

SANDY BROWN

Consultants in Acoustics, Noise & Vibration

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From:	Chris Perry	Reviewer:	Bob Albon
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Tribeca Plot B & C

Planning condition 35

Internal sound insulation – residential to commercial

This memo provides an overview of the design proposals relating to the sound insulation performance of the separating floors between the ground floor commercial spaces and the residential spaces in C2 with regard to the planning requirements.

Planning condition

Camden Council have granted planning permission for the development subject a number of planning conditions. Planning condition 34 relates to the separation between residential dwellings in Plot C2 and adjacent areas and states:

“Prior to commencement of above ground works of Plot C, details of the sound insulation of the floor and walls separating all non-habitable uses (for example retail, residential gym, office, workshop) uses from adjacent residential uses shall be submitted to and approved in writing by the local planning authority. Such details shall demonstrate that the sound insulation value $D_{nTw+Ctr}$ is enhanced by at least 10dB above the Building Regulations value for Class E (b), and Sui Generis (gym) uses and 5dB above the Building Regulations value for Class E (a) (non-music) and Class E (g) (office).”

Criteria

Camden Council require that walls and floors between residential and commercial spaces achieve a sound insulation performance of at least 10dB above the Building Regulations value for Class E (b), and Sui Generis (gym) uses, and 5dB above the Building Regulations value for Class E (a) (non-music) and Class E (g) (office).

These performance requirements are as follows:

- Between dwellings and Class E(b) / Suis generis (gym) uses, a 10 dB betterment of the ADE2003 criteria is required, resulting in a sound insulation performance requirement of $D_{nT,w} + C_{tr}$ 55 dB.
- Between dwellings and Class E(a) / Class E(g) (office) uses, a 5 dB betterment of the ADE2003 criteria is required, resulting in a sound insulation performance requirement of $D_{nT,w} + C_{tr}$ 50 dB.

Proposals

Floors

Proposals in C2 include ground floor commercial premises directly below residential dwellings.

The proposed use for the commercial area on the ground floor of Plot C2 is retail use and therefore the separating wall must achieve a sound insulation performance of at least $D_{nT,w} + C_{tr}$ 50 dB.

The separating floor between ground floor and level 1 is a 300 mm thick reinforced concrete slab. This is compatible with achieving a sound insulation performance of at least $D_{nT,w} + C_{tr}$ 55 dB between the commercial units and the dwellings above without the need for a ceiling.

The proposals therefore exceed the minimum requirements set out by Camden Council for sound insulation between commercial and residential dwellings.

Walls

There is a demise wall separating the residential dwellings in Plot C2 and the commercial premises in Plot C1.

The proposed use for the commercial premises in Plot C1 are offices / laboratories and therefore the separating wall must achieve a sound insulation performance of at least $D_{nT,w} + C_{tr}$ 50 dB.

The demise walls separating residential dwellings from laboratory space from Plot C1 are 300 mm thick concrete walls and include a lining comprised of:

- GTEC dryliner system with a minimum cavity of 25 mm and 25 mm mineral wool infill
- 2 x 12.5 mm acoustic plasterboard

These proposals are capable of achieving a sound insulation performance of at least $D_{nT,w} + C_{tr}$ 60 dB.

The proposals therefore exceed the minimum requirements set out by Camden Council for sound insulation between commercial and residential dwellings.