

THE EPITOME OF HEALTH

DEVELOPER : Greater Southern Health Service
MAIN CONSTRUCTION COMPANY : Hansen Yuncken
ARCHITECT : Billard Leese Partnership
STRUCTURAL ENGINEER : Mott Macdonald
SURVEYOR : Davis Langdon Australia
PROJECT VALUE : \$282 Million



After a monumental four-year effort, the Hansen Yuncken project team, led by Project Manager Michael Martin, have successfully delivered Stage 2 of the NSW Government's Wagga Wagga Rural Referral Hospital Redevelopment and the new state of the art hospital is now open to patients.

The redevelopment project has seen the Hospital's range of health services and capacity increase significantly enabling the delivery of improved health, education, research and community facilities and provides a flexible building design to allow for future modification and expansion.

Hansen Yuncken's project engagement with NSW Health Infrastructure commenced in March 2012 with the contract award part of the \$282.1 million project.

Stage 1 involved the design and construction of the Mental Health Building which included an 8 bed dependency unit, 22 bed acute unit, 20 bed sub-acute unit, management offices, courtyards, landscaping and car parking.

As the project progressed into overlapping early works for the Stage 2 Acute Hospital Building, Hansen Yuncken needed to navigate a chess-like process of relocating some departments without interrupting Hospital services. In some cases, temporary services and footings were constructed and departments located in small buildings were relocated wholesale into alternative locations. For Hansen Yuncken's Project Manager, Michael Martin, it has been an incredibly detailed logistical exercise.

The new Acute Hospital is an eight storey building which includes 230 overnight beds, an expanded emergency department, medical imaging suite, pharmacy, six operating suites, inpatient units and critical care units, paediatric and adolescent unit, women's health and new born unit, staff amenities, orthopaedic and surgical inpatient units, plant rooms and IT services and a rooftop helipad.

In terms of materials, buildings were constructed from insitu concrete with post-tensioned floor slabs, with a brickwork and Europanel cladding façade featuring thermally-efficient glazing and a colour palette inspired by the colours of the Murrumbidgee River.

"The Department of Health required that we achieve 10% better energy efficiency than specified in the BCA," said Michael Martin. "With our mechanical plant, we expect to achieve in the vicinity of 18% more efficient than BCA requirements.

Major features of the Acute Hospital building include new main entry, new outpatients entry and wards and medical services over six levels with a rooftop helipad. There is also a new operating theatre suite including expanded recovery capacity, cardiac catheterisation laboratory and angiography suite, women's and children's inpatient unit including birthing suites, central sterilising services department with increased capacity and a new medical imaging department.

As part of the overlapping Stage 2 works, Hansen Yuncken completed a diversity of smaller construction tasks, including refurbishment of the ground floor services area, construction of three pad mount substations, installation of the infrastructure for a site-wide BMS system, site-wide security and site-wide nurse-call.

The construction of a new plant room, a wide variety of temporary storage, new electrical supply network, and the installation of a broadband optic fibre and Cat6E backbone throughout are also elements of the Stage 2 works which were undertaken simultaneously with the completion of Stage 1 works.

The Hansen Yuncken project team has also received a National Professional Excellence in Building Award from the Australian Institute of Building for managerial and technical skill in delivering the Phase 1 Mental Health Building.

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LEADING PLUMBERS PIPE TO PERFECTION

Reliable, safe and efficient water supplies are a fundamental need, especially for a facility dedicated to wellbeing like a hospital. Cooke & Dowsett have been applying their skills to delivering excellence in plumbing and hydraulics solutions for over 20 years, including many outstanding health sector projects.

Currently Cooke & Dowsett are currently at work on the Wagga Wagga Base Hospital project. The first stage of works from September 2012 involved the design of the hydraulics services in joint venture with engineering firm ACOR, followed by the relocation of existing services, and supply and install of hydraulics for the new Mental Health Unit.

This full construct package has included domestic hot water; chilled water; plumbing of amenities for staff areas, common areas and client ensuite; natural gas connections; sewer services; and fire services. Six Cooke & Dowsett plumbers and apprentices worked on the first stage of service relocations, with the workforce doubling during the installation and fit out of the Mental Health Unit.

Because the hospital project is being staged over several years in distinct stages in order to keep the busy regional medical facility functional without interruption, detecting clashes between services and identifying buildability issues was extremely important. The project was coordinated by the Albury office, which services projects across New South Wales, and Cooke & Dowsett brought a high level of leading-edge sustainability innovations to the project.

“The water reuse component was a full design and construct package for us,” said Cooke & Dowsett Albury Director, Ian Avage. “We installed a siphonic roof water collection system and 50,000L of basement storage, and a 20,000L grey water treatment plant. The treated water is used with the collected rainwater to service the evaporative cooling towers and amenities. The grey water system, which was designed and manufactured by Origin Water on the Sunshine Coast, produces Class A+ water.

