

32 St Mary's Butts
Reading
RG1 2LS

Environmental Noise Survey and
Noise Impact Assessment Report

26 January 2023

Client:

P4i Developments Limited Limited

22076/ENS1

Document Control

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1.0 INTRODUCTION

It is proposed to convert the upper 2 floors of 32 St Mary's Butts from retail to residential use.

The site currently has an established A1 (retail outlet) use. Therefore, under the Town and Country Planning Act (General Permitted Development) (Amendment) Order 2015, a Class G permitted development is allowed to convert to residential (Use Class C3). A prior approval application is required to the Local Authority to consider the *"impacts of noise from commercial premises on the intended occupiers of the development"*.

Quantum Acoustics Ltd have been appointed to undertake an environmental noise survey and subsequently prepare a detailed Noise Impact Assessment Report to support the prior notification application, in accordance with relevant planning policy and guidance.

2.0 SITE DESCRIPTION

The site is located at 32 St Mary's Butts, Reading, located in an area of mixed residential, commercial, business and service use and retail premises.

To the south of 32 St Mary's Butts is 34 St Marys Butts, a 3 storey building which was granted planning permission in October 2021 for change of use of first and second floors from financial services to residential apartments. The site was undergoing development works at the time of our site visits.

To the north west of 32 St Mary's Butts is the Reading Market building accessed off Hosier Street. To the rear of the Reading Market is a new outdoors food and drink quarter known as Blue Collar Corner. The Boundary pub is located approximately 40 metres away on the opposite side of Hosier Street.



Figure 1. Site Plan (Google Imagery 2022, The GeoInformation Group)

3.0 ENVIRONMENTAL NOISE SURVEY

An unmanned fully automated environmental noise survey was undertaken from Friday 20th to Tuesday 24th January 2023.

Weather conditions for most of the survey were dry with light winds and therefore deemed suitable for the measurement of environmental noise.

The sound level meters were located at two positions, approximately 1m outside of the 2nd floor windows overlooking the front and rear of the 32 St Mary's Butts, as shown in the following site plan:

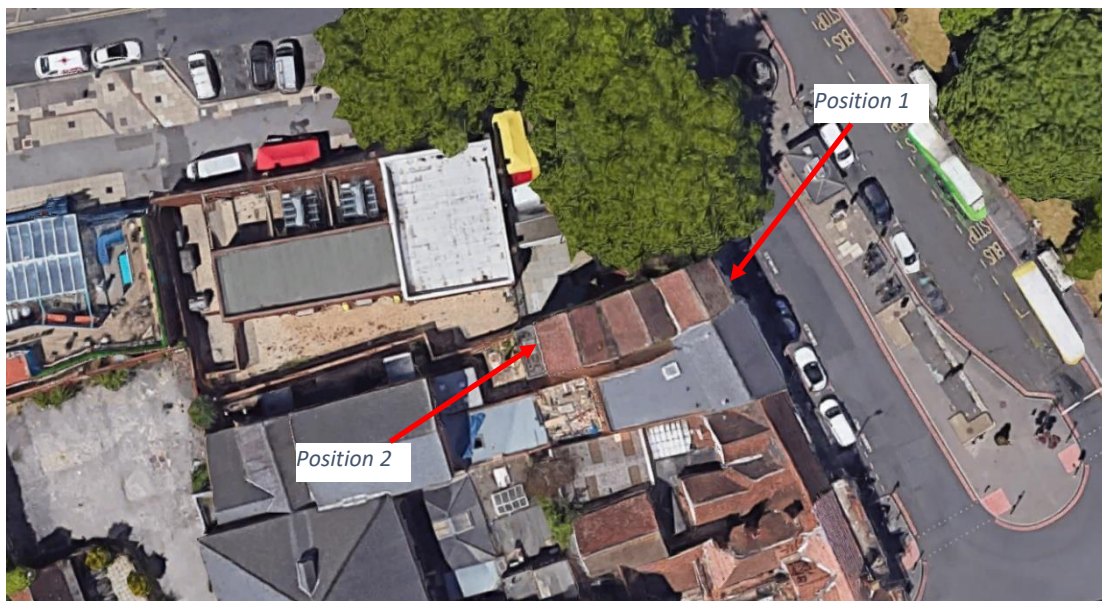


Figure 2. Unmanned Measurement Positions (Google Imagery 2022, The GeoInformation Group)

The details of the equipment used for the survey are presented within the following table.

