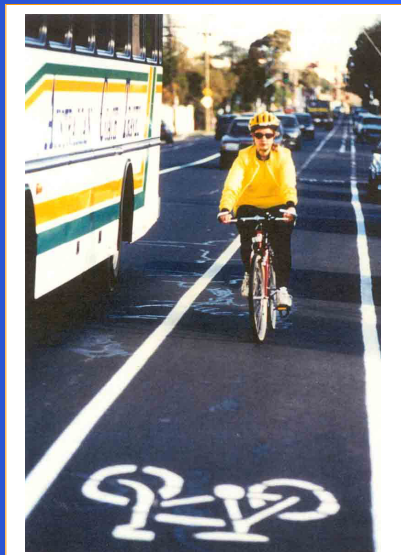


# 2002/03 ANNUAL REPORT

# AUSTROADS



AUSTROADS

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AUSTROADS  
Sydney 2003

***Austroads Annual Report 2002—03***

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Designed and typeset by Judi Sorbie.

# AUSTROADS PROFILE

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Austrroads is the association of Australian and New Zealand road transport and traffic authorities whose purpose is to contribute to the achievement of improved Australian and New Zealand transport related outcomes by:

- ◆ developing and promoting best practice for the safe and effective management and use of the road system;
- ◆ providing professional support and advice to member organisations and national and international bodies
- ◆ acting as a common vehicle for national and international action;
- ◆ fulfilling the role of the Australian Transport Council's Road Modal Group;
- ◆ undertaking performance assessment and development of Australian and New Zealand standards, and
- ◆ developing and managing the National Strategic Research Program for roads and their use.

Within this ambit, Austrroads aims to provide strategic direction for the integrated development, management and operation of the Australian and New Zealand road system — through the promotion of national uniformity and harmony, elimination of unnecessary duplication, and the identification and application of world best practice.

# AUSTROADS MEMBERSHIP

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Austrroads membership comprises the six state and two territory road transport and traffic authorities and the Commonwealth Department of Transport and Regional Services in Australia, the Australian Local Government Association and Transit New Zealand. It is governed by a council consisting of the chief executive officer (or an alternative senior executive officer) of each of its eleven member organisations:

- ◆ Roads and Traffic Authority New South Wales
- ◆ Roads Corporation Victoria (VicRoads)
- ◆ Department of Main Roads Queensland
- ◆ Main Roads Western Australia
- ◆ Department of Transport and Urban Planning South Australia
- ◆ Department of Infrastructure, Energy and Resources Tasmania
- ◆ Department of Infrastructure, Planning and Environment Northern Territory
- ◆ Department of Urban Services Australian Capital Territory
- ◆ Commonwealth Department of Transport and Regional Services
- ◆ Australian Local Government Association
- ◆ Transit New Zealand

The success of Austrroads is derived from the synergies of interest and participation of member organisations and others in the road industry.



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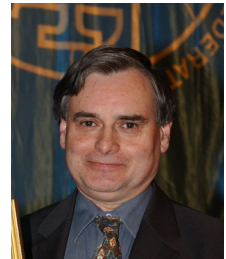
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# CHAIRMAN'S MESSAGE

Dr Robin Dunlop  
Austroads Chairman  
Chief Executive, Transit New Zealand



The last twelve months have been a challenging and rewarding period for Austroads as it continues to work towards the objectives and outcomes of the current strategic plan.

This effort is based on a rolling three-year work plan which is reviewed, approved and measured for performance and effectiveness annually. Built into the planning is enough flexibility to allow Austroads to respond to changing issues facing the roads and roads transport industry while maintaining a focus on the agreed strategic objectives of member organisations and stakeholders.

Austroads strategic plan and work program support its role as the Road Modal Group in providing professional support and advice to the Australian Transport Council (ATC) on road and road transport issues.

During 2002–2003, and continuing the efforts of the previous year, there has been a focus on improving Austroads policies and procedures, by streamlining existing administrative functions and reviewing and implementing new ways of working. Some of this has come about as Austroads undertakes preparatory work to develop its strategic plan for 2004–2007. The associated discussion and review has been valuable in concentrating attention on Austroads purpose and the strategic work it undertakes. It has also allowed productivity improvements through distributing communications electronically and more effectively utilising member's own resources.

Austroads continues to audit the effectiveness of its work by having all program areas undertake formal reviews of a number of completed projects. The results of these evaluations provide a picture of the impact that the dissemination of Austroads knowledge has and provides guidance on where and how to improve.

It is however the agreed work program that collectively addresses Austroads strategic objectives. In 2002–2003, Austroads project outputs have contributed to the improvement of Australasian roads and transportation in many areas.

I take the opportunity to acknowledge the work of Austroads Program Managers and Assistants, Project Managers, and the staff at Austroads National Office and thank them for their efforts.

A handwritten signature in black ink, appearing to read 'R Dunlop', with a horizontal line extending to the right.

Robin Dunlop  
Chairman



# SUMMARY

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The following is a summary of the information contained in this Annual Report.

## **Road investment, planning and management**

Austrroads work in the road system management area covers the wider strategic framework for providing and managing the road system within the transport network. Austrroads produced a number of transport reports including *Capturing the Benefits of Performance Based Standards* which examines the likely consequences of the introduction of the PBS approach to heavy vehicle regulation, *Forecasting Inter-regional Freight Transport from Regional Development* which stems from work examining bulk and non-bulk freight flows and flow prediction, and the resource reference *Planning for Freight in Urban Areas* to assist road authorities when assessing development proposals likely to generate significant freight movements. Austrroads also researched past trends in road transport-related revenue and the likely impact of tax reform, rail and new technologies.

In tourism, the report *Benefits of Road Investment to Assist Tourism* stemmed from the importance this sector has in regional and rural economies and the need for road authorities to plan accordingly. Other work in this area included publishing framework guidelines *Towards a Nationally Consistent Approach to Route Numbering* – the end result of which would assist all road users.

Austrroads continued during the year to work on a multi-volume series on project evaluation with the collation and updating of a range of previously published reports. Austrroads work on project evaluation methodologies, parameters and tools has been undertaken over a number of years and across several Austrroads Program areas. The goal now is to publish this work in a readily accessible, identifiable and integrated Austrroads series to assist practitioners in the process of project evaluation.

## **Asset Management, including Bridge Management**

Austrroads undertakes a wide range of work on asset management. Recognising that road authorities at all levels need better management of their infrastructure assets, Austrroads has been reviewing its 1997 *Strategy for Improving Asset Management Practice* with the revised document to include a detailed action plan. Austrroads has also launched an asset management internet site developed by the Asset Management Reference Group featuring information on best practice, publications, links to other sites and a glossary of terms. Supplementing this was *A Review of Access Management Practice*, a review and comparison of processes and tools for asset management. The report records assessments by users of systems in use in Australia and New Zealand.

An Austrroads *Action Plan* to respond to the High Court's decision on non-feasance was approved by ATC in August 2002 with road authorities subsequently meeting to progress understanding on this important issue. A current project is addressing this issue by investigating a framework for maintenance intervention standards and response times.

*Use of Community Input in Determining Treatment Intervention Levels* was published to provide guidelines for the development of a set of "customer defined levels of service" and tools for obtaining feedback from stakeholders. Also published was *Integrated Asset Management Guidelines for Road Networks* outlining guidelines for a generic process for managing a road network investment program, covering planning, implementation, audit and review.

The proposed Australian bridge design standard, based on the 1992 Austrroads *Bridge Design Code*, has continued to be developed through Standards Australia's technical committee process. Unfortunately, long delays in reaching agreement on some key bridge performance issues have seen the proposed publication date pushed back. The standard should be released in 2004.

Other Austrroads research work in bridges management include *Dynamic Interaction of Vehicles and Bridges* and *Bridge Management Systems — the State of the Art*, and in February 2003, a one-day workshop was held on bridge management to facilitate three current Austrroads projects covering bridge information and management. These projects are to develop performance indicators of bridge and bridge network condition together with investigation of the feasibility of an Australasian bridge maintenance manual.

# summary

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## Vehicle Regulation and Heavy Vehicles

During 2002-03, Australian states and territories continued the process to establish links with the National Exchange of Vehicle and Driver Information System (NEVDIS). NEVDIS is being used to combat vehicle theft, re-birthing and fraudulent driver licensing. All jurisdictions except the ACT and Tasmania have loaded driver licence and vehicle registration data and are online. Further, Police National Stolen Vehicle Data (NVOI) is available for enquiry to all jurisdictions. During the year a tender evaluation process for the continued operation and maintenance of NEVDIS was undertaken. As a result, Austroads and Fujitsu Australia Ltd have entered into a contract for NEVDIS II for five years from August 2003.

Following extensive research and consultation by the National Road Transport Commission (NRTC) and Austroads, a set of performance-based standards for heavy vehicles which will apply throughout Australia are close to being finalised. This set of standards forms a new approach to satisfying criteria for safety, infrastructure, environment and amenity outcomes of heavy vehicles. A regulatory framework, in which these standards can apply as a national, mutually recognised regulatory system, has been broadly agreed. This will be considered by ATC in late 2003. An approved regulatory framework will form the basis for the development of operating rules, codes, guidelines and legislation to apply the performance standards.

In May 2003, the ATC endorsed the results and recommendations of the 'Intelligent Access Program (IAP) Feasibility Project. This 12 month project sought to examine the feasibility of using telematics technology to track vehicle location and other associated parameters for route compliance. The purpose of the project was to identify the applications to which jurisdictions could apply the IAP and to demonstrate business, regulatory, technical and practical feasibility. The results show that IAP can provide significant benefits to jurisdictions in road safety, infrastructure wear, lessened environmental effects, public perceptions of heavy vehicle movements, and optimising road freight policy. An 18-month initiative has now commenced to rollout a pilot and associated elements to support an operationally sound IAP.

Austroads Heavy Vehicle Reference Group has continued to work on a package of compliance and enforcement projects during 2002-03, which will continue next year. These projects focus on producing best practice guidelines to support the consistent implementation of the Compliance and Enforcement Bill currently being prepared by the NRTC. The outcome of this work is far-reaching with guidelines in the series to deal with the management of mass, dimensions, load restraint, the application of powers along the chain of responsibility, and the development of codes of practice. A concerted and persistent emphasis on consultation and transparency has featured during the management of the project package.

Guidelines for the physical dimensions of mass have now been endorsed by all Austroads Council members and provide an innovative system for assessing heavy vehicle mass. Further work is planned. In addition, *Compliance Audits: Design of Methodology* has now been completed. The methodology describes a recommended method of auditing the overall rate of compliance with legal requirements by the heavy vehicle fleet.

## Performance measurement and RoadFacts

During the year, Austroads launched a dynamic internet facility for all existing and new National Performance Indicators (NPI) data on the road system and road authorities. This useful site features indicator definition, descriptions and methodologies. Austroads continues to review all indicators for relevance and significance. In June 2003, while Austroads Council agreed to continue to commit resources to collating and reporting on NPI data, it noted that approximately 21 of 72 indicators are not widely used. Further exploration of this fact is underway and will be supported by a user satisfaction survey of the public to gauge perceptions of road system and road agency performance.

Austroads also finished collating data for an interim update to its popular *RoadFacts 2000* publication and made this available for electronic download in February 2003. A second interim update is now close to release ahead of a full review of all data for the next *RoadFacts* edition – which will be the fourth – by the end of 2004.

# summary

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## Road Safety

Austroads has continued its extensive program in road safety. This includes undertaking ATC-instigated projects and in particular, research into school bus safety. Two reports – *Review of the School Bus Safety Action Plan — Final Report* and *Investigation of Internal Bus Safety Measures* were released during the year and examine the many issues involved in improving school bus safety. Another ATC project was the publication of an investigation into *Reducing Collisions at Passive Railway Crossing in Australia*, while scoping work has been completed on a national study on motorcycle crashes investigating the use of wire rope safety barriers.

The major work during the year was the development of *Assessing Fitness to Drive for Commercial and Private Vehicle Drivers*, the product of the combination the NRTC's *Medical Examinations of Commercial Vehicle Drivers* (1997) and Austroad's *Assessing Fitness to Drive* (2001) for private vehicle drivers. In September 2003, over 35,000 copies of the mailing pack including brochures and posters were sent to general practitioners, medical specialists and associations within Australia. With driver health very important for licensing authorities, this publication provides health professionals with guidelines for a consistent application when assessing a patient's fitness to drive. An extensive media campaign was supplemented by the launch of a website for online referral.

A large number of road safety reports were published in 2002-03, all available freely on the website: *Community Road Safety in Australia and New Zealand*, *Drink-Driving Enforcement: Issues in Developing Best Practice*, *Self-Regulation of Older Drivers: A Review*, *Evaluation of the Proposed Actions Emanating from Road Safety Audits* and *Investigation of Cyclist Safety at Intersections*. All this work contributes to a better understanding of how to reduce road death and trauma. In October 2002, at their request, a strategic review of road safety issues and the Road Safety program was submitted to Austroads Council. The review provided guidance on which strategic priority areas for research would help achieve the *2001-2010 National Road Safety Strategy* road toll reduction target. Major strategic priority areas identified are speeding and speed management, safer roads and road environment, driver impairment and restraint use.

The first stage of work to improve and update *Road Safety Risk Manager* software was completed this year. The purpose of the work is to increase the understanding of the relationships between road and road design elements, and to establish the methodology as an Australian standardised risk analysis support tool of the highest possible quality in support of the safety management responsibilities of road managers.

## Ecologically Sustainable Development and the Environment

*An Approach to the Validation of Road Traffic Noise Models* was produced by Austroads as a guide to the preparation and assessment of validation studies of traffic noise prediction models, and provides a technical basis for a preferred traffic noise model in Australia and New Zealand. Further work in this area is progressing towards establishing best practice guidelines for the management of road traffic noise.

*Guidelines for Treatment of Stormwater Runoff from the Road Infrastructure* was released to assist practitioners with the selection and design of road runoff treatment measures, hydrologic design standards and design computations for selected treatment measures.

Austroads produced its latest *Environmental Strategy* in September 2002 outlining strategies for planning, research and development on environmental issues facing road and transport authorities in Australia and New Zealand. While Austroads member authorities have long recognised the importance of the environment in road and transport planning and management, and significant gains have been made, there are opportunities to do more. Austroads also published *Environmental Considerations for Planning and Design of Roads* along with a CD-ROM based software tool that provides a framework for planners and designers of roads to become better informed on environmental impacts and current methods to minimise them.

