

# Aviation Noise

Edinburgh Airport's submission

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## Introduction

Noise is a by-product from aviation that affects communities in different ways. Through organisations such as Sustainable Aviation the industry as a whole is working to reduce the impact of noise from aviation. The work is on-going.

If, following review of the relevant information and response the Airports Commission are minded to propose new noise management or policies for airports it is important to emphasise that any potential noise policy should not be a one size fits all solution. The impact of noise at one airport can vary significantly from the impact at another. The media coverage and focus on noise around Heathrow should not result in a noise policy for the whole of the UK. In Scotland the volume of noise complaints are generally lower than those received by the London airports and some of this is due to the public being generally more forgiving regarding aircraft noise because they recognise the benefits of the connections the airport brings to them.

## Noise metrics

The 57dB  $L_{Aeq}$  contour is the most widely used and understood metric for measuring noise in the UK. Other metrics suggested in the consultation paper, such as the number of noise events above a certain threshold (N contours) could potentially aid a lay persons' understanding of noise and the impact on them. However, it may be more appropriate in situations where new airports are proposed or it is intended to increase the number of flights at an airport. In these instances it is important for the local community to understand how many noise events they are likely to be exposed to. Introducing another metric to replace or sit alongside the  $L_{Aeq}$  methodology will confuse people given that there is also the  $L_{den}$  metric to meet EU legislation<sup>1</sup>. Additionally, given the varying sensitivity of individuals to noise introducing a metric based on a number of noise events may either result in people perceiving that they will have less exposure or alternatively heightening their sensitivity to noise.

Additionally, whilst N contours may capture actual and projected air traffic movements at an airport they will not account for events associated with other aircraft or helicopters that did not land or take-off from the airport. For example at Edinburgh there is an events facility adjacent to the airport, The Royal Highland Centre, where on occasion helicopters offering tours of Edinburgh or the Forth Bridges fly to and from the site. Whilst these events are infrequent and not related to the airport the cumulative number of trips may, depending on direction of flight, result in more noise events than any nearby resident was led to believe.

The dB  $L_{Aeq}$  contour records noise over the busiest period and is used by planning authorities when considering applications where airport noise is a material consideration. The planning system gives the public the opportunity to influence decisions where airport noise is a factor and the 57dB  $L_{Aeq}$  contour is therefore understood by them.

## Flight paths

Noise during the landing and take-off cycles should be focused on the fewest number of routes and residential areas where both possible and practical. This would make the effects more predictable and easier to manage. If a range of NPRs were introduced to spread the noise impacts it could result in increases in CO<sub>2</sub> emissions where longer routes are required to allow aircraft to reach their destination and also affect more people.

Whilst airports have an ability to influence noise and implement mitigation other stakeholders such as local authorities should also take the appropriate steps to reduce the number of people potentially exposed to aircraft noise. Stronger planning policy would assist in achieving this. If planning authorities do not steer noise sensitive developments away from flight paths more of these uses will be located around airports exposing people to higher noise levels and resulting in future conflicts.

Many of the large UK airports only have one runway and cannot therefore alternate between runways. When considering proposals for noise sensitive developments in the vicinity of airports local authorities will consider the  $L_{den}$  and  $L_{Aeq}$  contours and allocate land or approve sites for development based on these contours. To either change the metric or departure routes will influence the areas affected by noise.

Edinburgh Airport has one Noise Preferential Route for easterly departures and this combined with a predominantly rural hinterland to the west results in a degree of certainty over the direction and frequency of flights to and from the airport. This combined with changes in technology and the introduction of procedures such as continuous descent approaches has led to a reduction in noise complaints at Edinburgh Airport. These have fallen from 261 in 2006 to 85 complaints from 44 individuals in 2012. Over the same period of time, the number of air transport movements into and out of Edinburgh Airport has fallen by circa 10%<sup>2</sup> but the type of planes has got bigger. The type of complaints varies based on runway use at the airport and the location of complainants is not restricted to people living within the noise contours. 2012 experienced higher than average westerly departures and the number of complaints reflects this. Our 2011 dB  $L_{den}$  contours estimate that there are 7,100 households and 16,850 people living within the 55dB  $L_{den}$  contours and above<sup>3</sup>.

