

**Department of Transport and Main Roads**  
**Decision Brief**  
**MC67485**

To: Minister for Transport and Main Roads

<b>SUBJECT:</b> Update on policy issues surrounding the introduction of Segways in Queensland.	<b>URGENT</b>
<b>Minister's Comments:</b>  <i>OPTION 2</i> <i>Progress option 1 in</i> <i>the interim</i> <i>letter to reflect changes</i>	

**Summary**

- This brief is to provide you with recommendations on the proposal to allow the use of personal mobility devices (PMDs) in Queensland, in particular the devices known as 'Segways'.
- Three options for the introduction of Segways were explored; a permit scheme for tourism purposes in approved areas; amendments to the road rules to allow PMDs access to road-related areas; and conditional registration.
- Following this investigation it is recommended that a permit scheme be introduced to allow the introduction of commercial tours involving PMDs. Over the next 12 months, the demand for wider access to the road network by individuals on these devices and the implications of such access will be assessed.

**Recommendations**

- That you:
  - approve the preparation of legislative amendments to introduce a permit scheme to allow commercial tour operators to conduct guided PMD tours on defined road-related areas
  - approve that the Department of Transport and Main Roads (TMR) conduct an assessment of the demand for broader access to the road network for PMDs, and the implications of such access, after the permit scheme has been in operation for 12 months

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- sign the letter to the Honourable Campbell Newman MP, Premier of Queensland, outlining the proposed approach to PMD use in Queensland (**Attachment 1**).

### **Financial Implications**

- There will be financial implications for TMR in establishing and administering the permit scheme. However, these will be met from within existing allocations. It is expected there will be some minor impacts on the Queensland Police Service (QPS) and local government in assessing permit applications.

### **Background**

- The Premier received a proposal from Mr Andrew Cusack regarding the use of Segways for commercial purposes around riverside bikeways adjacent to the Brisbane River and South Bank. The Premier requested that TMR prepare a Cabinet Submission regarding the use of PMDs, such as Segways, in Queensland.
- Further requests for permission to use Segways on public land for commercial purposes in Townsville have subsequently been received by TMR.
- A Segway is a well known brand of upright electric PMD controlled by balance that can travel up to seven times faster than the average walker. There are two main types of the device, including on-road (i2 model), which are approximately 63cm wide and weigh 47kg and off-road (x2 model), which are 84cm wide and weigh 55kg. Segways currently retail from approximately \$10,000 (new) in Australia.
- It is also understood that the use of Segways is under consideration by other agencies:
  - discussions have been held with the Department of National Parks, Recreation, Sport and Racing (NPRSR) regarding access to National Parks for Segway riders. NPRSR would like to see riders restricted to areas such as fire trails and only given access to areas where vehicle access is allowed, not walking trails
  - Mr Ian Stewart, Queensland Commissioner of Police, has been quoted in the media as saying that he would like members of QPS to be able to use Segways as a means of staying in touch with the community.

### **Issues and suggested approach**

#### *National position*

- Most jurisdictions have been approached by commercial operators to allow Segway tours on roads and/or road-related areas. At this time, the only Australian jurisdiction to allow Segways access to the road network is the Australian Capital Territory, where guided tours are permitted on paths around Lake Burley Griffin. Segways are allowed to cross the road network at a specific location on the tour. There are a range of conditions with which the tour operator must comply, for example, the speed of the devices, safety equipment for riders, instruction of riders, hours of operation and tour routes.
- It is understood that Tasmania and Western Australia are developing proposals to allow similar tour operations under a permit scheme.

- Issues surrounding the definition, access and regulation for the use of PMDs, including Segways, have been the subject of national discussion and research projects by the Austroads Registration and Licensing Taskforce. Concerns, largely around safety, have limited the progress of this work. In 2010, a project was established to develop a framework for assessing alternative vehicles based on performance. The framework was not finalised due to the difficulties of applying it to the broad range of PMDs available. Instead, the PMD framework is being progressively refined by applying it to specific vehicle types.
- The latest project involves a trial at the Macquarie University campus in Ryde, New South Wales. The trial has the aim of identifying a commercial model for purchasing, leasing or sharing of PMDs. The project will also look at insurance issues and social dimensions of PMD use in high pedestrian areas, such as perceptions of use, ease of use and management of possible conflicts.
- TMR will continue to participate in the Austroads projects and will monitor the outcomes of the trial at Ryde.
- Under the Australian Road Rules, PMDs are not permitted on roads or road-related areas, such as footpaths and bike paths. Therefore, use of these devices is restricted to private property.
- The Australian Road Rules have been adopted by all Australian jurisdictions following endorsement by Transport Ministers. There is an accepted process for amending and maintaining the national consistency of these rules.

