



F1457 A1 Equality Impact Assessment (EqIA) form

N.B: the completed form should be emailed to the [Diversity and Inclusion team](#)

Project * Programme Strategy Policy*	Name of Project/ Programme/Strategy/Policy Private e-scooter / e-unicycle ban on TfL network
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* Delete as appropriate (the Accountable person should always be at least one management level higher than the Responsible person).

Project Related Documents	Doc No.	Document title	Relevant Section(s) of this Document



Step 1: Clarifying Aims

Q1. Outline the aims/objectives/scope of this piece of work

Background

In late 2021, we saw two incidents of privately owned powered transporters catching fire whilst on TfL services or infrastructure. The causes of both fires, which involved an e-scooter and an e-unicycle respectively, were attributed to defective lithium-ion batteries. In both incidents the batteries ruptured without warning and were not on charge. In response to this, Transport for London (TfL) banned all privately-owned e-scooters and e-unicycles from its transport network with effect from 13 December 2021. This was on safety grounds.

Although privately owned e-scooters and e-unicycles are illegal for use on public pavements, cycle lanes and roads, we have recently seen a notable increase in their use across London, and carriage of them on TfL services was previously allowed - where customers were able to carry and fold them. The London Fire Brigade (LFB) has also recorded an increase in fires involving e-scooters powered by lithium-ion batteries, attending 60 in 2021 and 24 such incidents from Jan- October 2022.

Because e-scooters and e-unicycles are illegal to use on public roads, they are not regulated to the same safety standard as other legally allowed items such as e-bikes and mobility scooters.

The ban was introduced by TfL following a review of the safety of and risks posed by privately-owned e-scooters and e-unicycles, and further to a recommendation of the LFB that they should be banned. The ban has been introduced under TfL's byelaws and conditions of carriage, and further to the Public Service Vehicle (PSV) Regulations. Customers in possession of such devices are not therefore permitted to enter any premises on TfL's network or travel on any of its services, including on the Tube, buses, Overground, TfL Rail, Trams and DLR.

The equality implications of the ban were considered when the decision to introduce the ban was made. [See attached memos for Surface and LU changes to conditions of carriage] Relevant extracts are set out below:

- 8.4 Privately owned (non-rental) e-scooters and e-unicycles have not been approved to be used on the public roads in the UK and their use anywhere on these roads (whether on the pavement on the main carriageway or in cycle lanes) is therefore illegal.



- 8.5 Given this and the fact that they are a relatively new mode of transport, there is little robust data on the impacts of privately owned e-scooters and e-unicycles in the UK¹.
- 8.6 If consideration of the impacts of the proposed prohibition is restricted to those who are only transporting such powered transporters for lawful purposes (namely those who transport the powered transporters to be used on private premises with the owner's consent, or to be repaired, maintained, sold or given to another recipient), the impact of the proposed prohibition is likely to be limited in scale.
- 8.7 That said, it is appreciated that e-scooters/e-unicycles are not always used in this way and it is likely that they are being transported on TfL's services for other purposes too (predominantly, in our view, for their illegal use on public roads).
- 8.8 In November 2020, Kantar published a report commissioned by the DfT on [Public attitudes to the use of e-scooters in the UK](#), to contribute to DfT's work on the Future of Mobility by providing insight into public attitudes towards e-scooter use and regulation in the UK to inform decisions around the future policy direction for this micro-mobility vehicle. The report notes that participants in the study reported using e-scooters for a wide range of journeys, including to take on public transport to connect journeys (see: 4.1). The report also notes that e-scooters can reduce money spent on travel, and can increase accessibility to those with mobility problems (See: 4.3), and noted that non-users of e-scooters felt those with a disability or health condition that makes walking difficult could benefit from e-scooters, particularly ones with seats (see: section 5). The report did, however, note that safety concerns were prevalent among non-users (see: 8.2).
- 8.9 Noting this, the proposed prohibition could negatively impact those with mobility issues who rely on e-scooters to connect journeys via the TfL network. It could also negatively impact those on low incomes and individuals with protected characteristics disproportionately represented amongst those on low incomes, who use e-scooters to reduce their costs of travel; and we are aware that there have been a number of reported instances of key workers and NHS patients who consider themselves to be reliant on their privately owned e-scooters to travel to, from and between their places of work or hospital appointments.]
- 8.10 On the other hand, the proposed prohibition could result in a reduction of the number of e-scooter/e-unicycle being used on public roads, which could have a positive impact on disabled people using the pavement. In [Sustrans: Our position on e-scooters, October 2021](#), Sustrans' view is that "e-scooters

¹ See: [TfL EqIA on TfL rental e-scooter hire scheme](#)



present an impediment to pedestrians and disabled people sharing the pavement.”

8.11 In addition, the proposed prohibition may also have positive impacts on certain individuals with protected characteristics, such as disabled people who may otherwise risk tripping over or colliding with these powered transporters as they are being carried on TfL services or have difficulties in evacuating a train, car, vehicle or premises in the event of a fire caused by an e-scooter/e-unicycle.

8.12 In view of the risk identified in this paper as arising from e-scooters/e-unicycles, we consider that it is in the public interest – on grounds of safety – to introduce the proposed prohibition as soon as possible and consider that this outweighs the possible negative impacts identified above.

8.13 We will keep the impacts under ongoing review pursuant to our statutory obligations.

Aims / objectives / scope of this piece of work

The purpose of the assessment below is to inform our ongoing assessment of the equality impacts and implications of the ban, which forms part of our ongoing monitoring and review of the ban.

Q2. Does this work impact on staff or customers? Please provide details of how.

Staff

The ban could give rise to a risk of confrontation between staff and customers.

TfL’s enforcement officers, including CPOS Operational Officers and London Underground’s Revenue Control inspectors, and enforcement staff employed by our rail and sponsored services operators have been asked to enforce the ban using the 4E approach. Enforcement officers have the option of denying a customer access to the system, directing a customer to leave the network or reporting them for prosecution for breach of TfL’s byelaws/PSV Regulations. Officers use the same processes for reporting other byelaw/PSV Regulation offences. CPOS’ Investigations, Appeals and Prosecutions Team consider the evidence and decide whether to prosecute. This will be done in line with TfL’s enforcement and prosecution policy.

Under our enforcement and prosecution policy, we do not prosecute young people under the age of 18 unless in exceptional circumstances. As a byelaw offence is a breach of the TfL behaviour code the young person may have their free travel withdrawn. In line with our safeguarding policy, young people should not be left stranded and should be allowed to travel.



