

Didsbury Point Manchester

Noise Impact Assessment Report

28562/NIA1/R6

08 December 2022

For:

Southway Developments Limited

c/o Simon Fenton Partnership LLP

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Noise Impact Assessment Report 28562/NIA1

Document Control

Rev	Date	Comment	Prepared by	Checked by	Authorised by
6	08/12/22	Updated car park assessment following additional survey			
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4	17/02/22	Updated typical background noise levels in line with MCC comments.			
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3	07/02/22	Noise break-out section added.	Cameron Maskew Assistant Consultant BEng(Hons), AMIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA
2	18/01/22	Car park and primary care unit assessments added. Plans updated to latest revisions.	Cameron Maskew Assistant Consultant BEng(Hons), AMIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA
1	18/11/21	Emergency Plant Limits and AVO Assessment Added	George Grenfell Consulting Engineer MSc (Hons), AMIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA
0	15/02/21	-	George Grenfell Consulting Engineer MSc (Hons), AMIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA	Jake Howarth Principal Consultant BEng (Hons), MIOA

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1.0 Introduction

A new build residential lead mixed use development is proposed, located on The Boulevard, Didsbury, Manchester. The development includes the provision of 76 new dwellings composed as 2No Blocks, with Block 1 comprising 50No residential units and a Primary Care Unit (1600sqm across Ground and First Floor) and Block 2 comprising 26No residential units.

Hann Tucker have therefore been commissioned to assess any potential impact on the proposed residential buildings from environmental sources in order to ensure compliance with Local Authority requirements.

Our assessment findings are presented herein.

2.0 Objectives

To establish the prevailing environmental noise levels in line with current (at the time of writing) ANC and IOA guidance.

Based on the above, to undertake a detailed noise impact assessment of the proposed development, covering:-

- i. Incident external noise levels/sources & suitability of the site for residential use;
- ii. Measures to achieve acceptable noise levels within new dwellings.
- iii. Measures to achieve acceptable noise levels in new outdoor living spaces;
- iv. Noise limits for future fixed plant and equipment to protect the locality.

To provide preliminary specifications for windows and ventilators to control external noise intrusion.

To set plant noise emission limits in accordance with Local Authority guidance.

3.0 Acoustic Terminology

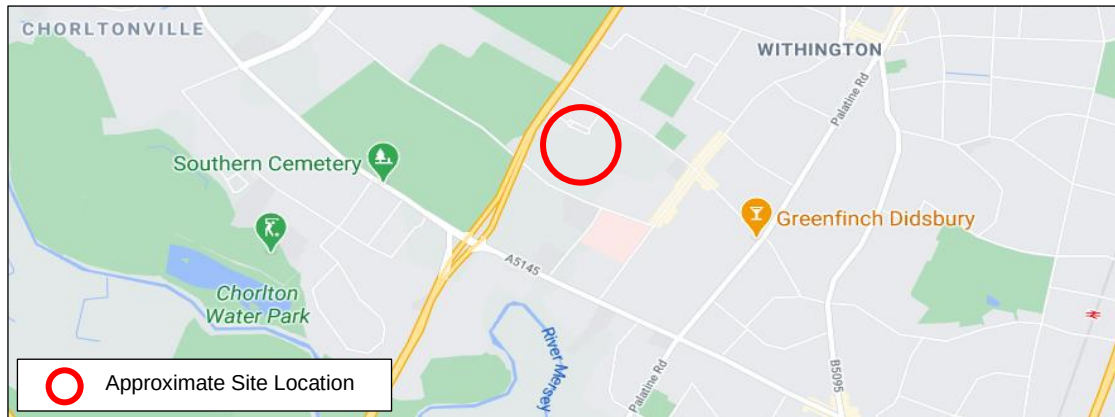
Please refer to Appendix A for an explanation of acoustic terminology used herein.



4.0 Site Description

4.1 Location

The proposed development is located at off the Princess Road (A5103), in Manchester, and falls under the jurisdiction of Manchester City Council. See site location below.



Site Location (© maps.google.co.uk)

4.2 Description

The site is bounded by Didsbury High School and associated carpark that separates the proposed development from 2No. playing fields (MUGA's) that lie approximately 50m southwest. One Didsbury Point, an office building, is situated northwest of the proposed development. Multiple blocks of apartments and townhouses lie to the north and east of the site boundary.

The nearest noise sensitive premises are understood to be the townhouses located to the east of the site on Clearwater Drive.

The site is shown in relation to its immediate surrounds is indicated below:



Site Plan (© maps.google.co.uk)



4.3 Project Proposals

The proposal includes the provision of 76 new dwellings composed as 2No. Blocks connected by a glazed link. Block 1 comprises 50 units (including 6no. duplex apartments) and Primary Care Unit across the Ground and First Floor while Block 2 comprises 26 units.

The development massing is to comprise 2No 5-storey “wings” either side of an 8-storey block located on the corner of the Avenue and the Boulevard.

The development has been designed to include a small secure parking courtyard for residents in addition to off-street parking for Primary Care visitors. A roof-top amenity space is also being provided along the Avenue elevation. An image of the proposal is provided below.



Site Plan (Buttress Architects)

5.0 Acoustic Standards & Guidelines

5.1 Guidance on the Impact of COVID-19 (ANC/IOA)

Joint guidance on the impact of COVID-19 on the practicality and reliability of baseline sound level surveying and the provision of sound & noise impact assessments was published on 23 March 2020 as a joint venture between the Institute of Acoustics (IOA) and the Association of Noise Consultants (ANC).

The document, provided in Appendix B for reference, highlights that as the responsible bodies, the ANC and IOA are keen to ensure that it is ‘business as usual’, as far as is practicably possible and responsible. The document sets out a number of methods in which a suitable assessment could be carried out during the outbreak.

The document states that rather than a baseline noise survey “*other approaches can be taken*”



to establish an appropriate robust estimate of baseline conditions, such as using existing data (for example, from previous local surveys and noise maps) or undertaking baseline sound predictions. These approaches can be supplemented by additional limited on-site sound level measurements, as necessary. Each of the possible options will need to be reviewed on a case-by-case basis, in order to identify the most appropriate approach, assessing the level of uncertainty and including this information in the reporting. Most importantly at this time, before progressing with surveying, there should be discussion of the intended approach with the relevant regulating authority”.

Based on the above, the baseline acoustic conditions of the site have been established through noise levels measured as part of previous local surveys and then modelled using traffic data from the Department of Transport and train timetables taken from National Rail.

Local Authority Liaison

Hann Tucker contacted Manchester City Council with regards to the above on 29 January 2021. A response was received on the same day stating that MCC are “fine with the approach set out”. The full email chain is provided in Appendix C for completeness.

5.2 Local Planning Requirements

Manchester City Council (MCC) requirements are outlined in Section 3.0 of Manchester City Council’s Planning & Noise Technical Guidance document (December 2015).

5.2.1 Achieving Suitable Internal Noise Levels

Section 3.6.1.1 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}).*

Section 5.3.1.3.1.2 of the document states the following with regards to maintaining internal ambient noise levels when it desired to keep windows closed but provide adequate ventilation:

“Occupants should be provided with a supply of fresh air in habitable rooms without having to open windows (whilst also having the option to do this for purge ventilation, or at the occupant’s discretion.

Where ambient noise levels are high a scheme of ventilation will need to be provided that does not compromise the acoustic attenuation afforded by glazing. This may come in the form of individual window trickle vents or acoustic trickle vents.”



5.2.2 Fixed Plant Noise Emissions

Section 3.6.1.5.1 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 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.”

5.2.3 Commercial Noise Breakout

Section 3.6.1.5 outlines that the noise assessment for commercial uses should be based on BS 4142:2014 and the design objective should be:

“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.”

5.3 National Planning Policy Framework

The National Planning Policy Framework (NPPF) was first published in 2012, replacing the existing Planning Policy Guidance Note 24 (PPG24) “Planning and Noise”, and sets out the government’s planning policies for England and how these are expected to be applied.

The latest revision of the NPPF (July 2021) states that planning system should contribute to, and enhance, the natural and local environment by (amongst others) “preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, water or noise pollution or land stability.”

NPPF advises that planning policies and decisions should ensure:

“...new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.” [In doing so they should] “mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life” and “identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.”

“...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.”



5.4 ProPG: Planning & Noise

ProPG: Planning & Noise 'Professional Practice Guidance on Planning & Noise' was issued in May 2017 with the primary goal of assisting the delivery of sustainable residential 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".

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 ProPG considers suitable guidance on internal noise levels found in BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' with the addition of an "ideal" $L_{Amax,f}$ requirement for bedrooms at night (45 dB L_{Amax}).

5.5 BS 4142:2014

BS 4142: 2014 describes methods for rating and assessing the effects of outdoor sound levels, of an industrial and/or a commercial nature, "on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident".

The impact of a specific sound is indicated by subtracting the existing background noise level from the rating level (i.e. noise level from the proposed items of plant/machinery/etc plus any acoustic feature corrections). The standard states that:

- *"a difference of around +10dB or more is likely to be an indication of a significant adverse impact";*
- *"a difference of around +5dB is of marginal significance is likely to be an indication of an 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".*

The noise from the new development is expressed in terms of a rating level and given as a $LA_{eq, T}$ noise level. The existing background noise level is expressed in terms of a $LA_{90, T}$ noise level. T is the assessment time interval, which is 1-hour for operations during daytime hours (07:00 to 23:00 hr) and 15-minutes for operations during night-time hours (23:00 to 07:00 hr).

BS 4142:2014 states that if a noise source contains an 'acoustic feature', such as tonality, intermittency or impulsiveness, an appropriate penalty should be applied.



5.6 BS 8233:2014

British Standard 8233: 2014 “Sound insulation and noise reduction for buildings” recommends design criteria for internal ambient noise levels for dwellings providing a reasonable or good level of protection from external noise. It states that it is desirable that ambient noise levels do not exceed the following guidelines:

Activity	Location	Desirable 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 $L_{Aeq,8hour}$

The document goes on to state that all of the above target levels may be relaxed by 5 dB and “reasonable” internal conditions would still be achieved.

