

Adran Seilwaith yr Economi  
Department for Economic Infrastructure



Llywodraeth Cymru  
Welsh Government

**THE LONDON TO FISHGUARD TRUNK ROAD (A40) (LLANDDEWI  
VELFREY TO PENBLEWIN IMPROVEMENT AND DE-TRUNKING) ORDER  
201-**

**THE LONDON TO FISHGUARD TRUNK ROAD (A40) (LLANDDEWI  
VELFREY TO PENBLEWIN IMPROVEMENT) (SIDE ROADS) ORDER 201-**

**THE WELSH MINISTERS (THE LONDON TO FISHGUARD TRUNK ROAD  
(A40) (LLANDDEWI VELFREY TO PENBLEWIN IMPROVEMENT))  
COMPULSORY PURCHASE ORDER 201-**

**SUMMARY PROOF OF EVIDENCE**

**DAVID HILLER, BSc MSc PhD CEng MIOA MIMMM FGS**

**WELSH GOVERNMENT, NOISE**

**DOCUMENT REFERENCE: WG 1.6.1**

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## **1. Author**

- 1.1 My name is David Michael Hiller. I am an Associate Director with Ove Arup and Partners Ltd (Arup), my employer since June 2000. My experience encompasses a wide spectrum of acoustics with my main specialism being in environmental noise and vibration.
- 1.2 I am a Chartered Engineer and a Corporate Member of the Institute of Acoustics I was an invited member of the BSI committees that revised British Standard BS 5228 'Code of practice for noise and vibration control on construction and open sites' and BS 8233 'Guidance on sound insulation and noise reduction for buildings' 2014.
- 1.3 I have over 30 years of experience and have published many reports and papers, mostly in relation to groundborne vibration and noise.

## **2. Scope and Purpose of this Proof of Evidence**

- 2.1 My evidence is presented in three sections. In the first I summarise the noise and vibration chapter of the Environmental Statement (ES) (Doc. 3.14.01). I then respond to two objections raised that relate to noise.

## **3. Summary of the Noise and Vibration Assessment**

- 3.1 The ES identified that the proposed scheme has the potential to cause:
  - a) Temporary, short term increases in noise and vibration at some sensitive receptors during construction works; and
  - b) During operation of the highway, changes in traffic noise levels due to the proposed changes to the road alignment.
- 3.2 The assessment included a baseline noise survey, calculation of construction noise and vibration impacts and 3D computer modelling to determine the operational (traffic) noise impacts. These assessments were all undertaken consistent with relevant policy, guidance and industry best practice.

- 3.3 Calculations of construction noise and vibration impacts followed the methods set out in British Standard BS5228<sup>1</sup>.
- 3.4 Traffic noise impacts were modelled using software that implements the Calculation of Road Traffic Noise (CRTN)<sup>2</sup> method, consistent with the Welsh Government's procedures set out in Design Manual for Roads and Bridges HD213/11<sup>3,4</sup> (which I will refer to as DMRB (Doc. 4.01.61)).
- 3.5 In total, it was predicted that, during the daytime, the proposed scheme would result in 54 dwellings experiencing a minor to major<sup>5</sup> decrease in traffic noise level in the future assessment year and nine dwellings and one other non-residential sensitive receptor experiencing a minor or greater adverse impact in the future assessment year.
- 3.6 In summary, the EIA demonstrated that
- a) During construction, no significant effects of construction noise or vibration would arise; and.
  - b) The community of Llanddewi Velfrey, which is a Noise Action Plan Priority Area, would experience significant permanent beneficial effects through a reduction in traffic noise as a result of the scheme.

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<sup>1</sup> British Standard BS5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites – part 1: noise.

<sup>2</sup> Calculation of Road Traffic Noise, Department of Transport Welsh Office, 1988. HMSO.

<sup>3</sup> Design Manual for Roads and Bridges Volume 11, Section 3, Part 7, HD 213/11 – Revision 1, 2011. The Highways Agency, Transport Scotland, Welsh Assembly, DRD.

<sup>4</sup> Note that HD213/11 was the extant guidance at the time the ES was written but has since been superseded by DMRB LA111

<http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/LA%20111%20Noise%20and%20vibration-web.pdf>

<sup>5</sup> The descriptors of magnitudes of impact are taken from DMRB and presented in ES Table 14.3 (short term) and Table 14.4 (long term).

## 4. Responses to Objections

4.1 In this section I respond to the issues raised by Mr Rayner Peett and Mrs Carol Peett relating to a residential property at Caermaenau Fawr, Clynderwen, Pembrokeshire, SA66 7HB. I refer to this as 'The Property' in my evidence, in which I address:

- a) the adequacy of the noise modelling undertaken for the EIA;
- b) the predicted noise impacts at The Property;
- c) noise monitoring undertaken following submission of the ES;
- d) noise monitoring carried out for the EIA and why measurements were not taken at The Property for the EIA; and
- e) the tranquillity of the location.

4.2 I also respond to the submission made by Sally Amooore, whose address is given as Cyncoed, Llanddewi Velfrey, SA67 7EG, which asserts that there will be an increase in noise level with the proposed scheme.

## 5. Conclusion

5.1 In my opinion, the noise modelling and assessment reported in the ES was appropriate, robust and consistent with relevant legislation, policy, standards and guidelines. The assessment showed that a larger number of properties would experience a reduction in traffic noise levels with the scheme than the number that would experience an increase.

5.2 In respect of the objection from Mr and Mrs Peett:

- a) It was not, in my opinion, necessary to measure baseline noise levels at The Property for the EIA.
- b) The assessment for The Property considered noise impacts at the façade that would be most exposed to a noise increase.
- c) Noise monitoring undertaken following submission of the ES indicate that the assumed (modelled) traffic noise baseline for 2020 was sufficiently close to the measured baseline that the conclusions

in respect of significant effects at The Property would not be altered had the measured baseline been used.

- d) There would be no change in the perception of tranquillity at The Property arising out of the noise changes predicted.

5.3 In respect of the suggestion that with the proposed scheme there 'will be an increase in the noise level<sup>6</sup>', the noise assessment has clearly shown that the majority of properties will experience a reduction in traffic noise in the long term, most notably those alongside the existing A40 through Llanddewi Velfrey.

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<sup>6</sup> This extract is taken from the submission by Sally Amooore