

## Response to the Airports Commission: Aviation Noise Discussion Paper

Submitted by Mary Macleod, MP for Brentford & Isleworth

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### Introduction

As a local Member of Parliament, whose constituency is under both Heathrow flightpaths, I believe it is important for me to ensure that the voices of local residents are fully heard in this debate on UK aviation, particularly when it comes to the issue of aviation noise.

In the Aviation Policy Framework, the Department for Transport (DfT) accepted that “noise is the primary concern of local communities near airports”. I therefore welcome the opportunity given by the Airports Commission to respond directly on this issue and for the detailed analysis it is undertaking to objectively understand the impact on the quality of lives of local residents as part of its assessment of UK aviation capacity proposals.

Given that I am a West London MP, my comments predominantly relate to the future of Heathrow airport, however I do believe it is important that we consider the full UK aviation map when assessing future options for the industry.

I have been involved in the Heathrow debate for many years now and have consulted many hundreds of residents. Overall, my aspirations are for a ‘better, not bigger’ Heathrow, with continued respite from noise from runway alternation and a ban on night flights.

In summary, my views on aviation noise are as follows:

- Planning permission for Terminal 5 was giving only with a proviso that further expansion of the airport would not be allowed. This commitment should be honoured.
- The noise impact of Heathrow airport is already significantly affecting the quality of lives of local residents and any future plans involving an increase in aviation noise should not be tolerated.
- There may not be consensus about the best approach to measuring aviation noise but there is sufficient evidence to recommend that changes must be made to the way that aviation noise is measured. As a minimum, additional approaches should be employed to better reflect the reality of the way that people experience aviation noise.
- Aviation noise from night flights is the biggest cause for concern and I want to see an operational ban on night flights between 23:30 and 06:00.
- All measures for reducing the impact of aviation noise on local residents should be considered including new operational measures for take-off and landing, dispersed flight paths and operational bans on the noisiest planes. Runway alternation provides a critical respite for local residents and must be maintained, with improved communication in emergency situations that require it to be broken.
- Noise compensation schemes for residents living around Heathrow are woefully inadequate when compared to the best of what’s on offer internationally. Local residents should receive consistent noise compensation regardless of which UK airport they live near and the standards should be in line with international best practice.

More detailed points are given below under the following sections:

- Summary of the existing impact of aviation noise at Heathrow
- Review of noise assessment methodology
- Night flights
- Noise reduction approaches
- Noise compensation schemes

### Summary of the existing impact of aviation noise at Heathrow

I welcome the Government's statement on aircraft noise in the Aviation Policy Framework that its "primary objective is to limit and where possible reduce the number of people significantly affected by aircraft noise".

In 2011 a CAA study reported that almost 30% of people unduly affected by the noise of aircraft across the whole of Europe live under the Heathrow flightpaths. This figure has now been validated by the Airports Commission own discussion paper that shows that Heathrow is in a league of its own when it comes to aircraft noise.<sup>1</sup> Even these figures may underestimate the number of people disturbed by the noise at Heathrow – I have received emails from people disturbed by planes flying into Heathrow from as far away as Blackheath, south-east London, some 20 miles from the airport!

Teachers in the Hounslow area already find that noise from Heathrow reduces pupils' ability to learn by a third and have resorted in some cases to using noise insulated 'igloos' to give children respite from the constant disruption.<sup>2</sup>

Estimates of the number of people that would be affected by aircraft noise should Heathrow be expanded have varied but are typically somewhere between one and two million. The Mayor of London, Boris Johnson summed this up when he described any potential expansion of Heathrow as an "environmental disaster".<sup>3</sup>

### Review of noise assessment methodology

The measurement of aviation noise is fundamental to any assessment made by the Airports Commission of future aviation capacity.

Humans do not respond to sound in a proportionate way, thus if sound energy is halved exactly, our ears do not perceive it as being exactly half as loud. That is why sound is measured on a logarithmic scale – the decibel (dB). The important point to take from this is that it would take a significant amount of noise reduction from aircraft engines and airframes to make any perceivable difference to humans on the ground. If, at the same time, the number of flights is increased, this objective becomes yet harder to achieve. As the discussion paper rightly points out, it is the number of flights and not the 'average' noise levels of flights that leads to noise disturbance for residents.

