



**Councillor Colin Ellar
Deputy Leader**

**Members Services
Civic Centre, Lampton Road
Hounslow TW3 4DN**

Sir Howard Davies
Airports Commission,
6th Floor, Sanctuary Buildings,
20 Great Smith Street,
London
SW1P 3BT

Your contact:
Direct Line: 020-8583-2249
E-Mail: colin.ellar@hounslow.gov.uk
Our ref:
Your ref: 6th September 2013
Date:

Dear Sir Howard

London Borough of Hounslow response to the Commission's Noise Discussion Paper

Please find attached the London Borough of Hounslow response to the Commission's Noise Discussion Paper.

Hounslow supports the submission made by the 2M group of Local Authorities and agrees with four the key recommendations outlined below.

- That the Commission immediately orders a new social survey of community attitudes to aircraft noise that can provide a rational basis for its assessments
- That any new noise threshold should look beyond the noise averaging principle and take account of the numbers of movements and noise episodes experienced in any one hour
- That the adoption of a new threshold be accompanied by a review of compensation arrangements for communities affected
- That as an interim measure, entitlement to compensation should be extended to households within the 55dB Lden contour adopted by EU as the benchmark for significant community annoyance.

In addition to the 2M response we have a number of local concerns.

Due to our proximity to Heathrow the Borough hosts an environment that is probably one of the noisiest in the UK. Parts of our Borough such as Cranford are situated less than 500 metres from Heathrow's perimeter fence but the extent of overflying across the whole of the Borough is considerable. Certain aspects of the operations at Heathrow have a disproportionately large effect on our Borough particularly changes in the alternation pattern and changes in the night flying regime. Aircraft noise and its reduction is our top priority so within our response below we have outlined some of the things which we believe need to be done to reduce the impact of noise on our communities.

Our stance on noise is based on what our community tell us but is reinforced by the fact that high noise levels directly affects our residents' health, including the often-overlooked areas of mental health. Research from Warwick Medical School shows that prolonged sleep deprivation and disrupted sleep patterns can have long-term, serious health implications which are: increasing risk of heart disease / stroke; high blood pressure and cholesterol; diabetes and obesity.

Our response has three sections

Section 1. – Responses to the questions posed

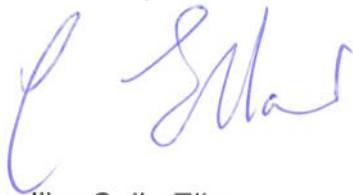
Section 2. – Measures to mitigate aircraft noise

Appendix 1 – Our consideration of a "reducing noise envelope"

We hope you find this submission to be informative of the Council's position related to aircraft noise and Heathrow,

Should you have any queries regarding this matter please do not hesitate to contact me.

Yours sincerely



Councillor Colin Ellar
Deputy Leader, London Borough of Hounslow

Aviation Commission Discussion Paper on Noise

London Borough of Hounslow Response

Section 1 Answers to Questions Posed

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?

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?

The metric used to describe aircraft noise needs to be selected in the context of its intended use. In terms of health and annoyance it Hounslow's objective that absolute noise levels are reduced.

For example the existing high-level policy objective to reduce the number of people affected by aircraft noise, and the requirements within the Noise Policy Statement for England (NPSE), are an important recognition of noise pollution as a serious local community problem. There is also recognition of the difficulty in dealing with noise pollution.

The NPSE refers to Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level" (SOAEL). These levels are not given in NPSE, but vary for different noise sources.

As the Government has formally adopted the NPSE as the touchstone of its noise policies for England, Hounslow considers it must be the case that airport operations should be consistent with the aims of the NPSE.

In the context of this NPSE Hounslow is of the view that it is necessary to

- i. Avoid significant adverse effects on health and quality of life (it is accepted that this may need to be a long term commitment);
- ii. Policy makers to give advice and guidance regarding LOAEL as lowest noise level above which adverse effects in health and quality of life can be detected

- iii. Policy makers to give advice and guidance regarding the SOAEL noise level above which significant adverse effects on health and quality of life occur; and

What is important to Hounslow are the levels at which LOAEL and SOAELs are set at an appropriate level e.g. those described by ANASE or the European Environment Agency.

Hounslow is concerned that multiple metrics may lead to confusion and misuse.

