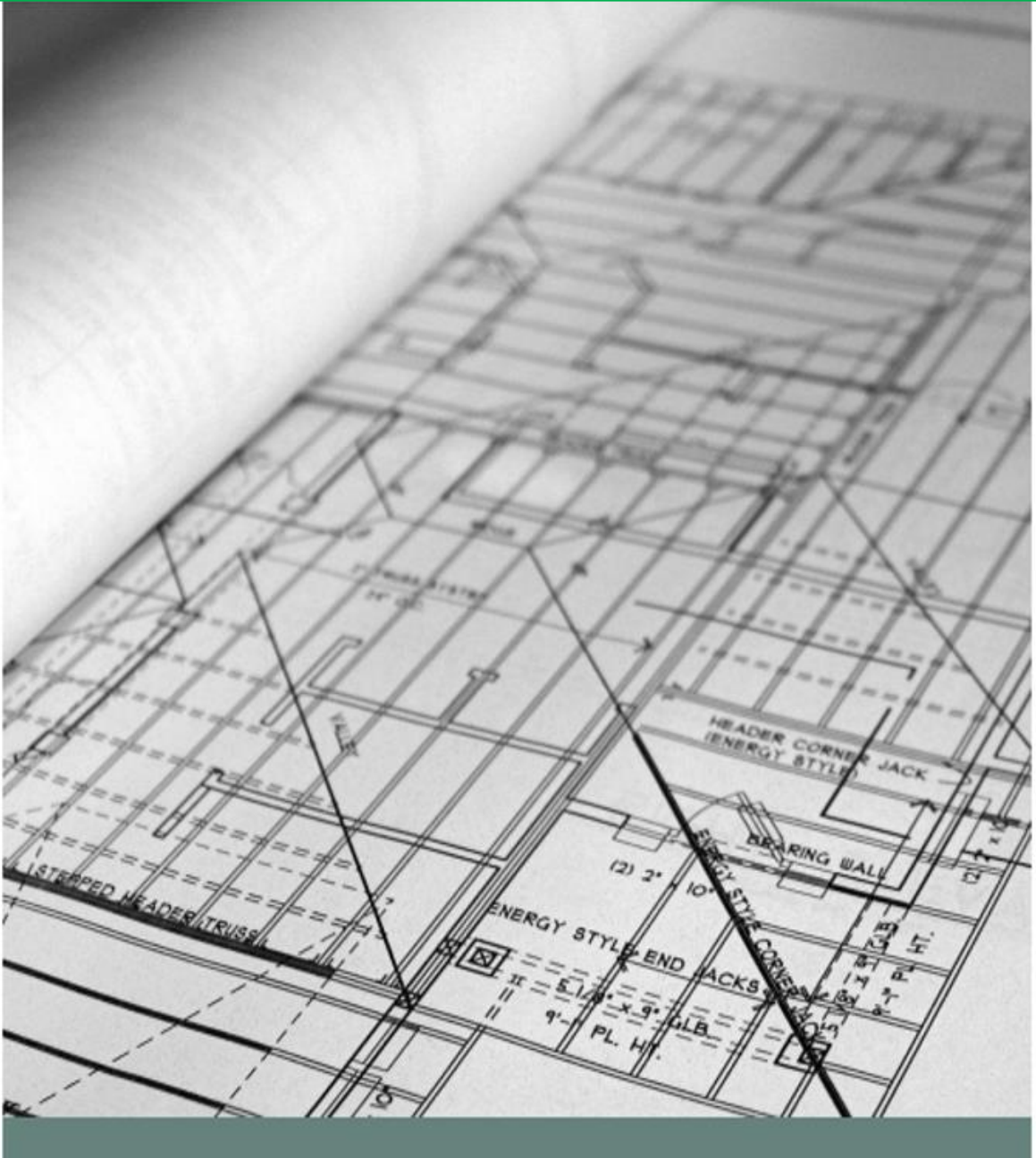




Central Air and Sound Testing

ENVIRONMENTAL NOISE ASSESSMENT

215a Bury Old Road

Prestwich

M25 1JF

CLIENT:

Mr Simon McGuinness

DATE:

16TH May 2023

Acoustic Survey undertaken by:

N Bagley CCENM CCBAM Institute of Acoustics

Checked P Richardson CCENM

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1. INTRODUCTION

Central Air and Sound Testing have been appointed to undertake an Acoustic Noise Assessment, to satisfy the planning requirements for the Bury Council , local Planning Authority (LPA) In relation to an application for prior approval for proposed change of use from commercial (class E) to 2 no flats (class C3) on the first and second floors at 215a Bury Old Road Prestwich. Planning Application 11937227

This assessment specifically addresses the LPA concerns regarding noise emanating from a restaurant next door to the proposed development. The Lime Tree, 213 Bury Old Road

(Please see email comments below)

Reference email from Bury Local Planning Authority (LPA)

“We have some concerns regarding noise emanating from the restaurant next door, and the effect this will have on the proposed development, for example, excess levels of noise could be produced from the extraction units, loud customers

Therefore, we recommend that suitable noise investigation shall be conducted “

Central air and Sound Testing have conducted an Environmental Noise survey in accordance with guidance from British Standard BS 8233, BS 4142 and Sound insulation measurements in buildings BS EN 140-7 1998, to assess if noise, from the operation of running the restaurant business would affect the future wellbeing of the occupants, of the proposed development.

