CORNER OF BOURKE AND WILLIAM

BROOKFIELD MULTIPLEX
MELBOURNE VIC

The CBW buildings project in Melbourne represents another industry first for leading property company, Brookfield Multiplex as the first privately owned 5 star Green Star office design V2 building in Australia.

The highly innovative $320 million project comprises two A-grade office towers on a 7000 m² site, which is bounded by Bourke, William, Little Bourke Streets and Ramsay Lane in Melbourne's CBD.

The 181 William Street building comprises a 26 storey A-grade office tower with a NLA of approximately 49,000 m², three levels of basement car parking with 420 spaces, approximately 5,000 m² of retail facilities covering the ground and mezzanine levels. The project also included an integrated 28,000m² fitout for IAG and 9,000 m² integrated fitout for Blake Dawson.

The 550 Bourke Street building comprises a 19 storey A-grade office tower with a NLA of approximately 27,000 m² and three levels of basement car parking.

Commenced in February 2006 and completed in August 2008, the CBW project brought together an impressive team of key partners for developer CBUS Property, with Brookfield Multiplex as main builder, Architects Bates Smart + SJB, Structural Engineer Winward Structures and Services Engineer Norman Disney Young.

CBW makes an impressive statement on a very prominent location.

The ETFE canopy between the two towers creates a distinct and iconic public realm area by allowing in extensive natural light, whilst providing protection from the elements. While both towers are clad with curtain wall, the 181 William Street building has its own unique and distinctive style, created by the use of zinc panelling on the external podium.To increase the efficiency and speed of floor pours, precast concrete columns were used in both buildings.

Both buildings have a 5 Star Green Star office design V2 rating and are targetting a 4.5 star ABGR with the inclusion of innovative green initiatives including a Blackwater Treatment Plant, Destination Control Lift Systems, BAS controlled HVAC system and Solar Hot Water panels.

The WJP Solutions designed and constructed Blackwater Recycling Plant treats the buildings' black and grey water for reuse as toilet flushing and cooling tower top, and will save an estimated 25 million litres of water each year.

The Brookfield Multiplex Project Team of Andrew James, Steve Wilson, Paul Ritchie and Danny Doherty faced a number of challenges throughout the project's design and construction.

In order to meet the tight programme required by the project as well as work around existing buildings and to allow for the different separable portions involved, the project was constructed in three stages.

The structure of the south core of 181 William Street began first in July 2006. Due to the demolition of an existing 12 storey office block, the north core of 181 William commenced in October 2006.

Construction of the 550 Bourke Street building, above level one, was not awarded to Brookfield Multiplex until September 2006 and as such construction commenced on that part of the project in January 2007.

Due to the separable portions of the project, levels 1-15 and the associated base building areas including the basements and 181 William Ground Lobby were handed over to anchor tenant IAG in April 2008, while Brookfield Multiplex still had approximately 550 workers still on the project.

The staggered handover created issues as all plant for 181 William located on levels 4 and 27 had to be completed by April to ensure tenants would have a fully operational building, whilst the remainder of the works continued.

CBW is yet another major statement project in Victoria for Brookfield Multiplex, who are also a consortium member of the Plenary Group, constructing the new Melbourne Convention Centre.

