



SOUND INSULATION TEST REPORT

Sound Insulation testing in accordance with Test
Standards BS EN ISO 140-4 & BS EN ISO 140-7

Report Reference Number: 28105

Report Date: 25/04/2023

Abstract

Sound Insulation Testing is the process of measuring how much noise a building element, normally a wall or a floor, stops from travelling through to a neighbouring property.

This report describes the process taken and the results obtained from the sound insulation testing at 64 - 65 St Marys Butts, Reading, RG1 2LG.

Competent Tester

Testing was conducted by Rhys Davies who is a member of the SITMA Sound Insulation Testing Registered Testers Scheme, Registration Number: 7183

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The SITMA Registered Testers' Scheme

This report was conducted by a tester that is registered with the SITMA Registered Testers' Scheme for Sound Insulation Testers. More information on the scheme, the lodgement system, quality control and auditing are discussed below.

Scheme Member Conducting this test

The tester that conducted your testing was:	Rhys Davies	
Linked to:	ATSPACE Ltd, Unit 3 & 4 , , Barkway, SG8 8DL.	

Entry Requirements

In order to enter the SITMA Registered Testers' Scheme, testers are required to either:

- Have completed the Institute of Acoustics Certificate of Competence in Building Acoustics Measurements (CCBAM), or
- Have been assessed by SITMA to hold suitable, demonstrable evidence of competence in sound insulation testing

Audit Requirements

Each tester is audited at least twice a year, completely unannounced. This is achieved by the tester logging their job onto the SITMA portal **in advance of testing taking place**.

Audits are carried out by independent SITMA employees who have been trained in accordance with BS EN ISO 19011:2018 and have extensive background in Sound Insulation Testing.

Each tester will be able to issue you with their SITMA audit documentation from their last audit alongside this report, if requested.

SITMA Portal

The SITMA Portal, besides logging every job for every tester, is used to generate reports, just like this one. The portal does not take pre-calculated information, it takes the raw data from the sound level meter and calculates each individual test itself, before producing this report. This ensures that no test data has been amended by any tester prior to the information being uploaded.

SITMA Accreditation

SITMA will shortly have achieved BS EN ISO/IEC 17024:2012 accreditation from UKAS (Application number 10579). SITMA has completed the Initial Audit and is awaiting final confirmation.

Calibration Requirements

SITMA holds some of the strictest calibration requirements in the world for sound insulation testing, with each sound level meter and tapping machine requiring UKAS calibration every 2 years and the microphone calibrator requiring calibration every 12 months. If the tester does not hold correctly calibrated equipment, the SITMA portal will not let them produce this report.

Complaints

You should speak directly with the tester if you wish to make a complaint. If your complaint is not

handled to your satisfaction, you are then welcome to make a complaint directly to the SITMA registered testers' scheme in line with our complaints process PUS013.

TO CHECK THIS REPORT IS VALID

1. Head to this site: <https://sitma.bcta.group/>
2. Use these credentials:
 - a. Report Reference Number:
 - i. 28105
 - b. Job Postcode:
 - i. RG1 2LG

Simplified Test Results

Certificate Number	Plot & Source Room	Plot & Receive Room	Target $D_{nT,w}+C_{tr}$ or $L'_{nT,w}$	Result $D_{nT,w}+C_{tr}$ or $L'_{nT,w}$	Pass / Fail
113989	Flat 4 Kitchen / Living Room	Flat 2 Kitchen / Living Room	43	49	PASS
113990	Flat 4 Bedroom 1	Flat 2 Bedroom 1	43	54	PASS
113991	Flat 4 Kitchen / Living Room	Flat 2 Kitchen / Living Room	64	51	PASS
113992	Flat 4 Bedroom 1	Flat 2 Bedroom 1	64	50	PASS
113993	Build No. 65 Commercial Space	Flat 2 Kitchen / Living Room	43	55	PASS

Testing Methodology

Airborne Sound Insulation Tests

Measurements of Standardised Level Difference (D_{nT}) were conducted in accordance with BS EN ISO 140-4:1998.

Level measurements in the Source & Receive Rooms (L_1 & L_2)

The noise was generated in the source room by placing an active loudspeaker, which produces a steady spectrum of pink noise, in an external corner of the room but at least 0.5m away from any reflective surface.

The noise level was measured in both the source room and receive room, sampling as much of the room as possible. The sound level meter was always kept 0.7m away from any reflective surface as to not artificially increase or decrease noise levels into the microphone.

The measurements were taken at one-third octave band intervals from 100 to 3150 Hertz using an average time of 30 seconds. The speaker was then moved to a corner junction on two internal walls and the measurements were repeated. The measurements in each room were arithmetically averaged. For separating walls the speaker should be in a corner opposite the test wall.