It is expected that frontline customer-facing staff (including bus drivers) will make customers aware of the ban where they feel it is safe to do so. There is a risk that the interactions with customers will result in increased levels of violence and aggression (WVA) towards our staff or between customers. We will mitigate this risk by delivering briefings for staff, clear customer messaging and an information campaign to raise awareness of the ban, and through our WVA measures and risk assessments. Frontline station staff and bus drivers will be encouraged to remind customers of the ban but will not be expected to deny customers access to the system or to direct someone to leave. This will be the role for TfL enforcement officers.

All of our enforcement officers are equipped with Body Worn Video (BWV). We will continue to strongly encourage other frontline transport staff who have access to BWV to wear it when on duty.

Enforcement of the ban will need to be balanced with other BAU demands for enforcement staff including fare evasion, work-related violence and aggression and other safety regulations.

Our transport policing partners – MPS Roads and Transport Policing Command and British Transport Police – are able to enforce our byelaws and the PSV regulations and will provide support to our enforcement activity. We do not expect the police to be routinely enforcing the ban given demands on policing resources as levels of crime and antisocial behaviour increase with more passengers returning to the network. They will deal with any associated crime and antisocial behaviour issues e.g. work-related violence or public order offences relating to the ban.

Since the implementation of the ban on the 13th December 2021 until October 2022, TfL Enforcement Officers have engaged with 1415 passengers obtaining compliance through engaging and explaining the ban.

55 passengers have been reported to the CPOS' Investigations, Appeals and Prosecutions Team by TfL Enforcement Teams, this being the last resort in the four-step approach if a passenger does not comply with the first three steps. These reports will now be considered by the Prosecution Team who will decide whether to prosecute in line with the TfL enforcement policy.

Majority of engagements (over 95%) have taken place on London Underground. Initial feedback from Operational Teams across all modes is that through customer service and informing passengers of the ban they are able to gain compliance.

Workplace violence and aggression (WVA) data has identified 28 incidents of workplace violence towards front line teams since the ban where an E-Scooter was a contributing factor. These incidents of WVA represent 9% of the total of all WVA incidents that have occurred on the TfL network since the 13th December 2021 until October 2022.

Customer



The ban will positively affect all customers by making the network safer; free from the fire and safety risks posed by privately owned e-scooters / e-unicycles.

The ban is likely to negatively impact upon our customers that previously carried e-scooters / e-unicycles on our network as part of an end to end journey using our network -by making the journey more difficult or expensive.

In addition, since the ban was introduced we have been contacted by some customers who use e-scooters / e-unicycles as mobility aids in place of more traditional mobility scooters.

The impacts of the ban on Protected Groups are identified in Step 3 below.

In addition, it is to be noted that there is a risk that customers who are prevented from travelling on public transport will then use the e-scooter/e-unicycle on a public road, committing a traffic offence where they are liable for penalties, points on their licence and seizure of the vehicle. CPOS will work with police partners to help minimise the risk by warning the rider that use on public roads is also a criminal offence and consequences of doing so. We will look to organise joint operations covering both public transport and road enforcement in hotspot locations.

We are monitoring compliance, enforcement and associated crime and antisocial behaviour to inform our ongoing monitoring of the ban.

CPOS are monitoring and will be reporting on the number of incidents or issues reported at stations, and their feedback has been taken into account when finalising this EqIA. Any further reports are likely to be provided quarterly.

Communications

TfL has widely publicised the ban, including through press releases, on our website and by sending an email to all registered oyster card holders advising them of the ban. The ban has also been reported on by BBC news, The Guardian and The Evening Standard.

The full comms plan is attached as Appendix 1.

The following poster is displayed in stations across the network:



No e-scooters or e-unicycles

allowed on TfL premises
or services.

Failure to comply may result in prosecution.

In addition to this we also have permanently fixed 'Welcome posters' at each station which highlights the ban:

London Underground

We'd like to hear from you

We value your feedback, suggestions and complaints which help to improve our service:

Web: tfl.gov.uk
Phone: 0343 222 1234
(Service and network charges may apply.
Visit tfl.gov.uk/terms for details)

To take your comments further, please contact London TravelWatch, the independent statutory watchdog for transport users in and around London.

Web: londontravelwatch.org.uk
Phone: 020 3176 2999

Using London Underground

Check before you travel

We have a range of travel tools to help you plan your journey, get travel information on the move and work out the safest way home. For details, visit tfl.gov.uk/travel-tools

Penalty fares

£80 penalty fare or prosecution if you fail to show on demand a ticket, validated smartcard or other travel authority valid for the route of your journey

Reporting a crime

We want everyone travelling on our network to feel safe. If you experience or witness a crime, feel threatened by another customer, or see something that doesn't feel right, text 877 on 8101 or call 0800 40 50 40. In an emergency call 999 or use the passenger alarm.

Please also note

- Smoking (including e-cigarettes) is not permitted anywhere on London Underground
- It is prohibited to drink alcohol or carry open containers of alcohol on London Underground
- No e-scooters or unicycles allowed on TfL premises or services. Failure to comply may result in prosecution
- Scooters, including e-scooters, must not be ridden anywhere on London Underground

The following Public Address is also being made at each station:



Valid from Monday 13 December until further notice

Ban on e-scooters and e-uni/monocycles

Version 1

Guidance:

For broadcast every 10 minutes at all LU stations

Customer Information:

From Monday 13 December all folded and unfolded e-scooters and e-unicycles are prohibited on all of TfL's premises and services.

- LU information: Any existing local restrictions / guidance on hours during which PAs are broadcast should still be adhered to. If you are unsure please speak to your Area Manager.

Step 2: The Evidence Base

Q3. Record here the data you have gathered about the diversity of the people potentially impacted by this work. You should also include any research on the issues affecting inclusion in relation to your work

Consider evidence in relation to all relevant protected characteristics;

- Age
- Disability including carers
- Gender
- Gender reassignment
- Marriage/civil partnership
- Other – refugees, low income, homeless people
- Pregnancy/maternity
- Race
- Religion or belief
- Sexual orientation

London Population Data

The following data for the London population has been collected from [London Datastore](#).

- **Gender:** There are an equal percentage of males (50%) and females (50%)
- **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%
- **Ethnicity:** The London population is mostly white (57%) compared to ethnic minority groups BAME (43%)
- **Religion:** The religion demographic in London is as follows:
 - Christian 48%
 - Buddhist 1%
 - Hindu 5%



- Jewish 2%
 - Muslim 14%
 - Sikh 2%
 - Other 2%
 - None 26%
- **Disability:** 81% of the London population are non-disabled (19% disabled)
 - **Sexual orientation:** The sexual orientation demographic in London is as follows:
 - Heterosexual 90%
 - Gay or lesbian 2%
 - Bisexual 1%
 - Other 1%
 - Don't know/refuse 6%

Demographic use of e-scooters and e-unicycles in the UK

A [survey](#) was conducted on the Kantar weekly face-to-face omnibus survey in January and February 2020. In total, 4,046 adults aged 16+ in Great Britain were interviewed. Its findings are set out below.

