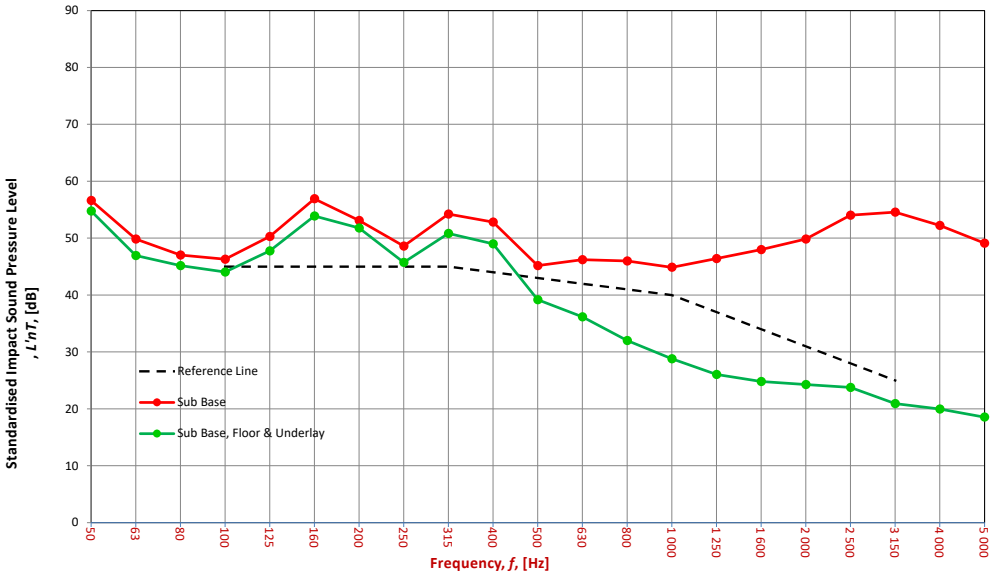


FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 02)

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		
Client Address	-		
Description of Floor System	Name	Thickness (mm)	Density (SI)
	14 mm engineered timber flooring	14	--
	2 mm Pro-Insul Acoustic Foam Underlay	2	--
	200~220 mm reinforced concrete slab	200'220	--
Room Floor Dimensions	Width :	5	m
	Length :	6.7	m
	Area :	33.50	m ²
Sample Dimensions	Width :	1	m
	Length :	1	m
	Area :	1	m ²

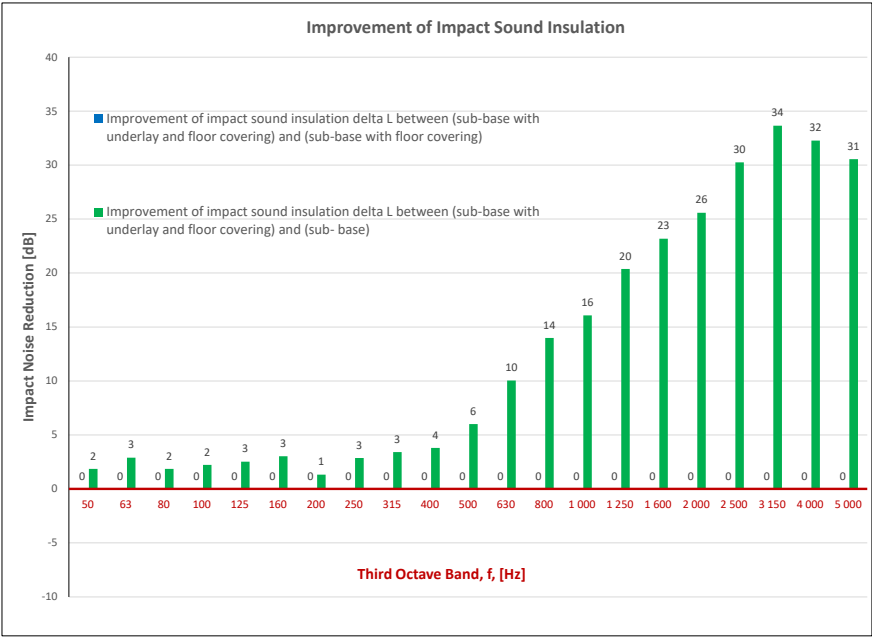
Receiver Rm	Location	Width	Length	Area	Height	Volume	Room Surfaces		
							Walls	Floor	Ceiling
	lower floor level bedroom	3	4	33.50	2.7	32.40	Plasterboard	Carpet	Plasterboard

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
1 000	44.9		28.8
1 250	46.4		26.0
1 600	48.0		24.8
2 000	49.8		24.3
2 500	54.0		23.8
3 150	54.6		20.9
4 000	52.2		20.0
5 000	49.1		18.5



Sub Base		
L'nT,w	58	AS ISO 717.2 - 2004
Ci	-10	AS ISO 717.2 - 2004
Ci(50-2500)	-9	AS ISO 717.2 - 2004
Ci(63-2000)	-10	AS ISO 717.2 - 2004
AAAC★	2 Star	AAAC Guideline
FIIC	45	ASTM E1007-14

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	Normally Inaudible