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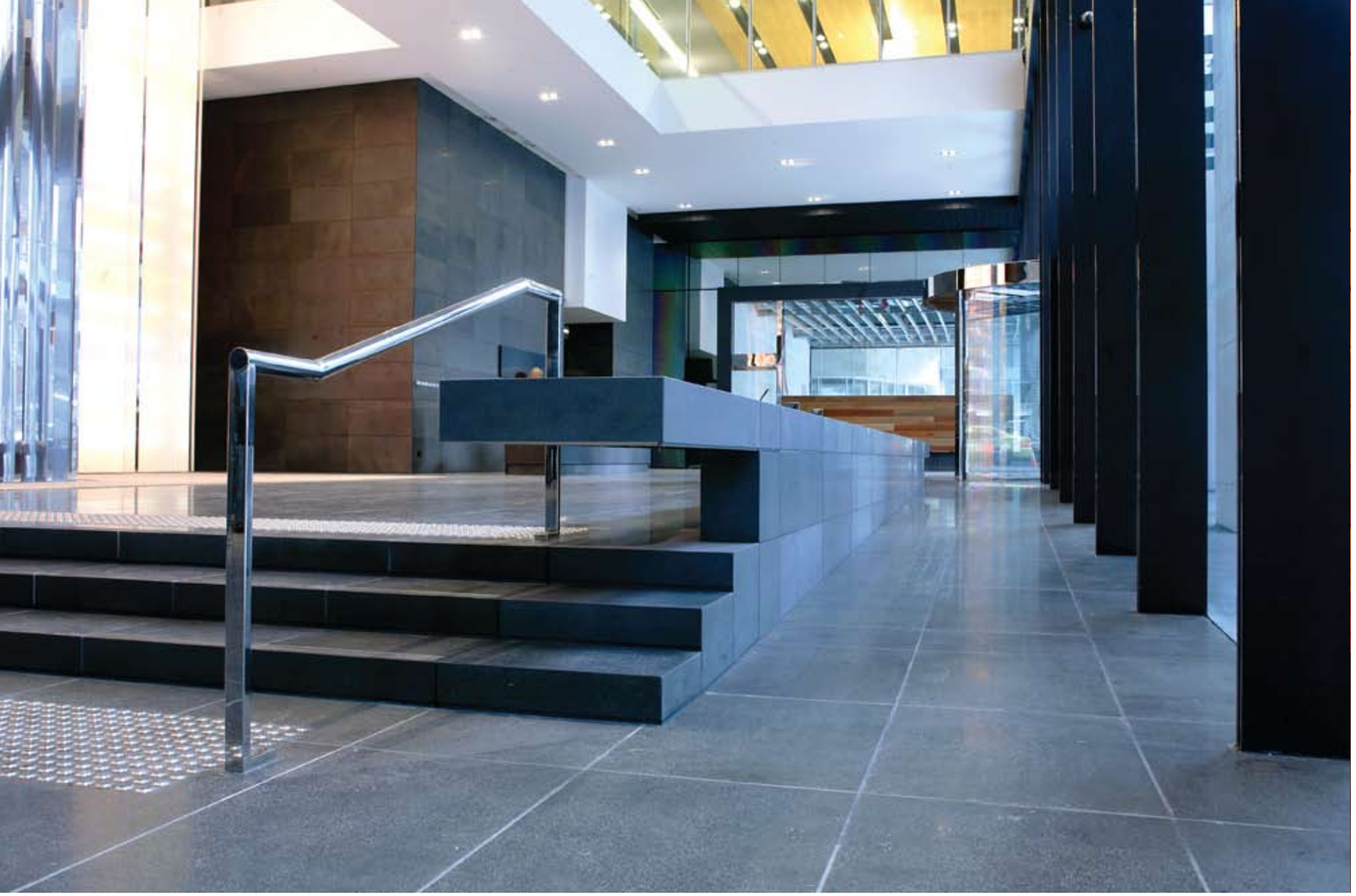

