

Changes to the Low Emission Zone (LEZ) and expansion of the Ultra Low Emission Zone (ULEZ)

Report to the Mayor on the consultation

June 2018

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Chapter 1. Introduction

1.1 Purpose of this report

- 1.1.1 To tackle London's poor air quality the Mayor of London and Transport for London (TfL) have developed proposals for strengthening the London-wide Low Emission Zone (LEZ) and expanding the Ultra Low Emission Zone (ULEZ).
- 1.1.2 The purpose of this report is to inform the Mayor of the results of a public and stakeholder consultation on both topics, which took place between Thursday 30 November 2017 and Wednesday 28 February 2018.
- 1.1.3 This report describes how that consultation was carried out, analyses stakeholder and public responses, and makes recommendations to the Mayor about the issues raised. It should be read in conjunction with the consultation material published by TfL¹, which contained details of the proposals, as well as other information about their likely impacts and other relevant matters. Particular attention should be given to the detailed supporting information document that was published as part of the consultation material.
- 1.1.4 The consultation included a statutory consultation on the proposals for the LEZ and ULEZ. If confirmed, a new Euro VI standard will be introduced for the LEZ and the area of the ULEZ will be expanded up to the North and South Circular Roads. The consultation proposals are described in further detail in Chapter Chapter 2 of this report.
- 1.1.5 This consultation was the final stage of a series of consultations to inform the development of the Mayor's air quality improvement proposals. These stages are summarised below.

¹ <https://consultations.tfl.gov.uk/environment/air-quality-consultation-phase-3b/>

<p>Stage 1 (5–29 July 2016): A consultation hosted on the Talk London website on initial ideas to tackle air quality. The results are available here: http://data.london.gov.uk/dataset/clean-air-consultation-july-2016</p>	COMPLETE
<p>Stage 2 (10 October–18 December 2016): A process incorporating a statutory consultation to introduce the Emissions Surcharge (T-Charge), and a non-statutory consultation on ideas for how the ULEZ could be improved. The results are available here: https://consultations.tfl.gov.uk/environment/air-quality-consultation-phase-2</p>	COMPLETE
<p>Stage 3a (4 April–25 June 2017): A statutory consultation on the proposals to introduce the ULEZ early in central London on 8 April 2019 and to strengthen the emissions standards to include particulate matter. The results are available here: https://consultations.tfl.gov.uk/environment/air-quality-consultation-phase-3a</p>	COMPLETE
<p>Stage 3b (30 November 2017–28 February 2018): A statutory consultation on the proposal to expand the ULEZ boundary beyond central London. The consultation material is available here: https://consultations.tfl.gov.uk/environment/air-quality-consultation-phase-3b/</p>	SUBJECT OF THIS REPORT

Figure 1: Summary of air quality improvement consultation stages

1.2 Structure of this report

1.2.1 Our analysis of the consultation responses and potential policy recommendations are presented for the Mayor’s information. The structure of this report is as follows:

- **Chapter 1 – Introduction:** The remainder of this chapter provides the background to the consultation, including the legislative framework and a summary of the proposals and recommendations
- **Chapter 2 – Description of the proposals:** A summary of the proposals and their impacts
- **Chapter 3 – The consultation process:** A summary of the consultation process undertaken by TfL

- **Chapter 4 – Public and business responses to the consultation:** A summary analysis of the consultation responses received in terms of the method of response, respondent type and their travel behaviour
- **Chapter 5 – Analysis of public responses:** An analysis of the responses to the consultation from the public, in terms of the number responding to the consultation, support and opposition to the proposals and the key issues raised in the consultation responses
- **Chapter 6 – Campaign responses and petitions:** A summary and analysis of the campaigns run by external bodies, which generated a large number of responses to the consultation and petitions received in relation to the consultation
- **Chapter 7– Stakeholder responses:** As per Chapter 5, but for stakeholder responses
- **Chapter 8 – Responses to issues raised:** Our response to the key issues raised specifically in relation to the proposals by theme, and our recommendations and conclusions
- **Chapter 9 – Conclusions and recommendations:** Our overall conclusions and recommendations to the Mayor

1.2.2 The Mayor is advised, when considering this report, to take into account the individual consultation responses themselves, full copies of which have been provided for his consideration.

1.2.3 Should the Mayor decide to proceed with the changes, an information campaign will be launched to inform customers of the changes in advance of their start date.

1.3 Air quality and health in London

1.3.1 The objective of the Mayor's proposals is to improve air quality in London. The health impacts of the two pollutants of concern in the Capital are listed below:

- **Nitrogen dioxide (NO₂):** At high concentrations, NO₂ causes inflammation of the airways. Long-term exposure is associated with an increase in respiratory symptoms in children with asthma and reduced lung function and lung growth
- **Particulate matter (PM):** Long-term exposure to particulate matter contributes to the risk of developing cardiovascular and respiratory diseases, as well as lung cancer. Research shows that particles with a diameter of 10 microns and smaller (PM₁₀) are likely to be inhaled deep into the respiratory tract. The health impacts of particles with a diameter of 2.5 microns and smaller (PM_{2.5}) are especially significant as smaller particles can penetrate even deeper

- 1.3.2 London's air quality has improved significantly in recent years and is now considered compliant for all air pollutants for which the European Union (EU) has set legal limits (called 'limit values'), except for NO₂. The exhaust emissions that give rise to NO₂ are oxides of nitrogen (NO_x), which are made up of both nitrogen oxide (NO) and NO₂. The NO forms additional NO₂ by reacting with ozone (O₃) in the atmosphere. The policy framework and London's responsibility with regard to the main air pollutants is described in the supporting information document.
- 1.3.3 Emissions from road transport are a major contributor to poor air quality in the Capital. In 2013, they accounted for 50 per cent of all NO_x sources in London².
- 1.3.4 London is now considered compliant for all but one air pollutant for which legal limit values are set: nitrogen dioxide. There is a three-fold obligation under European and domestic law: to achieve compliance with the limit value by the soonest date possible, to choose a route which reduces exposure as quickly as possible, and to ensure compliance is not just possible but likely. Further information regarding air pollution in the Capital and the legal framework in place to improve it is contained in the supporting information document that formed part of the consultation material³.

1.4 Scheme order changes

- 1.4.1 The LEZ and ULEZ are established under the Greater London Low Emission Zone Charging Order 2006 ('the 2006 Charging Order', as amended), which contains a charging scheme called the Greater London Low Emission Zone Charging Scheme ('the Scheme') in the Schedule to the Order. This Scheme originally established the London Low Emission Zone ('LEZ') in 2006 and was adapted in 2015 to incorporate provision for the ULEZ alongside it.
- 1.4.2 Any changes to a road user charging order and scheme require TfL to make an amending order (called a 'variation order') which follows the same statutory process as the original charging order and scheme. The variation order sets out the necessary changes to the charging order and scheme if the consultation proposals were to be implemented. A public and stakeholder consultation is carried out on the proposals; the consultation materials usually include (as circumstances require) either a draft of the proposed variation order or formally executed order by TfL (this has no legal effect unless and until confirmed by the Mayor).

² London Atmospheric Emissions Inventory (LAEI) 2013

³ Update link www.tfl.gov.uk/airquality-consultation

1.4.3 After the consultation closes we prepare a report to the Mayor (RTM) on the consultation responses which we submit for the Mayor's consideration. The RTM includes any responses received after the consultation closed. The report includes our responses to the issues raised and makes recommendations, where relevant, to the Mayor regarding any changes to the proposals and necessary modifications to the variation order. The Mayor considers the report and other relevant information before deciding whether or not to confirm the proposals and variation order, with or without modifications. The Mayor's formal confirmation of the variation order (with or without modifications) is done by the execution of an Instrument of Confirmation (this includes a schedule of variations if there are modifications).

1.4.4 The Stage 3b consultation materials included a draft variation order prepared on the basis of the proposals put forward for consultation. The draft variation order provided for the following major changes(subject to the Mayor's approval):

- The integration of the LEZ, which already operates London-wide for heavy vehicles, with the ULEZ, which covers light and heavy vehicles; this will operate initially in central London from April 2019 and will then expand to inner London on 25 October 2021
- The re-naming of the scheme as the London Emission Zones Charging Scheme and the use of the terms 'Londonwide Zone' to refer to emissions standards for heavy vehicles operating London-wide (LEZ) from 26 October 2020 and the 'Inner Zone' to refer to emission standards for light vehicles in the 'Inner Zone' from 25 October 2021 (referred to as the ULEZ)
- Setting the Inner Zone initially as central London from 8 April 2019 and then becoming the entire area within inner London from 25 October 2021. Daily charges for light vehicles are set for the Inner Zone
- The setting of Euro VI as the standard for heavy vehicles London-wide from 26 October 2020, and daily charges of £100 for those not meeting Euro VI, and £300 for those not meeting Euro IV or V to preserve the existing LEZ charge for such vehicles

1.4.5 On 21 May 2018 we formally executed the Greater London Low Emission Zone Charging (Variation and Transitional Provisions) Order 2018 ('the Variation Order') to make changes to the 2006 Charging Order and Scheme and give legal effect to the Stage 3b consultation proposals. The text of the executed Variation Order (VO) contains a few minor typographical corrections and missing plan numbers in the earlier draft included as part of the Stage 3b consultation materials.

1.5 Summary of recommended modifications to consultation proposals

1.5.1 We recommend to the Mayor that the following modifications are made to the Stage 3b proposals consulted upon :

- The extension of the sunset period for disabled tax class vehicles until 26 October 2025.
- The introduction of a sunset period until 26 October 2025 for Licenced private hire vehicles (PHVs) adapted for Wheelchair Access and registered by TfL under s.165 of the Equality Act 2010 until 26 October 2025.

1.5.2 These two recommendations would come into force at the start of ULEZ operations in central London on 8 April 2019 and (if confirmed) its expansion to Inner London from 25 October 2021.

- The introduction of a sunset period from 25 October 2021 until 29 October 2023 for minibuses⁴ purchased before 8 June 2018 operated by not for profit organisations⁵ under a section 19 or section 22⁶ Transport Act 1985 permit.

1.5.3 This modification would not apply to minibuses in central London between 8 April 2019 and expansion to Inner London on 25 October 2021 .

1.5.4 We recommend that the Mayor approve these as modifications to the VO in his Instrument of Confirmation. ,

⁴ A minibus is defined for the purposes of this sunset period as a vehicle constructed or adapted to carry more than 8 but not more than 16 passengers which is being used pursuant to a permit issued under s 19(3), 19(4) or 22 of the Transport Act 1985.

⁵ Section 19 and 22 permits are available to educational, religious, social welfare and other community benefit organisations (s 19) and organisations concerned for the social and welfare needs of one or more communities (s 22) without a view to a profit.

⁶ Vehicles operated under permits issued under sections 19 or 22 of the Transport Act 1985 (as amended) are exempt from the requirement to have a Public Service Vehicle operator and vehicle licence.

Chapter 2. Description of the proposals

2.1 Introduction

- 2.1.1 This section provides an overview of the proposals, how they were developed and how they are intended to operate. More detail is provided in the supporting information document attached as Appendix I.

2.2 Development and history of LEZ and ULEZ

Low Emission Zone

- 2.2.1 The LEZ was introduced in 2006 and covers heavy vehicles: buses, coaches, HGVs and similar vehicles. It was extended to include light goods vehicles, minibuses and similar vehicles in 2012. Cars, light vans and powered two wheelers are not subject to the LEZ. All vehicles need to meet emissions standards or pay a daily charge in order to enter the LEZ, which covers nearly all of greater London.
- 2.2.2 The emissions standards for the LEZ are currently set on the maximum PM emissions from vehicles. Heavy vehicles are required to meet a Euro IV standard for PM or pay £200 per day. Light vehicles are required to meet a Euro 3 standard of pay £100.
- 2.2.3 The LEZ operates 24 hours a day, every day of the year, including weekends and public holidays.

Ultra Low Emission Zone

- 2.2.4 The original ULEZ scheme was confirmed by the previous mayoral administration in March 2015 to come into operation in September 2020. A brief summary of the confirmed scheme is provided here, with a more detailed description included in the supporting information document.
- 2.2.5 The original ULEZ scheme covered light and heavy vehicles. All cars (except taxis, which are subject to environmental requirements through the taxi licensing system), motorcycles, vans, minibuses (coaches, buses, coaches and heavy goods vehicles (HGVs)) will need to meet exhaust emissions standards or pay a daily charge, when travelling in central London.
- 2.2.6 The required standards are at least Euro 4 for petrol cars and vans, Euro 3 for powered two-wheelers and other L-Category vehicles, and Euro 6/VI for diesel vehicles.
- 2.2.7 The ULEZ will operate 24 hours a day, every day of the year, including weekends and public holidays.

Air quality consultations: Stage 1

2.2.8 On 13 May 2016, the Mayor set out ideas to improve the ULEZ and additional requirements for TfL buses⁷. Refined proposals were announced by the Mayor on 5 July 2016 as part of his Clean Air Action Plan⁸. A three-week consultation on this plan was undertaken by the Greater London Authority (GLA), which ran from 5 July to 29 July 2016 (Stage 1). This consultation asked for views on air quality generally and included high-level policy ideas for the T-Charge (Emissions Surcharge), changes to the ULEZ, additional policy ideas to help improve air quality (such as a national diesel scrappage scheme) and any other ideas respondents might have. The results of the consultation are available on the GLA website⁹.

Stage 2 consultation

2.2.9 Informed by the Stage 1 consultation, we undertook a Stage 2 consultation, which ran from 10 October 2016 to 18 December 2016. This was a statutory consultation principally on the T-Charge but also set out policy ideas for future changes to the ULEZ and LEZ. The Mayor wanted to develop his proposals with the active involvement of Londoners and relevant stakeholders by considering:

- Bringing forward the introduction of the ULEZ to 2019 (previously planned for 2020)
- Extending the Euro VI ULEZ London-wide standard for heavy vehicles (HGVs, buses and coaches) London-wide as early as 2019, but possibly later. This is now referred to as 'strengthening the LEZ'
- Extending the ULEZ from central London up to the North and South Circular Roads for all vehicles as early as 2019, but possibly later.

2.2.10 The Mayor considered the Stage 2 consultation results and confirmed the T-Charge on 16 February 2017. He also asked we proceed with work to develop and undertake additional consultation and engagement with relevant stakeholders on the suggested changes to the ULEZ and LEZ.

Stage 3a consultation

2.2.11 When the Mayor announced the Stage 3a consultation on 4 April 2017, he described his proposals to strengthen the London-wide LEZ standards for heavy vehicles in 2020 to match the ULEZ standard (Euro VI), and to

⁷ <https://www.london.gov.uk/press-releases/mayoral/bold-plans-to-clean-up-londons-toxic-air>

⁸ <https://www.london.gov.uk/press-releases/mayoral/mayor-unveils-action-plan-to-battle-toxic-air>

⁹ <https://data.london.gov.uk/dataset/clean-air-consultation-july-2016>

extend the area of the zone up to the North and South Circular Roads for light vehicles (motorcycles, cars and vans) in 2021.

- 2.2.12 The Stage 3a consultation was principally about the Mayor’s proposals to bring forward the introduction of the ULEZ in central London from September 2020 to 8 April 2019, including proposals to bring forward the end of the sunset period for residents of the Congestion Charging zone. A consultation ran from 4 April 2017 to 25 June 2017. Results are available on the TfL website. On 3 November 2017 the Mayor confirmed the start date for the central London ULEZ as 8 April 2019.

Stage 3b consultation

- 2.2.13 Detailed information about the development and appraisal of the options for strengthening the LEZ and expanding the ULEZ from central London to Inner London was included in the supporting information document published for the Stage 3b consultation (attached to this report as Appendix I). The Stage 3b consultation proposals and impacts are summarised in the remainder of this chapter.

2.3 Summary of proposals

- 2.3.1 A detailed description of the proposals, summarised below, and their impacts is provided in the Stage 3b supporting information document, attached to this report as Appendix I.

Changes to the LEZ: heavy vehicles

- 2.3.2 It is proposed that from 26 October 2020 a new Euro VI standard for NO_x and PM will be introduced for buses, coaches, HGVs and similar vehicles as part of the London-wide LEZ. For vehicles that are subject to and do not meet the required emissions standard, a daily charge would apply.
- 2.3.3 This standard will apply in addition to the existing Euro IV PM standard, meaning that vehicles that do not meet either standard will pay a higher charge if driving in the zone.
- 2.3.4 The proposed charges have been set as follows:

Vehicle type	Charge
Heavy vehicle whose PM emissions are higher than Euro IV PM standards	£300
Heavy vehicle that does not meet Euro VI NO _x and/or PM standards but meets Euro IV PM standards	£100

2.3.5 Proposals for discounts and exemptions were set in line with the existing LEZ and ULEZ proposals where relevant, namely:

- **Specialist vehicles designed and built for mainly off-road use** including agricultural and forestry tractors, mowing machines, agricultural and farm machinery and equipment, mobile cranes and road and building construction machinery.
- **Vehicles with a historic tax class:** see below.
- **Military vehicles operated by the Ministry of Defence (MoD) and visiting forces:** Vehicles being used on a road for naval, military or air force purposes under the instruction of the armed forces or MoD.
- **Showman's vehicles:** Specially modified or constructed showman's vehicles on application.

2.3.6 There were no proposed changes to the LEZ boundary.

Changes to the vintage and historic tax class vehicles exemptions

2.3.7 There was previously an anomaly whereby the ULEZ exempts historic tax class vehicles, but not “vintage” vehicles registered before 1973, and LEZ exempts such vehicles registered before 1973, but not historic tax class vehicles.

2.3.8 The consultation sought to correct this anomaly by proposing that both historic tax class vehicles and “vintage” vehicles registered before 1973 that do not qualify for that tax class are exempt from both the LEZ and ULEZ schemes.

Changes to the ULEZ: light vehicles

2.3.9 It is proposed that from 25 October 2021 the ULEZ is expanded to Inner London so that it covers the whole of the area bounded by the North and South Circular Roads: A205 and A406. This expanded area will include the area of central London- the Congestion Charging Zone (CCZ) area - which will have formed the initial Zone area from 8 April 2019 to 24 October 2021.

2.3.10 From 25 October 2021 the ULEZ will cover light vehicles¹⁰. All cars, vans, minibuses, motorcycles and other light duty vehicles will need to meet emissions standards in this area or pay a daily charge to enter the zone.

2.3.11 The charge levels and emissions standards proposed for the expanded zone are the same as for the central zone, namely:

¹⁰ This is because the LEZ changes come into effect a year before and set Euro VI as the emissions standards for heavy vehicles apply Londonwide and so already cover the whole Inner London area.

Vehicle type (includes hybrid vehicles)	Minimum NO _x emissions standards ¹¹	Daily charge if vehicle is not compliant with ULEZ standards ¹²
Motorcycle, moped etc. – Category L	Euro 3	£12.50
Car and small van – Categories M1 and N1 (I)	Euro 4 (petrol) Euro 6 (diesel)	£12.50
Large van and minibus – Categories N1 (II and III) and M2	Euro 4 (petrol) Euro 6 (diesel)	£12.50

2.3.12 Full details of the Inner London boundary proposals were published online as part of the consultation materials.

2.3.13 Discounts and exemptions were set as above but also include an exemption for taxis and a time-limited sunset periods for disabled tax class vehicles and residents.

Changes to the residents' sunset period

2.3.14 Residents of the Congestion Charging zone, (CCZ) where the central London ULEZ will apply from 8 April 2019, are currently entitled to a three-year sunset period for the ULEZ, expiring on 10 April 2022. In order to ensure that all residents living in the extended Inner London ULEZ area are treated the same if the ULEZ is expanded, we proposed bringing forward the end date of the CCZ residents' sunset period to 24 October 2021, to align with the start date of the expanded ULEZ the following day.

2.3.15 No sunset period was proposed for residents of the expanded Inner London zone.

Changes to the PCN

2.3.16 The ULEZ PCN for the non-payment of the daily ULEZ charge for light vehicles is currently set at £130. Following a public consultation towards the end of last year, the level of a PCN for failing to pay the Congestion Charge (CC) rose to £160. In addition TfL proposed an increase in the level of a PCN for contraventions of the Transport for London Road Network (TLRN)

¹¹ Euro standards for heavy duty diesel engines use Roman numerals (I–VI) and light duty vehicle standards use Arabic numerals (1–6). The current ULEZ standards only apply to the level of NO_x emissions

¹² This is payable in addition to any applicable LEZ and/or Congestion Charge

in 2018, which was subject to a separate consultation and agreement by the Secretary of State for Transport. (This proposal was later objected to by the Transport Secretary.) Therefore, as part of the Stage 3b consultation, we consulted on increasing the PCN level for light vehicles failing to pay the ULEZ daily charge to maintain a deterrent effect and to ensure consistency with these other proposals.

2.4 Impact on emissions

2.4.1 The proposed changes to the LEZ and the ULEZ would bring significant emissions reductions to a wider area of London. There would be a 20 per cent reduction in NO_x emissions London-wide in 2020. The graph illustrates the London-wide impact of these proposals to 2030. In inner London, there would be a 30 per cent reduction in NO_x in 2021.

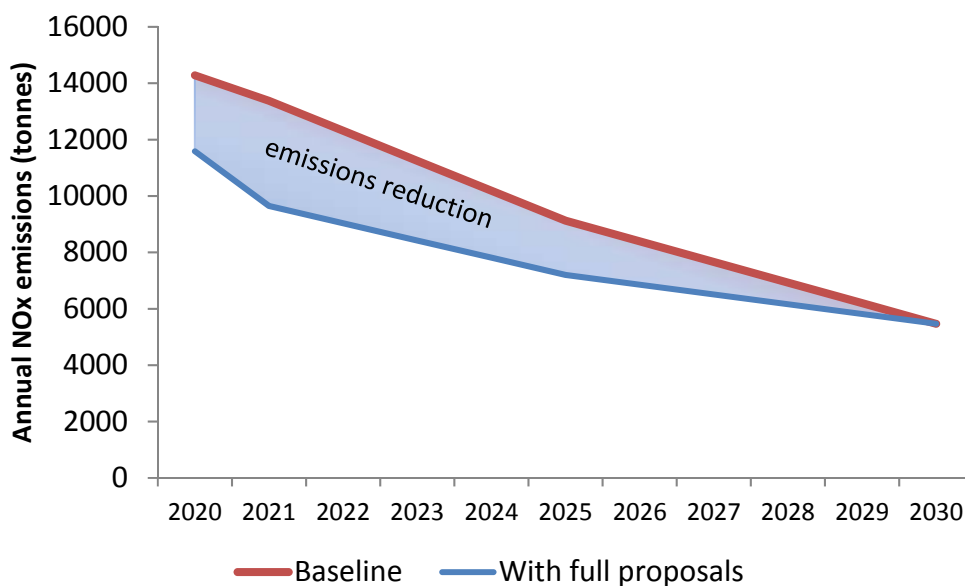


Figure 2: Impact of proposals on NO_x emissions

2.4.2 Fifty per cent fewer people in London would be living in areas exceeding the legal limits for NO₂ concentrations in 2020 and 77 per cent fewer in 2021.

2.4.3 By 2021 there would be 71 per cent fewer schools located in areas exceeding air quality limits as a result of the proposals.

2.4.4 Full details were set out in the supporting information document.

2.5 Integrated Impact Assessment (IIA)

2.5.1 We commissioned Jacobs Consultancy to carry out an IIA for the expansion of the ULEZ and strengthening of the LEZ. An assessment was undertaken on the impacts of the proposals as a whole. The IIA report was published as

part of the Stage 3b consultation materials, and is published again as appendix J. A summary of the key findings is as follows:

Environmental impacts

- Major beneficial impacts predicted in reducing NO₂ concentrations close to roads that are near, or above, the 40µg/m³ value in the baseline in 2021
- Major beneficial impacts in reducing air pollutant emissions
- Beneficial impacts on the protection of biodiversity and cultural heritage
- Slight benefit in reducing CO₂ emissions
- Non-significant benefits in reducing noise
- Slight short-term impact on waste and townscape

Health impacts

- Beneficial impacts through important reductions in negative health impacts as a result of improved air quality
- Minor benefits through a potential shift towards more active travel
- Neutral impact on noise, crime and community safety and climate change

Equalities impacts

- Disproportionate beneficial impacts for those living in deprived areas, school-age children, older people and pregnant women due to reductions in NO₂ concentrations
- Minor negative impact on connectivity if operators reduce or limit their services as a result of the ULEZ, and a possible increase in the cost of school trips affecting lower-income families
- Potential negative impact on low-income workers who own a non-compliant car and who live in areas with limited public transport and work unsocial hours
- Potential disproportionate impact on a small number of users of wheelchair accessible vehicles for whom the costs of a replacement may be unaffordable

Economic impacts

- Neutral impact on attracting and retaining internationally mobile businesses

- Moderate adverse impact on small and medium-sized enterprises (SMEs)
- Moderate financial impact on businesses

2.5.2 In light of these findings the Mayor is recommended to approve modifications to the published Stage 3b consultation proposals and Variation Order as set out at 1.5 above. These are to help mitigate the potential adverse impacts identified for disabled people and the impact on groups reliant on charitable and community services using minibuses. To reflect these changes an amendment to the published IIA was commissioned. .

2.5.3 The full IIA amendment is published as Appendix K.

Chapter 3. The consultation process

3.1 Introduction

- 3.1.1 This chapter provides an overview of the consultation, as well as a description of the actions and communication methods employed to promote the consultation itself and elicit views from the public and stakeholders about the proposals.
- 3.1.2 The primary objective of the consultation process was to understand the views of the public and stakeholders on the statutory proposals for changes to the LEZ and ULEZ.
- 3.1.3 The first Mayor of London issued statutory guidance to TfL detailing consultation practice, entitled 'Guidance from the Mayor of London on charging schemes pursuant to schedule 23 of the Greater London Authority Act 1999'. This guidance informed the consultation strategy in advance of implementation.

3.2 Dates

- 3.2.1 The consultation commenced on Thursday 30 November 2017 and closed on Wednesday 28 February 2018.

3.3 Publicising the consultation

- 3.3.1 A marketing campaign was developed to raise awareness of the air quality consultation and encourage customers to have their say.
- 3.3.2 The campaign included:
- A press release, issued on 30 November 2017, to announce the start of the consultation. The consultation received resulting media coverage across a number of outlets including print coverage in the Evening Standard and the Daily Express, and in trade publications such as Local Transport Today, Coach & Bus Week and Commercial Motor; web coverage on BBC News, City A.M., Air Quality News and BusinessGreen; as well as local coverage in publications such as South London Press; and broadcast coverage on BBC and ITV local bulletins
 - Press adverts in a variety of London media titles including the Evening Standard, Metro and City A.M. Adverts were also featured in specialist press titles and digital display adverts were used
 - A notice published in The London Gazette
 - Social media activity such as Tweets to promote the consultation
 - Detailed information about the scheme, supporting documents and an online questionnaire on TfL's consultation portal website at

www.tfl.gov.uk/airquality-consultation which was signposted with banners throughout the TfL website

- A radio advertisement about the consultation broadcast on the following radio stations: Heart, Kiss, Radio X London, Smooth Radio London

3.4 Targeted communications to registered Congestion Charge and other TfL customers

3.4.1 On 13 December 2017, we sent an email to relevant registered CC scheme customers using a customer relationship management system. Around 522,000 customers were emailed.

Table 1: Targeted communications to customers

Customer type	Customers contacted December 2017	Follow-up email February 2018
Congestion Charge customers with a residents' discount	13,377	11,650
Commercial (taxi and private hire)	127,121	130,834
Drivers	382,271	194,556
Residents in the ULEZ expansion postcodes (with exclusions)	-	747,981
Total:	522,769	1,085,021

3.5 Stakeholder communications and meetings

3.5.1 We engaged with stakeholders both in developing the proposals (prior to the consultation) and during the consultation itself. We met with a wide range of stakeholders through private briefings, workshops and third-party events.

3.5.2 We also held a briefing with the freight industry including manufacturers on 12 January 2018, covering both our proposals for the ULEZ and Direct Vision Standard (another consultation which was open at the same time).

3.5.3 We met with representatives from the coach industry on 18 December 2017 (including the London Tourist Coach Operators Association (LTCOA)) to introduce our latest proposals.

3.5.4 A full list of briefings is provided as appendix E

3.6 Borough engagement

- 3.6.1 In responses to the earlier phases of the consultation on air quality, a number of boroughs requested variations to and an expansion of the ULEZ boundary. London Councils requested that the Mayor and TfL work with those London boroughs who wished to see the ULEZ expanded into their areas.
- 3.6.2 Throughout the consultation, we have engaged with London Councils and boroughs across London. We presented our proposals to London Councils' Transport and Environment Committee on 7 December 2017.
- 3.6.3 We held a briefing session with representatives from the boroughs, both officers and members, to discuss our proposals.
- 3.6.4 We prepared and issued factsheets to the boroughs which contained information about the proposals specific to each borough, such as statistics about the numbers of residents who will no longer live in areas of illegal air pollution and the reductions of NO_x. For boroughs split by the boundary, the factsheet included details about the parts of the borough both inside and outside of the zone.

3.7 Letters/mailings sent

- 3.7.1 In addition to the stakeholder engagement outlined above, customised letters were sent to over two million addresses within the North and South Circular Roads and within 1km outside the proposed boundary.

3.8 The consultation portal

- 3.8.1 Our online consultation portal (www.tfl.gov.uk/airquality-consultation) hosted all the relevant information relating to the consultation. This included summary information on the proposals, supporting maps, diagrams and charts and details about the proposed ULEZ boundary and impact assessments. The portal also included a link to the following documents which provided more detailed information on the proposals:

- Supporting information document
- Integrated Impact Assessment
- Draft Variation Order
- Easy-view maps of the ULEZ boundary up to the North and South Circular Roads
- Deposited plans showing the proposed ULEZ boundary up to the North and South Circular Roads
- Emissions and concentrations impact by borough in 2020
- Change in emissions and concentrations in 2021 – LEZ proposals only

- Information about inner and outer London residents

3.8.2 During the consultation period, there were 93,263 unique visitors to the air quality consultation page.

3.8.3 Respondents were asked to complete and submit an online questionnaire to provide their feedback about the proposals. It included a number of closed questions and an open question providing the opportunity for respondents to indicate their views about each of the proposals and ideas as well as give additional comments and feedback.

Chapter 4. Public and business responses to the consultation

4.1 Introduction

4.1.1 This section of the report provides a summary of the information collected from responses from the general public (not stakeholders) through the online consultation questionnaire. In general, the data presented here is from questions 1 to 9 (see Appendix D), although information about individual email addresses, business names and the consultation process is not presented. In each table, the total of the percentages is 100 per cent prior to rounding.

4.1.2 In total, we received 37,513 responses to the consultation from the public and businesses. We offered a number of ways for respondents to comment on the consultation:

- Online – through the consultation portal
- Email – comments emailed directly to TfL
- Post – by letter or return of a hard copy questionnaire

Table 2: Consultation responses by response method

Response method	Number of responses	Percentage
Online (consultation portal)	36,893	98%
Email	345	1%
Letter	275	1%
Total	37,513	100%

4.2 Respondent type

4.2.1 Public, business, taxi and private hire vehicle (PHV) respondents were asked to indicate in what capacity they were responding to the consultation; that is whether they were representing themselves or another business or organisation. Respondents were free to identify themselves as any of these categories. It should be noted that where ‘Government organisation’, ‘community or voluntary organisation’, ‘businesses’ or ‘campaign group’ was selected, we undertook a check to see if any of these were stakeholders and if so, these respondents were then transferred to the stakeholder analysis in this report.

Table 3: Consultation responses by respondent type

Respondent type	Number of responses	Percentage
As an individual	33,721	90%
As a taxi (black cab) owner/driver	134	0.5%
As a PHV (minicab) owner/driver/operator	268	1%
As a representative of a business	1,008	3%
As a representative of a community or voluntary organisation	208	0.5%
As a representative of a Government organisation	36	0%
As a representative of a campaign group	68	0%
Other	668	2%
Not answered	1,402	4%
Total	37,513	100%

4.3 Information channels

4.3.1 Respondents were also asked how they heard about the consultation.

Table 4: Information channels through which respondents heard about the consultation

Information channel	Number of responses	Percentage
Received an email from TfL	11,983	32%
Received a letter from TfL	9,967	27%
Read about it in the press	1,629	4%
Social media	7,250	19%
Read about the consultation on the TfL website	929	2%
Other	3,627	10%
Not answered	2,128	6%
Total	37,513	100%

4.3.2 'Other' information channels included television, direct emails from stakeholders and through search engines.

4.4 Travelling in London

4.4.1 Respondents were asked to indicate which forms of transport they use in central London; they could tick as many of the options as applied.

Table 5: Modes of transport used by respondents (Question 19)

Mode of transport	Number of responses	Percentage
Vehicles for private use	17,853	48%
Vehicles for commercial use	2,674	7%
Taxi (black cab)	8,284	22%
PHV (mini cab)	8,276	22%
Tube	30,756	82%
Bus	25,592	68%
Walk	26,289	70%
Bike	11,531	31%
Motorcycle	375	1%
Other	3,976	11%

4.4.2 'Other' modes of transport include the Docklands Light Railway (DLR) and commuter coach.

4.5 Driver behaviour

4.5.1 In addition, respondents were asked to provide information about their driving behaviour in the Congestion Charging zone and in the area inside the North and South Circular Roads. This is the area proposed for any expanded inner London zone.

Table 6: Public and business respondent frequency of driving in the area inside the Congestion Charging zone (Question 20)

Frequency	Number of responses	Percentage
Every day	1,104	3%
1–2 days a week	1,969	5%
3–6 days a week	1,412	4%
1–2 days a month	3,290	9%
Less than once a month	11,903	32%

Never	16,874	45%
Not answered	961	3%
Total	37,513	100%

Table 7: Public and business respondent frequency of driving in the area inside the North and South Circular Roads (Question 21)

Frequency	Number of responses	Percentage
Every day	6,852	18%
1–2 days a week	6,432	17%
3–6 days a week	5,592	15%
1–2 days a month	4,399	12%
Less than once a month	5,992	16%
Never	7,329	20%
Not answered	917	2%
Total	37,513	100%

4.6 Respondent location

Respondents were asked to provide their postcode. This enabled us to identify whether respondents live within or outside the North and South Circular Roads and which borough they live in.

