

# **Submission to Legislative Council Select Committee Rural Road Speed Limits**

SUBMITTED BY:

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## 1. Introduction

This submission is provided by Terry Eaton, a Consultant Traffic / Transport Engineer with over 45 years experience in traffic and transport related issues. Employment has been in local Government infrastructure development, road planning and traffic management. The traffic management work included employment as the Executive Engineer for the Transport Commission reporting to the Registrar of Motor Vehicles on the Traffic Management function of the organisation. Included in the responsibilities was the accident research and crash data section.

I believe my work experience and in particular my significant travel on rural sealed roads and particularly my appreciation of the rural road standards for both Meander Valley and Northern Midlands Council's puts me in a position to present evidence for the consideration of this select committee.

## 2. Limitations on Submission

This submission is limited in scope due to the other commitments of my consulting business which limits my availability to undertake an in depth analysis of the information provided on this issue.

It should be noted that the Road Safety Advisory Council have offered substantial consultancies to road safety based research organisations over a number of years based on academic support for the position taken, i.e. it appears the conclusion was in place and support sought rather than a broad based assessment of the actual crash data.

Perusal of the documentation supporting this proposal indicates no in depth data has been provided as a breakdown of the crash incidents, driver factors and location details.

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### 3. Road Safety Administration

Road safety is administered by the Road Safety Advisory Council with staff support from the Transport Safety Policy Branch of DIER. Consideration of this administration model suggests:

- i) An internal feedback loop with the Road Safety Branch initiating recommendations to the Advisory Council and if supported, such as this reduced rural roads default speed limited proposal, the Road Safety Division becomes responsible for advancing and implementing the change.
- ii) Once committed, the proposed action appears to have been advanced with selective reporting in support.
- iii) The existing Road Safety Advisory Council is not seen as containing membership that can effectively address the issues brought before them. The membership comprises upper level management executives, except for a Monash University Accident Research Centre, Motorcycle and Cyclist user representatives. It is acknowledged this membership provides substantive management experience but may not necessarily understand research methodology except for the Monash representative.

It could be argued that the Monash University representative has a conflict of interest as much of the accident research for this project has been undertaken by that organisation. It is also considered that the DIER CEO is fettered by membership of the Council as a member only when the decisions of the Council may compromise his management role with regard to transport policy, infrastructure asset management and transport efficiency.

Management by a specifically focussed organisation may not necessarily provide balance to the consideration / costs of action plans and in this instance the impact on road users and business costs.

Providing support to the RSAC by the Land Transport Safety Policy Branch is seen as exacerbating the lack of balance on assessing proposed initiatives. It is suggested this arrangement excludes the road / traffic management divisions of DIER (the officers who deal with road infrastructure and traffic management of the state road system, and have a practical understanding of the needs and likely issues) from the decision loop.. It appears these officers who have close liaison with Local Government were not invited to the Northern Forums I attended.

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## 4. Perceived Deficiencies with the Proposal

- i) **Definition – Default Speed Limit;** is the maximum permitted speed with the road standard, the weather conditions, the vehicle condition and driver competence determining the actual point speed on any section of road.

My understanding is that the Transport Safety Policy Branch perceive that the default limiting speed is the speed at which motorists consider they should be able to maintain in all circumstances?

The concern is that reducing the default limit to 90 km/h may reinforce this view when substantial lengths / road locations are not safe for travel at this speed.

One can contemplate the next round of this initiative will be to speed zone the total road network with a further lowering of the default limit?

- ii) **Comparative Trauma;** whilst sudden death / injury are traumatic occasions for the community, such events also occur due to suicide, other community related activities and industrial accidents. Indeed, the number of deaths by suicide is over twice the fatal road accident number.

The heavy bias by extensive reporting of road crashes in the media does keep such events in public prominence, and accordingly there is a perceived bias by Government to fund road safety initiatives over and above what may be equally traumatic events in other sections of the community.

The present advertising focus by the Road Safety Advisory Council appears to be on excessive speed as the major contributor to traffic crashes, thus is seen as tending to focus on that crash factor over and above other causes.

