



BENDIGO BANK

PROBUILD CONSTRUCTIONS
BENDIGO VIC

WEALTH OF KNOWLEDGE

The third and final stage of the Bendigo Bank headquarters \$100 million development in Bendigo, Victoria, was completed in November 2008 and accommodates 1000 personnel in a state-of-the-art building. The multi-storey project involves an entire central business district block and will be one of the largest building projects in the city thus far. This was recognised early on by the State government who supplemented the project to the tune of \$3 million to ensure the public space surrounding the project was user friendly.

With a town square and wharf-like promenade over the creek, the project has now been likened to that of Melbourne's Southbank. Incorporating a shopping complex and cafes, the multi-function development also included a refurbishment of Level 2 of the adjacent Fountain Court building.

This is the first major regional project that Probuild has undertaken that required such a large site office to be maintained at a distance from the Melbourne base. Because of the staged nature of the job, the construction program was staggered over a three year time-frame. The company committed a team of key staff to Bendigo for the duration of the construction and encouraged them to participate in the life of the Bendigo community.

The Bank stipulated that most materials, where possible, were to be sourced within 200 km of the site and, as far as practicable, that personnel who were engaged to work on the project were to be drawn from the local community. Probuild met these requirements accurately. Materials, equipment and vehicles needed for the site office were purchased largely from local suppliers and the company recruited locally for their staff and site workers.

Probuild have been advised by some members of the local construction industry that the experience gained by those who have worked on the project has had a positive impact on the local industry as a whole. As Probuild aim to make some returns to the community through their developments, this feedback is both pleasing and constructive for the company and local community alike.

A number of unique, sustainable and innovative design and fabrication methods were utilised during the construction phase, combining to greatly increase the environmental performance of the building.

The design called for services to be installed both beneath the floors and above the ceilings, requiring a different construction system to be adopted. The use of the under-floor air highway system is unusual in Australia because most buildings do not have the raised floor required for the ductwork. The under-floor air conditioning provides fresh, clean air at low pressure and the number of outlets enables areas to be controlled locally to suit individual needs. There are also operable roller blinds controlled by tracking the sun's position to reduce internal heat transfer and glare. Both these features add to enhance the comfort levels of the building's occupants and minimise the energy required to control the internal ambient temperature. Another feature are the solar panels located on the roof, complementing the buildings hot water services.

The shading screens on the western and northern façades reduce glare and their design and installation was an interesting process. Substantial 'tunnel-testing' of the evolving window designs was undertaken to ensure that the pierced shades would not whistle in the wind. The tests at Monash University identified a whistling problem with the initial

prototypes. The diameter of the holes in each shade and the positioning of the shades to the facades were then modified to ensure that the whistling sound would be eliminated. Installation time was reduced by Probuild in conjunction with their sub-contractor Permasteelisa, who worked to devise a method of prefabrication whereby the shades were mounted to the window panels. This allowed both windows and shades to be efficiently fitted in one installation.

High performance double-glazing is used throughout the building reducing the need for artificial lighting and allowing greater views of the surrounding city and environs. Rainwater tanks and grey-water recycling systems have also been installed to maintain an eco-friendly mindset implemented by Probuild in the innovative Bendigo Bank construction project.

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RISING INTEREST

The Otis Elevator Company is responsible for lifts in some of the world's most formidable and free standing structures including the Eiffel Tower, the Melbourne Cricket Ground and of course the Bendigo Bank headquarters in Bendigo, Victoria.

The technology Otis are reputable for involves high quality elevators, escalators and moving walkways. These different systems have been designed by Otis for over 150 years, evolving into highly energy efficient lifts constructed from environmentally friendly materials. With over 2.1 million elevators in operation around the world and 63,000 employees, 200 countries rely on the quality and safety that Otis has come to represent.

The Bendigo Bank headquarters was constructed in 3 stages. Two banks of two Gen2 model lifts were installed in 2007 as part of the first stage completion. Otis then returned for the third stage and installed two escalators (510 PSE model) for the ground floor plaza along with a Hydraulic DDA (disable compliant) elevator.

The energy saving features on these two escalators is significant. With a weight sensor in the floor plate at each end they slow down to standby speed after five minutes then stop completely after a further 2 minutes if not in use. When the plate is triggered by a person's weight they quickly resume full speed. This smart feature represents a significant saving in power consumption in a situation where many models run potentially all night at full speed.

The variable frequency control module allows the 510 PSE to save its building managers a sizeable part of their power bill. The exact amount saved will depend on the number of people using the escalator and the frequency of users. The system no longer requires manual intervention to shut it down at night and this translates into an environmentally friendly approach.

"Think globally, act locally." The phrase, though the brainchild of the worldwide environmental movement, is a perfect fit for Otis. From humble beginnings in Yonkers, New York, to the worldwide industry leader it is today, Otis' long history is a testament to safety, service and performance.

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ENGINEERED STRENGTH

The multi-story, three-stage development of the Bendigo Banks headquarters in Northern Victoria, accommodating over 1000 staff and incorporating shopping precincts and riverside promenades was supplemented by the Victorian government to the amount of nearly three million dollars. Such was the government's belief in the project. Structurally, mechanically and electrically the building was going to be reliable for many years to come.

