

# Noise Impact Assessment

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Aztec House, London

26006-RP-NIA-01

12 June 2026

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The assessment is based on the specific conditions, equipment selections, and site layouts described herein. Any changes to these may require the assessment to be reviewed and updated.

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## 1.0 Introduction

### 1.1 Overview

Murray Acoustics Ltd has been commissioned to undertake a noise impact assessment of the proposed conversion of commercial accommodation to residential flats above at Aztec House, London, N6 4ER.

The change of use from offices (Class E) to dwellinghouses (Class C3) is being progressed under permitted development rights, and the assessment has been prepared to support the prior approval application in respect of noise impacts on the future occupiers of the proposed dwellings.

This report sets out the assessment methodology, findings, and recommended mitigation measures where relevant.

### 1.2 Site Description

The site comprises the first to third (top) floors of a commercial building located at 397-405 Archway Road, London, N6 4ER. The ground floor of the building is occupied as a retail unit by Topps Tiles. The upper floors, to which the report relates, are currently occupied as a mixture of Class E uses.

The surrounding locality is primarily residential in character, with elements of commercial use (small shops) to ground floor beneath terraced housing fronting Archway Road.

Archway Road runs to the front (north) of the site, while the site is bound by Bishops Rd to the west, and adjoins a terraced house with a small café at ground floor (the Vanilla Café) to the east.



**Figure 1.1** Site location

### 1.3 Development Proposals

The proposal sees the change of use of the existing first to third floors from commercial (Use Class E) to Dwellinghouses, while the ground floor will remain as Class E use (as Topps Tiles).

## 1.4 Assessment Scope

As the proposal is being progressed under permitted development (Class MA), the scope of the noise assessment is limited to the matters specified in Schedule 2, Part 3, of the Town and Country Planning (General Permitted Development) (England) Order 2015, as amended. The relevant matter for this assessment is:

- Impacts of noise from commercial premises on the intended occupiers of the development.

Accordingly, this assessment considers noise from the following identified commercial premises affecting the development:

- Ground floor Class E use of the building including transfer of noise to the new residential units above, via the separating floor, and also noise from associated external equipment
- Adjacent Vanilla Café, with associated external equipment

Given that the ground floor of the Site is to remain as Class E use, and that noise levels generated in such a demise are generally considered to be low, the internal operations of the Vanilla Café itself are not considered in the assessment which follows

Noise from environmental noise sources (e.g. external road traffic) affecting residential amenity is not a relevant matter under the prior approval scope and should not be considered with regards to any approval. Nonetheless, an external environmental noise survey has been undertaken to characterise the acoustic environment at the site and provide context to the included assessments.

## 2.0 Assessment Guidance & Requirements

### 2.1 Permitted Development Requirements

The development is being progressed under permitted development, which requires the local planning authority (**Haringey Council**) to consider the impact of noise from commercial premises on the intended occupiers of the development as part of the prior approval process.

#### 2.1.1 Town and Country Planning (General Permitted Development) (England) Order 2015 (SI 2015/596) as amended.

Permitted development rights are a national grant of planning permission which allow certain building works and changes of use to be carried out without having to make a full planning application. Permitted development rights are subject to conditions and limitations to control impacts and to protect local amenity.

Permitted Development Rights Class MA allows the change of use from Class E (Commercial, Business and Service) to Class C3 (Dwellinghouses) without the need for full planning permission.

A further update to permitted development rights on 5th March 2024 removes the requirement for office accommodation to be vacant for 3 months prior to approval application, and there is no longer a limit on the maximum floor space which may be converted. The key law controlling permitted development remain and require that:

- new dwellings meet Nationally Described Space Standards
- the impacts of noise from commercial premises on intended occupiers is considered, and
- there is the provision of adequate natural light in all habitable rooms.

When considering noise impact for proposed change of use from commercial to residential developments sought via Prior Approval under Permitted Development legislation, it is important to note that only the assessment of 'impacts of noise from commercial premises on the intended occupiers of the development' are required; where a "commercial premises" is defined within the GPDO 2015 (as amended) as meaning any premises normally used for the purpose of any commercial or industrial undertaking which existed on the date of the Prior Approval application, and includes any premises licensed under the Licensing Act 2003(a) or any other place of public entertainment.

Under Permitted Development legislation there is no requirement to consider noise from transport infrastructure type noise sources such as from road traffic, railways, or aircraft etc.

