

TfL Management System

Equality Impact Assessment (EqIA) form

Project	London rental trial of e-scooters	
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To be used in conjunction with: G1060

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Document History	Version	Date	Summary of changes
	0.1	08/07/2020	First draft
	0.2	11/09/2020	Second draft based on development of plans, evidence and feedback from Diversity & Inclusion (D&I) team
	0.3	25/9/2020	Third draft based on development of plans, evidence and feedback from D&I team
	0.4	12/10/2020	Fourth review based on development of plans, evidence and feedback from IDAG
	0.5	2/11/2020	Fifth review based on feedback from D&I team senior management
	0.6	20/11/2020	Sixth review based on procurement going live and additional evidence
	0.7	26/11/2020	Seventh review based on feedback from the core project team and input of additional evidence
	0.8	25/01/2021	Eighth review based on feedback from Legal
	0.9	01/02/2021	Ninth review based on feedback from Legal and additional evidence
	0.10	08/02/2021	Tenth review from an EQIA superuser, additional mitigations added based on the data and monitoring plan in place for the e-scooter rental trial and Legal. Published in March 2021.
	0.11	18/05/2021	Version 2 of the EQIA which includes trial updates, specific operator mitigations to possible impacts, additional points on the parking of rental e-scooters and that the complaints process will be accessible. Published June 2021
	0.12	24/02/2022	Version 3 of the EqIA which includes updates since the trial launched on 7 June 2021. The key updates have been made to Sections 1-4 in terms of trial updates, additional impacts identified, additional mitigations put in place and additional consultation undertaken since launch. Published February 2022
	0.13	25/10/2022	Version 4 of the EqIA which includes updates to the impacts, mitigations and additional consultation undertaken over the last six months of the trial. Published October 2022

Project Related Documents	Doc No.	Document title	Relevant Section(s) of this Document
	1	Department for Transport: Legalising rental e-scooter trials Department for Transport: guidance for local areas and rental operators Department for Transport guidance for users	Department for Transport (DfT) documents are referred to in Section 1

Summary Table

The London E-Scooter Rental Trial launched on 7 June 2021 and Transport for London (TfL), in collaboration with London Councils and the London Boroughs, have taken a co-ordinated approach to set the safety standards and the wider accessibility and environmental standards that are important to TfL and the Mayor. Although the trial has been operating for over a year, rental e-scooters are still a relatively new mode of transport and therefore a comprehensive monitoring, data collection and evaluation programme is in place to help TfL build a more detailed and evidence backed understanding of the negative and positive impacts of e-scooters for London. This will inform TfL's longer-term position on this new vehicle type, as well as informing national legislation via the Department for Transport (DfT). Safety is the main reason for doing the trial and will remain TfL's priority throughout.

The following table provides a summary of the negative impacts arising from the trial and the mitigations that are in place. The detailed assessment can be found in Section 3.

Negative Impact	Protected Characteristic	Specific Impacts	Mitigations
Collision/falls whilst riding a rental e-scooter and subsequent higher level of injury	Men Pregnant women Younger Older	<ul style="list-style-type: none"> Majority of e-scooter user casualties are men aged between 10-29 Centre of balance changes for pregnant women which increases risk of falls and more at risk to wrist/ankle injuries due to softened ligaments Older people have reduced bone density which can lead to more severe breaking of bones 	<ul style="list-style-type: none"> The co-ordinated pan London trial with high safety standards Enhanced vehicle safety features e.g. robust construction, lighting Operator safety processes e.g. mandatory first rider education Operator maintenance programmes No-go and Go-slow areas Education, training and marketing programmes focusing on safe use Community outreach delivered by operators and boroughs Existing TfL road safety campaigns Monitoring, data collection and evaluation programme Reviewing lessons learnt from incidents and a regular Safety Board
Collision with a rental e-scooter and subsequent level of injury to pedestrians due to illegal or poor rider use such as pavement riding, e scooters discarded and becoming street litter, e scooters not being seen or heard,	Pregnant women Younger Older Disability Ethnic minorities Low income	<ul style="list-style-type: none"> As above, pregnant women and older people can suffer disproportionately from a collision or fall Younger people can have less road and safety awareness Impingement on pavement space can make it more difficult for people with disabilities to get around Children from deprived and ethnic minority backgrounds are more likely to be killed or seriously injured 	<ul style="list-style-type: none"> The co-ordinated pan London trial with higher safety standards Enhanced vehicle safety features e.g. lighting, bells etc Operator safety processes e.g. mandatory first rider education, option to warn/ban users for poor riding behaviour Education, training and marketing programmes focusing on safe use Parking provision for rental e-scooters is available on borough, TfL and private land Parking bay signage is consistent and guidance has been provided Programmes to remove poorly left rental e-scooters Notifications to alert of discarded rental e-scooters

the speed of the vehicle as well as their use in shared areas, including even when parked correctly.		<ul style="list-style-type: none"> • People with disabilities and older people may find it more difficult to see, hear and move out of the way of e-scooters 	<ul style="list-style-type: none"> • No-go and Go-slow areas • Operator contact details are clear and accessible (on every vehicle) • Community outreach delivered by operators and boroughs • Police enforcement programmes • Monitoring, data collection and evaluation programme
Fear of going out and experiencing a collision with a rental e-scooter	Pregnant women Older Disability	<ul style="list-style-type: none"> • Fear of experiencing a collision for these groups can lead to a loss of independence for getting around • Pregnant women may feel 'extra safety conscious' 	<ul style="list-style-type: none"> • The co-ordinated pan London trial with higher safety standards • Education, training and marketing programmes focusing on safe use • Community outreach delivered by operators and boroughs • Enhanced vehicle safety features e.g. lighting, bells • Research partnership with UCL to develop an acoustic sound • No-go and Go-slow areas • Number of rental e-scooters available can be amended • Monitoring, data collection and evaluation programme
Fear and risk of hate crime at pick up and drop off locations for rental e-scooters as feel more at risk if these aren't secure	Women Younger Ethnic minorities Faith groups Sexual orientation	<ul style="list-style-type: none"> • These groups experience hate crime disproportionality • Women are more likely to experience sexual harassment in a public place 	<ul style="list-style-type: none"> • The co-ordinated pan London trial with higher safety standards • Parking bay signage is consistent and guidance has been provided • Monitoring, data collection and evaluation programme • Safety considerations in place for parking bay locations e.g. lighting, CCTV
Exclusion from the trial due to barriers in terms of accessibility, affordability, language and requirement for a smartphone, bank account or driving licence	Women Older Disability Ethnic minorities Other (homeless, refugees, low income)	<ul style="list-style-type: none"> • Women find there's a lack of safe spaces for using e-scooters and they're physically designed as being heavy / frustrating to use • Those on low incomes find the cost of using e-scooters a deterrent to use • Older people, people on low incomes and people with disabilities are less likely to have a driving licence, smartphone or bank account which is needed to use the e-scooters 	<ul style="list-style-type: none"> • The co-ordinated pan London trial with higher safety standards • Operators have access plans e.g. discounts for those on low incomes and blue badge holders • Operator education and outreach for users and non-users have maximum reach, including for those whose first language isn't English, who wouldn't interact with digital channels and all information is accessible • People without smartphones can sign up by calling operator customer services • Monitoring, data collection and evaluation programme

Section 1: Aims

1.1 Background to rental e-scooter trials

Prior to July 2020, e-scooters were illegal for use on all public highways in the UK and could only be ridden legally on private land with the landowner's consent. Then in early May 2020, the DfT announced its intention to bring forward trials of rental e-scooters for any interested local area as part of the government's response to the coronavirus pandemic. Following consultation, new regulations to allow trials came into force on 4 July 2020. These trials are only permitted in approved local authority areas with explicit authorisation under a vehicle special order by the DfT (which allow e-scooters to be used legally for trial purposes only).

TfL's engagement with London Boroughs and e-scooter operators demonstrated early on that there was strong interest in hosting trials and as such it was likely that some form of rental e-scooter trial(s) would happen in London, even without TfL involvement. If this were the case, there would be a patchwork of trials of varying operators with no consistency applied which could have potentially significant impacts on safety for London. For trials in major cities, DfT published guidance stating that where trial areas were to involve several tiers of local government, their preferred approach was for a lead authority to be agreed. In most cases it was expected that the lead authority would have strategic oversight across all local trial areas. In London, TfL, London Councils, and the London Boroughs therefore adopted a co-ordinated single rental e-scooter trial, promoting safety at its core and achieving a consistent approach with participating London Boroughs for the benefit of London.

Given their newness, there is less data on the impacts of e-scooters relative to other modes of transport, especially in the UK, and so the DfT legalised trials of rental e-scooters for the purpose of informing the future position on e-scooters. At present, private use of e-scooters on any public road is illegal and will be enforced by the Police (Police is a term used throughout this document to reflect the activities of the Metropolitan Police Service (MPS), the City of London Police and the British Transport Police as well as any aid officers from other forces). The Police are continuing enforcement activity to deal with illegal e-scooter use.

In May 2022, the Government announced that a forthcoming Transport Bill would introduce a new category of low-speed, zero-emission vehicles which could include e-scooters, thus legalising private-e-scooters to ensure they are regulated, safe and licenced. The details of this regulation are still to be determined by the DfT but the London e-scooter rental trial will be important in helping to learn about this new category of vehicles before any new legislation comes into force. Until this legislation is introduced, private e-scooters remain illegal and only the use of rental e-scooters is legal on public roads. In June 2022 the DfT approved an extension of rental e-scooter trials across the UK to 31 May 2024.

1.2 Government e-scooter standards and associated user requirements

In July 2020, the Government introduced their “[E-scooter trials: guidance for local areas and rental operators](#)”. This guidance sets the minimum vehicle standards and associated user requirements for rental e-scooter trials, such as the need for a provisional or full driver’s licence, insurance (provided by the operator) and compliance with all relevant road law such as that relating to drink driving and use of smart-phones. This was updated by the DfT in April 2022 to include additional guidance to ensure the trials are as safe and well run as possible, and includes requirements for improving general safety, providing training, encouraging helmet use and using unique identification numbers, all of which are adopted by the London trial.

1.3 London co-ordinated approach

On 7 June 2021, TfL, London Councils and participating London Boroughs launched a co-ordinated, rental e-scooter trial promoting safety and consistent standards. Three operators Dott, Lime and TIER were selected to operate the trial after being assessed on their ability to meet strict safety requirements and high operating standards, putting safety first and ensuring that the trial is responsibly managed for the benefit of everybody in London.

The trial initially launched with five participating boroughs and 600 vehicles but as of 28 August 2022 it has since grown to ten participating boroughs and 4,365 vehicles. The ten participating local authorities are: Camden, City of London, Ealing, Hammersmith & Fulham, Kensington & Chelsea, Richmond, Southwark, Lambeth, Tower Hamlets and Westminster. For more information please refer to TfL’s dedicated [e-scooter trial webpage](#).

The trial initially launched for 12-months but has since been extended up until September 2023 under the same terms of agreement and in line with national Government guidance. This extension will enable TfL to continue to collect data through the trial’s comprehensive monitoring and evaluation programme as well as continue the ongoing review of equalities impacts of e-scooters. TfL has also launched a new procurement for the London trial to undertake a further open and transparent selection process and build on lessons learnt from the current trial terms and equalities impacts.

1.4 London rental e-scooter trial: objectives

The key objectives of TfL taking a coordinated approach to the trial are to:

- Promote safety at the trial’s core and help to ensure operators meet strict standards relating to vehicle design, vehicle maintenance, parking, customer education and training
- Achieve a consistent approach across London (improving upon the experience of dockless bikes, which has a patchwork of different approaches), including in relation to street clutter, access across different socio-economic groups and enforcement issues
- Provide the data to understand how e-scooters might impact the achievement of the Mayor’s Transport Strategy (MTS), as well as helping to inform the DfT’s future policy position on e-scooters

- Provide a potentially green and sustainable alternative to private car and capacity restrained public transport.

Along with these wider project objectives, TfL is gathering data and evidence around six detailed learning objectives:

- To explore and understand the appropriate e-scooter operating standards, safety standards, environmental standards, regulations and city-level management powers required to ensure they benefit e-scooter users as well as [society] as a whole, and feed this insight gleaned through data collection into the DfT ahead of any changes to relevant legislation
- To understand the impact of e-scooters on air quality and demand for travel by car, walking, cycling and public transport as well as where e-scooters can enhance transport options and complement existing public transport
- To establish the changes in infrastructure required (if any) for rental e-scooter schemes to deliver a safe and attractive environment on our streets
- To understand user and non-user reaction to e-scooters, their attitudes and perceptions
- To understand the commercial viability of rental e-scooters in London, determine any areas of market failure including inequality in access and to understand the total cost of impacts for London Boroughs and TfL
- To understand how e-scooters might support ongoing restart and recovery objectives by providing a relatively green alternative to both private car and capacity restricted public transport, as part of London's wider re-opening following the coronavirus pandemic

1.5 London rental e-scooter trial: core details

The Operator Specification (**See Appendix 1**) sets out all the requirements of operators, however, the core details of a trial include:

- **Number of operators**
 - A procurement process selected three operators: Dott, Lime and TIER.
- **Duration and area**
 - The trial initially launched for 12 months from 7 June 2021 and has since been extended to September 2023.
 - The London Boroughs taking part are Camden, City of London, Ealing, Hammersmith & Fulham, Kensington & Chelsea, Richmond, Southwark, Lambeth, Tower Hamlets and Westminster. The participation of each London Borough is flexible and can be changed and other London Boroughs may choose to join the trial later.
- **Number of e-scooters**
 - The number of rental e-scooters allowed by an operator fluctuates throughout the trial and is determined by the permitted fleet size review process led by TfL, London Councils and participating Boroughs. This involves assessment against key metrics and stakeholder feedback. Fleets can be increased or decreased based upon this process as detailed in the Operator Specification (**see Appendix 1**).
 - The maximum permitted fleet sizes for each trial period can be found on the TfL website [here](#).

- **Features of e-scooters**
 - To be used by one person only.
 - Operators need to meet the DfT's minimum vehicle standards along with additional requirements in London.
 - The exact features of the rental e-scooters deployed vary by Operator. Many of these are referenced in this document and safety features are referenced in customer facing campaigns or by contacting the Operators directly; [Dott](#), [Lime](#) and [TIER](#).
- **Parking**
 - Participating London Boroughs determine where operators can and cannot park rental e-scooters.
 - TfL has provided parking on TfL land outside and close to a limited number of TfL stations and other TfL land.
 - Parking on private land has been provided by Canary Wharf Group in Tower Hamlets and other small private land areas.
- **Speed**
 - Rental e-scooters are limited to a maximum speed of 12.5 miles per hour (mph).
 - Participating London Boroughs and TfL have designated 'no go' and 'go slow' areas to prevent or reduce the speed of rental e-scooters in certain areas. Motor output is removed completely in no-go zones, with speeds capped at eight mph in go-slow zones. This is possible due to the vehicles being electrically powered and GPS-connected which means that they will know where they can and cannot go and in no-go zones, they become un-rideable. It is possible to adjust these zones at any point throughout the trial.

1.6 Who will be impacted: staff or customers

Although the trial of rental e-scooters presents a new mode of transport for TfL staff, it does not have any unique impact on them compared to other modes that have been rolled out before. TfL staff will need to enforce the conditions of carriage which prevent rental and private e-scooters being carried or used on the TfL network.

The impact of the rental e-scooters is more acutely felt by TfL customers both positively and negatively. This EqIA enables TfL to design and manage a trial that reflects and considers the impacts on individuals with protected characteristics and put in place mitigating actions to support this. E-scooters remain a relatively new mode of transport and in many places robust evidence is lacking about their impacts. It is acknowledged that there is still much to learn about these vehicles, and with an increasing number of people (including individuals with protected characteristics) expressing their intention to consider using e-scooters, people will subsequently develop their own views based on further experience. Our engagement programme is live to listen and incorporate new impacts as TfL learns about them directly or via our stakeholders.

One of the fundamental reasons why TfL is co-ordinating the trial of rental e-scooters is so that TfL can use the evidence and experience to influence the future position of these vehicles under national legislation.

Section 2 that follows summarises the evidence that has been collected to inform this assessment, followed by Section 3 which outlines the impacts by group and the associated mitigations (for negative impacts only).

Section 2: The Evidence Base

TfL has undertaken a programme of research and engagement to accurately understand the views and concerns of our stakeholders and importantly the impacts of the London rental e-scooter trial on people with protected characteristics. Evidence has been gathered via data from the first year of the trial, published reports or articles in the public domain (including those written by groups representing people with protected characteristics), and information provided at multiple meetings with stakeholders and representative bodies. In July 2020 before the trial launched, TfL issued a questionnaire to 140 key stakeholders to gain their direct views on e-scooters which received 48 responses. In March 2022 TfL issued a similar questionnaire to 80 key stakeholders after 10 months of the trial's operation which received 8 responses. TfL thanks all those that have engaged with us to date and for their continued engagement to come.

The purpose of this section is to display the evidence that has been gathered and is presented by neutral, positive and then negative impact area.

2.1 London population data

The following data has been collected from the London Datastore¹

Age: The age demographic in London is as follows:

- 0-15: 20%
- 16-24: 11%
- 25-34: 19%
- 35-49: 23%
- 50-64: 16%
- 65+: 11%

Disability: 19% of the London population are disabled (81% non-disabled)

Gender: There are an equal percentage of males (50%) and females (50%) in London

Ethnicity: The London population is majority white (57%) compared to people from ethnic minority backgrounds (43%)

Religion: The religion demographic in London is as follows:

¹ Greater London Authority, 2019. London's diverse population Available from: <https://data.london.gov.uk/dataset/london-s-diverse-population->

Christian: 48% None: 26% Muslim: 14% Hindu: 5%
Jewish: 2% Sikh: 2% Other: 2% Buddhist: 1%

Sexual orientation: The sexual orientation demographic in London is as follows:

Heterosexual: 90% Don't know/refuse: 6% Gay or lesbian: 2%
Bisexual: 1% Other: 1%

2.2 Rental e-scooter user demographic data

The DfT has been collecting demographic data directly via user surveys for rental e-scooter trials across the UK. The results of these are anticipated to be shared when the DfT publishes their evaluation report later in 2022. From the small sample of survey data supplied by the London e-scooter operators, the majority of rental e-scooter users are reported to be men aged between 25-40. This is in line with surveys conducted in other trial areas, for example research as part of the Southampton and Portsmouth e-scooter trial found that users were two thirds male and 70% were less than 35 years old². They also found that of 50-60% of their users were employed full time and 50% earned more than £32k per year. Research from the University of Salford on their rental trial in Greater Manchester found a demographic gradient in access to e-scooters with older people less likely to use the hire scheme compared to younger people³.

2.3 Positive impacts - evidence

The approach TfL is taking is positive for London as opposed to alternative multiple fragmented schemes:

The approach TfL adopted allows a co-ordinated single rental e-scooter trial across London which promotes safety and accessibility at its core and a consistent approach with participating boroughs. If TfL chose not to be involved there would be a fragmented approach to rental e-scooter trials in London with no consistency which could have led to numerous safety issues. Multiple stakeholder groups including Trust for London and Rolltech.uk, as well as TfL's Independent Disability Advisory Group (IDAG) have positively supported the approach TfL has taken which is to work together with London Councils and the participating London Boroughs to drive a high safety standard so that the selected operators have in place the best available mitigations, such as those listed in Section 3. They have noted the difference that this co-ordinated and collaborative approach has made in terms of higher and consistent safety standards to the people they represent in comparison to alternative options (borough by borough approach). The general views from the engagement listed in Section 4 has been that the co-ordinated approach for the London rental trial has been positive. Out of 8 key stakeholders who completed the questionnaire issued in March 2022, 7 responded to express their view that it was operating at least quite well and quite safely.

² <https://www.solent-transport.com/wp-content/uploads/2022/07/Solent-Transport-x-Steer-E-Scooter-Fact-Sheet-2022-1.pdf>

³ <http://usir.salford.ac.uk/id/eprint/62888/1/Sherriff%20et%20al%202022%20E-Scooters%20in%20Greater%20Manchester%20-%20Second%20Interim%20Report%20revised.pdf>

The trial provides the option of improve mobility for some:

Before the trial launched, the TfL Youth Panel told TfL that particularly for young Londoners (who tend to be lower income than other demographics), and those living centrally who may not own a car, rental e-scooters can increase opportunities through making travel easier within their local area and beyond. Further Wheels for Wellbeing told TfL that rental e-scooters, if adapted to suit people with different physical needs could provide some disabled people with greater opportunities for independent travel. More recently, IDAG suggested that e-scooters can be good for some disabled people, such as people with limited energy. London Cycling Campaign states⁴ this is similar for older people, in the way TfL has seen e-bikes create an opportunity for those who would not usually be able to travel a long distance by foot or on cycle, e-scooters provide an opportunity to improve independence for some older and disabled Londoners. These views are supported by research from the University of Salford which found that e-scooters can provide a kind of mobility aid for people with otherwise limited mobility⁵. Tommy's also felt that e-scooters could aid pregnant women who are suffering from pelvic pain, however the extent to which e-scooters might be used in this way is likely to be very limited.

The trial of rental e-scooters provides a benefit to those living in areas that are poorly serviced by other public transport modes. TfL is aware⁶ that people within lower socio-economic groups tend to live in poorer areas that have fewer transport links. Rental e-scooters available through a local authority scheme that are affordable help improve mobility, independence and journey times for those serviced less well by conventional modes for example people on low incomes. Trust for London reiterated to TfL the benefit to communities of having a low-cost way to travel without requirement for storage and risk of theft of vehicles, which a rental scheme achieves.

The trial improves access to conventional transport modes for groups that rely on them:

Before the trial launched, the RNIB told TfL that if e-scooters can contribute to a reduction in crowding on public transport it could aid blind and partially sighted people who rely on these modes making their journeys less crowded. A reduction in congestion on conventional modes of public transport further benefits individuals with other disabilities such as neurodivergent people and those with mental health conditions such as anxiety, who have told TfL⁷ that congestion remains a barrier to accessing public transport. As London recovers from COVID-19, the availability of rental e-scooters could alleviate space on conventional modes for those who need it more critically. This could also benefit wheelchair users and parents with young children and buggies.

