

Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Heathrow Airport

RESPITE TRIAL SUCCESSFUL IN RELIEF ZONES BUT INCREASES NOISE IN PLACES OUTSIDE

A five-month trial to test whether it is possible to create 'noise relief zones' for communities subject to noise from early morning arrivals into Heathrow Airport ended in mixed results.

While the noise respite trial – the first of its kind anywhere in the world – brought relief to approximately 100,000 people living under arrival paths east and southeast of London, it also increased noise impact on other communities east of London outside the noise relief zones.

During the five month Early Morning Noise Respite Trial, which ended in March, air traffic controllers instructed pilots to avoid specified areas on alternate weeks in order to give residents a break from the noise. The scheme only involved flights arriving between 11:30 p.m. and 6 a.m.

There were very few infringements of the designated noise respite areas, Heathrow officials said, but added that the trial did have "some unforeseen consequences. Some areas, such as Brockley in Southeast London saw an increase in night flights. Also, during the trial, aircraft joined the approach paths further from
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Legal Roundtable

WILL NEW STUDIES LINKING AIRPORT NOISE WITH HEART DISEASE AFFECT FAA POLICY?

What is the significance of the two major studies published last week (25 ANR 134) linking exposure to aircraft noise to heart disease?

Will they affect FAA's environmental analysis of airport projects, or make it more difficult to implement NextGen procedures, or impact FAA's 65 dB DNL threshold for significant noise impact?

ANR posed these questions to four aviation attorneys, all experts in FAA noise policy. Their responses provide an illuminating discussion of current agency policy and what it will likely take to make the FAA change it.

Neal McAilley

White & Case, Miami

The growing number of studies linking noise exposure to cardiovascular disease and other health issues has the potential to change how the FAA and DOD agencies prepare NEPA documents. These studies link cardiovascular disease to residential noise exposures at levels lower than 65 DNL.

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Heathrow Airport ... The world's first test of the idea of establishing noise relief zones around airports to give communities a rest from constant overflights ends at Heathrow Airport with mixed results.

While the five-month flight trial provided relief to about 100,000 people in communities near Heathrow, it also increased noise impact on some communities outside the zones.

Nevertheless, Heathrow officials and communities are encouraged by the results and plan to keep trying to refine the idea and eliminate the downside - p. 138

Legal Roundtable ... ANR asks four attorneys, who are legal experts on FAA noise and environmental policy, whether two new major studies released last week linking aircraft noise exposure to heart disease will have an impact on FAA noise policy or implementation of NextGen procedures.

Their answers begin on p. 138.

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touchdown in order to avoid overflying the exclusion zones. This in turn resulted in the areas between the zones being overflowed more during the trial.”

The UK aviation management and consulting firm Helios assessed the noise relief zone trial and recommended that it not continue in its present form because of the increased noise impact outside the zones. In the future, Heathrow should assess the noise impact that the noise respite program will have on areas outside the respite zones in order to “better understand the balance of the likely benefits against the unintended negative outcomes,” the Helios report stressed.

“During the feedback sessions with HACAN [the community group Heathrow Association for the Control of Noise] and the local communities, positive feedback on the impact of the trial was obtained from people living within these areas. However, the trial also had other impacts,” Helios said.

“The trial resulted in a number of aircraft joining the approach path further from touchdown (particularly discernible when the zones to the east of the airport were active). This resulted in communities between the zones on the extended centerline experiencing a significant increase in over-flights during the trial. Not only were there more flights, but they were also more laterally concentrated onto the centerline. This resulted in a significant negative impact to these communities.”

Results Called ‘Encouraging’

But despite Helios’ recommendation that the trial not continue, Matt Gorman, Heathrow’s Sustainability Director, said, “The results of this trial are very encouraging, showing that by working with local communities and our partners across the airport we can find new ways to bring noise respite to thousands of residents. We will now examine what improvements we can make to retain the benefits of this trial whilst addressing the challenges.”

The idea of giving communities respite from aircraft noise in the early morning evolved from an initiative by Heathrow officials to work with community groups to identify key issues for them and ask how the airport might address them. The respite zone idea was developed at a workshop Heathrow held with the UK air navigation service provider NATS and British Airways. The respite trial idea was presented back to the community groups who supported it.

HACAN Chair John Stewart said, “This is the first time we have worked with the aviation industry in this way. Although the trial had some problems which would need to be addressed in any future experiments, to bring relief to 100,000 people is a considerable achievement.”

