

**Reduction of impact sound pressure levels according to ISO 140-8**  
**Laboratory measurements of the reduction of transmitted impact sound by floor coverings on a standard floor**

Client: **Batten & Cradle Flooring Systems Ltd.**

Date of test: **Friday, 19 March 2010**

Test rooms: **Reverberation Chambers A and B**

**Description and identification of the test specimen and test arrangement:**

A 3.6m x 3.2m Batten & Cradle Flooring system comprising: 600mmx600mm glazed ceramic *PEI 3* tiles adhered with *monoflex C2S2et Tile Adhesive* (applied with 10mm notched trowel) to 6mm thick *James Hardie Tile Underlay* sheets. The *James Hardie Tile Underlay* sheets are screw fixed with 20mm 6g self tapping screws to 3600mmx800mmx20mm (*LengthxWidthxThickness*) *Strandfloor* tougue and groove flooring which is screw fixed with 50mm x 8g screws at 200mm centers to dressed 42mmx42mm fingerjoint timber battens spaced at 450mm centres on *RC-20* rubber cradles spaced at 450mm on the concrete test floor. The 62mm deep cavity space between the battens is lined with 75mm Pink Batts Silencer.

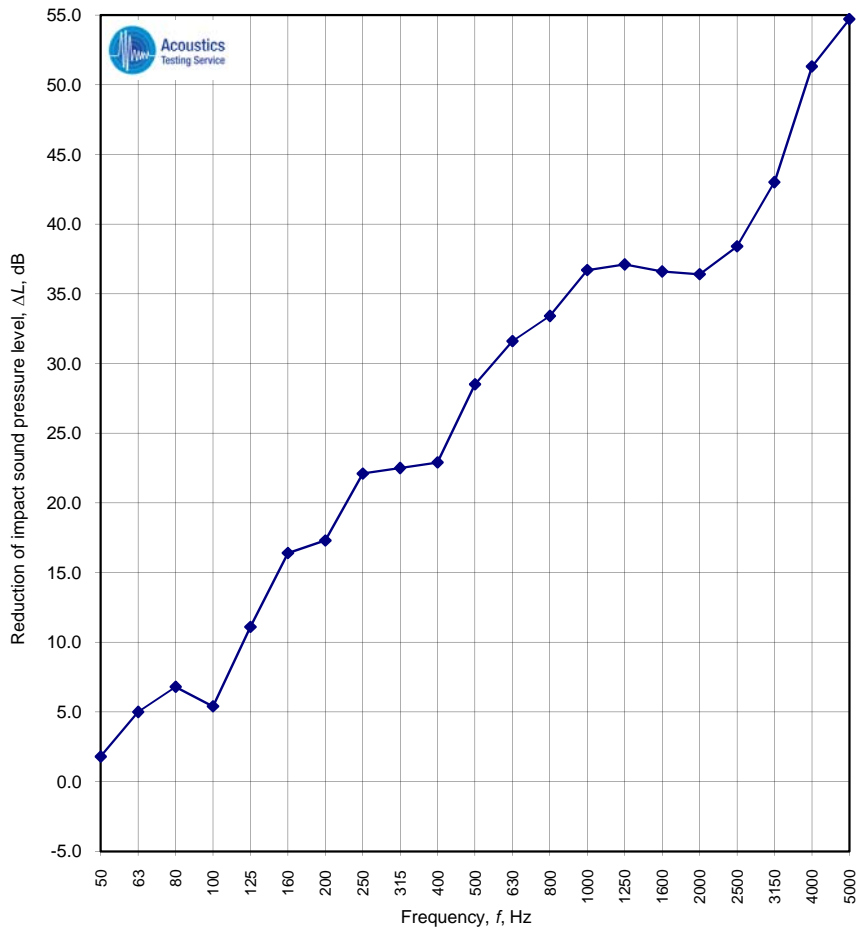
Source chamber was Chamber A and receiving chamber was Chamber B. Test specimen installed by the client. Curing time was 24 hours.

Deviation from standard: The bare test floor used is of uniform thickness for an area of only 2.6m x 2.6m. The description of the bare test floor is given in the full report.

Computer Files: T1006 Bare Floor.CMG(ID.15, ID.16, ID.54, ID.2, ID.0, ID.1)T1006-1 Sample.CMG(ID.14, ID.15, ID.54, ID.18, ID.55, ID.56)

Air temp in the test rooms: 21 °C  
 Air humidity in test rooms: 57 %  
 Receiving room volume: 153 m<sup>3</sup>

Frequency <i>f</i> Hz	<i>L</i> <sub><i>n,0</i></sub> One-third octave dB	$\Delta L$ One-third octave dB
50	58.6	1.8
63	52.8	5.0
80	53.8	6.8
100	<b>63.1</b>	<b>5.4</b>
125	<b>62.3</b>	<b>11.1</b>
160	<b>70.0</b>	<b>16.4</b>
200	<b>66.9</b>	<b>17.3</b>
250	<b>71.5</b>	<b>22.1</b>
315	<b>68.4</b>	<b>22.5</b>
400	<b>73.3</b>	<b>22.9</b>
500	<b>78.6</b>	<b>28.5</b>
630	<b>76.4</b>	<b>31.6</b>
800	<b>71.9</b>	<b>33.4</b>
1000	<b>72.6</b>	<b>36.7</b>
1250	<b>72.9</b>	<b>37.1</b>
1600	<b>79.0</b>	<b>36.6</b>
2000	<b>78.8</b>	<b>36.4</b>
2500	<b>76.9</b>	<b>38.4</b>
3150	<b>75.5</b>	<b>43.0</b>
4000	71.2	51.3
5000	67.4	54.7



Notes: #N/A = Value not available. **Bold** values are used to calculate  $\Delta L_w$ .  
 < indicates that the true value is lower.  
*L*<sub>*n,0*</sub> are the bare floor impact sound levels.

**Rating according to ISO 717-2:**

$\Delta L_w = 31$  dB

$C_{I,\Delta} = 13$  dB

$C_{I,r} = 1$  dB

$C_{I,50-2500} = 2$  dB

These results are based on a test made with an artificial source under laboratory conditions (engineering Method).

No. of test report: **T1006-1**

Name of test institute: University of Auckland Acoustics Testing Service.

Date: 26-March-2010

Signature: **Preliminary Results Only**