Appendix 3 - SAP Summary Extracts –First pages

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 1 Hendon	Issued on Date	26/09/2019
Assessment Reference	As Built	Prop Type Ref	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	70 C	DER	N/A	TER	N/A
Environmental	73 C	% DER<TER	N/A		
CO_2 Emissions (t/year)	1.18	DFEE	N/A	TFEE	N/A
General Requirements Compliance	N/A	% DFEE<TFEE	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	Assessor ID	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	North
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Mid-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	11.50 m	21.92 m^2	2.40 m

7.0 Living Area	16.99	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
Upgraded Existing	Solid Wall	Other	0.27	27.60	21.97

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	25.92
Party Wall 2	Filled Cavity with Edge Sealing	Other	0.00	7.58

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	21.92

11.0 Heat Loss Floors

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Upgraded Floor	Ground Floor - Solid	Slab on ground, screed over insulation	0.14	21.92

12.0 Opening Types

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 2 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	71 C	**DER**	N/A	**TER**	N/A
Environmental	74 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	1.19	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	North
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Mid-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	11.15 m	26.17 m^2	2.40 m

7.0 Living Area	20.33	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Rear Cavity	Cavity Wall	Other	0.14	26.76	22.01

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	25.68
Party Wall 2	Filled Cavity with Edge Sealing	Other	0.00	7.58

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
GF Flat	External Flat Roof	Plasterboard, insulated flat roof	0.16	20.04	20.04

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	6.13

11.0 Heat Loss Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 3 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	76 C	**DER**	N/A	**TER**	N/A
Environmental	78 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	0.89	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	East
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Mid-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	8.70 m	16.25 m^2	2.40 m

7.0 Living Area	13.55	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Rear Cavity	Cavity Wall	Other	0.14	20.88	18.81

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	27.00

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
GF Flat	External Flat Roof	Plasterboard, insulated flat roof	0.16	8.58	8.58

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	7.67

11.0 Heat Loss Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 4 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	74 C	**DER**	N/A	**TER**	N/A
Environmental	76 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	0.97	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	South
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Mid-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	10.25 m	16.36 m^2	2.40 m

7.0 Living Area 13.59 m^2

8.0 Thermal Mass Parameter Simple calculation - Low

Thermal Mass 100.00 kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Rear Cavity	Cavity Wall	Other	0.14	24.60	19.35

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	25.20

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.18	10.20	10.20

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	7.09

11.0 Heat Loss Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 5 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	72 C	**DER**	N/A	**TER**	N/A
Environmental	75 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	1.09	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	South
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, End-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	16.32 m	20.61 m^2	2.40 m

7.0 Living Area	16.76	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Cavity	Cavity Wall	Other	0.14	39.17	37.61

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	25.73

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.18	5.91	5.91
Flat	External Flat Roof	Plasterboard, insulated flat roof	0.16	3.03	3.03

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	12.26

11.0 Heat Loss Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 6 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	71 C	**DER**	N/A	**TER**	N/A
Environmental	74 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	1.39	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	North
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, Mid-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	16.58 m	36.77 m^2	2.38 m

7.0 Living Area	12.82	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
Upgraded Existing	Solid Wall	Other	0.27	39.46	30.02

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	43.15

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
Sloping	External Slope Roof	Plasterboard, insulated slope	0.18	7.06	7.06

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	29.11

11.1 Party Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 7 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	71 C	**DER**	N/A	**TER**	N/A
Environmental	74 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	1.33	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	East
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, End-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	26.09 m	33.59 m^2	2.38 m

7.0 Living Area	15.59	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Cavity	Cavity Wall	Other	0.14	62.09	56.99

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	24.40

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
New Sloping Roof	External Slope Roof	Plasterboard, insulated slope	0.18	25.83	25.83

10.1 Party Ceilings

Description	Construction	Area (m^2)
Party Ceilings 1	Other	8.99

11.1 Party Floors

SUMMARY FOR INPUT DATA
Calculation Type: Conversion (As Built)

Design SAP
elmhurst energy

Property Reference	Flat 8 Hendon	**Issued on Date**	26/09/2019
Assessment Reference	As Built	**Prop Type Ref**	
Property	49, Hendon Way, LONDON, NW2 2LX		

