

27 January 2022

**VIA ELECTRONIC MAIL ONLY**  
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**For the attention of:**

**Rt Hon Kwasi Kwarteng MP, Secretary of State  
for Business, Energy and Industrial Strategy**

1 Victoria Street  
London  
SW1H 0ET

**C/o: Government Legal Department**

102 Petty France  
Westminster  
London  
SW1H 9GL

Dear Sir/Madam

**LETTER BEFORE ACTION UNDER THE PRE-ACTION PROTOCOL FOR JUDICIAL REVIEW**  
**RESPONSE REQUIRED WITHIN 14 DAYS**

## Introduction

1. We write again on behalf of our clients, Daze Aghaji (the “**First Claimant**”) and Peter Garforth (the “**Second Claimant**”), in accordance with the Pre-Action Protocol for Judicial Review and in compliance with the Civil Procedure Rules and further to our pre-action protocol letter dated 6 September 2021 and your letter in response dated 4 October 2021 (received on 13 October 2021).
2. If we do not receive a satisfactory response to this letter within the timeframe specified, we propose to advise our clients to make an application for judicial review, without further reference to you.

## Summary of Claim

3. Human-induced climate change has serious adverse consequences for food security, water security, human health, and the life-supporting natural world, affecting citizens both in the UK and around the world. These adverse consequences become more significant the more carbon we emit, with harms substantially reduced by limiting warming to below 1.5°C. The Government is subject to a slew of obligations to reduce greenhouse gas emissions and thus mitigate climate change: the Paris Agreement temperature goal to keep global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels; the UK’s own Climate Change Act 2008 (“**CCA 2008**”), which imposes a legal obligation to achieve net zero emissions by 2050, and the protection of individuals’ lives, health and wellbeing laid down in the European Convention on Human Rights (“**ECHR**”).

4. The global temperature has already risen by between 0.8 and 1.1°C, meaning that the UK is already facing a number of adverse impacts from climate change, including coastal erosion from sea level rise, increased flooding and temperature extremes.
5. Despite repeatedly, and loudly, acknowledging the climate emergency and the need for urgent action, the Government is in breach of its legal obligations to put in place policies to mitigate climate change by reducing emissions. In terms of mitigation, the policies are so deficient that it is effectively as if the Government is currently hoping that, in under a decade from now, the UK will miraculously stop emitting for three whole years, in order to stay on track to achieving Net Zero. In terms of adaptation, the Government is in a worse position than it was three years ago and has failed to put in place policies even to adapt to 2°C of warming.
6. These policy gaps have repeatedly been brought to the Government's attention, and over the past three years they have been highlighted in the strongest terms, but the Government has failed consistently to put the requisite policies in place. As a result, the Committee on Climate Change ("**CCC**") concluded in June 2021:

*"[I]t is hard to discern any comprehensive strategy in the climate plans we have seen in the last 12 months. There are gaps and ambiguities. Climate resilience remains a second-order issue, if it is considered at all. We continue to blunder into high-carbon choices. Our Planning system and other fundamental structures have not been recast to meet our legal and international climate commitments."*
7. In our pre-action protocol letter dated 6 September 2021 we indicated, inter alia, that the Defendant was in breach of sections 13 and 14 of the CCA 2008 in circumstances where he had failed to publish "*as soon as is reasonably practicable*" after the making of the order setting the Sixth Carbon Budget "*a report setting out proposals and policies for meeting the carbon budgets for the current and future budgetary periods up to and including that period.*"
8. In your letter in response dated 4 October 2021, it was stated that the forthcoming Net Zero Strategy ("**NZS**") would meet the Defendant's statutory obligations under sections 13 and 14 of the CCA 2008.
9. On 19 October 2021, the Secretary of State for Business, Energy and Industrial Strategy (the "**Secretary of State**" or the "**Defendant**") published the NZS. In fact, the NZS does not set out proposals and policies for meeting the Sixth Carbon Budget and the Defendant is in continuing breach of his statutory obligations under sections 13 and 14 of the CCA 2008 and he has consequently breached the Claimants' human rights, protected by Articles 2 and 8 of the ECHR (taken together, in the case of the First Claimant, with Article 14). Specifically, the NZS:
  - a. completely omits matters which clear scientific evidence, of which the Defendant was aware, demonstrates must be addressed if net zero is to be achieved, including reducing carbon emissions from marine sediments and achieving behaviour changes;
  - b. assumes emissions will be reduced through improved and innovative farming practices without addressing the combination of low-carbon technologies and behaviour change necessary to address emissions from agriculture; and
  - c. completely omits policies which the CCC has repeatedly called for as crucial to achieving net zero, such as banning rotational burning on peat, but gives no reason for such omissions.

10. It is also clear that the NZS places excessive reliance on untested high-risk negative emissions technology and thereby places a disproportionate burden on the First Claimant, youth and future generations in breach of Article 14 of the ECHR when taken together with Articles 2 and 8.
11. A key material consideration in formulating the NZS should have been acute urgency. The clear scientific evidence shows that the Defendant was obliged to take urgent action to address the climate crisis and make net zero feasible and equitable. There is no evidence that the Defendant has in fact taken into account the need for such urgency. Instead, the opposite emerges: the Defendant has chosen to adopt plans for policies; to assume changes will happen; to foreground expensive technologies with long lead-times (such as nuclear power) and to rely on untested high-risk technologies which will take significant time to develop and scale. This, too, amounts to an error of law.

### **Proposed Parties**

12. **The Claimants:** Daze Aghaji and Peter Garforth.
  - a. Daze Aghaji is 21 years old. She has, over the past few years, advocated for change to fight the climate crisis which has included her running to be a Member of the European Parliament. Daze has been directly affected by climate change as she suffers adverse health from air pollution exacerbated by climate change and her family in Nigeria has been affected by flooding caused/exacerbated by climate change.
  - b. Peter Garforth is a resident of Skipsea, East Yorkshire, which is the fastest eroding coastline in Northern Europe and one of the most vulnerable communities in the whole of England to the impacts of climate change-related sea-level rise. He is directly affected as he lives on the northern part of the worst affected stretch of coastline, which runs from Bridlington to Spurn Point.
13. **The Defendant:** Secretary of State for Business, Energy and Industrial Strategy.
14. **Interested Party:** The Committee on Climate Change.
15. If you consider our explanation of the facts or underlying legal position is wrong in any way, please be clear in saying so in your response, explaining in full the nature of, and basis for, any disagreement. If there are any documents or other materials which you consider relevant to your response, please provide copies of them. If you later raise new factual or legal points, or provide further documents, which could have been raised or provided in response to this letter then we may rely on that fact in relation to the costs of any litigation.

### **Details of the matter being challenged**

16. The grounds of claim are:
  - a. The Defendant has failed to prepare such proposals and policies as he could reasonably consider will enable the Sixth Carbon Budget to be met in breach of section 13 of the CCA 2008.
  - b. The Defendant has failed to lay before Parliament a report "*setting out the proposals and policies for meeting*" the Sixth Carbon Budget "*as soon as is reasonably practicable*" in breach of section 14 of the CCA 2008.

