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13 August 2018

Dear Sir/Madam,

Consultation Response to the Draft Clean Air Strategy

We are writing in response to the above consultation. The Air Quality Committee of Environmental Protection UK has considered the consultation documents and welcomes the opportunity to comment. These comments represent an overview of the Committees, but do not necessarily reflect the views and opinions of individual Environmental Protection UK members.

About Environmental Protection UK

Environmental Protection UK is a national charity that provides expert policy analysis and advice on air quality, land quality, waste and noise and their effects on people and communities in terms of a wide range of issues including public health, planning, transport, energy and climate.

We offer clear and critical analysis of UK government and European Union policy proposals through a range of high-quality publications and expert-led events, as well as up-to-date regulatory information through our comprehensive guide to UK and EU environment legislation.

Environmental Protection UK works with UK national and devolved governments, local authorities, business, academics and the general public, and with relevant EU institutions and NGOs.

Response to Consultation

These are our overarching points to the consultation. Our detailed response to the questions is included in the Annex to this letter.

- We welcome the more holistic approach, covering a diversity of sources, such as domestic burning, non-road transport and agriculture, which can be major sources of local or regional pollution. However, road transport is still the largest source of urban pollution and public exposure, and must be considered here too.

The public and the Air Quality community will be expecting a National Strategy to look at the bigger picture (and must therefore include all key sources), to create a national narrative, and use this to make clean air a political and public priority.

We have commented on the Government's plans on road transport in the past, and these comments should be taken in to consideration here.

- There is very limited national action on many areas, which we have previously flagged as a major failing of the National NO₂ Plan and other clean air policies and schemes. This does still leave policy gaps to be filled, which are discussed further below.

- There are some good ideas in the Strategy, in new approaches and in fixing existing glitches (e.g. in the Renewable Heat Incentive). There are still gaps though in both actions (e.g. reducing trips through freight management and active travel) and approaches (including considering co-benefits).
- The joint aims of the strategy to reduce national emissions as well as protecting health from air pollution can be addressed, but should be acknowledged more clearly. The strategy currently includes confusion and tension between the two. Reducing national emissions is a practical way to tackle pollutants which mainly contribute to regional pollution in the air we breathe, but is not the right metric for pollutants which mainly damage health in urban hotspots.
- The draft Strategy lacks details on the actions, in particular the timescales or by stating that the details will be set out in the future. With so much of the effectiveness of the strategy bound up in these details, and the form and ambition of these future policy documents or legislation, how can we tell if this strategy is going to deliver clean air and health benefits, and what more is needed? Some may criticise this as a plan for a plan.
- No technical assessments have been released, although the strategy implies these have been carried out. These must include some indication of the level of ambition, and we call on the government to release these immediately.
- We welcome the formal involvement of new partners, especially in the health profession.
- We welcome the intention to give local authorities more powers to tackle air pollution, but we note that this is not the only reason that authorities struggle with Local Air Quality Management. Local authorities need more resources, including staff, expertise and money, and for clean air to be seen more strongly as a political priority in County and Unitary Authorities, and national government.
- We strongly recommend that if LAQM and CAZ systems are merged, the best points of LAQM are kept. And the changes must be carried out expeditiously. Review and Assessment of local air quality provides evidence to motivate and drive effective action. Local authorities must be empowered to identify, quantify and act on local air pollution problems, with access to government support where there is a proven problem. Local problems cannot be identified by national modelling, nor should the government decide how many and which local authorities can address air quality issues.
- EPUK welcomes the government's intention that we will become a world leader in environmental excellence. We'd like to see more commitment on action to achieve this.
- We call on the government to act more boldly on climate change. This is a serious global threat to humanity, and closely linked to air pollution. We must reduce the combustion of fossil fuels and number of vehicle trips. Modal shift, active travel and effective freight and procurement systems all have an important role to play in addressing both air pollution and climate change. Cleaner and more efficient vehicles are important, but we must ensure that renewable electricity is available if there is a shift to an electric fleet.

Please do not hesitate to contact us if you would any further information on any of these comments, we would be happy to provide more detail or discuss this further.

Yours sincerely,

Sarah Legge

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Response to the Consultation Questions

1. Understanding the problem

Q1. What do you think about the actions put forward in the understanding the problem chapter? Please provide evidence in support of your answer if possible.

- The Strategy states that its aim is to “drive down the national emissions of pollutants, reducing background pollution, and minimising human exposure to harmful concentrations of pollution.” However, total emissions are not the best metric for health protection. We cannot protect human health without also looking at local hotspots. The location and other characteristics of emissions are crucial.
- We strongly welcome further investment in monitoring and modelling, and steps to make this easier to access. However, this must include local and hotspot monitoring and modelling, and we are alarmed by the statement that:

“In monitoring and controlling pollutants we are concerned with the total volumes that are released (our national emissions).”

This ignores the issue of air pollution hotspots on health. The pollution is not spread over the land affecting us all equally. Some people, especially in urban areas near busy roads, suffer disproportionately from the damage of pollution at levels that are not seen in some quiet country areas without major pollution sources. This is a public health, equalities and an environmental justice issue.

- To address the twin goals of health protection and overall emissions reduction, two distinct approaches are required. These two approaches should be more explicit in the Strategy.
- Local authorities must play a continued key role in assessment of air pollution, as local monitoring and modelling can help identify and clarify local problems. Local review and assessment takes into account a level of local detail that is not, and realistically cannot be, considered within the national assessment, and as such, are able to identify, quantify and act on local hotspots of pollution, which would otherwise not be addressed.
- We would also recommend further investment into quantifying the impacts of air quality measures.
- The infographics in this chapter convey the information in an easily accessible manner.
- Ozone deserves more attention. It has both serious health impacts and is the third strongest climate change gas (a fact that isn’t adequately addressed in climate change policy, perhaps because it’s a secondary pollutant and so direct emission limits are inappropriate).
- There is a lack of clarity at times on particulate matter, which is sometimes referred to in the document as “PM”, without clarification over what type (including size, origin or primary/secondary).