# summary

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## Technology

The technology work Austroads undertakes is its largest field and covers such tangible areas as traffic management, bridges, pavements and the environment. The outputs from projects in this area are technical manuals and research reports. Publications released during the year include:

*A Guide for Traffic Engineers - Road-Based Public Transport and High Occupancy Vehicles* – an exploration of options to enhance the people-moving capacity of road networks; *Guide to Traffic Engineering Practice, Part 7 — Traffic Signals* – a complete revision of the 1993 edition incorporating the latest practice in the safe and efficient design of traffic signals installations; *Guide to the Selection and Use of Bitumen Emulsions* – designed to provide emulsion users with the necessary information to select and apply emulsions in a technically sound manner; *Austroads Pavements Strategy 2001-2004* – an update of the 1995 pavement research and development strategy; *Geometric Design for Trucks - When, Where and How?* – investigating truck-based geometric design standards; *Practitioners Guide to Design of Sprayed Seals - Revision 2000 Method*; *Austroads Framework for Specifying Asphalt* – to promote national uniformity and good practice in the specification and use of asphalt throughout Australia; *Comparison of Project Level and Network Level Pavement Strength Assessment* – to improve consistency of pavement strength assessment; *Progress Report on the 2001/02 National Mix Design Program* – progress on the two-year project to assist implementation of a new Australian asphalt mix design procedure; *Binders Research Program - 2001/2002 Progress Report* – progress on the development of an integrated specification for bitumens, multigrades and polymer modified binders.

## Intelligent Transport Systems

Austroads Intelligent Transport Systems (ITS) Program concluded its three-year duration in June 2003 with the completion of the implementation of the actions from *e-transport*, the National Strategy for ITS. ITS Australia managed the projects under the ITS Program for Austroads. Austroads also undertook six other projects related to ITS within other programs. An important focus of the strategy was to create a national framework for the development of interoperable and technically open architecture for ITS for Australia. This provides an environment that encourages competitive industry participation, and a platform for efficient ITS development and enhanced community benefits. The Standing Committee on Transport has now established a special working group, involving senior representatives of all transport modes, to oversee the development of a new national strategy for ITS.

## International

Austroads has continued its strategic involvement in international activities through the work of representatives in (PIARC) World Road Association and Road Engineering Association of Asia and Australasia (REAAA). In October 2002, a successful series of meetings of PIARC's Council, Executive, Commissions and National Committees was held in Melbourne. Over 120 delegates attended with a high level of interaction between international and Australian and New Zealand transport delegates. Austroads has also been working this year to organise participation by Australasian delegates at PIARC's 22<sup>nd</sup> World Road Congress in Durban, South Africa in October 2003. Delegates will be involved in all aspects of the Congress including technical committees and the accompanying exhibition.

There was a high level of REAAA activity this year with the 21<sup>st</sup> ARRB Transport Research/11<sup>th</sup> REAAA Conference in Cairns, 18–23 May, 2003. Almost 300 presentations were made covering the conference's theme of *Transport – our highway to a sustainable future*. Main Roads Queensland and the REAAA Queensland Branch played a key role in the lead up to and during the conference. The Chapter was also involved in arranging the Head of Road Authorities (HORA) meeting on 19 and 20 May 2003 run during the Conference. 24 heads of road authorities from 14 countries participated in two workshop sessions on *Road Network Asset Management* and *Road Safety*. These were fruitful sessions and continued the valuable exchange of ideas that the REAAA forum provides.

# summary

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During the year Austroads also signed an agreement for information exchange with the American Association of State and Highway Transportation Officials (AASHTO), our equivalent in the USA. In this way, Austroads assists to facilitate the dissemination of international information and practices to road authorities in Australasia.

## **Publications and Promotion**

During 2002-03, Austroads published 35 guides and reports. These publications are of high quality, are up-to-date and represent a vast body of knowledge. On 12 July 2002, Austroads launched a publications database that provided for the free download of research reports. Almost 11,000 downloads were recorded to 30 June 2003 and over 160 titles are now available in electronic format. The initiative has been a great success in raising the level of awareness and utility of Austroads publications.

Austroads has also worked at improving the methodology by which it updates its technical manuals, and the quality of the manuals themselves. Austroads Council has approved a new publications management strategy which provides for a dedicated program for publication development and revision. The objective is to revise Austroads guides and restructure the catalogue into separate series areas. This strategy will ensure regular and better updates and dissemination.

# MEMBERSHIP

Member Organisations	Directors
Roads and Traffic Authority, New South Wales	Mr Paul Forward — Chief Executive
Roads Corporation Victoria (VicRoads)	Mr David Anderson — Chief Executive
Department of Main Roads Queensland	Mr Stephen Golding AM RFD — Director-General
Main Roads Western Australia	Mr Menno Henneveld — Commissioner
Department of Transport and Urban Planning South Australia	Mr Flett Steele — Director, Commercial and External Relations
Department of Infrastructure, Energy and Resources Tasmania	Mr Peter Douglas — General Manager, Roads and Public Transport
Department of Infrastructure, Planning and Environment Northern Territory	Mr Richard Galton — Executive Director, Infrastructure and Roads
ACT City Services Department of Urban Services	Mr Gordon Davidson — Executive Director, City Management
Commonwealth Department of Transport and Regional Services	Ms Sema Varova — First Assistant Secretary, Transport Programs
Transit New Zealand	Dr Robin Dunlop — Chief Executive
Australian Local Government Association	Mr Ian Chalmers — Chief Executive

Observer Organisations	Representatives
ARRB Transport Research	Mr Gerard Waldron — Managing Director
Bureau of Transport & Regional Economics	Mr Tony Slatyer — Executive Director
National Road Transport Commission	Mr Tony Wilson — Chief Executive
Department of Transport, Papua New Guinea	Mr Henry Parakei — Secretary

National Office	
Executive Director	Mr Murray Kidnie
Manager, Program Support	Mr David Francis
Communications Manager	Mr Jason Day
Office Manager	Ms Judi Sorbie
Accounts Manager	Ms Jeannie Sanoo
Administrative Assistant	Ms Jenny Castle



# STRUCTURE & PROGRAMS

Austrorads is governed by a Council consisting of the Chief Executive (or alternative senior executive officer) from each member organisation. The Council meets three times a year.

Austrorads core activities were divided into six program areas, each of which was managed by a senior officer from a member organisation. The Intelligent Transport Systems program concluded at 30 June 2003. There are now five programs.

A small National Office based in Sydney services the Council. The National Office also undertakes the strategic planning and coordination of program work, publishes Austrorads outputs and markets the association and its achievements.

Program	Program Manager
<i>Road System Management</i>	Mr Peter Balfe Deputy Chief Executive VicRoads
<i>Road Use Management</i>	Ms Sue Sinclair Director, Road Safety and Road User Management Roads and Traffic Authority New South Wales
<i>Road Safety</i>	Mr Joe Motha Director, Safety Research and Education Australian Transport Safety Bureau
<i>Business Systems</i>	Mr Phil Ladner Executive Director — Major Projects Main Roads Western Australia
<i>Technology and Environment</i>	Mr Ian Reeves Executive Director (Pavements, Materials and Geotechnical) Department of Main Roads Queensland
<i>Intelligent Transport Systems</i>	Mr Geoff Kloot

Program	Program Assistants
<i>Road System Management and Intelligent Transport Systems</i>	Ms Charmaine Collins VicRoads
<i>Road Use Management</i>	Mr Chris Walker / Mr Craig D'Souza Roads and Traffic Authority New South Wales
<i>Road Safety</i>	Mr Phill Grabham Australian Transport Safety Bureau
<i>Business Systems</i>	Ms Cecylia Sylwestrzak Main Roads Western Australia
<i>Technology and Environment</i>	Mr Phil Rankine Department of Main Roads Queensland

# ROAD SYSTEM MANAGEMENT

Mr Peter Balfe  
Road System Management Program Manager  
Deputy Chief Executive, VicRoads



*To promote the effective and efficient management of the road system and to facilitate its adequacy, performance, contribution to the economy and achievement of environmental and social goals.*

## Overview

The Road System Management (RSM) Program is concerned with the strategic framework for provision and management of the road system within a total transport system.

Key areas of interest include:

- transport demand and travel forecasting
- integrated transport and land use planning
- sustainability of the road system
- travel demand management
- project assessment and investment evaluation
- road funding and financing
- road classification

I am very grateful for the excellent work undertaken by the RSM Reference Group, providing assistance in the development and delivery of the program. This group is made up of senior representatives from each jurisdiction and relevant observers. The role of the Reference Group is to:

- provide a forum for discussion of issues and strategic priorities
- assist in developing, prioritising and scoping projects
- as individuals, take responsibility for timely delivery of projects within their jurisdiction
- facilitate exchange and dissemination of information on national and international activities
- liaise with other Austroads Reference Groups on cross-program issues

## 2002-2003 program achievements

It was a productive period for the RSM Program during 2002-03 with the completion of a number of projects, significant progress on other projects and a focus on planning and progressing the proposed Austroads series of Guidelines on Project Evaluation.

The project *Capturing the Benefits of Performance Based Standards* examined the consequences of the introduction of performance based standards. The adoption of this new approach to standards is expected to provide a means of maintaining road safety and protecting road infrastructure, while offering opportunities to increase productivity and flexibility, in both vehicle characteristics and operations, in the Australian road transport industry. A report on the findings has now been published.



# road system management

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Increasing demands for road improvements by competing industry sectors and geographical areas is placing a greater onus on road authorities to demonstrate and quantify the social and economic benefits. With the growing importance of the tourism sector in regional and rural economies, the recently published report *Benefits of Road Investment to Assist Tourism* provides assistance to road authorities in considering the effects of tourism in transport planning and project evaluation. The report provides an assessment of the relevance of approaches adopted in the USA; reviews information exchange between road authorities and tourism agencies for considering demands generated by tourism in transport planning; recommends a regional economic model for assessing the relationship between road investment and tourism at a macro/regional level; and presents a number of case studies.

The project *Freight Transport and Regional Development* reviewed inter-regional bulk and non-bulk freight flows in Australia and developed a modelling tool, *FreightSim*, for predicting these flows. The model forecasts base case inter-regional freight flows and has a strong capability as a sketch planning tool for testing the implications for freight flows of chosen scenarios of economic development. The model generates both total freight flows and modal splits, so is equally useful for forecasting freight flows by road or by rail. The published report *Forecasting Inter-regional Freight Transport from Regional Development* details the findings of the review and introduces the purpose and application of the modelling tool.

The recently published report *A Review of Access Management Practice* reviews and compares processes and tools for access management employed in Australia and New Zealand. It highlights both commonalities and wide variations in practice and discusses current and proposed access management policy; guiding principles; legislation; powers and responsibilities; planning and development control processes; and management tools and guidelines. The report records assessments by users of the benefits and disadvantages of the various policies, systems and processes that are currently in use. I believe that the report will be of substantial benefit to all agencies in refining responses to current and emerging issues in this evolving field.

The report *Planning for Freight in Urban Areas* provides a resource for officers in state road authorities and local government who are required to assess development proposals that will generate significant freight movements, or are involved in land use planning for freight generating industries. The resource provides an overview of important issues and aspects of the movement of freight in urban areas, whilst providing a context and framework for consideration in detailed investigations and planning studies.

The report *Outlook for Road Related Revenue and Road Transport Demands*, published in March 2003, reviews the historic trends in road transport related revenue, and road transport demand and expenditure, and develops possible future scenarios. It explores a number of important factors likely to have a marked influence on these future scenarios, such as tax reform, impact of rail, new technologies and travel demand management. The scenarios are analysed to assess different outlooks for road related revenues and road transport demand. The analysis described in this report uses the software *Scenario Explorer™*, developed within the scope of this project using national level data. However, the tool's usefulness can be extended to accommodate state level simulations. Guidelines have been prepared to assist Australian state and territory road agencies to implement principles for a national approach to rural route numbering. These principles were agreed by Transport Ministers to provide a four-tier route classification system that reflects the functional importance of the route, and will be used on route signage and mapping. The determining principle in developing the guidelines is that they will assist road users. *Towards a Nationally Consistent Approach to Route Numbering* is available from Austroads website.

The RSM Program completed a review of Triple Bottom Line (TBL) evaluation concepts and methodologies to scope the work required to include these in the Austroads series on Project Evaluation. The project involved a review of national and international literature on TBL and consultation with sections of government that are practicing and developing methodologies for TBL evaluation. Work to progress development of the Project Evaluation Series, including the provision of guidance on TBL concepts and methodologies, will continue in 2003-04.

# road system management

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Two national reports were prepared for submission to the PIARC XXIIInd World Road Congress in Durban October 2003. The themes of the reports are Road Transport, Liveability and Sustainable Development of Life; and Access to Mobility: A Basic Social Service. PIARC has invited Austroads to present the first of these reports at the Congress.

In 2002-03, the RSM Program continued the initiative started in 2001-02 to produce a quarterly newsletter to disseminate knowledge from PIARC and other international activities related to the areas of interest of the Program. The success of this initiative has led to its adoption by the Austroads National Office as part of the strategy to increase the benefits from Australia's involvement in international activities. In 2003-04, Austroads National Office will prepare the newsletter, which will cover all areas of Austroads international involvement.

Changes in the volume and type of freight being carried on local roads are leading to increased costs for local governments. The RSM Program is undertaking a project to review current policy and practice in Australia and New Zealand for industry to contribute to the cost of constructing and maintaining local roads. The project looks at the issues driving the need for alternative management arrangements, national and international cost recovery mechanisms and impediments to implementation, such as insufficient data on road condition and use. The project will recommend if future research is required to progress the development of suitable guidelines, and is expected to be completed early in 2003-04.

## Future Directions

### **Austroads Series of Guidelines on Project Evaluation**

Austroads is well on the way in developing a new series of guidelines on Project Evaluation, with an emphasis on transport integration and placing evaluation in a multi-modal context. It is being developed in consultation with representatives of rail transport groups, and with the Bureau of Transport and Regional Economics in relation to the Commonwealth Government's AusLink transport funding initiative. The series collates existing material on project evaluation into a readily accessible and identifiable resource for state road agencies, local government, other transport agencies, consultants and academics. The proposed structure of the series includes eight volumes covering the full cycle of project evaluation from identification of a need; options identification to address the need; assessment of strategic fit; evaluation of economic, financial, social and environmental impacts; risk analysis; and post-implementation review. The first three volumes of the series are expected to be available from October 2003. Work programmed for 2003 and 2004 will substantially complete the series.

### **National Workshop on Urban Transport Modelling and Urban Freight Forecasting**

Austroads Council has recognised the need to explore the scope of work required to improve Australian practice in forecasting and analysing urban freight demand and, more generally, urban transport demand. Austroads, in conjunction with ARRB Transport Research and the Bureau of Transport and Regional Economics, will be convening a national workshop in September 2003 to review key issues, and recommend required actions to address these issues. The workshop will involve representatives of road agencies, transport departments and experts in the field. The workshop follows on from a review undertaken by the RSM Program in 2002-03 of urban freight forecasting and analysis practice in Australia and internationally.

# ROAD USE MANAGEMENT

Ms Sue Sinclair  
Road Use Management Program Manager  
Director, Road Safety and Roads User Management,  
Roads and Traffic Authority New South Wales



*To contribute to the safe and efficient use of the nations' roads and the harmonisation of user services and conditions.*

## Overview

In 2002-03, the Program concentrated on four key areas of activity: development of best practice guidelines for heavy vehicle compliance and enforcement; revision of traffic engineering guidelines; the development of performance based standards for heavy vehicles and the on-going implementation of NEVDIS (a system to link vehicle registration and licensing systems around Australia) and successful introduction of the NEVDIS II contract agreement with Fujitsu. The RUM reference groups continue to provide a valuable platform for the discussion, debate and resolution of disparities that arise between jurisdictions on a number of inter-jurisdictional issues, in relation to heavy vehicles, registration and licensing and traffic management.

