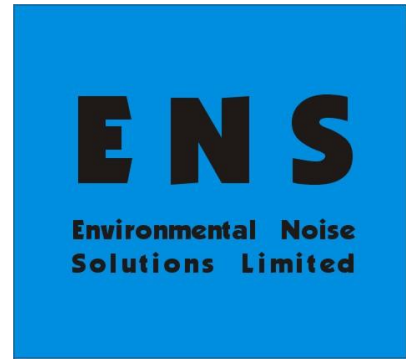




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Proposed Change of Use to Self-Storage Building, Moon Retail Park, Roch Valley Way, Rochdale, OL11 4QN

Noise Impact Assessment

For:
Max Design Consultancy

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1 Introduction

1.1 Overview

Environmental Noise Solutions Ltd (ENS) has been commissioned by Max Design Consultancy to carry out a noise impact assessment in relation to a proposed conversion to self-storage building at Moon Retail Park, Roch Valley, Rochdale, OL11 4QN (hereafter referred to as 'the site').

The objectives of the noise impact assessment were to:

- Measure the baseline noise levels at the site and its surrounding environs
- Assess the potential impact of the proposed development on surrounding noise sensitive receptors with reference to pertinent guidelines
- Provide recommendations for structural and management controls, as necessary, to protect the noise amenity of the nearest residential dwellings

This report details the methodology and results of the assessment. It has been prepared to accompany a planning application to be submitted to Rochdale Borough Council.

The report has been prepared for Max Design Consultancy for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties referring to the report should consult Max Design Consultancy and ENS as to the extent to which the findings may be appropriate for their use.

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

1.2 Site Description and Development Proposals

The site is located in a mixed-use setting, circa 1.2 km to the south-west of Rochdale Town Centre. The site boundary is indicated in Figure 1.1 below.

Figure 1.1: Location of Development



The nearest noise sensitive receptors to the site are considered to be surrounding residential dwellings on Roch Valley Way, Finsbury Street, Lambeth Terrace and Holborn Street.

The development consists of the change of use from furniture store (Class E(a) retail) to self-storage (Class B8 storage). Proposed operating hours for the proposed self-storage units are 24/7, with registered customers provided with access via secure key fobs. The site is expected to generate typically 5-10 customer visits per day, with staff on-site between 0800-1800 (Monday to Friday), 0900-1700 on Saturdays, and 1000-1600 on Sundays.

Internally, the building will be subdivided to provide a series of individual storage lockers, each with an approximate floor area of 10 sq ft, together with larger storage rooms of approximately 200 sq ft. Ancillary office accommodation will also be provided to support staff and management.

Proposals include the addition of a second roller shutter on the south-west elevation.

As customer movements at the site are infrequent and no significant internal noise is anticipated, at *prima facie*, it is considered that the nature, frequency and pattern of occurrence of the use of the site represents a negligible noise impact.

2 Policy Context and Assessment Guidance

2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF)¹ was updated in February 2025 and sets out the Government's planning policies for England and how these are expected to be applied.

Where issues of noise impact are concerned the NPPF provides brief guidance in paragraph 187 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'.

Paragraph 198 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'.

2.2 Noise Policy Statement for England

The Noise Policy Statement for England² (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

The 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

According to the explanatory notes in the statement, where a noise level falls between the lowest observable adverse effect level (LOAEL) and a level which represents a significant observable adverse effect level (SOAEL):

'....all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life whilst also taking into consideration the guiding principles of sustainable development. This does not mean that such effects cannot occur.'

1 National Planning Policy Framework. Ministry of Housing, Communities and Local Government (2021)

2 Government Department for Environment, Food and Rural Affairs. Noise Policy Statement for England. March 2010.

2.3 Planning Practice Guidance on Noise

Planning Practice Guidance³ (PPG) is an online resource 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

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’.

Table 2.1 summarises the PPG noise exposure hierarchy.

Table 2.1: PPG Noise Exposure Hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not Noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

3 Planning Practice Guidance on Noise: <http://planningguidance.planningportal.gov.uk/blog/guidance/noise/>

The PPG also provides general advice on the typical options available for mitigating noise, suggesting 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'.

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. The following guidance documents provide some meaningful context.

2.4 British Standard 8233:2014

British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'⁴ (BS 8233) sets indoor ambient noise levels for residential dwellings as summarised in Table 2.2.

