

TITLE OF REPORT: Air Quality Grant: Improving emissions from Hackney Carriage and Private Hire Vehicles

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Purpose of the Report

1. Gateshead Council bid for and received Air Quality Grant funding in January 2017 from the Department for Environment, Food and Rural Affairs (DEFRA) to support the development and implementation of a range of measures that would help deliver compliance with UK air pollution targets in the shortest possible time.
2. One project area was to consider opportunities for improving emissions from Hackney Carriage (HC) and Private Hire Vehicles (PHVs) licensed by Gateshead Council via changes to licensing policy. This coincided with the Regulatory Committee's wish for a wider review of Vehicle Licensing Policy (including emission standards) which was reported on 14 December 2016.
3. AECOM were commissioned in June 2017 to undertake a review of Vehicle Licensing best practice as well as an associated consultation with HC & PHV drivers and PHV operators. Learning from the experience and best practice elsewhere will be vital in determining lessons for potential application in Gateshead. This report provides an update to the Regulatory Committee on the progress of the study.

Background

1. Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions.
2. The single largest contribution to poor air quality arises from the use of motor vehicles on our road networks. There are two pollutants associated with road transport that cause problems with health in Gateshead. They are nitrogen dioxide (NO₂) and particulate matter less than 2.5 microns in size (PM_{2.5}) - both have short and long-term effects on human health. NO₂ is a colourless gas released from motor vehicle exhaust systems when fuels are burned. PM_{2.5} is also linked to exhaust systems, but is also released from braking systems and tyre wear.
3. Poor air quality places an added burden on the health service and impacts upon national productivity. This has been estimated by DEFRA as an annual cost of £15bn¹ and further costs of congestion have been estimated at up to £307bn over 2013-30². It is estimated that poor air quality is responsible for around 144 deaths annually in Gateshead. There is no safe level of exposure to air pollution, the effects of which build up over a lifetime.
4. Gateshead Council declared an AQMA in April 2005 within Gateshead Town Centre. This was extended to the south along Durham Road in April 2008. This remains in force.
5. Individuals can take steps to reduce their exposure to air pollution and to reduce their personal impact on air quality and the environment, for example through the transport they use and the routes they travel. However, actions by individuals alone will not be sufficient to eliminate these

¹ DEFRA, 2010

² INRIX, 2014

problems particularly to help those living in the most deprived areas, where levels of air pollution may be greater and where the death rates from cancer and cardiovascular diseases can be higher. Furthermore, individual choices are not made in a vacuum but are shaped by the environment itself, by the quality and availability of public transport, by the provision of safe routes for cycling and walking, by how jobs, goods and supplies are distributed and many other wider factors.

6. Gateshead Council were informally notified in February 2017 by DEFRA that they along with Newcastle City Council and North Tyneside, were to be named in the National Air Quality Plan for Nitrogen Dioxide as local authorities where it was anticipated that there would be continuing exceedances of European air quality limits beyond 2020. All three authorities were formally issued with a mandatory direction by DEFRA in July 2017, to introduce a Clean Air Zone (CAZ) and undertake a feasibility study to identify options that will deliver compliance with the legal limits of nitrogen dioxide in the shortest possible time and before 2021.
7. A CAZ defines an area where targeted action is taken to improve air quality. The aim of the zone is to address all sources of pollution and reduce public exposure to them. A CAZ aims to accelerate the transition to low carbon, low emission transport.
8. There are four classes of CAZ.

Clean Air Zone class	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 cars

9. All of the classes require focus on the provision of HCs and PHVs.
10. DEFRA has indicated that current modelling indicates that a category C CAZ scheme may be needed to bring about the change necessary to improve air quality in Gateshead, Newcastle and North Tyneside.
11. In order to minimise health risks and the wider costs of air pollution, there is a need to change the way many aspects of society operate. These are long-term changes that will require a sustained approach. The greater responsibility therefore rests on national and local government, rather than individuals, to tackle air pollution on behalf of those they represent, through action to change the environment in which people live and work.
12. The DEFRA Direction has provided a pressing need for action to be 'stepped up' to tackle air pollution 'exceedances' in some parts of our area. This includes areas of the A1 in Dunston and Swalwell as well as the Tyne bridge. The feasibility study referred to in paragraph 5 sets out how we will develop a plan for this with our partners in Newcastle and North Tyneside. The plan will address the issue of air quality across the whole area, not just the specific exceedance sites identified in the three local authority areas. The plan will also represent the start of a longer term journey to achieve our vision of low emissions through active travel, greater use of and cleaner public transport and reduced congestion.

