

Document Reference **19-0003-N3**

Project Name **The Whitecroft Care Home**

Subject **Deadline 8 Responses**

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Prepared by:

Johnny Berrill

Reviewed by:

Ian Yates

1 Introduction

- 1.1 This document sets out comments on the two LTC documents submitted at Deadline 8 relating to The Whitecroft Care Home.

2 LTC 9.196 – Applicants response

2.1 Point 3 – Road surface considerations

- 2.1.1 It would not be accurate to suggest that the opening year is the only important consideration in assessing the effect of a new road. While it is certainly important, and in many cases will directly inform the conclusion, it is necessary to consider the variation in noise level and impact after the opening year, whether gradual or not. This need is underlined by the requirement to include a future year analysis.
- 2.1.2 DMRB LA 111 refers to ‘opening year’ and 15 year after opening ‘future year’ assessments. However, an environmental noise impact assessment is in no way restricted to assessment in these two years only. It is good practice, and logical, to consider the reasonable worst case scenario in any impact assessment. IEMA guideline¹ Principles of Assessment state that “a noise impact assessment reflecting good practice should... Include an assessment of a worst-case situation, when appropriate”, with further clarification that the scenario “should be reasonably likely”(Clause 3.20).
- 2.1.3 For example, one approach typically used to follow the above requirement is to base the future year assessment on the “worst case within 15 years” traffic flow rather than the specific situation at 15 years.
- 2.1.4 A RSIH of -7.5 dB(A) is a very high-performance factor. Indeed, DMRB LA 111 states in Appendix A2, Point 5 “if RSI data is not available assume an upper limit correction of -3.5dB”. Operation of the road without the 7.5 dB(A) reduction could change a future year receptor impact from “No Change/Negligible” to “Major Adverse Change”. To include a mitigation measure, particularly one of such significance, which is inherently subject to degradation in performance without consideration of this degradation is not appropriate. Notwithstanding

¹ Guidelines for Environmental Noise Impact Assessment - Institute of Environmental Management & Assessment – November 2014



anecdotal discussion on what was or was not considered during drafting of DMRB LA 111, it is clear that to ignore such potential degradation is misleading.

- 2.1.5 Research into the performance of low-noise road surfacing indicates that most if not all of the benefit of the road surface could be lost well before the potential 11-year re-surfacing. It is not possible to review the actual potential loss in performance of the specific proposed surface as information on the actual surface proposed has not been provided. It is worth noting further that assessment in strict accordance with DMRB LA 111 (including Appendix A) without this information being available would require a maximum RSIH performance of -3.5 dB(A) to be applied.
- 2.1.6 The applicant has confirmed that degradation in performance of the road surface has not been considered in the assessment. They have also stated that they will not “resurface roads on the grounds of noise alone”; a reasonable interpretation of this being that if significant degradation in the low noise surface performance does occur, no amelioration will take place.
- 2.1.7 On this basis the noise impact assessment does not represent the actual impact likely to be experienced by the noise sensitive receptors and does not, therefore, meet the IEMA guidance that it should be credible.

2.2 Points 4, 10 and 21 – Best Practicable Means [BPM]

- 2.2.1 There is no question on the appropriateness of BPM, which are indeed a valid measure of control when utilised and applied correctly. However, we maintain our position that the applicants proposed use of BPM is not appropriate in some cases. The reasons for this have been previously set out, and include:
- The use of BPM as the sole approach to controlling noise in some cases, without any attempt to assess, calculate, predict, or otherwise identify the likely magnitude of noise or vibration impact upon the Care Home; this gives rise to the risk that the EIA fails to identify some potential impacts likely to require additional mitigation, with BPM then being implemented at a later stage, but leaving residents subject to significant impacts over several years.
 - Confirmation from the Applicant that, should the implementation of BPM not sufficiently control noise or vibration levels, there are no proposed controls in place to pause works until this is rectified.

2.3 Points 5 and 11 – NV015

- 2.3.1 Amended wording of NV015 to include reference to the specific time period being set as part of NV0002 provides no further confidence that the Care Home will be adequately protected. This is due, not least, to the commitments in NV015 being simply to “investigate” the issue and then “review” any further BPMs with limitations included in the text that could allow works to continue and finish with no changes implemented (potentially leaving residents subjected to significant impacts over several years).
- 2.3.2 The above concerns would stand to a certain extent for all elements which have been assessed. However, we have previously highlighted particular areas where no attempt has been made to assess or predict the impact upon the Care Home residents, particularly in the case of



construction vibration. To have a reactive approach only, with no commitment to pause works where an issue is noted, is not acceptable.

