Image by Rory Gardiner

ON WITH THE SHOW

DEVELOPER : Geelong Arts Centre, Development Victoria, Regional Development Victoria, Creative Victoria
MAIN CONSTRUCTION COMPANY : Kane Constructions
ARCHITECT : Hassell
STRUCTURAL ENGINEER : AECOM
CONSTRUCTION VALUE : $25 million

The Geelong Arts Centre Ryrie Street Redevelopment involved the demolition of existing buildings and the delivery of a new building on Ryrie Street. The construction of this spectacular 7-storey building, designed by Hassell, cantilevers over the newly revealed façade of the former church. The new building has a double height foyer on Ryrie Street and includes improved access to the Playhouse Theatre, new studio and rehearsal spaces and a dedicated co-working floor named Creative Engine, designed to foster entrepreneurship and incubate ideas within the contemporary arts space.

Geelong Arts Centre owns the city site that includes the stone church, built in 1856. A masterplan was formulated in 2009 which included the refurbishment of the entire site and the renovation of the Playhouse Theatre (Stage 1), completed by Kane Constructions in 2010.

Kane has significant experience constructing performing arts centres nationally. Projects include the Horsham Performing Arts Centre & Regional Arts Gallery, Presbyterian Ladies' College Performing Arts Centre, the award-winning Drum Theatre Performing Arts Centre and Eternity Playhouse, and Casula Powerhouse Regional Arts Centre, a 300-seat theatre housed within a heritage listed former power station.

Onsite work started at Geelong Arts Centre in August 2017 with the demolition the existing Band of Hope and Mechanics Institute to reveal the façade of the old 'steeple church' facing Ryrie Street. The excavation uncovered archaeological artefacts, including ticket stubs and an elephant bone, delaying the build for three months.

"We spent up to 12 weeks detailing the façade design, changing some elements from steel framing to aluminium to make it lighter and quicker to build," said Project Manager, Patrick Clements.

"The staircase was documented to be a monolithic finish out of concrete which made for some difficult formwork. We had 5.6m long double-glazed windows with U channels made in Germany and we visited the factory for a Q&A check. The glass is low iron for clarity with low emission coating for thermal insulation, the 'stick built' glass façade is the first of this scale in Australia," said Patrick.

"Disruption to Geelong Arts Centre's business was minimised by keeping the Playhouse Theatre operational. A temporary tunnel was constructed for patrons to link the theatre to the existing lobby spaces. It's a small congested site of only 800m^2. There was a school on one side and offices on the other, we had a lot of traffic management and community engagement tasks."

"It was a collaborative approach with positive feedback from all stakeholders. We are thrilled with the outcome," said Patrick.

Kane Constructions has a history of delivering unique and award-winning buildings. In 2019, they won National Construction Master Builder of the Year for their outstanding RACV Cape Schanck Resort. In 2016, Kane Constructions won the National Commercial Master Builder of the Year award for their iconic Geelong Library & Heritage Centre.

Kane Constructions is a privately owned commercial construction company active in all sectors of the industry. With a turnover in excess of $1 billion and over 450 full time employees, Kane operates throughout the east coast of Australia and overseas from offices in Melbourne, Sydney, Brisbane, Sunshine Coast and Canberra.

Kane Constructions was awarded the 2016 and 2019 National Construction Master Builder of the Year by Master Builders Australia and was also awarded Master Builder of the Year in Victoria for 2016, 2017, and 2019 by the Master Builders Association of Victoria.

For more information contact Kane Constructions, 658 Church Street, Richmond VIC 3121, phone 03 8420 1200, email viccontact@kane.com.au, website www.kane.com.au

Below ICE Engineering were responsible for the dramatic structural steel for the Geelong Arts Centre.

ICE Engineering specialises in the design detailing and fabrication of structural steel components for the building industry.

In early 2017, ICE Engineering started the contract to manufacture and supply all the structural steel for the dramatic building, the Geelong Arts Centre.

"We supplied a full steel package working from engineer's specifications," said ICE Engineering Owner, Peter Bailey. "We detailed the design, strengthening some columns and façade elements, made shop drawings and manufactured over 360 tonnes of steel elements."

"It was a complex construction with two cantilevers, one over the church and another facing Ryrie Street. We fabricated the large trusses that can be seen at Levels 2 and 3. We also constructed temporary columns to support the cantilever steel structure, (almost half the building), until the Level 4 pour took the load along with a 500 fully plated welded column. Another challenge involved fixing the façade to the structure. We fabricated some precise angles and heavy connection pieces within tolerances of 2mm," said Peter.