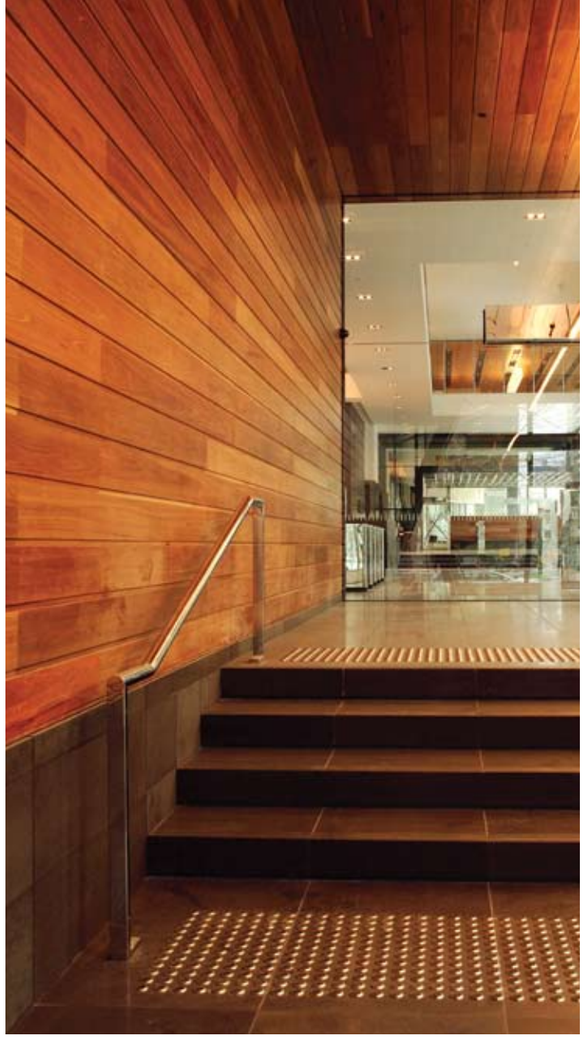

IN THE SPIRIT OF DDA

With a growing awareness of the needs and abilities of people with disabilities and the needs of the ageing population, throughout all sectors of Australian society, an increasing number of developers and builders are utilising access consultancy services firms such as Blythe-Sanderson Group to ensure their buildings comply with the Federal Disability Discrimination Act 1992 (DDA).

Founded in 1993 by Andrew Sanderson and four-time paralympian basketballer, Sandy Blythe, Blythe-Sanderson Group provides consultancy advice throughout all stages of design and construction, to assist in the enhancement of facilities for people with disabilities in all types of building projects.

Sandy's personal life experiences and passionate belief in the spirit and intent of the DDA has left a lasting legacy within the firm, which has assisted in positioning Blythe-Sanderson Group as a leading authority in the field. Through positive consultation and extensive experience, Blythe-Sanderson Group is well equipped to provide input to Corporate and Public Sector service providers. The firm's input assist its clients to encapsulate the broad needs of people with disabilities and the ageing population, whilst reflecting their growing service provision requirements based on the DDA.

Multiplex contracted Blythe-Sanderson Group to the $300m CBW project to ensure compliance with relevant legislation inclusive of the DDA.

Bounded by Bourke, William, Little Bourke Streets and Ramsay Lane, the CBW development comprises 26 storey and 20 storey A-grade office towers, both with car parking and retail facilities.

Blythe-Sanderson Group provided recommendations to the design team based on extensive research, consultation with peak organisations, government bodies, individuals and industry as well as drawing on their extensive experience from previous projects.

Whilst implementation of these recommendations is not mandatory, they provide critical direction to the design and development team on meeting the spirit and intent of the DDA, thus allowing them to make informed decisions.

With multi-towers and several streets included, the CBW development presented Blythe-Sanderson Group with a number of key challenges to overcome.

The existing topography of the land and classification of Goldsborough lane as a gazetted traffic way as well as specific Council requirements, limited the design solution options.

Blythe-Sanderson Group held workshops to ensure the best possible outcome was achieved within the constraints imposed. In some instances, the project brief and proposed direction for the design was not in line with the desired outcome in terms of access.

The company proceeded to liaise with Multiplex and the design team to develop reasonable design solutions to enable independent, equitable and function access to CBW for people of all abilities.

As a result of Blythe-Sanderson Group's consultation, specific inclusions in CBW include easy access to automated entry doors, enhanced visual indicator decals, handrails and tactiles on the exterior of the building and ground floor lobby areas, accessible toilets and showers and amenity tactile Braille signage.

