



**VICTORIAN
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COUNCIL**

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c/o <https://getinvolved.transport.vic.gov.au/driverreg2019>
Department of Transport Submission Link

New Road Safety (Drivers) Regulations 2019

Victorian Motorcycle Council Submission
July 2019

About this submission:

The Victorian Motorcycle Council felt compelled to make a submission to the Department of Transport's "New Road Safety (Drivers) Regulations 2019" review via the provided submission link at: <https://getinvolved.transport.vic.gov.au/driverreg2019>. The submission is focussed on the motorcycling related aspects of the proposed draft regulations.

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

This submission takes into account the extensive knowledge and thinking of a diverse group of experienced, representative and interested motorcyclists, including motorcyclist views expressed and sourced from the wider riding community.

The information included in this submission is for all intents and purposes, factual, correct, accurate and relevant. The VMC and/or its associates are available to expand on any of the points contained within this submission, or available to consult further on related motorcycling matters not covered in this submission.

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SUMMARY

The Victorian Motorcycle Council (VMC), a government and agency recognised key stakeholder for motorcycling in Victoria, was not contacted during the Regulatory Impact Statement (RIS) review process or advised that a RIS with implications for motorcycling regulations had been released for discussion and comment. This is a serious oversight in the RIS process. It has also come to light, that the RIS process also failed to contact or advise the Victorian Government's Motorcycle Expert Advisory Panel.

The failure to identify and advise key stakeholders about a relevant and related RIS review is a significant flaw in the RIS process and the systems that drive it.

The principle focus of this submission is on the mandatory requirement for learner riders to wear a “high visibility vest or jacket” and the addition of a demerit point to the infringement listed as item 36 on page 115 of the Road Safety (Drivers) Regulations Exposure Draft for RS(D)R 57 (2)(d).

It is unconscionable that the “high visibility vest” regulation introduced in 2014 without foundation and basis, or any demonstrated clear and unambiguous road safety benefit, is not only endorsed by it not being removed as part of this RIS review, but is proposed to be strengthened by the addition of a demerit point. The philosophy of “evidence based” regulation is turned on its ear.

This VMC submission clearly exposes the unfounded basis that the original regulation was first introduced in 2014, demonstrates that wearing a vest interferes with designed air flow through a jacket thus increasing heat load and fatigue, and further shows that the “Driver Regulations 2019 Regulatory Impact Statement document” (the “RIS document”) itself fails to justify a road safety case for the requirement.

There is only one conclusion that can be drawn – the mandatory requirement for learner riders to wear a high visibility vest must be withdrawn.

The VMC also calls for dropping the proposed introduction of a demerit point for the “failing to display L-plate” offence. It serves no road safety purpose and the rider is most likely unaware when the rear affixed plate fails and loses attachments due to the arduous service conditions it faces.

The Regulation requiring learner riders to mandatorily wear a high visibility vest or jacket, with no evidence of a road safety benefit plus its potential to increase rider fatigue and heat stress, **must be withdrawn.**

The proposal to add a demerit point to the “failing to display L-plate” offence, does not serve a road safety benefit and should **not proceed.**

DISCUSSION

Key Motorcycle Stakeholders Not Advised:

The VMC first learned about this RIS when riders became alarmed about the poorly worded requirement in the consultation document that appeared to indicate mandatory high visibility clothing for all motorcyclists. By that time, the RIS consultation process had already been open for 3 weeks. To the best of the VMC's knowledge, no key motorcycle stakeholders in the VMC's network had been advised about the consultation process.

It has also come to light that the Victorian Motorcycle Expert Advisory Panel was similarly not advised.

This is a significant deficiency in the RIS consultation process since key stakeholders are not unknown to the agencies or bureaucracies.

It has been construed by some riders in social media, that the lack of public notification was an attempt at regulation by stealth. Whilst this may be outlandish, if the publication of a web page for the RIS consultation process was the primary source of public notification, then this is a significant flaw in the intent to consult the public.

We note that revision 2 of the RIS consultation document has clarified this ambiguity and that the context is clearly related to learner riders.

