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Mr. Philip Graham
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Dear Philip

Selection Criteria for Future Airport Proposals.

LAANC is an umbrella local authority organisation which represents the interests of two dozen Local Councils comprising Boroughs, Unitary Boroughs, London Boroughs, County and Parish Councils serving a wide area around Heathrow Airport.

The Constitution of LAANC covers environmental issues as well as aircraft noise and represents a very large community many of whom have direct contacts with Heathrow.

At the last meeting of LAANC members considered the above topic on which the commission is asking for suggestions.

LAANC recently responded to the Draft National Aviation Framework Consultation on this point and members would urge the commission to be confident that the Aviation Framework when published later this month does provide a robust road map for the development of policy guidance on noise.

There is currently a policy vacuum in respect of local impacts from air noise and it is uncontroversial that large airports impose a significant local impact in respect of air noise (and in the case of Heathrow, 20 kilometres or more from the airport).

LAANC believes that in the UK wherever and whatever future airport provision is to be made air noise impact will be at the heart of the acceptability consideration. The facts are that in the UK the extant 57 decibel contour (16hr average mode) is now over 30 years and has been shown to be seriously out of calibration in representing the onset of significant daytime community annoyance. This much is acknowledged in the Draft Aviation Framework Consultation.

The Inspector at the Terminal 5 public inquiry accepted that there were deficiencies with using the $L_{Aeq,16h}$ noise index to set noise policy. In his main report published in 2001, the Inspector stated at paragraph 34.4.42:

*"The measure of the noise climate used by the Government to test the success of its policy is the $L_{Aeq,16hour}$ index. This was the subject of severe criticism much of which I consider to be well-founded. **It does not reflect the operation of runway alternation which is a key feature of Heathrow (para 21.3.30) nor does it give any indication of the number of times activities are interrupted by passing***

aircraft (para 21.3.31). More significantly I believe that it fails to give adequate weight to the number of aircraft movements (para 21.3.34). Many local residents are unconvinced by the Government's argument that the noise climate has improved. They believe that it has become worse over the last 5-10 years and this appears to be a reflection of the substantial increase in movements over that period (para 21.3.34)."

The Inspector also comments on the adequacy of the original Aircraft Noise Index Study carried out in 1982 and reported on in 1985 which led to the adoption by the government of the $L_{Aeq,16h}$ noise index. Thus, paragraph 34.4.43 of the Inspector's report states:

"Even the Department recognised the deficiencies of the L_{Aeq} system (para 21.3.32-33). They also accepted that it is difficult to establish the true relationship between the noise of individual events and their number and that it would have been useful if further social surveys had been carried out (para 21.3.35). The survey on which the use of the $L_{Aeq,16hour}$ is based was carried out in 1982 and the relationship between the L_{Aeq} and community annoyance was statistically weak even at that time (para 21.3.32)."

The Inspector recommended that Terminal 5 should be built subject to a noise contour limit and a limit of 480,000 on the number of air transport movements (ATMs) per year. He recommended an ATM limit in addition to a noise contour limit for several reasons including (a) earlier forecasts had underestimated the number of aircraft movements Heathrow could handle, and (b) he had formed the view that the L_{Aeq} noise index does not take sufficient account of the noise effects of increasing the number of aircraft movements.

The Inspector recognised that Terminal 5 would enhance the attractions of Heathrow still more and could make it difficult to resist future proposals for development there. Paragraph 98 of the Inspector's summary report gives his unequivocal view that a third runway at Heathrow would be totally unacceptable:

"Nevertheless, I agree with BAA that the evidence placed before me demonstrates that a third main runway at Heathrow would have such severe and widespread impacts on the environment as to be totally unacceptable."

Terminal 5 permission

The previous Government authorised Terminal 5 subject to the noise contour limit and ATM limit recommended by the Inspector. The authorisation letter of November 2001 made it clear that the Government was applying the ATM limit as a precautionary measure and would not rely solely on the noise contour limit for mitigating future air traffic noise at Heathrow:

59. *In accepting the Inspector's recommendation for an ATM limit of 480,000 per year, the Secretary of State notes the reservations expressed by the Inspector in his conclusions at section 3 of chapter 21 of his report about the Leq noise index. The Secretary of State further notes that this was one of the Inspector's reasons for recommending in chapter 21 of his report an ATM limit as well as a noise contour limit. The Secretary of State recognises that the number of flights handled by Heathrow, which is by far the busiest UK airport, has risen considerably since the empirical work underlying the Leq index was undertaken.*

60. *In the light of the Inspector's views on the adequacy of the Leq index, the Secretary of State thinks it right to adopt a precautionary approach. As noted above, he accepts the Inspector's recommendation for a condition limiting ATMs to 480,000 per year. He does so on the basis of the Inspector's concerns about noise, particularly the weighting of the number of aircraft movements relative to noise within Leq. He notes the Inspector's views expressed in paragraph 32.5.41 of his report that the ATM limit would have benefits in terms of other factors such as surface access, air quality and public safety but the Secretary of State does not consider it necessary to express a conclusion on these matters. The Secretary of State has already announced his intention, independently of Terminal 5, to conduct a new study on aircraft noise and the perception of people subject to it. On 8 May 2001, in response to a Parliamentary Question asking the Secretary of State what plans he had to carry out a new study to update the Aircraft Noise Index Study of 1985, Mr Bob Ainsworth, then Parliamentary Under Secretary in the Department of the Environment, Transport and the Regions, said: "My Department is to carry out a major study to*

reassess attitudes to aircraft noise. This new study underlines the Government's commitment to underpin our policy on aircraft noise by substantial research that commands the widest possible confidence". It is envisaged that the results of this study will help to show whether the Leq index does in fact have the weaknesses suggested by the Inspector. The results would also inform any future consideration of the ATM condition. (emphasis added)

