

## Technical Report

C/23410/T01

## Project

The Laboratory Measurement of Sound  
Insulation of Various Windows and a Door-  
Set

## Prepared for

Westbury Windows and Joinery Ltd

## By

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## Quality Assurance

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## Summary

Tests have been done in SRL's Laboratory at Holbrook House, Sudbury, Suffolk, to determine the sound reduction index of various insulation materials in accordance with BS EN ISO 10140-2:2010.

From these measurements, the required results have been derived and are presented in both tabular and graphic form in Data Sheets 1 to 5.

The results are given in 1/3rd octave bands over the frequency range 50Hz to 10kHz, which is beyond that required by the test standard. Measurements outside the standard frequency range are not UKAS accredited.



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## 1.0 Details of Measurements

### 1.1 Location

Sound Research Laboratories  
 Holbrook House  
 Little Waldingfield  
 Sudbury  
 Suffolk  
 CO10 0TF

### 1.2 Test Dates

1 and 2 February 2017

### 1.3 Tester

Allen Smalls of SRL Technical Services Limited

### 1.4 Instrumentation and Apparatus Used

Make	Description	Type
E D I	Microphone Multiplexer Microphone Power Supply Unit	
Norwegian Electronics	Real Time Analyser	830
	Rotating Microphone Boom	231

Brüel & Kjaer	Windshields	UA0237
	Pre Amplifiers	2669C
	Microphone Calibrator	4231
	Omnipower Sound Source	4296
Larson Davis	12mm Condenser Microphone	2560, 377A60
SRL	Loudspeakers	100w
Oregon Scientific	Temperature & Humidity & Probe	THGR810
TOA	Graphic Equalizer	E-1231
QSC Audio	Power Amplifier	RMX 1450

## 1.5 References

BS EN ISO 717-1:2013	Rating of sound insulation in buildings and of building elements. Airborne Sound Insulation.
BS EN ISO 10140-2:2010	Laboratory measurement of sound insulation for building elements – Part 2: Measurement of airborne sound insulation.

## 2.0 Description of Test

### 2.1 Description of Sample

Various windows & a French door. See Drawings and Data sheets for more details.

Sampling plan: Enough for test

Sample condition: New

Details supplied by: Westbury Windows and Joinery Ltd

Sample installed by: Westbury Windows and Joinery Ltd

### 2.2 Sample Delivery date

30 January 2017

### 2.3 Test Procedures

The sample was mounted/located and tested in accordance with the relevant standard. The method and procedure is described in Appendix A. The measurement uncertainty is given in Appendix B.

### 3.0 Results

The results of the measurements and subsequent analysis are given in Data Sheets 1 to 5 and summarised below.

Results relate only to the items tested.

SRL Test No.	Description in Brief	R <sub>w</sub> (C;C <sub>tr</sub> )
2	Westbury Casement window. 6mm toughened – 14mm spacer – 8.8mm Laminate	38 (-1;-4)
5	Westbury Sliding box sash with weight. 6mm toughened – 14mm spacer – 8.8mm Laminate	35 (-1;-2)
6	Westbury Sliding box sash with weights. 6mm toughened – 16mm spacer – 6.8mm Laminate	33 (-1;-2)
8	Westbury Solid frame spring balance sliding sash. 6mm toughened – 14mm spacer – 8.8mm Laminate	36 (-1;-3)
9	Westbury French door. 6mm toughened – 14mm spacer – 8.8mm laminate	38 (-1;-4)