HNCC D BLOCK

PART-E SOUND INSULATION TEST REPORT

25/10/2023

Revision	Description	Issued by	Checked By	Issue date
-	Part E Test Results	Chase Bartlett	Ze Nunes	25/10/2023

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
Full Site Address	25 Bertram St, London N19 5DQ
Test Date	21/06/2023

MACH Acoustics Ltd

3rd Floor 1 York Court
Upper York Street
Bristol
BS2 8QF
0117 944 1388

Eagle House
163 City Road
London
EC1V 1NR
0203 488 4559

info@machacoustics.com
www.machgroup.com

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 D Block. 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 21/06/2023. 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:

- 7 New-build apartments

To satisfy the requirements of Approved Document E, 7 individual sound insulation tests have been carried out (2 airborne wall tests, 3 airborne floor tests and 2 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-11002-E0	190656	2023-04-18
NTI Precision Sound Analyser XL2 TA	A2A-08695-E0	197909	2023-08-24
NTI Pre-amplifier MA220	7182	180607	2023-08-24
01dB & Sound Solutions Products Limited TM01 Tapping Machine	TP02058	TCRT22/1573	2022-09-15
QTX Speaker x 2	-	-	
Svantek Acoustic Calibrator SV31	32531	182609	2022-11-04

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	D-01-02 Hall	50	D-01-01 Bathroom	50	$D_{nT,w}+C_{tr} \geq 45$	57	Pass
ABW 2	Main Hall	200	D-01-1.4 Kitchen/Living	100	$D_{nT,w}+C_{tr} \geq 55$	58	Pass

Table 6.1 - Results of airborne walls sound insulation testing

The table indicates all tested areas have passed.

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	D-02-01 Kitchen	50	D-01-01 Kitchen	50	$D_{nT,w}+C_{tr} \geq 45$	54	Pass
ABF 2	D-02-02 Kitchen	50	D-01-02 Kitchen	50	$D_{nT,w}+C_{tr} \geq 45$	54	Pass
ABF 3	D-GF-01 Activity Room	100	D-01-1.4 Kitchen/Living	100	$D_{nT,w}+C_{tr} \geq 55$	59	Pass

Table 6.2 - Results of airborne floors sound insulation testing

The table indicates all tested areas have passed.

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	D-02-01 Kitchen	50	D-01-01 Kitchen	50	$L'_{nT,w} \leq 62$	47	Pass
IP 2	D-02-02 Kitchen	50	D-01-02 Kitchen	50	$L'_{nT,w} \leq 62$	46	Pass

Table 6.3 - Results of impact sound insulation testing

The table indicates 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 15mm Gyproc SoundBloc, Adhesive Dabs, 100mm Blockwork (SM: 130kg/m^2), 75mm Cavity fully filled with Isover APR 1200, 100mm Blockwork (SM: 130 kg/m^2), Adhesive Dabs and 15mm Gyproc SoundBloc. Party floors have been identified as 15mm allowance for finishes, 75mm screed including underfloor heating (TBC), Separation layer, 25mm Kingspan K103 , 6mm Thermal Economics Iso Rubber and IsoEdge 6, 200mm Hollow-Core Slab, 195.5mm clear service zone and 12.5mm Gyproc SoundBloc.

7.0 PLANNING CONDITIONS

Planning Condition 23 – residential/ commercial States: '*Prior to the commencement of above groundworks, details shall be submitted to and approved in writing by the Council, of the sound insulation of floors/ceilings/walls separating commercial parts of the building from residential premises. The airborne sound insulation performance shall achieve as a minimum 10 dB increase in the minimum requirements of Approved Document E of the Building Regulations 2010. A test shall be carried out prior to the discharge of this condition to show the standard of sound insulation required shall be met and the results submitted to the Council for approval.*'

Mach have tested the wall between the main hall and residential space and the floor separating the D block Activity Room and residential space.

7.1 Planning Condition 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 2	Main Hall	200	D-01-1.4 Kitchen/Living	100	$D_{nT,w}+C_{tr} \geq 55$	58	Pass

7.2 Planning condition 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 3	D-GF-01 Activity Room	100	D-01-1.4 Kitchen/Living	100	$D_{nT,w}+C_{tr} \geq 55$	59	Pass

7.3 Background Noise

Construction noise constitutes the main source of noise on site, Background noise levels are intermittent due to construction noise 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.

