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15 June 2017

Dear Sir/Madam,

**Consultation on “Improving air quality: national plan for tackling nitrogen dioxide in our towns and cities”**

We are writing in response to the above consultation. This document represents our submission to Defra on this topic.

**Preamble**

The Institute of Air Quality Management (IAQM) exists to maintain and enhance the status of over 400 professionals working in the field of air quality, mostly in the United Kingdom. The Institute aims to provide an authoritative voice on issues relating to air quality, based on the knowledge and experience of our members. This response to the consultation represents the collective views of the IAQM Committee members. It also follows on from our submissions to Defra on the previous versions of the Air Quality Plan and many of our comments in these previous submissions are still valid.

**Introduction**

In responding to this Air Quality Plan, we (the IAQM Committee members) have applied the following tests:

- Does the Plan clearly set out a series of measures that will enable the UK to achieve compliance with the Directive in respect of NO<sub>2</sub> concentrations?
- Does it do so in a way that will achieve compliance in the shortest possible time?
- Are the proposed measures feasible within the current structure of air quality management within the United Kingdom and the available resources?

The following sections address these points and we have also provided our answers to the eight questions posed in your Consultation Document.

We note that the Draft Plan should be a Draft Modified Plan; it is not a new plan, yet there is virtually no reference to the existing plan, and the long discussion in the Technical Report on the selection of measures, suggests that work undertaken for the 2015 Plan has been repeated as if this is a new Plan.

## Overview and Commentary

The Draft Plan appears to rely on Clean Air Zones being established in those areas where compliance is not to be achieved in the very near future (on current projections) and for these Zones to be designed and implemented by the local authorities where action is needed. (This applies to England – similar proposals are made for Wales, but Scotland and Northern Ireland have different approaches. Our submission focuses on the Plan for England.)

The Draft Plan provides some commentary on national measures that *could* be implemented to improve air quality, but not necessarily measures that *will* be implemented. Indeed, the main thrust of the Draft Plan appears to be a devolvement of the responsibility to achieve compliance to local authorities, but without provision of any additional resources or tools to accomplish this objective. Given that the Directive requires Member States to achieve compliance, we are of the view that this apparent transfer of responsibility is unreasonable, especially in the current circumstances where local authorities are less able to deal with air quality improvements than they have been since the introduction of Local Air Quality Management by the 1995 Environment Act. Since the Local Air Quality Management regime has failed to deliver air quality that meets the national air quality objectives (with the parallel problems in meeting compliance with the limit value), it is hard to see what can radically change in the near future through the efforts of local authorities, weakened in recent times by diminished funding.

On closer inspection, it also appears that the implementation of Clean Air Zones is dependent on certain criteria being met and subject to Government approval. The local authorities will, in effect, have to expend considerable effort in establishing their effectiveness and also evaluate the impacts on residents and local businesses. Since it is the Government's responsibility to achieve compliance in the shortest possible time, we are of the opinion that it would be more efficient and expedient if the Government was to take the lead in determining effectiveness and assessing the impacts. At the very least, provision of common tools and guidance would avoid many local authorities each having to develop their own methods for doing so.

The Draft Plan, and the accompanying Technical Report, set out several options for improving air quality at the national level. It is right that the Government takes action at the national level to reduce emissions, even though the compliance problem is geographically limited and chiefly concentrated in towns and cities. As the previous Plan and accompanying documents demonstrated, the chief problem is emissions from diesel vehicles in urban areas and effecting change in this section of the overall vehicle fleet should be a priority. Ensuring that this change occurs is at least partially something that only Government can achieve through sending the appropriate signals. One such signal would be the 'treatment of tax' for diesel cars or light goods vehicles (or diesel as a fuel). The Draft Plan is not forthcoming on this point, merely suggesting that the possibility will be 'explored' ahead of the Autumn Budget. Elsewhere, the Consultation Document notes that delivering on the air quality obligations 'must not be done in a way that penalises ordinary working families who bought diesel vehicles in good faith as a direct result of tax changes made by previous governments that focused on fuel economy and CO<sub>2</sub> emissions'. These elements of the Draft Plan suggest that the Government, as a whole, has some ambivalence to solving

the air quality problem in the shortest possible time. A persistent problem with the sequence of Plans to date is the lack of support shown by HM Treasury.

The fact that sales of new diesel cars have recently fallen shows, perhaps, that the market is responsive to signals and implied interventions from the Government or other authorities that might affect the economics of owning and running a diesel car. This ought to give some encouragement to Government that the trend for ever increasing use of the diesel car can be reversed.

