

TAS PROJECT FEATURE

ROYAL HOBART HOSPITAL

John Holland Fairbrother Joint Venture / Hobart



THE EPITOME OF HEALTH

DEVELOPER : Department of Health and Human Services & Royal Hobart Hospital
MAIN CONSTRUCTION COMPANY : John Holland Fairbrother Joint Venture
ARCHITECT : Lyons Architecture
CONSTRUCTION VALUE : \$350 million

The Royal Hobart Hospital redevelopment is the largest capital infrastructure project ever undertaken in Tasmania. The project consisted of the construction of 36,000m² of new space and refurbishment of 11,000m² of existing clinical areas including operating theatres, endoscopy, paediatrics, maternity, mental health, and women's clinics.

John Holland is one of Australia's leading engineering and building contractors and delivers innovative construction projects and diverse service solutions to Australia and the world. They work across multiple sectors, from infrastructure and property development to rail and building, with their purpose to transform lives. They have industry-leading healthcare capability on projects that are built for clinical excellence with patients at their heart. Fairbrother is one of Tasmania's largest and oldest building contracting firms with a long history in government project delivery. John Holland and Fairbrother have successfully delivered hundreds of millions of dollars worth of building work in Tasmania in past successful joint ventures.

The John Holland Fairbrother Joint Venture is the Managing Contractor for the design and construction of the Royal Hobart Hospital redevelopment. The project is Tasmania's largest hospital and the major teaching and research hospital of the University of Tasmania.

Demolition of the existing Building B was carried out during 2016 and construction of the new 36,000m² facility commenced in 2017.

As part of the project, a temporary solution was required to maintain hospital operations over the construction period. "There were three distinct phases to the project," said Stephen Adcock, Project Director for the Joint Venture and Managing Contractor's Representative. "First was the construction and commissioning of temporary facilities for use as hospital operational areas. "This was necessary to maintain the same level of service to the Tasmanian population prior to any works commencing."

In the second stage, hospital operations were relocated from the existing Building B which was then demolished. This included numerous physical connections, accessways and bridges between Building B and adjacent

areas. All adjacent existing structures, including heritage buildings, had to be protected during the demolition works.

The third stage involved the construction of the new building. "The building contains full admissions services for the entire hospital campus, new operating theatres and CSSD, two floors of mental health wards and 5-levels of paediatric, adolescent, birthing and general wards," said Stephen.

Due to the phased nature of the project some innovative construction approaches were required in order to stay on track against the programme. The project was redesigned to make use of predominantly precast vertical elements and pre-formed stairs to aid swift construction.

The location of the project in the heart of Hobart's CBD posed some logistical challenges. "A great deal of planning was required not only for surrounding public areas, but also to maintain access and amenity for hospital employees and patients," said Stephen. "Additional areas of planning and control were required due to the age of the existing buildings."

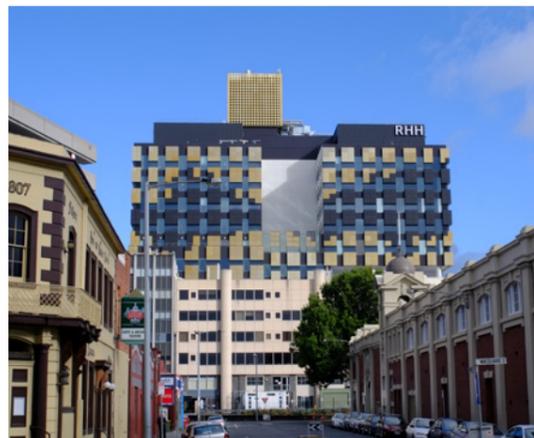
The project was a reunion for John Holland and Fairbrother as joint venture partners. "The joint venture was replicated for this

project following successful partnerships in the past for the Tasmanian Government and the University of Tasmania," said Stephen. "This set the project team up with the local knowledge of Fairbrother combined with the expertise of a Tier 1 contractor in John Holland."

John Holland continues to transform lives across Australia through their work in the healthcare sector. Recent projects including the Lismore Base Hospital and Joondalup Health Campus redevelopments are evidence of the success of their approach in delivering positive results in these challenging environments. John Holland have also been awarded the upcoming Victorian Heart Hospital project.