The Blythe-Sanderson Group is the leader in the establishment of access consultancy services and provides access audits, design appraisals, project management and occupational therapy services.

Physical access audits identify access barriers for people with disabilities throughout existing facilities and provide recommendations and implementation strategies to rectify these barriers.

Blythe-Sanderson Group Project Management Services ensure that building works not only provide enhance accessibility to people with disabilities, but are built in compliance to relevant codes and legislations.

The company also provides Occupational Therapy Services, which involve the assessment of a broad range of people with differing disabilities in all environments.

Their Directors and staff have a diverse range of individual skill sets, which include membership of Australian Standard review committees, membership of the Association of Consultants in Access (ACAA) and professional qualifications in the building and occupational therapy industries.

Their impressive list of projects highlights the significant impact Blythe-Sanderson Group continues to make on the disability forum.

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INSPIRATION AT WORK

Schiavello is renowned for enhancing people's quality of life at work, creating inspirational workplaces as those working in the spectacular Multiplex developed CBW are certain to appreciate.

Schaivello is one of Australia's leading designers and manufacturers of interiors and furniture products for advanced work environments, providing total office solutions to businesses around the globe.

The company's standards are uncompromising, ensuring total quality management on all finished products, making them the natural choice of contractor for the CBW A-grade office tower project. The contract covered design and construct for the major fit out on levels 1, 2, 3, 5-15 of the 181 William Street tower. This work involved the production and installation of all internal walls, glass frames and the hinged and sliding doors on all levels. For levels 1 and 2 an additional special feature incorporated in the fitout was the solid oak timber stairs, custom-made and installed on the existing steel structures.

For major tenant, IAG, Schiavello designed, manufactured and installed custom-made, integrated workstations to all levels. With total control over the manufacturing process and management, Schiavello effortlessly provided a tailored solution without incurring a cost premium to the client.

Schiavello Interior Construction provides a complete and comprehensive service including construction and coordination of all trades required to deliver a total work environment.

Interior Construction is one of Schiavello's many specialist divisions, others include Project Solutions, Systems and Occasional Furniture, Integrated Technologies, Signage, Health and Education consulting.

Schiavello Project Solutions provide strategic services including premises analysis, technology and infrastructure audit, budget expenditure assessment, financial packaging, project delivery and maintenance options, which allow organizations to expand and transform their work environment.

The Systems and Occasional Furniture division designs and manufactures integrated workstations, storage solutions, meeting furniture, seating, and associated elements for every workspace scenario. Schiavello products are designed and engineered in facilities certified to local and international quality and environmental management systems. Schiavello is the first Australian company to achieve an ISO 9001 Quality Management System, ISO 14001 Environment Management System, and OH&S accreditation to AS/NZS 4801 standard.

The Schiavello Technologies division is a full service operation; consulting, designing, specifying, manufacturing and installing business technologies infrastructure. The company's technology portfolio and capabilities are constantly expanded using the advanced resources of joint venture partner Smart Guide, a technology developer/integrator, specializing in Intelligent Information Systems.

Schiavello devotes substantial resources to research and development and works closely with project designers and clients to discern market directions and trends, transforming these trends into innovative solutions that satisfy both function and design. The expansive in house R&D team works closely with production and management, facilitated by a CAD design system that interfaces directly with production machinery. This allows fast track development of new products and provides customization to exact client specifications.

One of the company's world class developments is the medium density fibreboard (MDF) powder coat technology plant. Working closely with DuPont and OEM NuTech, Schiavello delivers greater product design freedom with reduced environmental impact.

At their purpose-built facility in Tullamarine in Victoria, Schiavello applies specialized UV powder finishes on various heat sensitive substrates. The facility features a dual system powder plant which sets new benchmarks for coating performance, finish and consistency on MDF wood furniture products.

