



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: 30670

Report Date: 02/10/2023

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 141-147 High Street, Brentwood, Essex, CM14 4SA.

Competent Tester

Testing was conducted by Shams Ahmadi who is a member of the SITMA Sound Insulation Testing Registered Testers Scheme, Registration Number: 7143


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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:	Shams Ahmadi	
Linked to:	Eecobuild Ltd, C/O Project H Ltd Beadle House, Bull Plain, Hertford, SG14 1DT.	

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 once per year, which may be unannounced in accordance with SITMA Document PUS012. 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. 30670
 - b. Job Postcode:
 - i. CM14 4SA

Simplified Test Results

Certificate Number	Plot & Source Room	Plot & Receive Room	Target $D_{nT,w}+C_{tr}$ or $L'_{nT,w}$ (dB)	Result $D_{nT,w}+C_{tr}$ or $L'_{nT,w}$ (dB)	Pass / Fail
130155	Flat 5 Kitchen / Dining Room	Flat 4 Kitchen / Dining Room	≥ 45	56	PASS
130156	Flat 16 Kitchen / Dining Room	Flat 17 Bedroom 2	≥ 45	57	PASS
130157	Flat 3 Kitchen / Dining Room	Flat 4 Bedroom 1	≥ 45	54	PASS
130158	Flat 15 Bedroom 2	Flat 16 Bedroom 2	≥ 45	57	PASS
130159	Flat 16 Kitchen / Dining Room	Flat 12 Kitchen / Dining Room	≥ 45	56	PASS
130160	Flat 17 Kitchen / Dining Room	Flat 13 Kitchen / Dining Room	≥ 45	60	PASS
130161	Flat 8 Kitchen / Dining Room	Flat 3 Kitchen / Dining Room	≥ 45	57	PASS
130162	Flat Room Commercial Space	Flat 3 Kitchen / Dining Room	≥ 45	56	PASS
130163	Flat 17 Kitchen / Dining Room	Flat 13 Kitchen / Dining Room	≤ 62	42	PASS
130164	Flat 9 Kitchen / Dining Room	Flat 4 Kitchen / Dining Room	≤ 62	45	PASS
130165	Flat 16 Kitchen / Dining Room	Flat 12 Kitchen / Dining Room	≤ 62	41	PASS
130166	Flat 8 Kitchen / Dining Room	Flat 3 Kitchen / Dining Room	≤ 62	41	PASS
130167	Flat Room Commercial Space	Flat 4 Kitchen / Dining Room	≥ 45	55	PASS
130170	Flat 9 Kitchen / Dining Room	Flat 4 Kitchen / Dining Room	≥ 45	54	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 (L_2) that are within 6dB of the background measurements (L_b) are corrected by adding 1.3 to receive room noise measurement.

Where the background measurement is less than 6dB but greater than 10dB of the receive room noise measurement, a correction is applied as per BS EN ISO 140-4:1998 section 6.6 for airborne tests and/or BS EN ISO-7:1998 Section 5.6 for impact tests.

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 the reverberation time at each frequency, divided by 0.5 (reference reverberation time), 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 the final D_{nT} .

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

The individual D_{nT} are then compared to the standard reference curve, with the sum of unfavourable deviations measured and adjusted, 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 (L_2) that are within 6dB of the background measurements (L_b) are corrected by adding 1.3 to receive room noise 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.

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

The result is standardized by adding 10 times the logarithm the reverberation time at each frequency, divided by 0.5 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} ')

The L'_{nT} 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
Kit 2.2	20 Apr 2022	19 Apr 2024	U40756
Kit 2.22	02 Mar 2023	02 Mar 2024	UCRT23/1275
Kit 2.2	19 Apr 2022	18 Apr 2024	U40752

Test Results

Airborne Wall Tests – New Build by Shams Ahmadi

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
130155	Flat 5 Kitchen / Dining Room	55.0m ³	Flat 4 Kitchen / Dining Room	55.0m ³	>= 45 dB	56 dB	Pass
	Construction: Generic Masonary Block: WB0001** : Generic Masonary Block						
	Deviations: 6dB Rule not met						
130156	Flat 16 Kitchen / Dining Room	55.0m ³	Flat 17 Bedroom 2	27.0m ³	>= 45 dB	57 dB	Pass
	Construction: Generic Masonary Block: WB0001** : Generic Masonary Block						
	Deviations:						
130157	Flat 3 Kitchen / Dining Room	55.0m ³	Flat 4 Bedroom 1	27.0m ³	>= 45 dB	54 dB	Pass
	Construction: Generic Masonary Block: WB0001** : Generic Masonary Block						
	Deviations: 6dB Rule not met						
130158	Flat 15 Bedroom 2	29.0m ³	Flat 16 Bedroom 2	29.0m ³	>= 45 dB	57 dB	Pass
	Construction: Generic Masonary Block: WB0001** : Generic Masonary Block						
	Deviations: 6dB Rule not met						

Airborne floor Tests – New Build by Shams Ahmadi

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
130159	Flat 16 Kitchen / Dining Room	55.0m ³	Flat 12 Kitchen / Dining Room	55.0m ³	>= 45 dB	56 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						
130160	Flat 17 Kitchen / Dining Room	55.0m ³	Flat 13 Kitchen / Dining Room	55.0m ³	>= 45 dB	60 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						
130161	Flat 8 Kitchen / Dining Room	55.0m ³	Flat 3 Kitchen / Dining Room	55.0m ³	>= 45 dB	57 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						
130162	Flat Room Commercial Space	820.0m ³	Flat 3 Kitchen / Dining Room	55.0m ³	>= 45 dB	56 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						
130167	Flat Room Commercial Space	820.0m ³	Flat 4 Kitchen / Dining Room	55.0m ³	>= 45 dB	55 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						
130170	Flat 9 Kitchen / Dining Room	55.0m ³	Flat 4 Kitchen / Dining Room	55.0m ³	>= 45 dB	54 dB	Pass
	Construction: Generic Concrete: FC0001** : Generic Concrete						
	Deviations:						

Impact floor Tests – New Build by Shams Ahmadi

Certificate Number	Plot & Source Room	Source Room Volume	Plot & Receive Room	Receive Room Volume	Target $L'_{nT,w}$	Result $L'_{nT,w}$	Pass / Fail							
130163	Flat 17 Kitchen / Dining Room	55.0m ³	Flat 13 Kitchen / Dining Room	55.0m ³	<= 62 dB	42 dB	Pass							
								Construction: Generic Concrete: FC0001** : Generic Concrete						
								Deviations:						
130164	Flat 9 Kitchen / Dining Room	55.0m ³	Flat 4 Kitchen / Dining Room	55.0m ³	<= 62 dB	45 dB	Pass							
								Construction: Generic Concrete: FC0001** : Generic Concrete						
								Deviations:						
130165	Flat 16 Kitchen / Dining Room	55.0m ³	Flat 12 Kitchen / Dining Room	55.0m ³	<= 62 dB	41 dB	Pass							
								Construction: Generic Concrete: FC0001** : Generic Concrete						
								Deviations:						
130166	Flat 8 Kitchen / Dining Room	55.0m ³	Flat 3 Kitchen / Dining Room	55.0m ³	<= 62 dB	41 dB	Pass							
								Construction: Generic Concrete: FC0001** : Generic Concrete						
								Deviations:						