Overall, 7% of respondents said that they had ever used an e-scooter: this was more likely among men and those aged 16-24. Respondents mainly borrowed e-scooters and levels of ownership were low (18% of those who had ever used an e-scooter owned one).

Among regular and occasional users, a large proportion of respondents used e-scooters for fun (72%), with a quarter using them to get to a specific destination, including workplaces, local facilities and amenities, educational settings, and the homes of friends or relatives.

One in ten respondents thought it was likely that they would buy an e-scooter and 15% said it was likely that they would hire an e-scooter if this service was available in city/town centres. Males, younger respondents (particularly those aged 16-24) and those living in urban areas were more likely to say they would buy or hire an e-scooter.

For a majority (66%) of those who said they were likely to buy or rent an e-scooter, the main reason would be to reach a specific destination (work, education settings, homes of friends/family etc.), while half said they would use an e-scooter for fun. Among those intending to use an e-scooter to reach a particular destination, 58% anticipated this would be their sole means of transport to reach that destination while 37% thought they would use another form of transport as part of the journey.

A majority of respondents (82%) who thought they would buy or hire an e-scooter anticipated that they would reduce or stop using at least one mode of transport, with walking being the most commonly mentioned transport mode that would be reduced by e-scooter use (39%).

Given that walking is [the most common form of transport for those on low incomes](#), the ban could affect this demographic the most.

Income Data

Data on income across those with protected characteristics has been collected where available.

The following findings are from London Datastore:

- **Gender:** Females earn an average of 21.7% less than males in London
- **Ethnicity:** BAME individuals earn an average of 23% less than white individuals
- **Disability:** Those considered disabled earn an average of 13% less than those not considered disabled

The figure below published by Parliament using data from the [Office for National Statistics](#) (ONS) illustrated 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 recent YouGov and [LinkedIn survey](#) identified Lesbian, Gay, Bisexual and Transgender (LGBT+) individuals earn an average of 16% less than others.

Other sources of data

With micromobility being a relatively new concept, data on e-scooters is limited. For the calendar year 2021 to end November, HMRC data indicates that 492,000 personal e-scooters were imported to the U.K. While imports are not the same as actual sales to the consumer, it may be assumed that (with some lag) imports and sales will equate.

A response to a Freedom of Information request published by campaign organisation Possible in November, found that [Black Londoners were over three times more likely to be stopped for e-scooter offences than white Londoners](#). Increased prohibitions around e-scooters may cause more Black Londoners to be stopped for e-scooter offences which now include carrying on TfL network.

The [RNIB](#) have identified concerns that e-scooters could have on the safety, independence and confidence of blind and partially sighted people.

It is [Sustrans'](#) view that e-scooters present an impediment to pedestrians and disabled people sharing the pavement.

A TfL workshop with pregnant women and those on maternity carried out as part of its [e-scooter rental trial](#) 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.

London Cycling Trends

To compare Santander Cycles to general cycling trends in London, data has been collected from the [Travel in London Report 11](#) available on the TfL Website. It is acknowledged that data is not available for all protected characteristics. The data can be summarised as follows:

- **Age:** The percentage within each age group of those that cycled at least once in 2017/18:
 - 0-24 33%
 - 25-34 20%
 - 35-44 20%
 - 45+ 27%

It is not possible to directly compare these results to those of Santander Cycles due to the different age group ranges within the datasets.

- **Gender:** Of those that cycled at least once in 2017/18, 60-65% were male. This demonstrates there are generally more male cyclists; however the percentage of male users of Santander Cycles is higher (70-76%).
- **Ethnicity:** Of those that cycled at least once in 2017/18, 75% were white. This is relatively consistent with the data for Santander Cycles users, where BAME is significantly underrepresented.
- **Employment/household income:** Of those that cycled at least once in 2017/18, 60-65% were employed. The average household income is split as follows:
 - <20k 15%
 - 20k-75k 50%
 - >75k 35%

Customer Complaints

The following complaints from customers have been received:

Feedback 1: (same customer as feedback 4)

I have just been prevented from traveling on the jubilee line because I have an electric unicycle which I need because I am disabled and this vehicle was adapted for my use. It is approved as safe concerning the batteries and I have no other means of getting around. I refuse to be encumbered by a wheelchair and preventing me from using public transport is a violation of the equalities act and possibly a human rights issue. I have missed a doctor's appointment which I cannot rebook until after the holidays and as it was urgent because of a blood test result that caused concern this action may cause me harm. Staff have said that an email or letter from you giving me permission to travel with my vehicle would allow me to travel. Please could you issue this and if not I would like to make a formal complaint
Enquiry About: Other Travel Mode: tube Travelling From: Canada Water Rail Station

Feedback 2

Hello,

My partner is disabled and uses TfL from time to time. She has limitations walking and uses a small foldable electrically assisted scooter for the distances that are not walkable for her. This fact has been accepted by airports, as she has a letter from her GP stating



that this scooter is an essential mobility aid for her. When buses, trains or tube are part of the journey, she folds her scooter and stows it safely. The speed of the assistive meter is limited to a walking pace.

She has now received a notification from TfL stating that from 13/12/2021, folded scooters are not permitted anywhere on the network. Please clarify whether this change would also apply to her, as that would in one fell swoop preclude her from using any TfL services on the basis of her disability. Battery-assisted wheelchairs and laptops pose the same fire hazards, as far as I can tell. Please let me know how she can go about obtaining an exemption to this rule change.

Feedback 3

My relative has an electric scooter, a very compact battery-driven two-wheel scooter the speed of which is very low, limited to walking speed. In her case it is a mobility aid which allows her to cover distances that able-bodied persons would cover on foot. Otherwise, her range would be very limited.

Her GP classes it as an essential mobility aid and has certified it in the past as such for use in airports where these vehicles are otherwise not permissible.

Feedback 4 (same customer as feedback 1)

I have been prevented from traveling on the LU because i use a single wheeled electric vehicle to get around. It was very expensive and adapted for my use as a disabled person .the batteries are safe and protected under a suspension system The cheap e-vehicles that can (but rarely do) catch fire do not have the safety tests required for Europe so it is unfair to ban all of these but not bikes which "normally have better protected batteries" .This is rubbish , a badly made bike battery going up in flames would be more dangerous than a scooter or. EUC whose batteries are encased.

