

JAMES COOK UNIVERSITY - CLINICAL PRACTICE BUILDING

In a landmark project, James Cook University's new Clinical Practice Building on the Townsville campus marks the beginning of a new mixed-use 'university town', Discovery Rise, which combines a high level of public amenity with facilities for teaching and learning.



Creating an extremely safe work site can also result in creating a very efficient one, as Uni-span demonstrated at the James Cook University Clinical Practice Building.

By applying their access system and safety system design skills to the project's program and workplace requirements, Uni-span were able to resolve some unique challenges in conceptualising and constructing a perimeter access scaffold to the project with roof edge protection.

The key challenges were the project's multiple work faces; designing and installing a suspended scaffold over the plant rooms; creating a cantilever scaffold for the roof structure; and ensuring that all the scaffolding was based out to suit all the various trades involved in the project.

To carry out the task, and ensure that any changes required due to the progress of the program were carried out efficiently and safely, Uni-span had an average of six men onsite throughout, supported by the Uni-span North Queensland yard, a site supervisor and the Uni-span design team.

"The building had a roof overhang of approximately 3.6m, with limited room around the base," said Uni-span spokesperson, Julie Roetger.

"Uni-span designed a cantilever scaffold for the perimeter of the building to provide access to the roof overhang. This scaffold also incorporated edge protection and the installation of our patented Uni-mesh containment system.

"Uni-span also supplied multiple scaffolds suspended over the plant rooms to provide clear access and commissioning of the plant room. One involved a 17m span, and the other a span of 12m. These were constructed using I-beams supported by scaffold support towers."

Uni-span's range of specialist safety and access products provided solutions which met not only the safety standards required, they did so in a time-effective manner. By using Uni-mesh, the patented edge protection and containment system designed and manufactured by Uni-span, the project ensured complete fall protection, compliance with Queensland Workplace Health & Safety standards, and a cohesive and tidy site image when viewed from

offsite by members of the public. Uni-mesh also has the advantage of being quick and simple to install.

The project also used Uni-span's new PA stairs/Lap plates, an innovative time-saving product for safe access to scaffolding and work sites at heights.

"Uni-span would hand over the working areas to Hansen Yuncken completed and safe for use in good time – causing no delays to the project," said Jurie.

"Our scaffold design suited the site requirements and was erected to suit all trades on site - making the scaffold effective and fit for use. Our cantilever design assisted the platforms to be commissioned whilst the project was still under way.

"Having 3000 ton of scaffold in North Queensland, we could guarantee supply on short notice and service the project with the required items. All scaffold supplied was galvanized which presents well on-site."

Uni-span offer a comprehensive range of scaffolding, formwork and safety solutions which is designed to Australian standards and capable of meeting the needs of projects across the commercial, industrial, public, infrastructure, health, retail and high-rise residential sectors.

Other current projects include Queensland Children's Hospital, Cairns Base Hospital, RAAF Base Ingham Road Townsville; Rockhampton Hospital for Hansen Yuncken; Mackay Base Hospital for Baulderstone; Indooroopilly Shopping Centre for Brookfield Multiplex; Townsville Hospital for Thiess; Royal Brisbane and the Women's Hospital for Watpac; QC LNG for Bechtel; and Legacy Way for Transcity JV.

Three words sum up what makes Uni-span the leader in their field – Solution. Service. Simple. In essence, their focus is on designing and delivering solutions which ensure contractual peace of mind at every stage, offer efficiency in implementation, and contribute to a safe workplace for builders and tradespeople.

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As a landmark mixed-use development, the James Cook University (JCU) Clinical Practices Building offered an excellent opportunity for KLN Electrical Services QLD to demonstrate the broad scope of their expertise. KLN's scope included the design and construct of all the project's electrical, communications, security and fire services, with the installation required to meet a wide range of needs including a Woolworths supermarket, retail outlets, offices, working dental surgeries and medical suites.

KLN installed every aspect of the project, including the supply and installation of the High Voltage reticulation and two transformers to the site.

"All these aspects are carried out in house and not subcontracted out like most companies," said KLN QLD General Manager, Brett Nicholson.

"We worked closely with Hansen Yuncken on delivering this challenging design, and this helped to ensure an efficient and safe resolution. It is a very diverse building, considering its on a University campus.

"The communications installation installed by our comms/data manager Nathan Adams and his team has been an excellent installation, and completed to a very high standard. KLN Qld is Krone certified, and is a preferred data contractor to the JCU.

"I would like to acknowledge our staff including Michael Payne, Nathan Adams, Mathew Stevens, Marty Peters and Clint Thompson for their efforts on the project. We look forward to continuing our association with the JCU and its building partners on future projects."

