119 Withington Road Whalley Range Manchester

Environmental Noise Survey and Noise Impact Assessment Report

32796/NIA

6 July 2026

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Hann Tucker Associates

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Document Control

Rev	Date	Comment	Prepared by	Reviewed by	Approved by
1	06/07/2026	Amending the report to reflect proposed changes to the internal layout plus the proposed location of 2 AC units.	[redacted] Christopher Fisk Consultant BSc(Hons), AMIOA, MIET	[redacted] Jake Howarth Senior Associate BEng(Hons), MIOA	
0	21/04/2026	-	[redacted] Christopher Fisk Consultant BSc(Hons), AMIOA, MIET	[redacted] Jake Howarth Senior Associate BEng(Hons), MIOA	

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1.0 Introduction

Hann Tucker Associates Limited (Hann Tucker) has been commissioned by Range Pharmacy Limited to undertake a noise assessment for a site in Greater Manchester.

The site, which is located on Withington Road, is being considered for residential development. The proposals allow for the furnishment and extension of the existing building to provide two 2-bed apartments on the first floor with a pharmacy on the ground floor and basement floors

Baseline noise conditions have been established by means of a detailed noise survey, presented herein. The findings have subsequently been used to assess the suitability of the site for residential use. Measures required to mitigate noise impacts for the proposed development (when operational) have been discussed in context with relevant national & local planning policies, design standards and good practice guides.

2.0 Objectives

To undertake an environmental noise survey to establish the existing L_{Amax}, L_{Aeq} and L_{A90} environmental road, rail and air traffic noise levels at selected accessible positions.

To obtain data that can be used to determine the requirements for sound insulation of the external facades at a later date.

Based on the results of the survey, to undertake a noise assessment to assess the suitability of the site for residential use in accordance with the Noise Policy Statement for England (NPSE), National Planning Policy Framework (NPPF), Planning Practice Guidance (ProPG), British Standard BS8233:2014 and Local Authority requirements.

To discuss noise mitigation and acoustic design solutions to achieve acceptable noise levels in residential areas.

With reference to BS 4142 and other relevant guides, to propose suitable noise limits for plant and commercial operations to protect neighbouring noise sensitive receptors.

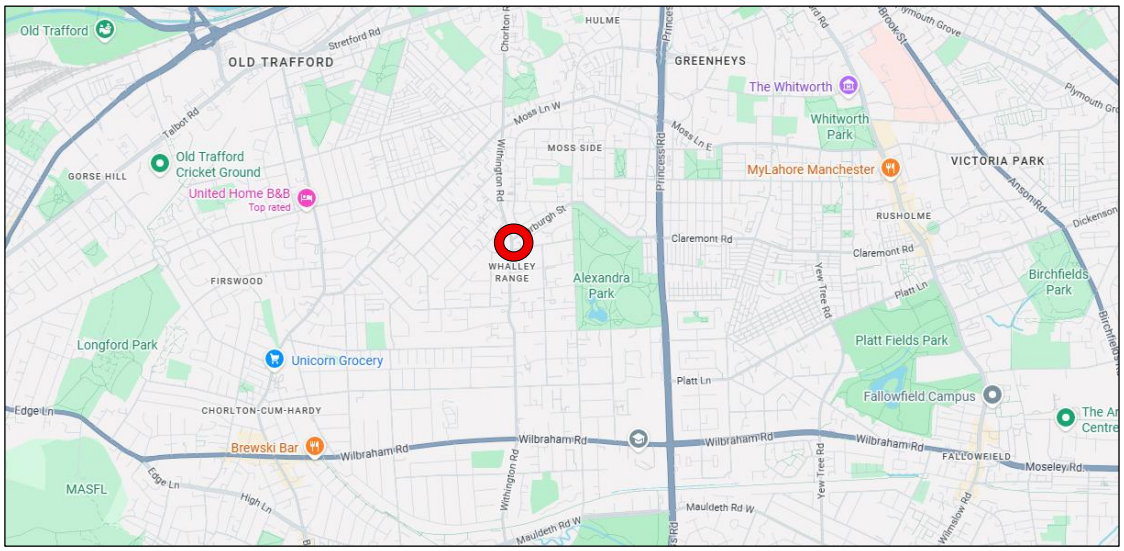
3.0 Acoustic Terminology

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

4.0 Site Description

4.1 Location

The site is Located on Withington Road, Whalley Range, Manchester and falls within the jurisdiction of Manchester City Council. The location of the site is shown in the Location Map below.



Location Map (Map Data © 2026 Google)

4.2 Description

The site is an existing building that is bounded by Withington Road to the west, Yarburgh Street to the north residential dwelling to the east and The Range Medical Centre to the south.

The surrounding area is mixed in character but remains predominantly residential. Withington Road accommodates a combination of flats, houses and small-scale commercial frontage and local shops, which contribute to a more active road environment than would be expected within a purely residential side street.

The site shown in relation to its surroundings is shown on the image presented overleaf.



Site Plan (Imagery © 2026 Airbus, Maxar Technologies)

5.0 Proposed Development

The proposals allow for the furnishment and extension of the existing building to provide two 2-bed apartments on the first floor with a pharmacy on the ground floor and basement floors

It is understood that all windows will be replaced with new.

