

## INQUIRY INTO VULNERABLE ROAD USERS

**Organisation:** Survive The Ride Association (NSW)  
**Name:** Mr David Tynan  
**Position:** Secretary  
**Date Received:** 6/08/2010

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# survivetheride association of NSW Inc

PO Box 5 Berowra NSW 2081 ABN 93 249 168 371

Staysafe (Joint Standing Committee on Road Safety)  
Parliament House  
Macquarie St  
Sydney NSW 2000

Dear Mr Corrigan

Please accept our submission to Staysafe for your inquiry into Vulnerable Road Users.

The Survive The Ride Association of NSW (STRA NSW) was formed in 2007 as an association of volunteers who have been active in motorcycle safety education and tuition for many years. Our members include ex Police Highway Patrol and Ambulance officers, motorcycle riding instructors, motorcycle racers and your average motorcycle riders.

Our efforts to date have included conducting free safety workshop for riders, safety planning for organised rides, distribution of resources to thousands of riders, providing displays at national motorcycle exhibitions and conducting presentations at national and international conferences. Our industry stakeholders and sponsors include national training providers and distributors of protective clothing and we are an affiliated member of Motorcycling Australia (MA).

While my name is on the submission as the primary point of contact, this submission has actually been developed with significant input from our members, all of whom have discussed the issues at length with their wider networks of riders and friends.

The members of STRA NSW trust that the outcomes of your inquiry will be sound advice regarding changes needed in NSW to assist riders to be safer on the roads. More information on STRA NSW is available from our website [www.survivetheride.org](http://www.survivetheride.org).

Yours sincerely

David Tynan  
Secretary  
On behalf of the membership of  
Survive The Ride Association of NSW  
(STRANSW)

## Survive The Ride Association of NSW (STRA NSW)

### Submission to the StaySafe Committee

August 5 2010

The terms of reference for the Committee are:

That the Committee inquire into and report on vulnerable road users, specifically motorcycle and bicycle safety, with particular reference to:

- a) patterns of motorcycle and bicycle usage in New South Wales;
- b) short and long term trends in motorcycle and bicycle injuries and fatalities across a range of settings, including on-road and off-road uses;
- c) underlying factors in motorcycle and bicycle injuries and fatalities;
- d) current measures and future strategies to address motorcycle and bicycle safety, including education, training and assessment programs;
- e) the integration of motorcyclists and bicyclists in the planning and management of the road system in NSW;
- f) motorcycle and bicycle safety issues and strategies in other jurisdictions; and
- g) any other related matters.

**This submission from STRA NSW focuses on crash statistics for on-road motorcycle casualties, the causes and recommendations for future initiatives. It is based on a review of recent literature, RTA crash data and our experience as riders and motorcycle safety initiatives.**

**Note:** Unless otherwise stated, the word motorcycle is used in this submission to include all powered 2 wheeled transport including motor scooters.

#### Categories of motorcycle user

Motorcycle riders are often seen as one homogenous group referred to by many as “bikies” and/or “temporary Australians”. Motorcycle riders, like 4 wheeled vehicle drivers, come in many shapes and sizes and have a vast range of motivations, likes and dislikes. Recent research from the UK provides a very useful insight into the array of sub-groups of motorcycle riders and the chances of crashes involving each sub-group.

The report is *Passion, performance, practicality: motorcyclists' motivations and attitudes to safety*; S Christmas, D Young, R Cookson, R Cuerden; Transport Research Laboratory, Oct 2009.

The sub-groups of riders they found are described as:

- ***Riding Hobbyists*** – Older, summer only riders who enjoy the social interaction with other riders almost as much as the riding itself.
- ***Performance Disciples*** – Committed all year riders with a focus on high performance riding and a strong dislike for anything that gets in the way of it.
- ***Performance Hobbyists*** – Solitary summer only riders for whom riding is all about individual experiences and sensations and who are not concerned about what other riders are doing.

- **Look-at-me-Enthusiasts** – young (or never grew up) riders with limited experience but limitless enthusiasm for whom riding is all about self-expression and looking cool.
- **Riding Disciples** – Passionate riders for whom riding is a way of life built on a strong relationship with the bike itself and membership of a wider fraternity of riders.
- **Car Aspirants** – Young people looking forward to getting their first car when finances/ age allow but for the time being are just happy to have their own wheels.
- **Car Rejectors** – Escapees from traffic jams, parking tickets, fuel costs and other problems of car use and who don't care for motorcycles but do care for low cost mobility.

The propensity for crashes they found for each sub-group in terms of accidents per year and accidents per mile were:

- *Riding Disciples and Riding Hobbyists have a relatively low accident propensity. Both have mean accident propensity scores significantly lower than the overall mean.*
- *Performance Disciples have a higher accident propensity, although in part this is because of a higher annual mileage.*
- *Car Aspirants and Look-at-me Enthusiasts have the highest accident propensity on either measure. Both have mean accident scores significantly higher than the overall mean.*
- *Car Rejectors and Performance Hobbyists also have somewhat higher accident propensities although lower annual mileages mean they may not have accidents as often as Performance disciples.*

This research is a good start at describing the diversity of riders and how their motivation and lifestyle influences their riding habits. However, it must be remembered that each rider will fit more than one category. In addition, a rider who fits 2-3 categories today will most likely migrate to others as their lifestyle changes and their needs change over time.

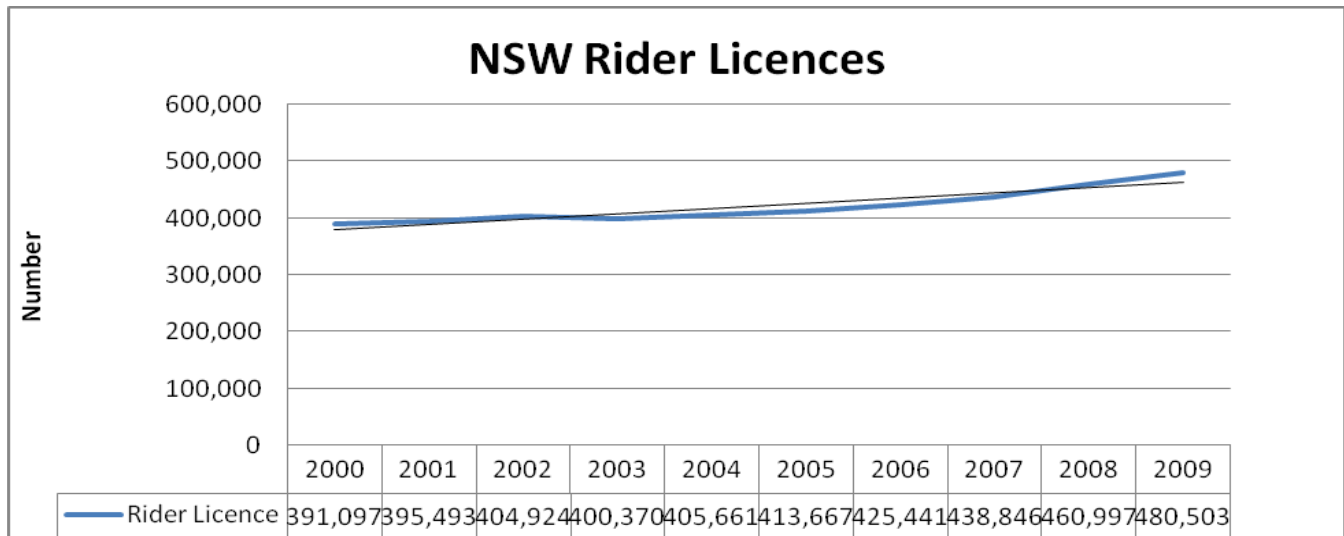
It seems logical that pedal cyclists would have similar subgroups with the additional category and corresponding sub-groups of people under 17 years of age. Dirt bike (off-road) riders would have similar categories. It is generally accepted that parents and family have a strong influence on the choices made of their children which suggests that similar categories may be applicable for people under 17 years although this would need to be confirmed.

