



# Waste Management Guidelines For New Developments

**Prepared by Talis Consultants**

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## Terms and Definitions

| Term                                     | Description/Definition                                                                                                                                                                                                 |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bin                                      | Receptacle used to store general waste, recyclables, organics or other waste streams for collection.                                                                                                                   |
| Bin Storage Area                         | Waste storage facility used to store bins between collections. This may be also a bin room or compound.                                                                                                                |
| Bulk Waste                               | Household appliances, furniture, mattresses, white goods and other oversized items which should not be disposed of in the bins.                                                                                        |
| Caretaker                                | Person(s) or party appointed by the managing agent to be responsible for the management of waste at the development. A caretaker may be a resident of the development or a third party.                                |
| City                                     | The City of Stirling.                                                                                                                                                                                                  |
| Collection Point                         | The point where bins are collected and loaded into collection vehicles.                                                                                                                                                |
| Food Organic Garden Organic (FOGO)       | Organic wastes including food scraps and garden waste.                                                                                                                                                                 |
| Garden Organics (GO)                     | Organic wastes including biodegradable plant and yard waste generated from landscaping, e.g. leaves, branches, glass clippings, weeds.                                                                                 |
| General Waste                            | The remaining waste after other materials have been separated for recycling and organics collection.                                                                                                                   |
| Grouped Dwellings (Villas or Townhouses) | Two or more dwellings on the same lot where no dwelling is placed vertically above another.                                                                                                                            |
| Hazardous Waste                          | Includes batteries, chemicals, paint, cleaning products, medicines and flammable liquids.                                                                                                                              |
| Kerbside Collection                      | The collection of 240L/360L bins from the kerbside by a side loader waste collection vehicle. This service relies on a strata manager/caretaker or residents presenting bins on the verge on collection days.          |
| Mixed-Use Developments                   | A building or area that combines compatible residential, commercial, retail or service uses on the same lot. These developments typically feature commercial spaces on the ground floor with residential living above. |
| Multiple Dwellings (Apartments)          | A group of more than one dwelling on a lot where any part of the dwelling floor area is vertically above any part of the floor area of any other dwelling.                                                             |
| Multi-Unit Dwelling (MUD)                | A residential development of more than one dwelling. This ranges from dual occupancies and attached dwellings to high-rise apartment buildings.                                                                        |
| Onsite Collection                        | The collection of bins where the collection vehicle enters the property and services the development within the property boundary from a designated stopping point or loading area.                                    |
| Organics                                 | Refers to FOGO or GO waste streams.                                                                                                                                                                                    |
| Presentation Point                       | Location/s in which the bins are presented for collection, typically on the verge for kerbside collections.                                                                                                            |
| Recycling                                | Material that is collected separately from general waste for the purpose of recycling. This may include paper, cardboard, glass, plastic, aluminium and steel containers.                                              |
| WARR Act                                 | The <i>Waste Avoidance and Resource Recovery Act 2007</i> .                                                                                                                                                            |
| Waste Generation Rate                    | Average general waste, recycling and FOGO waste generation volumes associated with developments, based on available industry data from compositional audits.                                                           |
| Waste Management Plan (WMP)              | Document that defines how waste will be managed for a proposed development.                                                                                                                                            |

# 1 Introduction

Waste management must be considered at the design stage in all new developments and changes of use to ensure that waste materials can be stored, collected, and removed from the property in a manner which is safe, efficient and minimises the risk to public health and the environment.

These guidelines have been developed to assist architects, designers, developers and other professionals to incorporate waste management into new developments and changes of use within the City of Stirling (the City). It outlines the City's requirements of a Waste Management Plan (WMP) for Development Applications (DA) including the generation, storage and collection of waste.

Please note that this guide does not substitute for professional site assessments, safety audits, or tailored plans prepared by qualified waste consultants or contractors.

A WMP is required to be submitted as part of the following DAs, unless otherwise determined by the City:

- Residential developments involving multiple dwellings or 3 or more grouped dwellings;
- Accommodation uses, commercial, industrial, recreational, and other non-residential developments
- Mixed-use developments
- Any development where simple verge-side bin presentation is not possible or appropriate, including where:
  - There is insufficient lot, road or verge frontage (as determined by the City);
  - The number of bins would adversely impact traffic flow, street trees, public amenity or pedestrian safety
  - On-street parking restricts waste collection vehicle access.

## 1.1 Objectives

The objectives of these guidelines are to:

- Ensure the long-term waste management needs of each development are met in an efficient and sustainable manner
- Minimise the impact of waste services and facilities on the streetscape and surrounding areas in relation to the footpath, public realm and the frontage of the development
- Ensure waste services and facilities do not have a negative impact on the amenity of a locality particularly in terms of noise and odour
- Maximise safety for both waste collection staff and the public
- Minimise traffic and footpath obstructions
- Improve sustainability outcome for the City.

## **1.2 Enquiries**

The City encourages designers to be innovative in developing the most efficient and sustainable waste management system to meet the above objectives and encourages early consultation with the City regarding waste management requirements.

This can be initiated by contacting the City on (08) 9205 8555 or emailing [stirling@stirling.wa.gov.au](mailto:stirling@stirling.wa.gov.au)

## 2 Waste Services

### 2.1 Residential Waste Services

The City provides the following residential waste collection services to all rateable properties as part of its statutory requirements under the Western Australia (WA) *Waste Avoidance and Resource Recovery Act 2007* (WARR Act)).

The City's residential collection services operate Monday to Friday only. The City does not collect waste from residential properties on Saturdays and Sundays (excluding make-up collections related to Good Friday, Christmas Day and New Years' Day Public Holidays, if applicable).

#### 2.1.1 Single-Unit Dwellings

For single-unit dwellings (SUDs), the City provides a standard three-bin kerbside collection service, as follows:

- General waste stored in one 140L bin, collected once each week
- Recycling stored in one 240L or 360L bin, collected once each fortnight
- Garden organics stored in one 240L bin, collected once each fortnight.