8.0 CONCLUSION

In order to demonstrate compliance with the requirements of Approved Document E (ADE), sound insulation testing has been undertaken at HNCC D Block. 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'.

9.0 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 D Block Test date: 2023-06-21 Test No: 179 : ABW1

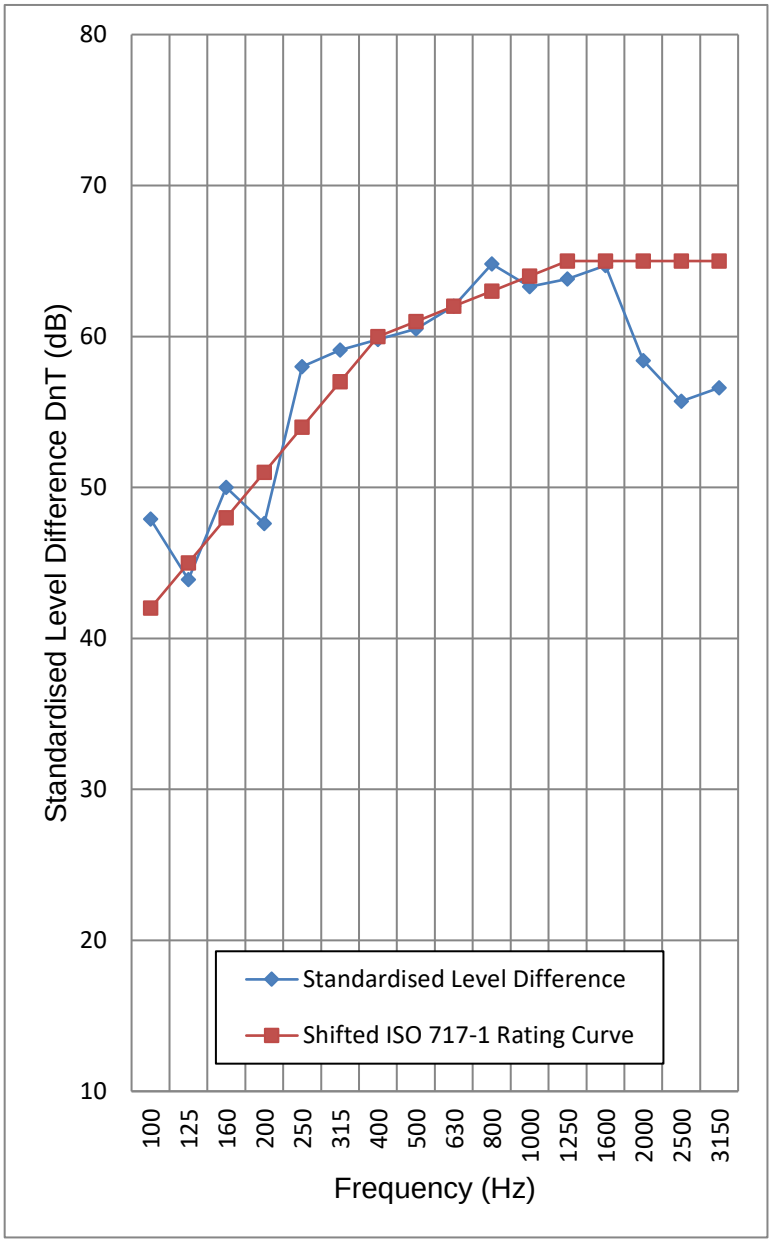
Client: FARRANS

Source Room: D-01-02 Hall Receiver Room: D-01-01 Bathroom

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

Construction: .

