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NOISE IMPACT ASSESSMENT FOR PROPOSED DEVELOPMENT:

24A Baron Street, Rochdale OL16 1SJ

Prepared for:

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Report Number: AS26-07V1

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1.0 INTRODUCTION

1.1

Acoustic Solutions has been commissioned by Norden Quantity Surveying and Construction Services Limited to undertake a noise impact assessment for a proposed development at 24A Baron Street, Rochdale.

1.2

The objectives for the noise impact assessment were as follows:

- Establish the daytime, evening and night time ambient and background sound levels at the application site and its surrounding environs;
- Establish the likely daytime and night time noise impact arising from the noise sources identified in the course of the assessment;
- If appropriate, provide recommendations with respect to management and/or structural controls to mitigate and control the potential noise impact upon future occupiers of the proposed development.

1.3

This report details the methodology and results of the assessment. It has been prepared to accompany an application for planning submitted to Rochdale Borough Council for the proposed development of 24A Baron Street.

1.4

This report has been prepared for the sole purpose described above and no extended duty of care to any third party is implied or offered. Third parties referring to the report should consult the client and Acoustic Solutions as to the extent to which the findings may be appropriate for their use.

1.5

A glossary of acoustic terms used in the main body of the text is contained in Appendix 1.

2.0 NOISE IMPACT ASSESSMENT CRITERIA

2.1

In terms of noise impact assessment criteria, Paragraph 170e of the National Planning Policy Framework (NPPF) 2024 states that planning policies and decisions should contribute to and enhance the natural local environment by *‘preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.’*

2.2

Planning Practice Guidance specifically dealing with noise was uploaded to the Government’s Planning Portal in March 2024 as an accompaniment to the National Planning Policy Framework. This guidance is summarised herein.

2.3

The guidance states that noise needs to be considered when new developments may create additional noise. Whilst noise can override other planning concerns, neither the Noise Policy Statement for England nor the National Planning Policy Framework (which reflects the Noise Policy Statement for England) expects noise to be considered in isolation, separately from the economic, social and other environmental dimensions of proposed development.

2.4

In order to determine noise impact, local planning authorities’ plan-making and decision taking should take account of the acoustic environment and in doing so consider:

- Whether or not a significant adverse effect is occurring or likely to occur;
- Whether or not an adverse effect is occurring or likely to occur, and;
- Whether or not a good standard of amenity can be achieved.

2.5

In line with the Explanatory Note of the Noise Policy Statement for England, this would include identifying whether the overall effect of the noise exposure is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation.

2.6

In terms of Observed Effect Levels:

- No Observed Adverse Effect Level (NOAEL) – This is the level of noise exposure below which no effect at all on health or quality of life can be detected;
- Lowest Observed Adverse Effect Level (LOAEL) – This is the level of noise exposure above which adverse effects on health and quality of life can be detected, and;
- Significant Observed Adverse Effect Level (SOAEL) – This is the level of noise exposure above which significant adverse effects on health and quality of life occur.

2.7

At the lowest extreme, when noise is not noticeable, there is by definition no effect. As the noise exposure increases, it will cross the 'no observed' effect level as it becomes noticeable. However, the noise has no adverse effect so long as the exposure is such that it does not cause any change in behaviour or attitude. The noise can slightly affect the acoustic character of an area but not to the extent there is a perceived change in quality of life. If the noise exposure is at this level no specific measures are required to manage the acoustic environment.

2.8

As the exposure increases further, it crosses the lowest observed adverse effect level boundary above which the noise starts to cause small changes in behaviour and attitude, for example, having to turn up the volume on the television or needing to speak more loudly to be heard. The noise therefore starts to have an adverse effect and consideration needs to be given to mitigating and minimising those effects (taking account of the economic and social benefits being derived from the activity causing the noise).

2.9

Increasing noise exposure will at some point cause the significant observed adverse effect level boundary to be crossed. Above this level the noise causes a material change in behaviour such as keeping windows closed for most of the time or avoiding certain activities during periods when the noise is present. If the exposure is above this level the planning process should be used to avoid this effect occurring, by use of appropriate mitigation such as by altering the design and layout. Such decisions must be made taking account of the economic and social benefit of the activity causing the noise, but it is undesirable for such exposure to be caused.

