



Briefing 17-34 September 2017

Air quality plan for nitrogen dioxide (NO₂) in UK (2017)

To: All APSE Contacts

Key issues:

- NO₂ concentrations are the only statutory air quality limit the UK is failing to meet
- Range of New Funding schemes local councils can compete for.
- No Diesel or Petrol cars or vans will be sold after 2040, however large vehicles including HGV's and refuse freighters excluded.
- Some Councils will be required to develop action plans for reducing emissions.
- Plans must be at least as effective as introducing Charging Clean Air Zones.
- Consultation will be issued in August 2017, plus other devolved consultations expected over the next year
- Significant implications for current fleet purchasing envisaged in move to electric vehicles and residual values.

The UK plan for tackling roadside Nitrogen Dioxide concentration sets out the way the government is seeking to reduce NO₂ emissions "within the shortest possible time" so that it can meet legal obligations to do so. It is currently the only statutory air quality limit that the United Kingdom is failing to meet.

As well as meeting this demand, the paper outlines some of the other benefits reducing NO₂ would offer, such as improving health, especially with the elderly, children and those who have cardiovascular and respiratory conditions. It would also have a positive impact on the environment, by reducing acidification and eutrophication and cutting down ozone production. They also make an economic argument, saying that poor air quality had an estimated cost of £2.7 billion on productivity in 2012.

The paper outlines a number of planned changes that the U.K. Government wish to implement, and it also highlights the efforts of some schemes that are already in place that contribute to tackling NO₂. DEFRA also published a technical report, that includes information on the methodology of the various models used to predict concentration levels and economic impacts, and gives additional information on the way policy was assessed and the degree of uncertainty that needs to be considered with predictions made.

The headline grabbing detail of the plans was the intention to end the sale of Petrol and Diesel Cars and Vans by 2040. However, there are a number of other changes that will have a more immediate effect on Local Authorities that this briefing will look at.

The plans will impact local authorities differently across the country, as the devolved administrations and the Mayor of London have some leeway to set different policy goals that local authorities would then be expected to meet.

Sources of Pollution

Section 3 of the Full plan, and 1.2 of the Technical Report go into some detail into the sources and chemical makeup of Nitrogen Dioxide Pollution.

There are two legal limits for NO₂ concentration in ambient air; annual and hourly. The annual mean limit is 40 micrograms per cubic meter (40µg/m³) and the hourly mean limit is 200µg/m³. Only two UK zones failed to meet this hourly limit, the Greater London Urban Area and South Wales. The Annual limit however was only met by 6 UK Zones:

- Brighton/Worthing/Littlehampton
- Blackpool Urban Area
- The Preston Urban Area
- Highland
- Scottish Borders
- Northern Ireland

In 2015, 60% of the average NO₂ emissions within the U.K. come from local road traffic, and this is broken down further into type of vehicle. The largest contributor of Local Road Traffic pollution is Diesel Cars (35%), followed by Diesel Vans (22%), Diesel HGVs (18%), Diesel Buses (16%) Petrol Cars (8%) and Diesel Taxis (2%).

Actions

A number of solutions are put forward by the Government to tackle pollution that require action from a range of bodies. Table 2 in Section 7 gives an overview of the actions expected, the bodies that would be involved and the timescale needed. This briefing will focus on the actions that will have most impact on Local Authorities.

National

Additional Funding will be made available to encourage the use of low emission buses. This includes both in awarding funding to purchase new buses or to retrofit the existing fleet with new technology, in total, £100 million has been committed to support this endeavour in England and Wales, and further details will be included in the Autumn Statement 2016.

The UK government expect Local Authorities to take the lead in improving their own fleets to assess the benefits of retrofitting public transport, especially when routes are within Clean Air Zones. This will be supported by Clean Vehicle Retrofit Accreditation Scheme (CVRAS), launched by the Low Carbon Vehicle Partnership, that will provide evidence for the effectiveness of retrofitting vehicles. There will also be a consultation on changing regulations on light commercial vehicles, to encourage a move away from them being diesel fuelled.

Two schemes will be launched to support electric taxis. £50 million will be made available for taxi drivers who are buying new plug-in vehicles, where they will be able to get up to

£7,500 off the price of a new car. £14 million would be spent on improving infrastructure for electric taxis in 10 council areas, which has already been awarded.