SAP Rating	72 C	**DER**	N/A	**TER**	N/A
Environmental	75 C	**% DER<TER**	N/A		
CO_2 Emissions (t/year)	1.34	**DFEE**	N/A	**TFEE**	N/A
General Requirements Compliance	N/A	**% DFEE<TFEE**	N/A		

Assessor Details	Mr. William Linley, William Linley, Tel: 03300431764, will@acousticsurveys.co.uk	**Assessor ID**	P977-0001
Client			

SUMMARY FOR INPUT DATA FOR: Conversion (As Built)

Orientation	North
Property Tenure	Unknown
Transaction Type	New dwelling
Terrain Type	Urban
1.0 Property Type	Flat, End-Terrace
2.0 Number of Storeys	1
3.0 Date Built	2019
4.0 Sheltered Sides	3
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	22.50 m	37.11 m^2	2.19 m

7.0 Living Area	22.46	m^2
8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m^2K

9.0 External Walls

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
Upgraded Existing Gable	Solid Wall	Other	0.27	3.16	3.16
Dormer	Timber Frame	Other	0.18	27.25	23.71

9.1 Party Walls

Description	Type	Construction	U-Value (W/m^2K)	Area (m^2)
Party Wall 1	Solid Wall	Other	0.00	24.51

10.0 External Roofs

Description	Type	Construction	U-Value (W/m^2K)	Gross Area (m^2)	Nett Area (m^2)
Sloping	External Slope Roof	Other	0.18	23.14	20.67
Flat	External Flat Roof	Other	0.16	18.19	18.19

11.1 Party Floors

Description	Construction	Area (m^2)
Party Floor 1	Other	37.11

12.0 Opening Types

Sound Installation Test Report

PEAK acoustics
T: 0330 043 1764
E: sales@acousticsurveys.co.uk
W: www.acousticsurveys.co.uk

Sound Insulation Test Report

Measurements to British Standard BS EN ISO 140-4 & 7 (1998) and BS EN ISO 717-1 & 2 (1997), following the test procedures in Annex B of Approved Document E of The Building Regulations at:

49 Hendon Way

London
NW2 2LX

Tom Greatorex
Approved Test Technician - Peak Acoustics Ltd

Ref: 2108191BCN

PEAK acoustics
T: 0330 043 1764
E: sales@acousticsurveys.co.uk
W: www.acousticsurveys.co.uk

Property Type: Change of use - Flats

Test	Source Room	Receiving Room	Measured $D_{nT,w}$ + C_{tr} (dB)	Required Level $D_{nT,w}$ + C_{tr} (dB)	Measured $L'_{nT,w}$ (dB)	Required Level $L'_{nT,w}$ (dB)	Pass/Fail	Improvement on Building Regulations (dB)	Test Type
1	Flat 8 - Living/Kitchen	Flat 6 - Bedroom	38	43			Fail	-5	ABF
2	Flat 8 - Living/Kitchen	Flat 6 - Bedroom			63	64	Pass	1	IMP
3	Flat 8 - Living/Kitchen	Flat 6 - Living/Kitchen	38	43			Fail	-5	ABF
4	Flat 8 - Living/Kitchen	Flat 6 - Living/Kitchen			66	64	Fail	-2	IMP
5	Studio Flat 3	Studio Flat 4	38	43			Fail	-5	ABW
6	Studio Flat 3	Studio Flat 2	38	43			Fail	-5	ABW

ABW - Airborne Wall
ABF - Airborne Floor
IMP - Impact

2108191BCN

PEAK acoustics
T: 0330 043 1764
E: sales@acousticsurveys.co.uk
W: www.acousticsurveys.co.uk

Testing commissioned by:

Adel Mohanaei
49, Hendon Way
London
NW2 2LX

Test Date:

09/10/2019

Equipment: Kit 4

Svantek 977 Class 1 SLM Serial No. 45376
Svantek SV 33 Acoustic Calibrator Serial No. 58016
Lookline EM50 Tapping Machine Serial No. DM.14008
Svantek SV12L Preamplifier Serial No. 42561
Aco Pacific type 7052E microphone Serial No. 59964
Dodec Sound Source

