London e-scooter rental trial: Phase 1 report findings

Data collected from June 2021 to September 2023

February 2024

MAYOR OF LONDON

LONDON COUNCILS

TRANSPORT FOR LONDON
EVERY JOURNEY MATTERS

Introduction

The London e-scooter rental trial commenced in June 2021 after the legalisation of trials across the country by the Department of Transport (DfT). This environmentally friendly mode of transport was introduced after the pandemic to aid with the countrywide 'green' recovery. Transport for London (TfL) is responsible for the management and coordination of the trial in London in collaboration with London Councils, participating boroughs and three e-scooter rental companies. Privately owned e-scooters remain illegal to use on all public roads in the UK.

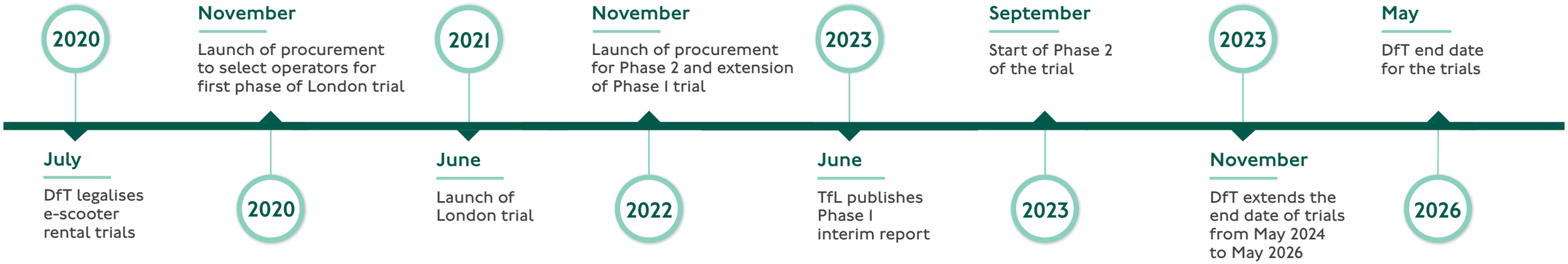
This report provides an overview of the key statistics of the first phase of the London rental trial, which took place from June 2021 until September 2023.

With UK trials set to continue until May 2026, these Phase 1 report findings will inform the priorities for the second phase of the trial that started, under a new contract, in September 2023.

The trial has enabled us to:

- **Gather information and data on this new vehicle type**
- **Prioritise safety issues and consistent high standards**
- **Achieve a reliable and coordinated approach with participating boroughs**
- **Conduct extensive stakeholder engagement**

Learnings from the trial will be used to inform future legislation and policy on e-scooters in London.



‘The Mayor and I are determined to continue building a cleaner, greener and more prosperous London for everyone, and with the right regulations that prioritise safety, rental e-scooters provide Londoners and visitors alike with a safe and sustainable travel option’

Will Norman
London’s Walking and Cycling Commissioner

We are managing one of the largest e-scooter rental trials in the UK

General information on e-scooters

- E-scooters are battery-powered kick scooters that are ridden standing up
- These Phase I report findings relate to rental e-scooters in London only. Private e-scooters remain illegal to use on public roads in the UK
- The information shown summarises data from the first phase of the trial (June 2021 to September 2023), collected as part of a comprehensive monitoring and evaluation programme. Data is from a number of sources, including operator reported data, real-time data within the data platform, user and non-user interviews, surveys and feedback

We have gathered a large amount of data and feedback

Key facts

4,000+

vehicles available for hire within the trial service area

100+ km²

area covered by our trial

10

participating boroughs, with e-scooters available for hire in Camden, City of London, Ealing, Hammersmith and Fulham, Kensington and Chelsea, Lambeth, Richmond upon Thames, Southwark, Tower Hamlets and Westminster

High standards enforced through operator contracts, including in relation to: vehicles, parking, maintenance, preventing risky behaviours, user education, equitable access and environmental impact

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Three operators

600+

marked parking bays, where customers must start and end their rides

Journeys

Rental e-scooters enable people to travel around the city in an easy and sustainable way. By looking closely at the journeys made during the trial, we have gained an understanding of the different types of trips people are using rental e-scooters for and the travel behaviours that inform those trips.[1]

- 3m+ trips made[2]
- 7.5m+ km travelled
- On average one ride per scooter per day (1.4 in summer, 0.7 in winter)[3]
- 17 minutes' trip duration, on average[4]
- Clear increase in use during the morning and evening peaks, reflecting weekday patterns in other modes of transport and suggests e-scooters are also being used to commute to and from work
- Saturdays were the busiest day of the week, with the greatest number of trips made
- Network resilience was evident on days of industrial action, with a significant uplift in customer journeys, suggesting rental e-scooters were used as an alternative mode of transport

2.4km

average trip distance[5]

Customers

Rental e-scooters are the first new mode of transport to be introduced on London's streets in over a decade.