Table 8: Public and business respondent resident zone (Question 13)

Respondent resident zone	Number of responses	Percentage
Congestion Charging zone	1,161	3%
Inside the North and South Circular Roads	19,409	52%
Rest of Greater London	6,970	19%
Outside Greater London	2,086	6%
No postcode/wrong postcode provided	7,887	21%
Total	37,513	100%

Table 9: Responses by borough (Question 13)

Borough	Number of responses	Percentage
Barking & Dagenham	163	<1%
Barnet	831	2%
Bexley	162	<1%
Brent	839	2%
Bromley	282	1%
Camden	1,269	3%
City of London	172	<1%
Croydon	233	1%
Ealing	758	2%
Enfield	526	1%
Greenwich	1,172	3%
Hackney	1,455	4%
Hammersmith & Fulham	926	2%
Haringey	1,384	4%
Harrow	209	1%
Havering	158	<1%
Hillingdon	185	<1%
Hounslow	613	2%
Islington	1,286	3%
Kensington and Chelsea	816	2%
Kingston upon Thames	168	<1%
Lambeth	1,412	4%
Lewisham	1,629	4%
Merton	203	1%
Newham	989	3%
Redbridge	987	3%
Richmond upon Thames	1,052	3%
Southwark	1,709	5%
Sutton	113	<1%
Tower Hamlets	1,384	4%

Waltham Forest	1,956	5%
Wandsworth	1,424	4%
Westminster	1,075	3%
Outside Greater London	2,086	6%
No postcode/wrong postcode provided	7,887	21%
Total	37,513	100%

Chapter 5. Analysis of public responses

5.1 Introduction

5.1.1 This chapter provides an analysis of the feedback from the public, community and businesses. A quantitative and qualitative analysis of the data received under each proposal is provided. A copy of the questionnaire is at Appendix D.

5.1.2 The proposals and the responses to them are considered in the following order:

- Introducing a Euro VI emissions standard for HGVs London-wide
- Introducing the standard in October 2020
- The charge level for non-compliant heavy vehicles
- The principle of expanding the ULEZ for light vehicles
- The proposed boundary for the expanded ULEZ
- Introducing the standard in October 2021
- The charge level for an expanded ULEZ
- The proposal to reduce the sunset period for CCZ residents
- The proposal to increase the PCN level for non-compliant light vehicles

Quantitative analysis of closed questions

5.1.3 For each proposal an analysis of the closed questions in the questionnaire is provided. The number of respondents and the proportion of support and opposition or preferences are set out. In some instances, these are cross-referenced with key respondent characteristics, such as whether they drive in a particular zone, for those that state they do this. The question numbers from the questionnaire are also referenced in the title of each sub-section.

5.1.4 Because of rounding, please note that some of the percentage totals may be approximately one per cent out (ie 99 or 101 per cent). In all cases, the totals equal 100 per cent prior to rounding.

Qualitative analysis of free text responses (open question)

5.1.5 The questionnaire contained a free text box to enable respondents to comment or make suggestions regarding any or all of the proposals. All comments and suggestions received were reviewed and coded in order to identify common themes raised by respondents.

5.1.6 For clarity, these comments are organised underneath each identified theme. The qualitative analysis also identifies the percentage of overall

public and business comments related to each theme, calculated by using the total number of respondents.

5.1.7 Our responses to the main comments and suggestions raised in the open text section of the questionnaire are provided in Chapter Chapter 8.

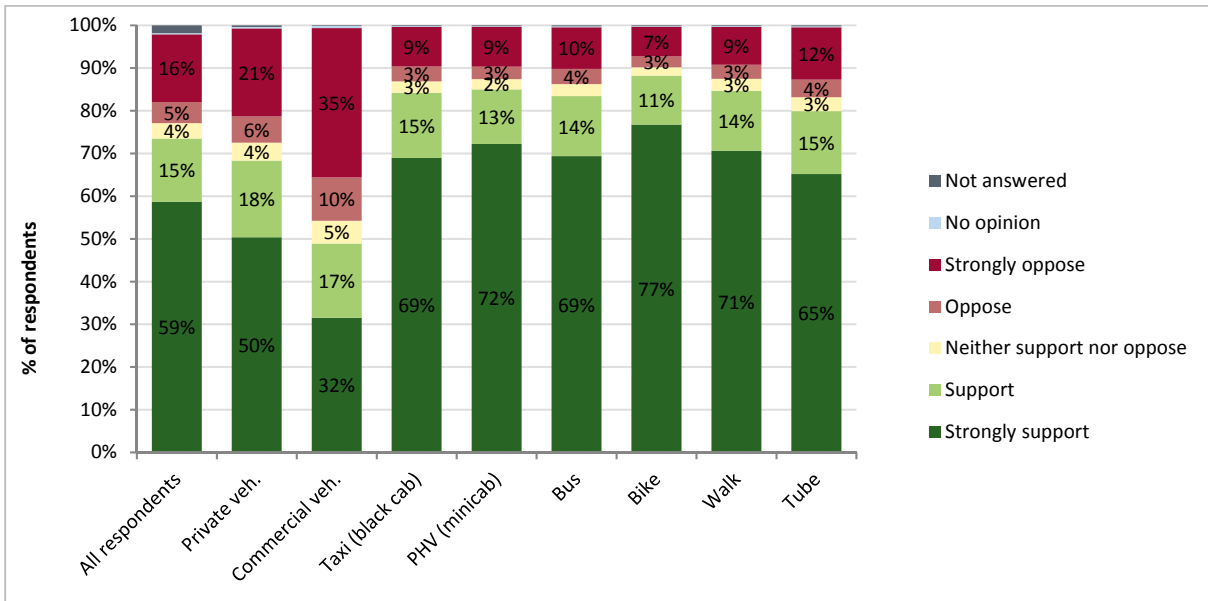
5.2 Question 1: Do you support tougher vehicle emissions standards in the London-wide Low Emission Zone so that heavy vehicles must meet the Euro VI emissions standards London-wide?

5.2.1 Table 10 sets out the level of support from the general public for the proposal to introduce a Euro VI requirement for heavy vehicles London-wide.

Table 10: Principle of changes to the London-wide LEZ

Response	Count	%
Strongly support	22,008	59%
Support	5,559	15%
Neither support or oppose	1,353	4%
Oppose	1,857	5%
Strongly oppose	5,935	16%
No opinion	111	0%
Not answered	690	2%
Total	37,513	100%

Figure 3: Support for changes to the London-wide LEZ by transport use



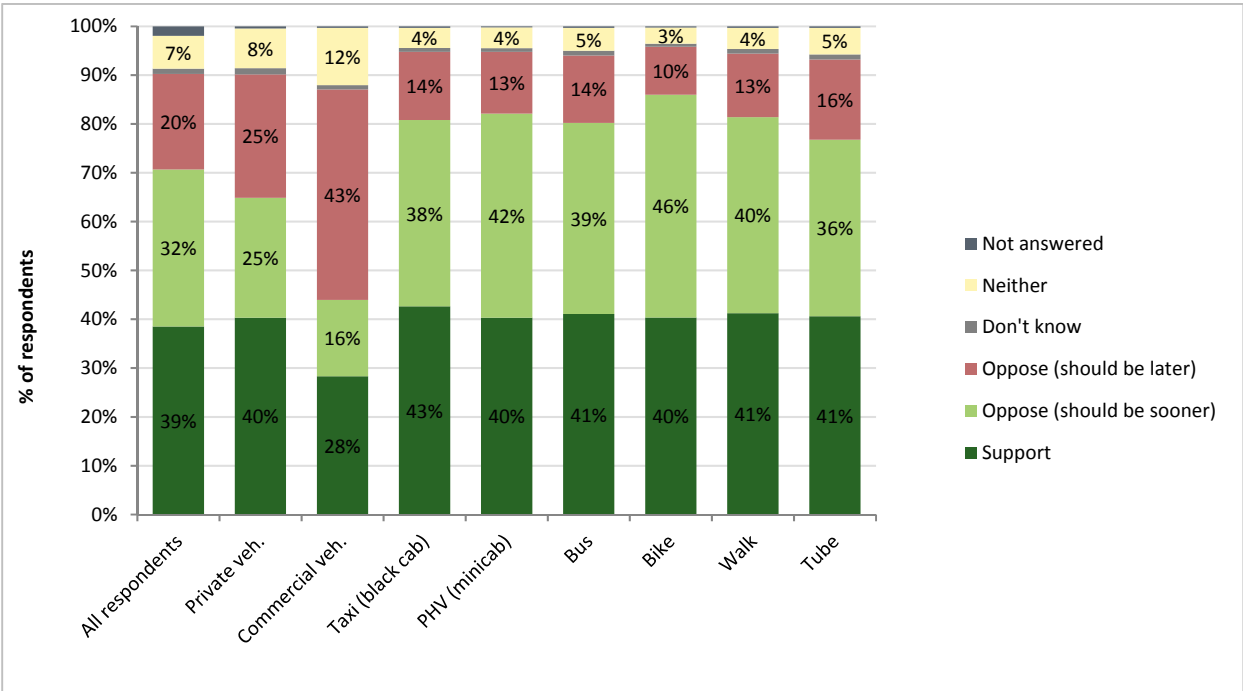
5.3 Question 2: Do you support the proposed implementation date of 26 October 2020 for the introduction of tougher Euro VI standards for heavy vehicles driving in the London-wide Low Emission Zone?

5.3.1 Table 11 sets out the level of support from the general public for the proposal to introduce the changes from 26 October 2020.

Table 11: Introducing new standards for heavy vehicles in the LEZ from 26 October 2020

Response	Count	%
Support	14,451	39%
Oppose (should be sooner)	12,063	32%
Oppose (should be later)	7,344	20%
Neither	2,523	7%
Don't know	405	1%
Not answered	727	2%
Total	37,513	100%

Figure 4: Support for introducing changes to the LEZ from 26 October 2020



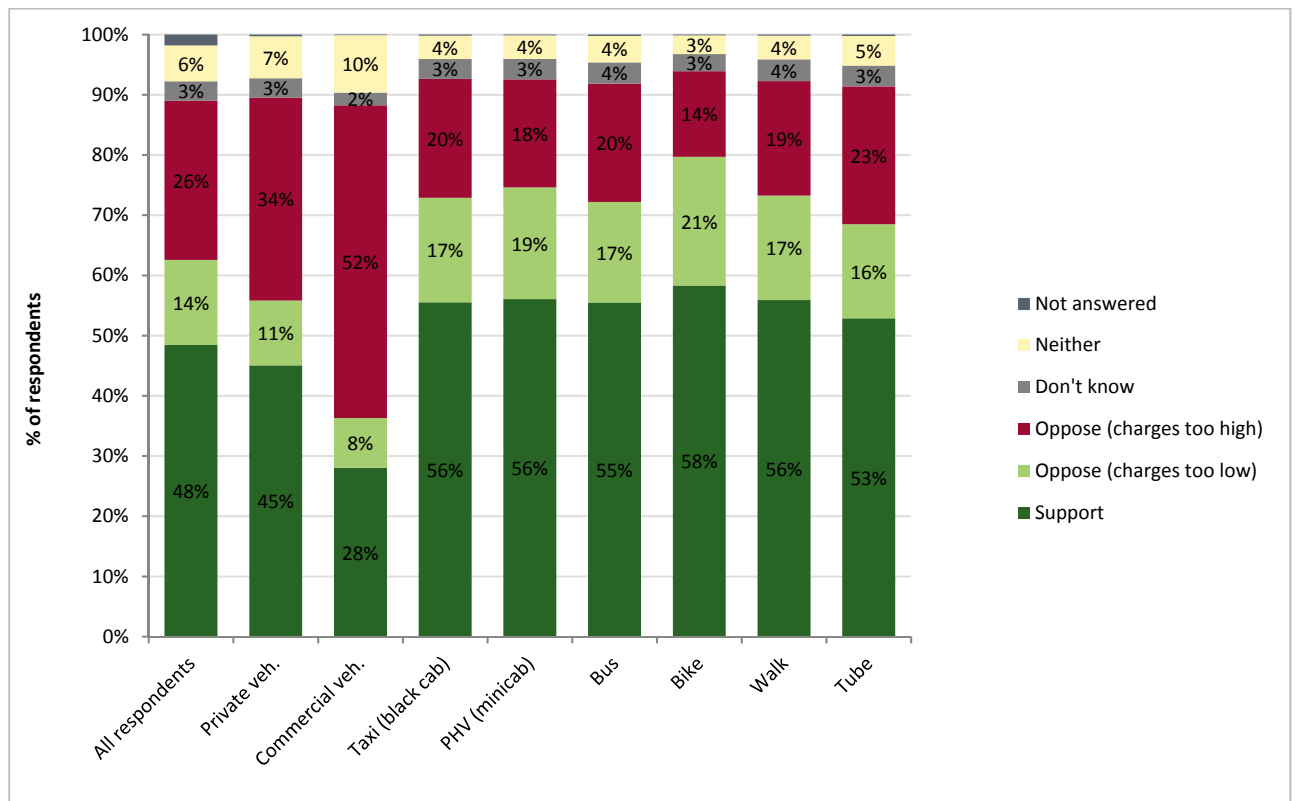
5.4 Question 3: Do you support the proposed daily charges to be paid by owners of heavy vehicles that do not meet the required emissions standards at: £300 for those that do not meet Euro IV PM standards and £100 for those that do not meet Euro VI NO_x and PM standards?

5.4.1 Table 12 sets out the level of support from the general public for the proposed charge levels for heavy vehicles.

Table 12: Heavy vehicle proposed charge levels

Response	Count	%
Support	18,172	48%
Oppose (charges too high)	5,298	14%
Oppose (charges too low)	9,925	26%
Neither	2,228	6%
Don't know	1,208	3%
Not answered	682	2%
Total	37,513	100%

Figure 5: Support for proposed heavy vehicles charge levels



5.5 Question 4: Do you support the principle of expanding the area where ULEZ emissions standards apply to light vehicles beyond central London?

5.5.1 Table 13 sets out the level of support from the general public for the overall principle of expanding the ULEZ.

Table 13: Principle of expanding the ULEZ

Response	Count	%
Strongly support	17,090	46%
Support	3,825	10%
Neither support or oppose	919	2%
Oppose	2,935	8%
Strongly oppose	12,003	32%
No opinion	92	0%
Not answered	649	2%
Total	37,513	100%

Figure 6: Support for extending the zone for light vehicles by residents' location

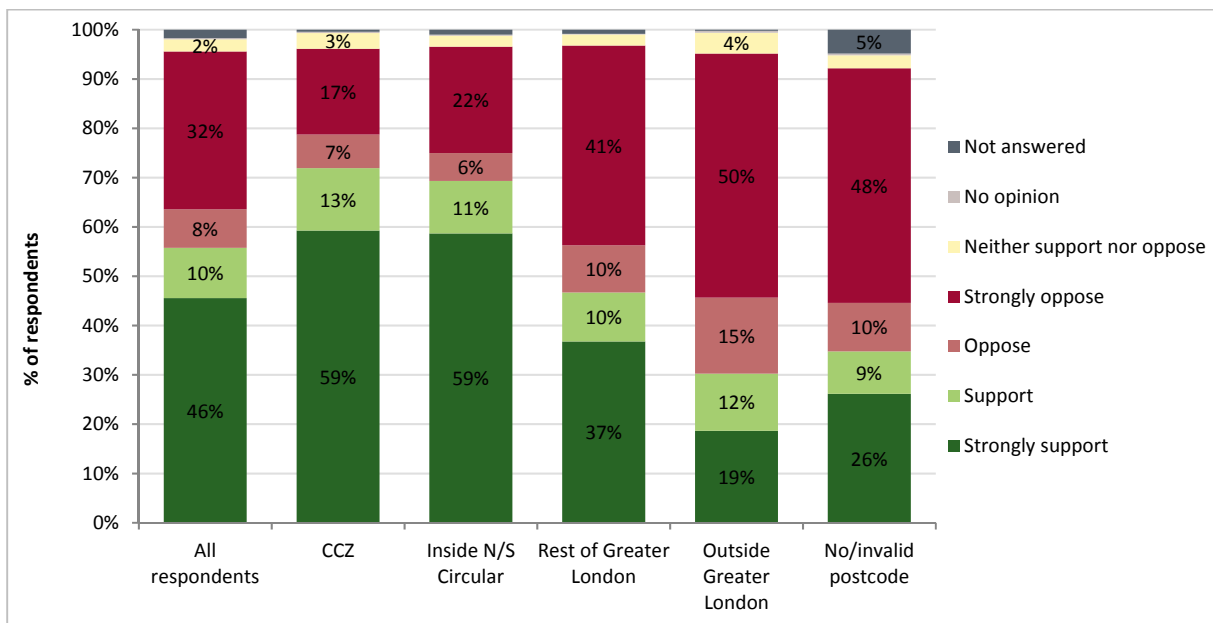
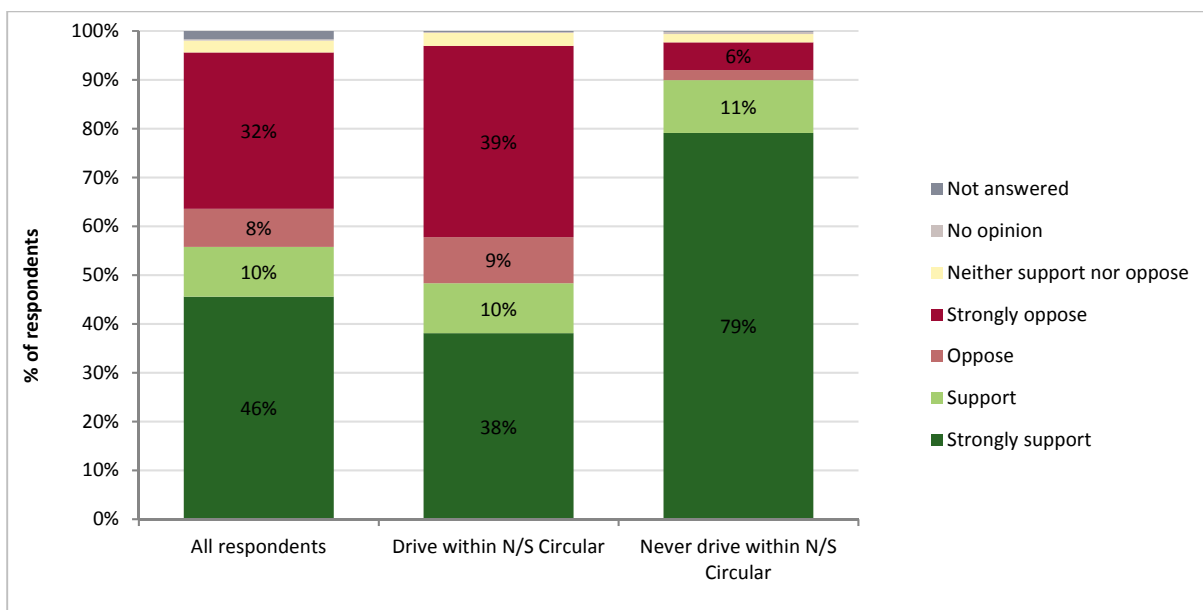


Figure 7: Support for extending the zone for light vehicles by locations driven



5.6 Question 5: We are proposing that the ULEZ emissions standards would apply to the inner London area below, roughly up to but not including the North and South Circular Roads. Do you support this proposed boundary?

5.6.1 Table 14 sets out the level of support from the general public for the proposal to use the North and South Circular Roads as the boundary for an expanded ULEZ.

Table 14: Support for the North and South Circular Roads as the boundary for an expanded ULEZ

Response	Count	%
Support	9,126	24%
Support an expansion but area should be larger	11,612	31%
Support an expansion but area should be smaller	1,808	5%
Oppose expansion	13,604	36%
Neither	469	1%
Don't know	256	1%
Not answered	638	2%
Total	37,513	100%

Figure 8: Support for extending the zone to the North and South Circular Roads for light vehicles by residents' location

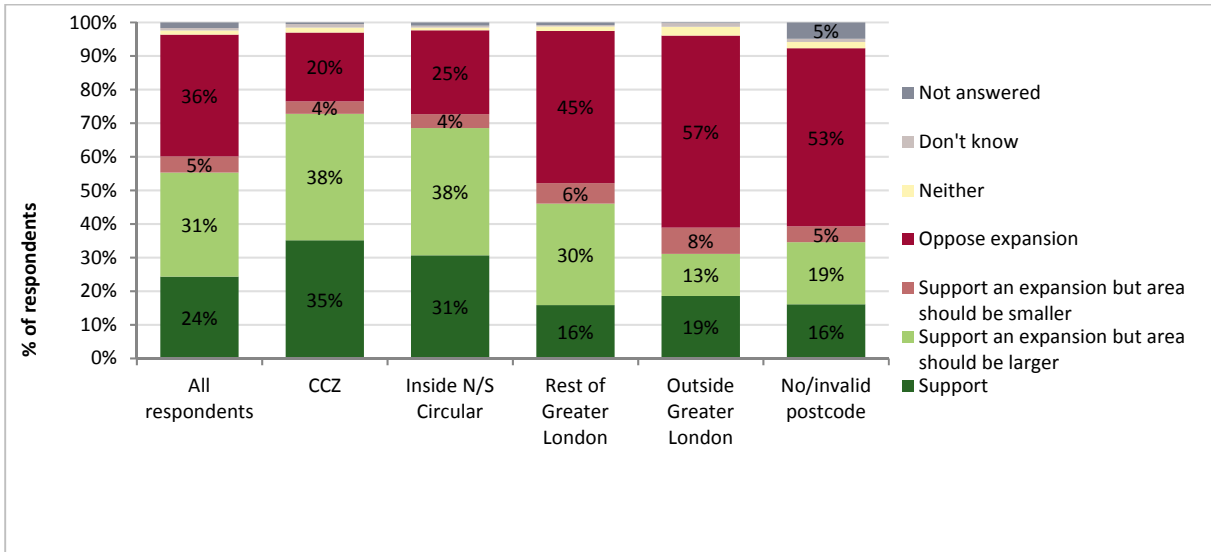
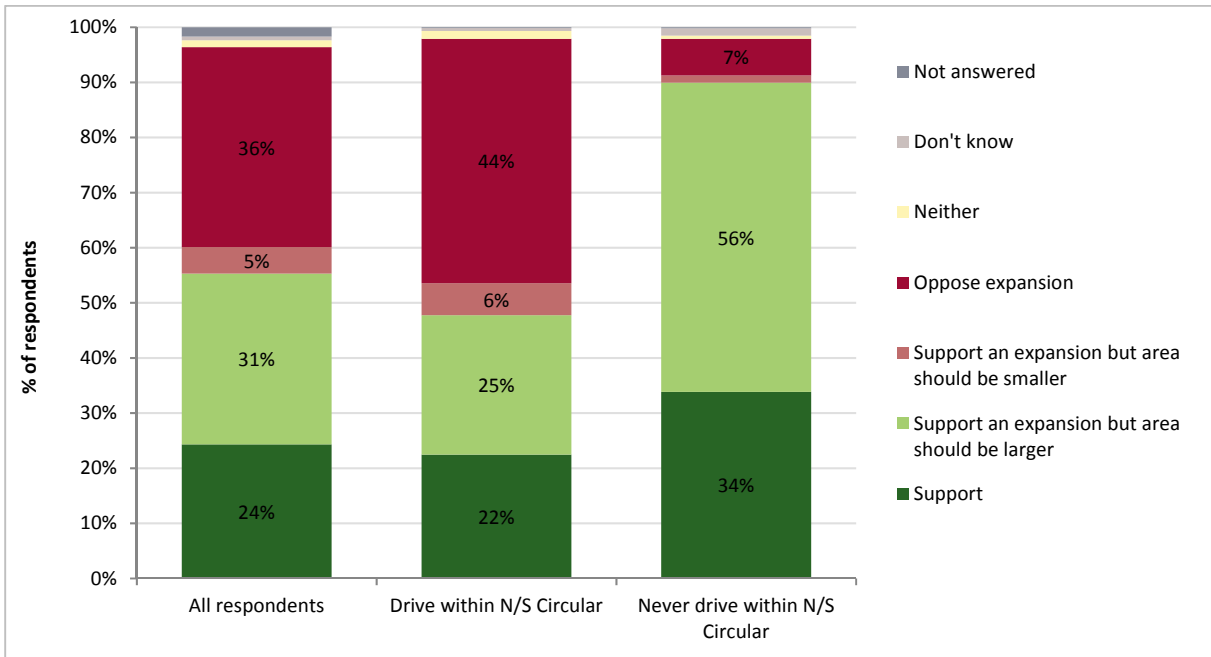


Figure 9: Support for extending the zone to the North and South Circular Roads for light vehicles by locations driven



5.7 Question 6: Do you support the proposed implementation date of 25 October 2021 for the expansion of the ULEZ to include light vehicles in inner London?

5.7.1 Table 15 sets out the level of support from the general public for the proposed start date of October 2021 for the expanded ULEZ.

Table 15: Proposed start date for the expanded ULEZ

Response	Count	%
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Support	8,142	22%
Oppose (should be sooner)	12,851	34%
Oppose (should be later)	11,503	31%
Neither	3,859	10%
Don't know	438	1%
Not answered	720	2%
Total	37,513	100%

Figure 10: Support for introducing an expanded zone on 25 October 2021 by residents' location

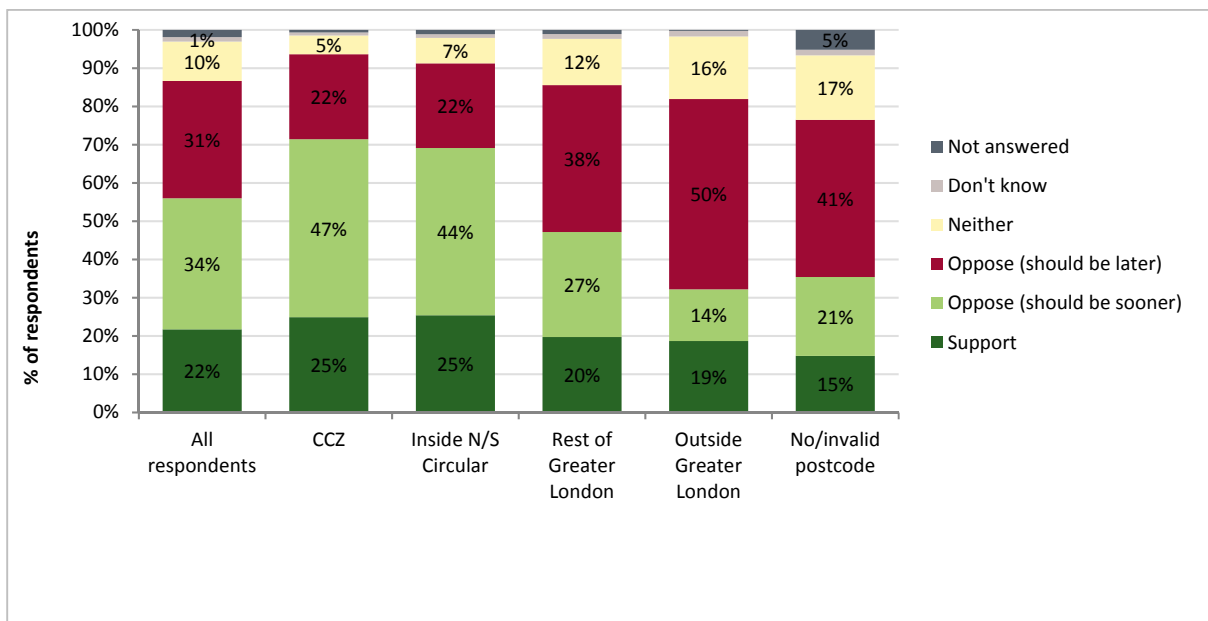
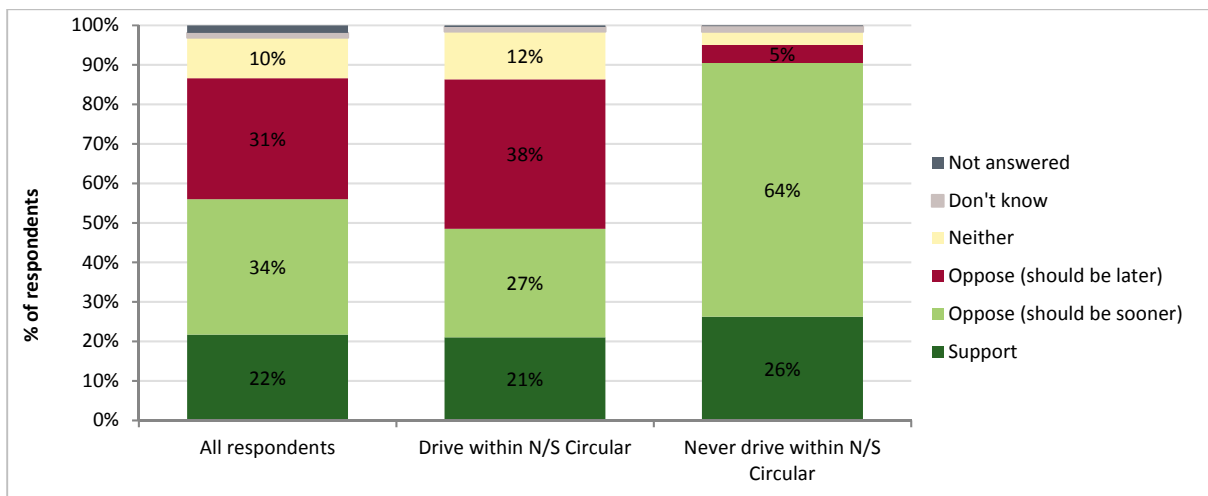


Figure 11: Support for introducing an expanded zone on 25 October 2021 by locations driven



5.8 Question 7: Do you support the proposed ULEZ daily charge to be paid by non-compliant owners of light vehicles of £12.50?

5.8.1 Table 16 sets out the level of support from the general public for the proposed charge level for the expanded ULEZ.

Table 16: Proposed charge level for an expanded ULEZ

Response	Count	%
Support	11,840	32%
Oppose (charges should be higher)	8,079	22%
Oppose (charges should be lower)	12,230	33%
Neither	3,986	11%
Don't know	689	2%
Not answered	689	2%
Total	37,513	100%

Figure 12: Support for the proposed £12.50 daily charge level for non-compliant light vehicles by residents' location

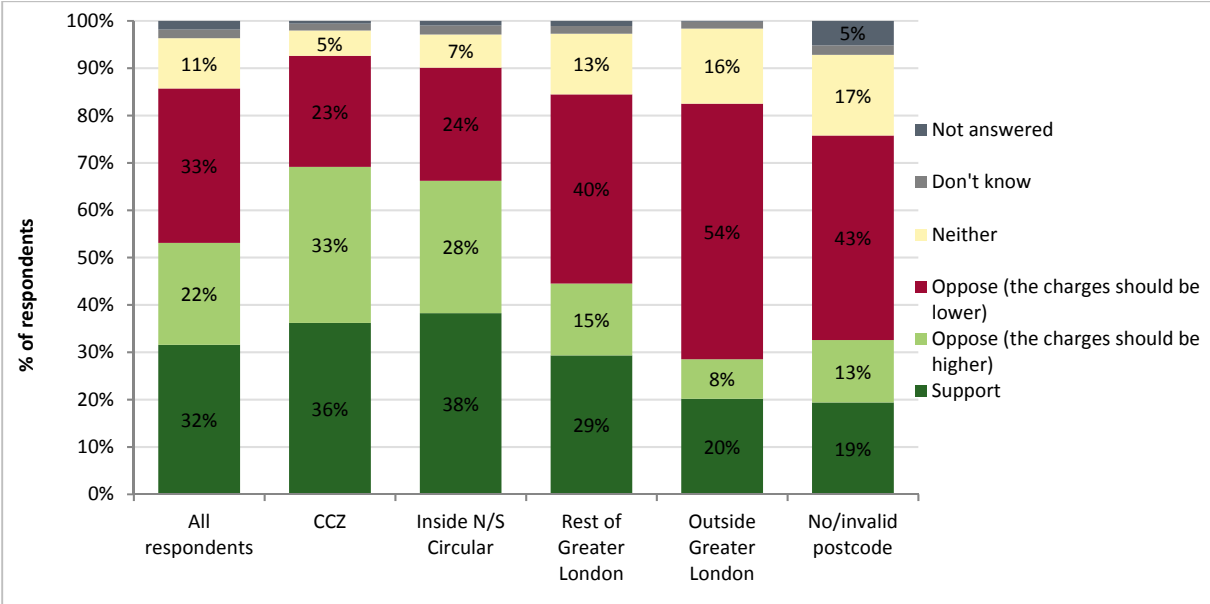
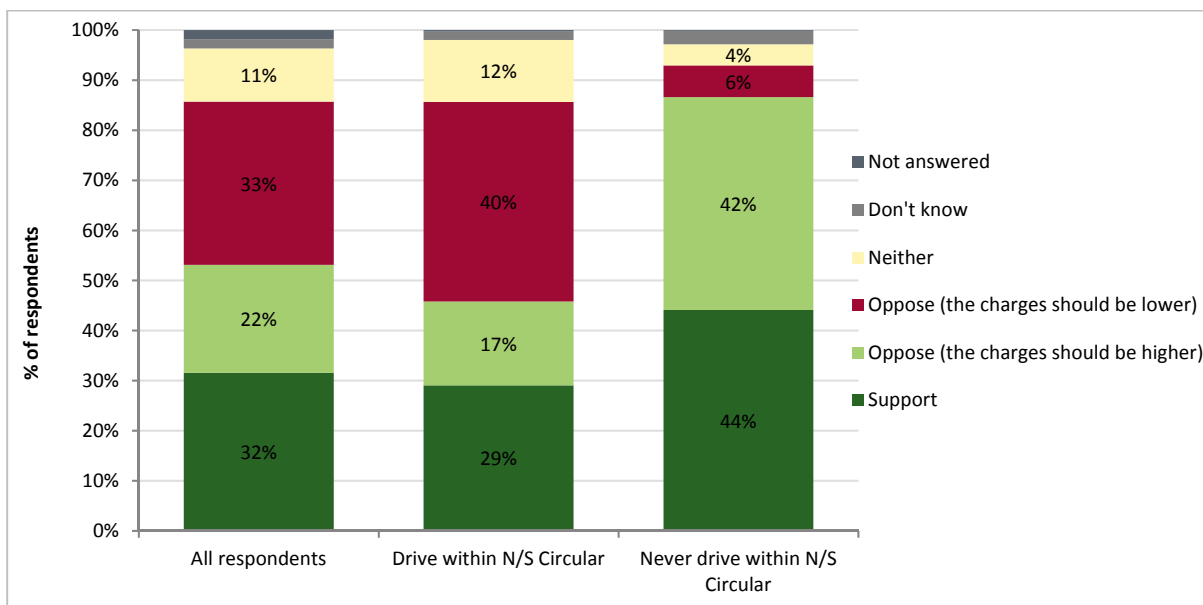


Figure 13: Support for the proposed £12.50 daily charge level for non-compliant light vehicles by locations driven



5.9 Question 8: Do you support bringing forward the end of the sunset period for residents in the central London Congestion Charging zone from 7 April 2022 to 24 October 2021 so that all residents of inner London, including the Congestion Charging zone, pay the daily charge for non-compliant vehicles from 25 October 2021?

