



How Safe Are Our Roads?

Rating Tasmania's Highway Network for Risk

Benchmarking the performance of Tasmania's roads in the Decade of Action

2011

Why Road Safety is Important

Many road crashes involve sudden loss, untold suffering and financial hardship, and they change the lives of people forever. Safe personal travel should be a key feature of modern society but unless road tragedy personally touches us or our loved ones, we sometimes don't reflect on how big a problem it is.

Across Australia around 1,400 people are killed each year and more than 32,500 are hospitalised. This averages four deaths and nearly 90 serious injuries on Australian roads and costs our community on average \$74 million each and every day.

Most crashes occur when ordinary people make everyday human mistakes. It has been estimated that around 1 in 500 driving decisions can be wrong, involving a mistake, an error of judgement, a missed signal or the like. Sober, drug-free, responsible drivers obeying the speed limit and wearing seatbelts frequently die on our roads. Safe roads minimise the chances of these crashes happening, and if they do occur, they minimise the severity of the crash. Engineering measures to improve safety don't have to be high cost and best of all, they last decades!

We need to create a genuinely safe road system, in which improving the safety of drivers, vehicles and roads is of mutual importance. A road system where we have five star drivers, in five star cars on five star roads should involve no deaths.

It is estimated that of all road fatalities which can be avoided through improved safety, half of these would be

avoided through road upgrades including investment in new road construction and expenditure on safety-related works. Australia's National Road Safety Strategy 2011-2020 recognises the critical need to improve road infrastructure, particularly those road features which are designed to reduce run-off-road, intersection and head-on crashes.

Making this happen requires the commitment of politicians, based on support from the public, funding from treasury, road authority action, and the design and construction skills of road engineers.

AusRAP is here to help all of these stakeholders, and aspires to help Australia become a nation free of high risk roads.

About AusRAP

The Australian Road Assessment Program (AusRAP) is a program run by the Australian Automobile Association and State and Territory automobile clubs, dedicated to saving lives through advocating for safer road infrastructure.

AusRAP's objectives are to:

- reduce deaths and injuries on Australia's roads by systematically assessing risk and identifying safety shortcomings that can be addressed with practical road-improvement measures; and
- put risk assessment at the heart of strategic decisions on road improvements, crash protection and standards of road management.

AusRAP works in partnership with government and non-government organisations to:

- inspect national and state highways and develop Star Ratings and Safer Roads Investment Plans;
- track road safety performance through risk maps so that funding agencies can assess the benefits of their investments; and
- explain the benefits of safer road infrastructure to the community by describing why some roads are safer than others.

Rating Australia's Network for Risk

In total, we have analysed more than 20,000 km of the highways which represents less than three per cent of the total road network in Australia, yet carries some 15 per cent of the nation's road traffic. This network experienced 1,170 road crash deaths, equating to 15 per cent of all road deaths in Australia during 2005-09.

The AusRAP analysis focuses on casualty crashes that occurred between 2005 and 2009 on rural sections of the National Land Transport Network and significant connecting roads. These are generally defined as being those with a speed limit of 90km/h or more, though some lower speed limit sections are included where they form an integral part of an otherwise higher speed route.

For the results of risk across Australia's network see the companion report *How Safe Are Our Roads? Rating Australia's National Network for Risk*, available from www.ausrap.org.

Rating Tasmania's Network for Risk

This brochure is a companion report to *How Safe Are Our Roads? Rating Australia's National Network for Risk (AAA, 2011)* and provides detailed results for the most improved and persistently higher risk roads in Tasmania. This brochure complements the broader national picture and provides an extra level of detail for Tasmania's roads.

Five highways were assessed in Tasmania, totalling 371km in length. The length assessed of each highway and number of casualty crashes and deaths that occurred during 2005-2009 are shown in Table 1.

The 371km network in Tasmania represented two per cent of the network analysed throughout Australia and the 74 deaths that occurred during 2005-2009 represents six per cent of the total national network assessed.