The Royal Hobart Hospital redevelopment is Tasmania's largest ever building infrastructure project and represents a significant boost to the state's building industry. "As a high profile piece of social infrastructure this project will improve the quality of healthcare for Tasmanians," said Stephen. "We are proud to have been instrumental in the successful delivery of such a critical piece of infrastructure that will serve Tasmanians well into the future."

For more information contact John Holland, website www.johnholland.com.au



Below Aidacare installed a Swedish manufactured tracking system which also act as a bariatric system with a capacity of up to 500kg.



One of Australia's largest healthcare equipment and service providers, Aidacare has been assisting Australians in hospitals, residential aged care, home and community care, and rehabilitation sectors for over 25 years. Aidacare is on most government healthcare equipment contracts in Australia and hold supply agreements with many private sector healthcare companies. This makes Aidacare the natural choice to provide specialist equipment to the Royal Hobart Hospital redevelopment project.

For the Royal Hobart Hospital, Aidacare supplied and installed a ceiling tracking system manufactured by the Swedish company Liko. The project was managed by Joe Gason and Grant Devonshire of Aidacare. "The tracking system is suspended from pendants bolted to the concrete ceilings," said Joe and Grant. "It's basically a tracking system that lifts patients, from wheelchairs onto beds or a therapy gym."

One application for the system is to facilitate gait training, which is a type of physical therapy to assist patients in regaining the ability to stand and walk. This allows early mobilisation of the patient. "It has a circular track set up to assist with walking, so that patients can practice and relearn this skill in a safe environment," said Joe and Grant. The system also functions as a bariatric system with a capacity of up to 500kg to assist heavier people who cannot stand unaided.

The rehabilitative applications of the system are wide ranging. "We covered more or less every room in the new section. There are many patients that don't require it, but for those who do, it is there," said Joe and Grant.

In most cases, the installation of the system was towards the end of the fitout programme. "We were usually one of the last trades in. The rooms must be plastered and painted, then finished before the equipment goes in," said Joe and Grant. This meant that Aidacare needed to be ready to rapidly complete installation works throughout the construction programme.

Aidacare planned the pendant placing and spacing to avoid clashes with services and ensured sufficient tolerances were allowed.

Shop drawings were then submitted to the main contractor and architects for approval. "If they were not happy, we fit it in to suit them. After approval of the shop drawings, we could get cracking. We segmented the project into levels so we could start on a level and complete it before moving onto the next one."

Aidacare provide much more than just the Liko ceiling tracking system. "That's just one of thousands of products we distribute in all states and territories across Australia. Equipment they provide includes hospital equipment, therapeutic chairs, walking aids, wheelchairs, bathroom and toilet equipment, mobility ramps and scooters."

As well as stocking equipment manufactured under other brand names, Aidacare also manufacture a premium range of healthcare equipment which has been designed, tested and manufactured to meet Australian standards.

To more comprehensively support their customers, Aidacare have recently opened a new 6,000m² showroom located five minutes from Melbourne Airport, called 'Project and Fitout Solutions by Aidacare'. The showroom displays a wide range of hospital and aged care fit outs that can be delivered by Aidacare.

"We've always done fitouts but now we are delivering a whole solution. We're offering everything from initial planning of a new build to the finishing touches," said Kate Williamson, Marketing Manager. With the launch of this unique facility, Aidacare are even more well placed to deliver cohesive end results in healthcare services that deliver on both design and price.

Aidacare are working on many hospital and aged care facilities across Australia including upcoming projects in Queensland for Estia Health and Japara Healthcare.



For more information contact Aidacare, phone 1300 133 120, email online@aidacare.com.au, website www.aidacare.com.au

Below Donald Cant Watts Corke was selected to work with Matrix Management Group as Cost Manager and Quantity Surveyor for the hospital.

With extensive experience in healthcare projects, Donald Cant Watts Corke (DCWC) was well placed to support the Royal Hobart Hospital project. Donald Cant Watts Corke was delighted to be appointed as Quantity Surveyor and Cost Manager for the Royal Hobart Hospital Redevelopment.

