



Case Study

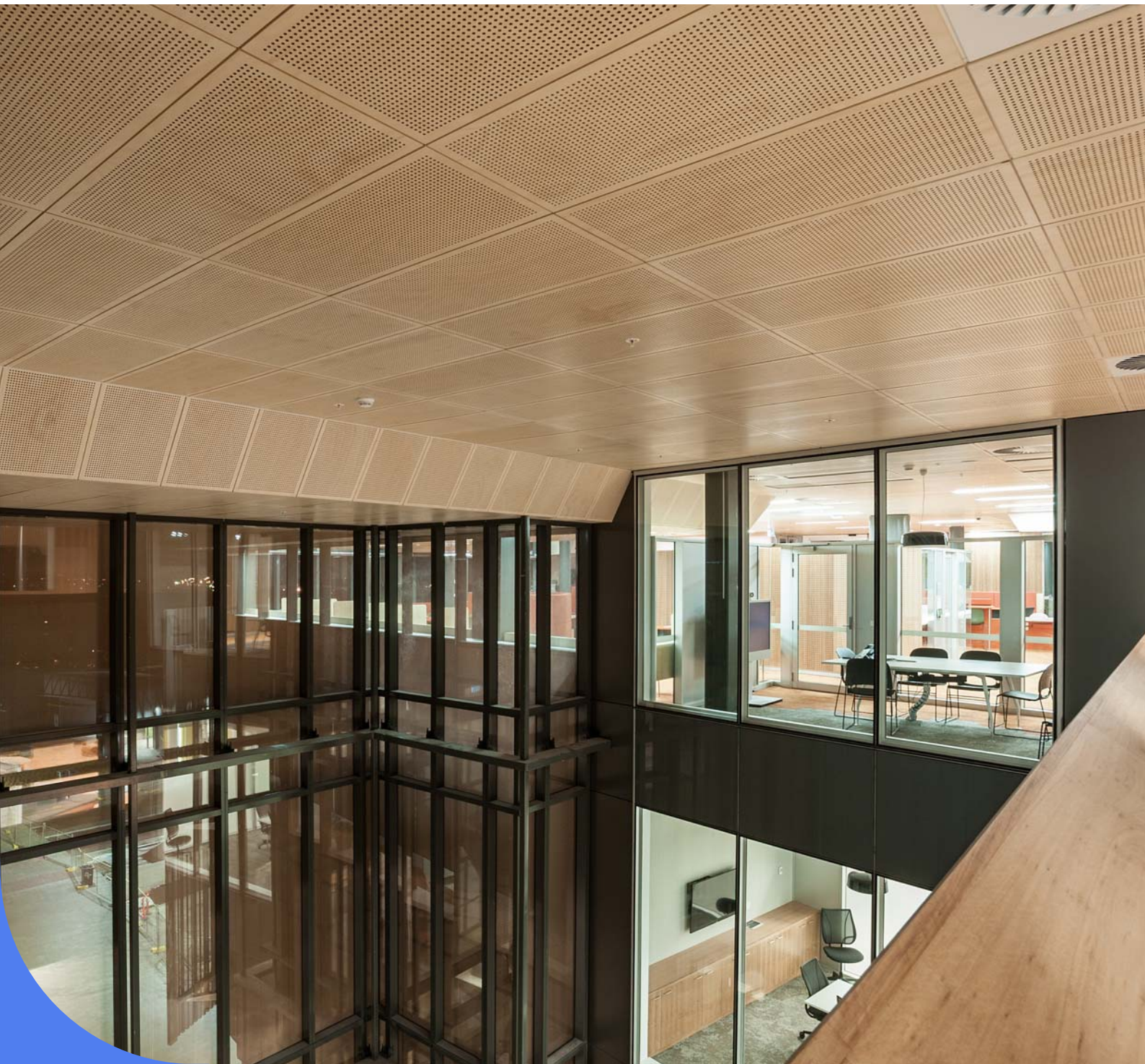
Monash University
Learning and Teaching Building

