# Waste and Recycling in Aged Care Facilities

**Better Practice Guide**
**September 2018**

Government of South Australia
Green Industries SA

ACSA
Aged & Community Services Australia

The 'Waste and Recycling in Aged Care Facilities - Better Practice Guide' is an initiative of Aged and Community Services Australia (ACSA) in partnership with Green Industries SA (GISA) and Rawtec Pty Ltd.

Funding to develop and pilot this guide and the associated tools was awarded to ACSA through the GISA Business Sustainability Program in January 2018.

This project was managed through the South Australian office of ACSA to support residential aged care facilities management to identify and implement practical initiatives to improve waste management across their facilities including opportunities to reduce waste generation and increase levels of recycling and landfill diversion.

**About Aged and Community Services Australia**

ACSA is the industry peak body supporting over 700 organisations that provide accommodation and care services to older Australians. ACSA supports members to achieve excellence in providing quality affordable housing and community and residential care services for older Australians.

www.acsa.asn.au

**About Green Industries SA**

GISA promotes waste management practices that aim to eliminate waste or its consignment to landfill and promote innovation and business activity in the waste management, resource recovery and green industry sectors.

GISA works with and supports South Australian industry sectors and organisations to improve resource efficiency, waste management, and lean production practices as a way to reduce operating costs, boost productivity, and environmental performance.

www.greenindustries.sa.gov.au

**About Rawtec Pty Ltd**

Rawtec is a South Australian-based waste and resource management consultancy. The team includes specialists in waste and recycling, sustainability, engineering, economics and behaviour change.

www.rawtec.com.au

**Acknowledgements**

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# Contents

# Glossary

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| **Better practice** | Better practice is continual improvement as community and customer expectations, and standards, available services and technology change over time. Better practice considers that each aged care facility has different needs and practices. |
| **Comingled recycling** | A recycling stream where materials (such as paper, plastics and metals) are mixed in the same bin and then sorted and processed in a materials recovery facility. |
| **Compostable** | Compostable products are made of natural plant starches and can be commercially or home composted. Products claiming to be compostable must be certified and meet the Australian Standard for compostability AS4736 |
| **Contamination** | Materials and items within a recycling stream that are not consistent with the nominated recycling stream, readily recycled or are a hazard to processing. |
| **Contractors** | A company or organisation that provides services to the facility. |
| **E-waste** | Electronic waste is any discarded electrical (e.g. kettles, fridges, microwaves etc.) or electronic device (e.g. televisions, computers, wires, batteries etc.). |
| **Facility** | An aged care facility. |
| **Food kilometres** | An indicator of the environmental impact of food. It considers the distance food travels, from where it is produced to where it is consumed. |
| **Medical waste** | Medical waste is any solid waste created during diagnosis, treatment or immunisation (e.g. needles, soiled bandages, blood, pharmaceuticals). It is considered a biohazard for human and environmental health. |

# Acronyms

| | |
|---|---|
| **FOGO** | Food Organics and Garden Organics |
| **KPI** | Key Performance Indicator |
| **SA** | South Australia |
| **CDL** | Container Deposit Legislation (10c refund) |

# Introduction

# Introduction to the Better Practice Guide

Better practice is the continual improvement of waste and recycling management at a workplace. It responds to changing community and customer expectations, standards, available services, regulations and technology. Better practice also considers that each facility may have different needs and improvement options and resources. This is opposed to 'best practice', which suggests that no further improvements are possible once best practice has been achieved.

## What are the benefits of improving waste and recycling practices?

The benefits of improving waste and recycling management and performance include:

- ✓ Demonstrating to potential residents and their families a commitment to corporate, social and environmental responsibility objectives.
- ✓ Increasing landfill diversion and making financial savings by improving resource use and reducing the impacts of future cost increases in the SA solid waste levy.
- ✓ Improving environmental performance via reducing greenhouse gas emissions from landfill disposal through recycling.
- ✓ Improving the cost-effectiveness and service quality of waste and recycling contracts.
- ✓ Enhancing operational efficiency for waste and recycling management practices.
- ✓ Improving staff job satisfaction.
- ✓ Meeting environmental regulations and legislation.

## Why do we need a better practice guide for waste and recycling in residential aged care facilities?

Recent reviews of aged care facilities in South Australia (SA) found that better practice initiatives can drastically improve waste and resource management practices at facilities, and also contribute to financial savings for organisations.

This Better Practice Guide (the Guide) and accompanying tools provides facility managers and operators with information and tools to improve the management of waste and recycling at an aged care facility. The Guide is presented in three sections:

### SECTION 1: FACILITY WIDE GUIDANCE

Guidance to improve waste and recycling practices across the whole facility, such as creating a waste management plan and implementing new recycling systems across the site.

### SECTION 2: AREA SPECIFIC GUIDANCE

Guidance relevant to better practice waste and recycling in specific areas of an aged care facility, including:

- Kitchen and servery
- Operations and maintenance
- Offices and administration
- Residential and public areas
- Tenancies

### SECTION 3: FURTHER INFORMATION AND RESOURCES

Provides further guidance and information on better practice waste and resource management in aged care facilities, checklists and an industry case study.

## Better Practice Tools

The Better Practice Tools accompany this Guide and provide a practical, step-by step process for facilities to review waste management and implement better practice initiatives.

There are two tools available for use:

### WASTE AND RECYCLING PERFORMANCE CALCULATOR

The *Waste and Recycling Performance Calculator* can be used to estimate baseline performance including waste generation and recycling levels. It also enables aged care facilities to benchmark their performance against other aged care facilities.

### ASSESSMENT WORKBOOK

*The Assessment Workbook* can be completed to identify opportunities to improve waste and recycling practices across a facility, and to develop a Waste and Recycling Implementation Plan.

# Reviewing facility waste and recycling performance

## Why review facility waste and recycling performance?

Reviewing the waste and recycling performance of an aged care facility delivers benefits such as:

- ✓ Provides a baseline measurement of performance. A facility can then assess and track the effectiveness of any actions and deliver feedback on its success.
- ✓ Enables a facility to benchmark their performance against other facilities.
- ✓ Helps to find facility specific improvement opportunities.
- ✓ Helps in understanding the costs of waste and recycling services.
- ✓ Helps when developing a waste and recycling plan for a facility.

Attempting to improve practices onsite without understanding the baseline performance may lead to uninformed interventions.

## How to review performance

Reviewing current performance involves understanding and assessing the key components of how waste and recycling is managed at the facility, including:

- Waste generation and resource use
- Waste management systems and processes
- On-site equipment and infrastructure
- Waste services and contracts.

Once all these components have been assessed your current waste and recycling performance can be determined, improvement opportunities can be identified and then implemented at appropriate times.

## What is involved

The box below summarises key steps involved with undertaking a review.

**Steps involved in reviewing facility performance**

1. Become familiar with the Better Practice Guide.
2. Utilise the Better Practice Tools to review the different aspects of managing waste and recycling at the facility. This involves:
   - Using the *Waste and Recycling Performance Calculator* to estimate current performance.
   - Completing Sections 1-3 of the *Assessment Workbook* to identify improvement areas.
3. Develop a Waste and Recycling Implementation Plan (see Section 4 of the *Assessment Workbook*) based on the review outcomes.
4. Implement the actions required.
5. Undertake follow-up reviews of performance (e.g. every 6-12 months) to see how the facility has progressed against identified actions.