2.10

At the highest extreme, noise exposure would cause extensive and sustained changes in behaviour without an ability to mitigate the effect of noise. The impacts on health and quality of life are such that regardless of the benefits of the activity causing the noise, this situation should be prevented from occurring.

2.11

Tables 2.1 and 2.1B summarises noise exposure hierarchy, based on likely average response.

Table 2.1 LOAEL and SOAEL Values

Noise Source	Assessment Location	LOAEL	SOAEL	Time
	Outdoor living space	55 dB L _{Aeq} , 1 hour (A)	56-60 dB L _{Aeq} , 1 hour (A)	Day (07:00-23:00)
	Façade	50 dB L _{Aeq} , 1 hour (A)	72 dB L _{Aeq} , 16 hour (A)	Day (07:00-23:00)
General environmental noise: Road/Rail	Façade	45 dB L _{Aeq} , 8 hour (B)	67 dB L _{Aeq} , 8 hour (A)	Night (23:00-07:00)
	Habitable Room	30 dB L _{Aeq} , 8 hour (B)	40 dB L _{Aeq} , 8 hour (A)	Night (23:00-07:00)
	Habitable Room	35 dB L _{Aeq} , 16 hour (A)	45 dB L _{Aeq} , 16 hour (A)	Day (07:00-23:00)

A: World Health Organisation: Guideline for Community Noise (1999)

B: World Health Organisation: Noise Guidance for Europe (2009)

Table 2.1B NOAEL, LOAEL and SOAEL Values

SPL, dB	</=40	41-45	46-50	51-55	56-60	>/=60
Day	NOAEL	NOAEL	NOAEL	LOAEL	SOAEL	SOAEL+
Evening	NOAEL	NOAEL	LOAEL	SOAEL	SOAEL	SOAEL+
Night	NOAEL	LOAEL	SOAEL	SOAEL	SOAEL	SOAEL+

2.12

The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any particular situation. These factors include:

- The source and absolute level of the noise together with the time of day it occurs;
- For non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise;
- The spectral content of the noise (i.e. whether or not the noise contains particular high or low frequency content) and the general character of the noise (i.e. whether or not the noise contains particular tonal characteristics or other particular features);
- The local acoustic character of the area.

2.13

In addition, further useful contextual guidance is provided in:

- British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings' (BS 8233);
- World Health Organisation (WHO) Guidelines for Community Noise (1999);
- ProPG: Planning & Noise, Professional Practice Guidance on Planning & Noise: New Residential Development, 2017.

2.14

British Standard 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings' sets indoor ambient noise levels from residential dwellings (see table below).

Table 2.2 – Indoor Ambient Noise Levels in Dwellings (BS 8233): 2014

Action	Location	Good Indoor Ambient Noise Levels, dB	
Resting	Living Room / Bedroom	L _{Aeq} (07:00-23:00)	35
Sleeping	Bedroom	L _{Aeq} (23:00-07:00)	30
Sleeping	Bedroom	L _{AMax} (23:00-07:00)	45
Action	Location	Good Outdoor Ambient Noise Levels, dB	
Resting	External Amenity	L _{Aeq} (07:00-23:00)	50-55

2.15

With regard to sound attenuation through the building envelope, the 'weak points' in the building façade are generally considered to be the windows. The worked example (G.1) at Annex G of BS 8233 suggests that a partially opened window would provide sound attenuation of approximately 15 dB *R_w*. The Standard also suggests that “..*standard insulating glass units have an insulation value of approximately 30 dB *R_w**” when closed.

2.16

With respect to noise affecting external areas, i.e. gardens, BS 8233 states that *“.. it is desirable that the steady noise level does not exceed 50 dB LAeq, and 55 dB LAeq should be regarded as the upper limit”*.

2.17

The World Health Organisation's Guidelines for Community Noise (1999) sets indoor ambient noise levels from residential dwellings (see table below).

