Comments on Applicant's Written Statement of Oral Case at ISH6 by William David Moore

6a Baseline Noise Conditions

The ambient sound of the distant road noise has been measured by NMP4 & NMP3. The ambient sound of train pass bys have been measured by NMP4 & NMP3. Those ambient sound levels have then been copied to the NSRs associated with NMP4 & NMP3.

But the NSRs aren't in extremely close proximity to the railway line, so attenuation corrections need to be applied to the sound of the train pass bys measured by NMP4 & NMP3.

The applicant has refused to do this.

Instead, the applicant is attempting to rely on the applicant's road noise contour map and DEFRA strategic rail noise contours, neither of which are levels measured at the site by NMPs.

The applicant is attempting to use those contours to make claims about ambient sound levels at some NSRs.

The applicant's own report acknowledges the applicant's road noise contours overstate ambient sound levels versus those measured by NMPs.The strategic rail noise contours introduced by the applicant also overstate ambient sound levels versus those measured by NMPs.

This is why the applicant should use measurements made by NMP4 & NMP3 during different time periods, and attenuate the sound of the rail noise measured by NMP4 & NMP3 during different time periods.

Instead, the applicant is making claims using contours which are known to overstate ambient sound levels.

During the meeting, I made three points which the applicant did not address on the day, and which the applicant hasn't addressed in the written statement of the applicant's oral case at ISH6. Those are:

1. The applicant's noise assessment update note doesn't address all the NSRs associated with NMP4.

2. The applicant has misstated the locations of NSRs 2, 3 & 4. Those NSRs should not have been included in Table 5 of the applicant's update note and the applicant's claims relating those NSRs can be discarded.

3. The applicant has attempted to attribute 50 dB of rail noise to the NSRs in Table 5, but all the NSRs in Table 5 are outside the rail noise contours introduced by the applicant.

I explained why the contours introduced by the applicant shouldn't be used in lieu of measurements by NMPs. The applicant has responded to those points.

I have included the words submitted by the applicant at Deadline 5 in red.
I have included the words I submitted at Deadline 4 in *italics*.

1. The long-term noise levels measured at NMP1 and NMP2 are within 3 dB of the noise levels predicted by the 2019 baseline road traffic noise model. This is within accepted tolerances and shows good correlation between the measured and predicted noise levels. For reasons set out within paragraph 10.226, noise levels measured at NMP5 and NMP6 are less reliable.

The applicant is attempting to make claims about ambient road noise by using a road noise model which their own report acknowledges overstates sound levels. The applicant should not be doing that. The applicant is knowingly using overstated numbers.

This has led to the applicant claiming NSRs associated with NMP4 experience 55 dB of daytime road noise. This is **higher** than the total daytime ambient sound levels measured by NMP1, located ~300 metres from the M69, and applied to NSRs 9-11 as shown in the report's Table 10.43. The applicant's road noise model predicted levels 5.4 dB higher than the levels measured by NMP1 and used in Table 10.43.

This has led to the applicant claiming NSRs associated with NMP4 experience 53 dB of night-time road noise. This is **higher** than the total night-time ambient sound levels measured by NMP1, located ~300 metres from the M69, and applied to NSRs 9-11 as shown in the report's Table 10.44. The applicant's road noise model predicted levels 6.4 dB higher than the levels measured by NMP1 and used in Table 10.44.

1.1 Notwithstanding the above, it is also worth noting that ambient noise levels used within the noise assessment are the lowest reported representative level over the assessment periods.

Which is why it isn't appropriate for the applicant to use contours which aren't derived from NMP measurements during different time periods. The applicant isn't comparing like with like.

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2. This is incorrect, noise levels measured on Saturday night did not include rail movements, as detailed in paragraphs 10.106 to 10.108 in Chapter 10 Noise and Vibration (document reference 6.1.10A, REP4-039). Therefore, the noise levels do not include all sources of sound.

The applicant's response is confused.

I wrote: *"2. NMP4's Saturday night-time measurements (which the applicant wrongly expunged) had ambient sound levels due to all sources of sound of 44 dB, as shown in the report's Table 10.23. This is 9 dB below the night-time ambient sound level which the*

applicant is now attempting to ascribe to NSRs 1-8 & 24-26 purely due to road noise during night-time periods."

I only referred to the applicant's road noise claims, I didn't refer to the applicant's rail noise claims. This was precisely because the measured Saturday night-time period doesn't include rail noise.

The 44 dB measured by NMP4 was not just due to road noise, it included all sources of sound on that night, e.g. birdsong and aeroplanes. It was 9 dB below the 53 dB which the applicant is attempting to attribute to NSRs associated with NMP4, purely due to distant road noise at night.

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3. Table 55 details the BS4142 assessment of operational noise with mitigation and does not reference daytime ambient noise levels.

The applicant's response is confused.

