



Noise:

The proposed dwelling is located off Botley High Street, which is a well trafficked through route, and adjacent to commercial uses, tyre repair and MOT workshop with vehicle parking, which have the potential to impact the development. In this respect the application is supported by a Noise Impact Assessment report, by AIRTIGHT & NOISECHECK LIMITED, Job No. 1446, dated 23.5.2023. The report advises that the development can proceed on the basis that the proposed noise mitigation measures are implemented and that on this basis there is ‘...no reason to suggest that the future residents of the proposed residential development will be adversely affected...’.

Whilst we do not disagree with this conclusion in respect of road traffic noise, we have concerns regarding the suitability of the assessment of the adjacent commercial noise sources. Typically, the assessment of commercial noise impacts in such situations as this is by reference to British Standard BS4142 (BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound). The report makes only a passing reference to the adjacent commercial use and a detailed assessment has not been included. The assessment should also consider the permitted operational hours on the adjacent land, as well as the other uses which could legitimately operate from the neighbouring land within the existing use class / permission. The report also appears to suggest that the property will not have noise sensitive rooms on the eastern façade however the plans show bedrooms overlooking the commercial use.

In terms of the acoustic glazing specified we are not clear whether free field or façade levels have been used in calculations, however, until the matter of the noise assessment of the commercial uses has been addressed the matter is moot. Reference is also made to having optimised the layout of the development site with respect to noise impacts, however the dwelling is located with two sides adjacent to the commercial land. From the information provided it is not apparent how this optimises the layout in acoustic design terms, where frequently the approach is to separate noise making and noise sensitive uses.

Response – 19th October 2023 by Michael Vine, BSc Hons, MIOA:

The small industrial estate was considered at length during the attended visit and mentioned numerous times in the report. However, it was not the dominant noise source apparent and as such a full BS4142: 2014 +A1: 2019 assessment was not deemed necessary (as listed in the Pro PG Documents).

It can be clearly seen that the average noise levels are constant throughout the day time, reducing at circa 2100hrs (Ind estate closed) and rising again at 0400hrs (Ind estate closed). The night time levels are incredibly low (as are the day time values) and as such it is anticipated that the dwelling can be naturally ventilated with open windows for large periods of the day time and night time periods.

Looking at the 1hour values in the table below, it is clear to see that there are no fluctuations due to the industrial estate but rather a steady and continuous environment associated with road traffic.



Time:	LAeq
(2023-05-16 11:00:00.230)	46.7
(2023-05-16 12:00:00.230)	46.7
(2023-05-16 13:00:00.230)	46.9
(2023-05-16 14:00:00.230)	46.4
(2023-05-16 15:00:00.230)	47.5
(2023-05-16 16:00:00.230)	48.3
(2023-05-16 17:00:00.230)	48.6
(2023-05-16 18:00:00.230)	47.3
(2023-05-16 19:00:00.230)	49.4
(2023-05-16 20:00:00.230)	47.4
(2023-05-16 21:00:00.230)	45.7
(2023-05-16 22:00:00.230)	39.8
(2023-05-16 23:00:00.230)	37.7
(2023-05-17 00:00:00.230)	36.8
(2023-05-17 01:00:00.230)	34.1
(2023-05-17 02:00:00.230)	34.8
(2023-05-17 03:00:00.230)	33.1
(2023-05-17 04:00:00.230)	48
(2023-05-17 05:00:00.230)	46.3
(2023-05-17 06:00:00.230)	48.2
(2023-05-17 07:00:00.230)	49
(2023-05-17 08:00:00.230)	48.1
(2023-05-17 09:00:00.230)	47.5
(2023-05-17 10:00:00.230)	45.7

It is also worth noting that the highest 3min value (not applicable during a day time BS4142 assessment) ranges between 51-55dBA with a large amount of these intervals apparent when the Ind Estate is closed. These higher events do not happen regularly and could be down to a number of factors, such as activity with the existing house, car horns, heavy traffic etc.

Even if such an event were associated with the industrial estate, then the following may be applicable:

Lowest LA90 value measured during the day time = 40dBA, rating level = 48dBA (highest 1hour LAeq) +3dB for noticeable and +3dB for intermittent leading to a value of 54dBA. No mitigation is possible to the source noise as there is no control over the industrial estate so the mitigation measures will be employed to the receptor location. The difference between rating levels and BGN as shown above is 14dB, and the mitigation measures listed within the report will easily achieve this sound reduction. An open window offer -13dB f sound reduction, again further illustrating the point that the noise can be mitigated and will not lead to an adverse impact in absolute terms.

Such a difference if listed in a stand alone 4142 assessment would indicate adverse impact, but this must be taken into context, and that context being, the noise associated with the industrial estate is not dominant, and not regular, there are clearly other noise sources apparent at the site and the mitigation measures listed within the report clearly indicate a suitable environment for future residents. The amenity space levels are also suitable and should not lead to an adverse impact.



The average noise levels begin to increase at circa 0400hrs so this will not be associated with the industrial estate as this does not open until circa 0800-0900hrs (Botley Tyres opens at 0800hrs) so the increase in levels (not high but an increase from the very low night time values) begins much earlier than this.

The noise levels do not increase at circa 0800hrs, so this further illustrates that the adjacent ind estate has no impact on the proposed site, it is clear to see that the noise levels remain constant throughout the day time period and as such the ind estate is not the dominant noise source.

Of course, if I thought the industrial estate was the dominant noise source then a full BS4142: 2014 + A1: 2019 assessment would have been undertaken but I feel that the data backs up the thought process that the noise associated with the ind estate is negligible and not the dominant noise source.

Regarding acoustic design, it must be stated that the principal noise sensitive rooms (master bedrooms & living rooms etc) are located on the Western façade of the building which does not face the ind estate or the road so this would indicate a thought process was adopted, this combined with the very low measured levels would further illustrate a good acoustic design, especially considering the robust building methods to be adopted, the proposed glazing (fare exceeds the max sound reduction) and the proposed acoustic trickle vents to be installed to the windows.

The overall sound reduction listed for the glazing far exceeds the highest measured sound reduction apparent (night time period – when ind estate is closed) and this will ensure a suitable level of sound reduction for the home. The measured levels were taken at the proposed façade in free field conditions, with the overall level of mitigation far exceeding the measured levels on site.

The noise associated with the industrial estate was considered during the assessment and referenced often throughout the report, and I hope that this response helps to illustrate the thinking behind the report and listed mitigation. Of course, the future use of the industrial estate is not known, nor the businesses that may use it, but the report was undertaken to determine the associated noise levels apparent at the site during that specific time period, and it offers suitable mitigation for such. There is no control over the future uses but the mitigation listed far exceeds the measured levels on site.