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**27 GREAT QUEEN STREET  
LONDON**

**NOISE ASSESSMENT**

Technical Report: R9472-1 Rev 0

Date: 28<sup>th</sup> February 2022

For: UGLE Property Investment Committee  
C/o Eddisons  
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## 24 Acoustics Document Control Sheet

**Project Title:** 27 Great Queen Street, London – Noise Assessment

**Report Ref:** R9472-1 Rev 0

**Date:** 28<sup>th</sup> February 2022

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### Document Status and Approval Schedule

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## **1.0 INTRODUCTION**

- 1.1 24 Acoustics Ltd has been instructed by the UGLE Property Investment Committee to assess the potential noise arising from the proposed change of use of 27 Great Queen Street from office to a members' club. The building was formerly used for commercial and is currently vacant.
- 1.2 Planning approval is sought for the proposed operation of a members' club including dining rooms and a multi-use space at the ground floor at the rear of the property.
- 1.3 All noise levels in this report are expressed in dB relative to 20  $\mu$ Pa. A description of the acoustic terminology used in this report is provided in Appendix A.

## **2.0 SITE DESCRIPTION AND PROPOSED USE**

- 2.1 The building is located on Great Queen Street which is predominantly commercial in nature. The building is Grade II\* listed and generally of a traditional construction comprising brick walls and timber internal floors.
- 2.2 It is proposed to renovate the building to provide a library, club meeting rooms, a small bar area, dining areas and a ground floor multi-use space. Access is from the front of the building via Great Queen Street.
- 2.3 The proposed opening hours are 07:30 to 01:30 Monday to Friday and 12:00 to 23:00 Saturday, Sunday and Bank Holidays. It is anticipated that the proposed first floor bar would be open from 10:00 until 23:00. During dinners, the bar would stay open until 01:00.
- 2.4 The nearest residential properties on the same road are at 22 Great Queen Street, at a distance of approximately 30m. Residential properties are also located to the rear in Parker Street to the rear.
- 2.5 The noise climate at this location is characterised by road traffic from Great Queen Street and surrounding roads, plant noise and other commercial activity. Commercial aircraft contribute to the day and evening noise profile. Great Queen Street is a busy east-west street for traffic with significant pedestrian footfall
- 2.6 The building and nearest residential properties are shown in Figure 1.

### 3.0 CRITERIA

- 3.1 The following sections describe the guidance documents relevant to the application and the proposed criteria.

National Planning Policy Framework and Noise Policy Statement for England

- 3.2 The National Planning Policy Framework (NPPF) states that planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely 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:
- (i) 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 quality of life.
  - (ii) Identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.
- 3.3 The NPPF states that where the operation of an existing business could have a significant adverse effect on new development in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.
- 3.4 The NPPF also refers to the Noise Policy Statement for England (NPSE) which is intended to apply to all forms of noise, including environmental noise, neighbour noise and neighbourhood noise. The NPSE sets out the Government's long-term vision 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' which is supported by the following aims.
- (i) Avoid significant adverse impacts on health and quality of life
  - (ii) Mitigate and minimise adverse impacts on health and quality of life
- 3.5 The NPSE defines the concept of a 'significant observed adverse effect level' (SOAEL) as 'the level above which significant adverse effects on health and quality of life occur'. The following guidance is provided within the NPSE:

*"It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available."*

- 3.6 The Planning Practice Guidance (NPPG) is written to support the NPPF with more specific planning guidance. The PPG reflects the NPSE and states that noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. It also states that opportunities should be taken, where practicable, to achieve improvements to the acoustic environment. The PPG states that noise can over-ride other planning concerns but should not be considered in isolation from the other economic, social and environmental dimensions of the proposed development.
- 3.7 The NPPG expands upon the concept of SOAEL (together with Lowest Observable Adverse Effect Level, LOAEL and No Observed Effect Level, NOEL) as introduced in the NPSE and provides a table of noise exposure hierarchy for use in noise impact assessments in the planning system.

#### The London Plan 2021

- 3.8 The London Plan 2021 is the Spatial Development Strategy for Greater London. It sets out a framework for how London will develop over the next 20-25 years and the Mayor's vision for Good Growth.
- 3.9 Policy HC6 promotes the night-time economy, where appropriate, particularly in the Central Activities Zone, strategic areas of night-time activity, and town centres where public transport such as the Night Tube and Night Buses are available. It protects and supports evening and night-time cultural venues such as pubs, night clubs, theatres, cinemas, music and other arts venues, and encourages the management of the night-time economy through an integrated approach to planning and licensing.
- 3.10 Policy D14 addresses the reduction, management and mitigation of noise. It encourages good acoustic design and notes that the management of noise should be an integral part of development proposals and considered as early as possible.