5.9.1 Table 17 sets out the level of support from the general public for the proposal to bring forward the end of the sunset period for residents of the Congestion Charging zone.

Table 17: Proposed change to the sunset period

Response	Count	%
Strongly support	14,624	39%
Support	4,465	12%
Neither support or oppose	2,547	7%
Oppose	4,438	12%
Strongly oppose	9,622	26%
No opinion	1,175	3%
Not answered	642	2%
Total	37,513	100%

Figure 14: Support for the proposed change to the sunset period by residents' location

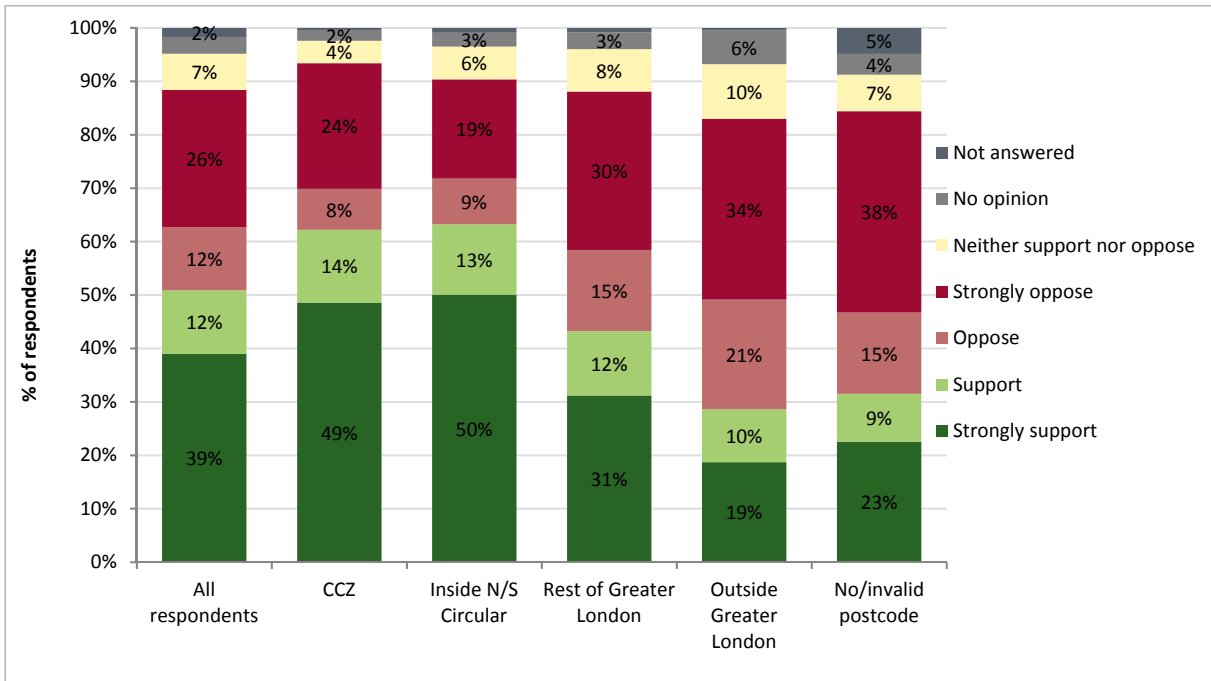
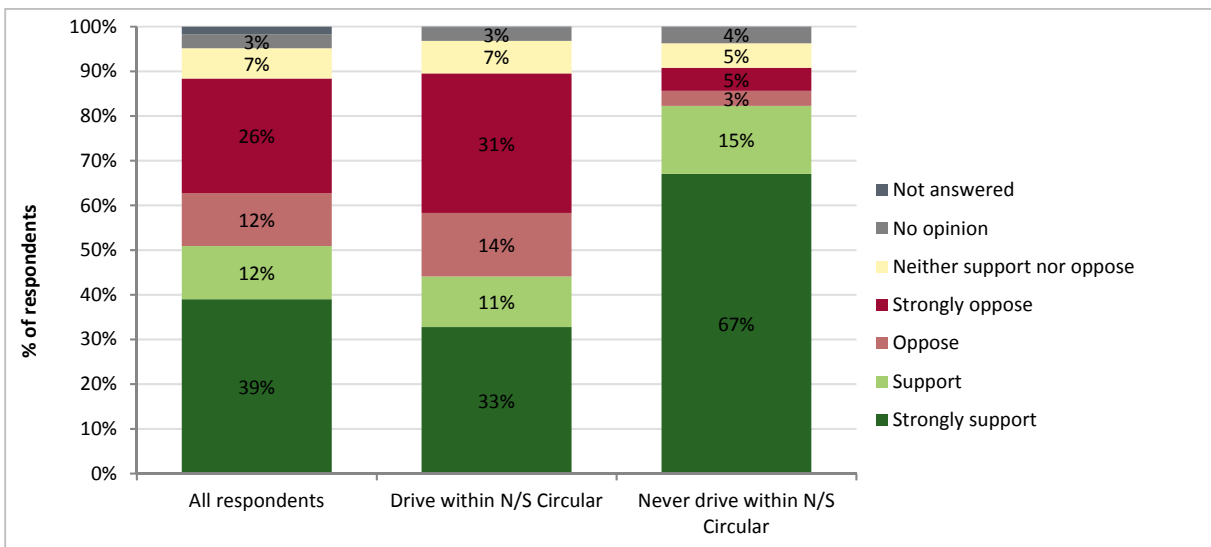


Figure 15: Support for the proposed change to the sunset period by locations driven



5.10 Question 9: Do you support increasing the Penalty Charge Notice (PCN) level for non-payment of the ULEZ daily charge by owners of non-compliant light vehicles from £130 to £160?

5.10.1 Table 18 sets out the level of support from the general public for the proposed increase in the PCN level for non-payment of the ULEZ charge for light vehicles.

Table 18: Support for the proposed PCN level changes

Response	Count	%
Strongly support	13,117	35%
Support	3,999	11%
Neither support or oppose	3,164	8%
Oppose	4,656	12%
Strongly oppose	11,312	30%
No opinion	635	2%
Not answered	630	2%
Total	37,513	100%

Figure 16: Support for an increase in the PCN charge level by residents' location

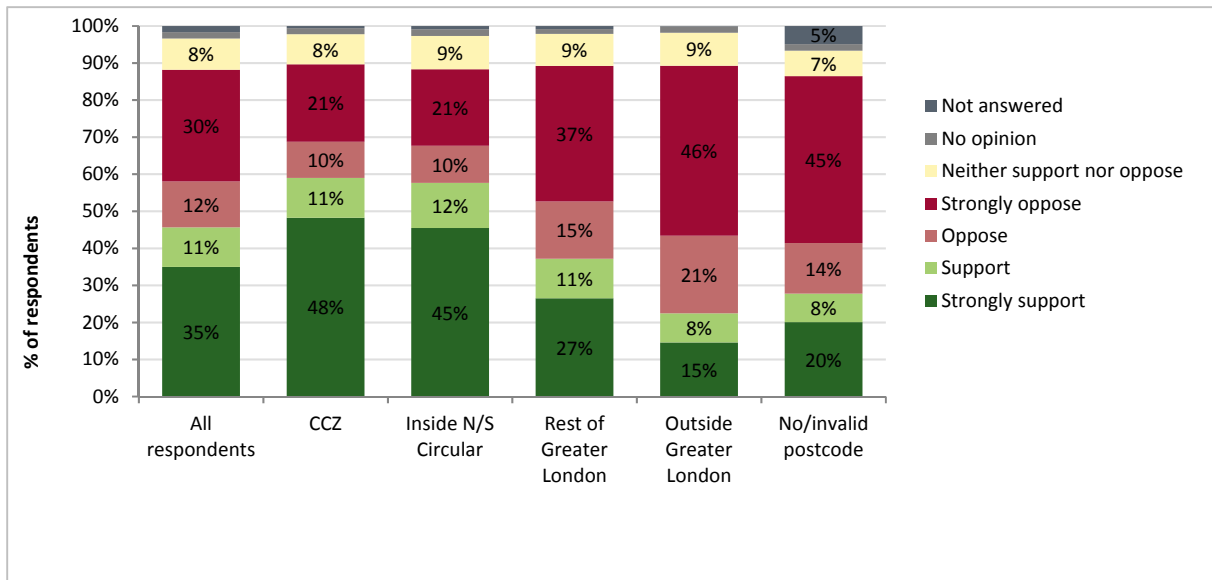
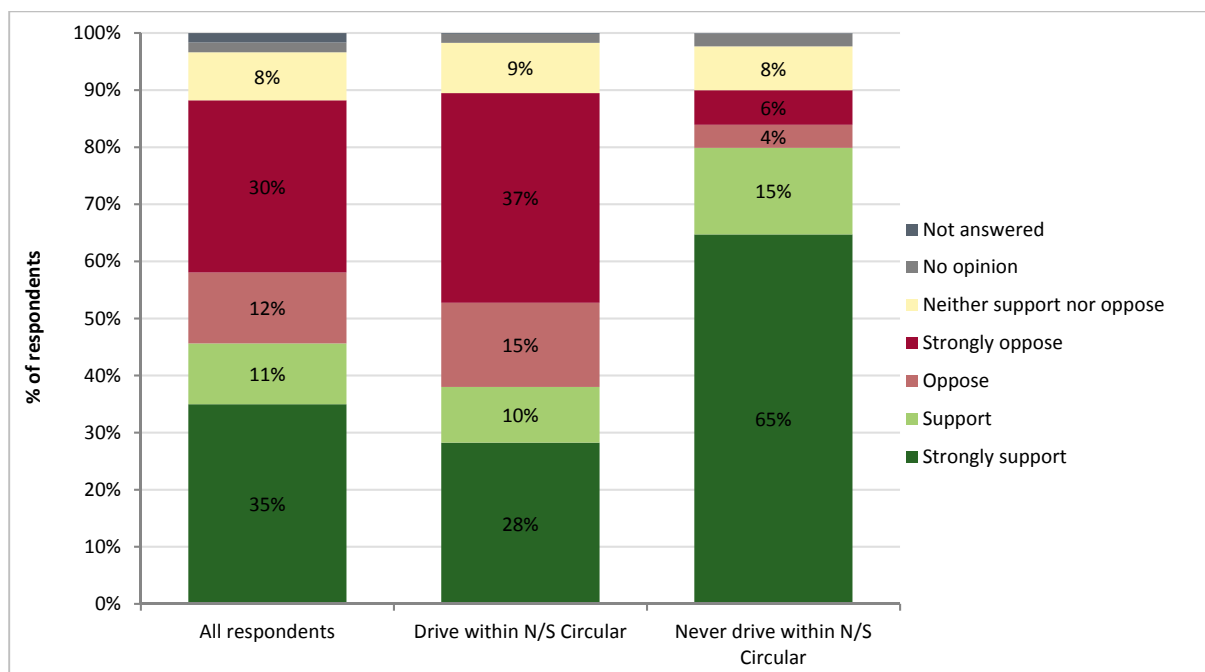


Figure 17: Support for an increase in the PCN charge level by locations driven



5.11 Question 10: Written comments

5.11.1 Question 10 of the questionnaire provided an opportunity for respondents to give their written comments on all of the proposals. Please see below for a summary of the analysis of free text responses, reported in themes. This was a wide-ranging consultation and therefore the comments made have been organised into a large number of sub-themes within each theme. For the sake of clarity, this chapter includes only the most popular sub-themes (made by more than one per cent of respondents). Appendix G has the full free text analysis.

Theme A: Principle of the ULEZ and LEZ, air quality and emissions

5.11.2 There were 5,140 comments made about the principle of the ULEZ, the LEZ and air quality proposals. The results are shown in Table 19.

5.11.3 Five per cent of respondents supported measures to improve air quality, two per cent wanted to see tougher measures and one per cent had concerns about the availability of public transport and specific aspects of the scheme (whilst being supportive).

Table 19: Comments on the principle of the ULEZ and LEZ, air quality and emissions

Comment	Number of comments	Percentage
Supports measures to improve air quality in London	1,927	5%
Supports tougher	688	2%

measures on air quality than proposed		
Supports proposals for health reasons	563	2%
Concerns that public transport is not always a viable option within the proposed ULEZ expansion area	523	1%
Supports the principle of the ULEZ but have concerns about specific aspects	325	1%

Theme B: Timescale

- 5.11.4 There were 2,399 comments made about timescales. The results are shown in Table 20.
- 5.11.5 Four per cent of respondents wanted to see air quality proposals implemented earlier and one per cent of respondents suggested a later compliance date for the proposals and for private vehicles.

Table 20: Comments on timescales

Comment	Number of comments	Percentage
Suggests earlier implementation of proposals	1,590	4%
Suggests later implementation of proposals	346	1%
Suggests later compliance date for private/individual vehicles	215	1%

Theme C: Vehicle emissions standards

- 5.11.6 There were 2,873 comments made about vehicle emissions standards in total. The most common comment (1,621 comments raised/four per cent of respondents) raised concerns that central Government had promoted diesel vehicles but is now penalising them.

Theme D: Charge level

- 5.11.7 There were 1,400 comments made about the charge level. The results are shown in Table 21.
- 5.11.8 Less than one per cent of respondents opposed the charging levels. Less than one per cent of respondents suggested higher charges for all vehicles.

Table 21: Comments on the charge level

Comment	Number of comments	Percentage
Opposes daily charge, suggesting variable rate per mile instead	166	0.5%
Suggests higher charges for all vehicles	158	0.5%

Theme E: Boundary

- 5.11.9 There were 4,303 comments made about the boundary –about both the LEZ and ULEZ boundary – however the most common comments were made about the ULEZ boundary. The results are shown in Table 22.
- 5.11.10 One per cent of respondents raised concerns regarding increased traffic and pollution near to the North and South Circular Roads boundary, one per cent suggested the ULEZ should be London-wide, one per cent suggested the inclusion of the North and South Circular Roads themselves in the ULEZ boundary, and one per cent opposed the ULEZ expansion.

Table 22: Comments on the boundary

Comment	Number of comments	Percentage
Concerns regarding increased traffic and pollution near to the North and South Circular Roads boundary	503	1%
Suggests the ULEZ should be London-wide (M25 boundary) for all vehicles	431	1%
Suggests inclusion of the North and South Circular Roads themselves in the ULEZ boundary	396	1%
Opposes expanding the ULEZ up to the North and South Circular Roads	363	1%

Theme F: Residents' sunset period

- 5.11.11 There were 410 comments made about the residents' sunset period in total. The most common responses opposed bringing forward the end of the sunset period for central London residents, or supported bringing forward the sunset period for central London residents or suggested a sunset period for residents within the North/South Circular Roads boundary. The frequency that these comments were raised was too low to make them statistically significant.

Theme G: Discounts, exemptions and other sunset periods

- 5.11.12 There were 3,584 comments made about discounts, exemptions and other sunset periods, and the results are shown in Table 23.
- 5.11.13 Three per cent of respondents suggested an exemption for motorcycles and two per cent opposed an exemption for taxis.

Table 23: Comments on discounts, exemptions and other sunset periods

Comment	Number of comments	Percentage
Suggests exemption for motorcycles	983	3%
Opposes exemption for taxis	745	2%

Theme H: Economic impacts

- 5.11.14 There were 9,830 comments made about economic impacts and the results are shown in Table 24.
- 5.11.15 Five per cent of respondents were concerned about the cost of upgrading a vehicle and three per cent were concerned that the ULEZ is a revenue raising scheme. Two per cent of respondents respectively were concerned that the ULEZ will increase the cost of living, were opposed to the ULEZ on the grounds that it is a money raising scheme, concerned or were opposed to the ULEZ on the grounds that it is a tax or were concerned about the impact on small business.

Table 24: Comments on the economic impacts

Comment	Number of comments	Percentage
Concerns regarding the cost of upgrading a vehicle	1,803	5%
Concerns that the ULEZ is solely a revenue raising scheme	1,152	3%

Concerns that the ULEZ will increase the cost of living	859	2%
Opposes the ULEZ on the grounds that it is a money raising scheme	697	2%
Concerns that the ULEZ is a tax	640	2%
Concerns regarding the impact of the ULEZ on small business	635	2%
Opposes the ULEZ on the grounds that it is a tax	633	2%
Concerns regarding motorists' costs without the ULEZ charge	541	1%
Concerns regarding people who use cars/vans for work	480	1%
Concerns regarding the impact of the ULEZ on business (general)	390	1%
Concerns that charging will allow richer people to continue polluting	381	1%
Concerns regarding the depreciating value of second-hand vehicles	346	1%

Theme I: Other impacts

- 5.11.16 There were 8,104 comments made about other impacts and the results are shown in Table 25.
- 5.11.17 Six per cent of respondents were concerned about the disproportionate impact on poor people or those on low incomes, and two per cent were concerned about a disproportionate impact on private/individual motorists. One per cent of respondents respectively were concerned that the proposals will not be effective in improving air quality, were concerned about a disproportionate impact on residents living in the ULEZ and about a disproportionate impact on motorcyclists.

Table 25: Comments on other impacts

Comment	Number of comments	Percentage
Concerns regarding the disproportionate impact on poor people or those on low incomes	2,260	6%
Concerns regarding the disproportionate impact on	899	2%

private/individual motorists		
Concerns that the proposals will not be effective in improving air quality	465	1%
Concerns regarding the disproportionate impact on residents living in the ULEZ zone	345	1%
Concerns regarding the disproportionate impact on motorcyclists	336	1%

Theme J: Implementation

- 5.11.18 There were 960 comments made about the implementation of the ULEZ/LEZ in total. The most common comment suggested that the ULEZ charge should only apply to vehicles purchased, registered or manufactured after the ULEZ legislation is implemented. The frequency that these comments were raised was too low to make them statistically significant.

Theme K: Financial support and revenue

- 5.11.19 There were 1,940 comments made about financial assistance in total. The most common comment (1,111 comments raised/three per cent of respondents) suggested that financial assistance (a scrappage scheme) was required in order to aid compliance.

Theme L: PCN level

- 5.11.20 There were 127 comments made about the PCN charge level – the most common opposed the increase of the charge. The frequency that these comments were raised was too low to make them statistically significant.

Theme M: Vehicle bans

- 5.11.21 There were 1,255 comments made about banning vehicles. The most common comment (278 comments raised/one per cent of respondents) suggested that non-compliant vehicles should be banned from the ULEZ rather than charged.

Theme N: Alternative and supporting policy suggestions

- 5.11.22 There were 9,666 comments made about alternative and supporting policy suggestions and the results are shown in Table 26.
- 5.11.23 Four per cent of respondents suggested making public transport cheaper. Two per cent of respondents respectively suggested improving traffic flow,

suggested encouraging motorcycles and suggested improving public transport.

Table 26: Comments on alternative and supporting policy suggestions

Comment	Number of comments	Percentage
Suggests making public transport cheaper	1,387	4%
Suggests improving traffic flow eg increase road space, reduce roadworks, reduce bus lanes etc.	740	2%
Suggests encouraging motorcycles as they are a solution to the air quality problem	726	2%
Suggests improving public transport services	717	2%
Suggests improving provision for electric vehicles	550	1%
Suggests improving provision for cyclists	487	1%
Supports low emission buses	398	1%
Suggests stricter enforcement for idling vehicles	296	1%
Suggests introducing incentives for low emission transport	294	1%
Supports policies that encourage electric vehicles	281	1%
Suggests introducing incentives for low emission transport (active travel/public transport) instead of a charge	277	1%

Theme O: Consultation

5.11.24 There were 1,415 comments made about the consultation in total. The most common comment (268 comments raised/one per cent of respondents) suggested that the consultation information is biased or that the questions were leading.

Chapter 6. Campaign responses and petitions

6.1 Introduction

- 6.1.1 Throughout the consultation, we received a number of emails from members of the public as part of a campaign led by the Healthy Air Campaign, Friends of the Earth, Mums for Lungs and the Motorcycle Action Group. We also received petitions from the Chiswick Liberal Democrats, Mums for Lungs and a member of the public via Change.org.
- 6.1.2 The campaign groups provided a template response for respondents which could be amended. A summary of these campaigns is provided in this chapter and a fuller analysis is set out in Appendix H.

6.2 Healthy Air campaign

- 6.2.1 We received 2,723 responses as part of this campaign; 286 had been edited to provide additional comments. The template text for the Healthy Air campaign is shown in Figure 18.

Figure 18: Text of Healthy Air campaign response

I strongly welcome the Mayor's commitment to tackling London's illegal and harmful levels of air pollution. Road transport is a major source of air pollution and we need urgent action to tackle this. By focusing on road transport and in particular diesel vehicles, he is demonstrating that he understands the urgency of addressing this public health crisis. However, he needs to go further and faster to meet his legal and moral obligations to protect the people of London from harmful air pollution.

A stronger, bigger Ultra Low Emission Zone brought in sooner is vital. I welcome the proposal to strengthen the existing Low Emission Zone for heavy duty vehicles and expand the proposals for the Ultra Low Emission Zone for cars and vans to protect inner London but the Mayor should go further to ensure that all Londoners have the same opportunity to breathe cleaner air in the shortest time possible. Transport for London's own analysis of a London-wide Ultra Low Emission Zone for all vehicles shows that this option will deliver greater emissions reductions.

I am concerned that car manufacturers are still not producing diesel cars that are as clean as they should be. I would like to see standards set for the Ultra Low Emission Zone that will ensure that the vehicles that enter the zone are the cleanest available on the road and not just in the lab.

I also welcome the fact that the Mayor has acknowledged the need to reduce the number of vehicles on our roads. Fewer and not just cleaner vehicles are needed to tackle illegal and harmful levels of air pollution in the shortest time possible. I would like the Ultra Low Emission Zone to be designed to support this and set a path towards a zero emissions future, starting with a zero emissions zone in central London by 2025.

We analysed the additional 286 comments received as part of this campaign. A summary of the most popular responses is provided in Table 27 below.

Table 27: Additional comments received through the Healthy Air Campaign

Comment	Number of Comments	Percentage of campaign responses
Suggests improving the provision for cycling, eg more cycle lanes, more cycle parking, an extension of cycle hire	24	1%
Supports policies that promote active travel (ie walking and cycling)	23	1%
Suggests improving public transport services	15	1%

6.3 Friends of the Earth campaign

6.3.1 We received 1,194 responses as part of this campaign; 187 had been edited to provide additional comments. The template text for the Friends of the Earth campaign is shown in Figure 19.

Figure 19: Friends of the Earth campaign response

Dear Transport for London,

London’s dirty air needs cleaning up – fast. The Mayor’s plans are a great start but he needs to do more to tackle the capital’s air pollution problem and reduce health risks for millions of people.

The Ultra Low Emission Zone must come into force much sooner than planned – by the end of 2018 at the latest. Londoners shouldn’t have to wait until 2021 for cleaner air.

The Zone must cover the whole of London to make a difference, extending beyond the North and South Circular roads and including all of Outer London too.

To make a significant impact the Zone must also cover all vehicle types. Over half of the polluting nitrogen oxides emissions from London’s road transport comes from cars and light goods vehicles – including taxis. It’s vital that the Mayor acknowledges and addresses this.

6.3.2 We analysed the additional 187 comments received as part of this campaign. A summary is provided in **Error! Not a valid bookmark self-reference.** below.

Table 28: Additional comments received through the Friends of the Earth Campaign

Comment	Number of comments	Percentage of campaign responses
Concerns regarding the health impacts of poor air quality on children	22	2%
Suggests improving the provision for cycling, eg more cycle lanes, more cycle parking, an extension of cycle hire	9	1%
Suggests introducing more green infrastructure (ie planting more trees and plants, green walls)	8	1%
Suggests stricter enforcement for idling vehicles (eg fines)	7	1%
Suggests reducing general traffic levels in London	7	1%
Concerns regarding the impacts of poor air quality on the health of cyclists	7	1%
Concerns regarding pollution caused by vehicles idling	7	1%

6.4 Mums for Lungs Campaign

6.4.1 We received 50 responses as part of this campaign; four had been edited to provide additional comments..The template text for the Mums for Lungs campaign is shown in Figure 20.

Figure 20: Mums for Lungs campaign response

For the health of our kids and all of us, I ask you, Mr Mayor, to be more bold and progressive, follow the lead of the London Assembly and implement the ULEZ and LEZ within your current tenure and to cover all of London to ensure the health of all Londoners is protected. The current proposals leave at least 74,000 Londoners breathing toxic air.

I urge you to work hard and fast to achieve full compliance with air pollution limits for the whole of London by 2020. You have the power to build a foundation of an eco-city, and leave a lasting legacy of cleaner air

for all of us to benefit from. We are relying on you

Please follow the lead of the London Assembly and implement the ULEZ and LEZ within your current tenure, ensuring both cover all of London. I urge you to work hard and fast to achieve full compliance with air pollution limits for the whole of London by 2020. You have the power to build the foundations of a healthy city, and leave a lasting legacy of cleaner air for us all. We are relying on you. I will be sharing your response with my network and Mums for Lungs

6.4.2 We analysed the additional four comments received as part of this campaign. A summary is provided in Table 29 below.

Table 29: Additional comments received through the Mums for Lungs campaign

Comment	Number of Comments	Percentage of campaign responses
Supports proposals	4	8%
Supports a London-wide LEZ for HGVs	4	8%
Suggests the ULEZ should be London-wide (non-specific boundary) for all vehicles	4	8%
Concerns regarding the health impacts of poor air quality	4	8%
Concerns regarding the health impacts of poor air quality on children	4	8%
Suggests the ULEZ in the central zone is implemented sooner than planned	4	8%
Suggests the ULEZ is extended London-wide sooner than planned	4	8%
Suggests the inclusion of the South Circular Road itself in the ULEZ	1	2%
Concerns regarding the pollution impact on houses and schools near to main roads	1	2%
Suggests car-free days	1	2%

6.5 Motorcycle Action Group campaign

6.5.1 We received 10 responses as part of this campaign; 5 had been edited to provide additional comments. The template text for the Motorcycle Action Group campaign is shown in Figure 21.

Figure 21: Motorcycle Action Group campaign

1. Why are riders of older, small-capacity bikes being charged, that often achieve up to 120mpg, when other forms of transport, e.g. taxis, which produce considerably higher emissions with a single occupant, aren't? We're not asking for taxis to be charged – only for a level playing field.

2. Why does the Mayor want to force riders of these machines onto a public transport system that will expose them to up to eight times more particulate matter, according to publicly available research, than using private transport such as a motorbike, when the whole purpose of the change is meant to be environmental and health related?

3. Will the Mayor compensate the thousands of low-paid workers using small, older motorbikes because it's all they can afford, and what scheme will he be setting up to pay the difference in cost between cheap, older bikes and expensive public transport?

6.5.2 We analysed the additional five comments received as part of this campaign. A summary is provided in Table 30 below.

Table 30: Additional comments received through the Motorcycle Action Group

Comment	Number of Comments	Percentage of campaign responses
Concerns regarding disproportionate impact on motorcycles	5	50%
Concerns regarding disproportionate impact on people who rely on motorcycles for commuting	5	50%
Concerns regarding disproportionate	5	50%

impact on people who rely on motorcycles for work		
Concerns that charging motorcycles will make users switch onto cars and thus cause more pollution	5	50%
Suggests motorcycles should be considered a separate category of vehicle	5	50%
Suggests encouraging motorcycles as they are a solution to the air quality problem and are being disproportionately punished	5	50%
Concerns that ULEZ charge will stop people using motorcycles for leisure	3	60%
Concerns regarding air quality on board public transport	2	20%
Concerns over high cost of public transport	2	20%
Suggest exemption for motorcycles	1	10%

6.6 Mums for Lungs petition

- 6.6.1 Mums for Lungs organised two petitions with different text for each. Both petitions had physical signatures signed by individuals.
- 6.6.2 The first petition attracted 78 signatures.

Figure 22: First Mums for Lungs first petition text

Dear Mr Mayor

Air pollution in London contributes to nearly 9,500 early deaths every year and plays a role in triggering asthma attacks and causing asthma in children and adults.

We, the undersigned, are calling on you to act urgently to protect our children's health.

Bring in an Ultra-Low Emission Zone for all vehicles London wide by 2020. The current proposals exclude the North and South Circulars, and so would bisect many of London's boroughs leaving thousands of us still breathing filthy air, particularly in hotspots such as Richmond town centre. A London-wide ULEZ will help to further reduce very harmful pollution along the South Circular and beyond, where many schools and nurseries

are blighted by toxic air.

6.6.3 The second petition attracted 330 signatures

Figure 23: Second Mums for Lungs second petition text

Dear Mr Mayor

Air pollution in London contributes to nearly 9,500 early deaths every year and is causing thousands of children and babies to develop asthma and breathing problems.

Your target is to bring pollution limits to within safe levels by 2030; that is simply too late for a generation of children. We deserve better!

We, the undersigned, are calling on you Mr Mayor, to act now, and act fast: CLEAN AND HEALTHY AIR FOR LONDONERS BY 2020

6.7 The Chiswick Liberal Democrats petition

6.7.1 The Chiswick Liberal Democrats organised a petition which was signed with physical signatures by individuals. It attracted 340 signatures.

Figure 24: Chiswick Liberal Democrats petition text

The area around the A4 has the highest levels of pollution in the Borough and frequently exceeds the safe maximum levels of NO2. Both St Mary's and William Hogarth schools. Back onto the A4, and many people live alongside it. In our view, the Council and the Mayor have missed a massive opportunity to reduce pollution for those most at risk in Chiswick, including the children at those schools, by the exclusion of the A4 from the Ultra Low Emission Zone (ULEZ)

Pollution on the A4 requires immediate attention; as admitted in Hounslow Council's own draft Air Quality Action Plan issued in 2017, the A4 has the highest levels of toxic pollution in the Borough. Harmful NO2 concentrations are almost double the legal limit and PM10 levels are just below the limit.

This is a serious issue, as long-term exposure to NO2 impacts respiratory development in children. PM10s are of particular concern as groups with pre-existing lung or heart disease, as well as elderly people and children, are particularly vulnerable to its adverse affects. According to a World Health Organisation report from 2013, "There is no evidence of a safe level of exposure or a threshold below which no adverse health effects occur."

The inclusion of part of the A4 running through Chiswick in the ULEZ is an opportunity to start to address this issue.

6.8 Change.org petition

6.8.1 Change.org hosted a petition that was created by an individual. This petition attracted 1,159 signatures¹³ at <https://www.change.org/p/sadiq-khan-stop-mayor-khan-s-ulez-zone-extension-to-the-north-south-circular-roads-in-london>

6.8.2 The body of the petition text is in Figure 25.

Figure 25: change.org petition text

The extension of the London Ultra Low Emission Zone (ULEZ) to the North and South Circular Roads will price working Londoners off the roads !! Extending the Ultra Low Emission Zone to the North & South Circular roads will mean anyone OUTSIDE the zone will have to pay : £12.50 for cars, vans and motorbikes; £100 for buses, coaches and HGVs ,to drive in the zone, 24 hours a day, 365 days a year.. OUTER LONDON IS RESIDENTIAL & should NOT be subject to the ULEZ !!

The ULEZ standards are:

Euro 3 for motorcycles, mopeds, motorised tricycles and quadricycles (L category)

Euro 4 for petrol cars, vans, minibuses and other specialist vehicles

Euro 6 for diesel cars, vans and minibuses and other specialist vehicles

Euro VI for lorries, buses and coaches and other specialist heavy vehicles

So if you own a petrol car older than Jan 2005 (Euro 4) you will have to pay :

If you own a motorcycle non Euro 3 compliant or first registered before July 2007 you will have to pay

If you own a diesel car not Euro 6 compliant (registered before Sept 2014) you will have to pay .

A stealth tax & NOTHING to do with air pollution !! Also what steps have Transport for London taken to cope with the already struggling bus , tube & train services??ABSOLUTELY NOTHING !!

THIS IS JUST THE START... Mayor Khan plans to extend the ULEZ zone still further up to the M25 !!

EVEN IF YOU LIVE NOWHERE NEAR LONDON PLEASE SIGN THIS PETITION BECAUSE : ONCE THIS IS PASSED IN LONDON IT WILL BE

¹³ As of 10:10 on 29/05/2018

COMING TO YOUR TOWN/CITY , TRUST ME !!

Chapter 7. Stakeholder responses

7.1 Introduction

7.1.1 This chapter of the report looks at the feedback provided by stakeholder organisations. It includes an analysis of both quantitative and qualitative data.

7.1.2 Responses were received from 142 stakeholder organisations. A full list of these stakeholders is included at Appendix A and a summary of each stakeholder response is provided at Appendix C.

