

# EXPANDED ULTRA LOW EMISSION ZONE – FIRST MONTH REPORT

December 2021



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## CONTENTS

<b>Key Findings</b>	<b>2</b>
<b>Introduction</b>	<b>4</b>
<b>What is the ULEZ?</b>	<b>5</b>
<b>What to expect in this report</b>	<b>6</b>
<b>Compliance, emissions and concentrations</b>	<b>7</b>
<b>Pre-compliance and sustained compliance</b>	<b>8</b>
<b>Privacy and data minimisation</b>	<b>8</b>
<b>Traffic patterns and disruption</b>	<b>9</b>
<b>Impact of the pandemic</b>	<b>9</b>
<b>Vehicle Compliance</b>	<b>10</b>
<b>ULEZ compliance rates</b>	<b>11</b>
<b>Compliance rates outside the zone</b>	<b>12</b>
<b>Compliance by vehicle type</b>	<b>13</b>
<b>Vehicle numbers</b>	<b>13</b>
<b>Charges, exemptions and warning notices</b>	<b>17</b>
<b>Traffic</b>	<b>19</b>
<b>Conclusions</b>	<b>20</b>
<b>Appendix 1: Daily ULEZ compliance</b>	<b>21</b>
<b>Appendix 2: LEZ compliance</b>	<b>22</b>
<b>Appendix 3: Warning notices issued</b>	<b>23</b>

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## Key Findings

On 25 October 2021, the Mayor of London expanded the Ultra Low Emission Zone (ULEZ) up to, but not including, the North and South Circular roads. The new zone is 18 times larger than before with nearly 4 million people living in the zone. Measuring 380km<sup>2</sup>, it covers one quarter of London and is the largest zone of its kind in Europe.

This report evaluates the impact of the newly expanded scheme in its first month. The initial data show that the scheme has been highly effective at driving reductions in the number of older, more polluting vehicles on London's roads.

To fully understand the impact of the scheme it is necessary to take into account the fact that many people will have made changes in advance to prepare for the formal start of the scheme. This is part of the scheme design and is a well understood feature of schemes like the ULEZ, supported by independent experts.<sup>1</sup>

In February 2017, the Mayor confirmed the creation of the Toxicity Charge (T-Charge), the first emissions control scheme to include cars and small vans. This was followed by the announcement and early introduction of the Ultra Low Emission Zone in April 2019, the beginning of enforcement of higher standards for the Low Emission Zone in March 2021 and the expansion of the Ultra Low Emission Zone in October 2021. Londoners and those who drive into 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 baseline for measuring the impact of the schemes.

Key findings from the first month of operation of the expanded ULEZ are:

- The compliance rate (percentage of vehicles detected in the zone that meet the strict emission standards) during the first month was **92 per cent**. Compared to the compliance levels in 2017 of 39 per cent, this indicates there has been an increase of **53 percentage points**.
- Compliance was also up from 87 per cent in the two weeks before the scheme was launched.
- On an average weekday, there were **47,000 fewer** non-compliant vehicles detected in the expanded zone compared to the two weeks before the scheme was introduced. This is a **37 per cent reduction** in non-compliant vehicles.

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<sup>1</sup> For example, Dr Gary Fuller, a leading air pollution scientist also 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>

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- On an average weekday there were **11,000 fewer** vehicles driving each day in the zone. This is a 1 per cent reduction, although it will take more time for traffic patterns post launch to fully emerge.
- Compliance with the ULEZ standards on the boundary roads was at **88 per cent**, an increase of 4 percentage points since the scheme went live in October. Total traffic on the boundary has slightly decreased since the scheme launched, although it will take more time for traffic patterns post launch to fully emerge.
- Compliance with the ULEZ standards in the rest of London outside the zone was at **82 per cent**, an increase of 2 percentage points since the scheme went live in October. This demonstrates the wider air quality benefits of the scheme beyond its boundary.
- On an average day, including both weekends and weekdays, in the scheme's first month of operation around 77,000 non-compliant, unique vehicles were detected in the zone. Of these, on an average day, 59 per cent paid the charge. The remainder were non-chargeable or were issued warning notices.
- To support the transition to cleaner vehicles the Mayor invested £61 million in scrappage schemes to help low income and disabled Londoners as well as charities and small businesses prepare for the ULEZ. Between them the scrappage schemes have helped remove over 13,500 older, more polluting vehicles from London's roads.

## Introduction

We all breathe the same air and when that air is polluted, we all suffer the consequences to our health. A study by Imperial College London found that in 2019 toxic air contributed to the premature deaths of more than 4,000 Londoners. Many more suffer from long term conditions such as asthma or Chronic Obstructive Pulmonary Disorder as a result of exposure to pollution.

Long standing structural inequalities in our society mean that if you are less well off or from a Black, Asian and Minority Ethnic background, you are more likely to live in the places with the worst air pollution, and more likely to suffer health impacts as a result.

By reducing pollution from road transport, the ULEZ expansion tackles the largest sources of pollution head on and is delivering the most benefit in the areas that currently have the worst pollution. On average, areas where the most deprived Londoners are more likely to live had levels of nitrogen dioxide 13 per cent higher than the least deprived Londoners. However, the difference in nitrogen dioxide levels between the most and least deprived areas of London has already reduced by half from 2013 to 2019 thanks to the bold policies taken by the Mayor.<sup>2</sup>

On the 25 October 2021, the Mayor expanded the ULEZ, making it 18 times larger than the central London zone. Expanding the ULEZ is an important step towards a fairer society by reducing road transport emissions, improving pollution and protecting the health of the poorest and most marginalised Londoners.

