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Victorian Parliamentary Road Safety Committee Inquiry into Motorcycle Safety

Victorian Motorcycle Council Submission
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About this submission:

The Victorian Motorcycle Council appreciates the opportunity to present a submission to the 2011 Victorian Parliamentary Road Safety Committee Inquiry into Motorcycle Safety.

The Victorian Motorcycle Council was created to represent the interests of motorcyclists, motorcycling organisations and relevant stakeholders in Victoria. The Victorian Motorcycle Council is represented on the Australian Motorcycle Council, the peak motorcycle body in Australia.

This submission represents the experience and thinking of a diverse group of experienced, representative and interested motorcyclists. Compiled and written by Rob Salvatore B.Eng Mech (Hons), it also includes direct contributions from Bronwyn Sorensen B.Psych.Sc (Hons), Stuart Strickland (former MD Honda MPE Australia) and Steve Scheffer (experienced career-rider).

The information included in this submission has been attained from public sources. Every reasonable effort has been made to ensure the information is accurate and relevant. The VMC has endeavoured to address as many of the terms of reference as possible by selecting key items. Some responses may cover topics relevant to a number of terms of reference beyond the heading under which they are placed. Further exploration of the diverse range of complex topics within the terms of reference was beyond the scope of this submission. However, the VMC has positions on and is available for consultation on any of the points within the terms of reference not covered in this submission.

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Appendix A: Motorcycle traffic filtering

Introduction: Motorcycling is complex

Motorcycles are an entirely unique mode of transport and as such require a unique approach to motorcycle safety. The generalisation of car-centric models of road safety to motorcycles is in most cases not appropriate. Despite their simple appearance, motorcycles are vehicles that exhibit complex dynamics and are impacted by physics and rider inputs in often counter-intuitive ways.

Motorcycling has many unique aspects that are not well appreciated by non-riders: manoeuvrability, acceleration, foot print, and exposure, for example. Motorcycles are owned and used for many reasons: utility, discretionary purposes, for pleasure, as a hobby, for social status, out of financial necessity, for fuel economy, a way of self-expression, to improve mental health, for touring, on the road, off the road, a range of agricultural purposes, competitive racing, relaxed cruising, weekend breaks, comradeship, restoration, displaying/showing, and collecting. In addition, the many segments of the motorcycle market and subsections within those segments generally bewilder a non-rider and can lead to misconceptions about the market as a whole.

To draw a metaphoric example, the topic of motorcycling is equivalent to the elephant in the Indian tale of the 'Blind wise men and the elephant' [1]. Many people seem to have a view on riding or think of motorcycling in terms of the part they know. Some of the strongest views about motorcycling appear to be held by non-riders coming from a perspective of car-centricity, or further, an anti-motorcycling prejudice born from a poor understanding of the issues involved. Consequently, these views can be misleading to others if not potentially dangerous.

In summary, motorcycles are a unique road user group with complex issues and needs. Any decisions made for motorcyclists about motorcycling that hasn't included effective consultation with motorcyclists is likely to be flawed or incomplete, risking disenfranchising the fastest growing sector of the Australian transport market [8]. Safety strategies that have taken careful consideration of motorcycles' unique needs are likely to receive universal acceptance and garner the respect of the motorcycle community.

Further explanation of the unique needs of motorcycles on key topics within the terms of reference of the *Road Safety Committee Inquiry into Motorcycle Safety* will be discussed in the body of this submission.

Key motorcycling advice and solutions should come from motorcyclists and their organisations.

(a) *Trends in motorcycling over time:
Victorian motorcyclists are the safest in Australia*

The recent Victorian Auditor General's report into motorcycle and scooter safety [7] describes that between 2002 and 2007, Victorian motorcyclists experienced a 53% reduction in fatality rate, despite a 28% increase in the number of registrations. This real terms success in motorcycle road safety has continued throughout the remainder of the decade [14] as demonstrated in Figure 1.

Despite this reduction, authorities such as TAC and Victoria Police continue to focus on year-to-year raw motorcycle road toll numbers with the claim that motorcycle deaths are on the increase. This approach overstates the small statistical variation between years whereby the relatively small number of motorcycle deaths is very sensitive to variable factors (e.g. influenced by registrations, weather/exposure, BAC, licence status). Motorcycle deaths per year must be considered in their broader long-term context and *real terms* situation (i.e. with consideration for increases in registrations).