It would also have been useful to include some information on the other differences in particulate matter, such as toxicity, shape, etc..

- On other pollutants, there is no information on what action is proposed to “reduce emissions of sulphur dioxide against the 2005 baseline by 59% by 2020, increasing to 88% by 2030”; there is also no information to assess how ambitious the proposed action is to meet the sulphur dioxide and ammonia targets.

Q2. How can we improve the accessibility of evidence on air quality, so that it meets the wide-ranging needs of the public, the science community, and other interested parties?

- A single portal is a useful idea. However, it needs to be recognised that there are different uses and audiences for air quality data. Some of us need full detailed data to help develop and monitor air quality actions, and others want to know how bad is the pollution today to see if they should modify their behaviour to protect their health. A range of different data types, or indicators to supplement the raw data and statistics, would help address this.
- In addition, any portal on air pollution monitoring or modelling should link to information on what one can do to reduce pollution, and/or its impact on our health.
- There is a range of other information currently monitored, including industrial monitoring, development planning monitoring, citizen science, etc. Will there be a mechanism to allow this information to be included in the portal? We note that that quality criteria would be needed, to ensure data was robust enough to be useful, with additional information on uncertainties.
- We note that the Mayor of London is already delivering many of the aims stated here and so it will be very important that the government liaise with his officers.

2. Protecting the nation's health

Q3. What do you think of the package of actions put forward in the health chapter? Please provide evidence in support of your answer if possible.

- The health chapter includes some interesting data and infographics. The transects illustrate the national importance of background pollution (although we would have liked to see the E-W transect continue into Wales). However other sources can have major local air pollution and health impacts, especially in heavily populated urban areas, and cannot be ignored.
- We are concerned that pollutants other than PM_{2.5} are not adequately addressed in this chapter.
- We welcome the recognition of the need for “straightforward, practical information so that people can reduce their own emissions for the benefit of themselves and their neighbours.” We welcome some of the new approaches outlined in this chapter, including involvement of the health profession.
- We strongly support the partnership with the Medical Royal Colleges and the General Medical Council to include the health impacts of poor air quality in the health profession's education and training.

We also support the work with the NHS, hospitals, emergency departments, GPs and local authorities to gather better information on where, when and how patients report and are treated for air quality related health conditions. This will help evaluate the effectiveness of actions and also open a dialogue with current health professionals. It is important to ensure that health professionals and their patients are also empowered by giving them advice on how to reduce air pollution and its impact on health. Doctors (both GPs and e.g. respiratory specialists) should be able to help people to improve their health through advice and action on reducing their contribution to air pollution and their exposure to it.

- We welcome the target of reducing PM_{2.5} levels in order to halve the number of people living in locations where concentrations of particulate matter are above 10 µg m⁻³ by 2025. However, it would be useful to have clarity on how many people are currently exposed, and the size of the geographic area which must be below this level, to see the ambition in this measure.
- We welcome the monitoring, continued refinement and enforcement of the work towards the WHO goals, including clear timescales and process. The new independent statutory body must have a role,

and effective powers, in enforcing the plans and holding the Government and others to account where environmental protection standards are not met.

- We welcome the intention to introduce “a comprehensive set of new powers designed to enable targeted local action in areas with an air pollution problem.” However, there is no detail on what these will involve, and what action will be taken to ensure these are used effectively (by making air pollution a political priority at all levels, and ensuring there are adequate resources of expertise, staff and funding). It will be important to learn from the expertise and experience that local authorities still have in this aspect.
- We welcome the development, publication and promotion of appraisal tools and guidance for health impacts of air pollution. We strongly support the intention to consider health impacts of air pollution in every relevant policy decision. We recommend that this tool and guidance is made available for both health and air pollution professionals. We also urge the government to make this a requirement to use it in development control and transport planning, as well as public health and environmental action.
- Recent research (at Queen Mary University of London) reinforces the views on the effects of air pollution on residents particularly those living close to busy roads. In summary the research claims that the heart enlarges by 1% for every extra $\mu\text{g m}^{-3}$ of $\text{PM}_{2.5}$ and for every extra $10 \mu\text{g m}^{-3}$ of nitrogen dioxide. We therefore urge that these proposed appraisal tools are related to new housing developments close to busy roads.

Q4. How can we improve the way we communicate with the public about poor air quality and what people can do?

- This chapter included some useful statistics, which can be used to build an accessible case for action on air pollution.
- However, we disagree with the statement that the air quality is almost always more polluted indoors compared to outside. This is an unhelpful oversimplification. While indoor air quality can be an issue, and certainly has an impact on health, it is highly correlated to the outdoor air quality plus any indoor sources, so we must address outdoor air pollution to protect health. Individual action on indoor sources, plus controls on indoor emission sources (both buildings and products), can also help address indoor air pollution.
- Pollution from the home (and therefore often also inside the home) can often be addressed using the stronger legal levers that area available for ambient outdoor pollution.
- Developing and requiring the use of appraisal tools, which assess the health impacts of air pollution in all aspects (policies, programmes, etc.) of government policy, would be very useful in communicating air pollution issues to the public (and decision-makers).
- Individual action can have a substantial impact on air pollution. People should be empowered to understand and take action, and that action should be made as easy as possible. The benefits of active travel should also be emphasised, as this has air quality, climate change and health benefits.
- We support the use of a personal air quality messaging system to inform the public, particularly those who are vulnerable to air pollution. Please clarify how this is different, or will build on/complement, from the various systems already in use, e.g. AirText, AirAlert and CityAir.
- Any public information system must empower people by including information on what they can do to reduce air pollution and its impact on health. It must also not issue alerts too frequently or they will become commonplace and not elicit actions.

