

Great Places Housing Group

Drake Street, Rochdale

Acoustic Assessment



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1. Introduction

Peninsular Acoustics Limited has been commissioned by Great Places Housing Group ('the Client') to undertake an acoustic assessment for a proposed residential development at Drake Street, Rochdale ('the Site').

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 is located within the town of Rochdale. It is bound to the south by Drake Street and St Albans Street to the north, existing residential properties are situated along both roads as well as two mechanics garages which are bound to the west, one overlooking Drake Street and the other St Albans Street.

An approximate redline boundary is presented in Figure 1.

Figure 1: Site Plan



Development Proposals

The development proposals are for the erection of 26 residential dwellings (one apartment building and a terrace of 4 family houses with associated external works, access, refuse and cycle store).

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.

The following scope of works has been undertaken:

- An environmental sound survey has been undertaken at one position within the Site;
- 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:
 - **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 ;
 - **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.

1.3. 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 in Table 1 below.

Table 1 Numerical Criteria Summary

Location	Daytime 07:00 – 23:00 L _{Aeq} , 16hr dB	Night-time 23:00 – 07:00	
		Ambient L _{Aeq} , 8hr dB	Maximum L _{AFmax} , 2min dB
Living Rooms	35	-	-
Bedrooms	35	30	45 ^(a)
External Amenity Areas	< 55		
^(a) Not exceeded more than ten times per night.			

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. Environmental Sound Survey

2.1. Methodology

A scoping exercise identified that the potential noise sources at the Site were commercial/industrial sound from the mechanics garages and road traffic noise from Drake Street and St Albans Street.

Due to site security, it was not feasible to conduct an unattended acoustic survey. Therefore, attended measurements were undertaken to determine prevailing sound levels, undertaken at one location within the Site

Daytime measurements were captured following the CRTN⁴ shortened method procedure to determine the impact of road traffic noise from Drake Street.

CRTN measurements were taken between 12:00 – 15:00 Wednesday 8th April to measure the $L_{A10,3hr}$ which is subsequently used to calculate the UK noise metrics as outlined in the TRL method⁵.

A second survey was conducted between 06:00-07:00 on Friday 10th April 2026 which measured $L_{AFmax,1min}$ to inform the assessment.

A Sound level meter (SLM) was installed at CM1 located to the south of the Site to establish sound levels from Drake Street situated approximately 7m away from the carriageway edge.

The above measurement position is depicted in Figure 1.

2.2. Equipment

Sound levels were measured using a Class 1 Sound Level Meter (SLM) and associated Windshield. The SLM was field calibrated before and after the survey using a Class 1 calibrator, with no significant drift in calibration levels recorded ($> \pm 0.5dB$). The equipment was setup in free-field conditions to capture L_{Aeq} , L_{AFmax} , $L_{A10,T}$ and L_{A90} .

Full details of the noise measurement equipment used are available upon request but have been calibrated to traceable standards as normally required.

2.3. Observations

2.3.1. Meteorological Conditions

During the survey, weather conditions were monitored which showed no rise to sound levels from prevailing wind speeds. Additionally, there was no precipitation during the full length of the survey meaning all results are suitable for assessment purposes.

⁴ UK Department of Transport, Welsh Office (1988) Calculation of Road Traffic Noise

⁵ Abbott, Phil & Nelson, P.M.. (2002). Converting The UK Traffic Noise Index $L_{A10,18h}$ To EU Noise Indices for Noise Mapping (includes validation with BRE National Survey Data 2000).

2.3.2. Site Survey Notes

Whilst on site the surveyor observed that commercial noise from the garages was not audible at site and therefore considered not dominant. ProPG states:

“In the special case where industrial or commercial noise is present on the site but is “not dominant” (i.e. where the impact would be rated as lower than adverse (subject to context) if a BS4142:2014 assessment was to be carried out), its contribution may be included in the noise level used to establish the degree of risk (and if included, this should be clearly stated)”

As a result, a BS 4142⁶ assessment is hereby scoped out and the assessment will focus on noise from transportation sources, which includes potential contribution of the commercial noise considered not dominant.

Further site notes indicate that the dominant source of noise across the Site was road traffic from Drake Street at all times and road traffic from St Albans road was not significant.

2.4. Results

The measured sound levels across the survey are provided in Table 2.

