



## Did you know?

- Producing 20 cans from recycled materials uses the same energy as making one can from raw materials.
- For every tonne of aluminium recycled five tonnes of bauxite are conserved.
- Recycling one aluminium can saves as much energy as it takes to run a television for three hours.
- It takes 95 per cent less energy to make a can out of recycled aluminium and produces 95 per cent less greenhouse gas than making one from virgin materials.
- Aluminium is 100 per cent recyclable and the only thing preventing this is incorrect disposal.

## About aluminium

The primary source of aluminium is bauxite rock. Australia is the world's largest producer and exporter of aluminium, mining 40 per cent of the world's bauxite in Western Australia and Queensland. The Darling Range in Western Australia is one of Australia's largest mine sites.

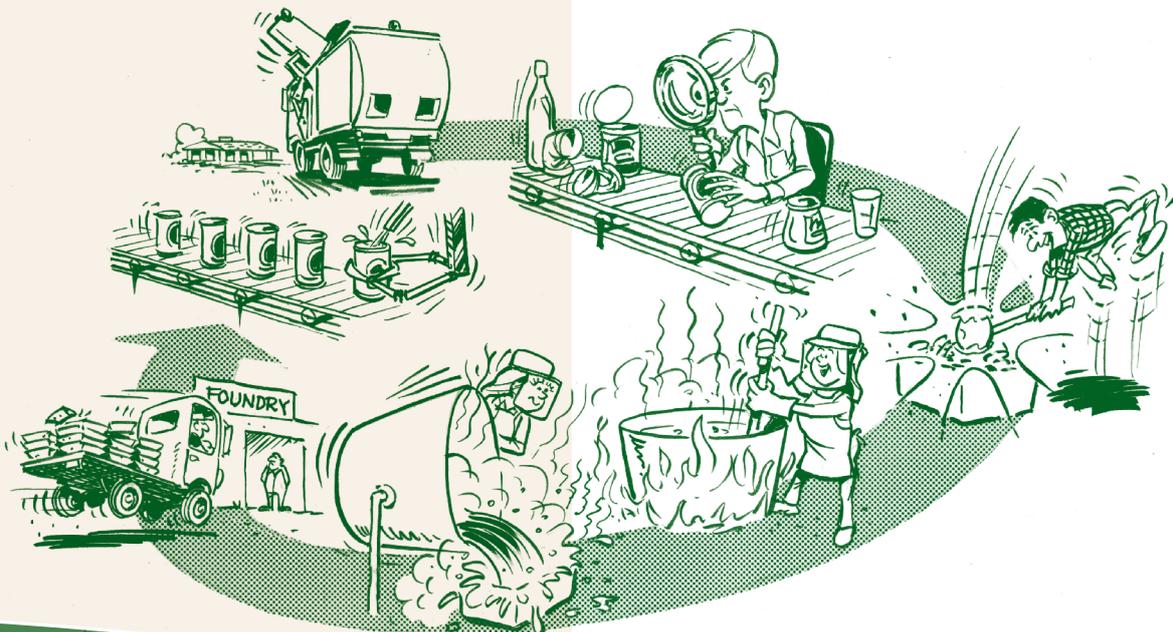
To produce aluminium metal, bauxite is mined in open-cut mines. Aluminium oxide (alumina) is then extracted in a refinery and converted into aluminium metal in a smelter. This increases the greenhouse gas emissions that are produced from burning the fossil fuels during manufacturing and transportation

The aluminium production process affects our environment in several ways. Large amounts of natural resources are extracted or modified from coal, oil, gas, and hydroelectricity dams for energy generation during the manufacturing aluminium. The refining of bauxite into alumina is also a water-intensive process. In 2007 2.5 kilolitres were used for every tonne of alumina production.

## Aluminium cans

Aluminium cans are very common today, but have only been used in Australia since 1969. Aluminium cans and aluminium foil are made from the best quality aluminium because only high quality aluminium can be pressed and rolled thinly and still stay strong.

Cans and foil are excellent for recycling because the recycling cost is much less than manufacturing aluminium from raw materials. Aluminium is a very valuable material in the recycling stream. In 2006-2007 approximately 1,277 tonnes of aluminium cans were recycled from kerbside collections by domestic recycling services in WA.



Aluminium recycling process

## Being Waste Wise about aluminium

By being Waste Wise about aluminium we can make a difference environmentally and economically. We can conserve mineral resources, reduce energy consumption from mining and transportation and reduce waste to landfill.

### Reduce

Aluminium cans are made for convenience, but mostly it is better to buy drinks in large bottles rather than cans. For example, using two-litre bottles of drink with reusable glasses to cater for a party or for your drinks at home, will reduce the amount of waste produced. When drinking in a restaurant or bar, consider buying drinks in jugs or glasses rather than cans.

Only use aluminium foil when necessary, for example when baking potatoes, simply prick them before they go in the oven rather than wrapping them.

### Reuse

Most aluminium packaging is used once and then recycled. However aluminium foil can be reused to cover food or protect grills. Once the foil becomes contaminated with food or oils it should be disposed of.

### Recycle

Aluminium cans can be returned in kerbside recycling collections and in recycling bins in public places. They are also collected at some schools. Both aluminium drink cans and clean aluminium cooking foil can be recycled.

Rinse and crush the cans. If you collect cans from public places, check that no sharp objects, such as syringes, have been placed inside the can before you crush it. Foreign objects in the can, such as stones, can interfere with the recycling process.

Recycling your aluminium cans really does make a difference. Not only do you save energy, water, prevent destruction of habitat, and reduce greenhouse gas production, but the metal is melted down to create useful everyday objects such as foil packaging, new cans, car engines, window and door frames, wheel chairs and prosthetic limb knee joints.

Check with your local council for specific details about how to recycle aluminium cans in your area.

## The recycling process

1. Aluminium is collected for recycling by contractors.
2. It is loaded on to the conveyer belt, screened and then crushed.
3. The cans are weighed and squashed together and baled into blocks.
4. The blocks are tipped into a rotary furnace where they are melted.
5. The molten aluminium is poured into a mould to make ingots.
6. The ingots are taken to where they can be formed into new aluminium items.

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## Websites

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