HIGHATE NEWTOWN COMMUNITY CENTRE – BLOCK A

PART-E SOUND INSULATION TEST REPORT

13/06/2023

Revision	Description	Issued by	Checked By	Issue date
-	Part E Test Results	Chase Bartlett	Ze Nunes	13/06/2023

Signed:  Signed: 

ANC Member Number	179
ANC Task Number	76631
ANC Password	CK1P0N

Client Name	FARRANS
Full Client Address	25 Bertram St, London N19 5DQ
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Test Date	08/06/2023

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Notice to Building Control Officer

Certification of Test Results

ANC operates an online, secure, paperless certification system for sound insulation tests.

The online verification (certification) system means that Building Control Bodies will need to follow the steps below to verify the results quoted in the relevant test report:

1. Go to the ANC secure server at www.theanc.co.uk
2. Navigate to the ADvANCE page which links to the ANC site available for use by BCOs.
3. Enter the following in the spaces provided:

   Task Number: 76631 Task Password: CK1P0N
4. Select role "Building Control Officer" and press "Login"
5. You will then see a summary list of results of all the Tests undertaken to date for this project (Task) as held on the secure primary server and you can print this table for your records.

TABLE OF CONTENTS

1.0 INTRODUCTION

MACH Group was engaged to carry out sound insulation tests on a residential development at HNCC – Block A. This report is an ANC registered report with the unique registration number 76631 (MACH - ANC registered number 179 at the time of testing). Tests were undertaken by Chase Bartlett of MACH on the 08/06/2023. All the procedures in Annex B of the Approved Document E to the building regulations have been followed.

2.0 SOUND INSULATION PERFORMANCE STANDARDS

The adopted standard for 'Approved Document E (ADE) Resistance to the Passage of Sound' of the Building Regulations (England and Wales) came into force in 1st July 2003. This document stipulates minimum requirements for the sound insulation levels within residential dwellings. Approved Document E states:

> *"In the Secretary of State's view, the normal way of satisfying Requirements E1 will be to build separating walls, separating floors and stairs that have a separating function, together with associated flanking construction, in such a way that they achieve the sound insulation values for dwelling-houses and flats set out in Table 1a, and the values for residential purposes set out in Table 1b."*

Table 1a of ADE 2003 summarises the sound insulation performance standards for dwelling houses and flats.

Table 1a: Dwelling-houses and flats – performance standards 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

Table 2.1 – ADE 2003 sound insulation performance standards – Dwelling houses and flats (Table 1a)

3.0 TESTING REQUIREMENTS

Approved Document E states that at least one set of tests per 10 dwellings in a group or sub-group should be undertaken. Where applicable, one set of tests should comprise of 6 individual sound insulation tests (2 airborne wall tests, 2 airborne floor tests and 2 impact floor tests).

The development consists of:

- 32 New-build Apartments.

To satisfy the requirements of Approved Document E, 24 individual sound insulation tests have been carried out (8 airborne wall tests, 8 airborne floor tests and 8 impact floor tests).

4.0 TEST PROCEDURE

The sound insulation testing was carried out in full accordance with the procedure described in BS EN 140 'Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements'. All of the procedures in Annex B of the Approved Document E to the building regulations have been followed. Appendix A provides further information of the test procedure used along with a list of standards followed.

4.1 Deviations from Test Procedure

None.

5.0 MEASUREMENT EQUIPMENT

The following equipment was used to carry out the sound insulation testing.

Name	Serial Number	Certificate Number	Last Calibration
NTI Precision Sound Analyser XL2 TA	A2A-15207-E0	183889	2023-02-02
Cirrus Microphone Capsule MK:224	216493B	183881	2022-11-29
NTI Pre-amplifier MA220	7856	183889	2022-11-29
01dB & Sound Solutions Products Limited TM01 Tapping Machine	TP02058	TCRT20/1500	2022-09-15
QTX Speaker x 2	-	-	
Svantek Acoustic Calibrator SV31	32527	184229	2022-12-05

Table 5.1 - Test equipment used on site.

5.1 Calibration

The Sound Level Meter was calibrated on site, at the start and end of the measurement sequence, to a level of 114.0 dB at 1000Hz. No drift was noted. The operation of the Tapping Machine was also inspected, with no deviations from acceptable function.

6.0 RESULTS

The test procedures in Annex B of ADE have been followed in full. The results of these tests are summarised below:

6.1 Airborne Wall Tests

Test	Source Room	Approx. Volume (m^3)	Receiver Room	Approx. Volume (m^3)	ADE Requirement dB $D_{nT,w}+C_{tr}$	Measured Sound Insulation	Pass / Fail
ABW 1	A1-02-24 Kitchen	100	A1-02-22 Bedroom	50	DnTw + Ctr ≥ 45	66	Pass
ABW 2	A1-02-21 Kitchen	100	A1-02-22 Kitchen	100	DnTw + Ctr ≥ 45	58	Pass
ABW 3	A1-01-14 kitchen	100	A1-01-12 Bedroom	50	DnTw + Ctr ≥ 45	61	Pass
ABW 4	A1-01-12 Kitchen	100	A1-01-11 Kitchen	100	DnTw + Ctr ≥ 45	59	Pass
ABW 5	A2-02_26 Kitchen	100	A2-02_25 Bedroom	50	DnTw + Ctr ≥ 45	58	Pass
ABW 6	A2-02_27 Bedroom	50	A2-02_26 Bedroom	50	DnTw + Ctr ≥ 45	64	Pass
ABW 7	A2-01-16 Kitchen	100	A2-01_15 Bedroom	50	DnTw + Ctr ≥ 45	59	Pass
ABW 8	A2-01_17 Bedroom	50	A2-01-16 Bedroom	50	DnTw + Ctr ≥ 45	61	Pass

Table 6.1 - Results of airborne walls sound insulation testing

6.2 Airborne Floor Tests

Test	Source Room	Approx. Volume (m^3)	Receiver Room	Approx. Volume (m^3)	ADE Requirement dB $D_{nT,w}$ +C_{tr}	Measured Sound Insulation	Pass / Fail
ABF 1	A1-02-24 Kitchen	100	A1-01-14 kitchen	50	DnTw + Ctr ≥ 45	64	Pass
ABF 2	A1-02-22 Bedroom	50	A1-01-12 Bedroom	50	DnTw + Ctr ≥ 45	58	Pass
ABF 3	A1-02-22 Kitchen	100	A1-01-12 Kitchen	100	DnTw + Ctr ≥ 45	57	Pass
ABF 4	A1-02-21 Kitchen	100	A1-01-11 Kitchen	100	DnTw + Ctr ≥ 45	58	Pass
ABF 5	A2-02_26 Kitchen	100	A2-02_16 Kitchen	100	DnTw + Ctr ≥ 45	61	Pass
ABF 6	A2-02_26 Bedroom	50	A2-01-16 Bedroom	50	DnTw + Ctr ≥ 45	58	Pass
ABF 7	A2-02_27 Bedroom	50	A2-01_17 Bedroom	50	DnTw + Ctr ≥ 45	60	Pass
ABF 8	A2-02_25 Bedroom	50	A2-01_15 Bedroom	50	DnTw + Ctr ≥ 45	58	Pass

Table 6.2 - Results of airborne floors sound insulation testing

6.3 Impact Tests

Test	Source Room	Approx. Volume (m^3)	Receiver Room	Approx. Volume (m^3)	ADE Requirement $L'_{nT,w}$	Measured Sound Insulation	Pass / Fail
IP 1	A1-02-24 Kitchen	100	A1-01-14 kitchen	50	LnTw ≤ 62	35	Pass
IP 2	A1-02-21 Kitchen	50	A1-01-11 Kitchen	50	LnTw ≤ 62	36	Pass
IP 3	A1-02-22 Bedroom	100	A1-01-12 Bedroom	100	LnTw ≤ 62	29	Pass
IP 4	A1-02-22 Kitchen	100	A1-01-12 Kitchen	100	LnTw ≤ 62	36	Pass
IP 5	A2-02_26 Kitchen	100	A2-01-16 kitchen	100	LnTw ≤ 62	37	Pass
IP 6	A2-02_26 Bedroom	50	A2-01-16 Bedroom	50	LnTw ≤ 62	29	Pass
IP 7	A2-02_27 Bedroom	50	A2-01_17 Bedroom	50	LnTw ≤ 62	30	Pass
IP 8	A2-02_25 Bedroom	50	A2-01_15 Bedroom	50	LnTw ≤ 62	31	Pass

Table 6.3 - Results of impact sound insulation testing

The tables indicate all tested areas have passed. Standard graphical results are presented in Appendix C.

6.4 Description of Constructions Tested

The party wall construction tested has been identified as 2 x 15mm Sound Shield plus, 60mm (60 I 70) metal 'I' studs, Cavity and Studwork filled with APR 1200, 125mm cavity (min 200mm between inside lining faces), 60mm (60 I 70) metal 'I' studs (Staggered), 12mm Ply within Studs for equipment fixing and 2 x 15mm Gyproc SoundBloc.
Party floors have been identified as MF Ceiling with 12.5mm Gyproc SoundBloc, 195mm clear service zone, 150mm in-situ RC floor slab, 6mm thermal ISO rubber, 25mm Kingspan K103, 75mm screed (SM:97.5 kg/m^2) and 15mm floor finishes.

6.5 Background Noise

Road traffic constitutes the main source of noise on site. Background noise levels are relatively consistent, due to a constant flow of vehicles during the test procedure.

Where receiver room measurements are between 6 and 10 dB above measured background noise levels, a correction has been applied as outlined in ISO 140-4. Where 1/3 octave results are seen to be at the limit of measurement, a correction has also been applied in line with ISO 140-4. All 1/3 octave results at the limit of measurement have been indicated within the test certificates presented in Appendix C. Procedure for correction is outlined in Appendix B.

7.0 CONCLUSION

In order to demonstrate compliance with the requirements of Approved Document E (ADE), sound insulation testing has been undertaken at HNCC. The sound insulation testing was carried out in full accordance with the procedure described in BS EN 140-4 and BS EN 140-7 'Acoustics – Measurement of Sound Insulation in Buildings and of Building Elements'.

8.0 REFERENCES

Approved Document E – The Building Regulations 2010 – Resistance to the passage of sound, July 2003

BS EN ISO 140-4:1998 – Acoustics – Measurement of sound insulation in buildings and of building elements – Part 4: Field measurements of airborne sound insulation between rooms.

BS EN ISO 140-7:1998 – Acoustics – Measurement of sound insulation in buildings and of building elements – Part 4: Field measurements of impact sound insulation between rooms.

BS EN ISO 717-1: 1997: Acoustics - Rating of sound insulation in buildings and of building elements – Airborne sound insulation.

BS EN ISO 717-2: 1997: Acoustics - Rating of sound insulation in buildings and of building elements – Impact sound insulation.

APPENDIX A - TEST PROCEDURE

The sound insulation testing was carried out according to the procedure described in Annex B of Approved Document E and in full accordance with the following standards:

- BS EN ISO 140-4: 1998: Field measurements of airborne sound insulation between rooms.
- BS EN ISO 140-7: 1998: Field measurements of impact sound insulation of floors.

Note: All measurements described below were undertaken using simultaneously recorded 1/3 octave frequency bands between 100 – 3150 Hz.

A.1 Airborne Sound Insulation - Testing Procedure

1. Two sources of white noise were placed in the 'source' room such that a diffuse sound field was created within the room.

2. Spatially averaged noise levels were recorded in the 'source' room using the moving microphone method for a minimum sample period of 45 seconds.

3. Noise levels were recorded in the 'receiver' room at 5 discrete locations, for a minimum sample period of 6 seconds at each location. The following minimum separating distances were used between measurement locations;

    - 0.7 m between microphone positions
    - 0.5 m between any microphone position and the room boundaries
    - 1.0 m between any microphone position and the sound source.

    The 5 samples measured in the 'receiver' room were then logarithmically averaged to give the 'receiver' room noise level. Although a moving microphone has been employed within the 'source' room, discrete locations have been employed in the 'receiver' room in order to avoid measurement of unwanted noise (eg movement of the engineer).

4. Reverberation time measurements were undertaken within the 'receiving' room using an interrupted noise method (loudspeaker). 6 measurements of reverberation time were undertaken at discrete positions within the room. The following minimum separating distances were used between measurement locations;

    - 0.7 m between microphone positions
    - 0.5 m between any microphone position and the room boundaries
    - 1.0 m between any microphone position and the sound source.

5. Finally, background noise measurements were taken at 6 fixed microphone positions in the 'receiver' room, for a sample period of 6 seconds at each position. These were logarithmically averaged to establish the background noise level.

A.2 Impact Sound Insulation - Testing Procedure

1. A single tapping machine was used, positioned at 4 different locations. 6 fixed microphone positions were measured. A minimum duration of 6 seconds was used for each measurement. The average sound pressure level in the receiver room was determined by logarithmically averaging the samples recorded.

   Where the floor construction has an anisotropic construction (with ribs, beams etc.). The hammer connecting line has been orientated at 45° to the direction of the ribs/beams.

   The following minimum separating distances have been used:

   - 1.0 m between microphone and the upper floor being excited by the tapping machine.
   - 0.7 m between microphone positions
   - 0.5 m between any microphone position and the room boundaries

2. Reverberation time measurements were undertaken within the 'receiving' room using an interrupted noise method (loudspeaker). 6 measurements of reverberation time were undertaken at discrete positions within the room. The following minimum separating distances are used between measurement locations;

   - 0.7 m between microphone positions
   - 0.5 m between any microphone position and the room boundaries
   - 1.0 m between any microphone position and the sound source.

3. Finally, background noise measurements were taken at 6 fixed microphone positions in the 'receiver' room, for a sample period of 6 seconds at each position. These were logarithmically averaged to establish the background noise level.

