

Evidence to the Airports Commission from the Aviation Environment Federation



Comments on project sifting criteria

15.3.13

The Aviation Environment Federation (AEF) is the principal UK NGO concerned exclusively with the environmental impacts of aviation. Supported by individuals and community groups affected by the UK's airports and airfields or concerned about aviation and climate change, we promote a sustainable future for aviation which fully recognises and takes account of all its environmental and amenity affects. As well as supporting our members with local issues, we have regular input into international, EU and UK policy discussions. In 2011 we acted as the sole community and environmental representative on the Government's South East Airports Taskforce. At the UN we are the lead representative of the environmental umbrella organisation ICESA, which is actively engaged in the current talks aimed at agreeing global climate measures for aviation.

AEF considers that, if appropriate environmental objectives are to be met, there is no case for building new runways in the near future. Our primary reason rests on the mathematics of climate change demands. We intend to set this out in due course in response to the appropriate thematic paper or papers. In addition, we note that passenger demand forecasts have now fallen to the extent that there is now only a 1.6% gap between the DfT's estimates of 'constrained' and 'unconstrained' demand, while the forecasts beyond 2030 are highly unreliable given the lack of availability of input data in relation to oil price. We contend that this greatly weakens the argument for any expansion. We have given evidence for this in our response to the Commission's paper on aviation demand forecasting.

To the extent, however, that the Commission must make an assessment of proposals for new airport capacity, we wish to make the following comments in relation to sifting criteria.

Environmental criteria must be part of the initial sift

Environmental criteria are, in our view, critical to any possible decisions in relation to airport capacity. It will therefore be prudent to ensure that consideration of the noise, air pollution, and other environmental impacts of any project proposals are carefully considered right from the start.

Air pollution

In relation to air pollution, we note that the Heathrow area remains in breach of EU legal limits for NO₂ and that the environmental organisation ClientEarth has been pursuing the UK's failure to comply with these limits through the courts, with a judgement expected from the UK Supreme Court before Easter on whether the UK legal system will demand action from the Government. Any airport

development that was likely to worsen air pollution in an area at or near to EU limits would be certain to face legal challenge.

At Heathrow, the air quality improvements predicted when the previous government gave approval to the building of a third runway have failed to materialise. We are not aware of any recent assessment of the NO₂ levels around other UK airports, meanwhile.

Noise

The primary reason, in our view, for the Government's reversal of the previous permission given to the building of a third runway at Heathrow was the strength of feeling among West London voters in relation to noise. While individual aircraft have gradually become quieter over time and, as a result, Leq contours have in many cases either stabilised or reduced in size, there is good evidence, not least from the Government's own study into Attitudes to Noise from Aircraft Sources in England (2007), that annoyance arising from aircraft noise has been increasing – a trend not replicated in relation to other transport sectors.

There is now a widely held view that the Government's official threshold for the onset of significant community annoyance, namely 57 dBA Leq, is no longer fit for purpose. The Draft Aviation Policy Framework notes that "International research carried out in recent years by the World Health Organization, European Environment Agency (EEA) and others seems to reinforce the finding that the level of aircraft noise exposure at which a certain level of annoyance occurs has decreased in the last 20-30 years" (section D.5). Despite this, the draft framework did not propose any revision to the figure of 57 Leq as the official indicator for the onset of significant community annoyance. We await the final version of the framework to see whether there has been any movement on this since publication of the draft.

We will of course be commenting on noise issues in more detail in response to the appropriate Commission paper. In devising sifting criteria, however, we consider it essential that the Commission look beyond 57 Leq contours in its assessment of the noise acceptability or otherwise of proposals. For night noise, in 2009 WHO Europe recommended that for the protection of public health communities should not be exposed to noise greater than 40 dB Leq for an 8 hour period at night. Recognising that this is a very challenging target, however, WHO suggested the use of 55 Leq as an interim target. (The WHO 1999 Community Noise Guidelines had recommended a maximum of 45 dB Leq at night.) The EU requires noise of 50 dB or greater to be periodically 'mapped' at all major European airports.