Table 2 Summary of Measured Sound Levels, ML1

Time	L _{A10, 1hr} dB	L _{AFmax, 2min} dB ^(a)
12 :15 – 13 :15	71	
13 :15 – 14 :15	70	
14 :15 – 15 :15	70	
06 :00 – 07 :00	71	79
(a) L _{AFmax} , 10th highest maximum sound level		

Table 3 presents the calculated L_{Aeq,16hr} the L_{Aeq,8hr} and L_{AFmax,2min} sound levels using the TRL method and empirical relationship between L_{night} and L_{Amax} research which shall be used to calibrate the acoustic model.

Table 3 Calculated levels used for acoustic modelling

L _{Aeq, 16hr} dB	L _{Aeq, 8hr} dB	L _{AFmax, 2min} dB ^(a)
66	58	79
(a) 10th highest maximum sound level as per the requirements of ProPG		

⁶ BS 4142:2014+A1:2019 Methods for rating and assessing industrial and commercial sound

3. Initial Assessment

3.1. 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 CRTN⁷ and ISO 9613-2⁸.

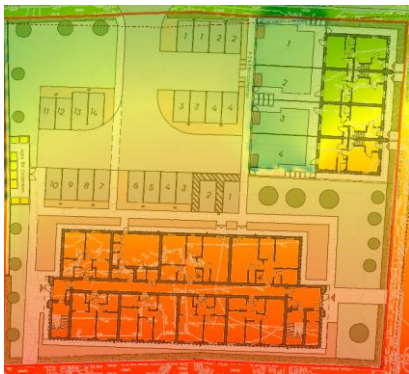
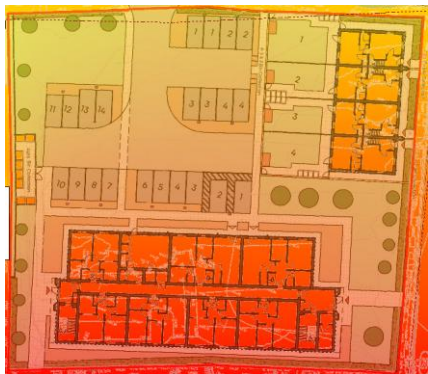
The modelling assumptions pertinent to the assessment are: ground absorption set to 0.5 (soft ground); digital terrain included in the model Environment Agency, 12th September 2025); buildings set to reflective and 2nd order reflections included in the modelling.

Sound source inputs have been applied based off values presented in Table 3. In addition an L_{AFmax} of 76 dB has been calculated as representative levels for St Albans Street and Broadfield Street where road traffic speeds are reduced to 20mph.

3.2. ProPG Stage 1: Initial Site Noise Risk Assessment

An Initial Site Noise Risk Assessment in accordance with ProPG is presented in Table 4.

Table 4 Initial Site Noise Risk Assessment

Criteria	Daytime	Night-time
Most Exposed Result	66 dB L _{Aeq} , 16hr	58 dB L _{Aeq} , 8hr
ProPG Noise Risk	Medium-High	High
		
Action	<i>As noise levels are predicted high, the Site should follow a good acoustic design process to demonstrate how the adverse impacts of noise will be mitigated and minimised</i> <i>High noise levels indicate there is an increased risk that development may be refused on noise grounds. This risk may be reduced by following good acoustic design process that is demonstrated in a detailed Acoustic Design Statement (ADS) applicants are strongly advised to seek expert advice.</i>	

⁷ Calculation of Road Traffic Noise, Department of Transport Welsh Office, 1988.

⁸ ISO 9613-2 'Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation.', 2024

4. ProPG Stage 2: Acoustic Design Statement

The Stage 1 Initial Site Risk Assessment has identified that the noise risk is **high**, as such, this part of the report presents the acoustic design statement to demonstrate how adverse impacts will be mitigated.

4.1. 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 will be embedded into the orientation and layout of the proposed development, in combination with a number of other considerations as required by planning as follows:

- The apartment building will act as partial screening to the terrace of houses;
- The external amenity areas of the houses will be fenced and setback a good distance from the main road.

4.2. Element 2 – Internal Noise Levels

4.2.1. Ventilation Strategy

For the four number town houses it is understood from discussions with the Client that 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.

The apartments will be served by mechanical ventilation with heat recovery.