Since its foundation in 1966, Schiavello has grown to an international brand, with over 1200 employees, operating right across Australia as well as South East Asia, Middle East and the U.S.A. A respected leader in the creation of workspaces, the company is listed amongst the top 200 private Australian companies.

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WJP SOLUTIONS

FORGE FURTHER AHEAD

WJP Solutions are forging further ahead in providing unique water solutions to water management problems with the completion of the highly innovative landmark CBW Buildings Project.

WJP Solutions, formally Walter J Pratt's environmental division were responsible for the design, construction and commissioning of the first and second commercial large-scale blackwater recycling projects in Australia with the 33 storey Urban Workshop and SX1 Southern Cross buildings, completed in 2006, and their plants remain the industry benchmark for commercial applications.

WJP Solutions designed and constructed the blackwater recycling plant for the project, which involves treating the building's black and grey water to Class A standard for reuse as toilet flushing water and cooling tower top-up, saving an estimated 25 million litres of water per year.

The WJP Solutions Commercial Blackwater Recycling design was developed with the assistance of Australian Company, Memcor (A Siemens Water Technologies Company) to specifically treat and recycle blackwater from commercial buildings.

The system is a Membrane Bio-Reactor (MBR) process that converts wastewater to Class A standards. The MBR treated water is used for toilet flushing and pre treatment for desalination. Desalination of the water is performed to remove salt and hardness and is required for cooling tower feed. A Reverse Osmosis (RO) process located on the roof of each building performs this function.

The main components in the treatment plant include: Screening, Flow Equalisation, Membrane Bioreactor (bioreactor and membrane operating system cell), Chlorine Disinfection, Desalination (Reverse Osmosis), water quality monitoring and quality assurance and storage and delivery.

All wastewater flows through a fine screen with solids diverted to sewer. Screened wastewater flows to an equalisation tank for processing, the tank allows for treatment of water at a steady constant flow throughout the day. Stored water is pumped through a bioreactor which contains millions of tiny organisms reducing nutrients in the water before flowing to the Membrane Operating System (MOS) cell.

The membranes in the MOS cell provide a physical barrier for the removal of pathogens. They have a filtration efficiency of 0.04 / 1000th of a millimetre. The membranes are validated for pathogen removal by independent and internationally recognised testing procedures acceptable to the Department of Human Services and verified by both constant monitoring of water quality after the membranes and daily direct integrity testing. Direct integrity testing can only be performed on hollow fibre membranes such as Memcor's B30R membranes and the process can identify a hole in the membranes the size of 1/1000th of a millimetre. This process controls the risk of pathogens breaking through the system. If the monitoring instruments detect a problem with the system it stops delivering water for reuse making the whole process safe and reliable.

The water is then disinfected using chlorine, held and monitored for a predetermined period of time to verify a kill of pathogens and distributed throughout the building for toilet flushing and delivery to the desalination break tanks for further salt and hardness reduction.
To further ensure a safe and reliable water supply, the whole plant is monitored and controlled by a Programmable Logic Controller (PLC) and interfaced by a touch screen computer to control the plant. The same computer screen can be accessed for remote monitoring and control from anywhere in the world via a laptop computer.

The application of this membrane-type treatment process in the WJP Solutions system results in a smaller overall tank size and reduced space required for the system.

The scheme was designed so if the plant is offline, the building still has essential services such as sewer and water. This process is again automated with backup contingencies built into the plumbing design.

The WJP Solutions system has been chosen by leading builders for a number of major projects including; 50 Lonsdale Street Melbourne, The Gauge (Docklands), SX1 - Southern Cross Melbourne, ANZ Global Headquarters (Docklands), Melbourne University (Carlton), Royal Children's Hospital

The company offers engineering advice, design, documentation, construction and maintenance of commercial, municipal and industrial water recycling schemes.

WJP SOLUTIONS
proven - safe - reliable water

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