

STAR CITY REDEVELOPMENT

The redevelopment will involve the addition of a brand new 5 star hotel, more restaurants and bars and enhanced entertainment and gaming facilities.



HITTING THE JACKPOT

Brookfield Multiplex was appointed as the contractor to refurbish the base building and the external facade fronting the harbour, and build a new five-star hotel. The building was re-oriented to allow a waterfront outlook and a street level facade was constructed to improve the public domain.

STAR CITY REDEVELOPMENT / BROOKFIELD MULTIPLEX



Image The revolutionary floor to roof glass facade providing views of the city skyline and Harbour.

Brookfield Multiplex is a leader in global contracting and development management – we build, engineer and maintain property and infrastructure assets.

Established in 1962 as Multiplex, Brookfield Multiplex, known for its professionalism and award-winning approach, has worked on a number of prolific projects. These include the Fiona Stanley Hospital in Western Australia, Tyree Energy Technologies building in NSW and more recently, the \$760 million redevelopment of Sydney's Star City Casino.

Appointed as principal builder, Brookfield Multiplex was responsible for the extension of the Star City Casino building.

George Kostas, Managing Director of Brookfield Multiplex, said that whilst working on the Casino, the highly skilled Brookfield Multiplex building team faced a number of challenges.

“The construction of Sydney City's new bike lanes along Union Street forced the construction zone to be in a dead-end street. Unfortunately, this also contained the Casino car-park entry and a loading dock for the Lyric Theatre and Coles,” Mr Kostas said.

“As a result, all building material deliveries took place in a 30 metre construction zone, with only 16 metres of useable loading space. This also needed to be used for the tower crane, due to the protected trees that occupied the remainder of the area,” he said.

Demolition of party walls between the existing and fully operational Casino and interfacing hotel areas also required careful building management to ensure Casino operations were not interrupted at any stage.

“In addition, we needed to ensure the curved facade operated in three zones on each floor to address climate issues,” Mr Kostas said.

“However, as a result of our effective Building Management system, we were able to manage energy consumption by switching off air-conditioning in particular areas and adjusting the automated blinds when too much heat was detected in the glass,” he said.

Given the success of the Star City Casino redevelopment, Brookfield Multiplex's astute reputation, management and industry expertise ensured the delivery of quality results and optimum client satisfaction, synonymous with their name.

For more information contact Brookfield Multiplex, L22, 135 King Street Sydney NSW 2000, phone 02 9322 2000, fax 02 9322 2001, email: information@brookfieldmultiplex.com, website: www.brookfieldmultiplex.com.



Below As the leading privately-owned electrical and communications organisation in Australia, Stowe Australia were responsible for the installation of the entire communications infrastructure on the Star City Redevelopment.

Established in 1910, Stowe is Australia's leading privately-owned electrical and communications contractor, delivering their specialist services to the private and public building, defence, urban infrastructure, mining and industrial sectors. The company has an industry reputation for delivering outstanding performance, quality and reliability.

With an objective to create long-term relationships with clients and suppliers, as well as deliver superior results and service, Stowe Australia has been involved in a number of prolific projects.

Given their diverse capability including design and engineering, installation, construction projects, maintenance and 24-hour service, Stowe Australia were recently awarded contracts for the delivery of the new HP Data Centre and ASX Data Centre.

In addition, Stowe Australia has also been providing their astute electrical and communications services throughout the Star City Casino redevelopment in Sydney.

This \$760 million project has incorporated the redevelopment of existing retail areas, demolition of the Spanish steps, extension of the existing gaming floor and retail structural slab, a new facade and roof works.

Prior to their involvement with Project Star, Matthew Parker, Business Development Manager from Stowe Australia, said since 1997, their professional team had been responsible for the ongoing maintenance of the entire electrical and communications infrastructure.

"Our initial involvement with Project Star began when we were directly engaged by Star City to undertake the infrastructure upgrade works at the Casino," Mr Parker said.