Increases in Learner Motorcycle Sanctions are not supported:

The VMC **does not support** the demerit point additions/increases to the learner rider sanctions.

In the base case, the VMC **does not support** the requirement for learner riders to mandatorily wear a high visibility vest or jacket, as there is no genuine road safety benefit to such a requirement, nor was it first introduced with a solid "evidence based" foundation (see below). Rules that fail to meet the base test of "evidence based Regulation" should be withdrawn. Further, the "Driver Regulations 2019 Regulatory Impact Statement" document itself fails to make the case for such a requirement (see below), which can only lead to one inescapable conclusion, the requirement for a learner rider to mandatorily wear a high visibility vest or jacket **must be withdrawn**.

In regards to the sanction of failing to correctly display an L-plate, the VMC acknowledges the intuitive basis of the sanction, but has grave concerns about the addition of a demerit point. A motorcycle is an arduous exposed environment, experiencing vibration, winds, rain, road grime/fumes and sunlight/UV exposure. L-plates are typically plastic, embrittle with time and are not very resilient to these exposed service conditions. As a result, an L-plate may fall off during a ride without the knowledge of the rider since plates are affixed to the rear of the motorcycle. Application of a demerit point may see a rider lose their license for something that is not a genuine

road safety issue. What behaviour change is being sought or addressed by the application of such a sanction? On that basis, an increased penalty for the existing infringement is **not** supported.

The Lack of a Road Safety Case For High Visibility Clothing Then...:

In 2014, VicRoads (and the then Liberal government) proposed adding a mandatory requirement for learner riders to wear a high visibility vest as part of Motorcycle Graduated Licensing Scheme improvements. This was opposed by the VMC and the VMC wrote to the then Transport Minister to voice its concerns.

Subsequently to that letter, the VMC commissioned Melbourne University Chair of Statistics Professor Huggins, to conduct a preliminary review of the research referenced in support of the proposal. This review has been included in Appendix A and whilst only a high level review, the letter indicated that there were significant issues with the quoted research, that VicRoads had cherry picked from that research and that overall, VicRoads position was not well supported by the research.

The Government replied to the VMC's letter, refer to Appendix B, asserting that the proposal was supported by research and that the Government intended to proceed. This was in turn responded to by the VMC, see Appendix C, clearly demonstrating the flaws and failings of the outlined case, however all subsequent contact on the matter was not formally responded to and the mandatory requirement was introduced despite the lack of an evidential basis.

Interestingly, the requirement was introduced despite the 2011/2012 Road Safety Committee Victorian Parliamentary Inquiry into Motorcycle Safety¹ failing to identify a clear supporting case for the benefit of high visibility clothing.

It is absolutely clear that there was **no fundamental road safety case** for the introduction of mandatory high visibility vests then, and as outlined below, no fundamental case supporting the contention today. This leaves only one conclusion, the requirement for learners to wear a high visibility vest is not evidenced based and **must be removed**.

The Lack of a Road Safety Case For High Visibility Clothing Now...:

The following (non-exhaustive) list of links and resources support the argument that there is no genuine clear road safety benefit provided by high visibility clothing:

- <http://eprints.qut.edu.au/38338/> Cyclist Visibility at night: Perceptions of Visibility do not necessarily match reality.
- <https://academic.oup.com/eurpub/article/25/3/517/2398658> The role of conspicuity in preventing bicycle crashes involving a motorcycle.

¹ https://www.parliament.vic.gov.au/file_uploads/Inquiry_into_Motorcycle_Safety_-_Report_dTgJ7nbQ.pdf

- <https://can.org.nz/canpolicy/high-visibility-clothing-0> Cycling Action Network High-Visibility Clothing Policy
- <https://scienceofbeingseen.wordpress.com> Science of being seen, explaining “looked but failed to see” collisions.
 - <https://scienceofbeingseen.wordpress.com/2018/10/05/14-strategies-create-a-contrast/>
 - <https://scienceofbeingseen.wordpress.com/2018/12/22/conclusion-what-might-work/>(The above pages in particular are especially worthy of review)
- <https://www.youtube.com/watch?v=x94PGgYKHQ0> Invisibility Training for Motorcyclists.

