PHA
Paul Horsley Acoustics Ltd
Acoustics & Noise Control Consultancy

21 May 2024

Our ref: PH/J3262

Martin Walsh Architectural
Firth Buildings,
99-103 Leeds Road,
Dewsbury,
WF12 7BU

For the attention of Ryan Lewis

Re : 6-10 Westgate, Dewsbury – Sound Insulation Testing.

Dear Sir,

Further to the Sound Insulation Testing carried out on 21st May 2024, I now have pleasure in enclosing a copy of the acoustic Test Certificates to suit for the locations under consideration.

In order to comply with the Building Regulation, Approved Document E, "Resistance to the passage of sound", for the change of use development, the building needs to pass a Pre-Completion sound test, as directed by the local Building Control Officer. This is required in order to prove compliance with the Building Regulations and consistency of construction.

The raw data collected during the testing has been utilized in the assessment of the airborne sound insulation provided by the party dividing floors and walls between the formed dwelling spaces. These have been calculated in accordance with the requirements of ISO 140-4 for airborne tests with the graphic representation in accordance with ISO 717-1 and ISO 140-7 for impact tests with graphic representation in accordance with ISO 717-2.

The calculations indicate that the Weighted Standardized Level Difference, DnT,w, (C, Ctr) dB provided by the floors as noted within the Test Summary Table for the areas tested for airborne sound.

The calculations indicate that the Weighted Standardized Level Difference, LnT,w (C) dB provided by the floors as noted within the Test Summary Table for the areas tested for impact sound.

Sound Insulation Test Summary – Results

Test Number	Location	Airborne Sound Insulation Achieved DnT, w (C; Ctr) dB	Pass / Fail
J3262-1	Separating Floor Between Flat No 3 Bedroom and Flat No 2 Kitchen / Diner	**66 dB (-2, -9)**	**P**
J3262-2	Separating Floor Between Flat No 2 Kitchen / Diner and Ground Floor Retail Unit No 1	**68 dB (-4, -9)**	**P**
J3262-3	Separating Wall Between Flat No 2 Kitchen / Diner and Common Hall/Stairs/Landing	**58 dB (0, -2)**	**P**
J3262-5	Separating Floor Between Flat No 1 Kitchen / Diner and Ground Floor Retail Unit No 2	**68 dB (-2, -8)**	**P**

Test Number	Location	Impact Sound Insulation Achieved LnT, w (C) dB	Pass / Fail
J3262-4	Separating Floor Between Flat No 3 Bedroom and Flat No 2 Kitchen / Diner	**49 dB (0)**	**P**

The Building Regulations Approved Document E states that **43 dB DnT, w (C; Ctr)** is the minimum requirement for airborne sound insulation for separation floors and walls for change of use building applications.

I can confirm that the attenuation values provided by the party separation floors and walls tested are acceptable for airborne sound insulation and meets the minimum requirements noted above for change of use building applications.

The Building Regulations Approved Document E states that **55 dB DnT, w (C; Ctr)** is the minimum requirement for airborne sound insulation for separation floors for change of use building applications between dwelling spaces and retail / commercial areas.

I can confirm that the attenuation values provided by the party separation floors tested are acceptable for airborne sound insulation and meets the minimum requirements noted above for change of use building applications between dwelling spaces and retail / commercial areas.

The Building Regulations Approved Document E states that **64 dB LnT, w (C)** is the maximum value requirement for impact sound insulation for separation floors for change of use building applications.

I can confirm that the attenuation values provided by the party separation floors tested are acceptable for impact sound insulation and meets the minimum requirements noted above for change of use building applications.

The test certificates have been appended to this document.

I trust the above and attached are acceptable for your needs, however, should you require any further information please do not hesitate to call.

Yours faithfully

P Horsley MIOA
Encl.