For outdoor living spaces, a desirable upper guideline value of 55dB $L_{Aeq,T}$ is quoted.

5.7 Calculation of Road Traffic Noise (CTRN) 1998

This document describes procedures to calculate (and measure) road traffic noise levels, in order to assess the impact of new or altered highways on specific receptors. The procedure allows the assessment to take in account different factors such as the percentage of heavy vehicle, traffic volume, gradient, screening effects, distance attenuation, reflections from façades or also angle of view of the highway.

5.8 Good Practice Guidance (SfE Design Guidance Note – Artificial Grass Pitch 2015)

Sport for England provide a Design Guidance Note document for the acoustics of Artificial Grass Pitches.

SfE provide noise emission data of 58 dB $L_{Aeq}(1hour)$ at a distance of 10 m from the halfway line of the AGP, specific noise mitigation measures, and guidance on the uses of barriers and bunds where necessary.

The SfE document specifically references WHO Guidelines for Community Noise and BS 8233:2014 to provide guidance correlating to annoyance to external absolute daytime noise levels for residential properties.

Thresholds of 55dB $L_{Aeq,16 hour}$ and 50dB $L_{Aeq,16 hour}$ are quoted within the WHO guidance, referring to ‘serious’ and ‘moderate’ annoyance respectively.



BS 8233 reflects WHO guidelines in section 7.7.3.2 where the following is stated:

It is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable.

The above is considered to apply during daytime hours only (07:00-23:00 hrs).

It is also important to consider the context of the existing ambient noise levels at the nearest noise sensitive receptors when assessing the potential impact from the proposed MUGA pitches.

We therefore propose to assess activity noise from the proposed MUGA pitches by reviewing the subsequent change in typical daytime L_{Aeq} ambient noise levels at the nearest noise sensitive receptors.

The potential impact of a change in noise level may be assessed in accordance with the guidance contained within the 'Draft Guidelines for Noise Impact Assessment' produced by the IEMA/IOA Working Party, and are detailed in the table below:-

Noise Level Change (dB)	Subjective Response	Significance
0	No Change	No impact
0.1-2.9	Barely Perceptible	Minor impact
3.0-5.9	Noticeable	Moderate impact
6.0-9.9	Up to a doubling or halving of loudness	Substantial impact
10.0 or more	More than a doubling or halving of loudness	Major impact

5.9 Acoustics, Ventilation & Overheating Residential Design Guide

The Acoustics, Ventilation and Overheating Residential Design Guide (Version 1.1) was issued in January 2020 by the Association of Noise Consultants (ANC) and the Institute of Acoustics (IOA). This document provides guidance on the interdependence between acoustics, ventilation and overheating.

The AVO guide recommends a two-level approach to assess the potential impact of noise ingress through windows that have been opened to mitigate overheating and also noise from any mechanical services used to provide comfort cooling. The level 1 assessment relates to incident environmental noise levels across a proposed site, it is used to define "risk categories" for each building façade based on these levels. These categories are set out below:



Risk category for Level 1 assessment ^[Note 5]	Potential Effect without Mitigation	Recommendation for Level 2 assessment
$L_{Aeq, T}$ ^[Note 3] during 07:00 - 23:00 $L_{Aeq, 8hr}$ during 23:00 - 07:00 65 dB High 55 dB 60 dB Medium 50 dB Low 50 dB Negligible 45 dB Increasing risk of adverse effect	Recommended	
	Optional	
	Use of opening windows as primary means of mitigating overheating is not likely to result in adverse effect	
	Not required	

© ANC 2020. AVO Level 1 Assessment

Where a Level 2 assessment is recommended the AVO guide states that the Significant Observed Adverse Effect Level (SOAEL), which is the noise level above which significant adverse effects on health and quality of life occur, is dependent on how frequently and for what duration the overheating condition occurs (i.e. how often the windows need to be open to mitigate overheating). However, the document refers to the overheating condition being “rare” or “most of the time” rather than providing specific durations. Therefore this is open to interpretation.

At planning stage the level of information required to undertake a level 2 assessment in-line with the AVO guide is often not available and a level 1 assessment, which establishes the risk categories of each proposed façade would be most suitable.



6.0 Establishing Baseline Conditions

6.1 Environmental Noise Survey

6.1.1 Procedure

Unattended noise level measurements were undertaken from 13:00 hours on Friday 5 February 2021 to 13:30 hours on Monday 8 February 2021 in order to establish noise levels at the site.

Additional attended noise measurements were undertaken between 13:25 hours and 14:40 on Friday 5 February 2021 in order to establish how noise levels vary across the site.

All measurements were taken of the A-weighted (dBA) L_{10} , L_{90} , L_{eq} and L_{Fmax} sound pressure levels over discrete 15 minute periods. Measurements were undertaken in accordance with BS 7445-1:2003 *Description and Measurement of Environmental Noise*.

6.1.2 Measurement Positions

Free-field noise level measurements were undertaken at 4No positions on site, as described/illustrated below.

Position	Description
A	Unattended measurement position located to the North of the existing site. Microphone positioned 1m above site perimeter fencing.
B	Unattended measurement position located to the South of the existing site. Microphone positioned 1m above site perimeter fencing.
1	Attended measurement position along Princess Road. Microphone located approx. 4m from the nearside carriageway and 1.5m above ground level
2	Attended measurement position along Nell Lane. Microphone located approx. 4m from the nearside carriageway and 1.5m above ground level



6.1.3 Instrumentation

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

Position	Description	Manufacturer	Type	Serial Number	Calibration
A	Type 1 Sound Level Meter	Larson Davis	LxT	4569	28/07/2020
B	Type 1 Sound Level Meter	Larson Davis	LxT	5111	28/07/2020
A & B	Type 1 Calibrator	Larson Davis	Cal200	3083	19/05/2020
1 & 2	Type 1 Sound Level Meter	Brüel and Kjær	2250	2600445	14/12/2020
1 & 2	Type 1 Calibrator	Brüel and Kjær	4231	2115545	14/12/2020

The sound level meters in Positions A and B were housed in a security case with the microphone mounted on a tripod with the microphone fitted with a windshield. The sound level meters in Positions 1 & 2 were mounted directly on a tripod. All equipment was calibrated prior to and on completion of the survey. No significant deviations occurred (no more than 0.1 dB).

All equipment was calibrated prior to and on completion of the survey. No significant deviations occurred (no more than 0.1 dB).



6.1.4 Weather Conditions

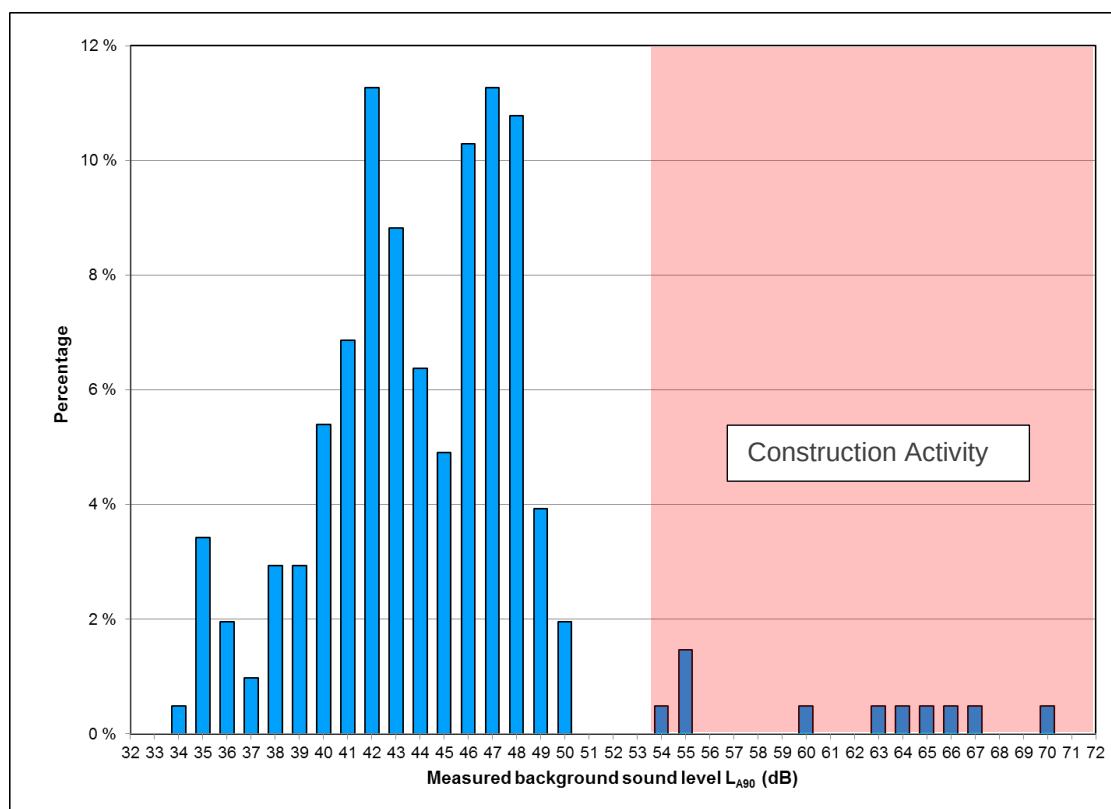
Due to the nature of the survey, i.e. unmanned, it is not possible to accurately describe the weather conditions throughout the entire survey period. However, upon set-up and collection of the equipment wind conditions were calm, road surfaces were dry and the sky was generally overcast.

Weather reports for the area indicate that rain showers did occur. However, reports also indicate there were large periods of calm, dry, weather during the survey. These conditions are considered suitable for obtaining representative measurement results.