Description	Manufacturer	Type	Serial Numbers
2 x Type 1 Sound Level Meters	Svantek	971A	124647 / 124770
Acoustic Calibrator	Svantek	SV 33B	125699

The sound level meters were located within environmental cases. The microphones were connected to the sound level meters with microphone extension cables and fitted with windshields.

The sound level meters, including the extension cables were calibrated prior to and on completion of the survey. No significant calibration drift was found to have occurred.

4.0 RESULTS

The results of the noise survey have been plotted on Graphs 22076.G1 to 22076/G2 enclosed, presenting the 15-minute A-weighted L90, Leq and Lmax noise levels throughout the duration of the survey.

The sound level meter at Position 1 operated from 12:30 on Friday 20th January 2023 to 15:00 on Monday 23rd January 2023 (power source failed at this time).

The sound level meter at Position 2 operated from 12:30 on Friday 20th January 2023 to 12:30 on Tuesday 24th January 2023.

The daytime LAeq (16 hour) and night-time LAeq (8 hour) measured noise levels are presented in the following table. It should be noted that both microphone locations were subject to a façade reflection i.e. not in free-field conditions.

Position 1	Daytime (07:00 – 23:00)	Night-time (23:00 – 07:00)
20 Jan 2023	66 dBA*	64 dBA
21 Jan 2023	66 dBA	65 dBA
22 Jan 2023	64 dBA	61 dBA
23 Jan 2023	66 dBA*	-

Denotes partial measurement periods*

Position 2	Daytime (07:00 – 23:00)	Night-time (23:00 – 07:00)
20 Jan 2023	56 dBA*	53 dBA
21 Jan 2023	56 dBA	56 dBA
22 Jan 2023	54 dBA	50 dBA
23 Jan 2023	55 dBA	51 dBA
24 Jan 2023	56 dBA*	-

Denotes partial measurement periods*

During the periods we were present at site, the noise climate was dominated by local road traffic at both measurement positions.

5.0 RELEVANT PLANNING POLICIES AND NOISE ASSESSMENT GUIDANCE

5.1 Noise Policy Statement for England

The Noise Policy Statement for England (NPSE) was published in March 2010. The NPSE is the primary statement of noise policy for England and applies to all forms of noise other than occupational noise. The NPSE sets out the long term vision of Government noise policy which 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.”

“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; and*
- where possible, contribute to the improvement of health and quality of life.”

The Explanatory Note to the NPSE introduces guidance to assist in defining the adverse impacts:

NOEL – No Observed Effect Level

This is the level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise.

LOAEL – Lowest Observable Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

These categories are further discussed in the Planning Practice Guidance section below.

The NPSE acknowledges that it is not possible to have a single objective noise level based measure that is mandatory and applicable to all sources of noise in all situations.

5.2 Planning Practice Guidance

The government’s Planning Practice Guidance is a web based resource and provide advice on various issues, including noise (<https://www.gov.uk/guidance/noise--2>). The advice (March 2014, latest update July 2019) states in the context of considering when noise is relevant to planning, “noise needs to be considered when new development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced).”

The Planning Practice Guidance pages also include more explanation of the effect level categories noted above, providing an explanatory Noise Exposure Hierarchy Table, which explores how actions such as a requirement for noise mitigation, or prevention of a development, might be assessed with respect to whether noise levels are considered above the category thresholds.

Response	Examples of outcomes	Increasing effect level	Action
No Observed Effect Level			
Not present	No effect	No Observed Effect	No specific measures required
Present 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	No specific measures required
Lowest Observed Adverse Effect Level			
Present 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.	Observed Adverse Effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Present 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
Present and very disruptive	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 hard, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

5.4 National Planning Policy Framework

The following paragraphs are from the National Planning Policy Framework (NPPF). The NPPF was revised in February 2019.

“180. 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 impacts 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.

182. Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities 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."

