

December 5th 2017

Leeds along with 27 other local authorities across the UK has been identified by the government as needing to introduce a range of solutions to meet legal limits on air pollution and therefore improve air quality within the shortest feasible timescale.

A report will be presented to the council’s executive board on Wednesday 13 December outlining a consultation plan on a proposed charging Clean Air Zone Class B covering all roads within the outer ring road, with the motorways acting as the southern boundary. The vehicles affected are HGVs, buses, coaches, taxis and private hire.

Leeds has been named as one of many cities in the UK that will have some roads that will not be compliant with nitrogen dioxide regulations by 2020, in line with EU air quality targets. Exceedances of the 40µg/m3 annual average NO₂ limit currently take place in select spots within the district boundary, and as a result the government’s national air quality action plan named Leeds as required to implement a Clean Air Zone (CAZ).

What is a Clean Air Zone?

A Clean Air Zone is an identified area where air quality requires improvement, and therefore non-compliant vehicles are charged to enter. Non-compliant vehicles are defined by their emissions Euro Standard, and the CAZ classification chosen. Clean Air Zones do not ban or prevent any vehicle from entering the ‘zone’. However, whilst no vehicle will be ‘banned’, those vehicles which do not meet minimum engine standards would need to pay a daily charge for entering the ‘zone’.

Who does it effect, and how?

Where there are the most persistent pollution problems, government have advised that a Clean Air Zone (CAZ) is the most effective way to tackle them. They have devised 4 categories of Clean Air Zone class, with different vehicles included within those categories – **Leeds has chosen CAZ B**. The charges on non-compliant vehicles entering a CAZ as set out by central government are designed to

Clean Air Zone Classification	Vehicles Included
A	Buses, coaches and taxis
B	Buses, coaches, taxis and heavy goods vehicles (HGVs)
C	Buses, coaches, taxis, HGVs and Light Goods Vehicles (LGVs)
D	Buses, coaches, taxis, HGVs, LGVs and private cars (option to include motorbikes and mopeds)

encourage only the cleanest vehicles to operate in the zone. This is summarised in the table below;

A CAZ B has been shown by the extensive modelling process to get us very close to compliance with legal limits of nitrogen dioxide. This would mean charging all buses, coaches and taxi & private hire vehicles which are below Euro 6 standard for diesel engines, and below Euro 4 standard for petrol which operate within the boundaries of the Clean Air Zone.

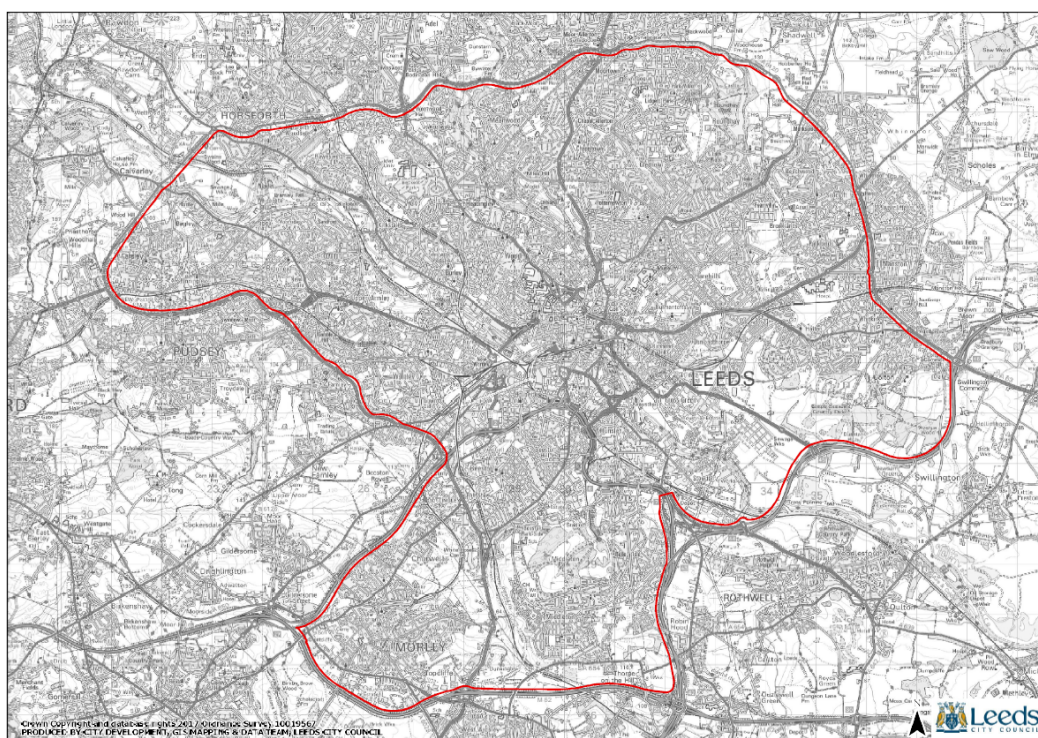
To achieve compliance with air quality targets, additional measures are needed. As part of the consultation we will be exploring how we can best achieve the shift of the taxi and private hire fleet to petrol-hybrid, LPG or electric (known collectively as Ultra-Low Emission Vehicles or - ULEV) whether it be via charging any non ULEV entering the zone, or whether a robust package of incentives can be relied upon to deliver the required uptake of ULEVs. Leeds City Council welcomes feedback on the barriers to achieving this, and how drivers/operators could be supported to achieve this shift.

