

# RHODES WATERSIDE WONDER

how the walker group is blending architectural synergy into inspired community design

TEXT: MICHAEL BROWN  
PHOTOGRAPHY: ANDY STEVENS

**RHODES WATERSIDE IS AN ARCHITECTURALLY INSPIRED COMMUNITY AT THE WATER'S EDGE** in the Sydney Harbour suburb of Rhodes. Developed by Walker Corporation, it is Australia's first integrated mixed-use development comprising luxurious waterfront homes, a commercial district, a major retail centre, and an entertainment precinct.

Rhodes Waterside is the triumph arising from the toil of the Lang Walker team, in collaboration with some of the most acclaimed architects of our time, an imaginative contemporary community providing a style of living unmatched in Sydney.

Rhodes Waterside showcases some of Sydney's finest architecture, using leading Australian architects such as Cox Richardson, Allan Jack & Cottier, Crone Nation and Stanisic & Associates, who have been employed to ensure a standard of design, diversity and interest not easily found in developments of this scale.

Rhodes Waterside is inspired by the finest examples of waterside living from around the world, setting a new standard for smart, environmentally sustainable design, a thrilling new blueprint for urban living. Rhodes Waterside is a new environment for total living.

At Rhodes Waterside, Lang Walker has drawn inspiration from international waterside sites, such as Rows Wharf in Boston, St Catherine's Dock in London, Vancouver's vibrant Granville Island and the former Oslo Harbour shipyard that is Aker Brygge. These sites, restorations of well placed former industrial waterside sites, are the emancipation of a universal desire for waterfront living that provides simultaneous access to metropolitan amenities.

Lang Walker has employed the experience gained from internationally acclaimed mixed-use waterfront developments, such as The Wharf at Woolloomooloo and King Street Wharf at Darling Harbour. The Wharf won acclaim as the World's Best Waterfront in 2000, and Lang Walker's Balmain Cove won the 1999 Jaguar Awards for the best Australian Development.

The thoughts of Mr. Lang Walker capture the essential notions behind the Rhodes Waterside development. "We're creating a vibrant town centre, work spaces and city living just a heartbeat away from the peace of gentle water, rolling parkland and foreshore walkways. With fabulous transport access and the great Olympic venue next door, this harmonious community will have it all. People will discover a magnificent place to do business, shop, invest, relax...and a place they'll feel privileged to call home," said Mr. Lang Walker.

Rhodes Waterside will be developed over five to seven years but Rhodes Waterside is already an important new element in the fabric of the Sydney landscape. The NSW Government's Beyond 2000 vision invested heavily to create Sydney Olympic Park, extensive Millennium Parklands, and to craft a vision for re-developing industrial lands on Sydney's harbour foreshores.

Rhodes presents a strategic location and development opportunity, given its proximity to pre-existing public transport nodes. And while Sydney increasingly positions itself as an economic hub in the Australasian region, the government has pinpointed Rhodes precinct for economic development, with a vision to create entirely new and vital communities along the Homebush Bay waterfront.

The NSW Government's plan for economic development and urban renewal is matched by Lang Walker's experience. This development is responsibly balanced and enhanced by Lang Walker's commitment to principles of Ecologically Sustainable Development

**LAND SIZE:**  
20.6 hectares  
Developer: Walker Corporation  
**SITE ADDRESS:**  
1 Mary Street, Rhodes NSW 2138  
Rhodes Waterside will be developed over five to seven years and will include: Residential - Up to 1600 mixed density apartments.  
Commercial - Up to 40,000 square metres of prestige commercial office space. Retail - 50,000 square metre retail shopping centre.

(ESD). ESD techniques employed at Rhodes include reduced energy requirements, water and energy efficient design criteria, appropriate re-vegetation of the entire foreshore, and creation of three parklands and a 30-metre corridor linking the site with path and cycleways into Australia's largest parkland, the Millennium Parklands.

## TRANSPORT

Rhodes Waterside is in the geographic and demographic heart of Sydney, and will be connected to surrounding Sydney by an integrated, dedicated transport network. Major arterial roads surround the Rhodes site, which is easily accessed from Homebush Bay Drive. The Rhodes railway station is 200 metres from the site, and the Meadowbank RiverCat wharf is nearby, with the CBD a short 30-minute ferry trip away. Rhodes is adjacent to the Sydney Olympic Parklands, with direct connectivity into Bicentennial Park. Basement car parking will serve the residential, retail and commercial buildings, and limited on street parking for visitors will be available.

In addition to existing transport infrastructure in the area, the Rhodes development has prompted an array of transport improvements. The development has been designed around the need to encourage public transport and ecologically sustainable transport systems such as pedestrian and cycleways. This goal has been bolstered by The Minister for Urban Affairs and Planning, who has approved a \$30 million Transport Management Plan [TMP] to facilitate better transport for the Rhodes Peninsula. These funds will cover a major railway station up-grade, increased peak hour rail services, bus shelters, new roads, traffic signals and signage, cycleways, bicycle lockers and bicycle parking.

## CALLING RHODES HOME - RHODES WATERSIDE RESIDENTIAL

The architectural philosophy driving the development of the site embraces diverse, innovative and contemporary designs that maximise the waterfront location and natural features of the site. At every stage, the world's best architects are competing for the opportunity to design for this unique waterfront site. The competitive process encourages innovation and creativity from the designers and will result in a diverse but complimentary range of residential buildings. Commissioned architects to date include Cox Richardson for Residential Stage One and Two, and Richard Huxley & Associates for Residential Stage Three.

Walker Group Design Manager, Mr. George Carone, oversees the design process for Rhodes Waterside's residential development. Three firms per lot were invited to enter a design competition for an allocated lot. Mr. Carone and Walker Group's design team then assess the strengths and benefits of each individual design.

"Mr. Lang Walker makes the final decision on which firm is chosen for each lot, following the

recommendations of our teams," said Mr. Carone.

"The winning architect comes on board and completes the realisation of their design. We work closely with the architects in the development of the design but allow them a considerable degree of freedom. We don't limit the architects because we want them to develop revolutionary, modern, architecturally inspired living spaces," said Mr. Carone.

The first architectural stage by Cox Richardson, comprising 137 homes, has sold out in two stages, prior to public release.

Richard Huxley and Associates have designed the second architectural stage. It includes a wide range of apartment types including terrace style, single level and two-level apartments in one, two and three bedroom and penthouse configurations.

All homes have private balconies, courtyards or rooftop gardens and easy access to swimming pools, extensive communal gardens and open spaces.

Streetscapes are designed with both function and form in mind. Individual street entrances for ground level homes and multiple foyers and various facades for each building, exemplify the best of contemporary residential design.

High quality materials, exclusive finishes and diverse floor plans enable owners to express their own taste and personality. Three levels of finishes offer five colour schemes and European appliances and quality carpets throughout.