Table 2.3 – Indoor Ambient Noise Levels in Dwellings (WHO 1999)

Action	Location	Good Indoor Ambient Noise Levels, dB	
Resting	Living Room / Bedroom	L _{Aeq} (07:00-23:00)	35
Sleeping	Bedroom	L _{Aeq} (23:00-07:00)	30
Sleeping	Bedroom	L _{AMax} (23:00-07:00)	45
Action	Location	Good Outdoor Ambient Noise Levels, dB	
Resting	External Amenity	L _{Aeq} (07:00-23:00)	50-55

2.18

ProPG: Planning & Noise, Professional Practice Guidance on Planning & Noise: New Residential Development, 2017 was developed by the Institute of Acoustics (IOA), the Chartered Institute of Environmental Health (CIEH) and the Association of Noise Consultants (ANC), the ProPG provides practitioners with guidance on a recommended approach to the management of noise within the planning system in England. The document provides guidance which encourages better acoustic design for new residential development and aims to protect people from the harmful effects of noise.

ProPG takes a two stage approach.

Stage 1: Initial Site Noise Risk Assessment;

Stage 2:

- Element 1 – Good Acoustic Design Process;
- Element 2 – Internal Noise Level Guidelines;
- Element 3 – External Amenity Area Noise Assessment;

- Element 4 – Assessment of Other Relevant Issues (compliance with relevant national and local policy; the magnitude and extent of compliance with ProPG; likely occupants of the development; acoustic design versus unintended adverse consequences; acoustic design versus wider planning objectives).

3.0 BASELINE NOISE SURVEY

3.1 Site Setting

The application site is 24A Baron Street, Rochdale. The proposal is for the change of use from storage to 7x residential flats (Figure 3.1).

Figure 3.1 24A Baron Street



Acoustic Solutions has assessed existing daytime, evening and nighttime noise sources that have the potential to adversely impact upon the amenity of the premises' future occupiers. Based upon this, this report will then specify the measures to be taken to protect the development from noise from all significant noise sources that are likely to affect the proposed development. The report shall:

- a) Determine the existing noise climate;

- b) Predict the noise climate in living rooms (daytime), bedrooms (night-time) and other habitable rooms of the development;
- c) Detail the proposed attenuation/design necessary to protect the amenity of the occupants of the new residences (including ventilation if required).

3.2 Site Description

The pre-application site relates to a 'U' shaped, part three storey/part two storey building which fronts directly onto Baron Street. The building is vacant, but it appears to have been used for storage. The premises is within a small row of buildings. The principal front building is narrow in width and appears as two storeys high. The rear section of the building is three storeys high. To the rear of the building is a row of two storey shops on Oldham Road with various single storey and two storey projections.

3.3 Noise Sources

Table 3.1 summarises the identified noise sources that have the potential to adversely impact future occupiers of the building, and their respective distances to the perimeters of the application site.

Table 3.1. Observed Noise Sources

Source	Distance at its closest point, m				Notes
	North	South	East	West	
Road traffic on Baron Street	N/A	N/A	4	N/A	Road traffic consists of private and commercial vehicles.
Cask & Feather public House	N/A	N/A	N/A	10	Opens Friday/Saturday. 12:00-02:00 hours. Karaoke

3.4

In order to establish the daytime, evening and night time background noise levels at the application site and its surrounding environs, a baseline noise survey was undertaken on Friday 30 and Saturday 31 January 2026 between 07:00 and 23:00 hours (daytime/evening) and 23:00-07:00 hours (nighttime).

3.5

For the purpose of the assessment, 2x noise monitoring positions, MP1 and MP2, were adopted in free field environments at over 1.5 metres above ground and over 3 metres from any vertical reflective surface (see Appendix 2):

- MP1. Baron Street outside front, north-eastern façade of the development site.
- MP2. Rear of development site.

At the microphone positions a series of hourly 15-minute noise measurements were undertaken using a Type 1 integrating sound level meter. The measurement system calibration was verified immediately before the commencement of the measurement sessions and again at the end. Weather conditions throughout the survey were dry but cloudy. Wind speeds were commensurate for the assessment methodology. Measurements consisted of A-weighted parameters: L_{Aeq} , L_{A90} and L_{Amax} .

3.7 MP1

Daytime

The principle daytime noise source was road traffic on Baron Street. This consisted predominantly of private cars. Other noise sources included pedestrians and birdsong.

Evening and Nighttime

From 18:00 hours onwards, road traffic on Baron Street tailed off significantly. By 21:00 hours there was little or no vehicles using these roads. Other noise sources included pedestrians.

Table 3.2 summarises daytime, evening and night time noise measurement data. For the purposes of this report, the average L_{Aeq} and maximum L_{Amax} values measured will be used so to provide an accurate illustration of the noise environment.

