Comments on the Applicant's Response to Deadline 4 Submissions [part 11] by William David Moore

The applicant has misstated my name and jumbled up separate submissions by two interested parties. This is not the first time the applicant has done this, please do better.

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*.

Section 1

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 be using the measurements made by NMP4 & NMP3 during different time periods, and attenuating the sound of the rail noise measured by NMP4 & NMP3.

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

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.

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I have included the words I submitted at Deadline 4 in *italics*.

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 definitive claims about ambient sound levels 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 weekday 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 and used in Table 10.43.

This has also led to the applicant claiming NSRs associated with NMP4 experience 53 dB of night-time road noise. This is **higher** than the 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.

When the applicant deployed NMP5 to calibrate the road noise model, the measured levels were 7dB below those predicted. This shows the danger of trying to pick a given location and declare road noise ambient sound levels based on the applicant's road noise model.

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."*

The analysis undertaken following ISH3 and detailed in Appendix F – Update to Noise Assessment Note (document reference: 18.7.6, REP3-061) provides an indication of the likely ambient noise levels in the vicinity of NSRs on Billington Road drawing on long-term data for the rail line and road traffic. This analysis shows that the noise levels measured at NMP4 are representative of the ambient noise levels at receptors and therefore the results and conclusions of the Noise and Vibration assessment remain valid.

This is not a meaningful response to point 2.

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."*

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.

This is not a response to point 3.

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."*

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

This is not a response to point 4.

I wrote: *"5. The applicant's road noise contour map is incompatible with the DEFRA road noise contour maps, which show road noise sound levels in the area below 55 dB LAeq (the lowest displayed threshold) during the day and below 50 dB LAeq (the lowest displayed threshold) at night. An example has been included in Figure 2 at the end of this document."*

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 overstated 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.

I wrote: *"7. Road and rail (particularly rail) activity can vary significantly during different days. Sound levels measured by NMPs reflect these variations."*

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 applicant's rail noise contours 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, even though all the NSRs in Table 5 are outside the contours.

Noise levels due to train pass bys were lower over the Sunday periods used in the applicant's report, but the applicant hasn't attenuated the measured sound of the train pass bys to the NSRs, **which returns us to the original problem.**

I wrote: *"As an aside, the applicant has made a mess of Table 5 in their update note. NSRs 2, 3 & 4 aren't on Billington Road East but have been included in the table. It's disturbing but unsurprising that we are two months away from the end of the examination period and the applicant still isn't familiar with the basic matters at hand. There are other problems with the applicant's document but I have to draw the line somewhere. I'll await answers to the Examining Authority's questions."*

This is incorrect, those receptors located north of the rail line where the noise levels measured at NMP4 have been used are included within Table 5.

The first sentence of the applicant's response is confused.

The applicant's noise assessment update note has misstated the locations of NSRs 2, 3 & 4. They have been included in Table 5 of the applicant's update note, but that they shouldn't have been, because they aren't on Billington Road East and the applicant's claims relate to Billington Road East.

This is with the exception of NSRs 1 and 24, where the methodology is not being questioned.

The second sentence of the applicant's response is completely untrue.

It is a false claim which has been invented by the applicant. **The applicant must immediately withdraw this false claim.**

Section 3

I interpreted The Examining Authority's ExQ 1.8.18 as effectively a request that I attempt to correct all the deficiencies identified in the applicant's report. My reply to that request was submitted at Deadline 4. The applicant has now responded.

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*.

Operational noise assessment - Weekend, night-time (2300-0700)

It is not appropriate to take the lowest measured level from a long-term data set. If there are trains running 6 nights out of 7, then the 'typical conditions' are that trains run during the night-time. The one night that trains do not run is atypical and not representative of the prevailing conditions.

The applicant's BS 4142 assessment includes four time periods: weekday daytimes, weekday night-times, weekend daytimes and weekend night-times. It's appropriate that assessments are conducted for different time periods, because sound levels can vary significantly during different time periods.

The applicant wrongly expunged the Saturday night-time noise levels measured by NMP4. This has been repeatedly explained to the applicant since Deadline 1 and accompanying evidence has been provided.

In response to the Examining Authority's request, I have reinstated the Saturday night-time noise levels measured by NMP4, as listed in the applicant's report.

Based on the above, the analysis for the ambient sound levels and predicted LAFmax levels is not correct and does not take into account the typical ambient and LAF max levels in the area.

I have applied the method disclosed and used in The West Midlands Rail Freight Interchange Environmental Statement On Noise and Vibration. The applicant has not claimed that I have failed to follow the method. The applicant has not disclosed any method whatsoever.

