Uniting on Hawker, Bowden

Waste Management Plan

Document verification

Date	Version	Title	Prepared by	Approved by
19 July 2024	V1.0	Uniting SA – Hawker St: Waste Management Plan | DRAFT	K Le Gallou L De Garis	K. Le Gallou
26 July 2024	V1.1	Uniting SA – Hawker St: Waste Management Plan	K Le Gallou L De Garis	K. Le Gallou
04 November 2024	V1.2	Uniting SA – Hawker St: Waste Management Plan	L De Garis	K. Le Gallou
09 December 2024	V1.3	Uniting SA – Hawker St: Waste Management Plan	L De Garis	K. Le Gallou
19 March 2025	V2.0	Uniting SA – Hawker St: Waste Management Plan	L De Garis	K. Le Gallou

Document summary

Rawtec prepared this waste management plan (WMP) to support the planning application of the development. We consulted the client, project manager, project architect and traffic consultant and considered all relevant policy requirements (see Appendix 1).

This WMP includes a high-level proposal for a waste management system, with a preliminary design to show how waste can be managed at the site. If land uses and waste management arrangements for the development change during detailed design, this WMP will need to be updated.

The WMP is aligned with the *South Australian Better Practice Guide – Waste Management in Residential or Mixed Use Developments (Green Industries SA, 2014)* and *Residential Waste and Recycling Guidelines for New Developments (City of Charles Sturt, 2010)*

1. Development summary

Project	Uniting on Hawker
Client	Uniting SA
Architect	City Collective
Project manager	Kennet Builders
Traffic consultant	Cirqa

1.1. Land use and occupancy

Table 1 lists the land uses that will generate waste and recycling at the development, based on the latest architectural plans.

Table 1: Land use and occupancy overview for the Apartment Building

Level	Tenancy/land use	Waste resource generation category	Estimated size (beds)
Ground – Level 1	Apartments	Residential (>10 Dwellings)	24 apartments 48 bedrooms
Ground – Level 1	Hawker St Apartments	Residential (6-10 Dwellings)	6 apartments 12 bedrooms

1.2. Waste management considerations

The client and project architect identified design choices and other elements that could affect waste management at the site (Table 2). We have included these in the design of the waste management system.

Table 2: Development waste management considerations

Consideration	Description
Council collection	This waste management plan is based on council collections for both the Hawker St Apartments (kerbside), and the apartments (bulk bins) by the City of Charles Sturt. Council provides residential collections only and will not service commercial properties.
Apartment caretaker	The waste chutes in the apartment development will require a building caretaker to rotate full bins with empty bins underneath the chutes. Installing a camera that can be accessed remotely by the caretaker may help make managing the bins more convenient.
Hawker St Apartment bin presentation	Residents will be responsible for presenting the bins on the Hawker St kerb as required.
Waste chutes	Waste and recycling chutes have been included to allow ease of access to the general waste and organics streams for residents on Level 1.

1.3. Recommended services

To manage waste and recycling effectively, the development needs the services listed in Table 3.

Table 3: Recommended waste management services

Required/recommended waste and recycling collection services			
	Land use	**Residential**	**Residential**
	Development land uses	**Apartments**	**Hawker St Apartments**
Routine collection (rear lift)	General waste	**X**	**X**
	Comingled recycling	**X**	**X**
	Organics recycling	**X**	**X**
On-call or external drop-off	Hard waste	**X**	**X**
	E-waste	**X**	**X**
	CFL/Lighting	**X**	**X**
	Printer Cartridges	**X**	**X**
	Batteries	**X**	**X**

X	= Required/Desired
NS	= Not serviced as separate service not required

2. Waste management analysis

2.1. Waste and recycling volumes

The apartments will generate about 4,100 litres of waste and recycling per week (Table 4)

The Hawker St Apartments will be serviced by the council's standard residential kerbside waste service with shared bins, and will generate around 1,700 litres of waste and recycling each week (Table 4)[1]

