



**86 London Street
Reading**

Planning Condition 4 Report

30 March 2026

For
Kalpana Chhetri

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SUMMARY

An application has been approved to change the use of the Grade II-listed office building at 86 London Street in Reading to create a residential dwelling.

A planning condition for the proposals specifies acoustic requirements to be achieved in proposed dwelling, requiring a noise survey and assessment of noise levels to be undertaken.

A noise survey has been undertaken to determine internal noise levels, which have been assessed in relation to the planning condition 4 internal noise level standards.

It was found that the BS 8233: 2014 noise limits are not exceeded at either measurement position, with the exception of a 1 dB exceedance of the night-time L_{Amax} limit at the front of the site, which should be considered negligible as this level of exceedance is subjectively imperceptible.

The additional standards relating to NR levels appear to have been exceeded on the east/front of the site. However, since BS 8233: 2014 is the current industry standard for desirable internal noise levels in residential dwellings, it is considered that the measured internal noise levels represent good acoustic conditions, particularly when taking into account the Grade II-listed, historic nature of the property, which has already been fitted with deep airspace secondary glazing.

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1.0 Introduction

An application has been approved to change the use of the Grade II-listed office building at 86 London Street in Reading to create a residential dwelling. A planning condition for the proposals specifies acoustic requirements to be achieved in proposed dwelling, requiring a noise survey and assessment of noise levels to be undertaken.

The following report presents the methodology and results of an environmental noise survey carried out at the site and a subsequent assessment to assess the potential impact of noise on the proposed dwellings.

2.0 Description of Site and Proposals

The site is located on the south-western side of London Street in Reading and is occupied by a commercial office building, in a mixed commercial and residential area.

Figure 2.1 shows the approximate site extent in red in relation to the surrounding area.

Figure 2.1 Existing Site Extent and Surroundings



3.0 Reading Borough Council Requirements

Planning condition 4 for the development states the following:

“No development shall commence on site until a detailed scheme, informed by an assessment of the current noise environment, for protecting the dwellings from the external noise environment of the area has been submitted to and approved, in writing, by the Local Planning Authority. The scheme itself shall be designed, specified and constructed so that the sound insulation performance of the structure and the layout of the dwellings are such that:

- i The indoor ambient noise levels shall not exceed the values detailed in Table 4 of BS 8233: 2014 with appropriate penalties applied for non-anonymous noise sources;*
- ii The NR value shall not exceed NR20 between 2300hrs and 0700hrs and NR25 at all other times.*

iii *The LMAX value shall not exceed 45dB more than 10 times per night.*

Where opening windows will lead to an internal noise level increase of 5 dBA or greater above BS 8233:2014 recommended internal levels, the scheme shall include provision of alternative mechanical ventilation with minimum performance equivalent to a mechanical heat recovery (MVHR) system with cool air bypass as an alternative means of cooling and ventilation. Noise from the system should not result in BS8233 internal levels being exceeded.

Thereafter, the development shall not be carried out other than in accordance with the approved scheme which shall be completed before any part of the accommodation hereby approved is occupied, unless the Local Planning Authority otherwise agrees in writing."

British Standard (BS) 8233: 2014 "Guidance on sound insulation and noise reduction for buildings" is the industry standard for 'desirable' internal noise level standards for dwelling, as shown in Table 3.1.

Table 3.1 BS 8233 Desirable Internal Noise Levels

Activity	Location	07:00 to 23:00 (hours)	23:00 to 07:00 (hours)
Resting	Living room	35 dB LAeq,16hour	-
Dining	Dining room/area	40 dB LAeq,16hour	-
Sleeping (daytime resting)	Bedroom	35 dB LAeq,16hour	30 dB LAeq,8hour

The standard advises that the limits shown in Table 3.1 could be increased by 5 dB whilst still achieving 'reasonable' conditions.

We have therefore considered the above in our noise survey methodology and noise assessment.

4.0 Noise Survey

4.1 Methodology

An unmanned environmental noise survey was undertaken between 09:30 hours on Friday 27 March 2026 and 12:00 hours on Monday 30 March 2026. The noise survey period was selected to determine typical noise levels affecting the proposed development site during the daytime and night-time, when the proposed dwellings will be occupied.

