

fisher acoustics

# NQ Building, Retail Units, Manchester

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## Noise Impact Assessment

March 2026

Report Reference: PR0706-REP01-MPF

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PROJECT TITLE

NQ BUILDING, RETAIL UNITS

REPORT TITLE

NOISE IMPACT ASSESSMENT

CLIENT

RENAKER BUILD LIMITED

NQ BUILDING

47 BENGAL STREET

ANCOATS

MANCHESTER

M4 6BB

REPORT REFERENCE

PR0706-REP01-MPF

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## CONTENTS

|     |                                                                                                                                                                              |    |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1.0 | SUMMARY .....                                                                                                                                                                | 2  |
| 2.0 | INTRODUCTION .....                                                                                                                                                           | 3  |
| 3.0 | DESCRIPTION OF SITE .....                                                                                                                                                    | 4  |
| 4.0 | DESCRIPTION OF PROPOSED DEVELOPMENT .....                                                                                                                                    | 5  |
| 5.0 | PUBLISHED GUIDANCE ON ENVIRONMENTAL NOISE .....                                                                                                                              | 6  |
| 6.0 | ENVIRONMENTAL NOISE SURVEYS .....                                                                                                                                            | 10 |
| 7.0 | ACTIVITY NOISE FROM PROPOSED RETAIL UNITS .....                                                                                                                              | 12 |
| 8.0 | EXTERNAL NOISE LEVELS DUE TO BUILDING SERVICES .....                                                                                                                         | 19 |
|     |                                                                                                                                                                              |    |
|     | Table 1: Maximum recommended noise levels in NQ Building apartments due to retail units .....                                                                                | 9  |
|     | Table 2: Summary of measured environmental noise levels .....                                                                                                                | 11 |
|     | Table 3: Measured typical external background noise levels .....                                                                                                             | 13 |
|     | Table 4: Maximum allowable external noise levels at nearest residential facades due to proposed retail units ....                                                            | 13 |
|     | Table 5: Expected sound reduction index of retail unit 1, 2 & 3 curtain wall elements .....                                                                                  | 14 |
|     | Table 6: Maximum allowable internal activity noise levels – daytime and night time, doors open.....                                                                          | 15 |
|     | Table 7: Maximum allowable internal activity noise levels – daytime and night time, doors closed .....                                                                       | 15 |
|     | Table 8: Measured level difference achieved by party floor and maximum allowable noise level in retail units,<br>shell only .....                                            | 16 |
|     | Table 9: Maximum allowable internal noise levels due to internal and external noise transmission – daytime and<br>night time, retail units with no door lobby .....          | 17 |
|     | Table 10: Maximum allowable internal activity noise levels due to internal and external noise transmission –<br>daytime and night time, retail units with a door lobby ..... | 17 |
|     | Table 11: Environmental noise limits for building services plant .....                                                                                                       | 19 |
|     |                                                                                                                                                                              |    |
|     | Figure 1: Site location plan – Units 1, 2 & 3 Bengal Street.....                                                                                                             | 4  |
|     | Figure 2: Noise survey measurement location .....                                                                                                                            | 11 |

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## 1.0 SUMMARY

Fisher Acoustics Ltd has been commissioned by Renaker Build Ltd to conduct an environmental noise study relating to the proposed change of use and revisions to the external elevations of existing retail units in the NQ Building, Bengal Street, Manchester.

An environmental noise survey at the site has identified the pre-existing environmental noise levels in the area during the day and night. An assessment of the potential noise impact of the retail units on nearby residential apartments has been carried out.

The minimum recommended acoustic performance of facade elements and maximum allowable activity noise levels within the retail units have been identified such that residential amenity can be maintained.

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## 2.0 INTRODUCTION

The NQ Building is located on Bengal Street, Manchester and is an 8, 10 and 6 storey plus basement mixed use building which comprises retail units, office space and residential apartments.

Fisher Acoustics Ltd has been commissioned by Renaker Build Ltd to conduct an environmental noise study relating to the proposed change of use and revisions to the external elevations of the existing retail units.

An assessment of the potential noise impact of the retail units on the residential apartments within the NQ Building and dwellings in nearby buildings has been conducted.