4.2.2. Façade Sound Insulation

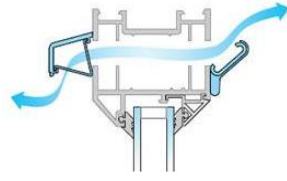
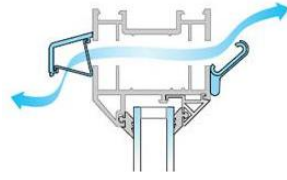
Whilst the exact construction details for the Site are currently unknown, the dominant transmission path via the façade will be the glazing and ventilation elements. As such, a conservative assumption of 48 dB $R_w + C_{tr}$ has been assumed for non-glazed elements which could comfortably be found in a double leaf external wall with a 75mm cavity filled with mineral wool and plasterboard on the internal face.

4.2.3. Mitigation Requirements

Based upon the sound levels incident upon the façade of each building, calculations in accordance with BS 8233 have been undertaken to determine the required mitigation measures.

The results of the calculations show the need for two mitigation strategies outlined below.

Table 5 Mitigation Requirements

Mitigation Ref.	Proposed Glazing System	Proposed Ventilation System
A Terraced Houses and Rear Apartments	Min. 27 dB $R_w + C_{tr}$ <u>Example Configuration</u> 4mm glass panel 12mm air gap 4mm glass panel	Window Mounted Acoustic Trickle Ventilator  Min. 32 dB $D_{n,e,w} + C_{tr}$ Or alternatively an MVHR system with no trickle vents to windows.
B Apartment Front and Side facades	Min. 31 dB $R_w + C_{tr}$ <u>Example Configuration</u> 4mm glass panel 12mm air gap 10mm glass panel	Acoustic Window Mounted Ventilator  Min. 39 dB $D_{n,e,w} + C_{tr}$ <u>E.g., Greenwood 5000EAW.AC2</u> Or alternatively an MVHR system with no trickle vents to windows.

The octave band specifications used to inform the break-in calculations are provided in Appendix C.

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.

A site plan highlighting the mitigation requirements in reference to Table 5. Is provided in Figure 2.

Figure 2: Site plan for mitigation requirements



4.3. Element 3 – External Amenity Areas

BS 8233 has an outdoor criterion of between 50 – 55 dB $L_{Aeq, 16hr}$ which is applicable to private amenity spaces such as gardens, play areas, communal areas etc.

The sound level contours in Appendix B show levels at the northern part of the Site reaching circa 50 dB $L_{Aeq, 16hr}$. which will offer good amenity to external noise, showing compliance with ProPG and relevant British Standards.

4.4. Element 4 – Other Relevant Issues

There are not considered to be any other relevant issues relating to acoustics at the Site.

5. Conclusions

Peninsular Acoustics has been appointed by Great Places Housing Group to undertake an Acoustics Assessment for a proposed residential development at Drake Street, Rochdale.

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

An environmental sound survey was undertaken at one location on the northern boundary of the Site. The results have demonstrated via the Initial Noise Risk Assessment that the Site is of **High** 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	Terraced houses benefit from the screening provided by the apartment building fronting on to Drake Street and are set further back from the main road.
Element #2: Internal Noise Levels	For the terraced houses and the rear façade of the apartment building, internal noise levels can be secured through standard thermal double glazing and direct airpath window mounted trickle ventilators which would be commonplace in every residential development. For the front façade and side facades of the apartment building internal noise levels can be secured through a higher specification of double glazing and acoustic window mounted ventilators or MVHR.
Element #3: External Amenity	Fencing around the terraced houses will screen road traffic noise and gardens are set further back from Drake Street which satisfy the criteria of 55 dB $L_{Aeq, 16hr}$ outlined in BS 8233. There are no proposed external amenity spaces for the apartments.
Element #4: Other Relevant Issues	Not applicable.

The result of this assessment demonstrates that the Site and development proposals are suitable for intended use.

Limitations applicable to this report are contained in Appendix E.

