Noise Impact Assessment

Site Address: Arch 124 Water Street, Manchester, M3 4JW

Client Name: FutureShock Wrestling Ventures Ltd

Project Reference No: NP-013494

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Revision	Reported By	Checked By
01	M. Welsh, MSc MIOA	S. Chesney, MSc, MIOA

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Contact Details

NOVA Acoustics Ltd,
Suite 13, Crown House,
94 Armley Road,
Leeds,
LS12 2EJ

0113 322 7977

www.novaacoustics.co.uk

technical@novaacoustics.co.uk

Delivering sustainable development by promoting good health and well-being through effective management of noise.

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1. Introduction

NOVA Acoustics Ltd has been commissioned to prepare a noise impact assessment for a wrestling school and training centre ('the proposed development') at Arch 124 Water Street, Manchester, M3 4JW ('the site').

The applicant has submitted planning application No. 143601/FO/2025 ('the Application') to Manchester City Council ('MCC'). This report has been prepared to accompany the planning application submitted to the Local Planning Authority ('LPA').

A noise survey has been undertaken to establish the prevailing background sound levels at the closest Noise Sensitive Receptors ('NSRs'). The report details the existing background sound climate and the predicted noise emissions associated with the proposed development. Measures required to mitigate noise impact from the proposed development have been recommended where necessary and assessed in accordance with the relevant performance standards, legislation, policy and guidance.

This noise assessment is necessarily technical in nature; therefore, a glossary of terms is included in Appendix A to assist the reader.

1.1 Standards, Legislation, Policy & Guidance

The following performance standards, legislation, policy and guidance have been considered to ensure good acoustic design in the assessment:

- The LPA's application feedback.
- National Planning Policy Framework (2024).
- Noise Policy Statement for England (2010).
- British Standard BS4142:2014+A1:2019 – 'Methods for rating and assessing industrial and commercial sound'.

Further information on the legislation can be found in Appendix B.

1.2 Proposal Brief

The proposal is for the relocation of a wrestling school to a new proposed venue. The proposed venue is to operate as a training space only and not to be used for the hosting of events as these will occur elsewhere. The gym comprises a wrestling wring and padded areas for training.

NOVA Acoustics has been informed of the following operational hours with no proposed operation during the nighttime period:

- Monday 14:00 – 21:30
- Tuesday 17:00 – 21:30
- Wednesday 14:00 – 21:30
- Thursday 13:00 – 21:30
- Friday 17:00 – 21:30
- Saturday 10:30 – 16:30
- Sunday 10:30 – 14:00

The figure below shows the location of the proposed development.

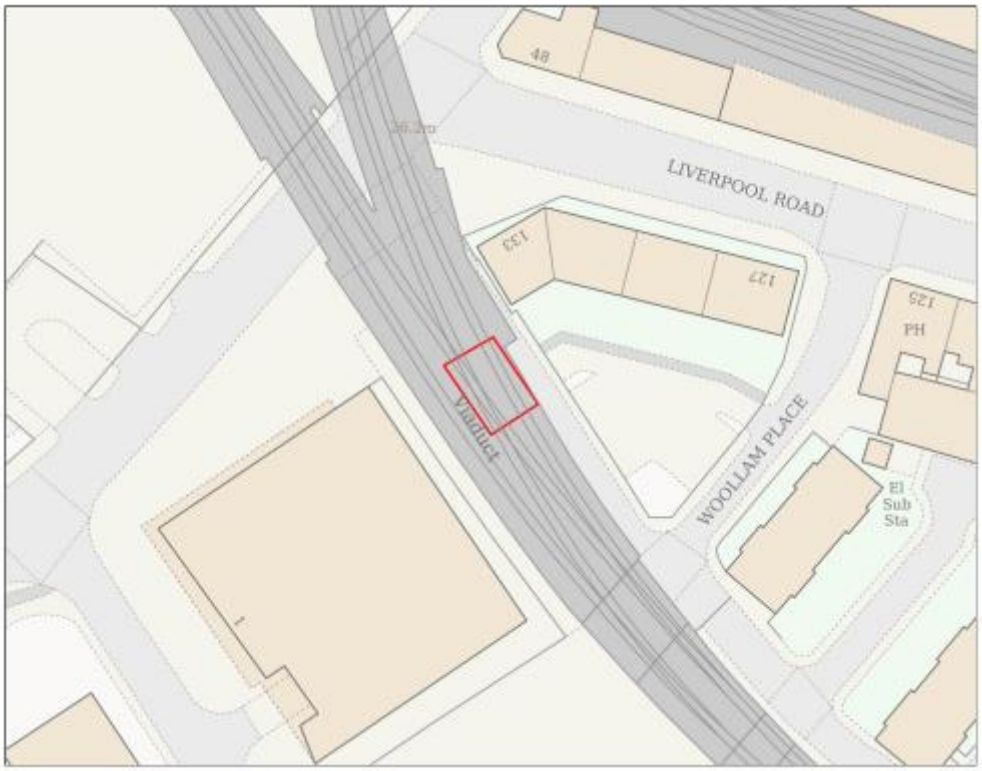


Figure 1 – Proposed Development Location

1.3 Local Planning Authority & Background

The following information was provided by the Local Authority to the client in response to the application:

"The premises shall be acoustically insulated and treated to limit the breakout of noise in accordance with a noise study of the premises and a scheme of acoustic treatment that has been submitted to and approved in writing by the City Council as local planning authority. The scheme shall be implemented in full before the use commences or as otherwise agreed in writing by the City Council as local planning authority.