Hounslow would like to see noise assessment take place on the absolute levels of noise rather than on changes to the existing noise environment so that noise levels can be related back to WHO health related standards. To base assessment on changes in noise level only would risk ignoring potentially damaging effects of noise.

For example Hounslow are extremely concerned about the potential effects on the community should the procedures known as "Operational Freedoms" be implemented permanently. We do not feel that the noise assessment metrics developed so far reflect the benefits of respite or the disbenefits operational freedoms will cause.

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

Hounslow would like the Commission to recommend that Government undertake a new noise study that seeks to build on the analysis carried out by the ANASE report. The communities affected by expansion have a right to expect that assessments of noise impacts be based on the most up to date information available.

Hounslow support the assertions made by the 2M group of local authorities that despite the criticisms of the ANASE study, it is difficult to understand why the Government continues to rely on the thirty year old noise metrics used by ANIS. Indeed, the perverse effect of relying on the ANIS study is to 'allow' a three-fold reduction in the size of the contour (within which people are said to be significantly annoyed) at a time when overall movements had risen by 70 per cent.

Whilst technological improvements may mean that individual aircraft are becoming quieter over time, Hounslow have consistently argued that the total number of movements make a significant contribution to the disturbance experienced by communities. The increase in the number of movements over recent years means that our residents experience a greater proportion of their day when aircraft noise is audible and intrusive.

CAA reports 1208 and 1209 that accompanied the publication of the Aviation Policy Framework were extremely useful in highlighting the health impacts of noise. This also helped to demonstrate where there are still gaps in the academic research, particularly around monetising the wider health and social impacts. We believe that Government and the industry should be funding further research into these areas.

Hounslow would like to see full impact assessments made of the social, health, environmental and economic effects of existing airport operations before Government makes a decision on where and if any additional capacity is needed. Such expansion

proposals should also be subject to robust impact assessments so that the communities affected can understand the actual cost and benefits to their quality of life.

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?

Monetising noise impacts is essential and Hounslow would like to see mitigation based on a scheme that is at least comparable to other modes of transport. The DfT currently agrees that households should qualify for compensation for every 1dB increase in their noise environment. However, the same does not apply from aircraft noise.

Unfortunately, the Department does not separately assess the monitory impacts of aircraft noise, preferring to rely on a model designed to assess road and rail noise levels. The difference between noise from a car, locomotive and a jet engine is substantial and surely merits a tailored model. Hounslow would like the Commission to recommend that Government takes forward the development of a new assessment model.

Indeed, as Figure 4.2 demonstrates within the discussion document, a higher percentage of the population is highly annoyed by aircraft noise when compared to road and rail noise and thus should qualify for at least equal levels of mitigation.

When monetising noise impacts all communities that suffer the negative effects of high aircraft noise levels should be included within the methodology, not just those within the 57LAeq contour.

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?

Hounslow residents suffer noise from an aircraft flying overhead roughly every 90 seconds during the daytime. Many of these also live very close to the airport boundary and thus suffer the increased noise associated with thrust required for take-offs and landings.

Ground Noise

The discussion paper does not consider ground noise for example noise from aircraft taxiing, engine testing and noise emissions from the use of auxiliary power units etc. Hounslow believe this is an omission and requests that ground noise is considered within the commission's future deliberations.

Hounslow are also concerned about increases in ground noise resulting from changes in operating practices (e.g. the revocation of the Cranford Agreement) arising from any proposals for Heathrow's expansion).

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?

Hounslow believe that the choice between increasing the noise experienced by already highly affected communities and introducing noise into areas for the first time is a value judgement that should only be made on the basis of proper evidence and assessment.

We believe there is a lack of evidence in relation to these matters; as such the Commission should recommend that the Government undertake research into these areas as soon as possible.

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

Hounslow rejects the application of a “Noise Envelope” at Heathrow as this is exactly the kind of poorly defined concept that experience suggests will be used by the aviation industry as justification for further expansion.

Whilst conceptually this *might* work elsewhere it should not apply at Heathrow, as the noise levels experienced by the community are currently unacceptable. Hounslow’s objective is to reduce the present overall level of noise rather than fossilise it.

