RECYCLING

# RECYCLING FACTSHEET

Managing waste is one of the greatest environmental issues facing people today. Landfills are filling up very quickly, so it is more important than ever to reduce, reuse and recycle our waste.

Reducing waste is important for: protecting the environment, protecting our health and saving money. The simplest and easiest way to reduce waste is to recycle. Recycling involves the collection, sorting and reprocessing of suitable waste materials to create the same or different products. Instead of sending waste to landfill, recycling saves valuable natural resources, conserves landfill space and reduces greenhouse gas emissions.

## What is the recycling process in Lithgow?

Have you ever wondered what happens to your recyclables after they have been collected?

Once the Recycling Collection truck is full, your recyclable materials are transported to Polygrade in Rydalmere and separated through a Materials Recovery Facility (MRF).

Image: Materials Recovery Facility (MRF) working conveyer belt.


The first station at the MRF is where MRF staff manually sort through materials by hand to remove any obvious contamination such as household garbage, plastic bags and garden waste.

Recyclables than travel along a conveyer belt through a trommel. The trommel is a large rotating barrel with holes in the sides to allow certain materials to drop through. Heavy items like glass and steel drop through these holes, leaving behind lighter items such as paper and cardboard to travel to the end of the trommel. The paper and cardboard are manually sorted again to ensure there is no contamination before it is compacted, ready for reprocessing.

All other items travel along an inclined bouncing conveyer belt. Any remaining paper and cardboard travel upwards to join the paper line, while other items fall downwards to pass through a second trommel.

All materials then travel along a conveyer belt under a magnet, which attracts steel cans and aerosols.

The plastic, aluminium, glass and cartons continue along another conveyer belt and into the air classifier. Here, air blows the lighter items to a separate conveyer, leaving only the glass. The glass is transported to a glass sorting facility where it is separated into the colour streams; clear, green and brown.

The remaining materials pass through an electricity or “eddy” current. Strong magnets create the eddy current, which repels the aluminium cans away from the magnets and the rest of the material.

Finally, only the plastic bottles and containers remain. These are sorted using an optical sorting machine. A light registers each item as it passes along the conveyer belt. A signal is sent to the computer as it recognises what material type the item is. A shot of air blasts the item onto the correct conveyer belt to allow the different types of plastic to be baled separately for transport to the reprocessing facility.

For more information about the recycling process visit: www.jrrichards.com.au/or

Lithgow City Council
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# What can you recycle in your yellow lidded recycling bin

- Packing glass (bottles and jars only)
- All clean paper and cardboard
- Milk and juice cartons
- Steel cans and aerosols
- Aluminium cans
- Plastic bottles and containers (from the kitchen, bathroom and laundry)

Contamination of kerbside recycling can be a major problem. Contamination of recyclables with non-recyclable materials can not only ruin a load of useable recycling but can also obstruct the recycling process and cause danger to MRF workers. It is important that the following items do not go into the yellow lidded household recycling bin:

- Garden waste
- Polystyrene and foam
- Ceramics
- Nappies
- Hazardous waste (chemicals, syringes, medial waste etc)
- Any glass that is not a bottle or jar
- Soft plastics (cling wrap, biscuit and chip packets etc)
- Plastic bags

## Important - No Plastic Bags!

There is not enough time for workers in the factory to open bags to find out if there are high quality recyclables such as paper, glass, plastic containers or aluminium inside. Therefore, filled plastic bags are removed from the recycling process, sent to landfill and lost forever.

Additionally, plastic bags cannot be separated from other materials by the sorting machinery as they get caught in the conveyer belts and spinning parts. This can cause machinery breakdowns and requires the bags to be found and removed by hand, which is both time consuming and potentially dangerous as the entire factory has to be closed.

# How are materials recycled?

**Paper and Cardboard**

Materials are cleaned and screened removing staples and paper clips . Water is then added to create a mushy pulp. This is mixed with raw materials and dried. It is then flattened by rollers and sent to paper/ cardboard manufactures for processing.

**Milk and Juice Cartons**

Milk and juice cartons are recycled in a process similar to paper and cardboard. The cartons are soaked in water to separate the paperboard from plastic and aluminium layer. The separated material is then sent to manufactures for reprocessing.

**Steel and Aluminium**

Steels items are heated, melted and ready for reshaping into new products. Aluminium is heated, melted and poured into metal casts called ingots. They are then rolled into sheets for reprocessing.

**Plastic**

Plastic bottles and containers are shredded into small flakes and washed. These flakes are turned into pellets. These are then melted and made into new shapes.

**Glass**

At the reprocessing factory , glass is checked for contamination. It is then melted down to a liquid and moulded into new bottles.

When placing items into the recycle bin, there are some simple things you can do to prepare your recyclables:

- Flatten cardboard boxes
- Rinse/wipe out and squash aluminium and steel cans
- Do not squash aerosols
- Rinse/wipe out and squash all plastic bottles
- Remove lids off bottles and jars
- Place items in the bin loose; i.e do not place recycling in plastic bags

If you would like more information please contact Lithgow City Council on (02) 6354 9999 or the Waste Hotline 1300 728 978.