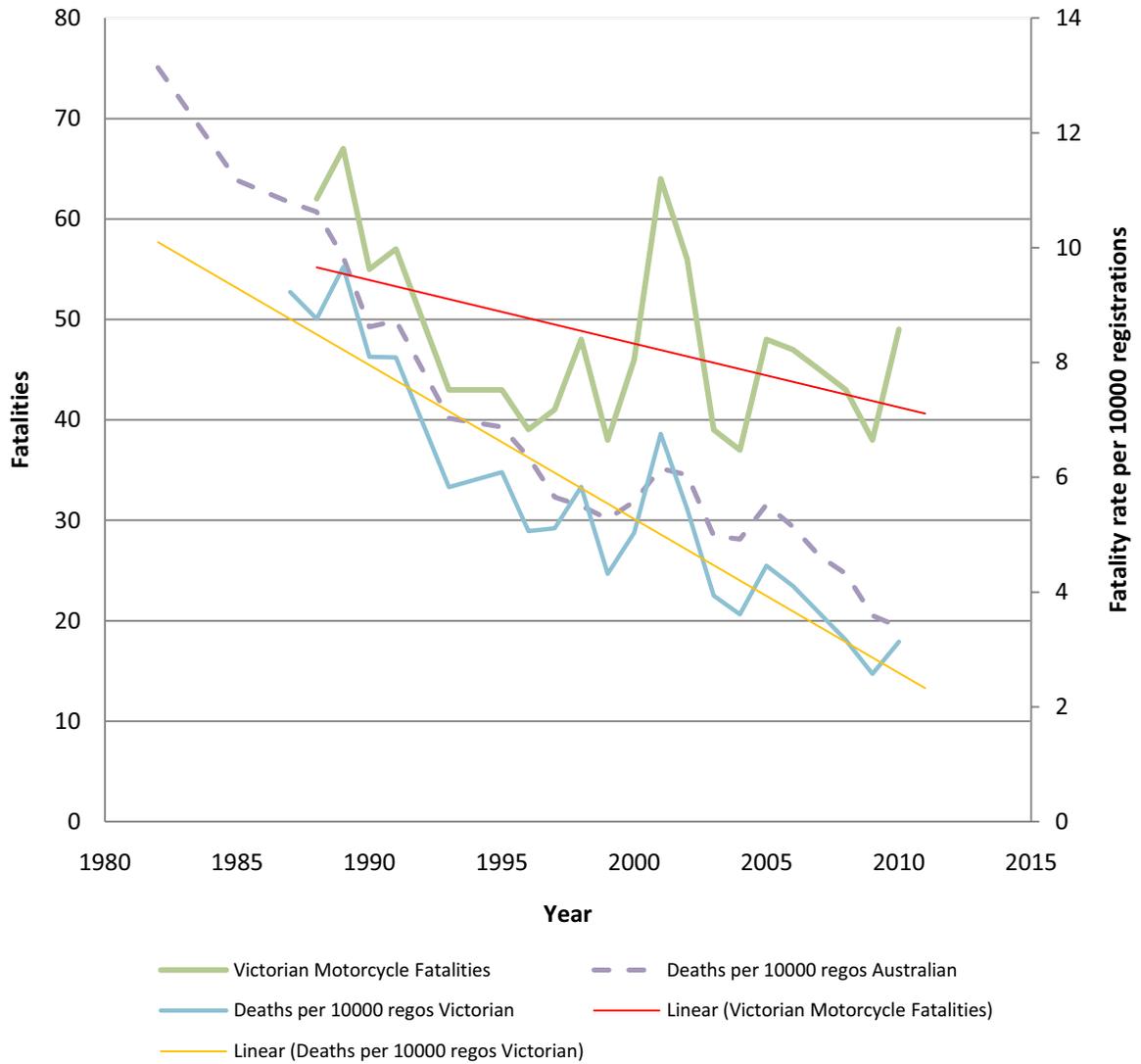
To expand on this point, 2010's well-reported increase in motorcycle fatalities was below the 2001 peak of 64 fatalities [14]. Figure 1 shows that there is a decreasing trend in both count and rate, and that compared to the start of the decade, there are 70% more registered motorcycles on Victorian roads (BITRE Motor vehicle census). In summary, that is both a decreasing fatality count and trend whilst motorcycling uptake increased strongly (fastest growing road user sector according to the BITRE census). Rarely is this reported accurately.

With the exception of 2001, Victoria's motorcycle fatality (per registration) rate has been consistently lower than the national average in every year of the last decade, and for most years was the lowest rate of any jurisdiction [14]. Yet bafflingly this is not broadly publicised.

As can be seen from Figure 1, the underlying trend is a decreasing one in both count and rate. For comparison purposes, the national rate is also shown, which also shows a downward trend. Motorcycling is safer than ever.

It is recommended the Road Safety Committee consider and acknowledge the real terms reductions achieved in the motorcycle road toll to date.

Figure1: Victorian and national motorcycle fatality rates.



