

E-scooters: follow-up - Transport Select Committee

Written evidence submitted by Dr Petya Ventsislavova and
Nottingham Civic Exchange

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1. Executive Summary

- 1.1 This submission builds on research conducted by Dr Petya Ventsislavova from Nottingham Trent University supported by the Department of Psychology and Nottingham Civic Exchange.
- 1.2 It shares outcomes from research conducted and led by Dr Petya Ventsislavova during the period between January 2022 and October 2022.
- 1.3 Since the introduction of the public e-scooter trials in the UK, multiple collisions involving these vehicles have been reported some resulting in fatalities. As a result, it has become questionable whether e-scooters contribute towards achieving Vision Zero goals.
- 1.4 The underlying reasons for these collisions remain uncertain, however, a significant number of these incidents have been attributed to the inexperience and the reckless and aberrant riding behaviour of riders.
- 1.5 The sudden implementation of e-scooters did not allow adequate opportunity for riders to familiarise with the legislation and safety standards on how to operate these vehicles, leading to a perception that they were primarily intended for recreational purposes rather than being considered a legitimate mode of transportation.
- 1.6 Recently, Dr Petya Ventsislavova conducted a study exploring the profile of e-scooter riders and potential riders, their knowledge of the current legislation and their proneness to engage in aberrant riding behaviour. A variety of riding scenarios, presenting live footage of real events filmed from the riders' perspective, were featured for the study to test participants' knowledge and riding behaviour. This approach was adopted to departure from the traditional survey methods

currently used to study riders' understanding of the regulations and adopt contextually relevant situations where riders were able to apply their knowledge.

- 1.7 It was observed that riders and non-riders did not show sufficient knowledge of the current legislation, especially in relation to parking, speeding and designated areas where e-scooters are permitted to operate.
- 1.8 Currently, there is no mandatory training to equip riders with the necessary knowledge and skills to operate e-scooters in a safe and responsible manner. This lack of mandatory training leaves riders without the minimum safety standards and awareness of regulations, increasing the risk of collisions and other safety incidents. It is imperative that riders receive adequate training on how to use these vehicles and understand the minimum safety standards and regulations. Without this training, riders may engage in dangerous and potentially life-threatening behaviour, hence we recommend that each rider should undertake compulsory training before they are allowed to operate e-scooters.
- 1.9 We call for mandatory training and media campaigns aimed at educating riders on safe and responsible e-scooter operation. Despite the availability of information, it is not effectively disseminated to the public, leaving many individuals unaware of the current regulation and safety guidelines.
- 1.10 This submission responds to the listed topics in relation to the progress that has been made in assessing e-scooter safety, with findings from the ongoing trials for the E-scooters: follow-up inquiry published in February 2023.

2. About the Authors

- 2.1 *Dr Petya Ventsislavova* is a Senior Lecturer in Transport Psychology at Nottingham Trent University. Dr. Ventsislavova specialises in Transport Psychology and has worked with various international government organizations to assess the best methods for incorporating hazard perception and prediction testing as part of their official driving tests. She led an institution-supported project by NTU on e-scooter safety and has established a wide network of partnerships with charities and

local councils. With over a decade of experience in transport psychology research, she has contributed with a strong publication record.

2.2 *Nottingham Civic Exchange* is Nottingham Trent University's pioneering civic think tank. It supports NTU as an anchor institution in the city and the region ensuring our expertise, knowledge and skills help to make a difference. Nottingham Trent University holds engagement with communities, public institutions, civic life, business and residents at the core of its mission.

3. E-Scooter Training Provision

- 3.1 Despite agreement among many witnesses that e-scooter riders should undertake training as a condition of hiring an e-scooter, it has been stated that such training is not deemed necessary due to the inherent safety design of these vehicles and their user-friendly nature. As a result, the government has determined that mandatory training is not required (Transport Committee, 2021).
- 3.1 These training needs have also not been further addressed, however, the assessments carried out in the previous year by the Department for Transport (2022) for the public trials and the Parliamentary Advisory Council for Transport Safety (2022) evaluation of private e-scooters, indicated a significant number of collisions involving these vehicles, some of which resulted in fatalities. The data showed that the use of private e-scooters led to a greater number of casualties although injuries resulting from the use of rental e-scooters were higher than those recorded for private e-scooter riders.
- 3.2 The number of collisions involving e-scooters have provided compelling evidence that these vehicles may not be as safe as initially believed. This highlights the need for individuals operating these vehicles to possess a basic understanding of relevant safety standards and regulations to ensure safe operation.
- 3.3 The sudden introduction of the trials did not allow enough time for riders to familiarize themselves with the rules and guidelines on how to safely operate these vehicles (Comer et al., 2020; Petzoldt et al., 2021;