The reader will note several links to cycling conspicuity studies. This is deliberate. What they demonstrate is that slower moving cyclists that tend to be on an *expected* part of the road, have no clear demonstrable safety benefit from the wearing of high visibility clothing. Therefore it is not logical to contend that high visibility clothing would provide a road safety benefit for motorcyclists when motorcycles are faster moving, not limited to an *expected* part of the road and can have a high degree of movement within traffic flow.

Some other key points that can be found in the above links are:

- That the focus on high visibility clothing by authorities and road safety campaigns may hide the more prevalent and likely reasons that drivers fail to detect motorcycles, those being related to cognitive issues such as inattentive blindness, change blindness, lack of expectation of seeing motorcycles and “time to arrival” illusion.
- Cognitive issues which result in motorcycles not being detected are not addressed by high visibility clothing.
- A one size fits all high visibility option cannot hope to create clear contrast, one of the primary presumed reasons believed to help detection, in all environments and may in fact decrease contrast and increase camouflage in some critical environments, e.g. High viz yellow vest on open country roads in bright sun.
- The intuitive notion that high visibility’s visual salience is what will help the detection of motorcycles, however the salience tends to be noted once the bike and rider has already been seen.
- There is a potential for high visibility wearing riders to demonstrate risk compensation behaviours on the assumption they are visible and seen by drivers.

Another argument often used to support high visibility clothing is its ubiquitous use in work place safety. This results in a very strong intuitive notion that “high viz” must be beneficial and would therefore be expected to improve the detection of riders. However, what is not often recognised is that such clothing is only part of an overall work place safety framework for the protection of pedestrians. Such frameworks include site safety inductions, traffic separation, vehicle speed limits, vehicle restricted degrees of freedom, ongoing safety training, signage, enforcement, other indicators such as large equipment or warning lights and the fundamental expectation of seeing slow moving pedestrians that present in a physical shape which the brain is already hard wired to recognise.



In direct contrast, the open road shares **none** of these characteristics or controls, and drivers are not trained or “safety inducted” to expect motorcyclists on the road. As a result, the assumption that high visibility clothing in and of itself would provide any meaningful road safety benefit to motorcyclists is a highly flawed notion.

And this is notwithstanding that a rider’s high visibility vest may be obscured by fairings, luggage or back packs, or form a limited proportion of their overall presence, further throwing into doubt the benefits of such a requirement.

High Visibility Vests Increase Rider Danger:

Learner and experienced riders² report that wearing a compliant and fastened high visibility vest significantly reduces their comfort and increases their heat stress on hot days. Motorcycle specific jackets are typically designed with carefully located zippered vents, or indeed open mesh, to channel air flow around the rider’s body, thus helping to thermally regulate the rider. High visibility vests, which are required to comply with given industrial high visibility clothing standards, are incompatible with motorcycle clothing design and block these vents leading to elevated heat stress and accelerated fatigue.

An experienced rider who chooses to wear a high visibility vest, can also choose to wear it unfastened thus limiting the disruption to cooling air flow. Regulation 57 however requires that the vest be securely fastened, under threat of a penalty, and therefore exacerbates the risk of heat stress and accelerated fatigue for learner riders. One may argue that there is a balance here between the *perceived* possible safety benefit of the rider’s conspicuity and the known but manageable potential risk from increased fatigue. However, the former is clearly ill defined, unverified and unsupported by research or empirical experience, whereas the negative impacts of the latter are well understood³ and interestingly, also discussed in the RIS document. This therefore makes Regulation 57 incompatible and internally inconsistent with the RIS document.

Road Safety Regulation 57 therefore potentially promotes increased risk from heat and fatigue in learner riders (arguably the least experienced and most vulnerable riders on our roads) and is clearly incompatible with the objective of improving road safety. The mandatory wearing of a high visibility vest with its unproven conspicuity based road safety benefit and its given potential to promote the risks from fatigue, must therefore **be withdrawn**.