*(a) Trends in motorcycling over time:
Drivers are a motorcyclist's greatest risk*

Over half of all motorcyclist deaths and 70% of all fatal and serious injury crashes involve another vehicle and typically the other vehicle has failed to give way to the motorcycle [27, 28]. Similar findings are repeated the world over [3, 23]. Drivers routinely fail to see motorcyclists, particularly at intersections [29]. The National Road Safety Strategy 2011-2020 states that some 32% of all fatalities occur at intersections. This has every likelihood of increasing given the forward blind spots that now exist in modern cars due to their large A pillars [26]. These blind spots were shown by a recent RACV study to hide whole cars, pedestrians & cyclists [26], consequently a safety hazard to motorcycles.

In 2008 MUARC conducted a study on hazard perception of motorcyclists compared to drivers [30] and found that motorcyclists consistently identified more hazards up to 4 seconds sooner than a corresponding car driver. This suggests an area that could potentially be improved upon in general driving ability and skill. It also suggests that motorcyclists possess inherent hazard perception skills greater than those displayed by car drivers and that their ability to identify risk may correspond to greater ability to mitigate risk.

In summary, research suggests that improving the competencies of drivers would show corresponding improvement in motorcycle safety.

The RSC is encouraged to consider motorcycle awareness campaigns directed at drivers along with strategies aimed at improving the general abilities and skills of drivers.

*(b) The changing face of motorcycling and its impact on road safety:
Are motorcyclists over represented in the road toll?*

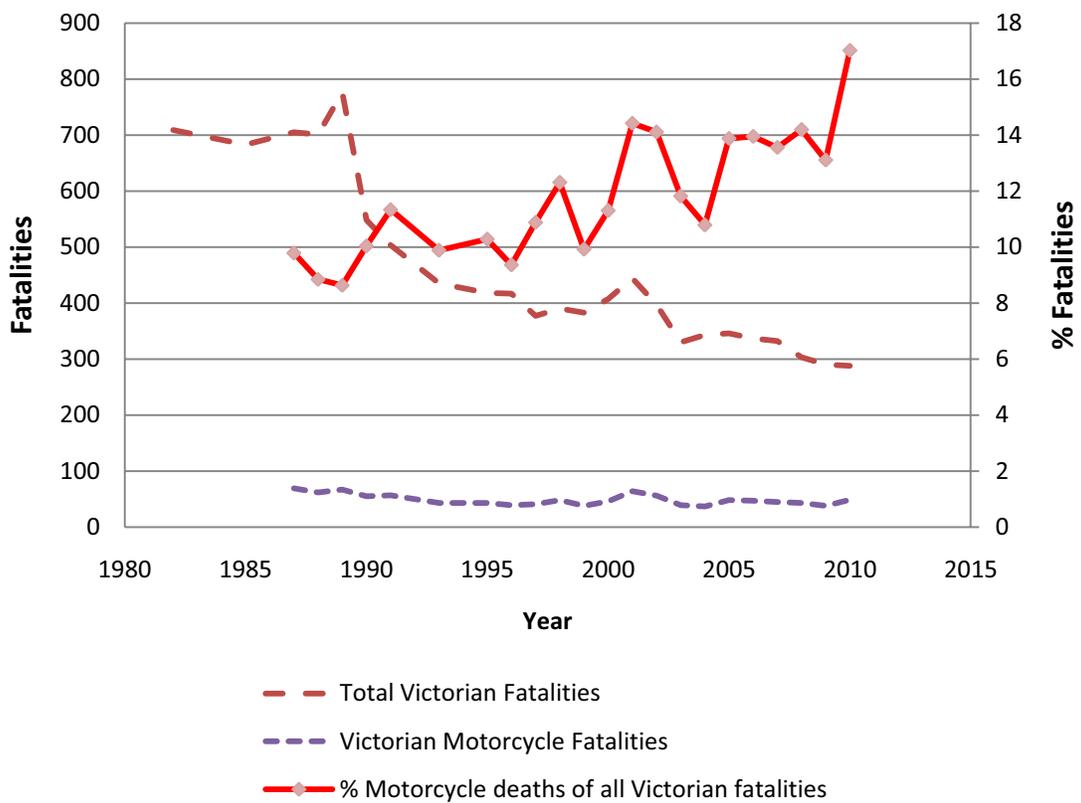
It is often reported that motorcyclists are over represented in the road toll. The concern is that they form 4% of registered vehicles but contribute a more significant proportion of the total road toll [7]. These claims must be investigated in the broader context and the factors involved given careful consideration.