Ref: 2108191BCN

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

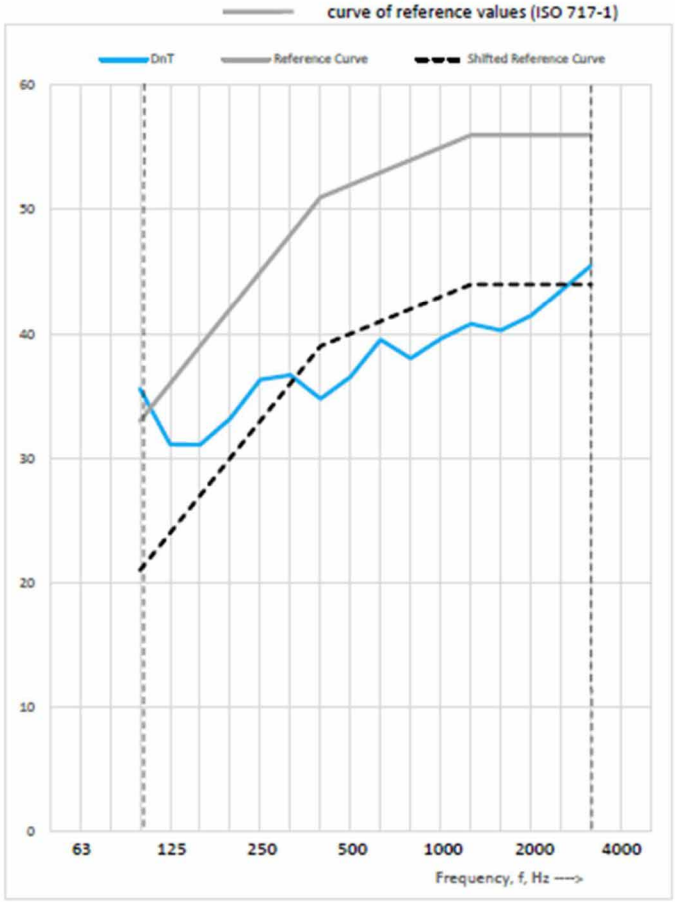
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Airborne 1

Project: 2108191BCN

Source: Flat 8 - Living/Kitchen
Receiver: Flat 6 - Bedroom

Source room volume (m^3): 55.4
Receiver room volume (m^3): 29.8

Frequency (Hz)	DnT 1/3 octave (dB)
50	
63	
80	
100	35.6
125	31.1
160	31.1
200	33.2
250	36.3
315	36.7
400	34.8
500	36.5
630	39.5
800	38.0
1000	39.6
1250	40.8
1600	40.3
2000	41.4
2500	43.5
3150	45.5
4000	
5000	



Rating according to ISO 717-1

DnT,w (C; Ctr) = 40 (0; -2) dB

Evaluation based on field measurement
results obtained by an engineering method

Signed: Tom Greatorex

[redacted]

b: background correction, B, maximum correction
No background noise influence on measured result

Certificate Ref: 2108191BCN - 1
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

Standardised impact sound pressure levels according to ISO 140-7
Field measurements of impact sound insulation of floors

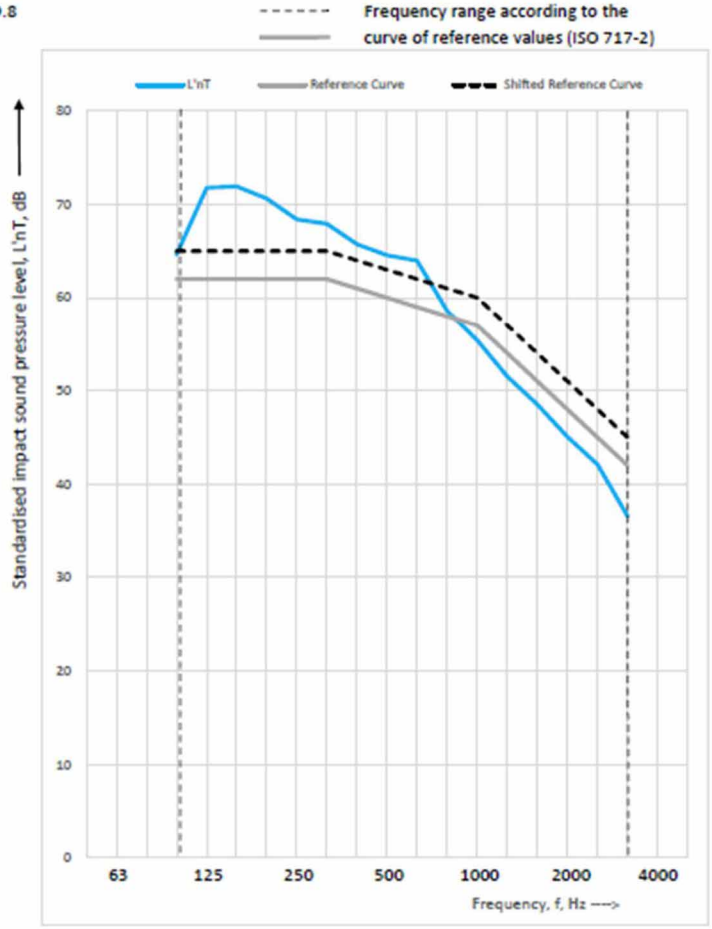
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Impact 2