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## 5. Proposed Default Speed Reduction Research

As indicated early, there has been substantial road safety research reports undertaken on this issue for the Road Safety Advisory Council such that it is difficult to review all work due to the limited resources available to me, Issues are seen as:

- i) No actual study has been undertaken on the Local Government road network. Work has been undertaken on the state system, with the general observation that the Municipal standard is lower and hence the relative accident risk must be higher.
- ii) The analysis is based on developing a strategy to reduce serious casualty crash numbers. This is seen as a crude statistic for comparison purposes. However, even on this statistic, the serious casualty crashes have continued to decline significantly in the last decade, i.e. the 2011 value is some 63% of the 2001 value. (refer figure 3 Non-urban road network strategy – Sept 2012)

The concern is when is “enough regulatory control acceptable” or is this a continuum toward a utopian position of no casualty accidents and as a consequence no economic activity.

- iii) Benchmarks; generally system performance is measured against adopted benchmarks. In the work to date, no benchmarks relative to the road network have been adopted. Indeed, the latest advice from DIER is that the department is working on the development of benchmarks.

It is usual practice to have adopted benchmarks in place for comparison of the actual situation to a standardised base. It can be noted in this instance no mention is made of comparison of the accident rate to accepted benchmarks such as accidents per million vehicle kilometres of travel or measurement of the individual crash rates for road sections against the critical crash rate (refer AustRoads Guide to Traffic Engineering practice Part 4). Indeed this matter was referred to DIER some time ago with regard to this method of assessment.

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Based on information provided in reports, indications are for 2010:

a) DIER maintained roads:

- Road length: 3,208 km
- Casualty crash rates for 100 km/h Undivided Roads:

<b>Road Class</b>	<b>Crashes per 100 million vehicle kilometres</b>
Category 1	16.06
Category 2	20.80
Category 3	14.50

Note:

- Information indicates some 69% of travel is on state roads
- Information indicates the distribution of rural road crashes in 55/45 between State maintained and Local Government roads.
- Standardised crash rates by Road type (Perovic - 2008) indicated typical casualty crash rates for:
  - Divided rural road 20.0 km
  - Undivided seal >11.6m 19.38 km
  - Undivided sealed 7.6 – 8.2m 21.25 km
  - Undivided sealed roads 6.4 – 7.0m 25.0 km
  - Unsealed gravel 35.0 km

Comparison between the Perovic benchmarks and the actual State road crash rate indicates that the crash performance for the State road system is substantially better than the benchmarks, i.e. a relatively “safe” road network.

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b) Council maintained roads

No specific data has been provided but indications are:

Total road length	14,220
Sealed	7,267
Gravel	6,855
Rural sealed	4,381
2010 Serious Casualty crashes	48

No information is available on vehicle kilometres of travel on the rural road network but a realistic estimate suggests some 240 million vehicle kilometres of travel as a reasonable value for annual travel on sealed rural roads.

Comparison between the number of accidents and this travel indicates some 17 casualty accidents per 100 million vehicle kilometres of travel. This value suggests the crash rate for sealed rural roads is below the Perovic benchmark value.

This analysis also suggests travel on gravel roads may even be safer, i.e. an accident rate comparable or better than for other rural roads within the State.

## **6. Kingborough and Tasman Municipality trials**

The use of these municipalities for the default speed limit trials is considered questionable due to the topography of these municipalities, generally classified as mountainous and with small road lengths compared to municipalities in the northern part of the State.

The road length for Kingborough is 138 km sealed rural road, i.e. some 3% of the rural road network and with proximity to Hobart and Kingborough requiring short travel distances for the majority of trips with the road standards due to topography limiting travel speed. Compared to municipalities in the north of the State with substantially longer road lengths of a higher standard.



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## 7. Cameron Report – October 2009

This report goes into extensive detail as to the economic performance of lowering the rural default speed limit, salient points to note:

- (1) This analysis was undertaken on 85% of the State Road Network.
- (2) Conclusions of Cameron Report.

