



AXA Centre

Grocon's Stunning AXA Insurance Group Offices Project



No risk involved

How the AXA Group insured all's well with Grocon

Melbourne based Grocon has grown from a small family company in the 1950s to the leading privately owned development and construction group in Australia. In that time, it has constructed some of the tallest and most impressive buildings in this country, towering skyscrapers such as the 92 level Eureka Tower at Southbank and the 62 storey Cove apartments in Sydney's Rocks area. By comparison, its current 10 level AXA Centre construction at 750 Collins St in Melbourne's Docklands might at first seem overshadowed by its iconic skyline landmarks. That is, until the full dimensions and innovative design of the new AXA project are fully revealed.

Whilst it might only be a modest ten storeys high, the \$240 million project boasts some 65,000 m2 and the "groundscraper" is in fact

the equivalent of an average 30 storey building. The campus style building will eventually house some 2200 employees, plus a child care centre for 95, as well as above ground parking and a gym. As the Australasian headquarters of the AXA insurance group, the building was designed by Cox Architects, with whom Grocon previously worked on the MCG upgrading, to reflect the historical, cultural and corporate ties of AXA.

The striking architectural design features four levels of podium situated retail space leading to six levels of commercial office space and interspersed with four individually themed wintergardens. Set over three levels the wintergardens were designed by the award winning landscape design company Rush\Wright Associates, with each devoted to an aspect of

AXA's French heritage and that influence in Australia. Complimenting these spacious and light filled areas are three impressive pieces of integrated artwork by Sydney artist Jonathan Jones, each two storeys high and progressively installed at a cost of \$1.2m.

The unique nature of the Docklands site provided a number of major challenges in construction. Problems with silt from the Yarra River delta and the possibility of soil contamination necessitated the project be constructed entirely above ground level. Using the Vibro-Pile CFA pile arrangement, foundations were socketed into the rock some 30m below ground level, saving time and money. High winds in the Docklands precinct restricted the use of cranes and necessitated the adoption of an innovative system of self-climbing screens

and formwork hoists - the end result being a major contributor to the project proceeding well ahead of schedule.

Environmentally the Centre has been built with the highest energy saving applications and whilst contracted to a 4-Star Green Star rating, Grocon is confident the finished project will eventually achieve 5-Star status. As with all Grocon constructions the building is finished to the very highest standards, not only aesthetically but with the introduction of sophisticated fire prevention and air conditioning systems.

The AXA Centre also marks the first time Grocon, through the Grocon Property Trust Australia, has offered the general public the opportunity to indirectly invest in an investment-grade commercial property in

Melbourne's central business district. The Trust is now fully subscribed with AXA agreeing to lease more than 70 per cent of the building for a minimum period of 12 years.

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Imaginative design

Imagine, Design and Deliver' is the motto of Bonacci Group, a specialist civil, structural, environmental and infrastructure engineering consultancy. It's a functional motto, and functionality is what Bonacci Group pride themselves on delivering. When Bonacci Group are engaged on a project they insist on being involved at every stage of the development and construction process, helping their clients with all aspects of the project, from concept through to final construction.

Bonacci Group specialise in being at the forefront of designing economical building structures. The firm's policy is to make sure that the client gets what they pay for; providing presence on-site, getting all documents to their clients in a timely manner, and making sure that any problems are quickly resolved.

They have developed and built on these skills while working on signature projects such as the

award-winning precast post-tensioned concrete design of the Dubai Creek Golf Club; the Royal Women's Hospital, the stunning new law school at the University of NSW; and together with Grocon, the ambitious Queen Victoria redevelopment in central Melbourne – a project that takes up a whole city block. And now the stunning new AXA centre, in Melbourne's Docklands, can be added to their list of prestigious developments.

Bonacci Group's team of engineers, working on the AXA centre project, included Nat Bonacci, Lou Piovesan, and Paul Luttick. In the interests of speed and economy, a decision was made to build with prefabricated material, where possible. As a result, the columns and core walls are built up out of precast concrete segments stitched together on-site with insitu concrete joints, to form structural elements. A large 13.2m x 8.4m column grid was accommodated by the use of fully post-tensioned concrete slabs and beams.

