Response from the Greenwich Society to the Discussion Paper 05 on Aviation Noise from the Davies Commission

The Greenwich Society is a local amenity society with about 800 individual members. It aims to make Greenwich a better place for all who live, work and study there; to protect the town's heritage; to improve its amenities; and to make it attractive for visitors.

Greenwich is significantly affected by aircraft noise associated with aircraft arriving at Heathrow, as can be seen from the distribution of complaint sources, despite being a long way outside the contours used by the DfT to measure the area so affected. We are not overflown by City Airport traffic, nor by Heathrow traffic with easterly operation, but with westerly operation – which occurs for about 70% of the time – the resulting noise frequently dominates the acoustic environment. With reference to our response to the question about additional relevant metrics, noise event histograms would reveal the extent of the noise intrusion.

In this submission, we will refer several times to the policy statement made in the DfT publication "Aviation Policy Framework", March 2013: "Our overall objective on noise is to limit and where possible reduce the number of people in the UK significantly affected by aircraft noise" (Executive Summary, para 17, and under Policy objective, para 3.12). Several of the questions in the Discussion paper are inconsistent with that policy. For brevity, we refer to that policy statement as "Policy A". We comment on a number of questions in the discussion document, followed by notes on additional issues.

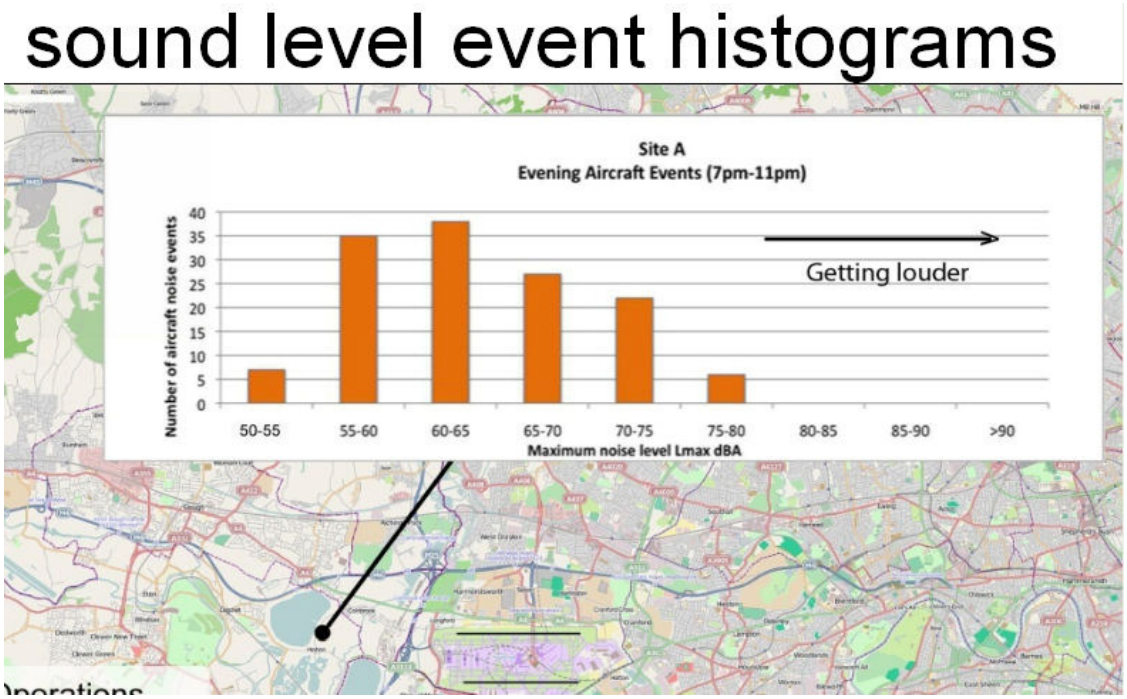
What is the most appropriate methodology to assess and compare different airport noise footprints? For example: What metrics or assessment methods would an appropriate 'scorecard' be based on?

To what extent is it appropriate to use multiple metrics, and would there be any issues of contradiction If this were to occur?

