Armstrong CEILING SOLUTIONS

Specifying Decorative Timber Ceilings

Design, Compliance and Performance in Commercial Applications

Specifying Decorative Timber Ceilings

Introduction

In commercial buildings, decorative timber ceilings are becoming an increasingly popular design feature. They can lend warmth and biophilic appeal to restaurants, hotel lobbies and public spaces, or soften learning environments and offices. In commercial applications, however, the ceiling needs to do more than deliver the desired aesthetic. Group Number requirements, acoustics, service access and other project considerations can all influence how it is ultimately specified.

The challenge is meeting these practical requirements without compromising the design vision that made timber the choice in the first place. Considering Group Number requirements alongside acoustics, service access, seismic considerations where applicable, and long-term adaptability early in the design process can help preserve that intent.

This white paper provides a high-level overview of these considerations, beginning with Group Numbers and the NCC fire hazard property requirements for internal linings. It is intended as a general specification guide rather than fire engineering advice. Project-specific requirements should always be confirmed against the NCC and, where required, with the appropriate project consultant.

Considerations when specifying decorative timber ceilings

Group numbers and fire hazard properties

In Australia, wall and ceiling linings in relevant commercial building applications are subject to the fire hazard property requirements of the National Construction Code (NCC). NCC Volume One, Specification 7, Clause S7C4 sets out Group Number requirements for wall and ceiling linings. The Group Number required for a particular project should be confirmed against the NCC and the project-specific application.

Group Number requirements vary by application. This paper does not attempt to interpret them; instead, designers and specifiers should confirm the requirements for their project against Clause S7C4 and with the relevant consultants.

Understanding Group Numbers

A Group Number is a fire hazard property classification for internal wall and ceiling linings and relates to reaction-to-fire behaviour. Group Numbers are determined in accordance with AS 5637.1, which classifies materials from Group 1 (best performing) to Group 4 (worst performing) based on their contribution to fire growth. From a specification perspective, the key point is to confirm the Group Number required for the application and select a product with appropriate supporting documentation.

Group Numbers should not be confused with fire resistance or a Fire Resistance Level (FRL). They relate to different aspects of fire performance. Where clarification is required, designers should refer to the NCC and the relevant project consultant.

Group 1 is the most stringent fire classification, so it is easy to assume a combustible material like timber cannot meet it. In practice, that assumption does not always hold true. Group 1 decorative timber ceiling solutions are available in the Australian market, allowing timber to remain part of the design palette subject to the project requirements and the product's supporting documentation.

Where Group 1 is required, the specification does not necessarily need to move away from timber. There are Group 1 decorative timber ceiling solutions available in the Australian market, allowing timber to remain part of the design palette, subject to the project requirements and the product's supporting documentation.

The challenge is balancing the warmth and visual impact of timber with the practical and compliance requirements of a commercial ceiling.

High-performance requirements should not mean compromising the warmth, materiality or visual continuity that made timber the design choice in the first place

Beyond Fire Performance: The Complete Ceiling System

While the timber face defines the visual character of the ceiling, it is only one part of the finished solution. Acoustic treatments, fixing or suspension methods, building services and access requirements all need to be considered alongside it. Bringing these elements together early can simplify coordination and help preserve the visual continuity of the timber ceiling.

Functionality

While the appeal of a decorative timber ceiling is largely visual, it also needs to accommodate the operational needs of the building. Lighting, HVAC, sprinklers, cabling and other services often sit above or integrate with the ceiling, making service access an important consideration from the outset.

Suspended ceiling systems can provide a serviceable plenum above the decorative finish, while demountable panels allow access for inspection, repairs and maintenance without unnecessarily disrupting the ceiling. This allows access to be considered as part of the design rather than added later through visually intrusive hatches or modifications.

This is where demountability becomes a practical design advantage. Lay-in panels can be individually removed and reinstated, allowing access to services above without disturbing the surrounding ceiling. This also supports future reconfiguration as services or tenancy requirements change.

Acoustics

Acoustic performance is another important consideration in offices, education and hospitality environments, where reverberation can affect comfort, communication and the overall experience of a space. An expansive timber ceiling without appropriate acoustic treatment can contribute to a more reverberant environment, but this does not mean designers need to compromise on the timber aesthetic. Panel design and acoustic treatment behind the timber can work together to improve sound absorption.

Perforated timber panels combined with acoustic backing tiles offer one way to balance the visual qualities of timber with the acoustic needs of a space. Holes of varying size, spacing and layout let sound pass through the panel to an acoustic backing behind, where it is absorbed thus reducing noise and reverberation. Perforation patterns range from barely perceptible micro-perforations to bolder, more expressive designs, giving specifiers control over both acoustic performance and visual effect.

Seismic Considerations

Seismic requirements are project-specific. Product or system selection alone does not make an installation compliant. Where seismic design is required, the project-specific design must be assessed and certified by a structural or professional engineer, in accordance with the NCC and applicable standards.

A Systems-Based Approach To Ceiling Design

Aligning the design intent with the relevant compliance and functional requirements can become complex, and decisions made without considering the wider ceiling can surface later as unexpected compromises. Resolving Group Number requirements, acoustics, service integration and seismic considerations early can make it easier to retain the materiality and visual continuity intended for the space.

Group Numbers are a good example of where clear product documentation can simplify specification. Once the required classification has been established for the project, designers can select an appropriately documented timber ceiling solution without needing to compromise the intended materiality.

The aim is not to make the architect responsible for interpreting specialist compliance requirements but to make the ceiling easier to coordinate and specify. Considering the decorative panel, suspension or fixing method, acoustic treatments, service access and relevant project-specific consultant requirements together can provide a clearer path from design intent to documentation.

Rather than considering these elements piecemeal, a more coordinated approach can make specification easier. Consistent technical documentation, compatible components and clear performance information can help the design team assess project requirements, coordinate the ceiling and plan for future access and adaptability.

This is where Armstrong's broader ceiling expertise adds value to WoodWorks. Rather than treating the timber panel as an isolated finish, architects can draw on decorative timber, compatible ceiling systems, performance information and technical support from one source, helping simplify coordination while maintaining design freedom.

About Armstrong Ceilings

Armstrong Ceiling Solutions has supported the Australian and New Zealand commercial ceiling market for more than 65 years, supplying a broad range of ceiling and wall systems for commercial applications. That experience is supported by technical documentation and specification guidance to help project teams identify an appropriate ceiling solution.

WoodWorks brings that experience into decorative timber, with Lay In and Direct Mount configurations, Group 1 and Group 3 options and a range of acoustic perforation choices. Combined with Armstrong's broader ceiling systems and technical support, it gives architects a way to address the practical requirements of a commercial ceiling without losing the warmth and visual impact that made timber the preferred material in the first place.

Designing for adaptability can also support better whole-of-life outcomes. WoodWorks solutions can provide access for maintenance and future service changes, while removable elements may be reused or repurposed as spaces evolve. PEFC-certified timber, Laminex finishes and E0 low-emission substrate options further support responsible material selection and healthier indoor environments.

Contact Us

Armstrong® CEILING SOLUTIONS

Still have questions?
Please contact us with any ceiling, wall or acoustical enquiry.

NSW/ACT

75 Long Street
SMITHFIELD NSW 2164

(02) 9748 1588

info@armstrongceilings.com.au

VIC/TAS

205-233 Abbotts Rd
DANDENONG SOUTH VIC 3175

(03) 8706 4000

info@armstrongceilings.com.au

QLD/NT

18-24 Beal Street,
MEADOWBROOK QLD 4131

(07) 3809 5565

info@armstrongceilings.com.au

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