

LONDON-WIDE ULTRA LOW EMISSION ZONE FIRST MONTH REPORT

October 2023



COPYRIGHT

**Greater London Authority
October 2023**

Published by
Greater London Authority
City Hall
Kamal Chunchie Way
London
E16 1ZE

enquiries 020 7983 4000
minicom 020 7983 4458

Photographs ©GLA

Copies of this report are available
from www.london.gov.uk

CONTENTS

Key Findings	2
What to expect in this report	5
Emissions and concentrations	5
Introduction	6
Health impacts of air pollution	6
What is the ULEZ?	8
Delivering change	11
Providing support	12
Privacy and data minimisation	16
Vehicle Compliance	17
ULEZ compliance	19
Charges, exemptions and warning notices	47
Traffic	50
Conclusions	52
Appendix 1: LEZ compliance	53
Appendix 2: Daily London-wide ULEZ compliance rates (29 August – 30 September 2023)	56
Appendix 3: Daily detected vehicles in the London-wide ULEZ from 29 August to 30 September 2023	58
Appendix 4: Monthly average compliance rates and vehicles detected in central ULEZ area, inner London ULEZ area, and North and South Circular Roads	60
Appendix 5: Weekday and weekend compliance	75
Appendix 6: Warning notices and PCNs	77
Appendix 7: Indexed Traffic Flows	79

Key Findings

There is a well-established and ever-growing body of scientific evidence linking exposure to air pollution and a number of adverse health effects across all stages of life, with these effects seen even in relatively low air pollution environments. In 2021, the World Health Organization (WHO) updated its air quality guidelines, recommending more stringent guidelines to protect public health. The updated WHO air quality guidelines are more ambitious than the UK national legal limits and emphasise that no safe level of air pollution exists.

On the 29 August 2023, to help tackle air pollution in the capital, the Mayor of London expanded the Ultra Low Emission Zone (ULEZ) across all London boroughs. The ULEZ boundary is now the same as the boundary for the Low Emission Zone (LEZ) for heavy vehicles. The London-wide zone measures 1,500km² and covers nine million people, making it the largest zone of its kind in the world.

This report evaluates the impact of the newly expanded scheme in its first month. The initial data shows that the scheme has been highly effective at reducing the proportion and number of older, more polluting vehicles on London's roads. To fully understand the impact of the London-wide ULEZ it is necessary to account for the fact that many people will have made changes in advance to prepare for the formal start of the scheme, with key dates including the launch of the consultation in May 2022 and the announcement of the Mayor's decision to proceed with the expansion in November 2022. This has been part of the scheme design from the beginning and is a well understood feature of schemes like the ULEZ, a fact supported by independent experts.¹

The introduction of the London-wide ULEZ in August 2023 is the continuation of various policies to reduce emissions from vehicles on London's roads under this Mayoralty. In February 2017, the Mayor confirmed the creation of the Toxicity Charge (T-Charge) in central London, the first vehicle emissions control scheme to include cars and small vans. It was then introduced in October 2017. This was followed by the introduction of the ULEZ in central London in April 2019, the beginning of enforcement of higher emissions standards for the LEZ in March 2021, the expansion of the ULEZ to inner London in October 2021, and now the London-wide expansion of the ULEZ in August 2023. Londoners and those who drive in London have been taking action to comply with these schemes since the confirmation of the T-Charge, which is why February 2017 is used as a reference for measuring the impact of the schemes over a longer-term period.

This first month report compares volumes of detected vehicles in September 2023 to June 2023 in the first instance. June 2023 has been used as the baseline date for this purpose as it is a typical month that does not include bank holidays or school holidays, and also uses available data from the new cameras installed for the expansion.

¹ For example, Dr Gary Fuller, a leading air pollution scientist from Imperial College London, described pre-compliance in multiple cities in his regular pollution watch column in the Guardian: <https://www.theguardian.com/environment/2021/may/21/pollutionwatch-ignore-naysayers-low-emission-zones-do-work>

This report focuses primarily on the “compliance rate” of vehicles travelling in the zone that are subject to the ULEZ standards – that is cars, vans, minibuses, and motorcycles. The compliance rate is the percentage of vehicles detected in the zone that meet the ULEZ standards. The higher the compliance rate the more successful the scheme has been in accelerating the transition to cleaner vehicles.

As with the One Month evaluation reports for the previous iterations of the ULEZ, this report will not cover the impacts of the scheme on air pollutant emissions and concentrations, as one month does not provide enough time to accurately assess the impact of the scheme on these. However, by incentivising people to use cleaner vehicles the scheme is ultimately expected to have a positive impact on air quality. Preliminary analysis of pollutant concentrations will be reported in the Six Month Report and fuller analysis of both emissions and concentrations will be reported in the One Year Report.

Key findings from the first month of operation of the London-wide ULEZ are:

- **A larger proportion of vehicles seen driving in London are cleaner.** The London-wide compliance rate for vehicles subject to the ULEZ standards during the first month was **95.3 per cent**, up from 91.6 per cent in June 2023 and 39 per cent in February 2017 when changes associated with the ULEZ began.
- **Compliance rates have increased for both cars and vans. 96.4 per cent** of cars and **86.2 per cent** of vans seen driving in the London-wide ULEZ met the standards in the first month of operation, up from 93 and 80.2 per cent in June 2023 and 44 and 12 per cent in February 2017.
- **There are fewer older, more polluting cars seen driving in the zone.** On an average day, there were **77,000 fewer** unique non-compliant vehicles (i.e., individual vehicles detected travelling in the zone at least once) seen detected in the London-wide ULEZ compared to June 2023. This is a **45 per cent reduction** in non-compliant vehicles.
- **There has also been an overall reduction in vehicles seen driving in the zone.** On an average day, there were **48,000 fewer** unique vehicles driving each day in the London-wide ULEZ compared to June 2023. This is a two per cent reduction, although it will take more time for traffic patterns post launch to fully emerge. Preliminary analysis of traffic flows indicates there have been no notable changes across London or on the London-wide ULEZ boundary. However, it is too early to draw firm conclusions and monitoring will continue in the coming months.

- **In the expanded outer London area, vehicle compliance has increased by 10 percentage points since the launch of the consultation to expand the ULEZ London-wide.** Vehicle compliance in the expanded outer London area is now 95.2 per cent, up from 85.1 per cent in May 2022 when the consultation on proposals to expand the ULEZ London-wide launched, and from 90.9 per cent in June 2023.
- **The London-wide ULEZ has closed the compliance gap between outer London and inner and central London.** After just one month of the London-wide ULEZ operating, compliance rates for vehicles using London's roads are now nearly the same across all areas of London for each vehicle type. Overall vehicle compliance in the expanded outer London area is now **95.2 per cent**, compared to 95.9 per cent in inner London the same month.
- **In outer London, well over nine in ten cars now meet the ULEZ standards.** Car compliance in the expanded outer London area is **96.4 per cent**, up from 92.4 per cent in June 2023 and 90 per cent in November 2022 when the Mayor announced the decision to expand the ULEZ London-wide. Van compliance in the outer London area was 86.2 per cent, up from 79.5 per cent in June 2023 and 77.8 per cent in November 2022.
- **High levels of compliance mean only a small proportion of vehicles paid the charge.** On an average day, of all ULEZ vehicles seen driving in London, only 2.9 per cent pay the charge, 1.7 per cent are non-chargeable (including those registered for a discount or exemption), and 0.2 per cent are issued with a warning notice or, from 26 September, a penalty charge notice. The rest meet the ULEZ standards.
- **There is still support available.** To support the transition to cleaner vehicles, the Mayor has provided **£160 million in funding** for a scrappage and retrofit scheme. The scheme provides grants to help Londoners, small businesses and charities prepare for the London-wide expansion. This is in addition to an expanded set of temporary exemptions ("grace periods") to support disabled people, community transport minibuses, people using wheelchair accessible vehicles, and businesses and charities with brand-new compliant vehicles or a retrofit solution on order. In August 2023, the Mayor and TfL expanded the eligibility of the scrappage scheme, meaning every Londoner with an eligible non-compliant car or motorcycle can apply for up to £2,000 to transition to a ULEZ compliant one.

What to expect in this report

The London-wide expansion of the ULEZ took place on 29 August 2023. This report covers the first month of operation of the London-wide ULEZ and provides the first indication of the impact of expanding the scheme across all London boroughs.

This report focuses primarily on the “compliance rate” of vehicles travelling in the zone that are subject to the ULEZ – that is cars, vans, minibuses, and motorcycles. The compliance rate is the percentage of vehicles detected in the zone that meet the ULEZ standards. The higher the compliance rate the more successful the scheme has been in accelerating the transition to cleaner vehicles. Vehicles that do not meet the ULEZ standards are described in this report as “non-compliant”. Drivers of vehicles that do not comply and are not subject to a grace period, discount or exemption must pay the daily charge or they may be liable for enforcement action.

Emissions standards for large and heavy diesel vehicles apply London-wide through the London-wide LEZ. Tougher LEZ standards were enforced from March 2021 and the LEZ standards now align with the ULEZ standards. Vehicles that are subject solely to the LEZ are excluded from the ULEZ compliance rates reported here (see Appendix 1 for LEZ compliance rates).

This is the latest in a series of reports evaluating the impact of the ULEZ and London-wide LEZ. Previous reports include:

- [Central London Ultra Low Emission Zone – First Month Report](#)
- [Central London Ultra Low Emission Zone – Four Month Report](#)
- [Central London Ultra Low Emission Zone – Six Month Report](#)
- [Central London Ultra Low Emission Zone – Ten Month Report](#)
- [Central London Ultra Low Emission Zone 2020 Report](#)
- [London Low Emission Zone: Six Month Report](#)
- [Expanded Ultra Low Emission Zone – First Month Report](#)
- [Expanded Ultra Low Emission Zone – Six Month Report](#)
- [Inner London Ultra Low Emission Zone – One Year Report](#)

Emissions and concentrations

As with the One Month evaluation reports for the previous iterations of the ULEZ, this report will not cover the impacts of the scheme on air pollutant emissions and concentrations as a longer period is needed to accurately measure this.

Schemes like the ULEZ not only incentivise people to drive cleaner vehicles, but they have also been shown to reduce the number of vehicles that are on the road and reduce air pollution and carbon emissions in this way.

Traffic volumes on London's roads vary from day to day and season to season. It therefore takes more time for traffic patterns to fully emerge. As a result, it is not possible to assess emissions reductions based on the first month of data. We will be able to provide more detail on emissions reductions in the One Year Report.

Ultimately it is the amount of pollution in the air, the concentration, that matters for people's health. While reducing emissions is the major step in reducing concentrations there are other important factors that affect concentrations, particularly the impact of weather, natural seasonal variations and, for nitrogen dioxide (NO₂), significant atmospheric chemistry processes involving other pollutants and sunlight.

The evidence indicates that long term exposure is the key driver of health impacts from air pollution. It is for these reasons that the focus for measuring air pollution concentrations has traditionally been on longer-term measurements, usually annual means. A preliminary assessment of measured pollutant concentrations will be included in the Six Month Report, but the full picture will properly emerge in the One Year Report once a longer-term comparative trend analysis is available.

Introduction

Health impacts of air pollution

Air pollution is the largest environmental risk to public health, posing a serious risk to people's health at every stage of life, including prior to birth. In the UK, air pollution contributes to the equivalent of between 28,000 to 36,000 premature deaths every year.²

Studies have long shown the many adverse health issues associated with elevated pollution levels. The latest evidence shows adverse health effects following long-term exposure to relatively low levels of pollution, below those experienced in London. Exposure to air pollution can impair normal foetal development in the womb and affects children's lung growth. It increases the risk of developing lung cancer, heart and lung disease, stroke, and early death.^{3,4}

² Office for Health Improvement & Disparities. <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health#:~:text=In%20the%20UK%2C%20air%20pollution,and%2036%2C000%20deaths%20every%20year.>

³The Committee on the Medical Effects of Air Pollutants (COMEAP) publishes regular reports and statements on the health effects of air pollution: <https://www.gov.uk/government/collections/comeap-reports>

⁴ The health effects across the life course are also summarised in "Impacts of air pollution across the life course – evidence highlight note." Imperial College London. April 2023. Available at: <https://www.london.gov.uk/sites/default/files/2023-04/Imperial%20College%20London%20Projects%20-%20impacts%20of%20air%20pollution%20across%20the%20life%20course%20%E2%80%93%20evidence%20highlight%20note.pdf>

Air pollution was the subject of the 2022 Chief Medical Officer's Annual Report, which set out the effects of air pollution on health and inequalities as well as solutions to tackling it. The report highlighted that central and local government, alongside many industries and sectors, can and should go further to reduce air pollution.⁵

Road traffic is one of the main sources of air pollution, and long-term exposure to traffic-related air pollution has adverse health effects across different age groups.⁶ In 2019, road transport was the single largest source of certain air pollutant emissions in London, accounting for 43 per cent of nitrogen oxides (NO_x) emissions and 31 per cent of fine particulate matter (PM_{2.5}) emissions.⁷

In London, independent research has shown that toxic air contributed to the premature deaths of the equivalent of around 4,000 Londoners in 2019.⁸ Over 500,000 Londoners live with asthma and are more vulnerable to the impacts of air pollution, with more than half of these people living in outer London.⁹ Exposure to air pollution is disproportionately higher for those communities that have higher levels of deprivation, or a higher proportion of people from Black, Asian and Minority Ethnic backgrounds, further exacerbating existing health inequalities.¹⁰

In 2021, in response to the growing body of scientific evidence about the health impacts of air pollution, the World Health Organization (WHO) updated its health-based guidelines for air quality, the first update since 2005.¹¹ The new air quality guidelines reflect the best available health evidence and emphasise that no safe level of exposure to air pollution exists. The WHO's recommendations continue to be recognised globally as the targets that should be met to protect public health.

The WHO recommended level for annual mean NO₂ has been revised from 40 µg/m³ in the 2005 guidelines to 10 µg/m³ in the 2021 air quality guidelines. Similarly, for fine PM_{2.5} the 2005 guideline was 10 µg/m³, in the 2021 update this was revised to 5 µg/m³. These

⁵ Chief Medical Officer's annual report 2022: air pollution. December 2022. Available at:

<https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2022-air-pollution>

⁶ Systematic Review and Meta-analysis of Selected Health Effects of Long-Term Exposure to Traffic-Related Air Pollution. Health Effects Institute. June 2022. Available at:

<https://www.healtheffects.org/publication/systematic-review-and-meta-analysis-selected-health-effects-long-term-exposure-traffic>

⁷ London Atmospheric Emissions Inventory (LAEI) 2019. Available at:

<https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2019>

⁸ London Health Burden of Current Air Pollution and Future Health Benefits of Mayoral Air Quality Policies. Imperial College London. January 2021. Available at:

<https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/health-burden-air-pollution-london>

⁹ Analysis from Asthma UK and the British Lung Foundation using NHS QOF data. Reported here:

<https://www.london.gov.uk/press-releases/mayoral/londons-toxic-air-is-triggering-asthma-attacks>

¹⁰ Air quality exposure and inequalities study part 1 – London analysis. Aether Ltd. June 2023. Available at:

<https://www.london.gov.uk/programmes-strategies/environment-and-climate-change/environment-and-climate-change-publications/air-pollution-and-inequalities-london-update-2023>

¹¹ WHO global air quality guidelines. September 2021. Available at:

<https://www.who.int/publications/i/item/9789240034228>

are more ambitious than the current UK national legal limits. The WHO interim targets, used as incremental steps to meeting the air quality guidelines, were also strengthened.

Despite significant improvements in air quality over recent years, the new WHO guidelines were not achieved anywhere in London in 2019, the latest date for which data is available.¹²

What is the ULEZ?

The expansion of the ULEZ London-wide is the latest in a progression of world-leading policies aimed at tackling harmful air pollution emissions from road transport, specifically NO₂ and PM. The ULEZ disincentivises the use of older, more polluting vehicles within the city through applying a daily charge to vehicles that do not meet certain emissions criteria. The emissions criteria are based on the Euro standards, which regulate the emissions of pollutants from road vehicles before they can be put on the market. The emissions levels permitted by successive Euro standards have progressively reduced, meaning vehicles have become less polluting over time.

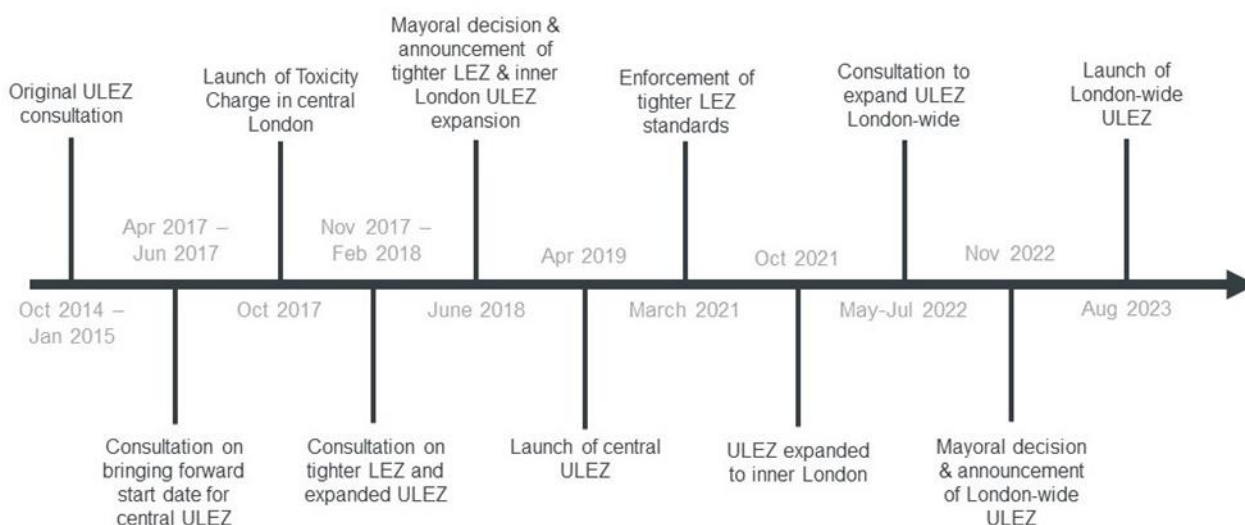
There have been successive emissions-based charging schemes in London, as set out in Figure 1. These schemes have been transformational in improving air quality in London. In October 2022, one year after the inner London ULEZ launched, roadside NO₂ levels had reduced by 46 per cent in central London and 21 per cent in inner London compared to what they would have been without the original introduction and then subsequent inner London expansion of the ULEZ.¹³

¹² London Atmospheric Emissions Inventory (LAEI) 2019. Available at:

<https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory--laei--2019>

¹³ Inner London Ultra Low Emission Zone Expansion One Year Report. Greater London Authority. February 2023. Available at: <https://www.london.gov.uk/programmes-strategies/environment-and-climate-change/environment-and-climate-change-publications/inner-london-ultra-low-emission-zone-expansion-one-year-report>

Figure 1: Timeline of vehicle emissions charging schemes in London



The ULEZ operates 24 hours a day, every day of the year except Christmas Day¹⁴ (25 December). Vehicles must meet strict emissions standards to drive in the ULEZ area, as set out in Table 1.

Table 1: ULEZ Standards

Vehicle type	ULEZ standard	Date from which manufacturers had to sell new vehicles meeting the ULEZ emissions standards ¹⁵
Motorcycles, mopeds, and other L category vehicles	Euro 3	From 1 July 2007
Cars and light vans	Euro 4 (petrol)	From 1 January 2006
	Euro 6 (diesel)	From 1 September 2015
Larger vans (≤3.5 tonnes gross weight) and minibuses (≤5 tonnes gross weight)	Euro 4 (petrol)	From 1 January 2007
	Euro 6 (diesel)	From 1 September 2016

¹⁴ On 25 December there are significantly reduced public transport options in operation meaning there are fewer alternatives available to those with non-compliant vehicles.