The steps undertaken in compiling this study are as follows:

- Carrying out of a daytime and night time external noise survey by Fisher Acoustics to determine the typical levels of background noise in the area during daytime and night time periods.
- Calculation of the required sound reduction index of the façade to the retail units such that activity noise egress to the external environment complies with guidance published by Manchester City Council
- Measurement of the sound insulation performance of the party floor between a ground floor retail unit and a first floor area and the subsequent determination of the allowable activity noise levels within the retail units such that residential amenity can be maintained in the apartments above

### 3.0 DESCRIPTION OF SITE

#### General Site Description

The retail units under assessment are on the ground floor of the NQ Building, at 43 - 45 Bengal Street and 49 Bengal Street, Ancoats, Manchester. The NQ Building is bounded by Naval Street to the north, Bengal Street to the west, Jersey Street to the South and by Beehive Mill to the east

The existing buildings around the site include residential buildings, offices, retail spaces and bars. The closest residential dwellings to the retail units are located directly opposite the NQ Building on Bengal Street and within the NQ Building itself. The residential apartments within the NQ Building are located directly above retail unit 3 and two floors above retail units 1 and 2.

Figure 1 is the site location plan. The closest residential dwellings, other than those within the NQ Building, are identified in green.

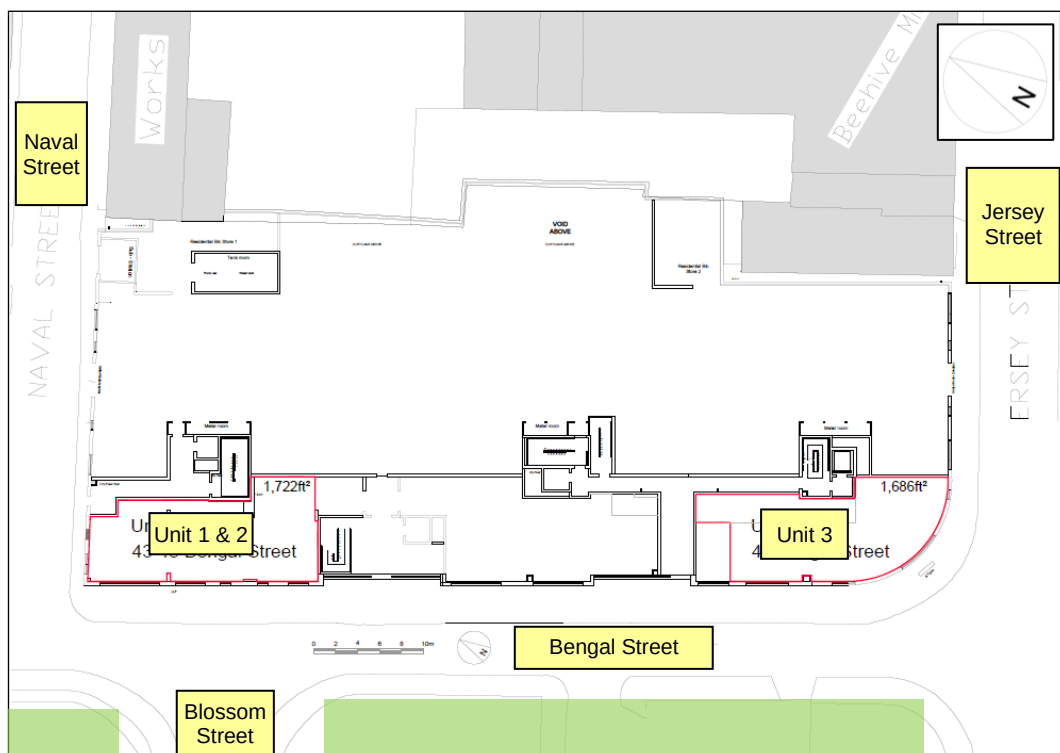


**Figure 1:** Site location plan – Units 1, 2 & 3 Bengal Street

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#### **4.0 DESCRIPTION OF PROPOSED DEVELOPMENT**

The planning application is for the following:

- Change of Use to existing commercial units 1 (43-45 Bengal Street) and 3 (49 Bengal Street) within ground level of the NQ Building from commercial (Use Class E(g)) to flexible commercial (Use Class E and Sui Generis – public houses, wine bars, or drinking establishments and/or public houses, wine bars, or drinking establishments).
- Elevational works to external façade.
- Internal arrangement works to facilitate the creation of 3no. flexible commercial units (namely – 43, 45, and 49 Bengal Street) within the Site.

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## 5.0 PUBLISHED GUIDANCE ON ENVIRONMENTAL NOISE

### NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF), published in December 2024 by the Ministry of Housing, Communities and Local Government 'sets out the Government's planning policies for England and how these should be applied'.

Clause 187 of the National Planning Policy Framework states that 'Planning policies and decisions should contribute to enhance the natural and 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'.

Clause 198 of the National Planning Policy Framework states:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- a) mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and
- c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."

