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13 December 2019

Tim Davern
National Transport Commission
Public submission – Barriers to the safe use of personal mobility devices
Level 3, 600 Bourke Street
MELBOURNE VIC 3000

Dear Mandi,

RACV welcomes the opportunity to provide the attached submission to the National Transport Commission's Regulatory Impact Statement for *Barriers to the safe use of personal mobility devices*.

With more than 2.2 million members, RACV is a household name in Victoria and a highly trusted organisation. We have long represented our members on motoring and transport issues, advocating on their behalf and expressing their views to both government and stakeholders.

In this submission we reiterate the need for consistent and clear road rules for personal mobility devices and the need for a faster legislation process, as it is likely other states or local governments will begin to legislate personal mobility devices prior to the completion of the National Transport Commission process.

I have also attached the results of a recent on-line survey about e-scooters we undertook. The survey received over 1400 responses and the feedback was used to guide our response to this regulatory impact statement.

If you would like any further information regarding our submission, please contact Peter Kartsidimas via email at Peter.kartsidimas@racv.com.au or telephone 03 9703 6799.

Yours sincerely,

BRYCE PROSSER
GENERAL MANAGER, CORPORATE AFFAIRS AND COMMUNICATIONS



Submission Regarding

**Barriers to the safe use of personal mobility
devices**

to National Transport Commission

December 2019

Introduction

RACV's transformation from operating as a motoring club to an organisation that touches the lives of Victorians in home, mobility and leisure, places us front and centre in the future development of Victoria. Our Corporate Strategy sets the foundations for even greater expansion into these key areas through advocacy, innovation and making membership more meaningful.

With more than 2.2 million members, RACV is a household name in Victoria and a highly trusted organisation. We have long represented our members on motoring and transport issues, advocating on their behalf, and expressing their views to both government and stakeholders.

How Victorians efficiently and safely move around their state in the future is of vital importance and RACV is pleased to have the opportunity to provide input to the National Transport Commission on the regulatory impact statement 'Barriers to the safe use of personal mobility devices'. RACV has been an active contributor and commentator in the innovative vehicle and personal mobility device space, producing the document '[Assessment of new recreational transport devices 2016](#)' and providing safety advice on the RACV website and through the '[Years Ahead](#)' program. Based on previous feedback and research, we have developed a series of recommendations for the Commission's consideration.

In February 2019, RACV responded to the National Transport Commission's issue paper titled 'Barriers to the safe use of innovative vehicles and motorised mobility devices'. In this submission we outlined the importance for road rule consistency for personal mobility devices (PMDs) across the states and territories and called for the lack of legislation to be addressed in a timely manner.

We followed this up in October 2019 by reaching out to RACV members through a RoyalAuto article which explained what e-scooters are and what the legal complications are around them. The article linked to an RACV e-scooter survey which allowed us to gather feedback on how e-scooters are being perceived in Victoria. We promoted this more widely to the general Victorian population through Facebook posts from the RACV Facebook page. The feedback we received in this survey will be used to guide our response to this regulatory impact statement.

As with any road rules changes, it is important that they are publicised, and community education programs are run by each state and territory well in advance of their implementation.

We believe national road rule consistency to be of a high priority, therefore, we encourage the National Transport Commission to prioritise the implementation of PMDs in the Australian Road Rules, as this is key to achieving the legal consistencies that are currently lacking.

RACV’s response to the questions outlined by the National Transport Commission.

