

REVIEW OF AIRBORNE SOUND INSULATION TESTS AT ST DOOLAGH'S, MALAHIDE ROAD, BALGRIFFIN



Construction Details

The following details the wall constructions tested and commented on in this document:

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Type	Construction
A	215 blockwork wall with sand cement plaster & skim finish on both sides
B	215 blockwork, sand cement plaster, 37.5mm o/a insulated plasterboard (25 PIR insul + 12.5 board), drilled & pegged to wall, no cavity, skim finish on both sides.

Measurement Procedure

The airborne sound insulation measurements were carried out to BS EN ISO 16283 – 1: 2014 "Acoustics – Field measurements of sound insulation in buildings and of building elements, Part 1: airborne sound insulation".

Results

The results obtained from airborne sound insulation tests conducted are detailed below.

Wall Type	Statistic	dB ($D_{nT,w}$)
A	Average	60
B	Range	61 – 62

Discussion

The following statements are taken from Part E of the Second Schedule to the Building Regulations (1997).

A wall which separates a dwelling from another dwelling ... shall have reasonable resistance to airborne sound.

In the absence of any other form of objective guidance, the following values are often employed as a basis for assessing sound insulation performance.

Type of performance	Individual values	Mean values	
		Test in at least four pairs of rooms	Test in at least eight pairs of rooms
Airborne sound	49 (walls)	53 (walls)	52 (walls)

Wall Type A The airborne sound insulation tests achieved an average result of **60dB** ($D_{nT,w}$). This level is some **7dB** above the guideline value of **53dB** ($D_{nT,w}$). This is the upper range of equivalent performance that would be typically expected from a party wall between concrete constructed semi-detached or terraced residential units and is some 40% quieter than noise passing through a 53dB ($D_{nT,w}$) wall

Wall Type B The airborne sound insulation test results were in the range **61 to 62dB** ($D_{nT,w}$). This levels are some **8 to 9dB** above the guideline value of **53dB** ($D_{nT,w}$). This is the upper range of equivalent performance that would be typically expected from a party wall between concrete constructed semi-detached or terraced residential units and is some 40% quieter than noise passing through a 53dB ($D_{nT,w}$) wall.

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