"Following this, Stowe Australia were engaged by Brookfield Multiplex to design and construct the electrical and communications infrastructure as part of the Pirrama Rd expansion," he said.

This has incorporated the delivery, supply and installation of all of the main switchboard connections, new distribution boards, submains cabling electrical multifunction metering, earthing, lighting, and lighting control, as well as the provision of power outlets and supplies to equipment installed by other trades.

In addition, Stowe Australia ensured the efficient and cost-effective delivery and

installation of the structured cabling infrastructure, cable supports, essential lightning and surge protection and the interface to the building's monitoring and security control.

Whilst performing their responsibilities on Project Star, Mr Parker said the experienced team from Stowe Australia introduced a range of innovative and cutting-edge installation techniques.

"While designing and installing the specific lighting requirements for the Casino, we had to ensure the installation minimised glare spill and obtrusive light," he said.

"Furthermore, we needed to make certain that the aesthetics and style of the lighting design, required for Project Star, met the architects' acute specifications.

"As a result of our experience with similar projects, we were able to meet not only the detailed lighting requirements, but also ensure the timely delivery of all of the required communications and electrical infrastructure, providing quality products and client satisfaction," he said.

With the Casino having to remain completely operational throughout the redevelopment, Mr Parker said with detailed planning and constant liaising with the client and other onsite contractors, the team from Stowe Australia managed to minimize disruption to the Casino's patrons and business critical services.

Given their dedication to becoming the industry's best, Stowe Australia remains pro-active and responsive to their client's needs and requirements, ensuring without a doubt that Stowe Australia, having recently celebrated 100 years of operation, will continue to remain a leader within the electrical and communications industry.



1910-2010
CELEBRATING 100 YEARS

Electrical and Communications Contractors

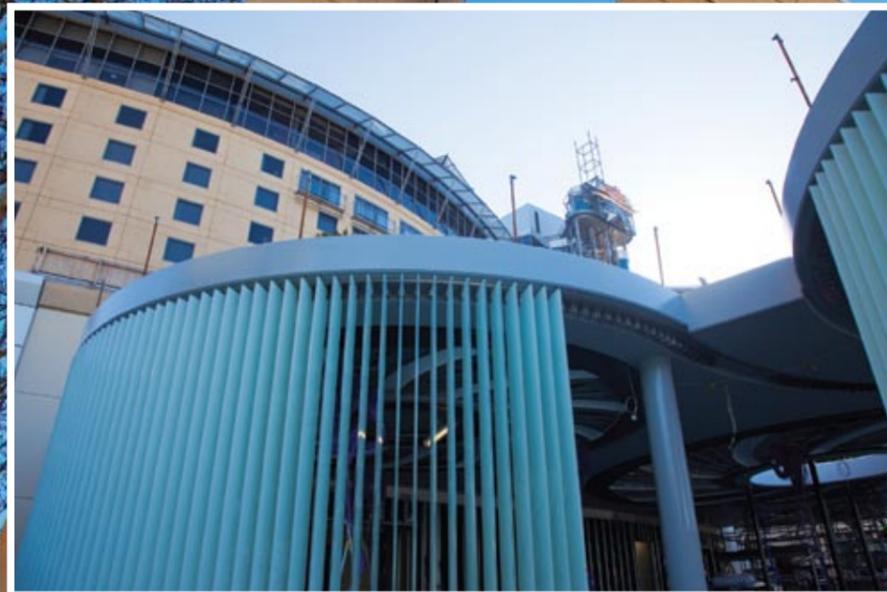
For more information contact Stowe Australia, 10-12 Clyde Street Rydalmere NSW 2116, phone 02 9848 2111, fax 02 9898 0200, email: stoweau@stoweaustralia.com.au, website: www.stoweaustralia.com.au.



Below De Martin & Gasparini were responsible for the supply and placement of all of the concrete required on the Casino Project.



