



PARKVILLE NEUROSCIENCE DEVELOPMENT

MAIN CONSTRUCTION COMPANY : Brookfield Multiplex Australasia
PROJECT MANAGER : DCWC Management
QUANTITY SURVEYOR : Davis Langdon Australia Pty Ltd
STRUCTURAL/CIVIL ENGINEER : Bonacci Group
PROJECT END VALUE : \$100 million
COMPLETION : First Half 2011
ARCHITECT : Lyons

BUILT FOR THE FUTURE OF NEUROSCIENCE

For Brookfield Multiplex, a leading global contracting and development company which builds, engineers and maintains property and infrastructure around the world, the \$100 million Parkville Neuroscience development is an especially exciting project. Brookfield Multiplex has proven expertise across the project lifecycle in a broad range of sectors including education, health, commercial, residential, retail, civic facilities & general civil infrastructure.

The Parkville Neuroscience Development will accommodate three medical research organisations: the University of Melbourne neuroscience and developmental biology groups, the Florey Neuroscience Institute (FNI) and the Mental Health Research Institute (MHRI). It will be occupied by 500 scientific staff, and will include six levels of intensive laboratories and office space with four levels of parking below, the DAX art gallery, auditorium, MRI facilities and airtight PC3 laboratories.

As the design and construction managers and main contractor on the project, which commenced in August 2009 and which is currently entering the completion phase, Brookfield Multiplex has committed itself to constructing a laboratory building with a 5 Star Green Star Design rating under the Education V1 rating tool.

The building's 'green' features include a highly efficient ventilation system: office areas will operate on a mixed-mode system, and economy cycle and openable windows will provide outside air into the space when ambient temperatures are suitable. A weather station will record outdoor conditions, and the information provided by it will allow the building to determine its ideal operating mode to minimise energy consumption.

The façade of the building is key to the building's green credentials, and the complexity of its design has presented some challenges for Brookfield Multiplex.

The façade will reduce heat gain through a combination of precast concrete spandrel panels for thermal mass, double glazing to minimise heat transfer and sunshades designed to intercept direct sun during the warmer months of the year. This passive design also assists in reducing the demand on the ventilation system all year round.

The building is designed to minimise its use of grid-based electricity through its co-generation plant, which provides electricity to the building using natural gas as its fuel source, reducing emissions by



approximately half those which would occur if grid base electricity was used. The roof will act as an extensive catchment area, providing rainwater to a 50,000-litre tank located in the basement to be used for toilet flushing and irrigation.

Apart from the façade, the project has presented other challenges that Brookfield Multiplex has handled deftly. The early handover of the basement carpark means that construction is occurring in tandem with continual public access onto and off the site, and there have been additional public safety challenges given that the site is within an operating university campus.

The project is adjacent to one of Melbourne's largest arterial roads, so works have had to be coordinated to ensure that the roads are able to operate as normal. There are also logistical issues involved in working in close proximity to the heritage-listed elm trees on Royal Parade and protected plane trees within the university grounds. It has been necessary to continually monitor the trees to ensure their survival.

Other projects Brookfield Multiplex is currently working on include RMIT Swanston Academic Building in Melbourne's CBD, and an apartment block in the Harbour One complex at Docklands. Recently, the company won the prestigious 2010 Australian Construction Achievement Award for its work on the Melbourne Convention Centre.



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The Parkville Neuroscience Development at
Melbourne University, VIC





YOUR PROJECT MANAGEMENT PARTNER IN SPECIALIST DEVELOPMENTS



Donald Cant Watts Corke Management (DCWC) is responsible for the project management of the design and construction of the Parkville Neuroscience Development which will form part of the newly formed Melbourne Brain Centre. The company was appointed to the project in 2007 and managed the design process prior to Brookfield Multiplex coming on board as the head contractor. DCWC is also the superintendent.

DCWC was founded in 1966, has offices in Melbourne, Canberra, Sydney, Brisbane and Perth and employs over 100 staff. It specialises in project management and cost management and has worked on major building and infrastructure projects across Australia, in the areas of education, health, the arts, transport and defence, residential, commercial and retail. It also offers quantity surveying, independent certification and review and strategic planning services.

The DCWC personnel who worked on the Parkville project were Alan Findlater, Phyllis Agam, James Hawkins and Peter Syme.