13. It is acknowledged that HC and PHVs provide a vital mode of transport for communities, offering a flexible form of public transport when other modes are unsuitable or unavailable. HC and PHV trips tend to include a high proportion of short journeys concentrated in small areas, contributing significantly to total vehicle miles travelled in an area. This means that in many towns and cities, HC and PHV emissions are a key source of pollutants, especially as many are large, diesel powered saloon cars.
14. Encouraging the uptake of Ultra Low Emission Vehicles (ULEVs) amongst licensed drivers and operators can be particularly effective in improving air quality, given the long distances travelled, the concentration of HC and PHVs in built up areas and the amount of idling many HC undertake at ranks.

Euro Emission Standards

15. Since the early 1990s, new car models have had to meet increasingly stringent exhaust pollution limits, known as the Euro emissions standards, before they can be put on sale. In 1992 the 'Euro 1' standard heralded the fitting of catalytic converters to petrol cars to reduce carbon monoxide (CO) emissions.
16. Euro 6 is the current emission standard that vehicle manufacturers are required to achieve for their vehicles. This came into force on 01 September 2014 for approvals that manufacturers require to produce a new vehicle. Most new registrations were required to be for Euro 6 vehicles by 01 September 2015. The Euro 6 Emission Standard became more stringent from September 2017 with the addition of an extended on-road emission test known as Real Driving Emissions or RDE. This followed the VW emission scandal.
17. Older diesel engines are recognised as being considerably more polluting than petrol. The latest Euro 6 standards set different emission standards for diesel and petrol vehicles, but that is a reflection of the different kinds of pollutants the two fuels produce. Older diesel cars produce considerably more nitrogen oxides and particulate matter compared to the new Euro 6 standard. For example the previous standard, Euro 5 produces 67% more nitrogen oxides than a Euro 6 engine. In response to the CAZ requirements, and as part of any emission based vehicle licensing policy it is incumbent on Gateshead Council to move towards licensing significantly less polluting vehicles.
18. A proportion of vehicles sold between September 2014 and September 2015 would be Euro 5 emission standard. Under the Council's current age policy, this means that a Euro 5 vehicle purchased late in August 2015 is still legitimately eligible to be licensed until August 2018. The continued licensing of these vehicles needs to be considered in the context of point 17.
19. Consideration of the current HC and PHV fleet age profile and vehicle Euro standard would indicate that approximately **140** vehicles will potentially still be on the fleet in 2021 that are of a lower standard than Euro 6 with 97% of these being diesel vehicles. As part of a CAZ these vehicles will have to be targeted in some way.

Local Licensing Policy

20. To investigate how other councils are currently addressing licensed vehicle emissions, a review of HC and PHV licensing policies was undertaken. Initially, councils were targeted that were comparable to Gateshead in terms of characteristics, area and population. Over 50 councils in England and Wales were identified and their HC and PHV licensing policies examined. It was clear from the initial review that there are currently few examples of local councils implementing a

comprehensive suite of policies to address HC and PHV emissions. However, there were a number of councils whose HC and PHV policy was currently under review and had expressed a desire to introduce further initiatives to reduce licensed vehicle emissions in the revised policy. This suggests that a number of other councils are in a similar position to Gateshead Council.