Hounslow maintains that a rigid noise envelope is not an appropriate noise control mechanism at Heathrow. However, a Reducing Noise Envelope (RNE) based on reducing the numbers of people exposed to high levels of aircraft noise could be a useful policy tool to inform the Government’s new aviation policy. We have attached our proposal for a Reducing Noise Envelope as Appendix 1 to this submission.

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

Hounslow believe that before any noise concentration or dispersal procedure is implemented in the UK then a comprehensive social survey would need to be undertaken to ensure that the impacts of such a procedure are fully understood. Without such a survey it is not possible to pass judgement of the relative benefits or disadvantages of these techniques.

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 constructing compensation arrangements?

People’s response to noise differs. Whatever metric is used, significant numbers of Hounslow’s population suffer serious annoyance with the associated health disbenefits. The effects of noise are immediate and psychologically damaging, so the reduction of noise levels at source must be the priority.

A predictable period of respite is the single most effective noise mitigation measure available. This should not be compromised by the use of mitigation measures or

operational issues. It gives relief from the continuous noise that residents suffer every day.

Hounslow have long argued that the compensation scheme offered at Heathrow is far less generous than competing airports, nationally and internationally. We applaud the Commission's recognition and are keen to stress that an improvement in the scheme is essential before any expansion proposals are to even be considered.

As stated earlier we believe that the trigger for noise mitigation and compensation should be 55dB Lden, this would mean that Heathrow would be responsible for compensating many more people than they currently do.

Hounslow have long endorsed the polluter pays principle and would like to see the landing charges increased on the noisiest and most polluting aircraft, with these fines accumulated into a community noise mitigation fund that could be administered independently by the CAA (with representation from local authorities).

Further views are given on mitigation are given below.

Section 2. - Mitigation and Compensation

The noise discussion document points out that the community surrounding Heathrow has had to live with a noise mitigation scheme that is much less generous than other comparable airports.

The London Borough of Hounslow has been working to obtain a better mitigation offer from Heathrow for many years.

In the past, residents around Heathrow have been subject to mitigation schemes less generous than those offered Gatwick and Stansted airport. This was particularly disappointing as until relatively recently BAA owned all three airports.

In 2010 we commissioned a comparative study of airport insulation scheme in an attempt to inform our policy on this matter. The aim of the study was to allow us to compare insulation schemes on a like for like basis, factoring out the different airport's noise metrics and fleet mixes.

We are submitting this study as part of our response with the following caveats. 1) It must be understood that the study provides an indication of the **relative** areas covered by different noise insulation schemes not absolute values 2) Some of the schemes may have been superseded by more up to date and 3) The proposed schemes for Heathrow (bottom line of table 3 page 9) have not come to fruition.

We invite the Airports Commission consider the methodology we have used and repeat this work to establish a more definitive view.

There have also been concerns regarding the scope and quality of the existing schemes offered by Heathrow. Whilst in the very high noise areas 69dB LAeq (18 hour contour based on 1995 air transport movements) all habitable rooms were offered secondary

glazing (free) or high specification acoustic glazing (residents paying 50% of the cost). Those who qualify for insulation under the night noise scheme based on the sound exposure level of a Boeing 747-400 series are only eligible for noise insulation in the bedrooms. These concerns are best illustrated by the recently received communication from a resident regarding this matter

"The detail of the offer of soundproofing from Heathrow for a normal home is that they offer secondary glazing or enhanced double glazing to all bedrooms and about 10 cm of rock wool insulation in your loft. Full stop.

What is not on offer is any improvements to glazing on landings, hallways, living rooms, bathrooms and kitchens. No improvement in soundproofing to doors. And unless you spend your life in a bedroom with the door closed you will suffer significant noise impact in your everyday home life. Your enjoyment of a normal family life and mundane activities like listening to the radio, music, talking to your children etc will be at times impossible due to loud aircraft noise."

