

Tested Site Address

108-110 Elm Grove

Hayling Island

PO11 9EN

Sound Insulation Test

Approved Document E: 2003

(2004, 2010, 2013 and 2015 Amendments)

Test Date

6th June 2025



Building Regulations Consultants Ltd

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West End

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AIRBORNE & IMPACT SOUND INSULATION TESTS

THIS REPORT AND ASSOCIATED ATTACHED FIGURES MAY NOT BE REPRODUCED
OTHER THAN IN FULL AND WITH PRIOR WRITTEN APPROVAL OF THE ISSUING LABORATORY

Client

BRC Ltd
33 Holly Gardens
West End
Southampton
Hants, SO30 3RU



4035

Site Address

108 – 110 Elm Grove
Hayling Island
PO11 9EN

Development Status

The site is a development of purpose built dwelling-houses and flats table 0.1a of Building Regulations Approved Document E 2003 'Resistance to the Passage of Sound'

Introduction

Sound Advice Acoustics Ltd has been instructed to assess the sound insulation values between the properties within this recently completed site. The development's sound insulation tests are to be carried out and rated in accordance with following British Standards:-

- BS EN ISO 140-4:1998 – 'Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements. Part 4 'Field Measurement of Airborne Sound Insulation Between Rooms'
- BS EN ISO 140-7:1998 – 'Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements. Part 7 'Field Measurement of Impact Sound Insulation of Floors.
- BS EN ISO 717-1:1997 – 'Acoustics - 'Rating of Sound Insulation in Buildings and of Building Elements: Part 1. Airborne Sound Insulation'
- BS EN ISO 717-2:1997 – 'Acoustics - 'Rating of Sound Insulation in Buildings and of Building Elements: Part 2. Impact Sound Insulation'.

These results are then assessed in accordance with the Building Regulations Approved Document E 2003 'Resistance to the Passage of Sound' in order to indicate compliance. The attached data sheets (figures 1 – 6 inclusive) give details as to the individual performance of each of the elements tested between the properties and should be read in conjunction with this report. Opinions and interpretations contained in this report are clearly marked (by the use blue italic text) and are outside the scope of the organisation's scope of accreditation. Corrections to a report are highlighted in Red. The results contained within this report apply to the sample as received.

Criteria

For purpose built dwellings or dwellings formed by material change of use, the Building Regulations Approved Document E 2003 'Resistance to the Passage of Sound' requires separating structures to adhere to the following requirements as detailed in table 1a of the below document.

Table 0.1a: Dwelling-houses and flats, performance standards for separating walls, separating floors, and stairs that have a separating function

	Airborne Sound insulation $D_{nT_w} + C_{tr}$ dB (Minimum values)	Impact Sound Insulation L'_{nT_w} dB (Maximum values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and Stairs	45	62
Dwelling-houses and flats Formed by material change of use		
Walls	43	-
Floors and Stairs	43	64

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REPORT COMPILED BY

Mrs S Grist
Quality Manager



Executive Summary

The following tables illustrate the summary of the achieved results carried out by Mark Grist / David Stephens / Brian Scrivener_(MIOA)

AIRBORNE TEST - WALL			REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
TEST NO.	FROM	TO			
10107 / 2	Flat 4 – Living Room	Flat 3 – Living Room	45	54	PASS

AIRBORNE TEST - FLOOR			REQUIRED MIN $D_{nT,w} + C_{tr}$ dB	ACHIEVED $D_{nT,w} + C_{tr}$ dB	RESULT
TEST NO.	FROM	TO			
10107 / 1	Commercial Unit	Flat 2 – Bedroom	45	51	PASS
10107 / 3	Flat 4 – Living Room	Flat 2 – Living Room	45	53	PASS
10107 / 4	Flat 4 – Bedroom	Flat 2 – Bedroom	45	51	PASS

IMPACT TEST - FLOOR			REQUIRED MAX $L'_{nT,w}$ dB	ACHIEVED $L'_{nT,w}$ dB	RESULT
TEST NO.	FROM	TO			
10107 / 5	Flat 4 – living Room	Flat 2 – Living Room	62	49	PASS
10107 / 6	Flat 4 – Bedroom	Flat 2 – Bedroom	62	49	PASS

Construction Types

FLOOR - Structure Unknown

WALL - Structure Unknown

These construction details have been supplied by the client and therefore Sound Advice Acoustics Ltd accepts no responsibility for their accuracy.