Following consultation with reference group members and key stakeholders throughout 2002-2003, the RUM Program has been able to implement the Austroads Council's strategic decision to manage a smaller number of projects in 2002-2003, each larger in size and with a stronger focus against the Austroads Strategic Plan 2001 - 2004. This will ensure that the Program's resources are directed to those projects that provide the highest value to Austroads members.

From the beginning of the 2002-2003 financial year, the RUM Program administered a total of twenty-two (22) projects. It is envisaged that the total number of projects managed will be further reduced throughout the forthcoming financial year in order to ensure focus against the strategic priorities identified by Austroads Council.

The total program budget for the RUM Program in 2002-2003 was \$912,600. The RUM Program is committed to the on-time delivery of all current and future projects.

## 2002-2003 program achievements

### Heavy Vehicles

During the 2002-2003 period, the RUM Program placed considerable emphasis on progressing the Compliance and Enforcement series of projects to coincide with the pending finalisation of the Compliance and Enforcement Bill. The Compliance and Enforcement projects deal with the management of mass, dimensions, load restraint, the application of enforcement powers along the chain of responsibility and the development of codes of practice for heavy vehicle operators. Once finalised, these projects will provide best practice guidelines to support the consistent implementation of the Compliance and Enforcement Bill currently being finalised by the National Road Transport Commission (NRTC).

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The Performance Based Standards (PBS) project for the assessment and management of alternative heavy vehicles configurations continues to progress. Following an extensive research and consultative period, a set of performance standards are close to being finalised to apply nationally. This set of standards form the criteria for safety, infrastructure, environment and amenity outcomes of heavy vehicles to apply under an alternative regulatory approach of performance-based standards for heavy vehicles. Once the standards are finalised, the NRTC will submit proposals for consideration by the Australian Transport Council.

The Heavy Vehicle Reference Group was successful in delivering two projects in 2002-2003:

*Compliance Audits: Design of Methodology* has now been completed. The methodology, developed by Dr Peter Baas and his colleagues at Transport Engineering Research New Zealand (TERNZ), describes a recommended method of auditing the overall rate of compliance with legal requirements by the heavy vehicle fleet.

*Guidelines for the Physical Measurement of Mass*, is now complete. These Guidelines provide an innovative system for assessing heavy vehicle mass and were endorsed by all Austroads Council members earlier this year.

## **Registration and Licensing**

A number of major initiatives have been progressed by the Registration and Licensing Reference Group in 2002-2003.

Australian states and territories continue to establish links with the National Exchange of Vehicle and Driver Information System (NEVDIS). NEVDIS enables certain classes of driver licensing, vehicle registration and similar records, held by each participating State and Territory Transport Vehicle Registration and Driver Licensing Authority to be provided, shared and exchanged by the participants, thereby combating vehicle theft, re-birthing and fraudulent driver licensing. Each jurisdiction's driver licence and vehicle registration databases are progressively being linked to NEVDIS. The current status of connection and data exchange is as follows;

- Vehicle Registration and Licensing – All jurisdictions except ACT and Tasmania have loaded their data and are on-line.
- Police National Stolen Vehicle Data (NVOI) is available for enquiry to all jurisdictions.
- ACT currently has full enquiry access with data load to be completed before the end of 2003.
- Tasmania is currently connected for written-off vehicles and have enquiry access for vehicle registration.

NEVDIS software became available on 28 August 1998. The tender evaluation process for NEVDIS II is complete, Austroads and Fujitsu Australia Ltd have now signed a contract for the operation and maintenance of NEVDIS for five years from August 2003.

The data and information generated by NEVDIS provides significant potential for commercial use. The Registration and Licensing Reference Group is currently managing a project to evaluate the benefits and risks associated with the commercialisation of registration and licensing data.

The Registration and Licensing Reference Group, in conjunction with the National Motor Vehicle Theft Reduction Council (NMVTRC), continues to implement strategic infrastructure, policy and practice changes to achieve long-term reductions in vehicle theft and vehicle re-birthing. Activities carried out during 2002-03 include:

- The implementation of written-off vehicle registers and associated vehicle identity inspections in remaining jurisdictions, except Western Australia, and the identification of post implementation issues impacting operational consistency.
- Development of a framework for monitoring the effectiveness of national information systems in combating vehicle theft and fraud; and

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- Assisting jurisdictions to implement a national system for consumers and the motor trades to access vehicle status reports.

The Registration and Licensing Reference Group continue to assess requests made from a number of Australian embassies to mutually recognise their country's driver licences in Australia. This will ensure that Australian and New Zealand licence holders do not have to undertake practical driving examinations when applying for a licence in any country recognised by Austroads. As candidate countries need to be assessed against an established criteria, a rotating panel of three members of the Registration and Licensing Reference Group have been considering applications for mutual recognition. Foreign countries recognised by Austroads as having equivalent licensing standards and procedures as Australia and New Zealand can be viewed on the Austroads website. This initiative provides a single point of reference for foreign licence holders and foreign licensing authorities.

## **Traffic Management**

Through the combined efforts of the Road Use Management Program and ARRB Transport Research, solid progress has been made on the revision of four parts of the Guide to Traffic Engineering Practice (GTEP) series. The Traffic Management Reference Group concentrated on completing a number of long-term projects during 2002-2003, with two of the four guides due to be completed in the later part of 2003. These include:

GTEP Part 3: Traffic Studies

GTEP Part 10: Local Area Traffic Management.

To ensure the ongoing maintenance of the Guide to Traffic Engineering Practice Series (GTEP), the Traffic Management Reference Group will provide on-going support to the following revisions in 2003-2004:

Revision to GTEP Part 9: Arterial Road Traffic Management

Revision to GTEP Part 11: Parking

## **Australian Bicycle Council**

The Australian Bicycle Council (ABC) applied significant effort in 2002-2003 to implement strategies from *Australia Cycling: The National Strategy 1999 – 2004*. A number of projects contained within this strategy have progressed well. Additionally, a first report on a Cycle Tourism project was made and work was initiated on Strategy 2.2 (Local Governments) and on a project proposal to review the implementation of *Australia Cycling* given the strategy expires in 2004. The ABC has developed a strong dialogue with the Traffic Management Reference Group and provides input to the reviews of the GTEP Series. It also aims to build better links with other Austroads Reference Groups to address emerging cycling issues.

## **Project Evaluation**

During the first quarter of 2002-2003, the RUM Program conducted project evaluations of two projects completed in 2001-2002 — Forecasting Demand for Bicycle Facilities and the NEVDIS Review. Key project representatives were consulted for both evaluations, thereby ensuring a comprehensive review of all aspects of the projects from conception to publication. The evaluation methodology was further adopted as a model for use in other Austroads projects.

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## Future Directions

The objective of the RUM Program in 2003-2004 is to increase the value and relevance of the program's work program and outputs, by responding to the priority strategic issues identified by Austroads Council members. In 2003-2004, the Road Use Management Program will be allocating resources to a number of emerging strategic initiatives identified by Austroads Council. These strategic initiatives specifically include:

- Freight and Heavy Vehicles
- Registration and Licensing

The Road Use Management 2003-2004 work program has a total of fifteen continuing projects, in addition further emphasis will be placed on the commencement of seven new projects.

### **Specific initiatives for Freight and Heavy Vehicles:**

Three projects emanating from the key strategic issue being progressed by the RUM Program on freight and heavy vehicles are:

- Community Attitudes to Road Freight Vehicles
- ITS Technologies for Metropolitan Freight Vehicle Operations
- Use of Temporal Spare Capacity on Metropolitan Networks

### **Specific initiatives for Registration and Licensing:**

New projects approved by Austroads Council will deliver key business outcomes for driver and vehicle management authorities. Strategic issues impacting on the driver and vehicle management environment are requiring road authorities to undertake product and service innovation in order to remain competitive in an increasingly challenging business environment.

The following project will be managed under the 2003-2004 RUM work program:

- Innovation and application of new technologies in the driver and vehicle management business

This project will progress recommendations already endorsed by Austroads Council supporting the harmonisation of jurisdictional approaches to driver licence issuance processes, standards and security features on driver's licences as well as options for alternative registration labelling methods.

## Other projects

The remaining projects in the RUM 2003-2004 work program are:

- Evaluation of Benefits and Risks Associated with the Commercialisation of Registration and Licensing Data
- Bus and Bicycle Interaction within the Road Network
- Evaluation of novice driver education programs (at the request of ATC).



# ROAD SAFETY

Mr Joe Motha

Road Safety Program Manager

Director, Safety Research and Education,  
Australian Transport Safety Bureau



*To develop and promulgate an agreed road safety program aimed at reducing the frequency and severity of crashes on the nation's road systems.*

## Overview

Through its targeted research, the Road Safety Program aims to contribute positively to achieving ongoing reductions in Australian road fatalities and injuries. The Program's research will also contribute specifically to efforts to achieve the National Road Safety Strategy target of a 40 per cent reduction in the 1999 population fatality rate by 2010.

This strong focus was fostered by Mr Adrian Beresford-Wylie, who resigned from the position of Program Manager in August 2002. In September, Mr Joe Motha was appointed Program Manager and has continued to vigorously pursue this objective.

The Road Safety Program has identified priority areas for research. The following priority areas were endorsed by the October 2002 Council meeting:

- Speeding and speed management
- Safer roads and road environment
- Driver impairment
- Restraint use
- High risk road users (for example, older road users, young drivers)
- Heavy vehicle safety
- Rural and remote area safety.

Of the 33 road safety projects currently in the Program, only three fall outside these priority areas. These three projects involve the analysis of economic factors aimed at providing road safety practitioners with a better understanding of crash costs and a more accurate costing of road safety initiatives. The majority of projects are concerned with safer roads and environment (8 projects), high-risk road users (8) and heavy vehicle safety (6).

The Program owes much to the excellent and sustained work undertaken by its two reference groups and the National Road Safety Strategy Panel.

## 2002-2003 program achievements

A focus for the Program has been to reduce the number of road safety projects from 52 to a more manageable level. In 2002-2003, the Program printed nine reports from completed projects. A further six projects were completed, but no printing was required and four were closed for various reasons, reducing the total number to 33 projects. It was considered that by reducing the number of small projects, the opportunity would be created for more substantial projects to come on line.

The Australian Transport Council (ATC) initiated several areas of research with the Program. During the year, the Program completed four ATC-initiated projects and published the following three reports: *Review of the School Bus Safety Action Plan – Final Report*; *Investigation of Internal Bus Safety Measures*, and *Reducing Collisions at Passive Railway Level Crossings in Australia*.

There was a great deal of public concern expressed about the safety of children on school buses, generating Australia-wide media debate. The Program published two reports which informed the debate positively: *Review of the School Bus Safety Action Plan – Final Report* and *Investigation of Internal Bus Safety Measures*. The first report examined the responses of jurisdictions to various measures aimed at enhancing school bus safety. The report also provided a methodology for refining and prioritising these measures, recommending that the focus be on those actions which address the primary cause of school bus related fatalities.

The second report focused more narrowly on the costs and benefits of measures to improve safety inside school buses, such as installing lap-sash seat belts, improving the rollover strength of buses and adopting a policy of ensuring one child per single seat.

There is a positive and growing interest in road safety among local communities throughout Australia and New Zealand. Questions arose as to how to rank and manage these community road safety projects so as to obtain maximum benefit and how to best target public funds. The report *Community Road Safety in Australia and New Zealand* provides a helpful overview of the role of local communities, identifying what has worked well and what factors were critical to success.

Road safety concerns have been raised due to the projected increase in the proportion of the elderly in the Australian population. Drivers aged 65 years and above are over-represented in serious injury and fatal crashes and unfortunately these figures are expected to increase as the proportion of drivers in this age category increases. *Self-Regulation of Older Drivers: A Review* identifies and discusses factors that may influence the process of self-regulation and eventual cessation of driving, including the role of educational programs aimed at improving the effectiveness of this practice for older drivers. This is an important report and one of a series from the Program focusing on older drivers.

*The Road Safety Risk Manager Software Tool: Background Research* was a significant report for jurisdictions. This research became the foundation for the development of an expert system to assist road safety practitioners to prioritise road safety improvement procedures within a network. Developmental research is continuing.



## Future Directions

As previously mentioned, the *Road Safety Risk Manager* is in the process of being further strengthened in its capacity to prioritise road safety improvement procedures within a network. The research this year will focus on developing crash rates and crash-type rates across a wide range of road and intersections categories. All of the new funding designated for the Program in 2003-2004 will be used for this research.

The Austroads Council has set up a task force to identify the linkages between emerging road safety issues and strategic priorities. The task force comprises representatives from each of the jurisdictions and the Program Manager. It is expected that the task force will propose a small number of priority action areas.

As 21 of the current 33 road safety projects are scheduled for completion in 2003-2004, the Program will be looking to allocate future new funds to projects that will contribute strongly to reducing the road toll and achieving the National Road Safety Strategy target.

# BUSINESS SYSTEMS

Mr Phil Ladner  
Business Systems Program Manager  
Executive Director — Major Projects, Main Roads Western Australia



*To promote best practice in business systems where a national approach best contributes to performance of road authorities and the road system.*

## Overview

The 2002–03 Business Systems Program focused on implementing the current *Austrroads Strategic Plan 2001-2004* and providing advice on strategic research initiatives for the new strategic plan. In particular the program was responsible for the following areas:

- Asset Management,
- Road User Effects,
- Performance Measures.

## 2002-03 program achievements

### Asset Management

During 2002–03, research and development effort continued on a range of asset management topics. The topics of main interest include analysis of various available data to improve pavement performance prediction, the role of ITS in road network asset management, consistency in approach to investment analysis, the use of pavement strength in asset management, consistency of road use data (traffic loading and traffic mix), the risks to road assets from salinity and rising water tables, clarification of definitions of maintenance, economic analysis for maintenance proposals, improved prediction for resealing intervention, consistent bridge information, and the ARRB initiative to collect data on the performance of local road pavements. New work began on skid resistance, pavement cracking, development of a framework for determining maintenance standards, and in new tasks under the “Consistency in approaches to road investment analysis” project.

The following new Austrroads publication was completed during 2002–03 and is available free of charge from the Austrroads website:

- *Intelligent Transport Systems in Asset Management – Issues Paper*,

The following existing Austrroads publications were under active review during 2002–03:

- *Road asset management guidelines*; and
- *Strategy for improving asset management practice*.

The Asset Management Reference Group (AMRG) conducted two workshops and two seminars during 2002–03, as follows:

*August 2003 (Sydney)*

“Exor Systems for Road Network Asset Management”

*November 2003 (Sydney)*

Joint APRG - AMRG, “Road Asset Management”

*April 2003 (Adelaide)*

Jointly with APRG and ERG, “Research Update Seminar on Environment, Asset Management, and Technology in Road Maintenance and Construction”

*May 2003 (Cairns)*

“Road Network Asset Management” in conjunction with the ARRB/REAAA Conference.

