

Airspace modernisation

HCNG presentation on the potential impact of PBN – 20 October 2021

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Teddington Action Group

Presentation – key message

Before developing airspace design options, it is essential that the airport, CAA and DfT explain how they will avoid overflowed communities in the UK suffering the disastrous outcomes experienced in the US.

This is of paramount importance given Heathrow's location in the centre of one of the most densely populated areas in Europe.

National noise policy

Air Navigation Guidance (ANG) 2017

Requires that significant adverse impacts of aviation should be limited and where possible reduced

Adverse effects are considered to be those related to health and quality of life

Altitude based priorities are clear - noise is the priority below 4000 feet; carbon and noise can be balanced between 4 -7000 feet

There is no accepted local evidence base that can be applied to the evaluation of options for the roll out of PBN in the UK

The starting point must be WHO ENG 2018. Adverse impacts above 45 dBLden (circa 43 dBLaeq) are strongly recommended to be avoided. It is obvious impacts become more severe as noise levels become intense

PBN and the environmental impact on populations

What does CAA airspace modernisation guidance say?

‘The UK airspace air traffic management structures require modernisation to accommodate the increasing demand for commercial air travel while safely accommodating increasing demands for airspace access from a wide variety of other users. At the same time, greater considerations must be given to the environmental impact that aviation has on local communities.’

‘Airspace modernisation offers some environmental improvements because aircraft can climb sooner, descend more quietly and navigate more accurately around populated centres’

How will this be put into practice around Heathrow?

Heathrow context

Location

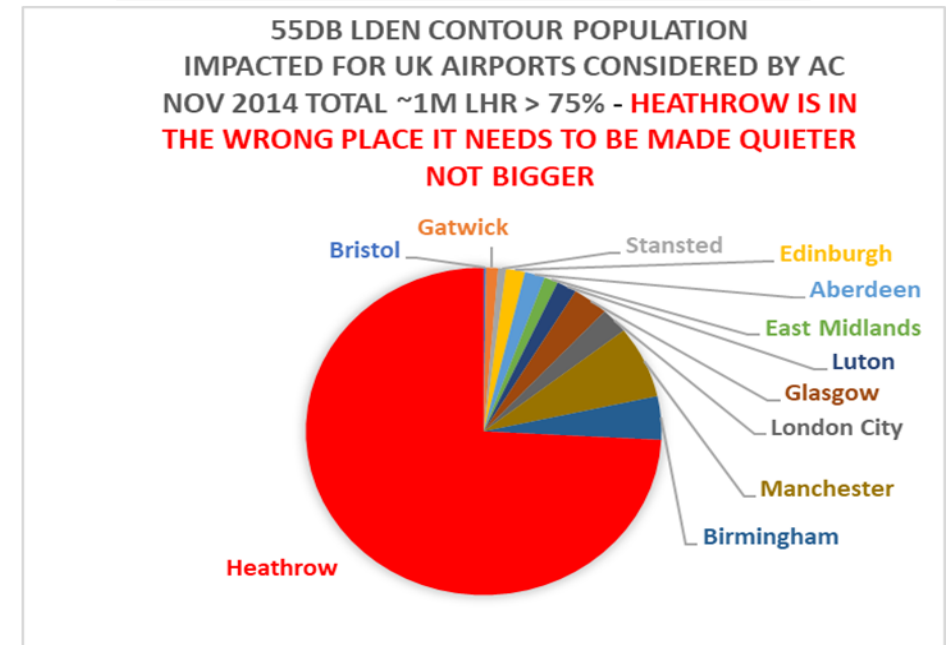
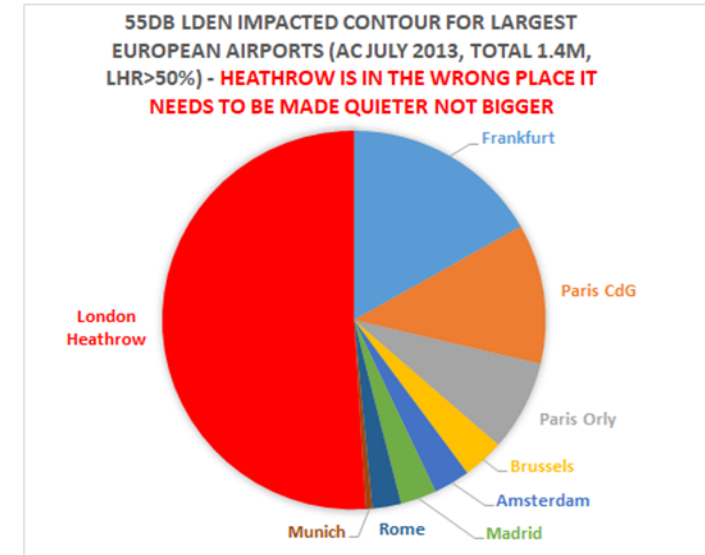
It is uniquely situated in the middle of an extremely densely populated area