Change in Network Crash Risk

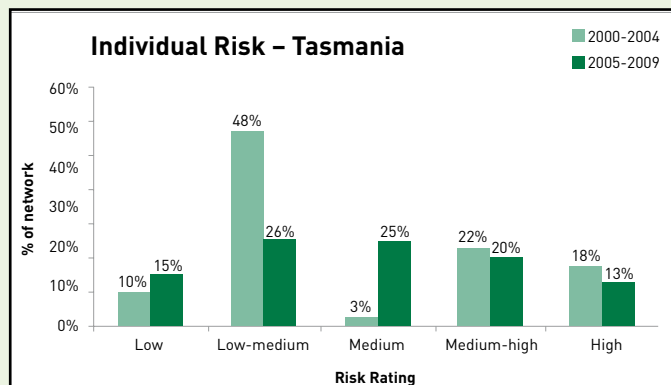
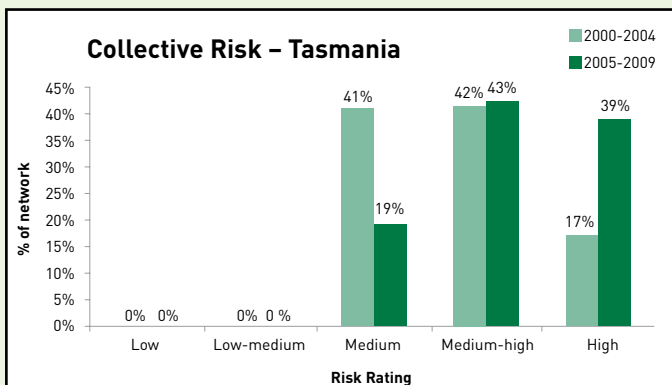
The collective risk graph for Tasmania's Network, (over) which measures the density, or total number, of casualty crashes over a given length of road shows that risk has increased since 2000-04. A substantial 39 per cent of the network assessed in Tasmania rated high for collective risk. The East Tamar, Tasman and Brooker Highways all rated high risk for the entire length assessed. Sections of the Midland Highway (from Evandale Main Rd to Howick Street) and the Bass Highway (Railton Rd to Forth River Bridge and Nine Mile Rd to Stowport Rd) also rated high risk.

The graph for individual risk on Tasmania's Network, which measures the casualty crash rates per vehicle kilometre travelled – that is the rate for each kilometre travelled by a vehicle, and so effectively represents

TABLE 1: HIGHWAYS RATED IN TASMANIA

Highway	From - to	Length		Casualty crashes		Deaths	
		km	%	2005-09	%	2005-09	%
Midland Highway	Rifle Range Rd to Howick Street	158	43%	184	24%	36	49%
Bass Highway	Midland Highway to Stowport Road	139	37%	253	33%	32	43%
East Tamar Highway	Alanvale Connector to Bell Bay Rd	41	11%	67	9%	2	3%
Tasman Highway [1]	Macquarie St to Holyman Ave	16	4%	70	9%	1	1%
Brooker Highway [1]	Burnett St to Granton	17	5%	187	25%	3	4%
Total		371	100%	761	100%	74	100%

[1] These links were added to the National Network during the rating period 2005-2009, however five years of data has been used.



the risk faced by an individual driver (above) shows a reduction in the percentage rated as high or medium-high risk. However a substantial portion of the network (25 per cent) now rates as medium risk, up from 3 per cent in 2000-2004.

Recent improvements to the road network in Tasmania include:

Upgrades to the East Tamar Highway including the completion of the \$60 million Dilston Bypass project in June 2011 will significantly reduce risk on this poorly-performing link.

Upgrades to the Bass Highway including duplication of some high-volume sections. In addition, the Tasmanian Government has committed to rolling out audible-tactile profiled edge and centre markings where required on single carriageway sections of the Bass Highway between Launceston and Devonport.

The Midland Highway - \$176 million Brighton Bypass, scheduled for completion in June 2012, will provide a new dual carriageway highway, grade-separated interchanges and local service roads on the highest-volume section between the East Derwent Highway at Bridgewater and the existing Midland Highway north of Pontville, substantially improving the current high-risk traffic conditions through Brighton and Pontville. The Tasmanian Government has also signed a partnership

agreement with local government to develop a plan to guide the implementation of safety upgrades to the Midland Highway over two-, five- and ten-year-plus timeframes to upgrade it to a pre-determined minimum standard identified by the common vision.