Appendix A

Technical Terminology

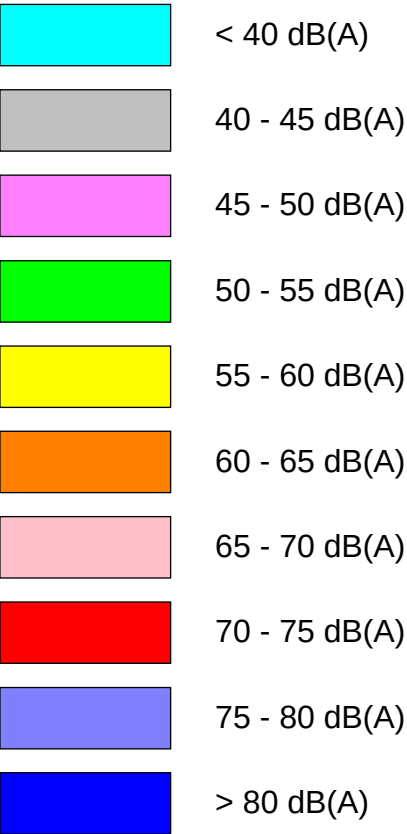
Noise	Typically defined as unwanted, unpleasant or disturbing sound
Frequency (Hz)	The number of oscillations in acoustic pressure per second. It represents the 'tone' of the sound. Often determined in octave bands
Maximum sound pressure level (L_{Fmax})	The maximum or highest sound pressure level measured with a 'fast' time weighting
Equivalent continuous sound pressure level ($L_{eq, T}$)	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.
$D_{n,e}$ / $D_{n,e,w}$	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

Sound Level Contours



Sound Level Contour
Maps



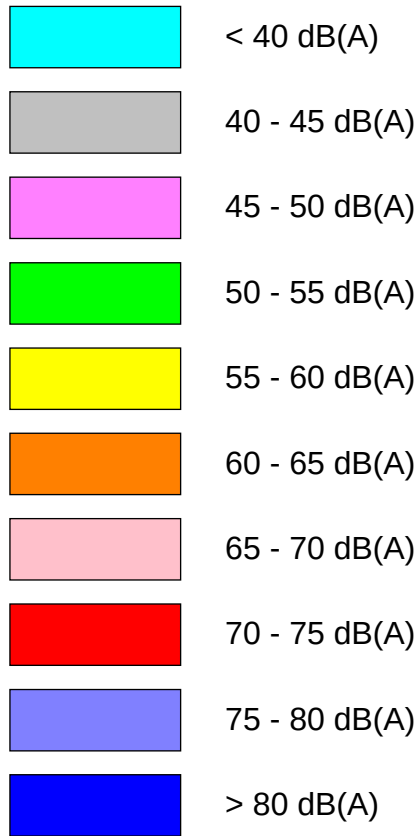
05/06/26	P03	For Planning	JL
DATE	REV	COMMENTS	BY

Project: Drake Street, Rochdale
Ref: Daytime Ambient Sound Levels
DWG: PA1832-ACO-001-P03