Table 4: Estimated volume of waste and recycling generated at the development

Estimated waste generation volumes (litres per week)			
Land use type		**Residential**	**Residential**
Development land use		**Apartments**	**Hawker St Apartments**
WRGR classification		*Residential (>10 Dwellings)*	*Residential (6-10 Dwellings)*
Waste stream	General waste	1,800	600
	Comingled recycling	1,800	500
	Organics recycling	500	500
Total site volume		**4,100**	**1,700**

*Totals have been rounded and may not equate

NE	= Not Estimated as Not Required

[1] Estimates are based on the proposed land-use data provided by the client/architect and metrics from the *Residential Waste and Recycling Guidelines for New Developments* (City of Charles Sturt, 2010). They have been cross referenced to the *South Australian Better Guide Practice Guide – Waste Management for Residential and Mixed Use Developments*.

2.2. Bin size and collection details

Based on the estimated volumes of waste and recycling, the apartment development needs 5 bins and 3 collections per week (Table 5). If using multiple collection providers to service separate tenancies, the number of collections may increase.

The Hawker St Apartments will have a shared set of kerbside bins, and will require the standard residential service of 2 collections per week, across 15 bins (Table 5).

Table 5: Estimated bin requirements and collections per week

	Apartments				Hawker St Apartments			
	Total volumes (L per week)*	Bin size (L)	Number of bins required	Collections per week	Total volumes (L per week)*	Bin size (L)	Number of bins required	Collections per week
General waste	1,800	1,100	2	1	600	140	5	1
Comingled recycling	1,800	1,100	2	1	500	240	5	Fortnightly
Organics recycling	500	660	1	1	500	240	5	Fortnightly
Total	4,100		5	3	1,700		15	2

*Totals have been rounded and may not equate

The following irregular waste streams will be managed as they occur onsite:

- **Containers under SA's 10 cent Container Deposit Scheme** will be managed by residents or the caretaker on behalf of the development.
- **Electronic waste and separate waste streams** (such as appliances and batteries, printer cartridges, lighting) will be stored at the development until sufficient quantities are available. All items must be source separated and collected by a certified collection contractor or taken to a licensed facility (e.g. recycling depot or participating retailer).
- **Hard waste** will be stored at the development and managed via a pull-in/pull-out collection service. This must be arranged by tenants and the building manager, so hard waste can be collected from the loading area at a suitable time.

Other advice

- **Bins and signage** must meet the Australian Standard for Mobile Waste Containers (AS 4123.7–2006 Mobile Waste Containers).
- **E-waste/hard waste collection:** Provide a central and accessible storage point for E-waste and hard waste. If hard waste is collected from individual locations, the building manager and tenant may need to be present for collection and costs may increase.

2.3. Waste storage area

The waste storage area houses the bins for residents to aggregate waste in:

- Figure 1 the chute room on level one and two of the apartments and Figure 2 shows the apartment waste storage area.
- Figure 3 shows the bin storage areas for the Hawker St Apartments

When planning the waste storage area, consider the additional waste management design advice listed in Section 5.