Standarized level difference measured in accordance with ISO 140-4

Field measurements of airborne sound insulation between rooms

Date of test: 2024-05-21

Task: J3262 Object: Sound Insulation Test

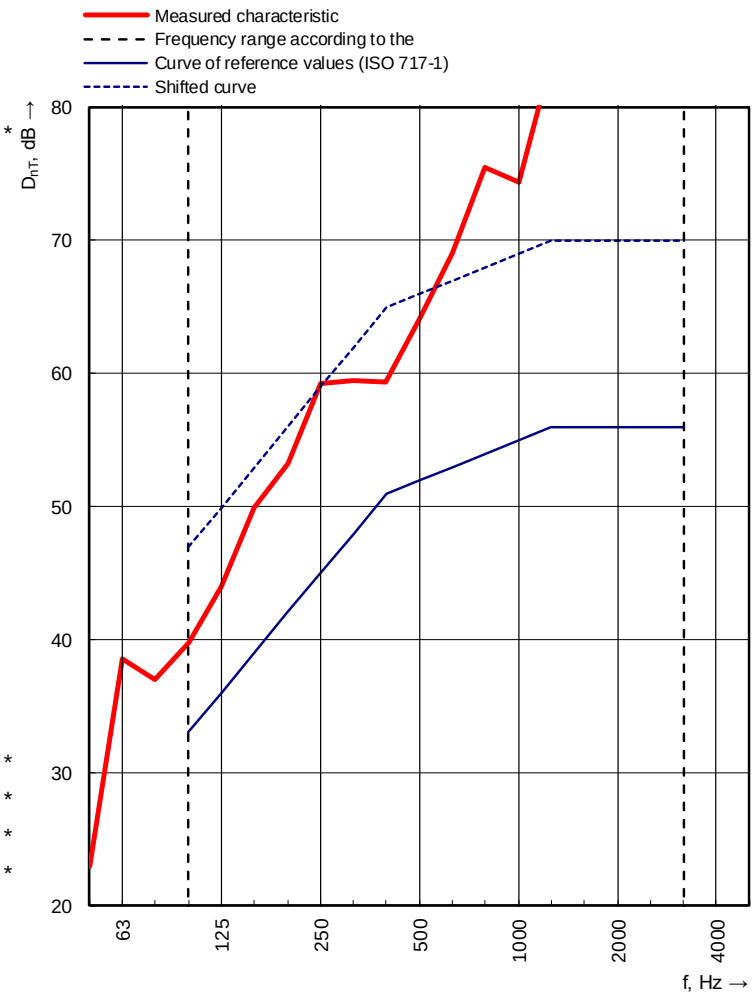
Client: Saleem Holdings Ltd

Description:

Sound insulation test between Flat No 2 Lounge / Diner and Flat No 3 Bedroom, 6-10 Westgate, Dewsbury. Party dividing floor.

Area of common partition:	12.5	m^2	Note:	Party dividing floor
Receiving room volume:	45.0	m^3	Name:	Flat 3 Bedroom 2nd Floor
Source room volume:	37.5	m^3	Name:	Flat 2 Lounge/Diner 1st floor

Frequency *f* Hz	D_{nT} (1/3 octave) dB	
50	23.0	*
63	38.6	
80	37.0	
100	39.8	
125	44.0	
160	49.9	
200	53.2	
250	59.2	
315	59.5	
400	59.3	
500	64.1	
630	69.0	
800	75.5	
1000	74.4	
1250	83.6	
1600	87.2	
2000	89.3	
2500	90.7	*
3150	92.6	*
4000	90.0	*
5000	90.3	*



Rating according to ISO 717-1

$D_{nT,w}$(C; Ctr) = **66 (-2 ; -9) dB** $C_{50\text{-}3150}$= -6 dB $C_{50\text{-}5000}$= -5 dB $C_{100\text{-}5000}$= -1 dB

$C_{tr,50\text{-}3150}$= -19 dB $C_{tr,50\text{-}5000}$= -19 dB $C_{tr,100\text{-}5000}$= -9 dB

Evaluation based on field measurement results obtained by an engineering method

No. of test report: J3262-Test No 1 Name of test institute: Paul Horsley Acoustics Ltd

Date: 2024-05-21 Signature:

Standarized level difference measured in accordance with ISO 140-4

Field measurements of airborne sound insulation between rooms

Date of test: 2024-05-21

Task: J3262 Object: Sound Insulation Test

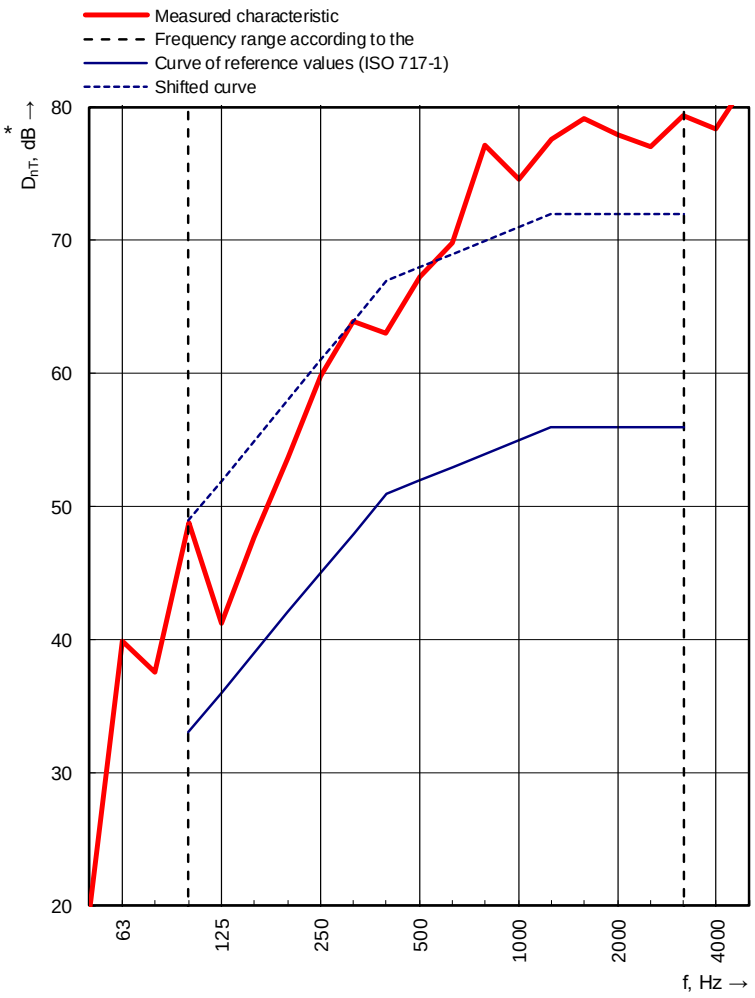
Client: Saleem Holdings Ltd

Description:

Sound insulation test between Flat No 2 Lounge / Diner and Ground Floor Retail Unit No 1, 6-10 Westgate, Dewsbury. Party dividing floor.

Area of common partition:	12.5	m^2	Note:	Party dividing floor
Receiving room volume:	75.0	m^3	Name:	Ground Floor Retail Unit No 1
Source room volume:	37.5	m^3	Name:	Flat 2 Lounge/Diner 1st floor

Frequency *f* Hz	D_{nT} (1/3 octave) dB
50	19.7
63	39.9
80	37.5
100	48.8
125	41.2
160	47.7
200	53.7
250	59.8
315	63.9
400	63.0
500	67.2
630	69.8
800	77.1
1000	74.6
1250	77.6
1600	79.2
2000	77.9
2500	77.0
3150	79.4
4000	78.4
5000	82.3



Rating according to ISO 717-1

$D_{nT,w}$(C; Ctr) = **68 (-4 ; -9) dB** $C_{50\text{-}3150}$= -10 dB $C_{50\text{-}5000}$= -9 dB $C_{100\text{-}5000}$= -3 dB

$C_{tr,50\text{-}3150}$= -24 dB $C_{tr,50\text{-}5000}$= -24 dB $C_{tr,100\text{-}5000}$= -9 dB

Evaluation based on field measurement results obtained by an engineering method

No. of test report: J3262 - Test No 2 Name of test institute: Paul Horsley Acoustics Ltd

