



WONDERWOOD

PRO-INSUL

Acoustic Underlay

INSPIRED BY NATURE, CRAFTED BY PASSION

PRO-INSUL / 4mm Rubber Underlay

SPECIFICATION		
Type	Rubber	
Colour	Multicolour	
Surface	Granular Texture	
Supplied	Roll Size	1 m x 1 m; 1 m ² /Sheet
	Thickness	4 mm
	Weight	3.5 kg/Sheet
	Density	970 kg/m ³



PRO-INSUL / 2mm Foam Underlay

SPECIFICATION		
Type	Foam	
Supplied	Roll Size	50 m ² and 20 m ²
	Thickness	2 mm
	Width	1 meter
Overlap Moisture Barrier	Yes	
Peel and Stick Tape	Yes	



Hybrid Built-in Acoustic Backing

SPECIFICATION	5.5 mm Hybrid	6.5 mm Hybrid	9 mm Hybrid	
Type	Hybrid			
Supplied	Length	1540 mm	1800 mm	
	Width	228 mm	228 mm	
	Total Thickness	5.5 mm	6.5 mm	9 mm
	Wear Layer Thickness	0.5 mm		
Underlay Thickness	1.5 mm	1.5 mm	2 mm	
Bevel	4-Sided Micro Bevelled Edges			
Joining System	Licensed Click System			
Supplied	Box Size	2.458 m ² / 7 Panels	2.243 m ² / 8 Panels	1.6416 m ² / 4 Panels
	Weight	20.5 kg	23.35 kg	24 kg



RUBBER

System Tested Results	PRO-INSUL Thickness	(L'nTw)	FIIC	AAAC Star Rating	Page
12 mm Laminate Flooring	4 mm	44	61	5	4
14 mm Engineered Flooring	4 mm	43	66	5	5
15 mm Engineered Flooring	4 mm	42	61	5	6
20 mm Engineered Flooring	4 mm	44	61	5	7

FOAM

System Tested Results	PRO-INSUL Thickness	(L'nTw)	FIIC	AAAC Star Rating	Page
12 mm Laminate Flooring	2 mm	44	61	5	8
14 mm Engineered Flooring	2 mm	43	65	5	9
15 mm Engineered Flooring	2 mm	42	63	5	10
20 mm Engineered Flooring	2 mm	43	62	5	11

HYBRID

System Tested Results	(L'nTw)	FIIC	AAAC Star Rating	Page
5.5 mm Hybrid Flooring	35	72	6	12
6.5 mm Hybrid Flooring	40	64	6	13
9 mm Hybrid Flooring	36	71	6	14

SAMPLES

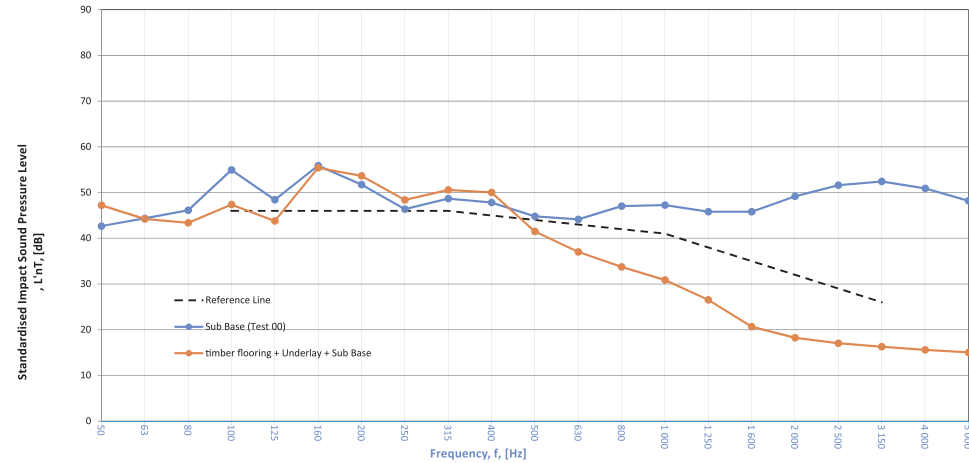
Type	PRO-INSUL Thickness	Page
Rubber	4 mm	15
Foam	2 mm	15

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 04)

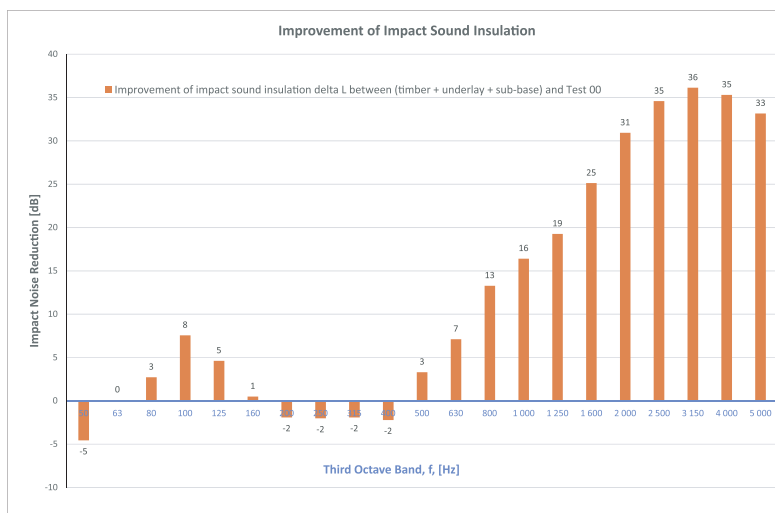
Date of Test: Friday, 9 November 2018
Project No.: 2754
Testing Company: Koikas Acoustics
Checked by: Nick Koikas
Place of Test: Residential flat building in Hurstville NSW
Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces		
	Wonderwood 12 mm Laminated Flooring		12		Walls	Floor	Ceiling
Room Floor Dimensions	Width:	6	m	Concrete / Plasterboard			Plasterboard
	Length:	4	m				
Sample Dimensions	Width:	1	m	Carpet (Covered with Plastic Sheets)			Plasterboard
	Length:	1	m				
Receiver Rm	Location	Unite 301 living	Area		Height	Volume	
	Area:	24	m ²	2.4	57.6		

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor Underlay
50	42.7	47.2
63	44.3	44.2
80	46.1	43.4
100	55.0	47.4
125	48.4	43.8
160	55.9	55.4
200	51.7	53.6
250	46.4	48.4
315	48.7	50.6
400	47.8	50.0
500	44.8	41.5
630	44.1	37.0
800	47.0	33.7
1000	47.3	30.9
1250	45.8	26.5
1600	45.8	20.7
2000	49.2	18.2
2500	51.6	17.0
3150	52.4	16.3
4000	50.9	15.6
5000	48.2	15.0