Within the different scenarios that have been modelled, and in the absence of any national guidance, the charges that are to be applied in London's Ultra-Low Emission Zone (ULEZ) have been used (see below). Further work is planned to determine an appropriate charging framework for any Leeds CAZ, and we will consult on this, but the charge set will need to ensure that a sufficient level of replacement and retrofit is delivered.

Vehicle Class	Daily Charge for non-compliant vehicles
Buses/ Coaches	£100.00
HGVs	£100.00
Taxi and private hire	£12.50

Where will a Clean Air Zone be?

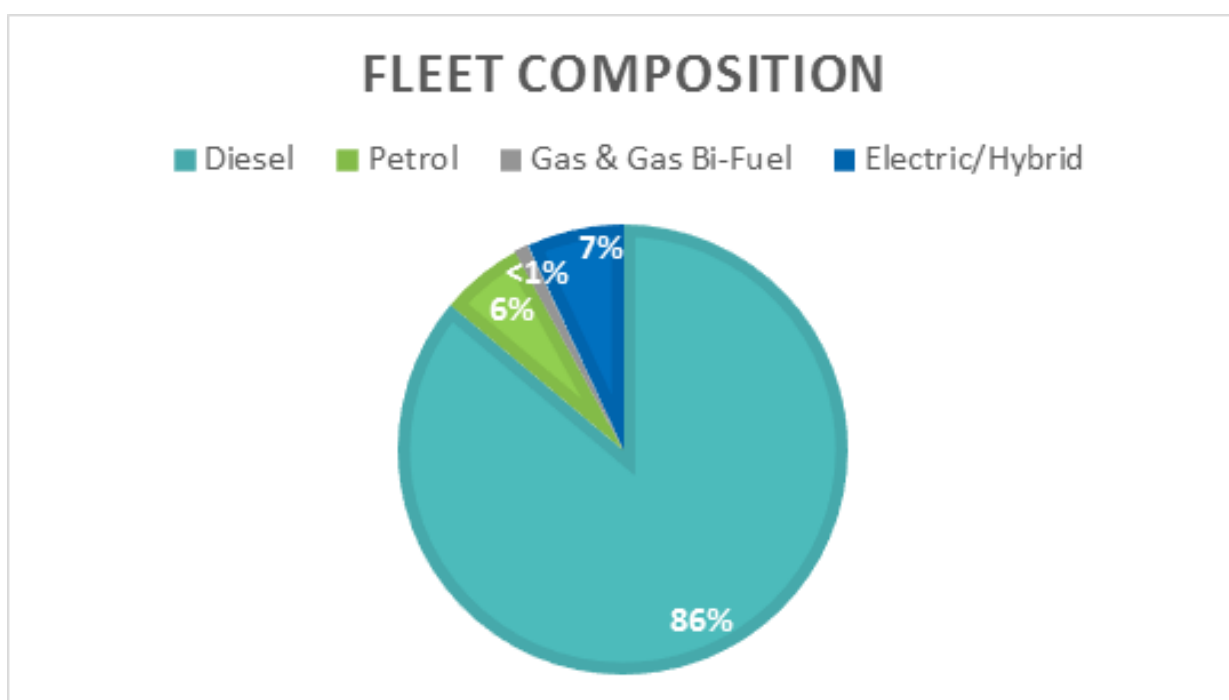
The CAZ is bordered by, but does not include the Outer Ring Road and M1/M62 motorways to the south. Vehicles can use the M621 to travel through the Clean Air Zone without being charged as long as they do not leave the M621 to enter Leeds. This option allows vehicles to use the outer ring road without being charged but buses, coaches, HGVs and taxi and private hire vehicles would be charged



when entering inside the outer ring road. This option achieves compliance across the majority of the road network, but due to the tolerances of the modelling would not be sufficient without other additional measures. However, displacement in this scenario is minimal and air quality improvements are achieved across the city.