Figure 1: Level 1 waste chute room design

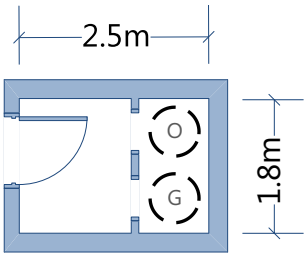
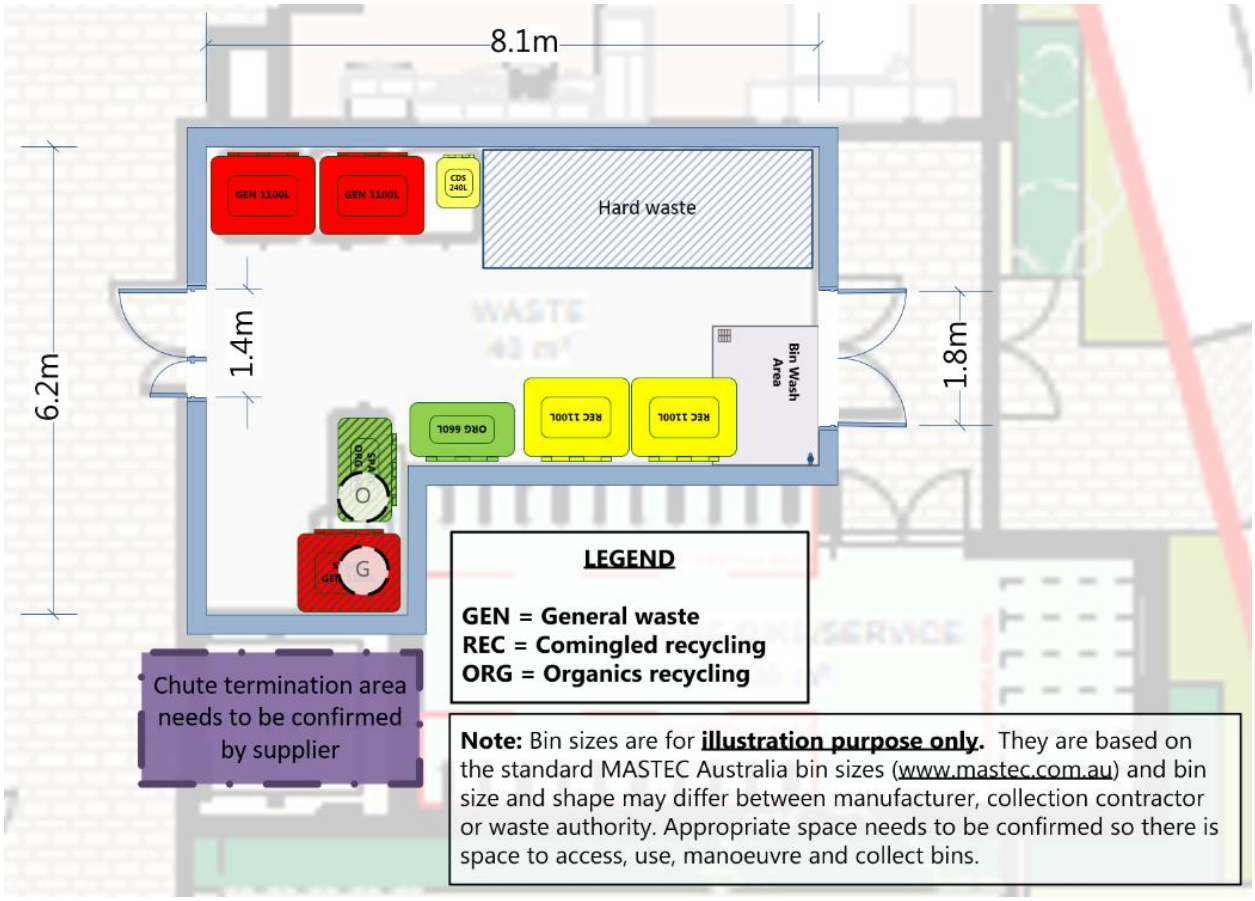