Hounslow proposes that a new noise mitigation for either a business as usual or an expanded Heathrow scheme should encompass the 55dB Lden contour (as a minimum) and should include the following for homes and community buildings within the borough:

- Maintenance of the annual movement limit;
- Establishment of a new contour cap or reducing noise envelope which provides a real incentive for aircraft and airports to improve their noise performance and comply with Government policy;
- Introduction of area limits on the higher contour bands,
- Greater differentials between the landing charges for highest and lowest noise emitting aircraft;
- Noise insulation and appropriate ventilation for windows/roofs/doors out to 55dB Lden for homes, schools and community buildings;
- Noise attenuation, for example the installation of material that reduce sound reverberation in school classrooms;
- Examination of new aircraft operating practices designed to reduce community noise;
- A revision of the fine system for departing aircraft in terms of noise limits and the levels of the fines;
- A review of the operating practices such as continuous descent approach and aircraft arrivals to establish if a fining regime for non-compliance is appropriate;

- Greater consideration for the mitigation of ground noise and road noise associated with the travel to and from Heathrow; and
- A compensation scheme for local authorities that are obliged to extend and build schools and other public buildings to higher specifications because of aircraft noise.

There is also a role for modified Building Regulations in limiting the effects of aircraft noise. We believe that the current regulations fail to take into account the special needs of new dwellings – and especially social housing – in areas of intense civil aviation activity. We urge the Government to examine the regulations to ensure that the detrimental effects of aviation noise are designed out of new homes from the beginning.

If competing proposals for additional capacity are to be properly weighed they must include the cost of providing appropriate compensation for people living under the new flightpaths. The noise cost therefore becomes a vital component of the overall cost-benefit analysis for each option.

Appendix 1 - Reducing Noise Envelope

Introduction

Noise is the key local pollutant when considering airport operation. As such any future aviation policy must, if it is to be effective, consider noise management. In the case of Heathrow, Hounslow has consistently stated that by reference to EU standards noise around the airport is unsatisfactory and that there should be a commitment to reduce noise.

Policy Context for the Development of a Noise Envelope.

The development a noise management mechanism should reflect international, national and local noise policies for example:

- The noise directive 49/2002/EC¹, indicating that noise levels should be reduced.
- The European Environment Agency document "Good practice guide on noise exposure and potential health effects", November 2010² advises that at a noise level of 55dB Lden 27% of people are highly annoyed.
- WHO health related noise criteria are 50dB(A) daytime external (to protect the majority of people from being moderately annoyed).
- The UK's long term position on noise is outlined by the Noise Policy Statement for England³ 15 March 2010³. It sets out the "long term vision of government noise policy, to promote good health and a good quality of life through the management of noise.

Noise Envelope and Aviation Growth

The idea behind the development of a noise envelope is predicated on allowing aviation growth to occur within a noise envelope. Hounslow believes that Heathrow's operation already exposes too many people to significant levels of daytime noise. Therefore, we believe that any technological improvements should benefit the community that surrounds Heathrow so that less people are exposed to such levels.

Noise Envelope as a Mechanism for Improving the Noise Environment.

A noise envelope could however be employed as a mechanism to monitor and enforce an **improvement** in the daytime noise environment. In this context a model noise envelope system could be designed to:

- Reduce levels of air noise experienced by the community. Such improvements would be significant, continuous and have a trajectory towards the target noise levels set out in WHO guidance on Community Noise;
- Drive technological improvements e.g. silent aircraft initiative;
- Take into account changes in the aircraft fleet for example retirement of the noisiest types of aircraft;
- Be future proofed to ensure that any technological changes in other areas of aircraft design do not compromise improvements of noise performance⁴;
- Have sanctions available if envelope is breached;
- Recognise the numbers of aircraft and the amount of noise individual aircraft make;
- Be meaningful i.e. not so great that it gives the industry a headroom "to pollute into" and
- Provide an all encompassing monitoring tool for Heathrow's noise action plan.

Currently there is no consensus with regard to the onset of the effects of noise at lower levels. Opinions are somewhat polarised with the local authorities and community groups being of the

¹ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32002L0049:EN:NOT>

² <http://www.eea.europa.eu/publications/good-practice-guide-on-noise>

³ <http://www.defra.gov.uk/environment/quality/noise/nps/>

⁴ A380 design was driven by noise performance. If it was being designed today its design would be driven by the need to reduce greenhouse gas emissions.

opinion that greater numbers of people than is currently accepted are affected by both the level of aircraft noise and the numbers of flights that pass overhead. What cannot be disputed is:

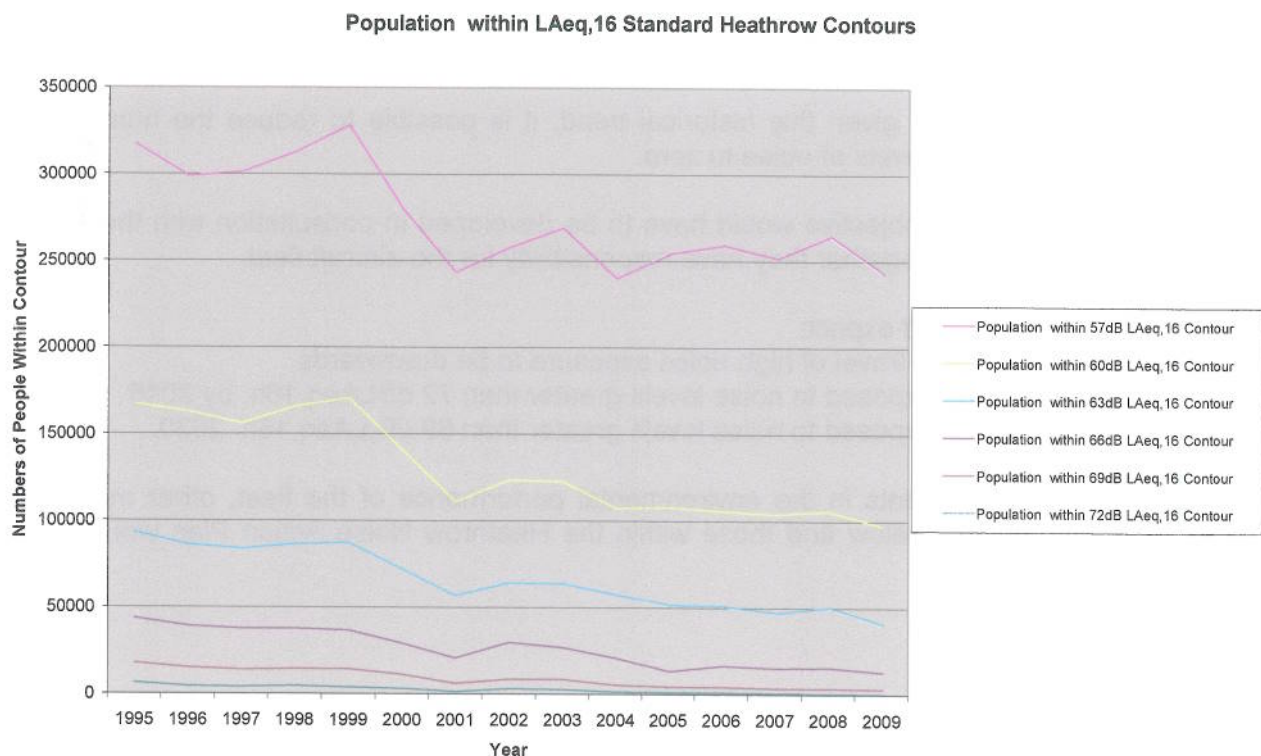
- Noise levels closer to the airport boundary are higher due to the proximity of the aircraft.
- That higher levels of noise produce greater levels of annoyance.

The Aim of the Reducing Noise Envelope

In order to circumvent any disagreement on the onset of annoyance or health effect Hounslow proposes the following noise envelope.

The aim of this noise envelope is to reduce the numbers of people who are exposed to **high levels** of aircraft noise. This would be a phased tightening of the envelope during the time span of the scheme. Our scheme envisages that "Numbers of population exposed to noise" would be used as the benchmark criterion instead of the traditional noise contour area. Thus it is possible to produce a Reducing Noise Envelope (RNE). Reduction in the numbers of people exposed to high level of aircraft noise would result in a commensurate reduction in the number of people exposed to lower levels of noise see Graph 1 below:

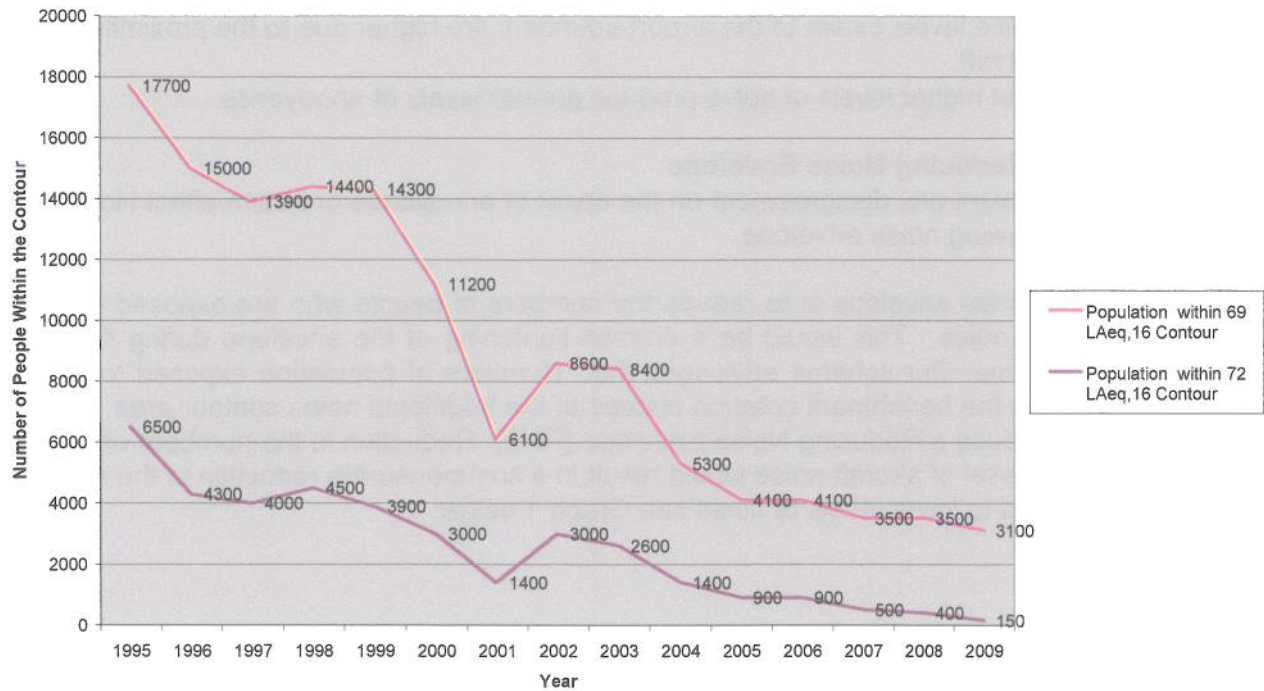
Graph 1



Graph 2

Shows the number of people who have been exposed to noise levels specifically above 69 and 72dB LAeq,16h by year.

Population within 69 and 72LAeq,16 - Standard Heathrow Contour



Hounslow suggests that, given this historical trend, it is possible to reduce the numbers of people exposed to high levels of noise to zero.

The final timings of this objective would have to be developed in consultation with the airport operator and airlines as together they have responsibility for the aircraft fleet.

However Hounslow would expect:

- the direction of travel of high noise exposure to be downwards
- no one to be exposed to noise levels greater than 72 dBLAeq,16h. by 2018
- no one to be exposed to noise levels greater than 69 dB,LAeq,16h. 2030.

In addition to improvements in the environmental performance of the fleet, other measures such as those outlined below and those within the Heathrow Noise Action Plan would drive this improvement.

Table 1. Examples of Noise Controls Available to Facilitate a Reducing Noise Envelope at Heathrow.

| Variable | Control Method |
|--|--|
| Numbers of aircraft | Controlled by planning condition |
| Types of aircraft | Controlled by airlines and ICAO phase out arrangements |
| The way aircraft are flown | ICAO, local agreement |
| Location of the community receiving the noise impact | Planning (new). Buy people out (existing) |
| Times of operation or times a noise envelope is in force | Government / BAA control |
| The level of noise emitted by each aircraft. | Aircraft Manufactures |

Conclusion

Hounslow maintains that a rigid noise envelope is not an appropriate noise control mechanism at Heathrow. However, a Reducing Noise Envelope (RNE) based on reducing the numbers of people exposed to high levels of aircraft noise could be a useful policy tool to inform the Government's new aviation policy.