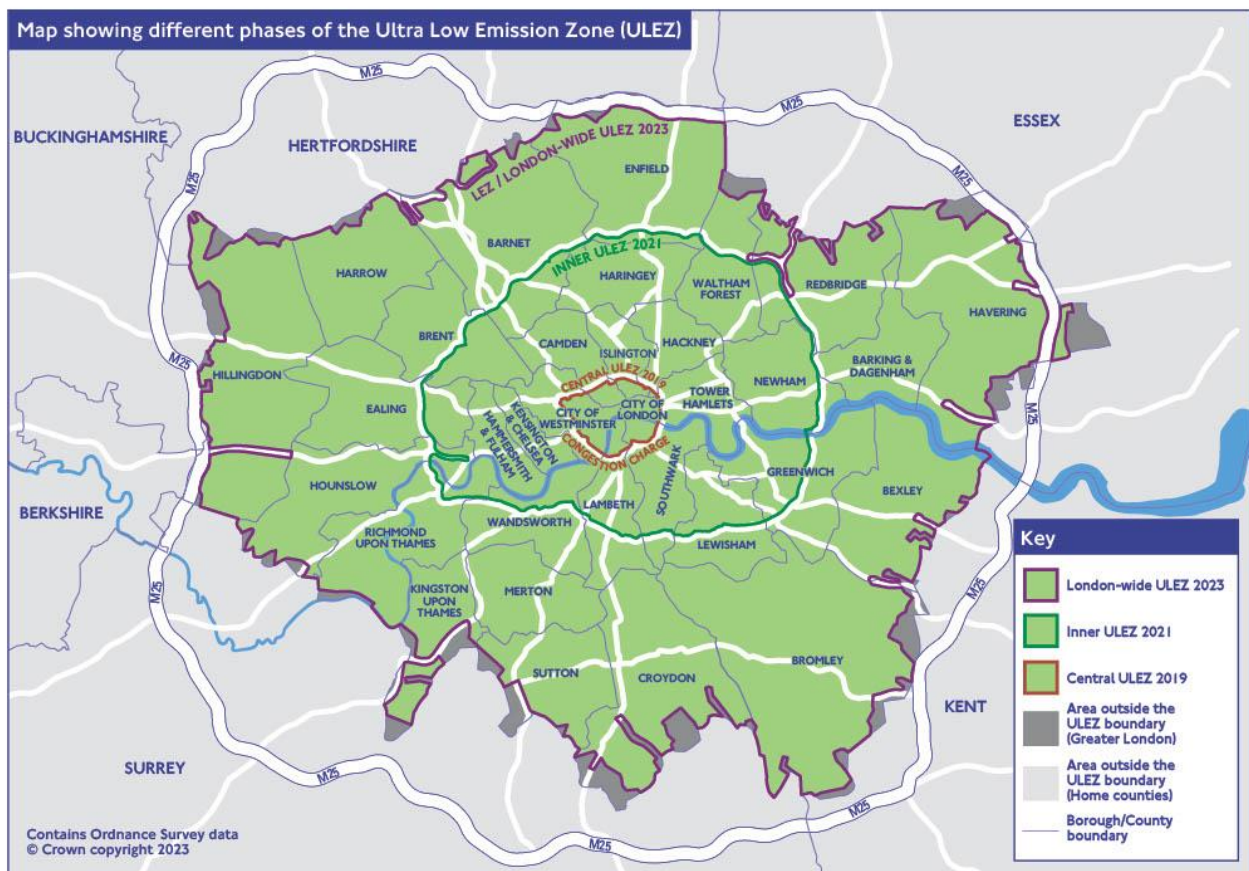
¹⁵ Some manufacturers were early adopters of the relevant standards, meaning some vehicles manufactured before these dates will meet the ULEZ standards.

Vehicles that do not meet these standards, and are not otherwise subject to a grace period, discount, or exemption, must pay a charge of £12.50 per day to travel in the ULEZ. The charge is set to disincentivise frequent trips in non-compliant vehicles, which would otherwise contribute more to air pollution. This incentivises people to change their travel behaviour or replace their vehicle whilst allowing occasional visitors and infrequent drivers an alternative. Figure 2 shows a map of the area covered by the London-wide ULEZ.

The ULEZ is complemented by the London-wide LEZ which applies to lorries, vans and specialist heavy vehicles (all over 3.5 tonnes gross weight) and buses, minibuses and coaches (all over 5 tonnes gross weight). The LEZ standards for most affected vehicles are aligned with the ULEZ standards.¹⁶

Importantly, the ULEZ and the LEZ sit within a wider suite of policies aimed at reducing air pollution in London. These policies include cleaning up the bus and taxi fleets, working with the London boroughs and the private sector to increase the provision of electric vehicle charge points in London, and making it easier and safer to walk, cycle, and use public transport in the city.

Figure 2: Map of the ULEZ



¹⁶ Diesel vans between 1.2T and 3.5T and minibuses under 5T are subject to both the LEZ (if they do not meet the Euro 3 standard for PM) and the ULEZ (if they do not meet the Euro 6 standard).

Delivering change

The effect of air pollution on people's health is most often a result of long-term exposure to pollutants. This means that schemes such as the ULEZ must seek to create long-term transformative change, and ensure benefits are realised over many years, both before and after the launch of the scheme. The ULEZ requires individuals, charities, organisations, and businesses with non-compliant vehicles to take action and either replace a non-compliant vehicle or change how they regularly travel. A change of this scale does not occur overnight.

To promote this action, an extensive awareness campaign has been underway since January 2023 to ensure individuals, charities and businesses were ready for the London-wide ULEZ.

Transport for London's online vehicle checker webpage has been visited more than 20.5 million times since the Mayor announced his decision to expand the ULEZ London-wide in November 2022. Over a million letters were sent to owners of non-compliant vehicles seen inside the zone ahead of the launch of the London-wide expansion in August 2023.

Over 1.6m leaflets were distributed via door drop and by face to face leafleting teams in outer London and over 9.6m customer emails were sent as part of a large scale, multi-channel marketing campaign. The campaign ran across TV, video on demand, radio, press, posters and fuel nozzles, and digital and social advertising targeting London and Home Counties drivers. This was in addition to significant stakeholder and local borough engagement and press activity, as well as activity to raise awareness of the scrappage scheme support available.

Stakeholder and press activity also engaged non-UK drivers, with ports of entry and ferry organisations raising awareness of the expansion, a press briefing with the Foreign Press Association attended by journalists from around the world, translated text available in 18 different languages downloadable from the TfL website and a detailed TfL webpage to explain the scheme to non-UK drivers including how to register a compliant vehicle. Third party mapping apps, such as Google, Apple, and Waze, provide information on the ULEZ boundary when route planning for users.

The London-wide expansion of the ULEZ was covered widely in both regional and national media and was subject to a judicial review claim brought by the London boroughs of Bexley, Bromley, Hillingdon, and Harrow, and Surrey County Council. In a judgment handed down on 28 July 2023, the claim was dismissed on all grounds. The outcome of the claim and the Mayor's reiteration of his commitment to expand the ULEZ likely prompted some people to take action to prepare for the expansion. There were also a number of changes to the vehicle scrappage scheme that were announced in the lead up to the launch of the expansion (see detail below). These changes are likely to have acted

as a further prompt by enabling more people to access scrappage grants and adding to the media coverage about the ULEZ expansion.

Of course, despite significant marketing and public information activity, some people do wait until the launch of the scheme to make changes to how they travel, or even to replace a vehicle. This last-minute change would not have happened, or would not have happened for some time, without the scheme launching, and it is helpful to also compare the immediate impact before and after launch.

Providing support

There is a range of support available for people and organisations with non-compliant vehicles, including temporary exemptions, a reimbursement scheme for certain NHS patients, funding to retrofit or scrap vehicles, and offers on sustainable transport alternatives.

This support was designed to build on the successful scrappage schemes and other support provided for previous iterations of the ULEZ and to respond to points raised in the Integrated Impacted Assessment, scheme consultation, and engagement with stakeholders both before and after the Mayor's decision to expand the ULEZ London-wide. This led to the extension of existing grace periods by two years, the launch of new grace periods to help more disabled people, and new retrofit and wheelchair accessible vehicle grants under the scrappage scheme.

Exemptions, discounts, and grace periods

For disabled people who own, or use, a non-compliant vehicle there are several temporary exemptions (or "grace periods") available that mean they will not have to pay the ULEZ charge until October 2027. These are available to all eligible drivers, including drivers from outside of London. The following temporary exemptions are available:

- Vehicles registered with the Driver and Vehicle Licensing Agency as having 'disabled' or 'disabled passenger' vehicle tax class.
- People over the state pension age and in receipt of Attendance Allowance or Constant Attendance Allowance.
- Wheelchair accessible vehicles and vehicles that have been converted by a mobility expert to allow a disabled person to access the vehicle as a driver or passenger (new to this scheme).
- Designated wheelchair accessible private hire vehicles (PHVs) when used to carry out a private hire booking for a TfL-licensed operator.

- People in receipt of certain disability benefits (including the standard and enhanced mobility rates of Personal Independence Payment), people who have a terminal illness that means they cannot walk or find walking very difficult, and people registered blind or severely sight impaired (new to this scheme).
- Parents or guardians of a child under the age of three with a medical condition that means the child needs to be accompanied by bulky medical equipment or needs to be near a vehicle in case they need emergency medical treatment (new to this scheme).

Not-for-profit organisations, including those based outside of London, operating community transport minibuses are also able to apply for a temporary exemption until October 2025.

London-licensed taxis are exempt from the ULEZ as taxi emissions are covered through separate licensing policies. Other exemptions and discounts are available for historic vehicles and showman's vehicles.¹⁷

London-registered sole traders, businesses with fewer than 50 employees, and charities can apply for a new short-term grace period if they have a new van or minibus on order, or a non-compliant van or minibus being retrofitted. Eligible organisations have until 29 November 2023 to apply. The grace period applies from the date the application is accepted for a maximum of six months (until 29 May 2024).

NHS patient reimbursement scheme

TfL has put in place arrangements to ensure that NHS patients who are clinically assessed as too ill, weak, or disabled to travel to an appointment on public transport can be reimbursed if they have had to pay the ULEZ charge during their journey. Eligible patients living outside of London can apply for the reimbursement if they have had to pay the ULEZ charge to reach their appointment. The reimbursement applies to the person who paid the ULEZ charge for the vehicle that transported the patient to the hospital, who may be a friend, relative or carer rather than the patient themselves. The reimbursement is funded by TfL but administered by the NHS trusts directly.

ULEZ vehicle scrappage scheme

To help people and organisations with non-compliant vehicles prepare for the London-wide expansion of the ULEZ, the Mayor has funded a scrappage scheme that provides financial support to Londoners, small businesses, and charities. A £110 million scheme launched in January 2023 and was open to Londoners in receipt of certain low-income and disability benefits, sole traders, businesses with up to 10 employees, and charities. On 30 July

¹⁷ More details about ULEZ discounts and exemptions are available on the TfL website: <https://tfl.gov.uk/modes/driving/ultra-low-emission-zone/discounts-and-exemptions>

2023, eligibility was expanded to include Londoners receiving child benefit and London-registered businesses with 11-49 employees. From this date charities could scrap up to three vehicles (up from one previously).

On 4 August 2023, the Mayor announced further changes to the scrappage scheme to support more Londoners in the face of the ongoing cost-of-living crisis. On this date the payment amounts to scrap or retrofit vans, minibuses and wheelchair accessible vehicles increased and then, on 21 August 2023, eligibility for the scrappage scheme widened to include all Londoners with an eligible non-compliant car or motorcycle. From this date sole traders and businesses could also scrap up to three vehicles (up from one previously).

To ensure as many Londoners as possible can benefit from the scheme, the Mayor also provided an additional £50 million in funding to bring the total pot to £160 million, the largest of its kind in the UK. Table 2 shows the vehicles and corresponding grant payment levels available through the scrappage scheme when the ULEZ expanded on 29 August 2023. TfL regularly reports on the uptake of the scrappage scheme on its website and will publish a full evaluation report following the closure of the scrappage scheme.¹⁸

¹⁸ The latest scrappage factsheet is available here: <https://tfl.gov.uk/corporate/publications-and-reports/ultra-low-emission-zone>

Table 2: Scrappage scheme eligibility and grant values

Target vehicles	Eligibility	Grant value
Cars and motorcycles	All London residents with an eligible non-compliant car or motorcycle	£1,000 for motorcycles £2,000 for cars Higher overall value option available: up to two annual bus and tram passes and lower cash grant
Wheelchair accessible vehicles (WAVs)	All London residents with an eligible WAV or adapted vehicle	£6,000 to retrofit £10,000 to scrap
Vans and minibuses	London-registered sole traders, businesses with fewer than 50 employees, and charities	<p>Vans</p> <ul style="list-style-type: none"> • £6,000 to retrofit • £7,000 to scrap • £9,500 to replace with an Electric Vehicle (EV) <p>Minibuses</p> <ul style="list-style-type: none"> • £6,000 to retrofit • £9,000 to scrap • £11,500 to replace with an EV <p>Eligible organisations can scrap or retrofit up to three vehicles.</p>

TfL also secured a range of deals to help individuals and organisations save money and use greener, cleaner forms of transport. These offers provide discounts on purchase, hire and subscription services for bikes, e-bikes, cargo bikes and e-scooters, discounts on car clubs and vehicle financing, and other deals. There are offers for everyone as well as offers exclusively for people who receive a scrappage grant.

Memorandums of understanding for emergency services

Non-compliant emergency services vehicles do not need to pay the charge. TfL has worked closely with London's emergency services (City of London Police, Metropolitan Police Service, British Transport Police, London Fire Brigade and London Ambulance

Service) on specific Memorandums of Understanding (MoUs) to outline how each service intends to comply with the London-wide ULEZ expansion, accounting for their unique circumstances.

The vast majority of these vehicles are already compliant. However, in cases where they are not, these MoUs ensure that specific vehicles responding to emergencies or other operationally critical events, or that are highly specialist, have their ULEZ and LEZ charges waived. The MoUs only apply to limited numbers of emergency and specialist response vehicles and are time limited.¹⁹

Privacy and data minimisation

The ULEZ uses a network of Automatic Number Plate Recognition (ANPR) cameras to identify non-compliant vehicles and enforce the scheme. The cameras along the boundary and within the zone operate as a single network for the whole expanded zone. This means that when a non-compliant vehicle is identified, even if it is observed on multiple cameras, only a single evidential record is retained for enforcement purposes to minimise the data collected. An evidential record will include a number of colour and black and white images to identify the vehicle and place it in the context of its surroundings.

When traffic is diverted into the zone because of road closures on or near the boundary, TfL does not use data from cameras along the diversion route to avoid unfairly penalising drivers of non-compliant vehicles who would not have otherwise entered the zone. Vehicles travelling off the diversion route and further into the zone will be picked up by the in-zone cameras.

A full Data Protection Impact Assessment for the scheme has been published on TfL's website: <https://content.tfl.gov.uk/london-wide-ulez-final-dpia-november-2022.pdf>.

¹⁹ The MoUs are published on the TfL website under the "Agreements with London's emergency services" section: <https://tfl.gov.uk/corporate/publications-and-reports/ultra-low-emission-zone>

Vehicle Compliance

The focus of this report is the London-wide ULEZ, which came into effect on 29 August 2023. As such, the compliance figures reported only relate to vehicles that are formally subject to the ULEZ standards (see Table 3). Lorries, vans and specialist vehicles over 3.5 tonnes Gross Vehicle Weight, and buses and minibuses over 5 tonnes Gross Vehicle Weight are required to meet Euro VI emissions standards through the separate LEZ.²⁰ Updated information on compliance for the LEZ scheme is provided in Appendix 1.

Licensed London taxis are not subject to the ULEZ as they have different emissions requirements as part of their licensing conditions and, therefore, are not included in the ULEZ compliance figures. Since 1 January 2018, all newly licensed taxis have needed to be zero emission capable (ZEC). As of publication, 70 per cent of taxis are compliant with the ULEZ standards, including over 7,000 ZEC taxis. This is up from less than 20 per cent in 2018 when the ZEC licensing requirement was introduced (of which 14 were ZEC).

²⁰ Vans or specialist diesel vehicles from 1.205 tonnes unladen weight up to 3.5 tonnes gross vehicle weight are required to meet Euro 3 (Particulate Matter) emissions standards through the LEZ. They are additionally subject to the ULEZ.

Table 3: Vehicle types included and excluded from compliance figures

Vehicle type	Included in ULEZ compliance?	Emissions limits requirement	Relevant scheme
Motorcycles	Yes	Euro 3	ULEZ
Cars	Yes	Euro 4 (Petrol) Euro 6 (Diesel)	ULEZ
Smaller vans	Yes	Euro 4 (Petrol) Euro 6 (Diesel)	ULEZ
Larger vans and minibuses (vans up to and including 3.5 tonnes, minibuses up to and including 5 tonnes)	Yes	Euro 4 (Petrol) Euro 6 (Diesel)	ULEZ
Heavy diesel vehicles (including buses and coaches over 5 tonnes and HGVs and other heavy diesel vehicles over 3.5 tonnes)	No (Appendix 1)	Euro VI	LEZ
Taxis (Black cabs)	No	All newly licensed taxis required to be “Zero Emission Capable” since 2018 and are subject to age limits and other restrictions to reduce emissions.	Taxi licensing

TfL buses are formally subject to the LEZ, including the tighter standards introduced in March 2021. The whole core fleet met or exceeded the standards for this scheme in December 2020, well ahead of the enforcement of the tighter LEZ standards. In September 2021, the Mayor announced that London would now only procure zero emission buses and that he was bringing forward his commitment to deliver a fully zero emission bus fleet by three years from 2037 to 2034. As of September 2023, the TfL core bus fleet includes 1,180 zero emission battery electric or hydrogen models operating on London’s roads, the largest zero-emission fleet in Western Europe.²¹ With Government funding the entire bus fleet could be zero emission by around 2030.

²¹ Zero-emission refers to tailpipe emissions. See: <https://www.c40.org/case-studies/london-powers-ahead-with-zero-emission-buses/>

There are a small number of ULEZ exemptions, discounts, and temporary grace periods. Drivers of vehicles that qualify for these do not need to pay if their vehicles do not meet the required emissions standards. However, these vehicles are still recorded as non-compliant in these figures.

ULEZ compliance

The data in this section has been taken from TfL's Automatic Number Plate Recognition (ANPR) camera network,²² which detects vehicles as they enter the ULEZ and when they travel within it.

Compliance levels in London are monitored through ANPR data derived from anonymised daily camera detections. To check if a vehicle meets the ULEZ standards or not, TfL cross-references this data with available DVLA records, including information on vehicle type, age, Euro standards, and emissions. This gives a daily average compliance rate for each month for central, inner and outer London. As the camera network in outer London continues to develop, there may be some minor fluctuations in data in addition to usual monthly variations in vehicular activity.

Camera installations for the London-wide ULEZ commenced in December 2022, following the Mayoral decision to expand the ULEZ across all London boroughs.²³ It was delivered through a rolling programme comprising site investigations, consents processing, designs and camera installation during 2023. By May 2023, a network of new cameras was in place. That network continues to evolve. To date, over 3,400 cameras are in place across the London-wide zone and an active programme of camera repairs and replacements, including to address instances of vandalism, is in place.

Compliance rates based on ANPR data from the camera network in place at the time are provided for the whole London-wide zone in addition to a subset of zonal compliance estimates for the central London ULEZ (the same area as the Congestion Charge zone), the inner London ULEZ (the entire area bounded by the North and South Circular Roads, including central London), and the expanded outer London area (excluding the central and inner London ULEZ area).

Compliance rates and vehicle detections up to November 2022 are based on the camera network in place for the LEZ at the time and do not include any cameras installed in preparation for the London-wide ULEZ. In outer London, this camera network detected unique vehicle numbers in the high hundreds of thousands per day and provided a suitable level of confidence for the assessment of compliance levels in that area before the network evolved.

Camera network changes were undertaken from December 2022 with data from new cameras starting to be available from May 2023.

