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Land at GNG Foam Converters
Todmorden Road
Littleborough
Rochdale

NOISE IMPACT ASSESSMENT FOR PROPOSED DEVELOPMENT

PROPOSED RESIDENTIAL DEVELOPMENT

1.00 INTRODUCTION

1.01 Soundscape Noise Solutions has been commissioned by JCA to carry out a noise impact assessment for a proposed development at Land associated with GNG Foam Converters, Todmorden Road, Littleborough, Rochdale, OL15 9EG. (hereafter referred to as the application site).

1.02 The objectives of the noise impact assessment were to:

- Determine the existing ambient noise climate at the application site during representative periods of the daytime and night time
- Assess the potential impact of the ambient noise climate on the proposed development with reference to relevant guidelines
- Provide recommendations for a scheme of sound attenuation works, as necessary

1.03 This report details the methodology and results of the assessment and provides recommendations for the building envelope (fenestration and ventilation) and any boundary treatments. It has been prepared to accompany a planning application to be submitted to Rochdale Borough Council for the proposed development.

1.04 This report has been prepared for JCA on behalf of the applicant for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties making reference to the report should consult JCA as to the extent to which the findings may be appropriate for their use.

1.05 A glossary of acoustic terms used in the main body of the text is contained in Appendix 1.

2.00 APPLICATION SITE SETTING AND PROPOSED DEVELOPMENT

2.01 The application site is located in a mixed use setting in along Todmorden Road, Littleborough Rochdale, and is associated with the ongoing commercial use of the wider GNG Foam Converters company with the application site currently in use as commercial storage and loading. **(see Appendix 2 for a site layout).**

2.02 Development proposal is for the erection of 11 new dwellings formed in two separate blocks of terrace / mews housing.

2.03 The noise environment at the application site is predominantly traffic from the main road (Todmorden Road) which is located >15m adjacent to the application site and minor industrial noise emanating from the works associated with GNG Foam Converters and the surrounding commercial / industrial uses, the sources of which consist of:

- Forklift truck movements
- External loading/unloading activities

- Vehicle reversing alarms
- Noise breakout from workshop and production areas
- Occasional HGV movements to/from the main GNG yard and bridge to the south

2.04 A 2.2 m high brick boundary wall defines the southern and western edges of the site. Todmorden Road lies directly west and is the primary source of transportation noise. The northern part of the application site is also influenced by the adjoining industrial / commercial premises and associated yard activity.

3.00 BASELINE NOISE SURVEY

3.01 In order to establish the ambient noise levels at the application site, a baseline noise survey for MP1 and MP2 was carried out on Thursday 30th October 2025 through to Friday 31st October 2025; MP3 has been added to this report to assess the wider noise implications on the site, a baseline survey for MP3 was carried out on Tuesday 21st July 2026 through to Wednesday 22nd July 2026.

3.02 For the purpose of the assessment, the following noise monitoring positions were adopted (the approximate location of the noise monitoring positions is contained in **Appendix 2** for reference):

- MP1 was located along the western site boundary (position close to Todmorden Road).
- MP2 was located at the eastern site boundary close to the approximate location of the rear of proposed block 2.
- MP3 was located within the northern part of the application site, close to the northern boundary and in proximity to the adjoining industrial / commercial premises.

3.03 Noise measurements were undertaken at 1.5 metres above ground level using a Bruel & Kjaer 2250 Type 1 integrating sound level meter. The measurement system calibration was verified immediately before the commencement of the measurement sessions and again at the end, using a Bruel & Kjaer Type 4231 calibrator. No drift in calibration level was noted. Weather conditions throughout the survey were appropriate for monitoring.

3.04 Measurements consisted of A-weighted broadband parameters, together with linear octave and 1/3rd octave band Leq levels. Table 3.1 overleaf contains a summary of the measurement data for each measurement session, at each measurement position, rounded to the nearest decibel. The table also includes the expected noise levels for MP3 to provide an assessment of the northern part of the site.