Figure 2 shows that motorcycling fatalities have stayed broadly constant (though we know from Figure 1 that they are decreasing) while the total number of road fatalities has reduced. The increasing percentage is in part an effect of the decreasing overall road toll (it is analogous to an individual slice of pie remaining the same size while the size of the overall pie has reduced). While the percentage of the overall road toll appears to be increasing on face-value, in reality motorcyclists have halved their fatality rate. Claims

that motorcycle deaths are on the increase are demonstrably erroneous and highlight the need to view these statistics in their proper context. Calls for increased enforcement, increased restrictions and sometimes for motorcycles to be removed from the roads altogether are often based on erroneous interpretation of motorcycle statistics.

Motorcycle statistics must be reported in their proper context. Positive outcomes in motorcycle safety must also be recognised.

Figure 2: Victorian Motorcycle Fatalities



*(c) Attitudes of riders to safety:
Playing by the rules doesn't guarantee safety*

Motorcyclists experience unique road-safety issues. Road laws are designed for vehicles that occupy most of a traffic lane and have limited positioning options within that lane. These laws are most problematic for motorcycles on roads where no overtaking is allowed, leaving motorcyclists exposed to the risk of collision and frustrated drivers. At times, a column of traffic can build up on such roads leading to increased frustration and weariness from drivers who feel 'stuck' and artificially held back. This scenario was exacerbated by the single white line rule change in Nov 2009 [10], further exposing riders to these agitated drivers and poor driving behaviours.

Motorcycles have a clear acceleration advantage over most motor vehicles [4] which, in conjunction with road positioning and improved vision, allows safe overtaking opportunities [5] in locations which are currently prohibited by line markings. The law is forcing motorcycles to behave like a car, without any of the car protections, at times placing motorcyclists' safety at greater risk. Motorcyclists are often forced to serve their safety first with adherence to the law a secondary consideration [13].

There is a strong and clear perception amongst motorcyclists that the change in white line law has been used by Victoria Police to put pressure on riders in certain areas, by specifically targeting and infringing riders conducting such previously safe and legal overtaking manoeuvres. This has resulted in riders either holding to the road law, thus increasing their exposure danger to close proximity vehicles, or deciding to avoid areas where such laws are strongly enforced. In the latter case, this sees a subset of motorcyclists moving to new areas which generally have poorer quality roads, thus increasing their risks. This demonstrates how the law and targeted enforcement can be counterproductive to motorcycle safety.

To demonstrate the above point, the following "You tube" video: <http://www.youtube.com/watch?v=G54Bus6bBhk>, believed to be an official police sanctioned video, was taken on the Great Ocean Road and demonstrates the specific targeting of motorcycles by a police camouflage unit. Despite the infractions of the law, the video demonstrates how the unique attributes of motorcycles affords them **safe (and previously legal)** overtaking opportunities. When motorcyclists talk about roadcraft and survival techniques on the road, they routinely accept that they have a greater cause to their own safety than to always complying with the law [13]. Motorcyclists openly advocate bending some laws when their safety requires it – there is wisdom in this and intelligence that can be gained in the cause of motorcycling safety.

Another aspect of the camouflage operations unit is that it is believed to be funded by the TAC and that the unit is specifically focused on motorcycles – further discussion on the relationship between motorcyclists and the road authorities later in the submission.

It is proposed that the RSC consider recommending a review of road laws that inhibit the unique safety advantages of motorcycles.

*(g) Countermeasure considerations:
Data collection and analysis*

To date, motorcycle studies have had a heavy focus on the analysis of crash statistics in an attempt to determine the reasons for why riders crash. This method has demonstrated a number of flaws (reliance upon self-report data, detection bias, limited validation, poorly controlled confounds, non-randomised, small sample size, other methodological weakness) [35] and any reported findings must be regarded with consideration for these.

The results of studies using this methodology do give some valuable insights but due to the poor quality of most studies and their reliance upon post-incident self-report data with little detailed in-depth crash analysis, they are ultimately only educated guesses. Many of these papers produce a list of countermeasures based on their results that purport to make riders and riding safer. MUARC is a well-known source of anti-motorcycle countermeasures. Beyond the possible countermeasure bias and best guesses, a common limitation of the research is the original data is flawed or insufficient. Motorcycle crash data may be sufficient to explain *what* happens on the road, but it often fails to accurately account for *why*.

In 2008, the RACV published a paper entitled ‘The suitability of current crash databases for analysis of motorcycle crashes’ [36]. There are significant overlaps in its recommendations and that of the Victorian Auditor General’s motorcycle safety report [7]. The primary sources of crash data are police reports, which according to the RACV report, provide insufficient information to determine cause. Police reports are inevitably focused on attributing fault and administering infringements, they are not designed to find/explore potential causes and determining recommendations. Crash studies do not provide sufficient evidence for the implementation of motorcycle safety measures, they are but one of many sources where information must be sought.