Where entertainment noise is proposed the L_{Aeq} (entertainment noise) shall be controlled to 5dB below the L_{A90} (without entertainment noise) in each octave band at the facade of the nearest noise sensitive location, and internal noise levels at structurally adjoined residential properties in the 63Hz and 125Hz octave frequency bands shall be controlled so as not to exceed (in habitable rooms) 47dB and 41dB ($L_{eq,5min}$), respectively.

Next, following on from our discussions last week the Environmental Protection team has also elaborated to advise that:

It is advised that the applicant employ a suitably qualified acoustic consultant to undertake a full assessment of noise breakout from the premises. It would be fine for the applicant to use measurements of internal noise levels at the existing site and then do the appropriate calculations to provide predicted noise levels at the NSRs. These measurements must include all noisy activities, including music and people noise. They must consider the noise levels/limit requirements of the condition and confirm how these will be complied with.

If additional insulation is required to the building fabric, then this will be highlighted during the initial assessments, and this work will need to be done before the premises is in use."

It should be highlighted that the facility is only intended for training purposes and will not be used to host events. Therefore, the proposal is not considered to classify strictly as 'entertainment' noise.

In addition, there are no residential receptors structurally adjoining the site. Therefore, the assessment is limited to internal noise break-out.

2. Environmental Noise Survey

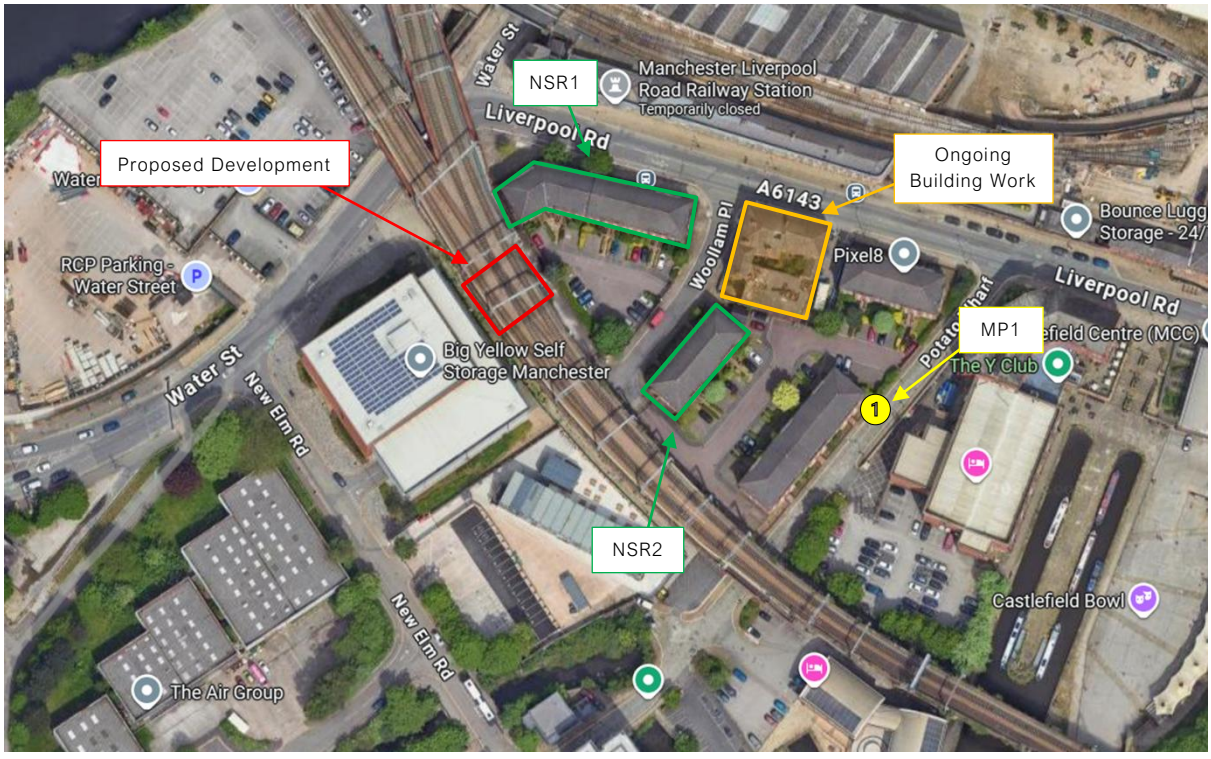
2.1 Measurement Methodology

The following table outlines the measurement dates and particulars. Weather conditions during the environmental sound survey can be found in Appendix D.

Location	Survey Dates	Measurement Particulars
MP1	28-30/10/2025	Equipment mounted on a lamppost along Potato Wharf. This location was chosen to minimise the influence from construction noise off Woolam Place. The measurement location is a similar distance from both the rail line and Liverpool Road to the dwellings at NSR1. As these were found to be the dominant noise sources within the area, the measurement results are considered to be representative for the assessment. The microphone was positioned approximately 3.5m above the ground and at least 3.5m from any other large reflective surface.

Table 1 – Measurement Methodology

The figure below outlines the site surroundings and measurement locations:



Imagery ©2025, Map data ©2025

Figure 2 – Measurement Locations and Site Surroundings

2.1 Context & Subjective Impression

The proposed site is located within a railway arch in Manchester. Trains passing along the associated rail lines are a dominant and regular contributor to the existing noise climate. Road traffic noise from Liverpool Road and the local road network was also observed to largely contribute to the noise environment, with

frequent comings and goings observed to the resident's car park located between the site and the nearby residential blocks.