From design through to completion, KLN committed two years to the process, with a team of up to 15 highly skilled tradespeople and project management involved on any given day.

Complexities of the construction task including the need to relocate an overhead high voltage installation at the main entrance to JCU without disrupting power to the entire campus. This was achieved by relocating the service to underground, which also in the long-term delivers a safer and more cyclone-resilient high voltage system.

As the project aimed to achieve energy-efficiency, KLN embedded lighting control efficiencies into the electrical design and installation, and drew of

their well-established supplier networks to ensure high quality, reliable and efficient products were installed throughout.

KLN QLD has been in operation since 2005, and services commercial sector projects across Queensland and the Top End from offices in Cannonvale (servicing southern Queensland), Townsville (servicing Northern Queensland) and Darwin (servicing the Northern Territory and the Kimberly and Pilbara regions of Western Australia).

The company has 40 fulltime staff across all three locations, enabling them to undertake concurrent projects across this vast geographical area efficiently. By focusing on developing and delivering the most practical, cost-effective and safe solutions, KLN QLD has built a solid reputation as a valuable asset for any project.

Other major projects KLN QLD are now at work on include the Townsville Hospital Sub-acute facility for Watpac Constructions, another project where the ability to manage a high order of complexity will be crucial for successful delivery. KLN QLD are also working with Watpac on the \$42 million Darwin International Airport expansion, a project which includes expansion and upgrade of terminals, new gate lounges, new security screening, new baggage handling, retail areas and offices.

Having the integrated capability across electrical (Low Voltage and High Voltage), communications including data, security and fire services offers their clients a more streamlined process for delivery of these critical project elements, with one point of contact for all four sets of services and a more effective coordination between interdependent systems. KLN QLD also holds all applicable certifications and accreditations, and all staff are well-versed in safety and hold all required tickets and Safe Work cards.

In an industry where results speak for themselves, KLN QLD's on-site achievements, backed by the level of organisation and efficiency of their procurement and project management personnel, ensures the company is one which given any complex or challenging opportunity, will most definitely shine.

For more information contact KLN Electrical Services (QLD) P/L, 3/8 Myer Lasky Drive Cannonvale QLD 4802, 2/17 Mackley Street Garbutt QLD 4814, phone 07 4948 3066, fax 07 4948 3067



James Cook University -
Clinical Practice Building, QLD

Below RST Air Conditioning
delivered a unique design for the
JCU Clinical Practice Building



For a university located in the tropical environment of Townsville, keeping both indoor temperatures and also energy consumption down is vital, which is why RST Air Conditioning delivered a unique design for the JCU Clinical Practice Building, which uses the university's existing chilled water ring main to cool the air.

RST designed and installed the base building system, which includes chilled water air handlers, mechanical ventilation, and outdoor air preconditioning, as well as the base building ductwork and grilles. The system is connected also to the University's BMS system to maximise its energy-efficiency.

"Using the chilled water ring main makes this a unique design, and makes it a very energy-efficient system," said RST Air Conditioning Project Manager, Keith Gibbon.

RST's team worked with consulting engineer, Craig McClintock of McClintock Engineering Group, who undertook all the thermal modelling and designed the system, which RST then implemented.

In addition to the base building system, RST is completing the individual tenancy fitouts as required. To date this has included supply, install, commissioning and balancing for the air conditioning system for the Woolworths supermarket, which has installed according to the retailers specifications, and systems for the JCU Dentistry teaching clinic and JCU Health. Each system is designed and specified to meet the individual

requirements, with RST accessing appropriate energy-efficient components from their well-established supplier network.

The relationship between RST and JCU is an ongoing one, with RST recently also completing the HVAC component of the JCU Australian Institute of Marine Science (AIMS) refurbishment. Other major projects have included the Lavarack Barracks for Department of Defence, and the company has just commenced work on the 4,000m² Queensland Country Credit Union Building in Townsville.

RST have been in the business of keeping people and places cool for 33 years, and have capabilities including air conditioning, mechanical ventilation systems, chilled water systems, cold rooms and freezers. They have more than 40 staff, including in-house mechanical electrical trades, a construction arm including installers, technicians, a sheet metal shop, and a 24/7 service and maintenance division.

From schools and apartment blocks through to medical facilities, retail and commercial developments, RST can provide complete design and construct packages for all a project's cooling needs.

For more information contact RST Air Conditioning, 196 Vickers Road North Condon Townsville 4815, phone 07 4773 9800, website: www.rstairconditioning.com.au