

Planning Response – Technical Review of Submitted Noise Impact Assessment

The submitted Noise Impact Assessment (NIA) is not considered sufficiently robust to provide an accurate or reliable representation of the potential noise impact arising from the proposed operations. More importantly, it fails to demonstrate that either daytime or night time activities would avoid causing adverse or significant adverse effects on nearby residential receptors.

The assessment does not follow BS 4142:2014+A1:2019, which is the UK's recognised national standard for rating and assessing noise from commercial and industrial sources. Instead, the consultant has relied on the IOA/IEMA "change in ambient noise" methodology, which is not an appropriate substitute for BS 4142 when determining impacts on residential dwellings. The site activities described—including vehicular movements, loading and unloading, and general yard operations—fall clearly within the scope of BS 4142. The NIA does not comply with the standard for the following reasons:

The scope of this assessment was originally BS4142, however, upon review it was deemed prudent to assess against the change in ambient noise due to the fact that the industrial site and its operations already exist – the proposal is for an extension only. BS4142 would potentially over assess the noise levels as it would assess for all noise, not just the additional proposed noise – where existing noise is already deemed acceptable. However, following on from comments raised, a full BS4142 assessment has been undertaken to cover the below points.

1. Failure to Determine Specific Sound Levels and Rating Levels

The assessment does not identify or quantify specific sound levels for individual noise sources, nor does it calculate rating levels including penalties for tonality, impulsivity, intermittency or other acoustic characteristics as required under BS 4142. These omissions fundamentally undermine the validity of the impact assessment.

Noise levels associated with the existing operations were undertaken over a full 4 day period. Whilst the measurements were unattended, the noise levels, calculated to remove road traffic noise levels (the only other contributing noise factor) represent the industrial noise levels present, These noise levels have then been utilised to determine the impact following the proposed additional operating period and area.

2. Inadequate Demonstration of Background Sound Levels

The NIA fails to provide:

- A description of the prevailing background acoustic environment.***

- ***Sufficient LA90 data or statistical analysis to justify the selection of representative background sound levels.***

- ***Any evidence that measured background levels are typical, uncontaminated by other noise events, or representative of the periods being assessed.***

This is contrary to BS 4142 requirements for determining background sound level.

Included within the updated report. The measurement period included both weekday and weekend periods to capture typical noise levels over a typical period. The premises was operating at its usual capacity and noise levels were representative of existing.

3. No Rating Assessment (Impact = Rating Level – Background Level)

The NIA does not assess noise impact by subtracting background levels from calculated rating levels.

This step is fundamental to BS 4142 and is the basis on which adverse or significant adverse impacts must be judged.

Assessment has been updated to include for a BS4142 Assessment. Findings have resulted in mitigation measures in line with the original Change in Ambient noise assessment.

4. No Assessment of Measurement Uncertainty

Uncertainty discussed within BS4142 Assessment of the report.

The report does not address uncertainty, despite BS 4142 requiring that uncertainty be identified, minimised and reported. This is particularly concerning given the limitations in the data and the lack of clarity regarding specific sound sources.

5. Absence of a Measurement Location Plan

No site plan or drawing is provided showing the locations of the noise measurement positions (NMP1 and NMP2).

Without this information, it is impossible to verify:

- ***Whether the positions were appropriate and representative.***
- ***Distances to reflecting surfaces or noise sources.***
- ***Compliance with free field measurement requirements.***

The omission significantly reduces confidence in the reliability of the reported data.

Included within updated Noise Impact Assessment. Figure is standard in reports but unfortunately missed on this occasion. It has no grounding on the reliability of data

6. Inadequate Measurement Periods for Specific Sound Assessment

Table 6 presents measurement periods of 4 hours (evening) and 8 hours (night time).

BS 4142 states that assessments must use:

- **1 hour reference periods during the day (07:00–23:00), and**
- **15 minute reference periods during the night (23:00–07:00).**

These prescribed reference periods are necessary to correctly characterise industrial noise. The NIA does not follow these requirements. If the premises operate as a storage and distribution facility, it is expected that noise will arise from multiple sources including:

- **Loading and unloading operations**
- **Reversing alarms**
- **Impulsive impact noise**
- **Internal and external plant**

The NIA does not identify which of these sources contribute to the measured noise levels, making the assessment incomplete.

The measurement period was undertaken over a full weekday and weekend period of 4 days. See section 3.1 of report. Table 6 is calculating the specific time periods in which the extension of time will impact. This table demonstrates the Change in Ambient Assessment, NOT the measurement period.

7. No Consideration of LAMAX for Night Time Disturbance

Short duration noise events at night can cause sleep disturbance.

WHO guidance indicates that maximum indoor noise levels should not exceed 45 dB LAMAX to prevent sleep disruption. The NIA does not assess LAMAX, despite the likelihood of impulsive and intermittent site noise.

LAMax index is not typically used for industrial type noise. Whilst the WHO guidelines do elude to commercial or industrial noise, they do not set specific noise limits for these types of noise. Furthermore, BS 4142 generally does not require LAMax limits. Under BS 4142:2014+A1:2019, industrial and commercial noise is assessed by comparing Rating level (L_Ar,Tr) of the source and Background level (L_A90) which has been included within the report.

Night-time is already implicitly accounted for within BS4142 with night time background noise levels typically lower than the daytime background noise levels.

8. Lack of Interpretation of Noise Data Presented in Appendix III

Appendix III contains graphs showing multiple significant noise spikes during both day and night time, including levels up to 86 dB(A) at night and 74 dB(A) during the day.

No commentary or contextual explanation is provided to clarify:

- ***The source of these spikes***
- ***Whether they relate to site activity***
- ***Whether they affect background or specific sound levels***

This lack of interpretation further reduces confidence in the assessment.

LA90 is designed to exclude short-term peaks, so isolated spikes normally do not affect the background noise level used in industrial noise assessments allowing a continuous environmental noise floor to be identified. LA90 means the sound level exceeded for 90% of the measurement period. This metric is used because it filters out transient noise events such as passing vehicles, doors closing, occasional bangs and random environmental noise.

Therefore, isolated peaks do not materially influence the LA90 value unless they occur frequently or persistently and brief spikes would normally have negligible effect on the calculated background level.