

Scrap Aluminium Recycling in Australia

Aluminium, copper, lead, nickel, tin, and zinc are among the many base metals that are referred to in the recycling industry as non-ferrous scrap. These materials have an extensive range of uses and maintain their core chemical properties through repeated recycling and reprocessing. This makes nonferrous metals like aluminium infinitely recyclable and important to maintaining sustainability in terms of resource conservation.

The intrinsic financial and embodied energy values contained within aluminium products provide the core foundations upon which the principles of recovery and recycling of these materials is based. These principles define and enhance the environmental benefits of diverting the metals from landfill once they have passed their useful practical life.

Aluminium scrap is sourced from a wide array of consumer, commercial and industrial sources that include electronic items and wiring, beverage drink containers, motor vehicles, aviation and marine industry, as well as numerous other manufactured man-made goods. In fact, anywhere these metals are being or have been used they provide a point source of supply for recycling and reuse.

Currently all of Australia's recyclers of aluminium export their scrap. None of the largest companies including [Sims Metal Management](#) and [Infrabuild Recycling](#) have any local remelting capability, rather they send their scrap offshore to end users.

Used aluminium cans (UBC) recovered from the various state collection recycling schemes including yellow recycling bins are sold predominantly into the European and Asian markets. These companies also sell the new can sheet to make new cans into the Australian market, but what percentage of imported materials contains the UBC recycled content, is unknown.

Where does Australia's scrap aluminium go to be recycled?

More than 95% of Australia's scrap aluminium is exported for recycling. The major buyers are in South Korea and Indonesia. Other main markets include European countries and India

How much scrap aluminium is exported for recycling?

In 2019 Australian exporters reported 95,154 tonnes of scrap aluminium sent overseas¹. In 2020 Australian exporters reported 119,075 tonnes of aluminium sent overseas. An increase of 25.13% on the previous year.

Who has remelting facilities and recycles scrap aluminium in Australia?

Some major manufacturers of extrusions, such as [G James](#), recover their pre-consumer scrap from their own production plant and remelt this to provide pre-consumer recycled content in their billet.

[Weston Aluminium](#) buy and reuse Australian scrap aluminium to make a range of new products, including, De-oxidants, Base Metal Sows and Aldex products. [Boyne Smelters](#) are able to remelt some UBC in their operations.

Generally, aluminium smelters ([Boyne Smelters](#), [Bell Bay Aluminium](#), [Tomago Aluminium](#) and [Portland](#)) have limited capacity for remelt. This is because of the safety and process risks of contamination from water, oil and other contaminants. Smelters may be able to remelt their own pre-consumer production scrap or some very limited quantities external scrap, however,

¹ <https://www.alcircle.com>

the capability will depend on the origin and composition of the scrap, and the configuration of the smelter's cast house.

What are these recycled products?

De-oxidant is used in the steel making process, to reduce the amount of oxygen present in molten steel.

Base Metal Sows are used as feed for production of aluminium alloys.

Aldex products are used as flux, slag conditioner, desulphurising agents etc in steel making. It is also used in the foundry industry and as a raw material in cement making, refractory production and as an ingredient for flux manufacture.

Which products use recycled aluminium?

Australia produces some extruded product, but no longer has manufacturing capability to produce rolled or flat sheet product. Extruded product is made from billet, and within Australia only [Boyne Smelters](#) and [Tomago Aluminium](#) produce billet.

All of Australia's rolled, flat sheet and extruded products may contain some recycled aluminium. Companies that produce these materials all use either internal scrap generated from plant operations and some manufacturers buy scrap aluminium from Australia for their operations.

Rolled aluminium products make products such as beverage cans, and roofing, flat sheet products are used in the manufacture of cladding, boats, trucks and trailers and aluminium extrusions are commonly used for building and other architectural uses.

How much recycled aluminium is used in Australia?

This is difficult to quantify as no one source, either a manufacturer or producer of aluminium products reports or publishes that information.

