

**For discussion  
on 16 June 2023**

**Legislative Council Panel on Transport  
Use of Electric Mobility Devices in Hong Kong**

**PURPOSE**

The Government proposes to establish a regulatory framework for electric mobility devices (“EMDs”) to allow their use in Hong Kong in phases. This paper sets out the proposed regulatory framework and seeks Members’ views on the legislative amendment proposals.

**BACKGROUND**

2. As EMDs are mechanically propelled, they fall within the definition of “motor vehicles” under the existing Road Traffic Ordinance (Cap. 374) (“the Ordinance”) and must be licensed before use on roads or private roads. EMDs mainly include:

- (a) motorised personal mobility devices (PMDs) such as electric scooters, electric unicycles and electric hoverboards; and
- (b) power assisted pedal cycles (PAPCs)<sup>1</sup>.

3. From the road safety or accessibility perspective, EMDs are not suitable for sharing road space with ordinary vehicles or being used on footpaths. Moreover, the quality of unregulated EMDs varies and they pose potential safety hazards in various aspects. It is therefore the long-standing policy of the Government not to register or license EMDs under the existing Ordinance. The use of unregistered or unlicensed EMDs on roads or private roads (including footpaths) may contravene relevant laws.

4. With the advancement of technology, the design and production technology of EMDs are being enhanced and their production costs have been reduced, leading to their rising prevalence. The proper use of EMDs are also gradually brought under regulation in various jurisdictions around the world. While adopting an open attitude towards new technologies and innovations for promoting green commuting, the

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<sup>1</sup> PAPCs refer to bicycles (or tricycles) that are equipped with an auxiliary electric motor and motorised assistance will only be provided when the riders are pedalling. Such motorised assistance will be cut out once a certain speed (generally at 25 km/h) is reached.

Government also attaches immense importance to road safety. Given the dense population and high vehicular traffic flow in Hong Kong, we consider that EMDs should not be used on footpaths or carriageways. However, with proper regulation, they may be used in new development areas with well-planned cycle tracks in the future so as to promote green and low-carbon living. We expect that active transport such as EMDs, walking and cycling can provide effective short-distance commuting options to support the railway network, which is the backbone of the transportation system, thereby reducing the overall demand for motorised transport for short-distance journeys and lowering carbon emission.

5. In this connection, it is the Government's intention to update the legislation by formulating a proper regulatory framework for EMDs so as to ensure their safe and effective uses and allow more room for the adoption of new technologies and innovation.

### *Relevant work carried out*

6. The Transport Department (TD) has set up an inter-departmental task group<sup>2</sup> dedicated to reviewing the proposed regulatory framework for EMDs, formulating relevant technical and safety requirements as well as reviewing the results of the trials<sup>3</sup>. To examine the interaction between EMDs and bicycles (including operating speed and spatial separation) when sharing cycle tracks, the TD conducted site trials on cycle tracks in Tseung Kwan O and Pak Shek Kok in 2021. According to the analysis of the results, upon imposition of appropriate technical and safety requirements (such as limits on the maximum operating speed, weight and width, as well as mandatory installation of lighting, brakes and stopping devices), EMDs are similar to conventional bicycles in terms of operating speed, space required for operation and manoeuvres. We therefore consider that, in terms of ensuring the safety of road users and technicality, the sharing of cycle tracks between EMDs and bicycles is feasible and can be further explored.

7. On this basis, the TD implemented a six-month pilot trial scheme with the Hong Kong Science and Technology Parks Corporation on an approximately three-kilometre cycle track section between the University Station and the Science Park in 2022, with a view to gaining more operating experience and enhancing the public's understanding of the use of EMDs as a mode of short-distance commuting between workplaces and transport hubs. Observations made by the TD show that the

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<sup>2</sup> Members include representatives from the Hong Kong Police Force, the Department of Health, the Electrical and Mechanical Services Department, the Highways Department, the Department of Justice and the TD.

