



2-4 Station Road, Port Talbot

Sound Insulation Testing Report

10th December 2019

inacoustic | cymru

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Date	10 th December 2019		
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1. INTRODUCTION

inacoustic has been commissioned to carry out sound insulation testing at 2-4 Station Road, Port Talbot, SA13 1JB. This is a SITMA accredited report; inacoustic have been accredited to conduct sound insulation testing in line with the Approved Document E, in addition to the technical standards referred to in this report.

This report sets out the sound insulation testing method, measured performances and provides a comparison with the requirements of The Building Regulations 2000 Approved Document E (2003 Edition). All of the procedures in Annex B of the Approved Document E have been followed.

Tests were undertaken by Lewis Wheatley of inacoustic on the 4th December 2019.

2. CERTIFICATION OF TEST RESULTS

inacoustic are third-party accredited by SITMA (Membership N^o 9029) to undertake sound insulation testing, in accordance with the requirements of the Approved Document E.

You can obtain online verification (certification) of the sound insulation testing results, by following these steps:

Go to [SITMA.BCTA.Group](https://www.sitma.co.uk/BCTA/Group)

Enter the following information in the Customer Report Finder

Job Number: 8805

Job Post Code: SA13 1JB

A Portable Document Format (PDF) will be automatically download containing verification of the sound insulation testing results, which you can print for your records.

3. 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, incorporating 2004, 2010, 2013 and 2015 amendments. 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 0.1a of ADE 2015 provides the performance standards for purpose built dwelling houses and flats, which is reproduced below.

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

	Airborne sound insulation sound insulation $D_{nT,w} + C_v$ 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

4. 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 test, 2 airborne floor tests and 2 impact floor tests).

The development consists of 6 flats.

In order to satisfy the requirements of Approved Document E 6 individual sound insulation tests have been carried out (2 airborne wall tests, 2 airborne floor tests, and 2 impact floor tests).

The development constitutes a Change of Use, and hence performance standards are in line with the requirements of ADE for this type of dwelling.

5. 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 10.1 provides further information of the test procedure used along with a list of standards followed.

5.1. Deviations from Test Procedure

None.

6. MEASUREMENT EQUIPMENT

All of the following equipment is fully UKAS calibrated at an independent test laboratory. The following equipment was used to carry out the sound insulation testing;

TABLE 1: TEST EQUIPMENT

Make, Model & Description	Serial Number	Calibration Certificate Number	Calibration Due Date
NTi Audio XL2-TA Sound Level Meter	A2A-14636-E0	U29205	03/08/2020
NTi Audio MA220 Preamplifier	7591	U29205	03/08/2020
NTi Audio MC230A Microphone	A15872	U29205	03/08/2020
Larson Davis CAL200 Acoustic Calibrator	15314	U29203	03/08/2019
ANV Tapping Machine type TM-02	TM02032	UCRT18/1546	25/05/2020

6.1. Calibration

The Sound Level Meters were calibrated on site, at the start and end of the measurement sequence, to a level of 94.0 dB at 1000Hz. No drift was noted. The operation of the ANV Measurement Systems TM-02 Tapping Machine was also inspected, with no deviations from acceptable function.

7. RESULTS

A summary of the results can be seen below in Table 2.

TABLE 2: RESULTS OF SOUND INSULATION TESTING

ID	Type	Source Room		Receiver Room		$D_{nT,w} + C_{50}$ (dB)	$L_{nT,w}$ (dB)	Result	Pass/Fail
		Description	Volume (m ³)	Description	Volume (m ³)				
26334	Airborne (Wall)	Flat E Living Room 1	60	Flat D Bedroom 1	29.3	≥ 43 dB	-	49	PASS
26330	Airborne (Floor)	Flat E Living Room 1	60	Flat B Living Room 1	60	≥ 43 dB	-	60	PASS
26331	Impact (Floor)	Flat E Living Room 1	60	Flat B Living Room 1	60	-	≤ 64 dB	37	PASS
26335	Airborne (Wall)	Flat B Living Room 1	60	Flat A Bedroom 1	29.3	≥ 43 dB	-	53	PASS
26332	Airborne (Floor)	Flat F Bedroom 1	35.8	Flat C Bedroom 1	35.8	≥ 43 dB	-	60	PASS
26333	Impact (Floor)	Flat F Bedroom 1	35.8	Flat C Bedroom 1	35.8	-	≤ 64 dB	37	PASS

Standard graphical results are presented in Appendix 10.2.