What does not get used due to process / cost or practicality?

Aluminium is a high value product and infinitely recyclable. Therefore, it has a very high recycling rate and almost all recovered scrap aluminium is used for recycling. Only very contaminated scrap aluminium that may have materials attached such as asbestos or very heavy metal contamination cannot be reused. If discovered, it is safely landfilled. There are few reported instances this occurs in today's recycling industry.

Who sells recycled aluminium ingots?

[Weston Aluminium](#) may sell similar products, but no-one sells secondary ingots produced directly in Australia from locally sourced aluminium.

Can Australian manufactured aluminium be tracked for recycling?

At this stage Australian aluminium cannot be tracked. In the future, this may be possible with the [Aluminium Stewardship Initiative Chain of Custody Standard](#).

Are there set recycling standards for scrap aluminium?

Yes. Scrap aluminium is traded in a globally competitive market. The Australian recycling industry operates according to the standards that are set by the [Institute of Scrap Recycling Industries](#) (ISRI) in the United States of America ISRI has general terms for the sale and trading of scrap internationally. If a company wishes to export scrap aluminium, that company must

be capable of presenting scrap to the market that meets these guidelines set by the ISRI specification.

Are there any Australia producers of recycled aluminium packaging for consumer items?

All manufacturers of consumer goods are increasingly looking at using recycled content in their products where this is feasible and safe. There are no reported estimates of the numbers of companies that publish this information.

Recycling Standards

In 2018 the federal government released the National Waste Policy – Less Waste More Resources. In 2019 the National Waste Action plan was published. Both documents provide the overarching framework for diversion from landfill of waste and recyclables. All state governments are co-signatories to the action plan and thus accountable to its objectives.

National Waste Policy

<http://www.environment.gov.au/protection/waste/how-we-manage-waste/national-waste-policy>

National Waste Action Plan

<https://www.environment.gov.au/system/files/resources/5b86c9f8-074e-4d66-ab11-08bbc69da240/files/national-waste-policy-action-plan-2019.pdf>

In November 2020, the Department of Agriculture, Waste and the Environment in Canberra published the **National Waste Report 2020**

<https://environment.gov.au/system/files/pages/5a160ae2-d3a9-480e-9344-4eac42ef9001/files/national-waste-report-2020.pdf>

The following individual state reports in terms of their waste generation, secondary resource recovery and recycling performance can be found at the following links

Queensland

<https://www.qld.gov.au/environment/pollution/management/waste/recovery/data-reports/recycling-waste>

New South Wales

<https://www.epa.nsw.gov.au/your-environment/waste/local-council-operations/local-council-waste-and-resource-recovery>

Victoria

<https://www.sustainability.vic.gov.au/research-data-and-insights/waste-data/2018-to-2019>

Tasmania

<https://epa.tas.gov.au/Documents/EPA%20Annual%20Report%202018-19.pdf>

South Australia

<https://www.greenindustries.sa.gov.au/sarecycling>

Western Australia

<https://www.wasteauthority.wa.gov.au/publications/view/recycling-review-annual/recycling-activity-review-report-2018-2019>

International Recycling References

Bureau of International Recycling

<https://www.bir.org>

The Bureau of International Recycling (BIR) is the only global recycling industry federation representing around 800 companies and 35 affiliated national recycling associations from 70 different countries. Its members are world leaders in the supply of raw materials and a key pillar for sustainable economic development.

WRAP UK

<https://wrap.org.uk>

WRAP was established as a not-for-profit company in 2000. It promotes sustainable resource use through product design, waste minimisation, re-use, recycling and reprocessing of waste materials, work across six continents with governments, businesses and citizens to create a world where resources are sourced and used sustainably.

Institute of Scrap Recycling Industries

<https://www.isri.org>

The Institute of Scrap Recycling Industries, Inc. (ISRI) is the voice of the recycling industry promoting safe, economically sustainable and environmentally responsible recycling through networking, advocacy, and education.