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IMPACT NOISE TESTING OF HARD FLOOR COVERING
THE FLOORING LAB

Contrix Pty Ltd was requested to perform an impact noise testing on the selected hard floor covering within the residential apartment in Zetland NSW.

The aim of conducting this impact noise test was to determine the acoustic rating of the selected hard floor covering (7mm thickness SPC Hybrid Flooring) and the results are to be used for design guidance only.

All measurements and assessment procedures were conducted in compliance with the standards:

- AS/NZS ISO 140.7:2006, titled "Field measurements of impact sound insulation of floors", and
- ISO 717.2-2004, titled "Rating of sound insulation in buildings and of building elements".

Test was conducted within the living areas of apartment units in Zetland NSW on Sunday 16th June 2024. A summary page of testing results can be found on page 2, followed by a detailed technical data sheet in the subsequent page.

Based on our test results and calculations, 7mm thickness SPC Hybrid Flooring tested within the residential apartment in Zetland achieves the acoustical ratings of:

- Measured Weighted Standardised Sound Level Different, L'_{nTw} 43
- Field Impact Insulation Class, FIIC 64
- AAAC Star Rating 5

IMPACT NOISE INSULATION FIELD TEST REPORT SUMMARY

Testing Date:	Sunday 16th June 2024
Prepared For:	The Flooring Lab
Testing Location:	Residential apartment in Zetland NSW
Flooring System Tested:	7mm thickness SPC Hybrid Flooring
Separating partition system:	200mm to 220mm reinforced concrete slab 100mm to 150mm suspended ceiling cavity 10mm or 13mm plasterboard ceiling
Source Room:	Living area on upper floor level
Receiver Room:	Living area on lower floor level (directly below)

Test Results					
Floor Covering	**Underlay**	**Acoustic Performance**			
		L'_{nTw}	**FIIC**	**AAAC Star Rating**	**$\Delta L'_{nTw}$**
7mm thickness SPC Hybrid Flooring	Built-in	**43**	**64**	**5**	**14**

Sound Source:	Tapping Machine TM004 S/N 59005
Measuring Device:	NTi-XL2 precision spectrum analyser S/N A2A-11580-E0

Measurements were conducted in accordance with:

- Australian Standard AS ISO 717.2-2004, Acoustics - Rating of sound insulation in buildings and of building elements;
- ASTM E1007-14 - Standard Test Method for Field Measurement of Tapping Machine Impact Sound Transmission Through Floor-Ceiling Assemblies and Associated Support Structure", and
- International Standard ISO 16283-02:2015, Acoustics – Field measurement of sound insulation in buildings and of building elements.

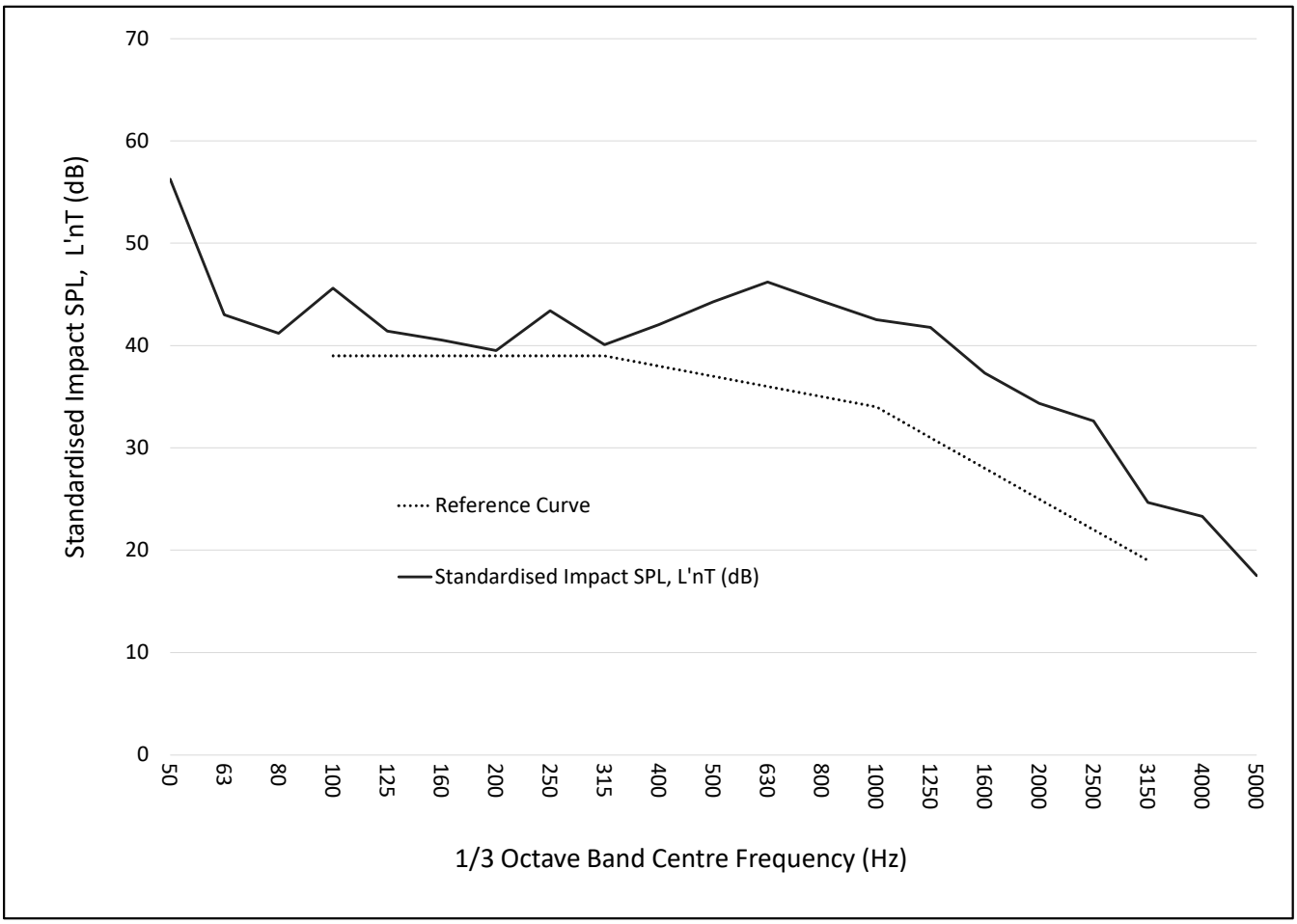
Tested By:	 Michael Fan Chiang BE (Mech)., MAAS Consultant	**Report Date:**	17th June 2024