### CONCLUSIONS

1. The envisaged reduction in the 110 km/h speed limit to 100 km/h on Category 1 (National Highways) roads in Tasmania would be economically justified on both the divided and undivided sections under consideration.
2. The economic justification is even greater on the undivided Category 1 roads when (a) the saving in road trauma is valued by “willingness to pay” estimates; or (b) if the high proportion of road environments with frequent sharp curves, at-grade intersections, and occasional stops in towns traversed by these roads is recognised. A 90 km/h limit on undivided Category 1 roads could be considered, particularly through curvy road environments.
3. The envisaged reduction in the default 100 km/h speed limit to 90 km/h on sealed rural roads would be economically justified when it is recognised that a high proportion of Category 2-5 roads are through road environments with frequent sharp curves, at-grade intersections, and occasional stops in towns. The optimum speed on these roads through curvy environments is below 90 km/h for all classes of vehicle.
4. The envisaged reduction in the default 100 km/h speed limit to 80 km/h on unsealed (gravel) roads would be economically justified. The optimum speed on these roads on the State Road Network is close to the proposed new speed limit for all classes of vehicle.
5. If mean free speeds were reduced by 5 km/h on each category of road in response to the envisaged reduced speed limit applicable in each case, there would be an estimated total economic benefit exceeding \$35 million per annum to Tasmania. It is estimated that there would be 25% reduction in fatal crashes, 15% reduction in serious injury crashes, and nearly 12% reduction in minor injury crashes on the roads with the speed limit reductions.
6. It is possible that the relationships developed by Nilsson (1984), linking crashes and their injury severity with changes in mean free speeds, may not adequately represent the expected changes in casualty crashes if speed limits are reduced in rural road environments where free speeds are already substantially below the current (and reduced) limits on many targeted roads. A change in the distribution of speeds, instead of, or in addition to a reduction in mean speed, may be expected to produce a reduction in casualty crashes. It is recommended that an alternative method of estimating the changes in the numbers of casualty crashes on the Category 2-5 roads be investigated and if feasible, incorporated in further analysis of the economic benefits of the envisaged speed limit reductions.

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- (3) The RSAC proposal is for lowering the default speed limit on Council managed roads where no analysis has been undertaken and where the economic benefits may not be as significant as reducing the default speed limit on State managed roads. Estimated 69% of travel on State roads versus 31% of travel on Council managed roads.
- (4) Mr Cameron has calculated the crash rate for the State roads which are lower than the Perovic benchmarks but makes no comment on this finding?

## **8. Crash Numbers**

The crash statistics indicate that crashes are rare events, for the 100km/h speed zone 106 crashes in 2010 from a licensed population of some 320,000.

Such a low involvement rate suggests it may be more beneficial to specifically evaluate characteristics of the involved drivers rather than impose restrictions on the total driver licensed population.

## **9. Proposed Road Standard**

The proposed standard recommended to provide for a 100km/h travel speed is comparable to the National Highway Standards for Trunk Routes, clearly the topography of most of Tasmania and economic considerations preclude adoption of such a high standard.

The actual construction standard is well in excess of the standard adopted by DIER for high mass vehicle routes.

No consideration has been given to the cost of providing such high standard roads particularly when the evidence to data indicates the present rural road standard provides for crash performance within accepted crash rate benchmarks.

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One could suspect the adoption of such a high standard is proposed to support the lower default speed limit, i.e. it is not economical to construct roads to the new standard with such a standard not as yet accepted by DIER.

## **10. Default Speed Limits in Australia**

The default speed limits in all states in Australia for rural areas is 100km/h except for the Northern Territory which is 110 km/h. This standardisation of the rural default limit provides consistency for motorists using rural roads throughout Australia, changing the default limit and in particular providing variable limits on the Tasmanian Rural road network is likely to add to confusion for both local motorists and tourists.

## **11. Conclusions**

Production of this submission has required substantial time due to the large volume and number of reports produced to support the proposal.

I am at a loss to understand how so much research effort could be afforded to the task:

- (i) Without actually assessing the actual crash incidents.
- (ii) Without assessing the rural road network which is to be the subject of the change.
- (iii) Without consideration of the crash rates compared to acceptable benchmarks.
- (iv) As an outcome proposes adoption of a rural road standard for 100km/h speed zoned roads which may be way beyond the capacity of the State to fund.

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- (v) There appears a clear need to review the role and make-up of the Road Safety Advisory Council to better understand and address road safety in this State. The present membership appears to be skewed toward administrative input rather than experience in road safety or relevant discipline principles.

One would suspect a group more aligned with experience in the road/safety domain with knowledge of road/traffic management, research protocols and education may provide better guidance.

It is noted the only person on the present Council with such a background is from Monash University, it is also interesting to note that that organisation's research unit has undertaken much of the research on this issue?

- (vi) This review suggests that overall, motorists in Tasmania drive to the conditions with casualty accidents on rural roads a rare event. This does suggest it may be more beneficial to address the specific accident situations both the road provisions and crash involved driver characteristics rather than impose further restrictions on what clearly appears to be a competent driver population.

I thank the Honourable members of the Legislative Council for their scrutiny of this issue and for the opportunity to contribute.

