

London Assembly ULEZ response

This paper gives the response of the London Assembly, through its Environment Committee, to the consultation on the proposed Ultra Low Emission Zone (ULEZ). Committee recommendations are highlighted in **bold**.

The Committee's response is by majority. The GLA Conservative Members dissent from the response as a whole and their view is noted at the end of the report. The Green Party and Liberal Democrat Members support the response as a whole, but would go further on certain points. Their views are also noted at the end of the report.

Introduction

The ULEZ is proposed to tackle air pollution, especially levels of NO₂ in central London, which are seriously in breach of UK and EU law and are responsible for thousands of early deaths each year in London, as well as other serious health problems.

Organisations including London boroughs, the London Health Commission, and the Faculty of Public Health of the Royal Colleges of Physicians have called for the ULEZ to be strengthened with earlier implementation, wider coverage, stricter standards and/or stronger incentives.

Compliance

Compliance with the legal limits for NO₂ should be achieved as soon as possible and the Mayor needs to show how the ULEZ can achieve this.

Compliance will not be achieved by the ULEZ alone. Other measures including modal shift to buses, trains, walking and cycling will complement it; any increase in traffic will increase the challenge.

The limits have been in force since 2010. Without the ULEZ and other recent proposals, compliance is not expected before 2030. The Mayor and TfL's Transport Emissions Road Map envisages compliance by 2025, with the ULEZ as proposed.

With pending judicial actions and Mayoral elections, a weak ULEZ ordered now might well need to be strengthened before 2020. It would be fairer on Londoners for an adequate ULEZ to be established from the start, enabling responses such as mode or vehicle changes to be planned with due notice.

The Mayor, working closely with the boroughs and national government, should examine how the whole of London could achieve full compliance with air pollution limits by 2020.

Timetable and incentives

The order to create the ULEZ is to be signed in 2015, but with more than a five-year delay in implementation to late 2020. The full effect of the zone will then take some time after its introduction. The Mayor says there is a need for owners to have time to adjust their purchasing decisions, when some may be on three or five year finance deals.

However, non-compliant vehicles will not become unusable on the implementation of the scheme; there will be an increase in costs on days of entry to the central zone (£12.50 for light vehicles, £100 for heavy vehicles). The majority of owners will be able to change vehicles in less than five years, and/or would pay the charge only on relatively infrequent occasions. TfL expects that 73 per cent of the traffic in central London will meet the proposed ULEZ standards by 2020 even without the zone.

A three-year finance deal signed before the scheme's finalisation would expire in early 2018. Euro VI diesel vehicles up to four years old (heavy vehicles) or three years old (light vehicles) will be available in the used market by then, as well as many compliant petrol vehicles up to 14 years old.

Financial costs to a fraction of drivers must be weighed against the health benefits to those same drivers, plus a much larger population of others, who are exposed to air pollution in central London and beyond.

Therefore there are strong arguments for earlier implementation of the scheme. Pressed to address this point at the Committee's meeting, the Mayor's adviser argued against introduction dates of: immediately in 2015; in 2016; or on 1 January 2017. However, within the range of possible timetables from later 2017 onwards, no specific justification has been presented for the proposed date of late 2020.

At the 2020 date, with five years' notice of the scheme, few drivers should need to pay the charge on a regular basis. Therefore there would be scope to set the charge then at a level that provides a stronger disincentive to driving high-polluting vehicles into the zone.

The ULEZ should be brought forward.

The modest initial non-compliance charge, of £12.50 or £100 per day, should increase over the zone's first years. Consideration should be given to increasing the charge for heavily polluting vehicles to a more punitive level, to enhance the zone's impact and reflect the generous time to change vehicles or routes to avoid the charge.

Geographical scope

The ULEZ is proposed to be based on the Congestion Charging Zone. The perimeter infrastructure is in place here and the zone is already well-understood.

The Mayor provides information on the air quality benefits to outer London and to inner London beyond the proposed zone. There would be greater benefits from a wider zone, (especially in the more populated areas outside central London, where there is most exposure of children whose developing lungs are affected by pollution, and of elderly people who are most vulnerable to life-threatening effects) but TfL has not provided quantified benefits for options other than the narrowest CCZ and the widest LEZ boundaries.

A number of boroughs representing areas adjacent to the CCZ (including Hackney, Southwark, Camden and Lambeth) have expressed an interest in extending the ULEZ. The Mayor has indicated he is happy to discuss this. If a zone wider than the CCZ but smaller than the LEZ is feasible, the pollution benefits will be greater the sooner it is established. There may also be cost and practical benefits to establishing a wider zone from the start, rather than changing the boundaries later.

The Mayor's current figures show that nearly half of London's main road network will still be over the legal limits in 2020.

Scope to expand the ULEZ should have been a part of the proposal from the beginning. Discussions with boroughs on the costs, benefits and practicalities of a wider ULEZ should be progressed rapidly, and with a view to widening the ULEZ

beyond the CCZ as soon as is practically possible, following further public consultation.