Which additional measures will be implemented?

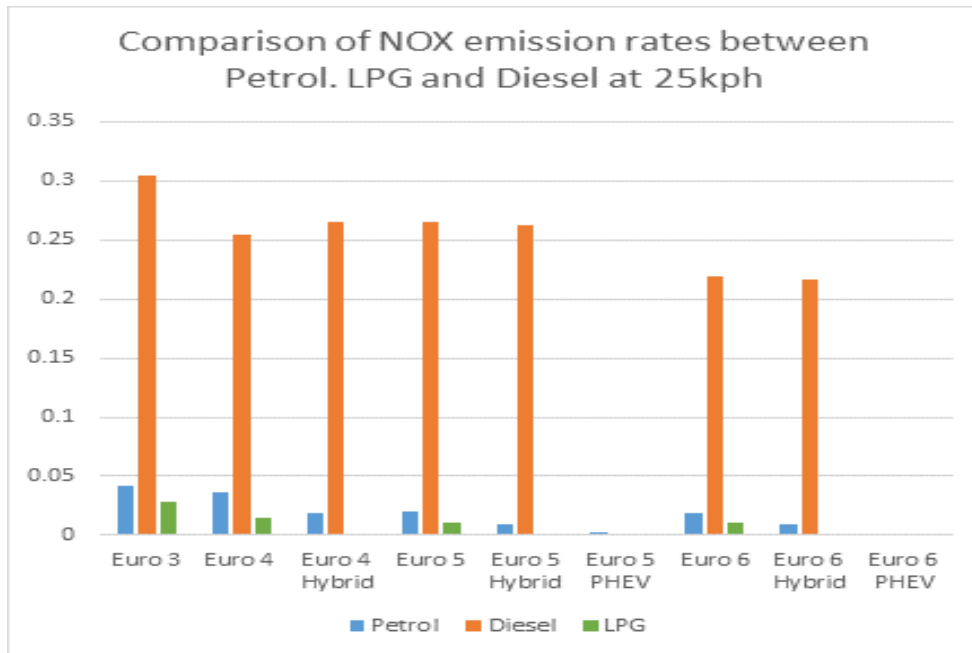
There are over 11,000 taxis and private hire vehicles licensed by authorities in West Yorkshire. Around 4,900 of these vehicles are licensed by Leeds City Council. Due to the high mileage and city centre focus of these vehicles, they contribute disproportionately to emissions, especially within the central urban area and are therefore a key sector that the council wants to work with to help improve the air quality of the city. The below chart demonstrates the current composition of the taxi



fleet operating in Leeds.

The below infographic demonstrates that a considerable reduction in NOx is achieved through replacing a diesel Euro 6 car with a ULEV. As part of the consultation we will be exploring how we can best achieve the shift of the taxi and private hire fleet to ULEV whether it be via charging non-ULEVs or whether simply a robust package of incentives can be relied upon to deliver the necessary emissions reductions.

Wheelchair accessible vehicles (WAVs) will be exempted from reaching the ULEV standard due to the limited vehicles available in this market currently and the desire not to decrease the supply of WAVs in the city.



The council is aware that in order to make this step change that it must look to provide additional support to this sector. The Council has already worked with partners within the West Yorkshire Combined Authority to secure funding from the Office for Low Emission Vehicles (OLEV) to deliver an ULEV taxi infrastructure scheme. £1.98 million capital grant funding has been secured to deliver 88 charge points over the three year delivery period to 2019/20. Of these, 33 will be located in Leeds – with funding of just under £750,000 allocated to the city.