Background Measurements in Receive Room (L_b)

Where noise levels were measured in the receive room, the background noise level was also measured with the source room speaker turned off to ensure the background noise level did not influence the result. The background noise level is measured over a time period that accurately reflects the background noise measurement at the time of the test. This is normally between 6 & 30 seconds and can vary between the first and second background measurements.

Reverberation Time Measurements (T_2 , T_{20})

A minimum of 6 reverberation time measurements were also taken in the receive room to accurately define the level of influence the diffuse field has on the microphone, ensuring that an increase in soft or hard surfaces does not impact the overall test result.

A minimum of 6 reverberation times were measured in each room using a minimum of 3 microphone positions at each of 2 loudspeaker positions in accordance with BS EN ISO 354:2003 (also complies with BS EN 20354:1993)

Impact Sound Insulation Tests

Impact Sound Insulation was conducted to BS EN ISO 140-7:1998

Measurements of standardised impact Sound Pressure Level (L'_{nT}) were conducted in accordance with BS EN ISO 140-7:1998.

Level Measurements in the Receive Room

Level measurements were acquired in the receive room using a tapping machine, which has a set of 5 steel hammers to produce impact noise on the separating floor surface.

The tapping machine was orientated at 45 degrees to the main floor axis.

The noise level was measured in the receive room at 2 microphone positions at one-third octave band intervals from 100 to 3150 Hertz using an average time of at least 6 seconds for each of 4 tapping machine positions, creating 8 individual measurement readings.

Measurements were always taken at least 0.7m away from any reflective or absorptive surfaces.

Background Measurements in Receive Room (L_b)

Where noise levels were measured in the receive room, the background noise level was also measured with the tapping machine turned off. This is to ensure the background noise level did not influence the result. The background noise level is measured over a time period that accurately reflects the background noise measurement at the time of the test. This is normally between 6 & 30 seconds and can vary between the first and second background measurements.

Reverberation Time Measurements (T_2 , T_{20})

A minimum of 6 reverberation times were measured in each room using a minimum of 3 microphone positions at each of 2 loudspeaker positions in accordance with BS EN ISO 354:2003 (also complies with BS EN 20354:1993)

These measurements are often the same readings as the airborne test when measured in the same group of tests where the receive room is the same and the test(s) carried out on the same day.

Calculation Methodology

Airborne Sound Insulation Tests

Background Noise Correction ('Corrected L_2 ')

Any receive room noise measurements that are within 6dB of the background measurements are corrected by logarithmically averaging the difference to correct the receive room measurement. The correction is applied up to 10dB, where a maximum correction of 1.6dB is applied. Any background noise level greater than 10dB over the L_2 measurement will appear to reduce the sound insulation at that frequency.

Level Difference (' D ')

The difference between the source and 'corrected' receive room measurement is calculated for each speaker position and 2 differences averaged to obtain ' D ' for each frequency measured. These are calculated separately for Speaker Position 1 and Speaker Position 2

Standardised Level Difference (' D_{nT} ')

The result is standardised by adding 10 times the logarithm of half the reverberation time at each frequency to give the standardized level difference (D_{nT}) at each frequency. These are calculated separately for Speaker Position 1 and Speaker Position 2 and are arithmetically averaged to produce final $D_{nT,S}$.

Weighted Standardized Level Difference (' $D_{nT,w}$ ')

The $D_{nT,S}$ are then compared to the standard reference curve as defined in BS EN ISO 717-1:1997 to give a single figure result of $D_{nT,w}$.

Weighted Standardized Level Difference with Spectrum Adaption (' $D_{nT,w} + C; C_{tr}$ ')

The spectrum adaptation terms ($C; C_{tr}$) are then calculated in accordance with BS EN ISO 717-1:1997.

Precision

All measurements are taken to 0.1dB precision, except reverberation times which are taken to 0.01 seconds precision.

Impact Sound Insulation Tests

Background Noise Correction ('Corrected L_2 ')

Any receive room noise measurements that are within 6dB of the background measurements are corrected by logarithmically averaging the difference to correct the receive room measurement. The correction is applied up to 10dB, where a maximum correction of 1.6dB is applied. Any background noise level greater than 10dB over the L_2 measurement will appear to reduce the sound insulation at that frequency.

Normalized Impact Sound Pressure Level (' L'_{nT} ')

The result is normalized by adding 10 times the logarithm of half the reverberation time at each frequency to the 'corrected' L_2 to give the Standardized Impact Sound Pressure Level (L'_{nT}) at each frequency.

Weighted Standardized Impact Sound Pressure Level (' $L'_{nT,w}$ ')

The $L'_{nT,w}$ are then compared to the standard reference curve as defined in BS EN ISO 717-2:1997 to give a single figure result.

