

Create It Studios

Junction Hotel, Rolls Crescent

Acoustic Assessment



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1. Introduction

Peninsular Acoustics have been commissioned by Create It Studios ('the Client') to provide a noise assessment to assist in the discharge of planning condition no. 29 imposed on application no. 126780/FO/2020 submitted to Manchester City Council ("the Local Authority"), for the redevelopment of the former Junction Hotel at, Rolls Crescent, Manchester, M15 5JZ ('the Site'), for the refurbishment and extension of the existing building, as well as the erection of an additional two blocks of flats.

This report is necessarily technical in nature and therefore, to assist the reader, an acoustics glossary is provided in Appendix A.

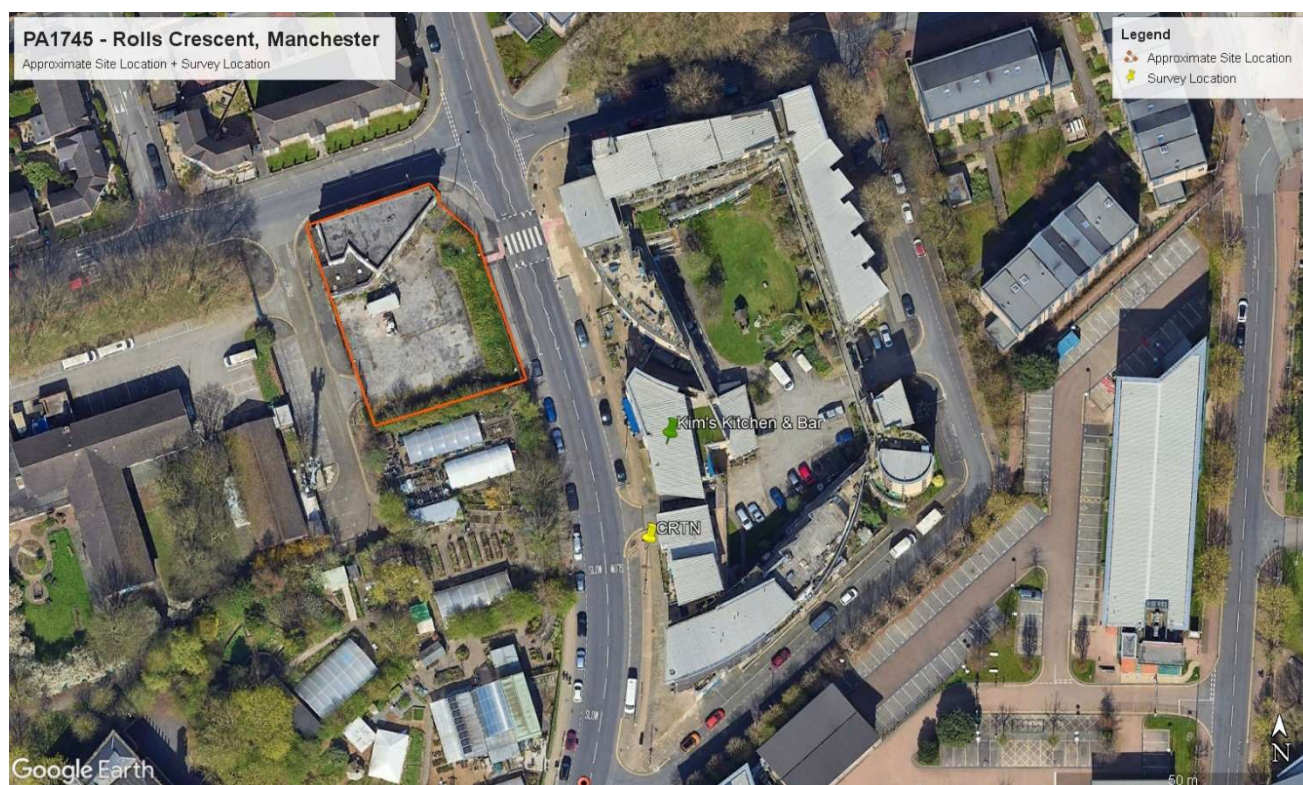
1.1. Site Description

Existing Site

The Site lies within the Manchester ward of Hulme, situated on the crossing between Rolls Crescent and Old Birley Street. It is bound to the north by Rolls Crescent with residential amenity beyond; to the east by Old Birley Street (the primary source of noise impacting the Site) with commercial buildings beyond, including Kim's Kitchen & Bar (a potential entertainment noise source); to the south by further residential amenity and commercial buildings; and to the west by the African Caribbean Care Group.

Figure 1 shows the approximate Site plan and surrounding area.