Armstrong[®]
CEILING SOLUTIONS

Case Study

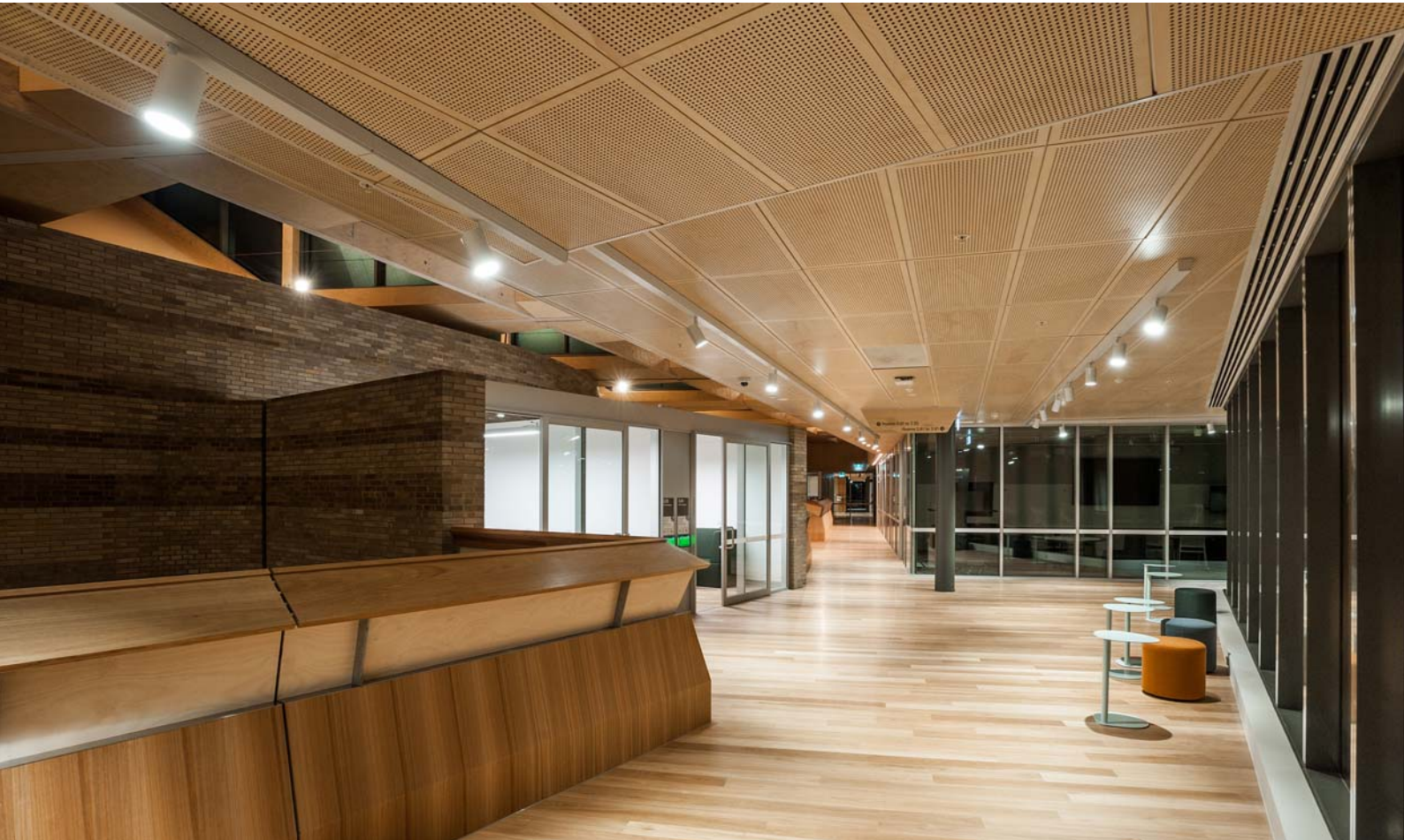
Monash University's Learning and Teaching Building harnesses the very essence of the collaborative learning experience – featuring over 60 different study spaces that encourage a new range of learning styles whether in open plan environments or smaller interactive lecture spaces. The facilities are designed to accommodate thousands of students and over 300 members of teaching staff across four floors with spaces that can be self-configured for group work or individual comfort.

Project:	Monash University Learning and Teaching Building Clayton Campus
Location:	Melbourne, Australia
Architect:	John Wardle Architects
Design & Build:	Multiplex
Ceiling Contractor:	Arc Plastering
Acoustic Consultant:	Marshall Day Acoustics
Products Used:	Optra K2C2 – Black (1600m ²) MetalWorks One Way Hook On (6500m ²) WoodWorks Vector – Hoop Pine (4000m ²) PeakForm and Blue Tongue Suspended Grid Systems
Photography:	Chris Matterson



Acoustic Requirements

Initially Armstrong was invited by Marshall Day Acoustics, to propose both a perforated wood and metal ceiling solution for application throughout various key learning spaces. The ceiling systems were required to meet the specific acoustic criteria of NRC of 0.70 and a CAC of 40dB. Based on testing conducted in the USA by Armstrong's NATA (equiv) certified acoustical laboratory, a compliant solution was determined that would deliver Total Acoustics®: both high sound absorption (NRC) combined with high sound attenuation (CAC).