7.1.3 We have categorised these 142 stakeholders into respondent types as follows:

Table 31: Stakeholder respondent type

Respondent type	Number of stakeholder responses	Percentage of stakeholder responses
Boroughs	26	18%
Business organisations/Business Improvement Districts (BIDs)	13	9%
Businesses	5	4%
Coach and bus operators	6	4%
Environmental groups	17	12%
Freight organisations	3	2%
Government organisations	2	1%
Health organisations/charities	3	2%
Motoring groups	8	6%
Other	6	4%
Other local authorities	1	1%
Political representatives	30	21%
Residents/community groups	9	6%

Taxi and private hire organisations	2	1%
Transport campaign groups	11	8%
Total	142	100%

7.2 Quantitative analysis

7.2.1 Stakeholders submitted their comments via a variety of channels. Of the 142 stakeholders that responded to the consultation, 86 used the consultation portal, and 68 responded by email. Sixteen stakeholders responded by email and through the consultation portal.

7.2.2 Fifty two stakeholders submitted their feedback only by email rather than via the online questionnaire and therefore we do not have a complete data set for all the closed questions contained within the questionnaire. This makes a complete quantitative analysis difficult. Identification of stakeholder views, including support or not for the consultation proposals, where it can be determined, is included in Chapter 8 of this report, which evaluates the written feedback (qualitative analysis). This is organised by theme so it can be better understood in relation to the proposals and the closed questions.

7.2.3 However, it is useful to present a quantified analysis of the degree of support and opposition to the proposals. After reviewing both the qualitative and quantitative data we have identified which stakeholders either support or oppose the overall proposals. As the tables show, support and opposition were nuanced, and the categories used reflect this.

Table 32: Stakeholder support and opposition to strengthening the LEZ London-wide for heavy vehicles

Response	Stakeholder list
Supported strengthening the LEZ standard (104)	Air Quality Brentford, Arriva, Balfour Beatty, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, Brewery Logistics Group, British Heart Foundation, British Lung Foundation, BVRLA, Campaign for Better Transport, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Chiswick Liberal Democrats, Church of England (Diocese of Chelmsford), City of London, Clean Air for Brent, Clean Air in London, ClientEarth, Cllr David Linnette, Cross River Partnership, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Heart of London Business Alliance, Helen Hayes MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth,

	<p>Islington Green Party, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Assembly Environment Committee, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Hammersmith & Fulham, London Borough of Havering, London Borough of Hounslow, London Borough of Islington, London Borough of Lambeth, London Borough of Lewisham, London Borough of Newham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Chamber of Commerce and Industry, London Councils, London Forum of Amenity and Civic Societies, London Living Streets, London Property Alliance, London Sustainability Exchange, London Tourist Coach Operators Association, LTDA, Make Air Safe and Clean, Marble Arch London, National Express, New West End Company, Port of London Authority, RAC Foundation, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Routemaster Association, Royal Borough of Greenwich, Royal Borough of Kensington and Chelsea, Royal Borough of Kingston upon Thames, Sian Berry AM, SMMT, Southwark Green Party, Streatham Wells Labour, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The Kew Society, The St Marylebone Society, Thurlow Park Ward Councillors, Tideway, Uber, Victoria BID, Waltham Forest and Redbridge Green Party, Wandsworth Environment Forum, Wandsworth Green Party, Westminster Business Improvement Districts and Westminster City Council.</p>
<p>Opposed strengthening the LEZ standard (5)</p>	<p>CitySprint, Confederation of Passenger Transport, Coulsdon & Purley Road User Forum, FSB and the Road Haulage Association.</p>
<p>Neutral or no comment (33)</p>	<p>Alliance of British Drivers, Bambos Charalambous MP, Brentford Chamber of Commerce, British Motorcyclists Federation, Builders Merchants Federation, CBI, Cllr Cohen, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Freight Transport Association, Greenwich Conservatives, Hertfordshire County Council, Joanne McCartney AM, John Lewis Partnership, LEVC, Lewisham Cyclists, London Assembly Environment Committee – Conservative group, London Assembly Environment</p>

	<p>Committee – UKIP group, London Borough of Enfield, London Borough of Haringey, London Cycling Campaign, Merton Community Groups, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians’ Union, RAC Motoring Services, Stagecoach London, The Finsbury Forum, UPS, Veolia, Waltham Forest Conservatives and We Ride London.</p>
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Table 33: Stakeholder views on the charge levels for the LEZ

Response	Stakeholders
Supported the charge levels (69)	<p>Air Quality Brentford, Balfour Beatty, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, British Heart Foundation, British Lung Foundation, Campaign for Better Transport, Campaign for Better Transport London Group, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, ClientEarth, Cllr David Linnette, Cross River Partnership, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Heart of London Business Alliance, Helen Hayes MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Borough of Barnet, London Borough of Brent, London Borough of Croydon, London Borough of Ealing, London Borough of Hammersmith & Fulham, London Borough of Havering, London Borough of Lewisham, London Borough of Newham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Living Streets, London Property Alliance, London Sustainability Exchange, London Tourist Coach Operators Association, Marble Arch London, National Express, New West End Company, Redbridge Liberal Democrats, Richmond and Twickenham Green Party, Routemaster Association, Sian Berry AM, Southwark Green Party, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The St Marylebone Society, Uber, Victoria BID, Waltham Forest and Redbridge Green Party, Wandsworth Environment Forum, Wandsworth Green Party, Westminster Business Improvement Districts and Westminster City Council.</p>
Supported higher charge levels (9)	<p>Barking and Dagenham and Havering Green Party, Campaign to Protect Rural England, London Borough of Camden, London Borough of Islington, London Borough of Lambeth, Richmond and Twickenham Friends of the Earth, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party and the Royal Borough</p>

	of Greenwich.
Opposed charge levels (10)	Brentford Chamber of Commerce, Brewery Logistics Group, Builders Merchants Federation, CitySprint, Coulsdon & Purley Road User Forum, FSB, Hertfordshire County Council, John Lewis Partnership, Road Haulage Association and We Ride London.
Neutral or no comment (54)	Alliance of British Drivers, Arriva, Bambos Charalambous MP, British Motorcyclists Federation, BVRLA, CBI, Chiswick Liberal Democrats, City of London, Clean Air in London, Cllr Cohen, Confederation of Passenger Transport, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Freight Transport Association, Greenwich Conservatives, Joanne McCartney AM, LEVC, Lewisham Cyclists, London Assembly Environment Committee, London Assembly Environment Committee – Conservative group, London Assembly Environment Committee – UKIP group, London Borough of Enfield, London Borough of Hackney, London Borough of Haringey, London Borough of Hounslow, London Borough of Southwark, London Borough of Sutton, London Chamber of Commerce and Industry, London Councils, London Cycling Campaign, London Forum of Amenity and Civic Societies, LTDA, Make Air Safe and Clean, Merton Community Groups, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians' Union, Port of London Authority, RAC Foundation, RAC Motoring Services, Richmond Heathrow Campaign, Royal Borough of Kensington and Chelsea, Royal Borough of Kingston upon Thames, SMMT, Stagecoach London, Streatham Wells Labour, The Finsbury Forum, The Kew Society, Thurlow Park Ward Councillors, Tideway, UPS, Veolia and Waltham Forest Conservatives.

Table 34: Stakeholder views on the timescale for the LEZ

Response	Stakeholders
Supported the implementation date (46)	Arriva, Balfour Beatty, Caroline Pidgeon AM, City of London, Clean Air in London, Cllr David Linnette, Cross River Partnership, Greenpeace, Heart of London Business Alliance, Kingston Environment Forum, Lambeth for a Cool Planet, Lewisham Liberal Democrats, Living Streets, London Borough of Barnet, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Havering, London Borough of Lambeth, London Borough of Lewisham, London Borough of Newham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Borough of Waltham Forest, London

	<p>Borough of Wandsworth, London Forum of Amenity and Civic Societies, London Living Streets, London Property Alliance, London Sustainability Exchange, Marble Arch London, National Express, New West End Company, Port of London Authority, Routemaster Association, Royal Borough of Greenwich, Royal Borough of Kensington and Chelsea, Royal Borough of Kingston upon Thames, Sustainable Merton, Sustrans, Tideway, Victoria BID, Wandsworth Environment Forum, We Ride London and Westminster Business Improvement Districts.</p>
<p>Supported earlier implementation (45)</p>	<p>Air Quality Brentford, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, British Lung Foundation, Campaign for Better Transport, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Russell AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, ClientEarth, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Helen Hayes MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Lambeth Green Party, London Assembly Environment Committee, London Borough of Camden, London Borough of Hammersmith & Fulham, London Borough of Islington, London Car Free Day 2018, Make Air Safe and Clean, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Sian Berry AM, Southwark Green Party, Streatham Wells Labour, Sutton and Croydon Green Party, Team London Bridge, The Kew Society, The St Marylebone Society, Waltham Forest and Redbridge Green Party, Wandsworth Green Party and Westminster City Council.</p>
<p>Suggested later implementation (15)</p>	<p>Brentford Chamber of Commerce, Brewery Logistics Group, Builders Merchants Federation, CitySprint, Confederation of Passenger Transport, Coulsdon & RoadPurley Road User Forum, Freight Transport Association, FSB, John Lewis Partnership, London Borough of Hounslow, London Chamber of Commerce and Industry, London Tourist Coach Operators Association, RAC Foundation, RoadRoad Haulage Association and UPS.</p>
<p>Neutral or no comment (36)</p>	<p>Alliance of British Drivers, Bambos Charalambous MP, British Heart Foundation, British Motorcyclists Federation, BVRLA, CBI, Chiswick Liberal Democrats, Cllr Cohen, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Greenwich Conservatives, Hertfordshire County Council, Joanne McCartney AM, LEVC, Lewisham Cyclists, London Assembly Environment Committee – Conservative group, London Assembly Environment Committee – UKIP group, London Borough of Brent, London Borough of Enfield, London Borough of Haringey, London</p>

	Councils, London Cycling Campaign, LTDA, Merton Community Groups, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians' Union, RAC Motoring Services, SMMT, Stagecoach London, The Finsbury Forum, Thurlow Park Ward Councillors, Uber, Veolia and Waltham Forest Conservatives.
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Table 35: Stakeholder support and opposition to widening the ULEZ to the North and South Circular Roads

Response	Stakeholders
Supported expanding the ULEZ to the North and South Circular Roads (34)	Arriva, Balfour Beatty, BVRLA, Chiswick Liberal Democrats, City of London, Cross River Partnership, Greenpeace, Heart of London Business Alliance, Lambeth for a Cool Planet, LEVC, London Borough of Croydon, London Borough of Haringey, London Borough of Havering, London Borough of Hounslow, London Borough of Islington, London Borough of Newham, London Property Alliance, London Tourist Coach Operators Association, Marble Arch London, National Express, New West End Company, Port of London Authority, RAC Motoring Services, Routemaster Association, Royal Borough of Kensington and Chelsea, Royal Borough of Kingston upon Thames, Team London Bridge, The St Marylebone Society,, Tideway, Uber, Victoria BID, Wandsworth Environment Forum, Westminster Business Improvement Districts and Westminster City Council.
Supported an expansion but believes the scheme should go further (75)	Air Quality Brentford, Bambos Charalambous MP, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, Brewery Logistics Group, British Heart Foundation, British Lung Foundation, Campaign for Better Transport, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, Clean Air in London, ClientEarth, Cllr David Linnette, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Helen Hayes MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Joanne McCartney AM, Kingston Environment Forum, Lambeth Green Party, Lewisham Cyclists, Lewisham Liberal Democrats, Living Streets, London Assembly Environment Committee, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Ealing, London Borough of Enfield, London Borough of Hackney, London Borough of Hammersmith & Fulham, London Borough of Lambeth, London Borough of Lewisham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth,

	London Car Free Day 2018, London Cycling Campaign, London Forum of Amenity and Civic Societies, London Living Streets, London Sustainability Exchange, LTDA, Make Air Safe and Clean, Merton Community Groups, Mortlake with East Sheen Society, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Royal Borough of Greenwich, Sian Berry AM, Southwark Green Party, Streatham Wells Labour, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, The Kew Society, Thurlow Park Ward Councillors, Waltham Forest and Redbridge Green Party and Wandsworth Green Party.
Opposed expanding the ULEZ to the North and South Circular Roads (12)	Alliance of British Drivers, Brentford Chamber of Commerce, CitySprint, Coulsdon & Purley Road User Forum, FSB, Greenwich Conservatives, London Assembly Environment Committee – Conservative group, London Chamber of Commerce and Industry, Motorcycle Industry Association, Musicians’ Union, Waltham Forest Conservatives and We Ride London.
Neutral or no comment (21)	British Motorcyclists Federation, Builders Merchants Federation, CBI, Cllr Cohen, Confederation of Passenger Transport, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Freight Transport Association, Hertfordshire County Council, John Lewis Partnership, London Assembly Environment Committee – UKIP group, London Borough of Sutton, London Councils, Motorcycle Action Group, RAC Foundation, RoadRoad Haulage Association, SMMT, Stagecoach London, The Finsbury Forum, UPS and Veolia.

Table 36: Stakeholder views on the charge level for the ULEZ

Response	Stakeholders
Supported the charge levels (52)	Balfour Beatty, Barnet Green Party, Better Streets for Enfield, British Heart Foundation, British Lung Foundation, Builders Merchants Federation, Campaign for Better Transport, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, ClientEarth, Cross River Partnership, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Heart of London Business Alliance, Herne Hill Green Party, Hertfordshire County Council, Hounslow and Brentford Friends of the Earth, Islington Green Party, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Croydon, London Borough of Ealing, London Borough of Hammersmith & Fulham,

	London Borough of Lambeth, London Borough of Newham, London Borough of Redbridge, London Borough of Waltham Forest, London Car Free Day 2018, London Property Alliance, London Sustainability Exchange, London Tourist Coach Operators Association, Richmond and Twickenham Green Party, Southwark Green Party, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The St Marylebone Society, Uber, Victoria BID, Westminster Business Improvement Districts and Westminster City Council.
Supported higher charge levels (21)	Air Quality Brentford, Barking and Dagenham and Havering Green Party, Bloomsbury Air, Brentford Community Council, Brewery Logistics Group, Campaign for Better Transport London Group, Campaign to Protect Rural England, Helen Hayes MP, London Borough of Islington, London Living Streets, LTDA, National Express, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, RoadRoad Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Royal Borough of Greenwich, Sian Berry AM, Waltham Forest and Redbridge Green Party, Wandsworth Environment Forum and Wandsworth Green Party.
Supported lower charge levels (6)	Alliance of British Drivers, Brentford Chamber of Commerce, British Motorcyclists Federation, Cllr David Linnette, John Lewis Partnership and the Musicians' Union.
Oppose a charge (8)	CitySprint, Coulsdon & Purley Road User Forum, FSB, Greenwich Conservatives, Motorcycle Action Group, Motorcycle Industry Association, RAC Motoring Services and We Ride London.
Neutral or no comment (55)	Arriva, Bambos Charalambous MP, BVRLA, CBI, Chiswick Liberal Democrats, City of London, Clean Air in London, Cllr Cohen, Confederation of Passenger Transport, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Forest Hill Society, Freight Transport Association, Joanne McCartney AM, LEVC, Lewisham Cyclists, London Assembly Environment Committee, London Assembly Environment Committee – Conservative group, London Assembly Environment Committee – UKIP group, London Borough of Enfield, London Borough of Hackney, London Borough of Haringey, London Borough of Havering, London Borough of Hounslow, London Borough of Lewisham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Borough of Wandsworth, London Chamber of Commerce and Industry, London Councils, London Cycling Campaign, London Forum of Amenity and Civic Societies, Make Air Safe and Clean, Marble Arch London, Merton Community Groups, Mortlake with East Sheen Society, New West End Company, Port of London Authority, RAC Foundation, Richmond Heathrow Campaign, Road Haulage Association, Routemaster Association, Royal Borough of Kensington and Chelsea, Royal

	Borough of Kingston upon Thames, SMMT, Stagecoach London, Streatham Wells Labour, The Finsbury Forum, The Kew Society, Thurlow Park Ward Councillors, Tideway, UPS, Veolia and Waltham Forest Conservatives.
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Table 37: Stakeholder views on ULEZ timescales

Response	Stakeholders
Supported the implementation date (42)	Arriva, Balfour Beatty, Brewery Logistics Group, British Lung Foundation, Caroline Pidgeon AM, Church of England (Diocese of Chelmsford), City of London, Clean Air for Brent, Cllr David Linnette, Cross River Partnership, , Heart of London Business Alliance, Helen Hayes MP, Hertfordshire County Council, Joanne McCartney AM, Kingston Environment Forum, LEVC, Lewisham Cyclists, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Lambeth, London Borough of Newham, London Borough of Redbridge, London Borough of Waltham Forest, London Borough of Wandsworth, London Forum of Amenity and Civic Societies, London Property Alliance, London Tourist Coach Operators Association, LTDA, New West End Company, Port of London Authority, Routemaster Association, Royal Borough of Greenwich, Royal Borough of Kingston upon Thames, Sustainable Merton, Tideway, Victoria BID, Wandsworth Environment Forum and Westminster City Council.
Supported earlier implementation (54)	Air Quality Brentford, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, Campaign for Better Transport, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Russell AM, Chartered Institute of Environmental Health, Clean Air in London, ClientEarth, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Assembly Environment Committee, London Borough of Hammersmith & Fulham, London Borough of Islington, London Car Free Day 2018, London Cycling Campaign, London Living Streets, London Sustainability Exchange, Make Air Safe and Clean, Marble Arch London, Merton Community Groups, National Express, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Royal Borough of Kensington and Chelsea, Sian Berry AM, Southwark Green Party, Streatham Wells

	Labour, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The Kew Society, The St Marylebone Society, Uber, Waltham Forest and Redbridge Green Party, Wandsworth Green Party and Westminster Business Improvement Districts.
Suggested later implementation (20)	Alliance of British Drivers, Brentford Chamber of Commerce, British Motorcyclists Federation, Builders Merchants Federation, BVRLA, CitySprint, Confederation of Passenger Transport, Coulsdon & Purley Road User Forum, Freight Transport Association, FSB, John Lewis Partnership, London Assembly Environment Committee – UKIP group, London Borough of Haringey, London Borough of Hounslow, London Borough of Lewisham, London Chamber of Commerce and Industry, RAC Foundation, RAC Motoring Services, UPS and We Ride London.
Neutral or no comment (26)	Bambos Charalambous MP, British Heart Foundation, CBI, Chiswick Liberal Democrats, Cllr Cohen, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Greenwich Conservatives, London Assembly Environment Committee – Conservative group, London Borough of Enfield, London Borough of Havering, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Councils, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians' Union, Road Haulage Association, SMMT, Stagecoach London, The Finsbury Forum, Thurlow Park Ward Councillors, Veolia and Waltham Forest Conservatives.

Table 38: Stakeholder views on the sunset period for CCZ residents

Response	Stakeholders
Supports reduction in the sunset period (69)	Air Quality Brentford, Alliance of British Drivers, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, Brewery Logistics Group, British Heart Foundation, British Lung Foundation, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Pidgeon AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, ClientEarth, Cllr David Linnette, , Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Heart of London Business Alliance, Helen Hayes MP, Hounslow and Brentford Friends of the Earth, Islington Green Party, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Newham, London

	<p>Borough of Redbridge, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Living Streets, London Property Alliance, London Sustainability Exchange, London Tourist Coach Operators Association, Marble Arch London, National Express, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Routemaster Association, Royal Borough of Greenwich, Royal Borough of Kensington and Chelsea, Sian Berry AM, Southwark Green Party, Streatham Wells Labour, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The St Marylebone Society, Victoria BID, Waltham Forest and Redbridge Green Party, Wandsworth Environment Forum, Westminster Business Improvement Districts and Westminster City Council.</p>
<p>Supports reduction in the sunset period and suggests further change (7)</p>	<p>Barking and Dagenham and Havering Green Party, Caroline Russell AM, Herne Hill Green Party, London Borough of Hammersmith & Fulham, London Borough of Haringey, London Borough of Islington and Wandsworth Green Party.</p>
<p>Opposes reduction in the sunset period (8)</p>	<p>Campaign for Better Transport, CitySprint, Coulsdon & Road Purley Road User Forum, London Borough of Enfield, London Borough of Hounslow, RAC Foundation, RAC Motoring Services and We Ride London.</p>
<p>Neutral or not answered (58)</p>	<p>Arriva, Balfour Beatty, Bambos Charalambous MP, Brentford Chamber of Commerce, British Motorcyclists Federation, Builders Merchants Federation, BVRLA, CBI, Chiswick Liberal Democrats, City of London, Clean Air in London, Cllr Cohen, Confederation of Passenger Transport, Cross River Partnership, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Freight Transport Association, FSB, Greenwich Conservatives, Hertfordshire County Council, Joanne McCartney AM, John Lewis Partnership, LEVC Lewisham Cyclists, London Assembly Environment Committee, London Assembly Environment Committee – Conservative group, London Assembly Environment Committee – UKIP group, London Borough of Havering, London Borough of Lambeth, London Borough of Lewisham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Chamber of Commerce and Industry, London Councils, London Cycling Campaign, London Forum of Amenity and Civic Societies, LTDA, Make Air Safe and Clean, Merton Community Groups, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians' Union, New West End Company, Port of London Authority, Road Road Haulage Association, Royal Borough of Kingston upon Thames, SMMT, Stagecoach London, The Finsbury Forum, The Kew</p>

	Society, Thurlow Park Ward Councillors, Tideway, Uber, UPS, Veolia and Waltham Forest Conservatives.
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Table 39: Stakeholder views on a change to the PCN level

Response	Stakeholders
Supports change (67)	Air Quality Brentford, Balfour Beatty, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, Brewery Logistics Group, British Heart Foundation, British Lung Foundation, Campaign for Better Transport, Campaign for Better Transport London Group, Campaign to Protect Rural England, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Church of England (Diocese of Chelmsford), Clean Air for Brent, ClientEarth, Friends of the Earth, Gipsy Hill Green Party, Heart of London Business Alliance, Helen Hayes MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Liberal Democrats, Living Streets, London Borough of Barnet, London Borough of Camden, London Borough of Croydon, London Borough of Ealing, London Borough of Hammersmith & Fulham, London Borough of Havering, London Borough of Islington, London Borough of Lambeth, London Borough of Newham, London Borough of Redbridge, London Borough of Waltham Forest, London Car Free Day 2018, London Living Streets, London Property Alliance, London Sustainability Exchange, LTDA, National Express, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Road Danger Reduction Forum, Rotherhithe and Surrey Docks Green Party, Sian Berry AM, Southwark Green Party, Sustainable Merton, Sustrans, Sutton and Croydon Green Party, Team London Bridge, The St Marylebone Society, Uber, Victoria BID, Waltham Forest and Redbridge Green Party, Wandsworth Environment Forum, Wandsworth Green Party, Westminster Business Improvement Districts and Westminster City Council.
Opposes change (9)	Alliance of British Drivers, Brentford Chamber of Commerce, CitySprint, Cllr David Linnette, Coulsdon & Purley Road User Forum, FSB, London Borough of Wandsworth, RAC Motoring Services and We Ride London.
Neutral or not answered (66)	Arriva, Bambos Charalambous MP, British Motorcyclists Federation, Builders Merchants Federation, BVRLA, CBI, Chiswick Liberal Democrats, City of London, Clean Air in London, Cllr Cohen, Confederation of Passenger Transport, Cross River

	<p>Partnership, Disabled Motoring UK, Federation of British Historic Vehicle Clubs, Forest Hill Society, Freight Transport Association, Greenpeace, Greenwich Conservatives, Hertfordshire County Council, Joanne McCartney AM, John Lewis Partnership, LEVC, Lewisham Cyclists, London Assembly Environment Committee, London Assembly Environment Committee – Conservative group, London Assembly Environment Committee – UKIP group, London Borough of Brent, London Borough of Enfield, London Borough of Hackney, London Borough of Haringey, London Borough of Hounslow, London Borough of Lewisham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Chamber of Commerce and Industry, London Councils, London Cycling Campaign, London Forum of Amenity and Civic Societies, London Tourist Coach Operators Association, Make Air Safe and Clean, Marble Arch London, Merton Community Groups, Mortlake with East Sheen Society, Motorcycle Action Group, Motorcycle Industry Association, Musicians' Union, New West End Company, Port of London Authority, RAC Foundation, Richmond Heathrow Campaign, Road Haulage Association, Routemaster Association, Royal Borough of Greenwich, Royal Borough of Kensington and Chelsea, Royal Borough of Kingston upon Thames, SMMT, Stagecoach London, Streatham Wells Labour, The Finsbury Forum, The Kew Society, Thurlow Park Ward Councillors, Tideway, UPS, Veolia and Waltham Forest Conservatives.</p>
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Chapter 8. Responses to issues raised

8.1 Introduction

8.1.1 This chapter sets out our analysis of the responses received to the proposals by theme, and our response to the comments, issues and recommendations raised. Comments from stakeholders and free text responses from the public and business respondents have been attributed to the most pertinent aspect of the proposal. Within each theme, the ‘issues raised’ during the consultation have been identified and are listed at the start of each section, followed by our response and any recommendation. Where issues are similar, they have been grouped together for a single TfL response.

8.1.2 The chapter brings together comments from stakeholders, the public and businesses, including data from the questionnaire (as set out in full in Chapter 5).

8.1.3 The themes addressed are as follows:

- ***Theme A: Principle of the ULEZ and LEZ, air quality and emissions***
- ***Theme B: Timescale***
- ***Theme C: Vehicle emission standards***
- ***Theme D: Charge level***
- ***Theme E: Boundary***
- ***Theme F: Residents’ sunset period***
- ***Theme G: Discounts, exemptions and other sunset periods***
- ***Theme H: Economic impacts***
- ***Theme I: Other impacts***
- ***Theme J: Implementation***
- ***Theme K: Financial support and revenue***
- ***Theme L: PCN level***
- ***Theme M: Vehicle bans***
- ***Theme N: Alternative and supporting policy suggestions***
- ***Theme O: Consultation***

8.2 Theme A: Principle of the ULEZ and LEZ, air quality and emissions

8.2.1 The following 51 stakeholders commented on this theme: Alliance of British Drivers, Balfour Beatty, Bambos Charalambous MP, Bloomsbury Air, British Heart Foundation, British Lung Foundation, Campaign for Better Transport London Group, Chartered Institute of Environmental Health, ClientEarth, Coulsdon & Purley Road User Forum, Disabled Motoring UK, Friends of the Earth, Heart of London Business Alliance, Hertfordshire County Council, Hounslow and Brentford Friends of the Earth, John Lewis Partnership, Lambeth Green Party, London Assembly Environment Committee –

Conservative group, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Lewisham, London Borough of Richmond upon Thames, London Borough of Sutton, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Councils, London Tourist Coach Operators Association, Make Air Safe and Clean, Marble Arch London, Motorcycle Action Group, Musicians' Union, National Express, New West End Company, Richmond Heathrow Campaign, Road Haulage Association, Royal Borough of Kensington and Chelsea, Sian Berry AM, SMMT, Team London Bridge, The St Marylebone Society, Thurlow Park Ward Councillors, Uber, UPS, Veolia and Westminster Business Improvement Districts.

- 8.2.2 There were 5,140 comments on the principle of the LEZ/ULEZ and 6,558 on emissions sources from public and business respondents.

Issues raised in relation to this theme:

- ***Support and opposition to the principle of the LEZ changes***
- ***Support and opposition to the principle of the ULEZ changes***
- ***Support for the principle of measures to improve air quality***
- ***Disagreement that air pollution is a serious issue***
- ***Concern regarding airport emissions***
- ***More action needed on PM***
- ***Emissions data is out-of-date***
- ***Requests for more localised information***
- ***Other comments***

Support and opposition to the principle of the LEZ changes

- 8.2.3 Overall support and opposition to the LEZ changes is set out for the public and business in Chapter Chapter 5 and stakeholders in Chapter Chapter 7.

Support and opposition to the principle of the ULEZ changes

- 8.2.4 Overall support and opposition to the ULEZ changes is set out for the public and business in Chapter Chapter 5 and stakeholders in Chapter Chapter 7.

Support for the principle of measures to improve air quality

- 8.2.5 The following stakeholders stated their support for measures to improve air quality: Balfour Beatty, Bambos Charalambous MP, Bloomsbury Air, British Heart Foundation, British Lung Foundation, Campaign for Better Transport London Group, Chartered Institute of Environmental Health, ClientEarth, Disabled Motoring UK, Friends of the Earth, Heart of London Business Alliance, Hertfordshire County Council, Hounslow and Brentford Friends of the Earth, John Lewis Partnership, Lambeth Green Party, London

Assembly Environment Committee – Conservative group, London Borough of Croydon, London Borough of Ealing, London Borough of Hackney, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Sutton, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Councils, London Tourist Coach Operators Association, Make Air Safe and Clean, Marble Arch London, Musicians' Union, National Express, New West End Company, Sian Berry AM, SMMT, Team London Bridge, The St Marylebone Society, Thurlow Park Ward Councillors, Uber, UPS, Veolia and Westminster Business Improvement Districts.

TfL response

- 8.2.6 We note the strong support for measures to tackle air pollution in London. The ULEZ and LEZ changes will bring about significant improvements in air quality and the health of Londoners. Further measures to tackle this problem are set out in the Mayor's Transport Strategy (MTS)¹⁴ and the London Environment Strategy (LES)¹⁵.

Disagreement that air pollution is a serious issue

- 8.2.7 The Alliance of British Drivers (ABD), the Coulsdon & Purley Road User Forum, the Motorcycle Action Group (MAG), and the Waltham Forest Conservatives commented that London's air quality was improving and the ULEZ expansion was unnecessary.
- 8.2.8 ABD and MAG questioned the health impacts of air pollution.

TfL response

- 8.2.9 Whilst London's air quality is improving, concentrations of NO₂ remain illegally high and will continue to do so without further action.
- 8.2.10 As highlighted by the supporting information document the publicly available evidence on the health impacts of high concentrations of NO₂ and PM in ambient air is compelling. There is an overwhelming consensus amongst leading health experts on the link between higher levels of NO₂ and PM and premature mortality and morbidity.

¹⁴ <https://www.london.gov.uk/what-we-do/transport/our-vision-transport/mayors-transport-strategy-2018>

¹⁵ <https://www.london.gov.uk/what-we-do/environment/draft-london-environment-strategy-have-your-say>

- 8.2.11 MAG challenged the claim that NO₂ harms human health. They quoted a 2002 study that did not find a significant association between NO₂ and mortality. However, this study did find a link between death and living near a major road and concluded long-term exposure to traffic-related air pollution may shorten life. Since 2002 the evidence associating NO₂ with health harms has strengthened substantially, linking this pollutant with a number of harms including premature mortality, increased symptoms of bronchitis in children with asthma and reduced lung function growth in children. This is backed up by evidence from the Government Committee on the Medical Effects of Air Pollutants (COMEAP),¹⁶ the Royal College of Physicians¹⁷ and the WHO¹⁸
- 8.2.12 Furthermore, London is currently in breach of legal limits for NO₂ and there is a legal requirement to meet these limits as soon as possible.

Concern regarding airport emissions

- 8.2.13 The London Borough of Richmond upon Thames, the London Borough of Wandsworth, London Councils, and the Richmond Heathrow Campaign stated their concern about the emissions impacts of Heathrow Airport.

TfL response

- 8.2.14 The Mayor remains opposed to the Heathrow Airport expansion, given its environmental impacts, including air pollution, both from aircraft emissions and associated highway traffic.
- 8.2.15 The Government's own analysis shows that if a third runway opens before 2030, there is a high risk of it delaying compliance with legal limits including impacts in central London. Following the concerns raised by the Mayor on this issue, the House of Commons Transport Select Committee has sought a stricter interpretation of air quality compliance from Government, including an appropriate level of headroom.
- 8.2.16 At the request of the Mayor, we are currently providing advice and assistance to affected borough councils as they prepare for a joint legal challenge against the Government's decision.

More action needed on PM

¹⁶

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/411756/COMEAP_The_evidence_for_the_effects_of_nitrogen_dioxide.pdf

¹⁷ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

¹⁸ [Review of evidence on health aspects of air pollution – REVIHAAP Project](#)

- 8.2.17 The Royal Borough of Kensington and Chelsea stated that more needed to be done to tackle PM emissions.

TfL response

- 8.2.18 The Mayor shares the concern around the impacts of PM pollution. The recently published London Environment Strategy sets out measures to reduce PM_{2.5} emissions with an aim to meet the World Health Organization (WHO) recommendations for concentrations by 2030.

Emissions data is out-of-date

- 8.2.19 The Road Haulage Association stated that the emissions data was out-of-date and that it overestimated the current emissions from HGVs.

TfL response

- 8.2.20 The LAEI 2013 is the latest available baseline for emissions data for London and uses the latest information on vehicle emissions factors. The increased uptake of cleaner Euro VI engines under a central-ULEZ only scenario and the resulting reduction in emissions is already factored into our baseline projections for 2020 and beyond, meaning we have accounted for the very significant benefits that Euro VI HGVs deliver in terms of emissions. However, as set out in the supporting information document, whilst there have been inevitably reductions in NO_x emissions since 2013, significant air pollution issues will remain if no further action is taken, with HGVs still making a significant contribution to this.

Requests for more localised information

- 8.2.21 The London Borough of Ealing, the London Borough of Haringey, the London Borough of Hounslow, the London Borough of Islington, the London Borough of Lewisham, the London Borough of Waltham Forest, the London Borough of Wandsworth and London Councils stated that more detailed information on the impact of the changes at a local level should be provided.

TfL response

- 8.2.22 The consultation provided a detailed assessment of changes in air quality at local levels, with a particular focus on the North and South Circular Roads themselves.
- 8.2.23 A map showing the impact of the proposals on all modelled road links in London was provided as part of the supporting information document.
- 8.2.24 The appendices to the supporting information document include a detailed breakdown of the impacts at an individual borough level, including both inside and outside the zone where boroughs are split.

- 8.2.25 Bespoke factsheets were sent to individual boroughs summarising this information.
- 8.2.26 Where boroughs have mentioned specific roads in their consultation responses we have provided specific clarification on these within Appendix L to this report.