- 3.11 It recognises that consideration of existing noise sensitivity within an area is important to minimise potential conflicts of uses or activities, for example in relation to internationally important nature conservation sites which contain noise sensitive wildlife species, or parks and green spaces affected by traffic noise and pollution.

Camden Local Plan - Policies A4 and A1

- 3.12 The Camden Local Plan was adopted by Camden Council on 3 July 2017 and has replaced the Core Strategy and Camden Development Policies documents as the basis for planning decisions and future development in the borough. Noise and vibration can have a significant impact on amenity, quality of life and well being.
- 3.13 Local Plan Policies A4 (Noise and vibration) and A1 (Managing the impact of development) seek to protect residents of both existing and new residential developments and the occupiers of other noise-sensitive developments from the adverse effects of noise and vibration.
- 3.14 Appendix 3 of the Local Plan supports these policies and sets out expected standard in terms of noise and vibration. Table D proposes noise levels applicable to proposed entertainment premises and indicates that night-time noise levels in gardens that does not exceed the higher of 45 dB  $L_{Aeq,5mins}$  or 10 dB below the existing  $L_{Aeq,5mins}$  would be rated as LOAEL (see Figure 1) and noise that does not exceed the higher of 46 – 50 dB  $L_{Aeq,5mins}$  or 9 - 3dB below the existing  $L_{Aeq,5mins}$  would be rated as LOAEL to SOAEL. It also proposes internal levels in bedrooms at night (23:00 - 07:00hrs) that do not exceed NR 25 when measured as a 15-min  $L_{eq}$  (unweighted). On this basis, this upper level of NR 25 is proposed to apply at all times.

#### 4.0 NOISE ASSESSMENT & RECOMMENDATIONS

##### Multi Use Room

- 4.1 24 Acoustics undertook a site inspection on 28<sup>th</sup> February 2022 to examine the building fabric and layout.
- 4.2 Sound levels in the ground floor rehearsal space are very unlikely to exceed 85 dB  $L_{Aeq, 15 \text{ mins}}$ . The construction of the party walls is 225mm brickwork and the risk of breakout is considered low. Noise breakout from the roof construction is similarly considered to be low risk. It is recommended, however, that all roof lights are closed during rehearsal times.
- 4.3 Calculations have been undertaken to determine the level of music noise breakout from the building's façade within the nearest residential properties and assume a conservative loss of 10 dBA from a partially open window at the neighbouring properties.
- 4.4 Resultant music noise break-out levels within the nearest neighbouring residential property are shown in Table 1 below.

Area	Sound Pressure Level dB, $L_{eq, 15 \text{ min}}$		
	63 Hz	125 Hz	A
Front Façade Rooms	40	35	15

**Table 1** - Predicted Music Noise Levels Within Nearest Residential Properties

- 4.5 The above predicted noise levels are lower than NR 20 and hence significantly below the maximum level of NR 25 identified in Section 3. This is considered acceptable particularly in the context of prevailing external evening and night-time noise levels in the vicinity which are in the region of 50 dB  $L_{Aeq, 15 \text{ min}}$ .