This UK research provides a sound platform on which to conduct similar studies in Australia to better understand why people ride and/or drive. With this information, education and skill development programs targeting issues such as protective clothing and risk awareness could be better tailored to spark the interest of each group of riders.

### **Motorcycle use in NSW**

The position of the RTA has been to discourage the use of motorcycles in order to achieve improved measures of road safety in terms of fatalities. Be that as it may, RTA data shows the number of motorcycle licences held in NSW was 8% of the total licence population from 1994 to 1996. From 1997 to 2009 it was 9% except for 2003 when it dropped back to 8%.

As the population of rider licence holders has increased in line with the general population it is expected that the percentage of rider licence holders will remain at least 9% in the coming years. The following graph shows the number of rider licence holders has grown from 391,097 in 2000 to 480,503 in 2009.



Many licenced riders also hold car and truck licences. The RTA has this information. It would be interesting to see the casualty crash rate for people who hold single versus multiple licences, particularly motorcycle rider licences. Should this present any patterns it would also suggest the means of sharing the key control and risk management skills demonstrated by the licence holders with the lowest overall crash risk.

It is known that many riders use their motorcycles only occasionally during the week and more often on weekends as recreation. In addition, some riders maintain their rider licence status during their 30's without riding as they raise a family and return to active riding later in life.

A more accurate assessment of how many people are actually riding is the number of registered motorcycles within the entire NSW powered vehicle fleet.

Due to the increase in traffic congestion and tightening of economic conditions the number of registered motorcycles has increased in recent years both in absolute numbers and as a percentage of the NSW fleet.

Registered motorcycles are now 4% of the total motorised vehicle fleet in NSW which is up from only 2% in 2000. This does not include a very large number of off-road motorbikes that have also been sold in the same period. The Federal Chamber of Automotive Industries (Motorcycle Division) has detailed information of the sales of all motorcycles in NSW.

In 2009, the Sydney metropolitan area contained 50% of the motorcycle registrations in NSW and 70% of the scooter registrations. Motorcycle sales for scooters has grown significantly more than other road motorcycle categories over the past few years as a response to both traffic congestion and fashion trends. Total motorcycle registrations in Sydney for 2009 was 82,288 and NSW was 162,076 (RTA data June 30 2009).

It is quite clear that many people are turning to motorcycles as part of their personal solution to transport management in the Sydney metropolitan area. Recognising this trend, some local Councils such as City of Sydney and Parramatta City have adopted policies that actively support their commuter workforce and therefore their local businesses. Other Councils are known to be following the trend of providing free all day motorcycle parking in the CBD areas.

STRA NSW has surveyed 42 local Councils in the Sydney metropolitan area to determine the level of motorcycle parking that is offered. In summary, we can confirm that:

- There are 1216 dedicated motorcycle parking spots in Sydney CBD + 307 in paid parking stations and Sydney University.
- There are 761 dedicated motorcycle parking spots combined in the other 15 Council LGAs that responded.
- City of Sydney and Parramatta City Councils have a "no charge in car bay" policy.
- Waverley, Woollahra and North Sydney Councils require motorcycles to pay in car spaces.

In addition, we only know of 123 spots at Railcorp commuter car-parks although we are still awaiting a response from Railcorp to learn of additional spots.

As the congestion in the Sydney metropolitan area gets worse and public transport fails to provide a suitable solution, STRA NSW confidently predicts the percentage of registered motorcycles as a percentage of the total vehicle fleet will continue growing above 4% in the next few years. In addition, with the increase in support at the local government level for motorcycles as a viable transport option the number of riders using their motorcycles for commuting will also increase.

### **Motorcycle crash statistics in NSW**

Prior to commenting on crash statistics it needs to be remembered that NSW RTA Crash statistics only list crashes where a person was killed or injured or a vehicle was towed. Many other crashes occur where reports of injury and tow-away are not reported to Police for a number of reasons related to the individual riders.

The injury and fatality rate for motorcycle crashes will always be significantly higher than car crashes due to a lack of crumple zones and cabin protection for secondary impact (air bags, seat belts, etc).

Reviewing known casualty crashes for 1997 to 2008 it is clear that motorcycle riders and their passengers have increased as a percentage of the total number of casualties. This is expected as the percentage of registered motorcycles in the fleet has doubled in recent years. However, the increase in the percentage of motorcycle riders and injuries has been slightly less than double.

Evidence presented at the Motorcycle and Scooter Safety Summit in Canberra in 2008 shows that Australia wide, the rate of fatalities for motorcycles has actually declined faster than that of car users, despite the increase in the numbers on the road. Dr Michael Kremmer, Economist and Lecturer from Griffith University stated:

*Since 1991 Rider mortality rates have fallen 50% as the number of motorcycles on the road has increased 100 %.*

*Consequently in 2007 Motorcycling was 100 % safer than it was in 1991 as the number of motorcycles on the road doubled without it costing a single additional statistical life.*

*This constitutes the largest genuine measurable increase in real road safety in the last half century.*

- *It can not be attributed to the motorcycles, their riders or their training.*
- *It is the consequence of general improvements in the safety of the roads rather*

than motorcycle safety in particular.

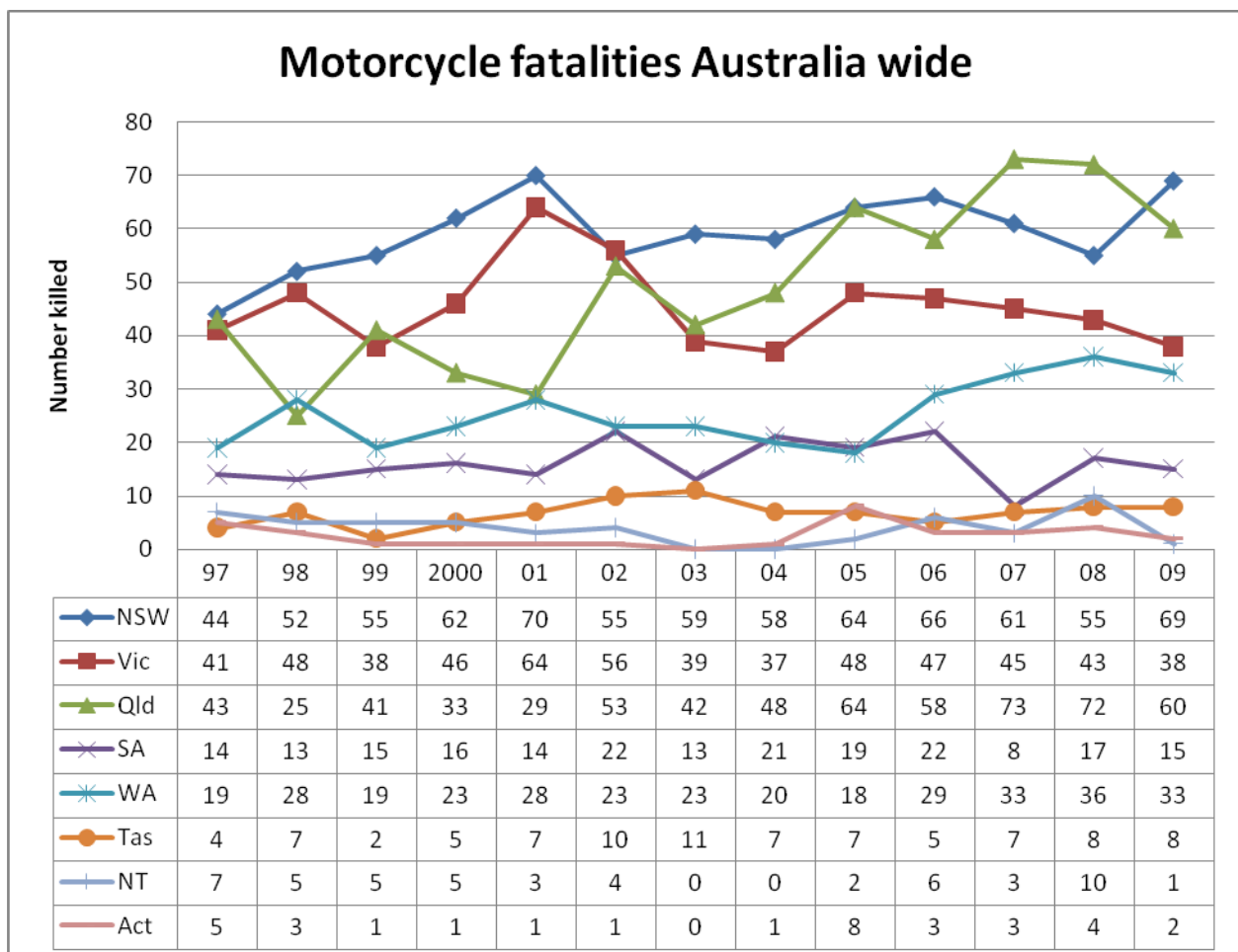
- It is the measure of the success of those who oversee and police our traffic system.