Founded in 1966, Donald Cant Watts Corke is one of Australia's largest privately owned cost and project consultancies. The company have been involved in over \$12 billion worth of healthcare projects over the last five years. They also have diverse experience in other sectors, working with government, private and public sector organisations on some of the largest infrastructure and development projects in Australia.

One of the keys to their appointment was their partnership with local firm Matrix Management Group. DCWC has worked on numerous other hospitals around Australia including the Royal Children's Hospitals in Perth and Melbourne, the Northern Beaches Hospital in Sydney and the Sunshine Coast Hospital in Brisbane. They were able to draw on their national experience to add value to the project, having worked on numerous other hospitals. "At the time, we were working across a number of different hospital projects nationally," said Victorian Quantity Surveying Managing Director, Stephen McCoullough. "This meant that we were able to advise and compare the Royal Hobart Project with other projects nationally. We were offering our national health sector capability and through Matrix we were also able to bring local knowledge and experience of the Hobart construction market."

Every hospital redevelopment comes with its own unique complexities. "The project had originally been intended to be built in two stages in order to minimise the need to decant and relocate functions within the hospital. However, after significant planning and review the decision was taken to build the project with a single stage approach," said Stephen. "The change required a range of renegotiations with the revised scope taken into account."

"It meant a greater input into the planning phases of the project. The single stage approach made construction easier from the point of view of complexity, as the existing hospital areas were now moved out of the

way to facilitate the construction, but it required more work up front to decant these areas to enable that to happen. The project is now being completed within the revised time frame stipulated and within the budget set," said Stephen.

"As the largest healthcare project undertaken in Tasmania, there was considerable consideration given to the size and capability of the local contractors and trades, given the scale and difficulty of what we were proposing," said Stephen. "It was a matter of getting an understanding of what the local market could support and supply and what may need to be supplemented from elsewhere. All of this was key to getting the costs for the project correct from the beginning and eliminating any surprises down the track."

In Tasmania, Donald Cant Watts Corke's projects include The Hedberg, the University of Tasmania's new multidisciplinary facility, this time working for Matrix Management in the cost planning phase and the Tasmanian Museum and Art Gallery (TMAG) redevelopment.

As an integrated business, Donald Cant Watts Corke understands the entire process of healthcare project delivery. "We are a multi-service organisation," said Stephen. "We support projects from concept all the way through to completion."

Donald Cant Watts Corke offers a full suite of services to support all needs through all phases of project development and clinical operations. To further their footprint within the health sector, Donald Cant Watts Corke has a specialist advisory team, offering master planning, service plans, models of care, functional briefs, transition planning, businesses cases and post-occupancy evaluations. "The advisory team is looking at design elements, breaking down the project needs to focus on what the client is really after," said Stephen. "They provide more context regarding what is required, and then our quantity surveyors can ensure the project team delivers the project on time and on budget."

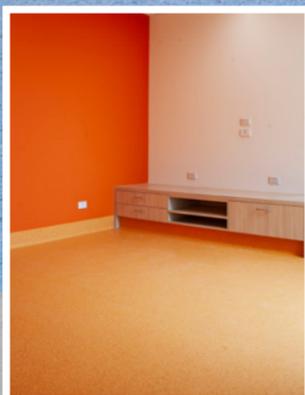
For more information contact Donald Cant Watts Corke, Upper Level 3 GPO Building, 350 Bourke Street, Melbourne VIC 3000, phone 03 8662 1111, email dcwc.vic@dcwc.com.au, website www.dcwc.com.au



Below Armstrong Flooring completed a complete wall and floor vinyl package, providing a variety of colours and textures.



“Armstrong’s Custom Design Centre allowed us to tailor the design of our flooring enabling a unified design outcome. Being able to work with almost any colour gave us limitless opportunity to bring the space alive and deliver a one-of-a-kind project. Needless to say, the client is thrilled with the outcome.”
- Andim Taip, Lyons Architecture



Armstrong Flooring are an international company with a history going back to 1860 in Pittsburgh, Pennsylvania. In 1969, they commenced manufacturing in Australia and today they are one of the country’s leading manufacturers and distributors of commercial and residential floor products.

