

# Consultation on Environmental Targets – ClientEarth response

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## 1. Executive Summary

1.1. Clear, comprehensive and ambitious targets are essential to drive the action and investment that is urgently needed to reverse environmental decline in England over the coming decades. While the proposed targets address many of the key environmental issues we are facing, the majority of the targets need to be much more ambitious if they are to have a significant impact on improving and protecting the environment. Without higher ambition in the scope and detail of the targets, the government will be unable to meet the goals set out in its 25 Year Environment Plan (“25 YEP”) and the environmental commitments it has made on an international level.

1.2. ClientEarth has contributed to and supports the response submitted by Wildlife and Countryside Link (“WCL”) in relation to this consultation. In addition to the proposals put forward by WCL in their consultation response, we would like to make the additional points set out below.

### **(a) Target proposal for biodiversity at sea**

In order to set more effective goals that go beyond what is already required under the existing policy framework, ClientEarth recommends that the biodiversity in the sea target should be reframed so that, instead of focusing on a prescribed number of features, the aim is to:

- i. ramp up designation so that 30% of UK seas are fully or highly protected by 2030;
- ii. complete the Marine Protected Area (“MPA”) network; and
- iii. apply a ‘whole-site’ approach to management of MPAs.

If the Government intends to keep a features-based target, it should be amended to 79% of the designated features in the MPA network being in favourable condition by 2042, with the remainder in recovering condition, and additional reporting on changes in individual feature condition.

### **(b) Target proposals for water quality**

Given the poor condition of our water bodies, ClientEarth recommends that the government amends the proposed target to reduce nitrogen, phosphorus and sediment loadings from agriculture in the water environment to aim for an increased reduction in these pollutants of at least 50% by 2037, against a 2018 baseline. A more ambitious target to reduce nutrient pollution from agriculture will help to drive the changes that are needed in the agricultural sector over the next decade to address food security and secure the transition to more mixed and sustainable farming systems.

Nitrogen pollution from a range of sectors is causing significant harm to the wider environment in the form of air pollution, water pollution, greenhouse gas emissions and harm to soil health and

biodiversity. Consequently, we recommend that a new overarching legally binding target is introduced to reduce nitrogen losses to the environment across all sectors by 50% by 2030. This target should be followed by further long-term targets to continue to reduce nitrogen pollution by 2040 and 2050. Targets that focus on reducing nitrogen pollution from a range of sources will greatly support the delivery of the proposed targets to improve water quality, air quality and species abundance.

### **(c) Target proposals for air quality**

The low level of ambition in the proposed air quality targets would leave another generation of children waiting for cleaner air, which will impact their health for the rest of their lives. The limited scope of the proposed air quality targets would also leave major gaps in the law that seeks to reduce air pollution. In order to remedy these concerns, ClientEarth recommends that:

- i. The government should bring forward the deadline in the proposed annual mean concentration target for PM<sub>2.5</sub> to ensure that annual concentrations are reduced to within 10 µg/m<sup>3</sup> by 2030 instead of 2040. This target should represent a stepping stone towards further ambition to achieve PM<sub>2.5</sub> concentrations across the country that are within the current 5 µg/m<sup>3</sup> World Health Organization (“WHO”) guideline level;
- ii. The government should increase the level of ambition in the proposed population exposure reduction target for PM<sub>2.5</sub> to more closely align it with the latest WHO guidelines for this pollutant;
- iii. The government should set new long-term legally binding targets beyond 2030 to reduce the levels of all key air pollutants including nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO<sub>2</sub>), and PM<sub>2.5</sub>;
- iv. The government should set new stronger legal limits for both annual mean and hourly mean nitrogen dioxide (NO<sub>2</sub>) concentrations that reflect the latest WHO guidelines;
- v. In order to better protect people from short-term exposure to PM<sub>2.5</sub> pollution, the government should commit to a new 24-hour mean alert threshold for PM<sub>2.5</sub>, which aligns with the latest WHO guidelines to ensure that people are informed of the risks posed to their health by PM<sub>2.5</sub> and short-term action is taken to protect them.

**(d) Other targets needed**

ClientEarth considers that the additional targets listed below are urgently needed to ensure that a holistic and comprehensive approach is taken to addressing biodiversity loss and to support the delivery of the targets proposed to halt the decline in species abundance:

- i. As soil health is essential to delivering wildlife-rich habitat, the government should set a new long-term target to improve soil health using an appropriate soil metric;
- ii. As pesticides can have a detrimental effect on biodiversity and soil health, the government should set a new target to reduce pesticide use by 50% by 2030 in line with the current EU targets on pesticide use.

## 2. Introduction

- 2.1 This document is ClientEarth’s response to the consultation being carried out by the Department for Environment, Food and Rural Affairs (“**Defra**”) on the government’s proposals for the environmental targets which are required to be set under Sections 1-3 of the Environment Act 2021 (“the Environment Act”). The consultation commenced on 16 March 2022 and closes on 27 June 2022.
- 2.2 ClientEarth is an environmental law charity with offices in London, Brussels, Warsaw, Berlin, Madrid, Beijing, Luxembourg and Los Angeles. We use the law to fight climate change, tackle pollution, defend wildlife and protect people and the planet.
- 2.3 ClientEarth has extensive experience in domestic, international and EU environmental law and climate related financial regulation. ClientEarth has recently been involved in a number of activities that seek to defend the rule of law, promote sound environmental and climate related financial governance and ensure the public’s right to participate in government decision-making and to access the courts.
- 2.4 ClientEarth welcomes the opportunity to comment on the proposed environment targets, which are one of the four pillars of the new system of environmental governance set out in the Environment Act. The introduction of legally binding targets is an ideal opportunity for the government to set world-leading standards for environmental protection. We hope that the government will seize this opportunity to create the ambitious and comprehensive targets that are urgently needed to restore nature and deliver the government’s stated aim to leave the natural environment in a better state than that in which they found it<sup>1</sup>.
- 2.5 ClientEarth has contributed to and supports the consultation response submitted by WCL, a coalition of over 65 charitable organisations concerned with the conservation and protection of wildlife and the countryside. In this response, ClientEarth provides additional comments on the target proposals relating to biodiversity at sea, nutrient pollution from agriculture in the water environment, and air quality. In our answers to the consultation response, we indicate where we support WCL’s position, but also provide further detail or explanation of our position.

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<sup>1</sup> A Green Future: Our 25 Year Plan to Improve the Environment’, Defra, January 2018, [25 Year Environment Plan - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/672222/25-Year-Environment-Plan-2018.pdf)

2.6 This consultation response is arranged as follows:

- **Section 1** provides a summary of our consultation response
- **Section 2** provides an introduction to the document
- **Section 3** sets out some general comments on the target proposals
- **Section 4** sets out our detailed comments on the individual target proposals relating to:
  - (i) biodiversity at sea;
  - (ii) water quality (in respect of nutrient pollution from agriculture); and
  - (iii) air quality.
- **Section 5** sets out our responses to the consultation questions

### 3. General Comments

Before considering the specific targets proposals put forward by the government in its consultation document and accompanying evidence packs, we make some general comments on the consultation, in particular on the need for greater ambition in the targets and the relationship of the targets to the Environmental Principles Policy Statement and the Environmental Improvement Plan.

#### 3.1 The need for much greater ambition within the targets

- i. The targets proposed in this consultation address many of the key environmental issues that need to be tackled over the next two decades. However, we believe that many of the targets are limited in scope and only aim for a minimal level of what is achievable under current policy frameworks. In many cases, a low level of ambition has been selected for the target, even where the consultation evidence packs show that a higher level of ambition is or may be feasible.
- ii. For example, the consultation proposals include a target to reduce annual average PM<sub>2.5</sub> concentrations to within 10 µg/m<sup>3</sup> by 2040. As discussed below in section 4.3, the government's own analysis published alongside the consultation shows that reducing concentrations of PM<sub>2.5</sub> to 10 µg/m<sup>3</sup> is achievable long before 2040, with evidence to show that this could realistically be delivered by 2030 under existing policies. Government policy on air quality in the UK in recent years demonstrates that binding targets are key to driving action so a later deadline will not bring about the urgent response that is needed to tackle this public health crisis.
- iii. In other cases, there is a risk that the target, even if met, will not achieve its aim. An example of this is the target to increase species abundance by 10% by 2042 based on 2030 levels. Here an uncertain future date has been used as a baseline, which means that this target could still be met even if biodiversity levels are lower in the target year of 2042 than they are today. In this instance, the target would fail to meet its overall aim to increase species abundance.
- iv. If the targets only aim for a low level of what is achievable, they will fail in their purpose to set high standards to drive changes in environmental and public health protection policy and channel investment. As the Office for Environmental Protection (the "OEP") identified in their review of the 25 YEP, "current environmental targets are not driving the scale or urgency of response required"<sup>2</sup>. In order to address this problem, the Environment Act targets proposed in this

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<sup>2</sup> Taking stock: protecting, restoring and improving the environment in England | Office for Environmental Protection ([theoep.org.uk](https://theoep.org.uk)), May 2022, p.30

consultation must act as a driving force to generate the robust response that is needed to meet the scale and urgency of the current environmental crisis.

- v. The targets should be based primarily on the levels of change that are needed to reverse environmental decline and protect people’s health from harmful pollution. When considering whether the targets “can be met”, as required under section 4(2) of the Environment Act, consideration must not be limited to simply what is achievable under current policy and market conditions. As the majority of the targets are long-term targets with a projection date of 15 years or more, allowance must be made for potential future developments to deliver the targets, including changes in lifestyle, production and consumption, and innovations in technology, including developments that are driven by the targets themselves.

### **3.2 The Environmental Principles Policy Statement**

Now that the revised draft environmental principles policy statement (the “**EPPS**”) has been laid before Parliament and the majority of the provisions in the Environment Act that relate to the EPPS are in force, the government should use the environmental principles as a policy basis to set more ambitious targets. The environmental principles, which are set out in section 17 of the Environment Act, and explained further in the EPPS, are intended to enable the government to put environmental protection and enhancement at the heart of policymaking. The environmental principles should give the government confidence to take bold action to protect the environment by setting robust and challenging targets that act as a force for transforming the *status quo*. For example, the government should use the principle of preventative action as a basis for setting ambitious targets to tackle the decline in species abundance and improve water quality and air quality. It should also use the precautionary principle to support the setting of robust targets in cases where the full impact of the harm to the environment and public health may not yet be fully understood.

### **3.3 The Environmental Improvement Plan**

- i. The Environment Act requires the government to prepare an environmental improvement plan (“**EIP**”) which sets out the steps that it intends to take to significantly improve the natural environment in the period to which the plan relates. The first EIP is the government’s current 25 YEP, “A green future: our 25-year plan to improve the environment”, which was published in 2018. The first review of the EIP must be completed by the Secretary of State by 31 January 2023, and then at least every five years thereafter. In the first review of the EIP, the government is required to set at least one interim target in respect of each matter for which a target has been set under Sections 1-3 of the Act. The revised EIP should provide a robust tool to help the government deliver the goals contained in the environmental targets. Once the targets have been

set, the revised EIP should set out the roadmap to explain how they will be met, with the interim targets acting as key progress markers along the route.

- ii. The revised EIP must be subject to a full and effective public consultation. Under the Aarhus Convention<sup>3</sup>, the public should have the opportunity to participate in environmental decision-making and comment on proposals affecting the environment. It is important that the public are given the right to comment on the contents of the revised EIP, including the proposed interim targets, given its central place in the Environment Act as a tool to secure the delivery of the targets and set out the government's detailed plans for environmental improvement and protection. Meaningful public engagement will allow the revised EIP to be fine-tuned and more effectively targeted to address the most pressing environmental issues. The role of the revised EIP in relation to the proposed air quality targets is discussed in more detail in section 4.3.4 below.

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<sup>3</sup> The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Aarhus Convention), signed on 25 June 1998

## 4. Discussion of individual target proposals

### 4.1 Target proposals for biodiversity in the sea

#### Proposed target to improve biodiversity in the sea

- **70% of the designated features in the MPA network to be in favourable condition by 2042, with the remainder in recovering condition, and additional reporting on changes in individual feature condition.**

ClientEarth welcomes the inclusion of a target relating to the condition of England’s MPAs. Although MPAs cover 40% of English waters, the vast majority<sup>4</sup> of these sites do not have sufficient management measures in place to provide genuine protection<sup>5</sup> - indeed, some MPAs do not have any such measures in place.<sup>6</sup> It is therefore positive that a condition target is to be set for biodiversity in the sea. Notwithstanding the above, ClientEarth considers that the level of ambition shown in the consultation in relation to biodiversity at sea is not enough.

- i. The overall target proposed is for 70% of the designated features in the MPA network to be in favourable condition by 2042, with the remainder in recovering condition. This target largely represents a reiteration of, or a minor addition to, existing legal obligations that the government has committed to and, on that basis, is not ambitious enough:
  - The UK Marine Strategy was put in place to give effect to the requirement, under the Marine Strategy Regulations 2010, to achieve good environmental status (“**GES**”) in the UK’s seas by 2020. However, a report from Defra in 2019 showed that the government was failing to meet 11 of the 15 marine indicators and would therefore fail to meet the target of GES by 2020.<sup>7</sup> The updated Parts 1, 2 and 3 of the Marine Strategy are therefore working towards an assessment of whether GES has been achieved by 2024

<sup>4</sup> 90% (Marine Protected Areas ([rspb.org.uk](https://rspb.org.uk))).

<sup>5</sup> [Ranking English MPAs report May 2022.pdf \(mcsuk.org\)](#).

<sup>6</sup> [Developing an ecologically-coherent and well-managed Marine Protected Area network in the United Kingdom: 10 years of reflection from the Joint Nature Conservation Committee \(jncc.gov.uk\)](#).

<sup>7</sup> [UKmarinestrategypart1consultdocumentfinal.pdf \(defra.gov.uk\)](#).

- The UK has an existing MPA network,<sup>8</sup> the purpose of which is to provide for the effective management of designated protected sites and the removal of anthropogenic pressures.
- ii. The target of 70% of designated features in the MPA network to be in favourable condition by 2042 has been set by reference to a figure of 71%. In relation to this figure, it is stated in the evidence report supporting the biodiversity at sea target (the “**BS Evidence Report**”, dated 28 April 2022) that there is a “*high level of scientific certainty that biological recovery rates are not overestimated.*”<sup>9</sup> However, the BS Evidence Report also states that, “*recovery potential assumes that the pressures are removed to allow the recovery to occur.*”<sup>10</sup> In effect, therefore, the target of 70% has been set by reference to what is readily achievable, with a high degree of certainty, simply by removing anthropogenic pressures on protected features in MPAs. This outcome is what the MPA network is designed to achieve on its own – something that the BS Evidence Report and associated Impact Assessment both recognise:

*MPAs have been designated to protect representative examples of the UK’s marine biodiversity and geomorphology by protecting specific features [...] which are listed at the time of designation for each site. Therefore, a feature-based approach for the MPA target is appropriate. **The objective for all MPAs is for their features to be in favourable condition and the proposed target is designed to align with this.***<sup>11</sup> (emphasis added)  
*There is already a legal requirement on regulators to achieve favourable condition and the specification of an additional target does not change this but may increase pressure on these regulators.*<sup>12</sup>

- iii. The fact that the proposed target aims only to reiterate existing obligations and increase pressure on authorities to meet them shows a fundamental lack of ambition – the targets setting process should be used to add to the existing policy landscape, not regurgitate it.
- iv. There should be a commitment made to: (i) ramping up designation in our seas so that 30% of them are fully or highly protected by 2030; (ii) completion of the MPA network in a manner that ensures ecological coherence; and (iii) application of a ‘whole-site’ approach to all MPAs, with management measures implemented for the full area, so that non-feature habitats and species also benefit.

