

SOUND TESTING FREQUENTLY ASKED QUESTIONS

Q:What is sound insulation testing?

A: Sound insulation testing is the measurement of how much sound is stopped by separating walls or floors between dwellings/classrooms/hotel rooms etc. By making a controlled noise on one side of the separating wall or floor and measuring how much sound is being received on the other side, we can tell how much sound is stopped by the structure. It is measured in Decibels (dB).

Q:Why is sound testing important?

A: Sound testing is important because it affects the way we live, ensuring that there is no excessive noise transfer between dwellings, which would result in uncomfortable living conditions.

Q:Is it mandatory to determine sound insulation performance?

A: Yes, sound insulation is covered under Approved Document E (ADE) of The Building Regulations. There are two ways in which to show compliance. You can either test to the regime set out in ADE, or pay to use Robust Details. Robust Details are a set of specific design details for walls and floors that have been previously tested to show compliance and must be used if this route is selected. The Robust Details scheme means that testing is not necessary, but is strictly limited to the design given in the Robust Details approved list. Testing provides more flexibility by allowing out of the ordinary designs and is often therefore more cost effective in many cases relative to the Robust Details Scheme.

Q:What happens during sound testing and will this disrupt work on site?

A: The test itself produces very high levels of noise. However testing also requires relatively quiet conditions. For these reasons, any workforce in the testing area will have to leave temporarily to ensure test accuracy. Testing on site varies with site conditions, but generally takes about 45 minutes per test.

Q:What happens after testing?

A: After testing, the sound testing engineer will provide provisional results on-site, as well as providing basic feedback about what has been noted during the test, i.e. potential problems/future areas of concern.

Should any test fail, we have specialist acoustic consultants within the BM TRADA Group, who can provide consultancy on the cause of defects and remedial work. A full report and individual test certificates can be generated and sent out within five working days. Provisional certificates can be emailed next day where agreed in advance.

Q:What preparation is required/when am I ready?

A: Sound testing can be done as soon as a number of plots are completed past second fix stage. All internal doors need to be hung and all windows fitted and closable. It is important that carpets are not laid for tests establishing the performance of the floor.

Q:What needs to be tested?

A: The testing regime is set out in Part E of the Building Regulations. It states that one set of tests is required for every 10 units in a group or sub-group. A group or sub-group is defined as a significant change in design or use and is broken down in detail in part 1 of Approved Document E (ADE).

- New Build Houses - set of two tests on the walls only is required
- New Build Flats - set of six tests on separating walls & floors comprising of two airborne wall tests, two airborne floor tests and two impact floor tests
- Rooms for Residential Purposes (student accommodation, hotel rooms, care homes etc.) - the set of three tests are required: one airborne wall test, one airborne floor test and one impact floor test.

Q: How are plots selected for testing?

A: Typically this is left to the discretion of the test engineer, however the local authority building control officer, warranty provider or other concerned parties may wish to test in specific areas.

Tests are always conducted between pairs of rooms, so if a wall is to be tested, two plots, side-by-side, must be chosen.

Q: What are the common problem areas?

A: Many aspects of the build can affect the acoustic performance of the separating walls or floors. One of the single largest factors influencing performance is workmanship. Sealing of air paths, clearing of cavities and good detailing are all key aspects in maximising on site performance. Generally, good workmanship for acoustic performance also leads to a better air leakage performance and we strongly advocate this to clients. Sound testing needs to be taken into account very early in the construction stage, to make sure a correct combination of building materials is used to achieve the performances required.

Q: What should I look out for in a test body?

A: The Building Regulations Part E Section 0.4 says that the testing body should be UKAS accredited, or a member of the ANC (Acoustic Noise Consultants) is acceptable. The benefits of using Chiltern Dynamics are that we are UKAS accredited to undertake the sound testing. This means we are able to produce the certificates ourselves rather than having to wait for ANC to approve the data and send back to the consultants.

Chiltern Dynamics are also UKAS-accredited to undertake air tightness testing, which means our engineers are capable of testing for both air and sound on the same visit, keeping down costs.



Chiltern Dynamics
Stocking Lane . Hughenden Valley . High Wycombe . HP14 4ND . UK

t +44 (0)1494 569800
f +44 (0) 1494 564895
e air@chilterndynamics.co.uk
w www.chilterndynamics.co.uk