

**BIRMINGHAM CITY COUNCIL**

**REPORT OF THE ACTING DIRECTOR OF REGULATION AND ENFORCEMENT  
TO THE LICENSING AND PUBLIC PROTECTION COMMITTEE**

**15 FEBRUARY 2017**  
**ALL WARDS**

**PROPOSALS FOR VEHICLE EMISSION STANDARDS  
FOR HACKNEY CARRIAGE AND PRIVATE HIRE VEHICLES**

**1     Summary**

- 1.1     In April 2016 your Committee considered a report on the consequences for the taxi and private hire trade of the introduction of a Clean Air Zone in Birmingham which is required to enable the City to meet European air quality standards. The City must demonstrate that it meets the standard for nitrogen dioxide levels as soon as possible and by 2020 at the latest.
- 1.2     The UK Government has mandated Birmingham to create a Clean Air Zone as one of the measures needed to ensure that Birmingham's air quality meets EU standards. The Government expects Licensing Authorities to use Licensing Policy to ensure that hackney carriages and private hire vehicles meet Clean Air Zone emission standards, which are Euro VI / 6 for diesel engines or Euro 4 for petrol engines.
- 1.2     In April 2016 your committee resolved to ask officers to produce a draft policy that would be applied to the licensing requirements for hackney carriage and private hire vehicles in order to meet the Clean Air Zone standards. Since then, the Council has set up an Air Quality Members Steering Group and an Officers' Delivery Group to coordinate a range of measures to improve air quality, of which this draft policy is one.

**2     Recommendations**

- 2.1     That subject to the views and comments of your Committee, officers be instructed to consult with the hackney carriage and private hire trade on the proposed emissions policy for hackney carriage and private hire vehicles detailed in sections 8 and 9 of this report and which are set out in Appendices 1(a), 1(b) and 2 of the report.
- 2.2     That the consultation extends for a period of 4 weeks and that officers report the results of the consultation to this Committee at the earliest opportunity.
- 2.3     That outstanding minute 651 (ii) be discharged.

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### 3. Background

- 3.1 In December 2015 the Government announced that Birmingham would be one of six cities that would be required to put in place a Clean Air Zone in order to improve air quality. Those cities are London, Birmingham, Leeds, Nottingham, Derby and Southampton. That decision was reported to your Committee on 17<sup>th</sup> February 2016.
- 3.2 The standard for air quality is set by the Ambient Air Quality Directive. This sets limit values for a range of pollutants at a level to protect public health. Birmingham is non-compliant with regards to the annual average value for Nitrogen Dioxide (NO<sub>2</sub>) (the annual mean).
- 3.3 The original deadline for compliance was January 2010 which was extended by the EU through derogation to January 2015. Plans were submitted by the UK Government to the EU which was challenged by ClientEarth, an organisation of activist environmental lawyers. A hearing in the Supreme Court resulted in a ruling that confirmed that Government's plans would not comply with the Directive.
- 3.4 The Supreme Court ruling catalysed the EU to commence infraction proceedings against the UK Government and further, the Supreme Court directed the UK Government to prepare an updated action plan by the end of 2015, setting out the route to compliance in the shortest time possible.
- 3.5 To inform this process the Department for Environment, Food and Rural affairs (Defra) and the Department for Transport (DfT) undertook consultation with local authorities to build up an understanding of committed interventions which would address air quality together with an understanding of other potential interventions which were planned or might be required to reach compliance. This included a discussion around what additional support might be needed from Government to enable these changes to happen.
- 3.6 If the UK Government does not satisfactorily demonstrate compliance, fines could be levied by the EU against the UK Government and, whilst the exact amount is unclear, values being considered are in the region of £300 million.
- 3.7 Under the Environment Act 1995 all UK Councils have the obligation to comply with emission limits drawn from the transposed Directive, one of which is an annual average value for NO<sub>2</sub> (the annual mean).
- 3.8 Birmingham, like many Councils, does not fully comply with this limit value and in response Government have reminded us "of the discretionary power in Part 2 of the Localism Act under where the Government could require responsible authorities to pay all or part of an infraction fine."