#### *Importation issues*

- Importation of 'vehicles' into Australia is governed by the Commonwealth *Motor Vehicle Standards Act 1989* (the Vehicle Standards Act).
- As a 'road motor vehicle', the on-road i2 model Segway may only be imported to Australia and supplied to the market if it is made to comply with the applicable Australian Design Rules (ADRs) under the Vehicle Standards Act. To achieve this, it would need to be fitted with mirrors, lights, markings, mudguards, signalling devices, motorcycle style braking system and a horn.
- In the case of the off-road x2 model Segway, the Commonwealth Department of Transport and Infrastructure has advised that it is not a 'road motor vehicle' as defined by the Vehicle Standards Act (as it is not designed for on-road use) and its importation and supply to the market is not prohibited. The regulation of use of this device on state/territory road networks is therefore the responsibility of the jurisdiction.
- However, if jurisdictions permit access to the road network by the x2 model, the Department of Transport and Infrastructure has advised that the device could then be regarded as a 'road motor vehicle' and, as it does not comply with applicable ADRs, importation would become illegal.
- For either Segway model to be allowed access to the road network without meeting the ADR requirements, a determination would need to be made under the Vehicle Standards Act that it is not a road vehicle for the purposes of the Act. If such a determination was made, regulation of the use of the Segway would then rest with the states and territories.
- Such a determination would be a major step and given the concerns that have already been raised at the national level, would clearly require full consultation with state and territory ministers. The determination would need to take account of all relevant issues, including serious safety issues and would need to be undertaken as part of a comprehensive approach to 'alternative vehicles' and other PMDs as Segways represent only one commercial brand of a range of such devices.

### Safety issues

- TMR conducted a preliminary examination of the issue of Segways in 2011-12 and identified a number of safety issues associated with Segway use including:
  - use on road-related areas, such as footpaths, is problematic as the braking, manoeuvrability constraints and speed and mass of the Segway has the potential to cause significant damage and injury, particularly to pedestrians
  - in optimal dry conditions, the Segway has similar speed, manoeuvrability and braking capabilities to that of a bicycle, but in poorer (wet, slippery or loose gravel) conditions or when taking emergency, evasive action the Segway underperforms the bicycle due to its high centre of gravity and relatively poorer surface friction
  - the turning radius of a Segway increases with speed. When stationary, a Segway can turn in place by rotating its wheels in opposite directions. This gives it greater manoeuvrability than most vehicles when standing still. However, at a controlled cruising speed of 20 km/h the turning radius of a Segway is approximately 10.5m
  - inexperienced operators are likely to have difficulty controlling the device in an emergency situation.
- Other safety related issues raised about the use of Segways on Australian roads and roadside areas include:
  - the safety of Segway riders in a road environment where they would be likely to come into conflict with other motor vehicles
  - commercial operations are likely to be most popular in areas with high pedestrian use and the conflicts which are likely to result
  - speed differentials between the Segway and pedestrians, and the Segway and other vehicles, are likely to cause conflicts on congested paths and public areas
  - the width of the devices when used on bikeways, shared and local paths – particularly the off-road x2 model – is likely to raise concerns, leaving very little room for error when the devices are passing pedestrians and cyclists or other Segways. The x2 Segway has a width of 0.84m and suburban footpaths commonly have a width of 1.0m. Stability concerns are likely to result from the devices running off the edge of paths, clipping infrastructure or running onto the road.

