

Cobham House Vineyard Limited
c/o Dan McEwen, **Work by Here Limited**
Via email

26 September 2024

231_01M_1-0_CWA

MEMO: LAND AT GOLD STREET, DA12 3AA – RESPONSE TO REVIEW OF NIA REPORT

Application ref: 20240544.

Proposal: Application to determine if prior approval is required for a proposed; Erection of a winery building and hardstanding for Agricultural or Forestry use of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) - Schedule 2, Part 6.

Location: Land At Cobham House Vineyard, Gold Street, Cobham, Gravesend Kent DA12 3AA.

1. MEMO AIM, SUMMARY AND LAYOUT

1.1 This document has been prepared in response to a review ('the NIA Review') submitted by objectors to the above referenced application and conducted by Lustre Consulting of the Noise Impact Assessment report ('the NIA Report') prepared by the author and submitted in support of the above application. The details of the NIA Review and the NIA report are as follows:

- **Acoustic MEMO Gold Street** – Gravesend, ref. 5088_AC_1.0, dated 05 July 2024, by **Lustre Consulting**.
- **Noise Impact Assessment**, ref. 231_02R_1-0_CWA, dated 05 June 2024, by **Chris Wood Acoustics**.

1.2 Having undertaken its own survey, Lustre Consulting [2.19 – 2.21] concludes that a lower existing background sound level value should be adopted for the daytime period than the NIA Report to inform the noise assessment. Lustre Consulting identify a value of 35 dB, whereas the NIA Report identified a value of 40 dB. The NIA Review suggests the 40 dB value is *"more favourable for the Applicant"* [2.21] and that *"it can be argued that background sound levels of around 35 dB... should be used for the BS 4142 assessment"* to establish noise impact. There was notably no disagreement about methodology and the night-time value used by the author in the NIA Report.

1.3 As explained below, there are two main areas of discrepancy within the NIA Review relating to the survey and data analysis, which included use of a time period not recommended within BS 4142, and analysis over periods and days not applicable to the proposals. This means that it cannot be concluded that the value Lustre Consulting argues should be used is necessarily more representative than the author's.

1.4 What should be noted is that the calculated development sound levels would still be below the suggested lower background sound level in any event. Therefore, the issue raised is ultimately of no consequence and does not alter the NIA Report's final conclusions and assessment.

1.5 Lustre Consulting also seek to throw doubt on the NIA Report's identification that sound levels within the winery are highly unlikely to exceed 75 dB ($L_{Aeq,T}$). The NIA Review at [2.22] suggests that it could be higher because of anecdotal evidence and a 'noise risk assessment' conducted in a Sicilian winery, which research Lustre Consulting states *"suggests that noise levels in the mid to high 80s dB(A) could occur."* As set out below the Sicilian winery is not a good comparator for the proposed operation, which is significantly smaller. The source of the 75 dB ($L_{Aeq,T}$) is explained and is a robust one given the assumptions made.

1.6 Lustre Consulting further submit that sound from mobile external plant should be included in the assessment. This may normally be the case when assessing more common commercial operations (with multiple such movements per hour), but this is not considered to be a normal case, with a distinct lack of such movements. It is clearly acknowledged in the NIA Report that movements would occur and result in additional sounds, but where there will be a relative lack of use of such plant as part of the overall operations, such that specific assessment is not justified. It is to be expected that, in keeping with living next to farmland, sound levels will be materially higher at certain times in the year, but this is for limited periods only and, in this instance, only during normal working hours.

1.7 The author has reviewed matters closely noting the submission by Lustre Consulting that the concerns raised “*could significantly affect the outcome of the BS 4142 noise assessment submitted in support of the proposed development*”. The author, however, stands by his initial judgements for the reasons given. As such the original conclusions remain valid.

1.8 This document is set out as follows: a brief description of the author’s experience is given in **Section 2**; the key areas for challenge are discussed in **Section 3**; and the author’s conclusion is presented in **Section 4**.

2. AUTHOR EXPERIENCE

2.1 This document has been prepared by Mr Chris Wood, who has 30 years’ relevant experience in acoustics, is a Corporate Member of the Institute of Acoustics (MIOA), and has the Diploma and Master of Science Degree from the IOA in Acoustics and Noise Control. He has undertaken a number of surveys and assessments for similar developments whilst following the relevant guidance.

3. KEY AREAS OF CHALLENGE

3.1. SUGGESTION THAT THE SURVEY WAS OVERLY AFFECTED BY ADVERSE WEATHER

3.1.1 At [2.4] the NIA Review considers the weather conditions shown in the NIA Report that were current at the time of the survey conducted by the author. The NIA Review suggests that the weather conditions recorded were adverse enough potentially to affect the noise monitoring results significantly.

