INFORMATION DATA SHEET: 2mm Ultra Green Foam U'Lay with 8, 12 & 14mm Laminate Acoustic Test Date: February 2018

COMPLIANCE TESTING

All measurements were carried out in accordance with the guidelines and procedures outlined in AS/NZS ISO 140.7:2006. "Field measurements of impact sound insulation of floors" with the rating determined in accordance with AS ISO 717.2-2004. "Rating of sound insulation in buildings and of building elements".

MEASURED RESULTS AND CONCLUSIONS

The results of the impact noise tests are summarized in the table below.
The standard product was installed on a 200 mm concrete slab, approximately 80–120 mm deep suspended ceiling cavity and 13 mm plasterboard ceiling. The results reveal that the ceiling/floor tested have met both the BCA 2016 criterion (L'nT,w ≤ 62) and City of Sydney DCP 2012 requirement (L'nT,w ≤ 55) for impact noise insulation. The lower the rating number the better for acoustic performance L'nT,w ratings.

The results confirms compliance NCC/BCA use Multi-residential requirements.

Product Sample	BCA Criterion	Test Result L'nT,w	AAAC[5] Star Rating	FIIC[4,5]	Compliance with NCC/BCA
2mm Ultra Green U'Lay & 8mm Laminate	L'nT,w ≤ 62	44 ✓	5	66	Yes ✓
2mm Ultra Green U'Lay & 12mm Laminate	L'nT,w ≤ 62	45 ✓	5	66	Yes ✓
2mm Ultra Green U'Lay & 14mm Laminate	L'nT,w ≤ 62	46 ✓	4	64	Yes ✓

Note: National Construction Code / Building Code of Australia (NCC/BCA).
Field Impact Insulation Class (FICC), higher the number the better its impact insulation performance. The minimum rate is 50.

Koikas Acosutics Pty Ltd has undertaken noise impact tests on 9 February 2018 at multi-residential units located at Little Bay Sydney. The results reveal that all the testing samples are compliant with the updated NCC/BCA 2016 impact noise insulation criterion with ceiling / floor systems.

A detailed test report is available on request.

The field test acoustic ratings provided in this report are indicative and for comparative purposes only. Acoustic ratings will vary depending on testing environment/conditions including, materials/structures of existing ceiling/floor system, room volume, internal layout, have and workmanship. Acoustic ratings can and will vary from building to building and room to room. Please consult with an appropriate building professional or acoustic engineer to confirm if the product selected meets the building and or body corporate acoustic impact sound isolation guidelines.

2mm Ultra Green Foam U'Lay installed with 8mm Laminate

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 01)

KOIKAS ACOUSTICS

Date of Test :	Friday, 9 February 2018
Project No. :	3369
Testing Company:	Koikas Acoustics
Checked by:	Nick Koikas
Place of Test:	Residential Units in Little Bay NSW
Client	Preference Floors
Client Address	-

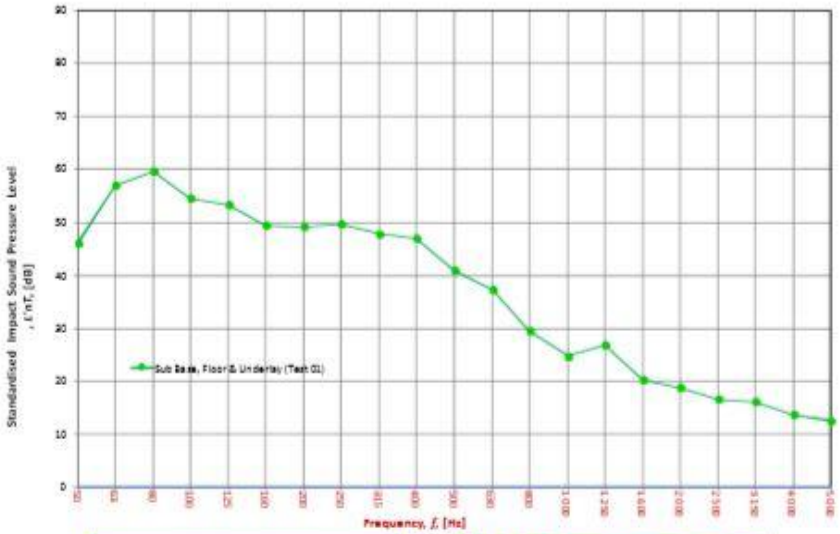
	Name	Thickness (mm)	Density (Kg/m³)
Description of Floor System	8 mm Laminated Timber (Test 01)	8	--
	2 mm Ultra Green Foam Underlay	2	--
	200 mm Concrete Slab + 80-120 mm Suspended Ceiling	200 + 80-120	--
	13 mm Plasterboard Ceiling	13	--

Room Floor Dimensions	Width :	3	m
	Length :	3.5	m
	Area :	10.5	m²
Sample Dimensions	Width :	-	m
	Length :	-	m
	Area :	-	m²

	Location	Width	Length	Area	Height	Volume
Receiver Rm	Residential Units in Little Bay NSW	3	3.5	10.5	2.4	25.2

