

A WORKPLACE DESIGNED FOR WELLBEING

With its abundant natural light, Green Star rating, spacious floor plate designs and prime location within walking distance of Parliament House, the Attorney-General's Department and other tenants of 4 National Circuit have acquired space which embodies the best of 21st Century design and construction.



Built on the site previously occupied by the Robert Garran Offices, the new 30,000 NLA Grade-A state of the art development comprises premium office space over five levels, spread across two six-level wings connected by a wide ground-floor lobby and atrium. The ground floor also includes a mix of retail tenancies, and there are four basement levels, providing parking for over 700 cars and secure bicycle parking facilities.

The unitised curtain wall of both east and west wings comprises high performance glazing, steel features and distinctive copper-clad fins on the front facade of the building, which gives the overall building a distinctive appearance. Other materials used in the project's finishes include marble and granite, which adds to the high calibre aesthetic throughout.

Developed by ISPT and designed by Fender Katsalidis Architects, the project has a Five Star Green Star rating for design, and is targeting Five Star Green Star As-Built, 5 Star NABERS Energy and 5 Star NABERS Water.

The floor plates have been designed with wide column spacing, allowing tenants to create office fit-outs which suit the collaborative style of working and allow for productive use of space. A state-of-the-art conference centre equipped with the latest in audio-visual technology has also been constructed within the project and will be available for use by major tenants for meetings of up to 150 persons, minimising the need to set aside multiple large meeting room spaces within tenant fit-outs.

The lobby area provides not only a striking entrance, but also a common break-out space, and there is a cafe adjoining the project's landscaped courtyards, maximising the on-site amenity for the workforce.

Providing a high level of service is part of the overall ethos which has driven the project, with extra refinements including a concierge service, which will provide a range of services including taxi bookings, small errands such as dry cleaning drop offs and pickups, through to event planning.

Leading engineering firm Norman Disney and Young (NDY) acted as both the project's ESD Consultant and the Building Services Engineer. The NDY Building Information Modelling System (BIM) was used to review

and consolidate the design, documentation and equipment schedules. All the consultants used the 3D modelling for the project, with Clash Detection used to coordinate the design, architecture and services to reduce clashes and improve the overall coordination of the design process.

Some of the design elements which delivered the high Green Star and NABERS ratings include DALI lighting control systems, rainwater harvesting, grey/blackwater treatment and double layer, extensive use of blinds and shading to reduce solar glare and modulate temperature rises throughout the day; and thermally efficient glazing to both reduce heat loss in Canberra's notoriously chilly winters and reduce the impact of the searing summers. The services fit-out, including the security, voice and data communications cabling, was integrated with the base building works.

Other Green Star achievements include the recycling or reuse of 80% at least of construction waste by head contractor Bovis Lend Lease and their subcontractors; ventilation rates designed for 50% improvement above the fresh air rate requirements in AS 1668.2-2002; installation of a carbon dioxide monitoring system to adjust ventilation rates; the use of almost exclusively low-VOC carpets, adhesives, paints and sealants; low-formaldehyde composite wood products; and a dedicated tenant exhaust riser to remove indoor pollutants from printing and photocopy area.

For the Attorney-General's Department there are specific efficiencies created by their stunning new accommodation.

Prior to the completion of 4 National Circuit, the Department held leases within three other ACT buildings, in addition to the lease on their new headquarters at 3-5 National Circuit. By relocating sections of their workforce previously located elsewhere in Deakin, Bruce and Barton into the new premium space across the road from the Headquarters office, the Department will now have all its Canberra-based administration consolidated in the one area, giving increased departmental productivity efficiencies. For the workers, the combination of attention to detail in design, quality materials and integration of healthy workplace principles in terms of lighting and indoor air quality, will possibly add a lovely new dimension to the concept of 'job satisfaction'.

SECOM Technical Services were awarded the contract to design, deliver and warrant an integrated Security System for 4 National Circuit. SECOM responded to the client brief with a proposal to meet the security needs of the building and its new tenant, the Attorney Generals Department. The proposed system was required to operate with other systems already deployed by the Department and so the system design incorporated these requirements.

This project is the third completed by SECOM in association with Lend Lease since 2005 and completes a property rationalisation programme by the Departments of the Attorney General and the Prime Minister and Cabinet.

The Security system provides for the following functions:

- Access Control
- Intruder Alarm
- Closed Circuit Television
- Intercom
- Key management
- Pedestrian Control
- Optical fibre communication network

The Systems installed by SECOM Technical Services include the latest products from Gallagher and DvTel Systems, which interface with the existing products used by the Department to form a complete security solution. "The interface of systems to multiple user groups and building services, including lift and intercom systems," said Director Ray Jewell, "is a major achievement in the project".

