

## **Air pollution: Clean Air Zones and Taxi Emissions**

### **Preliminary overview**

#### **Introduction**

There has been a lot of media coverage in recent months about air pollution levels in the UK. Across the nation it is reported that poor outdoor air quality results in around 40,000 premature deaths a year from air pollution related illnesses and currently costs business and health care services around 20 billion pounds per annum.

The main causes of pollution in towns and cities are nitrogen oxide and nitrogen dioxide (collectively referred to as nitrogen oxides), which are produced in the emissions from petrol and diesel vehicles. Diesel also produces minute 'particulates' that are harmful to health. Particulate matter comes not only from exhausts but also from tyres, brakes and road dust.

#### **Current government status**

In 2016 the UK government was taken to court for the second time by an environmental pressure group called ClientEarth. At the most recent session the High Court ruled that the government's plans to improve air quality were inadequate. It ordered the government to act in the shortest possible time to reduce pollution levels in major towns and cities to levels that meet the Ambient Air Quality Directive, which has been enacted into British law by the Environment Act 1995. The government also agreed to discuss with ClientEarth a new timetable for more realistic pollution modeling and the steps needed to bring the pollution levels down to the required level.

The Department for Business, Energy and Industrial Strategy (BEIS) initially advised that a draft emissions reduction plan (ERP) would be published at the end of 2016 but it was not until May 2017 that a draft plan was released. The draft plan - Clean Air Zone Framework (Principles for Setting up Clean Air Zones in England) went out for a six week public consultation that ended on 15 June 2017.

The original plan prioritises 6 Clean Air Zones (CAZs) in London, Birmingham, Derby, Southampton, Nottingham, and Leeds. A CAZ is an area where targeted action is taken to reduce pollution levels to improve people's health and support economic growth. CAZs aim to reduce all types of air pollution, including nitrogen oxides and particulate matter, so that people breathe in less of all these pollutants.

Within a CAZ, there is also a focus on reducing carbon emissions and making sure that improvements in air quality are long lasting. Pollution should not be increased by growth in population, new buildings or changes in land use.

There are two types of Clean Air Zone:

- Non-charging Clean Air Zones – these will have a focus for action to improve air quality but do not include charging money for any type of vehicle to enter the zone.
- Charging Clean Air Zones – drivers must pay to enter these zones if their vehicle is of a type which emits too much pollution. For example in a CAZ, vehicles such as old buses, taxis, coaches and lorries would have to pay a charge to enter these zones but private passenger cars will not be charged.

The Department for the Environment, Food and Rural Affairs (DEFRA) has suggested minimum emissions standards for vehicles to be allowed entry to a CAZ. The standards are expressed according to European vehicle emission standards. Buses, coaches and heavy goods vehicles must all be compliant with Euro 6. Diesel powered vans, hackney carriages and private hire vehicles will also have to meet the Euro 6 standard. Vans, hackney carriages and private hire vehicles powered by petrol will have to meet the lower Euro 4 standard because petrol is less polluting than diesel.

Vehicles that do not meet the standard would need to pay a charge if they enter the zone. The Government has not yet indicated what the scale of the charge may be.

ClientEarth argues more towns and cities should have been included in the government plan, for example Manchester, Hull, Cardiff and they are against the passenger car exemption, claiming that such vehicles are one of the biggest sources of poor air quality and want the government to take faster action to address this.

ClientEarth still consider the government's proposals to be inadequate and that the plan contains major flaws, as such they have announced that they intend to take the government back to court.

The Chartered Institute of Environmental Health (CIEH) has also advised their members that the government's proposals are inadequate in terms of addressing what they consider as a national public health emergency. The new proposals lack anything substantive, do not provide timescales

for addressing the key challenges, there is no clarity around targets and it does not deal with issues around resources to support actions. In short the proposals do not amount to a strategic approach; it's simply a plan for a plan. One of the CIEHs biggest concerns is that the government is consistently looking towards local authorities to implement novel solutions to the air quality problem. The view is this is inappropriate because air pollution is a national problem that requires a national response. Passing the buck to individual local authorities will result in 400 plus different responses and as pollution knows no boundaries the expectation should be that government should provide leadership and should be leading on it and be prepared to put resources behind it. For example investment in electric vehicle infrastructure, cheaper public transport, and improved cycling and walking routes.

