

noise.co.uk Ltd

T+44(0)2476 545 397

F+44(0)2476 545 010

The Haybarn

Newnham Grounds

Kings Newnham Lane

Bretford

Warwickshire

CV23 0JU

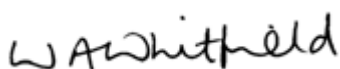
Environmental Noise Assessment

Prepared: 16th April 2025

Report No	23203-1
Client	Greggs PLC
Site	Greggs 10 Oxford Road Manchester M1 5QA

noise.co.uk

1. Quality Management

Report Number	23203-1
Issue	Issue 1
Prepared	16 th April 2025
Prepared By	 Jonathan Seiffert BSc, MIOA
Authorised By	 Bill Whitfield PhD, MSc, MIOA

2. Limitations

- 2.1.1. noise.co.uk Ltd ('Noise') has prepared this report for the sole use of Greggs PLC ('Client') in accordance with the Agreement under which our services were performed, proposal reference number 23203. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by Noise. This report is confidential and may not be disclosed by the Client nor relied upon by any other party without the prior and express written agreement of noise.co.uk Ltd.
- 2.1.2. The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by Noise has not been independently verified by Noise, unless otherwise stated in the report.
- 2.1.3. The methodology adopted and the sources of information used by Noise in providing its services are outlined in this report. The work described in this report was undertaken on the 16th April 2025 and is based on the conditions encountered and the information available up to the said date. The scope of this report and the services are accordingly factually limited by these circumstances.
- 2.1.4. Where assessments of works or costs identified in this report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.
- 2.1.5. Noise disclaim any undertaking or obligation to advise any person of any change in any matter affecting the report, which may come or be brought to Noise's attention after the date of the report.
- 2.1.6. Certain statements made in the report that are not historical facts may constitute estimates, projections or other forward looking statements and even though they are based on reasonable assumptions as of the date of the report, such forward-looking statements by their nature involve risks and uncertainties that could cause actual results to differ materially from the results predicted. Noise specifically does not guarantee or warrant any estimate or projections contained in this report.
- 2.1.7. Copyright: © This report is the copyright of noise.co.uk Ltd.

3. Executive Summary

3.1.1. An environmental noise assessment has been carried out for a proposed Greggs bakery at 10 Oxford Road, Manchester, M1 5QA ("Proposed Development").

3.2. Summary

3.2.1. The existing noise sources in the area are expected to dominate the noise climate after the proposed mechanical plant is installed. It is not expected that the proposed mechanical plant will have an adverse impact on existing residential/hotel receivers.

4. Scope

4.1.1. This report covers all aspects of the noise assessment, including:

- the identification of acoustic design criteria;
- the identification of noise generating sources;
- prediction of the sound pressure level generated by proposed mechanical plant equipment.

5. Contents

1. Quality Management 2

2. Limitations 2

3. Executive Summary 3

4. Scope..... 3

5. Contents..... 4

6. Background 5

7. Introduction 7

8. Assessment Criteria 9

9. 3D Noise Model 10

10. Conclusions 11

11. Appendix 12

6. Background

6.1. Noise Policy Statement for England

- 6.1.1. The Noise Policy Statement for England (NPSE), published in March 2010, states the long-term vision of Government noise policy is to *“promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development”*.
- 6.1.2. This long-term vision is supported by the following aims; through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:
- Avoid significant adverse impacts on health and quality of life;
 - Mitigate and minimise adverse impacts on health and quality of life;
 - Where possible, contribute to the improvement of health and quality of life.
- 6.1.3. The intention is that the NPSE should apply to all types of noise apart from noise in the workplace (occupational noise).

6.2. National Planning Policy Framework

- 6.2.1. The National Planning Policy Framework (NPPF) was published on the 27th of March 2012 and was most recently updated on the 19th December 2023; it sets out the Government’s planning policies for England and how these are expected to be applied. The framework states that the planning system should contribute to and enhance the natural and local environment by:
- “preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”*.
- 6.2.2. The NPPF requires that new developments be appropriate to their locations such that the effects of pollution on health have been taken into account. Planning policies and decisions should aim to:
1. avoid noise giving rise to significant adverse impacts on health and the quality of life;
 2. mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development; and,
 3. identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value.
- 6.2.3. Existing businesses near to proposed development should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) should be required to provide suitable mitigation before the development has been completed.

6.3. National Planning Practice Guidance

- 6.3.1. The National Planning Practice Guidance (PPG) is a web-based resource, launched by the Department for Communities and Local Government (DCLG) which was published on the 29th November 2016 and is regularly updated to reflect the changes made to the NPPF and make it more accessible.¹
- 6.3.2. There are a number of factors that determine whether a noise could be a concern to a receptor. These include: the absolute level of the noise and when it occurs, whether it is existing or new to the area, temporal characteristics, spectral content and the acoustic absorption in the area.

