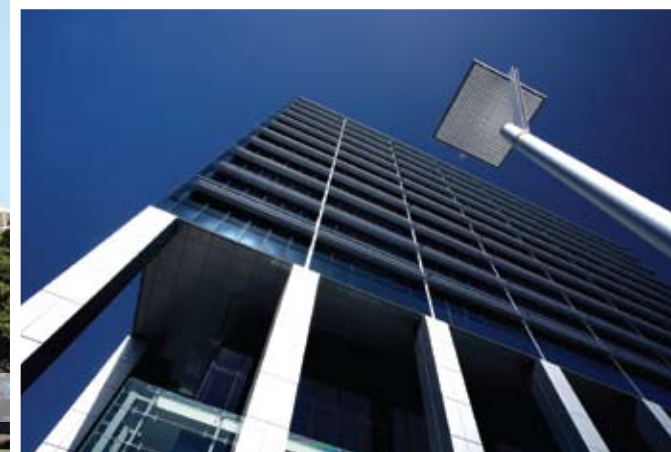


SYDNEY WATER

HQ

BROOKFIELD
MULTIPLEX
SYDNEY NSW



Sydney Water's new head office in Parramatta is a Five Star Green Star example to their customers of how to reduce water and energy consumption. Created and managed by Brookfield Multiplex, it incorporated environmentally sustainable innovations in design, construction and fit-out.

Stage one of the project in early 2007 involved cleaning up asbestos contamination at the site. Next came excavation, including site retention works and soil piling. Then up went perimeter walls, followed by structural works, the curtain wall and services rough-in. Internal fit-out and finishes followed, then services commissioning, external works and final handover in March 2009. During the construction period, Brookfield Multiplex purchased the land and constructed the building for inclusion in their property portfolio.

One of the major challenges was the need to integrate and interface with proposed Grocon / Parramatta City Council redevelopment works at the Sydney Water site boundaries, as both projects together form the nexus of the proposed Parramatta Civic Place development.

Another challenge was achieving the highest possible level of ESD. "For the building to achieve a five star NABERS (formerly ABGR) rating made

for a complicated services design," commented Project Engineer Tim James. "It was very challenging. For the Five Star Green Star rating we had to implement various initiatives and strategies during construction. These included waste minimisation, we were getting recycle rates of 97 per cent, which made the garbage man happy – it tripled the lifespan of his landfill. "We had segregated bins for different materials, our rule was if it can't be taken to landfill, everything gets reused or recycled."

The new head office replaces Sydney Water's previous offices in Bathurst Street in the CBD, and contains five basement levels for plant and carparking, a smart and sophisticated ground floor with cafes and public space, and levels 1-15 for offices. Level 16 features a breakout area for corporate events and space for workers to have lunch outside with a view. There is a reed bed, seating, a teapoint facility and meeting rooms. Plant occupies levels 16-18. All floors are connected with stairs, with travertine flooring in the lobbies and Vanceva glass in deep reds, blues, oranges and greens bringing in daylight to stairwells.

Setting a good precedent for Sydneysiders in managing water, the building has a blackwater treatment plant, reusing all dirty water, reticulating it throughout the building for use in toilet flushing, cooling towers and landscaping irrigation.

Air is another element which received special focus. All air in the building's office levels is 100 per cent fresh, there is no recycling of it through the chilled beam airconditioning system. This means workers are more likely to be alert throughout the day. All air is treated as it enters the building so there is no condensation.

Formaldehyde and VOCs have also been reduced, to avoid sick building syndrome. Targeting these indoor environmental quality points is part of creating a healthy working environment, along with an open plan and open feel, so workers can be more productive. Fit-out design maximises external views from all the offices. Lighting systems are T5, low energy consumption and high performance and set at 400 lux.

28 Brookfield Multiplex staff were based fulltime at the site office, with an extra 30 on site during the peak period of works.

Safety was paramount. Protective hoardings safeguarded the public, while sub-contractors went through an extensive safety process. A safety committee made regular walkout tours of the site both internally and externally. "At one stage, there were 350 people on site at one time, and there were a lot of people inducted as we had up to 30 subcontractors. But there was not one major injury during the entire two years," said Tim James.

ENVIRONMENTAL INNOVATIONS FOR HQ

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IT'S COOL
BEING GREEN



CLASSIC CLADDING

Panadell Architectural Cladding Systems Pty Ltd was established twenty years ago to provide builders with quality architectural cladding systems for major industrial and commercial buildings. The company maintains a presence across Eastern Australia and have fulfilled numerous contracts in Queensland, New South Wales and the ACT.

