



EXPANDING EDUCATION AT UniSC MORETON BAY

DEVELOPER : University of the Sunshine Coast
MAIN CONSTRUCTION COMPANY : Badge Constructions
ARCHITECT : Kirk Architects
CONSTRUCTION VALUE : \$68 million

The University of the Sunshine Coast's (UniSC) expansion of the Moreton Bay campus, entails the construction of three new buildings, incorporating sustainable prefabricated engineered timber. The new buildings will help support the university's commitment to excellence by providing an additional 12,500m² to the current floor space, and establishing itself as a pivotal hub for education, research, and industry groups in the region with new teaching and research areas, administration offices, social hubs, a car park, and sports facilities.

UniSC's first campus opened in 1996. Today its teaching network spans five campuses across South East Queensland and within three connecting UNESCO biosphere reserves and the World Heritage Listed K'gari.

The latest chapter in UniSC's growth story unfolds at the Moreton Bay Campus. This ambitious expansion involved the construction of three new buildings, utilising sustainable prefabricated engineered timber. This addition spans 12,500m², encompassing teaching and research spaces, administration offices, social hubs, a car park, and sports facilities.

The new buildings utilise a mixture of domestically-sourced XLam Australian timbers and purpose-sought glue-laminated Hess timbers from Europe.

UniSC Senior Project Manager Kate Robertson said while the initial

objective was to use 100% Australian-grown timber, incorporating European wood had practical and environmental advantages.

"Such are the qualities of the XLam and Hess timber, there is no need for painting, no need for internal refitting," said Kate. "I guarantee everybody that walks through will touch the building, feel its warmth, its natural qualities, and it does give off a rather enchanting scent as well."

The amount of timber UniSC used in the project regrows in the European forestry industry within five-to-six minutes, whereas regrowth in Australian forests is markedly slower due to the size of our plantations.

UniSC engaged award-winning architectural practice KIRK to provide the concept, design and documentation for the Moreton Bay Campus second stage, with BADGE Constructions and Cottee Parker Architects delivering the project under a Design and Construct Contract.

"The new buildings not only represent an evolution in the Campus's history – adding the first working PC2 laboratories and sports facilities to the site – they also provide tactile motivation for those with dreams of a future in disciplines like engineering and project management," said Kate. "The buildings will be landmarks that push the boundaries, expanding the possibilities in the minds of our students."

In addition to the aesthetic and functional advantages of the three new buildings, the construction incorporated research elements that allow academics, and their students, to observe data such as the moisture content in the materials over time.

The teaching and learning spaces are designed to foster collaborative and innovative learning experiences, and facilities include research laboratories, student gym, sports hall and sports science facility, a student hub and breakout spaces along with a multilevel car park.