Figure 1 Site Plan



Development Proposals

Development proposals are for the refurbishment and erection of a second floor extension to the existing Junction Hotel, as well as the erection of two additional blocks of apartments to the rear (for a total of 28 flats proposed at the Site in total), as well as an undercroft car park and four retail units fronting Old Birley Street

Figure 2 Proposed Site Plan (First Floor Layout Shown)



1.2. Scope of Works

This assessment seeks to establish existing sound levels at the Site, and using acoustic calculations, determine the risk of potential impacts from noise on the future occupants and, where necessary, propose suitable mitigation measures, in order to discharge Planning Condition 29. The following scope of works has been undertaken:

- An environmental sound survey has been undertaken adjacent to the Site to determine the prevailing acoustics conditions;
- An acoustic model has been created to predict sound level across the Site based upon the measured sound level data of the existing environment;
- Using the acoustic model, an assessment in accordance with ProPG¹ has been undertaken as follows:
 - **ProPG Stage 1:** Establish the site exposure from road and other noise sources and compare against the initial noise risk categories within ProPG and any other relevant guidance documents;
 - **ProPG Stage 2:** Complete an Acoustic Design Statement, comprising:
 - Element 1: A Good Acoustic Design Process;
 - Element 2: Internal Noise Levels;
 - Element 3: External Amenity Areas; and
 - Element 4: Other Relevant Issues.
- Where required, mitigation measures have been recommended to demonstrate compliance with the guidance contained within the British Standard BS 8233² and AD-F³, in order to satisfy the requirements given within the first part of Planning Condition 29.

¹ Professional Practice Guidance on Planning & Noise, May 2017

² BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings.'

³ The Building Regulations 2010, Ventilation, Approved Document 'F'.

2. Assessment Criteria

2.1. Standards and Guidance Documents

The following standards and guidance documents are relevant to this assessment:

- National Planning Policy Framework (NPPF) 2024;
- Noise Policy Statement for England (NPSE) 2010;
- Professional Practice Guidance on Planning and Noise (ProPG) 2017; and
- BS 8233: 2014 'Guidance on sound insulation and noise reduction for buildings'.

It is assumed that the reader has suitable knowledge of the above documents and therefore, for conciseness only the numerical criteria for the Site are presented below.

Table 1: Numerical Criteria Summary

Location	Daytime 07:00 – 23:00	Night-time 23:00 – 07:00	
	$L_{Aeq, 16hr}$ dB	Ambient $L_{Aeq, 8hr}$ dB	Maximum $L_{AFmax, 2min}$ dB
Living Rooms	35	-	-
Bedrooms	35	30	45

2.2. Planning Condition

Planning Condition 29 is repeated below:

Before the development commences a scheme for acoustically insulating the proposed residential accommodation against noise from the ground floor commercial units and the nearby busy roads shall be submitted to and approved in writing by the City Council as local planning authority. There may be other actual or potential sources of noise which require consideration on or near the site, including any local commercial/industrial premises. The approved noise insulation scheme shall be completed before any of the dwelling units are occupied.

Noise survey data must include measurements taken during a rush-hour period and night time to determine the appropriate sound insulation measures necessary. The following noise criteria will be required to be achieved:

Bedrooms (night time - 23.00 - 07.00) 30 dB L_{Aeq} (individual noise events shall not exceed 45 dB $L_{Amax,F}$ by more than 15 times)

Living Rooms (daytime - 07.00 - 23.00) 35 dB L_{Aeq}

Gardens and terraces (daytime) 55 dB L_{Aeq}

...

Additionally, where entertainment noise is a factor in the noise climate the sound insulation scheme shall be designed to achieve internal noise levels in the 63Hz and 125Hz octave centre frequency bands so as not to exceed (in habitable rooms) 47dB and 41dB, respectively.

Planning Condition 29 also stipulates a verification survey and report further to the completion of development proposals at the Site. This report solely focused on the first part of the condition, and will therefore devise façade design and internal sound insulation measures necessary to protect future occupants from an adverse noise impact.

3. Environmental Noise Survey

3.1. Methodology

Due to site security, an attended survey was conducted between 13:00 and 16:00 on Monday 23rd March 2026 in accordance with the shortened measurement procedure outlined in CRTN⁴.

A single sound level meter (SLM) was setup in the northern part of the Site approximately 6m from the edge of Old Birley Road. The measurement position is shown in Figure 1. A location slightly further south from the Site was chosen, to avoid a pedestrian crossing point which could reduce traffic speeds and result in lower measured sound levels.

3.2. Equipment

Sound levels were measured using a Class 1 SLM housed in environmental protection apparatus. The SLM was field calibrated before and after the survey using a Class 1 calibrator, with no significant drift in calibration levels recorded ($> \pm 0.5\text{dB}$). The equipment was setup in free-field conditions to capture L_{Aeq} , L_{AFmax} , and L_{eq} at a minimum.

Full details of the noise measurement equipment used are available upon request but have been calibrated to traceable standards within the 12 – 24 months prior to the survey being undertaken.

3.3. Observations

During the survey, weather conditions were monitored which showed steady state wind speeds of less than 5 m/s. Additionally, there was no precipitation during the full length of the survey meaning all results are suitable for assessment purposes.

The dominant source of noise was road traffic on Old Birley Road which had heavy traffic throughout the survey period. There was limited road traffic from all other roads adjacent to the Site (i.e. Rolls Crescent) for the full duration of the survey. No other notable sources of noise were observed whilst onsite.