- 3.9 Once again, whilst the exact amount is unclear, assessment suggests Birmingham could be fined in the region of £40-100 million with a figure of £60 million being suggested.
- 3.10 With the internalisation of the Public Health service, Councils now have duties under the Public Health Outcomes Framework (PHOF), two of which are air quality based. Specifically there is the indicator covering the *Fraction of mortality attributable to particulate air pollution*. This specifically relates to fine particles but as the source is mostly the same as for NO<sub>2</sub> i.e. road transport, benefits gained under either regime will provide benefits to the other.

#### 4 Government's Proposal – A Clean Air Zone for Birmingham

- 4.1 A Clean Air Zone (CAZ) is an area where only the cleanest vehicles are encouraged and action is focussed to improve air quality. For Birmingham the CAZ will restrict access to buses, coaches and heavy goods vehicles (HGVs) that are less than Euro VI for NO<sub>x</sub>, and to vans, Hackney carriages and private hire vehicles that are less than Euro VI/6 (diesel) and Euro 4 (petrol) for NO<sub>x</sub>.
- 4.2 This means that vehicles which do not meet the required standard will be precluded from accessing the zone or be subject to a charge should they enter the zone.
- 4.3 Current thinking with regards to the zone is that it will likely need to encompass the middle ring road (A4540), as this is a 'natural' cordon and the problem areas lie within, although the exact location of the CAZ has yet to be determined.
- 4.4 The CAZ will be one of a range of measures to help the City achieve the air quality improvements that are required of it by 2020. These will include a combination of improved signage and rerouting, switching to different forms of transport (e.g. use of Park and Ride), road and infrastructure improvements, and use of alternative fuels such as Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), Electric and Hydrogen Fuel Cell vehicles. Some of these items are already under consideration by the City Council.

#### 5. Steps Already Taken

- 5.1 Work has already begun in Birmingham to address vehicle emissions from hackney carriages and private hire vehicles. We have been successful in obtaining £0.5m from the Department for Transport's (DfT) Clean Vehicle Technology Fund to pay for the conversion of 63 hackney carriages to run on LPG. The funding has paid for a solution that involves new Vauxhall engines that are converted to run on LPG being put into hackney carriages. LPG has zero NO<sub>2</sub> emissions.

5.2 The City has also put in a bid to the DfT for a scheme to install 197 electric charging points at key locations around the city to enable ULEV (Ultra Low Emission Vehicles) and electric hackney carriages and private hire vehicles to recharge. There are several different types of electrically powered vehicles:

- **Conventional hybrids:** Hybrids burn fuel in an internal combustion engine (ICE) which drives the wheels via a gearbox. A battery charged by regenerative braking stores energy which is used to drive an electric motor and therefore the vehicle for a short distance (usually < 1 mile).
- **Plug-in hybrid electric vehicle (PHEV):** Combine a battery, electric motor and ICE like a conventional hybrid, a larger battery provides a longer electric only driving range. The battery can be recharged from a charge point reducing the amount of fuel consumed over a given distance. The vehicle reverts to petrol or diesel power when the battery charge is depleted.
- **Extended-range electric vehicle (E-REV):** Also combines a battery, electric motor and an ICE, however, unlike a PHEV the electric motor always drives the wheels. The ICE acts as a generator when the battery is depleted. The vehicle can also be recharged from a charge point. The battery in an E-REV battery is usually larger than in a PHEV, providing longer electrically driven range.
- **Battery electric vehicle (BEV or Pure-EV):** Powered only by electricity, a pure-EV has a larger battery than an E-REV or a PHEV and does not have an ICE.

## 6. Birmingham's Hackney Carriage Fleet

6.1 Officers have attempted to categorise licensed vehicles according to their age and Euro emissions classification, although the correlation is not always exact. The figures provided for hackney carriages and private hire vehicles are our best estimates at this stage without carrying out a more detailed analysis.

