

Number 65  
March 2008

Published by ARRB Group Ltd  
• ARRB Research  
• ARRB Consulting  
• ARRB Technology

VICTORIA

500 Burwood Highway  
Vermont South VIC 3133  
Tel: +61 3 9881 1555  
Fax: +61 3 9887 8104  
Email: info@arrb.com.au

WESTERN AUSTRALIA

191 Carr Place  
Leederville WA 6007  
Tel: +61 8 9227 3000  
Fax: +61 8 9227 3030  
Email: arrb.wa@arrb.com.au

NEW SOUTH WALES

2-14 Mountain Street  
Ultimo NSW 2007  
Tel: +61 2 9282 4444  
Fax: +61 2 9282 4430  
Email: arrb.nsw@arrb.com.au

QUEENSLAND

123 Sandgate Road  
Albion QLD 4010  
Tel: +61 7 3260 3500  
Fax: +61 7 3862 4699  
Email: arrb.qld@arrb.com.au

SOUTH AUSTRALIA

1 Ulah Place, Semaphore Park,  
SA 5019  
Tel/Fax: +61 8 8242 1039  
Email: arrb.sa@arrb.com.au

INTERNATIONAL OFFICES

Jakarta, Indonesia  
Beijing, China  
Dubai, United Arab Emirates

SUBSIDIARY

Luxmoore Consulting Parking  
Ground Floor  
12 Wellington Parade  
East Melbourne, VIC 3002  
Tel: +61 3 9417 5277  
Fax: +61 3 9416 2602

Editor: george.giummarra@arrb.com.au

## Estimated vehicle kilometres travelled on local roads

In 2007, ARRB completed a study for the National Transport Commission (NTC) to estimate the proportion of vehicle kilometres travelled (VKT) on Australian roads divided into arterial and local roads. These estimates were developed for light, medium, and heavy vehicles in metropolitan and rural areas. Establishing the mix of different vehicles in traffic is particularly important, as this will have an impact on the process of allocating road expenditure.

The study provided an estimate of VKT based on a representative selection (sample) of council road lengths and traffic information on road classifications across Australia. This information was factored up to provide an overall relative estimate of VKT for selected municipal groups, road and vehicle types. Additionally, the study provides data relating to sealed and unsealed road lengths, where possible.

In total 121 councils were invited to take part in the study (17% sample of the number of councils in Australia). Data was provided by 72 councils, representing a 10.3% sample of Australian councils.

The study updated estimates from an earlier (2003-2004) ARRB project, which was a first attempt to estimate VKT for arterial and local roads.

The total average VKT (000s) per day on Australian roads is given below.

	Heavy	Medium	Light	Total	%
<b>Arterial</b>	19,542	19,987	393,846	433,375	62.5%
<b>Local</b>	4,370	13,209	242,728	260,307	37.5%
<b>Total</b>	23,912	33,196	636,574	693,682	100.0%

A key finding of the study is that there has been an overall increase in VKT on local roads of 12% compared to the original study. The largest contributor to this growth in VKT was an increase of traffic on local regional roads.

Furthermore, the results of this study indicate that the VKT split between different vehicle classes on arterial and local roads is as follows (estimates from the previous study are in brackets). For example, for light vehicles the local/arterial road split is 38%/62%.

- for light vehicles, 38% of travel is on local roads (37%)
- for medium vehicles, 40% of travel is on local roads (30%)
- for heavy vehicles, 18% of travel is on local roads (16%)
- for all vehicles, 37.5% of total VKT is on local roads (35.5%).

Nationally, it is estimated that between studies total light vehicle VKT has grown by 8%, while medium vehicle VKT has decreased by 14%.



For further information, please contact Caroline Evans, caroline.evans@arrb.com.au

# Update of the Unsealed Roads Manual

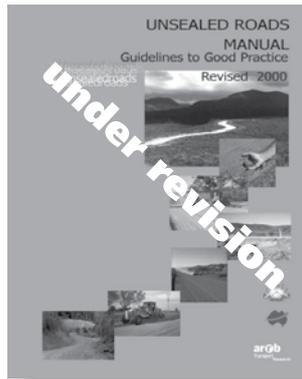
ARRB is currently updating the 2000 edition of the Manual with the intention of having the next edition released late in 2008.

The Manual requires an update because of a number of changes since its last release. Reasons for the update include:

- new geometric design procedures for rural roads released by Austroads
- comments from delegates at over 50 workshops held in the last seven years on ways to improve content
- Austroads review of pavement design requirements for unsealed roads
- new chapter to deal with road safety issues relating to unsealed roads
- development of deterioration models for unsealed roads
- dust suppressants update
- ways to better manage heavy vehicles (logging and haul vehicles) on unsealed roads.

The new edition will incorporate the previously used New Zealand unsealed roads supplement making the Manual cover Australasian practices.

Suggestions on how the current Manual can be improved are most welcome. Please send comments to [George.Giummarra@arrb.com.au](mailto:George.Giummarra@arrb.com.au) or +61 3 9881 1555.



## Milestone for the Roughometer II

ARRB recently marked the milestone of shipping the 200th unit of the Roughometer II road roughness system. Popular with local governments and other authorities responsible for the management of the local road networks, the Roughometer II is now proving itself to be a key product for ARRB in the international market. With strong demand from many developing nations for a low-cost, rugged device with repeatable results the Roughometer II is earning its stripes in some of the toughest conditions.

The benefits of using the Roughometer II include:

- low cost
- simple installation – no need to modify the survey vehicle
- easy to use
- GPS capabilities
- objective roughness measurement on both sealed and unsealed roads
- more accurate than response-type instruments
- planning a grading scheme on unsealed roads
- addressing road users complaints
- monitoring the development of roughness.

For further information on the Roughometer II please contact Jonathan Swift on +61 3 9881 1555 or [jonathan.swift@arrb.com.au](mailto:jonathan.swift@arrb.com.au)



## Geometric road design workshops prove popular

ARRB has to date run nine three-day workshops in New Zealand, Victoria, South Australia and Western Australia and given the high demand more are being planned in the other states and territories later this year.

The purpose of the workshops is to provide new graduates, draftspersons and technicians with a practical understanding of basic geometric road design. The objectives of the workshop are:

- develop a sound understanding of the fundamentals in geometric road design
- consider key engineering aspects that relate to a road design project
- apply the knowledge gained through various design exercises to confirm understanding
- undertake a preliminary rural road design exercise on the drawing board in a design team environment.

Most of the delegates from state road authorities, councils and consultants have found the 'hands-on' design exercise most beneficial as it was a great way to learn and understand the basic elements of road design.

Should you wish to attend a future workshop please register your interest by contacting [lorraine.ray@arrb.com.au](mailto:lorraine.ray@arrb.com.au) or on +61 3 9881 1555.



*A team at work on the design exercise in an Adelaide workshop*