6.0 Planning Policies, Standards & Guidance

6.1 Policies & Guides

In order to provide a suitable assessment a number of national planning policies have been considered, including:

- The National Planning Policy Framework (NPPF) 2024 (amended February 2025)
- The Noise Policy Statement for England (NPSE), 2010
- Planning Practice Guidance – Noise (PPGN), 2019

The above documents highlight the importance of considering the potential noise effects on any new residential development and provide a qualitative approach to assessment. However, each of the above does not provide any quantitative guidance. As such, all quantitative guidance used to form a noise impact assessment is taken from various other standards, guidance, and Local Authority requirements as summarised below:

- Local Planning Policy
- World Health Organisation: 2018
- British Standard BS8233: 2014
- ProPG : Planning & Noise: 2017
- British Standard 4142:2014 + A1:2019

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

6.2 Specific Local Authority Criteria

Manchester City Council requirements are outlined in Section 3.0 of Manchester City Council's Planning & Noise Technical Guidance document (October 2022).

6.2.1 Internal Noise Levels

Section 3.7.1.1 sets out the following noise levels to be achieved for residential developments:

- *Bedrooms (Night time - 23:00 to 07:00): 30dB L_{Aeq} and individual noise events should not normally exceed 45 dB (L_{Amax}).*
- *Living Rooms (Day time 07:00 to 23:00): 35 dB (L_{Aeq}).*
- *Gardens and terraces (daytime) 55 dB (L_{Aeq}).*

We understand there are no gardens or terraces associated with the development and as such external noise levels at the site have not been assessed with respect to the final point above.

6.2.2 Commercial Noise

The Manchester City Council requirements for noise are contained in the Planning & Noise Technical Guidance dated October 2022.

With regards to industrial/commercial proposals Section 3.7.1.5 states that:

> *"BS 4142 should be used to assess the likely impact of noise from industrial and commercial sources at noise sensitive premises and that the development should be designed so as to achieve a rating level of 5 dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.*
>
> *Where this criterion cannot be achieved, the various noise control measures considered as part of the assessment should be fully explained (i.e. relocation of noise sources, use of quieter equipment, enclosures, screening, restriction of the hours of operation) and the achievable noise level should be identified."*

6.2.3 Plant Noise Emission

The Manchester City Council requirements for noise are contained in the Planning & Noise Technical Guidance dated October 2022.

Section 3.7.1.5 also outlines that the noise assessment for fixed plant should be based on BS 4142:2014 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 so as to achieve a rating level of 5 dB (LAeq) below the typical background (L_{A90}) level at the nearest noise sensitive location."*

7.0 Baseline Noise Survey

7.1 Procedure

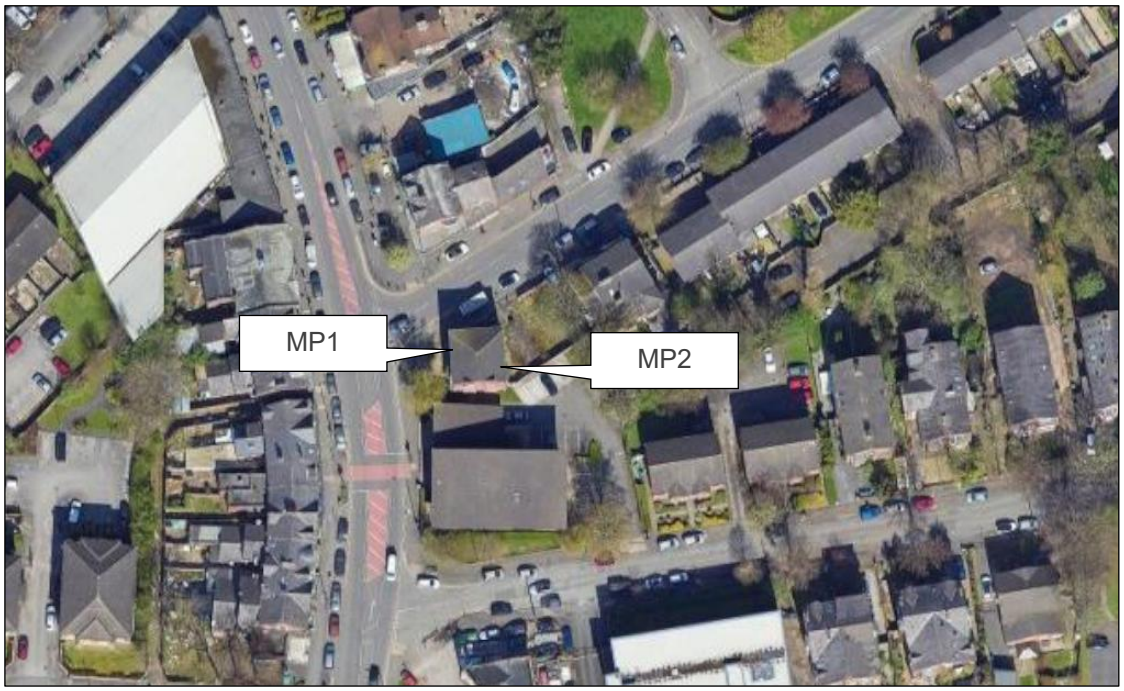
Fully automated environmental noise monitoring was undertaken by Christopher Fisk BSc (Hons) AMIOA, MIET from approximately 14:45 hours on Thursday 9 April 2026 to 12:00 hours on Tuesday 14 April 2026, to establish full daytime and night-time noise levels over a typical weekday and weekend period. Measurements were taken continuously of the A-weighted (dBA) L_{90}, L_{eq}, and L_{max} sound pressure levels over 15-minute periods.