Precision

All measurements are taken to 0.1dB precision, except reverberation times which are taken to 0.01 seconds precision.

Sampling Regime

Testing was conducted using a sampling regime in accordance with Approved Document E 2003 [as amended] (ADE), ensuring each construction type was tested on the project, not necessarily each plot.

It is assumed that each construction type is constructed consistently. If this is not the case, and deviations of the construction type occur, further testing will be required to comply with the requirements of Approved Document E 2003 [as amended] to the Building Regulations.

ADE requires that sets of tests are carried out on one in ten of each construction type or sub-group. Each set of tests on houses is made up of two airborne sound insulation tests (Two Tests). Each set of tests on flats is made up of two airborne tests on walls and two airborne and two impact tests on floors (Six Tests).

The location of the sets of tests are selected at random by the tester except where specifically requested the Approved Inspector or specialist input from Robust Details.

Rooms were tested unfurnished unless testing is specifically requested in a furnished room. Testing is conducted using the larger room as the source room, with a tolerance of 10% of volume being acceptable either way. Doors, windows and trickle vents must be closed and kitchen units, cupboard doors, wardrobes etc shall be open for the duration of the test when they have been installed against the separating wall under test.

For impact testing, the tests are always conducted on the separating floor that has received Building Control Approval.

It is only ever acceptable to test on a soft floor covering where that covering is an integral part of a Type 1 concrete floor as defined by ADE and cannot physically be lifted by the testers own hands.

Occasionally, rooms may have an awkward layout, such as a stagger, be significant in length (>10m) or contain internal barriers. These requirements are defined in EN ISO 140-14:2004 which all testers hold a copy of as a mandatory entry requirement into the SITMA scheme. Where a test has an awkward layout, the testing method from BS EN ISO 140-14:2004 will be defined in the report and sketches held internally.

Deviations

Background Noise Levels

Background noise levels are often an unavoidable part of testing as testing must take place on a live building site. Though a correction is applied within the calculation, high background noise levels may result in the wall/floor under test not achieving its full potential. Situations can occur where background noise levels are not high but the sound insulation performance of the separating floor or wall is so good that the measured levels are close to the prevailing background levels. The equipment used cannot distinguish between background noise levels and the noise from the speaker.

Deviations Related to the test

If any deviation from the testing method was necessary, details of the deviation are indicated on each individual test certificate (appended to this report). Where deviations were avoidable, or tests have been conducted on a 'trial' basis, these will be highlighted at the bottom of each certificate.

Calibration

Calibration

The calibration certificates are appended to this report under Appendix B. The summary of calibrated equipment used is shown below:

Item	Calibration from	Calibration expiry	Certificate Number
RD new kit	06 May 2021	05 May 2023	UCRT21/1571
RD new kit	19 Jul 2022	19 Jul 2023	UCTRT22/1914
RD New Tapper	10 Jun 2021	09 Jun 2023	UCRT21/1723

Test Results

Airborne floor Tests – Material Change of Use by Rhys Davies

Certificate Number	Plot & Source Room	Source Room Volume	Plot & Receive Room	Receive Room Volume	Target $D_{nT,w}+C_{tr}$	Result $D_{nT,w}+C_{tr}$	Pass / Fail
113989	Flat 4 Kitchen / Living Room	73.6m ³	Flat 2 Kitchen / Living Room	73.6m ³	>= 43 dB	>= 49 dB	Pass
Construction: Generic Timber Joist: FT0001** : Generic Timber Joist							
Deviations:							
113990	Flat 4 Bedroom 1	40.9m ³	Flat 2 Bedroom 1	40.9m ³	>= 43 dB	>= 54 dB	Pass
Construction: Generic Timber Joist: FT0001** : Generic Timber Joist							
Deviations:							
113993	Build No. 65 Commercial Space	335.0m ³	Flat 2 Kitchen / Living Room	73.6m ³	>= 43 dB	>= 55 dB	Pass
Construction: Generic Timber Joist: FT0001** : Generic Timber Joist							
Deviations:							

Impact floor Tests – Material Change of Use by Rhys Davies

Certificate Number	Plot & Source Room	Source Room Volume	Plot & Receive Room	Receive Room Volume	Target $L'_{nT,w}$	Result $L'_{nT,w}$	Pass / Fail
113991	Flat 4 Kitchen / Living Room	73.6m ³	Flat 2 Kitchen / Living Room	73.6m ³	<= 64 dB	<= 51 dB	Pass
	Construction: Generic Timber Joist: FT0001** : Generic Timber Joist						
	Deviations:						
113992	Flat 4 Bedroom 1	40.9m ³	Flat 2 Bedroom 1	40.9m ³	<= 64 dB	<= 50 dB	Pass
	Construction: Generic Timber Joist: FT0001** : Generic Timber Joist						
	Deviations:						