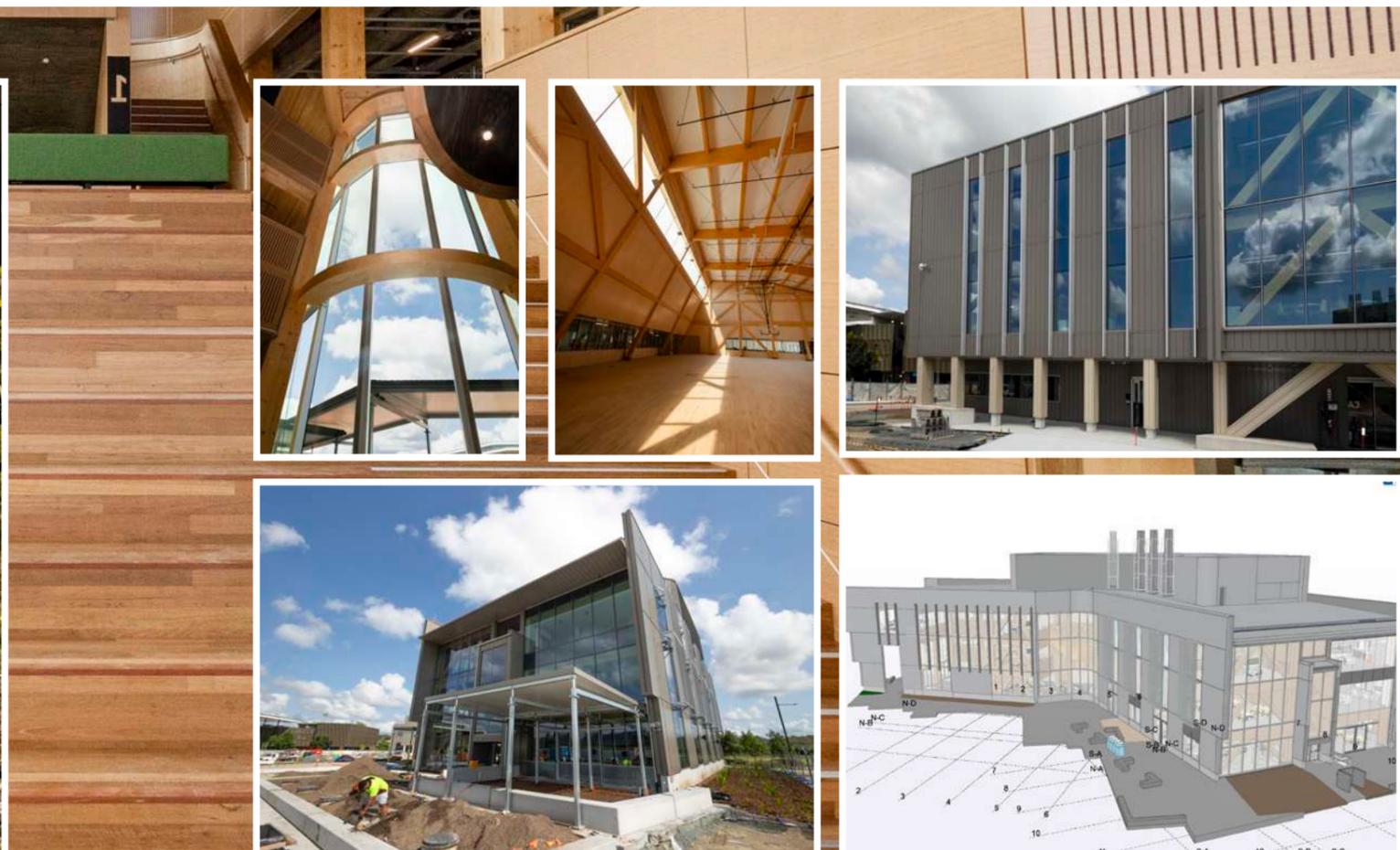
UniSC Moreton Bay is poised to become a pivotal hub for community education, research, business, and industry groups.

For more information contact UniSC Moreton Bay, 1 Moreton Parade, Petrie QLD 4502, website www.usc.edu.au



Below Mendham Consultants specialise in hazardous chemical risk management, designing lab storage for the USC labs and assessed explosive risks.

Below G. James managed the University of Sunshine Coast's facade project, addressing challenges in integrating it with the timber structure.



Mendham Consultants specialises in the management of risks associated with the storage and handling of hazardous chemicals, including dangerous goods throughout all industries.

For the USC Moreton Bay Campus project, Mendham Consultants developed the laboratory dangerous goods (hazardous chemicals) storage design and undertook the risk-based explosive atmosphere Hazardous Area Classification.

“Mendham Consultants undertakes a risk-based approach to Hazardous Area Classification in laboratories, which is a method it developed in 2005 for UQ,” said Director, Dr Frank Mendham. “This risk-based approach generally reduces onerous hazardous exclusion zones in laboratories, providing increased space for research and training without compromising safety.”

The use of floor mounted appliances such as refrigerators and freezers in laboratories is commonplace, however not many laboratory operators realise the lack of compliant equipment in Australia for use in hazardous areas. There are currently no IECEx compliant units available in this country.

“For this reason, we work to minimise the impacts of hazardous areas on laboratory floors, which typically allows the use of standard refrigerators and freezers,” said Dr Mendham. “In most cases, the hazardous zone at floor level at the Moreton Bay campus was reduced to 20mm above floor level, which is typically less than the castor height of fridges and freezers.”

A project highlight for Mendham Consultants was the opportunity to apply the latest safety standard for both laboratory hazardous chemicals storage and hazardous area classification. “We believe, from a safety viewpoint, that the new Moreton Bay campus design is of the safest laboratory design available with respect to hazardous chemical storage and handling,” said Dr Mendham.

Mendham Consultants has extensive experience in both the design of new facilities and the assessment of existing installations for many clients including: Federal Government, State Governments, Local Councils, major commercial and industrial companies and small to medium enterprises.