3. Protecting the environment

Q5. What do you think of the actions put forward in the environment chapter? Please provide evidence in support of your answer if possible.

- We welcome the government's recognition that clean, green and healthy environments are important and an essential component of progress, not a barrier to economic development.
- The actions put forward in this chapter give little real detail about how the natural environment is currently or will be protected in the future.
- We were dismayed that ground level ozone had very little consideration in this chapter as its effect on the natural environment and crops is well known (in addition to being one of the top three climate change gases). We request the government clarify the action proposed to tackle harmful ozone pollution.
- We welcome research on tyre and brake wear, in context of environmental damage. We would welcome equivalent health research on this topic (it is not clear whether this will be covered by the AQEG research).
- We welcome guidance for local authorities for addressing nitrogen deposition through planning. This needs to be given full support through planners and MHCLG. It should build on, rather than weaken the current situation, given the protection provided following the Wealdon judgement.
- It is important to recognise the importance of international coordinated action to reduce the environmental damage caused by air pollution and the government should maintain its commitment to these type of initiatives.

Q6. What further action do you think can be taken to reduce the impact of air pollution on the natural environment? Where possible, please include evidence of the potential effectiveness of suggestions.

- We strongly recommend that ozone pollution is considered in more depth, as this has significant environmental and health impacts.
- We would like to see a commitment to take action on tyre and brake wear emissions, "microplastics", etc. depending on the outcomes from the outlined research.
- In some cases, there is already sufficient information available to take action, especially in light of the precautionary principle, which further research should refine, rather than delay.
- We would also urge the government to ensure that emissions which affect the environment are considered in government assessment tools (such as the Design Manual for Roads and Bridges). For example, ammonia is emitted from road transport, and while this has declined overall, there are still local issues, especially from idling vehicles, where ammonia contributes to high N deposition rates at the roadside (and road verges are recognised as important for biodiversity).

4. Securing clean growth and innovation

Q7. What do you think of the package of actions put forward in the clean growth and innovation chapter? Please provide evidence in support of your answer if possible.

- There are a variety of constructive suggestions within this chapter. However as noted, many are not yet taken up at scale. One of the largest barriers to take up has been the lack of political support for individuals and local authorities implementing these schemes.
- In the past, there has been a lack, or inconsistency, of support for proven innovative technologies. Non-combustion technologies should be promoted (eg PV and heat pumps). More support is needed to address existing and emerging problems, such as biomass in urban areas.

- While there are a variety of grant and loan schemes available from the government, including the new Green Finance Taskforce, how many of them have air pollution as a formal criteria? The government should prioritise funding to an area which will optimise both air quality and e.g. climate change benefits.
- One of the most effective ways for Government to target funding is by making air quality a criteria in existing funding pots. There are a wide range of other Government initiatives which affect air quality. These must be optimized to improve air quality, by targeting areas of high pollution, and so harness the potential for air quality benefits (and focus these where most needed) from other government initiatives, such as BEIS's National Productivity Investment Fund and energy efficiency programme; DfT's low emission vehicle programmes; MHCLG's planning policies; and HMT's vehicle taxes; as well as the normal mechanisms that are available such as building regulations, development control and local transport plans.
- We strongly support the government's commitment to ensure that innovation funds are focused jointly on air quality and decarbonisation, and encourage them to ensure this is also the case for all new government funding and investment.
- We welcome the intention to finally address the air quality impacts of the Renewable Heat Incentive scheme, for example by tackling non-compliance and consulting on excluding biomass from the RHI if installed in urban areas which are on the gas grid. We urge the government to be ambitious and speedy in this work, to address this major source of local pollution.

We support making Coal to biomass conversion ineligible for the Renewable Heat Incentive scheme. We must reduce the combustion of fossil fuels to address air pollution and climate change, not incentivise them.

- We welcome the government's commitment to use future energy, heat and industrial policies together improve air quality and tackle climate change. This is something we have been calling for over many years.

However, we are severely dismayed to see that the government's commitment places the need for air quality action below cost and practicality on phasing out oil and coal heating. The High Court judgement told the Secretary of State to "*aim to achieve compliance by the soonest date possible*", so speed of compliance with the air pollution limit values must be a higher priority than cost.

We would like the government to consider all types of energy generation in their review, as sometimes small individual sources, when in large numbers, can cause major problems especially in urban areas. For example, some local authorities have reported air pollution problems arising from the use of multiple standby diesel generators in urban areas; these are sometimes part of the balancing plant or Short Term Operating Reserves (STOR).

- We welcome the government's commitment to conduct a cross-departmental review into the role of biomass in future policy for low carbon electricity and heat, focusing on the air quality impacts. We recommend that the final Strategy includes a timescale for this work and a commitment to take action to reduce negative air quality impacts following the review.
- We welcome the call for evidence and associated work on NRMM and red diesel. Again, we request that the final Strategy includes a commitment to take action if the evidence identifies a problem, which we believe is very likely.
- The idea of an annual Green Great Britain Week, starting in autumn 2018, is good. In order to be effective, this needs to include information to enable the public to take action, as well as awareness

of the problems and health damage. This should build on, and complement, existing programmes, such as Clean Air Day and Noise Action Week, run by Environmental Protection UK¹.

