

Cobham House Vineyard Limited

4 June 2025  
231\_02M\_2-0\_CWA

## MEMO: LAND AT GOLD STREET, DA12 3AA – ADDITIONAL NOISE ASSESSMENT INFORMATION

**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 SUMMARY AND LAYOUT

This memo has been prepared in response to the Council's **Determination As To Whether Prior Approval Is Required** Notice (ref. 20240544), which decided that, "**prior approval of the local planning authority will be required**", and states that, "**the development cannot therefore begin until additional details have been approved.**" The required additional details are presented in the form of 4no. "**informatives**", of which no. **2** is the subject of this memo. Under the heading "**BS4142:2014 Noise Assessment**", it states:

*"The applicant is advised that further details relating to a BS4141 [sic] noise assessment from a comparable facility is necessary, to establish that the building would not result in any adverse impact on amenity through its siting, design and external appearance. Should the assessment not meet the Local Authority's noise criteria, further noise mitigation shall be implemented."*

Since the primary limitation associated with the noise assessment is that sound level source data for the various internal plant items weren't available, necessitating an assumed internal sound level, the above informative has been interpreted as requiring confirmation in this regard. Accordingly, as far as practicable, measurements have been undertaken by the author at a comparable facility in Kent on Monday 02 June 2025. The facility requested to remain anonymous.

Since operations are both seasonal and subject to other cycles, it wasn't possible to witness processing or bottling occurring in practice, but where the owner was able to run the key items of plant, nonetheless, for sound level measurements in proximity. The exception to this was the destemmer, which, not having been used since last October or so, was found to be non-functioning. Like the majority of the other items, however, the sound is likely to be dominated by the motor, whereby sound levels should be no higher than for the other motor-driven items (i.e. the impeller pump, elevator and press (when turning only).

The highest overall ( $L_{Aeq,T}$ ) sound level was measured from the bottle filling (or bottling) machine at 72 dB at 2 m. Next was the press while the compressor was running (at 71 dB), followed by the impeller pump (at 70 dB). The press while turning only and when the vacuum pump was running resulted in lower sound levels, as did the elevator. It should be noted that these levels are applicable to a distance of 2 m. In terms of the general (i.e. reverberant) sound level within the building, and thus the level acting upon the building envelope, this will be somewhat less (by up to around 3 dB).

Conversely, the reverberant sound level adopted for the noise assessment was 75 dB ( $L_{Aeq,T}$ ). Even with the potential for some items and activities to occur concurrently, it would seem more realistic for the levels to be no more than 70 dB, typically, rather than 75 dB. In other words, the adoption of 75 dB is confirmed as being sufficiently robust.

It was on this basis that sound levels at the nearest properties of up to 29 dB ( $L_{Aeq,1h}$ ) were calculated, to which a pessimistic character correction of 5 dB was applied to determine the highest rating level as 34 dB ( $L_{Ar,1h}$ ). Such a level is 6 dB below the adopted background sound level of 40 dB, whereby any noise impact would, at most, be low, and where it was concluded that based on the wording in the **National Planning Policy Framework's planning practice guidance**, there should be **No Observed Adverse Effect**.

It is stated in the informative that, “Should the assessment not meet the Local Authority’s noise criteria, further noise mitigation shall be implemented.” Since the Local Authority hasn’t confirmed any such criteria, it is not possible to make a firm statement in this regard. However, with the original finding being that the rating level is more than 5 dB below the background conditions, typically, and that the latest finding being that the assessment was based on a higher sound level (i.e. 75 dB) than is likely in practice, it would seem appropriate to conclude that any such criteria would be met. This includes during the busier, but short-term, processing and bottling periods.

Accordingly, it is considered that this memo represents the fulfilment of informative no.2, with no further noise mitigation required.

This memo is set out as follows: a brief description of the author’s experience is given in **Section 2**; the details of the sound level measurements are presented in **Section 3**; and the relevance of the measurements in terms of the assessment is discussed in **Section 4**.

## 2. AUTHOR EXPERIENCE

This memo 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. VISIT TO SIMILAR FACILITY

As arranged by the applicant, on Monday 02 June 2025 the author visited the Kent-based winery, with the owner requesting for this to remain anonymous. The associated vineyards extend to 24 acres versus the 22 at Gold Street, and produces around 40,000 bottles per year versus an estimated 50,000 bottles at Gold Street.

Indeed, the equipment at the surveyed winery is in keeping with that envisaged for the proposed development. As per the noise assessment, the following items were listed:

- Vibrating sorting table
- Press impeller pump
- Whole bunch grape elevator
- Destemmer with crusher
- Rotary lobe pump
- Pneumatic press
- Bottling equipment

As it happens, the winery does not use a vibrating sorting table or a rotary lobe pump, and so these could not be measured. Its destemmer, which doesn’t incorporate a crusher (out of preference in terms of the desired end product), was found to not function at the time of the visit, having not been used since last October, and so this also could not be measured. However, it was possible to measure the pneumatic press and bottling equipment, which are the larger items, together with an impeller pump and elevator. The results are presented in the table and chart overleaf. An image of the destemmer is included within the table for information.

