



High Road, Wood Green

**Condition 33 – Noise
Assessment**

September 2023

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EXECUTIVE SUMMARY

This report provides results of a Noise Assessment carried out to address the requirements of Planning Condition 33 for the development at 44 - 46 High St, Wood Green.

The likely environmental noise intrusion has been assessed against the requirements of Planning Condition 33 requirements. The assessment shows that no further mitigation is required for internal noise levels not to exceed the condition noise limits.

Details of the noise survey and assessment are presented in this report, as required by Condition 33.

In our opinion, sufficient information is presented in this report for condition discharge.

INTRODUCTION

This report presents the acoustic performance requirements and design aspects integral to achieving those requirements. This report concerns the development of 44-46 High Road, Wood Green which is for *'the demolition of the existing building and erection of 3-9 storey buildings providing residential accommodation (Use Class C3) and retail use (Use Classes A1-A5) plus associated site access, car and cycle parking, landscaping works and ancillary development.'*

The development was approved with conditions at Appeal by The Planning Inspectorate in Appeal Decisionⁱ dated 14th August 2019 for appeal reference APP/Y5420/W/18/3218865. The permission stipulates conditions for building services noise emission and environmental noise intrusion. This report provides details of a noise survey and assessment of the noise intrusion requirements of condition 33.

PLANNING CONDITION 33

The planning condition wording is reproduced below for ease of reference.

- 33) The Acoustic Planning Report (Section 4) predicts that with the installation of the specified glazing and inclusion of a fully or partially mechanically ventilated system the following internal noise levels in accordance with BS8233:2014 below will be achieved within the proposed residential units (with the windows closed);

Time	Area	Minimum Noise Level
Daytime Noise 7am – 11pm	Living Rooms and bedrooms	35dB(A)
	Dining Room/Areas	40dB(A)
Night Time Noise 11pm – 7am	Bedrooms	30dB(A)

A test shall be carried out prior to the discharge of this condition to show that the required noise levels have been met and the results submitted to the Local Planning Authority for its written approval.

It is noted that the wording refers to BS 8233: 2014ⁱⁱ. The condition requires a test of internal noise levels prior to occupation.

NOISE LEVEL MEASUREMENTS

Noise level measurements of the acoustic conditions at the site have been made by a part attended survey on Thursday 24th August to Friday 25th August 2023. The purpose of the survey was to determine if internal ambient noise levels comply with condition requirements.

Internal ambient noise levels were measured in two rooms facing High Road.

All noise level measurements were undertaken by a consultant certified as competent in environmental noise monitoring and in accordance with the principles of BS 7445: 2003ⁱⁱⁱ. The noise measurement instrumentation used conforms to the accuracy requirements of Type 1 as defined by BS EN 61672-1: 2013^{iv} and an inventory of all equipment used is given in Table 1 below.

Table 1: Inventory of measurement equipment

System	Position	Item	Make & Model	Serial Number	Last Laboratory Calibration
1	2	Sound Level Meter	Sinus Tango	0001113	08/02/2023
1	2	Preamplifier	Sinus 907144.5	20005	08/02/2023
1	2	Microphone	BSWA Tech MP201	4502376	08/02/2023
3	1	Sound Level Meter	NTi XL2	09754	08/02/2023
3	1	Preamplifier	NTi MA220	3424	08/02/2023
3	1	Microphone	NTi MC230	9042	08/02/2023
All	All	Acoustic Calibrator	Larson Davis Cal 200	9535	08/02/2023