Q8. In what areas of the air quality industry is there potential for UK leadership?

- The UK are already leading in a number of areas, which could be further supported by the government, especially in light of current uncertainties. These include:
 - Environmental consultancy, which has extensive experience in air pollution and sustainable transport measures;
 - Emissions abatement technology, particularly road vehicles;
 - Zero emission vehicle technology and infrastructure, including zero emission refrigeration units;
 - Low cost sensors (the government could work with industry to produce a quality assurance scheme to address the unreliability of some of these sensors, to provide direction and reassurance to the industry and their potential customers).
- There is also a lot of work going on around Zero emission energy generation plant (and energy storage, to reduce need for polluting balancing plant), which is a vital part of the UK's vision for a zero emission transport system, as well as having benefits for air pollution and climate change more generally.

Q9. In your view, what are the barriers to the take-up of existing technologies which can help tackle air pollution? How can these barriers be overcome?

- One of the largest barriers to take up has been the lack of political support for individuals and local authorities implementing these schemes. If it is a not political priority it won't get the necessary time and money and support, e.g. from elected officials, other departments, and other levels of government. We strongly urge the government to address this and the other barriers identified.
- Several of the examples given in this section have proven solutions, they just haven't been used in the UK before, particularly where regulated if solutions are costly, e.g. ammonia emissions from agriculture, and low and zero-emission options for non-road mobile machinery (EST have operated an accreditation scheme for the Mayor of London's SPG (previously BPG) on construction for many years).
- National planning guidance has an important role to play in promoting the use of proven effective technologies which address air pollution (or even better, both air pollution and climate change).

Q10. In your view, are the priorities identified for innovation funding the right ones?

- It appears that on many issues, further research has been planned. There needs to be a commitment to take timely action, if the evidence identifies a problem and/or solution.
- We welcome HM Treasury contributing to cleaning the UK's air, with the announcement that it will review how alternative fuel taxation rates line up with rates of tax on petrol and diesel ahead of Budget 2018.

Fiscal measures can be very powerful, when effectively implemented. Unfortunately they can also be very damaging when inappropriate, as we saw when Vehicle Excise Duty made it preferable to buy diesel over petrol cars, leading to a huge increase in diesel cars in the UK fleet, and subsequent damage to the UK's air pollution.

¹ www.noiseactionweek.org.uk

5. Action to reduce emissions from transport

Q11. What do you think of the package of actions put forward in the transport chapter? Please provide evidence in support of your answer if possible.

- There needs to be more clarity about the double purpose of this document, and this is particularly needed in the section on transport which contributes to both background pollution and hotspots.
- There are major health impacts of transport pollution, especially for those living or working near busy roads. These health impacts cannot be addressed by considering average emissions, as these are not what these people experience. To focus on average emissions, misses the most severe health damage and fails to protect large swathes of the population, who are often there as they cannot afford to live or work in cleaner environments, making this an equalities issue and an environmental justice issue too.
- To address the twin goals of health protection and overall emissions reduction, two distinct approaches are required. For example, for transport: one to address hotspots of high concentrations of roadside of pollution, and the other to reduce overall emissions through improved vehicle fleets and where possible, fewer trips. These two approaches should be more explicit in the Strategy.
- Transport is a major contributor to air pollution (“road transport, shipping, aviation and rail are responsible for a significant proportion of air pollutant emissions: 50% of nitrogen oxides, 16% PM_{2.5} and 5% of NMVOCs”). It must therefore be a high priority in any National Strategy.
- We welcome the government’s acknowledgement that “transport therefore has a key role to play in reducing emissions and meeting the government’s objectives on the environment and public health. Emissions from road transport have been in the spotlight because of their impact on local air quality, but Government is committed to cutting air pollution from all forms of transport.” We look forward to decisive action on this.
- The Strategy goes on to reference the 2017 UK plan for tackling roadside nitrogen dioxide concentrations. We would appreciate the government clarifying its plans for a new/amended National Plan, in light of the High Court judgement.
- The Road to Zero strategy must consider air pollution as a vital element.
- We should remember that trip reduction is the most effective way to reduce transport emissions; reducing the need to travel, modal shift to public transport and active travel, and effective procurement and freight systems are key, and should be the fundamental aim of any transport policy. In terms of the reducing emissions from the remaining vehicles, measures such as a shift to electric fleet (combined with renewable generation), effective minimum standards for vehicles, and discouraging idling and stop-start driving are important.
- Encouraging the wider use of pure electric cars requires adequate electricity generating capacity and infrastructure. This must focus on renewable, and preferably non-combustion, sources. The closure of coal burning generating stations without sufficient alternative 'clean energy' facilities will not allow widespread adoption of clean electric vehicles.

In addition to the generation of sufficient clean energy, we also need to consider clean energy storage (as there are currently major local hotspots due to polluting balancing plant).

We also need to consider charging infrastructure, especially in urban areas. Some local authorities have reported issues where there are limited on-road charging points, and we support some of the ongoing work, including that by Innovate UK and Cenex, that considers solutions to this issue.

- We welcome the intention to lay new Regulations that will enhance our existing powers concerning vehicles with a prohibited defeat device. This must address all loopholes on this, including defeat devices and removing or tampering with existing abatement equipment.