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<sup>8</sup> Made up of: Special Areas of Conservation; Special Protection Areas; Marine Conservation Zones; Sites of Special Scientific Interest; and Ramsar Sites

<sup>9</sup> P.12 of the BS Evidence Report.

<sup>10</sup> P.11 of the BS Evidence Report.

<sup>11</sup> P.4 of the BS Evidence Report.

<sup>12</sup> P.iii of the Impact Assessment.

- v. Notwithstanding the above, if the feature-based approach is to be retained, a more ambitious level should be set.
- vi. Whilst ClientEarth accepts that the 88% figure at the top of the range may entail a “*high likelihood that the biological recovery rates may be overestimated*”, the BS Evidence Report suggests that a target of 79% would represent a “*compromised approach between low and high risk.*” Given the government’s own recognition that there is a need for “*urgent action to halt biodiversity loss*”<sup>13</sup>, ClientEarth considers that a more ambitious target, which sits somewhere around the ‘compromised’ figure of 79%, would be more appropriate.
- vii. We consider that the condition target should not be limited to the MPA network. The consultation document states that:
- Highly Protected Marine Areas should not be in scope [for the biodiversity at sea target] as they will take a new whole site approach rather than looking at specific features. The recoverability assessment for the MPA target is not suitable to assess at a whole site level as it was developed to assess MPA designated features independently.*
- viii. ClientEarth does not agree with this assessment and believes that the condition target could and should apply to those features that sit within Highly Protected Marine Areas (“**HPMAs**”). The whole-site approach instigated through HPMAs would support recovery of designated features within that network. Adding HPMA features to the target would also mean additional monitoring (as to which, see below) and time-bound targets for those features.
- ix. It is not clear, either from the consultation document or from the BS Evidence Report, which designated features (out of the list of around 150) constitute the 70% that it is intended should be in favourable condition by 2042. The government should set quantitative and time-bound targets for each feature. In the terrestrial environment, the consultation recommends recovery targets for ‘red list’ species but has no equivalent targets for ‘red list’ marine species. Such recovery targets should be included for endangered marine species (see section 5.1)
- x. ClientEarth welcomes the commitment to “*additional reporting through interim targets to show progress towards overall favourable condition for individual features.*”<sup>14</sup> However, there is a lack of detail on how these interim targets would be formulated or assessed. For example, will public authorities be required to draw up plans detailing how they we will achieve the targets and what

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<sup>13</sup> P.4, ‘Introduction’.

<sup>14</sup> P.15.

sort of funding will be needed? Will the MPA management plans need to be updated<sup>15</sup> could be reformulated into interim targets:

- All damaging activity/pressures to be removed by 2024 at the latest;
- Each MPA which has features designated as part of the targets process to have a management plan;
- If the feature is currently in favourable condition, management measures will be put in place as soon as practicable to ensure it remains in that condition (i.e., to avoid features being 'favourable' now, then slipping to 'unfavourable' before then being managed back up to 'favourable').

- xi. Related to the point above, there is no detail on how individual features would be monitored on an ongoing basis, which would presumably play a key part in assessing whether interim targets have been achieved. The BS Evidence Report states that “[a] bespoke monitoring programme to review progress towards achieving the proposed MPA target is being developed”<sup>16</sup>, but no detail is provided (nor is a timeframe for production of the monitoring programme).
- xii. The consultation document states that “MPAs are considered to be ‘recovering’ once all pressures which the features are sensitive to are reduced or removed”<sup>17</sup>, while the BS Evidence Report states that, “if all pressures to which the features are sensitive to are reduced or removed, then all features should be in at least an unfavourable but recovering condition.”<sup>18</sup> ClientEarth considers that this approach is insufficiently rigorous. The target should include a commitment that a feature will only be considered ‘recovering’ where monitoring evidence shows that to be the case.
- xiii. The consultation document states that “[if] any further MPAs are designated in the future, we propose to consider their inclusion at the time. It would seem unreasonable to expect features in MPAs designated close to 2042 to have recovered by then.”<sup>19</sup> ClientEarth agrees in principle with this position – an MPA designated in 2040 with a number of features in unfavourable condition would likely not allow sufficient time for recovery. However, the wording of the target is currently loose and a firmer commitment with clear assessment metrics would be welcome – for example, how far away from 2042 would it be reasonable to expect features to recover by the deadline?

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<sup>15</sup> Pp.11-12 of the BS Evidence Report.

<sup>16</sup> P.6 of the BS Evidence Report.

<sup>17</sup> P.15.

<sup>18</sup> P.5 of the BS Evidence Report.

<sup>19</sup> P.15.

## 4.2 Target proposals to improve water quality and availability

### Proposed target for nutrient pollution from agriculture

- Reduce nitrogen, phosphorus and sediment contribution from agriculture in the water environment by at least 40% by 2037 against a 2018 baseline.

#### 4.2.1 Proposed target for nutrient pollution from agriculture

- ClientEarth recommends that the government should increase the level of reduction in the proposed target to reduce nitrogen, phosphorus and sediment loadings from agriculture in the water environment. A more ambitious target is urgently needed to address the poor condition of our water bodies, only 16% of which currently meet the criteria for good ecological status. Given the considerable potential for widespread changes in the agricultural sector over the next two decades, we believe that a more ambitious target could and should be adopted.
- In considering a target with a potential 50% reduction in these pollutants, the detailed evidence report and impact assessment provided to explain the proposed water targets (the “**Water Evidence Pack**”) states that a 50% reduction is not a feasible option for the following reasons:

*“As noted by the WEAG, a 50% reduction of phosphorus, nitrogen and sediment loads from agriculture would get us closer to achieving good ecological outcomes in many waterways. However, we decided not to take this option forward as the widespread changes in agricultural practices and alterations in land use needed to achieve this high ambition would not be feasible and the impacts on the sector would be too great.”<sup>20</sup>*
- However, no evidence has been provided to explain why, in the government’s view, the widespread changes in agricultural practices and land use needed to achieve this ambition “would not be feasible”, given England’s agricultural policy is already in a period of transition from the previous mechanisms of the Basic Payment Scheme and Countryside Stewardship <sup>21</sup>.
- The Water Evidence Pack states that the assumptions used to calculate the level of ambition in the target that would be feasible include an assumption based around “an unchanged structure of

<sup>20</sup> Detailed Evidence Report, p18-19

<sup>21</sup> Impact Assessment, page 19

agricultural land use, management systems and technology<sup>22</sup> in the foreseeable future. Yet, this assumption is not supported by the information provided in the evidence pack. On the contrary, the Water Evidence Pack states that the agricultural sector is likely to undergo significant land use changes in the coming decades:

*“...the WEAG noted that geographical land uses are changing, and will continue to change, due to climate change and policy and market drivers, and that it should not be presumed that current farm structures and locations will stay the same.”<sup>23</sup>*

- v. In its recently published Food Strategy<sup>24</sup> the government has also committed to using the Environment Act to improve our food systems “to incentivise farmers and food producers to adopt more sustainable practices” and to developing a land use strategy in 2023 “to ensure we meet our net zero and biodiversity targets, and help our farmers adapt to a changing climate”.<sup>25</sup>
- vi. In summary, the reasoning used in the Water Evidence Pack to justify not proposing a higher ambition to reduce nutrient pollution from agriculture in the water environment appears to be based on unrealistic assumptions of an unchanging system of agricultural management and land use over the coming decades.
- vii. As the Water Evidence Pack notes, there are a number of factors that are likely to contribute to the delivery of the target to reduce nutrient pollution from agriculture including:
  - a high uptake of regulatory measures;
  - future farming funding schemes such as the Sustainable Farming Incentive<sup>26</sup>, the Farming Investment Fund<sup>27</sup> and the Environmental Land Management Schemes (ELMS);
  - advice schemes such as Catchment Sensitive Farming;<sup>28</sup>
  - technological innovation to improve input efficiency; and
  - new policy mechanisms that go beyond existing regulation.
- viii. In relation to potential policy pathways, the evidence pack also acknowledges that better targeted action, market driven changes and action aimed at other targets (primarily net zero) will all contribute to additional reduction in nutrient pollution from agriculture.<sup>29</sup>

<sup>22</sup> Impact Assessment, page 53

<sup>23</sup> Detailed Evidence Report, Page 43

<sup>24</sup> [Government food strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/food-strategy)

<sup>25</sup> [Government food strategy - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/food-strategy)

<sup>26</sup> [Sustainable Farming Incentive guidance - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/food-strategy)

<sup>27</sup> [Farming Investment Fund - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/food-strategy)

<sup>28</sup> [Catchment Sensitive Farming: advice for farmers and land managers - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/food-strategy)

<sup>29</sup> Detailed Evidence Report, page 37

- ix. The expert advisers noted that “significant reductions in nutrient pressures from agriculture would require wider changes within the food chain” and in fact, wider changes of this nature are envisaged by the Climate Change Committee (the “**CCC**”) in the future. In its Sixth Carbon Budget Report, the CCC predicts a 35% reduction in meat and 20% reduction in dairy consumption by 2050 as part of the “balanced pathway” with a corresponding change in the use of agricultural land. In the same report, it is estimated that halving meat and dairy intake in the EU could reduce total nitrogen loss to the environment by 42%<sup>30</sup>.
- x. These market-driven changes, together with recent world events in the Ukraine which are necessitating a review of our food and farming systems, all point to the potential for significant changes in agricultural practices over the next 15 years. With this in mind, now is an opportune time for a system-level change in our approach to agriculture to move it closer towards agroecology and more mixed and sustainable farming systems.
- xi. Taking into account the forthcoming changes in agricultural practices and land use discussed above, we consider that a higher level of ambition in the target to reduce nutrient pollution from agriculture in our water environment is feasible. Accordingly, we recommend that the water target to reduce nutrient pollution from agriculture in our water seeks a reduction in nitrogen, sediment and phosphorus loadings of at least 50% by 2037.

#### **4.2.2 The need for a more integrated approach to nitrogen pollution**

- i. ClientEarth welcomes the proposed target to reduce nitrogen and other pollutants from agriculture in our water. However, as nitrogen waste presents a much more serious and growing problem in the wider environment, we consider that there is a pressing need for an overarching target to reduce nitrogen losses to the wider environment from a range of sectors.
- ii. Nitrogen pollutants are causing significant harm to air, water, the climate, ecosystems, soil health and biodiversity. While agriculture is a major source of nitrogen pollution, other sectors including transport and energy also contribute to the overall problem. The costs of the environmental impacts from nitrogen are significant, both to farming communities and society at large.
- iii. Some of the main sources of nitrogen pollution include:
  - a. Ammonia emissions to air from agriculture (mainly from livestock excreta and synthetic fertilisers), which can react with other pollutants in the atmosphere to form the fine particulate matter (PM<sub>2.5</sub>) that is known to have serious negative effects on human health;

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<sup>30</sup> Sixth Carbon Budget Analysis for agriculture and land use, land use change and forestry), December 2020

- b. Nitrous oxide (N<sub>2</sub>O) from denitrification processes in soils, manure and stationary combustion sources is a greenhouse gas. While it represents a small contribution to overall emissions, it is 300 times as potent as carbon dioxide in terms of its warming potential and remains in the atmosphere for over 100 years;
  - c. Nitrate (NO<sub>3</sub>) from leaching and runoff is causing widespread pollution in our water bodies. In England, nitrate pollution comes mostly from agriculture (through inefficient use of synthetic fertiliser and organic manures) but a large proportion also comes from sewage treatment works; and
  - d. Nitrogen oxide (NO<sub>x</sub>) emissions from fossil fuel combustion, associated with transport, combustion in industry and public electricity are associated with widespread air pollution in England.
- iv. Nitrogen pollution leads to acidification of soils, forests and natural ecosystems, as well as eutrophication of soils, leading to loss of species. As of 2017, 58% of sensitive habitats in the UK exceeded their critical loads for eutrophication, while 39% exceeded critical loads for acidification<sup>31</sup>. Atmospheric nitrogen deposition is also increasing carbon emissions from peat bogs and about 15% of woodland soil in England and Wales is nitrogen saturated, which can lead to nitrate leaching into waterways and toxicity to plant roots<sup>32</sup>. Recent modelling has shown that NH<sub>3</sub> and NO<sub>x</sub> emissions reductions of 50% are required to restore 75% of UK sensitive habitats to favourable condition<sup>33</sup>.
- v. The Environmental Audit Committee (EAC) report on nitrogen in 2018<sup>34</sup> recommended that the government align regulations to address the problem of nitrogen pollution in its totality and avoid a ‘siloed’ approach, but this has not so far been taken forward. A more integrated approach to nitrogen pollution would enable more efficient solutions to be developed to address the widespread problem of nitrogen pollution from all its sources.
- vi. We recommend that the government adopts a legally binding target to reduce all forms of nitrogen waste across all sectors by 50% by 2030. A target to halve nitrogen waste by 2030 would be in line with the recommendations in the CCC’s Sixth Carbon Budget Report, the UN

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<sup>31</sup> Rowe, E. C., Mitchell, Z., Tomlinson, S., Levy, P., Banin, L.F., Sawicka, K., Martín Hernandez, C., Dore, A. (2020). Trends in Critical Load and Critical Level Exceedances in the UK.

<sup>32</sup> Environment Agency (2019). State of the environment: soil.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/805926/State\\_of\\_the\\_environment\\_soil\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/805926/State_of_the_environment_soil_report.pdf)

<sup>33</sup> Woodward, H., Oxley, T., Rowe, E.C., Dore, A.J., ApSimon, H. (2022). An exceedance score for the assessment of the impact of nitrogen deposition on habitats in the UK. <https://doi.org/10.1016/j.envsoft.2022.105355>

<sup>34</sup> [Nitrates \(parliament.uk\)](https://www.parliament.uk)

Colombo Declaration<sup>35</sup>, the UN Convention on Biological Diversity Post-2020 Biodiversity Framework<sup>36</sup> and the EU Farm to Fork Strategy.<sup>37</sup>

- vii. A short-term target to halve nitrogen pollution by 2030 should be followed by further long-term targets to continue to reduce nitrogen losses to the environment by 2040 and 2050. These long-term targets should include the targets that are proposed in section 4.3.6 below to reduce key air pollutants. Nitrogen reduction targets could be in the form of an overall target, or an economy-wide nitrogen budget system informed by nitrogen balance sheets, similar to the carbon budgets. In order to focus policy and investment on reducing nitrogen pollution, we also recommend that the government should include a new nitrogen chapter in its upcoming review of the 25 YEP (see section 3.3 above).
- viii. Tackling nitrogen pollution will require an integrated strategy rolled out on a national scale that combines robust targets to reduce nitrogen pollution, the effective enforcement of existing regulation on nitrogen waste, the creation of new policy and regulation to fill the gaps in the existing regulatory framework and advice and incentives to support the effective management of nitrogen waste.

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<sup>35</sup> [Colombo Declaration\\_Final.pdf \(inms.international\)](#)

<sup>36</sup> [iucn\\_position\\_paper\\_oewg-4.pdf](#)

<sup>37</sup> [f2f\\_action-plan\\_2020\\_strategy-info\\_en.pdf \(europa.eu\)](#)

## 4.3 Target proposals to improve air quality

### Proposed targets to improve air quality

- **Annual Mean Concentration Target ('AMCT')** – a target of 10 micrograms per cubic metre ( $\mu\text{g m}^{-3}$ ) to be met across England by 2040.
- **Population Exposure Reduction Target ('PERT')** – a 35% reduction in population exposure by 2040 (compared to a base year of 2018).

