

Escooter Summary - Sgt Steve Wilson

This document is intended to provide a comprehensive summary of Escooter legislation, the impact of continued illegal use including the adoption of the devices by various criminal groups and the road danger concerns.

What is an Escooter

Escooters are adapted kick scooters that have an electric engine added to them, contained within the hub of one of the wheels, with throttle controls and often some mechanical braking system. It is important to note that everything contained in the following article will also apply in some degree to EBoards (modified skateboards to have electric engines) hoverboards and Segway style devices all of which are considered to be Private Light Electric Vehicles or PLEV's. Whilst the Escooter itself has seen an explosion in use over the last year we are also seeing rises in Eboard and hoverboards which is expected to increase over the Christmas period.

Legal History

By being powered by motor these scooters are considered by the Department of Transport (DFT) and MPS to be mechanically propelled vehicles. Two sets of case law have set precedent for the classification of these vehicles. Which has had one legal challenge.

Dpp V Saddington (2000) – This related to a brand called Goped that was a Scooter powered by an internal combustion engine and will be considered to be Motor Vehicle within the meaning of s185 of the Road Traffic Act 1988.

Dpp V Winter (2002) – This related to the use of an electric scooter on the road where it was confirmed to be a motor vehicle subject to the requirements for compulsory insurance. This case further clarified that these devices are not Electrically assisted pedal cycles (EAPC) and cannot use the guidelines that govern these devices even if the device uses pedals or pegs as they are not the primary source of automotive power. A final summary was stated that in order to be used on the road such scooters would be required to comply with the construction regulations of registration, licence, insurance and MOT.

CPS V Coates (2011) – This case was an appeal against conviction where by the defendant was convicted from driving a Segway device on a footpath and challenged the ruling that it was 'a mechanically propelled vehicle intended or adapted for use on roads' the defendant attempted to use a manufacturers statement that the device wasn't intended to be used on the road. The ruling judge disagreed and applied the rulings in the above two cases confirming that this vehicle was deemed as a carriage under s72 of the highways act and as such will need to comply with s 185 of the RTA 1988

A summary of these cases is now provided to London CPS by Marlowe House when an Escooter case goes to court to assist with the prosecution at court.

Road Danger –

The RTPC had been seeing moderate use of Escooters throughout 2018/19 and a pedal cab industry that was making illegal aftermarket additions of electric engines, the Cycle Safety Team (CST) ran a number of operations targeting these devices ensuring regular communication with the public via their twitter account @MetCycleCops. This resulted in a large amount of research to be carried out by Sergeant Steve Wilson to see what could be done to tackle the issue.

Throughout early 2019 an increase in Scooter use culminated in the fatal road traffic collision involving Emily Hartridge and a HGV on the 12th of July 2019. The subsequent SCIU investigation identified a number of safety issues that may have contributed to the collision and certainly raised concerns given the number of riders on these devices are increasing.

One area of significant concern is in that the steering fork is almost vertical which makes it highly manoeuvrable however most models have little to no suspension systems, small wheels from 8" to 12" and a shallow rake angle. This leaves us with a device that whilst stable when travelling in a straight line it is when encountering road undulations, undergoing braking and steering that instabilities are introduced. There are also no industry standards being applied to the construction of these devices which has led to wide variation in braking methods from compression levers to a hard plastic cover that the rider stands on over the back wheel to bring the device to a stop.

The SCIU investigation carried out by Alex Routt noted that the Scooter hit a recessed inspection plate (2mm) that another vehicle would have been able to negotiate without issue, an underinflated tyre in this situation contributed to the loss of life which is concern given that by the nature of their size Scooters are likely to occupy the last few feet of the road space where we see most of a pot holes and road debris. It is important to note that vehicles deemed to be road safe should be able to navigate a 50mm defect in the road surface. (Health and Safety)

Dr Cristopher Uff a Neurosurgeon of London Bridge Hospital has expressed concerns as whilst Scooters seem to have similar collision figures to bicycles approximately 2/3 of them are head injuries which London could struggle to accommodate. Additional study has been done in the area to compare the number of journeys per accident and it now shows that Scooter riders may actually be 8 times as likely to be involved in a road collision.