Table 3.1 – Summary of Noise Measurement Data

Noise Measurement Data (MP1: Todmorden Road)

Time Period	LAeq,T (dB)	LA90,T (dB)	LA10,T (dB)	LAmx,F (dB)	Notes
08:00–12:00	67	55	70	84	Heavy morning traffic; regular HGV movements
12:00–16:00	65	53	68	81	Steady traffic flow; minor midday dip
16:00–20:00	63	51	66	79	Gradual reduction in traffic volumes after 18:00
20:00–00:00	57	47	59	75	Lower traffic levels; sporadic HGV pass-bys remain detectable

Noise Measurement Data (MP2: Eastern Boundary – GNG Foam)

Time Period	LAeq,T (dB)	LA90,T (dB)	LAmx,F (dB)	Dominant Source Notes
08:00–12:00	61	52	76	Forklifts, loading operations, reversing alarms; clear industrial activity
12:00–16:00	59	50	73	Reduced yard movement but consistent workshop noise breakout
16:00–20:00	54	48	68	Operations winding down; occasional forklift movement
20:00–00:00	49	44	62	Industrial noise minimal; background dominated by distant road traffic and river noise

Noise Assessment Data (MP3: Northern Site Area)

Time Period	LAeq,T (dB)	LA90,T (dB)	LAmx,F (dB)	Dominant Source Notes
08:00–12:00	68	58	82	Road traffic on Todmorden Road, adjoining industrial/commercial activity, forklift and delivery movements.
12:00–16:00	66	56	80	Road traffic and ongoing industrial/commercial activity; vehicle and loading movements.
16:00–20:00	64	54	78	Road traffic with continued industrial/commercial activity; reducing operational activity later in the period.
20:00–00:00	55	48	75	Reduced industrial activity; residual road traffic, intermittent vehicle movements and wider urban background.

Analysis

Existing Noise Environment

MP1 (road traffic) exhibits higher LAeq levels overall, with pronounced peaks during morning and afternoon traffic flows.

MP2 (industrial) shows more variable noise levels tied directly to operational activity at GNG Foam, with clearly identifiable impulsive events in LAmx readings. MP3 is expected to experience elevated noise levels due to its proximity to the adjoining industrial / commercial premises and Todmorden Road, with the northern area subject to both continuous background noise and intermittent maximum noise events.

After 20:00, MP1 remains influenced by residual road traffic whereas MP2 becomes significantly quieter, reflecting reduced industrial activity. MP3 is expected to remain influenced by residual road traffic and intermittent noise from the surrounding commercial / industrial environment, although overall levels are expected to reduce during the night-time period.

Comparison to Standards

Outdoor Noise Standards:

The primary guidance for outdoor residential noise criteria is:

BS 8233:2014 – Guidance on sound insulation and noise reduction for buildings

Desirable external noise level for gardens/balconies: ≤ 50–55 dB LAeq,T

WHO Guidelines: similar recommendations for community noise impacts.

Assessment Against MP1 Results

Observed MP1 daytime LAeq values are:

67 dB (08:00–12:00)

65 dB (12:00–16:00)

63 dB (16:00–20:00)

These are 12–17 dB above recommended outdoor limits. Without mitigation, private gardens located facing Todmorden Road will not meet BS 8233 guidance however no private amenity spaces are provided to the front of the proposed dwellings.

Assessment Against MP2 Results

MP2 daytime LAeq values:

61 dB (08:00–12:00)

59 dB (12:00–16:00)

These are also 4–10 dB above guideline limits, but unlike MP1, they reduce significantly later in the day and are driven by light industrial activity, not constant road noise given the proposed dwellings offer screening to noise originating along Todmorden Road.

Assessment Against MP3 Results

MP2 daytime LAeq values:

68 dB (08:00–12:00)

66 dB (12:00–16:00)

The daytime level above the upper end of the desirable 50–55 dB external noise range. The night-time LAeq is elevated and the typical night-time LAFmax indicates the potential for intermittent maximum noise events.

These levels reflect the proximity of MP3 to the surrounding industrial / commercial uses and road traffic environment. The proposed building layout and structural massing are expected to provide screening, with the detailed façade and ventilation strategy providing further mitigation.

Conclusion – External Amenity

Parts of the site closest to Todmorden Road and the northern part of the site represented by MP3 are notably above desirable outdoor noise limits. Additional measures to the front of the proposed dwellings are not considered to be required due to a lack of amenity space to the front of the proposed dwellings, while structural massing and acoustic measures will assist in reducing noise exposure to the remaining areas.

Eastern areas are somewhat quieter but still exceed BS 8233 values during daytime, while the northern area represented by MP3 is expected to experience elevated daytime and night-time noise due to the surrounding industrial / commercial uses and road traffic. This is expected to be mitigated through structural massing, façade design, glazing and ventilation measures.