#### 4.3.1 Introduction

- In requiring the government to set new legally binding targets to improve air quality, the Environment Act provides a significant opportunity for England to become a world leader in the fight against air pollution, improving the lives of people across the country, contributing towards the transition towards net zero, and promoting clean growth.
- ClientEarth welcomes the critical steps being taken by the government to achieve this goal in setting targets for fine particulate matter air pollution ("**PM<sub>2.5</sub>**") to better protect people's health and the environment.
- However, ClientEarth is extremely concerned about the lack of transparency in the evidence provided to support the air quality targets and the fact that the level of ambition proposed in the targets does not accord with the current WHO guidelines.
- We are also concerned that the limited scope of the proposed targets would leave major gaps in the law as it stands. The government proposals would fail to set ambition to reduce harm from the full suite of air pollutants that we know to be causing damage to human health and the environment. They also miss the opportunity to introduce new legal standards that would better protect people from short-term peaks in harmful PM<sub>2.5</sub> pollution.

#### 4.3.2 Insufficient ambition of the PM<sub>2.5</sub> annual mean concentration target

- The government has proposed an annual mean concentration target ("**AMCT**") of 10  $\mu\text{g}/\text{m}^3$  by 2040. The evidence disclosed by the government in support of its proposed AMCT contained within the 'Air quality PM<sub>2.5</sub> targets: Detailed Evidence Report' and the 'Impact Assessment' (together the "**AQ Evidence Pack**") suffer from a number of fundamental gaps which hamper full

public scrutiny of these proposals. These gaps are detailed in section 4.3.3 of our response below. In spite of this fundamental and concerning lack of transparency, it is clear that a greater level of ambition is deliverable, even based on the limited information available to us from the published results of the government’s own analysis. Accordingly, **we are calling on the government to improve its proposed AMCT by requiring annual PM<sub>2.5</sub> concentrations to be reduced to within 10 µg/m<sup>3</sup> a decade earlier, by 2030 at the latest.** The key pieces of evidence that support this increased level of ambition for the AMCT are summarised below.

- a) **By meeting the UK’s existing legal emission reduction commitments, the government’s own analysis suggests that it would be “possible” to reduce PM<sub>2.5</sub> concentrations to within 10 µg/m<sup>3</sup> by 2030.**
- i. The government has modelled a number of potential target scenarios which each consist of a package of policies and measures of varying degrees of ambition and with differing assumptions applied regarding uptake rates and timescales (based on technological development, required behavioural changes, and timeframes for implementation) (the **“AQ Target Scenarios”**). Future PM<sub>2.5</sub> levels have then been modelled under each AQ Target Scenario to indicate what reductions in PM<sub>2.5</sub> levels might be achievable under each scenario by what date, and ultimately to inform the government’s selection of its preferred AMCT. The results of this modelling are summarised in a matrix in the Detailed Evidence Report that indicates the likelihood of the different AQ Target Scenarios meeting certain PM<sub>2.5</sub> limits in 2030, 2040, and 2050 compared to a 2018 baseline<sup>38</sup> (the **“Matrix of Feasibility”**).
  - ii. The Matrix of Feasibility indicates that 10 µg/m<sup>3</sup> by 2030 is “unlikely to be achievable” under the government’s preferred “High” scenario. However, the achievement of 10 µg/m<sup>3</sup> by 2030 is classified as “possible” under the “NECR” scenario, i.e. the scenario that assumes that the UK will meet its legally binding 2030 emissions ceilings for the five key pollutants regulated by the National Emission Ceilings Regulations 2018<sup>39</sup> (**“NECR”** or **“NEC Regulations”**).<sup>40</sup> In other words, the policies necessary to meet existing legal commitments would do most of the work to achieve this more ambitious 10 µg/m<sup>3</sup> target. However, rather than treating compliance with existing legal targets as the baseline from which to add further ambition by setting new legal targets, the government has instead chosen to aim for a future scenario that does not even include compliance with existing legal commitments to reduce emissions. Effectively, in the same breath, the government is making new legal promises whilst implicitly acknowledging it is likely to

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<sup>38</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p106

<sup>39</sup> National Emission Ceilings Regulations 2018, SI 2018/129

<sup>40</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p102

break existing ones. This is extremely concerning. These new targets should be driving additional ambition to clean up the air and protect people's health, rather than rowing backwards on those improvements that the government is already legally obliged to deliver.

- iii. In ClientEarth's view, the NECR scenario should provide the baseline level of ambition upon which further action should be built. The fact that the "policies on how [the NEC Regulations commitments] will be reached are yet to be agreed"<sup>41</sup> is not a reasonable excuse for avoiding this as a baseline. The government should not be relying on its own delay in taking action to meet its existing legal air quality commitments as a justification for seeking less ambitious future air quality commitments. Indeed, as the government knows, it already negotiated to lower the original proposed ceilings and agreed to these under the premise that they were what it considered to be feasible to achieve.
- iv. ClientEarth notes that the 'Medium', 'High', and 'Speculative' AQ Target Scenarios all assume the government will meet its emissions reduction commitments for primary PM<sub>2.5</sub>, but not the equivalent commitments for the other four pollutants regulated by the NEC Regulations. We see no logical justification for excluding an assumption of compliance with NEC Regulations commitments for all pollutants covered by these regulations, as all are legally binding requirements of equal weight. The failure to assume that the 2030 emissions reduction commitment for NH<sub>3</sub> will be met is particularly irrational given that NH<sub>3</sub> is a precursor to PM<sub>2.5</sub>. We note that the Air Quality Expert Group ("AQEG"), which provided input into the target setting process, questioned "whether the level of ambition for NH<sub>3</sub> emission reduction in all scenarios was sufficiently high given the sensitivity of PM<sub>2.5</sub> in models to ammonia reductions"<sup>42</sup>. Presumably, this issue would have been mitigated to at least some degree had compliance with the NH<sub>3</sub> emissions reduction commitment been built into all of the AQ Target Scenarios.

**b) The government's own analysis shows that 11 µg/m<sup>3</sup> by 2030 is "likely to be achievable" under its preferred scenario**

While the Matrix of Feasibility categorizes an AMCT of 10 µg/m<sup>3</sup> by 2030 as "unlikely to be achievable", reaching 11 µg/m<sup>3</sup> by 2030 is categorised as "likely to be achievable" under the government's preferred "High" Scenario (and indeed under virtually all other AQ Target Scenarios). Despite this finding, the government has proposed to aim for a 10 µg/m<sup>3</sup> target with a deadline that is a whole decade later, giving itself a further ten years to achieve an additional 1 µg/m<sup>3</sup> reduction. There is no clear justification for this significant delay. This approach suggests a serious lack of urgency for action to protect people's health from toxic air. As elaborated in more

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<sup>41</sup> Department for Environment, Food and Rural Affairs, *Air quality targets: Impact Assessment* (2022) p56

<sup>42</sup> Department for Environment, Food and Rural Affairs, *Air quality PM<sub>2.5</sub> targets: Detailed evidence report. Annex F: AQEG Summary of Modelling Results Workshop* (2022) p2

detail in section 4.3.3(b) below, no modelling results have been published for the intervening years between 2030-2040 to show at what stage (on the government's analysis) 10 µg/m<sup>3</sup> is “possible” or “likely” to be achieved. This represents a serious failure of transparency.

**c) The government's analysis is overly pessimistic**

- i. In addition to selecting a target scenario which effectively builds in a failure to meet existing NEC Regulations legal commitments, there are a number of further indications that the government's modelling regarding target achievability is overly pessimistic.
- ii. Firstly, the government's supporting evidence notes that the AQEG, the expert group that provided input into the target setting process, “indicated that a generally conservative approach had been taken to the interpretation of model data and how each emissions scenario might meet future targets”.<sup>43</sup> This point is elaborated upon in Annex F of the Detailed Evidence Report (which contains the AQEG Chair's summary of a PM<sub>2.5</sub> modelling workshop). In this document the AQEG Chair notes that a “recurrent theme in AQEG discussions was that the government has taken a pessimistic view of likely attainment of different limit values under the different scenarios, building in ‘safety margins’ that could absorb unfavourable meteorological conditions, model under-representation of individual monitoring sites and only downside risks on emissions.” We note that the AQEG further questioned “whether smaller margins would be more appropriate” and also that when presenting the Matrix of Feasibility the inclusion of the various safety margins should be made clear (which was not done).
- iii. Secondly, the AQ Evidence Pack indicates that the AQ Target Scenarios were constructed with decisive input from a focus group whose views were sought on the feasibility of potential policy interventions and behavioural changes. Such input included discussion over the validity of such interventions, the timeframe for implementation, supporting actions required, barriers, costs and co-benefits, together with views on “what constituted different levels of ambition and/or optimism in terms of implementation time and uptake”.<sup>44</sup> This exercise is inherently subjective, necessarily involving value judgments and a significant degree of speculation. In such circumstances, basic methodological principles would demand the need for a broad focus group, striving for representation of diverse voices, expertise, and values. Despite this, the focus group created by the government appears to have been very narrow, comprising “a mixture of academics and consultants working in a particular sector, industry practitioners or trade organisations and other government department analysts”. There is no clear justification for excluding non-governmental

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<sup>43</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p77

<sup>44</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p59

organisations ("NGOs") from this focus group or indeed any other stakeholder activities that may have been run as part of this process. It also appears that the focus group comprised sector-specific representatives only and not experts with a broader, more holistic focus. Representatives from the health sector would not only have helped to ensure that the protection of human health was a central pillar of these discussions but would have also been able to put forward the business case of how certain policies would reduce the burden on the NHS, for example. In addition, representatives with a focus on climate (such as the Climate Change Committee) could have been particularly valuable given the considerable overlap between emission sources for PM<sub>2.5</sub> pollution and climate change. Given that the focus group appears to have been comprised primarily of industry and government representatives, it is reasonable to assume that it is likely to have made conservative assumptions around costs, barriers and behavioural changes etc. In turn, such assumptions may well have fundamentally influenced the resulting AQ Target Scenarios and the government's assessment of their respective feasibility. However, it is difficult for members of the public to interrogate this without transparency over the measures, policies, and behaviour changes that were assumed to be delivered within each AQ Target Scenario, or indeed the outcome of the focus groups.

**d) Recent independent analysis has shown that 10 µg/m<sup>3</sup> is achievable across the vast majority of the UK by 2030 by implementing existing policies**

Analysis by experts from Imperial College London, commissioned by the Clean Air Fund ("CAF") and published in March 2022, has shown that if the government implements in full those environmental, transport and clean air policies that it has already planned, PM<sub>2.5</sub> pollution could fall within 10 µg/m<sup>3</sup> by 2030 across 99.8% of the UK.<sup>45</sup> This analysis shows that this level of ambition is already achievable across the vast majority of the country based on what should be considered the 'baseline' level of action. However, as stated above, in order to show that it is serious about tackling PM<sub>2.5</sub> pollution, the government should be aiming to use these targets as a sign of its commitment go beyond the *status quo*. By putting in place additional measures, in particular those targeting the remaining hotspots in major cities, the analysis commissioned by CAF indicates that 10 µg/m<sup>3</sup> would be eminently achievable by 2030. This analysis was conducted by experts at the same university that conducted the modelling used by the government to formulate its proposed targets.

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<sup>45</sup> Clean Air Fund and Imperial College London, *The Pathway to Healthy Air in the UK* (2022), available at: <https://www.cleanairfund.org/resource/the-pathway-to-healthy-air-in-the-uk/>

**e) 10 µg/m<sup>3</sup> was achieved across the entire country in 2020**

In 2020, annual average PM<sub>2.5</sub> concentrations were lower than 10 µg/m<sup>3</sup> across the entire UK, including central London.<sup>46</sup> As noted by the AQEG, 2020 was clearly a very unusual year but nevertheless this comparison provides valuable context in showing that meeting this limit is possible and not unprecedented. We note that the AQEG urged the government that “this would be valuable contextual information for decision-makers” and suggested that 2020 be represented within the Matrix of Feasibility so as to be set out alongside the different future emission scenarios. The fact that this was not done<sup>47</sup> is a further example of a lack of transparency regarding information that is not supportive of the government’s preferred approach, facilitating a lack of ambition by the government.

**f) Realising the benefits of a more ambitious AMCT**

- i. There is compelling evidence on the benefits of having a more ambitious AMCT, indicated both by the government’s own Impact Assessment, and by independent analysis.
- ii. As elaborated in further detail at section 4.3.3(d) below, the more ambitious AQ Target Scenarios have not been individually impact assessed, impeding a detailed comparative evaluation of the net-benefits of the different AQ Target Scenarios. Nevertheless, the AQ Evidence Packs indicate in high level terms that having more ambitious targets compared to the government’s proposed approach would produce greater health benefits<sup>48</sup>, result in reduced exposure disparities<sup>49</sup>, and deliver greater ecosystem benefits.<sup>50</sup> The AQ Evidence Pack is silent on the greenhouse gas (“GHG”) abatement potential (and monetised benefit) of adopting more ambitious targets. However, the climate co-benefits of the government’s preferred option are considerable, resulting in a GHG abatement potential of 540,225 ktCO<sub>2</sub>e, with a monetised value of around £97.1bn.<sup>51</sup> Given the significant overlap between sources of PM<sub>2.5</sub> and GHGs, it is logical to assume that the GHG abatement potential would be even greater under the more ambitious AQ Target Scenarios. While the costs are also likely to be higher in these scenarios, a significant proportion of the

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<sup>46</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report. Annex F: AQEG Summary of Modelling Results Workshop* (2022) p3

<sup>47</sup> See Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p106

<sup>48</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p129

<sup>49</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p122

<sup>50</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p124

<sup>51</sup> Department for Environment, Food and Rural Affairs, *Air quality targets: Impact Assessment* (2022) p10

investment required would likely contribute to carbon savings, as is the case with the High Scenario.<sup>52</sup>

- iii. In addition to the benefits hinted at in the government's own evidence, independent analysis has confirmed the considerable advantages of committing to more ambitious targets. Pulling the target of 10  $\mu\text{g}/\text{m}^3$  forward by ten years would see an average of 388,000 fewer days of asthma symptoms flare up a year in children; a fall in cases of coronary heart disease of over 3,000 cases per year, and a rise in average life expectancy of 8-9 weeks across those born in 2018.<sup>53</sup>
- iv. Adopting this more ambitious target would also avoid the UK dragging behind other countries when it comes to  $\text{PM}_{2.5}$  legal protections. Since 2012, the USA has already had a stronger legal target for  $\text{PM}_{2.5}$  set at 12  $\mu\text{g}/\text{m}^3$  and the US EPA is currently considering recommendations<sup>54</sup> from its Independent Particulate Matter Review Panel to lower this further to between 8 and 10  $\mu\text{g}/\text{m}^3$ .<sup>55</sup> In the European Union, parallel legal air quality limits are also in the process of being revised and improved with proposals for a revised 'Ambient Air Quality Directive' expected later in 2022.<sup>56</sup> This is the time for the government to step up to become a leader on clean air, rather than risk getting left behind.