#### 2.1.2 Multi-Unit Dwellings

For multi-unit dwellings (MUDs), the City provides the following bin size and collection frequency options:

- General Waste:
  - 240L bins collected from the kerbside up to twice each week
  - 660L bins collected from onsite up to twice each week.
- Recycling:
  - 240L or 360L bins collected from the kerbside up to twice each week
  - 660L bins collected from onsite up to twice each week.
- Garden Organics:
  - 240L bins collected from the kerbside or onsite once each fortnight.

Depending on size of the development, increased collection frequencies may be considered by the City on a case-by-case basis, subject to assessment and additional charges.

### 2.2 Commercial Waste Services

For commercial developments, the City provides the following bin size and collection frequency options at a cost:

- General Waste stored in 240L, 660L or 1,100L bins, collected minimum weekly
- Recycling stored in 240L, 660L or 1,100L bins, collected minimum fortnightly.

Fees and charges can be found on the City's website or provided upon request.

Developers are encouraged to consider additional waste streams for separation and whether a more tailored waste management approach is appropriate. A private contractor may be engaged to service commercial developments.

# 3 Waste Management Plan Requirements

WMPs must include the following information:

- Summary of the development
- Anticipated waste generation
- Bin types, sizes and quantities
- Bin access and storage
- Internal waste system (including collection methods and equipment)
- Collection method and frequency
- Waste service provider (if commercial).

All WMPs must demonstrate how the development achieves the objectives of these guidelines, and be supported by appropriate plans, drawings, and figures. The checklist in Appendix B should be used as a guide to ensure that key waste management requirements have been considered and incorporated into the design of the development and addressed in the WMP.

The City requires all development applications to address waste management in accordance with this Guideline and all relevant Planning Policies. Providing sufficient information at the initial submission stage will help avoid delays and the need for requests for further information.

## 3.1 Summary of the Development

The summary of the development must contain the following information, where applicable:

- Location of the development
- Number of floors
- Number of dwellings by size (e.g. one, two, three-bedroom)
- Size and use type of each commercial unit
- Details the intended use of the development.

## 3.2 Anticipated Waste Generation

Anticipated waste generation for general waste, comingled recycling and organics must be calculated using the figures in Appendix A. Alternative guidelines may be applied where they achieve similar or improved outcomes. A summary of the anticipated waste generation and estimated quantity of bins should be included in the WMP.

The intended tenancy uses, floor areas, and dwelling or apartment sizes, should be clearly indicated to show how the anticipated waste generation of the development was calculated, with any assumptions explained.

Where specific commercial tenancy uses are unknown, the City encourages the use of higher generation rates to ensure the development has adequate waste storage capacity.

### **3.3 Bin Size and Quantity**

The size and quantity of bins to be used shall be clearly specified in the WMP. Section 2 contains details of the waste services and bin sizes that the City use. Alternative bin sizes may be used in commercial developments, subject to the City's approval, and details on these bins must be provided within the WMP.

### **3.4 Bin Access and Storage**

Design details of the bin storage area must be included in the WMP in accordance with the requirements outlined in Section 4. The bin storage area size and location must also be shown on DA plans, with consideration to providing convenient access for users and waste collection.

### **3.5 Waste System**

Details of the proposed waste systems must be provided in the WMP, including any waste chutes, compactors, turntables, or any other waste management equipment.

The WMP should describe internal source separation systems, bulk waste storage, signage, and how waste will be transferred from commercial tenancies or residential dwellings to the bin storage area.

The WMP must clearly define responsibilities for ongoing monitoring and maintenance of waste systems and equipment.

### **3.6 Collection Method and Frequency**

The WMP must contain details on the proposed collection method, including:

- Collection vehicle to be utilised
- Movement of collection vehicle, supported by swept path analysis where on-site servicing is proposed
- Bin presentation point or collection location
- Transfer of waste to the collection vehicle
- Collection frequency.

### 3.7 Drawings/Figures

WMPs should also provide drawings and figures to support the above information, including:

- Generic residential and/or commercial floor space, showing convenient and practical waste and recycling collection points
- Bin storage areas including configuration of the required quantity of bins and waste equipment to demonstrate functionality and adequate size. Drawings should include the bin storage area floor area (m<sup>2</sup>), access widths, bin sizes and configuration, chute/compaction equipment size and layout, and tap and sewer points
- Bulk waste storage area and suitable skip bin location
- Any ramp gradients
- Bin presentation point, with the maximum number of bins required to be presented to be shown on plans
- Collection vehicle access (including swept path analysis where collection is proposed from within the property).

# 4 Waste Storage Requirements

This section outlines the City's requirements for all developments in relation to bins and waste storage. The following requirements should be incorporated into the development designs and described in the WMP.

## 4.1 Bins

All general waste, recycling and organic material generated within a development is required to be stored in appropriate bins.

All bins should be fitted with permanent lids and colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist occupiers to dispose of their separate waste materials in the appropriate bins.

## 4.2 Bin Storage Area

Bin storage areas should be adequately sized to accommodate the preferred quantity of bins, at the designated collection frequency, with adequate room for occupiers to easily access all bins and to allow them to be easily moved around and serviced.

Bin storage areas should comply with the City's *Health Local Law* and be designed with consideration to the following:

- a) In the case of mixed-use developments, separate residential and commercial bin storage areas are required
- b) Be located behind the front building setback, not visible from the property boundary, and fully screened to a minimum height of 1.8m using materials that complement the building design
- c) Be able to hold a minimum of 24 hours' worth of waste generation based on development's standard collection frequency. Contingency plans should be in place if there is a delay in waste collection
- d) The design of the bin storage area should be functional, to allow all bins to be easily moved and washed/cleaned. All personnel access ways should be minimum width of 1,000mm wide
- e) Be large enough for the bins to sit next to each other, rather than being stacked in rows (unless bin rotation is to be managed by an onsite building manager/caretaker)
- f) All bins should be spaced with a minimum 50mm clearance on all sides (between bins and against walls)
- g) Have a minimum 1,100mm doorway width, with self-closing doors that can be securely locked open, to allow easy removal and return of all bin sizes
- h) Mains water supply and sewer plumbed drainage outlets must be installed to facilitate washing of bins and cleaning of the bin storage area. Surfaces must be constructed of durable, cleanable materials
- i) Be undercover and designed not to permit storm water to empty into the drain

- j) City approved signage shall be used in bin storage areas to inform users of the appropriate bins and guidance for the separation of waste streams, refer Appendix D for examples.