Hydrogen vehicles and infrastructure will receive additional funding, with a new competition being launched by the U.K. Government for match funding for Hydrogen Proposals in the summer.

England

The U.K. Government will set a national framework of steps that Local Authorities will be required to take. Various authorities, listed below, will be required to create plans on how they will tackle emissions, with the first draft expected by the end of March 2018, with final plans required by December 2018. As pollution problems are very localised, each of these plans will be expected to be tailored to the local authority in question. To assist with the development of these plans, an implementation fund that local authorities can draw on will be made available immediately.

These Local Authorities will be expected to make a plan:

- Basildon District Council
- Coventry City Council
- Leeds City Council
- Nottingham City Council
- Southampton City Council
- Bath and North-East Somerset Council
- Derby City Council
- Manchester City Council
- Rochford District Council
- Stockport Metropolitan Borough Council
- Birmingham City Council
- Fareham Borough Council
- Middlesbrough Borough Council
- Rotherham Metropolitan Borough Council
- Surrey Heath District Council
- Bolton Metropolitan Borough Council
- Gateshead Metropolitan Borough Council
- New Forest District Council
- Rushmoor Borough Council
- Tameside Metropolitan Borough Council
- Bristol City Council
- Greater London Authority
- Newcastle City Council
- Salford Metropolitan Borough Council
- Trafford Metropolitan Borough Council
- Bury Metropolitan Borough Council
- Guildford Borough Council
- North Tyneside Council
- Sheffield City Council

After these plans have been completed, the Government will assess them, checking that they will deliver the required air quality compliance, fairness, cost effectiveness and where possible wider benefits. The government encourage local authorities to explore a wide variety of creative options, over and above the suggestions made in this plan. They do however specifically discourage the use of parking charges on certain types of vehicles, as this would be considered unfair. They argue that charging in this way would harm local shopping centres and unfairly punish residents with no access to off-street parking.

Relevant local authorities will be legally required to deliver compliance as quickly as possible. The Government is offering £255m of funding to support the plans over their lifetime. £40m of this is immediately available to assist in the development of the plans. On top of this, a Clean Air Fund will be set up in the future, which will be a competitive process for additional funding for other interventions to meet NO₂ goals.

Clean Air Zones

The primary way the Government suggest achieving NO₂ reduction in England is through the use of [Clean Air Zones](#). There are two types of Clean Air Zones, charging and non-charging. Clean Air Zones identify geographic areas that should be the focus for improving air quality, and charging clean air zones add the additional provision that vehicle owners may need to pay to enter them, depending on the type of vehicle they are driving. All the models in the technical report that predict future emissions use charging Clean Air Zones as the intervention being assessed.

Tables 4 & 5 in Section 7.4.1.1 show the different charging Clean Air Zone classes that can be implemented, along with the vehicles that would be included in them and the emission standards they are expected to meet. Charging Clean Air Zones would be expected to be removed once compliance had been achieved.

Implementing Clean Air Zones is not mandatory for local councils, however, their plans must demonstrate at least equal effectiveness with charging Clean Air Zones in reducing emissions, and do it in at least the same amount of time, if not less. A consultation will be issued in August 2017, and during this, suggestions on alternative measures are encouraged.

Other Measures

The Department for Transport produced the [Cycling and Walking Investment Strategy](#) in April 2017, and part of it includes guidance for local bodies to develop Local Cycling and Walking Infrastructure Plans. These are intended to develop an understanding of travel patterns, identify and map cycling networks and walking zones, and focus on infrastructure that supports growth in cycling and walking.

The Government is also seeking to encourage the use of [Government Buying Standards](#), which take into account NO_x emissions as part of the procurement process, in the wider public sector.

Greater London

NO₂ exceedances are greatest in the Greater London Urban Area, and the Mayor of London will have much of the responsibility to tackle the problem. Section 7.4.6. outlines the various plans the Mayor of London is looking to put in place, including the creation of five low emission neighbourhoods spanning eight boroughs.

Scotland

The Scottish Government published its own air quality strategy, '[Cleaner Air for Scotland – The Road to a Healthier Future](#)'. Within this included two new policy initiatives, the National Modelling Framework (NMF) and the National Low Emission Framework (NLEF). These together are aimed to give Local Authorities the ability to appraise, justify and implement

transport policy interventions for improving air quality. A consultation on the NLEF will be issued during the latter half of 2017. There will also be a consultation on Scotland's National Low Emission Framework in August 2017.

