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London Luton Airport Expansion

Planning Inspectorate Scheme Ref: TR020001

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**8.169 Applicant's Response to Issue Specific Hearing 8 Action
41 - Commentary Regarding Non Carbon Dioxide Emissions**

Infrastructure Planning (Examination Procedure) Rules 2010

Application Document Ref: TR020001/APP/8.169



The Planning Act 2008

The Infrastructure Planning (Examination Procedure) Rules 2010

**London Luton Airport Expansion Development Consent
Order 202x**

**8.169 APPLICANT'S RESPONSE TO ISSUE SPECIFIC HEARING
8 ACTION 41: COMMENTARY REGARDING
NON CARBON DIOXIDE EMISSIONS**

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1 BACKGROUND

- 1.1.1 This document has been prepared by Luton Rising (a trading name of London Luton Airport Limited) ('the Applicant') for submission to the Examining Authority ('ExA'). Issue Specific Hearing 8 (ISH8) was held on 29 November 2023 covering environmental matters, health and community. Agenda Item 8 [EV15-001] of the hearing covered Climate Change and Greenhouse Gas (GHG) emissions.
- 1.1.2 As part of the hearing (as described in Section 5.1 of the **Applicant's Post Hearing Submission - Issue Specific Hearing 8 (ISH8) [REP6-066]**) and recorded by the ExA as Action Point 41 [EV15-013], the Applicant was asked to "Provide a full response to the suggestion that there are methods available to assess the effects of non-carbon dioxide emissions by NEF, including those at D3 [REP3-131]. If there is no proposal to use these methods, please explain why not?"
- 1.1.3 This document provides the Applicant's response to the ExA's Action Point 41.

2 APPLICANT'S RESPONSE

- 2.1.1 The Applicant recognises the issue of non-CO₂ effects and discusses this in section 12.12 of Environmental Statement (ES) Chapter 12, Greenhouse Gases [REP3-007]. Non-CO₂ effects are not however quantified in Chapter 12 of the ES.
- 2.1.2 The Applicant acknowledges that it is possible to calculate non-CO₂ effects but does not consider it appropriate to do so for several reasons:
- a) Considerable Uncertainty**
- 2.1.3 There remains considerable uncertainty, as recognised by the Climate Change Committee and Government, as to the magnitude of additional warming impact from non-CO₂ effects.
- 2.1.4 The Climate Change Committee in its Sixth Carbon Budget Pathway Report (Ref 1), page 374, states:
- "It remains extremely challenging to accurately aggregate the effects of these non-CO₂ impacts into a CO₂-equivalence 'multiplier' for use within climate policy mechanisms. These effects still have significant uncertainties associated with them and their size can depend on the conditions under which the activity occurs, unlike for well-mixed greenhouse gases which affect the climate similarly independently of where they occur."*
- 2.1.5 The Government's own documents refer to uplift factors for non-CO₂ effects ranging between a multiplier of 1.7 stated on page 17 of the 2023 Government greenhouse gas conversion factors for company reporting: Methodology paper (Ref 2) (DESNZ) and around 3 times, page. 55, Jet Zero Strategy (Department for Transport) (Ref 3).
- 2.1.6 In the Jet Zero Strategy, page 56, it is noted that addressing non-CO₂ effects is a core Government policy measure.

2.1.7 Jet Zero: One Year On (Ref 4) (Department for Transport), page 5, states however that

“Addressing non-CO₂ impacts of aviation remains challenging, given significant scientific uncertainty regarding the magnitude of their effects on the climate, though we have made progress in the last year.”

2.1.8 Page 5 of the same document goes on to state:

“We have developed a programme of research to advance our understanding of aviation’s non-CO₂ impact and identify mitigation options, and established a Non-CO₂ Task and Finish group as part of the Jet Zero Council.”

2.1.9 Jet Zero: One Year On, page 33, states that the Government’s next steps will be to:

- a. *“Further develop the multi-year non-CO₂ research programme in collaboration with NERC and initiate the research projects. The projects will seek to improve our understanding of aviation’s non-CO₂ impact as there continues to be significant uncertainty regarding the magnitude of these impacts. Through this project we will also seek to identify, better understand, and develop potential options for addressing aviation’s non-CO₂ impact such as using SAF, hydrogen, and contrail avoidance technology”; and*
- b. *“Undertake further work on how non-CO₂ impacts could be monitored and included in the UK ETS, in line with our aim to price aviation’s non-CO₂ climate impact once scientific understanding and consensus permit.”*

2.1.10 Given the universally acknowledged uncertainty around the magnitude of additional warming resulting from non-CO₂ effects, there is clearly no consensus around which uplift factor is most appropriate to apply to aviation.

b) Exclusion of non-CO₂ effects from the Jet Zero modelled trajectory

2.1.11 To evaluate the significance of a project’s GHG impact on the climate, IEMA guidance (Ref 5) recommends contextualising the emissions from a project against a relevant trajectory to net zero. To evaluate the significance of aviation emissions from the Proposed Development, these emissions were therefore compared against the aviation emissions trajectory presented in the Jet Zero Strategy for the High Ambition scenario, since this most closely represents UK Government policy on aviation decarbonisation.

