One Hardman Boulevard Spinningfields Manchester

Environmental Noise Survey Report

31472/NIA1

7 October 2024

For:
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Document Control

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1	04/09/2024	Updated to reflect revised external space and capacity. Assessment considering permitted development to the south.			
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1.0 Introduction

Hann Tucker Associates Limited (Hann Tucker) has been commissioned to undertake an environmental noise survey and subsequent Noise Impact Assessment for a site in Spinningfields, Manchester.

The site is undergoing refurbishment to create CAT A office spaces on Levels 02 to 09, designed for flexible, multi-tenant occupancy with options for vertical and horizontal division.

Ground and Level 01 will feature amenity spaces, including meeting rooms and a social area. There is also potential for a rooftop external amenity space. Additionally, the refurbishment includes retail and commercial units on the Ground and Level 01, enhancing the site's mixed-use functionality.

It should be noted that planning permission is not required for the internal refurbishment works to the existing office, or the reconfiguration of the ground floor units as they will all remain within the current lawful Class E use. As such, the elements relevant to the planning application are those that relate to external works, namely the proposed terraces, plant and facade changes.

Baseline noise conditions have been established by means of a detailed noise survey, presented herein. The findings have subsequently been used to assess the site for its intended use with reference to relevant national & local planning policies, design standards and good practice guides.

2.0 Acoustic Terminology

For an explanation of the acoustic terminology used in this report please refer to Appendix A enclosed.

3.0 Site Description

3.1 Location

The site is located in the west of central Manchester in Spinningfields and is approximately 200m from Trinity Way to the northwest. The site falls within the jurisdiction of Manchester City Council. The Location Map is shown below.

Location Map (Map data ©2024)

3.2 Description

The site is bound by Hardman Boulevard along the northeast façade, Gartside Street to the southeast, New College Street to the southwest, and Left Bank to the northwest.

Along the north of the site, approximately 10 metres away, are the Left Bank apartments, as well as restaurants such as “Slug & Lettuce” and “Indian Street Kitchen”.

Approximately 10 metres to the south is the Hardman Square building which houses offices, and southeast of the site, approximately 25 metres away, is 4 Hardman Square which is an office building with commercial spaces on the ground floor. To the northeast of the site is the XYZ building which houses many different businesses’ office spaces, as well as a personal trainer’s space called ‘Ultimate Performance’.

To the west of the site is an NCP carpark and The Manchester College building, approximately 15 metres away. The Manchester College building has planning permission (138273/FO/2023) for demolition and the subsequent erection of a 16-storey office building. The offices (if built) will overlook 1 Hardman Boulevard; this has been considered throughout the assessment.

The site is shown in the Site Plan overleaf

Site Plan (Imagery ©2024 Airbus, Maxar Technologies, Map data ©2024)

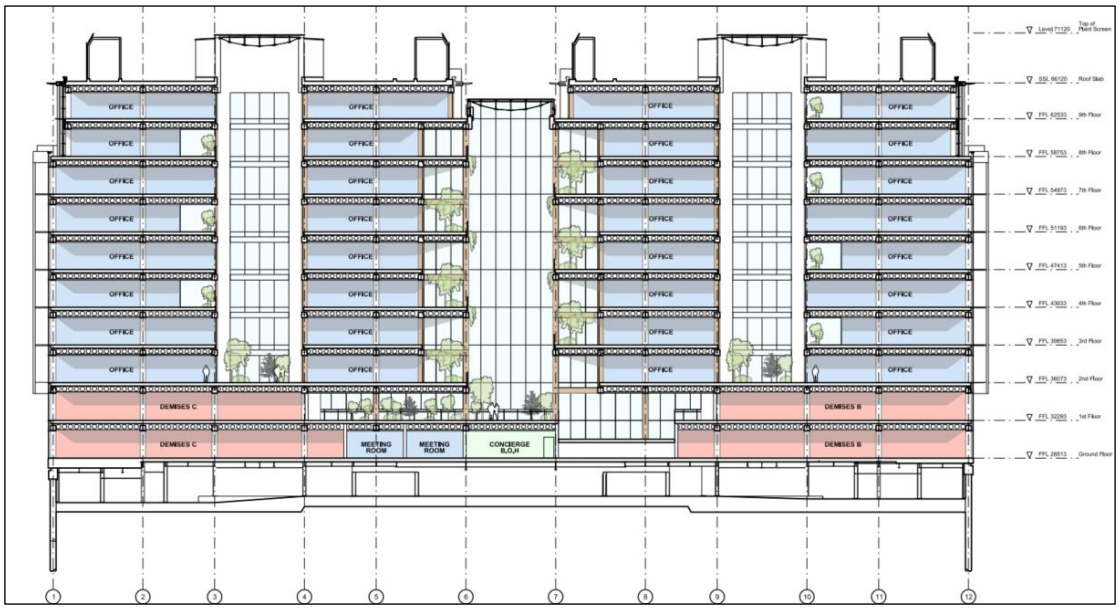
4.0 Proposed Development

As briefly discussed in Section 1.0, the proposals are for the refurbishment of office spaces grade A offices on Floor 02 to 09, which are to be adapted for multi-tenanted occupation, divisible vertically and horizontally. Additionally, a reconfiguration of the ground floor space and a mezzanine level to form a new Entrance Hall, Atrium Space, Meeting Areas, Social Areas, Lounges and Commercial Demises (Class E) is proposed.

It should be noted that planning permission is not required for the internal refurbishment works to the existing office, or the reconfiguration of the ground floor units as they will all remain within the current lawful Class E use. As such, the elements relevant to the planning application are those that relate to external works, namely the proposed terraces, plant and facade changes.

At the time of writing, it has been noted that the spaces will be mechanically serviced and as much of the existing plant as possible will be retained (where possible).

The Section Proposals are shown in the below.



Plan showing Project Proposals – General Arrangement – Base Scheme (c/o Simpsonhaugh)

5.0 Planning Policies, Standards & Guidance

5.1 Policies & Guides

In order to provide a suitable assessment a number of national planning policies have been considered.

All guidance used to form a noise impact assessment is taken from various other standards, guidance, and Local Authority requirements as summarised below:

- British Standard 4142:2014 + A1:2019
- Manchester City Council Requirements

Detailed information for relevant planning policies and guidance can be found within Appendix B.

5.2 Specific Local Authority Criteria

Manchester City Council requirements are outlined in Section 3.0 of Manchester City Council Planning and Noise Technical Guidance document (Oct 2022).

