

NOISE ACTION PLANS



This HACAN report outlines the flaws in the Government's approach to the Noise Action Plan for Heathrow and suggests the issues which it should address. June 2009

Summary

The European Union requires member states to produce noise action plans. DEFRA is the government department responsible for the plans in the UK. It has given responsibility for drawing up the noise action plans for many of the airports, including Heathrow, to the airport operators themselves! BAA's draft noise action plan for Heathrow failed to deal with any of the underlying noise problems.

This report sets out the issues which need addressing. It outlines 8 key measures which need to be contained in a Noise Action Plan in order to improve the situation: -

1. A strategic, step-by-step approach to reduce the noise suffered by all communities during the day through a range of clearly defined measures;

- Ensure method of measuring noise reflects the actual way people hear the noise;
- Retain the cap of 480,000 on the number of flights permitted at Heathrow;
- Retain runway alternation;
- Explore ways of extending runway alternation to areas further from Heathrow;
- Look at ways of introducing a steeper approach.
- Ditch any plan to concentrate the number of flights on narrower and narrower corridors thus creating noise ghettos.
- Explore ways of actually reducing the number of flights using the airport.

2. A ban on night flights between 11.30pm and 6am when the current arrangement comes to an end in 2012; with a phasing out of flights between 6am and 7am.

3. A recognition that the current method of averaging out noise does not, in itself, give an accurate picture of the way people hear aircraft noise.

4. 'C' weighted noise measurements to be taken alongside 'A' weighting to accurately reflect the high levels of low-frequency noise contained in aircraft noise;

5. The protection of existing quiet spaces.

6. A re-evaluation of the way Continuous Descent Approach is working and a re-assessment of its benefits and disbenefits.

7. The introduction of more realistic and generous insulation schemes.

8. A joint plan covering both Heathrow and London City airports because of the overlapping flight paths.

The cover photo is of the planes which flew over Vauxhall in one hour: thirty-three. And Vauxhall is between 17 and 20 miles from Heathrow, a stone's throw from the Houses of Parliament. The BAA Action Plan will not address the situation on Vauxhall because it refuses to recognise the area has a problem with aircraft noise.

Photograph by Weedon/Hartleben

Noise Action Plans

Why Noise Action Plans

The EU Noise Directive requires EU member states to produce noise action plans. These follow the noise maps member states had to submit to the European Commission in 2007. The countries within the EU were required to draw up noise maps for conurbations of 250,000 people or more, for the busiest roads and railways and for airports of 50,000 or more movements a year.

What are they intended to achieve?

The noise action plans are meant to outline what measures member states are going to take to reduce noise levels, particularly in the noisiest areas identified by the noise maps. There is a special requirement on governments to preserve and enhance quiet areas. In practice, noise action plans may not amount to much because the EU has surrounded them with so many caveats. In particular, measures in noise action plans do not require to be implemented if it is going to cost too much to do so.

Why is BAA drawing up the Government's Noise Action Plans?

In the UK the responsibility for drawing up noise action plans for the major airports has been given to the airports themselves! It is almost certainly not what the EU intended but it is within their rules. DEFRA, the government department with overall responsibility for noise action plans, argues that, because airports have detailed technical knowledge about aircraft noise from airports, they are in the best position to draw up the noise action plans. The plans will need to be approved by DEFRA.

For road and rail, DEFRA itself is drawing up the noise action plans, with some input from the local authorities

What is the timescale?

BAA will put the noise action plans out to public consultation for 16 weeks on 15th June. DEFRA is expected to submit the final noise action plans to the EU by the end of the year.

What does the BAA Noise Action Plan contain?

It contains little more than what the company would have been planning anyway http://www.heathrowairport.com/assets/Internet/Heathrow/Heathrow%20downloads/Static%20files/LHR_NAP.pdf

It has just four noticeably new suggestions:

- *It has been forced by the EU to use a more accurate way of measuring noise.*
- *We will work with our partners in Sustainable Aviation to develop and promote low noise flight procedures through evaluation of future operational methods and implementation of best practice, for example: **evaluating the feasibility of implementing steeper approaches**. We will report on these bi-annually.*
- *We will seek to protect quiet areas in any airspace change process that impacts LHR where it does not conflict with the government's stated policy of not adding to the burden of more densely populated areas.*
- *We will undertake a **review of our existing Community Buildings Noise Insulation** and our Home Relocation Assistance noise mitigation and compensation schemes in 2010.*

And the first one is definite and significant. The rest are all about “evaluating”, “seeking to protect” and “undertaking a review.” The action plan will do little to address the underlying noise problems caused by Heathrow and its flights.

Noise Action Plans

Key issues that have not been addressed

1. The Extent of the Noise Problem

In summary: This is the one area where there has been a noticeable improvement. Until now, both BAA and the Government didn't officially recognise there are significant problems outside the 57 decibel contour. But that contour didn't tie in with real life. For example, it excluded places like Putney and Fulham! It was also higher than the level at which the World Health Organisation found noise becomes a problem for people. Now, in drawing up its action plan, BAA has been forced by the EU to use a new method of measuring noise. It is still not perfect but it better reflects the way people hear noise. Using this new method BAA has been forced to admit that over 700,000 people are disturbed by aircraft noise from Heathrow; previously they only admitted to less than 300,000. But even the new method underestimates the number of people affected.