The AMRG contributed to the infrastructure protection aspects of the Austroads work in the RUM Program on Performance Based Standards (PBS) for heavy vehicles.

AMRG supported development and implementation of the Austroads Action Plan for Nonfeasance, which Council adopted on 9 August 2002. AMRG members contributed to an Austroads Workshop on nonfeasance at Tullamarine on 26 September 2002, and to the preparation of a status update summary report to SCOT as at 21 March 2003 on responses by jurisdictions to the High Court’s abolition of the nonfeasance immunity for highway authorities.

AMRG contributed to work, led by DOTARS, on the development of criteria for use with AusLink for reporting on the state of the road network from a maintenance perspective.

AMRG continued to monitor development and implementation experiences with HDM-4, through information exchanges, assisted by Neil Robertson (DMR Qld) who attended all AMRG meetings during 2002–03, and with particular reference to implementation by VicRoads.

## **Road User Effects**

In 2002–03, Austroads continued to develop and refine tools to support national use of consistent and credible models for road user effects, essentially in line with the 1997 *Strategy for Road User Costs*.

Work continued to coordinate three strands of work to improve consistency and validity of estimates of road safety benefits, by developing improved estimates of crash incidence, developing an improved methodology for updating estimates of crash unit costs for use in evaluation of general road investment proposals, and developing improved estimates of crash unit costs for use in evaluation of specific localised safety improvement works.

ARRB Transport Research (ARRB TR) compiled updated input values for road user costs as at 30 June 2002 and a draft covering report, which is expected to be finalised and published in 2003. ARRB TR also completed a literature survey of evaluation guidelines, standards and practices for investments in infrastructure for trips using other modes in conjunction with trips by car or truck and held discussions with selected member organisations on the feasibility of implementing an improved urban road user cost estimation model based on the Main Roads WA TRAMS model, for use with member organisations transport planning models.

The following new Austroads publications on road user effects were issued during 2002–03, and in line with overall Austroads practice, are available free of charge in pdf format at the Austroads website:

- *Economic evaluation of road investment proposals: Valuation of benefits of roadside ITS initiatives*
- *Economic evaluation of road investment proposals: Unit values for road user costs at September 2000.*
- *Economic evaluation of road investment proposals: Improved estimation of hourly traffic volume distributions*
- *Economic evaluation of road investment proposals: Valuing travel time savings for freight.*

The following proposed new Austroads publication was endorsed, subject to minor changes, and is expected to be published in late 2003:

- *Valuing Environmental and Other Externalities.*

The Road User Effects Reference group (RUEG) conducted a Workshop in Cairns on 20 May 2003 entitled “Quantifying the Benefits of Road Investment” as part of the ARRB/REAAA Conference. This was in line with an established practice, as RUEG conducted similar Workshops during the 1998 and 2001 ARRB Conferences.

BTRE maintained liaison with RUEG on progress with development of the Road Infrastructure Assessment Model (RIAM). During 2002-03, RIAM was harmonised in accordance with the ARRB/SRA arrangements.

RUEG members contributed to work led by DOTARS on the development of criteria for use with AusLink for assessing proposals for investment in land transport infrastructure.

## **National Performance Indicators**

The 2003 edition of Austroads *National Performance Indicators*, the ninth in the series, was prepared and contains descriptions, methodologies, considerations, qualifications, and 2001 values in charts and tables for 72 indicators. It can be accessed from the Austroads web site.

Work continued on a methodology review of the Greenhouse Gas Emissions, Traffic Noise Exposure and Return on Construction Expenditure indicators. The development of a series of social and environmental indicators (Extent of Externalities Recovery, Roadside Quality Management, and Resource Recycling and Substitution) progressed, and technical reports supporting introduction of three new NPIs were distributed to Council members for acceptance.

A seminar on Austroads NPI's in conjunction with a meeting of the National Performance Indicator Reference Group (NPIRG) attracted 26 people in Brisbane on 29 July 2002.

NPIRG conducted a Workshop in Cairns on 21 May 2003 entitled “Triple Bottom Line Performance - Austroads National Performance Indicators”, as part of the ARRB/REAAA Conference. This was attended by approximately 60 people, and included 4 presenters.

A review of the questionnaire for the User Satisfaction Index (USI) was completed, and the 2003 USI survey was initiated. Previous surveys were conducted in 1995, 1998 and 2000.

The Austroads Heavy Vehicle Reference Group, under the RUM Program agreed to develop NPIs for heavy vehicle compliance, in conjunction with NPIRG.

## **Future Directions**

The focus for Business Systems in 2003-04 will primarily be to complete existing projects. The only new project, other than an evaluation of two recent Business Systems projects, will be research and development on “*Quantifying Community Expectations of Levels of Service on Road Networks*”.

A review of NPI's and their use will be undertaken in 2003-04.

# TECHNOLOGY AND ENVIRONMENT

Mr Ian Reeves  
Technology and Environment Program Manager  
Executive Director (Pavements, Material and Geotechnical)  
Department of Main Roads Queensland



*To develop and promote technology appropriate to the Australasian road transport industry and to establish and promulgate environmental objectives and practices appropriate to Australian and New Zealand conditions.*

## Overview

The principal program areas comprise Pavements, Structures, Environment and Road Design. In 2002-03, the program's workplan addressed objectives in the Austroads Strategic Plan 2001-2004 mainly related to:

- Integrated Transport – Urban and Rural
- Infrastructure and Operational Improvements
- Asset Management and Performance
- Environmental Impact Management
- International Relationships
- Harmonisation of Standards and Practices
- Skills and Technology
- Research

The Program continued to place significant emphasis on the development, maintenance and dissemination of common standards and practices such as guides, codes of practice and tools. This work continues to benefit stakeholders in all levels of government and the private sector.

In response to Council's identification of strategic research priorities, the program prepared papers on the impact of heavy vehicles on road and bridge infrastructure and underperformance in road infrastructure. The Council approved projects in 2002-03 to prepare scoping documents and research proposals for commencement in 2003-04.

## 2002-03 program achievements

### Reference Groups

Reference Groups assisted in the development of strategic directions, project proposals and project management as well as conducting several significant technology transfer activities for Austroads.

Reference group meetings usually follow closely behind Austroads Council meetings. Wherever possible reference groups have overlapping or back-to-back meetings in a common location. This is to provide an opportunity for joint consideration on matters of common importance and technology transfer.

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## **Development of Austroads Strategies**

Following on from the Austroads Pavements Strategy, published in 2001-02, the Austroads Environmental Strategy and Strategy for the Design of Roads and Roadsides were completed in 2002-03. These strategies aligned reference group activities with the Austroads Strategic Plan 2001-2004.

## **Technology Transfer**

The program, through its reference groups, conducted several technology transfer seminars and workshops. These included:

### *July 2002 (Christchurch NZ)*

A symposium conducted by the Austroads Pavement reference Group (APRG) and Environmental Reference Group (ERG) organised by Transit New Zealand and NZ Pavements and Bitumen Contractors' Association, (BCA) attracted 175 people.

### *November 2002 (Hobart)*

A seminar conducted by ERG and Road Design Reference Group (RDRG) covered general Austroads matters and issues of interest to road planning, design and environmental professionals. Topics included designing for trucks, collection and treatment of stormwater, evaluation of fauna management devices and environmental considerations for road planning and design.

### *April 2003 (Adelaide)*

A seminar conducted by the APRG, ERG and Asset Management reference Group (AMRG) included topics such as recycling in the road industry, the environment and road network asset management, the role of roadworks technology in road asset management, and future directions for research on environmental, asset management and pavement technology cross-discipline issues. A separate workshop conducted by the Austroads Structures Technology Reference Group (ASTRG) discussed outputs from the project "Dynamic Interaction of Vehicles and Bridges" and issues relevant to the development of the new Australian Bridge Design Code.

### *May 2003 (Sydney)*

The ERG managed a workshop on Fauna Sensitive Road Design and Management. Several Australasian stakeholders discussed regional experiences and how to collaborate in evaluating measures and practices to prevent habitat fragmentation, animal roadkill and improve road safety. The workshop made enhancements to a draft framework for decision-making and reporting.

### *June 2003 (Melbourne and Sydney)*

The RDRG conducted seminars focused on general Austroads matters and introduction and promotion of recent Austroads publications. Topics included the guides for the Geometric Design of Major Urban and Rural Roads, Designing for Trucks – Where, When and How, Guide to Traffic Engineering Practice Part 5 – Intersections at Grade and Part 12 – Roadway Lighting and Environmental Considerations for the Planning and Design of Roads.

Other technology transfer activities funded by the program in 2002-03 included production of technology transfer material, Pavement Work Tips and Technical Notes and development of a new study unit for the Centre of Pavement Engineering Education. In addition, the program supported the attendance of key people at international technology transfer events to present papers. Events included the International Society of Asphalt Pavements Conference in Copenhagen, Denmark and the ARRB/REAAA Conference in Cairns.

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## Significant Outputs

### *Pavements*

- *Austrroads Framework for Specifying Asphalt*  
This framework for specifying asphalt promotes national uniformity and good practice in the specification and use of asphalt throughout Australia. Part A provides a general introduction to application of asphalt specifications to variations in contracting environment. Part B provides guidance to the application of model specification clauses provided in Part C. Part C is a series of specification clauses that may be used directly in contract documentation or as a framework for the preparation of individual specifications or quality plans.
- *Draft 2002 Austrroads Pavement Rehabilitation Guide*  
This final draft document provides advice for the investigation of existing sealed road pavements and the selection and design of pavement rehabilitation strategies/treatments. The draft was available for evaluation and comment from users until March 2003 and will be finalised and published in 2003-04.
- *Practitioners Guide to Design of Sprayed Seals - Revision 2000 Method*  
This report provides the details necessary for users to design a sprayed seal to the Austrroads Sprayed Seal Revision 2000 Design Method. A number of worked examples are included to assist in the correct interpretation of the method.
- *Progress Report on the 2001-02 and 2002-03 National Asphalt Mix Design Program*  
The report describes the work undertaken in each year of the project to assist implementation of a new Australian asphalt mix design procedure.
- *Binders Research Program – 2001-02 Progress Report*  
This report presents a summary of key contributions in 2001-02 to progress the development of an integrated specification for Bitumens, Multigrades and Polymer Modified Binders (PMBs). Contributions were in the areas of Binder nomenclature, Binder test methods, Development of new binder properties, and Laboratory performance studies in support of the new properties.
- *Guide to Best Practice for the Construction of Stabilised Pavements*  
The guide provides superintendents and contractors with best practice techniques for road stabilisation using various binders.
- *Comparison of Project Level and Network Level Pavement Strength Assessment*  
The current use in Australasia of different pavement strength parameters at project and network levels could result in inconsistencies in pavement structural assessment. The major objective of this work was to improve consistency of pavement strength assessment by comparing performance predictions using project level and network level systems.
- *Guidelines and Specification for Bituminous Slurry Surfacing*  
This is a practical guide to the specification and use of bituminous slurry surfacing.
- *Selection and Design of Asphalt Mixes*  
This publication is intended to be used in conjunction with the appropriate national or local specifications. The design procedure is intended to be performance related, able to produce mixes with improved service properties, affordable in terms of new equipment cost and rapid and easy to use.



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- *The State-of-the-Art of Bitumen Emulsions in Australia and New Zealand*  
This report provides general information, compiled from surveys and project committee contributions, on the use and application of bitumen emulsions in Australia and New Zealand.

## Structures

- *The Bridge Design Code* is currently in the process of being published as an Australian Standard.
- *Dynamic Interaction of Vehicles and Bridges*  
An ageing bridge infrastructure, projected increases in the freight task and the proposed introduction of the increased SM1600 loading drove the need to better understand the actual bridge response to heavy vehicle traffic. The report provides a summary of dynamic testing carried out on approximately 80 bridges in Australia and New Zealand. It compares the results of these tests with the current DLA provisions in the Australian Bridge Design Code and makes recommendations for extrapolating and modifying these provisions.

## Environment

- *Guidelines for the Treatment of Road Runoff from the Road Infrastructure*  
Guidelines and practices for the treatment of road runoff vary greatly across Australia and New Zealand. The intent of this document is to provide a consolidated guide to water sensitive road design and a process for selecting and designing treatment measures.

## Road Design

- *Environmental Considerations for Planning and Design of Roads*  
This publication and the accompanying CD-ROM provide a framework for planners and designers of roads to become informed on environmental impacts and current methods to minimise them. Section A provides the environmental context for the various categories and the phases of road life at which they impact. Section B provides details, references and guidelines, while Section C contains case studies.
- *Rural Road Design – Guide to the Geometric Design of Rural Roads*  
Rural Road Design embodies the philosophy of designing rural roads for observed vehicle speeds. Thus, the 85th percentile value of observed vehicle speeds is adopted as the basis for geometric form, rather than designing to a predetermined speed standard. The guide gives extensive supporting explanations of the practices recommended, either in the text or by directing the reader to specific references.
- *Geometric Design for Trucks – When, Where and How?*  
While truck tracking characteristics are a primary consideration for intersection geometry and curve widening practices, most road geometric design standards, particularly alignment design standards, are based on the performance characteristics of passenger cars and car drivers. This publication presents the results of research aimed at deriving truck-based geometric design standards, and establishing the traffic volumes and mix at which the adoption of such standards is economically warranted.

## PIARC Activities

The program supported Austroads representatives on the following PIARC technical committees. Reports of meetings and other activities were appropriately disseminated:

- C1 – Surface Characteristics
- C3 – Technical Exchanges & Development (World Interchange Network)
- C7/C8 – Road Pavements, and
- C12 – Earthworks, Drainage & Subgrade.



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## Standards Australia

A review of Austroads representation on a total of 81 Standards Australia committees aligned with the program's areas of responsibility was completed.

## Future directions

In 2003-04, the program will take its direction from the strategic research priorities identified by the Austroads Council. Significant issues for the program include the impact of heavy vehicles on the road and bridge infrastructure, investigation of the performance of existing road infrastructure and road traffic noise. The focus of continuing and future work for 2003-04 is as follows:

### *Pavements*

Existing projects continuing in 2003-04 include:

- Revision of NAASRA Pavement Materials Parts 1 to 5
- Development of Austroads Spray Sealing Guide
- Long term performance monitoring to develop consistent performance models
- Performance based specification for unbound pavement materials
- Utilisation of recycled asphalt
- Technical production of Austroads Pavement Design Guide and Pavement rehabilitation Guide.
- Development and maintenance of Austroads Test Methods.

New strategic projects commencing in 2003-04 include:

- Impact of heavy vehicles on the road and bridge infrastructure
  - Influence of vertical loading on the performance of unbound and cemented materials
  - Quantifying the stresses at the tyre surface interface and the resulting performance impacts
- Investigate performance of existing road infrastructure.
- Establish network performance profiles, identify under-performing pavements and establish contributory causes.