The measurement location was set on Potato Wharf due to the influence of construction noise at Woolam Place which is the location of the nearby receptors.

The closest NSR1 is a block of flats located to the north of the proposed site at approximately 20/30m from the roller shutter doors of the proposed unit. NSR2 is identified as the block of flats located to the east of the proposed unit at approximately 70m from the doors of the proposed unit.

2.2 Environmental Noise Survey Results

Background Sound Level Analysis

The following section outlines the measured background sound levels that have been used as the baseline for the subsequent BS4142 noise assessment. The figure below shows a histogram graph of the background sound levels measured during the proposed operational periods of 10:30 – 21:30 hours throughout the entire measurement period. The time history results can be found in Appendix D.

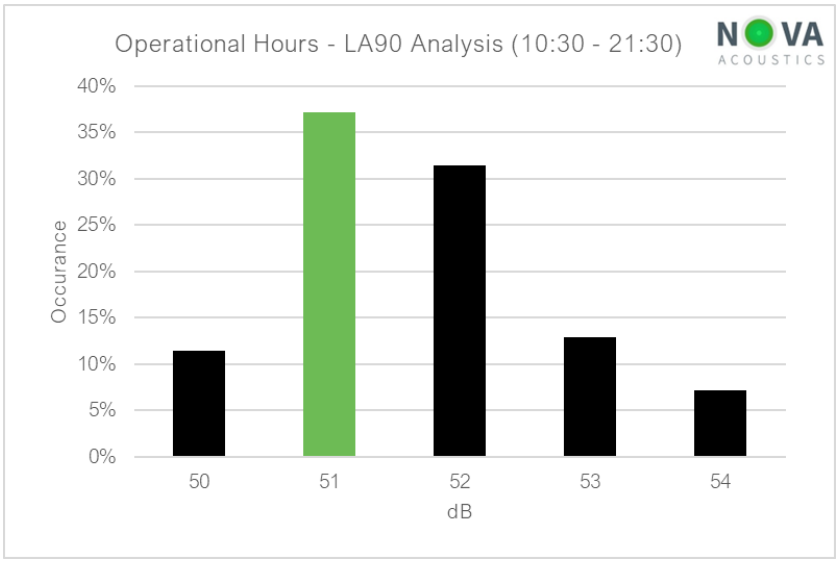


Figure 3 – MP1 Daytime Operational Hours Background Sound Level Analysis

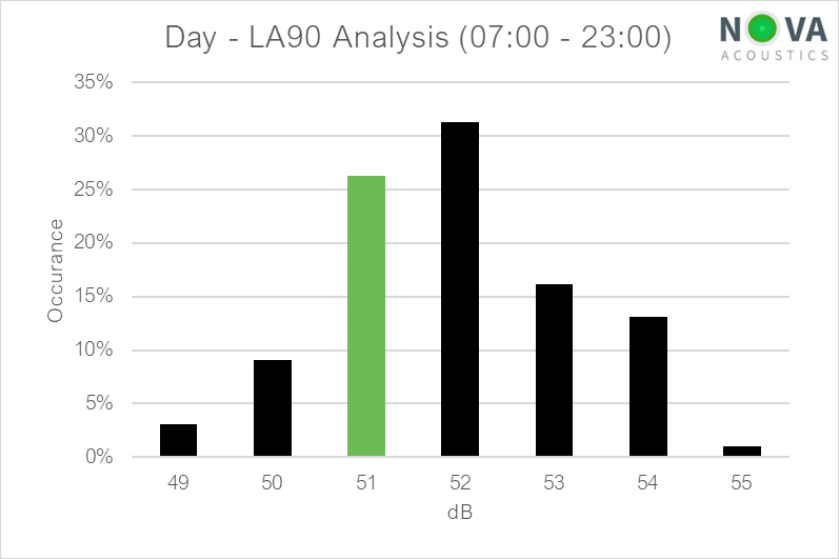


Figure 4 – MP1 Daytime Background Sound Level Analysis

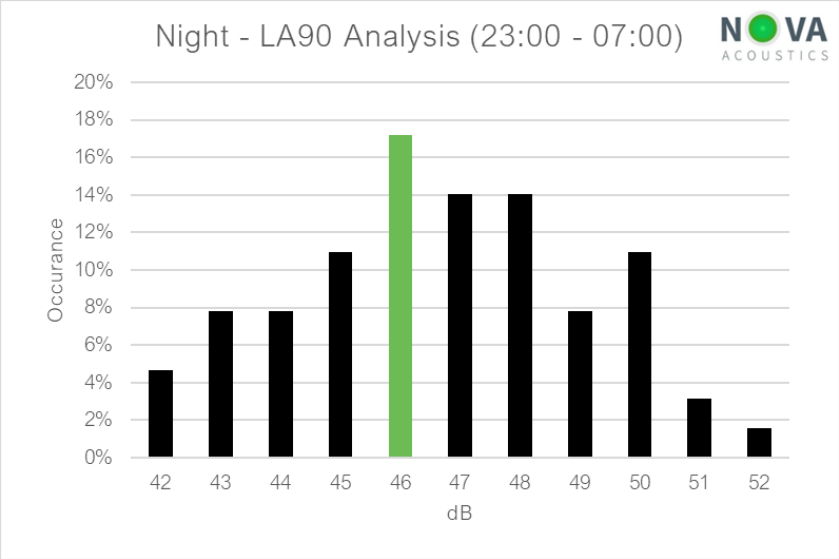


Figure 5 – MP1 Night Time Background Sound Level Analysis

As can be seen in Figure 3, the 'lowest typical' $L_{A90,15min}$ value during the proposed operational hours is 51dB. The ambient noise levels $L_{Aeq,T}$ measured throughout the same operational hours ranged between 55 and 65 dB $L_{Aeq,15min}$.