- c. The Defendant has breached the Claimants' rights protected by Articles 2 and 8 of the ECHR (taken together in the case of the First Claimant, with Article 14) in circumstances where he has failed to comply with sections 13 and 14 of the CCA 2008 and/or failed to act with the requisite urgency and/or has otherwise failed to close the policy gap now required in light of the Sixth Carbon Budget.
  - d. The Defendant has breached the First Claimant's rights protected by Articles 2 and 8 of the ECHR taken together, with Article 14 by placing excessive reliance on untested negative emissions technologies in the NZS.
17. The Second Claimant's circumstances evidence why there is a crucial need for urgent policy action to achieve net zero, rather than plans for policies. The First Claimant's circumstances evidence the inter-generational inequity of the Defendant's approach. The Government's own Treasury Net Zero Review made clear that delayed investment will only serve to put future generations at risk and burden them with higher cost.<sup>1</sup>

## Factual Background

### *Climate Change*

18. In October 2018, the Intergovernmental Panel on Climate Change ("IPCC") reported in its *Special Report on Global Warming of 1.5°C* (known as "SR1.5"), that human activities had caused the Earth's surface to warm by more than 1°C since the industrial period of 1851-1900.<sup>2</sup> The SR1.5 Report made two further significant findings: (i) the climate impacts of 2°C of warming would be very much more serious than those of 1.5°C of warming; and (ii) there were then only 12 years in which to take action to prevent global temperature rise above 1.5°C.
19. Warming substantially greater than the global average is being experienced in most land regions: up to twice as great for hot extremes in mid-latitudes and more than three times greater in the cold season in the Arctic.<sup>3</sup> Human-induced climate change has led to increases in the intensity and frequency of many extreme weather events,<sup>4</sup> in particular hot extremes in all land regions, heavy precipitation in several regions, and droughts in some regions. In many regions, changing patterns of precipitation and the melting of snow and ice are altering the volume and seasonal timing of water flows in rivers, affecting both the quantity and quality of water resources, and the potential occurrence of peak flow events, defined as the maximum instantaneous flow occurring in a year.<sup>5</sup> Climate zones are shifting, including expansion of arid zones and contraction of polar zones.<sup>6</sup>
20. Human-induced climate change has adverse consequences for natural and human systems, in particular food and water security, and human health.<sup>7</sup> Food production, especially in developing countries, is already being adversely affected as is water quality and quantity in many parts of the world, and human health is being affected by vector-borne and water-borne diseases and heat stress mortality.

<sup>1</sup> HM Treasury, Net Zero Review: Analysis exploring the key issues (19 October 2021) pg 92.

<sup>2</sup> IPCC 2018 *Special Report on Global Warming of 1.5°C*, Summary for Policymakers ("SPM") A1.

<sup>3</sup> UNEP 2021, *Making Peace with Nature* Executive Summary Section B, and Section 3.1 main report.

<sup>4</sup> IPCC *Special Report on Global Warming of 1.5°C*, SPM A1.3.

<sup>5</sup> UNEP *Making Peace with Nature*, pg 67.

<sup>6</sup> *Ibid.*

<sup>7</sup> UNEP *Making Peace with Nature*, pg 27; IPCC *Special Report on Global Warming of 1.5°C*, SPM A3.1.

21. These adverse consequences will become even more significant in the coming decades as the climate continues to warm,<sup>8</sup> i.e., the impacts of climate change are projected to be more severe if global warming is not limited to 1.5°C and rises to 2°C, and much more severe still if the world experiences warming in excess of 3°C by the latter part of the century.<sup>9</sup> Every fraction of a degree of warming increases the adverse effects of climate change.
22. In July 2021, the Royal Meteorological Society published its report on the *State of the UK Climate 2020*. This stated that: “Year 2020 was third warmest, fifth wettest and eight sunniest on record for the UK. No other year has fallen in the top-10 for all three variables for the UK.”<sup>10</sup> “Mean sea level around the UK has risen by approximately 1.5 mm per year<sup>-1</sup> on average from the start of the 20th century”.<sup>11</sup> From 1981 – 2000, the level of the seas around the UK rose by around 6.5 cm, and the levels are estimated to be rising at 2.5 cm per decade.<sup>12</sup> The seas around the UK will continue to rise over the three decades to 2050 and by that point sea levels could be around 10-30 cm higher than over 1981 – 2000, depending on the location in the UK.<sup>13</sup> There has been significant loss of land at Skipsea, East Yorkshire (faster than any other coastline in Northern Europe), Fairbourne, North Wales, and Happisburgh, Norfolk.
23. Along with coastal change, the key impacts for the UK of climate change are the risk of flooding, the impact of high temperature on human health and well-being, risks to natural capital, risks of future water shortages, impacts on the global food system, and emerging pests and diseases.<sup>14</sup>
24. 2020 alone saw an exceptionally wet February in the UK, with storms Ciara and Dennis causing widespread flooding, followed by an exceptionally sunny spring resulting in a sharp reduction in soil moisture and record minimum spring river flows and depleted reservoir stocks.<sup>15</sup> July then saw the UK’s third hottest day on record and Southern England experienced “one of the most significant heatwaves of the last 60 years during early August 2020”.<sup>16</sup> Storms Ellen and Francis in late August were separated by only a few days and “were two of the most notable August storms in the UK in the last 50 years”,<sup>17</sup> bringing 80 mph winds and coastal flooding.<sup>18</sup>
25. On 9 August 2021, the IPCC published the contribution of Working Group 1 to the IPCC’s Sixth Assessment Report, regarding the physical science basis of climate change. Its key findings of fact can be summarised as follows:<sup>19</sup>
  - a. It is unequivocal that human influence has warmed the atmosphere, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.

<sup>8</sup> IPCC 2018 *Special Report on Global Warming of 1.5°C*, SPM B5.

<sup>9</sup> *Ibid* B3-B5; IPCC 2019 *Special Report on the Ocean and Cryosphere in a Changing Climate*, SPM B1-B5.

<sup>10</sup> Royal Meteorological Society *State of the UK Climate 2020*, pg 7.

<sup>11</sup> *Ibid*, pg 8.

<sup>12</sup> CCC *Progress in adapting to climate change Report to Parliament* (June 2021), pg 40.

<sup>13</sup> *Ibid*, pg 44.

<sup>14</sup> HM Government *UK Climate Risk Assessment 2017*, pgs 10-17.

<sup>15</sup> Royal Meteorological Society *State of the UK Climate 2020*, pgs 43-44.

<sup>16</sup> *Ibid*, pgs 45-46.

<sup>17</sup> *Ibid*, pg 50.

<sup>18</sup> Met Office *Storms Ellen and Francis*, August 2020, pg 1.

[https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2020/2020\\_08\\_storms\\_ellen\\_francis.pdf](https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/weather/learn-about/uk-past-events/interesting/2020/2020_08_storms_ellen_francis.pdf).

<sup>19</sup> IPCC, 2021: SPM in *Climate Change 2021: The Physical Science Basis Contribution of Working Group 1 to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press.

