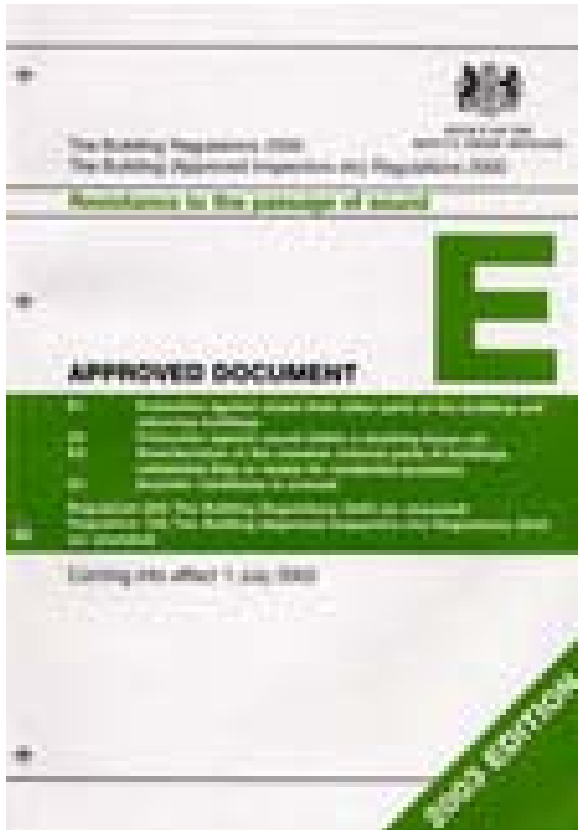


# Contents – Part E



## Part E Requirements

Regulation E1 – Protection against sound from other parts of the building and adjoining buildings.

Regulation E2 – Protection against sound within a dwelling house.

Regulation E3 – Reverberation in the common internal parts of buildings containing flats or rooms for residential purposes

## Pre Completion Testing

## Part E Requirements – Regulation E1 - Dwellings

**Table 1a Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function.**

	Airborne sound insulation DnT,w+Ctr dB (Minimum Values)	Impact L'nT,w dB (Maximum Values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and Stairs	45	62
Dwellings-house and flats formed by a material changes of use		
Walls	43	-
Floors and Stairs	43	64

# Part E Requirements – Regulation E1 - Dwellings

Music



45

44

43

42

41

40 dB Dntw+Ctr

Speech

# Audio demo



45

44

43

42

41

40 dB Dntw+Ctr

## Part E Requirements – Historical and non domestic spaces

**0.7** In the case of some historic buildings undergoing a material change of use, it may not be practical to improve the sound insulation to the standards set out in Tables 1a and 1b. The need to conserve the special characteristics of such historic buildings needs to be recognised, and in such work, the aim should be to improve sound insulation to the extent that it is practically possible,

**0.8** The performance standards set out in Tables 1a and 1b are appropriate for walls, floors and stairs that separate spaces used for normal domestic purposes. A higher standard of sound insulation may be required between spaces used for normal domestic purposes and communal or non-domestic purposes. In these situations the appropriate level of sound insulation will depend on the noise generated in the communal or non-domestic space. Specialist advice may be needed to establish if a higher standard of sound insulation is required, and if so, to determine the appropriate level.

## Part E Requirements Regulation E2 – Within Dwellings

The regulation (E2) states:



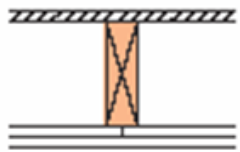
*“Dwelling-houses, flats and rooms for residential purposes shall be designed and constructed in such a way that:-*

- a) Internal walls between a bedroom or a room containing a water closet, and other rooms; and*
- (b) Internal floors provide reasonable resistance to sound.”*

Section 0, clause 0.9 of ADE 2003, states that the normal way of satisfying the regulation is to provide internal walls and floors with a laboratory performance of 40 dB  $R_{w}$ .

# Part E Requirements Regulation E2 – Within Dwellings

## Achieving Regulation E2

Type	Sound Reduction	Partition	Construction Details
1	40 dB $R_w$		One layer of 15 mm SoundBloc board each side of timber studs at 600mm centres.
2	41 dB $R_w$		Two layers of board each side of timber studs at 600mm centres.
3	40 dB $R_w$		Two layers of 12.5mm Gyproc FireLine or Two layers of 15mm Gyproc WallBoard. Timber joists with suitable timber noggings between joists to support board edges

## Part E Requirements Regulation E3 – Corridors

The regulation (E3) states:

*“The common internal parts of buildings which contain flats or rooms for residential purposes shall be designed and constructed in such a way as to prevent more reverberation around the common parts than is reasonable”*

### **Method A**

Corridors and hallways should be provided with acoustically absorptive ceiling tiles to ISO 11654, Class C or better, to an area equal to the floor area. It is also permissible to install an area of Class D tiles equal to 100% of the above area.