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<sup>1</sup> <https://www.gov.uk/government/publications/aviation-noise-discussion-paper>

<sup>2</sup> <http://www.hounslowchronicle.co.uk/west-london-news/local-hounslow-news/2013/04/15/heathrow-noise-reduces-pupil-learning-by-third-109642-33177122/>

<sup>3</sup> <http://www.bbc.co.uk/news/uk-politics-17510021>

There is widespread evidence that the existing measure of the threshold of annoyance, at 57dbLaeq16h (57 decibel), is inaccurate and misleading. This measure should be maintained only for historical comparison purposes and should not be used as the main measure for assessing future aviation capacity models.

There are a number of key flaws in the way that noise annoyance is currently measured:

- Noise is averaged out over a 16 hour period which underestimates the noise that people hear as it includes quieter periods of the day. It also excludes the period between 6-7am which is the busiest hour of the day. Using this method, the noise annoyance from 1 Concorde every four hours would be the same as 3 hours and 58 minutes of 757s flying overhead at 2 minute intervals – clearly not the reality!
- Insufficient weight is given to the number of planes flying overhead.
- The measurements do not include areas outside the 8.5 mile radius from Heathrow that have been significantly impacted since changes in the flightpaths in 1995/6.
- The point at which people are said to become annoyed by the noise is unrealistic. In the current model, it is claimed annoyance only sets in when the noise averages out at 57 decibels across the 16 hour period. This would exclude places like Putney and Fulham and I know residents would disagree with this assessment.
- The low-frequency content of aircraft noise is likely to be underestimated and it is this low-frequency noise that is most annoying. A study carried out by HACAN in 2003 suggested that the reason people may not be responding positively to the 'quieter' planes because aircraft noise improvements have been mainly in the mid to higher frequencies.

With regard to the alternative noise assessment approaches outlined in the discussion paper, I would like to make the following observations:

- **EU 55Lden** – despite the concerns raised in the discussion paper that the approach taken by this metric to add decibels to the evening and night periods may not be an exact science, this approach is closer to the reality of how people experience noise than the current 57LAeq metric. Consistent comparison with other EU countries would also be a significant benefit of adopting this measure.
- **WHO 50LAeq and 55LAeq** – this measure reflects the WHO guidance that noise annoyance starts at 50 decibels with 'severe' annoyance at 55 decibels. It is closest to the findings of ANASE, the most recent Government study into the impact of aviation noise and should therefore be considered as an additional metric.
- **N70** – following its trial in Sydney airport, it was shown that the general public more readily understand this measure that provides a metric for the number of aircraft passing overhead that reach or exceed a 70 decibel level within a given time period. For this reason, it should be considered as an additional metric.
- **Noise efficiency** – I suspect that this measure would not be as readily understood as the N70 above and does not significantly add to the measures of EU 55Lden and the WHO measures.

## Night flights

Aviation noise from night flights requires special consideration - I spoke at length on this subject in my Westminster Hall debate on Night Flights at Heathrow on 24<sup>th</sup> May 2011.<sup>4</sup>

On average there are 16 flights arriving or departing during the night quota period at Heathrow. The average occupancy of planes at Heathrow is around 70% and the predominant aircraft in use during the night period is the B747-400 (with a capacity of 345), which equates to just under 3,800 passengers per day. And yet, for the supposed extra convenience of less than 4,000 people per day, at least 750,000 people around Heathrow and more beyond are impacted by the noise of these flights – this equation just doesn't add up!

The existing noise levels at night are too high and are decreasing too slowly. At the same time, there is significant population growth in the southeast with the result that an increasing number of people are being affected by aircraft noise. World Health Organisation (WHO) guidelines recommend a sleep period of at least 8 hours for most people. Continued night flights mean that the WHO guideline limits are not being met. Noise from night flights has been shown to damage health and particularly affects vulnerable people - children, the chronically ill and the elderly.