²² For more information on how TfL gathers data, how it is used and protected visit:

<https://tfl.gov.uk/corporate/privacy-and-cookies/road-user-charging>

²³ <https://www.london.gov.uk/who-we-are/governance-and-spending/promoting-good-governance/decision-making/mayoral-decisions/md3060-london-wide-ultra-low-emission-zone-ulez-scheme>

General overview of London-wide ULEZ compliance

Table 4 summarises the London-wide ULEZ compliance rates at the following stages:

- February 2017 – confirmation of the T-Charge, the predecessor to the ULEZ
- May 2019 – the first month after the central London ULEZ was introduced
- October 2020 – one year before the implementation of the inner London ULEZ
- October 2021 – immediately prior to the launch of the inner London ULEZ on 25 October
- May 2022 – the launch of the consultation on expanding the ULEZ London-wide
- November 2022 – the announcement of the Mayor’s decision to expand the ULEZ London-wide
- June 2023 – baseline month for this report (includes data from new camera network rollout in outer London)
- September 2023 – one month after the London-wide expansion of the ULEZ

Table 4: Daily average proportion of ULEZ compliant vehicles detected in the London-wide ULEZ

Vehicle type	Feb-17*	May-19	Oct-20	Oct-21	May-22	Nov-22	Jun-23	Sep-23
All ULEZ vehicles	39%	67.9%	75.7%	83.8%	88.8%	90.5%	91.6%	95.3%
Cars (incl. PHV)	44%	72.8%	79.3%	86.2%	90.7%	92.1%	93.0%	96.4%
Vans (up to and incl. 3.5 tonnes)	12%	34.7%	53.8%	66.3%	74.4%	79.3%	80.2%	86.2%
Minibuses (up to and incl. 5 tonnes)	12%	45.0%	61.2%	68.4%	73.7%	76.5%	76.1%	79.1%
Motorcycles	50%	88.7%	90.8%	94.6%	96.7%	96.5%	96.0%	96.6%
All vehicles (LEZ, ULEZ, taxis)	38%	67.5%	75.9%	83.9%	88.7%	90.5%	91.6%	95.2%

*February 2017 based on data from the London Atmospheric Emissions Inventory, except for motorcycles which is based on Defra fleet composition data. Minibuses compliance estimate in 2017 is assumed to be the same as vans.

This overview of changes in ULEZ compliance, based on detected vehicles from the camera network available during these periods, shows the continuing and rapid improvement in compliance with the ULEZ standards across London.

The data shows that there has been a significant increase in the proportion of ULEZ compliant vehicles driving in the London-wide zone since February 2017, when compliance was approximately 39 per cent. The average compliance rate is now over 95 per cent for all vehicles subject to the ULEZ standards and even higher at over 96 per cent for cars.

Combining information on vehicles also subject to the LEZ means that after the first month of the London-wide ULEZ over 95 per cent of all vehicles seen in the zone are now compliant with ULEZ and LEZ standards.

Assessment of the impact of the London-wide ULEZ on compliance

This section provides information on the number of vehicles detected in May 2022 (when the public consultation for the London-wide ULEZ started), November 2022 (when the Mayor made the decision to proceed with the expansion), June 2023²⁴ (the baseline month for this report), and up to and including September 2023. Whilst the London-wide ULEZ came into operation on 29 August, for data clarity whole monthly comparisons have been undertaken for this report, which will also feed into future reports. Appendices 2 and 3 provide the daily compliance rates by vehicle type and numbers of vehicles detected in the London-wide ULEZ from the day of the scheme launch on 29 August to 30 September 2023.

All tables in this section show compliance rates for the entire London-wide ULEZ. Further sections provide more information on compliance rates in the expanded outer London area, and discussion of compliance rates across different areas of London over time. More detail on zonal compliance and indicative compliance rates for the North and South Circular Roads (the boundary to the inner London ULEZ area) is available in Appendix 4.

The tables provide the average daily number of unique vehicles²⁵ seen by the camera network each month, along with compliance rates for the different vehicle types. From May 2023, in outer London, there is an increase in the number of vehicles detected by the camera network in this area. This also affects London-wide data as it includes new data from outer London cameras. Vehicle volume comparisons prior to this date are unsuitable for assessing scheme impacts because the development of the camera network has increased the rate of vehicle detections.

This first month report compares volumes of detected vehicles in September 2023 to June 2023 in the first instance. June 2023 has been used for this purpose as it is a typical

²⁴ Data from May 2023 is also presented in tables as this is when the data from new cameras in outer London first became available.

²⁵ A daily unique vehicle means a vehicle that has been detected by at least one camera in the zone at least once per day.

month that does not include bank holidays or school holidays, and also uses available data from the new cameras installed for the London-wide ULEZ expansion.

However, in making comparisons to June 2023, only one month of operational data is available. Longer-term comparisons using more months of data will provide a fuller picture of scheme impacts based on a completed camera network and allowing for typical variations in traffic levels and patterns across the year.

Table 5 shows that overall compliance with the ULEZ is now 95.3 per cent. This is an increase of 3.7 percentage points between June and September 2023, and highlights the effectiveness of the scheme. Of the 4.7 per cent of non-compliant vehicles in September 2023, some vehicles will be non-chargeable, and the remainder will pay the charge or may have enforcement action taken against them. Non-chargeable vehicles include those with exemptions or benefitting from extended grace periods, as well as vehicles that were detected on a diversion route.²⁶

As seen in Table 5, the average number of non-compliant vehicles detected daily in the zone has fallen in the first month of the scheme. Non-compliant vehicles have dropped from a daily average of 170,000 in June 2023, prior to the expansion, to a daily average of 93,000 in September 2023. This is a reduction of 77,000 non-compliant vehicles (45 per cent) detected the zone in the first month of the scheme operating.

Whilst the biggest impact of the scheme is reducing the number of non-compliant vehicles being driven, there are also fewer vehicles seen driving in the London-wide zone overall. Comparing June and September 2023 there were two per cent fewer vehicles detected. This is a reduction in the daily average number of unique vehicles from two million in June 2023 to 1.97 million in September 2023. However, fluctuations in vehicle detections across the year are expected, some related to seasonal variation and school holidays, which influence vehicle numbers. Further monitoring over the next few months will provide information on the longer-term trend of unique vehicles detected and this will be reported in the Six Month Report.

The compliance rates for all ULEZ vehicles observed between May 2022 (when the consultation of the London-wide expansion began) and the first month of the scheme has increased by 6.5 percentage points to 95.3 per cent.

Tables 6 to 10 show the monthly average compliance rates and unique vehicles detected driving in the zone for different ULEZ vehicle types, including cars, diesel cars, vans and motorcycles. Table 6 reports compliance rates for all cars, while Table 7 focuses on diesel cars only.

²⁶ Available information indicates there were 28 traffic diversions from 29 August to 24 September including 11 on the M25 related to works at Junction 3, J8 - J9, and J24-J25, M40, A3, A309, and 14 on the A412 in relation to HS2 works.

Table 5: Daily average number and proportion of ULEZ compliant vehicles detected in the London-wide ULEZ per month (rounded to the nearest 1000 vehicles)

Date	Daily number of ULEZ vehicles driving in the London-wide ULEZ			Proportions of vehicles driving in the London-wide ULEZ	
	Unique vehicles detected in zone	Non-compliant vehicles	Compliant vehicles	Non-compliant vehicles	Compliant vehicles
May-22*	1,395,000	156,000	1,238,000	11.2%	88.8%
Nov-22*	1,398,000	133,000	1,265,000	9.5%	90.5%
May-23*	1,901,000	165,000	1,735,000	8.7%	91.3%
Jun-23	2,022,000	170,000	1,852,000	8.4%	91.6%
Jul-23	1,981,000	160,000	1,821,000	8.1%	91.9%
Aug-23	1,889,000	139,000	1,750,000	7.4%	92.6%
Sep-23	1,974,000	93,000	1,881,000	4.7%	95.3%
Change between June 2023 and September 2023	-48,000	-77,000	29,000	-3.7 ppt	+ 3.7 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-45%	2%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-4.8 ppt	+ 4.8 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-6.5 ppt	+ 6.5 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Table 6: Daily average number and proportion of ULEZ compliant cars (M1 and PHV, excl. taxis) detected in the London-wide ULEZ per month (rounded to nearest 1000 vehicles)

Date	Daily number of cars driving in the London-wide ULEZ			Proportions of cars driving in the London-wide ULEZ	
	Unique cars detected in zone	Non-compliant cars	Compliant cars	Non-compliant cars	Compliant cars
May-22*	1,192,000	111,000	1,081,000	9.3%	90.7%
Nov-22*	1,181,000	93,000	1,088,000	7.9%	92.1%
May-23*	1,647,000	120,000	1,527,000	7.3%	92.7%
Jun-23	1,747,000	123,000	1,624,000	7.0%	93.0%
Jul-23	1,718,000	116,000	1,602,000	6.7%	93.3%
Aug-23	1,633,000	99,000	1,534,000	6.1%	93.9%
Sep-23	1,710,000	61,000	1,649,000	3.6%	96.4%
Change between June 2023 and September 2023	-37,000	-62,000	25,000	-3.5 ppt	+ 3.5 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-50%	2%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-4.3 ppt	+ 4.3 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-5.7 ppt	+ 5.7 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Comparing June 2023 and September 2023, the average number of non-compliant cars detected in the zone has fallen by approximately 50 per cent, with around 62,000 fewer non-compliant cars seen on an average day. The compliance rate has increased by 3.5 percentage points between June and September to 96.4 per cent. This already exceeds TfL's forecast of achieving over 95 per cent compliance by the end of 2023 as outlined in the consultation document.²⁷ Considering the change between May 2022, when the consultation for the London-wide expansion began, and the first month of the scheme the compliance levels are up by 5.7 percentage points with most of the increase occurring since June 2023. Compliance levels will continue to be monitored in the coming months, with updated information in future reports.

In the first month of the scheme, the total number of unique cars detected fell by about 37,000 compared to June 2023, and there was an increase of 25,000 in the number of compliant cars seen. This is equivalent to about a two per cent reduction in the number of cars seen overall. Data from the inner London ULEZ area (Appendix 4) indicates a three per cent reduction between June 2023 and September 2023 in the number of cars detected in the area even though the ULEZ has operated there for some time. This highlights that the London-wide ULEZ has also likely had a positive impact on inner London. As data in this report is based on only the first month of the London-wide scheme, more data is required to provide insights into the overall trend in vehicles being detected in the zone.

Any reduction in the number of cars detected is likely to reflect some fleet operators choosing to use compliant vehicles instead, some individuals switching to compliant vehicles (including scrapping or selling their non-compliant cars, or using car clubs), some vehicle owners avoiding the zone, some choosing to use their non-compliant vehicle less often, and some switching to more sustainable transport modes including public transport, walking and cycling. These different changes to travel choices and behaviour are expected to occur as people respond to the scheme.

²⁷ <https://haveyoursay.tfl.gov.uk/15619/widgets/44946/documents/27070>

Table 7: Daily average number and proportion of ULEZ compliant diesel cars (M1, excl. PHVs and taxis) detected in the London-wide ULEZ per month (rounded to nearest 100)

Date	Daily number of diesel cars (excl. PHVs and taxis) driving in the London-wide ULEZ			Proportion of diesel cars driving in the London-wide ULEZ	
	Unique diesel cars detected in zone	Non-compliant diesel cars	Compliant diesel cars	Non-compliant diesel cars	Compliant diesel cars
May-22*	294,900	101,600	193,200	34.5%	65.5%
Nov-22*	278,500	85,400	193,100	30.7%	69.3%
May-23*	361,100	109,000	252,100	30.2%	69.8%
Jun-23	378,100	111,500	266,600	29.5%	70.5%
Jul-23	366,200	104,700	261,500	28.6%	71.4%
Aug-23	335,100	89,200	245,900	26.6%	73.4%
Sep-23	326,300	55,300	270,900	17.0%	83.0%
Change between June 2023 and September 2023	-51,800	-56,200	4,300	-12.5 ppt	+ 12.5 ppt
% Change in vehicles between June 2023 and September 2023	-14%	-50%	2%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-13.7 ppt	+ 13.7 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-17.5 ppt	+ 17.5 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Of the 62,000 fewer non-compliant cars detected in the zone, the vast majority (over 56,000) are diesel cars. This is similar to the pattern seen following the previous iterations of the scheme as only newer diesel cars meet the strict ULEZ emissions standards. The data from the first month indicates a 14 per cent reduction in the number of diesel cars overall. Compliance rates for diesel cars have increased by 12.5 percentage points to 83 per cent between June 2023 and September 2023.

Table 8: Daily average number and proportion of ULEZ compliant vans (N1) detected in the London-wide ULEZ per month (rounded to nearest 100 vehicles)

Date	Daily number of vans driving in the London-wide ULEZ			Proportions of vans driving in the London-wide ULEZ	
	Unique vans detected in zone	Non-compliant vans	Compliant vans	Non-compliant vans	Compliant vans
May-22*	170,300	43,700	126,700	25.6%	74.4%
Nov-22*	184,700	38,300	146,400	20.7%	79.3%
May-23*	208,900	42,800	166,100	20.5%	79.5%
Jun-23	225,600	44,700	180,900	19.8%	80.2%
Jul-23	216,600	41,600	175,000	19.2%	80.8%
Aug-23	211,800	38,100	173,700	18.0%	82.0%
Sep-23	214,900	29,700	185,200	13.8%	86.2%
Change between June 2023 and September 2023	-10,700	-15,000	4,300	-6 ppt	+ 6 ppt
% Change in vehicles between June 2023 and September 2023	-5%	-34%	2%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-6.9 ppt	+ 6.9 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-11.8 ppt	+ 11.8 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Comparing June 2023 and September 2023, the average number of non-compliant vans detected in the zone has fallen by about a third (34 per cent), with around 15,000 fewer non-compliant vans being seen on an average day. The compliance rate has increased by six percentage points between June and September 2023 to 86.2 per cent. Between May 2022, when the consultation for the London-wide scheme commenced, and the first month of the scheme the compliance level has increased by nearly 12 percentage points.

When comparing September 2023 to June 2023 there were 10,700 fewer unique vans seen on an average day (a five per cent reduction). There was an increase in the number of compliant vans seen of around 4,300. Data analysed for the inner London ULEZ area (Appendix 4) shows that there was also a two per cent reduction in the number of vans detected between June and September 2023 in this area, showing that some variation occurs naturally even in an area where the ULEZ has already been operating for some time. However, as data is based only on the first month of the scheme more data is required to establish if there is an overall trend in vehicles being detected in the zone.

Experience from the central and inner London iterations of the ULEZ indicates that any reduction in the number of vans detected is likely to reflect some fleet operators choosing to use compliant vehicles instead, some individuals or businesses switching to compliant vans (including scrapping or selling their non-compliant vans), some drivers avoiding the zone, and some choosing to use their non-compliant vehicle less often and/or more efficiently (including through freight consolidation).

The compliance rate for vans remains lower than that for cars. However, it is still high and crucially it has risen at a quicker pace than the average for all vehicles. Van compliance increased by 12 percentage points since the consultation for the London-wide expansion commenced in May 2022 compared to an increase of 6.5 percentage points for all vehicles over the same period.

In the consultation document²⁸ TfL estimated that van compliance levels at the end of 2023 would be around 91 per cent (based on vehicle kilometres). Compliance levels will continue to be monitored in the coming months, with updated information in future reports.

²⁸ <https://haveyoursay.tfl.gov.uk/15619/widgets/44946/documents/27070>

Table 9: Daily average number and proportion of ULEZ compliant minibuses detected in the London-wide ULEZ per month (rounded to nearest 10 vehicles)

Date	Number of minibuses driving in the London-wide ULEZ			Proportions of minibuses driving in the London-wide ULEZ	
	Unique minibuses detected in zone	Non-compliant minibuses	Compliant minibuses	Non-compliant minibuses	Compliant minibuses
May-22*	2,320	610	1,710	26.3%	73.7%
Nov-22*	2,470	580	1,890	23.5%	76.5%
May-23*	2,770	660	2,110	23.9%	76.1%
Jun-23	3,130	750	2,370	24.0%	76.0%
Jul-23	2,570	660	1,910	25.8%	74.2%
Aug-23	1,770	470	1,300	26.5%	73.5%
Sep-23	2,760	580	2,180	20.9%	79.1%
Change between June 2023 and September 2023	-360	-170	-190	-3.1 ppt	+ 3.1 ppt
% Change in vehicles between June 2023 and September 2023	-12%	-23%	-8%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-2.5 ppt	+ 2.5 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-5.3 ppt	+ 5.3 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt – percentage point

A few thousand minibuses are detected in the London-wide ULEZ on an average day. Compliance levels have increased by 3.1 percentage points since June 2023 to nearly 80 per cent in September 2023. As the number of minibuses seen travelling in London is low, a reduction of a few hundred vehicles equates to a larger percentage reduction than for other vehicle types. However, the number of minibuses seen fluctuates considerably during the year and data covering more months will be required to fully assess any trends due to the small volumes detected.

Table 10: Daily average number and proportion of ULEZ compliant motorcycles (L) detected in the London-wide ULEZ per month (rounded to near 10 vehicles)

Date	Daily number of Motorcycles driving in the London-wide ULEZ			Proportions of motorcycles driving in the London-wide ULEZ	
	Unique vehicles detected in zone	Non-compliant motorcycles	Compliant motorcycles	Non-compliant motorcycles	Compliant motorcycles
May-22*	31,840	1,380	30,460	4.3%	95.7%
Nov-22*	30,380	1,050	29,330	3.5%	96.5%
May-23*	42,030	1,610	40,420	3.8%	96.2%
Jun-23	46,170	1,850	44,310	4.0%	96.0%
Jul-23	43,790	1,720	42,070	3.9%	96.1%
Aug-23	43,130	1,640	41,490	3.8%	96.2%
Sep-23	45,700	1,580	44,130	3.4%	96.6%
Change between June 2023 and September 2023	-470	-280	-190	-0.6 ppt	+ 0.6 ppt
% Change in vehicles between June 2023 and September 2023	-1%	-15%	0%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	0 ppt	+ 0 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-0.9 ppt	+ 0.9 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Compliance rates for motorcycles remain high and have continued to increase steadily by about one percentage point since May 2022 to reach nearly 97 per cent in September 2023.

ULEZ compliance by zone

Table 11 shows the compliance levels for the central London ULEZ area, the inner London ULEZ area, and the expanded outer London area for September 2019 (the first month where monitoring across all areas separately is available) and September 2023. This shows that, based on available data for 2019, there were large differences in the compliance levels for all vehicle types across London, with central London having much higher levels of compliance following the early introduction of the ULEZ here.

Compliance rates in outer London in September 2019 were about 10 percentage points lower for cars and nearly 20 percentage points lower for vans than in central London. However, by September 2023, compliance rates for vehicles using London's roads are nearly the same across all areas for all vehicle types – even after just one month of the London-wide ULEZ operating. This shows the substantial impact of the London-wide expansion, which operates across a wide geographical area and brings changes to a large number of vehicles, helping to reduce emissions and improve air quality across the city.

Table 11: Daily average proportion of ULEZ compliant vehicles detected in different areas of London

Vehicle type	Central London ULEZ	Inner London ULEZ	Expanded outer London area	Percentage point difference between central and outer London
	September 2019*			
All ULEZ vehicles	79.0%	71.2%	68.6%	-10.4ppt
Cars (incl. PHV, excl. taxis)	84.0%	76.0%	73.5%	-10.5ppt
Vans (up to and incl. 3.5 tonnes)	56.5%	43.2%	37.7%	-18.9ppt
Motorcycles	84.0%	76.0%	73.5%	-10.5ppt
Minibuses (up to and incl. 5 tonnes)	62.1%	50.2%	48.6%	-13.5ppt
All Vehicles (ULEZ, LEZ, Taxis)	76.3%	70.6%	68.3%	-7.9ppt
	September 2023			
All ULEZ vehicles	95.5%	95.9%	95.2%	-0.3ppt
Cars (incl. PHV, excl. taxi)	96.5%	96.9%	96.4%	0.0ppt
Vans (up to and incl. 3.5 tonnes)	91.6%	89.4%	86.2%	-5.4ppt
Motorcycles	96.5%	96.9%	96.4%	0.0ppt
Minibuses	80.9%	81.7%	78.7%	-2.2ppt
All Vehicles (ULEZ, LEZ, Taxis)	94.6%	95.7%	95.2%	0.5ppt

* The first month where monitoring across all ULEZ zones separately is available.

Compliance rates in the expanded outer London area

This section provides information on detected vehicles and compliance rates in the expanded outer London area, which is now part of the London-wide ULEZ. The numbers of vehicles detected provided in these tables are those seen in the outer zone (the area from, and including, the North and South Circular Roads, to the London-wide ULEZ boundary based on available cameras). However, it is important to note that many vehicles are also seen in the inner London ULEZ area and the central London area – these are not vehicles detected solely in the expanded outer London area.