- We welcome the focus on air pollution from road infrastructure, and the fund in The Road Investment Strategy (RIS) although we note recently that Highways England have been particularly slow in their spending plans to deliver air quality improvements. Air pollution should also be a criteria in other government funding pots and schemes (where these have a potential impact on air quality).
- We welcome the new research programme on tyre and brake wear. This should lead to action to address this type of emission. Consensus building is good, and the EU, as well as the UN, should be considered as a potential partner. However the UK should not be afraid to be a leader on this, as we have in the past on other air quality issues.

Non-Road Transport

- We welcome the focus and proposals on other types of transport.
- We welcome the work on shipping, both domestic and international, as it is an important source both in ports and other hotspots, and as a major contributor to background pollution.
- River and canal boats can also be a source of local air pollution, and there are very little controls to address these.
- We note that carbon targets have been set for rail franchises. We recommend that air pollution targets are also included in rail franchises, as although low carbon engines can have low air pollution emissions, this is not necessarily always the case.
- We urge the government to commit to taking action, if the independent assessment of air quality at a range of railway stations identifies there is a more widespread problem. The review could also look at issues such as idling of diesel locomotives, both at stations and elsewhere.
- We cannot support, or even comment on, the government’s work on aviation without knowing how ambitious this will be. The postponement of sharing plans for aviation until the Aviation Strategy, means that the Clean Air Strategy is incomplete.
- The draft Strategy observes that the aviation industry is “taking action to cut airport-related emissions by operating aircraft more efficiently, introducing new lower emission technologies and practices, reducing vehicle emissions within the airport boundary, and improving public transport links to airports”. However there is no comment on whether this is sufficiently ambitious, or whether they should be doing more, at the very least this should be considered in light of the need for compliance with the wider ambient air quality legal limits.

Modal Shift

- The draft Strategy states:

“In addition to the actions for reducing emissions from each transport sector identified above, modal shift to lower emission modes of travel still plays a central role in reducing transport emissions. We remain committed to encouraging more sustainable modes of transport like cycling, walking and public transport, and shifting freight from road to rail.”

Removing vehicle trips should be the top of the hierarchy, rather than something we “remain committed to encouraging”. We need to more supportive of active travel, which has health benefits beyond air pollution.

Freight actions focus on moving freight from road to rail (and should also include low emission river freight), but there are many options to substantially reduce freight trips, such as logistics, no empty miles, consolidation, and better procurement practices.

Public transport

- This section lacks actions and ambition on public transport. There could be so much more action on public transport, such as minimum standards and supporting both urban and rural services which provide an opportunity for modal shift.
- Taxis and private hire licensing can be a powerful tool to encourage best practice, but action may be needed to stop operators from registering in an area with laxer standards, despite operating almost exclusively in an area with more stringent standards. National minimum standards or access controls may be required if this is a problem.
- We welcome air quality being a consideration in the Transforming Cities Fund.

Q12. Do you feel that the approaches proposed for reducing emissions from Non-Road Mobile Machinery are appropriate or not? Why?

- Non-Road Mobile Machinery (NRMM) is a significant source of local emissions and pollution hotspots. We note that this category covers not just construction site requirement, but a much wider range, including non-sea faring boats and watercraft.
- We welcome the government's intention to do more to tackle emissions from NRMM. We request more clarity on how new Local Authority powers ("to impose minimum emission standards where required to tackle serious air pollution problems") will work. Can a local authority apply a blanket rule to cover e.g. all existing building sites, all rivers/canals in their area?
- We welcome introduction of compliance checks, to ensure real world compliance. We request clarification on what the specified tolerance will be. Also, will these compliance checks include implementation, as this has been a problem in some local authorities, where developers have not followed their commitments? Is this covered by "in-service operations"?

We note that local authorities will need additional resources (especially expert staff and time) to implement and monitor this. This should not detract from their existing core air quality work.

- Further research, through the call for evidence, will help refine effective actions, but there is already sufficient evidence to take action now. We encourage the government to implement the measures listed.

6. Action to reduce emissions at home

Q13. What do you think of the package of actions put forward to reduce the impact of domestic combustion? Please provide evidence in support of your answer if possible.

Indoor and Outdoor Pollution

- Emissions from homes are a significant source of ambient air pollution, as covered by the Air Quality Directive and National Emissions Ceiling Directive. We were disappointed to see such a strong focus on indoor air quality, at the expense of ambient outdoor pollution.
- While there is a role for addressing indoor air pollution, to help protect people's health within their home, the legal powers for this are limited to awareness raising and working with manufacturers to reduce emissions from products (including cleaning and decorating products, furniture, white goods, etc.) used in the home.
- There are stronger legal levers for addressing emissions which affect the outdoor concentrations of air pollution. These should be used to address sources of pollution in, and from, the home.
- We support schemes to raise awareness of indoor air pollution and possible options. It should be noted that indoor and outdoor air pollution are not unrelated, both physically through ingress and egress of pollution, and in awareness, for example visible smoke from domestic burning is far more obvious from the chimney than in the room.

Domestic Burning

- We welcome the government’s intention to “consider a nationwide approach to reduce the impact of domestic burning on air quality and the health of all citizens.” We urge the government to make a stronger commitment to action on this.

A nationwide approach will help set strict standards and build political will. The introduction of national Sulphur content standards will bring down both national emissions and go some way to address higher hotspot emissions due to ‘biomass tourism’. An appropriate test standard for new solid fuels will also help. This must consider all relevant pollutants, such as particulates, VOCs and dioxins, and be stringent enough to make a significant improvement.