Below Hastie's highly skilled team were engaged by Brookfield to deliver the design, supply and installation of all of the Air Conditioning Mechanical Services.



With their professional team, industry expertise, company size and infrastructure, DeMartin & Gasparini have become the trusted choice for efficient and expert concrete placement within the building and construction industry.

With more than 50 years experience and a comprehensive portfolio of completed projects, including high-rise developments, sport stadiums, retail complexes, hospitals, educational facilities and airports, DeMartin & Gasparini were also recently involved on Sydney's Star City Casino re-development project.

When complete, the significant \$760 million redevelopment will transform the Casino into a world-class leisure and entertainment precinct and will incorporate the addition of a world-class five star Hotel, as well as a plethora of new restaurants and bars. The redeveloped property will also incorporate a range of energy conservation measures such as environmentally responsible materials, rainwater harvesting for hotel use and the avoidance of the use of ozone depleting substances.

Responsible for the supply and placement of all of the concrete required on the Casino project, DeMartin & Gasparini utilised the

latest technology methods and equipment to ensure they delivered both quality results and optimum client satisfaction.

With a focus on high class finishes to the high roller areas, DeMartini & Gasparini's highly skilled and trained crews used the cutting-edge 'Sovereign Room' self-compacting concrete on all of the building's columns.

Using their fleet of mobile concrete booms and self climbing tower booms, De Martin & Gasparini were also able to efficiently and expertly install and supply all of the Star City Casino structure. As a result, they were not only able to complete the job in a short period of time, but were also able to ensure minimal disruption to the construction of the building.

Given the fact the Star City Casino's re-development resonates a unique and innovative architectural style that is synonymous with DeMartin & Gasparini's prestigious reputation, it is without a doubt they will continue remain a leader within their industry.

For more information contact DeMartin & Gasparini, 16 Hill Road Homebush Bay NSW 2127, phone 02 9748 5100, fax 02 9748 0041, website: www.boral.com.au.

Formed in 1970, Hastie Australia specialises in Mechanical Building Services and takes pride in their ability to work harmoniously with clients, providing innovative solutions in both the design and coordination of projects.

Incorporating the latest project management systems, Hastie Australia is able to control every milestone in the design, co-ordination and construction of a range of projects. Having completed a range of prolific projects, including 1 Bligh Street and Sydney's Royal North Shore Hospital, Hastie Australia were also involved on the significant Star City Casino redevelopment project.

Glenn Hughes, Construction Director of Hastie Australia, said during their involvement, Hastie's highly skilled team were engaged by Brookfield to deliver the design, supply and installation of all of the Air Conditioning Mechanical Services. "These services included the chilled water reticulation system and its' connection to the existing Casino, dedicated heat water boilers, individual hotel room fan coil unit installations - complete with individual controls and a central chilled water air handling plant," Mr Hughes said.

"We also provided the car park, basement and general ventilation and toilet exhaust systems, as well as a BMCS controls system, with dedicated room

controls," he said. Throughout their involvement at Star City, the team from Hastie Australia faced a number of challenges, yet with their wealth of industry expertise and knowledge, were able to overcome these.

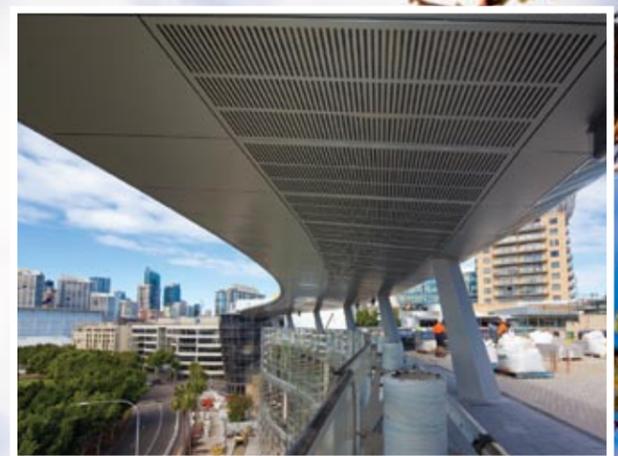
"One of the major challenges was that we had to alter and integrate the new hotel suite layouts, despite the fact the project was already underway. Furthermore, additional infrastructure and associated plant to permit future Super suites and private gaming rooms on the upper level was introduced," Mr Hughes, said. "As a result, these developments required the redesign from Level 6 upwards and the addition of extra plant, with re-designed plant-rooms on the roof. "However, we overcame these challenges by increasing the engineering, drafting and co-ordination of our labour resources assigned to the project," he said.

