

NEW SCHOOL OF THOUGHT

DEVELOPER : La Trobe University
MAIN CONSTRUCTION COMPANY : Hutchinson Builders
ARCHITECT : Vincent Crisp
STRUCTURAL ENGINEER : IrwinConsult
CONSTRUCTION VALUE : \$45 million



La Trobe University's Bendigo Campus Transformation Project was born from a 2015 Campus Master Plan and features a 4-level extension to the existing Library Building and a New Engineering Building. The Engineering Building's flexible learning and research spaces include a Tech School developed in partnership with the Victorian Government to deliver technology based programs to secondary students.

There is a revolution occurring in tertiary education throughout Australia as leading universities diversify their campuses from traditional city locations to embrace regional communities. La Trobe University has undertaken a \$45 million state-of-the-art transformation project at their Bendigo campus and Hutchinson Builders was selected as contractor for the complex planning and construction programme.

The Bendigo Campus Transformation Project consisted of several works portions implementing various initiatives to enhance student, staff and visitor experience as identified in the 2015 Campus Master Plan. Hutchinson Builders worked collaboratively with La Trobe to complete a series of enabling works followed by construction of the Library Extension and New Engineering Building major works portions.

Hutchies' was an obvious choice for the undertaking given their accomplished track record with major construction projects. They were initially engaged under a framework agreement for early procurement and other planning phase services, followed by a construction contract in November 2016.

The major construction phases were preceded by an eight month early works programme involving extensive services diversion, refurbishment of existing workspaces and major demolition facilitating later stages of construction and continuation of normal campus operations.

The site for the new Engineering Building was cleared of a complex network of existing services infrastructure including diversion and upgrade of incoming main supplies for power and gas. Civil drainage was redesigned to accommodate the new building and installed before main building works commenced. Site preparation for both the engineering building and library involved removal of over 3,000m³ of contaminated spoil and redesign of in ground structure and services to minimise disturbance of significant vegetation and naturally occurring rock.

The new Engineering Building provides a contemporary teaching and learning facility consisting of general and specialist spaces including research and structures laboratories, offices and flexible learning spaces. The Level 3 area will house the Bendigo Tech

School, providing a high-tech learning environment for students from 14 partner schools around Bendigo.

The Engineering Building is a stand alone facility of approximately 5,500m² of teaching, research and workspace accommodation including the Level 3 Tech School facility of 1,500m².

During construction, the programme and construction methodology for the New Engineering Building was revised collaboratively between Hutchies and La Trobe University, in conjunction with the Department of Education in order to facilitate an early opening, and partial occupancy by October 2018 for the Tech School floor. This change accommodated for the intake of students and the commencement of education programmes from the start of the University's 2019 academic year.

Library works involved partial demolition and extension of the existing Library/Student Union Building. The extended area consists of over 3,000m² of primarily informal student learning spaces designed to modernise and improve the amenity and performance of the existing spaces.

Both buildings feature a concrete primary structure with precast concrete core and a structural steel, lightweight framed façade clad predominantly with fibre cement sheet and metal wall cladding in vertical interlocking and Mini Orb profiles.

Unique features of the Engineering Building display and storage capabilities include a 4.5m rotating and lifting turntable designed and manufactured for the Tech School by a Bendigo based industry partner. Level 0, 1, 2 and 3 additionally benefit from an automated 16m high flexible storage and retrieval shuttle constructed entirely onsite from modules customised and manufactured in Germany.

The New Engineering Building was completed in 2019, with the building envelope of the library extension completed in June 2019.

For more information contact Hutchinson Builders, 70-72 Cecil Street, South Melbourne VIC 3205, phone 1300 HUTCHIES, email info@hutchinsonbuilders.com.au, website www.hutchies.com.au

Below SA Structural provided the structural steel for the Library at the La Trobe University Bendigo Campus.



Below Mills Glass provided their high quality commercial glass and aluminium solutions to the La Trobe Uni project.



Using the latest technology, to ensure optimum accuracy, SA Structural provided structural steel for the Library at the La Trobe University Bendigo Campus. Having worked with some of the most challenging structures, SA Structural were well equipped to work with the curved façade on this project. The team fabricated and painted the steel at their manufacturing plant before transporting the steel to campus. The highly experienced site crew then carried out the installation.

With an aim to continuously develop close working relationships with their clients, SA Structural focus on understanding the complex environments in which they operate. It is this approach that has earned SA Structural a reputation for exceeding client expectations.

All SA Structural clients benefit from modern technology, detailed quotations by quantity surveying, and a progressive well trained team with extensive industry experience.

Their state-of-the-art facilities have led to the successful completion of many high profile and complex projects across Australia which include a range of developments such as government facilities, infrastructure and mining, shopping centres, industrial, and multi-level apartments, schools and hotels.

The team offer an unrivalled inhouse drafting service which sees their steel detailing professionals use the latest 3D modelling technology. This advanced software ensures that when plans from engineers or builders are received SA Structural know that it will all fit together and meet expectations. More over, it provides their clients with the benefit of seeing their project in '3D' – which completely changes the dynamics of the standard '2D' plans.

Some of the notable projects SA Structural have worked on include; SA Medical Research Institute, The Adelaide Convention Centre, Burnside Village Shopping Centre, SA Health Medical Research Institute, Geelong Hospital, Murray Bridge Market Place, Adelaide University, New Royal Adelaide Hospital, and Rowlands Apartments. The team are currently working on Northumberland at Collingwood with many more projects starting early in the new year.

SA Structural have now opened a new office and fabrication workshop in Hallam, Victoria.