A large proportion of those who currently travel into Heathrow on a night flight will end their journey in the UK. There are alternative flights from these destinations that arrive during the daytime period. It is highly likely therefore, that these passengers would not cancel their flights to Heathrow if flights during the night flight quota period were banned.

There is a growing trend towards the banning of night flights e.g. Frankfurt, Zurich, Sydney, London City. I would like to see a ban on all night flights during the night quota period from 23:30 to 06:00, with restrictions being applied during the 06:00-07:00 period.

Residents living in my constituency have borne a considerable burden when it comes to disturbance from night flights over the years. During the transition period towards a ban, I believe it would be fair to consider how best to route flights to affect the minimum number of people. Planned periods of respite for particular communities should be incorporated into any new system.

Given the availability of modern, quieter planes (like the A380 which has a noise quota of QC/0.5 on arrival and QC/2 on departure), an operational ban on QC/16 and QC/8 planes should be feasible and implemented as soon as possible.

I also believe that landing fees can and should be used to a much greater extent to incentivise the use of quieter aircraft during the night period during the transition period to an operational ban.

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<sup>4</sup><http://www.publications.parliament.uk/pa/cm201011/cmhansrd/cm110524/halltext/110524h0001.htm#11052452000272>

## Noise reduction approaches

There are a number of ways that the impact of aviation noise from Heathrow could be controlled to reduce the adverse impact on residents' wellbeing. I would like to see some significant recommendations from the Airports Commission on how this should be addressed.

The International Civil Aviation Organisation (ICAO) balanced approach to noise management has four elements: reduction at source; land-use planning and management; noise abatement operational procedures and operating restrictions. I believe all of these approaches are necessary to address both the existing and future noise issues at Heathrow.

Increasing the angle of descent into Heathrow would be a welcome development, particularly if this would result in planes flying higher over most communities and lower over none. However, a continuous steeper angle of descent would be required – if there was a change in the angle of descent close to the airport, communities living near the airport could be subjected to increased noise which would not be acceptable.

New technology enables the guiding of flights much more precisely as they land and take off. This would enable the noise to be 'shared out' more equitably between communities, rather than the existing model in which residents in my area bear too much of the noise burden.

Providing communities with planned periods of respite through runway alternation is the most significant noise mitigation measure available and should be maintained. I believe that residents would welcome greater clarity on the issue of runway alternation, perhaps through legislation. In addition, greater use of real-time communication would also be appreciated by local residents, particularly when periods of respite have to be broken due to operational emergencies.

It is also important to ensure that the most effective noise monitoring techniques are employed to assess the noise of planes throughout the course of their journey. For example, if airlines and manufacturers only target the ICAO measuring points that are relatively close to the runway, it is possible that aircraft noise could be neglected at other points of the journey. Some HACAN members have argued, for example, that at some west London locations, the supposedly quieter A380 can sometimes be noisier than the old 747s it is replacing.

I look forward with interest to the CAA report into the use of differential landing charges to take account of the noise performance of an aircraft. I believe landing charges, if used effectively, could provide a valuable incentive for airlines to update their fleet for more modern, quieter planes.

On the subject of 'noise envelopes', I believe that local residents will be extremely wary of any measures that might result in breaking the cap on the number of flights at Heathrow.

## Noise compensation schemes

There should be consistency across the airports in the UK in terms of what noise level is considered appropriate for mitigation to apply. In general, the schemes offered at Heathrow and across the UK should be in line with international best practice. The comparisons given in the discussion paper show that the level of noise mitigation provided to residents living near Heathrow is currently significantly below that standard.

I have also received complaints from local residents about the quality of provision of noise mitigation. Residents would like to be offered a choice in the supplier they use I believe local companies should be invited to bid to become a 'recommended supplier'.

Given that Hounslow is the fourth fastest growing London borough, there is considerable pressure for housing developments and these must be required to meet the highest specifications with regard to noise mitigation.

## Conclusion

I welcome the Airport Commission's commitment to understanding the impact of aviation noise as part of its work and its recognition of the primary objective to "limit and where possible reduce the number of people affected by aircraft noise".

In my submission I have attempted to reflect the strength of feeling that local residents have on this issue and the level of impact that aviation noise already has on the lives of those living and working near Heathrow.