



TECHNICAL NOTE

Land at Pendle Road, Clitheroe (Standen Phase 5 & 6)

Proposed Residential Development

Comments on Developer's Noise Impact Assessment

Date 9th November 2022

Site Visited 28th October 2022



Prepared by: [Redacted]



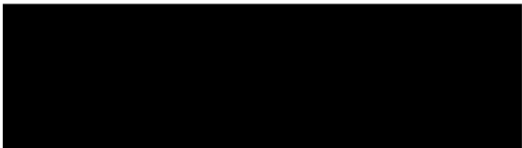
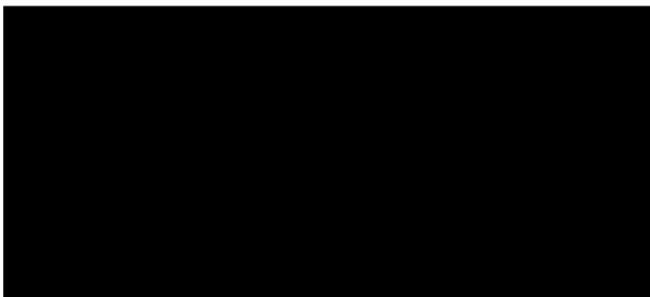
1.0 Introduction

[Redacted] on behalf of their clients [Redacted]

[Redacted] instructed [Redacted] to comment on a report prepared by Hepworth Acoustics "Land at Pendle Road, Clitheroe (Standen Phase 5 & 6) Proposed Residential Development – Noise Impact Assessment" [Hepworth's Reference P22-308-R01v1].

It is understood that Ribble Valley BC granted outline consent for residential development of the land immediately to the north of [Redacted]

[Redacted] [Ref. 3/2015/0895] and that recently the developer of the site [Taylor Wimpey] has applied for consent for the reserved matters [Ref.3/2022/0317],



and as part of that process has submitted the Hepworth's report referred to above.

2.0 The Hepworth Report

I consider that a fair summary of Hepworth's report would be

1. It is based on unattended noise measurements, which were made over the course of eight days, during the summer [30.8-7.9.2022] at a position close to the [REDACTED]
2. The report makes no mention of any recordings having been made [although the meter used may have been capable of it].
3. The only results reported in detail are the LAeq & LA90 levels which were both averaged over the whole day [07-23:00hrs] or whole night [23-07:00hrs].
4. The report concludes *"Whilst no significant noise was measured from [REDACTED] to the south, we consider that it would be prudent to incorporate some sound insulation measures for elevations of the dwellings along the southern boundary with a view of the yard to the south. This approach would protect the amenity of future residents and safeguard the business interests of the nearby commercial premises to the south."*
5. Recommendations are made for 8 of the plots to be fitted with upgraded acoustic glazing and trickle ventilators, and for acoustic fencing to protect two of the gardens.

3.0 [REDACTED] Site Visit

I visited [REDACTED] premises on the afternoon of [REDACTED] October 2022 and discussed the operation of the site with the owner [REDACTED]. In summary the operation of the site can be described as follows:

A. The site is largely open to elements and 'home' to many [REDACTED].
[REDACTED] Some of these items [REDACTED]

B. [REDACTED]

C. [REDACTED]

D. [REDACTED]

4.0 Comments on Hepworth's Report

4.1 Basis of the Report

Leaving aside all other issues, Hepworth's conclusions are based on the

assumption that their period of monitoring was representative of the noise produced by [REDACTED] however, as they themselves say no noise was measured from the [REDACTED] and therefore Hepworth's have no reliable basis for making their noise control recommendations.

From my site visit it is clear that there can be some very significant noise sources on the site and these can occur at anti-social times.

4.2 The Noise Control Recommendations

Hepworth's only noise control recommendations are that 8 properties are provided with acoustic glazing and trickle ventilators and 2 gardens are provided with acoustic fencing.

The main guidance on the assessment of noise from industrial and commercial sites is BS4142:2014, which states at its Section 11 that the impact of industrial noise can be ameliorated if the residential buildings *"...incorporate design measures that secure good internal and/or outdoor acoustic conditions, such as:*

- I. facade insulation treatment;*
- II. ventilation and/or cooling that will reduce the need to have windows open so as to provide rapid or purge ventilation; and*
- III. acoustic screening."*

Hepworth's recommendations on acoustic glazing and ventilation cover the *"façade insulation treatment"* from BS4142, albeit that they do not know if their

recommendations are sufficient, because they have not measured or predicted the noise from the site.

