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Sent by email to AQsreview@defra.gov.uk

Date: 20th April 2023

Dear Consultation Coordinator

Re: The Institute of Air Quality Management (IAQM's) Response to Defra's Draft Air Quality Strategy

Summary of Key Comments

1. Defra commits in writing to re-issuing the strategy once it is clearer the changes to the planning system and other regimes mentioned in the DAQS.
2. Defra commits to a regular and more frequent review of the AQ strategy, ideally at least every 3 years and in any case no later than 2028 (after the interim PM_{2.5} target date expires) and that this review is subject to a reasonable consultation period.
3. Consultation should be along the same lines as other Government consultations (at least two months) and not 10 days over a holiday period.
4. The use of the word 'ambitious' should be removed in relation to the PM_{2.5} concentration target.
5. Make consideration of PM_{2.5} in annual status reports and the requirement to produce local air quality strategies for all pollutants set out in Annex 1 of the DAQS, a statutory duty for local authorities.
6. Removal of the reference to the exposure reduction target being a novel approach

Introduction

This response to the Draft Air Quality Strategy (DAQS) is from the Institute for Air Quality Management (IAQM), a professional body representing ambient and indoor air quality professionals. It has over 650 members and was founded 20 years ago when air quality management responsibilities started in the UK. Membership of the organisation signals that one is an expert in the field of air pollution.

IAQM members include numerous experts who routinely advise Defra, local authorities and other official government bodies on air quality and manage Defra's LAQM helpdesk. This response has been put together after consultation with the IAQM managing committee who represent the membership but it does not necessarily represent the views of every member of IAQM.

This response does not need to be confidential (question 4).

We recognise that this is an update to the statutory 2007 Air Quality Strategy, required under Part IV of the Environment Act of 1995. An update has been long overdue as much has changed in the last 16 years in terms of air quality policies, legislation and public expectations.

The DAQS is very noticeably different to its predecessors, the 2007 Strategy for example was in two volumes with extensive data and analysis to support the policies contained within it.

We recognise that the DAQS is dependent on a number of cross-government initiatives, several of which are currently uncertain, for example, the final details of the Levelling Up Bill and Regeneration Bill and revisions to the National Planning Policy Framework (NPPF), which will impact on some of the policies outlined in this DAQS.

Given the dependence on soon to be published documents, ***we recommend that Defra will commit in writing to re-issuing the strategy once it is clearer what the changes to the planning system and other regimes mentioned in the DAQS.***

We recommend that Defra commits to a more frequent and regular review (it is 16 years since the last strategy was published) and no later than 2028 (after the interim PM_{2.5} target date expires).

We understand the desire to publish the final strategy as soon as possible but having a consultation period of just 10 days is unacceptably short for stakeholders to give a considered response. We have responded to the DAQS in the approximate order that issues are covered, and have not had time to sort our responses according to the questions. The consultation request is clear that weight will be given to responses with evidence but Defra have not provided sufficient time to compile supporting evidence. We do request you acknowledge that this letter is being sent on behalf of a group of experts, many who regularly provide advice to Government and Defra specifically and we hope that our experience will therefore carry commensurate weight. We also note that the DAQS states the consultation will be a two week period from 11 to 21 April, this is a 10 day duration over the Easter holiday period and is not two standard working weeks nor 10 working days. This does not equal a meaningful consultation and the DAQS will likely be hampered by this approach.

The consultation question chapters cross reference the wrong sections in the DAQS, there are also a series of typos in the document which makes a response as per the request even harder in the timeframe.

Should you wish to contact us please email info@iaqm.co.uk and we can arrange a meeting.

Ambitious

Firstly, we would like to state that the use of the word 'ambitious', while politically advantageous, is not appropriate in relation to the long term PM_{2.5} concentration target set by Government (Govt). The Government's own published evidence shows that much of England will achieve the concentration target currently and all but London will achieve it by the 2040 deadline based on business as usual (i.e. there is one "hotspot" location - London). While it is acknowledged that London has a high population density (exposure is covered by the exposure reduction target), for the majority of country the concentration target is not ubiquitously ambitious for the country. By definition, something that is achieved without going beyond the minimum is not ambitious. ***We would respectfully request that the phrase is dropped and focus changes to emphasise what is happening to the whole of the country due to the strategy set out.***

Reporting zones (question 5)

It is logical that reporting zones and local authority boundaries are aligned if Defra is relying on local authorities to implement improvements.