The unique conditions provided by building in the Docklands presented Bonacci Group with some challenges. In particular, the difficult Coode Island silts, upon which the AXA centre stands, necessitated a Vibropile CFA pile footing system socketed into the rock, 30 metres below ground level.

The lower four levels of the building combine car parking and retail, while floors 5-10 are offices – AXA will be moving into this space as principal tenant soon. Perhaps the most interesting features of the design are the wintergardens and atriums – there are two main wintergardens and four main atrium spaces, open to the office environment and clad with an external glass curtain wall. Bonacci Group facilitated this daring design by determining an economical and efficient technique by which to support the facade and to provide support across the voids. Finally, the AXA centre building is capped by an interesting

steel framed roof, pitched at varying angles to enclose plant and equipment.

In the 26 years that have passed since the foundation of the Company, as a two man team, Bonacci Group now forms a tight 100-person team, spread over three states. In 2006, the firm received two prestigious BRW-St George Bank 2006 Client Choice Awards for "Most Innovative" and "Best Small Engineering Firm". The Company continues to work on a wide range of projects in the structural, civil and environmental engineering disciplines.

Bonacci Group consistently demonstrate they are genuinely a dynamic and progressive modern civil and structural engineering company – something they have again shown through their involvement with Grocon on the AXA centre development.

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Holding it together

Collins Street in Melbourne's Docklands is lucky enough to be home to Grocon's diverse new AXA Centre, with its 10 storey 'ground-scraping' design including spacious atriums, offices, retail space – a great new 'campus style' office development.

A design as adventurous as the AXA Centre requires a team of great talent pulling together, from architectural services through to the financial. However in the most important sense, what holds everything together is steel - and in this area Fielders Steel Roofing are clearly an Australian market leader, particularly through their KingFlor range of products, Australia's biggest selling range of steel formwork products.

Since the 2000 introduction into the market of the KingFlor range, Fielders have supplied many of Australia's largest multi-storey commercial

projects. The KingFlor range of products includes the popular and versatile KF57 and, from very recently, the world first new steel formwork profile, KF40, specifically designed for the Australian construction industry.

KF57 is, of course, an Australian classic; however, KF40 goes beyond. It is unmatched in providing efficiencies and cost savings in terms of cost and time – comparing it to any competitor is like comparing the iPod with the Walkman!

Currently, Fielders are supplying some of Melbourne's largest high-rise projects, many of whom are using the KF40 product. However, it is not only with their products that Fielders obtain the highest levels of excellence – along with product they provide great service and backup. Bringing a wealth of experience gained during the numerous large-scale projects with which

they've been involved, they are well equipped to provide excellent technical support, advising clients of their best options. Furthermore, they are also able to fit in with the kinds of demanding and tight schedules that a major CBD project such as the AXA Centre development necessitate. Fielders' experience and reliability make them an obvious choice for developers working on high profile projects. This point is proven by the fact that, after their experience working with Fielders on the AXA centre, Grocon has chosen to work with Fielders Steel Roofing on their next major project, the C3 & C4 development.

Fielders Steel Roofing, worked in conjunction with project manager Jason O'Hara of Grocon to determine the best steel formwork profile for the application required on the AXA project. Fielders provided design advice and technical assistance, in

order to determine and optimise the temporary propping requirements of the project.

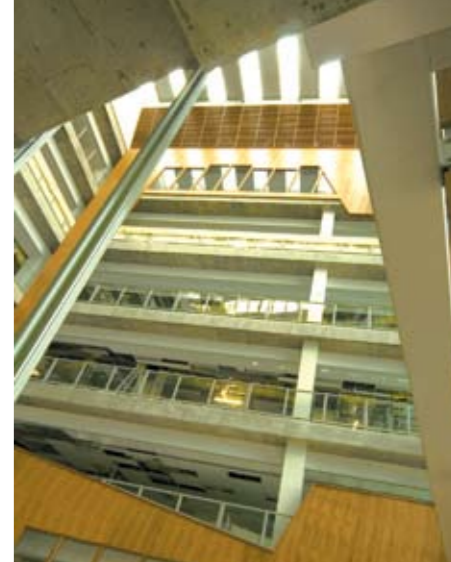
In the case of the AXA Centre development, Fielders supplied over 30,000m2 of the KF57 profile providing a structural steel formwork solution for the concrete framed building.

