



Acoustic Survey and Assessment for
Proposed for the change of use from
engineering workshop building (class
E) to a storage and distribution use
(class B8) at
Former Harrisons Engineering
Workshop,
Kendal Street,
Clitheroe,
BB7 1PA.

Prepared for:

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1. Introduction

- 1.1. Martin Environmental Solutions has been commissioned to undertake an acoustic survey and assessment to support a planning application for the change of use of the former Harrisons engineering workshop building, Kendal Stret, Clitheroe from (class E) to a storage and distribution use (class B8).

Site Location and Context

- 1.2. The development site is situated mid-way along the southern side of Kendal Street n Clitheroe. To the west beyond the alleyway and to the north on the far side of the road are residential properties, with industrial units to the northeast and east of the site. To the rear and south further industrial units including garages, window fitters and a car park.
- 1.3. An aerial Photograph is enclosed in Figure 1, together with a proposed layout drawing in Figure 2.
- 1.4. The report has been produced to clarify the potential impact on the proposed development and to identify mitigation measures if required to ensure the development is appropriate in terms of noise impact.



2. Policy and Guidance

- 2.1. The impact of noise can be a material consideration in the determination of planning applications. The planning system has the task of guiding development to the most appropriate locations. It is recognised that on occasions it will be difficult to reconcile some land uses, such as housing, hospitals, or schools, with other activities that generate high levels of noise. However, the planning system is tasked to ensure that, wherever practicable, noise-sensitive developments are separated from major sources of noise (such as road, rail and air transport and certain types of industrial development).
- 2.2. The Government's publication of the National Planning Policy Framework (NPPF), updated in December 2024, states that planning policies and decisions should prevent new and existing development from contributing to or being put at unacceptable risk from, of being adversely affected by unacceptable levels of noise pollution.
- 2.3. The Government have also issued the Noise Policy Statement for England (NPSE). The NPSE clarifies the Government's underlying principles and aims in relation to noise and sets a vision to promote good health and a good quality of life through the effective management of noise while having regard to the Government's sustainable development strategy. The NPSE aims to mitigate and minimise adverse impacts on health and quality of life through the effective management and control of noise.
- 2.4. The NPSE introduces the following terms, although no sound levels are given to represent these, many authorities have identified the sound level criteria in line with the World Health Organisation, BS8233:2014 and BS4142: 2014 levels. The terms introduced by the NPSE are:
- NOEL – No Observed Effect Level**; this is the level of noise exposure below which no effect at all on health or quality of life can be detected.
- LOAEL – Lowest Observed Adverse Effect Level**. this is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- SOAEL – Significant Observed Adverse Effect Level**. This is the level of noise exposure above which significant adverse effects on health and quality of life occur.



2.5. The Planning Practice Guidance on Noise supports the above and highlights that plan-making and decision making need to take account of the acoustic environment and consider;

- 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; and
- Whether a good standard of amenity can be achieved.

In line with the NPSE this includes whether the overall effect of the noise exposure would be above or below the SOAEL.

2.6. Other commonly used examples of standards utilised by Local Planning authorities for the consideration of noise impacts include comparison of the likely noise levels to be experienced at a development, with levels that have been recommended by the World Health Organisation (WHO) as Guidelines for the prevention of Community Noise Annoyance and within BS8233: 2014.

2.7. The WHO recommended noise levels for outdoor amenity areas (gardens) that should not be exceeded are 55dB(A) $L_{Aeq,16hr}$ in order to avoid 'Serious Community Annoyance' or 50dB(A) $L_{Aeq,16hr}$ to avoid 'Moderate Community Annoyance' during the day. For indoor levels WHO set 35dB(A) $L_{Aeq,16hr}$ during the day to prevent Moderate Annoyance and 30 dB(A) $L_{Aeq,8hr}$ at night to prevent sleep disturbance.

2.8. The WHO guidance also recommends that maximum sound levels at night should not regularly exceed 45dB(A) within bedrooms to prevent sleep disturbance. Regularly is considered to be more than 10 times during any 8-hour night-time period.

2.9. BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' also specifies desirable noise levels to be achieved inside dwellings.

