



## CASE STUDY – IMPROVING RESOURCE RECOVERY FACILITIES

### Moonee Valley Transfer Station

#### Overview

The Moonee Valley Transfer Station is a resource recovery centre/transfer station located nine kilometres north of the Melbourne Central Business District owned and operated by the City of Moonee Valley. The facility has been operating for 12 years, with the number of recycling streams increasing significantly over that time.

The site layout includes a large range of recycling stream drop-off points, which are strategically positioned around the site and provide convenient access to customers as they drive along the designated route, along with a saw tooth bin arrangement for bulk waste drop-off. This layout encourages customers to drive through the centre of the site and drop off materials in a manner that maximises resource recovery and reduces disposal costs for customers. A council “Sort and Save” marketing campaign encourages customers to increase their recycling activities and save on disposal costs.

The transfer station provides the following services for local residents:

- > A dedicated facility with twenty materials recycling streams, along with general waste items, which encourages customers to segregate their materials.
- > A free compost and mulch collection service (subsidised by the Metropolitan Waste and Resource Recovery Group).

#### Resource recovery materials accepted

The site accepts a large number of items suitable for recycling at no charge and accepts general waste items at cost.

##### Recycling items accepted

- > aluminium (cans, pots, pans and window frames)
- > car and alkaline batteries
- > cardboard, paper
- > carpet
- > cooking oil
- > engine oil (20 litre limit)
- > e-waste (including computers, keyboards, laptops, printers, printer cartridges, motherboards, network and memory cards, cameras, fax machines, telephones, televisions)
- > mobile phones and accessories
- > fluorescent tubes and compact fluorescent lamps
- > furniture items
- > gas bottles
- > hard rubbish
- > mattresses
- > paint (20 litre container limit, no limit on total volume)
- > plastics (codes 1–7), (i.e. plant pots, buckets, bags, crates)
- > polystyrene
- > steel and metal (guttering, appliances, whitegoods, roofing and bicycles)
- > textiles (re-useable shoes and clothing)
- > timber and fencing
- > tree pruning, garden rubbish and green waste
- > tyres.

The site does not accept food waste, chemicals (other than paint), syringes, asbestos, soil, concrete or sand and rubble.

#### SNAPSHOT

##### TONNES PROCESSED PER ANNUM

2,689 tonnes to landfill and 2,282 recycled processed per annum (2014-2015)

##### ESTIMATED RECYCLING RATE

Estimated at between 45-47%

##### NUMBER OF RECYCLING STREAMS ACCEPTED

21

##### TYPE

Transfer station and resource recovery centre, via customer “Sort & Save”, saw tooth bin arrangement.

##### NUMBER OF OPERATORS REQUIRED

4

##### FUTURE OPPORTUNITIES

Separation of timber and wood waste and establishment of a resale shop

**Management**

Moonee Valley Transfer Station is council owned and managed, with four council employees running site operations. The following are key management principles that contribute to the site’s success:

- > **A council run “Sort & Save” campaign**  
Encourages customers to pre-sort and drop off their waste and recyclables. This assists with the operation of the facility by:
  - providing customers with a lower cost drop-off service (than if sorted by council employees)
  - helping reduce contamination of recycling streams through source separation
  - enabling the acceptance of a higher number of recycling streams
  - being more cost-effective for council as fewer staff are required.

- > **Separation of plant and machinery from drop-off areas:**  
Plant and machinery are sectioned off and separated from the customer drop-off areas. A spotter is also present when plant and machinery are being used (e.g. when compacting materials or moving bins). This minimises the risk of accidents on site and means that plant and machinery can be used in a more efficient manner.

**Site layout and operation**

The layout of the site (below) enables effective source separation and drop-off for the customers, with the following process occurring:

- 1 Customers enter the gatehouse with their load.
- 2 The fee for the load is determined by the employee at the gatehouse and is based on:
  - the age of the customer (i.e. lower fees provided for pensioners)
  - the vehicle or trailer volume
  - the type of load (i.e. general waste load, furniture)
  - the amount of recyclable material able to be separated within the load (i.e. plastics, metals)
  - whether the load is source separated by the customer or the employees.
- 3 The employee directs the customer to the designated drop-off areas for the specific items in their load.
- 4 Customers drive one way through the site and drop-off waste and recyclables in the designated bin/ areas, which have clear signage.
- 5 Machinery is used to compact and transport waste and recyclables when required.

**Equipment**

Equipment utilised by the transfer station includes:

- > Small front-end loader with an attached backhoe – used to assist in manoeuvring material at the site, as well as compacting waste and recycling within bulk bins/areas (i.e. polystyrene).
- > Utility forklift – used to assist with transporting and loading material on pallets.
- > Cardboard baler – used for the compaction and baling of large amounts of cardboard.
- > Hook-lift truck – used for transporting bulk bins off the site for recycling or disposal.



### Future opportunities

A number of further opportunities that have been identified include:

- › **Separation of timber and wood waste suitable for recycling/mulching**  
Wood waste is currently being disposed of through the general waste stream and is going to landfill.
- › **Resale shop**  
There is potential to recover items that can be reused (rather than recycled) and sold in a resale shop. However, the main challenge is finding sufficient space to locate a resale shop onsite.

### Key learnings

- › **Encouragement and support from council management** – council support for the establishment of additional recycling streams has enabled the Moonee Valley Transfer Station to be highly effective.
- › **Ease of use, numerous recycling streams and a ‘Sort and Save’ customer campaign** – this model provides customers with a lower cost drop-off location to dispose of their waste and recyclables and increases resource recovery rates, as well as returns from materials sold (i.e. metals). Clear signage for each waste and recycling stream drop-off location is also very important.
- › **Prioritising customer service and good housekeeping** – these priorities allow customers to be supervised and assisted by site employees and ensure the site is neat and tidy. This establishes an expectation for customers to place their materials in the appropriate locations and keeps the site safe and presentable which also encourage return clientele.
- › **Regular checking of available recycling options** – new options for recycling are regularly becoming available for materials (e.g. rigid plastics) and external pricing for recyclable streams can often change. Regular checking of recycling options and external pricing ensures the most cost-effective options are being provided.

### Further information

For more information contact Sustainability Victoria on 03 8626 8700 or visit [www.sustainability.vic.gov.au](http://www.sustainability.vic.gov.au)