



## Briefing on issues with SoNA (2014)

The Survey of Noise Attitudes (SoNA) 2014, presently is used to set UK Government Aviation Policy noise annoyance levels so is fundamental in accessing the monetised health and annoyance impacts so it is critical that the input data and analysis is robust.

### Key Issues

1. No assessment was made of the impact of noise below average noise energy level of 51dB LAeq – for disturbing plane loudness events of 65dB L<sub>Amax</sub> this is equivalent to, on average 14 planes an hour or one every 4.5 minutes all day every day. Complaints analysis shows significant annoyance is experienced below this level and as Government policy has chosen the apparent lowest observable adverse effect level (LOAEL) at 51dB LAeq, these people are being ignored.
2. A large number of recognised flaws in SoNA 2014 have been identified which will have reduced apparent annoyance levels measured from the survey;
  - Within the limited 51dB contour, one area was totally missed out under an increasingly heavily used flightpath by large long-haul planes to the Middle East which fly late into the night - the Detling route which causes many complaints across Twickenham.
  - SoNA was undertaken in winter (where there is less traffic) and respondents were asked to recall situation from previous Summer.
  - The 2 annoyance questions that set Government policy were only asked after 15 and 30 minutes of other questions.
  - An unrepresentative mix of household types and tenures, biased towards flats and those without gardens was surveyed.Correcting for these known flaws would move the UK closer to WHO's more robust findings.
3. Type of questions & analysis on annoyance relied upon a numerical scale, in one question using a 11-point scale, respondents answering 7/10 were not deemed to be highly annoyed so were not used to set Government Policy.
4. SoNA incorrectly used a (logistic) function to correlate all metric data to annoyance so missed the opportunity to understand why average sound energy levels (LAeq) does not reflect the how annoyance from noise is created. ICAO advises that long term average metrics only account for one third of aviation noise impacts. Overall LAeq averages hide the real impacts on people when they are overflowed. For example, different operation modes and the impact of respite cannot be reflected in a single overall average metric.
5. SoNA 14 did not address the change effect (which is recognised by ICAO and international experts). This is a fundamental flaw in relation to Airspace Modernisation which is all about change.

### Any future survey should:

1. Survey in the summer
2. Include annoyance questions that set Government policy at the beginning of the survey
3. Ensure responses can reflect people's actual sentiment (significant and highly annoyed as opposed to a numerical scale – or with a scale clearly explained).
4. Choose a mix of property types, household types and tenures which is representative of the UK population.

5. Seek to understand the number of people who experience annoyance below 51dB LAeq by surveying areas that experience noise to a minimum 45dB LAeq (16hr day) and include any areas with complaints (as these may not be described by average sound energies 'LAeq'). WHO guidance advises against aviation noise over 45dB LDEN (equivalent to 43 dB LAeq).
6. Correctly evaluate a range of additional metrics and circumstances e.g. N60, N65, LDEN, single mode, time of day, intensification and concentration etc.
7. Include an assessment of the health and annoyance impacts of aircraft noise, particularly under concentrated routes referencing UK and US experience.
8. Use a range of questions to ascertain whether people believe aircraft are become quieter, more frequent, lower etc... to understand their experience of noise.
9. Survey a number of locations that have undergone change

**Key implication:**

1. Government static annoyance levels should be adjusted down by 3-6dB to reflect the flaws in SoNA 2014 (Significantly annoyed level and LOAEL).
2. Given the lack of evidence relating to change effects a sensitivity analysis reflecting a further 3-6dB increased sensitivity for anyone experiencing change should be included in wedTAG cost benefit analysis.

In conclusion as matters stand there is no credible evidence base to evaluate the biggest airspace changes the UK is ever going to see. The timing of the new Aviation Noise Attitude Survey needs to be programmed into the UK Airspace Modernisation timetable.