The ULEZ now covers all of inner London, up to, but not including, the North and South Circular roads, and nearly 4 million people live within the zone. The expansion of the ULEZ is a key part of the Mayor's ambitious programme to clean up London's filthy air and ensure that London has the cleanest air of any major world city.

When the ULEZ was first introduced in central London in 2019, we saw substantial and sustained improvements in air quality both within and outside the zone. This report provides the first assessment of the preliminary impact of the newly expanded ULEZ. The report covers the first four weeks of the scheme.

At this early stage it is not yet possible to determine the full impacts of the scheme on air quality concentrations and emissions. The best interim measure of success currently available is vehicle compliance data. Once the scheme has been in operation for a sufficient duration, impact assessments for air pollution emissions and concentrations will

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<sup>2</sup> <https://www.london.gov.uk/press-releases/mayoral/bame-and-poorer-londoners-face-air-quality-risk>

also be published, starting with the Six Month Report. As with all schemes of this type, our understanding of the impacts of the scheme will continue to improve over time.

## **What is the ULEZ?**

Air pollution is the biggest environmental risk to health. Poor air quality stunts the growth of children's lungs and worsens chronic illness such as asthma and heart disease, and a study from Imperial College London found that in 2019 toxic air contributed to the premature deaths of more than 4,000 Londoners. It is vital that all levels of government act now to safeguard human health.

In London, we have already made great progress in improving air quality over recent years, introducing bold policies including the world's first ULEZ in central London, which helped reduce roadside nitrogen dioxide by 44 per cent in central London from February 2017 to January 2020 (before the pandemic). However, air pollution isn't just a central London problem and tens of thousands of Londoners still breathe illegally polluted air. The World Health Organization (WHO) recommends guideline limits for pollutants based on the health impacts of exposure. The WHO has recently published new guidelines which are much more stringent than the current legal limits, and all Londoners live in areas exceeding these guidelines.

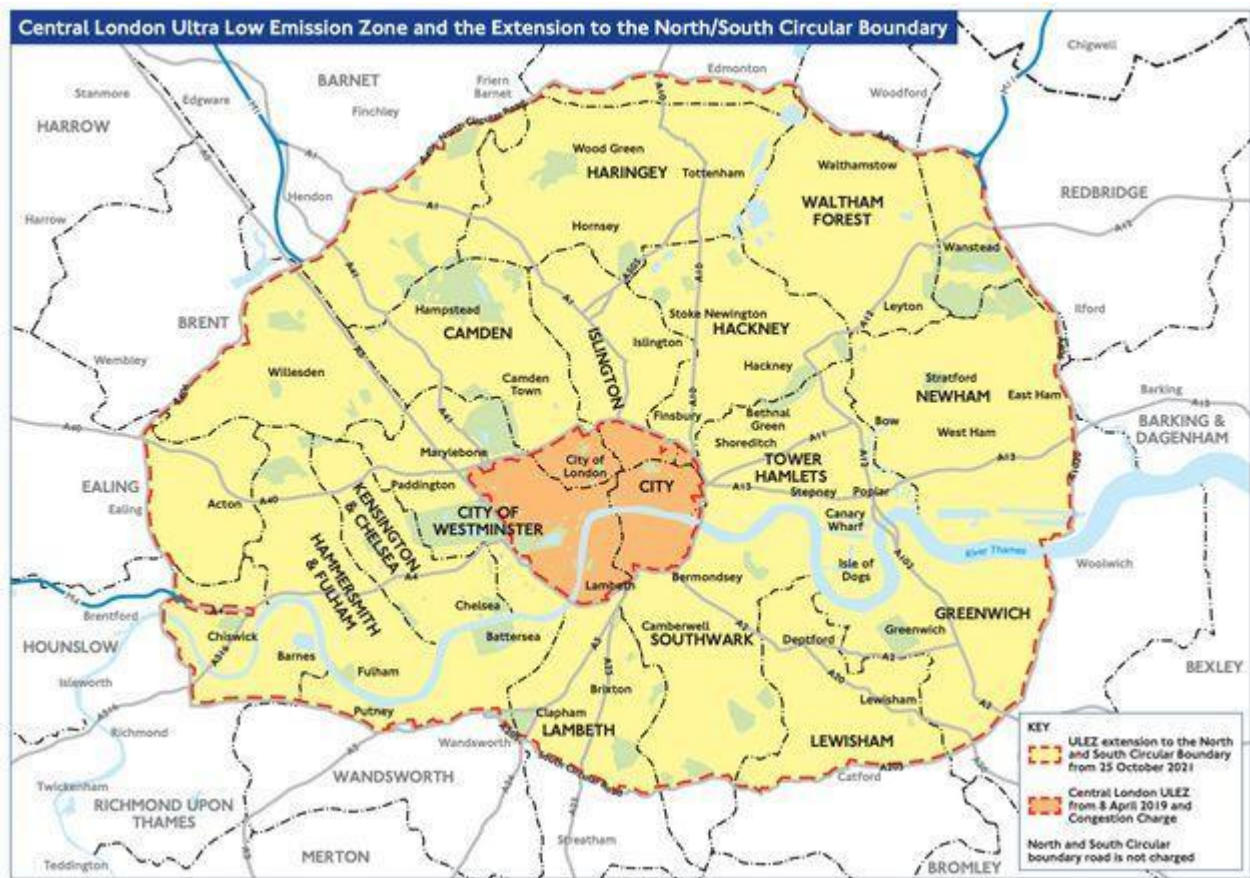
The ULEZ specifically targets the air pollutants which are most harmful to human health: nitrogen dioxide (NO<sub>2</sub>), one of oxides of nitrogen (NO<sub>x</sub>), and particulate matter (PM). The emissions of these pollutants from road vehicles are regulated by the Euro standards. It is a legal requirement for vehicles to meet the Euro standard emission limits in order to be sold in the European Union and United Kingdom.