<sup>3</sup> Various site trials need to be conducted on EMDs in order to gain the practical operating experience of using EMDs on cycle tracks and understand the effectiveness of certain safety requirements, thereby establishing the feasibility of using EMDs on cycle tracks.

operation of the scheme was generally smooth and no incidents occurred during the trial.

8. During the above trials, the TD conducted a questionnaire survey and collected the views of about 1 500 members of public on their acceptance of the use of EMDs on cycle tracks. Some 60% of the respondents supported the use of properly regulated EMDs on cycle tracks, and most of them considered the speed and width limits on EMDs as well as the safety equipment requirements<sup>4</sup> on EMDs and users appropriate. The remaining some 30% of the respondents expressed reservation, with the main concerns being the potential risks between EMDs, cyclists and pedestrians, as well as the limited space of existing cycle tracks.

9. Given the successful experience of the above trials as well as the opinions of the public, we are of the view that consideration may be given to allowing the use of certain EMDs on designated cycle tracks where technical and safety requirements permit. In this connection, we have commenced a study on the legislative amendments regarding the regulatory arrangements.

10. On the other hand, the TD has launched a one-year trial scheme on the shared use of PAPCs on cycle tracks in Pak Shek Kok from March 2023 in order to learn about the suitability of the operation mode of shared use of PAPCs in Hong Kong as well as public acceptance. This trial scheme is carried out in parallel with the legislative amendment exercise.

## **KEY POINTS OF THE PROPOSED REGULATORY ARRANGEMENTS**

11. There are currently no statutory technical specifications for EMDs. Variation in product quality and the substantial heat generated during charging, coupling with the high speed or reckless operation by users, pose potential safety hazards to both road and EMD users. Over the past four years, there were 72 accidents involving EMDs, resulting in six fatalities. Therefore, our primary principle in formulating relevant regulations and standards is safeguarding and enhancing road safety, with due regard to the views of stakeholders while allowing for flexibility for future development and application of mobility technologies. Accordingly, we propose to adopt a prudent approach by only permitting the use of EMDs at appropriate cycle tracks by phases. Overall speaking, we propose to formulate regulatory arrangements in such three aspects as EMDs, EMD users and the designation of appropriate road sections, with key points as follows.

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<sup>4</sup> The equipment includes a helmet, a front white lamp and a rear red lamp, a rear red reflector, an effective braking system and a warning device, etc.

## ***Regulation on EMDs***

12. In the course of formulating the technical and safety requirements for the EMDs, we have made reference from practices in various jurisdictions/cities<sup>5</sup>. Having also examined the results of the aforesaid trial and carefully taken into account safety and practicality considerations, we have formulated a set of technical and safety requirements on the limits on the speed, weight and size of EMDs (with details at **Annex**) to set out the conditions required for the safe use of EMDs on cycle tracks.

13. On implementation, we propose formulating certification arrangements<sup>6</sup> for EMDs to facilitate regulation of their operational as well as electrical and mechanical safety. Specifically, EMDs should be assessed by recognised certification bodies on their compliance with relevant technical and safety specifications. Compliant EMD models will be certified, with a designated mark with QR code affixed to them for easy identification by the public and enforcement officers who can get access to the relevant information of the EMD by scanning the QR code, thereby combating the use of illegal EMDs. In this regard, the TD is working with the Hong Kong Productivity Council to devise further details about the certification system and seeking the views of relevant stakeholders.

## ***Regulation on users***

14. Apart from the design and functions of EMDs, we must also ensure that EMD users adopt proper driving attitude and habit, so as to protect their own safety and that of other road users on cycle tracks. To this end, we propose that EMD users must be at least 16 years old<sup>7</sup> and wear a helmet. We have also set up a working group<sup>8</sup> to compile and formulate a code of practice which will serve as a reference for EMD users on proper driving attitude to ensure the safe and responsible use of EMDs. The code of practice will also include information about suitable cycle tracks which allow the use of EMDs.