Other new projects commencing in 2003-04 include:

- Implementation of Austroads Sprayed Seal Design Method
- Revision of Austroads Guide to Stabilisation in Roadworks
- Integrated specifications for bituminous binders
- Implementation of Austroads Asphalt Mix Design Procedure (AP-T20/02) and Asphalt Framework Specification (AP/T18).

### *Structures*

Existing projects continuing in 2003-04 include:

- Guidelines for ensuring specified quality performance in bridge construction
- 5<sup>th</sup> Austroads Bridge Conference.

New projects commencing in 2003-04 include:

- Guidelines for strengthening of bridges.

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## *Environment*

Existing projects continuing in 2003-04 include:

- Austroads best practice guidelines for road traffic noise management.
- Environmental management and environmental management tools for road maintenance contracts.
- Evaluation and identification of areas for improvement of air quality models as used by road agencies.

New strategic projects commencing in 2003-04 include:

- Identify and prioritise significant and strategic environmental issues facing road authorities.

## *Road Design*

Existing projects continuing in 2003-04 include:

- Revision of Guide to Traffic Engineering Practice Part 5 – Intersections at Grade, Part 8 – Traffic Control Devices, Part 12 – Roadway lighting and Part 16 – On Road Public Transport.
- Guidelines for the collection and discharge of stormwater from the road infrastructure.
- Investigation of the relationship between shoulder widths and crashes on dual carriageway roads.

New projects commencing in 2003-04 include:

- Review of 1995 Austroads Design Vehicles and Turning Path Template Guide
- Design for older drivers.

# INTELLIGENT TRANSPORT SYSTEMS

Mr Geoff Kloot  
Intelligent Transport Systems Program Manager



*To co-ordinate the implementation of e-transport, the National Strategy for Intelligent Transport Systems*

## Overview

The National Strategy for Intelligent Transport Systems, *e-transport*, was adopted by the Australian Transport Council (ATC) in November 1999. Funding for the implementation of the strategy was established from contributions by Austroads member organisations and the Austroads Research and Development Program.

Austroads Intelligent Transport Systems (ITS) Program implemented the key strategies and actions identified in *e-transport* over the three year program. This involved undertaking 22 projects, grouped under the following categories.

- Interoperability and national standards
- Creating a national institutional framework
- Public and industry awareness
- A competitive Australian based ITS industry
- International co-operation
- Establishing and monitoring demonstration projects

The first five of these categories, concentrated on improving the safety, security, efficiency and environmental performance of our transport system. The last category facilitated the implementation of emerging ITS technologies in which emphasis was given to regional areas and high-risk travel.

An important focus of the strategy was to create a national framework for the development of interoperable and technically open architecture for ITS for Australia. This provides an environment that encourages competitive industry participation, and a platform for efficient ITS development and enhanced community benefits. ITS Australia, a separate organisation with industry, government and Austroads membership, managed the projects under the ITS Program for Austroads. Austroads also undertook six other projects related to ITS within other programs.

The Austroads ITS Program concluded at the end of June 2003 with the completion of the implementation of the actions from *e-transport*. The Standing Committee on Transport (SCOT) has established a special working group, involving senior representatives of all transport modes, to oversee the development of a new national strategy for ITS taking a stronger multi-model approach.

# intelligent transport systems

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## 2002-2003 program achievements

### Standards and Architectures

A National ITS Architecture Working Group has been established with the aim of ensuring that ITS applications are developed that are both interoperable and compatible. The adoption of broadly accepted standards will improve competition, assist systems integration, and reduce risks for users and developers. Six focus groups are considering a broad range of architecture related issues in areas as diverse as public transport and telematics. The working groups have made considerable progress. Achievements to date include the following.

- National electronic tolling standards have been agreed and electronic tolling systems have demonstrated national interoperability. Full interoperability is expected in early 2004 as system upgrades are completed.
- The draft National Reference Architecture for ITS has been endorsed, promulgated and promoted in writing and through a national workshop.
- Significant progress has been made, and is ongoing, to support a national multimodal approach to ITS with the establishment of national working groups for spatial data, global navigation systems and electronics.
- Proposals have been developed for the establishment of a national data registry for ITS architecture, which will be available to all developers and users of ITS architecture in Australia and New Zealand.

### An Aware and Competitive Industry

*e-transport* also refers to improving industry awareness and fostering a competitive Australian-based ITS industry. The program of activities to improve industry skills and awareness involved: research into the needs of industry; establishment of an online industry capability register; provision of an ITS pocket guide for educational use (corporate and students); online learning programs that can be integrated in corporate intranets; and seminars on public-private partnerships for ITS projects.

As a result of the program, there is now a network of 12 Austrade and Invest Australia ITS staff around the world. In addition, various export market development grants and state development grants have been obtained by ITS organisations in Australia.

### National Multi-Modal Traveller Information System

A study was undertaken to assess the feasibility of providing a national traveller information system for Australia. The study reviewed the approach taken overseas and recommended a way forward to achieve a similar system in Australia. The proposed system would provide a common nation wide telephone number for accessing traveller information, through an unseen portal to the numerous existing telephone systems across Australia that provide traffic, road condition and public transport information. A demonstration of the system will be undertaken in 2003-04, prior to establishing a nation-wide system.

### Demonstration Projects

The ITS Program has supported five demonstration projects with the potential to improve rural road safety or safety for higher risk travel, a specific requirement of *e-transport*. The projects are briefly described below:

- The *Rural Road Flood Warning System* was developed to provide more reliable and timely information about flooding of roads in remote areas and the duration of the resultant road closures. This allows road users and managers to make more informed decisions about whether to use what are usually lengthy alternative routes. The system was trialed in Queensland, where regional and rural areas experience regular flooding. The system uses data from existing and newly developed sources, and demonstrates the value of open standards for data sharing with participant agencies including the Bureau of Meteorology, RACQ, and Queensland Main Roads. Road flood information is now available on the Internet and via mobile phone. Ultimately this information will be available on roadside variable message signs.

# intelligent transport systems

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- Throughout our road networks many incidents occur which go unreported to police, insurance companies and other authorities. Little information is available regarding these events and whilst surveillance could be used to analyse the number and severity of these incidents, it would be very inefficient and time consuming. The *Automated Incident Recording System* (AIRS) listens for the sounds of accidents or near misses, and makes video and audio records of incidents. The system was demonstrated in the central Sydney area where it recorded 100 crashes or near misses at three intersections during the 19 week trial period. The system will facilitate the development of better treatments for blackspot intersections, and is being considered for installation in other Australian cities.
- The high cost of active protection of rail level crossings has left numerous open level crossings in Australia that are only passively protected by warning signs. At projected funding rates, a large number of these crossings will remain so for decades. The *Passive Crossing Alternative Warning System* is a low cost detection and alerting system designed to improve safety at these crossings by enhancing the standard road signage. The system detects the presence and direction of a train, and a radio relay activates flashing amber lights mounted on the road signs at the level crossing to heighten motorists' awareness of the hazard of the approaching train. A six month reliability and durability test of the system has been successfully carried out. Consideration will be given to installing this system at selected level crossings that are not likely to be upgraded to active protection in the foreseeable future.
- A demonstration project involving the Association for the Blind of Western Australia and Main Roads WA has trialed a digital audio system which uses transmitters mounted on the traffic lights and a discreet earpiece receiver, to provide blind pedestrians with real time information when crossing intersections.



The *Audio Wayfinding System Trial for Blind Pedestrians*, trialed at a busy intersection in South Perth, provides blind pedestrians with the street names for the intersection that they are approaching, the direction they are travelling, and constantly updates information about the state of the pedestrian walk phase. Unlike conventional traffic light “audible signals”, the system provides the pedestrian with relevant information during the different phases of the traffic signals.

The infrared wayfinding technology, which uses digitally recorded messages, provides blind pedestrians with a level of information and reassurance in road crossing not previously available, and this is the first trial of the system in the world.

# intelligent transport systems

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- Motorcycling is on the increase in Australia. Unfortunately, motorcyclists are over represented in serious injury crashes, and sometimes the injured rider lies undetected for some time. In addition, motorcycles are regularly stolen and their recovery rate is low compared with cars. With these issues in mind, a demonstration project, the *Automatic Notification System for Motorcycles*, has been undertaken in NSW to develop and test a system to detect and report both theft and crashes of motorcycles. The system combines GPS (satellite) and GSM (mobile phone) technology with a crash impact sensor and a motorcycle alarm system. In the event of a serious crash, a signal is sent to a monitoring centre which can notify the relevant emergency services and provide an exact location where the incident occurred. If a theft alert is received, the same centre can notify police and keep track of the bike's location. The project, which is being supported by the NRMA, would reduce the time taken to reach injured riders particularly in situations where a motorcycle leaves the road in rural areas.



## ITS for Real-Time Monitoring of Cargo

*e-transport* identified the need to support a feasibility study for the integrated use of ITS, real time cargo monitoring and *e-commerce* to facilitate freight logistics for perishable cargoes. The feasibility project, named *Milklink*, was undertaken in the dairy industry, as milk is one of the most time, temperature and quality sensitive perishable cargoes. The project addressed the lack of integrity and accurate information along the supply chain and other key issues such as food safety (temperature and contamination), and planning for logistics and manufacturing.

The *Milklink* system provides an electronic means of capturing and monitoring critical information in the supply chain between the farmer, the transport provider and the processor. This information includes milk volume, temperature and quality, and consignment details, and facilitates data management, optimisation of transport scheduling and quality control. For example, farmers previously had to complete 25 forms every day and fax them before milking time. Now, the farmer uses a hand-held computer in the milking shed to quickly provide the required information to the processing company. The project has demonstrated savings through reduced paper work, improved productivity and less spoilage.

# intelligent transport systems

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## **The Way Forward from *e-transport***

At the request of SCOT, Austroads, in consultation with representatives of all transport modes and the transport industry, reviewed the achievements of *e-transport* and made recommendations on the way forward from the strategy. SCOT adopted the recommendations, and established a special working group to oversee the development of a new national strategy for ITS in Australia. The new strategy will focus on actions that will progress the development and application of ITS for all transport modes.

## Future

With the successful completion of the Austroads ITS Program, specific funding will no longer be required for ITS research projects, as projects involving the use of ITS will be considered for inclusion in Austroads traditional research programs. These projects will compete for funding against other projects being considered for the relevant program in the normal way.

In addition, a number of the projects that were developed within the Austroads ITS Program, such as the development of a National Reference Architecture and the provision of Ministerial Releases, will continue into the future with the support of ITS Australia.

A key project completed in the early stages of the Austroads ITS Program was the establishment of the Australian ITS website: <http://www.its-australia.com.au> This site provides a range of highly interactive web-based services dedicated to the Intelligent Transport Systems industry. Information about many of the projects undertaken in the Austroads ITS Program, together with data about the industry in general, can be found on the site.



# INTELLIGENT ACCESS PROJECT

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## Introduction

Satellite based vehicle telematics enables the provision of services to transport operators to monitor freight vehicles with respect to access conditions set by road jurisdictions. The objective of the Intelligent Access Project (IAP) is the implementation of a voluntary system to monitor freight vehicles using telematic services to ensure compliance with their agreed conditions of operation.

During 2002/03, Austroads undertook a feasibility project to investigate this capability. A steering committee was established of Austroads member organisations, Queensland Transport and the National Road Transport Commission. The feasibility project was delivered using the services of a cross-jurisdictional project team and expert consultants. The Chair of the Steering Committee was Steve Golding – Director General Main Roads Queensland and Austroads Council Member. Chris Koniditsiotis was specifically engaged as National Manager to direct and deliver the IAP feasibility project.

### IAP Feasibility

The purpose of the IAP feasibility project was to identify the applications to which jurisdictions could apply the IAP and to demonstrate the feasibility within the following sub-project components:

- intended applications and business feasibility,
- regulatory feasibility and implications for jurisdictions,
- technical feasibility and standards, and
- proof of concepts, pilots demonstrations and other learnings.

It was found that IAP can provide significant benefits across all areas of activity including:

- improved road safety,
- reduction in infrastructure wear,
- reduction in environmental effects,
- better managing public perceptions and expectations of heavy vehicle movements, and
- optimisation of the road freight policy and operations tasks, including optimisation of the on-road enforcement activities,
- additionally, the transport industry can benefit from improved productivity.

Explicitly, IAP is about providing alternatives to better manage the existing road transport compliance task. Implicitly, IAP has potential to go beyond the transport portfolio and to government as a whole. IAP is about exploring new ways to pursue important policy issues. Consequently, the IAP will have significant influence on subsequent uses and telematics in the transport sector.

The overall findings of each of the above sub-project components were that the IAP is feasible. This was demonstrated within each of the four components, whilst for different reasons each indicated a staged roll-out of IAP as the most appropriate implementation mechanism. Ultimately the success of the IAP is reliant on an appropriately designed and successfully managed implementation.

### IAP Implementation

On 23 May 2003, Australian Transport Ministers endorsed the results and recommendations of the IAP Feasibility Project. Austroads initiated a program to plan and scope the implementation of the IAP. In-line with the findings, a staged IAP implementation was recommended. Stage 1 addresses the key elements identified in the sub-project components and will be rolled-out during 2003-04.

More information on the IAP feasibility project and implementation may be found at [www.austroads.com.au](http://www.austroads.com.au).



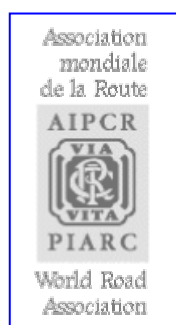
# INTERNATIONAL

Mr David Anderson  
International Committee Chairman  
Chief Executive, VicRoads



Through its International Committee, Austroads develops mechanisms through which it can fulfil its role in international affairs. These include, with the agreement where relevant of the Commonwealth Government through its Department of Transport and Regional Services:

- managing Australia's involvement in the World Road Association (PIARC) and coordinating it with that of New Zealand
- acting as a collaborative window for its members to overseas road agencies and organisations
- coordinating Austroads involvement, in international road organisations including the Road Engineering Association of Asia and Australasia, the Organisation for Economic Cooperation and Development (OECD) Road Transport and Intermodal Linkage Research Programme, and the APEC Transportation Working Group and the International Road Federation (IRF).



## World Road Association (PIARC)

Austroads involvement in the World Road Association (PIARC) activities continues to be overseen by Colin Jordan and Robin Dunlop, Australia and New Zealand's First Delegates to PIARC respectively. Colin Jordan, who is also Chairman of PIARC's Strategic Planning Commission, led a review into PIARC's structure, statutes and internal rules and the new PIARC Strategic Plan which will be approved at the XXIIInd World Road Congress in Durban in October 2003. Both Australian road authorities and Transit New Zealand have provided input, which will assist to ensure that the work of PIARC and Australia and New Zealand's involvement is relevant and valuable.

A good level of Austroads representation on PIARC technical committees continues. More systematic reporting from committee representatives was requested during the year to improve the dissemination of information from their international involvement and maximise the benefit to Austroads members. Reports from representatives have been regularly posted to Austroads web site and the initiative last year by the Road System Management program to put together and disseminate electronically a regular newsletter is being expanded to incorporate the activities of all committees.