2.10. BS 8233:2014 'Sound insulation and noise reduction for buildings – Code of Practice' also specifies desirable noise levels to be achieved inside dwellings. BS 8233 presents two levels, the first between the hours of 07:00 – 23:00 and the second between 23:00 -07:00.



- 2.11. The daytime period suggests internal noise levels of 35dB $L_{Aeq,16hr}$, for resting in living rooms and bedrooms while for night-time a level of 30dB $L_{Aeq,8hr}$ is recommended. Criteria for external areas mirrors that within the WHO guidance.
- 2.12. Another commonly used standard is British Standard 4142:2014 'Method for rating industrial and commercial sound' compares the sound predicted by the source in question against the background, L_{A90} sound levels.
- 2.13. The "residual" L_{Aeq} measurement is then subtracted from the "ambient" L_{Aeq} measurement (with the sound source) to calculate the sound level created by the "problem" sound alone -termed the "specific" sound level.
- 2.14. If the "problem" sound is tonal, such as whine or hum, or if it is impulsive such as bangs or clatters or if it is irregular enough to attract attention a correction is added to the "specific level" to produce the "rating level". The "background" L_{A90} measurement is then compared against the "rating level".
- 2.15. If the "rating level" exceeds the "background" by around 10dB(A) or more this "indicates a significant adverse impact". A difference of around 5dB(A) 'indicates an adverse impact. The lower the commercial noise level is, the lower the likely impact.
- 2.16. In addition, the 'ProPG Planning & Noise, Professional Practice Guidance on Planning & Noise, New Residential Development' provides a 4-staged approach to undertaking a risk assessment in relation to anticipated sound levels at new residential development and the provision of mitigation measures. The guidance is principally aimed at sites exposed predominantly to noise from transportation sources.
- 2.17. The first stage consists of an initial noise risk assessment, based on indicative day and night-time *noise* levels. Simply put, the higher the ambient noise in an area the greater the impact. The levels given are shown below although it should be noted that these are in excess of both the WHO and BS 8233: 2014 guidance.



Noise Risk Category*	Potential Effect if Unmitigated	Pre-Planning Application Guidance
0 – Negligible $L_{Aeq,16hr} < 50dB$ $L_{Aeq,8hr} < 40dB$	May be noticeable but no adverse effect on health and quality of life	In this category the development is likely to be acceptable from a noise perspective, nevertheless a good acoustic design process is encouraged to improve the existing environment and/or safeguard against possible future deterioration and to protect any designated tranquil areas. A noise assessment may be requested to demonstrate no adverse impact from noise. Application need not normally be delayed on noise grounds.
1 – Low $L_{Aeq,16hr} 50-63dB$ $L_{Aeq,8hr} 40-55dB$	Adverse effect on health and quality of life	In this category the development may be refused unless a good acoustic design process is followed and is demonstrated via a Level 1 Acoustic Design Statement which confirms how the adverse impacts of noise on the new development will be mitigated and minimised and that a significant adverse impact will not arise in the finished development. Planning conditions and other measures to control noise may be required.
2 – Medium $L_{Aeq,16hr} 63-69dB$ $L_{Aeq,8hr} 55-60dB$ $L_{AFmax} > 80dB^{**}$	Significant adverse effect on health and quality of life	In this category the development is likely to be refused unless good acoustic design process is followed and is demonstrated via a Level 2 Acoustic Design Statement which confirms how the adverse impacts of noise on the new development will be mitigated and minimised, and clearly demonstrates that a significant adverse noise impact will not arise in the finished development. Planning conditions and other measures to control noise will normally be required.
3 – High $L_{Aeq,16hr} > 69dB$ $L_{Aeq,8hr} > 60dB$ $L_{AFmax} > 80dB^{**}$	Unacceptable adverse effect of health and quality of life	In this category the development is very likely to be refused on noise grounds, even if a good acoustic design process is followed and is demonstrated via a Level 2 Acoustic Design Statement. Applicants are advised to seek expert advice on possible mitigation measures. Advice on the circumstances when the refusal of a new housing on noise grounds should normally be anticipated is included in the ProPG.