**Table 3.1: Overall ( $L_{Aeq,T}$ ) sound levels from the sample winery**

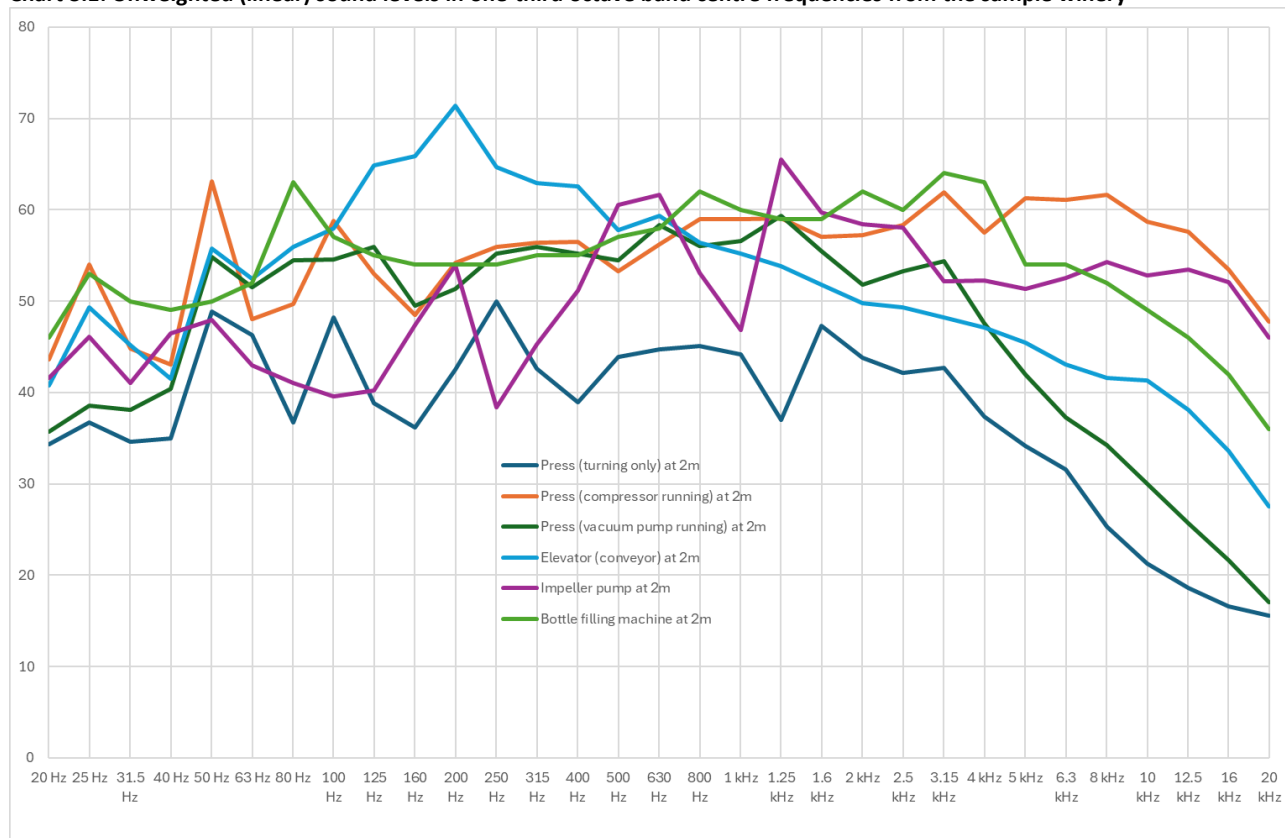
| Equipment (distance)                | Image                                                                               | Sound pressure level |
|-------------------------------------|-------------------------------------------------------------------------------------|----------------------|
| Press (turning only) (at 2m)        |    | 54 dB $L_{Aeq,20s}$  |
| Press (compressor running) (at 2m)  |                                                                                     | 71 dB $L_{Aeq,24s}$  |
| Press (vacuum pump running) (at 2m) |                                                                                     | 66 dB $L_{Aeq,40s}$  |
| Elevator (conveyor) (at 2m)         |    | 67 dB $L_{Aeq,60s}$  |
| Impeller pump (at 2m)               |   | 70 dB $L_{Aeq,20s}$  |
| Bottle filling machine (at 2m)      |  | 72 dB $L_{Aeq,110s}$ |
| Destemmer (not functioning)         |  | -                    |

Notes: The sound pressure level cells were condition-formatted in MS Excel using the default red-yellow-green scale to help show the range in levels – the scale is not related to any particular criteria.