The picture on the front of this report illustrates that aircraft noise is not confined to areas close to Heathrow. Vauxhall, where the picture was taken, is between 17 and 20 miles from the airport. 33 planes passed overhead in one hour. Most over 70 decibels. Yet according to BAA – and the Government – there is no problem which needs to be addressed. The Noise Action Plan doesn't cover this area at all.

It comes closer to recognising there is a problem in Vauxhall than it would have done under the old system of measuring aircraft noise. BAA and the Government had an obsessive belief that most people do not start to get annoyed by aircraft noise - what is known as the 'onset of community noise' – until it averages out, over 92 days, at 57 decibels. The Vauxhall average is likely to be 54 – 55 decibels.

The World Health Organisation Findings

The Government and BAA's blind adherence to 57 decibels – what's known as the 57 decibel Leq contour – flies in the face of the hard evidence collected by the World Health Organisation (WHO). WHO is clear. The onset of community annoyance starts well below 57 decibels. It has found people start to get 'moderately annoyed' when noise averages out at 50 decibels and 'severely annoyed' when noise averages out at 55 decibels.

The new way of measuring noise

The new method, which the EU requires BAA and the Government to use, is described in detail in section 2 but even it doesn't fully take account of the extent of the noise problem caused by Heathrow aircraft. The irony is that a report produced for HACAN in 2007 (*No Place to Hide*, 2007) by the same acoustics firm now advising DEFRA, Bureau Veritas, demonstrated the very real impact aircraft noise has on areas way outside the area covered by both the 57 contour and the new way of measuring noise..

- In **Kennington Park**, close to the Oval Cricket Ground, 18 miles from the airport, there was “an almost constant background of aircraft noise”.
- In **Ruskin Park** near Camberwell in South London, 20 miles from the airport, aircraft noise dominates the local environment. During busy hours a plane flies over almost every 90 seconds, usually louder than 60 decibels.
- In **Poplar** 84 planes were recorded as flying over in a two hour period, 45 Heathrow and 26 City Airport. The noise level of the Heathrow aircraft ranged from 60 – 69 decibels and the City aircraft from 64 – 82 decibels.

2. The Way Noise is Assessed

In summary: Noise contours used to be drawn up by averaging out the noise over usually 92 days. Because this includes the quiet periods of the year, it didn't properly reflect the way noise annoyed people. It also excluded areas, such as Ealing, where noise is a real problem but, since it occurs only on certain days of the year, the average is low – certainly less than the magic 57 decibels. Under the new method, the EU requires separate measurements to be taken for evening, night and daytime. Although this still relies on averages, it is an improvement on the old method.

The old method

Because noise contours reflected the noise averaged out over the year rather than the actual noise people hear when a plane flies overhead, they didn't fully reflect the real disturbance caused by the noise. The noise was averaged over a 16 hour period. After that, the noise was averaged out over a period of a year or part of a year. The method was also criticised because it gave too much weight to the noise of individual planes (which have become quieter over the past 25 years) and not enough weight to the number of planes (which have increased dramatically)

At Heathrow, this lead to significant distortions of the real situation:

- In areas closer to Heathrow which benefit from runway alternations (where planes landing at the airport switch runways at 3pm) people get a half day's break from the noise.
- And the averaging out method completely distorted the situation for places such as **Ealing** which only get planes overhead when the east wind is blowing. This only happens for about 25% of the time in a typical year but, on the days it does happen, the people experience very loud planes over their heads all day long. But, because the average noise over the year is less than 57 decibels, Ealing officially didn't have a noise problem. For the same reason, to the west of the airport, the 57 decibel contour barely encompassed all of **the Windsor area**.

The new method

The EU now requires separate measurements for day, evening and night. (Five decibels is added on to the evening level and 10 decibels to the night level to allow for the lower background noise levels at these times). The day, night and evening results are then combined to get the average over a 24 hour period, known as Lden. The new method, while far from perfect because it still relies on averages, better reflects how people hear noise. And, critically, it requires a 55 decibel cut-off point. WHO argues it should be lower still. And there will be no way back to the old methods as BAA and the Government are now committed to publishing annual 55 Lden contours. The 57 Leq contour is dead. But the danger is the 55 Lden contour will become the new holy grail. That would be disastrous as it still doesn't accurately reflect the true number of people disturbed. Parts of Ealing are still outside the new contour. As is Vauxhall, Wimbledon, North, East and South East London.

The Need to Get Real!

The official version of the areas where noise is a problem is still at variance with reality. Even using the new improved method of noise measurement, the number of people disturbed by noise from Heathrow is much greater than is officially admitted. A clear recognition of the numbers affected is the only credible basis on which a noise action plan can be drawn up. Without it, the plan is largely irrelevant before the ink is dry on the paper it is written on. There are measures which a noise action plan, which recognised the true scale of the problem, could contain in order to improve the situation. They are outlined on the following pages.