**(g) The need for longer-term ambition towards current WHO guidelines for  $\text{PM}_{2.5}$  pollution**

- i. Whilst this 2030 target would be a critical move to drive action to better protect people's health and the environment, we know there is no 'safe' level of  $\text{PM}_{2.5}$  pollution (as acknowledged in the Detailed Evidence Report).<sup>57</sup> The WHO's latest air quality guidelines suggest that countries across the world should be striving to reduce levels of this pollutant to within 5  $\mu\text{g}/\text{m}^3$  to minimise impacts on people's health. The WHO guidelines have been set by world-class health experts, including experts from the UK, using the best available health evidence. **If the UK's ambition to clean up the air is to be led by the latest science on what is necessary to protect people,**

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<sup>52</sup> Department for Environment, Food and Rural Affairs, *Air quality  $\text{PM}_{2.5}$  targets: Detailed evidence report* (2022) p112

<sup>53</sup> Clean Air Fund and Imperial College London, *The Pathway to Healthy Air in the UK* (2022), p13-14, available at: <<https://www.cleanairfund.org/resource/the-pathway-to-healthy-air-in-the-uk/>>

<sup>54</sup> EPA, 'EPA to Reexamine Health Standards for Harmful Soot that Previous Administration Left Unchanged' (10 June 2021) available at: <<https://www.epa.gov/newsreleases/epa-reexamine-health-standards-harmful-soot-previous-administration-left-unchanged>>

<sup>55</sup> IPMRP, 'Advice from the Independent Particulate Matter Review Panel (formerly EPA CASAC Particulate Matter Review Panel) on EPA's policy assessment for the review of the National Ambient Air Quality Standards for particulate matter (external review draft — September 2019)' (22 October 2019) available at: <<https://ucs-documents.s3.amazonaws.com/science-and-democracy/IPMRP-FINAL-LETTER-ON-DRAFT-PA-191022.pdf>>

<sup>56</sup> See: <[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12677-Air-quality-revision-of-EU-rules\\_en](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12677-Air-quality-revision-of-EU-rules_en)>

<sup>57</sup> Department for Environment, Food and Rural Affairs, *Air quality  $\text{PM}_{2.5}$  targets: Detailed evidence report* (2022) p12

**this 2030 target should therefore represent only a stepping-stone towards a further ambition to achieve PM<sub>2.5</sub> concentrations across the country that are within the current 5 µg/m<sup>3</sup> WHO guideline level.**

### 4.3.3 Lack of transparency of government evidence

The evidence disclosed by the government alongside its air quality target proposals suffers from a number of fundamental gaps that make it challenging to rigorously analyse the government's proposal for the AMCT, undermining the very purpose of the consultation exercise. The most significant of these gaps in the evidence can be summarised as follows:

#### (a) Lack of detail on policies or measures included in AQ Target Scenarios

- i. The AQ Evidence Pack fails to specify the policies, measures, and underlying assumptions included in each AQ Target Scenario. Instead, the descriptions of each AQ Target Scenario are incredibly high-level and vague. For example, the government's preferred 'High' scenario is described as follows: "*This scenario includes emerging technologies that are perceived as likely to be successful, and a medium degree of behavioural change. Implementation dates and uptake rates are towards the middle of estimates.*"<sup>58</sup> Such opacity makes it difficult to scrutinize the feasibility of more ambitious targets, including how drastic the required measures and behavioural changes would need to be to achieve them (and the public acceptability of such measures/behavioural changes).
- ii. The government states that it believes "*that the proposed targets strike an appropriate balance between being ambitious and achievable – delivering significant health benefits through utilising proportionate and viable measures*"<sup>59</sup>, basing this conclusion on its modelling of the AQ Target Scenarios. Proper public scrutiny of this conclusion on having reached the appropriate balance between ambition and feasibility is impossible in the absence of any transparency over the types of measures that are assumed as being "proportionate and viable". Effectively, the public is being asked to comment on these new targets and "provide feedback on the appropriate level of

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<sup>58</sup> Department for Environment, Food and Rural Affairs, *Air quality targets: Impact Assessment* (2022) p20; Similarly opaque descriptions are provided in the Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) e.g. see p63. Some limited further information is provided at p110-111 of the Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022), which indicate that two areas where further action may be needed are domestic burning and road transport. Such areas are referred to in high level terms and without specific examples of the measures envisaged to target emissions from these sources.

<sup>59</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p110

ambition”<sup>60</sup> without having been provided with any meaningful insight into what the government thinks might be necessary to achieve each AQ Target Scenario.

iii. This also appears to be a complete and unjustified U-turn from the government’s earlier position. During the passage of the Environment Bill through Parliament, calls were made by a variety of NGOs and parliamentarians to include a commitment on the face of the Bill to the AMCT being at least in line with 10 µg/m<sup>3</sup> by 2030. In response, a government minister repeatedly stated how important it was for the public to be consulted on what action would be needed to meet this level of ambition in advance of setting the targets. For example, the following statements were made during the House of Lords debates on the Environment Bill by Lord Goldsmith (then Minister of State for Defra):

- *“Before setting these targets, it is vital to ensure that both the Government and the public understand the kinds of actions needed and the restrictions which may be required for them to be achieved. This is why we will be consulting on the proposed targets and actions required...”*<sup>61</sup>
- *“It is so important to bring society with us and therefore consult properly and meaningfully on the measures that we are likely to need to implement to achieve those significant reductions in air pollutant levels in the future; that is something we will have to do.”*<sup>62</sup>
- *“It is not right for us to set a target at the stroke of a pen that would impact millions of people and thousands of businesses without first being clear with people and understanding what would be needed. The Government have committed to setting out detailed evidence, including for public consultation, early next year...”*<sup>63</sup>

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<sup>60</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p111

<sup>61</sup> Lord Goldsmith, Minister of State, Defra, House of Lords Debate on Environment Bill (Report Stage), 6 September 2021, column 664 available at: <<https://hansard.parliament.uk/lords/2021-09-06/debates/F0D9FD9E-BF6D-4281-B595-DD93CC6BAE97/EnvironmentBill>>.

<sup>62</sup> Lord Goldsmith, Minister of State, Defra, House of Lords debate on the Environment Bill (Report Stage), 6 September 2021, column 666, available at: <<https://hansard.parliament.uk/lords/2021-09-06/debates/F0D9FD9E-BF6D-4281-B595-DD93CC6BAE97/EnvironmentBill>>;

<sup>63</sup> Lord Goldsmith, Minister of State, Defra, House of Lords Debate on Environment Bill (Committee Stage), 23 June 2021, column 307, available at: <<https://hansard.parliament.uk/lords/2021-06-23/debates/C3D4149D-C174-4BEE-8778-7DE22AEFD6EC/EnvironmentBill>>.

- *“...the amendment pre-empts what we think is a crucial process of collaboration and consultation with the public, so that they can give us as much approval as possible to enable us to take what will undoubtedly be quite radical measures.”*<sup>64</sup>

iv. It is disappointing that the government has failed to follow through on this when publishing its supporting evidence. This failure frustrates the public’s legitimate expectation to see this information and impedes meaningful and informed public consultation. Moving forward, in light of the above assurances and as stated in section 3.3.3, we expect a full public consultation on the government’s revised EIP (including the proposed pathway to achieving the air quality targets) in due course.

**(b) Failure to publish modelling of interim years between 2030-2040**

- As explained above, a Matrix of Feasibility has been published that indicates the likelihood of the different AQ Target Scenarios meeting certain PM<sub>2.5</sub> limits in 2030, 2040, and 2050 compared to a 2018 baseline<sup>65</sup>. However, no modelling for any of the interim years between these dates has been published. This adds a further barrier to critical scrutiny of the government’s proposed AMCT.
- It is unclear whether this modelling has not been conducted at all or has been conducted but then withheld from publication. Neither position is defensible. As the government has acknowledged, PM<sub>2.5</sub> “is the air pollutant which causes the most harm to human health”.<sup>66</sup> Accordingly, if the government has failed to conduct any modelling for the interim years, especially those between 2030-2040, this would indicate a fundamental disregard for the urgency of tackling this public health crisis. If, on the other hand, such modelling has been conducted but subsequently withheld from public scrutiny, this would constitute yet another example of a lack of good faith in facilitating meaningful public engagement. It would have been extremely useful if the modelling covering the intervening years between 2030-2040 (or at the very least for the year 2035) had been conducted and published. This is because, as stated above, the government’s analysis indicates that under its preferred ‘High’ scenario 10 µg/m<sup>3</sup> is “unlikely to be achievable” by 2030 but is “likely to be achievable” by 2040. We are left guessing whether 10 µg/m<sup>3</sup> would have been “likely to be achievable” under the “High” scenario at any earlier date in between 2030-2040. The critical nature of this missing information is even more apparent considering that the government’s own

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<sup>64</sup> Lord Goldsmith, Minister of State, Defra, House of Lords Debate on Commons Amendments to Environment Bill, 26 October 2021, column 672, available at: <<https://hansard.parliament.uk/lords/2021-10-26/debates/C404149A-D773-4E4B-BFD8-4757A09A05A7/EnvironmentBill>>

<sup>65</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p106

<sup>66</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p6

analysis indicates that 11  $\mu\text{g}/\text{m}^3$  is “likely to be achievable” by 2030 under its preferred “High” scenario, indicating that 10  $\mu\text{g}/\text{m}^3$  may be deliverable under this same scenario much earlier than 2040.

**(c) Failure to define the uncertainty margins associated with the different AQ Target Scenarios**

- i. There is a concerning lack of transparency over the uncertainty margins associated with the different AQ Target Scenarios. As already mentioned above, the Matrix of Feasibility classifies the likelihood of the different AQ Target Scenarios meeting certain  $\text{PM}_{2.5}$  limits by certain years according to the following categories: “Likely to be achievable”, “Possibly achievable”, “Unlikely to be achievable”, and “Very unlikely to be achievable”. This is to reflect the inherent uncertainty associated with the modelling exercise. However, no further definition of these categories is provided beyond the titles themselves. It is not clear, for example, what government has deemed as being “Unlikely” from a statistical point of view. Nor has the government otherwise provided any quantitative measure of the uncertainty and/or possible range of outcomes associated with the modelling output of the AQ Target Scenarios. This information would have had a material bearing on the interpretation of the Matrix of Feasibility and is important to inform a proper understanding of the true range of possible concentrations in each of the modelled scenarios, as well as the extent to which the government has assumed the best/medium/worst case outcomes. Unfortunately, this critical information is entirely missing from the AQ Evidence Packs.

**(d) Failure to assess the impact of more ambitious targets**

- i. Whilst the government has modelled the impact of a number of different target scenarios on  $\text{PM}_{2.5}$  concentrations, it has only published a full impact-assessment, including a cost-benefit analysis, for two options. These two options are: 1) a ‘Do nothing’ scenario and b) its preferred “High” Target Scenario (i.e., an AMCT of  $10\mu\text{g}/\text{m}^3$  by 2040 together with a population exposure reduction target (“PERT”) of a 35% reduction in  $\text{PM}_{2.5}$  exposure by 2040). The options for more ambitious targets, aligning with the “Speculative” or hybrid “Med-Spec”, “High-Spec”, and “High-Spec+” scenarios, have not been impact assessed. This impedes a detailed comparative evaluation of the net-benefits of the government’s proposed targets against more ambitious targets. The choice to model only ‘Do nothing’ against the government’s preferred option is even more illogical considering that the ‘Do nothing’ scenario is not an option in light of the government’s existing legal obligations (as acknowledged by the government <sup>67</sup>). This applies in

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<sup>67</sup> Department for Environment, Food and Rural Affairs, *Air quality targets: Impact Assessment* (2022) p20

two ways. Firstly, there is a legal commitment in the Environment Act to set a long-term air quality target and a target to reduce annual mean concentrations of PM<sub>2.5</sub>.<sup>68</sup> Secondly the ‘Do nothing’ scenario (and indeed the government’s “High” Target Scenario) do not assume compliance with the UK’s legal obligations under the NEC Regulations.<sup>69</sup> Accordingly, contrasting the “Do nothing” scenario with the government’s preferred option is not a meaningful comparison, providing no insight whatsoever into the purported justification of the preferred option over other (legal) alternatives. At a minimum, the Speculative scenario should have been impact assessed to provide a comparison to the government’s preferred “High” scenario. Ideally, the hybrid “High-Spec” scenario would also have been impact assessed, especially in light of AQEG’s support for exploring hybrid approaches.<sup>70</sup>

**(e) The titles of the AQ Target Scenarios are misleading**

- i. Despite the lack of transparency regarding the AQ Target Scenarios, there are a number of indications that the naming of the scenarios is misleading and therefore does not allow the public to understand the true nature of the ambition behind the government’s proposals. A prime example is that the government’s preferred target scenario is called “High”, implying to the public that this scenario involves a high level of ambition. However, as explained above, this “High” scenario appears to assume that the government will not meet four out five of its existing legally binding emission reduction commitments under the NEC Regulations. It is difficult to reconcile a name for a scenario that implies high levels of ambition with this anticipated breach of existing legal air quality commitments. Another example, is the so-called “2030 Baseline” scenario, which appears to also assume that the UK will not meet any of the emission reduction commitments under the NEC Regulations that the government is already legally committed to meet by 2030 and that are supposed to be delivered by the 2018 Clean Air Strategy. This scenario, therefore, provides a very pessimistic and, one would hope, unrealistic representation of what future levels of PM<sub>2.5</sub> should actually be. This is misleading as having an artificially poor baseline helps to make the “High” scenario look better by comparison.

#### **4.3.4 Need for robust plans to secure the timely delivery of the target(s)**

Once the AMCT (and the PERT) are set, it will be essential for government to commit to a clear pathway for action to ensure these targets are met. In particular:

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<sup>68</sup> Environment Act 2021, ss.1(2), 1(3), and 2(1)

<sup>69</sup> See Department for Environment, Food and Rural Affairs, *Air quality targets: Impact Assessment (2022)* p56

<sup>70</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report. Annex F: AQEG Summary of Modelling Results Workshop (2022)* p3

- (a) **The Environmental Improvement Plan (“EIP”) should set out a clear and impact assessed suite of policies and measures necessary to achieve the AMCT (and the PERT)**
- i. As mentioned above in section 3, the Environment Act requires that the government prepares an EIP which sets out steps that it intends to take to improve the natural environment. As part of that first review, the government is required to set at least one interim target in respect of each relevant matter – which includes both the AMCT and the proposed PERT.
  - ii. The EIP should provide a robust tool through which government plans for and secures the achievement of new targets under the Environment Act. This is key to ensure that once targets are set, the necessary work is done to ensure that they are met. In order to secure likelihood of achieving the AMCT (and the PERT) and to ensure they act as effective tools to drive action, it is imperative that the revised EIP includes, as a minimum:
    - Specific and detailed policies and measures which, taken together, are assessed as likely to achieve the targets (and interim targets);
    - A committed timetable for the adoption, implementation and review of those measures;
    - Specification of the authorities responsible for their delivery; and
    - An analysis of the alternative options considered and their estimated impact on delivering progress against the relevant targets.
  - iii. A plan that commits to a clear way forward would also provide the public, public bodies, industry and businesses with much needed certainty, enabling them to plan for a cleaner future with confidence and to play their part in securing the necessary pollution reductions.
  - iv. Tackling the air pollution public health crisis, as well as other pressing environmental issues, will require action from across many different sectors of industry and society. To ensure coordination and avoid action becoming siloed, the EIP should include commitments from each relevant central government department.
  - v. ClientEarth notes that the government is exploring options to develop an appropriate role for local authorities to support the delivery of these new targets.<sup>71</sup> We welcome the government’s acknowledgement of the fact that there are key differences between PM<sub>2.5</sub> and other pollutants such as NO<sub>2</sub> and that this makes a material difference to the appropriate role of local authorities regarding delivery of the targets<sup>72</sup>, including its regional, ‘smeared out’ nature, and the fact that its

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<sup>71</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p111

<sup>72</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p111

sources are more complex compared to NO<sub>2</sub>. In light of these factors, it is clear that central government, rather than local authorities, holds the key policy levers necessary to drive reductions in PM<sub>2.5</sub> (especially in relation to the PERT). It is therefore critical that the revised EIP includes measures central government intends to take on a national scale to ensure successful achievement of the targets across the whole country, rather than reverting to local level action.