In summary he stated:

- Motorcycling is more popular than it has ever been.
- Motorcycling is safer than it has ever been.
- Over the last half-century Rider mortality rates have consistently fallen faster than Driver mortality rates and continue to do so.
- Since 1964 exactly the same economic and demographic forces have determined changes in the growth rates of Rider and Driver mortality.

An analysis of the Australian Fatality Database (BITRE) shows Victoria and South Australia have experienced a reduction in motorcycle fatalities and are now at levels last seen in the late 1990's. Unfortunately NSW, Qld and WA have seen an increase over the same period. The increase is more or less severe depending upon which year is used as the base comparison year.

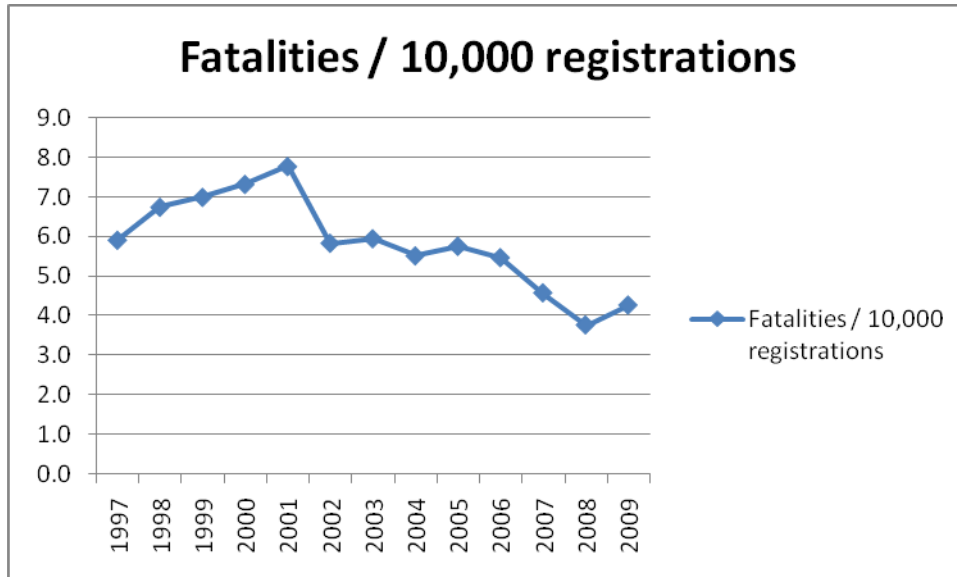
The BITRE data in the following graph shows the total motorcycle rider and pillion fatalities for each state since 1997.





While the picture looks reasonably poor in terms of raw numbers it needs to be reviewed in terms of how many riders and pillions were actually exposed to the risks on the road.

In NSW the number of registered motorcycles grew by 118% between 1997 (74,488) and 2009 (162,076) (RTA data). The following graph shows that over this time, when fatalities are indexed against the registrations, the fatality rate peaked in 2001 followed by significant reductions. 2009 saw a slight increase as did other vehicle categories.



Although there is good data on fatalities, data on injury rates is more difficult to access so we have to rely on other agencies to provide overall summaries.

It is vital to examine the injury data in more detail as the new Austroads Guides adopted in 2009 require all road authorities to focus on serious injuries as well as fatalities.

The recent Austroads report *AP-R361/10 Road Safety Consequences of Changing Travel Modes* presents additional evidence for NSW. This full report published in July 2010 should be read as a background to understand the relative fatality and injury rates that currently exist. Injury rates are described as:

#### Motorcyclists

- NSW injury rate is 132.39 per 10 million kilometres travelled. NSW and Qld data does not distinguish between serious and other injuries.
- Serious injury rates (excludes NSW and Qld data) is 19.36.
- Australian fatality rates per 10 million kilometres travelled is 1.39.

#### Bicyclists

- NSW injury rate is 29.8 per 10 million kilometres travelled. NSW and Qld data does not distinguish between serious and other injuries.

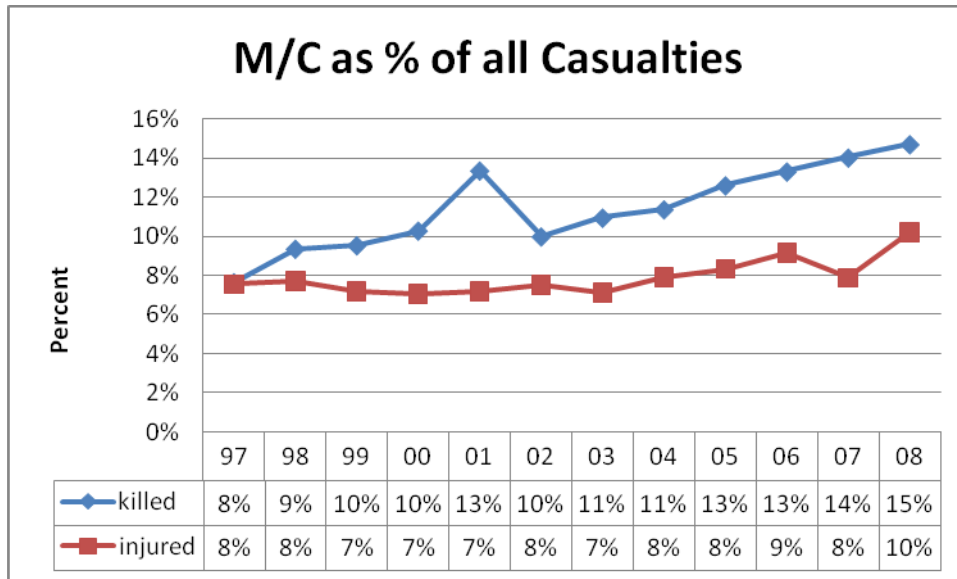
- Serious injury rates (excludes NSW and Qld data) is 5.0.
- Australian fatality rates per 10 million kilometres travelled is 0.2.