APPENDIX B - ANALYSIS PROCEDURE

The sound insulation testing analysis was carried out according to the procedure described in Annex B of Approved Document E and in full accordance with the following standards:

- BS EN ISO 717-1: 1997: Acoustics - Rating of sound insulation in buildings and of building elements – Airborne sound insulation.
- BS EN ISO 717-2: 1997: Acoustics - Rating of sound insulation in buildings and of building elements – Impact sound insulation.

B.1 Airborne Sound Insulation - Analysis Procedure

If the sound pressure levels in the receiver room are less than 10 dB above the background noise levels (but still greater than 6 dB above the background noise), the following correction will be applied to the measured receiver room levels:

$$L = 10\log\left(10^{L_{sb}/10} - 10^{L_b/10}\right)\ dB$$

Where:

L	= adjusted signal level, dB
L_{sb}	= level of signal and background noise combined, dB
L_b	= background noise level, dB

If the sound pressure levels in the receiver room are 6 dB or less above measured background noise, the correction 1, 3 dB is applied, corresponding to a difference of 6 dB.

Noise levels within the receiver room are then subtracted from the measured noise levels in the source room, thus providing the sound level difference in each 1/3 octave band.

Sound level differences are then corrected for reverberation time in the receiver room to a standardised time of 0.5 seconds, which is considered to be typical of reverberant conditions in most domestic properties.

The following formula describes the above process for each 1/3 octave band centre frequency:

$$D_{nT} = D + 10\log\left(\frac{T}{T_0}\right)$$

Where:

D_{nT}	= Standardised level difference
D	= Measured sound level difference
T	= Measured reverberation time in the 'receive' room
T_0	= Reference reverberation time (0.5 seconds)

Each 1/3 octave band D_{nT} value is then compared against a standard curve, as defined in BS EN ISO 717-1 and shifted in 1 dB increments, until a point is found where the value of deviations on the measured curve from the standard curve is as close to 32 dB as possible, without exceeding this value. The value of the

shifted standard curve in the 500 Hz 1/3 octave band centre frequency band is then taken to be the single figure weighted standardised level difference ($D_{nT,w}$).

A further low frequency correction is then calculated from the same 1/3 octave band values in full accordance with BS EN ISO 717-1 and this value is added to the previous value. This gives an overall standardised level difference of $D_{nT,w}$+ C_{tr} which may then be directly compared against the minimum airborne sound insulation requirements in Approved Document E of the Building Regulations.

B.2 Impact Sound Insulation - Analysis Procedure

If the sound pressure levels in the receiver room are less than 10 dB above the background noise levels (but still greater than 6 dB above the background noise), the following correction will be applied to the measured receiver room levels:

$$L = 10\log\left(10^{L_{sb}/10} - 10^{L_b/10}\right)\ dB$$

Where:

L	= adjusted signal level, dB
L_{sb}	= level of signal and background noise combined, dB
L_b	= background noise level, dB

If the sound pressure levels in the receiver room are 6 dB or less above measured background noise, the correction 1, 3 dB is applied, corresponding to a difference of 6 dB.

The noise levels in the receiver room are then corrected for the reverberation time in the 'receiver' room to a standardised time of 0.5 seconds, which is considered to be typical of reverberant conditions in most domestic properties.

The following formula describes the above process for each 1/3 octave band centre frequency:

$$L'_{nT} = L_i - 10\log\left(\frac{T}{T_0}\right)$$

Where:

L'_{nT}	= Standardised impact sound level
L_i	= Measured impact sound level
T	= Measured reverberation time in the 'receive' room
T_0	= Reference reverberation time (0.5 seconds)

Following the above, each 1/3 octave band L'_{nT} value is compared against a standard curve, as defined in BS EN ISO 717-2 and shifted in 1 dB increments until a point is found where the value of deviations on the measured curve from the standard curve is as close to 32 dB as possible but does not exceed this value. The value of the shifted standard curve in the 500 Hz 1/3 octave band centre frequency band is then taken to be the single figure weighted standardised impact sound pressure level ($L'_{nT,w}$). This figure may be directly compared against the minimum impact sound insulation requirements in Approved Document E of the Building Regulations.

APPENDIX C – TEST CERTIFICATES

Test certificates for all tests conducted are provided below.

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW1

Client: FARRANS

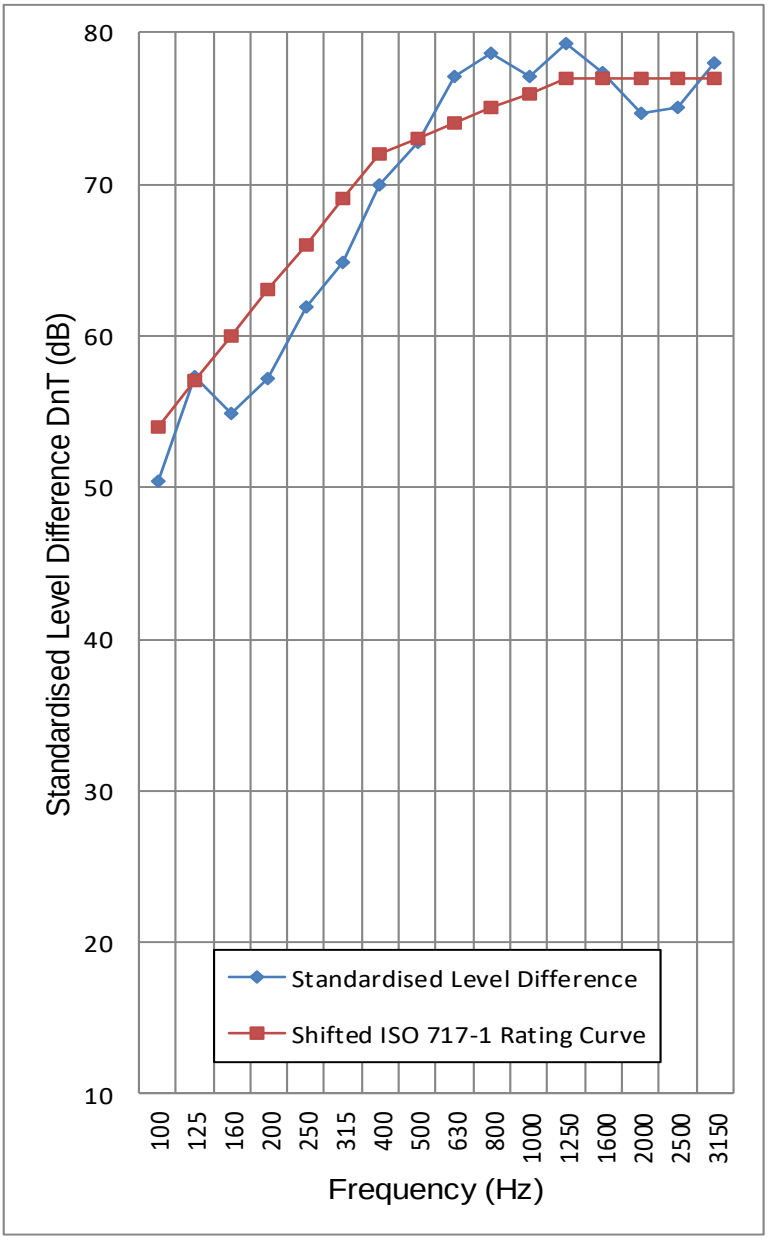
Source Room: A1-02-24 Kitchen Receiver Room: A1-02-22 Bedroom

Volume (m3): 100 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	43	
63	50.6	
80	49.6	
100	50.4	
125	57.3	
160	54.9	
200	57.2	
250	61.9	
315	64.9	
400	70	
500	72.8	
630	77.1	
800	78.6	
1000	77.1	
1250	79.3	
1600	77.4	
2000	74.7	
2500	75.1	
3150	78	>=
4000	80.4	>=
5000	79.1	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 73 dB **DnT,w + Ctr = 66 dB** **Dw = 72 dB**

Ctr = -7 dB

DnT,w + Ctr 50-3150 = 63 dB

DnT,w + C = 71 dB DnT,w + Ctr 50-5k = 63 dB DnT,w + C 50 - 5k = 71 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW2

Client: FARRANS

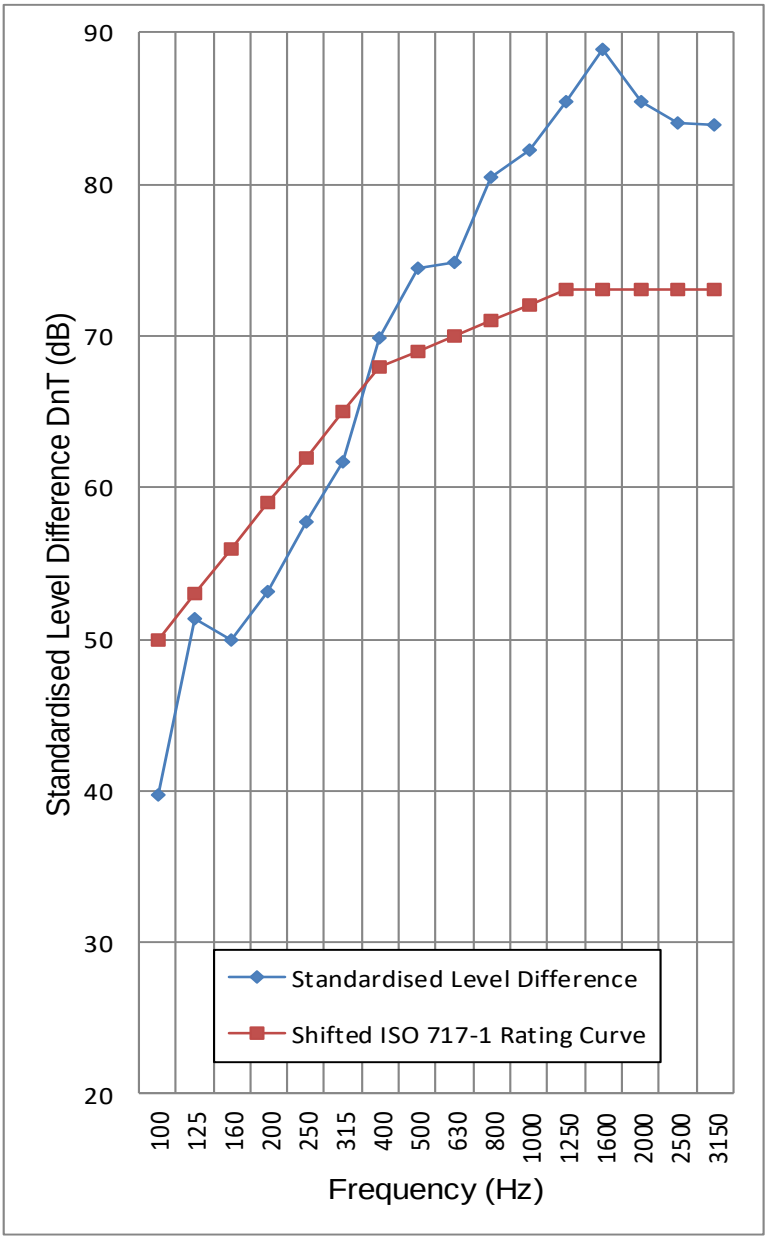
Source Room: A1-02-21Kitchen Receiver Room: A1-02-22 Kitchen

Volume (m3): 100 Volume (m3): 100

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	36.5	
63	34.5	
80	41.1	
100	39.7	
125	51.3	
160	50	
200	53.1	
250	57.7	
315	61.7	
400	69.9	
500	74.4	
630	74.9	
800	80.5	>=
1000	82.3	>=
1250	85.4	>=
1600	88.9	>=
2000	85.5	>=
2500	84	>=
3150	83.9	>=
4000	86	>=
5000	86	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 69 dB **DnT,w + Ctr = 58 dB** **Dw = 66 dB**

Ctr = -11dB

DnT,w + Ctr 50-3150 = 53 dB

DnT,w + C = 65 dB DnT,w + Ctr 50-5k = 53 dB DnT,w + C 50 - 5k = 65 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW3

Client: FARRANS

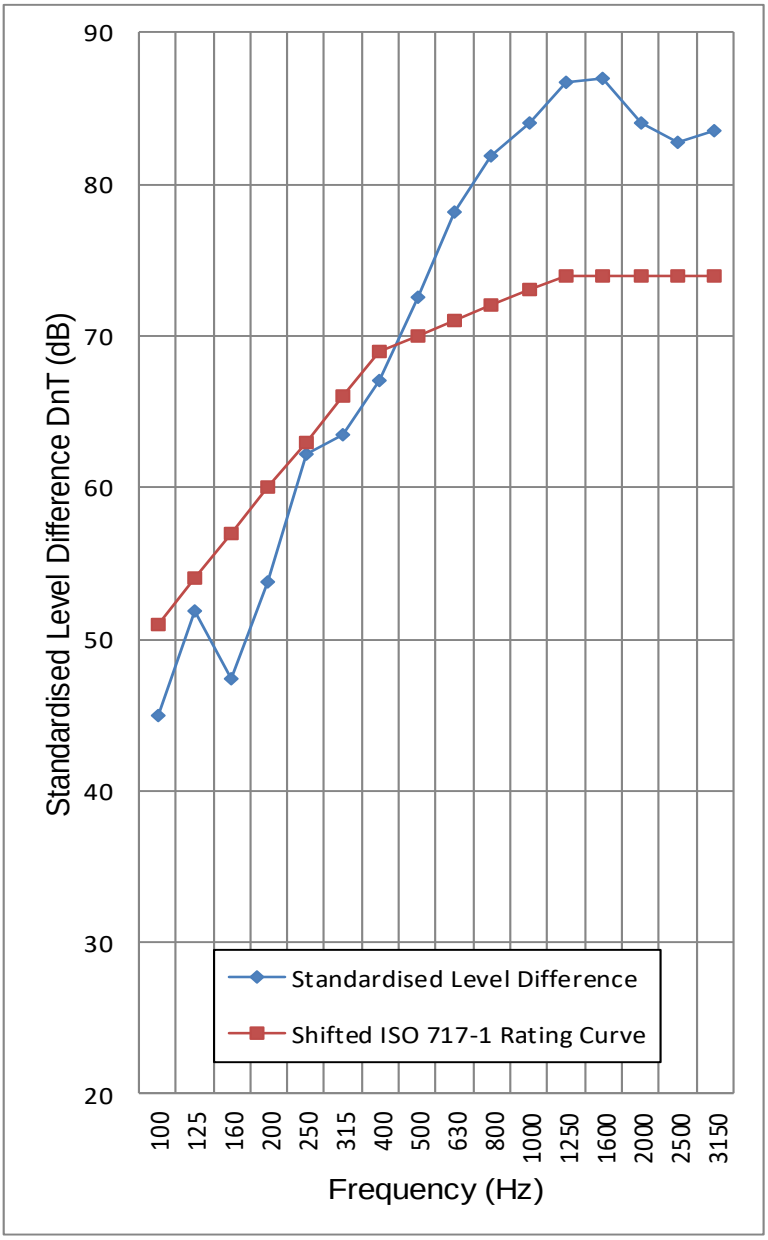
Source Room: A1-01-14 kitchen Receiver Room: A1-01-12 Bedroom

