Motorcycle Riders Association of Australia
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19th August 2021

Inquiry into Road Safety in Tasmania
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https://www.ract.com.au/en/community/advocating-change/road-safety-inquiry

Road Safety Inquiry (Tasmania)

Dear Sir/Madam,

This submission is specifically aimed at motorcycle safety and wishes to draw your attention to three contributors to the road toll:

1) Lack of data
2) "Absence of evidence is not evidence of absence."
3) Appropriate presentation of existing data "Lies, damn lies and statistics."
4) Avoiding risk is better than improving it "A stitch in time saves nine."

This submission will draw on Victorian examples to highlight how similar solutions can be used in Tasmania.

Missing data

The Victorian Auditor general's office has identified that 2/3 of motorcycle accident data is missing. 1/3 of that data relates to on-road riders and the other 1/3 to off-road riders. This off-road data is highly relevant as most of these off-road riders will spend at least some time on the roads. This missing data easily explains the considerable volatility in the motorcycle fatality rates from year to year and has got a great deal of relevance to the accident rates.

Injuries drive fatalities

The 2011 audit of motorcycle safety in Victoria (attached) has highlighted a few enormous holes in the motorcycle data which are relevant to the rest of Australia:

VicPol's crash records for 2008 show that up to 2,790 injured motorcycle riders and passengers attended a hospital.

In the same year, the TAC received 2,049 claims and paid compensation for 2,028 of these cases.

These records capture less than half of the 6,955 emergency presentations and admissions recorded by hospitals in 2008.

This data shows that the Police did not recognise ~60% of hospital injury admissions.

The TAC data covered only ~30% of admissions.

The Audit has found that 50% of the admissions should be covered by the TAC (included as on-road).

These figures support the contention that there are two or more off-road riders to every on-road rider and that off-road rider contribution to injuries/fatalities is significant. It urgently needs to be addressed.

Off-road figures almost certainly drive the on-road data... especially for injuries although this will also carry over into fatalities.

Unless we address these reporting deficiencies, any research is likely to be skewed. Current research appears to exclude the areas where around 2/3 of the injuries are coming from by putting a 150 km radius on the data collection. That will impact the outcomes as will the inability to access all hospital data.

The best way to address this issue is to address the data access issue (timely hospital data is not available). Once the data is freely available, the analysis of that data will tend to self-correct this problem.

Missing data is usually at the heart of road safety issues. Prioritising Safety Information by including it explicitly as an aim (or as a theme) is required to ensure it gets the attention it needs.

Figure 1 4S Safety Venn diagram showing the importance of Safety Information (refer MRAA Road safety Strategy attached)

Data presentation

The fatality rate is typically the only metric used when creating and measuring the effectiveness of safety programs. Fatalities only make up a small percentage of injury accidents. The number of injuries is ~100x higher and thus would be a better indicator of the success or failure of a safety intervention. However, in rapidly increasing populations, a worse problem exists. The fatality rate may stay the same while the population increases (lower risk). This problem exists in motorcycling where the number of riders (or motorcycles) has more than doubled while the fatality rate has decreased or stayed the same. Reporting fatalities instead risk tends to mask any positive improvements. Failing to report changes over longer periods (>10 years) also tends to mask improvements.

Combining both risk/rider (or motorcycle) accident rates (rather than fatality rates) makes it easier to determine what interventions work and how well they work. Previous investigations into motorcycle safety missed significant improvements because of poor data presentation, e.g. The contribution of Unriders (unlicensed, unregistered or otherwise illegal riders) was overlooked because of a failure of the TAC, Police and Vic Roads to harmonise their databases. Before the harmonisation of the databases, each authority believed that the unlicensed riders constituted ~10% of the road toll (roughly the same as car drivers). However, after combining data, the correct figure turned out to be ~35% (Refer attached Unrider document from 2001). After this discovery directly targeting this neglected group resulted in the Unrider contribution to the fatality rate dropping to ~10%. Targeting Unriders was responsible for the most substantial identifiable improvement to the motorcycle fatality rate since 2001 (~25%), yet previous inquiries into motorcycle safety have failed to notice. Overall the 77% decrease in risk over 20 years (a ~5x improvement) has gone uncommented. The fact that crucial data is not apparent signals the need to remedy a presentation problem.

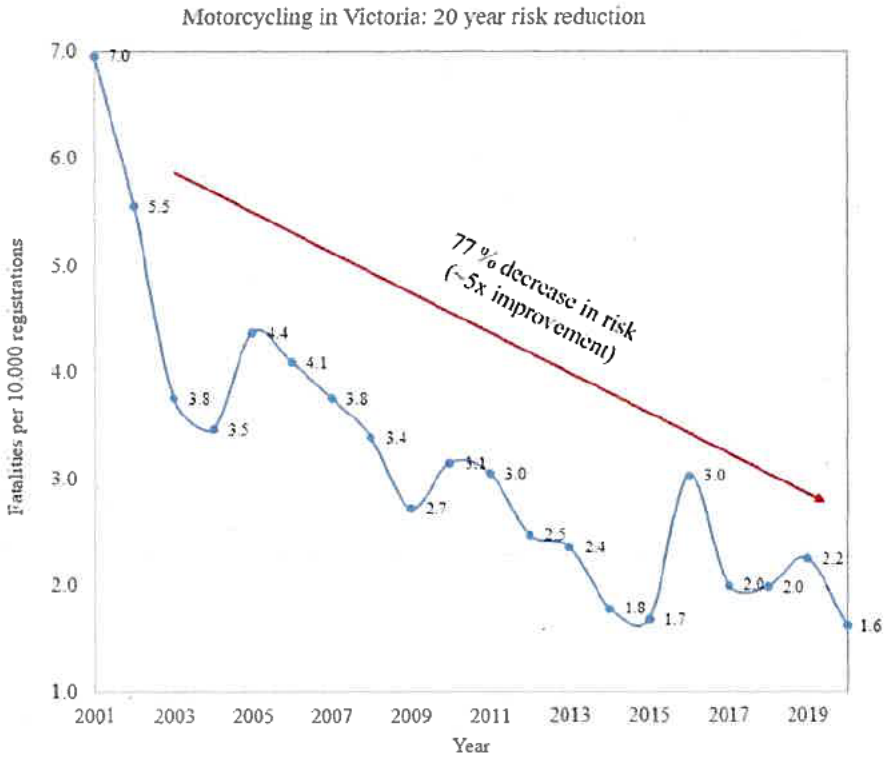

Figure 2 Motorcycling: 20 year risk reduction

N.B. Given that Unriders fatalities spiked ~2018 causing the motorcycle fatality rate to soar the issue remains highly relevant:

The consequences of this poor data presentation are a misallocation of resources and effort to ineffectual interventions while ignoring effective solutions.

Injury prevention

The failure to reduce risk until enough data is collected means that injuries and fatalities will keep occurring until they can't be ignored (the dead bodies start to pile up).

An excellent example of this problem is the issue of Wire Rope Barriers (WRB):

WRB creates a hazard to riders primarily via the posts which cause a rapid deceleration of the rider… which can be deadly.

"It's the sudden stop at the end that kills you."

Instead of reducing the risk, road authorities (Federal, State & Local) have resorted to the argument that fatalities attributable to WRB are negligible. The data relied on small amounts of installed WRB. It ignores the increase in risk that occurs as the number of kilometres of Insitu WRB increases (Refer attached WRB Report)

Conclusion

Tasmania suffers from similar problems to other parts of Australia and can apply similar solutions.

Yours sincerely

Dr Michael Czajka

P.S. At the heart of the improvement of motorcycle safety in Victoria was the involvement of motorcyclists in creating and implementing changes. Changes were all driven by motorcycle representatives often in ways the government had not envisaged.

The creation of a motorcycle specific strategy was also the key to creating meaningful change.

Motorcycle and Scooter Safety Programs

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Motorcycle and Scooter Safety Programs

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Victorian Auditor-General's Office

Auditing in the Public Interest

The Hon. Bruce Atkinson MLC
President
Legislative Council
Parliament House
Melbourne

The Hon. Ken Smith MP
Speaker
Legislative Assembly
Parliament House
Melbourne

Dear Presiding Officers

Under the provisions of section 16AB of the *Audit Act 1994*, I transmit my performance report on *Motorcycle and Scooter Safety Programs.*

Yours faithfully

D D R PEARSON
Auditor-General

9 February 2011

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Audit summary

Background

The audit examined how successful the road safety agencies—VicRoads, Victoria Police (VicPol) and the Transport Accident Commission (the TAC)—have been in improving the safety of riders and passengers travelling on motorcycles and scooters. We also included the Department of Sustainability and Environment (DSE) in the audit because it is responsible for state forests and parks used by motorcycle riders.

We assessed whether agencies had understood the motorcycle safety risks, prioritised and implemented initiatives to address these risks, and evaluated the success of these initiatives and their combined impact on implementing government policy.

The road safety agencies focused on the safety of riders using public roads including freeways, arterial roads, municipal roads and a small proportion of the roads that DSE manages in state forests and parks. Riding anywhere other than public roads is defined as off-road riding.

The Victorian Motorcycle Advisory Council (VMAC) includes the road safety agencies, industry representatives and motorcycle user representatives, as well as the RACV and the Monash University Accident Research Centre. It advises the minister responsible for road safety about motorcycling issues and endorses proposals for the spending of funding raised by the special safety charge levied on motorcycle and scooter riders. DSE is not a member of VMAC.

Conclusion

The road safety agencies have had mixed success in reducing motorcycle rider and passenger fatalities and serious injuries but, along with South Australia, have been more effective than other states. Achieving reductions over a period of several years is very challenging because motorcycle use has risen rapidly over the last decade and continues to rise.

Sufficient attention, however, has not been paid to unreported and off-road crashes. This audit's comparison of crash and hospital injury data shows that the road safety agencies need to understand these crashes and their implications for motorcycle safety programs.

Findings

Understanding motorcycle and scooter safety risks

VicPol, VicRoads and the TAC have built up an effective understanding of reported motorcycle and scooter crashes on public roads and they continue to invest to improve this understanding.

There are gaps, however, which they need to address. Of most importance is gaining a better understanding of crashes that result in injury but which are not reported to VicPol or captured in the TAC's compensation claims data. The road safety agencies have underestimated the significance of these crashes.

VicPol's crash records for 2008 show that up to 2 790 injured motorcycle riders and passengers attended a hospital. In the same year the TAC received 2 049 claims and paid compensation for 2 028 of these cases. These records capture less than half of the 6 955 emergency presentations and admissions recorded by hospitals in 2008.

Prioritising and implementing initiatives

While road safety agencies have targeted initiatives to address most of the important safety risks for riders travelling on public roads, improving the safety of off-road riders has lagged. This is a very significant gap that warrants urgent attention, given off-road riding accounts for the majority of crashes.

Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013 (powered two-wheeler plan) does not adequately explain how initiatives have been prioritised. Road safety agencies have adequately planned the major projects under the powered two-wheeler plan and regularly reported their assessments of progress.

Evaluating effectiveness and achieving outcomes

Road safety agencies have completed methodical and robust evaluations of their major motorcycle safety investments.

The safety outcomes for the previous motorcycle safety plan, the *Victorian Road Motorcycle Road Safety Strategy 2002–2007*, were mixed. The target of a 20 per cent reduction in fatalities for all road users was achieved in relation to motorcyclist fatalities. However, serious injuries increased over the period of the previous plan.

Under *Victoria's Road Safety Strategy: arrive alive 2008–2017 (arrive alive),* the target for reducing all road fatalities and serious injuries is 30 per cent. The contribution of motorcycle safety programs towards this target continues to be mixed. Serious injuries fell significantly between 2008 and 2009, yet fatalities in 2010 exceeded the level experienced five years ago. Nevertheless, since 2002, Victoria and South Australia outperformed other states in reducing motorcycle fatalities.

As the reduction targets relate to a fall in the absolute number of fatalities and serious injuries rather than their rate, they do not take account of the growth in motorcycle use. This makes their achievement more challenging, as data shows that more people are buying and using motorcycles and scooters.

Recommendations

Number	Recommendation	Page
1.	Victoria Police, VicRoads and the Transport Accident Commission should develop a good understanding of unreported injuries so they can advise government on the implications for motorcycle safety programs.	19
2.	VicRoads should develop and appraise the options for improving its understanding of exposure and apply for the resources to complete the option that provides best value.	19
3.	Victoria Police, VicRoads and the Transport Accident Commission should expand the interagency committee so it is able to resolve or recommend the actions needed to address data limitations.	19
4.	Victoria Police, VicRoads and the Transport Accident Commission should agree on, and consistently apply a definition of 'off-road' when coding crashes for the purposes of the road toll.	19
5.	VicRoads should update its strategic guide and use this to clearly describe the powered two-wheeler plan's priorities in its proposed update for 2012.	25
6.	Victoria Police, VicRoads and the Transport Accident Commission should consult with the Department of Sustainability and Environment and the Victorian Motorcycle Advisory Council to understand and address off-road motorcycling safety risks to coincide with the proposed update of the powered two-wheeler plan for 2012.	25
7.	Victoria Police, VicRoads and the Transport Accident Commission should expand existing activities to inform the community on expectations about what motorcycle safety programs are likely to achieve, using: • the available information on the effectiveness of different initiatives • forecasts of changes in exposure.	34
8.	Victoria Police, VicRoads and the Transport Accident Commission should provide information on changes in exposure when reporting on their progress towards the *arrive alive* safety targets.	34

Submissions and comments received

In addition to progressive engagement during the course of the audit, in accordance with section 16(3) of the *Audit Act 1994* a copy of this report, or relevant extracts from the report, was provided to Victoria Police, VicRoads, the Transport Accident Commission and the Department of Sustainability and Environment with a request for submissions or comments.

Agency views have been considered in reaching our audit conclusions and are represented to the extent relevant and warranted in preparing this report. Their full section 16(3) submissions and comments, however, are included in Appendix A.

1 Background

1.1 Introduction

Motorcycles and scooters are increasingly popular forms of transport. Over the eight years from 2002 to 2010, motorcycle and scooter registrations increased by 58 per cent, from 102 400 to 162 091, and the number of licence holders rose by 36 per cent to 325 977.

These vehicles are being used more for:

- daily commuting, because they are a more efficient way to travel in congested traffic and are easier and cheaper to park
- recreation, especially along popular tourist roads such as the Great Ocean Road and in the Yarra Ranges
- off-road riding where people use trail bikes on tracks and pathways in state forests and on private land that are not part of the public road system.

Motorcycle and scooter users are more vulnerable to crashes and serious injury than other forms of motoring. While they make up less than 4 per cent of all registered vehicles and their riders account for only 7 per cent of motor vehicle licences, they suffered 14 per cent of all road fatalities and serious injuries since 2005.

Between 2000 and 2008 an annual average of 47 motorcycle and scooter users were killed and a further 915 seriously injured in crashes on public roads. Public roads are defined under the *Road Management Act 2004* and include:

- freeways
- arterial roads managed by VicRoads
- municipal roads managed by councils
- some 2 500 kilometres of roads providing access to national and state parks, state forests and other crown land managed by the Department of Sustainability and Environment (DSE).

Only fatal and serious injury crashes that occur or originate on a public road are included in the Victorian road toll. Other fatal and serious injury crashes are considered to be off-road. Off-road crashes occur on:

- privately-owned land
- roads, tracks and land within state forests and parks
- crown land away from designated public roads.

This audit examined the safety risks for motorcycle and scooter riders when travelling both on and off the public road system. The audit was conducted from June to November 2010 and has therefore examined the policies that were in place before the change in government in December 2010.