Project: 2108191BCN

Source: Flat 8 - Living/Kitchen
Receiver: Flat 6 - Bedroom

Source room volume (m^3): 55.4
Receiver room volume (m^3): 29.8

Frequency (Hz)	L'nT 1/3 octave (dB)
50	
63	
80	
100	64.6
125	71.8
160	71.9
200	70.6
250	68.4
315	67.9
400	65.7
500	64.6
630	64.0
800	58.6
1000	55.4
1250	51.5
1600	48.5
2000	45.1
2500	42.1
3150	36.6
4000	
5000	



Rating according to ISO 717-2

L'nT,w = 63 dB

Signed: Tom Greatorex

[redacted]

Evaluation based on field measurement results obtained by an engineering method

b: background correction, K: maximum correction
Result corrected for background noise

Certificate Ref: 2108191BCN - 2
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

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

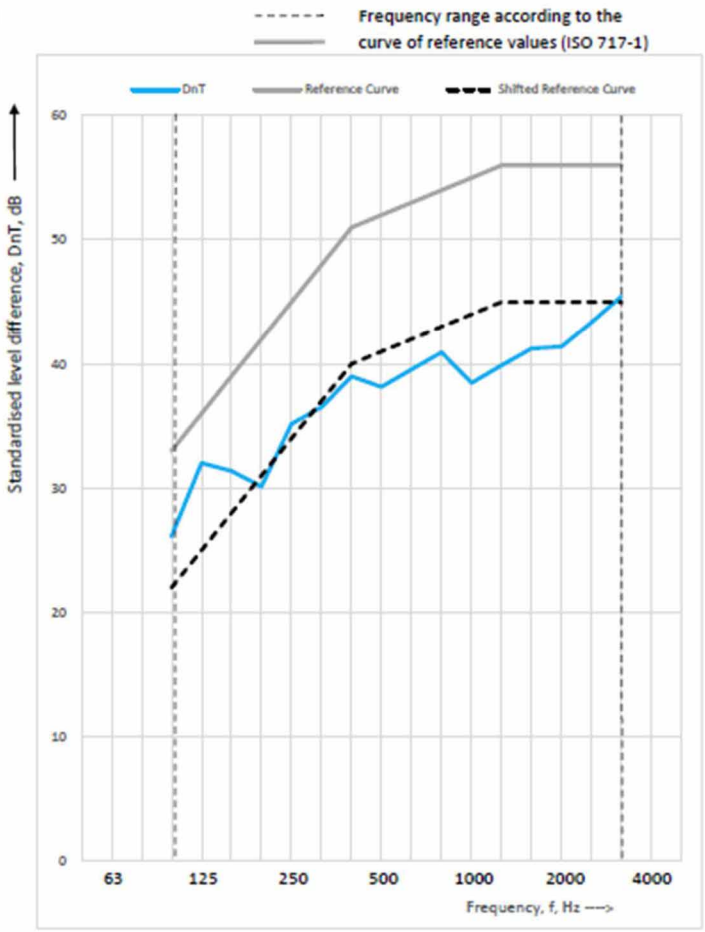
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Airborne 3

Project: 2108191BCN

Source: Flat 8 - Living/Kitchen
Receiver: Flat 6 - Living/Kitchen

Source room volume (m^3): 55.4
Receiver room volume (m^3): 32

Frequency (Hz)	DnT 1/3 octave (dB)
50	
63	
80	
100	26.1
125	32.0
160	31.4
200	30.1
250	35.2
315	36.5
400	39.0
500	38.1
630	39.5
800	40.9
1000	38.5
1250	39.9
1600	41.2
2000	41.4
2500	43.4
3150	45.5
4000	
5000	