For more information contact Mendham Consultants, phone 0421 407 633, website www.mendhamconsult.com

G. James was engaged to oversee the comprehensive façade package for the University of Sunshine Coast.

The brief included the design, supply and installation of all external windows, doors, oversize sun blades and large custom screens.

“The integration of the façade into the timber structure posed distinctive challenges, particularly in terms of window surround preparation completed by the builder,” said Project Manager, Daniel Searle. “This step was pivotal in establishing robust waterproofing measures during the seamless amalgamation of the G. James window system into the structure.”

“The project encountered additional complexities, including the necessity for external installation due to slab constraints on internal panel and plant loading,” said Daniel. “Leveraging the collective expertise of G. James management, design and engineering teams, a new die was innovatively crafted to facilitate the external installation into the subframes.”

“Dealing with movement on these buildings was a large hurdle but great teamwork between all parties had issues resolved and dealt with

in a manner that didn't take away from the final product being sought by the client and the architect.”

G. James also orchestrated a distinctive fabrication, packing and installation sequence tailored to the unique site conditions and program requirements for this job.

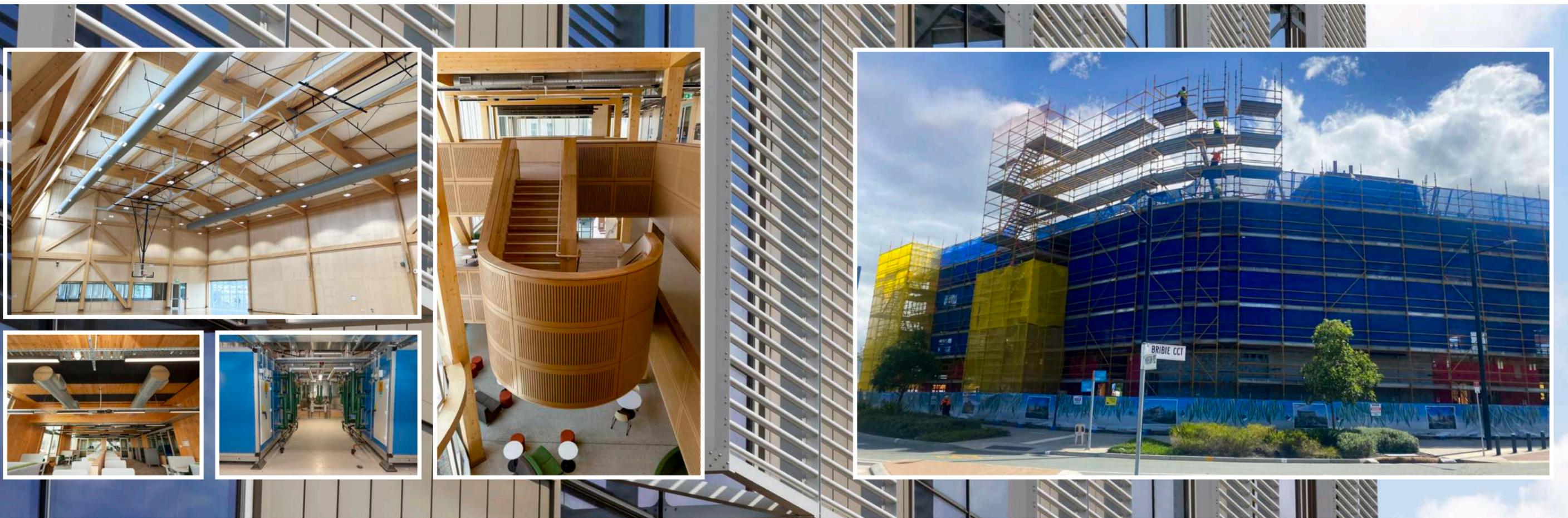
“While no construction endeavour is devoid of challenges, sustained and transparent communication with the builder played a vital role in the overall success of the project,” said Daniel. “G. James is proud of the final product put forward by the team, and looks forward to working with all parties again in the future.”

The G. James Group of Companies has grown to become involved in the successful manufacture, fabrication, processing and installation of a diverse range of products, and is Australia's leading integrated glass and aluminium manufacturer and contractor.

For more information contact G. James, 1084 Kingsford Smith Drive, Eagle Farm QLD 4009, phone 07 3877 2333, email commercial@gjames.com.au, website www.gjames.com

Below Sedatech, part of Climatech Group, provided design and installation services for HVAC systems for UniSC Moreton Bay Campus Project.