7.1. Description of Constructions Tested

Party floors between Flat E and Flat B have been identified as Timber Floors. Party Floors between Flat F and Flat C have been identified as Concrete floors. The walls have been identified as timber frame walls.

7.2. 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 dB and 10 dB above measured background noise levels, a correction has been applied as outlined in ISO 140-4. Where one-third octave results are seen to be at the limit of measurement, a correction has also been applied in line with ISO 140-4. All one-third octave results at the limit of measurement have been indicated within the test certificates presented in Appendix 9.2. The procedure for correction is outlined in Appendix 9.1.2.

8. CONCLUSION

In order to demonstrate compliance with the requirements of Approved Document E (ADE), sound insulation testing has been undertaken at 2-4 Station Road, Port Talbot, SA13 1JB. 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'.

The results show that all of the tests have passed.

9. REFERENCES

Approved Document E - The Building Regulations 2000 - Resistance to the Passage of Sound, July 2003, with 2005, 2010, 2013, and 2015 amendments.

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 7: 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 - 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.

10. APPENDICES

10.1. Measurement Procedures, Analysis Method and Quantities

10.1.1. Measurement Quantities

D_{nTw} Weighted Standardized Level difference

This is a measure of the amount by which constructions (eg, walls and floors) reduce the passage of airborne sound between two rooms. The value of the airborne sound insulation parameter D_{nTw} is greater for constructions providing good sound insulation than for constructions providing poor sound insulation.

$D_{nTw} + C_{tr}$ Weighted Standardized Level difference with spectrum adaptation term

This measurement quantity is as defined above for D_{nTw} except that it has been weighted with a spectrum adaptation term. The C_{tr} spectrum adaptation term allows a more rigorous assessment of sound insulation performance with respect to low frequency noise.

L_{nTw} Weighted Standardized Impact Sound Pressure Level

This is a measure of the amount by which constructions (eg, floors and stairs) prevent sound caused by impacts upon it being transmitted to an adjacent room. The value of the impact sound insulation parameter L_{nTw} is lower for constructions providing good sound insulation than for constructions providing poor sound insulation.

10.1.2. Measurement 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; and
- BS EN ISO 140-7:1998.

Note: All measurements described below were undertaken using simultaneously recorded one-third octave frequency bands between 100 Hz and 3150 Hz.

Airborne Sound Insulation – Testing Procedure

Two sources of pink noise were placed in the ‘source’ room such that a diffuse sound field was created within the room.

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

Noise levels were recorded in the ‘receiver’ room at 5 discrete locations, for a 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; and
- 1 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).

Reverberation time measurements were undertaken within the 'receiving' room using an impulse method (starting pistol). A minimum of 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; and
- 1 m between any microphone position and the sound source.

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.

Impact Sound Insulation - Testing Procedure

A single tapping machine was used, positioned at 4 different locations. A minimum number of six 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; and
- 0.5 m between any microphone position and the room boundaries.

Reverberation time measurements were undertaken within the 'receiving' room using an impulse method (starting pistol). A minimum of 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; and
- 1 m between any microphone position and the sound source.

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.

10.1.3. Analysis 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 717-1:1997; and
- BS EN ISO 717-2:1997.

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:

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

Where L is the adjusted signal level, in decibels, L_{sb} is the level of signal and background noise combined, in decibels, and L_b is the background noise level, in decibels.

If the sound pressure levels in the receiver room are 6 dB or less above measured background noise, a correction of 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 one-third 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 one-third octave band centre frequency:

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

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

Each one-third 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 one-third 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 one-third 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.

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:

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

Where L is the adjusted signal level, in decibels, L_{sb} is the level of signal and background noise combined, in decibels, and L_b is the background noise level, in decibels.

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 one-third octave band centre frequency:

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

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

Following the above, each one-third 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 one-third 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.