7.2 Measurement Position

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

Position	Type	Description
1	Unattended	On the front west façade of the building, approx. 1 m from the façade and approx. 4m from nearside edge of Withington Road. Microphone in façade conditions approx. 4 m above ground.
2	Unattended	On the rear east façade of the building, approx. 1 m from the façade. Microphone in façade conditions approx. 4 m above ground.

The positions are shown on the plan below.



Plan Showing Measurement Positions (Imagery © 2026 Airbus, Maxar Technologies)

7.3 Weather Conditions

For the unattended survey between Thursday 9 March 2026 and Tuesday 14 March 2026 local weather reports indicated that rainfall did occur. However, the survey is considered sufficient in duration to give a representative account of the noise levels experienced on site.

Temperatures ranging from 3°C (night) to 13°C (day) and wind speeds less than 5 m/s. During our time on site, skies were overcast, wind conditions were calm and road surfaces were largely dry.

7.4 Instrumentation

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

Position	Description	Manufacturer	Type	Serial Number	Calibration
1	Type 1 Data Logging Sound Level Meter	ACOEM	CUBE	10631	Calibration on 22/10/2025
1	Pre-amp	ACOEM	PRE22	10628	Calibration on 22/10/2025
1	Type 1 ½" Condenser Microphone	GRAS	40CD	207243	Calibration on 22/10/2025
2	Type 1 Data Logging Sound Level Meter	ACOEM	CUBE	10623	Calibration on 22/10/2025
2	Pre-amp	ACOEM	PRE22	10582	Calibration on 22/10/2025
2	Type 1 ½" Condenser Microphone	GRAS	40CD	217	Calibration on 22/10/2025
All	Type 1 Calibrator	Larson Davis	CAL200	3083	Calibration on 04/03/2026

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 0.2 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.

7.5 Results

The results have been plotted on Time History Graphs 32976/TH1 to 32976/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 L_{A90} values presented are the 'representative' levels determined through statistical analysis of the 15 minute readings in line with BS 4142. L_{Afmax} values are the '10th highest' 2-minute value in line with Approved Document O (Part O) requirements.

Position	Day	Daytime (07:00 – 23:00 hrs)		Night-time (23:00 – 07:00 hrs)		
		$L_{Aeq,16hr}$	L_{A90}	$L_{Aeq,8hr}$	L_{A90}	L_{Amax}
1	09/04/2026	66	56	61	39	78
	10/04/2026	65		61		77
	11/04/2026	68		65		80
	12/04/2026	64		62		78
	13/04/2026	65		60		79
	14/04/2026	64		-		-
2	09/04/2026	57	47	52	34	70
	10/04/2026	55		52		70
	11/04/2026	58		54		71
	12/04/2026	55		52		70
	13/04/2026	56		-		-

7.6 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.

8.0 Incident Noise Levels

Using the survey data the incident noise levels upon each elevation of the proposed development has been established.

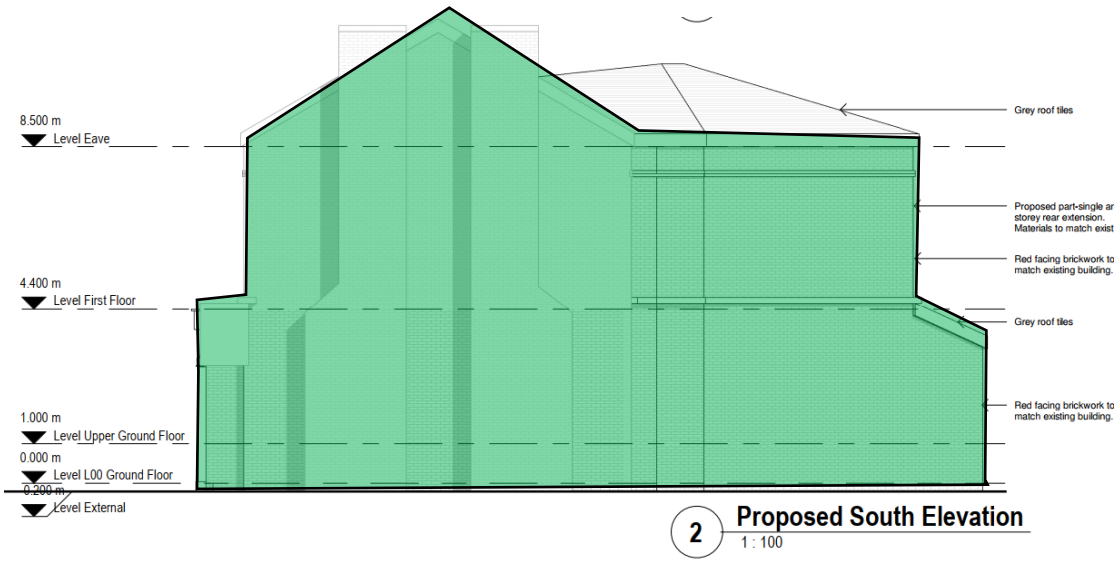
The following table and associated mark-up outline the free-field incident noise levels across the development. For purposes of any subsequent assessment, these zones are considered to be the “Façade Zones”).