- vi. In the Detailed Evidence Report, the government commits to publishing a pathway to meet the targets in the first revised EIP.<sup>73</sup> It is positive to see the government acknowledge this is necessary. However, the Detailed Evidence Report also states that “...it is not the intention at this stage to outline detailed policy pathways or action plans for delivering the targets. No work was carried out on developing individual policies beyond those already in train e.g., recent legislation restricting sales of domestic coal and wet wood, and many of the measures or interventions considered in the illustrative future scenarios for modelling purposes are not current government policy”<sup>74</sup>.
- vii. Whilst the Detailed Evidence Report does acknowledge that a “[m]ore in-depth assessment” of individual policies will form part of the revised EIP once the targets are set<sup>75</sup>, it appears that the government now has very little time to complete this exercise if work to develop those policies and the associate interim targets has not yet begun. It is important that this exercise is prioritised and accelerated if the 25 YEP is to provide a meaningful pathway to delivery.

#### **(b) Interim targets should accelerate and ‘front-load’ action**

- i. As noted above, the revised EIP must include at least one interim target for the AMCT and the PERT. While the government has committed to the frequency of interim targets (every five years<sup>76</sup>) it has provided no indication of the intended trajectories. Ensuring that these trajectories are ambitious and front-load effort to reduce air pollution is critical both to increasing the likelihood that the targets will be achieved and to reducing human exposure to PM<sub>2.5</sub> pollution during these intervening years. For example, in the event that the government proceeds with its proposed AMCT of 10 µg/m<sup>3</sup> by 2040, it would be critical to have a 2030 interim target of, at the

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<sup>73</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p9

<sup>74</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p16

<sup>75</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p112

<sup>76</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p9

very least, 11 µg/m<sup>3</sup>, given that the government’s own modelling has indicated this is “likely” to be achievable by 2030 under its preferred future emission reduction scenario.<sup>77</sup>

**(c) The revised EIP must be subject to public consultation**

- i. Finally, it is not entirely clear whether the government intends to conduct a public consultation on its revised EIP. For example, ClientEarth notes that the Detailed Evidence Report states that “[t]he first interim targets will be set following the public consultation in early 2023”.<sup>78</sup> However, this does not make clear whether the interim targets will be subject to consultation in isolation prior to their inclusion in the revised EIP, or as part of a wider consultation on the full document. As with this current consultation, it would not seem viable to meaningfully respond to a consultation on interim targets without details of the proposed policy outcomes or measures. The Detailed Evidence Report also states that “as policy pathways for achievement of the targets are developed, there will be further opportunities for consultation on specific measures that are tailored to local areas and their sources”.<sup>79</sup> However, again, this does not clarify whether the revised EIP itself will be subject to public consultation, or by contrast if there will be *ad hoc* or standalone opportunities for consultation on some of the policy measures contained within it.
- ii. ClientEarth considers it to be of the utmost importance that the revised EIP is subject to a full public consultation given its importance as the central tool to secure the achievement of the targets. Meaningful public engagement should allow the revised EIP to reflect the views of the public and the full range of stakeholders that air pollution needs to be urgently addressed, rather than solely reflecting the views of vested interests. In addition, the public should have the opportunity to provide feedback on the proposed package of policies and measures required in order to meet the targets, given the impacts such measures are likely to have on people’s everyday lives. We refer back to our earlier comments and the multiple assurances made by a government minister on this matter referred to at paragraph 4.3.3(a)(iii) above.

### 4.3.5 Assessing compliance - AMCT

- i. The consultation materials in the AQ Evidence Pack include some high-level indications of the methodology the government is proposing for the purpose of assessing compliance with the AMCT. The material indicates that the details surrounding this assessment regime are likely to be

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<sup>77</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p106

<sup>78</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p112

<sup>79</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p110

set out in the statutory instrument which sets the targets in law.<sup>80</sup> On the basis of the information provided so far, ClientEarth is concerned that some of the proposals risk undermining the effectiveness of the AMCT as a tool to protect people's health. ClientEarth is also concerned by the limited detail set out in the AQ Evidence Pack in relation to the minimum requirements against which the proposed AMCT will be assessed.

ii. The limited detail provided about the compliance assessment regime at this stage restricts the ability for meaningful stakeholder engagement in the compliance assessment regime at this stage. In view of this, the government should consult publicly on the full details of its proposed compliance assessment regime in due course, or at the very least, engage with stakeholders while these proposals are still at a formative stage.

iii. ClientEarth's concerns are summarised below.

**a) Compliance in only three out of every four years represents unacceptable 'double counting' of the possible effect of weather and other factors outside of government control**

i. The plans currently being consulted on include a proposal that if the 10 µg/m<sup>3</sup> AMCT target is exceeded in one year, this will not be treated as a breach of the law if the target was met in three out of the four preceding years.

ii. The government's stated rationale for proposing this loophole is to account for the impact of bad weather-years and transient events such as Saharan dust on pollution levels<sup>81</sup>. Whilst these factors can impact PM<sub>2.5</sub> concentrations, the government appears to have already accounted for such uncontrollable events as part of its modelling to inform what target level it considered to be feasible. From the description set out in the Detailed Evidence Report, it appears that the government modelled anticipated PM<sub>2.5</sub> pollution levels in each AQ Target Scenario in a usual year, and then added 1 µg/m<sup>3</sup> as a safety buffer to inform its assessment of achievability.<sup>82</sup> By doing so, the government has already 'baked in' an assumption that bad weather and transient events will occur in the future when assessing the level of ambition that it considered to be achievable. It is not defensible for the government to also give itself a future compliance loophole

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<sup>80</sup> e.g. Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p34-35

<sup>81</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) , p48

<sup>82</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p104

to account for the possibility of such risks materialising every four years (a frequency that has been afforded no explanation whatsoever within the consultation materials). ClientEarth therefore strongly recommends that this caveat to compliance should not be adopted, nor should any further compliance margins or loopholes be afforded to the government on the basis of weather events or other transient ‘uncontrollable’ conditions within the detailed rules for assessing compliance set out in secondary legislation.

- iii. On a related point, we note the government’s position that in relation to assessing compliance “*[n]o provision will be made for handling contributions due to exceptional events, transboundary pollution or other natural sources of PM<sub>2.5</sub>*”.<sup>83</sup> In other words such contributions will not be subtracted from total PM<sub>2.5</sub> levels for the purpose of assessing whether the AMCT has been achieved. This is on the basis that at present there is not a technically feasible approach to accurately quantify and subtract such contributions (save in relation to sea salt).<sup>84</sup> We support this position, both on account of the technical difficulties involved in quantifying and subtracting such sources, and also on the basis that such contributions have already been built into the government’s modelling of achievability (including through the 1 µg/m<sup>3</sup> safety buffer).

**b) Monitor siting requirements require clear definition and must not exclude hotspot sites**

- i. With respect to minimum requirements relating to the siting of monitoring stations used for the purpose of assessing compliance with the AMCT, the Detailed Evidence Report confirms that:
- “*Assessment of levels of PM<sub>2.5</sub> with respect to a legally binding target will be based on monitored concentrations at representative fixed monitoring locations around the country*”<sup>85</sup>
  - “*Existing requirements for monitoring equipment, site location and data capture will be retained*”<sup>86</sup>
  - “*...any new monitoring to be sited at appropriate locations where concentrations are likely to be highest and where there is appropriate public exposure. This will include all monitoring classifications*”<sup>87</sup>.

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<sup>83</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p37

<sup>84</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p37

<sup>85</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p38

<sup>86</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p7

<sup>87</sup> Department for Environment, Food and Rural Affairs, Air quality PM2.5 targets: Detailed evidence report (2022) p47

- *“The site categorization for monitoring sites will remain unchanged”* <sup>88</sup>
  
- ii. ClientEarth strongly supports the maintenance of those existing macroscale siting rules set out in Directive 2008/50 EC at Annex III, B.1(a) which require PM<sub>2.5</sub> concentrations to be measured at sites where the “highest concentrations occur”. It is essential that the AMCT acts to provide a minimum level of protection to everyone across the country, including those who live, work and /or study in high pollution areas. In order to do so, compliance with the target needs to be measured against those areas which are known to have the highest levels of pollution.
  
- iii. However, it remains unclear what the government will deem to constitute “appropriate public exposure” or a “representative” location in this context. These qualifications form part of the government’s proposals but have not been clearly explained in the consultation material.
  
- iv. The way in which the AMCT is assessed is critical to ensuring its effectiveness at securing the government’s stated aims to deliver a minimum standard of air quality across the country and support action to reduce health disparities.<sup>89</sup> In order to ensure proper accountability against this target and secure public faith in its ability to deliver these objectives, it is essential that the government:
  - **Clearly defines the concept of a “representative” site and “appropriate” exposure.**
    - To ensure that the AMCT acts to provide a minimum level of protection for people across the country, it is critical that this definition is not used as a means to exclude hotspot sites, such as roadside or other near source or industrial locations, if the public have access to spend time in those areas.
    - Annex III, A.2 of Directive 2008/50/EC already clarifies that compliance with limit values shall not be assessed at *“any locations situated within areas where members of the public do not have access and there is no fixed habitation”* or *“on the carriageway of roads; and on the central reservations of roads except where there is normally pedestrian access to the central reservation.”* It is important that any definitions of the terms “representative” and “appropriate” are expansive and do not operate to extend these existing exclusions, in order to ensure that the AMCT operates to provide equity and reduce health disparities.
    - Furthermore, it is notable that the Detailed Evidence Report suggests that the requirement to locate monitoring sites used for assessing compliance in locations “where

<sup>88</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p39

<sup>89</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p17-18

concentrations are likely to be highest” applies only to “new” monitors forming part of the expanded monitoring network. This would make little sense. This important minimum siting requirement must apply to *both* the existing and expanded monitoring network used for the purposes of assessing compliance with the AMCT.

- **Publishes detailed explanation of how the PM<sub>2.5</sub> monitoring network design satisfies the necessary siting requirements.**
  - This should include detailed reasons for and analysis behind the selection of sites considered representative of locations where pollution levels are likely to be highest and/or general population exposure. As explained further below, modelling should play a critical role in the analysis used to inform network design. Indicative measurements using less sophisticated/more transient monitoring techniques could also be used to better inform an understanding of where permanent monitors could be best placed.
  - As part of the regime set out in the Air Quality Standards Regulations 2010<sup>90</sup>, authorities are already required to prepare comprehensive documentation that includes evidence to support the choice of monitoring sites.<sup>91</sup> Any failure to prepare and publish at least equivalent detailed reasons for and evidence behind the design of the expanded monitoring network used to assess compliance against new targets established under the Environment Act would be rowing back on those existing protections.
- **Carries out periodic review and reassessment of the monitoring network design at least every 5 years, and report to Parliament of the results of that review.**
  - Regular reassessment of the network will be necessary to ensure that it keeps up with the latest technological advancements in measurement and modelling techniques, changes in pollution conditions in specific monitoring locations, and understanding of pollution sources. This periodic reassessment of the network should include consideration of whether the existing number of monitors is sufficient to provide an accurate representation of PM<sub>2.5</sub> concentrations across the country. In addition, in the event that the government elects to use monitoring only to assess compliance with the AMCT (see section 4.3.5(d) below), this 5- yearly review should also include a re-

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<sup>90</sup> Air Quality Standards Regulations 2010, SI 2010/1001

<sup>91</sup> See Annex III, Section D of Directive 2008/50/EC, and the judgment of the Court of Justice of the European Union (First Chamber) of 26 June 2019, *Lies Craeynest and Others v Brussels Hoofdstedelijk Gewest and Brussels Instituut voor Milieubeheer* (Case C-723/17), para. 51. This judgment is retained EU law and continues to apply to the interpretation of rules set out in the Air Quality Standards Regulations 2010

consideration of supplementing monitoring with modelling techniques for the purpose of compliance assessment. Regularly revisiting this decision is warranted in light of the benefits of modelling in providing better granularity in the government's assessment of pollution levels and ensuring that the target works to protect people in areas across the country. More broadly, it is worth noting that the existing regime of legal limit values set out in the Air Quality Standards Regulations 2010 already includes a requirement to update and review monitoring network design every 5 years.<sup>92</sup> Any failure to commit to at least an equivalent reassessment requirement would represent a loosening of existing rules.

- Whenever the results of the modelling and/or indicative measurements detect flaws in the monitoring network (for instance, because there is no fixed monitoring station in the area of modelled maximum levels), this should trigger an obligation to review the network design prior to the standard 5-yearly cycle (for example within one year) to avoid stalling on action to address hotspot areas.
- v. Given their importance in ensuring the effectiveness of the AMCT target in delivering its stated objectives, we urge the government to give the above requirements legal effect by setting them out within the statutory instrument that gives legal effect to the target.

**(c) The monitoring network needs significant expansion**

- i. With respect to the size of the monitoring network, the Detailed Evidence Report acknowledges that there are currently only 63 monitoring sites for PM<sub>2.5</sub> across the country<sup>93</sup> but explains the government's plan to "*expand the PM<sub>2.5</sub> monitoring network over the next three years to support the assessment and delivery of the new targets*".<sup>94</sup> The report does not, however, go on to include any indication of the scale of expansion that the government is planning in relation to assessment of the AMCT.
- ii. ClientEarth strongly supports the expansion of the monitoring network. If – as proposed in this consultation - modelling is not being used to provide further spatial resolution to the assessment of compliance with the AMCT, the expansion of monitors needs to be significant to ensure that the target provides protection to people across the country. The Detailed Evidence Report explains that a "minimum requirement for monitoring will be required and will be defined in

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<sup>92</sup> See Directive 2008/50/EC, Annex III, Section D

<sup>93</sup> Department for Environment, Food and Rural Affairs, *Air quality PM<sub>2.5</sub> targets: Detailed evidence report* (2022) p47

<sup>94</sup> Department for Environment, Food and Rural Affairs, *Air quality PM<sub>2.5</sub> targets: Detailed evidence report* (2022) p7

legislation”<sup>95</sup>. Establishing a binding, minimum requirement for the number of PM<sub>2.5</sub> monitors is critically important as this does not exist in current legislation. An absolute minimum number of monitors that satisfy the required data capture standards, alongside an ongoing obligation to ensure that they are properly maintained, is essential to ensuring that this target is a meaningful one.

- iii. Furthermore, ClientEarth would support a broader investment in increasing the sophistication of the entire PM<sub>2.5</sub> monitoring network over time e.g., to enable measurement of PM<sub>2.5</sub> composition.<sup>96</sup>

**(d) Retaining the role of modelling in assessing compliance**

- i. ClientEarth notes that the government is proposing to assess compliance with the AMCT exclusively through the use of monitoring (as opposed to a combination of monitoring and modelling). Whilst we acknowledge the AQEG’s advice that modelling is currently less accurate for PM<sub>2.5</sub> compared to other pollutants, such as NO<sub>2</sub><sup>97</sup>, we are concerned that this represents a step backwards from the existing approach to assessing compliance with air quality limits under the Air Quality Standards Regulations 2010. Under the existing approach, the government supplements fixed measurements of pollutant levels with modelled estimates using its Pollution Climate Mapping model. This provides a more granular picture of air quality levels across the country, especially across areas where there is poor coverage from the monitoring network. We are concerned that the decision to exclude modelling from the assessment regime may therefore allow for a less representative and comprehensive assessment of the levels of pollution that people are experiencing across the country. Areas with PM<sub>2.5</sub> exceedances that may have been captured by modelling may be missed if the monitoring network is not sufficiently expanded to increase its spatial representation. At the same time, modelling should not be used to override an exceedance identified through monitoring. We refer back to our earlier comments regarding the lack of transparency at this stage of the extent of the proposed expansion of the network.
- ii. If the government does press ahead with not using modelling (alongside monitoring) to assess compliance with the proposed new targets, we suggest that at the very least this decision be subject to periodic review to account for the potential improvement in PM<sub>2.5</sub> modelling techniques over time - as suggested in section 4.3.5(b) above.