Table 3.2. MP1: Baseline Noise Measurement Data, Daytime, Evening and Night Time Noise Measurements

Measurement Time	Sound Pressure Level, dB, $L_{Aeq, 15 \text{ min}}$	Sound Pressure Level, dB $L_{A90, 15 \text{ min}}$	Sound Pressure Level, dB $L_{A\text{Max}, 15 \text{ min}}$
07:00	49.3	42.1	57.6
08:00	49.6	42.2	58.5
09:00	49.1	42.1	58.4
10:00	49.2	42.5	57.2
11:00	49.5	42.0	58.5
12:00	49.7	42.7	58.4
13:00	49.6	42.2	56.6
14:00	49.4	42.0	58.2
15:00	49.2	42.5	56.2
16:00	47.3	42.0	58.1
17:00	48.1	42.3	57.3
18:00	47.2	42.3	58.5
Daytime Average/Max	49	42	59
19:00	46	40	54
20:00	46	40	55
21:00	44	37	55
22:00	44	37	55
Evening Average/Max	45	38	55
Daytime & Evening Average/Max	48	41	59
23:00	42	36	53
00:00	42	34	51
01:00	43	34	52
02:00	39	34	50
03:00	39	34	51
04:00	39	34	50
05:00	39	34	53
06:00	40	34	53
Nighttime Average/Max	41	34	53

3.7 MP2

Daytime

The principle daytime noise source was muffled road traffic on Baron Street. Other noise sources included pedestrians and birdsong.

Evening and Nighttime

From 19:00 hours onwards, music from the Cask and Feather was vaguely audible. The rear of the 24A Baron Street is separated from the Cask and Feather by a building, 3 Oldham Road.

Table 3.3 summarises daytime, evening and night time noise measurement data. For the purposes of this report, the average L_{Aeq} and maximum L_{Amax} values measured will be used so to provide an accurate illustration of the noise environment.

Table 3.3. MP2: Baseline Noise Measurement Data, Daytime, Evening and Night Time Noise Measurements

Measurement Time	Residual Noise Level, dB, L_{Aeq} , 15 min	Background Noise Level, dB L_{A90} , 15 min	Measured Noise Level, dB L_{AMax} , 15 min
07:00	46.5	40.4	55.0
08:00	45.2	40.6	56.5
09:00	46.4	40.7	56.2
10:00	45.8	40.6	55.6
11:00	46.0	40.1	56.3
12:00	46.4	40.6	56.2
13:00	45.9	40.3	55.8
14:00	45.2	40.6	56.5
15:00	46.1	40.1	54.9
16:00	44.3	39.7	54.9
17:00	45.2	39.7	55.3
18:00	45.1	39.2	56.3
Daytime Average/Max	46	40	57
19:00	42.9	39.7	53.8
20:00	43.8	39.3	54.0
21:00	41.9	38.0	53.9
22:00	42.3	38.3	53.4
Evening Average/Max	43	39	54
Daytime & Evening Average/Max	45	40	57
23:00	40.1	37.0	54.4
00:00	41.5	36.9	56.6
01:00	40.0	36.9	56.5
02:00	40.2	33.5	55.4
03:00	39.3	33.7	51.5
04:00	38.2	33.9	51.4
05:00	38.9	34.0	52.2
06:00	39.2	33.5	52.3
Nighttime Average/Max	40	35	57

4.0 DISCUSSION

4.1 External Noise Levels

Table 4.1 summarises the likely external Observed Effect Levels at MP1 and MP2, based upon average L_{Aeq} measurement values. These values can then be compared against maximum noise criteria, as set out in the World Health Organisation's 'Guidelines for Community Noise (1999) and BS8233: 2014.

Table 4.1. External Daytime/Evening measured SPLs at MP1 and MP2 compared against Observed Effect Levels

Location	Predicted Daytime Observed Effect Level	Predicted Evening Observed Effect Level	Predicted Night Time Observed Effect Level
MP1	49	45	41
MP1	NOAEL	NOAEL	LOAEL
MP2	46	43	40
MP2	NOAEL	NOAEL	NOAEL

4.2 Internal Noise Levels

4.2.1 World Health Organisation: 1999 and BS8233: 2014 (Internal)

Assuming a -15 dB attenuation provided by a slightly open window, daytime, evening and nighttime internal sound pressure levels arising from daytime, evening and nighttime noise sources can be predicted within habitable rooms. These values can then be compared against maximum noise criteria, as set out in the World Health Organisation's 'Guidelines for Community Noise (1999) and BS8233: 2014. Table 4.2 summarises the predicted internal noise levels.