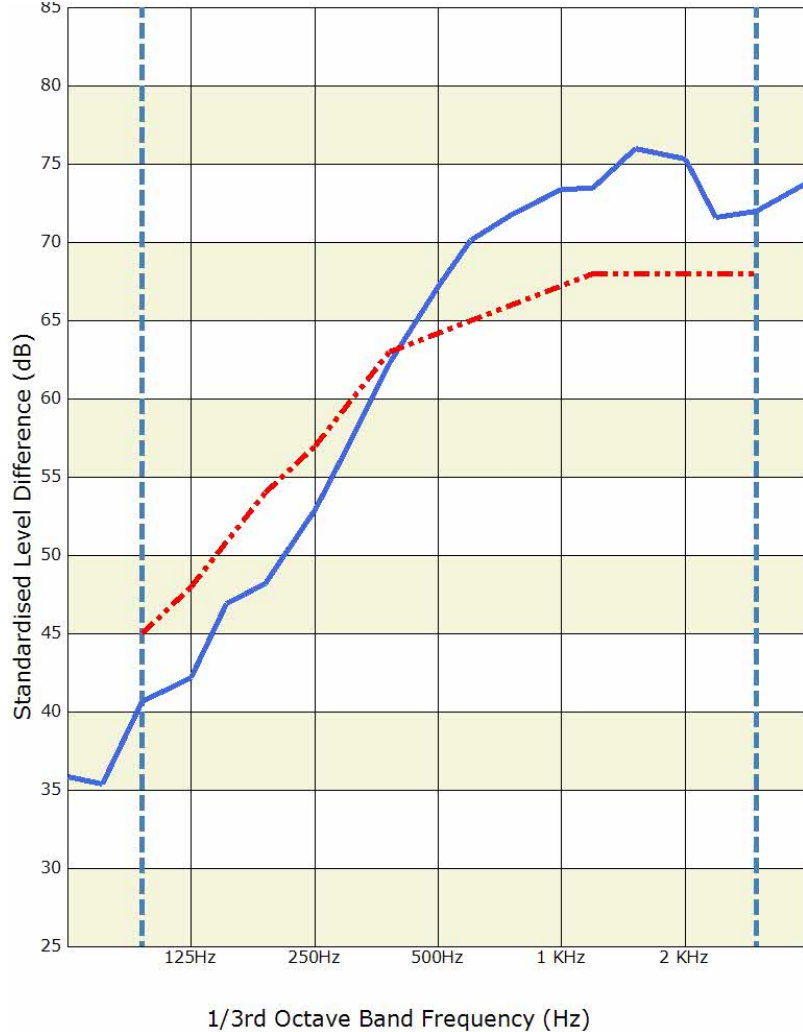
Appendix A – Individual Certificates

Test Type	Source Room	Partition	Receiver Room
Airborne sound insulation	Flat 5 Kitchen / Dining Room	WB0001**	Flat 4 Kitchen / Dining Room
Airborne sound insulation	Flat 16 Kitchen / Dining Room	WB0001**	Flat 17 Bedroom 2
Airborne sound insulation	Flat 3 Kitchen / Dining Room	WB0001**	Flat 4 Bedroom 1
Airborne sound insulation	Flat 15 Bedroom 2	WB0001**	Flat 16 Bedroom 2
Airborne sound insulation	Flat 16 Kitchen / Dining Room	FC0001**	Flat 12 Kitchen / Dining Room
Airborne sound insulation	Flat 17 Kitchen / Dining Room	FC0001**	Flat 13 Kitchen / Dining Room
Airborne sound insulation	Flat 8 Kitchen / Dining Room	FC0001**	Flat 3 Kitchen / Dining Room
Airborne sound insulation	Flat Room Commercial Space	FC0001**	Flat 3 Kitchen / Dining Room
Airborne sound insulation	Flat Room Commercial Space	FC0001**	Flat 4 Kitchen / Dining Room
Airborne sound insulation	Flat 9 Kitchen / Dining Room	FC0001**	Flat 4 Kitchen / Dining Room
Impact sound insulation	Flat 17 Kitchen / Dining Room	FC0001**	Flat 13 Kitchen / Dining Room
Impact sound insulation	Flat 9 Kitchen / Dining Room	FC0001**	Flat 4 Kitchen / Dining Room
Impact sound insulation	Flat 16 Kitchen / Dining Room	FC0001**	Flat 12 Kitchen / Dining Room
Impact sound insulation	Flat 8 Kitchen / Dining Room	FC0001**	Flat 3 Kitchen / Dining Room

Registered Sound Insulation Test Certificate

Test No:	130155	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Wall)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat 5 Kitchen / Dining Room		WB0001**		Flat 4 Kitchen / Dining Room
Volume / Area	55.0m ³		7.0m ²		55.0m ³

Frequency (Hz)	D_{nT}	Correction
50	22.6	X
63	35.9	
80	35.4	
100	40.7	
125	42.2	
160	46.9	
200	48.2	
250	52.9	
315	56.9	
400	62.3	
500	67.2	
630	70.1	X
800	71.8	X
1	73.4	X
1.25	73.5	X
1.6	76	X
2	75.3	X
2.5	71.6	X
3.15	72	X
4	73.9	X
5	72.5	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]: 64 (-2, -8) dB	PASS
$D_{nT,w} + C_{tr}$ [dB]: 56 dB	Adverse Aggregated Deviations [dB]: 27.9
Minimum Pass Level [dB]: 45 dB	

Partition Detail: WB0001** : Generic Masonary Block

Test Exceptions (if any): 6dB Rule not met

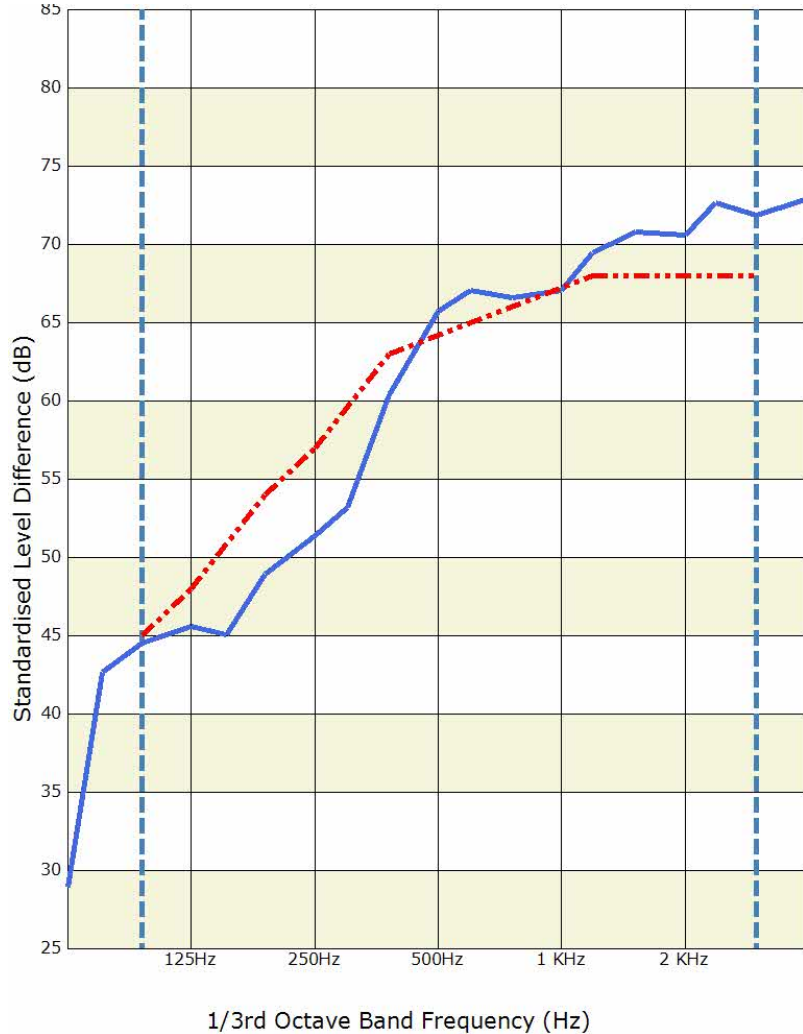
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130156	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Wall)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat 16 Kitchen / Dining Room		WB0001**		Flat 17 Bedroom 2
Volume / Area	55.0m ³		8.5m ²		27.0m ³

Frequency (Hz)	D_{nT}	Correction
50	16.2	X
63	28.9	
80	42.7	
100	44.5	
125	45.6	
160	45.1	
200	48.9	
250	51.4	
315	53.2	
400	60.4	X
500	65.7	X
630	67.1	X
800	66.6	X
1	67.1	X
1.25	69.5	X
1.6	70.8	X
2	70.6	X
2.5	72.7	X
3.15	71.9	X
4	72.9	X
5	70.6	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]: 64 (-2, -7) dB
 $D_{nT,w} + C_{tr}$ [dB]: 57 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 28.9