Table 4-1 shows the typical dimensions of the bin sizes utilised by the City. Examples of acceptable bin storage area layouts are provided in and Appendix C.

**Table 4-1: Typical Bin Dimensions**

| Dimensions (mm) | Bin Sizes |       |       |       |        |
|-----------------|-----------|-------|-------|-------|--------|
|                 | 140L      | 240L  | 360L  | 660L  | 1,100L |
| Height          | 1,065     | 1,080 | 1,120 | 1,250 | 1,470  |
| Depth           | 540       | 735   | 905   | 850   | 1245   |
| Width           | 500       | 675   | 700   | 1,200 | 1,200  |

### 4.3 Bulk Waste

For residential developments, space should be provided for the temporary storage of bulky waste items not suitable for disposal in the bins, including, but not limited to, furniture, whitegoods, televisions, mattresses.

A minimum area of 4m<sup>2</sup> or 0.5m<sup>2</sup> per dwelling (whichever is greater) shall be provided for the storage of bulky wastes. This requirement may be reduced at the discretion of the City where equivalent private storage is provided to each dwelling.

The area shall be:

- Secure and, where appropriate, caged to allow visibility of contents
- Designed to discourage illegal dumping in common areas
- Located at ground level (screened from public view) or within a basement and may be integrated with the bin storage area
- Easily accessible to residents
- Provided with a minimum doorway width of 1,500mm to allow movement of large items.

The City provides on-demand verge collection services for bulky items (skip bin) and green waste on a nine (9) month cycle. Sufficient space should be allocated on the verge or on-site for the presentation of a 3m<sup>3</sup> bin for collection of bulky waste.

Where the skip bin is required to be stored on-site, for example in a carpark, the development should be designed to accommodate the City's skip bin waste collection vehicle, refer Table 4-2.

**Table 4-2: Nominal Dimensions for Skip Bin Waste Collection Vehicles**

| Parameter                         | Vehicle Dimensions |
|-----------------------------------|--------------------|
| Overall Length                    | 6.5m               |
| Overall Width (including mirrors) | 2.2m               |
| Overall Height                    | 4.01m              |
| Operational Height                | 4.01m              |

# 5 Waste Collection Considerations

This section outlines the City's requirements for all developments in relation to waste collection. The following requirements should be incorporated into the development designs and described in the WMP.

The City's preferred servicing arrangements, depending on the development, are:

1. Kerbside collection
2. On-site collection
3. Embayment.

## 5.1 Kerbside Collection

Where kerbside collection is proposed:

- a) Bins must not be placed on a neighbouring verge or obstruct pedestrians, street furniture or bike lanes
- b) For MUDs, a strata manager/caretaker or equivalent is to be responsible for the ferrying of bins to and from the bin storage area and presentation point on collection days
- c) Bins must be placed at least 1m from cars, street signs or power poles and 1m away from trees, not under the tree canopy
- d) Bins must be lined up neatly and in a single row along the verge, with at least 0.5m spacing between each bin to facilitate collection by a side arm waste collection vehicle
- e) The space required for collection from the verge must not exceed one third of the property frontage or a maximum of 8 receptacles
- f) Where the waste collection vehicle is required to stop on the street it should be a minimum of 10m from any intersection
- g) The travel path between the bin storage area and the collection point is to be flat and kept free of obstacles and steps
- h) Surfaces of all bin travel paths must be designed to allow easy transportation of the bins. Travel paths should be level and with smooth non-slip surfaces and be finished in a way which reduces the noise of the bins as they are manoeuvred
- i) Gradients of bin travel paths must not exceed 1:14 for two-wheeled bins.

Refer Appendix C for an example diagram of appropriate bin presentation arrangements.

## 5.2 Onsite Collection

Where verge space is limited or collections from the kerbside create a safety risk/concern, onsite collection may be required.

Where collection vehicles are required to enter the development, the City may require a legal agreement indemnifying the City and its contractors for any damage arising from waste collection operations. The legal agreement is to be prepared to the City's satisfaction and executed at the applicant's expense.

Where on-site collection is proposed:

- a) Vehicle access and circulation areas shall be designed to accommodate the City's rear loading waste collection vehicle, refer Table 5-1, including turning, reversing where necessary, and safe manoeuvring
- b) Provision for vehicles to drive in and out in forward gear is preferred, this could be facilitated by the inclusion of a turntable
- c) Where forward entry and exit is not achievable, alternative arrangements (reversing in and driving out in forward gear) may be considered where site conditions (e.g. traffic volume, pavement width) are favourable
- d) A maximum three-point turn is permitted
- e) Suitable turning areas and loading zones/bays shall be provided
- f) Loading bays/collection points should be located far enough from residents to reduce the impact of the noise of waste collection
- g) Both the driver and passenger should be able to safely alight and board the vehicle before and after collection, allowing both doors to fully open
- h) There should be practical and convenient access for both the driver and passenger to access the rear of the vehicle, with a 3m operating space at the rear to operate the bin lifting mechanism
- i) Swept path analysis should be conducted by a certified traffic engineer to ensure a collection vehicle can safely service the development
- j) The bin travel path between the bin storage area/presentation point and the waste collection vehicle should be a flat surface ( $\leq 1:20$ , no steps or dock levellers, free of obstacles and a safe distance from parking bays and vehicle ramps)
- k) The recommended maximum travel distance between the furthest bin at the bin storage area/presentation point and the waste collection vehicle, for all bin sizes and waste type, is 10m
- l) For all properties that have lockable bin storage area/presentation point, the City will require one key or remote device for each of the waste types serviced.

**Table 5-1: Nominal Dimensions for 22m<sup>2</sup> Rear Loading Waste Collection Vehicle**

| Parameter                         | Dimensions |
|-----------------------------------|------------|
| Overall Length                    | 10.2m      |
| Overall Width (including mirrors) | 2.5m       |
| Overall Height                    | 3.5m       |
| Operational Height                | 3.5m       |
| Overall Weight                    | 22t        |
| Payload                           | 10t        |

### 5.3 Embayment

An embayment located within a private property may be considered as an alternative servicing arrangement where kerbside collection or on-site vehicle access for collection is not appropriate, and where the embayment provides a safer and more operationally efficient servicing outcome. The use of an embayment is subject to the City's approval and may only be considered in special circumstances.