For the Royal Hobart Hospital project, Armstrong’s brief was to deliver a complete package of bespoke colour and design vinyl and wall products. Their Specification Sales Manager for Victoria and Tasmania, Elise Johnston, worked closely with John Holland Fairbrother Joint Venture and Lyons Architecture to develop products that met the hospital’s design brief.

In conjunction with Lyons Architecture, Armstrong Flooring developed 24 bespoke floor and wall finishes in a diverse array of colours for installation throughout the facility to create a harmonious environment that contributes to patient well being and enables intuitive wayfinding.

Various elements of colour and texture such as Pantone® and Dulux® swatches were used to inspire the colour scheme. These were then aligned with Armstrong’s pigments, from there over 200 bespoke samples were then produced by Armstrong’s inhouse colour technician at their factory in Braeside, Victoria for client approval of the final 24.

All products were then manufactured at Armstrong’s Braeside factory. Armstrong manufactured approximately 60,000m² of floor and wall vinyl ranges, in both standard and slip resistant finishes, utilising custom colour products from concept to creation.

“We have the ability to manufacture in Australia bespoke colours and visuals based on our popular Accolade® and Wallflex® ranges,” said Michael Keam, Strategic Marketing Manager. “This allows for shorter lead times, smaller minimum order quantities and enables us to produce products with various degrees of slip resistance in the same bespoke colourway and visual.”

“Every day we manufacture products for installation in some of the most demanding spaces, for example hospitals, schools, prisons or even airports,” said Michael. “As such our products have to provide extremely durable, hygienic and easy to maintain floors which assist in minimising

ongoing costs as well as reducing resource waste throughout the life of the floor.”

“At Royal Hobart Hospital we supplied Accolade® Plus for general traffic areas and Accolade® Safe for areas requiring a higher degree of safety.”

Engagement with key hospital stakeholders was an important contributor to the success of the project. “Like all major projects it was important to get involved early and define the scope clearly,” said Michael. “This provided us with the opportunity to collaborate and problem solve throughout the journey from concept to creation and installation.”

Following the successful completion of the Royal Hobart Hospital project, Armstrong Flooring will continue to develop and manufacture durable Australian made products for projects around the country and for export markets. Their strong in country expertise means their local technical support is second to none.

Armstrong Flooring manufactures and supplies the highest quality flooring products to a vast range of projects in many sectors around Australia. Some other notable recent or upcoming projects are the Perth Children’s Hospital, Knox Private Hospital, the State Netball and Hockey Centre of Victoria, Launceston Hospital and King Island Hospital.

Part of the reason for Armstrong’s outstanding reputation and ability to build long term relationships with major clients in healthcare and other sectors is their commitment to sustainability. “We strive to meet and exceed environmental expectations,” said Michael. “Our Accolade® and Wallflex® products are third party certified by Global GreenTag™ and achieve not only GreenTag™ GreenRate® Level A, but also GreenTag™ LCARate® Gold.”

“Our floor and wall systems have a proven track record across the country,” said Michael. “We are proud to have supplied the client with a durable and cost effective product to keep their facility looking new and fresh for many years to come.”

For more information contact Armstrong Flooring Australia, 29-39 Mills Road, Braeside VIC 3195, phone 1800 632 624, email customer_services@armstrongflooring.com, website www.armstrongflooring.com.au

Below Honeywell supplied and installed the electronic security system, which included CCTV, security monitoring and access control.

Honeywell is a global technology company with a diverse range of services that help their customers become more connected to make the world safer, smarter and more sustainable. They have been innovating for more than 100 years and now they are creating what's next.

They deliver aerospace products, building technologies, performance materials and technologies and safety and productivity solutions. They were pioneers in the automation of indoor comfort in buildings and today they provide control and comfort solutions to 10 million buildings of all types and scales around the world.

Operating in Australia since 1962, Honeywell now have over 1,500 employees in 28 offices. In Tasmania, they boast a strong local team that benefits from wider company support from project managers, engineers and technical staff.

