

TECHNICAL NOTE: 0542018_DDN002

TO: Steve Jones

FROM: Jordan Mayes

SUBJECT: 50, Hope Street, Wrexham - Separating Floors.

DATE: July 2022.

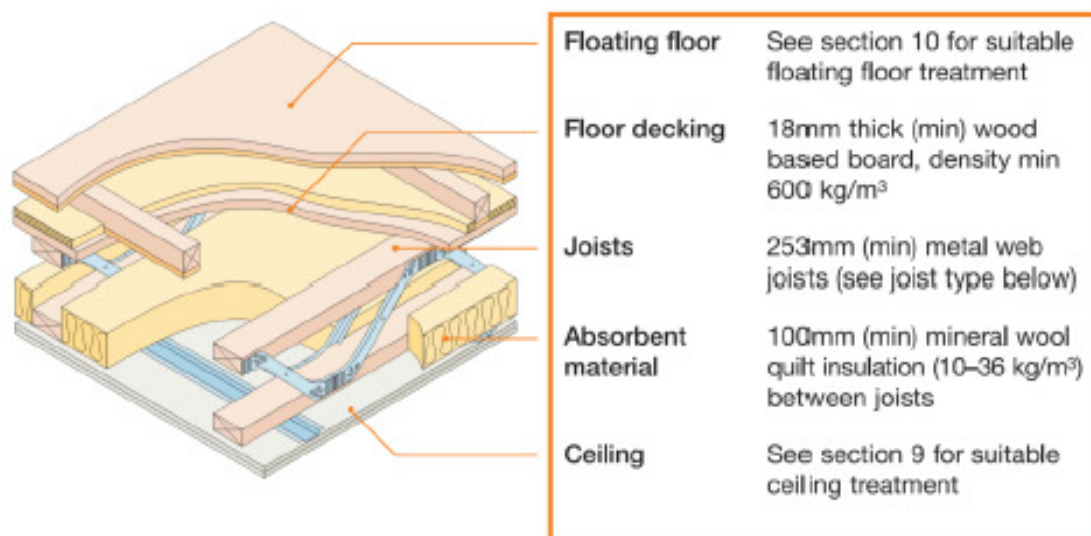
This Design Development Note (DDN) provides comment on the proposed separating floor constructions with regards their ability to meet the sound insulation performance requirements outlined in Approved Document E of the Building Regulations.

The airborne sound insulation performance requirements for separating floors are discussed in detail in Detailed Design Note 0542018_DDN01 and summarised below for ease of reference.

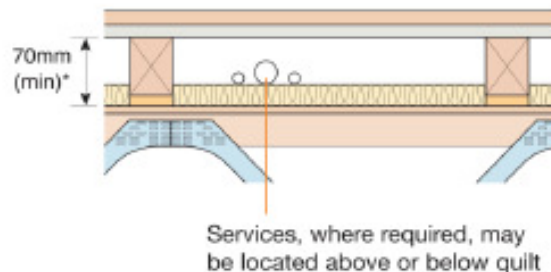
Table 1: Sound insulation performance requirements for separating elements in dwellings formed by a material change of use

Separating Element	Airborne sound insulation ($D_{nT,w} + C_k$, dB) (Minimum values)	Impact sound insulation $L'_{nT,w}$, dB (Maximum values)
Walls	43	-
Floors & Stairs	43	64

It is understood that existing floors between ground - first floor, and between first - second floor will be removed and replaced. The proposed replacement floors will comprise the following build up:



The proposed floating floor is understood to comprise the following:



FFT1 – Resilient composite deep batten system for E-FT-3

- 18 mm (min) t&g flooring board
 - gypsum-based board nominal 13.5 kg/m²
 - FFT1 resilient composite deep battens
 - battens may have the resilient layer at the top or the bottom
 - mineral wool quilt laid between battens
 - 13mm (min) 33-36 kg/m³, or
 - 25mm (min) 10-36 kg/m³
 - ensure any services do not bridge the resilient layer
- * Note - Services may run within the floor zone (see Appendix A)

The ceilings to ground and first floor spaces will comprise:

- 16mm resilient bars fixed at right angles to joists;
- 2 x 15mm Gyproc Soundbloc Boards

The northern extent of the development includes an existing concrete deck of circa. 150mm depth with a 40mm screed at levels 1 and 2. This deck is proposed to be retained.

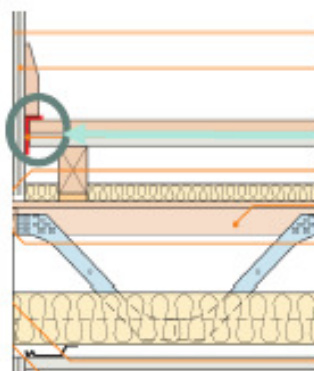
Recommendations

New Timber Floors

The proposed new-build timber separating floors are sufficient to meet the sound insulation performance requirements outlined in Table 1. In terms of value engineering, the following amendments could be made without compromising the suitability of the system:

- The Gypsum-based board below the 18mm tongue and groove flooring board on top of the floating timber floor battens can be amended from 15mm Gyproc Soundbloc Board to 12.5mm wallboard throughout.
- The ceiling to the ground floor retail units and first floor apartments could be substituted from 2 x 15mm Gyproc Soundblock Board to 2 x 12.5mm Gyproc Wallboard.

It is important that a flanking strip is included to isolate the floating floor from the surrounding structure, as indicated below. The skirting board should sit on-top of the folded flanking strip as identified in the figure.



Flanking Strip (Yelofon FS or similar)
used to separate floating floor from
the surrounding structure