Volume (m3): 100 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	38.4	
63	47.2	
80	49.5	
100	45	
125	51.8	
160	47.4	
200	53.8	
250	62.2	
315	63.5	
400	67	
500	72.5	
630	78.2	
800	81.9	
1000	84.1	>=
1250	86.7	>=
1600	87	>=
2000	84	>=
2500	82.7	>=
3150	83.5	>=
4000	84.6	>=
5000	84.1	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 70 dB **DnT,w + Ctr = 61 dB** **Dw = 69 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 58 dB

DnT,w + C = 67 dB DnT,w + Ctr 50-5k = 58 dB DnT,w + C 50 - 5k = 67 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW4

Client: FARRANS

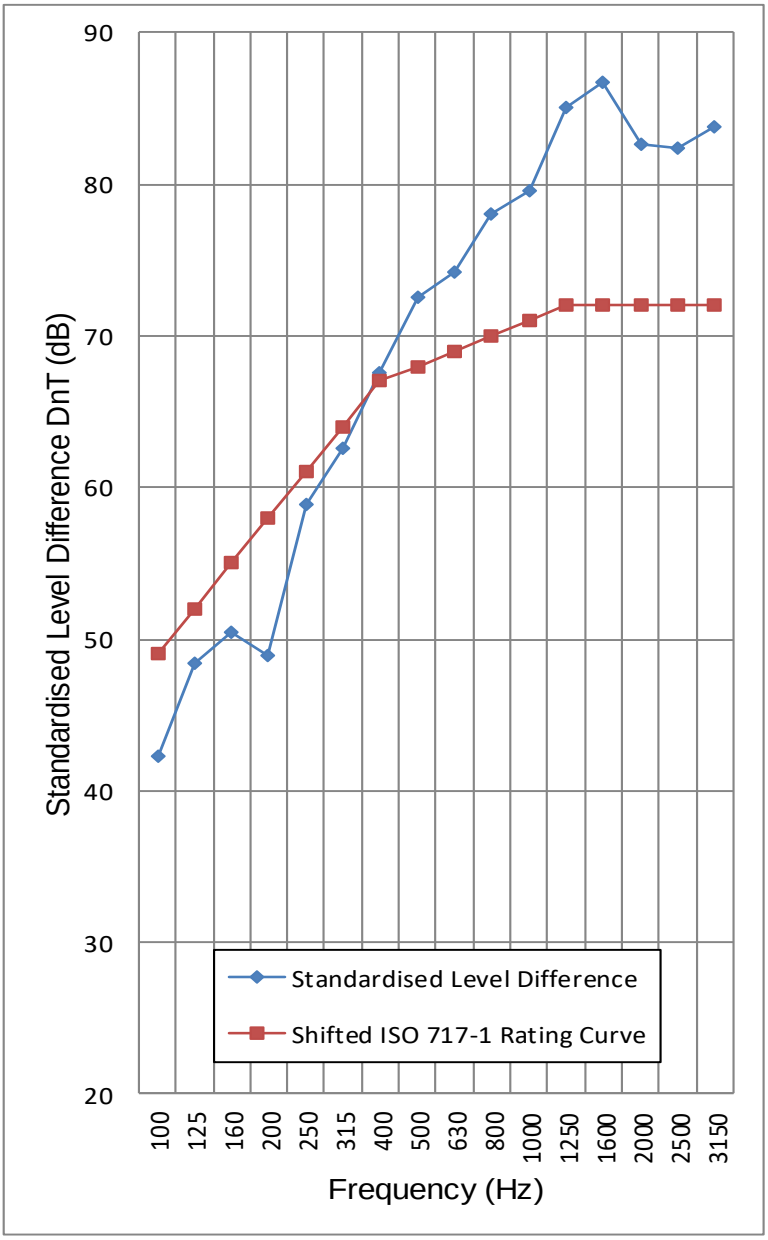
Source Room: A1-01-12 Kitchen Receiver Room: A1-01-11 Kitchen

Volume (m3): 100 Volume (m3): 100

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	34.3	
63	37.4	
80	45	
100	42.3	
125	48.4	
160	50.5	
200	48.9	
250	58.9	
315	62.6	
400	67.5	
500	72.5	>=
630	74.2	>=
800	78	
1000	79.6	>=
1250	85.1	>=
1600	86.7	>=
2000	82.6	>=
2500	82.4	>=
3150	83.8	>=
4000	85.8	>=
5000	84	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 59 dB** **Dw = 66 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 54 dB

DnT,w + C = 65 dB DnT,w + Ctr 50-5k = 54 dB DnT,w + C 50 - 5k = 65 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW5

Client: FARRANS

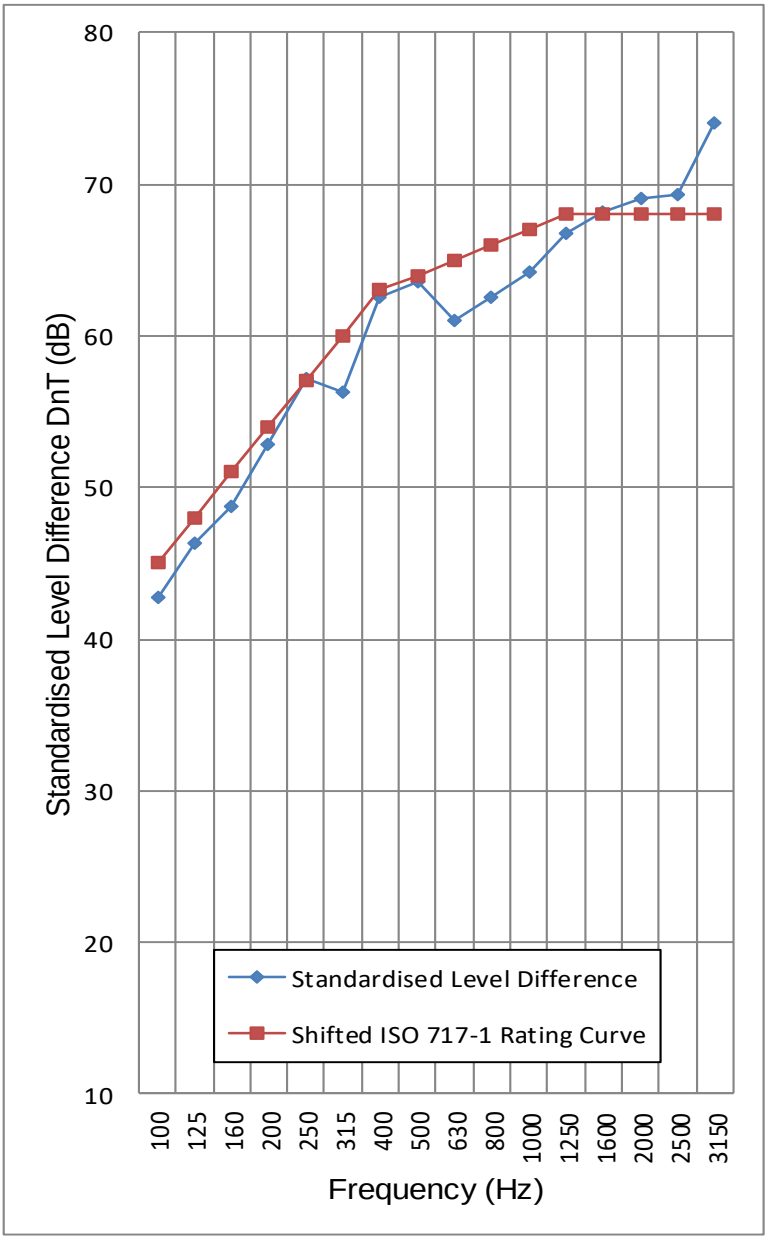
Source Room: A2-02_26 Kitchen Receiver Room: A2-02_25 Bedroom

Volume (m3): 100 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	36.7	>=
63	38	
80	42	
100	42.7	
125	46.3	
160	48.8	
200	52.9	
250	57.2	
315	56.3	
400	62.5	
500	63.6	
630	61	>=
800	62.5	
1000	64.2	>=
1250	66.7	>=
1600	68.1	>=
2000	69.1	>=
2500	69.3	
3150	74.1	>=
4000	76.6	>=
5000	78.4	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 64 dB **DnT,w + Ctr = 58 dB** **Dw = 64 dB**

Ctr = -6 dB

DnT,w + Ctr 50-3150 = 55 dB

DnT,w + C = 63 dB DnT,w + Ctr 50-5k = 55 dB DnT,w + C 50 - 5k = 63 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW6

Client: FARRANS

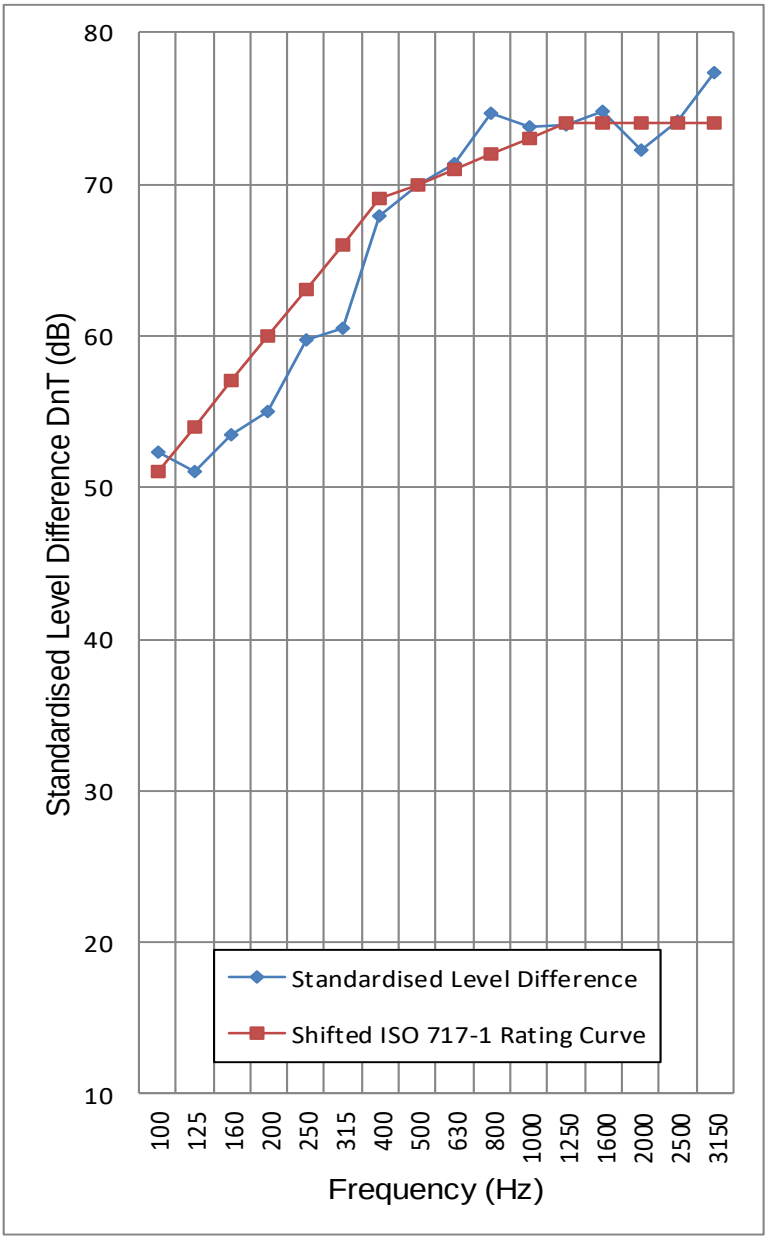
Source Room: A2-02_27 Bedroom Receiver Room: A2-02_26 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	39.6	
63	48.5	
80	40.7	
100	52.3	
125	51.1	
160	53.5	
200	55	
250	59.7	
315	60.5	
400	67.9	
500	70	
630	71.4	
800	74.7	
1000	73.8	
1250	73.9	
1600	74.8	
2000	72.2	
2500	74.2	>=
3150	77.3	>=
4000	79.7	>=
5000	75.7	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 70 dB **DnT,w + Ctr = 64 dB** **Dw = 68 dB**

Ctr = -6 dB

DnT,w + Ctr 50-3150 = 58 dB

DnT,w + C = 68 dB DnT,w + Ctr 50-5k = 58 dB DnT,w + C 50 - 5k = 68 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW7