Honeywell have a long standing relationship with the Department of Health and were appointed to provide the electronic security system for the Royal Hobart Hospital project, a major development that is Tasmania's largest ever building infrastructure project. The electronic security system provided by Honeywell included CCTV, access control, intercom and security monitoring.

As a major redevelopment of an existing hospital in a city centre location, the project has not been without its challenges and the logistics of the complex and busy building site required Honeywell to work closely with the overall programme to manage interfaces with other trades.

"The project has also included a lot of design updates and changes, so detailed project management was required to manage and facilitate these changes," said Wayne Kent, General Manager - Service, Asia Pacific.

As a world leader in implementing intelligent building solutions that bring building management systems, solutions, technologies and business processes into a single integrated platform, Honeywell was uniquely placed to introduce innovation and achieve a best in class outcome on the project. "The Honeywell Enterprise Buildings Integrator and Digital Video

Manager platforms have provided a great flexible and scalable integrated software solution for the security system," said Wayne.

The Honeywell Enterprise Buildings Integrator uses flexible architecture and open industry standards to integrate existing building systems, streamlining processes and optimising building performance. It allows clients to increase productivity and flexibility while reducing operational, energy and maintenance costs.

Honeywell's Digital Video Manager is a unique digital video solution that delivers enterprise wide access to process and security video. It is used extensively in a range of industries and is a trusted solution to increase safety, security and process performance.

In addition to healthcare, Honeywell service clients across a broad range of sectors including commercial offices, landmark buildings, airports, stadiums, universities, government buildings, museums and data centers.

With several other projects also running in Tasmania at present including other healthcare projects, hotel projects and work for the University of Tasmania, Honeywell are looking to build on the success of the Royal Hobart Hospital to continue to deliver market leading and value driven solutions for their clients. "The experience and learnings our local team has gained from this large project will be valuable as we move on to other projects," said Wayne.

Honeywell is rightly proud of their role in this transformational project for Tasmania's healthcare infrastructure. "We have been involved with the Department of Health in Tasmania for a number of decades providing technology solutions for their facilities," said Wayne. "They are a great customer of ours and we look forward to continuing to be a major supplier in the future."

"This is a huge project for Tasmania and we are very pleased to be a part of the project delivery team."

For more information contact Honeywell, Level 3, 2 Richardson Place North Ryde NSW 2113, phone 02 9353 7000, website www.honeywell.com



Below Miami Design supplied and installed the blinds and tracking system, which included the unique EZR curtain change system.



Miami Design are specialists in the installation of privacy curtain tracking and blinds for healthcare facilities. Their commitment to completing quality installations with maximum efficiency made them an ideal choice to complete the requirements at the Royal Hobart Hospital project.

Over the three years leading up to the commencement of site works for the Royal Hobart Hospital project, Miami Design were involved in extensive discussions and design work to ensure that the blinds met the hospital's functional requirements. "Communication is a point of difference for us," said John Zsarik, Project Manager. "Four or five years ago we decided that Customer Relationship Management software, wasn't for us. We prefer to pick up the phone and talk."

One of the biggest challenges in the project was the fixing of blind bracketing to the external windows. "For this building the windows were part of the external shell and no penetrations, post installation, once water tight could be made through them," said John. This made the fixing of the blinds, as well as the electrical cabling that provides operational control over them, very challenging.

To ensure that these challenging requirements were met, coordination between trades was vitally important. "Over a period of time we decided the best way to do what we needed to do," said John. "All fixings had to be completed prior to the windows being weather sealed. All cables had to be prefabricated, positioned and sealed into the window and then once the windows were installed the blinds would be clipped in position and installation completed."

"We made a model to show the different configurations of brackets and generated schedules to show where the brackets had to go," said John. "We also had to ensure that the cable ducts didn't impede the blinds. Within a prototype room, set up by John Holland Fairbrother Joint Venture the client could see the planned end result."

Once the proposals were approved and construction started, Miami Design commenced the supply and installation of the full blind and tracking package including both motorised and manually operated blinds, privacy curtain tracking, IV tracks and necessary component to complete the installation.