Through our monitoring and evaluation of the trial, we have looked at who is using rental e-scooters and what motivates or prevents people from using them.[6]

- 54 per cent of registered customers took more than one ride, with the number of repeat riders growing as the trial matured
- 2m+ customers completed a trip
- 2,000 customers used the operators' special access schemes, which provide discounts to certain groups to make the scheme more accessible
- The majority of customers were white (77 per cent), male (78 per cent) and under the age of 35 (59 per cent).[7] This fits with the typical profile of early adopters of new technologies
- Customers on low incomes and from ethnic minority groups were more likely to be frequent e-scooter users, which indicates that e-scooters might also provide communities with new mobility opportunities[7]

Data shows e-scooters provide an additional transport option

Safety

Safety sits at the heart of the the trial, aligning to the Mayor's Vision Zero target to eliminate all deaths and serious injuries on London's streets by 2041.

The rental e-scooters used in the London trial have high safety standards which go beyond the national standards, including a speed limit of 12.5mph, larger wheels and lights that stay on while a scooter is being rented. The trial's strong safety record demonstrates the benefits of clear standards and regulations for e-scooters.[8]

- 0.001 per cent of trips resulted in serious injury (with the rate of serious injuries falling over time)[9]
- There were 3.9 serious injuries per million km travelled[10]
- No fatalities and 29 serious injuries[11]
- 210 customers banned for poor riding and anti-social behaviour[12]

95%

parking compliance reported by operators[13]

200+

safety awareness events held[13]

We have found that rental e-scooters can be used safely

Community

Along with London Councils, participating boroughs and the three operators, we have worked with different groups to understand their views and concerns, and any possible impact of the trial on them. Our comprehensive equality impact assessment (EqIA) summarises these concerns and the mitigations we have put in place to help address them.

The legal status of e-scooters is complex and not well understood. Most people are not aware of the differences between private and rental e-scooters, so it can be difficult to collect data on people's perceptions and experiences of rental e-scooters specifically.

- 50+ organisations and stakeholder groups engaged, including: Alzheimer's Society, London Travel Watch, London Vision, Thomas Pocklington Trust, Transport for All and Talk London. We have also engaged with TfL's Independent Disability Advisory Group throughout the trial
- Extensive EqIA was produced and regularly reviewed, which found a key concern for stakeholders is around poor rider behaviour leading to injury or collision with pedestrians. The EqIA outlines the actions we have put in place to mitigate such concerns
- Technology has been researched and developed by operators to address stakeholder concerns. For example, operators have worked with universities to test audible vehicle alerts to help people who are visually impaired identify rental e-scooters
- Among Londoners, 58 per cent were aware of the rental scheme, showing not all were aware the trial was taking place[14]

Sustainability

The climate emergency is one of the biggest threats we face today, and we need to act fast to make an impact. This is why the Mayor has declared a climate emergency and is taking decisive action, including a commitment to make London a net-zero carbon city by 2030.

Rental e-scooters are fully electric and do not generate harmful emissions so are considered a sustainable form of transport that can help reduce congestion and improve air quality in London. All e-scooter operators are committed to reducing environmental impacts in their supply chain and whole-lifecycle carbon emissions.