UK experiences circa 40% of all European aviation noise impacts

Heathrow accounts for circa 30% of these

In the UK Heathrow creates 75% of the impacts while providing 25% of UK flights

Heathrow impacts are 9x worse per flight than the average of other UK airports



What Heathrow said in 2016 about PBN

- The social impact of PBN trials in the UK has been enormous
- No environmental assessment of noise impacts has been undertaken

Nothing has changed since and no impact assessment has been undertaken

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comment by: *Heathrow Airport Limited*

Whilst Heathrow Airport Limited fully supports airspace modernisation, this document does not support current UK CAA guidance and is not in line with current UK airspace projects such as LAMP. The time scale suggested here is unrealistic and could jeopardise these projects. In addition, as subsequent comments highlight, we have the following concerns:

- The Social Impact of PBN trials in the UK has been enormous, therefore this should be considered and not dismissed in one sentence.
- There does not appear to be an environmental assessment of this proposed change in terms of noise.
- The Benefit section takes no account of the cost of airspace consultation which results in an incomplete assessment.
- Mixed conventional and PBN operations are not supported by the UK CAA.

Consequently, this NPA is not supported by Heathrow Airport Limited.

Noted.

easa.europa.eu/sites/default/files/dfu/CRD%202015-01_0.pdf

The most relevant local evidence available to Heathrow

Anderson Acoustic's report on Heathrow's 2014 PBN trials

There was mass protest and opposition leading to the early abandonment of the trials

Communities were in uproar at noise levels a long way below the DfT's 51 dBL_{aeq} LOAEL level

Concentration of flight paths had a very significant effect causing substantial public protest

Average noise metrics (LA_{eq}) were not able to explain the level of adverse public reaction



WESTERLY AND EASTERLY DEPARTURE TRIALS 2014 - NOISE ANALYSIS & COMMUNITY RESPONSE

HEATHROW AIRPORT LTD

JULY 2015

More recent evidence regarding PBN and Heathrow

Heathrow commissioned Taylor Airey to review PBN in 2019

- TA's final report was not presented to HCNF
- Community engagement meetings and the draft report focused on international comparisons of governance and process, not outcomes
- Agreed at workshops that an evidence base for how acceptable outcomes can be achieved is essential and that PBN should not be implemented unless there is evidence that impacts on communities will not be harmful

The CAA undertook an assessment of the impacts of PBN and splitting routes for Heathrow. Its September 2018 report found that twin respite routes replacing a single concentrated route released over £650 million NPV in health benefits over a ten year period