With a team of 30 at work in the factory the first delivery took place in November 2017. Work was delayed by up to three months by an archaeological find with final delivery in July 2019.

Established 2003, ICE Engineering has years of experience providing accurate fabrication and quality product for the construction industry across Melbourne, Geelong and Ballarat. They provide quality design work with a team of drafters using modern 3D modelling.

ICE Engineering has a huge 3,600m^2 factory with modern equipment that includes a CNC press brake, rollers, benders and welders, saws, lathes and milling machines of varying sizes and capabilities as well as a new robotic beam line machine.

Their technology enables them to be a one-stop-shop for structural steel from design and drawings through to fabrication, machining and site installation with their own team, plant and equipment. From their well equipped workshop, the team of 30 provide fabrication, welding and machining of steel for smaller components such as walkways, stairs and handrails to larger pieces needed for heavy plant installation for industry and custom pieces for ground breaking buildings such as Geelong Arts Centre.

The company has supplied structural steel for a variety of structures including a multi-purpose sports hall, water treatment plant and quarry works. They also offer machining and fabrication of stainless steel components for the water, food and transport industries including water treatment equipment, tanks and pipework.

For the mining industry, ICE Engineering carry out industrial plant installation with service and repair to heavy machinery and equipment. They provide tanks, chutes, hoppers and conveyor belts as well as the service and repair of mining equipment. The company also contract for shutdown work for repairs and maintenance projects and are able to provide qualified and experienced personnel and labour hire for the job.

Recent successful projects include structural steel supply and install packages for The University of Melbourne, Western Edge Biosciences at Parkville and the Werribee campus redevelopment; 1,500 tonne of steel for the Sunshine Hospital multi-deck carpark; and buildings at Deakin University, completed in early 2019. ICE Engineering has also completed structural steel supply and install contracts for Ballarat Health Services, including the 4-storey Ballarat Regional Integrated Cancer Centre (BRICC) and the Cath Lab.

ICE Engineering's is currently working on The Puffing Billy Lakeside Discovery Centre for Kane Constructions, with fabrication for the structural steel package beginning in December 2019. They fabricated, supplied and installed 250 tonnes of structural steel for the $20 million centre, two long modern steel buildings that run along The Puffing Billy line, a narrow gauge heritage railway in the Dandenong Ranges.

For more information contact ICE Engineering, 26 Whitelaw Avenue, Delacombe VIC 3356, phone 03 5338 7022, email info@iceengineering.com.au, website www.iceengineering.com.au

Below O.C Stone replaced over 70 stones from the steeple church, restoring the entire façade.

O.C Stone specialises in stone masonry and render for the restoration of heritage buildings and focuses on producing historically accurate reproductions of architectural elements and unique hand carved features for churches and cathedrals.

The Geelong Arts Centre cantilevers over the air space of the steeple church, built in the 1856, and restoring the old church to its former glory was part of the arts centre project. O.C Stone was responsible for the entire restoration of the church façade.

"We rebuilt the load bearing buttresses, replaced numerous decayed face stones, reinstated the gothic style arch at the main entrance and installed new stone copings," Director, Oli Clack explained. "We also repointed the entire façade and implemented hidden structural façade ties to strengthen the gable wall which had become structurally unstable due to the removal of the steeple in the 1950s."

O.C Stone were awarded the contract for the job in December 2018 and Oli started design work straight away as well as beginning onsite work with a confirmation survey.

"Working from descriptions from tender documents we used the scaffold around the church to check the scope of works, adjusting to include any extra details and to take preliminary measurements. Further onsite preparation included removing decayed stone, and communicating with engineers to ensure the structural integrity of the façade," said Oli.

The next step involved taking detailed measurements and starting the 12 week design component, researching and drawing up the buttresses for approval by the architect before ordering the stone from an overseas.

"We used sandstone from Vietnam, the best match for the original stone, Barrabool, quarried in Victoria," said Oli. "We had a 15 week lead time and the product is three or four times more durable than the original Barrabool. The pleasure of stone masonry is to create something that will last and this restoration will be there in 200 years time."

"One of the biggest challenges was installing the large kneeler coping stones some of which weighed in at over 350kg. Throughout the project around 30 tonnes of new stone was installed, mainly using manual labour and traditional lifting techniques. We also used render to create a ghost steeple using plumb lines to locate where the steeple originally fit on the building," said Oli.