### 2.2 BS 8233 Assessment Methodology

BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings' (herein **BS 8233**) provides guidance on suitable internal ambient noise levels within residential buildings, along with recommended external amenity noise levels. The guidance draws on the World Health Organization (WHO) 'Guidelines for Community Noise' (1999) and 'Night Noise Guidelines for Europe' (2009).

The internal ambient noise level criteria set out in BS 8233 for residential dwellings are summarised in the table below.

**Table 2.1** Internal ambient noise levels for dwellings (BS 8233:2014)

| Activity           | Location         | 07:00 – 23:00       | 23:00 – 07:00      |
|--------------------|------------------|---------------------|--------------------|
| Resting            | Living room      | 35 dB $L_{Aeq,16h}$ | -                  |
| Dining             | Dining room/area | 40 dB $L_{Aeq,16h}$ | -                  |
| Sleeping / resting | Bedroom          | 35 dB $L_{Aeq,16h}$ | 30 dB $L_{Aeq,8h}$ |

BS 8233 notes that where internal  $L_{Aeq}$  targets are achieved, occasional higher noise events may still cause disturbance and refers to WHO guidance on individual event levels. A commonly applied criterion, drawn from WHO guidance, is that the internal  $L_{AFmax}$  in bedrooms should not regularly exceed 45 dB at night (i.e. more than 10-15 times).

For external amenity areas such as gardens and balconies, BS 8233 states that it is desirable that the external noise level does not exceed 50 dB  $L_{Aeq,T}$ , with an upper guideline value of 55 dB  $L_{Aeq,T}$ . The standard acknowledges that in higher-noise urban areas these values may not be achievable, and that a compromise between elevated noise levels and other planning benefits should be sought, with development not being prohibited on noise grounds alone.

## 2.3 BS 4142 Assessment Methodology

BS 4142:2014+A1:2019 '*Methods for rating and assessing industrial and commercial sound*' (herein **BS 4142**) provides a method for assessing the likelihood of adverse impact from industrial and commercial sound sources at nearby noise-sensitive receptors.

The assessment compares the rating level of the source in question against the prevailing background sound level at the receptor location. The rating level is derived from the measured or predicted specific sound level, with corrections applied where the sound has distinctive characteristics such as tonality, impulsivity, or intermittency.

The difference between the rating level and the background sound level provides an initial estimate of impact. A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on context. A difference of around +5 dB is likely to be an indication of an adverse impact, depending on context. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on context. These initial estimates are then considered in context, taking account of factors such as the absolute noise levels, the character of the existing acoustic environment, the sensitivity of the receptor, and the nature and frequency of the sound.

## 2.4 Building Regulations – Approved Document E

While demonstration of compliance with Building Regulations (specifically Approved Document E (ADE), relating to internal sound insulation) is not required as part of the permitted development application, the performance values from ADE provide a useful benchmark. ADE recommends a minimum airborne sound insulation of  $D_{nTw} + C_{tr} \geq 43$  dB for separating floors formed by material change of use.

In this assessment, the in-situ airborne sound insulation of the separating floor between the ground and first floors has been measured in accordance with BS EN ISO 16283-1:2014. The result has been used to predict the resultant noise level within the proposed flats arising from typical operational noise within the ground floor, and to compare this against appropriate internal ambient noise level targets in the rooms above.

## 3.0 Baseline Noise Survey & Sound Insulation Testing

### 3.1 Procedure

Unattended noise measurements were undertaken at 2 measurement positions from ~11:00 on Wednesday 6<sup>th</sup> May 2026 through to ~10:00 on Friday 8<sup>th</sup> May 2026.

Weather conditions were generally dry with light winds and therefore suitable for the measurement of environmental noise. The measurement procedure complied with ISO 1996-2:2017 Acoustics '*Description, measurement and assessment of environmental noise - Part 2: Determination of environmental noise levels*'.

In addition to the unattended measurements, attended measurements were made at roof level and in the ground floor car park to the rear of the building in order to quantify noise from:

- Cooling equipment serving Topps Tiles, located in an undercroft below the first floor of the Site
- A kitchen extract fan associated with the Vanilla Café

An in-situ airborne sound insulation test of the separating floor between the ground floor and first floor was also undertaken to establish the level difference performance of the separating floor.

### 3.2 Measurement Positions

The measurement positions (**MP1** & **MP2**) are described below and illustrated on Figure 3.1:

- **MP1:** Measurement at roof level on the elevation overlooking Archway Road
- **MP2:** Measurement at roof level on the elevation overlooking the rear of the site

Both microphones were located in free-field conditions.