Standards

Vehicles meeting certain standards are exempt from the ULEZ charge. The general exemption standard is Euro 4 for petrol vehicles and Euro 6/VI for diesels. This does not apply to taxis, which have their own rules as part of the licensing regime. There are also specific rules for buses, which are discussed at the end of this section.

Euro 4 for petrol cars and Euro 6 for diesel cars are equivalent in terms of certified NO_x emissions. However Euro 4 petrol cars would tend to have higher emissions of CO₂. The Society of Motor Manufacturers argues that the standard should also be Euro 6 for petrol.

Conversely, NO_x emissions standards for diesel cars are failing. Table 1 below shows the emission levels required in laboratory tests for diesel and petrol vehicles at the different Euro standards. Table 2 shows emissions measured in more realistic tests at the lower speeds typical of urban driving, for vehicles certified as meeting those standards.

Table 1: Euro emission standards

Tier	Date (new models)	Diesel		Petrol	
		NO _x (g/km)	PM (g/km)	NO _x (g/km)	PM (g/km)
Euro 1	July 1992	-	0.14	-	-
Euro 2	January 1996	-	0.08	-	-
Euro 3	January 2000	0.50	0.05	0.15	-
Euro 4	January 2005	0.25	0.025	0.08	-
Euro 5	September 2009	0.180	0.005	0.060	0.005
Euro 6	September 2014	0.080	0.005	0.060	0.005

Source: "Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007" and earlier editions: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007R0715:EN:NOT>

Table 2: Tested emissions from simulated driving at 48km/h in models with engines under 2.0l

Tier	Date (new models)	Diesel		Petrol	
		NO _x (g/km)	PM (g/km)	NO _x (g/km)	PM (g/km)
Pre-Euro		0.479	0.171	2.278	0.003
Euro 1	July 1992	0.570	0.054	0.260	0.003
Euro 2	January 1996	0.600	0.043	0.144	0.003
Euro 3	January 2000	0.687	0.028	0.072	0.001
Euro 4	January 2005	0.482	0.027	0.047	0.001
Euro 5	September 2009	0.593	0.001	0.035	0.001
Euro 6	September 2014	0.207	0.001	0.035	0.001

Source: Transport Research Laboratory, citing many tests for the European COPERT emissions model based on realistic driving cycles.

Table 2 shows that, up to Euro 5, there is no improvement in NO_x emissions from diesel cars. Even the current Euro 6 diesel cars remain a problem. In urban driving their NO_x emissions are about six times higher than Euro 5 or 6 petrols.

For these reasons the Committee heard from professors of air pollution and public health at Kings College London that that no diesels, even Euro 6, should be exempted from the charge.

The proposed ULEZ charge on pre-Euro 6 diesels is an improvement on the existing situation and certainly should not be relaxed.

The standards for the ULEZ must be kept under review, and should be tightened to drive the uptake of lower-emissions vehicles as they become more widely available. In particular, since even Euro 6 diesel cars are still significantly more polluting than modern petrol vehicles, as standards are tightened, consideration should be given (in tandem with measures to assist consumers such as a scrappage scheme) to removing all diesel cars from the exempt category.

However, the Committee has heard that Euro VI heavy vehicles do not have such a large discrepancy in real-world emissions. Also, there are fewer alternatives to diesel for heavy vehicles.

Therefore, the Committee agrees that Euro VI heavy vehicles should be exempt from the ULEZ charge, until lower emission alternatives are widely available.

The main concern of the ULEZ is emissions of local pollutants, especially NO₂. To facilitate the removal of older diesels from the road, alternatives will be required in the used car market.

However, a secondary aim of the ULEZ is also to reduce CO₂ emissions. Petrol vehicles tend to have higher CO₂ emissions than diesels of equivalent age (though diesel exhaust is high in black carbon, which is a highly potent greenhouse agent, as well as very damaging to human health). Therefore a switch from diesel vehicles to equivalent or perhaps older petrol vehicles might risk raising carbon emissions. A better understanding is needed of the impacts of the ULEZ on carbon targets and greenhouse gases.

Subject to confirmation that the Euro 4 petrol vehicle exemption will not have a significant detrimental impact on the Mayor's transport CO₂ reduction targets, the Committee agrees that Euro 4 is an adequate ULEZ standard for petrol vehicles at this stage.

It is proposed to make an exception to the general Euro VI standard for diesel vehicles in the case of the New Routemaster hybrid bus. About 300 New Routemasters are to enter service with Euro V engines, generating direct NO₂ emissions about 5 times more than Euro VI hybrids. Although other, higher-emitting, Euro V hybrids are to be retrofitted to meet the Euro VI standard, it is not proposed to retrofit the Euro V New Routemasters, but instead to allow them to operate in the ULEZ as they are. A special exception is drafted into the ULEZ order for this purpose.

TfL argues that it is more cost-effective to replace older buses on suburban routes with new buses, rather than spend an estimated £15 million on the retrofit. However, the Committee is concerned that TfL making an exception for its own vehicles may undermine the credibility and pollution benefits of the ULEZ.