Local Partners

We welcome the inclusion of the Environment Agency, National Highways and County Councils (where relevant) as partners with local authorities working together to address exceedances of the limit values and objectives and improving air quality beyond compliance.

Paragraph 1.3.2 mentions the Local Air Quality Management (LAQM) regime and local limits. Traditionally local authorities have assessed air quality against the air quality objectives set in the Air Quality (England) Regulations 2000 (as amended). The use of the term 'local limits' is counter to what has been used historically. The term 'limits' in the air quality context has related to the limit values set in the Air Quality Standards Regulation 2010. Note the definitions the air quality industry has been working to, prior to the recent PM_{2.5} targets, based on the 2007 Air Quality Strategy are:

- Air quality standards (in the context of the Air Quality (England) Regulations 2000 (as amended), defined in the 2007 Air Quality Strategy):
 - are the concentrations of pollutants in the atmosphere which can broadly be taken to achieve a certain level of environmental quality. The standards are based on assessment of the effects of each pollutant on human health including the effects on sensitive subgroups or on ecosystem. Standards, as the benchmarks for setting health related objectives, are set purely with regard to scientific and medical evidence on the effects of the particular pollutant on health, or, in the appropriate context, on the wider environment, as minimum or zero risk levels. Standards expressed in terms of critical loads and levels are derived for habitats and exceedance of this value is used as an indication of the potential for harmful effects to systems at steady state thus giving an indication of risk to the system.
- National air quality objectives (in the context of the Air Quality (England) Regulations 2000 (as amended), defined in the 2007 Air Quality Strategy):
 - are policy targets often expressed as a maximum ambient concentration not to be exceeded, either without exception or with a permitted number of exceedances, within a specified timescale. Objectives derived from the health and ecosystem advice have taken account of economic efficiency, practicability, technical feasibility and timescale.
- Limit values in the context of the Air Quality Standards Regulation 2010:
 - are legally binding, derived from EU directives, parameters that must not be exceeded. Limit values are set for individual pollutants and are made up of a concentration value, an averaging time over which it is to be measured, the number of exceedances allowed per year, if any, and a date by which it must be achieved.

If the terminology is changing it would be useful to include a glossary in the final version for all those who have been working in this field for many years to be clear of the meaning of limit in this context.

But we would recommend this is not done as it will cause confusion and is unnecessary.

We agree that Directors of Public Health should be involved in all aspects of LAQM and local authority work on indoor air quality.

More guidance is required on the how to monetise the benefits and costs of air quality interventions. Currently this uses the Defra damage cost calculator which is somewhat limited in its scope. New and

increasing evidence of the adverse human health effects of poor air quality including e.g. on cognitive function, means that the economic benefits to society of improving air quality will be much greater than estimated using this calculator. In the past it has taken years to update the calculator based on COMEAP recommendations. Should, for example, this calculator include the cost to society of the effects of air pollution on dementia? Historically, the costs of interventions have often outweighed the economic benefits of improving air quality because a relatively narrow view of the health effects has been taken (due to lack of evidence). To fully consider the economic benefits to society requires a wider consideration of the health effects. ***We recommend that this is discussed in the document*** and some estimate provided or error bars given for the outcome of this calculator e.g. one could say at least that the calculator is likely to underestimate the value cost of poor air quality and the results should be taken as a lower bound of the likely magnitude.

We support the inclusion of the effects of nitrogen deposition on designated ecological sites in LAQM, planning and fulfilling the duties of local authorities in section 40 of the Natural Environment and Rural Communities Act 2006.

However, if local authorities are expected to have greater consideration of the potential impacts on ecological sites then Defra could require monitoring and reporting of relevant pollutants at such sites as part of annual status reports. The greater level of monitoring may facilitate development to be permitted where otherwise it would not be.

Air Quality and Health

We support a robust consideration of the impacts of poor air quality on vulnerable groups in society within LAQM and the planning system. This includes the need to provide robust communication to local medical professionals such as GPs, health visitors etc.