Client: FARRANS

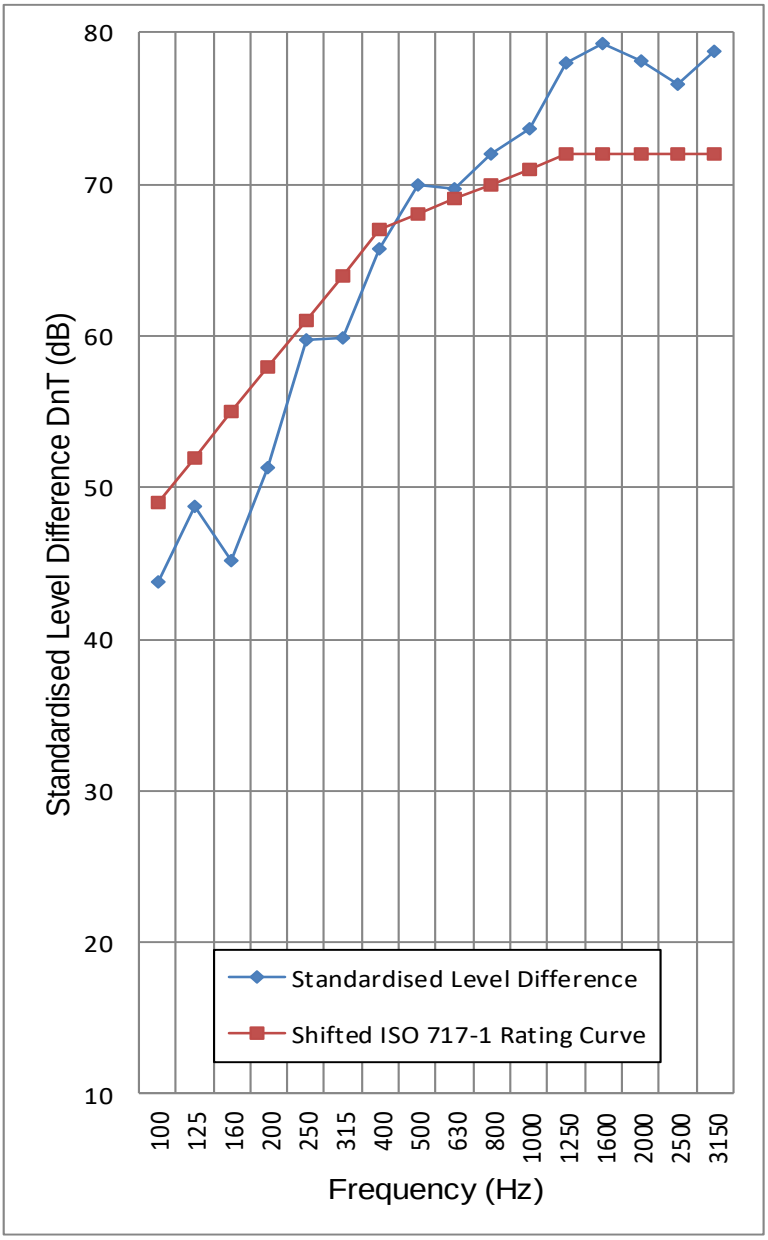
Source Room: A2-01-16 kitchen Receiver Room: A2-01_15 Bedroom

Volume (m3): 100 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	39.1	
63	34	
80	37.8	
100	43.8	
125	48.7	
160	45.2	
200	51.3	
250	59.7	
315	59.8	
400	65.8	
500	70	
630	69.7	
800	72	
1000	73.6	
1250	78	
1600	79.3	
2000	78.1	
2500	76.6	
3150	78.7	>=
4000	81.5	>=
5000	79.6	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 59 dB** **Dw = 66 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 53 dB

DnT,w + C = 64 dB DnT,w + Ctr 50-5k = 53 dB DnT,w + C 50 - 5k = 63 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABW8

Client: FARRANS

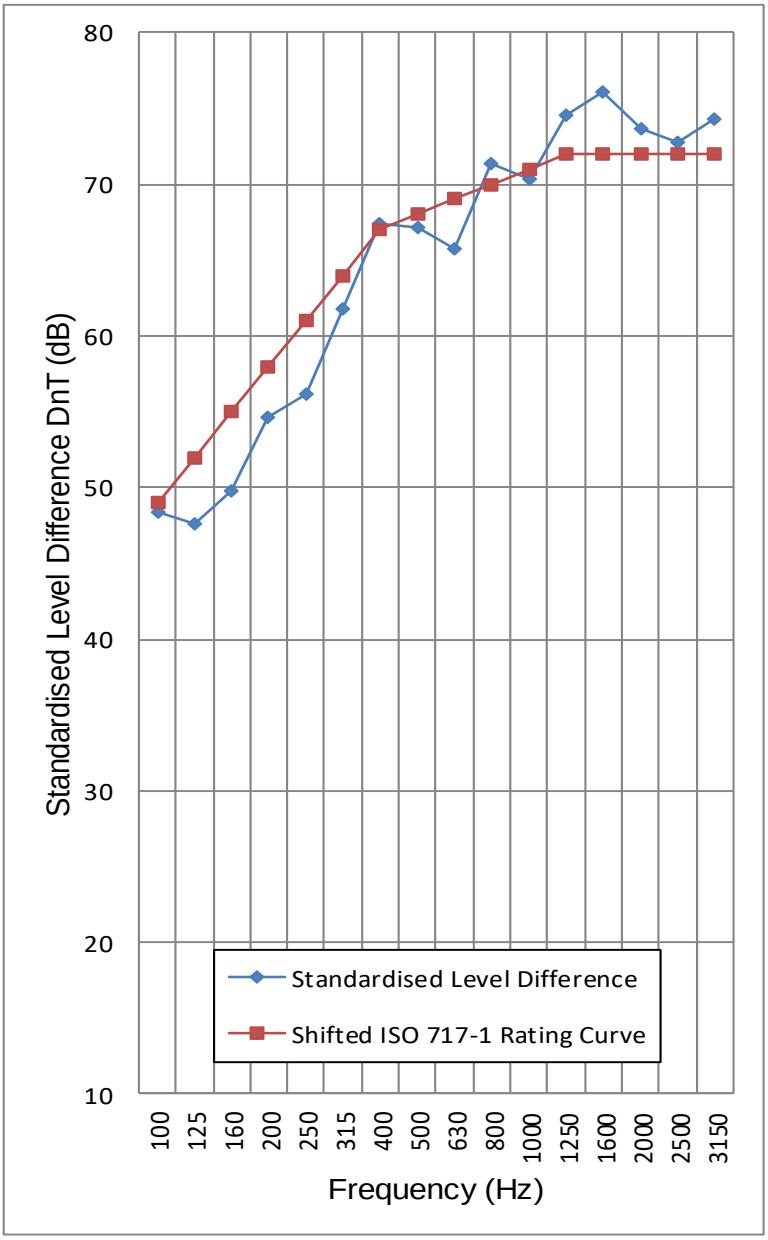
Source Room: A2-01_17 Bedroom Receiver Room: A2-01-16 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: 2 x 15mm Sound Bloc, 60mm studs, 125mm cavity, 60mm metal studs, 12mm Ply and 2 x 15mm Gyproc SoundBloc.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	43.7	
63	45.8	
80	46.8	
100	48.4	
125	47.6	
160	49.8	
200	54.6	
250	56.2	
315	61.8	
400	67.4	
500	67.2	
630	65.8	
800	71.3	
1000	70.3	
1250	74.5	>=
1600	76.1	>=
2000	73.7	>=
2500	72.8	>=
3150	74.3	>=
4000	76.9	>=
5000	76.7	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 61 dB** **Dw = 67 dB**

Ctr = -7 dB

DnT,w + Ctr 50-3150 = 59 dB

DnT,w + C = 66 dB DnT,w + Ctr 50-5k = 59 dB DnT,w + C 50 - 5k = 66 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF1

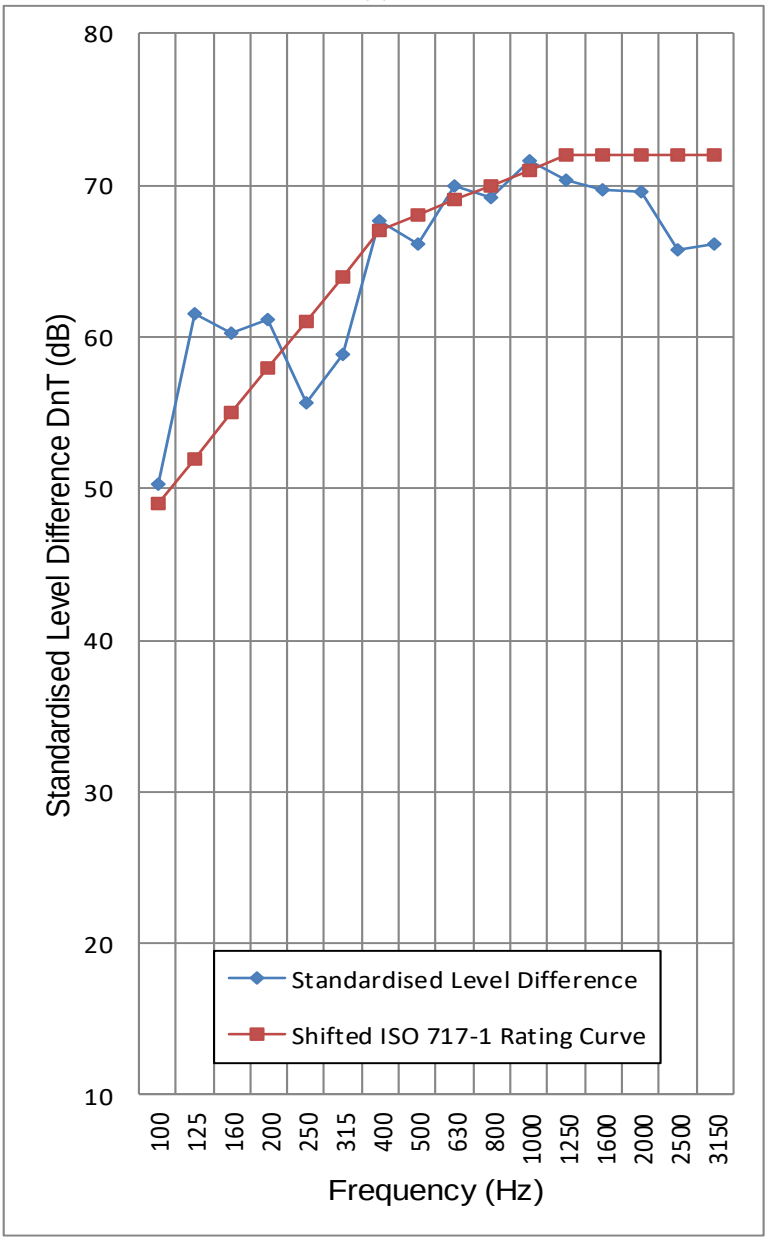
Client: FARRANS

Source Room: A1-02-24 Kitchen Receiver Room: A1-01-14 kitchen

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB
50	51.4
63	46.3
80	49.4
100	50.3
125	61.5
160	60.2
200	61.2
250	55.7
315	58.8
400	67.7
500	66.1
630	70
800	69.2
1000	71.6
1250	70.3
1600	69.7
2000	69.6
2500	65.7
3150	66.1
4000	67.3
5000	71.1



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 64 dB** **Dw = 63 dB**

Ctr = -4 dB

DnT,w + Ctr 50-3150 = 62 dB

DnT,w + C = 66 dB DnT,w + Ctr 50-5k = 62 dB DnT,w + C 50 - 5k = 67 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF2

Client: FARRANS

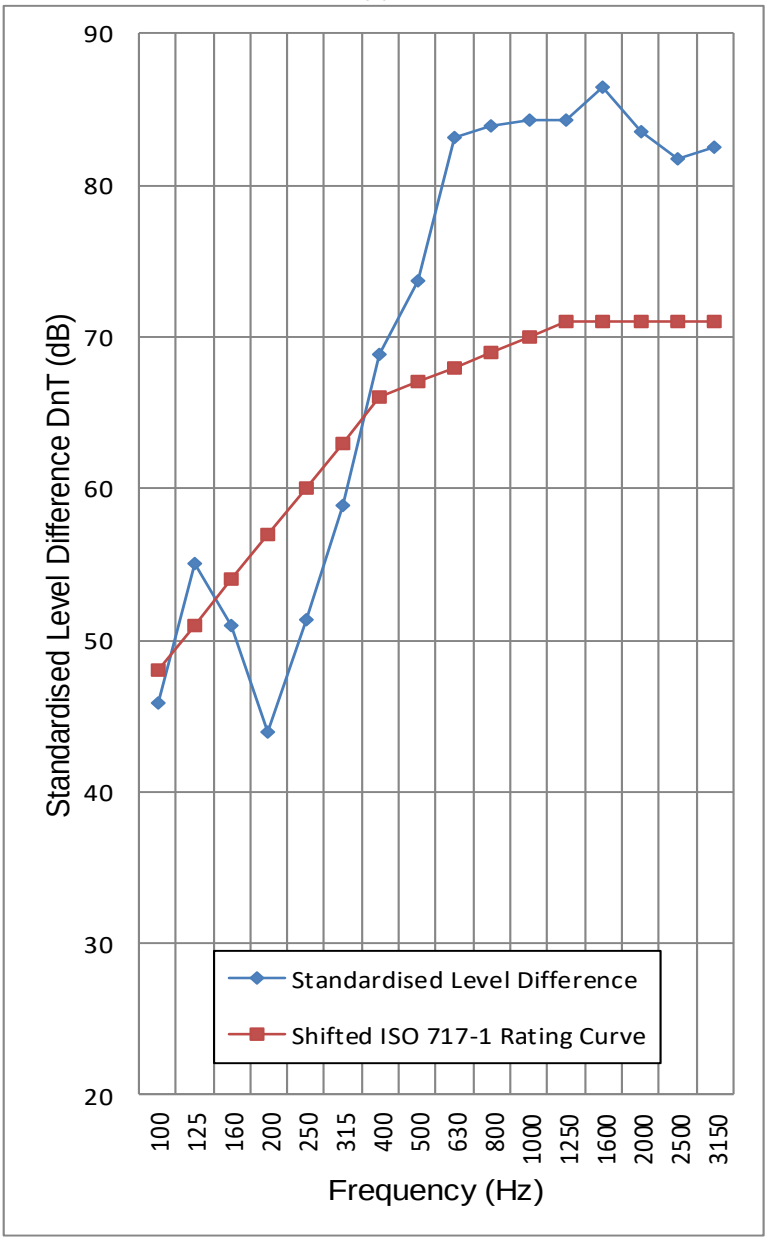
Source Room: A1-02-22 Bedroom Receiver Room: A1-01-12 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	50.5	
63	53.6	
80	45.5	
100	45.8	
125	55	
160	51	
200	44	
250	51.4	
315	58.9	
400	68.8	
500	73.7	
630	83.1	>=
800	83.9	>=
1000	84.3	>=
1250	84.3	>=
1600	86.4	>=
2000	83.5	>=
2500	81.8	>=
3150	82.5	>=
4000	83.6	>=
5000	82.7	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 67 dB **DnT,w + Ctr = 58 dB** **Dw = 65 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 57 dB