10.2. Graphs of Sound Insulation Results

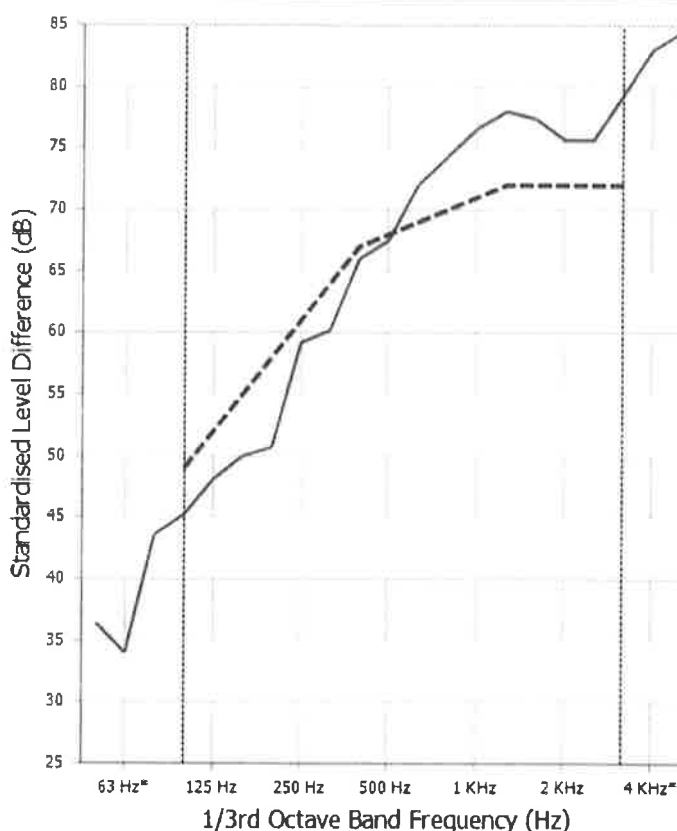
Registered Sound Insulation Test Certificate



Test No: 26330	Test Job Ref: 8805	Testing Org. Name: Inacoustic	SITMA Membership No: 9029
Customer: Ferhan Rasul	Job Address: 2-4 Station Road	Test Type: Airborne (Floor)	
Address: 2-4 Station Road		Test Date: 04/12/2019	
	Port Talbot	Tester: Lewis Wheatley	
		Site Type: Material Change of Use	
Postcode: SA13 1JB	Postcode: SA13 1JB	Site Build: Dwelling-House/Flat	

Source Room:	Partition:	Receiver Room:
Description: Flat E Living Room 1	WT0001**	Flat B Living Room 1
Volume / Area: 60.0 m3	25.0 m2	60.0 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High BGnd
50 Hz*	36.4	
63 Hz*	34.0	
80 Hz*	43.6	
100 Hz	45.2	
125 Hz	48.1	
160 Hz	50.0	
200 Hz	50.7	
250 Hz	59.2	
315 Hz	60.2	
400 Hz	66.0	
500 Hz	67.5	
630 Hz	72.0	
800 Hz	74.3	
1 KHz	76.6	
1.25 KHz	78.0	
1.6 KHz	77.4	X
2 KHz	75.7	X
2.5 KHz	75.7	X
3.15 KHz	79.3	X
4 KHz*	83.0	X
5 KHz*	84.5	X



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-1

$D_{nT,w}(C; C_{tr})$ [dB]: 68 (-2; -8) dB

$D_{nT,w} + C_{tr}$ [dB]: 60 dB

Minimum Pass Level [dB]: 43 dB

PASS

Adverse Aggregated Deviations [dB]: 27.1 dB

Partition Detail: WT0001** - Generic Timber Frame -

Test Exceptions (if any):

AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments

BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements

BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

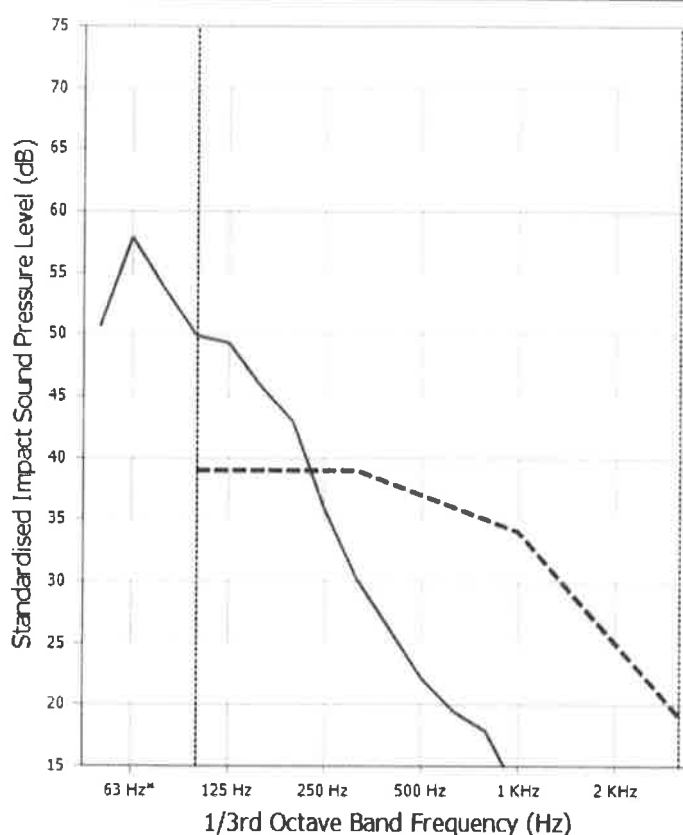
Registered Sound Insulation Test Certificate