Rating according to ISO 717-1

DnT,w (C; Ctr) = 41 (-1; -3) dB

Evaluation based on field measurement
results obtained by an engineering method

Signed: Tom Greatorex

[redacted]

b: background corrected, B: maximum correction
No background noise influence on measured result

Certificate Ref: 2108191BCN - 3
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

Standardised impact sound pressure levels according to ISO 140-7
Field measurements of impact sound insulation of floors

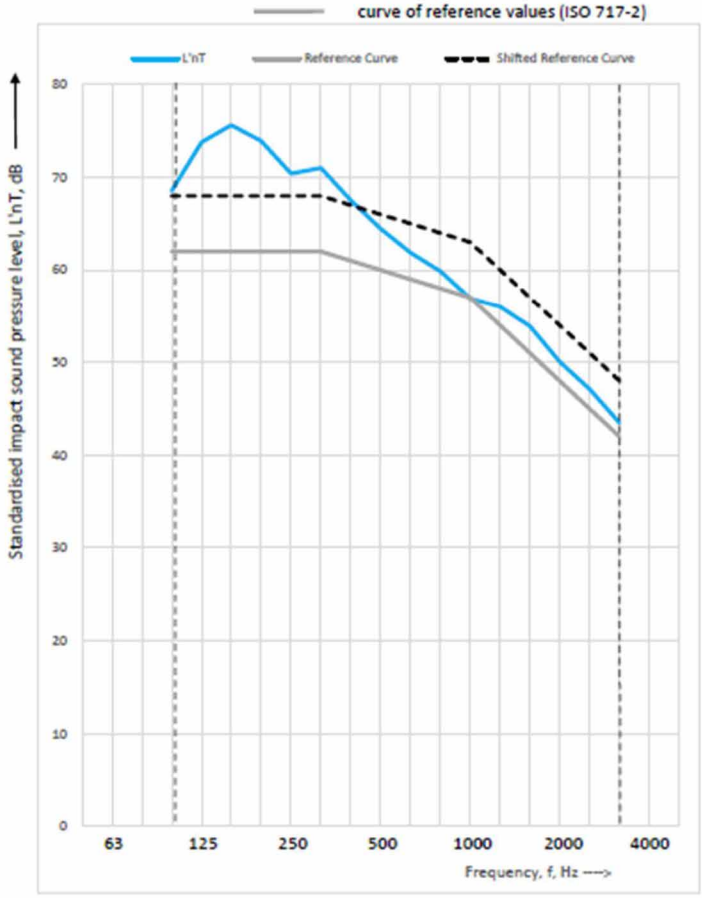
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Impact 4

Project: 2108191BCN

Source: Flat 8 - Living/Kitchen
Receiver: Flat 6 - Living/Kitchen

Source room volume (m^3): 55.4
Receiver room volume (m^3): 32

Frequency (Hz)	L'nT 1/3 octave (dB)
50	
63	
80	
100	68.5
125	73.8
160	75.6
200	73.9
250	70.4
315	71.0
400	67.5
500	64.5
630	61.9
800	59.9
1000	56.9
1250	56.0
1600	53.9
2000	50.1
2500	47.1
3150	43.5
4000	
5000	



Rating according to ISO 717-2

L'nT,w = 66 dB

Signed: Tom Greatorex

[redacted]

Evaluation based on field measurement
results obtained by an engineering method

b: background corrected, B: maximum correction
Result corrected for background noise

Certificate Ref: 2108191BCN - 4
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