## What components are reviewed

### WASTE MANAGEMENT SYSTEMS AND PROCESSES

A waste management system is the formal (or informal) process of dealing with waste from the point where it is generated until it is collected. **Figure 1** below shows a high-level overview of the steps in a waste management system at a facility.

It is important that a facility's waste management system(s) is documented. This allows a facility or organisation to review the performance of its waste management system(s). A well-thought-out waste management system enables a facility to:

- Create clear practices, documents and expectations for staff to follow.
- Provide consistency in employee training (e.g. inductions) of waste and recycling management at the facility.
- Ensure safe and effective waste and recycling management takes place.


**Figure 1:** Waste Management System (WMS)

### RESOURCE USE

A large cost to facilities is for products that are wasted due to overbuying or inefficient operations, such as food wastage in kitchens. This can be avoided and/or reduced through improved procurement and operational processes.

Facilities also bear costs in paying for the management and disposal of excess or avoidable packaging, which can be reduced by working with suppliers.

### WASTE SERVICES AND CONTRACTS

Understanding the current services used by the facility, including associated service costs, is an important aspect of reviewing performance. This also helps to identify additional or alternative services available.

Waste and recycling collection services are generally undertaken by commercial collection companies. However, some aged care facilities, particularly in regional areas, may access services provided by their local council.

### ON-SITE EQUIPMENT AND INFRASTRUCTURE

The selection of supporting equipment and infrastructure can affect the outcomes of a systems performance, costs for collection, time taken to manage waste and recycling and recycling outcomes.

Equipment and infrastructure may include:

- Bins and containers for collecting materials.
- Trolleys and equipment used for transporting materials.
- Plastic liners for collecting general waste and compostable liners for collecting food scraps and other compostable materials.
- Larger bins (e.g. 1100L, skip bins) for aggregation of waste and recycling.

# Key considerations for improving waste and recycling performance

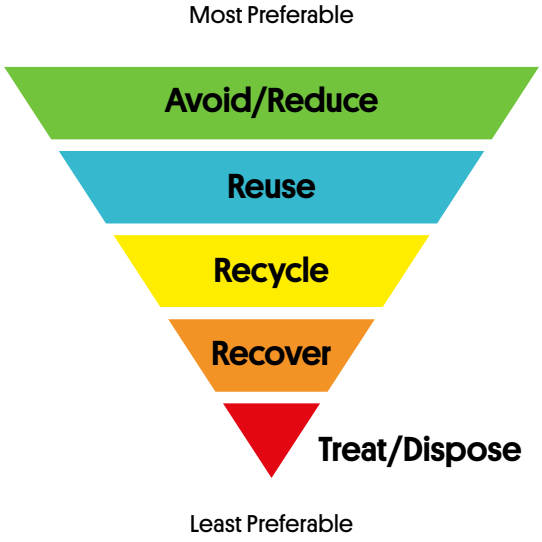
## Environmental drivers

Aged care providers may be motivated to increase waste and recycling performance to improve staff job satisfaction and meet customer expectations and corporate responsibilities. Facilities also need to comply with environmental regulations, such as the state-wide bans on sending certain wastes to landfill, including fluorescent lighting, E-waste, and other hazardous waste. [1]

## The waste management hierarchy

Improvements to solid waste performance should be based on the principles of the waste management hierarchy (**Figure 2** below), the nationally and internationally accepted guide that sets out the preferred order of waste and resource recovery management practices, from most to least preferred. The Guide utilises principles of the waste management hierarchy to provide guidance on how aged care facilities can achieve the preferred order of waste management practices in everyday activities and processes.

**Figure 2:** Waste management hierarchy




**Avoid/Reduce**

Avoid/reduce considers waste in the design before a product is created. It is inefficient to pay the financial and environmental costs for waste twice, first in creation and then in disposal. Waste shows that a system or process can be designed better. This may mean changing internal practices to preference actions that avoid the consumption of resources or incrementally reduce their use.

**Reuse**

Reuse means designing products for flexibility and durability, so they aren't disposed of until there is no other option available. This may mean donating working items that are no longer needed (e.g. quality furniture) or reusing elsewhere on site.

**Recycle**

Recycle means collecting, sorting and processing materials so that they can to be used again in the creation of a new products. For some streams, recycling is more cost-effective than landfill.

**Recover**

Recover is where materials that cannot be recycled are converted to be used to produce energy. This helps maximise the waste material not able to be recycled as a resource.

**Treat/Dispose**

Some waste materials may be hazardous (e.g. medical waste) and need to be treated to minimise harm. Disposal to landfill should be used when no other actions are workable.

[1] www.epa.sa.gov.au/data_and_publications/standards_and_laws/waste_to_resources_policy/landfill_bans

## Costs for managing waste

Regardless of whether bins are collected by a commercial operator or a local council, managing waste and recycling at a facility comes at a cost. These costs are made up of the time for staff to collect and manage waste within a facility, as well as service costs. A large, but less visible cost is purchased products that are wasted due to overbuying or inefficient operations, such as food wastage in kitchens.

## Waste service charges


### WASTE COLLECTION COSTS

These include the costs for the drivers, trucks, bins, fuel and other administration or business costs. Charges can be either per bin lift (even if not full) or by weight collected. Collection costs may also include bin rental costs, depending on the contractor. Costs can vary depending on the type of material, size of the bin and location of the disposal/processing facility.

### DISPOSAL OR PROCESSING COSTS

These include the costs for sorting the material, processing it into new products or resources, treating it for safe disposal, and/or disposal into landfill. Costs can vary depending on the location and type of processing or disposal facility and the quality or contamination rate of the material.

For example (not including collection costs), the gate rate for receiving waste at a landfill in Metropolitan Adelaide in 2018 is around $130-$150 per tonne (including Levy). This is compared to the gate rate for receiving separated food waste at a commercial composter, which is around $30-$50 per tonne. As a result, for some streams, there may be a direct financial benefit for separating material for recycling, rather than disposal into landfill.

## SOUTH AUSTRALIAN SOLID WASTE LEVY COSTS

The SA Solid Waste Levy is a charge applied to every tonne of waste disposed of in a landfill. Its purpose is to promote recycling and resource recovery and reduce the amount of waste sent to landfill, as per the waste management hierarchy (see section overleaf).

The levy rate typically rises each financial year due to seasonal indexation and rises above the seasonal indexation factor have also previously occurred (**Figure 3**). To future proof against further increases in landfill costs it is important that aged care facilities work towards increasing their recycling and resource recovery. More information on the SA Waste Levy is available from the South Australia Environment Protection Authority.

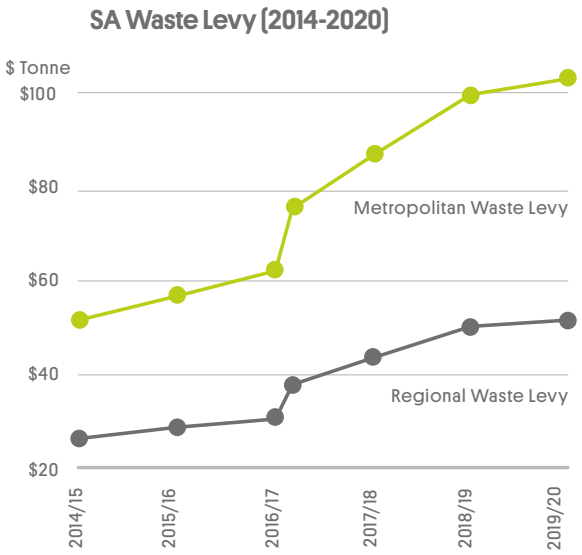



**FIGURE 3:** SA WASTE LEVY (2014-2020)

## SECTION 1

# Facility Wide Guidance

## 1.1 Understanding a facility's waste and recycling needs and practices

### How much waste does an aged care facility generate?

The amount of waste generated at an aged care facility depends on:

- Size and number of aged care beds.
- Location (e.g. high-density area or rural).
- Management practices (e.g. procurement practices and efficiency of resource use).