Ian Jopson, Head of Environment and Community Affairs at the air traffic control firm NATS, added, “The trial was a very positive example of how the industry and community can work together to look for ways to limit the impact of noise. The latest precision navigation technology makes it

more feasible to provide respite through innovative air traffic control procedures, and this trial has been an important first step in understanding how we can best take advantage of it.”

The Early Morning Noise Respite flight trial began on Nov. 5, 2012 (24 ANR 186).

Majority of Flights Stayed in Zones

From an operational perspective, the noise relief zones around Heathrow were operated successfully by NATS, Helios concluded in its report.

When the zones were operational, the vast majority of arrivals (96 percent) were successfully vectored to avoid them. Some flights did pass through the active zones but these were predominantly medical emergencies (allowed to pass through) or else they simply ‘clipped’ the zone during a turn, Helios reported.

Analysis of flight data from outside of the trial period showed that aircraft quickly returned to their normal flight paths.

The majority of nights (71 percent) saw no zone infringements. When an infringement did occur, it was typically a single flight through the entire night period, Helios found.

Aircraft involved in the trial typically incurred a small number of additional track miles (4.2 nm on average). Overall the additional distance led to an average additional fuel cost of £33 (\$52) per arrival and across the trial as a whole led to an additional 264 metric tons of CO₂ being emitted.

The Helios report is online at http://www.heathrowairport.com/static/Heathrow_Noise/Downloads/PDF/EMAT_final%20report.pdf

Roundtable, from p. 138

It is hard to see how those agencies can avoid disclosing these potential impacts when they consider airport projects, Part 150 studies, and changes in flight operations. NEPA requires agencies to disclose the reasonably foreseeable environmental impacts of their proposals, even if there is no substantive requirement that agencies act on that information.

Potential changes to NEPA documents include updated discussions of the effects of noise on people; calculation of noise contours below 65 DNL; and discussion of expanded noise mitigation programs and/or noise abatement procedures.

A Former FAA Attorney (now in private practice)

The studies are described as “preliminary” and recognize that much more study needs to be done. So I think it is quite premature for the FAA to consider any change in its noise policies.

While one or both of these studies may show the impacts by DNL corridor, it is not clear from the reports whether this was done and what was demonstrated. Clearly, the fact that some impact was noticed below 50 DNL (or the equivalent)

calls into question the bright line the FAA has drawn at 65 DNL.

As for NextGen, these studies could be used by opponents of narrow departure paths that reduce noise for 80% or more but increase noise for a small portion of residents (albeit likely outside of the 65 DNL). But I do not believe these studies alone will slow down NextGen improvements, as I do not believe environmental concerns are likely to slow down NextGen improvement, unless the FAA agrees to do one or more EA's and not rely on the cat ex authority. I note that Denver airspace improvements underwent NEPA review, and I believe an EA is being prepared (if not already concluded).

Steven Taber

Taber Law Group, Irving, CA

I do not quite agree with Neal. It is my belief that agency inertia will cause the FAA not to interfere with the noise measurement system they currently have, until they are told otherwise by Congress or the courts.

As [the former FAA attorney] pointed out, the DNL/INM system has been upheld consistently by courts as being the marker for what constitutes significant noise impact. The studies released last week by the *British Medical Journal* are just the most recent in a long series of studies – primarily outside the U.S. – that show that aircraft noise has a serious impact on human health, particularly with respect to heart disease and stroke. There was a German study a few years ago that arrived at the same conclusions as the *BMJ* studies. There were also a couple of British studies and a Dutch study that measured the physiological effect of aircraft noise. Yet, the FAA has not made any movement towards changing its DNL/INM model or modifying the 65 DNL as the line demarcation. I have mentioned in several comment letters to several airport projects the existence of the other studies, yet the FAA's response has always been that DNL is tried and true and they only need to have taken a "hard look" at the issue for purposes of NEPA. I believe that it will take a court or Congress to mandate that the FAA revisit the DNL/INM protocols before the FAA changes it.

That being said, I think the HAI [*Helicopter Association International, Inc. v. FAA*] case regarding the North Shore Helicopter route may provide much more leverage with the courts to argue that noise levels below 65 DNL create a significant impact. In that case, the FAA determined in a noise study that even though the noise levels experienced by the residents of the North Shore of Long Island were below 55 DNL, there was enough of an impact on the residents to justify the institution of the North Shore Helicopter Route. Thus, this case and the *BMJ* studies together are two more arrows in the quiver for those who oppose noise created by aircraft. These two factors present a much more compelling argument than what we had before.

