

Do Heathrow Airport's noise claims stack up?

Heathrow's claim that a third runway will improve the overall noise climate seems to defy common-sense. It certainly leaves people at public meetings shaking their heads in disbelief. Is it true?

Heathrow's Claims

Not "a choice between more flights or less noise. Heathrow can deliver both."

A third runway will mean "at least 30% noise reduction" by 2030

The number of people inside the 55Lden contour will fall by 48%. (55Lden contour is where the EU says noise becomes a problem).

The Counter Claims

A report for the London Mayor revealed Heathrow's claims are based on the assumption the new runway will be only operating at one-third capacity.

At full capacity, over 1,000,000 people will be impacted by noise, up from 725,000 today.

HACAN assessed Heathrow noise claims against two recent independent reports.

1. The CAA published *Managing Aviation Noise* -

<http://www.caa.co.uk/docs/33/CAP%201165%20Managing%20Aviation%20Noise%202.pdf>

2. The Mayor of London published the *Inner Thames Estuary Feasibility Study*

<http://www.tfl.gov.uk/cdn/static/cms/documents/mayoroflondon-inner-thames-estuary-fs-reponse.pdf> . Its noise assessment was based on work commissioned by Atkins on behalf of Transport for London (TfL) from The Environmental Research and Consultancy Department (ERCD) of the CAA to calculate noise exposure contours for a series of scenarios that were developed by Atkins, and that relate to Heathrow Airport. <http://www.tfl.gov.uk/cdn/static/cms/documents/t-aviation-noise-modelling-heathrow-options.pdf>

On the basis of this we have awarded each Heathrow claim a reality check star: **five stars** if it has a real ring of truth about it to **one star** if it is hardly believable.

- Quieter planes **2****
- Quieter operating procedures **2****
- The location of the new runway **3****
- Periods of relief from noise **2****
- Noise insulation schemes **2****

In short, Heathrow's claims are unravelling in the face of independent evidence.

Quieter planes

Heathrow: 90% of aircraft at Heathrow will be 'next generation' technology like the Airbus A380, Boeing 787 and Airbus A320 by the time the new runway opens.

CAA: The CAA acknowledges aircraft will become quieter but is less confident than Heathrow about how quickly the quieter planes will be introduced. Its report says: "Introducing new aircraft types is a slow and typically cyclical process that can be fraught with delays and issues, as recent experience with the introduction of both Airbus and Boeing's new models, the A380 and 787, has shown. Even when new aircraft types are available, reflecting [converting the whole fleet to quieter planes] is a lengthy and expensive process for airlines, with significant resource impacts." It goes on to point out that hundreds of the aircraft types would need to be removed by 2026 if Heathrow Airport were to meet its target: "in early 2014, British Airways' long-haul fleet consisted of 55 Boeing 747-400s, 21 Boeing 767-300s and 55 Boeing 777s." It could be 25 years before some of these planes were replaced.

Atkins (for the Mayor of London): Atkins is even more doubtful than the CAA that the fleet mix will be as Heathrow Airport predicts by 2026 when a 3rd runway opens. It cites as evidence the fact that: "IAG (BA and Iberia) are still placing orders for conventional A320's [one of the aircraft types that would need to be phased out]." It is also sceptical the new aircraft would be significantly quieter than the existing ones: "An older Boeing 747-400 has an Lmax (peak noise event impact) when arriving at 1,000 ft of 86dB. An Airbus A380 has an Lmax arriving at 1,000 ft of 85dB. This represents a relatively insignificant difference, despite the A380's much heralded status as a quieter aircraft."

Verdict:

➤ **There is real doubt Heathrow can defend its prediction that 90% of the planes using the airport in 2026 will be the quieter 'new generation' aircraft.**

➤ **There is also doubt that these quieter aircraft, when introduced, will cut noise for residents as much as Heathrow claims. The Atkins report says the difference will be 'relatively insignificant'.**

Reality check: 2 **

Quieter Operating Procedures:

Heathrow: A mixture of steeper landing approaches, displaced landing thresholds (where aircraft touch down 700 metres further along the runway) and new flight paths brought in to avoid the most populated areas will cut noise levels.

CAA: The CAA stresses that only a marginally **steeper approach** – 3.25 degrees rather than the current 3 degrees – is possible, and that even 3.25 might cause problems in low-visibility. At Frankfurt 3.2 degrees is used but it reverts to 3 degrees at times of poor visibility. Although a steeper descent approach would mean planes remain higher for longer, it concludes "the additional benefits of 3.2 degree approaches are relatively small." The CAA acknowledges that there would be noise benefits to displaced landing thresholds.