Partition Detail: WB0001** : Generic Masonary Block

Test Exceptions (if any):

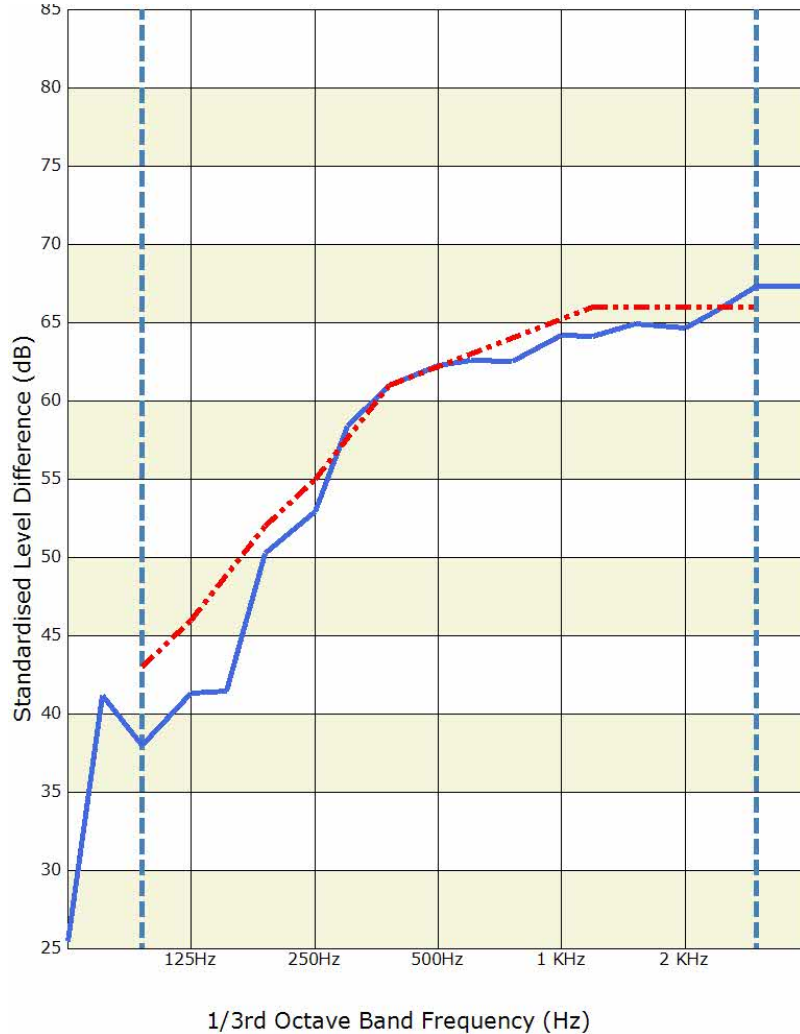
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130157	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Wall)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat 3 Kitchen / Dining Room		WB0001**		Flat 4 Bedroom 1
Volume / Area	55.0m ³		8.5m ²		27.0m ³

Frequency (Hz)	D_{nT}	Correction
50	16.5	X
63	25.5	
80	41.2	
100	38	
125	41.3	
160	41.5	
200	50.3	
250	52.9	
315	58.4	
400	61	
500	62.3	
630	62.6	
800	62.5	
1	64.2	
1.25	64.1	
1.6	64.9	X
2	64.7	X
2.5	65.7	X
3.15	67.3	X
4	67.3	X
5	65.2	X

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



1/3rd Octave Band Frequency (Hz)

*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 (-3, -8) dB
 $D_{nT,w} + C_{tr}$ [dB]: 54 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 28.3

Partition Detail: WB0001** : Generic Masonary Block

Test Exceptions (if any): 6dB Rule not met

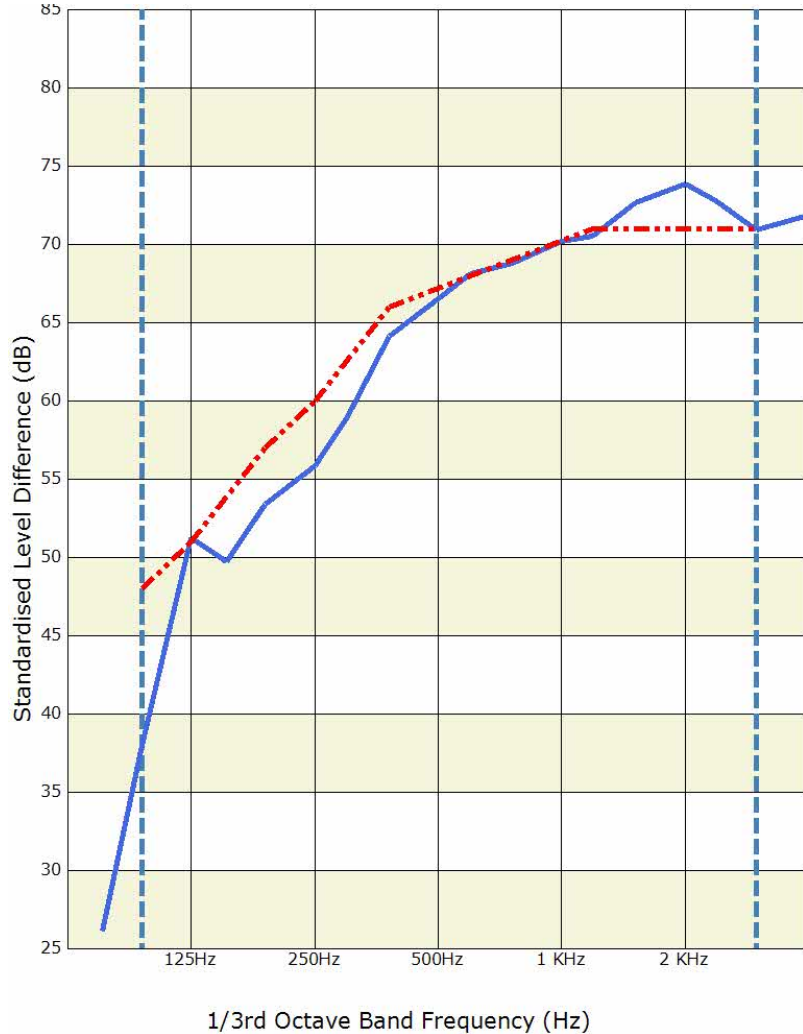
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130158	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Wall)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 15 Bedroom 2	WB0001**	Flat 16 Bedroom 2		
Volume / Area	29.0m ³	9.0m ²	29.0m ³		

Frequency (Hz)	D_{nT}	Correction
50	28.7	X
63	25	
80	26.1	
100	38	
125	51.3	
160	49.7	
200	53.4	
250	55.9	
315	59	
400	64.1	X
500	66.5	X
630	68.1	X
800	68.8	X
1	70.2	X
1.25	70.5	X
1.6	72.7	X
2	73.9	X
2.5	72.8	X
3.15	70.9	X
4	71.9	X
5	69.4	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]: 67 (-4, -10) dB
 $D_{nT,w} + C_{tr}$ [dB]: 57 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 29.2