Sound Insulation Test Procedure

Sound insulation tests carried out at the above site were conducted in accordance with Sound Advice Acoustics Ltd technical test procedure SA.SI.803. A full copy of this document is available upon request. The procedures stated in Annex B of Building Regulations Approved Document E 2003 'Resistance to the Passage of Sound' have been followed.

Equipment

All the following equipment was calibrated by a UKAS accredited laboratory in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service (UKAS) on the following dates. Calibration schedules are implemented within Sound Advice Acoustics Ltd in accordance with UKAS directive LAB 23.

Description	Make	Type	Serial No.	Calibration Intervals	Uncertainty	Next Due Calibration
Integrated Sound Level Meter	Norsonic	118	28191	2 YEARS	0.0 dB	16.05.2027
Integrated Sound Level Meter (Filters)	Norsonic	118	28191	2 YEARS	2.0 dB	16.05.2027
Integrated Sound Level Meter (RT 60sec)	Norsonic	118	28191	2 YEARS	0.2 dB	16.05.2027
12.5mm Microphone (with windshield)	GRAS	40AF	73337	2 YEARS	0.0 dB	16.05.2027
Microphone Pre – Amplifier	Norsonic	1206	27587	2 YEARS	0.0 dB	16.05.2027
Calibrator	Norsonic	1251	31963	1 YEAR	0.12 dB	16.05.2026
Tapping Machine	Norsonic	211A	29722	2 YEARS	Impact Rate 0.25 m/s Hammer Mass (mounted) 0.79 g Hammer Mass (de-mounted) 0.19 g Hammer Diameter 0.03 mm Radius of Curvature 11.0 mm Hammer Impact Velocity 0.01 m/s Fall Height Measurement 0.10 mm Hammer Angle of Fall 0.07 degrees Overall uncertainty 1.5 dB	11.11.2026
The above equipment was calibrated using a sound pressure level of 114.0 dB at an octave band centre frequency of 1000Hz with reference to $2 \times 10^{-5} \text{ Nm}^{-2}$ before and after the tests and the equipment set to have no inaccuracy greater than 0.5 dB.						

Full UKAS calibration data sheets and certificates are available upon request.

Customer Feedback

Sound Advice Acoustics Ltd welcomes any feedback from our clients. Please email info@soundadviceacoustics.co.uk with any comments.

Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

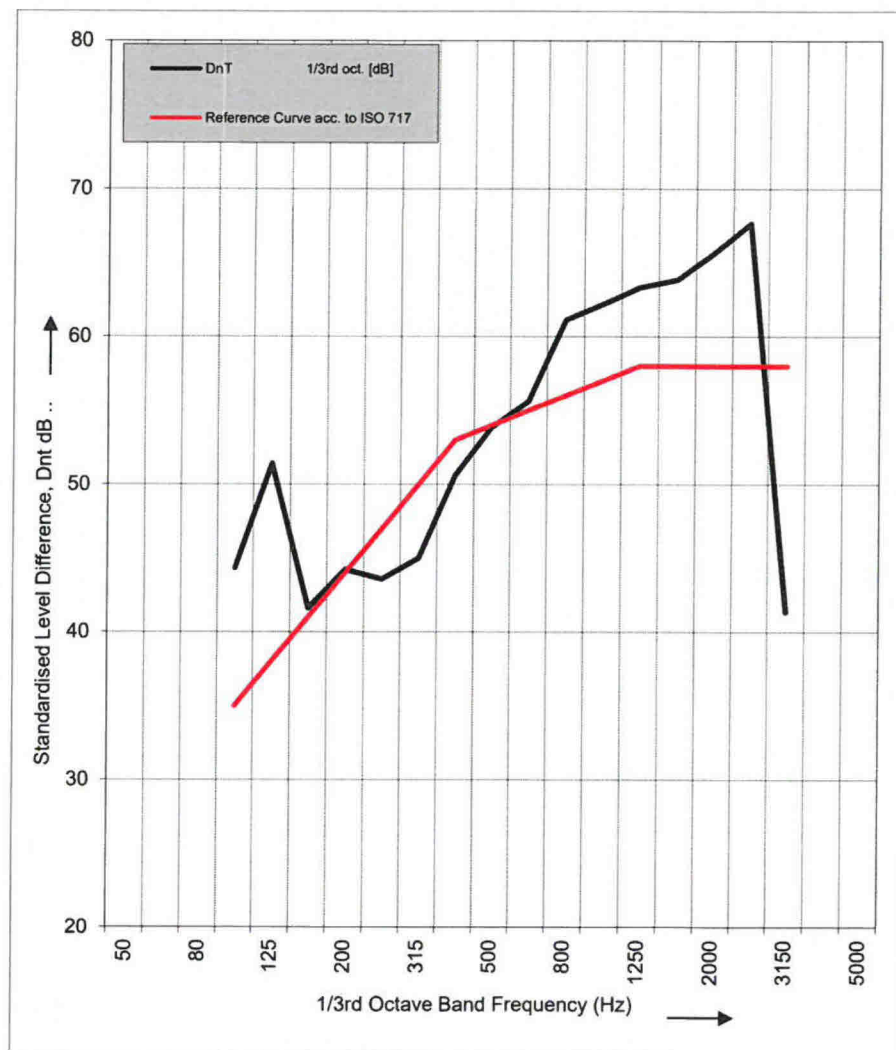
Figure:	1
Test No.:	10107 / 1

Test Location:	From: Commerical Unit
	To: Flat 2 - Bedroom

Test Dated	06.06.2025
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Source Room Volume (Approx) 314 m³
Reciever Room Volume (Approx) 28 m³

Frequency [Hz]	D _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	44.3 B
125	51.4 B
160	41.6 B
200	44.2 B
250	43.6 B
315	45.0 B
400	50.6 B
500	53.9 B
630	55.6 B
800	61.1 B <6
1000	62.2 B <6
1250	63.3 B <6
1600	63.8 B <6
2000	65.7 B <6
2500	67.6 B <6
3150	41.4 B
4000	
5000	



Rating According to ISO 717 1997 Part 1. Airborne Sound Insulation

D_{nT,w} (C, C_{tr}) 54 (-5 ; -3) dB

D_{nT,w} + C_{tr} 51 dB

B = Background Corrected Sample Level
<6 = Limit Of Measurement

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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Quality Manager

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Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

