

TOWN AND COUNTRY PLANNING ACT 1990

**Appeal by Bristol Airport Limited concerning land at North Side Road, Felton,
Bristol, BS48 3DY**

**DEVELOPMENT OF BRISTOL AIRPORT TO ACCOMMODATE 12 MILLION
PASSENGERS PER ANNUM**

Appeal Reference APP/D0121/W/20/3259234

SUPPLEMENTARY PROOF OF EVIDENCE

of

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Appendix: DEFRA and DBEIS Policy Paper, G7 Climate and Environment Ministers’ meeting, May 2021: communiqué (21 May 2021)

1. Introduction

- 1.1. This statement supplements my proof of evidence dated 15 June 2021 [BAAN/W1/1], taking account of a number of recent publications relevant to the Bristol Airport expansion application. Far and away the most significant and pertinent publication since mid-June is the IPCC's Working Group 1 Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (hereafter 'AR6') [INQ/032].
- 1.2. AR6 is the latest product of many years of collaborative scientific study of the physical scientific basis of climate change and gives robust conclusions (with associated confidence and likelihood levels) regarding the extent and timing of climate impacts under various temperature-related emissions scenarios. Seen in conjunction with commitment in the G7 Climate and Environment Ministers' Communiqué "to limit the increase in the global average temperature to 1.5°C above pre-industrial levels" (para 15),¹ AR6 places the UK under an even more urgent duty to reduce its emissions to keep a limit of 1.5°C temperature rise within reach, given the UK is required to act on the basis of the latest scientific evidence.
- 1.3. Other relevant developments include the recent passing into legislation of the UK Carbon Budget Order 2021 and publication of the Department for Transport's (DfT) framework policy *Decarbonising Transport: A Better Greener Britain*, and its *Jet Zero Consultation*. To have any real-world meaning, these latter consultative documents from DfT must be considered in the context of the unambiguous and conclusive AR6 and G7 Communiqué.
- 1.4. The aforementioned publications validate and reinforce the headline conclusions in my previous proof of evidence as follows in Section 2. I have, in compiling this supplementary proof, had reference to the *Jet Zero Consultation: Evidence and*

¹ BAAN/W1/2 Appendix 1 and discussed in paragraph 3.2 of my main proof BAAN/W1/1.

Analysis document [CB 9.136] and have seen both the Jet Zero Consultation Dataset, [INQ/041] and the DfT's letter to North Somerset Council [INQ/042] (although I have not needed to refer directly to the latter two documents).

- 1.5. As with my main proof, except where I indicate to the contrary, the facts and matters contained in this proof of evidence are within my own knowledge. Where facts and matters are not within my own knowledge, I have identified my sources of information or understanding.

2. Significance of recent publications to my previous conclusions

2.1. Headline conclusion 2.1

- 2.1.1. At para 2.1 of my main proof of evidence I give my first headline conclusion: “Bristol Airport’s proposal to expand to 12 million passengers per year entails an incontrovertible increase in aviation emissions from the airport over the next two decades. At every level, and by every reasonable measure, the proposed expansion runs counter to the UK meeting both its domestic and international climate change obligations.” This conclusion is reinforced by the IPCC’s AR6 report on the increased scientific confidence on the serious impacts at 1.5°C, and the expected onset of such impacts within the next two to three decades.
- 2.1.2. AR6 also updated the global emissions budgets from the IPCC’s 2019 Special Report on Global Warming (known as “SR1.5”) [CD 9.58] to account for emissions in the intervening period and refinements in the underlying science. The IPCC estimates a remaining carbon budget of 500GtCO₂ (from 2020) for a 50:50 chance of restricting warming to 1.5°C; i.e. a little over 420GtCO₂ from the start of 2022. This new budget represents just over ten years’ worth of global emissions at pre-pandemic (2019) levels (a level that 2021 is on track match).
- 2.1.3. On 20-21 May 2021, the G7 Climate and Environment Ministers’ Meeting took place, virtually, resulting in a Communiqué, which DEFRA and DBEIS describe as a “policy paper”². Under the UK’s leadership, the G7 countries committed to “make ambitious and accelerated efforts to reduce emissions to keep a limit of 1.5°C temperature rise within reach” (para 14).³ In particular, the G7 countries committed to “leading a step change in mitigation”, and to pursue efforts “to limit the increase in the global average

² See Appendix 1 to this supplementary proof.