Elsewhere, in the Technical Report, for example, the Draft Plan describes interventions designed to encourage the switching of diesel vehicles to Ultra Low Emission Vehicles through a scrappage scheme or an incentive scheme. As many members of IAQM know already through their work, this form of intervention is very costly if it is to be effective. (We would also note that any large scale support for ULEVs beyond that already provided by OLEV is likely to contravene State aid regulations, even with a Block Exemption.) We presume these interventions on a large scale are designed to be purely theoretical and bolster the support for the Clean Air Zones as the principal mechanism for achieving the objective of compliance. Whilst the information on the various interventions in the Technical Report is instructive, it is striking that they do not lead to the proposal for a formal plan as such, merely a list of ideas.

**Question 1. How satisfied are you that the proposed measures set out in this consultation will address the problem of nitrogen dioxide as quickly as possible??**

The IAQM is not satisfied that these proposed measures will address the problem *as quickly as possible*, largely because the Government appears to be transferring responsibility to local authorities. This will require them to undertake considerable preparatory work in order to establish Clean Air Zones, with the associated time lag before implementation. We also believe that the Government could choose to intervene more strongly in the ownership and use of diesel cars on a national basis.

**Question 2: What do you consider to be the most appropriate way for local authorities in England to determine the arrangements for a Clean Air Zone, and the measures that should apply within it?**

The IAQM is not convinced that the non-charging interventions suggested in the Draft Plan could produce results on the requisite timescale and so local authorities will be obliged to propose a charging scheme in order to achieve compliance in the shortest possible time. Obliging local authorities to justify this approach will take time and effort, which seems to be at odds with the need to achieve compliance in the shortest possible time.

**What factors should local authorities consider when assessing impacts on businesses?**

Local authorities will need to consider how many businesses will be affected by implementing charges, as measured by the number of journeys completed currently within the zone and the types of vehicles used. Gathering such data is not a simple task and, if not evaluated by ANPR data, relies on a consultation process and businesses making submissions. Imposing charges on diesel vans could affect many small and medium enterprises and IAQM is not oblivious to the impact this could have on the profitability of companies and possibly their viability. Some larger businesses and organisations can probably provide evidence of journeys currently made inside a defined zone through the use of telematics data.

**Question 3 How can Government best target any funding to support local communities to cut air pollution?**

We are not sure what Defra means by 'local communities' in this context. If local authorities are to bear the burden of establishing a Clean Air Zone, or even justifying one, this in itself will consume considerable resources that local authorities are not likely to possess. As we stated earlier, Defra could ease this burden to some degree by providing common tools and guidance for the work needed to justify a Clean Air Zone and evaluate its effectiveness. Following its introduction, support could be given to businesses and individuals in the adoption of ULEVs, notwithstanding the potential barrier presented by State aid regulations.

Given the well-recognised difference in the locations at which the Government and local authorities have identified high NO<sub>2</sub> concentrations (i.e. with regard to the EU limit values and the air quality objectives, respectively), it is important that funding is targeted to improve air quality in all identified areas. We note that in many cases there is more exposure to poor air quality in the areas identified by local authorities, and the High Court has concluded that exposure must be reduced as quickly as possible.

In this regard, we note that the Draft Plan is focused entirely on EU limit value compliance, and little, or no regard, is given to achieving compliance with the objectives. This not only has implications for public health, but also potentially risks diverting scarce local authority resources away from achieving the objective and only to achieving the limit value. There are many cases where the national model predicts exceedances of the limit value outside of existing AQMAs, and in areas where public exposure is limited. A case in point is Leeds, where exceedances of the limit value are confined to a ring road (with limited public exposure) whereas the AQMA encompasses the city centre (where there is considerable public exposure). Unless both issues are carefully considered together, there is risk that a CAZ may be established in a manner that diverts traffic into the AQMA, thus exacerbating public exposure.

**What options should the Government consider further, and what criteria should it use to assess them?**

The technical evidence shows clearly that charging CAZs are the only measure that can make a significant difference to the number of zones complying and that, even with charging Class D CAZs, nine zones will remain non-compliant in 2021. No information has been given as to when these zones will become compliant, except for London where the Draft Plan says 2025 or earlier.

There are no other viable solutions to solve the NO<sub>2</sub> non-compliance issue other than banning vehicles from parts of cities and on major roads. This is likely to be difficult to deliver.

We believe that there are a number of complementary central Government measures that must be introduced with Charging CAZs, to ease their burden on the poorer members of society and micro businesses (e.g. those with 1-5 people). These are discussed in later sections.

**Are there other measures which could be implemented at a local level, represent value for money, and that could have a direct and rapid impact on air quality?**

No measures other than Charging CAZs are likely to have the required effect. The research undertaken to support the 2015 AQP and the development of the Local Air Quality Management system clearly shows that the only measures that are effective are those that either reduce emissions from the vehicles (e.g. retrofitting) or remove vehicles from the pollution hotspot (e.g. constructing a bypass). The latter will take too long to implement.