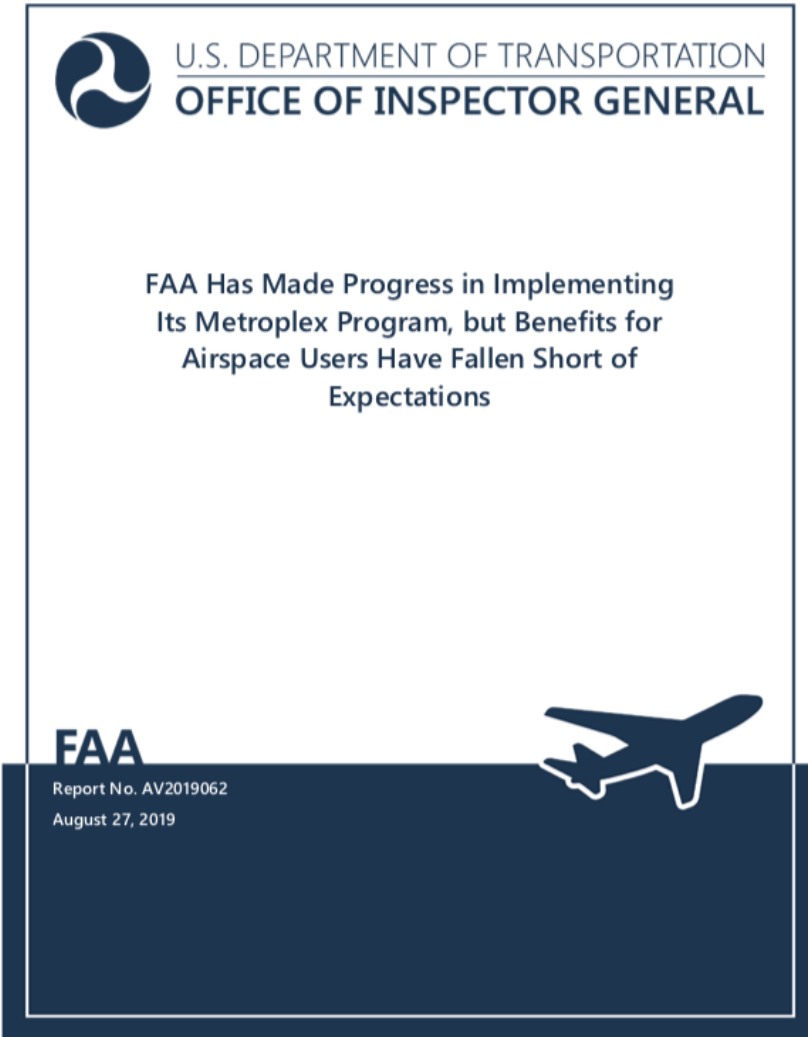
US experience

The FAA began the Metroplex program covering 12 major US cities in 2010 to accelerate implementation of PBN

The next three slides will cover;

- US Government Office of Inspector General Report on NextGen (PBN) which was published on 27 August 2019
- Congressional letters dated 20 December 2019 and 31 December 2020 setting out the impacts on communities
- Issues concerning governance, the FAA role, metrics and trust

US Government Office of Inspector General Report on NextGen (PBN)



Key Findings;

After 10 years only 7 out of the 12 Metroplex area programs had been completed by 2019

The estimated financial benefits had been less than half anticipated in the FAA's original business case

Delay in roll out had been caused by very significant community opposition changes in aircraft noise levels

The OIG report refers to the level of community and political opposition, as well as a number of legal challenges

Growing US political opposition - letter 20 December 2019

Congress of the United States
Washington, DC 20510
December 20, 2019

Hon. Stephen M. Dickson
Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591-0004

Dear Administrator Dickson:

We are writing on behalf of hundreds of thousands of Americans who continue to suffer the effects of the FAA's NextGen program.

As you know, since its introduction of Metroplexes in 2010, the FAA has concentrated flight paths over neighborhoods, schools, and national monuments in order to make the airspace more efficient. This heavy air traffic produces constant noise and particulate matter that has yet to be deemed safe by the FAA or any other government agency. The noise created by the frequency of flights – in some areas beginning before 6:00 a.m. and continuing every few minutes until midnight or later – has had a devastating impact on residents' quality of life. The FAA has yet to make any significant changes to the disruptive flight paths. In fact, communities, cities and states around the country, including in and around the District of Columbia, Phoenix, Boston, San Francisco, Los Angeles, Seattle, Denver, New York, and the State of Maryland, have taken legal action as a result of the FAA's failure to adequately address community concerns.

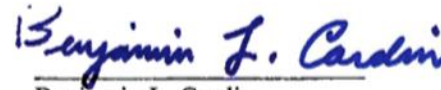
We are concerned that the NextGen program has failed to meet the bare minimum standards for success. Currently, the FAA continues to introduce and implement concentrated flight procedures with Performance Based Navigation throughout the country. The FAA boasts profits for airlines, shipping companies, and other industry stakeholders^[1], but the burden of noise, health risks, and declining property values falls on the backs of hard-working Americans. We urge the FAA to fast-track the development of new flight paths in all Metroplexes and at other airports with NextGen procedures that will significantly disperse air traffic and raise aircraft altitudes.