There is also concern that the government is suggesting that CAZs will be the panacea to rectify the problem, the CIEH feel it is too early to do that. There are a number of cities trialing CAZs but some of them are not looking at implementation until 2019 so feel it is currently not possible to evaluate the effectiveness of a CAZ therefore should not be putting them forward as a solution at this moment in time. To add to this CAZs are similar to Air Quality Management Areas (approximately 200 in the UK). The CIEH feel they have not worked in most areas so a CAZ will require considerably more attention, substance and detail if they are going to be more effective.

The only real way to address the problem is by taking measures to reduce or remove the large number of older polluting vehicles on the road especially diesel trucks, diesel busses, large diesel cabs, and older diesel passenger cars.

The CIEH is also lobbying for controls to be put in place about ending the use of red diesel, which is not only used in agriculture but also in refrigeration units on trucks. Red diesel carries a significant tax advantage, yet there are no controls or restrictions on emission limits from engines powered by red diesel. It is estimated in London there are 10,000 refrigeration vehicles a day that use red diesel and if this source of pollution was removed it would be the equivalent of removing 300,000 diesel vehicles from the London road network.

Finally the CIEH is calling for a new Clean Air Act as they feel the old one no longer deals with current issues.

## **Birmingham's response**

Birmingham is considering how Birmingham's CAZ will work. The exact location of the zone is not yet known, but it is expected to cover at least part of the city centre. The types of vehicle which could be charged to enter have also not yet been decided. A full local public consultation is likely to take place in 2018.

In preparation Birmingham are proposing to introduce a change to its taxi licensing policy. The consultation opened on 1 March and is seeking the views of licensed hackney carriage and private hire vehicle owners, drivers, operators and members of the public. The consultation closed on 24 May 2017 and the final outcome is expected later in 2017.

The draft policy sets out proposals to:

- Set deadlines for vehicles to meet the emission standards (Euro 4 for petrol vehicles and Euro 6 for diesel vehicles) starting from 2017.
- Introduce an age policy that will take effect in 2021 of 14 years for hackney carriages and 8 years for private hire vehicles.
- All vehicles to be ultra-low emission (ULEV) vehicles by 2026.
- All of its licensed hackney carriages and private hire vehicles to be zero-emission vehicles by 2030.
- The draft policy also highlights the limited choice for suitable ultra-low emission vehicles on the market that are wheelchair accessible so is proposing a change in policy to have a mixed fleet ("London styled" cabs and saloon vehicles").

Taxi drivers have raised concerns saying the cost of either buying an electric car or converting their vehicles to run on the more environmentally friendly liquid petroleum gas could prove prohibitive and force hundreds out of business.

The Council has responded to these concerns and advised drivers that the Office for Low Emission Vehicles (OLEV) has grants available of up to £5,000 for private hire drivers and up to £7,500 for hackney carriage drivers if they change their vehicle for a new ULEV vehicle. This is called The Plug-in Car Grant or PICG.

Birmingham have also recently been awarded funding from the OLEV to introduce 197 electric taxi charging points, all of which will offer fast or rapid charging facilities for hackney carriages and private hire vehicles. Electric vehicles will be exempt from charges in a Clean Air Zone

<https://www.gov.uk/plug-in-car-van-grants>

Birmingham is also in talks with vehicle manufacturers and operators about ways in which they can purchase fleets of ULEV vehicles to hire to drivers.

Funds have also been made available to convert 63 hackney carriages from diesel to LPG, which produces very low levels of pollution and will apply for further funding if the Department for Transport makes it available. These LPG converted vehicles will be licensable until 2021 under the proposed plan. Owners of hackney carriages that have the LPG conversion are required to pay the VAT element of the cost, which is approximately £1,300.

### **York's response**

York feel they are well ahead of the national picture in terms of how they have developed their air quality improvement plans and are seeing significant improvement in air quality pollution levels across the city in general.