I wrote: *"3. The applicant is attempting to claim that daytime ambient levels due to road noise are 16 dB above the weekday background sound levels, as shown in Table 10.55. As explained at the beginning of this document, the distant road noise generates a very small gap between the background sound level and the ambient sound level."*

Table 10.55 shows the applicant's weekday daytime background sound levels for NSRs 1-8 & 24-26. This level is 39 dB. The applicant is attempting to attribute 55 dB of daytime ambient road noise to NSRs associated with NMP4, which is 16 dB above the weekday background sound levels.

As I have previously shown and explained to the applicant, the distant road noise generates a small gap between the background sound level and the ambient sound level.

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4. The ambient noise levels in the area are dominated by rail movements and road traffic and therefore it is not surprising that noise levels do not fluctuate significantly across the site.

The applicant's response is confused.

I wrote: *"4. The applicant is attempting to claim that ambient sound levels at NSRs 1-8 & 24-26 purely due to road noise are higher than the weekday ambient sound levels used in the report for NSRs 9-11, as measured by NMP1, located ~300 metres from the M69. These lower ambient sound level figures for NSRs 9-11 are shown in the report's Table 10.43. The levels in the PEIR noise report were even lower."*

Point 4 refers solely to the applicant's road noise claims, that's why I wrote "purely due to road noise". The applicant's reference to rail movements is inappropriate.

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5. This is incorrect, it is not appropriate to compare the DEFRA road noise contour maps with the applicant's road contour map. The applicant's road contour map only includes those

roads within the study area and the DEFRA road noise contour maps only include roads for major roads with more than 3,000,000 vehicle passages per year. Therefore, the two are not directly comparable.

The applicant's response is disingenuous.

Look at the road noise contours emanating from the M69 in the applicant's road noise contour map and then look at the road noise contours emanating from the M69 in the DEFRA road noise contour map. The two are incompatible.

Any suggestion that this is due to the DEFRA road noise contours not including every road is untrue. These higher levels in the applicant's road noise model feed through to stated higher levels at NSRs.

It isn't surprising that the applicant's road contours state higher sound levels than the DEFRA road noise contours, because the applicant's own report states the NMP measurements were below those predicted by the applicant's road noise model.

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7. This is incorrect, the noise levels generally vary by 3dB day-to-day which is within accepted tolerances and is not significant.

The night-time ambient sound levels measured by NMP1 varied by 6.4 dB across different days of the week.

Noise levels measured adjacent to the railway line are lower over a weekend period, and this has been accounted for when selecting representative noise levels for these periods.

The rail noise contours introduced by the applicant don't distinguish between different days of the week. The applicant is attempting to attribute 50 dB of rail noise to NSRs associated with NMP4 during all time periods.

It's true that measured noise levels due to train pass bys were lower over the Sunday periods which were used in the applicant's operational noise assessment, but the applicant hasn't attenuated the measured sound of the train pass bys to the NSR locations, **which returns us to the original problem.**

The applicant has developed a very unfortunate habit of saying: this is negligible, this is not significant, this is within acceptable tolerances. This ignores the cumulative impact of multiple problems.

Noise attenuation at Burbage Common

The Applicant explained that Burbage Common is not a single receptor, it is a much bigger area and that is considered within the assessment.

The receiver point for Burbage Common is located at approximately 80m from the site boundary, within the nearest area to the HRNFI, which provides a robust scenario. However, the sound propagation across Burbage Common as a result of operational noise and road traffic on the A47 link road is shown on Figure 10.15 (document reference 6.3.10.15, APP-284).

The applicant's numerical calculations within the BS 4142 assessment for Burbage Common & Woods and the applicant's numerical calculations within the tranquillity assessment for Burbage Common & Woods both use the location of NSR 19, which is a fixed location.

The Applicant explained that the further you get from the rail line, the more road noise is going to dominate. The analysis undertaken for NMP4 suggests that the noise levels back into Burbage Common are representative.

The applicant's suggestion that being ~80 metres away from the railway line at NSR 19 rather than at the railway line means there is a dramatic difference in the distant road noise is not credible.

However, moving from being in extremely close proximity to the railway line to ~80 metres away, absolutely does have a dramatic impact on the ambient sound of the measured train pass bys.

The distant road noise and the sound of train pass bys have been measured during different time periods by NMP3. Unlike NMP3, NSR19 is not in extremely close proximity to the railway line, so attenuation corrections need to be applied to the measured sound of the train pass bys.

The road and rail noise contour maps introduced by the applicant overstate ambient sound levels versus those measured by NMPs, and they should not be used in lieu of NMP measurements.

The applicant needs to apply attenuation corrections to the sound of the train pass bys measured by NMP3 during different time periods, to attenuate them to the location of NSR 19.

Ambient noise levels at NSR caused by additional noise sources

The Applicant stated that the assessment of this matter is set out within the Noise and Vibration ES chapter (document reference 6.1.10A, REP4-039). The assessment does not include offsite rail noise on the basis that Network Rail control the offsite trains and could run these regardless of whether the HNRFI comes forward or not, so these are not a consideration of the noise assessment. The Applicant noted that the A47 link road and the onsite operational noise, including the gantry cranes, have been included in the assessment.

