

Airports Commission Submission

Discussion Paper 05: Aviation Noise

Part 1: Initial Comments re Aircraft Noise/Chapters 1 and 2

Aircraft noise has long been a major source of concern for my constituents, generating significant correspondence. Overwhelmingly my constituents find aircraft noise intrusive, particularly the early morning noise from aircraft landing routinely from as early as 4.30am every morning.

Currently the half day respite of flights from runway alternation provides residents with a break from aircraft noise of planes otherwise overhead every 90 seconds. Given a plane can be heard perhaps 30-40 seconds before it is immediately overhead and then a further 30-40 seconds as it continues past, outside of runway alternation periods, there is some aircraft noise most of the time. As Chapter 1 sets out clearly, aircraft noise disperses more slowly than other noise. The current half day respite of 8 hours (out of 24) when no planes are flying overhead is invaluable in retaining a quality of life for my community.

The issue of noise has always been dominant in decisions regarding Heathrow expansion. No further runways at Heathrow was an express condition that the Planning Inspector, Roy Vandemeer QC, set on Heathrow Airport owners, BAA, at the time that his consent was given for a fifth terminal.

My constituents include many of those who work in the City and also use Heathrow. Nevertheless, we believe that a balance ultimately needs to be struck between the needs of the airport to function but also local residents' needs to have some day to day quality of life. Retaining a quality of life for London's workers is also critical for London's economy. The City and London is the sum of its people working there – many live in Putney. We, they, are London's economy – the people who drive it forward every day.

The impact of noise is disturbed sleep, particularly from early morning night flights, and intrusive daytime noise, particularly when outside. The flight paths go directly over our key local amenities, the River Thames, Putney Heath, Richmond Park and Wimbledon Common.

I will not reprise the various studies the Discussion Paper refers to in Chapter 2 that set out the other measured and researched impacts of noise on childrens' education, broader health issues and worker productivity, suffice to say they are well documented, understood and real issues that should not be dismissed.

The Discussion Paper also notes in Chapter 2 the previous research carried out into how noise annoys people. The most recent ANASE study into noise annoyance had some debate over its methodology. It is clear that getting any precise science to understand noise annoyance is challenging. Even so, the ANASE findings did suggest broadly that people were getting more annoyed from noise at lower levels of noise. This finding mirrors the areas that generated significant responses from London residents to the last government's Heathrow third runway proposal.

I believe this strongly shows that taking a traditional 57dB approach to assessing the level of noise annoyance from any new aviation strategy will exclude a large number of people who will be annoyed and affected but live outside of the 57dB noise contours. At a minimum, the Commission must review noise impact using the 54dB or 55dB level and consider sensitivity analysis at lower levels as well.

For Heathrow, the population within a 55dB Lden contour is over 700,000 people compared with less than 300,000 inside the old 57dB Leq contour. Therefore to use 57dB will be ineffective in capturing the likely noise impact experienced on the ground.

In terms of noise avoidance for populations nearby and given wind direction, Heathrow airport is in the worst possible place, being on the west of our capital city. This is reflected in the exponential number of people affected compared with any other London airport. The table below shows how striking this is, as well as the disproportionate number of people within the 55dB Lden contour for Heathrow:

London Airport Population under 55dB Lden Contour

Heathrow	725,000
London City	12,200
Gatwick	11,900
Stansted	9,400
Luton	8,600

Heathrow has 60 times more people affected by 55dB or more noise than London's next biggest airport Gatwick with fewer than 12,000 people within the 55dB contour.

Looking at the overall numbers of people in the UK within a 55dB contour due to their proximity to an airport, Heathrow accounts for **70%** of all people.

Part 2: Comments in relation to specific Chapters:

Chapter 3 and 4

Chapter 3, in particular paragraph 3.5, clearly sets out that the definition of noise is inextricably linked to human experience, and it is therefore sensible to look at how many people are affected by aircraft noise and also how much. The World Health Organisation research shows that it is both individual instances of noise and ongoing noise – ie a continuous rumble, that can be disturbing to people.

The noise mapping currently used does provide some insight into the impact of aircraft noise on the ground.

The Discussion Paper asks what metrics and methods should be used to assess different airport noise footprints.

