

# The strongest Link

Hindmarsh has a long history of successfully completed high profile projects in Australia and overseas



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The \$150 million Flinders Link twin office towers in Adelaide's CBD are a significant undertaking for Hindmarsh and its partners in the project, Adelaide developer Kambitsis and Chappel's PT Building Services group. Designed to be an ecologically sound and sustainable development, Flinders Link is already a showcase of modern ecologically sound construction methods and principles.

For one of Australia's leading energy companies, Santos, the decision to move to Flinders Link meant the company could create an exciting new office environment for its employees in a building that reflected company's commitment to sustainability. It is more than just bricks and mortar – it's about creating an exciting working environment which is good for employees, energy efficient and ecologically sound. Stage 4 of the Flinders Link Development will provide Santos with a new, state of the art HQ in Adelaide. The 13-storey building will see the creation of offices and a laboratory as well as a workshop for the company which will become one of the major tenants along with the insurance giant IAG. The new building will form part of the Flinders Link Development, which also incorporates a number of high profile retail brands like SGIC, CGU and Swann Insurance. Flinders Link will also incorporate a 700-space car park for retail and office parking.

Hindmarsh has a long history of successfully completed high profile projects in Australia and overseas. Having recently completed a number of prestigious development projects in SA and ACT, Hindmarsh was able to present a thorough and comprehensive tender, which resulted in their appointment as project and construction managers. Their experience in the industry and their work with a number of community organisations, which advise statutory bodies, have provided them with a unique insight into their field of operations and they have become very adept at using their knowledge to the best possible advantage of their clients, the community and the environment. Their aim is to "create high quality built environs to promote long term enjoyment, maximisation of client's investment and the enhancement of urban living and working environments."

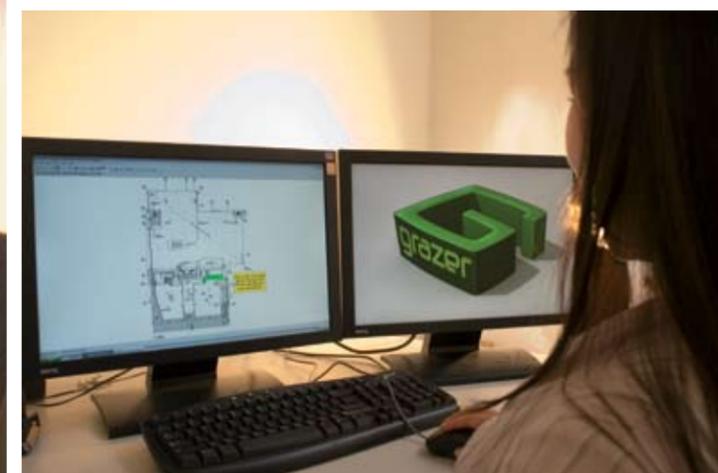
The NLA of both buildings is approximately 29,000 sqm and will be leased individually by Santos Ltd and IAG Ltd. The 700 bay public car park will be leased by EziPark Pty Ltd. The development incorporates modern design initiatives that are at the forefront of today's technological advancements in green building design and construction. The IAG office building has received a 5-Star Green Star-Office Design rating from the Green Building Council of Australia (GBCA) and 4.5 stars from Australian Building Greenhouse

Rating (ABGR). It is expected that Santos' HQ will achieve a similar result. This in itself sets it apart from many other developments currently being undertaken around the country. Features include: energy efficient lighting, double glazing, light sensitive dimmers, solar hot water, mixed flow air conditioning and co2 monitoring, renewable timber, bicycle parks and lockers and the use of non-toxic materials. The modern design and ESDI used in the project are not only sure to create a significant saving in greenhouse gas emissions but also to create a productive and comfortable work environment for those lucky enough to occupy the building when completed.

Flinders Link is yet another successful project to add to Hindmarsh's already impressive portfolio, which include landmark developments such as Martin Towers. The company also won the 2006 MBA National President's Award for its construction of the John Curtin School of Medical Research at the Australian National University in Canberra.