Rhodes Waterside incorporates environmentally sustainable development principles into every step of the design process including building orientation, natural ventilation, the use of eco-friendly materials and recycled water, energy efficient appliances and the provision of open space. All residential buildings have a NATHERS rating of at least 4.

## RETAIL THERAPY - RHODES WATERSIDE SHOPPING CENTRE

Rhodes Shopping Centre is fully operational and open to the public, servicing the local community. Rhodes Shopping Centre is the day spa of retail therapy.

The state of the art Rhodes Shopping Centre features a full range BiLo supermarket, and the full service Coles supermarket integrates the latest retail technology and design. Over 100 specialty stores serve the niche retail needs of the community.

## THREE COMMERCIAL BUILDINGS

### NO. 5 RIDER BOULEVARD

A Grade Commercial Building of 10 floors, A grade services, high quality foyer. 25,200 sqm of NLA over 10 floors. Floor plates of approximately 2,500 square metres. Estimated completion date June 2006

### NO. 3 RIDER BOULEVARD

A Grade Commercial Building of 7 Floors, with A grade services. 15,500 sqm of NLA over 8 floors, 7 levels of office accommodation starting at level 1. Floor plates of approximately 2,000 sqm. Estimated completion date June 2005

### NO. 1 RIDER BOULEVARD

A Grade Commercial Building of 3 Floors with A grade services 5,700 sqm of NLA over 3 floors, with a high quality entrance foyer at level 5. Floor plates of approximately 1,900 sqm will be achieved by this building design. Estimated completion date November 2004. Secure undercover parking space per 36 square metres



Designed by The Buchan Group, this new 50,000 square metre retail environment has a unique retail mix and interior themes inspired by Rhodes Waterside's natural environment - the water, the canopy and the sky.

## WORKING ON WATER - RHODES COMMERCIAL

Rhodes Commercial estate offers three commercial buildings, purpose built office spaces with the latest technology, designed to meet the needs of individual businesses. Rhodes' Rider Boulevard offers commercial buildings with

features like in-house broadband cabling and flexible workspaces as well as individual entry foyers, generous underground parking and multiple access points to keep traffic unobtrusive.

Office spaces at Rider Boulevard are enriched by immediate access to Rhodes Waterside's full amenity retail and entertainment centre, as well as the healthy lifestyle opportunities, with gymnasium, parklands, cycle paths and the Sydney Olympic Parklands next door.

Australia's national news agency Australian Associated Press (AAP) has already signed a 15-year lease for their new headquarters at Rhodes Waterside. The Lease Agreement with Walker Corporation Pty Ltd presents AAP with 3,500 square metres of new prestige office space at 3 Rider Boulevard, Rhodes Waterside.

The myriad of established transport options that service Rhodes Waterside makes this a pleasant commute for any work force.

The synergy of Rhodes Waterside's homes, shops and offices, beautifully offset by the proximity to the waterfront and the Millennium Parklands, makes this new development irresistible. Rhodes Waterside is set to become Australia's foremost integrated waterfront community.

For more information, visit [www.rhodeswaterside.com.au](http://www.rhodeswaterside.com.au).





## SITE IMAGE LANDSCAPE ARCHITECTS

**THE RHODES WATERSIDE IS A RARE URBAN RENEWAL PROJECT,** having a vast scope for design of a complete public domain of streetscapes, civic spaces, public parks, and regional walkways and cycleways. The project exhibits a comprehensive range of open space and landscaped parklands, with creative, innovative and environmental, sustainable characteristics.

The twenty hectare site fronts onto Homebush Bay, adjoins Bi-centennial Park, and is adjacent to the Rhodes Railway Station. Intensive development maximizes the number of residents, commercial tenants and shoppers who can take advantage of the water outlook, parklands, and links to a regional park and cycleway network. The project has sought to extend the creative vocabulary of landscape detailing from the nearby major parklands of Rhodes, Bicentennial Park, and Sydney Olympic Park.

Site Image Landscape Architects, working for Walker Corporation, have sought to create the premier waterfront urban village for Sydney. Seven of Australia's leading Architects were selected through a competition process to design the range of high-end residential apartment lots, commercial towers, and regional shopping centre components. The massive investment in world-class architecture has created some of the highest quality waterfront real estate in Sydney. Consistent with this investment, Walker Corporation has invested an equal degree of excellence into the design and finishes for the landscape and public domain.

The streetscape hierarchy on the site includes a major distribution road for the whole peninsula, secondary roads, and tertiary roads that provide a pedestrian friendly environment. All roads have a high degree of detailing that incorporates concrete as a major component of the visual environs of the street.

The signature design elements of the two large foreshore recreational parks are the long curvilinear concrete benches. The sinuous forms of the benches express the lanform sloping down to the water. The benches are all at once sculptural features, seating elements, play devices, and signature visual elements that reinforce the sense of place of Rhodes Waterside.

The foreshore walk is accompanied by a linear parkland, with new residential apartments directly accessed from this area. Feature nodal spaces have been created as accent locations along the waterfront walkway. These highlight the junction with the roadways and paths that come down to the water, and the crossover points of the parallel waterfront cycleway. A series of thematic environmental elements identify each of these nodes, being concrete benches formed to express the sinuous shapes of the riparian grasses of the foreshore.

The forecourt to the large regional shopping centre, and the adjacent streetscape to the commercial towers, create the civic 'main street' for Rhodes Waterside. The range of feature concrete details used elsewhere find expression here with accent concrete benches and sculptures, honed paving, and permeable paving to parking areas and pathways adjacent to large trees.

Overall, the landscape and urban design detailing provided by Site Image has fulfilled the opportunities presented by this site to create a new inner-harbour regional urban centre. The resultant parks provide a complete environment for living, with the design providing an ideal setting for some of the most contemporary residential, commercial and retail buildings in Australia today.

The Rhodes Waterside project represents one of the leading examples of urban renewal in Australia. It has sought the highest standards of architectural and urban design, and has committed to these standards through all stages of construction and maintenance.



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SITE IMAGE



## BATES SMART PTY LTD

**SINCE 1852 BATES SMART HAS BEEN CONTINUOUSLY INVOLVED IN MAJOR COMMERCIAL, RESIDENTIAL AND PLANNING PROJECTS** that have influenced both urban and regional development. Their commitment to design excellence, environmental responsiveness and client service affirms their reputation as one of Australia's most respected design firms. Today, Bates Smart has offices in Melbourne and Sydney and specialise in architecture, interior design, urban design and strategy.

Bates Smart was selected for architecture and interior design for Lot Three of the Rhodes Waterside residential development, when they entered and won an invited design competition in December 2002.

Design Manager for Lang Walker, Mr. Paul Pozzoban, oversees the residential design process. "The architects that have been selected were selected because they deliver cutting edge, award winning, modern styled architecture," said Mr. Pozzoban.

Bates Smart's design comprises 153 apartments on the waterfront site. Bates Smart provided full architectural and interior design services, acting as lead consultant through concept, Development Application and Tender Documentation, and their involvement will continue throughout the construction phase of the project.