2.18. Stage 2, consists of a full assessment of the prevailing ambient noise and requires 4 elements to be considered:

- I. Element 1 – Good Acoustic Design
- II. Element 2 – Internal Noise Level Guidelines
- III. Element 3 – External Amenity Area Noise Assessment
- IV. Element 4 – Assessment of Other Relevant Issues

2.19. A good acoustic design is implicit in meeting the requirements of the NPPF and can help to resolve many potential acoustic issues.

2.20. Details of the criteria considered suitable are provided above for both internal and external sound levels. Element 4 includes such issues as local and national policy, likely occupants, wider planning objectives.



3. The Assessment

The development

- 3.1 The proposed development consists a change of use from an engineering workshop to storage and distribution site. Small vans of goods arrive at the site which are unloaded by hand into the building for storage, some repackaging is undertaken by hand before being dispatched again by hand loaded small vans.
- 3.2 Hours of operation will be 08:00-17:00, but typically shorter.
- 3.3 Figure 2 below provides an overview of the proposed development.

Existing Situation.

- 3.4 In order to obtain representative background sound levels for the area on site monitoring was undertaken over the 22nd-24th February 2026.
- 3.5 A Cirrus Optimus Green sound level meter was utilised for the monitoring. The meter was placed over 1m from the first-floor façade of the building overlooking the road to the front.
- 3.6 The meter was field calibrated at the start and end of the monitoring period with no significant variation and full laboratory calibration certificates are available on request.
- 3.7 The weather during the monitoring was dry with little wind <5m/s.
- 3.8 The full results are shown in Appendix A, with a summary in the tables below.

Start Time	End Time	Duration	L _{Aeq}	L _{A90}	L _{AMax}
22/02/2026 15:00	22/02/2026 19:00	03:59:59	56.4	42.6	79.8
22/02/2026 19:00	22/02/2026 23:00	04:00:00	53.3	38.6	77.4
22/02/2026 23:00	23/02/2026 07:00	08:00:00	48.5	35.7	73.0
23/02/2026 07:00	23/02/2026 19:00	12:00:00	57.8	47.8	91.3
23/02/2026 19:00	23/02/2026 23:00	04:00:00	54.6	36.0	75.8
23/02/2026 23:00	24/02/2026 07:00	08:00:00	48.2	27.0	73.6
24/02/2026 07:00	24/02/2026 15:00	08:00:01	60.6	48.0	95.9

- 3.9 Background sound levels were dominated by passing & distant traffic.



Potential Sound Emissions

3.10 No plant is to be associated with the site. Internally packages will be opened and re packaged as required by hand. Sound emissions from internal operations are therefore likely to be minimal. However, to ensure a worst case, conservative assessment an excessive internal level of 80dB(A) has been chosen, equivalent to a large manufacturing site.

3.11 Assuming a minimal reduction of 20dB, equivalent to a thin roller shutter door (the walls providing in the region of 50dB reduction) the sound level 1m from the façade would be 54dB(A).

$$\begin{aligned}SPL_{ext,1m} &= SPR_{int} - attenuation (R_w) - 6 \\SPL_{ext,1m} &= 80 - 20 - 6 \\SPL_{ext,1m} &= 54dB(A)\end{aligned}$$

3.12 The nearest property is located 11m on the far side of the road, a distance reduction to the facade of 20.8dB, thus façade sound levels of 33.2dB(A). Given a 15dB attenuation¹ for an open window the internal sound levels to be experienced by the residents are 18.2dB(A).

3.13 Activities within the building are halted while loading unloading of deliveries are undertaken as staff are diverted to this activity.

3.14 Sound levels from the internal operations will not result in any adverse impact on the neighbouring properties with sound levels significantly below those identified by the World Health Organisation and contained within BS8233:2014. The levels will also be substantially lower than the prevailing background sound level of 57.8dB(A).

3.15 In terms of a BS4142 assessment, there is no plant or activity internally that is likely to generate significant sound emissions or affect the neighbouring properties. No tonal, impulsive or intermittent activities that will be identifiable at the receptor properties. The specific and rating levels therefore being the same and nearly 15dB below the identified background sound level (33.2-47.8=-14.6).