In summary, on page 30 it states:

*“All modes show a decline in fatality rates for 2006 compared to 1984. In most cases, the 2006 rate is between one half and one quarter of the 1984 rate. This is consistent with the large reductions in persons killed in road crashes over the period. The one exception is motorcycling, where the rate has been reduced by approximately 42%.”*

At first glance this appears to support some of Dr Kremmer’s conclusions and contradict others. However, different conclusions are reached due to comparing current results with different starting points. Dr Kemmer’s results are based against 1991 data whereas the Austroads reports compares current data to 1984.

The following graph shows motorcycle casualties as a percentage of all casualties in NSW since 1997. It is interesting to note that if we used 2001 as the base year for comparison, the reported improvements in safety would be much less as 2001 was a particularly bad year for motorcycle casualties:



This increase of motorcycles as a percentage of all casualties is often used by the RTA to recommend making it more difficult to ride motorcycles. However, this hides the fact that the fatalities per 10,000 registrations has dropped significantly and the size of the motorcycle fleet has more than doubled. Examining the evidence for recent years demonstrates without doubt that motorcycle riders are less likely to die or be seriously injured on NSW roads now than they were 10 years ago.

As the number of pedal cycle riders grows, they too will become a larger percent of all casualties however the RTA does not use that as justification to make it more difficult to ride a pedal cycle. In fact, they use this statistic to justify additional funding for safety projects.

Following our request, in 2009 the RTA provided STRA NSW with crash data covering crashes involving motorcycles in NSW from January 1, 2003 to December 31, 2007. It should be noted that the crash statistics for this 5 years also included 33 mini-bikes and 17 mopeds and only crashes on the road reserve.

Analysis of the RTA crash data provides a general overview of the issues involved. However, the precise measurement of the issues and a more accurate assessment of the seriousness and true cost of injuries can only be done with more up to date information from the NSW Ambulance Service. Off road crash data is currently being examined by the Institute of Public Works Engineers Australia, NSW Ambulance Service and the NRMA.

The RTA data shows that between January 1, 2003 and December 31, 2007 motorcycle riders were at fault in 7,380 crashes in NSW. Motorcycles were involved in another 4,400 crashes where the other vehicle driver was at fault. This data indicates that in addition to needing to be more careful of our own riding decisions (and our mistakes), riders need to be very aware of what other road users are doing both on and just off the road so we can avoid the result of mistakes by others. This is one of the key issues the RTA Motorcycle Rider Training Scheme, some journalists, riding groups and volunteer groups such as STRA NSW have been working to address.

There is a statistical correlation in the reduction in motorcycle fatalities since 1991 with the introduction and ongoing development of the RTA Motorcycle Rider Training Scheme. STRA NSW would like to believe that the improved training is the major contributing factor to the improved results however evidence presented at the Motorcycle and Scooter Safety Summit in Canberra in 2008 demonstrates that training is not the “silver bullet”. The only state in Australia without a motorcycle rider training scheme, Western Australia, has also seen a reduction in motorcycle fatalities although the extent of the reduction is not as great as other states. This is intriguing and demonstrates other factors must be at work. Suggestions for the other factors that have contributed to a reduction in motorcycle fatalities results include:

- As stated by Dr Kremmer, improvements in road design, construction and maintenance has had a positive effect on all road users. The extent of the effect could be determined by examination of the before and after crash statistics for a specific length of road. However, while this factor explains fatality reductions on major highways and routes it fails to fully explain the WA experience as the vast majority of roads are a legacy from the 1950's,60's and 70's.
- Advances in motorcycle tyre and brake technology. In the late 1980's tyre technology was lagging behind advances in the machine itself. Since then, advances in tyres and braking systems has moved ahead in leaps and bounds. Modern tyres for both cars and motorbikes provide much greater levels of grip and stability compared to tyres from as little as 10 years ago.
- Post licence training opportunities have increased and course providers are now targeting road riding skills for the majority of their customers, mostly on private closed circuits. The vast majority of these courses focus on the three key elements of riding safely – (i) looking where you want to go, (ii) posture on the bike to allow for proper control and emergency response and (iii) actively looking for hazards that need to be avoided.
- The riders themselves are becoming more experienced with risk management on the road. The level of discussion about safe riding on internet forums, in club newsletters and in motorcycle magazines has increased significantly on the past 10 years. Social policy in many areas of health education demonstrates that with repeated education and application of new ideas, general improvements in community outcomes are achieved.

There are a number of differing opinions about the most influential causal factors and most people have a preference for one over the other. However, the expert evidence from around Australia demonstrates that several factors are working together to deliver improved motorcycle safety in NSW.

## Where crashes occur

There is a common public misconception that motorcycle crashes are occurring on 100 kph rural roads where the “hoons” are “racing” and pretending to be Wayne Gardner or Casey Stoner. The reality is that in the 5 year period we examined, only 11% of motorcycle crashes occurred on roads with 80-90 kph limits and only 12% occurred on roads with 100-110 kph limits.

The location of crashes shows there are 16 Local Government Areas (LGAs) in NSW each with more than 200 motorcycle involved crashes. This represents 40% of all crashes involving motorcycles in NSW in the 5 years. These LGAs have common features that contribute to the crash rates that provide higher exposure levels:

- A large population of licenced riders.
- Large commercial centres requiring a large commuter workforce.
- Areas favoured by motorcycle riders for recreation.

The LGAs with more than 200 crashes involving motorcycles in this 5 year period are:

<b>LGA</b>	<b>Crashes</b>
City of Sydney	565
Blacktown	390
Wollongong City	322
Sutherland	320
South Sydney City	318
Gosford	317
Penrith	299
Newcastle City	275
Hornsby	248
Liverpool City	248
Parramatta	244
Bankstown	219
Lake Macquarie City	214
Campbelltown	207
Warringah	203
Ryde City	200

LGAs such as Sutherland, Gosford and Hornsby have rural roads that are very popular with recreational riders. Eg, the *National Park* in Sutherland and the *Old Highway* in Hornsby.

It is interesting to note that the City of Sydney has by far the largest number of crashes. It is assumed that the vast majority of these crashes involve commuters. Further study into the crash statistics is needed to confirm this. Additional research into the motivations for the various types of city riders discussed at the start of this submission would also provide useful insights into possible initiatives to reduce their chances of crashing.

With the significant increase in the number of commuters using motorcycles in the City of Sydney since December 2007, the number of crashes in this LGA can be expected to also increase significantly.

### **Speed limits and crashes**

An analysis of the speed limit at which the crashes occurred gives a more accurate indication of the type of road where motorcycles were involved in crashes state-wide, including the urban areas within country towns.

In NSW, 68% of all crashes involving motorcycles (8,074) occurred on roads with speed limits up to 60 kph. Apart from an extremely small number of 60 kph work zones where a crash occurred on a rural road this is a very accurate indicator that the great majority of motorcycle crashes occurred in urban areas in both the major cities and rural towns. It should be noted that several popular riding routes in Sydney's outer metro area have recently been converted to 60 kph limits, however, this change occurred after the period represented in the crash data (post December 2007).

Of the motorcycle crashes in urban speed limits up to 60 kph, 31% (2,523) were reported as single vehicle crashes. It is interesting to note that nearly half of these single vehicle crashes (1,127) were on corners, the same ratio as on higher speed roads. That is, nearly half (637) of the motorcycle crashes on higher speed 100-110 kph roads were single vehicle crashes on corners.