Partition Detail: WB0001** : Generic Masonary Block

Test Exceptions (if any): 6dB Rule not met

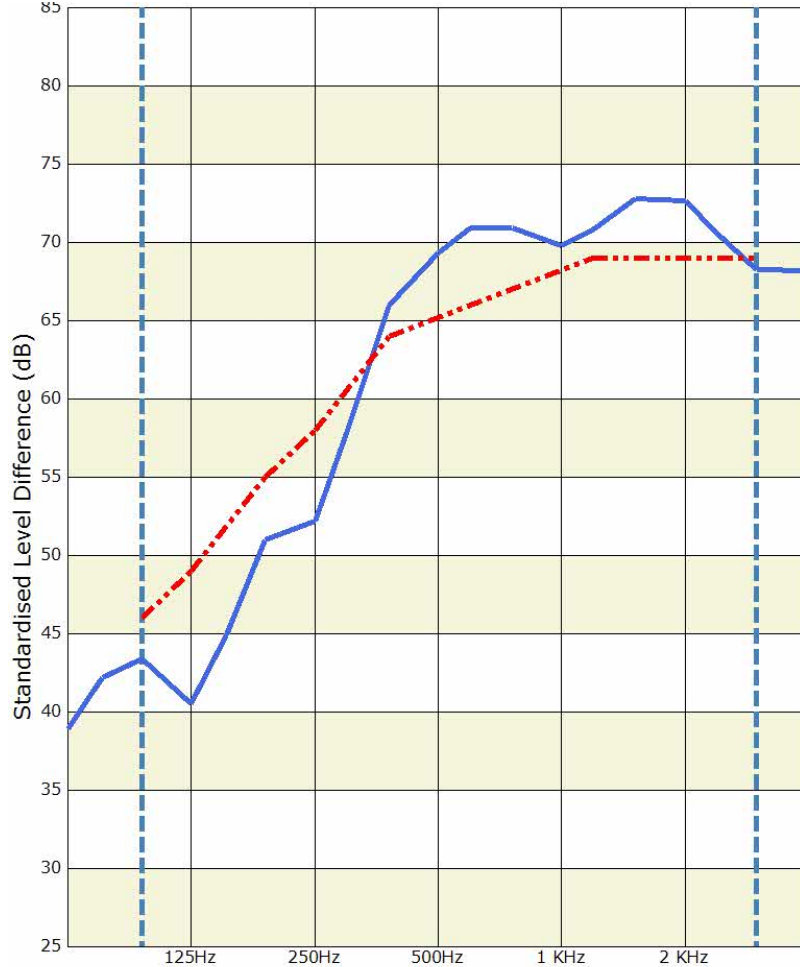
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130159	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 16 Kitchen / Dining Room	FC0001**	Flat 12 Kitchen / Dining Room		
Volume / Area	55.0m ³	28.0m ²	55.0m ³		

Frequency (Hz)	D_{nT}	Correction
50	22.8	X
63	38.9	X
80	42.2	X
100	43.4	X
125	40.5	
160	44.9	
200	51	
250	52.2	
315	58	
400	66	
500	69.3	
630	70.9	
800	70.9	X
1	69.8	X
1.25	70.8	X
1.6	72.8	X
2	72.7	X
2.5	70.7	X
3.15	68.3	X
4	68.2	X
5	67.1	X

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



1/3rd Octave Band Frequency (Hz)

*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]: 65 (-3, -9) dB
 $D_{nT,w} + C_{tr}$ [dB]: 56 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 31.7

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

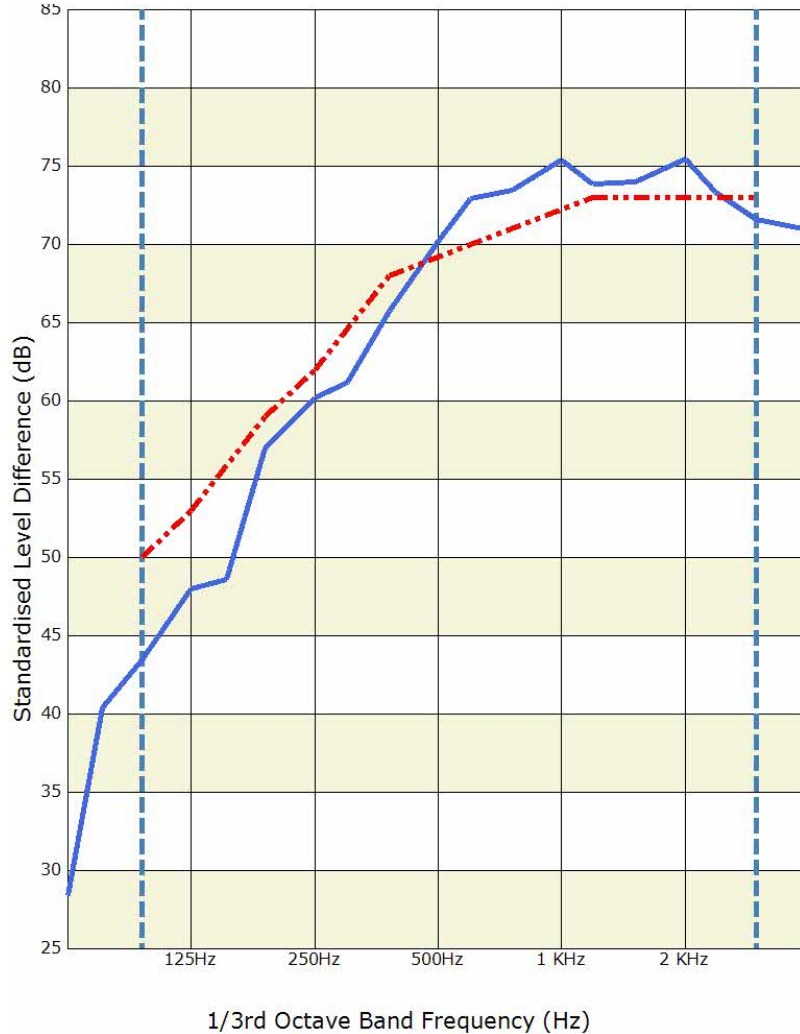
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130160	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 17 Kitchen / Dining Room	FC0001**	Flat 13 Kitchen / Dining Room		
Volume / Area	55.0m ³	24.0m ²	55.0m ³		

Frequency (Hz)	D_{nT}	Correction
50	22.7	X
63	28.4	X
80	40.4	X
100	43.5	X
125	48	X
160	48.6	
200	57	X
250	60.2	X
315	61.2	
400	65.7	
500	70.2	
630	72.9	X
800	73.5	X
1	75.4	X
1.25	73.9	X
1.6	74	
2	75.5	
2.5	73.3	
3.15	71.6	
4	70.9	
5	68.2	

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



1/3rd Octave Band Frequency (Hz)

*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]: 69 (-3, -9) dB
 $D_{nT,w} + C_{tr}$ [dB]: 60 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 30.2

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

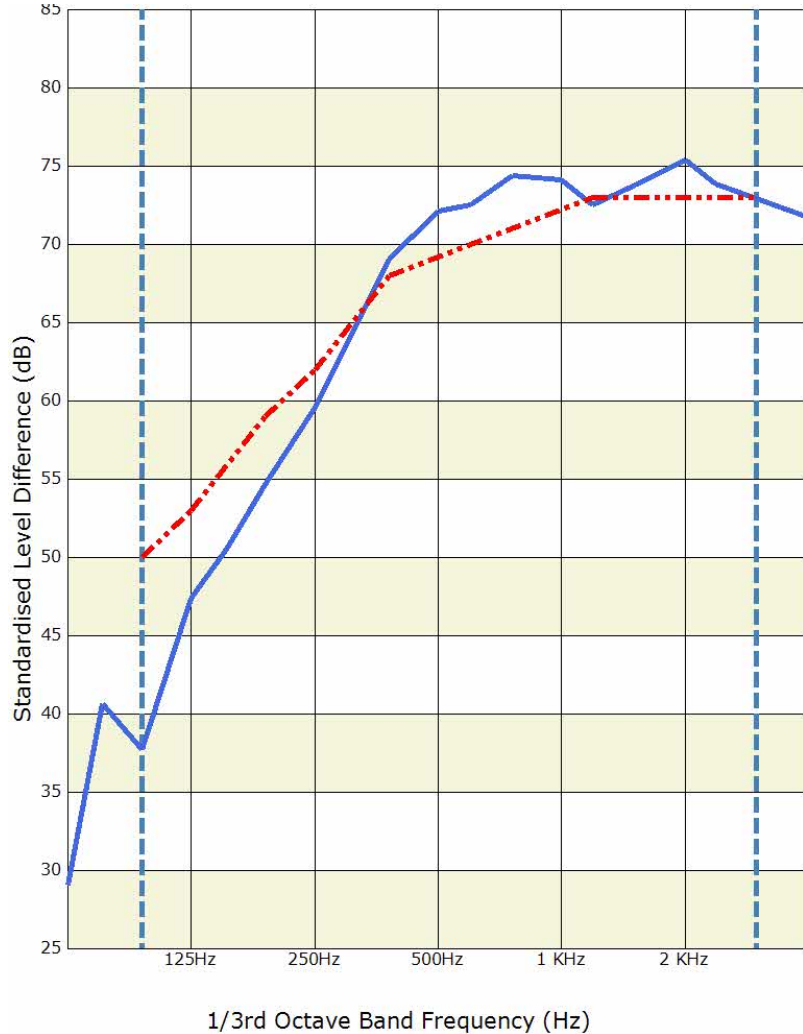
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130161	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 8 Kitchen / Dining Room	FC0001**	Flat 3 Kitchen / Dining Room		
Volume / Area	55.0m ³	28.0m ²	55.0m ³		