Section 3.7.1.5 outlines the noise assessment for commercial developments should be based on BS4142:2014 and the assessment must demonstrate that:

'The development should be designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location.'

Section 3.7.1.5 also outlines the noise assessment for fixed plant should be based on BS4142:2014 and the assessment must demonstrate that:

'Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location'.

Manchester City Council's '*Guidance on noise control from open air concerts and events' (August 2022)* draws on guidance from the following documents regard music noise egress from outdoor events. This is detailed in Appendices B9-B11.

6.0 Baseline Noise Survey

6.1 Procedure

Fully automated environmental noise monitoring was undertaken by Will Robertson BSc (Hons) TechIOA from approximately 13:30 hours on Tuesday 13 August 2024 to 08:45 hours on Friday 16 August 2024, to establish full daytime and night-time noise levels over a typical weekday and weekend period. Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq}, and L_{max} sound pressure levels over discrete 2 and 15-minute periods.

Additional attended measurements were performed between 13:45 hours and 14:30 hours on Tuesday 13 August 2024.

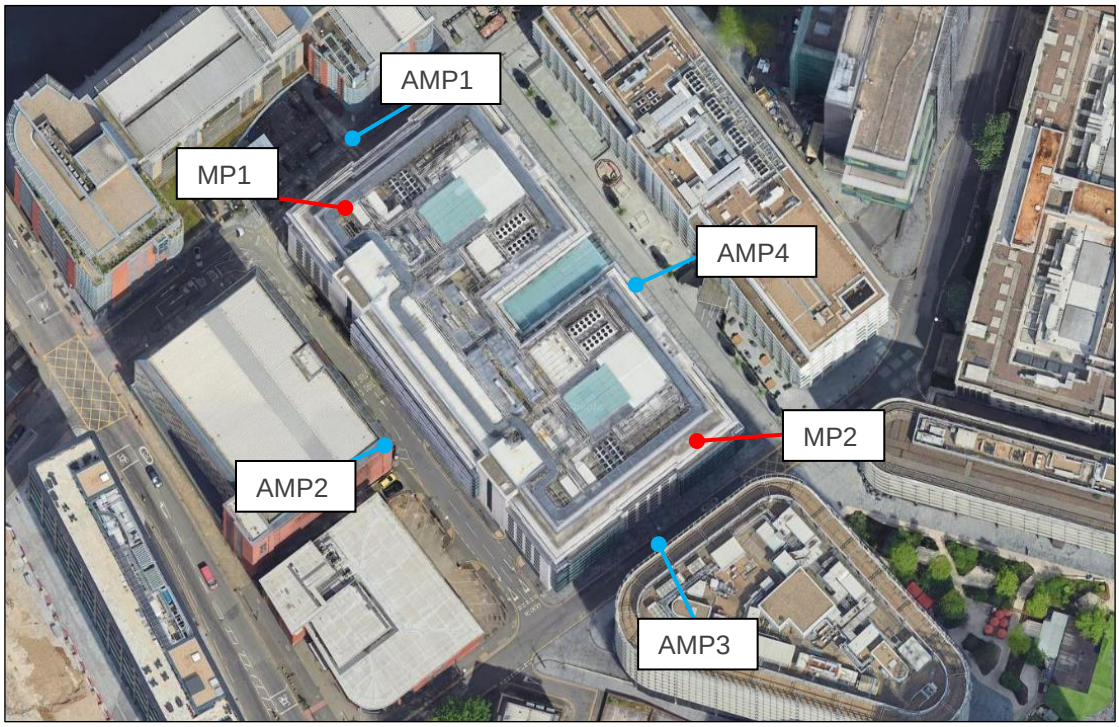
6.2 Measurement Positions

The noise level measurements were undertaken at 2no positions as described in the table below.

Position	Type	Description
MP1	Unattended	To the northwest corner of the site, approx. 2 m from the nearside edge of Left Bank Road on the roof of 1 Hardman Boulevard. Microphone in façade conditions approx. 1.5m above roof level.
MP2	Unattended	To the southeast corner of the site, approx. 2 m from the nearside edge of Gartside Street on the roof of 1 Hardman Boulevard. Microphone in façade conditions approx. 1.5m above roof level.

Position	Type	Description
AMP1	Attended	To the north of the site, along Left Bank Road. Microphone in free-field conditions approx. 1.5m above ground level.
AMP2	Attended	To the west of the site, along New College Street. Microphone in free-field conditions approx. 1.5m above ground level.
AMP3	Attended	To the south of the site, along Gartside Street. Microphone in free-field conditions approx. 1.5m above ground level.
AMP4	Attended	To the east of the site, along Hardman Boulevard. Microphone in free-field conditions approx. 1.5m above ground level.

The positions are shown on the plan below.



Plan Showing Measurement Positions (Imagery ©2024 Airbus, Maxar Technologies, Map data ©2024)

6.3 Weather Conditions

For the unattended survey between Tuesday 13 August 2024 and Friday 16 August 2024, local weather reports indicated some notable periods of heavy rainfall, with temperatures ranging from 10°C (night) to 21°C (day) and wind speeds less than 5 m/s. During our time on site, skies were overcast, wind conditions were light, and road surfaces were largely dry.

During the attended survey on Tuesday 13 August 2024, the weather was generally overcast and dry with no periods of rainfall and calm wind conditions.

6.4 Instrumentation

The instrumentation used during the survey is presented in the table below:

Position	Description	Manufacturer	Type	Serial Number	Calibration
MP1	Type 1 Data Logging Sound Level Meter	Larson Davis	LxT	5111	Calibration on 30/05/2024
MP2	Type 1 Data Logging Sound Level Meter	Larson Davis	LxT	4086	Calibration on 28/05/2024
MP1&2	Type 1 Calibrator	Larson Davis	CAL200	3083	Calibration on 27/03/2024
AMP1-4	Type 1 Data Logging Sound Level Meter	Bruel & Kjaer	2250	3025254	Calibration on 21/02/2024
	Type 1 ½" Condenser Microphone	Bruel & Kjaer	4189	3004879	Calibration on 21/02/2024
	Type 1 Preamp	Bruel & Kjaer	ZC0032	28066	Calibration on 21/02/2024
	SLM Calibrator	Bruel & Kjaer	4231	2308993	Calibration on 20/02/2024

Each sound level meter, including the extension cable, was calibrated prior to and on completion of the surveys. No significant changes were found to have occurred (no more than 0.3 dB).

Each sound level meter was located in an environmental case with the microphone connected to the sound level meter via an extension cable. Each microphone was fitted with a windshield.