Design Review

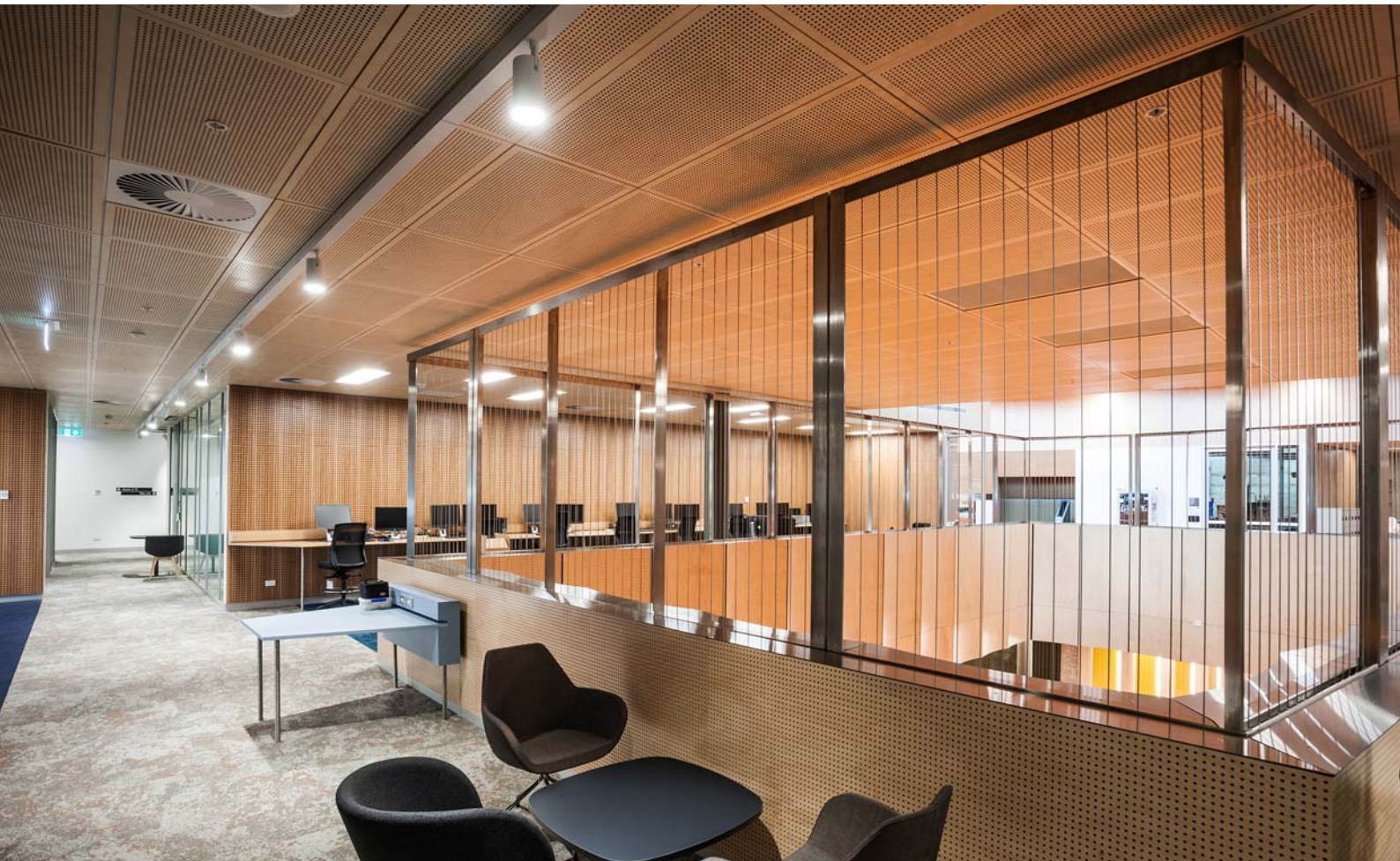
The team at Armstrong worked closely with the contractors Arc Plastering and Multiplex, and provided a prototype of the WoodWorks Vector and MetalWorks One Way Hook On ceilings, so that all key stakeholders had the opportunity to examine and approve the system from both an aesthetic and functionality perspective.