Date: 2024-05-21 Signature:

Standarized level difference measured in accordance with ISO 140-4

Field measurements of airborne sound insulation between rooms

Date of test: 2024-05-21

Task: J3262 Object: Sound Insulation Test

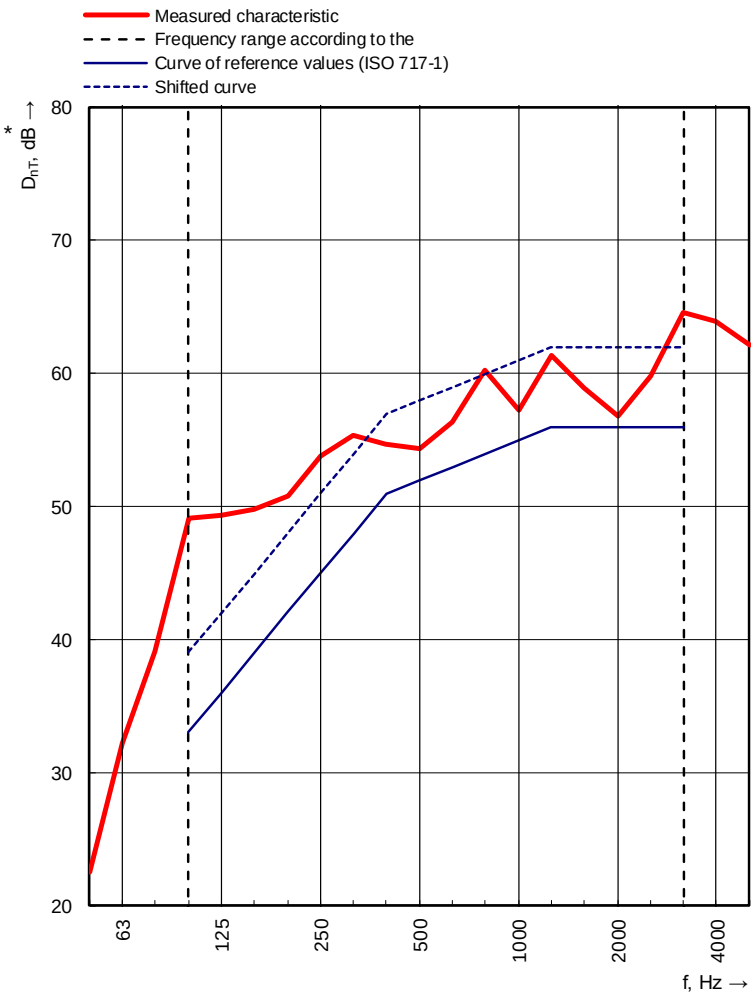
Client: Saleem Holdings Ltd

Description:

Sound insulation test between Flat No 2 Lounge / Diner and Common Hall/Stais/Landing Area, 6-10 Westgate, Dewsbury. Party dividing wall.

Area of common partition:	10.5 m^2	Note:	Party Dividing Wall
Receiving room volume:	60.0 m^3	Name:	Common Hall / Stairs/Landing
Source room volume:	37.5 m^3	Name:	Flat 2 Lounge/Diner 1st Floor

Frequency *f* Hz	D_{nT} (1/3 octave) dB
50	22.5
63	32.2
80	39.1
100	49.1
125	49.3
160	49.8
200	50.8
250	53.8
315	55.3
400	54.7
500	54.4
630	56.3
800	60.2
1000	57.2
1250	61.4
1600	58.9
2000	56.8
2500	59.8
3150	64.6
4000	63.9
5000	62.1



Rating according to ISO 717-1

$D_{nT,w}$(C; Ctr) = **58 (0 ; -2) dB** $C_{50\text{-}3150}$= -2 dB $C_{50\text{-}5000}$= -1 dB $C_{100\text{-}5000}$= 0 dB

$C_{tr,50\text{-}3150}$= -12 dB $C_{tr,50\text{-}5000}$= -12 dB $C_{tr,100\text{-}5000}$= -2 dB