2.1.12 In part, due to the uncertainty around the quantification of the warming impact of non-CO₂ effects discussed above, these effects are explicitly excluded from the aviation emissions trajectories presented in the Jet Zero Strategy. They are also excluded from the UK’s national carbon budgets and from the Climate Change Committee’s Sectoral budget for aviation.

2.1.13 In the Jet Zero Strategy, page 56, it is noted that addressing non-CO₂ effects is a core Government policy measure.

2.1.14 Jet Zero: One Year On (Ref 4) (Department for Transport), page 5, states however that *“Addressing non-CO₂ impacts of aviation remains challenging,*

given significant scientific uncertainty regarding the magnitude of their effects on the climate, though we have made progress in the last year.”

2.1.15 Page 5 of the same document goes on to state:

“We have developed a programme of research to advance our understanding of aviation’s non-CO₂ impact and identify mitigation options, and established a Non-CO₂ Task and Finish group as part of the Jet Zero Council.”

2.1.16 Jet Zero: One Year On, page 33, states that the Government’s next steps will be to:

c. *“Further develop the multi-year non-CO₂ research programme in collaboration with NERC and initiate the research projects. The projects will seek to improve our understanding of aviation’s non-CO₂ impact as there continues to be significant uncertainty regarding the magnitude of these impacts. Through this project we will also seek to identify, better understand, and develop potential options for addressing aviation’s non-CO₂ impact such as using SAF, hydrogen, and contrail avoidance technology”; and*

d. *“Undertake further work on how non-CO₂ impacts could be monitored and included in the UK ETS, in line with our aim to price aviation’s non-CO₂ climate impact once scientific understanding and consensus permit.”*

2.1.17 Given the universally acknowledged uncertainty around the magnitude of additional warming resulting from non-CO₂ effects, there is clearly no consensus around which uplift factor is most appropriate to apply to aviation.

c) Exclusion of non-CO₂ effects from the Jet Zero modelled trajectory

2.1.18 To evaluate the significance of a project’s GHG impact on the climate, IEMA guidance (Ref 5) recommends contextualising the emissions from a project against a relevant trajectory to net zero. To evaluate the significance of aviation emissions from the Proposed Development, these emissions were therefore compared against the aviation emissions trajectory presented in the Jet Zero Strategy for the High Ambition scenario, since this most closely represents UK Government policy on aviation decarbonisation.

2.1.19 In part, due to the uncertainty around the quantification of the warming impact of non-CO₂ effects discussed above, these effects are explicitly excluded from the aviation emissions trajectories presented in the Jet Zero Strategy. They are also excluded from the UK’s national carbon budgets and from the Climate Change Committee’s Sectoral budget for aviation.

2.1.20 For a meaningful contextualisation of aviation effects against the Jet Zero Strategy trajectory to be carried out, either both datasets should have the same non-CO₂ effects uplift factor applied to them, or both data sets should have non-CO₂ effects excluded. It would be meaningless to compare the aviation emissions from the Proposed Development against the Jet Zero trajectory if one set of emissions included non-CO₂ effects and the other did not, as this would not be comparing like with like.

2.1.21 It is clear, however, that whether or not the impact of non-CO₂ effects was applied, the relative contribution of the Proposed Development compared to the Jet Zero trajectory would remain unchanged, as would any resulting evaluation of significance.

d) Legal precedent on excluding non-CO₂ emissions

2.1.22 The Applicant commits to following all legislation, policy and Government guidance on the issue of non-CO₂ effects as the science and understanding of the impact of non-CO₂ effects improves.

2.1.23 It should be noted that the current position on the exclusion of non-CO₂ effects from aviation for the purpose of EIA reporting has been made clear by the courts.

2.1.24 The Decision letter published by the Secretary of State (Ref 6) relating to the granting of the P19 application at London Luton Airport makes direct reference to the issue of non-CO₂ impacts, and states in paragraph 8.29 on pages 22-23 that:

“LADACAN concede that there is no Government target or requirement to assess non-CO₂ effects as a matter of national policy. The Government’s considered approach is to continue to investigate and research non-CO₂ impacts. As accepted by LADACAN’s climate witness under cross examination, some measures directed at addressing CO₂ emissions will also cover non-CO₂ effects. Regarding SAF for example, the Bristol decision held that, given the extent of scientific uncertainty and the intention of the Climate Change Action Plan to consider the effects further, it would be unreasonable to weigh in the balance of that proposal. The same approach is true in this case. The Applicant’s climate witness identifies that there is no reason why the CRS could not consider the effects further as understanding of non-CO₂ effects develops. There is not reasonable reason for refusing permissions on the basis of non-CO₂ effects.”

