

Tritax Symmetry (Hinckley) Limited

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

The Hinckley National Rail Freight Interchange Development Consent Order

Project reference TR050007

Applicant's Response to Deadline 8 submissions made by Dr Moore and Mr Moore

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Hinckley NRFI

Applicant's Response to Deadline 8 Submissions from Dr Moore and Mr Moore

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Introduction

- 1.1 In paragraph 170 of the Secretary of State's ('SoS') letter, she has invited comments on the submissions of Dr Moore and Mr Moore (Interested Parties 'IPs') as referred to in the Examining Authority's ('ExA') report at paragraph 3.5.143. The reason for this is provided in paragraph 103 of the SoS's letter, which includes the following:

"... the ExA recorded that it had received a further submission from Dr Moore and Mr Moore at Deadline 8 of the examination (8 March 2024) [ER 3.5.143]. The additional submission included a third-party noise report indicating that that the daytime, night-time and 24-hour noise levels measured at Billington Lakes are all notably lower than those measured by the Applicant [ER 3.5.144 and 3.5.147]. The submission also suggests that the road noise levels used by the Applicant in its Noise Update Note are in error by 9.6Db [ER 3.5.148]. The ExA highlighted that it was unable to provide the Applicant with the opportunity to comment on this additional information and that it had not taken it into account as it considered that it would be procedurally unfair to the Applicant to do so [ER 3.5.149]."

- 1.2 The main concerns expressed by the Interested Parties are essentially around the use of ambient noise levels, or $L_{Aeq,T}$ levels. These were used by the Applicant to provide context in relation to the operational phase noise assessment work only, and only then with respect to assessments which adopt noise measurements from Noise Measurement Position 4 (NMP4 shown on Figure 10.2 Ref 6.3.10.2), APP-271 which has been considered by the Applicant to be representative of the existing noise climate at nearby Noise Sensitive Receptors (NSRs) to the north of the rail line, most notably NSRs off Billington Road East. All other noise measurements and associated noise assessments are not in dispute.

Context to Operational Noise Assessment

- 1.3 The operational phase noise assessment has been based upon British Standard 4142:2014+A1:2019 ('BS4142'). Section 11 of BS4142 'Assessment of the impacts' states:

"Obtain an initial estimate of the impact of the specific sound by subtracting the measured background sound level [...] from the rating level [...]."

- 1.4 Therefore, the first stage of the assessment is to obtain this initial estimate. Given that the measured background sound levels ($L_{A90,T}$) and rating levels are not in dispute (only the

existing ambient sound levels($L_{Aeq,T}$) are in issue), it follows that the initial estimate is also not in dispute.

- 1.5 The Standard provides further information regarding the context around the initial estimate.

“The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.”

- 1.6 BS4142 then directs the assessor to take all pertinent factors into consideration in giving context to the assessment, including (1) the absolute level of the sound, (2) the character and level of the residual sound compared to the character and level of the specific sound, and (3) the sensitivity of the receptor and whether dwellings will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.
- 1.7 In arriving at a final assessment of noise effects from operational phase noise, the Applicant has therefore utilised all three of these factors. Any dispute around existing ambient noise level (or residual noise level in BS4142 terminology), would only have the potential to affect one strand of the context assessment and would have no effect on the other factors.

Applicant's response to noise measurement report at Billington Lakes

- 1.8 BWB has reviewed the document “Billington Lakes Environmental Noise Measurements”, which was submitted separately by both IPs at Deadline 8 and raises a number of concerns with the data submitted on behalf of the Applicant. Firstly, the IPs have commissioned noise measurements at approximately 175m from the rail line (i.e. in a different measurement location) to the one used by the Applicant. The lower ambient $AeqT$ measurements obtained from this location are said by the IPs to be more representative than those used in one strand of one part of the BS4142 assessment.
- 1.9 The IPs measurements were commissioned for a single 24-hour period from a Friday at around 12:00 to Saturday around 12:00. By contrast, the Applicant's assessment included a full week of baseline noise measurements covering full weekday and weekend periods. The IPs Billington Lakes survey does not constitute one 24-hour weekday period, nor one 24-hour weekend period. BS 4142 states in the commentary on Section 8.1 Background Sound Levels:

“In using the background sound level in the method for rating and assessing industrial and commercial sound it is important to ensure that values are reliable and suitably represent both the particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.

Among other considerations, diurnal patterns can have a major influence on background sound levels and, for example, the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night-time period for sleep purposes. Furthermore, in this general context it can also be necessary to separately assess weekends and weekday periods”.

