Project	Montague Quarter Shopping Centre, Worthing: Noise Impact Assessment of Proposed Electrical Substation
Client	Cayuga 018 LLP
Date	19th February 2026
Ref	1228.001TM.Response.1.0.NA
Author	Neil Anderson BEng(Hons) MIOA : Director
Subject	**Response to EHO Comments on Acoustic Report**

1. Introduction

This Technical Note has been prepared in response to comments received from the Environmental Health Officer (EHO) dated 26/01/2026 but received on 17/02/2026 in relation to the Noise Impact Assessment (Ref: 1228.001R.2.0.JP, dated 29 May 2025) submitted in support of the proposed electrical substation at Montague Quarter, Worthing.

The EHO comments raise queries regarding the assessment of low-frequency noise at 160 Hz, the consideration of a closed-window scenario, and the requirement for a vibration impact assessment.

This note provides clarification in response to those matters and confirms that the conclusions of the original assessment remain unchanged.

2. Assessment at 160 Hz

The transformer sound power data supplied by UKPN (Figure A4 and Table 5.2) is provided in 1/1 octave bands from 31.5 Hz to 16 kHz. NANR45 reference criteria are presented in linear third-octave bands.

The 125 Hz single-octave band encompasses the 100 Hz, 125 Hz and 160 Hz third-octave components. As such, the predicted internal level within the 125 Hz octave band is representative of spectral content at 160 Hz.

The calculated internal sound level within the 125 Hz octave band is at least 10 dB below the adopted NANR45 reference curve, providing a significant margin of compliance. The use of octave-band data does not materially affect the assessment outcome.

In the absence of third-octave data from the manufacturer, the assessment has been undertaken using the available octave-band data. The approach adopted is consistent with normal UK acoustic practice for plant noise assessment.

3. Closed Window Scenario

The assessment adopted a partially open window scenario, representing reduced façade attenuation and therefore a worst case assessment of internal noise.

It is acknowledged that glazing systems typically provide greater attenuation at mid- and high-frequencies than at low frequencies. However, this does not give rise to a material change in assessment outcome in this case for the following reasons:

- The predicted internal levels remain at least 10 dB below the adopted NANR45 curve.
- A closed-window condition would reduce absolute internal sound pressure levels across the spectrum when compared to the partially open window scenario assessed.

The assessment therefore represents a reasonable worst-case scenario and demonstrates compliance with recognised internal criteria.

4. Vibration

Substations of this nature typically generate very low levels of vibration during normal operation. The proposed 800 kVA transformer will be installed on proprietary anti-vibration mounts within a masonry enclosure, which will effectively isolate the equipment from the surrounding structure.

In these circumstances, vibration levels would be expected to remain well below recognised guidance thresholds for human comfort and structural response. A separate vibration impact assessment is therefore not considered necessary.

5. Conclusion

The assessment methodology remains appropriate and robust. The predicted internal noise levels demonstrate a clear margin of compliance with both BS 8233 and NANR45 guidance, and the inclusion of resilient mounting measures addresses vibration transmission risk.

On this basis, the conclusions of the acoustic assessment remain unchanged.