### Options for use in Queensland

- TMR has examined how PMDs, in this instance Segways, can be accommodated in the transport system. Currently, the *Transport Operations (Road Use Management) Act 1995* (the TORUM Act) does not allow for the use of Segways on roads or road-related areas. PMDs (including Segways) are not defined in Australian law and there are no rules about these devices in the Australian or Queensland Road Rules.
- The use of Segways on roads has not been considered, apart from crossing roads by the shortest route to access paths, as the risks associated with the devices mixing with motor vehicles are too great.
- Three options to enable use of these devices on road-related areas have been identified. The three options and their advantages and disadvantages are described in **Attachment 2**. The options are:

- Option 1: Establish a Permit Scheme for commercial Segway tour operations.
  - Option 2: Amend the Queensland Road Rules to create a new vehicle type to provide access to road-related areas, such as bikeways and paths.
  - Option 3: Include the vehicles in a conditional registration scheme to allow use by individuals on road-related areas.
- All three options have assumed that the off-road Segway (the x2 model) will be used, due to the importation issues of the on-road type.
  - The recommended approach is Option 1, to establish a permit scheme for commercial Segway tour operations
  - Option 1 minimises the potential risks to public safety, can be implemented relatively quickly and at minimal cost and is the least burdensome for enforcement. It also provides a commercial tour opportunity in line with the approaches received by the Premier and TMR.
  - To introduce a new permit scheme, it is proposed to include an amendment to exclude PMDs from the definition of 'motor vehicle' in the TORUM Act in the Transport Legislation Amendment Bill H. In addition, some amendments to regulations under the TORUM Act will also be required.
  - As part of the recommended approach, over the next 12 months TMR will monitor the operation of the permit system and assess if there is sufficient demand to consider the wider use of the devices by individuals away from guided tours. The relatively high cost of the devices (\$10,000 for the current model – new) is expected to curtail demand for private recreational purposes. This price could decrease as demand increases, technology improves and competition with other, newer PMDs increases.
  - Further investigation of Option 2 will be undertaken to fully explore the implications of allowing wider use of Segways on bikeways and paths. It is expected that some groups, such as cyclists and pedestrians, may not be in favour of the proposal.
  - In addition, it will allow progress at the national level with the Macquarie University trial and Austroads work, which will aid in developing effective policy in Queensland.
  - Option 3 is the least preferred, due to the administrative burden placed on both Segway riders and TMR and a less straightforward enforcement mechanism.
  - Option 3 may also have implications for the Motor Accidents Insurance Commission (MAIC) should a conditional registration approach be adopted. Wider use will also impact on local government, for example signage in parks and public places where Segways are likely to be used.
  - It is noted that none of the options identified so far are likely to meet the requirements of NPRSR. Representatives of NPRSR have indicated a desire to limit PMDs to roads within National Parks. Further consultation will be required to reach a solution to this issue.

#### **Financial Implications**

- There are financial implications associated with the recommended option resulting from the implementation and administration of a permit scheme. It is expected that these costs will be met from within existing TMR budgets.

- Wider access to paths/road-related areas for riders of Segways has the potential to have more significant financial implications, for example, signage on paths and public places, changes to bikeways to minimise conflicts between road users etc.
- Issues of insurance may be a factor, including whether MAIC is the nominal defendant in the event of injury. While tourism operators will be required to have public liability insurance, general users will not. There is no available information on the crash involvement of personal transportation devices with which to estimate the likely cost to MAIC.

#### **Consultation with Stakeholders**

- QPS was consulted initially and has noted the importance of an enforcement framework to ensure that PMDs are only used in the areas and manner intended. QPS support was limited to a permit scheme for tour operators. It is unlikely that QPS will support wider access to road-related areas.
- The Department of Tourism, Major Events, Small Business and the Commonwealth Games (DTESB) noted that PMDs have value as a tourism mobility device. However, DTESB also acknowledged issues associated with the use of PMDs in public places, such as public safety, compatibility with existing traffic and environment and the need for public liability insurance.
- Initial discussions have been held with NPRSR. However, further discussions are required as noted above.
- MAIC has not been consulted regarding the implications for compulsory third party insurance.
- Local government has not been consulted.

#### **Employment impacts**

- It is possible there will be some employment opportunities from the PMD proposals discussed in this brief.

#### **Election Commitments**

- This does not relate to an election commitment