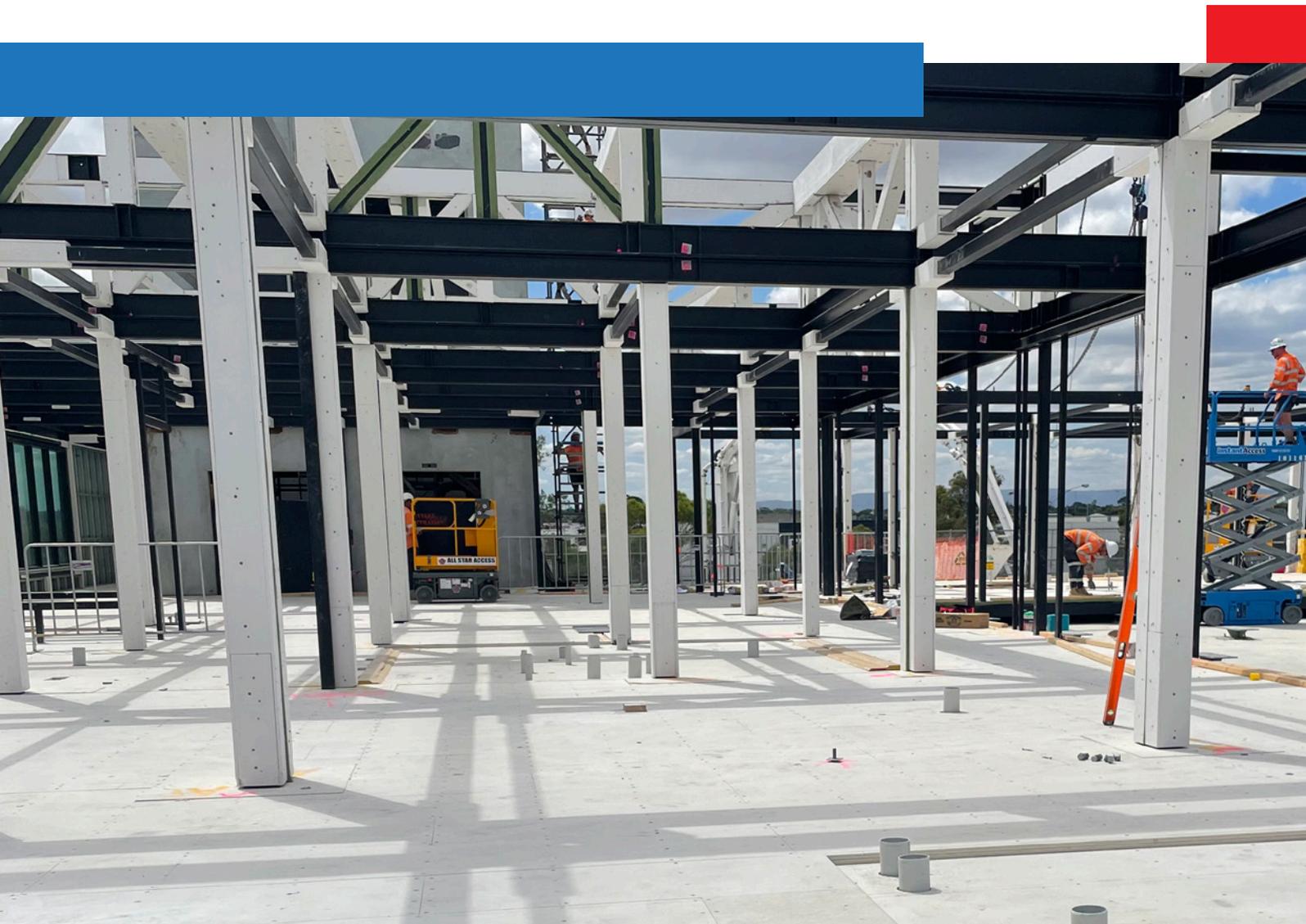


# Promat

Case Study

## Mental Health Beds Expansion, Northern Hospital, Epping (Melbourne)

**DESIGNER:** NH Architecture and NTC Architects **MANAGING CONTRACTOR:** Lendlease **MODULAR CONTRACTOR:** Modscape  
**SUPPLIER:** Promat **SYSTEMS:** Promat SYSTEMFLOOR®-FR, PROMATECT® 250 and PROMASEAL® IBS





## Background

Completed in 2023, the new 30-bed mental health facility at Northern Hospital will provide more than 10,900 days of care, enabling 655 more local residents to access vital mental health services every year. This project was delivered as part of the Victorian Government's Mental Health Beds Expansion Program, which will see \$801 million go towards the delivery of 260 new acute public mental health beds across Victoria.

Designers NH Architecture and NTC Architects, with LendLease as the managing contractor, worked with the Victorian Building Authority to design and build this state-of-the-art mental health facility, which will be able to provide immediate mental health treatment in a contemporary, safe setting.

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## Challenge

The new facility at Northern Hospital needed to be completed in as short a time frame as possible to address critical demand pressures within the Victorian mental health system. To be able to meet the challenging deadline, the project chose a modular system that could be constructed offsite and then craned into place, partnering with Modscape, leaders in the Australian modular industry.

“Our objective was to deliver a high quality, hospital grade project efficiently and cost effectively,” says Jan Gyrn, CEO, Director, Co-Founder and Owner of Modscape. “While Lendlease commenced work onsite, creating the carpark which modules would sit upon, Modscape manufactured the modules at our Brooklyn factory concurrently, allowing us to deliver the modules as soon as the onsite works were complete.”

While increasing speed and efficiency, modular construction brings with it a number of fire protection issues that are not normally seen in standard construction. The first issue for this build was that modular construction does not have traditional concrete slabs to form fire resistant barriers between levels. Second, traditional protection of a steel structure involves fully enclosing the steel with boards or spray, but the connections between the modules meant that this standard method of protection was not suitable. Third, considering the complexity and volume of hospital services that needed to be accommodated, it was also critical to ensure that the services being applied for the project could be fire protected.



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## Solution

Modscape partnered with Promat, the leading specialists in delivering passive fire protection systems for modular construction.

“Promat have outstanding technical knowledge and experience and their team made themselves available and were very involved,” explains Gyrn. “They were instrumental in having project specific details relating to the fire engineering tested at Warrington laboratory.”

To provide an effective fire barrier between levels, Promat SYSTEMFLOOR®-FR was selected. This unique floor/ceiling system provides fire protection on both the above and below sides of the assembly, while also carrying load. Unlike other systems on the market, it has been tested for fire resistance from either direction in accordance with AS1530.4.

Promat also conducted specific service penetration testing in the Promat SYSTEMFLOOR®-FR assembly to ensure that services were sufficiently fire-stopped.

To create a suitable structural steel fire protection

system, Promat conducted specific testing with their PROMATECT® 250 and PROMASEAL® IBS solutions. PROMATECT® 250 is a lightweight, fire-resistant board that has been extensively certified in line with AS 4100 and AS 1530.4. PROMASEAL® IBS is a fire resistant, flexible foam strip that, when placed in joints and around service penetrations in floors and walls, will maintain the fire resistance of the separating element.

In addition to their technical knowledge, Promat’s supply chain management was instrumental in ensuring that the total time from design to project completion was only about 18 months. The project consisted of 240 modules, which meant that a large volume of product was required.

“As manufacturing was occurring during Covid while logistics and supply chains were being affected, there were some challenges with getting the amount required in the timeframe,” noted Gyrn. “Promat went above and beyond, and assisted us with ensuring we had enough supply throughout the manufacturing process.”