**Figure 3.1** Survey measurement positions

### 3.3 Noise Climate

At both unattended locations, the noise climate was noted to be dominated by road traffic noise from Archway Road.

During lulls in road traffic, noise from the termination of the kitchen extract fan (KEF) associated with the Vanilla Café was audible at relatively low level. Noise from the fan itself, located at ~1<sup>st</sup> floor level, was more clearly audible at ground floor to the rear of the site.

No significant noise was observed from the operations of Topps Tiles, either externally or internally, during the installation or collection of equipment, though there were small condenser units located at ground floor level which operated intermittently during attendance.

The noise impact from both the Vanilla Café and Topps Tiles plant is appraised in further detail in Section 4.0 of this report.

### 3.4 Equipment

The equipment calibration was verified before and after use and no abnormalities were observed. The equipment used is described within Appendix A – Noise Survey Equipment.

### 3.5 Environmental Noise Survey Results

The full measured sound levels throughout the survey duration are presented as time history graphs in Appendix B – Environmental Noise Survey Results. A summary of the sound levels is presented below.

- The equivalent continuous sound levels ( $L_{Aeq,T}$ ) presented are the arithmetic average of each of the day/night periods, where the data from the morning of Friday 8th May has been aggregated with the data from Wednesday 6th May to form two 24-hour periods (with the exception of one missed hour between 10:00 and 11:00).
- The maximum noise levels ( $L_{AFmax}$ ) presented are the average of the 10th highest 1-minute maximum sound pressure level value across both nights.
- The background sound levels ( $L_{AF90}$ ) are the typical level determined in accordance with BS 4142 (choosing the lowest modal value in each period).

**Table 3.1** Summary of noise survey results

| Position | Period                        | Equivalent Continuous Sound Level<br>(dB $L_{Aeq,T}$ ) | Maximum Noise Level<br>(dB $L_{AFmax}$ ) | Typical Background Sound Level<br>(dB $L_{AF90}$ ) |
|----------|-------------------------------|--------------------------------------------------------|------------------------------------------|----------------------------------------------------|
| MP1      | Daytime<br>(07:00 – 23:00)    | 67 dB                                                  | N/A                                      | 58                                                 |
|          | Night-time<br>(23:00 – 07:00) | 64 dB                                                  | 80 dB                                    | 43                                                 |
| MP2      | Daytime<br>(07:00 – 23:00)    | 54 dB                                                  | N/A                                      | 49                                                 |
|          | Night-time<br>(23:00 – 07:00) | 50 dB                                                  | 69 dB                                    | 36                                                 |

Neither measurement position was considered to be unduly affected by noise from the mechanical plant on the roof of the building itself. This equipment is understood to serve the spaces which are to be converted to residential use and, therefore, would not be present once the conversion is undertaken – and therefore is not assessed.

### 3.6 Sound Insulation Test Results

The measurement of the in-situ sound insulation of the separating floor between the ground and first floors has been undertaken in accordance with BS EN ISO 16283-1:2014.

Due to the sensitive occupation of the laboratory space on first floor, the only available test location was between the ground floor toilets, associated with Topps Tiles, and the first-floor toilets, associated with the first-floor laboratory space.

The measured airborne sound insulation of the separating floor (expressed as the standardised level difference  $D_{nT}$ ) is presented below, together with the single-figure rating value  $D_{nT,w} + C_{tr}$ .

**Table 3.2** Summary of noise survey results

| Element                                                               | Standardised Level Difference ( $D_{nT}$ , dB)<br>at Octave Band Centre Frequency (Hz) |     |     |                 |                 |                 |                 | $D_{nT,w} (+C_{tr})$<br>dB |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|-----|-----|-----------------|-----------------|-----------------|-----------------|----------------------------|
|                                                                       | 63                                                                                     | 125 | 250 | 500             | 1k              | 2k              | 4k              |                            |
| Separating floor to shop below                                        | 41                                                                                     | 43  | 49  | 53 <sup>1</sup> | 58 <sup>1</sup> | 60 <sup>1</sup> | 66 <sup>1</sup> | 57 (-4)                    |
| <sup>1</sup> Limited by background, actual result likely to be higher |                                                                                        |     |     |                 |                 |                 |                 |                            |

The measured single-figure airborne sound insulation of the separating floor comfortably exceeds the standard Approved Document E benchmark of 43 dB for separating floors formed by material change of use.