In response to the interested parties comments in regard to freight movements, the Applicant reinforced the fact that Network Rail's statutory position is that it is entitled to increase the use of trains and it is protected in terms of nuisance for running extra trains on this line, which is a strategic freight line and is a key cross country route, the HNRFI is using some of these paths, but Network Rail remains entitled to use these paths.

The Applicant further explained that in terms of the capacity study and the sensitivity of Burbage Common, the expectation is that 20 of these routes will have paths that will be used going east towards Felixstowe, London Gateway and the eastern ports, whereas up to about six will go west through Burbage Common. If all of the trains passed through Burbage Common they would not be stopping at HNRFI.

If the applicant's proposal is to receive credit for a switch from road to rail then it should also be credited with necessitating additional freight train movements. One follows the other.

Network Rail could run these trains regardless of whether the HNRFI comes forward or not, but Network Rail is not currently doing so and there is no reason to believe Network Rail would do so in the absence of the applicant's development.

The worst case scenario for the projected 32 additional daily freight train movements should be included in the cumulative impact assessment.

Baseline and Off-Site Rail Movements

The Applicant confirmed that, as had been previously stated, a significant reduction was needed for there to be an appreciable difference. The baselines used had been confirmed by NR and the Applicant's rail consultant as being accurate and representative.

The applicant's response is disingenuous, the number of trains with timetable listings is not and never has been in dispute. However, the number of freight train pass bys during a typical day is far lower than the number of freight trains with timetable listings. This has been repeatedly explained to the applicant since Deadline 1.

In the case of Narborough level crossing, the barrier downtime has been measured. The barrier downtime is a product of actual train pass bys. The applicant hasn't added in additional downtime for all those freight trains with timetable listings which didn't run on each day. I haven't seen anyone suggest the applicant should do so.

Yet, in the noise assessment, the applicant has included every single freight train with a timetable listing, disregarding how many actually pass by during a typical day.

In respect of Saturday night when no trains run, the noise data measured onsite shows that trains run on the other 6 nights a week, and so Saturday night is atypical.

Train pass bys are lower on both Saturday and Sunday nights. The applicant hasn't conducted a weekend assessment.

It was noted that BDC and HBBC agreed with the Applicant's model.

This is a procedural comment, not a technical justification.

6g Rating penalties The ExA asked the Applicant to address Mr Moore's breakdown of rating penalties.

"The Applicant noted that Mr Moore had applied a +9 dB correction to account for impulsivity, and the Applicant strongly disagreed with this as the +9db penalty applied without any account of factors such as screening, distance and existing noise. A +9bd penalty is not the case for at least one receptor which is not going to experience impulsivity that highly. At SR2, the location of this receptor also will mean that impulsivity is unlikely to be highly perceptible. As such, the approach taken by Mr Moore fails to take account of the receptor in its environment.

In response to Mr Moore's comments that he had used the methodology employed at East Midlands Gateway, the Applicant noted that the method of assessing ratings penalties was subjective and was primarily based on professional judgement. It was also the Applicant's view that the methodology employed by Mr Moore failed to account for mitigation."

I did not say I had used the methodology employed at East Midlands Gateway.

I said: *"I've used the method which was disclosed and used in the West Midlands Rail Freight Interchange noise report"*.

You can see this at 1:21:55 on the Recording of Issue Specific Hearing 6 (ISH6) – Part 4. I have repeatedly explained this to the applicant since Deadline 1.

The applicant has misquoted me, has 'responded' to something I did not write or say and yet again failed to respond to my submissions on this topic since Deadline 1.

In the case of The West Midlands Rail Freight Interchange Environmental Statement On Noise and Vibration, a clear method was disclosed and used "to provide a consistent, quantified approach to determining the likelihood of each characteristic being audible." Applying that method to the sound levels in the applicant's report leads to far higher rating penalties than the unsubstantiated rating penalties in the applicant's report.

The applicant's claim that I applied penalties using that method without any account of factors such as screening, distance and existing noise or mitigation is completely untrue. I have applied the method as it is written, using ambient sound levels measured by NMP4 and the applicant's own pre- and post-mitigation projected operational sound levels which have been attenuated to each NSR **by the applicant**, accounting for both distance and topography. They are the applicant's own projected sound levels at NSRs, as listed in Table 10.47 & Table 10.61.

This was explained in my response to the Examining Authority's written question and it has been repeatedly explained to the applicant in other correspondence since Deadine 1.

The method disclosed and used in the case The West Midlands Rail Freight Interchange is a method which has already been through an examination process. The applicant has not claimed that I have failed to follow the method.

The applicant hasn't disclosed any method whatsoever. There is nothing backing the applicant's rating levels other than the applicant's declaration.