The laboratory aims to achieve a 5 Star Green Star design rating, and this has involved extensive consultation with the Green Building Council of Australia (GBCA). Alan Findlater names this as one of the major challenges of the project, along with managing all the stakeholders. "It's a multi-stakeholder project that involves bringing

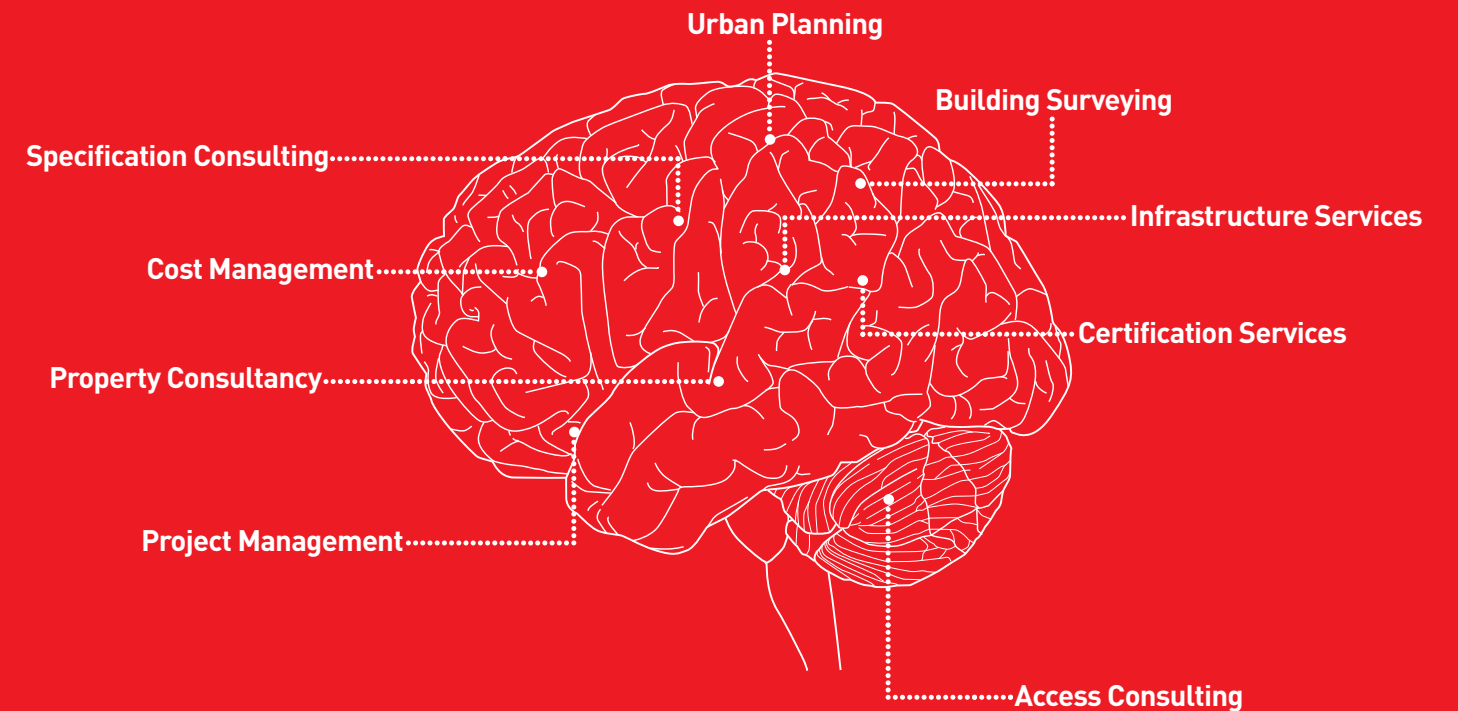
a lot of different groups together. That itself was a challenge; incorporating everybody's requirements into the design," he says.

DCWC is currently working on the Peter Doherty Institute for Infection and Immunity at the University of Melbourne, another \$200 million plus, multi-stakeholder laboratory project.

The company was nominated for the Built Environment Award at the 2009 Banksia Environmental Awards and the Built Environment Award at the 2009 Premier's Sustainability Awards for the Faculty of Economics and Commerce Building at the University of Melbourne.