Other comments

- 8.2.27 SMMT queried the baseline figures for 2020 that show all boroughs being below the annual mean and why they differed from the Defra data.

TfL response

- 8.2.28 The figures provided in the appendix of the supporting information document for boroughs included a figure for population-weighted annual mean concentrations across each borough as a whole. These are a useful way of summarising borough level information but are not used for the assessment of compliance. The Defra figures represent the concentrations at roadside where levels are the highest and this is where Defra assesses compliance with legal limits.

8.3 Theme B: Timescale

- 8.3.1 The following 55 stakeholders commented on this theme: Air Quality Brentford, Barking and Dagenham and Havering Green Party, Bloomsbury Air, Brentford Chamber of Commerce, Brewery Logistics Group, British Heart Foundation, Builders Merchants Federation, BVRLA, Campaign for Better Transport, Caroline Russell AM, Chartered Institute of Environmental Health, Clean Air in London, ClientEarth, Confederation of Passenger Transport, Freight Transport Association, Friends of the Earth, FSB, Gipsy Hill Green Party, Greenpeace, Herne Hill Green Party, Islington Green Party, John Lewis Partnership, Lambeth for a Cool Planet, Lambeth Green Party, Living Streets, London Assembly Environment Committee, London Borough of Camden, London Borough of Ealing, London Borough of Hammersmith & Fulham, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Lewisham, London Cycling Campaign, London Sustainability Exchange, London Tourist Coach Operators Association, Make Air Safe and Clean, Marble Arch London, Merton Community Groups, RAC Foundation, Redbridge Liberal Democrats, Richmond and Twickenham Green Party, Road Danger Reduction Forum, Road Haulage Association, Rotherhithe and Surrey Docks Green Party, Sian Berry AM, Sustrans, Team London Bridge, The Kew Society, Uber, UPS, Veolia, Waltham Forest and Redbridge Green Party, Wandsworth Green Party and Westminster City Council.
- 8.3.2 There were 2,399 comments on this theme from public and business respondents.

Issues raised in relation to this theme:

- ***Support for an earlier introduction of the LEZ changes***
- ***Call for a later introduction of the LEZ changes***
- ***Support for an earlier introduction of the ULEZ changes***
- ***Call for a later introduction of the ULEZ changes***
- ***Other comments on timescales***

Support for an earlier introduction of the LEZ changes

- 8.3.3 Overall stakeholder support and opposition to the LEZ start date is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.
- 8.3.4 The Kew Society suggested that LEZ emission standards should be tightened in 2019 rather than the proposed 2020 date.
- 8.3.5 The London Borough of Hammersmith & Fulham and Westminster City Council suggested the Euro VI standard could be introduced London-wide in April 2019.

Call for a later introduction of the LEZ changes

- 8.3.6 Overall stakeholder support and opposition to the LEZ start date is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.
- 8.3.7 The Road Haulage Association wanted a Euro V emissions standard for the LEZ instead and also that it should not be applied until 2023.
- 8.3.8 The Confederation of Passenger Transport (CPT) stated they would potentially accept an extension of the heavy vehicle standard to the North and South Circular Roads in 2021, expanding London-wide at a later date.

TfL response

- 8.3.9 In view of the urgent need to address the air pollution crisis, the October 2020 start date has been chosen as the earliest feasible date of implementation. There is a requirement to provide adequate notice for vehicle operators as well as a significant operational challenge in upgrading the necessary scheme operating systems and ensuring all TfL buses are compliant with the standards.
- 8.3.10 As a result of the requirement to take effective action to reduce NO₂ as quickly as possible we do not consider that any delay or deferral for large numbers of vehicles is appropriate.
- 8.3.11 By the proposed start date, a compliant Euro VI vehicle will be six years old, allowing time for a second-hand market to develop. It also enables time to introduce a retrofit solution for the higher value vehicles.

- 8.3.12 An earlier date of 2019 was considered, but it is likely that an earlier implementation would not provide sufficient notice to operators of the new requirements of the LEZ and not enable them to take action.
- 8.3.13 Whilst Euro V emissions standards deliver some benefits in terms of reducing emissions, Euro VI is a significant step forward in terms of emissions improvements across both NO_x and particulates. It is considered the more appropriate standard in order to deliver benefits as quickly as possible, and for long-term reductions in emissions and pollution concentrations.
- 8.3.14 In addition, strengthening the LEZ London-wide is essential for reducing concentrations alongside major strategic roads and motorways carrying high volumes of freight, and will widely benefit communities across London.

Support for an earlier introduction of the ULEZ changes

- 8.3.15 Overall stakeholder support and opposition to the ULEZ start date is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.
- 8.3.16 The following stakeholders said all proposals should be implemented before the end of the current Mayoral term (ie May 2020): Bloomsbury Air, British Heart Foundation, Caroline Russell AM, Gipsy Hill Green Party, Greenpeace, Herne Hill Green Party, Islington Green Party, Lambeth Green Party, London Assembly Environment Committee, London Borough of Islington, Richmond and Twickenham Green Party, Road Danger Reduction Forum and Wandsworth Green Party.

Call for a later introduction of the ULEZ changes

- 8.3.17 Overall stakeholder support and opposition to the ULEZ start date is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.
- 8.3.18 John Lewis Partnership called for a six-month delay to the proposed date for expanding the ULEZ to inner London.
- 8.3.19 The London Borough of Enfield stated that the ULEZ proposals should be implemented in 2023 London-wide for all vehicles.

TfL response

- 8.3.20 Due to the urgent and pressing need to take action on air pollution as soon as possible we do not believe that deferring the scheme to 2023 is acceptable; this would result in two additional years of exposure to higher levels of air pollution.
- 8.3.21 The 2021 start date was chosen to provide a balance between the need to take urgent action on air pollution and to provide adequate notice to those affected by the charge and ensure sufficient time to build the necessary systems to operate the ULEZ. This is coupled with the much earlier

strengthening of the LEZ which means that significant improvements in air quality across London are still delivered.

- 8.3.22 Expanding the ULEZ up to the North and South Circular Roads is technically complex. There are many practical challenges arising from introducing the scheme which will cover an area 18 times bigger than the Congestion Charging zone affecting millions of people. On-street infrastructure and a new back office system will be required. We do not believe it is technically feasible to implement the scheme prior to October 2021.
- 8.3.23 Should the Mayor wish to proceed with the changes to the scheme they will be signed into law and will come into effect on the date specified within the Scheme Order. Should a future Mayor wish to rescind the scheme prior to implementation, this will require a full public consultation and impact assessment, plus a revision to the Mayor's Transport Strategy.
- 8.3.24 The reasoning for the choice of dates has been set out above and in the supporting information document and we do not believe that the end of political terms of office should be considered as part of this decision.

Other comments on timescales

- 8.3.25 The Confederation of Passenger Transport, the Freight Transport Association, the London Tourist Coach Operators Association, the Road Haulage Association and Veolia raised concerns around the availability of retrofit within the timescales and called for a grace period for those who had ordered retrofit equipment but had been unable to install it in time.

TfL response

- 8.3.26 The Government launched its national Clean Vehicle Retrofit Accreditation Scheme (CVRAS) on 3 August 2017. This provides a certification scheme for manufacturers of retrofit emissions reduction systems to enable vehicles to meet Euro VI equivalent emissions.
- 8.3.27 The implementation of Clean Air Zones underpins the Government's Clean Air Action Plan and Euro VI emissions standards for diesel vehicles have been set for these. As several other cities are considering the introduction of Euro VI emissions standards potentially enforced in a similar way to the ULEZ, it is clear that certification needs to be centralised to ensure that a vehicle is compliant across all Clean Air Zones.
- 8.3.28 The CVRAS-approved companies and emissions reduction systems are listed on the CVRAS website. To date, five companies have had bus emissions reduction systems approved.
- 8.3.29 We will be using emissions reduction systems to upgrade nearly 5,000 buses across London to meet Euro VI equivalent emissions by October 2020.

- 8.3.30 The CVRAS test procedure and standards have also been developed for other heavy vehicle types. Retrofit emissions reduction technologies for other vehicle types, such as coaches, are similar to those fitted to buses but may need to be sized and calibrated differently to suit different duty cycles and engine power.
- 8.3.31 It is not within our remit to provide retrofit solutions. However we are working with the retrofit industry to test solutions for coaches in advance of the introduction of the ULEZ in central London in April 2019.
- 8.3.32 If there is evidence of delays in retrofitting vehicles due to high demand in the run-up to the start of the ULEZ, we will consider options for how to treat vehicles that can demonstrate they have ordered retrofit equipment in good time.

8.4 Theme C: Vehicle emissions standards

- 8.4.1 The following 22 stakeholders made comments on this theme: Bloomsbury Air, Chartered Institute of Environmental Health, City of London, ClientEarth, Friends of the Earth, Herne Hill Green Party, Lambeth Green Party, Living Streets, London Assembly Environment Committee, London Borough of Croydon, London Borough of Ealing, London Borough of Hammersmith & Fulham, London Borough of Islington, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Councils, London Forum of Amenity and Civic Societies, Sustrans, Veolia, Wandsworth Green Party and We Ride London.
- 8.4.2 There were 2,873 comments from public and business respondents in relation to this theme.

Issues raised in relation to this theme:

- ***The LEZ standard should be higher for vans***
- ***Concern that Euro standards do not reflect real-world conditions***
- ***Required standards should be progressively reviewed and/or raised***
- ***Zero Emission Zones***
- ***Other comments on emissions standards***

The LEZ standard should be higher for vans

- 8.4.3 The London Borough of Croydon, the London Borough of Hackney, the London Borough of Hounslow and London Councils stated that there should be a Euro 6 LEZ standard for vans.
- 8.4.4 The London Borough of Islington stated that there should be a Euro 4 standard London-wide for vans increasing over time.

TfL response

- 8.4.5 The LEZ standard for vans was introduced in 2012. Currently 99 per cent of vehicles comply with the LEZ standards. The LEZ is set with a deterrent level charge of £100. A Euro 6 LEZ standard for vans would in effect act as a London-wide ULEZ for vans. This is discussed further under section 8.6.
- 8.4.6 Regarding the introduction of a Euro 4 NO_x and PM standard for vans, it should be considered that, based on our projections, 96 per cent of vehicles entering London on an average day will meet at least Euro 4 standards by 2020, rising to 97 per cent in 2021. Given the Euro 6 requirement in inner London, we consider it unlikely that there would be a further increase in compliance with Euro 4 by increasing the LEZ standard for vans to this level.
- 8.4.7 It is unlikely that this would have any material impact on emissions or concentrations. In view of the additional costs of upgrading the TfL systems, the potential customer confusion that may arise from a Euro 4 standard for vans in outer London and a Euro 6 standard in central London, and limited benefits of setting such a low standard, we do not recommend this proposed change.

Concern that Euro standards do not reflect real-world conditions

- 8.4.8 Bloomsbury Air, the Chartered Institute of Environmental Health, ClientEarth, the London Borough of Ealing, the London Borough of Hammersmith & Fulham, London Car Free Day 2018, the London Forum of Amenity and Civic Societies, and Sustrans raised concerns that Euro standards do not reflect real-world emissions.
- 8.4.9 The Chartered Institute of Environmental Health, Clean Air for London, ClientEarth, the London Assembly Environment Committee, the London Borough of Hammersmith & Fulham, and the London Forum of Amenity and Civic Societies stated that the diesel standard should be based on real-world driving emissions.

TfL response

- 8.4.10 We have studied available evidence on the performance of Euro 6/VI vehicles and conducted our own testing to assess the ‘real-world’ performance of this standard in typical London driving conditions¹⁹. While Euro 6/VI produces higher emissions than specified in the Euro standard, vehicles are nevertheless performing much better than previous Euro standards. We continue to lobby the Government in the UK and in Europe to ensure that Euro 6 is implemented in the most effective way to control

¹⁹ <http://content.tfl.gov.uk/in-service-emissions-performance-of-euro-6vi-vehicles.pdf>

emissions. There is evidence that the cleanest Euro 6 diesel vehicles emit similar NO_x levels to petrol vehicles, although we note there is a wide range of emissions in Euro 6.

- 8.4.11 The most up-to-date emissions factors which aim to represent real-world performance of Euro 6 vehicles are factored into all modelling and results for the ULEZ. The introduction of real driving emissions (RDE) testing, being phased in between 2017 and 2021, is expected further reduce NO_x emissions from diesel vehicles. Whilst evidence about the real-world performance of new diesel vehicles will be developed over time what is clear is that the Euro 6 standard for diesel cars and vans is by far the better emissions standard to set for the ULEZ expansion and doing anything less would significantly reduce the benefits of the scheme.
- 8.4.12 Nonetheless, all standards will be kept under review to ensure that the ULEZ remains effective in reducing emissions. The MTS and LES clearly set out London's trajectory towards the Capital having fully zero emission road transport in the future.
- 8.4.13 The GLA has launched a vehicle checker²⁰ to provide independent ratings of vehicles, advising drivers and fleet owners how vehicles perform under real-world driving conditions.
- 8.4.14 However, it is not possible to use this for enforcement purposes, where all vehicle types and models that might drive in London would need to be tested. The ULEZ standards need to be set on a legally recognised and approved engine test cycle, such as those required to achieve the Euro standards.

Required standards should be progressively reviewed and/or raised

- 8.4.15 Living Streets, the London Assembly Environment Committee, the London Borough of Islington and the London Borough of Wandsworth stated that emissions standards should be progressively reviewed and raised if necessary.
- 8.4.16 Veolia requested certainty that the ULEZ standards would remain at Euro 6 for the next few years.

TfL response

- 8.4.17 At present Euro 6 is the standard. As with the initial LEZ scheme, proposals will be kept under review to ensure they are appropriate and effective in

²⁰ <https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/cleaning-londons-vehicles/newer-vehicle-checker>

view of the Mayor's ambition for zero emission road transport in London by 2050. Any future changes would be subject to a full assessment and public consultation.

Zero Emission Zones

- 8.4.18 The Chartered Institute of Environmental Health, the City of London, Friends of the Earth, the London Borough of Waltham Forest, London Car Free Day 2018, London Councils, and We Ride London stated their support for Zero Emission Zones and requested further details.

TfL response

- 8.4.19 The MTS and the LES set out the policy approach to Zero Emission Zones. We note that some boroughs are developing their own proposals for Zero Emission Streets and Zones prior to 2020. We are happy to work with and support boroughs' feasibility work in developing these further. We will be undertaking detailed feasibility of Zero Emission Zones later this year and will be engaging with boroughs and other interested stakeholders as part of this process.

Other comments on emissions standards

- 8.4.20 The Herne Hill Green Party, the Lambeth Green Party and the Wandsworth Green Party stated that the ULEZ should set a PM_{2.5} standard based on WHO recommendations.
- 8.4.21 There were 1,621 public comments stating concern that central Government has promoted diesel vehicles in recent years, and is now penalising them.
- 8.4.22 MAG and Waltham Forest Conservatives argued that motorcycles emit less tyre and brake wear than cars.
- 8.4.23 The Waltham Forest Conservatives stated that there should be CO₂ limits for HGVs in the future.
- 8.4.24 The London Borough of Ealing suggested a Euro 4 standard should be introduced for motorcycles.
- 8.4.25 The London Borough of Southwark queried how standards would be measured after Brexit.
- 8.4.26 Greenpeace stated that only Euro 6 diesel vehicles purchased before the ULEZ announcement should not be charged.
- 8.4.27 The Road Haulage Association stated that there should be a Euro V standard until 2023.

TfL response

- 8.4.28 The WHO does not set standards for vehicle emission limits. These are set by the European Commission. However, the WHO sets recommended concentration levels of PM_{2.5}. The London Environment Strategy sets an ambition for London to meet WHO-recommended concentrations of PM_{2.5} by 2030. Whilst the ULEZ can contribute to this, additional action across all sectors is required to meet this challenging target.
- 8.4.29 Regarding the issue of government promotion and penalisation of diesel vehicles, we note that there has been a promotion of diesel by successive governments in the past, owing to the (now defunct) scrappage scheme for cars and the provision of a VED class which incentivises diesel. Diesel was incentivised in recognition of its relatively low CO₂ levels, although there is mounting evidence that for urban driving the CO₂ benefits are overstated, due to the difference in driving style in urban areas when compared to longer distance driving.
- 8.4.30 In 2013 however, the WHO classified diesel engine exhaust as carcinogenic to humans, based on sufficient evidence that exposure is associated with an increased risk of lung cancer.
- 8.4.31 The ULEZ is primarily intended to reduce NO_x emissions and PM which are high from the burning of diesel fuel. It is therefore important to implement these changes sooner rather than later to improve air quality.
- 8.4.32 The requirements for each vehicle type according to emission factors will be clearly outlined for the ULEZ. Diesel vehicles can be driven in the zone without incurring a charge if they have a Euro 6 standard engine. This has been set at a level to reflect the large contribution each vehicle makes on a per-vehicle basis to air pollution and is intended to deter older, more polluting vehicles.
- 8.4.33 The ULEZ will encourage the public and businesses to make conscious environmental choices based on the vehicle they drive.
- 8.4.34 While emissions from tyre and brake wear are an increasingly important source of PM, there are no standards set for this emissions source so it is not possible to introduce a requirement based on it. Exemptions for motorcycles are discussed in section 8.8.
- 8.4.35 In regards to CO₂ limits for HGVs, the ULEZ is designed to reduce NO_x emissions from vehicles. There is currently no CO₂ limit on HGVs. As part of London's trajectory towards zero emission in 2050 we would support CO₂ limits on newly manufactured HGVs. However, this does not have a bearing on the immediate requirement to reduce NO_x emissions from road transport in order to improve air quality.
- 8.4.36 In regards to a Euro 4 standard for motorcycles: Although this would be in line with that for petrol cars, the Euro 4 standard for motorcycles was introduced in phases between 2016 and 2018, meaning that for the ULEZ, a three-year old motorcycle could potentially be non-compliant. The lower standard for motorcycles has been set to reflect their lower overall

contribution to emissions but still recognising that beneficial emissions reductions can be made by the motorcycle fleet.

- 8.4.37 In relation to Brexit, the NO_x and PM emissions limits are set at the level equivalent to the Euro standards and the requirement is to meet these standards. Therefore, even if Euro 6 standards were changed, the ULEZ emissions limits would remain, unless the Mayor were to specifically change them following public consultation. We consider it unlikely that the UK Government will allow a weakening in emissions standards for new cars sold in the UK market and it is likely that the Euro standards will still apply to cars sold in the UK. Should this situation change we will consider whether it is appropriate to change the emissions standards.
- 8.4.38 With regards to the suggestion put forward by Greenpeace, we do not hold data on the date of purchase for vehicles and so we would be unable to enforce a system on this basis without requiring a comprehensive registration process that would significantly increase the cost of operating the scheme. Furthermore, this would not necessarily target the most polluting diesel vehicles.
- 8.4.39 The Euro V standard for HGVs performs significantly worse than the Euro VI standard and there is evidence its performance is worse than the Euro IV standard for NO_x. Allowing these vehicles into the LEZ for a longer period of time would undermine the emissions benefits of the scheme.

8.5 Theme D: Charge level

- 8.5.1 The following 14 stakeholders commented on this theme: Barking and Dagenham and Havering Green Party, Builders Merchants Federation, Caroline Russell AM, John Lewis Partnership, Kingston Environment Forum, London Borough of Camden, London Borough of Islington, London Borough of Lambeth, London Property Alliance, Motorcycle Action Group , Motorcycle Industry Association, RAC Motoring Services, Road Haulage Association and the Royal Borough of Greenwich.
- 8.5.2 There were 927 comments from the public and business on this theme.

Issues raised in relation to this theme:

- ***Support for a higher charge for heavy vehicles***
- ***Support for a lower charge for heavy vehicles***
- ***Support for a higher charge for the ULEZ in inner London***
- ***Support for a lower charge for the ULEZ in inner London***
- ***Charge should be reviewed in the future***
- ***A lower charge for motorcycles***
- ***Other comments on charging levels***

Support for a higher charge for heavy vehicles

8.5.3 Overall stakeholder support and opposition to the LEZ charge levels is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.

8.5.4 The London Borough of Camden stated concern that the charge was too low to incentivise heavy vehicles, and the Royal Borough of Greenwich called for a flat £300 charge for heavy vehicles.

Support for a lower charge for heavy vehicles

8.5.5 Overall stakeholder support and opposition to the LEZ charge levels is set out in Chapter Chapter 7 and by the public and business in Chapter Chapter 5.

8.5.6 The Road Haulage Association suggested a lower charge of £10 for Euro V compliant vehicles.

8.5.7 John Lewis Partnership suggested that the charge should be set at £50 for non-compliant vehicles.

TfL response

8.5.8 We have considered the balance between the requirement for a significant charge to be implemented in order to generate change in practice amongst heavy vehicle operators and the need to avoid causing economic damage to an extent that would not be justified by the resulting emissions savings. Non-compliant heavy vehicles generate much greater quantities of NO_x than light vehicles, and the scale in the difference of the proposed charges reflects the scale in the difference of emissions produced by the different vehicle types. In addition to this, evidence on responses to charging shows that a higher charge is required for heavier vehicles in order to generate a change in practice due to the relatively high base cost of operating heavy vehicles.

8.5.9 Like other charges, the charges for compliance would be kept under review and could potentially be changed, subject to formal consultation, at a later date.

8.5.10 We do not believe that a lower charge as proposed by the Road Haulage Association and John Lewis Partnership will provide a sufficient deterrent or encouragement to upgrade heavy vehicles to meet emissions standards. It is likely it would increase the numbers of vehicles that opt to pay the charge rather than become compliant.

Support for a higher charge for the ULEZ in inner London

8.5.11 Overall support and opposition to the ULEZ charge levels is set out for the public and business in Chapter Chapter 5 and stakeholders in Chapter Chapter 7.

Support for a lower charge for the ULEZ in inner London

- 8.5.12 Overall support and opposition to the ULEZ charge levels is set out for the public and business in Chapter Chapter 5 and stakeholders in Chapter Chapter 7.

TfL response

- 8.5.13 As stated in the supporting information document, the behavioural response to a range of charges for car drivers was modelled using stated preference survey data. At the lower range of charges there was a significantly lower range of expected compliance with the standards as a larger proportion of drivers would opt to pay the charge.
- 8.5.14 It was felt that for clarity and simplicity, and to maximise the emissions impact, that the charge should be £12.50, in line with that of the central ULEZ.

Charge should be reviewed in the future

- 8.5.15 The London Borough of Lambeth and the Royal Borough of Greenwich stated that the charge should be kept under review to ensure its effectiveness.

TfL response

- 8.5.16 As part of ongoing monitoring we will review the impact of the ULEZ when it is implemented. The charge will be kept under review to ensure it is providing an effective deterrent. Any changes would be subject to further consultation.

A lower charge for motorcycles

- 8.5.17 The Motorcycle Action Group and the Motorcycle Industry Association stated there should be a lower charge for motorcycles as it is not proportionate to the amount of pollution they produce.

TfL response

- 8.5.18 On an individual basis, motorcycles can emit pollutants at levels similar to passenger cars. Compliant motorcycles are in fact permitted to emit a higher level of NO_x and other pollutants than petrol passenger cars in the ULEZ. The standard charge level is designed so that all types of polluting vehicles contributing to London's NO₂ exceedances are included in the scheme. The charge is designed to persuade the most frequent entrants into the zone to upgrade their vehicles in order to avoid the charge, and a lower rate would not have this deterrent effect.

Other comments on charging levels

- 8.5.19 The London Borough of Islington proposed that charges should be cumulative and increase as vehicles move closer to the centre.
- 8.5.20 The London Borough of Islington also proposed that Euro IV vehicles should be charged £200 and Euro V vehicles charged £100.
- 8.5.21 They also proposed a higher charge for commercial vehicles due to their higher levels of pollution.
- 8.5.22 Caroline Russell AM, the Forest Hill Society and the London Property Alliance called for a per mile charge instead.
- 8.5.23 The Kingston Environment Forum called for a per hour charge.

TfL response

- 8.5.24 We do not believe that introducing a third tier of charging for Euro IV compliant vehicles is appropriate. The current LEZ charging and emissions standards are well understood by operators and high levels of compliance have been reached. Introducing an additional tier of charging is likely to lead to customer confusion. Additionally, whilst Euro V heavy vehicles emit less PM, there is evidence that their NO_x emissions are higher than Euro IV vehicles. A differential charge between IV and V vehicles is not advisable on NO_x reduction grounds.
- 8.5.25 As the charge has already been set at a deterrent level we do not believe that a zonal approach to charging whereby vehicles are charged progressively more as they enter the centre is advisable or necessary. It is likely to create additional customer confusion and significantly increase TfL's operational expense for limited air quality benefits.
- 8.5.26 Aligning the charge level for vans with that of cars (ie £12.50) reflects the difficulties in reaching the Euro 6 standard compared to the challenge involved in vans reaching the previous LEZ Euro 3 PM standard, which incurs a higher charge for non-compliance (£100). It has been set to enable occasional trips to be made by van operators, whilst encouraging those who travel in more frequently to upgrade their vehicles.
- 8.5.27 Alternative methods of road user charging are considered under section 8.15.

8.6 Theme E: Boundary

- 8.6.1 The following 76 stakeholders made comments on this theme: Air Quality Brentford, Bambos Charalambous MP, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, British Lung Foundation, Campaign for Better Transport, Caroline Pidgeon AM, Caroline Russell AM, Chartered Institute of Environmental Health, Chiswick Liberal Democrats, Clean Air for Brent, ClientEarth, Cllr David Linnette, Coulsdon & Purley Road User Forum, Forest Hill Society, Friends of the Earth, Helen Hayes

MP, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Joanne McCartney AM, Kingston Environment Forum, Lambeth for a Cool Planet, Lambeth Green Party, Lewisham Cyclists, Lewisham Liberal Democrats, Living Streets, London Assembly Environment Committee, London Assembly Environment Committee – UKIP group, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Ealing, London Borough of Enfield, London Borough of Hackney, London Borough of Hammersmith & Fulham, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Lambeth, London Borough of Lewisham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Councils, London Cycling Campaign, London Forum of Amenity and Civic Societies, London Living Streets, Make Air Safe and Clean, Merton Community Groups, Mortlake with East Sheen Society, RAC Motoring Services, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Royal Borough of Greenwich, Royal Borough of Kingston upon Thames, Sian Berry AM, Southwark Green Party, Streatham Wells Labour, Sustainable Merton, Sustrans, The Kew Society, Thurlow Park Ward Councillors, UPS, Waltham Forest and Redbridge Green Party, Waltham Forest Conservatives, Wandsworth Green Party and Westminster City Council.

- 8.6.2 Of the public and business responses, 484 comments were made on the LEZ boundary, 484 on the principle of expanding the ULEZ boundary and 3,619 relating to the North and South Circular Roads as a boundary.

Issues raised in relation to this theme:

- ***Support for and opposition to the North and South Circular Roads as a boundary for all vehicles***
- ***Calls for a London-wide boundary for all vehicles***
- ***Concerns around the Woolwich Ferry***
- ***Proposed changes to the LEZ boundary***
- ***The A4 in Chiswick***
- ***Other ULEZ boundary suggestions***

Support for and opposition to the North and South Circular Roads as a boundary for all vehicles

- 8.6.3 Details of general support and opposition are set out in section 7.2.
- 8.6.4 UPS raised concerns that an expanded ULEZ may prove difficult for electric vehicles to operate in, due to range concerns.

TfL response

- 8.6.5 We note the responses for and against the use of the North and South Circular Roads as a boundary. As stated in the supporting information document, there is a clear need to take greater action on air pollution across a wider area of London and clear evidence that air pollution is more severe in inner than outer London.
- 8.6.6 Alternative options are discussed later in this section.
- 8.6.7 Regarding UPS' concerns around range, whilst we support any moves to go beyond the ULEZ standards and utilise electric and range extended vehicles, there is no requirement under the ULEZ to do so. Provided the combustion part of a plug-in hybrid engine, for example, meets the required Euro standard, there will be no charge for range extended electric vehicles to travel in the zone and no requirement for these to travel in zero emission mode. We will consider the specific requirements for future Zero Emission Zones as part of feasibility development for these.

Calls for a London-wide boundary for all vehicles

- 8.6.8 The following stakeholders said that the ULEZ should be expanded London-wide for all vehicle types: Air Quality Brentford, Bambos Charalambous MP, Barking and Dagenham and Havering Green Party, Barnet Green Party, Better Streets for Enfield, Bloomsbury Air, Brentford Community Council, British Lung Foundation, Campaign for Better Transport, Caroline Russell AM, Chartered Institute of Environmental Health, ClientEarth, Cllr David Linnette, Forest Hill Society, Friends of the Earth, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Joanne McCartney AM, Kingston Environment Forum, Lambeth Green Party, Lewisham Cyclists, Lewisham Liberal Democrats, Living Streets, London Assembly Environment Committee, London Borough of Barnet, London Borough of Brent, London Borough of Camden, London Borough of Ealing, London Borough of Enfield, London Borough of Hackney, London Borough of Hammersmith & Fulham, London Borough of Islington, London Borough of Lambeth, London Borough of Lewisham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Cycling Campaign, London Forum of Amenity and Civic Societies, London Living Streets, Make Air Safe and Clean, Merton Community Groups, Mortlake with East Sheen Society, Redbridge Liberal Democrats, Richmond and Twickenham Friends of the Earth, Richmond and Twickenham Green Party, Richmond Heathrow Campaign, Royal Borough of Greenwich, Sian Berry AM, Streatham Wells Labour, The Kew Society, Thurlow Park Ward Councillors, Waltham Forest and Redbridge Green Party and Wandsworth Green Party.
- 8.6.9 The London Borough of Havering stated they were not adverse to the principle of a London-wide extension for all vehicles if there was a sufficient notice period before such a scheme were implemented, although they did not state what this should be.

- 8.6.10 The London Borough of Sutton and the Royal Borough of Kingston upon Thames stated they would wish to see full details about a London-wide extension for all vehicles and its impact before making a decision.
- 8.6.11 The Greenwich Conservatives, the London Assembly Environment Committee – Conservative group and the Waltham Forest Conservatives stated their opposition to a London-wide ULEZ for all vehicles.

TfL response

- 8.6.12 As set out in the supporting information document, an alternative boundary was considered early in the options process. Within the Stage 1 Talk London consultation, a question was asked as to the appropriate size of the zone for light and heavy vehicles. Amongst both the representative sample poll and the Talk London results, more respondents favoured the North and South Circular Roads option for light vehicles than a London-wide option. For heavy vehicles the London-wide option was favoured.
- 8.6.13 Recent High Court rulings have confirmed there is a threefold obligation under the Directives and Regulations to: achieve limit value compliance by the soonest date possible, to choose a route which reduces exposure as quickly as possible, and to ensure compliance is not just possible but likely.
- 8.6.14 We have examined expanding the ULEZ London-wide to outer London for light vehicles and whether this was the fastest and most effective measure for bringing non-compliant areas in outer London into compliance and reducing exposure.
- 8.6.15 Considering the benefits expected from the earlier implementation of the central London ULEZ in 2019 and the application of ULEZ standards to heavy vehicles London-wide from 2020, it is likely that targeted local measures (such as local road closures, vehicle restrictions or other interventions) could be equally effective and are more likely to reduce exposure and bring areas of non-compliance in outer London into limit value compliance in a quicker timeframe than an expansion of the ULEZ to cover light vehicles in outer London.
- 8.6.16 The necessary infrastructure for a wider zone would take significant time to implement, delaying when such a scheme could start and therefore the air quality and health benefits. The additional 1.7 million households affected by this level of expansion would have to be given a reasonable advance notice period before vehicle charging started.
- 8.6.17 Most of the predicted remaining hotspots in 2021 will be in inner and central London. Whilst there may be some additional benefits through a reduction of background concentrations, it is unlikely that the compliance rates of vehicles driving in these areas would further increase in response to a London-wide zone. If combined with a residents' sunset period, as proposed by some boroughs, it is likely the emissions in London would increase in comparison to the 2021 inner London option.

- 8.6.18 Targeted action at the remaining hotspots is likely to be a more effective approach to reducing emissions at these locations. We are happy to work with boroughs to support the implementation of these focused measures.
- 8.6.19 However, the Mayor and TfL will keep the situation under review and will consider what measures will be most effective and likely to reduce exposure and secure compliance within the shortest time possible.
- 8.6.20 A further expansion of the ULEZ is something that may be considered if it is shown there is no other equally effective means of reducing emissions in the remaining hotspots. However, it may be more appropriate to consider whether a more sophisticated system of charging for road use or alternative measures would be appropriate in these areas as set out in the MTS.
- 8.6.21 We acknowledge that there are significant costs to some members of the public and businesses as a result of an expanded ULEZ. Whilst this is necessary to tackle the public health crisis caused by air pollution, it is less justifiable to apply restrictions to outer London. With the proposals as consulted in 2021, in outer London 96 per cent of road length will comply with legal limits and over 99 per cent of the population will live in areas below the legal NO₂ limits; local measures are likely to be equally effective.

Concerns around the Woolwich Ferry

- 8.6.22 The London Borough of Waltham Forest, London Councils and the Royal Borough of Greenwich raised concerns about the impact of the boundary on the Woolwich Ferry, with the London Borough of Waltham Forest and the Royal Borough of Greenwich stating their opposition to any proposal that would exclude the Blackwall Tunnel and approach roads.
- 8.6.23 The Coulsdon & Purley Road User Forum stated that the Blackwall Tunnel and approach roads should be exempt.

TfL response

- 8.6.24 We recognise that the Woolwich Ferry does not operate on a 24/7 basis. However, we do not intend to offer an alternative boundary through the Blackwall Tunnel. Preliminary modelling indicated that it is likely that this would reduce overall levels of compliance with the emissions standards and adversely affect the scheme as a whole.
- 8.6.25 Our modelling indicates that there will not be a significant increase in traffic using the Woolwich Ferry as a result of the scheme due to its limited capacity and longer journey time than the alternatives.

Proposed changes to the LEZ boundary

- 8.6.26 The London Borough of Barnet stated that the LEZ should include the A406.