TfL should not make an exception to ULEZ rules for its own vehicles. All London's Euro V hybrid buses, including New Routemasters, should be retrofitted to meet Euro VI standards by 2020. If cost benefit considerations preclude this, non-retrofitted

Euro V buses should be redeployed away from central London as soon as enough Euro VI double-deckers can be procured to serve the central London routes.

The Euro V New Routemasters, being significantly cleaner than standard Euro V buses, would be a benefit in the suburbs, where they could replace even older Euro III or IV conventional diesel buses emitting several times the NO_x per bus.

Minority views

Conservative

The GLA Conservatives are unable to support the findings of this report. We are particularly concerned about the report's recommendations to bring forward the ULEZ to 2018, to increase the daily charge for vehicles, to further tighten the ULEZ standards, and to widen the ULEZ area beyond the Congestion Charge Zone.

We do not feel that there would be sufficient benefit, in going beyond the current ULEZ proposals, to justify the additional restrictions and costs to vehicle owners, or the impact on London's economy that these measures are likely to bring.

We would therefore request that our opposition to this consultation response be noted.

Green Party and Liberal Democrat

The Green Party and Liberal Democrat Members support all of the findings and recommendations in the main body of this report. There are also certain points on which the Green Party and Liberal Democrat Members would go further, and one point which is the view of the Green Party Member.

Compliance

The Green Party and Liberal Democrat Members would support a further recommendation in the section headed Compliance:

The Mayor should show how the whole of London will achieve full compliance with air pollution limits by 2020 at the latest. TfL should work with the Mayor to ensure that the ULEZ makes the necessary contribution to this goal. Any scheme which, in conjunction with other planned measures, does not achieve this is inadequate and unacceptable.

Timetable and incentives

While supporting the recommendations above under Timetable and Incentives, the Green Party and Liberal Democrat Members would be more specific, stipulating that the ULEZ should be initially implemented by 2018 or earlier. These Members also specify 2020 as a date by which a more punitive entry charge should be in place.

Geographical scope

The Green Party and Liberal Democrat Members support the main points about widening the geographical scope of the ULEZ, initially to a larger area of inner London, where boroughs have already expressed interest. These Members additionally emphasise the need to apply ULEZ rules to the area around Heathrow, where there is also a major concentration of pollutant limit breaches.

The Green Party Member also recommends that the widening of the zone should be in place from the start.

Contingency plans for smog episodes

The Green Party and Liberal Democrat Members also support an additional section:

Weather can have significant impacts on London's air quality. Temperature and sunlight can affect chemical reactions and the formation of secondary pollutants, and wind affects how pollutants disperse or not. Still and clear weather, which can be associated with cold, hot or intermediate temperatures depending on the season, tends to concentrate London's own emissions. Conditions can also bring pollutants from elsewhere, such as Sahara dust¹ or urban pollution from the Continent.² As multiple factors combined, record pollution levels were recorded in Greater London in spring 2014, reaching the maximum 10 on the pollution index.³

Due to changes in our climate that are already 'locked in', London is expected to experience hotter summers and more frequent heatwaves. Evidence provided to this committee indicates that these changes could occur sooner than expected with the number of 'overheating days' doubling by the 2020s.⁴

In these events, pollution limits may be breached despite the ULEZ restrictions and other measures to reduce vehicle emissions: additional temporary measures are needed.

The Mayor of London's draft air quality strategy⁵ contained a policy called 'Action days and special measures'. It suggested: 'Under extreme circumstances there may be a role for more stringent special measures used intensively for short periods of time which primarily affect how many and which kinds of vehicles can travel to and through the relevant area'. When the final strategy was published⁶ this policy was not included, so there is currently no mechanism in place to achieve these measures.

In the run up to and during dangerous pollution episodes, special stringent measures should be in place which affect how many and which kinds of vehicles can travel to and through the ULEZ.

One such option would be to close certain roads to non-essential traffic, or to impose tighter restrictions on the worst polluting vehicles entering the ULEZ area.

¹ Sahara dust smog: record pollution levels hit London and south England. The Guardian, 3 April 2014
<http://www.theguardian.com/uk-news/2014/apr/03/record-pollution-levels-likely-to-stay>

² London's air pollution levels hit highest level. *itv.com*, 14 March 2014
<http://www.itv.com/news/london/story/2014-03-14/londons-air-pollution-levels-hit-highest-level/>

³ DEFRA's air pollution index shows pollution levels from one to 10, with one being the lowest and 10 the highest. Levels 7-9 are ranked 'high' and '10' very high. These carry warnings and advice for children and adults with lung and heart problems.

⁴ Witness evidence provided by Professor Martin Parry (Imperial College) at London Assembly Environment Committee meeting on 3rd June 2014. Item 10, Severe Weather, transcript
<http://www.london.gov.uk/moderngov/ieListDocuments.aspx?CId=305&MIId=5421&Ver=4>

⁵ Clearing the air, The Mayor's draft air quality strategy for public consultation, March 2010, Policy 6, pages 83-84

⁶ Clearing the air – The Mayor's Air Quality Strategy – December 2010