Local Licensed Vehicle Emission Initiatives

21. Although at the local level there was a general absence of comprehensive policy addressing licensed vehicle emissions, there were examples of initiatives that could be useful to implement. Current initiatives in use by councils include:

- Discounted licence fees (e.g. Wigan Council);
- As of 01 April 2018 no longer issuing licences to diesel vehicles and capping the number of licences (e.g. Bristol City Council);
- Capping the age of vehicles (e.g. City of York Council);
- Clean Air Zones;
- Vehicle purchase incentive schemes (e.g. Southampton City Council); and
- ULEV dedicated ranks for HC (e.g. Nottingham City Council).

Unintended Effects of Interventions

22. It is important to consider all outcomes when introducing policy interventions. This is especially important when individual's businesses and livelihoods could be adversely affected. There has been concern amongst HC and PHV drivers and trade associations that with initiatives such as introducing caps on the age of vehicles, drivers would not be able to incur the costs and would be forced off the road as a result. This would not only be a loss to the drivers involved, but to the communities they service. Gateshead Council currently have an upper age policy of 8 years with the opportunity to extend the licence for a further year where the vehicle is considered to be in exceptional condition. This policy would serve to limit the length of time current licensed vehicles would remain licensed if they do not meet the standards expected by any new specification requirement but would not accelerate their replacement.

23. To ensure that all outcomes were examined, a consultation process was undertaken with local HC drivers and PHV operators. The following sections provide an overview of the consultation and its findings.

Interviewing PHV Operators and hackney carriage drivers Headline Results

24. Disappointingly, the trade (which includes the majority of PHV operators, PHV and hackney carriage drivers) have been reluctant to engage with AECOM on this project.

25. Due to the small sample size, the findings below are indicative only and caution should be used when interpreting the results.

Interim Operator Survey Headline Results

26. Two operator interviews have been completed to date; both were conducted face to face. Some initial findings from these include:

- Fleet is replaced on a rolling basis, purchasing vehicles that are sixth months old or newer. Company policy is to reduce vehicle emissions.
- Electric vehicles are not financially viable due to lack of infrastructure in place, e.g. charging points and increased purchase cost of new vehicles.
- Council Contracts are awarded to the cheapest company, so this is not an important factor.

- HC and PHVs should be given greater consideration by Council, in terms of subsidies, use of bus lanes, etc.
- Concern that Council is not supporting smaller private hire companies; potential introduction of legislation for new and renewed licenced vehicles to be ULEVs would result in a loss of drivers.

Interim Driver Survey Headline Results:

27. A total of only 39 driver questionnaires have been returned and completed so far, via a combination of on-street surveys and self-completion questionnaires.
28. The greatest number of respondents were hackney carriage drivers, who represent a smaller proportion of the overall trade.
29. Of those drivers who have responded, the results indicate that they don't see a problem with poor air quality, do not consider themselves to be contributing to the problem and don't see a need for change.

Driver and Vehicle Information

30. Over half of all respondents held a hackney carriage licence (n=21). Three respondents held a dual licence and 14 held a private hire licence. The majority of respondents indicated that they owned their vehicle and licence plate (n=26) and a further 12 stated that they leased their vehicle and licence plate from an operator.
31. Only eight respondents said that their vehicle was wheelchair accessible and the majority of vehicles were diesel (n=36). Nearly a third of vehicles were three years old or less (n=12), i.e. licensed in 2015 or later. Three respondents stated that their vehicle was an Ultra-Low Emission Vehicle (ULEV), i.e. electric or hybrid, of which all were Hybrid Electric.
32. Almost a third of respondents stated that they travelled 100 miles or more on a typical day (n=12), with just eight respondents doing less than 50 miles. Just over half of respondents said that they typically waited 25 minutes or more between each fare/ pick up (n=20). Only six respondents indicated that they waited less than 15 minutes.