The National Planning Policy Framework document cross references the 'Explanatory Note to the Noise Policy Statement for England'. The 'Noise Policy Statement for England' (NPSE) was published by the Department for Environment Food and Rural Affairs in March 2010.

The NPSE does not give suggested external noise criteria for commercial Developments. In the absence of specific criteria, reference shall be made in this document to established guidance and principles, as established in British Standards and the local Planning policy.

### **National Planning Practice Guidance – Noise**

‘Planning Practice Guidance – Noise’ is a web-based resource provided by the Ministry of Housing, Communities and Local Government (last revision date 14 February 2024) which gives guidance on Planning considerations in relation to noise.

The document identifies the subjective grading of noise and the recommended actions and different effect levels. Again, as Planning Practice Guidance – Noise’ does not refer to objective criteria, reference shall be made in this document to established guidance and principles, as established in British Standards and the local Planning policy

### **LOCAL PLANNING POLICY**

Manchester City Council’s Core Strategy was adopted on 11th July 2012 and is the key Development Plan Document in the Local Development Framework (LDF).

Section 13.6 ‘Development Management’ of the Core Strategy states that ‘all new developments should follow the ‘Development Principles’ and accord with the design guidance set out in the Supplementary Planning Documents.

Policy DM 1, ‘Development Management’ of the Core Strategy states that:

- All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document: Effects on amenity, including .....noise, vibration.... This could also include proposals which would be sensitive to existing environmental conditions, such as noise.

‘Planning & Noise, Technical Guidance’, dated October 2022 has been issued by the Environmental Protection, Environmental Health and The Neighbourhoods Service sections of Manchester City Council. The document provides guidance to applicants and consultants concerning the assessment and prediction of environmental noise associated with a particular development. Reference is also made in the document to the relevant supporting information

and guidance documents that Developers are expected to refer to when submitting a planning application.

### **Noise from Commercial Operations**

Noise egress from the proposed retail units at the Proposed Development must be controlled to appropriate levels in order to avoid noise nuisance to existing sensitive receptors.

With regard to entertainment venues, 'Planning & Noise, Technical Guidance' issued by Manchester City Council as reference above states:

- 'When considering the potential impact of a proposal for an entertainment venue, consultants should consider the overall noise level (LAeq) and the 63 Hz and 125 Hz octave band noise levels (Leq). Music noise in the 63 Hz and 125 Hz octave bands, often described as "bass noise", is particularly difficult to contain and the impulsive and non-steady character of low frequency music noise is particularly disturbing for local residents exposed to it'.
- ....a criterion that would achieve a condition of 'inaudible' / 'virtually inaudible' which is applicable for new residential developments that are structurally connected to entertainment venues (or vice versa) would be:
  - 'Music noise levels in the 63Hz and 125Hz octave centre frequency bands (Leq) should be controlled so as not to exceed (in habitable rooms) 47dB and 41dB (Leq,5min), respectively'. This criterion may also be applicable for new residential developments that are structurally separate from an existing entertainment venue.
- 'A planning application for a new entertainment venue that is structurally detached from other building uses should demonstrate that music noise from the proposal will not be 'audible' in nearby residential properties, assuming that the residential properties in question have their windows open. The criterion here is:
  - Entertainment noise (LAeq,5 min) should be controlled to 5dB below the typical background noise level (LA90) in each octave band at the nearest noise sensitive location'.

As noted above, with regard to 'entertainment' venues that are structurally connected to residential developments, 'Planning & Noise, Technical Guidance' issued by MCC states:

- 'Music noise levels in the 63Hz and 125Hz octave centre frequency bands (Leq) should be controlled so as not to exceed (in habitable rooms) 47dB and 41dB (Leq), respectively'.

However, Fisher Acoustics does not consider that the noise limits quoted by MCC for 63 Hz and 125 Hz are sufficiently low to avoid potentially disturbing levels of music noise in residential apartments in circumstances where the background noise level in apartments is low.

It is therefore recommended that noise levels within the NQ Building apartments do not exceed the values given in Table 1 due solely to noise transfer from the proposed retail units.

| Sound Pressure Level (Leq, 1 min)<br>@ Octave Band Centre Frequency (Hz) |       |       |       |       |       |       |
|--------------------------------------------------------------------------|-------|-------|-------|-------|-------|-------|
| 63                                                                       | 125   | 250   | 500   | 1k    | 2k    | 4k    |
| 43 dB                                                                    | 35 dB | 25 dB | 20 dB | 17 dB | 15 dB | 12 dB |

**Table 1:** Maximum recommended noise levels in NQ Building apartments due to retail units

### Building Services Noise

With regard to external noise due to building services plant, Section 3.7.1.5 of 'Planning & Noise, Technical Guidance' states:

- 'Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (LAeq) below the typical background (LA90) level at the nearest noise sensitive location'

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## 6.0 ENVIRONMENTAL NOISE SURVEYS

In order to determine the prevailing ambient environmental noise levels at and around the site, a survey of the existing noise environment was carried out from 6 pm on Wednesday 9 April 2025 to 11:40 am on Thursday 10 April 2025.