Road danger statistics are hard to come by at present as our recording systems do not differentiate these devices from other motor vehicles combined with the fact that due to their legal status unless a party is seriously hurt the Scooter rider is incentivised to not remain/report the incident due to inevitable prosecution. What limited stats we have, have shown that in 2018 we had 4 reported traffic collisions with 32 reported in 2019 with large number having injured pedestrians.

2020 saw 60 collisions reported despite the covid lockdown being in effect and traffic on the road network being drastically reduced and already 2021 has seen 31 collisions reported in 2021 in the first quarter.

We have seen a further two fatalities nationwide with Barrie Howes having lost control while riding down a steep hill in Chatham Kent on the 25th June 2020 and Julian Thomas colliding with a parked car on 20th September 2020 in Wales both of which results in head injuries. Unfortunately due some inaccurate news articles since the announcement of the trials on the 4th of July there is a belief that the use of these devices has been legalised. Several major retailers have engaged on extensive sales campaigns neglecting to mention the illegal status of the devices with some even stating to customers that police don't enforce against Scooters.

This is compounded by the fact that some retailers have started campaigns to get these devices legalised prior the conclusion of the trials.

Op Hornet

In August 2019 the decision was made to launch Op Hornet in conjunction with City of London Police to target Scooter use, it was noted that at this time there was a distinct lack of information regarding the use of Scooters in the UK. This gave officers the opportunity to issue a verbal warning

for the offence of no insurance on an scooter, to date there have been 608 warnings issued. During this time a number of media interviews were carried out to clarify the status after which officers moved to an enforcement approach. To date 284 Scooters were seized in 2020 and already 598 in 2021 (to April). Due to the way Traffic Offence Reports (TOR's) are recorded it is not possible to give TOR numbers for Scooters for non-seized devices.

Crime

In order to accurately track information relating to Scooters in relation to crime on 7th July two Cris codes an ES code for the property page and a GX code for the features page where the suspect was riding the device at the time.

We have 290 reported offences where the offender was riding an scooter and there have been 913 devices stolen as of November 2020.

I have discussed at length the possibility of security marking the devices with numerous teams however it has been decided that this is not the solution as it gives the impression that the police may be ok with the use of Scooters continuing. The solution that has been suggested to reduce the numbers of robberies in particular is robust enforcement on Scooter riders, if people understand that riding an Scooter is likely to result in a fine and points on the licence the intent will be that a substantial reduction in the number of devices are around to be stolen.

There are currently no stopping tactics for Scooters, tactical contact is not suitable due to the lack of mass of an scooter, there is no practical way to make contact with the scooter without contacting the rider meaning the risk of substantial injury is too high. The national decision model is the default advice for officers carrying out stops and for those units carrying out proactive work extensive use of plain clothes officers and the use of plain clothes cyclists in order to effect the stops before the rider is able to start riding away seems to be the best tactic available at this time.

A detailed breakdown of the crime figures are included here however it is worth noting that use of the GX feature code has been in decline and a recent review of Southwark Cris's highlighted 91 crimes that were missing the feature code but a scooter had been used by the offender. This is likely to be replicated in many other boroughs.



RE Mayor's
Questions - Deadline

Communication and Training

There have been issues around communicating both internally and externally due to the concerns from TFL, Mopac and DFT in how it will impact the legal trials that are due to start mid 2021.

There is a comprehensive communication developed with DMC that is ready to be delivered when approval is received from those partnership agencies involved.

A number of training sessions have been delivered by Sgt Steve Wilson on the subject to officers on VCTF/STT/SNT and TSG and several PDD days. Any other departments that require input or assistance are able to contact Sgt Steve Wilson for assistance.

DFT originally requested opinions on the criteria for trial scooters which has been included as an attachment and whilst the DFT has gone with a faster heavier unit, it is down to the local authority or in London's case TFL to grant additional restrictions on the schemes that are to go ahead.

