

Heathrow Community Noise Forum

16 May 2018

Performance Based Navigation (PBN), Flight Paths and Airspace Capacity

A community group's perspective

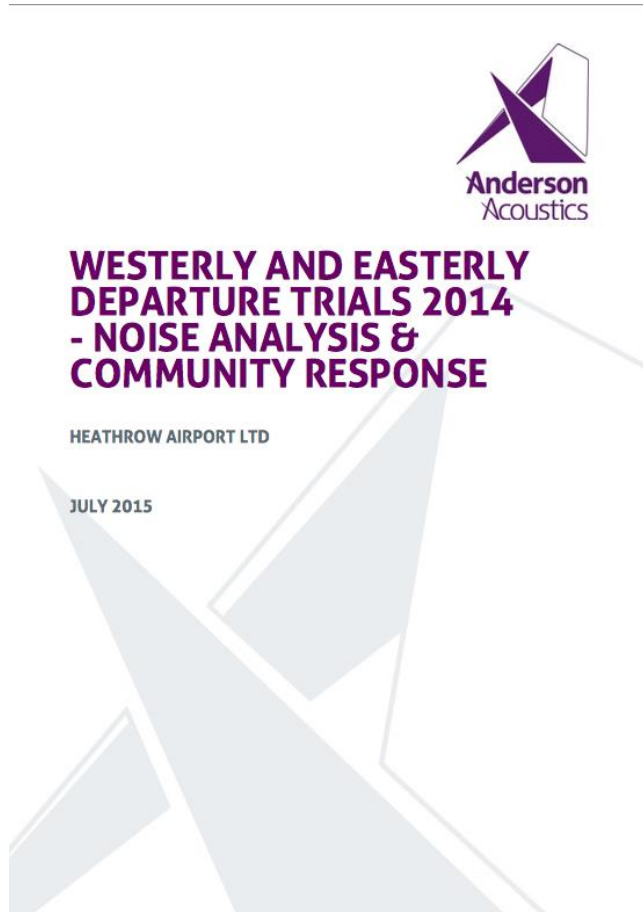
Stephen Clark

Teddington Action Group

Introduction

- This presentation addresses PBN and flight path issues based on TAG's experience under easterly departures, the 2014 PBN trials and other investigations our group has recently carried out.
- It draws on work undertaken for actions arising from the last CNF meeting on 14 March 2018, particularly concerning international examples of PBN, as well as in relation to projected noise impacts on local communities in relation to the NPS (which was prepared for the Transport Select Committee).
- It culminates in setting out a series of questions which must now be addressed – not just by Heathrow, but especially by the DfT - before airspace modernisation in general and the NPS in particular are considered by MPs.

Experience of PBN so far at Heathrow



The trials in 2014:-

- Only affected areas under departures
- Led to a huge rise in complaints
- Led to public protest meetings from Ascot to Teddington
- The trials were terminated earlier than originally planned
- Most residents believe that noise conditions never returned fully to pre-trial conditions
- The trials led to the establishment of many community groups who now attend the HCNF

This leads to the key question – what can be learned from this experience and how should it influence the shape of things to come?

International experience of concentrated flight paths

It is clear the introduction of highly concentrated routes has led to massive levels of outrage, opposition and protest from affected communities in the USA and Europe.

Examples include;

- In North America - Phoenix, Chicago, Los Angeles, San Francisco, Boston, Charlotte, San Diego, Santa Cruz, Denver, Palo Alto, Baltimore, Des Moines, Seattle and Washington, Toronto, Calgary, and Montreal.
- In the UK and Europe - Brussels, Paris, Notre-Dame Nantes, Munich, Belfast, Edinburgh, Manchester, Gatwick, Heathrow (2014 trials) and London City, in the UK.

For further details - <https://www.nextgennoise.org>

Examples of international experience of concentrated flight paths, contd.

Phoenix Noise



Mayor of Phoenix Greg Stanton and his representatives explain FAA's policy of disregard for United States citizens.

Boston Noise



U.S. Rep. Steve Lynch in dogfight with FAA over NextGen aircraft noise and solution. Calls FAA most unresponsive agency in government.

Santa Cruz Noise



Santa Cruz attorney cites destruction of pristine natural habitat by FAA's dirty NextGen transportation system.

Washington, D.C.



Arizona Senator John McCain sends letter to FAA Administrator Huerta urging changes to noisy flight tracks.