Wallius et al., 2022). In addition to this, the existing regulations for e-scooters are less comprehensive and standardised as the ones established for other forms of transportation. This has created a situation where riders are not fully aware of the laws and guidelines governing the use of e-scooters, having impact on their riding behaviour (Haworth et al., 2021).

- 3.4 We know that insufficient knowledge of the regulations governing e-scooters can result in aberrant riding practices with both private and public e-scooters (Haworth et al., 2021). The majority of e-scooter collisions have been reported by inexperienced riders, younger than 24 years, with rider error and reckless riding cited as the most common factor for these collisions (DfT, 2022). The absence of comprehensive knowledge regarding relevant legislation among e-scooter riders, coupled with a lack of enforcement mechanisms, can lead to a significant non-compliance with established regulations (Haworth et al., 2021).
- 3.5 Dr Ventsislavova led a project institutionally funded by NTU to explore e-scooter riders and non-riders' awareness of the current legislation and their intention to adhere to the current rules while operating e-scooters. Our work revealed that e-scooter riders who showed adequate knowledge of the current regulations were more likely to comply with them and avoid aberrant riding behaviour. Thus, mandatory training aimed at increasing riders' familiarity with the rules and regulations can promote and foster a culture of responsible riding behaviour. Such training will establish safety standards to minimise risk of injury, which ultimately will benefit both riders and the wider community.
- 3.6 During the study, participants were presented with a variety of riding scenarios, some featuring static images and some live footage of real events filmed from the riders' perspective. They were asked to identify which of the observed behaviours were legal or illegal by applying their understanding of the regulations to these contextually relevant situations.

- 3.7 Our research identified significant gaps in the knowledge of both current and potential e-scooter riders of the current legislation, particularly in relation to parking, speeding and designated areas where e-scooters are permitted to operate. We observed that users tend to demonstrate a better understanding of the current legislation in comparison to non-users, however, the knowledge and awareness of the current rules remained alarmingly low among both road users.
- 3.8 Whilst information around the use of e-scooters is available on the Government website, there are still many areas that remain unclear, resulting in a significant number of riders struggling to obtain accurate and comprehensive information on the applicable rules and regulations. Despite the increasing prevalence of e-scooters and associated media coverage, equally, a significant proportion of e-scooter riders remain uninformed about the legal situation of private e-scooters (Department for Transport, 2022).
- 3.9 The prevalence of aberrant and negligent riding practices is not necessarily indicative of a deliberate intention to violate rules and regulations. This is further reinforced by the fact that, upon closer examination, those participants who claimed to possess knowledge of the rules were unable to accurately identify them upon further questioning and when asked to apply their understanding of the regulations to specific, contextually relevant situations. This raises concerns regarding the root causes of such illegal riding behaviours, as it is quite possible that the riders are simply uninformed and lack adequate knowledge of the current regulations.
- 3.10 By identifying areas where riders are inadequately informed about the current legal framework and minimum safety standards, efforts can be made to address the most problematic forms of behaviour and promote responsible use for e-scooters. Therefore, the development of effective and targeted outreach campaigns, as well as training, aimed at providing riders with accessible information about the rules and safety standards is imperative and can significantly improve awareness and aberrant riding practices.