- b. The scale of recent changes across the climate system as a whole and the present state of many aspects of the climate system are unprecedented when compared to the globe's climate over many thousands of years.
  - c. Human-induced climate change is already affecting many weather and climate extremes in every region across the globe; evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones and, in particular, their attribution to human influence, has strengthened since the IPCC published its Fifth Assessment Report in 2013.
  - d. Global warming of 1.5°C and 2°C will be exceeded during the 21<sup>st</sup> century unless deep reductions in CO<sub>2</sub> and other greenhouse gas emissions occur in the coming decades.<sup>20</sup>
  - e. Limiting human-induced global warming to a specific level requires limiting cumulative CO<sub>2</sub> emissions, reaching at least net zero CO<sub>2</sub> emissions, along with strong reductions in other greenhouse gas emissions. Strong, rapid and sustained reduction in CH<sub>4</sub> (methane) emissions would also limit the warming effect resulting from declining aerosol pollution and would improve air quality.
26. The IPCC estimates a remaining carbon budget of 500 gigatonnes of CO<sub>2</sub> (“**GtCO<sub>2</sub>**”) (from 2020) for a 50:50 chance of restricting warming to 1.5°C, i.e., a little over 420GtCO<sub>2</sub> from the start of 2022.<sup>21</sup> This new budget represents just over ten years’ worth of global emissions at pre-pandemic (2019) levels (a level that 2021 is on track to match).
27. The conclusions of the IPCC’s Working Group 1 are not surprising, nor are many of them novel. It has been well known and well documented, over the past decade, that there is a climate emergency, that urgent action had to be taken to reduce greenhouse gas emissions, and that the policy levers required to reduce these emissions should urgently be put in place to avoid the very harmful impacts of dangerous climate change.

#### *The Paris Agreement*

28. The overarching international treaty addressing climate change is the UN Framework Convention on Climate Change (“**UNFCCC**”). Article 2 articulates that the “*ultimate objective*” of the Framework Convention “*and any related legal instruments that the Conference of Parties may adopt*” (which includes the Paris Agreement) is to achieve “*stabilization of greenhouse gas concentrations in the atmosphere*” at a level that would prevent “*dangerous*” human interference with the climate system.
29. On 12 December 2015, the State Parties to the UNFCCC adopted the Paris Agreement in relation to climate change. The recitals to the Paris Agreement recognise “*the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge*”, along with “*the importance of the engagements of all levels of government and various actors... in addressing climate change*”.
30. Article 2 of the Paris Agreement strengthens the global response in implementing the UNFCCC, in particular by committing Parties to three key goals, the first of which is known as the “*long-term temperature goal*”: to hold “*the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change*”.

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<sup>20</sup> This chimes with the IPCC’s warning in its *Special Report on Global Warming of 1.5°C* that there were then only 12 years in which to take action to prevent global temperature rise above 1.5°C.

<sup>21</sup> IPCC, 2021, Table SPM2 and paras D.1.3-D.1.8.

31. The wording “*Holding the increase in the global average temperature to well below 2°C above pre-industrial levels ...*” formulates a clear upper limit that must be regarded as binding hard law and an obligation of result, not only of conduct. The threshold of “*well below 2°C*” (emphasis added) is not an entitlement for Parties to exploit the ‘space’ up to 2°C. It is a maximum limit that shall not be reached. The Paris Agreement’s temperature goal thus contains strong language of legal effect, leaving no discretion for Parties to follow weaker temperature goals.
32. In order to achieve the long-term temperature goal, Article 4(1) requires Parties to “*aim to reach global peaking of greenhouse gas emissions as soon as possible*”. This aim includes Parties undertaking “*rapid reductions*” after global peaking, “*in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty*”. In other words, the Paris Agreement embodies not just a consideration concerning 2050 and beyond (“*second half of this century*”), but a significant focus on emissions reductions in the years up to that point.
33. Article 3 of the Paris Agreement imposes legal obligations on parties “*to undertake and communicate*” nationally determined contributions (“**NDCs**”), which represent “*ambitious efforts*”, as defined by Articles 4, 7, 9, 10, 11 and 13, “*with the view to achieving*” the temperature goal in Article 2. The NDCs must also “*represent progression over time*”.
34. On 24 November 2020, the Secretary of State asked the CCC, an independent statutory body established under the CCA 2008, for advice on the level of the UK’s NDC under the Paris Agreement. The CCC responded on 3 December 2020 recommending that the UK commit to reducing territorial emissions by at least 68% by 2030 compared to 1990 levels – excluding international aviation and shipping (“**IAS**”) emissions. The Secretary of State accepted that recommendation and the UK’s NDC was communicated to the UNFCCC on 12 December 2020. While the UK’s NDC includes transparency information on how the target was developed and is quantified, it does not address the policy gap that exists with respect to the achievement of the UK’s 2030 commitment.

#### *Setting of the Fourth, Fifth and Sixth Carbon Budgets*

35. Under section 1 of the CCA 2008, the Government is required to ensure that the “*net UK carbon account*” for 2050 is “*at least 100%*” lower than the 1990 baseline”. This 2050 ‘net zero’ target was introduced in June 2019 and replaced the previous target of a reduction of “*at least 80%*”, following the UK’s ratification of the Paris Agreement and the advice of the CCC.
36. Section 4 of the CCA 2008 requires the setting of five-yearly carbon budgets, twelve years in advance of the budget period in question. The budgets and 2050 target under the CCA 2008 cover the full range of major greenhouse gases, including carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.
37. The CCC’s role is to monitor and advise the Government on progress towards the 2050 climate target and the setting of carbon budgets.<sup>22</sup>
38. The Fourth Carbon Budget, for the period 2023-2027, is set at 1,950 million tonnes carbon dioxide equivalent (“**MtCO<sub>2e</sub>**”) and requires an average of a 51% reduction in emissions compared with 1990 levels. It was set so as to be on track for the previous target of an 80% reduction in greenhouse

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<sup>22</sup> CCA 2008, Schedule 1

gas emissions by 2050 (excluding IAS emissions). The Fifth Carbon Budget (2028-32), set on the same basis, is 1,725 MtCO<sub>2e</sub>, which requires an average of a 57% reduction.

39. On 9 December 2020, the CCC published its advice to the Government on the level of the Sixth Carbon Budget (for the period 2033-2037), which it recommended should be set at 965 MtCO<sub>2e</sub>, an average of a 78% reduction compared with 1990 levels. Importantly, this included IAS emissions.<sup>23</sup>
40. The Secretary of State and the Prime Minister announced on 20 April 2021 that the Government accepted the CCC's recommendation on setting the level of the Sixth Carbon Budget, and that the Sixth Carbon Budget would include the UK's share of IAS emissions.<sup>24</sup> On that date, the Government announced that it was "*already working towards its commitment to reduce emissions in 2030 by at least 68% compared to 1990 levels through the UK's latest Nationally Determined Contribution*" and that the announcement of the Sixth Carbon Budget "*builds on this goal to achieve a 78% reduction by 2035.*" (emphasis added).
41. The draft Carbon Budget Order 2021 was laid before both Houses of Parliament on 21 April 2021, in line with the CCC's advice, and on that date the Secretary of State moved that it be approved.<sup>25</sup> The Carbon Budget Order 2021 was made on 23 June 2021 and came into force on 24 June 2021.
42. Section 13 of the CCA 2008 provides that:

*"(1) The Secretary of State must prepare such proposals and policies as the Secretary of State considers will enable the carbon budgets that have been set under this Act to be met.*  
*(2) The proposals and policies must be prepared with a view to meeting—*  
*(a) the target in section 1 (the target for 2050), and*  
*(b) any target set under section 5(1)(c) (power to set targets for later years).*  
*(3) The proposals and policies, taken as a whole, must be such as to contribute to sustainable development.*  
*(4) In preparing the proposals and policies, the Secretary of State may take into account the proposals and policies the Secretary of State considers may be prepared by other national authorities."*