California



California Bay Area Resident files lawsuit against Federal Aviation Administration for unbearable aircraft

Chicago Noise



Chicago political activist Jac Charlier challenges Mayor Emanuel to come out from hiding re: O'Hare jet noise.

San Diego Noise



San Diego taxpayers give FAA hell over NextGen aircraft noise and pollution. FAA sits stone-faced, deaf and mute.

Chicago



Chicago political activist John Kane says meeting with Mayor Rahm Emanuel over aircraft noise a waste of time.

Chicago



Convenient for Chicago Mayor Rahm Emanuel: Air traffic over his home delayed until 2021.

Chicago



Chicago residents sing their

New York Noise



N.Y. Rep. Grace Meng introduces "Quiet Communities Act of 2015" to benefit all communities across U.S.

New York



New York Congressman Steve Israel calls the FAA the "Federal Arrogance Administration."

Brooklyn Noise



Park Slope, Brooklyn resident says FAA and Port are green-washing filthy NextGen air transportation system.

Air France



Air France sponsors Paris UN climate conference, but who are they really kidding?

Washington, D.C.



Washington, D.C. Congresswoman Eleanor Holmes

Chicago



Congresswoman Schakowsky says if you are not at the table then you are babbling on the menu re: aircraft noise.

Maryland



Maryland residents in for rude awakening from FAA's NextGen aircraft noise and aircraft pollution strategy.

Toronto



Toronto residents unite to fight for their airspace saying Nav Canada appears accountable to the airline industry.

Germany



German protesters flow into the streets in opposition to airport expansion and aircraft noise and pollution.

Germany



German protesters protest against aircraft noise terror in the busy airport terminal. Loudly, just like the jets disturb their peace and quiet.

Living beneath constant air traffic and loss of quiet enjoyment from FAA's NextGen.

Chicago



Chicago residents join forces to reduce property tax due to O'Hare aircraft noise and FAA's NextGen.

Santa Cruz



Santa Cruz Save Our Skies: "An incessant assault... you feel helpless... you can't stop it... you can't go outside"

Chicago



Chicago residents break U.S. record, logging more than 1 million O'Hare noise complaints!

Charlotte, N.C.



Charlotte, North Carolina residents bombarded by FAA NextGen noise and pollution.

is a bad neighbor for Queens' residents.

New York



New York State Senator Tony Avella from Queens to Federal Aviation Administration: "This is not acceptable!"

Washington, D.C.



New York's U.S. Senator Charles Schumer sells out New Yorkers and all of America in his 2012 FAA Reauthorization bill vote.

New York



Queens, NY jet engine sound monitors reveal residents suffer from levels of jet noise considered unhealthy.

New York



NYC Councilman Dromi together with Queens environmental groups, criticize FAA NextGen aircraft noise and misery.

New Zealand



Auckland, New Zealand families starting to feel the pain and misery of living under NextGen aircraft noise flight tracks.

Further international experience

The Washington Post on 8 March 2018

https://www.washingtonpost.com/local/trafficandcommuting/inspector-generals-report-says-the-faa-has-bungled-a-36-billion-project/2018/03/08/5436c6ba-22f6-11e8-badd-7c9f29a55815_story.html?utm_term=.b96dc38b6db6

Transportation

Inspector general's report says the FAA has bungled a \$36 billion project

By **Ashley Halsey III** March 8  Email the author

The Federal Aviation Administration has mishandled a \$36 billion project to modernize the antiquated aviation management system, according to a harshly critical inspector general's report released Thursday.

It was the fourth inspector general's critique in as many years of a program known as NextGen, on which more than \$7 billion in federal funds has already been spent.

This latest report says the FAA lacks "a clearly established framework for managing the overall oversight of NextGen."

Much of the 50-page report — done for the House Appropriations Committee and prepared by Matthew E. Hampton, assistant inspector general for aviation audits — focuses on specific examples of program mismanagement.

The report said the FAA "has lacked effective management controls" in awarding contracts, sometimes spent money on low-priority projects and allocated an estimated \$370 million for projects that were still awaiting approval.