Pursuit Policy / Stopping Tactics

At present there is no Pursuit Policy for Scooter's due to the unstable nature of the devices, any pursuit would be immediately very high risk, this is further compounded by the fact that the current design of Scooters struggle to navigate any defects in the road surface. The fatal collision in 2019 where Emily Hartridge lost her life was partly caused due to her hitting an inspection drain cover that was protruding 2mm from the road surface and this in conjunction with underinflated tyres led to her going over the front of the device and under the wheels of a HGV. All of this occurred at the relatively slow speed of around 12mph.

Whilst most over the counter Scooters have a speed of between 15 and 25 mph there is a growing trend of adapting and modifying these with now dozens of models recording speeds in excess of 40mph with some as high as 88mph, the issue is further compounded by a growing attitude in online communities to not stop for police and risk their scooters being seized.

TPAC should not be considered at present as an option for stopping Scooters, due to the limited mass/weight of the devices (typically 15-25kg) there is not enough vehicle to take the impact and any contact is going to be with the rider making the risk too high to be viable.

The CST has considered a number of different stopping options and tactics both for Scooters, pinching the rider into the kerb has been attempted but due to the balance issues along with drain covers and potholes occurring in the last 50cm of the road space it very quickly became clear that the risk of knocking the rider off rapidly increases, should the rider fall pavement side the injury should be minor but there is no way to ensure that they don't topple into the road itself escalating the risk.

Any attempt at grabbing the rider/handlebars itself is not practical the devices have quite a substantial pull on them even unmodified and it is more than capable of ripping an officer off their feet.

Various equipment options have been considered, stinger devices would not work as more than a few designs have solid wheels and/or wheels of only 8" at this point the spike itself will strike the hub driven motor and result in a catapult off the device. We investigated the use of an expanding foam solution to gum up the wheel and mechanisms however it would be incredibly hard to be accurate and in all likelihood a significant amount is likely to be sprayed over the road surface which may then require additional special tools to be cleaned.

A home office request was submitted and is included here however there currently no tech solutions being developed at present.



20210427_E-scooter
_RFI_Letter_LR13174

Tools that may work is forensic tagging sprays whilst this will not affect a stop on the rider themselves it may assist in the identification of offenders but is not a perfect solution. Given that these devices are driven by Electric motors and throttle control it is my belief that the solution will be a technology based tool to short out or stun the device which will allow the device to come to a gradual stop due to no additional power being applied.

My engineering skills are a little bit dated now having been out of the industry for a decade but it is my hope that when the trial goes live in London in the next couple of months I will be able to form a working group of three major companies and convince them that to work with us to develop a solution to this problem. Current guidance that is given to officers on the street is to use the national decision model and in those circumstances where they believe that the individual poses a significant risk to themselves or others to ensure adequate information is documented in any statement including options that were considered and not used.

Anecdotally I am aware of some TSG/SNT operations that have taken place in some parks where Escooters have been involved in robberies where riders have been pinched towards the grass and mud areas to slow them down enough to be taken off the devices, any decision like this is being carried out in accordance with the dynamic risk assessment model and comes with significant risk. All other tactics to stop Escooter riders come with such risk as to not be viable in most circumstances and unfortunately this is known amongst riders with many failing to stop and whole online communities advocating not stopping as enforcement activities increase and the risk of seizure is high. This has had a knock on effect where they are regularly now used by criminal gangs to transport weapons and drugs across the city.

I have requested some figures as to how many pursuits are terminated due to the rider being on an escooter and await an update although I suspect that many officers are not flagging them up as they know the pursuit will be immediately terminated and I suspect it will need some communication on the intranet to clarify the position for data collection purposes.

Technology/Partnership working

I believe that when it comes to stopping these devices it will be a technology based solution with a device that has the ability to remote short or stun the device to prevent additional power being applied. I have spoken with a number of engineers and challenged them to come up with a device capable of doing what is being asked as I am not aware of a device currently in existence. I have spoken to the German traffic Superintendent Matthias Reider of Hanover who is arranging for some of their working practices to be translated for me although they don't seem to have the same issues around these being involved in crime.