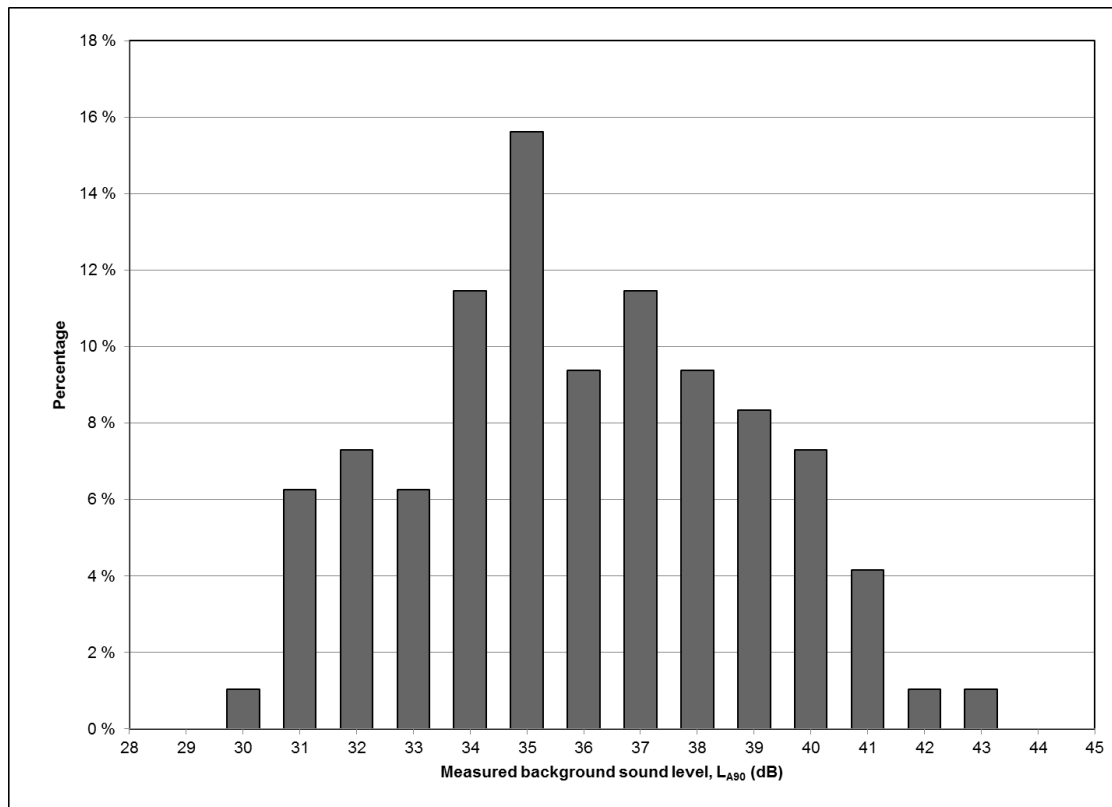
6.1.5 Results

The results of the automated survey have been plotted on Time History Graphs 28562/TH1 and 28562/TH2 enclosed. The graph present the 15 minute A-weighted (dBA) L_{90} , L_{eq} and L_{max} levels at each position throughout the duration of the survey.

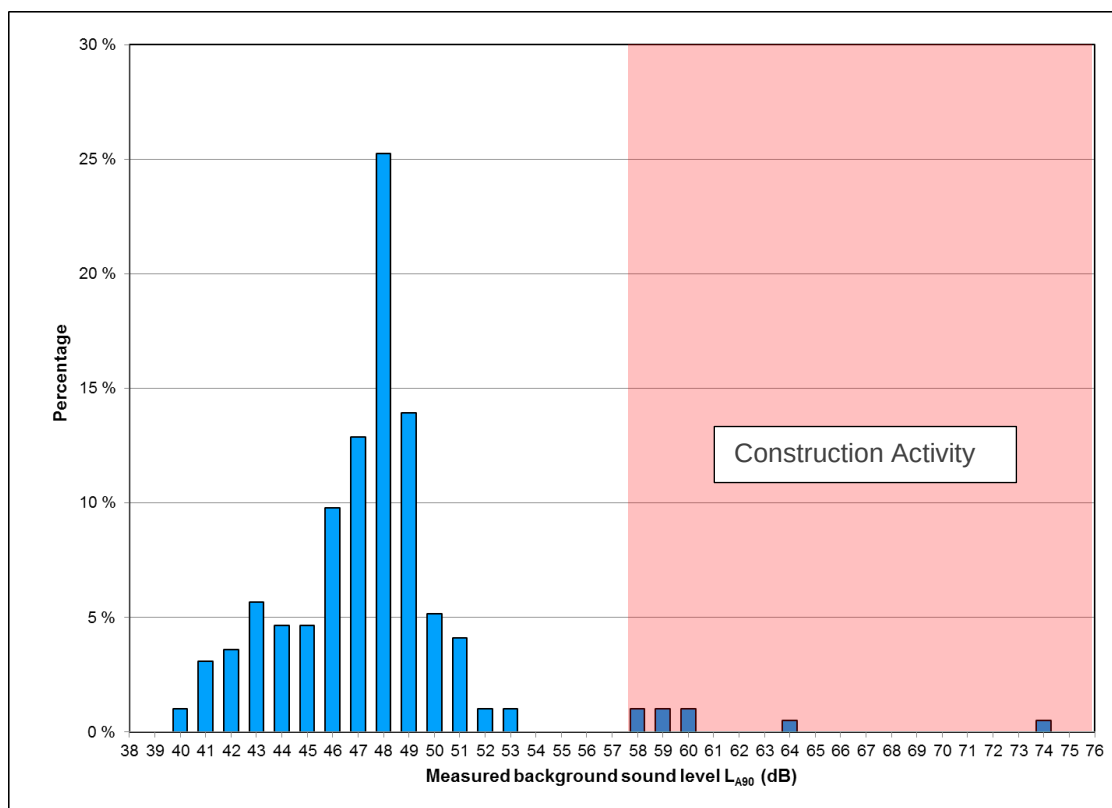
BS 4142 states that “the background sound level must be reliable and suitably represent the particular circumstances and periods of interest. For this purpose, the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods.” Taking this into account, the following histograms have been created which display the occurrence of each sound level (L_{90}) as a percentage for the day and night time periods for the purposes of establishing the typical background noise levels at the site.



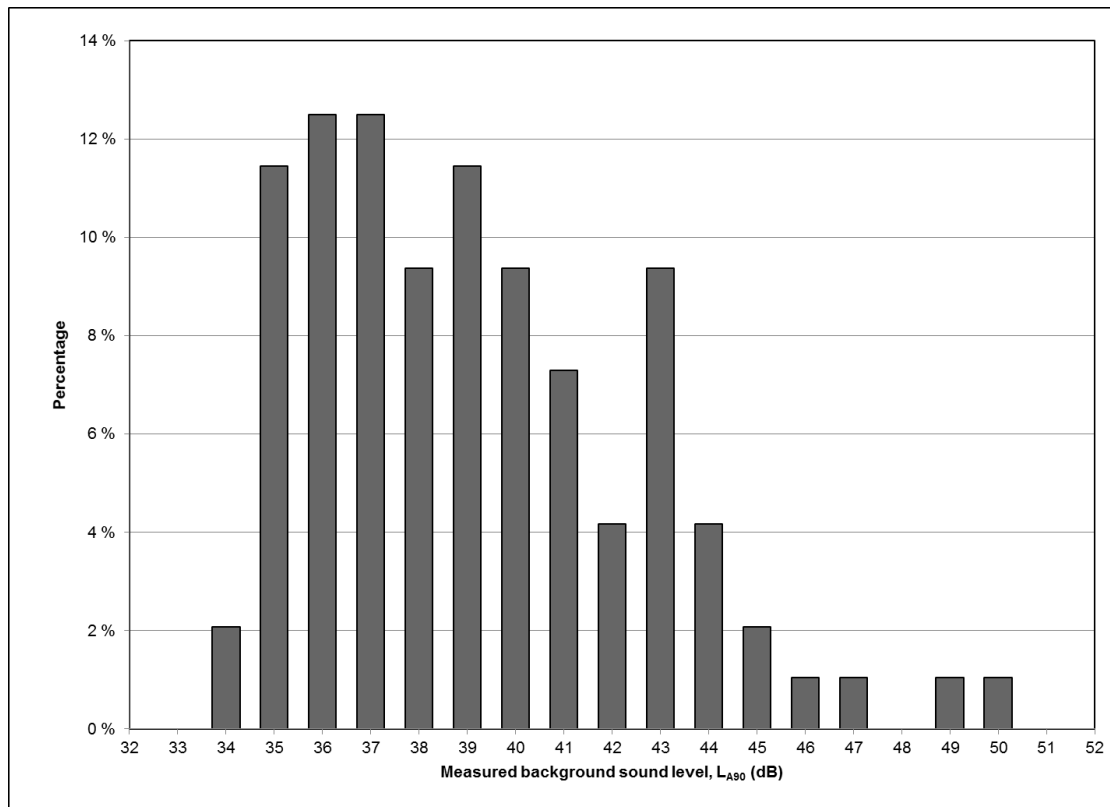
Statistical Analysis of Daytime Background Noise Levels - Position A



Statistical Analysis of Night-time Background Noise Levels - Position A



Statistical Analysis of Daytime Background Noise Levels - Position B



Statistical Analysis of Night-time Background Noise Levels - Position B

A summary of the results from the automated noise survey, as used to inform subsequent assessments against current guidelines, is presented in the table below. L_{A90} values represent the 'typical' 15-minute level and $L_{A_{fmax}}$ values are taken as the '15th highest' 5 minute value. All results are free-field levels.

Position	Daytime (07:00 – 23:00 hrs)		Night-time (23:00 – 07:00 hrs)		
	$L_{Aeq,16h}$	Typical $L_{A90,15min}$	$L_{Aeq,8h}$	Typical $L_{A90,15min}$	10 th Highest $L_{A_{fmax},5min}$
A	55	42	47	35	67
B	52	48	49	37	68

A summary of the results from the attended noise survey, as used to inform subsequent assessments against current guidelines in relation to commercial noise egress, is presented in the table below. All results are free-field levels.