NTC Question	RACV Response																																										
<p>Q1. Are the requirements in the proposed regulatory framework appropriate? Are there any requirements that should be removed, included or modified? Please provide a rationale to support your position.</p>	<ul style="list-style-type: none"> • We query the 700mm width for PMDs, as it seems excessive, especially on a footpath. • We query the wording regarding the PMDs propellant, as it is possible for PMDs to be propelled by more than one electric motor. In most scenarios, Segways have two motors, as each motor powers each individual wheel and helps keep the device balanced. • We understand that the 700mm width is present to incorporate Segways in the Rideables road rules in Queensland. However, we are concerned that including Segways under the definition of PMD opens up the potential for future conflict, as a 60kg device that is 700mm wide going at a speed of 25km/h could seriously injure someone. Segways may not be able to operate at this speed, but we are unable to anticipate if there will be a future PMD that can. • We would like to see further justification as to why Segways should be included under the definition personal mobility device. • Maintaining balance while hand-signalling around a corner can present a challenge for e-scooter users. We encourage the NTC to consider an appropriate solution to this issue. 																																										
<p>Q2. Is 60kg a suitable maximum weight for a PMD? If not, what is a more suitable weight and what other factors should be considered? Please provide a rationale to support your position.</p>	<ul style="list-style-type: none"> • We query whether 60kg is an appropriate weight, as it seems excessive. We would like to request that more analysis be done to justify the rationale behind this decision. • We understand that the 60kg weight limit is present to incorporate Segways under the personal mobility device road rules. However, we are concerned that this opens up the potential for future conflict as a 60kg device that is going at a speed of 25km/h could seriously injure someone. • Present day Segways may not currently pose a severe risk, however, a future unknown PMD that weights 60kg and can travel up to 25km/h may come along. • We encourage the NTC to do an assessment of the kinetic energy of PMDs at increased mass and speed. Similar to the table developed in the NTC motorised mobility devices discussion paper. See the table below for an example: <p>Table 2. Kinetic Energy of motorised mobility devices at increased mass and speed</p> <table border="1" data-bbox="541 1727 1374 2031"> <thead> <tr> <th>Vehicle Type</th> <th>Person (kg)</th> <th>Device (kg)</th> <th>Speed (kms)</th> <th>KE (J)</th> <th>KE % Difference to current limit</th> </tr> </thead> <tbody> <tr> <td>Current MMD limit</td> <td>80</td> <td>110</td> <td>10</td> <td>733</td> <td></td> </tr> <tr> <td>Wheelchair</td> <td>80</td> <td>250</td> <td>5</td> <td>318</td> <td>-56%</td> </tr> <tr> <td>Mobility Scooter</td> <td>80</td> <td>150</td> <td>10</td> <td>887</td> <td>21%</td> </tr> <tr> <td>Mobility Scooter</td> <td>80</td> <td>170</td> <td>10</td> <td>965</td> <td>32%</td> </tr> <tr> <td>Wheelchair</td> <td>80</td> <td>250</td> <td>10</td> <td>1,273</td> <td>74%</td> </tr> <tr> <td>Mobility Scooter</td> <td>80</td> <td>110</td> <td>15</td> <td>1,649</td> <td>125%</td> </tr> </tbody> </table>	Vehicle Type	Person (kg)	Device (kg)	Speed (kms)	KE (J)	KE % Difference to current limit	Current MMD limit	80	110	10	733		Wheelchair	80	250	5	318	-56%	Mobility Scooter	80	150	10	887	21%	Mobility Scooter	80	170	10	965	32%	Wheelchair	80	250	10	1,273	74%	Mobility Scooter	80	110	15	1,649	125%
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	<ul style="list-style-type: none"> • Approximately 375 Joules are required to crack bonesⁱⁱ(when force applied within five degrees of the orientation of the collagen fibres). A standard e-scooter on a footpath going at 10km/h, should not cause many problems, however PMDs that are heavier or going at faster speeds on a footpath may significantly increase the risk of injury. Based on our calculations, a 20kg device, with an 85kg person riding it going at 25km/h will have an impact of 2,529 Joules, which is much larger than 375 Joules required to crack bones. Even if this occurred at 10km/h the impact would be 406 Joules. 																		
<p>Q3. Should children under the age of 16 years old continue to be permitted to use a motorised scooter incapable of travelling more than 10km/h on level ground roads and paths? Or should they be able to use any device that complies with the proposed PMD framework? (see Appendix A). Please provide a rationale to support your position.</p>	<ul style="list-style-type: none"> • If an age limit is applied, there will be road rule inconsistencies between bicycles (including e-bikes) and e-scooters. This may result in people unknowingly breaching the road rules. The road rules need to be simple and easy to understand to ensure maximum compliance. • PMD hire companies should consider setting height limits for their devices, as some younger users may not be at an appropriate height to safely operate a PMD. • We would like to see the NTC consider at what age people develop the cognitive skills to safely operate an e-scooter at 25km/h. • We believe it is reasonable that children under the age of 16 should continue to be permitted to use a motorised scooter incapable of travelling more than 10km/h on level ground and only be operated on footpaths. • 40% of respondents in our e-scooter survey informed us that they believe 16 and over, to be the appropriate age to operate an e-scooter. See table below for results: <table border="1" data-bbox="643 1151 1254 1518"> <thead> <tr> <th colspan="3">Should there be a legal age for using eScooters?</th> </tr> </thead> <tbody> <tr> <td>No</td> <td>162</td> <td>12%</td> </tr> <tr> <td>Yes - Over 12</td> <td>358</td> <td>27%</td> </tr> <tr> <td>Yes - Over 16</td> <td>520</td> <td>40%</td> </tr> <tr> <td>Yes - Over 18</td> <td>276</td> <td>21%</td> </tr> <tr> <td>Total response</td> <td>1316</td> <td>100%</td> </tr> </tbody> </table>	Should there be a legal age for using eScooters?			No	162	12%	Yes - Over 12	358	27%	Yes - Over 16	520	40%	Yes - Over 18	276	21%	Total response	1316	100%
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<p>Q4. Do you agree with the criteria selected to assess the options? Are there any key impacts not covered by these criteria?</p>	<ul style="list-style-type: none"> • Regardless of what options are available, people are currently illegally using e-scooters on footpaths, shared paths, bicycle paths and roads in Victoria. • If this lack of compliance and support for legislation grows stronger, the current timeline offered by the NTC will not be sufficient. • The timeline for implementation of new rules is too long and risks local and state governments legislating these devices prior to completion of the NTC Australian road rules process (as is the case in QLD). This is likely to result in further inconsistencies in the road rules for PMDs across Australia. We strongly encourage the NTC to have something ready within the next few months. 																		