Vehicle Upgrading and Reasons for Vehicle Selection

33. Only six respondents were thinking of replacing their vehicle within the next six months. A further eight were looking to replace theirs within the next one to two years and six within the next two to three years. A fifth of respondents said that they were not looking to replace their vehicle within the next three years (n=8) and a quarter did not know (n=10).
34. Respondents were asked to highlight the key factors they consider when selecting a new vehicle. The key factor cited by over three quarters of respondents was 'the initial cost of buying the vehicle' (n=32). Other factors mentioned by more than half of respondents, included:
 - Ongoing running costs of the vehicle, e.g. maintenance, servicing, etc. (n=26);
 - Reliability (n=25);
 - Fuel efficiency/ economy (n=25);
 - Licensing requirements/ Council policy (n=24);
 - Fuel type, e.g. petrol, diesel, electric, hybrid (n=23); and

- Driver comfort/ experience (n=23).
35. Only seven respondents cited 'environmental considerations, e.g. vehicle emissions, air pollution, climate change' as a key factor when selecting a new vehicle.
36. Respondents were asked whether they would consider replacing their vehicle with an Ultra-Low Emission Vehicle (ULEV), i.e. electric or hybrid. Five respondents stated they were currently considering replacing their vehicle with an ULEV and nearly half of respondents said that they may consider one (n=19).
37. Of these, the main reason given for considering ULEVs was the '*reduced running costs of vehicles*' (n=23). Only five respondents cited '*concerned about air quality issues*' and '*concerned about climate change*' as reasons for considering ULEVs.
38. Of the 13 respondents that stated that they would not consider replacing their vehicle with a ULEV, the main reason given was '*the initial cost of buying the vehicle*' (n=11). Other factors mentioned, included:
- Running out of power with a fare on board (n=10);
 - Having insufficient power to make the return trip (n=10);
 - The inconvenience of charging (n=9); and
 - Nowhere to charge at home/ base/ office (n=8).
39. Respondents were then asked whether they would consider replacing their vehicle with a Euro 6 compliant one, i.e. new diesel vehicle sold after September 2015. Eight respondents stated that they were currently considering doing so and just over a third said that they **may** consider one (n=15).
40. As with ULEVs, the main reason for considering a Euro 6 compliant vehicle was the '*reduced running costs of vehicles*'. Only two respondents cited '*concerned about air quality issues*' and three quoted '*concerned about climate change*' as reasons for considering ULEVs. Of the 15 respondents that stated that they would not consider replacing their vehicle with a Euro 6 compliant one, the top three reasons given were '*the initial cost of buying the vehicle*', '*the price of fuel*', and '*not interested*' (n=5).
41. Respondents were asked what would encourage them to buy an **Ultra-Low Emission Vehicle**. The top three factors cited were:
- Cheaper vehicles (n=24);
 - Reduced/ subsidised licence fee (n=19); and
 - Improved range, i.e. being able to travel further (n=19).
42. Similarly, the top three factors that would encourage respondents to buy a Euro 6 compliant vehicle were:
- Cheaper vehicles (n=13);
 - Subsidised lease or purchase of vehicle (n=9); and
 - Reduced/ subsidised licence fee (n=8).

Views on Air Quality Issues and Potential Policy Changes

43. Respondents were presented with a series of statements and asked the extent to which they agreed or disagreed with each. The results are presented below:

	Number of Respondents*	
	Agree	Disagree
Air quality in Gateshead is poor	15	11
Air quality in Newcastle is poor	14	9
Air quality issues affect the Tyne Bridge area	14	11
Air quality issues affect the A1 area	16	7
Gateshead Council should ban the licensing of diesel vehicles	3	34
Gateshead Council should increase the licence fee for diesel vehicles	2	36
Gateshead Council should only allow ULEVs to be licensed	6	30
Gateshead Council should licence vehicles based on Euro standards instead of age	14	17
Gateshead should move to an all ULEV fleet within the next FIVE years	9	25
Gateshead should move to an all ULEV fleet within the next THREE years	4	29
Gateshead should move to a Euro 6 compliant minimum standard fleet within the next FIVE years	11	21
Gateshead should move to a Euro 6 compliant minimum standard fleet within the next THREE years	4	29

Base: 39 respondents

*Excludes Don't know and Neither/ Nor responses

44. Respondents were then asked what the impact would be if Gateshead Council was mandated by the Government to adopt a phased approach for all new and renewed licenced vehicles to be Ultra-Low Emission vehicles, i.e. electric or hybrid. Only five respondents stated that it would have *'no impact'*, with nearly two thirds indicating that the *'cost of new vehicles would mean I could no longer afford to be a driver'* (n=24). Over a quarter of respondents suggested that it *'would depend on the roll out'* (n=11).