Façade zone	Calculated incident noise levels		
	Daytime $L_{Aeq,16h}$ (dB)	Night $L_{Aeq,8h}$ (dB)	10th Highest Night $L_{max,2min}$ (dB)
A	65	62	77
B	60	57	73
C	55	52	67









9.0 Achieving Internal Noise Levels

There are 3No ventilation conditions applicable to proposed residential dwellings. These are Background Ventilation as described in Approved Document F (Part F), Overheating as described in Approved Document O (Part O) or the Acoustics Ventilation And Overheating Design Guide (AVO), and Purge Ventilation (odour and smells).

It should be noted that Part O and the AVO are applicable to new residential buildings only. As the proposed development is a refurbishment, neither document is considered to apply.

9.1 Purge Ventilation

It should be noted that the internal noise level guidelines are generally not applicable under *"purge ventilation"* conditions as defined by Part F, as this should only occur occasionally (e.g. to remove odour from painting and decorating or from burnt food).

As such, acoustic conditions are generally not a concern during purge ventilation.

9.2 Background Ventilation Condition

9.2.1 Criteria

With reference to the acoustic standards and guidelines as reviewed in Appendix B, the external noise intrusion levels from environmental sources should be controlled so as to not exceed the following criteria.

Activity	Location	Desirable Internal Ambient Criteria	
		07:00 – 23:00	23:00 – 07:00
Resting	Living Rooms	35 dB $L_{Aeq,16hour}$	-
Dining	Dining Room/Area	40 dB $L_{Aeq,16hour}$	-
Sleeping (Daytime Resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$ 45 dB[1] L_{Amax}

[1] Regular noise events such as trains, aircraft (10th highest)

9.2.2 Outline Specifications

Based on the prevailing noise climate at the site, open windows as a means of background ventilation would not be suitable on any façade across the development. As such, alternative ventilation measures would be required.

Allowance should be made to provide appropriate sound insulation solutions as required including, where necessary, suitably specified glazing and attenuated ventilators/mechanical ventilation systems. Preliminary calculations have been carried out to determine the likely façade sound insulation performance requirements for each façade. Calculation methods follow those outlined in BS 8233:2014 Section G.2 and are based on the following:

- Conventional brick cavity external wall
- Typical room volume as per latest drawings
- Typical window area as per latest drawings
- Reverberation time of 0.5 seconds.

From the results of the assessment, the following minimum preliminary acoustic performance specifications are recommended. Note, these specifications should be read in conjunction with the mark-ups in Section 8.0 and only apply to the residential element of the scheme. These are intended for planning use only, and detailed design stage octave band acoustic specifications will need to be developed for tender.

Façade Zone		Façade Element	Preliminary Minimum Sound Reduction Specification	
			Bedrooms	Living Rooms
A	Red	Window	32 dB $R_w + C_{tr}$	30 dB $R_w + C_{tr}$
		Ventilator	38 dB $D_{new} + C_{tr}$	36 dB $D_{new} + C_{tr}$
B	Yellow	Window	30 dB $R_w + C_{tr}$	27 dB $R_w + C_{tr}$
		Ventilator	36 dB $D_{new} + C_{tr}$	33 dB $D_{new} + C_{tr}$
C	Green	Window	27 dB $R_w + C_{tr}$	27 dB $R_w + C_{tr}$
		Ventilator	33 dB $D_{new} + C_{tr}$	33 dB $D_{new} + C_{tr}$

9.2.3 Example Glazing Configurations

Example glazing configurations commensurate with achieving the sound insulation specifications noted in Section 9.2.2 are given below.

Glazing Specification, $R_w + C_{tr}$ (dB)	Example Configuration
32	Uprated double glazed system e.g. 7/12/6 mm.
30	double glazed system e.g 10/16/4 mm.
27	double glazed system e.g 6/16/6 mm.

9.2.4 Example Ventilation Solutions

Example ventilation solutions commensurate with achieving the elemental sound insulation performances noted in Section 9.2.2 are discussed below.

Ventilator Specification, $D_{new} + C_{tr}$ (dB)	Example Configuration
≥43	High performance in-wall acoustic ventilator with absorption, or a mechanically assisted supply & extract solution (e.g. local MVHR).

Ventilator Specification, $D_{new} + C_{tr}$ (dB)	Example Configuration
34-42	Acoustic trickle vent per habitable room, or a mechanically assisted supply & extract solution (e.g. local MVHR).
33	1 x 2,500mm^2 standard hit-miss trickle vent per habitable room, or a mechanically assisted supply & extract solution (e.g. local MVHR).

The preliminary performance specifications included above are based on the provision of either full MVHR for rooms or 1no. ventilator only per habitable room as required. If additional numbers of ventilators are required to achieve the ventilation rates, the performance requirement for the individual ventilators will need to increase.

The table below provides guidance on the increase in performance specification required for additional numbers of ventilators.