5.5 Permitted Development

The Town and Country Planning (General Permitted Development) (Amendment) Order 2015 provides details of permitted development in Part 3 of Schedule 2 – Class G “*commercial, business and service or betting office or pay day loan shop to mixed use*”

Conditions

G.1

(d) before beginning development, the developer must apply to the local planning authority for a determination as to whether the prior approval of the authority will be required as to—;
(iii) impacts of noise from commercial premises on the intended occupiers of the development;

6.0 COMMERCIAL PREMISES NOISE IMPACT ASSESSMENT

For the prior notification application, it is only necessary to consider noise impact from commercial premises upon the proposed residential dwellings.

In general, the development site is exposed to low noise levels to the rear and typical busy urban road noise levels to the front, which should be considered suitable for residential use.

The adjacent market building has a board on the front advertising the market being open every Wednesday to Saturday. There was one market stall located outside of the indoor market building when we went to site on Friday 20th January. We did not witness any significant noise generated by the operation of the market stall.

The Boundary pub, located approximately 40m to the north of 32 St Mary's Butts is a food orientated pub. All patrons seen exiting the building left in a quiet, orderly fashion which did not affect the background noise level measurements.

Two of the planning conditions in planning permission (App 210540) for the outdoors food and drink quarter known as Blue Collar Corner which is located approximately 40m to the west of 32 St Mary's Butts are detailed as follows:

"16. No live amplified music performances or live amplified singing performances shall take place at the premises other than between the hours of 1100 to 2200 on Thursdays, Fridays, Saturdays and Sundays. There shall be no more than 1 (one) live amplified music performance

per month and no more than 1 (one) amplified live singing act (with acoustic instrument) per week.

17. No amplified playing of recorded music shall take place at the premises other than between the hours of 1100 to 2300 on Thursdays, Fridays, Saturday and Sundays."

These conditions which restrict the number of potentially noisy events and limit the hours of use have clearly been applied to reduce the likelihood of excessive noise/complaints from residential receptors.

The graph presenting the measured noise levels to the rear of the site (Graph 2) shows a small uplift (~3dB) in the L_{Aeq} and L_{90} noise levels on the Saturday afternoon / evening which is likely to be associated with noise emissions from the Blue Collar Corner site.

The table below presents the calculated internal noise level based upon the typical noise reduction provided by conventional double glazing (~33dBA) based upon road traffic noise taken from the now superseded PPG24. The 33dBA reduction in noise levels is the difference between the outside and inside of a typical dwelling.

		Daytime $L_{Aeq,16hour}$	Night-time $L_{Aeq,8hour}$
Measured external noise level	Position 1	66 dB	63 dB
	Position 2	56 dB	56 dB
Calculated Internal Level	Position 1	33 dB	30 dB
	Position 2	23 dB	23 dB
BS8233 / ProPG internal criteria		35 dB	30 dB

The above table demonstrates that with appropriate mitigation measures, suitable internal noise levels can be achieved at the front and rear of 32 St Mary's Butts, fully compliant with the World Health Organisation, BS8233:2014 and ProPG guidance.

A slightly lower level of attenuation than that assumed in the above table may be expected if the noise source is amplified music with a higher bass frequency content than typical road traffic noise frequency content which may be experienced to the rear of the site (Position 2), however given the predicted comfort margin based upon road traffic, we would still expect the internal noise levels to be compliant with the World Health Organisation, BS8233:2014 and ProPG guidance with the windows closed.

The above table demonstrates that with appropriate mitigation measures, suitable internal noise levels can be achieved, fully compliant with the World Health Organisation, BS8233:2014 and ProPG guidance.

The proposed change of use of 32 St Mary's Butts to residential use would not further fetter the use of the Blue Collar Corner site due to the approved residential use of the adjacent building, 34 St Mary's Butts.

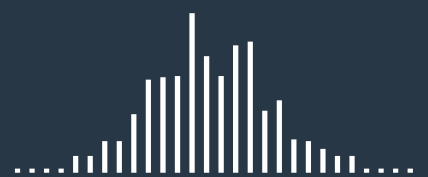
7.0 CONCLUSIONS

A fully automated environmental noise level survey has been undertaken.

The results have been used to assess the suitability of the site for residential purposes, in accordance with relevant national and local planning policy/guidance.