DnT,w + C = 63 dB DnT,w + Ctr 50-5k = 57 dB DnT,w + C 50 - 5k = 64 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF3

Client: FARRANS

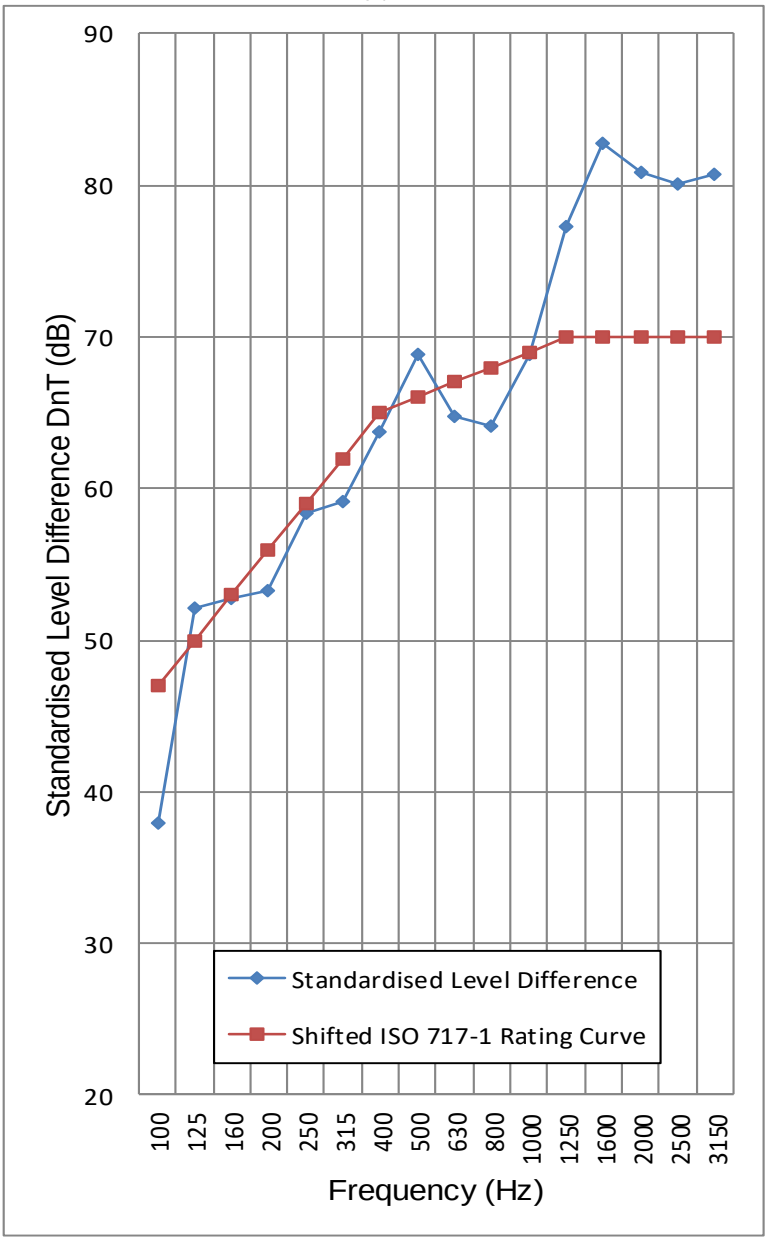
Source Room: A1-02-22 Kitchen Receiver Room: A1-01-12 Kitchen

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	38.2	
63	37.6	
80	37.9	
100	37.9	
125	52.1	
160	52.7	
200	53.3	
250	58.4	
315	59.1	
400	63.7	
500	68.8	
630	64.7	
800	64.1	
1000	68.9	
1250	77.3	
1600	82.8	>=
2000	80.9	>=
2500	80.1	>=
3150	80.7	>=
4000	83.6	>=
5000	83.8	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 66 dB **DnT,w + Ctr = 57 dB** **Dw = 63 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 53 dB

DnT,w + C = 64 dB DnT,w + Ctr 50-5k = 53 dB DnT,w + C 50 - 5k = 64 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF4

Client: FARRANS

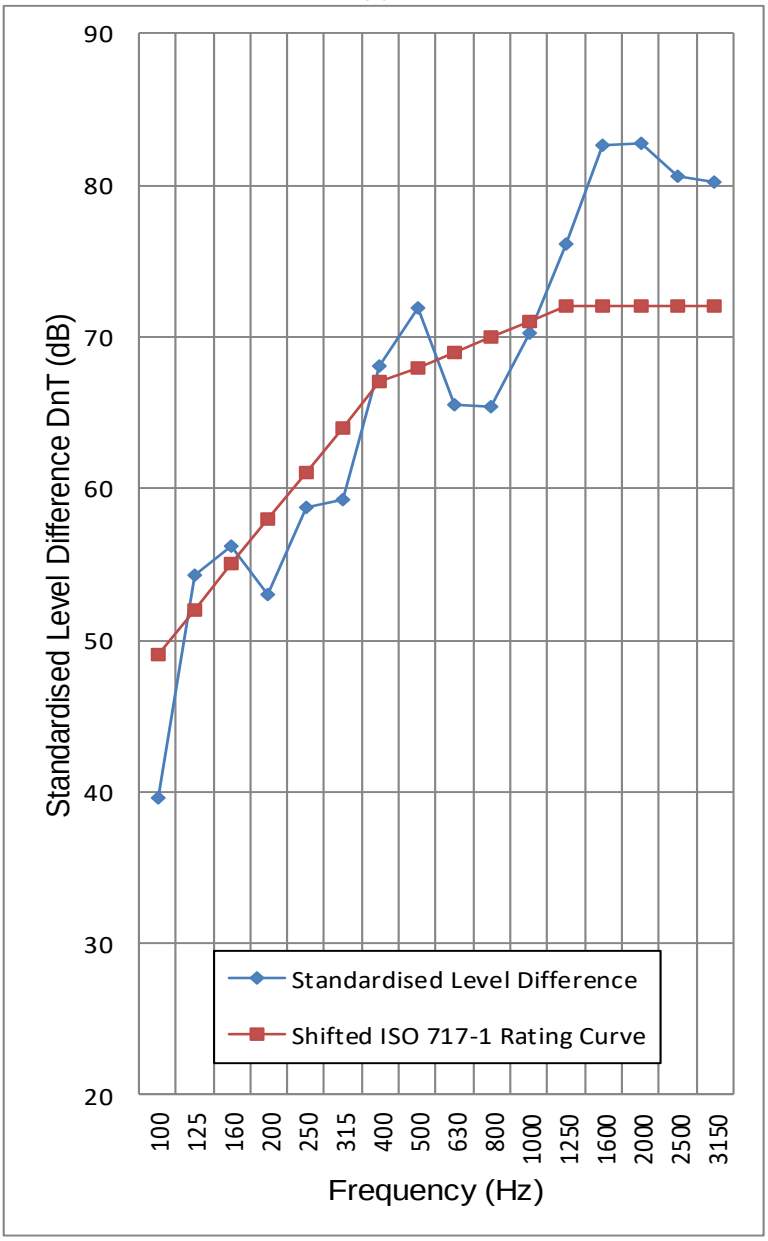
Source Room: A1-02-21 Kitchen Receiver Room: A1-01-11 Kitchen

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	40.7	
63	32	
80	43.8	
100	39.6	
125	54.3	
160	56.2	
200	53	
250	58.8	
315	59.2	
400	68.1	
500	71.9	
630	65.5	
800	65.4	
1000	70.2	
1250	76.1	
1600	82.6	
2000	82.8	>=
2500	80.6	>=
3150	80.2	>=
4000	81.8	>=
5000	83.8	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 58 dB** **Dw = 65 dB**

Ctr = -10 dB

DnT,w + Ctr 50-3150 = 53 dB

DnT,w + C = 65 dB DnT,w + Ctr 50-5k = 53 dB DnT,w + C 50 - 5k = 64 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF5

Client: FARRANS

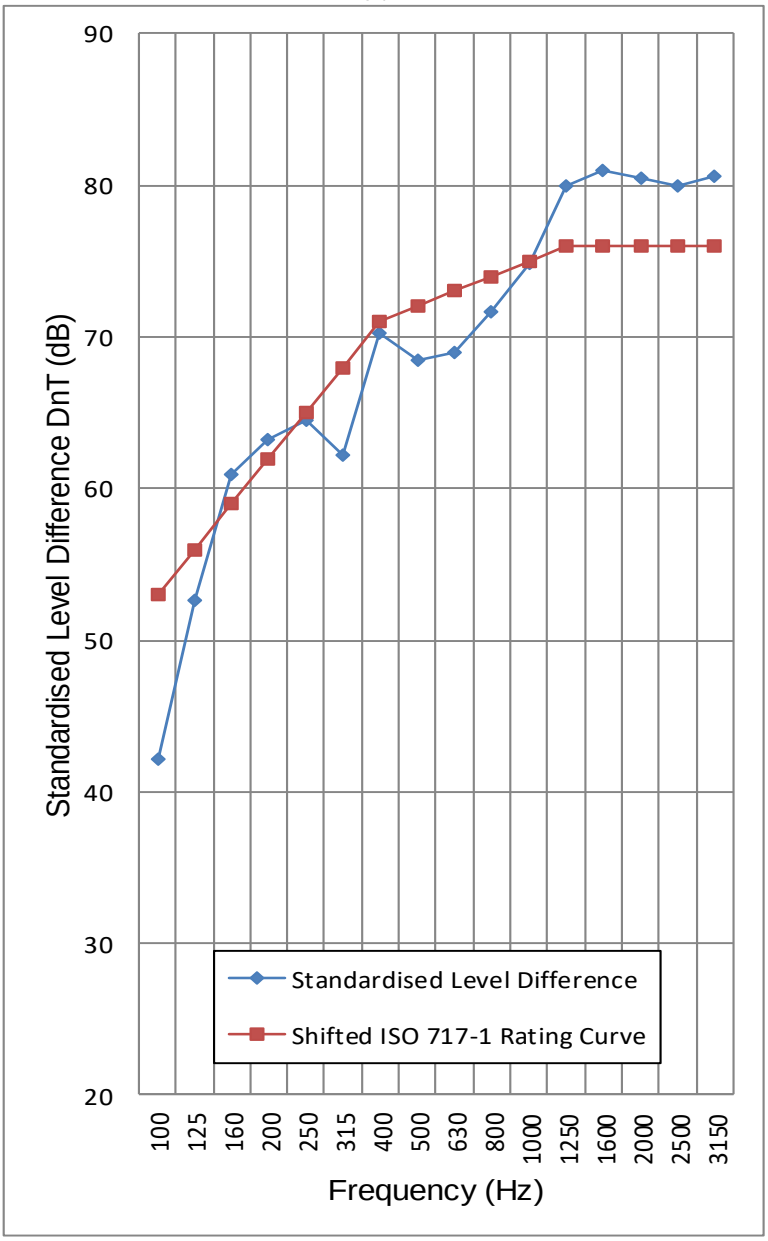
Source Room: A2-02_26 Kitchen Receiver Room: A2-02_16 Kitchen

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	41.6	
63	41.4	
80	44.6	
100	42.1	
125	52.6	
160	60.9	
200	63.2	
250	64.5	
315	62.2	
400	70.2	
500	68.4	
630	69	
800	71.7	
1000	74.8	
1250	80	
1600	81	
2000	80.4	>=
2500	79.9	>=
3150	80.6	>=
4000	82.4	>=
5000	83.2	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 72 dB **DnT,w + Ctr = 61 dB** **Dw = 68 dB**

Ctr = -11dB

DnT,w + Ctr 50-3150 = 58 dB

DnT,w + C = 68 dB DnT,w + Ctr 50-5k = 58 dB DnT,w + C 50 - 5k = 68 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF6