I refuse to get in a wheelchair or use a stigmatising and awkward mobility scooter that cannot access the tube system anyway (and have also been known to go up in flames). Peoples vapes can explode too, and power packs. And phones. Lithium batteries are inherently dangerous if not looked after but they are all around us. There should be CO2 extinguishers in every carriage which would put the fire out if one went up. This ban has prevented me from attending a vital doctor's appointment and could do me harm as it was to repeat a blood test that had some alarming results. My other vehicle is an electric mountain bike which I'm also unable to get on the tube with This type of bike was illegal because it t does not require me to pedal but I successfully challenged the DVLC because it discriminates against people who cannot pedal and a footnote was added to the rule regarding disabled people. These types of vehicle are liberating for many people with disabilities as we can travel like everyone else rather than being sat in a stigmatising cart that gets in everyone's way and tips over if the road gets rough. I can't walk more than a few steps unless I'm supported by holding the handle of my e-unicycle. Then i can ride it once I'm out of the station . Now i have been banned from using public transport because of the aid that I use to overcome my disability. I consider this to be an act of discrimination.

Feedback 5

I am not entirely sure that i understand the reply as it seems you are aware of the problems this ban has caused me and acknowledge that there is a need for exemptions but you are not prepared to issue one to me. I am submitting this request again to ensure that there is no misunderstanding in the response from TFL before further action is taken. The equality advisory and support Service (EASS) agree that I have a strong case against TFL for discrimination and will be advising me and reacting to your response or lack of which has been the outcome of my requests so far. Please explain why my previous requests have received no response. You must respond within 14; days • I believe the ban on all e scooters and e unicycles places me as a disabled person at a substantial disadvantage when compared to a non-disabled person. I use my scooter to transport myself from my house to the bus stop or tube station as I have severely impaired mobility. It has a modified handle so that I can support myself while walking through tube stations when changing from one line to another. I have no real alternative to this as a wheelchair or disability vehicle restricts access to many stations as well as stigmatising users who are considered a nuisance in a crowded train. My vehicle.is safe and has safety certification. As the service provider under the Equality Act 2010 you have a duty to make reasonable adjustments to a provision, criteria or practice of/lack of the provision of an auxiliary aid or service which places a person at a substantial disadvantage due to their disability. A failure to make a reasonable adjustment is unlawful and amounts to discrimination. I believe you can make an adjustment by issuing a letter of exemption to show TfL staff so that I have access to public transport by allowing me to travel with my vehicle. This request was suggested by the staff at Canada water tube station who were sympathetic to my problem but could not offer any solutions without approval from. TFLI am formally requesting that you consider the above adjustments.

Data Sources

To date the data supporting this EqIA has been obtained from the following sources:

[Press release on e-scooter seizure demographics](#)

[Travel in London: Understanding our diverse communities 2019 \(tfl.gov.uk\)](#)

[London Cycling Campaign – Micromobility and active travel in the UK](#)

[RNIB website](#)

[York EqIA on e-scooter and e-bike trial](#)

[Bloomberg report – e-scooter gender demographic](#)

[Rental e-scooter trial EqIA](#)

[PACTS review of e-scooter safety](#)

[Sustrans position on e-scooters](#)

[Kantar - public attitudes to the use of e-scooters in the UK](#)

The House of Lords July 2022 publication, E-Scooters: The Road Ahead.



Step 3: Impact

Q4. Given the evidence listed in step 2, consider and describe what potential short, medium and longer term negative impacts this work could have on people related to their protected characteristics?

Protected Characteristic	Impact Identified	Explain the potential negative impact
Age	Y	<p>e-scooters provide an opportunity to improve independent mobility for some older and younger people, by providing access to an affordable electric powered vehicle and an additional opportunity for independence; for instance to someone who cannot walk or cycle long distances but could use an electric powered vehicle and interdependence for example allowing users of electric powered vehicles the opportunity to visit and support each other.</p> <p>e-scooters could be used as an additional mode of transport and a better end to end journey experience, as well as improving independent living and reducing travel costs – people not using their car, not having to wait for a bus to get to the tube or train station. A ban could lead to increased journey times; unaffordability; increase in car use linked to increase in health inequalities; lack of connectivity and public transport exclusion for some groups, particularly those on lower income or those who rely on them due to mobility issues.</p> <p>According to the Kantar survey, overall, 7% of respondents said that they had ever used an e-scooter: this was more likely among men and those aged 16-24.</p>
Disability including carers	Y	<p>e-scooters provide an opportunity to improve independent mobility for some people with disabilities, by providing access to an affordable electric powered vehicle and an additional opportunity for independence; for instance to someone who cannot walk or cycle long distances but could use an electric powered vehicle.</p> <p>Disabled customers who rely on e-scooters/e-unicycles to travel may be prevented from doing so; including for travel to work or medical appointments.</p> <p>A customer who placed a complaint was contacted to</p>



		provide input to this EqIA process, and he reported that e-scooters are sometimes used as a mobility aid because they have less of a stigma attached to them compared to a wheelchair or mobility scooter, they are cheaper they are smaller and fold away.
Gender	Y	Some women who use e-scooters to move between modes of transport may be disproportionality affected by a public transport ban of e-scooters due to lower than average incomes as per the above.
Gender reassignment	N	There is insufficient data to identify any barriers to this protected characteristic.
Marriage/civil partnership	N	There is insufficient data to identify any barriers to this protected characteristic.
Other – e.g. refugees, low income, homeless people	Y	<p>If private e-scooters are prohibited, shared e-scooter schemes target urban or city centre journeys and can cost as much as 20p per minute in addition to a charge to unlock the scooter. They are potentially prohibitively expensive for many users.</p> <p>It could also negatively impact those on low incomes and individuals with protected characteristics disproportionately represented amongst those on low incomes, who use e-scooters to reduce their costs of travel.</p> <p>Travel in London: Understanding our diverse communities 2019 (tfl.gov.uk) found that the most common form of transport for those on low incomes is walking and the second most common is buses. E-scooters could improve journey times for these groups as well as providing better connectivity.</p> <p>Although there are trial e-scooters available, it is expected that these will not be used as frequently by those on low incomes compared to all Londoners – this assumes the same pattern as the cycle hire scheme. The Travel in London study above found that people on low incomes stated that they are less likely to use cycle hire in the future (15% on low income vs 28% of all Londoners)</p>



Pregnancy/maternity	N	There is insufficient data to identify any barriers to this protected characteristic.
Race	Y	<p>A response to a Freedom of Information request published by campaign organisation Possible in November, found that Black Londoners were over three times more likely to be stopped for e-scooter offences than white Londoners. Increased prohibitions around e-scooters may cause more Black Londoners to be stopped for e-scooter offences, which now include carrying on TfL network.</p> <p>Some ethnic minority BAME communities who use e-scooters to move between modes of transport may be disproportionality affected by a public transport ban of e-scooters due to lower than average incomes.</p>
Religion or belief	N	There is insufficient data to identify any barriers to this protected characteristic.
Sexual orientation	N	There is insufficient data to identify any barriers to this protected characteristic.