The measurement location used for the survey is identified on Figure 2 and is representative of the closest residential dwellings to the retail units. The measured noise levels can therefore be used to determine acceptable levels of noise at the existing sensitive properties around the site due to noise from the proposed development.

The noise survey measurement location was as follows:

- Location 1: 1m external to the Bengal Street façade of the NQ Building, at a microphone height of 4.5 metres above site ground level

Full survey details are given in Appendix A. Appendix A also contains a summary of the results obtained from the surveys.

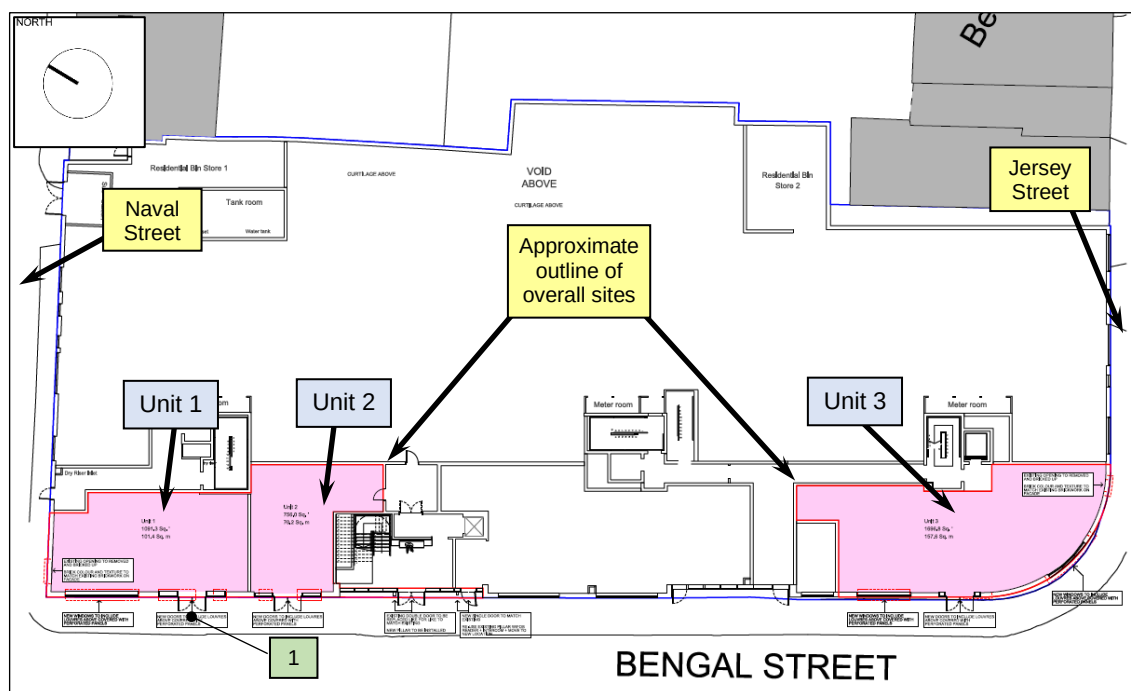


**Figure 2:** Noise survey measurement location

The long-term noise environment at and around the Site is principally determined by local and distant road traffic. Typical maximum noise levels at the site were generated by road vehicles.

The noise levels measured during the noise survey are summarised in Table 2.

| Measurement Location/ Date | Measured Noise Level                |           |          |                                        |           |          |
|----------------------------|-------------------------------------|-----------|----------|----------------------------------------|-----------|----------|
|                            | Daytime (Defined as 07:00 to 23:00) |           |          | Night time (Defined as 23:00 to 07:00) |           |          |
|                            | dB, LAeq                            | dB, LAmax | dB LA90  | dB, LAeq                               | dB, LAmax | dB LA90  |
| 1 – Wednesday 9 April 2025 | 51                                  | 60 to 93  | 40 to 47 | 43                                     | 49 to 76  | 38 to 43 |
| 1 - Thursday 10 April 2025 | 55                                  | 66 to 91  | 44 to 47 | -                                      | -         | -        |

**Table 2:** Summary of measured environmental noise levels

The statistical noise levels ('LAmax' and 'LA90') given in Table 2 show the range of noise levels measured over the sample periods. The quoted average (LAeq) noise levels are the average noise levels measured over the full measurement periods in question at each measurement position.

