



## A29 REALIGNMENT – RESPONSE TO WSCC QUERIES

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### Non-Technical Noise Response to Noise and Vibration Comments

The assessment of operational road traffic noise has been undertaken in line with guidance set out in Design Manual for Roads and Bridges (DMRB) LA111. The magnitude of change for the short term (i.e. on date of Scheme opening) and long-term (15 years after opening) described in DMRB has been used to inform the initial assessment of likely significant effects. The assessment looked at the magnitude of change where increases above 3 dB (short term) are considered Moderate to Major (refer to Table 7-11 of the ES).

The assessment also considered the absolute noise levels in terms of Lowest Observed Adverse Effect Level (LOAEL) and Significant Adverse Effect Level (SOAEL) (ref Table 7-12 of the ES), where SOAEL is 68 dB  $L_{A10\ 18hr}$  (daytime) and for night-time it is 55 dB  $L_{night}$ . The LOAEL and SOAEL are described in the Noise Policy Statement for England (NPSE) as key conceptual thresholds considered to represent the onset of the (adverse) effects of environmental noise and relates to the guidance and objectives in the National Planning Policy Framework (NPPF).

Appendix 7-3 of the ES identifies the number of properties modelled within the study area (1,792). WSP has produced two figures as visual representations of the information described in Table 7-18 of the ES which provides details of the assessment of Operational Road Traffic Noise. Details of the short term day and night-time impacts are provided in the bullet points below, but in summary it should be noted that of the 1,793 properties modelled, none were predicted to experience a significant magnitude of change in noise levels and be above the SOAEL in any scenario (day or night). In terms of magnitude of change, four properties were considered to experience a major (>5 dB) increase in noise during the daytime and two during the night-time. No further mitigation beyond the inherent mitigation within the Scheme design (i.e. the noise barrier) is required for these properties.

Table A7.4.4 and A7.4.4 of Appendix 7-3 also show that the number of properties exposed to noise level above the SOAEL, in both the day and night-time, reduce with the Scheme in operation.

#### SHORT-TERM IMPACTS (DAY)

- In the short term day-time period, 97 dwellings would experience a minor increase in noise level (less than 3 dB). 28 dwellings would experience a moderate increase in noise levels (between 3-5 dB). Four dwellings would experience a major increase (more than 5 dB). 902 dwellings would experience a decrease in noise level, 250 of these would be a minor decrease and six would experience a moderate decrease.
- Of the four dwellings predicted to experience a major increase, three are below the LOAEL (located on Downview Road), and one is between the LOAEL and SOAEL (located on Eastergate Lane/Fontwell Avenue). None are above the day-time SOAEL.
- For the 28 dwellings with a moderate increase in day-time noise levels, none are above the SOAEL. Seven are between the LOAEL and SOAEL with the remaining 21 subject to noise levels below the LOAEL

#### SHORT-TERM IMPACTS (NIGHT)

- During the night-time (short term), 76 dwellings would experience a minor increase in noise levels, 21 dwellings would experience a moderate increase and two a major increase. 927 dwellings would experience a decrease in noise level, of which 226 would be minor and five would be moderate.
- The two dwellings with a major increase in night-time noise (located on Downview Road) are exposed to absolute levels between the LOAEL and SOAEL
- For the 21 dwellings with a moderate increase in night-time noise levels, none are above the SOAEL. Seven are between the LOAEL and SOAEL with the remaining 14 subject to noise levels below the LOAEL

Ten properties alongside the existing A29 Fontwell Avenue and Barnham Road have been identified which exceed the daytime SOAEL and potentially qualify for measures under the Noise Insulation Regulations (NIR) 1975, as Amended 1988 (shown in purple in Figure 7-6). The contribution (magnitude of change) from the proposed Scheme is minor, however existing road traffic noise levels for these 10 properties are already high as a result of the existing roads and



noise levels are predicted to exceed the SOAEL. For these 10 properties further assessment under NIR will be required by WSCC who will carry out a full noise assessment to determine final eligibility under the NIR. This includes an internal inspection of properties which are potential eligible for noise insulation measures.

## NOISE INSULATION REGULATIONS (NIR) 1975, AS AMENDED 1988

The NIR provides the framework to determine the entitlement to noise insulation treatment at eligible buildings (i.e. dwellings and other buildings used for residential purposes within 300m from the nearest point on the new or altered highway). The following three conditions should be met for potential qualification under the NIR:

- The combined expected maximum noise traffic level, i.e. the relevant noise level from the new or altered highway together with any other traffic in the vicinity must not be less than the specified noise level, LA10,18h 68 dB;
- The relevant noise level is at least 1.0 dB more than the prevailing noise level, i.e. the total traffic existing before the works to construct or improve the highway were begun;
- The contribution to the increase in the relevant noise level from the new or altered highway must be at least 1.0 dB.

Regulation 3 of the NIR imposes a duty on the highway authority (in this case WSCC) to offer insulation or provide grants in respect of a new road, or a road for which a new carriageway has been constructed, if the above requirements are fulfilled.

The Noise Insulation Regulations require the highway authority to carry out a noise assessment and to publish a list or map identifying all buildings qualifying under Regulation 3, not later than six months after the relevant date, i.e. when the new road is first opened. Where necessary, they must immediately make offers of insulation to the occupier or landlord of the building, giving the person six months to accept. The highway authority is encouraged to make the offer prior to commencement of road construction so that residents may benefit during the construction period. However, some residents may prefer to wait until the road is opened before making a decision. Consequently, the offer is renewed for a further twelve months after opening.

DMRB guidance does require potentially eligible properties under the NIR to be identified. DMRB (E/2) does note that '*The assessment of indicative forecast eligibility sets out which buildings are forecast to be eligible for either statutory or discretionary noise insulation, and in urban areas it can be appropriate to complete this at an early project stage to estimate costs of insulation, if there is potential for it to be required for large numbers of dwellings*'.