Appendix A – Individual Certificates

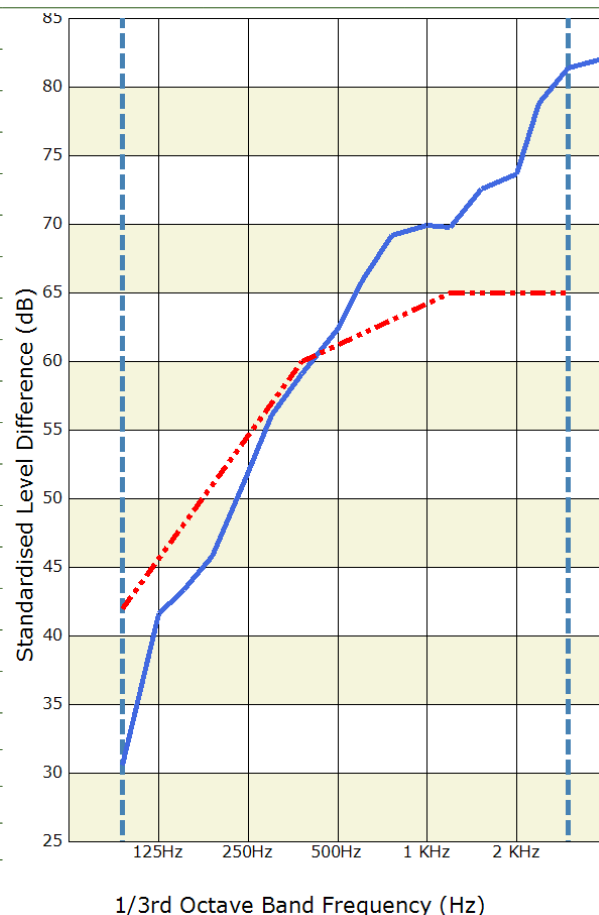
Test Type	Source Room	Partition	Receiver Room
Airborne sound insulation	Flat 4 Kitchen / Living Room	FT0001**	Flat 2 Kitchen / Living Room
Airborne sound insulation	Flat 4 Bedroom 1	FT0001**	Flat 2 Bedroom 1
Airborne sound insulation	Build No. 65 Commercial Space	FT0001**	Flat 2 Kitchen / Living Room
Impact sound insulation	Flat 4 Kitchen / Living Room	FT0001**	Flat 2 Kitchen / Living Room
Impact sound insulation	Flat 4 Bedroom 1	FT0001**	Flat 2 Bedroom 1

Registered Sound Insulation Test Certificate

Test No:	113989	Test Job Ref:	28105	Test Org Name:	ATSPACE Ltd
Customer:	Warrant Investments PLC			Test Type:	Airborne (Floor)
Address:	One Wellstones, , Watford	Job Address:	64 - 65 St Marys Butts, , Reading	Test Date:	24/04/2023
				Tester:	Rhys Davies
				Site type:	Material Change of Use
Postcode:	WD17 2AE	Postcode:	RG1 2LG	Site Build:	Dwelling-House/Flat
Source Room:		Partition:		Receiver Room:	
Description:	Flat 4 Kitchen / Living Room		FT0001**		Flat 2 Kitchen / Living Room
Volume / Area	73.6m ³		28.5m ²		73.6m ³

Frequency (Hz)	D_{nT} 1/3 Octave (dB)	BGnd Correction
50 Hz*	19.3	
63 Hz*	22.6	
80 Hz*	24.6	
100 Hz	30.6	
125 Hz	41.6	
160 Hz	43.4	
200 Hz	45.8	
250 Hz	52	
315 Hz	56.1	
400 Hz	59.1	
500 Hz	62.4	
630 Hz	65.8	
800 Hz	69.2	
1 KHz	69.9	
1.25 KHz	69.8	
1.6 KHz	72.6	
2 KHz	73.7	
2.5 KHz	78.8	X
3.15 KHz	81.4	X
4 KHz*	82.1	X
5 KHz*	75.6	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 BS EN ISO 717-1

$D_{nT,w}$ (C; C_{tr}) [dB]: 61 (-4, -12) dB
 $D_{nT,w} + C_{tr}$ [dB]: 49 dB
Minimum Pass Level [dB]: 43 dB