Frequency f (Hz)	DnT (1/3 Octave) dB
50	40.8
63	43.8
80	52.8
100	47.9
125	43.9
160	50
200	47.6
250	58
315	59.1
400	59.8
500	60.5
630	62
800	64.8
1000	63.3
1250	63.8
1600	64.7
2000	58.4
2500	55.7
3150	56.6
4000	60.7
5000	63.8



Rating according to ISO 717-1

DnT,w = 61 dB **DnT,w + Ctr = 57 dB** **Dw = 60 dB**

Ctr = -4 dB

DnT,w + Ctr 50-3150 = 56 dB

DnT,w + C = 58 dB DnT,w + Ctr 50-5k = 56 dB DnT,w + C 50 - 5k = 59 dB

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

No. of Test Report: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett

MACH

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

Site: HNCC D Block Test date: 2023-06-21 Test No: 179 : ABW2

Client: FARRANS

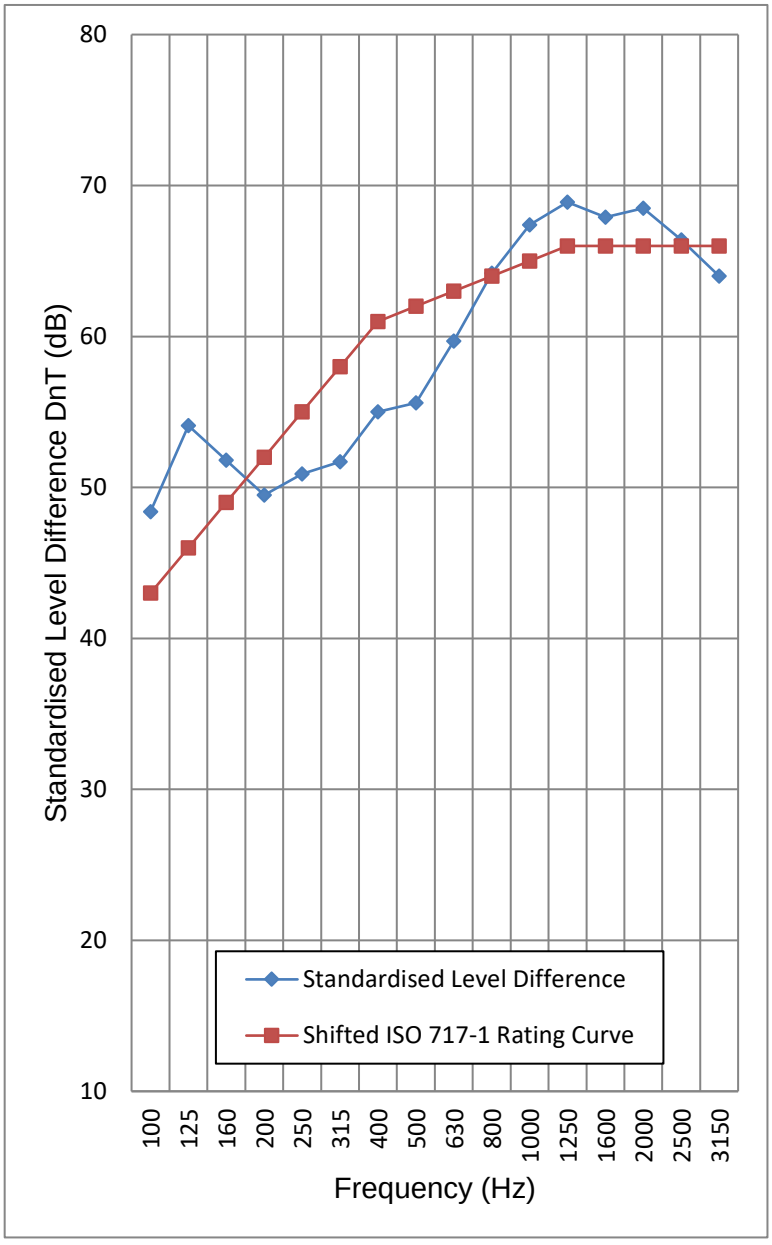
Source Room: Main Hall Receiver Room: D-01-1.4 Kitchen/Living

Volume (m3): 200 Volume (m3): 100

Construction: .