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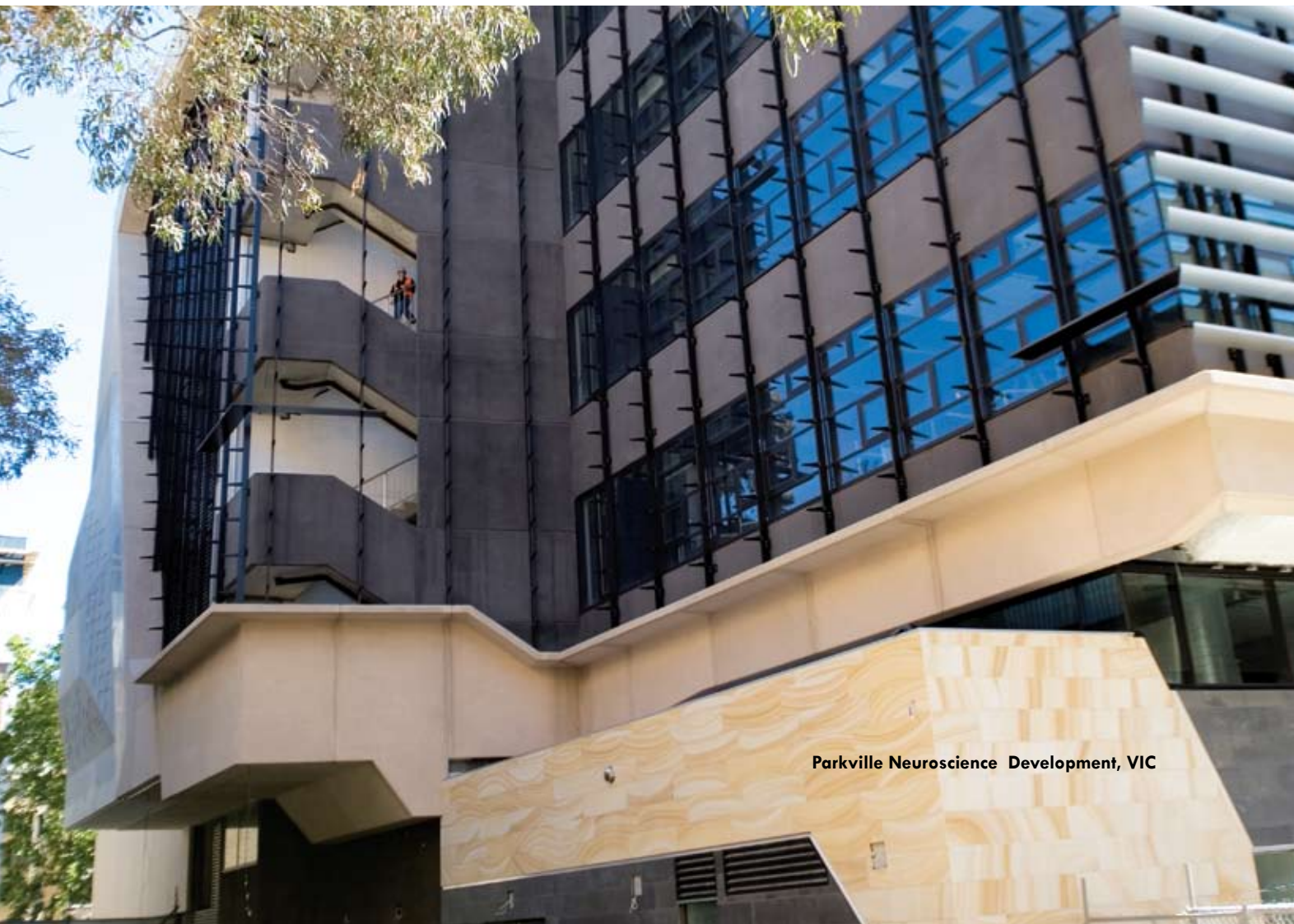
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**MECHANICAL SERVICES ARE
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Parkville Neuroscience Development, VIC

Effective and efficient mechanical services are vital to a project of this nature, and no-one understands this better than D&E Air Conditioning. D&E is contractually responsible for the design, construct and commissioning of the mechanical services installed as a critical component for the Parkville Neuroscience project, which includes clean rooms (both PC2 & 3), cool rooms, medical gases, reticulation steam, fume cupboards and a comprehensive BMS system. The project is aiming to achieve a 5 Star Green Star Education rating.

D&E Air Conditioning, based in Melbourne and Geelong, was founded in 1989 and today boasts over 200 employees. The company provides detailed design and construct solutions for all types of buildings, encompassing BMS control systems, environmentally sustainable HVAC solutions, industrial ventilation installations, dust control and exhaust installations, industrial process piping, sheet metal and steel fabrication, clean rooms, and ferrous and non-ferrous piping installation. D&E specialises in installations for the pharmaceutical industry, hospitals and laboratory environments. Commercial and retail developments of various scales are also part of D&E's flexible suite of services.

Five years ago the Hastie Group acquired D&E Air Conditioning. General Manager Greg Andrews says: "This has complemented and added to D&E's strength in the industry. Belonging to an international group that has separate business units in each state and region that can provide a full range of building and engineering services has given D&E a much greater scope."

D&E stands apart from other companies of its class and size due to its close focus on designing and delivering projects with low environmental impacts. The additional challenges and sensitivities associated with

environmentally sustainable projects are ably met by in-house Green Star and NABERS accredited engineers.

Some recently completed D&E Air Conditioning projects that have strong environmental outcomes are Southern Cross 2 (5 Star Green Star Office Interiors); 181 William Street (5 Star Green Star Office As-built – 4.5 Star NABERS commitment); 140 William Street, Perth (5 Star Green Star Office Design); and Myer C9 Docklands (5 Star Green Star Office As-built).



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