However, it should be acknowledged that the separating area of the floor under test was relatively small, at around 3 m<sup>2</sup>. The bedrooms on the scheme generally have floor areas of around 15 m<sup>2</sup>, while the living rooms are around 25 m<sup>2</sup>.

On this basis, the area corrected performances would be 46 dB  $D_{nT,w} + C_{tr}$  and 44 dB  $D_{nT,w} + C_{tr}$  for the bedrooms and living rooms, respectively.

## 4.0 Commercial Noise Assessment

An assessment of noise from the identified commercial elements which affect the site is presented below.

### 4.1 Vanilla Café (Adjacent)

As discussed above, the primary element of noise impact from the Vanilla Café is from the kitchen extract fan (KEF) located to the rear of the property at around first floor level – with internally generated noise not considered to be significant.

Measurements of both the termination (at roof level) and noise from the fan itself were undertaken, as illustrated in the figures below.



The results of these measurements are provided in the following table. It should be noted that the influence of noise from other sources has been removed as far as they can be, but it is impossible to completely remove as residual noise from the surrounding road network was relatively constant.

**Table 4.1** Measurements of Vanilla Café kitchen extract fan

| Position                             | Sound Pressure Level (dB L <sub>Aeq,T</sub> ) |
|--------------------------------------|-----------------------------------------------|
| Termination at roof level ~1 m       | 54                                            |
| Casing breakout at ground floor ~8 m | 59                                            |

#### 4.1.1 Upper Floors (Fan Termination)

In terms of the upper floor windows, likely to be affected by the roof level termination, the nearest window of the Site is approximately 6 m away, and significantly screened from the outlet of the fan.

Assuming a reduction in noise level of 10 dB for the screening, the predicted noise level outside the nearest window is **~28 dB L<sub>Aeq,T</sub>** – which is around 26 dB below the prevailing ambient sound level during

the daytime, and 22 dB during the night-time – suggesting that it should be insignificant in the context of the wider noise environment.

Furthermore, and while the ventilation strategy for the proposed units is not known, even with an open window used for ventilation this would result in noise levels which are significantly below the internal noise targets for residential development.

#### 4.1.2 Lower Floors (Fan Casing)

In addition to the above, a measurement was undertaken at the rear of the Site beneath the nearest first-floor window to the fan. This location is considered representative of the nearest affected façade, where a sound pressure level of **49 dB L<sub>Aeq,T</sub>** was measured.

The Vanilla Café operates during the daytime from 07:00. On this basis, it is possible that the fan may start shortly beforehand, likely between 06:30 and 07:00.

The typical prevailing background sound level at the rear of the building at around 06:30 was approximately **47 to 48 dB L<sub>AF90,15min</sub>**, as measured at MP2, increasing to a typical daytime background sound level of **49 dB L<sub>AF90</sub>**. It should be acknowledged that this similarity in level is coincidental, as the time history does not indicate a material influence from mechanical plant at the measurement position.

In accordance with BS 4142, this indicates that the specific sound source is likely to have a **low impact, depending on context**, during the daytime, with potential for a slightly greater impact during the early morning period when background sound levels are lower.

However, a conventional BS 4142 assessment is not always the most appropriate method for considering the introduction of a new residential receptor into an existing mixed-use environment. The standard is primarily intended to assess the effect of industrial and commercial sound on existing receptors and can, in some circumstances, be overly stringent when applied to a proposed development within an established acoustic environment.

On this, BS 4142 states that *“Where a new noise-sensitive receptor is introduced and there is extant industrial and/or commercial sound, it should be recognized that the industrial and/or commercial sound forms a component of the acoustic environment. In such circumstances other guidance and criteria in addition to or alternative to this standard can also inform the appropriateness of both introducing a new noise-sensitive receptor and the extent of required noise mitigation.”*

Accordingly, the assessment below considers the likely internal conditions experienced by future occupiers, taking account of the attenuation provided by the existing building envelope. This represents the contextual assessment envisaged by BS 4142.

##### Closed Windows

While the acoustic performance of the existing windows is not known, they were observed to be double-glazed and generally well sealed. A typical standard double-glazed window may achieve an acoustic performance of around 29 dB R<sub>w</sub> + C<sub>tr</sub>, while the brick façade is likely to achieve at least 45 dB R<sub>w</sub> + C<sub>tr</sub>. Overall, the external-to-internal level difference of the façade construction is likely to provide approximately 30 to 35 dB of attenuation.

