PACTS' submission to the Transport Committee's *e-scooters* inquiry, June 2020

The inquiry

PACTS welcomes the Transport Committee's inquiry *e -scooters, pavement nuisance or transport innovation?* It is timely and necessary. PACTS is pleased to submit this written evidence. We would be glad to give oral evidence, if the Committee wishes.

Response summary

Evidence from around the world shows that the public benefits are of e-scooters are largely illusory and the disbenefits substantial, at least in a European context. As such, e-scooters will work against the government's objectives for active travel, health and safety.

If the Government is determined to legalise e-scooters, we believe a proper and open examination of the evidence should be undertaken first, and construction and use regulations established in advance for private use as well as hire schemes, as happened with Electrically Assisted Pedal Cycles (EAPCs). The trials will be taken as a green light by the public for unregulated , private use. The police will be placed in an impossible position.

Response to question 1 - whether the legislation for e-scooters is up to date and appropriate

Use of e-scooters is currently illegal in public places in the UK, unlike in almost all other countries. Despite this, e-scooters are being sold and increasingly used. We support a review of legislation. This should be based on a proper examination of the evidence, taking into account the impacts of e-scooters on health, safety and the environment. It should not be rushed or driven by vested interests.

We understand why the government is proposing to go ahead with trials of e-scooters. At first glance, e-scooters appear to meet a number of the government's *Future of Mobility: Urban Strategy* objectives: digitally-enabled, low/zero carbon, non-polluting and serving last-mile travel needs.[1] They are also privately provided, widely available to purchase[2] and popular with some users – even promoted as a fashion accessory.[3]

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[1] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846593/future-of-mobility-strategy.pdf

[2] For example: https://www.pureelectric.com/pages/help-me-choose-an-electric-scooter

[3] https://www.standard.co.uk/tech/lime-voi-scooters-scooter-startups-uk-a4081816.html

However, from evidence and experience around the world, it is clear that the public benefits are illusory and the disbenefits substantial, at least in a European context. As such, e-scooters will work against many of the government's objectives. PACTS therefore opposes the trials and wider legalisation of e-scooters.

We are very concerned that the trials will be taken as a green light by the public for unregulated , private use. The police will be placed in an impossible position and its will be very difficult to impose retrospective regulation. The genie will be out of the bottle.

Response to question 2 - to what extent e-scooters have positive benefits, for instance relating to congestion and promoting more sustainable forms of transport

Active travel and health

The government has made clear its support for active travel, with its many benefits; PACTS endorses this policy. However, e-scooter are not active travel. They involve no physical exertion and provide no health benefit to the user. Because e-scooter largely replace walk, cycle and public transport trips, all of which involve physical activity and have the associated health benefits, e-scooter will tend to reduce active travel.

PACTS supports the responsible use of Electrically Assisted Pedal Cycles (EAPCs). These are constructed to established safety standards and, as the user must pedal, EAPCs also provide active travel benefits. As they can appeal to people who might otherwise not cycle, EAPCs are complementary to conventional pedal cycles, not a direct substitute.[4]

Congestion

The evidence from other European countries where e-scooter rental schemes operate and where private use is permitted is that very few car trips transfer to e-scooters. E-scooter trips are predominantly trips made previously on foot, or by cycle or public transport; or new trips (often for leisure). They are often very short, between 0.5km and 5km.[5] As cars have significant advantages (passenger and luggage carrying, range, safety etc) this is not surprising and unlikely to change, particularly at present when car use is being encouraged in preference to public transport and often supported by free / additional parking, and fuel prices (pump and wholesale) have fallen substantially.[6]

Lime and Dott hire schemes in Paris reported 8-10% transfer from car/taxi trips to e-scooters. Only in North American cities, which are highly car-dependent and have low levels of walking, cycling or public transport, is there evidence of significant transfer from car to e-scooter (>30%).[7] Such conditions are not relevant to the UK. It can therefore be assumed that it is unlikely that there will be any significant benefits relating to reduced congestion.

Environmental impact

As well as minimal transfers from car to e-scooter trips recorded in other European countries, there are concerns about the longevity of the product and the disposal of parts. Cycle shops report that

[4] https://www.sciencedirect.com/science/article/pii/S259019821930017X
[5] https://www.researchgate.net/publication/338245010_Challenges_Caused_by_Increased_Use_of_E-Powered_Personal_Mobility_Vehicles_in_European_Cities
[6] https://www.racfoundation.org/data/wholesale-fuel-prices-v-pump-prices-data
[7] https://www.itf-oecd.org/sites/default/files/docs/safe-micromobility_1.pdf See Table 3

punctures in some e-scooters wheels are extremely difficult/ impossible to repair. Battery life may be quite short and many e-scooter batteries are not recycled or disposed of sustainably.