Table 2.2: Indoor Ambient Noise Levels in Dwellings

Activity	Location	Good Indoor Ambient Noise Levels	
Resting	Living Room	35 dB L _{Aeq} (0700-2300)	-
Dining	Dining Room/Area	40 dB L _{Aeq} (0700-2300)	-
Sleeping (daytime resting)	Bedroom	35 dB L _{Aeq} (0700-2300)	30 dB L _{Aeq} (2300-0700)

2.5 IEMA Guidelines for Environmental Noise Impact Assessment

The IEMA Guidelines for Environmental Noise Impact Assessment provide recommendations for approaches to noise impact assessment in the context of the Environmental Impact Assessment (EIA) process. However, the principles in the guidelines are relevant to all types of project where noise effects are likely to occur, regardless of size including small developments which are not screened as EIA development.

The guidelines provide a number of examples regarding approach to impact assessment. In circumstances where a noise environment may be altered by addition or removal of a noise source, considered to be within the prevailing acoustic character of an area, assessment of impact magnitude may be performed by considering the relative change in ambient noise level, as shown in Table 2.3.

Table 2.3: Example Noise Impact Magnitude Descriptors

Relative Change (dB(A))	Magnitude / Scale of Change
≤ 2.9	Negligible
3.0 – 4.9	Small
4.9 – 9.9	Medium
≥ 10.0	Large

4 British Standards Institution (2014). *British Standard 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings*.

3 Noise Survey

3.1 Overview

In order to establish the ambient and background noise levels in the vicinity of the nearest noise sensitive receptors, a baseline noise survey was carried out on Thursday 11th December through to Friday 12th December 2025.

For the purpose of the assessment, a single monitoring position (MP1) was adopted at the rear of the site (as shown in Appendix 2).

Noise measurements were undertaken in free field conditions at 1.5 metres above ground level, using an NTi XL3 Type 1 integrating sound level meter. The meter was connected to a windshield covered microphone positioned at the location detailed above.

The measurement system calibration was verified immediately before and after the survey period using a Bruel & Kjaer Type 4231 calibrator. No drift in calibration levels greater than 0.5 dB was noted. The noted weather conditions during the survey were dry with wind speeds < 5 m/s. Weather conditions were therefore considered appropriate for noise monitoring.

Measurements consisted of A-weighted broadband parameters including L_{Aeq} and L_{A90} , together with linear octave band data.

3.2 Summary

Table 3.1 presents a summary of the noise data for each measurement session, rounded to the nearest decibel.

Table 3.1: Summary of Noise Measurement Data

Position	Date	Time	L_{Aeq} (dB)	L_{A90} (dB)	Comment
MP1	11/12/25	1050–2300	54	49	Road traffic on Roch Valley Way and the wider surrounding road network
	11-12/12/2025	2300–0700	49	44	
	12/12/25	0700–1005	54	49	

Noise levels in the vicinity of the site were characterised by local and distant road traffic noise with no other significant noise sources noted. Daytime and night-time ambient noise levels at MP1 were measured at **54 dB L_{Aeq} (0700-2300)** and **49 dB L_{Aeq} (2300-0700)** respectively.

3.3 Noise Associated with the Development

The only potential noise source associated with the development is considered to be use of the roller shutter doors.

In order to establish the noise levels associated with the roller shutter doors, short-term noise measurements were undertaken at the site using a calibrated NTi XL3 Type 1 sound level meter on Thursday 11th December 2025.

The Sound Exposure Level (SEL) of the roller shutter door being opened and then closed was measured at **85 dB(A) SEL** at 1 metre.

4 Noise Assessment

The only potential noise source associated with the development is considered to be use of the roller shutter doors, which was measured at up to **85 dB(A) SEL** at 1 metre.

The following formula is used for calculating the ambient noise level (L_{Aeq}) from measured activity SEL:

$L_{Aeq, T} = 10 \times \log_{10} [(n \times 10^{SEL/10}) / T]$ where:

- T is reference time interval (i.e. 900 seconds)
- SEL is the single event level of the roller shutter (i.e. 85 dB(A))
- n is the number of occurrences of the SEL

Assuming the roller shutter door is opened/closed on arrival and departure during a worst case 15-minute period, this equates to a noise level of **58 dB L_{Aeq} (15 min)** at 1 metre.