Timber Flooring + Underlay + Sub Base (TEST 04)			
L'nT,w	44		AS ISO 717.2 - 2004
Ci	1		AS ISO 717.2 - 2004
Ci(50-2500)	1		AS ISO 717.2 - 2004
Ci(63-2000)	1		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	61		ASTM E1007-14



Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

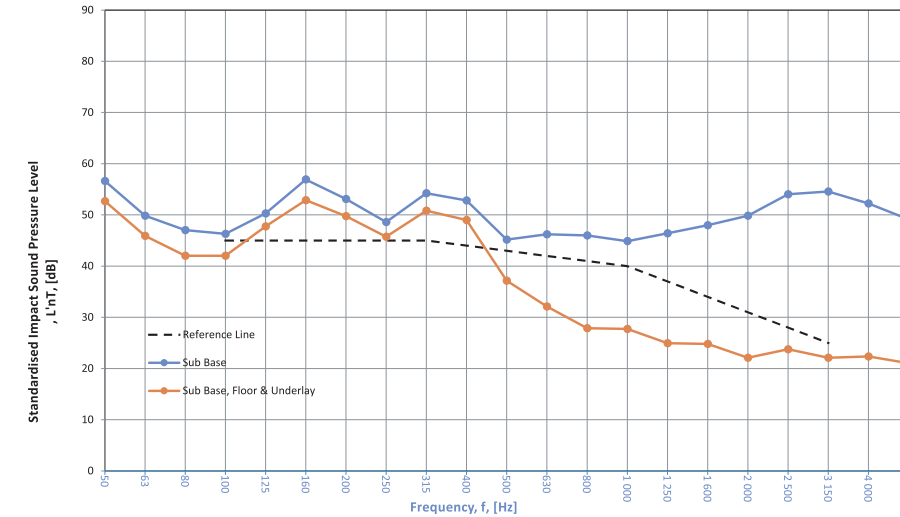
AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 03)

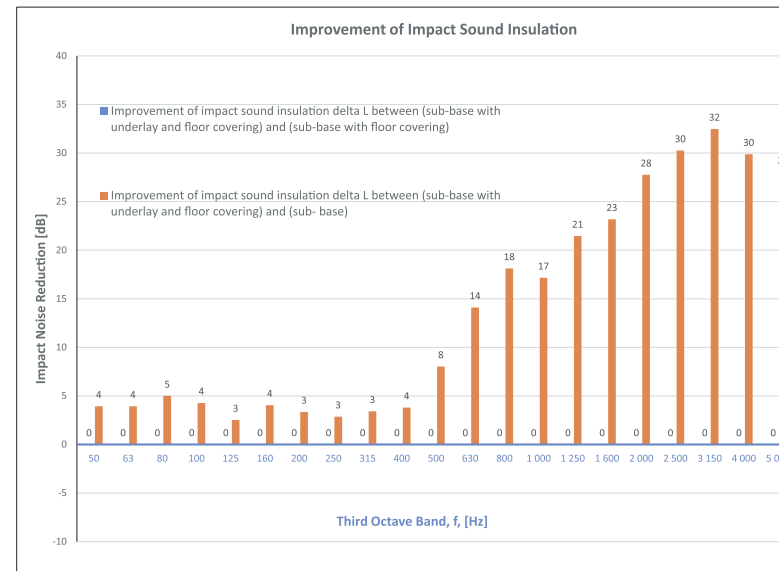
Date of Test: Wednesday, 20 January 2021
Project No.: 2754
Testing Company: Koikas Acoustics
Checked by: Nick Koikas
Place of Test: Residential apartment building in Wolli Creek NSW
Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces		
	14 mm Engineered Timber Flooring		14		Walls	Floor	Ceiling
Room Floor Dimensions	Width:	5	m	Plasterboard			Plasterboard
	Length:	6.7	m				
Sample Dimensions	Width:	1	m	Carpet			Plasterboard
	Length:	1	m				
Receiver Rm	Location	Lower floor level bedroom	Area		Height	Volume	
	Area:	33.50	m ²	2.7	32.40		

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor Underlay
50	56.6	52.7
63	49.8	45.9
80	47.0	42.0
100	46.3	42.0
125	50.3	47.8
160	56.9	52.9
200	53.1	49.8
250	48.6	45.7
315	54.2	50.8
400	52.8	49.0
500	45.2	37.2
630	46.2	32.1
800	46.0	27.9
1000	44.9	27.7
1250	46.4	24.9
1600	48.0	24.8
2000	49.8	22.1
2500	54.0	23.8
3150	54.6	22.1
4000	52.2	22.4
5000	49.1	21.1



Sub Base, Floor & Underlay			
L'nT,w	43		AS ISO 717.2 - 2004
Ci	0		AS ISO 717.2 - 2004
Ci(50-2500)	1		AS ISO 717.2 - 2004
Ci(63-2000)	0		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	66		ASTM E1007-14



Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

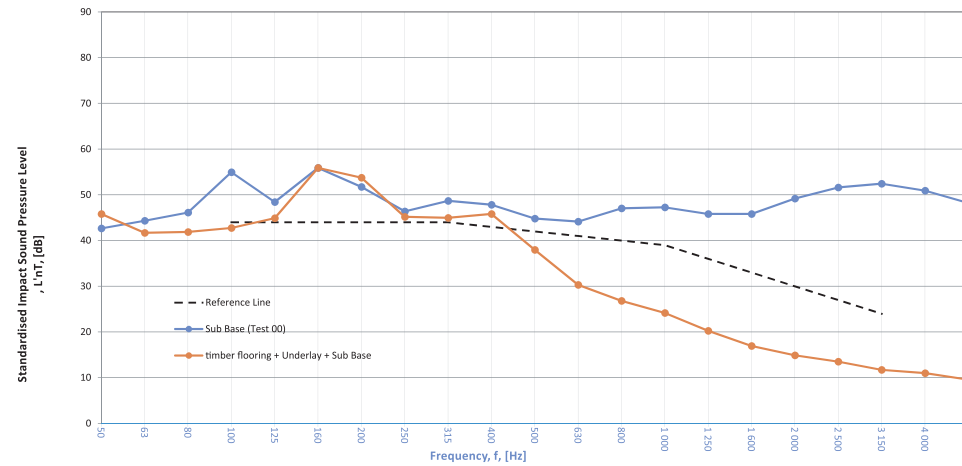
AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 08)

Date of Test: Friday, 9 November 2018
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential flat building in Hurstville NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces			
	Wonderwood 15 mm Engineered Flooring	15	Wonderwood Pro-Insul 4 mm Rubber Underlay	4				Concrete / Plasterboard
	200 mm reinforced concrete slab	200	80~120 mm suspended ceiling cavity + 13 mm plasterboard ceiling			80~120 +13		
Room Floor Dimensions	Width:	6 m	Length:	4 m	Area:	24 m ²		
Sample Dimensions	Width:	1 m	Length:	1 m	Area:	1 m ²		
Receiver Rm	Location	Unite 301 living	Width	6	Length	4	Area	24
	Height	2.4	Volume	57.6				

