

# TRANSFER OF APPROPRIATE CRUMB RUBBER MODIFIED ASPHALT TECHNOLOGY



## Project Update: Field Trial of Crumb Rubber in Open-grade Asphalt

WARRIP and industry partner Fulton Hogan are constructing a trial section of OGA with CRM binder on Kwinana Freeway during 17-20 March 2019. The demonstration will confirm whether the technology (design, manufacture & construction) can be successfully applied in WA prior to broader use within industry.

### Background

Every year millions of tyres in Australia reach their functional end-of-life. Crumb rubber modifier (CRM) in bitumen is used for road construction and can provide increased durability and cracking resistance. In addition to improved performance, recycling ground tyre rubber reduces landfill volumes and preserves natural resources. The use of CRM in high-performance sprayed seals has been routine practice in Western Australia (WA) for over 30 years. Internationally, the use of CRM binder in open-graded asphalt (OGA) is accepted practice and the project seeks to transfer the technology to WA.

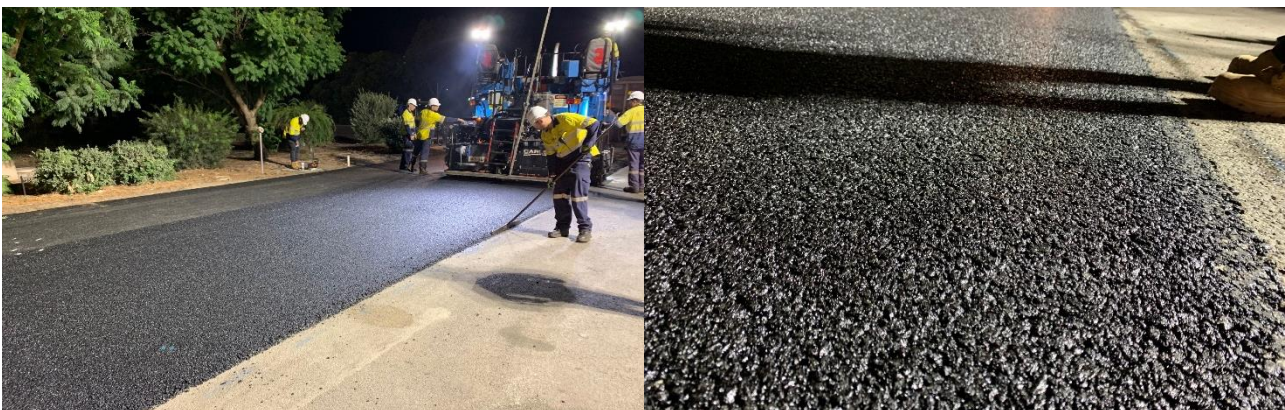
### Approach

- Comparison of specifications and practices
- Evaluate production and placement properties of OGA with CRM in the laboratory
- Develop a Main Roads specification for OGA with CRM
- Conduct and monitor trial constructing OGA with CRM
- Document findings, recommending areas of possible improvement

### Status

- Successful development of CRM binder with 18% crumb rubber by mass of total binder.
- Successful substitution of CRM binder with 18% crumb rubber into Main Roads standard OGA.
- Successful yard trial paving 20 tonnes of OGA with 18% CRM binder.
- Construction of trial pavement on Kwinana Freeway Northbound in progress.

### OGA WITH 18% CRM YARD TRIAL



Source: ARRB 2019.