### **Method B**

This comprises the calculation of total acoustic absorption within the common spaces, which allows for the acoustic absorption from carpeted floors and other similar acoustically absorptive surfaces.

# Contents – Part E



## Part E Requirements

Regulation E1 – Protection against sound from other parts of the building and adjoining buildings.

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## Pre Completion Testing



## Part E Pre-Completion Testing

10% of all same dwelling types are required to be tested

Typically a standard set of 6 tests per 10% is undertaken

- An airborne sound insulation test across a partition adjoining a living room.
- An airborne sound insulation test across a partition adjoining a bedroom.
- An airborne and impact test, across a flooring system above a living room.
- An airborne and impact test, across a flooring system above a bedroom.

**Section 1.8 – “Testing should not be carried out between living spaces, corridors, stairwells or hallways.”**

## Part E Pre-Completion Testing and Standards

The sound insulation testing was carried out in accordance with the procedure described in Approved Document E and the following standards were used to undertake testing and rating of test results.

**BS 140 Part 4:1980 (1993):** Field measurements of airborne sound insulation between rooms.

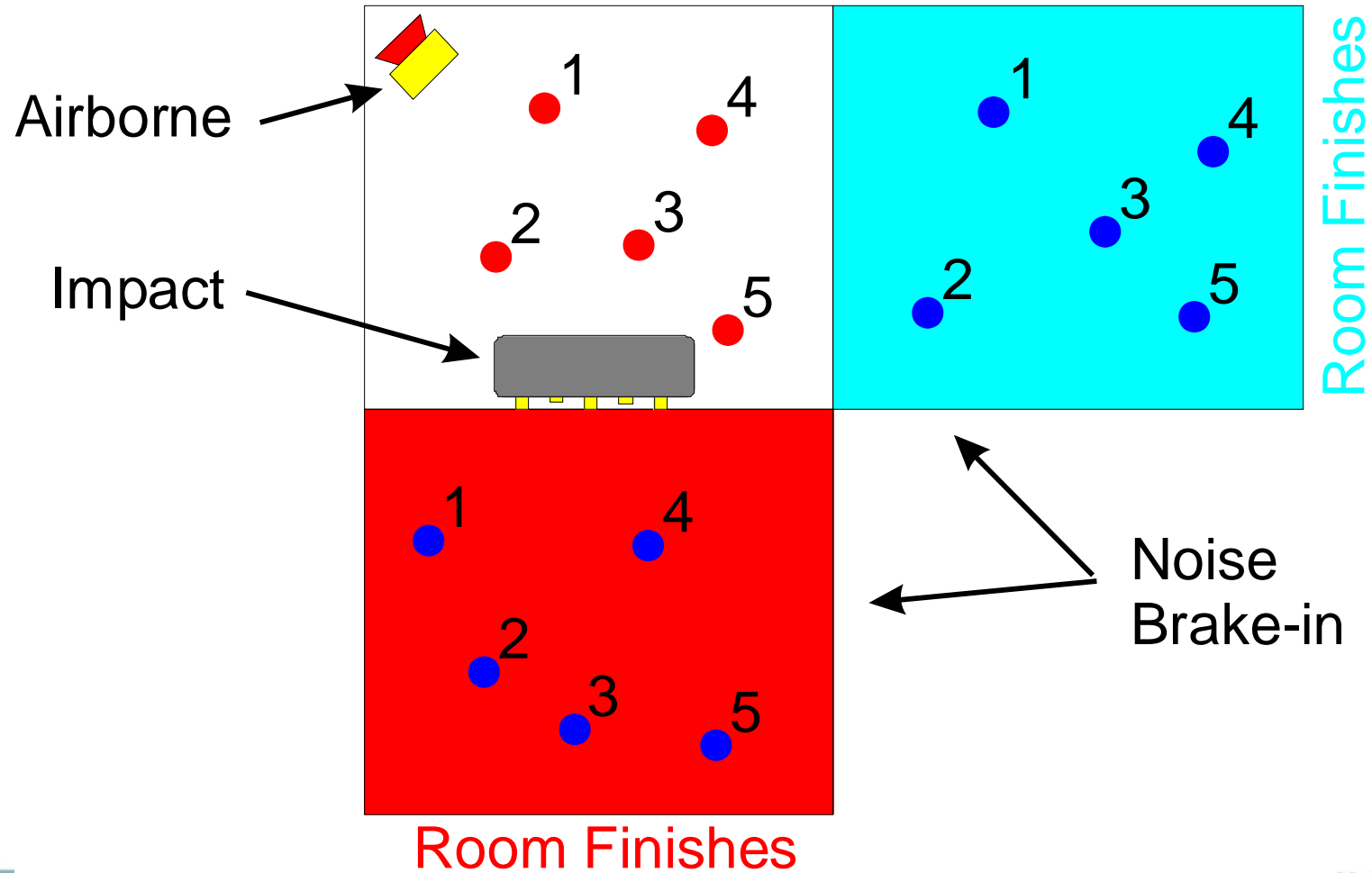
**BS 140 Part 7:1980 (1993):** Field measurements of impact sound insulation of floors.