- Operators are committed to green operations and use a fully electric fleet and 100 per cent renewable energy to deliver their operational activities
- Mode shift away from cars and taxi and private hire vehicles was 5.5 per cent.[15] Mode shift from walking was 54.2 per cent and from cycling 11.6 per cent. Mode shift from motorized vehicles has the potential to increase further in future and will continue to be monitored throughout the trial
- 156 tonnes of carbon dioxide equivalent saved based on the available mode shift data[16]
- A total of 35 per cent of users combined their e-scooter journeys with journeys on public transport[15]

E-scooters are a sustainable way of travelling around London

Conclusion

TfL remains committed to managing and coordinating the e-scooter rental trial in partnership with London Councils, participating boroughs and contracted operators. The evidence in this report demonstrates that in the current trial conditions, rental e-scooters have the potential to contribute positively to the aims of the Mayor's Transport Strategy. They have good safety records, are space-efficient, are zero emission at tailpipe, and are managed in a way to minimise clutter on footways. By providing a new alternative to the private car for short journeys and improving access to public transport services, rental e-scooters can support public transport and active travel in reducing our reliance on car use and its impact on road danger, congestion, air quality and climate change.

Evidence shows that rental e-scooters can be safe and sustainable

Next steps

- Continue to collect data on the London trial through Phase 2, aligned to DfT guidance
- Collect further data on user and non-user experiences of the London e-scooter rental trial and continue to further improve the on-street experience for all
- Collect data on demographics of users, specific to the London e-scooter rental trial
- Launch technology pilots to explore where new solutions could support London's policy goals

Further information

DfT's National evaluation of e-scooter trials report

TfL Electric scooter rental trial webpage

London e-scooter rental trial EqIA

TfL e-scooter rental trial: Headline metrics

Learnings from Phase 1 of the trial will inform the second phase

Appendix

1. Trip and vehicle data is taken from the Blue Systems micromobility platform, which collects near real-time information by comprising a set of Application Programming Interfaces (APIs) that creates standardised two-way communication between TfL and the e-scooter operators.

2. The hire of an e-scooter by a member of the public through an operator application that moves on the public highway for more than 10 metres in any direction with the e-scooter throttle activated.

3. The number of trips taken per vehicle per day calculated by trips divided by deployed vehicles.

4. The average length of a trip is calculated by the total trip duration divided by the total number of trips.

5. Average trip distance is calculated by total trip distance divided by total number of trips.

6. Data is taken from information provided by operators, including number of registered customers who completed a trip and numbers of those who used their access schemes. Steps have been taken to minimise the data shared with TfL, ensuring data is aggregated and depersonalised where possible, so some users could have registered with more than one operator and TfL would not be able to account for this.

7. This data was taken from the DfT's national evaluation between July and December 2021. No updated information is available from the DfT co-ordinated national reporting.

8. Data is taken from weekly situational reports provided by operators and includes any incidents reported by the rider themselves, the public, emergency services or TfL's Network Management Control Centre.

9. Percentage of trips resulting in serious injuries calculated by total serious injuries divided by total number of trips multiplied by 100.

10. The number of serious injuries per million calculated by the total number of serious injuries divided by total distance travelled and multiplied by one million.

11. In line with Stats 19, serious injuries are categorised as an injury for which a person is detained in hospital as an in-patient, or any of the following injuries, whether or not they are detained in hospital: fractures, concussion, internal injuries, crushing, burns (excluding friction burns), severe cuts, severe general shock requiring medical treatment and injuries causing death 30 or more days after the collision.

12. Action taken by an operator to prevent end-user account from being used. Poor riding is categorised as the use of an e-scooter by an end-user in a high-risk way, such as use on footways/pavements.

13. This data is taken from reports provided by operators.

14. Data is taken from a quarterly questionnaire TfL conducts on different transport modes, which includes a limited number of questions on e-scooters. Around 1,000 Londoners completed the questionnaire.

15. Data is taken from an end-of-ride survey issued at the end of each journey through operators' own applications. Three survey questions were asked at random on mode shift, journey purpose and intermodal trips. More than 40,000 responses were collected. Boroughs participating in the London trial are mainly in inner London, in areas that tend to have better access to public transport and where people are less likely to own a car.

16. Average CO_2 emissions have been estimated on per kilometre basis using fleet assumptions from the London Atmospheric Emissions Inventory, which are based on DfT speed-related emissions factors for vehicles. For TfL buses, CO_2 emissions are based on passenger kilometre estimates provided by TfL's Safety, Health and Environment team. The calculation used differs to that from the interim report, as it uses re-defined assumptions to produce more accurate emissions data. Full details of the calculation are available in the 'CO_2 savings' section of the Phase 1 data spreadsheet.

February 2024

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PUB23_025