



## CASE STUDY – IMPROVING RESOURCE RECOVERY CENTRES

# Mount Scobie (Kyabram) Transfer Station

### Overview

Located approximately five kilometres west of the small regional town of Kyabram, the Mount Scobie (Kyabram) Transfer Station provides resource recovery services to the region and is owned and operated by the Shire of Campaspe.

The transfer station opened to the public in 2000 and forms part of the Goulburn Valley region's waste management infrastructure. Recently, it has undergone significant upgrades, which were completed in November 2015. The upgrades included construction of a large shed in which to separate and store recyclable material. The shed also includes a large area for the drop-off of resalable materials and items, which are sold back to the community.

### Waste and recycling items accepted

The transfer station provides the towns of Kyabram, Stanhope, Girgarre, Tongala and their surrounding districts (an estimated population of 13,000) with a dedicated facility to source separate and drop-off a number of recycling material streams, as well as some general waste items.

The site does not accept asbestos, grease trap waste, industrial food waste, dead animals and offal, night soil or sewerage, hazardous toxic substances, liquid wastes (except approved oils) or logs and stumps in excess of 300 millimeters in diameter.

### Recyclable items accepted

- > batteries
- > bricks
- > concrete
- > cardboard
- > chemical drums (empty)
- > e-waste and electrical devices
- > clothing
- > commingled recycling
- > scrap metals (ferrous and non-ferrous – including water tanks bed frames, bikes, roofing iron, copper, aluminium, brass, fencing wire)
- > fluorescent lights
- > garden organics (green waste)
- > gas bottles/fire extinguishers (empty)
- > mattresses
- > mobile phones (includes batteries and other mobile accessories)
- > motor oil (up to 20 litres)
- > paint tins (empty – up to 20 litres)
- > paper
- > plastic (other than commingled recycling)
- > silage wrap
- > timber
- > tyres
- > whitegoods.

### SNAPSHOT

#### TONNES PROCESSED

Pre-transfer station upgrade:  
Approximately 1,100 tonnes of waste sent to landfill per annum.

Post-transfer station upgrade:

- > Approximately 900 tonne of waste sent to landfill per annum (18% reduction to landfill recorded).
- > An estimated 200 tonnes per annum additional recycling, including a 4% overall increase in recovered commingled recyclables.

#### NUMBER OF STREAMS RECYCLED 22

#### TYPE

Transfer station and resource recovery, via recycling and resale drop-off locations within main shed, and platform drop-off for bulk items.

#### NUMBER OF OPERATORS REQUIRED

One to two.

#### FUTURE OPPORTUNITIES

- > introduction of new recycling services, such as soft and polystyrene plastics
- > installation of weighbridge and electronic reporting and invoicing system
- > education area and display area, similar to that in place at Echuca Environment Centre
- > installation of covers over the skip bins.

### Continuous upgrades towards best practice

The objectives of the recent significant upgrade to the site were to:

- › significantly improve the effectiveness and efficiency of the site
- › significantly increase the number of recyclable material streams accepted at the site
- › create controlled traffic flows and all-weather access to improve the sorting, separating and storing of materials
- › create a space to implement recycling initiatives such as a re-sale shop, similar to that in place at the Echuca Environment Centre
- › improve site security and surveillance equipment
- › allow the closure of Kyabram, Tongala and Stanhope landfills.

Council commenced preparation and design works for the infrastructure upgrades in August 2014, with physical works completed in November 2015 after a three-month build time. The total cost for the project was \$748,400, which included a contribution of \$206,890 from Sustainability Victoria.

The project's works included:

- › construction of a large shed with concrete floor
- › upgraded site roadways and improvements to the hardstand
- › improvements to site security.

Since the upgrade, a number of positive impacts have been realised, including:

- › Immediate decrease in the tonnes of waste to landfill and skip bin movements. Council is confident these reductions experienced in the short amount of time the upgraded facility has operated will be increased upon throughout the year, as more initiatives are implemented and residents understand how the site operates and what materials can be recovered.
- › Greater efficiencies and improvements to the separation of loads and material movements. A large volume of material is being diverted to the re-sale shop and stillages, with drop-off locations strategically organised and separated to allow customers to recognise where to place various materials.
- › Improved traffic flow and a reduced risk of traffic accidents.
- › Signage improvements, which have resulted in improved materials recovery and education of users.
- › Positive feedback from users, who have indicated the site is now neater, more aesthetically pleasing and easier to use and that they are recognising the need to be cognisant of their behaviour toward waste management and to separate materials before coming to site.
- › Council is pleased with the outcomes of this project so far and is looking forward to further economic and environmental outcomes.



