

Document Reference **19-0003-M5**

Project Name **The Whitecroft Care Home**

Subject **Counter-Response to Written Reps**

Date: Prepared by:

18 August 2023 Ian Yates

1 Introduction

- 1.1 This memorandum sets out a counter-response to the Lower Thames Crossing Applicant's response ¹ at deadline 3 ("the Response") to the Written Representations (WR) ² made on behalf of Runwood Homes etc. at deadline 1, in relation to acoustics.
- 1.2 This counter-response also makes reference to the BY Acoustics LTC ES Chapter 12 Review ³ and the Psychiatric Report ⁴ prepared by Dr Series.

2 REP1-367: TR010032-002653-WR2: LTC ES Chapter 12 Review

- 2.1 Other than listing REP1-367 as a reference, the Response does not appear to make any other reference to the BY Acoustics LTC ES Chapter 12 Review. Consequently, it does not appear to address any of the points made in that review. The main body of that review extends to twelve pages, so this memorandum does not seek to restate the various points made therein. Nevertheless, REP1-367 needs to be specifically addressed by the Applicant.

3 REP1-370: TR010032-002652-WR1: Psychiatric Report

- 3.1 Other than listing REP1-370 as a weblink, the Response does not appear to make any other reference to the Psychiatric Report. Consequently, it does not appear to address section 10 of the report, which considers potential effects of noise on people in care homes such as The Whitecroft, and the likelihood that they will be impacted by noise to a greater degree than the general population.

¹ Examination Document Reference TR010032/EXAM/9.53 Comments on WRs – Appendix F – Landowners

² REP1-373: TR010032-002651-Kathryn Homes Ltd, Runwood Homes Ltd and Runwood Properties Ltd - Written Representation (WR)

³ REP1-367: TR010032-002653-Kathryn Homes Ltd, Runwood Homes Ltd and Runwood Properties Ltd - Written Representation (WR) 2: BY Acoustics LTC ES Chapter 12 Review

⁴ REP1-370: TR010032-002652-Kathryn Homes Ltd, Runwood Homes Ltd and Runwood Properties Ltd - Written Representation (WR) 1: Psychiatric Report



4 REP1-373: TR010032-002651-WR: Written Representation

- 4.1 The Response lists changes made following the consultation in summer 2021, including:

“Enhanced landscaping (bunds) around A13 junction to reduce visual impact and mitigate noise.”

However, it does not quantify the effects of the mitigation, for example in the form of any additional noise attenuation achieved by the enhanced landscaping.

- 4.2 In relation to Paragraph 25 of the WR, the Applicant notes potential noise impacts during extended working and confirms that:

“these have been considered within the noise and vibration assessment presented within ES Chapter 12: Noise and Vibration”

The statement does not appear to be correct, because the potential noise impacts during extended working have not been sufficiently considered and quantified. Neither have specifics been provided in relation to mitigation of any such noise impacts. Similar points were made in REP1-367; that report does not appear to have been addressed.

- 4.3 The Response to Paragraph 26 of the WR is acknowledged. However, haul routes and earthworks in the vicinity of The Whitecroft also have the potential to give rise to significant vibration, as stated in section 7 of REP1-367. This does not appear to have been addressed.

- 4.4 The Response to Paragraph 29 (second bullet) of the WR states that:

“None of the proposed works within close proximity to Whitecroft would generate significant levels of vibration, as such no assessment of construction vibration is necessary at Whitecroft.”

Again, this appears to disregard the comments made in section 7 of REP1-367, which does not appear to have been addressed.

- 4.5 The Response to Paragraph 29 also states that DMRB does not require detailed assessment of all façades at identified receptors. This is acknowledged; however, the response also states that the assessment “has focused on worst case façades” (note the plural). It is not clear which façades have been used and whether “worst case” applies to absolute noise levels or changes in noise levels. Our analysis showed a potential increase of up to 10 dB on the south façade, despite this not being the façade subject to the highest absolute levels (due to there being no major noise source to the south prior to commencement of LTC works). It is acknowledged that the use of low noise road surface could reduce the calculated level increase. However, insufficient detail has been provided regarding these points. Some similar points were made in section 4 of REP1-367, which does not appear to have been addressed.

- 4.6 The Response to Paragraph 29 also comments on the sensitivity of receptors. It refers to Chapter 12 and 13 of the ES. However, there does not appear to be any further consideration of The Whitecroft in terms of noise criteria, which appear to have been set as though it is an ordinary residential receptor such as a private dwelling, rather than taking account of the likely heightened sensitivity of its occupants in comparison to the general population.