## 6 Internal Transfer of Waste

Designers should provide sufficient space within dwellings and commercial tenancies for the temporary storage of waste, recycling, and organics (where applicable) prior to depositing in the bin storage area or waste chute system.

In large developments, dedicated areas for temporary waste storage on each floor, waste chutes, or other solutions should be considered to ensure waste collection and storage is more efficient.

Where waste chutes are proposed:

- a) The City encourages a dual chute system for both general waste and recycling in conjunction with an interim storage area on each floor for residents to place oversized items such as cardboard boxes that should not be put into the chute system
- b) Chutes should not open into any habitable or public spaces
- c) Chutes shall be mechanically ventilated and insulated to minimise odour, noise impacts and fire risk
- d) Chutes shall be cylindrical with a minimum diameter of 500mm or greater to prevent blockages
- e) Chutes should terminate directly into bins in a manner that avoids spillage and overflow
- f) Access to the terminus of the chute should be restricted to trained building management/staff only. Residents should be restricted from accessing rooms containing compacting equipment or chutes to help prevent damage or injury
- g) The WMP is to include chute specifications, ongoing cleaning and maintenance requirements and contingency plans in the event of system damage or operational failure.

# 7 Waste Management Responsibilities

Waste management arrangements shall include clear, operational responsibilities to ensure ongoing management of waste storage and collection areas over the life of the development.

Where a building manager or caretaker is required (for mixed-use developments, MUDs, and commercial developments), responsibilities shall include:

- a) Cleaning of bins, bin storage area/s and other storage facilities, and taking all reasonable steps to prevent fly breeding and odours
- b) Ensuring bins are stored in a suitable enclosure and remain accessible for collection
- c) Ensuring sufficient bin capacity is maintained to accommodate waste generated by the development
- d) Providing waste education materials to occupiers and ensuring bins are clearly identified for their intended use
- e) Transferring of bins to the presentation point (if required), this should be determined when designing the system and clearly stated in the WMP
- f) If a presentation point is to be used, it is the responsibility of the caretaker or equivalent to return the bins to the bin storage area following collection (same day or maximum 24 hours).

Developments shall also provide appropriate contingency arrangements for bin access, servicing, and damage management. The City does not accept responsibility for damage to private infrastructure arising from waste servicing activities, particularly where onsite collection is provided.

## 8 Signage and Education

Educational signage shall be provided to support correct waste separation and minimise contamination.

Signage should:

- a) Clearly identify accepted materials in the general waste, recycling and organic streams
- b) Outline appropriate waste behaviours (e.g. placing waste inside bins (not beside them), keeping recyclables loose (not bagged) and ensuring bin lids are closed)
- c) Be installed within bin storage areas and/or on bins to clearly guide correct waste separation
- d) Be consistent and easily understood to support correct waste separation.

Strata or building management shall also provide occupiers with guidance materials outlining how to correctly use the waste management system. Examples of these materials include information leaflets or a dedicated section outlining the waste management system in the tenant handbook.

The City has developed several waste education resources for use in bin storage areas, these are included in Appendix D. Please contact the City's Waste Education Officer at [stirling@stirling.wa.gov.au](mailto:stirling@stirling.wa.gov.au) for additional copies or further information.

The City also encourages the separation of waste streams to reduce landfill and improve resource recovery, including participation in the Containers for Change scheme. Further information is available at [Containers for Change WA | Giving 10¢ Containers Another Life.](#)

# APPENDIX A

## Waste Generation Rates

As outlined in Section 2, the City currently provides a three-bin GO service to residential properties. In future, the City may introduce a third FOGO bin service.

Table 8-1 and Table 8-2 outline applicable Residential MUD waste generation rates for a GO Service and FOGO Service respectively. These rates have been sourced from the WALGA Waste Calculator available here [Planning | Waste | WALGA](#).

**Table 8-1: Residential MUD Waste Generation Rates (GO Service)**

|               | Dwelling Size       | General Waste (L/week) | Recycling (L/week) |
|---------------|---------------------|------------------------|--------------------|
| <12 Dwellings | 1 Bedroom Dwelling  | 70                     | 40                 |
|               | 2 Bedroom Dwelling  | 130                    | 60                 |
|               | 3+ Bedroom Dwelling | 210                    | 120                |
| >12 Dwellings | 1 Bedroom Dwelling  | 60                     | 20                 |
|               | 2 Bedroom Dwelling  | 100                    | 40                 |
|               | 3+ Bedroom Dwelling | 140                    | 90                 |

*\*Developments should also provide suitable space for at least 2 x 240L GO bins*

**Table 8-2: Residential MUD Waste Generation Rates (FOGO Service)**

|               | Dwelling Size       | General Waste (L/week) | Recycling (L/week) | FOGO (L/week) |
|---------------|---------------------|------------------------|--------------------|---------------|
| <12 Dwellings | 1 Bedroom Dwelling  | 30                     | 40                 | 40            |
|               | 2 Bedroom Dwelling  | 50                     | 60                 | 80            |
|               | 3+ Bedroom Dwelling | 70                     | 120                | 140           |
| >12 Dwellings | 1 Bedroom Dwelling  | 40                     | 20                 | 20            |
|               | 2 Bedroom Dwelling  | 60                     | 40                 | 40            |
|               | 3+ Bedroom Dwelling | 80                     | 90                 | 60            |

Table 8-3 outlines applicable waste generation rates for commercial tenancies.