Number of Ventilators	Performance Increase on Ventilator Specifications Stated Above
1	+0 dB
2	+3 dB
3	+5 dB
4	+6 dB

10.0 Operational Noise Impacts

10.1 Fixed Plant & Equipment

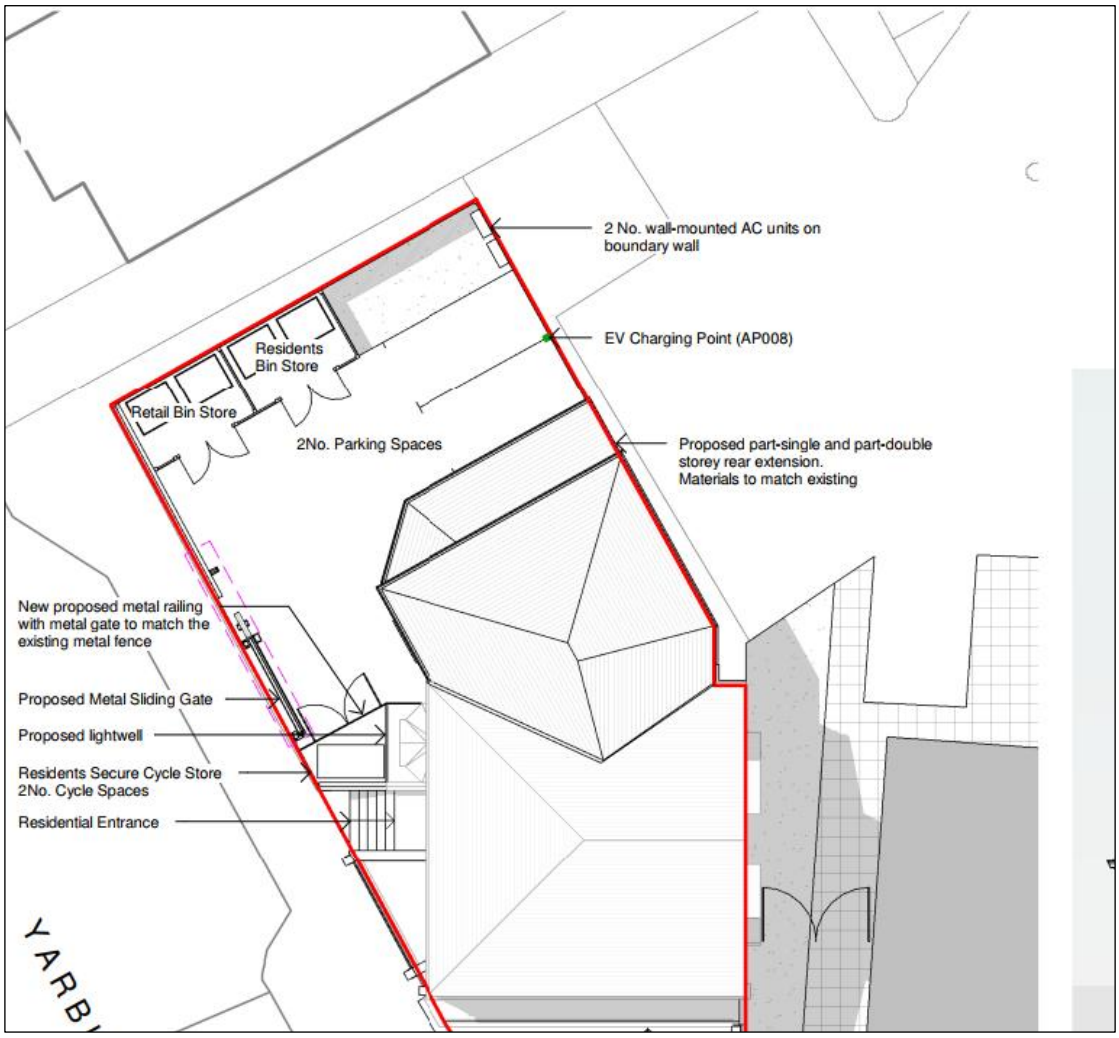
10.1.1 Plant Noise Emission Limits

The developments commercial unit below will have AC units which will be located to the rear of the property. Therefore, 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 residential windows, in free-field conditions, with all plant operating simultaneously.

Location	Plant Noise Emission Criteria $L_{Ar,Tr}$ (dB)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
Nearest residential window	42	29

10.1.1 Plant noise assessment

As of the writing of this report, the plant units have yet to be selected. However, the location has been set as shown in the plan below. The nearest residential windows are located on Yarburgh Street 4 meters away and are in direct line of site.



Therefore, in order to comply with the criteria set in section 10.1.1 above, we recommend the setting of limiting levels of any new plant as detailed in the table below, with all plant operating simultaneously.

Location	Plant Noise Emission Criteria $L_{Ar,Tr}$ (dB)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
1 meter from the air conditioning units	51	35

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.

10.2 Commercial Unit Operations

At ground floor level Pharmacy is proposed as part of the development. Considering the prevailing environmental noise climate at the site, we would expect that noise egress via the unit frontage from this use case 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:

Location	Commercial noise break-out Limit, L_{Aeq} (dB)	
	Daytime (07:00 – 23:00 hours)	Night-time (23:00 – 07:00 hours)
Receptor overlooking Withington Road or Yarburgh Street	48	31
All Other Receptors	39	26

[1] Should the operation include music noise, we advise that the above limits are reduced by a further 5 dB
[2] Established based on achieving suitable internal noise levels within noise sensitive premises.

Furthermore, noise transfer through the separating floor structure (and associated flanking paths) from the ground floor to first floor apartments shall be considered. As a minimum the floor should achieve the minimum requirements of Approved Document E. However, for noise transfer to apartments above, the design intent should be to ensure operational L_{max} noise transfer to apartments does not exceed a level at least 5 dB lower than the anticipated background L_{90} noise level in each octave band.

11.0 Conclusions

Hann Tucker Associates has undertaken a baseline noise survey and assessment in support of the proposed refurbishment and extension of the existing building on Withington Road, Whalley Range, to provide three 1-bed apartments at first floor level with a pharmacy at ground and basement levels.