The standards chosen as the basis for compliance with the ULEZ are Euro 4 for petrol vehicles (including cars, vans and minibuses) and Euro 6 for diesel vehicles (including cars, vans and minibuses). For motorbikes and other powered two wheelers, the standard is Euro 3. These standards reflect the points at which new Euro standards resulted in a very large drop in permitted NO<sub>x</sub> and PM emissions compared to previous standards.

The scheme operates 24 hours a day, seven days a week (except for Christmas day when there is no public transport). Drivers of vehicles which do not meet the relevant emission standard are required to pay a daily charge of £12.50 to drive in the zone or face a fine. The charge is set to incentivise frequent drivers, who would otherwise contribute the most to air pollution, to change their travel behaviour or replace their vehicle whilst allowing occasional visitors or infrequent drivers an alternative.

The ULEZ is complemented by the Londonwide Low Emission Zone (LEZ) which applies to large and heavy vehicles such as lorries, buses and coaches. The LEZ standards for most affected vehicles are aligned with the ULEZ.

Figure 1: Map of the ULEZ



## What to expect in this report

The expansion of the ULEZ took place on 25 October 2021. This report covers the first four weeks of operation of the expanded zone and provides the first indication of the impact of expanding the scheme.

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 terms of driving the transition to lower pollution vehicles. Vehicles which do not meet the ULEZ standards are described in this report as “non-compliant”.

Emission standards for large and heavy diesel vehicles apply Londonwide through the Londonwide Low Emission Zone (LEZ). The LEZ standards were tightened in March 2021 to align with the stricter ULEZ standards (see Appendix 2 for more detail). Vehicles that are subject solely to the LEZ are excluded from the ULEZ compliance rates reported here.



This is the latest in a series of reports evaluating the impact of the ULEZ and Londonwide LEZ for heavy vehicles. 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](#)

## **Compliance, emissions and concentrations**

Vehicle compliance refers to the number of vehicles that meet the ULEZ emission standards. Vehicles that do not comply and are not exempt must pay the daily charge or be liable for enforcement action.

To comply with the ULEZ, a vehicle must meet the relevant standards (Euro 4 for petrol, Euro 6 for diesel and Euro 3 for motorbikes). Schemes like the ULEZ not only incentivise people to drive cleaner vehicles, but they also reduce the number of vehicles that are on the road and reduce pollution and carbon emissions in this way. The ULEZ expansion, alongside tighter Londonwide LEZ standards for heavy vehicles introduced in March, are expected to reduce nitrogen oxides (NO<sub>x</sub>) emissions from road transport by 30 per cent across London in 2021. It is also estimated there will be a 5 per cent reduction in CO<sub>2</sub> emissions from cars and vans in the newly expanded zone in its first year.

Traffic volumes on London's roads vary from day to day and season to season. It therefore takes more time for traffic patterns post launch 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 Six Month Report, in summer 2022.

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 (NO<sub>2</sub>) 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 focused on long-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.

## **Pre-compliance and sustained compliance**

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 the benefits are realised over many years, both before and after the launch of the scheme, rather than instantaneously on the day the scheme launches. The ULEZ requires many individuals, charities, organisations and businesses 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 ensure this action has been taken, a major awareness campaign has been underway since 2018 to ensure drivers and businesses were ready for the ULEZ and its expansion, with Transport for London's (TfL) online vehicle checker being used more than 20 million times. Over a million letters were sent to owners of non-compliant vehicles seen inside the zone ahead of the expansion of the ULEZ in October.

Significantly, previous reports have demonstrated how the improvements in air quality from the central London ULEZ were sustained both during the pandemic and as the economy, and crucially, transport patterns resumed as lockdown measures have eased.

The first of the Mayor's schemes to encourage Londoners to take action to reduce emissions from polluting vehicles, the Toxicity Charge (T-Charge), was confirmed in February 2017. Since then, the T-Charge and then the central London ULEZ were introduced in central London. Following the successful implementation of the central London ULEZ, the vehicle standards for the Londonwide LEZ were tightened in March 2021. To support the transition to cleaner vehicles the Mayor invested £61 million in scrappage schemes to help low income and disabled Londoners as well as charities and small businesses prepare for the ULEZ. Between them, the scrappage schemes have helped remove over 13,500 older more polluting vehicles from London's roads.

Of course, despite significant marketing and public information activity, some people do leave it to the last minute 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.

## **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.

A full Data Protection Impact Assessment for the scheme has been published on TfL's website here <https://content.tfl.gov.uk/ulez-expansion-dpia-september-2020.pdf>.

## **Traffic patterns and disruption**

The expanded scheme launched on 25 October, which is the first day of the Autumn half-term. Traffic patterns during half-term week can be different to usual traffic patterns. This is part of the reason why four weeks data was used to undertake this initial analysis. However, as additional data is collected over the coming weeks and months the understanding of the impacts of the scheme will be better understood. Further information on traffic levels will be included in the next report when six months of data will be available.