1.2 Government policy and plans

The policy objective is to significantly reduce the number of people killed or seriously injured in crashes on public roads. To achieve this, the previous government:

- developed a 10-year strategy—*Victoria's Road Safety Strategy: arrive alive 2008–2017 (arrive alive)*
- launched a five-year action plan targeting on-road motorcycle and scooter safety—*Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013* (powered two-wheeler plan)
- added, since October 2002, a safety levy to the Transport Accident Commission (the TAC) fees paid by owners of motorcycles and scooters.

1.2.1 *arrive alive 2008–2017*

arrive alive is the strategy for reducing road deaths and serious injuries by 30 per cent over a 10-year period. In addition to general road safety initiatives, it aims to improve motorcycle safety by:

- improving road and roadside infrastructure
- encouraging manufacturers to develop new technologies that improve rider safety
- improving rider training programs and licensing
- making all road users more aware of the risks to motorcycle and scooter riders
- promoting the use of high standard protective gear.

VicRoads, the TAC, Victoria Police (VicPol) and the Department of Justice (DOJ) are responsible for delivering the strategy.

1.2.2 Powered two-wheeler plan 2009–2013

In August 2009 the then Minister for Roads and Ports launched a five-year plan to significantly reduce motorcycle and scooter fatalities and serious injuries and address the transport needs of riders. This followed on from the *Victorian Motorcycle Road Safety Strategy 2002–2007*.

The powered two-wheeler plan was designed to complement *arrive alive* while providing more detailed actions targeting motorcycle and scooter safety. It focused on:

- improving road safety agencies' understanding of motorcycle and scooter riding and crashes
- better defining the role of motorcycles and scooters in Victoria's transport system
- improving rider awareness, skills and knowledge
- encouraging riders to use safer vehicles and to wear protective clothing.

VicRoads, the TAC and VicPol are responsible for the powered two-wheeler plan's safety actions. The plan also acknowledged the importance of the Victorian Motorcycle Advisory Council (VMAC) in advising the minister responsible for road safety on how to achieve the plan's goal.

The powered two-wheeler plan recognises the increasing popularity and risks of off-road riding, but excludes this from the scope. It was planned to address the environmental, noise, social conflict and legal compliance issues associated with off-road riding through the DSE Trail Bike Initiative, but rider safety was not included in the scope of this initiative. The previous government committed to review progress in 2011 and update the plan's actions in 2012.

1.2.3 Motorcycle safety levy

The motorcycle safety levy is paid as a component of the TAC premium by owners of registered motorcycles with an engine capacity of more than 125cc. Motorcycles registered as recreational vehicles, used in primary production, or which are vintage or classic motorcycles with club permits, are exempt. In January 2008, the levy rules were changed so that non-business riders with multiple registrations only paid the levy for one of their vehicles.

The levy is used to fund projects that will improve motorcycle and scooter safety and which are over and above road safety agencies' business-as-usual programs. The minister responsible for road safety decides how the levy is spent and VMAC reviews proposals and advises the minister about candidate projects. VicRoads administers the levy for use in completing approved projects.

The levy for 2010–11 is $61.60 per rider, and the $35 million raised to 30 June 2010 has funded 188 motorcycle and scooter safety projects.

1.3 Roles and responsibilities

VicRoads, VicPol and the TAC are responsible for improving road safety and reducing deaths and injuries. While these agencies have focused on reducing trauma on public roads, their responsibilities extend to off-road riding on public land.

The legislation at some points is difficult to interpret and the relevant Acts do not use the same terms for defining a road. However, for all three agencies, the legislation includes functions that relate to the safety of motorcyclists riding off public roads. The TAC has also had to pay compensation to off-road riders injured in crashes on privately-owned land.

DSE was included in the audit because it manages designated public roads and operational roads in state forests, parks and on crown land.

1.3.1 VicRoads

VicRoads road safety responsibilities include:

- managing and maintaining freeways and those parts of arterial roads used for through traffic under the *Road Management Act 2004*
- registering vehicles and licensing drivers and riders under the *Road Safety Act 1986*
- improving the safety of roads under the *Transport Integration Act 2010*.

Managing and maintaining arterial roads

The *Road Management Act 2004* sets out which agencies are responsible for roads that are designated as 'public roads'. The Act is specific about the location of the roads for which VicRoads and other agencies are responsible, and what VicRoads and other agencies need to do to fulfil their road management obligations.

Vehicle registration and driver licensing

Under the *Road Safety Act 1986*, VicRoads is responsible for registering motor vehicles and licensing road users where the Act requires this. These responsibilities extend beyond public roads and apply to riders travelling off-road on public land because:

- registration requirements apply to motorcycles used or intended to be used on 'highways'
- a person who rides a motorcycle on a highway must be licensed
- the Act defines highways as:
  - **roads**—a place declared to be a road or areas open to or used by the public that is developed for, or have as one of its main uses, motor vehicle driving or riding
  - **road-related areas**—places declared to be road-related areas, footpaths or nature strips adjacent to roads, or areas that: divide a road; are open to the public and designated for use by cyclists or animals; are not roads but which are open to, or used by, the public for driving, riding or parking motor vehicles.

Road safety

VicRoads road safety function under the *Transport Integration Act 2010* is to 'lead in the development and implementation of strategic and operational policies and plans to improve the safety of the road system for all users'.

The ways it is meant to do this are both:

- **location specific**—for example, 'through works to improve the safety of road and road-related infrastructure'
- **non-location specific**—for example, 'through information and advice on the safety of motor vehicles and motor vehicle standards'.

The Act also emphasises the VicRoads objective to work 'in collaboration with relevant bodies including other road authorities, Victoria Police, the Transport Accident Commission…[to] improve the safety of the road system for road users and seek to reduce deaths and injuries'.

Other responsibilities relevant to motorcycle safety

VicRoads other responsibilities include:

- collecting the motorcycle safety levy on behalf of the TAC and managing levy projects
- providing secretariat services for VMAC.

1.3.2 Victoria Police

VicPol is responsible for enforcing the *Australian Road Rules* and the *Road Safety Act 1986* and its regulations. VicPol runs targeted enforcement operations to deter riders and drivers whose high-risk behaviours could endanger other road users. It also educates riders on safe riding practices and protective gear.

These rules and regulations apply to drivers and riders using roads and road-related areas defined under the *Road Safety Act 1986*. This means that VicPol's enforcement responsibilities cover off-road riding on public land because the Act defines a 'road-related area' as any location open to, or used by, the public for driving or riding.

1.3.3 Transport Accident Commission

The *Transport Accident Act 1986* establishes the TAC's role in providing a 'no fault' compensation scheme for people who are killed or injured in transport accidents on roads or in road-related areas, as defined under the *Road Safety Act 1986*.

Legal precedent dating back to 2001 means the TAC compensation has been extended to cover crashes on privately-owned land that would normally be disqualified from the scheme.

For example in 2006, a court found in favour of a motorcyclist's claim for compensation relating to injuries sustained while riding an unregistered vehicle on privately-owned land. The court decided that the location should be considered as a road under the *Road Safety Act 1986* because it had been regularly used by the public for off-road riding.

The TAC promotes road safety through public awareness campaigns and promotional materials that target motorcycle and scooter safety. It also researches motorcycle and scooter crash causes and rider attitudes and behaviour.

1.3.4 Department of Sustainability and Environment

Under the *Road Management Act 2004*, DSE is required to manage about 40 000 km of declared roads on public land that are commonly used for trail bike riding. Of these about 2 500 km are defined as public roads. The Act requires DSE to maintain these public roads to published standards and to minimise the road safety hazards. The remaining roads and tracks are provided mainly for fire suppression and land management access and are not subject to these standards.

Beyond these road management obligations, DSE is not responsible for road safety. DSE's Trail Bike Initiative aims to bring about long-term behavioural change in the use of trail bikes on public land so that their use allows for the activities of other users and does not damage the environment. This initiative was not intended to address safety for motorcycle riders on land managed by DSE.

1.3.5 Victorian Motorcycle Advisory Council

VMAC was established in 1998 to advise the minister on the management and development of motorcycling in Victoria. It includes representatives from VicRoads, VicPol and the TAC, as well as rider groups, industry, and training and research organisations. VMAC has an independent chair and is serviced by VicRoads.

Unlike VicRoads, VMAC is not constrained to focus on motorcycle safety on the public road system and has endorsed a small number of projects to better understand the safety risks for off-road riders.

In advising the minister, VMAC:

- monitors motorcycle trends and provides advice on rider regulations, facilities and services
- contributes to developing motorcycle education programs
- recommends projects for funding through the motorcycle safety levy
- provides feedback to the community about its activities and the progress and impacts of levy-funded projects.

VicRoads, VicPol, the TAC and other organisations are responsible for developing and delivering the levy-funded projects that VMAC endorses for ministerial approval. VicRoads plays a major role in the identification, design and delivery of these projects.

1.3.6 Victorian Road Safety Fatality Review Panel

This panel, which includes VicPol, VicRoads and the Victorian Institute of Forensic Medicine, recommends which fatal road crashes are included in the road toll to VicPol's Deputy Commissioner—Road Policing.

The panel's decisions are based on the Australian Bureau of Statistics guidelines for classifying crashes. These define a road crash for inclusion as part of the road toll as 'any apparently unpremeditated event reported to police, or other relevant authority, and resulting in death, injury or property damage attributable to the movement of a road vehicle on a public road'.

In terms of crash location, the guidelines specify that a reportable road crash must:

- have occurred or originated on land within the boundaries of a public road
- not have occurred on a road temporarily closed to the public.

This road toll therefore excludes crashes that happen off the public road system.

1.4 Audit scope and objectives

The audit assessed the effectiveness of motorcycle and scooter safety programs by examining whether agencies had:

- a comprehensive understanding of the risks affecting motorcycle and scooter users
- prioritised and implemented initiatives based on their likely effectiveness
- evaluated the success of initiatives and used the results to shape future programs.

The audit examined safety for riders and passengers on and off the public road system. The audited agencies were:

- VicRoads
- the Transport Accident Commission
- Victoria Police
- the Department of Sustainability and Environment.

The audit was conducted in accordance with the Australian Auditing and Assurance Standards. The total cost of the audit was $300 000.

1.5 Report structure

Part 2 examines how well VicPol, VicRoads and the TAC understood the safety risks.

Part 3 assesses how effectively these agencies have prioritised and implemented initiatives.

Part 4 examines how well these agencies have evaluated initiatives and achieved intended outcomes.

2 Understanding motorcycle and scooter safety risks

At a glance

Background

A sound understanding of the safety risks affecting motorcycle and scooter users is needed if agencies are to act effectively.

This part examines whether VicRoads, Victoria Police (VicPol) and the Transport Accident Commission (the TAC) have developed a comprehensive understanding of these safety risks.

Conclusions

VicPol, VicRoads and the TAC have built up a good understanding of reported motorcycle and scooter crashes on the public road system and continue to invest to further improve this understanding.

However, there are very significant gaps to be addressed. Of most importance is gaining a better understanding of crashes that result in injury but which are not reported. The significance of these crashes and their potential implications for motorcycle safety programs has been substantially underestimated. They represent at least 50 per cent of all injuries.

Gaining a better understanding and forming an appropriate response should be a high priority for road safety agencies.

Recommendations

- VicPol, VicRoads and the TAC should develop a good understanding of unreported injuries so they can advise government on the implications for motorcycle safety programs.
- VicRoads should develop and appraise the options for improving its understanding of exposure and apply for the resources to complete the option that provides best value.
- VicPol, VicRoads and the TAC should expand the interagency committee so it is able to resolve or recommend the actions needed to address data limitations.
- VicPol, VicRoads and the TAC should agree on, and consistently apply, a definition of 'off-road' when coding crashes for the purposes of the road toll.

2.1 Introduction

A sound understanding of the safety risks affecting motorcycle and scooter users is needed if agencies are to act effectively.

This part examines whether VicRoads, Victoria Police (VicPol) and the Transport Accident Commission (the TAC) have developed a comprehensive understanding of these safety risks.

2.2 Conclusions

VicPol, VicRoads and the TAC have set clear objectives and identified the important safety risks. They have built up a good understanding of reported motorcycle and scooter crashes on public roads and continue to invest to further improve this understanding.

However, there are very significant gaps to be addressed. Of most importance is gaining a better understanding of crashes that result in injury but which are not reported. The significance of these crashes and their potential implications for motorcycle safety programs has been substantially underestimated. They represent at least 50 per cent of all injuries.

Gaining a better understanding and forming an appropriate response should be a high priority for road safety agencies.

2.3 Strengths of the current approach

VicPol, VicRoads and the TAC have built a good understanding of the motorcycle and scooter crashes that contributed to deaths and injuries on the public road system. These agencies share the information they collect on the characteristics, causes and impacts of these crashes and have improved their shared understanding by investing in targeted research.

2.3.1 Consistent objectives and a shared risk framework

Victoria's legislation and road safety plans focus on the objective of making road travel safer by reducing crashes that result in death or serious injury. This is reflected in VicRoads, VicPol's and the TAC's corporate and business planning. The Department of Sustainability and Environment (DSE) does not have the same responsibility for road safety, although it does manage roads, tracks and land in forests and parks where motorcyclists ride away from the defined public road network.

VicRoads, VicPol and the TAC have identified and agree on the factors that contribute to motorcycle and scooter crash risks including:

- the design of roads and the roadside environment
- the skill level or behaviour of riders and other road users
- the design of vehicles and the lack of protective equipment.

VicRoads, VicPol and the TAC focus on addressing these risks for motorcyclists riding on Victoria's public roads.

2.3.2 Progress towards a better understanding of the risks

VicPol, VicRoads and the TAC have a good understanding of most of the characteristics and causes of motorcycle crashes that happen on public roads.

Victoria Police

VicPol follows an evidence-based approach when deploying resources to improve motorcycle safety. It regularly monitors its progress towards the previous government's target of a 30 per cent reduction in road trauma by 2017, and focuses its efforts to reduce motorcycle crashes on public roads.

During the course of the audit we observed how VicPol applied this approach by:

- identifying times and locations where riders were at most risk, for example, analysing crash data to highlight the increased risks for riders using the Great Ocean Road over the Queen's Birthday weekend
- acting on intelligence by running operations to target high-risk locations and behaviours
- responding to the spike in fatalities in 2010 by analysing each fatal crash and using a state-wide forum to work out how to reverse this trend.

VicRoads

VicRoads is responsible for supporting the Victorian Motorcycle Advisory Council (VMAC) and it informs its members about motorcycle safety trends and emerging issues. VicRoads provides updates on the number of motorcyclists killed or seriously injured in Victoria at each VMAC meeting.

The motorcycle safety levy has been used to fund more than $1.5 million worth of research dedicated to better understanding safety risks.

VicRoads develops these projects and manages them once they have been considered by VMAC and approved by the Minister for Roads and Ports. To date, completed projects costing $570 000 have examined:

- scooter involvement in crashes
- a sample of serious injury motorcycle crashes to understand contributing factors and potential countermeasures
- the different types of riders and where they ride
- the nature of injuries suffered when riders crash off road.

VicRoads is now managing a further $960 000 of levy-funded projects including:

- research into driver and rider attitudes towards each other
- research into the role of speed and speeding in motorcycle crashes
- a further study jointly funded with the TAC, the Department of Justice and the Australian Research Council to identify the roles of speed, riders and infrastructure and how they are linked.

The Transport Accident Commission

The TAC focuses on reducing the road trauma related to payments it makes under its legislated compensation scheme. The TAC has improved the understanding of risks to motorcyclists on public roads through one-off research projects and ongoing surveys. It also analyses its claims information to detect emerging risks.

