
IMPACT SOUND

THE **KNOWLEDGE**

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Impact sound & L'nT,w

Impact sound relates to sound generated by actual impact on a structure. This is typically only assessed for intermediate floors, to consider noise such as footsteps, chair scrapes and any other object being dropped or impacting on the floor.

The L'nT,w is determined by measuring sound levels within a room where the floor above is being subjected to an impact. An acoustic consultant will use a tapping machine to do this.

The tapping machine drops a series of weights/hammers on the floor in regular succession at a fixed force (if they varied the force every time they tested; they would get completely different results).

The lower the L'nT,w result the better the level of impact sound insulation.

Some tips to ensure good sound insulation performance.

- Ensure that “floating” layers are left floating and are not rigidly fixed
- Fill all joints between parts of the floor to avoid poorly insulated air paths
- Control flanking transmission by using the appropriate detailing
- Lay resilient materials in rolls or sheets with tightly butted and taped joints
- Leave a small gap between the floating floor layers and walls edges and skirting and fill with flexible sealant

- Where possible take the resilient layer up the wall to isolate the floating layer from the wall
- Give attention wherever a pipe or duct penetrates the floor, to reduce flanking transmission and to limit potential air paths
- Allow for movement of materials

Common reasons for **failure**.

- Poor workmanship
- Failure to follow all the detailing
- Floating floors fitted tightly to walls and skirtings
- Non resilient floor finishes fitted rigidly to the floor base
- Sound flanking through beams, joists and walls due to poor isolation



INSTALLATION



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STANDARDS



RECYCLING



MATERIALS



PERFORMANCE