Q5. Given the evidence listed in step 2, consider and describe what potential positive impacts this work could have on people related to their protected characteristics?

Protected Characteristic	Impact Identified	Explain the potential positive impact
Age	Y	<p>e-scooters being used on pavements can affect the confidence of other pavement users which would include the elderly, the very young, the disabled and the mentally unwell including the elderly. By introducing the ban on the network e-scooter users may be less likely to use private e-scooters to connect between other modes of transports.</p> <p>Reduced numbers of e-scooters would reduce the risk of collision and subsequent level of injury to older</p>



		<p>pedestrians.</p> <p>In the event of an evacuation from a public vehicle, there are less likely to be obstructions to the means of escape caused by e-scooters.</p>
Disability including carers	Y	<p>The RNIB have identified concerns that e-scooters could have on the safety, independence and confidence of blind and partially sighted people. A ban on the network may lead to reduced numbers of e-scooters users and subsequently a reduced collision risk.</p> <p>It is Sustrans' view that e-scooters present an impediment to pedestrians and disabled people sharing the pavement. A network ban may lead to reduced numbers of e-scooters users and subsequently a reduced collision risk.</p> <p>In the event of an evacuation from a public vehicle, there are less likely to be obstructions to the means of escape caused by e-scooters.</p>
Gender	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.
Gender reassignment	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.
Marriage/civil partnership	N	There is insufficient data to identify any positive impacts specific to these protected characteristics.
Other – e.g. refugees, low income, homeless people	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.



Pregnancy/maternity	Y	<p>A workshop with pregnant women and those on maternity carried out as part of the e-scooter rental trial 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. In introducing a ban on public transport, it may be expected that fewer e-scooter journeys will be taken to move between modes of transport.</p> <p>In the event of an evacuation from a public vehicle, there are less likely to be obstructions to the means of escape by e-scooters.</p>
Race	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.
Religion or belief	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.
Sexual orientation	N	There is insufficient data to identify any positive impacts specific to this protected characteristic.

Step 4: Consultation

Q6. How has consultation with those who share a protected characteristic informed your work?

List the groups you intend to consult with or have consulted and	If consultation has taken place what issues were raised in relation to one or more of the protected characteristics?
-------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------



reference any previous relevant consultation? ²	
<p>Compliance, Policing, Operations and Security Directorate (CPOS)</p> <p>Desk based research</p>	<p>Due to the need to implement the ban quickly because of health and safety concerns, it was not possible to consult with bodies representing Protected Groups prior to the ban being introduced.</p> <p>As part of this ongoing review/monitoring, we have so far drawn evidence from other consultation groups such as those in the e-scooter rental trial, desk based research and information gathered by PACTS.</p> <p>We will continue to gather intelligence from our Compliance, Policing, Operations and Security Directorate (CPOS) and ask them to report their findings to continue to inform this EqIA.</p> <p>As of 13th December until October 2022, we have had 1415 engagements with customers being refused access to the network and 55 Byelaw Reports that have been submitted to the Prosecutions Team to consider.</p> <p>However, we recognise that whilst e-scooters remain illegal to use on public roads data gathering from the public may be challenging.</p>
<p>Customer Feedback following complaints being received</p>	<p>A member of the Diversity and Inclusion team reached out to customers who had submitted complaints and 1 customer responded. In that discussion the customer reported that Escooters are being used more as mobility aids as they have less stigma attached to it compared to a wheelchair or mobility scooter, they are also cheaper they are smaller and fold away. The customer also followed up with the following resources:</p> <p>Taylor Lewis, using his “Electric Skateboard” to get around: https://www.robhitch.com/micromobility-blog/electric-longboard-making-a-great-assisted-mobility-device</p> <p>Below the knee amputee using his “Electric Unicycle”, helping him run his own mobile cart business: https://www.robhitch.com/micromobility-blog/17th-august-2020-thai-amputee-using-his-euc-to-help-him-get-around-and-run-his-own-business</p> <p>Benefits of PLEVs for people with disabilities: https://www.robhitch.com/micromobility-blog/micromobility-effective-mobility-for-people-with-injuries-and-disabilities</p> <p>Electric scooter to wheel chair adapter, converting manual</p>

² This could include our staff networks, the Independent Disability Advisory Group, the Valuing People Group, local minority groups etc.



	<p>wheelchairs to electric ones: https://www.designboom.com/technology/omni-globetrotter-scooter-electric-wheelchair-12-22-2020/</p>
<p>IDAG</p>	<p>We presented to the Independent Disability Advice Group (IDAG) on 20th January and they raised the following points:</p> <ul style="list-style-type: none"> • Not all mobility aids are strictly legal, the airlines banned lithium batteries and that caused a lot of problems for some disabled people • There is an increasing number of smaller folding scooters that do use lithium batteries but most of them have the safer type of battery. There are some people who do use wheelchairs that have the unsafe type of battery • IDAG recommended reviewing the decision by cross referencing what airlines do and looking at batteries in general • One IDAG member has a mobility scooter and it comes in a variety of ranges, the cheapest is not accepted on the airline as it has a different battery • We need to think about consistency. The wider rail network in the UK doesn't have a ban so there may be a situation that someone travelling into London with their e-scooter as part of their mobility find they are not able to take this on the network. This needs to be factored into the communication plan • IDAG suggested that we explore the possibility of an exemption for disabled people. We have considered this and concluded that it should not be introduced. Our consideration of this is contained in Appendix 2. <p>One IDAG member made the following comment regarding e-scooters/e-unicycles: 'they're cheaper than "mobility scooters", people think they look better, they're more portable/storable so less need for accessible home etc.'</p> <p>In reviewing the advice, the project team looking into carriage of e-scooters on airlines. The International Air Transport Association guidance identifies three different types of batteries and different ways of dealing with these; all of which require the flight operator's prior consent, which is unlikely to be a viable option for the TfL network. A summary of TfL's review into the air travel rules on lithium-ion batteries is contained in Appendix 3.</p> <p>We are working with the Rail Delivery Group and Rail Safety Standards Board to liaise with other transport providers who are also considering or have already implemented a ban.</p> <p>Eurostar have recently banned e-scooters and hoverboards:</p>