"We had four people working onsite and by September 2019 we were finishing up the pointing and cleaning and then were waiting for the builders to remove their formwork so we could install the steel entrance doors and complete the job."

O.C Stone also removed old leadlight windows and worked with a heritage glazier on the design and installation of a new stained glass window for the church.

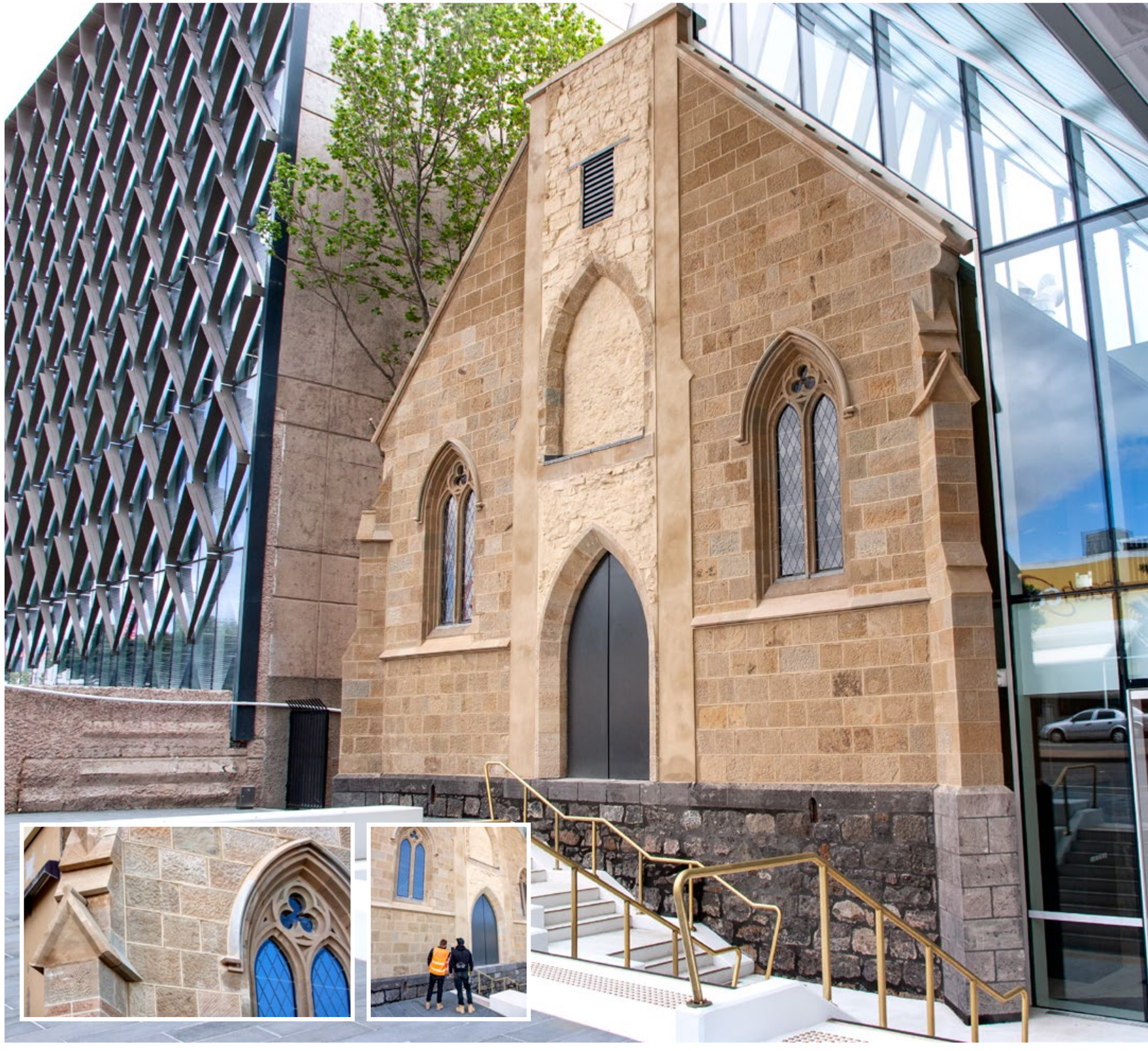
Oli trained in stone masonry and conservation in the United Kingdom and has acquired 14 years experience in the trade. He was ranked 4th in the world at the World Skills Competition, Calgary, in 2009.