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	42.6	>=
63	51.1	>=
80	50.7	
100	48.4	
125	54.1	
160	51.8	
200	49.5	
250	50.9	
315	51.7	
400	55	>=
500	55.6	>=
630	59.7	>=
800	64.2	>=
1000	67.4	>=
1250	68.9	>=
1600	67.9	>=
2000	68.5	>=
2500	66.4	>=
3150	64	>=
4000	70	>=
5000	75.8	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 62 dB **DnT,w + Ctr = 58 dB** **Dw = 57 dB**

Ctr = -4 dB

DnT,w + Ctr 50-3150 = 57 dB

DnT,w + C = 61 dB DnT,w + Ctr 50-5k = 57 dB DnT,w + C 50 - 5k = 61 dB

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

No. of Test Report: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett

MACH

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

Site: HNCC D Block Test date: 2023-06-21 Test No: 179 : ABF1

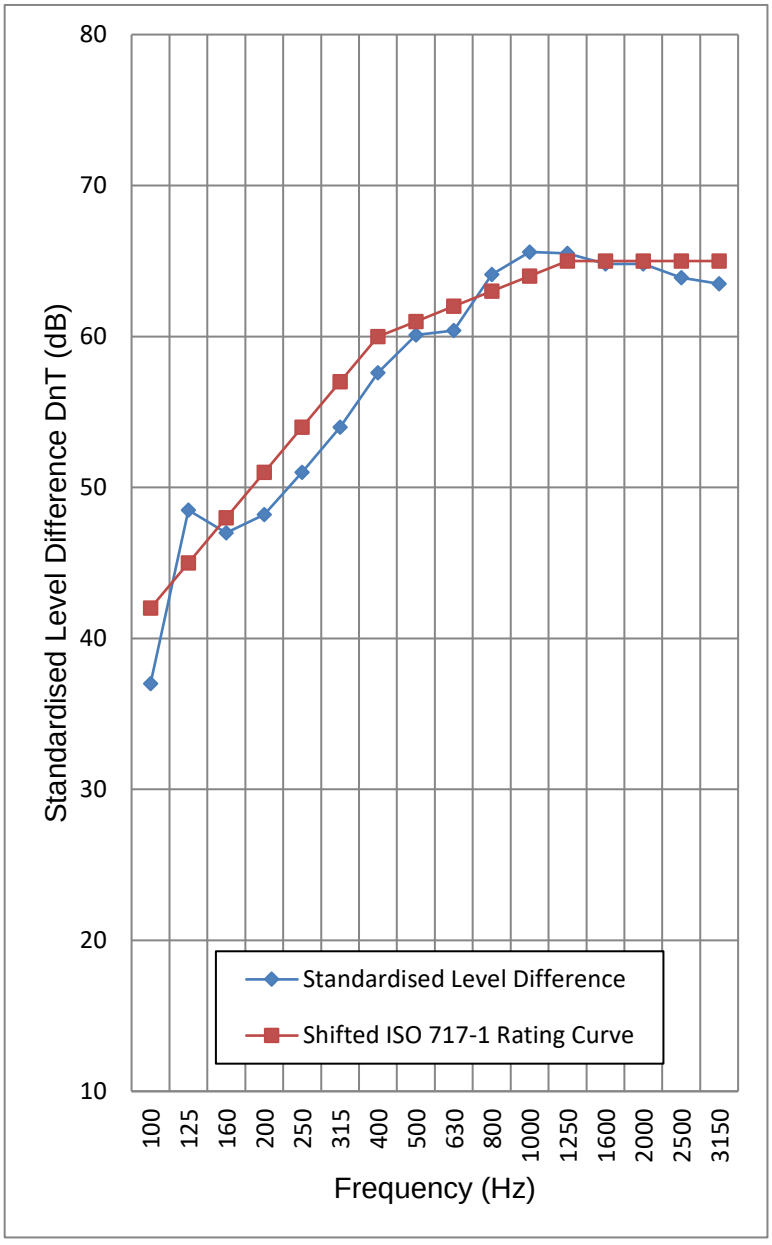
Client: FARRANS

Source Room: D-02-01 Kitchen Receiver Room: D-01-01 Kitchen

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

Construction: .