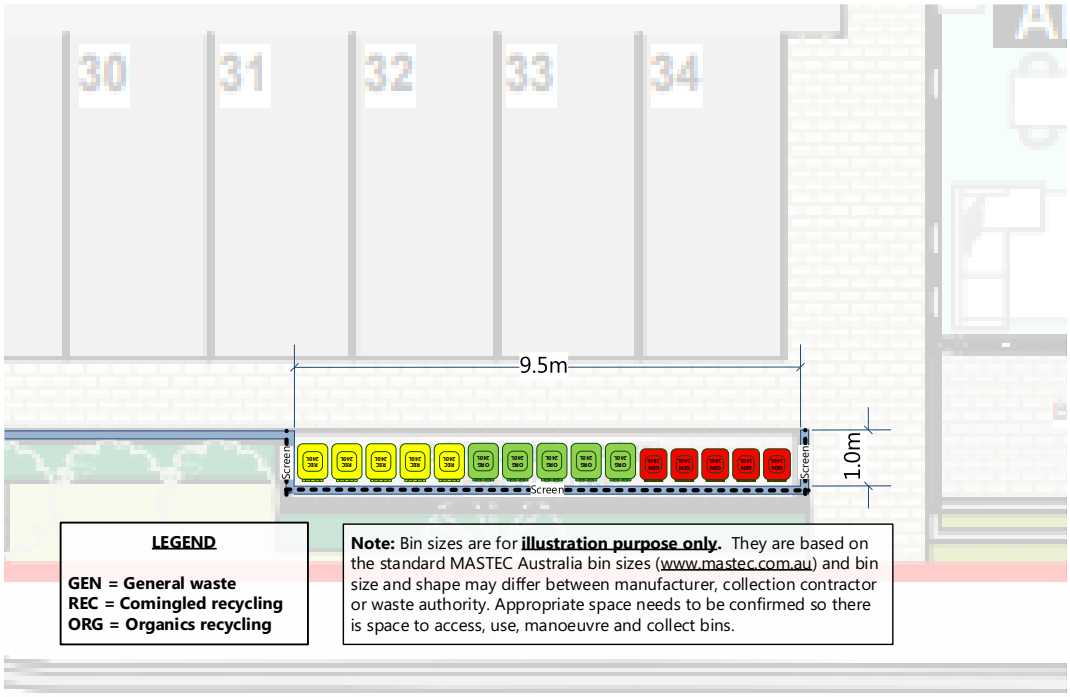
Figure 2: Waste storage area design for the apartments



Detailed design

- Detailed design and construction advice may be needed in later stages. Equipment specifications (such as chutes) must be confirmed by the provider before construction.

Figure 3: Waste storage area design for the Hawker St Apartments with screening



2.4. Transfer pathways

The transfer pathway show the route for residents to dispose of their waste and recycling (green) and for the collection of bins (red) for the apartments (Figure 4 and Figure 5) and the Hawker St Apartments (Figure 6).

