UKELA (UK Environmental Law Association)

Response to the Environment, Food and Rural Affairs Committee inquiry on Air Quality

UK Environmental Law Association, August 2020

SUMMARY
UKELA responds to the Environment, Food and Rural Affairs (EFRA) Select Committee inquiry into Air Quality. This is based on submissions from three of its working parties (Climate Change & Energy, Public Health & Environmental Law and Nature Conservation).

The Covid-19 pandemic has cast a spotlight on poor air quality, which has a well evidenced, harmful impact on human health, but the crisis has also demonstrated how global air pollution can be improved with the right public and political interventions. Whilst much attention has been given to the adverse effects of poor air quality on human health, the effects of air pollution upon the natural environment have not been fully recognised either in UK Government policy or established in nature conservation law. The Environment Bill provides an opportunity to rectify this, using mechanisms such as the air quality targets, environmental improvement plans, and biodiversity net gain. There is much to welcome in the Bill, although we suggest amendments that should ensure better environmental regulation, more robust governance, and no weakening of existing standards.

Air pollutants and greenhouse gas emissions share many sources, providing government with the opportunity to address these threats with a coherent set of policies. The pandemic has seen a reduction in air pollution due to lower energy consumption and reduced transport use, and to minimise an emissions bounce back we recommend policies for the short and longer term that address pollutants at source and are cognisant of the transboundary nature of this threat. Addressing emissions at source can have significant local (air pollution around busy roads), regional (acid rain) and international (climate change) co-benefits, for climate and environment. The UK has made good progress in reducing greenhouse gas emissions from the energy sector, but progress in transport, industrial and buildings emissions have not kept pace and need to be addressed. It is vital that the UK government’s international aid budget is similarly focused on helping developing countries avoid the use of polluting infrastructure.
UK ENVIRONMENTAL LAW ASSOCIATION

The UK Environmental Law Association aims to make better law for the environment and to improve understanding and awareness of environmental law. UKELA's members are involved in the practice, study or formulation of Environmental Law in the UK and the European Union. It attracts both lawyers and non-lawyers and has a broad membership from the private and public sectors.

UKELA prepares advice to government with the help of its specialist working parties, covering a range of environmental law topics. This response has been prepared with the help of the Climate Change & Energy, Public Health & Environmental Law and Nature Conservation Working Parties. Currently UKELA does not have a working party focused on Air Quality issues, the responses below address only those matters within the expertise of these groups.

UKELA makes the following comments on the questions raised by the Select Committee.

PRELIMINARY OBSERVATIONS

The consequences of environmental harm such as air pollution manifest as multiple human physical and mental health pathologies, which adversely impact on the quality and quantity of our lives as well as the capacity for health systems such as the NHS to cope.

Covid-19 has developed because of our encroachment upon and disrespect of nature. Habitat loss, air, water and soil pollution, wildlife trading, wet markets, unsustainable agricultural practices, and climate change have been the architects of humans becoming one of its hosts, and in the process creating an unprecedented global public health crisis with devastating socio-economic consequences. Even if a vaccine is developed, novel infectious diseases that cross the species barrier will become increasingly frequent if environmental degradation and pollution continues unabated.

Health care systems have at best struggled and at worst failed to cope with the public health impact of this disease. The NHS has only been able to buffer the impact by either shutting down or significantly reducing normal clinical services. This in turn is having a significant impact on the physical and mental health of tens of thousands of people in the UK. The indirect health consequences of Covid-19 will resonate long term.
There are, however, positive messages from this crisis:

- Covid-19 has provided an opportunity for humans *en masse* to understand that planetary health is human health.

- It has provided clarity that human behaviour towards the environment is having a negative impact on our lives.

- Even if one does not care much for nature, the economic reward of a green recovery is no longer in doubt. The only logical response to the Covid-19 pandemic is a green recovery that places environmental protection and biodiversity regeneration at the heart of all Government policy. Without this approach pandemics and their collateral socio-economic damage will become more frequent and more severe.

- The improvement in global air pollution levels has been an acute reminder of what can be achieved by humans quickly and efficiently when there is political and public incentive.

- Air pollution contributes to tens of thousands of deaths per annum in the UK alone. This does not include the negative socio-economic impacts of those living with poor health because of air pollution. The demonstrative improvement in air pollution during the pandemic will undoubtedly have a positive impact on this.