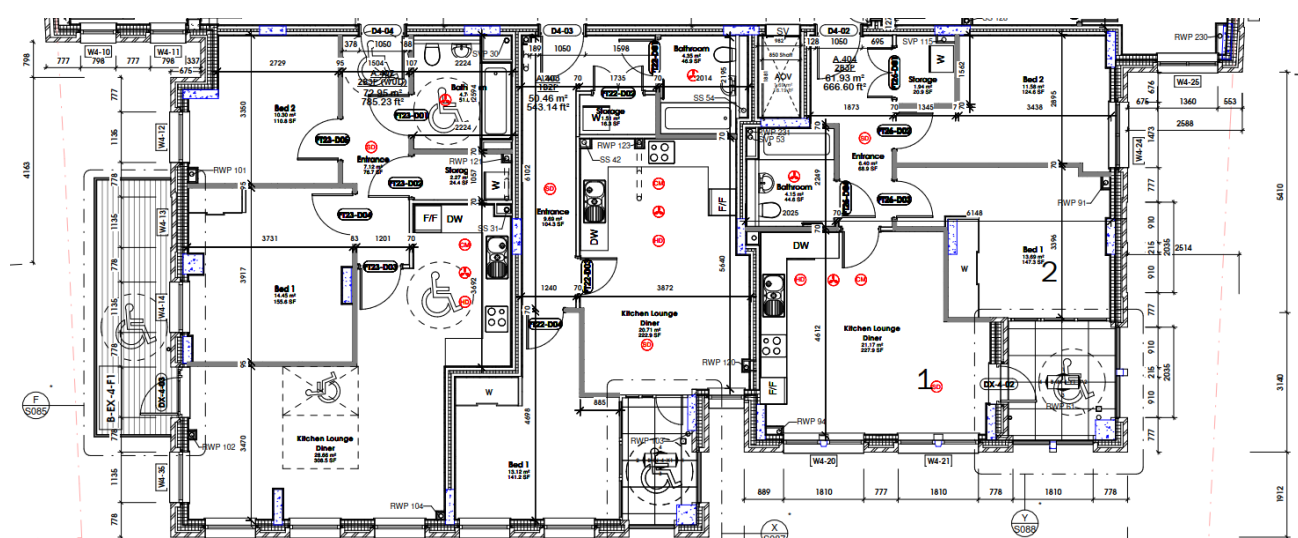
The logging sound level meters were set to automatically average 15-minute periods measuring parameters L_{Aeq} dB, L_{Amax} dB, L_{A10} dB and L_{A90} dB. Data was also logged in 10-second periods for the L_{Amax} dB parameter. The Calibrator CAL-200 producing nominal 114 dB at 1000 Hz was used to check the sensitivity of the measurement systems at the start and end of the survey. There was no observed drift in sensitivity.

Meteorological conditions were mild throughout the survey period, with no wind and the temperature varied between 15 Celsius at night and 22 Celsius during the day. Measurements were made with the hand-held Skywatch Xplorer and data from a nearby publicly accessible weather station is shown in Appendix A.

At Location 1 noise from vehicles using the adjacent High Road appeared to be the most significant noise source. Noise from the wider road network was just audible at times. The microphone was positioned at 1.5 metres above floor level near the centre of the living room.

At Location 2 noise from vehicles using the adjacent High Road appeared to be the most significant noise source. Noise from the wider road network was just audible at times. The microphone was positioned at 1.5 metres above floor level near the centre of the bedroom.

A plan drawing of the fourth floor of the south block, by GDM Architects is marked with the measurement locations in Figure 1 and photographs of the measurement positions are shown in Appendix B.

**Figure 1: Measurement Locations**

The fourth floor of the south block was selected as it is likely to be exposed to higher noise levels due to the screening effect of the terraces at lower levels.

A summary of the results is given in Table 2 below. The noise levels presented are for the day time periods of Thursday and the night time period of Thursday night into Friday morning. The L_{Aeq} dB noise levels are logarithmically averaged over the duration shown in the table. The night time $L_{A_{fmax}}$ dB noise levels are the 10th highest 10 second period during the 8 hour night time period of 23hrs to 07hrs.

Table 2: Summary of noise level measurements

Location	Period	Survey Duration hours	$L_{Aeq, T}$ dB	$L_{A_{fmax}}$ dB	$L_{A_{F90.0\%}}$ dB
1: Flat A.404 Living	Day	05:35:00	32.0	49.1	23.6
1: Flat A.404 Living	Night	07:59:20	26.4	45.2	21.0
2: Flat A.404 Bed	Day	05:15:00	28.6	33.7	22.2
2: Flat A.404 Bed	Night	07:59:20	24.9	43.6	19.7

A graph of the time history of noise level measurements for each location is shown in Appendix C.