4. Using E-Scooters on public pedestrian paths

- 4.1 The use of e-scooters on pavements has a substantial impact on the interactions between pedestrians and e-scooter riders, creating competition for already scarce road space and increasing the level of danger for vulnerable road users. Although a considerable number of serious injuries related to e-scooters are linked to motor vehicles (Beck et al. 2019), the majority of collisions typically take place on pavements and still result in, albeit minor, injuries.
- 4.2 Notably, the most affected groups, in terms of collisions, are e-scooter riders themselves (some of them being underaged). The existing roadways are not designed to accommodate e-scooters, making compliance with regulations challenging at times. This is particularly pronounced in areas with a lack of dedicated cycling infrastructure, where e-scooter riders are required to navigate amidst heavy traffic alongside other motorised vehicles.
- 4.3 Electric scooter riders have reported feeling vulnerable due to the behaviour of individuals operating cars and commercial vehicles, who they believe may sometimes drive recklessly and pose a threat due to the size and strength of their vehicles. In fact, e-scooter riders are more vulnerable to falling and sustaining injuries in comparison to other modes of micromobility (Useche et al., 2022)
- 4.4 In our study, we observed that e-scooter riders often chose to ride on pavements, even when they are aware of the fact that it is against the law. This preference was largely driven by the belief that pavements provide a safer alternative to sharing the road with other vehicles, particularly in situations where there is a choice between riding on pavements or the road.
- 4.5 Our team has captured footage that illustrates the hazards faced by e-scooter riders when riding alongside private vehicles. The footage demonstrates instances of risky behaviour, such as drivers overtaking on dual carriageways with an oncoming vehicle without keeping safe distance or e-scooter rider being caught in between faster-moving cars and buses, unable to maintain pace and safely exit the situation. The introduction of e-scooters to existing infrastructures, originally designed for the use of other modes of transport can lead to increased

interference and conflicts between road users. This can create unsafe conditions for e-scooter riders, as well as for pedestrians and cyclists (Pazzini et al., 2022).

- 4.6 Dedicated infrastructure, as well as training and guidance on road safety for riders is imperative to protect the safety of e-scooter riders, pedestrians, cyclists, and all road users, and requires urgent consideration and action to reduce the likelihood of collisions that could potentially result in fatalities.

5. Recommendations

- 5.1 Despite the presence of various sources of information regarding the laws and regulations for e-scooters, the information is not readily accessible and has not been distributed in an effective way. The Government should invest in a focused and comprehensive media campaign aimed at raising awareness about proper usage, potential risks associated to operating e-scooters and encouraging people to take part in e-scooter safety. This campaign should provide a comprehensive approach to educate and inform riders about the safety standards and current legislation for e-scooters.
- 5.2 Our work revealed that e-scooter riders who had understanding of the current regulations were more inclined to avoid aberrant riding behaviour. Consistent and readily available guidelines issued by the Department for Transport, as well as wider updates to the Highway Code to include guidance on micromobility are crucial in ensuring that e-scooter users understand and comply with the regulations. Despite being designed with minimal safety standards and marketed as user-friendly, the multiple collisions reported since 2020 have raised concerns about the safety of e-scooters. It is evident that riding an e-scooter without sufficient knowledge on safety standards can be dangerous and potentially fatal. It is imperative that training on basic safety standards and best practices is made compulsory to ensure e-scooters are used in a safe and responsible manner in order to prevent collisions.
- 5.3 Compulsory training in e-scooter safety can have a significant impact on riders by making them more aware of the dangers associated with e-

scooter use and helping them become more responsible with their privately owned e-scooters. This can, in turn, help towards the regulation of private e-scooters, as riders who have undergone training are likely to be more aware of the safety standards and responsible use of private e-scooters. Enacting legislation for private e-scooters is imperative in order to ensure their safe operation by adhering to established safety standards. Training alone may not be sufficient to address all the complex issues related to private e-scooter regulation, therefore the decision-making process should also be informed by evidence-based approaches regarding insurance mandates, driving license requirements, the safety design of e-scooters, and the provision of dedicated infrastructure.

- 5.4 E-scooters being ridden on pavements increase competition for road space and pose a greater danger to pedestrians and other vulnerable road users. Nevertheless, sharing the road with vehicles is not a safe option for e-scooter riders, as they are at a greater risk of harm compared to car drivers. In most cities, e-scooters have not been allocated dedicated lanes, meaning they have to share space with other modes of transportation. With a potential increase in e-scooter use, particularly as a means of transportation rather than just for leisure purposes, the capacity of current facilities must be evaluated and the priority of different types of uses considered. This might involve determining if dedicated lanes for e-scooters or shared micromobility lanes are necessary, or if cycle paths and shared paths need to be expanded to accommodate the growth.
- 5.5 Dr Ventsislavova is happy to speak to committee members confidentially about aspects of her research. She is also happy to present oral evidence to the committee or individual members of the committee.

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