



How Safe Are Our Roads?

Rating New South Wales' Highway Network for Risk

Benchmarking the performance of New South Wales' 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 \$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 2005-2009.

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, published in 2011, available from www.ausrap.org.

Rating New South Wales' Network for Risk

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

Ten highways were assessed in New South Wales, totalling 3,706km in length. The length of each highway and the number of casualty crashes and deaths that occurred during 2005-2009 are shown in Table 1 (below).

The 3,706km long network in New South Wales represents 18 per cent of the total network assessed and the 368 deaths that occurred on these sections of the New South Wales network during 2005-2009 accounts for 33 per cent of the national network total.

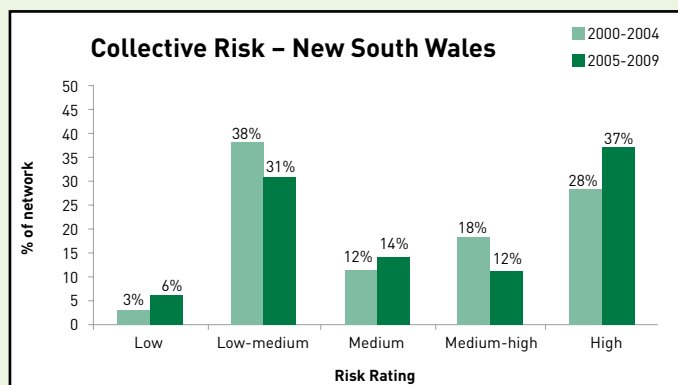
Change in Network Crash Risk

The collective risk graph for the New South Wales Network, which measures the density, or total number, of casualty crashes over a given length of road shows that risk has reduced since 2000-2004. While the proportion of the

TABLE 1: HIGHWAYS RATED IN NEW SOUTH WALES

Highway	From – to	Length		Casualty crashes		Deaths	
		km	%	2005-09	%	2005-09	%
Barton Hwy	Hume Highway to ACT border	38	1%	48	1%	6	2%
F3	Hawkesbury River to New England Highway	105	3%	563	10%	21	6%
F6	Waterfall to Wollongong (via Mt Ousley Rd)	39	1%	236	4%	5	1%
Federal Hwy	Hume Highway to ACT border	66	2%	108	2%	6	2%
Great Western / Mitchell Hwy	Lapstone to Dubbo	305	8%	1,040	19%	39	11%
Hume Hwy	Narrellan Rd to Albury	485	13%	769	14%	56	15%
New England Hwy	Branxton to QLD border	499	13%	535	10%	40	11%
Newell Hwy	VIC border to QLD border	986	27%	352	6%	37	10%
Pacific Hwy	Hexham to Chinderah	611	16%	1,596	29%	128	35%
Sturt Hwy	Hume Highway to Mildura	572	15%	249	5%	30	8%
Total [1]		3,706	100%	5,496	100%	368	100%

[1] Percentages may not total 100 per cent due to rounding.



network rating low has doubled (from three to six per cent), it is concerning to see that there has also been an increase in the proportion rated as high collective risk (from 28 to 37 per cent).

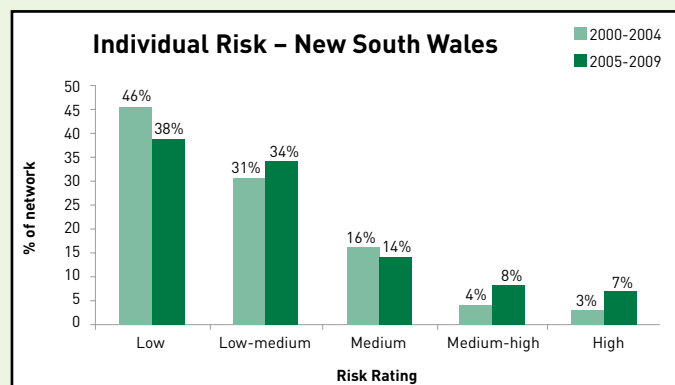
The graph for individual risk on the New South Wales Network, which measures the casualty crash rates per vehicle kilometre travelled shows an increased level of risk when 2000-2004 is compared to 2005-2009, with higher proportions of the network rating as medium-high or high risk.

Whilst the two major highways receive significant funding for upgrades, other NSW roads are struggling under the strain of lack of major upgrade and maintenance. The NSW network is in urgent need of funding to maintain and improve safety, in an attempt to reduce risk for motorists.

NSW continues with major upgrade work across the highway network, most prominently for the Hume and Pacific Highways.

Since 2007 the following major upgrades have been completed on the Hume Highway:

- The 17 kilometre Albury Wodonga Hume Freeway linking the Hume Freeway in Wodonga with the Hume Highway at Ettamogah, north of Albury
- The Sheahan Bridge has been duplicated over the Murrumbidgee River at Gundagai, immediately upstream of the existing crossing



- Construction of 12 kilometres of dual carriageway, including reconstruction of four kilometres of northbound carriageway between Muttama Creek and the Dog on the Tuckerbox
- Duplication of 67 kilometres of Hume Highway from the Sturt Highway to Table Top.

In addition the towns of Tarcutta, Holbrook and Woomargama all have bypass construction underway; upon completion this will see the Hume Highway duplicated from Sydney to the Victorian border.

Significant upgrades continue across the NSW network on the Pacific Highway in particular slowly working toward a fully duplicated highway. The evidence is clear that where parts of the highway have been upgraded to dual carriageways crashes have dramatically reduced along these routes. As at 30 June 2011, 337 kilometres have been completed dual carriageway, 67 kilometres are under construction, and 128 kilometres are being prepared for construction. About 51 percent of the highway length of 664 kilometres is now duplicated.

Highway	From - to	Type	Casualty crashes	Individual risk rating	Casualty crashes	Individual risk rating	Change in casualty crashes (%)
			2000-2004		2005-2009		
Hume Highway	Coolac to Tarcutta	Mixed	96	Low-medium	55	Low	-42.7%
Pacific Highway	Nabiac to Taree	Dual	87	Medium-high	50	Low-medium	-42.5%
F6 Freeway	Waterfall to Bulli	Dual	98	Low-medium	59	Low	-39.8%
Pacific Highway	Byron Bay to Yelgun	Mixed	96	Medium-high	64	Low-medium	-33.3%

No other section of highway in New South Wales classifies as Most Improved.

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).

TABLE 3: NEW SOUTH WALES 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		
Great Western/Mitchell Highway	Lapstone to Katoomba	Mixed	405	High	397	High	-2.0%
Pacific Highway	McLean to Ballina	Single	180	Medium-high	206	Medium-high	14.4%

No other section of highway in New South Wales classifies 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).

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 top five Most Improved highway sections in New South Wales are presented in Table 2 (previous page).

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 of a

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

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 two of these sections were considered statistically significant and therefore considered to be persistently high risk. The results of the Persistently High Risk sections of highway are shown in Table 3 above.

More information

For detailed information on the risk ratings for New South Wales' network, including maps and the best and worst roads, see pages 12 to 15 of the *How Safe Are Our Roads? Rating Australia's National Network for Risk*, published in 2011, available from www.ausrap.org.