Perception	Examples of outcomes	Effect level	Action
Not noticeable	No effect	No observed effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect (NOAEL)	No specific measures required
Lowest Observed Adverse Effect Level (LOAEL)			
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level (SOAEL)			
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very intrusive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

Table 1 – Noise exposure hierarchy

- 6.3.3. It is emphasised in the PPG that the planning process should be used to mitigate and minimise the impact of noise. This could include: engineering the noise sources to be quiet, minimising the impact of noise through layout, using conditions/obligations to restrict activities, mitigating the impact in places where noise is likely to be experienced (e.g. using facade sound insulation).

¹ <http://planningguidance.communities.gov.uk/>

7. Introduction

7.1.1. An environmental noise assessment has been carried out for a proposed Greggs bakery at 10 Oxford Road, Manchester, M1 5QA.

7.2. Proposed Development

7.2.1. An image showing the proposed location of the Proposed Development is given in Figure 1.

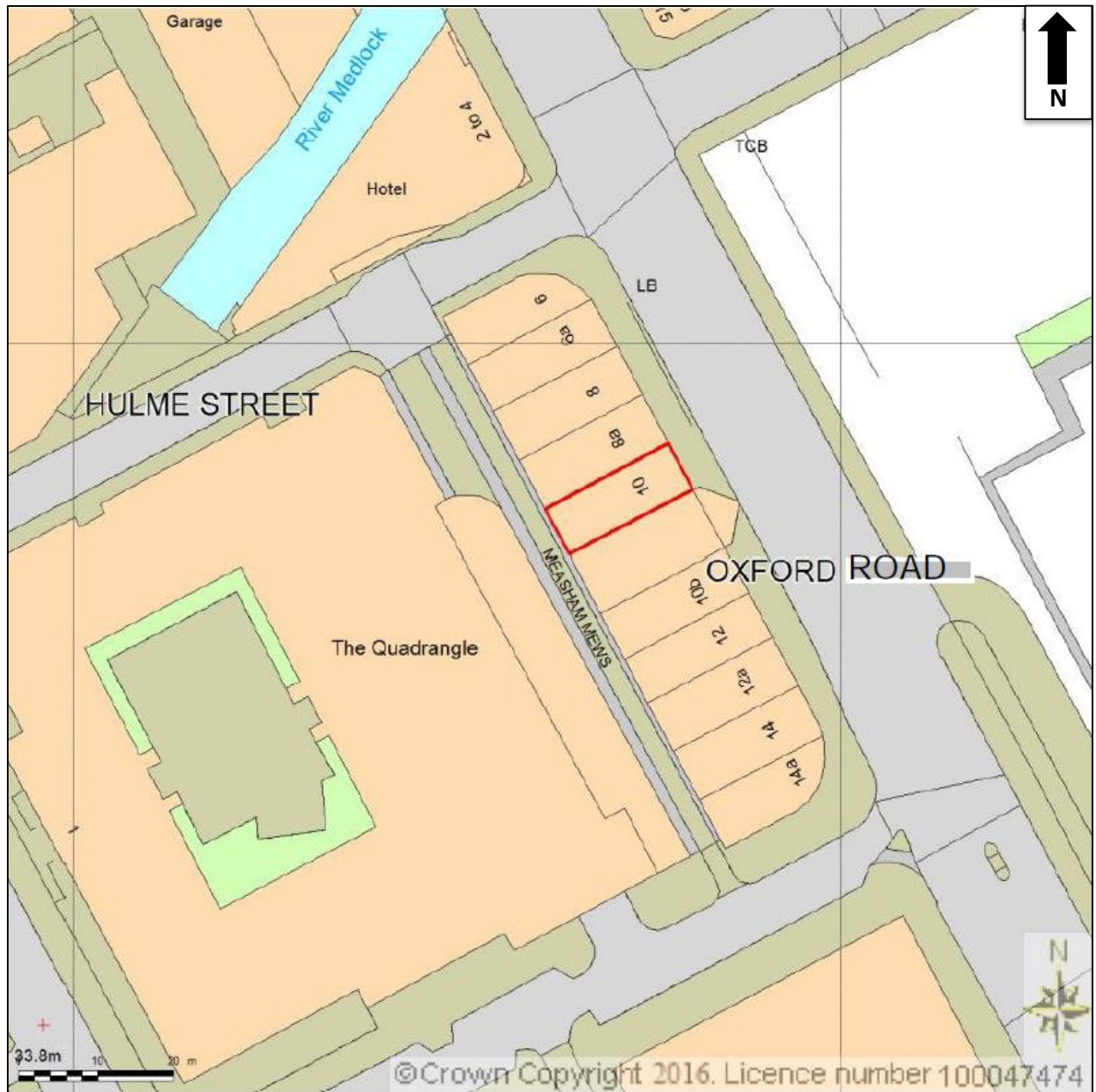


Figure 1 - Plan showing the layout of the Proposed Development

7.3. Specific Sound Sources

7.3.1. Information regarding the proposed mechanical fixed plant has been provided by the client. The operational hours of the sources is assumed to be the same as the store opening hours (06:30 – 23:00).