The appropriate location of these rapid charge points is critical to their utilisation, as such we would also like to receive suggestions for the type of location that potential users would prefer to see. For example which areas of the city should they be located, or should they be near other facilities such as car parks, drive-through restaurants, or adjacent to supermarkets. These rapid chargers are designed to support other charge point provision, such as points that can also be located at drivers homes (grants from the government are available to support this) and offer a quick way of restoring range to an electric vehicle battery (typically 80% charge in 20-30 minutes).

What are the barriers?

Affordability

A significant barrier to the taxi fleet replacing existing vehicles with Euro 6 or ULEVs is the affordability of purchasing these vehicles. The purchase of a second-hand ULEV typically has a cost premium compared to the equivalent petrol or diesel vehicle, this can be up to £5,000. As demonstrated below, over the lifecycle of a ULEV, the lifecycle costs of a hybrid or electric vehicle are lower than that of a diesel or petrol vehicle, due to the reduced fuel costs associated with the improved mpg of a hybrid, or cheaper fuel (electricity) for electric vehicles. In addition to this, pure electric vehicles attract lower maintenance costs due to the engine’s simplicity.

The below table provides an outline of how fuel savings from a hybrid can be used to pay-back the initial cost difference over a period of time, dependent upon the average annual mileage.

VEHICLE	Fuel Economy (MPG)	Fuel Consumption (l/100km)	Price 2010 Model (£)	Price (pence) per litre*	Fuel cost per 10000 miles	Payback time (years) if driven 20000 miles p.a.	Payback time (years) if driven 30000 miles p.a.	Payback time (years) if driven 40000 miles p.a.	Payback time (years) if driven 50000 miles p.a.	Payback time (years) if driven 60000 miles p.a.
Hybrid Normal	56.3	5.02	10000	117.2	807.9	4.4	2.9	2.2	1.8	1.5
Diesel Normal	33.0	8.55	5000	119.3	1376.0	N/a	N/a	N/a	N/a	N/a

Availability

A significant proportion of taxis and private hire vehicles are bought second-hand, therefore for a rapid shift to ULEV amongst the taxi and private hire fleet to take place, there will need to be a sufficient second-hand market of electric and hybrid vehicles. This second-hand market is already established and will continue to increase in size as we approach the implementation date for the CAZ in late 2019. Our licensing service will also be consulting on how our conditions can be reviewed in order to make more ULEV's available to be licensed. It is important that you consult with the licensing service when considering vehicle choices to ensure they are suitable for licensing as a taxi or private hire vehicle.

Who will be most affected by the CAZ?

Leeds City Council has approximately 5,000 licenced taxi and private hire vehicles. It is expected that over 3,500 of these will require replacing to meet the CAZ standard. Leeds City Council will be collecting all feedback from the consultation exercise to deliver a support package to assist all taxi and private hire vehicles achieve compliance. Comments and suggestions from the trade will inform LCC's understanding of the key challenges, and the most useful form of assistance that could be provided.

What are the benefits of a low emissions taxi and private hire trade?

Delivering a shift to a low emission T&PH trade will deliver considerable health benefits both for those who live and work in Leeds, and T&PH drivers themselves. Both long- and short-term exposure to air pollution are known to adversely affect health. Short-term exposure (over hours or days) to elevated levels of air pollution can cause a range of effects including exacerbation of asthma, effects on lung function, increases in hospital admissions and mortality. Epidemiological studies have shown that long-term exposure (over several years) reduces life-expectancy, mainly due to increased risk of mortality from cardiovascular and respiratory causes and from lung cancer.

Evidence shows that exposure to air pollution is often higher in a vehicle than when outside, as a result drivers have an increased health risk especially given the predominantly urban mileage typically involved. Taxi ranks will become cleaner areas, improving health both for drivers who regularly wait in these areas and the passengers utilising the services.

The purchase of a ULEV would ensure that vehicle was compliant with any CAZ nationwide, eliminating any risk of facing an emissions charge in another city. Exposure of the public to more PHEV/EVs will also increase popularity of these vehicles, and it is expected this will facilitate a faster uptake of ULEVs citywide, in turn making feasible a wider array of charging facilities in the region.

How to make your views heard

An extensive public consultation process will take place from 2nd January to 2nd March 2018 with all comments, suggestions and feedback feeding into a final proposal to be issued in 2018. The below link is where all information will be held for the consultation.

<http://www.leeds.gov.uk/Business/Pages/Air-quality.aspx>

Any questions can be asked to AQconsultation@leeds.gov.uk