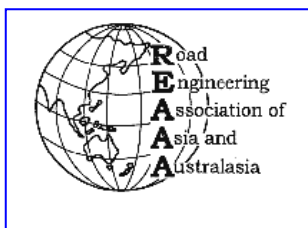
A full range of PIARC meetings, including Council, Executive, Commissions and National Committees were held in Melbourne in October 2002. The meetings were very successful with a high level of interaction between international and Australian and New Zealand transport executives. The schedule also afforded a showcasing of Australian road and road transport to the international representatives.

In October 2002, the National PIARC Prizes 2003 essay competition for young professionals, run under the auspices of Austroads, was won by Agnelo Duarte, Andrew Bethune, Charmaine Collins and Michelle Walker from VicRoads for their essay *Providing Sustainable Transport Solutions — How can we meet the increasing desire for mobility and protect our quality of life?* The winning team will be attending the Congress in Durban in October 2003.



Agnelo Duarte, Andrew Bethune and Charmaine Collins with the President of PIARC, Mr Olivier Michaud

Kristina Sikich of VicRoads was seconded to the PIARC Secretariat in Paris in February 2003. Kristina has worked with secretariat staff to assist with the organisation of regional technical committee meetings and events and the upcoming Durban Congress. She has performed a role as a link between PIARC and road organisations in the Asia/Australasia region, has been involved in the preparation of material for PIARC “Routes/Roads” magazine, and in the development of the PIARC and World Interchange Network websites.



## Road Engineering Association of Asia and Australasia (REAAA) – Australian Chapter

The Australian Chapter of REAAA provides links for Australians to professional and commercial colleagues in other REAAA member countries and from time to time organises technical visits, seminars and information exchange in Australia and Asia. Regular newsletters are distributed by both REAAA in Malaysia and the Australian Chapter informing members of local and regional activities, major road engineering activities, appointments and items of interest. Austroads national office acts as the secretariat to the Australia Chapter and supports the Chapter's activities. The Chapter has two branches in Western Australia and Queensland.

The Annual General Meeting of the Australian Chapter was held on 19 December 2002 in Melbourne at which new rules for the Chapter were approved. The new rules were essentially an update to reflect changes in the model rules which apply to incorporated associations. The Rules of the Australian Chapter are available for download from [www.austroads.com.au/reaaa.html](http://www.austroads.com.au/reaaa.html). An operating protocol has been developed by the Chapter committee covering the operation of the branches of the Chapter and will be submitted to the next AGM for adoption.

# international

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During the year, the Committee also decided that the Chapter should take out public liability insurance in its own name and accepted an offer from ARRB Transport Research to contribute an amount to the REAAA Australian Chapter equivalent to the cost of the cover. Austroads is grateful to ARRB TR for their support.

The Australian Chapter worked in conjunction with ARRB TR to help organise the 21<sup>st</sup> ARRB Transport Research and 11<sup>th</sup> REAAA Conference, held in Cairns from 18–23 May, 2003. Almost 300 presentations were made covering the conference's theme of *Transport – our highway to a sustainable future*. Delegates participated in an exploration of the key challenges, issues and opportunities for the transport sector. Special thanks are extended to Main Roads Queensland and the REAAA Queensland Branch for their support in the lead up to and during the conference.

The Chapter was also involved in arrangements for the Head of Road Authorities (HORA) meeting on 19 and 20 May 2003 run during the Conference. This was the second HORA meeting with 24 heads of road authorities from 14 countries attending as well as 14 members of the REAAA governing council. Invited observers from the Asian Development Bank, the World Bank, the Indian Institute of Technology (Delhi) and the Australian Department of Transport and Regional Services also attended. Two workshop sessions on *Road Network Asset Management* and on *Road Safety* featured in the program with strong overall participation. The HORA meetings are considered an excellent forum for the transfer of information and ideas. The next meeting is scheduled for the Philippines in 2004.

REAAA branches and various state road authorities were active this year in holding REAAA events and activities. The Queensland branch was heavily involved in the organisation of the REAAA/ARRB conference in Cairns and contributed greatly to its success. In June 2003, the first of a series of forums run under the auspices of the Chapter was held at VicRoads' offices in Melbourne. David Anderson, VicRoads CEO and Chairman of the Australian Chapter welcomed over 30 attendees and reported on the outcome of the meetings of HORA in Cairns.

The West Australian branch continues to be very active with a series of breakfast meetings with guest speakers throughout the year where key local people, or people visiting from overseas within the industry, are invited to talk. The WA Branch has for the first time decided to award prizes to students who excel in the final year road and traffic-engineering units at Curtin University and in February 2003, Branch Chairman, Phil Ladner presented certificates and \$250 prizes to students undertaking units in Highway and Traffic Engineering.

In NSW, forty people attended a seminar on AusLink in Parramatta in July 2003. Arranged in conjunction with Institute of Public Works Engineering Australia (IPWEA) (NSW), the seminar provided members and others with an opportunity to find out more about AusLink, where it is up to, and what the implications are for them.

## International discussions and relations

Austroads has established a partnership with American Association of State Highway and Transportation Officials (AASHTO) which is a similar organisation to Austroads in the United States of America. The agreement provides for the exchange of information between the two organisations, sharing knowledge and coordination research.

An agreement was also being developed with American Association of Motor Vehicle Administrators (AAMVA) and austroads. AAMVA is the equivalent organisation which covers vehicle registration and driver licensing in the United States of America. It is expected that this agreement will come into operation in early 2004.

## Strategic Planning

Austrroads continues to work towards addressing the objectives and outcomes from its *Strategic Plan 2001 – 2004*. This plan is divided into five outcome areas covering integrated transport strategy, road safety, national and regional development, access and mobility, and sustainability. The plan also has two enabling areas concentrating on partnerships and relationships, and research, standards and practices and tools.

Preparatory work commenced during 2002-03 on the development of Austrroads strategic plan for 2004-2007. Starting in April 2003, a range of stakeholders were canvassed for feedback on questions including Austrroads purpose, its effectiveness, what it should be concentrating on doing, what it does well, and where it could improve. The aggregated feedback fed into a discussion paper that was used as the basis for a strategic planning workshop on the development of the strategic plan 2004 to 2007. The agreed strategic priorities from that meeting are:

- Improving road safety
- Addressing the future freight task
- Optimising utilisation of the road network
- Minimising whole of life cost of road assets
- Enhancing the security and integrity of information.

Each of these priorities is now being addressed by a task group which will prepare a paper for submission to Austrroads Council in November 2003. The new strategic plan will guide the development of the Austrroads work program for 2004–05.

Another initiative developed during the year was a Partnership Agreement between Austrroads, the Australian Local Government Association and the Institute of Public Works Engineers. The agreement began on 1 July 2003 and seeks to improve communication between each organisation and help ensure that the management of local roads and the resolution of strategic local road issues are facilitated with the benefit of the knowledge, technology, best practice and research outputs from Austrroads activities.

## Program Coordination and Support

Several initiatives were introduced early in the year to expedite the commencement of projects and assist with the overall timely delivery. This included the early appointment of project managers and preparation of project documentation resulting in earlier commencement of the majority of new approved projects than in previous years.

Austrroads Council considered the role and operation of reference groups and endorsed a process for managing reference groups to bring about greater consistency in their operation and improve communication between reference groups, member organisations and the Austrroads Council.

Efforts were made throughout the year to identify and remove duplication of systems in program management. With significant reporting requirements by Austrroads programs, existing procedures, processes and mechanisms were reviewed resulting in the simplifying of reports and the facilitation of better collection of information. In association with the development of the Austrroads Strategic Plan 2004 – 2007 as mentioned above, Austrroads also reviewed program and project management arrangements and structures and implemented various changes for improved efficiency and the strategic targeting of resources.

During the year the National Office reviewed and completely revised the *Austrroads Handbook*, which contains Austrroads administrative, management and communications procedures, partnerships and agreements.

## Specific projects

Austrroads National Office is responsible for a small number of corporate projects:

### **Standards Australia**

Staff from Austrroads members' have for some time been involved with Standards Australia (SA) technical committees and the work they undertake in developing and maintaining Standards in key areas for road authorities. Austrroads Council in October 2001 approved a list of SA committees on which Austrroads should be represented. The review of representation on these approved SA committees is now complete and should lead to an increase in the value members' receive from such representation.

### **National Performance Indicators**

Austrroads has published an evolving set of national performance indicators data for the road system and road authorities annually since 1995. In January 2003, data for the eighth edition was for the first time published online from Austrroads website. The website application allows for data input and review by jurisdictions over the internet prior to publication. This development has sped up data collection and approval as well as providing data freely to the public in both chart and table format across the internet. Updated data is published each year to provide important time series information for the transport industry and the community and to facilitate individual comparisons of the performance of the road system and road authorities.

### **RoadFacts 2000**

Austrroads popular *RoadFacts 2000* publication was updated in March 2003 with an interim release containing updates of the majority of the data tables in Acrobat PDF format. *RoadFacts* provides selected facts and figures about both the extent of Australian and New Zealand road networks, and the demands placed on them. A further interim update will be released before the end of 2003, while a full update and review project is planned for 2003-04 for the release of the third edition of *Road Facts*.

### **PIARC World Road Congress, Durban**

Throughout 2002-03, Austrroads National Office has been coordinating an Australasian delegation and exhibit for the XXIIInd (PIARC) World Road Congress in Durban, South Africa, 19-25 October 2003. Thirty eight Australasian delegates will be involved in a range of strategic and technical committee meetings as well as attending sessions in the five strategic direction themes of the Congress.

## Communications, publications and marketing

### **Website**

In 2002-03, Austrroads sought to improve the way in which it disseminates and communicates information to target audiences. The website holds general information about Austrroads, acts as a vital marketing tool for its published outputs and strategic activities, and provides access to the internet databases for project, publication, personnel and key document records.

The website continues to be developed to communicate more and better information on Austroads work, activities and publications. During the year, new sections were added for reference groups and their activities. A local government section was added. An extensive sub-site for the Asset Management Reference Group was launched. The National Performance Indicators dynamic web pages were opened, as well as information about the Intelligent Access Project. A complete overhaul of the web site is planned in 2003–04 to afford a new look, a search engine and improved navigability.

### **Publications database**

On 12 July 2002, Austroads launched a revamped publications database that provided for the free downloading of almost all current research reports in Adobe Acrobat format. The response to this was excellent with close to 11,000 individual downloads recorded in the first 12 months of operation. Over 160 titles are now available in this way plus the complete listing of all Austroads titles and abstract information. The internet facility has increased the level of dissemination for Austroads research-type reports both nationally and overseas.

During the year, a number of high quality guides and technical manuals were published and promoted. These included:

- *Guide to Traffic Engineering Practice: Part 7 — Traffic Signals,*
- *Guide to the Selection of Road Surfacing* (2<sup>nd</sup> edition)
- *Guide to the Selection and Use of Bitumen Emulsions,*
- *Urban Road Design — Guide to the Geometric Design of Major Urban Roads,*
- *Road-Based Public Transport and High Occupancy Vehicles — A Guide for Traffic Engineers,*
- *Austroads Guidelines for Environmental Reporting,*
- *Telecommunications in Road Reserves: Operational Guidelines for Installations.*

These titles continue to add to the body of knowledge produced and maintained by Austroads member organisations.

During the year, a new publications management strategy was developed with the objectives to maintain the highest standard for Austroads technical manuals and improve the efficiency of the review and revision process. The key elements of the strategy are to consolidate the publication review and revision projects into a dedicated program, contract out Publications Program management services, improve the packaging of guides and technical manuals, and implement more effective dissemination and promotion. The publications program commenced on 1 July 2003.

### **Newsletter**

Austroads has continued to prepare a newsletter every two months and distribute it online to 2,500 subscribers, including all local councils in Australia. The newsletter is also accessible on the website and provides an effective way for Austroads to report on its activities and achievements and receives 30-40 new subscriptions every month.

As detailed under the Road System Management section, the regular RSM newsletter detailing RSM representative activities on World Road Association (PIARC) Technical Committees will be expanded to include information on all committees where there is Austroads representation. Likely to be published quarterly, the PIARC newsletter will feature alongside the regular Austroads e-newsletter.

## Staffing and Administration

In September 2002, Jennifer Castle commenced work part-time as an Administrative Assistant in the Austroads National Office. David Francis, Program Support Manager, on secondment from VicRoads from August 2002, accepted a permanent role with Austroads in July 2003.



# AUSTROADS AWARDS 2002-03

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Austrroads continued its professional recognition in the form of the Achievement Awards scheme that recognises significant contribution to Austrroads objectives through project work or other activity in the work program. There was one recipient of the Fellowship Award and twelve recipients of the Achievement Awards in 2002-03.

## Fellowship Award

- John Bethune (Australian Asphalt Pavement Association)

For his outstanding and lengthy contribution to Austrroads in the field of materials and pavement technology including the work undertaken between AAPA and Austrroads, his chairmanship of the Austrroads National Asphalt Research Committee, and his representation on Austrroads Pavement Reference Group since 1998, and, in particular, his contribution to Austrroads outputs including:

Asphalt Test Methods; Asphalt Guide; Guide to the Selection of Road Surfacing; Framework Specification for Asphalt Recycling and AAPA/APRG Pavement Work Tips.



John Bethune receiving his Fellowship Award from the Austrroads Chairman, Dr Robin Dunlop

## Achievement Awards

- Mr Allan Bell, Department of Main Roads Queensland
- Mr Geoff Bouilly, VicRoads
- Mr Geoff Clarke, Federal Department of Transport and Regional Services
- Mr Alistair Cumming, VicRoads
- Mr John Cunningham, VicRoads
- Mr David Dash, Roads and Traffic Authority New South Wales
- Mr Laurie Dowling, LB Dowling & Associates
- Mr Mike Kapitola, Main Roads Western Australia
- Mr Craig Mitchell, Roads and Traffic Authority New South Wales
- Mr Ken Russell, VicRoads
- Mr Paul Smith, Department of Main Roads Queensland
- Mr Phil Symons, VicRoads.