The TAC surveys motorcyclists between September and April each year measuring rider and vehicle characteristics and asking them about their behaviour, attitudes and past involvement in crashes and near misses. This has proved valuable in understanding the views and attitudes of a wide range of riders. For example, these surveys show that about half of the riders interviewed accept the need to wear protective clothing.

The TAC further examined the protective role of specialist clothing by funding research in 2008 on what protective gear the riders injured in motorcycle crashes used.

Other TAC projects will investigate:

- the wearing rates of protective clothing by season, as well as bike characteristics such as type/age
- the protective qualities of motorcycle helmets
- the contribution of off-road motorcycling, unregistered motorcycling, commuter motorcycling and recreational on-road motorcycling to TAC claims.

Victorian Motorcycle Advisory Council

VMAC has proved a valuable forum for bringing together the agencies responsible for motorcycle and scooter safety, and delegates representing industry and riders. It has provided a valuable testing ground for proposals and is a catalyst for agencies, and industry and community representatives to work together to address safety issues.

VMAC has endorsed more than $1.5 million worth of research projects to better understand motorcycling safety risks.

2.4 Areas that need to be strengthened

As part of the proposed review and update of *Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013* (powered two-wheeler plan), VicPol, VicRoads and the TAC need to:

- better understand the nature and extent of crashes that are not reported
- improve their understanding of the exposure of riders to the risk of serious injury
- improve the reliability and quality of the data they use to understand risk.

These agencies have in train actions to better understand exposure and improve data reliability. However, dealing with under-reporting is less advanced because:

- VicRoads focused on injury crashes on public roads and it considered under-reporting is primarily due to a lack of reporting of off-road crashes
- the TAC did not understand that this is a gap that needs to be addressed.

2.4.1 Better understanding crashes that are not reported

The number of motorcycle and scooter injuries captured in VicPol's, VicRoads' and the TAC's records understate, by at least 50 per cent, the number of people treated for these types of injuries in Victorian hospitals. These agencies need to develop an adequate understanding of these unreported injury crashes so they can advise government on the implications for motorcycle safety programs.

Road safety agencies' responses to early evidence of under-reporting

Research by the RACV compared VicPol's crash data for riders and pillion passengers 'taken to hospital' with records of hospital admissions between 2002 and 2005. This comparison showed that VicPol crash records under-reported admissions for on road injuries by 38 per cent. A similar study in Western Australia found 43 per cent under-reporting.

VicRoads argued under-reporting was unlikely to be significant for the road toll and its role because:

- VicPol's records were likely to fully represent rider injuries on public roads
- the under-reporting of off-road crashes was likely to explain most of the shortfall
- better understanding off-road crashes was not critical to VicRoads responsibility for improving safety on public roads.

The TAC suggested that under-reporting was unlikely to be important because:

- most injured riders and passengers are eligible to claim for TAC compensation
- hospitals encourage eligible patients to claim TAC compensation
- claiming compensation requires the completion of a VicPol crash report and this is likely to significantly reduce the under-reporting of injury crashes.

Comparing crash records with hospital data on injuries in 2008

To better understand the scale and nature of under-reporting we:

- compared, for 2008, VicPol's crash data and the TAC's claims data with Department of Health data on emergency department presentations and hospital admissions
- examined records on specific days to better understand the annual results.

This comparison confirmed the significance of under-reporting. We found that both road and off-road injuries are under-reported, but the difference between police and hospital records is much greater for off-road crashes.

Comparing crash and hospital data on persons injured for 2008

VicPol's records understate the number of injuries by at least 50 per cent and the scale of under-reporting is much higher for off-road injuries. Less than a third of motorcycle riders and passengers injured in a crash made a TAC claim.

Figure 2A summarises VicPol's records of motorcycle rider and passenger injuries.

Figure 2A
Victoria Police's record of motorcycle rider and passenger injuries 2008

	Crash location			
Consequences for persons involved	Public roads	Off-road	Totals	%
Died within 30 days	**45**	**2**	**47**	**2**
Injuries requiring admission to hospital	**1 710**	**436**	**2 146**	**73**
• Police confirmed person admitted	1 033	257	1 290	
• Police confirmed person not admitted	502	139	641	
• Not known or police have not checked	175	40	215	
Other injuries	**517**	**127**	**644**	**22**
Non injury	**75**	**20**	**95**	**3**
All motorcycle riders and passengers	**2 347**	**585**	**2 932**	**100**

Source: Victorian Auditor-General's Office, based on Victoria Police data.

Based on the VicPol records we expected in our analysis of hospital data to see no more than 2 790 persons attending hospital, with this figure comprising:

- up to 1 505 hospital admissions, estimated by combining the 1 290 people confirmed as admitted to hospital and the 215 injuries where admission status was unknown
- up to 1 285 emergency presentations that did not become hospital admissions, assuming that the 641 people not admitted and the 644 people with minor injuries all visited a hospital emergency department.

We found, as set out in Figure 2B, that the number of motorcycle riders and passengers attending a hospital was 6 955, more than double the maximum VicPol estimate of 2 790.

Figure 2B
Motorcycle emergency presentations and hospital admissions 2008

Hospital involvement	Place of injury		Totals
	Road	Other /unspecified	
Not admitted after emergency presentation	1 520	2 312	**3 832**
Admitted after emergency presentation	998	793	**1 791**
Admitted without emergency presentation	442	890	**1 332**
All persons	**2 960**	**3 995**	**6 955**

Source: Victorian Auditor-General's Office, based on Department of Health emergency presentation and hospital admission datasets.

Of these:

- 3 123 people, or 45 per cent, were admitted to hospital made up of 1 322 who did not go through an emergency department and 1 791 who did
- 3 832 people, or 55 per cent, visited an emergency department but were not admitted to a hospital.

The scale of the under-reporting is greater for off-road injuries. VicPol recorded that 2 347 people, or 80 per cent, were involved in crashes on public roads and the remaining 585 people, or 20 per cent, experienced an off-road crash.

This contrasted with the hospital data where 2 960 people attending a hospital, had been involved in a crash on a 'road', 'highway' or 'street'. This represents 43 per cent of crashes. The remaining 57 per cent, or 3 995 people, did not specify a location or stated that the crash happened on private land or away from roads.

In 2008 the 2 049 motorcycle rider and passenger claims for TAC compensation were less than a third of the 6 955 riders and passengers who went to a hospital. The TAC rejected 21 of these claims. Figure 2C describes which of the 2 028 successful claimants were admitted to hospital and the value of TAC compensation payments.

Figure 2C
Motorcycle riders and passengers—successful TAC claims in 2008

Hospital admission status	Claims	Compensation	
		Total ($mil)	Average ($)
Admitted to hospital	970	49.4	51 000
Not admitted to hospital	1 058	14.3	13 000
Total	**2 028**	**63.7**	**31 000**

Note: The number of successful claims includes cases where the claimant type was recorded as 'M/CYCLIST' by the TAC.
Source: Victorian Auditor-General's Office, based on Transport Accident Commission data.

Hospital data shows that 3 123 injured riders and passengers were admitted and this is 2 153 higher than the 970 successful TAC claims that involved hospital admission. As past legal cases have widened the circumstances when the TAC is liable to pay compensation it is likely that people that are eligible for compensation have not submitted a claim. The TAC needs to understand and respond to its potential liability for motorcycle injuries that are currently not reported to it or VicPol. The TAC has requested Department of Health data to help it understand the differences described in this report.

The 2008 TAC claims data for motorcyclists also included 55 claims that the TAC paid without being linked to a police crash report. VAGO selected the ten most expensive of these unlinked claims, as well as four unlinked claims involving a fatality between 2006 and 2008, and asked the TAC to explain the absence of a police report.

The TAC analysis found that for:

- eight claims a police report did not exist and the claims were accepted based on evidence including phone conversations with the police, ambulance service or vehicle removal companies, ambulance case sheets and hospital notes
- five claims the TAC have subsequently located a police report
- the remaining claim the TAC denied compensation.

The absence of a police report was a rare event, affecting 55 of the 2 028 successful claims for 2008.

Comparing crash and hospital data on single day

We examined VicPol, the TAC and hospital data for crashes and hospital admissions on specific dates and this detailed analysis verified our aggregate findings.
For example, on 16 November 2008:

- VicPol recorded that eight motorcyclists and passengers were injured in road crashes and taken to hospital. One off-road rider was also injured and in total six road riders were admitted to hospital
- the TAC had records of 14 injury claims for this date
- the hospital data included records for 14 road and 27 other injuries, making a total of 41 persons attending hospital and, of these, 10 were admitted.

2.4.2 Better measuring riders' exposure to risk

Measuring how much riders are exposed to the risk of crashing is important for setting priorities and evaluating actions. Road safety agencies have used the number of licence holders, motorcycle registrations and sales to measure changes in exposure because this information is readily available.

VicRoads recognise that using the number of registrations and licenses to measure exposure is inferior to measuring how far, where and when different types of riders travel. However, reliable information of this type is not currently collected. Without accurate and reliable measures of exposure it is difficult for road safety agencies to:

- be confident that they are targeting the most significant crash risks
- understand how effective their actions have been in addressing crash risks.

Currently the information collected on vehicle kilometres is insufficient to:

- estimate exposure in terms of distance travelled
- understand the reliability of registrations and licences as measures of exposure
- reliably measure the risks facing motorcycle riders compared to other road users
- understand how effective strategies have been in mitigating these risks.

We recognise that VicRoads has completed research that provides greater, but still partial, insight into exposure measured in kilometres travelled. VicRoads and the TAC are amongst several agencies funding a three-year research program which will improve the understanding of motorcycle travel behaviour, road safety and sustainability. The research will provide insight into decision-making processes underlying the mobility and travel decisions of motorcyclists. The project is still at the formative stage and is likely to estimate annual kilometres travelled by motorcyclists in Melbourne.

In reviewing and updating the powered two-wheeler plan VicRoads should document a two-year program of activities to improve its understanding of exposure. In doing this it should assess the costs and benefits of options that:

- continue to rely on registrations and license information
- supplement this information with limited, additional exposure data
- include the regular and reliable measurement of kilometres travelled for motorcyclists along the lines of the recommendations in the 2007 report by the Monash University Accident Research Centre entitled *Development of Road Safety Behaviour, Travel and Exposure Surveys in Victoria*.

2.4.3 Improving the quality and reliability of crash data

VicPol, VicRoads and the TAC have acted by forming an interagency committee to work through the limitations. This committee is dealing with the issues that can be immediately and quickly addressed. It should be strengthened and expanded so it can inform the longer-term actions needed to address under-reporting and the measurement of exposure in the revised powered two-wheeler plan.

In the short term the committee should create a single agreed definition of an 'off-road' crash because currently this is unclear.

RACV summary of data limitations

The RACV 2008 study, *The Suitability of Current Crash Databases for Analysis of Motorcycle Crashes* summarised the limitations of the data VicPol, VicRoads and the TAC use to understand the factors that contribute to crashes.

These limitations include missing, incomplete or insufficient information on:

- vulnerability to, and type of injury
- rider inexperience
- driver failure to see a motorcycle
- instability or braking difficulties
- road surface and environmental hazards
- risk taking
- rider impairment
- crashes involving scooters
- crash location.

Clarity about crash location and off-road crashes

Crash location is of particular importance because if a crash is labelled as 'off-road' it will not be included in the road toll. The Australian Bureau of Statistics guidelines for classifying road crashes include, within the reported road toll, crashes that occur or originate on public roads. For the purposes of reporting the road toll, VicRoads and VicPol have interpreted this as:

- including all freeways, arterial roads, municipal roads and the 2 500 km of non-arterial state roads under DSE's management
- excluding all other roads, tracks and land including some 38 000 km of minor roads and tracks also managed by DSE.

However, VicPol members confirmed that they do not always follow these criteria when recording crashes. For example, members have recorded crashes as off-road because they:

- involved a trail bike rider, even though they occurred on a public road
- happened on a DSE managed road, even though the road was included within the sub-set of DSE roads included in the public road system.

There is no consistently applied definition for recording a crash as off-road. VicPol, VicRoads and the TAC need to agree on, and consistently apply, a definition of 'off-road' when coding crashes for the purposes of the road toll.

Responding to the data limitations

VicPol, VicRoads and the TAC responded to these limitations and the powered two-wheeler plan's action to 'improve the collection, collation and exchange of powered two-wheeler crash data through better interagency liaison' by forming a working group or inter-agency committee.

The group met three times, in October 2009 and in February and June in 2010 and is proving to be a catalyst for responding to these limitations. The minutes record progress on several of the limitations in the RACV report. For example, VicPol will add a 'driver failed to see' variable to the police crash reporting because this is a factor in motorcycle crashes and needs to be recorded.

The committee is proving effective for helping with data limitations that can be immediately addressed by VicPol, VicRoads and the TAC without the need for significant, additional resource commitments.

The committee should contribute to the updated powered two-wheeler plan by forming a program of specific, costed actions to address more challenging deficiencies requiring more resources, a longer lead time and the cooperation of agencies not directly involved in motorcycle safety. To do this, the current committee would need to be strengthened and supplemented by:

- involving agencies such as the Department of Health, Ambulance Victoria and the Department of Justice that control access to data that is important for a better understanding of the risks
- setting clear terms of reference, deliverables and time lines
- providing the expertise and resources needed to develop detailed proposals
- securing the commitment of senior agency personnel
- securing the commitment of senior staff in each of the participating agencies to support the working group and achieve its goals.

Recommendations

1. Victoria Police, VicRoads and the Transport Accident Commission should develop a good understanding of unreported injuries so they can advise government on the implications for motorcycle safety programs.
2. VicRoads should develop and appraise the options for improving its understanding of exposure and apply for the resources to complete the option that provides best value.
3. Victoria Police, VicRoads and the Transport Accident Commission should expand the interagency committee so it is able to resolve or recommend the actions needed to address data limitations.
4. Victoria Police, VicRoads and the Transport Accident Commission should agree on, and consistently apply a definition of 'off-road' when coding crashes for the purposes of the road toll.

3 Prioritising and implementing initiatives

At a glance

Background

A thorough understanding of the safety risks is one of the prerequisites for making good decisions about what to do. This understanding needs to be combined with the ability to prioritise and deliver effective initiatives.

In this part we assessed whether VicRoads, Victoria Police (VicPol) and the Transport Accident Commission (the TAC) had:

- set clear priorities
- adequately planned, implemented and reported on these priorities.

Conclusions

While VicRoads, VicPol and the TAC have targeted initiatives to address most of the identified safety risks for riders travelling on public roads, improving the safety of off-road riders has lagged behind. This significant gap requires action.

Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013 (powered two-wheeler plan) does not adequately explain how initiatives have been prioritised. Assessments of progress against the plan have been reported regularly.

VicRoads, VicPol and the TAC had developed adequate plans for the larger, more significant initiatives in the powered two-wheeler plan and implemented these as intended.

Recommendations

- VicRoads should update its strategic guide and use this to clearly describe the powered two-wheeler plan's priorities in its proposed update for 2012.
- VicPol, VicRoads and the TAC should consult with the Department of Sustainability and Environment and the Victorian Motorcycle Advisory Council to understand and address off-road motorcycling safety risks to coincide with the proposed update of the powered two-wheeler plan for 2012.

3.1 Introduction

A thorough understanding of the safety risks is one of the pre-requisites for making good decisions about what to do. This type of understanding needs to be combined with the ability to prioritise and deliver initiatives that are likely to be effective in improving motorcycle safety.