Figure 4: Ground Floor transfer pathways

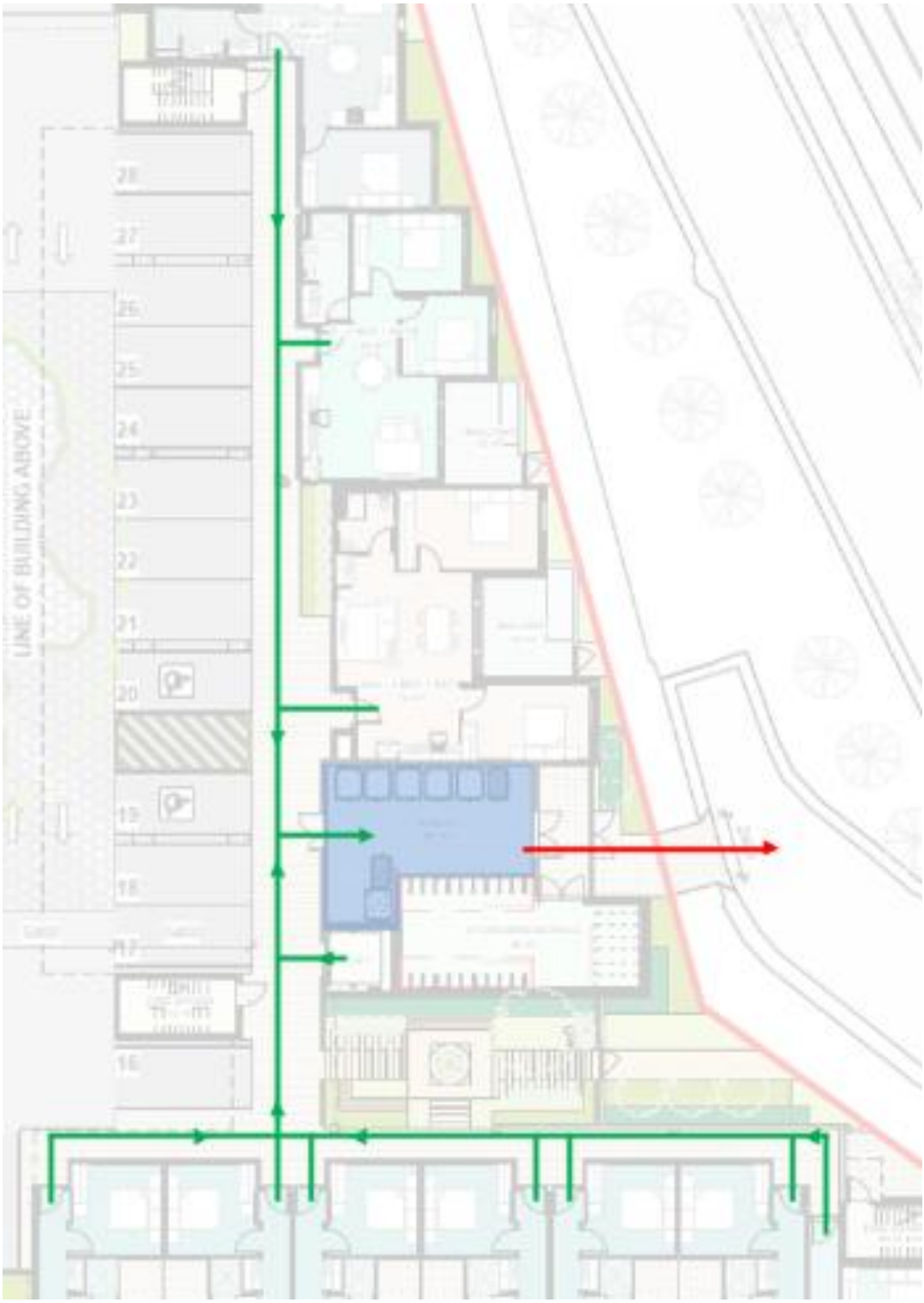


Figure 5: Transfer pathways for Level 1 of the Apartment development.

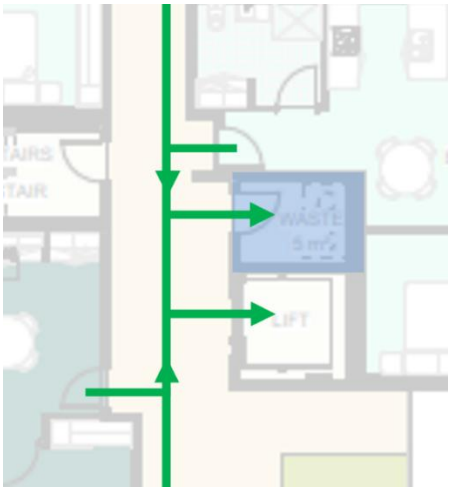
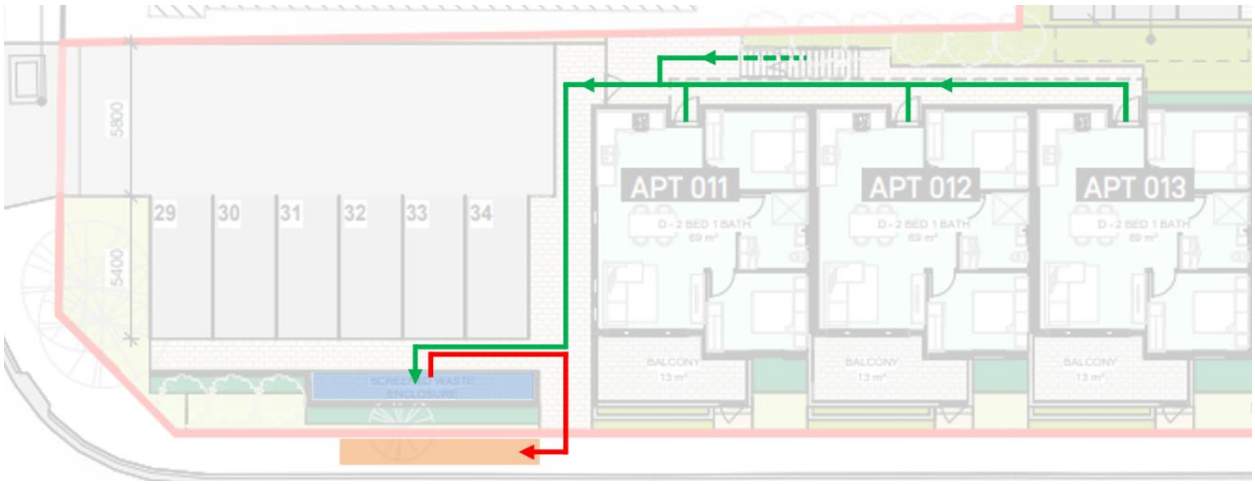


Figure 6: Transfer pathways for the Hawker St Apartments.