In order to understand motorcycling crash causes, motorcycle crashes must first be better analysed as per the RACV report recommendations. In-depth analysis should not only be reserved for fatal crashes, but for all crashes, such that an ‘accident pyramid’ philosophy [15] (common in workplace safety culture) can be employed to reduce serious injury and fatalities. By understanding near miss and serious crashes, valuable information and insights could be gained to help avoid fatal crashes.

On a global level, the limited usefulness of crash studies is being recognised. There is now a growing recognition of the value of naturalistic studies which provide objective data on motorcyclists’ safety behaviour and risks on the road. Readers are directed to two key current motorcycle studies: 2BeSafe (<http://www.2besafe.eu/>); and MSF (<http://www.motorcycle-usa.com/2/10888/Motorcycle-Article/MSF-Launches-Motorcycling-Naturalistic-Study.aspx>).

The RSC is encouraged to recommend more detailed and rigorous research into motorcycle safety beyond the limited scope of crash statistics and analysis.

(g) Countermeasure considerations:
ABS brake technology

Assisted braking systems for motorcycles are a complex issue. Successful safety technologies on cars are often not easily transferable to motorcycles and may not necessarily achieve similar safety benefits on a two-wheeled vehicle. A car-centric understanding of ABS may underestimate the unique dynamics and realities of ABS's application on motorcycles.

The impact on dynamics is a complex topic that is beyond the scope of this submission, but to summarise, ABS on a motorcycle *can negatively* impact motorcycle dynamics and safety in some situations. Consideration must be given to the potential negative effects and all research must be viewed within its context and potential limitations. ABS brake studies (e.g. [21] & [22]) can claim substantial crash reduction benefits for motorcycle with ABS. While others like the MAIDS detailed crash study [23] show that ABS would not have provided a clear and significant benefit in crash avoidance [24].

ABS studies with supportive findings typically take a limited data set and compare the crash statistics of ABS fitted motorcycles against non-ABS fitted motorcycles. They then generally find that ABS bikes have a lower crash incidence, a conclusion which fails to take account of the effect of confounds. The more significant of these include: a lack of controlled trials; small sample size; and rider factors such as experience, riding style, type of bike/purpose, kilometres travelled, etc [25].

Rider factors may be the most significant of the confounds. When presented with the option of purchasing ABS, a rider with a conservative hazard conscious riding style is likely to take up the ABS option believing that it will make them safer. Conservative hazard conscious riders tend to simply crash less, mediating the effect between ABS and crash risk. Therefore, the analysis of the crash statistics, does not present a causal relationship between ABS and crashing incidence, but more likely demonstrates the intrinsic crash rate difference between conservative and non conservative riders. Conclusions based on these findings must be made with caution.

Motorcycle crash reports may also show a bias toward ABS. Investigators may conclude that ABS would have been of assistance where there is a skid mark preceding a bike crash. However a tyre skid-mark in a motorcycle crash is often the result of rear wheel brake lock-up, a circumstance where ABS would not have offered a significant advantage due to the majority of braking forces being provided by the front wheel. The cause of the skid mark is a braking error that ABS would not have rectified.

Wet conditions provide optimal advantages in using ABS technology. However, the incidence of motorcycle use is dramatically reduced in inclement conditions. In addition, in such conditions, riders tend to reduce their speeds and increase their vigilance and caution. Therefore, the advantages of ABS may be reduced in such conditions as riders are already mitigating the possible factors that may contribute to brake lock-up.

Conversely, ABS may contribute to increased crash incidence in wet conditions if a rider is more likely to ride in such conditions when ABS is fitted to their motorcycle and ride more normally (usual speeds and vigilance) due to the feeling of additional safety provided by ABS – this phenomenon is known as risk compensation [25].

The VMC supports the progress made in ABS technology. The VMC does not support mandatory non-switchable ABS for use on motorcycles.

ABS technology is a complex topic, many factors must be considered before making recommendations relating to the use of ABS.

*(g) Countermeasure considerations:
Wire Rope Barriers - barriers to safety*

Victorian road authorities have enthusiastically adopted wire rope barriers (WRB's) as the favoured roadside environment barrier system; WRB's have proliferated on Victorian roads. However, they are universally disliked by motorcyclists.

One of the key sensitivities to motorcycle safety is the road and road environment. Given that there is some evidence that WRB's present an increased danger to motorcyclists over and above other road barrier systems, the adoption of WRB's deserves closer scrutiny. Studies show that WRB's are effective at stopping passenger and light truck/commercial single vehicle crashes, but there is growing evidence confirming that WRB roads are substantially less safe and more likely to result in trauma for motorcyclists than for other road users [16, 17, 18,19]. There is evidence to suggest that where motorcycle crashes and road fatalities have dropped on WRB treated roads; it is largely due to the perceptual risk that WRB's represent to motorcyclists [17].