Frequency (Hz)	D_{nT}	Correction
50	19.6	X
63	29.1	X
80	40.7	X
100	37.7	
125	47.4	X
160	50.5	
200	54.7	X
250	59.6	
315	63.7	
400	69.1	X
500	72.1	X
630	72.5	X
800	74.4	X
1	74.1	X
1.25	72.5	X
1.6	73.8	X
2	75.4	X
2.5	73.9	X
3.15	72.9	X
4	71.7	X
5	68.8	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 717-1

$D_{nT,w}$ (C; C_{tr}) [dB]: 69 (-5, -12) dB
 $D_{nT,w} + C_{tr}$ [dB]: 57 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 32.0

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

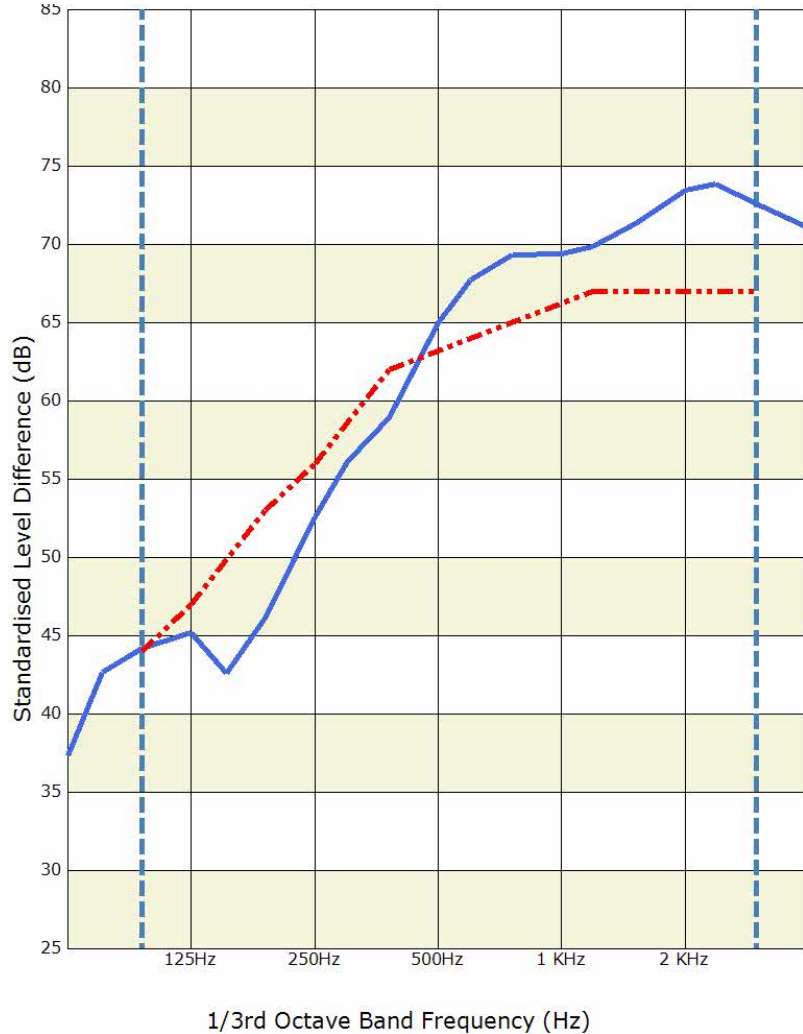
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130162	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat Room Commercial Space		FC0001**		Flat 3 Kitchen / Dining Room
Volume / Area	820.0m ³		28.0m ²		55.0m ³

Frequency (Hz)	D_{nT}	Correction
50	24	X
63	37.3	X
80	42.7	X
100	44.2	
125	45.2	
160	42.6	
200	46.1	
250	52.6	
315	56.1	
400	58.9	
500	65	
630	67.7	X
800	69.3	X
1	69.4	X
1.25	69.9	X
1.6	71.3	X
2	73.5	X
2.5	73.9	X
3.15	72.6	X
4	71.1	X
5	69.4	X

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



1/3rd Octave Band Frequency (Hz)

*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]: 63 (-2, -7) dB
 $D_{nT,w} + C_{tr}$ [dB]: 56 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 25.5

Partition Detail: FC0001** : Generic Concrete

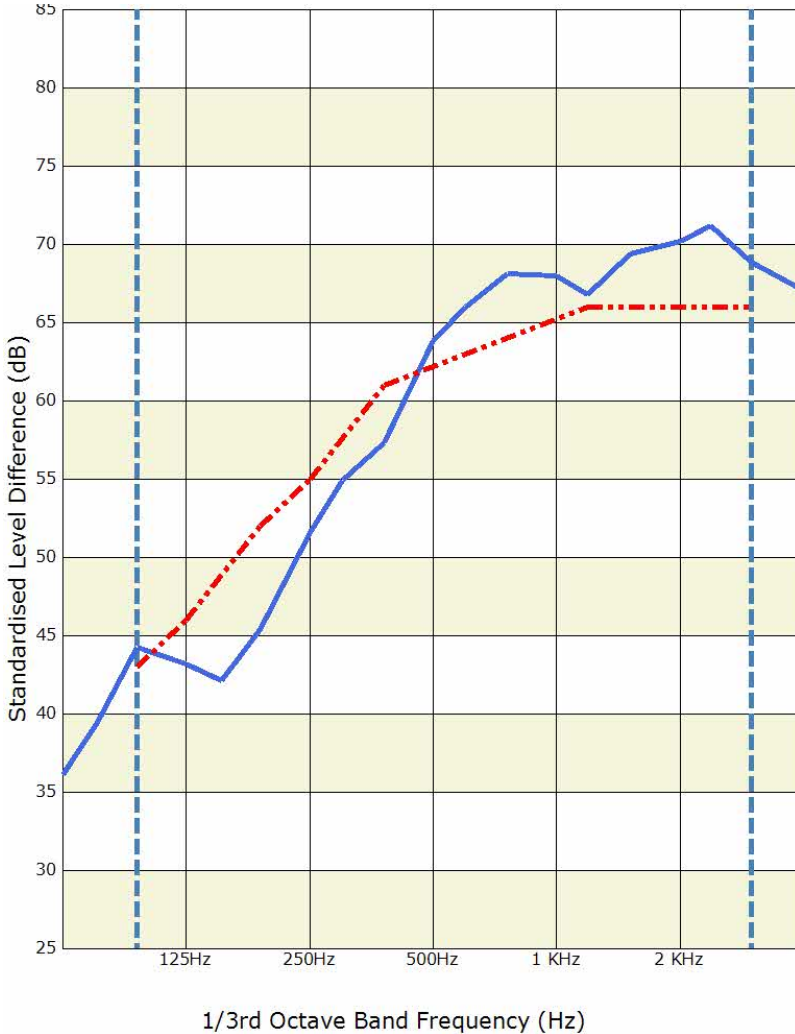
Test Exceptions (if any):

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:	130167	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat Room Commercial Space		FC0001**		Flat 4 Kitchen / Dining Room
Volume / Area	820.0m ³		20.0m ²		55.0m ³

Frequency (Hz)	D_{nT}	Correction
50	21.5	
63	36.1	
80	39.5	
100	44.3	
125	43.2	
160	42.1	
200	45.4	
250	51.6	
315	54.9	
400	57.3	
500	63.9	
630	66	
800	68.1	X
1	68	X
1.25	66.8	
1.6	69.4	
2	70.2	
2.5	71.2	
3.15	68.9	
4	67.1	
5	65.9	



