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At the iconic and locally-beloved Jaques Richmond site, a new MacRiver (Riverside Group and Macquarie Bank) development, Merkon Constructions have been able to showcase a broad array of capabilities, from innovative approaches to new construction through to the time-tested skills required to rebuild 19th century heritage brickwork.

The project comprises three stages totalling 430 apartments over five buildings on the one hectare site of the former Jaques Engineering facility. Merkon's scope for the first stage involved constructing two buildings, the infill slabs of the ground and first floor carpark, and slab work for the level two garden area which is a central feature of the site's overall masterplanning.

The work took 20 months, with completion reached in August 2013 – a substantial achievement given the numerous challenges the construction team encountered.

"One of the things which is a point of pride for us is accommodating major structural design changes to accommodate stage 2, whilst endeavouring to complete within the given time frame. Another challenge was the external façade works, which included rebuilding aspects of the existing brick walls. We recycled some of the existing bricks and also purchased seconds to ensure a consistent aesthetic feature," explained Merkon Project Manager, Peter Mercoulia Inr.

"We were also completing structural elements while high voltage power lines were not undergrounded, and there were complications with the existing ground conditions, including rock, existing footings, and contaminated soil ranging from Class A – C. We undertook a detailed contamination management system in accordance with EPA requirements, whilst once again keeping with programme."

Designed by Karl Fender of Fender Katsilidis Architects (FKA), there were numerous innovations in terms of materials and also methods, which add to the distinctive flavour of the overall development.

Copper has been used extensively in the building facades as an echo of the site's industrial heritage; the lift cores used Green artistically designed precast concrete panels; and the tiling system has been on pods in lieu of grouted to the balconies.

The level 2 garden area, a shared communal space at the heart of Jaques Richmond, features a timber decking over slab with complex geometry and soft landscaping elements; the public stair area has a dramatic FKA-designed ceiling; and the lobby finishes include polished plaster.

"Working hand in hand with FKA to create an iconic project like this has been an enjoyable experience," said Peter.

"Some of the other points of real pride on the project include the quality of finish we have produced, and working with FKA and the client to produce that quality finish within an existing environment. We are also proud of the feedback from local residents in relation to the external finish, and the timing of handover."

Sustainability was made a clear priority, with initiatives including solar-boosted hot water, double glazed windows throughout, and a shower and basin water retention/treatment system which will be providing water to the level 2 garden area.

Merkon had a team of approximately 30 direct staff on the project including project manager, foreman, contracts administration, site manager, leading hands, carpenters, labourers and OH & S supervisor, and also provided a substantial quantity of the construction plant and equipment including crane truck, forklifts, booms, man and material hoist, Manitou, scaffolding, formwork and temporary fencing.

Up to 50 subcontractors have contributed to the project, which including an integrated and

sophisticated FKA interior fit out. The peak period of works saw up to 133 workers onsite each day for four months.

Due to Merkon's hands-on and diligent approach to site-wide safety, stage one of the project has been delivered LTI-free. A scrupulous level of quality-control was also maintained throughout, with Merkon adopting an FTP website, in addition to using BuilderID, an online 'work to complete' /defect programme during the building process.

There are two further stages due to commence, comprising approximately 300 apartments. Stage 2 will feature a mix of one-, two- and three-bedroom apartments spread across two buildings; a ten level 5 Tonne Apartments, and a six level Iron Works Building. Stage 3 comprises a third apartment building between the southern boundary and a newly constructed lane, Little Bridge Lane, which will be the major point of entry to Jaques Richmond as a whole.

Merkon have also recently delivered several other outstanding residential and commercial projects including The Warehouse Apartments Kensington, Pump House Apartments North Melbourne, World Trade Centre North Bank and Quest Apartments.

Founded in 1986 by Jim Mercoulia and Peter Mercoulia Snr, Merkon have grown into a major builder with capabilities across aged care, education, special purpose, mixed-use, retail, residential, social housing and commercial industrial projects. With more than 60 full-time staff from project managers through to carpenters and labourers, they have the teamwork culture and skills capacity to undertake concurrent major projects - delivering on time, on budget and to the highest levels of quality.

For more information contact Merkon, Ground Floor 479 Warrigal Road Moorabbin Victoria 3189, phone 03 9555 3999, fax 03 9555 5616, email reception@merkon.com.au, website www.merkon.com.au

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AN INNOVATIVE APPROACH TO QUALITY PRECAST

Given a visionary design by Karl Fender, Jaques Richmond incorporates some concrete features which required specialist expertise to engineer and manufacture. United Precast have made a niche for themselves in innovative approaches to precast, and were able to manufacture and supply a range of customised structural and architectural precast panels for the project.

