



Recycling begins with us!

Recycling is a constantly evolving industry, but a vital stage in the chain is the very first one – us!

Without a continuous and reliable input of recyclable items, it's not economically viable to maintain recycling facilities and invest in the development of new equipment.

So we each play an important role as our recycling habits influence the success of the whole recycling system. To help us all maximise that success Planet Ark answers the top recycling questions in its new report *All Sorted: Answering the Big Recycling Questions*.



Associate
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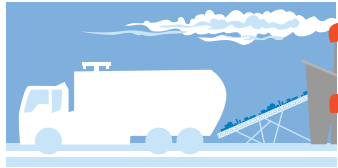
Supporting
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What happens to my recycling?

An understanding of the recycling process helps make sense of the rules and the importance of putting items in the correct bin.



1

The truck drops recycling onto a conveyer belt.

Staff remove - by hand - contaminants like plastic bags and car batteries.

2

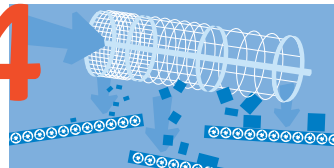


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Fans are used to separate paper.

A rotating trommel uses gravity to direct all other materials to a different conveyer.

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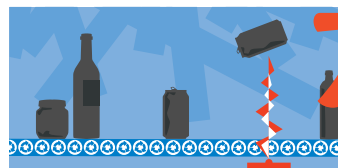


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Magnets pick up steel containers.

Optical sensors detect the different types of plastic and use jets of air that push them into separated collection areas.

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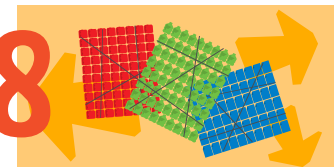


7

Eddy current-repels aluminium cans, pushing them into holding cages.

The separated material is baled and sent to recyclers to be made into new material.

8



Key Contaminants



Recyclables in Plastic Bags

For safety reasons staff have to send recycling in bags to landfill.



Soft Plastics*

Soft plastics, like bread bags, get caught in the conveyer belts.



Drinkware Glass

Melts at a different temperature to bottles and jars clogging the machines.



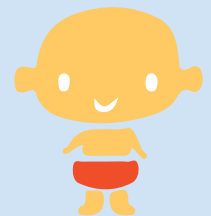
Food

Excess food and oil contaminated the paper stream.



Polystyrene

Polystyrene foam acts like paper in the sorting process and prevents that paper being recycled.



Nappies

11% of people think nappies are recyclable but they present health risks to staff.



What are the benefits?

For the planet

- ➔ In addition to diverting waste from landfill, recycling reduces and can even eliminate the need to extract raw materials, saving limited natural resources. For example, 75% of all of the aluminium ever produced is still in use today because it can be recycled infinitely.



- ➔ Recycling can reduce the amount of energy required to process and manufacture new products, compared to the use of virgin materials. For example, recycling one tonne of plastic saves enough energy to power 31 homes for a month.

For profit

- ➔ The process of recycling and composting creates more jobs than incineration and landfill, with 9.2 jobs in recycling for every 2.8 jobs in landfill.
- ➔ Access to recycled materials supports manufacturing in Australia, providing businesses with many resources that are cheaper than their virgin counterparts.

For people

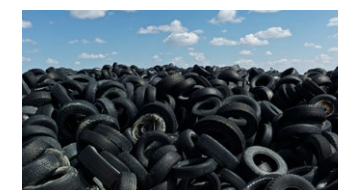
- ➔ A study of almost 24,000 individuals across 27 countries found a significant positive relationship between recycling and life satisfaction. The result was linked with the positive emotions associated with doing the 'right thing'.



Who pays?

Funding for recycling comes from a variety of sources.

- ➔ The introduction of a waste levy in most states and the resale value of recyclable materials means that the cost of councils providing recycling services to residents is frequently cheaper than sending the waste to landfill. Sometimes the cost of recycling is not completely offset and councils account for this difference by charging rates to residential property owners.



- ➔ Around the world there is a growing movement towards product stewardship or extended producer responsibility programs, under which manufacturers and/or retailers assume responsibility for reusing or recycling them.



What are the most common recycling mistakes?

Planet Ark surveyed 115 councils across Australia and asked them what the three most common recycling mistakes made by their residents were.

