

# The benefits of recycling and buying recycled goods

Recycling is one way to reduce the impact of your waste on the environment.

While recycling is the most famous waste minimisation tactic, always remember where it sits in the international recognised waste hierarchy approach.

Every time you buy an item made of recycled material, it has helped to:

- reduce greenhouse gas emissions
- conserve energy
- conserve water
- conserve resources
- reduce waste to landfill
- reduce pollution
- save money
- create job opportunities.

## Recycling can reduce greenhouse gas emissions

Greenhouse gas emissions trap and hold heat in the atmosphere. Through buying products made of recycled material and with less packaging, you are reducing the amount of greenhouse gas emissions released in the manufacturing process.

The recycling process tackles the need to extract raw materials such as minerals, metals and paper fibres – a process that costs significant energy and greenhouse gas emissions.

Recycling your organic material (through composting or worm farming for example) is a particularly powerful way to reduce greenhouse gas emissions. This is because landfills are designed to be 'anaerobic' meaning there is very little air among the waste once it has been buried. Organic waste buried in these conditions decomposes to create 'landfill gas'. Approximately half of this gas is made up of methane – a potent greenhouse gas that can be 72 times more effective at trapping heat in the atmosphere than carbone dioxide over a 20 year period.

If an item is recycled, rather than being sent to landfill, you are helping to reduce the production of methane and other greenhouse gas emissions which lead to climate change.

### Did you know?

Recycling one tonne of paper and cardboard has a greenhouse gas emissions saving equivalent to driving a car 3713 kms – that's the distance from Brisbane to Melbourne and back again!

Recycling one tonne of plastic has a greenhouse gas emissions saving equivalent to driving a car 5894 kms – that's the distance from Brisbane to Alice Springs and back again!

Recycling one tonne of aluminium has a greenhouse gas emissions saving equivalent to driving a car 85,770 kms. That the equivalent of driving around Australia more than six times!

Making the effort to recycle aluminium is especially beneficial because it takes just 5% of the energy used to create new aluminium and emits only 5% of the greenhouse gases. It is for these reasons that approximately 75% of the aluminium ever produced is still in use today.

## Recycling can conserve energy

Items made from recycled materials have used a lot less energy than those made from original 'raw' materials. Raw materials such as trees, minerals and fossil fuels require energy for extraction, processing and transportation before manufacturing can begin.

### Did you know?

Every tonne of aluminium that is recycled saves enough energy to power 106 houses for a month!

## Recycling can conserve water

Items made from recycled materials have used less water than those made from raw materials. For example, producing paper from recycled material needs 99% less water than if produced from raw materials.

### Did you know?

In the last 10 years, Brisbane has saved more than 100,000 megalitres of water through recycling, which is enough to fill more than 40,000 Olympic-sized swimming pools.

In Australia, it takes 10 litres of water to make one sheet of A4 paper, that's 62,500,000 litres per tonne of new paper. One tonne of recycled paper saves 31,780 litres of water – that's enough water to fill 111 bath tubs!

Recycling one tonne of plastic saves enough water to fill 31 bath tubs.

Recycling one tonne of aluminium saves enough water to fill 1154 bath tubs.

## Recycling can conserve resources

Items made from recycled materials have conserved Earth's natural resources such as oil, minerals and trees. When we recycle, used materials are converted into new products, reducing the need to consume more natural resources. For example, recycling a tonne of paper is equivalent to saving 13 trees. Recycling helps to conserve valuable raw materials and protect natural habitats for future generations.

## Did you know?

Every plastic water bottle that is made needs a quarter of an equivalent-sized bottle of oil to manufacture, transport and store that water bottle.

Each year, Australians sends around 3.5 kilograms of steel cans to landfill (per person). That's enough steel to make 40,000 fridges. Every tonne of steel recycled saves 1131kg of iron ore, 633kg of coal and 54kg of limestone.

Aluminium is 100% recyclable and experiences no loss of properties or quality during the recycling process.

Glass is another product that is 100% recyclable. It can also be recycled over and over again, as opposed to other materials like plastic. Recycling 1000kg of glass is equivalent to saving 38 litres of oil. It also reduces the mining cost as well as conserving the environment. A discarded piece of glass can take hundreds of years to decompose. Littered glass can also be a hazard to animals and human feet, and it has been known to cause fires in the past.

Televisions and computers contain valuable non-renewable resources including gold, steel, copper, zinc, aluminium and brass. The amount of gold recovered from one tonne of computers is more than what is recovered from 17 tonnes of gold ore!

## Recycling can reduce waste to landfill

Recycling reduces our dependence on landfill. Landfills take up a lot of space and are expensive to build and manage. As our cities grow and waste levels rise, it is becoming harder to find suitable sites for landfill. Recycling reduces the need for landfill space and saves precious resources from being buried.

## Did you know?

- If 75% of televisions that are discarded annually were recycled instead, 160,000m<sup>3</sup> of landfill space would be saved every year.
- Australia is a global leader in the recovery and recycling of newsprint with a 78% recovery rate. Every tonne of paper and cardboard that is recycled, prevents 14 full wheelie bins of waste going to landfill. Every time we reduce our waste to landfill, we are in turn increasing the amount of time we have left to use the current site.
- Glass bottles can take up to 1 million years to break down naturally
- Every tonne of plastic that is recycled, prevents 32 full wheelie bins of waste going to landfill. Every time we reduce our waste to landfill, we are in turn increasing the amount of time we have left to use the current site.
- Every tonne of aluminium that is recycled, prevents 28 full wheelie bins of waste going to landfill. Every time we reduce our waste to landfill, we are in turn increasing the amount of time we have left to use the current site.

## Recycling can reduce pollution

Recycling reduces pollution caused by the extraction and processing of virgin materials to make new materials.

To recycle a product rather than sending it to landfill, eliminates landfill gases and toxins which need to be managed for decades later to prevent environmental harm. Recycling prevents poisonous toxins from items such as batteries, electronic waste or mobile phones ending up in landfill. Recycling organic products such as paper cardboard and timber reduces methane gases that are created in the anaerobic environment of a landfill.

## Did you know?

Electronic waste contains toxic substances such as, cadmium, arsenic, mercury that can pollute the environment and harm both animals and humans. Electronic waste and batteries can be taken to Brisbane's resource recovery centres for recycling.

Up to 15 milligrams of mercury is found in one fluorescent tube. Fluorescent lighting tubes and bulbs can be taken to Brisbane's resource recovery centres for recycling any day of the year or at a household hazardous waste free drop off day.

## Recycling saves money

Recycling saves money by recovering resources and avoiding the costs associated with making products from raw materials. Other cost savings can happen by sending less waste to landfill and therefore eliminating the management of reducing greenhouse gas emissions.

## Did you know?

More gold can be recovered from one tonne of television and computer e-waste than can be recovered from 17 tonnes of gold ore.

## Recycling can create job opportunities

According to the National Waste Report (2010), recycling benefits the economy through the recovery of resources, and creates jobs, with more than 9 jobs per 10,000 tonnes of waste recycled compared to less than three jobs for landfill disposal. Choosing recycled products provides local green manufacturing jobs

*Factual referencing for this document can be provided by Council's [Waste Education Team](#) upon request*