Further international experience

The Washington Post on 8 March 2018

https://www.washingtonpost.com/opinions/the-unheard-of-noise-pollution-from-the-faas-wasteful-nextgen-program/2018/03/12/67214410-253c-11e8-a227-fd2b009466bc_story.html

Letters to the Editor • Opinion

The unheard-of noise pollution from the FAA's wasteful NextGen program



A plane takes off from Reagan National Airport on Sept. 1, 2017. (Chip Somodevilla/Getty Images)

March 12

Regarding the March 9 news article "[FAA botched \\$36 billion effort to modernize](#)

air traffic system, report says":

While the Federal Aviation Administration may have denounced the House Appropriations Committee-ordered audit of its NextGen program, it is time that Congress denounced NextGen. It's a failed program with bad design. The airlines don't like it, and it isn't saving them money. More important, NextGen is torturing hundreds of thousands of taxpaying citizens all over the country with noise pollution never heard before. The concentrated flight paths over heavily populated areas at low altitudes are causing health problems and lowering property values.

In our area, Georgetown University has sued the FAA, and [a lawsuit](#) from Maryland is imminent. Efforts across the country to negotiate fixes with the FAA have been futile. After a year of meetings between the DC Metroplex BWI Community Roundtable and FAA reps, the FAA has offered merely insignificant "[notional](#)" tweaks to flight paths, without addressing altitudes and dispersion. Last month, the FAA suddenly required that the roundtable submit [Freedom of Information Act requests](#), to be vetted by the FAA's legal team, for any information about redesign of our airspace.

Legal Challenges are mounting; Phoenix, USA

<http://www.azcentral.com/story/news/local/phoenix/2017/03/13/court-hear-phoenix-arguments-against-faa-flight-paths-sky-harbor/98956558/>

Court to hear Phoenix arguments against FAA flight paths at Sky Harbor

Brenna Goth, The Republic | azcentral.com Published 6:03 a.m. MT March 13, 2017 | Updated 8:59 a.m. MT March 14, 2017

The city and affected neighborhoods will make their case in front of the U.S. Court of Appeals District of Columbia Circuit.



(Photo: Michael Chow/The Republic)



Central Phoenix residents and city officials who argue noise from flight paths at Phoenix Sky Harbor International Airport is destroying their neighborhoods will voice their complaints against the Federal Aviation Administration in court March 17.

The U.S. Court of Appeals District of Columbia Circuit will hear oral arguments in two cases that have brewed for years. The FAA changed the flight paths in September 2014 as part of a national program for safety and efficiency.

Backlash to the noise the changes created was immediate. Phoenix filed a lawsuit against the FAA in June 2015; neighborhood associations filed their own complaint a few months later.



Legal Challenges are mounting; Montreal, Canada

<http://www.cbc.ca/news/canada/montreal/class-action-airplane-noise-1.4614458>

Class action lawsuit to fight Montreal airport noise pollution gets go-ahead

Citizen group says noise made by airplanes flying over their homes is ruining their quality of life

CBC News · Posted: Apr 11, 2018 1:19 PM ET | Last Updated: April 11



According to Aéroports de Montréal, the highest noise level in 2015 was 63 decibels recorded in Dorval.
(Francois Mori/Canadian Press)

A group of homeowners who live along the flight paths of Montreal's Trudeau International Airport say they're thrilled the class action lawsuit request they filed has been authorized to go forward.

"The noise is intolerable," said Pierre Lachapelle, president of the citizen group Les Pollués de Montréal-Trudeau. "The people have had enough."

The lawsuit targets the airport authority, the federal Ministry of Transport and Nav Canada, the company that runs Canada's civil air navigation service.

Lachapelle, who lives in Ahuntsic, says when a plane flies over his home, it sounds like a home invasion.

"It fills your space — for a short period of time — but it's awful. It's awful to hear," he said.

Legal Challenges are mounting; Schiphol, Holland

<https://nltimes.nl/2018/04/03/local-residents-sue-schiphol-failing-noise-management>

LOCAL RESIDENTS SUE SCHIPHOL OVER FAILING NOISE MANAGEMENT

By Janene Pieters on April 3, 2018 - 11:30



A plane approaches Schiphol Airport. Photo: @Schiphol / Twitter

People living around Schiphol are taking the airport to court. They want the court to force Schiphol to properly monitor noise pollution caused by air traffic, and for violations to be punished, a spokesperson for the Human Environment and Transport Inspectorate confirmed to NU.nl after reports in the Volkskrant.

According to the Inspectorate, currently violations are mainly monitored and recorded according to the new standards and enforcement system that was implemented in 2015. But at this stage, the airport is not penalized for violations. This is "the result of the application of the rules from the new system", which have not yet been formally laid down in the law, the spokesperson said to NU.nl.

Local residents now call on the court to force the Inspectorate to take action against violations when it comes to noise pollution. How many noise pollution violations the Inspectorate recorded for Schiphol since the introduction of the new system, is not clear.