The trial aids the reduction of pollution supporting those most at risk of its impacts:

Before the trial launched, pregnant women and those who are on maternity or with young children told TfL the concerns of parents and pregnant women of the impact of air pollution on their unborn babies or young children. A report from the World Health Organisation on air pollution and child health

⁴ <https://www.london.gov.uk/about-us/londonassembly/meetings/documents/s82223/Appendix%20-%20Micromobility%20and%20Active%20Travel%20in%20the%20UK.pdf>

⁵ <http://usir.salford.ac.uk/id/eprint/62888/1/Sherriff%20et%20al%202022%20E-Scooters%20in%20Greater%20Manchester%20-%20Second%20Interim%20Report%20revised.pdf>

⁶ <https://www.sustrans.org.uk/our-blog/policy-positions/all/all/our-position-on-micromobility/>

⁷ <http://content.tfl.gov.uk/travel-in-london-understanding-our-diverse-communities-2019.pdf>

highlighted that air pollution is a major environmental health threat and children are the most vulnerable to it⁸. The report also highlights that pregnant women who are exposed to polluted air are more likely to give birth prematurely, and have small, low birth weight children. The report found that children who have been exposed to high levels of air pollution may be at greater risk for chronic diseases such as cardiovascular disease later in life. Pregnant women and parents felt re-assured and positive about the introduction of a more sustainable mode of transport to London and how this can contribute to the safety and health of their families.

Another participant in the workshop held with pregnant women and parents before the trial launched, raised how the introduction of a new sustainable mode of transport can be a positive influence on her young children, setting a good example of how transport must evolve for the benefit of the environment. CoMoUK further highlights that the trial introduces another sustainable transport option for Londoners and provides the opportunity for learning to inform future direction.

TfL also know⁹ that in London air pollution is concentrated in areas near very busy roads, meaning people living in the most deprived areas of the city are exposed to a quarter more NO₂ pollution than those living in the wealthiest areas. As the negative health impacts of air pollution are felt more acutely by older people, children and those with heart and respiratory conditions, improvements in air quality and schemes that lead to a fall in air pollution could more acutely benefit these groups.

Based on a survey by Portsmouth City Council in January 2022, it was found that 42% of the e-scooter trips in their hire scheme replaced car trips which was calculated to be equivalent to 126.2 tonnes of CO₂ savings¹⁰. As well as reduction in pollution, a mode shift away from cars could potentially reduce the number serious injuries or fatalities by reducing potential impacts from collisions with a heavier vehicle. The DfT has been collecting mode shift data from end of ride surveys from all UK e-scooter trial locations, including London. To feed into this national data collection TfL is working closely with the operators to examine the available data points on mode shift, ensuring findings are representative and robust.

The trial provides an option for independent travel for Londoners that may have been victims of hate crime on the transport network:

On 5 February 2020 TfL's youth panel told TfL that a 'solo' mode of transport that removed fear of large crowds, intimidation or hate crime can be of benefit to people with protected characteristics, such as the young, who may have been victims of hate crime on the transport network.

Based on TfL held data on hate crime, from January to September 2020 there were over 1,500 reports of hate crime on the network with most of these from buses and London Underground – 876 and 491 respectively. A large proportion of the reports (over 70%) have been in relation to race hate crime. TfL know that hate crime is largely under-reported on the transport network, and that a lack of perceived support for victims of hate crime is a large barrier to reporting, so the impact of hate crime could be far higher than these figures here.

⁸ <https://unfccc.int/news/polluted-air-affects-more-than-90-of-children>

⁹ <https://www.trustforlondon.org.uk/publications/fair-access-towards-transport-system-everyone/>

¹⁰ <https://www.solent-transport.com/wp-content/uploads/2022/07/Solent-Transport-x-Steer-E-Scooter-Fact-Sheet-2022-1.pdf>

Providing an additional option for a sustainable mode of travel that does not involve returning to busy transport modes could be particularly beneficial to Londoners who have been victims to or witnessed hate crime on the public transport network, by ensuring they maintain their independence. Tell Mama, an organisation that supports victims of hate crime against Muslims, told TfL that a fear of returning to public transport following an incident will cause victims to then use unaffordable modes such as private taxis. This can in turn make maintaining part-time and low paid work uneconomical and victims have therefore had to give up work. A 'solo' affordable mode of travel helps prevent this negative effect of hate crime on the public transport network.

The trial provides a more affordable travel option for people with low incomes and disabilities:

Findings suggest that for low-income groups, private car ownership can consume a large share of disposable income and therefore mobility pricing represents an opportunity to offer an alternative and more affordable mode of transport¹¹. Rental schemes can avoid costs of purchasing, maintaining and insuring a vehicle but it's important they avoid high upfront costs which can prevent people on lower incomes accessing the best value transport options. To date over 1000 people have used the London e-scooter operators' discount schemes, for example for people on job seekers allowance and blue badge holders. This suggests that the rental vehicles are being used by people with low incomes and disabilities and therefore provides other transport options for these groups.

The trial provides an option of an enjoyable form of transport that could improve people's mental health:

In a recent survey carried out by TfL, out of the small number of respondents who had used an e-scooter the top reported reason for doing so was 'just for fun / pleasure'. Survey data from micromobility operator Spin found that 70% of respondents believe riding an e-scooter via a hire scheme helps improve their mental health and that people have highly positive associations with how they feel when they ride a hired e-scooter¹². Rental e-scooters could therefore provide a more enjoyable form of transport and improve mental health for people with protected characteristics.

2.4 Negative impacts – evidence

Via our programme of research and engagement, the most significant areas of concern raised to us by those with protected characteristics tends to be in the area of safety; affecting older people, disabled people (including individuals with visual impairments) and pregnant women most significantly. These impact areas, along with others, are presented below with the evidence TfL has gained and Section 3 explores who they are most applicable to.

Falls and subsequent level of injury to riders from rental e-scooters due to the vehicle design:

The safety of e-scooters is a growing issue globally and as a new vehicle type they present concerns as TfL strives to deliver Vision Zero in London.

¹¹ https://www.urbantransportgroup.org/system/files/general-docs/Arup%20UTG%20Equitable%20Mobility_final.pdf

¹² <https://www.spin.app/blog-posts/good-for-the-planet-good-for-the-mind-70-percent-of-e-scooter-hire-scheme-users-say-riding-helps-improve-their-mental-health>

In the UK in 2021, there were 9 fatalities, 305 serious injuries and 720 slight injuries involving e-scooters¹³. This STATS 19 data from the DfT does not accurately distinguish between injuries from rental vs private e-scooters, but a recent report by The Royal Society for the Prevention of Accidents (RoSPA) states that 94% of e-scooter incidents occurred in local authorities where there were no e-scooter rental schemes running¹⁴, thus suggesting that the majority are from private e-scooters.

Based on data of casualties involving e-scooters, the Parliamentary Advisory Committee for Transport Safety (PACTS) published a report concluding the unsafe nature of some private e-scooters¹⁵. The report summarises that:

- E-scooter stability over surface irregularities and potholes is improved with a larger wheel size
- E-scooter riders impact their heads with a similar force to pedal cyclists but there is a higher likelihood of facial injury compared to pedal cyclists
- Acceleration and deceleration reduce the stability of an e-scooter and e-scooters are inherently less stable than bicycles in many circumstances
- Head injuries are common and most riders fall from their e-scooter rather than being hit by another vehicle

PACTS therefore put forward recommendations for the safe construction and use of private e-scooters, including a minimum front wheel size of 12 inches and rear wheel size of 10 inches, a maximum possible speed of 12.5mph and two independently controlled breaks (all of which are adopted in the London rental e-scooters).

A recent study in Oslo looked at characteristics of electric scooter and bicycle injuries in 3191 patients that were admitted to hospital¹⁶. They found that e-scooter injuries commonly occurred at night-time and involved young adults who were not wearing helmets and were often intoxicated. In contrast most bicycle injuries were sustained during commuting hours and involved riders of a wider age range who were often helmeted and less likely to be riding while intoxicated.

For the London trial specifically, in the first year of operations there were no fatalities and 18 serious injuries reported as categorised in line with the DfT's STATS19 definitions. Due to the low number of serious injuries from the first year, there are no statistically significant trends. Ten of these serious injuries were sustained during the day and eight were sustained at night. Of the serious injuries reported, nearly 90% were rider only injuries. The injury rate was the highest at the start of the trial when the scheme was new and many users lacked familiarity with e-scooters, and the serious injury rate has since fallen over time despite significant increases in trips. TfL does not hold data on demographics of the reported injuries in the London trial, however the DfT highlighted that of 1,042 reported e-scooter user casualties in the UK in 2021 nearly 50% were males aged between 10 and 29¹⁷.

¹³ <https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-e-scooter-factsheet-2021/reported-road-casualties-great-britain-e-scooter-factsheet-2021-provisional>

¹⁴ <https://www.rospa.com/getmedia/f29815f4-53e3-40fe-9459-db293df2fd4b/RoSPA-UK-eScooter-Report-Summary-v6-250422.pdf>

¹⁵ <https://www.pacts.org.uk/wp-content/uploads/PACTS-The-safety-of-private-e-scooters-in-the-UK-Final-Report.pdf>

¹⁶ Stray AV, Siverts H, Melhuus K, et al. Characteristics of Electric Scooter and Bicycle Injuries After Introduction of Electric Scooter Rentals in Oslo, Norway. *JAMA Netw Open*. 2022;5(8):e2226701. doi:10.1001/jamanetworkopen.2022.26701

¹⁷ <https://www.gov.uk/government/statistics/reported-road-casualties-great-britain-e-scooter-factsheet-2021/reported-road-casualties-great-britain-e-scooter-factsheet-2021-provisional>

Although the risk of a fall and subsequent injury from an e-scooter is present for all riders, the level of injury appears to be disproportionately high for certain groups with protected characteristics, most notably older people and pregnant women. Before the trial launched Tommy's told TfL that e-scooters need to be used with care by pregnant women as their centre of balance changes as their pregnancy develops and risks of falls increase. If a pregnant woman falls, particularly on her bump, this can be very dangerous or if a fall leads to injuries to wrists/ankles then they can be more at risk of injury due to softened ligaments in pregnancy. Older people are also more likely to suffer more significant injuries due to the well-known fact that bone density reduces with age which can lead to more severe breaking of bones, as well as the degree of fragility increasing with age meaning they are more likely to suffer an injury or a more serious injury that can have longer term impacts or even death. This evidence applies to all injury categories below.

Injury to pedestrians due to illegal or poor rider behaviour including rental e-scooters becoming street litter through poor parking:

Nearly all consulted stakeholders have emphasised the risk of injury to pedestrians as a result of illegal or poor rider behaviour including: e-scooters being incorrectly parked, becoming street litter, and the consequences of high-risk behaviours. Feedback from TfL's IDAG has been that concerns lie more with poor behaviour from riders rather than the e-scooter vehicles themselves. Various stakeholders have also raised concerns about an increase in the illegal private use of e-scooters by people who believe that the prevalence of e-scooters equates to them being legal.

In terms of poor parking, stakeholders have raised concerns over the need for safe and suitable areas for parking, namely areas that don't impact on pedestrians or cause obstruction. Considering this further, this concern may be shared by a wider group of Londoners who are less mobile, including those pushing prams or who are pregnant. Such individuals can suffer disproportionality as a result of a trip or fall over e-scooters if they've become trip hazards. The TfL Youth Panel stated their concerns about e-scooters being parked in positions that are either unsafe or block pathways. Although they didn't stipulate the exact consequence for younger people, it could be assumed that e-scooters that are left in unsafe locations could be trip hazards for smaller children who don't have as much road awareness.

In terms of high-risk behaviours, one of the biggest areas of concern raised by stakeholders is injury to pedestrians as a consequence of pavement riding which is illegal for both private and rental e-scooters. This concern has been raised by groups representing people with learning disabilities, visual impairments, mobility impairments and neurological disorders such as Alzheimer's disease. At one of our Inclusive Transport Forums, representatives from Scope told TfL that pavement riding is one of the most dangerous behaviours for visually impaired people.

In research carried out by the University of Salford¹⁸, women were more likely to say they felt unsafe around e-scooters when walking whereas men were more likely to say that they felt unsafe whilst riding an e-scooter. It was also found that older people were more likely to report having felt unsafe around e-scooters and to have had a near-miss with one. In this same research people with vulnerabilities relating to sensory or visual impairments expressed particular concerns with e-scooter use impinging on pavement space thus making it more difficult to get around.

¹⁸ <http://usir.salford.ac.uk/id/eprint/62888/1/Sherriff%20et%20al%202022%20E-Scooters%20in%20Greater%20Manchester%20-%20Second%20Interim%20Report%20revised.pdf>

People with disabilities, for example those with visual impairments, have raised concerns about how they would report such poor riding or parking behaviour and the clarity of this process. In particular people that are blind and partially sighted might not have information such as the e-scooter registration number or the provider concerned in order to report the incident¹⁹.

The PACTS report²⁰ concluded that in a collision with a pedestrian when travelling at 15.5mph (albeit 3mph higher than the maximum speed limit in the trial), both the e-scooter rider and pedestrian are likely to suffer severe injuries and the pedestrian injuries are more likely to be fatal. For the London rental trial, over the first year of operation there were no fatalities and 18 serious injuries reported out of which 2 were serious injuries to pedestrians.

TfL does not hold data on demographics of the reported injuries in the London trial due to data protection regulations, however The London "Road Danger Reduction Dashboard"²¹ shows that in 2019 the number of pedestrian casualties were equally split between men and women. The TfL Vision Zero Action Plan²² highlights that road injury rates are disproportionately high for some people from ethnic minority backgrounds, with children in this group being on average 1.5 times as likely to be killed or seriously injured on the roads than children not from ethnic minority backgrounds. It could be assumed that this means children from ethnic minority backgrounds are more likely to be involved in an incident with an e-scooter as a pedestrian than children not from ethnic minority backgrounds. Younger and older children from deprived backgrounds are also nearly three times more likely to be killed or seriously injured as pedestrians²³.

Injury to other road users as a result of rental e-scooters being used in shared use areas:

Before the trial launched the Crown Estate raised significant concern to TfL about the conflict between pedestrians and e-scooter users that could occur on the public highway. Further, the workshop TfL held with parents and those who are pregnant shared this concern and highlighted their worry of the use of e-scooters in shared use areas in London. In 2018 the RNIB²⁴ responded publicly to concerns about shared use areas in Ealing. Such concerns included, blind and visually impaired people being unaware that they are walking on a footway where cycling is permitted, shock reactions, the inability to see or hear well enough to carry out communication with the other road user as well as an increasing need to walk excessively slowly and regularly stop, constantly strain to see or hear hazards which together become physically fatiguing. Such impacts could also apply to older people or people with neurological conditions, especially those that have reduced mobility and possibly slower reactions.

Concerns have also been raised about injuries to pedestrians even where rental e-scooters are parked correctly in their designated bays. Representatives from London Sight Loss Councils have expressed concerns over rental e-scooter parking bays being on footways and the potential

¹⁹ <https://www.londonvision.org/blog/open-letter-on-e-scooter-trials/>

²⁰ <https://www.pacts.org.uk/wp-content/uploads/PACTS-The-safety-of-private-e-scooters-in-the-UK-Final-Report.pdf>

²¹ <https://app.powerbi.com/view?r=eyJrIjoiYTlkYmE1ZGQ0tNGlyZi00N2YyLWEyMTYtMjYzNzA5YTVkOWEzIiwidCI6IjFmYmQ2NWJmLTVkZWYtNGVIYS1hNjkyLWEwODJiMjU1MzQ2YiIsImMiOiJh9>

²² <http://content.tfl.gov.uk/vision-zero-action-plan.pdf>

²³ O'Toole, S. E. & Christie, N. (2018). Deprivation and road traffic injury comparisons for 4-10 and 11-15 year olds. Journal of Transport & Health, 11, 221-229

²⁴ <https://www.rnib.org.uk/campaigning/campaigning-news/rnibs-response-proposed-shared-use-pathways-london-borough-ealing>

hazards this poses to blind and other disabled pedestrians²⁵. This group explained that their preference would be for parking to be on the carriageway and that should a designated parking area be on the pavement or other surfaces i.e. outside TfL stations, physical markers outlining the space would be preferable as there might otherwise be nothing, other than the parked e-scooters, for a white cane or dog to interact with which could lead to delayed reactions and as such trips or falls. In addition to the mitigations listed in Section 3, this is being monitored throughout the trial to understand how effective the current parking provision is and how it could be developed if necessary.

Injury to pedestrians due to rental e-scooters making little to no sound or not being clearly seen:

Many stakeholders such as IDAG, the TfL Accessibility Forum, the RNIB and London Sight Loss Councils have told TfL that silent vehicles such as e-scooters are extremely difficult for blind and partially sighted people to see or hear and that it may not always be obvious to someone riding an e-scooter that they are approaching a pedestrian who is visually impaired. The Urban Transport Group (UTG) has also highlighted concerns of e-scooters being largely silent and have said they present dangers to pedestrians, particularly those who are less mobile or who may be slower to react. The RNIB told TfL of the experiences of some individuals with one explaining that because of the lack of sound "...it could be the end of independent travel for me. It's hard enough without powered vehicles whizzing around on pavements". TfL has considered how this can affect others with protected characteristics such as younger people who may have less road awareness, older people or pregnant women..

Feedback from people with learning disabilities echoed this sentiment and commented how not everyone is able to respond quick enough to the ringing of a bell, such as people with ADHD or other learning difficulties, and it's not always obvious that someone will need alerting and they therefore feel a continually emitting noise to warn people on e-scooters is important.

Injury to pedestrians due to the speed of rental e-scooters:

The TfL Accessibility Forum, which represents multiple organisations, highlighted to TfL their concerns about the speed of e-scooters not being suitable for certain areas or that they're simply too fast. Furthermore, the National Federation of the Blind of the UK in their paper "No time to trial or legalise e-scooters²⁶" regularly cite speed as a contributory factor to many of the incidents seen in other cities involving e-scooters. The speed of an e-scooter can disproportionately impact older people with less mobility and those with a disability that limits movement or those that are visually impaired. If these people are in the path of an oncoming e-scooter in a shared use area they may struggle to move out of the way as quickly as others would and the injuries could be more significant for them too, especially older people.

A study from Austin Texas²⁷ is one of the most often highlighted when e-scooter speed is discussed as it states that "more than one-third (37%) of users reported that excessive scooter speed contributed to their injury."

²⁵ <https://www.londonvision.org/blog/open-letter-on-e-scooter-trials/>

²⁶ <https://www.nfbuk.org/wp-content/uploads/2020/06/No-Time-To-Trial-or-Legalise-EScooter.docx>

²⁷ https://www.austintexas.gov/sites/default/files/files/Health/Epidemiology/APH_Dockless_Electric_Scooter_Study_5-2-19.pdf

Fear and anxiety of rental e-scooters as a new mode of transport and impact on behaviour:

TfL's programme of research and engagement has also highlighted that it is not just the risk of an injury that causes concern to pedestrians, but it is also the perceived fear of interactions with e-scooters. Through our engagement, feedback has been that older adults and people with disabilities are concerned about the impacts and general interactions with e-scooters. IDAG highlighted that consequences of this fear can be a loss of independence for some people. At a roundtable event organised by Guide Dogs UK, TfL heard from a visually impaired Londoner who outlined how there are currently limited options for maintaining independence for people with sight loss and they felt like e-scooters impact their independent mobility.

To consider this further, this cause of anxiety could affect other groups such as pregnant women and older people who, as a result of not feeling safe to complete their normal journey, may choose alternative modes of transport such as the use of vehicles. This could prevent them from taking healthy exercise in order to mitigate their anxiety. A group of pregnant women and those on maternity also shared their concerns about already feeling "extra safety conscious" as a result of being pregnant or pushing a pram and being "more protective of themselves" and that the introduction of an e-scooter rental trial can exacerbate that feeling of stress and anxiety.

Through engagement, TfL has sought to improve knowledge and awareness about how the trial is being undertaken and what is being done to prioritise safety and illustrate the comparisons between rental and unregulated private e-scooters. This in general has been well received and helped reduce anxiety levels around London's rental e-scooters. Following education on the trial, feedback from stakeholders has broadly been that more anxiety is felt towards private e-scooters and the lack of regulation around them.

Increase in stress and anxiety as a result of experiencing an incident involving a rental e-scooter:

Before the trial launched, a workshop with pregnant women and those on maternity raised an important concern of the increase in stress and anxiety that could occur as a result of experiencing an incident involving an e-scooter. This could be directly due to involvement in the incident or as a third-party witness to a collision or incident such as road-rage. They felt this could be particularly impactful on children and they were concerned as parents for how witnessing such events could impact them. Witnessing incidents on the road network and the impacts as a result are an existing risk to anyone using the road-space and are unlikely to grow in any substantial way as a result of e-scooters. However, as e-scooters are a relatively new form of transport and many do not have experience of interacting with them yet, there could be an initial rise in conflict as people adjust and learn how to safely interact with one another. An article from the Mental Health Foundation confirmed that people who experience post-traumatic stress disorder can feel anxious for years after the trauma, whether or not they were physically injured²⁸ Furthermore, an article about road-rage²⁹ told TfL that witnessing such an event can have a more profound impact on children especially if someone involved was a parent who is a role-model and it can be very frightening.

²⁸ <https://www.mentalhealth.org.uk/publications/impact-traumatic-events-mental-health>

²⁹ <https://www.yahoo.com/lifestyle/road-rage-affects-kids-133116217.html>

Fear of harassment and hate crime due to using unsafe or unsuitable areas for starting or ending rental e-scooter journeys:

TfL learnt through the dockless bike experience in London the critical importance of structured and safe parking. In addition to ensuring e-scooters are parked in safe places e.g. not discarded on footways, it is also important to consider that chosen parking areas for them are considered safe and visible to others so that the user feels comfortable starting or completing a journey there. This is particularly important because of the prevalence of hate crime and harassment and unintentionally creating spaces where people feel more at risk of this occurring. Our engagement tells TfL that groups who experience this crime disproportionality are young people, women, people from ethnic minority backgrounds, LGBT+ as well as some faith groups. An Independent news article³⁰ has helped to inform TfL that one in three black, Asian or minority ethnic people have been racially abused since Brexit and a further study stated that recorded hate crimes rose by up to 100 per cent³¹. In the UK, 71% of women of all ages have experienced some form of sexual harassment in a public space including public transport³². TIER research found that 31% of women were concerned by a lack of lighting in parking areas which was higher for women with disabilities. In the same research TIER also found that 25% of women are concerned about being stalked or followed and more felt safe riding during the day rather than at night³³. It is important to ensure people feel safe where they are and that locations for collecting or leaving rental e-scooters are selected with care and thought.