Below Allsafe Platforms built scaffolding for UniSC Moreton Bay Campus Project, involving detailed engineering with timber design.



Sedatech is part of the Climatech Group, one of Australia and New Zealand's leading mechanical services companies, with comprehensive design, engineering and construction solutions services for clients of all scales and industries.

For the University of the Sunshine Coast, Moreton Bay Campus project, Sedatech was contracted to design, lead BIM coordination, drafting and installation of HVAC services including, but not limited to, HVAC building management system, general supply/extract systems, toilet ventilation systems, laboratory ventilation, laboratory dangerous goods and fume cupboard extraction systems, fume cupboard manufacture and installation, communications room DX air conditioning, and chilled water pipework system

"Installing the underground chilled water reticulation pipework alongside ongoing construction work was a challenge," said Senior Project Manager, Rob Grocott. "Our solution was to stage the excavation and installation works around the build programs which ensured constant safe access and egress routes through the main site traffic thoroughfare."

Sedatech used a range of materials to meet the project specifications including exposed spiral ductwork systems, exposed fabric ductwork (serving the Sports Hall), and offsite ductwork fabrication support frames.

"Working in and around several fully engineered timber construction buildings was a unique experience," said Rob. "Seeing the final project come to completion following months of leading the BIM Modelling process was a real highlight, not to mention the site coordination and attention to detail of all services against the backdrop of exposed timber features across three separate buildings."

Sedatech boasts an industry leading reputation for excellence and professionalism in mechanical services design, engineering, delivery and service that underpins their continued success and repeat business with their extensive list of top tier clients in a wide range of industry sectors. Their focus is on delivering smarter, more cost-effective and intelligent solutions to clients, while always looking towards future projects.

Sedatech offers large-scale, high-quality, innovative design and construction solutions, while maintaining the Australian family owned business values they started with 30 years ago. With established offices across Australia and New Zealand, Sedatech service Tier 1, 2 and 3 projects and have a strong record of repeat work.

For more information contact Sedatech, 15/243 Bradman Street, Acacia Ridge QLD 4110, phone 07 3370 6400, website www.sedatech.com.au

Allsafe Platforms and Scaffolding were contracted to build all of the scaffolding on the UniSC Moreton Bay Campus Project.

"We developed a number of scaffolding drawings and engineered the plans for the Project, going back and forth between the project engineers until they were signed off due to the engineering involved in this project with the use of timber in the design," said Founder and Director, Robert Yates.

Ten staff worked on the project, which ran smoothly from beginning to end. "It was a really good project to be involved in," said Robert. "We were able to keep up with the program timetable and work in with the other trades without any problems."

Robert began working in the scaffolding industry before starting his own business – Allsafe Platforms and Scaffolding – 25 years ago. He started in domestic housing before expanding into the commercial market prior to being acquired by the APS Group.

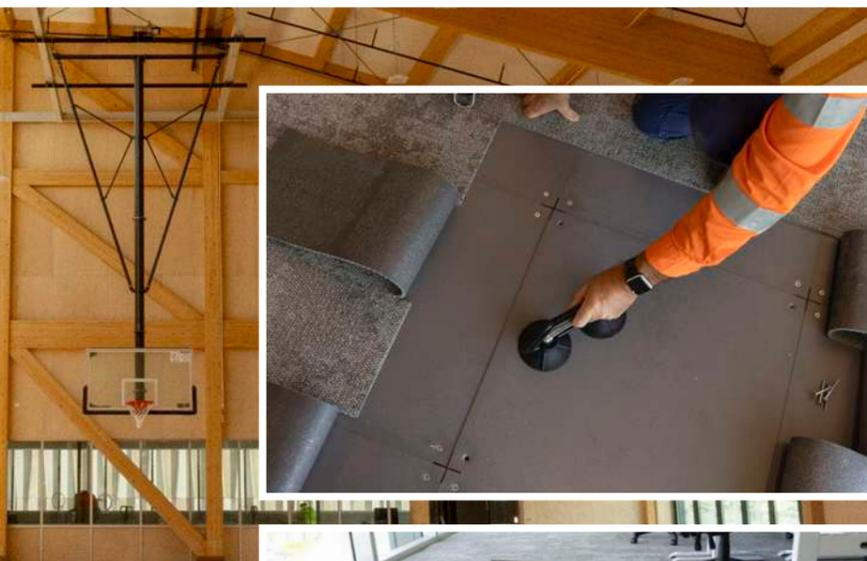
"We have grown every year," said Robert, and now Allsafe Platforms and Scaffold has amalgamated with the APS Group and has over 500 employees. With offices in Brisbane and Melbourne, the company services Queensland, New South Wales and Victoria. Allsafe Platforms & Scaffold have the capabilities to do major works.