This assessment is taken in accordance with the National Policy Planning Framework (NPPF) The Noise Policy Statement for England (NPSE) THE National Policy planning guidance (NPPG) including British Standard 4142 and ISO 140-7.

2. LEGISLATION & GUIDANCE

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

- The National Policy Planning Framework (NPPF),
- The Noise Policy statement for England (NPSE).
- The National Policy Planning Guidance (NPPG).
- British Standards BS 8233: 2014 Guidance on sound insulation for buildings.
- BS4142: Methods for rating and assessing industrial and commercial sound.
- The world health authority (W.H.O) Guidelines for community noise.

The National Policy Planning Framework states the following with respects to noise.

- Avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of a development.
- Mitigate and reduce to a minimum other adverse impact on health and quality of life arising from noise from new development, including through the use of conditions.
- Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
- Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

Noise Policy Aims

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

: The NPPF noise aims widely reflect those in NPSE. The NPSE does however include some context within the explanatory note to assessing noise impact and uses established concepts from toxicology currently being applied to noise impacts, these include:

1) NOEL– No Observed Effect Level.

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

2) SOAEL– Significant Observed Adverse Effect Level.

This is the level above which significant adverse effects on health and quality of life occur.

3) **LOAEL**– Lowest Observed Adverse Effect Level.

This is the level above which adverse effects on health and quality of life can be detected.

Noise Policy statement for England and National Planning Guidance

The NPSE has stated that the impact of noise be classified according to an “effect level” Shown in the previous table (Table A).

The National Policy Planning Guidance (NPPG) has clarified what this effect level above means in terms of its perception by people at receptors and what action should be taken.

(See Table A below).

Table A **The National Policy Guidance Noise Exposure Hierarchy**

Perception	Examples of Outcome	Increasing Effect Level	Action
Not noticeable	No effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and / or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum.
		Significant 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

British Standard 8233:2014

(Guidance on Sound Insulation and Noise Reduction for Buildings)

The latest version of BS 8233 adopts guideline noise values provided in WHO and 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.

	Location	Desirable Internal Ambient Noise Levels	
		07:00-23:00	23:00-07:00
Resting	Living Rooms	35dB LAeq,16hour	-
Dining	Dining Room /Areas	40dB LAeq,16hour	-
Sleeping (Daytime Resting)		35dB LAeq,16hour	30dB LAeq 8hour

Note 1: the above provides recommended levels for overall noise in the design of a building. However, 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: 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.

Note 3: 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.

Note 4: The levels detailed in the table above are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise and are not appropriate in all locations. Where atypical external noise levels are measured (i.e. high levels of traffic during certain times of the night) an appropriate alternative assessment period (e.g. 1 hour) and an assessment of individual night time events in terms of SEL or LAmax, F may be more suitable.

For Outdoor living spaces BS 8233 States For traditional external amenity areas such as gardens and patios. The Standard states that it is “desirable” that the external noise does not exceed 50 dB LAeq,T with an upper guideline value of 55 dB LAeq,T. However, it is also

recognised that these guideline values are not achievable in all circumstances where development is desirable in more noisier environments a compromise between elevated noise level and other factors, such as the convenience of living these locations or making efficient use of buildings or land resources may be warranted. In these situations, development should be designed to achieve the lowest practicable levels but should not be prohibited.

World Health Authority (W.H.O) Guidelines for Community Noise.

These guidelines entitled “Guidance for Community Noise”; were approved by the World Health Organisation and consider guideline values for annoyance in the community. These have been set at 50 or 55 dBA, representing daytime levels below which a majority of the adult population will be protected from becoming moderately or seriously annoyed, respectively.

See below an extract of Table 4.1 from Section 4.4 Guideline values for community noise in specific environments.

Specific Environment	Critical Health effect (s)	LAeq (dB)	Time base (hours)	LA max fast (dB)
Outdoor Living Area	Serious annoyance, daytime and evening Moderate annoyance, daytime and evening	55 50	16 16	- -
Dwelling, indoors Inside bedrooms	Speech intelligibility and moderate annoyance daytime and evening. Sleep disturbance, night-time	35 30	16 8	45
Outside bedrooms	Sleep disturbance, window open (outdoor values)	45	8	60

The guidelines also suggest that; “At night, sound pressure levels at the outside façades of the living spaces should not exceed 45 dB LAeq and 60 dB LAmx, so that people may sleep with bedroom windows open. These

values have been obtained by assuming that the noise reduction from outside to inside with the window partly open is 15 dB.” LAeq for daytime is for 16 h and for night-time 8h. It is also noted that the WHO suggest “where a development is deemed necessary or desirable despite external noise levels above recommended guidelines, the internal LAeq target levels may be relaxed by up to 5dB and reasonable internal conditions still achieved.

British Standards BS 8223 is based on the WHO Guidelines, and as can be seen, has similar values.

British Standards BS 4142:2014

The BS 4142 is a standard which describes a method for assessing whether a specific noise from an industrial or commercial source i.e., Extract fans, Air conditioning units is likely to give rise to complaint from residents of the adjacent dwellings the specific noise levels are determined outside dwellings.

