

Client: Mobile CAD Surveying Solutions LTD
Project: 23-31 London Street, Reading
Reference: 240202-R002
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ACA Acoustics have been requested to confirm the proposals for the separating floor at 23-31 London Street, Reading.

The site is proposed for development to incorporate office space at ground floor level, and residential dwellings at upper floors. Reading Borough Council have requested confirmation that the separating floor between the ground floor units and first floor residential properties will exceed the requirements of Building Regulations Approved Document E by 10dBA.

Approved Document E requires that for Material Change of Use developments, separating floors to residential properties should achieve an airborne sound insulation performance of not less than $DnT,w + C'tr$ 43dB. Exceeding this performance by 10dB means that Reading Borough Council requires the floor to achieve an airborne sound insulation performance of $DnT,w + C'tr$ 53dB.

It is understood that the existing floor comprises a minimum 150mm concrete slab. The developer proposes to install an acoustic ceiling beneath this floor.

The acoustic ceiling proposed would incorporate:

- Existing 150mm concrete slab
- Two layers 15mm Gyproc Firecase on Gypframe MF5 furring channels
- Suspended on British Gypsum GAH2 acoustic hangers or equivalent to form a 150mm cavity
- With minimum 25mm high density rockwool in the void

The walls of the development at ground floor level are understood to incorporate a brick-cavity -block structure with no structural steelwork throughout the building. ACA Acoustics are not aware of any flanking elements which would excessively affect the sound insulation performance.

ACA Acoustics have modelled the proposed separating floor using Insul, proprietary software for the calculation of sound insulation performance of a separating element. This indicates that the sound insulation performance of the proposed separating floor will be $Rw + C'tr$ 70dB.

Assuming a reasonable standard of workmanship, the on-site sound insulation performance between the proposed offices and residential flats is likely to be around $DnT,w + C'tr$ 66dB to 63dB and should comfortably comply with the requirements of Reading Borough Council.