Bates Smart employed a team of one director, one project leader, and four architects and interior designers for the project. Mr. Philip Vivian is a Director of Bates Smart and Design Director for Bates Smart at Rhodes Waterside.

"Our aim is to create a striking contemporary building that responds both to its waterfront location and to the informal urbanity of Shoreline Avenue. The design results from the desire to maximize the number of apartments with north orientation, cross ventilation and water views. The stepped massing is a response to the DCP height limits, the tapered site geometry and a desire to create corner apartments with water views. The stepped forms have become the design aesthetic, and are emphasised with floating roof planes. A combination of natural sandstone base, white balconies and green patina roof forms creates a classical composition that combines natural and artificial materials," said Mr. Vivian. "We used natural materials to respond to the waterside environment," he said.

Bates Smart is proposing to use lightweight green patina copper cladding for roof and wall elements offset by precast

and rendered walls and glazing.

"The tapered site presented a difficult geometry to work with as it narrowed toward the waterfront. The statutory requirements also set a four-storey limit to the waterfront. This steered the client towards a wall of buildings four stories high for the length of the waterfront boundary. Through negotiations with the regulatory authorities we were able to demonstrate that by relaxing the height limit we could provide a more animated, varied and less dominant form to the waterfront promenade," said Mr. Vivian.

"Apartments are arranged in a perimeter block configuration that is open at the waterfront end. The form consists of two fingers that follow the street alignments, allowing shared views of the bay across the court. A smaller block sits between the fingers on Shoreline Avenue to enclose the courtyard at its land end," said Mr. Vivian.

"The design is sustainability driven. We have used techniques such as obtaining cross ventilation, orienting to Northern sun in winter, rainwater collection and reuse, water efficient fixtures, and deep soil planting," said Mr. Vivian.

For more information on Bates Smart, visit [www.batesmart.com.au](http://www.batesmart.com.au).

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**BATESSMART.**



## THE BMD GROUP

### AT THE CORE OF THE IMPRESSIVE ARCHITECTURE,

extensive leisure and retail facilities, and the entire infrastructure at Rhodes Waterside, are carefully considered structural systems. One such structural system is the Ground Engineering completed by BMD Consulting.

Mr. Daniel Knotek served as BMD Consulting's shoring designer for the Rhodes Waterside project. BMD Group was engaged by Walker Group, and the most suitable division for the works, BMD Consulting, undertook the required tasks.

Daniel Knotek is a Geotechnical and Structural Engineer, and a specialist in Ground Engineering. Mr. Knotek and BMD Consulting provided Shoring design for the Origin North and Origin South developments at Rhodes Waterside, which form the basements of residential developments.

BMD undertook the shoring design and supervision of the reinforcement for shotcrete shoring walls. "We were asked to review and make some recommendations on the initial preliminary design," said Mr. Knotek. "We presented an alternative preliminary design. This was priced in comparison to the original, and our design was accepted and approved. We were then asked to do a detail design," he said.

"The preliminary design accounted for four typical sections of the shoring. The detail design covers the whole extent of both shoring structures," said Mr. Knotek.

The design of the shoring walls requires a thorough consideration of all factors affecting the proposed structure, Mr. Knotek explained. "In designing the shoring, we consider the depth and geometry of the excavation, the presence or absence of rock, the sub soil conditions, and the future entire structure to support the initial shoring," he said.

Examining the sub soil conditions involves gauging the strength requisites of the proposed structures, by analysing the concrete shoring structure and how it will

interact with the soil. This interactive relationship between the built and natural environment is considered by examining the strength and deformation properties of the soils to be retained. Once these factors are considered, the structure is analyzed and its reinforcement, soldier sizes and anchors are designed, taking into account the absolutes of the expected loads on the structure.

"Shoring is the lateral support of vertical excavation faces," said Mr. Knotek. "The retained soil at Rhodes was predominantly shale fill, as the excavation had been completed in a recently filled area," he said.

The design of the shoring wall reinforcement is one of the essential factors in the final strength of the wall. "Once the section of the wall was prepared for shotcreting, we inspected the steel reinforcement, identified occasional defects, reviewed and had these defects repaired, and then proceeded with the shotcreting," said Mr. Knotek.

The future structure affects the shoring wall's design because the two are co-dependent.

"As the shoring will eventually form the basement carpark wall, the structural engineer designing the building has to approve that the slabs will be prepared to carry the load from the shoring walls," said Mr. Knotek.

The BMD Group is a privately owned Australian company providing civil engineering construction, civil and structural engineering design, geotechnical services, investment services for property development and major infrastructure projects throughout Australia.

For more information on BMD Consulting and the full range of services offered by BMD Group, visit [www.bmd.com.au](http://www.bmd.com.au).

#### THE BMD GROUP

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## REED CONSTRUCTIONS AUSTRALIA PTY LTD

**AN INTEGRAL FEATURE OF THE RHODES WATERSIDE DEVELOPMENT'S MARKETABILITY IS ITS LOCATION** in the geographic heart of Sydney, and it's ready accessibility from main artery, Homebush Bay Drive. This ease of accessibility is facilitated by the construction undertaken by Reed Civil.

Reed Civil constructed exit ramps off the Southbound and Northbound carriageways of Homebush Bay Drive, connecting Homebush Bay Drive to Rhodes Waterside. The Northbound Off Ramp links directly into the roof car park of the new Ikea complex.

The Reed Group is a privately owned company that specialises in construction, hospitality, civil, interior fit outs and developments. Reed Civil has operated as a Division of Reed Group since July 6, 1987. Managed by a team of professionals with over 18 years experience in civil design, construction and project management, Reed Civil division combines the focus and skills of civil construction specialists with the vast back up resources of the Reed Group.

A specialised team of engineers was selected from Reed Civil's 87 employees, to complete the company's task at Rhodes Waterside. This team utilised the expertise of Paul Wise, Divisional Manager, Reed Civil; Fred Knox, Construction Manager, Reed Civil; Victor Ng, Project Manager; Doug Sparks, Senior Site Manager; Pierre O'Loughlin, part time Site Manager; Gary Mundy, part time Site Manager; Daniel Boorman, Site Engineer. The project required forty weeks of dedicated service from the Reed Civil Engineering team.

The off ramps comprise reinforced concrete columns, 161 precast pre tensioned concrete planks as decking, bored in-situ concrete piles and pad footings. The precast concrete planks, which are 650mm wide and 450mm to 550mm in thickness, form the decking of the road base, and run parallel to Homebush Bay Drive in the direction of the ramp's traffic flow.

Whilst the major aspect of the construction is vehicle access, pedestrian and cycle traffic was facilitated by Reed Civil's overall road construction works, encompassing steel and concrete pedestrian ramps, cycleway and footpaths, as well as features such as noise attenuation barriers, signage and guardrails. A slipform machine, containing a cast of the shape of the required kerb, was used to pour concrete kerbs.