Women and older adults feeling excluded from using rental e-scooters:

In a recent TfL survey, women reported being less likely to try e-scooters than men (and older age groups less likely to try e-scooters than younger age groups). Reasons for this could be because women encounter a range of barriers and few enablers to riding shared e-scooters in the UK. Research conducted by rental e-scooter operator Voi found that barriers for women include: the built environment which is viewed as hostile with roads considered dangerous and drivers aggressive, that it's not easy to learn or understand how to ride e-scooters with a lack of safe spaces and environments for women to learn, the way e-scooters are physically designed such as being heavy to manoeuvre and frustrating technology / restrictions can impinge on women's sense of safety riding after dark, and those who hadn't ridden generally characterise riders as being young and male³⁴.

In the e-scooter trial in Salford, female survey respondents were more likely to identify factors that would deter them from using e-scooters, for example concerns around road safety (fear of traffic) and personal safety (fear of attack) were more pronounced amongst female respondents³⁵.

Rental e-scooter affordability:

The Race Equality Foundation told TfL that the cost of renting an e-scooter is an issue for those from deprived communities and some people from ethnic minority backgrounds who are amongst the poorest in the population. TfL also found that this may extend to other groups too, as the London

³⁰ <https://www.independent.co.uk/news/uk/home-news/one-three-black-asian-minority-ethnic-bame-racism-abuse-assault-brexit-hate-crime-tuc-study-a7634231.html>

³¹ <https://www.independent.co.uk/news/uk/home-news/brexit-vote-hate-crime-rise-100-cent-england-wales-police-figures-new-racism-eu-a7580516.html>

³² https://www.unwomenuk.org/site/wp-content/uploads/2021/03/APPG-UN-Women_Sexual-Harassment-Report_2021.pdf

³³ https://production.web.cms.tier.exu.dev/uploads/2022-03-TIER-Mobility_Safe-the-City-report-summary-for-International-Womens-Day.pdf

³⁴ https://www.voiscooters.com/wp-content/uploads/2022/05/Voi_WIT_Gender-Equity-Report_2022.pdf

³⁵ <http://usir.salford.ac.uk/id/eprint/62888/1/Sherriff%20et%20al%202022%20E-Scooters%20in%20Greater%20Manchester%20-%20Second%20Interim%20Report%20revised.pdf>

Datastore³⁶ told TfL that income is lower than average for people from ethnic minority backgrounds, women, younger people and those from the LGBT communities. Studies have found that almost half of 16-18 year olds experience difficulty with the cost of transport to education³⁷.

The following findings are from the London Datastore:

- **Gender:** Females earn an average of 17.5% less than males in London
- **Ethnicity:** people from ethnic minority backgrounds earn an average of 29% less than white individuals
- **Disability:** Those considered disabled earn an average of 15% less than those not considered disabled

The figure below published by Parliament using date from the Office for National Statistics (ONS)³⁸ illustrates the median weekly pay age group.



Figure 1: Median weekly pay by age

Income data based on sexual orientation and gender reassignment is less readily available, however a YouGov and LinkedIn survey³⁹ in 2019 identified that Lesbian, Gay, Bisexual and Transgender (LGBT+) individuals earned an average of 16% less than others.

Research by the University of Salford found regarding their trial in Greater Manchester found that people in the lowest income group were more likely to say that cost would be a deterrent to e-scooter use⁴⁰.

³⁶ <https://data.london.gov.uk/economic-fairness/labour-market/>

³⁷ Stacey and Shaddock (2015). *Taken for a Ride: How UK public transport subsidies entrench inequality*

³⁸ <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8456>

³⁹ <https://www.linkedin.com/feed/news/the-uk-has-an-lgbtq-pay-gap-4702500>

⁴⁰ <http://usir.salford.ac.uk/id/eprint/62888/1/Sherriff%20et%20al%202022%20E-Scooters%20in%20Greater%20Manchester%20-%20Second%20Interim%20Report%20revised.pdf>

The rental scheme is inaccessible for some due to specific requirements needed to take part:

To use any rental e-scooter scheme in the UK, a provisional or full drivers' licence is required as set by the Government. Government figures⁴¹ show that only 52 per cent of black people have a driving licence (the lowest percentage of all ethnic groups). If this trend extends to provisional licences too it could result in a significant proportion of black people being un-able to access a rental e-scooter scheme and contribute to transport inequality. Through our consultation with Rollsafe Community Council Members and our Valuing People group (Section 4), TfL also expect that young people and people with learning disabilities are less likely to hold a driving licence or provisional driving licence. It is important to note this evidence when understanding the full breadth of impacts, however this stipulation of a provisional licence has been determined by law and isn't therefore influenced by TfL's policy.

According to the 2019⁴² report on Travel in London: Understanding our Diverse Communities, evidence tells TfL that that disabled and older Londoners are less likely to access the internet or own a smartphone. Feedback TfL received has emphasised this concern and how some potential users would be excluded from the service if they do not have a smart phone. People with learning disabilities have also fed back to TfL that they often find user education and materials difficult to understand and that easy read versions of materials would help them with this.

According to a BBC article⁴³ in 2014 over 300 languages are spoken in London schools. As a result, where English is not a person's first or a spoken language they could be excluded from a scheme if alternative languages were not available.

In a report published by Arup and the Urban Transport Group⁴⁴, it was concluded that to ensure future mobility contributes to equity it needs to follow the Four A framework: Available (be within easy reach of where people live and enable them to access the places they want to go), Accessible (everyone is able to use and understand the service without reasonable difficulty), Affordable (people should not be 'priced out' of using a service) and Acceptable (people should feel that the infrastructure is equipped to meet their needs).

2.5 Summary

E-scooters are a relatively new mode of transport that is in its infancy and therefore robust evidence is more limited compared to other modes. However, what is available has shown that there are positives as well as negative impacts associated with their introduction for those sharing protected characteristics. Often with the introduction of a new policy there are equality related tensions and trade-offs, where for some, the new opportunities are positive and welcomed and for others more concerning. TfL is aware that this is equally true for the rental e-scooter trial but fundamentally, the purpose of undertaking this trial in the co-ordinated way laid out minimises these impacts by raising the safety standards and the consistent way they're applied and to secondly, learn their extent of influence as evidence is gathered throughout.

⁴¹ <https://www.ethnicity-facts-figures.service.gov.uk/culture-and-community/transport/driving-licences/latest>

⁴² <http://content.tfl.gov.uk/travel-in-london-understanding-our-diverse-communities-2019.pdf>

⁴³ http://www.bbc.co.uk/languages/european_languages/definitions.shtml#:~:text=The%20largest%20number%20of%20community,%2C%20Cantonese%2C%20Mandarin%20and%20Hokkien.

⁴⁴ https://www.urbantransportgroup.org/system/files/general-docs/Arup%20UTG%20Equitable%20Mobility_final.pdf

As stated in Section 1, the core aims of this trial are to promote safety, achieve a consistent and accessible approach across London, provide the data to understand how e-scooters might impact the achievement of the MTS, provide the Mayor with the platform and evidence to request city-wide powers and to provide a potentially green and sustainable alternative to the private car. TfL wants to use this opportunity to gather data to further understand how e-scooters can work in London and to gain further evidence of their impact on Londoners including those with protected characteristics. The trial provides the opportunity for TfL to build on this evidence and better understand the impacts of e-scooters. TfL welcome feedback from groups who feel any impacts have been over-looked or not considered fully.

2.6 London E-Scooter Rental Trial Headline Metrics

TfL are publishing statistics on the London trial every four weeks which can be found [here](#). A summary table of the headline metrics is included below.

From 7 June 2021 – 28 August 2022 there were a total of 1.63 million trips made with an average trip distance of 2.6km and an average trip duration of 18 minutes. Operators have reported that there have been no fatalities and 21 serious injuries based on the STATS19 injury classification definitions.

Table 1: London e-scooter trial headline metrics

Trial Period ¹	Dates	Permitted Fleet Size ²	Total Trips ³	Average trip distance	Average trip duration	Serious injuries reported by operators ⁴
TP1	07 Jun – 04 Jul 2021	600	35k	2.9 km	24 mins	1
TP2	05 Jul – 01 Aug 2021	1,200	50k	2.7 km	22 mins	2
TP3	02 Aug – 29 Aug 2021	2,700	80k	2.8 km	21 mins	2
TP4	30 Aug – 26 Sep 2021	2,835	95k	2.8 km	22 mins	1
TP5	27 Sep – 24 Oct 2021	3,480	100k	2.5 km	18 mins	3
TP6	25 Oct – 21 Nov 2021	3,585	90k	2.5 km	18 mins	0
TP7	22 Nov – 19 Dec 2021	3,585	70k	2.4 km	17 mins	4
TP8	20 Dec 2021 – 16 Jan 2022	3,585	60k	2.5 km	18 mins	1
TP9	17 Jan – 13 Feb 2022	3,585	75k	2.4 km	16 mins	1
TP10	14 Feb – 13 Mar 2022	3,885	80k	2.4 km	16 mins	0
TP11	14 Mar – 10 Apr 2022	4,010	95k	2.5 km	16 mins	1
TP12	11 Apr – 08 May 2022	4,010	130k	2.6 km	17 mins	0
TP13	09 May – 05 Jun 2022	4,100	145k	2.6 km	17 mins	2
TP14	06 Jun – 03 Jul 2022	4,125	180k	2.8 km	18 mins	2
TP15	04 Jul – 31 Jul 2022	4,125	180k	2.7 km	17 mins	1
TP16	01 Aug – 28 Aug 2022	4,365	170k	2.7 km	17 mins	0
Total / Average			1.63m	2.6km	18 mins	21

Section 3: Impact and Mitigations

3.1 The short, medium and long-term negative impacts of the London rental e-scooter trial on people with protected characteristics

The approach TfL has adopted of a co-ordinated single rental e-scooter trial across London promotes safety and a consistent approach. If TfL chose not to be involved in a rental e-scooter trial the alternative of a fragmented approach, without the current level of consistency offered, could have led to numerous safety issues. TfL drive the safety standards as well as other standards important to the Mayor, TfL, London Councils and the London Boroughs. Critical to the trial is also research and data collection to better understand safety and wider impacts of the trial for London and Londoners.

The mitigations listed in the main table below are now in place and added at the end are additional mitigations that have been implemented based on learnings since the trial launched. Following the main table is a section which highlights how the Operators, in addition to the minimum national standards, are individually meeting TfL's Operator Specification and delivering on required outcomes. Where many of the below mitigating actions are imbedded within the Operator Specification (**See Appendix 1**) they are referenced accordingly, and language has been purposely chosen to try and ensure it is clear when an operator is contractually required to do something.

Higher and consistent standards, introduced because of this co-ordinated approach, are working to mitigate against the risk of negative impacts occurring. This EqIA is continually reviewed to understand the negative impacts and mitigations as well as whether additional mitigations are needed.

Protected Characteristic	Negative impacts based on evidence in Section 2	Mitigating action <i>(mitigating actions are presented as a summary and where more information can be found in the Operator Specification (Appendix 1) this is sign-posted via the relevant section of the document)</i>
Age	<p>1.1 Older people could suffer from more severe injuries due to falls from rental e-scooters as a rider and younger people could suffer from an increased rate of collisions due to increased use Falls and collisions from rental e-scooters are expected. Younger people may experience a higher rate of these due to their popularity with the vehicle and older riders are more likely to suffer from an even more significant injury if they fall from a rental e-scooter</p>	<p>Enhanced vehicle safety features: Operators will be required to meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily. Operators' e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process (See Section 16)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users of rental e-scooters and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This is to help people of all ages become more familiar with an e-scooter and how to safely use it leading</p>

		<p>to safer road behaviours. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users on how to ride e-scooters safely and considerately, with training mandatory for first time riders before they can start a ride. This information must be made available in a format that maximises understanding, including for those whose first language may not be English. This should help all riders understand how to safely ride their e-scooter and lead to safer road behaviours. (See Section 20)</p> <p>Required safety processes: Operators must also have various safety processes in place for users including one for first time users confirming they have understood the training information in advance of starting a ride and that promote the use of helmets. This should work towards ensuring riders of all ages are prepared before starting their journey safely. (See Section 20)</p> <p>Additional safety processes: Operators should consider additional safety processes and features such as encouraging riders to wear light-coloured or fluorescent clothing. This should help other vehicles ensuring riders are seen. (See Section 20)</p> <p>Maintenance regimes: Operators must ensure that all e-scooters made available to rent are maintained on an ongoing basis to ensure they are safe to operate, in good working order and are adequately charged. This should ensure that vehicles are safe to use before starting rides. (See Section 17).</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. Riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. (See Section 23)</p> <p>TfL existing safety campaigns: TfL already undertakes multiple road safety campaigns, with many targeting younger drivers or soon to be drivers (Safe Drive Stay Alive). Campaigns like this, will continue to occur to motorists but, many of the messages will still be relevant to younger people who decide to use e-scooters.</p>
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<p>Age</p>	<p>1.2 Increased risk of collision and subsequent level of injury to older pedestrians due to illegal or poor rider use such as rental e-scooters becoming street litter through poor parking E-scooters are sometimes discarded in unsuitable and unsafe areas or used inappropriately in places they shouldn't be. Older people are often reliant on the pavement for their active mobility and are more likely to suffer from more significant injuries if they trip over a discarded e-scooter or attempt to move it out of their way if it's causing obstruction to</p>	<p>Required user training and education by the operator: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements, but two examples include which parts of the road e-scooters can be used on, with absolute clarity provided as to the prohibition of riding the e-scooters on footways (pavement) and where and how to safely park the e-scooters without causing obstruction. This should ensure riders know exactly where they can ride and the rules they must obey. (See Section 20).</p> <p>Parking provision will be made available: It will be the responsibility of the Borough (or TfL on TfL land) to designate parking areas for e-scooters throughout the trial, and these may vary throughout the trial. This avoids e-scooters being parked wherever a user chooses and instead in controlled and considered areas. (See Section 11)</p> <p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with Traffic</p>

	<p>their journey. Their journey may also be blocked if their route is obstructed and they cannot safely pass it.</p>	<p>Signs Regulations and General Directions (TSRGD) 2016 requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Designated parking areas will be created: E-scooters must only be deployed by operators or parked by users in designated parking areas as agreed by the relevant full-service Borough, TfL, or where applicable, on private (or other) land. Operators must ensure (via geo-fencing technology) that e-scooters are not capable of being locked/rides cannot be ended outside of a designated area therefore preventing them from being left where they are not allowed. It is the intention for all parking (not just the parking provision on TfL land of which we are responsible) will be in bays that are both identifiable on the Operators' maps and physically marked with paint. Rental e-scooters must be parked in an upright and stable position and remain upright and must not obstruct the highway (footways, cycle lanes and carriageway) or obstruct street furniture that requires pedestrian access such as benches or should not be adjacent to disabled parking or loading bays. (See Section 11)</p> <p>Removal of poorly left e-scooters: Any e-scooter parked outside agreed parking areas will be non-compliant with the contract and must be moved within specified timeframes by the Operator and if it's not moved within this timeframe it can be by TfL, the Borough or the Police. Should the mitigations above not work then there are plans in place to ensure removal of a discarded e-scooter. (See Section 11)</p> <p>Notification to operators of non-compliant parking: Operators must have efficient means of identifying when an e-scooter is left in a non-compliant place which should increase response times. (See Section 11)</p> <p>Operators must encourage good behaviour: Operators must deploy solutions that drive good user behaviour including ensuring riders understand the possible implications of their actions on others. (See Section 11)</p> <p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-Go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should reduce the risk of collisions with</p>
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<p>Age</p>	<p>1.3 Increased risk of injury to children as pedestrians from rental e-scooters, but in</p>	<p>TfL safety related campaigns for children: TfL has multiple campaigns that run focused on the safety of children on the road. These include STARS and Youth Travel Ambassadors. Road Safety Club is another resource distributed to nurseries in London</p>

	<p>particular those from ethnic minority background as who are 1.5 times more likely to be killed or seriously injured on the roads than children not from ethnic minority backgrounds</p>	<p>with an emphasis on reaching people from ethnic minority backgrounds. The programme teaches young Londoners safe behaviour around roads and delivery of these messages should enhance children’s safety on the road.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p>
<p>Age</p>	<p>1.4 Increased risk of collision with rental e-scooters to younger and older pedestrians and subsequent increased level of injury due to rental e-scooters making little to no sound or not being clearly seen or used in shared use areas</p> <p>E-scooters are not always easily seen or heard and if they’re not identified early enough, it could lead to a collision. Older people with slower reactions and younger people with less</p>	<p>Enhanced vehicle safety features including lights and bell/horn: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence. The vehicles must also be easily distinguishable as a rental e-scooter, with most market providers already deploying vibrant livery to boost the visibility of their e-scooters. This should make e-scooters immediately more noticeable for those with slower reactions. Operator’s e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process (See Section 16).</p> <p>Additional safety processes including certain clothing: Operators should consider</p>

	<p>road awareness is more likely to suffer from collisions with e-scooters for these reasons and the level of injury could be more substantial for older people.</p>	<p>additional safety processes and features such as encouraging riders to wear light-coloured or fluorescent clothing and operators must post visible, easily legible, clear safety information on each e-scooter. Safety information must include requirements to obey all relevant legislation and trial rules. This should help the riders to be more visible to older people as well as the e-scooter. (See Section 20)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements including how to ride and operate the device safely, and in a considerate manner to other riders and road Users, for instance by including basic elements of the highway code (e.g. avoiding vehicle blind spots). This should help riders be more aware of the different road users and pedestrians including older people when using e-scooters. (See Section 20).</p> <p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. “No-Go” areas are where e-scooters are prohibited, and “Go-Slow” areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (I.e. not within the remit of the rider). This should reduce the risk of collisions with pedestrians in areas where rental e-scooters are prohibited. (See Section 13).</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This should help inform older people about the scheme and the safety mitigations involved. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p>
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<p>Age</p>	<p>1.5 Increased risk of collision with a rental e-scooter to younger and older pedestrians and subsequent increased level of injury to older pedestrians due to the speed of rental e-scooters</p>	<p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. “No-Go” areas are where e-scooters are prohibited, and “Go-Slow” areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go</p>

	<p>Through engagement these groups fed back that the speed of e-scooters is too fast and if people are unable to move out of the path of an e-scooter in time it may lead to collisions. Older people with slower reactions and younger people with less road awareness are more likely to suffer from collisions with e-scooters for these reasons and the level of injury could be more substantial for older people.</p>	<p>areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should immediately reduce the risk of speed contributing to incidents in high risk areas for older people. (See Section 13)</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>The maximum speed of the vehicle can be reduced: If the participating borough, TfL and London Councils are in unanimous agreement the maximum speed of e-scooters that is allowed (currently 12.5mph) can be reduced and operators would have to ensure compliance. Should the speed be deemed unsuitable or contributing to incidents it can be reduced. (See Section 16)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services which should ensure older people have an immediate way of contacting someone if something occurs. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements including where e-scooters can and cannot be ridden, including the different types of areas relevant to users (including No-go and Go-slow Zones) and the implications of entering each area. These areas, along with designated parking areas, will need to be communicated clearly to users on a map throughout the trial although vehicles entering these areas will automatically reduce in speed. (See Section 20).</p> <p>Additional safety processes including graduated speeds: Operators should also consider what additional steps they can take for first-time riders specifically to improve the safety of first-time trips, such as graduated speed limits. The procurement process will identify the extent to which it can be applied. (See Section 20)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p>
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		<p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes which will focus on using the trial safely which will likely include messaging on using speed appropriately for users and assuring non-users such as older people of the controls that are in place.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p>
<p>Age</p>	<p>1.6 Increased fear of going out for some older pedestrians as a result of the introduction of rental e-scooters as a new mode of transport Through engagement these groups fed back that some people are anxious and worried about the introduction of e-scooters. Older people, especially those that have had falls, are more likely to be nervous and will possibly stay home to avoid interactions leading to isolation</p>	<p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, especially older people feel encouraged that safety is the focus of the trial. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as older people and explaining how the trial works and what safety mitigations are in place such as parking, geo-fencing and restricted areas. Programmes such as the Inclusive Streetspace engagement programme seek to address the perceived feelings of being unsafe through</p>

	<p>and loneliness.</p>	<p>working on design solutions together that protect safety of both riders and pedestrians on our streets, involving disability campaigners, TfL designers and planners, as well as the cycling and walking lobby.</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services, share community feedback and the complaints channels. It is hoped via this outreach that non-users, especially older people will learn of the steps being taken by operators and riders to adopt safe behaviours and that they feel encouraged to maintain their normal activities. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. The perceptions and attitudes of non-users and gathering insight on the impact e-scooters have on all Londoners is a key objective for the trial. TfL are working on a number of approaches that can be used to ensure the option to feedback is available to non-users throughout the duration of the trial. (See Section 14)</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>No-go and Go-slow areas: TfL and all participating boroughs may introduce or otherwise vary any No-go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual</p>
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		<p>geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). (See Section 13)</p> <p>Enhanced vehicle safety features: Operators will be required to meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily. Operator's e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process (See Section 16)</p>
Age	<p>1.7 Increased risk of Covid-19 to older riders of rental e-scooters E-scooters could contribute to the spread of Covid-19 through multiple use. The disease can be especially harmful to older people who are more at risk of death from the disease.</p>	<p>Cleaning of e-scooters: The operator must ensure that all e-scooters made available to rent are maintained to ensure they are safe to operate, in good working order, are adequately charged and cleaned regularly. (See Section 17)</p> <p>Maintenance regimes: Maintenance regimes must include regular and deep cleaning and disinfection of e-scooters, with additional processes in place for e-scooter touchpoints on an ongoing basis e.g. handlebars, brake levers etc to be cleaned once a day. It will be for the Operators to present stringent cleaning processes and maintain these. These cleaning process should ensure vehicles are kept as clean as possible therefore reducing the risk of transmission (See Section 17)</p> <p>TfL Covid-19 marketing: TfL has multiple COVID-19 marketing messages in place, including on handwashing before and after your travel. These messages will remain live on the network and should help to further encourage all to wash their hands in the fight against COVID-19.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Operators are required to give TfL regular updates on their cleaning regime. (See Section 14)</p> <p>User education: Operators must make easily available within their apps at all times, comprehensive and clear training to users, including on any hygiene-related recommendations, in particular that users are recommended to wash their hands thoroughly before and after use. (See Section 20)</p>
Age	<p>1.8 Increased fear of hate crime to some</p>	<p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL</p>