**Table 8-3: Commercial Waste Generation Rates**

| Use Type                                 | General Waste | Recycling | Metric                   |
|------------------------------------------|---------------|-----------|--------------------------|
| <b>Accommodation</b>                     |               |           |                          |
| Backpackers, boarding house, guest house | 40            | 20        | L/bed/week               |
| Serviced Apartment                       | 35            | 35        | L/apartment/week         |
| Retirement Village                       | 60            | 60        | L/apartment/week         |
| Independent Living                       | 80            | 80        | L/apartment/week         |
| Hotel/Motel                              | 5             | 1         | L/bed/day                |
| <b>Food and Beverage Premises</b>        |               |           |                          |
| Hotel/Motel - Bar                        | 50            | 50        | L/100m <sup>2</sup> /day |
| Hotel Motel – Bar & Dining               | 660           | 240       | L/100m <sup>2</sup> /day |
| Licensed Club/Tavern/Small Bar           | 50            | 50        | L/100m <sup>2</sup> /day |
| Restaurant                               | 660           | 240       | L/100m <sup>2</sup> /day |
| Café (Dine-In)                           | 300           | 200       | L/100m <sup>2</sup> /day |
| Takeaway/Café (pre-packaged food only)   | 150           | 150       | L/100m <sup>2</sup> /day |
| Fast Food Outlet                         | 150           | 150       | L/100m <sup>2</sup> /day |
| Convenience Store                        | 300           | 150       | L/100m <sup>2</sup> /day |
| Supermarket                              | 660           | 240       | L/100m <sup>2</sup> /day |
| Greengrocer                              | 240           | 120       | L/100m <sup>2</sup> /day |
| Butcher                                  | 80            | 50        | L/100m <sup>2</sup> /day |
| <b>Non-Food Premises</b>                 |               |           |                          |
| Function Room                            | 200           | 100       | L/100m <sup>2</sup> /day |
| Offices and Medical Rooms                | 10            | 10        | L/100m <sup>2</sup> /day |
| Gym                                      | 10            | 10        | L/100m <sup>2</sup> /day |
| Showrooms                                | 40            | 10        | L/100m <sup>2</sup> /day |
| Retail Shops <100m <sup>2</sup>          | 50            | 25        | L/100m <sup>2</sup> /day |
| Retail Shops >100m <sup>2</sup>          | 50            | 50        | L/100m <sup>2</sup> /day |

| Use Type                    | General Waste | Recycling | Metric                    |
|-----------------------------|---------------|-----------|---------------------------|
| Hairdresser                 | 60            | 60        | L/100m <sup>2</sup> /day  |
| Community or Sports Centres | 50            | 50        | L/100m <sup>2</sup> /day  |
| Childcare                   | 350           | 350       | L/100m <sup>2</sup> /week |

*Note: Waste generation calculations are based on operational days. Some use types i.e. Function Room may only be used a few days each week. Therefore, waste generation calculations would be based on 2 days of operation.*

# APPENDIX B

## Waste Management Plan Checklist

The checklist below should be used to show that the City's core waste management practices have been considered and incorporated into the design of the development.

The WMP should include a brief description of the below considerations.

| Summary of the Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Completed |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <p>Does the WMP provide a summary of the development including the following information:</p> <ul style="list-style-type: none"> <li>• Location of the development</li> <li>• Details of the intended use of the development</li> <li>• Number of floors (if applicable)</li> <li>• Number of dwellings units by size (one, two or three bedrooms)</li> <li>• Number of dwelling units by size and/or commercial tenancy use types and floor areas (m<sup>2</sup>)</li> </ul>                                                                                                                                          |           |
| Anticipated Waste Generation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |
| <p>Does the WMP include the anticipated waste generation calculations for general waste, recycling and organics using the generation rates provided in Appendix A.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| Bin Storage Area                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| <p>Design details of the bin storage area included, such as drawings including floor area (m<sup>2</sup>), sizes of bins, aisle and access point widths and wash down facilities (Refer Section 4);</p> <ul style="list-style-type: none"> <li>• Bin storage area size</li> <li>• Bin storage area layout</li> <li>• Storage and management of Alternative Wastes (e.g. cooking oil, medical waste, bulky waste and hazardous substances)</li> <li>• Wash-down area/tap &amp; drain</li> <li>• Ventilation</li> <li>• Vermin prevention</li> <li>• Noise reduction</li> <li>• Stormwater ingress prevention</li> </ul> |           |
| <p>Is the Bin Storage Area accessible by residents and waste collectors, and transfer paths of waste have been considered.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
| <p>Does the WMP detail of any other waste management equipment or devices to be used, such as:</p> <ul style="list-style-type: none"> <li>• Chutes</li> <li>• Compacters</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <ul style="list-style-type: none"> <li>• Bin lifts</li> <li>• Other</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          |  |
| <b>Collection Method and Frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |
| <p>Does the WMP must contain details on proposed collection method for the development including:</p> <ul style="list-style-type: none"> <li>• City/private contractor</li> <li>• Collection vehicle to be utilised</li> <li>• Movement of collection vehicle including swept path analysis (if required)</li> <li>• Bin presentation point or collection location</li> <li>• Transfer of waste to the collection vehicle</li> <li>• Frequency of collection</li> </ul> |  |
| Has the transfer path between the Bin Storage Area and the collection location been designed to minimise occupational health and safety risks to those transferring the bins?                                                                                                                                                                                                                                                                                           |  |
| <b>Education</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |
| Has clear signage been included to provide instructions on how to use the waste system?                                                                                                                                                                                                                                                                                                                                                                                 |  |
| <b>Ongoing Management</b>                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Delegates responsibility for ongoing monitoring and maintenance of the waste management services and equipment, with relevant contact details to be provided to the City on occupancy.                                                                                                                                                                                                                                                                                  |  |

# APPENDIX C

## Bin Storage Area Diagrams

Diagram 1 illustrates a designated bin presentation area located along the street frontage, showing how bins should be positioned for collection. Each bin is spaced 0.5m apart to facilitate collection by a side arm waste collection vehicle.