For more information contact Allsafe Platforms & Scaffolding, 24 Andrew Campbell Drive, Narangba QLD 4504, phone 07 3888 0959, email admin@allsafeplatforms.com.au

Below Waldner with Lab Systems Group support, delivered an exceptional supply-only lab joinery package to UniSC Moreton Bay campus.

Below ASP Access Floors supplied and installed their innovative flooring systems, Icon X and Urban Interlock, in USC Moreton Bay Campus.



Laboratory Systems Group is an Australian manufacturer owned by Waldner Germany, specialising in the consultation, design, manufacture, installation, and commissioning of fume cupboards and laboratory joinery.

Waldner was engaged directly to provide the lab joinery for the University of the Sunshine Coast Moreton Bay Campus, and with Lab Systems Group support, delivered an exceptional workspace environment.

“After receiving approval of shop drawings, we processed the order through our factory in Germany,” said Project Director, Thomas Hall. “Once delivered, I provided assistance to the contracted installers regarding correct installation.”

In addition to the typical joinery units supplied, Waldner supplied both service columns and service booms. These are suspended from the ceiling and provide reticulation for gas and electrical services, as well as shelving.

“The end result is a really cool building which highlights sustainable construction methods,” said Thomas. “It’s a great teaching lab.”

In March 2023 Laboratory System Group became part of Waldner. The new partnership has created Australia’s first total solution provider for scientific infrastructure drawing on Waldner’s global expertise and product portfolio and almost 50 years of Laboratory Systems local engineering, manufacturing and service capability.

Laboratory Systems Group specialise in scientific and laboratory controlled environment equipment for a range of sectors including industry, universities, schools, research institutes, hospitals and allied healthcare. This now includes the comprehensive Waldner product range, encompassing lab joinery, infrastructure, and European low flow fume cupboards.

With agents located throughout Australia, and head office is based in Lilydale, Victoria, Lab Systems Group are readily placed to lend an expert on hand to provide individual solutions for laboratory/STEM spaces across a range of requirements.

For more information contact Laboratory Systems Group, 24 Melba Avenue, Lilydale VIC 3140, phone 1300 522 797, email sales@labsystemsgroup.com.au, website www.labsystemsgroup.com.au

With over 20 years experience, ASP Access Floors are a leading global company in the access flooring industry, revolutionising access flooring systems and installation.

ASP Access Floors specialises in the manufacture, distribution and installation of access flooring solutions globally and the company’s unique access floor designs have been used in some of the most iconic projects around the world, including USC Moreton Bay Campus.

ASP used two flooring systems on this project, Icon X and Urban Interlock. The general office areas in Buildings C and D utilised 2,100m² of Icon X, while 800m² of Urban Interlock was used in the tile and stone areas of Building D.

“Icon X is considered the classic system for commercial environments. It’s widely used for power and data cable management,” said Marketing Manager, Angela Zlater. “The panels consist of a hardened steel top and bottom sheet plate with corrosion resistant protection. The panel is screw fixed to the pedestal head at all four corners.”

“The Urban Interlock Panel has been designed for applications where stone or tile finishes are to be applied,” said Angela. “The panels’

specially designed interlock edge profile ensures panels remain locked together, eliminating movement.”

ASP Access Floor Systems are renowned for their ability to be supremely adaptable to any job brief. “While the building itself is really unique, the flooring installation was a standard job that didn’t present any challenges,” said Angela.

Ongoing research and development allows ASP Access Floors to produce innovative solutions that offer the market quality, versatility and infinite support.

ASP Access Floors service, from consultation to job completion stage, is unparalleled in the access flooring marketplace, and they are renowned for it.

For more information contact ASP Access Floors Pty Ltd, 32 Prime Drive, Seven Hills NSW 2147, phone 02 9620 9915, email sales@aspfloors.com.au, website www.aspfloors.com.au