2.4 Point 6 – NV017

2.4.1 The Applicant states that, whilst not specifically named, the Care Home “would be considered a sensitive receptor and considered accordingly”. However, as previously highlighted, this is not the case. Vibration impacts at the Care Home during construction have been considered only in relation to tunnel boring and piling. There are construction works close to the Care Home for which potential vibration impacts should at the very least be considered and assessed.

2.5 Points 6 and 16

2.5.1 Haul Road 4 was one of the concerns, though the primary concern related to all construction works in the vicinity of the care home and the applicants refusal to adequately assess the vibration impact from these. While Haul Road 4 may sit outside the referenced 20m zone, Stanford Road is a long term construction traffic route which sits within this zone and so, using the applicants own reasoning, is a concern.

2.5.2 Vibration from vehicles is indeed generated by irregularities on the road surface. It is important to ensure that the applicants statement is not taken as an indication that this is the only source of vibration from haul vehicles. There are many other elements, such as vehicle type and maintenance, load type and balance, etc. which can have a significant effect on the vibration levels associated with haul road usage.

2.5.3 There is a general tendency in this and previous responses to focus on a singular aspect while ignoring other, often more significant and relevant, aspects. Given the nature of the hearing and deadline submissions, this results in repeated and drawn-out discussions which do not cover the primary concerns or come close to reaching a conclusion. It would be preferable, and considerably more efficient, for a comprehensive and suitably detailed construction vibration assessment, covering all potential vibration sources, to be undertaken.

2.6 Points 14 and 16

2.6.1 Whilst not directly related to noise and vibration it is worth noting that the response relates to screening during the operational phase while the points it claims to respond to quite clearly refer to concern about the effect of feeling ‘boxed in’ during the construction phase. Point 2.5.3 above refers to this general trend in the applicant responses.

2.7 Points 19 and 20 – Hourly construction thresholds

2.7.1 The potential for more appropriate criteria (e.g. use of alternative indices such as $L_{Aeq, 1 \text{ hour}}$ or L_{Amax}) to be applied through Local Planning Authority directives is correctly pointed out. However, an assessment and mitigation strategy which results in levels just meeting the criteria on the basis of 8-hour and 16-hour periods, would be very unlikely to meet criteria based on more appropriate $L_{Aeq, 1 \text{ hour}}$ or L_{Amax} indices. Therefore, if the application is consented on the basis of long assessment periods it is considered unlikely that a controlling authority



would subsequently place alternative, more onerous requirements on it as part of a Section 61 agreement.

2.7.2 Further discussion on alternative criteria is set out in Section 3.1 below.

2.8 Point 22 – Additional monitoring around the Care Home

2.8.1 Noted – as such, the noise levels set out in Appendix 12.5 for position A-NML 15 and in Appendix 12.4 for position CN85 (both representing The Whitecroft Care Home) remain the baseline unless further detailed and representative noise measurements are submitted.

2.9 Point 23 – Operational Impacts

2.9.1 We agree with the comments relating to the model being based on outdated baseline data. It is unfortunate that, despite numerous requests over an extended period, the applicant never provided updated information to allow our calculation model to be sustained.

2.10 Point 24 – Construction vibration prediction

- 2.10.1 As commented previously, we agree that it is difficult to assess vibration impacts accurately and robustly. However, this is not a valid reason to ignore the potential impacts of vibration during construction works. Approaches to assessing and controlling vibration during construction exist, and could include proxy measurements, qualitative analysis and controls, and empirical calculation.
- 2.10.2 For example, BS5228-2:2009 Annex E includes methods of vibration prediction from activities such as dynamic compaction, which it is reasonable to expect will form some of the earthworks activities for the adjacent earth bund. While it may be argued that the specific methods and machinery to be used might vary from this, it is surely better to undertake such analysis and present conclusions with appropriate caveats than to ignore such works in the impact assessment.
- 2.10.3 As such, we maintain our position that construction vibration has not been appropriately considered at the Care Home.