	<ul style="list-style-type: none"> In our survey, 79% of respondents informed us that they would consider using an e-scooter. 16% said they wouldn't and 6% said they were unsure. See table below: <table border="1" data-bbox="662 309 1236 539"> <thead> <tr> <th colspan="3">Would you consider using an eScooter for yourself?</th> </tr> </thead> <tbody> <tr> <td>Yes</td> <td>1134</td> <td>79%</td> </tr> <tr> <td>No</td> <td>225</td> <td>16%</td> </tr> <tr> <td>Unsure</td> <td>83</td> <td>6%</td> </tr> <tr> <td>Response total</td> <td>1442</td> <td>100%</td> </tr> </tbody> </table> 	Would you consider using an eScooter for yourself?			Yes	1134	79%	No	225	16%	Unsure	83	6%	Response total	1442	100%
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<p>Q5. When considering the safety risk assessment, access and amenity impacts. Broader economic impacts, as well as compliance and enforcement impacts; has the impact analysis sufficiently considered all relevant variables and available evidence? What other factors could be included in the analysis? Please provide additional evidence. (See Appendix E – Impact Analysis).</p>	<ul style="list-style-type: none"> There needs to be further considerations for shared paths, as speed approach 1 does not consider that bicycles and e-bikes already operate on shared paths and can go at much faster speeds than some of the options proposed in the regulatory impact statement. The Queensland government released a technical note that discussed conflict between pedestrians and cyclists, and how design treatments can be implemented to mitigate this. If PMDs are legislated, government agencies should look into mitigation measures for where conflict is likely to occurⁱⁱⁱ. A study on shared paths identified that bicycle riders tend to self-moderate their speeds based on user volumes and path design. Any provision implemented should encourage PMD users to do the same^{iv}. As the assessment states, much like bicycles, PMD users are likely to prefer routes where they can travel at up to 25km/h on a road, rather than 10km/h on a footpath, as they can get to their destination faster. In situations where the user has a choice between a shared path and a footpath, the RIS offers no proposed incentive in terms of travel time for PMD users to choose a shared path over a footpath. As dedicated off-road bicycle infrastructure is minimal in Victoria, we encourage the rules to ensure PMD users choose shared paths over footpaths and riding on roads. 															
<p>Q6. What do you believe is the most appropriate road infrastructure for PMDs to access: footpaths, separated paths, bicycle paths and/or roads? Please provide a rationale to support your position.</p>	<ul style="list-style-type: none"> RACV supports Option 3: access permitted to most pedestrian infrastructure, bicycle paths and local roads with the following amendment: bicycle paths to be changed to include bicycle infrastructure. PMD road rules should consider city environments and where the use of on-road bicycle lanes may be appropriate (Elizabeth Street Bicycle Lane vs Elizabeth Street Footpath). Local and state governments should have the ability to set speed and usage restrictions in specific areas. This can be done through geofencing of hire PMDs, and signage for private PMDs. Considerations should be made for when on-road bicycle lane ends (e.g. at an intersection). We would recommend that the NTC explore provision that would allow e-scooter riders to ride an additional 50 / 100 metres along the road, so that they can safely reconnect with a footpath or other bicycle infrastructure. In our survey, respondents told us that the main location where e-scooters should be used is on “shared paths / bicycle paths” (86%) and “bicycle lanes (84%)”. 															