NOTE: While many crashes are reported as "single vehicle" crashes anecdotal evidence suggests that many of these crashes actually involved another road user, however, no contact was made. For example, a car crossing the centre line in a corner causes the rider coming the other way to "sit up" up or "touch" the front brake. "Sitting up" causes the motorbike to run wide in the corner. "Touching" the front brake can cause the brake to lock and the rider will fall. In such cases the other road user is quite unaware that their mistake led to a motorcycle crash.

### **Crashes in corners**

Research demonstrates that all "run off road" in corners (RUM 80-88) on higher speed roads are caused by either, or a combination of;

1. The entry speed being too fast for the prevailing conditions.
2. Sudden change of direction in the corner.
3. Braking suddenly in a corner.
4. The controller accelerated too early once in the corner.

This explanation holds true more so for motorcycles than 4 wheeled vehicles.

When driving a car, misjudging the corner entry speed or braking suddenly results in a skid and a fright for the driver and often the car will skid towards, or just off, the edge of the road and is able to be driven away. This is an obvious advantage of 4 wheels. For motorcycle riders, a similar misjudgement at a similar speed that leads to a skid in a car more often than not results in a fall from a motorcycle with the result being an injury and/or the need for a tow as vital levers and controls on the machine are damaged. For a motorcycle rider, this result can occur at speeds of as little as 10 kph if the front wheel loses traction for any reason.

For motorcycle riders there is an added factor that needs to be considered for crashes in both rural and urban corners. Many riders lack confidence in their ability to lean a bike to adapt the speed and direction for entry speed mistake and unforeseen road hazards. The technique required to do this comes only after tuition, practice in a safe environment such as a closed road, training range or circuit and then ongoing development of the techniques using the concepts on real roads to manage the inevitable mistakes.

The basics of the technique for leaning has been dealt with by the RTA motorcycle rider training in some detail, particularly since changes were introduced in 2007. Unfortunately, after obtaining P Plates there is no additional training offered by the scheme so there is a concern that:

- Many new riders fail to heed the lessons. There are a number of issues to remember from the training and this proves problematic when they move to larger capacity motorbikes. The larger machines are (generally speaking) more difficult to manage in corners for novice riders due to the increased engine response.
- Many older riders, particularly those returning to riding after several years “out of the saddle” have not learned these techniques or forgotten them and also are surprised by the capability of the newer machines.

A program of government sponsored training is required to increase opportunities for riders to develop the skills to manage larger machinery, particularly on corners.

### **Post licence training**

There are a range of brochures and websites available for riders to review the theory of safe riding. One of the best resources available in Australia is the risk management education self paced DVD titled *Ride Smart* produced by the Traffic Accident Commission (TAC) in Victoria. The Survive The Ride project distributed 10,000 copies of *Ride Smart* in NSW over recent years. In both Vic and NSW the DVD has received overwhelming support from riders, motorcycle retailers and journalists.

The *Ride Smart* DVD is somewhat dated and now needs an urgent update. A similar product updated to modern machines and road rules is needed on DVD and as web based and iPhone applications.

In addition to *Ride Smart*, there are three government sponsored post-licence programs that we are aware of. Victoria (Yarra Ranges) and Queensland (Gold Coast) provide on-road tuition for riders and the Dept of Defence pay for Defence personnel to undertake rider courses conducted by professional rider training companies at closed circuits. Unfortunately, a similar program does not exist in NSW. NSW riders have to rely on private companies and volunteers in riding clubs and other groups.

A great deal more effort in NSW needs to be placed on assisting riders to continue to learn skills and improve their road risk management and cornering capability to take advantage of improved technology now available on the average motorcycle. The crash data suggests this includes being able to better manage the way they ride in the urban areas during the week (commuters) and before they leave their local area on their weekend rides.

RTA data will show how many riders also drive cars and other vehicles. Anecdotal reports from riders suggests that after learning how to ride they believe they are safer drivers as they are now more aware of the risks on the road. This suggests that post licence rider training will not only assist riders to stay safe but also assist those same people to drive more safely.

## **Motorcycle rider - innocent victim in 37% of crashes**

There is a concern amongst riders that many crashes are not the riders fault although riders are unfairly blamed for all crashes. The crash data shows only 63% of crashes involving a motorcycle place the rider at fault. While this is a good indicator, it should not be considered to be a definitive measure as the crash scene is often assessed by Police who have very limited training in crash analysis. In addition, the Police documentation does not provide for a more accurate description.

When examining the crash types where the motorcycle rider was reported as not at fault, 51% occurred at intersections where the other vehicle either turned across the path or entered an intersection in front of an approaching motorcycle. Police report several typical explanations are given by drivers for this type of crash but the most common is that drivers claim they simply “*did not see*” the approaching motorcycle. Some commentators, most of whom do not ride motorcycles, suggest that riding with the headlight on and wearing bright gear should prevent this problem. Unfortunately, personal experience of STRA NSW members and many other riders includes being the innocent victim in this type of crash even though they were wearing bright clothing and riding with the headlight on. This is not as simple a problem as some people would like to believe.

A contributing factor for drivers “*not seeing*” the rider is the effect of conditioned response where the drivers do not expect to see motorcycle riders. In many cases, the riders involved commented that the “*driver looked straight at me – then pulled out*”. This is an indicator that the driver was acting on conditioned response and not reacting to the actual conditions.

A great deal more study into crash types, locations, lack of driver awareness and rider motivation is required to develop more targeted education and skill development initiatives.

It should be noted that, in terms of pedal cycle safety, Austroads recommends that relying on an increase in riders to improve road user awareness is not supported by research. It seems logical that this same conclusion is also true for motorcycles.

## **RTA and Motorcycle Safety**

Clover Moore, MP, Member for Sydney, recently requested information from the Minister for Roads, David Borger, regarding several issues raised in the Journal of the Australasian College of Road Safety in November 2009 (copy of Hansard attached). The response from the Minister described a range of ongoing strategies being implemented by the RTA. We acknowledge there are a few initiatives underway in NSW that will contribute to improved safety for motorcycles, in particular, the Motorcycle Rider Training Scheme which continues to provide excellent training and education to novice riders.

However, when compared to what is being done in other states, particularly Vic and Qld, NSW is lagging a long way behind in terms of acknowledging and supporting the place of motorcycles as a legitimate part of the transport system and a key part of the congestion solution.

Much of the feet dragging in NSW can be attributed to the influence of people in the RTA. For example, the Director for The Centre For Road Safety, Soames Job, has stated on many occasions and at many seminars and meetings that he “*will not doing anything to encourage people to ride motorbikes*”. This would actually appear to be a policy of his doing as he has stated to many people that if he had his way he would ban motorcycles altogether.

This RTA policy has led to an array of directives to stop motorcycle safety initiatives that are based on sound research. For example, many local government motorcycle safety projects such as producing rider safety maps for rural regions and rider safety programs for commuters from Western Sydney have been cancelled after a directive from Soames Job with the justification given that they may encourage more people to ride.

In his early years as the head of road safety in the RTA, crash data was demonstrating a clear reduction in the crash rate for riders particularly for Learners and Provisional licenced riders. While this information was issued to the rider training companies to show their work appeared to be having a good effect, the RTA instructions were that the companies were not allowed to release the information to the public as this may suggest that riding was safer and therefore encourage more people to ride.