	<p>younger riders of rental e-scooters at collection and drop off locations</p> <p>Younger people are at a higher risk of hate crime and e-scooter parking locations could be in areas that make younger people more at risk of this crime if they're not chosen carefully.</p>	<p>on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. The perception of non-users and gathering insight on the impact e-scooters have on all Londoners is a key objective for the trial. TfL are working on a number of approaches that can be used to ensure the option to feedback is available to non-users throughout the duration of the trial. (See Section 14)</p>
<p>Age</p>	<p>1.9 Some younger people may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: The operator is free to set its own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to Users. TfL hopes to see plans that support younger people's access to the trial and Operators' low income/equitable access proposals will be taken into consideration during the operator selection process. (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. An important learning objective of the trial (see Section 2) is to understand any inequality of access. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. (See Section 14)</p>

<p>Age</p>	<p>1.10 Some older people may be disproportionality excluded from using rental e-scooters due to lack of a smartphone Access to a rental e-scooter scheme is likely to be via an app. Older people may feel excluded or put off by a lack of a smart phone or digital awareness.</p>	<p>Operator education and outreach for users and non-users must have maximum reach: The operator must conduct education for users and outreach for both users and non-users, as well as with community and stakeholder organisations. This should be designed to have the maximum reach, including for those who would not come into contact with the app or digital channels such as older people. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23) Alternatives to smartphone: Operators should consider how they can support inclusivity by providing an alternative to smartphone access and to ensure people know about such plans they must be clearly listed in a variety of places so that without a smartphone older people, if they wish to ride, have the same opportunity even without a smartphone. (See Section 22) Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
<p>Age</p>	<p>1.11 Generation of stress and anxiety for the very young as a result of being involved in or witnessing an incident involving a rental e-scooter</p>	<p>Incident support: TfL offers people support via The Sarah Hope Line if they have been involved in, or affected by, a life-changing incident on the TfL network. A dedicated team are on hand to make sure that people get the help they deserve, and work in partnership with organisations that can provide further specialised support.</p>
<p>Disability</p>	<p>2.1 Increased risk of collision and subsequent injury to some disabled people, especially the blind and partially sighted and those in wheelchairs due to illegal or poor rider use</p>	<p>Enhanced vehicle safety features including lights and bell/horn: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence. The vehicles must also be easily distinguishable as a rental e-scooter, with most marker</p>

	<p>including rental e-scooters becoming street litter through poor parking E-scooters are sometimes discarded in unsuitable and unsafe areas or used inappropriately in places they shouldn't be. Disabled people especially, blind and partially sighted people are reliant on the pavement for safe mobility and are more likely to fall over a discarded e-scooter, this could lead to injury and a loss of confidence. Their journey may also be blocked if their route is obstructed and they cannot safely pass it which could be even more prevalent for those in wheelchairs.</p>	<p>providers deploying vibrant livery to boost the visibility of their scooters. Operator's e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process (See Section 16).</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements, but two examples include which parts of the road e-scooters can be used on, with absolute clarity provided as to the prohibition of riding the e-scooters on footways (pavement) and where and how to safely park the e-scooters without causing obstruction, including elements of disability awareness to ensure riders are aware of the possible implications of poorly parked e-scooters. This should ensure riders know exactly where they can ride and the rules, they must obey leading to safer road behaviours. (See Section 20).</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-Go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should reduce the risk of collisions with pedestrians in areas where rental e-scooters are prohibited. (See Section 13).</p> <p>Parking provision will be made available: It will be the responsibility of the full-service Borough (or TfL on TfL land) to designate parking areas for e-scooters throughout the trial, and these may vary throughout the trial. This avoids e-scooters being parked wherever a user chooses and instead in controlled and considered areas. (See Section 11)</p> <p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p>
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	<p>Designated parking areas will be created: E-scooters must only be deployed by operators or parked by users in designated parking areas as agreed by the relevant full-service Borough, TfL, or where applicable, on private (or other) land. Operators must ensure (via geo-fencing technology) that e-scooters are not capable of being locked/rides cannot be ended outside of a designated area therefore preventing them from being left where they are not allowed. It is the intention for all parking (not just the parking provision on TfL land of which we are responsible) will be in bays that are both identifiable on the Operators' maps and physically marked with paint. Rental e-scooters must be parked in an upright and stable position and remain upright and must not obstruct the highway (footways, cycle lanes and carriageway) or obstruct street furniture that requires pedestrian access such as benches or should not be adjacent to disabled parking or loading bays. (See Section 11)</p> <p>Removal of poorly left e-scooters: Any e-scooter parked outside agreed parking areas will be non-compliant and must be moved within specified timeframes, initially by the Operator and if not by TfL, the Borough or the Police. Should the mitigations above not work then there are plans in place to ensure removal of a discarded e-scooter. (See Section 11)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Notification to operators of non-compliant parking: Operators must have efficient means of identifying when an e-scooter is left in a non-compliant place which should increase response times. (See Section 11)</p> <p>Operators must encourage good behaviour: Operators must deploy solutions that drive good user behaviour including education which includes elements of disability awareness so that riders understand the possible implications of their actions. This should help rider understand and manage their behaviours to accommodate the different ways other people use the roads (See Section 11)</p> <p>Operator customer service details to be clear: Operators must provide customer service contact details via a variety of methods (phone, email, post etc), enabling users and members of the public to, as a minimum, ask questions, make complaints, report damaged e-scooters or improper parking and request refunds. This will ensure that any user, including disabled people can contact the operator directly. (See Section 21)</p>
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		<p>TfL’s contact centre will be available: TfL’s contact centre will remain available and ready to speak to anyone about any issues or concerns, especially if they haven’t been resolved through other means..</p> <p>The Police will undertake enforcement activity: Operation Hornet, the MPS’s safety operation around e-scooters, has now been running for over a year. The MPS run regular operations targeting e-scooters, and this work will continue during the trials. The MPS have also developed a training package on how to deal with e-scooters under the Road Traffic Act. This has enabled various teams across the MPS to undertake enforcement activity to deal with issues involving e-scooters, including the MPS Roads and Transport Policing Command (RTPC), Parks Police, Violent Crime Task Force and Operation Venice Team, along with local policing teams and safer transport teams.</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial and how to safely use e-scooters. This should help people of all ages become more familiar with an e-scooter and how to safely use it as well as what pedestrians can expect of this new mode. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required operator safety processes: Operators must also have various safety processes in place for users including confirming that users have understood the training information before starting a ride. This should work towards ensuring riders of all ages are prepared before starting their journey (See Section 20)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. In addition, TfL messaging should highlight that the rental scheme is the only legal way to use e-scooters in London other than on private land. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as disabled people and explaining how the trial works and what safety mitigations are in place such as “Go-Slow” areas and designated parking.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to</p>
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		<p>collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. There are two main mechanisms through which inappropriate use and/or parking can be minimised: 1) operators are required to share with TfL the training and education programmes undertaken and 2) near real time data will be provided by the operators and show if scooters are inappropriately parked and operators are expected to action this as per the SLAs agreed. If an operator repeatedly fails to do this, it may limit their ability to grow their fleet size. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p>
<p>Disability</p>	<p>2.2 Increased risk of collision and subsequent injury to some disabled people, especially the blind and partially sighted, due to rental e-scooters making little to no sound, not being clearly seen, used in shared use areas or even when parked appropriately. E-scooters are not seen (or easily seen) or heard, especially by those who are blind or visually impaired. If they’re not identified early enough, or a rider isn’t aware of the pedestrian’s disabilities it could lead to an</p>	<p>Enhanced vehicle safety features including lights and bell/horn: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence. This should aid detection of e-scooters for those that are blind or partially sighted, via the noise and for those that have hearing loss the light may aid visibility. Operator’s e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process. The vehicles must also be easily distinguishable as a rental e-scooter, with most market providers already deploying vibrant livery to boost the visibility of their e-scooters. (See Section 16).</p> <p>Additional safety processes including certain clothing: Operators should consider</p>

	<p>increased risk of collision and the level of injury could be more significant as they weren't able to protect themselves ahead of the collision.</p>	<p>additional safety processes and features such as encouraging riders to wear light-coloured of fluorescent clothing and operations must post visible, easily legible, clear safety information on each e-scooter. Safety information must include requirements to obey all relevant legislation and trial rules. This should help the riders to be more visible to those that have hearing loss. (See Section 20)</p> <p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-Go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (I.e. not within the remit of the rider). This should reduce the risk of collisions with pedestrians in areas where rental e-scooters are prohibited. (See Section 13).</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements, but two examples include which parts of the road e-scooters can be used on, with absolute clarity provided as to the prohibition of riding the e-scooters on footways (pavement) and where and how to safely park the e-scooters without causing obstruction. This should ensure riders know exactly where they can ride and the rules they must obey. (See Section 20).</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial and how to safely use e-scooters. This should help people of all ages become more familiar with an e-scooter and how to safely use it as well as what pedestrians can expect of this new mode. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are</p>
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		<p>accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, especially older people will see these messages and feel encouraged that safety is the focus of the trial. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as disabled people and explaining how the trial works and what safety mitigations are in place such as “Go-Slow” areas and designated parking.</p> <p>TfL’s contact centre will be available: TfL’s contact centre will remain available and ready to speak to anyone about any issues or concerns, especially if they haven’t been resolved through other means. TfL’s complaints process will be accessible to individuals with disabilities, including individuals with visual impairments e.g. those that are visually impaired will be able to contact TfL directly as opposed to the individual operator.</p> <p>Parking provision will be made available: It will be the responsibility of the full-service Borough (or TfL on TfL land) to designate parking areas for e-scooters throughout the trial, and these may vary throughout the trial. This avoids e-scooters being parked wherever a user chooses and instead in controlled and considered areas. (See Section 11)</p> <p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Designated parking areas will be created: E-scooters must only be deployed by operators or parked by users in designated parking areas as agreed by the relevant full-service Borough, TfL, or where applicable, on private (or other) land. Operators must ensure (via geo-fencing technology) that e-scooters are not capable of being locked/rides cannot be ended outside of a designated area therefore preventing them from being left where they are not allowed. It is the intention for all parking (not just the parking provision on TfL land of which we are responsible) will be in bays that are both identifiable on the</p>
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		<p>Operators' maps and physically marked with paint. Rental e-scooters must be parked in an upright and stable position and remain upright and must not obstruct the highway (footways, cycle lanes and carriageway) or obstruct street furniture that requires pedestrian access such as benches or should not be adjacent to disabled parking or loading bays. (See Section 11)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p>
<p>Disability</p>	<p>2.3 Increased risk of collision and subsequent injury to some disabled people due to the speed of rental e-scooters Some feel the speed of e-scooters is too fast. Those that are visually impaired, blind or have restricted movement due to a disability may have slower reactions and are therefore more likely to suffer from collisions and possibly more significant injuries if they are unable to move out of the path of an e-scooter in time.</p>	<p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should immediately reduce the risk of speed contributing to incidents in high risk areas for disabled people. (See Section 13)</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>The maximum speed of the vehicle can be reduced: If the participating borough, TfL and London Councils are in unanimous agreement the maximum speed of e-scooters that is allowed (currently 12.5mph) can be reduced and operators would have to ensure compliance. Should the speed be deemed unsuitable or contributing to incidents it can be</p>

		<p>reduced. (See Section 16)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services which should ensure disabled people have an immediate way of contacting someone if something occurs. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements including where e-scooters can and cannot be ridden, including the different types of areas relevant to users (including No-go and Go-slow Zones) and the implications of entering each area. These areas, along with designated parking areas, will need to be communicated clearly to users on a map throughout the trial although vehicles entering these areas will automatically reduce in speed (See Section 20).</p> <p>Additional safety processes including graduated speeds: Operators should also consider what additional steps they can take for first-time riders specifically to improve the safety of first-time trips, such as graduated speed limits. This will be taken into consideration during the procurement process. (See Section 20)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as disabled people and explaining how the trial works and what safety mitigations are in place such as</p>
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		<p>“Go-Slow” areas and designated parking.</p> <p>TfL’s contact centre will be available: TfL’s contact centre will remain available and ready to speak to anyone about any issues or concerns, especially if they haven’t been resolved through other means. TfL’s complaints process will be accessible to individuals with disabilities, including individuals with visual impairments e.g. those that are visually impaired will be able to contact TfL directly as opposed to the individual operator.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p>
<p>Disability</p>	<p>2.4 Increased fear of going out for some disabled people as a result of the introduction of rental e-scooters as a new mode of transport Some feel anxious and worried about the introduction of e-scooters. Blind or partially sighted people in particular are likely to be nervous and will possibly stay home to avoid interactions leading to isolation and loneliness. TfL expect this to affect others with disabilities too such as those with brittle bone disease, those with impaired movement and possibly autism.</p>	<p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, especially disabled people will feel encouraged that safety is the main focus of the trial and that they feel assured to continue with their normal activities. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as disabled people and explaining how the trial works and what safety mitigations are in place such as “Go-Slow” areas and designated parking. Programmes such as the Inclusive Streetspace engagement programme seek to address the perceived feelings of being unsafe through working on design solutions together that protect safety of both riders and pedestrians on our streets, involving disability campaigners, TfL designers and planners, as well as the cycling and walking lobby; to</p>

		<p>further mitigate this impact.</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services, share community feedback and the complaints channels. It is hoped via this outreach that non-users, especially those with disabilities will learn of the steps being taken by operators and riders to adopt safe behaviours and that they feel encouraged to maintain their normal activities. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. The perception of non-users and gathering insight on the impact e-scooters have on all Londoners is a key objective for the trial. TfL are working on a number of approaches that can be used to ensure the option to feedback is available to non-users throughout the duration of the trial. (See Section 14)</p> <p>No-go and Go-slow areas: TfL and all participating boroughs may introduce or otherwise vary any No-go and Go-Slow zones on their roads/in their borough at any point throughout the trial. “No-go” areas are where e-scooters are prohibited, and “Go-Slow” areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). (See Section 13)</p>
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Disability	<p>2.5 Some disabled people may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: The operator is free to set its own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to users. TfL hopes to see plans that disabled people that are able to use e-scooters be able to access it and operators’ low income/equitable access proposals will be taken into consideration during the operator selection process. (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
Disability	<p>2.6 Some disabled people may be disproportionality excluded from using rental e-scooters due to lack of a smartphone Access to a rental e-scooter scheme is likely to be via an app. Some disabled people may feel excluded or put off by a lack of a smart phone or digital awareness.</p>	<p>Operator educations and outreach for users and non-users must have maximum reach: The operator must conduct education for users and outreach for both users and non-users, as well as with community and stakeholder organisations. This should be designed to have the maximum reach, including for those who would not come into contact with the app or digital channels such as some disabled people. Even if this is not about using the service, the outreach programmes will be beneficial in helping people understand what is involved in the trials. (See Section 20)</p> <p>Alternatives to smartphone: Operators should consider how they can support inclusivity</p>

		<p>by providing an alternative to smartphone access and to ensure people know about such plans they must be clearly listed in a variety of places so that without a smartphone some disabled people, if they wish to ride and feel safe to do so, have the same opportunity even without a smartphone. (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
<p>Gender</p>	<p>3.1 Some women may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: Operators are free to set their own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to users. TfL hopes to see plans that support those with lower incomes able to access it and Operators' low income/equitable access proposals will be taken into consideration during the operator selection process (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access.</p>

<p>Gender</p>	<p>3.2 Men may suffer an increased risk of a collision on a rental e-scooter Falls from e-scooters are expected partly due to being a new and unknown mode of transport and not enough awareness of how to use them. Men are more likely to be involved in a collision than women.</p>	<p>(See Section 14) Enhanced vehicle safety features: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily by other road users. Operator’s e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process. (See Section 16) Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This should help men become more familiar with an e-scooter and how to safely use it before their journey. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23) Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users on how to ride e-scooters safely and considerately, with training mandatory for first time riders before they can start a ride. This information must be made available in a format that maximises understanding, including for those whose first language may not be English. This should help all riders understand how to safely ride their e-scooter. (See Section 20) Required safety processes: Operators must also have various safety processes in place for users including one for first time users confirming they have understood the training information in advance of starting a ride and that promote the use of helmets. This should work towards ensuring men are prepared before starting their journey. (See Section 20) Additional safety processes: Operators should consider additional safety processes and features such as encouraging riders to wear light-coloured or fluorescent clothing. This should help other vehicles ensuring riders are seen. (See Section 20) Maintenance regimes: The operator must ensure that all e-scooters made available to rent are maintained on an ongoing basis to ensure they are safe to operate, in good working order and are adequately charged. This should ensure that vehicles are safe to use before starting rides. (See Section 17). TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, especially</p>
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		<p>older people will see these messages and feel encouraged that safety is the focus of the trial. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be at more risk on the e-scooters such as men and working harder to deliver training and key safety messaging to them and building a culture of safe riding.</p> <p>TfL existing safety campaigns: TfL already undertakes multiple road safety campaigns, with many targeting younger drivers or soon to be drivers (Safe Drive Stay Alive). Campaigns like this, will continue to occur to motorists but, many of the messages, that are consistent in other schemes will still be relevant to those who decide to use e-scooters.</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p>
Gender	3.3 Some women may feel excluded from using	Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to

	<p>a rental e-scooter if cycling trends correlate</p>	<p>have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This should help women become more familiar with an e-scooter and how to safely use it before their journey and provide them with more confidence to experience e-scooters if safety is the cause of their possible exclusion. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users on how to ride e-scooters safely and considerately, with training mandatory for first time riders before they can start a ride. This information must be made available in a format that maximises understanding, including for those whose first language may not be English. This should help all riders, including women understand how to safely ride their e-scooter and grow confidence which could encourage participation. (See Section 20)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, including women, will see these messages and feel encouraged that safety is the main focus of the trial and that they feel assured to continue with their normal activities knowing other road users are aware of the presence of e-scooter riders. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to highlight to women the safety precautions in place and building a culture of safe riding.</p> <p>Ongoing engagement programmes such as the Inclusive Streetspace Engagement and Cycle Your City, aim to understand the barriers to cycling and better diversify the uptake of active travel modes such as cycling. Such programmes if successful in encouraging cycling could translate to e-scooters especially if mitigations put in place to aid cycling adoption also encourage safe rental e-scooter use. These programmes are continuing and will be able to include activity during the trial to understand how to further mitigate this impact.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on</p>
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		<p>performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
Gender	<p>3.4 Increased fear and risk of hate crime to some women riders of rental e-scooters at collection and drop off locations Women are at a higher risk of hate crime and e-scooter parking locations could be in areas that make younger people more at risk of this crime if they're not chosen carefully.</p>	<p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Areas selected with consideration: In addition to mirroring TSRGD guidance on parking lines TfL have provided guidance to boroughs on considering suitable parking locations that are easily accessible, well lit, allow people to feel safe, ideally have CCTV to mitigate against the threat of hate crime occurring whilst starting or ending their journey, and to avoid areas that could disturb the homeless. TfL are not providing parking on the TLRN but are providing some parking at TfL stations where it is safe to do so and that have been risk assessed.</p> <p>Monitoring, data collection and evaluation: Reporting hate crime can be encouraged through the feedback mechanisms which will be put in place, as well as directly asked for during survey work. (See Section 14)</p>
Gender	<p>3.5 Increased risk of Covid-19 to men from rental e-scooters E-scooters could contribute to the spread of Covid-19 through multiple use. The disease can be especially harmful to men who are more at risk of a serious illness</p>	<p>Cleaning of e-scooters: Operators must ensure that all e-scooters made available to rent are maintained to ensure they are safe to operate, in good working order, are adequately charged and cleaned regularly. (See Section 17)</p> <p>Maintenance regimes: Maintenance regimes must include regular and deep cleaning and disinfection of e-scooters, with additional processes in place for e-scooter touchpoints on an ongoing basis e.g. handlebars, brake levels etc to be cleaned once a day. It will be for the operators to present stringent cleaning processes and maintain these (See Section 17)</p> <p>TfL Covid-19 marketing: TfL has multiple COVID-19 marketing messages in place, including on handwashing before and after your travel. These messages will remain live</p>

		<p>on the network and should help to further encourage all to wash their hands in the fight against COVID-19.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Operators are required to give TfL regular updates on the cleaning regime they are using. (See Section 14)</p> <p>User education: Operators must make easily available within their apps at all times, comprehensive and clear training to users, including on any hygiene-related recommendations, in particular that Users are recommended to wash their hands thoroughly before and after use. (See Section 20)</p>
<p>Pregnancy/ Maternity</p>	<p>4.1 Pregnant women likely to suffer from more significant injuries due to falls from rental e-scooters as a rider</p> <p>Falls from e-scooters are expected partly due to being a new and unknown mode of transport and not enough awareness of how to use them. Pregnant women are more likely to suffer from more significant injuries if they fall from an e-scooter whilst riding which could lead to harm of their baby as well as themselves.</p>	<p>Enhanced vehicle safety features: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily. Operator’s e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process. (See Section 16)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This should help pregnant women become more familiar with an e-scooter and how to safely use it before their journey leading to safer road behaviours. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users on how to ride e-scooters safely and considerately, with training mandatory for first time riders before they can start a ride. This information must be made available in a format that maximises understanding, including for those whose first language may not be English. This should help all riders understand how to safely ride their e-scooter leading to safer road behaviours. (See Section 20)</p>