Frequency f (Hz)	DnT (1/3 Octave) dB
50	37.6
63	37.3
80	40.9
100	37
125	48.5
160	47
200	48.2
250	51
315	54
400	57.6
500	60.1
630	60.4
800	64.1
1000	65.6
1250	65.5
1600	64.8
2000	64.8
2500	63.9
3150	63.5
4000	68
5000	72.1



Rating according to ISO 717-1

DnT,w = 61 dB **DnT,w + Ctr =** **54 dB** **Dw = 57 dB**

Ctr = -7 dB

DnT,w + Ctr 50-3150 = 52 dB

DnT,w + C = 59 dB DnT,w + Ctr 50-5k = 52 dB DnT,w + C 50 - 5k = 60 dB

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

No. of Test Report: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett

MACH

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

Site: HNCC D Block Test date: 2023-06-21 Test No: 179 : ABF2

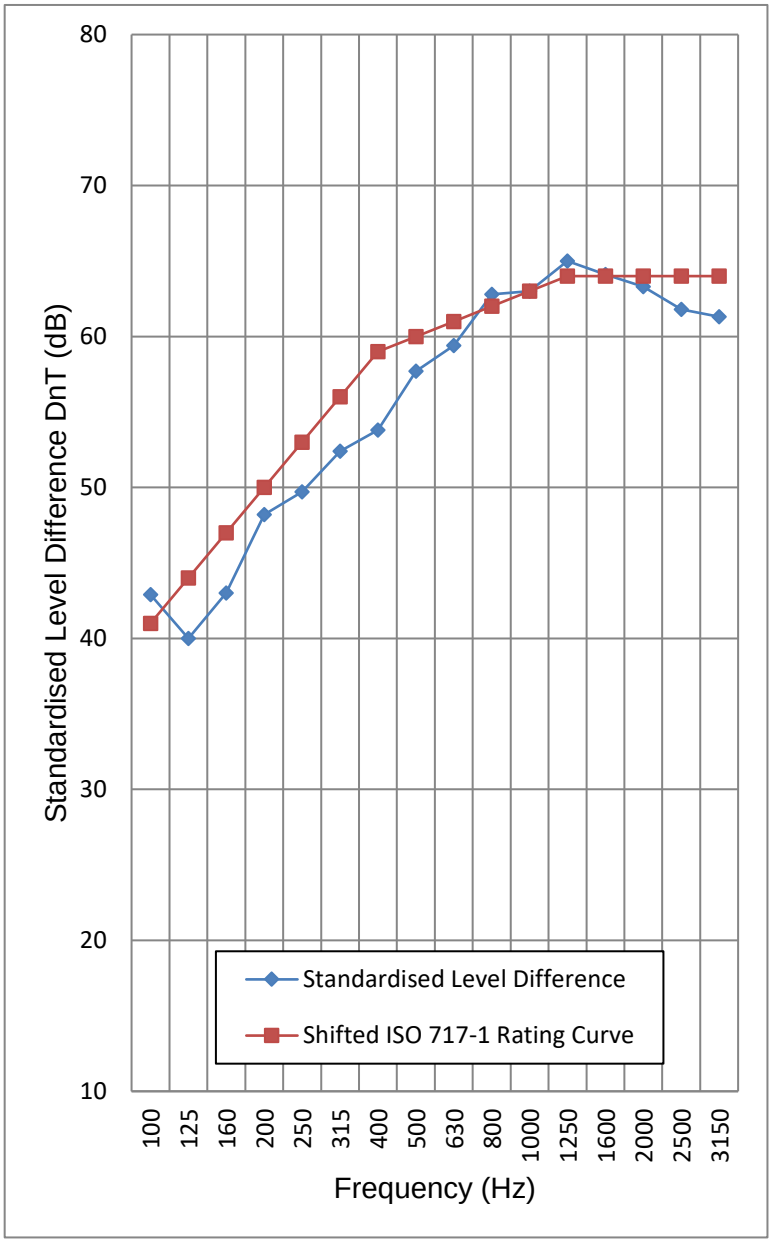
Client: FARRANS

Source Room: D-02-02 Kitchen Receiver Room: D-01-02 Kitchen

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

Construction: .