On the conventional approach of noise mapping, I have set out above that I believe a 57dB contour assumption as the onset of noise annoyance is inaccurate and that 55dB Lden or 54 Leq should be used as the onset threshold, with sensitivity analysis at a lower level. Regarding the appropriate noise measurement approach, the Paper sets out the drawbacks to Laeq16 and I support the additional analysis of looking at the so-called N contours approach used in Australia. This approach can better capture the extent of flyovers disturbing people. For example an N55 contour would sensibly look at the experience my own community has. If combined with a 55dB Lden or 54dB Leq approach the two could work effectively, and be considered in tandem.

The lower 55dB Lden or 54dB Leq threshold would mirror the EU approach on airport noise action plans, and also enable better comparison across other UK and European airports.

For any aviation strategy options that see night flights banned, or noise essentially limited to daytime hours, then 54dB Leq would be more appropriate than 55dB Lden.

The "airport efficiency" approach used in Figure 3.4, showing proportionately how many people are affected per plane and per passenger, provides an extremely valuable insight. I believe a comparable analysis on 55dB Lden or 54dB Leq would show an even starker reality on Heathrow's noise efficiency. If Heathrow continues as a future UK hub and needs significant numbers of new runways eg six, then aside from the population displacement needed to build in such a heavily developed area, we would potentially rapidly reach a point where the extent of London flown over becomes practically the entire population. That would risk making our capital city a place where people do not want to live.

Getting extra capacity from the aviation strategy by continuing to expand Heathrow is not only by far the least efficient way from a noise efficiency perspective, it also magnifies the error of Heathrow's poor location for our UK hub airport even more.

The Labour government's proposals for a third runway would have seen an additional 55-60,000 people around Heathrow affected by noise over 54dB Leq by 2020¹. That is fivefold higher than the impact of existing runways at Gatwick or Stansted.

The Victorians faced similarly important and challenging decisions on transport and wisely protected Londoner's quality of life and environment by building the city's new mass transportation system underground. If Heathrow expansion is allowed I believe it will be one of the biggest planning and transport strategy mistakes of this century, irreversibly blighting Londoners quality of life forever.

The noise efficiency approach also provides a powerful and concerning proxy for the "community safety efficiency" of an airport, if any plane was to crash in the vicinity of the airport prior to landing or post take off. Any such incident at Heathrow would be likely to prove catastrophic for those on the ground as well as those on board. Recent incidents have shown that however good Heathrow's safety record, human error alone means that risks can never be managed down to zero. In addition to that, aviation clearly faces other risks, not least terrorism. Even one accident could be catastrophic not only on loss of life but also London infrastructure. The higher the absolute number of aircraft movements, the higher the danger that even a "extremely low probability" event may occur. We cannot beat the odds forever.

Regarding the Paper's question on baseline in Chapter 3. I believe baselining should be from the perspective of the extent of "aircraft noise free time" people have.

The baseline for my community is having 8 hours of aircraft noise free time out of 24 hours every day. Those living away from airports have 24 hours of aircraft noise free time.

Regarding the question in Chapter 4 as to how to look at the introduction of noise in a previously unaffected area, I think it comes down to science and fairness.

Often the argument is made that people who already have some aircraft noise should have more, and those who have none will be particularly disturbed by any "new" noise. This argument is scientifically flawed. Flawed, because on average, it is hard in the first place to argue that one person's hour of identical noise inflicts anything worse on one person than on another person, so annoyance is equal (other than the general point that individuals can be more or less sensitive)². It is also flawed because of the scientifically based fact that people have a noise tolerance limit – an "onset of noise annoyance" regarding the level of noise and how long it goes on. So although on average noise should be equally disturbing to everyone, there is a level and an extent beyond which extra noise becomes annoying. Therefore communities which already have more noise are either closer to, or already beyond the point at which they become annoyed. Taking another hour out of my community's remaining 8 aircraft noise free hours is more likely to take more people over a noise annoyance threshold as to what they can put up with, than taking an hour out of another community's otherwise aircraft noise free 24 hours. By definition, given the extent of noise we already have there are more people at the margin of the onset of noise annoyance. And, adding an hour of "annoying" noise above a noise annoyance threshold must be worse than adding an hour of non-annoying noise below a noise annoyance threshold. Scientifically, those communities currently with no noise will only be as annoyed with aircraft noise as my community is when they have as much noise as my community has. Until that point they will be less annoyed, by definition.

Additionally, it simply comes down to fairness. If you expect to fly, you should expect to pay the costs – not only the ticket but the environmental costs too ie noise and pollution. It is inequitable to expect to consume more flights but have others pay the environmental price you yourself are unwilling to pay.