The survey indicates that the prevailing noise climate at the site is dominated by road traffic noise, with the highest noise exposure affecting the façades overlooking Withington Road and lower levels experienced to the more screened elevations.

Based on the measured noise levels, the site is considered suitable for residential use in acoustic terms, subject to the incorporation of appropriate mitigation measures as part of the detailed design. In particular, the proposed apartments will require alternative means of background ventilation, together with suitably specified glazing and ventilators and/or mechanical ventilation, in order to achieve acceptable internal ambient noise levels.

With regard to the non-residential element of the scheme, noise associated with the proposed fixed plant and the operation of the proposed pharmacy can be controlled to an acceptable level through appropriate design, selection and attenuation measures. Suitable plant noise emission limits and commercial break-out limits have therefore been proposed with reference to the prevailing background sound levels and relevant local authority requirements. In addition, the separating floor and associated flanking paths between the pharmacy and the proposed apartments above will need to be designed carefully to control structure-borne and airborne noise transfer.

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 2024, amended February 2025):

198. 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.

200. 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 198 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
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

B.4 World Health Organisation

The current Environmental Noise Guidelines 2018 for the European Region (ENG) supersede the Guidelines for Community Noise from 1999 (CNG). Nevertheless, the ENG recommends that all CNG indoor guideline values and any values not covered by the current guidelines (such as industrial noise and shopping areas) remain valid.

A summary of the guidance from the ENG and CNG is shown in the table below.

Source	CNG guideline indoors all sources	ENG guideline outdoors noise from specific source only
Road traffic noise	35 $L_{Aeq,\ 16h}$	53 dB L_{den}
	30 $L_{Aeq,\ 8h}$	45 dB L_{night}
Railway noise	35 $L_{Aeq,\ 16h}$	54 dB L_{den}
	30 $L_{Aeq,\ 8h}$	44 dB L_{night}
Aircraft noise	35 $L_{Aeq,\ 16h}$	45 dB L_{den}
	30 $L_{Aeq,\ 8h}$	40 dB L_{night}

With regard to single-event noise indicators, Section 2.2.2 of the WHO Environmental Noise Guidelines 2018 state:

"In many situations, average noise levels like the L_{den} or L_{night} indicators may not be the best to explain a particular noise effect. Single-event noise indicators – such as the maximum sound pressure level ($L_{A,max}$) and its frequency distribution – are warranted in specific situations, such as in the context of night-time railway or aircraft noise events that can clearly elicit awakenings and other physiological reactions that are mostly determined by $L_{A,max}$. Nevertheless, the assessment of the relationship between different types of single-event noise indicators and long-term health outcomes at the population level remains tentative. The guidelines therefore make no recommendations for single-event noise indicators."

B.5 British Standard BS8233: 2014

British Standard 8233: 2014 "Guidance on sound insulation and noise reduction for buildings" provides guidance for the control of noise in and around buildings.

Internal Areas

BS8233:2014 Section 7.7.2 titled "Internal ambient noise levels for dwellings" states:

"In general for steady external noise sources, it is desirable that internal ambient noise levels do not exceed the following guideline values:

Activity	***Location***	***Desirable Internal Ambient Criteria***	
		07:00 – 23:00	***23:00 to 07:00***
Resting	*Living Rooms*	*35 dB $L_{Aeq,16hour}$*	*-*
Dining	*Dining Room/Area*	*40 dB $L_{Aeq,16hour}$*	*-*
Sleeping (Daytime Resting)	*Bedroom*	*35 dB $L_{Aeq,16hour}$*	*30 dB $L_{Aeq,8hour}$*

Note 1 The above table provides recommended levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Groundborne noise is assessed separately and is not included as part of these targets, as human response to groundborne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.

Note 2 The levels shown in the above table are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the levels recommended in the above table.

Note 3 These levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New

Year's Eve.

Note 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$ depending on the character and number of events per night. Sporadic noise events could require separate values.

Note 5 If relying on closed windows to meet the guide values, there needs to be an appropriate alternative ventilation that does not compromise the façade insulation or the resulting noise level.

If applicable, any room should have adequate ventilation (e.g. trickle ventilators should be open) during assessment.

Note 6 Attention is drawn to the Building Regulations.

Note 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved."

External Amenity Areas

BS8233:2014 Section 7.7.3.2 titled "Design criteria for external noise" states:

"For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$[1], with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met, might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited.

Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses. However, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens, and terraces, which might be intended to be used for relaxation. In high-noise areas consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space."

B.6 ProPG : Planning & Noise : 2017

The primary goal of the ProPG is to assist the delivery of sustainable development by promoting good health and well-being through the effective management of noise. It seeks to do that through encouraging a good acoustic design process in and around proposed new residential development having regard to national policy on planning and noise. It is applicable to noise from existing transport sources (noting that good professional practice should have regard to any reasonably foreseeable changes in existing and/or new sources of noise). The recommended approach is also considered suitable where some industrial or commercial noise contributes to the acoustic environment provided that is “not dominant”.

This ProPG advocates a systematic, proportionate, risk based, 2-stage, approach. The approach encourages early consideration of noise issues, facilitates straightforward accelerated decision making for lower risk sites, and assists proper consideration of noise issues where the acoustic environment is challenging.

The two sequential stages of the overall approach are:

- Stage 1 – an initial noise risk assessment of the proposed development site; and
- Stage 2 – a systematic consideration of four key elements.