SECOM Technical Services is a specialist provider of Electronic Security Services providing services Australia wide, with offices in Brisbane, Sydney, Melbourne, Perth and Canberra.

The core services of SECOM Technical Services are the development of electronic security systems including design, documentation, integration, installation, training and support. Certified management systems provide the framework for service delivery. These continually evolving systems ensure that SECOM is responsive to the changing technologies and needs of our industry and clients.

SECOM commenced operation in Tokyo in 1962 and is celebrating its 50th year of operation this year. Since its inception, the company has



steadily grown. It now operates in 12 countries and employs in excess of 40,000 staff.

SECOM commenced operations in Australia in 1992 and has in excess of 240 staff. The company provides a range of security services including Security Guarding, Mobile Patrols, Electronic Security and Support Services including Remote Alarm Monitoring.

The SECOM Group of companies in Australasia consists of SECOM Australia, SECOM Technical Services and SECOM Guardall New Zealand.

SECOM Technical Services has 80 employees who operate in the various disciplines of the security business and who together provide a complete service for their clients.

The Project Manager for the 4 National Circuit project is Mr. Paul McWilliams. He has successfully delivered a number of similar projects over the past three years. Paul has a Project Team consisting of Team Leaders Darren Mason and Glen Harris, Technical Lead Jonathon Small and Project Lead Jonathon Kalina assisted by Technicians Jorge Chrysostomou and Anthony Phillips.

This highly professional team successfully overcame the challenges of the project through effective management. These challenges included:

- Work, Health and Safety considerations pertaining to staff, visitors and the public who come to the construction site
- Co-ordination of Security Services to ensure the finished product was fit for its purpose and compliant with all overarching regulatory authorities
- Connection to existing external "in-service

systems" without unnecessary interruption to Departmental operations

- Installation of systems during all phases of construction, requiring planned attendance during the entire construction period.
- Matching of resources to the construction program to ensure timely delivery of services without impact on other trades or services.
- Adjustment of system design to accommodate future and out of scope design changes without limiting the

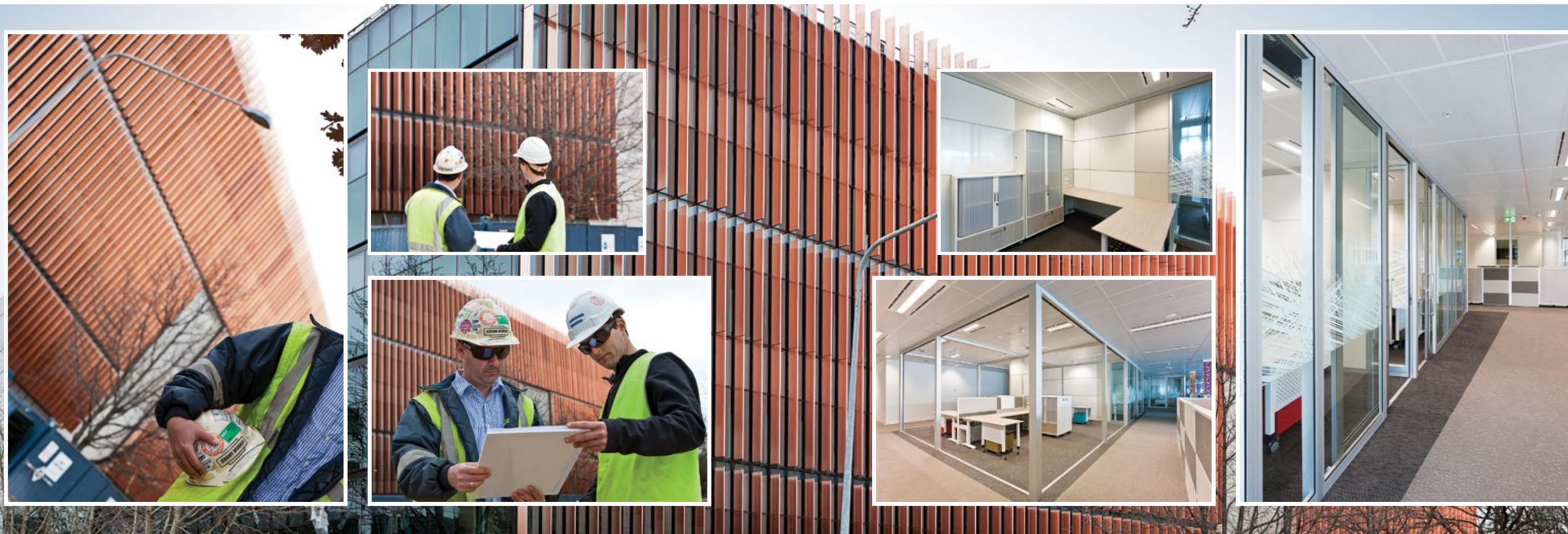
capacity or capability of the system to meet specified requirements.

