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Pritchard Francis

Setting New Standards in Civil and Structural Engineering



AT A GLANCE

WHO: Pritchard Francis

WHAT: Pritchard Francis is an award winning Civil & Structural Engineering Consultancy based in Western Australia.

WHERE: WA Subiaco 6904

WEBSITE: pfeng.com.au

Specialising in structural and civil engineering, Pritchard Francis is a leading consultancy based out of Perth. The company also has a regional office in Broome, Western Australia, which services the Kimberly area and beyond. Initially established as a structural engineering consultancy in 1977, Pritchard Francis expanded



optimal design solutions to each client. This resulted in a large volume of repeat business and the company has expanded rapidly over recent years.

James Leiper, Project Engineer, says “We have tried to keep client service as our sole focus and this has developed a good reputation in the industry. As the company expanded and started to employ more people we were awarded bigger jobs. In the last 10 to 15 years the company has really boomed as we moved into different areas and clients have trusted us knowing that we do a good job.

“Now we have got a number of large assignments across different industries. We operate in the industrial, commercial and residential sectors. We are also in the resource sector, land development and several other industries.”

into civil engineering and more recently lead consulting.

The company currently has a staff of approximately 70 and is involved in a wide variety of projects across Western Australia. When Pritchard Francis started operations it had a strong customer focus on providing

Civil Engineering

The firm is highly skilled in Civil Engineering and has several decades of experience working in this area. The land development industry utilises the company’s expertise in bulk earthworks projects. This work is primarily for greenfield



land development for residential, commercial and industrial applications.

Pritchard Francis has executed bulk earthworks projects for educational facilities and commercial sites across Western Australia. The Civil Engineering team's work includes feasibility studies and due diligence, planning concept design, detailed design and documentation, approval processes, site supervision and contract administration.

Having executed many projects of this type, Pritchard Francis' team

will identify key issues applicable to a project at the modelling stage and ensure these issues are successfully managed.

In July, 2014, the company completed the *Precinct 3, Port Hedland* bulk earthworks project. Pritchard Francis completed the initial due diligence for the 70 hectare site located adjacent to the Port Hedland International Airport. Subsequently the company was involved with the concept design, detailed design and documentation and tender documentation.

A total of 39 lots were developed



at the site which presented several unique challenges including the provision of services to a site relatively remote from existing infrastructure, the necessity to carry out flood modelling and the importing of substantial volumes of fill material.

Pritchard Francis has also gained significant experience in site remediation projects. This sector has grown as sites previously too expensive to develop or at the end of their original use are identified for regeneration. The *Bentley Regeneration Project* valued at

\$30 million is a good example of this category. The site covers an area of 25 hectares on which the Department of Housing is looking to provide 1500+ residential units.

Structural Engineering

Pritchard Francis' structural engineering team believe positive outcomes result from sound engineering principles. They place importance on understanding a client's specific requirements and having experience in specialised areas, these elements are



fundamental to maintaining excellence in engineering consulting. Working and communicating within a team environment to integrate aesthetic design and functionality is critical to a successful project, this is an important component of Pritchard Francis' success.

Aged care accommodation has seen rapid growth in the recent past. The requirements in this sector have changed and facilities often provide multiple services such as low care / high care, special areas for dementia sufferers and units for independent living.

Construction of aged care

accommodation requires a great level of expertise as they need to provide a number of supporting facilities for residents. Traditional construction is not in a position to meet all these requirements. Pritchard Francis has completed a number of large aged care facilities within Western Australia and its projects have been received very well.

The *RAAFA Bull Creek Development* at Perth involved the redevelopment of an existing 11 hectare aged care facility over an extended period. The project consisted of two stages, with the first involving a 108 new

bed accommodation facility in two six-storey residential buildings. The second stage incorporated a new respite care facility with 100 accommodation units over two storeys with undercroft parking.

Speaking about the company's projects, James Leiper says, "We usually have over one hundred projects in the business at any one time in a wide range of industries. In the last couple of years some of the more notable amongst these have been the Wheatstone and Gorgon projects which have kept a lot of us busy for a number of months."

The *Wheatstone Non Process Infrastructure Buildings* project is located at Onslow, Western Australia. This \$240 million project was completed in 2015 and involved the structural design and documentation for the plant, which incorporated a total of 12 buildings and other miscellaneous structures.

Pritchard Francis' expertise in Blast Engineering was put to good use as the structures were governed by blast pressures up to 50 times larger than wind. In conjunction with the sub-contractors the company was involved in research and development of cladding materials

simulating cyclonic wind and blast loading. The excellent quality of work resulted in the company being awarded additional assignments from Chevron.

Another major project completed by Pritchard Francis in 2015 was the execution of the *Gorgon General Administration Buildings* at Barrow Islands. This \$180 million project had the company providing lead, civil and structural consultant roles for the development.

The permanent administration buildings included a fire station, workshop and warehouse. The site was extremely difficult to work on due to cyclonic conditions and flooding. This project was a landmark achievement for the company and has set the stage for procuring more assignments that require the specialised capabilities developed within the company.

Technology

Pritchard Francis utilises cutting edge technology and owes a large part of its success to keeping up-to-date with the latest developments in its fields of expertise. James Leiper says, "On the design side of things computers are making Engineering



so much more efficient and it is also allowing us to offer more efficient solutions.

“We have a lot of technical expertise in areas like blast design and this would not be viable without the computer modelling that we use. As far as documentation goes we have readily embraced building information modelling which is basically about drawing a 3D model of any structure within a virtual construction model.

“We are using this on every new structural project. This helps the project timeline and is sometimes used for the operation and maintenance of the building as well. Moving forward, building operators will have a 3D model that they can use to find out if any maintenance is needed or if they want any work

done they can make use of the model. This technology is rapidly evolving and we make sure that we are the forefront of any new development in the area.”

Sustainability

When awarding projects, most companies specify that they would like to lower their impact on the environment. Historically, one of the biggest problems with implementing sustainable designs was quantifying and verifying the benefits derived from these efforts.

The Green Star environmental rating system implemented by the Green Building Council of Australia has provided a solution. Pritchard Francis has worked on several jobs where



it has achieved four and five star ratings. The company has five staff members who have gone through the Green Star accreditation process. This enables the firm to actively contribute to discussions during the design process and to work towards the most sustainable solution within the time and cost constraints.

Pritchard Francis has a strong focus on its existing clients and is constantly on the lookout for new market sectors to work within. It is concentrating on the sustainable design aspect as the company is of the view that this will gain greater importance in the coming years,

especially with topical climate change issues and environmental issues.

Commenting on the way forward for Pritchard Francis, James Leiper says, “I think life-cycle analysis is going to become a lot more common on projects

as the benefits to be reaped are huge. People will realise that some design options might be a bit more expensive

at the beginning but if you look at the life-cycle of those products and those systems there are substantial savings to be realised. As a result clients are going to be more willing to adopt those kind of approaches. This side of our business is going to be a real selling point.”



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