Client: FARRANS

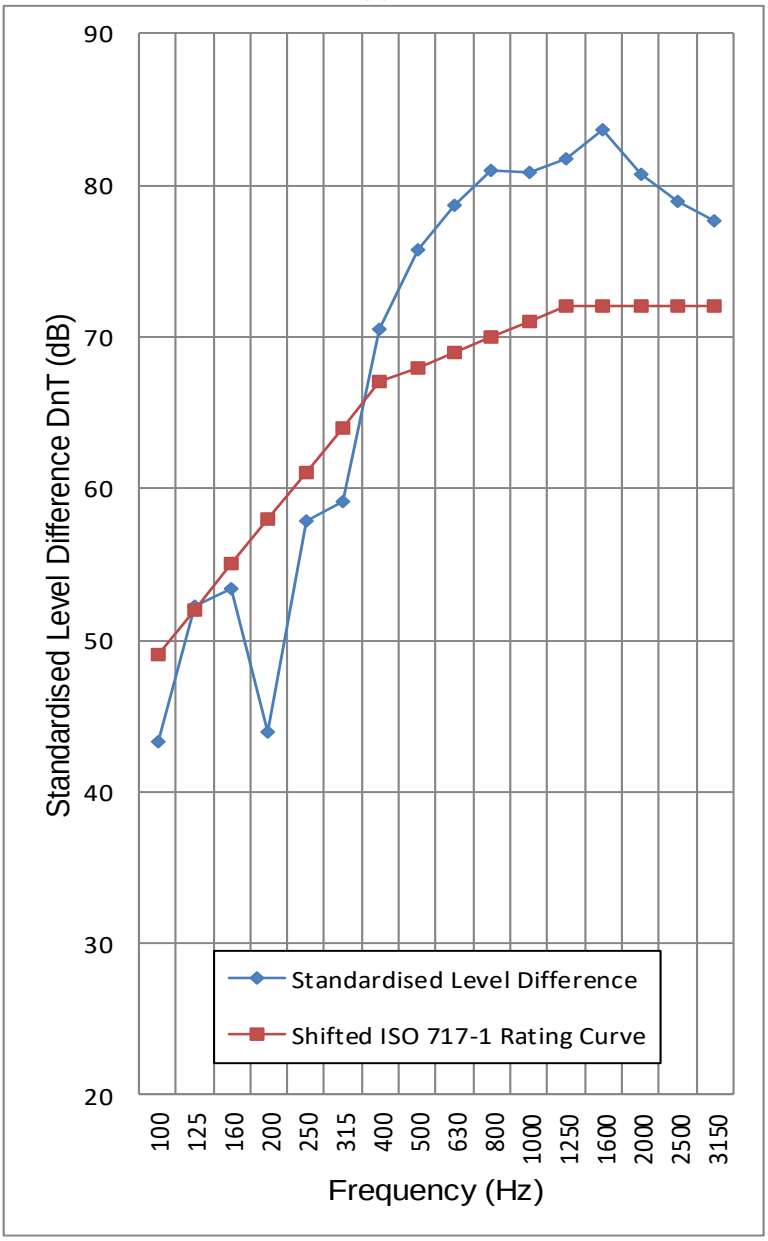
Source Room: A2-02_26 Bedroom Receiver Room: A2-01-16 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	59.4	>=
63	50.1	
80	41	
100	43.3	
125	52.2	
160	53.4	
200	44	
250	57.8	
315	59.1	
400	70.5	
500	75.8	
630	78.7	>=
800	81	>=
1000	80.8	>=
1250	81.7	>=
1600	83.6	>=
2000	80.7	>=
2500	78.9	>=
3150	77.6	>=
4000	77.8	>=
5000	78.1	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 68 dB **DnT,w + Ctr = 58 dB** **Dw = 67 dB**

Ctr = -10 dB

DnT,w + Ctr 50-3150 = 56 dB

DnT,w + C = 63 dB DnT,w + Ctr 50-5k = 56 dB DnT,w + C 50 - 5k = 64 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF7

Client: FARRANS

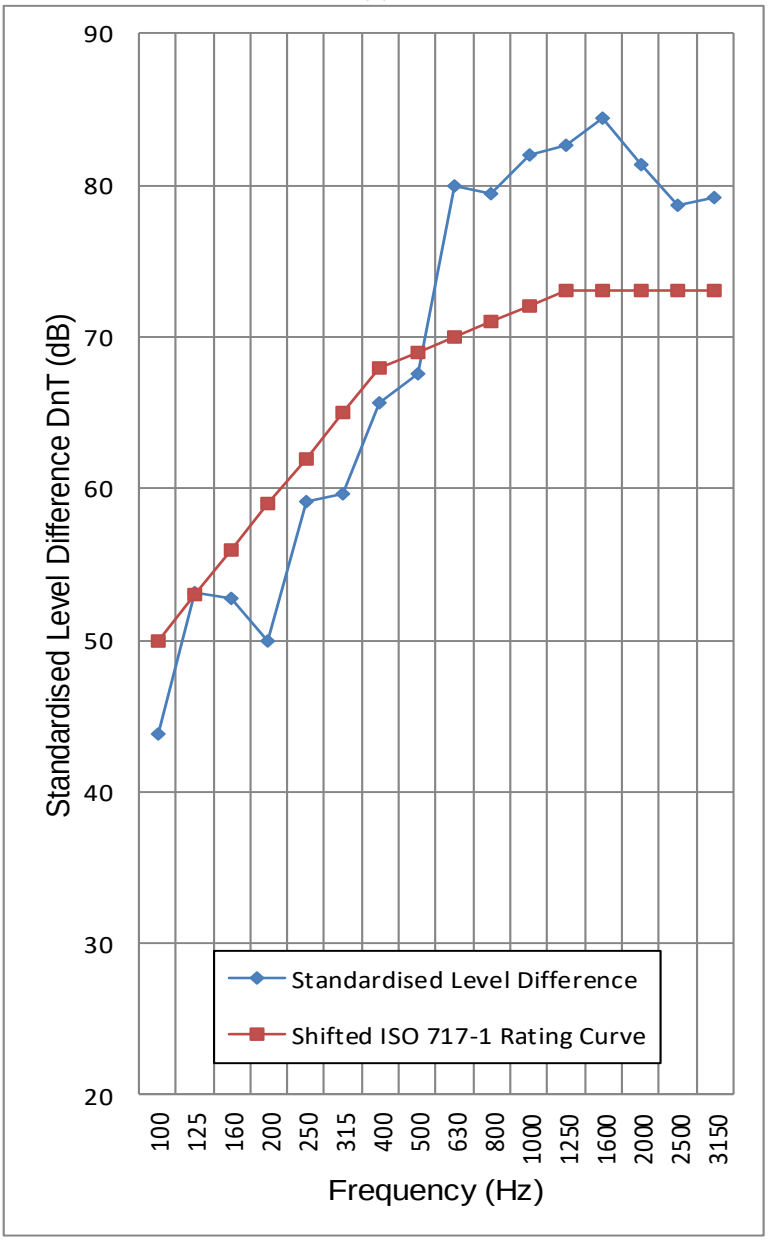
Source Room: A2-02_27 Bedroom Receiver Room: A2-01_17 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	49.8	
63	54.9	
80	48.5	
100	43.8	
125	53.1	
160	52.7	
200	50	
250	59.1	
315	59.7	
400	65.6	
500	67.5	
630	79.9	
800	79.4	>=
1000	82	>=
1250	82.6	>=
1600	84.4	>=
2000	81.4	>=
2500	78.7	>=
3150	79.2	>=
4000	81.4	>=
5000	81.3	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 69 dB **DnT,w + Ctr = 60 dB** **Dw = 67 dB**

Ctr = -9 dB

DnT,w + Ctr 50-3150 = 60 dB

DnT,w + C = 66 dB DnT,w + Ctr 50-5k = 60 dB DnT,w + C 50 - 5k = 67 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised level difference according to ISO 140-4. Field measurements of airborne sound insulation between rooms

Site: HNCC Test date: 2023-06-08 Test No: 179 : ABF8

Client: FARRANS

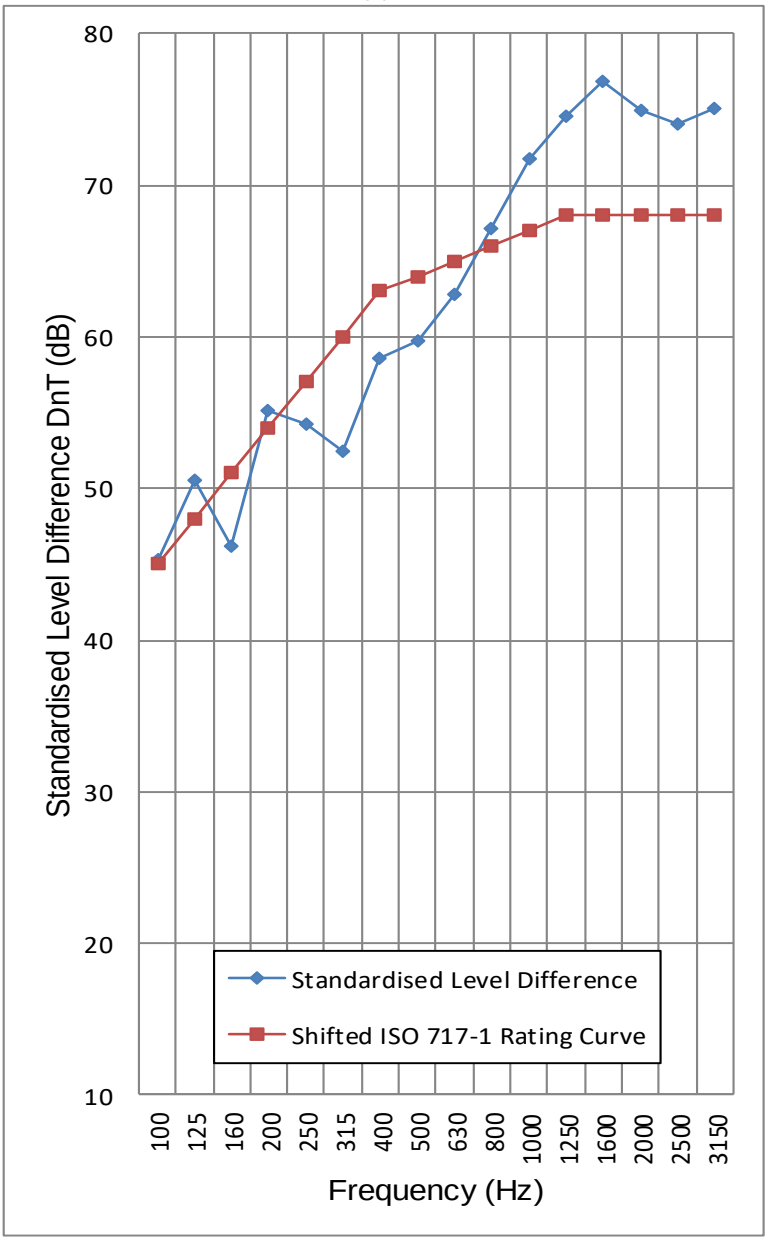
Source Room: A2-02_25 Bedroom Receiver Room: A2-01_15 Bedroom

Volume (m3): 50 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	35	
63	35.9	
80	41.2	
100	45.3	
125	50.6	
160	46.2	
200	55.1	
250	54.2	
315	52.4	
400	58.6	
500	59.7	
630	62.8	
800	67.1	
1000	71.7	
1250	74.6	
1600	76.8	
2000	74.9	
2500	74.1	
3150	75.1	
4000	78.4	>=
5000	78.7	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 64 dB **DnT,w + Ctr = 58 dB** **Dw = 63 dB**

Ctr = -6 dB

DnT,w + Ctr 50-3150 = 54 dB

DnT,w + C = 63 dB DnT,w + Ctr 50-5k = 54 dB DnT,w + C 50 - 5k = 63 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP1

Client: FARRANS

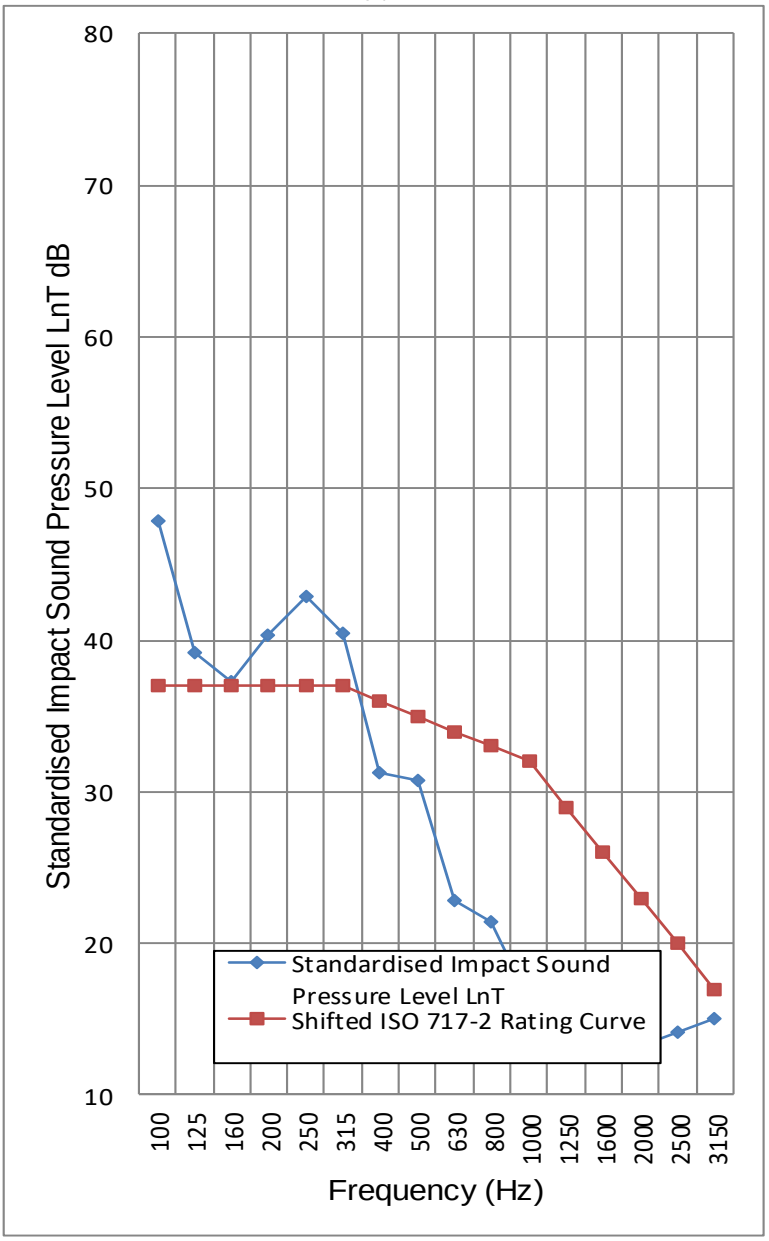
Source Room: A1-02-24 Kitchen Receiver Room: A1-01-14 kitchen

