

TRANSFORMING HEALTHCARE

CLIENT : Department of Health and Ageing
MAIN CONSTRUCTION COMPANY : Hansen Yuncken
ARCHITECTS : Silver Thomas Hanley & Cheesman Architects Pty Ltd
CONSULTING ENGINEERS : Aurecon Australia Pty Ltd & BCA Engineers
CONSTRUCTION VALUE : \$185.5 million



The \$185.5M Flinders Medical Centre (FMC) Redevelopment has transformed the FMC into a major healthcare facility for Adelaide's southern metropolitan area. Adjacent to the existing FMC facilities is a new Rehabilitation and Palliative Care Facility with 70 beds, new gyms, a hydrotherapy pool; a new multi-deck carpark and a new 30-bed Older Person's Mental Health Unit.

Innovation, problem-solving and forward-thinking risk management, ensured that Hansen Yuncken achieved excellent outcomes for the South Australian (SA) Government on the \$185.5 million FMC Redevelopment.

The redevelopment improves and upgrades healthcare and facilities at FMC and is part of the SA Government's Transforming Health plan. It has expanded the site into a major healthcare facility for Adelaide's southern metropolitan area. New buildings, services and carparking are the foundation of the expansion, and include:

- A new rehabilitation centre, with 55 rehabilitation beds (plus 15 palliative care beds), new gyms, research facilities, 50 consultation rooms and an indoor hydrotherapy pool.
- Southern Adelaide Palliative Services will relocate to Level 5 of the new rehabilitation building, offering access to shared spaces and a large rooftop garden.
- A dedicated orthogeriatric service.

- A new centre to accommodate the Older Person's Mental Health Unit including 30 patient rooms, support spaces and large secure courtyards.
- A new 1,820 space multi-deck carpark (1,260 more spaces than before the redevelopment commenced).

The South Australian based office of Hansen Yuncken was contracted to construct three buildings, the Rehabilitation Building, the Older Person's Mental Health Unit, and the multi-deck carpark. "The 6-level carpark solves a difficult existing carpark situation and allows for the health precinct to be 'future-proofed' for further development," said Heath Price, Hansen Yuncken's Senior Project Manager.

"The new rehabilitation centre connects to the existing hospital building and new Older Person's Mental Health Unit via link bridges, so that staff and patients can move between buildings sheltered from the outside elements." In addition, the complex features active garden spaces to provide the amenity and natural environment for patients and staff.

Hansen Yuncken began construction on an existing carpark zone in December 2015. With around 300 people onsite, the project reached Technical Completion in September 2017. The redevelopment has not been without its challenges, however, innovation and preparation has resulted in high level outcomes. "The original design for the carpark was for 4-levels and we accommodated the variation to add the two levels. We managed this without any impact to the project's programme," said Heath.

"We were also subsequently engaged to fit out two new Operating Theatres in the hospital which was completed within tight timeframes. We used Building Information Modelling (BIM) which assisted with the Operating Theatre fitout as it allowed design coordination and precision." BIM along with Virtual Design Construction tools enabled prefabrication of various construction elements such as the two bridge links that were fabricated offsite and transported on multiple wide loads. "BIM provided dimensional precision. Without it, the prefabrication would have been too challenging," said Heath.

Risks onsite required preparation and management, said Heath. "The main risks were around building on a rocky site. We had to make sure we had the right rock-breaking equipment. This was obviously a major risk that was addressed through preparation and we were able to keep to the schedule as a result," said Heath.



The successful outcomes on the FMC Redevelopment were possible due to the strength of the Hansen Yuncken team and the collaboration framework established with subcontractors and consultants. "We geared up for this project with a strong team culture and our subcontractors understood that. We worked within a collaborative team environment – we had a really cohesive and highly functional team," said Heath. "The project from a design and construction point of view, was a five year project and we have completed it in three years. That couldn't have happened without a cohesive team."

Hansen Yuncken is currently working on a number of projects across Australia, in South Australia these include the \$220 million University of SA Health Innovation Building (HIB) and the \$45 million Port Adelaide Government Office Development.

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Below Davison Earthmovers cleared 40,000 ton of materials out of the work area for construction to take place.

Below Harkk Pty Ltd supplied proprietary aluminium and glass balustrades on the rehabilitation building.



Davison Earthmovers began work at Flinders Medical Centre Redevelopment in November 2015.

“Flinders is part of the Transforming Health plan in South Australia and we had to clear ground for a new rehabilitation centre and mental health facility. This involved bulk earthworks and removal,” as Len Condo from Davison explains. “This was a major project and we had an average 10 people in the field for nearly two years.”

Davison Earthmovers moved 40,000 ton of material out of the work area. “The tricky thing about this job was that the entire medical centre is on a slope so there was lots of pre-work to prepare areas. It was not a straight-forward access,” described Len.

Included in the Flinders redevelopment was the building of a new 1,780 space multi-deck carpark. Davison Earthmovers are fully equipped for these types of industrial and commercial jobs bringing their own equipment and people to the site.

Len explains, “This site extended over 28,000m² and across different levels. The challenge was the large amount of rock through the site and services, such as stormwater, had to be diverted around the

carpark and the site. The tricky thing was the coordination with the builder and other trades on site. Imagine three multi-storey buildings all coming out of ground at the same time. It developed into a real coordination with the builder. We also constructed an 8m high Gabion retaining wall plus a 15m span entry bridge to the carpark.”

Accreditation has always been an integral part of the way Davison Earthmovers conducts business. They have a comprehensive Integrated Management System that complies with Quality Certification – ISO 9001:2008; Safety Certification – AS/NZS 4801:2001 and Environmental Certification – ISO 14001:2004. These systems are externally accredited through TQCSI.

Davison Earthmovers has a staff of 40 people, 27 in the field. At the same time as working on the Flinders Medical Centre redevelopment, Davison Earthmovers was working on a number of other projects including the Modbury Hospital.

For more information contact Davison Earthmovers, 3 Symonds Street, Royal Park SA 5014, phone 08 8447 7833, fax 08 8447 7442, website www.davisonearthmovers.com.au

Harkk is a name associated with innovation, and it was this strength that created a design solution for the 1.8m high balustrade needed for the rehabilitation building at the Flinders Medical Centre Redevelopment. “We utilised our proprietary Harkk View balustrade system to meet the requirements of the client, architect and builder. This was particularly challenging as we were required to provide and install a 3kN crowd loaded balustrade without a handrail at a height of 1,800mm from floor level,” Harkk Managing Director, Thomas Hartley said.

“To obtain a 3kN C5 rating without a handrail we conducted and provided independent NATA (National Association of Testing Authorities, Australia) testing and certification for the project to meet the relevant Australian standards, specifically AS1288 for glass and glazing and AS1170 for balustrade loadings. The result being that our balustrade system not only met Australian standards and project requirements, it maximised the significant views from the balconies.”

Harkk's strength lies in the unique profiles and installation methods it provides which are visually appealing, tested and engineered to meet the most stringent Australian standards. The company specialises in the design and supply of glass and aluminium balustrades, screening and

pool fencing for commercial and residential markets. All its extrusions are sourced from Australia and New Zealand, with its products being supplied and installed by a growing network of authorised distributors across Australia including the Jim's Glass network. Harkk has also supplied systems internationally in France, the US and Noumea.

Established in 1991, Harkk has grown from supplying predominantly pool fencing and café screening to state-of-the-art balustrades. Harkk employs nine full-time staff from a broad range of tradespeople to management. The company has fabricated and supplied products for major construction projects in Adelaide, including Liberty Towers Glenelg and the Crown Plaza Hotel.

For more information contact Harkk Pty Ltd, 3 Staite Street, Wingfield SA 5013, phone 08 8347 4001, fax 08 8347 4909, email info@harkk.com, website www.harkk.com.au

Below Dickson Glass & Aluminium supplied and installed approximately 6,000m² of windows on the project and installed windows, doors and aluminium louvres.