Test No:	26331	Test Job Ref:	8805	Testing Org. Name:	Inacoustic	SITMA Membership No:	9029
Customer	Ferhan Rasul	Job Address	2-4 Station Road	Test Type	Impact (Floor)	Test Date	04/12/2019
Address	2-4 Station Road		Port Talbot	Tester	Lewis Wheatley	Site Type	Material Change of Use
	Port Talbot		Wales	Site Build	Dwelling-House/Flat		
Postcode	SA13 1JB	Postcode	SA13 1JB				

	Source Room:	Partition:	Receiver Room:
Description	Flat E Living Room 1	FC0001**	Flat B Living Room 1
Volume / Area	60.0 m3	25.0 m2	60.0 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High BGnd
50 Hz*	50.6	
63 Hz*	57.9	
80 Hz*	53.7	
100 Hz	49.9	
125 Hz	49.3	
160 Hz	45.8	
200 Hz	43.0	
250 Hz	35.9	
315 Hz	30.3	
400 Hz	26.3	
500 Hz	22.2	
630 Hz	19.5	
800 Hz	17.9	
1 KHz	12.9	
1.25 KHz	10.9	X
1.6 KHz	10.2	X
2 KHz	11.2	X
2.5 KHz	9.5	X
3.15 KHz	8.6	X
4 KHz*	6.5	X
5 KHz*	6.1	X



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-2

L' nT,w (CI) [dB]: 37 (2) dB

Maximum Pass Level [dB]: 64 dB

PASS

Adverse Aggregated Deviations [dB]: 32.0 dB

Partition Detail: FC0001** - Generic Concrete -

Test Exceptions (if any):

IMPACT SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments

BS EN ISO 140 - Part 7:1998: Acoustics - measurement of sound in buildings and of building elements

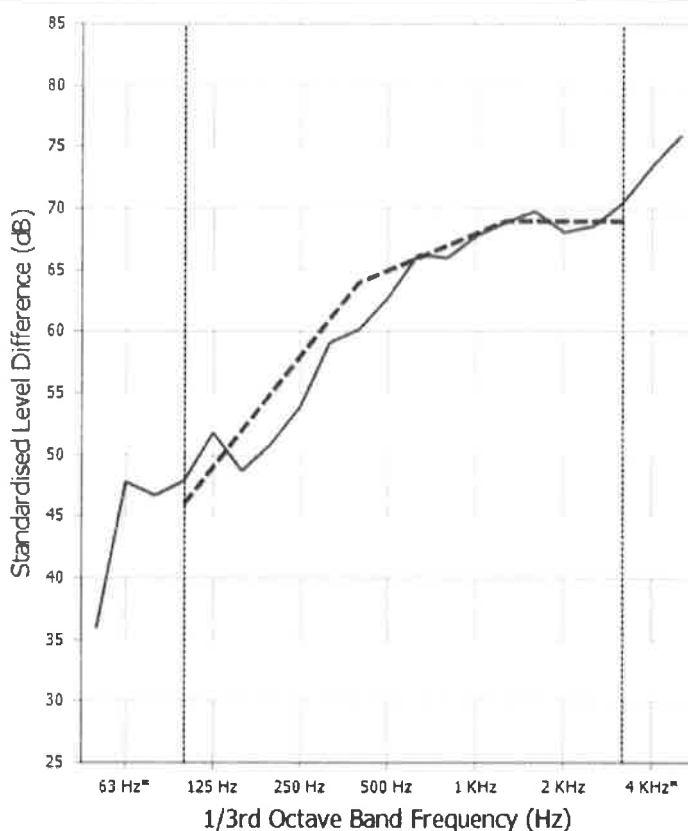
BS EN ISO 717 - Part 2:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate



Test No: 26332	Test Job Ref: 8805	Testing Org. Name: Inacoustic	SITMA Membership No: 9029
Customer Ferhan Rasul	Job Address 2-4 Station Road	Test Type Airborne (Floor)	
Address 2-4 Station Road	Port Talbot	Test Date 04/12/2019	
	Wales	Tester Lewis Wheatley	
Postcode SA13 1JB	Postcode SA13 1JB	Site Type Material Change of Use	
		Site Build Dwelling-House/Flat	
Source Room:			
Description	Flat F Bedroom 1	Partition:	Receiver Room:
Volume / Area	35.8 m3	FC0001**	Flat C Bedroom 1
		14.9 m2	35.8 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High BGnd
50 Hz*	35.9	X
63 Hz*	47.8	
80 Hz*	46.7	
100 Hz	47.9	
125 Hz	51.8	
160 Hz	48.7	
200 Hz	50.9	
250 Hz	53.9	
315 Hz	59.1	
400 Hz	60.2	
500 Hz	62.8	
630 Hz	66.3	
800 Hz	66.0	
1 KHz	67.8	
1.25 KHz	68.9	
1.6 KHz	69.8	
2 KHz	68.1	
2.5 KHz	68.6	
3.15 KHz	70.5	
4 KHz*	73.5	
5 KHz*	76.0	



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-1

$D_{nT,w}(C; C_{tr})$ [dB]: 65 (-1; -5) dB

$D_{nT,w} + C_{tr}$ [dB]: 60 dB

Minimum Pass Level [dB]: 43 dB

PASS

Adverse Aggregated Deviations [dB]: 22.0 dB

Partition Detail: FC0001** - Generic Concrete -

Test Exceptions (if any):

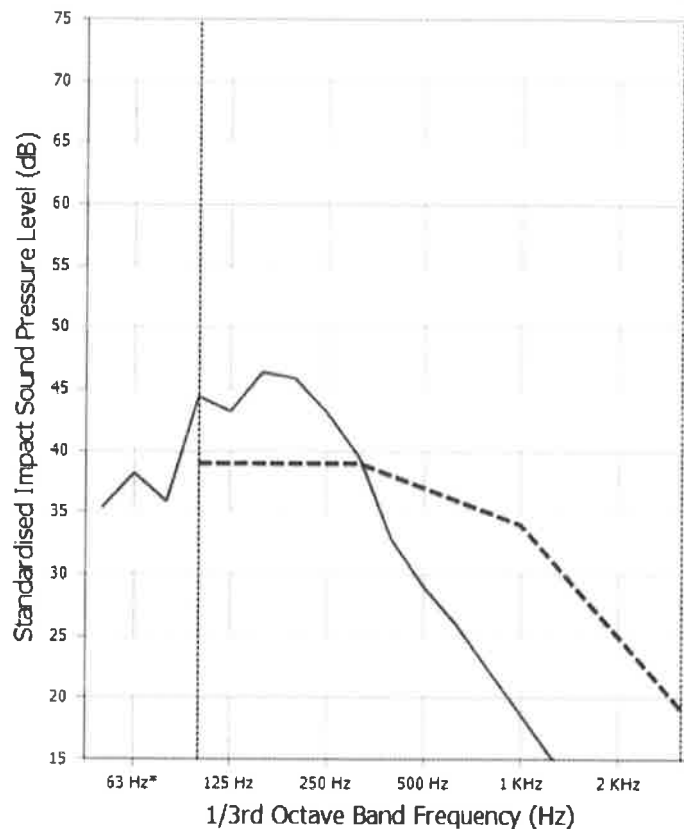
Registered Sound Insulation Test Certificate



Test No:	26333	Test Job Ref:	8805	Testing Org. Name:	Inacoustic	SITMA Membership No:	9029
Customer	Ferhan Rasul	Job Address	2-4 Station Road	Test Type	Impact (Floor)	Test Date	04/12/2019
Address	2-4 Station Road		Port Talbot	Tester	Lewis Wheatley	Site Type	Material Change of Use
	Port Talbot		Wales	Site Build	Dwelling-House/Flat		
Postcode	SA13 1JB	Postcode	SA13 1JB				