The number of flight movements at Schiphol increased significantly over the past years, and the airport is very close to reaching its 500 thousand flight movements per year limit, which is in place until 2020. According to local residents, the noise pollution around the airport increased with the number of flights.

Heathrow correctly recognises the PBN issue in its 2016 response to a European airspace modernisation consultation

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

comment

103

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.

response

Noted.

Why understanding PBN's impacts and limitations are so important?

- Plans for Heathrow expansion in the NPS only assume 'Minimise Total' concentrated flight paths, but based on the trials and international experience the airport and the DfT know this approach will not be acceptable.
- There are evidently practical, technical and acoustic limitations associated with the implementation of PBN - but these have not been widely disclosed or discussed with the public or politicians.
- These limitations include the numbers of alternative flight paths that can be accommodated viably around Heathrow, what physical separation between routes is needed to deliver effective noise relief and the timescale and practicalities for PBN's full introduction - which could be years away – potentially 2030-35.
- The medical implications of living under concentrated flight paths are not understood – however England's Chief Medical Officer's report for 2017 makes it clear that noise is an extremely serious health issue;

'In terms of the health effects of environmental pollution in Europe, environmental noise comes second in burden of disease to air pollution and arguably is responsible for more disturbance of quality of life. Environmental noise is also responsible for more life years lost than other significant environmental pollutants such as lead, ozone and dioxins.'

www.teddingtonactiongroup.com/2018/05/08/effects-of-noise-and-the-annual-report-of-the-chief-medical-officer-2017/

The relationship between PBN and Respite

- Respite is concerned with the distribution of noise – spatial and temporal – i.e. flight paths
- Assumptions concerning respite are reflected in how average noise contours and the noise analysis have been modelled in the NPS
- The NPS states that with Heathrow expansion respite will be reduced from one half to one third of the time
- However the health and social impacts of both this and extreme concentration under PBN are not known
- Anderson have produced two interim studies on Respite on behalf of Heathrow
- This work started in 2014 but the research has not yet been concluded



Anderson's key findings to date in relation to separation of routes and noise impacts

About noise levels – from the sound lab;

- 2-3 dBLAmax difference in successive sounds not particularly noticeable
- 5-6 dBLAmax may be needed for people to tell the difference
- At least 7-8 dBLAmax may be needed to provide a valuable break from noise

About increases and decreases in noise levels;

- Residents are more likely to notice increases in noise than equivalent decreases
- The judged value of respite may or may not be applicable to those newly exposed to aircraft noise
- Public sensitivity in the field may be greater than in the sound lab

These findings are of critical importance to the consideration of PBN and establishing acceptable flight path strategies

Why does this matter so much?

