Expansion of Bristol Airport to 12mppa

PINS Ref APP/D0121/W/20/3259234
Planning Application Ref: 18/P/5118/OUT

Summary Proof of Evidence

for PCCA

Laurence Vaughn

1. Introduction

My name is Laurence Vaughn and I am a director of Quiet Places Ltd, an environmental noise mapping company and I am also a Principal Engineer with Norton Straw Consultants. I am a practicing engineering consultant with over 20 years experience in providing engineering advice and assessments across a wide range of industries. I have a BEng (Hons) degree in Mechanical Engineering and a PhD in adhesives, both from the University of Bristol. I am a Chartered Engineer and a Fellow of the Institute of Mechanical Engineers as well as a Member of the Institute of Materials, Minerals and Mining. I have a certificate in Environmental Noise Measurement from the Institute of Acoustics and I am a member of the UK Acoustics Network. I am also a Parish Councillor in the village of Wrington in North Somerset.

My experience in environmental noise includes:

- A certificate in Environmental Noise Measurement following a week-long course and formal assessment (including both an exam and a written report), by the Institute of Acoustics;
- Noise calculations at residential properties arising from activities on industrial sites;
- Providing environmental noise calculations at a residential property for people concerned about noise when moving home. This takes account of the noise arising from road, rail and air traffic as well as geographical information (GIS) in a region around a property. At Quiet Places we have developed our own noise calculation software based on open source data and algorithms which uses as inputs Ordnance Survey data, road traffic information, rail movements and aircraft flight data.

The evidence which I have prepared and provided for this appeal reference APP/xxx (in this proof of evidence, written statement or report) is true and has been prepared and is given in accordance with the guidance of my professional institution and I confirm that the opinions expressed are my true and professional opinions.

2. Glossary

For terms relating to the acoustic and noise aspects of this proof, I refer you to the glossary contained in Appendix 7A of BAL's original environmental statement (CD2.5.17).

3. Summary of Scope of Evidence

In this proof I look at the main causes for concern regarding BAL's noise assessment.

My evidence is that BAL's noise assessment cannot be relied on due to a great deal of uncertainty regarding the methodology used and the conclusions reached. Given how badly noise from the airport affects local residents, it is essential that there is certainty in relation to these effects so that the inspectors can determine whether the effects are acceptable. Additionally, the approach taken by BAL does not recognise the Aviation Policy Framework objective to reduce the number of people significantly affected by aircraft noise.

In my proof of evidence I consider that the documentation provided by BAL in respect of environmental noise have the following issues:

- **Forecast air traffic movements** - Any claims of a reduction in overall aircraft noise are only possible through two unfounded assumptions: (1) on aircraft producing less noise, and (2) that these quieter aircraft will be adopted by operators as soon as they are available. The reality is that more flights will produce more noise.

- **Noise impact ratings** - BAL have assessed the effects of air noise, ground noise and road traffic noise for a range of scenarios, in all cases using only a change in noise level to determine the impact on local communities and residents. This approach makes no recognition of the change in frequency of noise events, as directed by the IEMA. There is no doubt that if the frequency of the noise events were taken into account, then the impact assessment would be significantly more onerous than currently suggested by BAL. Equally the approach taken by BAL makes the assumption that it is only the change that is of consequence, and that the current situation endured by local residents is acceptable as-is.

- **Night flying** - the proposed approach, with a nominal points-per-movement counting towards an overall point quota, and a limit to the number of flights, is somewhat at odds with the approach taken for non-nighttime aircraft movements, clearly underlining the deficiencies in this part of the noise assessment by BAL. This arrangement also permits a significant number of shoulder period flights to occur during the nighttime period, but not be counted towards the limit on number of nighttime movements nor the quota. Finally, to make an assumption that there is a threshold at which the noise impact of an aircraft movement is zero is clearly nonsense. To make this assertion especially during nighttime, when local residents are likely to be asleep and most sensitive to aircraft movements, seems doubly so.

- **Noise monitoring terminals** - With such a rich amount of data at their disposal, the omission of data gathered by their own noise monitoring terminals is a huge oversight by BAL. It also implies that the measured data does not support the modelling conclusions.

- **Noise figures** - not only do these not represent the noise associated with the actual operation of the airport (where a single runway direction is used at one time), these contain unexplained artefacts that call into question both the analysis and the experience of the originators.

- **Road traffic noise** - the impact of road traffic noise is assessed using the same data as for aircraft; clearly the impact on the local communities of road traffic noise cannot be evaluated in the same way as that arising from aircraft. It is also the case that the BAL documentation suggests that an increase in passenger numbers of 20% (from 10mppa to 12mppa), only results in a 10% increase in road traffic, potentially underestimating the noise impact on the local communities.

4. Proposed Conditions on Air Noise

Conditions will need to be imposed that are robust from a noise perspective.

Currently the noise conditions on the 10mppa consent are not fit for purpose and lead to significant adverse residential amenity effects.

We have suggested an improvement to the current conditions plus new conditions to restrict night flights. Our reasoning for these new conditions is set out in the PCAA conditions submission. This is a changing working document and I will refer to it when I give evidence if required.