



CLIENT : ACT Health
PRINCIPAL REPRESENTATIVE : Shared Services Procurement
PROJECT MANAGER : Iqon Pty Ltd
ARCHITECT : HBO+EMTB
STRUCTURAL ENGINEERS : TTW and AWT
SERVICES ENGINEER : AECOM
BUILDING CERTIFIER : Certis
GEOTECHNICAL ENGINEER : ACT Geotech
PROJECT VALUE: \$48.7 million

A HOLISTIC APPROACH TO HEALTH CARE

The \$48.7 million Canberra Region Cancer Centre is the largest project undertaken in the ACT government's history.



As part of the ACT Government's Health Infrastructure Program, the wide variety of medical, nursing and allied health services which are involved with cancer treatment are being brought together in one location with the completion of the Canberra Region Cancer Centre. The \$48.7 million project has been jointly funded by the ACT Government and the Federal Government, and comprises a five level building plus a basement on the Canberra Hospital campus, adjacent to the hospital's current Radiation Oncology building.

The new facility will improve cancer treatment and other related services in the ACT by drawing together and integrating cancer services including chemotherapy, radiation therapy, haematology, immunology, research and teaching programs. The Centre will allow full integration of cancer outpatient services currently available at Canberra Hospital into a cancer care-specific precinct.

The Centre also features a lounge for family and friends, a resource centre accessible to patients and their supporters, and space for some of the key

support and advocacy groups. Designed by local firms HBO + EMTB, the Centre comprises 5,300 square metres of floor space featuring a warm and welcoming palette and abundant natural light. Every chemotherapy treatment space has a window outlook with operable battens, so the patient can control the degree of light to that which is comfortable for them.

The whole ethos of the design has revolved around a patient-centered model of care, and both cancer patients and staff were involved in lengthy stakeholder discussions which formed part of the design process. Construction commenced in late 2011, and was managed by Shared Services Procurement and PM IQON Construction Management, with practical completion achieved in July 2014.

The layout of the Centre allows room for future growth, an important consideration given the number of patients has been growing annually, and the Centre provides services to people from beyond the ACT from Southern New South Wales. In 2012 ACT Health provided 60,852 cancer outpatient services, and that number continues to

grow each year. The basement level (Level 0) houses the ancillary support services. Level 1 is the main entrance, main reception and waiting area, and a patient information IT hub, which is located where the building adjoins the Radiation Oncology Department.

Level two is the Consultation level, which will include Immunology, Medical Oncology and Haematology outpatient services; the ACT Pathology collection centre; Patient and Family Lounge; Patient Resource Centre; and the Support services area. The Oncology Pharmacy is moving to Level 3, which will also provide room for future development. Level 4 comprises the Clinical treatment areas including Cancer Outpatients Day Treatment; Clinical Trials; Day Haematology Unit, including Aphaeresis, Bone Marrow Biopsy and Stem Cell Transplant; Cancer Outreach Treatment Team (COTT); and, Rapid Assessment Unit and Phone Triage Service. Clinical office space is located on level 5, with services including the Medical Oncology Department; Immunology Department; Haematology Department; Nurse Care

Coordination; Canberra Region Cancer Centre Administrative Services; Palliative Care; and Cancer Psychosocial Service. The Plantroom is also located on Level 5.

"This is the first time all ACT Health outpatient cancer services will be co-located in one building," said Denise Lamb, Executive Director, Cancer, Ambulatory and Community Health Support.

"We have additional treatment spaces as well as the opportunity to have support services and support groups at the Centre, and those groups will also be able to use the meeting rooms.

"One of the aims of the Centre is that we will have strong partnerships with John Curtin Medical School for research, and be able to translate the research into practice at the Centre.

"Co-locating services under one roof will create a more consistent patient experience and will enable a multidisciplinary team approach and cohesive service delivery. In addition, new initiatives will be implemented in the new centre that will also enhance patient care and outcomes.