- There has been an increase in awareness that the natural world is intrinsically linked to physical and mental wellbeing and all the personal and economic benefits that are associated with that.

- There is an understanding that health and wellbeing should not be restricted to quantitative terms such as blood pressure, weight, blood sugar levels, and cholesterol but instead, physical and mental well-being must be defined in qualitative terms such as access to and appreciation of the natural world, state of mind, and relationships.

Whilst much attention has been given to the adverse effects of poor air quality on human health, the effects of air pollution upon the natural environment have not been fully recognised either in UK Government policy or established in nature conservation law. This is despite that fact that the scientific evidence of the deleterious effects is comprehensively documented in the peer review literature, for example, the literature on the profound adverse effects of nitrogen deposition on plant communities stretches back over 40 years (see for example *Nitrogen as a threat to European terrestrial biodiversity*: Lead author: Nancy B. Dise)
Over the past 10 years evidence has emerged that the effects of nitrogen deposition are not confined to plant communities but are apparent further up the food chain. For example, there is now scientific evidence that insects are also adversely affected and it has been postulated that the high levels of nitrogen pollution may be the cause of the significant decline in insect populations that have been recorded across the UK and Europe. (For an overview see Atmospheric nitrogen deposition in terrestrial ecosystems: Its impact on plant communities and consequences across trophic levels Stevens, Thomas and Storkey 2018 https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2435.13063.

As a consequence, the scientific community has developed the concept of ‘critical loads’ and ‘critical levels’ to define environmental limits for air pollution. Critical loads are defined as "a quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge". The UK has an excellent knowledge base provided by the Air Pollution Information System (www.apis.ac.uk) which is managed by the UK Centre for Ecology and Hydrology, jointly funded by UK pollution and conservation agencies. APIS provides comprehensive data on the potential effects of air pollutants on habitats and species, including defining critical loads and levels for most habitats and designated nature conservation sites.

It is the view of UKELA that the EFRA committee review of the 2019 air quality strategy must include a greater focus on the effects of poor air quality on the natural environment. This is particularly critical in the context of the Environment Bill and its focus on biodiversity net gain and environmental restoration.

CONSULTATION QUESTIONS

1. Did the UK Government’s 2019 Air Quality Strategy set out an effective and deliverable strategy to tackle the UK’s poor air quality and address the issues raised in our 2018 report? Has the UK Government put in place the necessary structures and resources to deliver its strategy?

While the 2019 Air Quality Strategy recognises the effects of poor air quality on the natural environment the proposed actions were very limited and unlikely to lead to any demonstrable improvement. For example, the target for reduction of damaging forms of nitrogen by 17% by 2030 take no account of the concept of critical loads nor the
variation of critical load exceedance across the country. Indeed, the need to reduce nitrogen deposition rates to at or below critical loads does not feature in the Strategy. Setting a % based target for reduction is unlikely to achieve any environmental restoration given that across England nitrogen deposition rates are twice or even three times the crucial loads for many sensitive habitats. A 17% reduction target is therefore not ambitious, but importantly any target which does not refer to the concept of critical loads or levels does not reflect the fundamental principles of air quality environmental limits. An approach based in critical loads and levels is also consistent with the management of Habitat Sites (SPA, SAC and Ramsar sites) where Conservation Objectives for the site will often include an objective to restore or maintain nitrogen deposition levels at or below critical loads.

2. Will the Environment Bill provide England with a robust legal framework to define and enforce air quality limits?

UKELA’s response to the Environment Bill Public Bill Committee dated 21 May 2020 contains the following points of relevance to this question:

**Environmental targets (clauses 1-6)**

4. UKELA welcomes the introduction of environmental targets and notes the priority areas. It supports the legally binding nature of the targets (see clause 4) and that they can be enforced by the Office for Environmental Protection (“OEP”). A sound environmental law structure and framework will be vital if the UK is to be a world leader in environmental law and policy and to achieve the Government’s aim to deliver the most ambitious environmental programme of any country on earth. To assist the Government in achieving its aim, UKELA notes that:

a. The clause 1(2) requirement is only to set a target in “at least one matter within each priority area”. This gives broad discretion to the Secretary of State in choosing the metric and it would be preferable for detailed parameters for targets to be included in the Bill for each priority area, (for example, in terms of habitat extent and condition, and species abundance and occupancy).

b. It is important to ensure that the priority areas listed in clause 1(3) are not exhaustive and that a purposive approach to the provisions is adopted, so that matters such as land quality (including, for example, contamination) and noise can also be given priority. It will be vital that air quality in urban areas is included within the priority areas and not inadvertently excluded because it does not relate to the ‘natural environment’ as currently prescribed in clause 1(1).

