

Technical Response to Airport's Commission Discussion Paper 05: Aviation Noise

Chapter 2 – How does noise affect people?

The Commission is interested in views on these issues. In particular, we would like to invite submissions, which shed light on any other relevant evidence, or research that the Commission should be aware of. Chapter 4 considers further techniques, which can be used to quantify the impacts mentioned in this chapter

Chapter 2 response

The authority would like to highlight the following reports by HACAN to the Airport Commission, in connection with the noise levels experienced by the working and resident population, in the areas affected by the flight paths serving London Heathrow and London City Airport.

- [Bureau Veritas Report for HACAN - Aircraft Noise and London Heathrow - Final Report](#)
15 July 2007
Final Report: Details of how things have changed between 1996 and 2005/6
- [Bureau Veritas Report for HACAN - Aircraft Noise and London Heathrow - Final Report - Appendix A](#)
15 July 2007
Appendix A: Containing maps showing landing patterns in 1996
- [Bureau Veritas Report for HACAN - Aircraft Noise and London Heathrow - Final Report - Appendix B](#)
15 July 2007
Appendix B: Containing maps showing landing patterns in 2005
- [Bureau Veritas Report for HACAN - Aircraft Noise and London Heathrow - First Report](#)
15 July 2007
First Report: Outlining measurements taken in south east and east London
- [Bureau Veritas Report for HACAN - Aircraft Noise and London Heathrow - Second Report](#)
15 July 2007
Second report: Further measurements taken in south east and east London, including different aircraft types

The Authority receives few complaints in respect of the arrival of the long – haul early morning flights waking people up in the south of the Borough.

Chapter 3 – Measuring aviation noise

The Commission asks the question "What is the most appropriate methodology to assess and compare different airport noise footprints?". For example:

- What metrics or assessment methods would an appropriate 'scorecard' be based on?
- To what extent is it appropriate to use multiple metrics and would there be any issues of contradiction if this were to occur?
- Are there additional relevant metrics to those discussed in this chapter, which the Commission should be aware of?

- What baseline should any noise assessment be based on? Should an assessment be based on absolute noise levels, or on changes relative to the existing noise environment
- How should we characterize a noise environment currently unaffected by aircraft noise?

Chapter 3 response

The Commission should ensure that the actual flight paths are used and, over the Greater London area, that the flights arriving and departing London Heathrow and London City airport are modelled together in order to obtain a baseline map for the assessments of the different proposals submitted to the Airports Commission.

The authority agrees that one of the noise assessments should include the current 57 L_{Aeq} , but the assessments should include the various EU noise periods i.e. day, evening and night and the combined periods producing the L_{DEN} value. The contours need to extend to include the 40 dB(A) $L_{eq(T)}$ value, where t = relevant time period.

The provided periods of respite for certain areas at certain times of the day are valued to the population around London Heathrow Airport. At the Institute of Acoustics conference 'Acoustics 2013' Nicole Porter (Anderson Acoustics) presented short term averages to show temporal patterns for the varying runway operating modes throughout a typical day at London Heathrow Airport. This provided clear information on "respite" periods. Therefore, providing the assessment of options with short term averages will provide further information on the effects of the proposals.

Chapter 4 – Quantifying noise effects

The Commission is interested in receiving views on all the issues raised in this chapter, but in particular, on whether the approaches here summarised are a fair representation of the current evidence base for the quantification of noise impacts and effects. In addition, the Commission is also keen to receive views on the following questions:

- How could the methods described in this chapter be improved to better reflect noise impacts and effects?
- Is monetising noise impacts and effects a sensible approach? If so, which monetisation methods described here hold the most credibility, or are most pertinent to noise and its various effects?
- Are there any specific thresholds that significantly alter the nature of noise assessment, e.g. a level or intermittency of noise beyond which the impact or effect significantly changes in nature?

Chapter 4 response

There is an acknowledgement that since 1990's there has been an increase in sensitivity of the population to aircraft noise over other noise sources. However, due to the uncertainty over the future expansion of London Heathrow, it will be difficult to assess the full impact of aviation noise on Londoners, unless the survey questionnaire can be designed to overcome any bias by careful wording.

Chapter 5 – Mitigation

The Commission would be interested to receive views on additional mitigation methods that may be effective or worth consideration, but in particular responses that focus on the following questions:

- To what extent is the use of a noise envelope approach appropriate, and which metrics could be used effectively in this regard?
- To what extent should noise concentration and noise dispersal (as described in paragraph 5.17) be used in the UK? Where and how could these techniques be deployed most effectively?
- What constitutes best practice for noise compensation schemes abroad and how do these compare to current UK practice? What noise assessments could be effectively utilised when designing compensation arrangements?

Chapter 5 Answer

Not until the ANIS study is updated to reflect the current sensitivity of the population to aircraft noise can the concept of noise envelopes be applied to restricting the overall noise impact of an airport within any authority. The metrics used will depend on the outcome of the new study.