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	38.8	
63	50.9	
80	48.8	
100	47.9	
125	39.2	
160	37.3	
200	40.3	
250	42.9	
315	40.5	
400	31.2	
500	30.7	
630	22.8	
800	21.4	
1000	16.2	<=
1250	15.3	<=
1600	13.6	<=
2000	13.2	<=
2500	14.2	<=
3150	15	<=
4000	12.9	<=
5000	10.3	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 35 dB LnT,w + C150-2500 40 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP2

Client: FARRANS

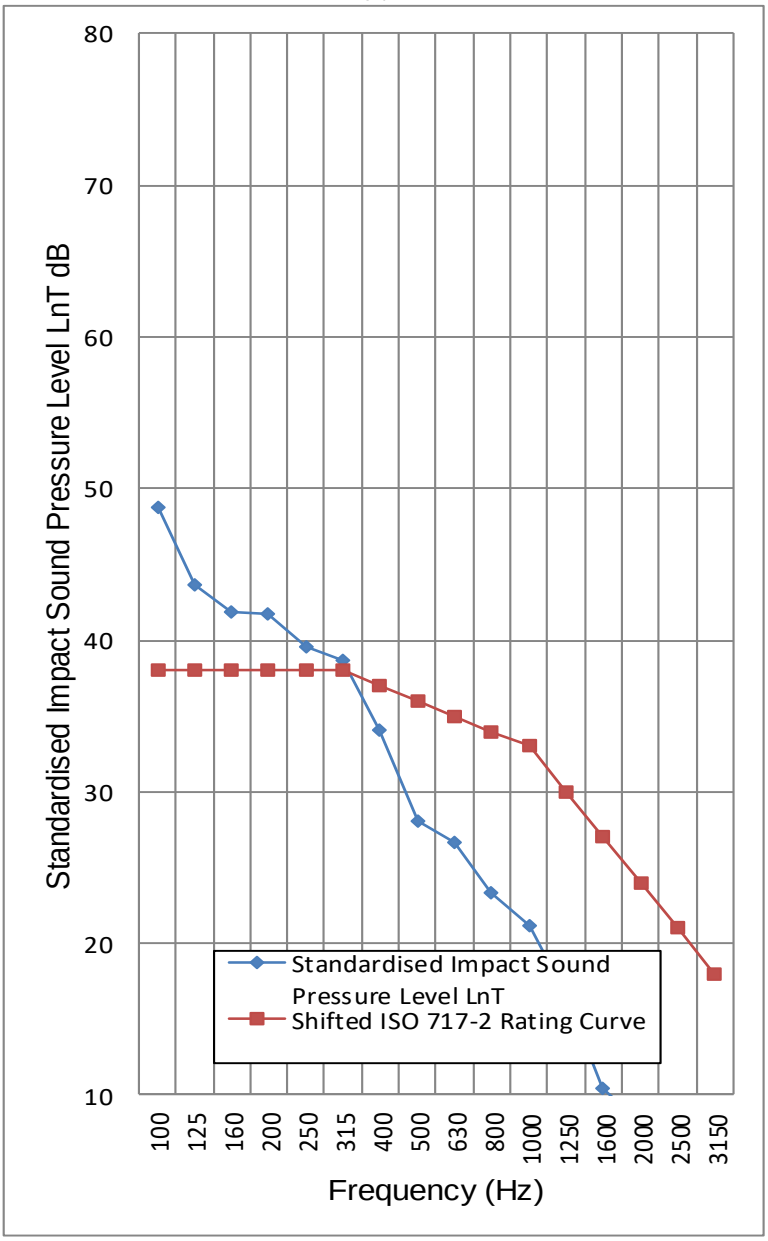
Source Room: A1-02-21 Kitchen Receiver Room: A1-01-11 Kitchen

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	50.3	
63	49.6	
80	46.7	
100	48.7	
125	43.6	
160	41.8	
200	41.7	
250	39.6	
315	38.7	
400	34.1	
500	28.1	<=
630	26.7	<=
800	23.3	
1000	21.2	
1250	16.6	
1600	10.4	<=
2000	8.2	<=
2500	8	<=
3150	7.4	<=
4000	6.6	<=
5000	6.6	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 36 dB LnT,w + C150-2500 41dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP3

Client: FARRANS

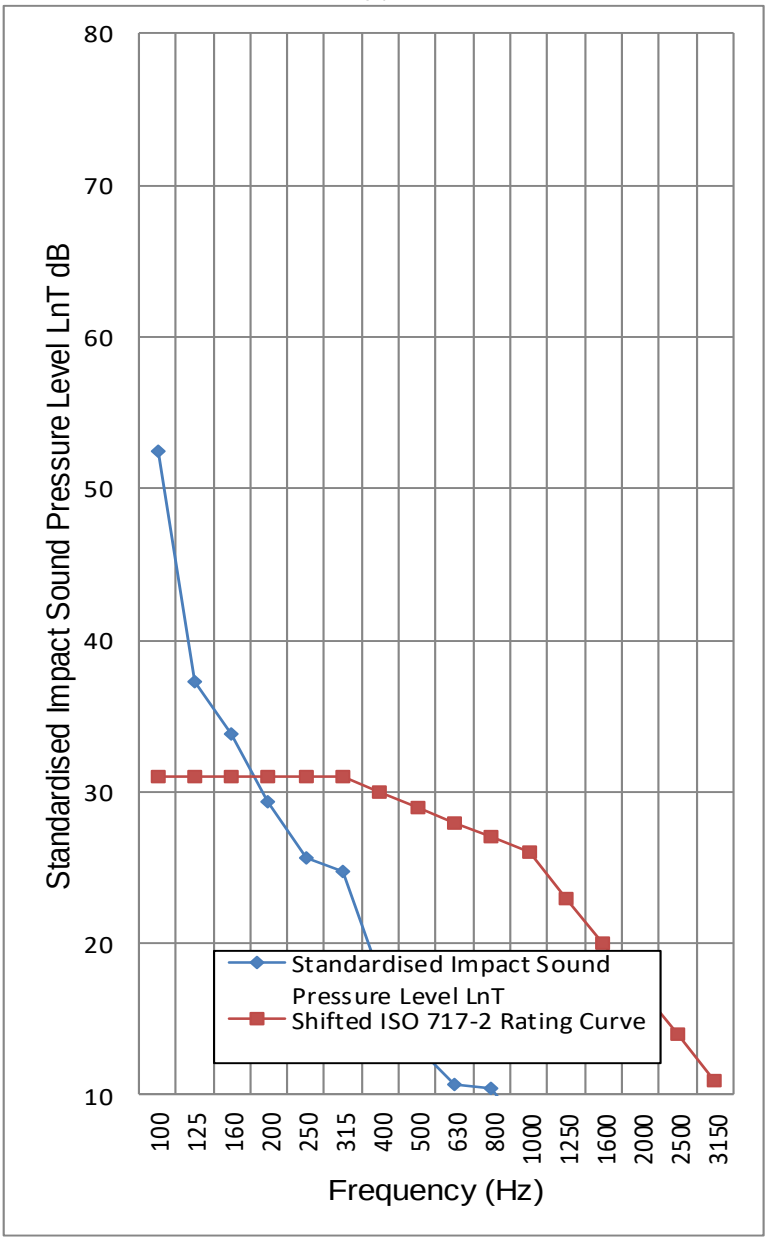
Source Room: A1-02-22 Bedroom Receiver Room: A1-01-12 Bedroom

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	52.3	
63	45.8	
80	51.1	
100	52.4	
125	37.3	
160	33.8	
200	29.4	
250	25.7	
315	24.8	
400	18	<=
500	13.1	<=
630	10.7	<=
800	10.4	<=
1000	7.3	<=
1250	7.1	<=
1600	8.7	<=
2000	8	<=
2500	8.2	<=
3150	8.2	<=
4000	8.2	<=
5000	8.9	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 29 dB LnT,w + C150-2500 42 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP4

Client: FARRANS

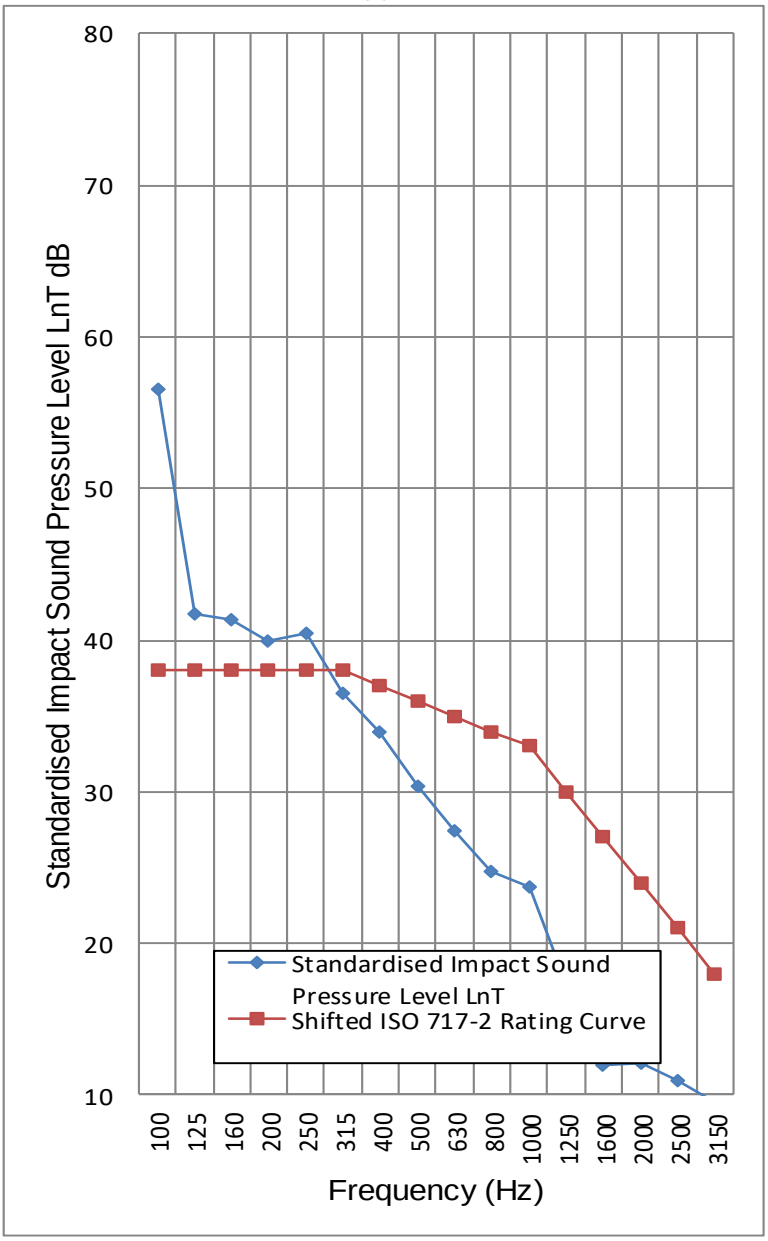
Source Room: A1-02-22 Kitchen Receiver Room: A1-01-12 Kitchen

Volume (m3): 50 Volume (m3): 50

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	50.8	
63	55	
80	57.7	
100	56.5	
125	41.7	
160	41.3	
200	40	
250	40.4	
315	36.5	
400	34	
500	30.4	
630	27.4	
800	24.8	
1000	23.7	
1250	17.4	<=
1600	12	<=
2000	12.1	<=
2500	10.9	<=
3150	9.6	<=
4000	7.8	<=
5000	6.9	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 36 dB LnT,w + C150-2500 47 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP5