Position	Start Time (mm:ss)	Measured Sound Pressure Levels (dB)			
		L _{Aeq,15min}	L _{A90,15min}	L _{A10,15min}	L _{AFMax,15min}
1	13:25	76	63	79	89
	14:15	77	63	80	89
	15:15	76	62	79	90
2	13:45	67	53	72	82
	14:00	67	63	72	82
	15:30	67	56	71	79

6.1.6 Discussion of Noise Climate

Due to the nature of the automated survey, i.e. unmanned, 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 dominant noise source was noted to be traffic noise from Princess Road and construction noise from the site itself, however, the time period affected by construction noise have been omitted from the assessment.

During the manned measurements the dominant noise sources were noted to road traffic noise from Princess Road and Nell Lane with Cavendish Road being noticeably quieter.

There was no external activity around the nearby commercial units and no noise was audible from the units itself during our time on site. There was little activity at the adjacent school.

6.2 Previous Local Noise Surveys

6.2.1 Noise Survey for Application 118539/FO/2017

A noise survey was carried out by Ramboll between 10:00 and 13:00h on Tuesday 19th September 2017, and during the evening of Monday 18th September 2017 in the locations highlighted in the plan below.

We understand the main noise source affecting the site is the traffic noise from Princess Road. Secondary noise sources include noise from Neil Lane, road traffic on the local roads and aeroplanes arriving and departing from Manchester Airport.



Survey measurement locations (Ramboll)

A summary of the noise levels measured in the above positions are presented overleaf. We understand all noise levels presented are free-field levels.

Position	Measured Sound Pressure Levels (Daytime) (dB)		
	$L_{Aeq,10min}$	$L_{A90,10min}$	$L_{Amax,10min}^*$
1	65	54	87
2	76	64	88
3	69	60	82
4	51	41	68
5	58	51	76
6	55	49	67

Discussion

The noise locations surveys by Ramboll are in the immediate vicinity to the proposed site and should be reasonable representative of a pre/post-COVID noise climate. However, it is worth noting that at the point of the Ramboll survey Didsbury High School was not constructed and the site is more exposed to the A5103 than it is currently.

Also, as the survey was not carried out by Hann Tucker Associates we cannot comment on the accuracy of the measurements taken, however, the noise levels appear to be reasonable considering the locations surveyed.



6.3 Noise Mapping

6.3.1 Overview

In order to validate the noise surveys, a 3D acoustic model was developed. The methodology set out in CRTN and the traffic flow data provided by the Department for Transport were used to develop the model.

In order to use the methodology set out in CRTN, a number of parameters relating to the road segment being modelled are required. The parameters used to inform the model are presented in the table below for the roads adjacent to the site.

Road	Traffic Flow (AAWT)	Traffic Speed (km/h)	Percentage HGVs	Gradient Correction	Surface Correction
Princes Road	45912	45	2	0 dB	-1 dB*
Nell Lane	8374	45	1	0 dB	-1 dB*

*As per Section 16.1 of CRTN

The parameters above, with the exception of the corrections, have been taken from the Department for Transport traffic count data (roadtraffic.dft.gov.uk).

6.3.2 Calculation Procedure

A 3D acoustic model has been developed using the CadnaA noise prediction software which involves modelling a three dimensional approximation of the site and the surrounding area and implements both the CRTN and CRN calculation methodologies.

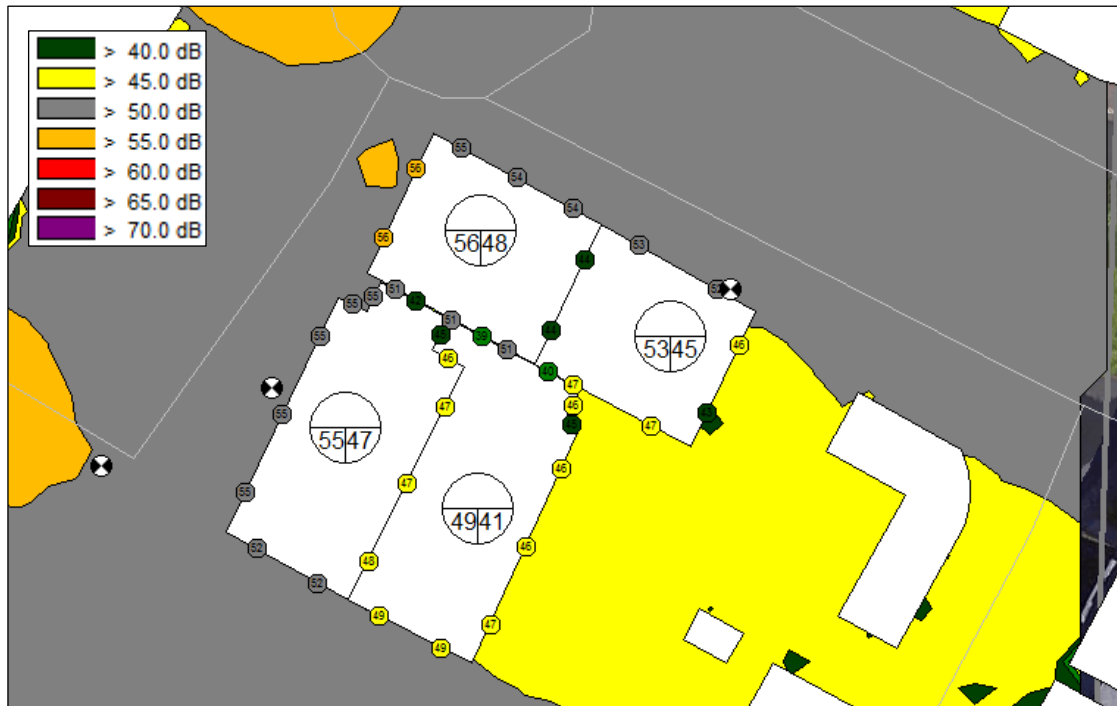
The calculation methodology set out CRN calculates both the daytime ($L_{Aeq,16h}$) and night time ($L_{Aeq,8h}$) ambient noise levels, which allows direct comparison with the relevant assessment criteria. The procedure in CRTN will only provide the noise level that is exceeded for 10% of the time (i.e. $L_{A10,18h}$). In order to convert the $L_{A10,18h}$ to daytime and night time ambient noise levels (and thus allow a direct comparison to the relevant criteria) the following equations have been used:

- $L_{Aeq,16h} = 0.95 \times L_{A10,18h} + 1.44$
- $L_{Aeq,8h} = 0.9 \times L_{A10,18h} - 3.77$

The above equations are taken from TRL document “*Method for Converting the UK Road Traffic Noise Index $L_{A10,18h}$ to the EU Noise Indices for Road Noise Mapping*” have been implemented in the modelling software used to create the noise model (i.e. CadnaA).

6.3.3 Results

Based on the methodology set out above the calculated day and night-time ambient noise levels across the site are presented below at a calculation height of 4m. These noise levels (in conjunction with vertical façade noise maps) have been used to inform the façade element performance requirements provided in Section 7.2.



Calculated Daytime Ambient Noise Level Across the Site ($L_{Aeq,16h}$)



Calculated Night-time Ambient Noise Level Across the Site ($L_{Aeq,8h}$)



6.4 Validation of Survey Results and Acoustic Model

Point receivers were included in the noise model in the survey locations measured by Hann Tucker Associates (see Section 6.1) and Rambol (See Section 6.2). The scenarios modelled where as follows:

- Existing site and surrounding area for comparison against Hann Tucker Survey.
- Existing site and surrounding area with Didsbury High School building omitted for comparison against the Rambol survey.

The results of the noise model have been compared against the results of the surveys below:

Position	Scenario	Sound Pressure Level (dB)	
		$L_{Aeq,16h}$	$L_{Aeq,8h}$
A	Measured by HTA	55	47
	Modelled by HTA	53	44
	Difference	+2	+3
B	Measured by HTA	52	49
	Modelled by HTA	52	44
	Difference	0	+5
5 (Rambol Survey Position)	Measured by Rambol	58	-
	Modelled by HTA	58	-
	Difference	0	-
6 (Rambol Survey Position)	Measured by Rambol	55	-
	Modelled by HTA	56	-
	Difference	-1	-

It can be seen from the above comparison of the measured and modelled data that the two are well correlated during the day. However, the measured night-time noise levels are up to 5 dB higher than the model.

Based on the above, we believe that the Hann Tucker noise survey is valid and considers a representative snapshot of the acoustic climate of the site. It is also noted, that the effects of the COVID-19 restrictions does not appear to have reduced noise the levels across the site.



7.0 Internal Ambient Noise Assessment

7.1 Overview

This section assesses external noise intrusion into residential rooms (living rooms and bedrooms) in order to determine preliminary acoustic performance specifications for the critical façade elements, namely windows and ventilators.

Unless stated otherwise, our assessment considers a general background ventilation strategy of MVHR units in each apartment.

The external walls are expected to comprise brick or outer cladding with insulated steel frame system (SFS) comprising an outer weather-board and 2 layers of plasterboard internally. The overall sound reduction afforded by the walls is expected to be at least 50 dB $R_w + C_{tr}$, which will far surpass the sound reduction requirements for this site.

Our calculations follow BS 8233 procedures and consider bedroom and living room dimensions and window sizes as per the latest design drawings (at the time of writing), and the intent is to ensure internal noise levels do not exceed ideal noise levels as set out in BS 8233:2014 and ProPG.