**Diagram 1: Example Kerbside Bin Presentation Area**

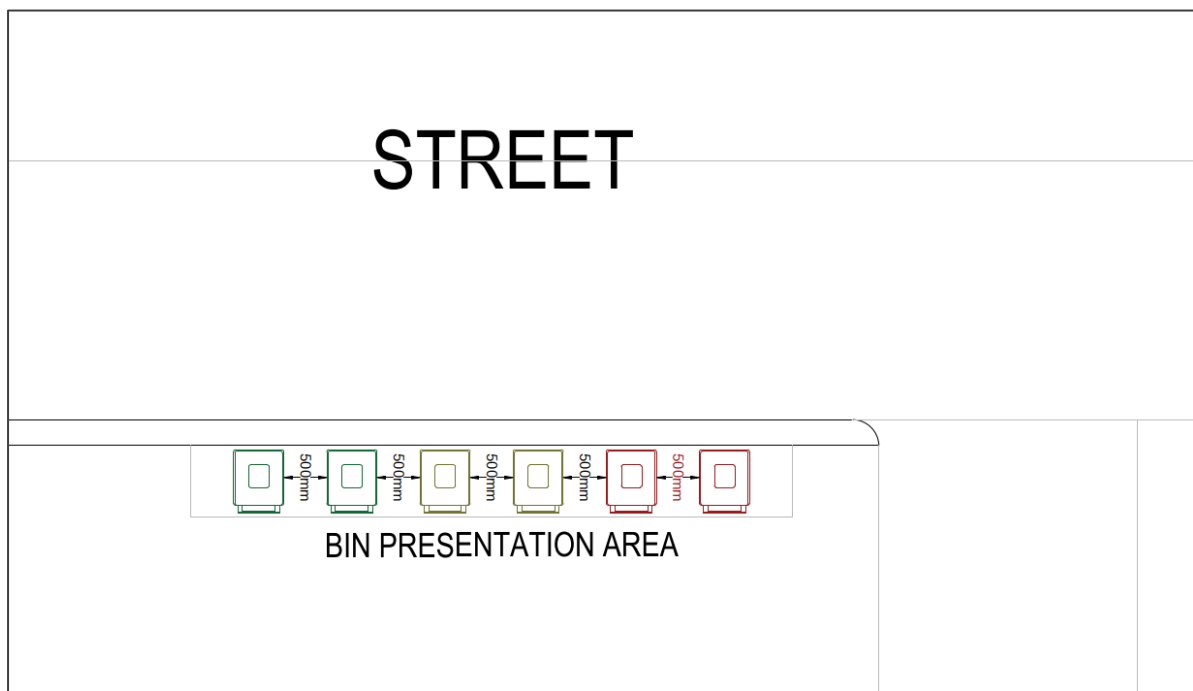


Diagram 2 shows a representative example of a bin storage area layout acceptable to the City. The bin storage area provides adequate doorway widths, aisle widths and spacing between bins, with a tap and drain shown.

**Diagram 2: Example Bin Storage Area**

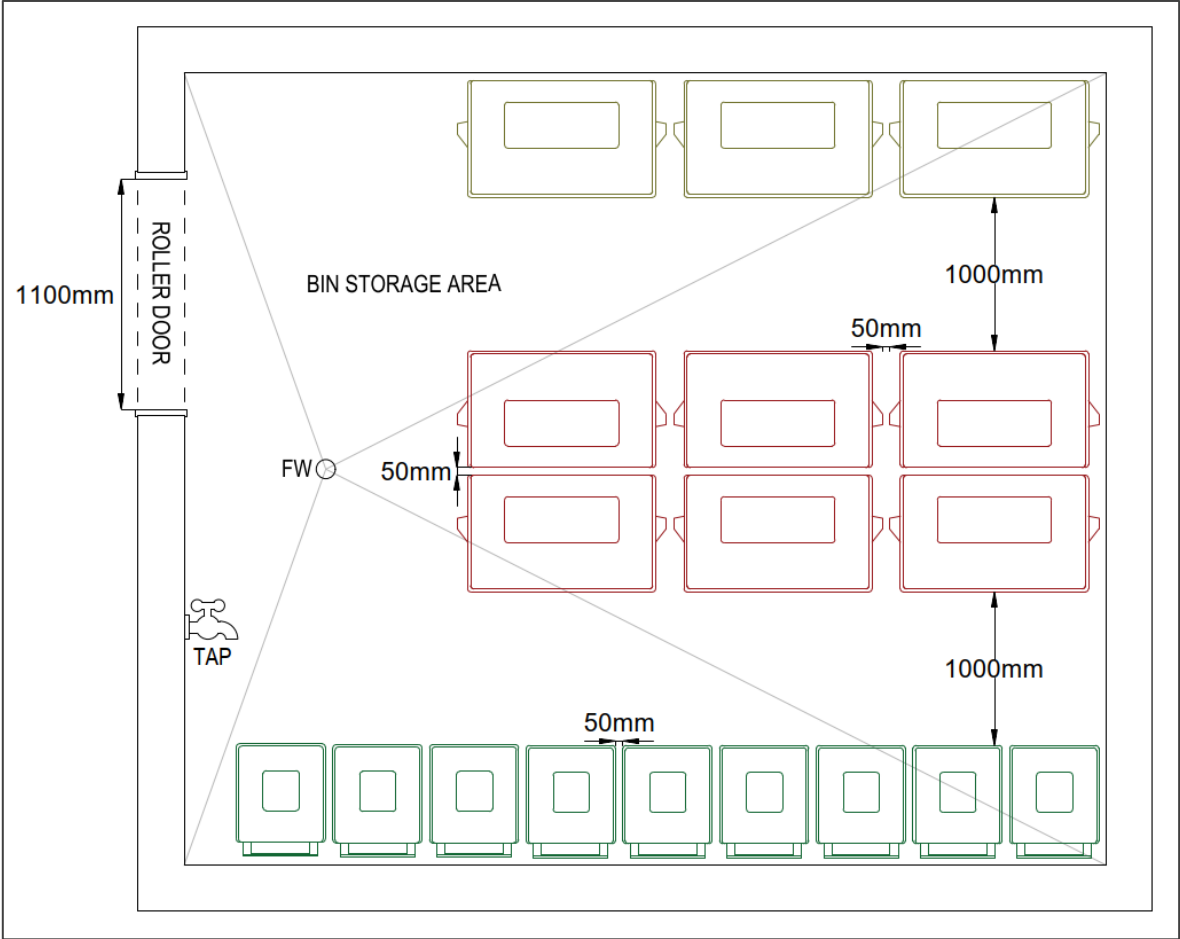


Diagram 3 shows an example acceptable layout of separate commercial and residential bin storage areas with an additional area for the temporary storage of bulk waste. This layout or similar would be utilised within a mixed-use development, as separate residential and commercial bin storage areas are required to minimise contamination and misuse of bins.