6.5 Results

The results have been plotted on Time History Graphs 31472/TH1 to 31472/TH2 enclosed presenting the 15-minute A-weighted (dBA) L_{90}, L_{eq} and L_{max} levels at each measurement position throughout the duration of the survey.

A summary of the results, as used to inform subsequent assessments against current guidelines, is presented in the table below. The daytime $L_{Aeq(12\text{-}hour)}$ (07:00-19:00 hours), evening $L_{Aeq(4\text{-}hour)}$ (19:00-23:00 hours), and night-time $L_{Aeq(8\text{-}hour)}$ (23:00-07:00 hours) levels have been calculated from the measured $L_{Aeq(15\text{-}minute)}$ noise levels and converted into single figure. The L_{A90} values presented are the 'representative' levels determined through statistical analysis of the 15-minute readings in line with BS 4142.

Position	Date	Daytime (07:00 – 19:00 hrs)		Evening (19:00 – 23:00 hrs)		Night-time (23:00 – 07:00 hrs)	
		$L_{Aeq,12hr}$	Typical L_{A90}	$L_{Aeq,4hr}$	Typical L_{A90}	$L_{Aeq,8hr}$	Typical L_{A90}
1	13/08/2024	56	49	54	47	47	42
	14/08/2024	53		51		48	
	15/08/2024	57		51		50	
2	13/08/2024	58	54	57	53	52	47
	14/08/2024	57		56		53	
	15/08/2024	58		56		53	

The following table summarises noise levels recorded at each of the attended measurement positions in free-field conditions.

Position	Date	Period	Sound Pressure Level (dB)		
			$L_{Aeq,T}$	$L_{A90,T}$	$L_{Amax,T}$
AMP1	13/08/2024	13:42-13:52	65	54	74
AMP2		13:53-14:03	62	53	71
AMP3		14:06-14:16	70	56	80
AMP4		14:18-14:28	65	54	82

6.6 Discussion of Noise Climate

Due to the nature of the survey, i.e. unattended, it is not possible to accurately describe the dominant noise sources, or specific noise events throughout the entire survey period. However, at the beginning and end of the survey period the noise climate was noted to be dominated by road traffic noise from New Quay Street and Gartside Street. To the southeast of the site, the noise climate was noted to be dominated by rooftop plant from One Hardman Square.

7.0 Operational Noise Impacts

7.1 Fixed Plant & Equipment

Based on the results of the noise survey and the requirements of the Local Authority, we propose that the following plant noise emission criteria be achieved incident at the nearest noise sensitive windows, in free-field conditions, with all plant operating simultaneously.

Period	Cumulative Plant Rating Level $L_{Ar,Tr}$ (dB)	
	Northwest Receiver	South and East Receivers
Daytime (07:00-19:00)	41	46
Evening (19:00-23:00)	39	45
Night-time (23:00-07:00)	34	39

Noise shall be assessed in accordance with BS 4142:2014 with corrections applied for any plant emitting noise of a tonal or irregular quality. The above limits shall be subject to the final approval of the Local Authority.

7.2 Commercial Unit Operations

At ground floor level, commercial units proposed as part of the development will fall within the existing Class E and will not need to be assessed for the planning application. While there are amendments to the existing units they do not require planning permission other than for external facades (ie not breakout).

Considering the prevailing environmental noise climate at the site, we would expect that noise egress via the unit frontage from most general commercial uses (e.g. restaurant, café, shop) should be readily controllable. However, for completeness we advise that operational noise break-out from any proposed use is controlled to no more than 5 dB below the existing background noise level as follows:

Period	Commercial noise break-out Limit, L_{Aeq} (dB)	
	Northwest Receiver	South and East Receivers
Daytime (07:00-19:00)	41	46
Evening (19:00-23:00)	39	45
Night-time (23:00-07:00)	34	39

7.3 External Terraces

It is understood that there is no specific guidance available from Manchester City Council on social speech/discussion noise from proposed external seating/social areas. However, the external terraces are proposed to have 'low-level background music' playing and should therefore be considered as commercial noise and should achieve a noise egress level of 5 dB below the background noise level as noted in Section 7.2.

However, we understand the large terrace at roof level could be used to host ad-hoc events for up to 450 attendees. However, this spaces is not intended for private hire so the use would be for the office tenants only. Manchester City Council has Guidance relating to ad-hoc open-air events as set out in *"Guidance on noise control for open air concerts and events"* document dated August 2022.

The document allows relaxed limits for up to 12No events per year held between the hours of 09:00 and 23:00. However, the document states that *"certain venues in the City may have site specific factors that will mean they fall outside of the above guidelines. The noise control strategy should be agreed in advance with the City Council's Events Unit."*

Based on the above, The following limits may be acceptable for up to 12No ad-hoc events, however, each event will need to be agreed with Manchester City Council's Events Unit.

Period	Example Noise Egress Level Limit, $L_{Aeq,15min}$ (dB) Up to 12No Pre-agreed Events
Daytime (07:00-19:00)	66
Evening (19:00-23:00)	59
Night-time (23:00-07:00)	N/A – Events not permitted.

8.0 Commercial Noise Impact Assessment

8.1 Overview

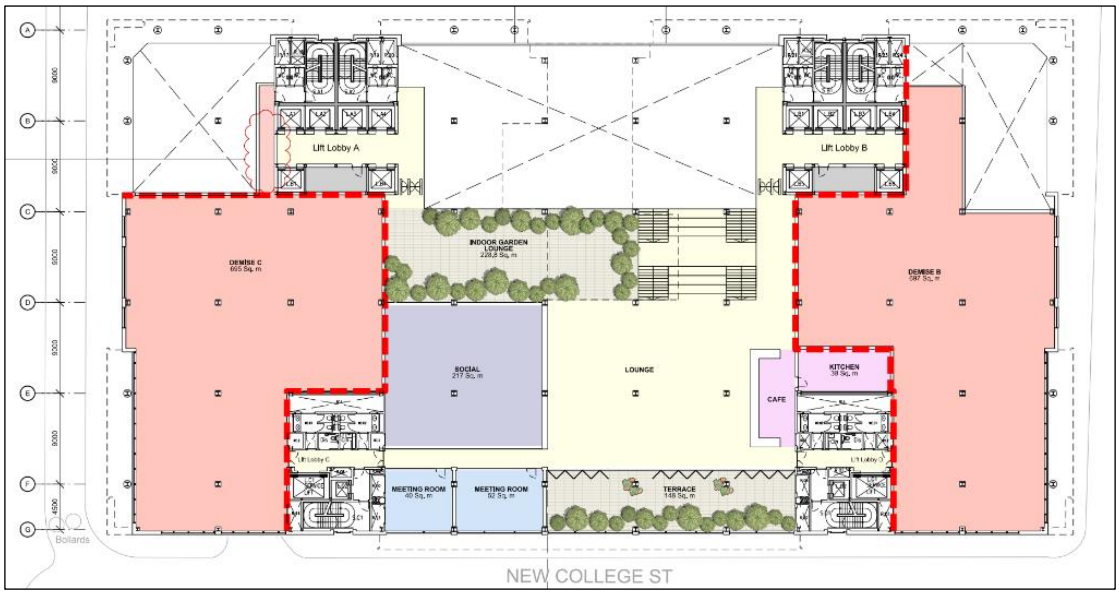
The following section outlines an assessment of the various potential noise impacts associated with the commercial units and provides outline specifications to control noise egress in line with the criteria proposed above.