- 1.10 Based on this, the weekday and the weekend cannot be considered in full without one full period of data for each time period, and therefore the IP’s measurement results are inadequate and consequently unreliable in this regard.
- 1.11 It is also noted that the IPs measurement period began on the day that Leicestershire schools finished for half term, which casts further doubt as to how representative or repeatable the data is likely to be, given that road traffic flows may potentially be lower. Noise surveys are usually conducted during term time when normal traffic conditions prevail.
- 1.12 Notwithstanding this, the IPs resultant $L_{Aeq,16h}$ daytime noise levels, derived through logarithmically averaging the 15-minute daytime measurements between 07:00 and 23:00 (and excluding a measurement affected by extraneous noise), were 47.9 dB. The resultant $L_{Aeq,8h}$ night-time noise levels, derived through logarithmically averaging the 15-minute night-time measurements between 23:00 and 07:00, were 47.1 dB.
- 1.13 The Applicant’s corresponding ambient sound levels at NMP4 during the weekend (which is likely to be quieter than the weekday period and therefore the most likely to be affected by a change in ambient noise level) were 53.7 dB $L_{Aeq,16h}$ for daytime and 50.1 dB $L_{Aeq,8h}$ for night-time, this equates to a 5.8 dB difference during the daytime and a 3.0 dB difference during the night-time between the two datasets. The following sections of this document explore the significance or otherwise of this comparison in terms of the effect of their use on the change in future ambient levels assessment and on the absolute noise level contextual assessment.
- 1.14 As confirmed in the Applicant’s Written Statement of Oral Case ISH3 (Document 18.7.6, REP3-061), the ambient sound levels used in the Applicant’s assessment were validated through DEFRA strategic noise mapping for annualised rail noise and the project team’s annualised road traffic flow data. This is considered one effective way of safeguarding against conclusions being drawn by short term snapshots of noise monitoring rather than longer term, more representative averages.
- 1.15 For the reasons discussed above, it is therefore not considered that the data put forward by the IPs is robust or provide a reliable basis for reaching conclusions about likely noise impact.

Effect of using the Billington Lakes noise measurement data for change in ambient noise level contextual assessment

- 1.16 Notwithstanding the above concerns about its validity and robustness, the IPs Billington Lakes noise measurement data has been assessed to provide an indication of whether using it as an input (which the Applicant does not consider to be appropriate) would materially change the outcome of this strand of the context assessment.
- 1.17 **Table 1** below recreates Table 5 from the Applicant’s Written Statement of Oral Case ISH3 – Appendix F – Noise Assessment Update Note [18.7.6, REP3-061], replacing the Applicant’s ambient sound levels with those of the IPs.

Table 1: Increase in noise level due to operational noise from the SRFI – Daytime and night-time adopting the IPs ambient levels

NSR	Daytime (0700-2300)				Night-time (2300-0700)			
	Rating Level	IPs Ambient Level	Rating + IPs Ambient	Increase if using IPs data	Rating Level	IPs Ambient Level	Rating + IPs Ambient	Increase if using IPs data
2	47	47.9	50.5	2.6	44	47.1	48.8	1.7
3	44	47.9	49.4	1.5	41	47.1	48.1	1.0
4	46	47.9	50.1	2.2	43	47.1	48.5	1.4
5	45	47.9	49.7	1.8	43	47.1	48.5	1.4
6	45	47.9	49.7	1.8	43	47.1	48.5	1.4
7	47	47.9	50.5	2.6	43	47.1	48.5	1.4
8	45	47.9	49.7	1.8	42	47.1	48.3	1.2
25	47	47.9	50.5	2.6	43	47.1	48.5	1.4
26	45	47.9	49.7	1.8	44	47.1	48.8	1.7

- 1.18 For the above NSRs, using the Applicant's data, as per Table 10.59 of the Noise and Vibration ES Chapter (Chapter 10, 6.1.10A Rev 08 updated version of [REP4-039] as part of the Applicant's submission in response to the SoS), the changes during the daytime were up to +0.5dB and during the night-time were up to +0.3dB. For receptors that used other NMP data, and therefore are not in dispute, the increase in noise levels is predicted to be up to +1.5dB for daytime and up to +1.7dB for the night-time.
- 1.19 However, adopting the IPs data as in Table 1 above, results in changes of up to +2.6dB during the daytime and +1.7 during the night-time at receptors associated with NMP4.
- 1.20 As previously discussed in the ES Chapter (Chapter 10, 6.1.10A, REP4-039 Rev 08), this level of change is considered marginal, and would barely be perceptible to the human ear with changes of 3dB only just perceptible under normal conditions. As such, an increase of +2.6dB is low, which is likely to result in a permanent, minor adverse effect, when context is taken into consideration, which is not a significant effect.
- 1.21 **Crucially, even if the IPs data is used as an input to the assessment (which the Applicant does not consider to be appropriate) the result is not materially different and would not alter the assessment conclusions of the ES Chapter.**