The ANASE study

The new study of aircraft noise was carried out as the ANASE study (Attitudes to Noise from Aviation Sources in England). Although the ANASE study was commissioned by the previous government in 2001, its findings were not released until November 2007 shortly before the launch of the SERAS consultation. The main findings of the study included:

- (i) People are more annoyed by all levels of aircraft noise than they were in 1985, when the last major aircraft annoyance study (the ANIS study) was carried out. Levels of annoyance previously believed to occur at a noise level of 57 dB are now occurring at approximately 50 dB.
- (ii) There is no identifiable threshold marking the onset of significant community annoyance. Even relatively low levels of aircraft noise can cause some annoyance, which rises as the noise level increases.
- (iii) The study provides indicative evidence that people are more concerned about numbers of aircraft (and slightly less concerned about the noise level of individual aircraft) than the present $L_{Aeq,16h}$ indicator assumes.

Dismissal of ANASE findings

The implications of the ANASE study for the proposed expansion of Heathrow are considered in paragraphs 3.28 to 3.41 of the SERAS consultation. Paragraph 3.32 recognises that the key findings of the ANASE study are (i) it is highly probable that annoyance with a particular level of aircraft noise is higher than found when the ANIS study was carried out in the 1980s, and (ii) there is no threshold noise level at which there is an "onset of significant community annoyance."

Paragraph 3.33 refers to scrutiny of the ANASE study by peer reviewers appointed by the government who suggested "further analysis, detailed revisions and improvements to the drafting." On the basis of the opinions of a small number of peer reviewers chosen by the Government, the Government seems prepared to dismiss the detailed findings of the ANASE study. This conveniently ignores the views of others and also overlooks the fact that the original ANIS study was not peer reviewed.

In fact, the ANIS study (DR Report 8402) was itself subject to much criticism at the Terminal 5 public inquiry for reasons including:

- It combined results from Heathrow having segregated use of two runways with results from Gatwick and other airports having mixed mode use of a single runway.
- Noise exposure at Heathrow from days of different mode operation were "stitched" together to form complete days of one mode; ANIS unable to measure response reactions to runway alternation; exclusion of Cranford site.
- Sites at around 57 dB L_{eq} were systematically excluded, possibly resulting in false inferences about significance of 57 dB.
- Original ANIS relationship was with 24 hour L_{eq} , subsequently changed to relationship with 16 hour L_{eq} .
- Use of cross sectional rather than longitudinal social surveys.
- Exclusion of aircraft sound exposure levels for aircraft noise events below 67 dB L_{Amax} .
- Use of manual measurement approximations to determine sound exposure level because equipment could not directly integrate; attended and unattended noise equipment differences of up to 2.5 dB.
- Noise exposure in common noise areas varied by up to 3 dB.

- ANIS study has become uncalibrated with passage of time because of changes in people's reactions and aircraft traffic.

With hindsight the ANASE study had an important bearing on the previous airport policy studies (SERAS). Failure to take account of ANASE was we believe contributory to a flawed proposal to expand Heathrow. If one of the key findings of the ANASE study (that annoyance from aircraft noise is greater than previously thought according to the ANIS study) had been taken into account in the SERAS consultation, expansion of Heathrow may not have been chosen with one of the other expansion alternatives such as at Gatwick or Stansted being preferred.

The recent Aviation Framework Consultation showed that current noise impacts at Heathrow are many times greater than at Gatwick and Stansted. Also, adding a third runway at Heathrow would be akin to adding a whole new airport since ATMs for the third runway would be higher than currently at Stansted, and not far short of Gatwick's. Given that aircraft noise is a primary issue and that more residents are affected by aircraft noise at Heathrow than other potential runway sites (by a factor of at least 10), it is probable that Heathrow would not have been judged the most sustainable overall option.

Night Noise

A similar UK policy vacuum exists in relation to air noise at impact at night. UK policy is still based upon sleep disturbance but the last sleep disturbance study (FS 92 - Olleherhed et al). This work is 20 years old.

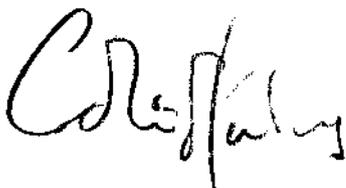
LAANC has consistently challenged the policy that was constructed around this study on the basis that the study results did not support the emergent policy. The current London Night Noise Restrictions scheme (the QC scheme) is founded upon the equal energy principle (leq) which has never been validated for sleep disturbance in the UK.

In LAANC's view the adoption of EC directive "targets" or environmental objectives at Noise Directive Airports (EC/2002 /30 and EC /2002/49) creates further inertia. At Heathrow for example the current night flight consultation on the one hand provides evidence from the Civil Aviation Authority (CAA) that there is now a proven association between night noise exposure and chronic effects on human health. On the other hand references at section 3 of the consultation indicate that the "environmental objectives " for Heathrow airport have been met and by implication under EC rules no more is required to be done to improve the noise environment around the airport.

LAANC member authorities have recently commissioned the ANASE study authors (Ian Flindell Associates with MVA) to revisit and update the ANASE study. The update study will respond to the non SP peer review criticism and it is intended that as part of the work the study authors will engage with the CAA.

I hope the commission finds the above suggestions helpful. Members of the LAANC Executive Committee would be very happy to meet with you and or the commission to discuss our suggestions further.

Yours faithfully



Colin Stanbury
Director LAANC