The rated sound insulation of separating partitions was carried out to the following standards as required by the regulations.

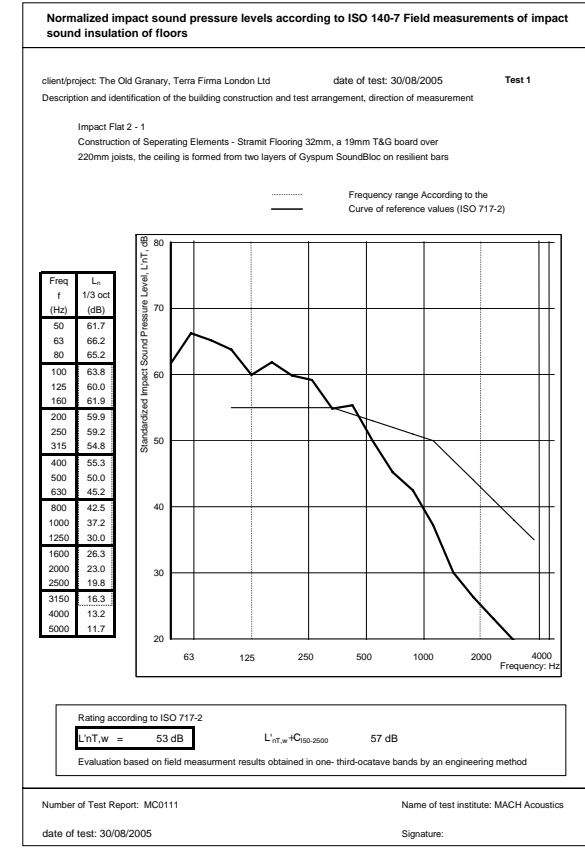
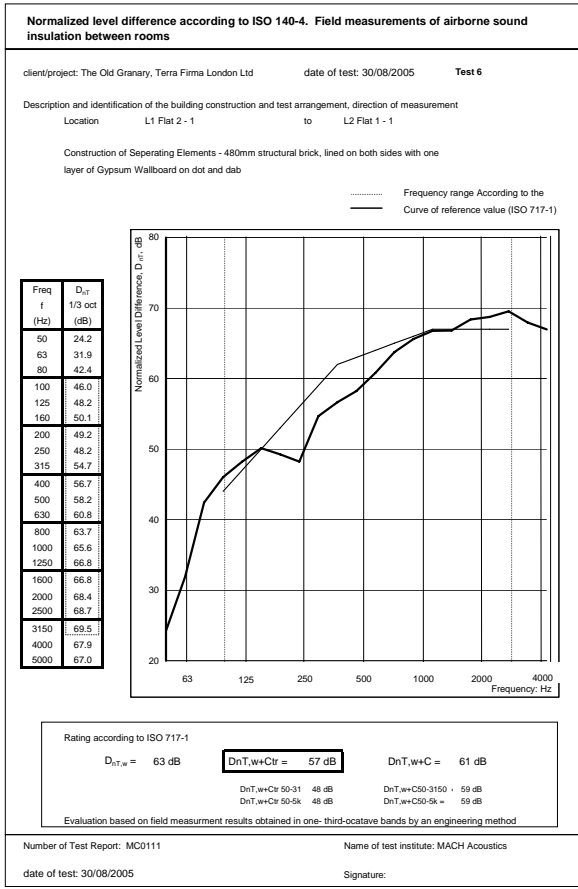
**BS 717: Part 1: 1984 (1993):** Method for rating the airborne sound insulation in buildings and of building elements

**BS 717: Part 2: 1984 (1993):** Method for rating the impact sound insulation

# Part E Pre-Completion Testing – Test Method



# Part E Pre-Completion Testing - Results



MACH Acoustics Ltd  
 11 Eimgrove Rd  
 Bristol  
 BS6 6AH

Zé Nunes  
 Mobile 07730590904  
 Email ze@machacoustics.com  
 Fax 0117 9244008

MACH Acoustics Ltd  
 11 Eimgrove Rd  
 Bristol  
 BS6 6AH

Zé Nunes  
 Mobile 07730590904  
 Email ze@machacoustics.com  
 Fax 0117 9244008

Presented by Ze Nunes of MACH Acoustics  
 25 Bishop Road, Bishopston, Bristol, BS7 8LS  
 ze@machacoustics.com mobile 07730590904

