



CLEM JONES TUNNEL

PROJECT NAME/LOCATION

Clem Jones (CLEM7) Tunnel, Brisbane

OWNER/PRINCIPAL

Brisbane City Council

MAIN CONTRACTORS

Leighton/Bilfinger Berger Joint Venture

MATERIALS SUPPLIED

Roadbase Material RM001, RM003,
RM005
Recycled Concrete Roadbase CBR15

SPECIFICATIONS

Queensland Main Roads Spec MRTS35

TOTAL TONNAGES

100,000 tonnes

TONNES SAVED

21,000 tonnes

ALEX FRASER CONTACT

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PROJECT DETAILS

Overview

The Clem Jones Tunnel (CLEM7) provides a critical river crossing that bypasses the CBD to link Brisbane's growing northern and southern suburbs, with direct connections at Bowen Hills, Kangaroo Point and Woolloongabba.

The 6.8 kilometre tunnel provides an alternative route to the heavily used Story Bridge, and additional access to the Brisbane Airport, Chermide Shopping Centre, Royal Brisbane Hospital and the RNA Exhibition grounds, all north of the river, and the Brisbane Cricket Ground, Princess Alexandra and Mater Hospitals and the Pacific Motorway to the Gold Coast, south of the river.

Alex Fraser contributions

Originally specified as a MR1.1 high quality roadbase, Alex Fraser developed a recycled concrete roadbase to engineers' specification specifically for the project. The material was stabilised to meet the demands of the application.

A significant challenge was transporting stabilised material up to eight kilometres into the tunnel before it was laid and then subjecting it to heavy traffic during construction. Engineers and project managers were pleased with how efficiently the material was laid and compacted. The material performed well and passed all geotechnical tests.

Environmental and cost savings

Recycled roadbase is approximately 15-20 per cent lighter compared to materials produced from Queensland quarried rock, which means less material is required. On the CLEM7 project the benefits of using recycled materials was a cost saving of an estimated \$570,000, and 725 less truck movements. The use of recycled materials also prevented the extraction of 120,000 tonnes of natural resources, saved more than 100,000 tonnes of waste from going to landfill and reduced carbon emissions by around 1,000 tonnes.

For its contribution to the CLEM7 project, Alex Fraser was recognised as a 2010 Finalist in the Gold Banksia and Queensland Premiers Sustainability Awards.