	<p><i>"Please be advised that we are no longer able to accept e-scooters on board our trains due to the fire risk they pose. Hoverboards are not allowed on board for the same reason.</i></p> <p><i>Battery-powered mobility scooters (no larger than 70cm in width and 120cm in length) and foldable e-bikes can still be brought on board"</i></p> <p>The Caledonian Sleeper service has banned e-bikes and the Tyne and Wear Metro and Shields ferry have banned e-scooters.</p> <p>On 21 March 2022, we attended a session with the Rail Delivery Group (RDG) and the Rail Safety Standards Board (RSSB) to review e-scooter safety on the rail network. Following that meeting a recommendation was put forward to the RDG to encourage all Train Operating Companies to temporarily ban e-scooters, e-unicycles and hoverboards from the network until a full risk review has been completed.</p> <p>We will continue working with the RDG/RSSB to review and evaluate our position in line with other ToCs as the e-vehicle landscape changes. We will continue to base our approach on risk.</p>
<p>DVLA</p>	<p>In reviewing the possibility of an exemption scheme, we reached out to the DVLA to gain further clarity on what type of e-vehicles they register. They responded with the following:</p> <p>Thank you for your email of 7 January requesting information under the terms of the Freedom of Information Act 2000 (FOIA). You asked:</p> <p>I currently work for TfL and I led the workstream to implement the recent ban of e-scooters and e-unicycles on TfL services. As part of our Equality Impact Assessment we reached out to an independent disability group who informed us that some e-scooters have been modified and subsequently registered with the DVLA. Please could you provide the following:</p> <p>1. how many modified e-scooters and e-unicycles have been registered?</p> <p>The DVLA does not hold recorded information relating to the volumes of modified e-scooters and e-unicycles. However, the information we do hold, which you may find useful, is the total number of electric bikes newly registered with the DVLA during each calendar year. This is provided in the table</p>



below and will include a mixture of scooters and motorbikes. These figures also include a number of Electrically Assisted Pedal Cycles as there was a legal requirement to register and license these vehicles in Northern Ireland between 2017 and 2020. We are unable to separate these registrations in the totals below. The information reflects the position as of 19 January 2022.

2012	257
2013	152
2014	237
2015	336
2016	436
2017	394
2018	702
2019	1,697
2020	2,469
2021	5,285

2. What criteria do you use when determining if a e-scooter/e-unicycle can be registered?

3. Are any considerations made to manufacturing standards?

4. Are there any restrictions on battery type and size?

The recorded information held by the DVLA within the scope of these questions is that for type approval, a two-wheel vehicle having a maximum speed of 45km/h, maximum internal combustion engine capacity of 50cm³ or a maximum electric motor power of 4kW. A motorcycle is defined in the Vehicle Excise and Registration Act (VERA) as a two-wheeled motor scooter, a bicycle with an attachment for propelling it by mechanical power.

E-scooters must provide evidence of relevant type approval at registration, unless they meet an exemption.

Q7. Where relevant, record any consultation you have had with other projects / teams who you are working with to deliver this piece of work. This is really important where the mitigations for any potential negative impacts rely on the delivery of work by other teams.

We engaged with the rental e-scooter team and reviewed their EQIA:
<https://content.tfl.gov.uk/rental-escooter-trial-2021.pdf>

Rental e-scooter are subject to higher safety standards, speed limitations and also cannot be taken on public transport.

Step 5: Informed Decision-Making

Q8. In light of the assessment now made, what do you propose to do next?

Please select one of the options below and provide a rationale (for most EqIAs this will be box 1). Please remember to review this as and when the piece of work changes

1. Change the work to mitigate against potential negative impacts found	
2. Continue the work as is because no potential negative impacts found	
3. Justify and continue the work despite negative impacts (please provide justification)	<p>The ban has been implemented on safety grounds but, by way of mitigating any negative impacts, TfL continues to promote other forms of transport; including the e-scooter trial, and continuing with its programme to improve its network's accessibility, effectiveness and efficiency. .</p> <p>We will continue to review the ban in line with LFB recommendations at our quarterly LFB-TfL liaison meetings.</p> <p>We will also continue to review the ban inline with recommendations from The Rail Delivery Group (RDG) and Rail Safety Standards Board (RSSB) following as they undertake their review.</p>
4. Stop the work because discrimination is unjustifiable and no obvious ways to mitigate	

Step 6: Action Planning

Q9 You must address any negative impacts identified in step 3 and 4. Please demonstrate how you will do this or record any actions already taken to do this. Please remember to add any positive actions you can take that further any positive impacts identified in step 3 and 4.



Action	Due	Owner
Gather evidence and report on findings from enforcement teams	ongoing	Jon Poett
Collect data on feedback from customers	31.03.21	Simon Jones
Review stance from other transport providers via RDG and RSSB	30.04.22	Simon Jones
Continue to review position on e-bikes based on LFB recommendations	Quarterly LFB-TfL liaison meetings Ad hoc LFB meetings relating to scooters/ebikes based on incident and risk status.	Simon Jones

Step 7: Sign off

Signed off by	EQIA Author	
	Kate Hagan	MD Advisor Special Projects – Fire Safety Plan Date: 24.03.22
	Simon Jones	SHE BP – LU Date Apr 2022 – to date
	EQIA Superuser	
	Amy Edgar	Date Apr 2023
	Signature	



	Senior accountable person	
	(see front page) : Mark Evers & Marian Kelly Signature	Date Apr 2023