WRB's have an established and accepted position in the overall road system. Given this, serious consideration must be given to recent EU research which recommends rub rails and other kinds of sliding barriers where WRB's have been deployed [20], particularly in areas known to have higher risk of motorcycle collisions. Careful consideration must also be given to adopting this system on the outside of corners where the risk of a motorcycle leaving the road is greater.

It is recommended that the RSC review all aspects of WRB implementation, particularly with respect to motorcyclist safety, and recommend road authorities employ injury reducing treatments where WRB's are to be retained.

*(h) New initiatives to reduce motorcycle crashes and injuries:
Taking advantage of motorcycles' unique attributes enhances safety*

Motorcycles are a unique road modality, being a powered single track vehicle that is as often used for its enjoyment value as it is for its utility value [2]. A rider experiences an immediacy to the road and road conditions that is both the key to their safety advantages (better vision, greater awareness, greater hazard perception) and safety disadvantages (higher injury likelihood from a small collision, higher risk from other road users). These factors are rarely appreciated by non-riders. There is a propensity to focus only on the negatives often fuelled by the anti-motorcycling rhetoric displayed in Australian media.

Further, it is noted that policy and road law generally fail to take advantage of the unique dynamics, size and mobility characteristics of motorcycles. This often forces motorcycles to behave in ways which can increase their exposed risk. This is particularly true of filtering* where a motorcyclist is forced by law to be part of the column of heavy traffic flow. This leaves the motorcyclist vulnerable to the risk of rear end collision† or being merged onto by a driver who perceives a gap in a column of traffic where in fact a motorcycle is travelling. For example, rear end collisions represented 23% of all Queensland crashes in 2002, according to the 'Queensland Transport Annual Road Traffic Crash Report: 2002'.

The anti-filtering position of road authorities and law makers results in the road system failing to capitalise on an effective way to both improve congestion and reduce the environmental impact of traffic on our busy roads and freeways [2].

There is substantial literature available to support the safety benefits of the practice of filtering. While a comprehensive literature review on the topic is beyond the scope of this submission, for further information please refer to *Lane sharing – A global solution for motorcycling safety* [9] for further information on the safety benefits of filtering. Also refer to Appendix A for more discussion on filtering.

Filtering is a safety behaviour undertaken by motorcyclists. It is recommended that consideration be given for making filtering explicitly legal.

*'Filtering' is not explicitly defined in Australian law, but it is legal in 25 countries and is expressly taught in UK motorcycle licensing. It refers to safely navigating between lanes of stopped or slow moving dense traffic. Filtering guidelines advocate limiting the differential speed to approximately 30km/h.

† The Hurt Report [3] found that there was an improved margin of safety for motorcycles when filtering. The ability to filter between lines of traffic effectively prevents motorcyclists being 'rear ended' - a major cause of accidents in traffic.

Figure 3: Melbourne’s Eastern Freeway showing the substantial space available for motorcycles to make safe progress. Note the bumper to bumper proximity of most cars – not a safe location for a motorcyclist (photo: The Age).



*(h) New initiatives to reduce motorcycle crashes and injuries:
Safety through better and advanced training*

EU countries are now recognising the benefits of advanced training in improving motorcycle safety. Training is becoming a key method to help achieve Vision Zero targets, based on the observation that experienced and competent motorcyclists have lower crash rates [33]. The Victorian GLS discussion paper also makes the contention that better training will lead to greater motorcycle safety. These observations have been supported by a recent simulator study [31] which found that the safest riders were experienced riders who had also received advanced training.

Despite the above observations, it has previously been contended that advanced skills training can lead to increased crash risk due to greater rider confidence. However it has been shown that advanced training which also focuses on attitude adjustment, does in fact produce safer drivers [32]. This is supported by a large body of research in the human factors science field, which focuses on competency based training to improve both workplace and individual worker safety.

The conclusion for motorcyclists (and indeed all road users) is clear: better training results in safer road users. They make fewer errors and can employ more adaptive responses to errors when they occur.

It is recommended that the RSC consider promoting strategies designed to encourage motorcyclists to pursue regular, high quality training, with one potential strategy including using levy funds to subsidise advanced training.

The RSC terms of reference recognise the need for authorities to work with industry and motorcyclists. At this time Victorian motorcycle advocacy is in a transitional phase and relies solely on volunteer resources. If such a group is to play a key essential link between Government and riders, then there is a strong case for an allocation of funding from the motorcycle safety levy to support a professional / semi-professional advocacy body. A funded body would more effectively be able to represent and develop strong communication links with all 353,000 [7] licensed Victorian motorcyclists, and importantly, the wider motorcycle retail and manufacturer industry.