- 4.7 The comments relating to construction noise assessment in the Response to Paragraph 29 are acknowledged. However, it has not been adequately demonstrated that the deemed levels of attenuation are achievable. If it transpires that they are not achievable, then The Whitecroft



residents could be subject to Moderate or Major impacts for extended durations, with the defence being that Best Practicable Means are being used to minimise noise levels. While that defence might be reasonable in some senses, it could leave the residents suffering the noise impacts for long durations with no way of mitigating them further, which would be unreasonable. To illustrate part of the problem, it can be noted that ES Chapter 12 Table 12.33 CN 85 states an exceedance of the Significant Observed Adverse Effect Level (SOAEL) by 7.3 dB during the day, with 10 dB mitigation then assumed to reduce levels to below SOAEL. The unmitigated exceedance of SOEAL at night is stated as 10.5 dB. The chapter acknowledges that even with mitigation there remains a risk of exceeding SOAEL – but states that the claimed short period for which it occurs means this is acceptable. In either of these situations, if any of the assumptions are inaccurate by even a few dB, then the impact could be significant and/or the duration longer (e.g. if the achievable attenuation is hypothetically only 6 dB rather than 10 dB, this would affect both the day and night assessments). This calls into question the conclusion that there will not be a significant impact. It should also be noted that these examples are based on the SOAEL thresholds in the ES, which appear to be the same as those applying to ordinary residential premises such as private residences, rather than taking account of the likely heightened sensitivity of The Whitecroft residents (please also refer to paragraph 4.6 above).

4.8 The Response to Paragraph 34 discusses mitigation with reference to ES Chapter 12 (Noise and Vibration) and ES Appendix 2.2 (Code of Construction Practice, First Iteration of Environmental Management Plan). No details appear to have been provided of any maintenance and renewal regime to ensure that measures such as low noise road surfaces continue to provide the assessed benefits over time. Some similar points were made in section 4 of REP1-367, which does not appear to have been addressed.

4.9 The Response to Paragraph 35 states that:

“The Applicant considers that there is significant detailed information within the DCO application documents relating to the construction phase”

This appears to contradict the claim implied in the Response to Paragraph 29 that it is not possible to include detailed information until a later stage, when the specifics of the works are better understood in relation to the level of noise required to be mitigated to meet appropriate thresholds. If there is in fact “significant detailed information” available, then why is more detailed information not provided on mitigation measures and the mitigated noise levels?

4.10 Under the heading Scope for Mitigation, the Response to Paragraph 38 cites a beneficial impact at The Whitecroft. It also makes specific reference to the eastern side of The Whitecroft. As we have already stated, it is not clear which façades have been used in the assessment, nor whether the “worst case” assessment relates to absolute noise levels or changes in noise levels. Our analysis showed a potential increase of up to 10 dB on the south facade, despite this not being the facade subject to the highest absolute noise levels (due to there being no major noise source to the south prior to commencement of LTC works). It is acknowledged that the use of a low noise road surface could reduce the magnitude of the calculated increase in noise level. However, insufficient detail has been provided regarding these points. Some similar points were made in section 4 of REP1-367, which does not appear to have been addressed.



- 4.11 In relation to the Public Sector Equality Duty (PSED, Paragraphs 43 – 47 of the WR), the Response states:

“It is noted that residents of the Whitecroft Care Home have the potential to be differently and disproportionately affected by disturbing noise events in comparison to persons who are not suffering from dementia-related or other cognitive impairments. This is acknowledged within the Health and Equalities Impact Assessment [APP-539] both in the evidence base (paragraph 7.9.6 refers to people with mental illness such as dementia being less able to cope with the impacts of noise exposure) and in the assessment of construction impacts (paragraph 7.9.21 notes the type of care provided at Whitecroft and that ‘residents are likely to have very different sensitivities to changes in noise level’).”

However, these statements are not borne out in the noise assessments in Chapter 12 of the ES, where The Whitecroft appears to be assigned the same sensitivity as general residential receptors such as private dwellings; and assessed against the same criteria. This is conceded in the Paragraph 29 Response, which states that “all receptors are given the same sensitivity”.

- 4.12 Also in relation to PSED, the Response states that:

“a range of BPM measures have been identified for this location specifically, including acoustic screening between construction works (including compounds and haul routes) and the care home (which in itself is anticipated to result in up to a 10dB reduction in noise at this location”

The phrase “up to a 10 dB reduction” is important, because it implies that the reduction will be no more than 10 dB but could also be less than 10 dB. If it is less than 10 dB, that could result in impacts being greater than assessed in the ES (please also refer to paragraph 4.7 above).

- 4.13 Again in relation to PSED, the Response states:

“The assertion in paragraph 47 that residents would be impacted by noise during the operational phase of the Project is refuted. The assessment presented within ES Chapter 12: Noise and Vibration [APP 150] has shown that the Whitecroft Care Home would experience a decrease in road traffic noise levels during operation.”

The assertion appears to have been refuted without sufficient evidence, as set out throughout this memorandum and in REP1-367; that report does not appear to have been addressed.

5 Conclusion

- 5.1 It is acknowledged that the ES is necessarily based on various assumptions, particularly concerning construction noise and vibration in advance of detailed methodologies, plant and equipment being selected. However, the assessment needs to be detailed enough to establish the viability of the stated levels of mitigation. Where various numerical noise reductions have been stated, it has not been satisfactorily demonstrated that they are achievable, because the assessments do not go into sufficient detail. If there is a risk of them not being achievable, that leads to there also being a risk of the noise effects being greater than assessed in the ES.
- 5.2 The Applicant’s Response to the Written Representations (REP1-373) does not appear to make any attempt to address the BY Acoustics review of ES Chapter 12 (REP1-367), or section 10 of the Psychiatric Report by Dr Series (REP1-370).
- 5.3 Comments on the Applicant’s Response to the main Written Representations (REP1-373) are made in section 4 of this memorandum.