Hindmarsh  
Flinders Link Development

VALUE: \$150M  
FLOOR SPACE: 29,000 sqm (NLA) & 700 bay public car park  
CLIENT: Flinders Link Pty Ltd  
DEVELOPER: Hindmarsh, Kambitsis Group, PT Building Services  
PROJECT & CONSTRUCTION MANAGER: Hindmarsh  
ARCHITECTS: Hassell  
SERVICES ENGINEERS: Bestec  
STRUCTURAL ENGINEERS: Wallbridge & Gilbert  
QUANTITY SURVEYORS: Currie & Brown  
FINANCIER: Bank of South Australia  
LEGAL: Thomson Playford  
PROPERTY MANAGER: Knight Frank



# Grazer software sophistication

Beginning operations in 2003, Grazer's team of seven project developers and software engineers are part of a truly 21st Century company founded by John Martin, who was inspired while working at Hong Kong airport. Recognizing the absurdity of the numerous folders and files that formed the operation and maintenance manuals for the runway lights John Martin decided to find an easier way in which these interrelated documents could be written and accessed.

Grazer has taken the bulky operations manual and radically modernised it. The system the company uses takes the various documents that form the basis for the narratives in traditional operation and maintenance manuals, the data specifications, diagrams, and drawings, and, rather than simply turn these into printed descriptions, transforms them into an interactive virtual graphical database.

John Martin explains using the example of a single air conditioner in a tower block that, while the traditional operation and maintenance manuals would

apply merely to the single air conditioner, the system Grazer has developed positions the air conditioner within the entire context of the building. Thus it is possible to access not just the operations manual for an individual device but visualise its entire context within the building, thanks to the software Grazer developed. Moreover because the entire system is visual, containing CAD drawings, diagrams and photographs, the information is clearly presented and comparatively easier to understand. Further the database allows for searches by location, part number, and specific relationship to other aspects of the building. As John Martin states, the diagrams of a building and its parts are as important as the skeletal structure and organs of the human body, indeed they are, he says, the "life blood" of the building.

While the traditional operation and maintenance manuals are collated at the end of a construction project, the Grazer team work alongside designers, architects, engineers, builders, and tradespeople from the moment of inception to the moment of completion. This close working relationship allows the company to integrate construction designs and installation plans within

their software, building their program while the actual construction process takes place, and thus guaranteeing everything involved is correctly represented in their finished product. This challenges the traditional concepts of information for the construction industry and re-writes the rulebook.

Under the supervision of project manager Elizabeth West, Grazer also helped Flinders Link gain its green star status, which amongst other design and construction aspects depends in part on a building users manual. As John Martin also observes Grazer's unique use of graphical representation also marks the project as innovative, another advantage when seeking a green star.

Growing organically Grazer is already expanding into other states. The implications for the system they have devised could be used not just in construction but also urban planning, industrial management, and systems design. The efficiency espoused by Grazer's system also applies to the company itself, which maintains carefully coordinated office systems to guarantee the

quality of the work they produce. With successfully completed projects including hospital and power supply infrastructure for South Australia, as well as Federation Square in Melbourne, the future for Grazer looks very bright.

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# Storing it up

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**T**he steel office furniture fit outs for Flinders Link were provided by F.G.P. Company Pty Ltd. The South Australian company provided staff lockers, stands, and seating for the Adelaide development. Working to the specifications of the project's developers, F.G.P. Company's in house design team worked on creating the lockers to complement and maximise the available area, while simultaneously creating lockers that had the greatest capacity for the space.

Working to the specifications of a project is something that F.G.P. Company enjoy, and they rightly pride themselves on their ability to go beyond the standard range of products available in order to help a client achieve the desired results. This ability to be fully flexible gives the company an edge when bidding on fit outs, and has allowed them to maintain high standards of quality. Indeed as an ISO 9001 accredited manufacturer the company's processes ensure the quality of the final product.

As an Australian owned company, with more than fifty years experience of manufacture and design, their skilled employees and modern manufacturing facility enables the company to maintain their position as market leaders. F.G.P. Company also understand the nature and demands of the developing market and can meet challenges head on. One such demand is the environmental effect of manufacturing, and the

company maintain a commitment to the preservation of the environment and sustainable practices. This commitment means that the company use recycled steel in their products, the powder coating is created using no emissions and that water use is carefully controlled to avoid any unnecessary wastage. The suppliers that F.G.P. Company rely upon are all similarly recognized for their commitment to rigorous environmental standards, and F.G.P. Company are currently in the process of becoming accredited as an environmentally friendly company.