The noise survey was undertaken with the measurement microphones mounted approximately 1.5m above floor level in rooms at the front (east) and rear (west) of the building.

The measurement positions were selected to assess internal noise levels on the front (east) and rear (west) sides of the building.

The rooms on the front (east) side of the building were noted to have been fitted with deep airspace double glazing, to the full depth of the window sill.

The equipment used for the noise survey is summarised in Table 4.1 below.

Table 4.1 Description of Equipment

Measurement Position	Item	Make & Model	Serial Number
East / Front	Type 1 automated logging sound level meter	Norsonic 140	1406015
	Type 1 ½" microphone	Norsonic 1225	168230
West / Rear	Type 1 automated logging sound level meter	Norsonic 140	1406016
	Type 1 ½" microphone	Norsonic 1225	168116
Calibrator		01 dB CAL31	105381

L_{Amax} and L_{Aeq} sound pressure levels were measured over contiguous 15-minute intervals throughout the noise survey period.

Due to the nature of the noise survey, i.e. unmanned, we are unable to comment on the weather conditions throughout the entire noise survey period. However, at the beginning and end of the survey period, conditions were dry with partially cloudy skies and light wind. We understand these conditions were representative of the remainder of the survey period and are considered appropriate for undertaking environmental noise measurements.

The noise monitoring equipment was calibrated before and after the noise survey period. No significant change was found. Laboratory equipment calibration certificates can be provided upon request.

4.2 Noise Survey Results & Observations

Appendix B presents time history graphs showing the L_{Amax} and L_{Aeq} sound pressure levels measured throughout the noise survey (shown in 15-minute periods).

We would consider the measured levels to be reasonable, taking into account the locations of the measurement positions and the dominant nearby noise sources.

5.0 Internal Noise Levels

This section presents our assessment of the measured noise levels in relation to the planning condition 4 requirements.

Based on the noise survey results, the measured internal noise levels are presented in Table 5.1 below.

Table 5.1 Noise Levels affecting Proposed Façades

Measurement Position	Daytime		Night-time		
	L _{Aeq} (16 hour) (dB)	NR Level (L _{eq})	L _{Aeq} (8 hour) (dB)	L _{Amax} (15 minute) (dB) (10th highest)	NR Level (L _{eq})
East / Front	34	28	29	46	24
West / Rear	31	26	22	34	18
Planning Condition 4 Limits	35	25	30	45	20

It can be seen that the BS 8233: 2014 noise limits are not exceeded at either measurement position, with the exception of a 1 dB exceedance of the night-time L_{Amax} limit at the front of the site, which should be considered negligible as this level of exceedance is subjectively imperceptible.