In this part we assessed whether VicRoads, Victoria Police (VicPol) and the Transport Accident Commission (the TAC) had:

- set clear priorities based on an objective understanding of the risks and the likely effectiveness of initiatives
- adequately planned and implemented these initiatives and reported on progress.

3.2 Conclusions

While VicRoads, VicPol and the TAC have targeted initiatives to address most of the important safety risks for riders travelling on public roads, improving the safety of off-road riders has lagged behind. This significant gap requires action.

Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013 (powered two-wheeler plan) does not adequately explain how initiatives have been prioritised. Assessments of progress against the plan have been reported regularly.

VicRoads, VicPol and the TAC had developed adequate plans for the larger, more significant initiatives in the powered two-wheeler plan and implemented these as intended.

3.3 Prioritising initiatives to address significant risks

3.3.1 Being clear about priorities

A plan will be more effective if its actions are clearly prioritised. This information helps agencies agree what actions are most important to achieve the government's goals and do these things first. This prioritisation is particularly important for plans with numerous initiatives, such as the powered two-wheeler plan which has 49 actions in addition to the 17 actions included from *Victoria's Road Safety Strategy: arrive alive 2008–2017*.

The powered two-wheeler plan did not set clear priorities for its initiatives. The only difference between actions was that those drawn from *Victoria's Road Safety Strategy: First Action Plan 2008–2010* had a delivery time frame of 2008 to 2010 while all other actions were to be delivered between 2009 and 2011.

VicRoads had already established guidelines for levy expenditure in the 2004 document, *Strategic Guide for Expenditure of the Motorcycle Safety Levy* (the strategic guide). This had rated the relevance and importance of different initiatives for the purposes of allocating levy funding.

This should have been the starting point for setting priorities in the powered two-wheeler plan. It is important for the effective use of public funds to debate and resolve priorities up front.

The proposed update of the powered two-wheeler plan should include clear priorities designed to have maximum impact on the safety of motorcycle riders. Updating the strategic guide would help keep the debate on priorities focused on the safety outcomes and the objective evidence about the effectiveness of different measures.

3.3.2 Motorcycle safety on public roads

Motorcycle safety levy initiatives

An effective program of motorcycle safety initiatives will require investment in:

- delivering initiatives with proven safety benefits, such as blackspot improvements
- developing, proving and implementing new ways of improving safety
- researching and evaluating initiatives to check that the program is delivering the required impacts and outcomes.

Overall, the directions in the strategic guide for improving safety on public roads are reasonable. Approximately two-thirds of levy funding to date has been used to improve road locations which are high risk for motorcyclists. These treatments have proven effective and the allocation of this funding is reasonable.

Levy funding has been used to provide an improved understanding of the risks, or to develop and deliver safety initiatives. Levy projects have funded initiatives based on their potential or proven effectiveness to address safety risks.

Improving how the Victorian Motorcycle Advisory Council works

The Victorian Motorcycle Advisory Council (VMAC) was reviewed in 2009 as part of a wider review of transport advisory bodies in response to a recommendation by the State Services Authority. The review identified issues about the functioning and effectiveness of VMAC. Minutes from VMAC meetings also showed that its composition has, on occasion, compromised its ability to focus solely on the safety outcomes when endorsing projects for levy funding.

We found two examples where initiatives that were consistent with the strategic guide priorities were delayed or rejected by VMAC. For example, it took nearly five years after the strategic guide was completed to fund an enforcement project from the levy although this type of initiative was supported by the road safety agencies and the strategic guide.

VMAC also did not endorse two proposals for research into the use and effectiveness of protective clothing despite evidence that this type of clothing reduces the severity of injuries for non-fatal crashes.

VMAC's minutes reveal issues about probity, where VMAC members provided advice about projects for which they were subsequently involved in bidding for the resulting work. VicRoads negotiated more stringent probity protocols but did not then consistently apply these. We have seen evidence that VicRoads is putting updated probity processes in place, which it needs to finalise.

The Minister for Roads and Ports in the previous government accepted recommendations for changing the way VMAC runs. In particular from March 2011 VMAC was to report to VicRoads rather than to the minister. This is now subject to review because of the change of government.

We found that VMAC had made a valuable contribution to improving motorcycle safety but needs refinement so that its:

- membership adequately represents government agencies, the motorcycling industry and Victorian motorcycle and scooter riders
- governance incorporates adequate probity arrangements
- decisions are always justified in terms of their effectiveness in improving motorcycle and scooter safety.

3.3.3 Motorcycle safety away from public roads

Road safety agencies have not adequately addressed the safety of riders travelling anywhere other than public roads. This needs to change because we found that off-road injuries are responsible for half of all the hospital admissions resulting from motorcycle crashes.

In response to our finding:

- VicPol acknowledged that its responsibilities under the *Road Safety Act 1986* applied to off-road riders travelling on public land off public roads.
- The TAC recognised that legal precedent meant it was likely to be liable to pay compensation to riders involved in off-road crashes. Indeed, the earliest case establishing this wider responsibility dates from 2001.
- VicRoads advise that it has focused its attention on the public road system.
- The Department of Sustainability and Environment (DSE) stated that it was not responsible for road safety beyond its asset management obligations under the *Road Management Act 2004* and it would contribute to but not lead work to improve off-road safety.

While the levy is payable on certain motorcycles used for off-road riding, only two levy-funded projects have been completed that examined off-road safety risks. Off-road riders are also not specifically represented on VMAC.

Since 2002, agencies have dealt with the safety of off-road riders as follows:

- The previous motorcycle safety strategy from 2002–07 recognised the importance of off-road safety, but excluded it and stated that VMAC would develop a separate strategy to address these risks.
- In 2004, VicRoads developed the *Strategic Guide for Expenditure of the Motorcycle Safety Levy Funding,* which noted that the safety of off-road riders was a significant issue that is not well understood.
- VMAC endorsed a levy-funded research project that confirmed that the safety risks for off-road riders were significant and needed to be addressed. However, it did not follow through on its intention to develop a strategy.
- DSE developed the Trail Bike Initiative. This project focused on better managing the impacts on the environment and potential conflicts with other forest and park users. While DSE liaised with VMAC on this initiative, it was never intended to address rider safety.
- The 2009 powered two-wheeler plan excluded off-road riding but noted that:
  - some of its actions will have a flow on benefit for off-road riding
  - VMAC is contributing to DSE's Trail Bike Initiative.

The actions in the powered two-wheeler plan are designed to address the safety risks faced by motorcycle and scooter riders and passengers travelling on public roads as defined in the *Road Management Act 2004*.

VicPol, the TAC and VicRoads should consult with DSE and VMAC to develop a plan to understand and address off-road motorcycling safety risks to coincide with the proposed update of the powered two-wheeler plan for 2012.

Recommendations

5. VicRoads should update its strategic guide and use this to clearly describe the powered two-wheeler plan's priorities in its proposed update for 2012.

6. Victoria Police, VicRoads and the Transport Accident Commission should consult with the Department of Sustainability and Environment and the Victorian Motorcycle Advisory Council to understand and address off-road motorcycling safety risks to coincide with the proposed update of the powered two-wheeler plan for 2012.

4 Evaluating effectiveness and achieving outcomes

At a glance

Background

This part examines:

- how well Victoria Police (VicPol), VicRoads and the Transport Accident Commission (the TAC) have evaluated the impacts of individual safety initiatives and applied the learnings
- whether these agencies are on track to achieve the previous government's motorcycle safety policy goals.

Conclusions

VicRoads, VicPol and the TAC have completed methodical and robust evaluations for their major motorcycle safety investments.

The outcomes of the previous motorcycle safety plan were mixed. Motorcycle fatalities fell by 20 per cent in line with the *arrive alive* reduction target for all road fatalities and injuries. However, serious injuries increased over the period of the previous plan.

Under the current plan, the contribution of improved motorcycle safety to the *arrive alive* target of a 30 per cent reduction in all road trauma continues to be mixed. Serious injuries fell significantly between 2008 and 2009, yet fatalities in 2010 exceeded the level experienced five years ago. Nevertheless, since 2002, Victoria and South Australia outperformed other states in reducing motorcycle fatalities.

As the reduction targets relate to a fall in the absolute number of fatalities and serious injuries rather than their rate, they do not take account of the growth in motorcycle use. This makes their achievement more challenging, as data shows that more people are buying and using motorcycles and scooters.

Recommendations

- VicPol, VicRoads and the TAC should expand existing activities to inform the community on expectations about what motorcycle safety programs are likely to achieve, using:
  - the available information on the effectiveness of different initiatives
  - forecasts of changes in exposure.
- VicPol, VicRoads and the TAC should provide information on changes in exposure when reporting on their progress towards the *arrive alive* safety targets.

4.1 Introduction

If agencies are to be effective in pursuing government policy goals, it is important they evaluate their actions and understand the outcomes.

This part examines:

- how well Victoria Police (VicPol), VicRoads and the Transport Accident Commission (the TAC) have evaluated the impacts of individual safety initiatives and applied the learnings
- whether these agencies are on track to achieve the previous government's motorcycle safety policy goals.

4.2 Conclusions

VicRoads, VicPol and the TAC have completed methodical and robust evaluations for their major motorcycle safety investments.

The outcomes of the previous motorcycle safety plan were mixed. Motorcycle fatalities fell by 20 per cent in line with the *arrive alive: Victoria's Road Safety Strategy: 2002-2007* reduction target for all road fatalities and injuries. However, serious injuries increased over the period of the previous plan.

Under *Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013* (powered two-wheeler plan), the contribution of improved motorcycle safety to the *arrive alive* target of a 30 per cent reduction for all road trauma continues to be mixed. Serious injuries fell significantly between 2008 and 2009, yet fatalities in 2010 exceeded the level experienced five years ago. Nevertheless, since 2002, Victoria and South Australia outperformed other states in reducing motorcycle fatalities.

As the reduction targets relate to a fall in the absolute number of fatalities and serious injuries rather than their rate, they do not take account of the growth in motorcycle use. This makes their achievement more challenging, as data shows that more people are buying and using motorcycles and scooters.

4.3 Strengths of the current approach

4.3.1 Victoria Police's approach to evaluation

VicPol has applied sound processes to evaluate motorcycle safety enforcement. It has evaluated operations targeting motorcycles through post-operation debriefs. These debriefs highlighted the positive and negative aspects of each operation, as well as ideas to improve future operations.

VicPol is responsible for piloting a levy-funded community education program to influence rider behaviour and improve safety through education and targeted enforcement. VicRoads, in consultation with VicPol, has commissioned a thorough evaluation of the programs' effectiveness.

4.3.2 VicRoads' approach to evaluation

VicRoads has completed rigorous evaluations for its motorcycle safety projects with large expenditures. For example, it commissioned independent evaluation of the Motorcycle Blackspot Program by the Monash University Accident Research Centre (MUARC). This exhaustive and detailed evaluation found a 24 per cent reduction in motorcycle casualty crashes at 85 sites that included:

- 54 'blacklength' treatments improving short road sections
- 30 long route treatments creating more consistent and safer conditions over longer road sections
- one intersection improvement.

We found evidence of a similar, rigorous approach to other large projects managed by VicRoads.

4.3.3 The Transport Accident Commission's approach to evaluation

The TAC is responsible for public education programs to promote safer rider practices and it routinely collects before and after information to understand program effectiveness. Tools for measuring and evaluating the impact of road safety campaigns include:

- a continuous tracking survey of Victorian drivers conducted over the entire year
- a dedicated motorcycle behavioural tracking study to gauge attitudes and behaviours across a range of motorcycling issues throughout the motorcycling season from September to April
- regular internal and external reporting mechanisms, including periodic reports to the TAC board on motorcycle safety initiatives.

In 2008 and 2009, the TAC developed public education campaigns that focused on increasing protective clothing wearing rates and reducing the risk of motorcycle accidents from speeding. These campaigns are also being used for the 2010–11 period. The key objectives are to:

- promote the regular use of protective clothing to motorcycle riders in Victoria to reduce the impact motorcycle injuries on the TAC compensation scheme
- educate motorcycle riders and pillion passengers on the impacts of speed-related road trauma on vulnerable road users.

Results from a motorcycle behavioural tracking study conducted from September 2009 until April 2010 found that:

- the majority of riders surveyed recalled the most recent motorcycle safety advertisement when prompted
- over half of surveyed riders had discussed the advertisement with family or friends
- nearly one quarter of surveyed riders changed their behaviour after viewing the advertisement.

4.4 Areas that need to be strengthened

Our assessment of the evaluation of major projects and programs by VicPol, VicRoads and TAC was positive. However, there were two cases where we found the need to strengthen the approach to evaluation.

4.4.1 Assurance that VicRoads review and apply evaluations

The 2008 evaluation by MUARC of the Motorcycle Blackspot Program highlighted an issue in how VicRoads uses these results. Overall the evaluation showed a measurable and positive impact on motorcycle crashes.

These evaluations are extensive and thorough pieces of work. It is important that VicRoads can demonstrate that it thoroughly reviews this material and uses it to improve performance.

However, we noted some important findings that VicRoads had not followed up. The overall positive safety outcomes included a reduction in crashes for the 54 'blacklength' sites, but no measurable impact for the 30 long routes included in the program.

VicRoads responded that the result for the long route sites was in fact a 'non finding' because there was insufficient information to make a judgement. VicRoads believes that a lack of post-treatment crash data is the most likely reason for the long route program not having a statistically significant finding in the evaluation.

This was very difficult to discern from the evaluation report. There were references in the report that more data post-treatment would have increased the significance of the results but this was not used to specifically explain the long route result.

VicRoads agreed that the evaluation has not established whether long route treatments had been effective because there was insufficient post-treatment data.

VicRoads has advised that it will:

- determine what additional data are required to measure the effectiveness of long route treatments
- extend the evaluation to collect data and measure effectiveness.

4.4.2 Limitations in the evaluation of the previous safety strategy

The earlier strategy was subject to a mid-term review. Its terms of reference did not include a review of its success in delivering on project and strategy outcomes. This limited its value because it did not provide recommendations about how to improve performance in reducing the road toll.

4.5 Measuring effectiveness

Road safety agencies' performance in meeting the targets set by the previous government has been mixed.

Victoria's Road Safety and Transport Strategic Action Plan for Powered Two Wheelers 2009–2013 (powered two-wheeler plan) sits under the state's road safety strategy, *arrive alive* which sets target reductions in road deaths and serious injuries of:

- 20 per cent for the five years between 2002 and 2007
- 30 per cent for the ten years between 2008 and 2017.

The previous strategy and current powered two-wheeler plan do not set specific targets for improving motorcycle and scooter safety. The powered two-wheeler plan aimed to 'significantly reduce' fatalities and serious injuries. The absence of an analysis estimating reasonable but challenging targets for motorcycle and scooter safety improvements makes it difficult to assess success.

These targets become more challenging if, for example, motorcyclists become more exposed because the number of riders and the distance they travel increases. It is important to view performance against targets in the context of changes in exposure.