Studies have shown that use of e-scooters can help to reduce environmental impacts (carbon emissions), but only when they replace car travel, which is seldom the case.[8] Their impact is also heavily dependent on the lifetime of each e-scooter.[9] Rental e-scooters in particularly are reported to have extremely short lifespans.

The European Environment Agency has reached similar conclusions:

Especially e-scooter sharing schemes appear to attract users that would have otherwise walked or used public transport. While the use of shared e-scooters generates few direct environmental impacts, their green credentials can be questioned by the substantial negative impacts associated to their materials, their manufacturing and their frequent collection for recharging purposes.[10]

Response to question 3 - where in the urban environment e-scooters could be used (e.g. road, pavement, cycle lanes), and how this could impact on other road users and pedestrians, including people who have visual impairments or use mobility aids

If e-scooters are to be legalised, they should be permitted to use the same infrastructure as bicycles. However, if they are to share this space with cyclists, then e-scooters should be limited to a specific speed. E-scooters should not be permitted use of the pavement.

E-scooters are a hazard for pedestrians. E-scooters are often used on the footway (pavement) and in other pedestrian areas – legally in some countries, illegally in others. We see this already in the UK, despite their illegality here. Regardless of the law, if e-scooters are legalised for use in the UK, some people will use them on footways, for convenience or personal safety. The police will be largely unable to prevent this – they do not have the resources and they have enough other priorities.

Dockless e-scooter rental schemes also result in e-scooters being left randomly on footways, in pedestrian areas, parks etc.[11] They cause obstruction, trip hazards, and are unsightly.[12] Cities around the world have experienced these problems. For example, Montreal announced in February that it would ban “free-floating” scooter rental schemes.[13] London councils have already experienced similar problems with dockless bike schemes.

All this will deter some people, particularly the more vulnerable (elderly, partially sighted etc) from walking. Collisions between e-scooters and pedestrians do occur, although many will go unreported. The number of number of collisions and pedestrian casualties is not an adequate measure of the deterrent effect. As we have seen in relation to partially sighted people and “shared space” areas, and with cyclists and close passing by motorists, the deterrent effects are subtle but significant. Walking is particularly important for the health and wellbeing of such people.

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[8] https://dl.acm.org/doi/pdf/10.1145/3313831.3376499
[9] https://iopscience.iop.org/article/10.1088/1748-9326/ab2da8/pdf
[10] https://www.eea.europa.eu/highlights/walking-cycling-and-public-transport

[11] https://www.aucklandcouncil.govt.nz/licences-regulations/report/rental-e-scooter-trial-2.0-evaluation-report.pdf
[12] Anindya Maiti, Nisha Vinayaga-Sureshkanth, Murtuza Jadliwala, and Raveen Wijewickrama. 2019. Impact of Urban Micromobility Technology on Pedestrian and Rider Safety: A Field Study Using Pedestrian Crowd-Sensing. arXiv preprint arXiv:1908.05846 (2019).
[13] https://portail.free.fr/actualites/monde/canada-la-ville-de-montreal-decrete-la-fin-des-trottinettes-electriques-en-libre-service/

Response to question 4 - whether there should be advice or compulsory requirements to use specific safety equipment when using an e-scooter

Safety equipment

E-scooter riders suffer much higher rates of head injury than pedal cyclists. The Danish Transport Authority recently concluded, on the basis of experience in Denmark, that the rate was eight times higher. The Transport Minister announced at the 3rd Global Ministerial Meeting on Road Safety, in Stockholm in February 2020, that helmets are to be made mandatory for e-scooters riders.[14] PACTS believes that helmets should be made mandatory for e-scooter riders in the UK.

Safe use

E-scooter hire schemes have tended to attract some unsuitable or unsafe users.

Users of public hire bicycles will have at least a basic knowledge of how to ride, particularly to balance, pedal and steer etc. E-scooters do not appear to require this – they look simple: step on and go. However, they also require riding skills. As a consequence, there has been a high incidence of first-time users suffering falls, sometimes with serious injury.

Experience has shown that e-scooters may attract users who have consumed alcohol or drugs.[15] For example, this has been a problem with clubbers in Berlin.

It is also not unusual to see e-scooter riders carrying child or adult passengers, or other items. Longer running boards and bigger motors make this easier.