The specific noise level is determined for a reference time period of 1hour daytime (7am-11pm) and 15mins night-time (11pm-7am).

Tonal or impulsive characteristics of a noise are likely to increase the scope for complaints and this is taken into account by adding a value to a specific noise source level to obtain a rating level. The value may be between 0 and 15dB depending on objective and subjective measures detailed in the standard.

BS 4142 Requires that the rating level of a noise source is compared with the existing difference between the rating level and the background noise.

- A difference of 0dB is indicative of a “minor impact”.
- A difference of +5dB is indicative of an “adverse impact”.
- A difference of +10dB is indicative of a significant “adverse impact”.

BS4142:2014 states, “Response to sound can be subjective and is affected.

by many factors, both acoustic and non-acoustic. The significance of its impact, for example, can depend on such factors as the margin by which a sound exceeds the background sound level, its absolute level, time of day and change in the acoustic environment, as well as local attitudes to the source of the sound and the character of the neighbourhood.

This British Standard describes methods for rating and assessing sound of an industrial and/or commercial nature.

3. SITE DETAILS

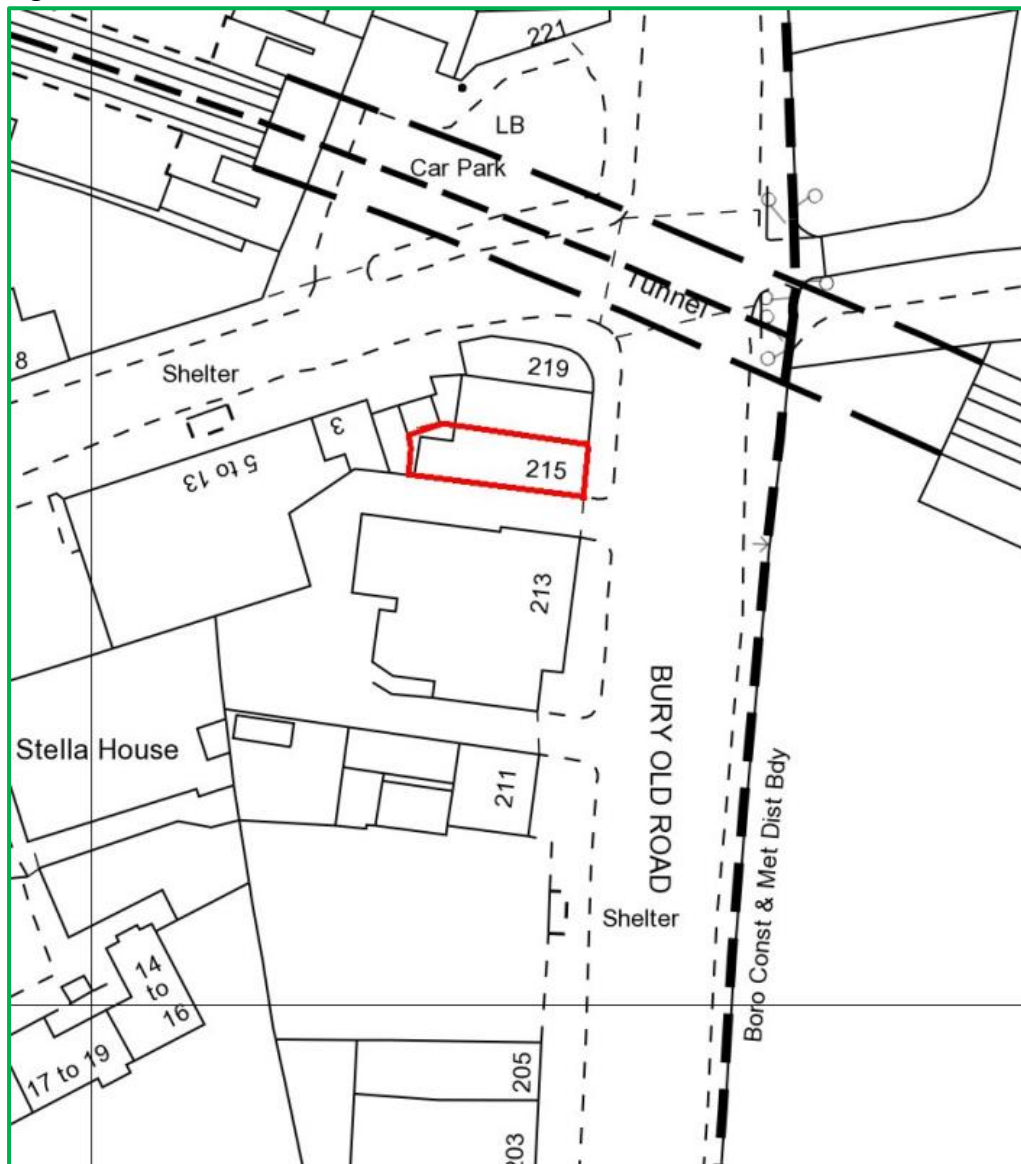
The proposed development is located off Bury Old Road, a busy link road near the town of Prestwich in the metropolitan Borough of Bury, Greater Manchester it is situated adjacent to Heaton Park, a large public park covering a recreational area of over 600 acres.