Chapter 5: How to Approach Mitigation

Taking the arguments above, and the Sydney airport case study, both suggest that, for the Airports Commission overall aviation strategy, the most efficient aviation strategy regarding extra capacity will:

¹ Table 8, page 71 "Adding Capacity at Heathrow Airport", DfT Consultation Paper, 2007

² It is not appropriate to get into a debate as to whether one person's hour of annoyance, is more or less valuable than another person's.

- Step 1. Achieve “best in class” noise performance for each airport under consideration: For any given airport noise footprint, minimise noise annoyance for extra, and ideally existing flight paths - use flight paths to optimally spread noise to minimize the number of people who experience noise above the level where the onset of noise annoyance occurs – i.e at least 55db.
- Step 2. Optimise down extra noise annoyance from extra capacity across airports: Minimise the number of extra noise annoyance of 55dB or over by having extra noise happen away from people rather than close by;

If step 1 is not viable, due to the rigidity of existing flight paths, then step 2 still logically holds.

Recognition of clear, independently monitored and rigorously enforced respite periods is vital and must be combined with a minimised frequency of planes overhead for any given community – i.e rumble management, based on the Sydney airport experience, and the Australian N+ approach.

From a purely efficient economic consumption perspective, matching economic “goods” – (i.e being able to fly), with economic “bads” (i.e noise, pollution) is more effective in driving responsible consumption than decoupling them. Given the overall environmental “bads” created by flying, not least noise, carbon emissions and pollution, arguably consumers will take more sensible choices as to whether to “consume” more flights if they face paying corresponding “bads” alongside that.

I would like to see the Commission carry out more analysis or assessment in relation to the onset of noise annoyance due to the length of noise - the persistent “rumble” of aircraft noise overhead and how long communities have to bear it each day. The case study of Sydney is interesting as it suggests that in that case, dispersal was much more effective in minimising overall annoyance, presumably because it minimised the numbers of people whose experience of noise was above the onset of noise annoyance. However, there is little understanding of the extent to which reducing noise overhead from, for example, the current every 90 seconds to every 3 minutes (ie 180 seconds) proportionately or disproportionately reduces noise annoyance by say, in that instance, a half, or whether a different relationship holds.

The Commission could also carry out high level work to look at the potential to optimise the noise footprints of existing London airports.

Looking at this in the context of extra aviation capacity in London and Heathrow, it is clear that expansion at Heathrow is the worst possible way of achieving a noise efficient capacity increase for the UK. With 60-fold more people under the 55dB Lden noise contour compared to Gatwick, and nearly 80-fold more than Stansted as examples, even with an “optimised” Heathrow noise footprint, the impact of expansion on people on the ground compared to other airports will be entirely disproportionate compared to expansion at any other airport.

Part 3: A Broader Approach to Aircraft Noise and producing an Aviation Strategy that can be successfully implemented

This matters because overcoming the issue of how to handle aircraft noise and pollution in particular are necessary for any successful aviation strategy. As we have experienced, failing to properly address concerns over aircraft noise has effectively led to Heathrow expansion being opposed by all major and most minor political parties and both of London’s Mayors. It has proved politically undeliverable. Given that any aviation strategy will take at least three Parliaments to be delivered, “political resilience” is a prerequisite for any successful aviation strategy.

Previous attempts to provide capacity in the South East have failed because incoming governments have reversed the decisions of their predecessors, eg Wilson government reversing Maplin Sands estuary airport decision in 1974, Coalition government reversing Labour’s third Heathrow runway decision.

The only area where there is political consensus is against a third runway at Heathrow. None of the three major parties is advocating a third runway at Heathrow. Politically, as an option it is as far away from having consensus to go ahead with it as is possible. In Coalition government, consensus may well have to be found within government, before it can be achieved via agreement with the Opposition.

Consequently, the Airports Commission should rule out further expansion at Heathrow as an option.

If expanding Heathrow is not a politically deliverable project then alternatives, and those that are more politically resilient and could get political consensus, must be looked at instead.

In this final section, I will make brief comments regarding the supply and demand side factors I believe the Commission needs to consider and then conclude with the strategic options those then drive.

Supply-side Factors.....:

Assumptions into the future regarding supply-side factors have too often proven to be wrong. Most have either mis-predicted the future cost base of the industry (eg during the oil crisis of the 1970s when it was assumed peak oil prices would persist, or mis-predicted the potential for the structure of the industry to change (e.g the entry of the low cost provider). If there are any major technological advances on speed of travel – e.g if major long haul routes became possible in short haul style times, or the new design Dreamliner became dominant making existing long haul flights more viable with fewer passengers, we could see another major structural shift in the industry on the supply-side.