The table below outlines the typical 1/1 octave band L_{90} and L_{eq} spectra during the operational period.

Description	Octave Band (Hz, L_{eq} dB)							Overall (dBA)
	63	125	250	500	1k	2k	4k	
Ambient Sound Level (L_{eq})	66	62	60	58	57	52	47	61
Background Sound Level (L_{90})	56	53	50	48	47	41	32	51

Table 2 – Baseline Noise Levels

Internal Noise Measurements

Spot measurements of a wrestling class and training session were conducted during a site visit at the schools existing location on 28/10/2025. During the session it was observed that a small Bluetooth speaker was used primarily for background music. Eight people were taking part in the session during the measurements. Photographs taken during the spot measurements can be found in Appendix E.

For all on-site measurements the following methodology was adhered to:

- Internal ambient noise measurements were taken in various locations of a variety of activities.
- All measurements were taken using a fast time-weighting and the sound level meter was set to log every 100ms.
- Measurements were taken in 1/3 octave frequency bands; however, the report details the 1/1 octave band sound levels used in the specific sound level calculations.

The following table shows the calculated specific sound levels for each plant equipment.

Description	Octave Band (Hz, L_{eq} dB)								Overall (dBA)
	63	125	250	500	1k	2k	4k	8k	
All participants in ring, bouncing off ropes.	79	76	73	71	71	76	72	66	80
2 participants at a time in the ring practicing lockups and rolling. Continuously flowing.	72	68	66	67	65	64	60	53	70
Talking and movement on padded area outside of the ring.	49	58	60	64	60	57	53	47	65
Demonstration in ring by the instructor.	70	64	62	66	63	65	60	55	70
2 participants in the ring undertaking a full run through.	79	72	72	70	70	71	65	58	76
Drills within the ring, measurement taken from 3m above the ring.	71	70	66	64	62	62	57	49	68
Drills within the ring.	75	72	69	70	68	67	61	53	73
Drills within the ring and speech from instructor.	70	67	64	69	65	65	59	53	71
Drills within the ring and speech from instructor.	74	70	69	68	67	68	61	54	73

Table 3 – Measured Operational Levels of Existing Wrestling School

To provide a robust assessment, the noise levels measured during the rope training (80dBA) are used to inform the assessment. It is understood that this exercise forms part of the warm-up, with participants taking turns to bound off the ropes in quick succession and at high intensity. The results show that this activity is significantly louder than typical training sessions, where movements are generally slower and more controlled.

3. Noise Impact Assessment

In the following section of the report, the impact of the noise emissions generated by the proposed development is assessed.

The primary source of noise of noise breakout is likely to be from the roller shutter door entering the unit.

Noise breakout levels have been assessed to the closest residential receptor (NSR1) which is a bedroom window approximately 20m from the front façade of the building. The calculations have been conducted assuming the following:

- All calculations have been undertaken in accordance with BS EN 12354-4:2000
- Internal noise levels have been taken from the highest measured levels presented in Table 3 as a worst-case.
- The noise breakout calculations have been conducted assuming glazed panels (or equivalent) are located directly behind the roller shutter door. This area is estimated to be approximately 7.6m^2.
- During measurements at the existing site, it was noted that the door was left partially open to allow for ventilation. It is understood that passive ventilation will also be adopted at the proposed development. Accordingly, and opening of 0.5m^2 is utilised within the calculations. This would allow for a partially open window or door at the site.
- The dimensions of the door are assumed with the calculations as a width of 3.8m and a height of 2m as per the proposed drawings provided.
- The sound power levels of the door has been calculated using the formula: $L_{W,rad} = L_{P,rev} - C_d - R + 10\ log\ (S)$, where, S is the surface area of the façade, C_d is the correction applied to account for the difference between reverberant internal conditions and non-reverberant external conditions (-5dB), and R is the composite sound reduction provided by the façade. The planar propagation loss from the open elements has been calculated from the point source region.
- The total attenuation due to propagation, A_{tot}, is calculated using formula E.2 presented in BS EN 12354-4.

The resultant L_{eq} noise breakout emissions at the closest window of NSR1 are assessed against the background noise levels in the table overleaf.

Description	Octave Frequency Band (Hz, dB)							Overall (dBA)
	63	125	250	500	1k	2k	4k	
Worst-case Internal Noise Level (L_{eq})	79	76	73	71	71	76	72	80
Composite Sound reduction Index (R')	11	11	12	12	12	12	12	--
Internal to External Correction (C_d)				-5				--
Sound Power Level of Façade (L_w)	83	80	77	75	75	80	76	84
Total Propagation Attenuation (A'_{tot})				-31				--
Activity Noise Level at NSR (L_{eq})	41	37	35	32	32	37	33	41
Daytime Operational Hours Background Sound Level (L_{90})	56	53	50	48	47	41	32	51
Exceedance	**-15**	**-16**	**-15**	**-16**	**-15**	**-4**	**+1**	**-10**

Table 4 – Noise Breakout Assessment – Daytime Operational Hours

It is understood that the school is to operate on a Sunday, where background noise levels may be lower. The survey was conducted during weekday periods and therefore and assessment has been undertaken against the nighttime background sound level for robust assessment.

