

Note

Title	Deadline 2 Noise Responses		
Project	Gatwick Airport DCO		
Reference	28AD.NT.3.0	Author(s)	BHo
Date	9 April 2024	Reviewer	VC

ExA's Written Questions (ExQ1)

NV.1.10

Noise Envelopes

Recognising that concerns have been expressed by some IPs about noise envelopes, what would other IPs propose for the initial (2029) areas of the 51 dB $L_{Aeq,16hr}$ contour and the 45 dB $L_{Aeq,8hr}$ contour and any other noise envelopes, including the use of other metrics?

What is the basis for the proposed values with reference to policy and guidance?

1. The Applicant has not yet explained which of the two scenarios assessed is most appropriate for setting noise contours. In absence of this explanation, noise contours should be set from the smallest contours provided to date, those being the Core Case noise contour areas.
2. The basis for using these values would be to ensure that noise impacts are limited, and where possible, reduced, as is the aviation noise policy requirement.
3. The Applicant has also not yet provided the missing information set out at Deadline 2, including forecasts used within the noise modelling. When this information is provided, there may be reason to implement further noise measures, such as movement caps, to ensure the assessed effects within the Environmental Statement are worst-case and effects cannot increase beyond this.

REP2-005 – Applicant's responses to ISH5

4. The Applicant sets out their responses to Issue Specific Hearing 5 under section 5 of the document. All references below are in relation to Table 5.1 within REP2-005, unless otherwise stated.

Reference 6 (a)

5. In responding to an issue raised by the Joint Local Authorities, the Applicant states the following:

"The Heathrow expansion PEIR may have commented on the significance of awakenings but the project was not taken forward. The Physiological Sleep Disturbance Assessment reported in ES Appendix 14.9.2: Air Noise Modelling [APP-172] concludes that even in the worst affected area the greatest extent of additional awakenings would be 0.8 per night. When discussing awakenings is it important to keep in mind an average healthy person awakens about 20 times a night for various reasons not connected with noise."

6. We have commented previously that we would expect the Heathrow PEIR thresholds of significance to be accounted for. It is not clear why the Applicant is disregarding the Heathrow application. We note that the Applicant relies on the Heathrow PEIR in its position on other matters and therefore note the contradiction in this instance.

7. One example has been noted previously by CAGNE, namely that the Applicant relies on the Unacceptable Adverse Effect Levels (UAELs) proposed within the Heathrow PEIR to demonstrate no dwellings lie within these thresholds. Other aviation expansion applications that have been taken forward use lower UAEL thresholds, the use of which would demonstrate that Gatwick Airport has dwellings within the 'unacceptable' thresholds.

8. The Applicant has not selected UAELs for the day or night. It has also not justified its position of comparing against Heathrow's UAELs. For the Applicant to state that it places no weight on awakening thresholds taken from the Heathrow PEIR is not accepted as justifying the approach taken for awakenings and a full assessment involving appropriate methodology and criteria should be requested by the ExA.

Reference 7 (a)

9. In responding to an issue raised by CAGNE relating to the lack of a school noise assessment, the Applicant states the following:

"This was discussed during the hearing. Noise insulation for schools will be consider where aircraft noise levels are above Leq 16 hour 51dB. See ES Appendix 14.9.10: Noise Insulation Scheme [APP-180] provided details of the Noise Insulation Scheme, which includes the following:

Where schools are concerned that aircraft noise could be affecting teaching, each classroom area will be surveyed to assess the effects of all types of noise including local road traffic. Noise insulation measures could include improved glazing and acoustic fresh air ventilation and GAL will work with the schools to deliver a suitable noise insulation package if found to be required... Any eligible school that applies will be surveyed by a suitably qualified surveyor and their requirements will be discussed in detail to arrive at the appropriate package of measures.

The assessment for qualifying schools would use appropriate noise metrics and standards to test if aircraft noise is affecting teaching including metrics covering shorter time periods."

10. The Applicant has not set out what the reasonable worst-case noise effects at schools are, but rather simply stated that it will be offering mitigation to schools. Without this information, no proper judgement on the full noise effects of this application can be made and the missing information, as has been previously identified by CAGNE, should be requested by the ExA.

11. We note that other recent airport applications, such as the Stansted Airport 35+mppa permitted application, have assessed noise impacts on schools.

Reference 7 (b)

12. In responding to an issue raised by CAGNE relating to the lack of ability to compare air and ground noise assessment results, the Applicant states the following:

"The use of ground noise contours has been discussed with the topic working group, where the Applicant has explained that ground noise contours do not necessarily depict areas of significant effect because the ground noise assessment also considers ambient noise and change above it. However, the Applicant is producing a report on ground noise effects with the slower transition fleet and in this will provide ground noise contours. These will depict noise on easterly and westerly operating days together for ease of comparison."