Appendix 1 – comms plan



E-scooter and e-unicycle carriage ban - Comms Tracker

Indicative Potential Date	Activity	Channel	Audience	TfL lead team/s	TfL lead contact	Detail
03/12/2021 - AM	Confirmation of ban going ahead (MDs Commissioner and City Hall)	Note'				
04/12/2021						
05/12/2021						
06/12/2021	Enforcement campaign on private e-scooters going live on digital display	Digital display	those in the market to buy a private e-scooter	CMBC	Phil Jepson	Separate campaign already planned that coincides
06/12/2021	Once 24hrs passed since City Hall briefed and are happy MUST HAPPEN NEXT: Notify Department for Transport regarding upcoming ban	tbc	Central Government	Government Relations	Tom Tweddle	
07/12/2021	Inform BTP Met	tbc	BTP Met	CPOS	Jon Poett	
07/12/2021	Inform LFB	tbc	LFB	SHE	Kate Hagan	
07/12/2021	Inform ORR	tbc	ORR	SHE	Marian Kelly	
07/12/2021	Inform London Councils regarding	tbc	London Councils	LCP/Rental e-scooter trial team	Elizabeth Gaden or Poppy Windsor	
07/12/2021	Inform Chair Assembly Transport Committee	tbc	Assembly	Government Relations	Tom Tweddle	
07/12/2021	Trade Unions	tbc	Trade Unions	SHE	Emma Burton	
07/12/2021	Heads up to Customer Contact Centre and website team	Email	Customer Contact Centre/Website team	Corp Comms	Rebecca Duffin	
07/12/2021	Inform Bus operators	tbc	Bus operator MDs	Buses	Tom Cunnington	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform Bus driver comms and training managers	Driver Notice	Bus drivers	Buses	George Marcar	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform London Overground	tbc	London Overground	London Overground	David Thomas Rajdeep Ghatora	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform Taxi and Private Hire Vehicle Drivers	TPH Notice	Taxi and Private Hire Vehicle drivers	Taxis and Private Hire Vehicles	Graham Robertson Dan Maskell	(senior management on need to know basis - no comms to staff until Press release day) - just checking how this works so will update if needs be
07/12/2021	Inform River Services and Piers	tbc	River Services and Piers	River Services and Piers	Terry Rose David Panayiotou	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform Trams	tbc	Trams	Trams	Tom Singleton	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform Dial-a-Ride	tbc	Dial-a-Ride	Dial-a-Ride	Roland James Jamie Delves	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform Docklands Light Railway (DLR)	tbc	Docklands Light Railway (DLR)	Docklands Light Railway (DLR)	Binu Sureshbabu Sophie Bancroft Malc McDonald Shawn Hill	(senior management on need to know basis - no comms to staff until Press release day)
07/12/2021	Inform TfL Rail (incl. Elizabeth Line)	tbc	TfL Rail (incl. Elizabeth Line)	TfL Rail (incl. Elizabeth Line)	Daniel Gierhart Grace Davis	(senior management on need to know basis - no comms to staff until Press release day)
08/12/2021	Platform story	Platform (intranet)	All TfL colleagues	ECE	Phil Hayward	
08/12/2021	SHE bulletin	Email	Ops Managers across the business	SHE/ECE	Kate Hagan/Phil Hayward	
08/12/2021	Press release - e-scooters and e-unicycles going to be banned	Press release	Media	Press office	Sean Colfer	
08/12/2021	Update London Assembly members including rest of Transport Committee and London MPs	tbc	AMs/MPs	Government Relations	Tom Tweddle	
08/12/2021	Inform stakeholders	Email attaching press release	Relevant strategic stakeholders	Stakeholder Advocacy & Engagement	Matt Kamau	Stakeholders include LTW TFA
08/12/2021	Distribution of posters and stickers to stations/modes ready to be put in place on ban day (may take over 3 days to display in TfL Rail up to 2 weeks on some modes)	Poster	Customers	Customer Info	Phil Dunwell	
08/12/2021	Share Q&A with customer contact centre	Email	Customers	Corp Comms	Rebecca Duffin	
09/12/2021	Message to managers in 'in focus' (our managers weekly email)	Email	All managers at TfL	ECE	Phil Hayward	
09/12/2021	Inform Taxi and Private Hire Vehicle Drivers	Email	Taxi and Private Hire Vehicle Drivers	Taxis and Private Hire Vehicles	Dan Maskell Graham Robinson	issued weekly on Thursdays
09/12/2021	CRM email to all registered Oyster holders around press release	CRM	Oyster Customers	Customer info	Simon Burrows	
10/12/2021	Story in the all colleagues Friday newsletter	Email	All colleagues at TfL	ECE	Phil Hayward	
11/12/2021						
12/12/2021						
13/12/2021	Ban in place: e-scooters and e-unicycles prohibited from TfL services		Ban in place e-scooters and e-unicycles prohibited from TfL services and premises			
13/12/2021	PA Script mirroring Poster copy in stations and reactive PA by drivers	PA	Customers/Staff	Customer Info	Alex Cook Simon Jones	
13/12/2021	Posters and stickers begin to be displayed across the network	Posters/Stickers	Customers	Customer Info	Phil Dunwell	

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Appendix 2 – Possible exemption scheme for people using banned e-scooters and e-unicycles as mobility aids

Although it is illegal to use privately owned e-scooters / e-unicycles on public roads, cycle lanes and pavements³, there is evidence (as identified above in this EQIA⁴) that some people with disabilities use these devices as mobility aids.

We do not know the extent to which such individuals are, by virtue of their disability, reliant on using e-scooters or e-unicycles because they are not able or comfortably able to use powered wheelchairs or mobility scooters. There is, however, evidence to suggest that this may be, or is, sometimes the case. For example, at the blog referred to above and identified again [here](#), a disabled person explains that: because of their disability arising from cancer treatment, walking, sitting or cycling for a reasonable period of time is internally uncomfortable; that the most comfortable positions are being either horizontal or vertical with minimum leg movement; and that his e-unicycle enables them to travel around with less discomfort.

Other reasons for disabled people using e-scooters / e-unicycles as mobility aids are that they have less stigma attached to them compared to a wheelchair or mobility scooter, they are also cheaper, smaller and fold away, and are generally more convenient.

Some customers who have complained about the ban have contended that their devices have been certified by their GPs as essential mobility aids.

In view of this, and in response to IDAG's suggestion, and also the duty to make reasonable adjustments under the Equality Act 2010, we have therefore explored the option of operating an exemption scheme that would exclude from the ban e-scooters or e-unicycles that are used as a mobility aid by customers who are disabled under the Equality Act 2010.

The first point to note is that because it is illegal to use privately owned e-scooters / e-unicycles on public roads, cycle lanes and pavements, it is not possible for GPs to legitimately certify them as mobility aids for use in such places. The requirements of a "Qualifying Mobility Aid" are summarised on the [Government's website](#) and are essentially vehicles that have a maximum speed of 4mph off the road and 8mph on the road, and meet various specifications as to braking, lighting and dials etc. Unless it is possible to adapt an e-scooter / e-unicycle to meet these requirements, they cannot legally be used on public roads, cycle lanes and pavements. We are not aware of any devices that have been adapted to meet these requirements. Powered wheelchairs and mobility scooters meeting these requirements are legal to use and can therefore properly be considered as mobility aids for use in public places.

Following an internal investigation into the viability of such an exemption scheme, we have concluded that it is not a reasonable adjustment to make at this time.

³ Potentially with the exception of e-scooters that meet the requirements of a "Qualifying Mobility Aid" summarised on the [Government's website](#); essentially vehicles that have a maximum speed of 4mph off the road and 8mph on the road, and meet various specifications as to braking, lighting and dials etc.