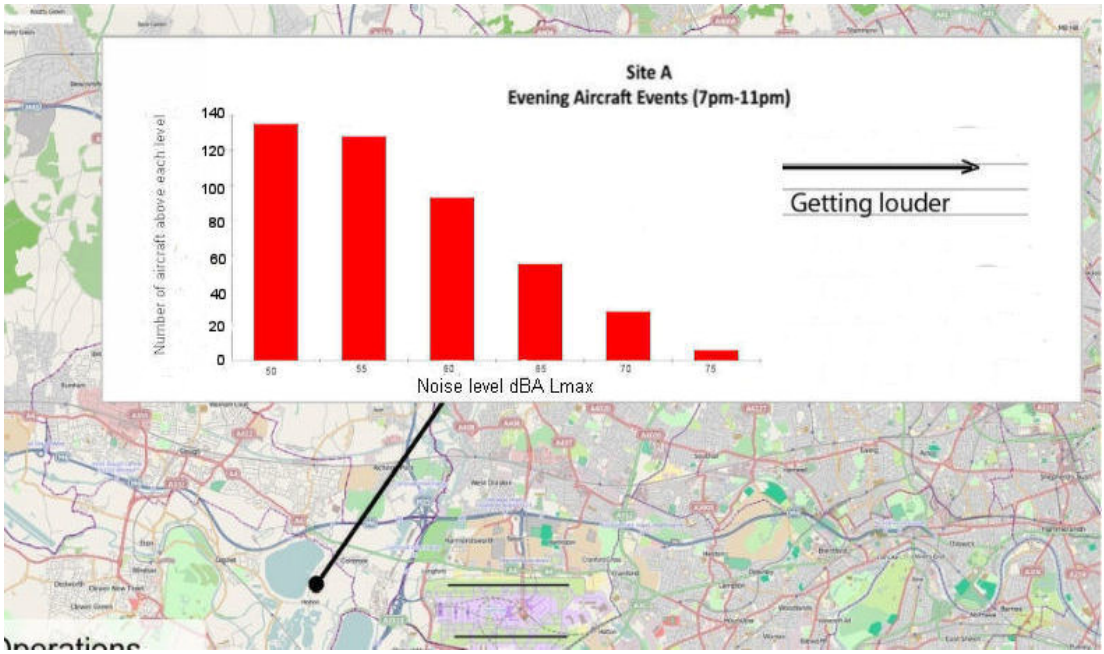
Are there additional relevant metrics to those discussed in Chapter 3 which the Commission should be aware of?

How could the assessment methods described in Chapter 4 be improved to better reflect noise impacts and effects?

Research carried out for the BAA by the Omega Consortium during 2011 and presented to the Heathrow Airport Noise and Track Keeping Working Group (NTKWG) in November 2011 by Ian Flindell showed that there is a clear difference between metrics used for overall noise assessment or regulation and metrics relevant for residents living under flight paths, and that sound level event histograms show most of what people are actually interested to know. In the light of Policy A, it follows that regulation should be based on what people are actually interested to know, i.e. sound level event histograms. Here is an example taken from Mr Flindell's presentation - such histograms are used in the airport's community noise reports:



Here is an alternative presentation showing the same data in cumulative form:



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?

Because the attitude to noise varies so much between individuals, care should be taken not to set any baseline at a level higher than acceptable to a small minority of the population affected. In general, even a small number of complaints indicate that there is a noise problem..

How should we characterise a noise environment currently unaffected by aircraft noise?

According to background noise and any other noise characteristics for that environment.

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?

Probably not, because so many other factors affect residents' decisions about where to live.

Are there any specific thresholds that significantly alter the nature of any noise assessment, e.g. a level or intermittency of noise beyond which the impact or effect significantly changes in nature?

Comments from our members suggest that four aircraft noise events per hour – including both fixed wing aircraft and helicopters – might be such a threshold. Some research on that suggestion might be useful.

To what extent does introducing noise at a previously unaffected area represent more or less of an impact than increasing noise in already affected areas?

It is unrealistic to expect any consensus regarding that question, and either course would conflict with Policy A. The question is therefore inadmissible.

To what extent is the use of a noise envelope approach appropriate, and which metrics could be used effectively in this regard?