To inform the assessment of the various uses, it is assumed that the unit frontages will be constructed from glazing achieving at least the following sound reduction index:

Element	Sound Reduction Index (dB $R_w + C_{tr}$)
Frontage Glazing	29

The proposed units are divided into larger demise and the noise sensitive receptors would change depending on the location of the unit. The images below show the location of the proposed demises (C and B) and the table below indicates relevant off-site noise sensitive premise for each unit and the distance at which they are considered.

Floor Plan Level 00 (c/o Simpsonhaugh)



Floor Plan Level 01 (c/o Simpsonhaugh)

Demise	Noise Sensitive Premises Location		
	Office Hours (07:00-19:00)	**Evening (19:00 – 23:00)**	**Night (23:00-07:00)**
B	XYZ Building Proposed 16no Storey Office 1 Hardman Square	Left bank Apartments	Left bank Apartments
C	Left bank Apartments XYZ Building Proposed 16no Storey Office	Left bank Apartments	Left bank Apartments

8.2 Operational Limits

The maximum operational internal noise levels have been calculated based on the assumption set out in Section 8.1 with a view to complying with the criteria set out in 7.2.

As the planning aspects for the commercial units only relate to the façade, all the potential noise impacts would be controlled by the unit façade rather than noise transfer via the separating floor between the units and the office above (as this not included as part of the application).

Demise	Period	Maximum Internal Noise Level (dB) at Octave Band Centre Frequency (Hz)						
		63	**125**	**250**	**500**	**1000**	**2000**	**4000**
B	Daytime (07:00 – 19:00)	85	82	81	80	80	79	80
	Evening (19:00 – 23:00)	108	105	98	105	108	108	99
	Night (23:00 – 07:00)	103	100	93	100	103	103	94
C	Daytime (07:00 – 19:00)	85	82	81	80	80	79	80
	Evening (19:00 – 23:00)	87	84	77	84	87	87	78
	Night (23:00 – 07:00)	82	79	72	79	82	82	73

The above limits may change depending on the final specification of the facade; however, the following table highlights the typical operational noise levels for a number of potential use types in each retail unit to give context to the limits provided above.

Use Type	Typical Operational Noise Level, L_{eq}, (dB) at each Octave Band Centre Frequency (Hz)						
	63	125	250	500	1000	2000	4000
Typical Retail Store	67	70	66	63	63	62	54
Chain Restaurant	64	65	69	74	73	69	63
Bar with Low Level Music	76	74	74	77	74	71	69
Typical Office Use	67	70	66	63	63	62	54
Retail Gym Specification	75	80	80	80	80	80	80

Comparing the above levels with the calculated limiting noise levels it can be seen that the units could operate as the following and comply with the noise egress criteria:

Use Type	Use Type Feasible with Typical Glazing					
	Demise B			Demise C		
	Day	Evening	Night	Day	Evening	Night
Typical Retail Store	Yes	Yes	Yes	Yes	Yes	Yes
Chain Restaurant	Yes	Yes	Yes	Yes	Yes	Yes
Bar with Low Level Music	Yes	Yes	Yes	Yes	Yes	Yes
Retail Gym Specification	Yes	Yes	Yes	Yes	Yes	Yes

Based on the above most typical uses would be feasible based on the glazing providing a sound insulation performance of 29 dB $R_w + C_{tr}$

8.3 Use of Lobbied Doors

Where noise generating uses are proposed a lobbied external door arrangement should be considered. If deemed necessary, the specification of the doors would need to be developed once final uses are known.

8.4 Ventilation Systems

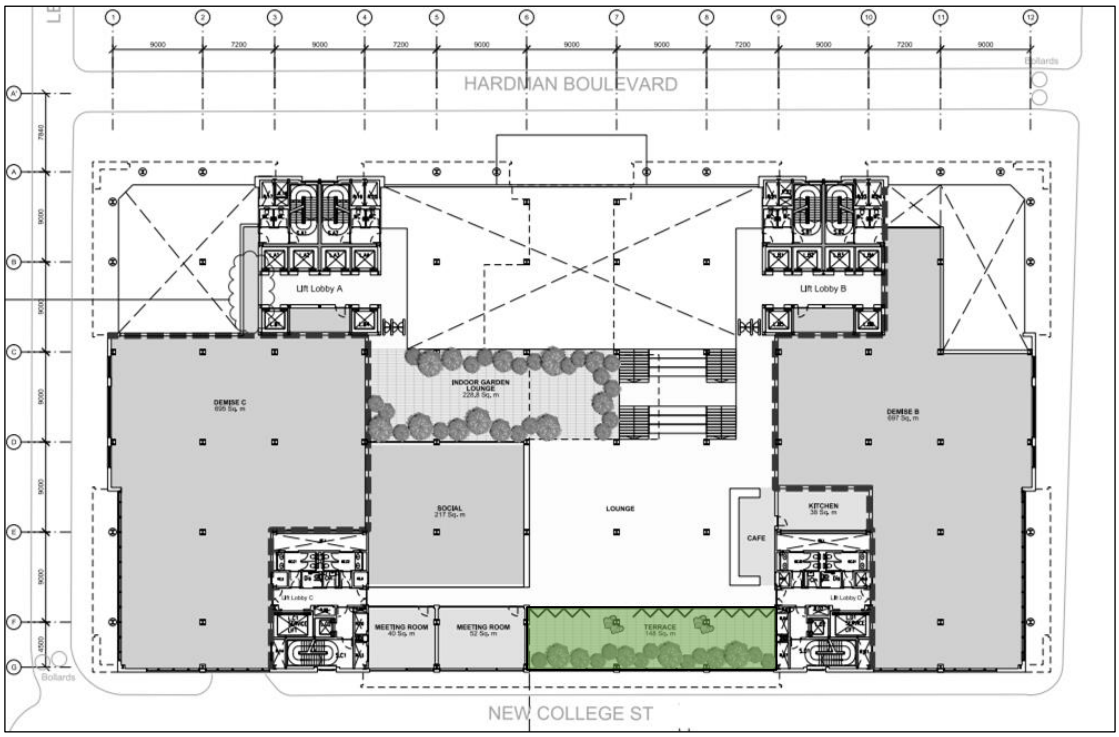
Where noise generating uses are proposed the ventilation strategy may need to be altered to include robust attenuation at atmosphere openings to avoid activity noise levels breaking out of the ventilation systems themselves. As such, once final uses are known then ventilation strategy would need to be reviewed to ensure the above is suitably controlled.