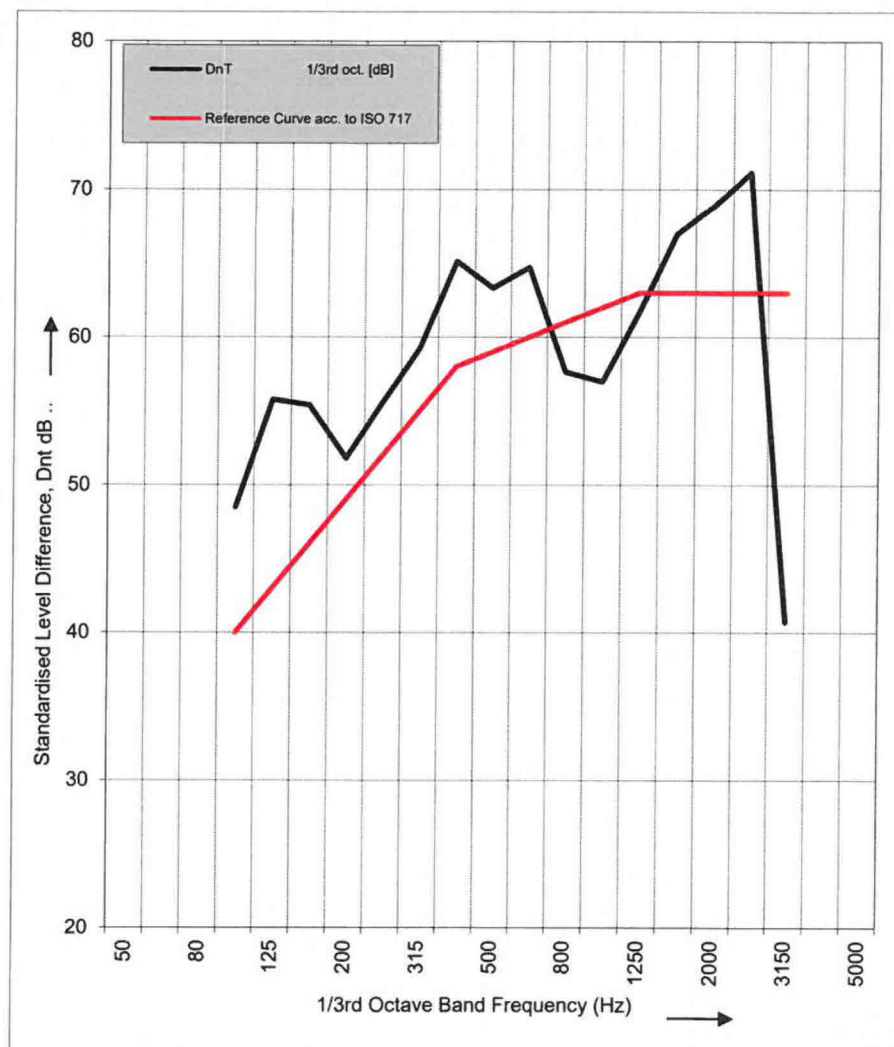
Figure:	2
Test No.:	10107 / 2

Test Location:	From: Flat 4 - Living Room
	To: Flat 3 - Living Room

Test Dated	06.06.2025
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Source Room Volume (Approx) 63 m³
Receiver Room Volume (Approx) 63 m³

Frequency [Hz]	D _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	48.5 B <6
125	55.8 B <6
160	55.4 B <6
200	51.8 B <6
250	55.6 B <6
315	59.2 B <6
400	65.1 B <6
500	63.3 B <6
630	64.7 B <6
800	57.6 B <6
1000	57.0 B <6
1250	61.7 B <6
1600	67.0 B <6
2000	68.9 B <6
2500	71.1 B <6
3150	40.7 B
4000	
5000	



