

# OPTIMA CENTRE

**HEAD DESIGN & CONSTRUCTION CONTRACTOR :** PACT Construction  
**DEVELOPERS :** ABN Developments & Macquarie Real Estate Equity Funds  
**COMPLETION :** May 2010  
**ARCHITECT :** Bateman Grundmann  
**STRUCTURAL ENGINEER :** VDM  
**CIVIL ENGINEER :** Ewing VDM  
**INTERIOR DESIGN ARCHITECT:** Marshall Kusinski  
**PROJECT END VALUE :** \$120 Million Plus

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the project team to deliver on its Green Star rating,” said Jason Kunkler, General Manager of PACT Construction. “There were very intensive workshops held early on during design development where we (our project team) worked together to make good design decisions which fed straight into our ability to achieve targeted project outcomes.”

It was this high performing and cohesive team environment which was responsible for the project’s success, said Mr Kunkler. “The correct selection of our site delivery team including one of Perth’s most experienced site managers and the selection of the right sub contractors was a big factor in our ability to deliver on this project.

It was a very tight market when we started Optima and we made good decisions throughout the delivery process. The partnerships we have with our sub contractors is without a doubt one of the major reasons why this project was such a success.

“This is the first Green Star rated development that PACT Construction and ABN Developments have been involved with so it was a learning curve for all of us, but we all worked cohesively and very much as part of a team and partnership.” The project team, including all key decision makers involved in key design decisions, looked closely at what was being offered in the marketplace for office development, especially in the major Sydney and Melbourne markets, and incorporated the best in the Optima Centre design.

“We then had to figure out how to integrate those elements into the West Australian environment and local conditions. Things like the winter gardens on levels 4,5 & 6 offer tenants a casual area of office space, or they can be used as a breakout area for staff located adjacent to staff hubs.

## A-GRADE OPTIMA

PACT Construction and ABN Developments have set the standard for A-grade office space (totaling 16,000m<sup>2</sup>) in the Perth suburban office market with the newly constructed and recently completed Optima Centre located within the Herdsman Business Park.

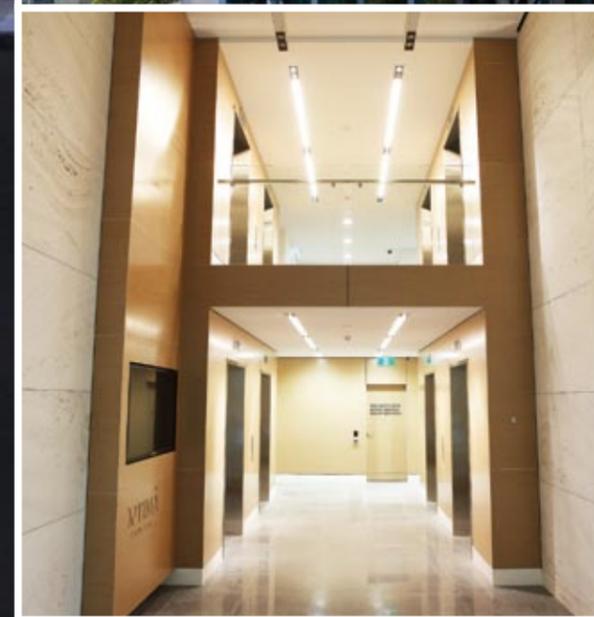
The 4.5 star NABERS and 4 star Green Star rated building is not only one of the most innovative and sustainable projects in WA, but also nationally, and already is receiving accolades for its design and construction. Already, The West Australian Government has leased all of Building B (13,000m<sup>2</sup>) for 15 years citing its green credentials as a factor for its decision.

PACT is the commercial building arm of Australia’s largest residential building group, The ABN Group (Alcock Brown-Neaves). PACT Construction has been involved with numerous landmark projects including state-of-the-art headquarters for Dale Alcock Homes, the Housing Industry Association (HIA), Webb & Brown-Neaves and high-end residential projects including Millstream Apartments in South Perth. It offers a full range of design, construction and project management services for multilevel commercial and residential projects. ABN Developments was established to manage the ABN Group’s property development projects

and investments. Having changed the face of residential landscapes across Western Australia, the ABN Group has expanded to include the provision of property developments of the highest quality. It was ABN Developments and Macquarie Real Estate Equity Funds that formed a joint venture partnership to develop Optima Centre with ABN Developments as the Project Manager.

After acquiring the Optima Centre site in mid 2007, ABN Developments and PACT Construction set about maximizing the opportunity on the site to develop the office construction as fully as possible. With current demand from government and large agency tenancies for sustainable and energy efficient buildings, as well as the desire to attract international opportunities, the PACT and ABN team revised the original three office tower concept. By eliminating unnecessary environmental and cost inefficiencies and creating increased single building floor plate sizes, the project team achieved significant time and cost benefits in the delivery of the project.