The precedent for the allocation of grants/funds to motorcycle advocacy bodies by government organisations has been set in Tasmania. The Tasmanian Motorcycle Council receives a proportion of its funding from government and as a result is able to effectively and professionally work with government on motorcycle road safety issues. All Tasmanian motorcyclists and stakeholders benefit from the outcomes of this model.

The VMC has been working towards this ‘inclusive motorcycling’ representative structure and believes it is a worthy recipient of such funding. Additional funding from within the motorcycle industry is also being considered. Seed funding is likely to help set the groundwork from which to achieve this goal. The VMC believes that only through a strong co-operative approach between authorities and motorcyclists will mutually beneficial safety messages and strategies be developed and achieved.

It is recommended that the RSC support the allocation of a proportion of motorcycle safety levy funds to professional motorcycle advocacy and representation.

*(j) Motorcycle Safety Levy:
The levy and better & safer roads*

Some popular motorcycling roads and blackspots have received road treatments funded by the motorcycle levy. Analysis conducted by the previous VMAC committee showed that the safety of all road users benefited from these road treatments. Vision Zero road treatments [11] [12] overseas have been shown to significantly reduce motorcycle crashes on treated roads and have similarly shown reduced crashes for all other road users.

Motorcyclists welcome road improvements that have made roads safer. However, these treatments should be funded in an equitable manner. Road treatments that benefit all road users equally should be funded by all road users equally.

Motorcyclists often report that the motorcycle levy has provided them no tangible benefit to their safety. This is a failure of the levy to meet the needs and expectations of its end user. If the levy was instead used for programs which clearly benefited motorcyclists, for example: better targeted and less adversarial motorcycling safety awareness programs; subsidised training; targeted driver awareness campaigns [13]; better data collection/analysis; and improved rider representation, the levy could achieve a greater level of acceptance. Riders would see the levy as a way of participating in their own safety and something they will benefit from, rather than an inequitable and ineffective tax. Rider-centred levy programs may also achieve a subsequent improvement in the relationship and dialogue between riders and the Government.

It is proposed that the RSC:

- Review the motorcycle safety levy and the appropriateness and effectiveness of its programs
- Consider redirecting levy monies into motorcycle-centred programs
- Recommend that road treatments that benefit all road users be funded by the all road users.

(k) Government and non-government stakeholders working together:

Motorcycling representation – Ministerial advice

The VMC welcomes the creation of the VMAG ministerial advisory group in replacement of the disbanded Victorian Motorcycle Advisory Council (VMAC) [6]. VMAC contributed to advantageous outcomes in improved rider safety. For example, through specific treatment of high-risk blackspot motorcycle roads.

Additionally, VMAC oversaw a range of detailed motorcycle research much of which has not yet been released. VMC calls for all findings of research funded by the Victoria motorcycle levy to be published without delay. It is believed this research will aid a better understanding of motorcycles and motorcycling specific to Victoria. This has the potential to allow for better targeted and well received communication programs.

The Victorian Minister of Roads must be given accurate and sufficiently detailed advice with regard to motorcycle specific issues. This can then be translated into good policy and positive outcomes in motorcycle safety. The previous RSC inquiry into motorcycling safety found an anti-motorcycling bias from Vicroads, which many motorcyclists believe still exists. The RSC should consider whether the structure of

VMAG has sufficient independence from Vicroads, such that the advice the minister receives will properly reflect motorcycling issues.

It is proposed the RSC Inquiry:

- Support the development of the VMAG
- Request immediate publication of all levy funded research
- Investigate the independence of the VMAG and potential issues in relation to this

*(k) Government and non-government stakeholders working together:
Distrust of authorities undermines safety message*

A common complaint amongst motorcyclists is that Victorian road authorities display an anti-motorcycling bias. This has a historical basis and is reinforced by recent TAC measures such as 'it's up to you' motorcycle safety campaign, recent phone surveys perceived to be biased against motorcyclists, and the belief that the TAC has directly funded motorcycle focused policing campaigns.

In the case of VicRoads, the commissioning of MUARC for a majority of motorcycle-related research with a particular focus on 'countermeasures' is regarded poorly by the motorcycle community. Motorcycle countermeasures may be interpreted as a continuation of its now officially withdrawn 'non-encouragement' policy. Other VicRoads measures such as the recent Graduated Licence Scheme proposals appear to be largely focussed on reducing motorcycle licence uptake as a strategy to reduce crashes, favoured over improving the safety of those actually on the road.

The justification for the extensive enforcement targeting of motorcyclists is also questioned. Victoria Police administer numerous operations throughout the year with motorcycles being the specific target. The results of these operations have found that rates of illegal behaviour by other motorists significantly exceeds that of motorcyclists. In addition, motorcycle fatalities are falling in real terms further reducing the need for extensive and prohibitive enforcement strategies.

