Acoustic Flooring Guide

Luxury Vinyl Plank
Hybrid Flooring
Engineered Timber

Version 4

Range: *Sanctuary*
Colour: *Pearl*

Contents

Excess noise can lead to acoustic discomfort which can negatively impact the health and wellbeing of

occupants.

Range: *Sanctuary*
Colour: *Seamist*

The importance of *acoustics*

Health impacts

With many people now living in multi-residential dwellings and hard flooring increasingly being the preferred flooring selection, noise can be a real concern.

The benefits of reducing impact and airborne sound in commercial and residential spaces is well documented.

Excess noise can lead to acoustic discomfort which can negatively impact the health and wellbeing of occupants, hinder learning and teaching, reduce productivity and create annoyance.

One way to meet NCC acoustic requirements is by specifying acoustically designed flooring.

Range: *Cascade*
Colour: *Teviot*

Where are acoustic ratings *required ?*

Refurbishments

Unless a refurbishment is specifically required to follow the NCC, body corporate organisations are often responsible for refurbishments.

Acoustic performance is determined by the body corporate and many adhere to the Association of Australian Acoustical Consultants Guidelines (AAAC).

The AAAC's star rating system ranks flooring products for acoustic impact isolation in multi-storey buildings.

	2 Star ★★	3 Star ★★★	4 Star ★★★★	5 Star ★★★★★	6 Star ★★★★★★
L_nT_w	65 dB	55 dB	50 dB	45 dB	40 dB
NCC Pass/Fail	Fail	Pass	Pass	Pass	Pass
Normal Speech	Audible	Just Audible	Not Audible	Not Audible	Not Audible

Range: *Spellbound*
Colour: *Amulet*

How is acoustic performance *tested ?*

Airborne Sound Insulation

Airborne sound insulation describes the insulation, between rooms separated by a wall or floor partition, of sound transmitted through air.

It is calculated by combining multiple sound pressure levels and reverb time measurements. Selecting products with great acoustic properties will substantially increase the Airborne sound insulation results.

Acoustic insulation & Acoustic flooring are both terrific ways to achieve the desired acoustic results throughout your dwelling!

Sound Absorbtion

Sound absorption is the measure of the amount of energy removed from the sound wave as the wave passes through a given thickness of material.