The compliance rate for all ULEZ vehicles seen in outer London has increased by over 10 percentage points since the consultation on the London-wide scheme commenced in May 2022 and now sits at 95.2 per cent (similar to 95.3% for the whole London-wide ULEZ). On an average day, there are 76,000 fewer non-compliant vehicles in the expanded outer London area – a reduction of nearly 50 per cent between June and September 2023. There has been an increase in the number of compliant vehicles seen (around 40,000 more on an average day) meaning that, overall, there are about two per cent fewer vehicles seen in the outer London area. This is based on only the first month of operation and more monitoring will be undertaken to understand the longer-term trends.

The compliance rate for cars seen in the expanded outer London area has increased to over 96 per cent in the first month of the scheme, an increase of 4.1 percentage points compared to June 2023, with 61,000 fewer non-compliant cars seen on an average day, a reduction of over 50 per cent.

The compliance rate for vans seen in the expanded outer London area is now 86.2 per cent – an increase of 6.6 percentage points since June 2023 and over 17 percentage points since May 2022. The number of non-compliant vans in the expanded outer London area has reduced by 36 per cent.

In September 2023 the compliance rate on the North and South Circular Roads, the previous boundary to the inner London ULEZ, has continued to increase to nearly 97 per cent for cars, and nearly 90 per cent for vans (see Appendix 4).

Table 12: Daily average number and proportion of ULEZ compliant vehicles detected in the expanded outer London area per month (rounded to the nearest 1000 vehicles)

Date	Daily number of ULEZ vehicles driving in the expanded outer London area			Proportions of vehicles driving in expanded outer London area	
	Unique vehicles detected in zone	Non-compliant vehicles	Compliant vehicles	Non-compliant vehicles	Compliant vehicles
May-22*	862,000	129,000	733,000	14.9%	85.1%
Nov-22*	926,000	110,000	816,000	11.9%	88.1%
May-23*	1,580,000	150,000	1,430,000	9.5%	90.5%
Jun-23	1,714,000	156,000	1,558,000	9.1%	90.9%
Jul-23	1,697,000	147,000	1,550,000	8.6%	91.4%
Aug-23	1,636,000	128,000	1,508,000	7.8%	92.2%
Sep-23	1,679,000	80,000	1,599,000	4.8%	95.2%
Change between June 2023 and September 2023	-36,000	-76,000	40,000	-4.3 ppt	+ 4.3 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-49%	3%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-7.1 ppt	+ 7.1 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-10.2 ppt	+ 10.2 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage point

Table 13: Daily average number and proportion of ULEZ compliant cars (M1 and PHV, excl. Taxis) detected in the expanded outer London area per month (rounded to nearest 1000)

Date	Daily number of cars driving in the expanded outer London area			Proportions of cars driving in the expanded outer London area	
	Unique cars detected in zone	Non-compliant cars	Compliant cars	Non-compliant cars	Compliant cars
May-22*	745,000	93,000	652,000	12.5%	87.5%
Nov-22*	780,000	78,000	702,000	10.0%	90.0% ²⁹
May-23*	1,371,000	110,000	1,261,000	8.0%	92.0%
Jun-23	1,483,000	113,000	1,369,000	7.6%	92.4%
Jul-23	1,473,000	107,000	1,367,000	7.2%	92.8%
Aug-23	1,416,000	91,000	1,325,000	6.4%	93.6%
Sep-23	1,457,000	52,000	1,405,000	3.6%	96.4%
Change between June 2023 and September 2023	-26,000	-61,000	35,000	-4.1 ppt	+ 4.1 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-54%	3%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-6.4 ppt	+ 6.4 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-8.9 ppt	+ 8.9 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points (ppt)

²⁹ This figure was used in TfL and GLA awareness raising campaigns and reported on the TfL website in the months leading up to the London-wide ULEZ launch.

Table 14: Daily average number and proportion of ULEZ compliant diesel cars (M1 excl. PHVs and taxis) detected in the expanded outer London area per month (rounded to nearest 100)

Date	Daily number of Diesel cars (excl. PHVs and taxis) driving in the expanded outer London area			Proportions of vehicles driving in the expanded outer London area	
	Unique diesel cars detected in zone	Non-compliant diesel cars	Compliant diesel cars	Non-compliant diesel cars	Compliant diesel cars
May-22*	214,000	85,800	128,200	40.1%	59.9%
Nov-22*	206,700	72,500	134,200	35.1%	64.9%
May-23*	312,900	100,300	212,600	32.1%	67.9%
Jun-23	332,200	103,100	229,100	31.0%	69.0%
Jul-23	324,400	97,000	227,400	29.9%	70.1%
Aug-23	298,800	82,400	216,400	27.6%	72.4%
Sep-23	282,800	47,600	235,200	16.8%	83.2%
Change between June 2023 and September 2023	-49,400	-55,500	6,100	-14.2 ppt	+ 14.2 ppt
% Change in vehicles between June 2023 and September 2023	-15%	-54%	3%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-18.2 ppt	+ 18.2 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-23.3 ppt	+ 23.3 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Table 15: Daily average number and proportion of ULEZ compliant vans (N1) detected in the expanded outer London area per month (rounded to nearest 100)

Date	Daily number of vans driving in the expanded outer London area			Proportions of vehicles driving in the expanded outer London area	
	Unique vans detected in zone	Non-compliant vans	Compliant vans	Non-compliant vans	Compliant vans
May-22*	113,300	35,000	78,300	30.9%	69.1%
Nov-22*	141,400	31,400	110,000	22.2%	77.8%
May-23*	183,800	39,000	144,700	21.2%	78.8%
Jun-23	201,100	41,200	160,000	20.5%	79.5%
Jul-23	194,000	38,300	155,600	19.8%	80.2%
Aug-23	190,600	35,200	155,500	18.5%	81.5%
Sep-23	191,300	26,400	164,900	13.8%	86.2%
Change between June 2023 and September 2023	-9,800	-14,700	4,900	-6.6 ppt [^]	+ 6.6 ppt
% Change in vehicles between June 2023 and September 2023	-5%	-36%	3%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-8.4 ppt	+ 8.4 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-17.1 ppt	+ 17.1 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Table 16: Daily average number and proportion of ULEZ compliant minibuses detected in the expanded outer London area per month (rounded to nearest 10)

Date	Daily number of minibuses driving in the expanded outer London area			Proportions of minibuses driving in the expanded outer London area	
	Unique minibuses detected in zone	Non-compliant minibuses	Compliant minibuses	Non-compliant minibuses	Compliant minibuses
May-22*	1,350	420	940	30.8%	69.2%
Nov-22*	1,540	400	1,140	26.0%	74.0%
May-23*	2,190	540	1,660	24.5%	75.5%
Jun-23	2,530	620	1,910	24.6%	75.4%
Jul-23	2,100	550	1,550	26.2%	73.8%
Aug-23	1,450	400	1,060	27.2%	72.8%
Sep-23	2,230	480	1,750	21.3%	78.7%
Change between June 2023 and September 2023	-300	-150	-160	-3.2 ppt	+ 3.2 ppt
% Change in vehicles between June 2023 and September 2023	-12%	-23%	-8%	N/A	N/A
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-4.6 ppt	+ 4.6 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-9.5 ppt	+ 9.5 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

ppt - Percentage points

Table 17: Daily average number and proportion of ULEZ compliant motorcycles (L) detected in the expanded outer London area per month (rounded to nearest 10)

Date	Daily number of motorcycles driving in the expanded outer London area			Proportions of vehicles driving in the expanded outer London area	
	Unique motorcycles detected in zone	Non-compliant motorcycles	Compliant motorcycles	Non-compliant motorcycles	Compliant motorcycles
May-23*	23,590	1,000	22,580	4.2%	95.8%
Jun-23	28,060	1,220	26,840	4.4%	95.6%
Jul-23	27,420	1,150	26,270	4.2%	95.8%
Aug-23	27,650	1,110	26,540	4.0%	96.0%
Sep-23	28,330	960	27,370	3.4%	96.6%
Change between June 2023 and September 2023	270	-260	540	-1 ppt	+ 1 ppt
% Change in vehicles between June 2023 and September 2023	1%	-22%	2%	N/A	N/A

* Data on motorcycles available from May 2023 following enhancements to the camera network in preparation for London-wide ULEZ scheme. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).
ppt - Percentage points (ppt)

Compliance rates across London

ULEZ compliance rates have increased across the whole of London over time, however the rate of increase and level has varied over the past few years. The introduction of the T-Charge, followed by the early introduction of the central London ULEZ in April 2019, meant that compliance levels inside the central London ULEZ, including for LEZ vehicles, were much higher than those outside of the central zone. In 2019 (when the central ULEZ was in operation), compliance rates in the expanded outer London area were much lower, with just over 73.5 per cent of cars meeting ULEZ standards, compared to 84 per cent in central London. Similarly, a third of vans in the expanded outer London area met the ULEZ standards, compared to over half of those in the central London area.

Vehicles travel between different areas of London and outside of the capital and this means that the ULEZ and LEZ can bring air quality benefits to a wider area and larger

population than directly within the charging area. The benefits of these effects have been shown in previous monitoring reports. For example, analysis by the Environmental Defense Fund (EDF) showed that HGVs were driven on average for twice the distance outside the LEZ than within, with many of them driving substantially further outside the capital and therefore bringing the benefits of the London LEZ to 95 per cent of major towns and cities in England and Wales.³⁰

Figure 3 below shows that, while compliance rates increased faster in the areas that would be charged, increases in compliance occurred outside these areas as well. We can see yet again a substantial step up in the compliance of vehicles in the expanded outer London area (and London-wide) as drivers respond to the launch of the London-wide scheme. The step up in compliance is smaller than for previous iterations of the ULEZ but this is to be expected as the gap to a fully ULEZ compliant fleet is much smaller. This is due to the natural replacement of the vehicle fleet over time, and, crucially, the positive effects of the central and inner ULEZ on increasing vehicle compliance even for those based outside of the previous charging zones. Importantly, the increase in compliance levels in the expanded outer London area affects over three times the number of vehicles than were covered by the inner London ULEZ.

The London-wide expansion of the ULEZ has led to a convergence and near levelling of compliance across different areas of London due to the fast rate of increase in 2023 as Londoners and businesses prepared for the scheme. Now over 95 per cent of all vehicles meet the standards. A similar pattern of increasing compliance outside of the charging zone is expected to have continued in the areas around the boundary of the London-wide ULEZ bringing benefits to a much larger area.³¹

Further tables in Appendix 4 provide compliance rates for the central ULEZ and inner London ULEZ areas over similar dates.

³⁰ Full report here: <https://www.globalcleanair.org/files/2021/07/EDF-Europe-Examining-the-reach-of-Greater-Londons-Clean-AirZone.pdf>. Data used in the report was procured from INRIX. INRIX has no affiliation with the analysis or results.

³¹ Future information on the make-up of the fleet outside of London becomes available periodically through the National Atmospheric Emissions Inventory, published by the UK Government.

Figure 3: Monthly average ULEZ compliance rates split by zone – all ULEZ vehicles