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

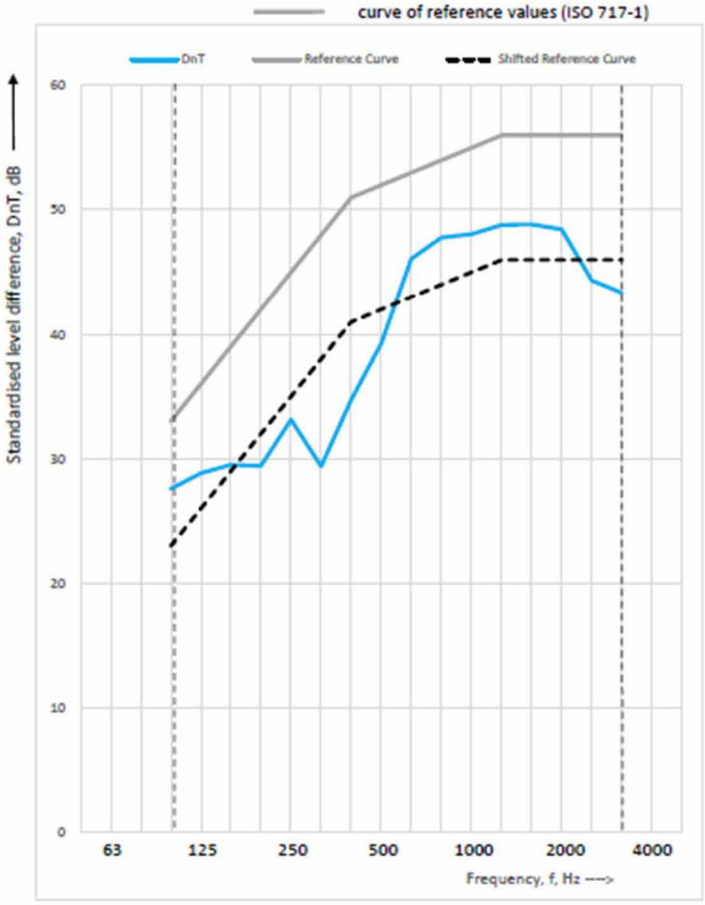
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Airborne 5

Project: 2108191BCN

Source: Studio Flat 3
Receiver: Studio Flat 4

Source room volume (m^3): 47.7
Receiver room volume (m^3): 40.4

Frequency (Hz)	DnT 1/3 octave (dB)
50	
63	
80	
100	27.6
125	28.8
160	29.5
200	29.4
250	33.1
315	29.4
400	34.7
500	39.2
630	46.1
800	47.8
1000	48.1
1250	48.8
1600	48.9
2000	48.5
2500	44.3
3150	43.3
4000	
5000	



Rating according to ISO 717-1

DnT,w (C; Ctr) = 42 (-1; -4) dB

Signed: Tom Greatorex

[redacted]

Evaluation based on field measurement results obtained by an engineering method

b: background corrected, B: maximum correction
No background noise influence on measured result

Certificate Ref: 2108191BCN - 5
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

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

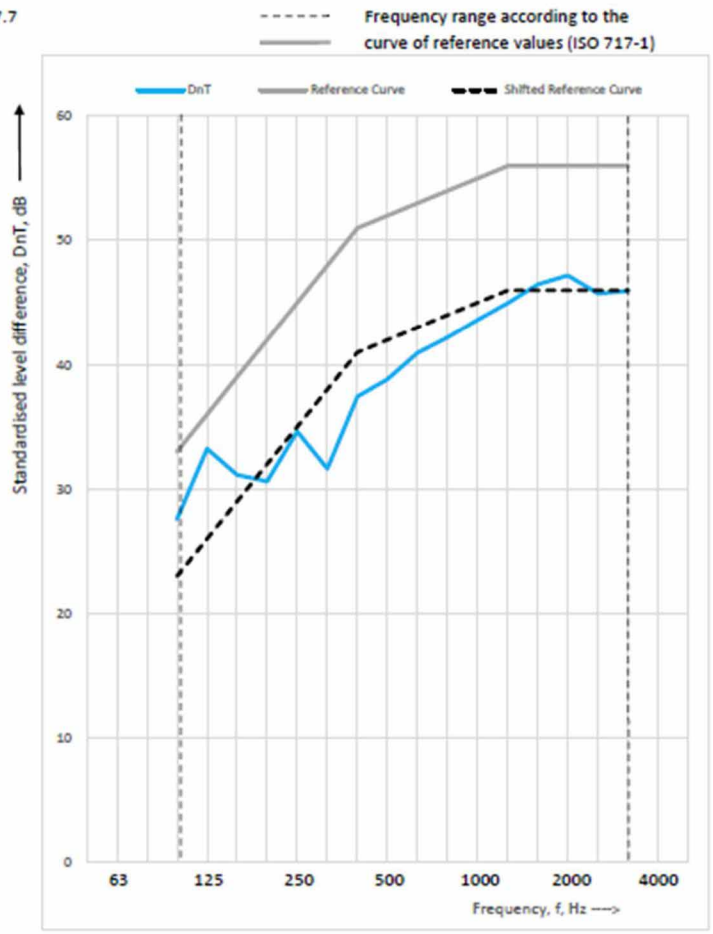
Client: Adel Mohanaei
Date of test: 09/10/2019
Certificate: Airborne 6