50 tonne, 80 tonne and 100 tonne cranes were used as required for the lifting of concrete planks. However, when landing the precast pre-tensioned concrete planks to span nine, because of limiting access, a 50 tonne and 100 tonne crane were used in tandem, to lift the 25 tonne concrete plank.

Columns run from North to South, standing between 12m and 22m in height. Piers 10 and 11 comprise two joint headstocks totaling 40 cubic metres of concrete. These piers sit atop three 15m high columns that were each poured in three sections. This overall process required an intricate scaffold and formwork system.

Reed Civil adds to their experience, prequalifications from RTA (B10 and R10), State Rail, Sydney Water, and Public Works Best Practices Credited to \$25m, as well as membership of the National Safety Council of Australia, Civil Federation of Australia, and Water Association of Australia.

For more information on the abilities of Reed Civil or Reed Group's Construction, Hospitality, Interiors and Developments Divisions, visit [www.reedgroup.com.au](http://www.reedgroup.com.au).



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# CONSTRUCTION LINK

**OVER FIVE YEARS AGO, AS MANAGER FOR FIVE OCEANS ENGINEERING,** Mr. John Lee was completing interesting and challenging projects such as the Airport Link for Vougers including above and underground temporary structures. Mr. Lee decided to solidify his experience, and founded Construction Link just over five years ago.

Construction Link manufacture, supply, and install structural steel components for a range of projects, dealing mainly in commercial and industrial applications.

Mr. Lee and his staff have proved that Construction Link has the ability to undertake challenging projects involving limited time frames, limited budgets, and high quality. Construction Link has recently provided structural steel for McIntosh Constructions, for a development of over one hundred industrial units at Kirrawee and Peakhurst. In 2003, Construction Link provided their services for a leisure centre at Fairfield, and for schools at Sefton and Fairfield.

Construction Link was integrally involved in the Rhodes Waterside project, providing structural steel for shoring works for the Origin North and Origin South residential developments. "We supplied all the steel soldiers for Origin North and South" said Mr. Lee. "The client was eager to speed up the process and we were able to match the demanding program," he said.

The walers and soldiers supporting the shoring walls, as provided by Construction Link, were 300mm by 90mm back-to-back channels, of between 9m and 16.5m in length. "These were all prefabricated in our factory, and left untreated as no treatment is necessary," said Mr. Lee.

This provision of structural steel components for the shoring walls of the Origin North and Origin South development was the first stage in Construction Link's continued involvement in the Rhodes Waterside residential developments, explains Mr. Lee.

"The client witnessed our skills and our work and they were pleased. So we were asked to supply, manufacture and install structural steel for the apartment buildings themselves," said Mr. Lee.

The procedures involved in fabricating the beams and columns forming the structural steel system of the apartment building were extensive and complex, explains Mr. Lee. "We took the architect's structural steel plan, and broke it down into a shop drawing. Using computer-based software our draftspeople ordered all the necessary components," said Mr. Lee.

The manufacturing process for the steel components has required approximately 6 months, from June 2004 to December 2004, with a small proportion of work remaining as of December.

"In terms of progress, structural steel is extremely effective in making construction faster, for a quicker and cheaper project overall," said Mr. Lee.

Construction Link has been engaged for involvement in future stages of residential development at Rhodes Waterside.

For more information, contact Mr. John Lee, owner of Construction Link, on 02 9898 9877.

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**CONSTRUCTION  
LINK**



# MURTAGH BOND STRUCTUREBURO

## MURTAGH BOND STRUCTUREBURO IS A MEMBER OF THE BOND JAMES GROUP

which was established in 1968 with offices in Sydney, Melbourne and Canberra, Murtagh Bond Structureburo operates primarily in the ACT and NSW region under the direction of Ken Murtagh, with a total of 30 staff across their three offices.

Mr. Ken Murtagh of Murtagh Bond recognises that the company is functioning amidst a constant flux in the construction industry. The reinterpretations of historical, traditional and new and revolutionary approaches to Engineering are all affecting the current design landscape.

"Solutions to successful construction systems often require development of unique methods. Many Consulting Engineers at this time place too much reliance on software solutions to design problems, and exclude the innovation aspect, or the 'art of structural engineering,' which is rarely evident in today's construction," said Mr. Murtagh.

Murtagh Bond derives strength from their ability to generate a building system for a project, basing each new system upon previous successful project systems where substantial time and cost savings have been generated.

Murtagh Bond dedicate themselves to Structural Engineering in quality Architecture. The firm has a long history of innovation, particularly in the use of prefabricated components for building in precast concrete and steel components. Murtagh Bond used these techniques for the NSW Institute of Technology tower on Broadway, and the Queens Square Law Courts, both iconic structures of the 1970s; and the first cable stayed structure at Bruce Stadium in Canberra.

These project proven methods of construction, as used by Murtagh Bond in such iconic projects of

the past, are also being fostered in the current construction landscape. Murtagh Bond embraced the use of precast components for the Rhodes Waterside project.

"Rhodes Waterside Origin structure combines external precast wall panels with the Ultrafloor precast floor system. Generally, internal party walls are made from the concrete filled wall shells of the ASF system. In basements, use has been made of fire engineered steel composite structure for columns supporting Ultrashell beams and slabs. The result of this combination of elements is a minimised need for formwork and reduced labour on site," said Mr. Murtagh.

"Murtagh Bond also operates in the Designer House area, where our abilities in problem solving lead to seamless engineering solutions in the minimalist style," said Mr. Murtagh.

Murtagh Bond has participated in the development of both wall and floor prefabricated products, which are now commonly used in the industry. This early involvement resulted in expansion in the use of these products and new applications have continued to be developed, refined and extended.

The success of Murtagh Bond's previous installations, including the Rhodes Waterside Origin structure, clearly exhibits the strength of system building. Rooted in the use of precast concrete methods common in the 1970s and composite steel structures from the 1960s, these systems have been expanded and made more sophisticated.

"In a building industry where construction costs are raising sharply, a return to system construction methods is the only opportunity to reduce costs and construction time," said Mr. Murtagh.

For more information on Murtagh Bond's full range of services, contact 02 6247 0011.

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## SANTANA E COMPANIA PTY LTD.

**IN 1992 A&F FABRICATIONS WAS ESTABLISHED, AND IN 1994 THE COMPANY EXPANDED** with the purchase of a stud welding company called Santana E Compania. The successful integration of stud welding into the original business has ensured that owners Agostinho and Florentino Rodrigues are still operating as A&F Fabrications, but trading under the familiar moniker, Santana E Compania.

Santana has eighteen employees, all of whom have in some way been involved in the Rhodes Waterside project, including administration staff. All site staff have been involved in the Rhodes Waterside project on site.

Santana specialise in shear connectors, CD stud welding, ARC studs, steel fabrication, welding, installation of structural decking including King Floor, Condeck and Bondeck.

Santana has been involved in the project since August 2003, and this involvement has entailed the installation of King Floor, shear studs, edgeform, and construction handrails.