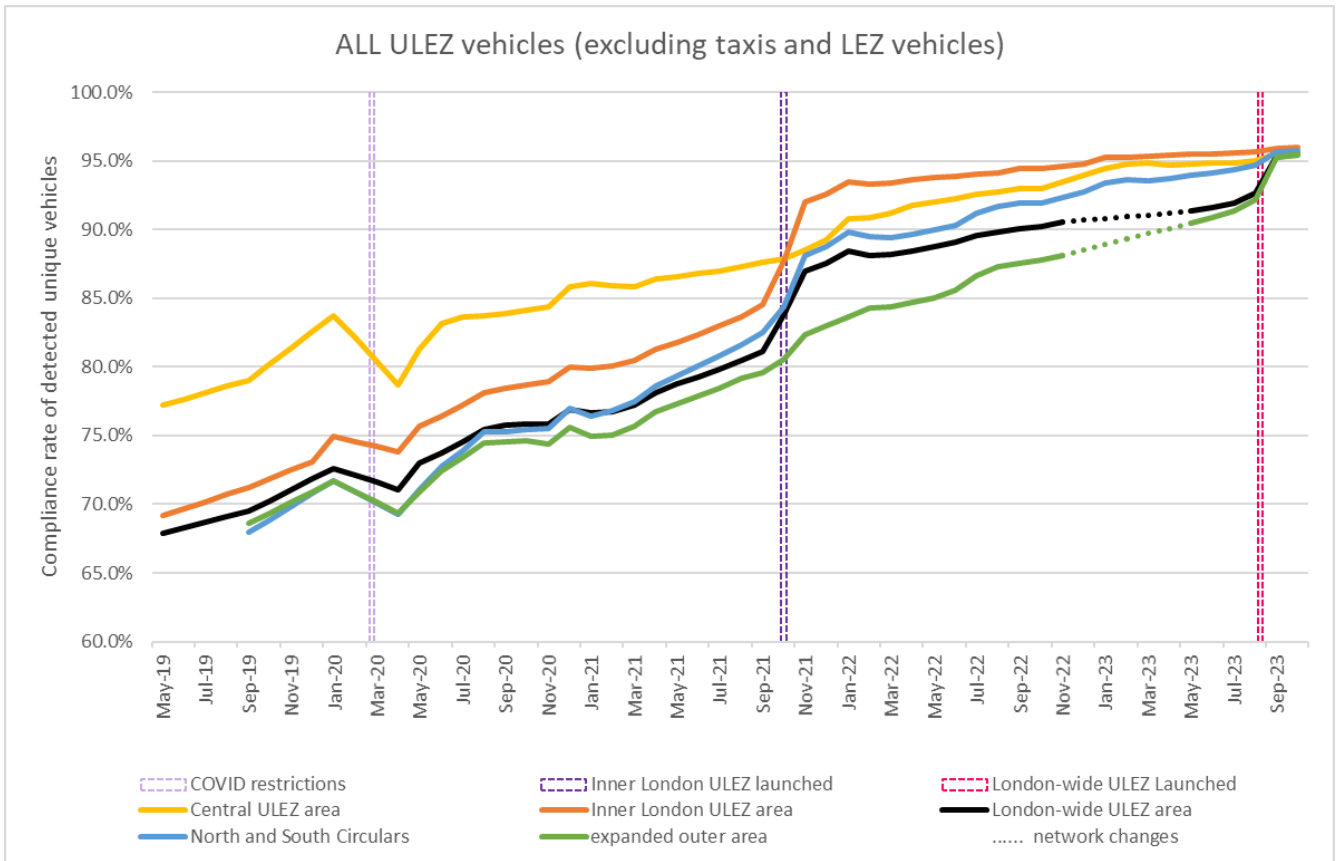


Figure 4: Monthly average ULEZ compliance rates split by zone – cars

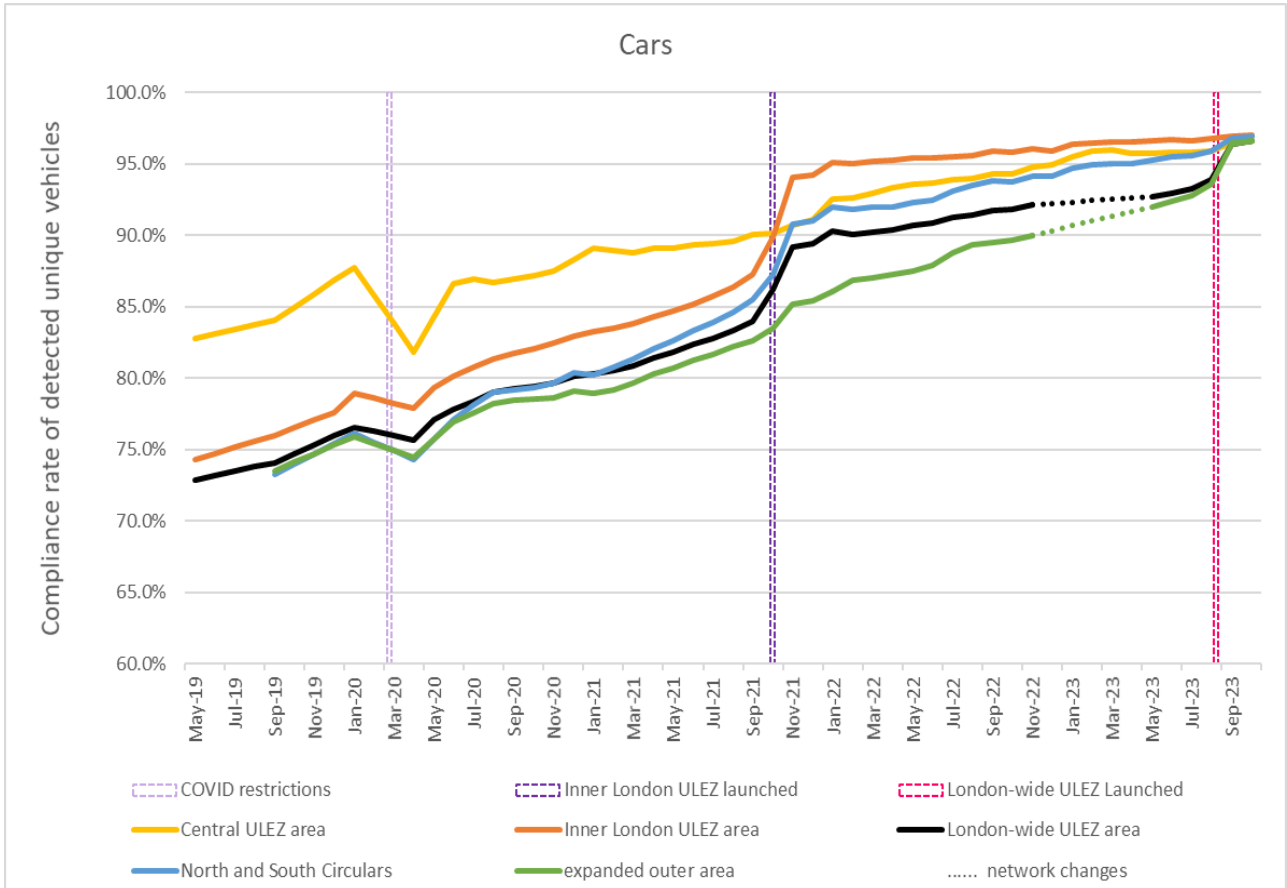


Figure 5: Monthly average ULEZ compliance rates split by zone – vans

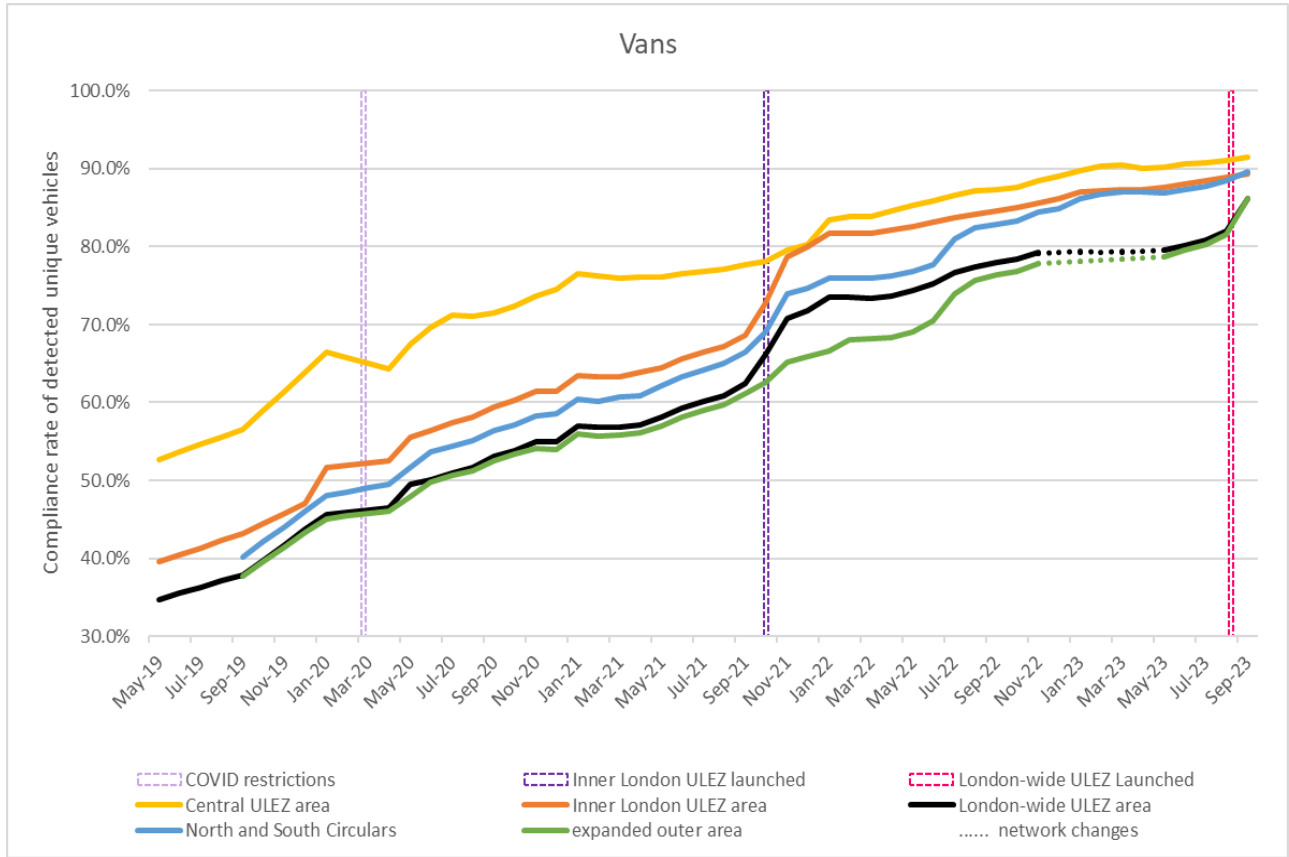
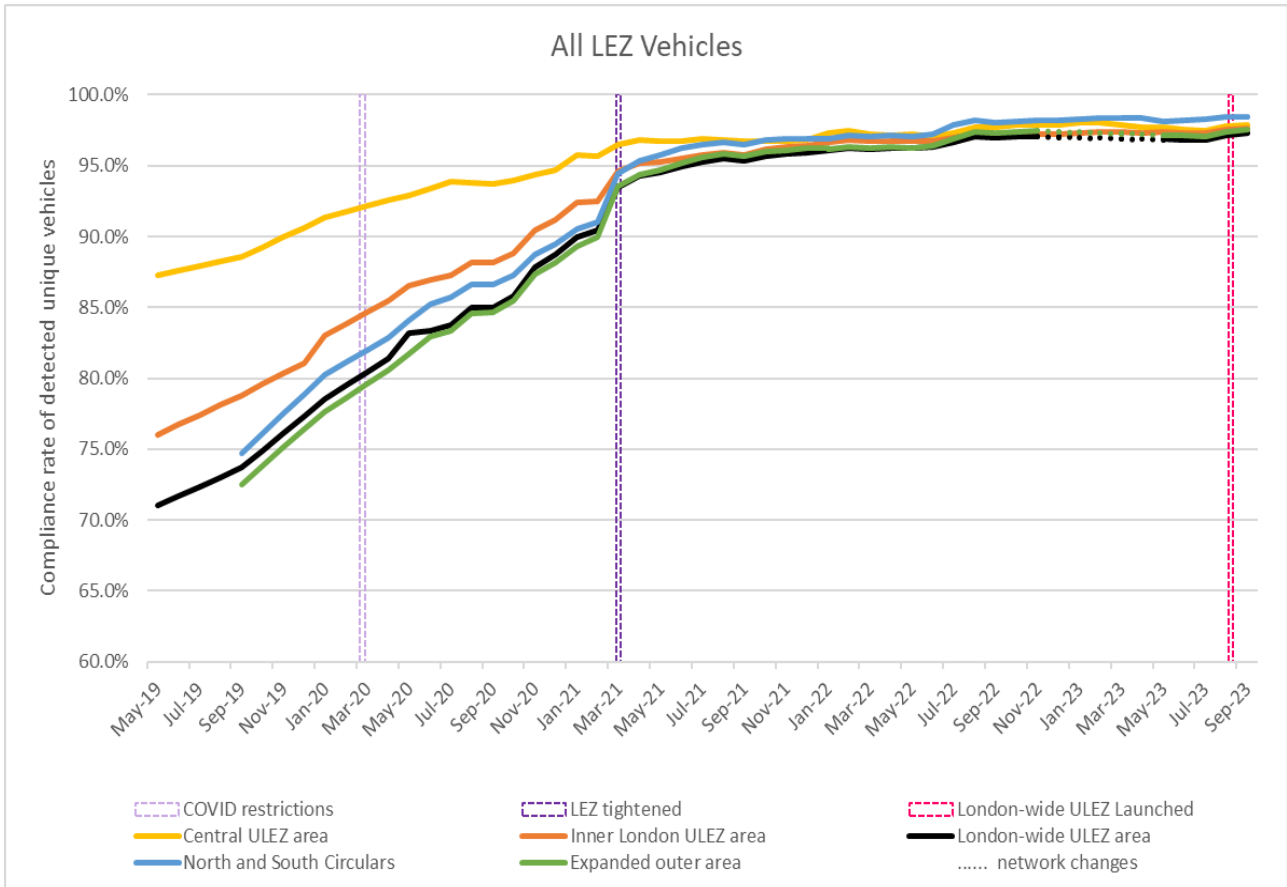


Figure 6: Monthly average LEZ compliance rates split by zone – all LEZ vehicles



Charges, exemptions and warning notices

On an average day³² between 29 August and 30 September 2023³³, TfL estimates that around 93,700 non-compliant, unique vehicles³⁴ were detected in the zone. Vehicle detections are subject to validation processes (known as settlement) prior to charging and therefore the volume of charged vehicles is always lower than the volume of vehicles initially detected. As shown in Figure 7, of these non-compliant vehicles, on an average day:

- Around 57,200 (61 per cent) paid the charge. Of these 33,600 were Auto Pay payments, 5,000 were Fleet Auto Pay payments and 18,600 were by other payment channels, including web or call centre payments.
- Around 3,200 (3 per cent) were issued with a warning notice on the first offence during the first 28 days after launch, or a Penalty Charge Notice (PCN) thereafter. From 29 August to 25 September, an average of 3,295 warning notices were issued per day and a total of 92,255 warning notices were issued overall. From 26 September to 30 September an average of 2,696 PCNs were issued per day and a total of 13,480 PCNs were issued. Warning notices were issued to ensure the correct action is taken in the future and to allow for any genuine mistakes that may have occurred. This approach was also taken for the introduction of the central London ULEZ in 2019 and its expansion to inner London in 2021. Appendix 6 provides a daily breakdown of the number of warning notices and PCNs issued.
- The remainder of the estimated non-compliant vehicles detected in the zone (36 per cent) were non-chargeable. Non-chargeable includes vehicles that benefit from a grace period, including those for recipients of disability benefits and community transport minibuses, vehicles that benefit from one of the exemptions or discounts, vehicles that had already received a warning notice within the last 28 days, vehicles that were detected on a diversion route, and vehicles for which no enforcement action could be taken based on available data.

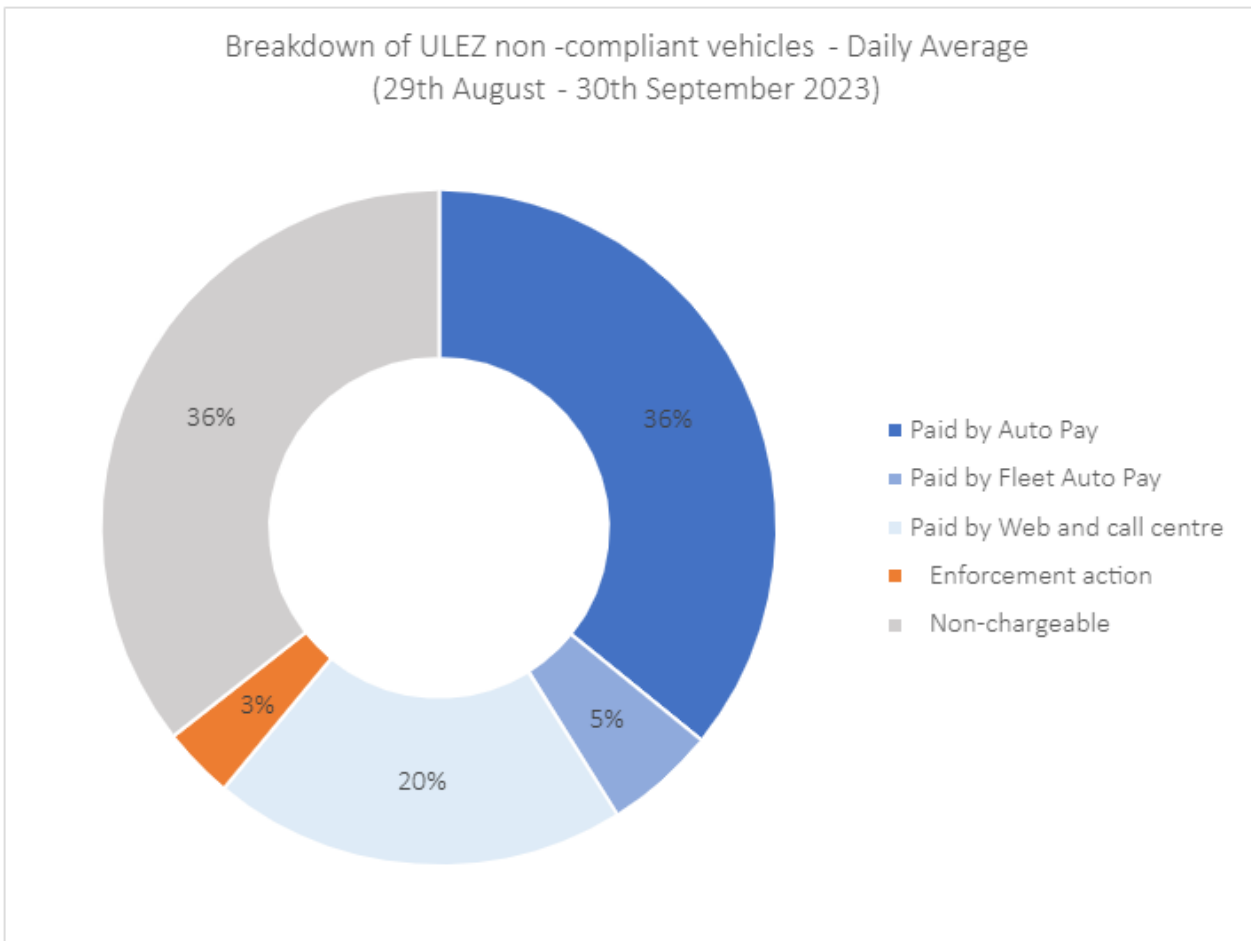
In January 2023, to help drivers of non-compliant cars avoid receiving a PCN, TfL removed the annual £10 per vehicle Auto Pay registration fee and is encouraging drivers to sign up for an Auto Pay account. This can be seen in the account data, with some 92,519 additional active Auto Pay accounts registered since go-live, for a total of almost 1,127,000 Auto Pay accounts. Auto Pay accounts are also used to pay the Congestion Charge, and by people who only travel into the ULEZ infrequently, so the total number of Auto Pay accounts does not align with the number of people who pay the ULEZ charge on a given day.

³² Including both weekdays and weekends

³³ The data referenced in this section relates to the period between the 29 August and 30 September 2023. For the month of September only (excluding 3 days in August) there were 93,000 non-compliant unique vehicles on an average day.

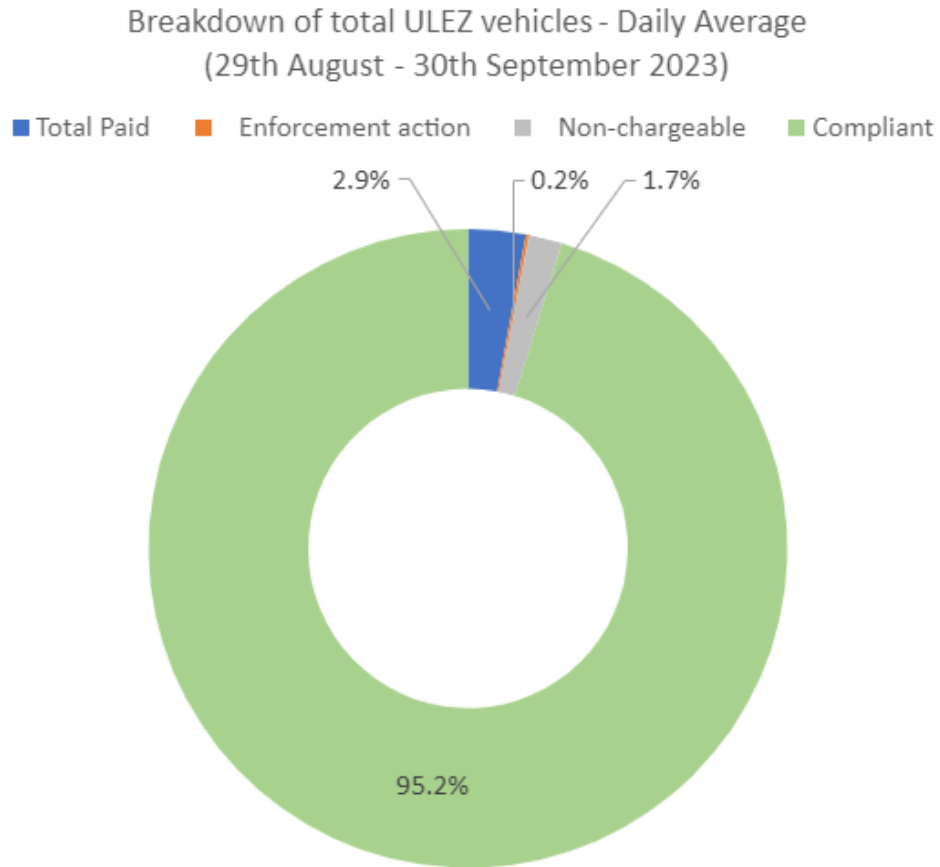
³⁴ As with previous section, this section covers vehicles subject to the ULEZ emissions standards (cars, vans, minibuses, motorcycles). Taxis and vehicles subject to the LEZ standards are not included in these figures.

Figure 7: Breakdown of ULEZ non-compliant vehicles



When looking at the total number of vehicles subject to the ULEZ emissions standards, it is clear that a very small proportion of vehicles seen driving in the zone during the first month of the London-wide ULEZ either paid the charge or received enforcement action. This is because such a high proportion of vehicles are compliant with the ULEZ emissions standards. As shown in Figure 8, 2.9 per cent of all vehicles paid the daily charge, and only 0.2 per cent received enforcement action. The remaining 1.7 per cent of vehicles are non-chargeable.

Figure 8: Breakdown of total ULEZ vehicles



Traffic

The ULEZ was not designed as a congestion management tool but the way it operates means it does influence travel behaviour and traffic, as has been shown in previous ULEZ monitoring reports. TfL uses automatic traffic count (ATC) data that provides traffic volumes at representative sites, often on key roads, across London to monitor changes in traffic flows. These sites provide total traffic flows for all vehicles for each hour of the day.

People who own non-compliant vehicles may choose to pay the daily charge, change their vehicle (the Mayor's scrappage scheme offers all Londoners with an eligible non-compliant car or motorcycle up to £2,000 to change them), drive it less, avoid driving in the zone, or choose an alternative mode of transport for some or all of their journeys. These individual choices may influence overall traffic volumes and patterns over time.

Traffic flow data available to September 2023 has been considered to provide preliminary information for this report after the first month of the operation of the scheme, but further and more detailed analysis of longer-term datasets will be undertaken for future reports.

ATC data does not provide traffic flows by vehicle type. We expect data, including vehicle type, for 2023 to become available in Autumn 2024 and this will be used in the One Year Report for the London-wide ULEZ.³⁵ It is important to note that overall changes in traffic flows do not necessarily reflect the changes to individual vehicle types, which is only possible to determine once the appropriate data is available.

Traffic in London by area

Data from ATC sites within London have been analysed – this includes data from over 300 sites that have been assigned to three areas across London: central London (the original ULEZ area), an inner ring representing the expanded inner London ULEZ area (excluding both central London and the North and South Circular Roads), and the expanded outer London area that is now part of the London-wide ULEZ. The data has been used to index the average daily flow per month for the ATCs in each zone to January 2019. This method is a useful way to summarise large volumes of traffic data. An index of 1.01 means average flows are one per cent higher than January 2019, and an index of 0.99 means flows are one per cent lower than January 2019. The monthly index for each area is shown in Appendix 7.

Traffic flow data represents circulating vehicles travelling on roads across London and is not the same as unique vehicles detected by the camera network, which only need to be seen once by any camera during the day. This means that a reduction in the average number of unique vehicles detected (as reported earlier in this report) does not equate to

³⁵ Traffic counts, including classification by vehicle type, are undertaken as part of the Department for Transport annual surveys. TfL uses this information to supplement its traffic count data.

the same reduction in traffic flows. Preliminary analysis of the indexed traffic flows indicates there are no notable changes in overall traffic in the three areas.

As expected, traffic is higher in September than August, once school holidays have finished, and data is so far within the range of normal observed variations of traffic that can occur in any month. Looking at the expanded outer London area, traffic flows in September 2023 are higher than in August 2023, but are below those in June 2023. A similar trend can be seen especially in 2019 and 2022, which were generally less affected or unaffected by Covid-19 related travel changes.

Traffic around the North and South Circular Roads

Traffic data collected at 34 sites on the North and South Circular Roads (the boundary for the inner London ULEZ) has been analysed and indexed to January 2019. Analysis of the data for the North and South Circular Roads index flows separately does not indicate any notable changes in flows in September 2023. The indexed flows closely follow the pattern observed in previous years on the North Circular, whilst flows on the South Circular in September 2023 remained very similar to those in August 2023 and do not appear to have increased in September 2023 as in previous years. Furthermore, as shown in Appendix 4, compliance rates on the North and South Circular Roads have continued to increase and now sit at 95.6 per cent. This shows that while there have been no notable changes in traffic flows, the vehicles using these roads are cleaner. More data needs to be collated over the coming months to understand longer-term trends, especially as local circumstances can affect traffic flows.

Traffic around the London-wide ULEZ boundary

In terms of the impact of the London-wide ULEZ on traffic near the boundary, modelling undertaken for the consultation estimated that there could be around a one per cent reduction in car kilometres in the expanded outer London area, and a 0.5 per cent reduction in London.³⁶ Whilst analysis of detected vehicles shows that there is a higher proportion of newer, cleaner vehicles in the zone, particularly after the scheme launched, analysis of traffic count data is required to understand any impacts on traffic flows. For this report, analysis of data obtained from 52 ATCs around the boundary of the Greater London Authority area has been undertaken up to the end of September 2023.

Traffic flows vary on a monthly and seasonal basis, and local traffic flows can also be influenced by road works or other local activity. The initial analysis of the traffic flows near the boundary indicates that no unusual changes due to the implementation of the scheme have occurred. As expected from patterns in previous years, flows in September 2023 are

³⁶ <https://haveyoursay.tfl.gov.uk/15619/widgets/44946/documents/27070>

higher than in August 2023 (school holidays) but comparatively remain below levels in June 2023.

It should be noted, however, that the data reported here only covers a one-month period after the expansion of the London-wide ULEZ, which also follows the summer holiday period when traffic flows are generally lower. More data over a longer period is needed before drawing conclusions about the long-term impact of the scheme. Future reports, starting with the Six Month Report, will continue to assess traffic flows to identify what consistent trends emerge.

Conclusions

- A larger proportion of vehicles in London are cleaner, and compliance with the ULEZ emissions standards has increased for all vehicles subject to these standards. 95 per cent of ULEZ vehicles seen driving in the London-wide ULEZ now meet the standards.
- There are fewer older, more polluting vehicles in the zone (45 per cent reduction) and an overall reduction in unique vehicles seen driving in the London-wide ULEZ (two per cent reduction).
- The London-wide ULEZ has closed the gap in compliance levels between outer London and inner and central London. Compliance rates for vehicles using London's roads are now nearly the same across all areas for all vehicle types (95 per cent or higher) – even after just one month of the London-wide ULEZ operating.
- In outer London, vehicle compliance has increased 10 percentage points since the London-wide ULEZ consultation launched in May 2022. Car compliance rates in outer London are now 96 per cent, well over the “nine in ten” rate from November 2022 (the figure used in the TfL awareness raising campaign).
- High levels of compliance mean only a small proportion of drivers are paying the charge or facing enforcement action, and there is still support available through the ULEZ scrappage scheme.