⁴ Including see: section 8.8 (Kantar report); Step 2, The Evidence Base, section on Customer Complaints; and Step 4, Consultation, section on Customer Feedback following complaints being received



- 1) E-scooters remain illegal for use on public roads, pavements and cycle lanes. TfL is not required by the duty to make reasonable adjustments to create an exemption scheme permitting the carriage on its network of devices that cannot be used lawfully in public, even where they are being used as mobility aids by individuals with qualifying disabilities. TfL permits the use of Qualifying Mobility Aids (mobility scooters and powered wheelchairs, which can be lawfully used in public) on its network, and such aids can therefore be used by customers with relevant disabilities. Indeed, TfL recognises the importance of mobility aids and has an existing Mobility Aid Recognition Scheme in place to support customers with reduced mobility travelling on our network. (More information is available here: <https://tfl.gov.uk/transport-accessibility/wheelchair-access-and-avoiding-stairs#on-this-page-6>.) To ensure the customers who use our existing approved mobility aids have a positive experience and are supported on our network, TfL issues a staff briefing to ensure all customer service staff are clear on their use and support customers' journeys as required to ensure they are able to travel as independently as possible.
- 2) An exemption scheme would be very difficult to establish and operate. It would involve the creation of an application process that determines:
 - a. whether or not applicants are disabled under the Equality Act 2010;
 - b. whether they use their e-scooter / e-unicycle because of their disability; and
 - c. whether their e-scooter / e-unicycle is sufficiently safe, in terms of fire risk, as to be permitted on the TfL network.

While it would be theoretically possible to assess the safeness of a device using similar guidelines to those used by the aviation industry (see Appendix 3 below) or agreeing a single list of approved devices, this would require extensive research and development and training for staff; including the ability to identify counterfeit devices that could pose a safety threat. An exemption scheme is also likely to require extensive and comprehensive training for thousands of front-line staff; to understand and properly apply the scheme.

- 3) The operation of an exemption scheme would mean that those who are exempt would be permitted to bring their e-scooter / e-unicycle onto the TfL network. Other non-exempt customers seeing the carriage of these devices could be encouraged to bring their banned e-scooters on to the network; increasing the fire risk, and also increasing the risk of conflicts with staff.
- 4) The matters identified above, and funding, delivering and monitoring an e-scooter exemption scheme would require significant investment and, at present, only a relatively small number of customers have raised issues with the ban on the use of e-scooters.
- 5) TfL seeks to remove the barriers to our customers with accessibility needs in using our network – the application of an exemption scheme would involve these customers having to be stopped and questioned about their accessibility needs/escooter use and then provide evidence or justification for their usage on our network. Through liaising with IDAG it is known that this would not be a favourable approach and contrary to what TfL is trying to achieve by making their journeys smoother and more accessible.



- 6) TfL has an on-going duty of care to staff and customers travelling on our network, and the potential for an exemption scheme to encourage non-exempt people to bring their banned e-scooters on to the network increasing the fire risk, as well as the potential for conflict with staff, militates against this.
- 7) For the reasons set out above, an exemption scheme is not considered to be a reasonable adjustment to make and TfL will not be creating an exemption to allow people to use these banned e-scooters and e-unicycles as mobility aids on the TfL network.

Appendix 3 – Lithium-ion batteries and air travel rules

The Civil Aviation Authority (CAA) has [guidelines](#) around lithium ion batteries. Lithium batteries up to 100Wh (watt hours) are generally permitted without the airline's prior consent. Portable electronic devices containing lithium ion batteries exceeding a 100Wh but not exceeding 160Wh are generally only permitted with the prior consent of the airline, and the batteries and cells must be of a type which meets the requirements of each test in the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, subsection 38.3.

Most laptop, phone charger, phone, and tablet batteries fall under the 160wh threshold, while most electric scooter batteries are well above it.

The CAA has different requirements for Mobility scooters. Its guidance provides that "Prior to travel, passengers must advise the airline of the type of batteries fitted to the mobility aid and how the device can be protected against inadvertent operation." It provides that:

"When the mobility aid does not provide adequate protection to the battery: the battery must be removed in accordance with the manufacturer's instructions and be carried in the cabin; the battery must not exceed 300 Wh; the battery terminals must be protected from short circuit (by insulating the terminals, e.g. by taping over exposed terminals); and the battery must be protected from damage (e.g. by placing each battery in a protective pouch); and the battery must be carried in the cabin. A maximum of one spare battery not exceeding 300 Wh or two spare batteries not exceeding 160 Wh each may also be carried. Spare batteries must be carried in the cabin. It is recommended that passengers make arrangements with each airline at least 48 hours in advance of the date of travel."

The International Air Transport Association's (IATA) general guidelines are mostly consistent with the UK's CAA. The IATA guidance for [Passengers Travelling with Lithium Batteries](#) provides that, in cases where the lithium-ion battery does not exceed 100Wh, passengers may have these devices in either carry-on or checked baggage, without the need for approval from the operator.

In cases where the lithium-ion battery exceeds 100Wh but does not go beyond 160Wh, passengers may have these devices in either carry-on baggage or checked. However, the approval of the operator is required.



Finally, in cases where the lithium-ion battery exceeds 160Wh, the device is forbidden from being in either passenger or crew checked or carry-on baggage. The device must be prepared and carried as cargo in accordance with the IATA Dangerous Goods Regulations.

The IATA guidance [Small Vehicles Powered by Lithium Batteries – Cargo Provisions](#) notes these small lithium battery-powered vehicles and, amongst other things, provides that they must be packed in accordance with specific packing instructions (Packing instruction 952); the lithium cells and batteries must be of a type that have successfully passed the applicable tests in subsection 38.3 of the UN Manual of Tests and Criteria; and that there are no exception for vehicles that contain lithium ion batteries with a Watt-hour rating not exceeding 100 Wh.

The IATA also makes different and specific provision for battery powered wheelchair's and mobility aids. The IATA issued guidance in January 2022 on [Transport of Battery-Powered Wheelchair and Mobility Aid Carried by Passengers](#), is based on provisions set out in the IATA Dangerous Goods Regulations (DGR).

In respect of wheelchairs / mobility aids with lithium batteries, it provides that the batteries must be of a type which meets the requirements of each test in the United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Party III, subsection 38.3.

The lithium battery(ies) can either remain installed in the mobility aid or be removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions. The removed battery(ies) must not exceed 300 Wh. Where the battery(ies) is not removed, there is no limit to the Watt-hour (Wh) rating for the installed battery(ies). A passenger may carry a maximum of one spare battery not exceeding 300 Wh or two spare batteries each not exceeding 160 Wh. All removed and spare batteries must be protected from damage (e.g. by placing each battery in a protective pouch) and must only be carried in the passenger cabin.

The approval of the operator is required for battery-powered mobility aids used by passengers, at least 48 hours prior to travel.