The Royal Hobart Hospital is the first site in Australia to use the recently released and patented EZR curtain change system which was invented by Miami Design. "One of the biggest occupational health and safety issues with curtain tracking is the reaching overhead to change curtains, a continuous operations requirement," said John. "We've identified a need for a better way. Avoiding ladders. The EZR has a section of track that is removed to accommodate the fitting of a change arm. The curtain travels on the track, down the change arm to waist level, no reaching no ladders."

The EZR system, although only recently launched, is already starting to generate strong demand nationwide. Following the Royal Hobart Hospital project, there are plans to install it in the Casey Hospital project in Melbourne and interest has also been expressed by NSW Health. "Our main aim is to get our EZR product up and running so we can wholesale it across Australia and eventually USA and Europe," said John.

Miami Design is a family business founded in 1988. They have built a strong reputation through their involvement in over 30 new build and extension projects for hospitals, starting with Portland Hospital in 1992 and recently including Monash Children's Hospital, Joan Kirner Women's and Children's Hospital, Frankston Hospital and Holmesglen Private Hospital.

The company develop long term relationships with their clients to ensure that the best outcomes are achieved. With all their projects, Miami Design have demonstrated their ability to deliver quality installations.

For more information contact Miami Design, 4/47 Parer Road, Airport West VIC 3042, phone 03 9310 5155, email sales@miamidesign.com.au, website www.miamidesign.com.au

Below All Brick Tasmania completed all of the brick and blockwork throughout the Royal Hobart Hospital project.

All Brick Tasmania is a family owned and operated business based in Hobart, they provide a wide range of brickwork and blockwork services to construction projects across Tasmania. They are experts in commercial projects and are also highly experienced at multi-unit residential developments. The company supplied and laid all the brickwork and blockwork for the Royal Hobart Hospital project.

All Brick commenced work on the project in early 2018. "We started with the blockwork to the lower ground rooms, mainly fire rated rooms, before moving on to the other floors," said Ben Barratt, Project Manager. "In the last couple of months, we have been laying curved common brick walls in the garden landscaped areas as well. These are rendered which is part of our scope as well. These are some of the last things to be done on the project, so we have to go in and be quick."

They had a team of up to eight bricklayers onsite during the works. "We had a tight time frame, especially for the blockwork to keep ahead of the services installation," said Ben.

All Carpentry Tasmania is the sister company of All Brick. "We have been doing carpentry for six years now," said Tom Barratt, All Carpentry General Manager. "We are also based in Hobart and we do commercial and multi-residential projects across the state."

"For the Royal Hobart Hospital project, we installed a fire-rated wall system called Speedpanel which is a fire rated system with acoustic elements," said Tom. "We had upwards of 20 carpenters onsite at any one time. Our works started in the basement and then we created the riser shafts as the building went up. We worked across quite a few levels, installing part of the risers first and then returning to close them off after the services were installed. We also worked in the plant level at the top of the building. We started on site in January 2018 and are keeping up with the programme."

During the works, there were challenges in coordinating with other trades on such a complex project. "One of the hardest challenges for us was coordination with other trades who are trying to get plant and services installed while we are completing our work," said Tom.

"There was a model made of services in the building but that did change, so we left it up to the services trades to decide where the services should go. In some cases, plant equipment was installed first and we put the walls in afterwards. Then we cut penetrations through the walls to allow services trades to make their connections," Tom added.

The company is part of the same family owned business as All Brick. "There are five boys and the parents," said Tom. "Four of the boys are bricklayers but I wanted to go into carpentry. I guess I am the black sheep."

Together, All Brick and All Carpentry form Tasmania's leading bricklaying and carpentry team. They have worked on projects for Hyatt, Crowne Plaza, MONA, Housing Tasmania and many other high profile clients.

They are currently involved in The Hedberg development for the University of Tasmania, one of Tasmania's most ambitious arts projects encompassing the historic Theatre Royal and the University Conservatorium of Music.

With a strong reputation, a positive family ethos and a depth of experience across a wide range of projects, they are well placed to expand their business and continue to provide quality bricklaying and carpentry services across Tasmania.

For more information contact All Brick Tasmania and All Carpentry Tasmania, Ground Floor, 85 Macquarie Street, Hobart TAS 7000, phone 03 6244 2220