² One such detailed example comes from an experienced rider marshalling a professional cycling event on a sunny day, who was required to wear event specific high visibility vest and livery. It was required to be fastened at all times, resulting in significant fatigue and heat stress.

³ <https://www.ncbi.nlm.nih.gov/pubmed/31071655> De Rome, L, (2019), “Could wearing motorcycle protective clothing compromise rider safety in hot weather?”

The RIS Document Fails to Make the Case for High Visibility Clothing:

The rationale for Regulation 57 is laid out on page 123 of the RIS document. The rationale is referenced immediately below by way of the following excerpt:

57	A person who holds a motorcycle learner permit must wear an approved high visibility vest or jacket that is visible and is securely fitted and fastened	<p>High visibility clothing has been found to improve outcomes in low ambient light, glare and poor weather as well as multi-vehicle crashes generally.</p> <p>Low motorcycle conspicuity, or the inability of other road users to see motorcyclists, is considered an important factor associated with risk of motorcycle crashes.³⁷⁹ Studies, particularly in the US, have shown that wearing high-visibility vests reduces injury rates and provides an overall safety benefit to novice motorcyclists. One study found that riders wearing any reflective or fluorescent clothing had a 37% lower crash risk than other riders.³⁸⁰</p> <p>Increasing the use of reflective or fluorescent clothing is a simple and cheap intervention that could considerably reduce motorcycle crash related injury and death.³⁸¹</p>	No
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The references used in the rationale do not support the case laid out. It is clear that even the authors of the RIS document struggled to make a case to support Regulation 57.

The first reference is from 1979 and could hardly be considered an up to date work aware of the increased understanding of human factors and clothing conspicuity issues.

The rationale then makes vague references to multiple studies, highlighting that the U.S. appears to have a number of such studies confirming the benefits of high visibility clothing for reducing novice rider crash rates, however the referenced study is not from the U.S. and is instead the highly confounded NZ study discussed in the attached appendices, which has been roundly dismissed as proof of conspicuous clothing's motorcycle crash risk reducing benefits.

Finally, the rationale makes an assertion that high visibility clothing is a simple and cheap intervention with potentially considerable crash reduction benefits, giving a reference that presumably substantiates this claim. However, the reference is to a paper which conducted a meta-analysis of 25 studies evaluating the benefits of Day Time Running Lights, i.e., nothing to do with conspicuous clothing. Perhaps this was a typographical error, but beyond the two already mentioned references, there were no other conspicuity related references in the end notes – a somewhat surprising finding given the multiple studies, “particularly in the U.S.” that had been alluded to.

It is clear that the DoT itself struggled to find a convincing case supporting the road safety benefit of high visibility clothing. Therefore given that there is a clear lack of evidence supporting the mandatory high visibility vest Road Safety Regulation, the Regulation **must be removed**.

CONCLUSION:

The VMC **does not support** the demerit point additions/increases to the learner rider sanctions.

The Victorian Motorcycle Council has demonstrated that there is no supportable case for mandating high visibility clothing for learner riders. The road safety benefit of such a requirement is spurious at best. Further, the wearing of a vest can exacerbate heat stress and fatigue issues, issues known to increase road safety hazards, thus Road Safety Regulation 57 is in fact exposing learner riders to increase risks on the roads. As a result the Regulation should be withdrawn.

The VMC also recommends against the addition of a demerit point to the “failing to display L-plate” offence. Given that the rider may not be aware of their rear affixed L-plate having fallen off as a result of the arduous conditions a plate is required to withstand during a ride, the strengthening of the sanction has no discernible road safety benefit and may result in a loss of license for no genuine road safety cause. What behaviour change is served by such sanction?



APPENDICES

Appendix A: 2014 06 Professor Huggins Hi Viz Review Letter

Appendix B: 2014 07 Hi Viz – Government Response Terry Mulder

Appendix C: 2014 07 Hi Viz – VMC Response to Parliamentary Secretary for Transport