



Christchurch	13 – 14 July 2009
Hamilton	16 – 17 July 2009
Napier	20 – 21 July 2009

ARRB Group Australia, in conjunction with NZIHT New Zealand, is pleased to present a number of two-day workshops across New Zealand on the latest practices in the management of unsealed roads including practical aspects during a site inspection.

Workshop purpose

- § To learn about the latest developments, new techniques and best practices on how to improve and lower maintenance costs of your unsealed roads.

Unsealed Roads Manual – Guidelines to Good Practice March 2009 (3rd edition)

ARRB Group released in March 2009 an updated and expanded edition of the very successful Unsealed Roads Manual, initially issued in 1993. This edition provides the latest research and developments worldwide to address issues identified by practitioners. It also includes the New Zealand Supplement to the 2000 edition of the Manual and the latest requirements and practices to make it an Australasian Manual on unsealed roads. This updated and expanded edition of the Manual is recommended reading for practitioners in local government, state road authorities and other agencies responsible for the care, maintenance and management of unsealed roads.

The new features of the upgrade include:

- Details on the latest research findings, new developments and applications of world best practice.
- Increased content to respond to comments made by delegates attending previous workshops held across Australasia.
- New Zealand procedures and practices.
- Equipment developments that provide objective data on unsealed road performance and the better use of often marginal pavement materials.
- A new chapter covering ways to improve safety on unsealed roads
- Applications for logging and haulage routes.
- Case studies highlighting how the application of good practice has resulted in significant cost savings or improved operating conditions.
- Greater emphasis on asset management requirements.

The workshop will be a practical 'hands on' presentation with group participation, worked examples, case studies, equipment demonstrations and a field inspection of various unsealed road sites.

Attendance at the popular workshops will be invaluable to learn and share the knowledge and experience with the other practitioners attending.

Who should attend?

Anyone involved in the construction and maintenance of unsealed roads, including, but not limited to, the following:

- § Local Road Authority Managers, Engineers and Plant Operators
- § Road Consultants (Engineers and Supervisors)
- § Road Contractors (Contract Managers, Roading Engineers, Supervisors and Grader Operators)
- § NZ Transport Agency personnel
- § Forest Owners and Forestry Consultants (operations staff)
- § Department of Conservation (operations and field staff)
- § Mining companies (operations staff)
- § Quarry Owners (operations staff)

Participants will receive a certificate of attendance.

The presenter:

George Giummarra is a Principle Consulting Engineer with ARRB Group, Australia. George has prepared the updated and expanded edition of the Unsealed Roads Manual and conducted many similar workshops across Australia and New Zealand over the past 15 years.



Cost:

\$695 + GST per person

To get better value from the workshop, delegates are advised to have access to a copy of the 2009 edition of the Unsealed Roads Manual – Guidelines to Good Practice. These manuals can be obtained from ARRB Group (Australia) directly at a cost of AUD\$250 + AUD\$20 postage + GST.

Manuals **MUST** be ordered at least **TWO WEEKS** prior to the workshop date to allow for postage time. Email BookSales@arrb.com.au, or visit NZIHT's website www.nziht.co.nz (view Conferences and Seminars) for a downloadable order form.

Attendees should also bring a calculator and a safety vest for site inspections.

Numbers for the workshop are strictly limited due to the nature of the group activities.

Cancellation policy:

If you are no longer able to attend this event a substitute attendee may take your place. However, if you wish to cancel your registration, you must notify us in writing, by email, letter or fax, at least 10 days before the start of the workshop. Withdrawals after this date (10 days prior to the start of the workshop) will be charged at 50% of the course fee. Non attendance on the course day will be charged at the full rate.

NZIHT Statement on Privacy – In accordance with the Education Amendment Act, the NZ Institute of Highway Technology Ltd is required to collect information that may be used or exchanged with: NZ Qualifications Authority for Records of Learning, NZIHT staff (including use for marketing purposes) and their consultants, Industry Training Organisations, Land Transport New Zealand and Road Controlling Authorities, Education and Training Support Agency and scholarship providers, Staff of any training providers you may be involved with, Other agencies where disclosure is required for data matching or the maintenance of law and order as defined in the Privacy Act 1993.



Unsealed Roads Workshop Program

Day One:

- 8:30 am Registration/Welcome
- 8:45 am Introductions / maintenance overview
- 9:00 am Road design requirements:
- Geometric design
 - Horizontal and vertical sight distance requirements
 - Drainage considerations
 - Safety measures to reduce risk
- 10:30 am Morning tea / coffee break
- 10:45 am Pavement and material selection
- Pavement design with worked examples
 - Pavement material properties and grading requirements
 - Base and wearing course specifications
- 1:00 pm Lunch
- 1:30 pm Getting the better value from existing pavement materials
- Stabilisation techniques
 - basic soil testing methods
 - examples on how to calculate material mixes
 - reducing dust and gravel loss
 - when to seal a road
- 3:30 pm Afternoon tea / coffee break
- 3:45 pm Road construction techniques
- Construction sequence
 - Compaction methods
 - Plant/equipment requirements
- 5:00 pm Close





Unsealed Roads Workshop Program (continued)

Day Two:

- 8.00 am Road maintenance techniques:
- Causes and cures to various road problems
 - Routine/periodic operations
 - Grading techniques
 - Unsealed shoulders on sealed roads
- 10:15 am Morning tea / coffee break
- 10.30 am Site inspection of various unsealed roads
(Roads to be inspected are to be advised)
- 1:00 pm Lunch in the field
- 3:00 pm Afternoon tea / coffee break (back in classroom)
- 3.15 pm Environment considerations
- Techniques to minimising soil erosion
 - Improving runoff water quality
 - Vegetation clearing requirements
- 3:30 pm Asset management activities and tools
- Establishing road hierarchy
 - Determining maintenance intervention levels /road class
 - Estimating a roads works program
- 4:00 pm Maintenance specifications
- 4:15 p.m. Forum discussions
- 4.30 p.m. Close