In contrast to the concerns of the CIEH, York feels, the argument for local authorities, rather than central government, developing air quality strategies is that each city has its own challenges. York felt a CAZ mechanism for entering the city would not work for them. They felt by allowing people or companies that could afford to pay the levy and as such continue to use the most polluting vehicles would not make much overall difference and that the policies in York needed to be phased in over time and simply prohibit the more polluting vehicles.

Over the years the population of York has grown significantly which inevitably has resulted in more cars. In 2012 York Council started to develop an overarching low-emission strategy that not only looked at transport, energy and planning but also procurement and the way lives were lived in the city. The strategy was developed to look at all issues not just trying to solve problems in piecemeal fashion.

One of the first steps taken was to identify the source of the pollution. The findings identified cars as being a relative low source of pollution and also HGVs as they were frequently replaced in comparison to some other commercial vehicles. However, buses, which made up of only 3 per cent of the traffic were actually responsible for a third of the pollution.

A blanket ban on buses was not practical so a matrix was drawn up which placed the different busses into different categories depending on how frequently they visited the city. The Council is working with the bus operators, targeting the most polluting vehicles in real terms. For example, whilst they would like to replace the older buses - a very old environmentally unfriendly bus that is driven twice a day into the city from outlying villages would be pumping less noxious fumes into the atmosphere per day than a Euro 4 bus that goes into the city 10 or 12 times a day. Therefore for economics and community service reasons more effort was put into upgrading the Euro 4 buses rather than ban the more polluting Euro 2 buses. To date many buses used in the city are now electric with help from Government funding.

Other initiatives have included schemes to assist HGV companies to improve fuel efficiencies, cut emissions and improve logistics and looking at methods for the provision of freight trans-shipment infrastructure and have plans for an outer city freight transmission centre linked to a natural gas refueling facility where larger lorries can pull off and load their goods onto smaller cleaner vehicles which can then drive into the city.

As for cars, about three years ago financial incentives were put in place for York's 80 or so taxis to encourage drivers to switch to low emission vehicles. This year a new taxi licensing scheme came into force requiring any new or upgraded taxis to be ultra-low emission, Euro 4 petrol or Euro 6 diesel.

Council employees are also encouraged to use low-emission cars when on Council business.

For domestic vehicles the Council has used the planning process to fund communal pay-as-you go charging points and have encouraged developers to build properties with charging points.

Charging points have also been installed in to all the cities and other major carparks as well as some local hotels, bed and breakfast and leisure facilities.

York Council offers a consultancy service to other local authorities that are facing similar problems to that of York.

The Council prides itself on how it has worked with bus companies through this ongoing green transition and how it has helped firms to access to funding to help with financing.

## **Air Quality in the Warwick District**

Within Warwick District, air quality is generally good. However there are locations in the town centres where nitrogen dioxide levels currently exceed the national objective. This has led to the Council declaring five air quality management areas (AQMAS) with on-going monitoring in these areas.

There are currently AQMAS declared in Warwick town centre and Coventry Road; Warwick, Leamington Spa and 2 small AQMAS in Kenilworth.

Vehicle emissions are the cause of nitrogen dioxide levels exceeding air quality objectives in all AQMAS and our Air Quality Action Plan was updated in 2015 which has enabled us to take forward a number of measures in pursuit of improving local air quality:

## **Traffic Management & Smarter Travel**

One of the key groups of measures relate to those being implemented on the key transport corridors, which have been prioritised by Warwickshire County Council. Good progress is being made in relation to these proposals, with many of the detailed measures having some air quality impact. Detailed proposals are set out for 11 main corridors / areas, many of which align with AQMAS in the district. Each of the 11 areas include specific measures for junction / highway improvements, walking and cycling improvements, Park and Ride provision, bus priority measures as well as behavioural change measures. Most work has been undertaken on the A452 Europa Way 'Sustainable Spine' corridor which is the key route from the M40 in Leamington Spa and Warwick. Proposals are being worked on and funding being sought from large scale developments currently coming forward.

## **Development Control**

The measures being implemented through planning are also successfully moving forward. Planning applications are routinely being checked by Environmental Health Officers and air quality assessments requested where relevant. Mitigation, based on Warwick District Council's Low Emissions Strategy is also routinely requested. In addition, an air quality assessment of the impacts of Local Plan development has been

undertaken, which goes some way to assessing the potential cumulative impact of development outlined in the Local Plan.