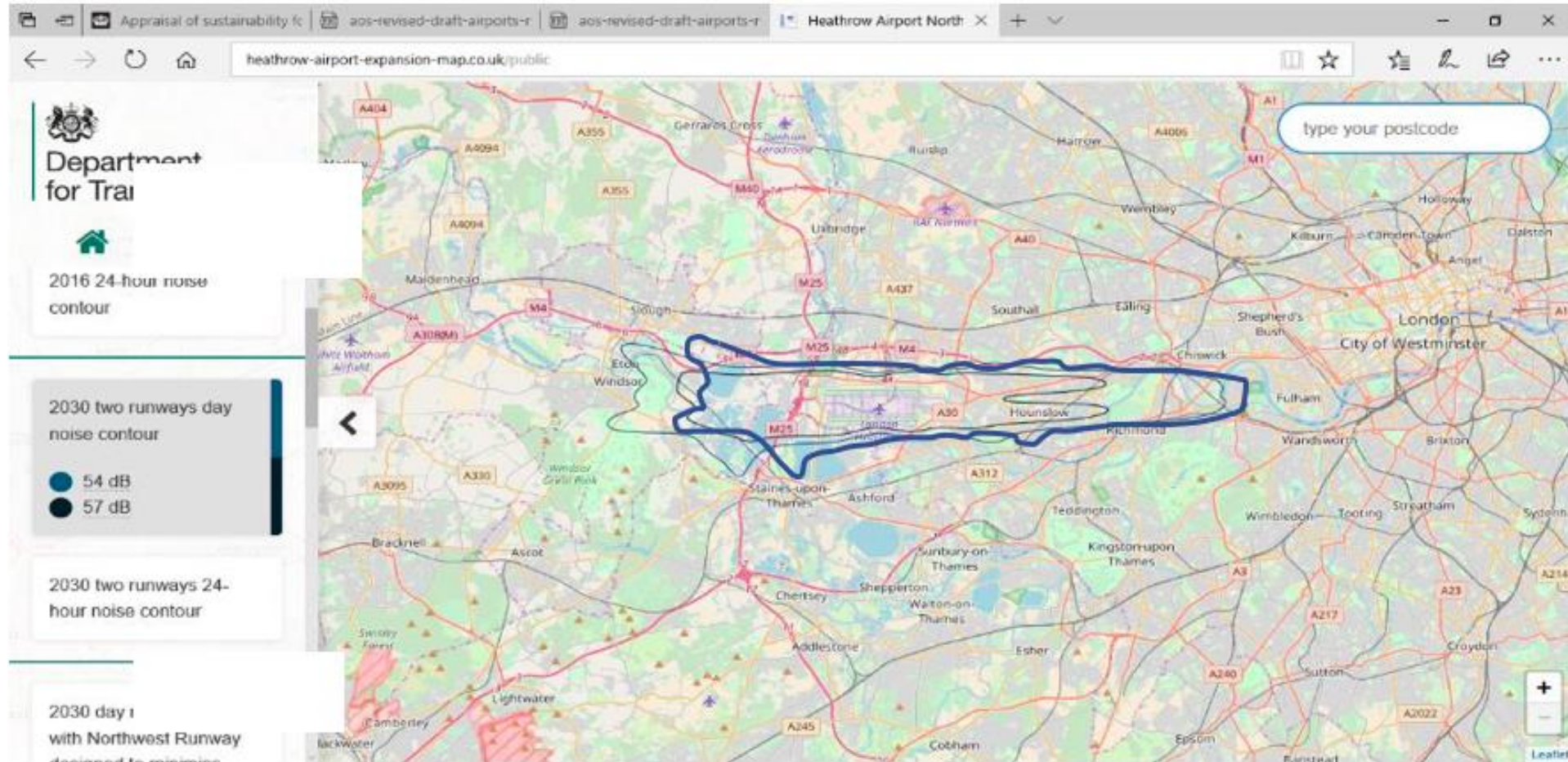
The Transport Select Committee found that if Heathrow is expanded the impacts on neighboring populations by 2030 will be massive;

- 653,900 people will fall within the 54 dBLAeq 'significantly affected' contour
- Over half of these, 323,684, will come into this category for the first time
- 419,803 people experiencing above 54 dBLAeq will receive 3 dB increase, equivalent to doubling the number of overflights
- 1,193,227 will be impacted by over 51 dBLAeq , a key new DfT threshold metric (LOEL)

These are minimum figures because;

- They are based on concentrated 'minimise total' flight path assumptions
- The noise impacts will be worse immediately after a third runway opens i.e. 2026-2029 - which will be the period of maximum public sensitivity
- The DfT's new supplementary metrics were omitted from the NPS and its appraisal of sustainability. A far greater number of people would have been shown to be significantly affected, for example using single mode analysis
- The NPS webTAG Noise Workbook indicates that over 2.2 million people will experience increased noise by 2050 (the forecast year) and this will be after the fleet has transitioned to quieter planes. The situation will be far worse in 2030.