We would appreciate your review of the enclosed report and a detailed timeline of your plan to implement procedures that will mitigate harm to the communities we represent. We look forward to your prompt response.


Sincerely,


Chris Van Hollen
United States Senator


Kamala D. Harris
United States Senator


Benjamin L. Cardin
United States Senator


Edward J. Markey
United States Senator


Jamie Raskin
Member of Congress


C.A. Dutch Ruppersberger
Member of Congress

Key points made in the 20 December 2019 letter

Heavy air traffic produces **constant noise** and **particulate matter** that has yet to be deemed safe by the FAA or any other government agency

Noise created by the frequency of flights – beginning before 6.00am and continuing every few minutes until midnight or later -- has had a **devastating impact on residents' quality of life**

The NextGen program has failed to meet the bare minimum standards for success

The burden of **noise, health risks and declining property values** falls on the backs of hard-working Americans

New flight paths are required to significantly disperse air traffic and **raise aircraft altitudes**

Letter to President Elect Biden 28 December 2020

Letter signed by 17 congress representatives;

‘united by grave concern over toll that noise can take on the people living with the constant drone of aircraft’

‘planes fly low or late at night – flights arrive and depart within minutes of each other’

‘the FAA’s NextGen project has concentrated flight paths without consideration of the people below’

‘for decades the agency has consistently downplayed or overlooked the toll of noise disruption on human lives and communities’

Dear President-elect Biden:

You will soon name several new appointees to the Federal Aviation Administration (FAA), including the Deputy FAA Administrator, the Chief Operating Officer of the Air Traffic Organization, the Associate Administrator for Airports, and the Assistant Administrator for Policy, International Affairs, and Environment. While the FAA and the aviation industry face many high-profile challenges, as Members of the Quiet Skies Caucus of the U.S. House of Representatives, we write to bring to your attention the overlooked problem of the disruption to human health and local economies from aircraft noise. We urge you to appoint officials who will include creative approaches to solving noise problems in the work ahead.

We represent Americans from diverse locales across the country, united by grave concern over the toll that noise can take on the people living with a constant drone of aircraft. Planes fly low or late at night, near homes and schools; flights arrive and depart within minutes of each other; and the FAA’s NextGen project has concentrated flight paths without consideration of the people below. As a result of these policies, millions of Americans suffer from sleep disruption; exacerbation of high blood pressure and other chronic diseases; learning loss in schools; and economic losses to businesses ranging from tourism to technology to entertainment.

For decades the agency has consistently downplayed and overlooked the toll of noise disruption on human lives and communities. The NextGen project to update the technology used to control air traffic has brought foreseeable problems that could have been headed off if the agency, early in its planning stages, had considered what happens on the ground as well as what happens in the skies and included in the process business owners, local elected officials, airport noise roundtables, health advocates, and others likely to be affected.

As Members of Congress, we all fly as part of our work. We agree that the FAA’s mission to maintain the safety and efficiency of our airspace is paramount. But we also believe that better noise control and full participation from all involved and affected can only enhance that safety and efficiency, not detract from it. The new appointees at the FAA should be committed to inventive problem-solving, to listening and bringing all affected parties into the discussion, and to finding win-win solutions. These leaders should embrace bold ideas, work in good faith with the Quiet Skies Caucus and Congress, and pledge to alleviate noise disruption on the ground, with a renewed focus on inclusiveness.

We look forward to learning of your choices for the FAA and to working with your administration in the 117th Congress to combat aircraft noise. Thank you for your leadership, and congratulations on your presidency.

Sincerely,

Governance and trust – recognition that metrics, measures and approaches used are outdated