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<sup>5</sup> Their weight limit for EMDs generally ranges from 20 kg to 55 kg. In Singapore, the weight limit for motorised PMDs and PAPCs is 20 kg; while in Mainland China and Germany, the weight limit for PAPCs is 55 kg. As regards speed limits, in the trial in the United Kingdom, Singapore, Queensland in Australia, France and Barcelona in Spain etc., the speed limit of motorised PMDs is mostly 25 km/h.

<sup>6</sup> There are no lack of examples involving the application of certification systems in Hong Kong, such as the certification scheme for telecommunications equipment administered by the Office of the Communications Authority.

<sup>7</sup> Reference has been drawn from practices in various jurisdictions/cities, the majority of which have in place an age restriction. Most of them require users to be at least 16 years old.

<sup>8</sup> Members include representatives from the Hong Kong Automobile Association, the Hong Kong Council of Social Service, the Cycling Association of Hong Kong, China, the Hong Kong Occupational Therapy Association, the Hong Kong Portable Electric Vehicle Association, the Hong Kong Road Safety Patrol, the Transport and Logistics Bureau, the Hong Kong Police Force and the TD.

### ***Opening of cycle track sections in phases***

15. Based on the survey results set out in paragraph 8 above, we propose adopting a prudent approach by opening cycle tracks for use of motorised PMDs by the public in phases. For the initial phase, we propose to first open a number of designated cycle track sections. Generally speaking, these cycle tracks have to be 3.5 metres wide with high connectivity, accessible to a relatively well-established cycle track network and located in a suitable road and traffic environment, etc. (such as the cycle tracks in Tseung Kwan O South and near the Pak Shek Kok Promenade). Having regard to the effectiveness, we will review whether more suitable cycle tracks<sup>9</sup> will be open for use of motorised PMDs by the public in due course. As for PAPCs, we propose allowing them to be used on all cycle tracks since their operating mode is similar to that of bicycles.

### ***Proper use of electric wheelchairs***

16. Electric wheelchairs are walking aids for mobility impaired persons to travel on pavements for necessary commuting purposes. We propose to clearly define in the Ordinance that electric wheelchairs are not “motor vehicles” in an effort to further clarify the role of electric wheelchairs as walking aids. From the perspective of road safety, in order to raise the safety and law-abiding awareness of electric wheelchair users, we will enhance the guidelines in the code of practice regarding traffic management and road safety pertaining to the use of electric wheelchairs, such as the proper speed<sup>10</sup> of electric wheelchairs on pavements and the pedestrian-related ordinances that must be followed.

### ***Offences and penalties***

17. We consider that the regulation on EMDs should be proportionate to the risks of their use<sup>11</sup>. In this regard, we propose that the offences and penalties related to

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<sup>9</sup> We propose analysing the use of motorised PMDs during the implementation of the initial phase, followed by examining and assessing public views, accident data, law enforcement situation, latest development of and international regulatory arrangements for motorised PMDs, etc., with a view to considering whether the scope of the use of motorised PMDs should be extended to cover other suitable cycle tracks (including new development areas or new towns with well-established cycle track networks).

<sup>10</sup> When travelling on pavements, users of wheelchairs should move at a reasonable speed which at most should be comparable with that of the moving crowd around them. They should look out for the road environment and the people moving around them, in particular the sudden movement of young children or the slow movement of the elderly. When crossing at-grade roads, users should always use dropped kerb crossings and follow the Road Crossing Code.

<sup>11</sup> While the average speed of compliant EMDs is generally comparable with that of bicycles, EMDs have a higher acceleration rate at the start-up and require less effort to maintain speed, thus posing a relatively higher safety risk. Users are required to exercise more care in manipulating EMDs and should be subject to more stringent penalties.

EMDs should be commensurate with those related to bicycles<sup>12</sup>. As for certain more serious offences<sup>13</sup>, reference should be made from the penalties similar to those vehicle-related offences in order to ensure the safety of other road users.