Room Surfaces		
Walls	Floor	Ceiling
Plasterboard	Carpet	Plasterboard

Frequency f Hz	L'nT (one-third octave) dB		
	Sub Base	Sub Base Floor	Sub Base Floor Underlay
50	N/A	N/A	46.1
63	N/A	N/A	57.1
80	N/A	N/A	59.6
100	N/A	N/A	54.4
125	N/A	N/A	53.2
160	N/A	N/A	49.3
200	N/A	N/A	49.3
250	N/A	N/A	49.7
315	N/A	N/A	47.8
400	N/A	N/A	46.9
500	N/A	N/A	40.9
630	N/A	N/A	37.2
800	N/A	N/A	29.4
1 000	N/A	N/A	24.7
1 250	N/A	N/A	26.8
1 600	N/A	N/A	20.1
2 000	N/A	N/A	18.7
2 500	N/A	N/A	16.6
3 150	N/A	N/A	16.1
4 000	N/A	N/A	13.5
5 000	N/A	N/A	12.5



L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

Sub Base, Floor & Underlay (Test 01)		
L'nT,w	44	AS ISO 717.2 - 2004
CI	0	AS ISO 717.2 - 2004
CI(50-2500)	5	AS ISO 717.2 - 2004
CI(63-2000)	5	AS ISO 717.2 - 2004
AAAC★	3 Star	AAAC Guideline
FIIC	66	ASTM E1007-14

2mm Ultra Green Foam U'Lay installed with 12mm Laminate

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 02)

KOIKAS ACOUSTICS

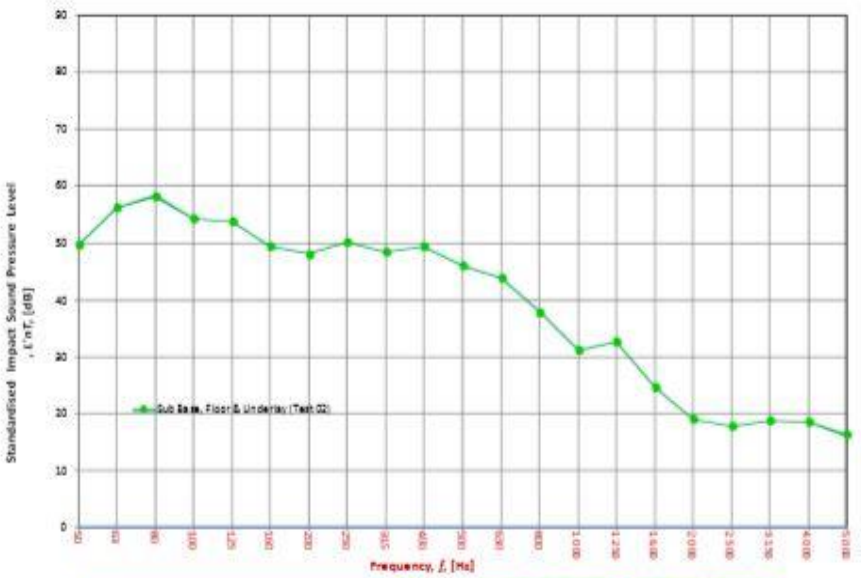
Date of Test :	Friday 9 February 2018
Project No. :	3369
Testing Company :	Koikas Acoustics
Checked by :	Nick Koikas
Place of Test:	Residential Units in Little Bay NSW
Client	Preference Floors
Client Address	-

	Name	Thickness (mm)	Density (kg/m³)
Description of Floor System	12 mm Laminated Timber (Test 02)	12	--
	2 mm Ultra Green Foam Underlay	2	--
	200 mm Concrete Slab + 80-120 mm Suspended Ceiling	200 + 80-120	--
	13 mm Plasterboard Ceiling	13	--

Room Floor Dimensions	Width :	3	m
	Length :	3.5	m
	Area :	10.5	m^2
Sample Dimensions	Width :	-	m
	Length :	-	m
	Area :	-	m^2

	Location	Width	Length	Area	Height	Volume	Room Surfaces: Walls	Floor	Ceiling
Receiver Rm	Residential Units in Little Bay, NSW	3	3.5	10.5	2.4	25.2	Plasterboard	Carpet	Plasterboard

Frequency f Hz	L'nT (one-third octave) dB: Sub Base	Sub Base Floor	Sub Base Floor Underlay
50	N/A	N/A	49.6
63	N/A	N/A	56.2
80	N/A	N/A	58.2
100	N/A	N/A	54.2
125	N/A	N/A	53.7
160	N/A	N/A	49.3
200	N/A	N/A	48.1
250	N/A	N/A	50.2
315	N/A	N/A	48.4
400	N/A	N/A	49.5
500	N/A	N/A	46.0
630	N/A	N/A	43.8
800	N/A	N/A	37.8
1 000	N/A	N/A	31.1
1 250	N/A	N/A	32.5
1 600	N/A	N/A	24.5
2 000	N/A	N/A	19.0
2 500	N/A	N/A	17.7
3 150	N/A	N/A	18.8
4 000	N/A	N/A	18.4
5 000	N/A	N/A	16.2