SECOM's service philosophy focuses on meeting the objectives of its clients, in design installation and maintenance of security systems.

For more information contact SECOM Technical Services, phone 02 62974670, email: Sales@secomts.com, website: www.secomts.com

Below The experienced team of professionals, ACT Geotechnical Engineers provided solutions for 4 National Circuit.

Below For 4 National Circuit Panelwall supplied a detailed design, then manufactured and installed demountable office partitions to the required custom specification.



The saying goes that solid foundations are necessary for a building to last. In this respect the 4 National Circuit site provided huge challenges. ACT Geotechnical Engineers' experienced team of professionals provided solutions. "The geology in the area is complex, and includes folding and faulting of the bedrock," said the Principal, Jeremy Murray. Some of the challenges they advised on were:

- Much of the site was underlain by very strong calcareous siltstone and limestone bedrock which had compressive strengths greater than 200MPa, and required continuous heavy rock hammering
- Temporary stability of the 12m deep basement excavation batters
- Permanent stability of the basement sides due to the ~20m wide fault zone causing the bedrock to be weak, fractured, and unstable
- Foundations of the large mobile cranes that were located close to the basement walls
- Footings of the heavy building loads, especially in the fault zone
- Dealing with strong groundwater inflows into the basement excavation

ACT Geotechnical Engineers was formed in 1994 and acts as a geotechnical engineering consultant to industrial, commercial and mining companies, statutory bodies and government departments. ACT Geotechnical Engineers has worked on projects in ACT, Goulburn, Cooma, Wagga Wagga, Albury, Sydney, Wollongong, Southern Highlands, Newcastle, Port Macquarie, Northern Territory (Ranger Uranium Mine), Queensland and Victoria. Some recent projects include:

- Bruce Stadium (structural and civil geotechnical services)
- Harcourt Hill Irrigation Dam and Coombs Ponds (embankment design, construction control, and instrumentation)
- Manhattan Apartments, Haig Tower, Manuka Plaza, and National Portrait Gallery (investigation for multi-storey buildings)
- Conder, Elmgrove & Kinlyside Reservoirs (investigation, high rock slope stabilisation)
- Thredbo Village, various lodges (slope instability assessment, subdivisions, bridges, retaining walls)
- Monaro & Barton Hwy, Tuggeranong Pkwy and Anzac Pde Upgrades (investigations for road design)
- Commercial developments in Fyshwick, Yass, Goulburn, Batemans Bay, Merimbula, Pennant Hills, Bega, and Fairy Meadow
- Sunshine Bay, Rosedale, and Long Beach Estates and Batemans Bay Coastal Zone Management Plan (slope instability, acid sulphate assessments)
- Bridgepoint (investigation, consultation on an ongoing basis)

ACT Geotechnical Engineers prides itself on its close personal involvement both with projects and with clients' needs.

For more information contact ACT Geotechnical Engineers, 31- 37 Townshend St, Phillip ACT 2606, phone 02 6285 1547, fax 02 6285 1861, mobile 04 0406 4858, email: Jeremy.murray@actgeoeng.com.au, website: www.actgeoeng.com.au

Four National Circuit is a prestigious office development in Canberra, ACT. It was designed to be highly energy-efficient and environmentally sustainable.

Panelwall had the expertise required for this project. The company specialises in demountable office partitions with an emphasis on peak environmental sustainability. They are a Member of Green Building Council of Australia and are accredited with ISO14001. Panelwall has a wealth of experience in projects requiring a large number of offices. For this project, they provided a detailed design, then manufactured and installed demountable office partitions to the required custom specification.

Panelwall has a dedicated, professional team led by:
Sales and Marketing Director: Robert Wall
Manufacturing Director: Craig Bricknell
Installation Director: Leigh Bricknell

The company maintains a substantial inventory of system extrusions and components to construct up to 50,000m² of partitioned office space at any one time. They manufacture and process wall panels, framing and glazing systems in their 2,500m² production facility using state of the art CAD/CAM machinery.

Panelwall prides itself on producing innovative solutions. They developed and introduced a double glazing system for this project.

Panelwall's glazing systems reflect the latest in European trends, customised for Australian conditions. The company also developed what they call the 'power blade'. This has a connection box within the wall that allows for electrical services, data and specialist cabling systems.

Panelwall enjoys the patronage of prestigious clients, including federal government departments (DEEWR, DH&A, FaHCSIA) and corporate clients such as accountants and law firms. Its services are currently available throughout Australia and Asia. The company has recently completed a training and laboratory facility for the Pharmacy Department at the University of New England.

Panelwall was recently awarded the internal glazing contract for the Luxury Nishi Residential Building on the shores of Lake Burley Griffin at Acton in Canberra after developing a new internal glazing and sliding door system for the residential market.