Bury old Road contains a mix of shops, with fast food takeaway businesses, estate agents, restaurant's, offices and residential houses and flats all located around the immediate area of the proposed development.

Historically the upper floors of the proposed development 215a Bury Old Road, has been used for residential purposes, but converted the into commercial office space some time ago, with shop frontage on the main road. The applicants now wish to re-establish the upper floors for residential use, retaining the commercial office space below.



Fig 2 site Location



4.Environmental Noise Survey

Methodology

BS 8223 Unattended Noise Survey.

The site was visited at 10am on Friday 12th May 2023 and sound meters set up to record noise data over the weekend, specifically when the restaurant, next to the proposed development would be busy with customers .

Measurements were recorded over 2x 24-hour periods to assess average continuous noise levels.

Noise monitoring equipment was set up in locations (1) & (2) to obtain noise data from all aspects of the development. 1 metre from the façade

Noise Levels were recorded in 15-minute samples to determine equivalent continuous A weighted sound level in dB of the Leq and LA90 and Lmax.

Weather over the weekend was mild and dry with a slight s/sw breeze wind speed 2.7m/s.

(Time history Graph shown located at end of this report)

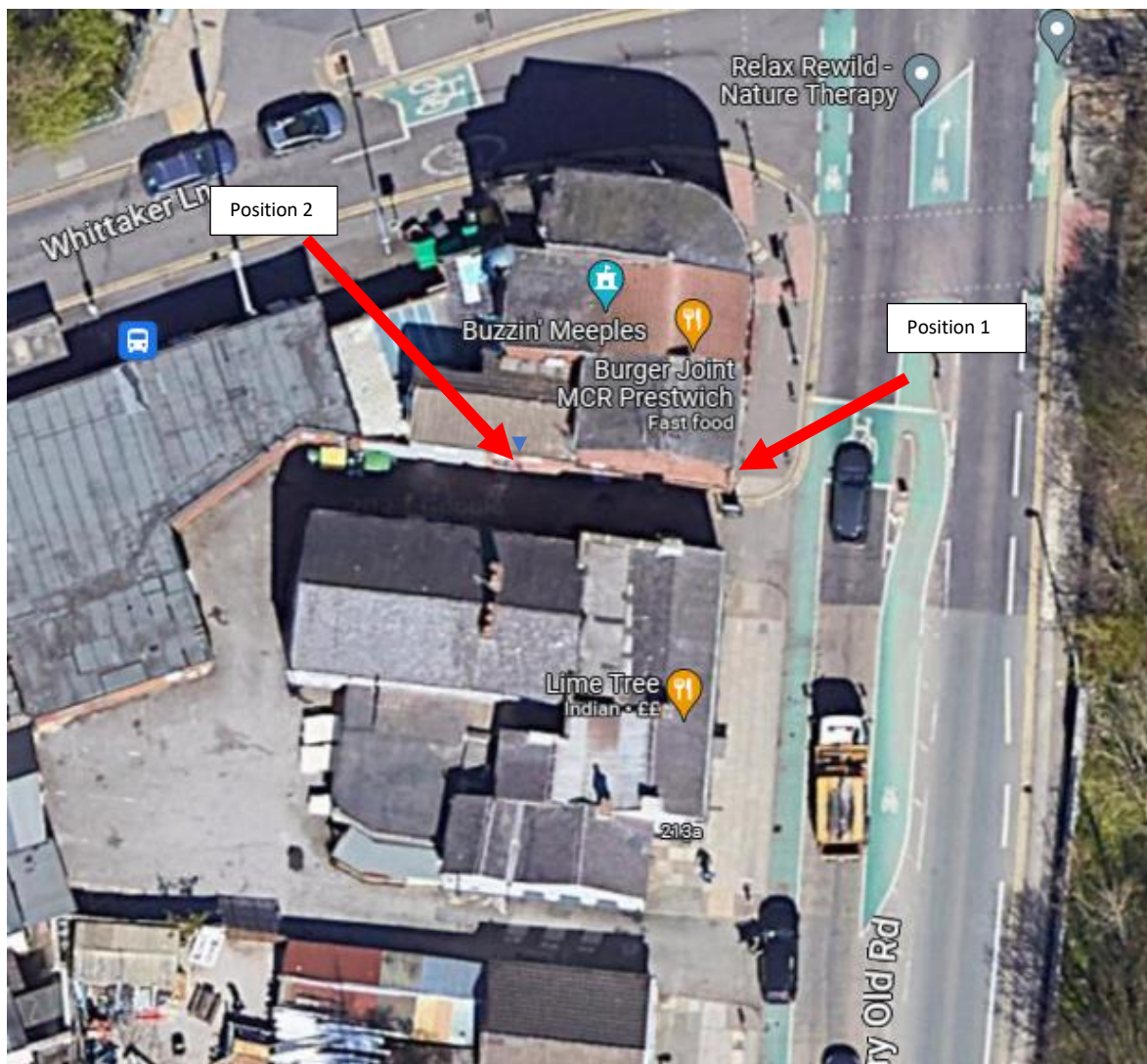
Temp 9-16 degrees Celsius

The Sound meter has been fully laboratory calibrated within the past 12months and field calibrated before and after the survey. No significant drift was noted for this report (Not more than +/- 0.1dB)

Equipment used.