7.3.2. The proposed specific sources are summarised in Table 2.

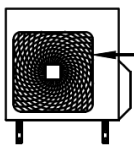
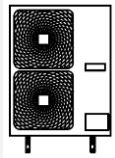
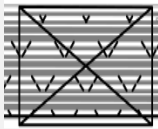
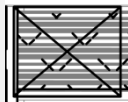
Plant Item	Illustration	Description
Condenser Unit Mitsubishi PUHZ - RP71VHA4		Air conditioner/heating condenser unit. Manufacturer's data supplied. Assumed to operate 100% of the reference period. Assumed to operate in its loudest mode $L_p = 48\text{dB(A)}$ re $20\mu\text{Pa}$ @1m
Mitsubishi PUHZ – ZRP125/140VKA		Air conditioner/heating condenser unit. Manufacturer's data supplied. Assumed to operate 100% of the reference period. Assumed to operate in its loudest mode $L_p = 52\text{dB(A)}$ re $20\mu\text{Pa}$ @1m
Extract Fan Ruck EL 315 E2 01		Assumed to operate for 100% of the time. Specific product sound power level data provided with octave band spectrum. $L_W = 81\text{dB(A)}$ re 1pW
Extract Fans Vent Axia		Extraction fans. Specific model not specified Generic Vent-Axia product data used. Assumed to operate 100% of the reference period. L_p $= 46\text{dB(A)}$ re $20\mu\text{Pa}$ @3m

Table 2 – Description of the proposed specific sound sources associated with proposed development

7.4. Nearest Sensitive Receiver

7.4.1. The nearest sensitive receivers have been identified as residential dwellings located on the upper floors of the Quadrangle and hotel rooms located on Hulme Street.

8. Assessment Criteria

8.1. Guideline Internal Sound Levels

- 8.1.1. BS8233:2014 draws on the results of research and experience to provide information on the design of buildings that have internal acoustic environments appropriate to their function. The standard provides guideline internal values for dwellings for steady external noise sources. These have been summarised in Table 3.

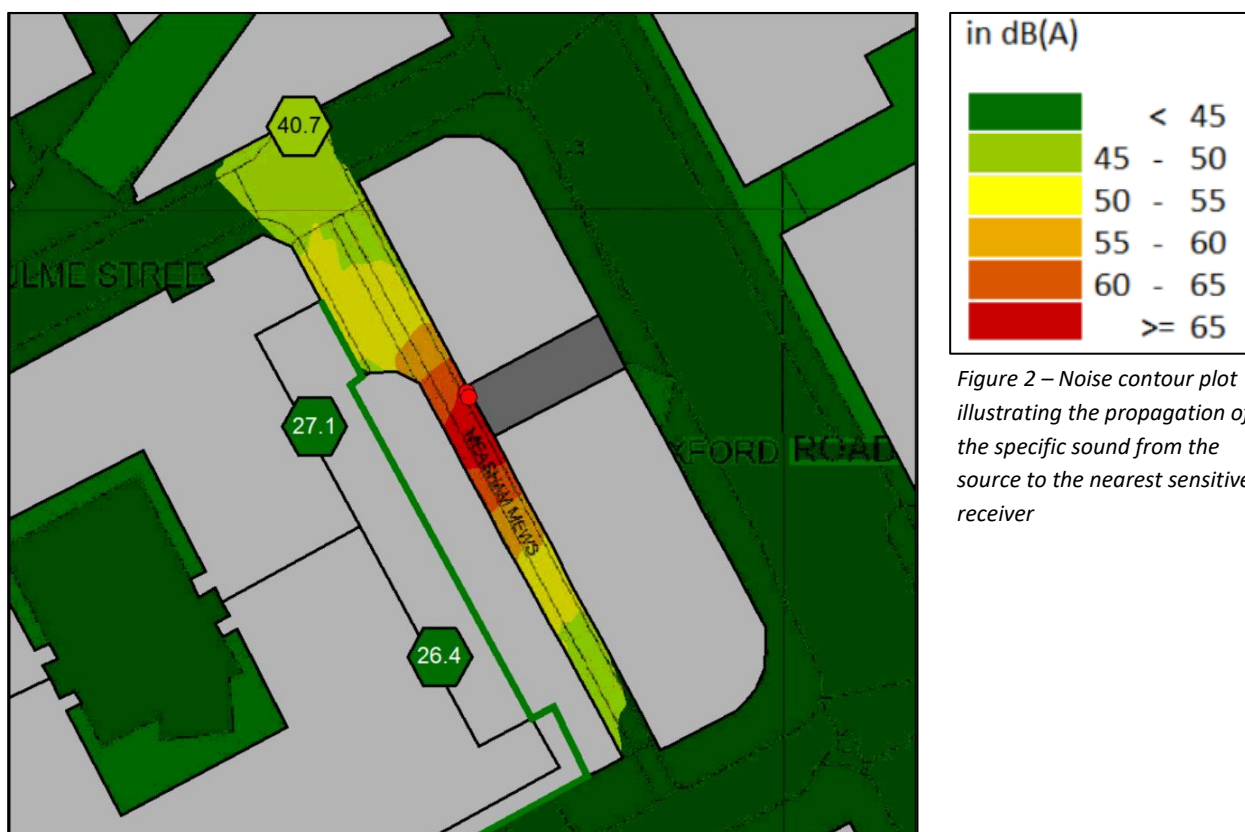
Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living Room	35dB $L_{Aeq,16hour}$	-
Dining	Dining Room	40dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35dB $L_{Aeq,16hour}$	30dB $L_{Aeq,8hour}$