**Diagram 3: Example Commercial and Residential Bin Storage Areas**



Diagram 4 illustrates an acceptable bin storage area layout within a residential development utilising a dual chute system for general waste and recycling. The waste chute and linear track system is shown, with organics bins separated by a mesh fence. This demonstrates that access to the terminus of the chute is restricted to trained building management/staff and the organics bins can be accessed directly by residents or the caretaker.

**Diagram 4: Example Residential Bin Storage Area with Waste Chutes**

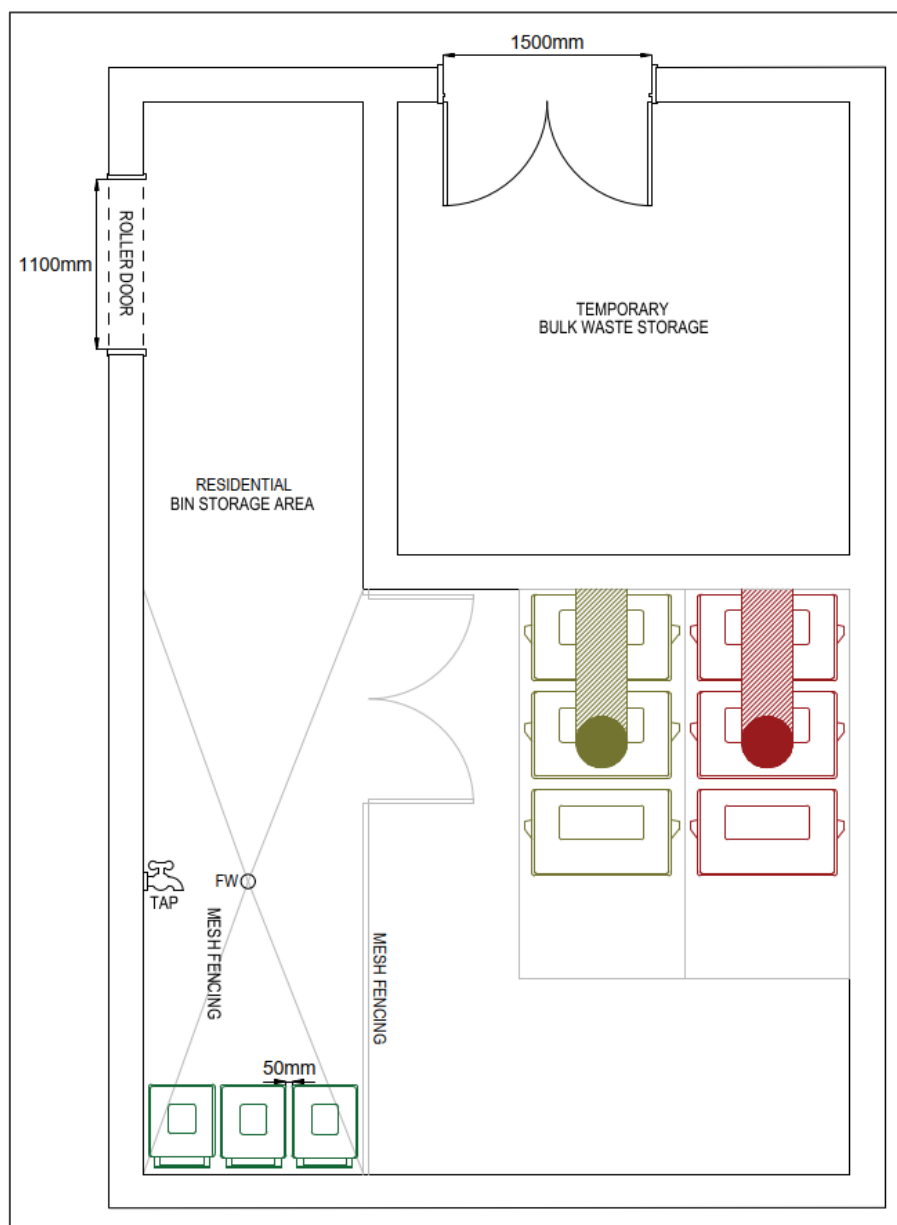
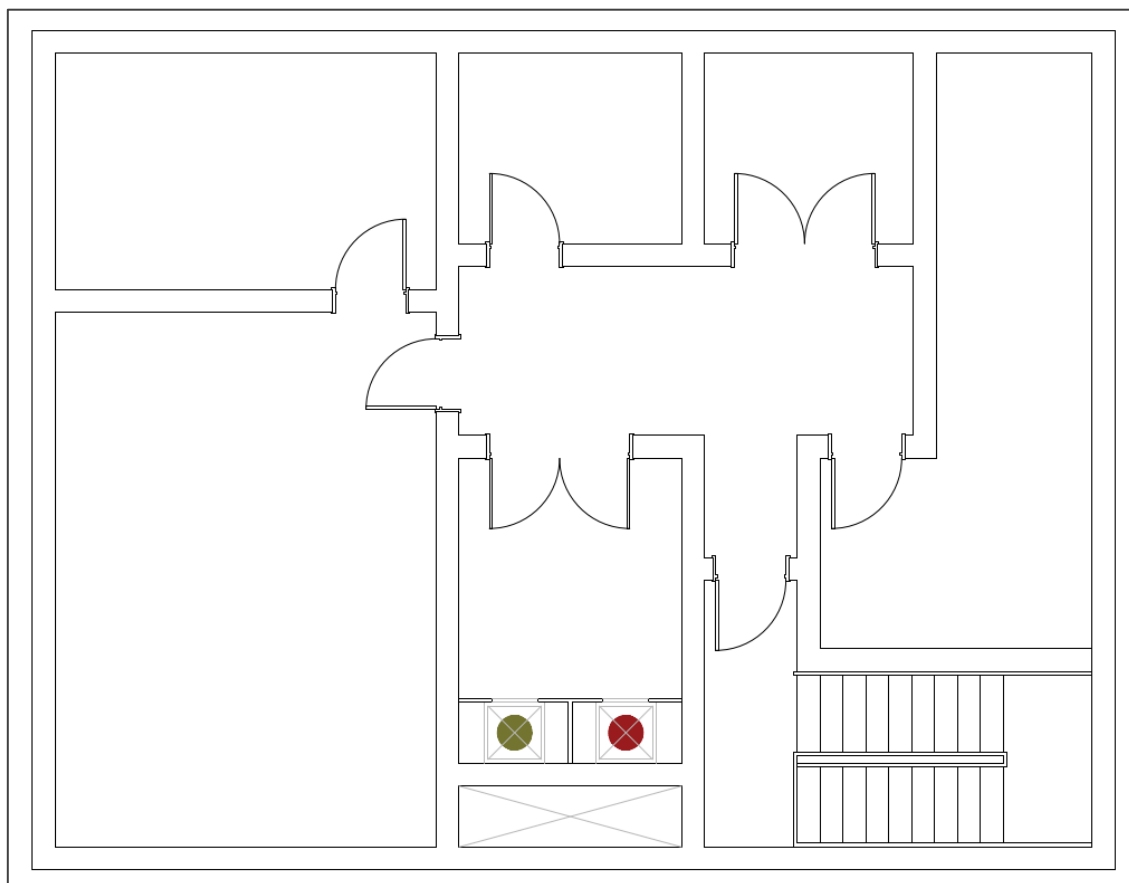