- We welcome the intention to reinvigorate Smoke Control Areas to tackle domestic burning, with new powers. These were largely completed by local authorities in the late 1980s but although these are ‘flagged’ to new house owners through searches, local authorities need to remind residents of such controls particularly as wood burning stoves are proving popular and anecdotal information suggests that not all of these are DEFRA approved.
- We agree that not all forms of domestic burning are equally polluting. Other factors which affect this are where the appliance is located, and the height, direction and location of the stack. There are, sadly, lots of bad examples in the UK at the moment. This could be improved through better enforcement of building regulations, updated guidance on stacks etc., and addressing some of the loopholes in the current Clean Air Act and Nuisance powers.
- The new standards for domestic stoves could address some of these issues, but this needs to be strict and cover the worst case operation.
- It should be noted that cleaner appliances and fuels can reduce emissions, but these will still be significantly higher than conventional gas or electric heating.

A nationwide approach will need to be supported by local enforcement, and we welcome the intention to empower local authorities to go further where necessary, as it is a major local issue as well as a national one. We urge the government to ensure that these powers will be ambitious, we were unsure of the meaning of “proportionate powers” and urge the government to make these proportionate to the damage done by domestic burning.

- Local authorities should be supported to act and enforce this, through additional resources, both expert staff and funding.
- We strongly support the commitment to reduce the air quality impacts of the Renewable Heat Incentive. This has been a major flaw in the RHI scheme since its inception, and caused untold damage to local air pollution levels. Climate change and air pollution can be effectively addressed together, but this is far easier to do if both are considered at the early stages of programme development. There have been too much air pollution and health damage from unintended consequences of tunnel-visioned climate change schemes already, and we welcome the government’s commitments to address existing programmes, and take a wider view in future.

Q14. Which of the following measures to provide information on a product’s non-methane volatile organic compound content would you find most helpful for informing your choice of household and personal care products, and please would you briefly explain your answer? “A B C” label on product packaging (a categorised product rating for relevant domestic products, similar to other labels such as food traffic light labels)

- information on manufacturer website**
- leaflet at the point of sale**
- inclusion in advertising campaigns**
- other option**

VOC labelling gives people a choice and has been used successfully in the past, e.g. on paint products. The labels shown on p57 of the strategy are a helpful way of communicating the relevant information.

However we feel this section of the draft Strategy is extremely lacking in detail or measures to address the very large gap predicted in achieving VOC targets for 2030. More proposals are required, these should be ambitious, and include proposals addressing emissions from agriculture.

Q15. What further actions do you think can be taken to reduce human exposure from indoor air pollution?

We want the government continue to control toxic chemicals, particularly those with the most harmful effects, in products intended for household use. As a back-stop this should include compliance with all existing controls, but the government could develop and implement stronger controls.

7. Action to reduce emissions from farming

Q16. What do you think of the package of actions put forward in the farming chapter? Please provide evidence in support of your answer if possible.

The contribution of the agricultural sector to ammonia, methane and NMVOC emissions is immense, and the statistics show how important it is to implement sectoral controls and new approaches.

The strategy states that “Farmers can take practical action to reduce ammonia emissions”, and includes some excellent options, and there are some great international examples. However it is not clear to what extent these are being implemented, required or even encouraged.

We welcome the government’s help for farmers, e.g. through the Farming Ammonia Reduction Grant Scheme, Countryside Productivity Scheme and the Countryside Stewardship Scheme. These are all useful incentives, we urge the government to match them with standards and best practice requirements.

We would like more information on what is proposed to protect (or even ensure the survival of) a natural ecosystem, where it “will still be exposed to nitrogen deposition and atmospheric levels of ammonia that are greater than they can tolerate.”

Q17. What are your preferences in relation to the 3 regulatory approaches outlined and the timeframe for their implementation: (1) introduction of nitrogen (or fertiliser) limits; (2) extension of permitting to large dairy farms; (3) rules on specific emissions-reducing practices? Please provide evidence in support of your views if possible.

- We welcome of all three approaches and strongly support them being introduced in parallel (or at least show an analysis of the different impacts and likely overlaps): the introduction of nitrogen (or fertiliser) limits, the extension of environmental permitting to large dairy farms; and the new legislation.
- We urge the government to tighten some of the rules and timescales for these works. For example, the Strategy mentions extending environmental permitting to large dairy farms by 2025; is that the start or end of the process? Could it be sooner? For example, why can’t slurry and digestate stores and manure heaps be covered before 2027?

Q18. Should future anaerobic digestion (AD) supported by government schemes be required to use best practice low emissions spreading techniques through certification? If not, what other short-term strategies to reduce ammonia emissions from AD should be implemented? Please provide any evidence you have to support your suggestions.

- We strongly support ensuring that digestate produced through AD incentivised by government is required to be spread using best practice techniques, and that there is a certification scheme to

ensure this. We were disappointed that the government did not make a firm commitment previously to set this up. We urge the government to commit to this action in the final Strategy.

8. Action to reduce emissions from industry

We note that the details of emissions from industry are from the National Atmospheric Emissions Inventory. However the categories in that database do not match those regulated by the Environment Agency and local authorities and so will give a false impression of how much of the emissions can potentially be controlled by regulation from these two authorities.

Q19. What do you think of the package of actions put forward in the industry chapter? Please provide evidence in support of your answer if possible.

- We welcome commitment to continue industrial regulation at the same level. We strongly support stringent emission standards for industrial plant and processes. We welcome some of the measures in this section, particularly integrated pollution control, Best Available Techniques, for medium combustion plants and generators and the regulatory gap between the current eco-design and medium combustion plant regulations.
- If the government is working in close collaboration with industry, we encourage the government to involve other stakeholders (we are always happy to comment, subject to availability). Some industrial companies have been pro-active in developing best practice and new techniques. However, some have not, and continue to prioritise implementation cost over air quality. This is echoed in the Strategy which talks of exploring

“the emissions reduction contributions from industry to date, the potential to make further commitments to improving air quality, and the technical and financial feasibility of doing so.”