3.3.1. Entertainment Noise

As discussed, the 'Kim's Kitchen & Bar' is situated 30m east from the Site. The opening hours associated with this Site were reviewed, and it was shown it continues operation until circa. 23:30. In order to determine whether any impact from entertainment noise needs to be considered as part of condition 29 assessment, the Site was attended during the evening of Friday 13th March (a Friday evening chosen as a worst-case scenario to account for an increased number of patrons attending bars). These sample measurements are summarised below. Values have been presented from the 63Hz and 125Hz octave bands, in accordance with Planning Condition 29. At no point during Site attendance was any entertainment noise audible, including whilst stood directly outside Kim's Kitchen and Bar. The low frequency results from the CRTN survey detailed in Table 3 have also been summarised, in order to provide a comparison.

⁴ Calculation of Road Traffic Noise, Department of Transport Welsh Office, 1988.

Table 2 Low Frequency Noise Summary

Measurement	Description	Octave Band	
		63Hz	125Hz
CRTN	Low-frequency results from CRTN survey detailed further in Table 3	68 dB $L_{\text{Freq,T}}$	63 dB $L_{\text{Freq,T}}$
Sample 1	Sample measurement taken in evening stood on pavement directly adjacent to Site	69 dB $L_{\text{Freq,T}}$	59 dB $L_{\text{Freq,T}}$
Sample 2	Sample measurement taken in evening stood on pavement directly outside Kim's Kitchen and Bar	65 dB $L_{\text{Freq,T}}$	60 dB $L_{\text{Freq,T}}$

These sample measurements do not indicate any increase in low frequency noise levels arising from Kim's Kitchen and Bar and show results that can be considered broadly commensurate at both locations; additionally, neither location showed low frequency noise levels greater than those measured during the daytime. Consequently, it has been determined that entertainment noise does not impact the Site and has not been considered further. The remainder of this report consequently solely considers road traffic noise.

3.4. Results

The measured sound levels from the survey are provided in Table 3. In lieu of night-time measurements, a maximum sound level has been derived from the dB $L_{\text{AFmax, 2min}}$ levels recorded in the daytime survey period.

Table 3: Summary of Measured Sound Levels, CRTN

Measurement Position	Daytime 07 :00 – 23 :00	Night-time 23 :00 – 07 :00	
	$L_{\text{Aeq, 16hr}}$ dB ^(a)	$L_{\text{Aeq, 8hr}}$ dB ^(a)	$L_{\text{AFmax, 2min}}$ dB
CRTN	63	56	77
(a) Derived from shortened measurement procedure of CRTN.			

4. Initial Assessment

4.1. Acoustic Modelling

An acoustic model of the Site and environs has been generated in Datakustik CadnaA® modelling software. The model was generated to determine noise levels across the Site and noise source emissions have been informed by survey data.

CadnaA® considers various inputs, including topography, buildings, and road noise sources, and calculates sound levels in accordance with national and international standards; in this case, the relevant UK standards are the procedures set out within ISO 9613-2⁵.

The modelling assumptions pertinent to the assessment are: ground absorption set to 0 (hard ground); digital terrain included in the model (Environment Agency, 27th March 2026); buildings set to reflective and 2nd order reflections included in the modelling.

4.2. ProPG Stage 1: Initial Site Noise Risk Assessment

An Initial Site Noise Risk Assessment in accordance with ProPG is presented in Table 4. The sound level contours shown herein are inclusive of the Site as it is presently, including the current building prior to refurbishment, but exclude the proposed development.

Table 4: Initial Site Noise Risk Assessment

Criteria	Daytime	Night-time
Most Exposed Result	64 dB LAeq, 16hr	55 dB LAeq, 8hr
ProPG Noise Risk	Medium	Medium
		
Action	As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated ADS which confirms how the adverse impacts will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development.	

The initial risk assessment shows a medium risk of adverse noise impact at the Site during both the day and the night.

Appendix C shows sound level contours demonstrating the full model output.

⁵ ISO 9613-2 'Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation.'

5. ProPG Stage 2: Acoustic Design Statement

The Stage 1 Initial Site Risk Assessment has identified that the noise risk is **Medium**. As such, this part of the report presents the acoustic design statement which covers the required information to discharge planning condition 29.

5.1. Element 1 – Good Acoustic Design Process

Following a good acoustic design process is an implicit part of planning and noise policy and it is imperative that acoustic design is considered at an early stage of the development control process.

Good acoustic design has been embedded into the orientation and layout of the proposed development, in combination with a number of other considerations as required by planning as follows:

- Design proposals at the Site have been drawn up such that each of the apartments in the new build section are designed such that bedrooms are shielded from road traffic (see Figure 2); and
- Where bedrooms are not situated on this façade, they have been situated setback from the road source or on a façade not directly exposed to road traffic noise, further reducing potential noise impacts.

5.2. Element 2 – Internal Noise Levels

5.2.1. Ventilation Strategy

The standard ventilation strategy is proposed to comprise “whole-house ventilation with continuous extract fans” in accordance with AD-F.

Therefore, all break-in calculations presented herein are conducted on the basis of habitable rooms requiring 4,000 mm² equivalent area for whole-dwelling ventilators.

5.2.2. Façade Sound Insulation

All non-glazed elements will achieve a performance of at least 47 dB $R_w + C_{tr}$ irrespective of whether the façade is part of the refurbishment or new build. In reality, the performance is likely to be substantially higher assuming a blockwork/brick façade and internal plasterboard linings.

Break-in calculations have been undertaken to determine the acoustic performance of the windows and ventilators such that internal acoustic conditions are satisfied. The results of the calculations have shown a need for two mitigation strategies as outlined in Table 5.

