Submission No 10

REDUCING TRAUMA ON LOCAL ROADS IN NSW

Organisation: National Motorists Association Australia

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Submission to the NSW Staysafe Committee from the National Motorists Association of Australia (NMAA)

NATIONAL MOTORISTS ASSOCIATION AUSTRALIA .

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Introduction

The National Motorists Association of Australia is a small group of people with a deep interest in road safety. We are not involved in insurance, road side break-down assistance or any commercial function and are not associated with any other motoring organisations.

We are all of mature years with a very wide range of experience both here and overseas. Most have achieved a high standard of driver training and most are university educated.

Our concern with improving road safety gives rise to acute observations of safety measures and their impact on risk reduction. We are constantly evaluating how systems can be improved both in terms of improved road safety and the amenities of road use for commercial vehicles, cars and other road users.

Our experiences and evaluations have led us to the conclusions that there are far better systems to improve road safety than are currently being used in systems design, regulation, construction, enforcement, research and training.

Our observation is that Australia has very low standards of training and testing compared with Europe; for example, very few Australian trained drivers would pass the German driving test without significant remedial training.

The Authors

Michael Lane

Some 2 million kilometres, 55 years driving experience, initially 5 years in the UK thence in Australia and in recent years a regular driver in most of Western Europe. He has

been closely involved in teaching his two children to drive but having professional instructors to teach them to pass their test.

Much of his professional life involved assessment of Industrial Research and Development projects including the technology, scientific methodology, innovation, managerial abilities, Finance prospects and commercial prospects.

He was a Councillor on Ku-ring-gai Council from 2004 to 2008 and chaired the Traffic Committee during this period. He currently represents the Member for Davidson on the Ku-ring-gai Traffic Committee.

Graham Pryor

Graham has had a life-long strong interest in road safety and was the first person in Australia to pass the advanced driving test to the gold standard with Australian Driver Education. Subsequently, he became an Instructor for the Chapter of Advanced Motorists of the VMA from the age of 21 until the Chapter was dissolved.

He is a graduate engineer and a qualified mine manager. Also, he achieved a Master of Management degree with an award from the Australian Institute of Management for academic excellence.

Graham operated potentially dangerous underground mines in private industry for more than 35 years and was employed previously as a District Inspector of Coal Mines for the NSW Mines Department. He attributes the reduction in fatalities in NSW mines to the "risk assessment" approach that is now required by legislation.

General

Standards and policies set by higher Government levels are reflected in local road systems. As the Australian Government is above the State Governments comments are confined to State Government activities although there would be influence on matters such as Australian Standards.

Policies, procedures, standards and designs are dependent on the State Government Departments. It is noted that Local Government has no constitutional standing and its existence is by virtue of an Act of the State Parliament. A number of these major inputs are indicated here.

Crash cause analysis

The analysis of crash causes is the foundation of safety. Done thoroughly it will provide information to reduce crashes; done superficially it leads to irrelevant measures and failure to improve crash rates.

The highest standard is the UK which is based on a report by the UK Transport Research Laboratory TRL 323. Highly trained Police (even science graduates consider the training to be challenging) carry out a two stage analysis of crash causes. The first

stage is a reconstruction of the crash to ascertain the contributory factors and is extremely thorough e.g. skid resistance of the road surface is checked, damage is compared with the crash testing done by the type approval system conducted by the authorities. The second stage is analysis of the contributory factors to determine why these happened and their significance. The statistics of contributory causes are published annually by the Government.

The two stage crash cause evaluation is the same principle as is used by the Civil Aviation crash investigation system which is credited with improving airline safety to the point that 2017 was a zero fatality year. Regrettably Boeing failed the world by not complying with established principles.

The UK Institute of Advanced Motorist conducted a study of 5 years of the published statistics and a table from the report is attached.

The NSW Centre for Road Safety, part of the Department of Transport, uses a different standard which is attached. Nowhere does it refer to any form of crash cause analysis. Its definition of "Speeding" as a cause of crashes includes a range of general indications including matters which have a range of causes. They also include speed inappropriate for the circumstances (but below the speed limit) as well as matters which are the outcome of braking issues not speed.