5. UKELA supports amendments that bind the setting of targets to the

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1 See §3, Defra Environment Bill 2020 Policy Statement (Defra, 30 January 2020).
6. The procedural provisions in clauses 3-6 as to regulations and target setting must be sufficiently robust, subject to scrutiny and operate to secure genuine and significant improvement in environmental matters. The duty on the Secretary of State to seek advice under clause 3(1) is welcome but, as worded, gives overly broad discretion in the choice of persons who should be consulted; notwithstanding that the Secretary of State should regard them as independent. UKELA considers that the clause 3(1) advice process should also include public consultation provisions analogous to the consultation provided in strategic environmental assessment and contained for example in Regulations 12 and 13 of the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633). Providing a robust form of consultation, including mechanisms for consulting the public, will help ensure that the independent advice process is robust. Moreover, any advice received by the Secretary of State should be made publicly available.

7. As well as considering whether the targets would significantly improve the natural environment, the five-year target reviews should also include the requirement that the Secretary of State is satisfied that they are in fact achieving those improvements, based on evidence and consultation that are publicly accessible.

Environmental improvement plans and monitoring (clauses 7-15)

8. UKELA welcomes the introduction of environmental improvement plans (“EIPs”) in the Bill. EIPs will be central to tackling environmental degradation and securing mid to long term measures for enhancing the environment. However, we suggest that clause 7 should include a provision that EIPs must also explain how they deliver progress towards meeting the targets defined under clause 1. Further, we suggest replacing the word ‘may’ in clause 7(5) to ‘should’, as improving people’s enjoyment of the natural environment is inextricably linked to improving the natural environment in some areas, for example, natural capital and ecosystem services.

Environmental principles, rights and statements (clauses 16-20)

9. As with targets and EIPs, UKELA generally welcomes the environmental principles under clauses 16-18. However, UKELA notes that the duty on Ministers under clause 18(1) is merely to have due regard to a policy statement (which has yet to be published), rather than to have due regard to the legal principles themselves (which would be capable of being enforced by the OEP). Further, the blanket exclusions for defence and taxation in clause 18(3) should not apply as currently drafted and the OEP...
should at least be entitled to review the impact of environmental taxation. In UKELA's view, the combination of the principles being unenforceable and subject to these exemptions significantly weakens their application and effect.

10. In relation to clause 18 (Policy statement on environmental principles: effect), UKELA welcomes the fact that the legal duty concerning the policy statement on environmental principles is applicable to all Ministers of the Crown.

11. The legal duty under clause 18(1) is to "have due regard to" the policy statement. Although some have criticised this duty as lacking substance, we note that the case law on the "have regard to" duty as it appears in other legislation would require a Minister genuinely to address the principles and make a reasoned justification for not applying the policy statement in any particular case. When interpreting such a duty, the courts will look carefully at the particular legislative context of the policy or guidance document in question. In this case, the fact that the policy statement is both subject to statutory requirements concerning consultation and must be laid before Parliament are likely to give it heightened legal significance.

**Aarhus Convention 1998**

12. The UK, along with EU Member States, the EU itself, and a number of other European countries, has ratified the UNECE Aarhus Convention 1998, which provides for access to environmental information, to participation in environmental decision making and access to environmental justice. EU legislation, including two Directives relating to environmental assessment and industrial emissions, also implement the Aarhus Convention rights, although these cover relatively defined and specific areas of environmental law. Direct transposition of the Aarhus Convention in the UK is piecemeal and incomplete in areas such as the Civil Procedure Rules Part 45, Rules 45.41-45.44 and the Environmental Information Regulations 2004 (SI 2004/3391). However, the UK Government has not systematically included the Aarhus Convention provisions in many other areas of environmental law (see, for example, the Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1156), which cover the permitting of a wide range of installations such as waste management facilities).