NTI XL2 Sound Meter Class 1

NTI Sound Calibrator Class 1



Results

Below is a summary of the results taken time averaged. (dB)

Position	Daytime (07.00-23.00 hrs)		Night-time (23.00-7.00 hrs)		
	LA eq 16hr	LA90	LAeq 8hr	LA90	LAmx
1	58	52	52	47	76
2	55	48	50	46	75

Calculated internal noise levels based on a 15dB sound level reduction allowance for open windows.

Positions	Calculated internal Noise Levels (dB)	
	Daytime LA eq, 16h	Night-time LAeq,8h
1	43	37
2	40	35

Internal noise levels Targets.

Activity	Location	Desirable Internal Ambient Noise Levels	
		07:00-23:00	23:00-07:00
Resting	Living Rooms	35dB LAeq,16hour	-
Dining	Dining Room /Areas	40dB LAeq,16hour	-
Sleeping (Daytime Resting)		35dB LAeq,16hour	30dB LAeq 8hour

Based on the above assessment the internal target levels would not be achievable when the windows are open

Therefore, an alternative means of ventilation is required. The ventilation path should be chosen such as Dnew Value which is 10dB higher than the $R_w + C_{tr}$ value of glazing.

Calculations follow BS 8233 procedures and consider the proposed flats, room, and window dimensions, as per design drawings. Sound insulation calculations have been carried out in order to specify the minimum sound insulation performance of windows and ventilators.

The calculation for solid elements (including glazing) is based upon,

$$L2=L1-R+10\log (ST/0.16V) +3$$

L2 is internal noise level.

L1 is the external noise level.

R is the sound reduction index

S is rea in m²

T is reverberation time in seconds

V volume of the room in m³

Calculation for ventilator open elements

$$L2=L1-D_{ne}+10\log (A_0/A) +3$$

D_{ne} sound level difference of the ventilator according to BSEN 20140-10 1992

A₀ is reference absorption area in 10m² at all frequencies.

Minimum Sound Insulation requirements

Position	Glazing (R _w +C _{tr})	Ventilator (D _{new})
Front	31dB	46dB
Rear	20dB	31dB

Below are suggested examples to achieve the required internal noise levels based upon the sound path for each element including wall; glazing; and ventilation. If necessary, the sound insulation value for certain elements can be adjusted to assist reaching the required internal noise levels. Other glazing and ventilation systems may be suitable, provided the required internal noise levels can be met.

Element	Description	Sound Reduction index.R (SRI BS EN ISO 140) at Octave Band Frequency (Hz)				
		125	250	500	1k	2k
Front & Rear Façade (Glazing)	Pilkington 4mm/16m/4mm	21	20	25	38	37

Glazing sound Level index figures

Element	Description	Dn,e at Octave Band Centre frequency Hz				
		125	250	500	1k	2k
Front & Rear Façade Trickle Ventilator	Acoustic ventilator AK80 Passivent	37	32	34	46	52

The above are examples are for guidance, the trickle ventilator and glazing examples should be capable of achieving the quoted SRI Figures.

Ventilation & Overheating

In most cases overheating is avoidable with good design, and the fact that comfort levels are subjective.

On overheating and ventilation, British standard BS 8233;2014 advises the following.

“The building regulations supporting documents on ventilation recommend that habitable rooms in dwellings have background ventilation. Where openable windows cannot be relied upon for this ventilation, trickle vents can be used and sound attenuating types are available. However, windows may remain openable for rapid or purge ventilation or the occupant’s choice.”

“However, it is also recognised that 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 to 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.”

The best way to avoid overheating is to consider this subject at the early design stage and to minimise internal heat gains when necessary. The requirements should be designed to provide purge ventilation and to not cause noise levels to significantly exceed the Noise Rating requirements, this can be achieved with the use of various methods.

- The correct use of thermal mass i.e. Insulation of walls and ceilings.
- Solar rated Glazing
- Micro Heating controls
- Cooking ventilation considerations
- Natural ventilation
- Installing Blackout Blinds, shades or shutters
- Providing cross ventilation where available
- Combi boilers would avoid the need for hot water storage.
- Use of cooler low voltage LED lighting vs Halogen

The subject of overheating can be a complex matter, large towns and cities are often 7-8 degrees warmer, than smaller towns and villages and the fact that personal heating comfort is very subjective.

Notwithstanding the above, Central Air & Sound Testing have presented solutions to satisfy the proposed internal ambient noise levels within a dwelling during normal ventilation conditions when windows are closed but ventilators are in operation to meet Part F minimum ventilation requirements.

Outdoor Space

The design drawings, indicate there is no allocated outdoor living space attached to the proposed development, Although it may be noted the proposed site is within a 5 min walk to Heaton Park, with vast areas of peaceful natural parkland available to potential occupants of the proposed development.

British Standard BS4142 Impact Noise Assessment

The local planning authority have expressed concerns on noise emitting from the Extraction Fan system connected with the running of restaurant, next door to the proposed development, and if this would possibly disturb future potential residents if planning was granted.

A noise impact assessment was undertaken to assess noise levels from the fixed plant.