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, -7) dB	PASS Adverse Aggregated Deviations [dB]: 26.5
$D_{nT,w} + C_{tr}$ [dB]:	55 dB	
Minimum Pass Level [dB]:	45 dB	

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

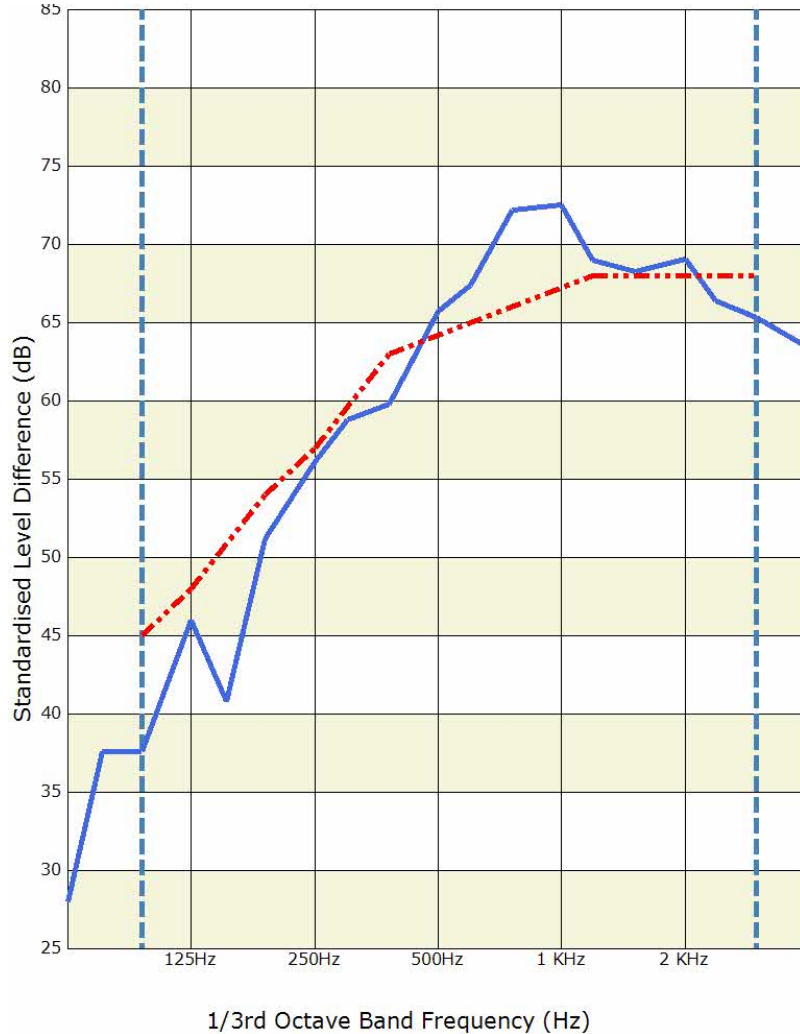
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Sound Insulation Test Certificate

Test No:	130170	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Airborne (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:		Partition:		Receiver Room:
Description:	Flat 9 Kitchen / Dining Room		FC0001**		Flat 4 Kitchen / Dining Room
Volume / Area	55.0m ³		20.0m ²		55.0m ³

Frequency (Hz)	D_{nT}	Correction
50	21.4	X
63	28	X
80	37.6	X
100	37.6	X
125	46	X
160	40.8	
200	51.2	
250	56.1	
315	58.8	
400	59.8	
500	65.7	
630	67.4	X
800	72.2	X
1	72.5	X
1.25	69	X
1.6	68.3	X
2	69.1	X
2.5	66.4	
3.15	65.3	
4	63.4	
5	61.9	

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]: 64 (-4, -10) dB
 $D_{nT,w} + C_{tr}$ [dB]: 54 dB
 Minimum Pass Level [dB]: 45 dB

PASS
 Adverse Aggregated Deviations [dB]: 32.0

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

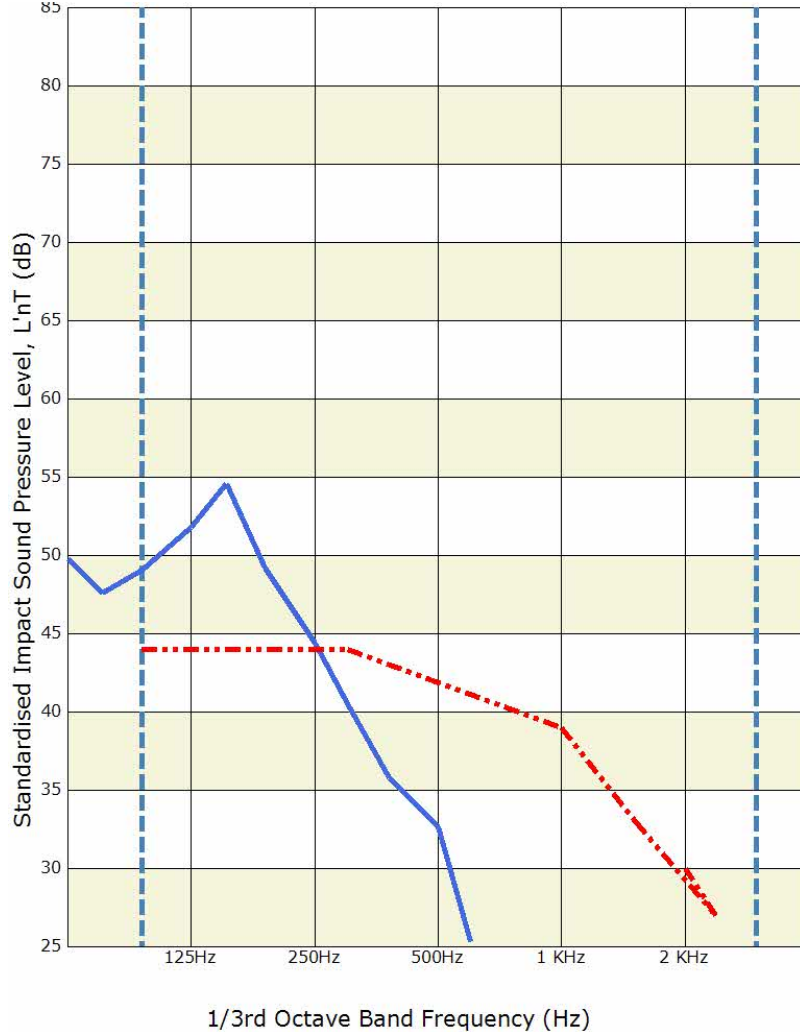
AIRBORNE SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 4:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 1:1997: Acoustics - rating of sound in buildings and of building elements

Registered Impact Test Certificate

Test No:	130163	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Impact (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 17 Kitchen / Dining Room	FC0001**	Flat 13 Kitchen / Dining Room		
Volume / Area	55.0m ³	24.0m ²	55.0m ³		

Frequency (Hz)	L'nT 1/3 Octave (dB)	Correction
50	52	
63	49.8	
80	47.6	
100	49.1	
125	51.8	
160	54.6	
200	49.2	
250	44.4	
315	40.5	
400	35.8	
500	32.7	
630	25.3	X
800	23.8	X
1	22	X
1.25	21.7	X
1.6	21.5	X
2	20.4	X
2.5	22.6	
3.15	23.1	
4	23.7	
5	24.2	

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]: 42 (1) dB
 Maximum Pass Level [dB]: 62 dB