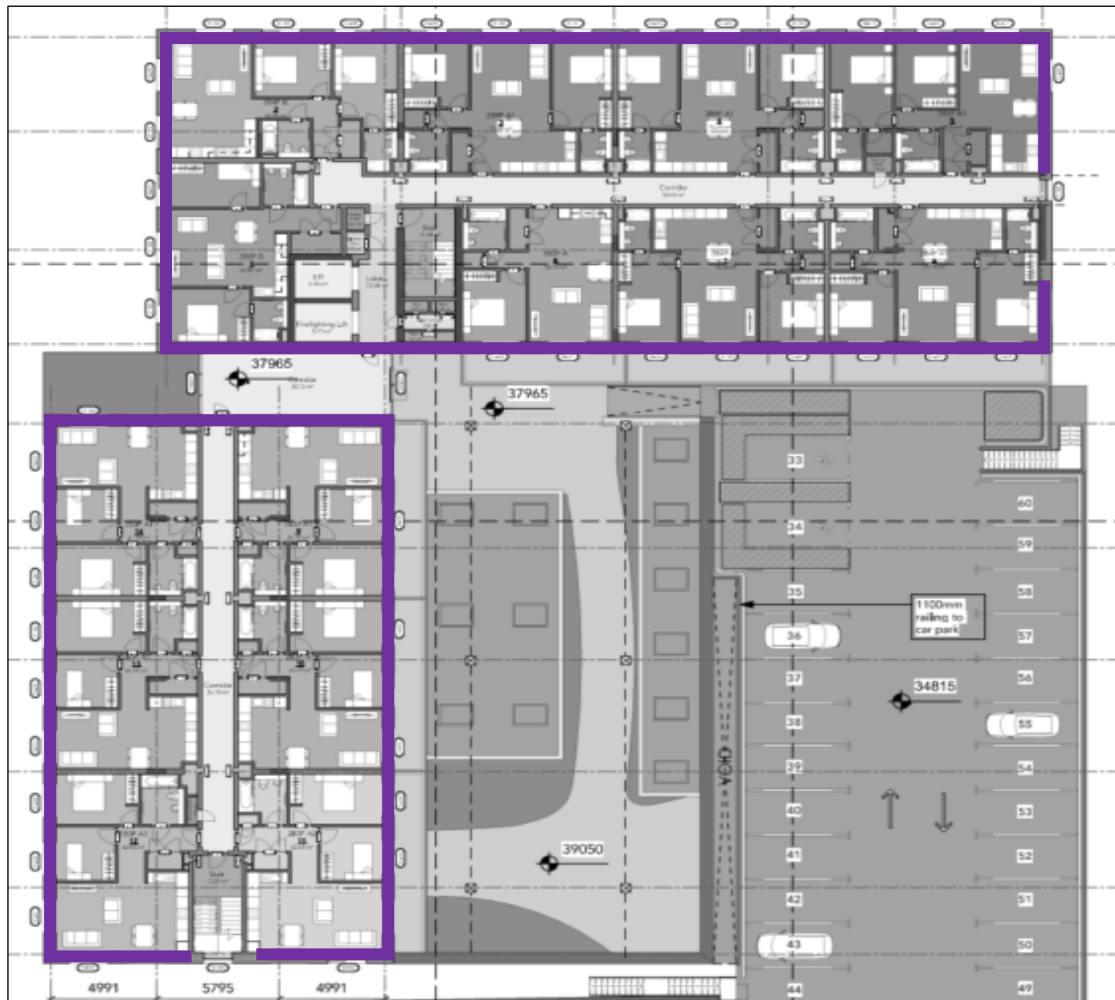
7.2 Preliminary Guidance for Windows & Ventilators

Preliminary sound insulation calculations have been undertaken in order to specify the minimum sound insulation performance of the façade elements to meet the proposed internal noise criteria.

From the results of our assessment, the following minimum preliminary acoustic performance specifications are recommended for the windows and ventilators to habitable rooms to achieve the internal ambient noise criteria. Our assessment has considered the equivalent continuous level (L_{Aeq}) during all periods as detailed in Section 6.3.3.

Type		Façade Element	Preliminary Minimum Sound Reduction Specification	Example Configuration (For Guidance Only)
A	Purple	Window	26 dB $R_w + C_{tr}$	- 6 / 16 / 6mm thermal double glazed system
		Ventilator	N/A	- Mechanical ventilation (e.g. MVHR)

The following sketch illustrates the extent of the above glazing type zones.



Mark-up Showing AVO Risk Categories on Building Façade

In summary, our calculations indicate that the internal ambient noise criteria should be achievable in all habitable rooms using appropriately specified façade elements.

The information presented above is intended as planning guidance only, with the aim of demonstrating that solutions are available to suitably mitigate noise intrusion. Detailed acoustic façade specifications shall be produced through detailed design.



7.3 Ventilation & Overheating

The above presents solutions to satisfy the proposed internal ambient noise limits within dwellings during normal ventilation conditions where windows are closed but ventilators or MVHR systems, to meet Part F minimum ventilation requirements, are operational.

The Acoustics Ventilation and Overheating – Residential Design Guide (AVO) provides guidance regarding noise and overheating. At this stage a level 1 assessment of the site has been carried out to establish the “risk categories” for each of the proposed building façades.

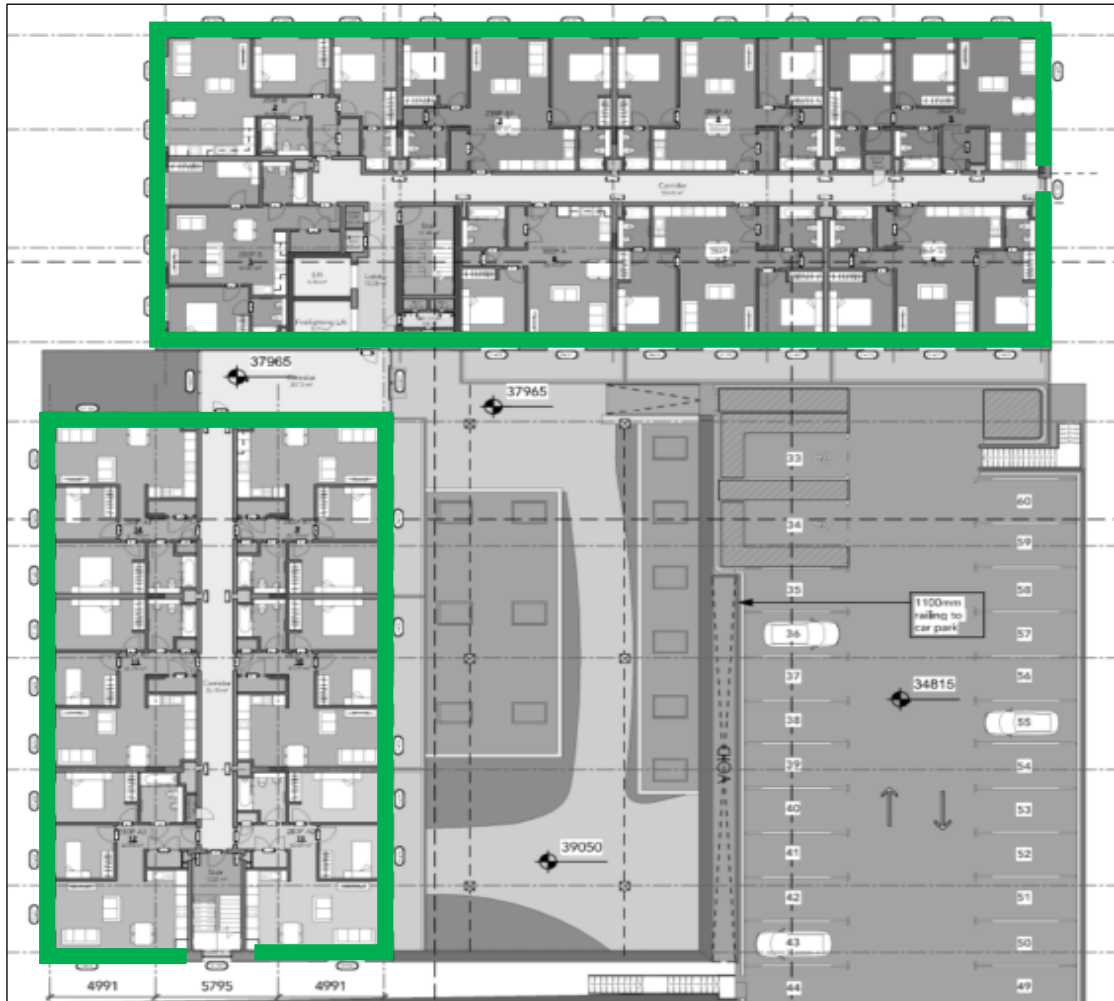
The table below sets out the risk categories and provides guidance as to whether opening windows as a means of overheating control would be suitable.

Incident Day-time Noise Level $L_{Aeq,16h}$	Incident Night-time Noise Level $L_{Aeq,8h}$	Incident Night-time L_{AFMax}	Risk Category	Comments
Below 50 dB	Below 45 dB	Does not normally exceed 58 dB ¹	Negligible	Opening windows likely suitable
50 dB to 55 dB	45 to 49 dB	-	Low	
55 dB to 65 dB	49 dB to 55 dB	-	Medium	Level 2 Assessment Recommended
Above 65 dB	Above 55 dB	Normally Exceeds 78 dB ²	High	Level 2 Assessment Recommended Opening Windows Unlikely Suitable

¹External L_{AFmax} noise level not normally exceeded more than 10 times a night. This is considered to be the SOAEL ventilation design case when considering opening windows as a means of background ventilation.

²Not normally exceeded absolute night-time maximum events should be calculated in-line with the paper *Assessing L_{max} for residential developments: the AVO Guide Approach*. This is considered to be the SOAEL overheating design case when assessing opening windows as a means of overheating control.

Based on the above and the calculated noise levels across the site the following mark-ups have been produced which show the risk categories across each façade of the proposed development.



Mark-up Showing AVO Risk Categories on Building Façade

Based on the above the site falls into the negligible or low categories and opening windows as a means of overheating control should be suitable for all facades across the site. Therefore, a Level 2 assessment in line with the AVO should not be required.

8.0 MUGA Noise Assessment

8.1 Overview

The southern façade of the proposed development lies approximately 50m north of the 2No existing Multi Use Games Areas (MUGA's), both of which are part of Didsbury High School. As such, noise egress from the sports pitches to the proposed development needs to be considered.