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## 7.0 ACTIVITY NOISE FROM PROPOSED RETAIL UNITS

In order to determine the potential for noise nuisance due to noise egress and internal noise transfer from the proposed retail units, assessments of the likely level of noise propagation from the units has been carried out.

The fit-out of the proposed retail units will be the responsibility of the tenant. The tenant will be required to ensure that noise due to activities and equipment within the retail units will comply with the requirements of any planning conditions and with the noise limits identified in this report.

Notwithstanding the above, an assessment of the potential levels of noise egress and internal noise transfer from the retail units has been carried out based on the shell construction to determine the maximum allowable internal noise levels within each of the units.

### Retail units noise egress

To comply with the guidance published by Manchester City Council, external noise levels in each octave band (when measured as an Leq noise level) at the closest residential façades of the nearest noise sensitive residential receptors due solely to noise egress from the proposed retail units must be 5 dB below the pre-existing octave band background noise level (when measured as an L90 noise level).

The nearest residential dwellings to the retail units are those within the NQ Building and those identified in Figure 1 above.

The results of the external noise survey have been used to identify day and night-time noise limits to comply with Manchester City Council's criterion

Table 4 identifies the measured typical background noise level in each octave band at the representative noise survey location.

| Time Period               | Sound Pressure Level (Leq, 1 min)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|---------------------------|--------------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                           | 63                                                                       | 125 | 250 | 500 | 1k | 2k | 4k |
| Daytime (0700 to 2300)    | 48                                                                       | 42  | 43  | 39  | 38 | 33 | 26 |
| Night time (2300 to 0700) | 45                                                                       | 39  | 44  | 34  | 30 | 23 | 15 |

**Table 3:** Measured typical external background noise levels

Table 4 identifies the applicable noise limits for the closest residential buildings to the retail units within the NQ Building. Compliance with the stated noise levels at the closest residential facade will ensure that compliance with the noise limits at all other existing properties around the site is also achieved, due to the greater intervening distances from the proposed retail units to these other receptors.

| Time Period               | Sound Pressure Level (Leq, 1 min)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|---------------------------|--------------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                           | 63                                                                       | 125 | 250 | 500 | 1k | 2k | 4k |
| Daytime (0700 to 2300)    | 43                                                                       | 37  | 38  | 34  | 33 | 28 | 21 |
| Night time (2300 to 0700) | 40                                                                       | 34  | 39  | 29  | 25 | 18 | 10 |

**Table 4:** Maximum allowable external noise levels at nearest residential facades due to proposed retail units

Noise egress calculations have been carried out to determine the expected noise level at the closest residential properties due to noise egress from the retail units.

There are patron access doors within the curtain wall of all retail units and therefore the principal determinant of the sound insulation performance of the external envelope will be the curtain wall glazing and the access doors.

As there are no proposed door lobbies to be installed to the retail units, there could be intermittent increases of external noise during the movement of patrons in and out of the units. Therefore, the assessment has included a worst-case scenario of open doors.

At this stage, operational noise levels for the proposed retail units are not known. However, guidance can be given based on the potential acoustic performance of the façade elements to the retail units. The solid external wall of the retail units is a masonry cavity wall. The sound insulation performance of the masonry wall will be substantially greater than that of any glazed façade areas. The principal determinant of noise egress from the retail units will therefore be the sound insulation performance of the glazed areas and any access doors.

It is recommended that the glazing units to the curtain wall of the retail units achieve a minimum weighted sound reduction index of 40 dB Rw. The recommended weighted sound reduction of the external doors to the retail units is 30 dB Rw. This performance is achievable by glazed aluminium doors with acoustic/weather seals to the full perimeter.

The expected minimum sound reduction index of the curtain wall glazing and the patron access doors when closed are given in Table 5.

| Building element                                                                                  | Sound Reduction Index (dB)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                                                                                   | 63                                                                | 125 | 250 | 500 | 1k | 2k | 4k |
| Glazing - 10 mm float glass/ 16 mm cavity/<br>8.8 mm laminated,<br>sound reduction index 40 dB Rw | 18                                                                | 24  | 27  | 38  | 42 | 41 | 53 |
| Retail unit entrance doors, 30 dB Rw                                                              | 18                                                                | 20  | 25  | 28  | 30 | 30 | 34 |

**Table 5:** Expected sound reduction index of retail unit 1, 2 & 3 curtain wall elements

Calculations have been carried out to determine the allowable contribution to the external noise level at the closest residential receptors from each of the retail units to ensure that the external noise limits identified in Table 4 are not exceeded when all of the retail units are operating simultaneously.