It can be seen that BS4142 considered that it is a good idea to provide powered ventilation so that residents don't have to choose between good ventilation and good acoustic conditions. Currently, it is likely that residents will want to open their acoustic glazing [rendering it useless] especially in the summer.

With regard to "*acoustic screening*" 2m high acoustic fencing is recommended for two gardens where the properties are 'sideways on' to any noise from the [REDACTED] however, when protecting against noise sources located in a particular direction, the best solution is to face all the nearest dwellings towards the noise source, with the outdoor amenity spaces on the 'blind' side of the property; this places the amenity spaces both further from the noise source and also uses the dwellings themselves as a screen against the noise. Acoustic fencing can then be used to link between the properties.

Another beneficial [*acoustic screening*] measure that could have been adopted would be an acoustic barrier along the [REDACTED] [REDACTED] which would help reduce noise at the front facades of the properties.

4.3 Specific Issues with Hepworth's Methodology

Given the above, it probably isn't necessary to comment on the methodology in depth; however, the main points would be:

A. If no recordings were made, to assist in source identification, and the measurements were unattended, it is unclear how can the conclusion be

drawn that '*...no significant noise was measured from [REDACTED] to the south*'.

B. The only results reported were 16 hour averages [day] and 8 hour [night]; the longer the average, the more that any intermitted noise would get 'averaged out'; by contrast BS4142 recommends that for industrial/commercial noise the results are averaged and assessed over 1 hour [day] or 5 minutes [night]; thereby intermittent noise is much more likely to be apparent.

5.0 Conclusions

From the information provided in the Hepworth's report, it is not clear how they draw their conclusions that there was no noise [REDACTED]

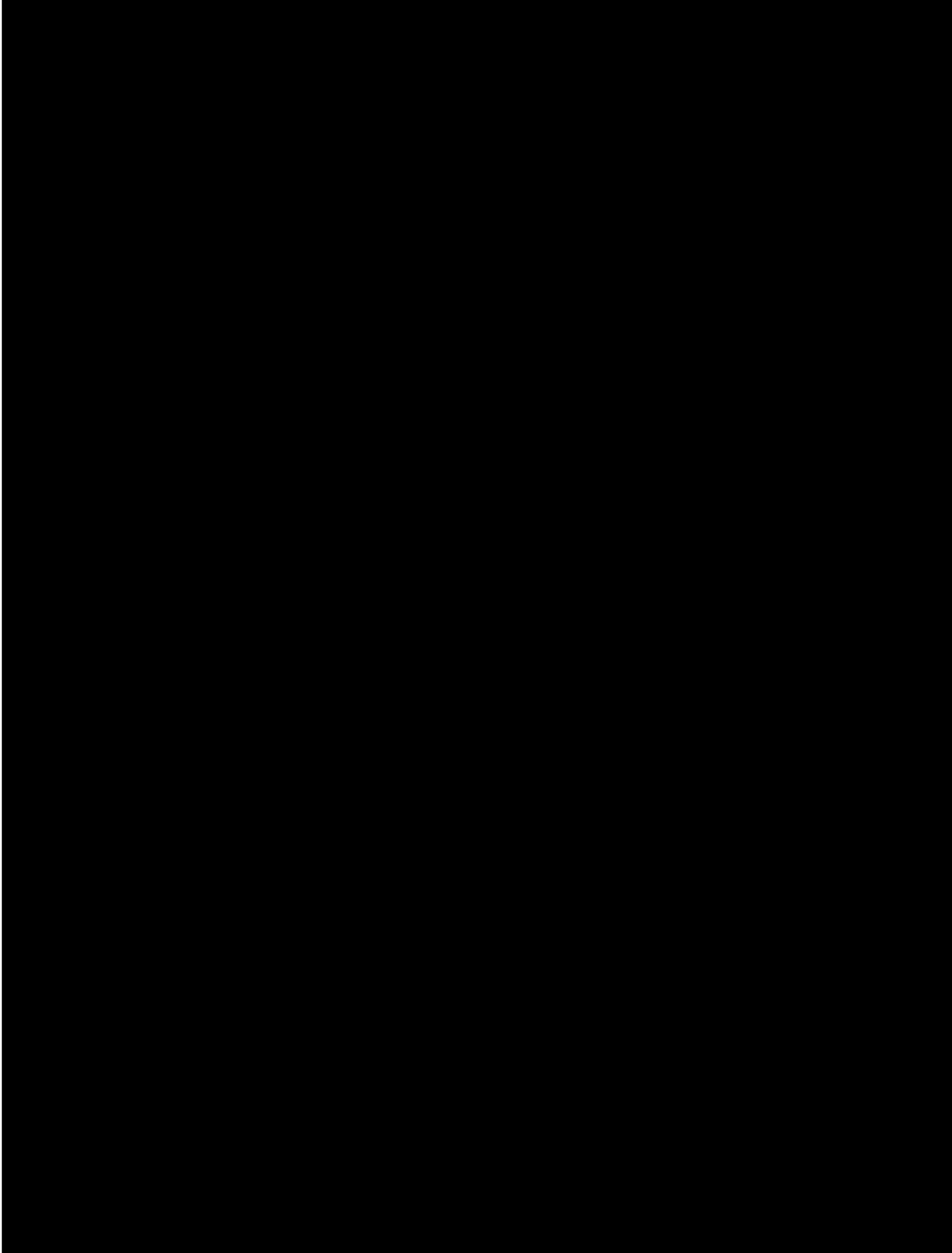
The basis on the report is that the monitoring period is representative of noise from the [REDACTED] however, Hepworth's apparently did not capture any noise from the site; therefore, it is not clear how reliable their recommendations for noise control can be. From discussions with the owner, significant noise can be generated often at unsocial times.

