

Helping Victoria Grow: recycling in construction

Growing demand for resources

Recycled materials are valuable in construction, as they can supplement raw materials such as sand, rock and gravel, as well as reducing the amount of construction and demolition material that goes to landfill.

Demand for extractives resources is increasing. By 2050, demand is expected to reach more than 100 million tonnes per year, more than doubling 2015 levels. This provides a significant opportunity for recycled materials to contribute to the construction sector.

In 2018, the Victorian Government released its *Helping Victoria Grow: Extractive Resources Strategy* to ensure extractive resources are available to meet the demand for housing, other construction, roads and infrastructure.

As outlined in the Strategy, the Victorian Government will support industry to continue minimising extractive resource waste, and recycling construction materials, where possible.

You can find out more about the Extractive Resources Strategy at earthresources.vic.gov.au/extractivesstrategy.

SECTOR STATISTICS

6.3m
TONNES
OF RECOVERED
CONSTRUCTION AND
DEMOLITION MATERIAL

In 2018-19 the construction and demolition sector recovered more than 6.3 million tonnes for reprocessing.

100% of this recovered material was used in Victoria.

Sustainability Victoria,
2018-19

87%
CONSTRUCTION
AND DEMOLITION
MATERIALS RECOVERED

In 2018-19 the construction and demolition sector increased the recovery rate of materials to 87%, up from 84% in 2017-18.

Sustainability Victoria,
2018-19

'Reduce demand on virgin extractive resources by substituting them with recycled products where appropriate.'

Helping Victoria Grow: Extractive Resources Strategy, 2018

Supporting opportunities for fit-for-purpose recycled materials in construction

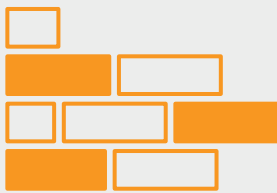
The construction and extractive resources industries support recycled materials in Victoria, by supplementing their product lines with recovered construction materials from demolished buildings and infrastructure.

Recyclable materials such as glass, bottles and tyres can potentially be used as a substitute for extractive resources.

Any innovative new product materials need to be fit-for-purpose and meet government and industry construction specifications.



Recycled materials are an integral part of the supply Victoria needs to meet the infrastructure demands of its growing population.



Processed concrete and rubble can be reused as landfill capping material, recycled into new products (road base aggregate) or sold to the public (whole concrete blocks, bricks or tiles).

Can recycled materials meet Victoria's demand for rock, sand and gravel?

While using recycled materials in construction to contribute to raw quarry materials is becoming more common, they cannot meet Victoria's current demand for construction.

To better understand how recycled materials can be used in construction, the Department of Jobs, Precincts and Regions will work with Sustainability Victoria. Information on recycled materials will be included in our regular demand and supply reporting and forecasting.

Through the Strategy, the Victorian Government will continue implementing a broad range of actions to link quarrying operations with the surrounding landscape.

The Victorian Government will support industry operators in establishing measures to continuously improve their environmental management, consistent with leading practice.

Supporting recycling in the extractive and construction sectors

Our priority action plan

Through the Strategy, The Victorian Government will:

- Work across government to promote the value of recycling and support industry programs and policies.
- Improve resource planning by including data on recycled materials in construction as part of our regular demand and supply reporting.
- Investigate the business case for reducing regulatory barriers for the co-location of recycling facilities within quarry operation sites.

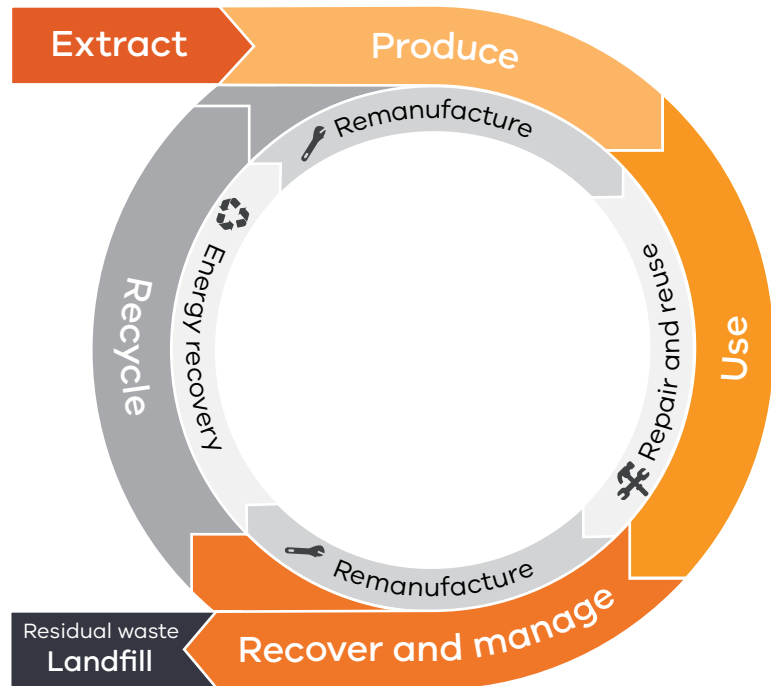
Key National and Victorian policies and programs

