



# Scrap Metal

**Scrap metal makes up a large proportion of heavy items collected on Clean Up Australia Day, eg Red Hill in WA the 4WD club of Western Australia removed 40 car bodies from the John Forrest National Park.**

**Illegal dumping of scrap metal contaminates the environment, creates safety issues and holds back much needed recoverable resources from recycling. Scrap metal can be recycled forever.**

## Did you know?

*Over 50% of the world's steel production uses recycled scrap metal making it one of the world's most recycled materials.<sup>1</sup>*

*By collecting and processing scrap metal, we reduce the ecological impacts of mining raw materials from the ground and reduce up to 97% of mining wastes.<sup>1</sup>*

*Metal manufacturing using recycled scrap metal reduces:<sup>1</sup>*

- Air pollution by 86%
- Water pollution by 76%
- Water use by 40%
- Consumer waste by 105%.

*Steel can go through the recycling process again and again without reducing the quality of the end product.<sup>3</sup>*

*Producing 20 aluminium cans from recycled materials uses the same power as making one can from raw materials.<sup>4</sup>*

*Recycling one kilogram of aluminium can save about 8 kilograms of bauxite, four kilograms of chemical products and 14 kilowatt hours of electricity.<sup>4</sup>*

## Scrap Metal and the Environment

### Environmental Impact

Scrap metal that has been dumped such as car bodies and obsolete farm machinery can contain many toxic chemicals that can leach into the environment. These include oil, petrol and diesel, battery acids, transmission and brake fluids plus radiator coolant.

Scrap metal can also create safety and fire hazards. Sharp jagged edges of rusting metal can injure bushwalkers and wildlife while chemicals within car bodies can cause bush fires.

### The cost of cleaning up

The costs to clean up illegally dumped waste materials are significant and generally fall back to local government.

Costs include collection and disposal of material, increased enforcement and surveillance, prosecution, education and awareness programs.

Mechanisms for deterring and preventing further illegal dumping must then be established including stricter state and local government laws, increased penalties and more severe punishment.

Dumping rubbish can incur fines issued by NSW State Forests ranging from \$5500 for corporations and \$3300 for individuals.<sup>8</sup>

### Monkey see monkey do

Illegal dumping is the disposal of material in areas where it is not permitted.

Illegal dumps attract additional rubbish like a magnet.

People who dump scrap metal often choose a spot where material has already been illegally dumped. Illegal dumping often occurs simply to avoid disposal charges.

By cleaning up an area of illegally dumped scrap metal you can reduce the likelihood of further dumping whilst increasing the recycling rate.

### The times are changing

Changing technologies in smelting processes and recyclable capture systems have moved scrap metal from a costly waste to a much sought after commodity.

By encouraging people to recycle scrap metal instead of dumping it illegally we will increase recycling rates and reduce the potential to contaminate the environment.

*Clean up - inspiring and working with all Australians to clean up, fix up and conserve our environment.*

# Benefits of Recycling

**Scrap metal recycling is playing an important role in establishing a long-term readily available source of ferrous and non-ferrous material for the steel industry.**

**Recycling scrap metal is reducing the environmental pressures that modern society has placed upon the earth's limited supply of mineral resources.**

## Scrap metal recycling

Metals are well suited to sustainable development goals such as closing the "cradle to grave" life cycle loop; because they have a virtually unlimited lifespan.<sup>7</sup>

Of the materials currently used by society, metals have the greatest potential for unlimited recycling.<sup>7</sup>

While scrap metal can be considered as a renewable resource, the mineral resources they are derived from are non-renewable as their supply is finite. There is real doubt as to whether the earth has the capacity to support continuously escalating levels of resource extraction and disposal.<sup>7</sup>

Scrap metal such as car bodies and obsolete farm machinery that have reached the end of their functional life are a valuable resource to the owner and recycler alike. When collected and processed they can deliver materials back into a flourishing market and provide the disposer with a return on the original capital outlay.

## The recycling process

In Australian capital cities scrap metal is collected by businesses and local government, broken down with large shredders, sorted into type (ferrous and non-ferrous) and melted down to become a renewable resource equal in standard to the original product.

## Types of scrap metals

Scrap metal is generally divided into two groups:

**Ferrous metals:** contain predominantly iron (they often contain small amounts of other metals), are magnetic and usually offer little resistance to corrosion. Ferrous metals include wrought iron, steel and stainless steel.

**Non-ferrous metals:** do not contain iron, are not magnetic and usually offer more resistance to corrosion than the ferrous metals. Non-ferrous metals include copper, aluminium, lead, zinc and nickel.

Making steel from recycled material uses only a quarter of the energy needed to make steel from raw materials. The recycling process can result in energy savings of up to 75%.<sup>3,1</sup>

## What can you do?

Scrap metal can be recycled at local council refuse and recycling stations, through on site pick-ups or at scrap metal merchants.

A new initiative for rural areas is the Smorgon Steel Great Scrap Round-Up.

To clean up scrap metal on public land you can contact Clean Up Australia on 1800 282 329 or visit [www.cleanup.com.au](http://www.cleanup.com.au).

To clean up scrap metal on private land you can contact Smorgon Steel directly on 1300 669 102 or visit [www.scrap.org.au](http://www.scrap.org.au).



## References

- <sup>1</sup> **Smorgon Steel**  
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  - <sup>2</sup> **The Lead Group Inc.**  
[www.lead.org.au](http://www.lead.org.au)
  - <sup>3</sup> **VISY Recycling**  
[www.visyrecycling.com.au](http://www.visyrecycling.com.au)
  - <sup>4</sup> **World-aluminium**  
[www.world-aluminium.org](http://www.world-aluminium.org)
  - <sup>5</sup> **Solutions Research, 2004**  
[www.smorgonsteel.com.au](http://www.smorgonsteel.com.au)
  - <sup>6</sup> **Dept of Environment and Conservation - NSW**  
Reducing the Unlawful Disposal of Waste; Littering, Illegal Dumping and Illegal Landfilling Feb 2004  
[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)
  - <sup>7</sup> **Norgate TE & Rankin WJ**  
The role of metals in sustainable development CSIRO Minerals  
[www.csiro.au](http://www.csiro.au)
  - <sup>8</sup> **Forest NSW**  
[www.forest.nsw.gov.au](http://www.forest.nsw.gov.au)
- Lead is a non-ferrous metal that can easily be recycled but if left within a broken or leaking engine battery or as solder within an engine radiator it can slowly break down to create a contaminant source.<sup>2</sup>*



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