A review of 26 aged care facilities in SA in 2017 and 2018, found that waste and recycling generation varied between 0.85kg to 7.83kg per residential bed per day. A typical aged care facility generates 2.89kg per bed per day. This does not include waste generated from renovations (e.g. construction and demolition) or other large events and temporary activities such as office refurbishments.

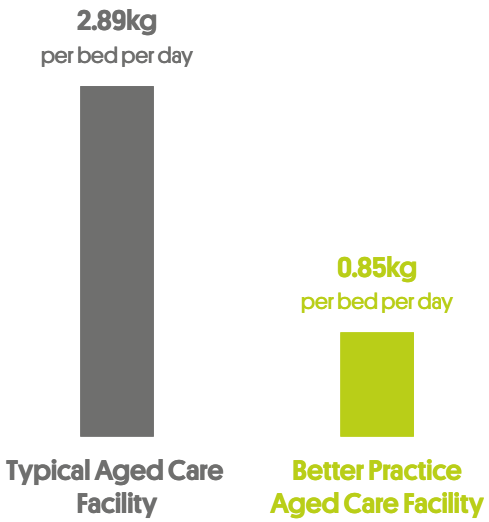



**Figure 4:** Comparison of waste generation at a typical aged care facility compared to a better practice facility

### Landfill diversion

Landfill diversion is the amount of waste that is sent for reuse, recycling or resource recovery compared to the amount that is sent to landfill.

Previous facility reviews found that the landfill diversion rate varied from less than 1%, to 77% (which is considered current better practice). The typical landfill diversion rate across the facilities reviewed in 2017 and 2018 was 40%.

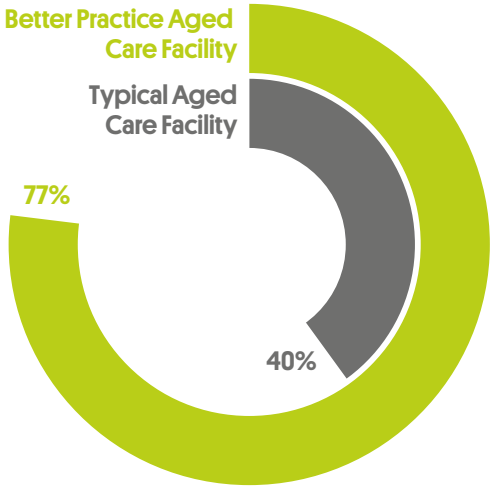



**Figure 5:** Comparison of landfill diversion rates at a typical aged care facility compared to a better practice facility

## What waste streams do aged care facilities generate?

Aged care facilities generate a variety of waste streams, including:

- Food and garden waste
- Cardboard, paper and confidential paper
- Bottles, cans and tins
- Continence product waste
- Medical waste
- Hard waste, E-waste, batteries and lighting

Section 3.1 provides further information on each of the key streams likely to be produced by a facility.

## What waste and recycling streams can be collected from an aged care facility?

Contractors (and some councils) can collect a variety of streams for either recycling, resource recovery, treatment and/or landfill disposal. **Table 1** overleaf summarises the typical waste and recycling streams available for collection and their common processing or disposal pathways.

**Figure 6** shows the service profile of an aged care facility with a better practice system. At this facility, approximately 40% of waste is recycled, 29% of dry residual waste sent to an energy recovery facility and the remaining 30% (comprising only of continence product waste, medical waste and sanitary waste) is sent to landfill. To improve performance further, this facility should work towards diverting materials from the dry materials stream to the comingled recycling stream, which has a higher preference on the waste management hierarchy.