6.2 The current licensing policy allows vehicles up to 14 years old to be licensed, although vehicles older than 14 can still be licensed if they meet the exceptional condition test as part of the annual MOT. Consequently many of our vehicles are older than 14. There are (at the time of writing) 1,233 licensed vehicles. The average age of the fleet is 13.6 years with only 392 vehicles (32%) less than 10 years old.

6.3 No vehicles meet the most recent Euro VI/6 emissions standard and only 4% meet the Euro 5 standard introduced on 01.01.11. 21% meet Euro 4; 33% Euro 3; 2% Euro 2; 16% Euro 1 and 25% predate the Euro standards completely. The taxi fleet is, therefore, likely to be a major source of Particulate Matter and NOx emission in Birmingham.

## 7. Birmingham's Private Hire Fleet

- 7.1 Vehicles are only licenced for the first time if they are less than eight years old. Vehicles over eight years old must pass the Supplementary Test Plus on an annual basis before their licence can be renewed. At the time of carrying out this analysis there were 4,200 private hire vehicles licensed by Birmingham City Council. The average age of a private hire vehicle in Birmingham is 11.1 years old based on these numbers, which is considerably older than in many other cities in the UK.
- 7.2 Only 2% of the private hire vehicles are 2 years old or newer, and 4% are 3 years old or newer, indicating that the majority of vehicles are bought second hand. 16% of the fleet meets the Euro 5 emissions standard; 51% Euro 4; 32% Euro 3; and 2% Euro 2.

## 8. Proposed Medium-Term Policy for Birmingham Licensed Vehicles

- 8.1 Any policy that is agreed should aim to deliver the greatest benefits for air quality. This means that earlier implementation of standards will achieve better health benefits. Set against this is the recognition that changing a vehicle is a major investment decision for a driver and they will want as much notice as possible of intended changes to policy that will require them to replace their vehicles.
- 8.2 Birmingham has collaborated with the Energy Saving Trust to look at how we can address Clean Air Zone requirements given that the City is will need to implement the CAZ by 2019 at the latest. We must demonstrate by 2020 that we meet the necessary air quality standards, but to do so, we must provide 12-months' worth of data, which is why the latest implementation date for the standard is December 2018. The feasibility study that we have worked on with the Energy Saving Trust will support our bid for Department of Transport funding to build an electric charging infrastructure in the city. That feasibility study identified that Birmingham has one of the oldest fleets of hackney carriages and private hire vehicles in the UK. Although we have notional age limits for hackney carriage vehicles of 14 years and 8 years for private hire vehicles, in practice a vehicle can continue to be licensed well beyond those age limits if it continues to pass the Supplementary Test.
- 8.3 We have such an old fleet of licensed vehicles because our lenient policy decisions in the past have been influenced by a wish to support the economic welfare of drivers. However, we are now at a point where events beyond the control of your Committee are requiring us to make decisions that will inevitably put improvements to air quality for the greater good of all citizens above the interests of individual drivers.
- 8.4 Currently there are no restrictions on vehicles relating to emissions other than to meet the MOT standard which applies to all vehicles on the road. Our age policy says that any newly licensed vehicle must be no more than 14 years old for a hackney carriage or 8 years old for a private hire vehicle.

