

Plastic and glass modified road

Soft plastics from approximately 200,000 plastic bags and packaging, and glass from approximately 63,000 glass bottle equivalents diverted from landfill to construct a Victorian road in an Australian-first trial.

TRIAL SNAPSHOT

The road constructed in Craigieburn with 250 tonnes of asphalt has a greater than 25% total recycled material content with approximately:

- 200,000 plastic bag and packaging equivalents
- 63,000 glass bottle equivalents
- Toner from 4,500 used printer cartridges
- 50 tonnes reclaimed road (asphalt).

Paving the way with soft plastics and glass



Overview

Downer has partnered with Hume City Council, Close the Loop and RED Group to set a new benchmark in sustainability and innovation, constructing Australia's first road utilising a combination of soft plastics and glass. Downer is proud to take a lead role in repurposing soft plastics and glass in asphalt for road construction to create a sustainable, cost effective solution that has improved performance characteristics.

The Australian-first road construction trial with soft plastics and glass in asphalt demonstrates the economic, social and environmental value for products that would likely end up in landfill, stockpiled, or as a pollutant in our natural environments.

More importantly, utilising soft plastics and glass in road construction proves that with thought leadership in sustainability and partnerships with progressive and environmentally conscious governments, suppliers and customers, we can continue to set new benchmarks in repurposing and recycling waste materials into new streams of use.



Recycled content breakdown

Every 1km of road (2 lanes) paved with plastic and glass modified asphalt will use approximately:

- 530,000 plastic bag and packaging equivalents
- 168,000 glass bottle equivalents
- Toner from 12,500 used printer cartridges
- 134 tonnes of reclaimed road (asphalt) re-used, with the inclusion of 20% Reclaimed Asphalt Pavement (RAP).



Sustainability credentials

Plastic and glass modified asphalt contains:

- Soft plastics and glass that would likely end up in landfill, stockpiled, or as a pollutant in our natural environment
- Greater than 25% total recycled material content.



Improved performance

Compared to standard VicRoads specified asphalt, plastic and glass modified asphalt has:

- 65% improvement in fatigue for longer life pavements
- Superior deformation resistance for withstanding heavy vehicular traffic.



Local procurement

- The recycled materials used in this trial are sourced from metropolitan Melbourne, not only saving transportation costs but also delivering an avenue for local Councils to repurpose and recycle waste materials into their road assets.



Innovative partnerships

- Downer partnered closely with resource recovery and recycling companies Close the Loop and RED Group to innovatively tailor the soft plastic product offering to suit a road construction application.