Besides working on the Flinders Link project the company have supplied steel office furniture across Australia to numerous clients. These have included supplying steel wardrobe for Defence throughout the country and supplying to Western Mining, as well as many other clients. Amongst other recent contracts the company are providing fit outs for the Victorian public records department, as well as ongoing provision for Centrelink and national libraries.

# Crowns of Aluminium

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Formed in 1974, the 100% South Australian owned Kingswood Aluminium have grown from strength to strength, with a portfolio of successfully fulfilled contracts that include such landmark buildings as the Adelaide Airport and the Adelaide Convention Centre, as well many of the South Australian state capital's apartment blocks. Kingswood Aluminium is the only company in South Australia to have achieved a Category 1 status with DEET (the state government building arm), which enables them to tender on any specialized government contract.

Specialising in designing, constructing, and installing glass and aluminium facades. The company are also unique in the state, having their own in-house design department to help clients realise their projects. The company prefer to be involved from the initial stages of development and they are adept at designing facades that meet the specialist needs of a project and the demands of their clients.

Kingswood Aluminium's dedication to creating specially realised facades made them the natural choice for the Flinders Link construction project, and the company were involved in the project from initial design conception. The company designed and constructed aluminium and glass facades for the project, alongside special glazed features. Responding to the demands made by the environmentally friendly aspects of the development, Kingswood Aluminium produced specially designed glass alongside aluminium fittings in order to guarantee the quality of the environmentally aware products.

The company chose glass that was designed and manufactured to meet specific green standards and recognized green criteria. In fulfilling a contract that necessitates meeting green standards Kingswood Aluminium had to balance the environmentally recognized criteria with the cost of manufacture and installation. In addition the products had to be designed so that both the process of installation and the finished project would meet the rigorous health and safety standards the company adheres too.

Uniquely the project demanded that part of the glazing of the prefabricated panels was done on site immediately prior to installation. This unusual method of production was necessary to maintain timing issues, as the specialist glass used required a long lead-time in manufacture. The process worked well, and the façade was erected on schedule.

Currently the company are working on numerous projects including the S.A Water Project, the Port Lincoln Hotel, the City Central Bus Terminal, and, fittingly, the Amazon Water Lilly green house in the Adelaide Botanic Gardens. Kingswood Aluminium have also introduced an apprenticeship programme to provide their employees with trade certified status, further guaranteeing the quality of their work, as well as investing in the company's future.



# Staging the show

**P**eter (Pedro) McColl is the founder and Managing Director of Australian Staging & Rigging Pty Ltd (ASR) a South Australian based company that provides extensive access, scaffolding, and rigging services in South Australia and across the country. Aside from construction projects, ASR is also one of the largest suppliers of specialised scaffolding services to the entertainment industry providing elaborate stages and set-ups for some of the biggest names in the business, including recently, U2 and Robbie Williams.

The extensive versatility and skills training provided by ASR is a key aspect of their business and company. The diversity of their operations has generated the skill and knowledge base to undertake a broad spectrum of jobs. From erecting communication towers, to scaffolding for commercial building projects, scaffolding off wharfs, inside and outside of silos, under and over bridges, and general demolition and building works.

Being one of the largest scaffolding operations within the entertainment industry also generates even greater versatility in the company's operations. Erecting stages and grandstand seating for some of the biggest stars and the largest sporting events in the country provides some enormous challenges.

With the "flagship" event being the Clipsal 500 Adelaide V/8 Supercar Event, other events undertaken by ASR include: Bathurst 1000, the Gold Coast Indy Event, Tour Down Under, Tennis events and currently installing grandstand seating for the 2007 World Swimming Championships in Melbourne.

This diversity provides ASR with an opportunity to multi skill their workforce. No two jobs are the same and many of the challenges faced in one area of the industry provide an 'outside the square' approach to other areas that generates innovation and motivation to produce outstanding results for their clients.