With the necessary skills to effectively analyse the mechanical services required for a particular project, it is without a doubt Hastie Australia will continue to uphold their industry reputation as the leading Mechanical Services experts.

For more information contact Hastie Australia, Suite 201, Level 2, Quad 3, 102 Bennelong Bay Homebush Bay NSW 2127, phone 02 8732 5400, fax 02 8732 5401, email: glenn.hughes@hastie.com.au.

Below Ramset™ were responsible for supplying chemical and mechanical anchoring systems as well as high volume repetitive fixing systems to the Star City Redevelopment.

Below As the leaders in their field, Philip Chun were engaged in the provision of the Building Code of Australia Certification throughout the construction process.



The Ramset™ team of major project professionals, provide construction engineering and product system solutions to important projects around Australia.

- Ramset™ drilling, cutting and coring products and,
- Ramset™ powder actuated tool systems to secure formwork and brickwork.

Ramset™ worked closely with major contractors and project design engineers to deliver construction works to schedule and specification for the redevelopment of the \$760 million Star City Casino Project in Sydney NSW, supplying chemical and mechanical anchoring systems as well as high volume repetitive fixing systems to this project.

During the course of the redevelopment, Ramset™ addressed the efficient installation of acoustic and thermal insulation, specified for this project.

The key Ramset™ systems used included:

A variety of insulation materials were quickly and easily installed using the new Insulfast™ GT gas tool and insulation fastener system, which was designed and developed by Ramset™ in Australia.

- ChemSet™ Reo502™ for heavy duty concrete and steel structure anchoring,
- ChemSet™ 101 for securing stone facades,
- CableMaster™ gas tool and cable clip systems, for the fast one step installation of over 300 kilometres of standard and specialized cabling,
- TrakMaster™ gas tool systems, for the installation of internal plasterboard and block walls,
- BlazeBrake™ fire rated foam and sealants, for fire rating of structures, joints and service penetrations,

It could be said that Ramset™, with their innovative project solutions and product systems, hold much of today's construction together.

In fact, as many of their product systems are so widely used, they're accepted as the benchmark standard for anchoring solutions on important projects.

For more information contact Ramset™, 1 Ramset Drive Chirnside Park Victoria 3116, phone 1300 780 063, fax 1300 780 064, email: enquiry@ramset.com.au, website: www.ramset.com.au.

Philip Chun is an international firm of building code consultants, providing building design certification, accessibility, fire engineering and fire life safety consultancy to both the private and public sectors, across all aspects of building regulation and control.

have liaised with other consultants to ensure compliance with the Building Code of Australia, carried out critical phase inspections and met with Fire and Rescue NSW regarding their requirements," he said.

With an innovative system-approach to building design and a dedication to achieving success in the planning design and construction of new buildings, Philip Chun have been involved on numerous developments. Some of these include the \$300 million Darling Walk development, the \$600 million development of the Royal North Shore Hospital and the State Theatre and Gowings Buildings Revival Project. Given their wealth of industry expertise, Philip Chun were also involved on the prestigious \$760 million Star City Casino redevelopment in Sydney.

Given their extensive role on Project Star, Philip Chun has faced a number of challenges resulting from the nature and functional use of the building.