Appendix 1: LEZ compliance

Compliance for the LEZ is reported separately to the ULEZ as the scheme applies to different vehicles. More detailed information on the progression of emissions standards under the LEZ is available in the previous London Low Emission Zone Six Month Report³⁷ and the Inner London Ultra Low Emission Zone – One Year Report.³⁸

The emissions standards for the LEZ were tightened to match the ULEZ standards on the 1 March 2021. Data up to February 2021 is prior to the change in emissions standards, but all the data shown is the compliance with the tighter standards to show changes over time. Data from September 2023 includes information based on the newly installed cameras in outer London.

Table 18 gives the average monthly compliance rates for large and heavy vehicles traveling in the LEZ. It shows that the LEZ compliance rate remains above 97 per cent. This highlights the success of the scheme in reducing the number of older, more polluting heavy vehicles on London's roads. This is based on the number of unique vehicles detected in the zone each day.

³⁷ <https://www.london.gov.uk/programmes-and-strategies/environment-and-climate-change/environment-publications/london-low-emission-zone-six-month-report>

³⁸ <https://www.london.gov.uk/programmes-strategies/environment-and-climate-change/environment-and-climate-change-publications/inner-london-ultra-low-emission-zone-expansion-one-year-report>

Table 18: London-wide Low Emission Zone compliance rate per month

Month	LEZ Compliance Rate (new emissions standards)
<i>Feb – 2017 baseline[§]</i>	48%
May-19*	71.00%
Sep-19*	73.70%
Jan-20*	78.50%
May-20†	83.20%
Jun-20†	83.40%
Jul-20†	83.80%
Aug-20†	85.00%
Sep-20†	85.00%
Oct-20†	85.80%
Nov-20†	87.90%
Dec-20†	88.70%
Jan-21†	89.90%
Feb-21†	90.40%
Mar-21	93.50%
Apr-21	94.30%
May-21	94.50%
Jun-21	94.90%
Jul-21	95.30%
Aug-21	95.50%
Sep-21	95.40%
Oct-21	95.70%
Dec-21	95.90%
Jan-22	96.10%
Feb-22	96.20%
Mar-22	96.10%
Apr-22	96.20%
May-22	96.20%
Jun-22	96.30%
Jul-22	96.70%
Aug-22	97.00%
Sep-22	97.00%
Oct-22	97.10%
Nov-22	97.10%
Dec-22	97.10%
Jan-23	97.20%

Month	LEZ Compliance Rate (new emissions standards)
Feb-23	97.40%
Mar-23	97.40%
Apr-23	97.40%
May-23	97.40%
Jun-23	97.40%
Jul-23	97.50%
Aug-23	97.70%
Sep-23	97.30%
Overall change in compliance February 2017 to present	Increase of 49.3 percentage points
Change in compliance since February 2021 (before the tighter standards)	Increase of 6.9 percentage points

§ February 2017 based on data from the London Atmospheric Emissions Inventory

* Analysis based on sampled days with these months, using historical data

† Compliance rates estimated using information from ANPR camera data and associated vehicle information such as age and type of vehicle

Appendix 2: Daily London-wide ULEZ compliance rates (29 August – 30 September 2023)

Table 19: Daily London-wide ULEZ compliance rates

		Proportion of unique vehicles detected in the London-wide ULEZ that are compliant with ULEZ standards each day				
		All ULEZ vehicles	Cars	Vans	Motorcycles	Minibuses
Weekday	29/08/2023	94.7%	96.0%	85.4%	96.6%	78.0%
Weekday	30/08/2023	94.9%	96.2%	85.8%	96.7%	77.2%
Weekday	31/08/2023	94.9%	96.3%	86.1%	96.9%	76.4%
Weekday	01/09/2023	94.8%	96.1%	85.6%	96.6%	76.7%
Saturday	02/09/2023	95.1%	96.0%	84.2%	96.5%	68.5%
Sunday	03/09/2023	95.3%	96.0%	83.8%	96.2%	67.4%
Weekday	04/09/2023	95.1%	96.4%	86.1%	96.6%	80.6%
Weekday	05/09/2023	95.2%	96.5%	86.3%	96.4%	79.1%
Weekday	06/09/2023	95.2%	96.5%	86.4%	96.5%	81.0%
Weekday	07/09/2023	95.2%	96.5%	86.2%	96.5%	81.6%
Weekday	08/09/2023	95.1%	96.4%	86.0%	96.5%	80.5%
Saturday	09/09/2023	95.1%	96.0%	84.5%	96.5%	69.5%
Sunday	10/09/2023	95.4%	96.1%	84.4%	96.3%	69.1%
Weekday	11/09/2023	95.3%	96.6%	86.6%	96.7%	81.0%
Weekday	12/09/2023	95.3%	96.6%	86.8%	96.7%	81.3%
Weekday	13/09/2023	95.3%	96.6%	86.7%	96.6%	81.3%
Weekday	14/09/2023	95.2%	96.5%	86.4%	96.4%	80.7%
Weekday	15/09/2023	95.2%	96.4%	86.1%	96.5%	79.9%
Saturday	16/09/2023	95.2%	96.1%	84.7%	96.4%	68.4%
Sunday	17/09/2023	95.5%	96.2%	85.0%	96.6%	66.8%
Weekday	18/09/2023	95.4%	96.6%	86.8%	96.8%	81.6%
Weekday	19/09/2023	95.4%	96.7%	87.0%	96.7%	81.5%
Weekday	20/09/2023	95.4%	96.6%	86.9%	96.8%	81.3%
Weekday	21/09/2023	95.3%	96.6%	86.7%	96.8%	80.8%
Weekday	22/09/2023	95.3%	96.5%	86.4%	96.7%	80.3%
Saturday	23/09/2023	95.4%	96.3%	84.9%	96.4%	70.4%
Sunday	24/09/2023	95.6%	96.3%	85.2%	96.4%	69.0%
Weekday	25/09/2023	95.4%	96.6%	86.8%	96.7%	80.7%
Weekday	26/09/2023	95.4%	96.7%	86.9%	96.7%	80.6%

		Proportion of unique vehicles detected in the London-wide ULEZ that are compliant with ULEZ standards each day				
		All ULEZ vehicles	Cars	Vans	Motorcycles	Minibuses
Weekday	27/09/2023	95.4%	96.7%	87.0%	96.6%	81.1%
Weekday	28/09/2023	95.4%	96.6%	86.9%	96.6%	80.5%
Weekday	29/09/2023	95.3%	96.5%	86.4%	96.5%	79.9%
Saturday	30/09/2023	95.2%	96.1%	84.9%	96.4%	71.9%

Appendix 3: Daily detected vehicles in the London-wide ULEZ from 29 August to 30 September 2023

Table 20: Daily number of unique vehicles detected in the London-wide ULEZ

		Number of unique vehicles detected in the London-wide ULEZ each day				
		All ULEZ vehicles	Cars	Vans	Motorcycles	Minibuses
Weekday	29/08/2023	1,887,139	1,598,689	240,967	45,481	2,002
Weekday	30/08/2023	1,920,701	1,626,229	245,050	47,389	2,033
Weekday	31/08/2023	1,923,655	1,630,350	246,310	44,952	2,043
Weekday	01/09/2023	2,056,765	1,764,124	243,934	46,562	2,145
Saturday	02/09/2023	1,901,529	1,715,004	144,697	40,566	1,262
Sunday	03/09/2023	1,763,815	1,622,759	103,177	36,646	1,233
Weekday	04/09/2023	1,960,719	1,665,442	244,531	48,316	2,430
Weekday	05/09/2023	1,991,118	1,684,638	253,091	50,682	2,707
Weekday	06/09/2023	2,002,364	1,694,199	253,779	51,208	3,178
Weekday	07/09/2023	2,022,504	1,713,090	254,680	51,373	3,361
Weekday	08/09/2023	2,073,067	1,770,308	248,321	50,902	3,536
Saturday	09/09/2023	1,924,322	1,736,528	145,284	41,223	1,287
Sunday	10/09/2023	1,787,701	1,646,639	103,965	35,760	1,337
Weekday	11/09/2023	1,981,843	1,681,435	248,539	48,416	3,453
Weekday	12/09/2023	2,007,749	1,700,675	255,910	47,657	3,507
Weekday	13/09/2023	2,018,016	1,708,378	256,045	50,021	3,572
Weekday	14/09/2023	2,043,036	1,730,237	257,690	51,535	3,574
Weekday	15/09/2023	2,087,917	1,784,066	249,637	50,606	3,608
Saturday	16/09/2023	1,940,794	1,750,133	147,569	41,831	1,261
Sunday	17/09/2023	1,748,550	1,611,903	103,072	32,424	1,151
Weekday	18/09/2023	1,976,561	1,679,341	247,742	45,958	3,520
Weekday	19/09/2023	1,979,131	1,675,372	253,719	46,502	3,538
Weekday	20/09/2023	1,998,170	1,697,365	253,658	43,461	3,686
Weekday	21/09/2023	2,026,246	1,719,842	255,830	46,879	3,695
Weekday	22/09/2023	2,085,780	1,783,906	250,198	47,945	3,731
Saturday	23/09/2023	1,943,539	1,752,379	149,377	40,547	1,236
Sunday	24/09/2023	1,777,324	1,635,619	105,655	34,821	1,229
Weekday	25/09/2023	1,992,355	1,689,672	250,917	48,303	3,463
Weekday	26/09/2023	2,017,177	1,706,306	257,523	49,639	3,709
Weekday	27/09/2023	2,016,731	1,706,600	256,419	49,909	3,803
Weekday	28/09/2023	2,016,988	1,708,011	255,501	49,759	3,717
Weekday	29/09/2023	2,088,814	1,787,178	248,065	49,990	3,581
Saturday	30/09/2023	1,981,790	1,790,602	148,207	41,609	1,372

Table 21: Daily number of unique non-compliant vehicles detected in the London-wide ULEZ

		Number of unique non-compliant vehicles detected in the London-wide ULEZ each day				
		All ULEZ vehicles	Cars	Vans	Motorcycles	Minibuses
Weekday	29/08/2023	100,845	63,765	35,077	1,563	440
Weekday	30/08/2023	98,293	61,429	34,821	1,579	464
Weekday	31/08/2023	97,226	61,041	34,291	1,411	483
Weekday	01/09/2023	106,708	69,428	35,207	1,573	500
Saturday	02/09/2023	93,810	69,184	22,792	1,437	397
Sunday	03/09/2023	82,645	64,138	16,720	1,385	402
Weekday	04/09/2023	95,772	59,614	34,025	1,661	472
Weekday	05/09/2023	96,341	59,217	34,748	1,811	565
Weekday	06/09/2023	96,811	59,776	34,619	1,812	604
Weekday	07/09/2023	97,940	60,425	35,116	1,781	618
Weekday	08/09/2023	101,059	63,886	34,719	1,766	688
Saturday	09/09/2023	93,847	69,412	22,581	1,462	392
Sunday	10/09/2023	81,557	63,599	16,206	1,339	413
Weekday	11/09/2023	93,526	57,828	33,428	1,614	656
Weekday	12/09/2023	94,183	58,066	33,897	1,564	656
Weekday	13/09/2023	94,245	57,767	34,109	1,702	667
Weekday	14/09/2023	97,788	60,129	35,128	1,841	690
Weekday	15/09/2023	100,559	63,442	34,603	1,787	727
Saturday	16/09/2023	92,531	68,076	22,545	1,512	398
Sunday	17/09/2023	77,963	61,000	15,494	1,087	382
Weekday	18/09/2023	91,369	56,575	32,658	1,487	649
Weekday	19/09/2023	90,816	55,513	33,109	1,541	653
Weekday	20/09/2023	92,508	57,153	33,256	1,411	688
Weekday	21/09/2023	94,801	58,531	34,054	1,506	710
Weekday	22/09/2023	98,366	62,105	33,936	1,589	736
Saturday	23/09/2023	89,946	65,532	22,585	1,463	366
Sunday	24/09/2023	77,639	60,365	15,635	1,258	381
Weekday	25/09/2023	92,124	56,615	33,232	1,609	668
Weekday	26/09/2023	92,412	56,379	33,671	1,643	719
Weekday	27/09/2023	92,170	56,336	33,410	1,707	717
Weekday	28/09/2023	93,098	57,248	33,438	1,686	726
Weekday	29/09/2023	98,407	62,237	33,703	1,748	719
Saturday	30/09/2023	94,605	70,270	22,443	1,507	385

Appendix 4: Monthly average compliance rates and vehicles detected in central ULEZ area, inner London ULEZ area, and North and South Circular Roads

Central London ULEZ area

Table 22: Daily average number and proportion of ULEZ compliant vehicles detected in the central ULEZ area per month (rounded to the nearest 1000 vehicles)

Date	Number of ULEZ vehicles driving in the central ULEZ area			Proportions of vehicles driving in the central ULEZ area	
	Unique vehicles detected in zone	Non-compliant vehicles	Compliant vehicles	Non-compliant vehicles	Compliant vehicles
May-22	141,000	11,000	130,000	8.0%	92.0%
Nov-22	143,000	9,000	134,000	6.5%	93.5%
May-23	143,000	8,000	136,000	5.3%	94.7%
Jun-23	153,000	8,000	145,000	5.1%	94.9%
Jul-23	152,000	8,000	145,000	5.1%	94.9%
Aug-23	144,000	7,000	137,000	5.0%	95.0%
Sep-23	158,000	7,000	151,000	4.5%	95.5%
Change between June 2023 and September 2023	5,000	-1,000	6,000	-0.7 ppt	+ 0.7 ppt
% Change in vehicles between June 2023 and September 2023	3%	-10%	4%	N/A	N/A
Change between Nov 2022 and Sep 2023	15,000	-2,000	17,000	-2 ppt	+ 2 ppt
Change between May 2022 and Sep 2023	17,000	-4,000	21,000	-3.5 ppt	+ 3.5 ppt

Table 23: Daily average number and proportion of ULEZ compliant cars (M1 and PHV, excl. taxis) detected in the central ULEZ area per month (rounded to nearest 1000 vehicles)

Date	Number of cars (incl. PHVs) driving in the central ULEZ area			Proportions of vehicles driving in the central ULEZ area	
	Unique cars detected in zone	Non-compliant cars	Compliant cars	Non-compliant cars	Compliant cars
May-22	105,000	7,000	99,000	6.4%	93.6%
Nov-22	105,000	6,000	100,000	5.2%	94.8%
May-23	106,000	4,000	102,000	4.2%	95.8%
Jun-23	112,000	5,000	108,000	4.1%	95.9%
Jul-23	114,000	5,000	109,000	4.2%	95.8%
Aug-23	107,000	4,000	102,000	4.1%	95.9%
Sep-23	117,000	4,000	113,000	3.5%	96.5%
Change between June 2023 and September 2023	5,000	-1,000	5,000	-0.6 ppt	+ 0.6 ppt
% Change in vehicles between June 2023 and September 2023	4%	-11%	5%	N/A	N/A
Change between Nov 2022 and Sep 2023	12,000	-1,000	13,000	-1.7 ppt	+ 1.7 ppt
Change between May 2022 and Sep 2023	12,000	-3,000	14,000	-2.9 ppt	+ 2.9 ppt

Table 24: Daily average number and proportion of ULEZ compliant vans (N1) detected in the central ULEZ area per month (rounded to nearest 100 vehicles)

Date	Number of vans driving in the central ULEZ area			Proportions of vehicles driving in the central ULEZ area	
	Unique vans detected in zone	Non-compliant vans	Compliant vans	Non-compliant vans	Compliant vans
May-22	28,700	4,200	24,500	14.7%	85.3%
Nov-22	31,600	3,700	28,000	11.6%	88.4%
May-23	29,100	2,800	26,300	9.7%	90.3%
Jun-23	32,000	3,000	29,000	9.3%	90.7%
Jul-23	30,600	2,800	27,800	9.3%	90.7%
Aug-23	29,900	2,600	27,200	8.9%	91.1%
Sep-23	32,200	2,700	29,500	8.4%	91.6%
Change between June 2023 and September 2023	200	-300	500	-0.9 ppt	+ 0.9 ppt
% Change in vehicles between June 2023 and September 2023	1%	-9%	2%	N/A	N/A
Change between Nov 2022 and Sep 2023	500	-900	1,500	-3.1 ppt	+ 3.1 ppt
Change between May 2022 and Sep 2023	3,500	-1,500	5,000	-6.3 ppt	+ 6.3 ppt

Table 25: Daily average number and proportion of ULEZ compliant minibuses detected in the central London ULEZ area per month (rounded to nearest 10 vehicles)

Date	Number of minibuses driving in the central ULEZ area			Proportions of vehicles driving in central ULEZ area	
	Unique minibuses detected in zone	Non-compliant minibuses	Compliant minibuses	Non-compliant minibuses	Compliant minibuses
May-22	310	70	250	20.9%	79.1%
Nov-22	320	60	250	20.2%	79.8%
May-23	320	60	260	19.4%	80.6%
Jun-23	360	70	290	19.3%	80.7%
Jul-23	320	70	250	22.7%	77.3%
Aug-23	240	50	180	22.8%	77.2%
Sep-23	310	60	250	19.1%	80.9%
Change between June 2023 and September 2023	-50	-10	-40	-0.2 ppt	+ 0.2 ppt
% Change in vehicles between June 2023 and September 2023	-14%	-15%	-14%	N/A	N/A
Change between Nov 2022 and Sep 2023	-10	-10	-10	-1 ppt	+ 1 ppt
Change between May 2022 and Sep 2023	-10	-10	0	-1.8 ppt	+ 1.8 ppt

Table 26: Daily average number and proportion of ULEZ compliant motorcycles (L) detected in the central London ULEZ area per month (rounded to nearest 10 vehicles)

Date	Number of motorcycles driving in the central ULEZ area			Proportions of vehicles driving in the central ULEZ area	
	Unique motorcycles detected in zone	Non-compliant motorcycles	Compliant motorcycles	Non-compliant motorcycles	Compliant motorcycles
May-22	6,490	180	6,320	2.8%	97.2%
Nov-22	6,130	110	6,020	1.8%	98.2%
May-23	7,530	140	7,390	1.9%	98.1%
Jun-23	8,320	160	8,150	1.9%	98.1%
Jul-23	7,680	150	7,540	1.9%	98.1%
Aug-23	7,250	140	7,120	1.9%	98.1%
Sep-23	8,330	170	8,170	2.0%	98.0%
Change between June 2023 and September 2023	20	0	10	0.1 ppt	+ -0.1 ppt
% Change in vehicles between June 2023 and September 2023	0%	3%	0%	N/A	N/A
Change between Nov 2022 and Sep 2023	2,200	60	2,140	0.2 ppt	+ -0.2 ppt
Change between May 2022 and Sep 2023	1,840	-10	1,850	-0.8 ppt	+ 0.8 ppt

Inner London ULEZ area

Table 27: Daily average number and proportion of ULEZ compliant vehicles detected in the inner London ULEZ area per month (rounded to the nearest 1000 vehicles)

Date	Number of ULEZ vehicles driving in the inner London ULEZ area			Proportions of vehicles driving in the inner London ULEZ area	
	Unique vehicles detected in zone	Non-compliant vehicles	Compliant vehicles	Non-compliant vehicles	Compliant vehicles
May-22	929,000	57,000	871,000	6.2%	93.8%
Nov-22	912,000	49,000	863,000	5.4%	94.6%
May-23	911,000	41,000	870,000	4.5%	95.5%
Jun-23	935,000	42,000	893,000	4.5%	95.5%
Jul-23	903,000	40,000	863,000	4.4%	95.6%
Aug-23	840,000	36,000	803,000	4.3%	95.7%
Sep-23	911,000	37,000	874,000	4.1%	95.9%
Change between June 2023 and September 2023	-24,000	-5,000	-20,000	-0.4 ppt	+ 0.4 ppt
% Change in vehicles between June 2023 and September 2023	-3%	-11%	-2%	N/A	N/A
Change between Nov 2022 and Sep 2023	-1,000	-12,000	11,000	-1.3 ppt	+ 1.3 ppt
Change between May 2022 and Sep 2023	-18,000	-20,000	3,000	-2.1 ppt	+ 2.1 ppt

Table 28: Daily average number and proportion of ULEZ compliant cars (M1 and PHV, excl. taxis) detected in the inner ULEZ area per month (rounded to nearest 1000 vehicles)