Table 4.2. Internal Daytime/Evening measured SPLs at MP1 and MP2 compared against BS8233 and WHO: 1999

Time	Location	External SPL, dB, $L_{Aeq, 15 \text{ min}}$	Open Window Attenuation, dB	Predicted Internal SPL, dB	WHO & BS8233 35/30 dB Criteria met?	Exceeds by, dB
Daytime/Evening	MP1	48	15	33	Yes	-2
Nighttime	MP1	41	15	26	Yes	-9
Daytime/Evening	MP2	46	15	31	Yes	-4
Nighttime	MP2	40	15	25	Yes	-10
Time	Location	External SPL, dB, $L_{Amax, 15 \text{ min}}$	Open Window Attenuation, dB	Predicted Internal SPL, dB	WHO & BS8233 45 dB Criteria met?	Exceeds by, dB
Nighttime	MP1	53	15	38	Yes	-7
Nighttime	MP2	57	15	42	Yes	-3

5.0 RECOMMENDATIONS

5.1 Internal

5.1.1 North-East-Facing Glazing – All Habitable Rooms

Table 5.1 summarises the glazing necessary to ensure that daytime and nighttime noise levels in all habitable rooms are within the maximum recommended by WHO: 1999 and BS8233.

For all habitable rooms, glazing units of the following specification are recommended:

10mm/(6-16mm)6mm

The Pilkington data sheet (reproduced here as Table 5.3) states that glazing with this specification will provide 32 dB noise attenuation (closed windows). Table 5.2 summarises the predicted daytime and nighttime internal sound levels with closed windows (assuming this recommended glazing).

5.1.2 South-West-Facing Glazing – All Habitable Rooms

Table 5.1 summarises the glazing necessary to ensure that daytime and nighttime noise levels in all habitable rooms are within the maximum recommended by WHO: 1999 and BS8233.

For all habitable rooms, glazing units of the following specification are recommended:

10mm/(6-16mm)6mm

The Pilkington data sheet (reproduced here as Table 5.3) states that glazing with this specification will provide 32 dB noise attenuation (closed windows). Table 5.2 summarises the predicted daytime and nighttime internal sound levels with closed windows (assuming the recommended glazing).

5.1.3 Ventilation.

Windows should be openable; however, where summarised in Table 4.1, above, open-window ventilation may result in excessive internal sound levels during daytime hours. The glazing must incorporate sufficient ventilation so to prevent overheating. ProPG calls for glazing with 'good ventilation'. In terms of temperature, this report interprets this as ventilation sufficient to provide a range of between 15-21°C. For west facing rooms, where summertime solar-gain will result in rapid heating, ventilation can be provided by open windows. Table 5.1 summarises the recommended ventilation scheme for all habitable rooms.

5.1.3.1 Ventilation. All North-Eastern-Facing Habitable Rooms

It is recommended that habitable rooms be ventilated by:

Open Window

5.1.3.2 Ventilation. All South-Western-Facing Habitable Rooms

It is recommended that habitable rooms be ventilated by:

Open Window

Table 5.1 Recommended Glazing and Ventilation

Location	Storey	Glazing	R _{wa} C _{tr} , dB	Ventilation
All Habitable North-East Facing Rooms	Ground	10mm/(6-16mm)6mm	32	Open Window
	First	10mm/(6-16mm)6mm	32	Open Window
All Habitable South-West-Facing Rooms	Ground	10mm/(6-16mm)6mm	32	Open Window
	First	10mm/(6-16mm)6mm	32	Open Window

Table 5.2. Predicted internal noise levels upon the adoption of recommended glazing

Time	Location	External SPL, dB, L _{Aeq} , 15 min	Open Window Attenuation, dB	Predicted Internal SPL, dB	WHO & BS8233 35/30 dB Criteria met?	Exceeds by, dB
Daytime/Evening	MP1	48	15	33	Yes	-2
Nighttime	MP1	41	15	26	Yes	-9
Daytime/Evening	MP2	46	15	31	Yes	-4
Nighttime	MP2	40	15	25	Yes	-10
Time	Location	External SPL, dB, L _{AMax} , 15 min	Open Window Attenuation, dB	Predicted Internal SPL, dB	WHO & BS8233 45 dB Criteria met?	Exceeds by, dB
Nighttime	MP1	53	15	38	Yes	-7
Nighttime	MP2	57	15	42	Yes	-3