Absolute noise level contextual assessment

- 1.22 Notwithstanding any dispute over existing ambient sound levels, as discussed within the Applicant's Written Statement of Oral Case ISH3 – Appendix F – Noise Assessment Update Note [18.7.6, REP3-061], the absolute noise levels predicted at NSRs on Billington Road East are broadly in line with the recommended internal and external noise levels in accordance with BS 8233:2014 and this has been relied upon to date to justify the assessment conclusions and this continues to be valid.
- 1.23 This approach was accepted by the Examining Authority and by the Local Authorities as referenced in the Examining Authority's Report, ExA's Consideration, Noise Assessment, Background and Rating Levels, paragraph 3.5.120:

"Taking everything together, including the Applicant's sensitivity testing and as the operational phase noise assessment is agreed with BDC and HBBC, we are satisfied

with the assessment in this regard. We favour its methodology, together with associated outcomes, over that provided by Mr Moore in [REP4-205]."

- 1.24 The operational phase noise assessment was agreed in Statements of Common Ground (SOCG) with Blaby District Council (Deadline 8 Submission - 19.1D, REP8-020 Hinckley NRFI SoCG between the Applicant and Blaby District Council [Signed] Rev 5) Section 1.5 Noise and Vibration, items 12 and 21), and with Hinckley and Bosworth Borough Council (Deadline 8 Submission - 19.2D, REP8-021 Hinckley NRFI SoCG between the Applicant and Hinckley and Bosworth Borough Council [Signed] Rev 5) Section 1.11 Noise and Vibration, items 12 and 21.

Other submissions from Dr Moore and Mr Moore

- 1.25 In addition to the Billington Lakes noise monitoring report, the IPs submitted several other documents:

Dr Moore

- Examination of Consultant's Noise Report Measurements – "Billington Lakes Noise Measurements 26th Feb 24 V2"

This document essentially summarises the IPs Billington Lakes noise measurements and then uses those results to compare with Applicant data as discussed in this note.

- Spreadsheet Analysis of Billington Lakes noise measurement data

This document is in support of the first document.

- 1.26 Realtime trains screenshot of rail movements

This document is in support of the first document.

- Summary and Signposting Document by Dr David Moore

This document does not raise any new points or concerns, instead signposting to four of Dr Moore's previously discussed issues, and listing Dr Moore's previous submissions. All of the points have been responded to previously by the Applicant, most recently discussed in the Applicant's Deadline 8 submission 'Applicant's response to Deadline 7 Submissions [part 8 - Residents Businesses] Document 18.21 (REP8-019), under 'Dr Moore' and taken into account where appropriate by the Examining Authority in reaching its conclusions on the noise issues.

Mr Moore

- Sound Measurements Which Refute the Applicant's Ambient Sound Claims by William David Moore

This document summarises the IPs Billington Lakes noise measurements and then uses those results to compare with Applicant data as discussed in this note.

- Comments on the Applicant's Noise Note Response to ExA Rule 17 letter by William David Moore

Parts a) and b) of the document comment on the existing ambient noise and the characterisation of this, which are dealt with in substance earlier in this Technical Note through discussion of the Billington Lakes data. No new points are raised.

Part c) relates to concerns around the application of BS4142, which is an issue fully ventilated during the examination, most recently in the Applicant's Deadline 8 submission 'Applicant's response to Deadline 7 Submissions [part 8 - Residents Businesses] Document 18.21 (REP8-019), under point 11, Mr Moore. All of these matters were taken into account by the Examining Authority in its conclusions in respect of noise. No new points are raised. In the Examining Authority's Report of Findings and Conclusions, paragraph 3.5.118 under the heading 'Background and Rating levels', it is stated:-

"We are satisfied that, given the overlapping of operations, acoustic character corrections are not required for tonality and impulsivity."

Part d) comments on the significance of mitigated construction noise effects but essentially highlights the inherent limitations of assessing construction phase noise mitigation at this stage in any project. The Examining Authority's Report of Findings and Conclusions, paragraph 3.5.128 under the heading 'Discussion – effects, Construction Noise and Vibration', stated:-

"In our view, effects during the construction stage would not be unacceptable and the Applicant, in accordance with paragraph 5.195 of the NPSNN and paragraph 5.232 of the dNPSNN, has demonstrated that adverse impacts would be mitigated and minimised."

The Examining Authority therefore accepted the assessment and mitigation is policy compliant. No new points have arisen since that would cast any doubt on that conclusion.