# REFERENCE GROUPS

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Membership of Austroads Reference Groups as at 30 September 2003:

## **Asset Management Reference Group**

Binning, Neville	Main Roads Western Australia
Clarke, Geoff	Federal Department of Transport and Regional Services
Coci, Leo	Main Roads Western Australia
Douglas, Bruce	Mornington Peninsula Shire Council
Dowling, Laurie	L B Dowling and Associates
Farrell, Richard	Department of Infrastructure, Planning and Environment Northern Territory
Ferguson, Ron	Roads and Traffic Authority New South Wales
Ladner, Phil	Main Roads Western Australia
Martin, Tim	ARRB Transport Research
McNulty, Hamish	Department of Urban Services Australian Capital Territory
Owen, Mark	Transit New Zealand
Silvester, David	Transit New Zealand
John Statton	Department of Transport and Urban Planning South Australia
Todd, Peter	Department of Infrastructure, Energy and Resources Tasmania
Van Every, Bruce	VicRoads

## **Australian Bicycle Council**

Boulter, Roger	Hamilton City Council
Campbell, Brent	Department of Infrastructure, Planning and Environment Northern Territory
Campbell, Fiona	Bicycle Federation of Australia
Cumming, Alistair	VicRoads
Evans, Graham	Federal Department of Transport and Regional Services
Gould, Trish	Albury City Council
Greig, Russell	Department of Transport Western Australia
Lunsmann, Rolf	Roads and Traffic Authority New South Wales
Magarey, Paul	Federal Department of Transport and Regional Services
McNamara, Warwick	Federal Department of Transport and Regional Services
Morath, Tim	Department of Urban Services Australian Capital Territory
Oxer, Michael	Bicycle Industries Australia Ltd
Salvestro, Anita	Department of Health and Aged Care
Tabor, Anthony	Australian Greenhouse Office
Walker, Chris	Roads and Traffic Authority New South Wales
Watts, Peter	Department of Transport and Urban Planning South Australia
Wolfe, Naomi	Environment Australia

# reference groups

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## **Austrorods Pavement Research Group**

Bethune, John	Australian Asphalt Pavement Association
Brown, Steve	VicRoads
Dash, David	Roads and Traffic Authority New South Wales
Elaurant, Scott	Federal Department of Transport and Regional Services
Evans, Gareth	Department of Transport and Urban Planning South Australia
Fischer, John	Main Roads Western Australia
Giana, Frank	Department of Infrastructure, Energy and Resources Tasmania
Hambleton, Paul	Transit New Zealand
Hansen, Bruce	Brisbane City Council
Hickson, Ian	Department of Urban Services Australian Capital Territory
Jackson, Stephen	Department of Infrastructure, Planning and Environment Northern Territory
Jones, Allan	Department of Main Roads Queensland
Matthews, Scott	Cement and Concrete Association of Australia
Olsen, Chris	New Zealand Pavement and Bitumen Contractor's Association Inc.
Reeves, Ian	Department of Main Roads Queensland
Sharp, Kieran	ARRB Transport Research
Vorobieff, George	AustStab

## **Environment Reference Group**

Cook, Geoff	Department of Infrastructure, Planning and Environment Northern Territory
Evans, Gareth	Roads and Traffic Authority New South Wales
Gillian, Jed	Department of Infrastructure, Energy and Resources Tasmania
Howard, Robert	Main Roads Western Australia
Isles, Steve	Roads and Traffic Authority New South Wales
Kinch, Matthew	Department of Urban Services Australian Capital Territory
MacDonnell, Sharon	VicRoads
Makeham, Peter	National Road Transport Commission
Reeves, Ian	Department of Main Roads Queensland
Rossiter, Lisa	Transit New Zealand
Sharp, Kieran	ARRB Transport Research
Stone, Robin	Department of Main Roads Queensland
Welsh, Anne	Department of Transport and Urban Planning South Australia

## **Heavy Vehicle Reference Group**

Allen, David	Roads and Traffic Authority New South Wales
Bessell, John	Department of Infrastructure, Energy and Resources Tasmania
Coonan, David	Department of Urban Services Australian Capital Territory
Daly, Wayne	Department of Urban Services Australian Capital Territory
Edgar, John	National Road Transport Commission
Hill, Craig	Land Transport Safety Authority
Hogben, Don	VicRoads
Hollingworth, Greg	Department of Main Roads Queensland
Ide, Robin	Department of Transport and Urban Planning South Australia
Kay, John	Land Transport Safety Authority
Peters, Bob	Main Roads Western Australia
Rowe, Carol	Federal Department of Transport and Regional Services
Sinclair, Tony	Department of Infrastructure, Planning and Environment Northern Territory
Sinclair, Sue	Roads and Traffic Authority New South Wales
Sleath, Lynn	Transit New Zealand
Swann, Greg	Department of Transport Queensland
Walker, Chris	Roads and Traffic Authority New South Wales

# reference groups

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## **National Performance Indicators Reference Group**

Bates, Dave	Transit New Zealand
Brown, Mike	Main Roads Western Australia
Cross, Phil	Department of Infrastructure, Planning and Environment Northern Territory
Dowling, Laurie	L B Dowling and Associates
Francis, David	Austroroads
Grogan-Jones, Alicia	VicRoads
Hunter, Richard	Roads and Traffic Authority New South Wales
Isles, Steve	Roads and Traffic Authority New South Wales
Lang, Jan	Department of Infrastructure, Energy and Resources Tasmania
Mehta, Ashok	Federal Department of Transport and Regional Services
Moore, Barry	National Road Transport Commission
Peters, Paul	Department of Main Roads Queensland
Sellek, Grant	Department of Transport and Urban Planning South Australia
Yeo, Richard	ARRB Transport Research

## **Registration and Licensing Reference Group**

Coonan, David	Department of Urban Services Australian Capital Territory
D'Souza, Craig	Roads and Traffic Authority NSW
Forbes, Greg	Department of Transport and Licensing Western Australia
Fowler, Richard	Department of Infrastructure, Energy and Resources Tasmania
Frisby, Rod	Department of Transport and Urban Planning South Australia
Habner, Lynne	National Road Transport Commission
Hill, Gavin	Roads and Traffic Authority New South Wales
Hill, Craig	Land Transport Safety Authority
Hughes, Geoff	NMVTTC
Kay, John	Land Transport Safety Authority
Mahon, Gary	Department of Transport Queensland
Moore, Terry	Austroroads
Quinlan, David	Department of Urban Services Australian Capital Territory
Rowe, Carol	Federal Department of Transport and Regional Services
Shanks, Geoff	VicRoads
Sinclair, Tony	Department of Infrastructure, Planning and Environment Northern Territory
Sinclair, Sue	Roads and Traffic Authority New South Wales
Walker, Chris	Roads and Traffic Authority New South Wales

# reference groups

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## Research Coordination Advisory Group

Brooks, Chris	Federal Department of Transport and Regional Services
Calvert, Fiona	National Road Transport Commission
Croke, Leah	Department of Infrastructure, Planning and Environment Northern Territory
Fildes, Brian	Monash University
Grabham, Phill	Federal Department of Transport and Regional Services
Graham, Andy	Roads and Traffic Authority New South Wales
Healy, David	Transport Accident Commission
Jiggins, Stephen	Department of Urban Services Australian Capital Territory
Johnston, Ian	Monash University Accident Research Centre
King, Mark	Department of Transport Queensland
Kirby, Gary	Department of Transport Western Australia
Langford, Jim	Department of Infrastructure, Energy and Resources Tasmania
McLean, Jack	University of Adelaide
Motha, Joe	Federal Department of Transport and Regional Services
Norton, Robyn	University of Sydney
O'Connor, Peter	National Injury Surveillance Unit
Potter, Jeff	VicRoads
Sheehan, Mary	Queensland University of Technology
Stevenson, Mark	University of Western Australia
Tziotis, Michael	ARRB Transport Research Ltd
White, Michael	Department of Transport and Urban Planning South Australia

## Road Design Reference Group

Armistead, Allan	Allan Armistead Consulting International
Aumann, Peter	Monash City Council
Bobbermen, David	Department of Main Roads Queensland
Brock, Tom	The Association of Consulting Engineers Australia
Cook, Geoff	Department of Infrastructure, Planning and Environment Northern Territory
Cunningham, John	VicRoads
Davis, Dennis	Transit New Zealand
Ellis, Peter	Roads and Traffic Authority New South Wales
Grove, Rob	Main Roads Western Australia
Nichols, Graeme	Department of Infrastructure, Energy and Resources Tasmania
Reeves, Ian	Department of Main Roads Queensland
Saunders, Richard	Department of Transport and Urban Planning South Australia
Tziotis, Michael	ARRB Transport Research

## Road Safety Engineering Reference Group

Anderson, Colin	Department of Transport and Urban Planning South Australia
Brisbane, Graham	Roads and Traffic Authority New South Wales
Edgar, John	National Road Transport Commission
Freeman, Peter	Department of Infrastructure, Energy and Resources Tasmania
Jordan, Phil	VicRoads
Kidd, Brian	Main Roads Western Australia
Lee, Gordon	Department of Main Roads Queensland
Simjanovska, Elka	Department of Infrastructure, Planning and Environment Northern Territory
Tziotis, Michael	ARRB Transport Research

# reference groups

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## Road System Management Reference Group:

Balfe, Peter	Austroads RSM Program Manager (Chair)
Bickoff, Kevin	Emerald Shire Council, Emerald, Qld (ALGA)
Collins, Charmaine	Austroads RSM Program Executive
Gargett, David	Bureau of Transport and Regional Economics
Hadingham, Kevin	VicRoads
Kugathas, Kuga	ACT Department of Urban Services
Lydon, Mary	ARRB Transport Research
Meakins, Trudi	Federal Department of Transport and Regional Services
Nicholls, Penny	Department of Infrastructure, Energy & Resources, Tasmania
Norwell, Gary	Main Roads Western Australia
Moore, Barry	National Road Transport Commission
Richards, Rob	Transport South Australia
Richmond, Allan	Department of Main Roads, Queensland
Stricker, Jay	Roads & Traffic Authority New South Wales
Wanka, Ernie	Department of Infrastructure Planning and Environment Northern Territory
Young, David	Transit New Zealand

## Road User Effects Reference Group

Boyd, Tony	VicRoads
Cross, Phil	Department of Infrastructure, Planning and Environment Northern Territory
Dowling, Laurie	L B Dowling and Associates
Hancy, Richard	Transit New Zealand
Harvey, Mark	Federal Department of Transport and Regional Services
Martin, Kathy	Main Roads Western Australia
Melsom, Ian	Transfund New Zealand
Moore, Barry	National Road Transport Commission
Peters, Paul	Department of Main Roads Queensland
Raniga, Pravin	Roads and Traffic Authority New South Wales
Robertson, Peter	Federal Department of Transport and Regional Services
Thoresen, Thorolf	ARRB Transport Research Ltd
Tisato, Peter	Department of Transport and Urban Planning South Australia
Tsolakis, Dimitris	ARRB Transport Research
Van Emmerik, Andrew	Department of Infrastructure, Energy and Resources Tasmania

## Structures Reference Group

Armistead, Allan	Allan Armistead Consulting International
Bouilly, Geoff	VicRoads
Chaplin, Gordon	Department of Transport and Urban Planning South Australia
Curran, George	Department of Infrastructure, Planning and Environment Northern Territory
Fenwick, John	Department of Main Roads Queensland
McGuire, Frank	Transit New Zealand
Mulcahy, Geoff	Department of Infrastructure, Energy and Resources Tasmania
Reeves, Ian	Department of Main Roads Queensland
Scanlon, Jock	Main Roads Western Australia
Shayan, Ahmad	ARRB Transport Research
Wedgwood, Ray	Roads and Traffic Authority New South Wales

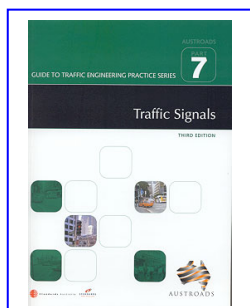
# reference groups

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## **Traffic Management Reference Group**

Brash, Janet	VicRoads
Clark, Steve	Department of Transport and Urban Planning South Australia
D'Souza, Craig	Roads and Traffic Authority New South Wales
Davis, Griff	City of Whittlesea Victoria
Davis, Dennis	Transit New Zealand
Douglas, Jon	Department of Main Roads Queensland
Freeman, Peter	Department of Infrastructure, Energy and Resources Tasmania
Grattan, Ken	Department of Infrastructure, Planning and Environment Northern Territory
Hill, Gavin	Roads and Traffic Authority New South Wales
Hough, David	Main Roads Western Australia
Margison, Philip	Roads and Traffic Authority New South Wales
Ogden, Ken	Royal Automobile Club of Victoria
Shoukrallah, Rifaat	Department of Urban Services Australian Capital Territory
Sinclair, Sue	Roads and Traffic Authority New South Wales
Tziotis, Michael	ARRB Transport Research
Walker, Chris	Roads and Traffic Authority New South Wales

# PUBLICATIONS



Publications releases during the year ended 30 June 2003:

## GUIDES

AP-11.7/03	Guide to Traffic Engineering Practice: Part 7 — Traffic Signals
AP-G63/03	Guide to the Selection of Road Surfacing (2 <sup>nd</sup> edition)
AP-G69/02	Guide to the Geometric Design of Major Urban Roads
AP-G70/02	Austroads Guidelines for Environmental Reporting
AP-G71/02	A Guide for Traffic Engineers — Road-Based Public Transport and High Occupancy Vehicles
AP-G72/02	Telecommunications in Road Reserves: Operational Guidelines for Installations
AP-G73/02	Guide to the Selection and Use of Bitumen Emulsions

## STRATEGIES

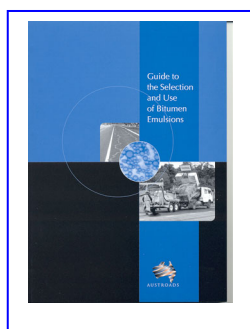
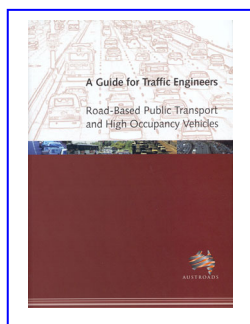
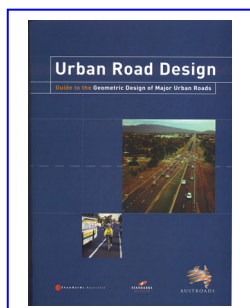
AP-S22/02	Austroads Pavement Strategy 2001—2004
AP-S27/02	Austroads Environmental Strategy

## RESEARCH REPORTS

AP-R205/02	Case Studies in Successful Environmental Management
AP-R206/02	Investigation of cyclist safety at intersections
AP-R207/02	Review of the school bus safety action plan — Final report
AP-R208/02	Reducing collisions at passive railway level crossings in Australia
AP-R209/02	Evaluation of the proposed actions emanating from Road Safety Audits
AP-R210/02	Intelligent transport systems in Asset Management: Issues Paper
AP-R211/02	Geometric Design for Trucks: When, Where and How?
AP-R212/02	Providing Sustainable Transport Solutions: How can we meet the increasing desire for mobility and protect our quality of life?
AP-R213/02	Investigation of Internal Bus Safety Measures
AP-R214/02	Community Road Safety in Australia and New Zealand
AP-R215/03	The Outlook for Road Related Revenues and Road Transport Demand
AP-R216/03	Economic Evaluation of Road investment Proposals: Valuation of Benefits of Roadside ITS Initiatives
AP-R217/03	Environmental Considerations for Planning and Design of Roads
AP-R218/03	Economic Evaluation of Road investment Proposals: Unit Values for Road User Costs at September 2000
AP-R219/03	Economic Evaluation of Road investment Proposals: Improved Estimation of Hourly Traffic Volume Distributions
AP-R220/03	Drink-Driving Enforcement: Issues in Developing Best Practice
AP-R221/03	Self-Regulation of Older Drivers: A Review
AP-R222/03	The Road Safety Risk Manager Software Tool: Background Research

