



**Appeal by: Bristol Airport Limited**

**Appeal Reference: APP/D0121/W/20/3259234**

**North Somerset Council Application Reference: 18/P/5118/OUT**

**Rebuttal proof of evidence of  
Dr Mark Broomfield BA DPhil MIAQM  
Air Quality**

Reference: NSC/W3/4

**Ricardo Energy and Environment**





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## Rebuttal Evidence of Dr Mark Broomfield on behalf of North Somerset Council: Air Quality

Section 78 Town and Country Planning Act 1990 Appeal by Bristol Airport Ltd  
against the refusal of application 18/P/5118/OUT for the development of Bristol  
Airport to accommodate 12 million passengers per annum

PINS Appeal ref APP/D0121/W/20/3259234

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Report ref. ED14606100 for North Somerset Council

Customer:

North Somerset Council

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Date:

05 July 2021

Ricardo Energy & Environment reference:

ED14606100- Volume 4\_Final

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## 1 Instructions and scope of evidence

1. I am instructed by North Somerset Council (NSC) in relation to the Appeal by Bristol Airport Ltd against the refusal of application 18/P/5118/OUT for the development of Bristol Airport to accommodate 12 million passengers per annum (PINS Appeal ref APP/D0121/W/20/3259234).
2. I was instructed by NSC to review the evidence on air quality and related matters submitted by Bristol Airport Ltd to this Inquiry. The relevant evidence comprises:
  - a) The evidence of Mr Peirce on air quality (BAL/3/2)
  - b) The evidence of Mr Pyper on health (BAL/8/2) where relevant to air quality
  - c) The evidence of Mr Melling on planning (BAL/7/2) where relevant to air quality.
3. BAL's evidence on air quality is largely tangential to the NSC case on air quality, as set out in my proof of evidence (NSC/W3/1). I have highlighted the aspects below where the approach of BAL's experts differs from mine, and the reasons why I conclude that the proposed development does not comply with national and local policy relevant to air quality.

## 2 Effect of the proposed development

4. As I explained in my evidence paragraphs 62-63, the important comparison when considering compliance of the proposed development with national and local policy is to compare:
  - a) The future situation if the proposed development goes ahead
  - b) The future situation if the proposed development does not go ahead
5. As I explain in my evidence, the proposed development would result in an increase in air pollution compared to the situation if it does not go ahead. At a number of points in his evidence, Mr Peirce makes a comparison of the situation in 2017 to the situation in the future if the proposed development goes ahead. It is important to appreciate that this does not support the case for development. For example, while the following comparison set out in paragraph 4.4.3 of Mr Peirce's evidence indicates a consistent trajectory to that envisaged in the Clean Air Strategy, it would be misleading to consider that such a comparison provides support for the proposed development.

*"4.4.3 The Regulation 25 response showed that there were 10 receptors of those modelled in the ES that experienced annual mean PM<sub>2.5</sub> concentrations over 10 µg m<sup>-3</sup> in at least one of the 2017 baseline, 10 mppa and 12 mppa scenarios. It showed that concentrations at all receptors except one would be lower in the 12 mppa scenario than in 2017; the number of receptors over 10 µg m<sup>-3</sup> decreases from nine in 2017 to four in 12 mppa. The response confirmed that this trajectory is consistent with the target in the Clean Air Strategy (noting that the evaluation years in the Strategy are 2016–2025 rather than 2017–2026)."*

6. Similar comparisons are made in Section 5.1.4 and 5.2.25 of Mr Peirce's evidence.

### 3 Requirement to improve air quality

7. Mr Melling quotes the National Planning Policy Framework (NPPF) (CD5.8) in paragraph 4.3.13 of his evidence, highlighting that NPPF paragraph 180 states that "*Opportunities to improve air quality or mitigate impacts should be identified.*" He goes on to summarise relevant provisions from the Aviation Policy Framework (APF) (CD6.1) in paragraph 4.3.14 of his evidence, stating that the APF seeks "*for Government to work with airports and local authorities to improve air quality.*" He also quotes from Aviation 2050 (CD6.5) paragraph 3.127, but fails to include reference to paragraph 3.101 of Aviation 2050 (referred to in NSC Statement of Case paragraphs 69, 73 and 78), which states:

*"3.101 The government expects airports to make the most of their regional influence to provide innovative solutions and incentives against ambitious targets which reduce carbon and congestion and improve air quality."*

8. Mr Melling does later mention Aviation 2050's requirement for "innovative solutions and incentives" (BAL/7/2 paragraph 3.2.17), but fails to address this in his subsequent discussion of national aviation policy. In the light of this weight of policy encouraging developers to deliver improvements in air quality, I am at a loss to understand how Mr Melling then goes on to state:

*"4.3.19 There is also no express requirement elsewhere in the Development Plan, in the NPPF or in national aviation policy for development proposals to improve baseline air quality conditions."*

9. This conclusion is not borne out either by the material quoted by Mr Melling, or by Section 3.101 of Aviation 2050 which he refers to only indirectly and did not engage with. In my view, the thrust of the approach set out is that an airport developer is required to seek to achieve improved air quality and it is to do so by utilising innovative solutions and incentives to achieve targets which must be "ambitious". This aspect of the Aviation Policy Framework and Aviation 2050 requiring an improvement in air quality does not appear to have been addressed in the recent Inspectors' Decision in relation to Stansted Airport (CD6.13).
10. Mr Pyper (BAL/8/2 section 5.2.36) describes this expectation that improvements in air quality will be delivered as "unreasonably high". I agree that this is a difficult and demanding challenge, but I do not agree that it is unreasonable. The requirement to improve air quality is written into aviation and planning policy, and cannot be ignored just because it is difficult to achieve. In the context of health impacts, Mr Pyper confirms that "*It is not possible to 'avoid' the small change in health-related risk factors associated with a small change in PM<sub>2.5</sub> and NO<sub>2</sub> exposures.*" He acknowledges here that the proposed development will have adverse impacts on air quality, and thereby give rise to increased risks to health compared to the position if planning permission were refused. This further emphasises the need to consider whether BAL

is promoting a development that achieves the Government's objective to deliver improvements in air quality and whether it has set itself an ambitious target to be achieved via the adoption of innovative solutions and incentives. In my view, the development proposed does not achieve these policy objectives.

11. Mr Peirce also provides an opinion on the policy obligation to deliver improvements in air quality and health (BAL/3/2 paragraph 5.2.10 and 5.2.39). With regard to NSC's view that failing to improve the health and well-being of the local population would be contrary to the core strategy, he comments: "*None of policies CS3, CS23 and CS26 of the North Somerset Core Strategy 2017 say this.*" In fact, Core Strategy (CD5.6) Policy CS26 makes exactly this point, by virtue of requiring "*Health Impact Assessments (HIA) on all large scale developments in the district that assess how the development will contribute to improving the health and well being of the local population; ...*" This important provision of Policy CS26 was omitted from the partial quote of this policy provided in Mr Peirce's evidence paragraph 5.2.19, but it is important to fully understand the relevance of this policy.
12. Policy CS26 cannot be read as simply requiring a process to be carried out. That is, it is not limited to requiring a Health Impact Assessment (HIA) to be conducted where large scale development is proposed. Such a policy would not have any land use consequences since it would achieve nothing more than the preparation and presentation of a HIA. In my view, Policy CS26 must have been included in the Plan to deliver the outcome that is specified in the policy itself: to ensure that large scale development will "*contribute to improving the health and well being of the local population.*"
13. Consequently, I do not agree with Mr Peirce's conclusion in the same paragraph that "*The Appeal proposal, therefore, does not in any way conflict with this policy.*"
14. Mr Peirce says in Section 5.2.49 that "*It is not necessary to set specific targets for the reduction of emissions. BAL has already committed to maintain the monitoring of air quality around Bristol Airport, and has an existing Section 106 commitment to report any significant deterioration in air quality.*"
15. This only serves to emphasise the problem with this application. Mr Peirce, on behalf of the appellant, has not sought to set any ambitious target with the objective of achieving improvements in air quality and has not identified any innovative solutions or incentives to achieve this aim. The commitment Mr Peirce refers to in Section 5.2.49 of his evidence is no more than a backstop, to be introduced in the event that a large enough increase in air pollution occurs to be measured in the field. An undertaking to avoid "*significant deterioration*" cannot be viewed as delivering an improvement in air quality.
16. I will now turn to the evidence provided by BAL on mitigation in the light of this understanding of national planning and aviation policy.

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## 4 Mitigation

17. Both Mr Peirce (paragraph 5.2.29) and Mr Melling (paragraph 61) highlight the Inspectors' decision relating to the recent Stansted Airport planning appeal (CD6.13):

*"While the Framework seeks to improve air quality where possible, it recognises that it will not be possible for all development to improve air quality".*