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	45.8
63	44.3	41.7
80	46.1	41.9
100	55.0	42.7
125	48.4	44.9
160	55.9	55.9
200	51.7	53.7
250	46.4	45.2
315	48.7	45.0
400	47.8	45.8
500	44.8	38.0
630	44.1	30.3
800	47.0	26.8
1000	47.3	24.2
1250	45.8	20.3
1600	45.8	16.9
2000	49.2	14.9
2500	51.6	13.5
3150	52.4	11.7
4000	50.9	11.0
5000	48.2	9.6



Timber Flooring + Underlay + Sub Base (TEST 08)			
L'nT,w	42		AS ISO 717.2 - 2004
Ci	2		AS ISO 717.2 - 2004
Ci(50-2500)	2		AS ISO 717.2 - 2004
Ci(63-2000)	2		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	61		ASTM E1007-14

Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

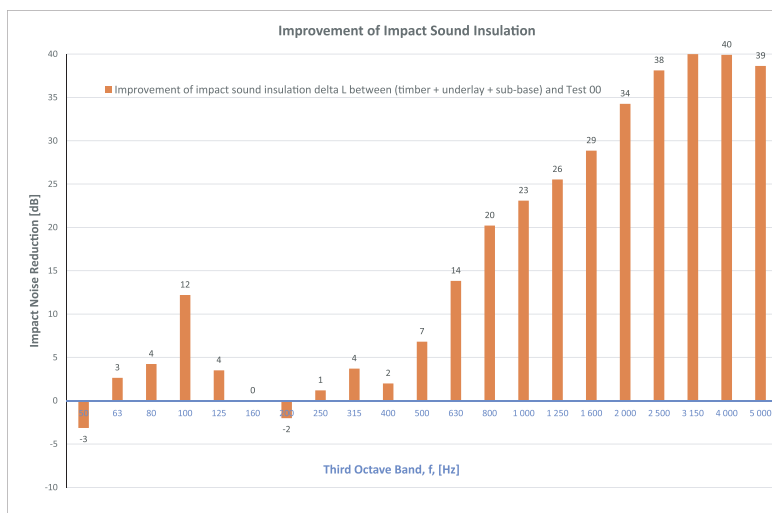
L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

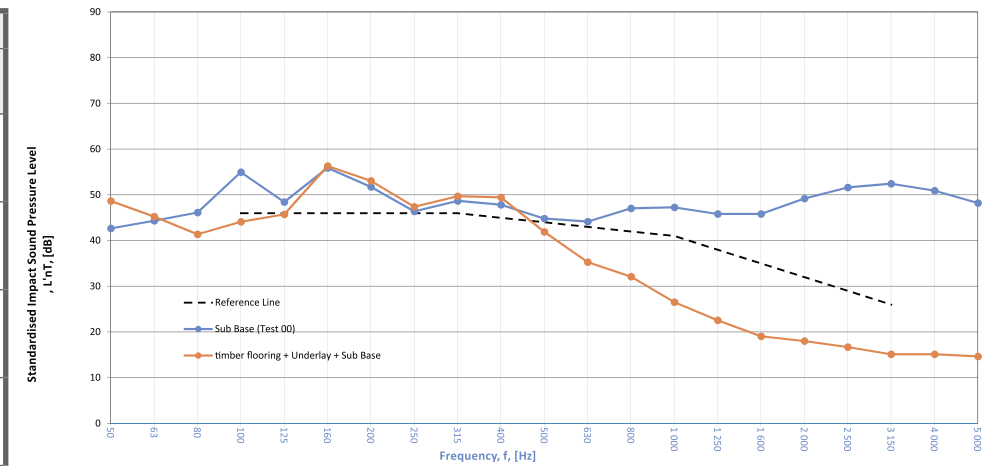


FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 12)

Date of Test: Friday, 9 November 2018
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential apartment building in Wolli Creek NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces			
	Wonderwood 20 mm Engineered Flooring	20	Wonderwood Pro-Insul 4 mm Rubber Underlay	4				Concrete / Plasterboard
	200 mm reinforced concrete slab	200	80~120 mm suspended ceiling cavity + 13 mm plasterboard ceiling			80~120 +13		
Room Floor Dimensions	Width:	6 m	Length:	4 m	Area:	24 m ²		
Sample Dimensions	Width:	1 m	Length:	1 m	Area:	1 m ²		
Receiver Rm	Location	Unite 301 living	Width	6	Length	4	Area	24
	Height	2.4	Volume	57.6				

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	48.6
63	44.3	45.3
80	46.1	41.4
100	55.0	44.1
125	48.4	45.7
160	55.9	56.3
200	51.7	53.0
250	46.4	47.4
315	48.7	49.7
400	47.8	49.4
500	44.8	41.9
630	44.1	35.3
800	47.0	32.1
1000	47.3	26.5
1250	45.8	22.6
1600	45.8	19.0
2000	49.2	18.0
2500	51.6	16.7
3150	52.4	15.1
4000	50.9	15.1
5000	48.2	14.7



Sub Base, Floor & Underlay			
L'nT,w	44		AS ISO 717.2 - 2004
Ci	1		AS ISO 717.2 - 2004
Ci(50-2500)	1		AS ISO 717.2 - 2004
Ci(63-2000)	1		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	61		ASTM E1007-14

Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

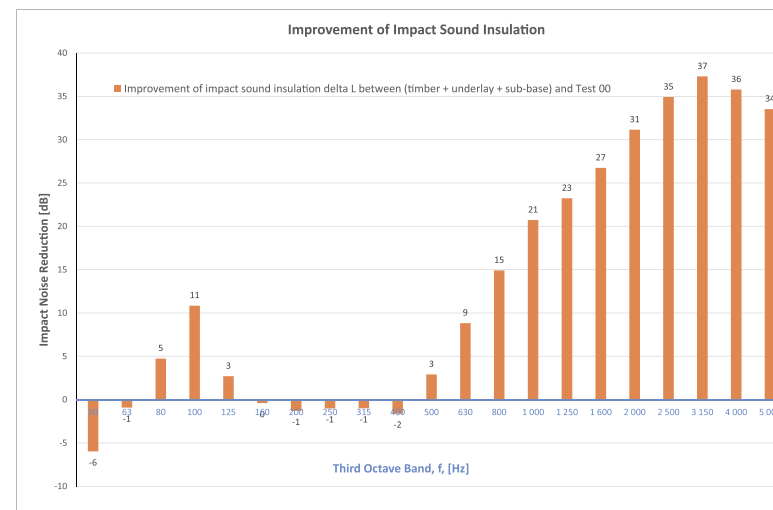
L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