PASS
Adverse Aggregated Deviations [dB]: 28.4

Partition Detail: FT0001** : Generic Timber Joist

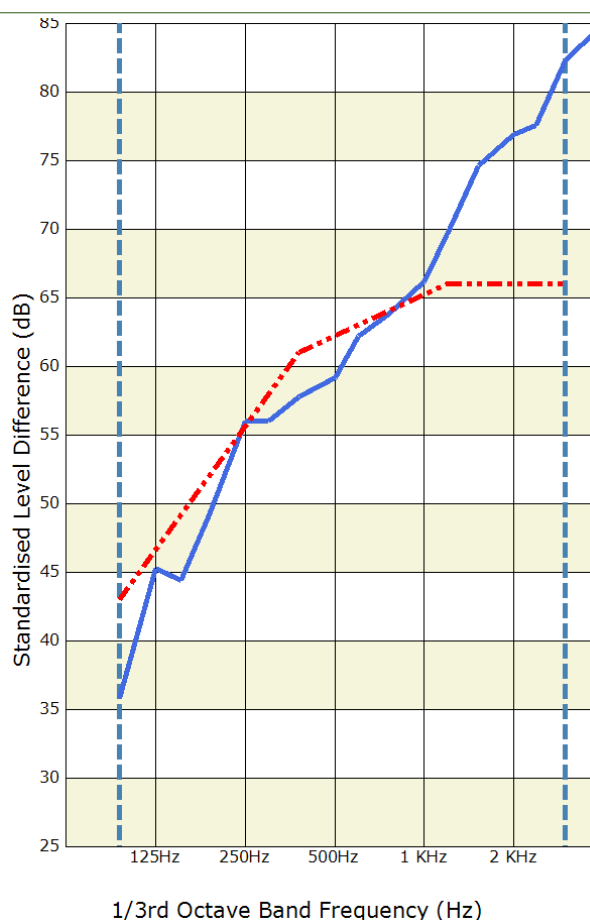
Test Exceptions (if any):

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:	113990	Test Job Ref:	28105	Test Org Name:	ATSPACE Ltd
Customer:	Warrant Investments PLC			Test Type:	Airborne (Floor)
Address:	One Wellstones, , Watford	Job Address:	64 - 65 St Marys Butts, , Reading	Test Date:	24/04/2023
				Tester:	Rhys Davies
				Site type:	Material Change of Use
Postcode:	WD17 2AE	Postcode:	RG1 2LG	Site Build:	Dwelling-House/Flat
Source Room:		Partition:		Receiver Room:	
Description:		Flat 4 Bedroom 1		FT0001**	
Volume / Area		40.9m ³		14.9m ²	
				40.9m ³	

Frequency (Hz)	D_{nT} 1/3 Octave (dB)	BGnd Correction
50 Hz*	9.9	
63 Hz*	19.3	
80 Hz*	21.9	
100 Hz	35.8	
125 Hz	45.3	
160 Hz	44.4	
200 Hz	49.2	
250 Hz	56	
315 Hz	56	
400 Hz	57.8	
500 Hz	59.2	
630 Hz	62.2	
800 Hz	63.8	
1 KHz	66.2	
1.25 KHz	69.6	
1.6 KHz	74.6	
2 KHz	76.9	
2.5 KHz	77.6	
3.15 KHz	82.3	
4 KHz*	85	X
5 KHz*	79.2	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 BS EN ISO 717-1

$D_{nT,w}$ (C; C_{tr}) [dB]: 62 (-2, -8) dB
 $D_{nT,w} + C_{tr}$ [dB]: 54 dB
 Minimum Pass Level [dB]: 43 dB

PASS
 Adverse Aggregated Deviations [dB]: 24.3

Partition Detail: FT0001** : Generic Timber Joist

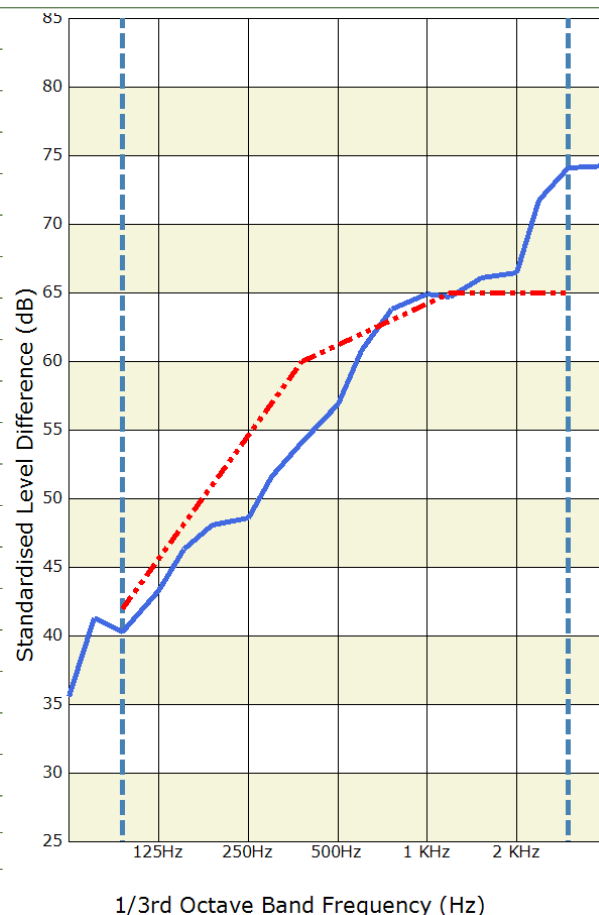
Test Exceptions (if any):