13. It is UKELA’s understanding that the Government intends to continue to be bound by the Aarhus Convention. However, one of the problems is that under the so-called dualist system applicable in the UK, any rights under

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3 See for example "The obligation to have regard to the policy recognises that there may be circumstances when it does not have to be applied to the letter but in my view, there must be very good reasons indeed for not applying it." (Collins J, *Royal Mail Group v Postal Services Commission* [2007] EWHC 1205); "In the absence of a considered decision that there is good reason to deviate from it, it must be followed" (Wilson LJ, *R(G) v Lambeth Borough Council* [2012] PTSR 364; and in the Australian case *Tackman v Chapman* [1995] 133 ALR 226 the 'have regard' duty was interpreted to mean "the decision-maker must engage in an 'active intellectual' process in which the prescribed circumstances receives his or her 'genuine' consideration".


5 The application of the dualist system in the UK was confirmed by the Supreme Court in *Miller v Secretary of State for Exiting the European Union* [2017] UKSC 5. As the court noted, it "is based on the proposition that international law and domestic law operate in independent spheres" (para 55).
international conventions such as the Aarhus Convention that have not been transposed into national law cannot be invoked before the national courts. Therefore, we recommend that the Aarhus rights of access to environmental information, public participation in environmental decision making and access to environmental justice should be re-incorporated into the Bill under a new section entitled “Environmental Rights”. Failing that, the Government should commit to a systematic review of the extent to which the Aarhus Convention rights have been incorporated in current domestic environmental legislation and to make appropriate amendments where they are not.

**Non-regression clause**

14. In relation to the non-regression of environmental law, UKELA considers that a comprehensive, unqualified, non-regression clause should be included in the Bill. Without this, it is possible that some environmental provisions (whether in primary or secondary legislation, policy, statutory guidance or otherwise) could weaken environmental law and policy. If the Government is not minded to provide an unqualified, non-regression clause in the Bill, then the commitment to this in environmental law and policy should be expressed elsewhere, for example, by way of a Ministerial Statement (although UKELA notes that this would not bind future governments).

15. In particular, the clause 19 statement of "not reducing the level of environmental protection" should apply to all law (including both primary and secondary legislation) that may have an adverse environmental impact or consequence, and not simply to new primary legislation that, if enacted, would be regarded as environmental law. There may well be proposed legislation that would not ordinarily be described as environmental law, but could have a significant adverse environmental effect if introduced (for example, a Bill to facilitate a major road-building programme or controls on movement and transport as a consequence of social distancing).

**The Office for Environmental Protection (clauses 21-40 and Schedule 1)**

16. UKELA welcomes the introduction of the OEP and believes that it will help secure the UK Government’s objective of ensuring the UK is a world leader in the environment. UKELA considers that the genuine independence, effective accountability and sufficient funding of the OEP are critical. Indeed, unless the OEP is sufficiently funded, independent and accountable, its operational effectiveness may be open to question. However, UKELA considers that the Bill as presented does not currently provide certainty in these areas.

17. On independence, UKELA considers that the OEP’s board must comprise an experienced and diverse group that is appointed through an open and transparent appointment process. UKELA suggests that paragraph 2(1) of Schedule 1 be amended so that the appointment of non-executive
members (particularly the Chair) must be confirmed by Parliament.

18. In terms of accountability, UKELA has consistently supported the principle that the OEP should be reporting to Parliament in compliance with the standards set out in the HM Treasury handbook: Managing Public Money (HM Treasury, rev Sep 2019) to ensure financial transparency, accountability and appropriate oversight.

19. In relation to funding, UKELA considers that a commitment within legislation is preferred. UKELA notes that in the Government’s response to the Environmental Audit Committee’s report on the Draft Bill, the Government gave an assurance that the OEP’s funding would be ringfenced for five years and that it would formalise the commitment in Parliament. However, the concern remains that a future government would not be committed to renew the funding, yet a long-term funding commitment is needed for most matters relating to the environment. Indeed, this is something the Government recognises in providing five yearly reviews for the EIPs and in setting a 25 year environment plan.

20. Clauses 22 and 23 explain that the OEP’s strategy is to set out how its functions are to be carried on. UKELA broadly welcomes the process in place to develop the strategy, although given the importance of the strategy in relation to the development and efficacy of the OEP’s functions and environmental law and policy as they evolve, the development of the strategy should secure meaningful and effective public consultation procedures.