Table 5: Mitigation Requirements

Mitigation Ref.	Proposed Glazing System	Proposed Ventilation System
A	4mm glass panel 20mm air gap 4mm glass panel Min. 27 dB $R_w + C_{tr}$	Direct airpath window mounted trickle ventilator
B	6mm glass panel 12mm air gap 10mm glass panel Min. 33 dB $R_w + C_{tr}$	Min. 32 dB $D_{n,e,w} + C_{tr}$

Figure 3 shows the location of required mitigation measures. Where a façade is unmarked, this is an indication that the standard thermal double glazing and non-acoustic window-mounted trickle ventilators shown in ref. A will be sufficient.

Figure 3 Mitigation Requirements



Whilst the first floor layout has been shown here, mitigation requirements will be commensurate with the above across all floors.

As can be seen, the majority of the Site will benefit from the standard mitigation measures shown in reference 'A'. However, where habitable rooms are situated overlooking the nearest road source, the increased performance glazing specifications shown in reference 'B' will be necessary in order to ensure BS 8233 compliant internal noise levels and satisfy the requirements of BS 8233.

Sample break-in calculations, as well as the octave band specifications used to inform them, are provided in Appendix B. However, as there are no tonal elements at the Site, the overall R_w or $D_{n,e,w} + C_{tr}$ values can be targeted for procurement and installation.

5.3. Element 3 – External Amenity Areas

Proposals at the Site do not include for any large external amenity areas. However, certain flats at the new built portion of the Site do include for small external balconies.

With respect to external amenity area noise criteria, BS 8233 states the following:

Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses.

Consequently, it has not been deemed appropriate to assess these boundaries in accordance with BS 8233 or ProPG.

5.4. Element 4 – Other Relevant Issues

There are four retail units proposed on the ground floor, with residential flats situated directly above.

At this stage of the design, the exact floor build-up has not been confirmed. However, the Local Authority produces a guidance document for planning applications where noise is a concern.

With respects to residential development adjacent to commercial sites, the Local Authority guidance document states the following:

Where a planning application includes a proposal to contain a potentially noisy development within the same building as a noise sensitive use or vice versa the noise survey should consider the transfer of noise between the noisy and noise sensitive uses. An example of where this should be considered would be a proposal for a bar or club within the same building as residential properties.

Consultants should demonstrate that the structure of the development will be sufficient to adequately contain the noise generated within the development. In doing so consultants should consider:

- *flanking noise;*
- *structure borne noise;*
- *the overall level of noise (LAeq) generated by the use in question and any tonal or impulsive characteristics that the noise may contain; and*
- *the acoustic properties of the development (including the construction of party floors and/or walls, windows and doors, ventilation systems, and structural columns.)*

At this stage, proposed tenants are not known, and are not expected to be especially noise generative. However, it may be that cafés or other retail outlets may wish to play low level ambient music. As such, to give confidence to the Local Authority that the two opposing uses can coincide, it is recommended that a minimum of a 300mm concrete slab is installed between the retail units and residential units, with an appropriate floor treatment included similar to the following:

- 18mm plywood;
- 45mm acoustic cradle and batten system creating a 70mm cavity with insulation between battens as required (recommended 50mm thickness with a density of 40kg/m³); and
- 300mm thick concrete slab.

The above, or similar construction, should provide an airborne sound insulation performance of at least 60 dB D_{nT,w}, chosen as a robust value to protect future residential occupation from any potential ground floor commercial activity.

6. Conclusions

Peninsular Acoustics have been commissioned by Create It Studios to provide a noise assessment to assist in the discharge of planning condition no. 29 imposed on application no. 126780/FO/2020 submitted to Manchester City Council, for the redevelopment of the former Junction Hotel at Rolls Crescent, Manchester, M15 5JZ, for the refurbishment and extension of the existing building, as well as the erection of an additional two blocks of flats

The assessment of acoustic conditions at the proposed development has been undertaken in accordance with BS 8233 and ProPG.

An attended environmental sound survey was undertaken near to the boundaries of the Site. The results have demonstrated via the Initial Noise Risk Assessment that the Site is of **Medium** risk to noise.

To provide further information to the Local Authority, an Acoustic Design Statement in accordance with ProPG has been provided, with the following key outcomes:

Acoustic Design Statement	
Element #1: Good Acoustic Design Process	The orientation and layout of the proposed development follows a good acoustic design process whereby bedrooms situated on façades screened from noise to achieve sound levels compliant with all relevant national and local policy.
Element #2: Internal Noise Levels	For the majority of the Site, BS 8233 compliant internal noise levels can be ensured with standard window mounted trickle ventilators and thermal double glazing common to the majority of residential development across the UK. However, for the most exposed façades, increased performance acoustic glazing have been specified, due to higher exposure to road traffic noise.
Element #3: External Amenity	The Site does not include for any external amenity areas deemed suitable to assess under BS 8233 or ProPG.
Element #4: Other Relevant Issues	A separating floor build-up to attenuate any potential noise from ground floor commercial units has been included.

The result of this assessment demonstrates that the Site and development proposals are suitable for intended use, and that Planning Condition 29 can be safely discharged.