3. Waste management system

The waste management system (WMS) explains how to manage the waste and recycling generated at the development (Table 6). It covers each land use and considers the relevant waste management policies (see Appendix 1).

When planning the WMS, consider the waste management design advice in Section 5.

If land uses and waste management arrangements for the development change during detailed design, this WMP will need to be updated.

Table 6: Proposed waste management system for the development

Proposed waste management system	
Waste/recycling services	• General waste • Comingled recycling • Organics recycling
WMS step	**WMS notes**
1. User storage	• Residents will aggregate and store their waste in their residences using: – general waste will be collected using black bin liners – organics will be collected using compostable bin liners – comingled recycling will be collected loose – cardboard will be collected loose. • Pullout bins within kitchen cabinetry is an ideal solution to maximise space.
2. Transfer pathways	• Residents will then transfer their aggregated waste to their designated waste storage area along the indicated transfer pathways – Residents on Level 1 of the apartments will transfer organics and general waste to the chute room located on their level and place inside. Comingled recycling, bulky waste and hard waste will be transferred to the waste room via the lifts. • Transfer routes must be at least 1.25 metres wide, free of obstructions and steps and with a slope of no more than 1:10.
3. Aggregation and storage	• Waste will aggregate in the waste storage areas until collection day. – The apartment building caretaker will be responsible for rotating the organics and general waste bins when bins are full.
4. Bin collection	• On collection day: – Residents of the Hawker St Apartments will present their bins on the kerb of Hawker Street (as indicated in Figure 6) the night before collection day. – The apartment bulk bins will be collected via a rear lift collection vehicle from Market Place. The driver will transfer the bins to the truck and return them to the waste room.

4. Collection requirements

4.1. Vehicle movements per week

The apartments will need three (3) regular collections per week. This is based on the waste and recycling volumes and collection service frequency in Table 5. The Hawker St Apartments will require two (2) collections per week.

Other advice

- **Collection times:** Schedule waste collection timing and frequency to reduce the impact of noise and traffic on residents, neighbours and the public.
- **Peak periods:** More waste is usually generated during holiday periods like Easter, Christmas and public holidays. Extra collections may be needed at these times.

4.2. Collection vehicle

Table 7 lists approximate truck dimensions to help the traffic consultant's analysis. Please note:

- Vehicle dimensions and operating conditions can differ between waste collection contractors.
- Rawtec does not provide traffic engineering services. The traffic consultant's report details how collection vehicles will service the development safely.
- The client must confirm with the preferred waste collection contractor that it can service the development before collection can begin.

Table 7: Approximate collection vehicle dimensions

Collection vehicle dimensions			
Vehicle type	Rear lift	Side lift	Pan-tech/Flat bed
Collection type	Collection of bins up to 1,100 L	Collection of kerbside mobile garbage bins	At call waste streams
Vehicle dimensions	3.4m minimum to 4m (h) × 2.5m (w) × 8.8m minimum to 11m (l)	3.8m minimum (h) × 2.5m (w) × 9.5m minimum (l)	Up to 4.5m (h) × 2.5m (w) × 8.8m (l)
Rear loading space required	2 m	-	-
Clearance height required	3.8m minimum (recommend 4m)	4.5m minimum	Up to 4.8 m
Vehicle turning circle	18-25 m	8-25 m	18-25 m

5. Other waste management and design advice

Table 8 lists advice on designing developments to encourage good waste management practices, based on the *South Australian Better Practice Guide – Waste Management for Residential and Mixed Use Developments*.