**Figure 6:** Services profile at a better practice facility

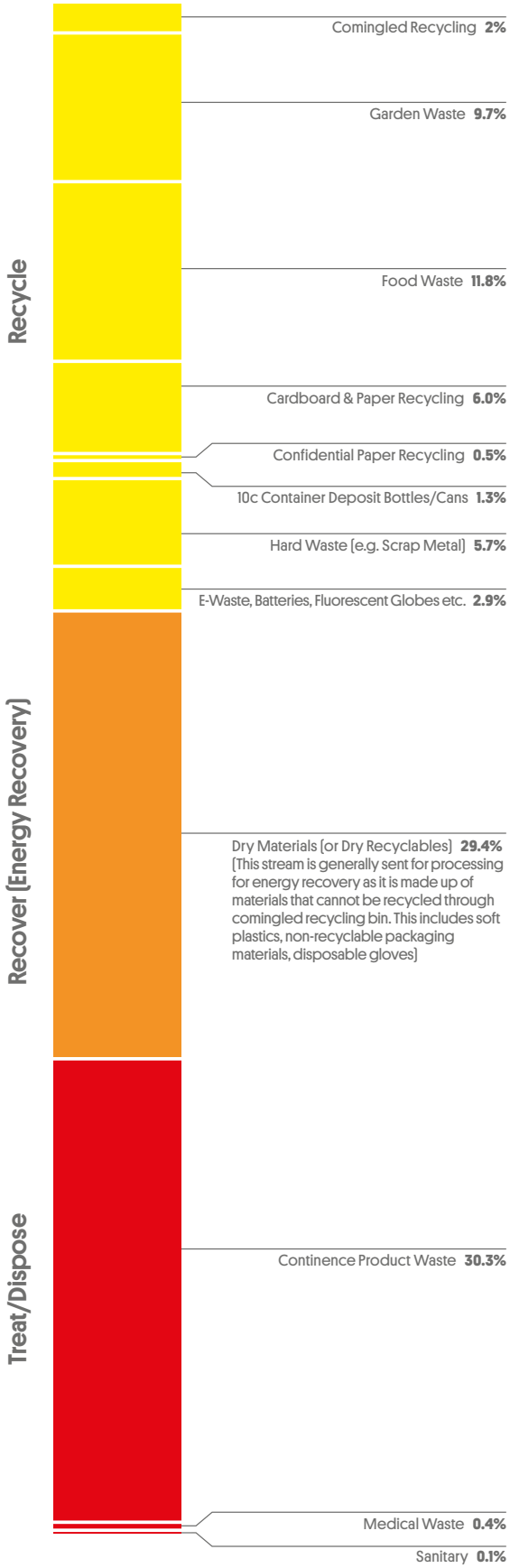


**Table 1:** Common waste and recycling services at aged care facilities

| | STREAM | MATERIALS | WHAT HAPPENS TO IT? |
|---|---|---|---|
| RECYCLE | **Comingled recycling** | Plastic containers, aluminium cans, glass bottles and jars, tin cans, mixed paper and cardboard | Recyclables are separated at a Materials Recovery Facility (MRF) and baled before being sent to recycling markets. |
| | **Cardboard or mixed paper/ cardboard** | Cardboard only service for sites that generate significant volumes | Baled and then recycled. |
| | **CDL (10c) containers** | Containers (e.g. bottles and cans) that attract a 10c refund | Refund provided by collection depots before recycling into new products. Returns are often used by staff (e.g. events). |
| | **Organics** | Food waste, garden waste | Composted by a commercial composter for inclusion in soil improvement products. |
| | **Confidential paper** | Confidential paper is shredded/destroyed either on-site or off site. Paper shredded by facility staff should be disposed of in organics bin or if not available the general waste bins. *Note: Shredded paper should not be put in comingled recycling bins.* | Commercial shredding (on-site or off site) is recycled. Shredded paper disposed of in an organics bin is composted by a commercial composter. |
| | **E-waste** | Computers, TVs, batteries and other electronic items. *Note: E-waste is banned from landfill in SA* | Disassembled into component parts and recycled. |
| | **Fluorescent lights** | Fluorescent tubes and globes. *Note: These materials are banned from landfill in SA* | Glass may be recovered and recycled hazardous materials (e.g. mercury) are treated and safely disposed of. |
| | **Gas bottles** | Pressurised gas cylinders, oxygen bottles. *Note: Pressurised cylinders are banned from landfill in SA* | Hazardous materials are extracted and safely disposed of. Gas may be recovered and recycled. |
| | **Building waste** | Building waste from renovations | Bricks, concrete, rubble can be processed into new products or used as fill. |
| | **Soft plastic** | Soft plastic packaging | Recycled into new plastic products (if collected as a separate stream). |
| | **Hard waste (metal items)** | Steel bed frames, whitegoods | Disassembled into component parts and recycled. |
| RECOVER | **Dry materials, dry recycling or dry residual waste** | Includes dry waste material (e.g. unrecyclable packaging, laminated plastics). A dry materials stream may be provided by some contractors alongside comingled recycling. It is important that dry material bins are not contaminated by food and other wet waste. | Material undergoes a resource recovery process to extract some recyclable items (e.g. metal, cardboard). Remaining materials are turned into a fuel for use as an alternative to fossil fuels in industrial processes (e.g. gas alternative in a cement kiln). |
| | **Hard waste (mixed)** | Large items including wooden furniture, couches, mattresses | Suitable resources are recovered (e.g. metals) and remaining material can be turned into an alternative fuel. |
| TREAT/ DISPOSE | **Residual Waste** | Waste items that are unsuitable for recycling (e.g. non-compostable continence products) | Disposed of in landfill. |
| | **Medical Waste** | Sanitary waste, clinical waste, anatomical waste and cytotoxic waste | Sterilisation before incineration or landfill disposal. |

## 1.2 Preparing a waste and recycling implementation plan

### What is a waste and recycling implementation plan?

A waste and recycling implementation plan is a document that details commitments and targets the organisation is willing to commit to achieve better practice. An implementation plan provides a summary of an aged care facility or organisation's:

- ✓ Current waste and recycling performance.
- ✓ Commitment to reduce waste generation and increase recycling and resource recovery.
- ✓ Targets for increasing landfill diversion and reducing waste generation.
- ✓ Actions required and the personnel responsible to meet waste and recycling commitments and targets.

An ideal time to develop a waste and recycling implementation plan is upon the completion of a waste and recycling review.

#### STAFF RESPONSIBILITIES

It is important to ensure that all staff are aware of the implementation plan and the organisation's commitment to better practice. Staff involvement and performance in waste and recycling activities can be through:

- ✓ Including recycling expectations and practices in job duty statements.
- ✓ Outlining practices in policies and procedures documents.
- ✓ Creation of a sustainability committee.

These methods help progress the implementation plan and allow staff performance to be measured.

### What to include

- An executive summary of the organisation's commitment to reducing waste generation and increasing recycling and resource recovery. It should also outline the reasons for this commitment (e.g. cost reduction, environmental performance).
- The baseline (and previous years) waste generation and landfill diversion for the facility(s).
- Targets for landfill diversion, reduction of waste generation (kg per bed/per day) and timeframes to achieve targets.
- An action plan for any identified improvements required and the personnel responsible in implementing the actions.
- Staff training requirements and obligations for meeting commitments and targets (e.g. induction guidelines).

It may also include:

- Incentives for best site or workplace area performance and/or other feedback and strategies to keep staff engaged.

### Developing an implementation plan

A waste and recycling implementation plan can be a standalone document, or it can form part of a facility or organisational environmental management plan or Work Health and Safety Plan. Refer to Section 3 of *Assessment Workbook* for a template.

## 1.3 Procurement of waste and recycling collection services

### Service procurement

Procuring waste and recycling services depends on the size and scope of the services required and can be completed through:

- **Direct quoting**
  Generally used by individual sites or small organisations (e.g. 2-3 sites).
- **Release of a tender (public or select tender)**
  Used by larger organisations.

It is advantageous to receive responses from at least three waste and recycling contractors if possible. This allows a competitive procurement process as well as cost effective and applicable services to be contracted.

### Developing specifications

When developing specifications, key considerations to incorporate into the tender document include:

- Provide accurate and sufficient data on past and current services and performance.
- Provide detailed information on collection locations, access and current bin types, including photos.
- Outline whether the contractor needs to supply bins, or they will be provided by the facility.

These considerations allow potential waste service contractors to assess the service delivery to the site accurately and adjust their response.

### What to ask for in a contract or tender

When procuring waste and recycling services, it is important to ask for:

- ✓ A breakdown of what is included in the contract and the charges for each component (e.g. bin rental, lift cost, disposal/processing costs, landfill levy costs).
- ✓ Where each stream will be taken to for disposal/processing, and the method used (reuse, recycling, energy recovery or disposal).
- ✓ Provision of correct bin colours and signage.
- ✓ Other assistance (e.g. education, training).

It is also important to request monthly reports and invoices that provide information on waste services provided and associated charges, including:

- ✓ Total tonnes collected, including how it is calculated (e.g. assumed bin densities used).
- ✓ Environmental repots (e.g. landfill diversion, $CO_2$ emissions avoided by recycling).

If the facility is in the middle of a contract, there's an opportunity to ask for a greater level of accuracy and transparency of reporting in collection contractor invoices and reports.

**Council services available to regional sites**

Regional facilities may also be entitled to some collection services provided by their local Council. Council services are generally more cost effective than commercial providers but have less service options available (generally the same as available to residents) and services available to businesses vary between Councils. Regional facilities should consider available council services when developing specifications, to minimise collection costs.

## Steps involved in tendering services

For large aged care facilities (or group of facilities) wishing to procure waste and recycling collection services through a tender process, the following considerations should be made.

A checklist for these steps is at Section 3.4 Procurement checklist.

### 1. IDENTIFY THE SERVICES REQUIRED

Define the service expectations and outcomes, such as the services required, number of bins to be collected and the weights of waste and recycling collected the previous year. Tendering is also an opportunity to seek innovative collection methods and improved measures for service delivery.

### 2. PREPARE TENDER SPECIFICATION AND CONTRACTUAL DOCUMENTS

Develop the tender document to ensure the waste and recycling collection service meets the standards and expectations of the facility. It is recommended that performance specifications be used to identify key selection criteria, for example:

- Length of contract
- Collection, rental and purchasing costs
- Frequency of collection
- Recording and reporting capabilities
- Recycling/waste minimisation initiatives
- Education and signage
- Team experience
- Quality and transition plans and costs.

### 3. ADVERTISE THE TENDER

Advertising the tender can be done through informing potential suppliers (e.g. from experience or from researching contractors). There are also companies that specialise in advertising tenders and collecting responses (e.g. Tenderlink). Public entities may be able to utilise the SA government's SA Tenders and Contractors online service.