³ BAAN/W1/2 Appendix 1 pg 7.

temperature to 1.5°C above pre-industrial levels” (para 15). The Communiqué references SR1.5; recognises that “avoided climate impacts are greater at 1.5°C than 2°C”, and commits the G7 countries “to align with a pathway that keeps 1.5°C within reach” (para 15).⁴

2.1.4. The UK is a signatory to the Communiqué. This is significant. It represents a very recent and completely clear policy commitment to a limit the global temperature rise to 1.5°C. As stated in para 3.2 of my main proof of evidence, this reaffirms the Paris Agreement Commitment to 1.5°C. It does so in strong language, prompted by the IPCC’s findings in SR1.5 of (i) the seriousness of climate impacts with 2°C of warming and (ii) how recent evidence suggests that many of these impacts are now expected earlier than previously thought.

2.1.5. The IPCC’s AR6 sets out even more robust conclusions (with associated confidence and likelihood levels) regarding the extent and timing of climate impacts under various temperature-related emissions scenarios and determines that there is an even more limited carbon budget than that set out in SR1.5. That being the case, the incontrovertible increase in aviation emissions over the next two decades which would be caused by expansion of Bristol Airport are contrary to the UK policy aligned with a pathway that keeps 1.5°C within reach.

2.1.6. The *Jet Zero* consultation does not change this. It is a consultation in progress and *Decarbonising Transport* relies on the outcome of that consultation. By contrast, the IPCC’s AR6 is a finalised conclusion about the scale of the challenge for 1.5°C and the impacts entailed should we fail to act swiftly

⁴ Ibid pg 7.

2.2. **Headline conclusion 2.2**

- 2.2.1. Para 2.2 of my main proof of evidence set out my second headline conclusion: “To increase emissions in the near to medium term runs completely counter to the Government’s forthcoming net-zero legislation, which is expected to endorse the Climate Change Committee’s recommendations to include aviation within the UK’s sixth carbon budget.” This conclusion stands, with the de facto incorporation of aviation in the Sixth Carbon Budget through the making of the Carbon Budget Order 2021 [CD 9.110]; see also the Explanatory Memorandum to the Carbon Budget Order 2021 [CD 9.101].
- 2.2.2. It is deeply concerning that whilst aviation is now included within the sixth budget, the UK is clearly way off track to meet its fourth, fifth and likely sixth carbon budgets. Thus increasing emissions in the short and medium term through the expansion of Bristol Airport is completely counter to correcting the UK’s current emissions trajectory in order to meet the fourth to sixth budgets (and, as noted in my main proof of evidence, these budgets are themselves much more generous than those associated with the Paris Agreement, as derived from the IPCC’s previous reports).⁵
- 2.2.3. Within this context, the Ministerial Forward to the DfT’s *Jet Zero Consultation* [CD 9.135] is highly misleading to frame the discussion of the UK’s aviation emissions by referring to aviation “only” contributing “2–3% of global emissions” (pg 4). In 2019 UK aviation emissions accounted for 9.3% of UK energy-based CO₂ [CD 9.84 BEIS Final UK greenhouse gas emissions national statistics 1990-2019, Tables 1.1, 1.2 & 6.1]. Importantly, UK aviation accounts for a considerably higher proportion of UK’s total warming impact due to the effect of emissions being released at altitude (following the BEIS

⁵ See main proof paras 4.4-4.7 on the budgets derived from AR5 or SR1.5.

recommended 'uplift', the level of warming is almost twice that of the CO₂ alone), as discussed in my main proof at paras 6.1.2-6.1.3⁶ and 6.5.1.

2.2.4. Page 17 of *Jet Zero* gives a representation of "UK share of international aviation emissions", which states that "[t]otal international aviation emissions were 17 times greater than the UK's international emissions in 2019." This creates a misleading impression that the UK's international aviation emissions were comparatively small. The UK's 1/17th share is 5.9% of global aviation emissions, whereas the UK's population is around 0.86% of the global total. Thus the UK's aviation emissions are not only a major contributor to UK emissions, but they are also almost seven times their 'fair' proportional level of global emissions.