Description	Octave Frequency Band (Hz, dB)							Overall (dBA)
	63	125	250	500	1k	2k	4k	
Worst-case Internal Noise Level (L_{eq})	79	76	73	71	71	76	72	80
Composite Sound reduction Index (R')	11	11	12	12	12	12	12	--
Internal to External Correction (C_d)				-5				--
Sound Power Level of Façade (L_w)	83	80	77	75	75	80	76	84
Total Propagation Attenuation (A'_{tot})				-31				--
Activity Noise Level at NSR (L_{eq})	41	37	35	32	32	37	33	41
Night Time Background Sound Level (L_{90})	51	48	44	42	42	37	29	46
Exceedance	**-10**	**-11**	**-9**	**-10**	**-10**	**0**	**4**	**-5**

Table 5 – Noise Breakout Assessment - Night Time Period

The assessment indicates that noise breakout levels (L_{Aeq}) are 5dB below the typical night time background sound level (L_{A90}). This indicates a low likelihood of adverse impact at the NSRs. Additionally, where it is understood that background noise levels will be lower on a Sunday, due to the dominant noise sources in the area such as traffic and noise from the nearby trainline, it is unlikely that the background noise level during the Sunday operating hours will be a s low as the measured nighttime levels.

It is understood that Manchester City Council typically target 1/1 octave band ‘entertainment noise levels’ to be at least 5dB below the background sound levels. However, the site is not considered to classify as an entertainment venue, with the facility being used for training purposes only.

While exceedances of these criteria are predicted in the 4kHz bands, this does not necessarily indicate adverse impact. The exceedances are also linked to a conservative assumption in the calculations, where a partially open door. Once the doors are closed, predicted levels are at least 15dB below the background across all bands.

4. Conclusion

Noise breakout associated with the development has been assessed against the existing background sound levels (L_{90}) at the NSRs during the day and nighttime period. The development is not due to operate during the nighttime period however it is due to operate ona Sunday between 10:30 and 14:00 hours. As the survey was measured during a weekday period, the nighttime background sound level has been used for comparison as a worst-case representative of the quieter noise environment on a Sunday.

The assessment indicates that noise breakout levels (L_{Aeq}) are 10dB below the typical background sound level (L_{A90}) in the day and 5 dB below the typical background sound level at night. This indicates a low likelihood of adverse impact at the NSRs.

It is understood that Manchester City Council typically target 1/1 octave band 'entertainment noise levels' to be at least 5dB below the background sound levels. However, the site is not considered to classify as an entertainment venue, with the facility being used for training purposes only.

While exceedances of these criteria are predicted in the 2kHz and 4kHz bands, this does not necessarily indicate adverse impact. The exceedances are also linked to a conservative assumption in the calculations, where a partially open door. Once the doors are closed, predicted levels are at least 15dB below the background across all bands.

It should also be noted that the assessment represents a worst-case scenario, based on the loudest observed activity (rope training). This exercise lasted for only around five minutes before more controlled and slower-paced movements began, which were typically 5–15 dB quieter. During these normal training conditions, even lower impacts are expected.

Therefore, it is considered that no further mitigation is required and that a partially open window or door is a suitable ventilation strategy.

However, music during the session should be kept at a background level, as observed during the visit to the existing site.

The findings of this report will require written approval from the Local Authority prior to work commencing.

Appendix A – Acoustic Terminology

A-weighted sound pressure level, L_{pA}	Quantity of A-weighted sound pressure given by the following formula in decibels (dBA). $L_{pA} = 10 \log_{10} (pA/p_0)^2$. Where: pA is the A-weighted sound pressure in pascals (Pa) and $p0$ is the reference sound pressure (20 μPa)
Background Sound	Underlying level of sound over a period, T, which might in part be an indication of relative quietness at a given location
Equivalent continuous A-weighted sound pressure level, $L_{Aeq,T}$	Value of the A-weighted sound pressure level in decibels (dB) of a continuous, steady sound that, within a specified time interval, T, has the same mean-squared sound pressure as the sound under consideration that varies with time
Facade level	Sound pressure level 1 m in front of the facade
Free-field level	Sound pressure level away from reflecting surfaces
Indoor ambient noise	Noise in a given situation at a given time, usually composed of noise from many sources, inside and outside the building, but excluding noise from activities of the occupants
Noise Criteria	Numerical indices used to define design goals in a given space
Noise Rating (NR)	Graphical method for rating a noise by comparing the noise spectrum with a family of noise rating curves
Octave Band	Band of frequencies in which the upper limit of the band is twice the frequency of the lower limit
Percentile Level, $L_{AN,T}$	A-weighted sound pressure level obtained using time-weighting “F”, which is exceeded for N% of a specified time interval
Rating Level, $L_{Ar,Tr}$	Equivalent continuous A-weighted sound pressure level of the noise, plus any adjustment for the characteristic features of the noise
Reverberation time, T	Time that would be required for the sound pressure level to decrease by 60 dB after the sound source has stopped
Sound Pressure, p	root-mean-square value of the variation in air pressure, measured in pascals (Pa) above and below atmospheric pressure, caused by the sound
Sound Pressure Level, L_p	Quantity of sound pressure, in decibels (dB), given by the formula: $L_p = 10\log_{10}(p/p_0)^{2.}$ Where: p is the root-mean-square sound pressure in pascals (Pa) and $p0$ is the reference sound pressure (20 μPa)
Weighted sound reduction index, R_w	Single-number quantity which characterizes the airborne sound insulating properties of a material or building element over a range of frequencies

Appendix B – Standards, Legislation, Policy, and Guidance

This report is to be primarily based on the following standards, legislation, policy and guidance.