- 1 Plastic bags and soft plastics in the recycling bin** - Nine out of ten councils (92%) say that it is one of the most common mistakes made by their residents.

These are recyclable, but not at kerbside: Consumers can drop their soft plastics such as plastic shopping bags, and plastic bags from confectionary, pasta, bread



and frozen food off at one of 600 REDcycle locations, including selected Coles and Woolworths stores.

- 2 Recyclable items in the general waste bin** - Nearly half of councils (48%) reported residents mistakenly placing kerbside recyclables into the general waste bin. These items are wasted resources, as the materials are sent to landfill instead of being used for the manufacture of new products and the removal of limited and valuable resources from the Australian economy.

- 3 Food contamination** - Food contamination was the third most common recycling mistake highlighted by councils (23%), so residents are placing items into the kerbside recycling bin that have too much food waste attached to them, for example pizza boxes.

Other common mistakes include clothing, polystyrene nappies, garden waste and electronic waste.



How can we recycle at work effectively?

Commercial and industrial sectors generate more waste than households in Australia but have lower landfill diversion rates, recycling less than half of their waste (46%) and sending around 7 million tonnes to landfill every year. This is approximately 1.7 tonnes of waste per employee, so is an area of huge potential.

Previous Planet Ark research has shown that Australia-wide, 80% of employees would like to see more recycling in their workplace and 71% of people think that having access to recycling facilities at work makes or would make them feel like they work for a responsible employer, which correlates with staff morale and performance.





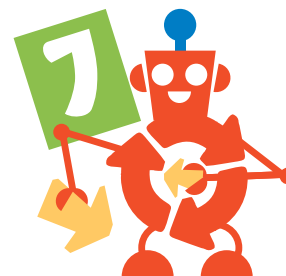
How does Australia's recycling compare to the rest of the world?

Australia's unique landscape and dispersed population creates different recycling challenges to those faced in Europe, but despite these challenges Australia is developing new recycling services and stewardship programs that are helping to build a strong nation of recyclers.

- ➔ Overall, 51% of household waste in Australia gets recycled, relatively on par with recycling rates in northern European countries, exceeding the mean recycling rate of all 28 countries in the EU of 42%. However, Europe's recycling rates are bolstered by the incineration of non-recyclable waste, significantly lowering the volume that is sent to landfill.
- ➔ In Australia, electronic waste is increasing at three times the rate of other types of waste. Our National

Television and computer recycling scheme has been formed to bring the manufacturers and importers together to manage the collection and recycling of the products covered by the scheme. In comparison, Europe and South Korea have schemes that accept broader forms of e-waste, including kitchen and home appliances.

- ➔ Battery recycling is in its infancy in Australia, with talk of a national battery product stewardship scheme. In the Europe Union, where battery recycling is mandatory, there are hundreds of thousands of collection points and initiatives designed to develop positive attitudes towards recycling in children and families.

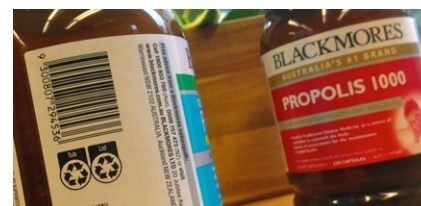


What is the future of recycling?

The volume of waste being generated in Australia is increasing every year, so the recycling industry needs to constantly adapt by developing new processing technologies and public engagement initiatives. New product stewardship schemes are helping to promote the recycling and safe disposal of items that were routinely sent to landfill in the past.

Australian Recycling Label

Although Australians are world-class recyclers at home, 99% of people are confused about the recyclability of at least one common item of packaging. To address this confusion Planet Ark,



in partnership with GreenChip, has developed the Australian Recycling Label, with funding from the Australian Packaging Covenant (APC).

The label shows clearly and simply whether each individual piece of packaging can be recycled in the kerbside recycling bin, or whether a consumer needs to 'check locally' to see if the item is accepted by their local council.

Container Deposit Schemes (CDS)

This involves a small deposit being paid by the consumer through the price of the beverage, which is refunded when the empty container is returned for recycling to either a reverse-vending machine or a waste facility.

A CDS has been successfully running in South Australia since 1977, where litter from beverage containers is the lowest in the country. The CDS was introduced to the Northern Territory in 2011 and doubled the recycling rate of beverage containers in its first year. After much debate a CDS is due to begin in NSW in 2017, to try and reduce the estimated 2 billion plastic bottles that are littered in NSW every year, and this has led to both the Queensland and ACT governments considering a similar scheme.