- 8.5 We are proposing that by December 2017 for hackney carriages we would only renew licences for vehicles that meet the Euro 3 standard. This would remove from the road an estimated 530 (43%) vehicles that fall below that standard. These are the oldest and most polluting vehicles.
- 8.6 We are proposing that by December 2017 we would only renew licences for vehicles that meet the Euro 4 standard for petrol driven private hire vehicles or Euro 5 for diesel powered private hire vehicles or be ULEV. This is higher than the Euro 3 standard for hackney carriage vehicles, but it affects a smaller percentage of the private hire fleet compared to the application of the Euro 3 standard to the hackney carriage fleet. We have also taken into account the fact that there is a much larger pool of alternative vehicles available to the private hire trade that meet higher emissions standards than is available to the hackney carriage trade. The effect of this would be to remove from the fleet an estimated 1,428 vehicles (34%).
- 8.7 From December 2018 we are proposing that to replace any licensed vehicle the replacement must meet the Euro 6 standard for all hackney carriages or be Ultra Low Emission or be Ultra Low Emission for private hire vehicles. This is higher than the statutory minimum standard required by the CAZ of Euro 4 for petrol engines, but it demonstrates the City's ambition to improve air quality in the shortest possible time.
- 8.8 This would mean that none of the hackney carriage vehicles that are currently licensed would be able to retain their licences beyond December 2018 (apart from any that have converted to LPG through the ULEV scheme, which at the moment is limited to a maximum of 63).
- 8.9 The above proposals are represented in a table at appendix 1(a)
- 8.10 These proposals remove the age of a vehicle as being the determining factor as to whether it can be licensed and replace it with the emissions standard of the vehicle. However, the emission standards set by Government are likely to increase with time. To help this policy to remain effective and up to date it is proposed to incorporate an age policy into it that would run parallel to the emissions standards, but on the basis that if the age limit conflicted with the emissions standard, the emissions standard would always take precedence.
- 8.11 At the moment we are in the process of converting up to 63 hackney carriages to run on LPG. One of the criteria for the conversion is that the vehicle cannot be more than 15 years old at the time of conversion and that the vehicle must be capable of remaining on the road for at least 5 years after the conversion. In 2021 these vehicles will be 20 years old. We are proposing that in 2021 an overarching age limit should apply to all vehicles which would be the current age limits of 8 years for PHV and 14 years for HCV, but without exception. Not only will this ensure that vehicles will be replaced more frequently and therefore they will incorporate more modern technology and have higher emission standards, it will also guard against the situation we now find ourselves in with one of the oldest fleets of licensed vehicles in the country.

## 9. Proposed Long Term Policy

9.1 The above proposals are all steps towards the ultimate objective of achieving a fleet of zero emission (all-electric or hydrogen fuel) licensed vehicles by 2030. As part of an incremental approach towards that objective it is proposed to require all licensed vehicles to be Ultra Low Emission (ULEV) by 2026. Ultra-Low Emission Vehicles include:

- Battery electric vehicles.
- Plug-in hybrid electric vehicles (vehicles with an electric motor capable of a range of more than 10 miles which can be used in tandem with an internal combustion engine). An example of a plug-in hybrid is the Toyota Prius, which we already license.
- Extended-range electric vehicles(vehicles which only use an electric motor for propulsion with a battery that can be recharged on-the-move by a small on-board petrol or diesel generator).

9.2 The proposed long term policy is set out in a table at appendix 1(b).

## 10. Mitigation for Vehicle Owners

10.1 The financial effects will be felt hardest by hackney carriage drivers. None of the vehicles that are currently licensed will meet the CAZ emission standards. Those that take up the option of the LPG conversion will meet the standard. Drivers have to pay the VAT element of the price, which is approximately £1,300. The London Taxi Company (LTC) based in Coventry has invested £300m in a brand new factory to develop and build an extended range all new electric taxi which contains a small petrol engine that can be used to top up the battery. It will go on sale at the end of 2017.

10.2 Private hire drivers will be less adversely affected because 67% of their vehicles already meet the Euro 4 standard for petrol engine vehicles and there is already a range of electric or hybrid vehicles available to them as saloon cars which could be licensed and which would not be as expensive as purpose built hackney carriages.

10.3 Anyone buying an Ultra-Low Emission Vehicle, including taxi and private hire drivers, is entitled to claim a government grant from OLEV (the Office for Low Emission vehicles). The grants are up to a maximum of £5,000 for private hire vehicles and up to £7,500 for hackney carriages. The grant is designed to bridge the gap between the cost of a conventional vehicle and the extra cost of an electric vehicle.

