

**HEATHROW AIRSPACE DESIGN PRINCIPLES**  
**Proposals by Richmond Heathrow Campaign (RHC)**  
**27 July 2018**

The following Noise Objectives and Airspace Design Principles are recommended by Richmond Heathrow Campaign. A detailed explanation is presented in the RHC's published response to Heathrow's Consultation on Airspace design Principles 27 July 2018.  
( [www.richmondheathrowcampaign.org](http://www.richmondheathrowcampaign.org) )

**EXISTING NOISE OBJECTIVES**

- a. To limit and, where possible, reduce the number of people in the UK significantly affected by adverse impacts from aircraft noise.
- b. As a general principle, any benefits from future improvements in aircraft noise performance should be shared between the aviation industry and local communities.
- c. The Government wants to strike a fair balance between the negative impacts of noise and the positive economic impacts of flights.

**A. Amend Noise Objective (a) to integrate WHO Noise Guideline**

1. Establish the legal status of the WHO guideline values,
2. Establish a UK strategy and timetable for reducing the levels of community noise from aircraft and from other major sources to the WHO guideline values,
3. Integrate the WHO guidelines with key noise objective (a) concerning reduction in adverse impacts of noise.

**B. Add a Noise Objective to share noise between communities**

Where there is a reduction in overall noise the benefit be applied to those already most affected and where there is an increase in overall noise the dis-benefit be applied to those already least affected. This objective can be applied using proportionality or a sliding scale between those most and those least affected.

**AIRSPACE DESIGN PRINCIPLES**

**C. Safety Principle**

Safety is paramount.

**D. Dispersion Principle**

1. Dispersion should be sought for the additional flights from the NWR expansion,
2. Noise from existing flight paths should not be re-distributed.
3. There should be no increase in noise impact for those already affected by the two runway airport
4. Optimise on minimising noise cost per household.

**E. Frequency Principle**

Frequency of flights is a major factor in the impact of aircraft noise. The CAA Change process does not control the frequency of flights on any flight path. A Principle needs to be established for frequency of flights.

**F. Respite Principle**

1. In so far as dispersion is desirable for new flight paths over newly affected areas, scheduled respite should be sought especially near the airport.
2. Introducing respite to existing flight paths is likely to result in a net noise impact cost and should normally be avoided.
3. Reduction of scheduled respite for existing flight paths should be avoided.
4. Since the easterly/westerly split in effect provides respite, the respite principle should require that

no community should be exposed to both departure and arrival flight paths.

**G. Separation Principle**

Sufficient flight path separation should be established so as to avoid an over-lap of noise at the relevant ambient noise level or 50 dBA footprint, whichever is less.

**H. Concentration and Performance Based Navigation (PBN) Principle**

The introduction of PBN will concentrate and hence reduce the dispersion around flight paths. There should be no increase in noise concentration compared to the ground based navigation that PBN replaces.

**I. Less Noisy Aircraft Fleet Principle**

Noise at source from individual aircraft and the introduction of less noisy aircraft into Heathrow's fleet should be sought. The principle should also require estimates of the fleet's noise energy for the medium and longer term with plans for managing the reduction in noise.

**J. ICAO Land-Use Planning Principle**

A Principle needs to be established for population encroachment, noise mitigation and flight path location.

**K. Independent Parallel Runways and Runway Length Principles**

(1) The NWR should be at least 3,500 metres in length and as far as possible the mix of aircraft (heavies, etc.) should be spread evenly by type across the three runways.

(2) There should be no mixed mode or any increase in the number of scheduled flights over and above 480,000 per annum in segregated mode prior to first flight from the NWR.

**L. ICAO Balanced Approach -Operational Performance**

This covers ascent and descent rates, deployment of landing gear and use of flaps, etc. To the extent these can be controlled a Design Principle should be established.

**M. London Park's Principle**

There should be no increase in noise over Royal Botanic Gardens, Kew, Richmond Park, Old Deer Park and other London parks.

**N. Night Noise Principle**

All scheduled flights between 11pm and 7am should be banned by May 2021. In the interim period there should be no increase in Heathrow flights in the early morning shoulder period 6-7am and mixed mode (TEAM) in this period should be re-assessed so as to reduce the noise impact.

**O. Altitude Based Priorities Principle**

The Altitude Based Priority ceiling should be increased from 7,000 feet to [9,000] feet.

**INTEGRATED DECISION FRAMEWORK**

There should be an integrated decision framework to bring together the several design principles and stakeholder interests. It should aim to minimise the health and quality of life impacts of Heathrow's flights as quantified by the DfT's webTAG valuation tool. The aim of the decision framework is to seek to optimise airspace design by minimising the noise impact and share the costs and benefits of noise mitigation between the several stakeholders. The quantitative impacts of noise and emissions for each flight path should be optimised where possible but also as a "global optimization" for Heathrow as a whole.

*RHC may seek to add to, remove or change the above noise objectives and airspace design principles.*

Peter Willan

Chair, Richmond Heathrow Campaign email: willan829@btinternet.com