This was also critical for the lighting and mechanical services contractors to work with Armstrong to finalise the integration of the light fixtures and air handling systems with the ceiling systems.



Practical Ceiling Solutions

In addition to the acoustical performance, three key features made the WoodWorks ceiling the right solution for Monash University's Learning and Teaching Building: installation on the standard, cost effective PeakForm 24mm Tee-Bar Suspension Grid; the proprietary Armstrong Vector Edge profile, which provides the desired "concealed-grid-look" with a fine 6mm express joint between panels; simple "downward demountable" ceiling panels which enable full accessibility to the plenum space.



For open plan faculty areas, Armstrong MetalWorks One Way Hook On ceilings produce the required Total Acoustics® performance (high NRC + high CAC) and also a clean, contemporary flush finish. The fully accessible ceiling panels, Blue Tongue Aluminium One Way Grid, custom Perimeter and Transition Trims were all powdercoated in RAL 9003 for a uniform finish.

The third Armstrong Ceiling Solution installed at Monash was a black finished Optra One Way Exposed K2C2 system. The Optra Ceiling featured in the “theatre-style” teaching areas on the ground floor, provides maximum sound absorption of NRC 0.90 to minimise reverberation and ensure optimum speech intelligibility, critical for learning spaces. The Optra panels are fully accessible and suspended in a black powdercoated Blue Tongue 35mm Flat Faced One Way Grid system.



Featured Products

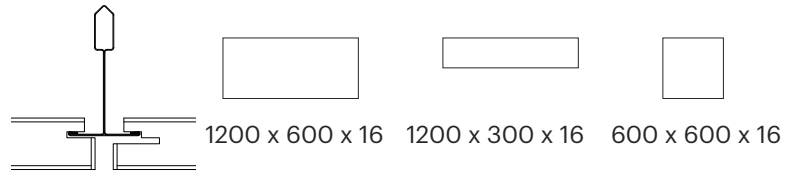
WoodWorks Vector

Armstrong has harnessed the enduring, natural beauty of wood in its Vector Ceiling System, that delivers functionality, elegance and flexible design.

Features & Benefits

- Installation on standard Prelude XL 24mm Tee Suspension Grid for cost effectiveness and simplicity
- Three standard panel sizes to integrate with light fixtures and swirl diffusers
- M22 perforation pattern (8mm hole with 19% open area) to enhance acoustical performance and design aesthetics
- Total Acoustics® solution: WoodWorks panel with Infill consisting of a high density mineral panel to achieve NRC 0.70 and CAC 40
- Narrow (6mm) reveal visual
- Installation with minimum plenum clearance
- Safe and secure downward accessibility without tool

System Detail

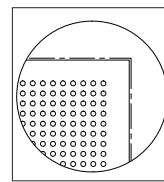


Veneer



HP(V) – Hoop Pine Rotary Cut

Perforation



Code: M22
RG8019



Moisture Resistant MDF



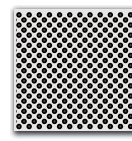
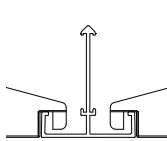
MetalWorks One Way Hook On

Clean monolithic visual of a semi-concealed system with the practicality, and robustness of a two way system

Features & Benefits

- Contemporary appearance
- Optimum balance between form and function
- One Way Exposed Hook On Aluminium Grid with colour matching, durable powdercoat finish
- Micro-perforation for acoustical performance and design aesthetics
- Simple accessibility to plenum space
- Durable for longevity
- Total Acoustics® solution: MetalWorks panel with Infill consisting of a high density mineral panel to achieve NRC 0.70 and CAC 40
- Sustainable – Green Star™ contribution

System Detail



Panel Size
1200 x 300 x 16



WH-White
RAL9003



Product Handling Durability



Light Reflectance



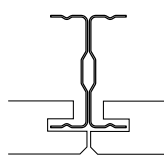
Optra One Way Exposed (K2C2 Edge)

Smooth-textured panels provide outstanding acoustical performance for open plan areas.

Features & Benefits

- Excellent sound absorption (NRC 0.90) for intelligibility
- Fully accessible ceiling system
- One Way Exposed Aluminium Grid with colour matching, black durable powdercoat finish
- Clean monolithic visual of a semi-concealed system with the practicality, and robustness of a two way system
- Sustainable – Green Star™ contribution

System Detail



1004
1200 x 600 x 16



BL-Black
RAL9005



Recycled Content
EN ISO 14021



RH95 Humidity Resistant



High Acoustic Performance



Product Handling Durability





Contact us

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