We understand that local authority projects that address the links between local pollution and healthcare providers are currently being delivered, but funding for this work is limited.

Actions to Improve Air Quality

We fully support local authorities being proactive in improving air quality in their area, irrespective of whether or not they have an Air Quality Management Area. Local Authority Air Quality Strategies could be a useful tool to help meet the targets set under the 2021 Environment Act. They could also be used to avoid sensitive development (e.g., schools and care homes) in areas with high pollution levels, such as close to major roads. It is widely accepted that the regulatory values are not protective of human health and that reducing levels below then would be beneficial for human health and the economy. These local Strategies could also be a tool to reduce nitrogen dioxide concentrations below the objective/limit values set in regulations.

Importance of Statutory Duty to Reduce PM_{2.5}

As the DAQS points out PM_{2.5} is not explicitly included in LAQM but it has been included in statutory technical guidance since at least 2016. Despite this many local authorities have chosen to not include it in their reviews, assessments and management of local air quality. It is hard to see how further inclusion in statutory guidance will make local authorities change their priorities, despite the introduction of the new mandatory national targets. The sparse network of local authority monitoring of PM_{2.5} or detailed considerations within annual status reports demonstrates the lack of consideration by local authorities.

We believe there is a gap in the current approach which requires local air quality strategies (LAQS) to be produced by local authorities who have not declared an AQMA and need to produce an AQAP. The overwhelming majority of AQMAs in England are for NO₂ only, only some are for NO₂ and PM₁₀, and are almost all for road traffic sources only. There is no onus on these local authorities to produce a separate LAQS for reduction of emissions more generally nor specifically for PM_{2.5}. It should be clarified that where an AQAP is needed, this should not only focus on the AQMA, but also address reduction in emissions especially PM_{2.5}. More simply should not all local authorities be required to produce a LAQS for all pollutants in the national AQS regardless of AQMA status?

We recommend that it is made a statutory duty of local authorities to develop a LAQS.

We would like Defra to note in the DAQS, that some sources of PM_{2.5} may require central government to consider changes in the law to enable local authorities to adequately tackle this problem.

Communicating Air Quality Information (question 11)

We believe that providing good high quality but relevant and easy to find information on air quality is an important duty for Local Authorities who should be communicating it to a range of different members of the public. This was an issue brought to light in the 2021 Coroner's report to prevent future deaths following the re-opened inquest into the death of Ella Abdo Kissi-Debrah in 2013. ***We suggest removing the reference to the information helping the public "protect themselves" under heading 4.6 to recognise many do not have a choice where they live or work.***

We support Defra providing communication resources to local authorities as this will save duplication of effort, provided it is robust, relevant and appropriate to the local circumstances. The level and type of information is best agreed at national level to ensure consistency and Defra should keep under review the quality and relevance of information disseminated.

However, we also request that the resources (such as the Air Quality Hub) are not limited in access to local authorities and that the wider air quality community (e.g. consultants and academics) have a similar level of access and potential for practical input.

We look forward to seeing the conclusions from the Air Quality Information System review. Should you wish to do a call for evidence request to IAQM members please do let us know. We have the largest database of air quality practitioners in the UK.

With sufficient engagement with IAQM and a longer consultation period, IAQM could have polled its 650+ members to ask: how can local authorities most effectively communicate air quality information? We would still be prepared to do this if Defra considers it useful and timely.

Audit of Local Authority Powers (question 12 – 13 and 6)

Understanding the powers available to local authorities, and the barriers to using them, is an important step in identifying new ways of improving air quality. There are, of course, a number of existing powers which are not well used such as the enforcement of Smoke Control Areas. It is difficult to control the burning of wood particularly now when energy costs are so high. However, as it is an important local source of PM, we agree that it is important the local authorities have the means to control wood burning efficiently and welcome further details on how Defra propose to support local authorities on this.