As identified in Figure 1 above, the closest residential dwellings to the retail units are located directly opposite the NQ Building on Bengal Street. In addition, there are residential apartments within the NQ Building, directly above retail unit 3 and two floors above retail units 1 and 2.

Table 6 identifies the calculated noise levels that could be generated within the retail units with patron doors open, without exceeding the daytime and night time external noise limits given in Table 4.

| Location                                               | Sound Pressure Level (dB Leq)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|--------------------------------------------------------|----------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                                        | 63                                                                   | 125 | 250 | 500 | 1k | 2k | 4k |
| Retail Unit 1 & 2<br>Daytime (0700 hrs to 2300 hrs)    | 59                                                                   | 58  | 63  | 59  | 58 | 53 | 46 |
| Retail Unit 1 & 2<br>Night time (2300 hrs to 0700 hrs) | 56                                                                   | 56  | 63  | 53  | 49 | 43 | 35 |
| Retail Unit 3<br>Daytime (0700 hrs to 2300 hrs)        | 64                                                                   | 63  | 66  | 62  | 61 | 56 | 49 |
| Retail Unit 3<br>Night time (2300 hrs to 0700 hrs)     | 60                                                                   | 60  | 67  | 57  | 53 | 46 | 38 |

**Table 6:** Maximum allowable internal activity noise levels – daytime and night time, doors open

The noise levels detailed in Table 6 are relatively low and would allow typical retail outlets with background music replay to be accommodated. However, a 'lively' restaurant or bar with music replay would not be expected to comply with the allowable noise levels.

Table 7 identifies the calculated noise levels that could be generated within the retail units with patron doors closed or with the benefit of a door lobby, without exceeding the daytime and night time external noise limits given in Table 4.

| Location                                               | Sound Pressure Level (dB Leq)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|--------------------------------------------------------|----------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                                        | 63                                                                   | 125 | 250 | 500 | 1k | 2k | 4k |
| Retail Unit 1 & 2<br>Daytime (0700 hrs to 2300 hrs)    | 74                                                                   | 77  | 78  | 81  | 77 | 72 | 69 |
| Retail Unit 1 & 2<br>Night time (2300 hrs to 0700 hrs) | 71                                                                   | 74  | 78  | 75  | 69 | 62 | 59 |
| Retail Unit 3<br>Daytime (0700 hrs to 2300 hrs)        | 79                                                                   | 81  | 83  | 79  | 81 | 76 | 73 |
| Retail Unit 3<br>Night time (2300 hrs to 0700 hrs)     | 75                                                                   | 79  | 85  | 74  | 72 | 66 | 62 |

**Table 7:** Maximum allowable internal activity noise levels – daytime and night time, doors closed

The noise levels detailed in Table 7 would allow typical retail outlets, restaurants or bars with background music replay to be accommodated.

Given the above, it is expected that the retail units will be able to operate within the proposed planning class without causing disturbance to the nearest residential properties with the proviso that an internal door lobby may be required for noisier operations.

It is also recommended that the proposals for acoustic treatment and the noise levels to be generated within the retail units be formally submitted by any potential tenant by way of an application to discharge relevant conditions that may be attached to the planning permission.

Any ventilation system that serves the proposed retail units must include appropriately specified silencers such that noise egress via the atmosphere terminations of the associated ductwork systems allows compliance with the maximum allowable external noise levels.

#### Noise transfer to apartments via party floor

As discussed above, it is recommended that noise levels within the apartments do not exceed the values given in Table 1 due solely to internal noise transfer from the proposed retail units.

It is understood that the build-up and composition of the concrete party floor between retail unit 3 and the apartments directly above is the same as that between retail unit 1 and the offices above. The sound insulation performance between retail unit 3 and the apartments directly above can therefore be assumed to be similar to that between retail unit 1 and the offices above.

The in-situ sound insulation performance of the party floor between retail unit 1 and the offices above has been measured. From this measurement, the maximum allowable noise level within the retail units to allow compliance with the noise limits in Table 1 can be determined.

Table 8 identifies the measured standardised level difference achieved by the floor and the allowable activity noise levels within the retail units given the existing party floor build-up.

| Room                                  | Sound Pressure Level (dB)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|---------------------------------------|------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                       | 63                                                               | 125 | 250 | 500 | 1k | 2k | 4k |
| Party floor level difference (Dn,T)   | 34                                                               | 39  | 52  | 58  | 61 | 62 | 65 |
| Activity noise limits in retail units | 77                                                               | 74  | 77  | 78  | 78 | 77 | 77 |

**Table 8:** Measured level difference achieved by party floor and maximum allowable noise level in retail units, shell only

The noise levels detailed in Table 8 would allow typical retail outlets, restaurants or bars with background music replay to be accommodated.