B.1 – National Planning Policy Framework (2024)

Government policy on noise is set out in the National Planning Policy Framework (NPPF), published in 2024. This replaced all earlier guidance on noise and places an emphasis on sustainability. In section 15, Conserving and enhancing the natural and local environment, paragraph 187e, it states:

Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;

Paragraph 198 states:

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:

a) *Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*
b) *Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and*
c) *Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

B.2 – Noise Policy Statement for England (2010)

Paragraph 198 of the NPPF also refers to advice on adverse effects of noise given in the Noise Policy Statement for England (NPSE). This document sets out a policy vision to:

Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development.

To achieve this vision the Statement identifies the following three aims:

Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- 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.

In achieving these aims the document introduces significance criteria as follows:

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur. It is stated that "significant adverse effects on health and quality of life should be avoided while also considering the guiding principles of sustainable development".

LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected. It is stated that the second aim above lies somewhere between LOAEL and SOAEL and requires that: "all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also considering the guiding principles of sustainable development. This does not mean that such adverse effects cannot occur."

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. This can be related to the third aim above, which seeks: "where possible, positively to improve health and quality of life through the pro-active management of noise while also considering the guiding principles of sustainable development, recognising that there will be opportunities for such measures to be taken and that they will deliver potential benefits to society. The protection of quiet places and quiet times as well as the enhancement of the acoustic environment will assist with delivering this aim."

This is further expanded using the updated "Noise Exposure Hierarchy Table" which includes an additional level of impact referred to as the 'No Observed Adverse Effect Level' ('NOAEL'). It is stated that at this level: *"noise can be heard, but does not cause any change in behaviour, attitude or other physiological response"*. In addition, noise at this level *"can slightly affect the acoustic character of the area but not such that there is a change in the quality of life".*

The NPSE recognises that it is not possible to have a single objective noise-based measure that is mandatory and applicable to all sources of noise in all situations and provides no guidance as to how these criteria should be interpreted. It is clear, however, that there is no requirement to achieve noise levels where there are no observable adverse impacts but that reasonable and practicable steps to reduce adverse noise impacts should be taken in the context of sustainable development and ensure a balance between noise sensitive and the need for noise generating developments.

Any scheme of noise mitigation outlined in this report will, therefore, aim to abide by the above principles of the NPPF and NPSE whilst recognizing the constraints of the site.

B.3 – BS4142:2014+A1:2019 – 'Methods for rating and assessing industrial and commercial sound'

Overview

BS4142:2014 sets out a method to assess the likely effect of sound from factories, industrial premises or fixed installations and sources of an industrial nature in commercial premises, on people who might be inside or outside a dwelling or premises used for residential purposes in the vicinity.

The procedure contained in BS4142:2014 for assessing the effect of sound on residential receptors is to compare the measured or predicted sound level from the source in question, the $L_{Aeq,T}$ 'specific sound level', immediately outside the dwelling with the $L_{A90,T}$ background sound level.

Where the sound contains a tonality, impulsivity, intermittency and other sound characteristics, then a correction depending on the grade of the aforementioned characteristics of the sound is added to the specific sound level to obtain the $L_{Ar,Tr}$ 'rating sound level'. A correction to include the consideration of a level of uncertainty in sound measurements, data and calculations can also be applied when necessary.

Rating Penalty

Section 9 of BS4142:2014 describes how the rating sound level should be derived from the specific sound level, by deriving a rating penalty.

BS4142:2014 states:

"Certain acoustic features can increase the significance of impact over that expected from a basic comparison between the specific sound level and the background sound level. Where such features are present at the assessment location, add a character correction to the specific sound level to obtain the rating level. This can be approached in three ways:

a) subjective method;
b) objective method for tonality;
c) reference method."

Due to the nature of the development the subjective method has been adopted to derive the rating sound level from the specific sound level. This is discussed in Section 9.2 of BS4142:2014, which states:

"Where appropriate, establish a rating penalty for sound based on a subjective assessment of its characteristics. This would also be appropriate where a new source cannot be measured because it is only proposed at that time, but the characteristics of similar sources can subjectively be assessed. Correct the specific sound level if a tone, impulse or other characteristics occurs, or is expected to be present, for new or modified sound sources."

BS4142:2014 defines four characteristics that should be considered when deriving a rating penalty, namely; tonality; impulsivity; intermittency; and other sound characteristics, which are defined as:

a) Tonality

A rating penalty of +2 dB is applicable for a tone which is "just perceptible", +4 dB where a tone is "clearly perceptible", and +6 dB where a tone is "highly perceptible".

b) Impulsivity

A rating penalty of +3 dB is applicable for impulsivity which is "just perceptible", +6 dB where it is "clearly perceptible", and +9 dB where it is "highly perceptible".

c) Other Sound Characteristics

BS4142:2014 states that where "the specific sound features characteristics that are neither tonal nor impulsive, though otherwise are readily distance against the residual acoustic environment, a penalty of +3 dB can be applied."

d) Intermittency

BS4142:2014 states that when the "specific sound has identifiable on/off conditions, the specific sound level ought to be representative of the time period of length equal to the reference time interval which contains the greatest total amount of on time … if the intermittency is readily distinctive against the residual acoustic environment, a penalty of +3 dB can be applied."

