

Burwood Grand, 39-47 Belmore Street, Burwood

Sample Floor Impact Testing

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Attention To	OZWood Australia Pty Ltd

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1 INTRODUCTION

This report presents Acoustic Logic's measurement results of the impact noise isolation testing of the proposed sample flooring and underlays at Burwood Grand, 39-47 Belmore Street, Burwood (also known as Burwood Grand). On-site testing was conducted on Wednesday, the 23rd of August 2019 between Apartments 19.07 and 18.07 (located below).

Impact noise insulation was conducted to ensure the requirements of Part F5 (Verification Method FV5.1) of the National Construction Code of Australia (NCC / BCA) 2016 were satisfied.

2 PROJECT CRITERIA

2.1 NATIONAL CONSTRUCTION CODE (NCC / BCA) 2016

2.1.1 Part F5: FV5.1

“Compliance with FP5.1 and FP5.3 to avoid the transmission of impact generated sound through floors is verified when it is measured in-situ that the separating floor has—

- (b) impact: a weighted standardised impact sound pressure level with ($L_{nT,w}$) not more than 62 when determined under AS ISO 717.2.”*

2.2 SUMMARY OF CRITERIA

The $L_{nT,w}$ criteria are summarised in the table below.

Table 1 – Summary of Criteria

Regulation	Criteria
NCC / BCA 2016	$L_{nT,w} \leq 62$

3 IMPACT ISOLATION TESTING

3.1 MEASURING EQUIPMENT & TESTING PROCEDURE

A Nor277 type tapping machine was used to generate a standardised impact sound source. The tapping machine was placed on the flooring system and a measurement of the transmitted sound was taken in the receiving room below. The background noise and reverberation time of the receiving room was also measured.

Noise measurements were obtained using a Norsonic 140 Sound Level Analyser, set to A-weighted fast response. The sound level meter was calibrated before and after the measurements using a Norsonic 1251 Sound Level Calibrator. No significant drift was recorded.

The general method employed to conduct the impact noise isolation measurements is consistent with International standard ISO 140-7, "Acoustics-Measurement of sound insulation in buildings and of building elements - Part 7: Field measurements of impact sound insulation of floors."

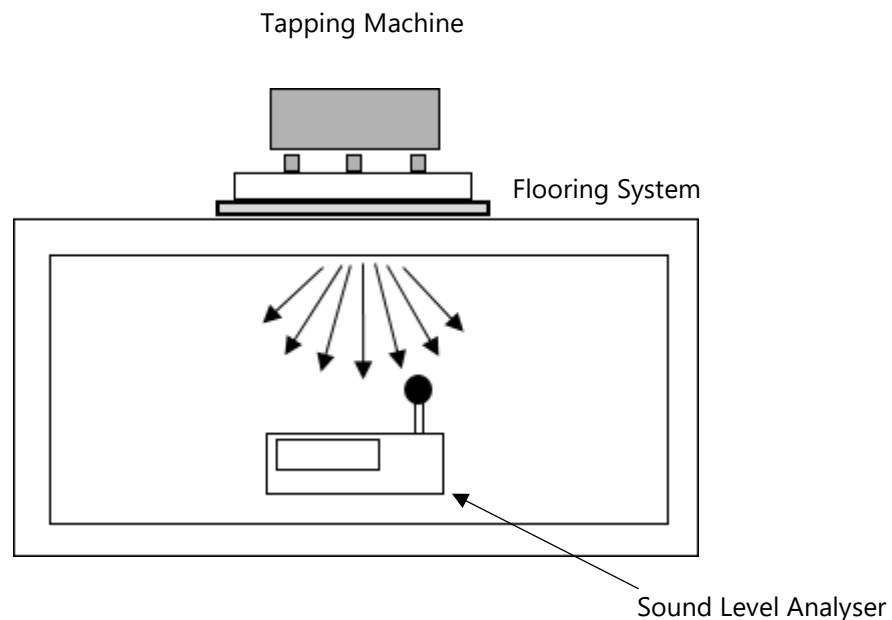


Figure 1 – Tapping Test Procedure

3.2 TEST RESULTS

The $L_{nT,w}$ ratings for hard floor sample and underlays were determined using noise levels obtained taking into account the acoustic characteristics of the receiving room. Each tapping test was conducted in two sets, the second of each test with the tapping machine rotated 90° to the first test alignment. All tests were performed at approximately 1m from any walls. The average result for the two tests is present in the table below:

Table 2 – Impact Isolation Testing Results

Flooring System	Source Room	Receiving Room	Measured $L_{nT,w}$ Rating	Criteria ($L_{nT,w}$)	AAAC Star Rating
Barock Hybrid with Cork Base	Unit 19.07 Living Room	Unit 18.07 Living Room	44	$L_{nT,w} \leq 62$	5
Barock Hybrid with IXPE Base			44		5

Note: Test results outlined above are specific to Apartment 19.07 at 39-47 Belmore Street, Burwood. These results are not to be used in the assessment of compliance for the same or similar flooring systems in other apartments or different buildings and are not for marketing purposes.

3.3 SUMMARY OF RESULTS

Measured $L_{nT,w}$ results above indicate that the all flooring systems tested achieved a field rating which satisfies Part F5 - National Construction Code of Australia (NCC / BCA) 2016 criteria.

4 CONCLUSION

Acoustic Logic Consultancy has conducted acoustic performance testing of the proposed flooring systems within apartment 19.07 at Burwood Grand, 39-47 Belmore Street, Burwood. Based on the measured performance levels in section 3.2 and the summary of results in section 3.3, any of the four flooring systems could be implemented on the structural concrete slab to satisfy the requirements of Part F5 - National Construction Code of Australia (NCC / BCA) 2016.

We trust this information is satisfactory. Please contact us should you have any further queries.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Kanin Mungkarndee', written in a cursive style.

Acoustic Logic Consultancy Pty Ltd
Kanin Mungkarndee