Based on protocol from BS4142 assessments noise from fixed plant and machinery.

The restaurant extraction fan is located around 2 metres from the ground and some 5 metres from nearest noise sensitive residential receptor, that being the first-floor window of the proposed development. It was not possible to determine the exact model and manufacturer of the extraction Fan system, but representative acoustic data was implemented, taken from typical high flow commercial extraction fan systems used in many similar restaurant and used in the calculation for this assessment.

Fixed Plant Manufacturer / Model	Sound Power Level (dB)
Helios 560 GBD 345/4/4	61dB

<i>Extraction Fan model Helios 560/4 /4</i>	61dB case Breakout	61
Distance Attenuation	5.9m	-15.5
Feature Correction for tonal features BS 4142	Intermittency	+3
Adjustment for Noise Propagation	-8	-8
Calculated specific sound pressure at receptor		40.5
Lowest recorded LA 90 Background Noise	Night-time (8hr)	46
Difference (dB)	40.5 - 46	-5.5dB

Survey Results:

Specific sound Level corrected. $(40.2 - 46) = -5.5\text{dB}$

Rating Level at Receptor 40.5dB

Background Sound level 46dB

Excess of rating over background sound level $(43.2 - 45) = \text{Difference } -5.5\text{dB}$ BS4142

LOW IMPACT

BS 4142 Requires that the rating level of a noise source is compared with difference between the rating level and the background noise.

- **A difference of 0dB is indicative of a “minor impact”.**
- **A difference of +5dB is indicative of an “adverse impact”.**
- **A difference of +10dB is indicative of a significant “adverse impact”.**

In accordance with BS 4142;2014 Guidance ,

The rating level is an indication of a specific sound source having Low Impact in relation to noise, the lower the rating level is relative to the measured LA90 Background noise, the less likely the specific sound source will have an adverse impact

5. SOUND INSULATION TESTING

As the ground floor of the proposed residential development is to be retained as office space, a sound insulation Test was undertaken to establish the performance level of sound insulation between separating floors between the offices and flats above, this was conducted in accordance with BS EN ISO 140-7).

The floor comprising of 22mm floorboards over 175mm timber floor joists with an independent suspended ceiling comprising of 100mm acoustic quilt 100mm ceiling joists and 2 layers of 15mm acoustic sound bloc plasterboard.

A calibrated NTI xl2 sound meter was used and a single source dodecahedron speaker was used to generate noise to record sound power levels on the opposite partition. Sound readings were taken either side of floor partition to determine the sound level index of the floor.

Acoustic data recordings were taken in various positions to take an average sound level of each room.

Reverberation time measurements and background recordings also taken.

Sound Insulation sound levels requirements BS EN ISO 140-7

Table 0.1a Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne sound insulation sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and stairs	45	62
Dwelling-houses and flats formed by material change of use		
Walls	43	-
Floors and stairs	43	64

XL2 Sound Level Meter: A2A-19318-E0 (M2230: 10055)

Area of common partition: 20.00 m²

Source room volume: 50.00 m³

Receiving room volume: 50.00 m³

Frequency f Hz	DnT 1/3 octave dB
50	---
63	≥ 42.9
80	≥ 48.0
100	≥ 42.9
125	≥ 45.2
160	≥ 43.5
200	≥ 47.7
250	≥ 46.9
315	≥ 44.3
400	≥ 48.0
500	≥ 50.0
630	≥ 52.8
800	≥ 57.6
1000	≥ 58.7
1250	≥ 61.3
1600	≥ 63.6
2000	≥ 64.6
2500	≥ 65.8
3150	≥ 67.6
4000	≥ 67.5
5000	≥ 66.2

≥: 1.3 dB correction applied,
value at the limit of measurement

Rating in accordance with ISO 717-1:

$D_{nT,w}(C;C_{tr}) = 56 (-1; -4) \text{ dB}$

$C_{50-3150} = \text{--- dB};$

$C_{50-5000} = \text{--- dB};$

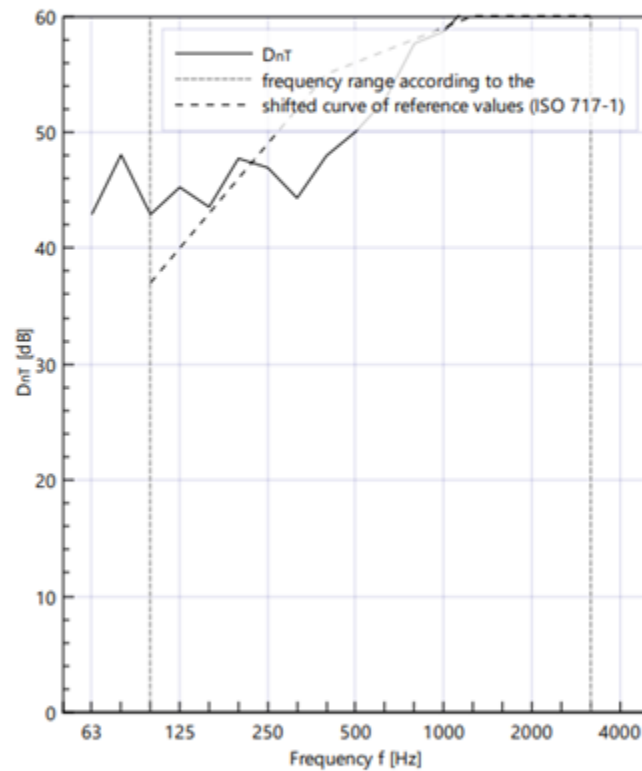
$C_{100-5000} = 0 \text{ dB}$

$C_{tr,50-3150} = \text{--- dB};$

$C_{tr,50-5000} = \text{--- dB};$

$C_{tr,100-5000} = -4 \text{ dB}$

Evaluation based on field measurement using results obtained by an engineering method.