Will the FAA change on its own? I do not believe it is likely.

Peter Kirsch

Kaplan Kirsch & Rockwell, Denver

You pose a good question that deserves a thoughtful response. Being the last one to respond to your query gives me the advantage of saying that I basically agree with all of the prior comments but want to offer a little background and explanation for my agreement.

As you know, the DNL metric and the 65 dB threshold were established by the FAA in response to the 1979 Airport Safety and Noise Abatement Act. While Congress directed the FAA to establish the threshold and metric in the context of creation of the Part 150 program, the FAA has been extraordinarily successful in morphing a metric/threshold intended to be used exclusively as part of a funding and planning program into a *de-facto* national standard for what constitutes significant noise impact. (The metric and threshold were established for the purposes of determining funding of mitigation – and were never intended to be a measure of significance for other purposes.) The FAA has consistently, strategically and methodically converted the DNL metric and 65 dB threshold into a standard for use in myriad federal environmental statutes from NEPA to Section 4(f) to Section 106, Endangered Species Act, etc. Through aggressive litigation defense, the FAA has successfully defended the widespread application of this metric/threshold way beyond its originally intended use. The courts, applying *Chevron* deference, have almost uniformly upheld the agency views. Note that this is in contrast to state courts (especially in California and Minnesota) which have not been nearly so deferential.

In recent years, in response to what has been an increasing (and some would argue overwhelming) industry criticism of the exclusivity of the 65 dB DNL standard, the FAA has allowed use of other metrics and other thresholds for information purposes only in environmental documents. While allowing a small crack in the door, the agency has remained vehement that these other metrics and thresholds have zero legal significance.

The most important crack in the door came, as Steve Taber noted, is the FAA brief and later D.C. Circuit opinion in the *Helicopters Association International* case last summer (25 ANR 86). I cannot explain the FAA's shift in position and cannot predict its effect beyond the obvious that the FAA can no longer assert that it has an inviolate policy of relying only on DNL metric and the 65 dB threshold for all environmental purposes. The FAA position in this latest litigation is consistent with a growing body of scientific literature (led largely by Sandy Fidell and Vince Mestre, among others) that argues that use of a measurement of noise energy (decibels) is not a good surrogate for annoyance. Time will tell if the FAA will allow other measurements of annoyance.

I put the latest research results into a bucket with a large body of scientific criticism that has pretty consistently argued that the FAA's reliance on the DNL and 65 has been misplaced when it is used outside the Part 150 context. The FAA has repeatedly been successful in beating back this criticism

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and I would expect that they will do the same here. That being said, it is quite possible that the FAA will allow use of other analytic methods to disclose, for example, health effects, but I expect that any such allowance will come with the caveat that such additional data is “for information purposes only” and has zero legal or regulatory significance. We saw that same reaction to studies of sleep disturbance (see, for example, the FAA’s opinion in the Burbank Part 161 decision where the agency discounted virtually every study of sleep disturbance).

This is probably longer than you wanted but I thought it important to explain why I think it will be a very long time until the FAA reacts to the latest studies and any reaction is likely to come as the result of external pressure (e.g., Congress) and not the result of the agency reassessing its own methodologies.

Neal McAilely (again)

White & Case, Miami

My point is more limited than several of the others have interpreted it. NEPA is a procedural statute, which only requires agencies to disclose the reasonably foreseeable environmental impacts of their proposed actions. Currently, the FAA and other federal agencies do not disclose in their NEPA documents that there are studies linking high noise exposures with cardiovascular disease and other health effects. With the new health studies, it becomes harder for those agencies not to indicate in their NEPA documents that some studies link noise to health effects. Whether the agencies believe that these studies are valid, or sufficient to establish causation, is something that they could address in their NEPA documents.

How the FAA and other agencies measure noise is a separate issue, because the health studies address the effect of noise exposure (however measured) on human health. It also is a separate issue how the FAA will respond substantively to any given noise impact (e.g., the level of noise exposure at which FAA will allow the use of airport funds for noise mitigation), because NEPA does not require agencies to act upon the information they disclose.

Finally, I agree with the other commenters that the FAA will resist acknowledging these studies, or changing the longstanding position that 65 DNL is the threshold of significance for noise impacts. However, the purpose of NEPA is to have agencies disclose environmental impacts so that government decisionmakers and members of the public can be informed about the likely effects of agency decisions, and make up their own minds.

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Anne H. Kohut, Publisher

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