Frequency f (Hz)	DnT (1/3 Octave) dB
50	33.8
63	39.8
80	40.9
100	42.9
125	40
160	43
200	48.2
250	49.7
315	52.4
400	53.8
500	57.7
630	59.4
800	62.8
1000	63
1250	65
1600	64.1
2000	63.3
2500	61.8
3150	61.3
4000	64.1
5000	68



Rating according to ISO 717-1

DnT,w = 60 dB **DnT,w + Ctr = 54 dB** **Dw = 56 dB**

Ctr = -6 dB

DnT,w + Ctr 50-3150 = 52 dB

DnT,w + C = 58 dB DnT,w + Ctr 50-5k = 52 dB DnT,w + C 50 - 5k = 58 dB

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

No. of Test Report: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett

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

Site: HNCC D Block | Test date: 2023-06-21 | Test No: 179 : ABF3

Client: FARRANS

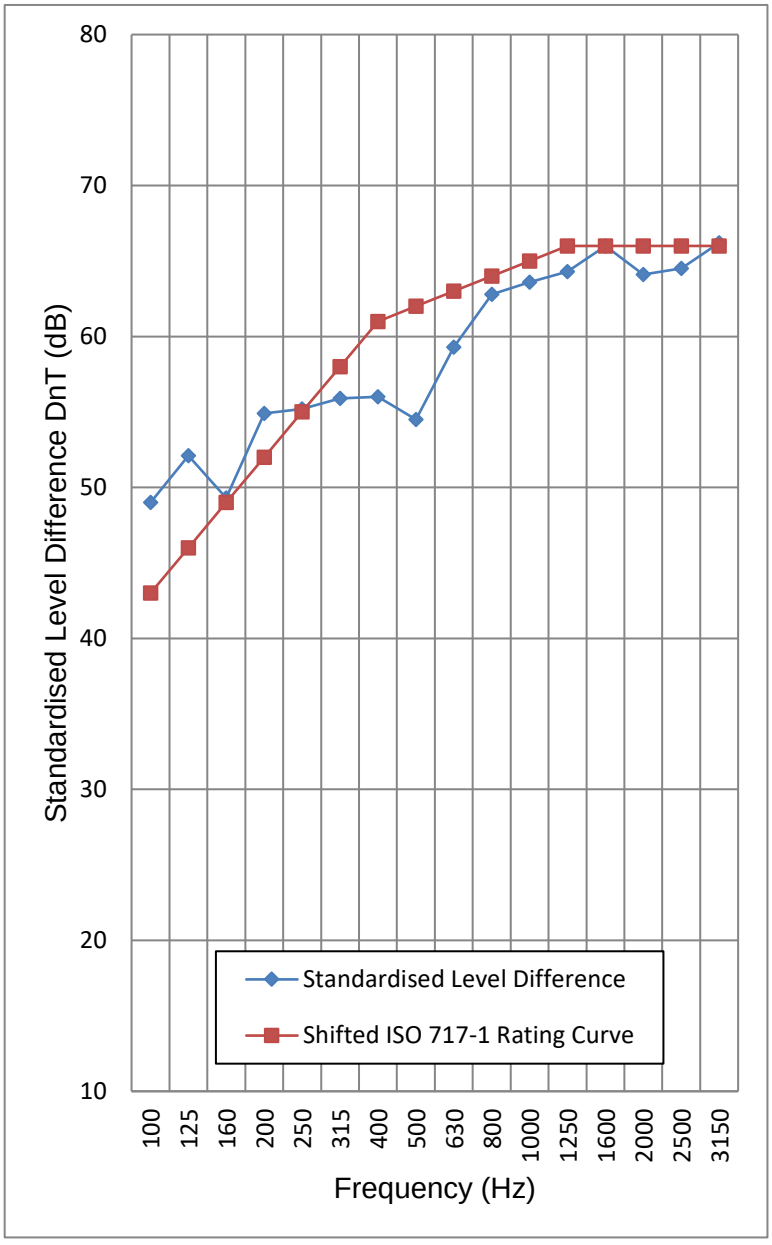
Source Room: D-GF-01 Activity Room | Receiver Room: D-01-1.4 Kitchen/Living

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

Construction: .