		<p>Required safety processes: Operators must also have various safety processes in place for users including one for first time users confirming they have understood the training information in advance of starting a ride and that promote the use of helmets. This should work towards ensuring pregnant women who choose to ride are safer on the road. (See Section 20)</p> <p>Additional safety processes: Operators should consider additional safety processes and features such as encouraging riders to wear light-coloured or fluorescent clothing. This should help other vehicles ensure riders are seen. (See Section 20)</p> <p>Maintenance regimes: The operator must ensure that all e-scooters made available to rent are maintained on an ongoing basis to ensure they are safe to operate, in good working order and are adequately charged. This should ensure that vehicles are safe to use before starting rides. (See Section 17).</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be at more risk on the e-scooters such as those who are pregnant and work harder to deliver training and key safety messaging to them and building a culture of safe riding.</p> <p>TfL existing safety campaigns: TfL already undertakes multiple road safety campaigns, with many targeting younger drivers or soon to be drivers (Safe Drive Stay Alive). Campaigns like this, will continue to occur to motorists but, many of the messages, that are consistent in other schemes will still be relevant to those who decide to use e-scooters therefore contributing to seeing safer behaviours on the road.</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure</p>
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		<p>TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p>
<p>Pregnancy/ Maternity</p>	<p>4.2 Increased risk of collision and subsequent injury to some pregnant women and those with prams due to illegal or poor rider use including rental e-scooters becoming street litter through poor parking</p> <p>E-scooters are sometimes discarded in unsuitable and unsafe areas or used inappropriately in places they shouldn't be. Pregnant women are more risk of a severe injury if they fall whilst trying to navigate a discarded e-scooter and fall on their bump. Men or women with prams are reliant on the pavement for safe mobility and are more likely to suffer from tripping over a discarded e-scooter Their journey may also be blocked if their route is obstructed and they cannot safely pass it.</p>	<p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements, but two examples include which parts of the road e-scooters can be used on, with absolute clarity provided as to the prohibition of riding the e-scooters on footways (pavement) and where and how to safely park the e-scooters without causing obstruction. This should ensure riders know exactly where they can ride and the rules, they must obey leading to safer road behaviours. (See Section 20).</p> <p>Parking provision will be made available: It will be the responsibility of the full-service Borough (or TfL on TfL land) to designate parking areas for e-scooters throughout the trial, and these may vary throughout the trial. This avoids e-scooters being parked wherever a user chooses and instead in controlled and considered areas. (See Section 11)</p> <p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Designated parking areas will be created: E-scooters must only be deployed by operators or parked by users in designated parking areas as agreed by the relevant full-service Borough, TfL, or where applicable, on private (or other) land. Operators must ensure (via geo-fencing technology) that e-scooters are not capable of being locked/rides</p>

		<p>cannot be ended outside of a designated area therefore preventing them from being left where they are not allowed. It is the intention for all parking (not just the parking provision on TfL land of which we are responsible) will be in bays that are both identifiable on the Operators' maps and physically marked with paint. Rental e-scooters must be parked in an upright and stable position and remain upright and must not obstruct the highway (footways, cycle lanes and carriageway) or obstruct street furniture that requires pedestrian access such as benches or should not be adjacent to disabled parking or loading bays. (See Section 11)</p> <p>Removal of poorly left e-scooters: Any e-scooter parked outside agreed parking areas will be non-compliant and must be moved within specified timeframes, initially by the operator and if not by TfL, the Borough or the Police. Should the mitigations above not work then there are plans in place to ensure removal of a discarded e-scooter. (See Section 11)</p> <p>Notification to operators of non-compliant parking: Operators must have efficient means of identifying when an e-scooter is left in a non-compliant place which should increase response times. (See Section 11)</p> <p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-Go and Go-Slow zones on their roads/in their borough at any point throughout the trial. "No-Go" areas are where e-scooters are prohibited, and "Go-Slow" areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should reduce the risk of collisions with pedestrians in areas where rental e-scooters are prohibited. (See Section 13).</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph.</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Operators must encourage good behaviour: Operators must deploy solutions that drive good user behaviour including education which includes elements of disability awareness</p>
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		<p>so that riders understand the possible implications of their actions. The education broadly should make riders aware of their behaviours so that they accommodate the different ways other people use the roads or what makes someone higher risk. (See Section 11)</p> <p>Operator customer service details to be clear: Operators must provide customer service contact details via a variety of methods (phone, email, post etc), enabling users and members of the public to, as a minimum, ask questions, make complaints, report damaged e-scooters or improper parking and request refunds. This will ensure that any user, including pregnant women and those with prams can contact the operator directly. (See Section 21)</p> <p>TfL's contact centre will be available: TfL's contact centre will remain available and ready to speak to anyone about any issues or concerns, especially if they haven't been resolved through other means. TfL's complaints process will be accessible to individuals with disabilities, including individuals with visual impairments e.g. those that are visually impaired will be able to contact TfL directly as opposed to the individual operator.</p> <p>The Police will undertake enforcement activity: Operation Hornet, the MPS's safety operation around e-scooters, has now been running for over a year. The MPS run regular operations targeting e-scooters, and this work will continue during the trials. The MPS have also developed a training package on how to deal with e-scooters under the Road Traffic Act. This has enabled various teams across the MPS to undertake enforcement activity to deal with issues involving e-scooters, including the MPS Roads and Transport Policing Command (RTPC), Parks Police, Violent Crime Task Force and Operation Venice Team, along with local policing teams and safer transport teams.</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial and how to safely use e-scooters. This should everyone become more familiar with an e-scooter and how to safely use it as well as what pedestrians, including pregnant women and those with prams can expect of this new mode. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required operator safety processes: Operators must also have various safety processes in place for users including confirming that users have understood the training information before starting a ride. This should work towards ensuring all riders are prepared before starting their journey and demonstrate safer road behaviours. (See Section 20)</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety</p>
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		<p>campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. In addition, TfL messaging should highlight that the rental scheme is the only legal way to use e-scooters in London other than on private land.</p> <p>(See Section 23)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. There are two main mechanisms through which inappropriate use and/or parking can be minimised: 1) operators are required to share with TfL the training and education programmes undertaken and 2) near real time data will be provided by the operators and show if scooters are inappropriately parked and operators are expected to action this as per the SLAs agreed. If an operator repeatedly fails to do this, it may limit their ability to grow their fleet size. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p>
<p>Pregnancy/ Maternity</p>	<p>4.3 Increased risk of collision and subsequent injury to some pregnant women or those with prams due to the speed of rental e-scooters especially in shared space areas Some feel the speed of e-scooters is too fast. Pregnant women may have restricted movement and slower reactions and are therefore more likely to suffer from collisions</p>	<p>No-go and Go-slow areas to be introduced: TfL and all participating boroughs may introduce or otherwise vary any No-go and Go-Slow zones on their roads/in their borough at any point throughout the trial. “No-go” areas are where e-scooters are prohibited, and “Go-Slow” areas are where the speed of the e-scooters must be reduced to a maximum of 8mph. This automation will be enabled through geofence technology, which will set a virtual geographic boundary that the e-scooters will be unable to ride across (in no-go areas) or will slow down the e-scooters upon crossing (in go-slow areas). The Operator must ensure compliance and the reduction or removal of motor output must be automatic (i.e. not within the remit of the rider). This should immediately reduce the risk of speed</p>

	<p>and possibly more significant injuries if they are unable to move out of the path of an e-scooter in time and fall on their bump. Children in prams could also be injured if involved in a collision with an e-scooter due to its speed.</p>	<p>contributing to incidents in high risk areas for pregnant women or those with prams. (See Section 13)</p> <p>Reduced maximum speed: The maximum speed of a rental e-scooter has been reduced to 12.5mph. The maximum speed of the vehicle can be reduced: If the participating borough, TfL and London Councils are in unanimous agreement the maximum speed of e-scooters that is allowed (currently 12.5mph) can be reduced and operators would have to ensure compliance. Should the speed be deemed unsuitable or contributing to incidents it can be reduced. (See Section 16)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services which should ensure disabled people have an immediate way of contacting someone if something occurs. This should help pregnant women and those with prams become more familiar e-scooters and grow their confidence that riders have also been educated. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users. This includes various elements including where e-scooters can and cannot be ridden, including the different types of areas relevant to users (including No-go and Go-slow Zones) and the implications of entering each area. These areas, along with designated parking areas, will need to be communicated clearly to users on a map throughout the trial although vehicles entering these areas will automatically reduce in speed. (See Section 20)</p> <p>Additional safety processes including graduated speeds: Operators should also consider what additional steps they can take for first-time riders specifically to improve the safety of first-time trips, such as graduated speed limits. This has been taken into consideration during the procurement process (See Section 20)</p>
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<p>Pregnancy/ Maternity</p>	<p>4.4 Men or women on maternity/paternity may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: The operator is free to set its own pricing for its service to Users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to Users. TfL</p>

		<p>hopes to see plans that support those with lower incomes able to access it and operators' low income/equitable access proposals will be taken into consideration during the operator selection process (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
<p>Pregnancy/ Maternity</p>	<p>4.5 Increased fear of going out for some pregnant women or those on maternity/paternity as a result of the introduction of rental e-scooters as a new mode of transport</p> <p>Some feel anxious and worried about the introduction of e-scooters and how it could adversely affect them and their activities.</p>	<p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that non-users, especially pregnant women will see these messages and feel encouraged that safety is the main focus of the trial and that they feel assured to continue with their normal activities. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be nervous such as pregnant women and those with prams and explaining how the trial works and what safety mitigations are in place such as "Go-Slow" areas and designated parking.</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services, share community feedback and the complaints channels. It is hoped via this outreach that non-users, including pregnant women will learn of the steps being taken by operators and riders to adopt safe behaviours and that they feel encouraged to maintain their normal activities. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with</p>

		<p>all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Ability to amend numbers: Via the permitted fleet size review process (led by TfL, London Councils and participating Boroughs) vehicle numbers can be lowered (as well as maintained and raised) should they not be appropriate after the first 28 days. This involves assessment against three areas: key metric trial performance, participating London Borough, TfL, Police and other relevant party feedback and lastly, operator feedback. It is hoped this will reassure pedestrians if they experience multiple incidents that it will be considered and possible impact numbers being reduced. (See Section 9 and 10)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. The perception of non-users and gathering insight on the impact e-scooters have on all Londoners is a key objective for the trial. TfL are working on a number of approaches that can be used to ensure the option to feedback is available to non-users throughout the duration of the trial. (See Section 14)</p> <p>Enhanced vehicle safety features: Operators will be required to meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily. Operator's e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process (See Section 16)</p>
<p>Pregnancy/ Maternity</p>	<p>4.6 Increased risk of Covid-19 to pregnant women from rental e-scooters E-scooters could contribute to the spread of Covid-19 through multiple use. The disease can be especially harmful to pregnant women who are more at risk of a serious illness to themselves or their baby</p>	<p>Cleaning of e-scooters: Operators must ensure that all e-scooters made available to rent are maintained to ensure they are safe to operate, in good working order, are adequately charged and cleaned regularly. (See Section 17)</p> <p>Maintenance regimes: Maintenance regimes must include regular and deep cleaning and disinfection of e-scooters, with additional processes in place on an ongoing basis for e-scooter touchpoints e.g. handlebars, brake levers etc to be cleaned once a day. It will be for the operators to present stringent cleaning processes and maintain these (See Section 17)</p> <p>TfL Covid-19 marketing: TfL has multiple COVID-19 marketing messages in place, including on handwashing before and after your travel. These messages will remain live on the network and should help to further encourage all to wash their hands in the fight against COVID-19.</p>

		<p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Operators are required to give TfL regular updates on the cleaning regime they are using. (See Section 14)</p> <p>User education: Operators must make easily available within their apps at all times, comprehensive and clear training to users, including on any hygiene-related recommendations, in particular that users are recommended to wash their hands thoroughly before and after use. (See Section 20)</p>
<p>Race</p>	<p>5.1 People from ethnic minority backgrounds may suffer an increased risk of a collision on a rental e-scooter Falls from e-scooters are expected partly due to being a new and unknown mode of transport and not enough awareness of how to use them. People from ethnic minority backgrounds are more likely to be involved in a collision.</p>	<p>Enhanced vehicle safety features: Operators must meet the minimum DfT requirements as well as additional features as listed in the Operator Specification which include; forward and rearward lighting which is always on throughout a rental and a bell/horn to allow the rider to make a sound to warn others of their presence and be seen more easily. Operator’s e-scooters must also be designed with the safety of users, including under impact, and the general public in mind, with this being assessed during the Operator selection process. (See Section 16)</p> <p>Operator education and outreach for users and non-users: Operators must conduct education for users and outreach for both users and non-users. It must be designed to have maximum reach and focus on the trial, how to safely use e-scooters such as how to ride safely and how to access customer services. This should help people from ethnic minority backgrounds becoming more familiar with an e-scooter and how to safely use it before their journey leading to safer road behaviours. Further, the Operator must ensure that all user communications and user-facing apps, websites and other materials are accessible, and that marketing and any sponsorship must comply with all legal requirements including the Equality Act 2010. (See Section 20 and 23)</p> <p>Required user training and education: Operators must make easily available within its app at all times, comprehensive and clear training to users on how to ride e-scooters safely and considerately, with training mandatory for first time riders before they can start a ride. This information must be made available in a format that maximises understanding, including for those whose first language may not be English. This should help all riders understand how to safely ride their e-scooter leading to safer road behaviours. (See Section 20)</p> <p>Required safety processes: Operators must also have various safety processes in place for users including one for first time users confirming they have understood the training</p>

		<p>information in advance of starting a ride and that promote the use of helmets. This should work towards ensuring those from people from ethnic minority backgrounds are safer on the road. (See Section 20)</p> <p>Additional safety processes: Operators should consider additional safety processes and features such as encouraging riders to wear light-coloured or fluorescent clothing. This should help other vehicles ensure riders are seen. (See Section 20)</p> <p>Maintenance regimes: The operator must ensure that all e-scooters made available to rent are maintained on an ongoing basis to ensure they are safe to operate, in good working order and are adequately charged. This should ensure that vehicles are safe to use before starting rides. (See Section 17).</p> <p>TfL rental e-scooter campaign: TfL are preparing a centralised awareness and safety campaign. Raising awareness of the scheme is expected to run approximately for the initial 10 weeks and safety messaging will run throughout the trial via a mix of channels. The exact messages are currently in development. It is hoped that riders benefit from being reminded about safe behaviours and it raises attention to all other road users of the presence of e-scooter riders. (See Section 23)</p> <p>TfL and London Borough community engagement: TfL and London Boroughs will be designing community engagement programmes. These are being designed but it will be important to consider reaching out to communities who could be at more risk on the e-scooters such as those from people from ethnic minority backgrounds and working harder to deliver training and key safety messaging to them and building a culture of safe riding.</p> <p>TfL existing safety campaigns: TfL already undertakes multiple road safety campaigns, with many targeting younger drivers or soon to be drivers (Safe Drive Stay Alive). Campaigns like this, will continue to occur to motorists but, many of the messages, that are consistent in other schemes will still be relevant to those who decide to use e-scooters.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Incident and collision data will be captured throughout the trial using a range of approaches to ensure TfL get as complete a picture as possible. Operators are required to log incidents and share that information with TfL, data will also be collected in the same way as existing modes i.e. through STATS19, plus users and the public will be able to self-report incidents. This information can both be used immediately to understand the nature of the</p>
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		<p>incident, but then be analysed over time to keep under review the impact on those with protected characteristics and others who are at a greater risk. It is worth noting here that the appropriate privacy and safeguarding measures will be used when capturing this data and it might not be possible to get information on protected characteristics in every case. (See Section 14)</p> <p>Events, incidents and emergencies: Operators will be required to work with Boroughs, TfL and Police when emergencies, incidents or special events occur to prioritise the safety of users and the general public. This includes for instance suspending the service during severe weather (e.g. snow) when there may be an increased likelihood of injuries (See Section 24)</p>
Race	<p>5.2 Increased risk of Covid-19 to people from ethnic minority background from rental e-scooters E-scooters could contribute to the spread of Covid-19 through multiple use. The disease can be especially harmful to people from ethnic minority backgrounds who are more at risk of a serious illness or death from the disease.</p>	<p>Cleaning of e-scooters: Operators must ensure that all e-scooters made available to rent are maintained to ensure they are safe to operate, in good working order, are adequately charged and cleaned regularly. (See Section 17)</p> <p>Maintenance regimes: Maintenance regimes must include regular and deep cleaning and disinfection of e-scooters, with additional processes in place on an ongoing basis for e-scooter touchpoints e.g. handlebars, brake levers etc to be cleaned once a day. It will be for the operators to present stringent cleaning processes and maintain these (See Section 17)</p> <p>TfL Covid-19 marketing: TfL has multiple COVID-19 marketing messages in place, including on handwashing before and after your travel. These messages will remain live on the network and should help to further encourage all to wash their hands in the fight against COVID-19.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Operators are required to give TfL regular updates on the cleaning regime they are using. (See Section 14)</p> <p>User education: Operators must make easily available within their apps at all times, comprehensive and clear training to users, including on any hygiene-related recommendations, in particular that Users are recommended to wash their hands thoroughly before and after use. (See Section 20)</p>
Race	<p>5.3 Some people from ethnic minority background may be disproportionality</p>	<p>Low income plans: The operator is free to set its own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable</p>

	<p>excluded from using rental e-scooters due to lower than average incomes</p>	<p>access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to users. TfL hopes to see plans that support those with lower incomes able to access it and Operators' low income/equitable access proposals will be taken into consideration during the operator selection process (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
<p>Race</p>	<p>5.4 Some people from ethnic minority backgrounds may be disproportionality excluded from using rental e-scooters if they do not speak English Access to a rental e-scooter scheme is via an app which if only in English could prevent many people from accessing the service.</p>	<p>Reach and language: The operator must conduct education for users and outreach for both users and non-users, as well as with community and stakeholder organisations. This should be designed to have the maximum reach, including for those who would not come into contact with the app or digital channels and those whose first language may not be English. (See Section 20)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
<p>Race</p>	<p>5.5</p>	<p>Parking bay consistency and guidance: The DfT has approved 5 national designs for</p>

	<p>Increased fear and risk of hate crime to some people from ethnic minority backgrounds riders of rental e-scooters at collection and drop off locations</p> <p>People from ethnic minority backgrounds are at a higher risk of hate crime and e-scooter parking locations could be in areas that make them more at risk of this crime if they're not chosen carefully.</p>	<p>use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Areas selected with consideration:</p> <p>In addition to mirroring TSRGD guidance on parking lines TfL have provided guidance to boroughs on considering suitable parking locations that are easily accessible, well lit, allow people to feel safe, ideally have CCTV to mitigate against the threat of hate crime occurring whilst starting or ending their journey, and to avoid areas that could disturb the homeless. TfL are not providing parking on the TLRN but are providing some parking at TfL stations where it is safe to do so and that have been risk assessed.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Reporting hate crime can be encouraged through the feedback mechanisms which will be put in place, as well as directly asked for during survey work. (See Section 14)</p>
<p>Religion</p>	<p>6.1 Increased fear and risk of hate crime to riders of some faith groups at collection and drop off locations</p> <p>Some faith groups are at a higher risk of hate crime and e-scooter parking locations could be in areas that make them more at risk of this crime if they're not chosen carefully.</p>	<p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Areas selected with consideration:</p> <p>In addition to mirroring TSRGD guidance on parking lines TfL have provided guidance to boroughs on considering suitable parking locations that are easily accessible, well lit, allow people to feel safe, ideally have CCTV to mitigate against the threat of hate crime occurring whilst starting or ending their journey, and to avoid areas that could disturb the homeless. TfL are not providing parking on the TLRN but are providing some parking at TfL stations where it is safe to do so and that have been risk assessed.</p>

		<p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Reporting hate crime can be encouraged through the feedback mechanisms which will be put in place, as well as directly asked for during survey work. (See Section 14)</p>
<p>Sexual Orientation</p>	<p>6.2 Increased fear and risk of hate crime to riders of some LGBT+ groups at collection and drop off locations LGBT+ communities are at a higher risk of hate crime and e-scooter parking locations could be in areas that make them more at risk of this crime if they’re not chosen carefully.</p>	<p>Parking bay consistency and guidance: The DfT has approved 5 national designs for use on public roads in the trials which will also be adopted by any parking provided by TfL on TfL land. TfL will seek to ensure that any painted markings are consistent with TSRGD requirements, ensuring alignment to regulated designs. Adopting a common design approach, may enable users across the trial area to more easily recognise where they can and cannot park their vehicles. The parking areas on TfL land were assessed by TfL surveyors considering elements such as lighting and CCTV and purposely set back from the pedestrian flow.</p> <p>Areas selected with consideration: In addition to mirroring TSRGD guidance on parking lines TfL have provided guidance to boroughs on considering suitable parking locations that are easily accessible, well lit, allow people to feel safe, ideally have CCTV to mitigate against the threat of hate crime occurring whilst starting or ending their journey, and to avoid areas that could disturb the homeless. TfL are not providing parking on the TLRN but are providing some parking at TfL stations where it is safe to do so and that have been risk assessed.</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL’s new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. Reporting hate crime can be encouraged through the feedback mechanisms which will be put in place, as well as directly asked for during survey work. (See Section 14)</p>
<p>Sexual Orientation</p>	<p>6.3 Some people from LGBT+ communities may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: The operator is free to set its own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to users. TfL hopes to see plans that support those with lower incomes able to access it and Operators’</p>

		<p>low income/equitable access proposals will be taken into consideration during the operator selection process (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>
Other	<p>7.1 Disruption to the homeless if areas they sleep in are selected as parking locations for rental e-scooters</p>	<p>Areas selected with consideration:</p> <p>In addition to mirroring TSRGD guidance on parking lines TfL have provided guidance to boroughs on considering suitable parking locations that are easily accessible, well lit, allow people to feel safe, ideally have CCTV to mitigate against the threat of hate crime occurring whilst starting or ending their journey, and to avoid areas that could disturb the homeless. TfL are not providing parking on the TLRN but are providing some parking at TfL stations where it is safe to do so and that have been risk assessed.</p>
Other	<p>7.2 Low income groups may be disproportionality excluded from using rental e-scooters due to lower than average incomes</p>	<p>Low income plans: The operator is free to set its own pricing for its service to users. However, it should include consideration of an affordable service that competes with other transport options. Throughout the trial all operators must offer low income/equitable access customer plans to support the use of rental e-scooters by disadvantaged groups in London. Plans must be visible, and the pricing structure explained clearly to users. TfL hopes to see plans that support those with lower incomes able to access it and Operators' low income/equitable access proposals will be taken into consideration during the operator selection process (See Section 22)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and</p>

		socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)
Other	<p>7.3 Low income groups, the homeless and refugees may be disproportionality excluded from using rental e-scooters due to lack of a smartphone, bank account or not speaking English.</p> <p>Access to a rental e-scooter scheme is likely to be via an app, in English and using a bank card. Those that do not own a smartphone, bank account or speak English may feel excluded</p>	<p>Alternatives to smartphone: Operators should consider how they can support inclusivity by providing an alternative to smartphone access, or cash or other non-bank account-based payment alternatives. These plans must be clearly listed in a variety of places so that those who are already restricted at least know about alternatives. (See Section 22)</p> <p>Ensuring a wider reach and alternative languages: The Operator must conduct education for users and outreach for both users and non-users, as well as with community and stakeholder organisations. This should be designed to have the maximum reach, including for those who would not come into contact with the app or digital channels and those whose first language may not be English. (See Section 20)</p> <p>Monitoring, data collection and evaluation: A comprehensive research programme to collect rich quantitative and qualitative data is at the heart of the trial. Data will be collected via the introduction of TfL's new micro-mobility data platform. It is a contractual requirement that operators must regularly share a wide range of information on performance including on usage patterns and incidents and data will also be collected from participating London Boroughs, and from both users and non-users. As part of their evaluation and social research on the trials, DfT are collating data on demographics and socioeconomic characteristics of users. TfL are hoping to access this information for users in London. If TfL are not able to leverage the DfT data, provision has been made to undertake our own data gathering. The user data can then be compared to London-wide population data and understand if certain groups are underrepresented. An important learning objective of the trial (see Section 2) is to understand any inequality of access. (See Section 14)</p>

The following additional negative impacts and mitigations have been identified since the trial's implementation:

Protected Characteristic	Negative impacts based on further stakeholder engagement / feedback	Mitigating action (<i>mitigating actions are presented as a summary and where more information can be found in the Operator Specification (Appendix 1) this is sign-posted via the relevant section of the document</i>)
Age	7.4 People with a paper driving licence may be disproportionately excluded from using rental e-scooters as they can't use the in-	Alternatives for those with a paper licence: operators offer a manual verification process for individuals who can't use the in-app scan technology which involves contacting the operators' customer service teams.