Limitations applicable to this report are contained in Appendix D.



Appendix A

Technical Terminology



Noise	Typically defined as unwanted, unpleasant or disturbing sound
Frequency (Hz)	The number of oscillations in acoustic pressure per second. It represents the 'tone' of the sound. Often determined in octave bands
Maximum sound pressure level (L_{Fmax})	The maximum or highest sound pressure level measured with a 'fast' time weighting
Equivalent continuous sound pressure level ($L_{eq, \tau}$)	The average of the total sound energy over a specified time period (T). L_{eq} represents the equivalent sound level that a fluctuating source would have compared to a steady source with the same total sound energy over a specific time period. Commonly used as a descriptor of human perception of sound over time.
'A' weighting	Frequency-dependent weighting based on the response of the human auditory system which has been found to correlate well with the subjective response to sound. Denoted by the use of the letter 'A'. For example, dBA denotes an 'A' weighted sound level in decibels, or L_{Amax} denotes an 'A' weighted maximum sound pressure level.
Internal Ambient Noise Level (IANL)	The noise level within a room or enclosed space. Usually determined as an equivalent continuous sound pressure level over a specific time period ($L_{Aeq,T}$, dB)
$L_{night, outside}$	The incident external A-weighted long-term average sound level as defined in ISO 1996-2: 1987, determined over all the night periods of a year, in which the night is eight hours between 23:00 and 07:00.
$D_{n,e}$ / $D_{n,e,w}$	The laboratory tested sound insulation of small building elements, normalised to an equivalent absorption area of 10m ² .
Façade level	The sound pressure level measured close to a building façade that includes contribution from both the incident sound and the sound reflected from the façade. Normally taken to be 3dB higher than the equivalent free-field level, when located at 1 metre from a façade.
Free-field level	A measured sound pressure level that is independent of any contributions due to reflections from nearby surfaces and is therefore representative of the direct path only.
R / R_w	The laboratory tested airborne sound insulation of a building element
Sound insulation	The capacity of a structure to prevent sound from reaching a receiving location. Sound energy is not necessarily absorbed; impedance mismatch, or reflection back toward the source, is often the principal mechanism

Appendix B

Example Break-In Calculations + Mitigation Specifications

Flat 1 Living Room

Internal Noise Break-in					Calculation to BS12354-3:2000							 Peninsular ACOUSTICS		
Project Name	Junction Hotel				Consultant	GM								
Project No.	PA1745				Checker									
Room Name	Flat 1 Living Room				Date	30/03/2026								
Room Details														
Width	8		m	Height	2.4		m							
Depth	4		m	Volume	76.8		m ³							
Façade Area	19.2		m ²	Surface Area	121.6		m ³							
Additional Façade Area	11.1		m ²	Total Façade Area	30.3		m ²							
Area of glass / SRI	11.88	21	27	26	33	39	39	47	41	36	-3	SG 6mm/12mm/10mm BS 8233 'Brick and Block External Wall' Trickle vent with indirect air path		
Area of façade / SRI	18.4	35	40	44	45	51	56	56	56	51	-4			
Vent No. off / D _{se}	1	33	33	33	33	31	32	32	32	33	-1			
Composite Façade Sound Reduction														
Composite SRI		25	31	30	37	43	43	50	45	40	-3			
Measured Incident Sound Level (Free field)														
L _{Aeq} Daytime		63	125	250	500	1000	2000	4000	8000	dB(A)	65	Notes		
Daytime L _{Aeqn} Typical		0700-2300	73.6	66.6	61.6	60.6	58.6	50.6	45.6					
Lp Via Vent			39.7	32.7	27.7	26.7	28.7	25.7	17.7	12.7	32			
Lp via Façade (BS8233:2014)			52.7	39.7	35.5	27.8	21.8	19.5	4.2	4.6	32			
L _{Aeqn} Total			52.9	40.5	36.2	30.3	29.5	26.6	17.9	13.3	35			

Flat 10 Living Room

Internal Noise Break-in				Calculation to BS12354-3:2000									
Project Name	Junction Hotel				Consultant	GM							
Project No.	PA1745				Checker								
Room Name	Flat 10 Living Room				Date	30/03/2026							
Room Details													
Width	4.7		m	Height	2.4		m						
Depth	1.4		m	Volume	15.792		m ³						
Façade Area	11.3		m ²	Surface Area	42.44		m ³						
Additional Façade Area	11.1		m ²	Total Façade Area	22.4		m ²						
Area of glass / SRI	11.88	63	125	250	500	1000	2000	4000	8000	R _w / D _{new}	C _{tr}	5G 6mm/12mm/10mm BS 8233 'Brick and Block External Wall' Trickle vent with indirect air path	
Area of façade / SRI	10.5	21	27	26	33	39	39	47	41	36	-3		
Vent No. off / D _{ve}	1	35	40	44	45	51	56	56	56	51	-4		
		33	33	33	33	31	32	32	32	33	-1		
Composite Façade Sound Reduction													
Composite SRI		24	30	29	36	42	42	49	44	39	-4		
Measured Incident Sound Level (Free field)													
	63	125	250	500	1000	2000	4000	8000	dB(A)	Notes			
L _{Aeq} Daytime	66.6	59.6	54.6	53.6	53.6	51.6	43.6	38.6	58				
Daytime L _{Aeq} Typical 0700-2300													
L _p Via Vent	39.6	32.6	27.6	26.6	28.6	25.6	17.6	12.6	32				
L _p via Façade (BS8233:2014)	52.4	39.5	35.3	27.5	21.5	19.3	3.7	4.4	32				
L _{Aeq} Total	52.6	40.3	36.0	30.1	29.3	26.5	17.7	13.2	35				