It will be noted that the allowable daytime internal noise levels detailed in Table 8 (ie due to internal noise transfer) are typically greater than those in Table 5 (ie due to noise ingress from the retail units that do not have a door lobby). The applicable overall internal noise limits for the retail units are the lower of the values in Tables 5 and 8 (for units that do not have a door lobby) or Tables 6 and 8 (for units that have a door lobby).

For ease of reference, Tables 9 and 10 identify the maximum allowable noise levels in the retail units, taking into account internal noise transfer to the apartments above and noise egress to the nearest noise sensitive receptors. Table 9 is applicable to operators that have not installed an entrance door lobby. Table 10 is applicable to operators that have installed an entrance door lobby.

| Location                                               | Sound Pressure Level (dB Leq)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|--------------------------------------------------------|----------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                                        | 63                                                                   | 125 | 250 | 500 | 1k | 2k | 4k |
| Retail Unit 1 & 2<br>Daytime (0700 hrs to 2300 hrs)    | 59                                                                   | 58  | 63  | 59  | 58 | 53 | 46 |
| Retail Unit 1 & 2<br>Night time (2300 hrs to 0700 hrs) | 56                                                                   | 56  | 63  | 53  | 49 | 43 | 35 |
| Retail Unit 3,<br>Daytime (0700 hrs to 2300 hrs)       | 64                                                                   | 63  | 66  | 62  | 61 | 56 | 49 |
| Retail Unit 3,<br>Night time (2300 hrs to 0700 hrs)    | 60                                                                   | 60  | 67  | 57  | 53 | 46 | 38 |

**Table 9:** Maximum allowable internal noise levels due to internal and external noise transmission – daytime and night time, retail units with no door lobby

| Location                                               | Sound Pressure Level (dB Leq)<br>@ Octave Band Centre Frequency (Hz) |     |     |     |    |    |    |
|--------------------------------------------------------|----------------------------------------------------------------------|-----|-----|-----|----|----|----|
|                                                        | 63                                                                   | 125 | 250 | 500 | 1k | 2k | 4k |
| Retail Unit 1 & 2<br>Daytime (0700 hrs to 2300 hrs)    | 74                                                                   | 74  | 77  | 78  | 77 | 72 | 69 |
| Retail Unit 1 & 2<br>Night time (2300 hrs to 0700 hrs) | 71                                                                   | 74  | 77  | 75  | 69 | 62 | 59 |
| Retail Unit 3,<br>Daytime (0700 hrs to 2300 hrs)       | 77                                                                   | 74  | 77  | 78  | 78 | 76 | 73 |
| Retail Unit 3,<br>Night time (2300 hrs to 0700 hrs)    | 75                                                                   | 74  | 77  | 74  | 72 | 66 | 62 |

**Table 10:** Maximum allowable internal activity noise levels due to internal and external noise transmission – daytime and night time, retail units with a door lobby

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It is recommended that the noise levels in Table 9 and 10 be written into the agreement-to-lease documents for the retail units. It is also recommended that the proposals for acoustic treatment and the noise levels to be generated within the retail unit be formally submitted by any potential tenant.

## 8.0 EXTERNAL NOISE LEVELS DUE TO BUILDING SERVICES

The measured background noise levels can be used to establish the acceptable level of noise from any plant that may serve the retail units. Plant requirements and selections have not been made at this stage as the potential tenants of the units are not known. In the absence of specific selection of plant items, overall plant noise limits can be advised.

With reference to the guidance referenced in Section 5 above, the cumulative rating level due to all simultaneously operating non-emergency plant must be at least 5 dB lower than the typical pre-existing background noise level at the nearest residential receptors to the site.