**Terry Eaton**

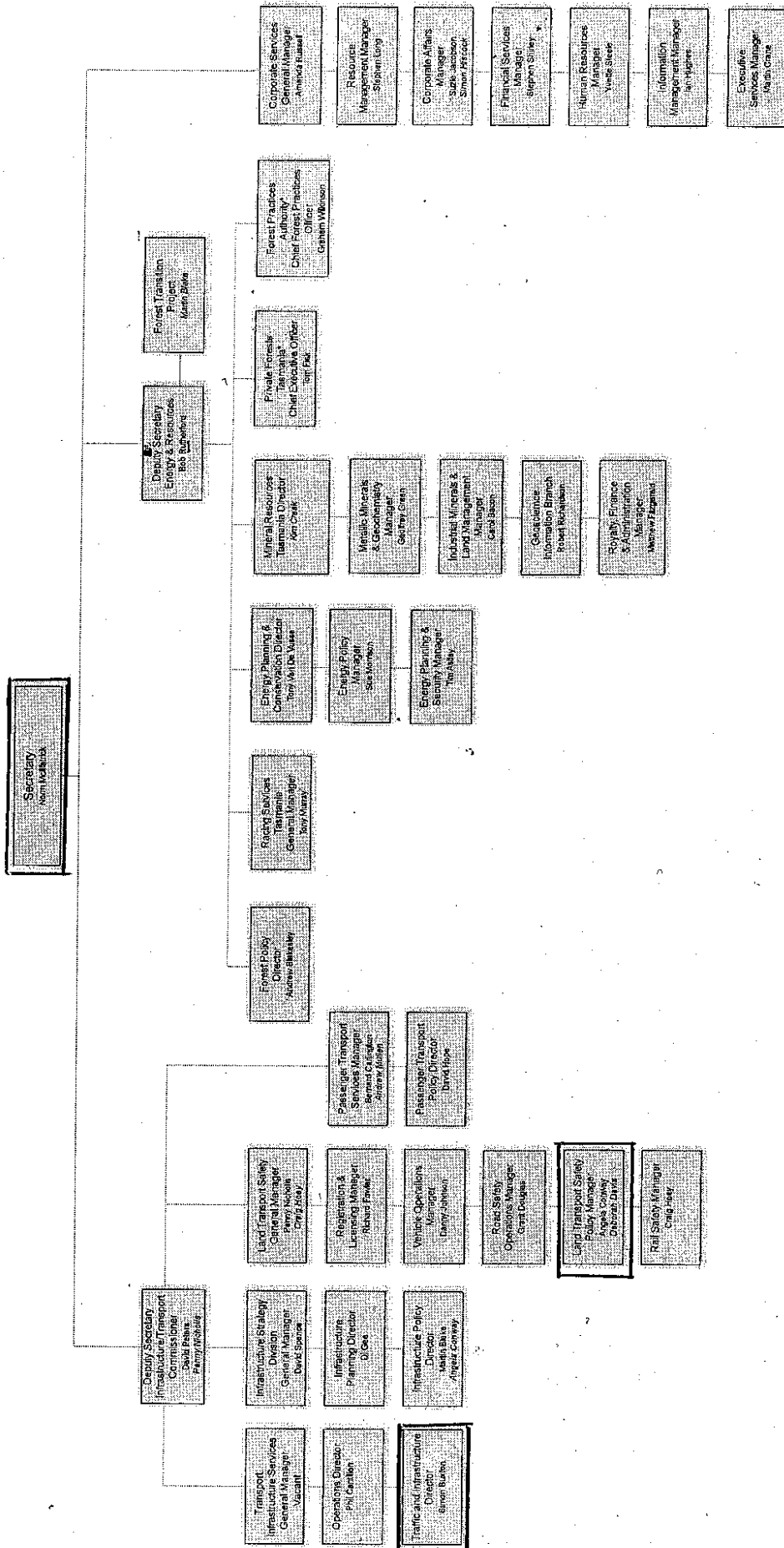
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# Department of Infrastructure, Energy and Resources

(As at 30 June 2012)



Note: Names in italics identifies acting in Role  
 \*Please note: Forest Practices Authority and Private Forests  
 Tasmania are statutory authorities that receive support from  
 DIER in relation to budget and human resource matters.



Road Safety Advisory Council

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SPEED

ALCOHOL AND DRUGS

INATTENTION /  
DISTRACTION

RESTRAINT USE

FATIGUE

MOTORCYCLISTS

OTHER ROAD USERS



**Chair: John Gledhill**

John was appointed as Chair of the Road Safety Advisory Council in October 2010. He retired from Tasmania Fire Service as its Chief Officer in August 2009 after a 35 year fire service career. He was appointed Chief Officer in 1995 after promotion through a number of positions in TFS. As Chief Officer he was the CEO and also Chairman of the State Fire Commission.

