SHEFFIELD I MANCHESTER
0114 279 4932
www.codastudios.co.uk

THURNSCOE BRIDGE LANE- NOISE AND VIBRATION ASSESSMENT RESPONSE NOTE

Detailed comment on noise conditions during lockdown is provided in the report at Paragraphs 3.14-3.20. This includes comparison of noise and vibration levels measured at the Phase 1 site in 2012 to provide further detail, which is reasonable. The comparison of this data and its application to the assessment is clearly explained in these paragraphs. The parameters referenced are standard, and as used in BS8233.

CRN and CRTN are methods for calculating rail and road traffic noise where various detailed parameters are known about the flows on the rail or road. Noise measurements made on the land are acceptable for planning purposes, and are essential where the flow information is not known. Details of the freight movements on the railway for example are not known, thus must be measured. The flows on the road can only be approximated as the road is not a major highway. In any case, both calculation methods in CRN and CRTN are approximations and are often +/-5dB estimates, and +/-3dB at best. Differences between CRTN and reality are increasingly common, as the documents were written decades ago and no not reflect modern vehicles particular well. We understand work to update the standards is being tendered currently. CRTN also generates an L_{A10} parameter that must then be converted by rule of thumb to L_{Aeq}, which is used in BS8233 and essentially every other noise standard - therefore usually measurement of the L_{Aeq} direct is preferable.

CRTN does have a shortened method that requires 3no L_{A10} measurements in consecutive hours, being averaged. In this case, 61.1dB at 1411 hours, 62.7dB at 1511 hours, 62.6dB at 1611 hours - averaging to 62dB, which is 'converted' to an 18-hour L_{A10} minus 1dB, so 61dB $L_{A10(18hour)}$. 'Converting' this to a 16-hour L_{Aeq} gives us 59dB L_{Aeq}. This is measured directly, and declared in Table 2 as 59dB L_{Aeq}. So, whichever way we consider the noise levels near the road, the daytime levels are 59dB L_{Aeq}. CRTN has no nighttime calculation or measurement method (again, making it difficult to use), so direct measurement of noise levels has been undertaken and declared. Government statistics show that vehicle movements during the survey were at around 69% of normal. CRTN would find a 50% flow to produce a noise level 3dB lower than a 100% flow. 100% reducing to 69% would change noise levels by 1.6dB. This is a very small amount, and is not noticeable. Measured noise levels in 2020 are higher than in 2012, and we have no reason to suspect that this is significantly artificially low. In addition, our calculations allow sufficient headroom that an increase of 4dB L_{Aeq} in road traffic noise could be accommodated. This equates to more than a doubling of the road traffic flow at the time of the survey. Road traffic noise on this site is not a particular concern, and can be accommodated. The Council could place a validation testing condition on the approval such that BS8233 levels can be demonstrated once built, if required.

Coda Planning Ltd registered in England and Wales (registered number 12149908)
Registered address: 70 – 71 Cornish Place, Cornish Street, Sheffield, S6 3AF

SHEFFIELD I MANCHESTER
0114 279 4932
www.codastudios.co.uk

We have considered train movements during the day and at night, and have advised accordingly. As stated in Paragraph 3.19, we have allowed for the train L_{Aeq} noise level to be 7dB greater than actually measured during the 2020 survey (i.e. at the level measured in 2012, as that was greater). Train noise is dominated by the maximum events, and measures to control of these maxima have been submitted. Again, the Council could place a validation testing condition on the approval such that BS8233 levels can be demonstrated once built, if required.