Panadell currently have a team of 60 employees, including manufacturing staff in their in-house warehouse/distribution centre, on-site tradesmen and labourers and 6 apprentices currently undergoing training.

The company applies up-to-date production and installation methods as well as state-of-the-art manufacturing equipment in order to deliver high quality and special solutions to builders and customers with a demand for more than just an average solution. Their range includes composite aluminium cladding (Alpolic, Vitrabond and Alucobond), Rockcore, compressed fibre cement, Prodema, Creaton and Terracade tiles.

Firmly at the forefront of this industry, Panadell constantly develops new techniques and work practices to ensure its future growth. At Sydney

Water HQ, Panadell were responsible for cladding 5500 sqm to the lift core, 1500 sqm to the columns, and 1500 sqm to the soffit to ceiling level 1 and 4 in Alucobond "Brilliant Metallic" aluminium composite panels. They also installed the steel substructure to support the cladding as part of the cladding package.

In keeping with their policy of meticulous quality control Panadell also assisted in the design of the panelling, thus enabling the company to have an input into the practical aspects of the construction and the fitting, ensuring the clients expectations of a superior finished product were fully realised.

Panadell have enjoyed successful collaborations with Brookfield Multiplex on the Sydney Water Headquarters project and also on Long Bay Forensic & Prison Hospital, Prince Henry @ Little Bay and Wharves 9 & 10 projects, Sydney.

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Making a building work as an environment is a job for experts. Hastie Australia designed, installed and commissioned all air conditioning systems for Sydney water corporate HQ.

Achieving the five star Green rating involved using an eco-friendly chilled beam system for airconditioning, with heat rejection via cooling towers which utilizes heat transfer through water to remove heat from the building, dissipating the heat safely into the atmosphere. All water used in the system enters a blackwater treatment process after multiple uses. "A building like this is one hundred per cent reliant on effective airconditioning, without that, it is like a greenhouse. The biggest challenge was co-ordinating all services in limited spaces. Working as a team with all other trades and services was crucial on this job," said Project Manager Stephen Brown.

The Hastie Project team of 10 worked on the project between may 2007 and Project Completion on the 2nd April 09. The company also utilized over 100 subcontractors.

Established in Sydney in 1970, Hastie Australia has grown to become an international company, providing major project delivery and maintenance in Australia, New Zealand and internationally.

Their experienced and professional engineering and management staff can handle every aspect when it comes to delivering superior building services systems, from planning through to procurement. State of the

art CAD technology is used for designing, and the best international technology sourced to actualize plans. The company also provides qualified post-installation service and maintenance technicians.

Hastie Australia has been responsible for such landmarks as the Australian Stock Exchange, Royal Prince Alfred Hospital, King Street Wharf, Auburn Hospital, Citigroup Building, Sydney International Airport Terminal and the Exhibition Centre Darling Harbour. Internationally, their work includes systems for the Australian Embassies in Vietnam and China, Saigon Towers in Vietnam and the Earth Relay Station in Kazakhstan.

With offices in Sydney, Brisbane, Perth, ACT, Melbourne, New Zealand and Dubai, they can tackle any large multistory or hospital project anywhere, anytime.

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A GOOD STRONG POUR

Pouring 20,000 cubic metres of concrete is no job for amateurs. De Martin and Gasparini Pty. Ltd (DMG) have been in the concrete contracting business since 1947. Now a wholly owned subsidiary of Boral, they sourced, poured and trowel finished all the concrete for the new Sydney Water HQ at Parramatta.

High-strength concrete was used for the entire job, which entailed 70MPa concrete to the lift core, 80MPa concrete to the columns and 22MPa @ 4 days to the slabs. DMG successfully achieved high floor tolerances using these high strength concrete mixes.

“Access was a real challenge,” said Project Manager Fabio Tuttocuore. “For the trucks doing the delivering, being right next to a major train station and school with multitudes of pedestrians meant managing truck movements very carefully”. There was an average of fifty truck movements during a typical concrete pour. Tight site access required the efficient coordination of concrete supply and careful traffic control to ensure that the supply of concrete to the pump was maintained at efficient rates, while retaining the highest level of both site and public safety.

The project gave the company further opportunity to utilise recently introduced tower placing booms to facilitate placing concrete to all elements. Freestanding, self climbing towers were introduced to the Sydney market in recent years by DMG, improving safety for both our workforce and other contractors on site. It also gives the builder the

flexibility of doing multiple pours on the same day due to the increased speed in placing and repositioning concrete delivery lines. DMG currently have at its disposal a vast range of Tower placing booms from 24m through to 36m in size.