PASS
 Adverse Aggregated Deviations [dB]: 29.1

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

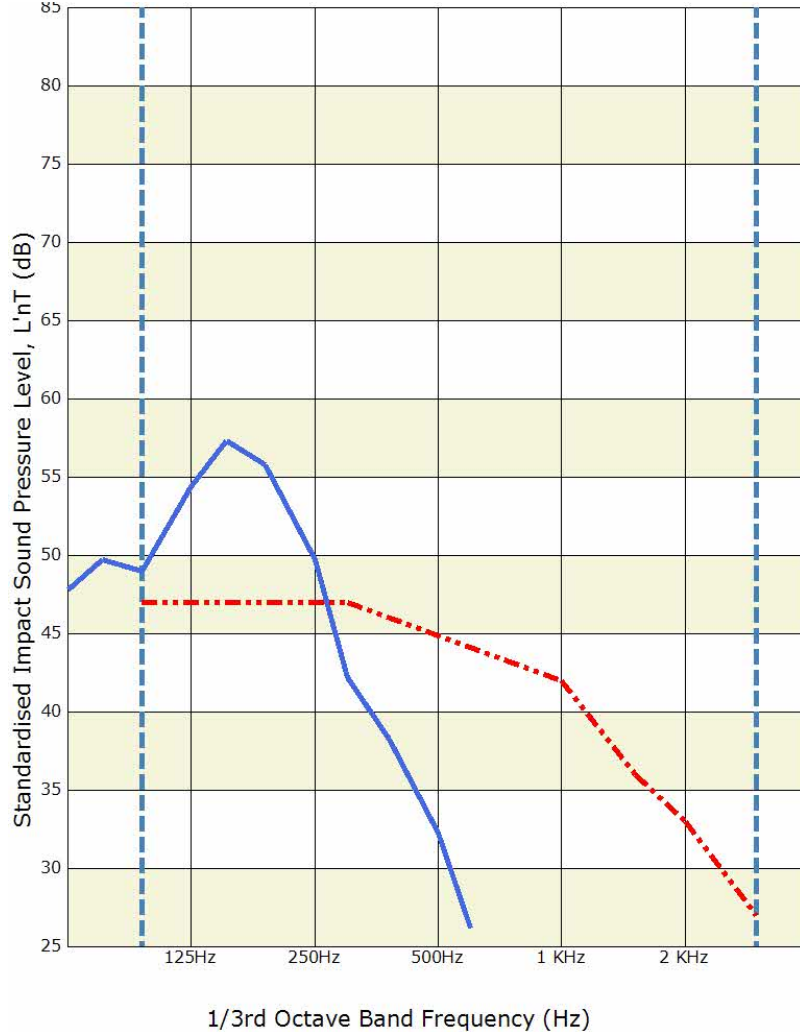
IMPACT SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 7:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 2:1997: Acoustics - rating of sound in buildings and of building elements

Registered Impact Test Certificate

Test No:	130164	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Impact (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 9 Kitchen / Dining Room	FC0001**	Flat 4 Kitchen / Dining Room		
Volume / Area	55.0m ³	20.0m ²	55.0m ³		

Frequency (Hz)	L _{nT} 1/3 Octave (dB)	Correction X
50	50.8	
63	47.8	X
80	49.7	
100	49	
125	54.4	
160	57.3	
200	55.8	
250	49.7	
315	42.2	
400	38.3	
500	32.3	
630	26.2	X
800	22.7	X
1	21.6	X
1.25	21.6	X
1.6	21	X
2	19.5	X
2.5	21	
3.15	21.4	X
4	21.2	X
5	21.4	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]: 45 (1) dB
 Maximum Pass Level [dB]: 62 dB

PASS
 Adverse Aggregated Deviations [dB]: 31.2

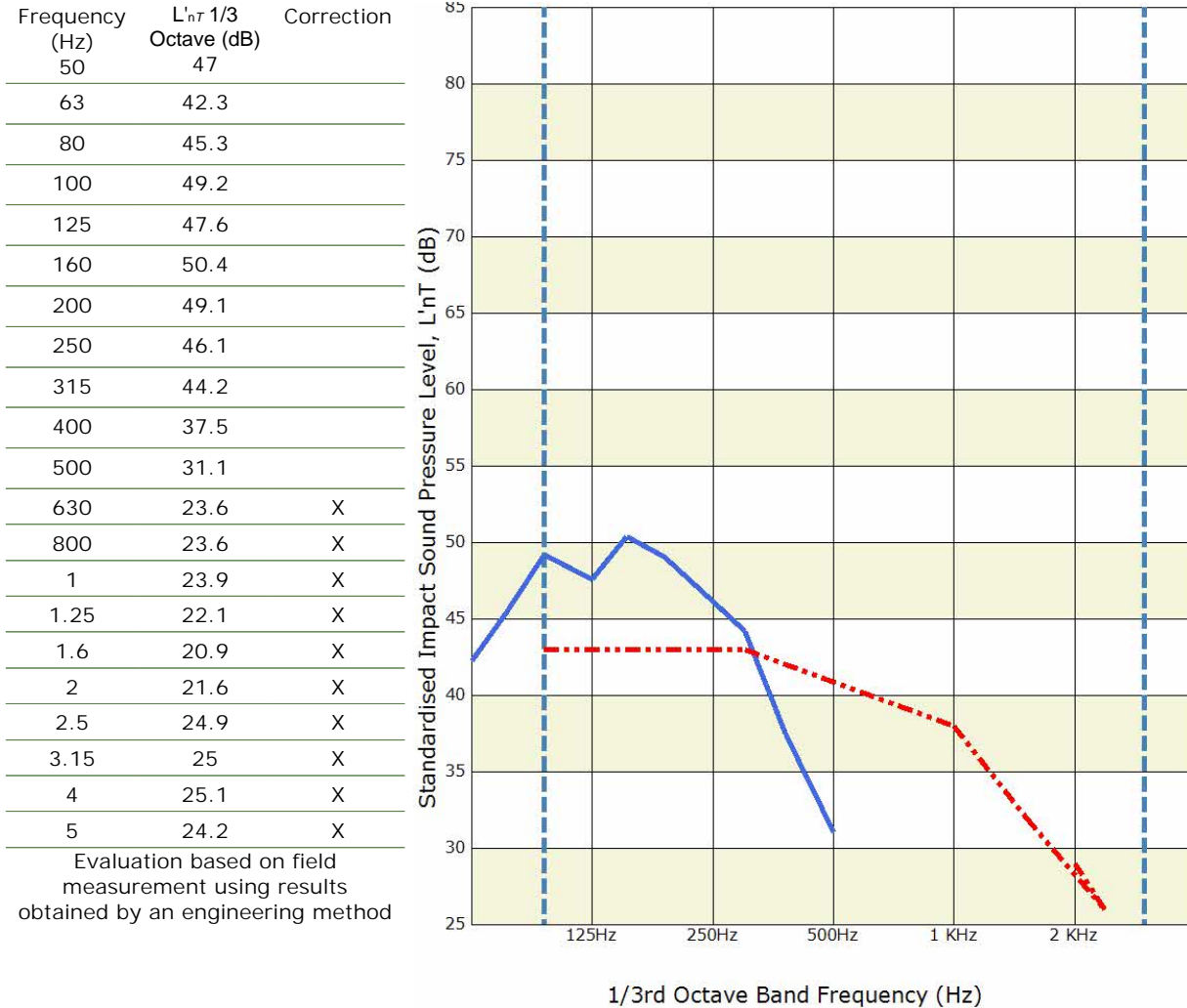
Partition Detail: FC0001** : Generic Concrete

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 Impact Test Certificate

Test No:	130165	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Impact (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 16 Kitchen / Dining Room	FC0001**	Flat 12 Kitchen / Dining Room		
Volume / Area	55.0m ³	28.0m ²	55.0m ³		



*Outside scope of accreditation

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

PASS

L_{nT,w} (CI) [dB]: 41 (0) dB
 Maximum Pass Level [dB]: 62 dB

Adverse Aggregated Deviations [dB]: 30.6

Partition Detail: FC0001** : Generic Concrete

Test Exceptions (if any):