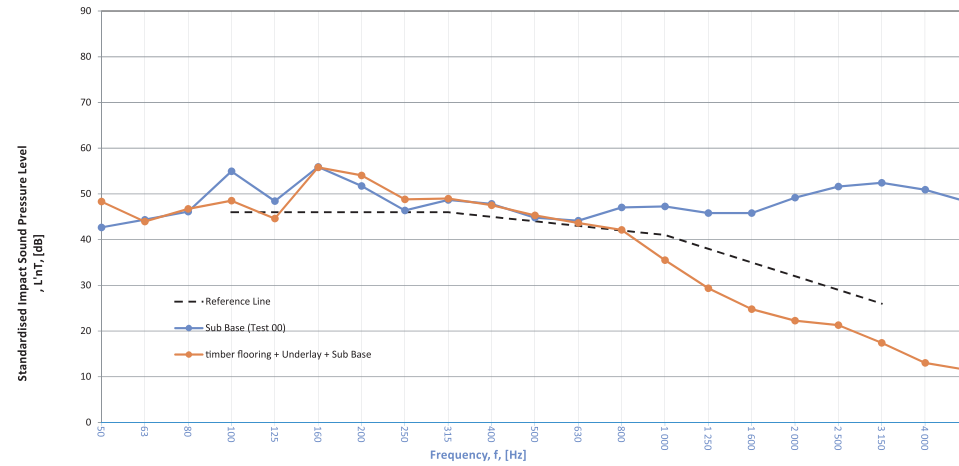


FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 01)

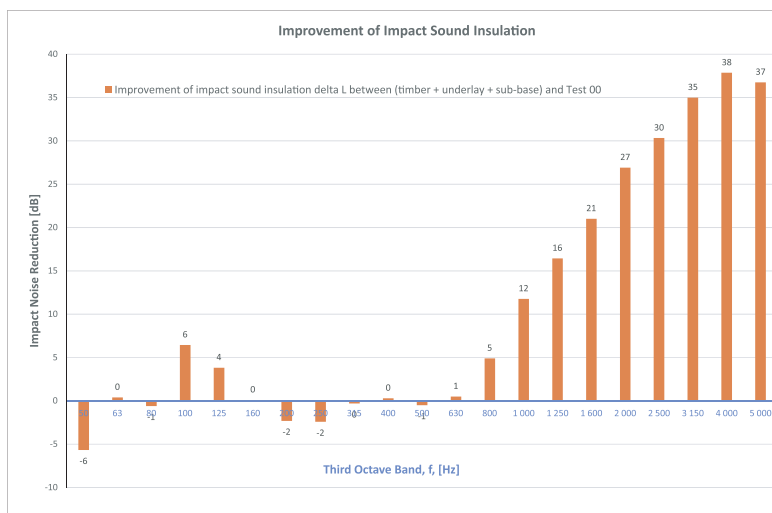
Date of Test: Friday, 9 November 2018
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential flat building in Hurstville NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces				
	Wonderwood 12 mm Laminated Flooring		12		Concrete / Plasterboard				
Room Floor Dimensions	Width:	6	m				Walls		
	Length:	4	m					Floor	
Sample Dimensions	Width:	1	m				Ceiling		
	Length:	1	m					Carpet (Covered with Plastic Sheets)	
Receiver Rm	Area:	24	m ²				Plasterboard		
	Location	Unite 301 living			Width	Length		Area	Height
		6	4	24	2.4	57.6			

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	48.3
63	44.3	43.9
80	46.1	46.7
100	55.0	48.5
125	48.4	44.6
160	55.9	55.8
200	51.7	54.0
250	46.4	48.8
315	48.7	49.0
400	47.8	47.5
500	44.8	45.3
630	44.1	43.6
800	47.0	42.1
1000	47.3	35.5
1250	45.8	29.4
1600	45.8	24.8
2000	49.2	22.3
2500	51.6	21.3
3150	52.4	17.4
4000	50.9	13.0
5000	48.2	11.4



Timber Flooring + Underlay + Sub Base (Test 01)			
L'nT,w	44	AS ISO 717.2 - 2004	
Ci	1	AS ISO 717.2 - 2004	
Ci(50-2500)	2	AS ISO 717.2 - 2004	
Ci(63-2000)	1	AS ISO 717.2 - 2004	
AAAC ★	5 Star	AAAC Guideline	
FIIC	61	ASTM E1007-14	



Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

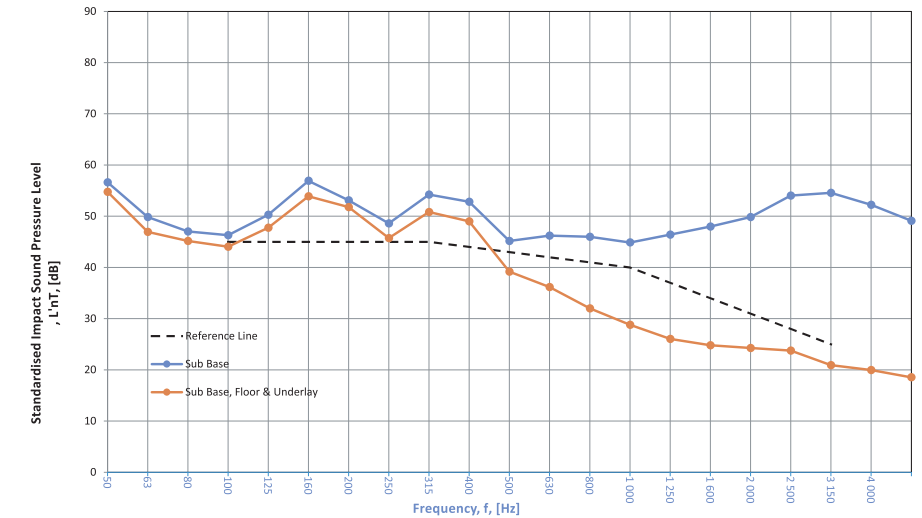
AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 02)