Internal Airborne sound Test Results in accordance with BS ISO 140.7

Result: $D_{nT, w} = 56 (-1; -4) \text{ dB} = 52 \text{ dB}$

6. Results summary

- Results from the British Standard (BS 8233) Environmental Noise assessment have shown that the Internal targets noise levels and overheating requirements can be met using conventional mitigation measures recommended in this report, and indicates the occupants of the proposed development would not receive any unreasonable degree of noise disturbance from activities associated with the adjacent restaurant.
- Results from the airborne sound insulation testing BS EN ISO 140.7 determined the floor partition separating the office and proposed Flats to be sound insulated, In excess of that required for newbuild or refurbished purpose-built dwelling house or Flats as set out in Approved Document Part E 2010 Resistance to the passage of sound.
- Results from the Plant Noise impact Assessment undertaken with guidance from BS 4142;2014 . indicate noise, emitting from the restaurant extraction fan system to be well below the required, plant noise limits at the proposed site, and to be classed as **Low Impact**. indicating no detectable effect on health and quality of life due to noise.
- Uncertainty of the assessment. - The measurements and calculations undertaken for this assessment, were taken under repeatable conditions. Manufacturers data and specification is likely to be robust and the Uncertainty in these results will be considered low.

7. CONCLUSION

Central air and Sound testing have conducted a detailed environmental noise assessment to establish the noise climate around the proposed development site, 215a Bury Old Road.

Based on the measured noise levels obtained, and the recommendations given in this report, appropriate internal noise levels can be met.

Therefore, it is our conclusion that this Noise assessment shows, the proposed development conforms to the National Planning policy requirements, and it is recommended that noise should not be a constraint to the approval of planning permission.