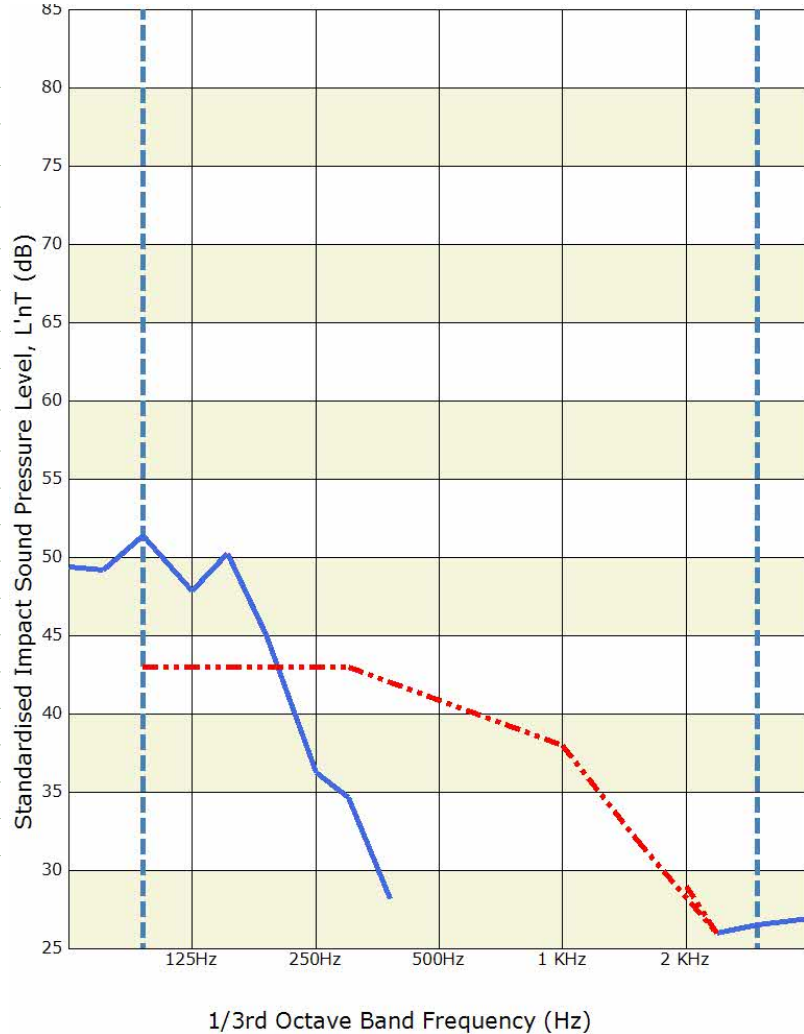
IMPACT SOUND INSULATION TEST: Approved Document E (2003) including 2004, 2010, 2013, and 2015 Amendments
 BS EN ISO 140 - Part 7:1998: Acoustics - measurement of sound in buildings and of building elements
 BS EN ISO 717 - Part 2:1997: Acoustics - rating of sound in buildings and of building elements

Registered Impact Test Certificate

Test No:	130166	Test Job Ref:	30670	Test Org Name:	Eecobuild Ltd
Customer:	YSJ01 Ltd			Test Type:	Impact (Floor)
Address:	Elthorne Gate, 64 High Street, Pinner	Job Address:	141-147 High Street, Brentwood, Essex	Test Date:	30/09/2023
				Tester:	Shams Ahmadi
				Site type:	New Build
Postcode:	HA5 5QA	Postcode:	CM14 4SA	Site Build:	Dwelling- House/Flat
	Source Room:	Partition:	Receiver Room:		
Description:	Flat 8 Kitchen / Dining Room	FC0001**	Flat 3 Kitchen / Dining Room		
Volume / Area	55.0m ³	28.0m ²	55.0m ³		

Frequency (Hz)	L _{nT} 1/3 Octave (dB)	Correction X
50	49.3	
63	49.4	X
80	49.2	
100	51.4	
125	47.9	
160	50.3	
200	45.1	
250	36.3	X
315	34.7	
400	28.2	
500	22.8	X
630	21.3	X
800	20.6	X
1	21.4	X
1.25	21	X
1.6	20.8	X
2	22.1	X
2.5	26	X
3.15	26.5	X
4	26.9	X
5	25.6	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 717-2

L_{nT,w} (CI) [dB]: 41 (-1) dB
 Maximum Pass Level [dB]: 62 dB

PASS
 Adverse Aggregated Deviations [dB]: 26.2

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

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

Certificate number: U40756

Test Object: Sound Level Meter, BS EN IEC 61672-1:2013 Class 1
Associated Frequency Analyser to BS EN IEC 61260:1996 Class 1

Producer: Svantek

Type: 977A

Serial number: 92116

Customer: Eecobuild Ltd

Address: C/O Project H Ltd Beadle House, Bull Plain,
Hertford, Hertfordshire. SG14 1DT.

Contact Person: Shams Ahmadi

Order No:

Introduction:

Calibration has been performed as set out in CA Technical Procedures which are based on the procedures for periodic verification of sound level meters as per the **Test Object** listed above. Results and conformance statement are overleaf and detailed results, where appropriate, are provided in the attached Measurement Report.

Tested:	<i>Producer</i>	<i>Type</i>	<i>Serial No</i>	<i>Certificate No</i>
Microphone	ACO	7052E	77165	40755
Calibrator*	Svantek	SV33B	93175	U40754
Preamplifier	Svantek	SV12L	95133	Included

* The calibrator was complete with any required coupler for the microphone specified.

Additional items that have also been submitted for verification:

Wind shield Svantek SA22

Attenuator N/A

Extension cable N/A

These items have been taken into account wherever appropriate.

Instruction Manual: svan_977a_man_en_v03.03_2018-09-18 Firmware Version: v2.02.03 The test object is a single channel instrument.

Conditions	<i>Pressure kPa</i>	<i>Temperature °C</i>	<i>Humidity %RH</i>
Reference conditions	101.325	23	50
Measurement conditions	101.04 ±0.07	21.80 ±0.25	41.08 ±3.5

Calibration Dates:

Received date: 31/03/2022 Reviewed date: 20/04/2022

Calibration date: 20/04/2022 Issued date: 20/04/2022

Technicians: (Electronic certificate)

Calibrated by:



Reviewed by:

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Laboratory Location

Campbell Associates Ltd

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



Certificate of Calibration

Certificate number: U40752

Test Object: Floor Tapping Machine

Producer: Sources Line
Type: EOS
Serial number: NGE05118
Customer: EecoBuild LTD
Address: C/O Project H Ltd Beadle House
Bull Plain Hertford SG14 1D
Contact Person: Shams Ahmadi
Order No: TBA

Method :

This certificate is issued against the requirements of Annex A of both BS EN ISO 16283-2:2015 and BS EN ISO 140-6/7:1998 in respect of regular verification and also meet the requirements of UKAS publication LAB23 covering the verification of floor tapping machines used for building acoustics applications.

The machine was inspected for mechanical soundness and tested for electrical safety. It was cleaned and lubricated in accordance with the manufacturers instructions where necessary. The cams and hammer guides were inspected to ensure a free fall of the hammers. The mass of each of the hammers was determined either by measurement or reference to historical data (see Statements overleaf) along with their curvature and diameter of the impact face. The machine was set up as per the manufacturers specification using the calibration gauge provided (where applicable) and checked for level, then the direction of fall of the hammer set was checked against the requirements of the standard. The time between successive hammer impacts was measured over a 30 second period and the mean and range of successive values calculated.

Statements:

A successful calibration indicates that this Tapping Machine meets the requirements of BS EN ISO 16283-2:2015 and BS EN ISO 140 parts 6, 7 & 8 annex A and is therefore suitable for the measurement of impact sound transmission following the procedures set out in their associated standards.

Expanded measurement uncertainties are:- Impact rate 0.25 ms, Hammer mass (mounted) 0.79 g, Hammer mass (dismounted) 0.19 g, Hammer diameter 0.03 mm, Radius of curvature 11.0 mm, Hammer impact velocity 0.01 m/s and Hammer angle of fall 0.07 degree.

The mass of each individual hammer was measured in situ and the resulting data has been used in the calculation of the momentum of impact.

Environmental Conditions	Temperature	Relative Humidity
Reference Conditions:	23 °C	50 %RH
Measurement Conditions:	23.0 °C	44.3 %RH

Calibration Dates:

Received date:	31/03/2022	Reviewed date:	20/04/2022
Calibration date:	19/04/2022	Issued date:	20/04/2022

Technicians: (Electronic certificate)

Calibrated by:

Reviewed by:

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