Santana typically engage themselves in jobs involving the installation of decking, welding jobs and specialised stud welding jobs.

Since the purchase of the Santana E Compania stream of the business, A&F have offered stud welding as a specialty service. "Stud welding is an interesting skill that not everyone provides, and we offer this as an advantage to the more

limited range of skills provided by other companies," said Agostinho.

Santana has completed work for the entire retail centre, and is engaged in decking for all of the commercial towers.

For the retail precinct, Santana established the floor with structural steel decking based upon a grid layout that they predetermined for the most effective layout for the decking. Individual structural steel decks are ordered in customised sizes according to the floor layout, and decks can also be cut to length on site when required. The decking ranges from 0.6m wide and from 0.75mm to 1mm in thickness.

The structural decks are delivered in packs, which are craned directly into place on top of the steel base structure. From here the Santana installation crew lay the decks by hand, finding each decking plank's place on the floor layout. The decks range between 20kg and 100kg, so the Santana crew of 16 works in pairs, and in threes when necessary.

Once the decks have been laid, they are secured using a Hilti explosive tool equipped with a drive pin fixing. Studs are welded on top of the deck, using high voltage, high ampage welding, a technique that fuses the metals together in less than half a second. Finally, shear connectors join the floor together as a single unit.

To find out how Santana E Compania can answer your project's needs, call 02 4274 7030.

### A&F FABRICATION PTY LTD T/A SANTANA E COMPANIA

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## SANTANA E COMPANIA



**ABOVE:** PREPARED RETAINING WALL BEING SPRAYED LEURA BY PASS.  
**LEFT:** SHOTCRETE WOOD FLOAT SPONGE FINISH.

## THE RIX GROUP PTY LTD.

**THE RANGE OF SHORING WORKS TO BE COMPLETED AT RHODES WATERSIDE** required a fast, effective shoring solution. The Rix Group was engaged by Walker, and by John R Burton, to expedite their respective shoring needs. Rix Group provides Shotcrete Solutions for Construction and Civil Works.

Shotcrete shoring provides a fast and efficient method of constructing permanent shoring and retaining walls. Shotcrete is mortar or concrete pneumatically projected at high velocities onto a surface.

Mr. Matthew Hicks, of the Rix Group, explains Shotcreting. "A concrete agitator feeds the shotcrete mix into a purpose built shotcrete rig which pumps the mix through a 50mm internal diameter hose. An air line is attached to the nozzle, and the resulting pressure propels the shotcrete mix from the hose, which is directed onto the walls by the Shotcrete operator," said Mr. Hicks.

"Shotcrete is a tailored mixture. It has a high cement content and contains silica fume, which causes the mix to become 'sticky,' so that it adheres," said Mr. Hicks. Once it has adhered, the mix needs to set rapidly. Reduced aggregates of around 10mm compared to standard concrete's approximate 20mm aggregate, and the inclusion of water reducing chemicals, facilitate rapid setting.

The careful preparation of reinforcement prior to the Shotcreting process ensures absolute effectiveness of the process. "We put piles in a line along the length of the future wall, and welded steel mesh to these piles. To alleviate hydrostatic pressure from behind the new Shotcrete wall, which could structurally weaken the wall, we also installed drainage between the piles," said Mr. Hicks.

"The shotcrete is sprayed horizontally over the face of the prepared piles, for evenness. The final face is screened to a line, smoothed using wooden floats, and followed by damp sponging. We then install vertical trowelled joints to attempt to induce cracking and any possibility of movement in the shotcrete."

The Rix Group used Shotcrete shoring for the kilometre long, six to eight metre high shoring wall required to support the adjoining railway line - for John R Burton. For Walker, they completed further Shotcrete shoring walls at the North and South origin residential sites. And again for Walker, Rix Group completed shoring for embankments at the East and South East Boundary, under the Ikea building. They are currently spraying two lifts shafts in the Northern commercial towers.

Rix Group also used Shotcreting to establish three metre wide air ventilation trenches, between 50 and 100 metres long, beneath the slab of the Ikea building in the retail precinct. "The process of meshing the trench walls and floor and then spraying Shotcrete in one pass, which avoided cold joints at the floor to wall joints, took around two days. If conventional methods were used the floor would have been poured first and then the walls formed, propped, poured and then stripped. Not only would this have taken over more than a week the cold joints would have required treating with expensive waterproofing strips," said Mr. Hicks.

Shotcrete consistently shows a significant reduction in construction time and materials used during construction when compared to conventional methods and ultimately equals considerable financial savings.

To discover how Shotcreting can meet the construction needs of your next project, contact the Rix Group, on 02 9521 8733, or visit [www.therixgroup.com](http://www.therixgroup.com).

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**RIX**  
SHOTCRETE SOLUTIONS  
CONSTRUCTION • CIVIL WORKS

# ONESTEEL

## long spans maximize space at the rhodes waterside project

**WHEN A NEW DEADLINE FOR A LARGE RETAIL PROJECT UNEXPECTEDLY SHAVED MANUFACTURING LEAD TIME** by more than a third, it presented the opportunity for Australia's largest maker of steel long products, OneSteel Market Mills, to demonstrate how more than 5000 tonnes of steel could be fabricated and erected in just 21 weeks. In total, 7000 tonnes of 300PLUS® steel beams and columns were supplied to the Rhodes Waterside Development - a state-of-the-art retail, commercial and entertainment centre at Rhodes Peninsula by OneSteel Market Mills.

When the original 36-week steel construction programme was compressed to 21 weeks to meet opening deadlines, it represented a real challenge for the project team.

But the developer (Walker Corporation) designer (van der Meer Bonser), main fabricator (National Engineering) and steel manufacturer (OneSteel Market Mills) were all confident that a steel solution could deliver the project on time.

As in all retail developments, the completion deadline was of utmost importance.

Many retail tenants who signed contracts before construction even began on the building had planned months and even years in advance to ensure the opening dates of the development coincided with consumer or seasonal demands. Therefore missing the deadline was out of the question.

To set up the transport and delivery logistics necessary to manufacture and deliver a steady supply of steel economically to the fabricator National Engineering, OneSteel Market Mills worked closely with the distributor - OneSteel Steel and Tube.

National Engineering took delivery of two truckloads of steel per day, each truck containing more than 20 tonnes of steel. National Engineering in turn fabricated and delivered to site, two truck loads of steel per day, representing more than 1000m<sup>2</sup> of floor area coverage.

The extraordinary output of fabricated steel was largely due to National Engineering's beam line, which is able to cut, cope, hole, camber, shot blast and paint the beams in a continuous operation.

Once the beams were delivered to site the erection of the steel work was simple and hence very fast. Profiled steel decking was then laid

over the 300PLUS® steel beams providing a safe working platform for the following trades. The other fabricators on the project Torresan Engineering and Profab Industries demonstrated that they were equally well equipped delivering and erecting the other 2000 tonnes of steel.