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:	113993	Test Job Ref:	28105	Test Org Name:	ATSPACE Ltd
Customer:	Warrant Investments PLC			Test Type:	Airborne (Floor)
Address:	One Wellstones, , Watford	Job Address:	64 - 65 St Marys Butts, , Reading	Test Date:	24/04/2023
				Tester:	Rhys Davies
				Site type:	Material Change of Use
Postcode:	WD17 2AE	Postcode:	RG1 2LG	Site Build:	Dwelling-House/Flat
Source Room:		Partition:		Receiver Room:	
Description:	Build No. 65 Commercial Space	FT0001**		Flat 2 Kitchen / Living Room	
Volume / Area	335.0m ³	28.5m ²		73.6m ³	

Frequency (Hz)	D_{nT} 1/3 Octave (dB)	BGnd Correction
50 Hz*	25.9	
63 Hz*	35.6	
80 Hz*	41.3	
100 Hz	40.3	
125 Hz	43.3	
160 Hz	46.3	
200 Hz	48.1	
250 Hz	48.6	
315 Hz	51.6	
400 Hz	54.1	
500 Hz	56.9	
630 Hz	60.8	
800 Hz	63.8	
1 KHz	64.9	
1.25 KHz	64.7	
1.6 KHz	66.1	
2 KHz	66.5	
2.5 KHz	71.8	
3.15 KHz	74.1	
4 KHz*	74.3	X
5 KHz*	69.5	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 BS EN ISO 717-1

$D_{nT,w}$ (C; C_{tr}) [dB]: 61 (-2, -6) dB
 $D_{nT,w} + C_{tr}$ [dB]: 55 dB
 Minimum Pass Level [dB]: 43 dB

PASS
 Adverse Aggregated Deviations [dB]: 30.3

Partition Detail: FT0001** : Generic Timber Joist

Test Exceptions (if any):

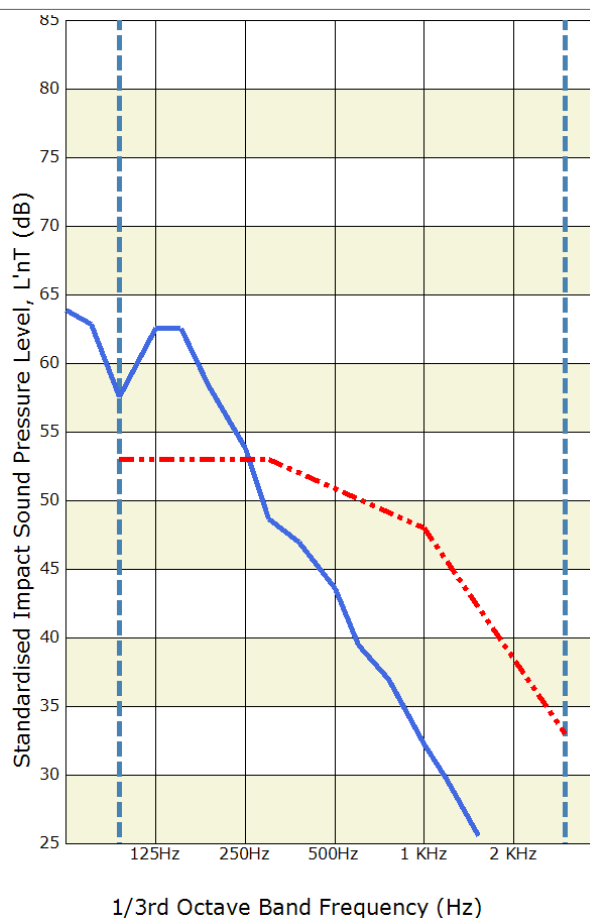
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Impact Test Certificate

Test No:	113991	Test Job Ref:	28105	Test Org Name:	ATSPACE Ltd
Customer:	Warrant Investments PLC			Test Type:	Impact (Floor)
Address:	One Wellstones, , Watford	Job Address:	64 - 65 St Marys Butts, , Reading	Test Date:	24/04/2023
				Tester:	Rhys Davies
				Site type:	Material Change of Use
Postcode:	WD17 2AE	Postcode:	RG1 2LG	Site Build:	Dwelling-House/Flat