Project: 2108191BCN

Source: Studio Flat 3
Receiver: Studio Flat 2

Source room volume (m^3): 47.7
Receiver room volume (m^3): 47.7

Frequency (Hz)	DnT 1/3 octave (dB)
50	
63	
80	
100	27.6
125	33.2
160	31.1
200	30.6
250	34.6
315	31.6
400	37.4
500	38.8
630	40.9
800	42.2
1000	43.6
1250	45.0
1600	46.5
2000	47.2
2500	45.7
3150	45.9
4000	
5000	



Rating according to ISO 717-1

DnT,w (C; Ctr) = 42 (-1; -4) dB

Signed: Tom Greatorex

[redacted]

Evaluation based on field measurement
results obtained by an engineering method

b: background corrected, B: maximum correction
No background noise influence on measured result

Certificate Ref: 2108191BCN - 6
Test Institute: Peak Acoustics Ltd

Date: 09/10/2019

PEAK acoustics
T: 0330 043 1764
E: sales@acousticsurveys.co.uk
W: www.acousticsurveys.co.uk

References

Test Procedure - Airborne Sound Insulation

Airborne sound insulation measurements are taken to a recommended procedure summarised below: -

- A pink noise source generates a steady and continuous spectrum across the required frequency bands.
- Measurements, following the International Standard (2), of the sound levels are taken at one-third octave intervals from 100Hz to 3150Hz, in the source and reciever room using fixed microphone positions.
- An average sound pressure level, representative of the space in each room is established.
- Reverberation time measurements are made in the receiver room (3).
- The standardised level difference (DnT) in decibels (dB) is calculated in each frequency band using the equation: $DnT = L1 - L2 + 10lg\ T/T0$.

DnT is the Standardised Level Difference (dB)

L1 is the average sound pressure level in the source room (dB)
L2 is the average sound pressure level in the receiver room (dB)
T is the average reverberation time of the receiver room (seconds)
T0 is the reference reverberation time of 0.5 seconds.

- The Weighted Standardised Level Difference (DnT,w) in decibels and Spectrum Adaptation Terms (C and Ctr) , are calculated in accordance with BS EN ISO 717-1:1997(4)

Test Procedure - Impact Sound Transmission

Impact sound insulation measurements are taken to a recommended procedure summarised below:-

- An industry standard *tapping machine* is used as the impact noise source.
- Measurements, following the International Standard (5), if the sound level are taken at one-third octave bands intervals from 100Hz to 3150Hz in the receiver room using fixed micrphone positions.
- An average sound pressure level representative of the space in each room is established.
- Reverberation time measurements are made in the receiver room (3)
- The Standardised Impact Sound Pressure Level (L'nT) in decibels (dB) is calculated in each frequency band using the equation: $Lnt = L1 - 10\ lg\ T/T0$

where L'nT Is the Standardised Level Difference (dB)
L1 is the average sound pressure level in the source room (dB)
L2 is the average sound pressure level in the receiver room (dB)
T is the average reverberation time of the receiver room (seconds)
T0 is the reference reverberation time of 0.5 seconds.

- The Weighted Standardised Impact Sound Pressure Level (L'nT,w) in decibels (dB) is calculated in accordance with BS EN ISO 717-2:1997 (6).

Reference Documents

1.The Building Regulations 2015 - Approved Document E: Resistance to the passage of sound.
2. BS EN ISO 140-4:1998 Acoustics - Measurements of sound insulation in buildings and of building elements.
3. BS EN ISO 354:2003 Acoustics - Measurement of sound absorption in a reverberation room.
4. BS EN ISO 717-1:1997 (Incorporating Amendment 1) Rating of sound insulation in buildings and of building elements.
5.BS EN ISO 140-7:1998 Field Measurements of impact sound insulation of floors.
6. BS EN ISO 717-2:1997 (Incorporating Amendment 1) Acoustics. Rating of sound insulation in buildings and of building elements. Impact sound insulation.

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