Notes

1. Do not scale this drawing.
2. Sound levels presented as $L_{Aeq, 16hr}$ values.
3. Grid height 1.5m

Sound Level Contour Maps



05/06/26	P03	For Planning	JL
DATE	REV	COMMENTS	BY

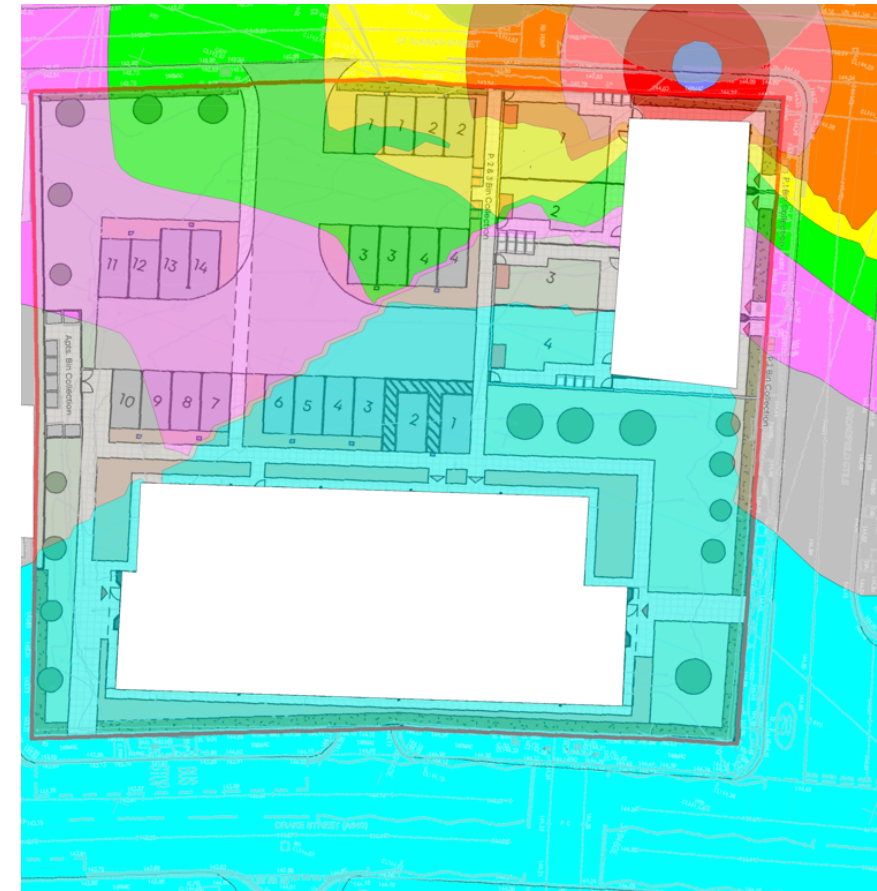