Anti-motorcycling approaches are counterproductive in improving motorcycle safety. Motorcycle safety must include a cooperative approach between motorcyclists and road agencies.

The RSC is encouraged to investigate any anti-motorcycling ethos within key road agencies.

Concluding comments:

Motorcyclists are in the business of managing risk and are generally very successful at this. Motorcycle crash risk must be viewed in the context of: how sensitive motorcycles are to the road surface and conditions compared with other vehicles; how much more exposed they are to injury in the event of a collision; and how prone they are to the mistakes made by other road users. The fact that the motorcycle crash rate has halved is a significant success story.

The TAC advertises that it's up to motorcyclists to manage the risks; despite their greatest risk coming from other road users. This approach to advertising is counterproductive to safety by attributing fault to motorcyclists and failing to highlight the need for awareness of all road-users. The VMC contends that it is time for a paradigm shift in road safety. An improvement in the skills and awareness of all road users will benefit the entire road system with motorcyclists potentially seeing the most significant safety gains.

In addition to the information presented in this submission, the VMC feels it important to emphasise and recommend the following papers to the RSC:

- Victorian Auditor General's February 2011 report on motorcycle safety [7],
- Oxford Systematic's "Motorcycle transport, Powered two Wheelers in Victoria" [2],
- "Lane Sharing: A global solution for motorcycle safety" – Guderian [9] and,
- 2BeSafe's "Using Cognitive Work Analysis to Derive Recommendations for Improving Motorcycle and Scooter Rider Safety"[13]

Together these documents cover a broad range of issues impacting motorcycle safety and give many recommendations for improving motorcycle safety. The last three in particular point to motorcyclists and motorcycling for the answers to motorcycle safety.

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Appendix A

Motorcycle Traffic Filtering:

There are many useful discussion papers about the safety and other benefits of motorcycle filtering, particularly out of the UK where filtering is a common practice and actively encouraged by the Police force and Netherlands where filtering is legal. However, the recent American paper “Lane Sharing: A global solution for motorcycle safety” (2011), Guderian [9], gives a very good account of the state of play and safety benefits of filtering.

In the Victorian context, a 2006 paper prepared for the MRA(Vic) by Tony Ellis, “Inquiry into managing transport congestion, Victoria” (2006), gives a good account for the benefits of filtering. The following excerpt is taken from the paper for the RSC’s benefit.

“Many of the policies in place at present seek to discourage motorcycling on perceived safety grounds; however experience from Britain and the efforts to control traffic congestion in Central London show that by decreasing the number of cars and increasing the number of motorcycles the proportion of motorcycle accidents is significantly reduced. Other policies (such as that of discouraging filtering through traffic) arise from a lack of knowledge by legislators of the advantages and a wrongful perception of the “risks” involved.

Motorcycles provide significant advantages:

- ✓ They are the most efficient way of utilising road space;
- ✓ They have very efficient parking space utilisation;
- ✓ They have reduced emissions;
- ✓ They provide easy access ; and
- ✓ They provide enhanced mobility.

Providing improved mobility for motorcycles in traffic contributes to a decrease in congestion. This mobility may be improved by numerous methods;

- ✓ Directly and explicitly permitting motorcycles to filter between lanes of stationary or slow moving traffic;
- ✓ Permitting motorcycles to overtake stationary or slow moving traffic on the left hand side in the same manner as bicycles;
- ✓ Provision of advanced stop-lines for motorcycles at intersections in a similar manner to those provided for cyclists;
- ✓ Permitting sharing of bus and taxi lanes by motorcyclists; and
- ✓ Allowing sharing of some bicycle lanes on roads by motorcycles (under certain conditions).

There is no evidence of a safety issue regarding motorcycle lane filtering and explicit legalisation of this practice would further improve its safety. If this practice was explicitly legalised and an extensive “*share the lane*” advertising campaign carried out,

motorists would be made aware of the fact that this practice eases congestion and would also make them more aware of the presence of motorcycles.”

Examples of what riders are trying to avoid by filtering:

<http://www.youtube.com/watch?v=q09mqgVxub0>

<http://www.youtube.com/watch?v=o7D0BTyJBeM>

<http://www.youtube.com/watch?v=PggkC3iX578>

<http://www.youtube.com/watch?v=f95iO6fuF6s>

<http://www.youtube.com/watch?v=T8Z-Z9snVAM>

Sample of traffic conditions that encourage riders to filter for safety:

<http://www.youtube.com/watch?v=8n9GGzyj0e8> (especially 2’30’’))

<http://www.youtube.com/watch?v=PggkC3iX578>

Sample Videos demonstrating peak hour filtering:

http://www.youtube.com/watch?v=S_cf4efSfCk

<http://www.youtube.com/watch?v=Z0QHn8ebit4>