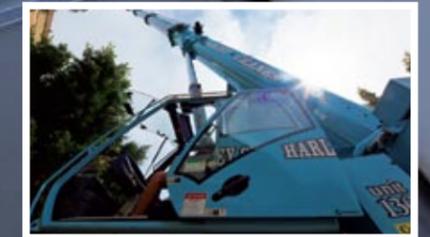
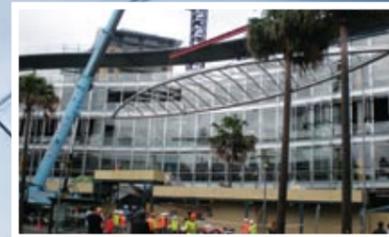
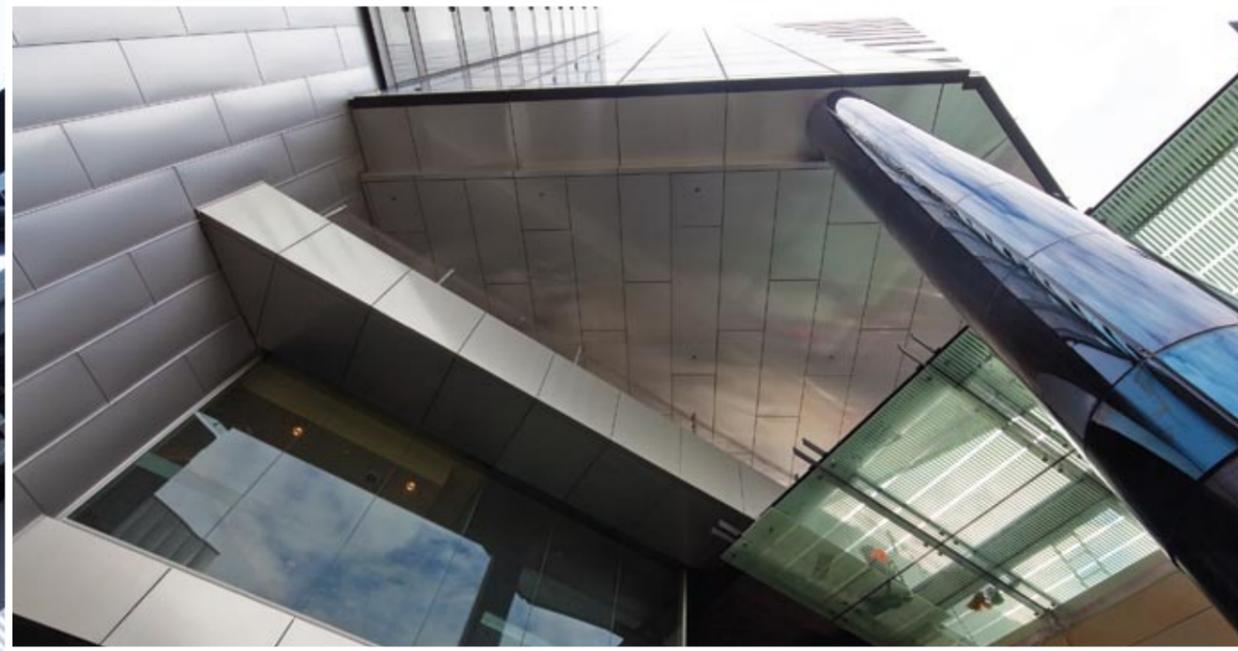
According to Robert Marinelli, Managing Director of Philip Chun, the company has been engaged on the project providing Building Code of Australia Certification since 2006. This included the issue of numerous construction and occupation certificates and regular inspections during the Project Star construction process. "Our role has also incorporated responsibilities such as reviewing performance-based design, the provision of assessment reports, reviews to the design team and reviewing the DA conditions from the consent authority," Mr Marinelli said. "In addition, we

"As the Casino was required to remain operational during the renovation, a number of factors needed to be considered whilst completing the internal refurbishment of the Main Gaming Floor," Mr Marinelli said. "These included the redirection of exits to ensure paramount safety conditions, and maintaining the bus and light-rail operations to allow for minimal disruptions," he said. However, the multi-disciplinary Philip Chun personnel have been able to handle and overview innovative solutions, while at the same time adopting a responsible approach to the Casino's building regulations. Boasting a reputable project profile, as well as a wealth of local and international experience, Philip Chun will no doubt, continue to remain the leaders in their field.