### 4. RESPOND TO QUERIES

It is important to clarify any queries raised during the tendering process. This may require negotiation which is a standard practice. It is also important to publicly provide addendum for all answered queries from tenderers (e.g. tender forum or email all tenderers).

### 5. TENDER ASSESSMENT

Evaluating and awarding contracts needs to be equitable and transparent.

Appoint a tender selection panel to review and evaluate tenders. The selection panel should analyse tenderers responses against key selection criteria. All key selection criteria and elements of the tender should be addressed and comply with the requirements of the tender. For public bodies awarding a waste management contract will need to comply with any statutory or legislative requirements.

### 6. AWARD CONTRACT AND EXECUTE

Award the contract to the most suitable tenderer. It is also important to communicate with unsuccessful tenderers and provide feedback on why they were not selected.

### 7. IMPLEMENT CONTRACT

Key to implementing a successful and effective contract includes undertaking effective contract administration to monitor and review contract performance, and continually identify opportunities to improve service delivery and facility performance.

Most contract difficulties should be able to be managed by the contract administrator. However, if required, independent assistance is sometimes required, to negotiate potential contract issues that are unable to be resolved by staff.

## Joint procurement opportunities

Joint procurement is the act of combining procurement services between two contracting authorities e.g. multiple facilities or organisations. Joint procurement may lead to:

- ✓ Lower prices due to economies of scale.
- ✓ Administrative cost savings as it removes multiple submissions and assessments of tenders.

Multi-site organisations are well placed to take advantage of this approach. Small independent facilities can also utilise this approach through forming networks with other facilities and developing joint procurement tenders.

### Considerations for regional facilities

Regional aged care facilities often have fewer services available from commercial waste providers, particularly for organics recycling. This is because travel distances and ensuring a consistent volume (tonnes) of waste for a service to be viable are key issues for waste service providers.

Additional services may become available and more affordable through joint procurement ventures either with other aged care facilities or similar waste generating organisations in the area.

## Cleaning and catering contracts

If an aged care facility or organisation uses an external contracted cleaning or catering service provider, it is important that contractor's processes are consistent with the facility waste and recycling systems. Considerations include:

- Job descriptions to make sure waste and recycling streams are collected separately.
- Appropriate bags or containers are used for collection (e.g. compostable liners for food waste, no bags for collecting comingled recycling).
- Key Performance Indicators (KPIs) and either incentives or penalties (e.g. for contamination caused by cleaners) are included in contracts.

It is difficult and potentially costly to change arrangements during the term of a contract. Therefore, it's important to ensure that any waste and recycling management duties required of cleaners or kitchen staff are clearly defined in the tender and contract before signing.

There may also be situations where waste and recycling collections are managed within cleaning contracts. For these arrangements it is important to ensure that contracts include:

- Minimum waste and recycling segregation systems.
- Information on where waste and recycling streams are being sent to and what processing or disposal activities take place.
- KPIs that ensure each waste and recycling stream is collected separately and inspections take place to monitor performance.
- Ensure induction and training is included for both cleaning and facility staff.
- Adequate equipment for sorting and carrying sorted waste is provided or included.

# 1.4 Bin signage

## Better practice signage

Consistent and clear signage is a key element of effective source separation and minimising incorrect disposal. All signage should comply with the Australian Standards (Section 3.2: Waste and recycling bin colour standards), using standard colours and be consistent throughout the facility.

The figure below, identifies the key components of a better practice bin station.

### CLEAR AND SIMPLE MESSAGING

- Combine the use of text and images. This ensures appropriate interpretation for people with English as a second language or low literacy skills.
- Signage should reflect the services offered.
- Encourage source separation.

### PROMINENT DISPLAY

- Ensure signage is displayed in a prominent position.
- Ensure that signage is placed to correspond with bins that it refers to.
- Signage that refers to bins not installed can cause confusion.

### CONSISTENCY

- It is important that signage is consistent throughout the facility and provides the same message.

## Available resources

Green Industries SA has developed signage available to organisations in SA. For a free printable copy of the signage contact Green Industries SA on (08) 8204 2051 or visit www.greenindustries.sa.gov.au/contact-us




## SECTION 2

# Area Specific Guidance

## 2.1 Kitchen and servery

Kitchen and serveries generate a significant amount of waste and recycling. Better practice actions can improve performance and lower costs.

### Avoid/Reduce

- ✓ Ensure the kitchen and servery staff induction includes waste and recycling processes.
- ✓ Ensure staff duty statements include information on waste and recycling processes.

#### PROCUREMENT

- ✓ Source food from local producers and suppliers to reduce food kilometres.

#### STOCK CONTROL AND SMART ORDERING

- ✓ Regularly review and record stock to ensure that food is not going out of date.
- ✓ Rotate stock. Store new deliveries at the back of storage areas and prioritise stock that has a closer use by date.
- ✓ Record wastage to aid opportunities for improvement practices.

#### PORTION CONTROL

- ✓ Develop guidelines (with a dietician) and communicate expectations for portion sizes (e.g. 80-120 grams of protein).
- ✓ Offer optional entrée size main meals to customers.
- ✓ Ensure kitchen staff are aware of the number of meals required to minimise preparation of excess serves.
- ✓ Record food wastage to aid opportunities for improvement practices.

#### AVOID UNECESSARY PACKAGING

- ✓ Discuss options with suppliers to reduce packaging (e.g. buying in bulk).
- ✓ Store food in reusable and sealable containers.
- ✓ Discuss options with suppliers to return packaging. This may encourage the supplier to adapt their processes. Consider this in future procurement tenders.

### Reuse

#### REUSUABLE PACKAGING

- ✓ Discuss options with suppliers to provide packaging that can be returned, sterilised and reused (e.g. returnable crates).

### Recycle

#### DONATING SURPLUS FOOD

- ✓ Donate unopened food that is past its best before date (not *use by date*) to charities.

#### KITCHEN AND SERVERY FOOD WASTE RECYCLING

- ✓ Separately collect organic waste (**Photo 1** and **2**) and general waste.
- ✓ Make recycling bins for comingled recycling and cardboard in kitchens accessible.

**Photo 1** (Left) and **2** (Right): Containers for collecting kitchen food waste (Left), and servery food waste (Right)

## 2.2 Operations and maintenance

Operations and maintenance staff are involved in managing a range of waste streams, including items that are banned from landfill.

### Avoid/Reduce

#### PROCUREMENT

- ✓ Where possible, purchase goods in bulk to minimise packaging (e.g. cleaning chemicals).
- ✓ Purchase products with high or 100% recycled content (e.g. toilet paper, tissues).

#### LIGHTING

- ✓ Transition from fluorescent lighting to low energy, LED lights. Financial or advisory assistance may be available for lighting upgrades.

#### E-WASTE

- ✓ When purchasing new equipment, include collection and recycling of electronic items in the purchase agreement (e.g. IT upgrades).

#### BATHROOMS

- ✓ Consider installing electric hand dryers in bathrooms.

### Reuse

#### OLD FURNITURE

- ✓ Donate quality, excess furniture to charities.

### Recycle

#### FLUORESCENT LIGHTS, BATTERIES, GAS BOTTLES, PRINTER CARTRIDGES AND X-RAYS

- ✓ Become a FluoroCycle Signatory for fluorescent light globe recycling.
- ✓ Hazardous items cannot be disposed into landfill, so these items should be collected in specific containers and swapped over when new items are delivered (e.g. printer cartridges), dropped off at collection locations or dedicated collections arranged.