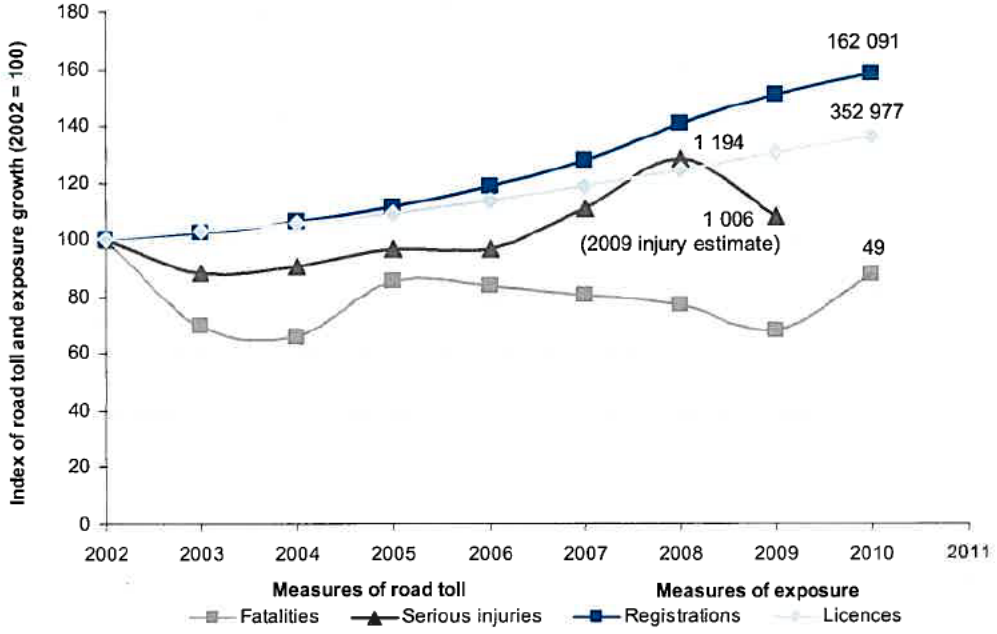
These targets make no allowance for any changes in motorcyclists' exposure to crash risks. An increase in exposure by 20 per cent is likely to lead to a similar increase in crashes if the other factors affecting risk remain unchanged. In this example, a 20 per cent reduction in the absolute number of serious injuries requires a 40 per cent reduction on the injuries expected with additional safety initiatives.

The road safety agencies should use the available information on the effectiveness of different actions and forecasts of changes in exposure to inform future targets.

4.5.1 Trends in the official road toll

Figure 4A shows the changes in deaths and serious injuries and the available measures of exposure.

Figure 4A
Growth in the motorcycle road toll and measure of exposure



Note: A change to Victoria Police data collection processes and systems has resulted in a discontinuity in the data series. Therefore, non-fatal data from 2006 onwards should not be directly compared with previous years' data.

Source: Victorian Auditor-General's Office.

When compared to the *arrive alive* targets, the outcomes of the previous motorcycle safety plan from 2002 to 2007 were mixed. For motorcyclist fatalities, it achieved the 20 per cent target reduction for all road users, but serious injuries increased by 11 per cent from 930 to 1 032. However, over this period, the numbers of vehicles registered and motorcycle licenses rose by 28 per cent and 19 per cent respectively.

To achieve the *arrive alive* 30 per cent target for the period 2008 to 2017 for motorcycles requires:

- serious injuries to fall from 1 194 in 2008 to 836 or lower by 2017
- fatalities to fall from 43 in 2008 to 30 or lower by 2017.

Reported road injuries have fallen by 16 per cent between 2008 and 2009. Motorcyclist fatalities initially fell from 43 in 2008 to 38 in 2009, but then significantly increased to 49 in 2010, exceeding levels last seen in 2005.

VicPol, VicRoads and the TAC are scrutinising the crash information to understand what is behind the recent spike in motorcycle fatalities. However, we have not seen a clear explanation of the causes.

4.5.2 Comparing the road toll across states

Figure 4B compares motorcycle fatalities for Victoria and other states. Between 2002 and 2009, Victoria and South Australia outperformed the other states by reducing fatalities by 32 per cent and fatalities per registration by more than 50 per cent.

Figure 4B
Changes in motorcycle fatalities and fatalities per registration by state

	Percentage change 2002 to 2009	
State	Fatalities	Fatalities per vehicle registration
Victoria	–32	–53
New South Wales	24	–27
Queensland	13	–41
South Australia	–32	–57
Western Australia	43	–23

Source: Victorian Auditor-Generals Office based on Commonwealth data.

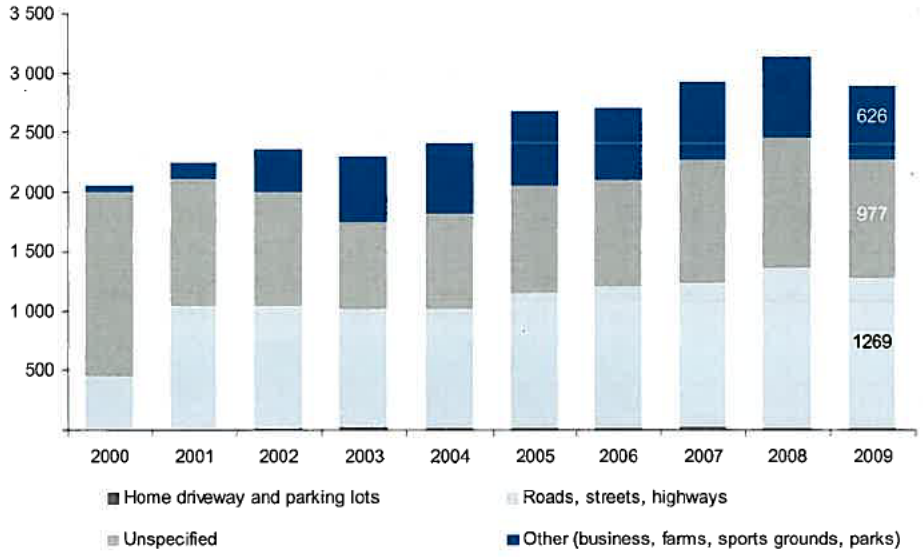
4.5.3 Hospital admission trends

Figure 4C shows motorcycle hospital admissions and these are equivalent to what VicPol defines as serious injuries.

While the number of admissions is more than double the serious road injuries measured in the road toll in Figure 4A, the trend is very similar. In 2009 there were:

- 1 269 admissions where the location of injury was stated as a road, street or highway and this compared with 1 006 serious injuries in the official road toll
- 977 admissions where the place of injury was unspecified
- 626 admissions where the place of injury was away from roads or other places
- a small number where the place of injury was a private drive way or car park.

Figure 4C
Motorcycle hospital admissions by 'place of injury'



Source: Victorian Auditor-General's Office, based on Department of Health data.

4.5.4 Summary

Road safety agencies have been successful in reducing the number of motorcycle deaths on public roads since 2002. The road toll for this year reverses this trend and agencies are working to understand and address the increase. Victoria's performance compares well with other states.

Serious injuries are now heading in the right direction after trending upwards between 2002 and 2008.

It is important that road safety agencies explain the context for these and future results in terms of changes in exposure to help the community interpret changes.

Recommendations

7. Victoria Police, VicRoads and the Transport Accident Commission should expand existing activities to inform the community on expectations about what motorcycle safety programs are likely to achieve, using:
   - the available information on the effectiveness of different initiatives
   - forecasts of changes in exposure.
8. Victoria Police, VicRoads and the Transport Accident Commission should provide information on changes in exposure when reporting on their progress towards the *arrive alive* safety targets.

Appendix A.

Audit Act 1994 section 16—submissions and comments

Introduction

In accordance with section 16(3) of the *Audit Act 1994* a copy of this report was provided to Victoria Police, VicRoads, the Transport Accident Commission and the Department of Sustainability and Environment with a request for submissions or comments.

The submissions and comments provided are not subject to audit nor the evidentiary standards required to reach an audit conclusion. Responsibility for the accuracy, fairness and balance of those comments rests solely with the agency head.

Contents

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  - Victoria Police 37
  - Transport Accident Commission 41
  - Department of Sustainability and Environment 42

Submissions and comments received

RESPONSE provided by the Acting Chief Executive, VicRoads

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(File No PC009270)

Mr D D R Pearson
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Victorian Auditor-General's Office
Level 24
35 Collins Street
MELBOURNE VIC 3000

Dear Mr Pearson

PROPOSED AUDIT REPORT
MOTORCYCLE AND SCOOTER SAFETY PROGRAMS

I refer to your letter dated 12 January 2011, regarding the proposed Audit Report on Motorcycle and Scooter Safety Programs and your invitation to provide submissions or comments for inclusion in the report.

VicRoads provided a response to the preliminary draft report in a letter dated 22 December 2010. In that response, it was stated that the report provides a useful basis for further enhancing motorcycle safety and noted that it highlighted a significant gap in regard to responsibility for off-road motorcycle trauma. In addition to these earlier comments, gaining a better understanding of crashes that result in injury but which are not reported to Police, also provides an opportunity to further understand motorcyclist risk.

Thank you for the opportunity to review and provide further input to the proposed report. It appears that the suggestions in VicRoads' response to the preliminary draft have substantially been addressed. I understand that comments on the remaining minor issues have been provided at officer level.

Whilst the report identifies opportunities for improvement in the delivery of motorcycle and scooter safety programs, it also acknowledges the agencies' effective understanding of risk and continued investment to improving the understanding of risk; the targeting of initiatives to address the most important risks for riders and the methodical and robust evaluations of major motorcycle safety investments.

The report amendments and resolution comments satisfy VicRoads' input to the report, and as such there is no need for any comments to be included in the report.

Yours sincerely

for **BRUCE GIDLEY**
ACTING CHIEF EXECUTIVE

27 / / 2011

Victoria

VicRoads ABN 61 760 960 480

RESPONSE provided by the Deputy Commissioner (Road Policing), Victoria Police

VICTORIA POLICE

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20th January, 2011.

Mr Ray Winn
Director, Performance Audit
Victorian Auditor-General's Office,
Level 24,
35 Collins Street,
Melbourne, 3000

Dear Mr Winn,

I refer to the proposed audit report on *Motorcycle and Scooter Safety Programs* forwarded to Victoria Police on 12th January, 2011. This report follows on from a draft specification, early and late conduct briefing papers forwarded to Victoria Police during 2010. I note that you met with Deputy Commissioner Ken Lay, Superintendent Bob Stork and Acting Senior Sergeant Jamie Chester at the Victoria Police Centre on 13th December, 2010, where feedback was provided on the Early and Late Conduct Briefing Papers of the audit.

Having recently assumed the Road Policing portfolio, it is encouraging to discover from the early findings of the review, that Victoria Police continues to work hard to recognise the characteristics and causes of motorcycle crashes. Whilst Victoria Police adopts an evidential and intelligence based approach when deploying resources to improve motorcycle safety, we also appreciate that there is much more work to be carried out in this area. In that respect Victoria Police continues to work collaboratively with the road safety partners in an effort to minimise road trauma risk to all road user groups.

In reference to the proposed audit report, Victoria Police maintains the position previously reported on and offered by way of correspondence dated 15th December, 2010. Additional to those comments, I also acknowledge the contemporary recommendations 1, 3, 4, 6, 7 and 8 which relate directly to Victoria Police and are likely to be included in the final audit to be tabled in Parliament in February, 2011.

RESPONSE provided by the Deputy Commissioner (Road Policing), Victoria Police – continued

VAGO Draft Audit Recommendations

1. **VicPol, Vic Roads and TAC should develop a good understanding of unreported injuries so they can advise Government on the implications for motorcycle safety programs.**

Victoria Police acknowledges a gap between reported and unreported injuries however it is a question of what use can be made of potentially inaccurate hospital injury data compared to an official police collision report. There are significant barriers associated with accessing hospital data, including privacy provisions. De-identified, non-specific, statistical data may assist in understanding the prevalence of injury types, but not their nature. Accessing more specific data is problematic in its collection and accuracy. The data may also provide evidence of a criminal offence of failing to report a collision. When an offence is disclosed, Victoria police has a duty to investigate. If it is intended to gain access to this data, without consent, it must be requested under warrant. However, it is difficult to identify an appropriate legislative authority to obtain a warrant if the offence is not indictable. If the person is asked to consent, they should also be cautioned. If the person becomes aware that the details may be accessed by police, they may be reluctant to seek treatment, or to provide full and frank disclosure of the details of their medical condition, thereby increasing the risk to public health.

- A good understanding requires accessing a level of detail not recorded and forwarded to MUARC.
- There is heavy reliance on self reporting and then accurate recording by medical/hospital staff that have competing interests/priorities.
- To properly inform motorcycle programs, causal data is essential, independent (police) examination and validation of information is required regarding accuracy.
- The additional information may provide a picture of the demographics, but as above accuracy and causal data should provide the basis of understanding risk and strategy.

3. **VicPol, Vic Roads and TAC should expand the interagency committee so it is able to resolve or recommend the actions needed to address data limitations.**

- Victoria Police supports the ongoing commitment to the interagency Powered Two Wheel Committee and the TIS Interagency Data Quality and Change Management Working Group. It is envisaged that these committees will continue to explore these issues.

4. **VicPol, Vic Roads and TAC should agree on and consistently apply a definition of 'off-Road' when coding crashes for the purposes of the road toll.**

There is passing mention of conflicting understandings of what constitutes an 'Off Road' crash within Victoria Police itself. I can advise that the Traffic Incident System (TIS) will be implementing a Replacement Location Validation System in early 2011, which will assist members in the authentication of collision locations. This system will enhance the accuracy of identifying collision location data via computer based mapping technology. The information gained will be used to expand the capability of understanding the 'Off-Road' definition per the ABS guidelines. It will also promote a more accurate account for our statistical, analytical and intelligence areas regarding tasking and coordination.

RESPONSE provided by the Deputy Commissioner (Road Policing), Victoria Police – continued

The main thrust of recommendation 4 is directly associated to perceived inconsistencies between the road safety partners.

The relevant criteria used by Victoria Police to classify crashes in terms of the official road toll are contained within the Australian Bureau of Statistics (ABS) "Guidelines for Reporting and Classifying Road Vehicle Accidents" 2005.

Victoria Police consistently applies these guidelines to determine whether the crash being considered meets the criteria for road toll reporting. Work is currently being undertaken by the Australia New Zealand Policing Advisory Agency (ANZPAA) to reach national consensus on a common set of guidelines for use by all jurisdictions within Australia. It is important to note that where an injury crash is reported to police, the data is captured and retained regardless of on or off-road status. Details of these crashes are not discarded as they may be of special interest to some authority or agency.

- Victoria Police consistently applies the ABS definition and support ANZPAA's efforts regarding National consistency. It is Victoria Police's position that if there is any inconsistency between agencies that the ABS guidelines should prevail.

6. **VicPol, Vic Roads and TAC should consult the Department of Sustainability and Environment and VMAC to understand and address off-road motorcycling safety risks to coincide with the proposed update of the powered two-wheeler plan for 2012.**

- Victoria Police supports the recommendation and will continue to work with all relevant agencies to further motorcycle safety in Victoria.

7. **VicPol, Vic Roads and TAC should expand existing activities to inform the community on expectations about what motorcycle safety programs are likely to achieve, using:**

   (i) The available information on the effectiveness of different initiatives
   (ii) Forecasts of changes in exposure.

- Victoria Police supports the principle of continuing to work with our road safety partners to promote motorcycle safety messages.
- Consideration should be given to expanding the message to remind the public of their obligation to report crashes.
- Care must be exercised that such communications do not compromise police operational efforts.

8. **VicPol, Vic Roads and TAC should provide information on changes in exposure when reporting on their progress towards the *Arrive Alive* safety targets.**

- Victoria Police is constantly enhancing and improving its intelligence gathering capability and looks forward to the opportunity to work with its road safety partners to explore our capacity to provide this type of detail when reporting on whole of Government road safety strategic objectives.