There were no major traffic disruptions affecting the expanded ULEZ in the period covered in this report, and only three closures affecting small parts of the boundary since launch (on 4, 9 and 13 November). As these diversions are expected to have had a negligible impact on overall compliance, data from these days has been included in the analysis in this report.

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.

## **Impact of the pandemic**

The impact of the Covid-19 pandemic, and individual, regional and national responses to the need to control it mean that 2020 and 2021 have been different from previous years. This is particularly so for travel and transport as people have reacted to lockdown measures and wider concerns about the pandemic by changing their work and travel habits.

In July 2021 the majority of lockdown restrictions were formally lifted, and much of the economy has now returned to near normal levels of activity. The fuel crisis in late September and early October 2021 was another factor driving change in travel habits.

Overall indications are that traffic on London's roads is returning close to pre-pandemic levels. This means that compliance rates remain a robust indicator of the impact of the scheme.

## Vehicle Compliance

The focus of this report is the expanded ULEZ, which came into effect on the 25 October 2021. The compliance figures reported below, therefore, only relate to vehicles that are formally subject to the ULEZ standards. This means that most large and heavy vehicles are not included as these are subject to the larger LEZ. Similarly, taxis are subject to different rules as part of their licensing conditions and are not included in the compliance figures.

**Table 1: Vehicle types included and excluded from compliance figures**

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

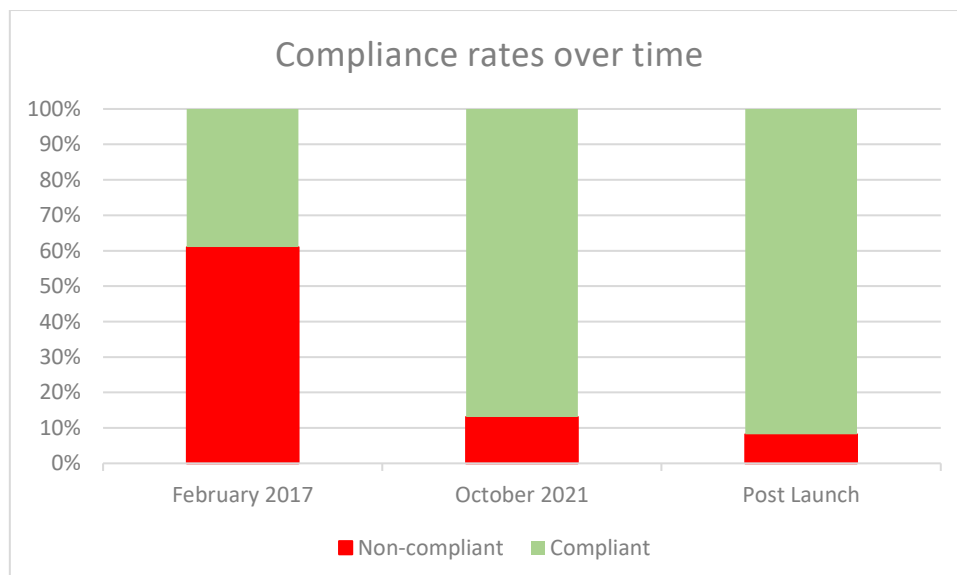
TfL buses are formally subject to the LEZ, including the tougher standards introduced in March 2021. The whole core fleet met or exceeded the standards for this scheme in December 2020 well before launch and now includes 550 zero emission battery electric or hydrogen models on London's roads. In September 2021 the Mayor announced that London would now only procure zero emission buses and the Mayor was bringing forward his commitment to delivering a fully zero emission bus fleet by three years from 2037 to 2034. With Government funding the entire fleet could be zero emission by 2030. More detail on LEZ compliance is included in Appendix 2.

There are a small number of exemptions and discounts from the ULEZ. Vehicles that benefit from an exemption or a discount do not need to pay if they do not meet the standards, however they are still recorded as non-compliant in these figures.

### ULEZ compliance rates

The table below sets out the compliance rates for the first month (four weeks) of operation of the expanded ULEZ compared to indicative figures prior to the launch and from 2017 when the Mayor announced plans for expansion and confirmed the T-Charge, which was the predecessor to the ULEZ and ULEZ expansion. These figures show both the immediate impact of the scheme launch and the longer-term lead in of pre-compliance when Londoners were preparing for the scheme in advance.

**Figure 2: ULEZ compliance rates (all vehicles)**



**Table 2: ULEZ compliance rates (all vehicles)**

Date	Compliance rate	% change since the scheme was announced	% change since the scheme was launched
February 2017	39%	-	-
October 2021 (prior to launch) <sup>§</sup>	86.9%	▲ 47.9 percentage points	-
First month of operation <sup>†</sup>	<b>91.8%</b>	<b>▲ 52.8 percentage points</b>	<b>▲ 4.8 percentage points</b>

*§ Based on indicative data gathered from 12 to the 20 October*

*†Operational data collected over the first four weeks (25 October to 21 November) since go live*

The table shows that many Londoners and businesses had already taken action before the scheme launched with a strong **growth in pre-compliance of 47.9 percentage points** between February 2017 and October 2021.

At scheme launch there was also an immediate impact, with compliance rates up by **4.8 percentage points** in the first month.

### Compliance rates outside the zone

Vehicles travelling in outer London and on the North and South Circular roads, which form the boundary, are not subject to the ULEZ. However, as fewer vehicles drive exclusively within the zone or exclusively outside the zone the ULEZ will still have the effect of increasing the proportion of less polluting vehicles in these areas.