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<sup>95</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p46

<sup>96</sup> See COMEAP’s comments on this too at Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p25

<sup>97</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report. Annex A: AQEG engagement meeting on the PM2.5 target setting process* (2022) p5

iii. In the meantime, modelling should continue to play a valuable role outside of the compliance assessment regime. This appears to be acknowledged in the AQ Evidence Packs, which indicate that modelling will continue to be used for a range of matters including assessing progress towards meeting interim and final targets<sup>98</sup>, helping assess where monitors should be located, and in relation to policy development.<sup>99</sup> ClientEarth welcomes the use of modelling for these matters provided that the results of such modelling are made publicly available. Please see our comments in relation to this under section 4.3.5(f) below.

**(e) The need to consult with a wide range of stakeholders on monitoring requirements**

i. There are various key details regarding the monitoring network, including its proposed expansion, which are not adequately specified or elaborated upon in the AQ Evidence Pack. Instead, the government has proposed that such details will be included in the draft statutory instrument that will be laid before Parliament in October 2022 and, therefore, will not be subject to public consultation. These details include:

- The minimum number of monitoring sites (that satisfy the required data capture requirements) to be used to assess compliance with the AMCT (and the PERT);<sup>100</sup>
- The minimum number of representative measurements (again that satisfy the required data capture requirements) which must be taken near source locations to assess compliance with the AMCT;<sup>101</sup> and
- The requirements for the spatial representativeness of the monitoring network i.e., the spread of monitoring sites over different geographic areas (which applies both in relation to the AMCT and the PERT).<sup>102</sup>

ii. These technical details will play a key role in determining the integrity of the monitoring regime. By extension, given that the monitoring regime is proposed to be the sole means of assessing compliance, such technical details will also dictate the meaningfulness and effectiveness of the AMCT itself in protecting people's health. Accordingly, the fact that such details are not included in the AQ Evidence Pack and appear very unlikely to be subject to public consultation is

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<sup>98</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p112

<sup>99</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p28

<sup>100</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p34 and 46

<sup>101</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p33 and p47

<sup>102</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p36

disappointing. ClientEarth urges the government to conduct a public consultation or - at the very least - engage with stakeholders, including NGOs, for their view and input on this crucial matter to help ensure that the monitoring regime is robust, fit for purpose and engenders public trust.

**(f) Public access to modelling and monitoring information is critically important**

- i. The AQ Evidence Pack states that assessment of the two new PM<sub>2.5</sub> targets will be included in the long-running series of annual reports, 'Air Pollution in the UK', and also that public access to real-time data and statistics on PM<sub>2.5</sub> levels on the UK Air website will be maintained.<sup>103</sup> ClientEarth supports this commitment to the public availability of monitoring data. However, we note that there is scope for transparency around monitoring data to be significantly improved in order to have a meaningful impact in raising awareness of the problem and helping to change behaviour and also to build support for bold air quality policies.
- ii. As regards modelling, while modelling is not proposed to be used to assess compliance with the targets, the AQ Evidence Pack indicates that modelling will continue to be used for a range of matters including assessing progress towards meeting interim and final targets<sup>104</sup>, helping to assess where monitors should be located, and in relation to policy development.<sup>105</sup> However, it is unclear whether the government intends to make the results of such modelling publicly available. It is critical that the results of the government's modelling of pollution levels continue to be made publicly available in the interests of transparency and to facilitate public understanding of the issues and ensure public trust in the new regime. Failing to do so would represent a step backwards when compared to the government's current practice of publishing the output of its Pollution Climate Mapping model for estimated roadside and background pollution concentrations on the UK-AIR website.
- iii. The statutory instrument that sets these targets in law should include a legal requirement for public access to the information (derived from both monitoring and modelling) set out above. This would ensure the ongoing provision of this information and increase public confidence in the transparency of the regime governing these targets.

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<sup>103</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p41

<sup>104</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* 112

<sup>105</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* 28

#### 4.3.6 The need for a broader suite of targets

ClientEarth welcomes the provision of new targets for annual mean PM<sub>2.5</sub> concentrations and population exposure reduction. This is important recognition by the government that the law as it stands is not strong enough to protect people's health from this harmful pollutant. However, there are additional gaps in the existing legal regime that allow a range of pollutants to persist at levels that are continuing to harm people's health and our natural environment. In order to tackle the threat that air pollution poses to human health and the environment, we urge the government to commit to a broader suite of air pollution targets to cover a wider range of air pollutants. These should include, as a minimum:

**(a) Stronger concentration limits for nitrogen dioxide (NO<sub>2</sub>) pollution**

- i. Both annual mean and hourly mean concentration limit values for NO<sub>2</sub> pollution already exist within the Air Quality Standards Regulations 2010. However, these limits fall well short of the latest air quality guidelines published by the WHO in September 2021. The annual mean limit value of 40 µg/m<sup>3</sup> is four times higher than the 10 µg/m<sup>3</sup> guideline the WHO now urges countries across the world to strive for in order to protect human health. The hourly limit value of 200 µg/m<sup>3</sup> is eight times higher than the 25 µg/m<sup>3</sup> 24-hour mean WHO guideline. The law on NO<sub>2</sub> is significantly out of kilter with the state of scientific understanding of the health risks associated with air pollution. This is translating into a lack of action to control levels of this pollutant, with all of the air quality reporting zones under the Air Quality Standards Regulations 2010 continuing to exceed the existing WHO guideline.
- ii. The disparities between our existing legal protections for NO<sub>2</sub> and the recommendations made by the world's leading scientists are now just as wide as those with respect to PM<sub>2.5</sub>. Despite this, the government's consultation proposals do not contain any proposals for new targets to reduce levels of NO<sub>2</sub>. ClientEarth urges the government to rectify this major lacuna in the law by setting new stronger legal limits for both annual mean and hourly mean NO<sub>2</sub> concentrations that reflect the latest WHO guidelines.

**(b) New long-term emission reduction commitments for all key air pollutants**

- i. The government is already bound by emission reduction commitments for five harmful pollutants and their precursors – including nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO<sub>2</sub>), and PM<sub>2.5</sub> – set out within the NEC Regulations<sup>106</sup>. However, these targets only extend to 2030. Beyond this date, there is no

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<sup>106</sup> National Emission Ceilings Regulations 2018, Regulation 6 and Schedule 3

indication of whether or how targets for ambition to further reduce emissions of these harmful pollutants will be set. The government's consultation proposals do not explain how this looming gap in regulation will be filled.

- ii. NO<sub>x</sub> and NH<sub>3</sub> pollution impact human health through their contribution to ground-level ozone, namely NO<sub>2</sub> and PM<sub>2.5</sub> concentrations<sup>107</sup>. As already noted above in section 4.2.2, nitrogen pollution is causing significant harm to air, water, the climate, ecosystems, soil health and biodiversity. Across the UK, nitrate is a significant contributor to the poor state of our water, nitrous oxide (N<sub>2</sub>O) is a greenhouse gas contributing to the depletion of the stratospheric ozone layer while nitrogen pollution is leading to acidification and eutrophication of soils, forests and natural terrestrial ecosystems, and the associated loss of species. The Government's own Clean Air Strategy 2019 states "We will set a target for reduction of damaging deposition of reactive forms of nitrogen by 17% over England's protected priority sensitive habitats by 2030 and review what longer term targets should be".<sup>108</sup> The 2021 assessment of progress towards this target showed that total nitrogen deposition increased by 2.5% from 2016-2018.<sup>109</sup>
- iii. Recent modelling has shown that ammonia and NO<sub>x</sub> emissions reductions of 50% are required to restore 75% of UK sensitive habitats to favourable condition<sup>110</sup>. Yet air pollutant emissions statistics published in February 2022 showed that the 2020 target for ammonia emissions had not been reached.
- iv. **ClientEarth urges the government to set new long-term legally binding targets beyond 2030 to reduce annual NO<sub>x</sub>, NH<sub>3</sub>, NMVOC, SO<sub>2</sub> and PM<sub>2.5</sub> emissions.** These emissions targets should work alongside concentration and exposure reduction targets as an additional tool to secure national-level reductions from key pollution sources. They would also provide a means to drive action to reduce the UK's impact on neighbouring countries' air quality via transboundary pollution putting us on a stronger footing to expect similar action to reduce air pollution from them.
- v. Action to meet new long-term emission reduction targets for NO<sub>x</sub> and NH<sub>3</sub> would also contribute to reducing negative impacts of nitrogen on our natural world and delivering important progress

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<sup>107</sup> W.K. Hicks et al., commissioned by WWF-UK, *A Comprehensive Approach to Nitrogen in the UK* (2022), available at: < [https://www.wwf.org.uk/sites/default/files/2022-02/WWF\\_Comprehensive\\_Approach\\_Nitrogen\\_Full\\_Technical\\_Report.pdf](https://www.wwf.org.uk/sites/default/files/2022-02/WWF_Comprehensive_Approach_Nitrogen_Full_Technical_Report.pdf)>

<sup>108</sup> Clean Air Strategy 2019, section 3.7

<sup>109</sup> Rowe EC et al., 'Trends Report 2021: Trends in critical load and critical exceedances in the UK' (2021) p5, available at: <[https://uk-air.defra.gov.uk/assets/documents/reports/cat09/2106241035\\_Trends\\_Report\\_2021.pdf](https://uk-air.defra.gov.uk/assets/documents/reports/cat09/2106241035_Trends_Report_2021.pdf)>

<sup>110</sup> H. Woodward, T. Oxley, E.C. Rowe, A.J. Dore, H. ApSimon. (2022). An exceedance score for the assessment of the impact of nitrogen deposition on habitats in the UK. <https://doi.org/10.1016/j.envsoft.2022.105355>

against the government's targets in other priority areas under the Environment Act – including most notably the species abundance targets and water quality targets.

- vi. Plans to meet emission reduction targets for nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO<sub>2</sub>), and PM<sub>2.5</sub> should form part of an integrated and full-cycle approach to tackling all forms of nitrogen pollution to air, water and soil. As mentioned in section 4.2.2, this approach should be underpinned by nitrogen budgets and delivered through a national nitrogen strategy that appropriately balances effective and properly enforced regulation alongside well-designed incentives, advice and support.

#### 4.3.7 The need for stronger protections against short-term peaks in PM<sub>2.5</sub> pollution

- i. There are currently no specific legal protections against short-term peaks in PM<sub>2.5</sub> pollution set out in domestic legislation. The Air Quality Standards Regulations 2010 provide no daily or hourly legal limit for this harmful pollutant. Furthermore, those Regulations also fail to include any legal alert threshold for PM<sub>2.5</sub> above which the government is required to draw up and implement 'short-term action plans' to reduce short-term peaks in this harmful pollutant<sup>111</sup> and communicate to the public about the risks posed by spikes in concentrations<sup>112</sup>. These major gaps in the law mean that our legal framework as it stands does not require any action on the part of the government to protect people from harmful short-term episodes of PM<sub>2.5</sub> pollution or inform them about the associated risks.
- ii. The government's own advisory group – the Committee on the Medial Effects of Air Pollution ("COMEAP") - noted in its 2011 review of the UK Air Quality Index that "*[t]he acute effects of particle exposure include increases in hospital admissions and premature death of the old and sick due to diseases of the respiratory and cardiovascular systems. The evidence is that both PM<sub>2.5</sub> and PM<sub>10</sub> cause additional hospital admissions and deaths on high pollution days. There are also less severe effects of short-term particle exposure during pollution episodes, such as worsening of asthma symptoms and even a general feeling of being unwell leading to a lower level of activity (termed reduced activity days)*".<sup>113</sup> Reflecting the wealth of evidence about the adverse health impacts of short-term exposure to PM<sub>2.5</sub>, the 2021 WHO air quality guidelines recommend a 24-hour average concentration for PM<sub>2.5</sub> pollution of 15 µg/m<sup>3</sup>.

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<sup>111</sup> See Air Quality Standards Regulations 2010, reg 27

<sup>112</sup> See Air Quality Standards Regulations 2010, reg 21

<sup>113</sup> COMEAP, 'Review of the UK air quality index' (2011), available at: <<https://www.gov.uk/government/publications/comeap-review-of-the-uk-air-quality-index>>

- iii. Those with pre-existing health conditions can be more vulnerable to the effects of peaks in pollution levels. A recent report from Asthma + Lung UK revealed that more than half (53%) of people with asthma and 47% of people with COPD<sup>114</sup> say air pollution is a trigger for their symptoms which can include a tight chest, coughing and breathlessness.<sup>115</sup> When applied to the general population of people with asthma and COPD, this could equate to as many as 3.4 million people who are affected.<sup>116</sup> Pollution peaks can have wide-ranging effects on these people's quality of life, with a third reporting that they do not leave their homes when air pollution is high, almost half saying air pollution prevented them from exercising outdoors and almost a quarter saying air pollution made them feel low or depressed.<sup>117</sup>
- iv. Government-reported figures of the average number of hours urban background and roadside sites reached “Moderate”, “High”, or “Very High” levels of PM<sub>2.5</sub> pollution have decreased significantly since 2011.<sup>118</sup> However, reductions have largely stagnated since 2015. Moreover, the way in which these figures are presented is misleading when it comes to the level of risk posed by these peaks. Government statistics show that the average number of hours across all roadside sites for which PM<sub>2.5</sub> concentrations were reported as “Moderate” or above was 61 in 2020. The lower threshold of concentrations classified as level 4 “Moderate” (an hourly concentration of 36-41 µg/m<sup>3</sup>) is more than twice the level of the 2021 WHO daily air quality guidelines of 15 µg/m<sup>3</sup>. Whilst a like for like comparison between hourly concentrations and the daily air quality guidelines might not be a neat one, this indicates that even “Moderate” peaks represent a risk to people's health and persist to a significant degree (noting also that the 61-hour figure is an average across all roadside monitoring sites – some will suffer from more frequent and more severe peaks).
- v. Despite this persisting problem, the government's consultation proposals do not include new targets to limit short-term concentrations of PM<sub>2.5</sub> pollution. In explaining the consultation proposals' focus on long-term concentrations, the Detailed Evidence Report asserts that “*action to reduce long-term exposure will also reduce short-term peaks*”, suggesting that the impacts of

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<sup>114</sup> Chronic obstructive pulmonary disease

<sup>115</sup> Asthma and Lung UK, *Alerting the Nation: Improving the way information is used to protect the most vulnerable from air pollution* (2022) p11, available here:

<[https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report\\_v4.pdf](https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report_v4.pdf)>

<sup>116</sup> Asthma and Lung UK, *Alerting the Nation: Improving the way information is used to protect the most vulnerable from air pollution* (2022) p11, available here:

<[https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report\\_v4.pdf](https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report_v4.pdf)>

<sup>117</sup> Asthma and Lung UK, *Alerting the Nation: Improving the way information is used to protect the most vulnerable from air pollution* (2022) p9 and p11, available here:

<[https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report\\_v4.pdf](https://www.blf.org.uk/sites/default/files/Alerting%20the%20Nation%20Report_v4.pdf)>

<sup>118</sup> Published here: <<https://www.gov.uk/government/statistics/air-quality-statistics/concentrations-of-particulate-matter-pm10-and-pm25#trends-in-concentrations-of-pm25-in-the-uk-2009-to-2020>>

short-term exposure will instead be managed by “*immediate action that will be taken to improve public awareness about air pollution*”<sup>119</sup>. However, it is unclear what this “immediate action” will be or when it will materialise. In the meantime, it is difficult to opine on whether these planned but elusive improvements to the public information system will effectively mitigate negative impacts of short-term PM<sub>2.5</sub> episodes (particularly for the most vulnerable) in lieu of a legal target for short-term concentrations. The gravity of urgently improving this information system was highlighted in the *Report to Prevent Future Deaths* issued by the Coroner following the inquest into the death of 9-year-old Ella Adoo-Kissi-Debrah. In this report the Coroner noted the low public awareness about the sources of information about air pollution levels and that greater awareness would help individuals reduce their personal exposure.<sup>120</sup> As noted by the Coroner, this information “must be sufficiently detailed” and that publicising this information needs to be addressed by national as well as local government.<sup>121</sup>

vi. **At the very least, we strongly urge the government to urgently:**

- **Commit to a new 24-hour mean alert threshold for PM<sub>2.5</sub> which aligns with the latest WHO guidelines to ensure that people are informed of the risks posed to their health;**
- **Better promote the national air pollution alerts system; and**
- **Improve the health advice issued with the alerts.**

vii. ClientEarth has additional broader concerns about the inadequacy of the existing provision of public information on air quality. However, we consider that the detail of these concerns falls outside of the scope of the present consultation. They are not included in this response, but ClientEarth reserves its position in this respect.