Specialists in the supply and placing of concrete, DMG can also offer complete structural packages which would encompass formwork, reinforcement, concrete and other necessary trades to complete the concrete frame. With their extensive experience and trusted suppliers they can source and supply Green Star concrete, which incorporates the use of recycled materials and industrial waste by-products.

DMG has an enviable list of completed projects which includes notable projects such as Stadium Australia, City Bank Tower, Rouse Hill and Top Ryde Shopping Centres, Westfield Bondi Junction and Balgowlah’s new shopping and residential development.

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KALEIDOSCOPE OF COLOUR

Fit out for Sydney Water HQ involved handling complex designs on tight schedules, which is business as usual for Cubic Interiors.

The Sydney-based firm was responsible for the interior fit out that included ceilings, walls, doors, joinery, wall panels, internal glazing and room dividing walls.

Their work required integration with some of the building’s special features. For example, the ceiling system required Cubic Interiors to provide a perforated aluminium design that allows chilled beam air-conditioning to function effectively.

Van Ceva glass was procured and fitted for illuminating offices, meeting rooms and other internal spaces. This glass is a compound created with coloured PVB (Polyvinyl butyral) interlayered between two sheets of laminated glass, resulting in a glass product which is deeply coloured, offers a low solar load, is also extremely sturdy that is safe and resistant to damage. Hues used for this project included deep reds, blues, greens and oranges emitting gorgeous stained glass light effects.

“This was a highly complex project” explained company Managing Director Robert Migliorino. “We procured and delivered within an extremely vigorous timeframe of six months while having to procure specialist fittings to deliver this project on time and budget.”

Since 1991, Cubic Interiors have specialised in interior fit out, refurbishments and construction management. They have over 150 employees and contractors and are accustomed to working on complex projects. Their strengths lie in an ability to deliver state-of-the-art, cutting edge designs.

Some of Sydney’s most iconic developments feature Cubic’s work including landmarks such as World Square Tower, Chifley Square, Westpac Head Office in Kent Street, Innovation Place in North Sydney, the Citibank Building in Park Street, Macarthur Shopping Centre at Campbelltown, Bankstown Square Shopping Centre and the University of NSW Law Building.

Current projects include new fit out for Macquarie Bank at King Street Wharf, Channel 7 Studios at Redfern, Pinnacle Office Park at North Ryde and refurbishment of Australian Tax Office offices at Jessie Street in Parramatta.

Cubic offers a complete service where they are involved in the project from pre-tender to post construction phases in all sectors of the industry. They take pride in being able to deliver unique and challenging projects that is not only aesthetically pleasing but is cost effective and environmentally sustainable.

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ENVIRONMENTALLY FRIENDLY FURNITURE

Maxton Fox designed and manufactured major parts of the fit out for Sydney Water's new HQ, making the project environmentally friendly right down to nitty gritty details.

An Australian owned company which have been in the commercial furnishings business since 1974, Maxton Fox assisted with initial development of the specialised workstation system, then designed and manufactured approximately 2,400 workstations, plus locker systems and general storage requirements for the Sydney Water HQ building. They also manufactured custom joinery on the executive level, and supplied and installed toilet partitioning to the base building fit out.

With an ISO14001 accreditation recently acquired, their manufacturing process meets the strictest standards of ESD. For example, the workstations incorporate the unique MAXBoard pinnable screen, used in the internal voids of infill/tile panels in workstation screens and manufactured locally from reprocessed petro-chemical polymer waste product. It replaces MDF board which uses toxic formaldehyde resins and adhesives, also powderised and chipboard timber. The MAXBoard is inert, gives off no VOCs, is lighter than MDF and is re-fixable, re-surfaceable, recyclable and reusable. The screens were designed on a 100mm system enabling CAT 7 cabling to run through them, keeping desktops free of cords and cables. The worktops were constructed from GECA-Certified EO Board in Parchment from Laminex.

Storage supplied included two drawer and one file Mobile Pedestals, screen hung metal bookshelves for workstations and lockable Tambour door storage units, all finished in Laminex EO Fossil.



Maxton Fox employs over 60 people across manufacturing, sales and project management, with agents Australia-wide. The Sydney in-house manufacturing facility incorporates powder coating, metal, timber and upholstery workshops, allowing a great diversity of options for clients with products including also commercial and occasional seating and joinery in addition to workstation systems, storage and toilet partitioning. Manufacturing processes recently became more streamlined with the addition of a Biesse edge banding machine, allowing for gains in productivity, and reduction in power use and wastage.

Other noteworthy projects include Reed Construction in North Sydney, McGrath Ford in Canberra, Auburn Hospital and Mastercard in North Sydney.

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