2.3. **Headline conclusion 2.3**

2.3.1. My third headline conclusion, at para 2.3 of my main proof, is: "The proposal goes against the CCC's own UK aviation pathway to align with its Balanced Net Zero (BNZ) pathway, whereby emissions from aviation are to be reduced in the near and medium term through demand management. The BAL proposal directly contravenes the CCC's clear statement that the BNZ pathway should be achieved with no net expansion of UK airport capacity." This conclusion stands; the proposal goes against the CCC's unambiguous recommendation for no net expansion of UK airport capacity and I do not consider that either *Decarbonising Transport* or the *Jet Zero Consultation* make that irrelevant for this inquiry.

Demand Management

2.3.2. While the *Jet Zero Consultation* suggests that a pathway not dissimilar to the CCC's BNZ pathway could potentially be achieved "without the

⁶ Note that para 6.1.3 contains a typing error where a "%" has wrongly been included; that should read "nor does it reflect BEIS guidance on the use of a 1.9 multiplier".

Government needing to intervene directly to limit aviation growth” (para 3.41). I also note that the very explicit statement in fn 39 that the “government is clear that expansion of any airport must meet its climate change obligations to be able to proceed” (pg 51). Those “climate change obligations” plainly include the need to outperform the fourth and fifth carbon budgets (see para 4.11 of my main proof of evidence) and meet the sixth carbon budget.

2.3.3. I understand from the Supplementary Proof of Sam Hunter-Jones [BAAN/W3/4] that the *Jet Zero Consultation* and *Decarbonising Transport* explicitly do not assess (or provide a framework for assessing) the adverse climate or other environmental effects of expansion proposals.

2.3.4. The *Jet Zero Consultation* remains an open consultation, and not a matter of policy. It is salient that it does not take demand management off the table. The consultation was published before AR6, with its profound implications for adhering to the UK’s 1.5°C obligation, understood in light of the recent strong commitment in the G7 communiqué. If the conclusions of AR6 and the G7 communiqué’s commitment to 1.5°C are taken seriously and genuinely fed into the consultation process, then the Government will need to include demand management measures in the final Jet Zero strategy.

2.3.5. If the conclusions of AR6 and the G7 communiqué were not acted upon immediately, the type of demand management recommended by the CCC will in all likelihood be found to have become even more of a necessity by the advent of the first five-year review of *Decarbonising Transport*.

Jet Zero Scenarios are Aspirational and Optimistic

2.3.6. *Jet Zero* notes how a carbon budget (cumulative emissions) approach is key to addressing climate change and that aviation emissions need to be included (see, e.g., pg 46). It offers a suite of four scenarios for the future of UK

aviation: the first is a reference scenario based on a continuation of current trends in aviation system efficiencies, carbon prices and passenger growth (pg 13); the second it calls 'High Ambition', which includes a slightly higher annual rate of efficiency improvements for operations and aircraft, as well as a substantial increases in the penetration of sustainable aviation fuels (SAF) and 'zero-emissions' aircraft (pg 14). Scenarios 3 and 4 go further than 'High Ambition' with (respectively) a 'breakthrough' in sustainable fuels or zero-emissions aircraft (pgs 14-15). Given that (i) 'breakthroughs' are, by definition, highly speculative and (ii) any such 'breakthrough' would be unable to sufficiently penetrate the global aviation market within a timeframe compatible with 1.5°C, I will focus my analysis here on Scenario 2.

2.3.7. Within *Jet Zero's* Scenario 2, 'High Ambition', is the assumption of entry into service by the mid-2030s of hydrogen-powered and all-electric aircraft carrying 'a significant number of passengers', and a single trans-Atlantic demonstrator aircraft before 2040. High optimism, rather than ambition, is required to imagine that these still experimental technologies will penetrate the global fleet sufficiently to have any meaningful impact on aviation emissions within the very short timeframe relevant to holding to a budget in line with 1.5°C. It must be emphasised that it is the level of technology penetration that matters, not invention, demonstration or feasible entry into service dates.

2.3.8. Scenario 2's assumptions about the increased availability of drop-in SAF that meet relevant sustainability criteria are also optimistic rather than ambitious. Sustainable, low-carbon fuels from waste and biomass are likely to be a relatively scarce resource for the foreseeable future. Given that other key sectors (not least shipping and road freight) also count on reducing their emissions through increased utilisation of sustainable liquid fuels, it is unrealistic to assume that the aviation sector would have first refusal for the

purchase of such fuels. Assuming that international trade (which relies on shipping) and intra-national distribution are considered at least as essential to the UK economy as aviation, then there is a strong case to argue for a 'triage approach' to allocate scarce low- and zero-carbon energy sources to the most critical sectors first.