RESPONSE provided by the Deputy Commissioner (Road Policing), Victoria Police – continued

Conclusion

It is a priority of Victoria Police to work closely with our road safety partners in reducing all road trauma. We know that through our road safety partnership with Vic Roads, TAC and the Department of Justice that the whole-of-government road safety strategies and initiatives are making a difference. We continue to direct attention to vulnerable road user groups such as motorcycles and scooter operators, who are significantly over-represented in road trauma. We understand that registration and licensing of these road users continues to increase each year and that effective programs directed at minimising the risk of road trauma is imperative.

We appreciate the ongoing opportunity to comment and provide feedback toward the Motorcycle and Scooter Safety Program Audit. Victoria Police now await the release of the final Audit Report to be tabled in the Victorian Parliament in February, 2011.

Yours sincerely,

Kieran J Walshe APM
Deputy Commissioner
Office of Deputy Commissioner (Road Policing)

Page 4 of 4

RESPONSE provided by the Chief Executive Officer, Transport Accident Commission

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2 February 2011

Mr D D R Pearson
Auditor-General
Victorian Auditor General's Office
Level 24, 35 Collins Street
Melbourne Vic 3000

Dear Mr Pearson

Audit Act 1994 s16(3) – Proposed Audit Report
Motorcycle and Scooter Safety Programs

Thank you for providing the TAC with a copy of the proposed report for our consideration.

Consistent with the advice provided to your office following the preparation of the draft report the TAC is pleased to note that VAGO believes that the TAC, along with its *arrive alive* partner agencies, has completed methodical and robust evaluations of our major motorcycle investments. The work of your office has added to knowledge about motorcycle and scooter related injury and identified some areas for the TAC to further investigate.

I understand the TAC Senior Manager Road Safety and Marketing has provided advice to your office outlining the action taken by the TAC to clarify the data kept by the Department of Health since the draft report was presented.

The TAC will respond to the recommendations as required when the final report is presented to Parliament.

Should you require further comment or clarification please feel free to contact [redacted] Manager Road Safety, on [redacted]

Yours sincerely

Janet Dore

cc: Mr Paul Barker, TAC Chairman

RESPONSE provided by the Secretary Department of Sustainability and Environment

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Mr D D R Pearson
Auditor-General
Auditor General Victoria
Level 24
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Dear Mr Pearson

PROPOSED AUDIT REPORT - MOTORCYCLE AND SCOOTER SAFETY PROGRAMS

Thank you for your letter dated 12 January 2011, regarding the proposed Audit Report *Motorcycle and Scooter Safety Programs*. I understand that the report is due to be tabled in Parliament in February 2011.

The Department of Sustainability and Environment (DSE) has reviewed the proposed report and concludes that the findings and recommendations that apply to DSE are fair and reasonable. In particular, though DSE notes and concurs with the finding in section 1.3.4 that DSE is not responsible for road safety, DSE nonetheless supports Recommendation 6 which recommends that Victoria Police, VicRoads and the Transport Accident Commission consult with DSE regarding off-road motorcycling safety risks.

Thank you for this opportunity to comment on the proposed report.

Yours sincerely

Greg Wilson
Secretary

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Restricting Environmental Flows during Water Shortages (2010–11:17)	October 2010
Victorian Registration and Qualifications Authority (2010–11:18)	October 2010
Acquittal Report: Results of the 2009–10 Audits: (2010–11:19)	February 2011
Effectiveness of Victims of Crime Programs: (2010–11:20)	February 2011

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WRB Report

Wire Rope Barrier (WRB) illustrates much of what is wrong with our roadsides. Roadside hazards are involved in ~40 % of all accidents (with all vehicles). Up to 30 % of all motorcycle, fatalities involve a post, pole or tree. Around 2.4 - 2.6 % of Australian motorcycle, deaths involve a barrier (up to 16 % overseas). This figure increases further for casualties. In such accidents, the exposed posts constitute most of the hazard. Exposed posts concentrate impact forces and lead to increased soft tissue injuries, fractures, amputations and deaths. All barriers stop most cross-over accidents! However, WRB has the highest number of exposed posts of any barrier. Ergo, WRB has the highest potential to kill riders. This short report summarises the problems and suggests solutions.

Posts

There are many examples of the reduced surface area and sharp edges causing injuries and fatalities. Telephone poles, signs and trees all figure prominently in injuries and deaths. German research illustrated the consequences of impacts with posts using cadavers. Amputations and fractures resulted. Researchers provided measurements of the impact forces generated (making comparisons more straightforward). An impact with a series of WRB posts would create similar forces and similar injuries. It would be more than sufficient to kill. Even a slow collision with a post is enough to kill a rider!

The tops of posts (especially if uncapped) can also be a problem. A rider can be cut in half tumbling along the top of the barrier.

Creating Hazards

Impacts with trees and other objects are common roadside accident scenarios. Motorcyclists have been requesting the removal of trees and other objects from medians for years (RIP Helen Hawthorn)! This simple and cheap intervention would save many lives. Barriers with exposed posts contribute to the problem. By placing WRB so close to roads, there is no safe run-off area creating a hazard where none previously existed. Drivers need to be able to safely exit a car (or truck) without walking into traffic. A 4 m offset to the road allows a driver enough room to pull over and exit.

Cross-overs

Cross-over accidents (into oncoming traffic) are of most significant concern. Almost any barrier in the median would prevent most cross-over accidents. WRB claims to stop 100 % of cross-overs (obviously untrue). Hitting WRB posts often catapults a rider over the barrier into oncoming traffic N.B. 37 % of riders go over the top of barriers! This catapult action does not happen with a smooth-faced barrier. Riders can also slide between the posts, and WRB does not stop larger vehicles. By comparison, the simple concrete barrier stops even large trucks, e.g. In 2006 24th July in Yatala Queensland, a truck went through WRB on a freeway killing one and injuring 8.

Rollovers

Rollovers are common in roadside accidents. Rollovers significantly increase the risk of injury or death. Taller vehicles like 4WD's and vans are at risk of rolling when hitting WRB. The end treatments (where they are attached to the ground) of many WRB installations cause flipping of the vehicle. Installing WRB also requires levelling of the roadside so that cars do not roll before they hit the barrier N.B. Roadside clear zones alone may be sufficient to prevent accidents in many cases, e.g. 85 % of all vehicles travelling at 100 Km/hr recover in a 9 m clear zone.

Figure 1 WRB Ballarat Road Sunshine: WRB too close to the road and end treatments which will flip a car/rider or launch them into the air.

MUARC (Monash University Accident Research Centre) testing compared WRB to obsolete Jersey concrete barrier. Vic Roads says it has not used Jersey for over 20 years because it rolls cars. *WRB rolled cars during testing too!* The public has never seen this original report: Only MUARC researchers have access to it. An F-profile concrete barrier is currently in use and has about half the rollover rate of the Jersey profile. Presumably,

F-profile has fewer rollovers than WRB? Newer concrete barrier types (Texas profile) have an even lower rollover rate than F-profile. Why weren't they tested?

These same reports failed to identify that outside of Australia, the rate of barrier fatalities for motorcyclists is much higher (up to 16 %) demonstrating that as exposure increases fatality rates will too, i.e. More unsafe barriers mean more deaths!

Costs

Typical installation and repair costs for simple installations:

Installation Cost/metre		Typical Repair Costs/metre
Concrete	$150+	Negligible (>80-year lifespan)
Steel W-beam	$120+	$80 to $150
Wire ropes	$130+	$25

These are Vic Roads figures N.B. Independent contractors quoted complex concrete barrier installations with footings and drainage at $150/m and less if you wanted lots of it.

Thus, installation costs for all barrier types are similar. However, after only one impact, maintenance costs make WRB more expensive than concrete. Over the years, WRB will be many times more costly than alternatives because it requires more maintenance: Placing WRB closer to the road (a common practice) results in more frequent damage and larger damaged sections when hit. These costs are at odds with claims that WRB is cheap.

Accident facts

1) Motorcyclists tend to hit barriers like concrete at shallow angles (<15°) because they leave the road at shallow angles.
2) Concrete has no projections, so motorcyclists slide along the barrier.
3) 85 % of vehicles recover within 9 m of a 100 km zone (no barriers required).
4) 37 % of riders go over the top of barriers: Items behind barriers kill riders!
5) Exposed posts kill riders!

WRB:

- Is easily damaged
- Is less effective or ineffective until repaired
- Is often extensively damaged (large sections unserviceable)
- Can create a hazard until repaired
- Can spend long periods between repairs (7 – 30+ days)
- Has high maintenance costs (poor whole of life cost-effectiveness)
- Can fling a rider over the barrier and into oncoming traffic or some other hazard
- The further it is placed from the road the safer it is for motorcyclists
- Becomes more expensive to maintain the closer you place it to the road
- Often needs to be duplicated on both sides of a median (doubling the cost)
- Acts like a substantial barrier to riders (because riders are much lighter than cars)
- Stops riders suddenly when they hit the posts (rapid deceleration)

- The exposed posts are a significant hazard to riders
- Testing the cabling with riders has not been done
- Is not designed to stop trucks or tall vehicles
- Does not allow vehicles to pull off the road safely
- Restricts access by emergency vehicles

Concrete barriers:
- Have little or no maintenance costs
- Are functional effectively 100 % of the time
- Have similar installation costs to WRB
- Are the most forgiving barrier for motorcyclists (of the three listed)
- Reduce light glare at night
- Prevent more cross-over accidents than WRB
- Are safer at shallow impact angles (<30 degrees)
- Stop trucks

Alternative Solutions

Cover the posts and barriers become much safer

1) Expanded foam impact attenuators placed around posts reduce impact forces by 50 %
2) Mototub is a compressible rubber tube positioned along the bottom of WRB, Armco and other barriers to prevent riders from sliding into posts.
3) Armco is a safe alternative if the posts are covered (top & bottom), e.g. In countries like Portugal they use tyres to protect the posts.

Use barriers without exposed posts or other projections:

1) Concrete has a smooth snag-free surface
2) Tire barriers on racetracks are very successful at preventing injury.

Decelerate vehicles gradually:

1) Gravel, sand and other materials (such as shredded rubber) on racetracks/roads stop motorcycles, cars and trucks safely at very high speeds.
2) Water filled collapsible barriers are incredibly effective at dissipating extreme impact forces with minimal injuries even for large vehicles.

Remove hazards

This alternative needs to be applied more frequently. Usually, it is the cheapest of all the options. Once implemented, it fixes the problem for good, often makes barriers unnecessary and requires little or no ongoing expenditure.

Why is safe design a smart move?

1) Better designs can avoid at least 30% of all road fatalities
2) Motorcyclists are amongst those most prone to injury and death due to bad design
3) Good design is much cheaper than lousy design
4) Excellent design for motorcyclists is generally good for other road users
5) Vic Roads is underfunded by around $1Billion/yr. It can not afford expensive solutions if cheap ones exist.

Figure 2 Princess Freeway Laverton A double row of WRB… which doubles the cost of WRB

For more information on this or other road safety issues go to the Motorcycle Riders Association (MRA) page: www.mraa.net.au

Michael Czajka PhD
MRA Road Safety & Research Officer

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http://www.vicroads.vic.gov.au/Home/Moreinfoandservices/Motorcycles/VictorianMotorcycleAdvisoryCouncil.htm
MRAA rep to the ATSB's (Australian Transport Safety Bureau) motorcycle safety advisory council http://www.atsb.gov.au for ~ten years.
Member of the AMC (Australian Motorcycle Council) the peak rider group for Australia http://www.amc.asn.au

Last updated 7/6/20

Appendix

Figure 3 Yea Showing middle of the road WRB. The end treatments are particularly problematic. Any car crossing the road would ride up the anchoring cable and roll.

Un-riders = Unlicensed/Unregistered/Underage

Un-riders are probably the largest identified discrete group in motorcycle fatalities. In Victoria, unlicensed rider fatalities have been a problem for many years. In 2001, the TAC, Vic Roads and Police now agree that 35-37% of deaths are unlicensed. The equivalent number of unlicensed drivers is usually about 5-10%. We are unable to establish the total number of Unriders because most jurisdictions do not compile figures comparing unlicensed/unregistered/underage fatalities.

Virtually every high-risk behaviour category has an over-representation of Un-riders:

- 35-37%+ of fatalities were unlicensed (Vic 2001)
- 37% of all crashed riders over .05 were also unlicensed
- 25% of all unlicensed rider crashes were alcohol-related
- 36% of unlicensed rider crashes were speed-related
- 46% of crashed riders not wearing a helmet were unlicensed
- Unlicensed riders were twice as likely to have a pillion when they crashed (14%) (Positioned for Safety, NSW MCC, 2002).

The Un-rider figures increase further if we include un-registered riders. No current statistics exist for unregistered riders.

Police figures now tell us that around 66-80% of the Un-riders have a car license. Only ~20% of Un-riders have an expired or suspended motorcycle license. Un-riders are not just a motorcyclist problem. They are a problem for all road users. Interventions aimed at keeping car drivers off motorcycles may be more effective than continuous blitzing of licensed motorcyclists. If all road users bear the responsibility for this problem, then all road users should bear the costs associated with this problem.

Urgent

Un-riders need stating in all motorcycle statistics as a matter of urgency. Awareness of the Un-rider figures is almost non-existent because of this non-reporting. Once Un-riders are separately identified, Licensed rider risk profiles change dramatically. Licensed riders start to look like some of the most responsible road users on our roads, e.g. Vic .05 stats, over many years, show between 20-25% of rider fatalities are over .05 (usually very similar to the car figure). Take out the unlicensed riders, and suddenly the number drops to ~15% or less. That is significantly lower than cars which are usually ~25% (over .05 fatalities).

Research

To fix a problem, you must first understand it:

- How old are Un-riders?
- Where do they come from?
- What bikes do they favour?
- Did they have a license in the past?
- What kind of license did they have?
- Do they have a car license?
- What is stopping Un-riders from getting a license?
- Where do they ride?
- How is it that traditional policing has been mostly ineffectual?

- How have such problems been addressed in other parts of the world?

Ineffectual
In 2001 Victorian police put out more speed cameras and Booze Buses than ever before. Bookings decreased from over 2% to fewer than 2% of traffic flow. The number of hours of operation of speed cameras increased dramatically. In 2001, a motorcycle blitz by police was the only motorcycle safety initiative on the official road safety calendar. The primary justification for the blitz was the high level of illegals. In 2001, the level of illegal fatalities increased 144%, in Victoria, from ~9 (22%) to ~22 (34%) of deaths N.B. Prior-year figures probably under-estimate Unriders, which would decrease the increase in Un-rider fatalities for 2001.

Booze buses, speed cameras and policing have been the traditional approach to safety in Victoria and most states. Statistics seem to indicate that we are now seeing a plateau in road safety benefits from these conventional approaches and diminishing responses are now the norm.

An explanation
It appears that increased policing results in increased levels of illegals. Research around the world seems to support this. Transurban (the Victorian tollways) have reported that unidentified vehicles are becoming more frequent. Californian research supports this contention: up to 75% of drivers who lose their licenses drive while cancelled (Accident Analysis & Prevention, 1999, p.45). Driving without a license is logical: Unlicensed drivers can no longer lose their licenses. Fines are no deterrent if the identification (no registration) of vehicles is not possible.

Consultation
Consultation with rider groups identifies the problems. Consultation with rider groups creates good research proposals. Consultation with rider experts focuses the research in the conceptual, implementation and analysis stages. The consultation gives motorcycle research credibility. Consultation ensures the broad promotion and implementation of research findings. Consultation is required to solve the issue of Un-riders.

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Road Safety & Research Officer
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http://go.to/mc-research for motorcycle research including the NSW report mentioned above.