Date	Number of cars (incl. PHVs) driving in the inner London ULEZ area			Proportions of vehicles driving in the inner London ULEZ area	
	Unique cars detected in zone	Non-compliant cars	Compliant cars	Non-compliant cars	Compliant cars
May-22	778,000	35,000	742,000	4.6%	95.4%
Nov-22	757,000	30,000	727,000	4.0%	96.0%
May-23	764,000	26,000	738,000	3.4%	96.6%
Jun-23	779,000	26,000	753,000	3.3%	96.7%
Jul-23	755,000	25,000	730,000	3.3%	96.7%
Aug-23	698,000	23,000	675,000	3.3%	96.7%
Sep-23	758,000	23,000	735,000	3.1%	96.9%
Change between June 2023 and September 2023	-21,000	-3,000	-18,000	-0.3 ppt	+ 0.3 ppt
% Change in vehicles between June 2023 and September 2023	-3%	-11%	-2%	N/A	N/A
Change between Nov 2022 and Sep 2023	2,000	-7,000	8,000	-0.9 ppt	+ 0.9 ppt
Change between May 2022 and Sep 2023	-20,000	-12,000	-7,000	-1.5 ppt	+ 1.5 ppt

Table 29: Daily average number and proportion of ULEZ compliant vans (N1) detected in the inner ULEZ area per month (rounded to nearest 100 vehicles)

Date	Number of vans driving in the inner London ULEZ area			Proportions of vehicles driving in the inner London ULEZ area	
	Unique vans detected in zone	Non-compliant vans	Compliant vans	Non-compliant vans	Compliant vans
May-22	118,600	20,600	98,000	17.4%	82.6%
Nov-22	125,100	18,000	107,100	14.4%	85.6%
May-23	115,500	14,300	101,100	12.4%	87.6%
Jun-23	122,900	14,600	108,300	11.9%	88.1%
Jul-23	116,600	13,500	103,100	11.6%	88.4%
Aug-23	112,200	12,500	99,700	11.1%	88.9%
Sep-23	120,300	12,800	107,500	10.6%	89.4%
Change between June 2023 and September 2023	-2,500	-1,800	-700	-1.3 ppt	+ 1.3 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-13%	-1%	N/A	N/A
Change between Nov 2022 and Sep 2023	-4,700	-5,200	500	-3.8 ppt	+ 3.8 ppt
Change between May 2022 and Sep 2023	1,700	-7,800	9,500	-6.7 ppt	+ 6.7 ppt

Table 30: Daily average number and proportion of ULEZ compliant minibuses detected in the inner London ULEZ area per month (rounded to nearest 10 vehicles)

Date	Number of minibuses driving in the inner London ULEZ area			Proportions of vehicles driving in the inner London ULEZ area	
	Unique minibuses detected in zone	Non-compliant minibuses	Compliant minibuses	Non-compliant minibuses	Compliant minibuses
May-22	1,660	350	1,310	21.1%	78.9%
Nov-22	1,740	340	1,400	19.4%	80.6%
May-23	1,590	310	1,280	19.4%	80.6%
Jun-23	1,750	340	1,410	19.5%	80.5%
Jul-23	1,440	310	1,130	21.5%	78.5%
Aug-23	990	220	770	22.1%	77.9%
Sep-23	1,540	280	1,260	18.3%	81.7%
Change between June 2023 and September 2023	-200	-60	-150	-1.2 ppt	+ 1.2 ppt
% Change in vehicles between June 2023 and September 2023	-12%	-17%	-10%	N/A	N/A
Change between Nov 2022 and Sep 2023	-200	-60	-140	-1.2 ppt	+ 1.2 ppt
Change between May 2022 and Sep 2023	-120	-70	-50	-2.9 ppt	+ 2.9 ppt

Table 31: Daily average number and proportion of ULEZ compliant motorcycles (L) detected in the inner London ULEZ area per month (rounded to near 10 vehicles)

Date	Number of motorcycles driving in the inner London ULEZ area			Proportions of vehicles driving in the inner London ULEZ area	
	Unique motorcycles detected in zone	Non-compliant motorcycles	Compliant motorcycles	Non-compliant motorcycles	Compliant motorcycles
May-22	30,540	1,010	29,530	3.3%	96.7%
Nov-22	28,640	770	27,870	2.7%	97.3%
May-23	29,880	820	29,060	2.7%	97.3%
Jun-23	31,610	890	30,720	2.8%	97.2%
Jul-23	29,500	810	28,690	2.7%	97.3%
Aug-23	28,480	770	27,710	2.7%	97.3%
Sep-23	30,890	850	30,040	2.8%	97.2%
Change between June 2023 and September 2023	-720	-40	-680	-0.1 ppt	+ 0.1 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-4%	-2%	N/A	N/A
Change between Nov 2022 and Sep 2023	2,250	80	2,170	0.1 ppt	+ -0.1 ppt
Change between May 2022 and Sep 2023	340	-160	510	-0.6 ppt	+ 0.6 ppt

North and South Circular (NSC) Roads

Table 32: Daily average number and proportion of ULEZ compliant vehicles detected on the North and South Circular Roads per month (rounded to the nearest 1000 vehicles)

Date	Number of ULEZ vehicles driving on the North and South Circular Roads			Proportions of vehicles driving on NSC	
	Unique vehicles detected on NCR	Non-compliant vehicles	Compliant vehicles	Non-compliant vehicles	Compliant vehicles
May-22*	251,000	25,000	226,000	10.0%	90.0%
Nov-22*	288,000	22,000	266,000	7.6%	92.4%
May-23*	363,000	22,000	341,000	6.1%	93.9%
Jun-23	396,000	23,000	372,000	5.9%	94.1%
Jul-23	394,000	22,000	372,000	5.6%	94.4%
Aug-23	376,000	20,000	356,000	5.3%	94.7%
Sep-23	392,000	17,000	374,000	4.4%	95.6%
Change between June 2023 and September 2023	-4,000	-6,000	2,000	-1.5 ppt	+ 1.5 ppt
% Change in vehicles between June 2023 and September 2023	-1%	-26%	1%		
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-3.3 ppt	+ 3.3 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-5.7 ppt	+ 5.7 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

Table 33: Daily average number and proportion of ULEZ compliant cars (M1 and PHV, excl. taxis) detected on the North and South Circular Roads per month (rounded to nearest 1000 vehicles)

Date	Number of cars (incl. PHVs) on the North and South Circular Roads			Proportions of vehicles driving on NSC	
	Unique cars detected on NCR	Non-compliant cars	Compliant cars	Non-compliant cars	Compliant cars
May-22*	213,000	16,000	197,000	7.7%	92.3%
Nov-22*	235,000	14,000	221,000	5.9%	94.1%
May-23*	300,000	14,000	286,000	4.7%	95.3%
Jun-23	324,000	15,000	310,000	4.5%	95.5%
Jul-23	325,000	14,000	311,000	4.4%	95.6%
Aug-23	309,000	13,000	297,000	4.1%	95.9%
Sep-23	321,000	10,000	311,000	3.2%	96.8%
Change between June 2023 and September 2023	-3,000	-4,000	1,000	-1.3 ppt	+ 1.3 ppt
% Change in vehicles between June 2023 and September 2023	-1%	-30%	0%		
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-2.7 ppt	+ 2.7 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-4.5 ppt	+ 4.5 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

Table 34: Daily average number and proportion of ULEZ compliant vans (N1) detected on the North and South Circular Roads per month (rounded to nearest 100 vehicles)

Date	Number of vans driving on the North and South Circular Roads			Proportions of vehicles driving on NSC	
	Unique vans detected on NCR	Non-compliant vans	Compliant vans	Non-compliant vans	Compliant vans
May-22*	36,500	8,400	28,100	23.1%	76.9%
Nov-22*	51,300	8,000	43,300	15.6%	84.4%
May-23*	58,000	7,600	50,300	13.2%	86.8%
Jun-23	65,100	8,200	56,900	12.6%	87.4%
Jul-23	62,500	7,600	54,900	12.2%	87.8%
Aug-23	60,600	7,000	53,600	11.6%	88.4%
Sep-23	63,800	6,600	57,200	10.4%	89.6%
Change between June 2023 and September 2023	-1,300	-1,600	300	-2.2 ppt	+ 2.2 ppt
% Change in vehicles between June 2023 and September 2023	-2%	-19%	0%		
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-5.2 ppt	+ 5.2 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-12.7 ppt	+ 12.7 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

Table 35: Daily average number and proportion of ULEZ compliant minibuses detected on the North and South Circular Roads per month (rounded to nearest 10 vehicles)

Date	Number of minibuses driving on the North and South Circular Roads			Proportions of vehicles driving on NSC	
	Unique minibuses detected on NCR	Non-compliant minibuses	Compliant minibuses	Non-compliant minibuses	Compliant minibuses
May-22*	370	110	260	29.3%	70.7%
Nov-22*	450	100	350	22.5%	77.5%
May-23*	590	130	460	21.4%	78.6%
Jun-23	700	150	550	21.4%	78.6%
Jul-23	580	140	440	23.5%	76.5%
Aug-23	430	100	320	24.0%	76.0%
Sep-23	600	120	480	20.0%	80.0%
Change between June 2023 and September 2023	-90	-30	-60	-1.4 ppt	+ 1.4 ppt
% Change in vehicles between June 2023 and September 2023	-13%	-19%	-12%		
Change between Nov 2022 and Sep 2023	N/A	N/A	N/A	-2.5 ppt	+ 2.5 ppt
Change between May 2022 and Sep 2023	N/A	N/A	N/A	-9.3 ppt	+ 9.3 ppt

* November 2022 and May 2022 are based on the camera network in place before additional new cameras were installed for the London-wide ULEZ. Detected volumes for these months cannot be compared to London-wide ULEZ volumes for the new camera network. Data for May 2023 included the first data available from some cameras installed as part of the network changes, as well as bank holidays (including the coronation).

Table 36: Daily average number and proportion of ULEZ compliant motorcycles (L) detected on the North and South Circular Roads per month (rounded to near 10 vehicles)

Date	Number of Motorcycles driving on the North and South Circular Roads			Proportions of vehicles driving on NSC	
	Unique motorcycles detected on NCR	Non-compliant motorcycles	Compliant motorcycles	Non-compliant motorcycles	Compliant motorcycles
May-23**	4,510	130	4,380	2.9%	97.1%
Jun-23	5,350	150	5,200	2.8%	97.2%
Jul-23	5,330	150	5,180	2.7%	97.3%
Aug-23	5,190	130	5,060	2.5%	97.5%
Sep-23	5,890	130	5,760	2.3%	97.7%
Change between June 2023 and September 2023	540	-20	560	-0.5 ppt	+ 0.5 ppt
% Change in vehicles between June 2023 and September 2023	10%	-10%	11%		

***Data on motorcycles available from May 2023 following enhancements to the camera network in preparation for London-wide ULEZ scheme. Data for May 2023 included the first data available from some cameras installed as part of the network changes.*

ppt - Percentage points (ppt)

Appendix 5: Weekday and weekend compliance

Compliance rates for all days from the start of the scheme on 29 August 2023 are provided in Appendix 2. Compliance rates in September 2023 vary a little depending on the day of the week. Car compliance is marginally higher (about 0.5 per cent) and van compliance is two per cent higher on weekdays compared to weekends. There tend to be more cars detected in the London-wide zone on an average weekend day than weekdays, but there are more vans on weekdays than weekend days. Table 37 provides a summary of the changes in numbers of non-compliant vehicles detected on weekdays and weekends in June and September 2023, along with the percentage reductions observed. Based on the first month of the scheme, the number of non-compliant cars has reduced by 52 per cent on weekdays, compared to a 47 per cent reduction on weekends. For vans, the reduction on both weekends and weekdays was about 33 per cent.

Table 37: Daily average non-compliant vehicle detections in the London-wide ULEZ per month – by weekday and weekend

	Jun-23	Sep-23	Change in vehicles detected	Percentage reduction
Vehicle Type	Average Weekday – Detected non-compliant vehicles			
ULEZ Vehicles	176,000	96,000	- 80,000	-45%
Cars	122,000	59,000	- 63,000	-52%
Vans	50,400	34,000	- 16,400	-33%
Motorcycles	1,950	1,660	- 290	-15%
Minibuses	850	660	- 190	-22%
Vehicle Type	Average Weekend – Detected non-compliant vehicles			
ULEZ Vehicles	156,000	87,000	- 69,000	-44%
Cars	125,000	66,000	- 59,000	-47%
Vans	29,300	19,700	- 9,600	-33%
Motorcycles	1,580	1,380	- 200	-13%
Minibuses	480	390	- 90	-19%

Appendix 6: Warning notices and PCNs

During the first four weeks following expansion, warning notices were issued to owners of non-compliant vehicles who had not paid the ULEZ charge after driving in the zone. This is the same approach that was taken when the central London ULEZ first launched in 2019 and when the ULEZ expanded to inner London in 2021. Warning notices were issued to ensure the correct action is taken in the future and to allow for any genuine mistakes that may have occurred. Only one warning notice was issued per vehicle. Since 26 September 2023, Penalty Charge Notices have been issued for contraventions.

Table 38: Daily number of warning notices and PCNs issued

Weekday/weekend	Date	Numbers of warning notices issued	Number of PCNs issued
Weekday	29/08/2023	12,613	
Weekday	30/08/2023	5,895	
Weekday	31/08/2023	4,245	
Weekday	01/09/2023	5,452	
Weekend	02/09/2023	4,691	
Weekend	03/09/2023	3,507	
Weekday	04/09/2023	3,257	
Weekday	05/09/2023	2,950	
Weekday	06/09/2023	2,807	
Weekday	07/09/2023	2,726	
Weekday	08/09/2023	2,986	
Weekend	09/09/2023	3,513	
Weekend	10/09/2023	2,621	
Weekday	11/09/2023	2,445	
Weekday	12/09/2023	2,250	
Weekday	13/09/2023	2,194	
Weekday	14/09/2023	2,381	
Weekday	15/09/2023	2,526	
Weekend	16/09/2023	3,112	
Weekend	17/09/2023	2,463	
Weekday	18/09/2023	2,169	
Weekday	19/09/2023	2,130	
Weekday	20/09/2023	2,006	
Weekday	21/09/2023	2,051	
Weekday	22/09/2023	2,334	
Weekend	23/09/2023	2,743	
Weekend	24/09/2023	2,212	

Weekday/weekend	Date	Numbers of warning notices issued	Number of PCNs issued
Weekday	25/09/2023	1,976	
Weekday	26/09/2023		1,876
Weekday	27/09/2023		2,265
Weekday	28/09/2023		2,426
Weekday	29/09/2023		2,827
Weekend	30/09/2023		4,086

Appendix 7: Indexed Traffic Flows

Figure 9: Indexed traffic flows in central London ULEZ area

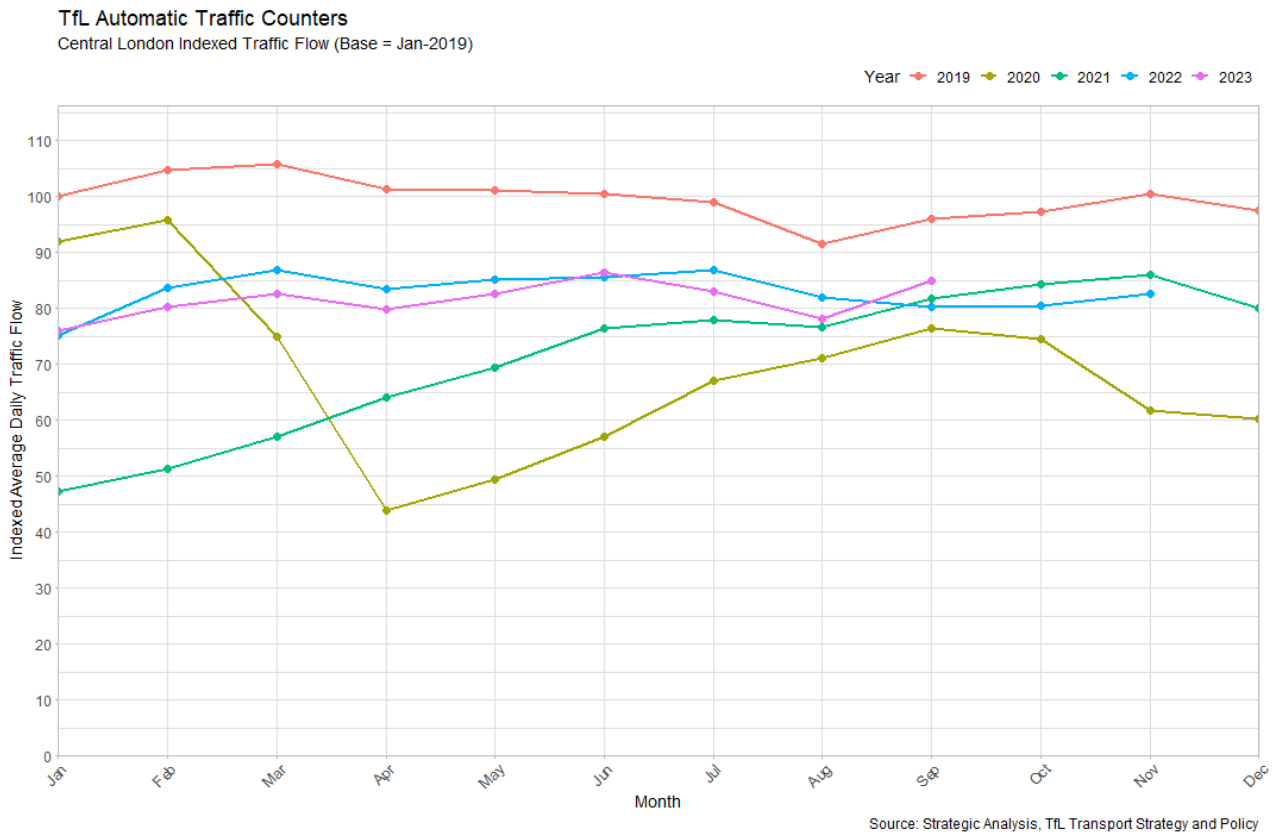


Figure 10: Indexed traffic flows in inner London area (excluding central London and the North and South Circular Roads)