Atkins: The Atkins Report doesn't analyse the feasibility of a **steeper approach**, nor does it comment on the impact of **displaced landing thresholds**; it simply assumed both will be in place when it made its calculations of the total number of people likely to be impacted by a 3rd runway would be over 1 million.

Neither the CAA nor Atkins assesses Heathrow's claims the "new flight paths will avoid the most populated areas." Partly this is because Heathrow has not yet published these new flight paths but probably also due to the recognition that altering flight paths will have a minimal overall impact since all of London is so heavily populated. Moreover, as Atkins points out London's overall population is likely to have increased significantly by 2026.

Verdict:

- Steeper approach paths might reduce noise but the impact would be "relatively small".
- There would be benefits from displaced landing thresholds (aircraft touching down further along the runway).
- Given the density of the London population – and the fact that the number of people living in London is expected to increase – it will be difficult to find "less populated" areas over which flight paths could be routed.

Reality Check: 2**

The location of the new runway

Heathrow: "Our proposal sites a third runway one nautical mile (1.1 miles) further to the west than the previous proposal for a short third runway. Every mile further west an aircraft lands means it is flying approximately 300 ft higher over London on its landing approach.

Verdict:

- It is clear that this proposal would reduce the noise over West London a little. It would not, in itself, benefit areas to the west of Heathrow. This, though, would be mitigated by the fact aircraft would be landing further along the runway.

Reality Check: 3** (This would have been higher if it wasn't for its potentially negative impact on areas west of Heathrow).

Periods of relief from the noise

Heathrow: "We have maintained the principle of runway alternation. This provides periods of respite from noise for all communities around Heathrow." It will also guarantee "periods without over-flights for every community." Heathrow argues that a 3rd runway would provide additional respite at night for residents under the current flight paths as they would only get night flights one week in every three.

Atkins: Atkins questions how long these respite periods will be: "One of the few aspects of the current noise regime at Heathrow that affords local residents any relief from aircraft noise are the periods of respite that are secured by operating the airport in 'segregated alternate mode'. With one runway used for departures and the other for arrivals before being switched round at 3pm, this gives local residents half a day without aircraft overhead. However, Heathrow Airport have made clear that their three runway proposals would require at least one runway to operate in mixed mode at all times. For the majority of affected residents, that will mean just 4½ hours of respite a day within operating hours – half the respite offered to local communities today." Additionally, with the new flight path being close to the existing northern flight path it is probable that many people will be impacted by noise from both runways, thus making the period of real respite even shorter.

CAA: The report doesn't look at respite specifically but does point out that "anti-noise groups report complaints about aircraft noise (especially early morning or late evening noise) as much as 20 miles from the airport". It is not at all clear just how far Heathrow intends to, or is able to, extend its respite periods.

Verdict:

➤ **There is no doubt Heathrow recognizes the value of respite and is trying to ensure all communities have some respite but it is clear that people in West London, who currently enjoy a half day's break from the noise, will see that cut to a third and it is unclear whether communities further from the airport will enjoy respite periods. In fact, with the increased number of planes to be accommodated, it is possible that most communities will enjoy less respite than they currently do. Heathrow has a lot more to do to convince on respite.**

Reality Check: 2**

Noise Insulation

Heathrow: "£550 million will be allocated to noise insulation or compensation." Of that, £250 million will go towards noise insulation schemes for people under the flight paths. For people whose homes will be demolished it is committed to offering 25% above the unblighted market value of the property plus legal fees and stamp duty paid on a new home.

CAA: The report found that in France, there is a statutory scheme to insulate all housing within the 55 dB Lden contour..... funded through a noise tax on each departure, introduced on the 1st January 2005.

Verdict:

➤ **The Heathrow scheme is not ungenerous but the problem Heathrow will always face is the sheer numbers of people under its flight paths. It would cost Heathrow billions to match the Paris scheme of compensating everybody within the 55Lden contour. It would never be possible. The vast majority of those under the flight paths will remain uncompensated.**

Reality check: 2**

Conclusion

There is no doubt Heathrow understands the need to deliver on noise. However, these two new independent reports underscore the task Heathrow faces to improve the noise climate and suggest that it cannot deliver. In fact, Heathrow's claims are unravelling in the face of the independent evidence. And Heathrow continues to skirt round what is the biggest problem for most residents: the increased number of aircraft. The last study into noise annoyance was carried out in the 1980s. Flight numbers have more than doubled since then. The CAA is clear that it would "support the need for a new aviation noise attitude survey." Surely that should be the starting point.