Frequency f (Hz)	DnT (1/3 Octave) dB	
50	46.2	>=
63	44.6	>=
80	48.2	
100	49	
125	52.1	
160	49.3	
200	54.9	
250	55.2	>=
315	55.9	>=
400	56	>=
500	54.5	>=
630	59.3	>=
800	62.8	>=
1000	63.6	>=
1250	64.3	>=
1600	66	>=
2000	64.1	>=
2500	64.5	>=
3150	66.2	>=
4000	72.4	>=
5000	76.4	>=

Limit of Measurement >=



Rating according to ISO 717-1

DnT,w = 62 dB | **DnT,w + Ctr =** | **59 dB** | **Dw = 57 dB**

Ctr = -3 dB

DnT,w + Ctr 50-3150 = 58 dB

DnT,w + C = 61 dB | DnT,w + Ctr 50-5k = 58 dB | DnT,w + C 50 - 5k = 62 dB

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

No. of Test Report: 1109 | Name of Test Institute: MACH

Date: 2023-06-21 | Signature: CBartlett

MACH

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

Site: HNCC D Block Test date: 2023-06-21 Test No: 179 : IP1

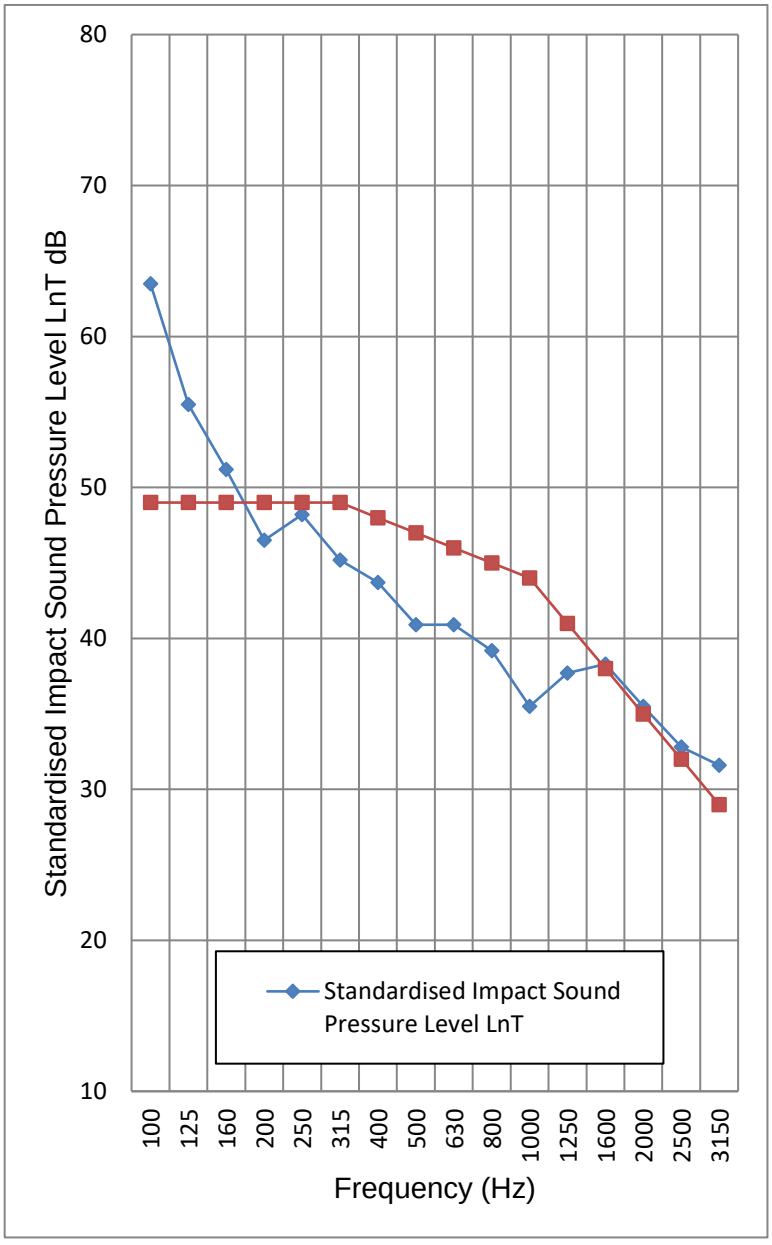
Client: FARRANS

Source Room: D-02-01 Kitchen Receiver Room: D-01-01 Kitchen

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

Construction: .