Using instead the Sunday night-time ambient sound levels measured by NMP4 of 50.1 dB, which the applicant used for the weekend night-time BS 4142 assessment, would still lead to +9 dB impulsive rating penalties at numerous NSRs, leaving the highest predicted rating levels unchanged.

Impulsive Penalty Allocation - Weekend, night-time (2300-0700)

The table is based on the incorrectly applied penalty which has been applied without taking account of any factors such as distance and screening.

The applicant's claim that penalties have been applied "without taking account of any factors such as distance and screening" is completely untrue. I have applied the method used in West Midlands Rail Freight Interchange as it is written, using the applicant's own projected operational sound levels which have been attenuated to each NSR, accounting for both distance and topography. They are the applicant's own projected sound levels at NSRs, as listed in the applicant's Table 10.47.

This has been repeatedly explained to the applicant since Deadline 1.

For example, the dwelling associated with NSR1 is located approximately 260m from the proposed development and is screened by the existing farm buildings. Therefore, impulsivity associated with the proposed development will not be highly perceptible at NSR1, particularly given how quickly point sources attenuate with distance.

Similarly, at NSR2, impulsivity associated with the proposed development will not be highly perceptible as it is located approximately 460m away from the proposed development.

I have applied the method as it is written, using the applicant's own projected operational sound levels which have been attenuated to each NSR, accounting for both distance and topography.

They are the applicant's own projected sound levels at NSRs, as listed in the applicant's Table 10.47. This has been repeatedly explained to the applicant since Deadline 1.

The applicant has not claimed that I have failed to follow the West Midlands Rail Freight Interchange method. The applicant has not disclosed any method whatsoever.

Furthermore, the operational phase noise assessment is agreed with BDC and HBBC through the Statement of Common Ground.

This is a procedural comment, not a technical justification.

Tonal rating penalties

The applicant did not comment on this section.

Operational noise assessment - Weekend, night-time (2300-0700) Assessment Outcome & Context

Notwithstanding the points detailed above, this is a pre-mitigated impact based on the atypical noise levels measured when no trains were running.

The applicant has performed assessments for both pre- and post-mitigation scenarios, my response to the Examining Authority's written question also looks at pre- and post-mitigation scenarios.

The applicant wrongly expunged the Saturday night-time noise levels measured by NMP4. Since Deadline 1, this has been repeatedly explained to the applicant and accompanying evidence has been provided.

In response to the Examining Authority's request, I have reinstated the Saturday night-time noise levels measured by NMP4, as listed in the applicant's report.

The results of the noise and vibration assessment show that with mitigation in place and once context is taken into account, the resultant impacts will be low.

The applicant is not referring to my submission.

Operational noise assessment, with mitigation - Weekend, night-time (2300-0700)

As detailed above, it is not appropriate to take the lowest measured level from a long-term data set. If there are trains running 6 nights out of 7, then the 'typical conditions' are that trains run during the night-time. The one night that trains do not run is atypical and not representative of the prevailing conditions.

The applicant's BS 4142 assessment includes four time periods: weekday daytimes, weekday night-times, weekend daytimes and weekend night-times. It's appropriate that assessments are conducted for different time periods, because sound levels can vary significantly during different time periods.

The applicant has wrongly expunged the Saturday night-time noise levels measured by NMP4. In response to the Examining Authority's request, I have reinstated them.

Based on the above, the analysis for the ambient sound levels and predicted LAFmax levels is not correct and does not take into account the typical ambient and LAF max levels in the area.

I have applied the method disclosed and used in The West Midlands Rail Freight Interchange Environmental Statement On Noise and Vibration. The applicant has not claimed that I have failed to follow the method. The applicant has not disclosed any method whatsoever.

Using instead the Sunday night-time ambient sound levels measured by NMP4 of 50.1 dB would still lead to +9 dB impulsive rating penalties at numerous NSRs, leaving the highest predicted rating levels unchanged.

Impulsive Penalty Allocation, with mitigation - Weekend, night-time (2300-0700)

The table is based on the incorrectly applied penalty which has been applied without taking account of any factors such as distance, screening and mitigation.

The applicant's claim that penalties have been applied "without taking account of any factors such as, and screening and mitigation" is completely untrue. I have applied the method as it is written, using the applicant's own post-mitigation projected operational sound levels which have been attenuated to each NSR, accounting for both distance and topography. They are the applicant's own sound levels, as listed in the applicant's Table 10.61. This has been repeatedly explained to the applicant since Deadline 1.

Tonal rating penalties

The applicant did not comment on this section.