8. EQUIPMENT

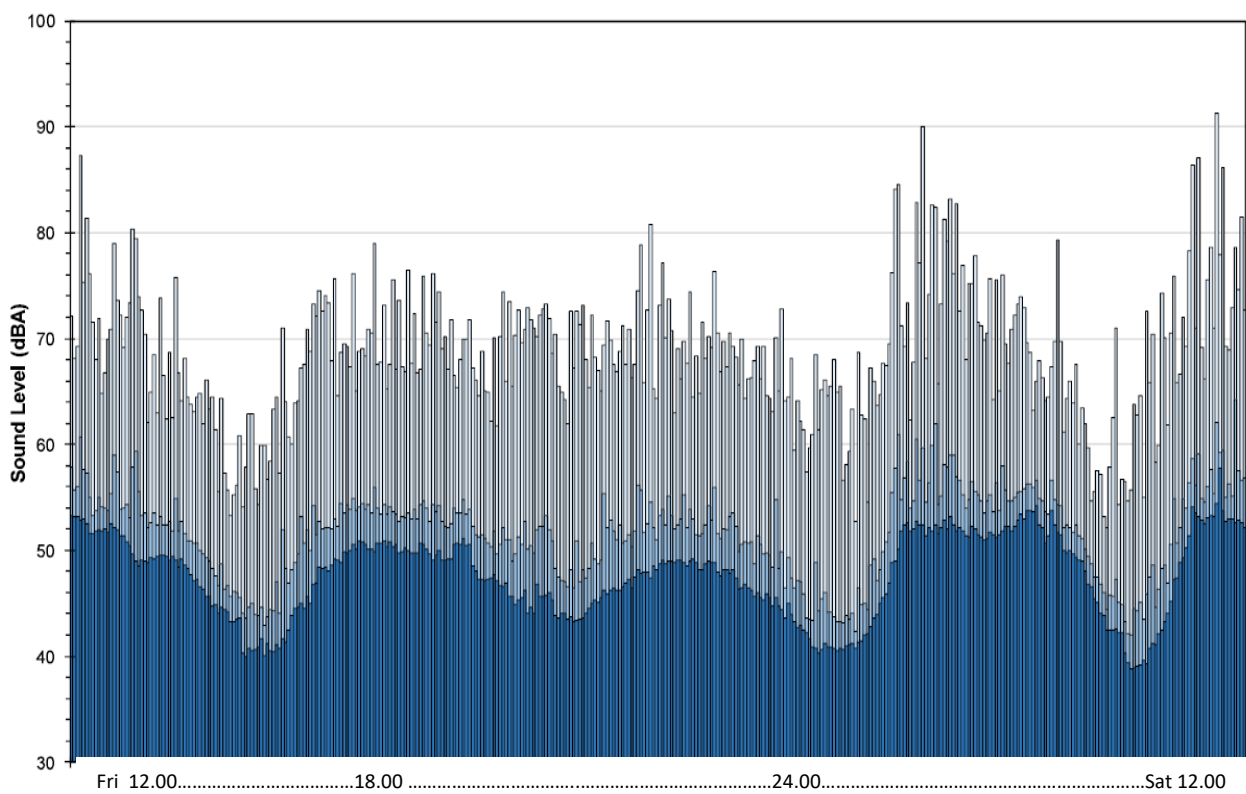
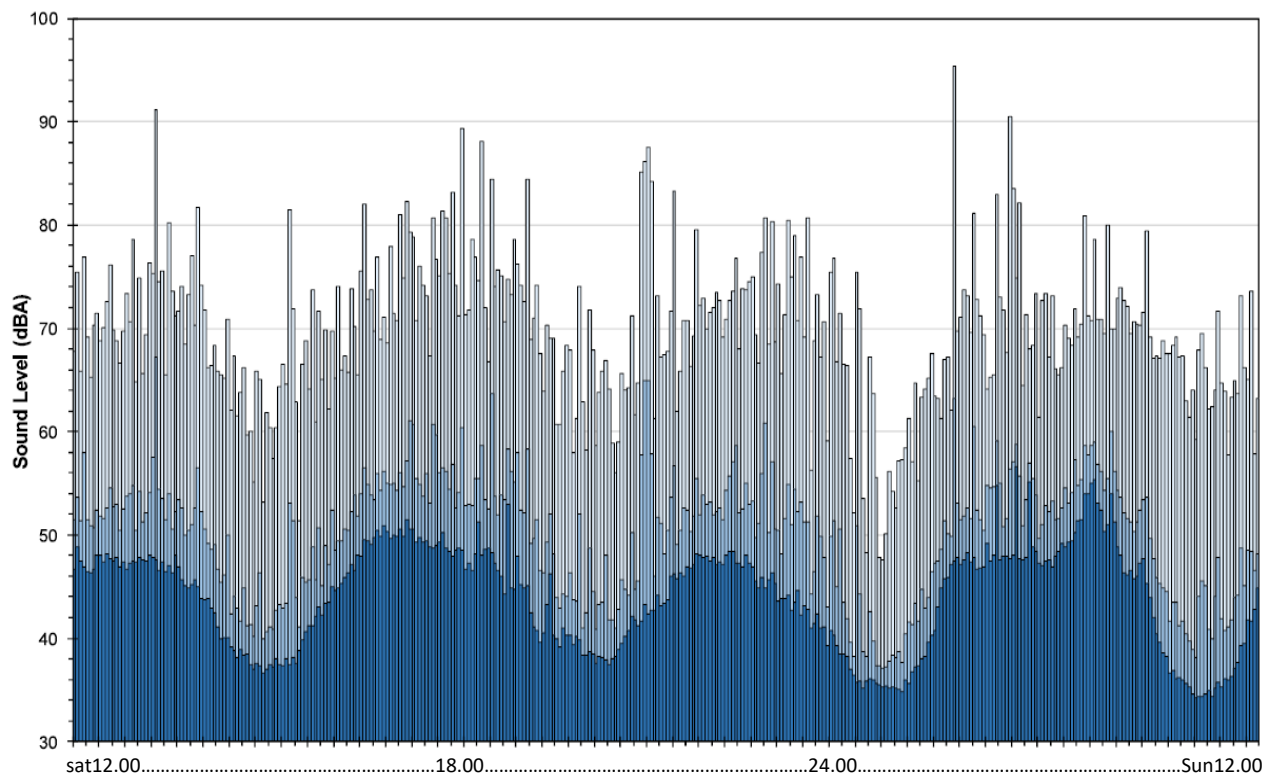
NTI XL2 Class 1 SOUND METER	<u>SERIAL NO 456778</u>	<u>UKAS Calibration Dec 2023</u>
<u>NTI Class 1 MICROPHONE</u>		
<u>NTI Class 1 calibrator</u>	<u>69678</u>	<u>UKAS Calibration Dec 2023</u>

9. Glossary of Terms

Term	Definition
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s_1 and s_2 is given by $20 \log_{10} (s_1/s_2)$. The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is $20 \mu\text{Pa}$.
A-weighting, dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Noise Level Indices	Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so a number of different noise indices have been defined, according to how the averaging or statistics are carried out.
$L_{eq,T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max,F}$	A noise level index defined as the maximum noise level during the period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{90,T}$	A noise level index. The noise level exceeded for 90% of the time over the period T. L_{90} can be considered to be the 'average minimum' noise level and is often used to describe the background noise.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5m
Ambient Noise Level	The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near ($L_{Aeq,T}$).
Residual Noise Level	The ambient noise remaining at a given position in a given situation when specified sources are suppressed to a degree such that they do not contribute to the ambient noise level ($L_{Aeq,T}$)
Specific Noise Level	The equivalent continuous A-weighted sound pressure level at the assessment position produced by the specific noise source (the noise source under investigation) over a given time interval ($L_{Aeq,T}$)
Rating Noise Level	The specific noise level plus any adjustment for the characteristic features of the noise ($L_{Ar,Tr}$).

Data Recorded Friday 12th May Middy - Sunday 14th May Middy

Position1



Position 2