13. It is not clear what the reference to ‘consideration of ambient noise’ is for the ground noise assessment, as no precise assessment description has been provided to date. There is no description of how ambient noise is actually taken into account within the results or why this is appropriate given the difference between road and ground noise sources.

14. We note again that this approach differs from that adopted at all other recent airport expansion applications, despite the Applicant relying heavily on adopting comparable positions for other aspects of the assessment.

15. CAGNE have also previously set out why it does not have confidence in the ambient noise measurements used, which were undertaken in 2016 and could have materially changed in the interim due to the introduction of new generation aircraft, for example.

16. The Applicant’s position is that noise contours do not necessarily translate to areas where significant effects are observed. This does not justify the lack of ground noise contours as they would still be of benefit in showing, clearly, the extent of the noise effects arising from his application.

17. It is not clear which scenario the promised ground noise contours are for; noise contours should be for the 92-day summer average, as other airport applications have provided. Providing separate set of contours for easterly and westerly contours does not permit any proper aggregation of air and ground noise, as has been requested by the Examining Authority.

Reference 7 (c)

18. In responding to an issue raised by CAGNE relating to the wind corrections used in the ground noise assessment, the Applicant states the following:

“Section 4.8 of ES Appendix 14.9.3: Ground Noise Modelling [APP-173] sets out the methodology employed for the wind direction correction in the ground noise modelling. Paragraphs 2.2.3 to 2.2.6 of ES Appendix 14.9.3 discuss the justification for employing the methodology. This explains that the ISO 9613 worst case assumptions are used for the Lmax levels reported. This is because the highest instantaneous Lmax may occur for any wind directions at any point in time.

However, for modelling Leq, 16 hr or Leq 8 hr night over an average summer day (ie the average over 92 days) this approach was considered too conservative because any given receptors would not be 100% downwind across the whole averaging period. This is particularly the case for an airport because the runway shifts direction to avoid aircraft operating in tail winds. For example, this means that a receptor due west of the airport and due west of a ground noise source can never be downwind during westerly operations when the wind is necessarily from the west. The wind directions and speeds used to model the average Leq condition in the 4 easterly/westerly, day/night scenarios are the average condition taken in each case from an analysis of 2018 summer season wind conditions, given in Table 4.8.1, noting the resultant hourly or daily Leq noise levels would vary around this.

Using this methodology a reasonable worst case has been modelled and assessed. Using the formula at paragraph 4.8.1 and the average wind conditions from Table 4.8.1 of the Appendix, corrections have been applied based on the relative vectors between each source and each receiver location. The figure below is an example of the corrections made for the daytime easterly operating scenario, for which the average wind is from a bearing 070 degrees, based on a fixed distance of 500 m between a source and a receiver.

Using this methodology a reasonable worst case has been modelled and assessed.”

19. The approach taken by the Applicant differs from any other airport expansion application and seeks to model the precise ground noise conditions that occurred in 2018. It does not however

model the reasonable worst case in the future, normally achieved using the wind corrections of ISO 9613, as has been adopted at other airport expansions. It therefore underestimates the noise effects, which in turn affects the number of dwellings that could be eligible for noise insulation.

20. We note that air noise contours are calculated using a headwind in all directions, again in the interests of being “conservative” (as with ground noise). The approaches adopted for the Applicant’s air noise assessment and ground noise assessment differ without justification.

Reference 7 (d)

21. In responding to issues raised by CAGNE relating to the noise insulation scheme and lack of high-quality mapping on figures, the Applicant states the following:

“Noted; the Applicant is in the process of reviewing the offer proposed in the NIS to take account of feedback received. Any changes will be detailed in the updated version of ES Appendix 14.9.10: Noise Insulation Scheme [APP-180] to be submitted at Deadline 3.

Paragraph 14.9.80 of ES Chapter 14: Noise and Vibration [APP-039] provides a link to the northern runway project air noise viewer which is an online mapping tool illustrating the boundaries of the Noise Insulation Scheme. The viewer also shows the various noise contours provided in the ES figures. This online resource was provided with the ES to allow interested parties to look in detail at noise levels in their location including eligibility for the noise insulation scheme. It includes a post code look up tool to facilitate this.”

22. We await the updated Noise Insulation Scheme details.

23. The online tool is not a substitute for proper figures clearly showing the extents of the noise contours that have been provided. We note that the ExA required the Applicant to provide such figures for the recent Luton Airport DCO and would expect the Applicant to do so here as well, especially given the level of reliance placed on comparing their application against Luton’s.