Client: FARRANS

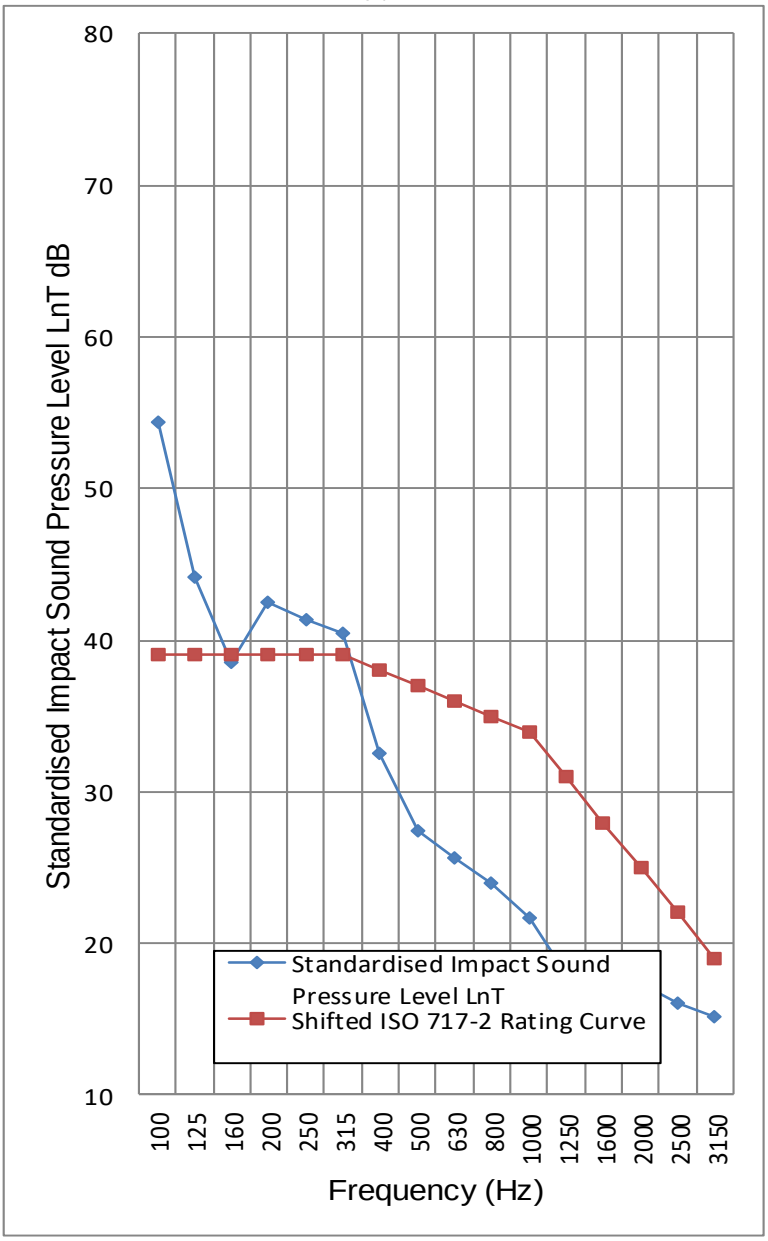
Source Room: A2-02_26 Kitchen Receiver Room: A2-01-16 kitchen

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	43.5	<=
63	51	
80	58	
100	54.4	
125	44.2	
160	38.5	
200	42.5	
250	41.3	
315	40.4	
400	32.5	<=
500	27.4	<=
630	25.6	<=
800	24	<=
1000	21.7	<=
1250	18	<=
1600	16.7	<=
2000	17.4	<=
2500	16	<=
3150	15.2	<=
4000	13	<=
5000	12.6	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 37 dB LnT,w + C150-2500 46 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP6

Client: FARRANS

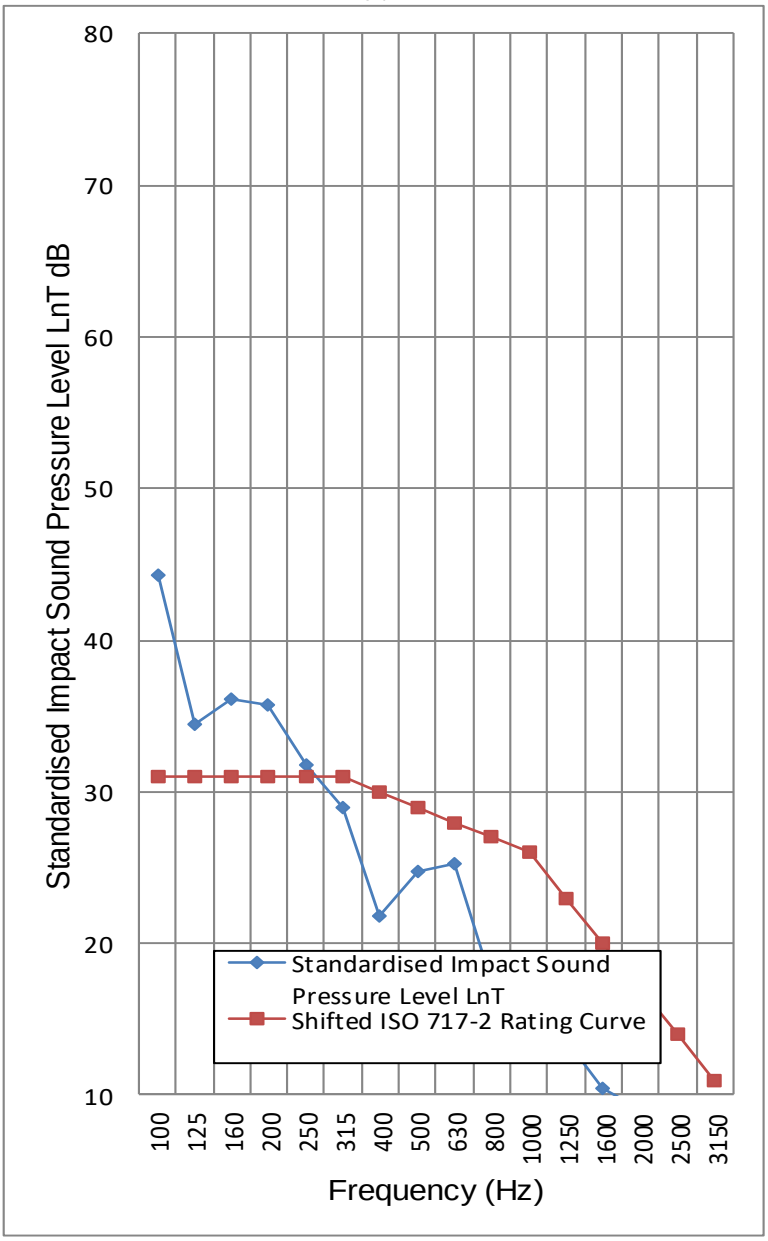
Source Room: A2-02_26 Bedroom Receiver Room: A2-01-16 Bedroom

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	51.2	
63	53.9	
80	47.6	
100	44.3	
125	34.5	
160	36.1	
200	35.7	
250	31.8	
315	29	
400	21.8	<=
500	24.8	
630	25.2	
800	17.6	<=
1000	13	<=
1250	13.6	<=
1600	10.5	<=
2000	9.1	<=
2500	9.2	<=
3150	8.9	<=
4000	8.6	<=
5000	9.2	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 29 dB LnT,w + C150-2500 42 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP7

Client: FARRANS

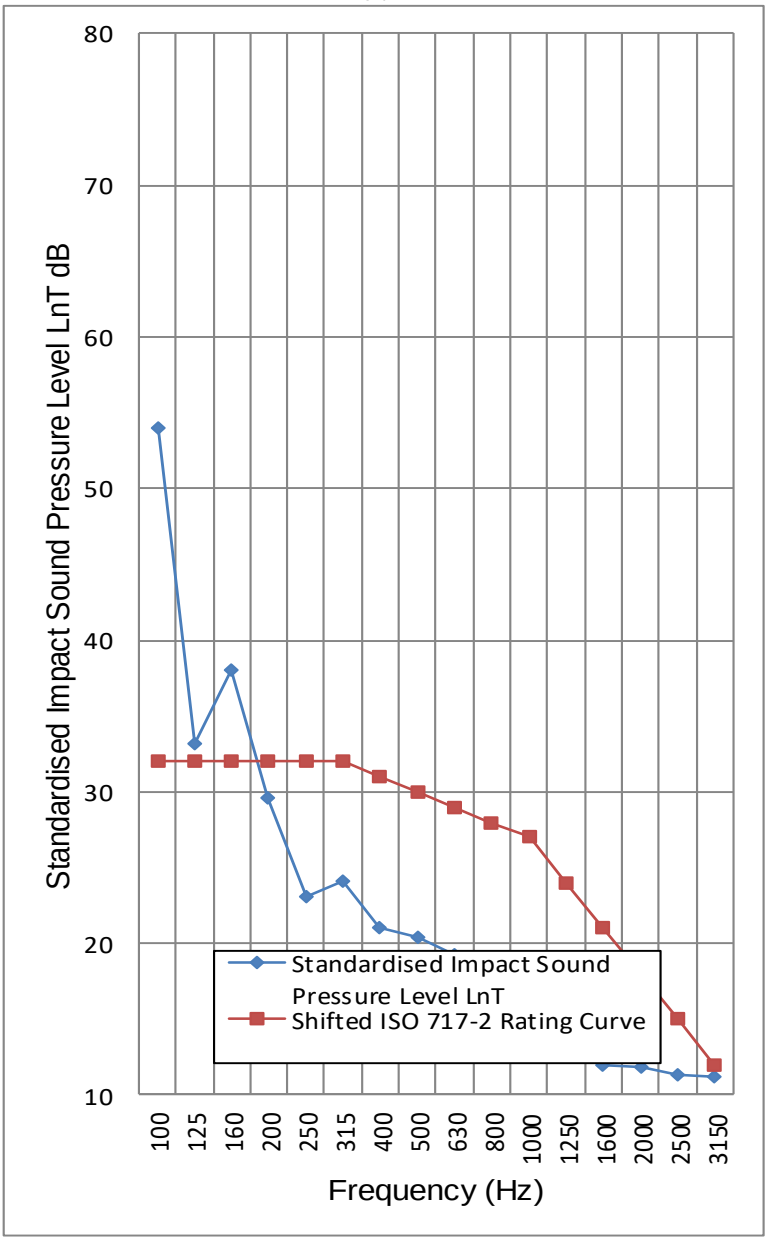
Source Room: A2-02_27 Bedroom Receiver Room: A2-01_17 Bedroom

Volume (m3): 100 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	47.9	
63	46.1	
80	53	
100	54	
125	33.2	
160	38	
200	29.6	
250	23.1	
315	24.1	
400	21	
500	20.4	
630	19.3	
800	17.4	
1000	16.5	
1250	14.3	
1600	12	
2000	11.9	<=
2500	11.4	<=
3150	11.2	<=
4000	10.5	<=
5000	10.5	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 30 dB LnT,w + C150-2500 43 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett

Standardised impact sound pressure levels according to ISO 140-4. Field measurements of impact sound insulation of floors

Site: HNCC Test date: 2023-06-08 Test No: 179 : IP8

Client: FARRANS

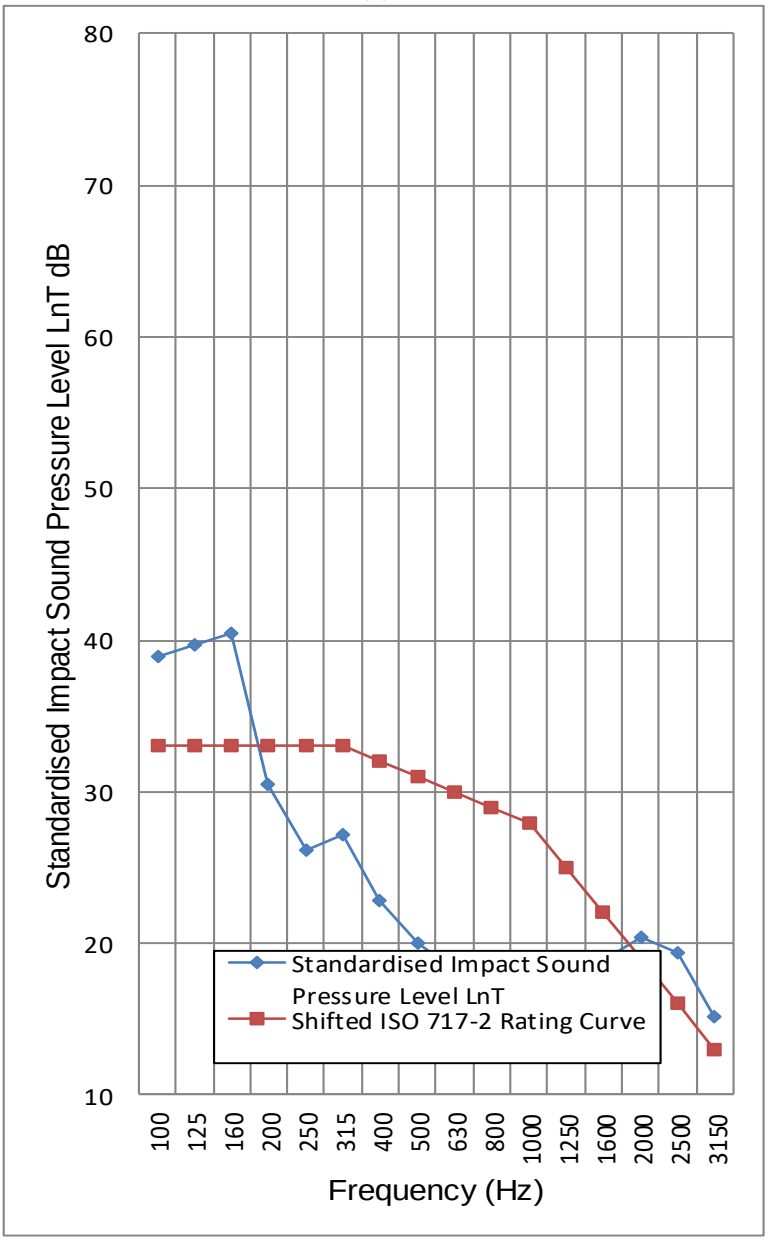
Source Room: A2-02_25 Bedroom Receiver Room: A2-01_15 Bedroom

Volume (m3): 50 Volume (m3): 100

Construction: Gyproc SoundBloc, 150mm in-situ RC floor slab, 25mm Kingspan K103, 75mm screed.

Frequency f (Hz)	LnT (1/3 Octave) dB	
50	45.1	
63	48.6	
80	50.9	
100	38.9	
125	39.7	
160	40.5	
200	30.5	
250	26.1	
315	27.2	
400	22.8	
500	20	
630	18.2	
800	17	
1000	16.7	
1250	17.3	
1600	18.9	
2000	20.4	
2500	19.4	
3150	15.2	
4000	13.8	<=
5000	12.3	<=

Limit of Measurement <=



Rating according to ISO 717-2

LnT,w = 31 dB LnT,w + C150-2500 39 dB

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

No. of Test Report: 1103 Name of Test Institute: MACH

Date: 2023-06-08 Signature: CBartlett