Background Sound Level

The background sound level is the underlying level of sound over a period, T, and is indicative of the relative quietness at a given location. It does not reflect the occurrence of transient and/or higher sound level events and is generally governed by continuous or semi-continuous sounds.

To ensure the background sound level values used within the assessment are reliable and suitably represent both the particular circumstance and periods of interest, efforts have been made to quantify a 'typical' background sound level for a given period. The purpose has not been to simply select the lowest measured value. Diurnal patterns have also been considered as they can have a major influence on background sound levels, for example, the middle of the night can be distinctly different (and potentially of lesser importance) compared to the start or end of the night time period for sleep purposes.

Since the intention is to determine a background sound level in the absence of the specific sound that is under consideration, it is necessary to understand that the background sound level can in some circumstances legitimately include industrial and/or commercial sounds that are present as separate to the specific sound.

Assessment of Impact

BS4142:2014 states: "The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs". An estimation of the impact of the specific sound can be obtained by the difference of the rating sound level and the background sound level and considering the following:

- "Typically, the greater this difference, the greater the magnitude of the impact."
- "A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context."
- "A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context."

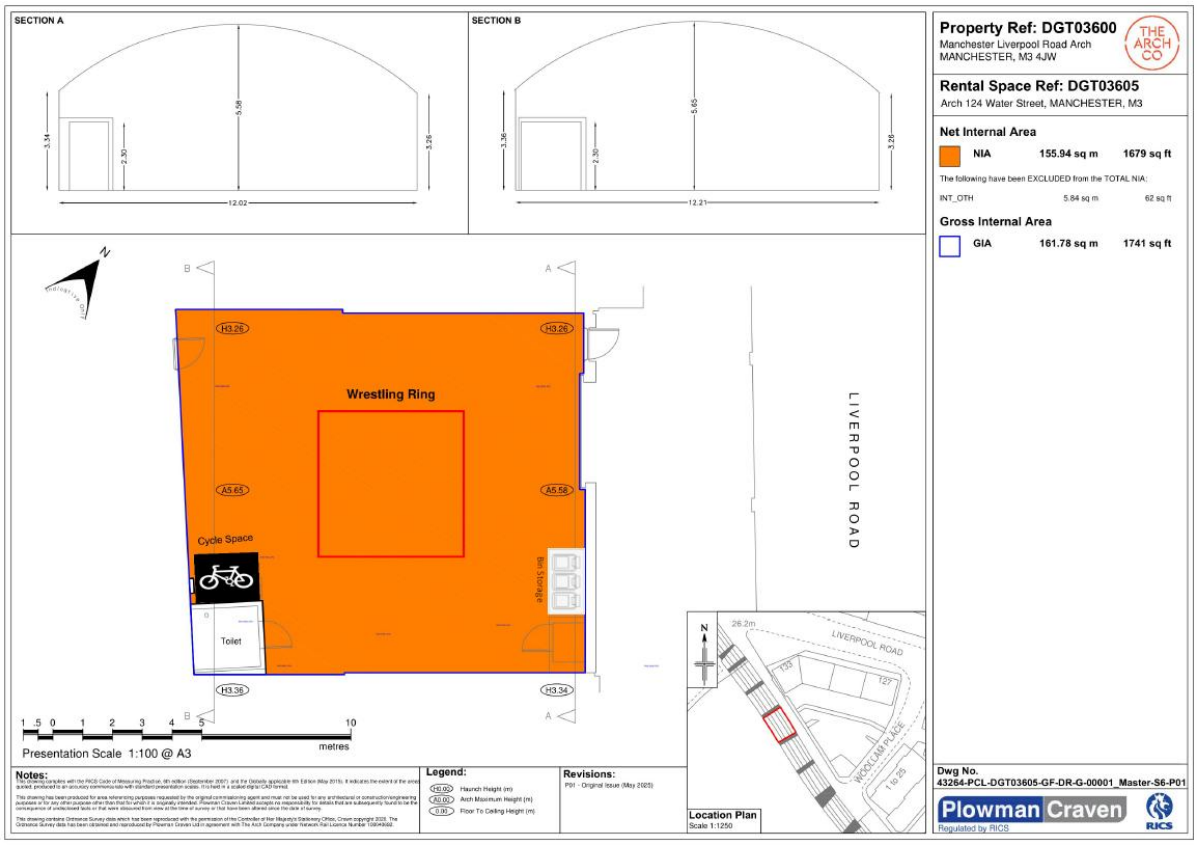
- "The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context."

Interpreting the guidance given in BS4142:2014, with consideration of the guidance given in the NPSE and NPPG Noise, an estimation of the impact of the rating sound is summarised in the following text:

- A rating sound level that is +10 dB above the background sound level is likely to be an indication of a Significant Observed Adverse Effect Level;
- A rating sound level that is +5 dB above the background sound level is likely to be an indication of a Lowest Observed Adverse Effect Level;
- The lower the rating sound level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating sound level does not exceed the background sound level, this is an indication of the specific sound source having a low impact and would therefore classified as No Observed Adverse Effect Level.