What a Credible Noise Action Plan Might Look Like

It is not easy to reduce noise levels. What is required is a strategic plan with credible steps to achieve clearly defined goals.

The Basis of a Plan

The most logical thing would be to base the plan and its goals on the standards set out by the World Health Organisation.

The World Health Organisation states that:

- People start to get moderately annoyed when noise averages out at 50 decibels
- People start to get seriously annoyed when noise averages out at 55 decibels
- At night it recommends that the average noise (indoors) should not exceed 30 decibels
- If there is a high low-frequency content in the noise, 'C' weighted measurements as well as 'A' weighted measurements should be used
- The number of flights should be taken into account as well as the average noise levels when assessing the impact of noise

What is required:

1. An **Action Plan which sets out to reduce annoyance for people living within the 50 and 55 decibel contours – over a million people in total.**

That means:

- Go further than the new 55 Lden measurement.
- Retain the cap of 480,000 on the number of flights permitted at Heathrow. This will mean that, if and when quieter planes come on-stream, residents will get some benefit.
- Retain runway alternation.
- Explore ways of extending runway alternation to areas further from Heathrow in order to give more people some relief from the noise during the day.
- Look at ways of introducing a steeper approach. This actually does form part of BAA's draft Action Plan. A steeper glideslope would have significant benefits for areas further from Heathrow as planes would be higher in the sky.
- Ditch any plan to concentrate the number of flights on narrower and narrower corridors thus creating noise ghettos. (The industry now has the technology to do this. Using a system called PR-NAV, computers can guide planes down from the holding stacks with great precision. It is something BAA is actively exploring).
- Explore ways of actually *reducing* the number of flights using the airport. It is the sheer volume of aircraft, rather than the noise of each plane, that is the big problem these days. Cutting overall numbers is a big challenge, but not impossible. Investment in fast, affordable rail services, coupled with more use of teleconferencing, has the potential to cut flight numbers without affecting the effectiveness of UK plc.

2. An Action Plan which reduces night noise.

That needs:

A ban on night flights. Night flights are incompatible with the WHO recommended noise limits for night-time. A two-stage approach is recommended:

- a ban on night flights between 11.30pm and 6am when the current agreement with the airlines runs out in 2012. The alleged contribution of these flights to the UK economy has never been backed up by hard evidence.

- a reduction in the number of night flights between 6am and 7am, leading to an eventual ban

3. An Action Plan which takes full account of low-frequency noise in measurements

This needs:

The use of 'C' weighted or 'D' weighted noise measurements as well as 'A' weighted ones. WHO recommends that when the difference between 'A' and 'C' weighted results is around 10 decibels, 'C' weighted measurements should be used as well as 'A' weighted ones. A 2003 HACAN Study (The Quiet Con, 2003) found that 'C' weighted results showed planes to be around 9 decibels noisier than when the conventional 'A' weighting was used – this is because of the high amount of low-frequency contained in the deep roar of an aircraft.

4. An Action Plan which doesn't rely exclusively on average noise

This needs:

An additional noise measurement. The method of averaging out noise is used internationally and would be difficult to ditch unilaterally but additional methods can be used. For example in Sydney, the number of flights going over an area is published as well as the noise average. This needs to be explored for use in the UK as part of this action plan.

5. An Action Plan which protects and enhances quiet areas

This needs:

- the retention of runway alternation - because that means important open spaces such as Hounslow Heath or Windsor Great Park would at least be quiet for some of the day

- a guarantee that no new areas of London and the South East will be overflown, thus protecting somewhere like Regents Park

6. An Action Plan which looks again at the operation of Continuous Descent Approach

This needs:

Continuous Descent Approach (CDA) – whereby planes descend in a continuous, gradual, smooth movement from the holding stacks rather than by a step-by-step approach – may not be the panacea the aviation industry claims it to be. Firstly, CDA permits planes to fly at the same height over a long period rather than the constant smooth descent it claims. And secondly, there is some evidence that, in order to get a smooth approach, aircraft are required to join their final approach path further from Heathrow – this could, for example, be the reason why so many planes now fly over Vauxhall. The operation and overall benefits and disbenefits of CDA need to be evaluated.

7. An Action Plan which introduces more realistic and generous insulation schemes

This needs:

- Proper noise insulation schemes for residential and community buildings, operating over wider areas than now, to include more than just double-glazing (ventilation etc) and to apply to new community buildings as well as existing ones.
- Investment in updating old insulation (in homes and community buildings) after, say, 20 years or when it fails to provide appropriate attenuation
- Ensure Cranford is covered for additional mitigation and/or buy-up if the noise increase is more than 1dB (as in road schemes) - rather than 3dB which BAA would like.

8. An Action Plan which also covers City Airport

This needs:

Given the way that, between them Heathrow and City Airport have made aircraft noise a London-wide problem, the same action plan should cover both airports.

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