Hepworth's package of measures does not include any mechanical ventilation, so that residents will be forced to open their acoustic glazing, rendering it useless, especially in the summer.

6.0 Recommendations

Based on our understanding of the matter, and in recognition of the fact that the site has outline residential planning consent, we consider that the developer's should redraft the proposed noise control measures as follows:

- Base the package of measures on actual measurements or predictions of noise that could realistically be created on the [REDACTED]
- Any properties where acoustic glazing is recommended should be provided with appropriate mechanical ventilation.
- The package of noise control measures should incorporate the following as appropriate:
 - Erecting an acoustic fence along the boundary [REDACTED]
 - Locating the nearest properties further from the above boundary
 - Facing the nearest properties towards the above boundary, placing the gardens on the north side of the dwellings and linking up the dwellings with an acoustic fence
 - Having the roofs of the 'front line' dwellings with the ridges full-width of the dwelling and with the gables on the side elevations, to maximise the barrier effect of the dwelling.
 - Having the 'front-line' dwellings as close together as possible, preferably terraced, again to maximise the barrier effect.



APPENDIX 1

EXPLANATION OF ACOUSTIC TERMS

The dB or the decibel, is the unit of noise. The number of decibels or the level, is measured using a sound level meter. It is common for the sound level meter to filter or 'weight' the incoming sound so as to mimic the frequency response of the human ear. Such measurements are designated **dB(A)**.

A doubling of the sound is perceived, by most people, when the level has increased by 10 dB(A). The least discernible difference is 2 dB(A). Thus most people cannot distinguish between, say 30 and 31 dB(A).

The Background level of noise is most commonly represented by the level which is exceeded for 90% of the time i.e. the LA90.

If a noise varies over time then the **equivalent continuous level, or LAeq**, is the notional constant level of noise which would contain the same amount of acoustic energy as the time varying noise.

The following table gives an approximate indication of the comparative loudness of various noises expressed in terms of the A weighted scale:

Source of noise	dB(A)	Nature of Noise
Inside Quiet bedroom at night	25-30	Very Quiet
Quiet office	40-45	
Rural background noise	35-45	
Normal conversational level	55-65	
Busy restaurant	65-75	
Inside suburban electric train	70-80	
Hand clap @ 1m	75-85	
HGV accelerating @ 5m away	85-90	Very Loud

APPENDIX 2