Diagram 5 shows an example waste chute room on each floor where chutes open into in an interim storage area for residents to place oversized items such as cardboard boxes that should not be put into the chute system. Chutes do not open into any habitable or public spaces.

**Diagram 5: Example of a Waste Chute Room on Each Floor**



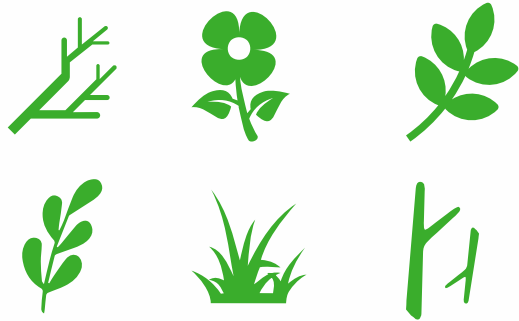
## **APPENDIX D**

### Example Waste Education Materials/Signage

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# How to sort your waste

## Garden organics bin



Lawn clippings and garden organics



## Recycling bin



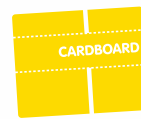
Glass bottles and jars



Plastic bottles and containers



Cans



Cardboard



Paper

**Items loose, rinsed and lids off.**



## General waste bin



Damaged clothing



Soft plastics



Nappies



Used paper towels & tissues



Food-soiled cardboard



Polystyrene



Food scraps



**These items cannot go into any kerbside bin.**

**Drop them off for free at Recycling Centre Balcatta**

**For more information visit [www.stirling.wa.gov.au/rcb](http://www.stirling.wa.gov.au/rcb)**



Batteries



Light globes



E-waste



Paint



Aerosol cans



**Do better than the bin.  
Find out how at [wastesorted.wa.gov.au](http://wastesorted.wa.gov.au)**



# General Waste



**Use me for:**



✓ **Food scraps**



✓ **Soft plastic bags and packaging**



✓ **Pet waste and kitty litter**



✓ **Nappies, hygiene and sanitary products**



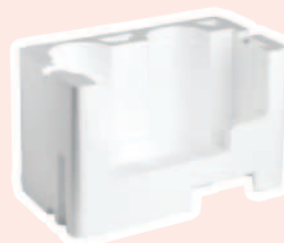
✓ **Takeaway coffee cups and containers**



✓ **Silver-lined cartons**



✓ **Meat trays and soiled packaging**



✓ **Polystyrene**



✓ **Worn-out clothing and textiles**



**Take hazardous or electronic waste to your nearest drop off centre.**



# Recycling



✓ Recycling is simple – it's only these five things:



✓ **Paper**  
(including newspapers and magazines, no shredded paper)



✓ **Cardboard**  
(please flatten boxes)



✓ **Glass bottles and jars**



✓ **Cans**  
(aluminium and steel)



✓ **Plastic bottles and containers**

**Rinsed,  
loose,  
lids off!**

Place recyclables loose in the bin, not in bags.



# Garden Organics (GO)



## ✓ Use me for:



## ✓ Grass clippings



## ✓ Weeds and flowers



## ✓ Leaves



## ✓ Plant prunings and small branches

Place garden organics in loose, not in bags or boxes.



# On-demand waste collections

**Households in the City of Stirling can access these on-demand collections for free, once every year:**

- ✓ 1 x 3m<sup>3</sup> skip bin collection or  
1 x lounge collection  
(three items maximum)



- ✓ 1 x mattress/bed base collection  
(six items maximum, bed frames and headboards not included)



- ✓ 1 x white goods collection  
(four items maximum).



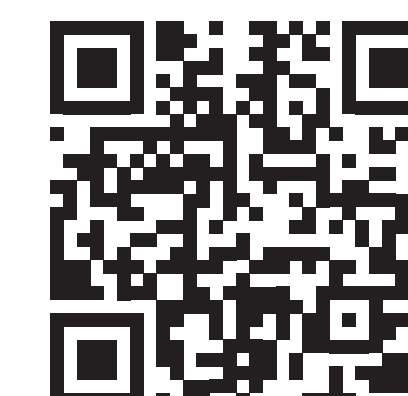
- ✓ 1 x electronic waste collection  
(six items maximum).



## How to book your collection

Collection services can be booked on our website, through your strata manager or by calling the City's Customer Service team on (08) 9205 8555.

For more information visit [www.stirling.wa.gov.au/ondemand](http://www.stirling.wa.gov.au/ondemand) or scan the QR code.



# What items can you put in a skip bin?

## Accepted items

✓ Furniture



✓ Timber  
Up to 1.5m lengths



✓ Sports equipment



✓ General junk



✓ Floor coverings



## Not accepted items

Contaminated bins may incur penalty fees.

✗ Hazardous



✗ Car parts and tyres



✗ Building



✗ White goods/e-waste/  
mattresses



✗ Garden waste



Never bin a battery or anything with a battery inside.

For more information visit [www.stirling.wa.gov.au/ondemand](http://www.stirling.wa.gov.au/ondemand) or scan the QR code.