## 11. Consultation

- 11.1 The subject of vehicle emissions standards has been discussed on a number of occasions at trade liaison meetings where officers from Transportation have briefed trade reps on the introduction of low emission vehicles. Specific consultation meetings have been held with hackney carriage drivers and private hire drivers as part of the Council's bid for OLEV funding for an electric charging infrastructure to establish their patterns of vehicle usage, where they would prefer charging points to be and whether they would consider an electric vehicle when they change their current vehicle.
- 11.2 Whatever policy your committee agrees to at today's meeting will be consulted on widely with vehicle owners and drivers. The results of the consultation will be reported back to your committee before final approval of the policy is agreed.
- 11.3 A document has been prepared and is attached as appendix 2, for circulation amongst hackney carriage and private hire owners, drivers and operators to explain our proposals and invite comment. This will be published with the tables in appendices 1(a) and 1(b) with the approval of your Committee, subject to any alterations that the Committee requests.

## 12. Implications for Resources

- 12.1 The cost of replacing a vehicle rests with the owner of the vehicle, not the Licensing Authority. Although it has been suggested that the Licensing Authority could consider free or discounted licences to encourage the take up of cleaner vehicles, this is not thought to be legal. The only money available would be that contained in the hackney carriage and private hire ring fenced carry forward surplus, but there are restrictions on the use that can be made of licence fees; namely for the administration of the licence or to ensure compliance with the licence conditions. Subsidising the cost of replacement vehicles would not fit into those categories, and in any event, the cost of a licence, which is £124 for a hackney carriage and £128 for a private hire vehicle, is unlikely to persuade a driver to change their vehicle when the total cost might be many thousands of pounds.
- 12.2 A consequence of the move to a policy requiring vehicles to meet higher emission standards will probably be a reduction in the number of licensed vehicles. This will result in a reduction in licence fee income, but at this stage it impossible to predict with any accuracy.

## 13. Implications for Policy Priorities

- 13.1 The management of air quality contributes to fulfilling the policies of Birmingham 2026: Our vision for the future, and supports the strategic outcomes set out in the Council Business Plan for 2016+, specifically to 'stay safe in a clean, green city'.



14. Public Sector Equality Duty

- 14.1 Air pollution has the potential to affect all members of society but can have specific impacts on pregnant women and the unborn child. The concerns about such are widely known and health advice is issued accordingly by relevant medical professionals.
- 14.2 The approach taken to address air quality is such as to protect all members of society and does not discriminate against any group.
- 14.3 The economic impact that these proposals will have on vehicle owners will apply equally to all drivers, regardless of their demographic profile, and as such it is unlikely that an Equality Analysis would be required.

**ACTING DIRECTOR OF REGULATION AND ENFORCEMENT**

Background Papers: Nil

## APPENDIX 1(a)

### Summary of Proposed Medium-Term Policy

		Existing Policy	Policy from December 2017	Policy from December 2018
<b>Minimum Vehicle Requirements and Standards</b>	New or replacement vehicles	Maximum age of 8 years for PHV  Maximum of 14 years for HCV  Basic MOT requirements applicable to all vehicles for emissions	Euro 6 or ULEV for HCV  ULEV for PHV	Euro 6 or ULEV for HCV  ULEV for PHV
	Existing licensed vehicles	No age limit for PHV or HCV provided the exceptional condition test is met  Basic MOT requirements applicable to all vehicles for emissions	Euro 3 for HCV  Euro 4 for all petrol vehicles and Euro 5 for all PHV diesel vehicles or ULEV	Euro 6 for all diesel vehicles or ULEV  Euro 5 for all petrol vehicles or ULEV

**APPENDIX 1(b)****Summary of Proposed Long-Term Policy**

		Policy from 2021	Policy from 2026	Policy from 2030
<b>Minimum Vehicle Requirements and Standards</b>	New/Replacement Vehicles	No HCV older than 14 years No PHV older than 8 years All vehicles to be ULEV	All vehicles to be ULEV	All vehicles to be zero emission
	Existing vehicles	No HCV older than 14 years No PHV older than 8 years Euro 6 for all diesel vehicles or ULEV Euro 5 for all petrol vehicles or ULEV	All vehicles to be ULEV	All vehicles to be zero emission