	<p>app scanning technology to register Older people are more likely to hold paper licences and therefore not be able to use the in-app scanning technology to register to use the rental vehicles.</p>	
Other	<p>7.6 Low income groups may be disproportionately excluded from using rental e-scooters due to the low parking density of the trial in certain areas Only 7% of parking bays are located in the most deprived areas of London and 44% of parking bays are located in areas that already have high public transport accessibility levels. Low income groups may therefore be less likely to have a nearby parking bay to access the rental vehicles.</p>	<p>Parking bay consistency and guidance: TfL and operators have developed parking bay guidance and principles to help identify suitable parking bay locations. Parking bay locations are primarily the responsibility of the participating boroughs who have their own mitigations in place or are following guidance from their local policing and highways teams. Additional parking bays: TfL, boroughs and operators are working closely to identify additional parking bays to improve density of the trial area.</p>

Mitigations	Additional Actions
Operator education and outreach for users and non-users	<ul style="list-style-type: none"> • Operators are leading in-person safety / training events in the participating boroughs (as well as in-app / online training courses), some operators are now offering female only sessions to help encourage more women to use the vehicles • Operators have been giving away free helmets at these events to encourage the use of safety equipment. • Operators are exploring whether easy-read versions of their online user education are possible. • Parking bay locations have been added on the Lazarillo app for people who are blind or partially sighted
Additional safety processes	<ul style="list-style-type: none"> • Beginner mode: as well as mandatory training for first-time riders, all operators offer a beginner mode which gives people the option to have a lower maximum speed limit for those less confident in riding.
Maintenance regime	<ul style="list-style-type: none"> • A Service Level Agreement has been put in place with the operators to ensure any on-street vehicle with a reported maintenance issue is made unavailable to rent immediately and removed within a certain timeframe. It will then be taken to back to the warehouse for inspection and repair. • Tyres were not initially included as part of the on-street maintenance checks so TfL worked with the operators to make sure this was included. The operators are also looking into developing a standard for e-scooters tyres and tyre inspection.
Events, incidents and emergencies	<ul style="list-style-type: none"> • TfL have encouraged operators to work together to ensure a collaborative approach when responding to events, incidents and emergencies. • A Service Level Agreement has been put in place for service suspensions so that operators need to remove their vehicles within a certain timeframe. • Rental e-scooters have been incorporated into the TfL weather plan so that appropriate actions are taken in the event of severe weather.

Operators must encourage good behaviour	<ul style="list-style-type: none"> Operators encourage good behaviour through user training and education, as well as incentivising with discounts etc. Operators are expected to fine, warn or ban users for poor riding behaviour.
No-Go and Go-Slow areas to be introduced	<ul style="list-style-type: none"> TfL and operators have worked with boroughs to mitigate impacts of GPS drift from the introduction of zones. TfL and operators have developed guidance and principles for why and how zones should be implemented so they don't have any negative impacts, for example on rider experience or excluding certain areas / groups of people.
Operator customer service details to be clear	<ul style="list-style-type: none"> Operator contact details are also on display on every e-scooter vehicle. TfL Customer Services can be contacted if anyone is unsure how to contact the operators.
Enhanced vehicle safety features including lights and bell/horn:	<ul style="list-style-type: none"> Operators are working collaboratively on the development of an Audible Vehicle Alerting System. The development of such a system is complex, and so operators are working on an in-depth research proposal that will involve disability groups to ensure an appropriate sound is developed that does not cause any negative impacts. In the meantime, operators have developed additional user education on the use of the bells on their vehicles to train riders on how and when they should be used.
Removal of mis-parked or abandoned rental e-scooters	<ul style="list-style-type: none"> Operators are collaborating in ensuring parking bays across the trial area are kept tidy. A Service Level Agreement has been put in place for operators to rectify any poorly parked vehicle within a certain timeframe.
Monitoring data, collection and evaluation	<ul style="list-style-type: none"> For incident data we are conducting additional monitoring through TfL's Network Management Control Centre (NMCC) and Customer Services. TfL are also working with the NHS to see if we can collect injury data through hospitals. TfL has initiated independent research to collect quantitative and qualitative data from users and non-users on the trial. To make reporting incidents easier, a web-form has been included on the TfL customer services webpage and contact details have been added to the Lazarillo app for blind and partially sighted people

3.2 Specific Operator Mitigations

The table below lists further mitigations implemented by each of the Operators and shows how they go beyond the national minimum standards. These key additional measures in place go towards supporting all the impacts listed in 3.1.

Dott	
Core vehicle features	<ul style="list-style-type: none"> Indicators on handlebars and rear 30.5cm front wheel Licence plate style vehicle identification Double kickstand and tip-over alert Side reflector strips
Safety and maintenance	<ul style="list-style-type: none"> Minimum rental age of 18 (with a provisional or full licence) Safety Advisory Board, (local organisations, charities, the police, research, battery safety and road safety experts)

	<ul style="list-style-type: none"> • Free helmets/safety equipment distributed to all attendees of in-person training events and sent to first 5000 rider to pass online training. • Copper handlebar tape that kills 99% of germs • On street, in person, Scooter familiarisation and road awareness training sessions available and run by qualified Bikeability trainers • Self-diagnostics on board the vehicles combined with the support of an on-street team • Swappable batteries • Quality checks at each battery swap (est. every 1/2 days) • Cleaning at each battery swap (est. every 1/2 days)
Staffing	<ul style="list-style-type: none"> • On-street patrollers, proportionate to fleet size (for operations and customer support) • On-street support staff at the start of the trial (customer support) • 24/7 customer support channels
Community engagement and accessibility	<ul style="list-style-type: none"> • 24/7 multilingual customer support • London-specific surveys and focus groups conducted, including RNIB • Launch campaign and community communications are Equality Act and ASA compliant • All safety messaging and comms reviewed by Safety Advisory Board • Equality Access partner of Transport for All • Disability equality and awareness training for UK staff
Parking	<ul style="list-style-type: none"> • 97% parking compliance in Paris • Smart parking that is GPS backed based on phone location and the requirement for an end of ride photo to ensure accuracy in marked bays • Fines and incentives if parking rules are not adhered to • Trialling full parking bays are removed from App view
Equitable access	<ul style="list-style-type: none"> • 30% student/public sector discount • 80% discount for low income/disabled users • Partnership with Beam and Keys for life to make the service accessible to homeless people • 75% NHS and key worker discount and free rides during lockdown • Provision for unbanked/non-smartphone users • Multiple App languages
User education	<ul style="list-style-type: none"> • Mandatory acknowledgement of pre-ride safety information • Online safety quiz with a test which includes disability awareness questions and users must sign safe and legal riding rules • Incentives provided for users who commit to ongoing learning • DriveTech AA accredited London-specific e-learning and highway code assessment • Weekly in-person e-scooter training sessions with one women only training session per month • Beginner Mode for the first ride; speed limited to 10mph
Managing high risk behaviours	<ul style="list-style-type: none"> • Navigation phone holders on the e-scooters • Safe routing and regular reminders to never ride on the pavement provided to users to prevent pavement riding

	<ul style="list-style-type: none"> In-app safety messaging 2-strike policy and banned if more than one person per e-scooter Anti-theft/vandalism technology: monitor abnormal e-scooter behaviour and components are chipped and secured Drink riding messaging and sobriety confirmation
Rider verification	<ul style="list-style-type: none"> Register a valid licence, live selfie for biometric checks, check age and licence validity, payment method in same name. Automatic ongoing licence checks. Fraud detection

Lime	
Core vehicle features	<ul style="list-style-type: none"> Swept handlebars Pneumatic tyres with 30cm front wheel and 26cm rear wheel Licence plate style vehicle identification Double kickstand and tip-over alert Interchangeable battery with e-bike
Safety and maintenance	<ul style="list-style-type: none"> Minimum rental age of 18 (with a provisional or full licence) Real-Time Accident Detection Free helmet and high-vis clothing giveaways at safety events (including partnerships with small local businesses) Helmet selfie = 25% discount Swappable batteries Self-diagnostics and preventative maintenance Regular disinfection of vehicles Launched the targeted safety campaign, Safer with Lime, that focused on rider education covering five key areas: parking, pavement riding, helmet use, drunk riding and braking. As part of this, fines were doubled for improper parking and new stickers were installed on vehicles informing users of the requirement to park in a painted bay. Educational stickers installed on vehicles to inform users of the rules of the road - such as no tandem riding and the minimum age requirement.
Staffing	<ul style="list-style-type: none"> On-street parking patrol proportionate to fleet size
Community engagement and accessibility	<ul style="list-style-type: none"> 24/7 multilingual customer support Awareness campaign with London Cycling Campaign Foreign language community engagement planned Meet quarterly with the established Disability Advisory Board which includes stakeholders such as Wheels for Wellbeing, RNIB and Thomas Pocklington Trust Bluetooth beacons on vehicles to link with accessibility apps to enable easy contact with the operator Conducted own EQIA for Lime Trial TfL user survey (also expanded to e-bike users) Launched the world's first micromobility pop-up community hub in London - providing a physical space for the general public and stakeholders to find out more about the e-scooter trial and Lime.

	<ul style="list-style-type: none"> • Opened warehouse doors to stakeholders for a behind the scenes look at Lime's London Operations
Parking	<ul style="list-style-type: none"> • Parking photo required at the end of journeys • Parking patrols (1 person to 25 scooters) • Incentives for correct parking - such as Lime Parking Wardens, as well as a progressive fining and banning process as well as a progressive fining and banning process
Equitable access	<ul style="list-style-type: none"> • Expanded Lime Access scheme to offer 50% off unlimited rides for low income riders, key workers, students, apprentices, freedom pass holders (including disabled persons freedom pass) and veteran oyster card holders, Discounts automatically applied in any 'priority areas' set by boroughs • Non-smartphone options • Multiple App languages and 24/7 multilingual (100+ languages) customer service info on scooters (and in Braille)
User education	<ul style="list-style-type: none"> • Mandatory in-app pre-first ride training (including elements of disability awareness training (DAT) with test • Incentivised AA-accredited online driving school, including disability awareness training module (informed by Transport for All and RNIB) – mandatory completion for riders identified for unsafe/non-compliant parking/riding • In-person First Ride Academy (includes optional e-bike training) • Beginner Mode for the first ride; speed limited to 8mph • Mandatory in-app DAT for riders who repeatedly mis-park or pavement ride – must complete it to unlock account • Non-user surveys every second trial period to improve training provision
Managing high risk behaviours	<ul style="list-style-type: none"> • Cognitive sobriety testing between 10pm-6am • Dual riding prevention using data from scooters • Offer training for bus, HGV, PHV drivers about sharing road with e-scooters • Pricing is per minute but there's an offer of 25% discounts for riders who ride safely
Rider verification	<ul style="list-style-type: none"> • Two-factor authentication: register a valid licence, live selfie for biometric checks, check age and licence validity • Fraud detection

TIER	
Core vehicle features	<ul style="list-style-type: none"> • Indicators on handlebars and rear • 30.5cm front wheel • Licence plate style vehicle identification designed in collaboration with Sight Loss Councils to improve visibility • Double kickstand and tip-over alert • Phone holder for navigation • Updated and newer model with a brighter front light and indicators; improved weather casing to protect batteries; and more visible colouring across the vehicle to make it easier to identify in poorer lighting. • Piloting TIER's latest IoT which significantly improves positioning, parking accuracy and geofencing reaction times.
Safety and maintenance	<ul style="list-style-type: none"> • Minimum rental age of 18 (with a provisional or full licence) • Daily disinfection and catalytic coating • On-board diagnostics and regular checks

	<ul style="list-style-type: none"> • Swappable batteries • UK Safety Board with members from Transport for All and London Vision • Dedicated Safety & Police Liaison • Comprehensive process to track and learn from any incident • In-app option to reserve a vehicle for free for 10 minutes to ensure availability and increase feeling of safety when travelling alone at night • Signed up to the Mayor of London's Women's Night Safety Charter • Commissioned independent research on tyre safety
Staffing	<ul style="list-style-type: none"> • On-street parking patrol (proportionate to fleet size).
Community engagement and accessibility	<ul style="list-style-type: none"> • 24/7 multilingual customer support by email, phone and in-app chat function • Multilingual app, ID verification & safety training • UK staff have disability equality & awareness training (delivered by Transport for All) • Impact on disabled people to be included in messaging campaign • Transport for All focus group and street audit • Gender lens research commissioned • Conducted own EQIA and implemented actions incl. recommendations for training • Safety and education campaign across London boroughs to meet local communities and share details on how e-scooters work, both for participants and non-participants to improve confidence and diminish anxiety • Conducted and published women's safety research that helps understand the barriers women face in accessing services, and workshopped research findings to inform day to day operations • Conducted accessibility and equity study to advise boroughs and inform our work with them to identify new parking locations reaching underserved and poorly connected communities • E-scooter parking bays are visible in the Lazarillo app (app for visually impaired people - helping guide app users through cities). Lazarillo users can contact TIER and report issues directly in the app
Parking	<ul style="list-style-type: none"> • Camera Positioning System using to ensure parking accuracy to 20cm • User must 'scan' the parking area at the end of ride with their phone to ensure compliant parking • Free travel from a full parking bay to an available one • Incentives and 3 strikes then a £5 fine to drive good behaviour
Equitable access	<ul style="list-style-type: none"> • UK Access scheme to provide long term discounts to concessionary riders • Discounted rides from any borough-designated priority areas • Free rides for users swapping batteries at Tier PowerBoxes placed in local businesses. • Provide in-app guidance on driving licence application to reduce exclusion • Non-smartphone and cash payment options • Multiple languages in app and customer support
User education	<ul style="list-style-type: none"> • Mandatory in-app pre-first ride training with test • Online and in-app Ride Safe School in partnership with AA and disability groups, includes disability awareness guidance • 20 in person training events per month

	<ul style="list-style-type: none"> • Beginner Mode for the first ride with 10mph speed limit. Beginner mode can also be turned on for any ride, not just the first • Free Bikeworks e-scooter training offered and dedicated sessions for women are being offered to encourage uptake • User education and safety messaging included in frequent global safety campaigns including Out Of Home and digital advertisements in London
Managing high risk behaviours	<ul style="list-style-type: none"> • Divert user to a private hire vehicle if the rider doesn't confirm they are sober Thurs-Sun (9pm-4am) • In-app quiet route navigation to deter pavement riding • Referral codes to mitigate against double riding • £150 credit for trading in privately-owned e-scooter • Priced for Safety whereby users are not charged while static during trips • Research on risky behaviour tracking and automated action, in progress • Riders banned where risky behaviour is identified • In-app navigation to navigate to desired parking bay to reduce risk of abandoned vehicles • Extensive outreach to police, security and street enforcement teams across the trial area to encourage reporting of poor rider behaviour
Rider verification	<ul style="list-style-type: none"> • Register a valid licence, live selfie for biometric checks, check age and licence validity. Automatic ongoing licence checks. • Fraud detection • Riders banned where fraud is identified • Single Sign-On (SSO) through Apple and Google accounts to increase accessibility and provide diverse payment options including PayPal

3.3 The positive impacts of the rental e-scooter trial on people with protected characteristics

In addition to the benefits below it is important to highlight that by TfL taking this co-ordinated approach it is preventing a scenario which would otherwise occur. Such a scenario would involve a fragmented approach of multiple trials across London of rental e-scooters with no consistent standards. The co-ordinated approach allows TfL to set the standards that are important to the Mayor, TfL, London Councils and the London Boroughs for the benefit of all. These include:

- **Safety:** Strict safety requirements and high operating standards are enforced as far as reasonably possible, putting safety first and ensuring that the trial is responsibly managed for the benefit of everybody in London. Safety requirements run throughout the Operator Specification (**See Appendix 1**) and require operators to provide services that include: additional vehicle safety features beyond the DfT's requirements; strict maintenance regimes; strategies to mitigate risky behaviours and crime and ensure vehicles are parked in designated areas only without obstructing pedestrian access; and providing customer education and training on how to ride safely and considerately. TfL is collecting data to understand the perceptions and attitudes of users and non-users, particularly older people and disabled people who have shared concerns about the impacts of the vehicles in public spaces. We have started to gather this feedback through surveys and stakeholder consultation (listed in Section 4) and we plan to gather further insights from further research throughout the trial.

- **Environment:** TfL have set and encourage environmental standards important to TfL and the Mayor, including Ultra-Low Emission Zone (ULEZ) compliance, minimising water and energy consumption, using renewable energies, and encouraging sustainable design, manufacture and maintenance of the e-scooters. An important learning objective of the trial is to understand the impact of e-scooters on the demand for travel by car, walking, cycling and public transport, and the corresponding impact this has on the health of Londoners.
- **Accessibility:** Operators are required through the administration agreement to offer low income or equitable access customer plans to reduce transport inequality. In delivering the trial, TfL will better understand any inequality in access that may need to be managed longer term. TfL is collecting data to understand the impact of this vehicle type on travel behaviour in London as well as where e-scooters can enhance transport options and complement existing public transport.

The collection of data to understand any social, economic, health and environmental benefits and impacts of the trial is fundamental to the learning objectives. This data will be used to shape the policy position for TfL, London Councils and the London Boroughs on this vehicle type and in turn, to feed in views to help to shape national legislation relating to this new vehicle type, including informing TfL, London Councils and the London Boroughs as to any powers that London needs to promote positive outcomes for the Mayor and for TfL.

As part of this data collection, ongoing engagement with groups representing those with protected characteristics is crucial to better understanding both the positive and negative impacts of rental e-scooter trials. The engagement will further ensure TfL keep under review and develop appropriate mitigations and actions to ensure the delivery of an inclusive rental e-scooter trial and as per the learning objectives of the trial as set out in 1.4, it will feed into the DfT ahead of any changes to relevant legislation.