3.16 The internal operations will not result in any adverse impact.

¹ BS8233: 2014; Guidance on sound insulation and noise reduction for buildings
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- 3.17 Externally deliveries both to and from the site will be undertaken by vans, with material unloaded by hand. Noise from the vans will be no different to the other vehicles currently using the road, sound levels from the engines would result in levels of ~56dB at the nearest property but averaged over an hour ~45dB(A). Below the background sound level for the area.
- 3.18 Unloading activities are undertaken by hand and so minimal sound levels are to be expected. Given staff will communicate between each other an assessment based on a loud make voice at 1m, 65dB(A) has been used in the assessment. This would result in a façade sound level of 45.9dB(A) at the nearest property. In addition, the van is likely to be blocking the direct line of sight, reducing sound levels further by at least 5dB.
- 3.19 The above 45.9dB(A) is below the identified background L_{A90} sound level on site, and this only occurs on a few occasions for a short duration.
- 3.20 Unloading/loading activities are not therefore expected to result in any adverse impact on the neighbouring properties.



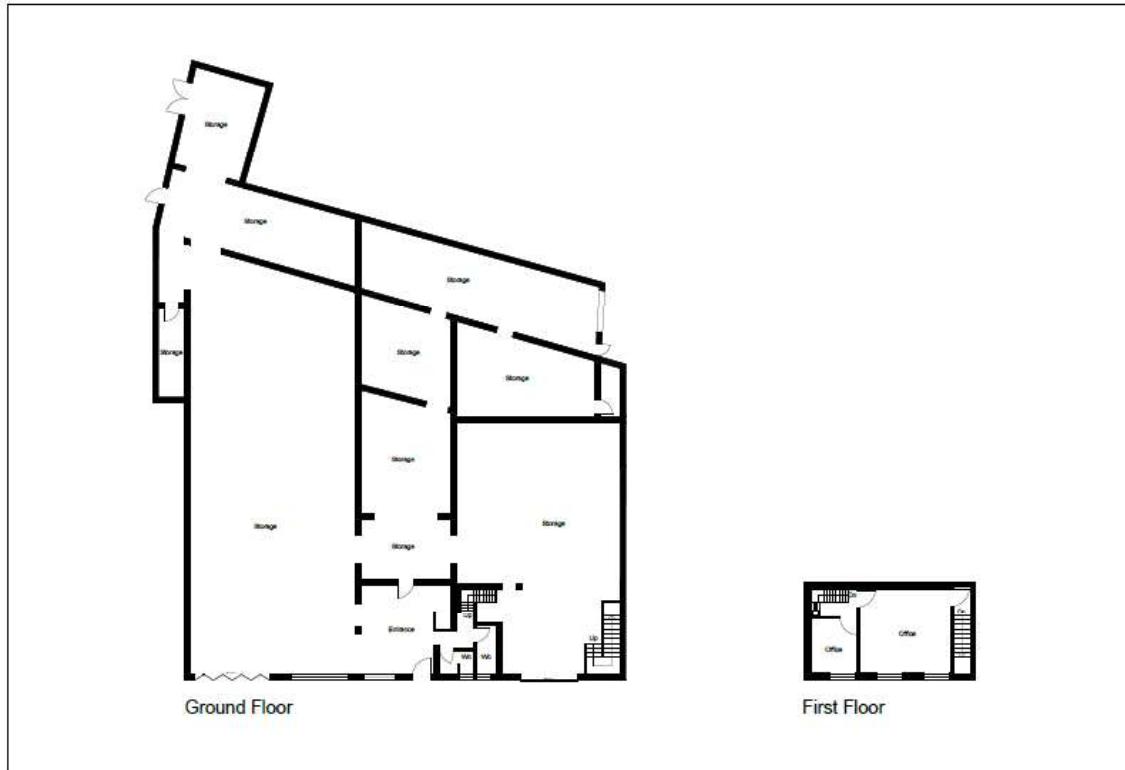
4 Conclusion

- 4.1 On-site monitoring has identified existing background sound levels for the area. An assessment along with an assessment of operations at the site.
- 4.2 Internal operations are unlikely to produce excessive levels of sound but for the sake of the assessment a high internal level was chosen and shown not to result in any adverse impact.
- 4.3 Likewise external loading operations are undertaken by hand and are not anticipated to generate significant levels of noise. These have been assessed and shown not to result in any adverse impact.
- 4.4 The development will ensure that the internal and external sound levels at neighbourign properties' are acceptable and will result in a No Observe Effect on the future residents in line with the Noise Policy Statement for England.
- 4.5 As such the development will meet the objectives of the National Planning Policy Framework in ensuring that no significant adverse impact is experienced by the future residents. The development is therefore considered to be acceptable in terms of noise.