Operational noise assessment, with mitigation - Weekend, night-time (2300-0700) Assessment Outcome & Context

Notwithstanding the points detailed above, this is based on the atypical noise levels measured when no trains were running

The reinstatement of the expunged Saturday night-time sound levels measured by NMP4 has already been addressed above.

and an inflated rating level which does not take into account any factors such as distance, screening, mitigation and the existing noise climate.

These claims are untrue and have been addressed above.

Notwithstanding this, with mitigation in place, the absolute noise levels predicted in garden areas at NSRs will be below the guideline value to 50dB LAeq,T during the daytime, and would only marginally exceed the internal noise level criteria of 30dB LAeq,T during the night-time.

The applicant is not referring to my submission.

The post-mitigation specific sound levels listed in the applicant's tables don't include the noise associated with the gantry cranes, as the applicant explains in Paragraph 10.284.

The applicant's post-mitigation specific sound levels have no rating penalties applied.

I have addressed other deficiencies in the applicant's assessment elsewhere. I'm not going to repeat them here.

The results of the noise and vibration assessment show that with mitigation in place and once context is taken into account, the resultant impacts will be low.

The applicant is not referring to my submission.

I have addressed other deficiencies in the applicant's assessment elsewhere. I'm not going to repeat them here.

Weekend Daytime & Weekday Operational noise assessment

Unsurprisingly, the weekend daytime assessment is fairly similar to the weekend night-time assessment, although more deficiencies needed to be corrected because the Sunday daytime included train pass bys and the applicant hasn't attenuated to the NSRs.

Even using the overstated 53.7 dB ambient sound level in the applicant's report and applying the West Midlands Rail Freight Interchange Method led to 9 dB impulsive penalties at numerous NSRs in both pre- and post-mitigation scenarios.

I don't intend to go through the applicant's responses to the weekend daytime and weekday assessments which have been variously addressed earlier in this document and in other submissions.

Burbage Common & Woods (NMP3)
Operational noise assessment

There is no technical basis provided for the statement on operational rating level.

As I have repeatedly explained to the applicant, the applicant hasn't provided predicted LAFmax noise levels due to impulsive and tonal elements at NSR 19. I can't perform any calculations because the applicant hasn't supplied the necessary data.

The final statement is incorrect. The results of the assessment with operational noise from the gantry cranes is provided in paragraphs 10.311 to 10.313 of Chapter 10 Noise and Vibration (document reference: 6.1.10A, REP4-039)

The applicant's response is confused.

As I explained numerous times in my response to the Examining Authority's written question, the post-mitigation specific sound levels listed in the applicant's tables don't include noise associated with the gantry cranes.

The applicant explains this in Paragraph 10.284: "Considering this, the noise associated with the gantry cranes and associated character correction have been removed from the following assessment."

The applicant then shows tables listing post-mitigation specific sound levels. These specific sound levels don't include noise associated with the gantry cranes, as explained in Paragraph 10.284.

Following on from those tables are Paragraphs 10.311 to 10.313 which also do not show post-mitigation specific sound levels with the gantry cranes included.

Paragraph 10.312 is actually an admission that once the gantry cranes are re-included, the post-mitigation specific sound levels are higher than the levels listed in the applicant's earlier tables.

In my response to the Examining Authority's written question, I had to use the post-mitigation specific sound levels in the applicant's tables. They are the only post-mitigation specific sound levels supplied by the applicant. They don't include the noise associated with the gantry cranes.

Tranquillity assessment

I wrote: *"This means that I also can't go through the tranquillity assessment at Burbage Common & Woods, because the operational noise forms part of projected noise."*

This statement is incorrect. The assessment includes on-site operational noise including the gantry cranes.

The applicant's response is confused.

There were two primary reasons why I couldn't go through the tranquillity assessment. These two reasons are explained in my response to the Examining Authority's written question.

The first is that the applicant has not supplied LAFmax levels for NSR 19. This meant that I couldn't apply the method disclosed and used in the case of the West Midlands Rail Freight Interchange to apply rating penalties to the specific sound levels and generate rating levels.

The second is that the post-mitigation specific sound levels for NSR 19 listed in the applicant's tables do not include noise associated with the gantry cranes.

The applicant's other responses have been addressed elsewhere.

Cumulative Impact

This statement is incorrect. Figure 6.3.10.15 shows the noise propagation across the site from operational noise including road traffic on the A47 link road, with mitigation in place.

I wrote: "*As I explained in my written representation, the noise report does not include a cumulative 'all in' calculation of predicted changes in sound levels at NSRs due to the cumulative effect of projected sources of sound during all time periods. These would include all noise from the site, increased road traffic noise and increased off-site rail movements."*

Figure 6.3.10.15 does not include the calculations I described showing the cumulative change at NSRs.