21. At present, clause 23(5) provides that in preparing, reviewing and revising its strategy, the OEP is required only to consult anyone it considers appropriate, leaving the choice of person entirely its own discretion. The OEP’s strategy is an important document that will explain how the OEP will exercise its functions and determine its priorities in line with its statutory duties, and it will be key in ensuring public confidence and understanding in how it goes about its work. No doubt in practice the OEP would be well advised to consult widely in developing its strategy, but because it is so significant UKELA feels the legal provisions on consultation should make it explicit that the OEP should seek the widest possible views in its consultation process. This would bring it in line with the legal provisions concerning the strategy of the Equality and Human Rights Commission (that has in many ways provided a model for the OEP), which provide in section 5 of the Equality Act 2006 that before preparing or revising its strategy, the Commission must:

"(a) consult such persons having knowledge or experience relevant to the Commission’s functions as the Commission thinks appropriate,

(b) consult such other persons as the Commission thinks appropriate,

(c) issue a general invitation to make representations, in a manner likely in the Commission’s opinion to bring the invitation to the attention of as

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7 In practice, this might be a joint committee of, for instance, the Environmental Audit and EFRA Committees although that would be for Parliament to decide. However, given that the OEP will have some functions in Northern Ireland, the process to appoint a non-executive member from Northern Ireland should also involve the Northern Ireland Assembly.
large a class of persons who may wish to make representations as is reasonably practicable, and

(d) take account of any representations made."

22. UKELA suggests that additional clauses equivalent to sub-sections 5(c) and 5(d) above are introduced in clause 23(5).

23. Providing meaningful consultation, including mechanisms for consulting the public, will help ensure that matters developed within the strategy (for example, how the OEP is to respect the integrity of other statutory regimes, including appeals, under clause 22(6)(c)) will be effective and robust.

24. UKELA welcomes the provisions in clause 25 in relation to the OEP’s scrutiny and advice functions, although it notes that sub-clause 25(6) provides the option for the OEP to consider how progress could be improved or to consider the adequacy of the plans. UKELA recognises that it could be the case that the OEP concludes that progress is sufficient. However, at present the clause leaves the option simply to avoid consideration altogether. In the circumstances, UKELA proposes that the word "may" in clause 25(6) should be replaced by "must", to ensure that there is always consideration of the adequacy of the data relating to the clause 15 environmental monitoring provisions. This would be consistent with the other clause 25 provisions and it would remain open for the OEP, if it so concluded, to be satisfied with progress and the adequacy of data.

25. UKELA is concerned about clause 27 requiring the OEP to provide advice to a Minister on any proposed change of environmental law, or any other matter relating to the natural environment should that Minister require this. This role could conflict with that of specialist advisers within government departments, who should be able to provide appropriate legal advice to those departments. The OEP may also be required to advise a Minister against whom it may wish to take enforcement action. UKELA suggests that the OEP should be consulted on new law and have the right to comment should it so wish but should not be obliged to advise.

26. In UKELA’s view, the constraints in clause 35 on the Upper Tribunal’s power to issue remedies are unnecessarily restrictive and should be amended to allow the Tribunal to impose such remedies as it sees fit, including financial penalties.

Interpretation (clauses 41-44)

27. UKELA welcomes the fact that there are provisions seeking to define environmental law in some form, in order to ensure that the provisions within the Bill can have some defined scope and purpose. UKELA also recognises that it may be unwise to attempt to provide an all-encompassing and over-arching definition of what ”environmental law” may or may not include. That said, we consider that the term ‘environmental law’ currently in Clause 43 is narrowly drawn and does not include many areas of law, such as planning and transport, where decisions by public bodies may have

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8 i.e. clause 25(6) should read: “A progress report for an annual reporting period must include – (a) consideration of how progress could be improved, and (b) consideration of the adequacy of the data …”.
significant environmental implications.

28. UKELA understands the rationale for having a reasonably defined definition of environmental law for the purposes of the OEP’s enforcement functions, both to prevent overload and to provide some degree of certainty. UKELA notes though that where, say, a planning decision was considered to be in breach of specific environmental laws, such as air quality standards or environmental assessment requirements, that fall within the current definition in clause 43, the OEP would have enforcement jurisdiction in respect of the breach.