This approach by Soames Job to try and stop people from riding motorcycles has continued to this day. We have confirmed that in the past few weeks a memo has been issued to all staff at the RTA Parramatta office that motorcycles (not pedal cycles) are now banned from parking in the underground car park despite the capacity for the machines to be parked in numerous locations without hindering other vehicles and despite the obvious advantages that motorcycles have for reducing congestion, managing the carbon footprint and offering employees cheaper alternatives for commuting. As the head of a directorate within a major NSW government department this would suggest that Soames Job is actively working against the State Plan objectives of environmental and economic sustainability.

Rather than trying to help motorcycle riders to improve their safety, Soames Job ignores the need for rider safety and wants to simply reduce the number of motorcycle riders. This would naturally reduce the road toll due to lower exposure and therefore demonstrate he is meeting his performance targets. His simplistic approach exhibits a “*head in the sand*” mentality to the reality of Sydney’s congestion problems, the RTA’s own data that shows the number of registered motorcycles is increasing, the rights of individuals to choose their own mode of transport and his own training in human behaviour.

It appears that Soames Job and his colleagues have adopted the policy to “*will not doing anything to encourage people to ride motorbikes*” simply because they have a personal dislike for motorcycles and riders. If the true aim and justification was to reduce the road toll then they would also have to be discouraging the use of pedal cycles with an equal level of zeal and passion. The recent announcement of \$158 million funding over 10 years for pedal cycles demonstrates this is not the case.

Soames Job and his colleagues will attempt to explain that they are actually working on motorcycle safety with discussion of the billboard and poster campaigns for motorcycles that began in 2007-2008 and the Motorcycle Rider Training Scheme. It needs to be remembered that the Motorcycle Rider Training Scheme commenced in 1991 and demonstrated success in fatality reductions long before these people rose to the executive ranks. In addition, the billboard and poster campaign was conducted only after receiving a directive from the then Minister for Roads following a review of the more pro-active approaches taken by the Vic government and an admission that the RTA was not doing anything.

The fact that Soames Job’s personal policy has been tolerated for many years is also a concern for motorcyclists who represent 10% of the NSW voting population.

### **Lack of RTA infrastructure funding**

Motorcycle riders are very concerned with the lack of safety related infrastructure spending that research in Europe and the Australian experience with “black spot” programs demonstrates will reduce the risk of



fatalities and injuries for motorcycle riders. This same research is clear in the conclusion that when improvements are made for high risk road users such as motorcycles, the risk reduction for all other road users at that location is maximised.

At the same time, the level of funding for pedal cyclist infrastructure seems to be increasing although they represent less than a third of the serious injuries compared to motorcycle riders. We acknowledge that pedal cycles offer many of the same advantages as motorcycles for both work and recreation and some of the pedal cycle infrastructure has been necessary, however, it is clear that motorcycle safety has been effectively ignored by the NSW government.

Given the huge potential for motorcycles to reduce traffic congestion it is ludicrous that the NSW Metropolitan Transport Plan does not even mention the words “motorcycle” or “motorbike” in any part of the document even though the percentage of motorcycles in the NSW fleet has doubled since 2000. This demonstrates the RTA personal bias policy against motorcycles has spread to several government agencies.

The effect is demonstrated by a commitment of \$0.0 for motorcycle safety infrastructure but \$158 million over 10 years for pedal cycle infrastructure, the majority of which is for cycle-ways to improve access and safety. The justification for this pedal cycle spending is a mere 7.2% projected increase in the number of commuter trips. This small need has somehow led to funding for an increase to the 900 kilometres of cycle infrastructure already built in NSW since 1999.

This inequity is multiplied when you consider pedal cyclists do not contribute any revenue to the state government and motorcycle riders contribute annual licence, registration and CTP fees (which have just been increased). The RTA will justify this pedal cycle spending based on ABS and other transport planning reports that show growth in pedal cycle sales and usage. It is not surprising that the RTA and other agencies only quote the reports that separate pedal cycles as a road user group and place motorcycles within the general category of “vehicles”. In addition, the question of transport modes with the potential to ease congestion discussed in these reports is limited to public transport, pedal cycling and walking. It is a concern that the licence and registration data presented earlier in this document is public information available on the RTA website yet it has not been included in the transport plans from other NSW agencies and has not been considered by the NSW Parliament.

To quote the NSW Bike Plan from page 44:

“The direct economic benefits of cycling are significant for NSW. The bicycle sector employs people in retail, repair and service, information production, planning and tourism.

With the right strategies in place, more people cycling for transport and pleasure will translate into more jobs, especially for regional NSW.”

Exactly the same argument applies to motorcycling yet there is no motorcycle safety infrastructure funding provided for the next 10 years. The NSW Parliament has been actively misled by government agencies to

overlook the huge potential for motorcycles to ease traffic congestion and improve environmental sustainability. As a result, motorcycle riders and the motorcycle industry are the only people investigating and implementing improvements that specifically target motorcycle riding.

The following agencies need to consider motorcycles in their efforts to achieve the NSW state plan objectives for managing health costs, transport management, economic growth and environmental sustainability:

- Dep't of the Premier and Cabinet
- RTA
- NSW Transport and Infrastructure
- Dep't of Industry and Investment NSW
- Dep't of Environment, Climate Change and Water
- Dep't of Planning
- NSW Centre for Road Safety
- Dept of Local Government

Be that as it may, the growth of motorcycle sales and usage demonstrates that despite the efforts to actively discourage motorcycling, since 1997 the number of registrations as a percentage of the NSW fleet has doubled and the number of motorcycle rider licence holders as a percentage of all licence holders has remained steady at 9%.

To put this argument into perspective in terms of the health costs, the *2006 NSW Trauma Registry Profile of Serious to Critical Injuries* reports 81 pedal cyclists and 241 motorcycle riders/pillions being admitted for trauma with the total motor vehicle trauma admissions being 1,055.

Despite being almost 25% of the serious to critical trauma admissions, motorcycle riders and pillions have received virtually zero safety infrastructure and education spending. However, even though they are less than 8% of the serious to critical trauma admissions and provide no revenue to the government, pedal cyclists receive tens of millions of dollars each year in infrastructure and safety campaign funding.

If the 2006 report shows a typical year, then the safety infrastructure and safety spending for motorcycles should be almost 3 times that of pedal cycle infrastructure. Further analysis of data for years since 2006 will reveal a more accurate estimate of motorcycle safety infrastructure spending that should occur as a matter of urgency.

### **Infrastructure design and management**

In July 2009, the RTA adopted the new Austroads Guides for all existing and new roads. This change follows significant research in Europe (Vision Zero and Safe Systems) since the mid 1990's and recent work in some Australian states, particularly Vic and Western Australia.

The new Safe Systems approach targets both fatalities and serious injuries which increases the total target group of road users in NSW from approximately 450 to over 1,050 (using the 2006 Trauma Profile). The Safe Systems approach is based on the understanding that:

- When a crash occurs, the results should NOT include a serious injury or a fatality.
- Infrastructure spending IS NOT and WILL NOT keep up with growth in population and industry.
- Road users WILL make mistakes. Simply blaming the road user for a crash DOES NOT change the road user behaviour.

This provides both a challenge and a clear direction for future policy and funding in NSW for the next 25 years. As motorcycle riders represent 25% of the serious and critical injuries we expect that the relevant level of funding will be committed to implementing strategies to assist riders to both avoid crashes and minimise injuries when the inevitable mistakes are made.