MRA Policy Document

Last updated: 27/3/06

Contents

Introduction (the scope of the policy document)

1) Road Safety
- Safe Roads
- Safe Vehicles
- Safe People
- Safety Information

2) Image

3) Legislation
- FNP's
- Appropriate Penalties
- $50 Levy

4) Appendices

Barriers

Policy Document
- The role of a Policy document
- Creating a policy
- Using the Policy document
- Developing the Policy document
- Updating the policy document

Introduction

The MRA advocates Riders rights in three broad areas:

1) Road Safety
2) Image
3) Legislation

These three areas are drawn directly from the MRA aims:
1) To promote road safety
2) To promote a better image for motorcycling
3) To work for fair and sensible legislation

1

Road Safety

1)Safe Roads

Policy statement
All road users are entitled to Safe Roads (including motorcyclists).

Policy
Motorcyclists should be included in safety strategies.

This is a matter of urgency because vulnerable Road Users are over-represented in fatalities.

The National Road Safety Strategy estimates that a 30% reduction in fatalities is possible by improving our roads.

1) Road Safety

Policy
Road safety is for all road users (including motorcyclists).

Facts
Motorcyclists are part of the Vulnerable Road User (VRU) group.

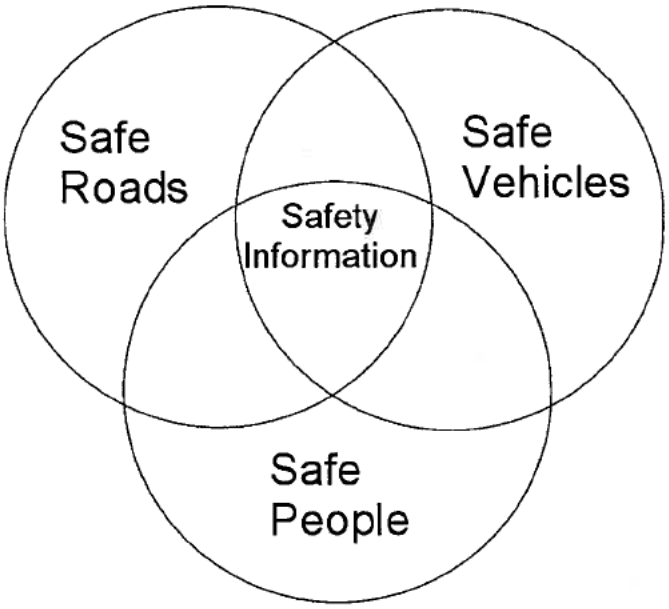
The VRU group comprises pedestrians, bicyclists and motorcyclists.

Together VRU's make up roughly 30% of fatalities.

VRU's share accident features in common:

VRU's
- Have little primary protection in case of an accident
- Rely on avoiding accidents rather than surviving them
- Are unlikely to cause injury to other road users
- Are often legally in the right in accidents (Western Underwriters 2004)

Policy
A simple four Point Safety Strategy is the key to improved Road Safety:
1) Safe Roads
2) Safe People
3) Safe Vehicles
4) Safety Information



Roadside hazards

Policy statement
Roadside hazards are undesirable.

Definition
Roadside hazards can be both man made and natural. Hazards include any object that has the potential to kill or injure. Normally roadside hazards are objects that stop you suddenly. Posts, poles, trees are one type of roadside hazard. Other hard objects such as rocks might make up others.

1) Roadside hazards are involved in most accidents 70%+.
2) Posts, poles and trees are responsible for around 30% of motorcycle fatalities.

Posts
Posts (or post like objects) are especially dangerous because:

- No matter which angle you approach from it is like hitting posts head on
- The small surface area of a post concentrates forces increasing injuries

Barriers

Policy
Barriers should be utilised as a last resort in roadside use.

Definition
Barriers are objects that in some way decelerate or redirect forces away from more dangerous objects or consequences.

1) Roadside barriers are responsible for around 10% of all motorcycle fatalities (more in some overseas countries).
2) Riders are twice as likely to die if they hit a barrier.
3) The posts are the most dangerous items in a barrier

Road design guidelines prioritise the responses to a hazard:
1) Remove the hazard
2) Move the hazard at least to the edge of the clear zone
3) Remove the danger
4) Make change the hazard to reduce impact severity
5) Install impact attenuation or redirection devices around the hazard

Road Design Guidelines (3.9 Clear Zones) Rev 2.3 Aug 1997 p.63

"A safety barrier is a hazard in itself" ...and should only be installed where the consequences of the impact with the barrier are less than the (unprotected) alternatives. Road Design Guidelines, P67.

Austroads part 15 Guide to Traffic Engineering Practise, Motorcycle Safety states "minimise the number of posts and poles" p.22.

Wire Rope Barriers

Policy
The MRA is opposed to the installation of WRB.

Rationale
WRB contains the greatest density of exposed posts of any barrier system.
WRB tends to be placed very close to the road which increases the risk of hitting the posts.

WRB is contrary to the Labour government's policy promises
WRB is contrary to the Road Design Guidelines (Austroads 15, p.22)
WRB creates a lethal environment for motorcyclists

WRB is a maintenance intensive barrier. It has very high maintenance costs and long down times (10-30 day repair times). On economic grounds other barriers are more attractive (refer WRB fact sheet).

Alternatives to WRB
1) Create clear zones
2) Use safer barriers eg. racetrack proven technology (Tire barriers), Barriers with smooth surfaces and no projections, etc…
3) Slow vehicles down once they leave the road eg. Gravel, Sand, water, etc…
4) Install newer energy damping barriers eg. Water Filled Barriers

What can be done to improve the safety of WRB?
1) Remove unnecessary barriers
2) Remove hazards which make barriers necessary
3) Locate barriers as far from traffic flow as practical
4) Prevent unnecessary duplication of barriers
5) Make the posts soft/weak/frangible enough not to injure a motorcyclist
6) Install impact attenuators on the posts
7) Install covers over the barrier to prevent contact with the posts

Refer to Annex for illustrations of barrier types.

Motorcycle Tolls

Policy
Motorbike and scooter riders in Victoria should not be required to pay road tolls.
Approved: 2005

Rationale
- Toll roads are safer for riders.
- Powered two-wheelers are good for the environment.
- They help ease traffic stress by facilitating traffic flow.
- Riders already pay heavy road user taxes and charges.
- Bike tolls won't benefit toll company shareholders
- Commuter cycles should be encouraged by all three levels of government as they benefit society as a whole.

The Facts
- Toll roads in Victoria are often at capacity, sometimes overloaded.
- Most vehicles in these traffic jams are single-occupant cars.
- Traffic jams increase pollution and decrease productivity
- Exhaust emissions do not stop when a vehicle is stationary
- Man-hours are lost when vehicle occupants, private and commercial, are trapped in traffic jams.
- Most bike riders own cars
- Most road user injuries are caused by driver error.
- Riders in casualty crashes almost never injure third parties.
- Motorbikes and scooters do minimal damage to infrastructure.
- Motorbikes and scooters use between 10-15% of the parking space of a car

Tolling road-registered motorbikes and scooters in Victoria will:
- Cause many riders to use alternate, less safe, routes.
- Cause other riders to return to their cars increasing third party injuries, pollution, traffic stress and parking problems.
- Decrease traffic flow on toll roads at peak times reducing toll income for the company and its' shareholders.
- Increase the number of vehicles seeking alternative routes, some through residential and sensitive areas.

Not tolling road-registered motorbikes and scooters in Victoria will:
- Encourage riders to use safer, well-maintained and monitored roads.
- Encourage the use of environmentally friendly vehicles as commuters.
- Ease traffic stress and parking problems for drivers.
- Help toll collection systems to operate efficiently.
- Be a public relations positive for toll companies by presenting a safety conscious, "green" and efficient image as people movers.

Motorcycle Parades

Policy
Motorbike and scooter parades in urban areas, like the Melbourne MRA Toy Run, should move as a single unit from assembly area to destination. Approved 2005

Rationale
The safest, most efficient way to move a large group of riders from point A to point B is in a single, disciplined column.

The Facts

• 2) Safe People

The road is a shared environment.

Riders and drivers are jointly responsible for road safety.

Rider Training

Policy statement
All motorcyclists are entitled to access appropriate safety focussed training.

The MRA will support proposals designed to extend the range and type of safety enhancing training available to all motorcyclists.

Defensive riding
Training and skills development for motorcyclists should not just cover the basic skills needed to obtain a licence or a permit. Further training in roadcraft (defensive riding) and advanced skills for both on and off road riders will reduce the incidence of injuries and accidents.

Such training should be equitably available at an affordable cost and at appropriate accessible locations.

Definition
Is riding in a manner which avoids accidents. This is primarily a cognitive approach requiring mental skills.
This can be contrasted with responding to situations which threaten to injure the rider eg. Emergency braking, counter steering, etc… which are all handling skills.

3) Safe Vehicles

4) Safety Information

2
Image

3
Legislation

3) Legislation

Policy
The MRA will oppose legislation we perceive to be ineffectual or discriminatory.

Motorcyclists should be treated in the same manner as other road users in our legislative system.

Front Number Plates (FNP's)

Policy
The MRA opposes the fitment of front number plates.

Rationale
Front number plates have been proposed by the government as a safety measure; mainly as a method of improving the detection of non-compliant motorcyclists.

The evidence

- Victorian figures from 2002 show that of 3,445,000 car registrations, 95,000 vehicles passed a speed camera but were not issued a fine due to lack of a front plate or an obscured plate.
- For motorcycles, figures from 2001 show that of ~105,000 registrations, 3216 bikes passed a speed camera site but were not issued a fine as the photo was taken from the front.
- This equates to 2.8% of cars and 3.1% of bikes not fined (.3% difference).
- If 2.8% of cars escape fines, FNP's can only reduce motorcycle speeding non-detection to 2.8% Nb. a lower rate than cars is unlikely but a higher rate is possible.
- Catching a further 0.3% of riders equates to only 316 riders per year.
- Therefore, the ~$10M+ cost of introducing FNPs is equivalent to a cost of $31,645 per rider caught.

Lack of evidence based research
There is no evidence that even one life will be saved or one accident prevented Nb. FNP's are not used in any other developed country.

Waste of scarce resources
No demonstrated safety outcomes and such a small effect suggest a negative rate of return on expenditure. Because of this motorcyclists believe FNP's are not a safety issue.

Alternatives
There are plenty of better ways to spend this money that will show much higher rates of return eg. Funding motorcycle black spot repairs often returns 16x the invested amount.

Government policy
The government has stated its intention to only implement projects for which there is evidence based research. FNPs fail this criterion.

Priorities
Motorcyclists ask the government to fund motorcycle safety interventions with high safety returns. Riders suggest using a prioritised, evidence based strategy to make such decisions.
Last amended: 30/9/05

Appropriate Penalties - Fatal Crashes

Policy
When a fatality (or serious injury) occurs four actions should be the mandatory result for the "at fault" road user:
1) A loss of license;
2) Re-training;
3) Re-testing;
4) Community service.

Background
In 2002 and 2003 when car drivers killed motorcyclists in Geelong (Mick Kemp & Graham Clarke) their penalty was a small fine ($550 & $535 respectively).

Inappropriate Penalty
Fines are not an appropriate penalty when a road user makes a mistake and kills a motorcyclist (or other vulnerable road user).
Fines have a short term deterrent effect but do not ensure that the offending person is trained to prevent future crashes.
Fines do not test that the road user is aware of, or comply with, existing laws.

The Evidence
Motorcyclists are not at fault in ~70% of dual vehicle crashes (Swann 2004) eg. Failure to give way at intersections is a common crash scenario (VicRoads Motorcycle Safety Strategy 2003-07).
Car drivers are responsible for most vulnerable road user deaths (motorcyclists, cyclists & pedestrians).
In any given year it is a rare event where a motorcyclist causes the death of another road user.

Perceptions
Vulnerable road users believe vulnerable road user fatalities are treated differently to car fatalities.

The solution
Improving the skills and judgment of road users is a reasonable response to any fatality involving poor skills and/or judgment.

Equal before the law
It is proposed that rules apply equally to sentencing for all road users who are at fault in a fatality.

Equity
As a member of the community has been removed it is appropriate that the survivor contributes back to the community in the form of community service. Approved 26/2/05

$50 TAC Levy Policy

Policy
The MRA strongly opposes the $50 TAC levy. However we approve that motorcyclists are directing the spending of these funds.

Background
Motorcyclists received a $50 TAC levy in the state budget of 2002. The levy was earmarked to improve motorcycle safety. This TAC levy has a review date of October 2005 (after 3 years) and will raise some $10.5 million dollars during this time.

Administration of the levy
The expenditure of the levy is administered by VMAC (Victorian Motorcycle Advisory Committee) which is a committee of motorcyclists with representation from key government agencies (Vic Roads, Police & TAC).

The Facts
The motorcycle road toll peaked in 2001 at 62 deaths. The increase in fatalities in 2001 probably reflected an increase in motorcycle registrations in recent years (~25%+). In 2002 it dropped to 56 (-9.7%) and it dived to 39 (-37%) in 2003 (TAC website 2004). There is no correlation between the reduction and the expenditure of the $50 "safety levy" because virtually no $50 levy money was spent during this period Nb. This lack of expenditure reflects the lag time between planning and implementation of projects.

Motorcyclists pay less into the TAC system than they take out (TAC indicates a 1:3 ratio). However almost all motorcyclists own a motorcycle and a car. Thus motorcyclists pay at least 2 sets of registration (contribute twice). Adjusting for this gives a 2:3 ratio.

In 2001 35-37% of motorcycle fatalities were unlicensed to ride motorcycles. Of these unlicensed motorcyclists most were licensed to drive cars... and pay car registration.

When dual vehicle motorcycle accidents occur, the other vehicle (car) is at fault ~70% of the time (Swann Insurance, 2004).

Off- road accidents were 38% of hospitalizations in 2003. Most off-road riders do not have TAC insurance but are covered by the TAC scheme if they are considered to be riding "on road". "On road" has now been redefined to include most tracks. Many if not most off-road riders pay car registration.

These facts suggest that any equitable intervention in motorcycle safety is a joint responsibility of car owners and motorcyclists. Costs should be shared.

Discriminatory
No other road user group is subject to such a tax. In a no-fault system we are attributing fault only to motorcyclists!

Learner Approved Motorcycles

Policy

The MRA supports "Learner Approved Motorcycles" for both Learners and Probationary Licence holders.

The MRA believes that restrictions should be based on a more equitable "power to weight" ratio rather than an arbitrary capacity limit.

Facts

NSW, Qld, ACT, SA & Tasmania have implemented an approved list of motorcycles suitable for learner and probationary riders. This list is not based on a capacity limit but on a "power to weight" ratio.

There are many 250 – 260cc capacity sports machines available with a higher performance than larger touring or cruising motorcycles. Often the performance characteristics of these machines may make them more difficult to ride than a larger capacity machine in a lower state of tune.

Some learners may require a heavier, larger capacity motorcycle. These include physically heavier or taller riders or riders who may travel longer distances.

Some safety features such as anti-lock braking systems (very useful for inexperienced riders) are only available on larger motorcycles.

NSW, Qld, ACT, SA & Tasmania all have LAM's.

8/6/05

Small Scooters on a car license (draft)

Policy
Anyone who has a car license should be legally entitled to use a small capacity scooter on the road.

Rationale
Riding a small scooter (~50cc) on a car license is legal in four Australian states (W.A., Qld, S.A. & NT).

The Facts
Currently most car trips are made with only one person in the car.