43. Section 14 of the CCA 2008 provides that:

*"(1) As soon as is reasonably practicable after making an order setting the carbon budget for a budgetary period, the Secretary of State must lay before Parliament a report setting out proposals and policies for meeting the carbon budgets for the current and future budgetary periods up to and including that period.*  
*(2) The report must, in particular, set out—*  
*(a) the Secretary of State's current proposals and policies under section 13, and*  
*(b) the time-scales over which those proposals and policies are expected to take effect.*  
*(3) The report must explain how the proposals and policies set out in the report affect different sectors of the economy.*  
*(4) The report must outline the implications of the proposals and policies as regards the crediting of carbon units to the net UK carbon account for each budgetary period covered by the report.*

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<sup>23</sup> CCC, *The Sixth Carbon Budget – The UK's path to Net Zero*, pg 13 <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

<sup>24</sup> <https://www.gov.uk/government/news/uk-enshrines-new-target-in-law-to-slash-emissions-by-78-by-2035>

<sup>25</sup> <https://statutoryinstruments.parliament.uk/timeline/f0PehAJ5/SI-2021/>

- (5) So far as the report relates to proposals and policies of the Scottish Ministers, the Welsh Ministers or a Northern Ireland department, it must be prepared in consultation with that authority.
- (6) The Secretary of State must send a copy of the report to those authorities.”

#### Level of the existing Fourth and Fifth Carbon Budgets

44. The setting of the Sixth Carbon Budget in 2021 has clear implications for the Fourth and Fifth Carbon Budgets, which were set in line with the previous ‘at least 80% reduction’ target for 2050 rather than the revised ‘at least 100%’ target now found in Section 1 of the CCA 2008. In its May 2019 report *Net Zero – The UK’s contribution to stopping global warming*, the CCC stated that the existing Fourth and Fifth Carbon Budgets “are likely to be too loose”.<sup>26</sup>
45. In its December 2020 report *The Sixth Carbon Budget – The UK’s path to Net Zero*, the CCC calculated a difference of at least 28-68 MtCO<sub>2e</sub> a year (depending whether IAS emissions were included or excluded) in 2030 between the average emissions allowed by the Fifth Carbon Budget, and the CCC’s “Balanced Pathway”, which is a trajectory that if followed would allow the UK to just meet the 2030 NDC, the Sixth Carbon Budget and the 2050 ‘Net Zero’ target.<sup>27</sup>
46. The CCC has thus advised that the Fifth Carbon Budget will need to be significantly outperformed to stay on track to meet the Sixth Carbon Budget and the 2050 ‘Net Zero’ target.<sup>28</sup> Accordingly, the CCC has stated that “if the Government wish to align the fifth budget to our recommended NDC, it would need to change to 1,585 MtCO<sub>2e</sub>”, assuming IAS emissions are included within the Fifth Carbon Budget.<sup>29</sup> This is a reduction in the existing Fifth Carbon Budget of 140 MtCO<sub>2e</sub>.
47. However, if IAS emissions are excluded from the Fifth Carbon Budget (as proposed by the Government, and in line with the UK’s communicated 2030 NDC), the level of the Fifth Carbon Budget would need to change to 1,384 MtCO<sub>2e</sub> to align with the CCC’s Balanced Pathway.<sup>30</sup> This is a reduction in the existing Fifth Carbon Budget of 341 MtCO<sub>2e</sub>, equivalent to a 20% tightening.
48. The CCC stated that the existing Fourth Carbon Budget is likely to be aligned with their Balanced Pathway already, and therefore does not require adjustment.

#### Failure to adopt policies to meet Fourth, Fifth and Sixth Carbon Budgets – the policy gap

49. In October 2020, the Department of Business Energy and Industrial Strategy published its “*Updated energy and emissions projections 2019*”. They are the most up to date annual set of emissions projections that have been made public and they show that under existing and planned policies (their “**Reference Scenario**”), the UK is significantly off track to meet both the Fourth and Fifth Carbon Budgets. These projections assume that existing and planned policies achieve their aim; even so, they show the expected emissions reductions to only be 46% and 50% against 1990 levels

<sup>26</sup> CCC (2019) *Net Zero – The UK’s contribution to stopping global warming*, pg 30.

<sup>27</sup> *The Sixth Carbon Budget – The UK’s path to Net Zero*, pg 432 <https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf> .

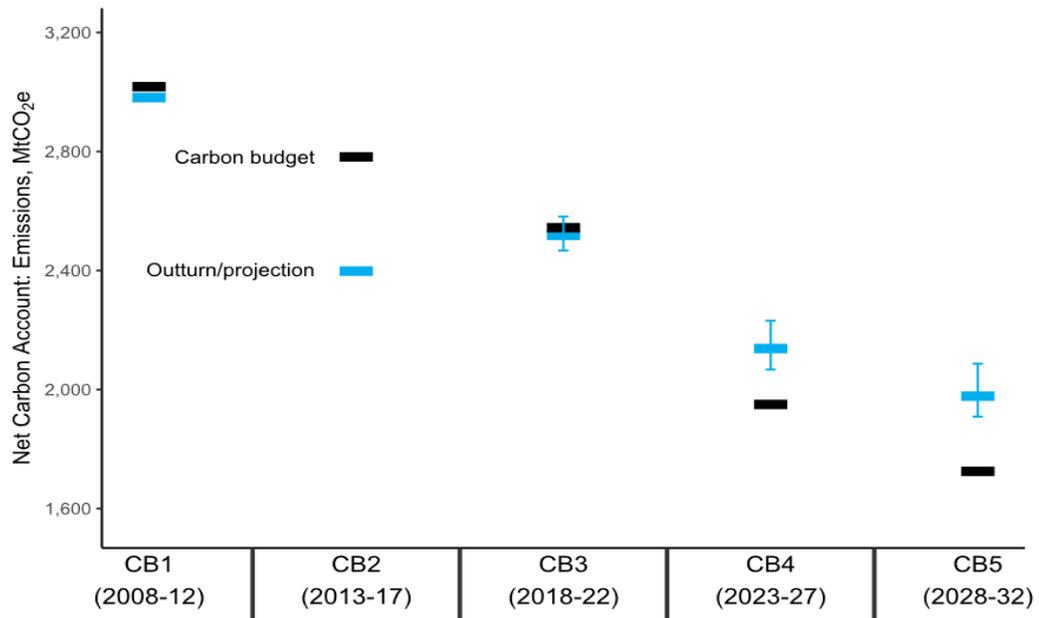
<sup>28</sup> CCC *The Sixth Carbon Budget – The UK’s path to Net Zero*, pgs 24 and 430-433.

<sup>29</sup> CCC *The Sixth Carbon Budget – The UK’s path to Net Zero* pg 433.