#### 4.3.8 The population exposure reduction target (“PERT”)

- i. In principle, we support the introduction of a PERT for PM<sub>2.5</sub>. There is no “safe” level of PM<sub>2.5</sub>, so it is important to ensure that action is not limited to areas where this pollutant is at its worst. A target that requires action from the government to drive down average exposure could help

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<sup>119</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report* (2022) p6

<sup>120</sup> Philip Barlow, Assistant Coroner for the coroner area of Inner South London, *Regulation 28: Report to Prevent Future Deaths* (2021) p2, available at: < <https://www.judiciary.uk/wp-content/uploads/2021/04/Ella-Kissi-Debrah-2021-0113-1.pdf>>

<sup>121</sup> Philip Barlow, Assistant Coroner for the coroner area of Inner South London, *Regulation 28: Report to Prevent Future Deaths* (2021) p2, available at: < <https://www.judiciary.uk/wp-content/uploads/2021/04/Ella-Kissi-Debrah-2021-0113-1.pdf>>

provide the legal impetus for continuous improvements, even where concentrations of PM<sub>2.5</sub> are already below the ambient concentration target value. In doing so, this type of approach could help maximise public health gains across the country.

- ii. However, this needs to sit alongside a more ambitious AMCT target that provides a better minimum level of protection for everybody. A legal framework that drives down average exposure but allows very high levels of pollution to remain in some areas for another 18 years would not be a fair one. People should not be condemned to poor health based on where they live, work or study. This is particularly true for the most vulnerable people exposed to the impacts of pollution, including children, older people, people with pre-existing health conditions, people on low incomes, people from ethnic minorities and outdoor workers.
- iii. ClientEarth are also concerned that the PERT proposed by the government as part of this consultation represents an insufficient level of ambition. We have a number of parallel concerns about the lack of transparency of evidence the government has used to justify the proposed level of ambition as those set out in section 4.3.3 above, as well as suggested improvements in how compliance with the PERT should be assessed. These are set out below.

#### 4.3.9 Insufficient ambition of the PERT

The government has proposed a PERT of a 35% reduction in population exposure to PM<sub>2.5</sub> by 2040 compared to 2018 levels. As in relation to the AMCT, the evidence disclosed by the government in support of its proposed PERT suffers from a number of fundamental gaps. These gaps are detailed in section 4.3.10 below. Nevertheless, in spite of this significant lack of transparency, there are a number of persuasive factors which point to a greater level of ambition being required for the PERT. Accordingly, **we are calling on the government to increase the ambition of the PERT, to more closely align it with the latest WHO guideline for PM<sub>2.5</sub>**. Our reasons are summarised as follows.

- a) **The government's proposed PERT, if successfully achieved, would result in average population exposure in almost two decades' time still being significantly above the latest WHO guideline level of 5 µg/m<sup>3</sup>.**

The government is proposing a 35% reduction in population exposure by 2040 (compared to a base year of 2018). The government's supporting evidence indicates that the baseline average for 2018 (calculated as a three-year calendar mean using years 2016, 2017, and 2018) would be 10 µg/m<sup>3</sup>. A 35% reduction in population exposure would therefore bring average exposure to PM<sub>2.5</sub> down to 6.5 µg/m<sup>3</sup>. The proposed PERT would result in average population exposure being

1.5 µg/m<sup>3</sup> or 30% above the WHO’s guideline level almost two decades after the present day. This provides a strong case for greater ambition being required to enable the PERT to provide a meaningful driver for continuous improvement across the country. We also reiterate our comments in section 4.3.2(f) above that the government’s own analysis indicates adopting more ambitious targets would result in reduced exposure disparities, greater ecosystem benefits, and greater GHG abatement (in addition to greater health benefits).

**b) There are a number of indications that the government’s modelling regarding target achievability was overly pessimistic/conservative.**

- i. As already explained above in paragraph 4.3.2(c)(iii) above, the inherently subjective exercise of constructing the AQ Target Scenarios was carried out by a narrow focus group, comprising mainly industry and government representatives, with no representation from NGOs or (as far as we can tell) health or climate experts<sup>122</sup>. Such a group is likely to have held conservative assumptions around the feasibility of different policy pathways, which may have significantly influenced the resulting AQ Target Scenarios. In addition, as explained in relation to the AMCT, the AQEG’s expert view was that the government had taken a generally conservative approach to the interpretation of model data and how each emissions scenario might meet future targets<sup>123</sup>. Furthermore, while the precise mix of policies and measures included under the government’s preferred ‘High’ Target Scenario is unknown, the AQ Evidence Pack makes clear that it is less ambitious than what is necessary to meet the government’s existing legal commitments. For example, according to the government’s modelling, its preferred ‘High’ scenario would result in a population weighted mean concentration (“**PWMC**”) of 7 µg/m<sup>3</sup> in 2030. This, absurdly, is higher (i.e. worse) than the PWMC resulting from the “NECR” scenario (6.8 µg/m<sup>3</sup> in 2030) – the scenario that assumes that the UK will meet the legally binding 2030 emissions reduction commitments for all five key pollutants under the NEC Regulations<sup>124</sup>. As noted above in section 4.3.2 (a), the NECR scenario should provide the baseline level of ambition upon which further action should be built.
- ii. In light of the clear health and climate-based rationale for a stronger target combined with the repeated indications that the government’s feasibility analysis has been overly pessimistic, ClientEarth believes that the government should opt for a higher level of ambition for the PERT. The lack of transparency from the government on the evidence base underpinning its proposed

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<sup>122</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p59

<sup>123</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p77

<sup>124</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p102

PERT (detailed further below) makes it difficult for those responding to this consultation to provide a clear opinion on what that alternative level of ambition should be. **At a minimum, the PERT should be re-calibrated to align with a scenario that assumes compliance with all of the legally binding emission reduction commitments within the NEC Regulations and should more closely align with the WHO guideline.** The table at p102 of the Detailed Evidence Report indicates that such a pathway would require an interim PERT target of at least a 30% reduction in population exposure by 2030<sup>125</sup>.

#### 4.3.10 Insufficient evidence to justify the proposed PERT

As mentioned above, the evidence disclosed by the government alongside its proposal for the PERT suffers from a number of fundamental gaps. ClientEarth repeats its above comments that these defects in the government's supporting evidence present significant barriers to a rigorous evaluation of the government's proposals, undermining the purpose of the consultation exercise.

The gaps in the evidence that apply to the PERT can be summarised as follows:

##### a) Lack of detail on policies and measures included in modelling scenarios

- i. ClientEarth repeats our comments in section 4.3.3(a) above. In summary, there is a complete lack of transparency regarding the policies and measures included under each AQ Target Scenario, which makes it very difficult to scrutinize the government's assessment of the feasibility of more ambitious targets and the 'balance' purportedly struck between ambition and achievability. This also appears to be a complete U-turn from the government's previous position, given repeated earlier statements made by a government minister explicitly advocating the importance of the public being consulted in full knowledge of what action would be required to meet certain levels of ambition.

##### b) Uncertainty margins associated with the different AQ Target Scenarios have not been published

- ii. In addition to the lack of transparency over the make-up of the AQ Target Scenarios, there is also a lack of transparency over the uncertainty margins associated with the different AQ Target Scenarios. As explained above, a table presented in the Detailed Evidence Report sets out the PWMC that has been modelled under each AQ Target Scenario in 2025, 2030, 2040, and 2050<sup>126</sup>.

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<sup>125</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* 102

<sup>126</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p102

However, despite the inherent uncertainty in modelling, these figures have been presented as absolute values, with no uncertainty margins to indicate whether these figures represent the best, medium or worst case estimated under the different scenarios.

**c) More ambitious targets have not been impact assessed**

ClientEarth repeats the above comments at section 4.3.3(d) above, which apply equally to the PERT. Contrasting the “Do nothing” scenario with the government’s preferred option is not a meaningful comparison since the “Do nothing” scenario is not legally an option. Such a comparison therefore provides no insight whatsoever into the purported justification of the preferred option over other actual alternatives. At a minimum the “Speculative” scenario should have been impact assessed to provide a comparison against the government’s preferred “High” scenario. Ideally, the hybrid “High-Spec” scenario would also have been impact assessed, especially in light of the AQEG’s support for exploring hybrid approaches<sup>127</sup>.

**d) Lack of detailed methodology regarding the PERT calculation**

The AQ Evidence Pack does not include sufficient details of the specific methodology used to calculate the PERT, including the relevant data sets used, to allow independent experts to verify the government’s calculations of the PERT when compliance assessments are conducted in due course. We would have expected such information to have been published in the AQ Evidence Pack to facilitate rigorous independent oversight, thereby decreasing the likelihood of inadvertent errors and fostering greater public confidence in the assessment regime.

### 4.3.11 Delivery of the target(s)

ClientEarth refers to our earlier comments on delivery of the target(s) at section 4.3.4 above.

### 4.3.12 Assessing Compliance

**a) Near source environments should be included within the PERT calculation**

The government has proposed that assessment of the PERT will focus largely on the use of data from a representative network of monitors predominantly at urban background and suburban locations.<sup>128</sup> It appears that near source environments such as roadside locations will be excluded from the PERT calculation on the basis that they are not representative of exposure for large

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<sup>127</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report. Annex F: AQEG Summary of Modelling Results Workshop (2022)* p3

<sup>128</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p51

proportions of the population.<sup>129</sup> We oppose this exclusion on the basis that it would reduce the effectiveness of a PERT as a tool for decreasing inequalities, given that people living near source environments such as roadside sites are more likely to be from disadvantaged backgrounds. Accordingly, **ClientEarth recommends that near source environments be included in the PERT calculation.**

**b) We support the need for network expansion**

- i. With respect to the size of the monitoring network for the purposes of assessing compliance with the PERT, the Detailed Evidence Report acknowledges that there are currently approximately 44 urban background and suburban monitoring sites across the UK.<sup>130</sup> However, the report goes on to explain the government’s proposals to expand the network of urban background and suburban monitors in 2022-2023 to approximately 57 monitors<sup>131</sup>, and its aspirations to expand it further beyond 2023, subject to available funding.<sup>132</sup> As stated above, ClientEarth strongly supports the expansion of the monitoring network, especially if modelling is not used to supplement monitoring data for the purposes of compliance assessment.
- ii. In parallel, the government has proposed for a minimum requirement for monitoring to be defined in legislation.<sup>133</sup> We repeat our comments in section 4.3.5(c) above that having a sufficient legally binding minimum number of PM<sub>2.5</sub> monitors (that satisfy the required data capture requirements) is critically important to ensuring that the targets are meaningful.
- iii. On a related note, the Detailed Evidence Report sets out a number of principles that are intended to govern the future expansion of the monitoring network for the purposes of assessing the PERT. One such principle is that “consideration is given to locating a proportion of monitoring in areas of deprivation”.<sup>134</sup> In our view, locating a minimum proportion of monitors in areas of deprivation should be a legal requirement. This would help ensure that the PERT calculation adequately reflects PM<sub>2.5</sub> levels in the communities that are more likely to suffer from poor air quality and, moreover, more likely to be more vulnerable to its effects.

<sup>129</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p51

<sup>130</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p51

<sup>131</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p52

<sup>132</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p52

<sup>133</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p46

<sup>134</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p52

iv. On a related note, we also strongly support the expansion of the rural background monitoring capability (even though this would not be used for assessing compliance with the PERT), to increase understanding of background concentrations across the country and facilitate understanding of the drivers of overall trends in air pollution levels.

**c) The need for periodic review and reassessment of the monitoring network design at least every 5 years**

ClientEarth repeats the comments set out in section 4.3.5(b) above regarding the need for the monitoring network to be subject to periodic review and reassessment at least every 5 years to ensure that it remains fit for purpose, and for the government to be required to report to Parliament on the results of that review.

**d) Public access to modelling and monitoring information remains important**

- i. ClientEarth repeats the comments set out in section 4.3.5(f) above.
- ii. It is essential that the government adequately ‘shows its workings’ with respect to the PERT, in order to secure public confidence in this target. As explained above, it is important that the government publishes the specific methodology used to calculate the PERT, including the relevant data sets used to input into the relevant calculation.

**e) The need to consult with stakeholders on monitoring requirements**

- i. As stated above in relation to the AMCT, there are various key details regarding the monitoring network, including its proposed expansion, which are not adequately specified or elaborated upon in the AQ Evidence Pack. Instead, the government has proposed that such details will be included in the draft statutory instrument that will be laid before Parliament in October and, therefore, will not be subject to public consultation. These details include:
  - The minimum number of monitoring sites (that satisfy the required data capture requirements) to be used to assess compliance with the PERT (and the AMCT);<sup>135</sup>
  - The requirements for the spatial representativeness of the monitoring network i.e. the spread of monitoring sites over different geographic areas (which applies both in relation to the AMCT and the PERT);<sup>136</sup> and

<sup>135</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p34 and 46

<sup>136</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p36

- The cap on the number of monitors required for the largest population areas used for the purposes of assessing compliance with the PERT.<sup>137</sup>
- ii. ClientEarth refers back to our comments in paragraph 4.3.5(e) above regarding the centrality of these technical details in determining the integrity of the monitoring regime, and therefore by extension the effectiveness of the PERT in protecting public health. Stakeholder engagement on this crucial matter would have helped ensure that the monitoring regime is robust and fit for purpose.

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<sup>137</sup> Department for Environment, Food and Rural Affairs, *Air quality PM2.5 targets: Detailed evidence report (2022)* p52

## 5. Response to the consultation questions

**Question 4 – Would you like your response to be confidential?**

No.

### 5.1 Questions on target proposals for biodiversity on land

**Question 6. Do you agree or disagree that the proposed combination of biodiversity targets will be a good measure of changes in the health of our ‘biodiversity’?**

We disagree.

**Question 7. [If disagree] What additional indicators do you think may be necessary?**

ClientEarth supports WCL’s submission in their consultation response that a legally binding target is needed to ensure that at least 75% of SSSIs are in favorable condition by 2042. In addition, we believe that the targets listed below are also needed to reverse the decline in biodiversity:

- A legally-binding long-term target to improve soil health; and
- A legally binding target to reduce pesticide use by 50% by 2030

Soil is a vital living habitat that is essential to delivering wildlife-rich habitat. Consequently, soil health should be a key component in the government’s strategy to halt the decline in biodiversity. However, as soil is not currently monitored, a new long-term target to improve soil health should be set at the earliest opportunity to build on the 25 YEP goal of achieving sustainable soil management by 2030 as an interim target.<sup>138</sup> The new target to improve soil health should use a soil metric to indicate whether soils are being managed sustainably.

Pesticides can have a harmful impact on air quality, water quality and soil health when they enter run-off from fields and pavements, are not disposed of correctly or are sprayed aerially. Pesticides have also been linked to dramatic declines in bees and pollinators, beneficial insects, birds, mammals, aquatic animals and non-target plants. Given the widespread use of pesticides in England, we consider that a target to reduce pesticide use is urgently needed to support the proposed target to halt the decline in species abundance.