18. Taken into account enforcement modes of other traffic offences, we propose introducing a fixed penalty system<sup>14</sup> for some minor offences in order to enhance the enforcement effectiveness.

### *Consultation*

19. We have preliminarily consulted the Legislative Council (LegCo) Panel on Transport on the review of the use of EMDs in Hong Kong in June 2020, followed by the Transport Advisory Committee and the Road Safety Research Committee under the Road Safety Council. The Panel on Transport generally supported the proposed direction of regulation and conducting site trials to examine the feasibility of using EMDs on cycle tracks. In addition, the TD has consulted relevant stakeholders, including EMD interest groups, manufacturers and bicycle associations in the working group on the code of practice mentioned in paragraph 14 above, by explaining the proposed regulatory framework, regulatory arrangements for EMDs as well as the proposed certification arrangements and relevant technical requirements, etc., and seeking their views. Overall speaking, the various stakeholders supported in general the introduction of regulatory arrangements for EMDs. Further consultation with the Transport Advisory Committee and other relevant stakeholders on the proposed regulatory framework will also be conducted.

### **NEXT STEP**

20. The establishment of a regulatory framework for EMDs will necessitate amendments to the existing legislation. Subject to the views of Members and relevant stakeholders and the studies on the detailed regulatory arrangements for EMDs, we plan to commence the drafting of legislative amendments in the second half of 2023 with a view to submitting the amendments to the LegCo as soon as possible.

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<sup>12</sup> We propose that for the penalties of some traffic violations similar to those of cycling, such as reckless driving, careless driving, breach of age restrictions, not using helmets, minor vehicle non-compliances (such as not fitting with a front white lamp/a rear red lamp), reference can be made to those related to cycling. For example, the proposed penalty for the offence of reckless driving of EMD would be a fine at level 1 (\$2,000) in the case of a first conviction.

<sup>13</sup> Such offences include speeding, illegal modification or using a forged mark. For example, the proposed penalty for the offence of illegal modification of an EMD is a fine at level 4 (\$25,000).

<sup>14</sup> For example, regarding the amount of fine, the proposed fixed penalty for the use of an EMD without certification label as mentioned in paragraph 13 above will be \$2,000.

## **ADVICE SOUGHT**

21. Members' views are invited on the proposal for the establishment of a new regulatory framework for EMDs in Hong Kong.

**Transport and Logistics Bureau**  
**Transport Department**  
**June 2023**

**Proposed Technical and Safety Requirements for  
Motorised Personal Mobility Devices and Power Assisted Pedal Cycles**

	<b>Motorised personal mobility devices (PMDs)</b>	<b>Power assisted pedal cycles (PAPCs)</b>
Maximum net weight <sup>15</sup>	20 kg	25 kg
Maximum design speed <sup>16</sup>	25 km/h	Up to 25 km/h with auxiliary power
Maximum width	650 mm	
Maximum length	1 250 mm	1 800 mm
Maximum number of wheels	1-2 (wheel set(s)*)	2-3
Safety requirements	<ul style="list-style-type: none"> <li>• fitted with a front white lamp and a rear red lamp</li> <li>• fitted with a rear red reflector</li> <li>• fitted with an effective braking/stopping system</li> <li>• fitted with a warning device</li> <li>• complying with relevant international standards</li> <li>• no passengers allowed</li> </ul>	

\* If the distance between two centre points of the wheel-to-ground contact areas is less than 300 mm, the two wheels can be regarded as being in one wheel set.

<sup>15</sup> A weight limit ranging from 20 kg to 55 kg is generally imposed as a regulatory requirement in other jurisdictions. With the proposed maximum design speed of 25 km/h, we consider imposing a weight limit of 20 kg for motorised PMDs appropriate from the perspective of prudence and safety. For PAPCs, we understand from stakeholders that the frame of a PAPC is generally larger and we therefore propose a weight limit of 25 kg.

<sup>16</sup> The regulation on the speed is mostly 25 km/h in other jurisdictions.