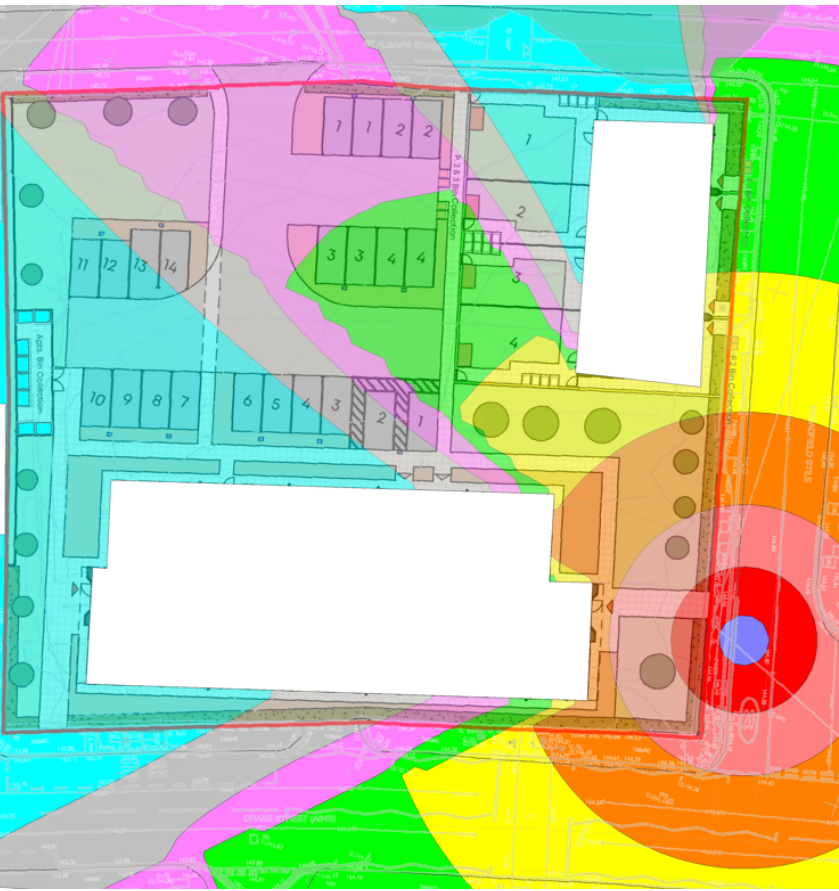
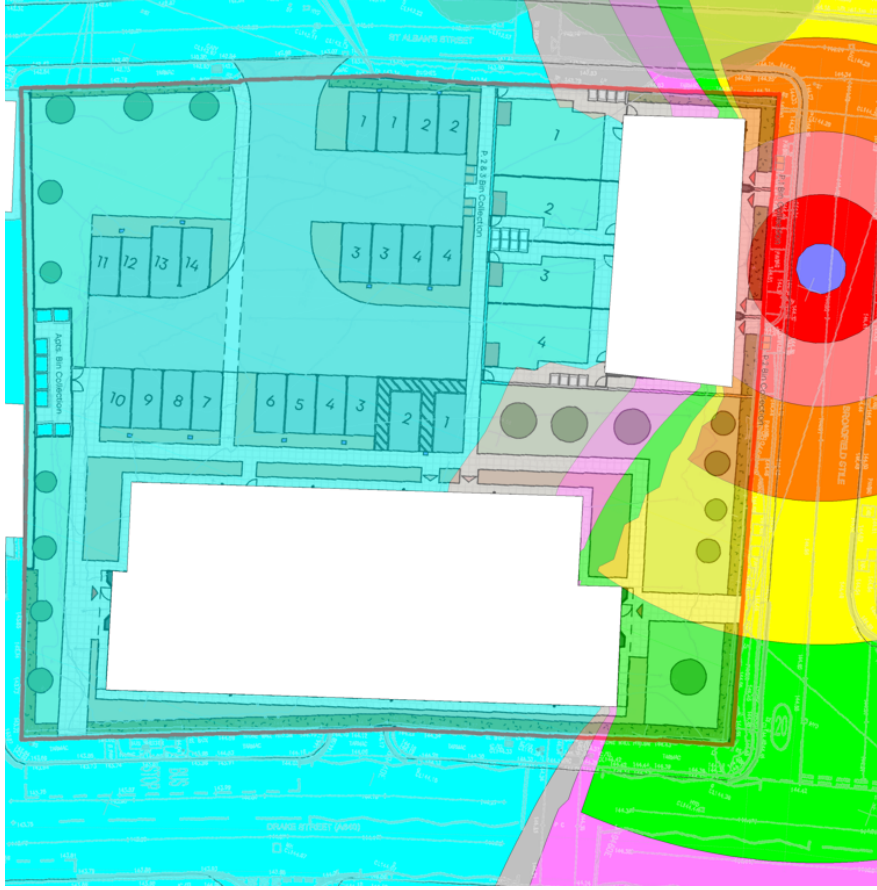
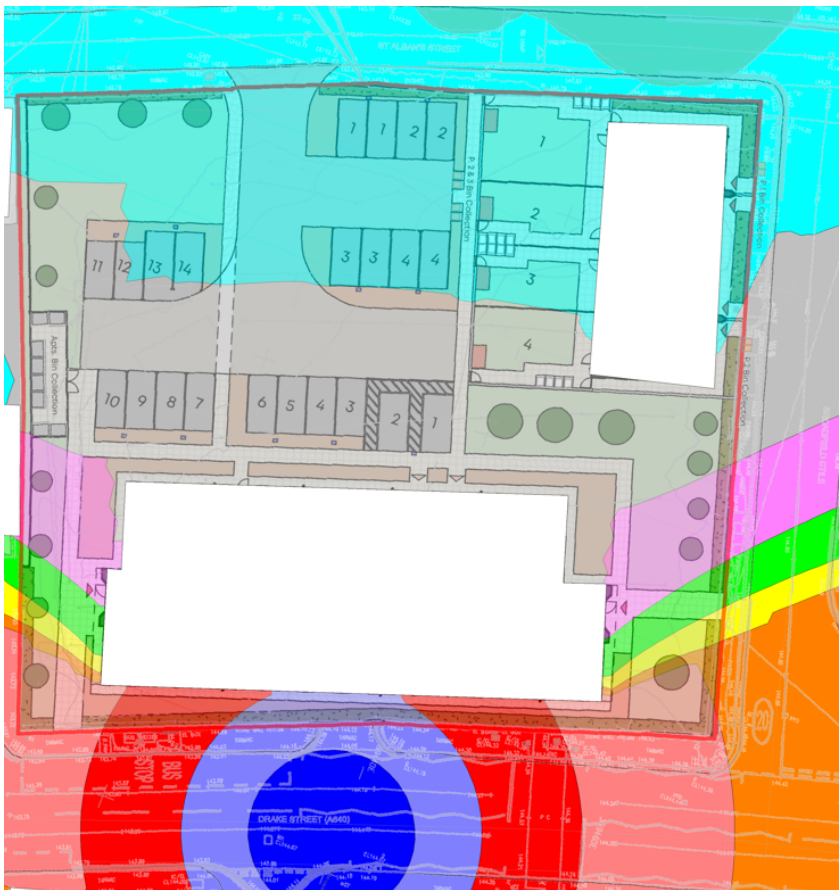
Project: Drake Street, Rochdale
Ref: Nighttime Ambient Sound Levels
DWG: PA1832-ACO-002-P03

