

# GLENSIDE CAMPUS REDEVELOPMENT

**PROJECT :** Glenside Campus Health Facilities  
**MAIN CONSTRUCTION COMPANY :** Hansen Yuncken  
**CLIENT :** SA Health  
**PROJECT END VALUE :** \$110 Million  
**COMPLETION :** December 2012  
**ARCHITECTS :** Swanbury Penglase Architects  
**STRUCTURAL & CIVIL ENGINEER :** Kellogg, Brown & Root  
**SURVEYOR :** Davis Langdon

**PROJECT :** Adelaide Studios  
**MAIN CONSTRUCTION COMPANY :** Hansen Yuncken  
**CLIENT :** (Arts SA) Department of Transport, Energy & Infrastructure  
**PROJECT END VALUE :** \$42 Million  
**COMPLETION :** August 2011  
**ARCHITECTS :** Grieve Gillett  
**STRUCTURAL & CIVIL ENGINEER :** Wallbridge and Gilbert  
**QUANTITY SURVEYOR :** Rider Levett Bucknall

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## HANSEN YUNCKEN DELIVER TWINNED PROJECT EXCELLENCE

Redeveloping Glenside Campus, the site of the oldest mental health facility in South Australia, showcases the skills of Hansen Yuncken in a real ‘double feature’. The site is now home to the newly completed Adelaide Film Studios and a redeveloped Glenside Mental Health Facility, due for final completion in late 2012.

Hansen Yuncken delivered the Film Studios under a Collaborative contract, participating in the evolution of the final design for the building complex, which incorporates two sound stages and a wide range of post-production facilities. Their scope of works also included restoration of the existing Heritage Listed Administration Building, which was part of the former mental health facility and is now part of the Film Centre development.

“The new Adelaide Film Studios building complex presented challenges around the high levels of acoustic isolation and attenuation. These aspects of the project were driven by the requirement to obtain Dolby Premier Studio Certification. Dolby Premier Studio Certification is a measure of technical excellence at every level of the studio’s operation and is the highest accreditation given by Dolby,” said Hansen Yuncken project manager, Stuart Warnes.

“The heritage listed Administration Building presented its own challenges of a very different nature compared to the modern construction techniques associated with the new building complex. Due to the original construction methods and materials used, this building required particular considerations during the structural alterations and seismic upgrade phase partly due to the use of bluestone as the principle construction material used to build the walls.

“Bluestone in this construction is very difficult to anchor fixings into and also undertake structural alterations without it crumbling away. Therefore forming new openings required complex propping arrangements prior to new lintels and piers being installed. The plaster restoration in the Administration Building required the use of putty lime and locally sourced sands to comply with the Heritage listing.

“There was also the requirement to seismically upgrade the inside of the existing Clock Tower around the clock mechanism that is older than Big Ben in the UK. This in itself was very difficult due to the confined access and the 5 tonnes of steel structure that had to be installed.”

Some innovative materials choices were made to meet project requirements. Durra Panel roof construction was used on the new production facility building complex, delivering excellent acoustic performance. The roof panels were constructed in modules at ground level and lifted to the work face using specially designed frames.

Prodema cladding panels have been used extensively to the Production area facades. Sourced from Spain, the wood composite panels have a wood veneer finish, giving the exterior facades of the Production areas a warm, earthy look.

Solar panels have been installed to deliver significant energy savings, reducing operational costs for the facility.

A team of ten Hansen Yuncken staff and 47 sub contractors worked on the project, with a combined peak daily workforce of 165.

“This project has met all key project objectives relating to time, quality and delivery within the overall budget. The project has proceeded in an environment of good collaboration amongst all project stakeholders. Safety outcomes have been exceptional, with no lost time injuries recorded across the project, to its successful completion in late July 2011,” said Stuart.

The second act of this redevelopment is the construction of the new Glenside Campus Mental Health Facility. This is being constructed on the existing Glenside Campus, and has been preceded by the demolition of several existing building to make way for the new facilities, which necessitated the staged relocation of current mental health clients.



The project includes construction of seven major buildings on an over 70,000m<sup>2</sup> campus, comprising a Facilities management Hub (845m<sup>2</sup>), Supported accommodation (20 units), an administration building for people transitioning into the community (1,767m<sup>2</sup>), Specialist Rehabilitation Service (4000m<sup>2</sup>), Shared Activity Centre (ShAC) (800m<sup>2</sup>), Helen Mayo House (HMH) (1,425m<sup>2</sup>), Drug and Alcohol Inpatient Services (2,900m<sup>2</sup>), Acute Inpatient Services (5,775m<sup>2</sup>), and Front of House/Administration building (2,031m<sup>2</sup>).

“The key issue about the project is the size of the buildings and campus, and the logistics of managing such a large area project which will have multiple buildings being constructed at the same time,” said Hansen Yuncken Senior Contract Administrator, Josh Webb. “The project has extensive landscaping which forms a major element of the project to assist in the wellbeing of the residents. It has also been designed to bring the general community into the campus and to reduce the stigma associated with mental illness.

“Extensive civil works on this project includes the creation of new roads, carparking and infrastructure into the existing campus. This involves the relocation and disconnection of existing services and installation of all new electrical, water, sewer, communication services, installation of new road works and new entrance to the campus, while also maintaining access to the site.

“A major challenge has been ensuring detailed and ongoing consultation with the client to ensure access to existing and operational facilities, as some operational buildings are within the construction zone. Patients are still around the construction zone, which was initially a concern, however they have adapted well to the changes occurring around them. Another challenge has been planning and creating a series of temporary road accesses for construction and existing road traffic.”

There are several stages of building completions between January 2011 and late 2012, in order for the staged relocation of clients to occur with

minimal disruption to the clients themselves. Construction is general single storey brick veneer construction on timber framing, excepting the Front of House which is a two storey precast/steel/alucabond structure. The first building completed was the Facilities Management Hub in January 2011. The Supported Accommodation units were completed in August 2011, allowing long-term clients to be moved ahead of construction of acute care services.

The project has been designed using Green Star standards. Water and energy efficiency measures include water tanks being installed for reuse in the toilets systems to the supported accommodation units, a 240m<sup>3</sup> below ground water tank installed for supplying the 140 bed patient care areas and solar panels being installed throughout. All services have been designed to meet the goal of low energy consumption. A dozen or more Hansen Yuncken staff will be contributing to the project between starting on site in April 2010 and final completion and handover, and the combined workforce with subcontractors is expected to peak at around 300 daily.

Hansen Yuncken has also just completed the largest PPP project in South Australia, the \$210million Education Works New Schools PPP and is currently a joint-venture main contractor for the design and construction of the \$1.8billion New Royal Adelaide Hospital PPP project, currently Australia’s largest social infrastructure buildings project, scheduled for completion in 2016.

Established in 1918, Hansen Yuncken is Australia’s largest private commercial construction contractor. The company employs around 800 people in Australia with offices in Sydney, Melbourne, Adelaide, Hobart, Brisbane, Cairns, Townsville, Newcastle, Canberra, Shepparton/Albury and Orange.

Hansen Yuncken is the recipient of the 2010 ANZ/BRW Private Business of the Year Award, and is the current holder of the Master Builders Australia National Commercial Builder of the Year Award.



# EXCELLENT EYES FOR DETAILS AND DATA

FYFE had to research right back to some of Adelaide's earliest survey documents in order to compile the data required for the Glenside Campus Redevelopment. Hand drawn pen and ink records, many in links and perches from the 1840s were invaluable in preparing service infrastructure and cadastral plans for the Glenside redevelopment.

"There had been no legal division or survey work carried out at the site since its inception in the 1840s as the Mental Asylum. Many of the records were hand drawn stored in Government Archives," explained FYFE Director, Ross Fyfe.

FYFE were responsible for the compilation of base plans to identify existing heritage buildings and underground services, to assist with the planning and design activities of the Project Team.

The gardens surrounding the buildings contained numerous significant trees that were classified as special and important. Many of the established specimens were uncommon English species with definite Heritage value, these had to be surveyed, tree protection zones plotted, this was a very sensitive process.

FYFE supplied consistent spatial data to the project team to be used for architectural, civil and landscaping design, and to create new Certificates of Title for the development lots.

The Adelaide Film Corporation now occupy the grand heritage administration building following extensive restoration.

Portions of the site were subdivided for higher density residential units, planned mental care facilities and the expansion of the adjacent supermarket and shopping centre.

The project was master planned from inception, and underwent extensive community consultation to achieve the aims and ambitions of the State Government.

One of the strengths FYFE brought to the project was the forty years experience that Director Ross Fyfe has accumulated whilst working for State, Local Government and in private practice within South Australia.

The employment of high accuracy GPS equipment, laser scanning and remote operating instruments were used on site.

Survey work within the heavy tree canopies restricted GPS coverage and provided another challenge. This meant a combination of traditional and GPS survey methods, with a further step offsite needed to integrate the two different forms of data.

Working under contract for SA Health, the title holders for Glenside, FYFE worked with the project team in preparing planning and titling documents for both the Film Centre and the Health Campus. The Health Campus is a relatively complex facility, comprising a working hospital, two facilities for intellectually handicapped persons and facilities for substance abuse and mental illness treatment.

"This project is another example where the South Australian Government has carefully master planned, consulted and delivered a project to the community, which provides essential public health facilities, the opportunity for first class residential development, and commercial shopping centre expansion" said Ross.

"The project is a win-win for all camps, with quality open space for all parties to enjoy."

FYFE is a well established land, resource and infrastructure development consultancy specialising in providing comprehensive services to SA, QLD and NT.

Since commencing operations in 1982, FYFE has grown to employ more 350 people located in 11 offices throughout Australia – Adelaide, Brisbane, Darwin, Coolom, Roma, Alice Springs, Dalby, Ballera, Tennant Creek and Moomba. FYFE has undertaken a variety of large and small survey projects, employing more than 50 qualified surveyors for survey activities and maintain a fleet of 20 fully equipped survey vehicles.

Clients are assured of the highest quality of service, with FYFE having ISO 9001:2008 Quality Accreditation since 1994.

FYFE are one of the largest survey companies able to provide a full range of survey services from initial feasibility to as constructed surveys. As part of delivering the best service possible, FYFE has developed their own software application 'Project Tracker', to enable efficient collection and retrieval of information in relation to regions and projects.

Some of FYFE's landmark projects have involved maintaining an eye for detail and accuracy over vast distances, such as the 280km Jackson to Moomba pipeline and the 128km Fairview to Wallumbilla Pipeline Project for Santos Ltd, and the 680km Victoria to South Australia Pipeline for SEA Gas Pty Ltd. FYFE also provide comprehensive urban planning services for both the public and private sector, with completed commissions including Penneshaw, Kangaroo Island – Tourist Park Master Plan; Penfield – 200

allotment residential land division master plan; the preparation of multiple planning reports for the DAP & ERD Court; Munno Para West, 47 allotment residential land division and 83 allotment land capability analysis.

FYFE also has extensive experience in land development projects, including project management of engineering and survey elements, feasibility studies and marketing plans. The company has completed more than 350 major land development projects, 4500 minor land development projects and 2000 residential boundary surveys. Recent noteworthy projects include Murray Bridge Equine Precinct, providing engineering and survey services; Martin Towers; Northgate, undertaking a 1200 allotment residential survey and development applications for AV Jennings Ltd; and Waterford Estate, an award winning residential development of 198 country living lots on the outskirts of Mt Barker for which FYFE provided both engineering and survey services.

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# SIMPLY THE BEST CRANES IN SA

Having a site complicated by narrow passages, multiple gates and numerous Heritage trees made access a challenge on the Glenside Campus Redevelopment project. Fleurieu Cranes made life easier for Hansen Yuncken and many of the subcontractors with their All Terrain and Pick n Carry Franna cranes supplied as wet hire to the project.

Of the All Terrain Cranes used on the project, Fleurieu supplied their 200T and 55T All Terrain Cranes, both selected for their superior manoeuvrability, versatility, reach and lifting capacity. They were used to unload site huts, reposition amenities blocks, relocate tanks, lift steel, reo, air conditioning units and chillers.

Of the Frannas supplied (12T, 15T, 20T and 25T), these cranes were used for their ability to "walk" their loads and relocate them with relative ease, eg Containers, toilet blocks, gensets

The company, formed in 2005, has South Australia's most modern fleet of cranes for wet and dry hire as well as some of the State's most experienced operators with decades of experience in safe, efficient lifting. Company founder, Philip "Snowy" Allen, brought to the company extensive experience as a Rigger, Crane Operator and Crane Supervisor and has, with his two business partners, built a fleet of cranes including a 30T slew crane, five Frannas, three City Cranes, two 40T All Terrains, two 55T All Terrains, an 80T Crawler Crane, two 95T Liebherr All Terrains, a 200T All Terrain crane – the only crane of this capacity currently allowed to travel on a 24 hour permit in South Australia - and a 350T All Terrain.

Fleurieu are dedicated to safety with strict OH&S policies and are National Code compliant. Their services include 24/7 mobile crane hire, general rigging, boilermaker and labour hire services, steel fabrication and erection service and tower crane operation. Fleurieu are also specialists in pre cast and tilt up panel installations.

Other recent major projects include Adelaide's Women's and Children's Hospital, Adelaide Desalination Plant, the Coast to Coast Road, Aldinga & Christies Beach Waste Water Treatment Plants, Angas Zinc & Kanmantoo Copper Mines, ASC Facility, Franklin Street Bus Terminal, Gepps Cross Super School, Wave and Edge and numerous remote location jobs including mining operations.

Fleurieu Cranes willingness to invest in modern equipment, coupled with dedicated staff who are prepared to go the extra yard for customers, has seen Fleurieu thrive in the competitive crane hire market, winning repeat business from some of the most experienced contractors in the construction trade.

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# PAVING THE WAY

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The redevelopment of Adelaide's iconic Glenside Campus was a large multifaceted project that demanded a wide range of skills and expertise. South Australia's largest privately owned construction company, McMahon Services, was contracted by Hansen Yuncken to prepare the hospital precinct from civil works through to building packages.

The first phase of the project cycle was the civil works with an expected duration of 14 months. McMahon Services were responsible for asbestos removal, demolition, waste disposal, high volume bulk earthworks, environmental management and all new infrastructure from water mains and new roads through to paving works and building pads.

An Environmental Management Representative was appointed specifically for the project, to carefully manage all materials, with the tracking of on-site and imported material recorded, screened and if contaminated, disposed of to EPA regulation standards. Special care was also required when working on heritage-listed areas and through the engagement of an Archaeologist a wall was uncovered dating back over 100 years – a reminder of the project's sensitivity.

With an average of 30 employees working on-site, McMahon Services have now completed Stage 1, 2 and 2a. To ensure patients, staff, visitors and other contractors were not affected, the works were divided into small segments to provide access to the hospital and other on-site projects.

Civil works still remain including; footpaths, garden bed preparation ready for landscaping, ETSA service pillars and streetlights. The Building Services division were also contracted to complete 1st and 2nd fix carpentry works for 6 new buildings. 1st fix works involved wall and roof frames, and roof trusses, whilst the 2nd fix works included supply and installation of timber and metal doors and doorframes, and specialist doors. The works also included the supply and installation of door hardware, specialist fittings and fixtures, and 2nd fix timbers

including skirtings, architraves and window sills. The team consisted of 15 personnel and up to 4 carpentry apprentices on-site at the one time. The Roofing division also carried out a 2 stage project. Phase 1 included roofing and cladding works to a central building using 140 Kingspan, a product from Western Australia that had never been used before. Phase 2 involved installing Colorbond roofing to the Supported Accommodation - 10 buildings in total. The team also completed wall cladding for the carport facilities.

As a safety-focused and federal accredited company, McMahon Services implemented a strict Occupational Health and Safety management plan in consultation with Hansen Yuncken. Best practice standards were developed, particularly for roofers, requiring them to wear a safety harness and use the 'Sure Line' system.

With 21 years of experience in the construction industry, McMahon Services delivered a depth of knowledge and resources to the project. McMahon Services are at the forefront of delivering multi-disciplinary projects, with over 450 staff, offices around Australia, and a \$50million network of company owned plant and equipment, McMahon Services continues to grow.

McMahon Services recently partnered with Aboriginal Foundation of South Australia to form Infract – a new business aimed at providing skills training and long-term employment for Aboriginal people in the mining and construction industries. With 9 graduates and a team of 15 actively working in construction services, the initiative is off to a great start.

In October, McMahon Services was recognised for their work, winning the Category 2 award for the \$2.5million remediation of Housing SA's Birkenhead site at the Civil Contractors Federation (CCF) National Earth Awards. McMahon Services has cemented itself as an industry leader, and continues to pave the way, securing complex projects across Australia.



## TRAFFICKING SUCCESS

The team at Murray F Young & Associates (MFY) wish to congratulate the Glenside project team for completion of a successful project. As one of Australia's leading integrated traffic and parking consultants, Murray F Young & Associates (MFY) was engaged by SA Health to provide the Glenside Campus redevelopment project with the specific solutions to both project construction and ongoing user access issues for the New Health Facilities. MFY is proud to have been a part of this important project which will provide state-of-the-art mental health and drug and alcohol treatment services for all South Australians.

The scope of work undertaken included a review of the Master Plan document for the Glenside site, and assessment of specific traffic aspects of the Master Plan. The firm also undertook an assessment of the particular traffic implications associated with the redevelopment of the health facilities and the adjacent Film Corporation site; an assessment of parking provision requirements for the health facilities and adjacent Film and Screen Centre development; and design of the new public and private road layout, including traffic control treatments, intersection design, and on-street and off-street parking areas.

MFY also liaised with the Department for Transport, Energy and Infrastructure and the City of Burnside in relation to site access requirements including review of the Aimsun microsimulation analysis. A detailed traffic and parking report was prepared, which formed part of the Development Application submission to Council. In addition, the firm has provided advice to SA Health's Major Projects Office in respect to traffic management interface and access issues associated with the adjacent supermarket site.

Project challenges MFY resolved included addressing specific health facility user requirements, interface issues with adjacent (existing and proposed) land uses, Heritage issues and significant trees. MFY has worked closely with the multi-disciplinary project team to ensure that traffic and parking treatments will provide high levels of safety and amenity for all The Health Facility's stakeholders and users.

MFY has been providing high quality traffic management and parking studies services to both private and public sector major projects since 1979, with well over 300 projects in Melbourne, Sydney, Brisbane, Adelaide, Darwin and regional areas completed each year. The six professional traffic engineers at MFY offer a wide range of experience, and are supported by technical personnel with expertise in CAD drafting, intersection/vehicle path (Autoturn) modelling and traffic network and microsimulation modelling.

From offices in Adelaide and Darwin, MFY has progressively widened its traffic and parking expertise to include retail and industrial developments; mixed land use studies; major subdivisions; traffic safety reviews; landside airport operations assessments; road safety auditing; car park operation and management assessments; and feasibility studies.



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