Our assessment considers a worst-case scenario for which both of the MUGA pitches are used simultaneously. We understand the outdoor sports areas will be used during school hours only (approximately 09:00-17:00 hrs).



8.2 Operation & Source Noise Levels

For our assessment, we have assumed the MUGA pitches to be used during sports classes lasting approximately 1 hour.

Activity noise from the MUGA is likely to include shouting, whistle blowing, or impact noise from kicking a ball. *Sport England* offer guidance on typical noise levels from MUGAs in *Artificial Grass Pitch (AGP) Acoustic – Planning Implications (August 2015)*, which states:

“A typical free-field noise level from an AGP (at 10m from the sideline halfway marking) = 58 dB $L_{Aeq}(1 \text{ hour})$ ”

8.3 Baseline Noise Levels

The following table presents the noise levels measured during typical school hours (ie 09:00 – 17:00) for use in later assessments.

Time Period	Ambient Noise Level, $L_{Aeq,16hr}$ (dB)	Typical Lowest $L_{A90,15min}$ Sound Pressure Level (dB)
Typical School Hours (09:00 – 17:00)	52	42

8.4 Predicted Incident Noise Levels

The following table compares the predicted incident noise levels (based on source noise levels of 58dB at 10m, as discussed in 8.2) with the WHO design target as referenced in the SfE Guidance Artificial Grass Pitch (AGP) Acoustics – Planning Implications, and existing ambient noise levels incident at the nearest noise sensitive receptors:-

Predicted Incident Noise Level $L_{Aeq,1hr}$ (dB)	SfE/WHO Target $L_{Aeq,1hr}$ (dB)	Existing Ambient $L_{Aeq,16hr}$ (dB)
47	50	52

Our assessment indicates that activity noise from the proposed MUGA pitches incident at the nearest noise sensitive receptor should not exceed the WHO/SfE design target or the existing typical ambient $L_{Aeq,16hr}$ during periods of MUGA activity.

In addition to the above, it is useful to consider the change in typical 1-hour ambient noise levels during periods of MUGA activity. The following table demonstrates the predicted change in L_{Aeq} noise level at the nearest noise sensitive receptors due to the operation of the MUGA:-

Contribution from MUGA $L_{Aeq,1hr}$ (dB)	Typical Existing $L_{Aeq,16hr}$ During School Hours (dB)	Predicted Cumulative Incident Noise Level (dB)	Change in Typical $L_{Aeq,1hr}$ (dB)	Significance (dB)
47	52	53*	+1	Minor Impact (Borderline)



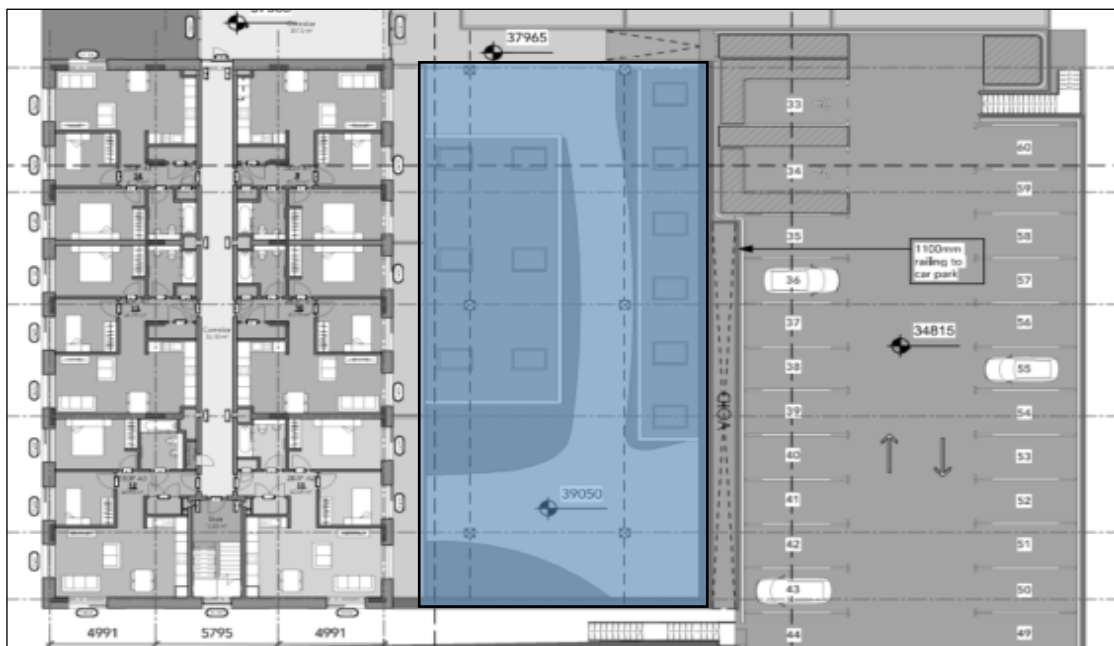
It can be seen above that our assessment indicates a perceptible change in L_{eq} noise levels and a potential Minor Impact incident at the nearest noise sensitive receptors during periods of MUGA activity.

Based on the above, we would propose that no specific mitigation measures should be required to mitigate noise from the existing sports pitches.

9.0 External Amenity

It is understood that a rooftop amenity space located on the First Floor is proposed. The rooftop area is facing into the carpark of the proposed development as is screened from the main noise sources in the area. A plan showing the location of the proposed external amenity area is provided overleaf.

Calculations indicate that noise levels on the rooftop area should be below proposed criterion of 55 dB L_{Aeq} and therefore is in-line with the requirements of Manchester City Council.



Mark-up Showing rooftop amenity space

10.0 Fixed Plant Noise Emissions

10.1 Normally Operating Plant

On the basis of the aforementioned acoustic standards and guidance we propose that the following plant noise emission criteria be achieved incident (ie free-field) at nearest noise sensitive residential window with all plant associated with the proposed development operating simultaneously.



These limits are based on the noise levels measured in Position A as this position is near the noise sensitive premises directly adjacent to the site.

Period	Cumulative Plant Rating Level $L_{A,T,r}$ (dB)
Daytime (07:00-23:00)	37
Night-time (23:00-07:00)	30

Noise shall be assessed in accordance with BS 4142:2014 with corrections applied for any plant emitting noise of a tonal or irregular quality. Emergency plant items (e.g. standby generators, smoke extract equipment) should be subject to more relaxed criteria.

The above limits shall be subject to the final approval of Manchester City Council.

It is likely that the following noise control techniques would be implemented as part of the inherent design of the development:

- Enclosing noisy plant within the building envelope;
- Selecting suitably quiet 'low noise' plant;

10.2 Emergency Plant

For emergency equipment, e.g. generators, the noise output during an emergency would be inconsequential provided they do not compromise the audibility of fire alarms in all private/public outdoor spaces.

Maintenance testing should be schedule for weekday daytime (office) hours only and limited to only brief periods of operation (ie no more than 30 minutes). During these brief periods, a noise limit of 55 dB L_{Aeq} at the nearest on- or off-site residential window would be considered reasonable, which would correspond with typical daytime ambient noise levels in the area.

11.0 Commercial Unit Noise Breakout

11.1 Overview

The following section presents preliminary guidance on the commercial space proposed as part of the development. A detailed review shall be carried out at as the design progresses and the exact use/intended operation for the ground floor unit is finalised.

The control of noise output from the commercial unit should be secured with suitable wording and detailed acoustic noise limits set within tenant's handbook, the Local Planning Authority may also wish to secure this with a condition of planning. Any such condition must be mindful of tenant's responsibilities to manage noise levels where appropriate.



11.2 Primary Care Unit Area – Noise Transfer to Above

The ground floor of the development is understood to be used for a medical centre. Noise transfer through the separating floor structure (and associated flanking paths) from the ground floor units to first floor apartments shall be considered through design.

Assuming typical office use, achieving the minimum criteria in ADE should be sufficient between the Primary Care Unit and residential areas.

Suspended floors between non-residential spaces and apartments (and between adjacent non-residential spaces) will comprise 240 mm in-situ concrete slab. This in conjunction with a ceiling within the primary care unit would provide a sound insulation performance of at least $D_{nTw} + C_{tr}$ 45 dB.

11.3 Primary Care Unit Area – Noise Break-out

With regards to noise break-out MCC request that noise egress from any commercial unit is 5 dBA below the typical background noise level. As such, for this site the day-time noise egress level would be L_{Aeq} 37 dB.

We understand that the following constructions to be as follows:

Building Element	Construction
Wall	Facing brickwork on SFS frame with 2No plasterboard internal linings
Glazing	4mm / 6mm / 4mm double glazing.

Notwithstanding the above we understand that the ground floor spaces could be naturally ventilated, and the windows could be open from time to time. As such, our assessment considers the worst-case scenario of the windows being open and activities taking place inside the ground floor areas.

To inform our assessment of noise generated by a, we have considered historical noise levels measured from similar venue previously undertaken by Hann Tucker. These are considered to be representative of worst-case noise levels. Typical noise levels are detailed below.

Description	Estimated Worst-case Reverberant Noise Levels (dB $L_{eq,1hr}$) at Octave Band Centre Frequency (Hz)							dBA
	63	125	250	500	1k	2k	4k	
Busy Concourse	55	66	60	59	59	59	62	67

We have assessed noise breakout to the nearest receptor highlighted below based on the noise levels provided above to provide a sufficiently robust assessment.



Based on standard calculation procedures for reverberant noise breakout and source noise levels above. The resultant noise level for the daytime has been calculated using the following equation.

$$SPL_{out} = SPL_{in} - SRI + 10\log_{10}\left(\frac{S}{r^2}\right) - 14$$

Where:

SRI estimated sound reduction performance of façade element

r distance from radiating element to receptors

S approximate area of radiating element

For the purposes of the above assessment the limiting factor would be the open window. We have assumed that any open window would have a SRI of 0 dB and an area of 0.5m². Based on the above typical SRI values for the external wall, the noise egress calculations are detailed below.