For more information contact Panelwall, Unit 1, 63 Norman Street Peakhurst NSW 2210, phone 02 9584 2320, mobile 0418 657 205, fax 02 9584 2325, email: info@panelwall.com.au, website: www.panelwall.com.au

Below Coopers Fire supplied Coopers FireMaster® NVS™ horizontal fire curtain barriers for the 4 National Circuit project.

Below With a professional team providing quality service and professionalism, Spanos Waterproofing applied waterproofing for 4 National Circuit.



Coopers Fire has been supplying fire and smoke curtains to the Australian market since 1995. The team has successfully delivered their products on more than 100 projects across the Country.

Working with Lend Lease, Coopers Fire supplied Coopers FireMaster® NVS™ horizontal fire curtain barriers for the 4 National Circuit project in the ACT.

The aesthetic design of each building includes a void similar to an atrium which interconnects the 6 levels. This allows for introducing more natural light in to the building and increasing the opportunity for people to interact and share ideas. These features of the building add favorably to the 5 Star Green Office Design v3 target achievement for the project.

However, as there are 6 levels interconnected through the void, the large floor area and volume created meant that the building is required to meet the atrium provisions in Part G of the BCA. This would prove to be very costly and restrictive in design.

Coopers Fire provided a favorable solution to this challenge. By incorporating Coopers FireMaster® NVS™ horizontal fire curtain barriers on levels 2 & 4 the voids can be closed in fire mode. This reduces the compartment size to within the BCA requirements for Type A construction of not more than two interconnected floors, a

floor area of less than 8,000m² and office volume less than 48,000m³. This means that the building does not have an atrium in fire mode. Two NVS™ models were installed in the West building. These are the largest horizontal fire curtains installed in the world with No Visible Supports (NVS™).

The benefits to the development include:

- NVS™ - No Visible Supports within the atrium void
- Cost saving on atrium construction requirements
- Cheaper solution than vertical fire curtains on multiple floors
- Reduced maintenance costs with less curtains and no supports in the void
- Allows points for Green Star ratings
- Light weight construction does not require structural steel to support it

Based in Australia, the United Kingdom and East Asia, Coopers Fire has established itself as the world leader in Fire Curtain and Smoke Curtain systems.

For more information contact Coopers Fire, 21B 1-3 Endeavour Road Caringbah NSW 2229, phone 02 9526 3100, fax 02 9526 3111, email: info@coopersfire.com.au, website: www.coopersfire.com.au

Spanos Waterproofing applied the waterproofing for the podium area, planter boxes, roof slabs and plant rooms of 4 National Circuit, Canberra. “We utilised new waterproofing application techniques to meet or exceed all requirements of the project and the client,” said George Spanos, the Project Manager. “Our professional team provided the highest quality of service and professionalism to meet the strict deadlines.”

Spanos Waterproofing, established in 1996, specialises in:

- waterproofing applications
- concrete repair
- specialised expansion joints systems
- facade coatings
- waterproofing injection systems
- concrete crack injection systems
- epoxy coatings

Spanos Waterproofing used Aquagard M, Ultraure A-80 and Chemspray™ 790 at 4 National Circuit. Chemind Construction Products is the supplier. Chemspray™ 790, was applied as the waterproof membrane system to areas where long term water tightness was critical. Complex structural designs to planter boxes would have been difficult to waterproof using conventional techniques. In the hands of such experienced applicators as Spanos Waterproofing, the use of Chemspray™ 790 greatly simplified the application and produced a superior, robust but flexible membrane. The 10 second

cure time meant the waterproofing could be walked on immediately. Ultraure A-80 was applied to high traffic areas, near pre-installed equipment and where the product's excellent self-levelling properties enabled a quality finish.

Spanos Waterproofing's current projects include:

- Royal Randwick Racecourse
- UTS – Dr Chau Chak Wing
- 6C1 Acacia, 6C2 Norfolk and 6F2 Endeavour Projects, Breakfast Point
- Stella Apartments
- Avoca Apartments ACT

The company has provided waterproofing for important civil projects such as the railway bridges for the Kingsgrove to Revesby Quadruplication Project and the roof of the Air Filtration Plant for the M5 East Air Filtration Project. Spanos Waterproofing specialises in remedial work. A high-rise project recently completed in Sydney, involved concrete, render and blockwork repairs for the Joanna Odea Court Facade Upgrade Project. Spanos Waterproofing prides itself on its professionalism, expertise and willingness to use the latest technology to provide the highest quality service.

For more information contact Spanos Waterproofing Pty Ltd, Unit 23, 168 Victoria Road Marrickville NSW 2204, phone 02 9565 1099, mobile 0415 307 199, email: gps@spanoswaterproofing.com.au