3.1.2 It is correct (as recorded in the NIA Report) that there were high winds at times during the survey, but it can be seen from Table 5.2 of the NIA Report that this was only for very limited periods. Six days out of the eight days over which the survey was conducted were unaffected by such winds.

3.1.3 It is also true (again as noted in Table 5.2 in the NIA Report) that there were varying degrees of a chance of rain on a number of days. However, firstly, this is England, where it rains frequently, and, secondly, a rain event does not necessarily mean there were ‘adverse or atypical conditions’, especially where any rain was light, which is understood to be the case when it did occur during the survey. It is noted at [2.13] of the NIA Review that Lustre Consulting specifically excluded from its survey the results taken during “a period of time when it rained between 4:00 and 6:00am on the 3rd July”. This appears to be on the basis that the rain could be heard in the audio recording and it was concluded this “affected the survey”. This may seem to an appropriate/prudent step, but where it was likely to be largely unnecessary, and where it is certainly unhelpful to remove all sign of the data for others to review and to be considered as part of a broader understanding of conditions at times.

3.1.4 It is noted that the NIA Review commends the approach adopted by the NIA Report.

3.1.5 With regard to the survey (as presented in the NIA Report), the author maintains that sufficient data were obtained from which to determine suitable values despite any so-called adverse weather conditions that *might* have occurred. This is in fact largely borne out by the similarity between the author’s and Lustre Consulting’s survey data, as commented on below.

3.2. LUSTRE CONSULTING’S SURVEY DATA

3.2.1 Lustre Consulting’s survey was to the rear of Hevers Cottage, so not quite the same as the author’s main position on the boundary with Hevers Cottage, but an appropriate position given the access that Lustre Consulting had. Being a different position, however, there is a greater chance in there being differences in results; although, in order for the author’s position to be considered suitable, conditions should be sufficiently similar and which, for the most part, is indeed be the case. Ideally, Lustre Consulting would have measured in both locations to cover this potential factor.

3.2.2 Like the author, Lustre Consulting did not undertake weather monitoring, and so there will always be a degree of uncertainty about what happened in practice.

3.2.3 The weather data Lustre Consulting present [at page 5 of the NIA Review] is from an unknown source. It is also not stated if the data is forecasted or historical. The conditions shown generally look fine, albeit periods of elevated wind speeds are shown. Whilst these may not have been as high as during the author’s survey, Lustre Consulting do

not address this point about their own conditions. As noted, one period of rain is declared, with the resultant sound level data having been removed entirely without trace rather than allow it to be considered in context. This is an unusual approach to take in the author's experience.

3.2.4 Lustre Consulting measured in terms of 5-minute intervals. This is contrary to the advice in BS 4142 (which recommends at least 15-minutes, with examples presented using this period).

3.2.5 It may be noted that the averages of Lustre Consulting's daytime (07-23) background sound levels range from 32-37 dB. For the same period, the author's ranged from 31 to 42 dB. As such the recorded levels are very similar.

3.2.6 As a single value, Lustre Consulting suggest (or argue) that 35 dB ($L_{A90,5min}$) should be used for the BS 4142 assessment as the background sound level, whilst the author adopted 40 dB ($L_{A90,15min}$). At least part of the discrepancy between the two assessments, however, is due to Lustre Consulting using the full daytime (07-23) period (and weekend data), when, in order to reflect actual operations (other than the chiller), the use of normal working hours during the week is the appropriate period. The author used the period 07-19 (and weekday data), which naturally results in higher levels on average/typically.

3.2.7 Unfortunately, Lustre Consulting has not presented the full data in tabular form in order to determine what would be the equivalent value for the same period, but where, with the use of a shorter period, a true like-for-like comparison is not possible in any case.

3.2.8 It is noted that whilst Lustre Consulting's survey was seemingly over a reasonable amount of time, since it centred around the weekend, there are only two full weekday daytime periods recorded.

3.2.9 There is also an error in the table where no night-time data are presented for the Friday (the first day), but there are for the Wednesday (the last day).

3.2.10 Given the discrepancies, and the likely lack of influence of adverse weather conditions on the author's survey as suggested by the NIA Review, it is considered that it would be inappropriate to rely on the Lustre Consulting survey data as sufficient evidence that 35 dB is a more suitable level than the 40 dB adopted within the NIA Report. It would be unreasonable, however, not to expect some variation of background sound levels from season to season, but this is where an assessment based on broadly worst-case assumptions comes into effect. It is considered this is true of that presented in the NIA Report.

