

Aiming for construction and maintenance best practice

Moyne Shire is located in the south-west of Victoria and has an extensive road system of over 3,500 km servicing a local population of 16,000, a significant agricultural industry, growing tourism, energy developments and a wide range of other industries.

Vehicular traffic and the Moyne road network play an integral part in maintaining and developing the vitality of the Moyne region, by supporting community access, connecting townships and industries.

Moyne, like other local governments, is responding to rising community expectations by providing a growing range of essential services and infrastructure that underpin local communities. This expansion in service demand, coupled with growth in input prices creates a growing challenge of trying to do more with proportionately less resources.

On top of growing expectations and tighter resourcing, Moyne is further challenged with significant growth and changes in population traffic and freight demographics using infrastructure designed and built in the 1960s and 70s. At the time these roads were constructed, the usage and the expected future demands of the road network were significantly different than is experienced today.

The Shire is the second top agricultural producing local government in Australia. Most of the produce will spend some component of its transport journey using Shire roads and at tonnages likely to accelerate road wear.

Much of Moyne is subject to high rainfall and reactive black soils known to move (subside) significantly making constructing and maintaining



roads a less straightforward task than in other municipalities. In addition the prevalence of single-lane sealed roads in Moyne means the shoulders are subject to extensive wear and tear.

All of these elements combine to make Council management and maintenance tasks extremely challenging.

To assist Moyne Shire improve the management of its road network and as part of the ongoing cycle of review and improvement integral to good asset management, Council engaged ARRB to conduct a review of its road construction and maintenance practices. The review focused on considerations in terms of their acceptability and appropriateness with regard to good practice in the Australian local government context.

The review was delivered through a short term discovery mission to quickly explore Moyne Shire Council's existing practices in order to gain an appreciation of the types of issues and

conditions faced by Council and to report on key areas and potential quick wins for improvement. The process included a desktop review, onsite inspections and interviews with Council representatives.

The findings identify that whilst Council is presently able to substantially fulfil its statutory obligations regarding the Road Management Act, Council is heavily dependent upon its senior experienced staff. This exposure could be reduced through improvements to management procedures, reporting, and strengthening the inspection and field reporting capabilities. Key recommendations of the review were to strengthen Council's influence on operations and outcomes by further developing key performance indicators. This will improve the alignment of Council operations with its Corporate Plan and enable monitoring of achievements against objectives.

A list of actions to address the recommendations was also produced. A follow on project will look at strategic asset management improvements that will enhance Council's capabilities to make informed decisions and trade-off competing priorities, to deliver the best combination of community benefits.

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Getting value for money

ARRB was commissioned by the Goulburn Mulwaree Council (GMC) to develop an optimised 10-year works program to achieve best use of available funds.

Pavement maintenance activities were modelled and works programs developed by using the dTIMS asset management software, in a similar set up as the pavement management system currently implemented by the RTA. The software was customised to the requirements of GMC.

Available condition data was used together with costing and funding provided by Council.

The life cycle cost models predicted the condition of the rural and urban networks over the next 10 years under varying funding regimes.

Under the current funding level the regional network will remain in the same condition for most of the time, though some deterioration is anticipated. Substantial additional funding is required to achieve the ideal or target condition on the rural and urban networks.

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Years

The report addressed issues such as:

- the recommended works program
- calibration of the findings by road inspections
- data collection needs
- maintenance of records of completed works, including costs and location
- maintenance of a condition data base.

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Tackling skid resistance

ARRB hosted the 3rd International Road Surface Friction Conference on 15-18 May 2011, at Sanctuary Cove, Queensland, Australia, in association with the New Zealand Transport Association (NZTA) and WDM Limited UK. The conference was attended by 240 delegates from 15 countries.

The conference addressed issues such as:

- the effect of ABS in old and new vehicles and under-inflated tyres
- the role of micro-texture to give skid resistance and macro-texture to maintain skid resistance as speed increases
- intense competition for financial resources and the non-sustainability of aggregate resources mean that targeting of works is necessary
- a possible methodology to define a skid resistance performance model

for current surfacings and hence demonstrate affordability of a skid policy

- the challenges of achieving a uniform risk of skidding across the network
- surfacing is important but other low cost options should not be forgotten such as use of vehicle activated slippery road and speed signs
- improving the life cycle costs of high friction surfaces can be achieved only if the design of the whole pavement is taken into account
- whether greater returns can be achieved if sharp curves are targeted for improvements in skid resistance.

The papers contain material of relevance to local government. Copies are available from:
www.saferroads.org.uk/2011papers.asp



Upcoming workshops

The following workshops are available throughout Australia as listed below.

These courses are recognised by Engineers Australia for Continuing Professional Development (CPD) purposes.

Level 1 Bridge Inspection

- Townsville 13-14 September
- Port Macquarie 12-13 October
- Bendigo 15-16 November

Level 2 Bridge Inspection

- Melbourne 29-30 August
- Ballarat 1-2 September
- Benalla 4-5 October
- Brisbane 18-19 October
- Sydney 7-8 November
- Dubbo 10-11 November
- Coffs Harbour 22-23 November
- Adelaide 6-7 December

Unsealed Local Roads

- Grafton 5-6 September
- Dubbo 8-9 September
- Maitland (SA) 2-3 November
- Launceston 9-10 November
- Canberra 21-22 November
- Griffith 24-25 November
- Albany 5-6 December
- Bunbury 8-9 December
- Morwell early 2012
- Ballarat early 2012

Speed Limits & Speed Management

- Melbourne 6 September
- Perth 27 September

Local Area Traffic Management

- Brisbane 8-9 September

Fundamentals of Transport and Accessibility Modelling

- Melbourne 9-10 November

For a full list of ARRB training workshops visit www.arrb.com.au/workshops.

Should you wish to attend a future workshop or simply request more information please register your interest by contacting training@arrb.com.au or on +61 3 9881 1680.



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