

## Seminar on Aircraft Noise and Mental Health, 4th July 2016, Westminster

The seminar was staged by HACAN, the organisation which gives a voice to residents under the Heathrow flight paths and the Aviation Environment Federation.

### There were three speakers:

- **Dirk Schreckenber**g - [schreckenber@zeusgmbh.de](mailto:schreckenber@zeusgmbh.de) - ZEUS GmbH, Centre for Applied Psychology, Environmental and Social Research, D-58093 Hagen, Germany.
- **Chris Keady**, a West London resident who talked about the impact of aircraft noise on somebody like himself who had mental health issues.
- **Matt Gorman**, Director of Sustainability at Heathrow Airport

### **Below are short summaries of their presentations.**

#### **Dirk Schreckenber**g

Dirk Schreckenber

g talked about the NORAH Study - <http://www.laermstudie.de/en/norah-study/overview/> - to which he was one of the main contributors. It looked at the impact of noise on health, including the impact of aircraft noise on mental health. It was commissioned by the Environment & Community Center (UNH), a wholly-owned subsidiary of the federal state of Hessen) took place between 04/2011 – 12/2015.

The study found that there is a link between increased noise levels and mental health problems. It is strongly mediated by annoyance.

The study found that in the case of road noise, there is a straight linear relationship between noise and depression, i.e. the more noise, the more people are depressed. A 10 decibel increase in noise can lead to a 4% increase in the numbers depressed. The picture for rail noise is a bit more complicated – and not quite a linear link.

For aircraft noise, the relationship with depression was very different. There is a stronger link between depression and lower levels of aircraft noise (below 55 decibels) but, with higher levels of noise, the levels of depression tail off – i.e. there is less depression at higher levels. The reasons for this are not known, but could include the “healthy resident” effect, and a mixture of people self-selecting to not live in those areas, or moving away, or being accustomed to the noise and accepting of it (see **graph reference 1**). The study also found that, in the case of aircraft noise, depression was more likely to occur in areas that had not previously experienced aircraft noise.

#### **Chris Keady**

Chris Keady explained what it was like for a person like himself who has mental health issues living under the Heathrow flight paths. He emphasised that the mental health problems can become acute if the sufferer feels there is no way out of the situation. He therefore argued that some predicable break from the noise was critical; that over-concentration of the noise would make things worse. He emphasised, though, that he believed the best way forward was to work constructively with the airport. He argued that, in addition to the provision of periods of respite, the airport should look creatively at ways to mitigate the noise – for example the provision of acoustic shutters on windows. He argued that the key thing was to give people the tools to cope with the noise, be it respite or a variety of measures to improve the insulation of properties. And he suggested that the airport should look particularly at ‘hotspot’ areas where, for example, a number of flight paths might converge.

## Matt Gorman

Matt Gorman said that Heathrow was looking at practical ways in which to reduce the impact of noise. The airport had commissioned a major study to look at the most effective ways of introducing meaningful respite. Heathrow recognised that the traditional way of measuring noise annoyance – by averaging it out – was not the only way of measuring it and that it favoured a suite of metrics. He said that non-acoustic factors played a role in annoyance, something which the NORAH study also highlighted. He said that, without in any way diminishing the impact of aircraft noise on mental health, it needs also be recognised that a lack of employment or security of employment can impact on people's mental health – therefore the employment opportunities created by the aircraft needed to be balanced against the impact of the noise.

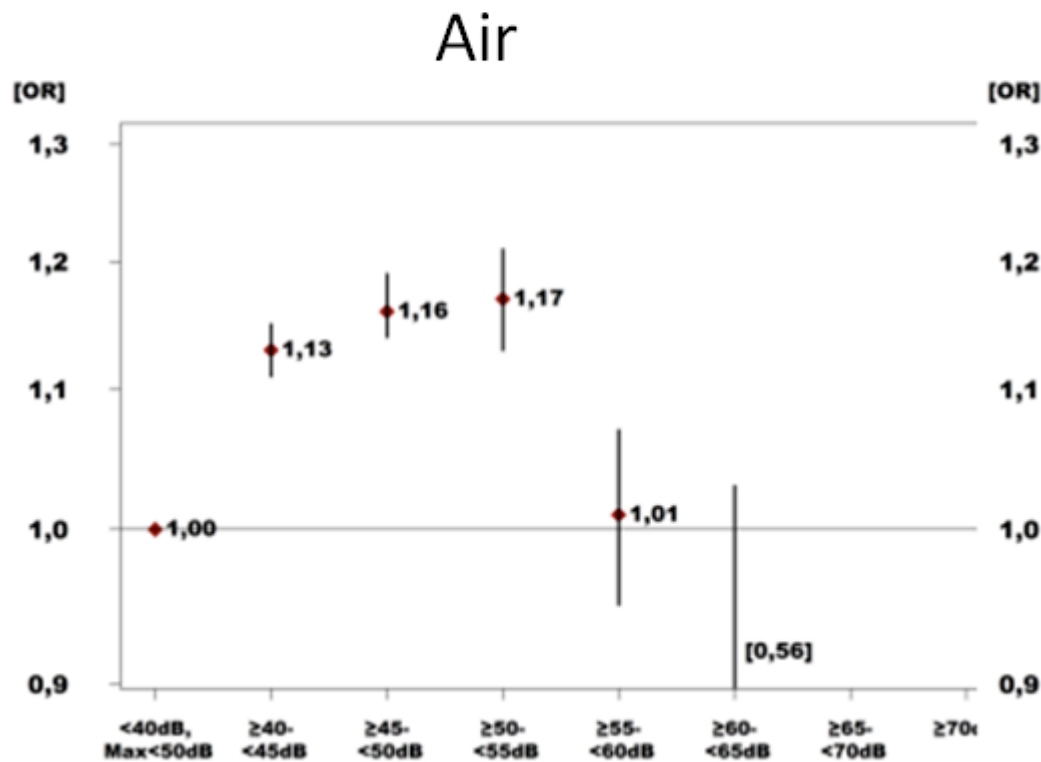
(1). The graph from the NORAH Study

- Aircraft:

Inversed 'U'-shaped:

8,9% increase in risk of depression per 10 dB in  $L_{pAeq,24hrs}$

but decrease in higher sound level classes.



This summary written by John Stewart, Chair HACAN