### **Promote Low Emission Vehicles and Infrastructure**

Environmental Health Officers are using our Low Emission Strategy Guidance to require new developments to provide electric vehicle charging points and ensure a more widespread infrastructure for low emission vehicles.

In response to the commitment for WDC to move our fleet to electric vehicles where practicable, WDC now have 5 electric vehicle pool cars, 4 are routinely used by the housing department and 1 by planning.

The UK Government previously identified five cities outside of London where the implementation of a Clean Air Zone (CAZ) may become mandatory. These were Birmingham, Leeds, Nottingham, Derby and Southampton. Under DEFRA's latest draft UK Air Quality Plan for tackling nitrogen dioxide (May 2017), thirty-one local authorities have now been identified as possibly having roads that will not achieve the legal limits for nitrogen dioxide (NO<sub>2</sub>) and must explore further measures to improve air quality. Warwick District Council has not been identified within DEFRA's latest air quality modelling data therefore a mandatory CAZ for the district seems unlikely.

A study completed for Warwick District Council in 2013 examined source apportionment for air pollution in and around our existing air quality management areas. This study identified diesel passenger vehicles, diesel light goods vehicles, and buses to be the largest contributors to adverse air quality in the district. The data from this study was not specific enough to identify the contributions made by taxi vehicles alone within the district. It is important to note that the introduction of a taxi CAZ or similar scheme is likely to provide only negligible improvements in air quality due to the small number of vehicles involved (approximately 397). If, however, the scheme was publicised as a part of Warwick District Council's Air Quality Action Plan then it could contribute positively towards behavioural change in the wider population by further raising the profile of air quality. If necessary, a detailed assessment of the direct air quality improvements from implementing a taxi CAZ could be commissioned, however, the costs for this have not currently been established.



## **Further considerations for air quality standards and taxi licensing policy**

WDC is responsible for licensing taxis and private hire vehicles in the district. A licence is required before a vehicle can be used as a taxi or private hire vehicle. The vehicle must meet a local specification policy before it will be accepted as being suitable to be licensed by this authority.

Currently WDC require all private hire vehicles to be less than 5 years old from the date of first registration, when the vehicle is submitted for licensing. Once licensed, the vehicle can remain licensed subject to the vehicle continuing to meet the required standards and the license not being allowed to expire. The Council requires that all new licence applications for Hackney Carriage vehicles must be for a brand new, side loading wheelchair accessible vehicle.

Currently there are no requirements for a set emission standard.

It is evident that the taxi licensing function is only one means of working towards a cleaner Warwick in terms of reducing air pollution. However, unlike York, currently we do not have the necessary data to identify which are the most polluting vehicles in our air quality management areas therefore we have limited justification on how much impact any control on taxis would have in real terms. Having justification for a change in policy is important, especially where those changes are likely to impact significantly on individual businesses in the district.

A significant change in policy requires consultation and engagement with the trade to allow those affected opportunity to comment on any proposals. Consultation would also be required with any other stakeholders. At each juncture the local authority would need to take into consideration any comments received and respond accordingly before putting in place any new requirements.

It is important that any changes in policy, especially changes that can have significant financial impacts on business in the area as well as individuals, should have long term aim. To lessen the impact and allow time for financial adjustment there would need to be a gradual implementation towards an improved fleet.

Failure to properly plan and imposing specific emission standards on taxis could result in the undesirable outcome that private hire vehicles may seek to register with a neighbouring local authority that may not have similar policies in place. This means that private hire operators (45% of

current fleet) could continue to operate within the district whilst avoiding the need to upgrade or replace their vehicle to comply with the updated vehicle requirements. A possible way to minimise this would be to explore the potential for a county-wide initiative through the Coventry and Warwickshire Air Quality Alliance which includes membership of the district and borough Councils of Warwickshire.

The introduction of a taxi CAZ could also inadvertently lead to a shortage of taxis within the district as a result of drivers unwilling or unable to transition to cleaner or low emission vehicles. This could negatively affect local residents that do not own or have access to a private vehicle by reducing the transport options available to them.

