

## **Can marginal materials matter? You bet!**

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With more than sixty percent, or over 570,000 kilometres of Australia's roads being unsealed, most managed by local councils, innovative ways to use local materials and applying proven techniques to build and maintain these important connections are imperatives of huge value to communities.

Since central Victoria's Central Goldfields Shire launched its nine-section Possum Gully 2.7-kilometre unsealed road trial in December 2016 it has been carefully measured and monitored. The results thus far provide information about pavement longevity, environmental and ride quality outcomes. The Council has applied ARRB's "Unsealed Roads Manual" guidelines upon two active local gravel pits, adding and comparing various mixes and treatments including blending with clays, local bluestone quarry products, polymers, enzymes, cement and bitumen emulsions additives.

Discrete defined locational cross-sections, roughness, dust, climate and traffic have been regularly measured over two years. The base course materials were extensively tested as were compaction and moisture content.

From a detailed report to Central Goldfields Shire Council completed in early 2019 about the outcomes of the trial, innovative approaches to the use of marginal pavement materials and improvements to methods and plant used by Council maintenance and construction crews are advocated. Decisions about application of marginal materials using sampling, testing, and blending techniques will lead to considerable cost savings and conservation of better-quality gravel and quarried rock resources, as will application of the excellent fifteen years of practical research work done by ARRB.

#### References:

Styles M. "Unsealed Roads – Make Marginal Materials Matter (Trialling by Central Goldfields)" International Public Works Conference Perth Western Australia 20-23 August 2017