- We urge the government to be ambitious in their Industrial strategy and roadmaps. The High Court has highlighted the relative unimportance of cost in taking action on air pollution, and the importance of urgent action.
- We question the potential effectiveness of market-based measures to reduce NMVOC emissions. There is no detail on what these will be or whether they will work.
- We note that the graphs on pages 66 and 68 are unclear, they need labels for the largest sources and a better key.

Q20. We have committed to applying Best Available Techniques to drive continuous improvement in reducing emissions from industrial sites. What other actions would be effective in promoting industrial emission reductions?

- We believe that a significant proportion of the emissions highlighted in this section are not just from sites regulated by the EA and local authorities. These will need to be quantified and appropriate measures and policies developed to address them.
- We would also like to see a shift away from biomass as a source of fuel for electricity generation (especially in urban areas). We support the trial of zero emission technology, particularly zero emission energy generation. We would like to see future commitments to implementing these, if they prove effective.

Q21. Is there scope to strengthen the current regulatory framework in a proportionate manner for smaller industrial sites to further reduce emissions? If so, how?

- It will be important to ensure that local authorities have adequate guidance and are funded to have the necessary resource and expertise to deliver effective regulation of smaller industrial sites.

- Smaller industrial sites should be supported and encouraged to identify opportunities for continuous improvement and innovation to reduce emissions. It would also be useful to clarify any overlap in regulatory arrangements.

Q22. What further action, if any, should government take to tackle emissions from medium plants and generators? Please provide evidence in support of your suggestions where possible.

- Any new Local Authority system (covering Smoke Control Areas, Clean Air Zones, or Local Air Quality Management) should include some levers on new combustion plants, generators or other combustion balancing plant. Some local authorities have suggested a presumption against new combustion plant in these zones.

Where combustion plant is regulated by the Environment Agency, but can affect an Air Quality Management Area, we encourage the close involvement of the local authority.

- We are aware that some local authorities (such as the City of London) have proposed minimum standards for some non-EA regulated plant, which should be considered.

The City of London's proposals are aimed at complementing (and plugging the gap between) Ecodesign and MCPD emission limit controls. They propose that all new plant should be required to meet a specified emission limit with a certificate of compliance from the local authority. For example:

- Gas boilers > 400kW : NO_x emission limit of 40 mg/kWh
- Naturally-aspirated (stoichiometric) Combined Heat and Power plant
- (≤500 kWe): NO_x emission limit 50 mg Nm⁻³
- Turbocharged CHP (>500 kWe): NO_x emission limit 25 mg Nm⁻³.

Q23. How should we tackle emissions from combustion plants in the 500kW-1MW thermal input range? Please provide evidence you might have to support your proposals if possible.

- The planning regime could also be used to ensure that best practice is used in medium and small combustion plants and generators in new developments.

Q24. Do you agree or disagree with the proposal to exempt generators used for research and development from emission controls? Please provide evidence where possible.

- The exemption for generators used for research and development would be acceptable, on the basis that this is only for R&D on generators, is limited in size and location, and has minimum standards.

9. Leadership at all levels (local to international)

Q25. What do you think of the package of actions put forward in the leadership chapter? Please provide evidence in support of your answer if possible.

- We welcome the government's commitment to being a leader on air quality action, and continue playing a key role in CLRTAP and the UN Environment and the World Health Organization. The European Union will also continue to be a key partner, regardless of the UK's membership or not.
- It would have been useful to see more clarity on how the National Air Pollution Control Programme relates to this Strategy.
- We are strongly supportive that, regardless of EU membership, "environmental standards are not only maintained, but enhanced". We urge the government to protect its citizens' health through environmental protection.
- We welcome the commitment to setting up a body to 'hold government to account'. In particular this needs to be enforceable in Court by citizens affected by poor air quality. The issue of costs in any such action should not be so prohibitive as to discourage citizens from taking action.

Internal Government Action

- We welcome the government leading by example, through the Government Buying Standards, Sustainable Travel Plan, and other initiatives implemented within government. Where these are effective, they should be considered as official policy, or at least, as Best Practice examples which can be implemented elsewhere.
- We welcome the government's intention to extend their greenhouse gas emissions reporting (for their estate and operations) to also report and achieve reductions of air pollutant emissions. We recommend that this process identifies co-benefits and trade-offs so that actions can be optimised to reduce both local and global pollutants.

Q26. What are your views on the England-wide legislative package set out in section 9.2.2? Please explain, with evidence where possible.