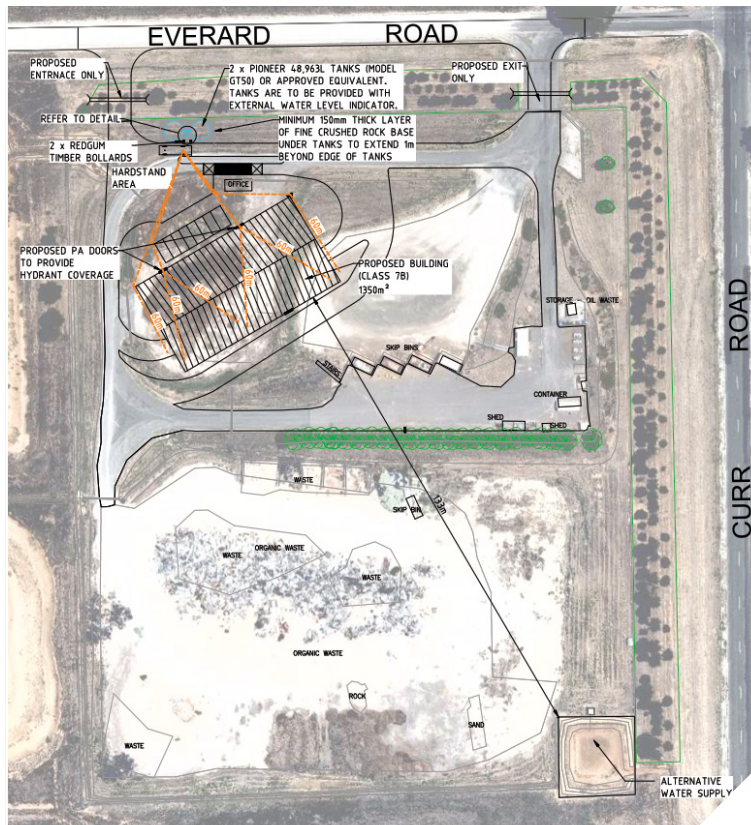
### Management of the facility

The Transfer Station is owned by the Shire of Campaspe and managed under contract by Ellwaste. The Transfer Station is currently managed by one Ellwaste employee per shift, with operating hours being 8:00am to 12:00pm Tuesdays to Fridays and 8:00am to 3:45pm Saturdays and Sundays. The following are key management principles that contribute to the transfer station's success:

- › The undercover drop-off area for customers and operators has:
  - increased OH&S for both customers and transfer station employees
  - provided customers with an all-weather location to sort, separate and drop-off recyclables
  - helped reduce contamination of recycling streams
  - enabled the acceptance of a higher number of recycling streams.
- › The installation of a gatehouse within the shed has:
  - enabled greater visual surveillance by operators and reduces the need for additional employees per shift
  - increased the site security and enables easier inspection of loads.
- › A good relationship with a well-managed and local recycling contractor has provided the council with access to a nearby materials recovery facility (MRF) in Echuca for the processing or the site's commingled and other recycling streams.
- › The provision of free mulch collection to the local community is sourced from green waste dropped off at the site by residents and processed on-site by a mulching contractor from Melbourne on an as needs basis. The mulch is available to residents for self-loading when the transfer station is open, as well as via loading by transfer station staff operating the site's front-end loader once a month. The mulch is also used for site and landfill rehabilitation and site beautification.



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### Site layout

The transfer station layout enables effective source separation and drop-off for the customers, with the following process occurring:

- 1 Customers enter transfer station and stop at the main shed gatehouse.
- 2 Gatehouse employees determine the fee for the load based on:
  - the vehicle or trailer volume and if it is waste
  - 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).
- 3 Customers drive through the transfer station and drop-off waste into the skip bins at the saw tooth platform and recyclables into the designated stillages, bins and areas.
- 4 Machinery is used to compact and transport waste and recyclables and bins when required.

### Equipment

The main equipment utilised by the transfer station is a large front-end loader with an attached backhoe.

This is used to assist in manoeuvring material at the site, as well as compacting waste and recycling within bins/areas (i.e. general waste).

### Future opportunities

Future opportunities identified by council for the transfer station include:

- › Continually introducing recovery pathways for additional materials, such as soft and polystyrene plastics, through the introduction of new services.
- › Installing a new weighbridge and electronic reporting system to accurately invoice and measure/calculate waste and recyclable material tonnages, diversion rates, as well as monitor site uses and promote the positive outcomes of the project. (The installation of a weighbridge was originally included in the upgrade design, but was unable to be installed due to cost.



However, provisions were put in place during construction to assist installation at a later date).

- › Undertaking media and promotional activities, including providing an education area and display similar to that in place at Echuca Environment Centre, to maximise people taking responsibility for and separating their waste.
- › Installing covers over the skip bins.

### Key learnings for similar extensive upgrades

Key learnings from certain components of the upgrades were as follows:

#### › Extensive planning phase and design for over-capacity

A lengthy planning phase was one of the most important elements in enabling the success of this project. Conducting an extensive planning stage ensures the design and operation of the site meets the project's aims and objectives, and designing for over-capacity assists with the transfer stations being able to accommodate greater forecasted volumes, and keeps the site neat and tidy minimising safety issues. Designing for over-capacity also enables further improvements and additions to be implemented after the major construction finishes.

#### › Construction of a large shed to house recyclables and resale items

Construction of a large shed assisted in mitigating challenges of remoteness and low population densities. As larger facilities can store greater amounts of recyclables, this enables lower collection frequencies by waste contractors and can also provide opportunities for group buying/joint procurements.

### 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)