Flat 10 Bedroom 2

Internal Noise Break-in				Calculation to BS12354-3:2000								 Peninsular ACOUSTICS	
Project Name		Junction Hotel		Consultant		GM							
Project No.		PA1745		Checker									
Room Name		Flat 10 Bedroom 2		Date		30/03/2026							
Room Details													
Width		3.9		m		Height		2.4		m			
Depth		2.8		m		Volume		26.208		m ³			
Façade Area		9.4		m ²		Surface Area		54		m ²			
Additional Façade Area				m ²		Total Façade Area		9.4		m ²			
Area of glass / SRI		4.86	63	125	250	500	1000	2000	4000	8000	R _w / D _{new}	C _{tr}	4-20-4 BS 8233 'Brick and Block External Wall' Trickle vent with indirect air path
Area of façade / SRI		4.5	21	21	20	33	42	46	39	33	35	-7	
Vent No. off / D _{se}		1	35	40	44	45	51	56	56	51	51	-4	
			33	33	33	33	31	32	32	32	33	-1	
Composite Façade Sound Reduction													
Composite SRI			24	24	23	36	44	48	42	36	37	-6	
Measured Incident Sound Level (Free field)													
			63	125	250	500	1000	2000	4000	8000	dB(A)	Notes	
L _{Aeq} Daytime			66.6	59.6	54.6	53.6	53.6	51.6	43.6	38.6	58		
L _{Aeq} Night Time			52.1	41.6	41.8	50.5	40.1	36.8	36.1	32.6	49		
L _A max Night Time			50.2	46.1	43.1	50.1	60.0	63.5	64.8	67.9	71		
Daytime L _{wa} Typical		0700-2300											
Lp Via Vent			37.4	30.4	25.4	24.4	26.4	23.4	15.4	10.4	30		
Lp via Façade (BS8233:2014)			46.3	39.2	35.2	21.4	12.7	6.6	5.3	6.2	29		
L _{wa} Total			46.9	39.8	35.6	26.2	26.5	23.5	15.8	11.8	33		
Night Time L _{wa} Typical		2300-0700											
Lp Via Vent			22.9	12.4	12.6	21.3	12.9	8.6	7.9	4.4	20		
Lp via Façade (BS8233:2014)			31.9	21.3	22.4	18.4	-0.8	-8.2	-2.2	0.2	18		
L _{wa} Total			32.4	21.8	22.8	23.1	13.1	8.7	8.4	5.8	22		
Night Time Maximum Typical		2300-0700											
Lp Via Vent			21.0	16.9	13.9	20.9	32.8	35.3	36.7	39.7	43		
Lp via Façade (BS8233:2014)			30.0	25.8	23.7	18.0	19.1	18.5	26.6	35.5	36		
L _A max Total			30.5	26.3	24.2	22.7	33.0	35.4	37.1	41.1	44		

Façade Element	Sound Insulation Performance Requirements (dB) in Octave Band Centre Frequencies (Hz)								$R_w + C_{tr}$ (Glazing) $D_{n,e,w} + C_{tr}$ (Ventilation)
	63	125	250	500	1k	2k	4k	8k	
Ventilator	33	33	33	33	31	32	32	32	32
Reference A Glazing	21	21	20	33	42	46	39	33	28
Reference B Glazing	21	27	26	33	39	39	47	41	33

As there are no low-frequency or tonally prominent sources impacting the Site, the weighted value can be classified as the minimum performance requirements.

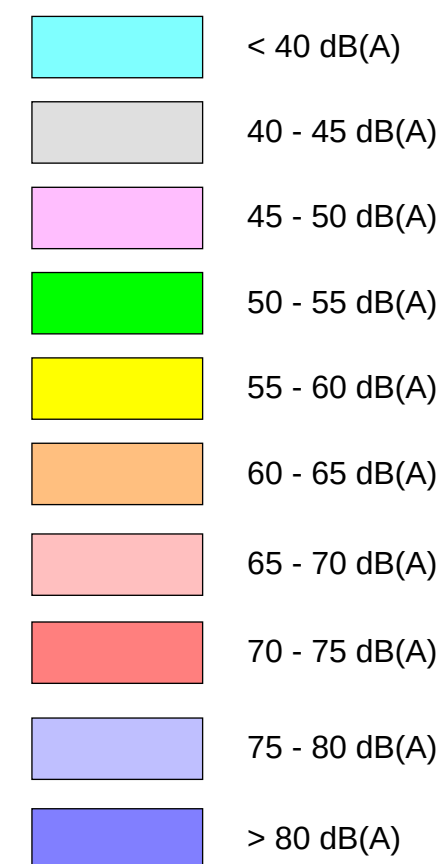
The octave band spectra is included to demonstrate what has been used to inform the break-in calculations.