There is little or no evidence regarding the efficacy of other measures.

We believe that electrifying the vehicle fleet, modal shift to public transport and encouraging walking and cycling are all important measures in the longer term. We do not, however, believe that it is the answer to the NO<sub>2</sub> non-compliance issue as it will take too long to have a material difference on NO<sub>x</sub> emissions within the required short timescale.

**How can Government best target any funding to mitigate the impact of certain measures to improve air quality, on local businesses, residents and those travelling into towns and cities to work? Examples could include targeted scrappage schemes, for both cars and vans, as well as support for retrofitting initiatives. How could**

**mitigation schemes be designed in order to maximise value for money, target support where it is most needed, reduce complexity and minimise scope for fraud?**

We believe that there is an important role for central government to use the taxation system to promote the purchase and use of petrol, hybrid and electric vehicles and discourage diesel light duty vehicles, particularly cars.

The Government must publish the long awaited heavy duty vehicle retrofit accreditation scheme as a matter of urgency. The 2015 Plan promised it in 2016. Financial support for upgrading buses has already proved to be effective. This must continue and be targeted at heavy duty vehicles used in urban areas (including delivery vehicles) in non-compliant cities.

Targeted scrappage schemes for light duty vehicles are also useful, although a large part of the NO<sub>2</sub> problem lies in the fact that even quite new vehicles, i.e. Euro 5 emit at high rates in real world conditions.

**Question 4: How best can governments work with local communities to monitor local interventions and evaluate their impact??**

Ultimately, the success of local interventions is measured in lower NO<sub>2</sub> concentrations, which will be the responsibility of the local authority. Continued support for effective and accurate ambient air quality monitoring, and data analysis will be required.

**Question 5: Which vehicles should be prioritised for government-funded retrofit schemes?**

The Government should continue with its current policy of targeting buses. Commercial HGV fleets tend to have a reasonably short replacement cycle, except for specialist vehicles, and so are not a priority. As noted above, publication of the accreditation scheme is urgent.

**Question 6: What type of environmental and other information should be made available to help consumers choose which cars to buy??**

A high quality public education programme to include promotion of Emissions Analytics EQUA Index for cars and vans would re-enforce the message that there are viable options available, as currently there is much consumer confusion.

The assessment criteria must be the impact on NO<sub>x</sub> (and NO<sub>2</sub> primary) emissions, time and deliverability. The Court has stated that costs can only be a consideration when comparing two equally effective measures.

There is merit in making (real world) NO<sub>x</sub> emission data available for all models purchased by private motorists and fleet operators, in the same way that CO<sub>2</sub> data are published for standard drive cycles. We currently have no means of knowing whether this will have any beneficial effect, in terms of purchasing decisions, but the risk of doing so seems low.

**Question 7: How could the Government further support innovative technological solutions and localised measures to improve air quality?**

The IAQM recognises that Government is already contributing significant support for technological innovation in the form of alternative fuels for vehicles and cleaner transportation generally, through DfT funding and the work of Transport Catapult, for example. We give the Government credit for this. This work should continue and success be reinforced.

Where necessary, intervention in markets might be necessary. An example of this is in the large van and small lorry sector, where mainstream manufacturers have ‘concept’ ultra low emission vehicles that are almost ready for introduction to the market, but currently not available for purchase because of a perception that there is insufficient demand. The Government could stimulate such demand through its procurement policies and by continuing with its programmes of ‘demonstrator projects. The light goods vehicle sector of the overall fleet continues to grow and is a substantial source of NO<sub>x</sub> emissions, as well being notable for a poor real world NO<sub>x</sub> emission performance and high primary NO<sub>2</sub> emissions. Almost all of these vehicles are currently powered by diesel engines.

A major barrier to the more widespread uptake of electric vehicles for commercial fleets in urban areas is the obstacle presented by the need to upgrade local sub-stations in the electricity distribution network in some cases. It seems to be unreasonable that an individual business should have to fund this upgrade in order to provide charging facility for a fleet of electric vehicles. The Government could intervene to rectify this anomaly for the greater public good.

**Question 8: Do you have any other comments on the draft UK Air Quality Plan for tackling nitrogen dioxide?**

Our overriding comment on the Draft UK Air Quality Plan is that it is not a modified version of the previous Plan, as was required, and nor does it provide a clear vision for the proposals that Government believes will deliver the stated objective. Instead, the impression created is one of uncertainty as to the best solution and a lack of conviction.

A handwritten signature in black ink, appearing to read 'R Barrowcliffe', is positioned above the typed name.

Roger Barrowcliffe

*Vice Chair*