The four key elements to be undertaken in parallel during Stage 2 of the recommended approach are:

- Element 1 – demonstrating a “Good Acoustic Design Process”;
- Element 2 – observing internal “Noise Level Guidelines”;
- Element 3 – undertaking an “External Amenity Area Noise Assessment”; and
- Element 4 – consideration of “Other Relevant Issues”.

The ProPG considers suitable guidance on internal noise levels found in “BS8233:2014: Guidance on sound insulation and noise reduction for buildings”.Table 4 in Section 7.7.2 of the standard suggests that “in general, for steady external noise sources, it is desirable that the internal ambient noise level does not exceed the guideline values”. The standard states (Section 7.7.1) that “occupants are usually more tolerant of noise without a specific character” and only noise without such character is considered in Table 4 of the standard.

Activity	Location	07:00 – 23:00 Hours	23:00 – 07:00 Hours
Resting	Living Room	35dB $L_{Aeq,16hr}$	-
Dining	Dining Room / Area	40dB $L_{Aeq,16hr}$	-
Sleeping (daytime resting)	Bedroom	35dB $L_{Aeq,16hr}$	30dB $L_{Aeq,16hr}$ 45dB $L_{Amax,F}$

NOTE 1 the Table provides recommended internal L_{Aeq} target levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Ground-borne noise is assessed separately and is not included as part of these targets, as human response to ground-borne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.

NOTE 2 The internal L_{Aeq} target levels shown in the Table are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the L_{Aeq} target levels recommended in the Table.

NOTE 3 These internal L_{Aeq} target levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New Year's Eve.

NOTE 4 Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise-sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events (see Appendix A).

NOTE 5 Designing the site layout and the dwellings so that the internal target levels can be achieved with open windows in as many properties as possible demonstrates good acoustic design. Where it is not possible to meet internal target levels with windows open, internal noise levels can be assessed with windows closed, however any façade openings used to provide whole dwelling ventilation (e.g. trickle ventilators) should be assessed in the "open" position and, in this scenario, the internal L_{Aeq} target levels should not normally be exceeded, subject to

the further advice in Note 7.

NOTE 6 Attention is drawn to the requirements of the Building Regulations.

NOTE 7 Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal L_{Aeq} target levels may be relaxed by up to 5dB and reasonable internal conditions still achieved. The more often internal L_{Aeq} levels start to exceed the internal L_{Aeq} target levels by more than 5dB, the more that most people are likely to regard them as "unreasonable". Where such exceedances are predicted, applicants should be required to show how the relevant number of rooms affected has been kept to a minimum. Once internal L_{Aeq} levels exceed the target levels by more than 10dB, they are likely to be regarded as "unacceptable" by most people, particularly if such levels occur more than occasionally. Every effort should be made to avoid relevant rooms experiencing "unacceptable" noise levels at all and where such levels are likely to occur frequently, the development should be prevented in its proposed form (See Section 3.D).

B.7 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.