	Source Room:	Partition:	Receiver Room:
Description	Flat F Bedroom 1	FC0001**	Flat C Bedroom 1
Volume / Area	35.8 m3	14.9 m2	35.8 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High BGnd
50 Hz*	35.4	X
63 Hz*	38.2	
80 Hz*	35.9	
100 Hz	44.4	
125 Hz	43.2	
160 Hz	46.4	
200 Hz	45.9	
250 Hz	43.1	
315 Hz	39.5	
400 Hz	32.8	
500 Hz	29.0	
630 Hz	26.0	
800 Hz	22.3	
1 KHz	18.7	
1.25 KHz	15.0	
1.6 KHz	13.2	X
2 KHz	14.6	X
2.5 KHz	13.7	X
3.15 KHz	11.7	X
4 KHz*	10.4	X
5 KHz*	10.1	X



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-2

L' nT,w (CI) [dB]: 37 (0) dB

Maximum Pass Level [dB]: 64 dB

PASS

Adverse Aggregated Deviations [dB]: 28.5 dB

Partition Detail: FC0001** - Generic Concrete -

Test Exceptions (if any):

IMPACT SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments

BS EN ISO 140 - Part 7:1998: Acoustics - measurement of sound in buildings and of building elements

BS EN ISO 717 - Part 2:1997: Acoustics - rating of sound in buildings and of building elements

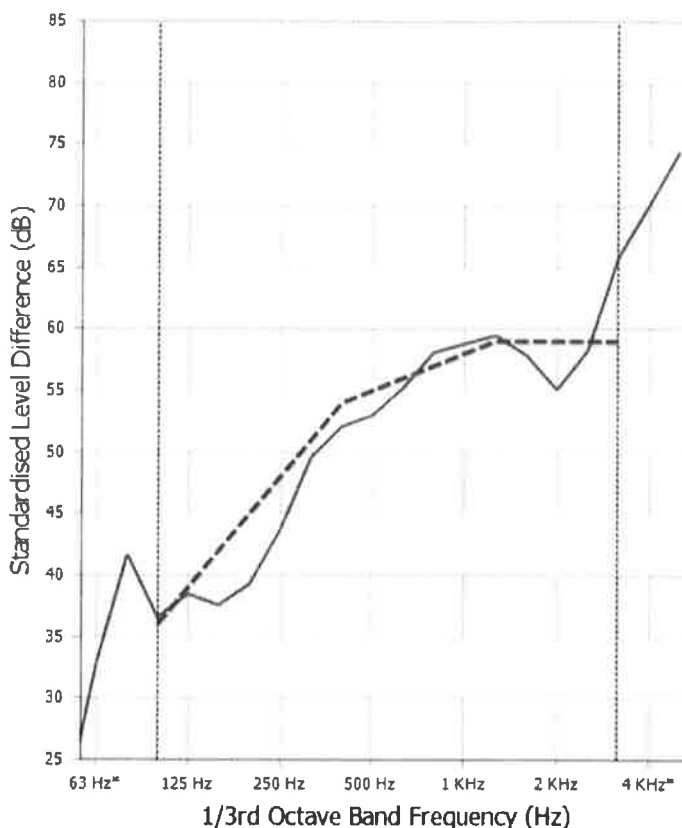
Registered Sound Insulation Test Certificate



Test No: 26334	Test Job Ref: 8805	Testing Org. Name: Inacoustic	SITMA Membership No: 9029
Customer: Ferhan Rasul	Job Address: 2-4 Station Road	Test Type: Airborne (Wall)	
Address: 2-4 Station Road	Port Talbot	Test Date: 04/12/2019	
Port Talbot	Wales	Tester: Lewis Wheatley	
Postcode: SA13 1JB	Postcode: SA13 1JB	Site Type: Material Change of Use	
		Site Build: Dwelling-House/Flat	

Source Room:	Partition:	Receiver Room:
Description: Flat E Living Room 1	WT0001**	Flat D Bedroom 1
Volume / Area: 60.0 m3	9.6 m2	29.3 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High Bnd
50 Hz*	21.1	
63 Hz*	32.9	
80 Hz*	41.7	
100 Hz	36.6	
125 Hz	38.5	
160 Hz	37.6	
200 Hz	39.3	
250 Hz	43.7	
315 Hz	49.6	
400 Hz	52.1	
500 Hz	53.0	
630 Hz	55.2	
800 Hz	58.1	
1 KHz	58.8	
1.25 KHz	59.5	
1.6 KHz	57.9	
2 KHz	55.1	
2.5 KHz	58.3	
3.15 KHz	65.9	
4 KHz*	70.1	
5 KHz*	74.5	