<sup>30</sup> CCC *Sixth Carbon Budget - Dataset*, “Different methodologies” tab, then selection of “Include international aviation and shipping?” drop-down = No, and summing Total UK emissions in cells N48-R48 = 1,384 MtCO<sub>2e</sub>. <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

for each budget period, rather than the required reductions of 51% and 57% respectively.<sup>31</sup> This is illustrated in the following figure and table:

**Figure 2.2:** Actual and projected performance against carbon budgets, MtCO<sub>2</sub>e



<sup>31</sup> Department for Business, Energy and Industrial Strategy, *Updated energy and emissions projections 2019*, October 2020, pp 14-15, <https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2019>

**Table 2.1: Net carbon account performance against carbon budgets, MtCO<sub>2</sub>e and per cent**

		Carbon budget				
		CB1	CB2	CB3	CB4	CB5
		(2008-12)	(2013-17)	(2018-22)	(2023-27)	(2028-32)
		actual	actual	projected	projected	projected
Carbon Budget level [1]	emissions, MtCO <sub>2</sub> e	3,018	2,782	2,544	1,950	1,725
Average annual required reduction vs. base emissions	%	-24%	-30%	-36%	-51%	-57%
<b>EEP 2018</b>						
Reference scenario	projected emissions, MtCO <sub>2</sub> e	2,982	2,398	2,456	2,089	1,970
<b>EEP 2019</b>						
Reference scenario	projected emissions, MtCO <sub>2</sub> e	2,982	2,398	2,518	2,138	1,978
Result vs. Budget with reference case	emissions, MtCO <sub>2</sub> e	-36	-384	-26	188	253
Result vs. Budget with inclusion of CGS policy proposals [2]	emissions, MtCO <sub>2</sub> e	-36	-384	-26	158	173
Projected average annual reduction vs. base emissions [3]	%	-25%	-40%	-37%	-46%	-50%
Cumulative Result vs Budget	emissions, MtCO <sub>2</sub> e			-26	162	415

50. Working with those projections, the cumulative policy gap up to the end of the Fifth Carbon Budget period is currently  $188 + 253 = 441$  MtCO<sub>2</sub>e, based on the existing Carbon Budget levels, no IAS emissions and no carry-overs of any surplus emissions. However, as the CCC has noted, there is a clear need to significantly outperform the Fifth Carbon Budget (or to lower the Fifth Carbon Budget level) to match the CCC's Balanced Pathway and stay on track for the 2050 Net Zero target. Taking account of the analysis in paragraph 47 above, the "true" cumulative policy gap at the end of 2032 between the Government's existing and planned policies and the CCC's Balanced Pathway is currently  $441 + 341 = 782$  MtCO<sub>2</sub>e.
51. On any metric, this gap constitutes a monumental failure of policymaking. This cumulative policy gap at the end of 2032 exceeds the UK's total permissible emissions on the Balanced Pathway from January 2030 to December 2032 inclusive. It is effectively as if the Government is currently hoping that, in under a decade from now, the UK will miraculously stop emitting for three whole years in order to stay on track to Net Zero.
52. As has already been noted, the Government's most recent publication of energy and emissions projections took place in October 2020, that is, before the publication of the Sixth Carbon Budget report in December 2020; and it follows that new policies and proposals relied upon to meet the Sixth Carbon Budget have not yet been included within the annual projections published by the Government to date.

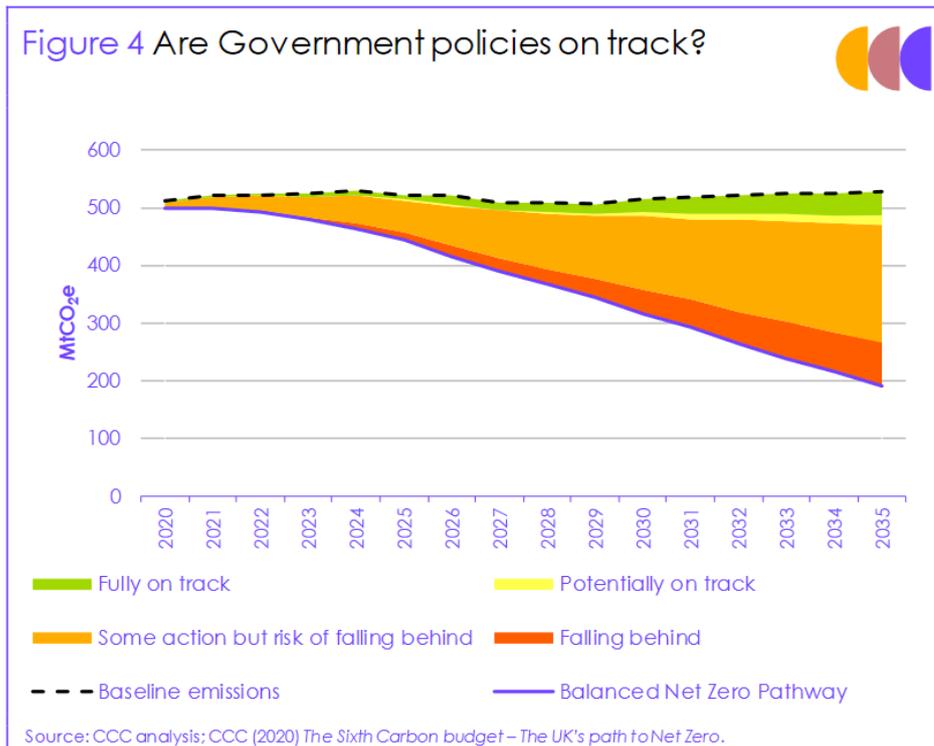
53. However, the overall requirement to reach Net Zero by 2050 and significantly increase policy ambition across all sectors has been clear since May 2019 when the CCC published its report *Net Zero – The UK’s contribution to stopping global warming*, and the need for urgent action to prevent dangerous climate change has been clear since the publication of the IPCC’s SR1.5 in October 2018.
54. During the Sixth Carbon Budget period 2033-2037, the cumulative difference between the Government’s Reference Scenario (which does not yet include IAS emissions) and the CCC’s Balanced Pathway (taken without IAS for comparability) is a further 938 MtCO<sub>2</sub>e – a gap almost as big as the Sixth Carbon Budget itself.
55. In summary, the policy gap between what is required for the UK to follow a Net Zero compatible pathway and what is projected under existing and planned UK policies is therefore modest in the mid-2020s, large by 2030, and severe by the mid-2030s.
56. It has, for many years, been plain from the CCC’s Progress Reports to Parliament that this significant policy gap exists, and that this gap has been stubbornly persistent.
57. In its June 2016 Progress Report to Parliament, several years prior to the 2050 Net Zero target being set, the CCC highlighted a “*gap of around 100 MtCO<sub>2</sub>e (47% of the required emissions reduction) between Government plans and the path required to meet the recommended fifth carbon budget in 2030*”.<sup>32</sup> This is a smaller policy gap for 2030 than under current projections – so the policy gap has actually increased in the past five years.
58. In its June 2020 Progress Report to Parliament, the CCC highlighted that the UK failed on 17 out of 21 progress indicators, falling further behind in many areas, and that only two of 31 key policy milestones were met over the previous year.<sup>33</sup>
59. In its June 2021 Progress Report to Parliament, the CCC stated that “*In many cases, a strategic commitment has been made, but details of policy implementation have not yet caught up with the high-level ambition*”. The CCC’s Figure 4 below shows that only one-fifth of the emissions savings for the Sixth Carbon Budget period involve policies that are fully or potentially on track for delivery. The rest of the UK’s policies are falling behind or at risk of falling behind.<sup>34</sup>

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<sup>32</sup> CCC (2016), *Meeting Carbon Budgets: 2016 Progress Report to Parliament*, pg. 13.

<sup>33</sup> CCC (2020), *Reducing UK emissions: Progress Report to Parliament*, pgs. 109 and 112.

<sup>34</sup> CCC (2021), *Progress in reducing emissions: 2021 Report to Parliament*, pgs. 26-27.