Appendix C

Sound Level Contours

Sound Level Contour Maps



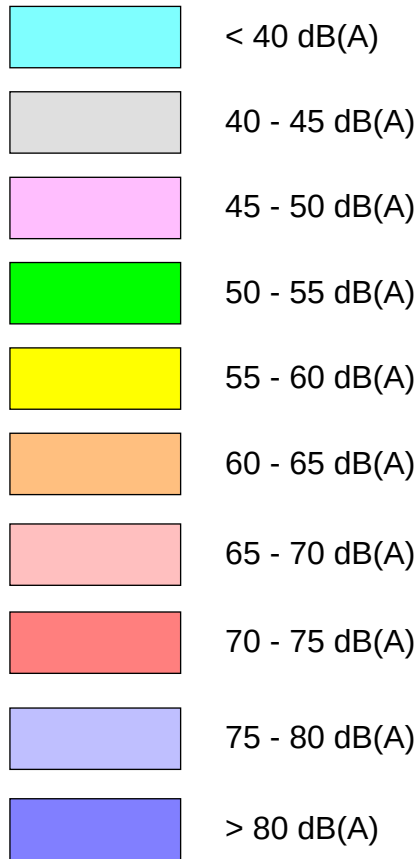
30/03/26	P01	First Issue	GM
DATE	REV	COMMENTS	BY

Project: Junction Hotel Manchester
 Ref: Daytime Ambient Sound Levels
 DWG: PA1745-ACO-001-P01



Notes
 1. Do not scale this drawing.
 2. Sound levels presented as $L_{Aeq, 16hr}$ values.

Sound Level Contour Maps

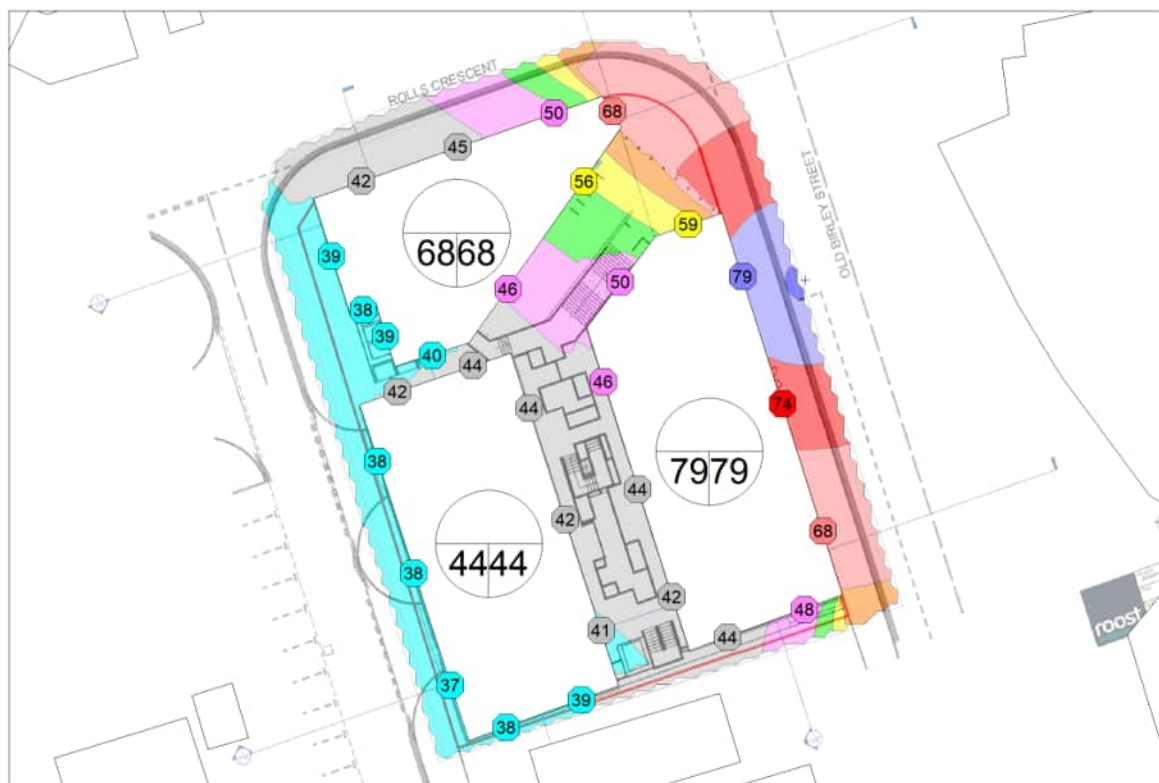
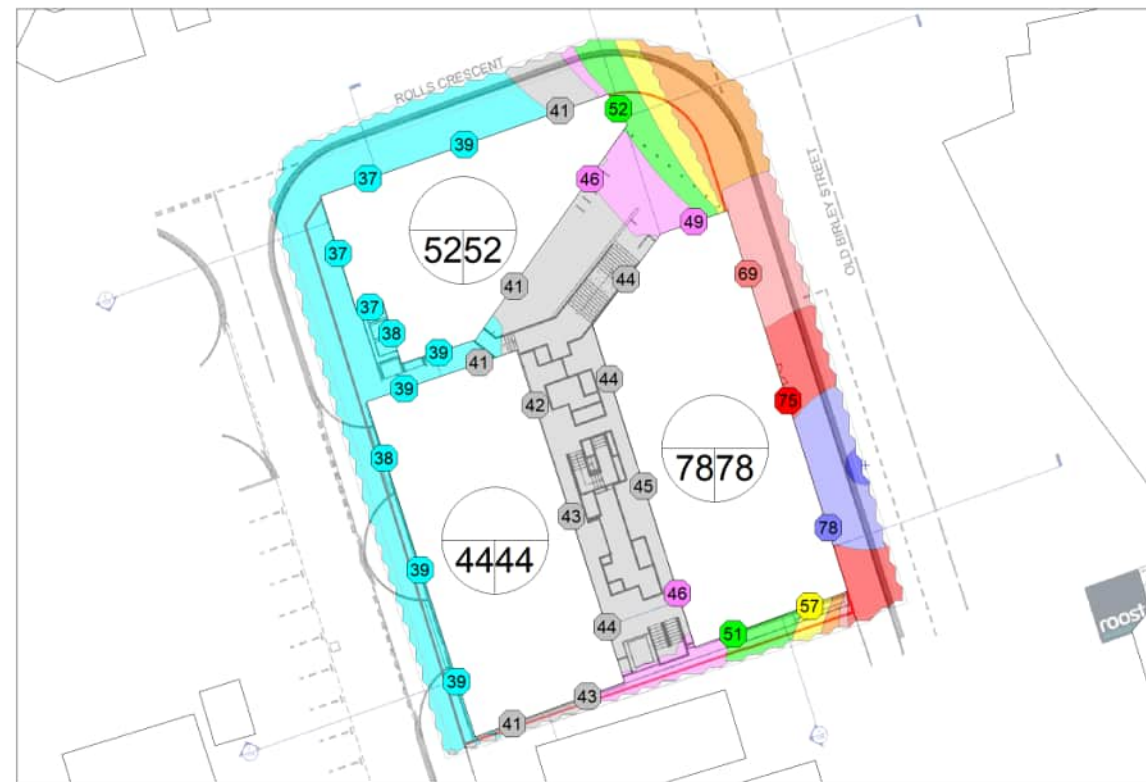