29. In respect of environmental law, the OEP has broader functions than solely the enforcement of breaches of public law duties. In particular, it has a duty to monitor and report on the implementation of environmental law (clause 26) and to provide advice to the Secretary of State on changes in environmental law (clause 27 – though please note our comments in paragraph 0 above). UKELA considers that it would be a lost opportunity if the OEP could not consider areas of law falling outside the narrow definition in Clause 43.

30. There are areas of law (such as planning, flood defence, company law relating to environmental reporting, and pension trustees’ duties concerning divestment from fossil fuels) that may give rise to genuine environmental problems and where independent investigation and advice from the OEP could be of real value in improving how the law affects the environment. On the current definition where, say, a Parliamentary Select Committee reports that such an area of law is giving rise to real environmental problems, the Secretary of State could not seek advice from the OEP on the issue because the narrow definition applies to all of the OEP’s functions. UKELA therefore proposes that clause 43 is amended so that the narrow definition of environmental law is confined to the enforcement functions of OEP. For instance, it could be amended to state:

“In relation to the OEP’s enforcement functions under sections 28-39, “environmental law” means any legislative provision to the extent that it is (a) mainly concerned with environmental protection…”.

31. However, a much broader and more flexible definition should apply to the OEP’s monitoring and advisory functions in respect of environmental law. For example, it could be amended to state:

“In relation to sections 26 and 27, “environmental law” means any area of law with the potential to have any or any significant environmental implications”.

32. Finally, on interpretation and definition, UKELA welcomes the fact that climate change law has no longer been excluded from the remit of the OEP.

Air quality and environmental recall (clauses 69-74 and Schedules 11 and 12)

40. UKELA welcomes any measures to tackle pollution and improve air quality and
notes the provisions in clauses 69-74. UKELA agrees with the Government’s concern that air pollution is the top environmental risk to human health in the UK\textsuperscript{9}. However, the original introduction of measures in the Environment Act 1995, including the requirement to designate Air Quality Management Areas and associated local air quality management (LAQM) obligations, has not, to date, materially reduced the high level of premature deaths and illness arising as a consequence of poor air quality in the UK\textsuperscript{10}. It is therefore unclear how the UK Clean Air Strategy 2019 coupled with the clauses in the Bill will materially resolve matters without more specific legal targets and clearer duties on central government.

41. UKELA welcomes some of the provisions revising the Environment Act 1995’s LAQM regime through Schedule 11. In particular, the requirements to review the national air quality strategy regularly (proposed section 80(4A)); the duty on the Secretary of State to report annually on progress in meeting air quality objectives and standards (proposed section 80A)); and the efforts to spread responsibility for air quality control to other public bodies (through the duty to have regard to the air quality strategy, and the creation of ‘air quality partners’ (proposed sections 81A and 85A)).

42. UKELA is, however, concerned that some of these provisions place responsibility on local authorities to achieve air quality outcomes beyond their sphere of competence (for example, through enhanced duties on local authorities to ‘secure’ air quality standards, in proposed section 83A), even with the support of air quality partners. This concern about misplaced legal responsibility is partly because there is scope for air quality partners to avoid air quality obligations (for example proposed section 85B(3)) and partly because some air quality measures are best taken at the national level (for example, investment in new air quality technologies, public communication strategies, common vehicle standards and transport solutions).

43. More generally, and relating to Part 1 of the Bill (on targets), UKELA considers there should be progressive, legally binding targets within the Bill to ensure that the UK meets WHO air quality limits as soon as possible and by 2030 at the latest. Reaching ambitious air quality targets should include an obligation on all levels of government to reduce air pollution in policy adoption and decision making. UKELA acknowledges that there must also be a clear, detailed pathway and adequate funding in place to enable the Government and to empower industries to reach these targets.

Further to the comments made in our Public Bill Committee response, we are concerned at the limited scope of the long terms targets (Clause 1(2) of the Environment Bill only requires setting these for ‘at least one matter within each priority area’) and for air quality could therefore omit targets for impacts on biodiversity. We feel it is an anomaly that Clause 2 is confined to particulate matter and does not address other types of air pollution which are equally pressing, such as NOx (oxides of nitrogen). The Bill makes no reference to the concept of critical loads/levels for air

\textsuperscript{9} Foreword by the Secretary of State for Environment, Food & Rural Affairs, UK Air Quality Strategy 2019.