Rating According to ISO 717 1997 Part 1. Airborne Sound Insulation

D_{nT,w} (C, C_{tr}) 59 (-10 ; -5) dB

B = Background Corrected Sample Level
<6 = Limit Of Measurement

D_{nT,w} + C_{tr} 54 dB

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

Figure:	3
Test No.:	10107 / 3

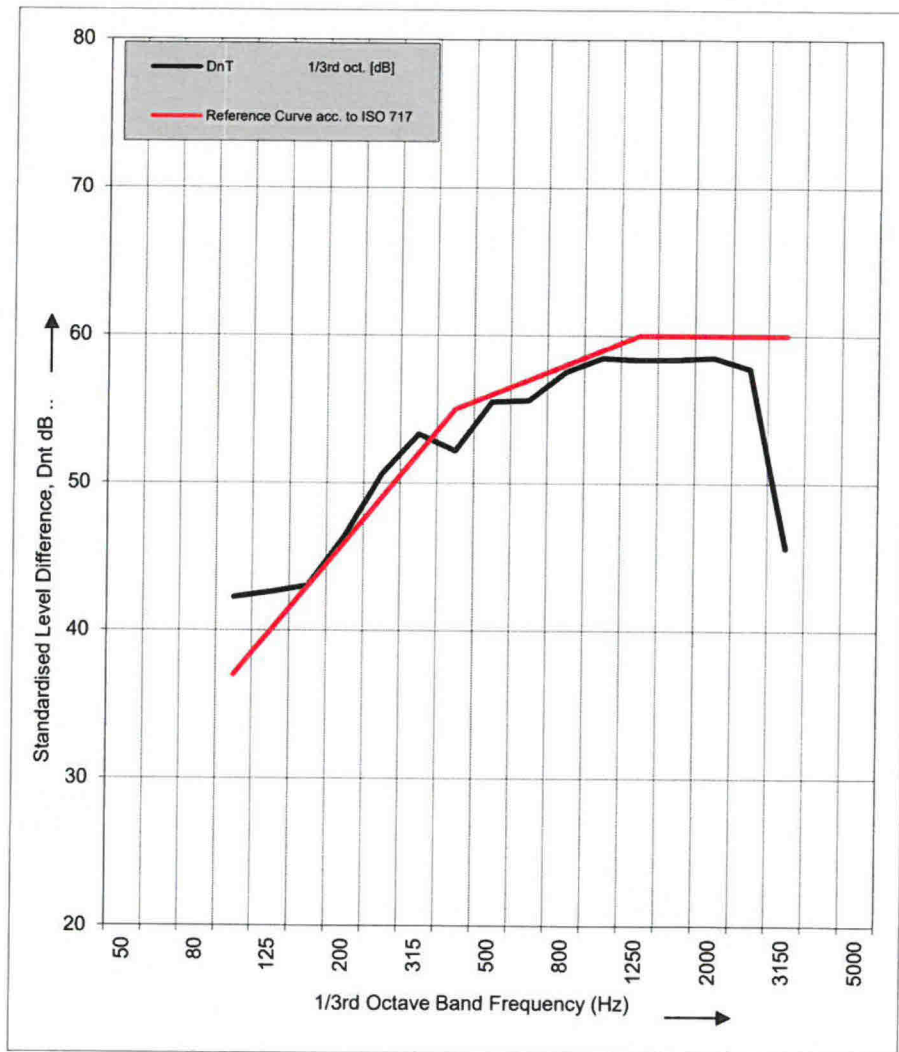
Test Location:	From: Flat 4 - Living Room
	To: Flat 2 - Living Room

Test Dated	06.06.2025
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Source Room Volume (Approx) 63 m³

Receiver Room Volume (Approx) 63 m³

Frequency [Hz]	D _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	42.2 B
125	42.6 B
160	43.0 B
200	46.4 B
250	50.6 B
315	53.3 B
400	52.2 B
500	55.5 B
630	55.6 B
800	57.5 B <6
1000	58.5 B <6
1250	58.4 B
1600	58.4 B
2000	58.5 B
2500	57.8 B
3150	45.6 B
4000	
5000	



Rating According to ISO 717 1997 Part 1. Airborne Sound Insulation

D_{nT,w}(C, C_{tr}) 56 (-4 ; -3) dB

D_{nT,w} + C_{tr} 53 dB

B = Background Corrected Sample Level
<6 = Limit Of Measurement

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

Figure:	4
Test No.:	10107 / 4

Test Location:	From: Flat 4 - Bedroom
	To: Flat 2 - Bedroom

Test Dated	06.06.2025
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Source Room Volume (Approx) 28 m³

Receiver Room Volume (Approx) 28 m³

Frequency [Hz]	D _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	43.6 B <6
125	45.8 B
160	39.9 B
200	44.2 B
250	48.0 B
315	51.4 B
400	56.1 B <6
500	58.5 B <6
630	57.4 B <6
800	58.6 B <6
1000	56.8 B <6
1250	59.1 B <6
1600	60.6 B <6
2000	58.2 B
2500	58.4 B
3150	41.9 B <6
4000	
5000	