Industrial Emissions (question 7)

Whilst the information provided for planning and permitting decisions is often similar, it serves different purposes and therefore cannot always be aligned. Planning is about ensuring an industrial development is located in an appropriate location, permitting is about minimising the emissions to an acceptable level. For example, following regulatory approaches, a permit decision will only consider the impact of the emissions from the facility, whereas a planning decision will also include the impact of the road traffic associated with the facility. These distinctions are important as the two control regimes serve different purposes (i.e. do not build in the first place vs control of emission for an operating facility). And importantly, much of the process detail that is required for detailed assessment for permitting is frequently not available when planning permission is sought.

We welcome the commitment from national government to update standards more regularly, and more closely align LAQM and permitting, and the consideration of how to boost local authority regulatory capacity/capability.

It should be noted that there are a number of combined heat and power (CHP) plant (not industrial combustion plant) installed in densely populated urban areas which fall between the planning and permitting regimes and are currently uncontrolled. Cumulatively, these can make a significant contribution to public exposure to nitrogen dioxide. Air quality may benefit from Defra regulating these.

With sufficient engagement with IAQM and a longer consultation period, IAQM could have polled its 650+ members to ask: what local authorities can most effectively reduce pollution from industrial sources they are responsible for? We would still be prepared to do this if Defra considers it useful and timely.

Transport and NRMM (question 8)

The actions suggested for transport and NRMM are appropriate and are consistent with the approach of having LAQM partners working together to improve air quality. The reference to consideration of low emission NRMM at the tender stage is welcome, however could this be strengthened beyond simply a suggestion to local authorities to “consider incentivising”. Is this limited to local authority planning decisions only or is there an intention to extend to national government contracts, where the size/scale of scheme may have more of an impact?

The consideration of modal shift away from road vehicles should be considered in the DAQS, as a mean to reduce the number of vehicles from the road network. Better use of public passenger transport, including buses as mentioned in the DAQS, and also rail (which is not mentioned in the DAQS), should be at the heart of the future development of the national transport system, in particular in areas where there is demonstratable benefit to local or regional air quality. Similarly for freight, the use of non-road transport (e.g. rail and shipping) should be incorporated in the strategy. There should be a focus on supporting an overall clean public transport system and phasing out diesel trains and vessels as soon as possible.

Emissions from NRMM at construction sites has largely been ignored by the planning system outside London, on the basis that their emissions make little difference individually due to their relatively short-term nature. It would be useful to understand more about their local contributions to PM and NO_x emissions, especially when considered over longer timescales i.e. continued construction periods on different sites at different times could have a cumulative impact worth introducing controls on emissions at a higher level rather than individual site basis, to incentivise innovative technology.

It is already considered good practice by IAQM to include ammonia emissions from road traffic, and its potential impacts on nature sites, in air quality assessments accompanying planning applications. It is, however, significantly more difficult, technically, to consider the impacts of ammonia emissions on the formation of secondary PM_{2.5} in the atmosphere (which is noted in the DAQS for agricultural emissions), and as a consequence this is normally not done in assessment (including for agriculture and industrial emissions as well as transport emissions).

Consideration of ultrafine particles (UFP) as a pollutant class should be acknowledged in the strategy. The evidence on the health effects exists (recent WHO publication). Sources of UFP include transport such as aviation and shipping.

With sufficient engagement with IAQM and a longer consultation period, IAQM could have polled its full membership to ask: what can local authorities do to effectively reduce pollution from transport and NRMM? We would still be prepared to do this if Defra considers it useful and timely.

Agriculture (question 9)

Ammonia emissions from agriculture are already considered in planning decisions, but it would be useful to have consistent assessment criteria for all local authorities, and a good understanding of the barriers to the installation of new covered slurry pits. Some nature conservation bodies object to new covered slurry pits on the grounds that they will increase nitrogen deposition on ecological sites. We believe that if a new covered pit is replacing an existing uncovered one this should not be automatic grounds for refusal, even if the new one is marginally closer to an ecological site.

There are particular challenges in how individual local authorities can include impacts from agriculture on generation of secondary PM_{2.5}, particularly when this pollutant can travel across local boundaries. This would best be addressed at local plan level, or as part of national policy.

With sufficient engagement with IAQM and a longer consultation period, IAQM could have polled its 650+ members to ask: what can local authorities do to effectively reduce pollution from agriculture? We would still be prepared to do this if Defra considers it useful and timely.