Part e) makes a comment related to the Applicant's allowance of a 15 dB attenuation through a partially opened window, suggesting this is not robust. The reduction has been taken directly from BS8233. This is an issue that was considered through the examination. No new points are raised. The Examining Authority's Report of Findings and Conclusions states at paragraph 3.5.118:

"In such scenarios, we are content that [...] the 15db reduction afforded by a partially open window, which is in line BS 8233, is appropriate."

- Comments on the Applicant's Response to Deadline 6 Submission [part 8 – Residents Businesses] by William David Moore

Points 1 and 2 refer to the Applicant not addressing all NSRs associated with NMP4. Specifically, Mr Moore has raised concern over allegedly high existing ambient noise levels being applied to NSR1, 2, 3 and 4. Existing ambient noise levels and absolute levels have been discussed earlier in this Technical Note. These NSRs are predicted to experience between 44 and 47 dB $L_{A,T}$ for daytime, and between 41 and 43 dB $L_{A,T}$ night-time, as a result of operational noise, which is broadly in line with the recommended internal and external noise levels in accordance with BS8233:2014, when allowing for partially opened windows. This was already addressed in 'TR050007-001705-18.7.6 (REP3-061) Written Statement of Oral Case ISH3 [Appendix F - Noise Assessment Update Note]'.

Point 3 refers to concerns around attributing 50dB of existing rail noise to NSRs listed in Table 5 of the Note when NSRs are outside of the rail noise contours presented within that document. The daytime $L_{Aeq,16h}$ rail noise contours are only shown down to 55 dB and it was stated in the Note at the time that the extrapolated noise levels based on the shape of the night-time contour would result in levels at NSRs in the region of 50 dB. As distance increases between the rail line and the NSRs, road traffic noise from the surrounding road network increases, which counteracts this reduction. Therefore, the statements in REP3-061 remain valid.

Beyond this, points are not numbered.

There is a point relating to the baseline and off-site rail movements which has already been raised and addressed, most recently in the Applicant's Deadline 8 submission 'Applicant's response to Deadline 7 Submissions [part 8 - Residents Businesses] Document 18.21 (REP8-019), under point 12, Mr Moore.

There is a comment around the Applicant allegedly misquoting Mr Moore on the breakdown of rating penalties. It is not clear in the document which statement is alleged to have been misquoted by the Applicant, but the Applicant has been clear throughout on the application of rating penalties, most recently in the Applicant's Deadline 8 submission 'Applicant's response to Deadline 7 Submissions [part 8 - Residents Businesses] Document 18.21 (REP8-019), under point 11, Mr Moore, and that remains the case.

There is a point querying whether the post mitigation specific sound level for NSR 19 due to operational noise includes gantry cranes. Table 10.64 of Chapter 10 Noise and Vibration 6.1.10A, rep-039 Revision 08 includes noise associated with gantry cranes. Paragraph 10.341 states, "*It is also worth noting that the above assessment has included cranes with the higher noise level to consider a worse case scenario.*"

- Summary/Signposting Document by William David Moore

This document does not raise any new points or concerns, instead signposting to Mr Moore's previously discussed issues, all of which were addressed most recently in the Applicant's Deadline 8 submission 'Applicant's response to Deadline 7 Submissions [part 8 - Residents Businesses] Document 18.21 (REP8-019).

- 1.27 It should be noted that officers at Hinckley and Bosworth Borough Council and Blaby District Council are in agreement with the Applicant on the conclusions of the noise and vibration chapter and none of the above points or comments change the Applicant's conclusions.

Summary and Statement of Compliance with Policy

- 1.28 The Applicant has considered the IPs Billington Lakes noise measurement data and makes the following points:

- Even if the new data were considered to be appropriate and robust, and used as an input to the assessment, it only has the potential to affect one strand of the context assessment of operational noise for a limited number of NSRs;

- The new data is limited in its coverage, being over a very short time duration and covering a period that the Applicant does not consider to be representative;
- The new data does not align with longer term, annualised rail traffic noise mapping produced by Defra and road traffic noise mapping from annualised baseline road traffic flow data, whereas the Applicant's data does;
- Irrespective of its validity, the use of the new data in the change in ambient noise level contextual assessment does not make any material difference to the potential increases across the wider project, those being less than 3.0dB;
- The inclusion of a contextual assessment based on absolute noise levels within the Chapter, which effectively removes the consideration of ambient noise level changes and disputes between one noise measurement dataset and another, provides comfort that final, residual effects from noise generated by the Proposed Development are likely to be permanent, minor adverse with the proposed mitigation in place.

1.29 For those reasons, even if the Secretary of State were minded to accept the IPs noise monitoring results as a reliable input for the purposes of assessment, the Proposed Development would remain compliant with policy from a noise perspective.