John was actively involved outside of Tasmanian emergency management through the Australasian Fire Authorities and Services Council (serving as its President from 2000 - 2003) and was a member of the Board of the Bushfire Cooperative Research Centre as Member of the Board of the National Aerial Firefighting Centre.



**CEO Motor Accidents Insurance Board (MAIB), Peter Ridd**

In 1996 Peter was appointed as Chief Executive Officer of the Motor Accidents Insurance Board in Tasmania and he became a Director in 2004.

Prior to this appointment, Peter held the position of Deputy Chief Manager of the Workers Compensation Board of Queensland (Workcover Queensland). Peter has been involved in personal injury insurance for the last 35 years.



**DIER CEO, Norm McIlfratrick**

As Secretary of the Tasmanian Department of Infrastructure and Resources, Norm leads a diverse agency covering Road Infrastructure, Passenger Transport, Road Safety and Compliance, Motor Registry, Energy policy, Mineral Resources, Forestry and Racing Services and a few other things!

Before taking up this appointment in September 2008, Norm was Chief Executive of the Department of Economic Development and Infrastructure (since 2004), and Managing Director of Aurora Energy (from 2004). His broad background includes roles as a management consultant working on major national and international assignments in senior management positions in customer service, marketing, engineering services and strategic planning in private and public utilities. Norm is a Commissioner of the Tasmanian Planning Commission and a Director of TasDance Limited.



#### **Police CEO, Commissioner Darren Hine**

Joining Tasmania Police as a cadet in February 1980, Commissioner Hine graduated from the Tasmania Police Academy in December 1981. Following graduation, he performed general uniform duties in Burnie, duties within the Criminal Investigation Branch in Launceston, and uniform duties in Hobart.

Promoted to Inspector in 1997 whilst working in Business Process Services on Project Baton, a reform program which was implemented across the organisation in the mid 1990s. Baton, which was an acronym for Business Alignment of Technology to Operations, reviewed existing business systems and developed opportunities for improvements to the operational efficiency of the organisation.

Mr Hine was promoted to Commander during 2000 and served in Executive Support and Operations Support before promotion to Assistant Commissioner in late 2002. After serving in both the Crime and Development and Crime and Operations portfolios, Mr Hine was promoted to Deputy Commissioner of Police in 2008 and was appointed as Commissioner of Police and Secretary of the Department of Justice and Emergency Management on 11 October 2010.



#### **Road User Representative, Harvey Lennon**

Harvey Lennon is the Chief Executive Officer of The Royal Automobile Club of Tasmania Limited, having taken up this role in December 2010, succeeding Greg Goodman.

Prior to assuming his new role, Harvey was the Club's Chief Executive Officer from 2007 to December 2010 and Chief Financial Officer from January 2000 to 2007. Before joining the RACT, Harvey worked in senior positions in the State Department of Treasury and Finance, where he held a senior position. He has a Bachelor of Commerce Degree from the University of Tasmania, is a CPA and a Graduate of the Australian Institute of Company Directors.

Harvey is married with five children. His interests include serving as a reservist officer in the Army Reserve, a Board Member of Colony 47, a member of Rostrum and continued involvement in Scouting.

For relaxation, Harvey enjoys running, camping and fishing.



#### **LGAT CEO, Allan Garcia**

Allan is the Chief Executive Officer of the Local Government Association of Tasmania.

He was previously General Manager Strategy and Policy with the Tasmanian Economic Development agency where he was responsible for industry policy and planning.

He worked with the Department of Premier and Cabinet as part of an Issues Management project managing issues of strategic importance to the State Government.

He has also worked as a Senior Adviser to two State Ministers and held other senior policy and management positions with the Tasmanian Government.

#### **Road Safety Expert, Dr Bruce Corben**

Following a twenty-year career as a practitioner in the fields of road safety management, design and traffic engineering safety, Bruce Corben joined the Monash University Accident Research Centre where he was an Associate Director responsible for facilitating the translation of research into practice. He also leads the Safe System Strategies and Infrastructure Team. Bruce has devoted much of the past decade to developing new, ambitious approaches to meeting Australia's road safety challenges.





System vision, as well supporting road safety strategy development target-setting for Australian and New Zealand jurisdictions.