Indoor Air Quality (question 10)

The Government needs to develop guidance for local authorities on chemical pollution inside buildings (PM, TVOCs etc), particularly public buildings such as school, care homes and hospitals. Most people spend most of their time indoors, and currently there is no regulatory or other regimes to ensure that people are not inadvertently being exposed to high levels of indoor pollution over which they have no control.

Following the tragic death of Awaab Ishak due to his exposure to mould in his home, it is right that the government should address this issue, particularly in public and private rented sectors. IAQM has published guidance on indoor air quality and are happy to issue a call for evidence to members on behalf of Defra should you wish.

With sufficient engagement with IAQM and a longer consultation period, IAQM could have polled its full membership to ask: how can local authorities most effectively improve indoor air quality? We would still be prepared to do this if Defra considers it useful and timely.

PM_{2.5} Target Implementation (question 14-16)

It has been good practice for some years, to design low emission development from the start, as set out in the EPUK/IAQM guidance on assessing air quality in the planning system¹, however the reality is that air quality practitioners are generally only engaged by developers to provide advice later in the design process (i.e. when the traffic modelling is completed, for planning purposes). Changing this developer culture is likely to be difficult in the absence of a clear mandate from Government. Air quality measures are often retrofitted e.g. mechanical ventilation and may, as a consequence, not achieve maximum potential effects, be practical, cost efficient, or be ideal both for public exposure and for achieving targets. For example, it may be that the location of a development sensitive to air pollution (e.g. a GP surgery) is in an area of poor air quality. Changing the design may make some difference, but the major route of exposure of users may be travelling to the location because it is located on a very busy road.

The strategy also appears to place significant weight on the planning system for reducing PM_{2.5} emission when existing emission sources are likely to be the greatest contributor. While we understand local authorities have the powers to expand/enforce smoke control areas, there are limitations on how much control they have over individual behaviours behind closed doors therefore there are no guarantees that this will lead to significant reductions in existing emissions. Defra should consider further national controls on domestic biomass combustion considering the significant contribution to PM_{2.5}.

As an example, the Greater London Authority's (GLA's) approach to air quality positive statements are only recently required and only for some large development (EIA developments) and are yet to prove effective at reducing emissions through design.

The use of low emission benchmarks, similar to the GLA air quality neutral approach will require very careful consideration and regular update as emissions from road traffic decline. This is unlikely to make a material contribution to reducing PM_{2.5} from new development which tends to have low additional traffic contribution in urban areas where population exposure is highest.

Furthermore, it is unclear from the DAQS in relation to the PM_{2.5} targets whether Defra consider there to be any locations where introducing new exposure would be deemed unacceptable i.e. contrary to the intention of the exposure reduction target.

There is no suggestion of by how much, or how quickly, local authorities are expected to reduce PM_{2.5} emissions from sources 'within their control' and how this will be evaluated. The statement in the DAQS is simply "*If the government considers local action has not gone far enough...*". This lack of clarity will result in local authorities and their advisors taking different approaches to justify, and provide evidence for, their interventions, or where no action is taken.

We look forward to seeing your consultation on the detail of a combined design stage emission prevention and quantitative assessment approach. We recommend early consultation with the Institute of Air Quality Management, the professional body of air quality practitioners who between them produce the vast majority of air quality assessments for planning and permitting.

Finally, ***we recommend removal of the reference to the exposure reduction target being a novel approach.*** The 2007 Strategy and EU directives both have had requirements for PM_{2.5} exposure reduction and the concept of population weighted exposure levels (PWEL) is not a new concept.

¹ EPUK/Institute of Air Quality Management, 2017, Land-Use Planning & Development Control: Planning For Air Quality

We would be happy to share with you IAQM committee members' views on how to effectively consider these issues in the planning system through verbal discussion and potentially hosting a workshop including some of our members.

Conclusion

We support an update to the air quality strategy; however, we request a commitment to review and update it as other documents (e.g. the NPPF) are published. Furthermore, we request that IAQM be an early stakeholder formally in your development of further air quality strategies and guidance.

If you would like any further information, please do not hesitate to contact us.

Yours sincerely,

The IAQM Committee (sent on behalf of the Chair)