9.0 External Terrace Area

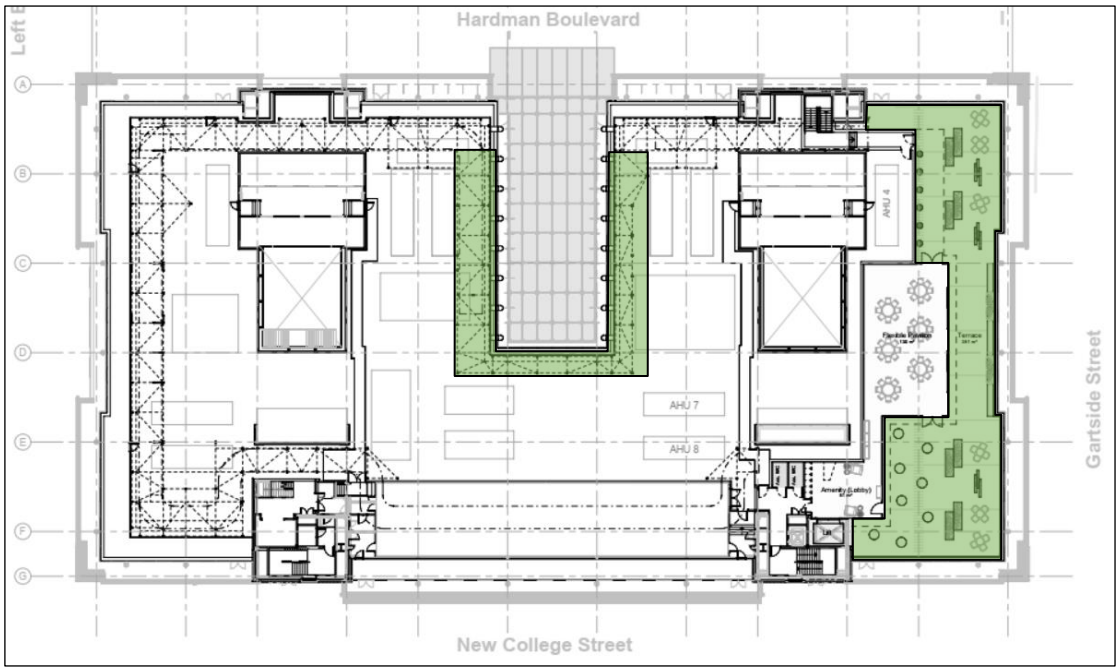
9.1 Overview

It is understood that there is potential 3No external terraces to be provided as part of the development. The mezzanine level terrace is not assumed to be used for events; however, it is understood that the rooftop terrace to the south of the building is proposed to have the potential to house ah-hoc events. As such, the rooftop terrace and mezzanine terrace have been assessed separately.

The locations of these terraces are highlighted below.



Potential External Mezzanine Terrace Locations (c/o Simpsonhaugh)



Potential External Rooftop Terrace Locations (c/o Simpsonhaugh)

9.2 Mezzanine Terrace

For the assessment of noise egress from the mezzanine external areas, the following assumptions have been made:

- There will be background music played at any time;
- Active management will be employed to promote a relaxed atmosphere and to prevent rowdy/loud behaviour from occupants.

The assessment has considered 2No primary receptors being the permitted development where the current college resides in the day and Left Bank Apartments during the evening and night. Due to the nature of the space's use, the criteria are set to 5 dB below the typical lowest measured L_{A90} at each of the identified sensitive receptors.

Period	Criteria at Receptor	External Terrace Noise Level Limit, $L_{Aeq,15min}$ (dB) for Typical Use
Daytime (07:00-19:00)	46	69
Evening (19:00-23:00)	39	80
Night-time (23:00-07:00)	34	75

9.3 Rooftop Terrace

For the assessment of noise egress from the rooftop external areas, the following assumptions have been made:

- A Maximum of 450 people in the external area at any one time;
- A 1.5-metre-high screen will surround the perimeter of the terrace;
- There will be background music played externally;
- Ad-hoc events could take place;
- The terrace would act as one large noise source rather than a number of individual sources;
- Active management will be employed to promote a relaxed atmosphere and to prevent rowdy/loud behaviour from occupants.

The assessment has considered 3No primary receptors being XYZ building and the proposed office block to the west during the day and Left Bank Apartments in the evening and night. It should be noted that the proposed 16-storey building on the site of the current college would overlook the external terrace. This would require in the noise level on the external to be significantly lower than it would be if assessed against the current surround of the site. Based on this, the allowable external noise level on the terrace has been calculated for 2No scenarios as follows:

- With the office building as detailed in Planning Application 138273/FO/2023 brought forward.
- Without the above building and assessing the site against the current surroundings.

The calculated maximum noise levels on the external terrace for all scenarios are detailed below:

Period	External Terrace Noise Level Limit, $L_{Aeq,15min}$ (dB) for Typical Use		External Terrace Noise Level Limit, $L_{Aeq,15min}$ (dB) for up-to 12No ad-hoc Events	
	138273/FO/2023 brought forward	Existing Surroundings	138273/FO/2023 brought forward	Existing Surroundings
Daytime (07:00-19:00)	69	74	89	94
Evening (19:00-23:00)	79	79	99	99

Period	External Terrace Noise Level Limit, $L_{Aeq,15min}$ (dB) for Typical Use		External Terrace Noise Level Limit, $L_{Aeq,15min}$ (dB) for up-to 12No ad-hoc Events	
	138273/FO/2023 brought forward	Existing Surroundings	138273/FO/2023 brought forward	Existing Surroundings
Night-time (23:00-07:00)	74	74	N/A	N/A

Based on the above if the development noted in Planning Application 138273/FO/2023 is brought forward the day-time noise limits on the terrace for typical use would not allow anything other than very low-level music to be played. As such, the rooftop terrace, in this scenario, should only be used for an external amenity space for the offices (i.e. for occupants to each lunch or have small breakout sessions, etc). If 138273/FO/2023 is not brought forward the typical external noise limits become less onerous due to the external terrace not being overlooked.