	<p>*Note that respondents could select multiple answers to this question.</p> <table border="1" data-bbox="678 264 1217 602"> <thead> <tr> <th colspan="3">Where should eScooters be used? Check all answers that are relevant.</th> </tr> </thead> <tbody> <tr> <td>On footpaths</td> <td>659</td> <td>50%</td> </tr> <tr> <td>Shared path / bicycle path</td> <td>1137</td> <td>86%</td> </tr> <tr> <td>Bicycle lanes</td> <td>1106</td> <td>84%</td> </tr> <tr> <td>On roads with speed limits under 50km/h or less</td> <td>670</td> <td>51%</td> </tr> <tr> <td>On all roads</td> <td>182</td> <td>14%</td> </tr> <tr> <td>Other (please specify)</td> <td>102</td> <td>8%</td> </tr> <tr> <td>Total responses</td> <td>1322</td> <td></td> </tr> </tbody> </table>	Where should eScooters be used? Check all answers that are relevant.			On footpaths	659	50%	Shared path / bicycle path	1137	86%	Bicycle lanes	1106	84%	On roads with speed limits under 50km/h or less	670	51%	On all roads	182	14%	Other (please specify)	102	8%	Total responses	1322	
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<p>Q7. What is an appropriate and safe maximum speed that PMDs should be permitted to travel across the various infrastructure? (a) pedestrian areas, (b) bicycle areas, and (c) roads? Please provide a rationale to support your position.</p>	<ul style="list-style-type: none"> • RACV supports Speed Approach 1: 10km/h maximum speed on pedestrian infrastructure; and 25km/h maximum speed on bicycle infrastructure and roads (where the option permits) with the following amendment: PMD riders to be able to travel at 25km/h on shared paths. • 10km/h on shared paths, but 25km/h on bicycle paths is inconsistent, confusing and may lead to users unknowingly breaking the road rules. • Bicycle and e-bike riders can already go faster than 10km/h on shared paths, it does not seem reasonable to limit other users. • If PMDs are to be a first and last mile solution then they should be competitive with other modes, including walking, running, bicycle riding and driving. A 10km/h limit on a shared path, provides no incentive for e-scooter users to preference a shared path over a footpath. • Shared paths have less interactions with driveways and overall provide a safer environment. E-scooter usage on shared paths should be consistent with bicycles and e-bikes. • Users should be encouraged to always operate the PMD in a safe manner, adjusting their speed based on the environment. 																								
<p>Q8. Do you agree with the overall assessment that Option 3, Speed Approach 1 is the option that best balances mobility and safety? If not, which option and speed approach do you prefer? Please provide a rational to support your position.</p>	<ul style="list-style-type: none"> • For option 3, bicycle paths should be changed to bicycle infrastructure, as this provides a faster alternative to using a footpath and reduces any conflicts with pedestrians, particularly in an inner-city environment. • City of Melbourne's transport strategy identified that many of the streets in Melbourne's city centre feature significant footpath overcrowding. At present, there may be limited capacity for PMDs to safely operate on city footpaths. Because of this, bicycle infrastructure should be considered as a potential solution. • Speed approach 1 should allow PMD users to go up to 25km/h on shared paths, to provide an incentive for PMD users to preference shared paths over footpaths and to strengthen the potential for these devices to work as a solution for first and last mile transport. • With these amendments, RACV would support Option 3, Speed Approach 1. • Further, for PMD hire companies, we would encourage the restriction of speed limits to be explored in contract negotiations with private operators and by local and state governments. This should take into consideration areas of high 																								

	pedestrian activity and regulation of these devices through geofencing.
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In all circumstances regardless of age, gender or region, our e-scooter survey participants informed us that they would consider using an e-scooter. Furthermore, people are currently using e-scooters that are non-compliant with the road rules. We recommend that the NTC reduce their allocated timeframe for the adoption of PMDs into the Australian Road Rules, as local and state governments may act in the interim, much like what has occurred in Queensland and South Australia.

PMDs provide opportunity to address the lack of first and last mile transport in our cities and towns and based on our independent research and the feedback we have received from Victorians', we would like to see them included into the Australian Road Rules as quickly as possible. With the legislation of these devices, further considerations need to be made around pedestrian and road safety, where local and state governments will need to amend and mitigate any issues that may arise.

Thank you for the opportunity for RACV to provide feedback to the National Transport Commission's regulatory impact statement 'Barriers to the safe use of personal mobility devices'.

ⁱ Segway.CH 2019, viewed at <http://www.segway.ch/en/infos/technologie.php>, viewed on 28th November 2019.

ⁱⁱ Scientific American 2005, viewed at <https://www.scientificamerican.com/article/bone-resilience-depends-o/#:~:targetText=Without%20a%20notch%20to%20start,orientation%20of%20the%20collagen%20fibers.>, viewed on November 28th 2019.

ⁱⁱⁱ Queensland Government 2014, viewed at <https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Technical-notes/Traffic-engineering/TN130.pdf?la=en>, viewed on November 28th 2019

^{iv} Bicycle Council 2011, viewed at <http://bicyclecouncil.com.au/files/research/SpeedLimitSettingOnSharedPaths.pdf>, viewed on November 28th.