On this basis, the internal noise level due to the fan with windows closed is expected to be around **14 to 19 dB L<sub>Aeq</sub>**. This is significantly below the internal ambient noise targets set out in BS 8233 and is therefore highly unlikely to give rise to disturbance within internal living spaces, particularly given the relatively steady character of the source.

### Open Windows

It is acknowledged that, during warmer periods, when windows may be opened for additional ventilation (for example, to mitigate overheating), internal noise levels due to external noise ingress would increase.

Due to various factors — including window type, orientation relative to the source, the extent to which the window is opened, and the duration for which it remains open — it is difficult to quantify the external-to-internal level difference under open-window conditions with precision.

When windows are open, the kitchen extract fan may be audible internally. However, given its relatively steady character and that its level is of a similar order to the surrounding environmental noise climate, it is not expected to be unduly intrusive or to materially disrupt normal residential use.

It should also be recognised that the need to open windows for overheating mitigation is generally limited to warmer periods of the year.

Furthermore, it is noted that there are existing residential windows in significantly closer proximity to the fan than those of the Proposed Development. This provides additional context that the source forms part of the established local acoustic environment.

Finally, it should be acknowledged that the Proposed Development is located within an area of mixed use, and that a degree of commercial and mechanical noise is characteristic of this type of urban environment. It is therefore considered likely that an element of commercial noise would be acceptable within the context of the proposed development.

## 4.2 Topps Tiles (Below)

The ground floor Class E use, currently occupied by Topps Tiles, is located directly below proposed residences and, therefore, an assessment of noise transfer to above has been undertaken.

The full construction details of the separating floor are not known, however it is understood that the structural slab is a composite metal deck (unknown depth of concrete), and the current ceiling in Topps Tiles is a mineral fibre lay-in grid ceiling. The presence or construction of any raised floor is not known.

It is assumed that the construction is the same throughout the first-floor, and the tested floor (between WCs) was observed to have a similar lay-in grid ceiling.

During attendance at the site, it was observed that Topps Tiles is generally a relatively low occupancy shop, with low ambient noise levels. A typical operational noise spectrum for a busy retail environment has been adopted for the assessment below.

### 4.2.1 Noise Transfer from Ground Floor

The predicted resultant noise level within the proposed flats arising from operational shop noise has been calculated by subtracting the calculated airborne sound insulation of the separating floor ( $D_{nT}$ ) from the anticipated source sound pressure level in each octave band.

The shop is currently open during daytime hours only, and an assessment has been undertaken to a living room as this is most likely to be occupied during the day, and also has a slightly lower performance due to its larger floor area.

**Table 4.2** Predicted resultant noise level in first-floor living rooms from shop operations

| Description                                            | Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |                 | Overall (dBA) |
|--------------------------------------------------------|-----------------------------------|-----|-----|-----|----|----|----|-----------------|---------------|
|                                                        | 63                                | 125 | 250 | 500 | 1k | 2k | 4k | 8k              |               |
| Source sound level within shop ( $L_{eq,1h}$ , dB)     | 62                                | 59  | 61  | 63  | 60 | 58 | 55 | 49              | 65            |
| Level difference of separating floor ( $D_{nT}$ , dB)  | 32                                | 34  | 40  | 44  | 49 | 51 | 57 | 57 <sup>1</sup> | -             |
| Resultant sound level within flats ( $L_{eq,1h}$ , dB) | 30                                | 25  | 21  | 19  | 11 | 7  | ≤0 | ≤0              | 20            |

<sup>1</sup> Value extrapolated from measured performance at 4 kHz

The overall A-weighted resultant noise level within the proposed flats arising from operational shop noise is predicted to be approximately **20 dB  $L_{Aeq}$  / NR16** which is well below typical residential internal ambient noise level targets of 35 dB  $L_{Aeq,16h}$  during the daytime.

On this basis, noise from Topps Tiles transmitted to the proposed flats via the separating floor is considered **very unlikely to give rise to an adverse impact** on the future occupiers of the development.

#### 4.2.2 External Condenser Units

In order to provide cooling to Topps Tiles, there are a number of small condenser (DX) units located at high level in the undercroft area to the rear of the site. A measurement was made of two operational units, as illustrated in Figure 4.1, with a noise level of ~57 dB  $L_{Aeq,T}$  measured at ~3 m.

**Figure 4.1** Measurement of Topps Tiles condenser units

Considering their location, a high level of screening is predicted to the windows above (>15 dB). On this basis, the noise from the units is likely to be at least 5 to 10 dB below the existing background sound level at the rear of the site during the daytime (49 dB(A)) and, therefore, it is considered there should be **no impact on occupants of the Proposed Development**.

### 4.3 Other Class E Uses

While the current level of sound insulation is deemed appropriate for the existing occupation of the ground floor, it is noted that Use Class E contains a number of other potential uses which may have higher noise levels than those experienced in a typical retail setting.

Noisier uses, and particularly those which may include amplified music and/or run into the night-time period, may require higher levels of sound insulation than those afforded by the existing floor/ceiling build-up.

Based on the current levels of sound insulation, which exceed Building Regulations requirements with a relatively lightweight ceiling, it is considered likely that appropriate levels of sound insulation should be able to be achieved through use of better performing ceilings in the ground floor demise – without need to undertake works above the floor.

This should be clarified following confirmation of the presence/construction of any raised floor to the first-floor demise.

Similarly, any changes to externally located mechanical equipment should be assessed and mitigation specified as necessary to ensure that they comply with appropriate noise limits.

## 5.0 Conclusion

Murray Acoustics Ltd has undertaken a noise assessment of the proposed conversion of offices to residential flats above at Aztec House, London, in support of a prior approval application under permitted development.

The relevant matter under the prior approval scope is the impact of noise from commercial premises on the intended occupiers of the development. To address this, the assessment of noise impact from two premises (the Vanilla Café, adjacent, and Topps Tiles, below) has been undertaken.

The impact of externally located mechanical equipment has been considered. The noise level is comparable to that of the general noise climate due to other sources. Overall, having regard to the measured sound levels, the existing mixed-use character of the area, and the attenuation provided by the building envelope, noise from the existing mechanical plant is considered unlikely to give rise to an adverse effect on the future occupiers of the Proposed Development.

An in-situ airborne sound insulation test of the separating floor between the ground floor and the first floor was undertaken, with a measured performance of  $53 \text{ dB } D_{nT,w} + C_{tr}$ . This figure has been corrected for the size of the new rooms, and, in conjunction with typical operational retail noise levels, the predicted internal noise level within the proposed flats arising from such use is approximately  $20 \text{ dB } L_{Aeq} / \text{NR16}$ , which is significantly below the BS 8233 internal ambient noise target of  $35 \text{ dB } L_{Aeq,16h}$  for daytime in living rooms and bedrooms.

Noise from the ground floor commercial unit is therefore not expected to give rise to an adverse impact on the future occupiers of the proposed dwellings, and no specific mitigation measures are considered necessary at this stage.

It is noted that other Class E uses which generate higher levels of noise, or are used into the night-time, may warrant increased levels of sound insulation. This would likely be achievable through upgrades in the ground floor demise alone (i.e. inclusion of a better performing ceiling). However, this would need to be confirmed once more detailed information of the existing floor construction is available.

**Accordingly, with respect to the requirements of the General Permitted Development Order relating to commercial and industrial noise, the site is considered suitable for conversion to residential use.**

## Appendix A – Noise Survey Equipment

| Equipment                                                               | Serial No.    | Calibration Date |
|-------------------------------------------------------------------------|---------------|------------------|
| <b>Class 1 Sound Level Meter</b><br>01dB Metravib FUSION                | 11703         | 01 July 2026     |
| <b>Preamplifier</b><br>01dB Metravib PRE22                              | 2138123       |                  |
| <b>Free-field Microphone</b><br>GRAS 40CD 1/2" Pre-polarised free-field | 470866        |                  |
| <b>Class 1 Acoustic Calibrator</b><br>01dB Metravib CAL31               | 82793         |                  |
| <b>Class 1 Sound Level Meter</b><br>01dB CUBE                           | 14240         | 03 June 2026     |
| <b>Preamplifier</b><br>01dB Metravib PRE22                              | 2138129       |                  |
| <b>Free-field Microphone</b><br>GRAS 40CD 1/2" Pre-polarised free-field | 367230        |                  |
| <b>Class 1 Acoustic Calibrator</b><br>Cirrus CR:515                     | 100874        |                  |
| <b>Active Loudspeaker</b><br>ART 310-A                                  | s/n RFCZ01844 | N/A              |
| <b>Signal Generator</b><br>NTi Audio Minirator MR-PRO                   | G2P-RADNQ-G0  | N/A              |

## Appendix B – Environmental Noise Survey Results