The completed Rhodes Waterside Development showcases the many benefits of a steel framed building including speed of construction, column-free space, reduced exposure to onsite risks, cost competitiveness and future-proofing of an investment.

Architects have long recognised the aesthetic benefits structural steel offers. These are clearly displayed at Rhodes Waterside development in the main entry and through the mall of the retail centre.

What may not be so obvious is the exceptional capability of 300PLUS® steel beams to economically achieve large spans. With few columns, tenants are afforded great flexibility in fit-out, thereby enhancing store efficiency and customer amenity.

When tenant Ikea required large column-free spaces, 3 out of 4 columns from the lower levels terminated, providing a 17m x 17m column grid for Ikea and the carpark above. By adopting steel framing the designers were able to achieve the varying designs from floor to floor and the large spanning requirements economically.

During the planning stage of the development, structural engineers van der Meer Bonser produced numerous design options, including post tensioned concrete, precast concrete and composite steel for the builder to cost.



Van der Meer Bonser's cutting-edge design consisting of OneSteel's 300PLUS® range of beams acting compositely with the concrete slab supported generally on Fielders KF70 profiled steel deck was ultimately chosen as the best option.

OneSteel Market Mills was able to provide technical support to van der Meer Bonser in a range of areas, most significantly in the area of fire safety design.

Over the years, testing and fire engineering studies have demonstrated the adequacy of steel framing, with little or no applied passive fire protection in many building applications. This is largely based on cases where the steel beams are in contact with 'closed-rib' type steel decking profiles. As KF70 has a trapezoidal profile and therefore leads to greater exposure of the beam top flange to high temperature gases in the event of a fire, OneSteel Market Mills commissioned it's fire researchers at the Victoria University of Technology to conduct tests on its steel beams with a KF70 slab.

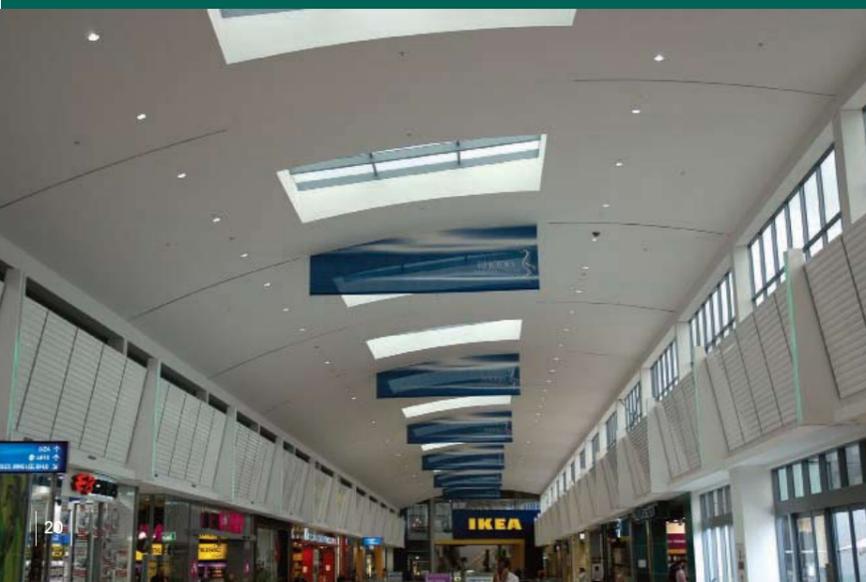
As a result of the testing it was demonstrated that while the trapezoidal deck offered less shielding to the beam than a conventional deck, this had very little impact on the inherent fire resistance of 300PLUS® beams.

A building framed in steel also has the added advantage of being relatively easy to modify compared to other forms of construction, effectively future proofing the investment.

Due to the accessibility of the structure and the weldability of 300PLUS® steels, new floor penetrations can be added for tenants and floors can be easily strengthened.

In addition, as all the fabrication work occurred off site, there was a significant reduction in the on-site workforce which reduced the congestion on site and in turn, the on-site risk.

For more information or assistance with your building project contact OneSteel Direct on freecall 1800 1 STEEL or visit the website at [www.onesteel.com](http://www.onesteel.com)



**onesteel**

# JAMES L WILLIAMS AND OPTIMUS

## form Optimus JV for Rhodes Waterside Shopping Centre

### THE VAST RHODES WATERSIDE SHOPPING CENTRE,

an integral feature of the Walker Group Rhodes Peninsula Development, required strong mechanical and air conditioning services to ensure the centre's operability, and the provision of a fresh and comfortable retail environment.

To meet the design and construct needs of the Rhodes Waterside Shopping Centre's mechanical and air conditioning services, a major meeting of talent took place. The joint forces of James L. Williams and Optimus melded to form the joint venture company, Williams Optimus JV, for the design and construct contract with a relatively short construction period. Individually, James L. Williams and Optimus are highly respected Mechanical Services companies. The joint expertise and experience of these companies, realised in Williams Optimus JV, forged a winning combination.

One task of Williams Optimus JV consisted of providing mechanical and air conditioning services for major individual tenants including Coles, Bi-Lo, Reading Cinemas, Bing Lee, and IKEA, each of whom had precise briefs outlining their specialised requirements.

One of the most significant undertakings of the Rhodes Waterside Shopping Centre was the IKEA Store, the largest in the southern hemisphere, with an extensive under cover carpark. Williams Optimus JV was engaged to establish services for the IKEA store. The IKEA store incorporates a warehouse, display & sales areas, back-of house, and an in store cafeteria, covering an area in excess of 34,000 square metres. To serve the IKEA store Williams Optimus JV utilised seven large DX Modular air-cooled A/C units, located on the roof, plus supplement units for small-specialised areas. These Optimus Modular units offer the client an extremely energy efficient system with the flexibility of low load control.

In the Coles and Bi-Lo stores, Williams Optimus JV provided traditional air-cooled systems and supplement A/C and ventilation systems for each store.

The movie going experience of visitors to the Reading Cinemas was an important consideration for Williams Optimus JV. Two large cinemas and six smaller sized cinemas form the Reading Cinemas eight cinema complex, which is served by a stand-alone air conditioning system. A roof mounted air cooled chiller and boiler is coupled via chilled and hot water piping to the air handling units in the mezzanine platform, and a separate air handling unit serves each cinema.

Directly above the cinemas is a medical centre, childcare centre and three levels of offices of a further 6,000 square metres, all fully air-conditioned. As well as servicing the needs of individual major tenants, Williams Optimus JV provided air conditioning and mechanical services for other specialty shops, and major public areas of the Rhodes Waterside Shopping Centre. The Shopping Centre Mall and Specialist Shops are conditioned from elevated air handling units situated throughout both levels two and four, and a central chilled water plantroom located on level nine has three centrifugal chillers with a cooling tower on the roof.