....and Impact on Demand and Capacity Requirements:

In a highly competitive industry we have seen supply-side factors quickly translate into pricing and consequently demand. It is hard to see anything other than a rapid rise in air travel to, for example New York, if the flight time became 4 hours rather than 7-8 hours.

In the case of the Dreamliner development enhancing point to point route viability, this could see the value of a hub airport, where passengers for lower demand or longer haul more expensive destinations are aggregated by the hub to optimise the network, lessened by comparison to its importance in today's aviation network.

Additionally, though night flight restrictions are rightly in place to protect communities on the ground, in the case of an airport well away from people, the market may be there for a 24 hours a day operation. Many airports operate with flights leaving at early morning hours eg Riyadh, Dubai, so there is a market elsewhere. Any 24 hour operation could presumably improve airport charges per aircraft movement by spreading infrastructure charges across more flights, and in turn improving competitiveness compared to other EU competitor hubs.

Future-proofing UK Aviation Capacity

The UK's aviation strategy also has to answer the simple but critical question as to how "futureproofed" it wants to be. Should we have an aviation strategy that can meet a demand-side scenario that is well beyond that which we can envisage today? If at all possible it should because our previous experience is that we underestimate future demand and fail to see the future strategic shifts in the industry that can trigger demand growth.

Hub Airport or Multi-airport Strategy

Beyond that, the key issue is then the hub argument, and whether rising demand, combined with technological progress, eg Dreamliner or other technological/industry advances, will mean that point to point travel becomes increasingly dominant over the traditional hub and spoke network.

Looking at factors other than the pure network benefits of a hub if we were, in a future world where point to point travel dominates more, with passengers avoiding the cost and inconvenience of hubbing, then having previously locked into a hub strategy of locating all the extra runway capacity needed in just one place could easily be suboptimal:

- Resilience: Less resilience under the single hub strategy, in the event of the major airport being inoperational;
- Transport pressure: Greater pressure and dependency on one point of London's transport system, rather than spreading extra passenger driven travel from extra demand to several airports;

- Economic concentration: Less widely spread economic benefits in terms of growth and jobs that airports can bring;
- Market Competition: Less competition in the airport industry and potentially between airline alliances, creating the usual problems with a monopoly provider.

Under this point to point travel scenario and using the approach on noise mitigation I set out in the previous section, then considering adding extra runways at existing airports, eg Gatwick and Stansted, and setting out which airport would take further runways beyond that as demand determined, makes sense. This multi-airport strategy could also provide a medium term approach to capacity whilst the evolution of the market between hub and point to point became clearer to assess.

Conversely, if the assessment is that the hub airport benefits are so overwhelming that aggregating runways in one place makes strategic sense, to be politically deliverable it will have to be done so as to minimise noise on as few people as possible and then minimised on those affected, to ensure that the numbers experiencing noise above the level of the onset of noise annoyance was as low as possible.

This points to either expanding an existing airport but one that is away from dense population, or building a new hub airport in a new location, again, away from dense population.

For a hub airport strategy approach to UK aviation capacity, due to unstrategic expansion allowed at Heathrow, we are now at a stage where any such proposal has significant drawbacks and we face a challenge of working out the least bad option.

As a hub airport which may quite likely need several more runways, Heathrow is simply in the wrong place. It has insufficient space and too many people around it to have any meaningful, long-term hub role for our country. For many this is a deeply inconvenient truth, but it is time to face the fact. As with previous attempts to add capacity at Heathrow, expansion on any scale, let alone the scale potentially required over the coming decades is politically unviable.

London's Mayor has now developed further proposals on a new hub airport which merit serious consideration and others may propose turning other existing London airports into long-term hubs. These all need to be properly assessed and considered by the Airports Commission.

Above all, whether a multi-airport, or a hub airport approach to strategy, the UK needs a medium and long term aviation strategy that is deliverable. Choosing a strategy that seems optimal but politically undeliverable, delivering 0% of its planned capacity, would be disastrous for our economy. The UK aviation strategy has to be rooted in what is politically achievable and therefore actually deliverable. Having another "non-strategy" of tactical incremental expansion at Heathrow, in other words more of the same will generate more of the same results – eg nothing.

It is time to think clearly about what has held us back, therefore to tackle the concern of aircraft noise seriously and think for the long term.

As Albert Einstein said:

"The definition of insanity: doing the same thing over and over again and expecting different results."

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