

# Sound Insulation Testing

## Technical Information



When undertaking Sound Insulation Testing between houses, the separating element under test is the party wall, and is tested for airborne sound. Testing is carried out between habitable rooms on either side of the party wall, usually from a Bedroom to Bedroom, and Kitchen/Lounge to Kitchen/Lounge. This constitutes 2No tests.

In the instance of testing apartments, the separating elements are the party walls and party floors. Therefore to

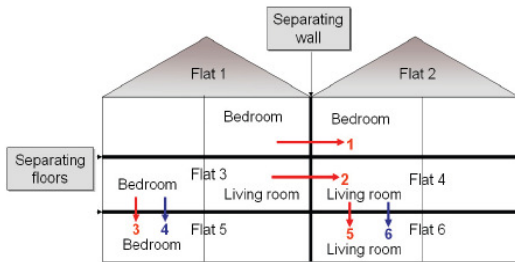
### The six standard test locations are:

1. Airborne - Bedroom to Bedroom (Wall)
2. Airborne - Living Room to Living Room (Wall)
3. Airborne - Bedroom to Bedroom (Floor)
4. Impact - Bedroom to Bedroom (Floor)
5. Airborne - Living Room to Living Room (Floor)
6. Impact - Living Room to Living Room (Floor)

complete testing in apartments, 6 individual tests are required. As with the houses, the party walls of the apartments are tested for airborne sound, again preferably from Bedroom to Bedroom, and Kitchen/Lounge to Kitchen/Lounge. The additional tests are airborne and impact testing through the separating party floor. Once again these are preferably from Bedroom to Bedroom, and Kitchen/Lounge to Kitchen/Lounge.

Approved Document E of the Building Regulations 2000 states:

*"Building Control bodies should stipulate at least one set of tests for every 10 dwelling-houses, flats or rooms for residential purposes in a group or sub-group."*



The advice in Approved Document E is that testing should be carried out by a test body with appropriate accreditation. SES Ltd has accreditation from UKAS for Sound Insulation Testing, and all SES Ltd Noise Consultants are members or affiliated with the Institute of Acoustics.



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Sound Testing will be carried out for the following elements:

To undertake Airborne Sound Insulation Testing on the existing separating wall and/or floor construction in accordance with BS EN ISO 140: "Measurement of Sound Insulation in Buildings and of Building Elements", Part 4 "Field Measurements of Airborne Sound Insulation between Rooms": 1998.

To compare the reports with BS EN ISO 717: "Rating of Sound Insulation in Buildings and/or Building Elements", Part 1, "Airborne Sound Insulation": 1997 to obtain a single figure rating.

To undertake Impact Sound Insulation Tests on the separating floor constructions in accordance with BS EN ISO 140: "Measurement of Sound Insulation in Buildings and/or Building Elements", Part 7 "Field Measurements of Impact Sound Insulation between rooms": 1998.

To compare the results with BS EN ISO 717: "Rating of Sound Insulation in Buildings and/or Building Elements", Part 2 "Impact Sound Insulation": 1997 to obtain a single figure rating.

### Testing Requirements

- External noise should be controlled e.g. no heavy plant, disc cutters etc operating in the vicinity.
- No work within the block where testing is to be carried out; e.g. carpentry, carpet fitting etc.
- Units to be practically complete, with:
  - Windows Fitted
  - Doors Fitted
  - Trickle Vents Fitted
  - 240v Electrical Supply
  - Units Empty of Rubbish or Materials
- Floor—Carpets or floor finishes should NOT be fitted if the floor construction is a Type 2, as defined in Approved Document E of the Building Regulations 2000. A Type 2 floor incorporates a resilient layer within the construction.

SES present the results of all of the tests along with our comments in the form of a Technical Report. The single figure ratings will be compared with the performance standards set out in the 2003 edition of Approved Document E of the Building Regulations 2000.



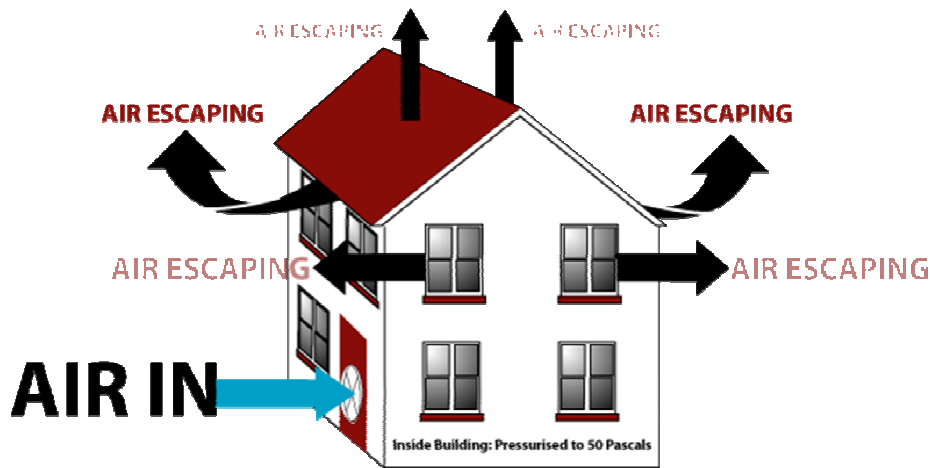
# Air Tightness Testing

Technical Information



## Works consist of the following elements:

- Air Tightness Testing on new dwellings in accordance with the ATTMA publication 'Measuring Air Permeability of Building Envelopes'.
- Testing schedule for the development that satisfies Approved Document L1A requirements for dwellings (either Accredited or Non-Accredited Construction Details).
- Preparation of building envelope calculations and preparation of the dwelling prior to test (inc. sealing up of ventilation units, shutting off HVAC systems, etc.)
- The result will be compared with the performance standards set out in the 2006 edition of Approved Document L1A of the Building Regulations 2000.
- Test data provided as soon as possible with full technical support should standards not be initially met.
- To present final results off all tests along with our comments in the form of a technical report.



**BINDT**  
THE BRITISH INSTITUTE OF  
NON-DESTRUCTIVE TESTING



REGISTERED AIRTIGHTNESS TESTER OF DWELLINGS

**All Air Tightness Testers under the employment of SES are registered with the British Institute of Non-destructive Testing (BINDT) as required by Approved Document L1A**

## Testing in accordance with Approved Document L1A of the Building Regulations 2000

**We require scaled floor plans, elevations and sections together with SAP calculations for the specific plots.**

**Should you require SAP calculations, please contact a member of the SES team.**

### Testing Requirements

- Dwellings to be practically complete (this will also benefit the end result) with:

- Sanitary-ware fitted (toilet, basin, bath, shower, u-bends, kitchen sink)
- Mechanical extract systems fitted (bathroom & kitchen)
- Units empty of rubbish/materials
- Sockets, light fittings (inc. down-lighters) fitted
- Trickle vents fitted
- 240v electrical supply
- Loft hatch fitted

- Unrestricted access to the dwellings to be tested. NB. Operatives can continue to work in a particular dwelling that is being tested.

Please be advised that testing in high wind speeds can provide a less than accurate result. SES Ltd will obtain a five day weather forecast prior to the test to assess the likelihood of suitable weather on the proposed test date. If weather conditions are not suitable for testing, arrangements can be made for alternative test dates and you will not incur a further charge.

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