In accordance with the Town and Country Planning Act (General Permitted Development) (Amendment) Order 2016, impacts of noise from commercial premises on the intended occupiers of the development has been assessed.

The proposed residential development would not further fetter the continued operation of any commercial businesses.



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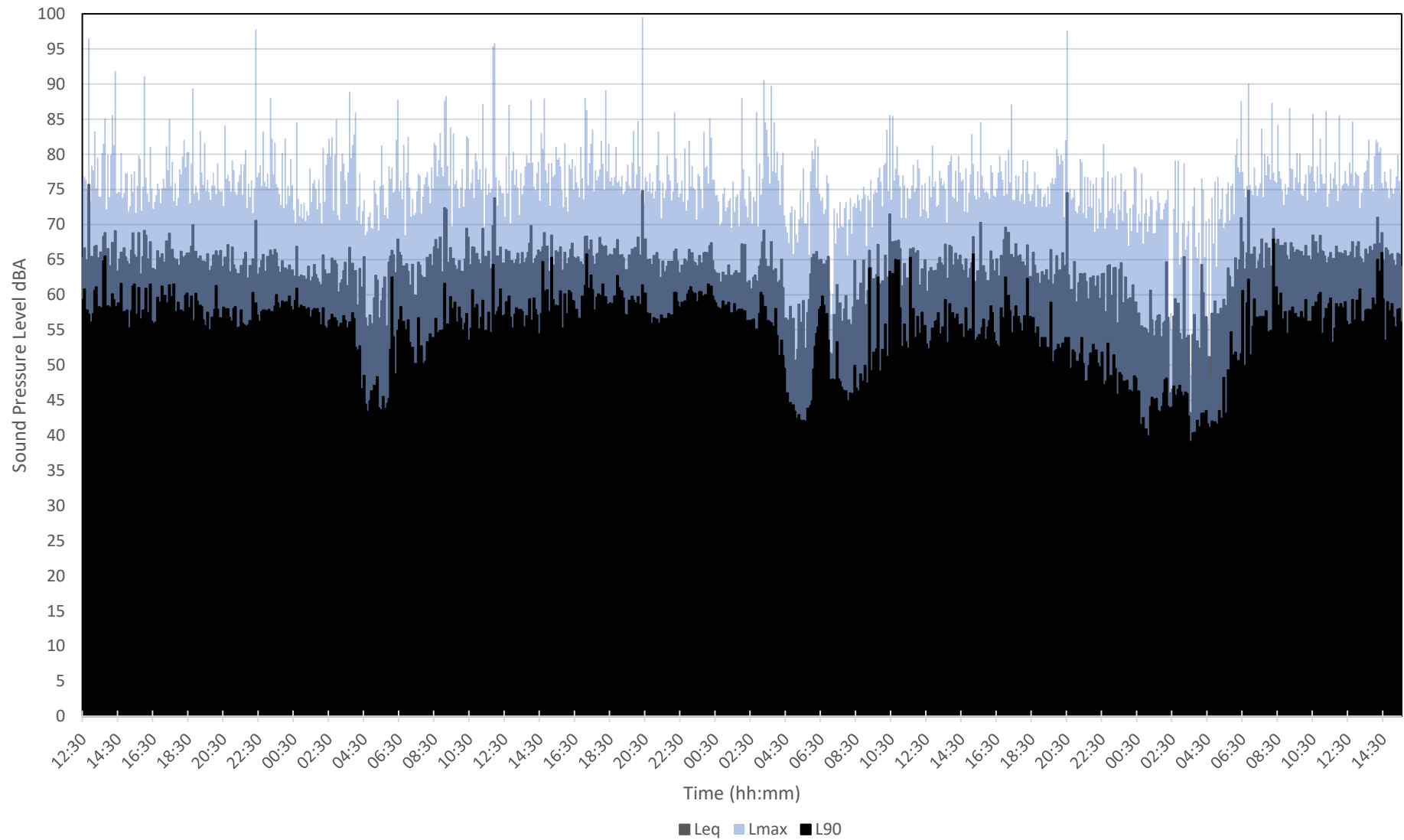
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32 St Mary's Butts

Position 1 - Front

20/01/2023 to 23/01/2023



32 St Mary's Butts

Position 2 - Rear

20/01/2023 to 24/01/2023