Engaged by John Hindmarsh (SA) Pty Ltd on the Santos HQ Project in Adelaide, ASR provided many services and products, including:

- Drop scaffolding, birdcage scaffolding, scaffolding inside lift wells.
- Scaffold overhead protection, i.e. "A & B-Type" hoardings and gantries in, various configurations.
- Structural steel gantries.
- Scaffold staircases.
- Installation of structural loading bays.
- Supply and install a double man & materials hoist, i.e. one mast with 2 independent lift cars.
- Hoist landing platforms.
- Supply and install three twin mast Elevating Mast Climbing Platforms.
- Supply, install and relocate swing stages.
- Mini Crawler Crane supply & operators.
- Edge handrails and screens to all floor levels.

ASR was faced with many access challenges, including to design a 'double deck' mast climber for the front façade of the building that would follow the contour the cantilevered structural glass facade and sunshield balcony, and would allow the glaziers to install the entire façade with 3.6 m x 1 m sheets of glass. This operation proved to be very successful for

the glaziers and the builder to maintain tight scheduling.

On the project, ASR provided specialized labour force including scaffolders, riggers, crane operators and construction equipment such as stretchers & stretcher boxes, dog boxes, lift opening protection gates, heavy duty industrial waste bins (on castors for rubbish on each floor level), winches, tarpaulins for water proofing, rigging equipment, fall arrestor systems & devices (inertia reels).

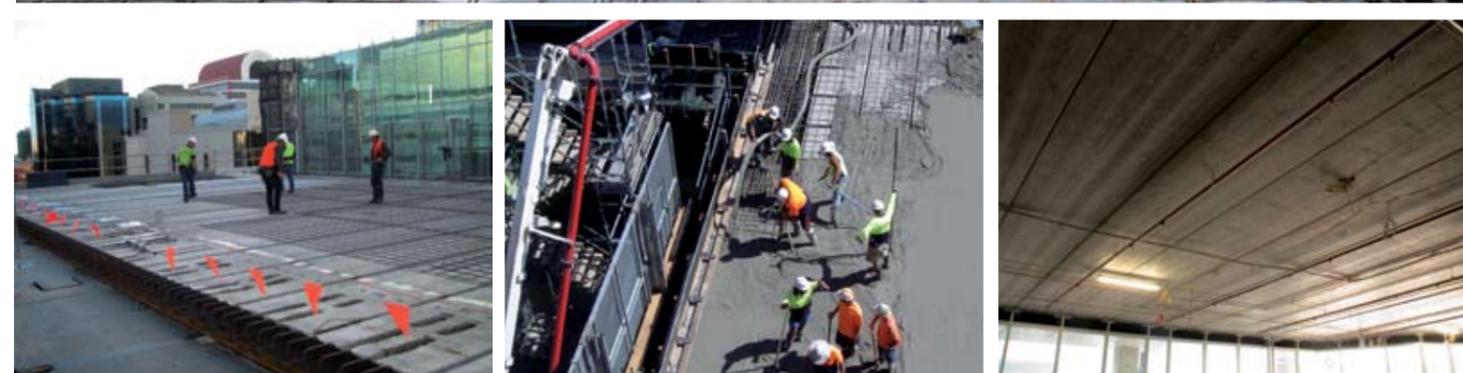
Pedro, who founded the company in 1988, explains about their unique versatility, "Our labour force includes Riggers, Scaffolders, Dog Men, Boilermakers, Carpenters, Crane chasers, Welders and skilled labourers, along with other specialist trades; we are able to provide a multi-skilled workforce to service all of our client needs effectively and efficiently." He says, "It's the ultimate in multi-skilling and a big part of the company's success. Every job is different, and everyone is kept interested."

Certainly, the Santos HQ Project benefited from the involvement of ASR. With all labour resources being well versed in OH&S requirements, (another core principle of the company's approach) and dedicated to providing a quality and professional service. All of ASR's personnel engaged on the job site provided a clear example of what can be achieved with clear communication, and a well-trained workforce. Naturally, ASR is extremely proud of what was achieved.

Perhaps, the final words should be left to McColl, "At the end of the day scaffolding is not only a structure, it is a piece of art. The company's logo is 'Satisfaction with every Erection' and we stand by it".