##### Internal Patron Noise

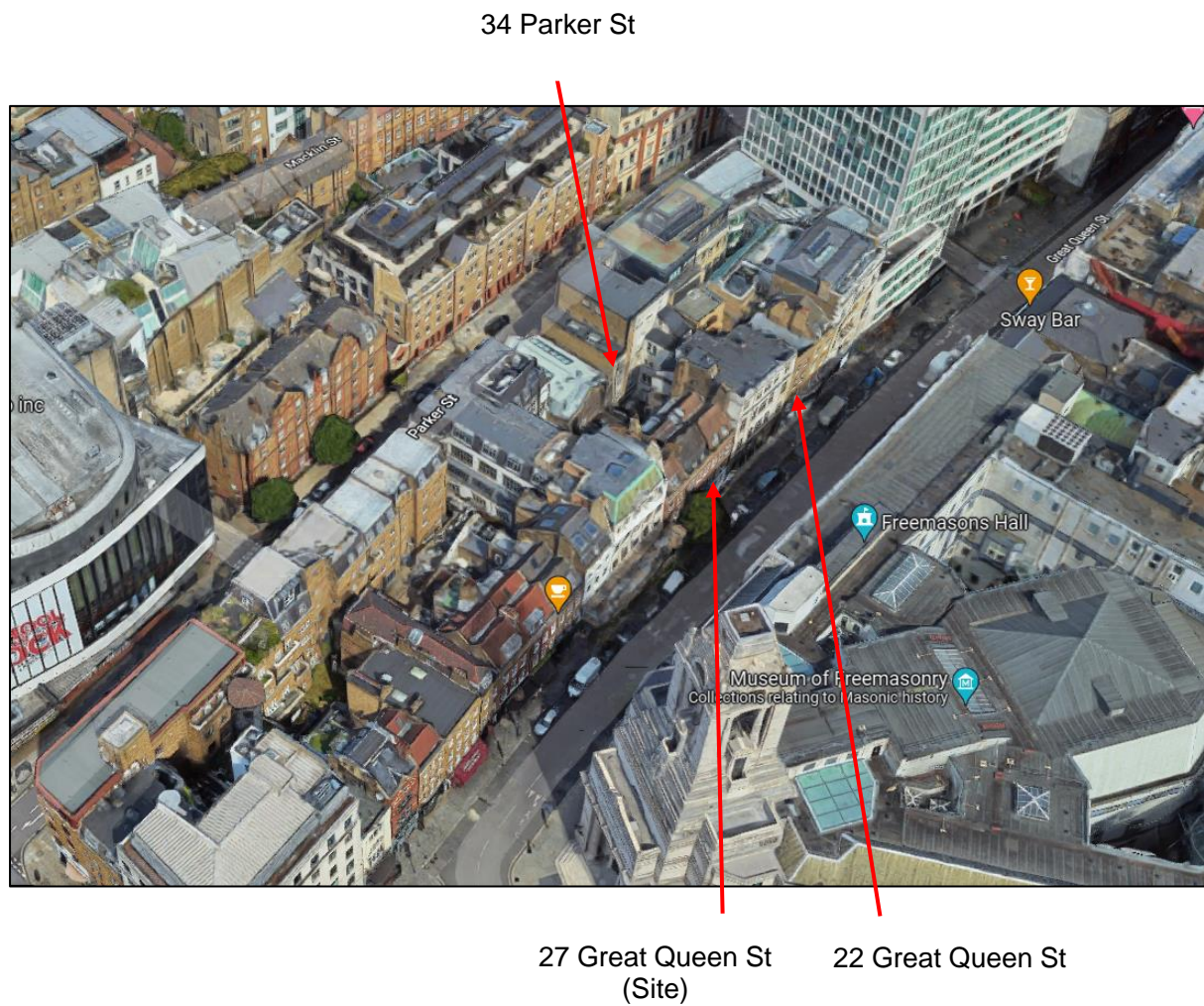
- 4.6 The risk of noise disturbance from club members' typical activities is considered to be very low. No mitigation measures are considered necessary.



## **5.0 CONCLUSIONS**

- 5.1 24 Acoustics Ltd has been instructed by the UGLE Property Investment Committee to prepare a noise assessment in relation to a proposed members' club at 27 Great Queen Street.
- 5.2 Calculations and measurements of the noise break-out from the building have been undertaken. It is concluded that noise associated with the buildings' proposed use are very unlikely to cause disturbance to occupiers of nearby residential properties.

**FIGURE 1**



## APPENDIX A: ACOUSTIC TERMINOLOGY

Noise is defined as unwanted sound. The range of audible sound is from 0 to 140 dB. The frequency response of the ear is usually taken to be around 18 Hz (number of oscillations per second) to 18000 Hz. The ear does not respond equally to different frequencies at the same level. It is more sensitive in the mid-frequency range than the lower and higher frequencies and because of this, the low and high frequency components of a sound are reduced in importance by applying a weighting (filtering) circuit to the noise measuring instrument. The weighting which is most widely used and which correlates best with subjective response to noise is the dBA weighting. This is an internationally accepted standard for noise measurements.

For variable sources, such as traffic, a difference of 3 dBA is just distinguishable. In addition, a doubling of traffic flow will increase the overall noise by 3 dBA. The 'loudness' of a noise is a purely subjective parameter, but it is generally accepted that an increase/ decrease of 10 dBA corresponds to a doubling/ halving in perceived loudness.

External noise levels are rarely steady, but rise and fall according to activities within an area. In attempt to produce a figure that relates this variable noise level to subjective response, a number of noise indices have been developed. These include:

- a) The  $L_{Amax}$  noise level

This is the maximum noise level recorded over the measurement period.

- b) The  $L_{Aeq}$  noise level

This is "equivalent continuous A-weighted sound pressure level, in decibels" and is defined in British Standard BS 7445 as the "value of the A-weighted sound pressure level of a continuous, steady sound that, within a specified time interval, T, has the same mean square sound pressure as a sound under consideration whose level varies with time".

It is a unit commonly used to describe construction noise and noise from industrial premises and is the most suitable unit for the description of other forms of environmental noise. In more straightforward terms, it is a measure of energy within the varying noise.

c) The  $L_{A10}$  noise level

This is the noise level that is exceeded for 10% of the measurement period and gives an indication of the noisier levels. It is a unit that has been used over many years for the measurement and assessment of road traffic noise.

d) The  $L_{A90}$  noise level

This is the noise level that is exceeded for 90% of the measurement period and gives an indication of the noise level during the quieter periods. It is often referred to as the background noise level and is used in the assessment of disturbance from industrial noise.



## APPENDIX B – VIEW TO REAR FROM FIRST FLOOR