The evening and night-time levels are less restrictive in both scenarios. When compared against a typical bar with low level music below (albeit this level was measured internally), the evening and night-time periods could be suitable to accommodate a busy area with low level music noise levels.

Use Type	Typical Operational Noise Level, L_{eq}, (dB) at each Octave Band Centre Frequency (Hz)							dBA
	63	125	250	500	1000	2000	4000	
Bar with Low Level Music	76	74	74	77	74	71	69	79

The ad-hoc event noise levels are likely subtle for some live music; however, all events would need to be agreed with Manchester City Council. It should be noted that in the event that Manchester City Council deny the request for a relaxation in the noise limits due to an ad-hoc events the typical noise limits would need to be complied with.

On the basis of the above, the external terrace areas may be suitable for its intended use as long as careful consideration regarding typical music volumes and suitable agreements are made with Manchester City Councill for any ad-hoc events. Therefore, it is important that the management for the building are conscious of the proximity to the neighbours and remind the patrons in this area to be respectful and that antisocial behaviour will not be tolerated.

10.0 Conclusions

A detailed environmental noise survey has been undertaken in order to establish the currently prevailing environmental noise climate around the site.

Plant noise egress limits have been set based on the requirements of the Local Authority.

Operational internal noise limits have been developed based on achieving commercial noise break-out/transfer criteria. An assessment of potential commercial use types in Demise B and C has been undertaken and the viable options to develop these spaces further (if needed) has been discussed in terms of noise break-out.

An assessment of the external terrace areas and the impacts on nearby current and potential future sensitive receptors has been undertaken. The findings of this assessment suggest that the rooftop terrace area is suitable for commercial use based on the typical levels of a bar playing low-level music during the evening period. The mezzanine terrace area is suitable in terms of noise and music breakout as long as it is managed to the limits discussed in Section 9.2.

The assessment shows the site, subject to appropriate mitigation measures, is suitable for commercial development in terms of noise.

Appendix A

Acoustic Terminology

The acoustic terms used in this report are defined as follows:

dB — Decibel - Used as a measurement of sound level. Decibels are not an absolute unit of measurement but an expression of ratio between two quantities expressed in logarithmic form. The relationships between Decibel levels do not work in the same way that non-logarithmic (linear) numbers work (e.g. 30dB + 30dB = 33dB, not 60dB).

dBA — The human ear is more susceptible to mid-frequency noise than the high and low frequencies. The 'A'-weighting scale approximates this response and allows sound levels to be expressed as an overall single figure value in dBA. The $_A$ subscript is applied to an acoustical parameter to indicate the stated noise level is A-weighted

It should be noted that levels in dBA do not have a linear relationship to each other; for similar noises, a change in noise level of 10dBA represents a doubling or halving of subjective loudness. A change of 3dBA is just perceptible.

$L_{90,T}$ — L_{90} is the noise level exceeded for 90% of the period *T* (i.e. the quietest 10% of the measurement) and is often used to describe the background noise level.

$L_{eq,T}$ — $L_{eq,T}$ is the equivalent continuous sound pressure level. It is an average of the total sound energy measured over a specified time period, *T*.

L_{max} — L_{max} is the maximum sound pressure level recorded over the period stated. L_{max} is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the L_{eq} noise level.

L_p — Sound Pressure Level (SPL) is the sound pressure relative to a standard reference pressure of 2×10^{-5} Pa. This level varies for a given source according to a number of factors (including but not limited to: distance from the source; positioning; screening and meteorological effects).

L_w — Sound Power Level (SWL) is the total amount of sound energy inherent in a particular sound source, independent of its environment. It is a logarithmic measure of the sound power in comparison to a specified reference level (usually 10^{-12} W).

Appendix B

Planning Policies, Standards & Guidance

B.1 Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) was published in March 2010 (i.e. before the NPPF). The NPSE is the overarching statement of noise policy for England and applies to all forms of noise other than occupational noise, setting out the long term vision of Government noise policy which is 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."

That vision is supported by the following NPSE noise policy aims which are reflected in three of the four aims of planning policies and decisions in paragraph 123 of the NPPF (see paragraph 8.2 (b) below):

"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; and*
- *where possible, contribute to the improvement of health and quality of life."*

The Explanatory Note to the NPSE has three concepts for the assessment of noise in this country:

NOEL – No Observed Effect Level
This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

LOAEL – Lowest Observable 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.

None of these three levels are defined numerically and for the SOAEL the NPSE makes it clear that the noise level is likely to vary depending upon the noise source, the receptor and the time of day/day of the week, etc. The need for more research to investigate what may represent an SOAEL for noise is acknowledged in the NPSE and the NPSE asserts that not stating specific SOAEL levels provides policy flexibility in the period until there is further evidence and guidance.

The NPSE concludes by explaining in a little more detail how the LOAEL and SOAEL relate to the three NPSE noise policy aims listed above. It starts with the aim of avoiding significant adverse effects on health and quality of life, then addresses the situation where the noise impact falls between the LOAEL and the SOAEL when *"all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development."* The final aim envisages pro-active management of noise to improve health and quality of life, again taking into account the guiding principles of sustainable development which include the need to minimise travel distance between housing and employment uses in an area.

B.2 National Planning Policy Framework (NPPF)

The following paragraphs are from the NPPF (published December 2023):

191. 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 impacts 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.

193. 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."

Paragraph 185 also references the Noise Policy Statement for England (NPSE). This document does not refer to specific noise levels but instead sets out three aims:

- "Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development."