Evaluation based on field measurement results obtained by an engineering method

No. of test report: J3262 - Test No 3 Name of test institute: Paul Horsley Acoustics Ltd

Date: 2024-05-21 Signature:

Standarized impact sound pressure levels measured in accordance with ISO 140-7

Field measurements of impact sound insulation of floors using tapping machine

Date of test: 2024-05-21

Task: J3262 Object: Impact Sound Insulation Test

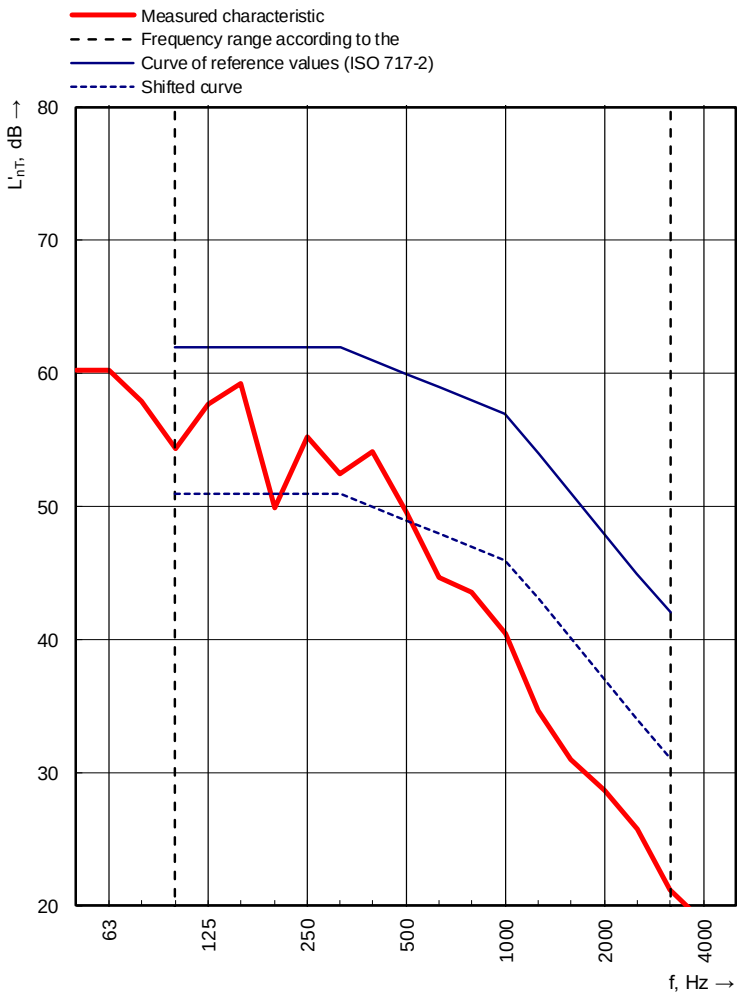
Client: Saleem Holdings Ltd

Description:

Impact sound insulation test between Flat No 2 Lounge / Diner and Flat No 3 Bedroom, 6-10 Westgate, Dewsbury. Party dividing floor.

Receiving room volume: 37.5 m^3 Name: Flat 2 Lounge/Diner 1st Floor

Frequency *f* Hz	L'_{nT} (1/3 octave) dB
50	60.2
63	60.2
80	57.9
100	54.4
125	57.7
160	59.2
200	49.9
250	55.2
315	52.5
400	54.1
500	49.6
630	44.7
800	43.6
1000	40.4
1250	34.7
1600	31.0
2000	28.6
2500	25.8
3150	21.2
4000	18.7
5000	16.4



Rating according to ISO 717-2

$L'_{nT,w}(C_I)$ = **49 (0) dB** $C_{I,50\text{-}2500}$= 3 dB

Evaluation based on field measurement results obtained by an engineering method

No. of test report: J3262 - Test No 4 Name of test institute: Paul Horsley Acoustics Ltd

Date: 2024-05-21 Signature:

Standarized level difference measured in accordance with ISO 140-4

Field measurements of airborne sound insulation between rooms

Date of test: 2024-05-21

Task: J3262 Object: Sound Insulation Test

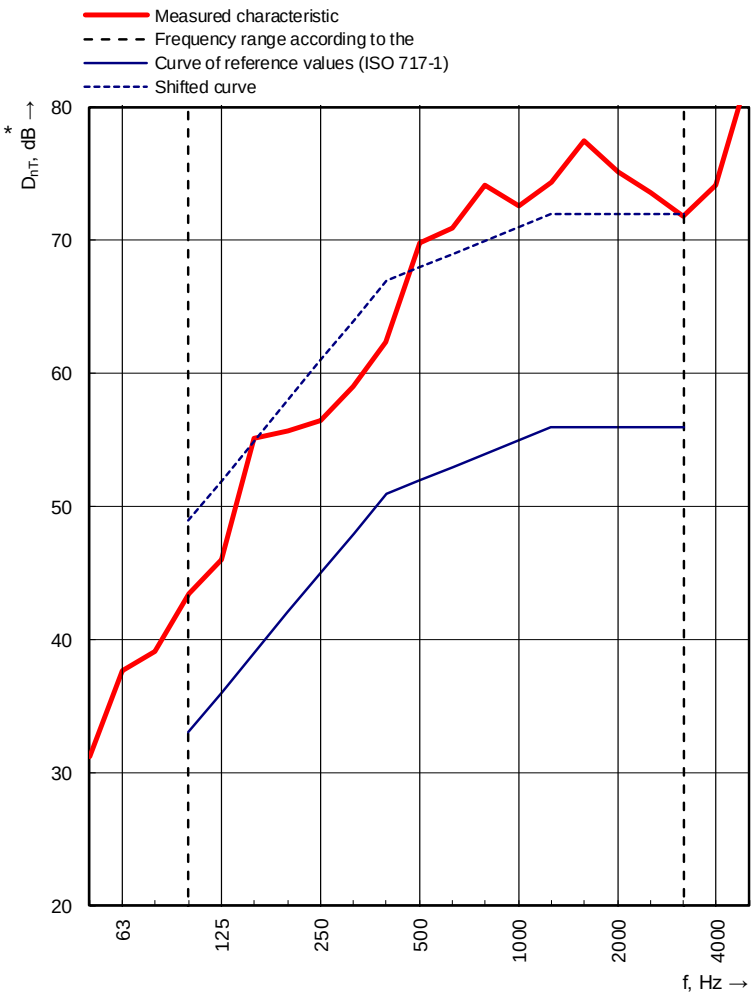
Client: Saleem Holdings Ltd

Description:

Sound insulation test between Flat No 1 Lounge / Diner and Ground Floor Retail Unit No 1, 6-10 Westgate, Dewsbury. Party dividing floor.

Area of common partition:	15.0 m^2	Note:	Party Dividing Floor
Receiving room volume:	147.0 m^3	Name:	Ground Floor Retail Unit No 2
Source room volume:	56.0 m^3	Name:	Flat 1 Lounge/Diner 1st Floor

Frequency *f* Hz	D_{nT} (1/3 octave) dB
50	31.2
63	37.7
80	39.1
100	43.4
125	46.0
160	55.1
200	55.7
250	56.5
315	59.0
400	62.4
500	69.8
630	70.9
800	74.2
1000	72.6
1250	74.4
1600	77.5
2000	75.2
2500	73.6
3150	71.8
4000	74.1
5000	82.8



Rating according to ISO 717-1

$D_{nT,w}$(C; Ctr) = **68 (-2 ; -8) dB** $C_{50\text{-}3150}$= -5 dB $C_{50\text{-}5000}$= -4 dB $C_{100\text{-}5000}$= -1 dB

$C_{tr,50\text{-}3150}$= -15 dB $C_{tr,50\text{-}5000}$= -15 dB $C_{tr,100\text{-}5000}$= -8 dB

Evaluation based on field measurement results obtained by an engineering method

No. of test report: J3262 - Test No 5 Name of test institute: Paul Horsley Acoustics Ltd

Date: 2024-05-21 Signature: