

GLEN EIRA SPORTS & AQUATIC CENTRE

MAIN CONSTRUCTION COMPANY : Hansen Yuncken
DEVELOPER : Glen Eira City Council
PROJECT END VALUE : \$43 Million
COMPLETION : End 2011
ARCHITECT : Mantric Architecture
CIVIL / STRUCTURAL ENGINEER : Cardno Grogan Richards
QUANTITY SURVEYOR : Currie & Brown

A RACE AGAINST TIME

Hansen Yuncken commenced work on the \$43 million Glen Eira Sports & Aquatic Centre project in 2009. The centre boasts a range of facilities and services catering for young babies right through to the elderly.

The Glen Eira Sports and Aquatic Centre (GESAC) is the single largest capital works project embarked upon by Glen Eira City Council in its history. The centre is located in East Bentleigh, Victoria.

A striking architectural finish was a key element of the project and the external design has proven to be an eye-catching masterpiece.

During the construction process, The City of Glen Eira experienced some of the wettest weather in over 13 years. This greatly impacted on the work site and Hansen Yuncken held the schedule together by incorporating weekend work into the tight schedule.

A unique and interesting aspect of the project is the tension canopy that allows for the two waterslides to penetrate through a section of the fabric. The 2 layer insulated fabric system is assembled over a central tower elliptical steel frame and tensioned into position onto the large elliptical steel frame below. This is the first time such a system has been used in Australia.

The planar glazing system also proved to be very successful in providing an interesting element. The frameless boxed highlight window, which is made completely of glass and fixed with stainless steel fixings, is located on the roof above the spa and stairs.

The centre includes aquatic facilities, health club and various services.

Aquatic facilities:

- Eight lane 25 metre pool catering for lap swimmers, squads, schools and aquatic fitness activities.
- Outdoor eight lane 50 metre pool catering for lap swimmers, squads, schools, carnivals or the perfect place to cool down during summer.
- 510 square metre leisure pool equipped with a range of the latest interactive water features and play equipment.
- Two waterslides that travel inside and outside the facility
- Aquatic wellness area that is separate from the main pool space — this has been designed as a therapy and relaxation area for adults and incorporates a 200 square metre hot water pool, spa, sauna and steam room.
- 100 square metre program pool that will be used to deliver a range of learn-to-swim and aquatic programs.



Health Club:

- 800 square metre gymnasium that will have a wide array of cardio, pin loaded, free weight and core strength equipment.
- 285 square metre group exercise room that will host a wide range of group exercise classes for up to 60 participants
- 180 square metre body and mind studio that will host a wide range of programs for up to 36 participants
- 140 square metre group cycling studio with a range of cycling fitness classes for up to 58 participants.
- 90 square metre outdoor terrace that will offer a range of flexible training options.

Services:

- Wellness centre and consulting suites that will have a range of tenants offering different services.
- Crèche and Occasional Care Centre that includes indoor and outdoor play areas for children.
- Three court sports stadium that will be available for both competition and hire.
- Retail outlet that will stock a range of aquatic and health club related merchandise.
- Café providing a range of food and drink options to users of the facility.

Hansen Yuncken is one of Australia's largest privately owned construction companies and operates nationally with offices in VIC, NSW, SA, TAS and QLD.

As one of the leading construction companies in Australia, Hansen Yuncken is at the forefront of change and innovation in the building industry. The company is known for its pioneering role in both the application of new technologies and the development of new construction techniques and project delivery methods.



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A COOL DESIGN

Mantric Architecture were the lead consultant and design Architects for the new Glen Eira Sports and Aquatic Centre (GESAC) in Victoria. The team became involved in 2008, working closely with Council from the master planning stage right through to completion. Their role included full design services such as architecture, urban design and interiors. The team from Mantric Architecture consisted of more than 20 specialist consultants dedicated to delivering a superb result for this highly specialised facility.

GESAC is the latest addition to Metropolitan Melbourne's aquatic and recreation facilities and will offer the residents of the City of Glen Eira a world class centre with something for all ages. The centre includes a three court basketball stadium, 950sqm gym, program rooms, five pools, including an outdoor 50m, plus spa, steam and sauna in the health & wellbeing zone. Mantric Architecture have successfully delivered a design that meets a demanding and comprehensive brief, while also sensitively addressing the broader park & sport field setting the facility is located within. By cleverly

orienting the facility to address the park precinct (rather than the main road), Mantric have designed a facility that is integrated with the park, rather than simply being co-located. With north facing aquatic areas, including two water slides and a fantastic 500sqm leisure pool, and a strong connection to the park, this centre is sure to attract patronage from far beyond its local catchment.

GESAC is a testament to Mantric Architecture's consultative approach and innovative interpretation of the project brief. This boutique design practice has provided a unique 'people focused' process that results in a dynamic and engaging design solution, specific to the client, site and surrounding community.

Mantric Architecture commenced operation in October, 2003 under the stewardship of Director Miranda Ellis. In 2005 when David Newstead joined the practice, the company expanded its focus from Interior Design to Architecture, Urban Design and Facility Master Planning. Since that time Mantric Architecture have provided multi-

discipline services to a broad range of local government, institutional and commercial clients.

In recent years Ecologically Sustainable Design (ESD) has become the marketing 'catch-cry' of almost every business type imaginable. This is a clear indication that the broader community now understands the importance of treating the environment with respect and sensitivity. Council's, and the facilities they build, are expected to be at the forefront of Sustainable Design. At Mantric Architecture they passionately believe that good design must be sustainable and that innovation need not be compromised to achieve this end. Their highly educated staff have had significant training in the field of sustainable design.

There are a number of Ecologically Sustainable Design (ESD) features implemented into the state-of-the-art Glen Eira Sports and Aquatic Centre. With the most obvious element of the centre being water consumption, the focus of the project was on this issue along with

considering the most cost-effective solutions. As a result, Council expects to save around 286 megalitres of water and avoid producing 82,000 tonnes of greenhouse gases over a 25 year period.

Mantric Architecture boasts a team of architectural professionals with complimentary skills and a shared philosophy of collaboration. At Mantric Architecture they pride themselves on delivering well-considered, responsive design solutions, and strive to exceed the expectations of their clients throughout the entire process. The team at Mantric Architecture is committed to understanding the particular needs and aspirations of their clients, the key stake holders and end users.

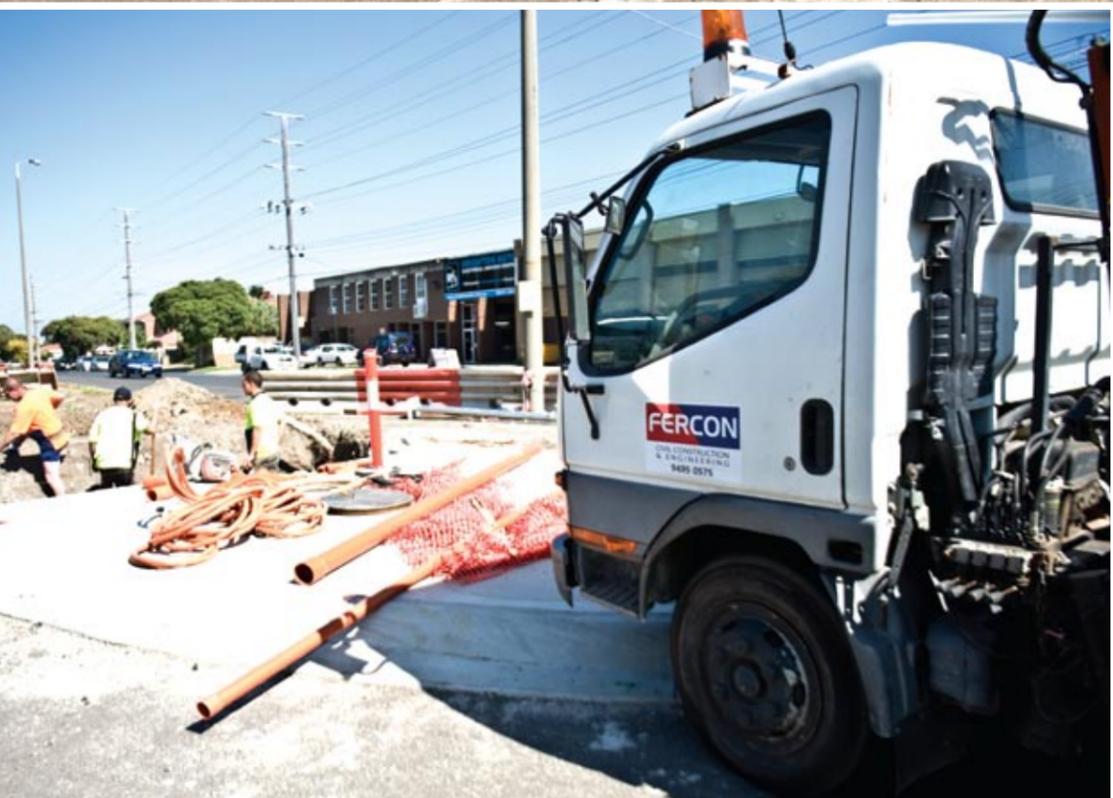
Local Government facilities have been a particular focus of the practice resulting in the delivery of Community Hubs, Sports Pavilions, Libraries, Children Centres and the like. Mantric Architecture's major projects portfolio also includes the new State Basketball Centre that is currently under construction in Wantirna South with Knox City Council.

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3D rendering of GESAC

Caulfield Park Pavillion



FERCONS FIRST CLASS FINISH

Fercon Pty Ltd is an Australian company that undertakes a variety of civil construction and engineering projects for clients in both the public and private sectors.

Recently Fercon Pty Ltd worked on the Glen Eira Sports and Aquatic Centre in Victoria. Undertaking carpark construction along with landscaping, external road works and lighting, Fercon Pty Ltd finished the extensive works with a degree of ease.

The wet weather in Melbourne during 2010/2011 saw a little bit of pain for contractors working on the Glen Eira Sports and Aquatic Centre, but the teams were able to push forward and work around all obstacles that presented.

The \$43 million Glen Eira Sports and Aquatic Centre includes a 50 metre outdoor pool, 25 metre indoor pool, two water slides, learn to swim pool, warm water program pool, spa, sauna, crèche, multi purpose stadium, 800m² community gymnasium, 3 multipurpose program rooms and a wellness suite. The construction provides an eye-catching finish complete with detailed landscaping, courtyard area and generous lighting. It is the single largest capital works project embarked upon in the history of Glen Eira City Council.

A core element of this project was the implementation of energy conservation as well as water harvesting and management. By focusing on energy conservation the project delivers a greener option and contributes to improvements in the earths environment today and for future generations. Water harvesting and management also provides a cost effective solution for the Glen Eira Sports and Aquatic Centre.

The Glen Eira Sports and Aquatic Centre was designed to provide a modern, unique finish and Fercon Pty Ltd ensured that the external roads and landscaping provided a clean finish which worked in well with the surrounding Glen Eira district. Fercon Pty Ltd has a reputation for providing detailed work and the Glen Eira Sports and Aquatic Centre has benefited from the attention to detail that Fercon Pty Ltd provided.

It is envisaged that over 150 staff will be employed at the long awaited Glen Eira Sports and Aquatic Centre. It is an exciting initiative for the Glen Eira Council and they look forward to enhancing the health and wellness of the Glen Eira community.

Robert Cardinale founded Fercon Civil Construction and Engineering in 2002. Roberts vast knowledge of the industry has seen the company grow and strengthen over the years. Fercon Pty Ltd is recognised as a leader in their industry and offer a variety of solutions to meet all budgets.

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ENGINEERING GOOD TIMES

Australian Waterslides & Leisure Pty Ltd was successful in their tender to design, manufacture and install two exciting waterslides at the Glen Eira Sports and Aquatic Centre in 2011.

Glen Eira Sports and Aquatic Centre is set to be one of Australia's premier sports and aquatic centres. Featuring state of the art aquatic, fitness, sports, rehabilitation, wellness, café and occasional care facilities, the centre will cater for all ages from infants through to the elderly.

Australian Waterslides & Leisure Pty Ltd worked closely with the architects to design and implement two waterslides, one of which penetrates through a fabric roof structure. It was an innovative design that required specific integration. The two waterslides travel inside and outside of the facility. Each slide is different; one is an exhilarating body slide designed to be ridden by one person at a time, whilst the other ride is a shared experience and designed to be ridden by two riders in an inflatable raft.

Australian Waterslides & Leisure Pty Ltd has developed its own software integrated with AutoCAD that enables them to provide the superior design service that was necessary for the Glen Eira Sports and Aquatic Centre waterslides project. Good communication was essential to ensure the design was properly executed.

AWL use high quality, Australian Standard compliant, fibreglass materials for the manufacture of all their waterslides.

Australian Waterslides & Leisure Pty Ltd boasts more than 30 years experience in the Leisure Industry. From humble beginnings during the creation of the first waterslide in Australia in 1979, they are now considered to be industry leaders in the design and manufacture of waterslides and waterparks throughout Australia and Internationally. They have worked on many notable projects including Wet'n'Wild Waterworld on Queensland's Gold Coast, Jamberoo Recreation Park near Wollongong in New South Wales, Funfields at Whittlesea in Victoria and even a waterslide for the Sultan of Brunei.

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A COMPLEX STRUCTURE

Commencing the design phase of the Glen Eira Sports and Aquatic Centre in October 2008, Cardno Victoria provided a team of 6 structural and 3 civil engineers and draftspersons for the project. Cardno delivered structural and civil design and documentation phase engineering services, along with construction phase engineering services for the structural discipline.

Throughout the design and construction phases, Cardno liaised closely with the architect, Mantric Architecture to ensure that the requirements of Glen Eira City Council were achieved at all times. Given that this project was the largest ever undertaken by the Council, smooth communication was an essential requirement.

One particularly interesting and challenging section of the project is the steel framed main entry area which appears separated from the main building by a continuous skylight, while the ceiling to the entry is a three-dimensional fibreglass feature sculpture. The project also included an elliptical steel ring truss of varying height to support the fabric roof over the waterslide tower and leisure pool.

The façade consists of a number of varying materials and alignments, with a number of the façade components and framing inclined. This

included inclined precast concrete bracing walls and a 23m spanning transfer truss at 20° incline over one of the pools.

The glazing to the front entry contains a number of vertical planar glazing trusses, requiring careful coordination of the header and base structures as the glazing support system comprises of wire support trusses that impart significant loads on the primary structure.

Cardno Victoria provides structural, civil, hydraulic, fire and traffic engineering services in house. Cardno also offer expertise in mechanical and electrical engineering disciplines in Melbourne. As part of the worldwide Cardno group, they are able to draw on specialist skills and services from around the world to suit the needs of each project.

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