During the daytime, the assessment is carried out over a reference time period of 1-hour. The periods associated with day or night, for the purposes of the Standard, are 07.00 to 23.00 and 23.00 to 07.00, respectively.

Appendix C – Site Plans



Appendix D – Environmental Survey

D.1 – Time History Noise Data

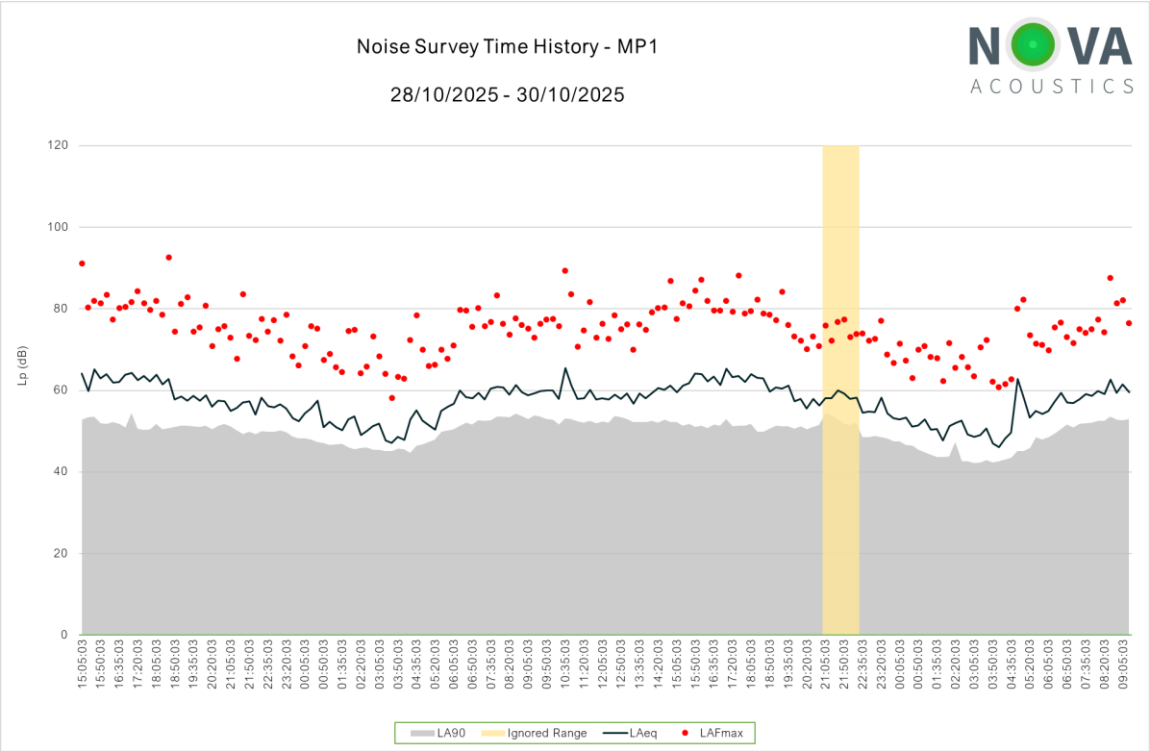


Figure 6 – MP1 Noise Survey Time History

D.2 – Surveying Equipment

Piece of Equipment	Serial No.	Calibration Deviation
Svantek SV971A Class 1 Sound Level Meter	143564	≤0.2
Svantek SV31 Class 1 Calibrator	106876	
Svantek SV971A Class 1 Sound Level Meter	121111	≤0.1
Svantek SV31 Class 1 Calibrator	32569	

Table 6 – Surveying Equipment

All equipment used during the survey was field calibrated at the start and end of the measurement period with negligible deviation noted. All sound level meters are calibrated every 24 months and all calibrators are calibrated every 12 months by a third-party calibration laboratory. All microphones were fitted with a protective windshield for the entire measurements period. Calibration certificates can be provided upon request.

D.3 – Meteorological Conditions

As the environmental noise survey was carried out over a long un-manned period no localised records of weather conditions were taken. However, all measurements have been compared with met office weather data of the area, specifically the closest weather station, and the data from the weather station is outlined in the table below. When reviewing the time history of the noise measurements, any scenarios that were considered potentially to be affected by the local weather conditions have been omitted. The analysis of the noise data includes statistical and percentile analysis and review of minimum and maximum values, which aids in the preclusion of any periods of undesirable weather conditions. The weather conditions were deemed suitable for the measurement of environmental noise in accordance with BS7445 Description and Measurement of Environmental Noise. The table below presents the average temperature, wind speed and rainfall range for each 24-hour period during the entire measurement.

Weather Conditions – Chorlton (Approx. 6.8km SE of Site)				
Time Period	Air Temp (°C)	Rainfall (mm/h)	Prevailing Wind Direction	Wind Speed (m/s)
28/10/25: 00:00 – 23:59	8.8 – 13.7	0.0 – 3.6[1]	WSW	0.0 – 4.4
29/10/25: 00:00 – 23:59	6.8 – 12.6	0.0 – 7.2	SW	0.5 – 1.8
30/10/25: 00:00 – 23:59	5.1 – 12.2	0.0 – 1.8[1]	WSW	0.0 – 3.1
Note [1] *Rainfall occurred outside of the measurement period.*				

Table 7 – Weather Conditions

Appendix E – Photographs of Existing Facility




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