The government has already laid out its intention to reduce pesticide use in its 25 YEP and a recent report by the Wildlife Trusts calls on the government to set an ambitious target to reduce pesticide use

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<sup>138</sup> 25 Year Environment Plan (OEP, 2018) ([25-year-environment-plan.pdf \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/682022/25-year-environment-plan.pdf)) pg. 27

in order to reverse dramatic reductions in insect numbers, which has detrimental implications for biodiversity.<sup>139</sup> Targets to reduce pesticide use by 50% by 2030 have been adopted by the EU as part of its Farm to Fork Strategy<sup>140</sup>. We consider that a similar target to reduce pesticide use by 50% by 2030 should be adopted in England.

A target to reduce pesticide use will need to be accompanied by support for farmers to adopt non-chemical pest control methods, for example through subsidies delivered via the ELMS and advice on Integrated Pest Management (IPM).

***Question 8. Do you agree or disagree with the level of ambition of a 10% increase proposed for the long-term species abundance target? [Agree/Disagree/Don't know]***

We disagree.

***Question 9. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?***

ClientEarth supports WCL's view that a more ambitious target should be adopted to increase species abundance by at least 20% by 2042, compared to 2022 levels.

***Question 10. Do you agree or disagree with the ambition proposed for the long-term species extinction risk target to improve the England-level GB Red List Index? [Agree/Disagree/Don't know]***

We disagree.

***Question 11. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?***

ClientEarth agrees with the WCL's view that a specific level of improvement in species extinction risk by 2042, such as a reduction of 30% by 2042 compared to 2022 levels. ClientEarth also recommends that marine species are included in the 'red list' of endangered species. Recovery targets should be included, for example, for: Atlantic sturgeon (*acipenser sturio*) and angelshark (*squatina squatina*) that are 'critically endangered'; North Atlantic halibut (*hippoglossus hippoglossus*) that is 'vulnerable'; salmon (*salmo salar*), which is 'vulnerable'; and common eel (*anguilla anguilla*), that is currently 'critically endangered'.

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<sup>139</sup> Goulson, D. (2020) Reversing the Decline of Insects. [Reversing the Decline of Insects Report -EMBARGO 08.07.20 \(2\).pdf \(wildlifetrusts.org\)](#)

<sup>140</sup> Farm to Fork Strategy (European Commission, 2020) [f2f\\_action-plan\\_2020\\_strategy-info\\_en.pdf \(europa.eu\)](#)

**Question 12. Do you agree or disagree with the level of ambition of ‘in excess of 500,000 hectares’ proposed for the long-term wider habitats target? [Agree/Disagree/Don’t know]**

We disagree.

**Question 13. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?**

ClientEarth supports WCL’s view that the target level of wildlife-rich habitat should be increased to 750,000ha of high-quality habitat that is secured on a permanent basis.

**Question 14. Do you agree or disagree that all wildlife-rich habitat types should count towards the target? [Agree/Disagree/Don’t know]**

We disagree.

**Question 15. [If disagree/Don’t know] [Are there any habitat types that you think should not count towards the target? [[peatland], [grassland], [heathland], [scrub], [native woodland], [hedgerows], [traditional orchards], [arable field margins], [estuarine and coastal water habitats], [wetlands], [rivers / streams], [lakes / ponds], [other habitat types that you think should not count towards the target]]]**

**Question 16. What reasons can you provide for why these habitats should not count towards the target?**

ClientEarth supports WCL’s view that arable field margins should not count towards the target because of their impermanent nature.

## 5.2 Questions on target proposals for biodiversity in the sea

***Question 17 - Do you agree or disagree with the level of ambition proposed for the Marine Protected Area target? [Agree/Disagree/Don't know]***

We disagree.

***Question 18. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?***

ClientEarth welcomes the inclusion of a target to improve the condition of England's MPAs as the vast majority of these sites do not have sufficient management measures in place to provide genuine protection. However, as discussed above in section 4.1, in order to set more effective goals to halt the decline in marine biodiversity that go beyond what is already required in the existing policy framework, ClientEarth considers that the government should reframe the biodiversity in the sea target so that, instead of focussing on a prescribed number of features, the target aims to:

- increase levels of designation so that 30% of UK seas are fully or highly protected by 2030;
- complete the MPA network; and
- apply a 'whole-site' approach to management of MPAs.

If the Government intends to keep a features-based target, it should be amended to 79% of the designated features in the MPA network being in favourable condition by 2042, with the remainder in recovering condition, and additional reporting on changes in individual feature condition.

## 5.3 Questions on target proposals to improve water quality and availability

**Question 19. Do you agree or disagree with the level of ambition proposed for an abandoned metal mines target? [Agree/Disagree/Don't know]**

We have no comment to make in response to this question.

**Question 21. In addition to the proposed national target, we would like to set out ambitions for reducing nutrient pollution from agriculture in individual catchments. Do you agree or disagree that this approach would strengthen the national target? [Agree/Disagree/Don't know]**

We agree.

**Question 23. [If agree] Why do you think ambitions for reducing nutrient pollution from agriculture in individual catchments will strengthen the national target? What factors should the government consider when setting these ambitions?**

ClientEarth supports WCL's view that basing targets on individual catchments is the best approach for ensuring that reduction measures maximise ecological benefits where they are needed most.

**Question 24. The target needs to allow flexibility for water companies to use best available strategies to reduce phosphorus pollution, including the use of nature-based and catchment-based solutions. Do you agree or disagree that the proposed target provides this flexibility? [Agree/Disagree/Don't know]**

We have no comment to make on this question.

**Question 26. Do you agree or disagree with the level of ambition proposed for the nutrient targets? [Agree/Disagree/Don't know]**

We disagree.

**Question 27. [If disagree] What reasons can you provide for why government should consider a different level of ambition?**

Our comments in response to this question relate solely to the proposed target to reduce nutrient pollution from agriculture.

In ClientEarth’s view, the government should increase the level of ambition in the proposed target to reduce nitrogen, phosphorus and sediment loadings from agriculture in the water environment to a target reduction of 50% by 2037, against a 2018 baseline.

We consider that a more ambitious target is urgently needed to address the poor condition of our water bodies, only 16% of which currently meet the criteria for good ecological status. Given the considerable potential for widespread changes in the agricultural sector over the next two decades, we believe that a more ambitious target should be adopted.

As discussed above in section 4.2.1, the main reason provided in the Water Evidence Pack for not adopting a more ambitious target to reduce nutrient pollution from agriculture in our water is that the widespread changes in agricultural practices and alterations in land use that would be required “would not be feasible” and the impact on the agricultural sector would be “too great”. However, considering the agricultural sector is already in a period of a transition from the previous Basic Payment Scheme and the government is in the process of re-evaluating our food and farming systems through the Food Strategy, we consider that now is an opportune time for a systems-level change to move towards more sustainable agricultural practices that minimise nutrient pollution. Also, predicted changes in land use driven by net zero targets and market-driven changes in production and consumption of meat and dairy are likely to assist in driving down levels of nutrient pollution from agriculture. In our view, these current and impending changes in the agricultural sector provide an ideal opportunity for the government to adopt a more ambitious target to reduce nutrient pollution from agriculture in our water.

While ClientEarth welcomes the proposed target to reduce nitrogen and other pollutants in our water, we consider that there is also a pressing need for a more overarching target to reduce nitrogen losses to the wider environment from all sectors. As discussed above in section 4.2.2, nitrogen pollution is causing significant harm to air, water, the climate, ecosystems, soil health and biodiversity. While agriculture is a major source of nitrogen pollution, other sectors including transport and energy are also contributing to the overall problem. In order to address the problem of nitrogen pollution more effectively, ClientEarth strongly recommends that the government adopts a legally binding target to reduce nitrogen waste from all sources across the UK economy by 50% by 2030, followed by further long-term targets to continue to reduce nitrogen losses by 2040 and 2050.

***Question 28. Do you agree or disagree with the level of ambition proposed for a water demand target? [Agree/Disagree/Don’t know]***

We have no comments to make in response to this question.

## 5.4 Questions on target proposals for woodland cover

**Question 30. Do you agree or disagree with the proposed metric for a tree and woodland cover target? [Agree/Disagree/Don't know]**

ClientEarth agrees with WCL's view that the proposed metric is appropriate but that the target should measure both the quality and the quantity of tree cover, for example, by specifying the types of trees that should make up the increase in woodland. This should ideally be indefinite plantings of native species similar to the diversity of a natural UK forest.

**Question 31. Do you agree or disagree that short rotation coppice and short rotation forestry plantations should be initially excluded from a woodland cover target? [Agree/Disagree/Don't know]**

ClientEarth agrees with the exclusion of short rotation coppice and short rotation forestry plantations from the tree canopy and woodland cover target.

**Question 32. Do you agree or disagree with the proposed inclusion of trees in woodlands, as well as trees in hedgerows, orchards, in fields, and in towns and cities? [Agree/Disagree/Don't know]**

ClientEarth agrees with WCL that trees in woodlands, as well as trees in hedgerows, orchards, in fields, and in towns and cities should be included in the target.

**Question 33. Do you agree or disagree with our proposed level of ambition for a tree and woodland cover target? [Agree/Disagree/Don't know]**

ClientEarth supports WCL's view that the proposed level of ambition for the tree canopy and woodland cover target is appropriate. We welcome the government's ambition to promote agroforestry as increased tree-planting on farms will be key to achieving the woodland cover target. However, it is important that the integration of trees into the farmed landscape is managed sensitively to balance the interests of farmers, food security, nature and climate. ClientEarth support's WCL's recommendation to introduce a target to increase hedgerows by 40% by 2050.

## **5.5 Questions on target proposals for resource efficiency and waste reduction**

ClientEarth has no comments to make in response to the questions relating to these targets.

## 5.6 Questions on target proposals to improve air quality

**Question 45. Do you agree or disagree with the level of ambition proposed for a PM<sub>2.5</sub> concentration target? [Agree/Disagree/Don't know]**

We disagree.

**Question 46. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?**

ClientEarth welcomes the introduction of legally-binding targets to improve air quality in order to better protect people's health and the environment. However, ClientEarth is extremely concerned about the lack of transparency in the evidence provided to support the air quality targets and the fact that the level of ambition proposed in the targets falls well short of current WHO guidelines. This lack of ambition in the proposed air quality targets would leave another generation of children waiting for cleaner air.

The evidence disclosed by the government in support of its proposed AMCT suffers from a number of fundamental gaps that hamper full public scrutiny of the proposed target (see section 4.3.3 above for further details). In spite of this concerning lack of transparency, it is clear that a greater level of ambition is feasible. The government's own analysis shows that reducing concentrations of PM<sub>2.5</sub> to within 10 µg/m<sup>3</sup> is achievable long before 2040, with compelling evidence to show that this could be delivered by 2030 (see section 4.3.2 above for further detail). Pushing back the deadline by a whole decade would fail to realise the considerable benefits of taking more urgent action for climate mitigation, reducing inequalities, and the economy. Accordingly, ClientEarth recommends that:

- The government should bring forward the deadline for the AMCT to ensure that PM<sub>2.5</sub> concentrations are reduced to within 10 µg/m<sup>3</sup> by 2030. This should represent a stepping-stone towards a longer-term ambition to achieve PM<sub>2.5</sub> concentrations across the country that are within the current 5 µg/m<sup>3</sup> WHO guideline level.

The rules that will govern the assessment of compliance with both the AMCT and the PERT will be pivotal to the integrity of the targets themselves. ClientEarth has a number of concerns regarding the proposed rules for the assessment of compliance with the two targets. Some of these proposals risk undermining the effectiveness of the targets as a tool to protect people's health. The limited detail provided by the government at this stage about the minimum requirements against which the proposed targets will be assessed is a further concern. Further detail, is provided in sections 4.3.5 and 4.3.12 above. ClientEarth recommends that:

- The three out of four year caveat to assess compliance with the AMCT should not be adopted as it represents unacceptable double-counting (see section 4.3.5(a) for further details);
- Monitor siting requirements should be clearly defined and must not exclude hotspots (see section 4.3.5(b) for further details);
- The monitoring network should be significantly expanded (see sections 4.3.5(c) and 4.3.12(b) for further details);
- Modelling should be used alongside monitoring to assess compliance, in particular in relation to the AMCT (see section 4.3.5(d) above);
- The government should be legally required to conduct a periodic review and reassessment at least every 5 years of a) the monitoring network design and b) the decision to not use modelling (alongside monitoring) to assess compliance, and to report to Parliament on the results of that review (see sections 4.3.5(b), 4.3.12(c), and 4.3.5(d) for further details);
- The government should consult with stakeholders on the detailed monitoring requirements (see sections 4.3.5(e) and 4.3.12(e) above for further details);
- The public should be provided with sufficient access to modelling and monitoring information (see sections 4.3.5(f) and 4.3.12(d) above for further details); and
- Near source environments should be included within the PERT calculation (see section 4.3.12(a) above for further details).

Once the AMCT and the PERT are set it will be essential for government to commit to a clear pathway for action to ensure that these targets are met. ClientEarth recommends that:

- The revised EIP should set out a clear and impact assessed suite of policies and measures necessary to achieve the AMCT and the PERT (see section 4.3.4(a) above);
- Interim targets should accelerate and ‘front-load’ action (see section 4.3.4(b) above); and
- The revised EIP must be subject to public consultation (see section 4.3.4(c) above).

ClientEarth is also concerned that the limited scope of the government’s proposed air quality targets would leave major gaps in the law as it stands. Focusing on PM<sub>2.5</sub> pollution only would represent a missed opportunity to set ambition to reduce harm from the full suite of air pollutants we know to be causing damage to human health and the environment. See section 4.3.6 above for further details. As such, ClientEarth recommends that:

- The government should set new stronger legal limits for both annual mean and hourly mean NO<sub>2</sub> concentrations that reflect the latest WHO guidelines; and

- The government should set new long-term legally binding targets beyond 2030 to reduce levels of all key air pollutants including nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO<sub>2</sub>), and PM<sub>2.5</sub>.

The current scope of the government's proposals also misses the opportunity to introduce new legal standards that would better protect people from short-term peaks in harmful PM<sub>2.5</sub> pollution (see section 4.3.7 above). Accordingly, ClientEarth recommends that:

- The government should commit to a new 24-hour mean alert threshold for PM<sub>2.5</sub> which aligns with the latest WHO guidelines to ensure that people are informed of the risks posed to their health and short-term action is taken to protect them.

***Question 47. Do you agree or disagree with the level of ambition proposed for a population exposure reduction target? [Agree/Disagree/Don't know]***

We disagree.

***Question 48. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?***

As with the evidence provided to support the proposed AMCT, the evidence disclosed by the government in support of the level of ambition for the proposed PERT suffers from a number of fundamental gaps (see section 4.3.10 above for further details). Nevertheless, in spite of this significant lack of transparency there are a number of factors which point to a greater level of ambition being required for the PERT. The government's proposed target, if successfully achieved, would result in the average population exposure in almost two decades' time still being significantly above the latest WHO guideline level of 5 µg/m<sup>3</sup> (see section 4.3.9 above for further detail). In addition, the proposed target appears to be less ambitious than what is necessary to meet the government's existing legal air quality commitments (see section 4.3.9 above for further detail). In light of these concerns, ClientEarth recommends that:

- The government should increase the ambition of the proposed PERT to more closely align it with the latest WHO guideline for PM<sub>2.5</sub>. At a minimum, this should involve the PERT being re-calibrated to align with a scenario that assumes compliance with all of the legally binding emission reduction commitments within the NEC Regulations.

We repeat our comments and recommendations made in relation to Question 46 above regarding the assessment of compliance with the government's proposed air quality targets (see section 4.3.12 above for further detail).

We also repeat our comments and recommendations made in relation to Question 46 above regarding the need for government to commit to a clear pathway for action to ensure that these air quality targets are met (see section 4.3.11 above for further detail).

To discuss the points made in this response further, please contact:

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