18. I accept this finding by the Inspectors for this appeal (subject to the findings of any judicial review), and for the avoidance of doubt, I was the expert witness on air quality instructed by Uttlesford District Council for the Stansted Airport appeal hearing. Indeed, I have never argued that all development can improve air quality, but it is clear that airport development in particular is under an obligation to set ambitious targets with a view to achieving the aim of delivering improvements and to introduce innovative solutions and incentives to achieve this goal. There is a heightened obligation on airport operators compared to the obligations on other forms of development.
19. Thus, where an airport-related development comes forward which will adversely affect air quality and cause an increased risk to health, the applicant must demonstrate that it has done everything possible to avoid such consequences. That is, the applicant should demonstrate that, despite its ambitious targets and innovative solutions and incentives, nothing further can be done to avoid the adverse effects that result from the proposed development.
20. As the authority with responsibility for local air quality, if NSC cannot intervene to secure such improvements as part of this planning application, it will never have any leverage to secure the improvements so clearly anticipated by national planning and aviation policy. Yet the Appellant has not adopted any ambitious target, nor has it considered what measures could be introduced to deliver the improvement in air quality envisaged in national planning and aviation policy, or evaluated the benefits that innovative solutions and incentives might deliver so as to improve air quality.
21. As a consequence, the proposed development does not adopt the approach required by policy. I conclude that the adverse impacts that it will have upon air quality are a factor that must be weighed in the balance against the grant of planning permission.
22. Mr Melling (paragraph 4.3.20, referring to Mr Peirce's evidence) goes on to highlight BAL's membership of Sustainable Aviation as adding weight to the expected mitigation of impacts. While welcome, this membership does not appear to commit BAL to any particular course of action or specific measures. Rather than simply mentioning membership of an organisation, I consider that BAL should be adopting an ambitious target which would achieve an improvement in air quality and designing a series of innovative improvement measures to achieve that ambitious target thereby achieving improvements in air quality. I have started this

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- process by highlighting a range of measures provided in a Sustainable Aviation report published four years ago in 2017 (CD8.21) (my evidence Section 6.3).
23. In my view, BAL should have sought to achieve an improvement in air quality as an objective for the scheme from its inception. Instead, it appears that BAL has regarded the air quality impacts of the proposed development and its implications for the health of the local population as something of an after-thought. BAL has had ample opportunity to identify a robust and detailed plan to achieve an improvement in air quality, or failing that to do all that can be done to mitigate the air quality and associated health impacts of the development, but has failed to do so.
24. Mr Peirce introduces a modest expansion of the expected contents of the Air Quality Action Plan in Section 5.2.45 of his evidence:
- “The Air Quality Action Plan will introduce further measures, which will build on best practice learned at other airports where air quality is a greater issue than at Bristol Airport. It will identify what measures are likely to be reasonably practicable and what emissions reduction is possible and cost-effective.”*
25. While welcome, it is unclear what this means. This outline of the Air Quality Action Plan does not substantively change the position set out in the Environmental Statement Addendum. For example, some of the key questions that remain unanswered include: what specific measures will be introduced, and when? What, if any, improvement in air quality will be achieved?
26. Mr Peirce seeks to explain that the proposed development provides effective mitigation of air quality impacts. In section 4.6.1 of his evidence, he highlights the reduction in queuing on local roads that is forecast to result from the proposed development. While this would be welcome, it is clear from the results set out in the Environmental Statement (CD2.5.19 and CD2.5.10), Regulation 25 submission (CD3.4.10) and Environmental Statement Addendum (CD2.20.1 and CD2.20.5) that any such improvements would be limited to the immediate vicinity of the junctions of Downside Road and West Lane with the A38. Furthermore, there is no indication in the application that the proposed works here were driven by any objective to achieve an improvement in air quality. Rather, the limited air quality improvement in this area is a by-product of having to address local highway constraints. As set out in Section 5 of my evidence, the effect on air quality at the overwhelming majority of locations is adverse.
27. Mr Peirce goes on in Section 4.6.1 of his evidence to describe the proposed target for the proportion of passengers travelling by public transport of 17.5% as an *“ambitious target.”* I explain in my evidence at paragraph 107 why this cannot be described as an *“ambitious target,”* which is the benchmark set in national policy (Aviation 2050, CD6.5 paragraph 3.101).

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28. Mr Peirce also anticipates “further mitigation measures” in section 4.6.3 of his evidence, but in fact only provides reference to one mitigation measure. This is the proposed Air Quality Action Plan. It is unfortunate that no details of this mitigation measure have been provided, so it has never been possible for NSC to evaluate the benefit that would accrue from this mitigation measure. As I explain in paragraph 115 of my evidence, this cannot be viewed as an ambitious measure or an innovative solution: it is no more than a backstop in case air quality should become measurably worse. Mr Peirce also refers back to the provision of mitigation in his evidence section 5.2.16 which he claims would reduce impacts to an “acceptable level”. Again, for the reasons set out above and in Section 6 of my evidence, I do not consider that the very limited mitigation provided would reduce impacts to an acceptable level, in the light of national planning and aviation policy.
29. Despite NSC clearly highlighting its ambition to see air quality improvements in accordance with national and local policy in the NSC Statement of Case, BAL does not seem to have taken the required steps towards designing and evaluating an effective and ambitious set of mitigation measures. NSC will continue to liaise with BAL through discussion of Conditions and/or Section 106 Agreement with the aim of securing improvements.



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