£4 million is available to support air quality action in 2017/18.

Wales

Defra has identified Wales as an area that is at risk of being non-compliant in future years without intervention.

The Welsh Government introduced the Well-being of Future Generations (Wales) Act 2015 ("the WFG Act"), which includes provisions on air quality. The Average Population Exposure to NO₂ is included as a national indicator in the act. The Government are also seeking to consult on a Clean Air Zone Framework for Wales within a year, which will have an impact on local authorities. City of Cardiff Council is anticipated as requiring a Clean Air Zone.

The Welsh Government intends to provide additional funding for public transport improvements and encouraging walking and cycling. They also plan to work with local authorities to identify pinch points and congestion on bus networks to improve bus services across Wales.

Local Authorities in Wales will be required in their local air quality plans to not only demonstrate technical compliance with national air quality objectives, but to also show they are maximising their contribution to reducing average pollution across the local authority area.

The process for a local authority declaring air quality management areas has been streamlined, and the Welsh government will act quickly to ensure an air quality action plan is in place. Air quality will also be added to the list of items that Public Services Boards account for when preparing assessments.

Northern Ireland

The Northern Ireland Executive Draft Programme for Government 2016-2021 includes outcomes that are intended to tackle the environment and infrastructure, which will both have an effect on air quality. As part of this, they intend to develop an Air Quality Action Plan, increase uptake of electric vehicles and encourage the use of public transport and walking/cycling.

The paper also highlights some of the infrastructure projects that Northern Ireland intend to take on to improve transport, including Belfast Rapid Transit, transport hubs in Belfast and Derry/Londonderry and implementing the Regional Strategic Plan for Greenways & urban bicycle network plans.

Link to Full plan from DEFRA - <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-in-uk-2017>

APSE Comment

APSE welcome attempts to improve air quality across the United Kingdom, and recognise the health benefits that this will bring. However, the various projects that are being encouraged will require significant investment and the detail of how local authorities will access additional funding is very light.

This is especially an issue where councils will be expected to bid on funding. For example, the plans seek to encourage taxi drivers to use electric taxis, and they are being offered grants to do so nationwide. However, the additional funding for charging infrastructure is limited to just ten local authorities, with no clear plans to extend funding to other councils who would be expected to improve infrastructure for the increased electric vehicle numbers the government are seeking.

Whilst the Government is sufficiently confident that technology for cars and vans will have advanced sufficiently by 2040 to cease use of petrol and diesel, it is noticeable that diesel HGV's have been spared as yet. As these vehicles are significant polluters in their own right, APSE looks forward to specific proposals to restrict their use in congested areas whilst ensuring that services reliant on them e.g. Waste might continue.

There is also a need for more information on how local authorities in devolved regions will be affected, though we appreciate that the Scottish and Welsh executives have plans to publish their own strategies and consultations within the next year. In addition to this, Defra and the Mayor of London will also be introducing at least one consultation on measures to improve air quality. This is very useful as Local Authorities will have a number of obligations and targets to meet, and it is only right that they are given some input on these. APSE encourage Local Authorities to get involved with these consultations and will produce follow-up briefings when these consultations are published.

Technology & Infrastructure implications

The move away from traditional hydrocarbon based fuels may have significant implications for Local Authorities. We are already seeing some automotive manufacturers e.g. Volvo announcing that they will only supply electric or hybrid vehicles from 2019 onwards. Forecasters are predicting that battery technology will have advanced significantly by 2020 allowing vehicles to do 500 miles plus on a single charge bringing them in-line with petrol & diesel.

Local Authorities normally look at around a 7 year lifespan for vehicles. The advent of much improved electric vehicles will affect the future value of vehicles that are being purchased now and residual values may fall significantly.

One of the barriers to electric vehicles is the charging infrastructure. The standard home charger takes 30 minutes or more to charge whilst a fast charge takes under 5. However fast chargers require upgraded power systems to cope with the high current demand and the UK currently has an inadequate infrastructure.

If you need support in determining an appropriate future energy/fleet strategy please contact Phil Brennan at APSE Energy pbrennan@apse.org.uk or Andy Mudd from APSE Solutions amudd@apse.org.uk.

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