60. In the same report, the CCC identified the following as “*essential elements of the transition to Net Zero*”:<sup>35</sup>
- a. Developing and implementing a comprehensive policy to enable the delivery of the 2030 transition to electric vehicles;
  - b. Implementing a policy package for buildings decarbonisation and enshrining the long-term standards framework in regulation;
  - c. Implementing delivery mechanisms for landscape-scale land use change for afforestation and peatland restoration and a high take-up of low-carbon farming practices;
  - d. Advancing policy for manufacturing decarbonisation;
  - e. Continue auctions for low-carbon capacity, together with supporting actions to enhance system flexibility, to deliver an emissions intensity of 50 gCO<sub>2</sub>/kWh or better in electricity generation by 2030;
  - f. Delivering a hydrogen strategy that sets out a vision of the role of hydrogen on the path to Net Zero and the steps needed to realise it; and
  - g. Enabling domestic engineered greenhouse removals to contribute to UK carbon budgets and Net Zero, and establishing support mechanisms and monitoring verification and reporting structures.

### *The Net Zero Strategy*

61. In paragraph 18 of your letter dated 4 October 2021, it was stated that the NZS would meet the Defendant’s statutory obligations under sections 13 and 14 of the CCA 2008.

<sup>35</sup> CCC (2021), *Progress in reducing emissions: 2021 Report to Parliament*, pgs. 158-159.

62. The Defendant published the NZS on 19 October 2021.<sup>36</sup> The NZS contains a number of proposals and policies which constitute a sector-based strategy for UK emissions reductions. It also sets out an “*indicative delivery pathway to 2037*”, which it explains is: “... *an indicative trajectory of emissions reductions which meets our targets up to the sixth carbon budget ending in 2037 .... It is designed only to provide an indicative basis on which to make policy and plan to deliver on our whole-economy emissions targets.*”<sup>37</sup>

63. However, the NZS does not state that the proposals and policies it contains will meet the Sixth Carbon Budget. Instead, the NZS informs the reader that:

*‘... this strategy sets out our plans for reducing emissions from each sector of our economy, while hoovering up any remaining emissions with greenhouse gas removals – either natural, like trees, or technological, using carbon capture. This is an historic plan. Taken together the transitions set out below for every sector of the UK economy meets Carbon Budgets 4 and 5, and puts us on the path for Carbon Budget 6 – and ultimately on course for net zero by 2050.’* (pg 18, Executive Summary).

64. Table 6, on pg 321 of the NZS, shows that *without* the proposals and policies contained within the NZS, the UK would miss the Sixth Carbon Budget by as much as 1064 MtCO<sub>2</sub>e. Though the NZS suggests that its proposals and policies will put “*us on a path for Carbon Budget 6*” it does not assess or quantify their impact on emissions reductions and does not explain how that enormous gap will be bridged or confirm that the Sixth Carbon Budget will be met.

65. Following the publication of the NZS, the CCC published its initial review entitled ‘*Independent Assessment: The UK’s Net Zero Strategy*’. The CCC welcomed the ambitious targets contained in the NZS but noted (at pg 27):

*“However, the Government has not quantified the effect of each policy and proposal on emissions. So while the Government has proposed a set of ambitions that align well to the emissions targets, it is not clear how the mix of policies will deliver on those ambitions – albeit in theory they could”.*<sup>38</sup>

66. Carbon Brief, a UK based website covering the latest developments in climate science, climate policy and energy policy, reported on the NZS and commented that:

*“Although it sets out target-compliant “indicative delivery pathways” for each sector until 2037, it fails to quantify the impacts of the new plans and policies it contains, meaning it is not possible to say if the government is now doing – or spending – enough to meet its legally binding goals”.*<sup>39</sup>

67. Finally, we note that UK FIRES commented upon the reliance on technological solutions in the NZS, in its report entitled *Minus 45* in the following terms:

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<sup>36</sup> See here: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1033990/net-zero-strategy-beis.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf)

<sup>37</sup> Pg 74. See also pg 253 where it is said that: “*The Journey to Net Zero chapter of the Strategy report set out a delivery pathway: an indicative trajectory of emissions reductions based on potential in each sector of the economy, which keeps us on track to meet the sixth carbon budget ending in 2037. Sector chapters set out policies and proposals in line with this indicative pathway to ensure we are on track for net zero.*”

<sup>38</sup> CCC, ‘*Independent Assessment: The UK’s Net Zero Strategy*’, October 2021, available at: <https://www.theccc.org.uk/publication/independent-assessment-the-uks-net-zero-strategy/>

<sup>39</sup> [In-depth Q&A: The UK’s net-zero strategy - Carbon Brief.](#)

*“The strategy places all its hope in technologies that don’t yet operate at all in the UK, fails to account for the new electricity demand created by its plans for greenhouse gas removal technologies and synthetic jet fuel, and includes no commitments on key areas such as rail electrification, reducing demand for aviation or reducing ruminant herds.”<sup>40</sup>*

#### *Tackling climate change and human rights obligations*

68. Climate change is largely the result of the historical and continued emissions from the activities of relatively wealthy individuals and countries, but its most damaging impacts will be experienced by those who are young today and by the generations which will follow them. The most acute impacts are occurring within already vulnerable communities and regions, but nowhere will be exempt from impacts. As set out above, the UK is already feeling significant impacts: coastal erosion is intensifying with rising sea levels, leading to loss of land at Skipsea, East Yorkshire (faster than any other coastline in Northern Europe), Fairbourne, North Wales, and Happisburgh, Norfolk.
69. In 2019, Michelle Bachelet UN High Commissioner for Human Rights said:
- “Climate change is a reality that now affects every region of the world ... The world has never seen a threat to human rights of this scope ... The economies of all nations; the institutional, political, social and cultural fabric of every state; and the rights of all your people - and future generations - will be impacted.”*
70. Article 2(1) of the ECHR provides that:
- “Everyone's right to life shall be protected by law. No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which this penalty is provided by law.”*
71. In *Öneryıldız v Turkey*<sup>41</sup> the European Court of Human Rights (“**ECtHR**”) held that Article 2 imposes a positive duty on the State *“to put in place a legislative and administrative framework designed to provide effective deterrence against threats to the right to life”*<sup>42</sup> and that, in the context of dangerous activities, *“special emphasis must be placed on regulations geared to the special features of the activity in question”* which *“must make it compulsory for all those concerned to take practical measures to ensure the effective protection of citizens whose lives might be endangered by the inherent risks”*.<sup>43</sup> The ECtHR has also stated that whenever a State undertakes or organises dangerous activities, or authorises them, it must ensure through a system of rules and through sufficient control that the risk is reduced to a reasonable minimum.<sup>44</sup>
72. Similarly, in *Budayeva v Russia*,<sup>45</sup> the Court held that: *“[t]he scope of the positive obligations [under Article 2] imputable to the State in the particular circumstances would depend on the origin of the threat and the extent to which one or the other risk is susceptible to mitigation”*;<sup>46</sup> and that Article 2 imposes a duty *“to do everything within the authorities’ power in the sphere of disaster relief for the protection of that right [to life]”*.<sup>47</sup>

<sup>40</sup> See pg 1 of the *Minus 45* report: <https://ukfires.org/press-release-minus-45/>

<sup>41</sup> App no 48939/99 (ECtHR GC, 30 November 2004).

<sup>42</sup> *Ibid*, §89.

<sup>43</sup> *Ibid*, §90.

<sup>44</sup> *Mučibabić v Serbia*, App no 34661/07 (ECtHR, 12 July 2016), §126.

<sup>45</sup> *Budayeva v Russia*, App no 15339/02 inter alia, (ECtHR, 20 March 2008).