B.3 Planning Practice Guidance on Noise

Planning Practice Guidance (PPG) under the NPPF has been published by the Government as a web based resource at http://planningguidance.planningportal.gov.uk/blog/guidance/. This includes specific guidance on Noise although, like the NPPF and NPSE the PPG does not provide any quantitative advice. It seeks to illustrate a range of effect levels in terms of examples of outcomes as set out in the following table:

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	

Perception	Examples of Outcomes	Increasing effect level	Action
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.	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

B.4 British Standard 4142:2014 + A1:2019

When setting plant noise emission criteria reference is commonly made to BS 4142:2014 "*Methods for rating and assessing industrial and commercial sound".*

The procedure contained in BS 4142:2014 provides an assessment of the likely effects of sound on people when comparing the specific noise levels from the source with representative background noise levels. Where the noise contains "a tone, impulse or other characteristic" then various corrections can be added to the specific (source) noise level to obtain the "rating level".

BS 4142 states that: *"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 noise can be obtained by the difference of the rating noise level and the background noise 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."*

The determination of the "rating level" and the "background level" are both open to interpretation, depending on the context.

B.5 Licensing Act 2003

The latest revision of the licensing act for England and Wales emphasises the need to minimise disturbance and annoyance to the local community whilst also encouraging local authorities to promote cultural activity in their communities.

The s182 Guidance to the Licensing Act is as follows:

"*The 2003 Act enables licensing authorities and responsible authorities, through representations, to consider what constitutes public nuisance and what is appropriate to prevent in terms of conditions attached to specific premises licences and club premises certificates. It is therefore important that in considering the promotion of this licensing objective, licensing authorities and responsible authorities focus on the effect of the licensable activities at the specific premises on persons living and working (including those carrying on business) in the area around the premises which may be disproportionate and unreasonable. The issues will mainly concern noise nuisance, light pollution, noxious smells and litter.*

Public nuisance is given a statutory meaning in many pieces of legislation. It is however not narrowly defined in the 2003 Act and retains its broad common law meaning. It may include in appropriate circumstances the reduction of the living and working amenity and environment of the persons living and working in the area of the licensed premises.

…Any conditions appropriate to promote the prevention of public nuisance should be tailored to the type, nature and characteristics of the specific premises and its licensable activities. Licensing authorities should avoid inappropriate or disproportionate measures that could deter events that are valuable to the community, such as live music…"

B.6 Environmental Protection Act 1990

Where it is established that noise from an event is causing, or is likely to cause, a statutory nuisance under Part III of the Environmental Protection Act 1990, the Council is required to serve an Abatement Notice, requiring that the nuisance is abated. It is a criminal offence not to comply with such a notice and may result in prosecution with a maximum penalty on conviction

of an unlimited fine. It is therefore important that effective noise control procedures are implemented.

The Council's Enforcement Policy states that enforcement notices will be served where it is considered that a more informal approach would be ineffective. It also allows for Abatement Notices to be served without prior discussion with the prospective recipient in cases where immediate action is required in the interest of environmental protection.

B.7 Noise Council's Code of Practice on Environmental Noise Control at Concerts (1995)

The national Code of Practice was issued by the Noise Council in 1995 and is the most up to date and thorough guidance on the control of noise from outdoor concerts. It provides guidelines for noise levels and a noise control procedure to minimise any disturbance caused. It should be noted that compliance with the Code of Practice does not, of itself, confer immunity from legal obligations. It suggests that, if the event is to continue after 23:00 hours, music noise should be 'inaudible' within noise sensitive properties.

The recommended noise limits in the Code of Practice for events operating between 09:00 hours and 23:00 hours have been adopted by MCC with successful implementation at the many different external music venues across the city. These are as follows.

Concert days per calendar year, per venue	Venue	Guideline
1 to 3	Urban stadia or arenas	The MNL should not exceed 75dB $L_{Aeq, 15min}$
1 to 3	Other urban & rural venues	The MNL should not exceed 65dB $L_{Aeq, 15min}$
4 to 12	All venues	The MNL should not exceed the background noise level by more than 15dB(A) over a 15 minute period

MCC's guidance also states that for specific premises or bespoke events that the following points should be followed in lieu of the above Code of Practice guidelines.

1. If the event site already holds a Premises Licence (PL) then any proposed activities will be restricted to the terms and conditions of the PL. For example, venues such as Heaton Park and the Etihad stadium have specific conditions in relation to a prescribed limit attached to the PL.

2. Certain venues in the City may have site specific factors that will mean they fall outside of the above guidelines. The noise control strategy should be agreed in advance with the City Council's Events Unit.

3. For events continuing or held between the hours 23:00 and 09:00 the music noise should not be audible within noise sensitive properties with windows open in a typical manner for ventilation. Control can be exercised in this situation by limiting the music noise so that it is just audible outside the noise sensitive premises. When that is achieved it can be assumed that the music noise is not audible inside the noise sensitive premises.

4. Please refer to the Code of Practice (1995) for assessments relating to the background noise level.

If the above guidance was solely relied upon criteria for the events would likely be for the Music Noise Level to not exceed the background noise level by more than 15 dBA in any 15 minutes. This criterion is likely unachievable for a city centre development such as this and historical dialogue with MCC has yielded bespoke criteria to be achieved.