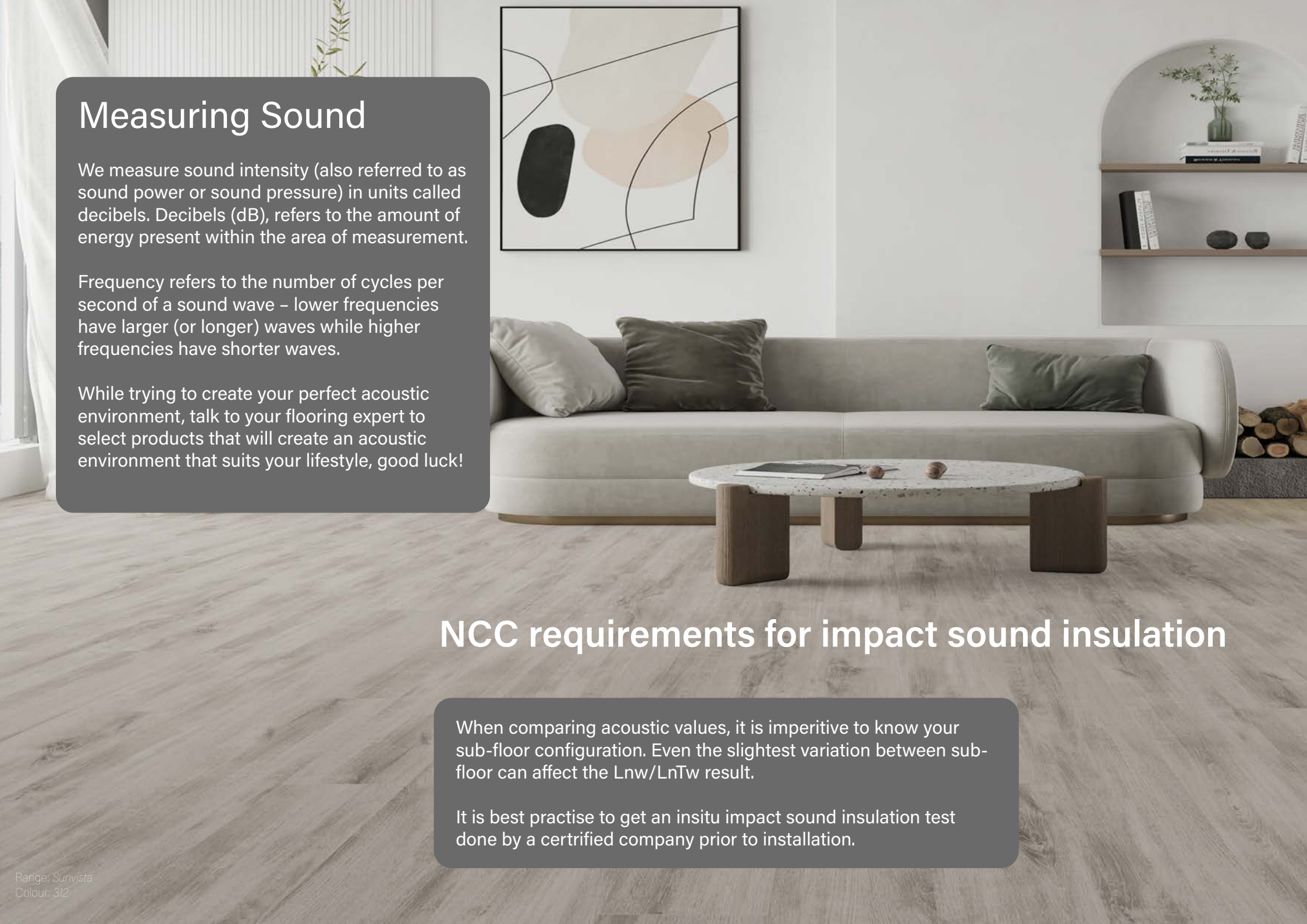
Choosing the appropriate furnishings can drastically increase/decrease the amount of sound waves travelling throughout a room. Soft furnishings will absorb sound waves & decrease the noise within a room while hard furnishings will reflect the sound waves creating a noisier environment.

Measuring Sound

We measure sound intensity (also referred to as sound power or sound pressure) in units called decibels. Decibels (dB), refers to the amount of energy present within the area of measurement.

Frequency refers to the number of cycles per second of a sound wave – lower frequencies have larger (or longer) waves while higher frequencies have shorter waves.

While trying to create your perfect acoustic environment, talk to your flooring expert to select products that will create an acoustic environment that suits your lifestyle, good luck!



NCC requirements for impact sound insulation

When comparing acoustic values, it is imperitive to know your sub-floor configuration. Even the slightest variation between sub-floor can affect the Lnw/LnTw result.

It is best practise to get an insitu impact sound insulation test done by a certrified company prior to installation.

Range: *Sunvista*
Colour: *312*

Project: *Founders Lane, ACT*
Range: *Sanctuary*
Colour: *Seamist*

Our acoustic flooring *ranges*

	2 Star ★★	3 Star ★★★	4 Star ★★★★	5 Star ★★★★★	6 Star ★★★★★★
L_nT_w	65 dB	55 dB	50 dB	45 dB	40 dB
NCC Pass/Fail	Fail	Pass	Pass	Pass	Pass
Normal Speech	Audible	Just Audible	Not Audible	Not Audible	Not Audible

NFD 4.5mm Luxury Vinyl Plank *without underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	68 ★★	66 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	62 ★★	61 ★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	59 ★★	58 ★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	57 ★★	56 ★★

NFD 4.5mm Luxury Vinyl Plank *with 2mm rubber/cork acoustic underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	56 ★★	55 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	50 ★★★★	49 ★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	47 ★★★★	46 ★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	45 ★★★★★	44 ★★★★★

Range: *Cascade*
Colour: *Gordon*
* Cavity Insulation Present
** Results are a guide only