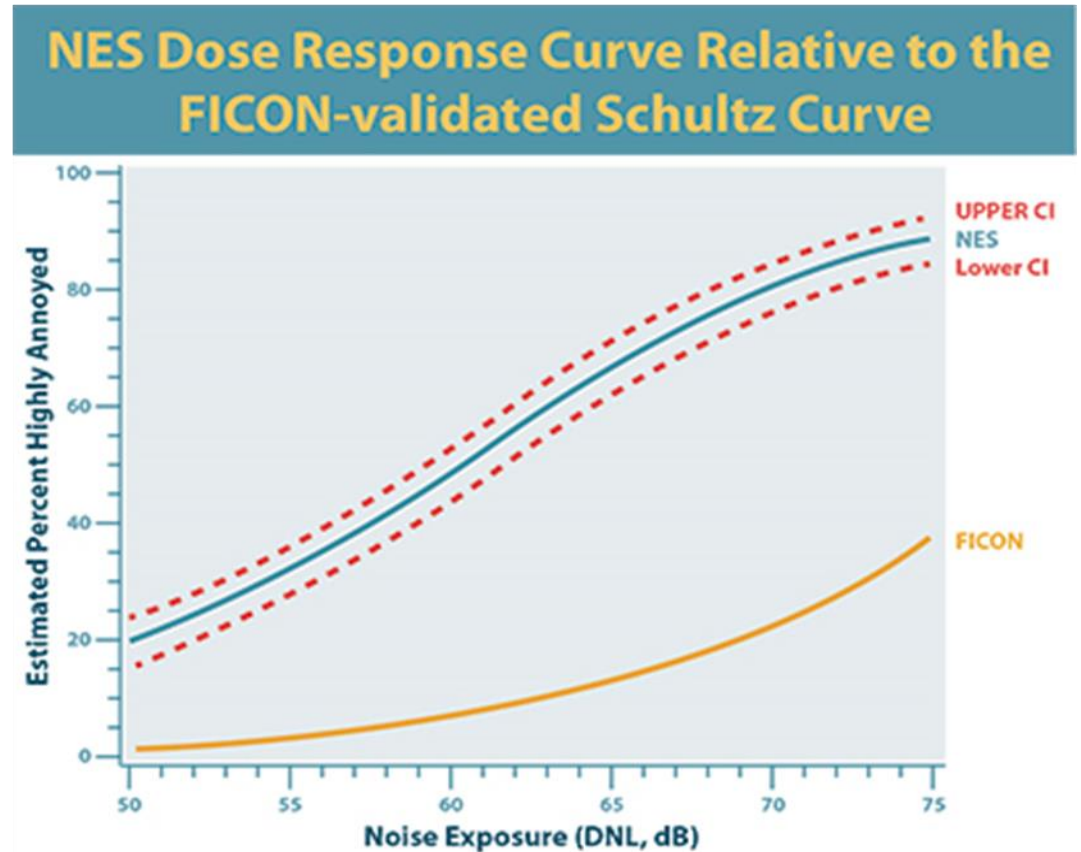
After sustained political challenge and scrutiny FAA was forced to undertake an updated National Environmental Study (NES) into noise as part of its reauthorization act

The NES was published in January 2021

The results show how out of touch the FAA has been regarding community noise (20 dB DNL out – in highly annoyed terms a factor of 400%)

The report demonstrates that FAA noise standards used in formulating aviation policy are obsolete

Lack of trust in aviation governance is a massive issue in the US (see additional link in References)



The challenge to Heathrow in designing airspace

Before developing airspace design options, it is essential that Heathrow, the CAA and the DfT explain **how they will avoid overflown communities in the UK suffering the disastrous outcomes** evidenced in Heathrow's 2014 PBN trials and the implementation of NextGen in the US.

This is of paramount importance given **Heathrow's location** in the centre of one of the most densely populated areas in Europe and the **huge numbers of people** who could be adversely affected by PBN.

Governance has been discussed on a number of occasions at the HCNF. In terms of the effects on the impacted population around Heathrow **there needs to be clarity regarding who will be held accountable** if the experience of Heathrow's 2014 trials and within the US NextGen project are repeated.

Heathrow needs to state clearly **how it will address the issues raised in this presentation** in developing its strategies towards airspace modernisation around the airport. It won't be good enough to say 'we were just following orders' from either the CAA or DfT.

References

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- CAA report on health benefits of splitting routes – previous HCNF minutes and report circulated by Heathrow in 2018 (contact Heathrow or the CAA)
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- Congress Representatives’ letter to FAA 20 December 2019 - <https://nextgenrelief.org/congress-and-nextgen/>
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- Congress Representatives’ letter to FAA 20 December 2019 re trust and metrics - <https://norton.house.gov/media-center/press-releases/norton-quiet-skies-caucus-send-letter-to-faa-on-aircraft-noise>
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