The contours for Edinburgh Airport have been contracting<sup>4</sup> as aircraft have got quieter however the rate of contraction has slowed and to produce annual reports would show little change. Through the publication of noise action plans and masterplans<sup>5</sup> the public can identify the areas most affected by aircraft noise and get an opportunity to input into the documents. Edinburgh Airport also produce a quarterly Community News letter<sup>6</sup> that we distribute to 16,500 local homes and businesses which details the number and nature of noise complaints received for the last quarter. It is our view that the current methods for reporting noise data are sufficient to inform the public around Edinburgh Airport and to comply with the appropriate legislation.

The vast majority of flights to and from Edinburgh Airport are between 6am and 11pm and outwith these hours there are some commercial flights and around 16 cargo flights per night. Edinburgh Airport does not have a curfew on flights and is the main air cargo hub for Scotland by tonnage. Given our geographical position in Europe, and indeed the UK, there is a need to have night flying to ensure that mail and similar cargo reach their destination.

## Noise controls

Airports generally recognise their role in society and are both good corporate citizens and responsible neighbours. As a result many airports already have measures to influence noise generated by aircraft both during the day and at night. In 2006 we voluntarily introduced our scheme to fine noisier aircraft and we have committed to this and other noise measures in our contract with the community<sup>7</sup>. Specific noise related commitments are as follows:

- We automatically charge more for older noisier aircraft to operate at the airport to encourage airlines to move to quieter models

- We record the noise produced by arriving and departing aircraft and fine those that break the noise thresholds set down by the UK Government
- We ensure that residents can complain about noise at any time of the day through a freephone dedicated number - 0800 731 3397 - and aim to respond to all calls within two working days

Whilst noise action plans have been around for 6 years the aviation industry has more recently collaborated through Sustainable Aviation and published the Sustainable Aviation Noise Road Map. This incorporates industry best practise and has been complemented by the recent publication of revised noise action plans by airports with over 50,000 movements. Both documents detail what airports and the industry can and will do to address noise at airports.

### **Airport noise mitigation**

Whilst we can overtime reduce noise from aviation we will not remove it entirely. So, at Edinburgh Airport we offer a noise insulation scheme<sup>9</sup> but have had limited take-up since its introduction. This is partially due to the modest number of residential properties located within the relevant contours (66dB  $L_{Aeq}$  and greater). As part of our current noise action plan consultation we propose to lower the threshold to 63dB  $L_{Aeq}$ . It is proposed to phase this in at a 1db reduction per annum over three years.

Although we have been able to assist some properties in addressing noise levels within their property and any consented residential properties may also have acoustic glazing/insulation there is no appropriate mitigation for garden ground. Recognition of this should be reflected in stricter planning policy relating to proposals for residential development around airports, particularly those within the 57dB  $L_{Aeq}$  contour.

To incentivise the aviation sector to deliver quieter planes the UK government could consider offering grants for engine replacement and further research and development. The terms of the grant could be such that the resultant technology/planes are restricted to domestic UK routes for a minimum period.

### **Conclusions**

As demonstrated by the low number of complaints at Edinburgh Airport versus the volume received at airports such as Heathrow a one size fits all noise policy would not be appropriate due to the varying size and geographical locations of airports across the UK. Such factors combined with the number of layers of legislation and both statutory and non-statutory agencies that airports liaise with would make producing a regulatory framework tackling local environmental impacts impractical particularly when there can be further requirements within the devolved nations.

Through the staggered consultation and production of airport masterplans and noise action plans there is greater public awareness and transparency on noise at airports. However there is a risk that the focus on noise at Heathrow will influence decisions and policies at other airports where noise is not an issue.

The current noise metrics are understood and through technological advances there is likely to be further contraction of contours around airports over the next ten years. Firm planning policy will ensure that the number of people affected by noise will as a result be reduced.

## References

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