Table 5.3 Pilkington Data Sheet (Blue: Recommended Glazing)

Glass	Sound Reduction Index								
	Octave Band Centre Frequency (Hz)								
	125	250	500	1000	2000	4000	Rw	Rw + C	Rw + Ctr
4mm/(6-16mm)/6mm	21	17	25	35	37	31	29	28	25
6mm/(6-16mm)/6mm	21	20	26	38	37	39	32	30	28
6mm/(6-16mm)/6mm	20	18	28	38	34	38	31	30	27
8mm/(6-16mm)/6mm	22	21	28	38	40	47	33	32	29
8mm/(6-16mm)/6mm	20	21	33	40	36	48	35	33	29
10mm/(6-16mm)/6mm	24	21	32	37	42	43	36	34	30
10mm/(6-16mm)/6mm	24	24	32	37	44	45	35	34	32
6mm/(6-16mm)/6mm laminated	20	19	30	39	37	46	33	31	28
6mm/(6-16mm)/10mm laminated	24	25	33	39	40	49	37	36	32

5.2 External

No recommendations.

6.0 CONCLUSIONS

6.1

A daytime, evening and night time noise impact assessment has been conducted at 24A Baron Street, Rochdale OL16 1SJ.

6.2

The existing noise sources (road traffic) are predicted to not adversely impact upon the daytime/evening internal amenity of north and south-east-facing habitable rooms.

6.3

Appropriate glazing specifications have been recommended.

Appendix 1

Glossary of Acoustic Terms

Sound Pressure Level (L_p)

The basic unit of sound measurement is the sound pressure level. As the pressures to which the human ear responds can range from 20 μPa to 200 Pa, a linear measurement of sound levels would involve many orders of magnitude. Consequently, the pressures are converted to a logarithmic scale and expressed in decibels (dB) as follows:

$$L_p = 20 \log_{10}(p/p_0)$$

Where L_p = sound pressure level in dB; p = rms sound pressure in Pa; and p_0 = reference sound pressure (20 μPa).

A-weighting Network

A frequency filtering system in a sound level meter, which approximates under defined conditions the frequency response of the human ear. The A-weighted sound pressure level, expressed in dB(A), has been shown to correlate well with subjective response to noise.

Equivalent continuous A-weighted sound pressure level, $L_{Aeq, T}$

The A-weighted 'equivalent continuous noise level' which is an average of the total sound energy measured over a specified period of time. In other words, L_{Aeq} is the level if a continuous noise which has the same total (A-weighted) energy as the real fluctuating noise, measured over the same time period. L_{Aeq} is increasingly being used as the preferred parameter for all forms of environmental noise.

$L_{A90, T}$

The A-weighted sound pressure level of the residual noise in decibels exceeded 90% of a given time interval, T . L_{A90} is typically taken as representative of background noise.

LA max

The maximum A-weighted noise level recorded during the measurement period.

Hz

The unit of frequency. The number of cycles (in the context of acoustics, the number of complete sound waves generated) per second.

Appendix 2

Location Plan and Microphone Positions (MPs)



MP1
MP2

Appendix 3

Equipment Used

Noise measurements were undertaken using a precision grade sound level meter:

Norsonic Nor145 Model integrating sound level meter.
Serial Number 14529307
Certificate Number U35939/U35940
Last Laboratory Calibrated 17/10/24

B & K 4230 Model calibrator
Serial Number 724157
Last Laboratory Calibrated 21/1/25

The Sound Level Meter was calibrated before and after both measurement periods, with no significant change in calibration. All calibrations took place at the measurement position.

The SLM met the requirements of BS EN 60651: 1994 and BS EN 60804: 2001 IEC 60804: 2000. It was capable of simultaneously measuring Leq and Ln values. Batteries for the SLM and calibrator were checked prior to all measurements.

Appendix 4

References

Pilkington (2026) [Online]. Available at:

assetmanager-ws.pilkington.com/filesserver.aspx?cmd=get_file&ref=8222&cd...

[Accessed 6 February 2026];