**Key to abbreviations used in tables:****PHV** Private Hire Vehicle**HCV** Hackney Carriage Vehicle**LPG** Liquid Petroleum Gas

**ULEV** Ultra-Low Emission Vehicle (includes LPG). A ULEV vehicle is defined as having a pure electric engine, a plug-in hybrid engine or a car with CO2 emissions below 75 g/km

### Birmingham City Council

#### **Proposals to introduce Emission Standards for Taxi and Private Hire Vehicles**

This is an initial consultation to seek the views of licensed hackney carriage and private hire owners, drivers and operators on proposals to introduce emission standards for vehicles.

#### **Why is the Council doing this?**

You may be aware that there has been a lot of media coverage in recent months about pollution levels in the UK. The main causes of pollution in towns and cities are Nitrogen Oxide and Nitrogen Dioxide (referred to as Nitrogen Oxides), which are produced in the emissions from diesel vehicles. Air quality in city centres is a major public health concern. Air pollution is believed to be responsible for up to 900 premature deaths in Birmingham every year. Diesel produces Nitrogen Oxides and minute pieces of carbon known as 'particulates' that are harmful to health. Although invisible to the naked eye, this form of pollution is very serious and some of the people who are most affected by it are motorists who spend long hours behind the wheel, such as taxi and private hire drivers.

In 2015 and 2016 the UK government was taken to court by an environmental pressure group called Client Earth. The Supreme Court ruled that the government's plans to improve air quality were inadequate. It has 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.

#### **How will the Council improve air quality?**

The Government has told Birmingham, London, Leeds, Nottingham, Derby and Southampton that they must introduce **Clean Air Zones** (CAZ) to improve air quality in their city centres by 2020. In order to demonstrate that air quality has improved by 2020 Birmingham must have a CAZ in place and is aiming to do so by 2019, or as soon as possible before then, to be able to collect the necessary statistical data to prove that air quality has improved.

A CAZ is an area where a range of measures are put in place to control pollution. These can include redirecting the most polluting vehicles away from the worst pollution hotspots, encouraging motorists to use park and ride schemes, making improvements to roads to reduce congestion, and encouraging the use of less polluting fuels such as Liquid Petroleum Gas (LPG), Compressed Natural Gas (CNG), hydrogen fuel cells and electrically powered vehicles.

The Government expects local authorities where a CAZ has been mandated to use a range of measures to achieve improvements to air quality: these include the use of taxi and private hire licensing policy to limit the use of vehicles that fail to meet the prescribed vehicle emission standards.

### **What standards will be applied?**

The Department for the Environment, Food and Rural Affairs (DEFRA) has set 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 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.

### **Where will the Clean Air Zone be?**

The most polluted locations in Birmingham are in the city centre. Therefore it is likely that the CAZ will encompass the city centre, although the exact boundary has yet to be determined. Vehicles that do not meet the standard will not be allowed to enter or will pay a charge if they do. The Council has not yet agreed what the charge will be. The timescales that have been set by Government are short, but we have set out below a proposed policy for vehicle licensing covering the medium and long term. The overall objective of the policy is to improve air quality by removing polluting vehicles from the road and encouraging the use of electrically powered vehicles (also known as Ultra Low Emission Vehicles (ULEV)).

Birmingham City Council has applied to the Government for funds to install 197 electric charging points across the city for the use of taxis and private hire vehicles.

### **What help is available to drivers to update their vehicles?**

We recognise that the policy will need many drivers to update their vehicles. 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. <https://www.gov.uk/plug-in-car-van-grants>

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

We have made funds available to convert 63 hackney carriages from diesel to LPG, which produces very low levels of pollution. We 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. We are continuing to look for other sources of government support.