

Technical Memorandum

To: James Richardson
From: Mike Potts (Echo Acoustics)
CC:
Date: 18 June 2025
Re: 47 Knowles St, Bury BL9 0ST: change of use to HMO - Noise

Qualifications

This document has been prepared by Mike Potts of Echo Acoustics; Mr Potts is a Member of the Institute of Acoustics (MIOA) and is an Acoustic Consultant with over 24 years' experience in environmental noise assessment, within both regulatory and private industry roles at a senior level, and including experience in the provision of Expert Witness evidence at Public Inquiry.

Introduction

This document presents a technical response to Planning Condition 3 of Planning Application 71276 for the *"Change of use from offices (Use Class E) to 8 no. bedroom (single occupancy) HMO (Sui Generis) with 2 no. front velux rooflights and 2 no. rear velux rooflights; Erection of 1.8m high boundary walls at rear with gated access"*.

Specifically, Condition 3 requires:

"The sound insulation of the party wall(s) shared with Westminster House, 49 Knowsley Street, shall be improved in accordance with Building Regulations Approved Document E (or similar method), the details of which shall be submitted to and approved by the Local Planning Authority and implemented to and approved in writing by the Local Planning Authority prior to the use commencing.

Reason. To reduce nuisance from noise to the occupiers of the adjoining business pursuant to the Policy EN7/2 Noise Pollution of Bury Unitary Development Plan and the National Planning Policy Framework"

Construction details

We are informed that the party wall between the Application property and Westminster House is a double-leaf brick construction. It is assumed that this will be 'made good' prior to any additional works.

It is proposed that the internal wall finish on the party wall, within the Application property, will be dot-and-dab fixing of Soundbloc acoustic plaster-board directly to the wall.

The adjoining property, 49 Knowles Street, is currently occupied by an online pharmaceutical retail business over 3 storeys; the business receives pharmaceutical supplies which are packaged and shipped out to customers. The use of the business is not particularly noise sensitive.

However, it is appreciated that the use of the building might, in future, change to something more sensitive.

Sound insulation data and relevant guidance

The manufacturer of SoundBloc, British Gypsum, does not provide an airborne sound insulation performance specification for this particular construction, but the board alone is shown as having a minimum sound insulation performance of 37 dB R_W (weighted sound reduction index).

Examination of Echo Acoustics' own database indicates that a double block-work wall with plaster finish on at least one side will have a minimum sound insulation performance of 45 dB $R_W + C_{tr}$; previous field-measurements of a similar construction have shown a performance of 50 dB $R_W + C_{tr}$. The addition of Soundbloc on one side will increase the performance by a few dB but laboratory sound insulation performance data for this are not available.

Approved Document E of the Building Regulations 2010 *Resistance to the passage of sound*, is intended for assessing noise transmission within buildings affecting rooms for residential purposes; consequently, it is not directly applicable to this situation but does provide useful guidance. It requires that party walls within dwellings provide a minimum sound insulation performance of 43 to 45 dB $D_{n,Tw} + C_{tr}$, equivalent to approximately 47 to 50 dB $R_W + C_{tr}$.

British Standard (BS) 8233: 2014 *Guidance on sound insulation and noise reduction for buildings* suggests that noise within open-plan offices should be in the range of 45 to 50 dB L_{Aeq} . When considering noise transmission through party walls, the noise level in the receiving room is dependent on a range of factors including the area of the wall, volume of room, floor/wall finishes, furnishings etc. However, some reasonable approximations can be made.

If it is assumed that a residential use of a room within an HMO generates sound levels no greater than 60 to 65 dB L_{Aeq} , levels associated with conversational speech, it would be expected that the noise within the adjoining property would be in the region of 15 to 20 dB L_{Aeq} ; even allowing for levels to be up to 10 dB greater than this (a 10-fold increase in perceived sound), levels within the adjoining property will be significantly below the BS 8233 guideline value of 45 to 50 dB L_{Aeq} for open plan offices.

Conclusion

It can be reasonably concluded, therefore, that a combination of the existing double-leaf brick wall, made good, with Soundbloc plaster fixed to one side, will provide suitable levels of protection against noise for the adjoining property.

Condition 3 can be considered to have been complied with once the construction details have been completed.