“Every element of the project which had an impact on energy efficiency, energy consumption and end user requirements were reviewed to ensure the best decisions were made during the design development period allowing



The glass bookends or towers at either end of the development act as a feature of the development and provide relief for the main building façade so the building doesn’t just read as a monolithic glass and concrete structure.” Mr Kunkler said. With tenants already occupying Stage 1 of the development, construction had to be quick and efficient, and Mr Kunkler says the way the project was managed ensured there was always optimum continuity of workflow during construction particularly during the delivery of the concrete structure.

“It was one of those projects from a design and development side of things in which we were pushed hard and we had to make sure everything was right. We managed to finish the project 16 weeks ahead of schedule and we did that through good decisions in the design of structure, using a composite precast and in-situ concrete system so we were able to break the building into three zones, which we worked on at the same time. It also resulted in us being able to procure much of the structure of the building offsite in precast concrete facilities, thus reducing on site activity times, on site labour and coordination. All of this meant we could get the structure up very quickly so the following trades had large open spaces, great access and continuity in their own work areas.”

# OPTIMAL PERFORMANCE



Reid™ Construction Systems is a business unit of ITW Construction Systems Australia, which specialises in the development, manufacture and supply of products that make reinforced concrete construction faster, safer and more efficient. Reid is the Australasian market leader in lifting and connection systems for concrete construction, so wherever precast or reinforced concrete construction is used there is a good chance a Reid product will be found.

However, Reid is much more than a supplier of construction products. Reid's in-house testing facilities, national team of design professionals, network of regional warehouses and independently audited quality accreditation enables it to offer a total product support service, from design through to completed construction.

And that is exactly what Reid delivered to the Optima Centre. Reid was contracted for the Optima project to supply Studrail™ shear reinforcement, ReidBar™ threaded reinforcing in the floor to wall connections, temporary structural propping during the construction phase, and all SwiftLift™ anchors and clutches for lifting precast concrete elements. Beyond the physical products supplied, Reid also undertook all the specialised design detailing for lifting, bracing, and floor to wall connections.

Reid's WA team delivered design and field support, reinforced by the design, manufacturing and logistics teams from the company's operations in Melbourne and Sydney.

"Our total presence in most jobs will be a fairly small percentage of the total project cost, but our products and systems yield efficiency, safety and speed benefits out of all proportion to the investment in them", said Reid WA State Manager, Brian Craig.

"For instance, our RapidBrace™ precast propping system, which was acknowledged with a High Commendation at last year's Awards for Excellence in Concrete, can take weeks off the total duration of a multi-storey building by dramatically reducing the floor cycle time. Faster floor cycle times mean earlier completion, reduced finance costs, earlier positive cash flows from sales or rent, and earlier payment for the builder."

"Reid has been helping Australian industry lift things since 1921. Making the impossible possible, and the difficult easy is our business", said Mr Craig. "We achieve this through the application of 90 years of experience, backed by the resources ITW, of one of the world's largest diversified manufacturers".

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# EVOLVING WITH DESIGN

What started out as a \$20 million design project for architectural firm Bateman Grundmann grew to something three times bigger and has set a precedent for sustainability and energy efficiency in suburban office construction in WA.

The Optima Centre, Perth's latest prestigious new office complex, is set to become a signature development in the Herdsman Business Park. Worth in excess of \$120 million, Optima is Perth's largest PCA A-grade suburban office building and the only building outside the CBD to have been accredited a 4 Star Green Star from the Green Building Council of Australia and is on target to achieving a 4.5 Star NABERS rating.

It was these sustainability targets and efficiency standards which have hallmarked the design of the building, and for which Bateman Grundmann is becoming so well known. Bateman Grundmann Architects is an architectural practice whose principals have a wide background in health related and commercial architecture, its planning, briefing, design and construction.

The Optima Centre was one of the largest commercial designs the company has worked on, and also one of the most fluid in terms of its constantly evolving nature. When Bateman Grundmann was first asked to help design the building in 2006 it was originally three buildings, but new ownership saw the concept move towards to a different concept.

Bateman Grundmann were commissioned for the office development, design development, design documentation, construction documentation, and contract administration for the two multi-storey commercial/retail buildings which have a combined floor area of approximately 16,000M2 and 515 car bays.

The development incorporates environmentally sustainable design aspects including water efficient fixtures, energy efficient lighting, external sun shading devices, HVAC energy analysis systems. Architects from Bateman Grundmann wanted to incorporate the latest sustainability design techniques and ideas into the project and researched other major projects on Australia's east coast for inspiration.

Optima Centre's winter garden and feature glass stairs are not only an eye-catching part of the design, but also function in an environmental capacity with automatic glass louvers bringing the outside in for tenants, providing fresh air and cutting cooling costs significantly.