Table 8: Other waste management and design advice

Area	To consider
Bin/chute rooms	• Make bin/chute rooms accessible to mobility impaired persons. • Locating chutes in closed waste rooms on each floor may prevent odours or spillage issues compared to providing access directly from a hallway.
Bin transfer routes	• Transfer routes should be at least 1.4 m wide, free of obstructions and steps, and with a slope of no more than 1:10. • Transfer routes should not pass through living areas or dwellings.
Bin washing	• A bin washing station must: – slope to a drain connected to the sewer – have a tap and a hose with mains supply – be at least 2 m × 2 m – be slip resistant. • Note: – Line marking and bunding are not required. – Bins can be stored on top of the bin wash area. During washing, other bins can be placed outside the room. – The bin wash area can be installed outside the waste room. – The waste contractor may provide this service (either onsite or offsite).
Education and training	• The building manager should educate and train residents/tenants to use the waste management system correctly. • Consider including better practice waste management requirements in strata or commercial lease agreements.
Health and amenity	• Effective WMS design should: – reduce and stop odour and noise – consider and preserve visual amenity for residents/tenants, neighbours and the public – prevent waste spreading beyond the defined location – specify washable services enabling periodic cleaning – provide adequate ventilation.
Lid within a lid bin	• A 'lid within a lid' system can make it easier to dispose of waste and recycling into bulk bins (e.g. 1,100 litre bins): – The smaller, lighter lid reduces the weight and risk for people disposing of materials.

Area	To consider
	– The large lid can be locked, stopping oversize items being put into the bin.
Waste storage area	• For residential buildings, waste storage areas should be: – external to all living areas but within the dwelling or on common property – no more than 30 m from living areas for convenience and to reduce spills/mess. • Consider installing a security camera to allow the building manager to remotely view when bins under chutes need to be rotated and to discourage misuse of bins and dumping.
Waste streams	• All SA residents should have access to an organics (food and/or garden) collection service. • Locate the disposal point for all three streams together (general waste, comingled recycling and food organics).

6. Appendix 1: Waste policies

This WMP is based on the following policies, design and operational requirements:

- The South Australian Environment Protection (Waste to Resources) Policy 2010, Government of South Australia, version 1.6.2019:
  - Waste is subject to resource recovery processes, which can include source separation, before disposal to landfill.
- *South Australian Better Practice Guide – Waste Management in Residential or Mixed Use Developments*, Green Industries SA, 2014.
- South Australian Planning and Design Code
  - Table 9 summarises the Performance Outcomes in the code related to waste and recycling.

Table 9: Waste and recycling performance outcomes in the Planning and Design Code

Design	
PO 1.5	The negative visual impact of outdoor storage, waste management, loading and service areas is minimised by integrating them into the building design and screening them from public view (such as fencing, landscaping and built form) taking into account the form of development contemplated in the relevant zone.
PO 19.3	Driveways are located and designed to facilitate safe access and egress while maximising land available for street tree planting, landscaped street frontages, domestic waste collection and on-street parking.
PO 20.1	Provision is made for the adequate and convenient storage of waste bins in a location screened from public view.
PO 26.3	Provision is made for suitable household waste and recyclable material storage facilities which are: a) located away, or screened, from public view, and b) conveniently located in proximity to dwellings and the waste collection point.
PO 26.4	Waste and recyclable material storage areas are located away from dwellings. **DTS/DPF 26.4 -** Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 26.5	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.
PO 30.4	Provision is made for suitable household waste and recyclable material storage facilities conveniently located and screened from public view.
PO 30.5	Waste and recyclable material storage areas are located away from dwellings. **DTS/DPF 30.5 -** Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 30.6	Provision is made for on-site waste collection where 10 or more bins are to be collected at any one time.