Notes

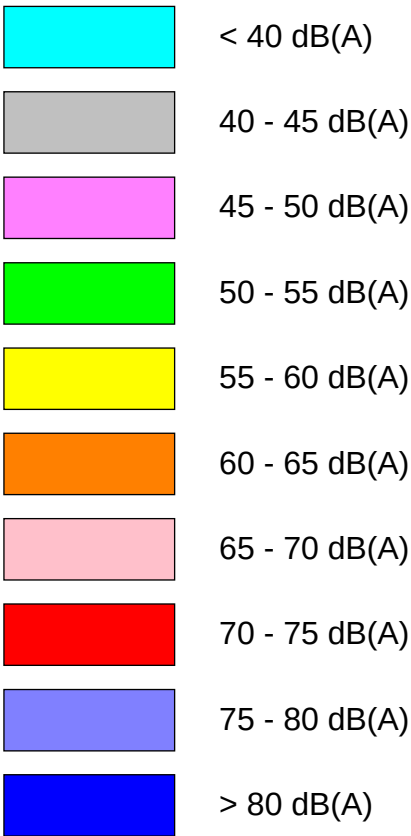
1. Do not scale this drawing.

2. Sound levels presented as $L_{Aeq, 8hr}$ values.

3. Grid height 4m



Sound Level Contour
Maps



05/06/26	P03	For Planning	JL
DATE	REV	COMMENTS	BY

Project: Drake Street, Rochdale
Ref: Nighttime Max Sound Levels
DWG: PA1832-ACO-003-P03

Notes

1. Do not scale this drawing.

2. Sound levels presented as 10th highest L_{AFmax,2min} values.

3. Grid height 4m

Appendix C

Mitigation Specifications

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	
Glazing Reference A	16	22	20	26	36	39	31	25	27
Glazing Reference B	22	28	23	32	38	42	44	38	31
Ventilation Reference A	32	32	32	31	33	31	31	31	32
Ventilation Reference B	32	39	37	33	48	53	48	48	39

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 D

Noise Break-In Calculations

Internal Noise Break-in Calculation to BS12354-3:2000													
Project Name		Drake Street, Rochdale				Consultant		JL					
Project No.		PA1832				Checker							
Room Name		Terraced Houses				Date		08/06/2026					
Room Details Width 5 m Height 2.4 m Depth 3 m Volume 36 m³ Façade Area 12.0 m² Surface Area 68.4 m³ Additional Façade Area m² Total Façade Area 12.0 m²													
		63	125	250	500	1000	2000	4000	8000	R _w / D _{new}	C _{tr}		
Area of glass / SRI		2.52	16	22	20	26	36	39	31	25	31	-4	SG 4mm/12mm/4mm
Area of façade / SRI		9.5	34	41	43	48	50	55	55	55	51	-3	2x103mm brick (75mm gap + plast)
Vent No. off / D _{ne}		1	32	32	32	31	33	31	31	31	32	0	Trickle vent with direct air path
Composite Façade Sound Reduction Composite SRI 23 29 27 33 42 45 38 32 #NAME? #NAME?													
Daytime L_{aeq} Typical 07:00 - 23:00 Lp Via Vent 29.2 22.2 21.5 21.7 22.5 20.0 13.6 9.2 26 Lp via Façade (BS8233:2014) 39.4 26.3 27.6 20.8 14.1 6.4 7.7 9.2 23 L_{Aeq} Total 39.8 27.8 28.6 24.3 23.1 20.2 14.6 12.2 28													
Night Time L_{aeq} Typical 23:00 - 07:00 Lp Via Vent 15.9 13.6 10.5 12.2 14.8 13.0 3.8 -3.6 18 Lp via Façade (BS8233:2014) 26.1 17.8 16.5 11.3 6.3 -0.7 -2.1 -3.6 13 L_{Aeq} Total 26.5 19.2 17.5 14.8 15.3 13.2 4.8 -0.6 20													
Night Time Maximum Typical 07:00 - 23:00 Lp Via Vent 44.7 29.1 32.4 37.9 40.2 39.9 31.3 23.4 45 Lp via Façade (BS8233:2014) 54.9 33.3 38.5 36.9 31.8 26.3 25.4 23.4 38 L_{AFmax} Total 55.3 34.7 39.5 40.4 40.8 40.1 32.3 26.4 45													