## TECHNICAL REPORTS

AP-T16/02	Mix Design for Stabilised Pavements Materials
AP-T17/02	Practitioners Guide to the Design of Sprayed Seals Revision 2000 Method
AP-T18/02	Austroads Framework for Specifying Asphalt
AP-T19/02	Progress Report on the 2001/02 National Mix Design Program
AP-T21/03	Comparison of Project level and Network Level Pavement Strength Assessment
AP-T22/03	State-of-the-Art of Bitumen in Australia and New Zealand
AP-T23/03	Dynamic Interaction of Vehicles and Bridges
AP-T24/03	Progress Report on Binders Research Program 2001/02



A complete list of Austroads publications can be found at <http://www.austroads.com.au/publications>



# FINANCIAL INFORMATION

## Income and Expenditure Statement for the year ended 30 June 2003

	2003		2002
		\$	\$
<b>INCOME</b>			
Contributions			
Membership	751,048		728,600
Work program	4,489,392		4,487,300
Special Programs and Projects			
Performance Based Standards	—	100,000	
ITS Projects (Note 5)	12,996	125,858	
Intelligent Access Project	<u>361.00</u>	<u>89,000</u>	314,858
Publications			
Gross sales revenue	236,725		236,458
Royalties	2,324		—
Interest Received			
Short Term investments	172,791	166,350	
Rental Bond	<u>1,160</u>	<u>1,201</u>	167,551
Other Income	<u>60</u>		<u>136</u>
<b>Total Income</b>	<b><u>6,027,496</u></b>		<b><u>5,934,903</u></b>
<b>EXPENDITURE</b>			
Corporate			
Salaries and related charges	451,474	494,747	
Other National Office expenses (Note 2)	284,359	325,360	
Projects	174,052	157,431	
Depreciation (Note 1b)	19,501	26,176	
Program management	<u>506,119</u>	<u>557,785</u>	1,561,499
Work program			
Road System Management	492,642	400,328	
Road Use Management	615,934	404,939	
Road Safety	615,491	466,225	
Business Systems	648,003	539,685	
Technology & Environment	1,585,681	1,478,059	
Intelligent Transport Systems (Note 5)	350,000	350,000	
Intelligent Access Project	<u>383,427</u>	<u>54,775</u>	3,694,011
Publications			
Cost of Sales	70,848	91,415	
ARRB commission	70,295	64,683	
Stock Write-off	19,770	35,093	
Royalty payments	2,823	2,186	
Production and distribution	40,000	40,000	
Other costs	<u>—</u>	<u>445</u>	<u>233,822</u>
<b>Total Expenditure</b>	<b><u>6,330,419</u></b>		<b><u>5,489,332</u></b>
<b>Net (Deficit) / Surplus for the year</b>	<b><u>(302,923)</u></b>		<b><u>445,571</u></b>

# financial information

## Balance Sheet as at 30 June 2003

	2003		2002	
	\$	\$	\$	\$
<b>ASSETS</b>				
Current assets				
Cash	637,755		877,614	
Investments (Note 1d)	2,803,442		2,862,530	
Inventories (Note 3)	216,514		204,208	
Receivables (Note 4)	3,386,921		119,374	
Prepayments	25,605		53,324	
Other debtors	<u>285,095</u>		<u>237,360</u>	
		7,355,332		4,354,410
<b>Non-current assets</b>				
Office Furniture and Equipment – at Cost	193,142		180,884	
Less: Provision for Depreciation	<u>(168,388)</u>		<u>(151,990)</u>	
	24,754		28,894	
Motor Vehicles at Cost	20,576		–	
Less: Provision for Depreciation	<u>(3,078)</u>		–	
	17,498		–	
Sundry Debtor	<u>30,110</u>	<u>72,362</u>	<u>28,949</u>	<u>57,843</u>
<b>Total assets</b>		<b><u>7,427,694</u></b>		<b><u>4,412,253</u></b>
<b>LIABILITIES</b>				
Current liabilities				
Accounts Payable	2,277,076		1,772,348	
Contributions received in advance	284,926		227,200	
Subscriptions invoiced in advance (NEVDIS II) (Note 6)	3,016,231		–	
Unacquitted funds (e-transport) (Note 5)	431,911		667,287	
Provision for Annual Leave	36,936		53,160	
Provision for Long Service Leave	<u>10,293</u>		<u>21,496</u>	
		6,057,373		2,741,491
<b>Non-current liabilities</b>				
Provision for Long Service Leave		<u>16,333</u>		<u>13,851</u>
<b>Total liabilities</b>		<b><u>6,073,706</u></b>		<b><u>2,755,342</u></b>
<b>NET ASSETS</b>		<b><u>1,353,988</u></b>		<b><u>1,656,911</u></b>
Represented by:				
Net (Deficit)/ Surplus		(302,923)		445,571
Cumulative surplus brought forward		<u>1,656,911</u>		<u>1,211,340</u>
<b>MEMBERS' FUNDS</b>		<b><u>1,353,988</u></b>		<b><u>1,656,911</u></b>

# financial information

## Statement of Cash Flows for the year ended 30 June 2003

	2003	Inflows (Outflows)	2002
	\$		
<b>CASH FLOWS FORM OPERATING ACTIVITIES</b>			
<b>Receipts</b>			
Member Contributions	5,334,026		5,280,466
Publication sales	247,712		243,637
Interest received	170,843		166,549
External project funding	373,996		439,000
Other receipts	60		136
Net GST receipt	<u>68,213</u>		<u>39,050</u>
<b>Total receipts</b>	<b><u>6,194,850</u></b>		<b><u>6,168,838</u></b>
<b>Payments</b>			
Salaries and related costs	(472,404)		(522,780)
National Office	(471,590)		(516,909)
Publications	(451,418)		(246,196)
Programs	<u>(5,065,526)</u>		<u>(4,651,408)</u>
<b>Total payments</b>	<b><u>(6,460,938)</u></b>		<b><u>(5,937,293)</u></b>
<b>Net Cash (used in)/ provided by operating activities (Note 7)</b>	<b><u>(266,088)</u></b>		<b><u>231,545</u></b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Payment for purchase of fixed assets	(32,859)		(11,341)
<b>Net cash used in investing activities</b>	<b><u>(32,859)</u></b>		<b><u>(11,341)</u></b>
<b>Net (Decrease)/ Increase in cash held</b>	<b><u>(298,947)</u></b>		<b><u>220,204</u></b>
<b>Cash at the beginning of the year</b>	<b>3,740,144</b>		<b>3,519,940</b>
<b>Cash at the end of the year (Note 8)</b>	<b><u>3,441,197</u></b>		<b><u>3,740,144</u></b>

# financial information

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## Notes to and forming part of the accounts for the year ended 30 June 2003

### 1. Statement of significant accounting policies

This financial report is a special purpose report prepared in order to satisfy the financial reporting requirements of the Association Incorporation Act (NSW). The Executive Committee has determined that the association is not a reporting entity.

The financial report has been prepared in accordance with the requirements of the Associations Incorporation Act (NSW) and the following Australian Accounting Standards:

AAS 5	Materiality
AAS 8	Events Occurring after Reporting Date

No other applicable Accounting Standards, Urgent Issues Group Consensus Views or other authoritative pronouncements of the Australian Accounting Standards Board have been applied.

The financial report has been prepared on an accruals basis of historical costs and does not take into account changing money values or, except where specifically stated, current valuations of non-current assets.

The following material accounting policies, which are consistent with the previous period unless otherwise stated, have been adopted in the preparation of this report:

#### a) **Inventories**

Inventories comprise stock of publications on hand at ARRB Transport Research and Austroads National Office, publication costs in progress, and publication raw materials, all of which are stated at the lower of cost and net realisable value.

Due to the nature of projects conducted by Austroads Incorporated and the manner in which some costs are shared between the various project participants' organisations, costs of publications only include the cost of printing and other publication production costs. Research and development costs are expensed to the relevant project in the Income and Expenditure Statement.

#### b) **Depreciation**

Furniture and equipment and motor vehicles are depreciated on a straight line basis over their useful lives.

#### c) **Employee entitlements**

Provision for long service leave and annual leave are made for all employees from their date of commencement and are calculated at current pay rates.

#### d) **Investments**

Investments reflected on the Balance Sheet represents funds held with the National Australia Bank in short term investments. These funds are placed for varying periods up to 13 months, but may be withdrawn at short notice.

# financial information

## Notes to and forming part of the accounts for the year ended 30 June 2003 (continued)

### e) e-transport Implementation

Funding of e-transport implementation is recognised as income to the extent of expenditure incurred to balance date (refer Note. 5). Funding in excess of expenditure is carried forward to a subsequent year as unacquired funds in the Balance Sheet.

### f) Income tax

The Association has been exempted from income tax under Section 50-5 of the Income Tax Assessment Act 1997.

	2003	2002
	\$	\$
<b>2. Other National Office Expenses</b>		
Other National Office Expenses include the following		
— Remuneration of Auditor for Audit Services	8,450	6,900
— Remuneration of Auditor for Other Services	<u>—</u>	<u>2,588</u>
	8,450	9,488
— Rental expense on operating lease	82,745	71,424
<b>3. Inventories</b>		
Publications		
— Finished goods (at cost)	219,963	241,675
Less stock valuation adjustment	(20,000)	(43,335)
— Raw materials (at cost)	<u>16,551</u>	<u>5,868</u>
	<b><u>216,514</u></b>	<b><u>204,208</u></b>
<b>4. Receivables</b>		
Trade debtors	69,067	119,374
NEVDIS II subscriptions receivable (note 6)	<u>3,317,854</u>	<u>—</u>
	<b><u>3,386,921</u></b>	<b><u>119,374</u></b>

# financial information

## Notes to and forming part of the accounts for the year ended 30 June 2003 (continued)

### 5. e-transport Implementation

Income		
Members' contribution	250,000	250,000
Austroads contribution	350,000	350,000
Interest received	<u>11,002</u>	<u>15,602</u>
<b>Total Income</b>	<b><u>611,002</u></b>	<b><u>615,602</u></b>
Expenditure		
Partial Reimbursement of Austroads' Administration Costs	11,002	15,602
ITS Projects in Austroads Programs	12,996	125,858
Intelligent Transport Systems Projects	<u>822,380</u>	<u>548,740</u>
<b>Total Expenditure</b>	<b><u>846,378</u></b>	<b><u>690,200</u></b>
<b>Net Deficit for the year</b>	<b>(235,375)</b>	<b>(74,598)</b>
Amount unexpended brought forward	<u>667,287</u>	<u>741,885</u>
	<b>431,911</b>	<b>667,287</b>
Amount unexpended transferred to Liabilities (Note 1[e])	(431,911)	(667,287)
<b>Net Surplus (Deficit)</b>	<u><u>=</u></u>	<u><u>=</u></u>

### 6. NEVDIS II

The NEVDIS II Program commenced in August 2003. Whilst there has been no income or expenditure relating to this project up to 30 June 2003 the following amounts are included in the Balance Sheet:

	<b>2003</b>	<b>2002</b>
	<b>\$</b>	<b>\$</b>
<b>Current Assets</b>		
Subscriptions Receivable re 2004 year	3,317,854	—
<b>Current Liabilities</b>		
Subscriptions Invoiced in advance	3,016,231	—

# financial information

## Notes to and forming part of the accounts for the year ended 30 June 2003 (continued)

### 7. Reconciliation of Net Cash used in Operating Activities to Operating Result

	2003	2002
	\$	\$
Operating result	(302,923)	445,571
Depreciation	19,501	26,176
Decrease/ (increase) in inventories	(12,306)	(26,382)
Decrease/ (increase) in trade debtors	50,307	7,466
Decrease/ (increase) in prepayments and other debtors	(3,339,031)	2,931
Increase/ (decrease) in liabilities	<u>3,318,364</u>	<u>(224,217)</u>
<b>Net cash from operating activities</b>	<b><u>(266,088)</u></b>	<b><u>231,545</u></b>

### 8. Reconciliation of Cash

For the purposes of the Statement of Cash Flows, the Association considers cash to include cash on hand and in banks and short term investments. Cash at the end of the reporting period as shown in the statement of cash flows is reconciled to the related items in the Balance Sheet as follows:

Cash	637,755	877,614
Investments	<u>2,803,442</u>	<u>2,862,530</u>
	<b><u>3,441,197</u></b>	<b><u>3,740,144</u></b>

### 9. Members Funds

Opening Balance	1,656,911	1,211,340
Net (Deficit) / Surplus for the year	<u>(302,923)</u>	<u>445,571</u>
<b>Total</b>	<b><u>1,353,988</u></b>	<b><u>1,656,911</u></b>



# financial information

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## Statement by Members of the Executive Committee

The Executive Committee has determined that the association is not a reporting entity and that this special purpose financial report should be prepared in accordance with the accounting policies outlined in Note 1 to the financial statements.

In the opinion of the Executive Committee, the attached financial statements as set out on page 48 to 54 present fairly the financial position of Austroads Incorporated as at 30 June 2003 and its performance for the year ended on that date.

At the date of this statement, there are reasonable grounds to believe that Austroads Incorporated will be able to pay its debts as and when they fall due.

This statement is made in accordance with a resolution of the Executive Committee and is signed for and on behalf of the Committee by:



Murray Kidnie  
Executive Director



Robin Dunlop  
Chairman

Dated this 14th day of October 2003.

# financial information

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## Independent Auditor's Report to the Members of Austroads Incorporated

We have audited the financial report, being a special purpose financial report, of Austroads Incorporated for the financial year ended 30 June 2003 as set out on pages 48 to 55. The Executive Committee is responsible for the financial report and has determined that the accounting policies used and described in Note 1 to the financial statements which form part of the financial report are appropriate to meet the requirements of the Associations Incorporation Act (NSW) and are appropriate to meet the needs of the members of Austroads Incorporated. No opinion is expressed as to whether the accounting policies used are appropriate to the needs of the members.

The financial report has been prepared for the purpose of fulfilling the requirements of the Associations Incorporation Act (NSW). We disclaim any assumption of responsibility for any reliance in this report or on the financial report to which it relates to any person other than those members, or for any purpose other than for which it was prepared.

Our audit has been conducted in accordance with Australian Auditing Standards. Our procedures included examination, on a test basis, of evidence supporting the amounts and other disclosures in the financial report, and the evaluation of significant accounting estimates. These procedures have been undertaken to form an opinion whether, in all material respects, the financial report is presented fairly in accordance with the accounting policies described in Note 1 so as to present a view which is consistent with our understanding of the Association's financial position, and performance as represented by the results of its operations and its cash flows. These policies do not require the application of all Accounting Standards and other mandatory professional reporting requirements in Australia.

The audit opinion expressed in this report has been formed on the above basis.

### Audit opinion

In our opinion, the financial report of Austroads Incorporated presents a true and fair view of the financial position of Austroads Incorporated as at 30 June 2003 and the results of its operations and its cash flow for the year ended in accordance with the accounting policies described in Note 1 to the financial statements.

**SOTHERTONS — Sydney Partnership**  
**Chartered Accountants**



**S Tzannes, Partner**  
14 October 2003