- We welcome new legislation for action to tackle air pollution, underpinned by new England-wide powers to control major sources of air pollution, plus new local powers to take action in areas with an air pollution problem. The effectiveness of this will depend on its ambition and detail. We urge the government to be ambitious and to openly discuss what this will include and allow. We would be happy to discuss this further.
- Central government must provide the political narrative and support and the financial backing to enable local authorities take sufficiently ambitious and effective action.
- The new legislation will create a new statutory framework for Clean Air Zones (CAZ) to simplify current overlapping frameworks of CAZ, AQMA and Smoke Control Areas to create a single approach covering all sources of air pollution. This should be developed in concert with local authorities and other key stakeholders.
- We strongly recommend that if LAQM and CAZ systems are merged, the best points of LAQM are kept. Review and assessment of local air quality provides evidence to motivate and develop effective action. Local authorities must be empowered to identify, quantify and act on local air pollution problems. Local problems cannot be identified by national modelling, nor should the government decide how many local authorities can address air quality issues.
- In addition, local authorities must retain the ability and responsibility to identify local pollutions. At present, Clean Air Zones are only designated by the national government, based on national modelling. We know from multiple examples that the national modelling does not, and is not designed to, identify local issues accurately. Local review and assessment must be used to identify hotspots and areas of unacceptably high air pollution.
- We were disheartened to see plenty of references to the Clean Air Zone programme, but almost none on Local Air Quality Management within the draft Clean Air Strategy. The Local Air Quality Management framework has led to identification and understanding of local air pollution sources and hotspots, and this should be built on, in any new system, to ensure effective action.
- Local authorities with proven air pollution problems, including AQMAs, must be able access CAZ funding and support, and the new CAZ powers, regardless of a government designation of CAZ. Some local authorities with air quality problems and declared AQMAs have already reported that air quality is now considered a low priority as they are not a "mandated city". This has led to reduced funding and resourcing within those areas, and also to fleet operators indicating they will be using lower spec vehicles in that local authority area, as their cleaner newer vehicles are needed on the mandated city routes.
- We recommend that the new CAZ powers include new powers in planning, and over development sites. This will need to be considered in light of existing planning powers, and also in terms of whether enforcement and monitoring will be the responsibility of Planners or Environmental Health.

- New powers are only effective if a local authority implements them. This requires not just legal drivers, but political ones, in terms of a national narrative and national and local political pressure to take action. They will also require sufficient expert staff, support and funding, all of which have suffered under austerity programmes.
- There should also be a requirement for local authorities with innovative or best practice schemes, to produce guides to assist other local authorities. Defra should disseminate and promote these.

Q27. Are there gaps in the powers available to local government for tackling local air problems? If so, what are they?

- The government needs to ensure that clean air is a political priority at all levels of government. There should be a clear national narrative for action to protect and enhance human health through clean air, which is supported with further targeted work at a local level.
- It would be useful to consider why LAQM has not delivered all we hoped it would (such as lack of expert staff and funding, lack of political support, lack of support from those controlling sources, such as transport and planning teams). For example, NO₂ exceedence areas are generally close to busy roads, but local authorities have next to no control over the amount or type of traffic on their roads (short of a charging CAZ, which could just displace this traffic, with no significant reduction in overall emissions).
- We welcome the intention to strengthen statutory planning guidance on air quality and help share good practice where it is already happening. We recommend you consider the EPUK/IAQM guidance “Land-Use Planning & Development Control: Planning For Air Quality”², January 2017, in developing new guidance.

Q28. What are the benefits of making changes to the balance of responsibility for clean local air between lower and upper tier authorities? What are the risks?

- The draft Strategy makes the claim that “LAQM does not currently effectively encourage all local authorities to work collaboratively across departmental or structural boundaries”. While this is sometimes true, this is not always the fault of the local authority Environmental Health Officer, but lack of political priority in County and Unitary Authorities, and lack of support from national government.
- The draft Strategy goes on to say that “LAQM does not currently effectively encourage all local authorities to take a total emissions approach to tackling local air quality.” However, a total emissions approach was never part of the LAQM system and is inappropriate to protect health, given hotspots and social inequality. By all means reduce background concentration, but also help the people who suffer the most.
- We dispute the implication that “under the existing system few local authorities consider themselves to have a problem or need to take action on domestic wood and coal burning even though nationally this source accounts for 38% of PM_{2.5} emissions.” Many local authorities see a problem with domestic wood and coal burning, but haven’t had the appropriate tools and support, including political will, both nationally and locally, to do anything about it.

Q29. What improvements should be made to the Local Air Quality Management (LAQM) system? How can we minimise the bureaucracy and reporting burdens associated with LAQM?

- Reporting is not necessarily a bad thing, if it (and the underlying ‘bureaucracy’) is useful in developing effective policies and action. The measures taken to streamline the LAQM system in 2014/2015 minimised the burdens.

² http://www.environmental-protection.org.uk/wp-content/uploads/2013/07/air-quality-planning-guidance_Jan17.pdf

- To make the Local Air Quality Management system more effective, central government must provide the political narrative and support and the financial backing to enable local authorities take sufficiently ambitious and effective action. They must also ensure adequate skills and resourcing are available within local authorities to support this and any additional work required to meet the limit values in a short a time as possible, and protect human health.

10. Progress against targets

Q30. What do you think of the package of actions in the strategy as a whole?

- We are pleased to see a number of new actions in the draft Strategy and that these should help deliver its aims, to some degree. It is particularly encouraging to see some positive proposals for dealing with the ammonia that is affecting the natural environment. However there are a number of gaps and some options that need further developing. So overall we believe the draft Strategy should deliver some useful progress but there does still seem to be a long way to go.

Q31. Do you have any specific suggestions for additional or alternative actions that you think should be considered to achieve our objectives? Please outline briefly, providing evidence of potential effectiveness where possible.

- There are often competing priorities in government, for example, road transport versus the need to address climate change and air pollution. There needs to be a stronger requirement for all government programmes and policies to assess the impact on air pollution and health, and take this into consideration for both local impacts and national emission compliance.
- It would be good to see more thought given to developing and promoting non-combustion alternatives for heat and electricity generation. Biomass, emergency diesel generators and other balancing plant can cause major problems in urban areas, and need to be more tightly controlled, through the various existing regimes, such as industrial regulation and planning, and new controls needed where there are gaps or the controls are too lax.

Q32. If you have any further comments not covered elsewhere, please provide them here.

- Please do not hesitate to contact us if you would any further information on any of these comments, we would be happy to provide more detail or discuss this further.