	Source Room:	Partition:	Receiver Room:
Description:	Flat 4 Kitchen / Living Room	FT0001**	Flat 2 Kitchen / Living Room
Volume / Area	73.6m ³	28.5m ²	73.6m ³

Frequency (Hz)	L _{nT} 1/3 Octave (dB)	BGnd Correction
50 Hz*	59.1	
63 Hz*	63.9	
80 Hz*	62.9	
100 Hz	57.6	
125 Hz	62.6	
160 Hz	62.6	
200 Hz	58.3	
250 Hz	53.8	
315 Hz	48.7	
400 Hz	47	
500 Hz	43.6	
630 Hz	39.5	
800 Hz	37	
1 KHz	32.3	
1.25 KHz	29.6	
1.6 KHz	25.6	
2 KHz	23.6	
2.5 KHz	20.5	
3.15 KHz	18.3	X
4 KHz*	17.5	X
5 KHz*	16.8	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 BS EN ISO 717-2

L_{nT,w} (CI) [dB]: 51 (1) dB
Maximum Pass Level [dB]: 64 dB

PASS
Adverse Aggregated Deviations [dB]: 29.9

Partition Detail: FT0001** : Generic Timber Joist

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 Impact Test Certificate

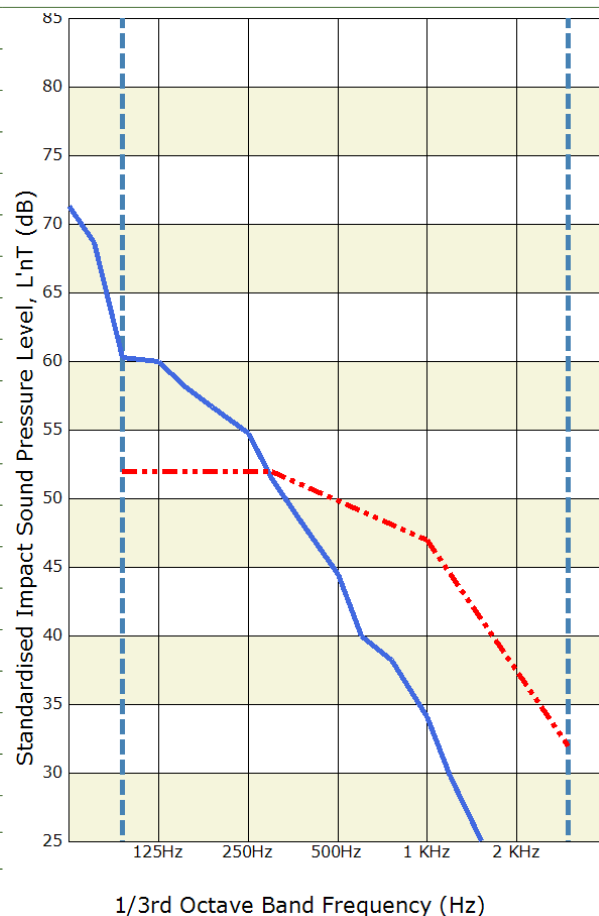
Test No:	113992	Test Job Ref:	28105	Test Org Name:	ATSPACE Ltd
Customer:	Warrant Investments PLC			Test Type:	Impact (Floor)
Address:	One Wellstones, , Watford	Job Address:	64 - 65 St Marys Butts, , Reading	Test Date:	24/04/2023
				Tester:	Rhys Davies
				Site type:	Material Change of Use
Postcode:	WD17 2AE	Postcode:	RG1 2LG	Site Build:	Dwelling-House/Flat

	Source Room:	Partition:	Receiver Room:
Description:	Flat 4 Bedroom 1	FT0001**	Flat 2 Bedroom 1
Volume / Area	40.9m ³	14.9m ²	40.9m ³

Frequency (Hz)	L _{nT} 1/3 Octave (dB)	BGnd Correction
50 Hz*	73.3	
63 Hz*	71.3	
80 Hz*	68.7	
100 Hz	60.3	
125 Hz	60	
160 Hz	58.2	
200 Hz	56.7	
250 Hz	54.8	
315 Hz	51.5	
400 Hz	48.2	
500 Hz	44.5	
630 Hz	40	
800 Hz	38.2	
1 KHz	34.1	
1.25 KHz	29.8	
1.6 KHz	25.1	
2 KHz	25	
2.5 KHz	22.9	
3.15 KHz	19.2	
4 KHz*	17.7	X
5 KHz*	17.3	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 BS EN ISO 717-2

