

# How Noisy are the Planes?

# How Many People are Affected?



Both the Government and BAA claim that, year on year, fewer people are affected by noise from planes using Heathrow. They claim the noise climate is improving. Yet that is not the experience of people living underneath the flight paths. The Briefing Sheet examines the apparent contradiction.

## How does the Government measure aircraft noise?

It is complicated, but essentially it uses a method known as db Leq. What this means is that it averages out the noise. It works like this. The noise of individual planes is recorded in decibels (db), then the noise is averaged out over a whole day (Leq). The Government then produces noise contour maps showing how various areas are affected by it. The key figure for the Government is the 57db Leq contour. It is at that level that the Government argues that "the onset of community annoyance" begins. It argues that the 57db Leq contour around Heathrow is shrinking each year, ie that fewer people are being disturbed by aircraft noise: "only" about 275,000 people now live within the 57db Leq contour.

## Is the method flawed?

It is flawed in a number of ways:

1. The average noise that Leq measures is meaningless because it includes the quiet periods when there are no planes. It even includes the half of the day when, because of runway alternation, the areas measured don't have planes! It, therefore, doesn't tally with the way people experience noise.
2. It excludes the hour between 6am and 7am - the busiest hour of the day when both runways are used for landing.
3. It makes no attempt to deal with night flights.
4. It is not based on actual measurements. The last noise study to take measurements on the ground was published in 1985. Each year since then, the noise contours have been produced on computers. There is a lot of evidence that the computer estimates give too much weight to the noise of individual planes (which have got quieter in recent years) and not enough to the number of planes (which have increased significantly). Therefore, the results bear little resemblance to reality. For example, now that Concorde (the noisiest of all passenger planes, but with only 3/4 flights each day) has gone, the official noise contours have shrank by a third!
6. On-the-ground measurements are not being taken in areas further way from Heathrow, but these are the places which in recent years claim to have experienced a considerable upsurge in aircraft noise.
7. The World Health Organisation challenges the Government's assertion that "the onset of community noise" starts at 57db Leq. They argue it is lower: at 55db Leq "serious annoyance" begins; at 50db Leq "annoyance" begins.

## Is the Government doing anything to correct these flaws?

Very little. It commissioned the ANASE Study looking at how people react to aircraft noise. The study was not confined to London. When the Government released it in November 2007, the Government refused to adopt its findings. It found them embarrassing. The report argued that the method of averaging out noise was not satisfactory. It also argued that a significant number of people became annoyed long before the noise averaged out at 57 decibels.

**But the Government was forced by the European Commission to use different measurements when drawing up its Noise Action Plans. Instead of Leq it was required to use Lden. Lden requires separate averages to be taken for day, evening and night, with the evening and night levels weighted to take account of lower background noise levels. And it had to measure everybody affected above 55db Lden. At Heathrow the numbers disturbed by aircraft noise were over 700,000! This is much more in line with reality, though still probably an underestimate.**

## What's the way forward?

The Government needs to start using more accurate methods of measuring noise on a regular basis. At present its maps border on mere propaganda designed to kid the uninitiated into thinking the noise climate is improving.

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