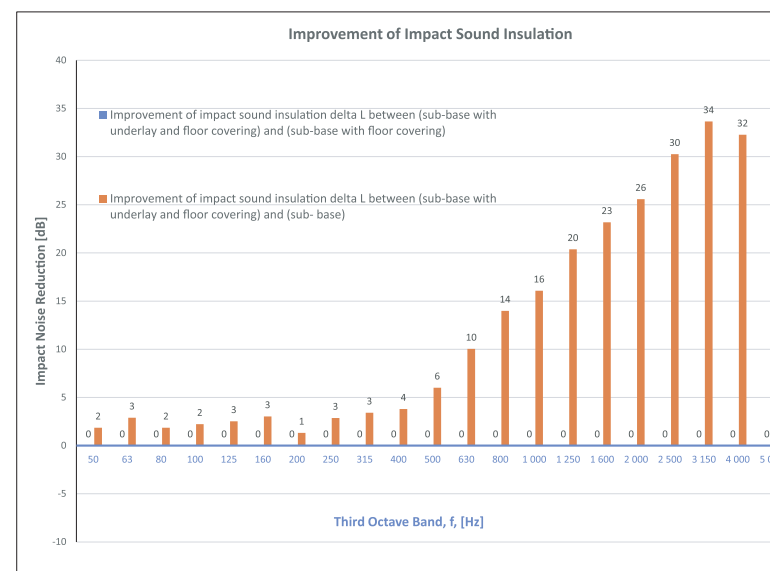
Date of Test: Wednesday, 20 January 2021
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential apartment building in Wolli Creek NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces				
	14 mm Engineered Timber Flooring		14		Plasterboard				
Room Floor Dimensions	Width:	5	m				Walls		
	Length:	6.7	m					Floor	
Sample Dimensions	Width:	1	m				Ceiling		
	Length:	1	m					Carpet	
Receiver Rm	Area:	33.50	m ²				Plasterboard		
	Location	Lower floor level bedroom			Width	Length		Area	Height
		3	4	33.50	2.7	32.40			

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	56.6	54.8
63	49.8	46.9
80	47.0	45.2
100	46.3	44.1
125	50.3	47.8
160	56.9	53.9
200	53.1	51.8
250	48.6	45.7
315	54.2	50.8
400	52.8	49.0
500	45.2	39.2
630	46.2	36.2
800	46.0	32.0
1000	44.9	28.8
1250	46.4	26.0
1600	48.0	24.8
2000	49.8	24.3
2500	54.0	23.8
3150	54.6	20.9
4000	52.2	20.0
5000	49.1	18.5



Sub Base, Floor & Underlay			
L'nT,w	43	AS ISO 717.2 - 2004	
Ci	1	AS ISO 717.2 - 2004	
Ci(50-2500)	2	AS ISO 717.2 - 2004	
Ci(63-2000)	1	AS ISO 717.2 - 2004	
AAAC ★	5 Star	AAAC Guideline	
FIIC	65	ASTM E1007-14	



Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

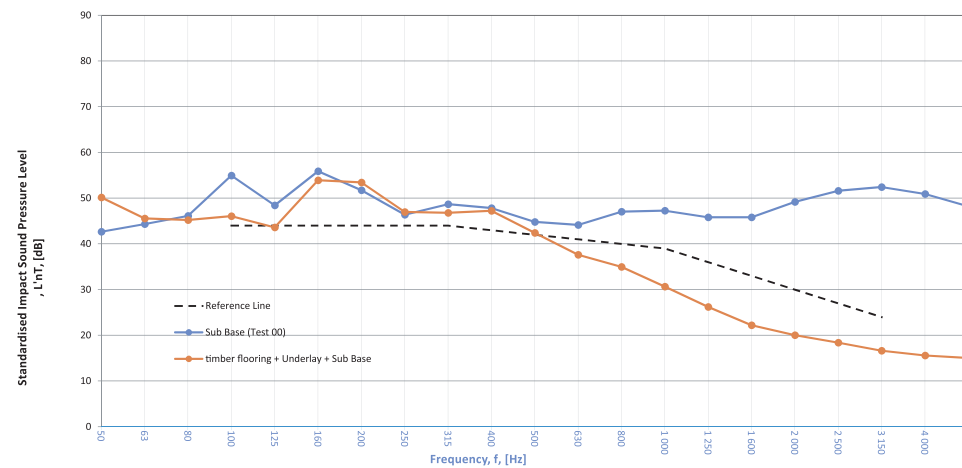
AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 05)

Date of Test: Friday, 9 November 2018
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential flat building in Hurstville NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces		
	Wonderwood 15 mm Engineered Flooring		15		Concrete / Plasterboard		
Room Floor Dimensions	Width:	6	m				Walls
	Length:	4	m				
Sample Dimensions	Width:	1	m				Floor
	Length:	1	m				
Receiver Rm	Area:	24	m ²				Ceiling
	Location	Unite 301 living					

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	50.1
63	44.3	45.6
80	46.1	45.2
100	55.0	46.1
125	48.4	43.6
160	55.9	53.9
200	51.7	53.4
250	46.4	47.0
315	48.7	46.8
400	47.8	47.2
500	44.8	42.4
630	44.1	37.6
800	47.0	35.0
1000	47.3	30.6
1250	45.8	26.2
1600	45.8	22.2
2000	49.2	20.0
2500	51.6	18.4
3150	52.4	16.4
4000	50.9	15.6
5000	48.2	15.0



Timber Flooring + Underlay + Sub Base (Test 05)			
L'nT,w	42		AS ISO 717.2 - 2004
Ci	2		AS ISO 717.2 - 2004
Ci(50-2500)	2		AS ISO 717.2 - 2004
Ci(63-2000)	2		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	63		ASTM E1007-14

Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

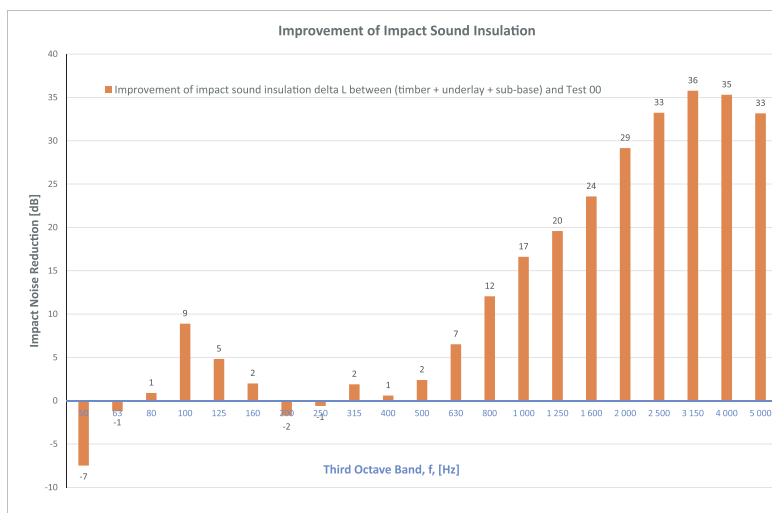
L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