Rating According to ISO 717 1997 Part 1. Airborne Sound Insulation

D_{nT,w} (C, C_{tr}) 56 (-6 ; -5) dB

B = Background Corrected Sample Level
<6 = Limit Of Measurement

D_{nT,w} + C_{tr} 51 dB

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

Figure:	5
Test No.:	10107 / 5

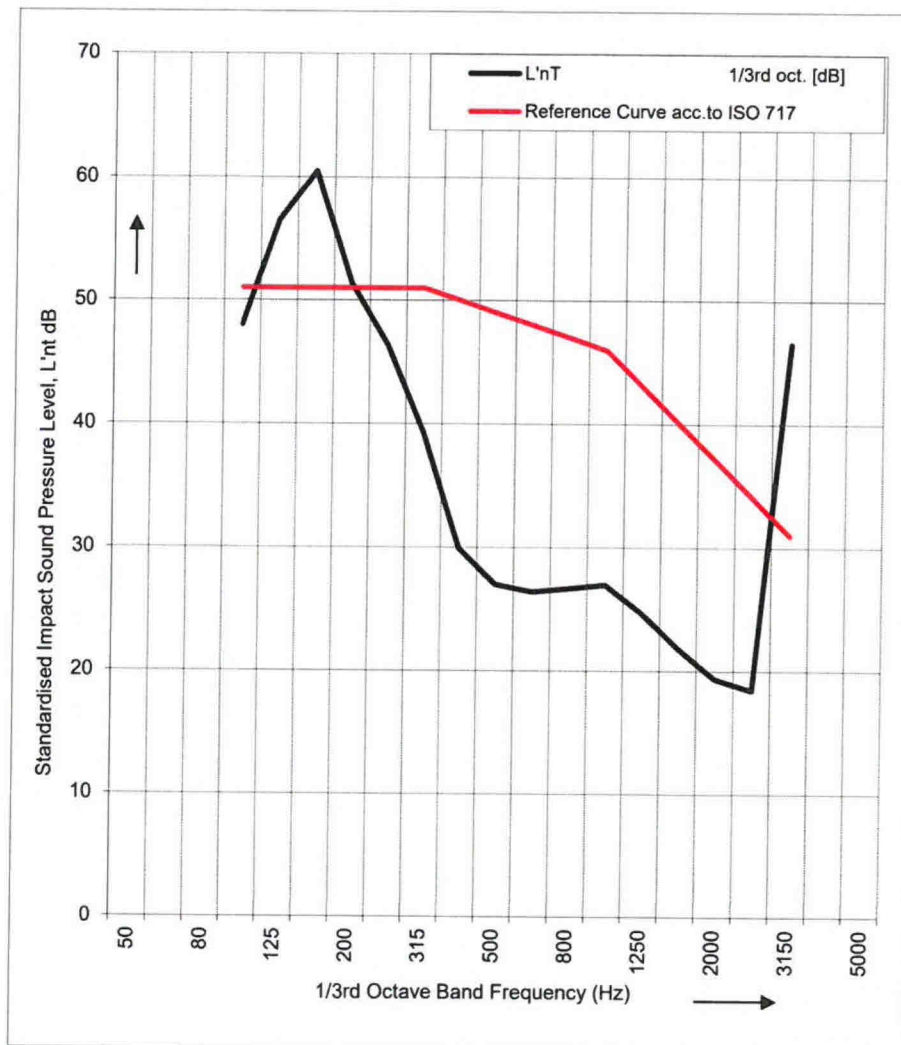
Test Location:	From: Flat 4 - Living Room
	To: Flat 2 - Living Room

Test Dated	06.06.2025
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Source Room Volume (Approx) 63 m³

Receiver Room Volume (Approx) 63 m³

Frequency [Hz]	L _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	48.0
125	56.5
160	60.5
200	51.4
250	46.4
315	39.3
400	29.9
500	27.0
630	26.4
800	26.7
1000	27.0
1250	24.7
1600	21.8
2000	19.3
2500	18.4 B
3150	46.5 B
4000	
5000	



Rating According to ISO 717 1997 Part 2. Impact Sound Insulation

L_{nT,w} (C_i) 49 (-1) dB

B = Background Corrected Sample Level

L_{nT,w} 49 dB

<6 = Limit Of Measurement

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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Please note this data sheet is to be read in conjunction with report SA.SI.106. 10107