#### E-WASTE

E-waste is banned from landfill. Electronic items should be recycled via:

- ✓ Hardware and electrical/white goods stores that have E-waste collection. Check first if they will accept from a commercial entity.
- ✓ Use E-waste collection services that can provide once-off or regular collections.

#### OLD FURNITURE

- ✓ If in disrepair, split furniture into components and recycle appropriately (e.g. metals). Dry materials may be able to be sent to facilities that create energy from waste fuels.

#### GARDEN WASTE

- ✓ Ensure garden waste is managed on site or disposed of through an organics service.
- ✓ If an external contractor manages the gardens, ensure they recycle the garden waste.

#### SCRAP METAL

- ✓ Separate metal from other waste streams and schedule collection via a recycler.
- ✓ Alternatively, schedule collection of whole hard waste items that contain mostly metals (e.g. white goods, broken beds) by a recycler.

## 2.3 Offices and administration

Opportunities to improve waste and recycling in offices and administration areas are largely based on reducing paper waste. It is also important that E-waste and other potentially hazardous wastes (e.g. toner cartridges) are recycled.

### Avoid/Reduce

#### DOCUMENT MANAGEMENT

✓ Where possible, manage records, information and other documents in a secure on-line system (e.g. cloud based). This avoids unnecessary printing.

#### PRINTER SETTINGS

✓ Set default settings for printers to double sided and black and white/ greyscale printing.

✓ Purchase or set up a 'follow-me' or 'pull printing system' where staff physically go to the printer and select their document before it is printed.

#### OFFICE SUPPLIES

✓ Procure stationary items and office supplies made from recycled materials (e.g. purchase only 100% recycled printer paper).

### Reuse

#### OFFICE SUPPLIES

✓ Provide a designated area for staff to store and reuse office supplies (e.g. folders, scrap paper).

### Recycle

#### BINS

✓ Use bin stations with consistent signage (**Photo 3**) to increase recycling rates.

✓ Remove under desk general waste bins to encourage staff to use a nearby bin station. Provide staff an under-desk paper recycling box.

✓ Provide food waste recycling bins in staff rooms and kitchens.

**Photo 3:** Better practice bin station and signage

#### PRINTER USAGE

✓ Explore a white paper only recycling collection service (separated white paper stream is easier to recycle and therefore generally costs less).

✓ Ensure that staff are aware that only documents requiring destruction go into the confidential paper bins, as this service is more expensive.

✓ Printer and toner cartridges are banned from landfill. Collect and recycle through organisations such as Planet Ark.

## 2.4 Residential and public areas

Smaller volumes of waste are generated across public areas, but these areas are highly visible to residents and visitors (e.g. foyers). Developing better practice systems in these locations can help communicate a commitment to sustainable resource management practices. The largest waste stream generated across residential areas is continence products.

### Reuse

- ✓ Develop policies for when residents (with family consultation, where applicable) have items they no longer need and that are appropriate to be donated.

### Recycle

#### BIN PLACEMENT

- ✓ Ensure co-located bin stations with appropriate signage are available to the public that reflect the services provided at the facility (e.g. general waste, comingled recycling and organics).
- ✓ Provide recycling options in resident rooms.

#### BATHROOMS

- ✓ Provide hand towel only bins and signage in bathrooms. These can be disposed of into the facility's organics recycling bins.

#### COMPOSTABLE CONTINENCE PRODUCTS

- ✓ Compostable continence products are available and facilities should monitor the price of these products and explore procurement options as they become a more viable option. Buying in bulk is likely to improve the cost effectiveness. Prior to purchase, ensure that the contracted organics service is able to accept these in collections.

### Treat/Dispose

#### MEDICAL WASTE

- ✓ Ensure that any medical waste/sharps produced in residential rooms are disposed of safely and correctly (e.g. by staff in approved containers).

#### CONTINENCE PRODUCTS

- ✓ Non-compostable continence products need to be disposed to landfill via a general waste service. There are no recycling options currently available in SA for non-compostable products.

## 2.5 Tenancies

Some aged care facilities have external tenancies (e.g. a café) that operate within the site. This is often administered through a contract or tenancy agreement and this can be utilised to improve waste and recycling processes.

### FOR UPCOMING TENDERS AND CONTRACTORS AGREEMENTS

- ✓ Ensure that better practices identified in this section are incorporated into upcoming tenders and contracts.

### FOR TENANCIES CURRENTLY WITHIN THEIR CONTRACT

- ✓ Discuss with tenants the benefits of making changes to their operations to align with facility wide systems.
- ✓ Ensure that that future tenancy contracts/ tenders will include assessment criteria based on actions to reducing waste generation and increasing recycling.

**Avoid/Reduce**

- ✓ Request that suppliers provide packaging for goods that can be returned, sterilised and reused (e.g. returnable crates).
- ✓ Discuss options with suppliers to return packaging. This may encourage the supplier to adapt their own processes and minimise excess packaging. This could also be a consideration for future procurement tenders.

**Reuse**

### FOOD AND BEVERAGES

- ✓ Ensure tenants that serve food and beverages use non-disposable items for in-house dining.
- ✓ Encourage tenancies to offer discounts to customers who utilise their own reusable coffee cups.

### USING AND DONATING LEFTOVERS

- ✓ Donate food that is past its best before date (not *use by date*) to food recovery organisations or charities.

**Recycle**

- ✓ Ensure tenants maintain and use bins that correspond to the waste services at the facility.
- ✓ Separately collect coffee grounds and other food waste items for recycling in an organics bin.
- ✓ Provide compostable takeaway containers which can be recycled through the organics bins. Note that clear signage is required to ensure people place only compostable containers in the organics recycling bin to avoid contamination issues.

## SECTION 3

# Further Information & Resources

# 3.1 Further details on each waste and recycling stream

**THE FOLLOWING STREAMS UNDERGO RECYCLING ACTIVITIES**

## COMINGLED RECYCLING

A comingled recycling stream is a mixture of recyclable materials, similar to a kerbside (yellow bin) recycling service. Material is sorted at a materials recovery facility (MRF), which separates and extracts recyclable material for further processing. Keeping contaminants out of this stream is critical to a cost-effective service.

**Common contaminants include:**

- ✕ Plastic bags and soft plastic
- ✕ Food waste and containers with food waste still in them
- ✕ Shredded paper

## CARDBOARD


If a facility generates a significant amount of cardboard waste, it may be feasible to have a designated cardboard collection service. Separated cardboard is easier to recycle by processors and can be a more cost-effective service for facilities, as it doesn't require as much sorting as comingled recycling.

## WHITE PAPER

A separate white paper service is important for facility's that have a large office and generate a significant amount of white paper waste. Separated white paper is easier to recycle by processors and can be a more cost-effective service as it doesn't require as much sorting as comingled recycling.

## CONFIDENTIAL PAPER


Most aged care facilities have a confidential paper service to securely dispose of sensitive materials such as medical records. Shredding of confidential paper is usually a high cost service and can be undertaken on-site or off site. To minimise disposal costs, it is important that only confidential items go into the confidential waste bin.

If shredding is undertaken by staff on site, it is important shredded paper is not placed in commingled recycling as it can clog up processing machinery. Shredded paper should be placed in an organics bin, or general waste bin if an organics service isn't available.

## THE FOLLOWING STREAMS UNDERGO RECYCLING ACTIVITIES

### FOOD WASTE

Food waste makes up an estimated 19% of the waste generated at an aged care facility. Separated food waste can be commercially (or home) composted. Some contractors may provide a mixed garden and food recycling collection service. It is important to educate staff on what can and can't go in an organics bin and that this is reflected in staff education materials and policy and procedure documents.