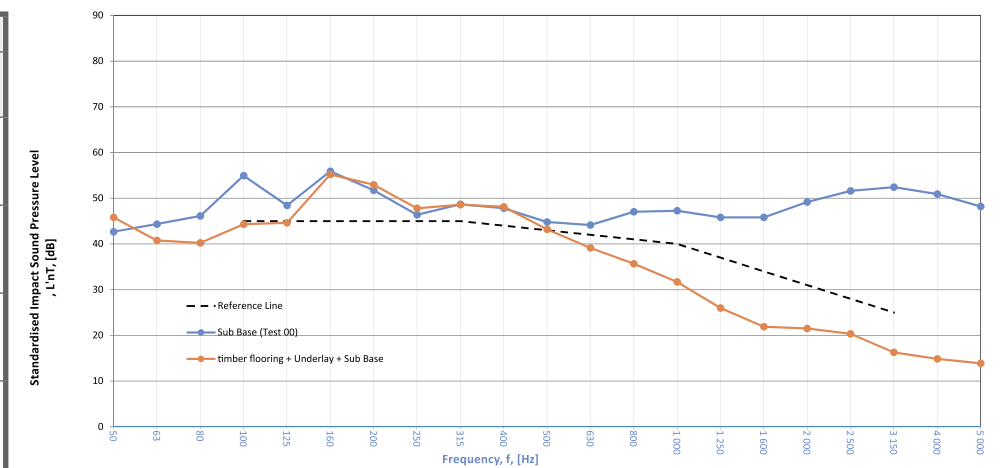


FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 09)

Date of Test: Friday, 9 November 2018
 Project No.: 2754
 Testing Company: Koikas Acoustics
 Checked by: Nick Koikas
 Place of Test: Residential apartment building in Wolli Creek NSW
 Client: Wonderwood Floors

Description of Floor System	Name		Thickness(mm)		Room Surfaces		
	Wonderwood 20 mm Engineered Flooring		20		Concrete / Plasterboard		
Room Floor Dimensions	Width:	6	m				Walls
	Length:	4	m				
Sample Dimensions	Width:	1	m				Floor
	Length:	1	m				
Receiver Rm	Area:	24	m ²				Ceiling
	Location	Unite 301 living					

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	45.8
63	44.3	40.8
80	46.1	40.2
100	55.0	44.3
125	48.4	44.6
160	55.9	55.2
200	51.7	52.9
250	46.4	47.8
315	48.7	48.6
400	47.8	48.1
500	44.8	43.2
630	44.1	39.1
800	47.0	35.7
1000	47.3	31.7
1250	45.8	26.0
1600	45.8	21.9
2000	49.2	21.5
2500	51.6	20.3
3150	52.4	16.3
4000	50.9	14.9
5000	48.2	13.9



Sub Base, Floor & Underlay			
L'nT,w	43		AS ISO 717.2 - 2004
Ci	1		AS ISO 717.2 - 2004
Ci(50-2500)	1		AS ISO 717.2 - 2004
Ci(63-2000)	1		AS ISO 717.2 - 2004
AAAC ★	5 Star		AAAC Guideline
FIIC	62		ASTM E1007-14

Definitions of Noise Metrics

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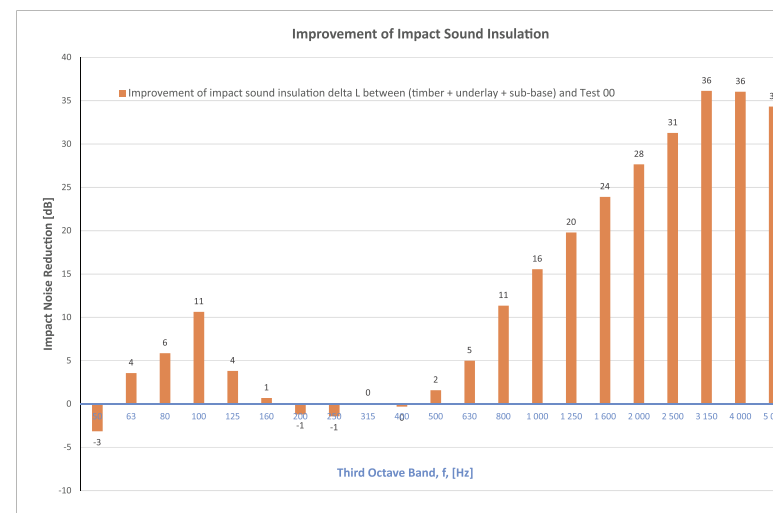
L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

Ci: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors Ci is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

Ci(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

Ci(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible



FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS

Date of Test: Friday, 25 November 2022
Ref No.: 2001
Test No.: 01
Testing Company: Contrix Pty Ltd
Tested by: Michael Fan Chiang BE(Mech), MAAS
Place of Test: Residential Apartment in Wolli Creek
Client: Wonderwood Floors

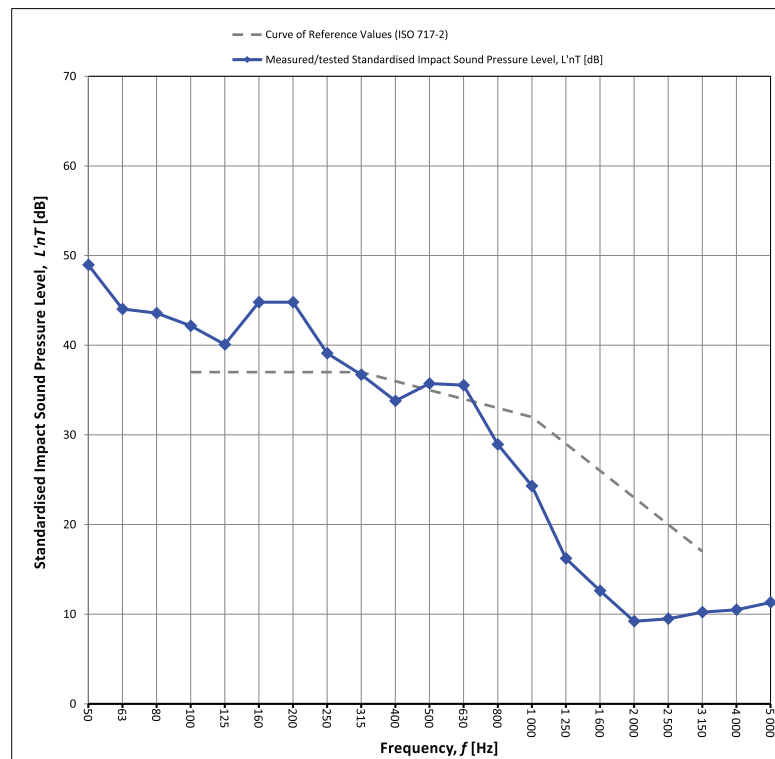
Name	Thickness(mm)
5.5 mm Hybrid Flooring 200~220 mm reinforced concrete slab	5.5 200~220

Location
Living area on level 17

Location	Volume
Living area on level 16	55.41

Room Surfaces		
Walls	Floor	Ceiling
Plasterboard	Tiles/Rug	Plasterboard

Frequency, f [Hz]	L'nT (one-third octave)
Hz	dB
50	49.0
63	44.0
80	43.6
100	42.2
125	40.1
160	44.8
200	44.8
250	39.1
315	36.7
400	33.8
500	35.7
630	35.5
800	28.9
1 000	24.3
1 250	16.2
1 600	12.6
2 000	9.2
2 500	9.5
3 150	10.2
4 000	10.5
5 000	11.3



Timber Flooring + Underlay + Sub Base (Test 09)		
L'nT,w	35	AS ISO 717.2 - 2004
FIIC	72	ASTM E1007-14
AAAC ★	6 Star	AAAC Guideline

Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

CI: Spectrum adaption term is a low frequency correction factor. Typically for massive floors such as concrete, the values are about zero while for timber joist floors CI is positive because of the low resonant frequencies. Considers frequency range between 100 -and 2500 Hz.