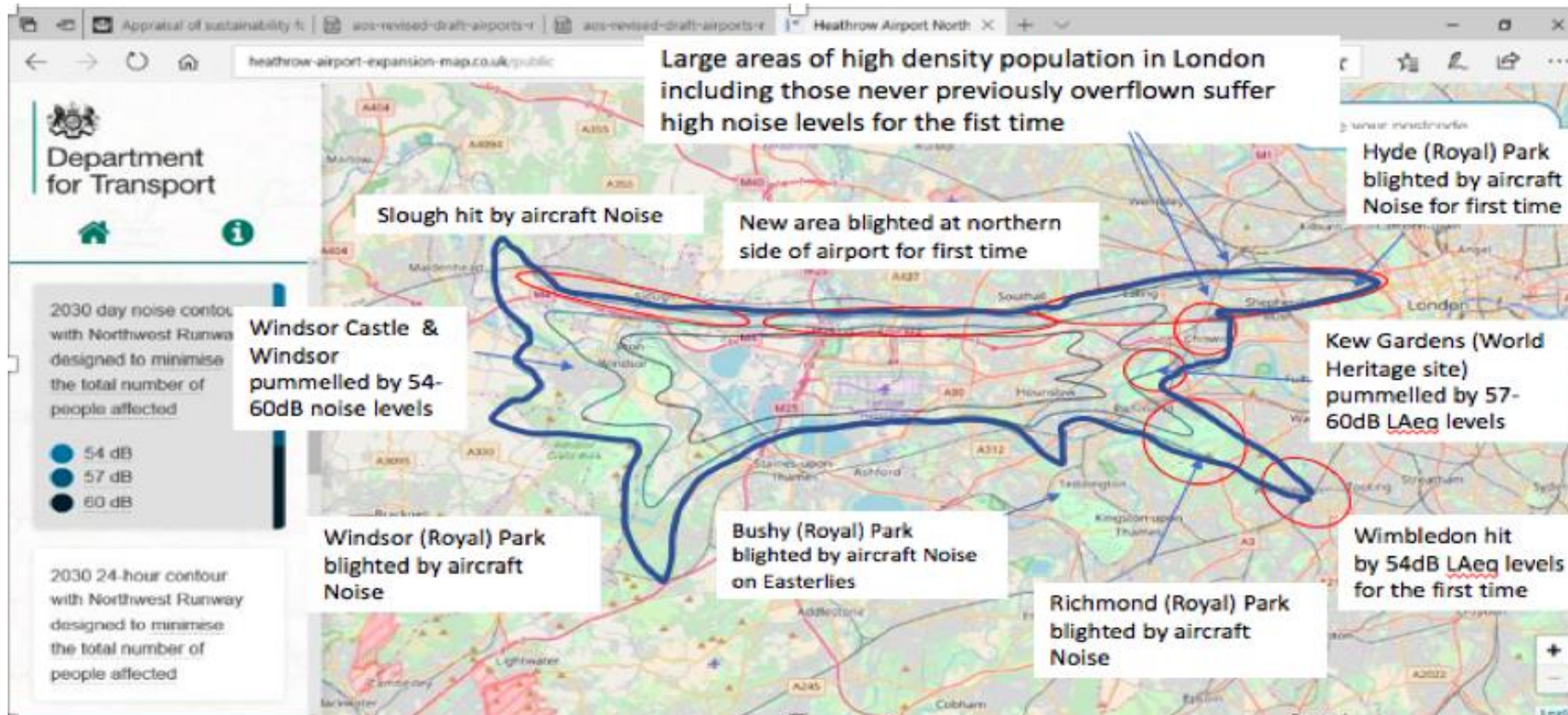
This is what Heathrow's noise contour will look like in 2025



Note – this is the NPS's 'Do Minimum' scenario in fact mitigations such as deeper landings should also be applied making area smaller

And this is what it will look like in 2030 (even worse in 2028)

This is the 'best case' scenario used for the financial modelling of noise annoyance in the NPS 'Minimise Total Impacted'



Note - These are average contours, on Westerlies the eastern noise footprint will shift further into central London blight an even larger area than shown. Similarly for Easterlies areas to the south and north will get blighted. Contours will be much bigger for 51dB 'LOAEL'

Key issues that need to be addressed in relation to the introduction of PBN and possible expansion of Heathrow

How many routes can feasibly be flown using PBN in terms of;

- airspace capacity
- technical capability (harmonizing flight management systems)
- safety
- acceptable health and environmental impacts?

What are the implications for London's airspace strategy arising from the above in terms of;

- consideration and appraisal of alternative flight path scenarios?
- the balance between achieving quality of life for communities and optimising aviation efficiency
- assessment of the environmental and health consequences associated with Heathrow expansion and the NPS and DCO processes?
- the roll out of new flight paths (particularly timing, airspace change procedures and consultations)?

Challenges to Government and the aviation industry

Very significant impacts to health and quality of life are apparent having regard to UK and international experience of concentrated flight paths (PBN).

These have an even greater importance than otherwise might be the case given the extent of Heathrow's exceptionally densely populated hinterland, the projected environmental impacts and especially the proposal to expand Heathrow ATMs by 54%.

The general public and politicians should be made aware of these issues. How will this be done and how will they to be factored in Parliamentary decision making?

Given the implications for the huge numbers of people who will be affected, these matters need to be addressed now by Government – before the NPS is considered further – not at some future time.

It is not satisfactory to say good research is being done and that the industry is looking for solutions, if irreversible far reaching decisions are currently being made. There is no available evidence to suggest that concentrated flight paths can ever lead to acceptable living conditions over residential areas.

A full and open public debate is required – now!

Discussion