Disclaimers:

1. The information provided in this report relates to sound insulation of floor covering only.
2. Contrix Pty Ltd does not supply and install any flooring products, therefore, not responsible or liable for any product defects.
3. It is imperative to strictly adhere to the installation guidelines provided by the supplier or installation instructions (if any). Contrix Pty Ltd bears no liability in the event of non-compliance with these instructions.
4. This testing report is site-specific and only applies to the subject premise and product(s) tested as specified in this document.
5. The acoustic rating may vary up to 3 L'_{nTw} rating points depending on the placement of the tapping machine, testing locations within the unit and the junction details between the floorboards/skirting/scotia and walls. Many Strata Management or certifying authorities have allowed a tolerance of 3 L'_{nTw} acoustic rating points.
6. The test results detailed in this report are intended solely for use as design guidelines and should not be interpreted as formal certification of the tested products.
7. The use of any glue or adhesive can negatively impact the acoustic rating. Based on previous testing data, a degradation of up to 5 L'_{nTw} rating points has been recorded.
8. It is highly recommended to engage a qualified acoustic consultant (Contact Contrix Pty Ltd on +61 425 240 555 or other qualified consultants) to conduct in-situ testing (field testing) prior to flooring installation.

Technical Data Sheet - Standardised Impact Sound Pressure Level
Impact Sound Insulation Testing of Floorboards
The Flooring Lab - 7mm Thickness SPC Hybrid Flooring

Testing Date: Sunday, 16 June 2024
Test No.: N/A
Client: The Flooring Lab
Testing Location: Residential apartements in Zetland NSW
Floor Finish: 7mm thickness SPC Hybrid Flooring
Acoustic Underlay: Built-in
Sub-base & ceiling below: 200mm to 220mm reinforced concrete slab
100mm to 150mm suspended ceiling cavity with 10mm or 13mm plasterboard ceiling
Source Room: Living area on upper floor
Receiver Room: Living area on lower floor level (directly below)
Approx. receiver room vol: 56.32



1/3 Octave Band Centre Frequency (Hz)	50	63	80	100	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000	2500	3150	4000	5000
L'nT [dB]	56.3	43.0	41.2	45.6	41.4	40.5	39.5	43.4	40.1	42.0	44.3	46.2	44.3	42.5	41.8	37.3	34.3	32.6	24.6	23.3	17.5

Acoustical Rating		Reference/Guildine
Measured Weighted Standardised Sound Level Difference, **L'nTw**	**43**	AS ISO 717.2 - 2004
Field Impact Isolation Class, **FIIC**	**64**	ASTME1007-14
AAAC **Star Rating**	**5**	AAAC Guideline

Testing Date :	Sunday, 16 June 2024	
Reference No.:	3828	
Testing Organisation:	Contrix Pty Ltd	
Tested By:	Michael Fan Chiang BE(Mech)., MAAS	

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