\textsuperscript{10} See e.g. Royal College of Physicians: *Every breath we take: the lifelong impact of air pollution* (RCP, 2016) cited in Defra/DIT UK plan for tackling roadside nitrogen dioxide concentrations (overview) (Defra/DIT 2017).
quality either for human health or habitats and species. These concepts are at the heart of air quality management and monitoring and should therefore be included in the list of ‘environmental principles’ set out in Clause 16(5) of the Bill.

3. What progress had the UK Government made on reducing air pollution and enforcing legal pollution limits before the Covid-19 pandemic?

4. What does the early evidence from the COVID-19 pandemic say about the impact of poor air quality on health, and health inequalities for disadvantaged communities and other at-risk groups, and possible policy responses?

5. What are the current and emerging risks and opportunities for air quality posed by:

   a) Short-term policy and societal changes in response to the pandemic, for example changes to transport to reduce the risk of transmission

   Tropospheric air pollution and greenhouse gas emissions share many sources: the heat of the combustion process that leads to much of global CO$_2$ emissions also creates the conditions for the formation of primary air pollutants, including NO$_x$, SO$_x$, CO and particulates (PMs), which through UV-mediated radical chemistry can form secondary pollutants, such as O$_3$. These pollutants have deleterious health impacts and can chemically attack infrastructure including metal and stonework.

   Reducing these emissions at source can therefore have multiple environmental co-benefits, which have accompanying benefits for human health. Air pollution kills around 40,000 UK citizens each year and has been implicated in causing a variety of diseases, including cancer, asthma, stroke, heart disease and diabetes, which create costs of £20 billion every year$^{11}$. There is some evidence that air pollution can increase badly exposed people’s susceptibility to SARS-COV-2$^{12}$.

   Since air pollution is a transboundary issue, the UK should work with its European neighbours to help minimise an emissions bounce back across the region, but also needs to be cognisant of its responsibilities as a major donor and investor in developing countries to help them avoid locking into polluting infrastructure and modes of behaviour, as part of the needed global solidarity response to the Covid-19 pandemic.

$^{11}$ https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution
$^{12}$ https://www.bbc.co.uk/news/science-environment-52943037
Addressing emissions at source can have significant local (air pollution around busy roads), regional (acid rain) and international (climate change) co-benefits, for climate and environment. Addressing emissions from energy, transport and industrial sources will need to be considered separately in policy terms, in order to maximise transformational changes in the respective sectors and thereby minimise rebound effects as lockdown measures are lifted. While the UK has made significant progress in reducing greenhouse gas emissions (and thus other air pollutants) from the energy sector, progress in transport, industrial and buildings emissions have not kept pace and these sectors will need to be subject to policies of transformation in order to reduce their harmful impacts:

![Graph showing excellent progress in reducing emissions from electricity generation](image)

**ENERGY**

Under lockdown, the UK went 67 days without coal power\(^\text{13}\), the longest period since the Industrial Revolution. Across Europe, electricity consumption was down 15% during lockdown\(^\text{14}\), leading to reduced air pollution and greenhouse gas emissions. This builds upon an existing UK power sector trend for reducing emissions, as shown in the Committee on Climate Change's (CCC) graph above.

In the near term, to build upon this success, the UK could implement policies to:

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- Insulate buildings. The CCC has found that without near-complete elimination of greenhouse gas emissions (and thus other accompanying air pollutants from combustion for energy) from UK buildings, UK legally-binding greenhouse gas targets will not be reached. Other research indicates that the NHS could save £1 billion if the UK pursued a retrofit program to slash the number of people living in cold, draughty and mouldy homes\textsuperscript{15}. A retrofit program could create 8000 jobs, cut emissions and drive down energy bills, thus reducing social inequality. The multiple co-benefits a home insulation program would provide should make it a top priority for a near- and medium- term economic stimulus for the UK.

- End support for fossil fuels in the UK and overseas, including through ODA and UK export credit finance. The UK continues to provide support for the fossil fuel industry, the products of which cause deathly levels of air pollution and greenhouse gas emissions.

- Promote the use of decentralised renewables, particularly in urban areas to minimise land use pressures.

TRANSPORT
The economic lockdown has brought about significantly reduced demand for road transport, a significant source of emissions and one that is particularly harmful to health because the emissions are so proximal to areas of high residency: >40% of European NO\textsubscript{x} emissions and almost 40% of PM\textsubscript{2.5} particles are from road transport. In the two weeks after the UK went into lockdown, some cities saw NO\textsubscript{2} emissions fall by 60% compared to the same period in 2019\textsuperscript{16}. The London Air Quality Network has measured levels of nitrogen dioxide, sulphur dioxide, particulates and ozone in the capital since 2000 and the Covid-19 lockdown levels are the lowest they have recorded in that time\textsuperscript{17}.