For more information contact SA Structural, 40-54 Kaurna Avenue, Edinburgh SA 5111, phone 08 8285 5111, fax 08 8285 5122, email reception@sastructural.com.au

Mills Glass has a commitment to excellence in all facets of window fabrication and glazing. An outstanding result was achieved by Mills Glass at the SP4 Engineering Building at La Trobe University's Bendigo Campus, part of the University's ongoing transformation project, where it provided extensive commercial glass and architectural aluminium fins.

The glazing was highly specified to produce a sustainable outcome that provided thermal control and noise reduction. Mills Glass provided 150x50 double glazed windows using both EnergyTech grey and EVantage bronze products to meet the specifications.

The powdercoat finish on the frames featured Dulux Duratec Zeus Timberland Satin and Duratec Copper Metallic Kinetic Matt. Mills Glass has the manufacturing capacity to produce all their frames inhouse, and best of all – local!

From an engineering perspective, it was necessary to provide strengthening to 15 of the larger windows to allow for high wind pressures. This was achieved utilising steel flat bar fitted on the inside of the split mullions together with 1.6mm galvanised folded channel installed in the sub heads.

Mills Glass has a high level of technical strength thanks to continual investment in the latest technology plus the expertise of their team.

Due to their excellent industry relationships, they can also call on the expertise of specialists. For the SP4 project, Mills Glass had Dow Corning carry out laboratory peel tests to confirm adhesion of both the Dow Corning structural glazing tape and Dow Corning 795 structural silicon to the hot dipped galvanised steel for the northern glass wall.

The aesthetics of the Engineering Building have also been greatly enhanced by the 72 vertical and 472 horizontal powdercoated aluminium fins manufactured and installed by Mills Glass. Internal glazing was also supplied, including five Dorma EL301 automatic doors. Mills Glass is also supplying their aluminium glazed fin products to the Library building at La Trobe Bendigo Campus.

***All fabrication done inhouse with our own labour force. We do not use subcontractors **We use only locally sourced materials**

For more information contact Mills Glass, 24 Metrolink Circuit, Campbellfield VIC 3061, phone 03 9303 9193, email info@millsglass.com.au, website www.millsglass.com.au



Below The concrete precast panel walls for La Trobe Uni's Bendigo campus were manufactured and supplied by Statewide Panels.

Below McCaig Air Conditioning supplied and installed the heating, cooling and ventilation (HVAC) systems for the La Trobe University.



The team at Statewide Panels manufactured and supplied precast concrete panel walls for the stylish La Trobe University Bendigo Transformation Project. The scope of works included the external walls, stairwells and lift shafts for the new buildings and the library extension.

Statewide Panels had a team of 12 working on the manufacture of the precast panels which were then delivered onsite to their specialised installation crew B & M Dorrington, who erected and completed all onsite work for the panels.

Based in Shepparton Victoria, Statewide Panels supply a range of made to measure precast concrete panels throughout the State. Working with both the domestic and commercial construction markets, the team have made a solid reputation as a manufacturer of choice within their industry. Completing panels with form liners and specialised finishes as well as standard class two finishes to architects requirements.

The precast panels manufactured by Statewide Panels are high quality, versatile, durable, strong and sustainable. The team specialise in precast tilt panels which is fast becoming the construction medium of choice for projects in Victoria. This is mainly due to their low

maintenance, high durability and contemporary look. This method also reduces construction times, cost and safety risks.

Over the past 13 years, Statewide Panels have been part of some exciting projects. At present, they are working on Woolworths Heidelberg and Ocean Grove, Bunnings Mernda and Villawood, Woolworths and specialty shops Ocean Grove, Twin Rivers Primary School Echuca.



For more information contact Statewide Panels, 11 Joseph Baldwin Place, Shepparton VIC 3630, phone 03 5821 7006, mobile (Dale Baldi) 0438 232 069, email dbaldi@statewidepanels.com.au, website www.statewidepanels.websyte.com.au

McCaig Air Conditioning was one of the very first air conditioning specialists in country Victoria and has since grown significantly to become one of the most trusted air conditioning brands today.

Engaged to supply and install the heating, cooling and ventilation (HVAC) systems for the La Trobe University, Bendigo Campus Transformation Project, the scope of works was quite diverse and included chilled and heated water systems comprising a Modulex boiler, Trane air cooled chiller, Air Change heat recovery ventilator, GJ Walker fan coil units, and mechanical ventilation using Fantech fans.

The refurbished library is serviced by Daikin Heat Recovery VRF multi-split air conditioning systems and Fantech mechanical ventilation fans. The HVAC systems are integrated with a Siemens APOGEE Building Management System which also monitors the building occupancy, CO₂ levels and the buildings rain harvesting system.

Parts of the mechanical services installation were deliberately left exposed in the Engineering Building so that future occupants of the learning areas can visualise how these systems are installed and operate. This was all part of the vision to incorporate creativity and design into the learning environment.

The team at McCaig Air Conditioning has the knowledge, expertise and know how to design, install, service and maintain all commercial air conditioning and mechanical service systems. Their extensive design and installation service covers everything from small offices and shop fitouts to multi-storey buildings, hospitals and industrial complexes.

The team are currently working on the boiler upgrade at St John of God Hospital in Bendigo, and have numerous other projects ready to start in 2019.

For more information contact McCaig Air Conditioning, Corner Strickland Road & Beischer Street, PO Box 54, Bendigo VIC 3552, phone 03 5442 1655, fax 03 5441 2655, email admin@mccaigairconditioning.com.au, website www.mccaigairconditioning.com.au