"For patients from outside the ACT, this enables them to come to Canberra and see all the relevant professionals, and cut down the number of times they have to come to Canberra."

The Canberra Region Cancer Centre has been designed along sustainable development principles, with a range of energy and water saving initiatives incorporated into the design, construction and building systems.

Solar orientation to capture sunlight, the use of effective insulating materials for external walls and roof, and double glazing for all external windows give a high degree of passive thermal and energy efficiency.

Energy-efficient LED lighting has been installed, and the design took into consideration appropriate lighting levels through zoning by activity and usage patterns. Sensor lighting controls have been installed, so room lighting automatically switches on when people enter a room and automatically switches off after a short preset time once they exit. The electrical installation also included DALI lighting dimming controls, a remote programmable central lighting control to dim lighting during preset night time hours for such areas as meeting rooms and corridors.

The Centre also has a high efficiency HVAC systems design with air-cooled chillers, and a large array of solar panels on the roof for hot water, with gas boosting rather than electricity. Sub-metering of natural gas usage will allow monitoring and benchmarking.

Essentially, the whole focus has been on delivering an improved and integrated model of care in an environment which is conducive to wellbeing.

"The Centre is a warm, welcoming space which takes away the cold clinical approach. It features a lot of light, and quiet, airy, treatment rooms. We are trying to make it as calming as possible. It is a beautiful building."

"An important feature of the design is it allows privacy for increased patients whilst receiving treatment", said Denise Lamb.

For more information contact ACT Health, website www.health.act.gov.au



COVERING EVERY BASE TO ENSURE SAFE, SUSTAINABLE SPACES

When CERTIS undertakes the building certification for a project like the Canberra Cancer Centre, they do far more than simply tick the boxes on regulatory requirements. Instead, they bring a broad depth of understanding to resolving any issues, and work with clients, architects, engineers, builders and consultants to develop effective solutions which meet the required standards without compromising the budget or the design brief.

The company's involvement in the CRCC project began in 2010, which included a staged process. A regular schedule of inspections was also followed, to ensure each element of the project would achieve BCA compliance.

"There was a lot of planning and design for this building due to the proximity to other buildings. Hospitals themselves have special requirements that need to be met on top of the requirements of the BCA," said CERTIS Principal Building Certifier, Belinda Hyde.

"There is an "atrium" area which had to be fire engineered. This space looks and feels great with a lot of light and texture. "The Fire Stairs are probably the most unique aspect of the project. Fire stairs are generally solid

concrete to achieve the required fire rating however, the architect designed the stairs with glass. This was done as an alternate solution and it has opened the building up and utilised the natural light through the stairs instead of a concrete shaft. It is quite effective."

Key challenges for the project included ensuring the protection of steel columns in the building, the size and location of the access stairs to the plant room, the separation between buildings, stair pressurisation, glazed fire stair and the methodology used to overcome issues around the protection of openings. Extensive liaison was undertaken with key stakeholders, including ACTPLA and ACT Health, the builder (Iqon), engineering consultant Aecom, and the architects HBO + EMTB.

Another issue which CERTIS were able to resolve was the energy efficiency assessment for section J compliance.

The 3rd floor of the building was partly vacant, which affects the energy efficiency of floors above and below, CERTIS' Energy Consultant, Ray Argue, implemented a temporary measure to enable certification of the 3rd floor without insulating the ceiling below.

"The project has been a difficult one which has kept me on my toes. Most government buildings like this can be challenging as there are so many different requirements that the end client needs which have to fit into the realms of the BCA. This is a challenge in itself but this is what makes a building like this so interesting to work on," said Belinda.

CERTIS Building Certification is one of three divisions in the CERTIS Group. Together with CERTIS Energy Assessment and CERTIS Access Consultancy, the company provides developers, builders, agencies and consultants with informed expertise and advice to assist with meeting the various regulatory requirements and standards which apply to buildings across all sectors.

CERTIS Building Certification provides practical and cost-effective solutions for ensuring fire and safety standards. In addition to undertaking inspection, compliance and approval processes, they also provide consultancy services for clients looking for a straightforward, value-adding approach to delivering designs effectively.

The staff of the Certification division hold building surveying and fire engineering

qualifications, and work closely with clients to reduce the costs and bureaucracy involved in achieving compliance, through applying experience and knowledge of wide diversity of possible methodologies, materials and design alternatives.

CERTIS Energy Assessment Consultancy operates as an independent arm of the CERTIS Group to provide impartial and professional advice on energy and compliance with Section J of the BCA. Their reputation is founded on many years of delivering high level services in the field of building surveying covering a range of disciplines related to the statutory control of buildings.

The practical advice they can provide to clients includes meeting the Deemed to Satisfy technical requirements of the (BCA), and also the JV3 Verification Method where proposals do not meet the deemed to satisfy provisions in the BCA. CERTIS Energy Assessment Consultancy can also carry out energy modelling requirements for Green Star / LEED certification and the energy modelling protocol for NABERS Commitment Agreement, in addition to site energy assessment and identification of areas where efficiencies can be gained.

CERTIS Access can provide a comprehensive service aimed at providing clients practical and supportive advice with respect to designing for people with a disability. This includes meeting the broad principles of the Disability Discrimination Act along with the technical requirements of the Building Code of Australia (BCA), the Disability (Access to Premises – Buildings) Standards and associated guidance, in particular the AS1428 suite of guidance.

In addition they can assist in developing "Alternate Solutions" where proposals do not meet the deemed to satisfy provisions in the BCA as well as broader Disability Action Plans, which can identify a package of measures including management responsibilities.

CERTIS Access can also provide site audits, identifying barriers that may prevent a person with disabilities from accessing a service, as well as offering solutions to improve accessibility. By being able to identify these during the early stages of a project, potential barriers can be identified and redesign carried out – thereby avoiding the need for costly rectification works. For retrofits, CERTIS Access can provide site audits of existing premises, and recommend methods of improving accessibility which

can be incorporated into a refurbishment program at little or no extra cost.

Measurable results, reliable data and strategic advice tailored to each specific project are the methods by which CERTIS Group's solutions-focused thinking ensures buildings are compliant, safe, accessible and energy efficient by design, and throughout their life cycle.

For more information contact CERTIS Group, Canberra Office - PO box 1977 Canberra ACT 2601, phone 02 6232 3000, fax 02 6232 3099. Head Office - Brisbane - PO Box 1065 Milton BC QLD 4064, phone 07 3144 4600, email belindahyde@certis.com.au, www.certis.com.au



PROUD TO DELIVER FINE WORKMANSHIP

For 24 years M & M Kitchens have been designing, crafting and installing high-quality joinery for projects across the ACT and surrounds. One of their recent showpieces is the Canberra regional Cancer Centre, where they supplied and installed all the building's architecturally-designed joinery from ground floor to level five.

Given the dual requirement of an extremely high level of finish to create a warm and nurturing feel, while at the same time ensuring impeccable levels of hygiene, the materials chosen needed to be aesthetically pleasing, durable, sustainable and ensure high levels of hygiene.

For the main reception counter and bench tops throughout the Centre, DuPont™ Corian was used. Corian is an advanced blend of natural minerals, pigments and polymer, and is extremely versatile.

In the lift areas, M & M installed iron bark veneer panels and solid iron bark kicks, giving a very classy and organic feel to the space. Cabinetry throughout was constructed using Laminex Structural HM REO, a product which has been awarded the Good Environment Choice Australia Mark.

By using Planit's Cabinetware software program, M & M were able to produce detailed plans and shop drawings before manufacture in the company's technologically advanced workshop which is equipped with the latest CNC machining, edge bander and panel saw for efficient, accurate and high-quality results. M&M's staff

comprises locally qualified tradesmen, who take pride in producing superior workmanship.