Performance Tracking

Performance Tracking uses the data compiled for each risk map to assess how the risk has changed over time on the network as a whole, and on individual road sections. It is a way of measuring the success and effectiveness of investment in safer roads.

Since 2005, AAA and the State and Territory Motoring Clubs have been mapping the rate of death and serious injury on Australia's main highways. This year, for the first time, and to coincide with the start of the *Decade of Action*, we have also tracked the risk rates across Australia. For this report, crash and traffic data for the period 2000-2004 has been compared to 2005-2009, and we have identified the most improved and persistently high risk sections of highway.

The results of the *Most Improved* highway sections in Tasmania are presented in Table 2 below.

It is often difficult to be definitive about the cause of a reduction in casualty crashes on any given section of road. Frequently, the improvement in safety is the result

TABLE 2: TASMANIA'S MOST IMPROVED HIGHWAY SECTIONS

Highway	From - to	Type	Casualty crashes	Individual risk rating	Casualty crashes	Individual risk rating	Change in casualty crashes (%)
			2000-2004		2005-2009		
Bass Highway	Forth River Bridge to Knights Rd	Single	33	Medium-high	9	Low	-72.7%

Tasmania does not have any additional sections of highway which rate as Most Improved.

Ranked by percentage reduction in the number of casualty crashes between 2000-2004 and 2005-2009; significant reduction in the number of casualty crashes between data periods at the 98% confidence level; section lengths are greater than 7km; AusRAP Risk Rating based on the number of casualty crashes per 100 million vehicle km travelled: black (high risk), red (medium-high risk), orange (medium risk), yellow (low-medium risk), green (low risk).

TABLE 3: TASMANIA'S PERSISTENTLY HIGH RISK HIGHWAY SECTIONS

Highway	From - to	Type	Casualty crashes	Individual risk rating	Casualty crashes	Individual risk rating	Change in casualty crashes (%)
			2000-2004		2005-2009		
Bass Highway	Victoria Bridge to Forth River Bridge	Single	45	High	48	Medium-high	6.7%
Bass Highway	Nine Mile Rd to Stowport Rd	Dual	31	High	33	Medium-high	6.5%
Midland Highway	Lower Marshes Rd to Sorell Springs Rd	Single	28	High	28	Medium-high	0.0%
Tasmania does not have any additional sections of highway which rate as Persistently High Risk.							

Ranked by AusRAP Risk Rating 2005-2009; no significant reduction in the number of casualty crashes between data periods; section lengths are greater than 7km; AusRAP Risk Rating above average of the medium-high (red) category or high risk (black) category in both data periods; AusRAP Risk Rating based on the number of fatal or serious crashes per 100 million vehicle km travelled: black (high risk), red (medium-high risk), orange (medium risk), yellow (low-medium risk), green (low risk);

of a combination of factors which can include reductions in traffic volumes, road upgrades, improvements in vehicle safety and changes in police enforcement.

The Bass Highway has undergone substantial upgrades in recent years including duplication of some high-volume sections. In addition, the Tasmanian Government has committed to rolling out audible-tactile profiled edge and centre markings where required on single carriageway sections of the Bass Highway between Launceston and Devonport, which will help mitigate the high incidence of single vehicle run-off-road type crashes prevalent on the Tasmanian network.

Unfortunately the analysis has also identified a number of sections of highway where numbers of crashes have not significantly reduced. After statistical testing it was found that three of these sections had increases in crashes that were large enough to be considered significant, or crash numbers that stayed the same and therefore considered to be persistently high risk. The

results of the *Persistently High Risk* highway sections are shown in Table 3 (above).

While it can sometimes be difficult to be sure about the factors that might have caused a reduction in crashes, it is often more difficult to explain an increase. One of the common reasons for a decline in safety is that there has been an increase in traffic volumes, which has occurred on these three sections of road, and thus greater exposure to risk.

More information

For detailed information on the risk ratings for Tasmania's network, including maps and the best and worst roads, see pages 32 to 35 of the *How Safe Are Our Roads? Rating Australia's National Network for Risk*, published in 2011, available from www.ausrap.org