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## LOW VOLUME ROAD WORKSHOP

\*\*\*\*\*REGISTER NOW\*\*\*\*\*

Wednesday 18th to Friday 20th July 2007

Rutherford Hotel, Nelson

Further details for the 2007 Low Volume Roads Workshop are available at [www.roads.co.nz](http://www.roads.co.nz)

## REAAA NZ CHAPTER ROADSHOW

\*\*\*\*\* MARK YOUR DIARIES \*\*\*\*\*

“Delivering Value”

Programme and registration details out shortly

*Auckland*  
19 September

*Taupo*  
20 September

*Wellington*  
21 September

*Dunedin*  
24 September

*Christchurch*  
25 September

## YOUNG PRESENTERS COMPETITION

REAAA ROADSHOW SEMINARS

[Click here for details](#)

## REAAA NZ CHAPTER ANNUAL GENERAL MEETING

Wednesday 18th July at 6.00pm

Rutherford Hotel, Nelson

## AUSTROADS UPDATE

Austrroads is currently operating under a five year plan, which concludes in June 2007, when the new plan for 2007-2012 will commence. There are six key strategic areas of focus being addressed through research and development of guidelines: [more](#)

## INNOVATION AIDING CHALLENGING SECTION OF ALPURT B2

While not as glamorous as the project's viaducts or tunnels, Retaining Wall number two (RW02) has nonetheless provided designers and constructors on the Northern Motorway extension (ALPURT B2) project with one of the most enduring challenges on the job. [more](#)





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### REAAA ROADSHOW 2007 – YOUNG PRESENTER COMPETITION

**Format:** The 2007 REAAA Roadshow will include a “Young Presenter Competition” in each of the 5 centres; Dunedin, Christchurch, Wellington, Taupo and Auckland. Three individual entrants will be selected for each centre on the basis of a paper proposal as defined under “Entry”. Each entrant will be required to submit a paper of less than 750 words supporting their presentation prior to the Roadshow and each entrant will be limited to a presentation timeframe of 10 minutes with 5 minutes for questions and answers.

**Prize:** The prize for the young speaker in each centre will be a cash prize of \$500 and judging and award will be made on the day.

**Theme:** Entrants will be expected to present on a subject related to the Roadshow theme – “Delivering Value”. Submissions related to practical innovations that deliver value (value can be interpreted in its broadest sense – social, environmental, economic etc), will be preferred.

**Eligibility:** Entrants must be individuals (i.e. no joint papers) under the age of 32 years as at 31 December 2007. The purpose of the competition is to encourage participation in the REAAA. Entrants are encouraged to become individual members or members through their company’s corporate or institutional membership of the New Zealand Chapter but this is not a condition of entry.

**Entry:** Entrants are initially requested to submit a proposal for a paper in the form of a 100 summary outlining the subject and the proposed value perspective(s) no later than 20 July 2007.

The three selected entrants for each Roadshow venue will be required to complete papers of not more than 750 words and to submit the papers by **5 September 2007**.

**Submissions:** All entrants’ proposals should be submitted to:

Secretary, REAAA New Zealand Chapter Inc, PO Box 12 647, Thorndon, Wellington

Phone: 06 379 5579 Fax: 06 379 5578 Email: [lisapallister@reaaa.co.nz](mailto:lisapallister@reaaa.co.nz)



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## AUSTROADS UPDATE

Austroads exists to foster cooperation between Australian and New Zealand government road agencies and work on initiatives of common and important interest to their members. As the national state highway manager, Transit New Zealand (Transit) co-ordinates New Zealand involvement in Austroads. Transit staff, as well as others, make regular contributions on New Zealand's behalf.

Austroads is currently operating under a five year plan, which concludes in June 2007, when the new plan for 2007-2012 will commence. There are six key strategic areas of focus being addressed through research and development of guidelines:

- **Assets** – to minimise the whole of life cost of road and bridge assets to meet the transport task.
- **Freight management** – to address the future freight task.
- **Network optimisation** – to improve the productivity and reliability of the road network in moving people and goods.
- **Registration and licensing** – to enhance the security and integrity of registration and licensing information.
- **Road safety** – to reduce road trauma through a safe systems approach.
- **Technology** - to promote best practice in technology.

There is also a Capability area of focus to address the issues of skill development and retention that we all face in the roading industry.

With such a comprehensive coverage of the roading sub-sector, all the various projects and initiatives are too numerous to mention here. Further details can be found on the Austroads website ([www.austroads.com.au](http://www.austroads.com.au)) and the New Zealand delegate reports on recent meetings of each of the programme areas can be found on Transit's website ([www.transit.govt.nz](http://www.transit.govt.nz)).

Whilst most of the work has direct relevance to New Zealand, there are some areas of less relevance due to the different contexts of Australia and New Zealand. For example, within the Assets and Freight areas, a key challenge in Australia is currently being fixed with the introduction of performance based loading standards for heavy vehicles. This is directing much of the current work on these two programmes.