- 8.6.27 The Royal Borough of Kingston upon Thames requested a review of the existing LEZ boundary to cover more of the borough.
- 8.6.28 The London Borough of Islington stated that the LEZ should be expanded to the M25 and should include neighbouring authorities.

TfL response

- 8.6.29 With regards to a potential change to the LEZ boundary, when designing the initial scheme in 2007, we sought a boundary that most widely covered the GLA area to maximise the air quality benefits of the scheme. In seeking this objective, we were mindful of the need to offer drivers of vehicles which do not meet the LEZ emissions standards the opportunity to safely U-turn or divert away from the zone immediately prior to the point of entry. The LEZ boundary therefore excludes small areas within London to allow for this. An extension of the zone to cover the entirety of the boroughs and still provide a safe diversion route would need to include areas outside of the Greater London area where the Mayor has no jurisdiction.
- 8.6.30 We have no plans to change the current LEZ boundary. Roads just outside the LEZ boundary tend to experience similar protection from non-compliant vehicles as the rest of the LEZ area, since vehicle operators approaching London are aware of the LEZ requirements and, if they have business close to and within London, will be compliant. Therefore we do not believe there would be additional air quality benefits from a change to the LEZ boundary.
- 8.6.31 We are willing to work with local authorities outside London should they wish to extend the LEZ to their regions, but this would need to be initiated and funded by the local authorities or Defra.

The A4 in Chiswick

- 8.6.32 Caroline Pidgeon AM, the Chiswick Liberal Democrats and the London Borough of Hounslow stated that the A4 should be included within the ULEZ. There was also a 340 signature petition on this issue.
- 8.6.33 The London Borough of Hounslow suggested that Junction 2 of the M4 could be used as an alternative turn-back point for vehicles in order to include the A4 within the ULEZ.

TfL response

- 8.6.34 As with the existing LEZ boundary, the ULEZ boundary has been designed to ensure that drivers of non-compliant vehicles do not accidentally enter the zone. A short section of the A4 is excluded to allow drivers to make a safe U-turn at the Hogarth Roundabout to avoid entering the zone.
- 8.6.35 All exits from this stretch of the route are included within the ULEZ, so all vehicles intentionally travelling on this section of the road will have an origin or destination within the zone and therefore there would not be any

noticeable change in emissions if the road itself were to be included in the zone.

- 8.6.36 Latest traffic data suggests that 45 vehicles in the morning peak and 90 in the evening peak make this turning manoeuvre at Hogarth Roundabout, presumably to access roads south of the A4 where right turns are not permissible for eastbound vehicles. We do not anticipate that this number will noticeably increase as non-compliant vehicles travelling eastbound wishing to access the North Circular are likely to use the signed exit at junction 2 instead.
- 8.6.37 An alternative turn-back point at Junction 2 of the M4 was considered as part of the boundary design process. However, there were significant practical design risks and disproportionate implementation costs envisaged with this approach. It would have required adding new signage on the elevated motorway structure and its slip roads with the potential for major gantry works or strengthening of the existing elevated structure which is owned and operated by the Secretary of State and outside of the direct control of TfL or the London boroughs.
- 8.6.38 In view of the limited benefits of including this stretch of road, due to the fact that all exit points are included within the zone, it was decided not to progress with this as an option on the grounds of overall risk to deliverability of the expanded ULEZ. It was also felt that driver understanding of the zone could be affected if a significant stretch were to be located outside of the North Circular Road.

Other ULEZ boundary suggestions

- 8.6.39 The London Assembly Environment Committee suggested the A232 as a potential boundary in south London to ensure the same area as north London was covered.
- 8.6.40 The London Assembly Environment Committee – UKIP group stated their support for a potential diesel ban near Heathrow if sufficient notice were provided.
- 8.6.41 Air Quality Brentford and Brentford Community Council stated the ULEZ should include areas of outer London close to main radial roads.
- 8.6.42 RAC Motoring Services stated the ULEZ should only expand to areas with air quality problems.
- 8.6.43 Caroline Pidgeon AM, Clean Air for Brent, London Living Streets, the Redbridge Liberal Democrats and Sustrans proposed inclusion of the North and South Circular Roads themselves within the boundary. The London Borough of Haringey stated they would support this in the future if there could be mitigation against displacement of traffic.

- 8.6.44 The London Borough of Richmond upon Thames stated that the Mortlake Crematorium and Townmead Recycling Centre should be excluded from the zone.
- 8.6.45 The CPT stated they would potentially accept an extension of the heavy vehicle standard to the North and South Circular Roads in 2021, expanding London-wide at a later date.

TfL response

- 8.6.46 The ULEZ boundary was designed along the following principles, which are based on those used to design the London-wide LEZ, to ensure a consistent, clear and navigable boundary that provides an adequate diversion route for drivers and does not force anyone into the zone. These principles:
- Provide driver opportunity to divert at or close to the point of entry. All possible boundary diversions should be suitable for the largest classes of vehicle who may need to divert away from the zone, either by continuing along the boundary route, by a U-turn at a roundabout or by utilising side roads
 - Avoid charge-free 'islands', ie they ensure all roads outside the zone can be reached without passing through the zone
 - Allow minor adjustments to the boundary to ensure practical signage and camera placement. It is a key principle that the regulatory boundary entry signs are placed at or very close to the boundary and at a point where drivers can choose to avoid entering the zone. Where this is not possible, an alternative boundary may be the only solution
 - Include all public roads inside the North and South Circular Roads in the zone, including cul-de-sacs and self-contained roads
 - Avoid any areas outside the North and South Circular Roads
 - Consider small stretches outside the North and South Circular Roads only where it is very difficult to meet the above objectives within the North and South Circular Roads (eg where a road crosses under/over the North Circular)
 - Follow the inside (anti-clockwise) route of the North and South Circular Roads for gyratories
- 8.6.47 Regarding the A232, there is no connection directly to the North Circular Road or a clear and cohesive set of boundary roads that would be as recognisable to drivers as the South Circular Road.
- 8.6.48 Alternative suggestions that include the North and South Circular Roads or restrict themselves to key routes are more likely to create diversionary impacts along parallel routes that are less suitable for traffic than the North and South Circular Roads.

- 8.6.49 With regards to Mortlake Crematorium, whilst we acknowledge there may be perceived sensitivities in accessing the Mortlake Crematorium, we do not consider it appropriate to redraw the boundary for this specific location. There are several crematoria within the North and South Circular Roads and this is not a unique situation for Mortlake. Options to use a compliant vehicle or take public transport are available to avoid paying the daily charge.
- 8.6.50 Similarly, with Townmead Recycling Centre, there are options to use alternative facilities outside the zone, pay the daily charge or use compliant vehicles.
- 8.6.51 Heathrow is included within the London-wide LEZ for heavy vehicles. It is our understanding that as the highway authority for roads within the airport, Heathrow is considering introducing its own emissions charging to access the airport. This is something we would support but does not alter our opposition to the expansion of Heathrow.
- 8.6.52 A heavy vehicle standard that only extended to the North and South Circular Roads would have lower emissions benefits in outer London and cause potential confusion for operators of heavy vehicles as to which standards apply where, given the existing London-wide LEZ standards.

8.7 Theme F: Residents' sunset period

- 8.7.1 The following 14 stakeholders raised issues in relation to this theme: Campaign for Better Transport, Caroline Russell AM, Herne Hill Green Party, London Borough of Barnet, London Borough of Enfield, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Waltham Forest, London Chamber of Commerce and Industry, Mortlake with East Sheen Society, Royal Borough of Greenwich, Wandsworth Green Party and Westminster City Council.
- 8.7.2 Issues around additional sunset periods for other vehicles or groups are discussed in section 8.8.

Issues raised in relation to this theme:

- ***Support and opposition for changes to the sunset period for residents***
- ***Calls for further changes to the sunset period for CCZ residents***
- ***Support residents of inner London paying the charge***
- ***Calls for a sunset period for residents of inner London***

Support and opposition for changes to the sunset period for residents

- 8.7.3 General support and opposition to the sunset period for central London residents is set out in Chapter 5 for public and businesses and Chapter 7 for stakeholders.

TfL response

- 8.7.4 We note the overall support for the changes to the residents' sunset period in central London. It is necessary to avoid a situation where residents of inner London are subject to the ULEZ when residents of central London are not.

Calls for further changes to the sunset period for CCZ residents

- 8.7.5 Caroline Russell AM, Herne Hill Green Party and Wandsworth Green Party stated their opposition in principle to sunset periods.
- 8.7.6 The London Borough of Islington stated their support for a sliding scale of charges for residents increasing over time.

TfL response

- 8.7.7 Residents were granted a sunset period until 2023 by the previous administration. This was brought forward in line with the proposals to bring forward the start date of the ULEZ in central London and it was proposed to bring this further forward to align with the start date for the expanded ULEZ. It is our view that a removal of the sunset period at this late stage, less than a year before the implementation of the ULEZ in central London, would not provide residents with sufficient notice to change their vehicle in order to comply with the ULEZ standards.
- 8.7.8 The sunset proposal is that registered residents will receive a 100 per cent discount on the ULEZ during the sunset period. This has been written into the transitional provisions of the Scheme Order. The GLA Act requires the Road User Charging Scheme Order to specify the level of charges. This has been set at £12.50 for light duty vehicles. The legislation does not permit the Scheme Order to make provision for automatic changes to the level of discounts provided. Introducing a sliding scale of charges for residents would require a variation order and statutory consultation for each change. We do not believe it would be cost effective to undertake further annual consultations to introduce and then alter a charge for residents.

Support residents of inner London paying the charge

- 8.7.9 Caroline Russell AM, Herne Hill Green Party, the London Borough of Hackney, the London Borough of Islington, Wandsworth Green Party and Westminster City Council stated their support for residents of inner London who are liable for the charge from October 2021.

Calls for a sunset period for residents of inner London

- 8.7.10 The Campaign for Better Transport, the London Borough of Barnet, the London Borough of Enfield, the London Borough of Hounslow, the London Borough of Waltham Forest, the Mortlake with East Sheen Society and the

Royal Borough of Greenwich asked for a sunset period for residents of inner London.

- 8.7.11 The London Borough of Hounslow stated this should be for 18 to 24 months and should include residents just outside the ULEZ.

TfL response

- 8.7.12 A sunset period for residents of inner London was carefully considered. Our analysis indicated that 50 per cent of journeys inside the North and South Circular Roads are undertaken by residents, therefore any sunset period would dramatically undermine the emissions impacts of the scheme.
- 8.7.13 It would also potentially undermine the benefits of the 2019 ULEZ as it would enable an estimated 175,000 additional cars to benefit from a sunset period.
- 8.7.14 In view of the pressing need to reduce NO_x emissions we do not feel it is appropriate to undermine the benefits of the ULEZ in this manner.
- 8.7.15 We consider that a three-year notice period prior to the implementation of the scheme provides sufficient notice for residents to prepare for the ULEZ.
- 8.7.16 Petrol vehicles that meet the Euro 4 emissions standard have been available since at least 2002 and mandatory since 2005, meaning there are low cost compliant vehicles available for residents.

8.8 Theme G: Discounts, exemptions and other sunset periods

- 8.8.1 The following 35 stakeholders made comments on this theme: Arriva, Balfour Beatty, Bloomsbury Air, Brentford Chamber of Commerce, British Lung Foundation, British Motorcyclists Federation, BVRLA, Clean Air for Brent, Cllr Cohen, Confederation of Passenger Transport, Disabled Motoring UK, Heart of London Business Alliance, John Lewis Partnership, London Borough of Barnet, London Borough of Croydon, London Borough of Ealing, London Borough of Hounslow, London Borough of Islington, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Chamber of Commerce and Industry, LTDA, Motorcycle Action Group, Musicians' Union, Routemaster Association, SMMT, Stagecoach London, Tideway, UPS, Veolia, Victoria BID, Waltham Forest and Redbridge Green Party, We Ride London and Westminster City Council.
- 8.8.2 There were 3,584 comments on discounts and exemptions, including comments on the residents' sunset period, from public and business respondents.

Issues raised in relation to this theme:

- ***Motorcycles***
- ***Taxis***

- **Private hire vehicles**
- **Historic vehicles**
- **Showman's vehicles**
- **Blue Badge holders**
- **Disabled tax class sunset period**
- **Support for an exemption for emergency service vehicles**
- **Charities operating minibuses**
- **Support for other discounts, exemptions or sunset periods**
- **Opposition to other discounts or exemptions**

Motorcycles

- 8.8.3 The British Motorcyclists Federation, MAG, the Motorcycle Industry Association and We Ride London stated their support for an exemption for motorcyclists on the basis that they contribute less to air pollution and congestion.
- 8.8.4 The London Borough of Islington stated their support for including motorcycles in the scheme.

TfL response

- 8.8.5 Presently less than one per cent of road transport NO_x emissions in London come from motorcycles and mopeds. However, on an individual basis these vehicles can pollute at similar or even higher levels than cars, contributing to NO_x 'hotspots' throughout the Capital. For example in the ULEZ, compliant motorcycles are permitted to emit 0.15 g/km of NO_x which is a higher level than petrol passenger cars are permitted to emit (0.08 g/km). As reducing NO₂ is the primary aim of the ULEZ, it is important that all vehicle types that are contributing to London's NO₂ exceedance are included in the scheme.
- 8.8.6 Motorcycles emit relatively high levels of carbon monoxide and hydrocarbons in addition to NO_x as the requirement to have a three-way catalytic converter fitted only came into force for motorcycles in 2016; in cars they have been mandatory since 1993.

Taxis

- 8.8.7 Balfour Beatty, Bloomsbury Air, Clean Air for Brent, the Heart of London Business Alliance and the London Borough of Southwark stated their opposition to the exemption for taxis.
- 8.8.8 The LTDA reiterated their support for the exemption for taxis.
- 8.8.9 Balfour Beatty stated that if taxis were exempt there should be exemptions for other businesses on viability grounds.

- 8.8.10 There were 745 public and business comments opposing the exemption for taxis.

TfL response

- 8.8.11 Taxis are exempt from the ULEZ scheme recognising that taxi drivers are compelled to accept journeys within London and, unlike other private and commercial vehicles, do not have the option to avoid the journey in response to the charge. Furthermore, we are using our licensing regime to reduce emissions from taxis in London.
- 8.8.12 The ULEZ charge is designed to accelerate the uptake of compliant vehicles but given the special circumstances for taxis, a charge would not be effective in this regard.
- 8.8.13 Changes to the taxi Conditions of Fitness in respect of stipulating zero emissions capability for newly licensed vehicles and maintenance of the existing London-wide taxi age limit are considered to be a more direct way of influencing emissions from taxis than applying a charge, particularly as the TfL Board sets maximum fares for all taxis.
- 8.8.14 Another consideration is that, unlike PHVs (which are included in the ULEZ emissions standards) taxi operators are not free to set their own fares. If they were, one option might be to adjust fares to cover the costs of compliance. This approach could make a charge an effective mechanism.
- 8.8.15 Instead, taxi fares are determined by tariffs that are reviewed each year to take into account changes in a cost index that reflects the costs of operating a taxi. The cost index has been established for over 30 years as the most appropriate way of ensuring that regulated fares remain in line with the costs of providing the taxi service. In this context, it would not be suitable to include a charge for non-Euro 6 taxis, particularly as some drivers would be using vehicles that meet the Euro 6 standard.
- 8.8.16 Since 1 January 2018, we no longer license new diesel taxis and vehicles new to licensing will need to meet zero emission capable requirements instead. It is our opinion that this is the best approach to reducing emissions from the taxi fleet.
- 8.8.17 Further measures to reduce emissions from the taxi fleet are set out in our Taxi and Private Hire Action Plan.

Private hire vehicles

- 8.8.18 Bloomsbury Air stated their opposition to a PHV exemption.

TfL response

- 8.8.19 We are not proposing any other discount, exemption or sunset period for PHVs. However the IIA suggested that additional mitigation should be considered for wheelchair accessible PHVs.

- 8.8.20 We recognise the need to improve access for disabled people. Whilst we are investing heavily in increasing step-free access on our network we know that taxis or PHVs are the only option for some people. We currently offer a five-year extension on the age limit for wheelchair accessible vehicles.
- 8.8.21 Whilst a significant proportion of wheelchair accessible PHVs qualify for disabled passenger vehicle tax status this is not the case for all of them.
- 8.8.22 To ensure parity between wheelchair users with and without access to private vehicles we will be offering a sunset period for wheelchair accessible PHVs until 2025.
- 8.8.23 PHVs will need to be on a pre-booked pick-up or drop-off within the expanded ULEZ in order for this sunset period to apply.
- 8.8.24 This sunset period will only apply as long as a vehicle is licensed as a PHV. Upon surrender of the PHV licence the vehicle operator will need to pay the daily charge, unless the vehicle qualifies for exemption as a disabled tax class vehicle.
- 8.8.25 It is estimated that this will affect 141 non-compliant vehicles that have been converted to provide wheelchair accessibility, that do not qualify for disabled tax class status and will still be within the PHV age limit.
- 8.8.26 The updated IIA states that this will reduce the impact on disabled users of wheelchair accessible PHVs from a major impact to a moderate impact.

Historic vehicles

- 8.8.27 The London Borough of Islington and the London Borough of Southwark stated their opposition to an exemption for historic vehicles.
- 8.8.28 Arriva, the Brentford Chamber of Commerce and Routemaster Association stated their support for an exemption for historic vehicles. With the Brentford Chamber of Commerce stating this should be rolling and apply to vehicles registered after 1973.
- 8.8.29 The Federation of British Historic Vehicle Clubs requested clarification on the procedure for exempting vehicles and the difference between pre-1973 and historic vehicles.

TfL response

- 8.8.30 The ULEZ currently exempts historic tax class vehicles on the basis that there are limited numbers and it is not practical or possible to upgrade or retrofit them without alterations that would result in a significant loss of historic character.
- 8.8.31 As part of the consultation it was proposed to align the historic vehicle exemptions for the LEZ and ULEZ. Vehicles that were registered before 1973 or vehicles with a historic tax class will be exempt from both the LEZ and ULEZ. There are strict criteria with these vehicles that necessarily limit

their usage. Should the Mayor decide to proceed with the changes as proposed, the information on our website would be updated.

- 8.8.32 The reference to vehicles being entered into the register is a legal term whereby we keep a register of vehicles exempt from the LEZ. As we are able to identify these vehicles automatically we are able to enter them on the register ourselves, without the need for customer action.
- 8.8.33 On average four vehicles that would potentially qualify for a historic vehicle exemption enter the Congestion Charging zone per day during charging hours and approximately 131 vehicles per day are observed London-wide. The benefit of including these vehicles in the scope of the charge would be negligible.
- 8.8.34 An option where historic vehicles are not generally exempt from the ULEZ, but can apply for an exemption for special events, was considered, but it is not considered cost effective due to the increased costs and administrative burden to both TfL and event organisers, and the emissions benefits would be limited.

Showman's vehicles

- 8.8.35 The London Borough of Islington stated their opposition to the 100 per cent discount for showman's vehicles.

TfL response

- 8.8.36 The LEZ and the ULEZ currently offer a 100 per cent discount for showman's vehicles. When the LEZ scheme was consulted on in 2006, we accepted the argument from the Showmen's Guild that many of their vehicles were older, low mileage vehicles for which replacement of all or part of the vehicle would not be possible. This was because they had been specially adapted to accommodate rides and ancillary equipment, such as generators, which made fitting abatement devices technically challenging and disproportionately expensive. In light of this and in recognition that there was no ready source of newer compliant vehicles we agreed to a 100 per cent discount from the LEZ daily charge.
- 8.8.37 There are strict and limited criteria as to what can be designated as a showman's vehicle. To be eligible for the discount, the vehicles must be registered to a person following the business of a travelling showman and must have been modified or specially constructed. Trailers and semi-trailers that have been modified or specially constructed are not eligible for the discount. Operators must register with TfL for the discount and provide evidence relating to their membership of an accredited body and the modifications to the vehicles. The discount is available to eligible UK and non-UK registered vehicles. To be defined as a showman's vehicle it must be used solely by that person for the purposes of his or her business and no other purpose. By definition, these vehicles are used solely for the purpose of events.

- 8.8.38 The most recent data indicates that on average nine showman's vehicles per day are observed entering the LEZ. The benefit of including these vehicles in the scope of the charge would be negligible.

Blue Badge holders

- 8.8.39 The British Lung Foundation and Disabled Motoring UK stated that there should be a discount or exemption for Blue Badge holders.

TfL response

- 8.8.40 The ULEZ does not place a blanket charge on all vehicles entering the zone, but restricts the choice of vehicle. However, there will be significant numbers of second-hand compliant vehicles available as set out in the supporting information document.
- 8.8.41 Unlike the disabled tax class, Blue Badge status is related to the individual rather than the vehicle. Given the wide range of available compliant vehicles it is not considered appropriate to offer a sunset period or exemption for Blue Badge holders, in view of the reduction in emissions benefits that such a proposal would bring.
- 8.8.42 Blue Badge holders using disabled tax class vehicles will benefit from a sunset period.

Disabled tax class sunset period

- 8.8.43 The British Lung Foundation, Disabled Motoring UK and the London Borough of Wandsworth commented on this. The British Lung Foundation and Disabled Motoring UK stated that there should be a longer sunset period, and the London Borough of Wandsworth commented that the sunset period should be reviewed to ensure it is adequate.

TfL response

- 8.8.44 A sunset period was proposed until 2023 for disabled and disabled passenger tax class vehicles as part of the initial consultation on the ULEZ in 2014. In view of the significant increase in the area of the zone we have carefully considered proposals to review this.
- 8.8.45 We note significant costs are incurred in the conversion of some drive-from-wheelchair vehicles and that these tend to be diesel van conversions. There is also less scope for using alternative means of travel. Due to the high costs, these vehicles tend to operate longer leases, with a lease of up to 10 years allowed under the Motability leasing scheme.
- 8.8.46 We recommend an extension to the sunset period until 2025. This will allow for leased non-compliant wheelchair accessible vehicles to be replaced upon expiry of their leases.

- 8.8.47 We note that there may still be some disabled tax class vehicles that do not meet emissions standards at the end of this sunset period. However we do not believe a full exemption or discount is appropriate as the scale of the challenge means that all vehicles need to become cleaner.
- 8.8.48 The new 2025 date provides a seven-year notice period for owners of non-compliant vehicles to seek alternative options, including the use of leasing services.
- 8.8.49 The revised IIA states that this extension to the sunset period eliminates the disproportionate impact on owners of non-compliant disabled tax class vehicles and reduces the impact on wheelchair accessible vehicle owners to a short-term minor impact.

Support for an exemption for emergency service vehicles

- 8.8.50 The London Borough of Islington stated their support for our approach to emergency service vehicles.
- 8.8.51 Greenwich Conservatives stated that emergency service vehicles should be exempt.

TfL response

- 8.8.52 In line with government best practice on the implementation of Clean Air Zones we are entering into Memoranda of Understanding with emergency service vehicles. Whilst they will not be exempt from the ULEZ, we will, for a time-limited period, waive any charges for vehicles responding to emergency call-outs or other operationally critical activities.
- 8.8.53 We will be publishing the Memoranda of Understanding later in 2018.

Charities operating minibuses

- 8.8.54 The London Borough of Brent, the London Borough of Croydon and the London Borough of Wandsworth requested that the impact on charity minibuses be considered.

TfL response

- 8.8.55 We recognise that the increase in the size of the zone will impact significantly more organisations who use minibuses to provide school and community transport on a not-for-profit basis. Unlike other vehicle types there are limited options for compliant alternatively fuelled vehicles or retrofits and no options to pass the charge on to customers.
- 8.8.56 We are proposing that not-for-profit organisations operating minibuses and holding section 19 permits and section 22 permits issued in line with government regulations are given a sunset period from 2021 until 2023.

- 8.8.57 This will be limited to vehicles that are already owned by organisations. Non-compliant vehicles purchased after 8 June 2018 will not be eligible for this sunset period as we wish to ensure that all organisations choose a compliant vehicle when replacing their fleets.
- 8.8.58 Details of how to apply for this will be set out to affected organisations at a later date.
- 8.8.59 Given the significant transport alternatives available within the Congestion Charging zone and the severity of the pollution within the zone, vehicles operating in central London from 2019 will still need to comply with the standards or pay the daily charge.
- 8.8.60 As commercially operated minibuses will have the option to pass on the charge to customers, this sunset period will not apply to these vehicles.
- 8.8.61 The revised IIA states that this will reduce the differential impact on groups reliant on charitable services to a short-term moderate impact.

Support for other discounts, exemptions or sunset periods

- 8.8.62 Balfour Beatty stated that there should be exemptions for businesses on viability grounds.
- 8.8.63 The Royal Borough of Greenwich and Westminster City Council stated that essential public service vehicles such as refuse collection vehicles and gritters should receive a sunset period.
- 8.8.64 The Brentford Chamber of Commerce, the Freight Transport Association and the London Borough of Wandsworth stated that specialist vehicles should receive a sunset period from the ULEZ.
- 8.8.65 The London Borough of Haringey, the London Borough of Hounslow, the London Borough of Waltham Forest and the Royal Borough of Greenwich stated that there should be a sunset period for small businesses in the zone.
- 8.8.66 John Lewis Partnership and London Chamber of Commerce and Industry stated that there should be a sunset period for businesses.
- 8.8.67 Cllr Cohen and the London Borough of Barnet stated that there should be assistance for families driving six-plus seater vehicles.
- 8.8.68 The CPT and Stagecoach London stated that there should be a sunset period for training buses.
- 8.8.69 Tideway stated that there should be a sunset period for Fleet Operator Recognition Scheme (FORS) silver members.
- 8.8.70 The BVRLA, SMMT and UPS stated that there should be a sunset period for those who can demonstrate an adaptation plan.

- 8.8.71 The Musicians' Union stated that there should be an exemption for essential workers travelling by car.
- 8.8.72 The Freight Transport Association suggested an exemption for vehicles visiting authorised test facilities (ATFs).

TfL response

- 8.8.73 Training buses: We do not consider it appropriate to offer a specific sunset period for training buses. As with other companies options are available for bus operators to retrofit or replace the fleet or pay the daily charge.
- 8.8.74 Six-plus seater vehicles: As the ULEZ is a scheme designed to control emissions we do not consider it appropriate to offer a discount according to a specific car type. A six-plus seater discount is likely to lead to more polluting vehicles being allowed to travel into the zone without paying the charge whilst potentially less polluting vehicles will need to pay a daily charge.
- 8.8.75 There are several compliant seven seater vehicles that are readily available, including older petrol models.
- 8.8.76 With regards to the other discounts and exemptions proposed, we consider that there will be sufficient options for operators to buy compliant vehicles, retrofit existing vehicles, manage the deployment of their fleets or, if necessary, pay the charge for entering the ULEZ. As such it would not be appropriate to undermine the health benefits of the scheme with additional discounts and exemptions.
- 8.8.77 With regard to a more tightly-defined discount, such as for small businesses, vehicles with an adaptation plan, essential workers or where there is 'genuine hardship', any such discount would, in practical terms, be extremely difficult to define and implement. Again, this approach would undermine the scheme and, furthermore, lead to calls for other discounts for other groups who felt that they had been adversely impacted by the scheme.
- 8.8.78 Regarding access to ATFs, we consider that there is an option for non-compliant vehicles to pay a one-off charge when accessing facilities. We will however consider a discretionary waiving of charges for vehicles having retrofit equipment fitted or tested; a change to the variation order to allow for this is not necessary.

Opposition to other discounts or exemptions

- 8.8.79 The Victoria BID requested clarification on the exemption for military vehicles.

TfL response

- 8.8.80 The exemption for MoD vehicles applies only to vehicles used for naval, military or air force purposes. This is because it is not legally permissible to levy a charge against such vehicles. The 'civilian fleet' operated by the MoD will be subject to the ULEZ.

TfL recommendations

- 8.8.81 We recommend the following amendments to the VO:
- An extension of the sunset period for disabled tax class vehicles from September 2023 to September 2025
 - The introduction of a sunset period for licensed wheelchair accessible PHVs commencing in 2019 and expiring in 2025
 - The introduction of a sunset period for minibuses operated by not-for-profit organisations under a section 19 or section 22 permit, purchased prior to June 8 2018 upon application to TfL

8.9 Theme H: Economic impacts

- 8.9.1 The following 40 stakeholders commented on this theme: Alliance of British Drivers, Balfour Beatty, Brewery Logistics Group, Builders Merchants Federation, BVRLA, CBI, City of London, Confederation of Passenger Transport, Coulsdon & Purley Road User Forum, Disabled Motoring UK, Freight Transport Association, FSB, Greenwich Conservatives, Heart of London Business Alliance, Hertfordshire County Council, John Lewis Partnership, London Assembly Environment Committee – Conservative group, London Borough of Brent, London Borough of Ealing, London Borough of Enfield, London Borough of Havering, London Borough of Hounslow, London Borough of Newham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Chamber of Commerce and Industry, London Councils, London Property Alliance, London Tourist Coach Operators Association, Motorcycle Action Group, Musicians' Union, RAC Foundation, RAC Motoring Services, Road Haulage Association, Royal Borough of Greenwich, Tideway, Veolia and Waltham Forest Conservatives.
- 8.9.2 9,830 comments were received in relation to impacts from the public and business.

Issues raised in relation to this theme:

- ***Concerns around the impact on small businesses***
- ***Concerns around costs to drivers and operators***
- ***Concerns regarding the impact on older and disabled people***
- ***Concerns regarding the impact on coach companies***
- ***Concerns regarding the negative impact on charity minibuses***

- ***Other comments on the economic impact***
- ***Concerns about the impact on businesses in general***
- ***Concerns about the impact on poorer people***

Concerns around the impact on small businesses

8.9.3 The following stakeholders raised concerns around the potential impact on small businesses: Builders Merchants Federation, BVRLA, City of London, Confederation of Passenger Transport, FSB, Greenwich Conservatives, Heart of London Business Alliance, London Assembly Environment Committee – Conservative group, London Borough of Brent, London Borough of Ealing, London Borough of Havering, London Borough of Hounslow, London Borough of Newham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Chamber of Commerce and Industry, London Councils, London Property Alliance, Musicians' Union, Road Haulage Association, Royal Borough of Greenwich, and Waltham Forest Conservatives.

TfL response

8.9.4 We note that the IIA sets out the possible impact on small businesses.

8.9.5 Whilst 2016 was the year that the Euro 6 standard became mandatory for vans, there are models of vehicles produced earlier than this date that comply with the ULEZ standards. By 2021 we consider that a viable second-hand market will have emerged for light commercial vehicles, reducing the potential overall cost. We are working with manufacturers and leasing companies to develop options to reduce the overall burden on commercial vehicle operators.

8.9.6 We have also developed proposals for a commercial vehicle scrappage scheme that would be targeted at small and micro businesses operating vans. As London is not the only city that is looking to introduce emissions standards for light goods vehicles, it is right that this should be a central Government-led and funded scheme.

8.9.7 We will be working with stakeholders to promote options for compliance for small businesses in the run-up to implementation.

8.9.8 There is an acknowledgement that compliance with the standards may be more difficult for commercial vehicle operators. Part of the reason that the charge level for vans was set at £12.50 was to enable occasional trips into the zone at an affordable cost for businesses who also retain the option to pass this on to customers. Similarly the charge level for non Euro VI compliant heavy vehicles was set at £100 rather than £200 for this purpose.

8.9.9 All vehicles contribute to air pollutant emissions and we and the Mayor have a duty to take action on the Capital's air quality. Londoners have indicated that emissions from all vehicle types must be reduced. The ULEZ proposal

seeks to achieve a balance between the need to reduce vehicle emissions to improve the health of Londoners and the need to ensure that the scheme is affordable and feasible for businesses and individuals.

Concerns around costs to drivers and operators

- 8.9.10 The BVRLA, the Confederation of Passenger Transport, FSB, Greenwich Conservatives, John Lewis Partnership, the London Borough of Ealing and the London Borough of Waltham Forest raised concerns on the potential costs to drivers and vehicle operators.

TfL response

- 8.9.11 With regard to the economic impact on other sectors, it is acknowledged that there will be some cost impacts. However, this is outweighed by the significant and crucial benefits that the proposals will bring to a large proportion of people in terms of improved air quality, health and wellbeing. This also needs to be considered alongside the economic cost of the health impacts of air pollution in the Capital, which is estimated as being up to £3.7bn a year.

Concerns regarding the impact on older and disabled people

- 8.9.12 Disabled Motoring UK and London Councils raised concerns on the potential financial impact of the ULEZ on disabled and older people.

TfL response

- 8.9.13 As set out in section 8.8 disabled people with a disabled tax class will now benefit from a sunset period until 2025. This reduces the impacts identified in the original IIA.
- 8.9.14 Older and disabled people are disproportionately impacted by air pollution, and the ULEZ will offer significant benefits for them.
- 8.9.15 We have proposed a Government-led scrappage scheme targeted at low income households. It is likely that this would benefit many older and disabled people.

Concerns regarding the impact on coach companies

- 8.9.16 The CPT and the LTCOA raised concerns on the potential impact on coach companies.

TfL response

- 8.9.17 In response to concerns from the coach industry, we worked with the CPT to identify potential case studies of small coach operators to look at the impact of the ULEZ on them. We found that a retrofit solution would reduce the potential impact on coach operators. This work was published as an

appendix to the stage 3a consultation report on bringing forward the ULEZ in central London²¹.

- 8.9.18 We are working closely with the industry, suppliers of retrofit equipment, the Energy Saving Trust and the Low Carbon Vehicle Partnership to test retrofit solutions for coaches, with a view to accelerating the process for approval through the CVRAS.

Concerns regarding the negative impact on charity minibuses

- 8.9.19 The London Borough of Brent and the London Borough of Croydon raised concerns around the potential impact on the community transport sector.
- 8.9.20 Eighteen public respondents stated that there should be an exemption for charity minibuses.

TfL response

- 8.9.21 We are proposing a sunset period for charity minibuses, as set out in section 8.8. This reduces the differential impact on groups reliant on these services, as set out in the IIA revision.

Other comments on the economic impact

- 8.9.22 The CPT, the Freight Transport Association, the London Borough of Brent, LTCOA and the Road Haulage Association raised concerns around the lack of available retrofit options. The London Borough of Brent enquired whether we had considered the market for retrofit as part of the proposals.