Table 3 – BS8233:2014 guideline values for internal ambient noise levels from steady external noise sources

- 8.1.2. The guideline values are issued by the World Health Organisation (WHO) and assume normal diurnal fluctuations in external noise. They are expected to be achieved based on normal annual data and not in all circumstances. For example, it is normal to exclude occasional events such as fireworks night or New Year's Eve.
- 8.1.3. For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50dB $L_{Aeq,T}$ with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In such cases, the lowest practicable levels should be achieved in external amenity areas but the development should not be prohibited.

9. 3D Noise Model

- 9.1.1. A 3D noise model has been constructed using SoundPLAN™ in order to predict the propagation of sound across the site of the Proposed Development. The calculation procedure has been used from ISO9613-2:1996² to predict the propagation of sound from source to receiver, taking into account distance, screening, and atmospheric and ground conditions. Terrain data has been taken from DEFRA. Google Maps has been used to create the existing roads and buildings.
- 9.1.2. The extract fans have been modelled as separate area sources to match the vent sizes indicated on plans provided and are attached to the rear façade of the building. The main extract uses the sound power and frequency emission spectrum data provided by the manufacturer, and the frequency sound reduction of the proposed attenuator has also been included. The WC fan extract has the Vent-Axia sound power and emission spectrum from the SoundPLAN™ library applied. The manufacturer's data for the Mitsubishi units has been applied to point sources that represent the units mounted on the wall.
- 9.1.3. All sources have been included in the model and have been placed at the positions indicated in the proposed elevation drawings provided by the client.
- 9.1.4. The results of the model have been illustrated in the noise contour map in Figure 2.



- 9.1.5. The results of the 3D noise model show that the worst case predicted sound pressure level generated by the proposed mechanical plant at the nearest sensitive receiver is 40.7dB $L_{Aeq,T}$. Standard thermal double glazing can achieve 26/27dB R_w+C_{tr} and this would give an internal sound pressure level of approximately 15dB(A) $L_{Aeq,T}$.
- 9.1.6. It is expected, given the location of the proposed development, that existing noise sources, such as road traffic noise and existing mechanical plant equipment will dominate the noise climate in the area.

² ISO9613-2:1996 "Acoustics – Attenuation of Sound During Propagation Outdoors – Part 2: General Method of Calculation"

10. Conclusions

- 10.1.1. An environmental noise assessment has been carried out at the site of a proposed Greggs bakery at 10 Oxford Road, Manchester, M1 5QA to determine typical ambient sound levels. The sound levels have been used to determine the likely impact of new proposed fixed plant on the existing residential receivers.
- 10.1.2. Details of the proposed new fixed plant have been provided by the Client and used to calculate the specific sound level at the nearest sensitive receiver.
- 10.1.3. The existing noise sources in the area are expected to dominate the noise climate after the proposed mechanical plant is installed. It is not expected that the proposed mechanical plant will have an adverse impact on existing residential/hotel receivers.
- 10.1.4. We strongly recommend that this report be passed to the local planning authority for approval prior to any works being carried out.

11. Appendix

APPENDIX A: Summary Information

Required ISO Test Report Information (cross referenced where required)		
		Analysed to:
A	Standards	BS8233:2014
B	Organisation performed the measurements	No measurements made
C	Name of Client	Greggs PLC
D	Full site address	Greggs 10 Oxford Road Manchester M1 5QA
E	Date of surveys	N/A
F	Description & identification of Proposed Development	It is proposed to develop the site for commercial use.
G	Brief Description of details of Procedure & equipment	See Section 9 of this report.