In order to predict the resultant noise levels at the nearest NSRs, the following relationship may be employed:

$SPL_{NSR} = SPL_{REF} - DA - SA$ where

- SPL_{NSR} is the resultant sound pressure level at the nearest NSR (dB)
- SPL_{REF} is the sound pressure level at 1 metre to the source (dB)
- DA is the distance attenuation of noise
- SA is the screening attenuation of noise

Distance attenuation (DA) is calculated as follows:

$DA = 20 \times \log (D_{source} / D_{rec})$ where,

- D_{SOURCE} = distance to source (1 metre in this case)
- D_{REC} = distance to receiver

In relation to screening attenuation (SA), BS 5228:2009 Part 1 states *'In the absence of spectral data, as a working approximation, if there is a barrier or other topographic feature between the source and the receiving position, assume an approximate attenuation of 5 dB when the top of the plant is just visible to the receiver over the noise barrier, and of 10 dB when the noise screen completely hides the sources from the receiver. High topographical features and specifically designed and positioned noise barriers could provide greater attenuation'*.

Dwellings on Roch Valley Way to the west are circa 40 metres from the roller shutter doors and unscreened, whereas dwellings on Finsbury Street to the north are circa 22 metres from the doors and screened from the doors by the building itself. Remaining NSRs are set much further back and are more significantly screened by the building.

The resultant noise levels at the nearest NSRs are set out in the following table.

Table 4.1 – Predicted Roller Shutter Noise Levels at Nearest NSRs

Receptor	Specific Noise Level at 1 metre	Distance Attenuation	Screening Attenuation	Resultant Noise Level at NSR
Roch Valley Way	58 dB L_{Aeq} (15 min)	–32 decibels ($20 \cdot \log(1/40)$)	0 dB	26 dB L_{Aeq} (15 min)
Finsbury Street	58 dB L_{Aeq} (15 min)	–27 decibels ($20 \cdot \log(1/22)$)	–10 dB	21 dB L_{Aeq} (15 min)

Worst-case noise levels associated with use of the roller shutter doors are therefore calculated at **26 dB L_{Aeq} (15 min)** at the nearest NSRs.

Such levels are significantly (at least 23 dB) below the existing ambient noise levels at the nearest NSRs. With reference to Table 2.3, the impact is deemed to be ‘Negligible’.

Further, assuming 15 dB reduction for a partly open windows, **≤ 26 dB(A)** externally equates to **≤ 11 dB(A)** internally, which is significantly (at least 19 dB) below the internal targets contained in BS 8233. It is evident that the predicted noise levels associated with the development are very low in absolute terms.

With reference to Table 2.1, noise from the development is considered to represent a No Observed Adverse Effect Level (NOAEL) in that such noise is noticeable and not intrusive i.e. noise may be heard, but does not cause any change in behaviour or attitude and such noise may slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.

The noise impact is therefore considered to be negligible.

5 Summary and Conclusions

A noise survey and assessment have been performed for a proposed change of use from furniture store to self-storage building at Moon Retail Park, Roch Valley, Rochdale, OL11 4QN.

Baseline noise monitoring was carried out on Thursday 11th December through to Friday 12th December 2025 to determine prevailing ambient noise levels in the vicinity of the nearest noise sensitive receptors.

Activity at the site is likely to be very infrequent, with predicted noise levels significantly below the existing ambient noise levels and very low in absolute terms.

Noise associated with the proposed development is considered to represent a No Observed Adverse Effect Level (NOAEL) in that such noise is noticeable and not intrusive i.e. noise may be heard, but does not cause any change in behaviour or attitude and such noise may slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.

The noise impact is therefore considered to be negligible.

Appendix 1 – Abbreviations and Definitions

Sound Pressure Level (L_p)

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

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, $L_{Aeq, T}$

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. $L_{Aeq, 16h}$ (07:00 to 23:00 hours) and $L_{Aeq, 8h}$ (23:00 to 07:00 hours) are used to qualify daytime and night time noise levels.

$L_{A10, T}$

The A-weighted sound pressure level in decibels exceeded for 10% of the measurement period, T . $L_{A10, 18h}$ is the arithmetic mean of the 18 hourly values from 06:00 to 24:00 hours.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T . L_{A90} is typically taken as representative of background noise.

$L_{AF \max}$

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.

Single Event Level / Sound Exposure Level (SEL or L_{AE})

The energy produced by a discrete noise event averaged over one second, regardless of the event duration. This allows for comparison between different noise events which occur over different lengths of time.

Weighted Sound Reduction Index (R_w)

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

Appendix 2 – Noise Measurement Position