TfL response

- 8.9.23 There is recognition within the ULEZ modelling that retrofit is less likely to be a financially viable solution for non-specialist HGVs. This is set out in the IIA. We consider that for specialist vehicles with longer lifespans retrofit is more likely to provide a viable option. Retrofit is being led at a national level to ensure consistency across all Clean Air Zone cities. We are working closely with manufacturers to encourage the development of emissions reduction systems for specialist HGVs, which would be approved through the CVRAS.

Concerns about the impact on businesses in general

²¹ https://consultations.tfl.gov.uk/environment/air-quality-consultation-phase-3a/user_uploads/appendix-k.pdf

- 8.9.24 The following stakeholders raised general concerns on the impact of the ULEZ and LEZ changes on business groups in general: Balfour Beatty, Brewery Logistics Group, Builders Merchants Federation, BVRLA, CBI, Confederation of Passenger Transport, Coulsdon & Purley Road User Forum, Freight Transport Association, FSB, Hertfordshire County Council, John Lewis Partnership, London Assembly Environment Committee – Conservative group, London Borough of Waltham Forest, London Borough of Wandsworth, London Tourist Coach Operators Association, Road Haulage Association, Tideway, Veolia and Waltham Forest Conservatives.

TfL response

- 8.9.25 Whilst we acknowledge that there will be additional costs for businesses, a balance needs to be struck between the need to reduce vehicle emissions to improve the health of Londoners and the need to ensure the scheme is feasible and affordable. In our opinion and that of the Mayor, the proposals strike an appropriate balance, especially when considering the urgent requirement to achieve compliance with legal air pollution limits as quickly as possible.
- 8.9.26 The IIA, which formed part of the consultation material, found that there should be little impact from the stronger LEZ and expanded ULEZ proposal on London's ability to provide an environment which will attract and retain internationally mobile businesses. This is due to the central location of international business employment. Conversely, the strengthening and expansion of the current ULEZ standards are likely to create a cleaner London environment which could prove attractive to staff in these industries.

Concerns about the impact on poorer people

- 8.9.27 The following stakeholders raised concerns about the impact of the ULEZ proposals on lower income households: Alliance of British Drivers, City of London, Coulsdon & Purley Road User Forum, London Borough of Brent, London Borough of Enfield, London Borough of Newham, London Borough of Southwark, London Councils, Motorcycle Action Group, RAC Foundation, RAC Motoring Services and Royal Borough of Greenwich.
- 8.9.28 MAG raised concerns around the impact on lower income motorcyclists.

TfL response

- 8.9.29 There is mounting evidence that lower income Londoners are disproportionately affected by air pollution. They are the most likely to benefit from reduced concentrations of air pollution as a result of the ULEZ expansion, as set out in the IIA.
- 8.9.30 However the IIA acknowledges there may be a minor differential impact on shift workers. Improvements to public transport, such as the proposals to introduce overnight services and the future expansion of the Night Tube to

the sub-surface lines (after the completion of line modernisation) will help mitigate this impact.

- 8.9.31 The freeze on TfL fares and the introduction of the Hopper ticket reduce the overall costs of travel for lower income Londoners and particularly the cost of bus-to-bus interchange trips in inner London.
- 8.9.32 There is evidence that lower income Londoners have access to fewer cars per household than those on higher incomes, and that lower income households make fewer car trips than those on higher incomes.
- 8.9.33 The ULEZ allows petrol vehicles that meet Euro 4 standards to travel into the ULEZ without charge. The Euro 4 standard was introduced in 2005, and vehicles that meet the standards have been available since around 2002, meaning that a 16-year-old petrol vehicle in 2021 and potentially older vehicles would comply with the ULEZ standards.
- 8.9.34 We have proposed a scrappage scheme to the Government targeted at low income households.
- 8.9.35 There are approximately 146,000 powered two- and three-wheeled vehicles registered to Greater London postcode areas (SMMT data 2016). There is evidence that motorcyclists in London come from a wide income distribution and that large numbers do not fall within the lower income brackets. Defra estimates that by 2021, 91 per cent of motorcycles will meet the Euro 3 emissions standard, and so it is likely that only a small proportion of lower income individuals will own vehicles that do not comply with the ULEZ standard. Non-compliant vehicles will be at least 13 years old when the expanded ULEZ is launched in 2021.
- 8.9.36 It is important to remember that as L-category vehicles up to 14 years old will be compliant when the expanded ULEZ comes into force, there is a large second-hand market of vehicles for those wishing to upgrade. On the other hand, older vehicles that are in the historic vehicle tax class and registered as such by the DVLA are exempt from the charge. In 2021 this will be available to vehicles first registered before 1 January 1981.

8.10 Theme I: Other impacts

- 8.10.1 The following 45 stakeholders commented on this theme: Air Quality Brentford, Bambos Charalambous MP, Better Streets for Enfield, Builders Merchants Federation, Forest Hill Society, Greenwich Conservatives, Helen Hayes MP, Hertfordshire County Council, Hounslow and Brentford Friends of the Earth, Joanne McCartney AM, Kingston Environment Forum, Lewisham Liberal Democrats, London Assembly Environment Committee, London Assembly Environment Committee – Conservative group, London Borough of Barnet, London Borough of Brent, London Borough of Croydon, London Borough of Ealing, London Borough of Enfield, London Borough of Hackney, London Borough of Havering, London Borough of Hounslow, London Borough of Lambeth, London Borough of Lewisham, London Borough of Newham, London Borough of Redbridge, London Borough of

Richmond upon Thames, London Borough of Southwark, London Borough of Sutton, London Borough of Waltham Forest, London Borough of Wandsworth, London Councils, London Tourist Coach Operators Association, Make Air Safe and Clean, Mortlake with East Sheen Society, Motorcycle Action Group, Musicians' Union, Richmond and Twickenham Friends of the Earth, Royal Borough of Kingston upon Thames, SMMT, Streatham Wells Labour, The Kew Society, Thurlow Park Ward Councillors, UPS and Waltham Forest Conservatives.

- 8.10.2 There were 8,104 comments received in relation to impacts from public and business respondents.

Issues raised in relation to this theme:

- ***Concerns about the impact on drivers accessing hospitals/shops***
- ***Concerns about increased traffic and pollution in outer London***
- ***Concerns about increased traffic and pollution on the North and South Circular Roads***
- ***Concerns about the negative air quality impact of the LEZ outside of London***
- ***Concerns about the relocation of non-compliant bus fleets to outer London***
- ***Concerns about second-hand vehicles in outer London***
- ***Concerns around the impact on parking***
- ***Other comments on impacts***
- ***Concerns around the boundary splitting boroughs***

Concerns about the impact on drivers accessing hospitals/shops

- 8.10.3 The Forest Hill Society, the Mortlake with East Sheen Society, The Kew Society and Waltham Forest Conservatives raised concerns that the ULEZ proposals restrict access to hospitals and shops within the zone.

TfL response

- 8.10.4 The ULEZ is designed to encourage non-compliant vehicle users to upgrade their vehicle to comply with standards, or use alternative means of travel whilst enabling occasional trips to be affordable. By 2021 compliant vehicles will have been available for at least 17 years. There is also the option to pay the charge for occasional trips.
- 8.10.5 Given the alternatives of compliant vehicles and the alternative forms of transport available we do not feel that this significantly restricts access to shops and hospitals.

Concerns about increased traffic and pollution in outer London

- 8.10.6 The following stakeholders raised concerns that the ULEZ proposals would lead to an increase in traffic and pollution in roads in outer London, potentially delaying compliance: Bambos Charalambous MP, Builders Merchants Federation, Greenwich Conservatives, Helen Hayes MP, Hertfordshire County Council, Hounslow and Brentford Friends of the Earth, Joanne McCartney AM, Kingston Environment Forum, London Borough of Barnet, London Borough of Brent, London Borough of Ealing, London Borough of Enfield, London Borough of Lewisham, London Borough of Richmond upon Thames, London Borough of Southwark, London Borough of Waltham Forest, London Borough of Wandsworth, London Councils, Make Air Safe and Clean, Mortlake with East Sheen Society and Royal Borough of Kingston upon Thames.

TfL response

- 8.10.7 As clearly stated within the supporting information document, the combined impact of the LEZ and ULEZ proposals sees a reduction in emissions and concentrations across all areas of London. Whilst some road links might see small rises in pollution from light vehicles, the combined package of the LEZ and ULEZ reduces emissions across all areas and does not delay compliance.

Concerns about increased traffic and pollution on the North and South Circular Roads

- 8.10.8 The following stakeholders raised concerns that the ULEZ proposals would lead to an increase in traffic and pollution on the North and South Circular Roads, worsening air quality overall: Air Quality Brentford, Bambos Charalambous MP, Better Streets for Enfield, Forest Hill Society, Greenwich Conservatives, Helen Hayes MP, Joanne McCartney AM, London Assembly Environment Committee, London Borough of Barnet, London Borough of Ealing, London Borough of Enfield, London Borough of Lambeth, London Borough of Lewisham, London Borough of Newham, London Borough of Redbridge, London Borough of Richmond upon Thames, London Borough of Waltham Forest, London Borough of Wandsworth, London Councils, Make Air Safe and Clean, Richmond and Twickenham Friends of the Earth, The Kew Society and Thurlow Park Ward Councillors.

TfL response

- 8.10.9 As clearly stated within the supporting information document, the combined impact of the LEZ and ULEZ proposals sees a reduction in emissions and concentrations across all areas of London. A detailed analysis of the impact on the North and South Circular Roads themselves was provided as part of the supporting information document. Some parts of the roads showed an increase in the percentage of light vehicles meeting the ULEZ emissions standards when compared to the baseline.

- 8.10.10 For areas where there is a diversionary impact of non-compliant vehicles, this is more than outweighed by the benefits of the package as a whole. All areas of the North and South Circular roads see reductions in road transport NO_x emissions, ranging between 20 and 30 per cent.
- 8.10.11 For areas where we are anticipating increases in overall vehicle flow we will be undertaking further work in the run-up to implementation to mitigate against any potential negative impacts.

Concerns about the negative air quality impact of the LEZ outside of London

- 8.10.12 Hertfordshire County Council raised concerns on the potential negative impacts of the change in LEZ standards in Hertfordshire.

TfL response

- 8.10.13 It is likely that owners of vehicles which have origins or destinations outside of London will upgrade their vehicles in order to avoid paying the charge. This is likely to offset any small diversionary impact in Hertfordshire.

Concerns about the relocation of non-compliant bus fleets to outer London

- 8.10.14 The London Borough of Brent raised concerns about the potential relocation of older buses in order to meet the 2019 ULEZ date.
- 8.10.15 The London Borough of Havering, the London Borough of Waltham Forest, London Councils and the Mortlake with East Sheen Society raised concerns about the potential relocation of buses in 2021 to meet the ULEZ standards.

TfL response

- 8.10.16 We will meet the requirements of the central London ULEZ in 2019 through the introduction of new vehicles via the tendering process or the retrofit of existing vehicles. We do not intend to replace compliant vehicles in outer London with non-compliant vehicles as a short-term measure.
- 8.10.17 As stated in the consultation material all buses in London will be required to meet the latest Euro VI emissions standards by 2020 as part of the changes to the LEZ. There will be no relocation of non-compliant buses to outer London in 2021.

Concerns about second-hand vehicles in outer London

- 8.10.18 The London Borough of Sutton, London Councils and the Royal Borough of Kingston upon Thames raised concerns that the reduced cost of second-hand vehicles meant that these would be sold to residents of outer London boroughs.

TfL response

- 8.10.19 Vehicles in outer London outside the North and South Circular Roads tend to be newer than those in inner London. In 2016 43 per cent of cars registered in inner London and 46 per cent in outer London were compliant. As 20 per cent of trips in outer London involve going into inner London, we consider it unlikely that there will be significant switching from compliant to non-compliant vehicles in outer London.

Concerns around the impact on parking

- 8.10.20 The Forest Hill Society, Helen Hayes MP, the Lewisham Liberal Democrats and the London Borough of Havering raised concerns that the ULEZ expansion would lead to increased parking pressures in and around the boundary, particularly at public transport interchanges.

TfL response

- 8.10.21 We are happy to work with the boroughs to assess parking demand in the run-up to implementation and discuss possible solutions.

Other comments on impacts

- 8.10.22 The London Assembly Environment Committee – Conservative group and Waltham Forest Conservatives stated that the expanded ULEZ would mean areas with good air quality would be paying unnecessarily.
- 8.10.23 The CPT and the London Tourist Coach Operators Association stated that there would be a negative impact on school trips.
- 8.10.24 The Mortlake with East Sheen Society stated that there would be an impact on people accessing rail stations in the zone.
- 8.10.25 MAG stated that there would be a shift from motorcycles to more polluting forms of transport.
- 8.10.26 The Musicians' Union expressed concern that the ULEZ would impact on the Capital's cultural life by making travel unaffordable for musicians.
- 8.10.27 The London Borough of Richmond upon Thames and The Kew Society expressed concerns about the potential increase in fly-tipping by including the recycling centre in the zone.
- 8.10.28 The ABD, the London Borough of Ealing, the London Borough of Wandsworth, SMMT and UPS stated that a cost benefit analysis was needed.
- 8.10.29 The Freight Transport Association, John Lewis Partnership, the RoadRoad Haulage Association and UPS raised concerns about the impact of the Direct Vision Standard (DVS) proposals when combined with the ULEZ.

- 8.10.30 Marble Arch London raised concern about the impact of the 2019 ULEZ on the Edgware Road.
- 8.10.31 The London Borough of Enfield quoted impacts from 2016 feasibility work and questioned why these differed to the figures presented in the supporting information document.

TfL response

- 8.10.32 As stated in the consultation material there would be over 104,000 people in inner London living in areas exceeding legal NO₂ limits in 2021 in a “no-ULEZ” scenario. In Waltham Forest there would be 4,300 people in the borough inside the North and South Circular Roads living in areas exceeding legal limits. We disagree that air quality is good enough in inner London to not require any action.
- 8.10.33 As stated in the consultation material we consider that schools will opt to hire compliant vehicles or pay the charge to operators. We do not believe there will be a negative impact on school travel.
- 8.10.34 Given the alternatives of compliant vehicles and the alternative forms of transport available we do not feel that there will be restrictions in access to Mortlake or other rail stations in the zone.
- 8.10.35 Similarly we do not believe the proposals will cause a significant adverse impact on London’s cultural life as alternative vehicles and means of transport are available for musicians.
- 8.10.36 Regarding the recycling centre, there are options to use alternative facilities outside the zone, pay the daily charge or use compliant vehicles. We do not consider there will be an increase in fly-tipping as a result.
- 8.10.37 Regarding the potential shift from motorcycles to cars: given the large second-hand market, the owners of non-compliant motorcycles will have a wide, economical range of compliant motorcycles to choose from should they wish to upgrade. The scheme will not change the cost of owning a motorcycle that is compliant, and so it is likely this will remain an economical option for many who already choose motorcycles as a mode of transport. A motorcyclist who wishes to switch to a compliant car and who does not already own one would have to purchase a newer vehicle, which may be more expensive. A shift of mode towards buses would result in a net reduction in emissions on a per passenger basis.
- 8.10.38 Regarding the DVS, operators can now contact their vehicle manufacturer to request a DVS star rating for Euro VI HGVs. Manufacturers will calculate

the star rating of the HGV based on the approved technical protocol. Contact details for manufacturers are available from TfL's DVS website²²:

- 8.10.39 Operators with zero-star rated vehicles can sign up to the safe system to allow them to travel in London. Information on the safe system is available here: <https://tfl.gov.uk/info-for/deliveries-in-london/delivering-safely/direct-vision-in-heavy-goods-vehicles>
- 8.10.40 To align with the proposed strengthening of the LEZ, the enforcement launch date of the DVS will go live in October 2020.
- 8.10.41 Regarding Enfield's query on the emissions benefits of the scheme compared to the 2016 estimates: As stated in the consultation report for Stage 2, the figures presented in 2016 were preliminary estimates that did not take into account the knock-on benefits of vehicles upgrading in outer London. The figures presented in the consultation factor in this impact, as explained within the supporting information document.
- 8.10.42 Regarding the impact of the central London ULEZ on the boundary, trips diverting around the ULEZ could use the Inner Ring Road. Experience with the Congestion Charge (CC) suggests that 'new' trips diverting on to the Inner Ring Road will be counterbalanced by capacity 'freed up' by other deterred trips. Additionally, given that the CC is already a deterrent, the number of 'through trips' during daytime hours is likely to be small in number. Other traffic deterred from the ULEZ could be reflected in less traffic in inner and outer London, as the legs of these trips in these areas would also not be made.
- 8.10.43 In this way, it is not expected that the ULEZ will lead to increased traffic around its perimeter. Indeed, it will lead to a very small reduction in vehicle kilometres on the Inner Ring Road.
- 8.10.44 Regarding a cost benefit analysis, the benefits and impacts of the scheme are set out in the IIA including a monetised health benefit. The cost of the scheme is estimated at £130m for the implementation of necessary infrastructure. This is part of a wider package of measures to improve air quality.

Concerns around the boundary splitting boroughs

- 8.10.45 The following stakeholders raised concerns that the boundary splits boroughs: Helen Hayes MP, London Borough of Barnet, London Borough of Hackney, London Borough of Hounslow, London Borough of Lewisham, London Borough of Redbridge, London Borough of Richmond upon

²² <https://tfl.gov.uk/info-for/deliveries-in-london/delivering-safely/direct-vision-in-heavy-goods-vehicles>

Thames, London Borough of Wandsworth, London Councils, Streatham Wells Labour and Waltham Forest Conservatives.

TfL response

- 8.10.46 The boundary was designed in accordance with a set of principles as covered in the supporting information document. One key principle was that it needed to provide drivers with a clear and navigable diversion route. Borough administrative boundaries are not suitable for such a purpose as they do not follow the road network.
- 8.10.47 The reasons for not choosing a London-wide boundary are set out in section 8.6.

8.11 Theme J: Implementation

- 8.11.1 The following 27 stakeholders raised issues related to this theme: Campaign for Better Transport, CBI, Clean Air for Brent, Confederation of Passenger Transport, Coulsdon & Purley Road User Forum, Federation of British Historic Vehicle Clubs, Forest Hill Society, Heart of London Business Alliance, John Lewis Partnership, London Borough of Hackney, London Borough of Haringey, London Borough of Havering, London Borough of Hounslow, London Borough of Islington, London Borough of Lambeth, London Borough of Lewisham, London Borough of Waltham Forest, London Chamber of Commerce and Industry, London Councils, London Tourist Coach Operators Association, National Express, RAC Motoring Services, Royal Borough of Greenwich, SMMT, The Kew Society, Waltham Forest Conservatives and Westminster Business Improvement Districts.
- 8.11.2 There were 960 comments received from the public and businesses.

Issues raised in relation to this theme:

- ***Comments on enforcement***
- ***Concerns over the cost of implementing proposals***
- ***Ensuring the ULEZ and LEZ are adequately publicised before implementation***
- ***Other comments on implementation***

Comments on enforcement

- 8.11.3 The following stakeholders queried how an expanded ULEZ would be enforced: Confederation of Passenger Transport, Forest Hill Society, Heart of London Business Alliance, London Borough of Islington, London Councils, RAC Motoring Services, The Kew Society, Waltham Forest Conservatives, and Westminster Business Improvement Districts.
- 8.11.4 The CPT queried how Euro V and Euro VI coaches would be identified.

- 8.11.5 The London Borough of Southwark queried how vehicles would be identified if they did not cross the boundary.

TfL response

- 8.11.6 It is likely that enforcement will be undertaken using Automatic Number Plate Recognition cameras. Should the Mayor confirm the scheme we will be undertaking detailed design work in the run-up to implementation to determine the appropriate delivery and enforcement solution. We would be happy to involve all affected boroughs in this process.

- 8.11.7 We are aware that there are Euro V coaches manufactured after the date that Euro VI became mandatory as a result of derogation. We are doing all we can to identify Euro VI coaches. We are working with individual manufacturers to identify the emissions standards of all coaches likely to be impacted and have successfully identified a significant proportion. However, for the small number of vehicles for which we cannot identify the emissions standard, we will assume they do not meet Euro VI unless proven otherwise. We will be contacting operators of vehicles observed in the zone asking for evidence and outlining the process for providing this evidence.

Concerns over the cost of implementing proposals

- 8.11.8 The following stakeholders raised concerns over the cost of implementing the ULEZ: Coulsdon & Purley Road User Forum, London Borough of Islington, London Borough of Lewisham, London Borough of Waltham Forest, London Chamber of Commerce and Industry, London Councils, RAC Motoring Services, SMMT and The Kew Society raised.
- 8.11.9 The Greenwich Conservatives stated that the ULEZ would cost £780m and that the money should be spent elsewhere.
- 8.11.10 The London Borough of Haringey, the London Borough of Islington, the London Borough of Waltham Forest and London Councils raised concerns around the potential impact on borough funding.

TfL response

- 8.11.11 The £780m figure is based on an extrapolation of an estimate from a London borough. It is not an accurate estimate of the cost of expanding the ULEZ.
- 8.11.12 For the purposes of business planning we have estimated the implementation costs for the expanded ULEZ to be between £90m-£130m. We will seek ways to deliver the infrastructure needed to operate the scheme in the most cost-effective way possible. All infrastructure and signage would be funded by TfL.

Ensuring the ULEZ and LEZ are adequately publicised before implementation

- 8.11.13 The Campaign for Better Transport, CBI, Clean Air for Brent, the London Borough of Haringey, the London Borough of Havering, the London Borough of Lambeth and National Express stated that there should be significant publicity for the LEZ and ULEZ prior to implementation, including targeted information for affected groups such as small businesses.

TfL response

- 8.11.14 Should the Mayor decide to proceed with the proposals we will be undertaking a programme of targeted communications in the run-up to implementation, similar to the campaigns for the T-Charge, the LEZ and the Congestion Charge.

Other comments on implementation

- 8.11.15 The Royal Borough of Greenwich stated that additional signage and cameras should be implemented for the LEZ.
- 8.11.16 The London Borough of Southwark and London Councils queried what would happen if there was a diversion into the zone.
- 8.11.17 The London Borough of Hackney stated that the infrastructure should be used for future road pricing, and this should be factored into the cost of installation and that use of the existing LEZ and CCZ network of cameras would also reduce the cost of the required infrastructure.
- 8.11.18 The CPT stated that buses and coaches with limited mileage should be allowed into the zone without penalty in line with City of York Council policies.

TfL response

- 8.11.19 The LEZ has signs at every entry point and advance warning to vehicle operators. It has been in operation since 2008 and has 99 per cent compliance. We disagree with the Royal Borough of Greenwich's assertion that there is not adequate signage to inform drivers of affected vehicles that they are entering the LEZ.
- 8.11.20 The LEZ is enforced through a network of fixed cameras at trunk roads and through transportable enforcement cameras. CCZ cameras are also used to enforce the LEZ. We consider that the existing enforcement infrastructure and the future ULEZ infrastructure will be fit for purpose.
- 8.11.21 With regard to unexpected diversions, there is already a mechanism in place for the CCZ whereby if vehicles follow the specified diversionary route they are not required to pay the charge (and are not issued with a PCN). A similar approach will be taken for the ULEZ.
- 8.11.22 As stated in responses to boroughs, whilst the existing LEZ network is effective in enforcing a high charge that only a small number of users are eligible to pay, it is less appropriate for a wider scheme with a lower charge

and an Auto Pay system. Analysis indicates there would be at least a threefold increase in the infrastructure required to enforce a London-wide scheme for all vehicles. This factors in use of the existing LEZ network of cameras.

8.11.23 Should the Mayor wish to proceed with wider road user charging we would consider what infrastructure is appropriate. However we do not consider it appropriate to factor in unconfirmed future plans when considering the costs of infrastructure.

8.11.24 Our understanding is that the City of York Council proposals are enforced through traffic regulation conditions, with limits set on the number of times a non-compliant bus can enter the zone. The LEZ is operated as a charging scheme, but has a similar effect in that vehicles that enter less frequently are charged less.

8.12 Theme K: Financial support and revenue

8.12.1 The following 37 stakeholders raised issues related to this theme: Balfour Beatty, Bloomsbury Air, Brentford Chamber of Commerce, British Lung Foundation, Builders Merchants Federation, Campaign for Better Transport, Clean Air for Brent, ClientEarth, Confederation of Passenger Transport, Cross River Partnership, Freight Transport Association, Friends of the Earth, Heart of London Business Alliance, Helen Hayes MP, Herne Hill Green Party, Hertfordshire County Council, Joanne McCartney AM, Kingston Environment Forum, Lambeth Green Party, Lewisham Cyclists, Lewisham Liberal Democrats, London Assembly Environment Committee, London Borough of Camden, London Borough of Ealing, London Borough of Haringey, London Borough of Hounslow, London Borough of Islington, London Borough of Redbridge, London Borough of Wandsworth, London Chamber of Commerce and Industry, London Sustainability Exchange, Marble Arch London, Mortlake with East Sheen Society, Motorcycle Industry Association, Royal Borough of Greenwich, Wandsworth Green Party and Westminster Business Improvement Districts.

Issues raised in relation to this theme:

- ***Support for a scrappage scheme***
- ***Support for a vehicle retrofit fund***
- ***Financial support for upgrading to compliant vehicles***
- ***Revenue generated by the ULEZ and LEZ***
- ***Other comments***

Support for a scrappage scheme

8.12.2 The following stakeholders stated their support for a scrappage scheme for non-compliant vehicles: Balfour Beatty, Bloomsbury Air, Builders Merchants Federation, Clean Air for Brent, Cross River Partnership, Friends of the Earth, Heart of London Business Alliance, Joanne McCartney AM, Kingston

Environment Forum, Lewisham Liberal Democrats, London Assembly Environment Committee, London Borough of Camden, London Borough of Ealing, London Borough of Haringey, London Borough of Hounslow, Mortlake with East Sheen Society and Royal Borough of Greenwich.

- 8.12.3 The BVRLA stated that this should be an offer in the form of a mobility credit.

TfL response

- 8.12.4 The national air quality plan, first published in December 2015, stated that the Government requires the implementation of Clean Air Zones (CAZs) in five cities. The plan also relies on London successfully delivering its own Clean Air Zone – the ULEZ. The costs of complying with the ULEZ standards may fall disproportionately on two user groups: small businesses and charities that operate vans and minibuses, and low income households that own a car. We have considered exemptions or sunset periods for these groups when the ULEZ comes into force. However, any reduction in compliance rates poses a substantial risk to the Government of failing to achieve the improvements in air quality as detailed in the national NO₂ plan. Therefore we strongly believe that the Government should fund a targeted scrappage scheme for London to help maximise compliance while spreading costs fairly.
- 8.12.5 We have prepared a detailed proposal for a scrappage scheme that is viable, delivers good value for money, and helps improve London's air quality as quickly as possible. We have engaged with officials from Defra and continue to put pressure on the Government to make funding available for this scheme. At the time of writing these efforts have not been successful but we continue to work with the Government and other city authorities to build the case for scrappage. We would welcome additional support from stakeholders in making the case.
- 8.12.6 Part of this proposal is an offer for mobility credit for low income families. We are happy to discuss this option further with the BVRLA.

Support for a vehicle retrofit fund

- 8.12.7 The CPT and the London Borough of Islington called for a vehicle retrofit fund.
- 8.12.8 Hertfordshire County Council requested an extension to the Government's Green Bus Fund.

TfL response

- 8.12.9 A national retrofit fund could also be deployed to enable operators of large and specialist vehicles to upgrade their vehicles to comply with Euro VI standards.

- 8.12.10 As this is not a problem unique to London, it would require a nationwide Government-led solution. Issues around state aid would need to be considered in the administration of any such assistance scheme.
- 8.12.11 We would support any extension of the Government's Green Bus Fund for neighbouring counties who could bid for funding to improve their bus fleets.

Financial support for upgrading to compliant vehicles

- 8.12.12 The Herne Hill Green Party and Wandsworth Green Party stated that we should offer a cashback scheme in line with the Centre for London proposal whereby people entering the ULEZ can receive cashback from their charges in order to pay for scrapping their vehicle.
- 8.12.13 The London Borough of Redbridge stated that their support was dependent upon funding the upgrade of the borough fleet.
- 8.12.14 The British Lung Foundation, the Herne Hill Green Party, the Lambeth Green Party, the London Borough of Islington and the Wandsworth Green Party stated that financial support for people with disabled tax class vehicles should be provided in order for them to upgrade their vehicle.
- 8.12.15 The London Chamber of Commerce and Industry and Westminster Business Improvement Districts requested support for businesses to upgrade their vehicles.
- 8.12.16 Hertfordshire County Council requested support for Hertfordshire businesses in upgrading their vehicles.

TfL response

- 8.12.17 The Centre for London proposal is interesting. However we have concerns that it would encourage those who make occasional journeys into the ULEZ to travel in more frequently in order to receive more cashback and upgrade their vehicle. We consider that revenue generated by the ULEZ is better spent on other initiatives to improve air quality and on public transport services to encourage drivers to switch to more sustainable means of transport.
- 8.12.18 The LES sets out actions that boroughs should be undertaking to reduce air pollution in their area. This includes ensuring that their vehicles meet and where possible exceed the latest emissions standards. This should be implemented by boroughs regardless of any expansion of the ULEZ. In line with their statutory duty boroughs will be expected to fund this through existing funding sources.
- 8.12.19 Regarding financial support for disabled people to upgrade their vehicles: Financial support for people in receipt of higher rate mobility payments to lease new vehicles is available through the Motability scheme on a means-tested basis. In view of the relatively small number of affected vehicles and the limited impact on emissions it is our view that offering mitigation through

a sunset period for those with extended leases is a more appropriate use of public money than offering a parallel alternative to this existing system.

- 8.12.20 Regarding support for businesses to upgrade vehicles:.. As this is not a problem unique to London, it would require a nationwide Government-led solution. Issues around state aid would need to be considered in the administration of any such assistance scheme.

Revenue generated by the ULEZ and LEZ

- 8.12.21 The Campaign for Better Transport, the Cross River Partnership, Helen Hayes MP, Lewisham Cyclists, Lewisham Liberal Democrats, the London Borough of Haringey, the London Borough of Wandsworth, the London Sustainability Exchange and Marble Arch London made suggestions about the revenue generated by the LEZ and the ULEZ.
- 8.12.22 The Waltham Forest Conservatives raised concerns that the revenue generated would be insufficient to cover the costs.

TfL response

- 8.12.23 While the ULEZ is expected to make a small surplus initially, it is not intended as a revenue-raising scheme and the surplus is expected to decline over time as more vehicles become compliant with the standards and do not have to pay the charge. As with the Congestion Charge, all surplus revenue would be used to deliver the MTS, including sustainable transport.

Other comments

- 8.12.24 The CPT stated that assistance should be provided for developing retrofit solutions for coaches.
- 8.12.25 The Motorcycle Industry Association stated that they would only support a charge for motorcycles if the revenue were ring-fenced to provide scrappage for non-compliant motorcycles.
- 8.12.26 Helen Hayes MP stated that funding should be made available for communities on the boundary to provide mitigation measures.

TfL response

- 8.12.27 In view of the increased NO_x emissions from Euro V coaches compared with Euro IV and Euro VI and the pressing need for retrofit, we are working to support the testing of retrofit solutions for coaches.
- 8.12.28 As with other vehicle types we consider a scrappage scheme should be led by national Government. Should funding for this become available we will consider the eligibility of motorcycles.

8.12.29 Should the Mayor approve the scheme we will consider what mitigation measures are appropriate on boundary routes in the run-up to implementation.

8.13 Theme L: PCN level

8.13.1 RAC Motoring Services made comments on this theme.

8.13.2 There were 127 comments made on this theme from public and business respondents.

8.13.3 Issues raised in relation to this theme:

- ***Support for and opposition to the PCN increase***
- ***Other comments on PCNs***

Support for and opposition to the PCN increase

8.13.4 General support and opposition to the PCN increase is set out in Chapter 5 for public and businesses and Chapter 7 for stakeholders.

Other comments on PCNs

8.13.5 RAC Motoring Services suggested a sliding scale of charges increasing for multiple offenders.

TfL response

8.13.6 Auto Pay will enable drivers to avoid PCNs. Currently 78 per cent of drivers paying the Congestion Charge use Auto Pay and we intend to integrate the system with the ULEZ prior to implementation.

8.13.7 A tiered PCN structure where multiple offenders are charged more would be complex to implement and problematic for PCNs issued to hired or leased vehicles, or where vehicles have been sold.

8.13.8 Drivers who believe that they should not have received a PCN- or have mitigating circumstances, can raise a representation with TfL to review their case. More information on representations and appeals can be found at: <https://tfl.gov.uk/modes/driving/congestion-charge/penalties-and-enforcement/challenge-a-penalty-charge/make-a-representation>

8.13.9 Since the consultation, the Mayor has confirmed that the PCN for non-payment of the Congestion Charge will rise to £160. For consistency we recommend that the ULEZ PCN level for light vehicles is increased accordingly.

8.14 Theme M: Vehicle bans

- 8.14.1 The following six stakeholders raised the issue of vehicle bans: Better Streets for Enfield, Clean Air in London, Lambeth Green Party, London Assembly Environment Committee – UKIP group, London Borough of Islington and Rotherhithe and Surrey Docks Green Party.
- 8.14.2 There were 1,255 comments relating to vehicle bans received from public and business respondents.

Issues raised in relation to this theme:

- ***The Mayor should implement a ban on diesel vehicles***

The Mayor should implement a ban on diesel vehicles

- 8.14.3 Stakeholders stated that there should be a ban on diesel vehicles or non-compliant diesel vehicles with the London Assembly Environment Committee – UKIP group calling for a 10-year notice period.