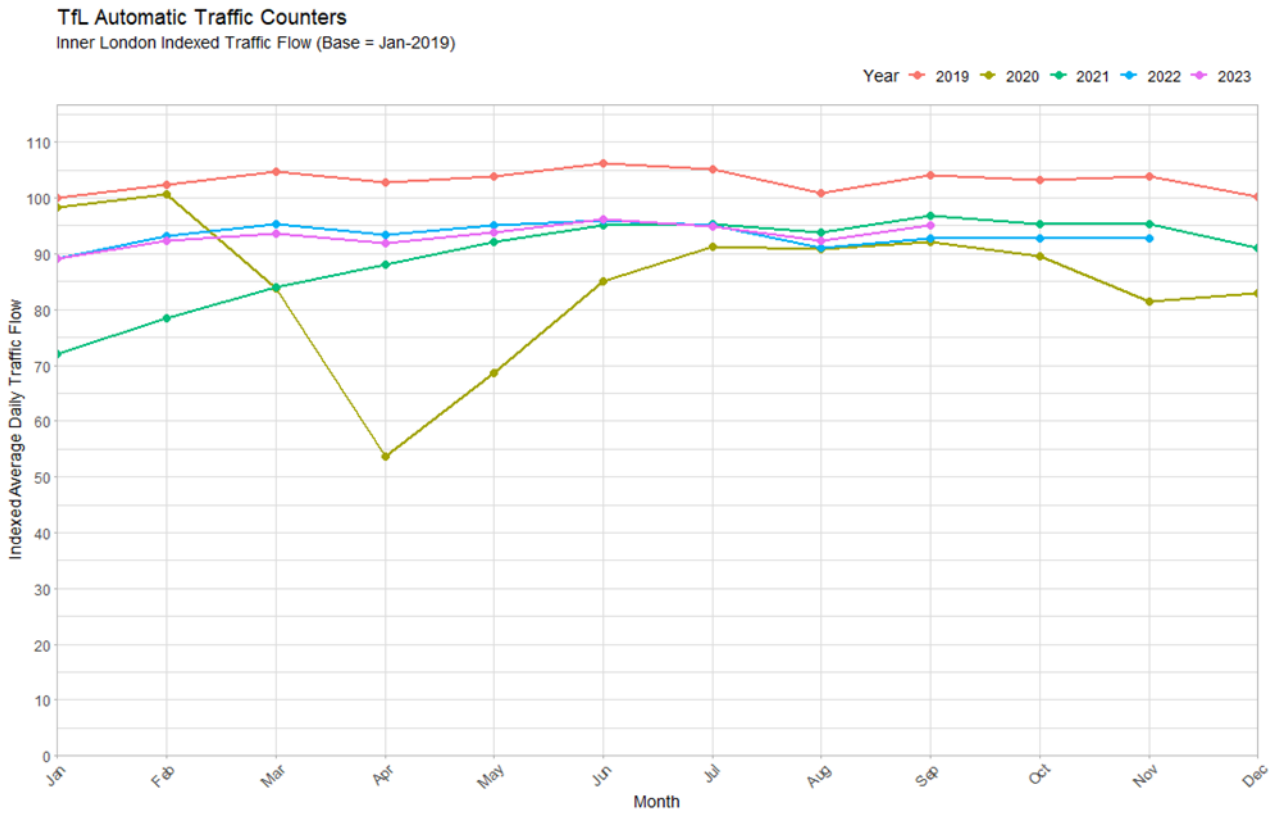


Figure 11: Indexed traffic flows in expanded outer London ULEZ area

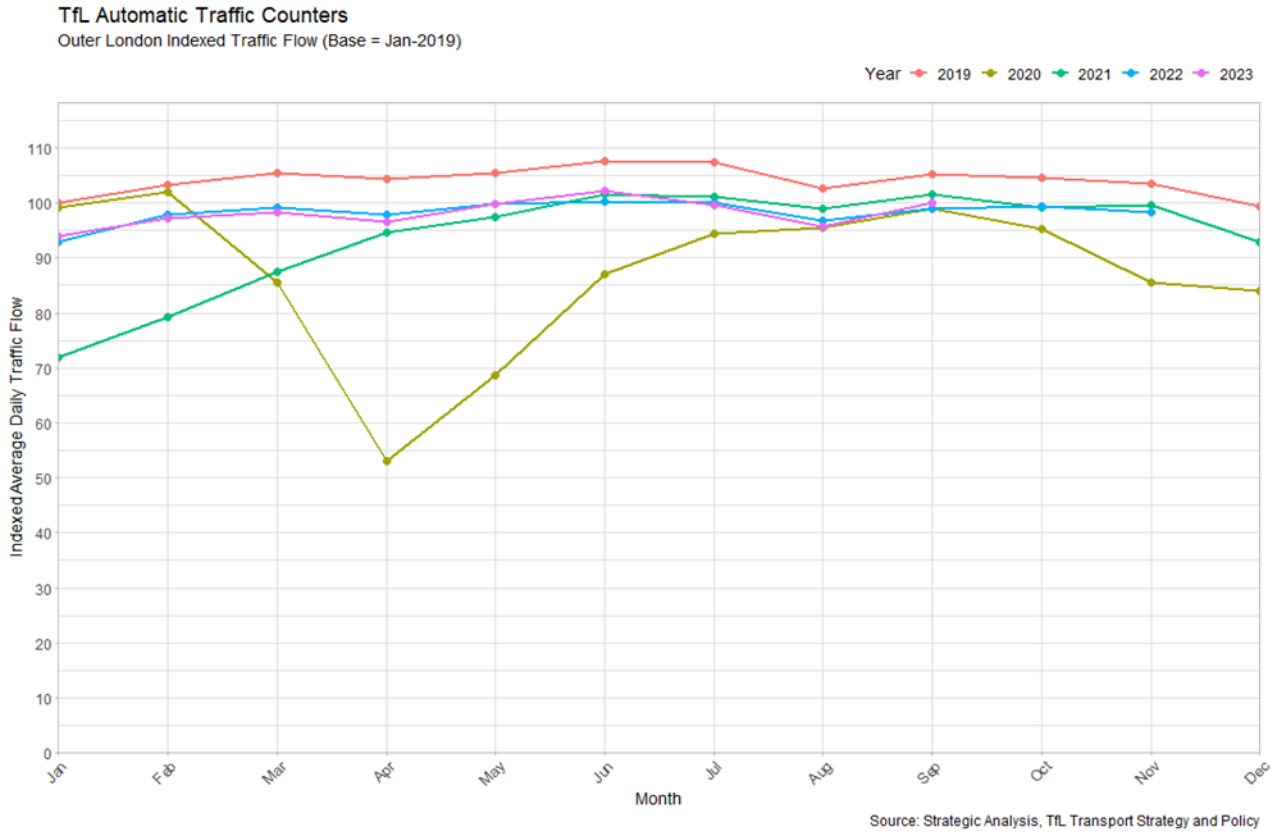


Figure 12: Indexed traffic flows in London-wide ULEZ

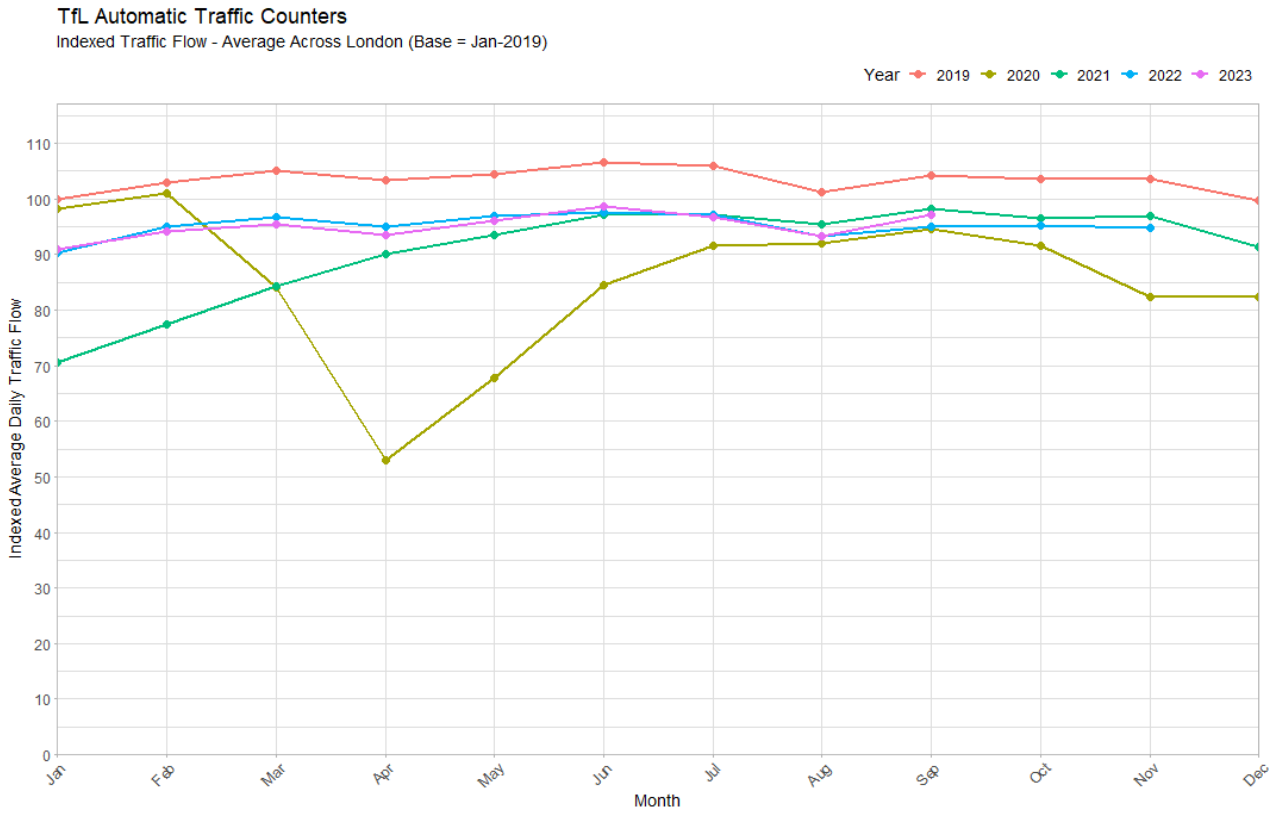


Table 39: Indexed monthly traffic in central, expanded inner, and expanded outer ULEZ areas

Central ULEZ	2019	2020	2021	2022	2023
Jan	1.00	0.92	0.47	0.75	0.76
Feb	1.05	0.96	0.51	0.84	0.80
Mar	1.06	0.75	0.57	0.87	0.83
Apr	1.01	0.44	0.64	0.83	0.80
May	1.01	0.49	0.69	0.85	0.83
Jun	1.00	0.57	0.76	0.86	0.86
Jul	0.99	0.67	0.78	0.87	0.83
Aug	0.92	0.71	0.77	0.82	0.78
Sep	0.96	0.77	0.82	0.80	0.85
Oct	0.97	0.74	0.84	0.80	
Nov	1.00	0.62	0.86	0.83	
Dec	0.97	0.60	0.80	0.76	
Expanded inner	2019	2020	2021	2022	2023
Jan	1.00	0.98	0.72	0.89	0.89
Feb	1.02	1.01	0.78	0.93	0.92
Mar	1.05	0.84	0.84	0.95	0.94
Apr	1.03	0.54	0.88	0.93	0.92
May	1.04	0.69	0.92	0.95	0.94
Jun	1.06	0.85	0.95	0.96	0.96
Jul	1.05	0.91	0.95	0.95	0.95
Aug	1.01	0.91	0.94	0.91	0.92
Sep	1.04	0.92	0.97	0.93	0.95
Oct	1.03	0.89	0.95	0.93	
Nov	1.04	0.81	0.95	0.93	
Dec	1.00	0.83	0.91	0.89	
Expanded outer	2019	2020	2021	2022	2023
Jan	1.00	0.99	0.72	0.93	0.94
Feb	1.03	1.02	0.79	0.98	0.97
Mar	1.05	0.85	0.87	0.99	0.98
Apr	1.04	0.53	0.95	0.98	0.97
May	1.05	0.69	0.97	1.00	1.00
Jun	1.07	0.87	1.01	1.00	1.02
Jul	1.07	0.94	1.01	1.00	1.00
Aug	1.03	0.95	0.99	0.97	0.96
Sep	1.05	0.99	1.01	0.99	1.00
Oct	1.05	0.95	0.99	0.99	
Nov	1.04	0.85	1.00	0.98	
Dec	0.99	0.84	0.93	N/A	

London-wide	2019	2020	2021	2022	2023
Jan	1.00	0.98	0.71	0.90	0.91
Feb	1.03	1.01	0.77	0.95	0.94
Mar	1.05	0.84	0.84	0.97	0.95
Apr	1.03	0.53	0.90	0.95	0.94
May	1.04	0.68	0.93	0.97	0.96
Jun	1.06	0.84	0.97	0.98	0.99
Jul	1.06	0.92	0.97	0.97	0.97
Aug	1.01	0.92	0.95	0.93	0.93
Sep	1.04	0.95	0.98	0.95	0.97
Oct	1.04	0.92	0.97	0.95	
Nov	1.03	0.82	0.97	0.95	
Dec	1.00	0.82	0.91	N/A	

Figure 13: Indexed traffic flows on North and South Circular Roads

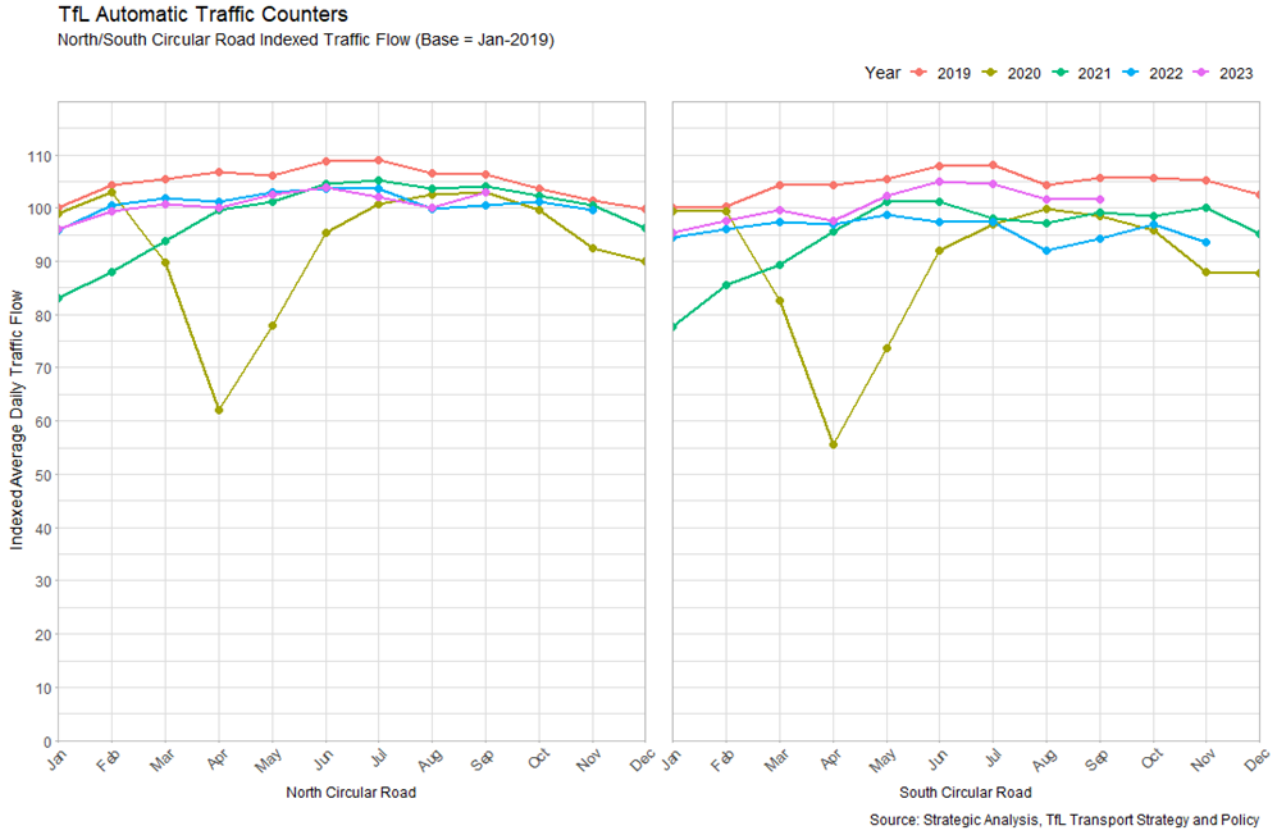


Table 40: Monthly traffic flow index on North and South Circular Roads (Index to January 2019)

North Circular Road	2019	2020	2021	2022	2023
Jan	1.00	0.99	0.83	0.96	0.96
Feb	1.04	1.03	0.88	1.00	0.99
Mar	1.05	0.90	0.94	1.02	1.01
Apr	1.07	0.62	1.00	1.01	1.00
May	1.06	0.78	1.01	1.03	1.03
Jun	1.09	0.95	1.05	1.04	1.04
Jul	1.09	1.01	1.05	1.04	1.02
Aug	1.07	1.03	1.04	1.00	1.00
Sep	1.06	1.03	1.04	1.01	1.03
Oct	1.04	1.00	1.02	1.01	
Nov	1.01	0.92	1.01	1.00	
Dec	1.00	0.90	0.96	0.96	
South Circular Road	2019	2020	2021	2022	2023
Jan	1.00	0.99	0.78	0.95	0.95
Feb	1.00	0.99	0.85	0.96	0.98
Mar	1.04	0.83	0.89	0.97	1.00
Apr	1.04	0.56	0.95	0.97	0.98
May	1.05	0.74	1.01	0.99	1.02
Jun	1.08	0.92	1.01	0.97	1.05
Jul	1.08	0.97	0.98	0.97	1.05
Aug	1.04	1.00	0.97	0.92	1.02
Sep	1.06	0.99	0.99	0.94	1.02
Oct	1.06	0.96	0.99	0.97	
Nov	1.05	0.88	1.00	0.94	
Dec	1.02	0.88	0.95	0.95	

Figure 14: Indexed traffic flows at GLA boundary

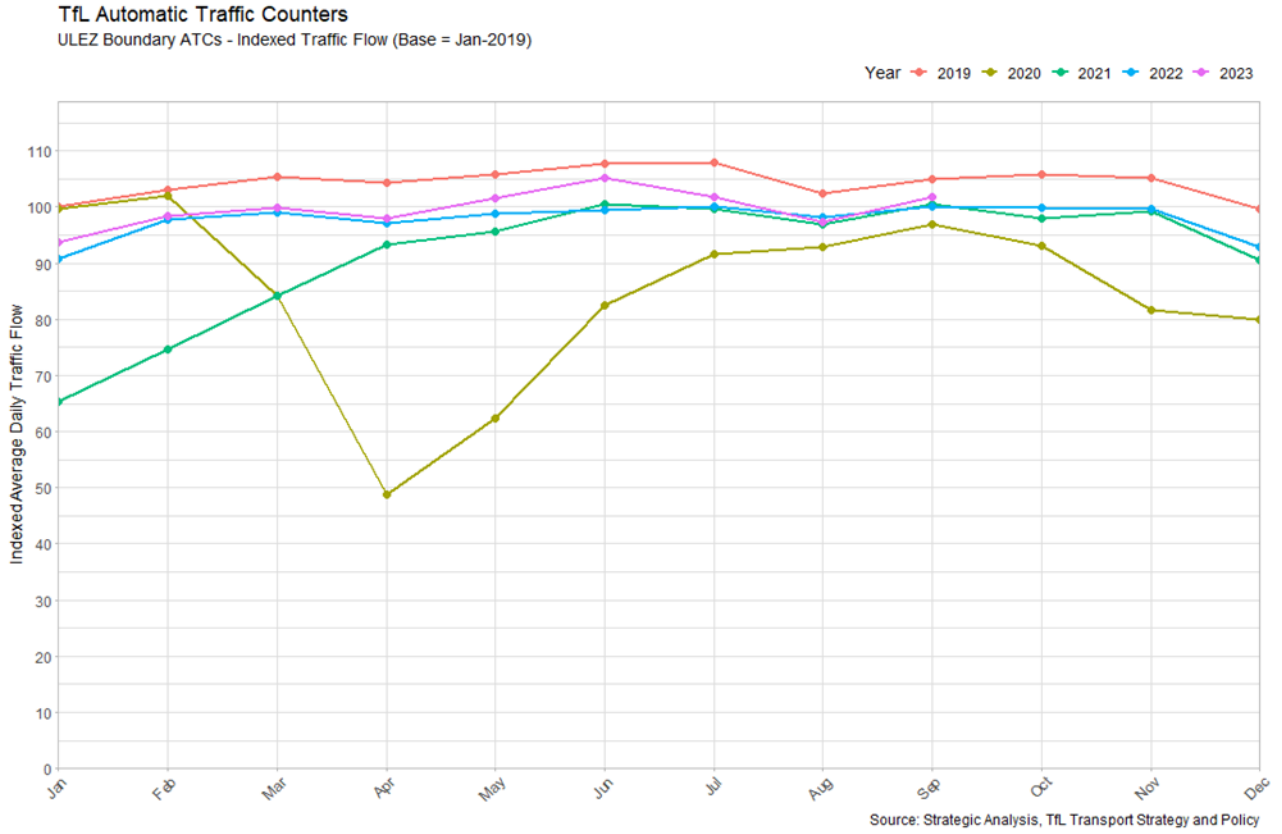


Table 41: Monthly traffic flow index at GLA Boundary (Index to January 2019)

	2019	2020	2021	2022	2023
Jan	1.00	1.00	0.65	0.91	0.94
Feb	1.03	1.02	0.75	0.98	0.98
Mar	1.06	0.84	0.85	0.99	0.99
Apr	1.04	0.48	0.94	0.98	0.98
May	1.06	0.62	0.96	0.99	1.01
Jun	1.08	0.82	1.01	1.00	1.05
Jul	1.08	0.92	1.00	1.00	1.01
Aug	1.02	0.93	0.97	0.99	0.96
Sep	1.05	0.97	1.01	1.00	1.01
Oct	1.06	0.93	0.98	1.00	
Nov	1.05	0.82	1.00	1.00	
Dec	1.00	0.80	0.91	0.93	

Other formats and languages

For a large print, Braille, disc, sign language video or audio-tape version of this document, please contact us at the address below:

Greater London Authority
City Hall
Kamal Chunchie Way
London
E16 1ZE

Telephone **020 7983 4000**
www.london.gov.uk

You will need to supply your name, your postal address and state the format and title of the publication you require.

If you would like a summary of this document in your language, please phone the number or contact us at the address above.