

## **Participation of personal light electric vehicles in road traffic**

Resolution of 8 April 2019 on the basis of recommendations of the Executive Committee Vehicle Technology in collaboration with the Executive Committees Adults, Children and Young Road Users and Traffic Engineering

### **Resolution**

The use of Personal Light Electric Vehicles (PLEV) is a new form of mobility in the area of leisure and sport, which according to the Federal Ministry for Transport and Digital Infrastructure (BMVI) and manufacturers, could develop into a module for sustainable mobility. Approval of personal light electric vehicles for use on public roads is associated with new and as yet unforeseeable risks. These may contradict the objectives of Vision Zero.

The German Road Safety Council (DVR) resolves:

- Personal light electric vehicles with a maximum design speed above 6 km/h without steering or handle bars should not be approved for use in public road traffic.
- Personal light electric vehicles with steering or handle bars with a maximum design speed of 6 to 20 km/h should not be used on pedestrian footways, but rather on cycle paths, cycling lanes and protected lanes, if these are available. Pedestrian footways should not be released for the use of personal light electric vehicles above 6 km/h.
- Only persons who are at least 15 years old and who have a moped license may operate personal light electric vehicles with a maximum design speed of 6 to 20 km/h. The DVR is of the opinion that driver training must be adapted to this new field of use.

- Personal light electric vehicles with a maximum design speed above 6 km/h must at least be equipped with brakes, lights and a bell or horn.
- A brake test according to DIN EN 15194:2017-12 is suggested. This includes details of the surface granulation of asphalt and concrete and also a test in wet conditions. The additional introduction of a target braking test is suggested in order to test the reaction of the brakes.
- Personal light electric vehicles with a maximum design speed above 6 km/h should be used with a suitable helmet.
- Road construction regulations, such as the Guidelines for Cycling Facilities (ERA) currently under revision should for example take the minimum width of personal light electric vehicles into consideration.
- The DVR recommends that manufacturers and sharing providers of personal light electric vehicles should be addressed and obliged to provide instruction and information about the safe and considerate use of these vehicles.
- The effects of the draft regulation on the use of personal light electric vehicles should be scientifically monitored and evaluated over a period of three years from the time on which it comes into effect. Here, the focus should be on road safety.

It must be ensured that these vehicle categories are recorded separately in the accident statistics. The use of personal light electric vehicles should only be permanently allowed if this is in accordance with Vision Zero.

## **Explanation**

Personal light electric vehicles are vehicles without a seat or self-balancing vehicles with or without a seat. They have a maximum width of 70 cm, a maximum height of 140 cm and a maximum length of 200 cm. According to the draft regulation by the Federal Ministry of

Transport and Digital Infrastructure (BMVI) of 26.02.2019<sup>1</sup>.they have a maximum design speed of 6 to 20 km/h.

On the European level, the new Regulation (EU) No. 168/2013 for type approval of two- or three-wheeled and four-wheeled vehicles has been in force since 2016. According to this EU regulation approval of PLEVs can be regulated at a national level, as it excludes these types of vehicles from its scope of application. This means that at present, PLEVs may not participate in road traffic, i.e. they cannot be approved. However, at the same time, PLEVs are increasingly being offered on the market.

The BMVI has commissioned the Federal Highway Research Agency (BAST) with the research project "Investigation of very small electric vehicles". The concluding report was published in November 2018. This contains proposals and definitions for PLEV categories depending on their maximum design speed: Category K0 (maximum design speed  $\leq 6$  km/h), K1 (6-20 km/h), K2 (20-25 km/h). (Reports by the Federal Highway Research Agency (BAST), Vehicle Technology, Issue F125)<sup>2</sup>.

The objective of the project was to determine under what conditions PLEVs can be safely operated in road traffic, what technical requirements are necessary for this and what potential conflicts are to be expected with regard to other road users.

The DVR issued a statement with regard to the first draft regulation in October 2018.

### **Draft regulation of 26.02.2019 and planned exemption regulations**

Subsequent to the DVR statement of October 2018 the BMVI developed a second draft of the Personal Light Electric Vehicle regulation which was submitted to the EU in the framework of an emergency procedure. The emergency procedure has been approved. This current draft regulation proposes that PLEVs which travel at less

---

<sup>1</sup> Draft regulation of the Federal Ministry for Transport and Digital Infrastructure; "Draft Ordinance on the use of personal light electric vehicles (PLEV) on public roads and amending other road traffic regulations". Status 26.02.2019

<sup>2</sup> BAST (2018): Untersuchung zu Elektrokleinstfahrzeugen, [Investigation of very small electric vehicles] Issue F 125, Bergisch Gladbach, p. 33

than 12 km/h could be used after completion of the 12th year of life and PLEVs with a design speed up to 20 km/h could be used after completion of the 14th year of life. Originally, a condition was possession of a moped license and therefore a minimum age of 15 and hence use by children was excluded. These regulations were abandoned. According to the draft regulation, PLEVs which travel at less than 12 km/h may be used on pedestrian footways, on joint pedestrian and cycle paths and in pedestrian zones inside urban areas.

This new draft regulation was not submitted to the relevant stakeholder organisations by the BMVI in order to seek their opinions.

In addition, the BMVI is planning an exemption to the rule, which allows PLEVs without steering or handle bars to be used on public roads and probably on pedestrian footways. However, an initial expert opinion "On the permissibility of the release of pedestrian footways for personal light electric vehicles" comes to the conclusion that a general use of this traffic area by PLEVs without steering or handle bars is "not legally tenable"<sup>3</sup>.

The DVR has the opinion that footways should be reserved for pedestrians. Older people and children would be especially endangered by PLEVs, because they are often unable to evade them quickly enough. In principle, PLEVs are problematic for persons with reduced mobility and reduced vision.

Signed  
Prof. Dr. Walter Eichendorf  
President

---

<sup>3</sup> Prof. Dr. Jur. Stefan Klinski, Brief expert legal opinion: Zur Zulässigkeit der Freigabe von Gehwegen für Elektrokleinstfahrzeuge , Berlin, February 2019

