



# Drive the future of road construction

---

Unlocking the benefits of crumb rubber in Australian roads

TSA Driving sustainable outcomes for end-of-life tyres



**Governments spend billions annually on road maintenance due to potholes and cracking.**

Traditional asphalt deteriorates quickly, requiring frequent repairs & resurfacing.

---

**Roads using rubber-modified asphalt have an extended lifespan, reducing costly maintenance interventions.**

Crumb rubber improves flexibility, making roads more resistant to cracking and potholes.

---

**Australia generates 67 million equivalent used tyres annually. Tyre derived rubber is an underutilised resource.**

2,000 used tyres per kilometre can be repurposed in asphalt applications.

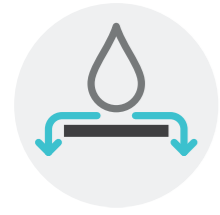
# What is Crumb Rubber asphalt?

Crumb rubber asphalt is an advanced, high-performance road surfacing material that incorporates finely ground rubber particles from recycled tyres into asphalt mixtures. This innovative approach not only diverts end-of-life tyres from landfill but also enhances the durability and sustainability of road infrastructure.

## The benefits of using crumb rubber:

- 1 Consumes Australia's end-of-life tyres, and
- 2 Enhances the durability and sustainability of road infrastructure

Roads using crumb rubber-modified asphalt require 30% fewer maintenance interventions than conventional roads, reducing long-term repair costs for councils and road authorities.



### Increased service life, reduces the frequency and cost of maintenance

Crumb rubber helps to improve fatigue resistance, making roads better able to withstand the stresses and strains of heavy traffic and changing temperatures.



### Reduced surface deformation from heavy traffic

Crumb rubber can improve resistance to rutting and cracking, which are common issues that lead to road deterioration.



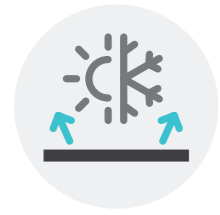
### Drive a circular economy and meet resource recovery targets

Supports sustainable outcomes for end-of-life tyres by using their valuable resources in vital infrastructure.



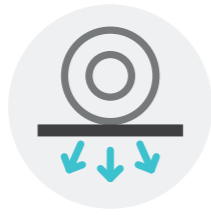
### Is cost effective and priced below that of neat bitumen

A cost-effective binder compared to other polymer-modified bitumen (PMB) options, with crumb rubber offering a lower-cost alternative to bitumen without compromising performance.



### Has a high resistance to moisture and water infiltration

Crumb rubber can improve resistance to moisture, reducing the risk of damage caused by water infiltration.



### Reduced road noise and increases passenger comfort

Crumb rubber absorbs sound, providing a more comfortable in-car driving experience, while making roads quieter for residents and businesses.



### Cut carbon emissions and support Net-Zero goals

Life Cycle Assessments (LCA) show up to 30% fewer CO<sub>2</sub> emissions when compared to conventional bitumen over the road's lifetime.



### Meet ESG and sustainable procurement requirements

Using crumb rubber in roads is a proven, low-risk way to enhance sustainability reporting and meet public sector green procurement objectives.

# Why should governments act now?

The Federal Government's 80% resource recovery target by 2030 requires greater uptake of recycled materials in infrastructure. Governments are under increasing pressure to prioritise sustainable procurement in infrastructure projects.

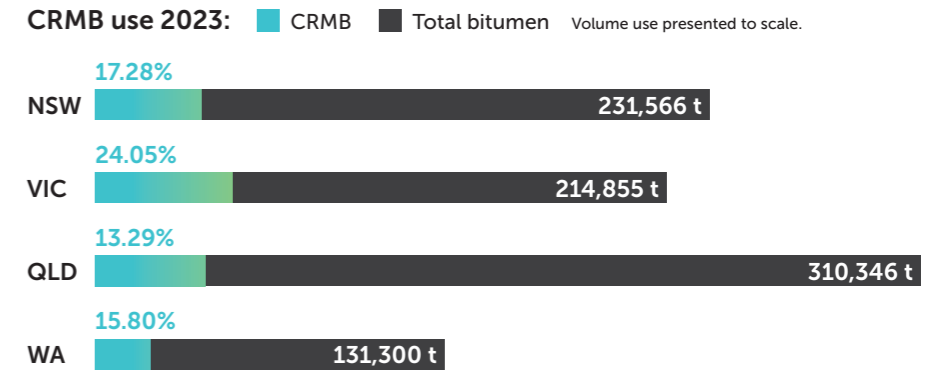
## The benefits of procuring crumb rubber:

- 1 Governments embedding recycled materials in procurement policies position themselves as leaders in sustainable infrastructure.
- 2 Projects using crumb rubber asphalt align with ESG funding criteria, making them eligible for sustainability grants.

Using crumb rubber in roads is a proven, low-risk way to enhance sustainability reporting and meet public sector green procurement objectives.

# Proven results across Australia

Crumb rubber asphalt is already used across Australia with national specifications in place. Austroads and Main Roads WA have developed guidelines for incorporating crumb rubber into both asphalt and sprayed seal applications.



Excerpt of chart from TSA's report: Tyre derived Crumb Rubber in road surfacing applications in Australia - Market overview. 2024

## Is it expensive?

**NO.** While initial costs may be slightly higher, lifecycle savings are substantial. Roads last longer, require less frequent resurfacing, and improve sustainability metrics, making rubber-modified asphalt a cost-effective solution.

## Is it easy to procure?

**YES.** Crumb rubber is widely available in Australia. TSA Accredited Recyclers are ready to supply governments with high-quality, locally produced material.

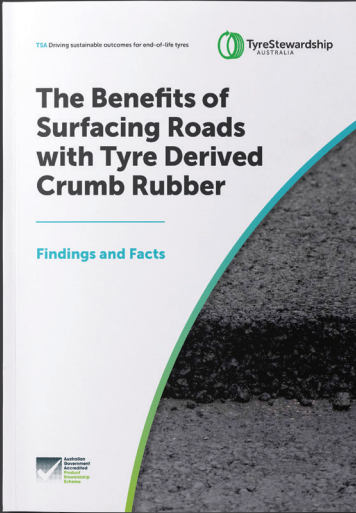
## Is it successful?

**YES.** Crumb rubber has been successfully used in roads across Australia, demonstrating its durability and performance. TSA has case studies demonstrating these successes – scan the QR code to learn more.



# Governments have the opportunity to act. Tyre Stewardship Australia is here to assist.

## Crumb rubber in roads research



TSA is committed to advancing research into the performance, environmental benefits, and long-term cost savings of crumb rubber in road construction. Scan the QR Code to explore TSA's latest research findings.

## Find a crumb rubber manufacturer



TSA supports a growing network of recyclers, manufacturers, and suppliers ready to provide high-quality crumb rubber for road construction. Scan the QR Code to access our manufacturer search page.

## Have questions?

Contact TSA at [getonboard@tyrestewardship.org.au](mailto:getonboard@tyrestewardship.org.au) and visit [tyrestewardship.org.au](http://tyrestewardship.org.au)