<sup>46</sup> *Ibid*, §137.

<sup>47</sup> *Ibid*, §175.

73. Article 8 of the ECHR provides that:

*“1) Everyone has the right to respect for his private and family life, his home and his correspondence.*

*2) There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.”*

74. In *Tatar v Romania*<sup>48</sup> the ECtHR held that Article 8 imposes a positive obligation on States to adopt reasonable and sufficient measures capable of protecting the right to a private life, a home and, more generally, a healthy, protected environment. The ECtHR has also held that the positive obligation requires that the measures not only exist but are implemented in practice, to ensure that the Article 8 rights are effective and not illusory.<sup>49</sup>

75. The positive obligation arises where there is a sufficient causal link between the impugned activity and the adverse impact on persons within the jurisdiction. The positive obligation also arises if there is a serious and substantial threat to the health and well-being of persons within the jurisdiction.<sup>50</sup> In this respect, the ECtHR stressed the importance of the precautionary principle,<sup>51</sup> given its aim to secure a high level of protection for the health and safety of persons and the environment.<sup>52</sup>

76. Physical and mental health are both crucial parts of private life associated with the aspects of physical and moral integrity;<sup>53</sup> and in *Tatar* the ECtHR also found a violation of Article 8 in circumstances where the applicants had lived in a state of anxiety, uncertainty and fear.<sup>54</sup>

77. Significantly, the obligations outlined above apply to risks that may only materialise in the future.<sup>55</sup>

78. Finally, we note that Article 14 of the ECHR provides that:

*“The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status.”*<sup>56</sup>

## **Grounds of Claim**

### **Ground one: Breach of section 13 of the CCA 2008 in relation to the Sixth Carbon Budget**

79. Section 13(1) of the CCA 2008 provides that:

*“The Secretary of State must prepare such proposals and policies as the Secretary of State considers will enable the carbon budgets that have been set under this Act to be met.”*

<sup>48</sup> *Tatar v Romania*, App no 67021/01 (ECtHR, 27 January 2009), §170.

<sup>49</sup> *Moreno Gomez v Spain*, App no 4143/02 (ECtHR, 16 November 2004), §56.

<sup>50</sup> See *Tatar v Romania*, §107.

<sup>51</sup> See also Article 3(3) of the UNFCCC which requires States to “take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects”.

<sup>52</sup> *Tatar v Romania*, §120.

<sup>53</sup> *Bensaid v United Kingdom*; App no 44599/98 (ECtHR, 6 February 2001), §47.

<sup>54</sup> *Tatar v Romania*, §122.

<sup>55</sup> See, e.g., *Oneryildiz v Turkey*, §§98-101.

<sup>56</sup> ‘Other status’ can include age: see *Schwizgebel v Switzerland*, App no 25762/07, 10 June 2010.

80. The NZS relies on the assessment of the “*theoretical potential*” of each sector of the UK economy.
81. Significantly, it does not quantify the emission reductions that will result from the proposals and policies identified in the NZS and fails to assess whether they will enable the Sixth Carbon Budget to be met. In the absence of any other assessment or quantification of the impact of the proposals and policies set out in the NZS, there is no rational basis for the Defendant to have concluded that they will enable the Sixth Carbon Budget to be met; and it follows that the Defendant has not yet complied with section 13(1) of the CCA 2008 and is in continuing breach of his statutory obligations.
82. The Defendant’s breach of section 13 of the CCA 2008 is compounded by the fact that the NZS also relies upon:
- a. a number of proposals and policies, including those relating to industrial decarbonisation, home insulation and low-carbon heat networks, which either lack detail or have not yet been the subject of consultation; and
  - b. highly speculative technological solutions, including emissions reductions arising from the development of sustainable aviation fuel and low-carbon hydrogen as well as upon untested negative emissions technologies (“NETs”),

which cannot rationally be considered to be proposals and policies that will enable the Sixth Carbon Budget to be met.

83. The breach is further compounded by the number of very significant omissions from the NZS:
- a. There is clear evidence that marine sediments are amongst the largest pools of carbon storage in the world and that carbon emissions caused by trawling exceed those of aviation.<sup>57</sup> The Government was well aware of this evidence. The UK is the fourth highest emitter of CO<sub>2</sub> in the world inside its Exclusive Economic Zone.<sup>58</sup> Yet the NZS is completely silent on protecting the seabed or addressing bottom trawling.
  - b. There is clear evidence that net zero cannot be achieved without behaviour change,<sup>59</sup> for example, in relation to diet and transportation choices like flying, and that the Defendant was well aware of this. The NZS deliberately chooses, as one of its “goals” to “go with the grain of existing behaviour and trends” (pg 274), and to eschew policies directed at behaviour change in favour of costly and long-term technological “silver bullets”.
  - c. The NZS assumes emissions will be reduced through improved and innovative farming practices without addressing the combination of low-carbon technologies and behaviour change necessary to address emissions from agriculture.
  - d. The CCC has since 2015 urged the Government to take action to address burning of peat and since 2020 repeatedly recommended that rotational burning be banned. The NZS acknowledges that peatlands, instead of being carbon sinks (as they should be) are in fact net emitters of GHG emissions because of degradation “*due to drainage for agricultural use, overgrazing and burning*”, but the NZS says nothing further about addressing, or banning, rotational burning and gives no reason for this omission.
  - e. The CCC recommended that the NZS introduce a Net Zero Test to ensure that all policy decisions are compatible with the legislated target. This is not addressed at all in the NZS.

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<sup>57</sup> Nature, *Protecting the global ocean for biodiversity, food and climate* (17 March 2021) <https://www.nature.com/articles/s41586-021-03371-z>

<sup>58</sup> <https://www.theguardian.com/environment/2021/mar/17/trawling-for-fish-releases-as-much-carbon-as-air-travel-report-finds-climate-crisis>

<sup>59</sup> BEIS Research Paper Number 2021/063 (October 2021)

### **Ground two: Breach of section 14 of the CCA 2008 in relation to the Sixth Carbon Budget**

84. It follows that the Defendant has failed to comply with section 14(1) of the CCA 2008, in that he has not published “as soon as is reasonably practicable” after the making of the order on 24 June 2021 which set the Sixth Carbon Budget “a report which sets out the proposals and policies for meeting the carbon budgets for the current and future budgetary periods up to and including that period”. That breach is continuing.

### **Ground three: Failure to close the policy gap breaches the Claimants’ ECHR rights**

85. The Defendant has breached the Claimants’ rights protected by Articles 2 and 8 of the ECHR (taken together in the case of the First Claimant, with Article 14) in circumstances where he has failed to comply with sections 13 and 14 of the CCA 2008 and/or failed to act with the requisite urgency and/or has otherwise failed to close the policy gap now required in light of the Sixth Carbon Budget.
86. The Claimants are “victims” for the purposes of the Human Rights Act 1998. They are both at risk of being directly affected by the Defendant’s failure to comply with sections 13 and 14 of the CCA 2008 and to bridge the enormous existing policy gap and meet the Sixth Carbon Budget.
87. In accordance with European Court of Human Rights caselaw, Articles 2 and 8 (taken together with Article 14) of the ECHR are clearly engaged in this case.<sup>60</sup>
88. It follows that the Defendant has positive obligations under Article 2 and 8 of the ECHR to act in accordance with the statutory framework and that his failure to do so breaches those rights.
89. Article 14 is also engaged in circumstances where the Defendant’s failure to comply with his statutory obligations will have a disproportionate impact on the First Claimant and those of younger and future generations because the interference with their rights will increase over time, due to the anticipated deterioration in climatic conditions.