ASSESSMENT OF INTERNAL NOISE LEVELS

Planning Condition 33 requires that internal ambient noise levels are not greater than 35 dB $L_{Aeq, 16hr}$ in Living rooms and Bedrooms during the daytime and not greater than 30 dB $L_{Aeq, 8hr}$ in bedrooms at night time. Assessment at design stage determined the acoustic requirements of the building.

The noise level measurements at Location 1 and 2 shown in Table 2 are representative of the internal noise levels in living rooms and bedrooms across the site in unfurnished rooms. It is expected that noise levels in furnished rooms would be 2 dB (A) to 3 dB (A) lower than measured in unfurnished rooms.

The measured internal ambient noise levels in unfurnished rooms do not exceed 35 dB $L_{Aeq, 16hr}$ in the day time, as required by condition 33. At night time the measured internal ambient noise levels do not exceed 35 dB $L_{Aeq, 8hr}$, as required by condition 33. Furthermore, at night time noise levels from individual events are not expected to typically exceed $L_{A_{fmax}}$ 45 dB in bedrooms.

In our opinion, these results demonstrate the development complies with the internal noise level criteria set by condition 33.

SUMMARY AND CONCLUSIONS

This report has been prepared to provide details of the Noise Assessment undertaken for the development at 44 – 46 High Road, Wood Green. Condition 33 concerns the internal noise levels from external transportation sources.

Internal ambient noise levels were measured in the completed bedrooms with frontage High Road. The measured noise levels were found to be lower than noise limits set by planning condition. Internal ambient noise levels are demonstrated to be less than 35 dB $L_{Aeq\ 16\text{hours}}$ in the day and less than 35 dB $L_{Aeq\ 8\text{hours}}$ at night. Noise level maxima were measured to be less than 45 dB L_{Amax} at night in bedrooms.

In our opinion, this demonstrates compliance with planning condition 33 requirements for internal noise levels. The information provided in this report is sufficient for the discharge of Planning Condition 33.

APPENDIX A – Weather History

Weather History for ILONDO584

Previous

Next

Daily Mode

August

24

2023

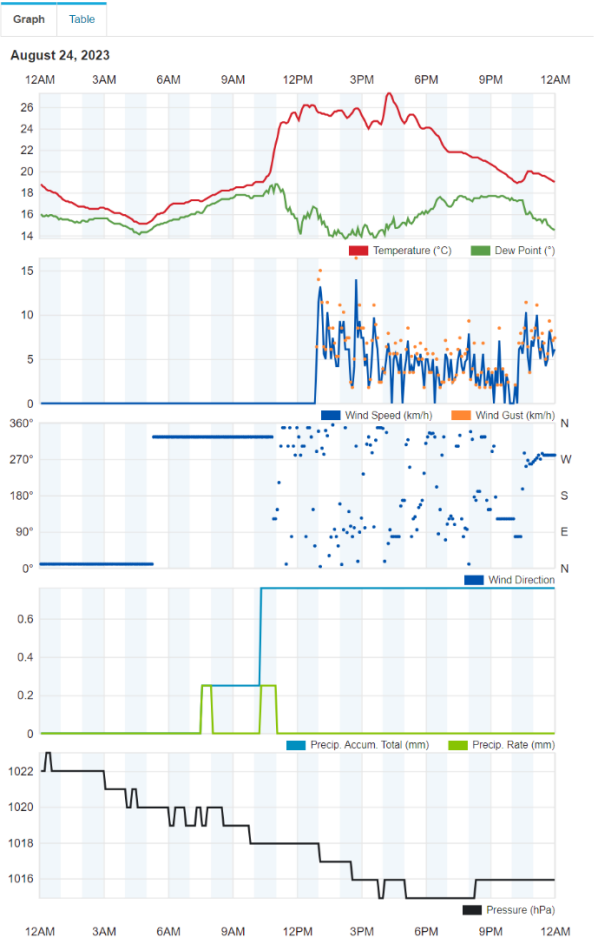
View

Summary

August 24, 2023

	High	Low	Average
Temperature	27.3 °C	15.1 °C	20.4 °C
Dew Point	18.8 °C	13.1 °C	15.8 °C
Humidity	95 %	44 %	77 %
Precipitation	0.76 mm	–	–