In 2015, Oli established O.C Stone combining traditional methods with modern techniques, most often working with sandstone, limestone, render and bluestone. The company employs eight people, skilled stonemasons and stone carvers, working from a factory in Reservoir, Victoria, with air powered chisels and grinders.

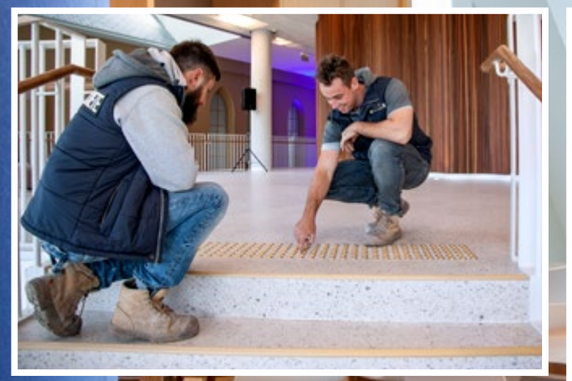
O.C Stone covers the commercial and domestic sectors including new builds, restorations and remedial work. They offer surveys, assessments of work, designs as well as stone cleaning and supply. Oli will often make clay marquettes to provide a three dimensional view of special decorative pieces prior to carving.

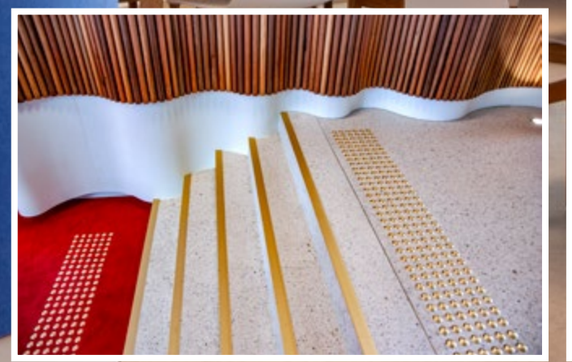
Since September 2018, O.C Stone has been at work on Wesley Church, Lonsdale Street, Victoria carving large beautiful stonework elements for the church. Currently they are working on components for St Georges Anglican Church in Hobart, carving numerous five tonne ornate stone cornices and pediments.

For more information contact O.C Stone, 6 Vickers Street, Reservoir VIC 3073, phone 0401 748 382, website www.ocstone.com.au



Below Policrete completed the grinding and polishing of 500m² of concrete floors throughout the project.





Policrete is a team of expert professional finishers, expert in concrete grinding and polishing to give concrete floors a hard wearing, smooth and decorative finish. At the Geelong Arts Centre, Policrete carried out extensive work on 500m² of floors in the ground floor entrance, the first floor and the connecting spiral staircase.

Onsite work started in April 2019, and with a team of 12 working at different times, the grinding and polishing job was finished in five months. "The floor is a white, satin finish with quartz and it came up beautifully," said, Manager, Marcos Shaw.

Policrete has been producing exquisite concrete floors since 2009 and offers a complete 'pour and polish' service. The Policrete team are Melbourne's number one for pouring, grinding, polishing and sealing concrete floors, and also offer epoxy coatings for a smooth glossy finish with excellent durability.

Policrete has a 400m² yard and showroom located in Footscray dedicated to showcasing some of their finest work. This is open seven days a week to the public with a wide variety of finishes on offer.

"We specialise in decorative concrete for the commercial sector, offices, apartments, and for public buildings," said Marcos.

For the retail industry Policrete installs; hard wearing polished concrete, epoxy flooring and grind and seal finishes. Previous clients include large names such as Woolworths. "We've been working with Kane Constructions for years," said Marcos. "We finished two large 1,200m² grinding and polishing jobs for Kane, at RACV Cape Schanck in 2017 and the University of Melbourne WEBs building in 2018 as well."

Policrete employ 20 staff, including form workers, concreters as well as grinders and polishers. They have six trucks on the road every day, each equipped with their own generators, vacuums and grinders. Policrete works with developers, builders and designers, shopfitters, businesses and home owners. In 2014, Policrete partnered with Hanson Concrete and DPP Hydronic Heating to specialise in installing hydronic heating slabs.

For more information contact Policrete, 11 Geelong Street, Footscray VIC 3012, phone 1300 851 401, email info@policrete.com.au, website www.policrete.com.au