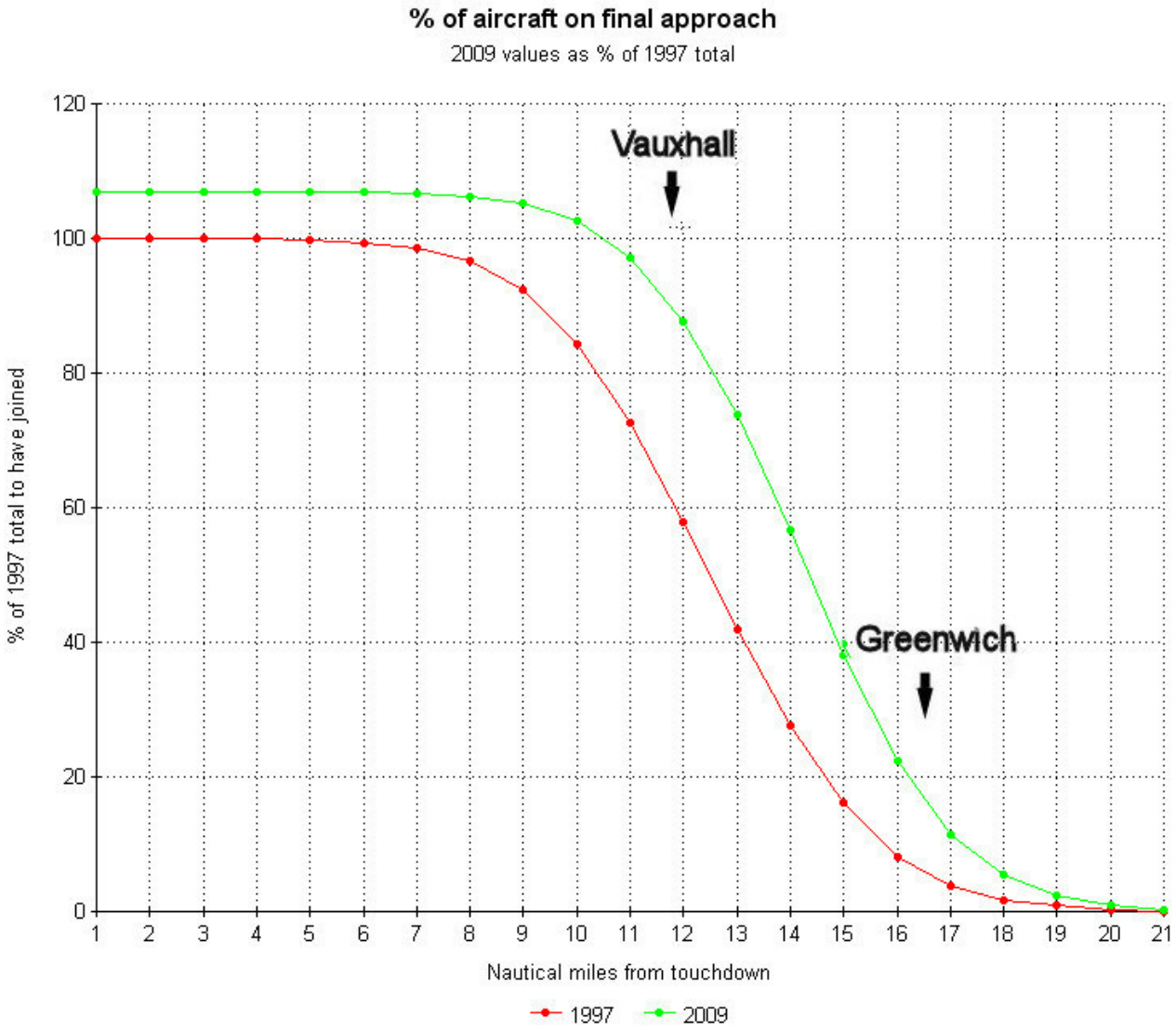
The principles lack clarity. They are too vague to merit considerations as being appropriate. Furthermore, any form of noise envelope would seem to be inconsistent with Policy A. If noise envelopes are used, noise event histograms should be the preferred approach, and any airport development should match the best in Europe, rather than being by far the worst, as is the case at Heathrow, where the "noise impact easily exceeds the combined impact of all the other hub airports in Western Europe" (DfT Draft Aviation Policy Framework, July 2012, para 4.5). Mitigation of noise disturbance caused by Heathrow should therefore have high priority.

.

To what extent should noise concentration and noise dispersal be used in the UK? Where and how could these techniques be deployed most effectively?

The more effective use of airspace, and the use of improved technology to position and guide aircraft with more precision, should give opportunities for more dispersal, which should be used whenever possible. That is a critical issue, not just for those living within a few miles from Heathrow. It has also, in recent years, become extremely important for those living much further away but still under the flight paths, such as at Greenwich. Aircraft are now regularly joining the approach flight path over this area, and they converge on it from both North and South. This means that for periods in the day, often lengthy, there is an aircraft overhead every 90 seconds, and a further 2 or 3 aircraft can be seen approaching the turning-in point before joining the final approach.

The comment in the Draft Aviation Policy Framework, July 2012, para 4.53, about alleged good work by the industry in regard to "varying the point where aircraft join final approach before landing [to] address the problem of approach noise" is an idea that should be developed. At present it is inconsistent with the practice at Heathrow, where approach paths are merely the result of trying to achieve the maximum rate of arrivals. Over several years the point where aircraft join the final approach has moved further away from Heathrow, as shown by the attached plot of data supplied by the BAA, and that has resulted in increased concentration of arrivals in this area:



Additional Issues

1. It might be noted amongst aircraft currently operating, the most offensive in the intermediate approach phase is the Airbus A320 family, the noise spectrum of which is characterised by a distinctive "whine" in the range 500 to 630 Hz. According to the CAA/ERCD, March 2005, ICAO was currently reviewing the noise certification process with the UK chairing that task. One item identified was consideration of a possible supplementary approach noise certification point more distant from the airport, where the aircraft would be in a configuration much more similar to that overhead at Greenwich than is required by the current demonstration test. That work was later discontinued because the industry did not want it. Eight years later, the situation has not changed and should be examined afresh. The cause of the "whine" should be investigated with a view to mitigation of the effect on both new and existing aircraft.

2. At present the industry's Arrivals Code of Practice is a muddle which allows aircraft to be assessed as descending continuously when they are not. CDA should be defined in accordance with the CAA Consultation on Future Airspace Strategy June 2011 "the descent profile will need to be a continuous low power descent based around a suitable descent gradient from Top of Descent".

3. It is now approaching 10 years since the “Knowledge Integration Community” on the “Silent Aircraft Initiative” was formed, with UK Government funding. The target, in fuel-efficient designs, was a reduction in aircraft noise by 25dB relative to current aircraft so as to be “imperceptible outside aircraft perimeter in an urban environment”. That would solve a number of problems.

Roy Easson
HACAN representative on the Heathrow Airport NTKWG
On behalf of the Greenwich Society
25 Gloucester Circus
London SE10 8RY.