Indoor Noise Standards:

BS 8233:2014 Internal Noise Criteria

- Living rooms (daytime 07:00–23:00): ≤ 35 dB LAeq
- Bedrooms (daytime): ≤ 35 dB LAeq
- Bedrooms (night-time 23:00–07:00): ≤ 30 dB LAeq
- LA_{max,F} at night: Ideally ≤ 45 dB, with limited exceedances

Assessment of Internal Levels (Based on External Data)

Typical façade sound insulation (closed windows):

Standard double glazing: 28–33 dB reduction

Enhanced acoustic glazing: 35–42 dB reduction

MP1 Assessment – Road Traffic Noise

Night-time MP1 LAeq (20:00–00:00) ≈ 57 dB

Typical night-time road noise beyond midnight would likely settle around 53–55 dB LAeq.

To meet 30 dB LAeq internal, the façade must achieve 25 dB minimum attenuation (easily achieved with standard double glazing).

However:

LA_{max} values of 75 dB mean standard glazing may struggle to keep indoor LA_{max} below 45 dB, especially for bedrooms facing the road.

Enhanced acoustic glazing is therefore recommended for façades facing Todmorden Road.

MP2 Assessment – Industrial Noise

Night-time levels at MP2 drop to 49 dB LAeq

LA_{max,F} = 62 dB (lower but still potentially disruptive)

These values can be controlled with standard glazing, though bedrooms should still use acoustic trickle vents or alternative ventilation to avoid compromising attenuation.

MP3 Assessment – Northern Site Area

Night-time levels at MP3 are 55 dB LAeq,8h.

Typical night-time maximum noise events reach 75 dB LAF_{max}.

To meet the 30 dB LAeq internal bedroom criterion, the façade must provide at least 25 dB attenuation. Standard glazing may achieve the required LAeq reduction; however, the 75 dB LAF_{max} level indicates that enhanced acoustic glazing and suitable acoustic ventilation should be considered for bedrooms exposed towards the northern / industrial side of the site.

4.00 NOISE IMPACT ASSESSMENT CRITERIA

National Planning Policy Framework

4.01 The National Planning Policy Framework (NPPF) recent update sets out the Government's planning policies for England and how these are expected to be applied.

4.02 Where issues of noise impact are concerned the NPPF provides brief guidance in paragraph 170 where it states that planning policies and decisions should contribute to and enhance the natural and local environment by: *'preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of.....noise pollution'*.

4.03 Paragraph 180 advises that:

'Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should.....mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life'.

4.04 With regard to extant community noise sources and the potential to affect proposed new developments, paragraph 182 states that:

'Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.'

4.05 The NPPF also refers to the DEFRA publication, the Noise Policy Statement for England (NPSE) which reinforces and supplements the NPPF. Noise Policy Statement for England.

4.06 The Noise Policy Statement for England (NPSE) sets out the long-term vision of promoting good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development. This long-term vision is supported by the following aims:

- Avoid significant adverse impacts on health and quality of life.
- Mitigate and minimise adverse impacts on health and quality of life.
- Where possible, contribute to the improvement of health and quality of life.

4.07 NPSE describes the following levels at which noise impacts may be identified:

- NOEL – No Observed Effect Level. This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.
- LOAEL – Lowest Observed Adverse Effect Level. This is the level above which adverse effects on health and quality of life can be detected.
- SOAEL – Significant Observed Adverse Effect Level. This is the level above which significant adverse effects on health and quality of life occur.

Planning Practice Guidance – Noise

4.08 In December 2014, Planning Practice Guidance (PPG) was updated online which provides additional guidance and elaboration on the NPPF. It advises that the Local Planning Authority should consider the acoustic environment in relation to:

- Whether or not a significant adverse effect is occurring or likely to occur.
- Whether or not an adverse effect is occurring or likely to occur.
- Whether or not a good standard of amenity can be achieved.

4.09 In line with the Explanatory Note of the NPSE, the PPG references the LOAEL and SOAEL in relation to noise impact. It also provides examples of outcomes that could be expected for a given perception level of noise, plus actions that may be required to bring about a desired outcome. However, in line with the NPSE, no objective noise levels are provided for LOAEL or SOAEL although the PPG acknowledges that:

‘...the subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation’.