Grocon's choice to use KF57 steel formwork on this project was ideal in many respects, allowing them to utilise the product's ability, through deeper pan stiffeners, to improve the aesthetic value of the deck profile for exposed ceiling areas. The use of KF57 also allowed Grocon to slash construction costs on the key components of the floor. On-site labour was significantly reduced, and much less storage space was required than is the case with conventional ply formwork materials and techniques. These advantages in turn reduced OH&S issues, and

improved site access and mobility by reducing on-site congestion. Thus, Fielders Steel Roofing were able to deliver Grocon with lower preparatory costs, fewer temporary props, less site congestion and fast tracked construction.

Fielders Steel Roofing have once again shown that they are able to deliver clients truly excellent results: reliability, alongside great product, great service, great backup support, and a wealth of experience working on high-profile projects.

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High wire act

With over forty years experience in the design and installation of deep foundations, Vibro-pile are strategically equipped to meet some of the unique problems associated with the construction of Melbourne's new Axa Centre. Difficulties encountered with Coode Island silts flowing from the Yarra River delta and the possibility of low level soil contamination has determined that the Docklands project be constructed entirely above ground.

Overcoming these obstacles saw the application of a Vibro-pile CFA pile arrangement with socketing into the rock some 30m below ground level. The Continuous Flight Auger pile is a non-displacement pile used where fast vibration free installation is required in difficult ground conditions. The drilling process is ideal for penetrating dense layers and is unaffected by ground water or collapsing soil conditions. These groups of piles were designed for maximum efficiency and employed fully instrumented pile construction

and testing. The end result saved the builders Grocon both considerable time and money.

The introduction of concrete injected screw piling and computer monitored piling came in the mid 90's and was accompanied by Vibro-pile's own adoption of concrete injected CFA piling, replacing the traditional grout injected system. Together with innovative geotechnical design, this has enabled the company to increase the capacity of this pile type, allowing it to secure contracts for which previously, the system might not have been considered viable.

With "design and construct" piling now the industry norm, Vibro-pile has equipped itself well in terms of expert technical and construction personnel, together with advanced plant and piling systems, to compete efficiently in a highly competitive market. This means that an ethic is ensured where only soundly based innovative and efficient solutions are applied in

all its contracts. The design team has successfully re-engineered foundation solutions for some of Australia's most high profile structures and specializes in "Design and Construct" contracts.

Testimony to Vibro-pile's success and continuing innovation is the number of awards the company has won in recent years from the Master Builders Associations of Victoria. These include a 2003 award for "Most Innovative Construction Method" for their work on Grocon's Eureka Tower and awards in 2004 and 2005 for "Specialist Contractor Of The Year".

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Documenting the design

Architectural documentation specialists Webber & Associates played a key role in assisting Grocon in delivering the completed AXA building ahead of program. Webber & Associates, based in Adelaide, provided Grocon with a fixed fee for its documentation services after receiving a Design Development package prepared by the Architect. The completed documentation package consisted of some 300 drawings, specification and schedules.

We attended weekly site meetings with Grocon representatives and assorted consultants throughout the project and provided updated electronic documentation via Aconex.

"We feel privileged to be involved in this exciting project, which has added such an intricate and dynamic building to the landscape of Docklands," says Managing Director Geoff Webber.

Mr Webber began his Architectural documentation business 12 years ago, initially working alone in a home office. The company has steadily developed to become an industry leader and now employs around 25 people.

With a number of major projects "on the go" across Australia and looking to overseas, Mr Webber is expecting to double his workforce over the next 12 months and he is actively looking for skilled, experienced people.

"We are very proud of our reputation for delivering thoroughly coordinated and accurate documentation of the highest quality to our valued clients."

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