Appendix C

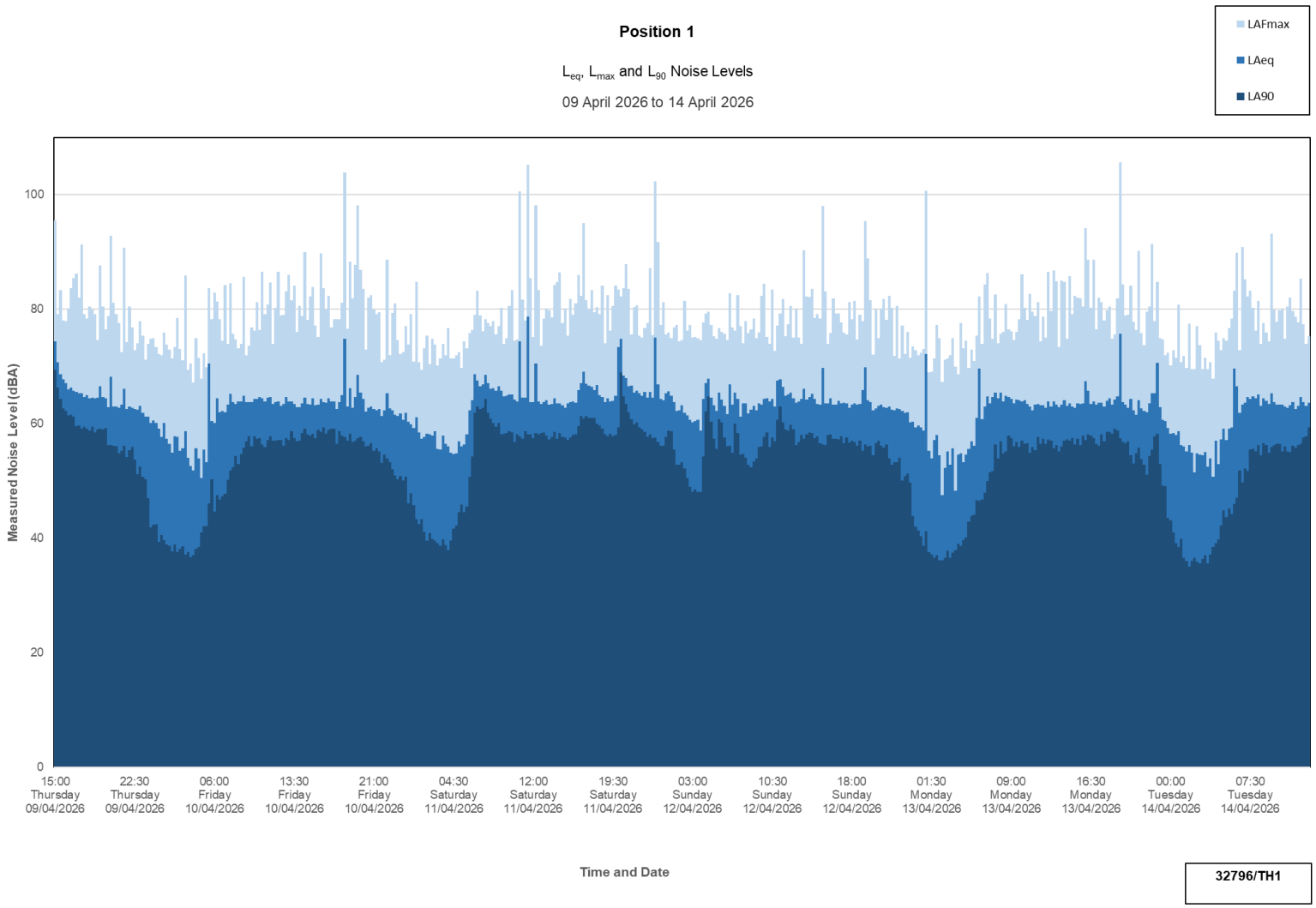
Time History Graphs

119 Withington Road

Position 1

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

09 April 2026 to 14 April 2026



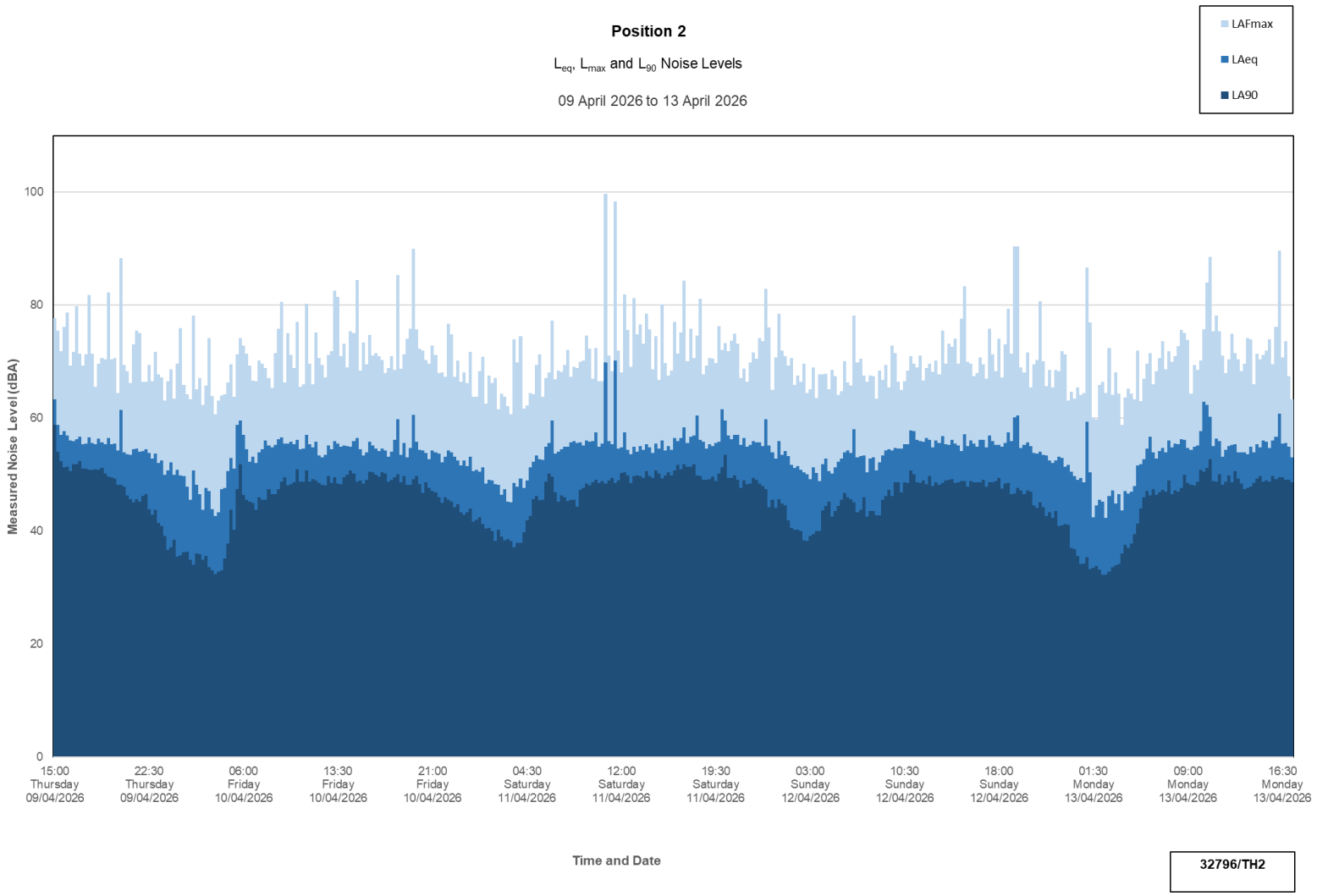
32796/TH1

119 Withington Road

Position 2

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

09 April 2026 to 13 April 2026



32796/TH2