CI(50-2500): Same as above, but for the frequency range 50 -2500 Hz.

CI(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 13)

Date of Test: Friday, 9 November 2018
Project No.: 2754
Testing Company: Koikas Acoustics
Checked by: Nick Koikas
Place of Test: Residential flat building in Hurstville NSW
Client: Wonderwood Floors

Name	Thickness(mm)
Wonderwood Hybrid SPC Flooring 200 mm reinforced concrete slab 80~120 mm suspended ceiling cavity + 13 mm plasterboard ceiling	6.5 200 80~120 + 13

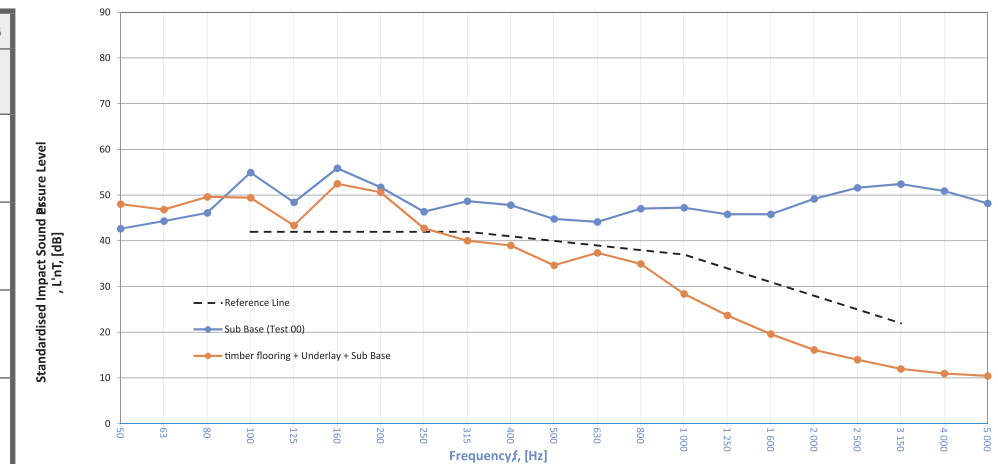
Room Floor Dimensions	Width	Length	Area
	6 m	4 m	24 m ²

Sample Dimensions	Width	Length	Area
	1 m	1 m	1 m ²

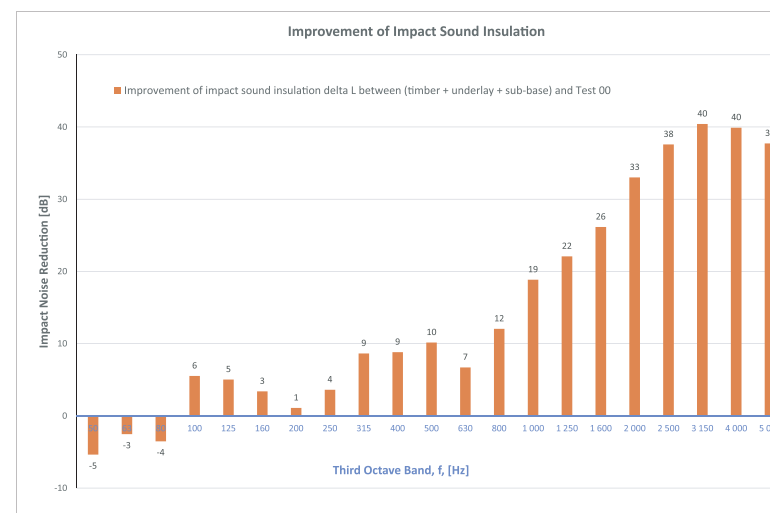
Receiver Rm	Location	Width	Length	Area	Height	Volume
	Unit 301 living	6	4	24	2.4	57.6

Room Surfaces		
Walls	Floor	Ceiling
Concrete/Plasterboard	Carpet (Covered with plastic sheets)	Plasterboard

Frequency, f, [Hz]	L'nT (one-third octave) dB	
	Sub Base	Sub Base Floor underlay
50	42.7	48.0
63	44.3	46.9
80	46.1	49.6
100	55.0	49.4
125	48.4	43.4
160	55.9	52.5
200	51.7	50.6
250	46.4	42.8
315	48.7	40.0
400	47.8	39.0
500	44.8	34.6
630	44.1	37.4
800	47.0	35.0
1000	47.3	28.4
1250	45.8	23.7
1600	45.8	19.6
2000	49.2	16.1
2500	51.6	14.0
3150	52.4	12.0
4000	50.9	11.0
5000	48.2	10.5



Timber Flooring + Underlay + Sub Base (Test 09)		
L'nT,w	40	AS ISO 717.2 - 2004
CI	2	AS ISO 717.2 - 2004
CI(50-2500)	3	AS ISO 717.2 - 2004
CI(63-2000)	3	AS ISO 717.2 - 2004
AAAC ★	6 Star	AAAC Guideline
FIIC	64	ASTM E1007-14



Definitions of Noise Metrics

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L'nT,w: The Weighted Standardised Impact Sound Pressure Level when measured in situ referenced to a reverberation time (RT60) of 0.5 seconds. Used by the AAAC to determine their respective Star Rating.

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CI(125-2000): Same as above, but for the frequency range 125 -2000 Hz.