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-1

$D_{nT,w}(C; C_{tr})$ [dB]: 55 (-2; -6) dB
 $D_{nT,w} + C_{tr}$ [dB]: 49 dB
Minimum Pass Level [dB]: 43 dB

PASS

Adverse Aggregated Deviations [dB]: 26.7 dB

Partition Detail: WT0001** - Generic Timber Frame -

Test Exceptions (if any):

AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments

BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements

BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

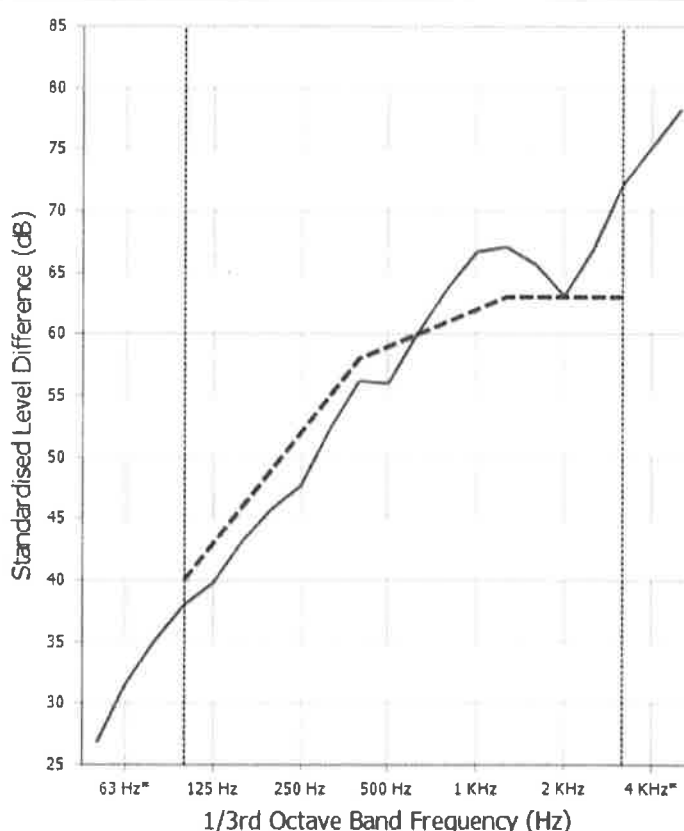
Registered Sound Insulation Test Certificate



Test No:	26335	Test Job Ref:	8805	Testing Org. Name:	Inacoustic	SITMA Membership No:	9029
Customer	Ferhan Rasul	Job Address	2-4 Station Road	Test Type	Airborne (Wall)	Test Date	04/12/2019
Address	2-4 Station Road		Port Talbot	Tester	Lewis Wheatley	Site Type	Material Change of Use
	Port Talbot		Wales	Site Build	Dwelling-House/Flat		
Postcode	SA13 1JB	Postcode	SA13 1JB				

	Source Room:	Partition:	Receiver Room:
Description	Flat B Living Room 1	WT0001**	Flat A Bedroom 1
Volume / Area	60.0 m3	9.6 m2	29.3 m3

Frequency (Hz)	DnT 1/3 Octave (dB)	High BGnd
50 Hz*	26.8	
63 Hz*	31.6	
80 Hz*	35.1	
100 Hz	38.0	
125 Hz	39.8	
160 Hz	43.2	
200 Hz	45.8	
250 Hz	47.7	
315 Hz	52.3	
400 Hz	56.2	
500 Hz	56.0	
630 Hz	60.1	
800 Hz	63.7	
1 KHz	66.7	
1.25 KHz	67.1	
1.6 KHz	65.7	
2 KHz	63.1	
2.5 KHz	66.9	
3.15 KHz	72.1	
4 KHz*	75.2	
5 KHz*	78.3	



Evaluation based on field measurement using results obtained by an engineering method

*Outside scope of accreditation

Above graph shows frequency range according to the curve of reference values within ISO 717-1

D_{nT,w} (C; C_{tr}) [dB]: 59 (-1; -6) dB

D_{nT,w} + C_{tr} [dB]: 53 dB

Minimum Pass Level [dB]: 43 dB

PASS

Adverse Aggregated Deviations [dB]: 23.0 dB

Partition Detail: WT0001** - Generic Timber Frame

Test Exceptions (If any):

AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments

BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements

BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

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