

A: BASNER AWAKENING METRIC

At the noise issue specific hearing, the writer (on behalf of No Night Flights) and Thanet District Council questioned the applicant's reliance on research by Dr Basner *et al* regarding night time awakenings.

The writer has corresponded with Dr Basner about this matter . Dr Basner is now based at the University of Pennsylvania and confirms that he was not been consulted about the environmental assessment of the applicant's proposals. However, he has seen some of the Manston DCO documentation and has very kindly offered the following observations related to his research cited by the applicant:

- a. [Dr Basner] looked at awakenings and sleep stage changes to superficial sleep stages (he says " S1"). He "did not investigate potential long-term health consequences".
- b. the applicant's assumption of an outdoor to indoor attenuation of 21 dB is important for determining the likely number of awakenings (as of course is the accuracy and validity of the projected noise contouring)
- c. many of the subjects of [Dr Basner's] research were living close to the airport for years and well accustomed to aircraft noise (we do not know how long it takes for people to become accustomed to aircraft noise)
- d. the representativeness of the Leipzig/Halle and other samples is limited (and the topic is discussed at length in certain of Dr Basner's academic articles)
- e. the concept for the Leipzig/Halle model accounted for all noise events that generated noise levels ≥ 33 dB inside the bedroom.
- f. Dr Basner has pointed out in his publications that it has to be taken into account that on average 24 spontaneous awakenings can be observed in an otherwise undisturbed night anyway.

It would appear that, as with the applicant's quotations from York Aviation, Dr Basner's work has been taken out of context and manipulated in a way that has turned truth into those cursed sisters, half-truth and no-truth.

There are now several important unanswered questions for the applicant about his application of what he described as "informed by emerging best practice and research into aircraft induced sleep disturbance, undertaken by Basner et al (2006)":

1. How far is it reasonable to assume typical 21dB outdoor to indoor insulation, given a) the existence of several substantial mobile home¹ parks in the immediate vicinity of the airport,

¹ Please note that, with the possible exception of RSP's acoustic consultant (to judge by his contribution at the issue specific hearing), it is generally recognised mobile homes have a lower standard of sound insulation than conventional homes – see the British Standard BS 3632. In 2005 BS 3632 was updated to make insulation and other standards more in-line with conventional forms of housing. However, in November 2015 it was found necessary to raise the standard yet again, especially in relation to insulation. Very few mobile homes in the area are believed to meet the 2015 standard and property sale records indicate that many were constructed prior to 2005.

b) the predominantly older housing stock (Victorian and earlier) under the flight path in the Ramsgate area, and c) the continuing importance to the area of fair-weather coastal leisure tourism (where a preference for sea air ventilation and open windows may reasonably be expected) ?

2. Why should we accept RSP's noise contouring, based on theory, when we have historical data and independent reports showing that 747-400s produce more noise and over a wider area?
3. Why is it good practice to look at awakening and not at the harm from sleep disturbance (which may or may not result in awakening)? Does the Government, WHO and other international authorities support such a narrow approach?
4. What assumptions for the purposes of sleep disturbance has the applicant made about the health profile of the affected population? And what assumptions has he made about how accustomed they are to aircraft noise at night? In the light of that, how far does he consider the Basner work from Leipzig/Halle to be directly applicable, having regard to the subject population profile?
5. What sleep disturbance – and for how many people - would the applicant predict from a maximum SPL of 95dB and the window open (worst case scenario) and how far would this be mitigated by his Noise Mitigation Plan?

No Night Flights reserves the right to make further representations on this topic once it has had the chance to study the applicant's further amended Noise Mitigation Plan.

B: NOISE MONITORS – FRUIT FROM THE POISONED TREE?

1. The writer referred to questions about the validity and relevance of the applicant's main noise monitors at the noise issue-specific hearing, i.e. the 7 locations used for the long-term sound measurements which form the backbone of the characterisation of existing local noise as presented in the applicant's environmental impact assessment (see Table 12.3 of his assessment at Volume 5.2-2).
2. It will be seen from the map and table below that the siting appears to have more to tell us about the applicant's use of the membership of Save Manston Airport than the acoustical environment which will be most impacted by the proposed development. All 7 long term monitors were in the back gardens of people actively engaged in trying to get the airport re-opened. The sitings do not appear to follow the logic of the flight path and they seem studiously to avoid Ramsgate itself, even though that is (as the applicant has admitted) where the majority of his victims will be located.
3. It is unclear how far the sitings followed informed community and local authority consultation, except the late addition of monitor 7 on the Nethercourt Estate at the insistence of Thanet District Council. That too appears to have been ill-placed, as the notes below explain. In any event it is difficult to place confidence in the selection given the non-neutral stance of those entrusted with the equipment and collaboration.



4. The following Table further evidences the concern and draws attention to acoustical features of the sites which are omitted or glossed over in the applicant’s characterisations. In addition to the doubts raised about the neutrality of the sites and the risk of contamination, this information calls into question whether the data collected from the sites is capable of providing baselines which are genuinely representative of local noise conditions.

Monitoring point	Address	Save Manston airport member?	Observation
LR1	██████████ The Street, Acol	Yes – ██████████ and ██████████	Audio servicing and Thanet Model Aircraft Club
LR2	██████████ Manston	Yes – ██████████	Flag hoister for SMAA. Site was in vicinity of significant demolition and construction works
LR3	██████████ Manston Road	Yes – ██████████	Prints SMAA leaflets
LR4	██████████	Yes – ██████████	Adjoins noisy primary school and on a “rat run” through estate
LR5	██████████, Cliffsend	Yes – ██████████	Relatively very close to the new dual carriageway and to the railway line, which it tunnels under at this point, creating yet higher noise levels
LR6	██████████, MInster	Yes – ██████████	Tall, adjacent conifers provide major bird roosting sites; likelihood that mechanised asparagus bed spring preparations on field abutting

			rear garden may also have elevated readings.
LR7	██████████, Ramsgate	Yes – ██████████	Garden backs onto the railway line and is close to a Tesco petrol station plus superstore open 0600 – 2400, plus business park – this is a very noisy part of the Nethercourt Estate

5. Even if the application is approved and maintains target construction timings, residents will have had 8 years without annoying aeroplane noise. It is therefore very important to assess existing baseline noise levels accurately and in a way that genuinely informs us about the likely impact of the proposed development. This does not appear to have happened. It is unclear that the main sites are well chosen as representative of ambient noise levels, either locally or in relation to the main population centre of Ramsgate.

6. The conclusion of the writer’s NNF submission at the noise ISH was that the Examination urgently requires independent noise expertise in order to assess the environmental impact of the application. You have now had multiple evidence of questionable methodology and metrics behind the noise picture presented in the applicant’s EIA. It will not be possible to resolve these crucial issues satisfactorily without independent, qualified input and it has been made clear by ICCAN that they are not yet in a position to help you. I would repeat again the following provisions from Article 5 of the Union’s parent law:

“3. In order to ensure the completeness and quality of the environmental impact assessment report:

(a) the developer shall ensure that the environmental impact assessment report is prepared by competent experts;

(b) the competent authority shall ensure that it has, or has access as necessary to, sufficient expertise to examine the environmental impact assessment report;”

Thank you.