“All the water supplies at the Albury ATO office are metered and monitored through the BMS, which can detect any irregular flows such as leaks and blockages. Another sustainable feature is that all the drainage pipes on the project are HDPE which has been manufactured from recycled products.”

Currently Cooke and Dowsett are working on two other projects in and around Albury – the refurbishment of the Heritage listed Woolstore in Albury’s central district which will become a Quest Serviced Apartments complex, along with the new Albury/Wodonga Regional Cancer Centre, \$70 million. Cooke & Dowsett are also working on two other major Riverina projects, the Riverina Juvenile Centre (also a Hansen Yuncken project), and Phase 2/3 Acute Hospital in Wagga Wagga, \$300 Million

Out at Broken Hill, Cooke & Dowsett are undertaking the hydraulics and civil stormwater package for the Coles retail centre development. For this project, the company is using their own senior management and employing local plumbers and labour where possible. This gives the local workforce exposure to skills and knowledge gained on major projects around the country.



Cooke & Dowsett work collaboratively with architects, builders, engineers and asset owners to develop innovative, buildable alternatives which are designed and tested against building plans using CAD technology. The company’s specialties include sustainable and innovative hydraulics solutions, fire services, fire sprinkler systems, backflow design and testing, drainage contracting and gas pipe and fitting installations.

Other major health sector projects the Cooke & Dowsett group of companies have completed include Joondalup Hospital (WA);

Geelong Children’s Hospital; Knox Private Hospital; Mercy Hospital; Bendigo and Box Hill Hospitals; Alfred Hospital; and Walter & Eliza Hall Institute of Medical Research.

Cooke & Dowsett’s Head Office in Melbourne oversees the operations of offices in NSW, SA, QLD, Broome and Western Australia. The company also recognises the importance of improving overall community wellbeing, and holds part ownership of NUDJ Plumbing, a Broome-based NGO which trains indigenous youth, who then return to work on community projects across the Pilbara, improving sanitation

and water supplies. With certification for Quality Management to AS/NZS ISO9001:2008 and a dedication to maintaining the highest levels of worker safety, end-user safety and environmental sustainability, Cooke & Dowsett create solutions which are truly at the leading end of the industry.

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SUCCESSFUL SAFETY SYSTEMS

ArjoHuntleigh led the way with innovative technology to deliver a “world first” in ceiling hoist solutions for the Wagga Wagga Rural Referral Hospital (WRRRH) Project.

The brief was to deliver a quality large Referral Hospital that would facilitate current and future demands of the Riverina population. ArjoHuntleigh took up the challenge to supply, install and commission the latest innovative patient handling solutions to create a safer environment for both patients and care staff with return on investment through reduced risk of injury and improved productivity.

Early engagement with the Facility Health Planners, LHD user groups, WH&S management and the awarded construction company was vital to this project. Led by ArjoHuntleigh’s Paul Currey (Projects BDM for NSW/ACT) and supported by an Implementation Team, ArjoHuntleigh were able to design, deliver, install and commission the latest in safe manual handling technology.

With a high SWL of 455KGS allowing access to ensuite’s via room covering H Pattern systems linked to dual electronic gates, this was the first Maxi Sky II Plus super bariatric dual cassette ceiling lift system commissioned in the world garnering WRRRH global recognition.

Additionally the ArjoHuntleigh Maxi Sky II (SWL 272Kgs) system was installed widely throughout the various wards in the facility to accommodate room-linked-to-ensuite access and rehabilitation areas. Future proofing was firmly on the LHD’s management team’s radar.

This saw large numbers of rooms throughout the facility fitted with a provision to allow a low cost solution to be implemented with minimal inconvenience when retrofitting as the clinical needs change.

With the new Maxi Sky 2 and Maxi Sky 2 Plus (bariatric), ArjoHuntleigh are able to supply systems which share common accessories and parts, as well as the unique Kwik Connect Hanger Bar System. This system allows efficient changes in hanger bars/support frames to suit the clinical needs of the caregiver and patient.

Sidath Wijethunga, ArjoHuntleigh’s Area Manager and Application Specialist for states NSW/ACT, was involved in this project. He sites that acquiring the Enterprise bed range for the hospital was a gamechanger as well: “Getting the Enterprise 9000x in to the ICU was a major breakthrough as this led to the presence of ArjoHuntleigh being felt at the hospital. As a result of ongoing trials and the good will that we had created, we had the support of the clinicians to get this through. Soon after the clinicians made a decision to go with a variety of our products like Enterprise beds (E9000x, E8000x, E5000x), Carendo shower chair, Omega examination couches and Tenor lifters to name a few.”

The fact that this is competitively priced, offers a compact storage and transport system available to accommodate four point powered DPS hanger bar systems, universal stretcher frames, Weigh Scale and other accessories made the Maxi Sky Range the obvious choice. The Maxi Sky ceiling hoists were also complemented by ArjoHuntleigh’s market leading Enterprise bed and mattress range, mobile patient floor hoists and hygiene solutions that were supplied throughout the facility to accommodate the various clinical and WH&S requirements.



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