- 2.3.9. This analysis of Scenario 2 demonstrates *Jet Zero* relies on "aspirational" and "optimistic" assumptions. The *Jet Zero Consultation: Evidence and Analysis* document [CB 9.136] discreetly acknowledges at para 4.3 the ramifications of this approach: "*There is significant uncertainty surrounding the abatement potential, uptake and costs of the measures described in this document and therefore these scenarios should be seen as illustrative pathways rather than forecasts. Achieving the emissions reductions shown in these scenarios will also require substantial international effort and cooperation.*"

Offsetting

- 2.3.10. Both the *Jet Zero Consultation* and *Decarbonising Transport* refer to offsetting via the UK ETS and CORSIA. It is relevant that *Jet Zero* was compiled before the publication of the IPCC's AR6.
- 2.3.11. Offsetting via market mechanisms such as emissions trading relies on other sectors having scope to compensate for and take up the 'abatement slack' created by the privileging of aviation. As I explained in my main proof of evidence, neither UK ETS nor CORSIA is fit for purpose with regard to securing the rates of emissions reduction required for 1.5–2°C (paras .5.6-5.11) The required reduction rates are extremely demanding for all sectors, such that no other sector has spare mitigation capacity to compensate for aviation. This conclusion is further strengthened when considered against the AR6 updated carbon budgets and the UK's tighter 1.5°C commitment. It

is worth recalling here, that for a 50:50 chance of 1.5°C, the remaining carbon budget is equivalent to just over ten years of current global emissions.

2.3.12. Even under the budgetary framing informed by CCC's Sixth Carbon Budget Report (which falls far short of what is required for 1.5–2°C), there is simply no scope for other sectors to pick up aviation's slack – as evidenced by the CCC's warnings that the UK is now on track substantially to exceed the fourth, fifth and sixth carbon budgets.

2.4. **Headline conclusion 2.4**

2.4.1. Para 2.4 of my main proof contains my fourth headline conclusion: "The expansion flouts the UK's obligations as a signatory to the Paris Agreement, under which the country has committed to deliver emissions reductions that embody its 'highest possible ambition'. This conclusion still stands. The DfT's *Jet Zero Consultation* further flouts the UK's obligations under the Paris Agreement by proposing a suite of measures for aviation which logically does not embody 'highest possible ambition', since it shies away from demand management. It is worth reiterating here, that the proposed sub-maximal ambition on demand management offered by *Jet Zero* is in direct contradiction to the clear and categorical advice of the government's appointed climate advisory body (the CCC).

2.5. **Headline conclusions 2.5 – 2.7**

2.5.1. My fifth headline conclusion, at para 2.5 of my main proof of evidence, is: "Proceeding with the project would make a mockery of the high-profile acknowledgement by Somerset's five councils of the "climate emergency"."⁷ This conclusion stands and is in fact reinforced by the confirmation in AR6

⁷ By this I meant the region's four councils and the regional authority (Bristol, North Somerset, Bath and North East Somerset, South Glos and The West of England Regional Authority) all of whom have declared a climate emergency.

of hastened impacts of global warming in the next twenty years and the reduced global emissions budgets for a 50:50 chance of 1.5°C due to continued high emissions since SR1.5.

2.5.2. Headline conclusion 2.6: “Given that North Somerset Council is now on an ‘emergency response’ footing towards emissions reduction, now is certainly not the time for a development that, on its own, would wipe out a ‘Paris-compliant’ carbon budget for the local authority area”. This conclusion still stands, unaffected by recent publications.

2.5.3. Headline conclusion 2.7: “Whether it is on the basis of policy or maths, this proposal is completely inappropriate for the huge climate and ecological challenges we are facing in the twenty-first century. It is akin to pouring yet more fuel on an already out-of-control fire”. This conclusion still stands, corroborated and amplified by the unambiguous findings in AR6 that impacts of 1.5°C warming will be more severe and occur sooner than previously thought.

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Policy paper

G7 Climate and Environment Ministers' meeting, May 2021: communiqué

This communiqué is from the G7 Climate and Environment Ministers' meeting which took place virtually on 20 to 21 May 2021.