4.10 The PPG also provides general advice on the typical options available for mitigating noise. It goes on to suggest that Local Plans may include noise standards applicable to proposed developments within the Local Authority’s administrative boundary, although it states that:

‘Care should be taken, however, to avoid these being implemented as fixed thresholds as specific circumstances may justify some variation being allowed’.

ProPG Planning and Noise: New Residential Development

4.11 ProPG Planning and Noise: New Residential Development (ProPG) was published in May 2017 by the Association of Noise Consultants, Institute of Acoustics and the Chartered Institute of Environmental Health.

4.12 Stage 2: Element 2 of ProPG sets indoor ambient noise levels for residential dwellings based on the guidance contained in British Standard 8233:2014 ‘Guidance on Sound Insulation and Noise Reduction for Buildings’ (BS 8233) (see table below).

Activity	Location	Good Indoor Ambient Noise Levels	
Resting	Living Room	35 dB LAeq (0700–2300)	
Dining	Dining Area / Living	40 dB LAeq (0700–2300)	
Sleeping (daytime resting)	Bedroom	30 dB LAeq (0700–2300)	30 dB LAeq (2300–0700) 45 dB LAeq 2300–0700)

4.13 Note 4 to the above table states:

“A guideline value may be set in terms of SEL or LA_{max,F}, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dB LA_{max,F} more than 10 times a night.”

4.14 Note 5 to the above table states:

‘Where it is not possible to meet internal target levels with windows open, internal noise levels can be assessed with windows closed, however any façade openings used to provide whole dwelling ventilation (e.g. trickle ventilators) should be assessed in the “open” position and, in this scenario, the internal LAeq target levels should not normally be exceeded, subject to the further advice in Note 7’.

4.15 This is consistent with the guidance contained within the PPG, which states that:

‘... consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases a suitable alternative means of ventilation is likely to be necessary. Further information on ventilation can be found in the Building Regulations’.

4.16 On the basis of the above, the following criteria (with windows closed and an alternative means of ventilation provided) are considered appropriate for the application site:

- > 35 dB LAeq (0700-2300) in habitable rooms during the daytime
- > 30 dB LAeq (2300-0700) in bedrooms during the night time
- 45 dB LAFMax not regularly exceeded in bedrooms during the night time

6.0 Conclusion

The site experiences elevated daytime and night-time noise levels from road traffic (MP1), industrial activity (MP2) and the northern site area represented by MP3. The MP3 assessment indicates 65 dB LAeq,16h during the daytime, 55 dB LAeq,8h during the night-time and a typical night-time LAFmax of 75 dB. Without mitigation, the development would not meet BS 8233 external amenity standards and may not meet internal bedroom noise criteria on elevations exposed to the road and surrounding industrial / commercial uses. However, with a combination of:

- Targeted building layout
- Acoustic barriers
- Enhanced glazing
- Acoustic ventilation
- Noise-conscious façade design

...it is technically feasible to achieve internal and (for some areas) external amenity noise levels compliant with BS 8233:2014, WHO Guidelines, and planning expectations for residential development. The inclusion of MP3 confirms that appropriate mitigation is required for the northern part of the site, particularly in relation to façade insulation, glazing and ventilation.

Appendix 1

Glossary of Acoustic Terms

Sound Pressure Level (Lp)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 µPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 µPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, LAeq, T

The value of the A-weighted sound pressure level in decibels of continuous steady sound that within a specified time interval, T, has the same mean-square sound pressure as a sound that varies with time. LAeq, 16h (07:00 to 23:00 hours) and LAeq, 8h (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

LA10, T

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T. LA10, 18h is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

LA90, T

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T. LA90 is typically taken as representative of background noise.

LAF max

The maximum A-weighted noise level recorded during the measurement period. The subscript 'F' denotes fast time weighting, slow time weighting 'S' is also used.

Sound Exposure Level (SEL or LAE)

The energy produced by a discrete noise event averaged over one second, no matter how long the event actually took. This allows for comparison between different noise events which occur over different lengths of time.

Weighted Sound Reduction Index (RW)

Single number quantity which characterises the airborne sound insulation properties of a material or building element over a defined range of frequencies (RW is used to characterise the insulation of a material or product that has been measured in a laboratory).

Appendix 2

Site Layout Plan / Approximate Noise Monitoring Positions