**Accepted items include:**

- ✓ All food scraps ('if it grows, in the bin it goes')
- ✓ Soiled paper and cardboard (e.g. pizza boxes)
- ✓ Certified compostable bin liners
- ✓ Separated paper towels and shredded paper.

**Common contaminants include:**

- ✕ Plastic bags and containers (including degradable and biodegradable items)
- ✕ Metal, glass or dirt/rocks.

#### Food waste recycling in regional areas

Regional aged care facilities may not have access to a commercial food waste recycling collection service. Facilities may wish to explore opportunities to divert food waste from landfill for example, on-site composting as part of a gardening program for residents, or feeding food scraps to chickens, either kept on site or taken home by an employee(s).

### COMPOSTABLE BIN LINERS

Food waste can be managed using compostable bin liners. The benefits of liners are that they:

- Can be commercially or home composted.
- Help keep bins or containers cleaner which can reduce water usage and odour issues.
- Allow easier transportation of food waste.
- Can include educational messaging which can encourage staff to recycle food waste and reduce events of contamination.

The challenge with using compostable liners is that they may cost more than plastic liners, however this cost is coming down with increasing use.

#### COMPOSTABLE VS BIODEGRADABLE/DEGRADABLE?

✓ **Compostable** products are made of natural plant starches and can be commercially or home composted. Products claiming to be compostable must be certified and meet the Australian Standard for compostability AS4736 (see logo below). Only compostable liners are accepted in a food organics service.

Compostable
AS 4736
ABAX 9999

✕ **Biodegradable or degradable** products are made of plastic and have negative environmental impacts. They also can contaminate composting processes. Some may have added chemicals, so they break down into smaller pieces, which can take many decades (or centuries) to breakdown.

## THE FOLLOWING STREAMS UNDERGO RECYCLING ACTIVITIES

### GARDEN WASTE

Aged care facilities with large gardens can generate significant amounts of garden waste (e.g. grass clippings, tree branches and prunings). Garden waste should be recycled into either mulch or compost products by:

- Hiring or purchasing a mulcher and processing onsite. Associated costs and WHS management need to be considered.
- Ensuring any external garden maintenance removes and recycles garden waste.
- Contacting a garden waste collection service.

Depending on a facility's location, contractors can sometimes provide a mixed garden and food recycling collection services.

### CDL (10 CENT) BOTTLES AND CANS

Many organisations collect CDL (10 cent) bottles and cans informally. The proceeds from these containers are often then utilised for staff events or resources. Creating a more formal system may streamline the process and reduce the input needed by staff to manage CDL containers. This may involve:

- Supplying dedicated 10c bottle and can bins, containers or cages with signage.
- These bins/containers should be easy to transport to the recyclers.
- Partnering with an organisation (e.g. Scouts South Australia) can provide regular collections and manage the refund process of the containers for a percentage of the refund.

### E-WASTE

E-waste is a growing and hazardous problem. In South Australia, it is banned from landfill and must be safely and environmentally recycled.

Many hardware and electrical/white good stores have E-waste collection. Check first if they will accept from a commercial entity or only accept from residents. Otherwise, there are E-waste collection services that can provide once-off collections, or regular collection if needed. When purchasing new equipment, it may also be possible for the collection and recycling of electronic items that are no longer needed, to be included part of the purchase agreement (e.g. IT system upgrades).

### FLUORESCENT LIGHTS, BATTERIES, GAS BOTTLES, PRINTER CARTRIDGES


Fluorescent lights, batteries, gas bottles, printer cartridges and x-rays are hazardous if disposed of into landfill (e.g. fluorescent globes can leak mercury into the environment). Recycling of these items is vital. Collection can occur through:

- Aggregating the items in specific containers and collected when new items are delivered or posted (e.g. printer cartridges).
- Dropped off at collection locations (e.g. councils, recycling centres).
- Arrange an on call or regular collection service for items.

## THE FOLLOWING STREAMS UNDERGO RECYCLING ACTIVITIES

### HARD WASTE


Facilities often produce a range of hard wastes. Opportunity exists to separate recyclable hard waste materials from general waste items to reduce collection costs. Better practice management of hard waste includes:

- Separating recyclable components (e.g. scrap metals) from other waste items.
- Having regular collection (e.g. every two months) of a scrap metal skip/stillage via a recycler.
- Having regular collection of whole hard waste items that contain mostly metals (e.g. white goods, broken beds) by a recycler.

Used mattresses should be considered separately to other hard wastes, as some mattresses are not suitable for landfill disposal without processing. If available, used mattresses should be collected by a mattress processor who dismantle mattresses (either by hand or through shredding) so that the metal components can be recovered and recycled.

### SOFT PLASTICS

Soft plastics recycling is an emerging area within the waste and recycling industry. Currently there are few options to recycle these, unless a facility has a large (commercial) quantity of soft plastics.

If staff are willing, collecting clean soft plastics and taking them to a supermarket that provides soft plastics recycling bins is currently an option.

*Note: Soft plastics should not be recycled through the comingled stream.*

### COMPOSTABLE CONTINANCE PRODUCTS (POTENTIAL FUTURE RECYCLING STREAM)

Continence waste was found to make up a large amount of waste sent to landfill from aged care facilities (approximately 1/3 of waste generated). Due to the material and moisture content, this material needs to be sent to landfill.

Compostable continence products are available and facilities should monitor the price and suitability of compostable continence products and explore procurement options.

Note, before including compostable continence products in the organics recycling bins, facility managers need to discuss with the waste provider and composter on whether they accept these products in the collection.

## THE FOLLOWING STREAMS COLLECTED UNDERGO A RECOVERY PROCESS (E.G. ENERGY RECOVERY)

### DRY MATERIALS OR DRY GENERAL WASTE


A dry materials stream (also referred to as dry general waste or dry recycling) undergoes less processing and sorting than a comingled recycling stream. This stream can take most dry waste material and can sometimes take items in bags.

The material undergoes a resource recovery process to extract some recyclable items (e.g. CDL items, metal and large cardboard). In South Australia, the remaining (or residual) material is then processed into a Process Engineered Fuel for use as an alternative to fossil fuels in a cement kiln.

It is important to confirm with your waste and recycling collection processor what processes this stream undergoes (recovery or recycling).

### BUILDING WASTE


Building and renovations produce significant amounts of waste and a large skip bin is often located onsite to manage this. Despite its specific purpose, a skip can often be utilised by facility staff to remove regular waste (due to convenience) or even opportunistic members of the public.

Skip bins are less cost effective than regular bulk bin (e.g. 1100L) collection for routine waste. Therefore, it is important to minimise the length of time that a skip bin spends on site, to ensure appropriate source separation and avoid unnecessary costs.

## THE FOLLOWING STREAMS COLLECTED UNDERGO TREATMENT (IF REQUIRED) OR DISPOSAL TO LANDFILL

### MEDICAL AND SANITARY WASTE


The collection and treatment of medical waste is legislated in South Australia. Currently, medical waste (and some sanitary waste) is sterilised or incinerated at specialised facilities. As such, this stream is a required, but significant, expense for an organisation. Ensuring all staff are aware of what constitutes medical waste and which bin is appropriate can help to minimise costs for this service.