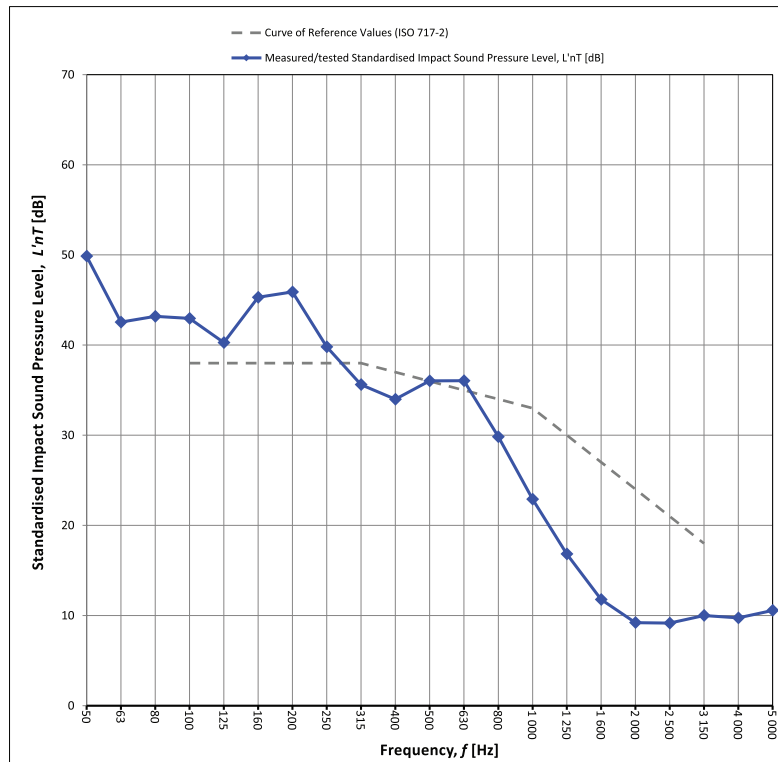
AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Nomally Inaudible

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS

Date of Test: Friday, 25 November 2022
 Ref No.: 2001
 Test No.: 02
 Testing Company: Conrix Pty Ltd
 Tested By: Michael Fan Chiang BE(Mech), MAAS
 Place of Test: Residential Apartment in Wollli Creek
 Client: Wonderwood Floors

Name	Thickness(mm)	Room Surfaces			
Description of Floor System	9 mm Hybrid Flooring 200*220 mm reinforced concrete slab	9 200*220	Walls	Floor	Ceiling
Source Room	Location Living area on level 17		Plasterboard	Tiles/Rug	Plasterboard
Receiver Rm	Location Living area on level 16	Volume 55.41			

Frequency, f [Hz]	L'nT (one-third octave)
Hz	dB
50	49.9
63	42.5
80	43.2
100	43.0
125	40.3
160	45.3
200	45.9
250	39.8
315	35.6
400	34.0
500	36.0
630	36.0
800	29.8
1 000	22.9
1 250	16.8
1 600	11.8
2 000	9.2
2 500	9.2
3 150	10.0
4 000	9.7
5 000	10.6



Timber Flooring + Underlay + Sub Base (Test 09)		
L'nT,w	36	AS ISO 717.2 - 2004
FIIC	71	ASTM E1007-14
AAAC ★	6 Star	AAAC Guideline

Definitions of Noise Metrics

FIIC: Field Impact Insulation Class is a single-number rating of how well a floor system attenuates impact type sounds, such as footsteps. Calculated from third-octave band normalised impact sound pressure level data and referenced to 10 m² as described in ASTM E989. The higher the single-number rating, the better its impact insulation performance.

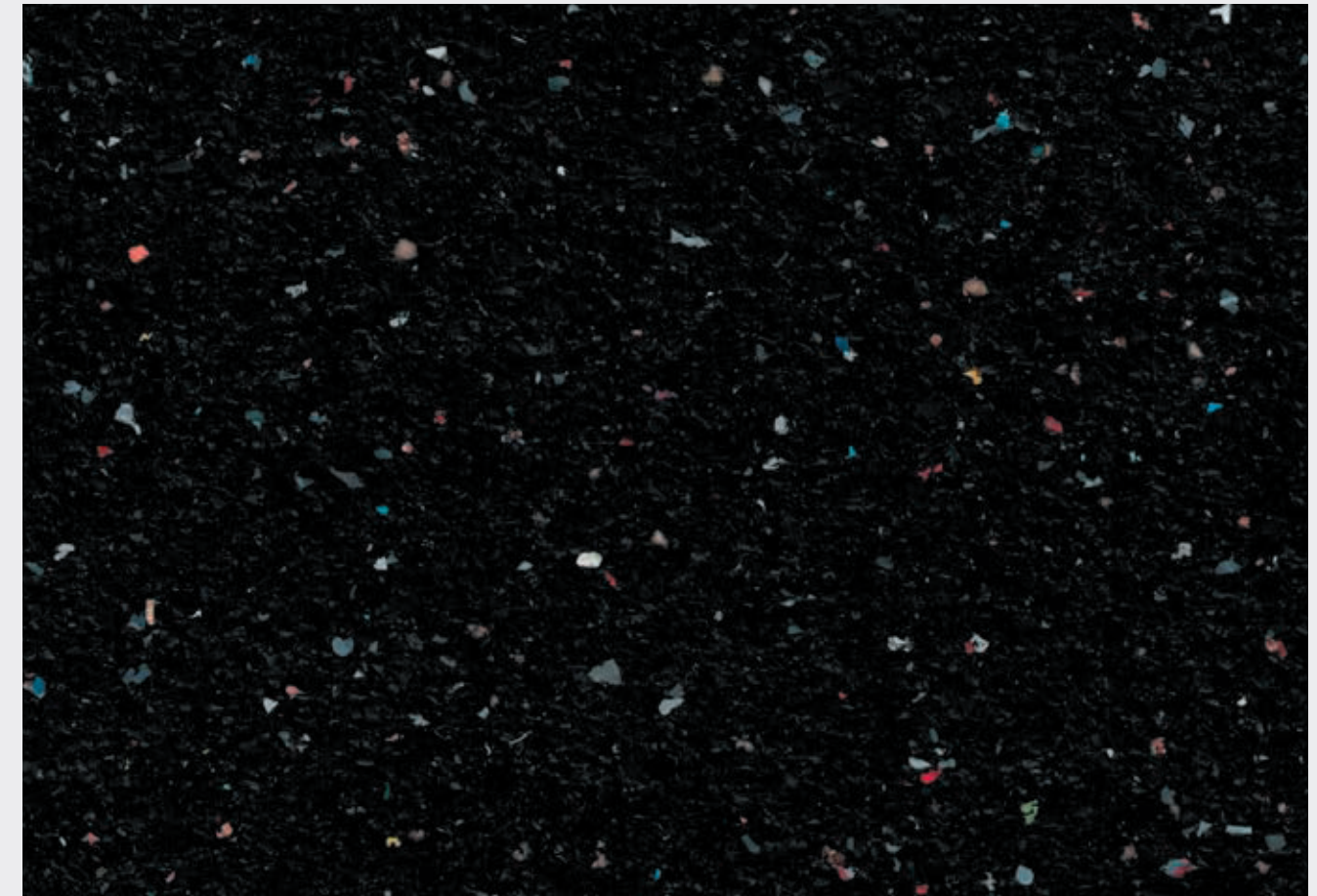
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AAAC Star R.	2	3	4	5	6
L'nT,w	65	55	50	45	40
FIIC	45	55	60	65	70
Comments	Below BCA 62	Clearly Audible	Audible	Barely Inaudible	Normally Inaudible



PRO-INSUL - 4 MM Rubber Sample



PRO-INSUL - 2 MM Foam Sample



WONDERWOOD

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