Note that the UK statistics are that exceeding the speed limit is a contributory (not primary) factor in 13% of fatal crashes but the NSW Centre for Road Safety claims 43% are caused by "speeding" – an extraordinary difference. This figure is used in NSW to influence road design, rules and enforcement and was even part of information given to the Auditor General in the inquiry into use of mobile speed cameras notwithstanding that the vehicle speed is mostly less than the speed limit.

The impact on local road systems is that the Council officers are under persuasion to use this in their action priorities.

Other sources indicate that the true figure for fatal crashes where exceeding the speed limit is the primary cause is between 5% and 8%.

A study into "Intelligent Speed Adaptation" (i.e. external control of a vehicle's speed) proved that if **every** vehicle in Australia was fitted with an Intelligent Speed Adaption device so that it could not exceed the posted speed limit, the maximum reduction in road fatalities would be 8%. That research was conducted by Monash University Accident Research Centre (MUARC) and the report can be accessed at www.monash.edu/muarc/research/our-publications/muarc253.

Quoting from the report: "Based on the logged data, the ISA system by itself is expected to reduce the incidence of fatal crashes by up to 8% and serious injury crashes by up to 6%."

Motorists could ask themselves why the Government focus is on eight per cent of causes of road fatalities (exceeding the speed limit) instead of taking positive action on the 92% of other causes such as inattention, fatigue and driver error.

In the UK crash causation analysis, the discrepancy between the 13% contributory figure and the lesser primary figure is because the excess speed is caused by other dominant factors such as intoxication, fleeing apprehension, domestic dispute, stolen vehicle, other criminal action, homicide, suicide etc.

It is noted that there is no Standard in NSW for acceptable skid resistance of a road surface which means that it is often neglected as a contributory cause. Without a standard Councils and Government can deny their liability for low skid resistance.

There are many other matters which influence local actions e.g. the requirements for pedestrian crossings are set by the State Government bureaucracy, “Stop” signs locations are determined by a formula that pre-dates “Give Way” signs which means that motorists, recognising that they are inappropriate do not stop. Unfortunately they may not stop when the Stop sign is appropriate.

Recommendations

1 The NSW Police establish their crash investigation teams to operate in the same manner and standards as the UK police using TRL 323 as the basis.

2 Police crash investigators who are fully trained be given the status of Detective.

3 That the consolidated results of crash cause evaluations, both primary and secondary, be published.

4 That a Standard be developed for skid resistance of road surface and there be a minimum acceptable level below which the surface must be replaced.

Specific reference items

The role of local roads in road safety and trauma.

The NMAA does not have access to the breakdown of crashes and injuries on local roads and, as noted above, crash cause analysis is not reported hence we can only comment on our own observations of issues and extensive experience.

Local roads, i.e. those under the control of local Government, range from urban residential to rural non-highway. They carry local residential traffic, collect traffic going to higher level roads, secondary roads in cities can be very busy multi-lane roads and in rural areas may be unsealed or sealed and are generally of two lanes. Other than purely residential streets, local roads are used extensively by vehicles from outside the Local Government Area.

Urban local roads usually have weight restrictions except for access but rural roads are generally open to heavy vehicles although some are restricted due to limitations of size, curvature and bridge capacity.

Urban local roads often have traffic calming measures, speed bumps, platforms, chicanes, pinch points, roundabouts (for slowing traffic not for intersection management), lane narrowing by painted lines and/or rumble bars and more recently “speed cushions”.

These have the ostensible aim of slowing traffic for safety purposes but in reality vehicles accelerate and brake between the obstacles creating noise and pollution.

These devices are expensive to install and it is noted that in areas where the Council has installed a large number of these, general road maintenance has been neglected (for lack of funds) and the backlog takes many years to be resolved.

The designs of many of these devices seem to be intended to inflict damage and in some cases cause crashes. For example if a motor cycle touches rumble bars on a curve it is almost certain that the rider will fall. Similarly tyre and or suspension damage can be inflicted on cars with the potential to cause a crash elsewhere.

“Speed cushions” are touted as being useful to slow cars but allow buses and emergency vehicles to pass without hindrance. The unintended consequences are that motor cycles, trucks, large US style utilities and 4WDs are also unhindered however cars must slow to single figure speeds as the sloping sides will damage the normal low profile tyres fitted to modern vehicles. Because of the layout of the roads, emergency vehicles will be held up also.

Rural roads have different issues but the lack of maintenance funds is also a problem.

Many rural roads were laid out and built decades ago with poor alignment and camber (now called “super-elevation”). Most have trees close to the road, dirt shoulders which are eroded at the edge of the bitumen and the substrate has moved creating vertical variations (long bumps) and unprotected culverts.

Too often if a road has deteriorated or the layout including off-road danger points is considered inadequate the State authorities lower the speed limit in the hope that this will solve all problems.

Rural roads are used by locals i.e. those who live in the Local Government Area but frequently have a large non-local usage. Road lengths are also relatively high compared with the population density. By observation in mainland European countries when a road deteriorates or is substandard whole lengths are resurfaced, not simply patched.

Some roads have a line on the left of the carriageway before the edge of the bitumen with slightly raised sections known as ripple strips or vibralines. Any vehicle which drifts to the left will create vibrations which will be felt by the driver arousing them if they have lost attention. Long distance drivers are highly supportive of these.

It seems remarkable that ripple strips are not utilised as part of the centre line marking as its presence would alert the driver who could otherwise cause a head-on crash by inadvertently onto the wrong side of the road. Head-on crashes are potentially fatal.

Recommendations

1 Higher Government should take over the maintenance of secondary roads.

2 Higher Government should increase its support for maintenance of collector and high use local urban roads.

3 State Government to review the allowable “Calming” devices with a view to removing those which create damage or cause significant speed variations:- for example rumble bars, speed cushions would be withdrawn as non-permissible. Speed bumps and platforms should only be permitted in exceptional circumstances although “Wombat” crossings should be permitted at schools. Note that this measure would free local Government road funding from non-maintenance expenditure.

4 Higher Governments should increase their support for reconstruction of rural roads and provision of vibralines.

5 Councils, both urban and rural, should pool equipment enabling better use of capital and higher standards.

The effectiveness of existing road safety planning requirements, including in other jurisdictions.

As noted in the General Section above, the information on crash causes is badly distorted and, as this is this is the basis for planning, the planning is often inappropriate. External academic studies are usually narrowly focussed and thus planning does not consider the unintended consequences. Equally non-road-safety planning often causes road safety problems. For example the inadequacy of off-street parking in home unit buildings means that residents garage their cars on the street which curtails visibility for passing traffic, inadequate parking at railway stations creates on-street parking problems and commuters having parked are frequently hurrying to catch their train.

Road planning in international jurisdictions is often praised and advocated for implementation in Australia however conditions are usually very different. The Norwegian City of Oslo has recently celebrated a year with only one fatality however it has a small population, about the same as a small urban Council area in NSW, Further, it has a high population density with good public transport. Being small it can prohibit the use of private vehicles in the city centre and limit other areas to 30 km/h but as the city was founded about 1,000 years ago, like most cities of the era, the streets are narrow. The cost of cars is extremely high. With relatively few cars moving there is little chance of a fatality. Such conditions should not be applied here with big cities, long distances and low public transport availability.

Opportunities for improving road safety planning and management on local roads, including through the Local Government Road Safety Program and Community Strategic Planning.

The Local Government Road Safety Program is the NSW Centre for Road Safety's method of co-opting Local Government into providing structure deemed to be safety devices. It assumes that there is local knowledge of crashes and their causes so that appropriate measures can be undertaken. In fact this is not the case as crash cause information is largely unavailable which results in inappropriate attempted counter measures.

Much of the measures mandated in the 2019 version of the programme is based on the Centre's definition of speed caused crashes which, as noted above, gives a grossly exaggerated figure of 43% of fatalities.

In the section on heavy vehicles it notes that they are 2.2% of registrations but are involved in 20% of crashes. This figure does not account for the higher exposure of heavy vehicles because they cover very long distances annually.

Although the documented program is highly prescriptive it does not cover road maintenance requirements. The demands of the program absorb large proportions of the roads budget of a Council thus restricting management of the road surface. Consequentially roads are patched rather than resurfaced, potholes and broken surfaces are left for long periods and manholes/waterpoints are not at surface level.

The section on motorbikes does not refer to these hazards.

The section on pedestrians does not refer to the provision of footpaths – apparently it is not understood that walking along the road is potentially hazardous!

In general the program is almost exclusively aimed at vehicles and there is no provision for dealing with the actions of other road users. There is no provision for having pedestrians to look for traffic before crossing a road, no provision for reminding pedestrians not to use their phones when crossing roads, no provision for discouraging cyclists from riding in a risky or obstructive manner.

A copy of the program is attached.

Recommendations

1 That all serious crashes be evaluated in accordance with UK practice (Transport research Laboratory report TRL323)

2 That all results be forwarded to the Local Council to enable appropriate decision making.

3 Surface maintenance be given a higher priority to eliminate hazardous conditions

4 That footpaths be included in the program.

5 That speed bumps, speed cushions and platforms other than for “Wombat” crossings at schools not be installed on roads.

6 The program to be revised to include provision to address issues of unsafe behaviour by other non-motorised road users.

The role of local communities and their representatives in identifying and delivering road safety initiatives to reduce trauma on local roads.

It is not clear what is meant by “local communities and their representatives”. This could mean the residents who are represented by Councillors, local “Progress Associations”, Rotary and other service organisations etc.

Residents and community groups are able to take issues to Council, and frequently do, through their Councillors and/or directly to staff.

Submissions include requests for “Fun runs” etc and most Councils have standard requirements for these with provisions for traffic management and insurance.

Requests for road features such as pedestrian refuges, changes to parking provisions, restrictions on movements etc are referred to the Council officers who then report to the Traffic Committee on proposed actions. Voting members (Chair, Police, Department of Transport representative and the local State MP) may or may not support the proposal. Most Councils operate the approval process “out of session”

Some Councils have policy provisions that certain features will not be used in their area where these are regarded as potentially causing problems e.g. no speed humps.

Common requests include pedestrian refuges even though there is often a minimal number of people crossing the road and extra lengths of “No Stopping” zones at intersections beyond the statutory 10 metres. This is contentious as a competent driver is aware that they can move forward by 2 metres if cars are parked at the 10 metre point.

Council staff tend to support these requests because the applicants are vociferous and some staff have an “Edifice” complex in believing that they must be seen to be doing things and building things. Unnecessary construction affects the traffic budget adversely.

Recommendations

1 Improved training of Council Traffic Engineers so that they make better assessments of proposals.

2 Councillors to be given a better appreciation of traffic matters during their induction period.

Other relevant matters.

There will be significant pressure on this inquiry to support widespread reduction of speed limits on local roads. While this may be superficially attractive in the medium to longer term this has proven to be virtually ineffective largely a result of unintended consequences. For example on urban roads with pedestrian activity the perception of lower danger leads to risky behaviour such as walking across a road while using a telephone, encouraging children to play in the road, walking at night on the road while wearing dark clothing etc. The failure of lowering urban limits is best illustrated by UK experience where the imposition of 20 MPH (= 30 km/h) limits has had mixed results with an overall outcome of nil benefits to road trauma.

Reducing limits on rural roads to below normal driver expectations induces boredom and fatigue, momentary sleeps and inattention can result in high energy impacts – the argument that if you are travelling slowly you can survive an impact into an immovable object is superficially attractive but not if it increases the probability of such an event.

It is well established that, based on work by David Solomon, the safest speed for driving is at the 85th percentile i.e. that speed at or below which 85% of cars drive when unimpeded by any factors. This work was substantial, examining a very large number of cases and has been repeated since. Most US jurisdictions use this as their engineering standard for setting speed limits.

The poor standard of information on crash causes is referred to earlier in this submission which thus leads to poor standards of research and development of policy. It is an inherent feature of political life that the bureaucracy informs the elected members and ensures that contra advice is not presented – the UK series “Yes Minister” and “Yes Prime Minister” although fiction was very close to fact!

Good policy making needs a wide range of input – most issues are complex and decision making is enhanced by considering alternate thought processes and subjecting Public Sector advice to thorough external review. This should be at all levels of Government.

Recommendations

1 The speed limits be set in accordance with the principle that the safest speed is the that at which 85% of unrestricted cars drive at or below with due regard to speedometer accuracy.

2 The Minister responsible for road safety appoint an external advisory body free of academic or public sector personnel. This body should include those with road user experience such as the NRMA, ourselves and a legal practice with wide experience in road crash compensation matters.

Contacts

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