**Table 3: Compliance rates outside the zone**

Date	Inside the Zone	Boundary Roads	Outside the zone
October 2021 (prior to launch) <sup>§</sup>	86.9%	83.7%	80.4%
First month of operation <sup>†</sup>	<b>91.8%</b>	<b>87.8%</b>	<b>82.2%</b>
Change	<b>▲ 4.8 percentage points</b>	<b>▲ 4.1 percentage points</b>	<b>▲ 1.9 percentage points</b>

*§ Based on indicative data gathered from 9 to the 24 October – a slightly longer time period is used in this table than table 2 above to allow for a better estimate on the boundary and outside the zone where there is less data.*

*†Operational data collected over the first four weeks since go live*

## Compliance by vehicle type

The table below shows how compliance across all vehicle types was high in the weeks before the launch and has grown in the first month. The largest growth was in vans, where compliance increased by 7 percentage points, continuing the long-term trend where van compliance has been increasing more rapidly than others from a very low baseline. The smallest growth was amongst motorbikes where pre-compliance was already much higher than for other vehicle types.

Many not-for-profit organisations that operate minibuses used for community transport can register for a temporary 100% discount of the ULEZ charge until 29 October 2023. These are minibuses that carry passengers on a not-for-profit basis. For example, for educational, religious, social welfare or other activities that benefit the community. In this table these minibuses are reported as non-compliant, contributing to the relatively lower reported compliance rate in this sector.

**Table 4: Compliance rates by vehicle type**

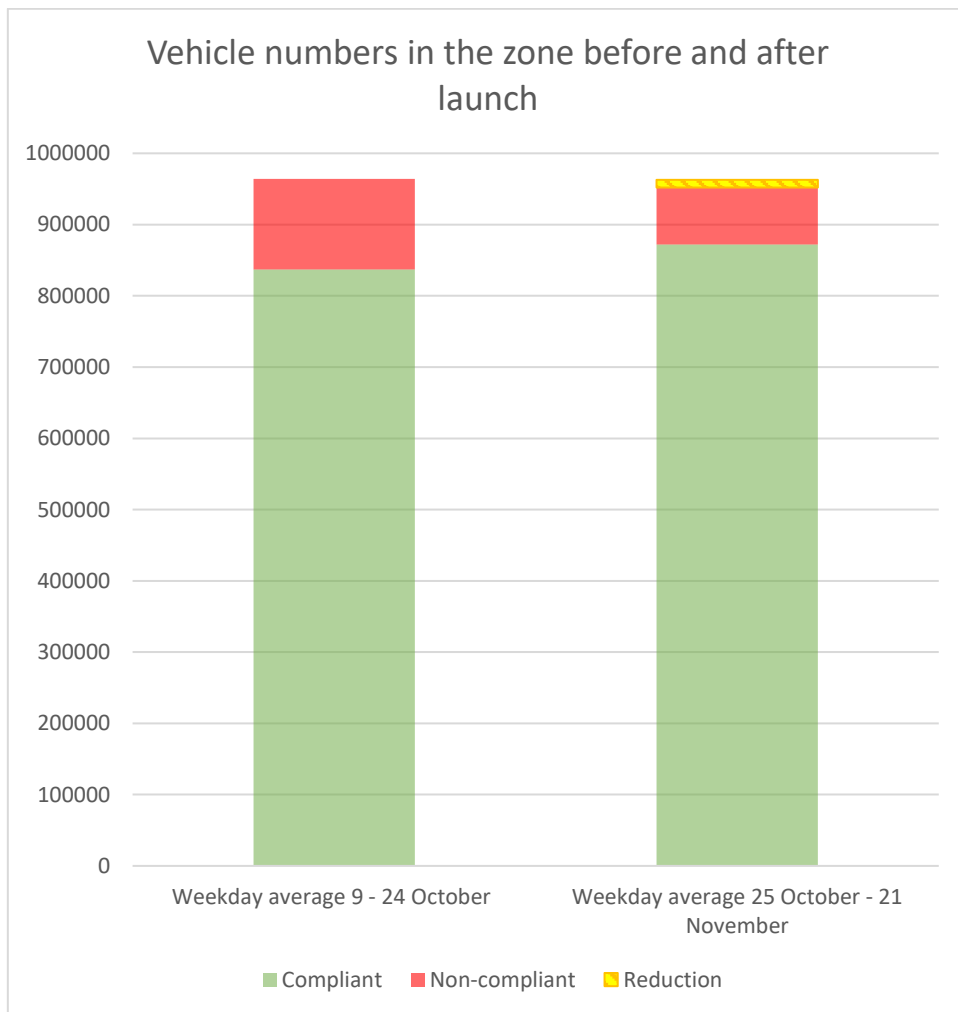
Vehicle type	Compliance rate October 2021 (prior to launch) 9-24 October	Compliance rate October 25 – November 21, 2021 (post launch)	% change
All ULEZ vehicles	86.9%	91.8%	▲ 4.8 percentage points
Cars	89.0%	93.8%	▲ 4.8 percentage points
Vans (up to and including 3.5 tonnes)	71.0%	77.8%	▲ 6.8 percentage points
Motorcycles	95.7%	96.6%	▲ 0.9 percentage points
Minibuses	69.7%	73.7%	▲ 4.0 percentage points

## Vehicle numbers

In addition to the compliance rates, the ANPR camera data allow us to estimate the number of unique vehicles detected in the zone. This does not tell us how many times, or how far, any given vehicle has been driven in the zone. The number of unique vehicles detected in the zone changes from day to day, but a reduction in the number of unique

vehicles provides an indication that the owners have changed how they choose to travel; this could be travelling within the zone using a more sustainable mode such as walking, cycling or public transport, or avoiding the zone. The changes presented in the report are based only on the first four weeks of operation of the zone and analysis based on longer term data will be presented in future reports.