Client Details:	BRC
Site Address:	108 - 110 Elm Grove, Hayling Island

Figure:	6
Test No.:	10107 / 6

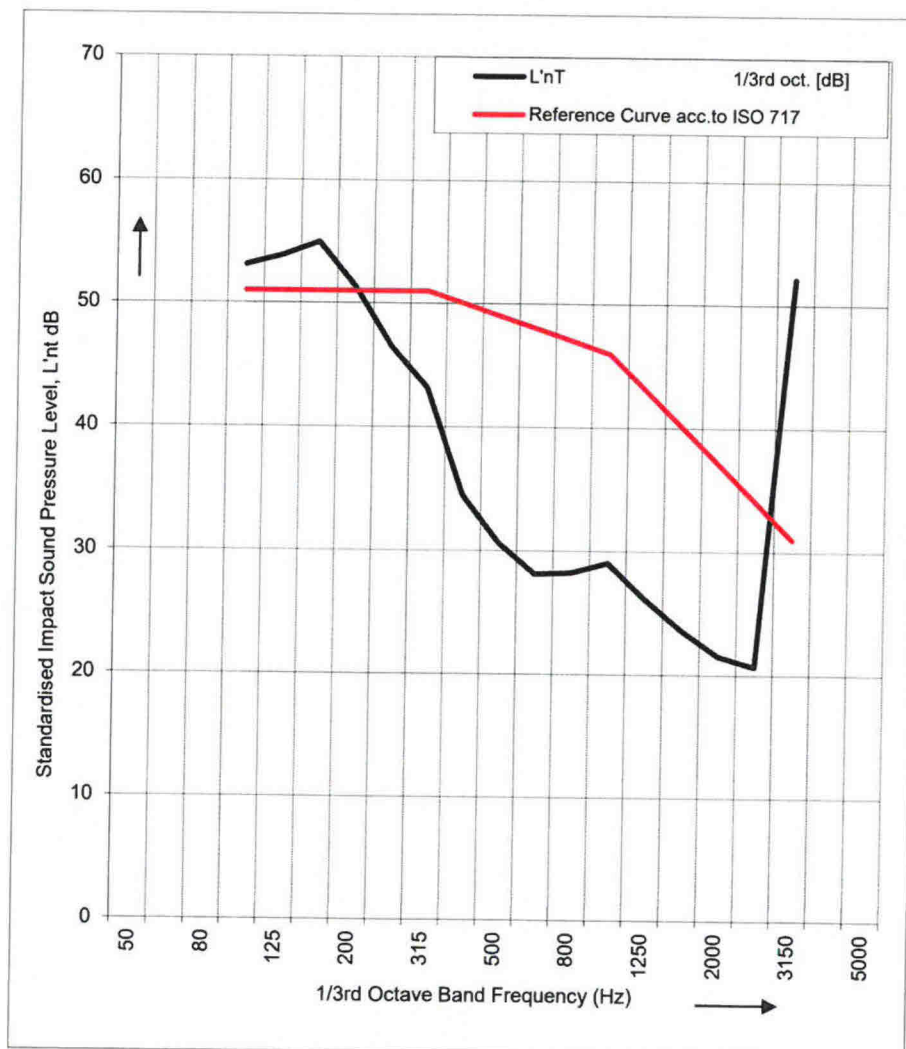
Test Location:	From: Flat 4 - Bedroom
	To: Flat 2 - Bedroom

Test Dated	06.06.2025
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Source Room Volume (Approx) 28 m³

Receiver Room Volume (Approx) 28 m³

Frequency [Hz]	L _{nT} 1/3rd oct. [dB] B <6
50	
63	
80	
100	53.1
125	53.8
160	55.0
200	51.3
250	46.5
315	43.2
400	34.5
500	30.6
630	28.1
800	28.2
1000	29.0
1250	26.1
1600	23.6
2000	21.5
2500	20.7 B
3150	52.1 B
4000	
5000	



Rating According to ISO 717 1997 Part 2. Impact Sound Insulation

L_{nT,w} (C_I) 49 (-3) dB

B = Background Corrected Sample Level

L_{nT,w} 49 dB

<6 = Limit Of Measurement

Evaluation based on field measurement results obtained in one third octave bands by an engineering method

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