



Bailey Interiors Pty Ltd
83-85 Boundary Road
Mortdale NSW 2223

Suite 17, 808 Forest Road
Peakhurst Sydney NSW 2210
Phone: (02) 9584 2639 Fax: (02) 9584 2619
Email: acoustics@daydesign.com.au
www.daydesign.com.au

Refer: P\4110-R2

Attention: Mr Roger Bailey
Telephone: 9153 9326

Email: Roger@baileyinteriors.com.au

10 June, 2009

Dear Sir,

BAILEY INTERIOR "MOON" ACOUSTIC CEILING TILES

ACOUSTIC OPINION

As requested, we are pleased to provide acoustic opinions for the Bailey Interiors "Moon" ceiling tiles as detailed below.

Sound absorptive tests were carried out at the National Acoustic Laboratories in May 2009 to determine the sound absorption coefficients of the "Moon" Ceiling Tiles, with an open area of 18%. The results of the test were reported in our report 4110 dated 10 June 2009 and are extracted below together with two acoustic opinions by varying the insulation above the tile.

Tile Description	NRC (α_w)
Moon Tile, 18% open area, 40 mm diameter holes with Regina tissue and 25 mm thick glasswool (density 32 kg/m ³) behind with an airgap of 400 mm.	0.65 (0.6)*
Ditto with 38 mm thick insulation and 400 mm airgap	0.70 (0.60)^
Ditto with 75 mm thick insulation and 400 mm airgap	0.75 (0.65)^

*Measured

^Opinion

We consider the accuracy to be within ± 0.05 NRC and α_w .

Yours faithfully

Day Design Pty Ltd

Stephen Gauld, BE (MEch), MEngSc(Noise and Vibration), MIE Aust, MAAS
Senior Acoustical Engineer

Manufacturer:
Bailey Interiors Pty Ltd
83-85 Boundary Road, Mortdale

Test Specimen:
"Moon" Ceiling Tile
15mm thick cast-plaster (18% open area) with 25mm thick glasswool (32kg/m³)

Frequency - Hz	Sound Absorption Coefficients	
	α_s	α_p
100	0.49	0.60
125	0.56	
160	0.79	
200	0.71	0.65
250	0.61	
315	0.68	
400	0.66	
500	0.66	0.70
630	0.72	
800	0.73	
1000	0.75	0.70
1250	0.69	
1600	0.67	0.60
2000	0.60	
2500	0.51	
3150	0.45	
4000	0.39	0.40
5000	0.32	
Weighted Sound Absorption Coefficient, α_w		0.60

Australian Standards:
Measured according to AS ISO 354-2006
Rated according to AS ISO 11654-2002

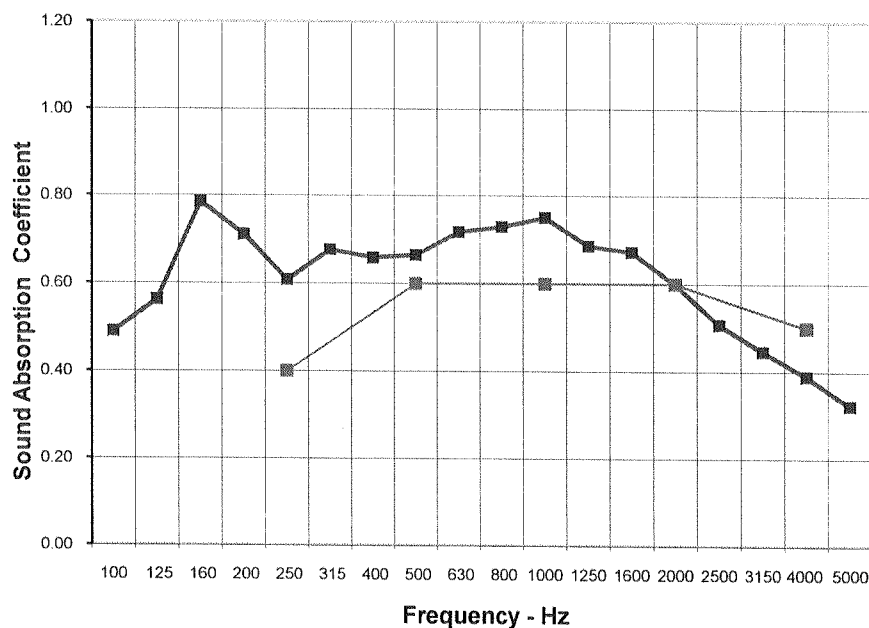
Specimen Area:
10.4m² (3.53m x 2.94m)
Type E-400 Mounting (400mm airgap behind tiles)

Test Location:
National Acoustics Laboratory
126 Greville Street, Chatswood NSW

Instrumentation:

- Brüel and Kjær Two Channel Pulse Analyser (assembly 2825, 7521, 2 x 3015)
- Brüel and Kjær Cathode Follower type 2660
- Brüel and Kjær Microphone type 4179
- Brüel and Kjær Sound Level Calibrator type 4231
- Yamaha Professional Sound Sources type S500
- Vaisala Digital Barometer type PTB201AD
- Testo Temperature/Humidity Logger type 177-H1

Noise Reduction Coefficient, NRC	0.65
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Date of Test: Thursday, 14 May 2009
Project Number: 4110-2

Test Engineer: Alex Li, BE(Mech) Hons
For and on behalf of Day Design Pty Ltd