As one of the leading multi-disciplinary engineering consultancies in the world, The Meinhardt Group embraced the opportunity to deliver engineering services and economical solutions to the construction of one of Bendigo's most advanced developments.

With 22 offices worldwide and over 200 employees in Melbourne alone Meinhardt's Consulting Engineers, Planners, Project Managers and Scientists are sure to cover every aspect of the buildings construction and development to ensure reliability, safety and efficiency.

Meinhardt provides clients with a range of technical evaluation services through its Asset Management, Building Services and Building Sciences groups. Structural, Façade, Infrastructure and Environmental consultancies complement the service range with a focus on retro-greening existing buildings and developing new-generation green buildings in a bid to extract the highest possible property value opportunities. Services such as Fire Performance Engineering, Project Management, Planning and Meinhardt Light Art are also on offer.

The strength and efficiency of the building are paramount for Meinhardt's reputation. Research is conducted at both macro and micro levels to ensure every aspect of the structure is planned and tested before going into production. Light and energy solutions are achieved through their extensive modelling capabilities. NABERS/ABGR predictive modelling, thermal CFD modelling, the modelling of daylight and lighting systems, dynamic façade systems, energy recovery systems and co-tri generation systems are used to give accurate predictions for a precursor to the final design. The modelling of alternative ventilation and air conditioning systems includes chilled beams, displacement ventilation, and ground source systems. Their focus on energy efficiency, building tuning, energy auditing and Green Star assessment gives the Meinhardt Group the edge.

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Traffic Management & Security Services



The Bendigo Bank headquarters construction project in Northern Victoria has been a multi-stage development with the final stage coming to completion late in 2008. Logistically this project has been massive. Co-ordinating over 1000 employees into their headquarters whilst ensuring the development and construction goes smoothly has been a challenge for all concerned.

When the builders need their trucks and deliveries managed and directed efficiently, and the surrounding roads need their traffic diversions safe and effective, there's only one name in the book – Filcon Safety Group. Structured to accommodate the requirements of industries needs in professional Traffic Management and Security, Filcon Safety Group are proud to work along side Probuild once again to ensure a smooth, efficient and well managed site in Bendigo with minimum disruption and maximum efficiency.

Filcon is based in Kensington, Melbourne providing Traffic Management and Licensed Security Guards for the construction and film industries. Management of traffic past construction sites using traffic controllers, Arrow and VMS Boards, co-ordinating deliveries and departures, ensuring public safety by installing barricades and highly visible detours as well as traffic control during the erecting and dismantling of tower cranes on site, is all in a days work for the Filcon Safety Group.

Filcon also work with construction industry giants such as Australand, Boulderstone, Bovis, Construction Engineering, Hacer Group, Hansen Yunken & Hooker Cochram. Paramount Pictures and Sony Pictures also call upon the reputable Filcon to ensure the protection and logistical

efficiency of their stars, cast and crew when on set at various locations throughout the country.

Operating nationally the company have recently been in Western Australia providing logistical support for the Red Bull Air Race, a massive spectacle over the river involving very fast aircraft, thousands of workers and hundreds of thousands of spectators.

Whether it's a minor traffic diversion, full or part road closures, a major construction site or a star studded movie location, Filcon Safety Group is there to ensure the efficiency and flow of the area is maintained whilst the public and employees are protected by the traffic management division and the licensed security personnel.

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CLEANING THEM ALL OUT

Once the construction of a building finalises completion, the task of ongoing cleaning and maintenance both internally and externally is just beginning. The Bendigo Bank project in Victoria has been a three stage development over several years. Within that timeframe Lahns Cleaning, a Bendigo based contract cleaning firm founded in 1992 has been responsible for the ongoing maintenance of the building and its grounds. As the development stages of the building have been staggered over time, the workload of cleaning and maintenance duties for Lahns Cleaning has increased exponentially.

Lahns Cleaning employ over 30 people in a range of different cleaning and maintenance services. General cleaning involves vacuuming and steam cleaning of carpets, sterilisation of toilets and kitchens, windows both inside and out and general surface cleaning and dusting. Lahns also offer a range of maintenance and upgrades for floors and gardens.

A strip and seal method for re-surfacing stone or wood floors involves stripping back the original sealant, polishing and then resurfacing. These are all potentially problematic jobs Lahns Cleaning take in their stride providing an efficient and cost effective means of not only redoing a variety of flooring surfaces, but then maintaining them in an ongoing plan of action to make sure the building presents well everytime.

Recently Lahns Cleaning have also moved into the garden maintenance sector of the services industry with a crew that can ensure visually stunning vistas of your development in an ongoing projected plan that can not only assist the aesthetic attraction of your building but ensure an attractive resale figure should you a sale of the premises be looming. Mowing, pruning, weeding, vaccuming (particularly effective during the autumn months when leaf debris buildup can cause scummy deposits in dead ended wind-tunnels as the material breaks down into the natural humus) sweeping, raking, rubbish removal, high pressure water blasting to remove grime and stains from concrete in carparks and any other necessary maintenance duties required to ensure the internal and external cleanliness and presentation of your building is a class "A" Lahns Cleaning job.

LAHN'S CLEANING

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