

# HS2 Stakeholder Summit

5<sup>th</sup> March 2013

## Noise and Environmental Statement

Prof Colin Waters MSc BSc Eng C Eng MRAeS FIOA

# Environmental Impact Assessment

relies upon the physical information and its interpretation to lead to the

## Environmental Statement

# Impact or Effect ?

## **Impact**

A physical noise exposure

## **Effect**

The subjective response of the exposed population to that impact.

# Noise Assessment

## Two Fundamental Considerations :

1. The definition of what constitutes a significant adverse effect
2. The Accuracy of the noise modeling

The information we have as to how this will be done at present is contained within the Scope and Methodology Report

# Identification of an IMPACT

The measures must exist as set out in para 14.3.26 of the SMR:

Direct long term operational sound impacts **will** be identified where at the façade of the receptor the proposed scheme causes:

1. A change in the day or night equivalent sound level as defined in Table 33; or
2. A maximum sound level of 85 dB(A) or greater; and
3. **Absolute sound levels that are above the values of 50 dBL<sub>pAeq,16hr</sub> during the daytime or 40 dBL<sub>pAeq,8hr</sub> at night.**

# What does this mean ?

- Before the exposure of a residential receptor can even begin to be assessed for its effect it has to be identified that an impact even exists.
- Item 3 of the previous slide defines the base level for this identification.
- If the calculated noise exposure does not exceed 50 dB by day then no impact is identified and no effect can exist. No matter what the excess noise is over the background.

# Interpretation of the SMR

- This basic item is the subject of discussion at present with the ASG of the PF. It has been accepted that a case could validly be made for an identification of an impact at an exposure of less than 50 dB by day (40 dB by night) where the background levels are low.
- It is suggested by HS2 that the flexible approach that is set out in for example para 14.3.31 of the SMR. Will cover this point. This has not been accepted by the EHPs who take the view that the SMR is a quasi legal document and words like **will** have a meaning that does not allow variation.

# Calculation of Noise Exposure

The methodology that will be used by HS2 will depend upon a calculation method that has been derived from past projects and consideration of the peculiar noise sources attributable to high speed trains.

The overall level of accuracy of this procedure has been estimated as within +3 dB of a measured noise level.

# Summary

- An impact identification procedure that could remove significant impacts from consideration.
- A Noise Calculation procedure that is not precise.
- Given these two BASIC potential shortcomings of methodology the forthcoming EIA must be examined to ensure that the situation is rectified.

This presentation is very much a precis of the present situation. The theme will be further developed at the forthcoming noise workshop at CDC on 15<sup>th</sup> March.

Thank you