L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC ★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC ★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

Sub Base, Floor & Underlay (Test 02)		
L'nT,w	45	AS ISO 717.2 - 2004
CI	0	AS ISO 717.2 - 2004
CI(50-2500)	3	AS ISO 717.2 - 2004
CI(63-2000)	3	AS ISO 717.2 - 2004
AAAC ★	5 Star	AAAC Guideline
FIIC	66	ASTM E1007-14

Preference FLOORS

2mm Ultra Green Foam U'Lay installed with 14mm Laminate

FIELD MEASUREMENTS OF IMPACT SOUND INSULATION OF FLOORS (TEST 03)

KOIKAS ACOUSTICS

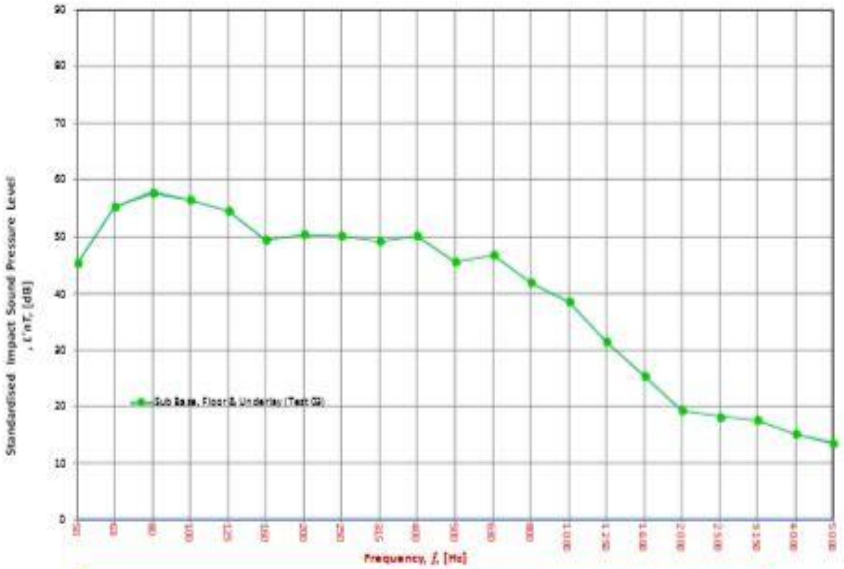
Date of Test :	Friday, 9 February 2018
Project No. :	3369
Testing Company :	Koikas Acoustics
Checked by :	Nick Koikas
Place of Test:	Residential Units in Little Bay NSW
Client	Preference Floors
Client Address	-

	Name	Thickness (mm)	Density (Kg)
Description of Floor System	14 mm Laminated Timber (Test 03)	14	--
	2 mm Ultra Green Foam Underlay	2	--
	200 mm Concrete Slab + 80~120 mm Suspended Ceiling	200 + 80~120	--
	13 mm Plasterboard Ceiling	13	--

Room Floor Dimensions	Width :	3	m
	Length :	3.5	m
	Area :	10.5	m^2
Sample Dimensions	Width :	-	m
	Length :	-	m
	Area :	-	m^2

	Location	Width	Length	Area	Height	Volume	Room Surfaces: Walls	Floor	Ceiling
Receiver Rm	Residential Units in Little Bay, NSW	3	3.5	10.5	2.4	25.2	Plasterboard	Carpet	Plasterboard

Frequency f Hz	L'nT (one-third octave) dB: Sub Base	Sub Base Floor	Sub Base Floor Underlay
50	N/A	N/A	45.2
63	N/A	N/A	55.2
80	N/A	N/A	57.7
100	N/A	N/A	56.4
125	N/A	N/A	54.5
160	N/A	N/A	49.5
200	N/A	N/A	50.4
250	N/A	N/A	50.2
315	N/A	N/A	49.1
400	N/A	N/A	50.2
500	N/A	N/A	45.5
630	N/A	N/A	46.7
800	N/A	N/A	41.9
1 000	N/A	N/A	38.4
1 250	N/A	N/A	31.3
1 600	N/A	N/A	25.3
2 000	N/A	N/A	19.3
2 500	N/A	N/A	18.1
3 150	N/A	N/A	17.5
4 000	N/A	N/A	15.0
5 000	N/A	N/A	13.5



L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

L'nT,w	N/A	AS ISO 717.2 - 2004
CI	N/A	AS ISO 717.2 - 2004
CI(50-2500)	N/A	AS ISO 717.2 - 2004
CI(63-2000)	N/A	AS ISO 717.2 - 2004
AAAC★	N/A	AAAC Guideline
FIIC	N/A	ASTM E1007-14

Sub Base, Floor & Underlay (Test 03)		
L'nT,w	46	AS ISO 717.2 - 2004
CI	0	AS ISO 717.2 - 2004
CI(50-2500)	3	AS ISO 717.2 - 2004
CI(63-2000)	3	AS ISO 717.2 - 2004
AAAC★	4 Star	AAAC Guideline
FIIC	44	ASTM E1007-14