TfL response

- 8.14.4 The Mayor has not been given the necessary legal powers to impose a ban on diesel vehicles in London.
- 8.14.5 It is unclear how the bans in other cities will operate and be enforced or how effective they will be. Our understanding of the Paris scheme is that it currently only applies to diesel vehicles registered before 1997 and that it may be strengthened to set a Euro 3/III standard.
- 8.14.6 By contrast, the Mayor’s air quality proposals currently set more stringent standards, have allocated funding within the TfL Business Plan and will be delivered in stages well before 2025.
- 8.14.7 We provide alerts for Londoners during high pollution episodes and encourage them to reduce car usage.
- 8.14.8 We consider it more appropriate to spend time and resources on reducing emissions on an ongoing basis rather than temporary bans as a reaction to emergency incidents.

8.15 Theme N: Alternative and supporting policy suggestions

- 8.15.1 The following 64 stakeholders suggested alternative and supporting policy measures to those outlined in the consultation: Alliance of British Drivers, Balfour Beatty, Better Streets for Enfield, Bloomsbury Air, Brentford Chamber of Commerce, Builders Merchants Federation, Caroline Russell AM, City of London, Clean Air for Brent, Clean Air in London, Client Earth, Cross River Partnership, Diocese of Chelmsford, Church of England, Forest Hill Society, Friends of the Earth, Gipsy Hill Green Party, Greenpeace, Greenwich Conservatives, Heart of London Business Alliance, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green

Party, John Lewis Partnership, Kingston Environment Forum, Lambeth Green Party, Lewisham Cyclists, Living Streets, London Assembly Environment Committee, London Borough of Brent, London Borough of Ealing, London Borough of Enfield, London Borough of Hackney , London Borough of Hammersmith and Fulham, London Borough of Hounslow , London Borough of Islington, London Borough of Lambeth, London Borough of Newham, London Borough of Redbridge, London Borough of Sutton, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Chamber of Commerce and Industry, London Councils, London Property Alliance, London Sustainability Exchange, LTDA, Motorcycle Action Group Ltd, Motorcycle Industry Association, National Express, Port of London Authority, RAC Motoring Services, Richmond Heathrow Campaign, Royal Borough of Greenwich, SMMT, Sustrans, The Finsbury Forum, The Kew Society, The St Marylebone Society, , Uber, UPS, Victoria BID, Wandsworth Green Party and Westminster Business Improvement Districts.

- 8.15.2 There were 9,666 comments on supporting and alternative policies received from public and business respondents.

Issues raised in relation to this theme:

- ***Cycling***
- ***Motorcycles***
- ***More public transport***
- ***Ultra low emission Low Emission Vehicles***
- ***Pedestrians***
- ***Idling***
- ***Freight***
- ***Buses***
- ***Taxis and PHVs***
- ***Wider road user charging***
- ***Traffic reduction***
- ***Silvertown Tunnel***
- ***Monitoring***
- ***Other emissions sources***
- ***Other policy suggestions***

Cycling

- 8.15.3 The following stakeholders stated that more should be done to enable cycling: Bloomsbury Air, Caroline Russell AM, Church of England, Diocese of Chelmsford, Friends of the Earth, Herne Hill Green Party, Lewisham Cyclists, Living Streets, Sustrans and Wandsworth Green Party.
- 8.15.4 MAG stated their opposition to segregated cycle lanes as they cause congestion and pollution.

TfL response

- 8.15.5 The impact of the new high-quality segregated cycling infrastructure that has been provided in London in recent years is largely positive, with significant increases in the number of people now cycling on these routes.
- 8.15.6 It is very difficult to link changes in air quality at a particular location to specific schemes such as segregated cycle facilities, because of the number of contributory factors to air quality. However, in general, segregated cycle facilities are not traffic-generating schemes, even though they can result in some redistribution of existing motor traffic flows. We continue to monitor the impact of segregated cycle facilities as part of our evaluation process.
- 8.15.7 Traffic must be considered in the context of all people using the road, not just motorised vehicles – sustainable and active modes such as cycling make much more efficient use of our limited road space. This has been demonstrated by initial monitoring of the Cycle Superhighways: Since opening, the East-West and North-South Cycle Superhighway corridors are already moving five per cent more people per hour than they did without cycle lanes.
- 8.15.8 The Mayor and TfL are committed to improving conditions for cycling across Greater London, and to help achieve this have secured record levels of funding for cycling in London. The latest TfL Business Plan, published in December 2017, sets out an average of £169m each year to be spent on cycling schemes and initiatives over the next five years, including new Cycle Superhighways and Quietways. This represents a yearly spend of almost £19 per London resident, investment which is on a par with that seen in Dutch and Danish cities. The MTS sets out a long-term approach to providing for cycling, including proposals to develop a London-wide strategic cycle network that 70 per cent of Londoners will live within 400m of by 2041.

Motorcycles

- 8.15.9 MAG, the Motorcycle Industry Association and the Waltham Forest Conservatives stated that more should be done to encourage motorcycling as a means of transport.

TfL response

- 8.15.10 The MTS sets out the part motorcycles and other powered two-wheelers can play in London's future transport system. They clearly have an important role in many Londoners' lives and businesses, helping not only to get people around the city, but in moving and delivering a huge range of goods. As motorcycle riders are disproportionately represented in fatal and serious injury collisions, the MTS includes a dedicated section on motorcycling safety for the first time.

- 8.15.11 We are developing improvements for motorcycle and moped users, particularly around rider safety. In October 2017 we launched a series of training courses to help improve motorcycle safety and we are currently exploring the expansion of FORS to reward and encourage fleet operators who follow positive motorcycle safety practice. We are also following the guidance set out in our Urban Motorcycle Design Handbook to embed motorcycle safety within the design process. We are using this for all schemes on the TLRN, and through the borough Local Implementation Plan (LIP) process we will encourage boroughs to apply these principles to their roads.
- 8.15.12 The need for secure motorcycle parking across London is also highlighted in the latest borough LIP guidance.

More public transport

- 8.15.13 The following stakeholders stated that there should be more investment in public transport, particularly in outer London: Balfour Beatty, Caroline Russell AM, Friends of the Earth, Lewisham Cyclists, London Borough of Brent, London Borough of Enfield, London Borough of Newham, London Borough of Sutton, London Borough of Waltham Forest, London Councils and Royal Borough of Greenwich.
- 8.15.14 The Herne Hill Green Party and Wandsworth Green Party stated that there should be more step-free access on the Tube network.
- 8.15.15 The London Borough of Sutton stated that the ULEZ should help to fund the Sutton Tramlink.

TfL response

- 8.15.16 We are committed to reducing emissions across London by encouraging a shift towards public transport as part of the MTS target for 80 per cent of trips to be made by public transport, walking and cycling by 2041. Full details of the proposals for public transport are set out in the published MTS, including proposals to improve the accessibility and security of the transport network.
- 8.15.17 We are working closely with the London Borough of Sutton on the Tramlink extension. A full option selection process with a preferred strategic option is expected to be identified in summer 2018. An initial public consultation is planned to start in September 2018. We will then develop the design of the preferred option further towards a potential Transport and Works Act order in early 2020, subject to the funding for the scheme being identified.

Ultra low emission vehicles

- 8.15.18 The following stakeholders stated that there should be greater investment in electric vehicle (EV) charging facilities and incentivisation of the use of ultra low emission vehicles: Bloomsbury Air, Clean Air for Brent, Church of

England, Diocese of Chelmsford, Greenwich Conservatives, Kingston Environment Forum, London Borough of Hounslow, London Borough of Waltham Forest, SMMT, Uber, UPS, Victoria BID and Westminster Business Improvement Districts.

- 8.15.19 UPS raised concerns about the capacity of the National Grid to cope with the additional EV charging required.
- 8.15.20 The Waltham Forest Conservatives stated that EVs produce more pollution from tyre and brake wear than other equivalent vehicles.

TfL response

- 8.15.21 We are already delivering rapid charge points in London, which are vital if commercial fleet vehicles such as taxis which travel a high number of kilometres per day are to make the urgent switch to electric vehicles. We have already delivered over 100 rapid charge points and are set to have installed over 150 by the end of 2018, and at least 300 by the end of 2020. We are imminently launching a series of workshops with key stakeholders to feed into a shared delivery plan for EV infrastructure, exploring in greater detail the anticipated need in terms of location and spread of charge points in London, as well as delivery mechanisms. The ULEZ is fundamental to the push for people to switch to zero emission vehicles, showing the industry that London is serious about cleaning up its air and also demonstrating to the public that the revolution towards low emissions is happening.
- 8.15.22 To facilitate the installation of on-street residential charge points, as part of the Go Ultra Low City Scheme (GULCS), a residential charging framework of charge point service providers will be established in summer 2018. This will allow Londoners without access to off-street parking to make the switch to EVs. Boroughs can utilise the framework of service providers procured by the GULCS project team to more easily get charge points installed. Additionally, the GULCS project team will also be developing a procurement toolkit for boroughs that decide not to use this framework, which will include all necessary procurement documentation. To promote local solutions and trial innovative schemes, GULCS has funded several 'Neighbourhoods of the Future' projects where boroughs can act as testbeds for innovative EV charging technologies, policies and initiatives. In addition, TfL and London Councils are overseeing work by car club operators to identify locations in London boroughs to install charge points for car club vehicles using GULCS funding. For freight and commercial vehicles, our LoCITY programme (www.locity.org.uk) disseminates information and trials solutions on low emission options and charging facilities.
- 8.15.23 The GLA and TfL are coordinating activity to ensure continued upgrades to London's electricity infrastructure. This includes working very closely with UK Power Networks (UKPN) to make sure their investment plan aligns with the Mayor's strategy. UKPN is confident that the planned growth in the electricity grid can accommodate this demand. We also continue to

champion smart and flexible energy use so that we minimise the footprint future growth will have on the grid.

- 8.15.24 The proportion of PM produced by tyre and brake wear is increasing in importance relative to diminishing tailpipe emissions. However the regenerative braking technology employed by hybrids and EVs reduces wear on the brake components and helps to offset any potential increase in tyre and brake emissions arising from their greater kerb weight.

Pedestrians

- 8.15.25 Bloomsbury Air, Caroline Russell AM, the Cross River Partnership, Friends of the Earth, Lewisham Cyclists, Living Streets, and Sustrans stated that more should be done to support pedestrians and encourage more walking.

TfL response

- 8.15.26 Our Healthy Streets approach will make London a more attractive place to walk by delivering improvements to streets that are part of the TLRN.
- 8.15.27 We provide funding to boroughs to deliver improvements to local streets as part of their LIPs. The Healthy Streets approach will encourage investment in walking routes including the Healthy Routes initiative for routes to schools and other destinations, making streets safer, more accessible and more attractive places to walk. We also promote walking through Legible London, the Walk London Network and engagement with schools and businesses.

Idling

- 8.15.28 The CPT and The St Marylebone Society commented on idling vehicles.
- 8.15.29 The CPT highlighted the work they are undertaking to reduce coach idling.

TfL response

- 8.15.30 TfL and the boroughs are taking targeted action to reduce vehicle idling. This includes information campaigns and Engine Idling Action Days to educate drivers about engine idling supported by the Mayor's Air Quality Fund. The information campaign is led by the City of London, and it has now engaged with 15 boroughs.
- 8.15.31 We are deploying operational staff in areas identified as being of significant concern on the TLRN. They are educating drivers about the law relating to engine idling and the impact of their actions on air quality and public health. We are also working with the Metropolitan Police Service to identify ways to educate and encourage motorists to turn off their engines when required to by law.
- 8.15.32 We continue to address the air quality impact, including from engine idling, of buses, taxis and PHVs. Bus drivers are reminded to switch off their engines at their garages and at bus stands. Signage is displayed at many

locations to further remind drivers, and we follow up reports of idling with bus operators. We regularly include information in our publications to taxi and private hire licensees, and work with boroughs to engage with drivers and target problem areas.

- 8.15.33 We have also called on the Government to provide additional support, powers and regulation to improve air quality. Stronger idling enforcement powers for local authorities will be included in the list of requests that we put to the Government. We are also requesting that we are given the power to issue penalties for idling, which we do not currently have.
- 8.15.34 We welcome the work of the CPT to reduce coach idling.

Freight

- 8.15.35 The following stakeholders supported more freight consolidation to reduce traffic, including the use of micro-consolidation and out-of-hours deliveries: Bloomsbury Air, Brentford Chamber of Commerce, Heart of London Business Alliance, London Borough of Hammersmith & Fulham, London Borough of Lambeth, London Property Alliance, London Sustainability Exchange, UPS and Westminster Business Improvements Districts.
- 8.15.36 The Port of London Authority supported a shift to river freight.
- 8.15.37 The Finsbury Forum supported more rail freight.
- 8.15.38 The Freight Transport Association and John Lewis Partnership supported further action such as reform to the London Lorry Control Scheme improving, loading/unloading facilities in London; and increasing access to bus lanes in off-peak periods, with a preferential access given to cleaner and quieter commercial vehicles.

TfL response

- 8.15.39 Our position on freight consolidation is set out in the MTS.
- 8.15.40 Rather than restricting deliveries, the MTS sets an ambitious target to reduce freight journeys into central London in the morning peak by 10 per cent. This would be achieved by a combination of shifting some deliveries off the road altogether (for example to rail or water), retiming deliveries to another time of the day or consolidating supply chains to reduce the number of journeys required.
- 8.15.41 Consolidating freight journeys is one of the measures set out in the MTS as we believe this has a role to play in reducing congestion and emissions.
- 8.15.42 We constantly review the TLRN to ensure that bus lanes operate as required to keep traffic moving. In some cases, this may include permitting HGV access on specific sections. In the majority of cases, however, there are a number of factors explaining why HGVs would not be permitted to use bus lanes. It is likely that further increasing the level of traffic in bus lanes

would lead to an increase in journey times for bus services and could also increase the risk of a collision for vulnerable road users (including cyclists and motorcyclists), who are permitted to use bus lanes on the TLRN to reduce the potential for conflict with other road users.

- 8.15.43 Further details on freight policies are set out in the MTS.
- 8.15.44 It should be noted that further action on freight retiming, mode shift and consolidation should be viewed as complementary policies to the changes to the LEZ and ULEZ rather than alternative policies. In their own right they are unlikely to bring comparable emissions reductions to that of the ULEZ.

Buses

- 8.15.45 The following stakeholders commented on buses: Bloomsbury Air, City of London, Clean Air in London, Greenwich Conservatives, Kingston Environment Forum, London Assembly Environment Committee, London Borough of Brent, London Borough of Ealing, London Borough of Islington, Richmond Heathrow Campaign, and The Kew Society.
- 8.15.46 The London Borough of Ealing requested more Low Emission Bus Zones.
- 8.15.47 Bloomsbury Air, the London Borough of Islington, the Richmond Heathrow Campaign, and The Kew Society stated that the target for all buses to be zero emission should be brought forward.
- 8.15.48 The Greenwich Conservatives stated that there should be more hydrogen buses and more hybrid buses instead of the ULEZ.

TfL response

- 8.15.49 Low Emission Bus Zones were chosen through careful assessment criteria to target pollution in areas where buses are a significant contributor. Twelve Low Emission Bus Zones will be delivered prior to 2020, offering significant benefits beyond the bus corridors.
- 8.15.50 At the latest Euro VI standard, hybrid buses produce about the same, , amount of NO_x and PM as conventional Euro VI diesel buses, although produce less CO₂. For the last year, we have only bought hybrid double decker buses, ie no conventional diesel double deckers.
- 8.15.51 By 2020 our whole bus fleet will be at Euro VI standard, with a significant proportion of hybrid and electric buses, through our cost effective retrofit programme combined with normal fleet replacement. This is the most cost effective way to reduce pollution from buses in the short term across London, with a very strong benefit to cost ratio.
- 8.15.52 We are progressing towards zero emission buses, however the supply market is immature and costs remain high. Therefore deployment of large numbers of double decker zero emission buses will come later.

- 8.15.53 The MTS clarifies that buses will be zero emission as soon as practicable with 2037 being the latest date for this to happen. The 2037 date is based on all new buses, single or double, being electric or hydrogen powered by 2025. Double decker buses present a significant technological challenge. Whilst we are trialling early versions of zero emission double decker buses, we foresee that 2025 is the likely date that they will come to the mass market at an affordable price. There are also technical considerations around the infrastructure needed to support the electrification of the entire fleet.
- 8.15.54 Should technology develop in a way that enables the earlier affordable replacement of Euro VI vehicles with zero emission alternatives, we will endeavour to bring this date forward.

Taxis and PHVs

- 8.15.55 The City of London, the London Borough of Islington and the LTDA suggested further changes to PHV licensing including bringing forward restrictions on diesel vehicles.

TfL response

- 8.15.56 All newly licensed PHVs must meet Euro 6 emissions standards. This is being tightened in 2020 so that all newly manufactured PHVs must meet a zero emissions capable standard in line with the policy of the Office for Low Emission Vehicles, and from 2023 this will apply to all newly licensed PHVs.
- 8.15.57 PHV emissions standards are set in recognition of the fact that PHVs serve a wide variety of purposes. For specialist vehicles diesel is currently the only viable fuel. Distinguishing between six-seater vehicles, where fewer options zero emission capable options exist and others was considered but may lead to incentivisation of more of these vehicle types over cleaner petrol hybrids.

Wider road user charging

- 8.15.58 The following stakeholders indicated their support for a wider, more advanced system of road user charging: Better Streets for Enfield, Bloomsbury Air, Clean Air in London, Forest Hill Society, Herne Hill Green Party, Hounslow and Brentford Friends of the Earth, Islington Green Party, Lambeth Green Party, London Borough of Brent, London Property Alliance, Sustrans, The St Marylebone Society, and Wandsworth Green Party.

TfL response

- 8.15.59 The approach to paying for road use is set out in the MTS.
- 8.15.60 We are committed to investigating proposals for the next generation of road user charging systems, to account for a range of significant developments that have occurred since the Congestion Charge was first established. We

are considering how new ways of paying for road use could potentially build on the Congestion Charge and the future ULEZ charge schemes, to deliver benefits such as reduced transport emissions and congestion.

8.15.61 Any new proposals would be subject to full public consultation.

Traffic reduction

8.15.62 The following stakeholders stated that more could be done to reduce traffic and congestion levels in London: Bloomsbury Air, ClientEarth, Cross River Partnership, Herne Hill Green Party, Lambeth Green Party, London Assembly Environment Committee, National Express, The St Marylebone Society and Wandsworth Green Party.

TfL response

8.15.63 We recognise that congestion is a significant issue facing London and that it has a number of negative impacts on life in the Capital. The MTS states that a reduction in traffic of 10–15 per cent by 2041 is needed to keep congestion manageable, whilst also achieving the aims of the strategy. The MTS policies and proposals encourage more active, efficient and sustainable travel outline plans to reduce the amount of traffic on London's roads and encourage a change in the way people travel around the city. It is acknowledged that changes to the allocation of road space will need to be carefully managed; however 75 per cent of congestion is caused by there being too much traffic on the road network, therefore the strategy supports managing the network more efficiently and encouraging more space efficient modes to help reduce congestion.

Silvertown Tunnel

8.15.64 The Campaign for Better Transport, Friends of the Earth and Greenpeace stated their opposition to the Silvertown Tunnel.

TfL response

8.15.65 The overall conclusion of the Silvertown Tunnel air quality assessment, which was updated in February 2018, is that the scheme would not have a significant impact on air quality, nor would it impact on the ability of the Greater London Urban Area to achieve compliance with the Air Quality Directive. The scheme would have an overall beneficial impact on air quality.

8.15.66 The most recent assessment (published in February 2018) uses Emissions Factor Toolkit version 8. This represents the latest in a substantial body of air quality assessment results that we have provided, which consistently demonstrate the acceptability of the Silvertown Tunnel in air quality terms.

Monitoring

8.15.67 London Councils requested more PM_{2.5} monitors.

TfL response

8.15.68 With regards to monitoring, London has one of the most comprehensive air quality monitoring networks in the world. Data from monitoring stations is available online.²³

8.15.69 TfL and the GLA work continually with boroughs to ensure that the air quality monitors are appropriately maintained and located. We are undertaking a general review of air quality monitoring in view of the need to meet the WHO PM_{2.5} targets and we are happy to work with boroughs on this.

Other emissions sources

8.15.70 The following stakeholders stated that more action was needed to reduce emissions from other sources, particularly housing and boilers: Alliance of British Drivers, Balfour Beatty, Bloomsbury Air, Builders Merchants Federation, Cross River Partnership, Herne Hill Green Party, Living Streets, London Borough of Waltham Forest, Waltham Forest Conservatives, Wandsworth Green Party and Westminster Business Improvement Districts.

TfL response

8.15.71 We recognise that there are other sources of emissions beyond transport. Action to deal with these is set out in the LES.

8.15.72 The Mayor's Energy for Londoners (EfL) initiative has two award-winning building retrofit programmes, RE:NEW (housing) and RE:FIT (public buildings) which provide advice to help make London's existing building stock more energy efficient. The programmes not only reduce carbon emissions but also improve local air quality.

8.15.73 EfL's "'Better Boilers' was the first scheme of its type to include a requirement that all boilers installed by the scheme were ultra low NO_x. The Mayor will shortly be launching a Commercial Boiler Scrappage scheme which will help small and medium enterprises to replace their old boilers with cleaner technologies, including cleaner, more efficient boilers, heat pumps and connections to district heating schemes. In addition, the £2.5m 'Warmer Homes' scheme which helps Londoners stay warm in the winter and save on their energy bills has the requirement that the boilers installed are ultra-low NO_x.

²³ <https://www.londonair.org.uk/LondonAir/Default.aspx>

8.15.74 However with road transport responsible for over half the NO_x emissions in London, and for an even higher proportion at roadside levels where people are most exposed, action on other emissions sources does not reduce the need to take action on road transport emissions.

Other policy suggestions

- 8.15.75 The following stakeholders offered alternative policy suggestions: Bloomsbury Air, Brentford Chamber of Commerce, ClientEarth, Gipsy Hill Green Party, John Lewis Partnership, Lewisham Cyclists, Living Streets, London Borough of Ealing, London Borough of Hackney, London Borough of Hammersmith & Fulham, London Borough of Hounslow, London Borough of Redbridge, London Borough of Waltham Forest, London Borough of Wandsworth, London Car Free Day 2018, London Chamber of Commerce and Industry, London Councils, National Express, RAC Motoring Services, SMMT and UPS.
- 8.15.76 London Car Free Day 2018 proposed a car-free day in London.
- 8.15.77 The Brentford Chamber of Commerce and Industry, the Freight Transport Association and John Lewis Partnership suggested that more could be done to incentivise the uptake of alternatively fuelled freight vehicles.
- 8.15.78 The London Borough of Wandsworth stated that more could be done to use waste heat from the Tube network.
- 8.15.79 The London Chamber of Commerce and Industry proposed a freight commissioner.
- 8.15.80 The Gipsy Hill Green Party stated that public transport should be made free during high pollution episodes.
- 8.15.81 The London Borough of Redbridge, the London Borough of Wandsworth, the London Borough of Waltham Forest and London Councils stated that we needed to undertake more activity to reduce emissions on the TLRN.
- 8.15.82 Bloomsbury Air proposed a London-wide 20mph limit.
- 8.15.83 The London Borough of Ealing stated that the Mayor should take action to encourage the use of smaller instead of larger cars.
- 8.15.84 Living Streets, the London Borough of Hackney, and RAC Motoring Services proposed more Low Emission Neighbourhoods.

TFL response

- 8.15.85 We are considering proposals for car-free days. However it should be noted that whilst they significantly reduce emissions on a given day this benefit is not sustained in the long term.

- 8.15.86 Our approach to alternative fuels is set out in the MTS. Through LoCITY we are conducting research as to which fuels are appropriate when transitioning to zero emission.
- 8.15.87 Regarding a freight commissioner: Freight will be a key focus area for the Deputy Mayor for Transport and for TfL as the MTS is taken forward and embedded within our operations. The Deputy Mayor will be working closely with the freight sector, thinking about how freight operates in London in the context of the broader transport strategy and other key modes of transport. This will ensure freight is given the right level of priority and will be a key area of delivery for us.
- 8.15.88 Regarding free public transport during high pollution episodes: We are not convinced that this is appropriate. Even if sufficient capacity were available there is a finite limit to the number of trips that are likely to switch to public transport. As only the Mayor has the power to set fares on our services, this may also not be targeted at areas where pollution is the most severe. We consider focusing on reducing pollution levels on a permanent basis to be more important than reacting to short-term emergencies.
- 8.15.89 The MTS sets a target of zero people killed or seriously injured on London's transport network by 2041. We are considering 20mph limits where appropriate.
- 8.15.90 The ULEZ proposals will have a significant impact on the TLRN, with an average 60% reduction in the length of the TLRN exceeding legal limit values expected. The wider MTS and LES policies provide effective means of reducing traffic levels and cleaning up the vehicle fleet that will have an overall beneficial impact on reducing emissions on the TLRN.
- 8.15.91 As stated in the MTS and LES the Mayor, through TfL, will make use of waste heat from the Tube network to support the decarbonisation of London's heating, for example through district heating schemes such as that already being implemented at Bunhill. Utilisation of waste heat may support air quality improvements through the replacement of domestic boilers with decentralised energy systems. However the level of opportunity for NO_x reduction from domestic boilers is far smaller than that required to meet NO₂ concentration limits, and would be far lower than the reduction achieved by the proposed changes to the ULEZ. Action is needed on all fronts.
- 8.15.92 The Mayor does not have the power to set standards on the size of vehicles.
- 8.15.93 Through the Mayor's Air Quality Fund, five Low Emission Neighbourhoods, led by boroughs, are being delivered. The GLA are funding five further Low Emission Neighbourhoods led by business improvement districts. We will be announcing details of future rounds of funding through the Mayor's Air Quality Fund shortly.

8.16 Theme O: Consultation

- 8.16.1 The following stakeholders commented on the consultation: British Motorcyclists Federation, London Property Alliance, Motorcycle Industry Association and RAC Motoring Services.
- 8.16.2 The London Property Alliance stated that the questionnaire format was too narrow.
- 8.16.3 The British Motorcycle Federation and the Motorcycle Industry Association stated that there should be more analysis of motorcyclists' reaction to the charges.
- 8.16.4 RAC Motoring Services stated that it would be useful to be able to ask follow-up questions during the consultation process.

TfL response

- 8.16.5 Although there were many closed questions on the proposals, the final question in the questionnaire was a comments box in which respondents could write any comments of their own on the proposals. Alternatively, respondents, including stakeholders, could email or write to us. As set out in Chapter 7, a significant proportion of respondents emailed us rather than used the consultation portal. There was therefore sufficient opportunity to comment outside (or in addition to) the questions in the questionnaire and to ask for further clarification.
- 8.16.6 A dedicated email address airqualityconsultations@tfl.gov.uk was set up to receive enquiries around the ULEZ consultation.

Chapter 9. Conclusions and recommendations

- 9.1.1 We recommend that the Mayor should consider the whole of this report and other relevant information available to him, including advice from GLA and TfL officers, the contents of the IIA (including amendment), the responses to the consultation, together with our considerations, particularly with relation to Chapter 8 of this report, and then consider whether further consultation, further information or the holding of some form of inquiry is necessary or appropriate prior to his decision to confirm or not confirm the VO. If the Mayor considers that no further consultation or the holding of a public inquiry is not necessary or appropriate, it is recommended the VO is confirmed with the modifications described below.

Vintage and Historic tax class vehicle proposals

- 9.1.2 There were 275 public comments received on the historic vehicle exemption. Forty two opposed the exemption and the remainder commented either supporting the exemption, suggesting a rolling date or a later cut off period than 1973

LEZ proposals

- 9.1.3 The consultation indicated that there is strong support for the change to the LEZ standard with 74 per cent supporting or strongly supporting the proposal to increase in the standard to Euro VI to match ULEZ.
- 9.1.4 There was significant support for 26 October 2020 as the implementation date for the LEZ changes with 39 per cent in support and 32 per cent stating that it should be introduced later.
- 9.1.5 There was significant support for the proposed LEZ daily non-compliance charge (£100 for not meeting Euro VI NOx and PM levels and £300 for not meeting Euro IV PM levels) with 48 per cent in support. A higher charge was supported by a further 26 per cent.

ULEZ proposals

- 9.1.6 There was overall support for the principle of expanding the ULEZ boundary from central London to include the whole of Inner London with 56 per cent supporting or strongly supporting the principle.
- 9.1.7 There was mixed support for the proposal to use the North and South Circular Roads as the Inner London boundary with 24 per cent supporting that proposal. There was popular support for a larger expansion with 31 per cent supporting this. Our reasoning behind the choice of the Inner London boundary is set out in section 8.6 above.
- 9.1.8 There was mixed support for the daily non-compliance charge of £12.50 for light vehicles. Thirty-two per cent supported the £12.50 charge, 22 per cent thought it should be higher and 33 per cent thought it should be lower. Our

reasoning behind maintaining the non-compliance charge level for light vehicles is set out in section 8.5 above.

- 9.1.9 There was mixed support for the implementation date of 25 October 2021. Twenty-two percent supported the date, 34 per cent thought it should be sooner and 31 per cent thought it should be later. Our reasoning behind the start date is set out in section 8.3 above.
- 9.1.10 There was overall support for the proposal to end the currently approved sunset period for CCZ residents from 25 October 2021 - the point expansion to Inner London takes place. There were 51 per cent supporting or strongly supporting the proposal. Our reasoning behind this change is set out in section 8.7 above.
- 9.1.11 There was overall support for the proposals to increase the PCN level for light vehicles with 46 per cent supporting the proposal and 42 per cent opposing it. Our reasoning behind this change is set out in section 8.13 above.

Recommended Variation Order modifications

- 9.1.12 We have considered and responded to the issues raised in relation to the Stage 3b consultation proposals in Chapter 8. In view of these responses we recommend that if the Mayor is minded to confirm the Variation Order he does so with the following modifications:
- An extension of the sunset period for disabled tax class vehicles until 26 October 2025, and which in central London will operate from 8 April 2019
 - The introduction of a sunset period until 26 October 2025 for licensed wheelchair accessible PHVs registered by TfL, which in central London will operate from 8 April 2019.
 - The introduction of a sunset period for minibuses operated by not-for-profit and charitable organisations under a section 19 or section 22 permit, where the vehicle was purchased prior to the Mayor's decision on the outcome of the Stage 3b proposals on June 8 2018. This will only apply after the Zone is expanded to Inner London on 25 October 2021 and will end on 29 October 2023. (It will not operate in central London before 25 October 2021.)
- 9.1.13 London is in continued breach of legal limit values for NO₂. Although, if approved, the Stage 3b consultation proposals cannot by themselves deliver compliance, and further Government action is required over policy areas the Mayor and/ or TfL have no control, they will accelerate the date by which areas of London become compliant with legal limit values. This is in line with the duties under European and domestic air quality law to achieve limit value compliance by the soonest date possible, to choose a

route which reduces exposure as quickly as possible, and to ensure compliance is not just possible but likely.

- 9.1.14 We consider that our published Stage 3b consultation proposals strike the correct balance in terms of reducing vehicle emissions to meet NO₂ limit values in the most expeditious and effective way, and to reduce exposure to particulate matter.
- 9.1.15 Therefore, we recommend that the Mayor confirms the VO with the modifications described above. No other modifications are proposed.
- 9.1.16 If the Mayor decides to confirm the VO (with the proposed modifications), the changes would come into effect as follows alongside approved arrangements:
- From **8 April 2019** any “vintage vehicles” registered before 1973 and all Historic Tax Class vehicles will be exempt from both the LEZ and ULEZ schemes.
 - From **8 April 2019** the ULEZ will start to operate in **central London** (the CCZ area). It will cover all vehicles, “light” (motorcycles, mopeds etc., cars, except taxis, light and heavy vans, and minibuses) and “heavy” (HGVs, buses, coaches and other heavy vehicles) and impose emissions standards²⁴ on them.
 - There will be a daily non-compliance charge of £12.50 for light vehicles and £100 for heavy vehicles. These will be in addition to any applicable Congestion Charge (light and heavy vehicles) and LEZ charges (£200 for heavy vehicles not meeting Euro IV PM standards and £100 for relevant light vehicles not meeting Euro 3 PM standards).
 - Registered residents of the CCZ (including those with motorcycles, mopeds etc.) will benefit from a 100% discount on ULEZ charges until 24 October 2021.
 - Registered disabled tax class vehicles and registered wheelchair accessible PHVs will have a 100% discount sunset period until 26 October 2025.
 - From **8 April 2019** the PCN level for non-payment of the £12.50 daily ULEZ charge by non-compliant light vehicles will increase to £160.

²⁴ Euro 3 for motorcycles and mopeds etc. Either Euro 4 petrol or Euro 6 diesel for light vehicles (cars, small and large vans and minibuses). Euro VI for heavy vehicles (buses, coaches, HGVs and similar vehicles).

- From **26 October 2020** an additional Euro VI standard (based on the central London ULEZ standard) will be introduced for heavy vehicles to apply London-wide. Heavy vehicles that do not meet the Euro VI standard will pay a daily non-compliance charge of £100 and any that are also Euro III or below for particulate matter will pay a total of £300 per day.
- On **24 October 2021** the sunset period for central London (CCZ) residents under ULEZ will expire. (Consequently the 90% discounted T –Charge for residents will also expire on the same date).
- From **25 October 2021** the area of the ULEZ will be extended to the whole of **Inner London** within the area approximately bounded by the North and South Circular Roads as detailed in the deposited plans. This includes the original central London (CCZ) area that has been operating the ULEZ from 8 April 2019.
- As a result of the combination of the two schemes from 25 October 2021 all vehicles in Inner London will be subject to ULEZ-level emissions standards and charges.
- The same arrangements concerning registered disabled tax class vehicles and wheelchair accessible PHVs will continue throughout the expanded Inner London zone until 26 October 2025.
- Between **25 October 2021 and 29 October 2023** there will be a 100% discount sunset period for registered minibuses purchased before 8 June 2018 and operated by charities and other not for profit organisations under a section 19 or section 22 permit..This will apply from 25 October 2021 across the whole of Inner London.

9.1.17 We recommend that the Mayor confirms the Greater London Low Emission Zone Charging (Variation and Transitional Provisions) Order 2018 with the modifications mentioned above. However, the Mayor is at liberty to decide not to confirm the Variation Order at all or to consider doing so with or without modifications or with other modifications if he judges that appropriate.