Another area of significant current activity is publication. Many readers will be familiar with the existing Austroads guides and manuals. These are being revised into a format and structure, which better addresses today's needs. Finally, all the work isn't just done in Australia! The next (7<sup>th</sup>) Austroads Bridge Conference will be held in New Zealand in May 2009, to coincide with the 50<sup>th</sup> anniversary of the Auckland Harbour Bridge. For further information on the Bridge Conference – [douceline.vanarts@transit.govt.nz](mailto:douceline.vanarts@transit.govt.nz).



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### INNOVATION AIDING CHALLENGING SECTION OF ALPURT B2

While not as glamorous as the project's viaducts or tunnels, Retaining Wall number two (RW02) has nonetheless provided designers and constructors on the Northern Motorway extension (ALPURT B2) project with one of the most enduring challenges on the job.

RW02 is located at the northern end of the project next to the Puhoi River. Its purpose is to support the southbound 'off ramp' that heads up the hill to Waiwera. Geotechnically, this section of the project is as challenging as it comes. Soft alluvial clays and silts sit over sandstone rock that slopes steeply beneath the Puhoi River, giving the hillside a strong tendency to slide eastwards.

RW02 is a 220m long reinforced soil embankment with slopes that will be grassed to blend in with the coastal marine environment. At the toe it's supported by more than 100 shear piles, installed to prevent large scale slips behind and below the embankment. The slopes of the embankment range from 45 to 65 degrees, so the fill must be reinforced with a layer of Tensar RE120 and RE80 geogrid every 500mm.

The primary component of the embankment is rock excavated from the nearby Johnstone's Hill Tunnels. Stockpiling this material in a confined workspace, as it becomes available, is a logistical juggling act for the team. Compounding this is the fact that fill placed directly next to the geogrid needs to be less than 75mm in diameter to avoid damaging it – the majority of tunnel millings are larger. This means the team has to sandwich bulk tunnel fill with smaller sized tunnel millings.



*RW02: Reinforced slope RW02 under construction in the centre of the picture*



Enter some kiwi ingenuity.

On the steep batter slopes of the embankment keeping the dirt stationary created another challenge for the team. Solutions such as the use of temporary plywood formwork or the use of permanent topsoil socks to support the fill were trialled, with limited success.

The ultimate solution was to use permanent sacrificial mesh formwork. Standard 663 mesh was cut, then bent into 45 or 65 degree sheets. This was then placed at the front of the RW02 batter slope, supporting the fill while maintaining the correct angle and fill heights. The problem with this solution is that quotes for bending the mesh were prohibitively expensive.

With the help of the tunnels team the crew put together an automatic mesh bending machine using spare parts from the tunnels arch form. The machine has proved to be a resounding success and will ultimately be used to bend more than 3000 sheets – giving rise to significant savings. It also ensures that despite the difficult geometry, the surface of the slope is smooth and ready for hydroseeding.

The Northern Gateway Alliance, which is project managing, designing and constructing the motorway, comprises Transit New Zealand, Fulton Hogan, Leighton Contractors, URS New Zealand, Tonkin & Taylor and Boffa Miskell.



*Mesh bender: The NGA designed and built mesh bender*



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#### **CHAIRMAN'S NOTE**

This is my last Chairman's note as I will be retiring from the committee at the chapter's Annual General meeting in July. I have thoroughly enjoyed my role as Chairman however business commitments have been consuming my time and energy lately and I feel it is time to handover the reins. I have particularly enjoyed seeing the Chapter grow from its inception to what it is now. So as you are aware nominations are now open for a new Chairperson along with committee members with positions commencing after the Annual General Meeting on Wednesday 18 July at the Rutherford Hotel, Nelson. We are looking for enthusiastic supporters to join the committee. Please think about this seriously – it will be your chance to help guide the REAAA to achieve what you want.

The AGM will be held in conjunction with the Low Volume Roads Workshop and will follow the happy hour on Wednesday evening. Following the AGM we will be launching the chapter's new website and will be asking for feedback and ideas from the audience on how to cater the website for the benefit of REAAA members. The website will be live a week before the AGM so have a browse and bring your feedback.

Along with a new website we have changed the format of our newsletters to electronic form from the website. Let me know what you think by sending me an email at [mike.s.rudge@nz.mwhglobal.com](mailto:mike.s.rudge@nz.mwhglobal.com)

The dates have been set for the 2007 annual Roadshow and this year's topics will be focused around 'Delivering Value'. We will be piloting a new initiative this year at the Christchurch Roadshow location only. At around 3.30pm and in place of a local paper we will be holding a Regional Sector Forum. This Forum will include road controlling authorities, consultants and contractors, it will identify issues across the sector that attendees feel need to be addressed and look at how they could be. If you have any ideas on what you would like discussed at this local forum please email our secretary on [lisa.pallister@reaaa.co.nz](mailto:lisa.pallister@reaaa.co.nz) and she will forward your ideas to our Forum committee.