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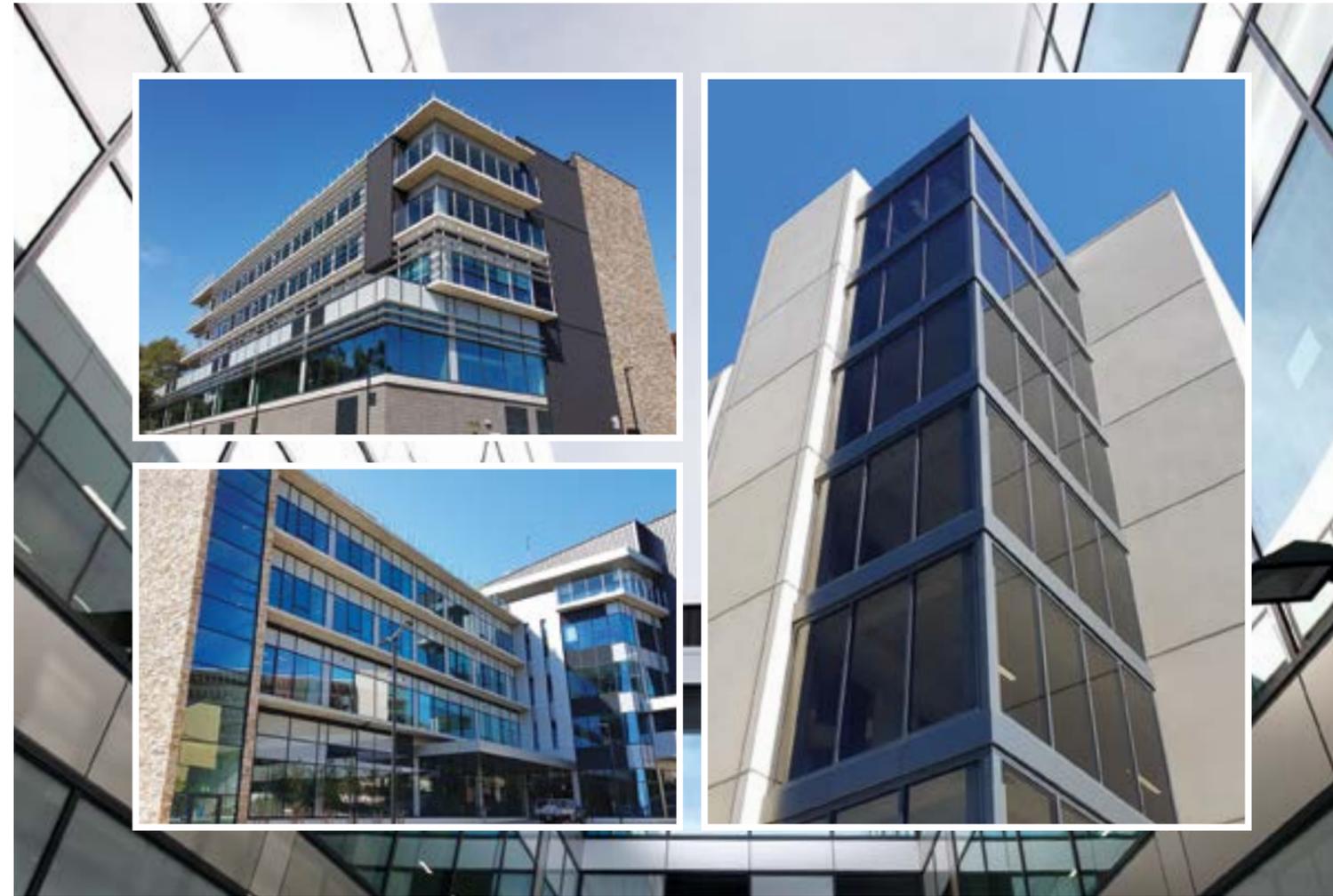


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Dickson Glass & Aluminium supplied and installed 6,000m² of glass for the Flinders Medical Centre Redevelopment in Adelaide, supplying and installing windows, doors and aluminium louvres for the rehabilitation building and the carpark. “We are really happy with the outcome. We began work onsite at the end of July 2016 and finished in October 2017,” said Managing Director, Brenton Keogh. “We were able to use Alspec’s newest product ThermoA frame on the job.”

One of the main challenges on the project was incorporating the buildings’ post disaster engineering system into the window, door and louvre specifications. “We had to make sure that if a sizeable earthquake occurred, the products would remain intact,” Brenton said. However, Dickson Glass & Aluminium’s 23 years of experience working with a wide range of construction projects, ensured they were more than capable of accommodating to these technical specifications without affecting construction timeframes.

The company employs 46 staff across its two Lonsdale factories and prides itself in its long-term relationships with Adelaide’s top construction companies. Dickson Glass & Aluminium is in the unique position of not only being able to fabricate but also import finished

product which enables cost effective and timely delivery on projects. “This is definitely one of our strengths. Our factory in Lonsdale is able to fabricate aluminum and steel, cut glass, and we have a secondary factory where structural glazing is done, however we can also import pre-fabricated and glazed product from China which we can install,” Brenton said.

“We work in Adelaide across commercial building projects, offices, universities, and residential apartments,” described Brenton. “We’re now a Tier 1 window company and we’ve completed some of Adelaide’s major projects,” Brenton said. “We have moved to the highest rating of DPII contractors and are able to undertake all forms of government work.”

In 2012, Dickson Glass & Aluminium supplied 30,000m² of glazing on the Tonsley TAFE, and have also completed work on the Flinders University Hub for Lendlease and the View Apartments which is Adelaide’s tallest residential tower at 27-storeys and are now working on Kodo apartments with Watpac which is a 30-storey tower.

For more information contact Dickson Glass & Aluminium, 1 Lindsay Road, Lonsdale SA 5160, phone 08 8387 0600, fax 08 8387 0666, email brenton@dicksonglass.com.au, website www.dicksonglass.com.au



Flinders Medical Centre Redevelopment, South Australia