L_{nT,w} (CI) [dB]: 50 (1) dB
Maximum Pass Level [dB]: 64 dB

PASS
Adverse Aggregated Deviations [dB]: 30.0

Partition Detail: FT0001** : Generic Timber Joist

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

Appendix B – UKAS Calibration Certificates

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD
Phone 01371 871030



Certificate of Calibration and Conformance

Certificate number: **U40468**

Test Object: **Sound Calibrator**

Producer: **Norsonic AS.**

Type: **1251**

Serial number: **31169**

Customer: **Airtight & Noisecheck Ltd**

Address: **The Old Laundry, Bridge Street, Southwick,
Hampshire. PO17 6DZ.**

Contact Person: **Charlotte Vine.**

Order No:

Measurement Results	Level dB	Level Stability dB	Frequency Hz	Distortion %
Measurement 1	114.14	0.06	999.72	<0.3
Measurement 2	114.15	0.06	999.72	<0.3
Measurement 3	114.15	0.06	999.72	<0.3
Result (Average):	114.15	0.06	999.72	<0.3
Expanded Uncertainty:	0.1	0.02	1	0.25
Degree of Freedom:	>100	>100	>100	>100
Coverage Factor:	2	2	2	2

The stated level is relative to 20 μ Pa. The level is traceable to National Standards. The stated level is valid at reference conditions. The following correction factors have been applied during the measurement

Pressure: 0.0005 dB/kPa Temperature: 0.003 dB/ $^{\circ}$ C Humidity: 0 dB/%RH Load volume: 0.0003 dB/mm³

Conditions	Pressure kPa	Temperature $^{\circ}$ C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	101.601 $\pm$ 0.041	21.7 $\pm$ 0.1	38.8 $\pm$ 0.9

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of $k=2$, providing a level of confidence of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level. The uncertainty has been determined in accordance with UKAS requirements.

Records: K:\C A\Calibration\Nor-1504\Nor-1018 CalCal\2022\NOR1251_31169_M1.nmf

Preconditioning

The equipment was preconditioned for more than 4 hours in the specified calibration environment.

Method

Calibration has been performed as set out in the current version of CA Technical procedure TP01

Calibration Dates:

Received date:	03/03/2022	Reviewed date:	15/03/2022
Calibration date:	15/03/2022	Issued date:	15/03/2022

Technicians: (Electronic certificate)

Calibrated by: *Michael Tichner*

Reviewed by: *Darren Batten*

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CERTIFICATE OF CALIBRATION



0653

Date of Issue: 20 July 2022

Certificate Number: UCRT22/1914

Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court

17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.uk

Web: www.noise-and-vibration.co.uk

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

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Approved Signatory

K. Mistry

Customer
ATSPACE Ltd
Unit 3 & 4
The Cokenach Estate
Barkway
Royston
Hertfordshire, SG8 8DL

Order No. RD190722

Test Procedure Procedure TP 14 Calibration of Sound Calibrators (60942:2017)

Description Acoustic Calibrator

Identification	Manufacturer	Instrument	Model	Serial No.
	Svantek	Calibrator	SV 33B	108326
Public evidence of Type Approval		No		

The calibrator has been tested as specified in Annex B of IEC 60942:2017. The sound calibrator has been shown to conform to the class 1 requirements for periodic testing described in Annex B of IEC 60942:2017 for the sound pressure level and frequency stated, for the environmental conditions under which the tests were performed. However, as public evidence was not available, from a testing organisation responsible for pattern approval, to demonstrate that the model of sound calibrator conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2017, no general statement or conclusion can be made about conformance of the sound calibrator to the requirements of IEC 60942:2017.

ANV Job No. UKAS22/07477

Date Received 19 July 2022

Date Calibrated 20 July 2022

Previous Certificate	Dated	06 May 2021
	Certificate No.	UCRT21/1468
	Laboratory	0653

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CERTIFICATE OF CALIBRATION



0653

Date of Issue: 11 June 2021

Certificate Number: UCRT21/1723

Calibrated at & Certificate issued by:

ANV Measurement Systems

Beaufort Court

17 Roebuck Way

Milton Keynes MK5 8HL

Telephone 01908 642846 Fax 01908 642814

E-Mail: info@noise-and-vibration.co.uk

Web: www.noise-and-vibration.co.uk

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Approved Signatory

K. Mistry

Acoustics Noise and Vibration Ltd trading as ANV Measurement Systems

CUSTOMER

Airtite Ltd
Residence 2
Royal William Yard
Plymouth
Devon
PL1 3RP

ORDER No

PO-0008

Job No

UKAS21/03208

DATE OF RECEIPT 24 March 2021

PROCEDURE

Calibration Engineer's Handbook section 31

IDENTIFICATION

Tapping Machine ntek type TPM Pro serial no. T1876-8F2

CALIBRATED ON

10 June 2021 to 11 June 2021

PREVIOUS CALIBRATION

None known

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