Table 11 identifies the allowable combined free-field noise level at the nearest residential receptors to the development, due to all simultaneously-operating non-emergency building services plant and equipment.

| Location                          | Rating noise level (dB LAeq)        |                                        |
|-----------------------------------|-------------------------------------|----------------------------------------|
|                                   | Daytime<br>(07:00 hrs to 23:00 hrs) | Night time<br>(23:00 hrs to 07:00 hrs) |
| Bengal Street residential façades | 39                                  | 34                                     |

**Table 11:** Environmental noise limits for building services plant

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## APPENDIX

### NOISE SURVEY DETAILS AND SUMMARY RESULTS

#### LOCATION

NQ Building, 47 Bengal Street, Ancoats, Manchester

#### DATES AND TIMES

6 pm Wednesday 9 April 2025 to 11:40 am Thursday 10 April 2025

#### WEATHER DURING SURVEYS

Wednesday 9 April 2025 (Day time)

No cloud cover, 4 m/s breeze, no rain, 12 °C

Wednesday 9 April 2025, (Night time)

No cloud cover, 3 m/s breeze, no rain, 5 °C

Thursday 10 April 2025 (Day time)

No cloud cover, 2 m/s breeze, no rain, 11 °C

#### MEASUREMENT LOCATION

The noise survey measurement location is shown on Figure 2 and described below:

- Location 1: 1m from the Bengal Street façade of the NQ Building, at a microphone height of 4.5 metres above site ground level

#### MEASUREMENT RESULTS

Figure A1 shows the measured free-field noise levels at the measurement location. The two 'peaks' in noise on 9 April 2025 were due to emergency vehicle sirens.

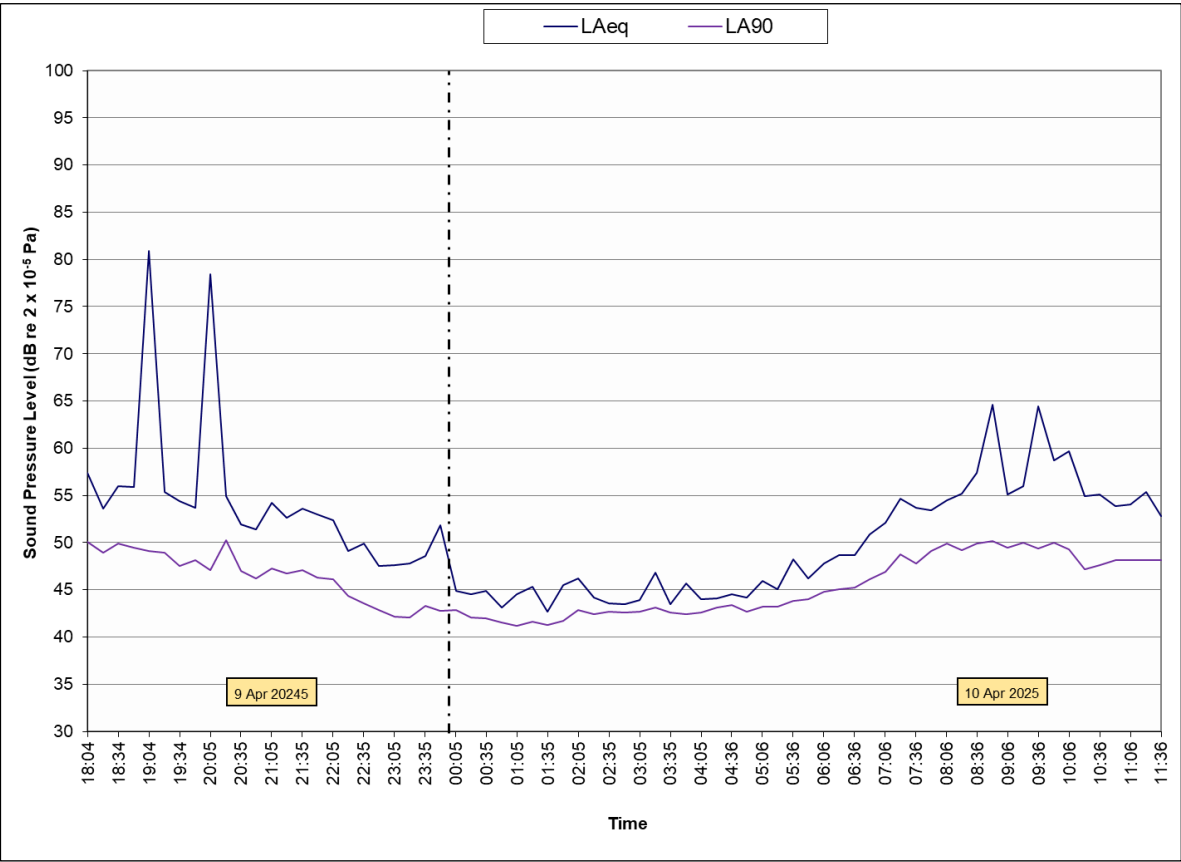


**Figure A1:** Position 1 noise measurements, Wednesday 9 April 2025 to Thursday 10 April 2025, average (LAeq,15mins) and background (LA90,15mins) noise levels