### GENERAL WASTE

The general waste stream is composed of all residual waste that cannot be recovered for reuse or recycling. This stream generally goes to landfill and attracts the state landfill levy. Costs for landfill disposal are likely to continue to increase into the future as the state waste levy increases over time. Therefore, appropriate source separation and minimising the amount of waste going to landfill is a direct way to affect the costs of waste management.

## 3.2 Waste and recycling bin colour standards

The table below details the Australian Standards for the correct colouring of bin bodies and lids per each waste stream. These should be referred to when purchasing or procuring bins, as well as, for the colouring of signage.

**Table 2:** Source: Australian Standard 4123.7-2006 Mobile Waste Containers

| Types of material | Body | Lid |
|---|---|---|
| Garbage / General waste | Dark Green or Black | Red |
| Paper/cardboard | Dark Green or Black | Blue |
| Green waste/organics | Dark Green or Black | Lime Green |
| Recyclables | Dark Green or Black | Yellow |
| Metal cans | Dark Green or Black | Light Grey |
| Food waste | Dark Green or Black | Burgundy |
| Clear glass | Nature Green | White |
| Brown glass | Nature Green | Brown |
| Green glass | Nature Green | Nature Green |
| Mixed glass bottles | Nature Green | Yellow |
| Plastics | Dark Green or Black | Orange |
| Office paper | Blue | Blue |
| Electronics | Dark Green or Black | White |
| Clinical and related—incineration | Yellow | Orange |
| Clinical and related—technologies other than incineration | Yellow | Yellow |
| *Cytotoxic | Purple | Purple |
| *Radioactive | Red | Red |

**Appropriate hazard warnings shall be affixed.*

*NOTE: Where the bin body is metal it may remain natural or galvanized.*

## 3.3 Waste and recycling bins

The table below shows example of the diverse types and sizes for waste and recycling bins generally available to aged care facilities.

**Table 3:** Example of the types and sizes of waste and recycling bins

| Bin Size (L or $m^3$) | Example | Collection vehicle | Approximate dimensions (m) | | |
|---|---|---|---|---|---|
| | | | Height | Width | Depth |
| 120L -140L |  | Side lift or rear-lift | 0.93 | 0.48 | 0.55 |
| 240L |  | Side lift or rear lift | 1.08 | 0.58 | 0.74 |
| 660L |  | Rear-lift | 1.22 | 1.34 | 0.5 - 0.8 |
| 1100L |  | Rear lift | 1.48 | 1.36 | 1 - 1.2 |
| $1.5m^3$ |  | Rear-lift | 1.2 - 1.3 | 2-2.4 | 1 - 1.3 |
| $3m^3$ |  | Rear-lift | 1.3 - 15 | 2-2.4 | 1.4 - 2.3 |
| $4.5m^3$ |  | Rear-lift | 1.8 | 2 | 1.4 - 1.8 |

## 3.4 Procurement checklist

The table below provides an example checklist for the steps that are likely to be involved in procuring or tendering waste and recycling collection service contractors for an aged care facility.

**Table 4:** Procurement checklist

| Task completed | Completed? | Completed by |
|---|---|---|
| **Preliminary review/planning phase** | | |
| Define project team | | |
| Develop waste collection aims and objectives | | |
| Waste reporting data | | |
| Draft key specifications | | |
| Draft tender document | | |
| Develop list of possible service contractors to invite | | |
| **Tender phase** | | |
| Finalise specifications | | |
| Finalise request for tender document | | |
| Propose submission deadline date | | |
| Develop evaluation template/criteria | | |
| Appoint tender selection panel | | |
| Issue tender documents | | |
| **Evaluation phase** | | |
| Receive tenders | | |
| Evaluate tenders | | |
| Select preferred supplier and negotiate any conditions if required | | |
| **Contracting phase** | | |
| Award successful service contractor | | |
| Advise to unsuccessful service contractor(s) | | |
| Sign and commence contract | | |

## 3.5 Case study

### War Veterans - RSL Care SA

### Initial Review (2011)

RSL Care SA underwent a waste and recycling review of its War Veterans' Home aged care facility in 2011. This review measured the facility's baseline waste and recycling volumes. It also identified opportunities for improvement to management the site's waste and recyclables.

RSL CARE SA

Key recommendations from the initial review included:

- Removing under desk bins and introducing designated and well signed bin stations in kitchens and offices for general waste, comingled recycling and organics recycling.
- Introducing a separate continence waste service for landfill disposal.
- Maximising food organics recycling (ensure food scraps, tea bags and handtowels are placed in organics bins). Improving the cost effectiveness of food organics collection.
- Introducing garden organics recycling.
- Identifying opportunities with suppliers to reduce packaging and ensure it is recyclable.

## Follow-up Review (2017)

A follow-up review was undertaken in 2017. This review found that the facility had implemented most of the recommendations with the following outcome:

### COST OUTCOMES

- Overall waste costs have remained consistent with 2011 costs. This is despite increased costs for waste disposal due to the SA waste levy which is now $100 per tonne (up from $26 per tonne in 2011).
- 30% reduction in food wastage has resulted in large financial savings.

### BUSINESS MANAGEMENT OUTCOMES

- Sorting waste makes it easier to identify where it is being generated and implement actions to cut waste across the business.
- Facility is now meeting EPA legislative requirements of landfill bans for E-waste and fluorescent lights.
- Greater staff awareness in waste performance helps to implement improvements.

### ENVIRONMENTAL OUTCOMES

**42%**
**LANDFILL VOLUMES DOWN**

**Landfill volumes down by 42%**
**(from 44.8 to 25.7 tonnes per annum)**

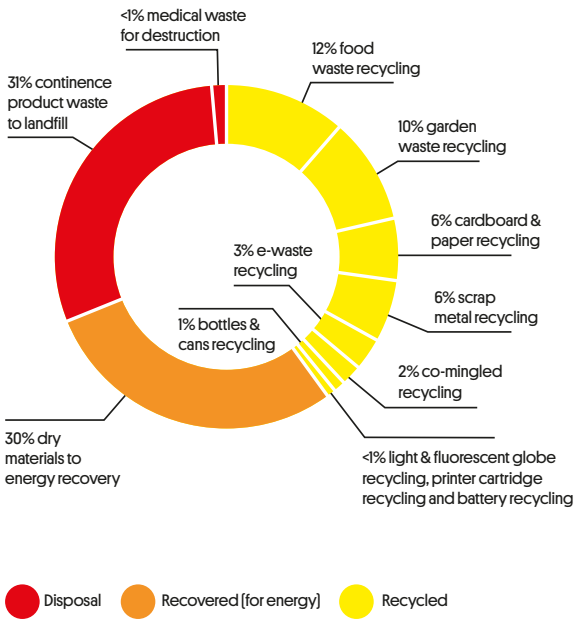
**Reduced food waste by 30%**
**(from 7.3 to 5.1 tonnes per annum)**

**Recycling 10 different waste streams**

**Only continence waste is sent to landfill**
**(as no current option to recycle)**

## CURRENT WASTE STREAM COMPOSITION

The follow-up review found that the facility's waste and recycling stream is currently made up of around:




## FUTURE IMPROVEMENT OPPORTUNITIES

Key recommendations from the follow up review included:

- Focus on shifting recyclable materials from the dry materials stream to the comingled recycling stream, so that there is a better recovery of resources, rather than sending them to energy recovery.
- Continue to investigate the availability of affordable compostable continence products.

## Conclusion

RSL Care SA are proud of their achievements in better-practice waste and resource management. Undertaking performance reviews has helped them achieve good outcomes for the environment, cost management and makes good business sense.