Appendix C

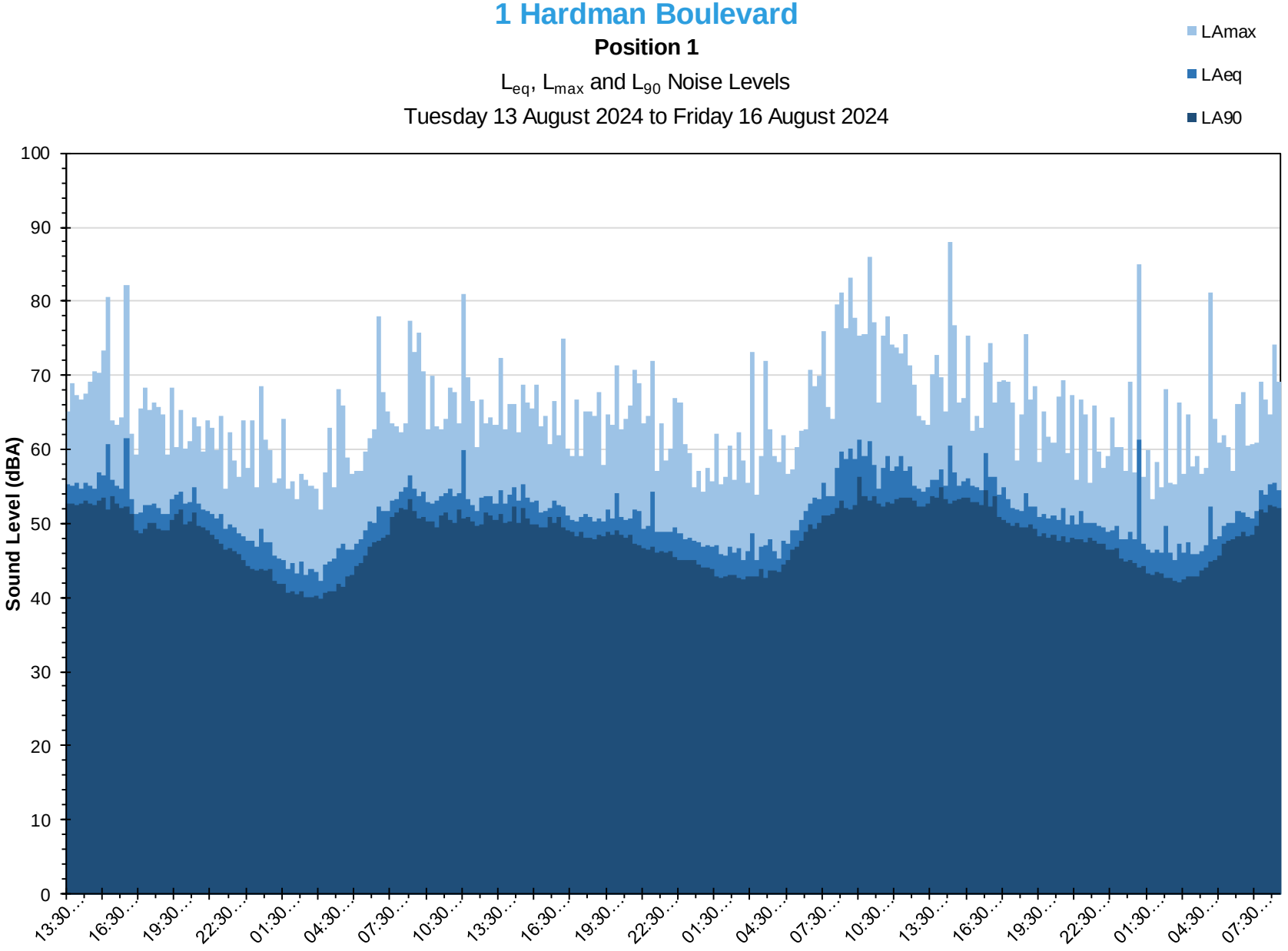
Time History Graphs

1 Hardman Boulevard

Position 1

L_{eq}, L_{max} and L_{90} Noise Levels

Tuesday 13 August 2024 to Friday 16 August 2024

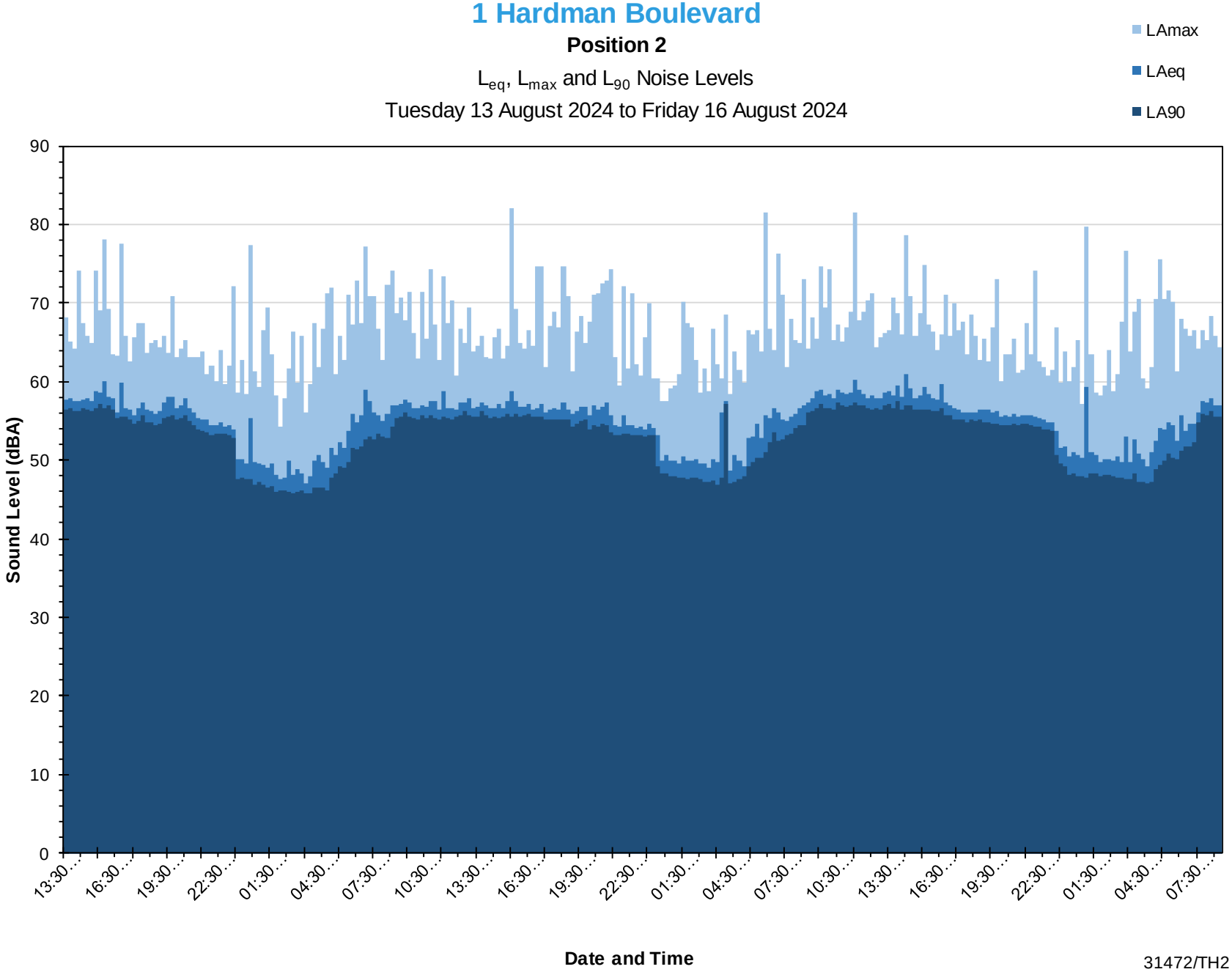


1 Hardman Boulevard

Position 2

L_{eq}, L_{max} and L_{90} Noise Levels

Tuesday 13 August 2024 to Friday 16 August 2024



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