The risks include that people feel pressure to return to office working, requiring transportation, and that they reduce their use of public transport, slowing the needed modal shift, by jumping back into cars. Another risk is that the government bows to the aviation industry and does nothing to change business as usual policy, relying on ICAO processes to bring about industrial changes. ICAO has demonstrated its inability to regulate commensurate with the scale of change needed to be achieved by its sector.

\textsuperscript{15} https://british-utilities.co.uk/2020/nhs-could-save-1bn-by-making-homes-energy-efficient/
\textsuperscript{16} https://www.bbc.co.uk/news/uk-england-52202974
\textsuperscript{17} https://www.bbc.co.uk/news/uk-england-london-52114306
There are real opportunities, however. The behavioural changes that lockdown has demanded have had beneficial impacts on air pollution levels. Promoting continuance of these changes could help to reshape the world of work in ways that not only promote reduced pollution, but which permit workers to have a better work-life balance.

Near-term policy changes that could support avoiding a rebound in transport emissions could include:

- continuing to promote homeworking after lockdown eases to reduce overall transportation needs
- subsidising people on low incomes to buy bicycles, where appropriate, and thus realising exercise and health co-benefits
- making more roads cycle friendly to promote cycling, especially in urban areas
- ensuring that any bailouts to the aviation industry are predicated on strong standards for fleet emissions reductions per plane and also reduced route coverage and intensity.

b) Medium and long-term actions to promote economic recovery.

In order to meet climate goals, with the concomitant air pollution benefits, the UK will need to reduce its reliance on fossil fuels of all kinds across all sectors. The UK had its dash for gas in the 1980s. Gas can no longer rationally be seen as a bridging fuel if global greenhouse gas emissions are to be roughly halved by 2030. Internationally, the UK could work in the lead up to COP26 to create a coalition of the willing, a “powering Past Oil and Gas Alliance’ as a counterpart to the existing one for coal. The UK has the choice to embrace and encourage a continuation of its energy transition, or it can risk the future of the planet through choosing to prop up damaging industries, such as the fossil fuel industry. The UK will need to create a program of retraining for workers in affected industries to ensure a just transition, and the government will also need to support the new clean industries that need to rise to replace them.

ENERGY

In order to meet its 2050 net zero greenhouse gas emissions target, the UK’s energy sector will continue to transform to zero emissions/100% renewable and will need to expand its capacity to enable the electrification of other sectors, such as transport. It will also require a concerted effort to ensure that energy is used maximally efficiently. This will require
supporting policies to support investment in energy efficiency measures, as well to promote the continued investment in renewable infrastructure. An increase in interconnectors with other European countries could also help to smooth variations between supply and demand, as could an increase in storage capacity.

Longer-term policy changes that could support the reduction of energy emissions include:

- increase the number and capacity of grid interconnectors with other European countries to help manage supply to match demand

- invest in storage capacity to smooth supply of renewable energy

- invest in energy efficiency measures domestically and make implementation of similar standards a prerequisite for other countries’ goods to be imported into the UK

- support new jobs in the renewable sector by creating incentives for small-scale/ household renewables projects to reduce air pollution, greenhouse gas emissions and household energy bills

- require all new houses to be built to zero carbon standards, including own energy generation

TRANSPORT
The transport sector would benefit from being built in line with a strategic plan consistent with the net zero goal. This would include a mixture of reducing demand (e.g. via incentives for home working), modal shift through better investment in an integrated public transport system and a shift to a more electrified transport system.

Longer-term policy changes that could support avoiding a rebound in transport emissions could include:

- avoiding building new road infrastructure

- setting a standard for electric vehicle charging points and supporting local authorities to provide these

- require all new houses to have infrastructure for electric charging, and instigate a retrofitting program
- building faster internet connectivity to facilitate home working from a greater number of regions

- investing in public transport and promoting modal shift from cars through incentive schemes

- set planning rules to require access to public transport

- create a scrappage scheme to incentivise polluting vehicles being removed from service and being replaced by electric vehicles.

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6 August 2020

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