

# ACOUSTIC LOGIC CONSULTANCY

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## **ACOUSTIC SUPPLIES - FLOOR SAMPLES ACOUSTIC TESTING**

### **1. INTRODUCTION**

This report provides the results of our measurements of the acoustic performance of the timber floor acoustic samples conducted within the Regency residential development, Sydney. The impact isolation test was conducted on the 24<sup>th</sup> of February, 2006.

### **2. MEASUREMENT EQUIPMENT**

A Bruel & Kjaer type 3204 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.

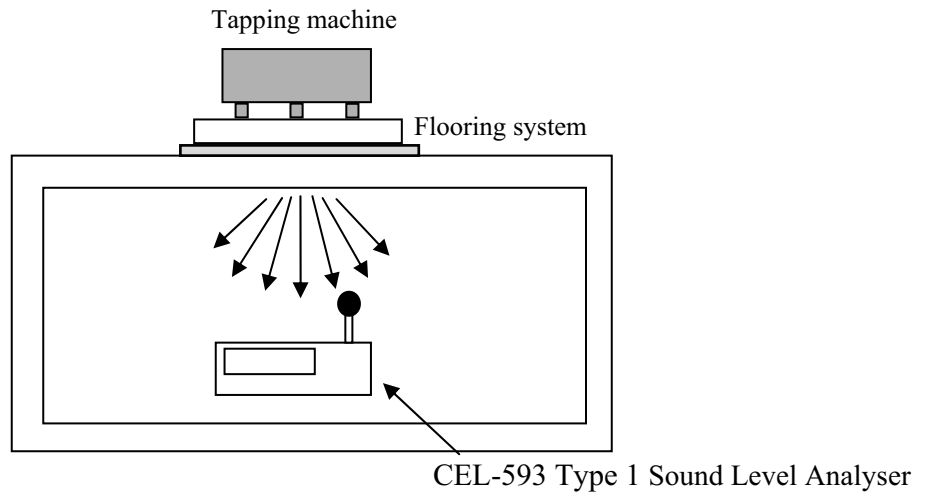
Noise measurements were obtained using a CEL-593 Type 1 Sound Level Analyser, set to A-weighted fast response. The sound level meter was calibrated before and after the measurements using a RION NC-73 Sound Level Calibrator. No significant drift was recorded.

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### 3. TEST PROCEDURE

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**

#### 4. TEST RESULTS

The FIIC and  $L_{ntw}$  rating for the floor samples was determined using noise levels obtained from the test samples and the acoustic characteristic of the receiving room. The field results for the tests are given in Table 1 below.

The 2005 BCA criteria for the separation of hard floors is a minimum  $L_{ntw}$  rating of 62. Note: a lower  $L_{ntw}$  represents a greater acoustic separation. Measured FIIC performance has also been provided as a comparison.

**Table 1 - Measured FIIC and  $L'_{n,w} + C_1$  Results**

Floor	Sample Number	FIIC	$L'_{n,w} + C_1$	Complies with BCA 2005
5mm Vibra Mat	3	60	50	Yes
5mm Vibra Mat + 2mm Soflon	4	62	48	Yes

## 5. CONCLUSION

The Field impact isolation class (FIIC) has been measured for 5mm thick Vibra Mat and 5mm thick Vibrat with 2mm thick Soflon acoustic floor samples within the Regency residential development situated in Sydney.

The measured  $L_{ntw}$  and FIIC results have been presented in Section 4 of this report.

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

Report prepared by

A handwritten signature in black ink that reads "B.G. White." The signature is written in a cursive, slightly slanted style.

ACOUSTIC LOGIC CONSULTANCY PTY LTD  
Ben White