3.3. SUGGESTION THAT AN INTERNAL SOUND LEVEL OF 75 DB MIGHT BE EXCEEDED DURING BOTTLING

3.3.1 The following are stated in Lustre Consulting's review :

"...anecdotal evidence from winery bottling videos show staff wearing hearing protection during bottling operations. Thus indicating the potential for internal noise levels to be over 75 dB(A)." [2.22]

"Moreover, data presented in the 'Noise risk assessment in a bottling line of a modern Sicilian winery'¹ research paper also suggests that noise levels in the mid to high 80s dB(A) could occur. Again, this indicates that noise levels in excess of 75 dB(A) could occur." [2.22]

"¹ Noise risk assessment in a bottling line of a modern Sicilian winery – Journal of Agricultural Engineering 2013; volume XLIV(s2):e140"¹ [footnote to 2.22]

3.3.2 Apart from Lustre Consulting accepting that the 75 dB is a reasonable maximum to assume, the figure came from an assessment for Moorbridge Winery, Newbury, which is of a similar scale to the proposed development (albeit slightly larger, with a proposed production of 100,000 bottles per year compared to 50-60,000 bottles associated with the Gold Street application, as confirmed by Vinescapes in their Winery Scoping Report as recently updated).

¹ <https://www.agroengineering.org/jae/article/view/jae.2013.s2.e140/344>

3.3.3 It is noted that the referenced Sicilian winery noise risk assessment (see footnote 1 below) related to operators using machines with a capacity of 3000, 4000, 5000 and 6000 bottles per hour. This is a significantly different scale to that proposed at Gold Street, therefore, which, as mentioned, is for just 50-60,000 bottles per annum.

3.3.4 It is also noted that Lustre Consulting do not present any data of its own for context/assistance.

3.3.5 In terms of the assessment, it should be borne in mind that the worst-case assumption is made that the building is fully open plan with the internal sound impacting upon all surfaces equally. In practice, rooms (and a separating floor) are proposed, whereby the bottling sound will be contained/compartimentalised to some extent, with limited elements of the building radiating sound, if at all.

3.3.6 It is the author's view that the use of 75 dB(A) is a robust figure to rely upon and that a higher one suggested by the NIA Review is not reasonable or justified.

3.4. CLARIFICATION REQUEST ON USE OR OTHERWISE OF FREQUENCY DATA

3.4.1 At [2.22] the NIA Review raises the issue of frequency data. No frequency data were available in order to undertake the assessment on this basis. However, this is true of the majority of such assessments.

3.5. SUGGESTION THAT MOBILE EXTERNAL PLANT SHOULD BE CONSIDERED IN AN ASSESSMENT

3.5.1 It is stated in the NIA Review at [2.22] that:

"From experience working in a vineyard (Lamberhurst Vineyard), the grapes are transported and moved around in pallet-sized 'containers' using noisy plant such as tractors and/or forklifts. The NIA has not considered the potential effects of such noise.

"Although some of the mobile plant would likely be similar to current agricultural use at the site, the intensification and concentration around the winery would significantly differ from the typically transient drive-by agricultural use..."

3.5.2 These activities are acknowledged in the NIA Report, but where there will be a relative lack of use of such plant and absence of occurrence of such activities (i.e. mostly concentrated at harvest time during two weeks of the year), whereby a specific assessment is not justified. It is also relevant that the residential properties for which Lustre Consulting is carrying out its review for are located next to farmland. As such, sound levels will be materially higher at different times in the year, but for limited periods. This is the same with the proposed winery but, in this instance, these activities would be limited to normal working hours only.

3.5.3 When it comes to infrequent activities, the danger with the default BS 4142 approach – to assess on an hourly basis as if these events occur on a regular basis – is that it results in unrealistic and distorted picture of the potential effect of sound from such activities. This is where further consideration of context must come in. By comparison, once a sound level has been applied to an activity, this can become the reader's focus, rather than the additional context, which is not as readily quantifiable, if at all.

3.5.4 In this extreme case, therefore – where the noisier external activities truly will be infrequent and a very small part of the overall operations – it is therefore appropriate to exclude them from the assessment as part of following the guidance in BS 4142, which is directed at activities which are "representative of *typical* operating conditions." [emphasis added].

3.5.5 What is key is that sound emissions are controlled to a practicable minimum, hence the Noise Management Controls presented in the NIA Report, which are specific to a small scale vineyard operation as set out by Vinescapes.

4. CONCLUSION

4.1 The NIA Review in overall terms confirms the appropriateness of the methodology and approach adopted in the NIA Report.

4.2 The NIA Review seeks nevertheless to raise “concerns”, which it argues “could significantly affect the outcome of the BS 4142 noise assessment submitted in support of the proposed development”.

4.2 The author has addressed these concerns, with many of which stemming from a failure to take into account or understand the nature and timing of the operations – in particular the absence of activities at weekends and outside of the short harvest period.

4.3 The author sees no justification for amending the Noise Impact Assessment as submitted with the application, and can confirm that resultant sound levels in the vicinity of the residential properties should be well below the background conditions. They would also, therefore, be well below the ambient conditions, as well as relevant criteria for external amenity areas. Accordingly, the expectation is that there would be no adverse noise impact from this proposal upon the said properties.

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