2.1.25 In relation to the Bristol Airport Case between the Bristol Airport Action Network Coordinating Committee (BAANCC) and the Secretary of State for Levelling Up, Housing and Communities (Ref 7) Lane J stated at paragraph 231, *“In the present case, for the Panel to have attempted directly to address the non-CO₂ effects of aircraft emissions, in considering the appropriateness of the expansion of a regional airport, would have been highly anomalous. Therefore, even if the Panel might have acted lawfully if it had embarked on such as exercise, it was clearly not irrational for the Panel to conclude that it would not do so.”*

2.1.26 In addition to the issues of scientific uncertainty and the exclusion of non-CO₂ effects from relevant carbon budgets and trajectories, the status of non-CO₂ effects in relation to recent aviation-related planning decisions clearly indicates that these effects do not form a proper basis for refusing consent.

e) Quantification and Monetisation of non-CO₂ effects

2.1.27 At paragraphs 11 and 12 of **REP3-131**, the New Economics Foundation (NEF) refers to the quantification of non-CO₂ in the context of a WebTAG appraisal.

For the reasons already set out in Sections 1.2 and 6 of **REP2-038** and Section 10 of **REP4-096**, the Applicant does not consider that a WebTAG economic appraisal of the Proposed Development is required. This view is reinforced by the most recent versions of WebTAG guidance in relation to Aviation Appraisal (Ref 8). This states quite clearly, at paragraph 1.1.4, that:

“Decisions on planning applications for airport development will be considered in the normal way, including to take account of relevant material considerations which may include evidence relating to the strategic, commercial, financial and management case of a development proposal.”

- 2.1.28 This makes clear that a planning application is to be considered in ‘the normal way’, which may where appropriate include broader considerations as set out in the **Environmental Statement, Planning Statement [REP5-016], Need Case [AS-125]** and other submission documents. It does not, however, require that such issues that may arise at a planning inquiry are considered through a TAG appraisal, as may be required for Government interventions such as the appraisal of policy options.
- 2.1.29 For the reasons set out above, the Applicant maintains the position set out at paragraph 6.1.3 of **REP2-038** that the value of non-CO₂ effects cannot be robustly quantified. Although the TAG guidance does offer the option of including a quantification of such costs within a WebTAG appraisal, if one was appropriate to the intervention being contemplated. Paragraph 3.3.3 of the TAG guidance (Ref 8) is clear that the primary approach should be qualitative in light of the uncertainties:
- “However, despite scientific advances, considerable uncertainty still remains. Due to this uncertainty, especially surrounding the effects of different policy levers on non-CO₂ emissions, either a qualitative assessment should be made of the non-CO₂ impacts, or a quantitative assessment can be made as a sensitivity test, drawing on the latest guidance on GWP factors and BEIS guidance on valuing greenhouse gas emissions.”*
- 2.1.30 This is entirely consistent with the approach taken to presenting the effects within the Environmental Statement as relevant to the application for development consent.

GLOSSARY AND ABBREVIATIONS

Term	Definition
NERC	Natural Environmental Research Council
SAF	Sustainable Aviation Fuel
UK ETS	UK Emissions Trading Scheme
BEIS	Department of Business, Energy & Industrial Strategy
DESNZ	Department of Energy Security and Net Zero

REFERENCES

Ref 1 The Sixth Carbon Budget: The UK's path to Net Zero, Climate Change Committee, December 2020
<https://www.theccc.org.uk/wp-content/uploads/2020/12/The-Sixth-Carbon-Budget-The-UKs-path-to-Net-Zero.pdf>

Ref 2 2023 Government Greenhouse Gas Conversion Factors for Company Reporting Methodology Paper for Conversion Factors Final Report, DESNZ, June 2023
<https://assets.publishing.service.gov.uk/media/647f50dd103ca60013039a8a/2023-ghg-cf-methodology-paper.pdf>

Ref 3 Jet Zero Strategy: Delivering net zero aviation by 2050, DfT, July 2022
<https://assets.publishing.service.gov.uk/media/62e931d48fa8f5033896888a/jet-zero-strategy.pdf>

Ref 4 Jet Zero One Year On, DfT, July 2023
<https://assets.publishing.service.gov.uk/media/64c2463b331a650014934cb0/jet-zero-strategy-one-year-on.pdf>

Ref 5 Assessing Greenhouse Gas Emissions and Evaluating their Significance, IEMA, February 2023

Ref 6 Decision Letter, 21/00031/VARCON, Secretaries of State for Department for Levelling Up Housing and Communities and Department for Transport, 13 October 2023

Ref 7 Case No: CO/928/2022, Between Bristol Airport Action Network Coordinating Committee (BAANCC) and the Secretary of State for Levelling Up, Housing and Communities, 31 January 2023

Ref 8 TAG Unit A5.2 Aviation Appraisal, Department for Transport November 2023 (replacing November 2022 version).