James L. Williams Pty Ltd has over one century of experience, established for over 129 years. Offices across Melbourne, Sydney and Brisbane have installed HVAC installations throughout the eastern states, with projects such as the Westin Hotel at No. 1 Martin Place; 400 George Street, Sydney; Rialto Tower; and Melbourne Exhibition & Convention Centre. James L. Williams has also recently completed several SEDA 4.5 star-rating buildings including the new NSW Police Headquarters, KPMG at King Street Wharf, and Civic Tower in Sydney.

Optimus is a proven leader in the field of mechanical services and associated control systems for retail, commercial and industrial property developments.

Their track record of innovation, efficient and reliable air-conditioning solutions has been established during their 30 years in business. Apart from the Rhodes Waterside Shopping Centre, recently completed projects include Erina Fair and Westfield Bondi Junction. Projects currently under construction include QIC Blacktown (a JV with Hastie Australia), Penrith Plaza for Bovis Lend Lease, and Westfield's Parramatta.

Optimus is part of the Hastie Group of Companies and has a wide range of skills and resources available to Builders and Developers.

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## HEYDAY GROUP PTY. LTD.

**AS A PROJECT DELIVERY ENTERPRISE HEYDAY GROUP PROVIDE DESIGN,** implementation and maintenance services. These services include building utility systems such as electrical infrastructure, fire detection and suppression systems, building controls, energy management systems, security, voice and data networking systems and structured cabling systems.

Multi NECA Award of Excellence winners, Heyday Group designed and constructed electrical services for the immense retail precinct at Rhodes Waterside, comprising all facets of electrical, voice, data and security infrastructure.

Heyday established the power substations feeding power to the retail precinct.

Heyday delivered the retail centre's voice communication infrastructure, establishing incoming Telstra phone lines, configured by a mainframe and distributed to the individual tenancies. Heyday also established centre management's data control systems, and subcontracted the centre's security systems installation.

Heyday Group's Colin Murphy was extensively involved in the electrical services design and construction. "We developed a coordinated design with the architects, interior designers and Walker Developments. We configured the design in accordance with Walker's concepts and with that of the major retail tenants," said Mr. Murphy.

Heyday established a substation and main switch room, feeding the metered submains as established by Heyday in each retail tenancy, the house services such as the carpark and mall areas, the common areas, and the air conditioning plant.

Heyday established electrical submains in each retail tenancy, and completed full electrical setup in major tenancies such as Ikea, Coles, Bi-Lo, and Reading Cinemas.

Heyday designed and installed a specialised essential services alarm monitoring system in the Ikea store. This system monitors Ikea's services using a switchboard interface which sounds an alarm upon any technical problems arising, and indicates the specific problem to a maintenance engineer. Heyday also installed a diesel generator providing backup power for the Ikea store.

In the Coles and Bi-Lo tenancies, Heyday completed full electrical installation down to setup of cash register and food preparation areas. "We also supplied and installed a gas powered AC generator for these tenants," said Mr. Murphy.

Heyday's own blockbuster efforts prepared the Reading Cinemas for screenings. "The cinema presented a challenge in terms of the sheer volume of electrical infrastructure required for lighting and power," said Mr. Murphy.

"We installed light and power for the foyer, sales area, theatre seat lighting, the complex biobox and projector setups, and mains cabling for the cinema's audio system," he said.

"In the cinemas, the ceiling was ten to twelve metres high, and proved a challenging work environment," said Mr. Murphy.

To work at these heights, Heyday utilized electric scissor lifts, and hydraulic shaft bucket lifts depending upon the work involved.

Heyday's installations were effected by the retail centre's structural steel framework. "The Bondeck flooring was too thin to put access conduits through, so surface mounting became necessary, and this takes more time," said Mr. Murphy.

This limited space constraint was countered by Heyday's service works within the ceiling. "An extensive cable cage was installed prior to the sheeting of the ceiling so that all of these services are concealed. In contrast, the services in the carpark are all secured with the drill and fix method," said Mr. Murphy.

Heyday Group lives by the motto, "our technology, your future." To plan your future with Heyday Group, visit [www.heyday.com.au](http://www.heyday.com.au)

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**Heyday Group**



## McPHERSON PLUMBING

**MCPHERSON PLUMBING BECAME INVOLVED IN THE RHODES WATERSIDE** Retail Project during 2001 formulating preliminary budgets and designs.

McPherson Plumbing's Senior Project Manager Stephen Carey and Project Designer Scott Johnson, from Harris Page and Associates, commenced design in early 2003 with installation of in ground drainage works starting shortly thereafter.

Due to the nature of the project, with it's large open car parking and roof areas, the project team deemed that a siphonic stormwater drainage system would be of benefit to the project and Andrew Powiss from Syfon Systems was engaged for it's design and installation.

In addition to the conventional hydraulic services of sanitary and trade waste drainage, stormwater systems, cold water services, fire hydrant/fire hose reel systems and natural gas supplies, Walker Corporation decided to commission the design and installation of a reclaimed water supply as an environmental initiative. The reclaimed water is used for toilet flushing and irrigation purposes throughout the project.

During construction up to 30 tradespeople out of the McPherson Plumbing's more than 100 employees were involved in installation of the hydraulic services on the project.

Stephen Carey, with the assistance of Foreman Ian Imrie, had the challenging task of leading his project team while they were working over the huge construction footprint on 10 floor levels.

The unique construction method of this

building using steel structural beams required careful coordination of services to enable pipework penetrations to be performed in the correct locations.

McPherson Plumbing is one of the major hydraulic services contractors with extensive expertise and experience in the design and installation of hydraulic services on large commercial, retail, hospital and residential projects throughout NSW.

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MARK KELLY - STATE MANAGER (LEFT) & FRANK CALARA - KEY ACCOUNT MANAGER (RIGHT)



## HILTI AUSTRALIA PTY. LTD.

**HILTI'S MISSION STATEMENT ASSERTS THAT,** "throughout the world, we strive to be the leading supplier of high-quality selected tools and fastening systems for professional customers in the construction and building maintenance industries." This global ideal is achieved through the localised efforts of Hilti's branch of companies. The recent outstanding efforts of Hilti Australia, who provided specialty services to clients involved in the Rhodes Waterside project, exhibited Hilti's ability to deliver complete customer satisfaction.

Hilti Australia provided their services to customers involved in the Rhodes project, such as Walker, DeMartin, Gasporini, Stowe Electricals and Heyday Group.

Hilti Australia offers customised service to individual companies. "For our customers at Rhodes, we talked them through their technical concerns, and provided access to engineering knowledge to assist in finding the right solution. Many of our tools are unique in ability, and these tools vary in their construction qualities. We find the right Hilti tool for the job, and we also provide complete backup service on Hilti tools," said Mr. Frank Calcara of Hilti Australia.

Hilti strive for customer delight, which explains why Hilti is the only company in the industry with a global direct sales force. Hilti boast that the specific recipe driving their products is one-third observation, one-third inspiration and one-third consultation. Hilti involve customers in every stage. Hilti's philosophy of customer driven innovation was explored during the Rhodes Waterside project.