NFD 5.0mm Luxury Vinyl Plank
*without underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	66 ★★	64 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	60 ★★	58 ★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	57 ★★	55 ★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	55 ★★★	53 ★★★

NFD 5.0mm Luxury Vinyl Plank
*with 2mm rubber/cork acoustic underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	54 ★★★	53 ★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	48 ★★★★	47 ★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	45 ★★★★★	44 ★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	43 ★★★★★	42 ★★★★★

NFD Acoustic 5.0mm SPC Hybrid *without underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	62 ★★	61 ★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	56 ★★★	55 ★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	53 ★★★	52 ★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	51 ★★★★	50 ★★★★

NFD Acoustic 5.0mm SPC Hybrid *with 2mm rubber/cork acoustic underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	52 ★★★	50 ★★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	46 ★★★★★	44 ★★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	38 ★★★★★★	41 ★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	36 ★★★★★★	39 ★★★★★★

Range: *Siena XL*
Colour: *Seasoned Oak*
* Cavity Insulation Present
** Results are a guide only

Range: *Seasons*
Colour: Recycled Driftwood
* Cavity Insulation Present
** Results are a guide only

NFD Acoustic 5.5mm SPC Hybrid
*without underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	58 ★★★	57 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	52 ★★★	51 ★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	50 ★★★★	48 ★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	48 ★★★★	46 ★★★★

NFD Acoustic 5.5mm SPC Hybrid
*with 2mm rubber/cork acoustic underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	48 ★★★★	46 ★★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	42 ★★★★★	40 ★★★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	39 ★★★★★★	37 ★★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	37 ★★★★★★	35 ★★★★★★

NFD Acoustic 6.5mm IPC Hybrid *without underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	57 ★★	56 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	51 ★★★	50 ★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	48-45 ★★★★★	47-44 ★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	46-43 ★★★★★	45-42 ★★★★★

NFD Acoustic 6.5mm IPC Hybrid *with 2mm rubber/cork acoustic underlay***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	47 ★★	45 ★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	41 ★★★★★	39 ★★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	38 ★★★★★★	36 ★★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	36 ★★★★★★	34 ★★★★★★

Range: *Highland*
Colour: Australian Blackbutt
* Cavity Insulation Present
** Results are a guide only

Range: *Burra*
Colour: *Ground*
* Cavity Insulation Present
** Results are a guide only

NFD Acoustic 8.0mm IPC Hybrid
*without underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	55 ★★★	54 ★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	49 ★★★★	48 ★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	46 ★★★★	45 ★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	44 ★★★★★	43 ★★★★★

NFD Acoustic 8.0mm IPC Hybrid
*with 2mm rubber/cork acoustic underlay***

Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	45 ★★★★★	43 ★★★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	39 ★★★★★★	37 ★★★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	36 ★★★★★★	34 ★★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	34 ★★★★★★	32 ★★★★★★

Acoustic 5.0mm Luxury Vinyl Plank**		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	64 ★★	62 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	58 ★★	56 ★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	55 ★★★	53 ★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	53 ★★★	51 ★★★

Range: *Soundless*
Colour: *Yarra*
* Cavity Insulation Present
** Results are a guide only

Engineered *timber*

14/3mm Engineered Timber *with 2mm builders plastic underlay (floating)***		
Ceiling	180mm Concrete	200mm Concrete
Thickness/Layers	L_{nw} Star Rating	L_{nw} Star Rating
No Plaster Board	61 ★★	59 ★★
1 x 13mm Plaster Board* (100mm Cavity suspended light steel grid with 450mm spacing)	42 ★★★★★	40 ★★★★★★
1 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	41 ★★★★★	39 ★★★★★★
2 x 13mm Plaster Board* (200mm Cavity suspended light steel grid with 450mm spacing)	40 ★★★★★★	38 ★★★★★★

Range: *Eternity*
Colour: *Natural Oak*
* Cavity Insulation Present
** Results are a guide only

Commercial *projects*

Project: *Founders Lane, ACT*
Range: *Sanctuary*
Colour: *Seamist*

Head Office: 58 Blanck Street, Ormeau 4208

nfd.com.au

(07) 3806 2666

info@nfd.com.au

/nfd_aus

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