30/03/26	P01	First Issue	GM
DATE	REV	COMMENTS	BY

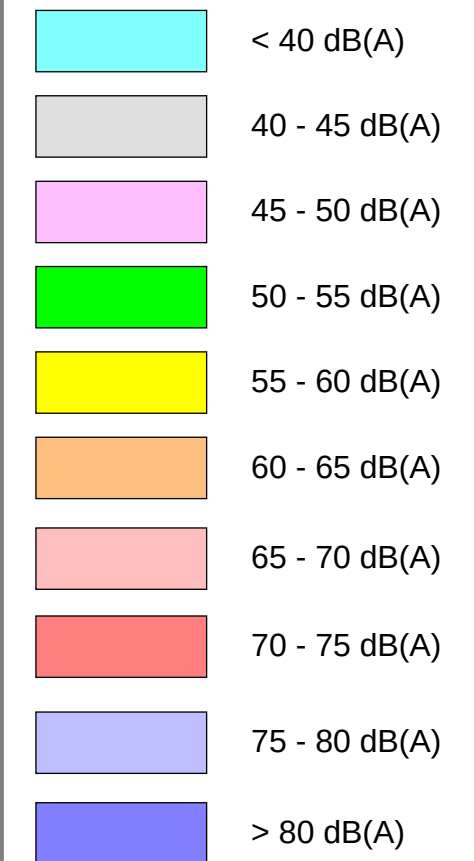
Project: Junction Hotel Manchester
Ref: Night-time Ambient Sound Levels
DWG: PA1745-ACO-002-P01



Notes
1. Do not scale this drawing.
2. Sound levels presented as $L_{Aeq, 8hr}$ values.



Sound Level Contour Maps



30/03/26	P01	First Issue	GM
DATE	REV	COMMENTS	BY

Project: Junction Hotel Manchester
 Ref: Night-time Maximum Sound Levels
 DWG: PA1745-ACO-003-P01

Notes

1. Do not scale this drawing.
2. Sound levels presented as $L_{Amax,2mins}$ values.



Appendix D

Report Limitations

This report has been prepared for the titled project or named part thereof and should not be used in whole or part and relied upon for any other project without the written authorisation of Peninsular Acoustics Limited. Peninsular Acoustics Limited accept no responsibility or liability for the consequences of this document if it is used for a purpose other than that for which it was commissioned. Persons wishing to use or rely upon this report for other purposes must seek written authority to do so from the owner of this report and/ or Peninsular Acoustics Limited and agree to indemnify Peninsular Acoustics Limited for any and all loss or damage resulting therefrom. Peninsular Acoustics Limited accepts no responsibility or liability for this document to any other party other than the person by whom it was commissioned.

The findings and opinions expressed are relevant to the dates of the site works and design drawings/specifications and should not be relied upon to represent conditions at substantially later dates. Opinions included therein are based on information gathered during the study and from our experience. If additional information becomes available which may affect our comments, conclusions or recommendations Peninsular Acoustics Limited reserve the right to review the information, reassess any new potential concerns and modify our opinions accordingly.



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