### Current fleet stats

Vehicle by fuel type:

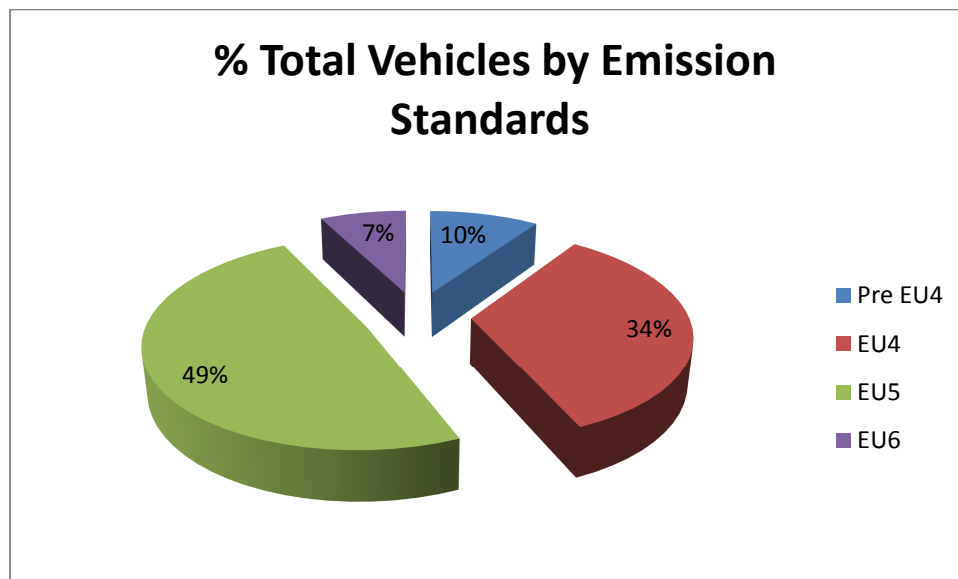
Number	Diesel	Petrol	Diesel-Electric	Electric	LPG
Hackney Carriage	213	1	1	0	0
Private Hire	177	3	0	1	1
Total	390	4	1	1	1

Vehicle by Age:

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Hackney Carriage	2	1	0	5	10	8	8	7	13	14	19	17	26	29	13	19	15	9	0
Private Hire	0	0	0	0	1	0	3	10	11	6	12	26	27	22	24	18	12	8	2
Total	2	1	0	5	11	8	11	17	24	20	31	43	53	51	37	37	27	17	2

Vehicles by European Emission Standards:

	Pre EU4	EU4	EU5	EU6
Hackney	34	70	97	14
Private Hire	4	65	97	16
Total	38	135	194	30



## Proposals

### Stage one

- Explore the potential for a county-wide initiative through the Coventry and Warwickshire Air Quality Alliance which includes membership of the district and borough Councils of Warwickshire.
- Explore possible sources of funding to undertake a study of taxi vehicle emission contributions to air quality in the district and possible air quality benefits from introducing a taxi clean air zone or similar scheme.
- Review the level of electric vehicle infrastructure required in WDC area (charging points) as part of Warwickshire County Council's electric vehicle recharging strategy, to include provision of rapid or fast charging points in suitable locations for taxis.
- Work with the trade to identify government funding opportunities to support ULEV taxis and private hire vehicles.
- Work with stakeholders in the trade in finding methods of reducing vehicle emissions and setting realistic timeframes.
- Ensure the continued implementation of Warwick District Council's air quality action plan and low emission strategy guidance to improve air quality and increase availability of low emission vehicle infrastructure within the district.
- In partnership with the licensing technical group, agree uniform standard proposals across the county.

### Stage two

- Consider a Private Hire and Taxi Policy Vehicle Emission Policy.
- Public consultation with interested parties on findings and proposal, with particular emphasis on setting realistic time frames for fleet development.

- Setting of age limits
  - Set emission standards
  - Electric/Hybrid Vehicles only
  - Fleet colour options for environmentally friendly vehicles
  - Make provision for electric/hybrid saloons for hackney carriage use.
- Investigate the potential for providing for an environmental levy or reducing license fees for cleaner vehicles.