It is interesting to note that the recent Austroads report AP-R361/10 *Road Safety Consequences of Changing Travel Modes* provides some guidance for road authorities on how to spend their funds:

Page 48

*“Actions to improve the road system would involve close attention to all the points relating to motorcycling covered in the Austroads Guide to Road Safety and the Austroads Guide to Road Design. If numbers were to increase dramatically, it might be worth considering dedicated facilities for motorcycles on part of the road network, for example motorcycle lanes or separate motorcycle paths.”*

As we have shown, the numbers are increasingly dramatically and will continue to increase as more people choose to ride motorcycles both to work and for recreation.

The Austroads report continues:

Page 55:

***“10.3 Recommendations for Actions to Improve the Safety of Vulnerable Road Users***

*Road authorities, including local governments, should consider the following actions if they are not already vigorously pursuing them:*

- *Encouraging car-pooling and other forms of car-sharing.*
- *Progressively improving the provision for pedestrians accessing or leaving bus stops or train stations.*
- *Progressively improving provision for cyclists.*
- *Progressively improving measures to encourage safe motorcycling.*
- *If necessary, reformulating the issue of promoting or providing for walking and cycling as creating a walking and cycling infrastructure and traffic environment which will encourage high levels of walking and cycling will result in casualty rates which match crash rates in countries such as the Netherlands.*
- *For the time being at least, until more definitive evidence is available, refrain from promoting the view that increasing the number of pedestrians or cyclists will by itself reduce the crash rate for these modes. Instead, promote the view that concerted policy initiatives and infrastructure provision can create an environment where walking and cycling are encouraged and are safe activities.”*

As part of the research and scientific study behind the Safe Systems approach, several projects were implemented in Europe to determine how to assist motorcyclists avoid crashes on corners and reduce the severity of injuries when they did crash. The research proved that the design of roadside features has a significant influence on the risk of a mistake that leads to a “run of the road” crash and if such a crash does happen the risk of injury can also be reduced. Adjusting the roadside is significantly cheaper than rebuilding

the road itself and can have immediate effects on crash risk even when the road surface may require maintenance. For example:

- Flexible plastic signs when used correctly to delineate bends can reduce the single vehicle crashes on corners for all vehicles to virtually nil.
- Removal of roadside furniture and signage on high crash risk corners and using energy absorbing cushions reduces the severity of impact when a crash does occur.
- Additional lightweight guards that block the gap at the base of Armco and Briffen wire barriers prevents riders from both getting “hooked” on the vertical support posts and sliding under the barrier.

An interesting conclusion from the European research is that if a change is made specifically to reduce motorcycle rider crashes, the reduced crash rate is also experienced by ALL vehicle drivers.

The RTA have been fully aware of these simple initiatives for several years and have failed to take action that benefits motorcycle riders, despite repeated requests, due to Soames Job’s personal dislike of motorcycles.

It is of great concern to many motorcycle riders that while the RTA have ignored the advice on motorcycle safety infrastructure on roads that see numerous fatality and injury crashes the NSW government continues to fund bike paths for pedal cyclists in areas that see very few cyclists and areas that have a virtually zero casualty crash rate.

There is significant discussion in the general road safety and motorcycle community that this state of affairs is due primarily to the personal bias of Soames Job and several senior bureaucrats in transport and planning agencies. It is seen as no coincidence that pedal cycling is the personal hobby of Soames Job and his colleagues who actively support decisions to spend taxpayer money on pedal cycling. After all, they are the ones who receive the most personal benefit.

### **Protective clothing**

One of STRA NSW’s main messages to riders has been to wear appropriate protective clothing. We recently sent a request to all MPs to examine the issue of providing easy to understand guidelines for riders to overcome the confusion that often surrounds choosing the right gear.

The previous discussion regarding the types of riders uncovered by the UK researchers demonstrates the vast differences in why people ride. The UK research needs to be adjusted to take into account Australia’s climate which makes riding all year round a much more pleasant experience compared to the cooler English climate.

There is a vast array of choices of protective clothing available for each of group of riders. The number of manufacturers and importers demonstrates the healthy industry that has grown with the increase in the use of motorcycles.

A CARRS-Q report funded by VicRoads comments on the state of protective clothing guidelines in Australia. *Motorcycle protective clothing: Are stars better than standards?*; Narelle Haworth, Liz de Rome, Paul Varnsberry, and Peter Rowden

#### ***“Standards Australia Guidelines***

*The Standards Australia (2002) document ‘Motorcycle protective clothing: Guidelines for*

*manufacturing' applies only to clothing, it is not compulsory for manufacturers to follow and there is no requirement for marking the garments that comply with the Standard. The levels of protection are defined in terms of four "end use categories":*

- A Strong enough for racing*
- B Strong enough for sports road riding*
- C Strong enough for commuting*
- D Not strong enough to offer crash protection*

*The Guidelines drew on the Cambridge Standard (Woods, 1999) which provided the basis for EN 13595 Parts 1-4. The Guidelines include tests of the suitability of the clothing for various weather conditions and discuss issues related to testing for thermal comfort which are not specifically included in the European or Cambridge Standards. The Guidelines also include tests of durability which are quality rather than safety issues, but the durability of zip fasteners is also a safety issue (Reference AS 2332 specifications for slide fasteners)."*

The Standards make no other recommendations for how to select or gauge the effectiveness of clothing.

The Australian summer makes the choice of protective clothing difficult for some riders as they have a very little disposable income. Other riders can afford to have several sets of gear to accommodate the weather, the riding experience and the social occasion.

Of most concern to STRA NSW are the riders who, for a number of reasons, choose not to wear the basics of gloves, jacket and pants. Anecdotal reports suggest that:

- Some riders think the weather in Sydney and the northern coastal areas is too hot and humid to remain comfortable on a motorbike if they wear "too much gear".
- Some riders are very experienced and have not crashed for many years, hence their confidence that they will not crash in the future.
- Some riders cannot afford any protective clothing and wear only their work clothes.
- Some riders work at fitting within an image and believe the use of protective clothing, particularly in warmer weather reduces the effect of the desired "look".
- Some riders don't think about protective clothing at all. They only wear a helmet because it is the law. Many of these riders are commuters using small capacity motorbikes because they are the cheapest form of transport.

A great deal of effort is required to better understand the motivations of riders, their preferences for protective clothing and how to successfully encourage them to consider the basic elements of abrasion and impact protection before they start each ride.

The CARRS-Q report suggests that a star rating for protective clothing to indicate the overall abrasion and impact protection would be very useful for all riders. This approach would be familiar to riders as it is the same approach taken by electrical goods and vehicle manufacturers to indicate energy consumption of their products. This appears to be a logical and practical first step and one that would be adopted quite well by the general population as it is already common on many other mass market products.

STRA NSW would welcome the opportunity to establish ongoing communication between the government, the industry and riders with the view to creating guidelines that all riders can use to select the most appropriate protective clothing for their own riding situations.

## Summary

To continue the trend of reducing injury and fatality crashes involving motorcycles, the BIG issues are:

1. The NSW government has completely overlooked the potential for motorcycles to reduce traffic congestion. In doing so they have no plans whatsoever for low cost and proven changes to existing infrastructure at known crash locations to lower the casualty crash risk for motorcycle riders.
2. The RTA have in place an excellent training regime for novice riders however there is a huge unmet need for ongoing training for riders after they achieve full licence status. A government funded post licence training program is urgently needed to further develop safe riding capabilities. In particular, riders need to build their general cornering capabilities and risk management skills in both urban and rural areas.
3. Riders need a very basic guide to protective clothing translated in several languages and covering the basic elements of choosing the appropriate clothing. Investigations into a star rating system that is supported by both the industry and riders in general is urgently needed.
4. The Soames Job policy to “*not support anything to encourage the use of motorcycles*” must be overturned at the highest level of government. This should be followed immediately by reporting to the NSW Parliament on the growth in the use of motorcycles as a mode of transport compared to public transport, cars and pedal cycles. This information can then inform a rational decision on funding for motorcycle safety in proportion to the usage and risk of trauma.
5. More effort is needed to assist riders manage mistakes made by other road users in urban areas. The majority of injury crashes occur on urban roads in our cities and country towns. As the number of commuters continues to rise to minimise the effect of congestion, lack of public transport and economic constraints the number of urban motorcycle injury crashes will increase.