[illegible]



Given the intended use as a doctors surgery, it is very unlikely that activity noise source levels would be as high as 67 dBA in practice. However, the above shows that the levels of noise egress would be significantly below the day-time criteria even if internal noise levels were 67 dBA.

Based on the above, noise break-out from the ground floor unit should be easily controlled given the intended use.

12.0 Car Park Noise Impact Assessment

12.1 Decked Car Park Noise Levels

Hann Tucker has undertaken our own noise survey to assess the noise levels associated with the use of a multi-storey car park. The site selected to conduct the survey was chosen on the basis that the construction is very similar to the car park proposed as part of this development. The car park had multiple levels and is open at the sides.

Attended noise measurements were undertaken between 15:00 hours and 16:00 on Wednesday 30th November 2022 in order to establish noise levels associated with car parking 'events'.

The noise levels measured during this survey are presented below for reference and are considered to be reverberant noise levels.

Event	Duration (Seconds)	Specific Sound Level (dBA) at 5m
Car entering car park	10	60
Car manoeuvring into space	15	58
Car exiting car park	10	60

12.2 Open Air Car Park Noise Levels

Historical noise levels measured of private vehicle movements in an open air car park undertaken by Hann Tucker Associates are presented in the table below. Whilst some vehicles will be of a different class (vans, motorcycles) cars will undoubtedly dominate the vehicle count.

Event	Duration (Seconds)	Specific Sound Level (dBA) at 5m
Car entering car park	10	56
Car manoeuvring into space	15	54
Car exiting car park	10	56



12.3 Assessment Overview

In the absence of any specific information regarding the potential number of vehicles using the car park associated with the proposed development, we have calculated the maximum permissible number of events consistent with maintaining a noise rating level equal to or less than the prevailing background sound level at the most affected off-site residential receptors on Clearwater Drive located approximately 16m from the proposed car park (see assessment location below).



In addition to the off-site receptors, consideration has also been given to the most affected on-site receptor. Namely the bedrooms of the development that directly look out onto the carpark. The most affected window within the development is 5.6m from the nearest parking bay. It is worth pointing out that only 8No parking bays are within the 16m of the on-site receptor and the average distance between the carpark spaces and the onsite receptor is 25m.

Our assessment has been based on historic noise level data collected within carparks to judge the significance of potential noise impacts on nearby dwellings.

12.4 Assessment Considerations

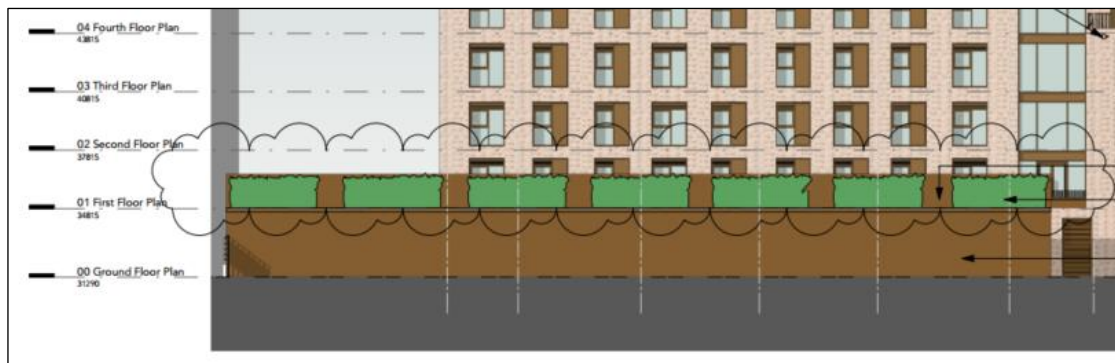
Our assessment of noise impact from the proposed carpark has been based on the following assumptions/considerations:-

- For daytime (07:00-23:00), we have determined the maximum permissible parking “events” that can occur within a single one-hour assessment period before the limits are likely to be exceeded.
- For night-time (23:00-07:00), we have considered the maximum permissible parking “events” that can occur within a single 15-minute assessment period before the limits are likely to be exceeded.
- A parking “event” would comprise a car arriving onto site and manoeuvring/reversing



into the parking space.

- Given the context of the site acoustic features could be audible. As such a 3 dB correction will be applied to the specific noise level.
- Noise levels within the underground carpark are considered to be reverberant noise levels. As such, when the noise egress has been calculated at 6 dB reduction has been taken to account for the correction between an internal diffuse field and an external free field.
- The east façade of the carpark has circa 1.7m high solid aluminium screens on level. This would serve to acoustically screen the cars parking close to the screen from the properties on Clearwater Drive. However, as the apartments on Clearwater Drive are higher than the carpark, not all of the cars will be fully screened. As such, to provide a robust assessment, no losses for screening have been taken into account. However, in practice some will be provided.
- On the lower level is a perforated panel which would serve to visually screen the carpark from the nearby off-site receptors, however, would provide any acoustic screening.
- An image of the east elevation is provided below for reference:



Proposed East Elevation

12.5 Assessment

The results of our calculations are summarised in the table below which show that 100 individual parking events would be permissible with an hour period during the day and 4 individual parking events would be permissible during any 15-minute period during the night.

Receptor	Time Period	Max. No of Events (Per assessment period)	Calculated Noise Level, L_{A1Tr} (dB)	Noise Rating Limit, L_{A1Tr} (dB)	Excess Over/Under Limit (dB)
Off-site open air	1 Hour Period During the Daytime	100	42	42	0
	15 Minute Period During the Night	4	35	35	0



Receptor	Time Period	Max. No of Events (Per assessment period)	Calculated Noise Level, L _A Tr (dB)	Noise Rating Limit, L _A Tr (dB)	Excess Over/Under Limit (dB)
Off-site internal	1 Hour Period During the Daytime	60	42	42	0
	15 Minute Period During the Night	3	35	35	0
On-site open air	1 Hour Period During the Daytime	115	42	42	0
	15 Minute Period During the Night	5	35	35	0
On site internal	1 Hour Period During the Daytime	N/A*	N/A*	N/A*	N/A*
	15 Minute Period During the Night	N/A*	N/A*	N/A*	N/A*

The ground floor carpark is full screened from the on-site residential receptors. As such, there should be no impact from this area of the carpark on these receptors.

The table above indicates that a significant amount of parking events would be required to exceed the proposed limits. Given that the proposed site has 64 parking spaces and would typically be used during the daytime only, it is unlikely that the maximum possible number of events would be exceeded and therefore, noise generated by carpark use should not be problematic for this site.

13.0 Conclusions

In line with current ANC and IOA guidance relating to the practicality and reliability of baseline sound level surveying and the provision of sound & noise impact assessments, Hann Tucker have estimated the existing noise climate within the vicinity of the proposed development site through:

- Reviewing nearby Planning Application to establish if a noise survey has been carried out in the vicinity of the site
- A noise model of the proposed site based on information available from the Department for Transport and the Ordnance Survey.

The acoustic requirements of local planning requirements and current industry guidelines have been reviewed and used to inform an assessment of environmental noise sources affecting the proposed residential properties.

Our assessment indicates that acceptable internal noise levels should be achievable through the appropriate selection of critical façade elements.

Openable windows may not be relied upon as a means of background ventilation, however, an alternative ventilation strategy is being offered in the form of MVHR systems. Openable



windows to provide overheating control should be acceptable on all facades.

An assessment of the potential noise impact of the use of the MUGA pitches been undertaken based on historic noise data and usage information.

The rooftop amenity spaces are well screened from the nearest noise source by the proposed building massing and calculations indicate that noise levels on the rooftop area should be below proposed criterion of 55 dB L_{Aeq} .

Noise emissions from the proposed carpark have also been considered. Calculations indicate that noise associated with cars parking should not be problematic for this site.

Noise emission limits have also been set for new items of fixed plant related to the development.

Appendix A

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 <i>T</i> (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, <i>T</i> .
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

Joint Guidance on the Impact of COVID-19 on the Practicality and Reliability of Baseline Sound Level Surveying and the Provision of Sound & Noise Impact Assessments



Joint Guidance on the Impact of COVID-19 on the Practicality and Reliability of Baseline Sound Level Surveying and the Provision of Sound & Noise Impact Assessments

By the Association of Noise Consultants [ANC] and the Institute of Acoustics [IOA]

Introduction

The level of concern across the United Kingdom in relation to the spread of the COVID-19 means that there is now forced or self-imposed home working, along with restricted travel arrangements encouraged or enforced by the Government.

With regard to the provision of Sound and Noise Impact Assessments, many Members of the ANC and IOA, are finding their normal work practices impacted, such that even where opportunities to work from home exist, it will not be 'business as usual'. Nevertheless, there will be a continuing requirement to maintain as far as possible the standard of our working practices, and also to maintain the flow of acoustic reporting which has an important role in the fabric and functioning of society. Acoustic reports are utilized for many purposes including to assist planning applications, the discharge of planning conditions and the implementation of Building Regulations. Continuing to provide high quality acoustic reporting in a timely manner for scrutiny by regulators and decision makers will allow the important aspects of planning to continue to move forward to support our society in the longer term beyond this national emergency.

As the responsible bodies, the ANC and IOA are keen to ensure that it is 'business as usual', as far as is practicably possible and responsible; not only to support continued on-going financial stability for our members, but also for the myriad strands of society that rely on our reports and input to projects. With the limitations on travel for all, we recognize that there will have to be changes to the manner in which acoustic monitoring and reporting is carried out (both how much and where). We have, therefore, recommended below some changes in working practices in the production of such reports. In so doing, it is still important to minimize uncertainties in surveying and to select appropriate baseline conditions, in a clear and transparent way. Furthermore, by good communication between those preparing the reports and those that will be reviewing them, the planning process (and other relevant processes) will be able to continue as smoothly as possible, without what could be a delay of many months.

We consider that by implementing these measures the provision of Sound and Noise Impact Assessments will be able to continue in a timely manner.