The 1999 WHO guidelines recommended a maximum level of 50 dB Leq during the day for the avoidance of moderate annoyance, a figure which has not yet been updated. The 57 Leq level used by the UK Government in relation to significant annoyance is based on an even older study known as ANIS (the Aircraft Noise Index Study, 1982). The 2007 update to this work, however, suggested that a similar proportion of the population is now annoyed by noise at 50 dB Leq than was annoyed by noise at 57 Leq in the past. Although the Government has so far chosen not to incorporate this finding into policy, AEF considers that it has greater validity than the 57 Leq figure. EU noise mapping

is required for noise of 55 Lden and higher (Lden being a metric specific to noise mapping legislation that gives extra weighting to noise during the evening and night)

Based on these sources, we recommend that noise be assessed by the Commission down to levels of at least 50 dB Leq (and if possible 40dB) at night, with the aim being for no-one to be exposed to noise greater than WHO Europe's 'interim target' of 55 dB Leq. Daytime noise should be assessed down to 50 dB Leq as a minimum, with reference also made to 55 dB Lden contours.

Other environmental impacts

Prior to the publication of the 2003 Air Transport White Paper, a number of criteria were developed for assessing the environmental and other impacts of possible developments, including:

- Impacts on rail and road networks
- Public safety: impacts of proposals both in terms of increased risk to local people associated with aircraft crashes, and the potential economic impact of planning constraints in any areas newly subjected to Public Safety Zone restrictions (which preclude increases in population living or working in, or travelling through, the affected area, potentially ruling out new housing for example)
- Land take and property impacts (including households displaced)
- Heritage impacts
- Water impacts, and
- Other ecological impacts including biodiversity (which would now need to include consideration of the EU Habitats Directive, as well as potential impact on sites specially designated for environmental protection)

All of these considerations remain relevant, in our view.

Climate change is essential to the consideration of airport capacity at a national level, but has very little relevance at a local level

We have not included CO₂ emissions in our list of recommended environmental criteria to be taken into account. Airport developments are sometimes justified, however, on the basis that they will help to reduce CO₂ impacts. The Mayor of London, for example, argued in his response to the Government's Draft Aviation Policy Framework, that:

One could also achieve a valuable reduction in emissions with an operationally optimised hub airport – specifically, one with minimal capacity constraints. Heathrow is operating at up to 99% capacity and this has significant environmental consequences. At busy times, incoming aircraft can spend 30-40 minutes in stacks circling London. The CO₂ emissions of aircraft stacking at Heathrow represent an amount equivalent to around 10% of the total CO₂ emitted during the landing and take-off cycle (LTO) of aircraft arriving and departing at Heathrow.

Literature from Heathrow Airport¹ indicates that its total Landing and Take-Off emissions (including those from aircraft turning on the ground as well as coming into or leaving the airport) are around 1.31 Mt CO₂; 10% of this is 0.131Mt CO₂. Including emissions from aircraft departing the airport, meanwhile, the Heathrow total is given as 18.9 by the DfT for 2010 (the most recent year for which data is available). 0.131Mt CO₂ of this figure is 0.69%.

This suggests that emissions arising from aircraft stacking at Heathrow airport are therefore 0.69% of those from the airport when flight emissions are also counted. There can be no valid argument, we conclude, for building a new airport with unconstrained flight numbers in order to tackle emissions from stacking. In fact, while it is right for efforts to be made to reduce air traffic inefficiencies, the existence of constraints at Heathrow appears to be prompting the use of an increasing proportion of larger aircraft, thus generating lower emissions per passenger than would otherwise be the case, as passenger numbers at the airport have grown significantly faster than Air Transport Movements in recent years.

It is also sometimes argued that a new airport well-connected by rail could help to reduce emissions by encouraging the use of public transport to and from the airport. But these represent only a very small proportion of aviation emissions. Again using Heathrow as an example, the airport's leaflet on climate change² gives a figure for annual emissions from passenger transport of 0.38 Mt CO₂. Adding these to the aircraft emissions total of 18.9 would mean that passenger transport was responsible for less than 2% of the total. Again, it is clear that the amount of flying (especially long haul flying) that takes place should be a far more significant component of the Commission's consideration of climate change than anything taking place on the ground.

The relevance of climate change in terms of project sifting therefore seems to us to be limited.

¹ <http://www.heathrowairport.com/about-us/community-and-environment/sustainability/environment/climate-change>

² http://www.heathrowairport.com/static/Heathrow/Downloads/PDF/LHR_Climate_brochure.pdf