## Recommendations

1. Direct the RTA and other agencies to immediately cease the policy of “*not do anything to support the use of motorcycles*”.
2. Direct the RTA to fund voluntary post-licence education and tuition similar to the programs offered in Qld (Gold Coast Council) and in Vic (Yarra Ranges).
3. Direct the RTA to commence a project that complements the Vic initiative into protective clothing with the view to establishing a rating system similar to other mass market products which will assist motorcycle riders select the protective clothing that is the most appropriate for their personal requirements.
4. Direct the RTA to fund independent research into:
  - a. Rider motivations similar to the UK study.
  - b. Motorcycle crashes and multi-licence holders to determine the most common crash factors for specific urban areas and times

NB: this analysis should not be bound by the clause in the current confidentiality agreement which allows the RTA to change the findings in the report without the approval of the researcher.

5. Direct the RTA to use the results of the above research to design local area awareness programs to create:
  - a. More awareness of approaching motorcycles in the minds of drivers.
  - b. More awareness of intersection hazards in the minds of motorcycle riders.
  
6. Direct the RTA to develop a web and CD based education resource similar to the Victorian *Ride Smart* DVD to target enhanced risk management skills for riders. This resource should then be actively promoted and distributed via riding clubs, local government, motorcycle dealers and volunteer groups to reach the majority of riders. Consideration should be given to including the RTA website link with registration and licence renewal notices to ensure 100% coverage of riders in NSW.
  
7. Direct the NSW transport and planning agencies to report on all modes of transport including motorcycles and pedal cycles as separate modes to provide an unbiased picture of the preferences of NSW residents. Following this report, recommend to the NSW Parliament to review infrastructure and safety spending and provide a balance of spending that represents the interests and relative serious/critical injury risk of ALL road users.

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### 10641—MOTORCYCLIST AND SCOOTER SAFETY

Ms Clover Moore to the Minister for Roads, and Minister for Western Sydney—

Noting that the number of motorcycles registered between 2003 and 2008 increased by 60 per cent along with the number of riders and passengers killed or injured, and the assessment of motorcycle safety programs in 'A Survey of Motorcycle Safety Programs Across Australasia' by N Haworth, K Craig and D Whelan (Journal of the Australasian College of Road Safety 20(4) November 2009):

1. What assessment has the Government made of this analysis of road safety programs targeting motorcycle and scooter riders and what action has been taken to
  1. improve and provide refresher courses for mature riders about basic skills and hazard perception;
  2. review licensing and testing and all education and safety programs to include specific information about scooters;
  3. provide education about visibility and motorcyclists positioning themselves on the road where other users can see them;
  4. provide information and education about the level of protection from different brands and types of protective clothing, including specific information for scooter riders;
  5. advocate for and develop a national rating system for helmets and protective clothing;
  6. educate riders and clubs about post-crash action, first aid officers and roles about protective clothing;
  7. introduce a loss-of-control crash program similar to the successful Victorian Motorcycle Blackspot Program;
  8. update motorcycle-friendly road design standards and educate road managers about design and maintenance that is safer for riders;
  9. establish and promote a Road Hazard Reporting Line that includes motorcycle specific concerns;
  10. undertake motorcycle-oriented road safety audits;
  11. run drink riding education campaigns;
  12. operate enforcement programs targeting unlicensed riders and unregistered motorcycles;
  13. expand education programs on hazard perception and emergency braking for motorcyclists;
  14. identify and promote motorcycles with better braking technology; and
  15. develop programs for better motorcycle maintenance?
2. What structured guidance material or packages have been developed to inform and help address safety for motorcycle and scooter riders?
3. What consultation, collaboration and joint projects have been carried out with motorcycle organisations and groups to ensure that safety program messages and media are effective?
4. What action will the Government take to address these concerns based on the evidence of this 2009 assessment of safety programs?

Answer—

I am advised:

1.

(a) to (f) The Roads and Traffic Authority (RTA) analyses crash data, and reviews research papers and action plans (interstate and international) to define the key strategies to improve the safety of motorcycle and scooter riders in NSW. The NSW Government is already implementing many of the strategies outlined in the paper identified in the Journal of the Australasian College of Road Safety.

The RTA produces a range of educational material and has produced a number of education campaigns in relation to visibility and positioning, protective clothing and equipment as well as helmet safety and first aid. This information is also available from the RTA website. The NSW Rider Training Scheme has been specifically reviewed to address scooters. Special licensing arrangements include a conditional licence to ride a scooter with an engine capacity not exceeding 160



mit fires

(g) The RTA maintains its Blackspot Program which includes consideration of the requirements of all road users, including motorcycle riders.

(h) The RTA is conducting research in regard to motorcycle riders and pilions impacting roadside barriers. The project is exploring how to reduce the injuries to motorcyclists impacting safety barrier systems

(i) The RTA currently has two telephone numbers : 131 700 Incident Reporting and 132 701 Traffic Information. These are available for all road users, including motorcyclists for reporting traffic incidents or road conditions and obtaining basic traffic information.

(j) Road safety audits are regularly undertaken and consider all road users including motorcyclists.

(k) The RTA actively promotes the dangers of drink driving, including motorcycle specific campaigns such as "Alcohol and riding do not mix".

(l) The RTA funds the NSW Police Force's Enhanced Enforcement Program. This program targets high risk road safety behaviours of riders such as speeding, drink riding and non-helmet use, as well as unlicensed vehicles and riders.

(m) (o) The RTA provides a wide range of educational programs and materials on hazard perception, emergency braking and motorcycle maintenance. The motorcycle riders' handbook contains more information relating specifically to hazard perception (responding to hazards and examples of situations that require a response) and braking techniques. Developments in motorcycle technology that have the potential to improve safety, such as anti-lock brakes and traction control are being constantly monitored.

(2) The RTA has recently updated the motorcycle section of the NSW Centre for Road Safety website to provide a range of information on motorcycle safety. The website provides information on how to purchase approved motorcycle helmets and a range of safe riding tips. The website is available at:

<http://www.rta.nsw.gov.au/roadsafety/motorcyclesafety/index.html>

The RTA also produces a number of structured guidance materials aimed at motorcyclists and scooter riders.

(3) The RTA consults with the Motorcycle Council of NSW in the development of key campaigns and on the design of communication materials. The RTA Motorcycle Helmet Evaluation Program was developed in consultation with a variety of stakeholders including the Motorcycle Council of NSW, the NRMA, the Transport Accident Commission, the University of NSW and helmet suppliers.

The RTA has distributed "Safer Motorcycle Helmets" brochures through motor registries, rider learning centres and helmet retailers in NSW. The NRMA has joined the program and plans to distribute the brochures through out its branches. The Transport Accident Commission is in the process of joining the program and is also planning to distribute the brochure in Victoria.

(4) The NSW Government recently announced a \$170 million Road Toll Response Package and the RTA will continue to research and implement strategies to reduce any death or injury on our roads.

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