Protected Characteristic	Positive impacts based on evidence in Section 2
Age	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to older and younger people being more likely to be impacted by the negative safety impacts raised such as increased collisions involving an e-scooter as a rider or pedestrian. The consistent and collaborative approach is facilitating the introduction of higher safety standards to protect these groups.</p> <p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p>

	<p>This is likely to be of particular benefit to this group as some older people do not have access to a smart-phone and the trial requirements request alternatives to this which means older people shouldn't be excluded for this reason and have the opportunity to experience, if they wish, a new sustainable mode of transport.</p> <p>Rental e-scooters provide an opportunity to improve independent mobility for some older and younger people, by providing access to an affordable electric powered vehicle. Access through an affordable scheme provides additional opportunity for independence for instance to someone who cannot walk or cycle long distances but could use an electric powered vehicle.</p> <p>Older and younger people in London are more likely to have low incomes. An affordable rental e-scooter scheme could benefit older and younger people on low-incomes living in deprived areas with poorer links to conventional transport, by providing them access to a quick, sustainable mode to travel.</p> <p>A sustainable, clean new mode that could absorb car trips and reduce pollution: Rental e-scooters have the opportunity to encourage people to switch from car use to a rental e-scooter instead for their trip. Pollution levels are particularly dangerous to children and older people and so the benefits of improved air quality could be far greater on this group.</p> <p>A socially distanced form of travel: Rental e-scooters offer a new socially distanced form of travel. Certain groups, such as older people, are more at risk of suffering from a more dangerous version of the disease. If chosen as a transport option, rental e-scooters could help older people move around London more comfortably, or, because of other people using rental e-scooters it would mean public transport is less crowded for them.</p> <p>Independent travel: An independent form of travel could benefit groups who are more at risk of hate crime on the public transport network and lead to increased confidence being able to travel independently on a rental e-scooter rather than on a busy transport mode.</p> <p>Less congested transport network: A switch to rental e-scooters from conventional modes as discussed would further free up critical space for older people who need access to seats and experience congestion as a barrier to travel.</p>
Disability	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to some disabled people, especially those who are blind or have visual impairments being more likely to be impacted by the negative safety impacts raised such as increased collisions with e-scooters as a pedestrian if they form street clutter. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p>

	<p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group as some disabled older people do not have access to a smart-phone and can have lower than average incomes. The trial requirements request alternatives to smartphones and low-income plans which means those affected shouldn't be excluded for this reason and can experience, if they wish, a new sustainable mode of transport.</p> <p>Independent travel: Rental e-scooters provide an opportunity to improve independent mobility for some disabled people, by providing access to an affordable electric powered vehicle. Access through an affordable scheme provides additional opportunity for independence for instance to someone who cannot walk or cycle long distances but could use an electric powered vehicle. Future considerations for adapting e-scooter vehicles to further improve accessibility would also benefit disabled people and a trial would provide the opportunity to investigate innovative options.</p> <p>Disabled people and their families are more likely to have low incomes compared to non-disabled Londoners. An affordable rental e-scooter scheme could benefit some disabled people living in deprived areas with poorer links to conventional transport, by providing them access to a quick, sustainable mode to travel.</p> <p>A sustainable, clean new mode that could absorb car trips and reduce pollution: Rental e-scooters could encourage people to switch from car use to a rental e-scooter instead for their trip. Pollution levels are particularly dangerous to disabled people who may have heart and respiratory conditions and so the benefits of improved air quality could be far greater for this group.</p> <p>A socially distanced form of travel: Rental e-scooters offer a new socially distanced form of travel. Certain disability groups such as those with learning disabilities are more at risk of catching COVID-19 and then suffering from a more dangerous version of the disease due to underlying health conditions. This group of people are likely to benefit from quieter public transport if some existing passengers choose to use rental e-scooters instead and therefore make public transport less crowded for them.</p> <p>A switch to rental e-scooters from conventional modes would further free up critical space for disabled people on public transport who experience congestion as a barrier to travel on public transport, especially during the COVID-19 pandemic.</p>
<p>Pregnancy/ Maternity</p>	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p>

	<p>This is likely to be of particular benefit to this group due to some pregnant women, new parents and those on maternity feeling at a higher risk of collisions with e-scooters if they form street clutter or cannot move quickly enough out of their way. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p> <p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to pregnant women or those on maternity as they can have lower than average incomes. The trial requirements request low income plans which means those affected shouldn't be excluded for this reason and could experience, if they wish, a new sustainable mode of transport.</p> <p>A sustainable, clean new mode that could absorb car trips and reduce pollution: Rental e-scooters could encourage people to switch from car use to a rental e-scooter instead for their trip. Pollution levels are particularly dangerous to children and pregnant women and so the benefits of improved air quality could be far greater for this group.</p> <p>A socially distanced form of travel: Rental e-scooters offer a new socially distanced form of travel. Certain groups, such pregnant women are more at risk of suffering from a more dangerous version of the disease. If chosen as a transport option, rental e-scooters could help pregnant women move around London more comfortably, or, because of other people using rental e-scooters it would mean public transport is less crowded for them.</p> <p>Less congested transport network: A switch to rental e-scooters from conventional modes would further free up critical space for those who need it including pregnant women, with improved access to seats and young families with pushchairs.</p>
<p>Gender</p>	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to men being more at risk of road incidents and therefore at a higher risk of being involved in an incident involving a rental e-scooter. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p> <p>Enhanced mobility around London: As a result of the co-ordinated approach being proposed by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with</p>

	<p>rental e-scooters directly as a rider or indirectly as another road user will benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to women as they can have lower than average incomes. The trial requirements request low income plans which means those affected shouldn't be excluded for this reason and could experience, if they wish, a new sustainable mode of transport.</p> <p>A socially distanced form of travel: An independent form of travel could benefit groups who are more at risk of hate crime on the public transport network and lead to increased confidence being able to travel independently on a rental e-scooter rather than on a busy transport mode. TfL know that trans-gender communities are particularly concerned of travelling on London's network due to hate crime. Access to a rental e-scooter could increase opportunities from independent travel for this group.</p>
<p>Race</p>	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to people from ethnic minority backgrounds being more at risk of road incidents and therefore at a higher risk of being involved in an incident involving a rental e-scooter. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p> <p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group as some people from ethnic minority backgrounds have lower than average incomes and some in this group may not speak English. The trial requirements request low income plans and consideration of alternative languages to English which means those affected shouldn't be excluded for this reason and can experience rental e-scooters, if they wish, a new sustainable mode of transport.</p> <p>A sustainable, clean new mode that could absorb car trips and reduce pollution: Rental e-scooters could encourage people to switch from car use to a rental e-scooter instead for their trip. Pollution levels are particularly prevalent in areas of deprivation. TfL know that people from ethnic minority backgrounds are more likely to live in more deprived areas in London and so the benefits of improved air quality could be far greater for this group.</p> <p>A socially distanced form of travel:</p>

	<p>Rental e-scooters offer a new socially distanced form of travel. Certain groups, such as people from ethnic minority backgrounds and especially men, are more at risk of suffering from a more dangerous version of the disease. If chosen as a transport option, rental e-scooters could help people from ethnic minority backgrounds move around London more comfortably, or, because of other people using rental e-scooters it would mean public transport is less crowded for them.</p> <p>An independent form of travel could benefit groups who are more at risk of hate crime on the public transport network and lead to increased confidence being able to travel independently on a rental e-scooter rather than on a busy transport mode.</p>
<p>Religion</p>	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to some faith groups being more at risk of hate crime which could be increased if unsuitable areas are selected for starting and ending journeys which makes an individual feel more at risk. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p> <p>A socially distanced form of travel: An independent form of travel could benefit groups who are more at risk of hate crime on the public transport network and lead to increased confidence being able to travel independently on a rental e-scooter rather than on a busy transport mode.</p>
<p>Sexual Orientation</p>	<p>A safer and consistent approach to a trial: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised safety standards set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to this group due to the LGBT+ community being more at risk of hate crime which could be increased if unsuitable areas are selected for starting and ending journeys which makes an individual feel more at risk. The consistent and collaborate approach is facilitating the introduction of much higher safety standards to protect these groups.</p> <p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to the LGBT+ community as they can have lower than average incomes. The trial requirements request low income plans which means those affected shouldn't be excluded for this reason and can experience rental e-scooters, if they wish, a new sustainable mode of transport.</p> <p>A socially distanced form of travel:</p>

	<p>An independent form of travel could benefit groups who are more at risk of hate crime on the public transport network and lead to increased confidence being able to travel independently on a rental e-scooter rather than on a busy transport mode.</p>
<p>Other</p>	<p>Enhanced mobility around London: As a result of the co-ordinated approach by TfL (one rental trial of e-scooters) all Londoners and visitors who interact with rental e-scooters directly as a rider or indirectly as another road user benefit from the raised accessibility requirements set as part of this process (as set out in Appendix 1) as opposed to a fragmented approach with varying rules and standards which is the alternative.</p> <p>This is likely to be of particular benefit to people in this group as those on low income may not be able to afford the scheme, may not have access to a smartphone or bank card or speak English. The trial requirements request low income plans, alternatives to bank card and smartphone access and consideration of alternative languages to English which means those affected shouldn't be excluded for this reason and can experience rental e-scooters, if they wish, a new sustainable mode of transport.</p>

Section 4: Consultation

Below is a summary of the consultation undertaken to inform TfL's EQIA in addition to the desk-based research that was carried out:

List the groups you intend to consult with or have consulted and reference any previous relevant consultation?	If consultation has taken place what issues were raised in relation to one or more of the protected characteristics?
<p>IDAG The Independent Advisory Group (IDAG) involves disabled people in the way TfL shapes and develops their strategy for making London more accessible to all.</p>	<p>Date: 15 July 2020 Key Outputs: The following key concerns relevant to the EQIA were raised. All points were considered in the writing of the Operator Specification as many comments contributed to the introduction of mitigations and recommendations for operators. Points were also used as evidence in the EQIA. TfL will continue to engage with this group to keep them updated on progress and to gain further insight as the trial develops.</p> <ul style="list-style-type: none"> • Will there be a customer service/contact point? • Unique identification is needed on rental e-scooters • Lights and sounds are essential • Concerns raised about the active travel impacts • Lifespan of e-scooters and environmental impacts • Not conforming to parking rules • Lack of understanding on the psychological impact on disabled people needs to be addressed • Lack of helmets is concerning given research and evidence seen to date.
<p>TfL Accessibility Forum (incl. Royal Assoc. for Deaf people, Epilepsy Society, Transport for All, Scope, Disability Rights UK, Alzheimer's UK, Inclusion London, Age UK, Parkinson's UK, Guide Dogs, London Vision and RNIB)</p>	<p>Date: 3 July 2020 Key Outputs: The following key concerns relevant to the EQIA were raised. All points were considered in the writing of the Operator Specification as many comments contributed to the introduction of mitigations and recommendations for operators. Points were also used as evidence in the EQIA. TfL will continue to engage with this group to keep them updated on progress and to gain further insight as the trial develops.</p> <ul style="list-style-type: none"> • Ensuring considerate parking • Prevention of use on footways (pavements) • Need for audible warnings on rental e-scooters • Speed of rental e-scooters must be appropriate • Need to build rider awareness of the potential impact of rental e-scooters on disabled/visually impaired Londoners.

<p>Guide Dogs, London Vision and RNIB</p>	<p>Date: 17 July 2020 Key Outputs: The following key concerns relevant to the EQIA were raised. All points were considered in the writing of the Operator Specification as many comments contributed to the introduction of mitigations and recommendations for operators. Points were also used as evidence in the EQIA. TfL will continue to engage with this group to keep them updated on progress and to gain further insight as the trial develops.</p> <ul style="list-style-type: none"> • Parking needs to be clear and safe • Complaints need to be handled in the correct manner and a process established • Rider training needs to be as comprehensive as possible including where they're allowed to be ridden. • On-going engagement is recommended and encouraged • Rental e-scooters need to be uniquely identifiable
<p>TfL Survey: Rental Electric Scooter Trials (Survey responses from: Construction Industry Council, Confederation of Passenger Transport, Age UK London, London Vision, Unibail-Rodamc, Westfield Stratford City, RoadPeace, London First, The Ramblers, Road Haulage Association Ltd, Living Streets, EY, Road Haulage Association, Paddington Central, The Portman Estate, Cabvision Network, TfL Youth Panel, United Cabbies Group, London Cabbie, Sus, strans, Future City Logistics, MCIA Ltd, LINK Limited, London City Airport, Canary Wharf Group, UKHospitality, London Chamber of Commerce and Industry, BIRA, Guide Dog London First, Wheels for Wellbeing, Orbital Equipment Ltd austin wilkinson & Sons Ltd, Baker Street Quarter Partnership, RNIB, Heathrow Airport Limited, Alliance of British Drivers, CoMoUK, London Bike Kitchen, Race Equality Foundation, The Crown Estate, British Land and Delivery</p>	<p>Date: Friday 10 July 2020 Key Principles: Sent to 140 stakeholders with 48 completing the survey Key Outputs: The following key concerns relevant to the EQIA were raised. All points were considered in the writing of the market specification as many comments contributed to the introduction of mitigations and recommendations for operators. Points were also used as evidence in the EQIA.</p> <p>Safety</p> <ul style="list-style-type: none"> • Could there be conflict with buses, cyclists and motorcyclists • Inexperienced users present a risk to themselves and other road users • The speed and silence of e-scooters present a risk to pedestrians, particularly those with accessibility needs • Scooters abandoned on pavements after use and parking facilities may cause obstructions and injuries <p>Accessibility and inclusion</p> <ul style="list-style-type: none"> • Fear that rental e-scooters could have a potential impact on isolation and activity levels for vulnerable groups • They could be prohibitively expensive and therefore unlikely to reduce transport inequality <p>Environment and sustainability</p> <ul style="list-style-type: none"> • Inadequate infrastructure- not enough space on streets to accommodate rental e-scooters
<p>Review of DfT consultation responses</p>	<p>Date: Closing date of the DfT consultation was 3 July 2020 Key Principles: Some organisations shared their consultation responses with TfL for wider understanding. Where relevant and possible this feedback contributed to the development of the EQIA, mitigations and</p>

	<p>consequently the Operator Specification. Some of the key outputs are below: Key Outputs:</p> <ul style="list-style-type: none"> • User training is essential (Road Haulage Association) • Lack of visibility (Road Haulage Association) • Helmet use should not be mandatory (London Cycling Campaign) • Need to restrict and manage numbers (London Cycling Campaign) • Risk in attracting users from more sustainable and active modes (CoMoUK)
<p>TfL webcast on London approach to rental e-scooters for key stakeholders</p> <p>There was a total of 93 registrations for the webcast.</p>	<p>Date: 1 December 2020 Key Principles: TfL hosted a webcast to update key stakeholders on the approach that was being taken to a London rental e-scooter trial following the launch of procurement for operators. The webcast lasted for just over an hour and focused on explaining the principles and objectives of the trial. Namely the safety-first approach with consistent standards, the focus on evidence gathering and the engagement programme.</p> <p>This proactive approach was applied to ensure stakeholders were kept up to date and at the end of the session all stakeholders were encouraged to get in touch directly if they had any other questions, but none were received at this time.</p>
<p>Email exchange with Tommy's</p>	<p>Date: 22 January 2021 Key Principles: TfL contacted Tommy's directly as TfL hadn't yet heard from them or other groups representing pregnant women to inform this EQIA. Key Outputs:</p> <ul style="list-style-type: none"> • Rental e-scooters would need to be used with care because as a woman becomes more heavily pregnant their centre of balance changes and risk of falls would increase. • If a pregnant woman falls particularly on her bump this could be dangerous; or if she falls and hurts wrists/ankles, then they could be more at risk of injury due to softened ligaments in pregnancy. • If used in crowded areas could there be an increase in accidents and pregnant women being involved/knocked over? • Possibly reduce the amount of exercise pregnant women get if they use a rental e-scooter rather than walk. • Rental e-scooters could possibly help those whose mobility is difficult due to pelvic pain • Clear guidance for pregnant women on when to use an e-scooter
<p>Workshop with TfL colleagues on impacts of e-scooters on pregnant women or those on maternity</p>	<p>Date: 1 February 2021 Key Principles: TfL hosted a workshop with seven colleagues who represented pregnant women, those on maternity and new parents to understand their views on the introduction of a 12-month rental e-scooter trial in London. Key Outputs:</p> <ul style="list-style-type: none"> • They were unanimously positive about the approach TfL was taking and saw this as the best way to

	<p>mitigate against a fragmented approach in London and that it will help to clarify how they should be used safely.</p> <ul style="list-style-type: none"> • Concerned about the pollution levels in London and the impact on children and therefore positive about a more sustainable mode that could reduce car use. • Strongly concerned about the speed of vehicles and the inability to see or hear them coming and how this could lead to incidents. • They shared experiences of near-misses with e-scooters as a result of illegal behaviours e.g. e-scooters going through red lights and felt shared use areas could become dangerous. • Fear the impact of on children from road-rage and how this may occur more frequently with e-scooters as well as the longer-term impacts on children from witnessing incidents involving e-scooters. • Stressed the unpredictability of children and how this could possibly lead to incidents especially in shared use areas. • Raised the risk of being slower due to pushing children or being heavily pregnant and reactions being slower. • Children and low down in prams and could they be more likely to be hit by an e-scooter given the design is new and something people are not used to.
<p>Equality and Inclusion workshop hosted by TfL (Those that joined represented Rolltech.uk, TfL Youth Panel and Trust for London.</p>	<p>Date: 5 February 2021 Key Principles: 35 groups were invited to join a workshop to share their views of e-scooters with TfL and some listening in London Boroughs. Only five were able to attend, representing the three organisations listed on the left. The conversation naturally focused on the importance of affordability and the youth. Key Outputs:</p> <ul style="list-style-type: none"> • Trust for London felt e-scooters could provide a great opportunity for communities to have a low-cost way of travelling without the concerns of storage (as for a personally owned bike), theft, or, having to shower at the end of their journey (as with a bike). • Trust for London did stress the importance of rental e-scooters being affordable. • The representative from the TfL Youth Panel stressed that used in the right way e-scooters could be incredibly practical in providing an alternative to crowded public transport, offer a great social element as well as a form of solo transport to avoid large crowds or group if you otherwise felt intimidated to use buses or trains where this may be the case. • Rolltech.uk were keen to stress that they viewed the safety-first approach by TfL positively and that they were pleased to hear so many things had been considered in the planning of the trial. • One representative from Rolltech.uk shared their experience and reasons for using an e-scooter over a car for their journeys. The key reasons were the efficiency of the route (removing the need for 3 buses), it was cheaper and saved him money as well as provided a genuine sense of fun. • Rolltech.uk stressed the importance of community engagement and ensuring there is a culture of safety imbedded within everyone. Not just the operators but riders too. They offered to support here with this.

<p>Hate Crime Engagement Programme (Organisations engaged with include: British Transport Police, Metropolitan Police, The Mayor's Office for Policing and Crime (MOPAC), Galop (LGBT+ and transgender anti-violence charity), Transport for All, Tell MAMA (Measuring Anti-Muslim Attacks), Shomrim (supporting victims of Anti-Semitism), London Faith Forum, Stop Hate UK and Diversity Role Models)</p>	<ul style="list-style-type: none"> All were pleased to see the opportunity in London to trial e-scooters <p>Date: Meetings with various stakeholders across December 2020 and January 2021 Key principles: TfL has been engaging with organisations that support victims of hate crime with different protected characteristics, in order to better understand the impact of hate crime on the transport network and how TfL can support victims of hate crime, both staff and customers, in their responsibility to tackle hate crime on London's transport. Key Outputs:</p> <ul style="list-style-type: none"> Three themes are emerging: education, raising awareness, understanding and support. Tell Mama told TfL for Muslim women who have a part-time low-paid job, and who have been victims of hate crime on public transport, fear of returning to the network and having to use less sustainable modes such as taxis in place, leads to their giving up their jobs and independence. Galop told TfL that the trans community avoid public transport all together for fear of being attacked. Fear and experience of hate crime on public transport is a barrier for groups with protected characteristics to using conventional modes.
<p>Visually impaired stakeholder meeting (Organisations engaged with include London Vision, RNIB and Guide Dogs)</p>	<p>Date: 12 May 2021 Key Principles: TfL had a meeting with this small group of stakeholders to gain some early feedback on the first version of the EqIA and the areas causing most concern to this group. Key Outputs:</p> <ul style="list-style-type: none"> Felt the EqIA was very comprehensive Two main themes were discussed which cause the most concern in the trial: consistent parking areas and riding of e-scooters on the pavement. The group also raised concern about the complaints process for individuals with visual impairments and how this would work. This point was taken away and is being actively worked on within TfL. The group raised the concern about the private illegal use of e-scooters on roads and their perception of the lack of consistency from the Police on enforcement.
<p>DfT Minister Roundtable with representatives from the accessibility sector (Organisations represented included Guide Dogs UK and RNIB)</p>	<p>Date: 7 June 2021 Key Principles: Department for Transport (DfT) led a roundtable for cities to share updates on the progress of status of their rental e-scooter trial with representatives from the accessibility sector in the meeting. Key Outputs:</p> <ul style="list-style-type: none"> TfL presented on the status of the rental e-scooter trial (which had gone live that morning) and the mitigating actions in place to promote safety throughout. The response was positive and felt a lot had been considered. Issues around a straightforward complaints process and the concerns of e-scooters being use on the pavement were raised

<p>Valuing People Valuing People' is a network of adults with learning disabilities. Established in February 2007 it has over 60 representatives covering most London boroughs. The group meets at least three times a year, to provide TfL with ideas and feedback on a range of topics.</p>	<p>Date: 9 and 11 June 2021 Key Principles: The session started with breakout sessions where everyone joining was able to share their views on e-scooters and then TfL provided an explanation of what is happening in the trial which helped clarification on a lot of the points raised. Key Outputs:</p> <ul style="list-style-type: none"> • Safety; not being able to see or hear them and having to watch behind you. They feel they could be very dangerous and suggested them using bike lanes • Concerns over pavement riding for everyone • Training to build up knowledge of how to ride an e-scooter • Wanted to understand how insurance works and helmet use • Information in Easy Read formats would be useful with pictures • Their use should be in appropriate places • Experience of witnessing bad behaviors such as going through red lights • Some people felt they were ok and saw the young using them • Another person has tried them and really enjoyed it • People thought that if they suffer from conditions that create physical fatigue they could be useful by providing a new transport option. • The group wanted to understand if indicators are being used • Points raised about the location of parking bays for those that are visually impaired • Sounds: not everyone driving them are able to respond quick enough to honk for a person (i.e. if they have ADHD or other kinds of learning difficulties/ disabilities or any other perceptual/ attention difficulties). Also it's not always obvious that someone will need alerting i.e. I 'look' young and able bodied but have ADHD/ dyspraxia so easily could miss someone driving a scooter. So I think it's important that they do have a continually emitting noise to warn people • An accessible briefing on the rental e-scooters was developed and shared with the attendees after the meeting
<p>Guide Dogs UK Roundtable Event with representatives from the accessibility sector (Organisations represented included Guide Dogs UK, RNIB, London Vision, Assembly Members, Borough Heads of Transport)</p>	<p>Date: 14 June 2021 Key Principles: The session started with a presentation from TfL and London Councils providing an overview of the trial, followed by the sight loss sector sharing their five priorities for e-scooters and the personal experience of a visually impaired Londoner. The session ended with a Q&A. The rental operators were also invited to the session. Key Outputs:</p> <ul style="list-style-type: none"> • Feedback: there are currently limited options for maintaining independence for people with sight loss • Pavement Obstructions: it's important to protect pavements, parking should be on carriageways only • Pavement Riding: concerns over a lack of care for pedestrians – Guide Dogs UK found that more people on escooters are seen on pavements than roads