Competence

Appropriate sound level surveying should always be designed to obtain data which is representative of normal conditions, whilst taking account of variations in sound levels due to, for example, fluctuations in transportation traffic flows and industrial output. Acoustics professionals are skilled in understanding the effects of such variations and, therefore, check that results are representative and conclusions technically robust, so that clients and decision-makers can come to well-informed judgements.

In these more uncertain times, where sound level climates may be affected by changing work patterns, school closures, etc. it is more important than ever that where surveys are undertaken, and the results assessed, these are done by suitably qualified professional acousticians.

Baseline Sound Level Measurements

The COVID-19 outbreak presents new challenges in obtaining representative baseline sound levels because typical road, air and rail transport usage have been reduced by travel restrictions and social distancing measures. Other sound sources may also be affected – for example, due to changes in operating patterns at industrial and commercial premises. However, other approaches can be taken to establish an appropriate robust estimate of baseline conditions, such as using existing data (for example, from previous local surveys and noise maps) or undertaking baseline sound predictions. These approaches can be supplemented by additional limited on-site sound level measurements, as necessary. Each of the possible options will need to be reviewed on a case-by-case basis, in order to identify the most appropriate approach, assessing the level of uncertainty and including this information in the reporting. Most importantly at this time, before progressing with surveying, there should be discussion of the intended approach with the relevant regulating authority.

Methodology

For some projects there will be similar challenges when determining the sound levels associated with the development. Where possible, site visits to understand the sound environment will assist the professional in understanding the sources contributing to the sound environment, and where these may not be typical due to current circumstances. Any such site visits would need to comply with any restrictions on movement and ensure that social distancing is embedded within the site visit methodology.

For transport schemes, there may be a heavier reliance on predicted sound levels to describe the baseline conditions, with a corresponding need to source flow/activity data. There are now many sources of transport data available and these should be used, where possible, as an alternative to, or to augment direct site measurements to describe baseline conditions.

Where sound from existing facilities is needed to inform future noise levels, or where it is the existing sound that is being assessed, enquiries will be needed to understand whether or not the facility is running as normal. Discussions with other operators may be needed to understand whether nearby facilities are operating normally, and whether any changes might affect sound emissions. Examples may include where the BS4142 methodology is being used to assess the impact from an industrial / commercial facility following complaints, or where existing machinery needs to be measured to use as a reference for predicted future levels.

The acoustics professional will need to consider whether alternative sources of information in respect of sound levels can reasonably be used. Where appropriate, a case should be made regarding why any alternative methods are suitable for a robust assessment, and should clearly set out the estimated uncertainties in the assessment. In a small number of cases (most likely those relating to investigation of complaints), professional judgement will be needed as to whether the assessment can go ahead straightaway, or whether it would be prudent to wait until conditions are more representative of normal activities.

As with the determination of baseline conditions, discussions with the relevant regulators, who may be able to provide vital local knowledge, will be key.

Liaison with Regulators and Decision Makers

Liaison between acoustics professionals and relevant regulators is especially important during this period where environmental sound climates may vary from representative conditions. It is recognised that sites should be assessed on a case by case basis. A pragmatic approach may be needed with regard to the information required for planning applications and/or the discharge of planning conditions. Having said that, it will continue to be important that such assessments remain robust, and follow current good practice.

One outcome may be that supplementary information will be required at a later date or controlled by condition to allow planning authorities to maintain momentum in the planning system during this period.

Summary

In summary, we are experiencing extremely unusual conditions but yet, it is essential that we continue to exercise our professional skills diligently and cope with these changed circumstances. The advice contained in this guidance is not new, and all professionals have probably had to cope previously with unusual circumstances from time to time in their day to day life. It is just that, at the moment, every day presents an unusual situation.

It is important that decision making and associated development continue, including the planning process and the discharge of planning conditions. But it is also important to avoid poor decisions being made because the highest standard of acoustic assessment was not maintained during these challenging times.

The Association of Noise Consultants

The Institute of Acoustics

23rd March 2020

Appendix C

Local Authority Liaison

Jake Howarth

From: [REDACTED]
Sent: 29 January 2021 15:14
To: Jake Howarth
Cc: [REDACTED]
Subject: Re: 28562 - Didsbury Point - Noise Assessment Methodology

Hi Jake

My EH colleague has reviewed your email and methodology and is fine with the approach you set out.

Kind regards

Rob Griffin
Principal Planner
Development Management South
Planning, Licensing and Building Control
Growth and Development Directorate
Manchester City Council
PO Box 532
Manchester
M60 2LA

[REDACTED]

[REDACTED]

From: Jake Howarth [REDACTED]
Sent: 29 January 2021 11:10
To: Robert Griffin [REDACTED]
Cc: [REDACTED]
Subject: 28562 - Didsbury Point - Noise Assessment Methodology

Hi Robert,

I hope this email finds you well? I'm working on the Didsbury Point scheme in Manchester and I have been given your contact details by Buttress Architects.

I'm getting in touch with you see if you or your colleagues at Environmental Health have any comments on our proposed noise assessment methodology for the scheme. We have set out our proposed methodology below and would welcome any comments you or Environmental Health may have.

In light of the COVID-19 restrictions which have reduced traffic on surrounding roads and caused school closures, the noise levels at the site may be atypical and carrying out a noise survey now will unlikely be representative of the noise levels once the restrictions are lifted.

To address this we propose the following:

- Undertake a noise survey at the site to establish background noise levels with a view to setting plant noise limits for new plant items.
- Develop a 3D model of the site to calculate the noise levels from nearby roads. We will use data provided by the Department for Transport for this.
- Review nearby planning applications which contained a noise assessment and compare our measured/modelled results with the results of previous noise survey carried out by others. We note an assessment was carried out in relation to Didsbury High School which will be very useful considering the school will likely be closed why we carry out our noise survey.

As with all assessments we undertake in Manchester, we will use the MCC Planning & Noise Technical Guidance Note (2015) for all relevant criteria.

Kind Regards

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Consultants in Acoustics Noise & Vibration

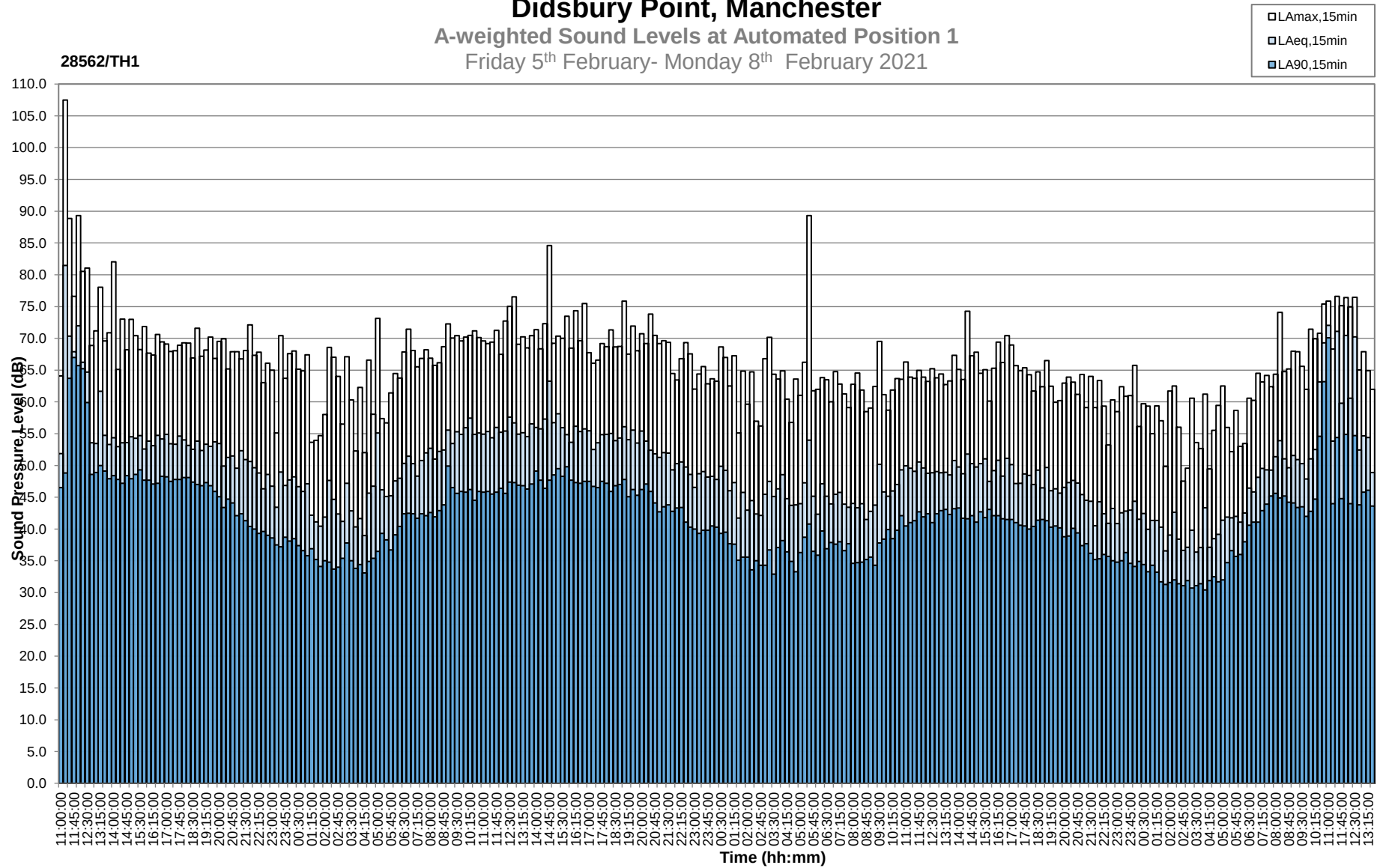
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Appendix D

Time History Graphs

Didsbury Point, Manchester
A-weighted Sound Levels at Automated Position 1
Friday 5th February- Monday 8th February 2021



Didsbury Point, Manchester
A-weighted Sound Levels at Automated Position 2
Friday 5th February- Monday 8th February 2021