Figure 1 - Aerial Photograph



Figure 2 - Proposed Layout Plan





Appendix A – Full Monitoring Results

Time	L _{Aeq} (dB)	L _{AMax} (dB)	L _{A90} (dB)
22/02/2026 15:00	57.7	79.8	46.4
22/02/2026 16:00	56.5	77.6	43.7
22/02/2026 17:00	55.4	78.8	41.0
22/02/2026 18:00	55.8	76.2	41.3
22/02/2026 19:00	55.3	77.4	40.8
22/02/2026 20:00	54.0	76.3	39.5
22/02/2026 21:00	52.2	74.4	38.9
22/02/2026 22:00	49.1	71.4	36.9
22/02/2026 23:00	46.9	68.4	35.4
23/02/2026 00:00	43.8	68.3	35.2
23/02/2026 01:00	43.2	69.0	36.6
23/02/2026 02:00	42.7	66.9	36.1
23/02/2026 03:00	46.2	73.0	34.5
23/02/2026 04:00	46.3	72.6	35.0
23/02/2026 05:00	51.0	70.6	36.1
23/02/2026 06:00	54.0	70.1	41.6
23/02/2026 07:00	58.3	76.2	46.2
23/02/2026 08:00	58.3	78.4	50.7
23/02/2026 09:00	58.1	85.1	47.2
23/02/2026 10:00	57.2	70.5	48.3
23/02/2026 11:00	56.3	71.8	47.7
23/02/2026 12:00	57.6	77.6	49.2
23/02/2026 13:00	57.1	75.1	48.7
23/02/2026 14:00	59.9	91.3	48.7
23/02/2026 15:00	58.2	82.6	49.5
23/02/2026 16:00	57.8	75.6	49.0
23/02/2026 17:00	56.4	77.0	46.8
23/02/2026 18:00	56.5	74.4	41.2
23/02/2026 19:00	57.0	75.8	41.3
23/02/2026 20:00	55.4	72.3	39.9
23/02/2026 21:00	52.7	70.8	36.6
23/02/2026 22:00	50.4	71.7	34.1
23/02/2026 23:00	47.2	70.5	30.1
24/02/2026 00:00	43.8	68.6	27.7
24/02/2026 01:00	39.2	66.1	27.8
24/02/2026 02:00	41.1	66.8	26.6
24/02/2026 03:00	36.0	64.8	24.8
24/02/2026 04:00	46.7	68.9	31.7
24/02/2026 05:00	50.7	73.6	34.4
24/02/2026 06:00	54.2	71.0	38.8
24/02/2026 07:00	64.1	95.9	45.5



24/02/2026 08:00	60.3	84.4	50.8
24/02/2026 09:00	57.4	79.2	47.9
24/02/2026 10:00	57.2	72.7	48.5
24/02/2026 11:00	57.2	77.8	46.6
24/02/2026 12:00	58.6	82.4	49.2
24/02/2026 13:00	64.1	94.8	47.7
24/02/2026 14:00	57.4	81.4	46.6



Appendix B – Report Author Details

This report has been produced by Neil Martin, BSc (Hons), PGDip, CEnvH MCIEH, MIOA.

Neil is the principal acoustic consultant at Martin Environmental Solutions Ltd, a consultancy company specialising in Environmental Health disciplines including environmental noise assessment and control. He holds a Bachelor's degree in Environmental Health and Diploma in Acoustics. He is a Chartered Member of the Chartered Institute of Environmental Health and a Full member of the Institute of Acoustics.

Neil has over 20 years' experience working within a Local Authority Environmental Health setting, principally in the Environmental Protection and Public Health areas and has been working as an acoustic consultant since 2011.

Since its formation, Martin Environmental Solutions has advised and assisted many groups including residents, developers and local authorities about the problems of noise and vibration in the environment and the possible solutions. Neil also acts as an expert witness in the area of acoustics.