These included textured and coloured concrete panels. The textured finish was produced using patterned formliners, and the coloured finish with a post-manufacture colour treatment. United Precast manufactured various samples in consultation with the client to tailor a panel finish that matched the site's natural surroundings.

United Precast has two manufacturing and project management bases, one in South Australia, and one in Victoria. The Directors of the company have more than 30 years combined experience in the concrete construction trade, creating a quality-focused operation which can meet the specialist precast needs of a wide range of challenging major projects.

The company capabilities include structural and architectural precast panels for residential apartments, commercial and industrial projects across both urban and rural areas, producing a wide range of finishes both off-form and post-manufacture. United Precast can also provide

green alternatives for clients with high environmental sustainability benchmarks for their projects.

United Precast provides a complete and integrated service, from initial design advice, engineering and shop drawings through to manufacture, transport and erection. The two operations have a combined staff of 70 personnel including engineers, in-house shop detailers, estimators, riggers, project managers and experienced tradespeople. The manufacturing facilities at both Gisborne VIC and Gillman SA are equipped with 16T and 20T gantry cranes. The Gillman facility also operates 55T, 100T, and 130T Liebherr mobile cranes, enabling their team to safely and efficiently fabricate and install substantial structural and architectural precast items, including panels, beams, columns, stairs, landings, pits, culverts and retaining walls.

Other recent major projects have included SXY2 apartments in South Yarra VIC; Euneva car park, Glen Waverley VIC; Precinct apartments, Richmond VIC; the Liebherr warehouse, Para Hills SA; and the Southern Expressway Duplication, Adelaide SA.

For more information contact United Precast, Victoria - Sammy Azzopardi, Suite 4, Level 4, 424 St. Kilda Road Melbourne VIC 3004, phone 03 9036 0480, South Australia - Simon Gargaro, 2 Portsmouth Court Gillman SA 5013, phone 08 8240 2223

For half a century Taylors have been evolving their integrated suite of planning and survey disciplines, using the best-available technology to stay ahead in the field. For the Jaques Richmond project, Taylors provided a range of services, from the early survey set up, cadastral boundary checking, and establishment of the gridlines and primary control network, through to ongoing as-built surveying.

The early set up was handled by the Taylors Urban Development team, who faced the challenge posed by surveying for a new build in an existing industrial structure, with limited access points and all pre-existing services still onsite. The second survey stage was undertaken by the Taylors Infrastructure survey team, who needed to maintain a flexible schedule in order to meet the demands of the construction program. The teams used the latest robotic Trimble S8 surveying equipment, which efficiently deliver results which are accurate to the millimetre, and GNSS (GPS) units, which provide real-time millimetre accurate coordinates through all current navigational satellites and the Victorian GPS base station network.

The S8 units provide live review capabilities of field work, including onscreen checking of construction design plans, allowing same-day reporting of discrepancies between design and construction. The benefit for the builder is almost instant feedback on issues, enabling rapid rectification. The field crews can also send and receive data via mobile internet access, enabling real-time file access to the office-based operational teams.

Taylors expertise includes a wide variety of infrastructure disciplines including Telecommunications, Water, Rail, Roads and Buildings. Their experience includes major pipeline route surveys, establishment of control networks and level datums, acquisition surveys and associated subdivisions, easement creations, feature and level surveys, drainage

surveys for flood modelling, mobile mapping, UAV aerial photography and all other forms of engineering and construction surveys. Major projects that Taylors have delivered in the past 5 years include the Victorian Desalination Pipeline survey, The Australian Grand Prix and the National Broadband Network rollout.

Over the past 50 years Taylors have also developed a reputation for excellence in Masterplanning and Urban Design, GIS, Civil Engineering, Development Strategy and Project Management. The team of nearly 100 professionals includes town planners, urban designers, architects, landscape architects, civil engineers, licensed surveyors, field surveyors, draftspeople, project coordinators, project managers and development strategists.

"When it comes to solutions, at Taylors we pride ourselves on being able to think outside the square to conceptualise creative and workable solutions for our projects," said Taylors spokesperson, Anthony Emmerson. "We strive to explore new frontiers, to challenge ourselves and our industry, and to put our people in the space of groundbreaking project and development activity. Our clients, our team and our community all benefit from this vision and we believe that this is what makes us stand out from the crowd."



Urban Development | Built Environments | Infrastructure

For more information contact Taylors, Richard Cirillo, Director, CEO and Urban Development Manager, Anthony Emmerson, Infrastructure Operations Manager, phone 03 9501 2800, website: www.taylorsds.com.au

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