PO 32.1	Areas for activities including loading and unloading, storage of waste refuse bins in commercial and industrial development or wash-down areas used for the cleaning of vehicles, vessels, plant or equipment are: a) designed to contain all wastewater likely to pollute stormwater within a bunded and roofed area to exclude the entry of external surface stormwater run-off b) paved with an impervious material to facilitate wastewater collection c) of sufficient size to prevent 'splash-out' or 'over-spray' of wastewater from the wash-down area d) designed to drain wastewater to either: i) a treatment device such as a sediment trap and coalescing plate oil separator with subsequent disposal to a sewer, private or Community Wastewater Management Scheme or ii) a holding tank and its subsequent removal off-site on a regular basis.
Design in Urban Areas	
PO 1.5	The negative visual impact of outdoor storage, waste management, loading and service areas is minimised by integrating them into the building design and screening them from public view (such as fencing, landscaping and built form), taking into account the form of development contemplated in the relevant zone.
PO 11.1	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.
PO 11.2	Communal waste storage and collection areas are located, enclosed and designed to be screened from view from the public domain, open space and dwellings.
PO 11.3	Communal waste storage and collection areas are designed to be well ventilated and located away from habitable rooms.
PO 11.4	Communal waste storage and collection areas are designed to allow waste and recycling collection vehicles to enter and leave the site without reversing.
PO 11.5	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.
PO 23.3	Driveways and access points are located and designed to facilitate safe access and egress while maximising land available for street tree planting, domestic waste collection, landscaped street frontages and on-street parking.
PO 24.1	Provision is made for the convenient storage of waste bins in a location screened from public view. **DTS/DPF 24.1 -** Where dwellings abut both side boundaries a waste bin storage area is provided behind the building line of each dwelling that: a) has a minimum area of 2m2 with a minimum dimension of 900mm (separate from any designated car parking spaces or private open space); and

	b) has a continuous unobstructed path of travel (excluding moveable objects like gates, vehicles and roller doors) with a minimum width of 800mm between the waste bin storage area and the street.
PO 35.3	Provision is made for suitable household waste and recyclable material storage facilities which are: a) located away, or screened, from public view, and b) conveniently located in proximity to dwellings and the waste collection point.
PO 35.4	Waste and recyclable material storage areas are located away from dwellings. **DTS/DPF 35.4 -** Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 35.5	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.
PO 40.4	Provision is made for suitable household waste and recyclable material storage facilities conveniently located away, or screened, from view.
PO 40.5	Waste and recyclable material storage areas are located away from dwellings. **DTS/DPF 40.5** - Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window.
PO 40.6	Provision is made for on-site waste collection where 10 or more bins are to be collected at any one time.
PO 43.1	Areas for activities including loading and unloading, storage of waste refuse bins in commercial and industrial development or wash-down areas used for the cleaning of vehicles, vessels, plant or equipment are: a) designed to contain all wastewater likely to pollute stormwater within a bunded and roofed area to exclude the entry of external surface stormwater run-off b) paved with an impervious material to facilitate wastewater collection c) of sufficient size to prevent 'splash-out' or 'over-spray' of wastewater from the wash-down area d) designed to drain wastewater to either: iii) a treatment device such as a sediment trap and coalescing plate oil separator with subsequent disposal to a sewer, private or Community Wastewater Management Scheme or iv) a holding tank and its subsequent removal off-site on a regular basis.
PO 44.1	Development with a primary street comprising a laneway, alley, lane, right of way or similar minor thoroughfare only occurs where: a) existing utility infrastructure and services are capable of accommodating the development b) the primary street can support access by emergency and regular service vehicles (such as waste collection) c) it does not require the provision or upgrading of infrastructure on public land (such as footpaths and stormwater management systems) d) safety of pedestrians or vehicle movement is maintained

e) any necessary grade transition is accommodated within the site of the development to support an appropriate development intensity and orderly development of land fronting minor thoroughfares.

Housing Renewal	
PO 16.1	Provision is made for the convenient storage of waste bins in a location screened from public view.
PO 16.2	Residential flat buildings provide a dedicated area for the on-site storage of waste which is: a) easily and safely accessible for residents and for collection vehicles b) screened from adjoining land and public roads c) of sufficient dimensions to be able to accommodate the waste storage needs of the development considering the intensity and nature of the development and the frequency of collection.

(08) 8376 7752
11 Paringa Ave, Somerton Park,
South Australia 5044