

From:
To:
Subject: RE: Hansard Commentary
Date: Friday, 10 July 2015 9:30:21 AM
Attachments: [NASA_1982.png](#)

Dear Carol,

There is one aspect of my testimony to the Senate Wind Turbine Select Committee which I should like to confirm. I had referred to graphical data presented by NASA in 1982 which indicated that people could experience adverse effects from infrasound at levels well below the nominal threshold of hearing.

In 2012 I had given a presentation at a conference on Low Frequency Sound and Infrasound, organised by Geoff Leventhall, at Stratford-on-Avon in the UK. In this presentation, I had shown a graph reported by NASA some 30 years earlier, relating to levels of infrasound that had apparently given rise to adverse effects inside dwellings.

I enclose the corresponding slide showing this graph, as a .JPG image.

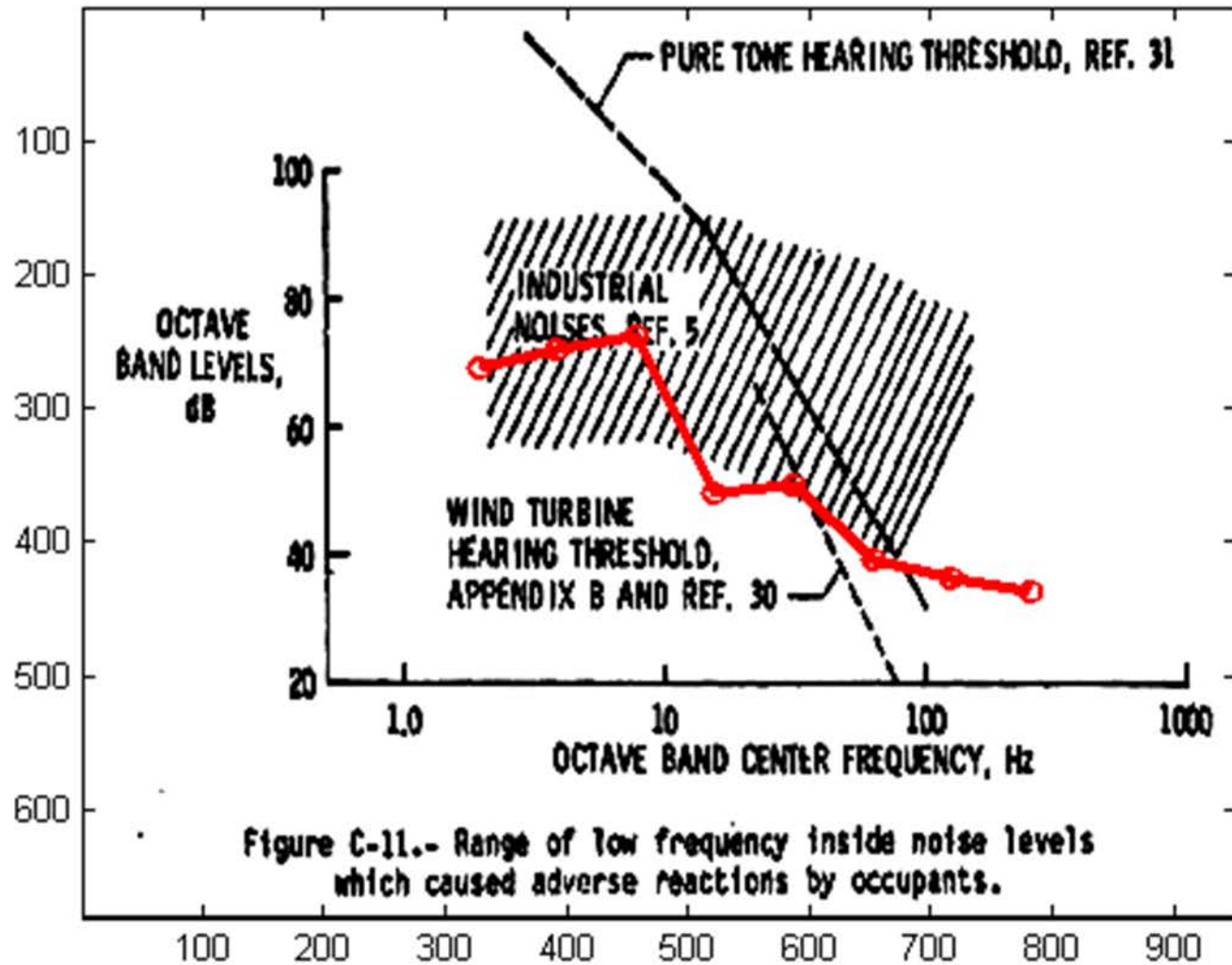
The slide makes clear that people had reported adverse effects at infrasound levels well below the conventionally defined hearing threshold. Superposed on the NASA graph is a set of octave data presented as a separate red curve. These red octave levels corresponded to infrasound levels which I had obtained from a house within a windfarm, and which I had used for my own analyses relating to the perception of infrasound at levels well below the nominal threshold of hearing.

I believe that clear evidence from over 30 years ago, coupled with modern analysis procedures using time-domain techniques, indicates that the process of comparing infrasound levels with the threshold of hearing obtained simply by testing with pure tones, is not an adequate criterion. Moreover, there is no doubt that we do not yet fully understand the mechanisms by which people can be adversely affected. Consequently, it is completely inappropriate to dismiss the genuine complaints of people who have to endure the adverse effects associated with living close to, or even within, modern windfarms.

Best Regards,

Malcolm Swinbanks

Octave Band Wind-Turbine Sound Pressure Level Inside House (Red)
 compared to 1982 NASA Perspective*



* D.G.Stevens, K.P.Shepherd, H.H.Hubbard, F.W.Grosveld, Guide to the Evaluation of Human Exposure to Noise from Large Wind Turbines, NASA TM83288, March 1982