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## QUALITY SERVICES

With three generations of painting experience behind them, VPC Painting certainly know what they are doing. And it was this experience which saw them become one of the sub contractors of choice for the final touches to the Optima Centre development.

VPC Painting, a family owned company run by the Vandenberg brothers Wil and Rob who have more than 50 years painting experience between them, was contracted to complete the painting inside and out for the centre. And with high sustainability and environmental standards, VPC Painting had to ensure it not only had a high quality finish, but used materials that would meet the strict requirements.

The exterior of the office blocks has a texture coating with a very high quality for which VPC Painting is renowned. And even with thousands of metres of external and interior walls the quality of the work did not suffer, and is in fact rated as above the commercial standards.

Although the job was not one of the largest VPC Painting has worked on, the business was onsite for more than six months with between one and 14 staff working to complete the project. The efficient project management meant there was no down time for the painters who were able to continue working throughout the program.



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## SRC MALAGA IN FOCUS

SRC Malaga provided nearly 1000 tonnes of steel reinforcement and 66 tonnes of mesh reinforcement for the Optima Centre in WA. All was fabricated onsite at its state-of-the-art factory which is capable of operating around the clock to meet the needs of its clients.

SRC Malaga was contracted to schedule, fabricate and supply all the steel reinforcing products for the \$110 million Optima Centre project which is the largest suburban office building constructed in Perth in the past 15 years.

The company began work on the Optima project in January of 2008 and around 14 staff were constantly involved throughout the duration of the construction.

SRC Malaga has been in production since March 2007 and in this time has formed an excellent customer base. To ensure it keeps abreast of the latest materials and technology in the industry, SRC Malaga has sourced overseas suppliers who are providing the Australian Standards Grade 500N and consistent steel deliveries. The Optima Centre project was one of the largest SRC Malaga has worked on and the company

provided all the steel form bars and mesh for the construction. The continuing evolution of the project's design meant there were many revisions throughout the construction phase which, although challenging, presented no obstacles for the SRC Malaga team.

The expertise of owner and director of SRC Malaga, Russell Williams, was instrumental in the high quality workmanship on the project. Russell's knowledge and expertise in the building industry comes from more than 40 years of hands-on experience and he completed major formwork projects throughout Perth and Western Australia throughout his lengthy career.

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## SPECIALIST IN PRECAST CONCRETE

With more than 20 years experience Gocrete Pty Ltd was the obvious choice to supply the precast concrete panels needed for the Optima Centre, especially with the company's specialisation in walling and flooring. The precast concrete panels were one of the major design elements of the environmentally inspired office complex and Gocrete was contracted to supply all the precast walls panel and Formfloor preslabs for the job.

Gocrete has been operating in Perth since the early 1980s, starting with a single agitator truck, a small mobile concrete batching plant in the surrounding hills of Perth and a strong desire to become a highly service orientated supplier to the building industry. It has since grown to become a significant supplier of precast concrete in the Perth metropolitan area. Its precast facility, which uses robotic technology imported from Germany, allowed for the manufacture the components needed with speedy efficiency.

Although it was challenging job, Gocrete Pty Ltd met the delivery demands and worked with the project managers and other subcontractors on the job for a seamless coordination on shop drawings, working with consultants and other trades as well as meeting design requirements to ensure all panels fitted exactly. In keeping with the green star and NABERS

requirements for the project, all steel used for the project were sourced from recycled material. The formfloor preslabs were produced in an automatic pallet rotation system that adopted automatic cleaning, plotting station and curing chamber to increase productivity and surface quality.

About three staff and 10 production crew were involved in the project implementation including one project coordinator who took care of delivery as well as coordinating with site staff on technical problems, a shop detailer, a production supervisor and administrative staff on procedures and documentation. Gocrete is now also working on a number of other projects including Prisons upgrade projects; Shopping Centres; University Buildings; Primary and secondary schools, commercial buildings and infrastructure works.

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## AIR CONDITIONING EXPERTS

A well-oiled construction and design team helped Centigrade air-conditioning and ventilation specialists stay on top of the tight project schedule for the Optima Centre in WA.

Centigrade was contracted to the Optima Centre project to provide air-conditioning and mechanical services to the AECOM specification and drawings and with the high NABERS rating specified for the project, Centigrade had to meet stringent sustainability targets.

"It was challenging, however, we have now completed a number of these projects and our construction team is very familiar with the ins and outs of the different building ratings and the input required to achieve them," said Doug Bandy, Centigrade's project manager.

"We also worked with the independent commissioning agent to achieve the specified rating and the successful completion of the project was achieved by a lot of forward planning and initial upfront engineering

and input from our in house commissioning manager," Mr Bandy said. The environmental and sustainability features of the project required some of the most modern air-conditioning and ventilation systems on the market today including chillers that utilise energy efficient Turbocor oil free compressors, and a DDC system that has a high level interface to all mechanical equipment for greater control and energy management.



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