Moving drivers to small scooters would:

- Improve traffic flow (decrease congestion): The Westgate Bridge is forecast to be fully congested by 2007! Many of our freeways are car parks at certain times of the day
- Reduce our reliance on fossil fuels: scooters get up to 50Km/L
- Improve air quality: 1L v's 5L to move the same distance = no contest!
- Reduce our expenditure on the road network (including the need for parking facilities): 1 car parking spot = 10 scooter spots!
- Provide a cheap form of personal mobility: new scooters start from under $2K
- Increase road users awareness of riders: As the number of scooters increases the rate of "Sorry Mate I Didn't See You" (SMIDSY) crashes drops because drivers are used to looking out for scooters.

25/10/05

Lane Filtering

Policy
The MRA supports filtering when done in a safe, responsible and respectful manner. Approved 25/2/06 MRA AGM

Rationale
Research shows that filtering can reduce crashes.
There is no evidence to suggest that filtering increases crashes.

Definition
Filtering is the practice of riding between lines of stationary traffic.
Nb. Riding between moving traffic is known as 'lane splitting'.

Background
Until 1999, there were no laws restricting filtering. In 1999, the Victorian Road Rules were revised. Clause 141 was added preventing overtaking to the left of a vehicle if in the same lane as that vehicle Nb. It is still permitted to pass to the right side of the vehicle but to the left of the white line (refer diagram in appendix).

Evidence
- The Hurt Report concluded that filtering reduces crash frequency compared with sitting in stop and go traffic[1].
- The US Department of Transport supports filtering as it reduces congestion while providing possible safety benefits[2].
- Rear end collisions were 23% of all Qld crashes in 2002 (Queensland Transport Annual Road Traffic Crash Report: 2002) Nb. Filtering prevents rear end collisions.
- 2 rear end motorcycle collisions resulting in m/c fatalities have occurred in front of the Vic Coroners Court in the last 5 years
- Many countries have legalised, and encourage, filtering eg. UK & US

Filtering benefits all road users:
- Riders benefit from improved visibility and space when they filter to the front of traffic lights.
- Prevents riders from being 'sandwiched' between two vehicles in stationary or slow moving traffic
- Reduces traffic congestion for all road users.
- Increases road carrying capacity.

Recommendation
Filtering should be further legalised and encouraged.

References
1. Hurt, H.H., Ouellet, J.V. and Thom, D.R., Motorcycle Accident Cause Factors and Identification of Countermeasures, Volume 1: Technical Report, Traffic Safety Centre, University of Southern California, Los Angeles, California 90007, Contract No. DOT HS-5-01160, January 1981 (Final Report)
2. US Department of Transport, http://www.nhtsa.dot.gov/ 2/5/05

Lane Splitting (draft)

Policy
The MRA supports lane splitting when done in a safe, responsible and respectful manner.

Rationale
Research shows lane splitting may improve safety when carried out responsibly.
There is no evidence to suggest that lane splitting increases crashes.

Definition
Lane splitting is the practice of riding between lines of moving traffic.
Nb. Riding between moving stationary traffic is known as 'lane filtering'.

Background
Until 1999, there were no laws restricting lane splitting. In 1999, the Victorian Road Rules were revised. Clause 141 was added preventing overtaking to the left of a vehicle if in the same lane as that vehicle Nb. It is still permitted to pass to the right side of the vehicle but to the left of the white line (refer diagram in appendix).

Evidence
- The Hurt Report concluded that lane splitting reduces crash frequency compared with sitting in stop and go traffic[1].
- The US Department of Transport supports lane splitting as it reduces congestion while providing possible safety benefits[2].
- Rear end collisions were 23% of all Qld crashes in 2002 (Queensland Transport Annual Road Traffic Crash Report: 2002) Nb. Rear end collisions can be prevented by lane splitting
- 2 rear end motorcycle collisions resulting in m/c fatalities have occurred in front of the Vic Coroners Court in the last 5 years
- Many countries have legalised, and encourage, lane splitting eg. UK & US

Lane splitting benefits all road users:
- Riders benefit from improved visibility and space when they move to the front of a column of traffic
- Prevents riders from being 'sandwiched' between two vehicles
- Reduces traffic congestion for all road users.
- Increases road carrying capacity.

Recommendation
The difference in speed between vehicles when engaged in lane splitting should be no more than 20km/hr.

References
1. Hurt, H.H., Ouellet, J.V. and Thom, D.R., Motorcycle Accident Cause Factors and Identification of Countermeasures, Volume 1: Technical Report, Traffic Safety Centre, University of Southern California, Los Angeles, California 90007, Contract No. DOT HS-5-01160, January 1981 (Final Report)
2. US Department of Transport, http://www.nhtsa.dot.gov/ 2/5/05

Registration Labels: Placement

Policy

The MRA supports label placement on the motorcycle in a rearward facing position or on the right side of the motorcycle (a prominent position).

Rationale

The current system of registration label for two and three wheel motorcycles is difficult to adhere to:

- A registration label in a suitable holder (mostly plastic) is difficult to place on the majority of motorcycles;
- The existing requirements for the label in its holder is specified in the Road Safety (Vehicles) Regulations 1999 SR No 29/1999:

You are not allowed to place the label at the centre bottom of the numberplate.
You are not allowed to place the label on the right hand side of the motor cycle

The label is most visible in these two positions.

- Many riders are uncertain where the label in a holder should be placed and use the existing holes at the bottom of the numberplate.
- Labels are placed at the centre bottom of the number plate mostly because there is no other suitable area to locate it.
- The bottom of the number plate is the most obvious place to put a registration label

Victoria Police also have problems with positioning labels on their motorcycles. It has been observed that they:

- Attach the label to the numberplate facing rearwards,
- Attach the label on the existing holes at the bottom of the numberplate,
- Do not attach the label at all.

Solutions

1) Amend the Regulations to allow rearwards facing labels.

2) Amend regulations to allow location to the right hand side of the motorcycle, scooter or trike.

Steel Plates on Roads

Policy

The MRA calls for the Vic Roads draft standard on steel plates (used on roads) to be implemented.

The MRA calls for Vic Roads to create other similar guidelines for metal objects that may be on our roads but not covered by these proposed guidelines.

Background

Steel plates are commonly used to cover temporary large holes in the road that have been created by roadworks, construction crews, Telstra, etc.... These plates, particularly when wet, are a danger to motorcyclists as they become a skid pan providing almost no traction.

No consideration is made in placement and size of these plates. They merely cover a hole in the road. If the plate happens to overlap the line that one would take leading into a corner then so be it.

The Facts

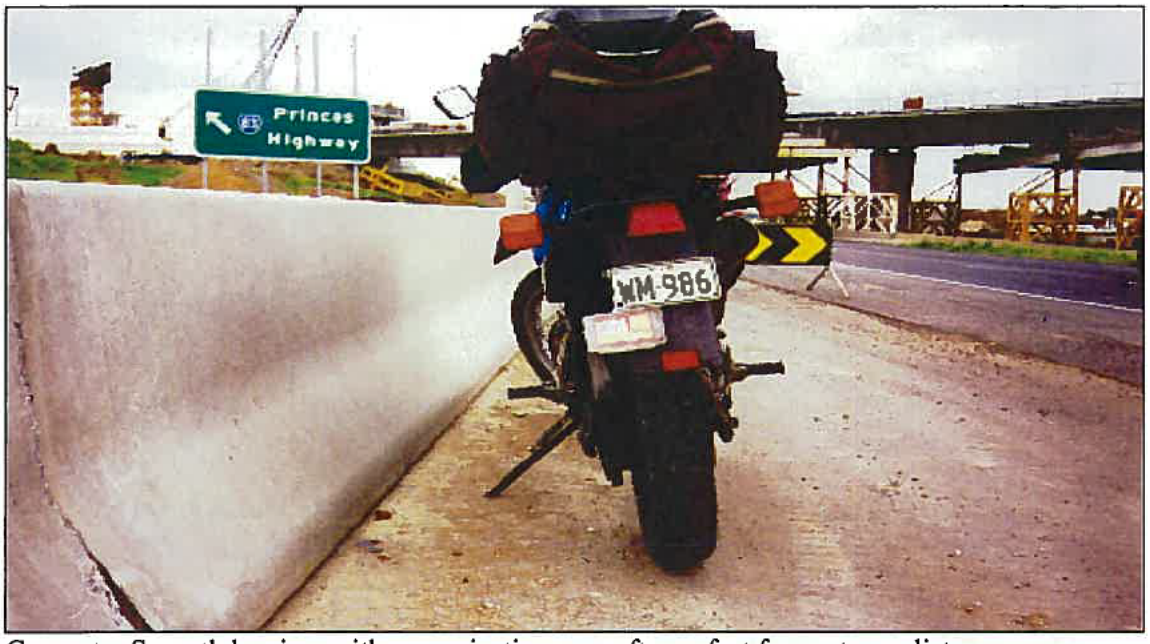
- The chances of someone having a crash are very high on low friction surfaces.
- It can be very hard to stay upright when braking as stopping distance is greatly increased and stability decreased
- Cornering becomes perilous on a slippery surface
- Poor road surfaces are a primary cause of motorcycle accidents.
- Most road surfaces have a coefficient of friction between 45-55BPN
- Steel plates have a coefficient of friction, when wet, of under 25BPN
- A road with a BPN of under 25 is considered dangerous by Vic Roads
- A paint with a BPN of 35 is rarely used on the roads... and new regulations require 45 or 55 BPN paints in most locations.

Appendix: Barriers

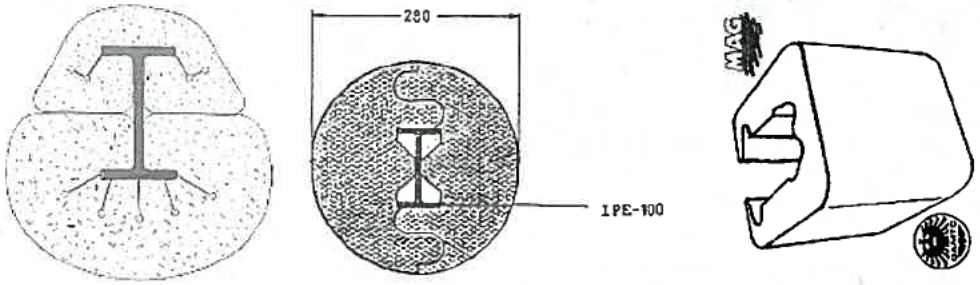
Mototub used to protect WRB

Pt Cook
Road
LEFT LANE

WRB = Lots of posts, small surface area to concentrate impact forces and often located too close to roads. A further detailed report on WRF is available at the motorcycle research web site http://go.to/mc-research



Concrete: Smooth barriers with no projections are often safest for motorcyclists



Impact attenuators are foam cushions that go around posts. They decrease impact forces by around 50%.

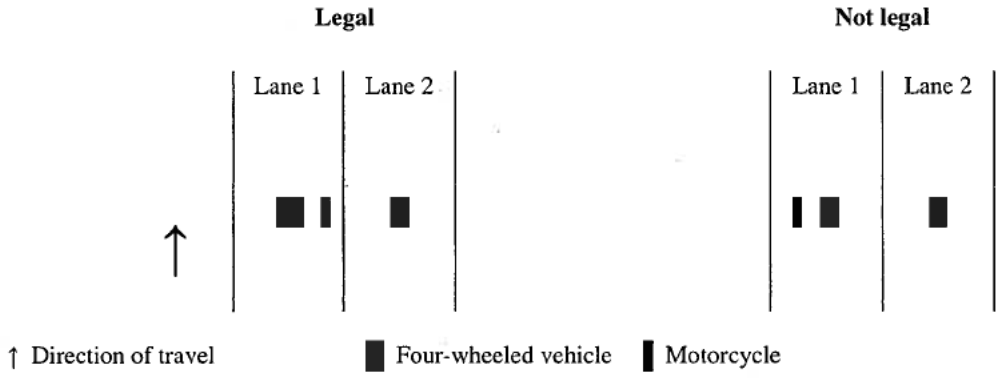
Armco posts can create a hazard as this Portugese advertisement shows. In Portugal they are protecting Armco posts with old car tyres.

Portugese safety video: 10% of riders that hit a guardrail die! At 30mph guard rail posts are blades that kill and maim! Protect guard rails! Protect life! http://go.to/mc-research for the full video clip

Tyres as used on racetracks to prevent injury and fatalities at speeds 2 or 3 times the legal limit on our roads.

Water filled barriers. A relatively new barrier but with lots of potential eg.
A 2000 kg Truck Traveling at 62 mph at a 25 degree angle.

Lane Filtering and Splitting



Appendix: Policy Document

The role of a Policy document

The MRA is regularly asked its position on motorcycle issues. This document provides those positions.

MRA Policies have to be easily understood and accessible to people who may have little knowledge of politics, the media and/or motorcycling. This policy document gives the MRA a uniform, clear and well-prepared voice.

The need for speed
Issues often arise with very little warning. A response often has to be prepared very rapidly:

"A stitch in time saves nine"

Putting together a comprehensive response quickly is a not easy.

"Act in haste. Repent at leisure"

A policy document addresses these concerns.

Work smarter not harder
The same issues arise again and again. Repeatedly preparing a response to the same issue is unnecessary if we centralise previous responses in a policy document.

- A Policy document makes supporting information much easier to find.
- A Policy document improves the quality of any response.
- A Policy document can be continually refined to improve it.
- A policy document ensures the MRA is representing the views of its members, bolstered by the facts.

Historical perspective
The policy document serves as a corporate memory. It is a link to the past and an aid in the future.

"Those who fail to remember the past are doomed to forever repeat it" Santayana (1863-1952)

Creating a policy

Anyone can create a policy: Policies are usually created by individuals which are passionate about an issue. If you're passionate about something consider putting it down on paper as a policy.

Structure
Policies should contain:
1) Policy statement
2) Rationale
3) Appendix (optional)

1) Policy statement
- Should be one sentence
- Should clearly state the position
- Should refer to only one thing

2) Rationale
The rationale should:
- Be easy to read (simple)
- Explain the reasons for supporting a policy
- Contain facts and figures supporting the policy

The exact layout of the Rationale is flexible and can be tailored to the requirements of the point being illustrated.

3) Appendix
Used to store additional information which doesn't fit on one page eg. Photo's & charts

Peer Review
1) MRA members/committees review draft policies prior to wider distribution.
2) Draft policies are circulated to members in the MRAA magazine.

Ratification
Members ratify policies at formal meetings eg. QGM's/AGM's or Special meetings
A ratified policy should contain the date of ratification Nb. **Only the policy statement is subject to a vote not the Rationale.**

Using the policy document

Once ratified, the policies guide MRA committee and members. People can quote from the document secure in the knowledge that they have consulted with members and are communicating the members point of view. Even a draft policy is useful (although not compelling).

Developing the policy document

Each time an issue arises that is not in the Policy document… the outcomes should be documented in the Policy document… so that the information can be reused the next time round.

Pro-active
Policies can be created proactively to address impending issues.

Re-active
There is nothing like a crisis to focus thinking.
Consensus is often easier to achieve in a crisis.
Policies on contentious items are often easier to develope in a crisis.

Updating the policy document

The Rationale is just a supporting document. It can be updated any time without members voting on it.

Each time an issue arises the rationale should be updated to include the new facts (bring it up to date).

Obsolete policies
If a policy is no longer current a meeting can vote to remove it or change it.

Who's responsible?
The Secretary is responsible for most documents. Thus the Secretary is ultimately responsible for making sure the Policy Document is updated with new policies as they are passed at meetings. However to reduce workload it is recommended the task of developing the document be delegated to a third party… which might include a sub-committee.

Nb. The Secretary should always have a copy of the policy document.

Date of last update should be noted on the front of the document.
Date of changes to individual policies should be noted inside the document.