**Marketing Expert, Suzi Watral**

Suzi has over 20 years in-depth marketing experience gained in senior positions held internationally and on the mainland including Macquarie Bank and E\*TRADE Australia. Since moving to Tasmania in 1999, Suzi has focused on helping both government agencies and small businesses to be far more effective in their marketing.



**Road User Representative, Shaun Lennard**

Shaun Lennard has ridden motorcycles since he was 16 and has been president of the Tasmanian Motorcycle Council since 2005. He is also chairman of the Australian Motorcycle Council, and also chairman of the federal Motorcycle Safety Consultative Committee. Shaun is a member of the Australasian College of Road Safety and the Safety Institute of Australia.



**Road User Representative, Mark Parssey**

Chair Tasmanian Bicycle Council  
Mark represents all transport and recreational oriented bicyclists across Tasmania on the Road Safety Advisory Council. Mainly in enabling more people to include cycling in their regular activities as a founding member of Hobart Bike Kitchen and his workplace (Bike User Group) he is working to make cycling simple, attractive and safe. Mark is a graduate of the Tasmanian Leaders Program.

**Members of the Road Safety Advisory Council Education and Enforcement Sub-Committee:**

Chair: CEO Motor Accidents Insurance Board (MAIB), Peter Roche

John Gledhill, Chair Road Safety Advisory Council  
Tasmania Police State Traffic Co-ordinator, Inspector Mark Beech-Jones  
Assistant Commissioner of Police (Crime and Operations), Donna Adams  
RACT General Manager Public Policy and Communications, Vince Taskunis  
Marketing Expert, Suzi Watral  
Manager Land Transport Safety Policy, Deb Davis



# MONASH University

## Accident Research Centre

### Economic Evaluation of the Introduction of Lower Rural Default and National Highway Speed Limits in Tasmania

*EXTRACT FROM FULL REPORT*

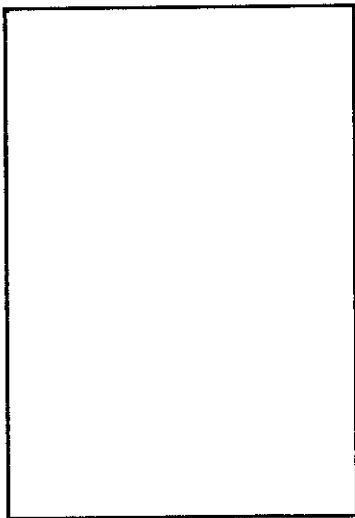
Max Cameron

Monash University Accident Research Centre

October 2009

[4]	number on school zone sign	50	100	number on speed-limit sign
<u>Australian Capital Territory</u>	40	50	100	100
<u>New South Wales</u>	40 on all roads	50	100	110 <sup>[5]</sup>
<u>Northern Territory</u>	40	60 <sup>[6]</sup>	110	130
<u>Queensland</u>	40 on roads 70 km/h or less 60 on roads 80 km/h and some 90/100 km/h 80 on roads 110 km/h and some 90/100 km/h	50	100	110
<u>South Australia</u>	25 on roads 60 km/h or less	50	100 <sup>[7]</sup>	110
<u>Tasmania</u>	40 on roads 70 km/h or less 60 on roads 80 km/h or more	50	100	110 <sup>[8]</sup>
<u>Victoria</u>	40 on roads 70 km/h or less 60 on roads 80 km/h or more	50	100	110
<u>Western Australia</u>	40 on roads 70 km/h or less 60 on roads with 80 km/h or 90 km/h	50	110	110

## [edit] Historical limits



A remnant pre-metric speed limit sign in NSW

Historically, Australia operated a simple speed limit system of urban and rural default limits, denoted in miles per hour. The urban default, which prior to the 1930s was 30 miles per hour (48 km/h), applied to any "built up area", usually defined by the presence of street lighting. This limit was progressively increased to 35 miles per hour (56 km/h) over the next 30 years by each of the states and territories, with New South Wales being the last to change in May 1964. Outside of built up areas, a *prima facie* speed limit applied. In New South Wales and Victoria, the *prima facie* speed limit was 50 miles per hour (80 km/h). In the 1970s however, most state *prima facie* speed limits were gradually replaced by absolute limits.<sup>[9]</sup> An absolute speed limit of 70 miles per hour (113 km/h) was introduced to Victoria in 1971. This was subsequently reduced to 60 miles per hour (97 km/h) in late 1973. South Australia introduced an absolute speed limit of 60 mph in 1974.

With the onset of metrication in 1974, speed limits and speed advisories were converted into