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## Solid to the Core

Formed in 1988, Hollow Core Concrete specialise in the design, manufacture and installation of structural precast components. The company pride themselves on their design expertise and assist many of their clients in the initial stages of planning and design through to construction. This approach enables Hollow Core Concrete to come up with innovative solutions tailored specifically to the demands of any project they are involved, with these projects earning awards such as the Master Builders Association of Australia award for excellence in construction.

For Flinders Link, Hollow Core Concrete manufactured and supplied the flooring components, working on the project from its inception. The project consisted of approximately 11,500m<sup>2</sup> of Hollow Core Planks. The spans were typically 6.5m (using 205mm thick planks) and 14m (using 320mm thick planks) with each level consisting of approximately 1,000m<sup>2</sup> of flooring and being completed in a weekly cycle.

These components were specially designed for the project in conjunction with the structural engineers. The Flinders Link project was designed as a green star project, and the components provided were produced with Hollow Core Concrete's standard high quality concrete. The company is highly familiar with the demands of environmentally sustainable develop-

ment. Indeed, they frequently use blended cements and recycle any concrete waste as lower grade aggregate for roads.

Leo Logmans, Flinders Link Construction Manager for John Hindmarsh expressed that "the system worked extremely well and allowed the structure to be constructed very quickly and efficiently."

This project adds to a portfolio of successfully realised projects that include such national icons as the Melbourne Cricket Ground's Northern Stand and the Melbourne Sports and Aquatic Centre. Hollow Core Concrete can now add the green star rated Flinders Link, another benchmark construction project realised by the company.

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## Keeping their cool

With 62 years specialising in mechanical services and air conditioning Frigrite A.C are familiar with the demands of the construction industry in Adelaide. The company's portfolio includes Adelaide Airport and the Commonwealth Law Courts in Victoria Square, Adelaide. The company is a major employer of in-house apprentices in plumbing, refrigeration and sheet metal, which enables them to both guarantee the skills of their work force and quality of the work undertaken.

For Flinders Link Project, the company had to install environmentally friendly air conditioning, something with which they are already familiar, having installed similar green systems elsewhere in the state. Spending fifteen months devoted to the project the company installed an active chilled beam system with low and high temperature controlled water. The active chilled beam system uses smaller fans and has a lower energy capacity, reducing running costs and energy consumption.

Frigrite A.C. Contracts and Project Manager Scott Oatway led a dedicated team to deliver an excellent result which often tested the project team. With a limited amount of space on site, working on six levels and the plant room simultaneously the Flinders Link development tested the skills of Frigrite A.C. engineers. However, thanks to the advance planning, ex-

tensive preparation and innovation Frigrite A.C. were able to complete the project on schedule. Indeed, finding solutions is something the company pride themselves on.

The project involved four separate contracts with two construction managers using three consulting companies to deliver this unique project. With Flinders Link marking another successfully completed project, Frigrite A.C. are already looking forward to the next challenge.

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## Going with the flow

Adelaide's Flinders Link development is a green star project, and Jordan Plumbing were the natural choice to supply the environmentally aware plumbing requirements. The company have both an expert knowledge and extensive experience of the various environmental aspects of the plumbing industry.

Company spokesperson Christopher Brown is careful to observe that green credentials function in a variety of ways. On Flinders Link the company selected plumbing materials that included high-density polyethylene pipes instead of PVC, because the manufacturing process uses less petroleum products. The plumbing is designed so that the hot water supply is solar boosted, heated by the Sun prior to delivery and consequently using less energy and reducing running costs. Throughout the construction process Jordan Plumbing also maintained a rigorous monitoring of waste, in order to maximise recycling and minimise all other waste. Jordan Plumbing commenced work at the start of construction, and will maintain an ongoing presence at Flinders Link working in preventative maintenance.

The company's commitment to green awareness, to water conservation, material usage, recycling and waste management is informed by a commitment to ongoing training and upgrading employee knowledge. Christopher Brown

has undergone a Green Building Council of Australia Green Star Accredited Professional Course as well as a Ecosmart Sustainable Plumbing Training Course with the Plumbing Industry Association, such professional recognition enables the company to position themselves at the forefront of their trade and makes them well situated for the future of Australian construction.



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