Frequency f (Hz)	LnT (1/3 Octave) dB
50	45.8
63	48
80	57.6
100	63.5
125	55.5
160	51.2
200	46.5
250	48.2
315	45.2
400	43.7
500	40.9
630	40.9
800	39.2
1000	35.5
1250	37.7
1600	38.3
2000	35.5
2500	32.8
3150	31.6
4000	23.7
5000	16.4



Rating according to ISO 717-2

LnT,w = 47 dB LnT,w + C150-2500 51 dB

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

No. of Test Report: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett

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

Site: HNCC D Block Test date: 2023-06-21 Test No: 179 : IP2

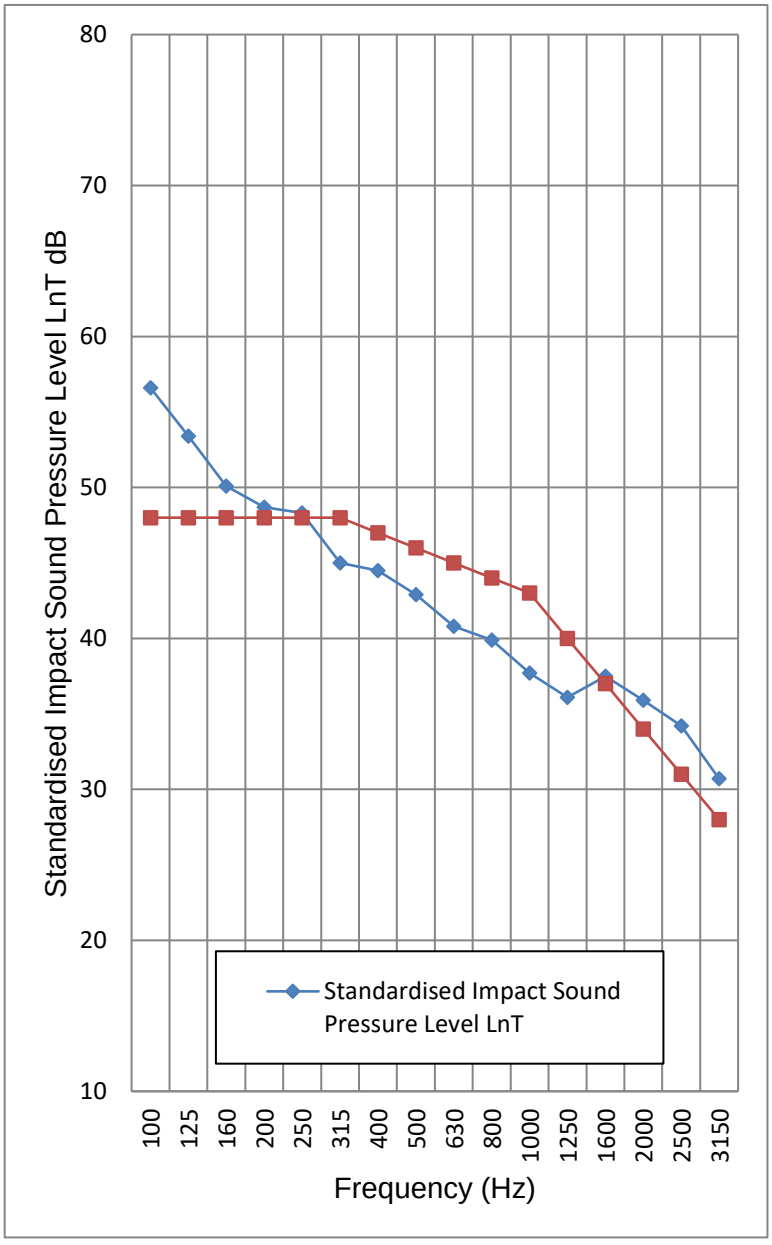
Client: FARRANS

Source Room: D-02-02 Kitchen Receiver Room: D-01-02 Kitchen

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

Construction: .

Frequency f (Hz)	LnT (1/3 Octave) dB
50	40.6
63	51
80	52.3
100	56.6
125	53.4
160	50.1
200	48.7
250	48.3
315	45
400	44.5
500	42.9
630	40.8
800	39.9
1000	37.7
1250	36.1
1600	37.5
2000	35.9
2500	34.2
3150	30.7
4000	21.4
5000	12.3



Rating according to ISO 717-2

LnT,w = 46 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: 1109 Name of Test Institute: MACH

Date: 2023-06-21 Signature: CBartlett