### **Ground four: Reliance on untested technological solutions breaches the Claimants’ ECHR rights**

90. Further or alternatively, the Defendant has breached of the First Claimant’s rights protected by Articles 2 and 8 of the ECHR (taken together with Article 14) by placing excessive reliance in the NZS on highly speculative technological “silver bullet” solutions, including emissions reductions arising from the development of sustainable aviation fuel and low-carbon hydrogen and untested NETs.
91. For example, para 2.5 of the Jet Zero Consultation includes “sustainable aviation fuels” in the suggestion that “many of the technologies we need to achieve Jet Zero are at an early stage of development or commercialisation”.<sup>61</sup> That is not correct. Alternative jet fuels, such as advanced biofuels, have been in development for more than a decade, with promises of scale-up that have not materialised. Aviation biofuel is not a sustainable or scalable solution without causing increased

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<sup>60</sup> See *Oneryildiz v Turkey* (App No. 48939/99 (ECtHR, 30 November 2004); *Budayeva v Russia* App No 15339/02 (ECtHR, 20 March 2008), *Tatar v Romania* App no 67021/01 (ECtHR, 27 January 2009); *Moreno Gomez v Spain* App no 4143/02 (ECtHR, 16 November 2004); and *Fadayeva v Russia* App no 55723/00 (ECtHR, 9 June 2005).

<sup>61</sup> Department for Transport, *Jet Zero Consultation: A consultation on our strategy for net zero aviation* (14 July 2021) pg 12.  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1002716/jet-zero-consultation-a-consultation-on-our-strategy-for-net-zero-aviation.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1002716/jet-zero-consultation-a-consultation-on-our-strategy-for-net-zero-aviation.pdf)

global food prices, deforestation, drainage of peatland, loss of biodiversity, and land-use change emissions.<sup>62</sup>

92. NETs are technologies that remove CO<sub>2</sub> emissions from the atmosphere, involving carbon capture and storage (“**CCS**”). Professor Kevin Anderson and other climate scientists have explained that they are unproven at scale.<sup>63</sup> The form of NETs most often utilised in global climate pathway modelling is bioenergy with carbon capture and storage (“**BECCS**”), which Professor Anderson describes as “*essentially burning fast-growing fuel crops to produce electricity while capturing the CO<sub>2</sub> at source and storing it safely and permanently underground*”.<sup>64</sup>
93. Professor Anderson is of the opinion that there are compelling reasons to be “*extremely cautious about emissions pathways that depend on huge amounts of negative emissions or carbon dioxide removal*”, and BECCS in particular, given:
- “(1) the as yet embryonic state of the CCS industry (thus far only one large demonstration power-station with CCS exists today with a number of years of operating experience, and this at only a few millions of tonnes of CO<sub>2</sub> per year, not the several orders-of-magnitude-greater billions of tonnes assumed in the models);*  
*(2) the colossal quantities of land required to produce the requisite biomass (some BECCS-heavy scenarios requiring area equivalent to about half the global total agricultural land),<sup>65</sup> not to mention the threats to planetary boundaries for freshwater and biosphere/biodiversity conservation<sup>66</sup>.”<sup>67</sup>*
94. Other NETs, such as direct air capture and enhanced geological weathering, similarly suffer the drawbacks of unproven-at-scale demonstrations. It is for these reasons that Professor Anderson explains that “*NETs cannot be thought of as an ‘insurance policy’, since they come with no assurance that they will be able to ‘pay out’.*”<sup>68</sup>
95. The Defendant’s reliance upon such untested, high-risk technological solutions in the NZS to compensate for the failure to adopt other available emission reduction policies in the near term is contrary to the precautionary principle and reckless. It puts the First Claimant, youth and future generations in a position where their lives, homes and family life are placed at a disproportionate risk when compared to those of older generations, in breach of Articles 2 and 8 of the ECHR taken together with Article 14 of the ECHR.

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<sup>62</sup> See Finlay Asher’s evidence to Bristol Airport Inquiry (15 June 2021) and (20 August 2021). See also A. Vaughan, New Scientist, 8 Mar 2021: “*Carbon-negative crops may mean water shortages for 4.5 billion people*”.

<sup>63</sup> See: Professor Kevin Anderson’s evidence to Bristol Airport Inquiry (15 June 2021) at §4.12, [https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer\\_public/6a/68/6a6828f8-060f-4181-acfc-644d28bf7937/baan-w1-1\\_prof\\_kevin\\_anderson-proof\\_final.pdf](https://gat04-live-1517c8a4486c41609369c68f30c8-aa81074.divio-media.org/filer_public/6a/68/6a6828f8-060f-4181-acfc-644d28bf7937/baan-w1-1_prof_kevin_anderson-proof_final.pdf); and Fajardy M, Köberle A, Macdowell N, & Fantuzzi A (2019), *BECCS deployment: a reality check*, Grantham Institute Briefing Paper no.28, <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/BECCS-deployment---a-reality-check.pdf>

<sup>64</sup> *Ibid.*

<sup>65</sup> Fajardy M, Köberle A, Macdowell N, & Fantuzzi A (2019), *BECCS deployment: a reality check*, Grantham Institute Briefing Paper no.28. <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/BECCS-deployment---a-reality-check.pdf>

<sup>66</sup> Heck V, Gerten D, Lucht W et al, (2018). *Biomass-based negative emissions difficult to reconcile with planetary boundaries*. Nature Climate Change 8, 151–155. <https://www.nature.com/articles/s41558-017-0064-y>

<sup>67</sup> *Supra* Note 48, §4.13.

<sup>68</sup> *Supra* Note 48, §4.14.

### **Details of the action the Defendant is expected to take**

96. The Claimants expect the Government to publish, within three months of the date of this letter, a revised NZS or other assessment which demonstrates that the Sixth Carbon Budget will be met.

### **Costs**

97. If a claim is pursued it will plainly be an Aarhus claim to which the cost protection of CPR r.45.41 will therefore apply. As a consequence, each Claimant's liability for the costs of other parties should be limited to £5,000 and their joint recovery of costs should be limited to £35,000.
98. In accordance with the pre-action protocol for Judicial Review we request you confirm that the costs position is agreed. If you disagree, please fully explain why.

### **Disclosure and the Defendant's duty of candour**

99. Please provide immediate disclosure (and in any event by the below deadline) of any and all relevant documents, including the Government's energy and emissions projections for 2020 and the equality impact assessment of the NZS.

### **ADR proposals**

100. We do not currently consider that these issues are suitable for alternative dispute resolution but would be pleased to consider any proposals you have for this.

### **Claimants' solicitors and address for reply / service of court documents**

101. Wessen Jazrawi and Luke Grimes of Hausfeld & Co. LLP are dealing with this matter. Please forward all future correspondence to them at [wjazrawi@hausfeld.com](mailto:wjazrawi@hausfeld.com) and [lgrimes@hausfeld.com](mailto:lgrimes@hausfeld.com) using reference L0322.0001.

### **Proposed reply date**

102. Please reply within 14 days of the date of this letter, i.e., by no later than 10 February 2022.

Yours faithfully,



**Hausfeld & Co. LLP**

**cc:** The Committee on Climate Change (FAO Chris Stark, [private.secretary@theccc.org.uk](mailto:private.secretary@theccc.org.uk))