45. When asked how these impacts could be mitigated, over three quarters said *'cheaper electric/hybrid vehicles'* (n=22). Other factors mentioned by more than half of respondents, included:

- Reduced/ subsidised licence fee tariff (n=15); and
- Subsidised lease or purchase of vehicle (n=15).

45. However, it is important to note that the legal officer has advised that it would not be appropriate within a ring-fenced budget to offer a reduction in the licence fee for the purpose of incentivising the uptake of electric vehicles as opposed to petrol / diesel vehicles where the administrative processes for licensing all of these vehicles is identical.

46. If such an incentive were to be offered, the shortfall in the cost of the licensing process would need to be met from central budget rather than from increased licence fees for petrol / diesel vehicles."

Findings

47. As expected, the typical response from drivers licenced in Gateshead reflected someone who had an older diesel vehicle, which travelled relatively long distances each day. Most were not looking to replace their vehicle soon and didn't consider environmental factors to be a key consideration when replacing their vehicle.

48. However, a significant proportion said they may consider replacing their vehicle with a ULEV (albeit to secure reduced running costs). Costs unsurprisingly proved to be the dominant factor when choosing a vehicle but licencing factors were reported to be a key determinant.

49. The solution therefore, would be to take advantage of the willingness of many drivers to consider ULEVs, without adding to the cost burden of operating a licensed vehicle. Regulation would appear to be a key means of successfully encouraging a shift to a less polluting HC and PHV fleet.
50. Although the interim headlines discuss concerns from operators about the viability of introducing electric vehicles there are examples of operators³ that have successfully introduced electric vehicles into their fleet.
51. The Government is also incentivising the uptake of purpose built electric taxis or HC⁴ through grants of £3,000 or £7,500 depending on range etc.; and that national vehicle specifications are being introduced for these type of vehicles that Councils will effectively be compelled to adopt subject to local policy requirements such as colour, CCTV, etc. The Government will also pay up to 35% of the cost of a standard electric vehicle⁵ rather than a purpose built taxi or HC (e.g. the Nissan Leaf which the Regulatory Committee approved as a PHV in 2015).
52. The DEFRA Direction will require Gateshead, Newcastle and North Tyneside to look closely at their respective HC and PHV vehicles and Licensing policies to ensure that vehicle emissions are reduced. The North East Combined Authority will also be pushing for consistent emission standards within vehicle licensing policies across the North East local authorities.

Next Steps

53. We are awaiting the final report from AECOM. This will be with us by the end of March 2018.
54. Any comments from Regulatory committee will be considered and if necessary acted upon to inform vehicle licensing policy.
55. It is recommended that vehicle emission standards are included in vehicle licensing policy. If Regulatory Committee agree, then consideration needs to be given to whether this is completed separately or as part of the wider vehicle licensing review detailed in the December 2016 report. The level of urgency for emission standards to be improved would suggest moving quickly to the next step of going out to public consultation with proposals to amend –
 - (1) the specification requirements, to include reference to electric vehicles being licensed under delegated powers (perhaps specific vehicles within category 1,2 and 3 in the Government list of vehicles eligible for a plug-in grant) and real life emissions testing for non-electrics to ensure that they meet an expected standard; and
 - (2) the upper / lower age policies, with a view to reducing the number of heavy polluting licensed vehicles whilst not reducing the number of licensed vehicles.
56. A further report will be presented to Regulatory Committee in June 2018 to update members as well as confirming the approach to be taken following discussions between the Chair and Service Director.

³ [DG Private Hire Ltd Nottingham 2017](#)

⁴ [Plug in Taxi Grant 2018](#)

⁵ [Vehicles eligible for a plug-in grant](#)