	<ul style="list-style-type: none"> • Police and Monitoring: they would welcome better communication on illegal usage, the rental scheme does have some awareness of accessibility issues, but policing should be strict and consistent • Reporting: should be accessible to everyone and widely shared • Sound: should be on the e-scooter and should be distinctive and consistent • Safety, enforcement and regulation are the key points • Questions: on enforcement (fines/penalties) and audible warning systems (when will they be in place) • Question was asked whether TfL can track licence plates for rental vehicles that jump lights for example
<p>London Visual Impairment Forum (Organisations represented included RNIB, London Vision)</p>	<p>Date 18 June 2021 Key Principles: The session started with a presentation from TfL providing an overview of the trial, followed by a presentation from each of the operators and the Metropolitan Police. The presentations were followed by a Q&A. The rental operators were also invited to the session. Key Outputs: Questions were primarily focused on private e-scooters – how they are regulated by the police. Questions were also asked on:</p> <ul style="list-style-type: none"> • Possibility to explore tandem e-scooters: our response was that this needs to be balanced with safety • Possibility of on-camera technology to detect when someone is riding on a pavement: our response was that this technology is in the early phases of development but is growing in the industry
<p>London Sight Loss Council (LSLC) Meeting (Organised by London Vision with 14 members representing the sight loss sector)</p>	<p>Date 23 June 2021 Key Principles: The session started with a presentation from TfL providing an overview of the trial, followed by TfL, the operators and the met police addressing each of the concerns raised by the LSLC in a letter that they addressed to us. This was followed by a Q&A. The rental operators were also invited to the session. Key Outputs: The strongest feedback was on audible warning systems and the desire for this to be in place on vehicles:</p> <ul style="list-style-type: none"> • Audible Warnings: expressed disappointed that this wasn't in place for the start of the trial – electric vehicles making a noise is the only way I will feel safe' – it's not just about riding on pavements but also about crossing roads • TfL Customer Services: wanted to check whether you must press lots of options to get through to someone or if it can be a direct number • Pavement parking: concerns raised that they are on footways and will cause obstructions • Police enforcement: question raised on why retailers can sell private escooters • Training: question raised on the measures in place to ensure that training is undertaken • Monitoring: question asked on whether bans will be shared across all companies • Monitoring: what measures are in place to stop hiring vehicles from friends' accounts

<p>TfL webcast on London approach to rental e-scooters for key stakeholders</p> <p>There was a total of 53 registrations for the webcast.</p>	<p>Date: 12 July 2021 Key Principles: TfL hosted a webcast to update key stakeholders on the launch and progress of the London rental e-scooter trial so far. The webcast lasted for just over an hour and a half and focused on explaining how the trial is working and updates on the insights found to date. The rental operators were also invited to the session.</p> <p>This proactive approach was applied to ensure stakeholders were kept up to date and an opportunity for them to ask pre-submitted questions. At the end of the session all stakeholders were encouraged to get in touch directly if they had any other questions, but none were received at this time.</p>
<p>IDAG The Independent Advisory Group (IDAG) involves disabled people in the way TfL shapes and develops their strategy for making London more accessible to all.</p>	<p>Date: 19 August 2021 Key Principles: TfL provided an update on the on the launch and progress of the London rental e-scooter trial so far. Key Outputs: The following key concerns were raised:</p> <ul style="list-style-type: none"> • Reporting: under-reporting of the blind and partially sighted community • Reporting: trusting of operators to report incidents and getting objective data on injuries • Action taken to share information on poor ridership and anti-social behavior • Audible warnings: questioned why they're not available and highlighted the importance of consistency plus engagement with disability groups • Parking compliance: concerns that c95% isn't high enough • Queried whether there had been any feedback on accessibility so far
<p>Rollsafe Community Council Members Meeting Youth organisations in south London meet to give a voice to young people in transportation. Organisations include Sherwood Park Hall, Hook House Community Centre, Leranto Community Initiative in Lambeth, Merton Connected.</p>	<p>Date: 14 October 2021 Key Principles: TfL provided an update on the London rental trial and listened to feedback from the representative groups. Key Outputs: The following key points were raised:</p> <ul style="list-style-type: none"> • Law: the organisations and people they representative have a lack of understanding on the laws around e-scooters e.g. weren't aware that private ones are illegal to use on public land and that rental ones are legal and different • Publicity: the groups felt that better publicity was needed to communicate awareness of the trials as they weren't aware that they were taking place in their boroughs e.g. newsletters, community centre outreach, tik tok / YouTube adverts for younger people • Helmets: felt that helmets should be a mandatory requirement as they've read research around the link between e-scooter incidents and head injuries, they were surprised it's not mandatory for the trial • Colour: private e-scooters are looking more like rental ones in terms of brightness of colours • Demographics: some of the organisations had perceived that people riding rental e-scooters are older and more professional whereas private e-scooters are being ridden by younger people on pavements. In Lambeth mothers are also using the private e-scooters to take their children to school so it's not just

	<p>young people who use them</p> <ul style="list-style-type: none"> • Environment: the organisations see the value of having e-scooters as a form of green transport but feel that some young people don't understand the bigger purpose for them and just perceive them as something new and exciting • Safety: is integral to these trials and must underpin any decision-making processes • Age limit: if you exclude younger users who are interested in the technology then they will continue to try and use them regardless, need to embrace them as early adopters and make sure they're included as part of the decision making process for micromobility • Young people are brave and ready to try things first and so pave the way to others using them • If young people know that as soon as they turn X age and get their driving licence then they can use an e-scooter then it might deter them from using the private ones e.g. as with driving cars • Outreach: schools / sixth form colleges / community centres / youth clubs are good ways to get feedback from young people e.g. educate on illegal private vehicles and you need to involve parents • Information: it would be useful to have everything in one place e.g. all the borough/parking locations e.g. a dedicated webpage. Clarity is important when getting information across to young people • Photos of the e-scooters on the webpage look 'businessy' which can be alienating to some people who want to use them
<p>Valuing People Valuing People' is a network of adults with learning disabilities. Established in February 2007 it has over 60 representatives covering most London boroughs. The group meets at least three times a year, to provide TfL with ideas and feedback on a range of topics</p>	<p>Date: 20 and 26 October 2021 Key Principles: The session started with breakout sessions where everyone joining was able to share their views on e-scooters and then TfL provided an explanation of what is happening in the trial which helped clarification on a lot of the points raised. Key Outputs:</p> <ul style="list-style-type: none"> • Asked questions on: how are you encouraging the wearing of safety equipment? How are you including those who aren't able bodied in accessing the scheme? Do you need a driving licence to use them? How long is the training and does it cover using the vehicles in busy traffic? • Asked if there are easy read versions of the training so people with learning disabilities can understand it, and suggested the requirement for a driving licence might exclude people with learning disabilities using the rental vehicles because a lot of people with learning disabilities don't have one • Asked if there were many instances of people trying to steal the rental vehicles • Lambeth: recognises the differences to the private vehicles, reported that they were nearly knocked down by a rental vehicle on the pavement (details couldn't be provided so the individual didn't want to report but this raises the question of how we help with reported for those with learning disabilities) • Greenwich: concerns they won't work as there are lots of careless people out there who will knock people over • Ealing: have seen them and they are much better with parking and safer for people than private vehicles • Concerns raised were mainly with the private vehicles e.g. fatality in Richmond in Twickenham

	<ul style="list-style-type: none"> Suggested it would be useful for people with learning disabilities to have an opportunity to try out the rental vehicles (subsequently invited to demo day)
<p>TfL Inclusive Transport Forum (incl. Royal Assoc. for Deaf people, Epilepsy Society, Transport for All, Scope, Disability Rights UK, Alzheimer's UK, Inclusion London, Age UK, Parkinson's UK, Guide Dogs, London Vision and RNIB)</p>	<p>Date: 21 October 2021 Key Principles: An information deck providing an update on the trial was shared with the Inclusive Transport Forum (ITF) around 2 weeks ahead of the session. In this the ITF were invited to provide feedback on the current EqIA including mitigations and impacts and the rental operators were also invited to the session. Key Outputs: The following key concerns were raised:</p> <ul style="list-style-type: none"> Questions on parking, technology, data being collected especially from accessibility perspective Asked if e-scooter users are following the rules of the road Asked how we're considering including disabled people as users and those on low income to access rental scooters Asked for an update on audible warnings Asked about reports of delivery companies using e-scooters Asked if geo technology can detect pavement riding – pavement riding is one of the most dangerous things for visually impaired people
<p>IDAG The Independent Advisory Group (IDAG) involves disabled people in the way TfL shapes and develops their strategy for making London more accessible to all.</p>	<p>Date: 28 October 2021 Key Principles: Follow up to the previous meeting and sharing of injury data, discussion and questions on the data shared Key Outputs: The following key concerns were raised:</p> <ul style="list-style-type: none"> Data reporting: those with disabilities e.g. visual impairments unlikely to report issues as they often believe it's their fault – need to recognise limitations of data and self-reporting when making any conclusions Suggested other data sources could be used such as hospitals, councils, active polling of non-users, focus groups Near misses can be as much of a barrier for disabled people as physical barriers e.g. lose independence due to fear of being hit by an e-scooter
<p>IDAG The Independent Advisory Group (IDAG) involves disabled people in the way TfL shapes and develops their strategy for making London more accessible to all.</p>	<p>Date: 25 November 2021 Key Principles: Presented a proposal on Acoustic Vehicle Alerting Systems Key Outputs: The following feedback was received:</p> <ul style="list-style-type: none"> Good to try and get it to work across the board and take a rigorous / collaborative approach Endorse using rigorous research methodology Most important thing is consistency Need to work with stakeholders Would like to see more of the research methodology details but like the overarching principles Ensure enough time for testing so can be refined User groups – people who might be neurodivergent / with tinnitus, societies with hearing loss – test

	sounds both as a rider and as a pedestrian, test with people that have anxiety or panic disorders (mental health), York University / disability groups in local towns
London E-Scooter Trial: 6-month roundtable	<p>Date: 21 January 2022</p> <p>Key Principles: session held with the TfL E-Scooter Trial project team, TfL Diversity & Inclusion team, three rental operators and TfL's Independent Disability Advisory (IDAG) group to review progress of the trial and any areas for improvement for the remainder of the trial.</p> <p>Key outputs: The following topics were discussed</p> <ul style="list-style-type: none"> • Operators outlined additional mitigations put in place since the trial launched • Operators talked through the impacts of their equitable access programmes • Operators listed some barriers to accessing the rental scheme that has been fed back by users: lack of available parking, excessive use of geofencing zones, requirement to hold a driving licence • Operators highlighted potential mental health benefits of using rental e-scooters • IDAG added that there are potential negative mental health benefits on people as a consequence of poor riding behaviour • IDAG raised their ongoing concerns around head injuries resulting from e-scooters • IDAG fed back that they would like improvements to be made on the data collection for the trial – more data is needed from non-users on their sentiment, experiences, and psychological impact of the trial in particular for people with protected characteristics. They also expect to see some hospital data by the end of the trial. • IDAG fed back that the process for reporting issues / incidents isn't very clear and improvements should be made to simplifying the trial's reporting methods • TfL took an action to ensure IDAG is involved in the monitoring and evaluation strategy for the trial
Accessibility Demo Day	<p>Date: 18 March 2022</p> <p>Key Principles: in-person event organised for accessibility stakeholders as an opportunity to see / feel the rental vehicles and speak with the three rental operators. Held at the e-scooter parking bay at Southwark station.</p> <p>Key outputs: the following feedback was received from representatives of the different groups that attended IDAG</p> <ul style="list-style-type: none"> • For people with visual impairments, the new vehicle models are more because of the increased surface area of colour and increased colour contrast. It would be good if they could all paint the mudguard on the front wheels as people with visual impairments and mobility impairments generally look at the ground so this would improve their visibility • For people with visual impairments it would be better if the vehicles either all had indicators or all did not have indicators, this is because consistency is key. • Indicators do rely on the riders to use them – importance of rider education • Interested in pavement riding detection technology and when this will be available • Difficulties for people reporting issues with vehicles e.g. those abandoned – is it possible to have a

	<p>button on each scooter that members of the public could press to notify the operator if they're mis-parked, abandoned etc. to make this reporting process easier</p> <ul style="list-style-type: none">• The parking bay design is good for people with visual impairments as it's easily visible• Was initially disappointed at the lack of progress with audible warnings but the announcement of the partnership with PEARL has provided assurance that robust research methodology will be used for its development so is now comfortable with progress• Commended efforts with engagement and standard of the e-scooter trial and that the rental vehicles go way above the standard of private vehicles <p>Brent Mencap</p> <ul style="list-style-type: none">• One of the attendees did not have a driving licence so wouldn't be able to use the rental e-scooters even though he would like to• One of the attendees was scared at the prospect of riding the vehicles but interested in beginner training courses which would need to be close to where they live• Asked questions about how the vehicles are charged, where they can be found, how you register <p>Thomas Pocklington Trust</p> <ul style="list-style-type: none">• It's useful for the vehicles to have QR codes on to report issues e.g. with abandoned, mis-parked vehicles and it would be good to have this for all operators• A distinctive audio sound for the e-scooters is important as it will be re-assuring to people with visual impairments• Generally the experience of their local e-scooter bays have been that they are neat / tidy and but there was one instance recently where the Vauxhall parking bay was congregated with mis-parked e-scooters and e-bikes which risks pedestrians tripping over them• Asked whether the e-scooters could have a light shaped like an e-scooter (like Santander has with the bike-shaped light) to help people with visual impairments distinguish that the vehicle is an e-scooter so they can act appropriately if being approached by one• E-scooter parking bay used at the demo day was fine for people with visual impairments because it's out the way but for bays in the middle of pedestrian areas it would be useful to emboss the 'e-scooter hire only' writing so it can be more easily detected by people using a white cane• Asked if people without a smartphone can use the vehicles• Colours of Lime's vehicle stand out the most in terms of visibility for people with visual impairments but visibility is dependent on the time of day <p>Queen Elizabeth Federation for Disabled People</p> <ul style="list-style-type: none">• The rental vehicles look more robust in construction than was expected• Has a member who gets into difficulties with members of the public because she rides a mobility scooter and they think she's riding an e-scooter on the pavement suggesting education is needed around e-scooters vs mobility scooters
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	<ul style="list-style-type: none"> • Perception of the e-scooters is so important – the information and education provided today would be helpful and re-assuring to a lot of people <p>Alzheimer’s Society</p> <ul style="list-style-type: none"> • Lives in Camden and has seen people on the rental vehicles on the pavement but didn’t think / know how to report it • It’s important to make it clear that these vehicles are not for riding on the pavement - encourage e-scooters and bikes off the pavement • Audible warnings would be very welcome • Overall happy with the scheme – private e-scooters are more of a problem
<p>London Sight Loss Council Public Meeting LSLC works to advocate the needs of blind and partially sighted people and influence positive change in the capital.</p>	<p>Date: 6 April 2022 Key Principles: in-person event organised by LSLCs where TfL, operators and the Metropolitan Police provided updates on the rental trial as well as illegal enforcement. There was also the opportunity for the audience members to ask questions. Key outputs: the following feedback was received from representatives of the different groups that attended</p> <ul style="list-style-type: none"> • Reporting needs to be simplified– there are 4 telephone numbers on the TfL website, it would be easier if there was a direct line to customer services rather than needing to go through options first • It would be useful to have a single database of offenders that can be shared across operators • Someone who lives in WCC / K&C asked if operators ban riders for poor behaviour and was happy to hear that a certain number of people are being banned per week. They would like more people banned but think this is a good start. The same individual didn’t know how to report these incidents. • This individual’s experiences of living in these boroughs were that they see 1 or 2 people on rental e-scooters going through red lights / riding on pavements each week. Their view is that it’s ok if parking bays are on the road but when they’re on the pavements it makes it awkward for people to walk • The NFBUK raised a number of concerns around the rental scheme in particular that people are mis-using the vehicles and there are maintenance issues with tyres under inflated / torn
<p>IDAG The Independent Advisory Group (IDAG) involves disabled people in the way TfL shapes and develops their strategy for making London more accessible to all.</p>	<p>Date: 4 August 2022 Key Principles: update on progress of the London e-scooter rental trial and recent Government announcements Key outputs: the following feedback was received:</p> <ul style="list-style-type: none"> • E-Scooter trial project has been a great example of good engagement with IDAG • AVAS research: impressed with the initiative but emphasised the need for input from people with disabilities throughout • Users and non-user research: 6 non-users with a range of disabilities being interviewed isn’t enough - still a gap which might result in not all the data being captured • Asked about accident data and how this has progressed

	<ul style="list-style-type: none"> • Concerned that if private e-scooters are to be made legal then all the hard work taken to make the trial safe may be affected. Worried about what happens when these safety measures are taken away • Critical to include the audible sounds for privately owned scooters
<p>Kensington & Chelsea Mobility Forum Representatives from Action Disability Kensington & Chelsea, Big Voice and Age UK</p>	<p>Date: 6 September 2022 Key Principles: update on progress of the London e-scooter rental trial and recent Government announcements Key outputs: the following feedback was received:</p> <ul style="list-style-type: none"> • Difficulties with vehicles being in the way of pedestrians at the parking bay at Shepherds Bush Station (<i>on follow up it was confirmed as an e-bike only bay in Hammersmith and Fulham of which the borough officer is looking into potential alternative locations for the bay</i>) • Concerns raised of people riding e-scooters on the pavements • Concerns raised that people, for example those with learning disabilities, don't have an easy way to report issues with the rental e-scooters, suggestions were made to put contact information posters at tube stations or bus shelters, or to have a button near the parking bay where people can report straight to the operators • Reported a near miss in Kensington Gardens but they didn't know if it was a private or rental vehicle (Kensington Gardens should be a no-go zone for rental e-scooters) • Suggestion that rental e-scooters with seats would be helpful for people with disabilities • Acoustic vehicle alerts are important for the group and they are pleased that it's being researched

Section 5: Consultation with other projects / teams to deliver this piece of work

Included below is a table of the various regular meetings that TfL has with other teams and organisations to support the development and planning of this trial. These meetings commenced in Spring 2020.

Who	Purpose	Frequency	Responsibilities of the other group
London Councils	To manage the planning and preparations for the multi borough London trial	Weekly as well as ad-hoc	London Councils are responsible for co-ordination of the trial alongside TfL
London Boroughs	To manage the planning and preparations for the multi borough London trial	Fortnightly as well as ad-hoc	London Boroughs are responsible for primarily responsible for parking and their local community engagement
Metropolitan Police Service	Manage the planning and preparations for the multi borough London trial	Monthly as well as ad-hoc	The relevant police forces in London are responsible for the enforcement of illegal use of e-scooters
Operators	Responsible for delivering the trial	Daily	Dott, Lime and TIER have been appointed as the London rental e-scooter trial operators. The Operator Specification (See Appendix 1) highlights many of the responsibilities they will have such as delivery of the trial

Section 6: Informed Decision-Making

Considering the assessment, the below states how TfL intend to proceed:

<p>1. Change the work to mitigate against potential negative impacts found</p>	<p>As a result of completing this EQIA, many impacts have been highlighted across the protected characteristics and strengthened the importance of TfL taking an active role via the co-ordination of a London trial alongside London Councils and the London Boroughs. There are positive impacts because of this scheme on protected characteristics but there are also negative impacts.</p> <p>Given the context in which rental e-scooter trials present themselves in the UK, it's important TfL plays its part in ensuring e-scooters can be as safe and integrated as they can be, form a view on how they might affect city goals and considers what powers may be needed to ensure long term adherence to standards important to London. Due to operator and London Borough appetite to trial e-scooters, trials were going to happen anyway. Without a coordinated approach TfL can only anticipate the same fragmented and patchy approach to customer experience and parking experienced with dockless bikes. TfL therefore has taken on a proactive approach, to contract, project management and evaluation of rental e-scooter services in collaboration with London Councils and the London Boroughs. By TfL leading this activity, TfL will continue to:</p> <ul style="list-style-type: none"> • Promote safety at its core, setting strict minimum standards and requesting high quality proposals for the safety of the vehicle design, maintenance, parking as well as customer education and training. • Achieve a consistent approach across London, avoiding the experience of dockless bikes, which created a fragmented and patchy approach. • Provide the data to understand how e-scooter rental vehicles might benefit or impact TfL's achievement of city goals, as well as informing DfT's legislation of this new vehicle type. • Provide TfL with the platform to request any city-wide powers possible needed longer term to manage the outcomes of these vehicles (and which could include a potential revenue stream); and • Provide a transport alternative for COVID recovery (and further lockdowns), to car travel and capacity restricted public transport. <p>TfL have been working with London Councils and the London Boroughs since June 2020 on the details of how the coordinated trial works in London and working on detailed proposals together. The research and engagement set out in this document was undertaken in parallel with the writing of the Operator Specification and it has meant TfL have been able to fold learnings and mitigations to negative impacts directly into the design of the London rental e-scooter trial. Many examples are listed above in the mitigations, but one in particular is that as a result of speaking to charities representing the blind a requirement for operators was included that "operators...must deploy solutions that drive good user behaviour. Systems must include education, including elements of disability awareness so that riders understand the possible implications of their actions, and could also include penalties and incentives." As a result, operators have mandatory education in place for all first-time riders which includes disability awareness and issue sanctions for poor riding behaviour. Additionally, feedback received has directly informed the introduction of "no-go" and "go slow" areas to reduce or prevent rental e-scooter use.</p>
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Most of the impacts raised have mitigations against them to reduce their likelihood. Operators were selected upon their ability to fulfil these requirements and their proposals to meet our high-quality standards which are outlined in Section 3.

Monitoring, data collection and evaluation

Although TfL have collected and reviewed considerable evidence, there is still a lot TfL do not know about e-scooters including the full impacts related to safety, mode shift and behaviour change, revenue abstraction, air quality and accessibility.

TfL has a comprehensive monitoring, data collection and evaluation programme in place for the rental e-scooter trial, to help inform the six learning objectives set out in Section 2. This programme comprises critical data needed from operators which is outlined in the detailed Operator Specification (See **Appendix 1**), which includes the near-real time collection of rental e-scooter location and utilisation data, as well as the regular collation of other data including incident, demographic and safety and training related data. Data is being collected from the boroughs, from users of the trial and non-users also. TfL are also collaborating with the DfT on their evaluation work to ensure learnings are shared and that a consistent approach can be adopted where appropriate. All of this should mean a wide range of impacts (on users and non-users of rental e-scooters) are being assessed throughout the trial, including their safety, potential mode shift implications and regulations for their use in London. A micro-mobility data platform separately procured by TfL enables two way sharing between TfL and the operators as one of the means through which TfL will collect this critical evaluation data. The key purpose of this monitoring is to evaluate the trial against the six objectives set out earlier in this document.

As part on this on-going monitoring, data collection and evaluation TfL will continue to engage with groups representing people with protected characteristics during the trial to understand how the trial is impacting their lives and how to better take their needs into account. This extensive engagement is outlines in Section 4 and feedback was collected through a survey sent out in March 2022 of which there were only 8 responses. TfL will monitor against the risk assessment as well as the EQIA.

The evidence TfL gathers throughout the trial will inform TfL's future policy on e-scooters and input to the DfT national evaluation of rental e-scooter trials which will inform national legislation. It is through this trial that TfL intends to build the evidence and determine the best outcomes for London.

Appendix 1: Operator Specification

See attached document for the operator specification which the operators are required to fulfil.