Hilti offered individualised solutions for the diverse project needs at Rhodes Waterside. Hilti provided a tool for fixing steel to steel, facilitating the structural steel elements of the on and off ramps connecting Homebush Bay Drive to the Rhodes Waterside precinct. "Hilti developed a new tool for core drilling, used for the on and off ramps wherever drilling was required for balustrades and handrails. This unique tool provided the tool that could do the job, with no added dramas," said Mr. Calcara.

In addition to specialised project and product consultancy, Hilti facilitated on site licensing and training courses for persons requiring the use of Hilti DX powder actuated tools. "Work cover enforce

licensing of these tools, and Hilti insist on providing this training. Powder actuated tools are potentially dangerous, so education needs to be made available to those using DX tools," said Mr. Calcara. Hilti representatives and Account Managers Sean Hoffman, Ian Shaw, Scott Wright and Henry Kharoufeh completed intensive in house training, and a vigorous Workcover certification process spanning two years, qualifying them in licensing training. The powder-actuated range of tools allows users to fix timber to steel, timber to concrete, and steel to concrete, for example.

Hilti Australia draws on the strength of the Hilti Group's global industry, with over 14,000 employees across 120 countries worldwide, and Research and Development centres in Europe, America and Asia.

The Hilti Group is a world leader in developing, manufacturing and marketing added-value, top-quality products for professional customers in the construction industry and building maintenance. Hilti's product range covers drilling and demolition, direct fastening, diamond and anchoring systems,

firestop and foam systems, installation, positioning and screw fastening systems as well as cutting and sanding systems.

For more information on Hilti Australia and Hilti's innovative product range, visit [www.hilti.com.au](http://www.hilti.com.au).

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## BLACKTOWN BUILDING SUPPLIES

**THE TASK OF SATISFYING THE TIMBER AND BUILDING SUPPLIES NEEDS** of builders at Rhodes Waterside is an undertaking of significant proportions requiring dedication, professionalism, knowledge, ability and experience. When it comes to fulfilling these requirements, Blacktown Building Supplies delivers.

Blacktown Building Supplies has over twelve years of experience in the hardware industry, and staff and management know the necessity of exceptional customer service and fast delivery.

Blacktown Building Supplies is part of the Swadling Group, operated by the Swadling family. The Blacktown store is one of a network of stores across Rosebery, Rozelle, Annandale, Canterbury and Bankstown. From the purchase of a single store in Alexandria in 1986, the Group has grown to a Sydney wide network with an annual turnover of over \$45 million. The Group's recipe for success is a combination of businesses that are customer service oriented, and which ensure that delivery is expedited.

The Blacktown store was purpose built as a customised provider of reliable and fast delivery of timber and building supplies. The store is founded upon the many years of experience attained by the Swadling family and the two former employees who co-founded the operation. Since opening in 1992, the store has continually perfected its mode of operation.

Blacktown Building Supplies live by their motto, "Yes, we can deliver."

"We've created an operation at Blacktown - and at all our stores - which is service oriented," said Director, Phillip Screpis. "Deliveries across the group account for a major part of our business, and we have structured everything so that even if one of our stores doesn't stock a product, we can still arrange a delivery quite often within a matter of hours," said Phillip Screpis.

Sam Cassar, Sales Representative for Blacktown Building Supplies is responsible for servicing the needs of clients at the Rhodes Waterside project. "Our customers at Rhodes Waterside, including Walker Group and Richard Crookes Construction, engage our services because we make minimal mistakes and we get goods on site fast," said Sam Cassar.

Blacktown Building Supplies ensure the fastest possible delivery, even for goods that they do not supply. "If a client requires a product, and we do not stock it, we offer a special order service. A special order is placed with the supplier of the goods. And the rapport that we hold with these suppliers ensures the overall process is expedited. Once the goods are ready, we will collect them from the supplier and deliver them directly to the client," said Sam Cassar.

While Blacktown Building Supplies are extremely proud of their successful delivery system, the store offers many other benefits. The store has a 4,000 square metre undercover floor area and 100 parking spaces. The store's timber department stocks a wide range of timbers and can offer special attention to registered builders. The store has won a number of awards, including the TABMA Award for Member of the Year over four consecutive years (1998-2001).

To find out how Blacktown Building Supplies can deliver exactly what you need, call 02 9671 2355.



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## FIELDERS

**THE FIELDERS NAME HAS BEEN SYNONYMOUS WITH QUALITY AND STRENGTH FOR OVER 100 YEARS** in an industry where success is reliant on complete satisfaction. Initially providing roofing materials, Fielders now offer an extended product range including doorframes, carports and verandahs, fencing and flooring, ensuring comprehensive product offerings and support in all aspects of building construction.

Utilising its innovative culture, specialised resources and market leadership position, Fielders is famous for its avant-garde approach to manufacturing and installation. This innovative culture is evidenced in Fielders' Mobile Roofing Mill, concealed fix roofing and KingFlor formwork systems.

Fielders used its KingFlor product suite at Rhodes Waterside to deliver extreme cost efficiencies for Walker Group.

"Walker had prepared some costings based on traditional steel framing, and were looking for design solutions that were more cost effective. Fielders offered cost saving design solutions to meet Walker's needs," said Fielders NSW State Manager, Mr. Nathan Jack

With four profiles to choose from, Fielders has a formwork profile to suit any situation. KF70 has large unpropped spans to reduce structural costs, saves on concrete costs and has reduced deflection under wet concrete loads. KF57 is easy to lay with closed embedded ribs to save on fire reinforcement costs. RF55, the newest addition to the KingFlor family, is the strongest deck of its kind in Australia with its patented ReLok technology, lapping dovetail ribs and extra rib embossments.

Meanwhile with KingFlor, only Fielders offer a choice in composite steel formwork systems. KingFlor has become accepted industry wide as the most cost effective solution that saves on concrete, preparation and installation time.

"Each KingFlor product has unique strengths and benefits. At Rhodes' retail precinct, individual products were used in areas where they would benefit the project most," said Mr. Jack.

"The stiffer composite construction allowed by RF55 and KF57 was utilised in areas that were to support heavy loads, such as the Ikea store, and retail carpark and truck loading zones," said Mr. Jack.

"KF70 profile allows a 25mm displacement of concrete over the whole slab depth. With slabs in the retail areas reaching up to 80,000 square metres, this is a significant cost saving for materials, labour and time," said Mr. Jack.

"KingFlor products also have greater spanning ability, reaching up to twenty five percent further than traditional steel framing. At Rhodes, KingFlor design solutions altered the initial design, allowing a secondary beam to be taken out of every second bay, effecting significant cost efficiencies," said Mr. Jack.

The innovation of Fielders has attracted the work of many architects and builders who have experienced the benefits of reduced logistics, labour and time expenditures. With these and many other new developments, Fielders will continuously strive for growth through superior products, convenience, quality and service to all of its markets.

To find out how Fielders can help you finish on top with Tomorrow's Solutions, visit [www.fielders.com.au](http://www.fielders.com.au).