From:

Department for Environment, Food & Rural Affairs

(<https://www.gov.uk/government/organisations/department-for-environment-food-rural-affairs>) and

Department for Business, Energy & Industrial Strategy

(<https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy>)

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Documents

G7 Climate and Environment: Ministers' Communiqué, London, 21 May 2021 (<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communiqué/g7-climate-and-environment-ministers-communiqué-london-21-may-2021>)

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G7 Climate and Environment: Ministers' Communiqué, London, 21 May 2021

(https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/988551/g7-climate-environment-communiqué.pdf)

P.D.F., 629KB, 27 pages

G7 Ocean Decade Navigation Plan

(<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communiqué/g7-ocean-decade-navigation-plan>)

HTML

G7 Alliance for Resource Efficiency: best practice

(https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/993206/g7-alliance-resource-efficiency-best-practice.pdf)

PDF, 1.55MB, 32 pages

G7 Presidency summary of the Alliance for Resource Efficiency Technical Working Group (<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communiqué/g7-presidency-summary-of-the-alliance-for-resource-efficiency-technical-working-group>)

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International Zoonoses Community of Experts (IZCE)

(<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communiqué/international-zoonoses-community-of-experts-izce>)

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Climate and Energy Commitments to Action

(<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-communiqué/climate-and-energy-commitments-to-action>)

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G7 Industrial Decarbonisation Agenda

(<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-industrial-decarbonisation-agenda-ida>)

<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-industrial-decarbonisation-agenda-ida>

Presidency statement on guest participation

(<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-presidency-statement-on-guest-participation>)

<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-presidency-statement-on-guest-participation>

OECD report: biodiversity, natural capital and the economy: a policy guide for finance, economic and environment ministers (https://www.oecd-ilibrary.org/environment/biodiversity-natural-capital-and-the-economy_1a1ae114-en)

https://www.oecd-ilibrary.org/environment/biodiversity-natural-capital-and-the-economy_1a1ae114-en

OECD report: towards G7 action to combat ghost fishing gear (https://www.oecd-ilibrary.org/environment/towards-g7-action-to-combat-ghost-fishing-gear_a4c86e42-en)

https://www.oecd-ilibrary.org/environment/towards-g7-action-to-combat-ghost-fishing-gear_a4c86e42-en

Stern report: G7 leadership for sustainable, resilient and inclusive economic recovery and growth (<https://www.lse.ac.uk/granthaminstitute/publication/g7-leadership-for-sustainable-resilient-and-inclusive-economic-recovery-and-growth-summary-report/>)

<https://www.lse.ac.uk/granthaminstitute/publication/g7-leadership-for-sustainable-resilient-and-inclusive-economic-recovery-and-growth-summary-report/>

IEA report: Net Zero by 2050: a roadmap for the global energy sector (<https://www.iea.org/reports/net-zero-by-2050>)

<https://www.iea.org/reports/net-zero-by-2050>

Details

The Climate and Environment Ministers of Canada, France, Germany, Italy, Japan, the UK, the USA, and the Climate and Environment Commissioners of the European Union agreed the joint climate and environment communiqué and associated G7 documents.

The communiqué was agreed during their meeting in London on 20 to 21 May 2021. The UK invited Australia, India, the Republic of Korea and South Africa, to join the meeting as guests.

Ministers heard from Prime Minister Boris Johnson and His Royal Highness the Prince of Wales, and were joined by Amina Mohammed, UN Deputy-Secretary General, Dr. Jane Goodall DBE, Ms Patricia Espinosa, UNFCCC Executive Secretary, Dr Fatih Birol, Executive Director of the IEA, and Jouja Maamri, UK Delegate to the Youth 7.

See also the G7 Chief Veterinary Officer meeting chair's summary, 4 May 2021 (<https://www.gov.uk/government/publications/g7-chief-veterinary-officer-meeting-chairs-summary-4-may-2021>).

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- G7 Climate and Environment Ministers meeting, May 2021: presidency statement on guest participation (<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-presidency-statement-on-guest-participation>)
- G7 Climate and Environment Ministers' meeting, May 2021: Industrial Decarbonisation Agenda (IDA) (<https://www.gov.uk/government/publications/g7-climate-and-environment-ministers-meeting-may-2021-industrial-decarbonisation-agenda-ida>)
- G7 Chief Veterinary Officer meeting chair's summary, 4 May 2021 (<https://www.gov.uk/government/publications/g7-chief-veterinary-officer-meeting-chairs-summary-4-may-2021>)
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