Policy	Program	How it is supporting the sector
Recycling Victoria: a new economy ten-year circular economy policy and action plan	More than \$300 million for a suite of initiatives to transform Victoria's waste and recycling sector	Development of specifications to use more recycled materials in construction, and a product directory to help government source recycled materials
Recycled First Policy for major transport infrastructure	Ecologiq promoting the use of recycled materials for Victoria's road and rail projects	Projects where tenderers must: <ul style="list-style-type: none"> • demonstrate how they will use recycled and reused materials • report on the types and volumes of recycled and reused products they used
Recycling Industry Strategic Plan	Sustainability Victoria's \$26 million Resource Recovery Infrastructure Fund	\$500,000 to Repurpose It – producing 500,000 tonnes of reusable material and saving 84,000 tonnes of CO ₂ per year
	Sustainability Victoria's Research, Development and Demonstration Grants Program	\$150,000 to the University of Melbourne and Downer EDI Works for trialling a permeable pavement using recycled materials
Australian National Waste Policy Action Plan	\$160 million Recycling Modernisation Fund to generate investment in recycling and transform national	National resource recovery target of 80 per cent by 2030
Helping Victoria Grow: Extractive Resources Strategy	Environmental Sustainability Theme – supporting industry to be recognised as leaders in the sustainable development of resources	Promotion of use of recycled materials across industry and inclusion of data on recycled materials in extractive supply and demand reporting

Victoria's circular economy

Recycling Victoria is the Victorian Government's ten-year circular economy policy and action plan, which will transform Victoria's recycling sector to ensure that it is reliable, safe and resilient. In a circular economy, people minimise waste and make the most of resources. Shifting to a more circular economy will grow the economy, increase jobs and reduce impacts on the environment.

The circular economy policy will build on Victoria's leading waste and resource recovery initiatives and respond to global recycling market challenges. It will also examine new ways for Victorian businesses and communities to reduce waste in all stages of making, using and disposing of the products and infrastructure Victorians rely on every day.



Innovative recycling case studies

Alex Fraser – sustainable construction materials

Alex Fraser's billion-bottle-per-year glass recycling plant is one of three sustainable production facilities across Melbourne, including a construction and demolition recycling plant and a high technology recycled asphalt plant. These facilities produce sustainable construction materials including asphalt, aggregates, road base, and sand.

To date, Alex Fraser has supplied infrastructure projects with more than 50 million tonnes of recycled materials, including more than 1 million tonnes (5.4 billion bottles) of recycled glass from kerbside collections.

Delta Group recycling

Delta Group diverts more than two million tonnes of construction waste from landfill every year. More than 90 per cent of all construction and demolition waste is recycled and reused as 21st Century building materials on project sites around the world.

Delta Group specialises in:

- concrete, timber and scrap steel recycling
- waste transfer stations
- asset recovery and salvage.

Repurpose It – recovering construction waste for reuse

Repurpose It is turning construction and demolition waste once destined for landfill into reusable materials for civil and infrastructure building projects.

Located in Melbourne's north, Repurpose It is home to Australia's first construction and demolition washing plant. The company has received \$1 million in grant funding from Sustainability Victoria.

Their integrated process of washing, blending, crushing and soils provides a true closed loop solution. The washing plant separates waste materials by density and washes them for re-use in sand and aggregates across the construction industry. Repurpose It has diverted more than 1 million tonnes of construction and demolition waste from landfill and saves more than 84,000 tonnes of CO₂ per year.

Recycled rubber roundabout

Regional Roads Victoria used recycled rubber to construct a roundabout in Geelong - improving safety at a dangerous intersection and taking only four months to complete.

Asphaltech – recycled asphalt products

Asphaltech produce a range of asphalt products which incorporate recycled materials such as reclaimed asphalt (RAP), steel slag, rubber and plastic. These products are used on many projects across Victoria, ranging from local road resurfacing to asphalt for major infrastructure, including the Mernda Rail Extension and various Level Crossing Removal Projects. Asphaltech's products include an 85% reclaimed steel slag aggregate asphalt mix; 100% Recycled Cold Emulsion Asphalt and a suite of Bitumen Crumb Rubber Asphalt products made from second-hand Australian truck tyres.

Zero net GREENHOUSE GAS EMISSIONS

The Victorian Government has committed to a target of zero net greenhouse gas emissions by 2050 for Victoria. Recycling and reprocessing of materials will play an important role in helping meet this target.