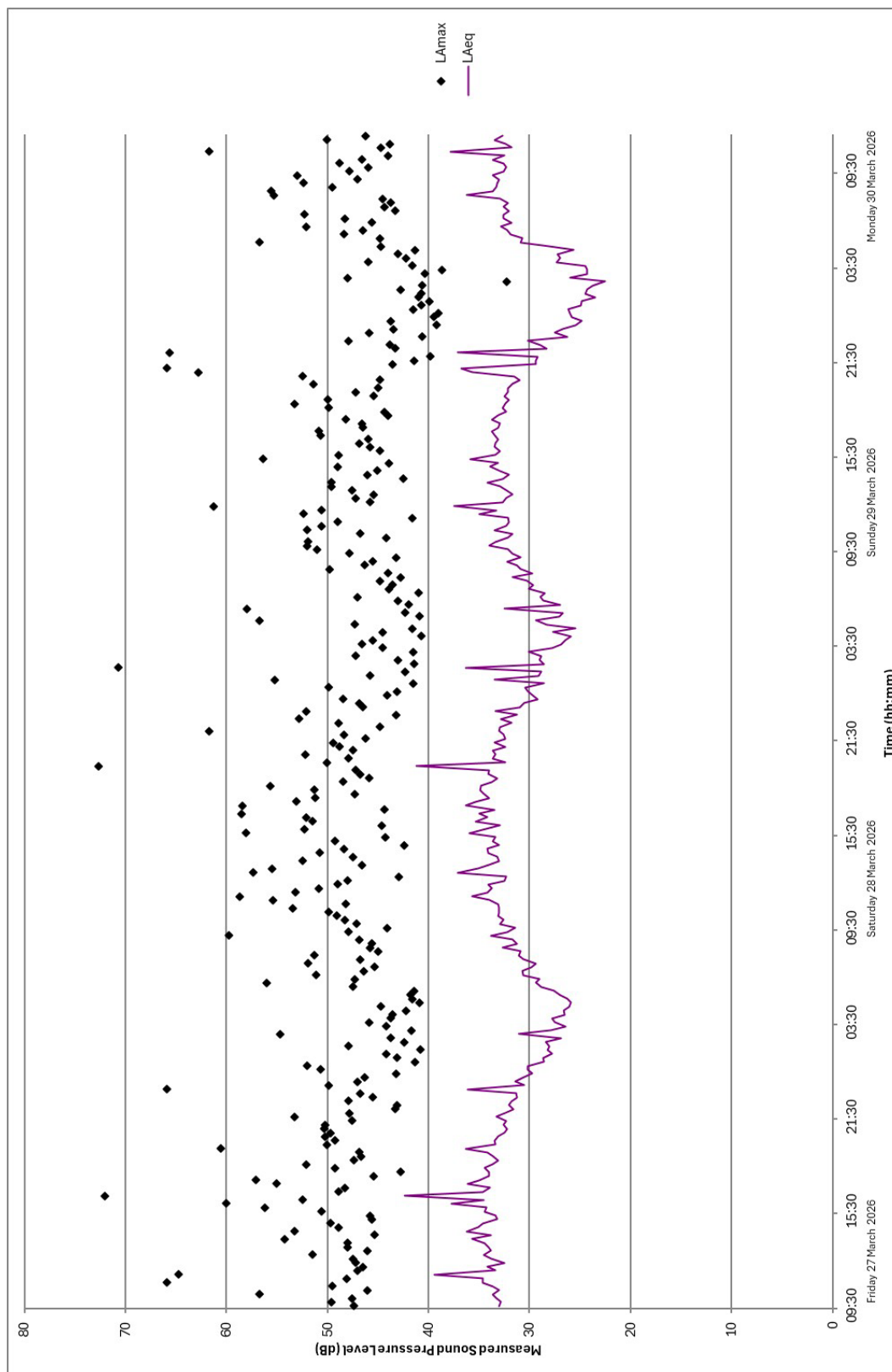
The additional standards relating to NR levels appear to have been exceeded on the east/front of the site. However, since BS 8233: 2014 is the current industry standard for desirable internal noise levels in residential dwellings, it is considered that the measured internal noise levels represent good acoustic conditions particularly when taking into account the Grade II-listed, historic nature of the property, which has already been fitted with deep airspace secondary glazing.

Appendix A – Acoustic Terminology

Parameter	Description
Decibel (dB)	A logarithmic scale representing the sound pressure or power level relative to the threshold of hearing (20×10^{-6} Pascals).
Sound Pressure Level (L_p)	The sound pressure level is the sound pressure fluctuation caused by vibrating objects relative to the threshold of hearing.
A-weighting (L_A or dBA)	The sound level in dB with a filter applied to increase certain frequencies and decrease others to correspond with the average human response to sound.
L_{Amax}	The A-weighted maximum noise level measured during the measurement period.
$L_{Aeq,T}$	The A-weighted equivalent continuous noise level over the time period T (typically T = 16 hours for daytime periods, T = 8 hours for night-time periods). This is the sound level that is equivalent to the average energy of noise recorded over a given period.
L_{A90} (15 min)	The noise level exceeded for 90% of the time (also referred to as the background noise level), measured over a 15-minute period
R_w	The weighted (w) sound reduction index (R), a single figure rating of the laboratory airborne sound insulation performance of a construction, usually measured across the frequency range 100-3150Hz. The higher the value, the greater the sound insulation, and the more onerous the requirement.
$D_{n,e,w}$	The weighted (w) element (e) normalised (n) level difference (D), a single figure indicator of the ability of a small building element (such as a trickle ventilator) to reduce sound. The higher the value, the greater the sound reduction, and vice versa.

Appendix B – Time History Graphs

East / Front Measurement Position



West / Rear Measurement Position