As a result of the basic design features of e-scooters and the way in which they are sometimes used, serious and even fatal casualties result, mostly to the rider but sometimes to other roads users, notable pedestrians. The Metropolitan Police was informed of 4 injury collisions involving e-scooters in 2018 and 32 in 2019, including one fatality; one third involved injury to pedestrians. Dr Adam Snow of John Moores University, who has specialised in this issue, says: *"The Centre for Disease Control in Texas found in 2018 that the rate of KSI for these modes is 22 per 100,000 miles (in the UK it's about 0.5 per 100,000 for cars). On the face of it they are far more dangerous than current modes of travel."*

Response to question 5 - whether there should be safety and environmental regulation for the build of e-scooters, and what this might entail

Safety of e-scooters

E-scooters, as widely sold and promoted by hire companies, have features which are inherently unsafe.

- With wheel sizes typically 8-10 inches[16] (often less but rarely more), they are incapable of safely negotiating the ruts, potholes, uneven surfaces of many urban streets. Some have solid tyres and very few have any form of suspension. By contrast, the minimum wheel size

[14] https://www.trm.dk/nyheder/2020/evalueringen-af-de-smaa-motoriserede-koeretoejer-er-nu-offentliggjort/
[15] https://www.sciencedirect.com/science/article/abs/pii/S0020138319306084
[16] https://www.halfords.com/scooters/electric-scooters/xiaomi-mi-m365-electric-scooter---black-843190.html

for a bicycle is 16 inches; 26-27 inches is normal, and pneumatic. This is for reasons of safety and comfort. Suspension is not unusual on bicycles now.

- It is very difficult for e-scooters riders to see vehicles approaching from behind or to give signals. E-scooters are not fitted with rear-facing mirrors or indicators. They have narrow handlebars and very responsive ("twitchy") steering due to the small wheels. The rider must constantly grip the throttle on the right.
- Unstable. The e-scooter rider will be in a standing position. They (and any passenger) are liable to be thrown forward more quickly and with a greater force than a pedal cyclist. As a result, e-scooter riders suffer much higher rates of head injury than pedal cyclists. The Danish Transport Authority recently concluded, on the basis of experience in Denmark, that the rate was eight times higher.[17]
- Lighting. Some e-scooters are fitted with lights. However, the rear light is positioned just above the rear wheel, only a few inches from the ground and less visible than a bicycle light. This is unsatisfactory.

The claim, made by some, that e-scooters should be permitted because they are less dangerous than cars is simplistic, open to challenge and an inadequate basis for decision making.

The report *Safe Micromobility* by the ITF Corporate Partnership Board is sometimes (mis) quoted in this regard.[18] The report is a comprehensive source of references about e-scooters. On safety, it cites a wide range of studies and findings from around the world, some of which are inevitably more robust and relevant to the UK than others. It cites various studies to compare the safety of e-scooters riders and cyclists. For the UK, we prefer the more specific, recent study by the Denmark Transport Authority, which was not available to the ITF.[19]

Safety standards

We agree that, if e-scooters are going to be legalised, then there should be regulatory changes made to ensure a standard of safety. We expected to see detailed consideration of construction and use regulations, such as minimum wheel size, maximum motor power, maximum speed limits, braking, lights and length of running board. Stringent safety standards should be required.

Response to question 6 - the experience of other countries where e-scooters are legal on the roads

We have based our response to this enquiry on evidence from countries where use of e-scooters on the road is legal.

End

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[17] https://www.trm.dk/nyheder/2020/evalueringen-af-de-smaa-motoriserede-koeretoejer-er-nu-offentliggjort/
[18] https://www.itf-oecd.org/sites/default/files/docs/safe-micromobility_1.pdf
[19] https://www.trm.dk/nyheder/2020/evalueringen-af-de-smaa-motoriserede-koeretoejer-er-nu-offentliggjort/

About PACTS

The Parliamentary Advisory Council for Transport Safety (PACTS) was formed in 1982 by parliamentarians and experts from a range of disciplines who had amended what became the Transport Act 1981 to make seat belt wearing compulsory.

Today, PACTS is the only NGO which:

- addresses transport safety (road, rail and air) across the UK;
- focuses on parliament, government and key stakeholders;
- has a wide membership base across the modes and the public, private and third sectors;
- has no commercial or sectional interests.

It has provided the secretariat to the All-Party Parliamentary Group for Transport Safety.

PACTS is a founder member of the European Transport Safety Council (ETSC) and continues to be one of its most active members.

More details about PACTS can be found on our website here.