		Internal Noise Break-in				Calculation to BS12354-3:2000									
Project Name		Drake Street, Rochdale				Consultant	JL								
Project No.		PA1832				Checker									
Room Name		Appartment Rear Bedroom				Date	08/06/2026								
Room Details															
Width		2.8	m	Height		2.4	m								
Depth		3.7	m	Volume		24.864	m ³								
Façade Area		6.7	m ²	Surface Area		51.92	m ³								
Additional Façade Area			m ²	Total Façade Area		6.7	m ²								
		63	125	250	500	1000	2000	4000	8000	R _w / D _{new}	C _{tr}				
Area of glass / SRI	1.76	16	22	20	26	36	39	31	25	31	-4	SG 4mm/12mm/4mm			
Area of façade / SRI	5.0	34	41	43	48	50	55	55	55	51	-3	2x103mm brick (75mm gap + plast)			
Vent No. off / D _{ne}	1	32	32	32	31	33	31	31	31	32	0	Trickle vent with direct air path			
Composite Façade Sound Reduction															
Composite SRI		22	28	26	32	41	45	37	31	37	-4				
Daytime L_{aeq} Typical 0700-2300															
Lp Via Vent		22.8	15.8	15.2	15.3	16.1	13.6	7.2	2.8	20					
Lp via Façade (BS8233:2014)		31.4	18.3	19.6	12.8	6.0	-1.7	-0.3	1.2	15					
L _{Aeq} Total		32.0	20.3	21.0	17.3	16.5	13.8	7.9	5.1	21					
Night Time L_{aeq} Typical 2300-0700															
Lp Via Vent		11.5	9.2	6.1	7.8	10.4	8.6	-0.6	-8.0	14					
Lp via Façade (BS8233:2014)		20.1	11.8	10.5	5.3	0.2	-6.7	-8.1	-9.6	7					
L _{Aeq} Total		20.7	13.7	11.9	9.8	10.8	8.7	0.1	-5.7	15					
Night Time Maximum Typical 2300-0700															
Lp Via Vent		49.3	33.7	37.0	42.5	44.8	44.5	35.9	28.1	49					
Lp via Façade (BS8233:2014)		57.9	36.3	41.5	40.0	34.7	29.2	28.4	26.5	41					
L _{AFmax} Total		58.4	38.2	42.8	44.4	45.3	44.6	36.6	30.3	50					

		Internal Noise Break-in				Calculation to BS12354-3:2000							 Peninsular ACOUSTICS	
Project Name		Drake Street, Rochdale				Consultant	JL							
Project No.		PA1832				Checker								
Room Name		Appartment Rear Lounge				Date	08/06/2026							
Room Details														
Width		2.3	m	Height		2.4	m							
Depth		3.5	m	Volume		19.32	m ³							
Façade Area		5.5	m ²	Surface Area		43.94	m ³							
Additional Façade Area			m ²	Total Façade Area		5.5	m ²							
		63	125	250	500	1000	2000	4000	8000	R _w / D _{new}	C _{tr}			
Area of glass / SRI	3.52	16	22	20	26	36	39	31	25	31	-4	SG 4mm/12mm/4mm		
Area of façade / SRI	2.0	34	41	43	48	50	55	55	55	51	-3	2x103mm brick (75mm gap + plast)		
Vent No. off / D _{ne}	1	32	32	32	31	33	31	31	31	32	0	Trickle vent with direct air path		
Composite Façade Sound Reduction														
Composite SRI		18	24	22	28	38	41	33	27	33	-4			
Daytime L_{aeq} Typical		0700-2300												
Lp Via Vent		23.9	16.9	16.3	16.4	17.2	14.7	8.3	3.9	21				
Lp via Façade (BS8233:2014)		35.4	22.3	23.7	16.9	9.7	2.2	3.8	5.3	19				
L _{Aeq} Total		35.7	23.4	24.4	19.6	17.9	15.0	9.6	7.7	23				
Night Time L_{aeq} Typical		2300-0700												
Lp Via Vent		12.6	10.3	7.2	8.9	11.5	9.7	0.5	-6.9	15				
Lp via Façade (BS8233:2014)		24.0	15.7	14.6	9.4	4.0	-2.8	-4.0	-5.5	11				
L _{Aeq} Total		24.3	16.8	15.3	12.1	12.2	9.9	1.8	-3.1	17				
Night Time Maximum Typical		2300-0700												
Lp Via Vent		50.4	34.8	38.1	43.6	45.9	45.6	37.0	29.1	50				
Lp via Façade (BS8233:2014)		61.8	40.2	45.6	44.0	38.5	33.1	32.5	30.6	45				
L _{AFmax} Total		62.1	41.3	46.3	46.8	46.7	45.8	38.3	32.9	51				

Appendix E

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.

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