	High	Low	Average
Wind Speed	14.0 km/h	0.0 km/h	0.5 km/h
Wind Gust	16.4 km/h	–	0.6 km/h
Wind Direction	–	–	NNW
Pressure	1,023.03 hPa	1,014.90 hPa	–



Weather History for ILONDO584

Previous

Next

Daily Mode

August

25

2023

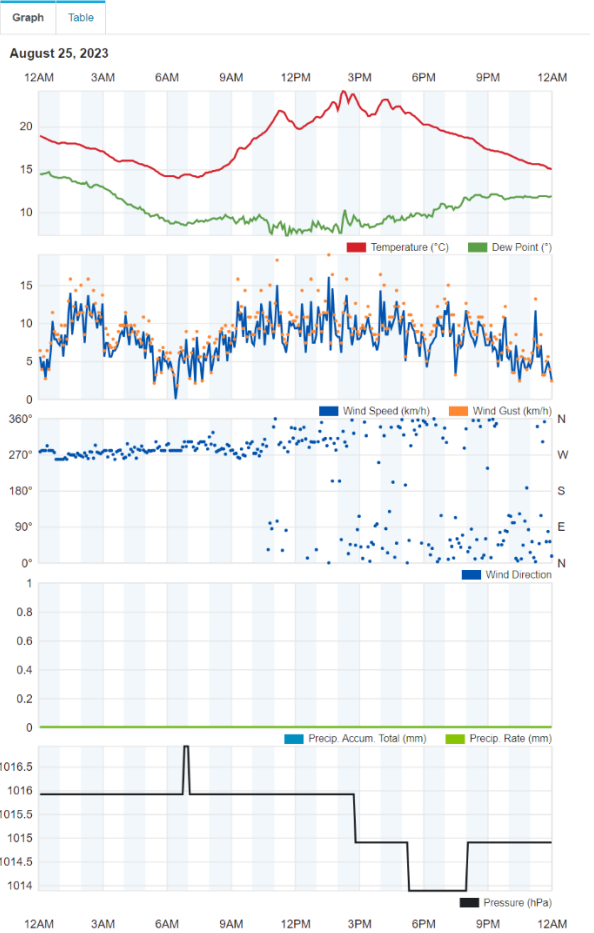
View

Summary

August 25, 2023

	High	Low	Average
Temperature	24.1 °C	14.0 °C	18.2 °C
Dew Point	14.7 °C	6.4 °C	10.0 °C
Humidity	82 %	35 %	61 %
Precipitation	0.00 mm	–	–

	High	Low	Average
Wind Speed	16.1 km/h	0.0 km/h	3.1 km/h
Wind Gust	19.0 km/h	–	3.4 km/h
Wind Direction	–	–	WNW
Pressure	1,016.93 hPa	1,013.88 hPa	–



APPENDIX B – Measurement Location Photographs



Location 1 looking towards High Road



Location 2 looking towards High Road

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- ⁱ Appeal Decision, reference APP/Y5420/W/18/3218865, The Planning Inspectorate, Secretary of State for Communities and Local Government, 9 July 2019
- ⁱⁱ BS 8233:2014, Guidance on sound insulation and noise reduction for buildings, BSI, February 2014
- ⁱⁱⁱ BS 7445-1: 2003 'Description and measurement of environmental noise – Part 1: Guide to quantities and procedures'
- ^{iv} BS EN 61672-1: 2013: 'Electroacoustics. Sound level meters. Specifications.', BSI, December 2013

APPENDIX C – Measurement Location Photographs

Time history of 10 second noise level measurements at Location 1, showing exclusions of emergency sirens