Building a circular economy

A key element in the future of recycling is for companies to invest in the development of products and processes that use the outputs of the recycling process, to develop a circular economy. There is little use collecting and processing materials unless there is a key market for it. Several examples of companies who have built their business on recycled products include Close the Loop's TonerPave and Dunlop Flooring's underlay.

The future of recycling is very much centred on closing the loop, with products not just being recycled, but being made from recycled materials in the first place. This system is aided by new technologies and processes making recycling more efficient and economical, such as Australian Paper's new cutting-edge paper recycling mill in Victoria from which companies can buy their own recycled office paper back as new product.

Business innovation









Businesses in many industries have economic incentives to choose and develop sustainable designs for their products and packaging and reduce their waste and carbon footprint.

Some examples include:

- ➔ O-I Australia made changes to bottle design resulted in 5,895 tonnes less glass being used. In addition, 84,258 tonnes of material has been diverted from landfill through the Returnable Packaging Program.
- ➔ Mars Chocolate Australia reduced its waste to landfill from 165 tonnes in 2014 to 0 in 2015. This was achieved through better recycling at source, partnership with global waste management and finding recyclable non-landfill homes for their waste.
- ➔ Unilever Australia has saved 28 tonnes of packaging from its tea, 16 tonnes of wood from its icecream sticks and 2.7 tonnes of aluminium from its aerosols simply through better product design.



Future Drivers of Recycling

 <p>Increase in the amount of waste being generated⁵⁸, through greater consumption and population growth.</p>	 <p>Increase in public willingness to recycle away from home as shown by success of 'Cartridges 4 Planet Ark', MobileMuster and TechCollect</p>	 <p>Increase in items covered by product stewardship legislation eg TVs and computers, tyres, paint and batteries.</p>
 <p>Increasing public and private investment in recycling e.g. NSW \$400 million Waste Less Recycle More program and \$15 million by the Australian Packaging Covenant</p>	 <p>The promotion of sustainable business practices and end of life waste management.</p>	 <p>Increase in awareness of the environmental dangers of waste, such as cadmium in power tool batteries and mercury in fluorescent lamps.</p>
 <p>Increased scarcity of resources like phosphorous, oil, and precious metals.</p>		 <p>Financial incentives, such as the Container Deposit Scheme.</p>

Take action: How can you help?

Although we're generally pretty good recyclers here in Australia, it's important that we continue to adapt our behaviours with the evolving industry as new schemes, processes and facilities become available.

- ➔ Visit Planet Ark's [RecyclingNearYou](#) to find out what can go in your recycling bin and where to drop other items.
- ➔ Check that everyone in your household or apartment building knows what can and cannot be placed into the kerbside recycling bin.
- ➔ Look out for the new [Australian Recycling Label](#) on Officeworks, Blackmores and other products and use it to determine if the packaging can be recycled in your kerbside recycling bin.
- ➔ Visit Planet Ark's [BusinessRecycling](#) website to find out what recycling actions your workplace can take.
- ➔ Encourage companies to take financial responsibility for the waste management of their products by favouring brands that have voluntary product stewardship schemes in place. For household furniture and whitegoods, ask the retailer if they have a recycling service where they collect your old item when delivering the new one.
- ➔ Find out if your workplace is eligible for a free ['Cartridges 4 Planet Ark'](#) collection box and **MobileMuster** collection box.
- ➔ Close the loop and buy products made from recycled materials, especially simple items like Australian-made office paper creating an economic incentive for businesses to use materials with recycled content.
- ➔ When building or renovating, look for a waste company that recycles, like Bingo in Sydney. Choosing them over companies that just landfill helps drive economic incentives to recycle.



National Recycling Week

Planet Ark founded National Recycling Week as a community education campaign in 1996 to bring a national focus to recycling and minimising waste. National Recycling Week is a great way to learn about new recycling schemes and address key recycling questions.

It's easy to get involved through the activities specifically designed for individuals, workplaces, schools and councils at recyclingweek.planetark.org. Host a **Friday File Fling** to get reams of paper back into circulation, promote reuse before recycling by setting up a **Big Aussie Swap Party** or get your school to participate in the **School Recycle Right Challenge**.