**Figure 3: Estimated average numbers of vehicles before and after launch (weekdays)**



In general, there are fewer vehicles on the road over the weekend, and the reasons for driving are different (e.g. less commuting and more journeys for leisure purposes). In the table below weekdays and weekends have been reported separately.



**Table 5: Estimated numbers of compliant and non-compliant vehicles\***

Date	Number of compliant vehicles (weekday average)	Number of non-compliant vehicles (weekday average)	Total number of vehicles (weekday average)	Number of compliant vehicles (weekend average)	Number of non-compliant vehicles (weekend average)	Total number of vehicles (weekend average)
October 2021 <sup>§</sup>	837,000	127,000	964,000	795,000	108,000	903,000
Post launch <sup>†</sup>	<b>872,000</b>	<b>80,000</b>	<b>953,000</b>	<b>829,000</b>	<b>70,000</b>	<b>898,000</b>
Change	<b>▲36,000</b> <b>4.3% increase</b>	<b>▼47,000</b> <b>37% reduction</b>	<b>▼11,000</b> <b>1% reduction</b>	<b>▲34,000</b> <b>4.2% increase</b>	<b>▼38,000</b> <b>35% reduction</b>	<b>▼5,000</b> <b>0.5% reduction</b>

\* All numbers are rounded

§ Based on indicative data gathered from 9 to the 24 October

† Operational data collected over the first four weeks since go live

Since the expansion of the ULEZ, on an average weekday there were an estimated 11,000 fewer vehicles driving each day in the zone. This is a 1 per cent reduction, although it will take more time for traffic patterns post launch to fully emerge.

Similarly, on an average weekend day, there were an estimated 5,000 fewer vehicles driving each day in the zone. This is a 0.5 per cent reduction, although it will take more time for traffic patterns post launch to fully emerge.

## Scrappage

Between February 2019 and November 2021, the Mayor invested £61 million in three scrappage schemes. These schemes helped low income and disabled Londoners, charities and small businesses to replace older, more polluting vehicles with ULEZ compliant ones, or simply to scrap an older vehicle. Demand for the schemes was consistently high throughout the time they operated, showing how ordinary Londoners have been taking the steps they need to clean up London's filthy air well in advance.

The three scrappage schemes had different levels of incentive available for cars and motorcycles, vans and minibuses, and HGVs and different eligibility criteria. For instance, the HGV and van and minibus schemes were available only to small and medium

businesses and charities frequently operating in London, whilst car scrappage was available only to Londoners in receipt of specific benefits. On 24 November 2021 the schemes were closed to new applicants as the funding had been exhausted.

The table below summarises the numbers of vehicles scrapped under each element of the scrappage scheme

**Table 6: Scrappage scheme**

Vehicle type	Eligibility	Grant level	Number of vehicles scrapped <sup>†</sup>
Cars and motorcycles	Londoners receiving certain means tested or disability benefits	£1,000 for motorcycles £2,000 for cars	8,153
Vans and minibuses	Sole traders and small businesses with up to 50 employees and charities.	£7,000 to scrap and replace with an internal combustion engine van or minibus  OR  £9,500 to scrap and replace with an electric van or minibus	5,230
Heavy vehicles (HGVs, large vans, specialist vehicles over 3.5 tonnes, buses or coaches over 5 tonnes)	Sole traders and small businesses with up to 50 employees and charities.	£15,000	119  (+ 11 retrofitted)