The destemmer wasn't functioning at the time, and so an image is presented for interest only.

The measured sound levels are a factor of the environment within which they were made, and thus subject to sound reflected from the floor and other surfaces.

**Chart 3.1: Unweighted (linear) sound levels in one-third octave band centre frequencies from the sample winery**



Note: When reviewing the above frequency data, it should be borne in mind that they are unweighted (i.e. linear) values, which is typically how such data are presented (and also analysed for tonal characteristics, as per the guidance in **BS 4142**). Applying the A-weighting network to approximate human hearing sensitivity would typically reduce the levels presented. The corrections at 50 Hz and 200 Hz, for example, as relevant to the press's compressor and the elevator, are -30 and -11 dB (when rounded), respectively. The corrections between 800 Hz and 5 kHz, however, as relevant to the bottle filling machine, are no more than +/-1 dB in round terms. Hence, in terms of the overall (dBA) sound levels, the bottle filling machine resulted in a higher level than the elevator, for example.

Whilst it was not possible to measure the destemmer, nor a vibrating sorting table or a rotary lobe pump, since these, like most of the other items, are electric motor-driven, which typically represents the main source of sound, it can be expected that similar overall sound levels would result. Accordingly, it is considered safe to conclude that the additional items not measured are no noisier than those that were measured.

#### 4. RELEVANCE OF THE MEASURED LEVELS

In the absence of source data for the various internal plant items at the time of preparing the noise assessment (ref. 231\_02R\_1-0\_CWA, dated 05 June 2024), a reverberant sound level of 75 dB ( $L_{Aeq,T}$ ) was assumed. This was the area of greatest uncertainty in terms of the calculations, but where it was deemed by the author high enough to account for the likely worst case sound levels during either the initial processing or bottling activities, with sound levels the majority of the time – between these temporary activities – likely being notably less.

As presented above, the highest overall ( $L_{Aeq,T}$ ) sound level was measured from the bottle filling (or bottling) machine at 72 dB at 2 m. Next was the press while the compressor was running (at 71 dB), followed by the impeller pump (at 70 dB). The press while turning only and when the vacuum pump was running resulted in lower sound levels, meaning that the overall level (comprising a mix of these modes) would be somewhat lower than the compressor-specific level. The sound from the elevator, which is used in combination with the destemmer, was 67 dB. Assuming the sound from the destemmer is no higher than the highest measurement level of 72 dB, therefore, the combined sound level from these two items is expected to be no more than 73 dB.

Bearing in mind these levels were obtained at 2 m from the equipment, the equivalent reverberant sound levels (which are more relevant when it comes to the acoustic performance of the building envelope) would be somewhat less. In terms of the bottling, which will generally occur in isolation and within the main area of the proposed building, the reverberant level is expected to be up to 3 dB less. During bottling, therefore, the reverberant sound level would more likely be in the region of 69 dB rather than the assumed 75 dB.

In terms of the initial processing, primarily involving the use of the press, which is proposed to be located in a separate area to one end of the building, the reverberant sound levels can be expected to be less than 68 dB. During the use of the destemmer and elevator, the reverberant sound levels can be expected to be no more than 70 dB. Should these three items (the press, destemmer and elevator) be used concurrently, then the combined level would be no more than 72 dB.

All of which, therefore, are below the assumed level of 75 dB, meaning that the findings of the noise assessment remain valid, and likely representative of an overestimation of the conditions during such periods of at least 3 dB.

The findings being that the highest calculated rating level was 6 dB below the adopted background sound level. The “initial” guidance in the relevant British Standard (**BS 4142**) being that, “Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.” In terms of the wording within **BS 4142**, therefore, and bearing in mind that it doesn’t go as far as to say when there should be no impact, the only firm conclusion that can be drawn is that any noise impact should be no more than “low”. It is then a case of further considering applicable contextual factors, as far as practicable, with ultimately the decision and description of the potential for, and degree of, noise impact coming down to professional judgement.

Having been to the sample winery, it remains the author’s conclusion that, as per paragraph 1.6 of the noise assessment report, “no more than a low impact is expected, and where further consideration of context, which includes the sound levels being well below the existing ambient conditions and criteria relevant to external amenity areas, indicates that there should be no adverse noise impact.”

It is stated in the informative that, “[Should the assessment not meet the Local Authority’s noise criteria, further noise mitigation shall be implemented.](#)” Since the Local Authority hasn’t confirmed any such criteria, it is not possible to make a firm statement in this regard. However, with the original finding being that the rating level is more than 5 dB below the background conditions, typically, and that the latest finding being that the assessment was based on a higher sound level (i.e. 75 dB) than is likely in practice, it would seem appropriate to conclude that any such criteria would be met.

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