M&M design and manufacture a wide range of joinery including whole kitchens, laundries, vanity units, wardrobes, linen storage, entertainment units and study and office fitouts. They have completed projects across both the private residential and commercial sector, with other recent major projects including the Jewish Child Care Centre, ATO Headquarters, Thrifty Car Rental, Holy Sheet, the Acute Mental Health Unit and numerous KFC outlets throughout New South Wales and Victoria.

As part of their client-focused approach to their craft, M & M provide an obligation free design and quote service, including computer enhanced design and 3D perspectives. All cabinetry carries a 10-year warranty, with a manufacturer's warranty on doors and benchtops. They source locally-produced materials wherever possible, and have a wider supplier network which includes leading makers of fixtures and fittings.

The result of this combination of skill and commitment is an end result which combines function, form and lasting style.

For more information contact M&M Kitchens and Joinery, 8 Barrow Place, Queanbeyan NSW 2620, phone 02 6299 2322, fax: 02 6299 7159, email mick@mmkitchens.com.au, website www.mmkitchens.com.au



A FUSION OF SKILLS ENSURES A FINE FITOUT



Challenges such as those presented by the Canberra Cancer Centre (CCC) Project give Antos Constructions an opportunity to showcase their extremely high level of project management and design and construction skills.

Their scope included all the ceilings, dry walls, bulkheads, door frames and partitions, tasks which were complicated by the specific requirements and specifications of this state-of-the-art medical facility.

Some of the ceilings, for example, featured specialist tiles which 'reflect' air-borne bacteria, delivering a level of hygiene which is crucial for patients whose treatment has compromised their immune systems. Antos Constructions imported these tiles from Denmark, and given the three-month wait time on procurement, effective organisation during the planning stages was essential.

"There were numerous acoustic treatments we applied throughout the CCC, including some walls which were fully insulated from slab to slab. The acoustic requirements were really high," said Antos Constructions Director, Nick Antos.

"The most difficult part of the project technically was the SuperWood used in some of the feature ceilings. It is quite expensive, and relatively difficult and time-consuming to install, requiring a carpenter with more abilities than the average framer.

"We had to be very flexible on this project, and vary the manpower from 40 at peak of works down to just key tradesmen and site supervisor. We also had to factor in unforeseen events. For us, it is really important to do the right thing in terms of quality workmanship, and to be able to walk away from a building knowing we have delivered something the client is pleased with.

Nick Antos has been in the construction industry for 21 years, and his training in architectural drafting has given the company a solid ability to interpret plans, refine specifications, accurately determine quantities, resolve detail issues and develop methodologies.

"Many things which are easy to draw are actually hard to build. We like to look for simple ways of solving those problems," said Nick.

The company's staff includes a highly experienced project manager, site manager and foreman, a carpenter, a framer and a qualified builder with an A-Class Builders License. Antos Constructions has a regular, trusted workforce of tradesmen and labour to draw on for projects, who all adhere to the company's high standards of skill, professionalism and safety.

Antos Constructions have undertaken fitout projects across the residential, commercial, retail and health sectors around the ACT, such as the M Centre in Manuka, Equinox (both commercial fitout and the complete private hospital and doctors fitout), the ATO in Civic, and the complete fitout including FFE, services, electrical, floor coverings, walls and ceilings for the Cultural Mission of

Saudi Arabia. In addition, the company develops and builds residential projects, with successes including an MBA and HIA award-winning complex of seven 50-square homes in O'Malley, and the Camerai Apartments in O'Connor, a 20-apartment project which won the 2013 ACT MBA Award for Apartments and Units up to Three Storeys and 2013 HIA ACT & Southern NSW region Award for best apartment complex of the year.

For more information contact Antos Constructions, Unit 2/47, Tennant Street, Fyshwick ACT 2609, phone 0418 261 251, email antosconstructions@bigpond.com, website www.antosconstructions.com