<sup>†</sup> Figures as at 30 November 2021

## Charges, exemptions and warning notices

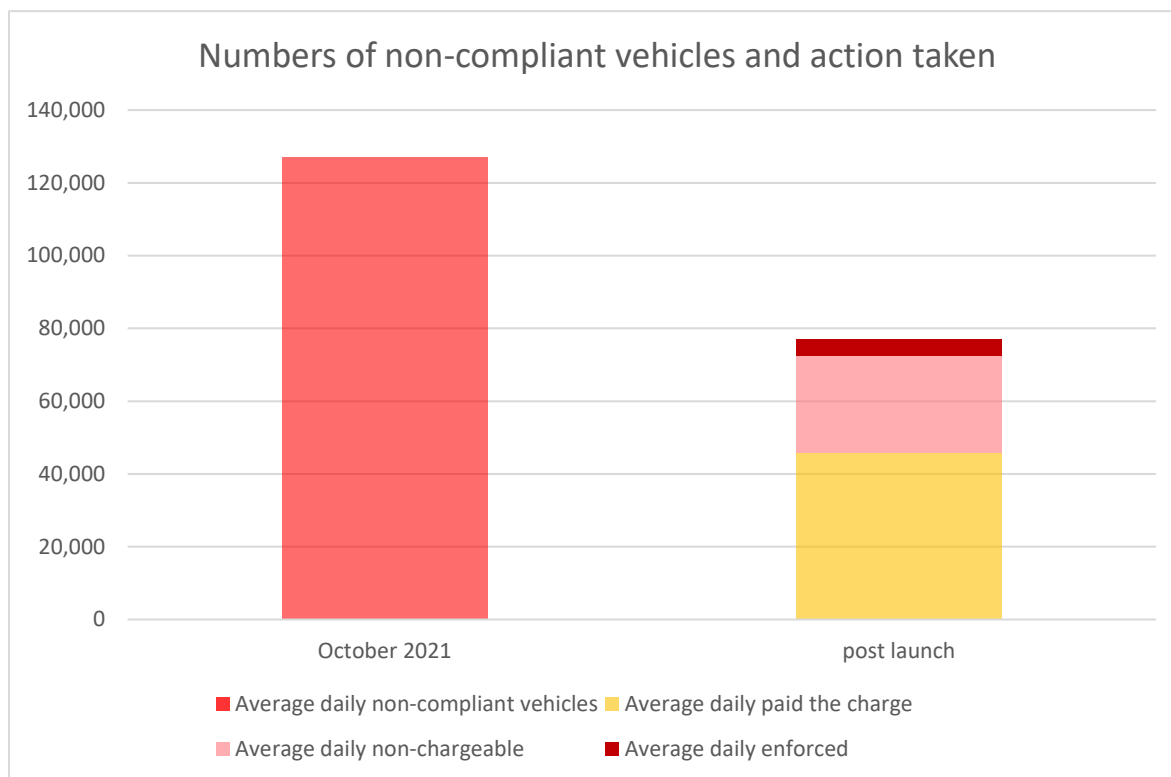
On an average day, including both weekends and weekdays, in the scheme's first month of operation TfL estimated that around 77,000 non-compliant, unique vehicles were detected in the zone. Vehicle detections are subject to validation processes (known as settlement) prior to charging and therefore the volume of charged vehicles is always lower than that based on initial detections. Of these, on an average day:

- Around 45,800 (59 per cent) paid the charge (17,200 ULEZ web or call centre payments, 23,300 Auto Pay payments and 5,300 ULEZ Fleet Auto Pay payments).
- Around 4,300 (6 per cent) were issued with a warning notice on the first offence<sup>3</sup>. A total of 121,200 warning notices were issued during the first month of the scheme's operation and Penalty Charge Notices (PCNs) have been issued since. 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.
- The remainder of the estimated vehicles detected in the zone (35 per cent) were non-chargeable. Non-chargeable includes vehicles that benefit from an extended grace period, including community transport minibuses and disabled tax class vehicles, vehicles that benefit from one of the limited number of 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.

The figure below shows the breakdown between vehicles paying the charge, vehicles where enforcement action (e.g. issuing a warning notice) was taken and non-chargeable vehicles.

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<sup>3</sup> After the first offence further warning notices were suppressed for that vehicle for a further 28 days, after which a PCN will be issued for each further contravention.

**Figure 4: Action taken on non-compliant vehicles**

Londoners continue to sign up for Auto Pay with some 57,300 additional active accounts registered since go-live, for a total of almost 687,000 Auto Pay accounts. Auto Pay accounts are also used to pay the congestion charge, or by people who only travel into the zone 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.

## Traffic

The ULEZ was not designed as a congestion management tool but the way it operates means it does influence travel behaviour and traffic levels. Transport for London uses automatic traffic count data at representative sites 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 change their vehicle, drive it less, avoid driving in the zone or they may choose alternative modes of transport for some or all of their journeys. These individual choices may influence overall traffic volumes over time.

A key question for many Londoners is how the zone will affect traffic on the boundary. Table 3 shows that there was a higher proportion of newer, cleaner vehicles on the boundary road and outside the zone compared to the weeks immediately prior to launch and the first four weeks afterwards.

Preliminary analysis of traffic data has been undertaken based on a comparison of the first 4 weeks of the scheme<sup>4</sup> to a pre-scheme baseline from 13 September to 24 October, excluding dates affected by the fuel crisis (25 September to 3 October) to avoid distorting the data.

Compared to the pre-launch baseline, vehicle kilometres<sup>5</sup> travelled in the ULEZ zone have reduced by nearly 1 per cent after the ULEZ expansion. Along the boundary roads, the preliminary data indicated that average daily traffic flows were about 1.5 per cent lower than prior to the scheme.

It should be noted, however, that there are daily, seasonal and annual variations in traffic flows as well as long term trends and the data reported here only covers a short period in time. More data over a longer period of time 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.

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<sup>4</sup> This includes the half term week.

<sup>5</sup> Vehicle Kilometres is a measure of traffic flow on the roads, 1 vehicle kilometre represents one vehicle travelling one kilometre.

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## Conclusions

- Londoners have responded extremely positively to the expansion of the ULEZ with very high levels of compliance with the scheme.
  - Much of the growth in compliance took place as Londoners prepared for the scheme introduction, with pre-compliance already at very high levels immediately prior to launch. Many factors have contributed to this high level of pre-compliance including Londoners' awareness of the impacts of air pollution, extensive marketing and publicity campaigns by TfL and the GLA and the Mayor's scrappage schemes.
  - Compliance also increased immediately post launch for all vehicle types.
  - The proportion of compliant vehicles on the boundary roads and outside the zone also grew after scheme launch.
  - While it is too early to draw out longer term trends in traffic volumes there are early indications that traffic has reduced as a result of the ULEZ expansion, including on the boundary roads.
  - The majority of non-compliant vehicles have paid the charge rather than waiting for enforcement action.
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## Appendix 1: Daily ULEZ compliance