3 LTC 9.186 – Post-event submissions

3.1 Clause 3.4.10 – 3.4.12

3.1.1 The clauses of note are replicated below:

“KHL was concerned there may not be adequate mitigation measures for the construction of the proposed bund and for the management of general construction noise affecting bedrooms at night, noting it had responded to material which had been submitted by the Applicant at Deadline 6. In summary, KHL did not consider that material submitted by the Applicant was sufficient to address construction impacts on the Whitecroft care home.

BF responded to points in relation to the one-hour data and L_{Max} on behalf of the Applicant. The assessment which has been undertaken is appropriate for the current phase in the planning process with regard to the construction techniques that will be undertaken. The



Applicant confirmed that it would consider KHL's Deadline 7 submissions in relation to noise and vibration and respond in writing. The ExA noted it would want to understand what the appropriate measure in terms of protection is of undisturbed sleep in bedrooms, as that issue is potentially the most difficult.

AT confirmed that the Applicant considers that the application of BS 5228 for night-time is an appropriate measure for healthcare facilities which is why it was used. This sets out the thresholds that are set out in Responses to the Examining Authority's ExQ2 Appendix E – 9 Noise & Vibration [REP6-111].”

- 3.1.2 In response to the ExA comment, it is worth noting that $L_{Amax,F}$ is the index typically used to provide controls relating to undisturbed sleep. A short term $L_{Aeq,T}$ measure could also be used. Both of these would be likely to indicate greater impacts than the longer $L_{Aeq,T}$ currently used in the applicant's assessment.
- 3.1.3 BS5228-1:2014 highlights that short time periods can be appropriate when describing noise from isolated events. This is certainly the case when considering potential sleep disturbance, which could apply to any period, day or night, for the Care Home residents. While there are various references to such periods through the standard, Clause 6.2 states:
- “When describing noise from isolated events that might not always be apparent from a longer period $L_{Aeq,T}$, it can be useful to use a short period (e.g. 5 min) $L_{Aeq,T}$. Alternatively, the maximum sound level, L_{Amax} , or the one percentile level, $L_{A01,T}$, can be used.”
- 3.1.4 It is worth noting that use of one-hour periods can often be used to better protect sensitive receptors from noise levels which might not be accurately described using a full 16-hour day or 8-hour night averaging period. Examples of this, where standard daytime and night time numerical thresholds are applied using a 1-hour period rather than 16-hour or 8-hour include the London Borough of Ealing (SPG10) and numerous hotel operators. These examples are given merely to illustrate the fact that such periods are in common usage.
- 3.1.5 BYA set out in 19-003-R3-1 suggested appropriate criteria including $L_{Amax,F}$ and $L_{Aeq,1\text{ hour}}$ indices. The Applicant did not respond to the proposed criteria.
- 3.1.6 The applicant has suggested that analysis of shorter time periods is not possible as it is “unreasonable to assume this level of information would be available at this stage of the Project design”. It should be possible for the applicant to make reasonable assumptions about plant that could be operating in any given 1-hour period (for example). However, if assessment is not possible at this stage, more appropriate short term $L_{Aeq,T}$ and or L_{Amax} limits could still be set for the development.
- 3.1.7 In terms of assessment, Appendix 12.4 sets out equipment details, including percentage on time, as utilised in the assessment to date. While it is appreciated that it would take work, it is relatively straightforward (with reasonable assumptions) to establish a potential worst case 1-hour using this data upon which the assessment could be based.
- 3.1.8 The Applicant maintain that the assessment criteria used for the Care Home is appropriate. The following two statements are included in the HeQA impact assessment.
- “The care home provides elderly and dementia care; residents are likely to have very different sensitivities to changes in noise level”



“people in care homes may experience a variety of conditions, including dementia, and may be more sensitive to changes in noise level.”

- 3.1.9 On the basis of the above two statements, application of the same criteria to both the general population and care home residents, with no further consideration of the specific sensitivities of the latter, cannot be said to be appropriate.
- 3.1.10 It is worth noting on this point that BYA raised in 19-0003-N2 paragraph 2.6 the fact that LTC appear to have changed the methodology from the BS5228-1 example method 1 (ABC method) to BS5228-1 example method 2 (5 dB(A) change). We queried why this was done without highlighting the change, and whether any other such changes had been implemented without notification. No response to this has been received.