		All ULEZ Vehicles	Cars	VANS	Motorcycles	Minibuses
Weekday	25/10	90.5%	92.9%	77.1%	96.4%	72.2%
Weekday	26/10	90.8%	93.3%	77.5%	96.5%	72.8%
Weekday	27/10	90.9%	93.3%	77.6%	96.5%	72.4%
Weekday	28/10	91.1%	93.4%	77.7%	96.7%	73.6%
Weekday	29/10	91.1%	93.3%	77.4%	96.7%	72.7%
Saturday	30/10	91.6%	93.0%	75.0%	96.5%	65.4%
Sunday	31/10	92.2%	93.2%	75.4%	96.5%	63.5%
Weekday	01/11	91.5%	93.9%	78.3%	96.5%	78.5%
Weekday	02/11	91.5%	94.0%	78.3%	96.6%	77.5%
Weekday	03/11	91.5%	93.9%	78.3%	96.7%	77.8%
Weekday	04/11	91.6%	94.0%	78.5%	96.7%	77.8%
Weekday	05/11	91.6%	93.9%	77.9%	96.6%	77.7%
Saturday	06/11	91.9%	93.3%	76.1%	96.6%	69.3%
Sunday	07/11	92.5%	93.5%	76.4%	96.3%	62.4%
Weekday	08/11	91.8%	94.1%	78.8%	96.6%	78.3%
Weekday	09/11	91.9%	94.2%	79.0%	96.7%	79.1%
Weekday	10/11	91.8%	94.2%	78.6%	96.7%	78.3%
Weekday	11/11	91.8%	94.2%	78.7%	96.8%	77.8%
Weekday	12/11	91.7%	94.0%	78.4%	96.8%	77.5%
Saturday	13/11	92.2%	93.6%	76.6%	96.4%	67.6%
Sunday	14/11	92.6%	93.6%	76.8%	96.1%	66.1%
Weekday	15/11	92.0%	94.4%	79.2%	96.9%	78.8%
Weekday	16/11	92.0%	94.4%	79.1%	96.7%	78.5%
Weekday	17/11	91.9%	94.3%	79.1%	96.5%	78.1%
Weekday	18/11	92.0%	94.3%	79.1%	96.7%	79.3%
Weekday	19/11	91.9%	94.1%	79.0%	96.6%	77.6%
Saturday	20/11	92.6%	94.0%	77.6%	96.8%	66.0%
Sunday	21/11	92.6%	93.6%	77.0%	96.5%	66.2%
	<b>Average</b>	<b>91.8%</b>	<b>93.8%</b>	<b>77.8%</b>	<b>96.6%</b>	<b>73.7%</b>

## Appendix 2: LEZ compliance

The LEZ is a separate complementary scheme to the ULEZ. Since new standards were introduced bringing the LEZ into line with the ULEZ in March 2021, compliance with the LEZ has been calculated separately to the ULEZ. The following data is included for information. For more details on the LEZ please see the LEZ Six Month Report (<https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/london-low-emission-zone-six-month-report>).

The LEZ standards are:

- Large and Heavy vehicles (including buses, coaches and HGV's): Euro VI
- Larger vans and minibuses: Euro 3 for particulate matter.

It should be noted that the “larger vans and minibuses” category vehicles are subject to the ULEZ as well as the LEZ because they are subject to different LEZ and ULEZ standards (see Table 1).

**Table 7: LEZ compliance rates**

Month	LEZ Compliance Rate (overall)	LEZ Compliance Rate (TfL bus)	LEZ Compliance Rate (N2 vehicles - HGVs from 3.5-12 tonnes)	LEZ Compliance Rate (N3 vehicles - HGVs over 12 tonnes)	LEZ Compliance Rate (non-TfL bus and coach)
March-21	93.5%	99.2%	84.4%	94.7%	81.6%
Apr-21	94.3%	99.6%	85.8%	95.5%	83.0%
May-21	94.5%	99.5%	86.4%	95.8%	84.4%
June-21	94.9%	99.7%	87.6%	96.2%	85.0%
July-21	95.3%	99.8%	88.3%	96.4%	85.9%
August-21	95.5%	100.0%	88.5%	96.5%	87.1%
September-21	95.4%	100.0%	88.5%	96.6%	86.7%
October-21	95.7%	100.0%	89.4%	96.8%	87.2%



## Appendix 3: Warning notices issued

During the first month 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. 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 and Penalty Charge Notices are now being issued for contraventions.

		Numbers of warning notices issued
Weekday	25/10	12,560
Weekday	26/10	9,002
Weekday	27/10	6,492
Weekday	28/10	6,612
Weekday	29/10	5,941
Saturday	30/10	6,417
Sunday	31/10	5,695
Weekday	01/11	3,785
Weekday	02/11	3,657
Weekday	03/11	3,404
Weekday	04/11	3,370
Weekday	05/11	3,865
Saturday	06/11	4,728
Sunday	07/11	4,229
Weekday	08/11	2,598
Weekday	09/11	2,721
Weekday	10/11	2,764
Weekday	11/11	2,540
Weekday	12/11	3,408
Saturday	13/11	3,610
Sunday	14/11	3,655
Weekday	15/11	2,434
Weekday	16/11	2,047
Weekday	17/11	2,535
Weekday	18/11	2,241
Weekday	19/11	3,197
Saturday	20/11	3,969
Sunday	21/11	3,297
<b>Total</b>		<b>121,200</b>

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