For more information contact Philip Chun, Suite 404, 44 Hampden Road Artarmon NSW 2064, phone 02 9412 2322, website: www.philipchun.com.

Below Stane Industries provided the supply and installation of the aluminum composite and stainless steel cladding.

Below Harley Cranes in action at the \$760 million Star City Casino redevelopment in Sydney.



With more than 15 years experience in construction industry, specializing in fabrication and installation of aluminum composite cladding, Stane Industries Australia is a name synonymous with success. Offering an extensive range of façade systems, including Aluminium composites, Terracotta, Stainless Steel and Kingspan cladding, Stane Industries have been involved on a number of prestigious projects throughout Sydney and NSW. Some of these include the Harley Davidson showroom, Sydney's World Square, CSU Orange Campus and more recently, the Star City Casino and New Hotel redevelopment.

When complete, the significant \$575 million redevelopment will transform the Casino into a world-class leisure and entertainment precinct and will incorporate the addition of a world-class five star Hotel, as well as a plethora of new restaurants and bars.

Stan Kopse, Managing Director of Stane Industries Australia, said that throughout their involvement on the Star City New Hotel and Star City Casino building, their expert team carried out a number of responsibilities. "Whilst working on Star City's Hotel, a team of our best fabricators and installers including our project management team supplied and installed aluminium composite cladding Alucobond to the walls and external ceilings" he said. "In addition, we used black mirror finish stainless steel

to install cladding to the building's columns and Kingspan to install the insulated panel cladding to the Plant room. "In regards to the Casino building, we provided the supply and installation of the aluminum composite cladding to the stairs and slab edges," he said. Although Stane Industries Australia specialise in the majority of façade systems, the installation of the Standing Seam stainless steel roof and wall cladding was challenging, especially as it was a relatively new in such a large scale. "The size of this project and its complex design, involving a number of different façade systems has been also challenging, especially coordination of works involving diverse trades and materials have tested our potential." "Yet, thanks to our great tradesman and management team, we were able to overcome these challenges and provide outstanding results and complete satisfaction to the client."

Committed to successfully completing projects, regardless of the challenges, it is without a doubt Stane Industries Australia will uphold their reputation of fine workmanship within the industry.

For more information contact Stane Industries (Australia) Pty Ltd, 3/13-15 Governor Macquarie Dr Chipping Norton NSW 2170, phone 02 9723 6673, fax 02 9723 3308, email: projects@stane.com.au, website: www.stane.com.au.

Harley Cranes is a family owned business that specialises in the provision of mobile cranes, rigging and material handling. Established in 1994, Harley Cranes is committed to providing their clients with quality services from their leading fleet of machines, in a cost and time effective manner.

Able to operate 24 hours a day, seven days a week, the professional Harley Cranes' team have worked on a number of significant projects throughout NSW.

Some of these include the Revesby Railway Station Turnback (Railcorp), Metropolitan Railcorp Projects, King Street Wharf, Prince Henry Hospital, the erection of numerous tower cranes and the Sydney International Airport Terminal.

Given their wealth of expertise and range of quality services, Harley Cranes were also involved on the \$760 million Star City Casino redevelopment in Sydney.

Adam Hughes, General Manager of Harley Cranes, said that whilst working on the redevelopment, they provided all the mobile crane and installation to various sections of the building.

"Our professional team were particularly responsible for the installation of 9mtr x 44mtr of feng shui awning at the entrance of the Casino," Mr Hughes said.

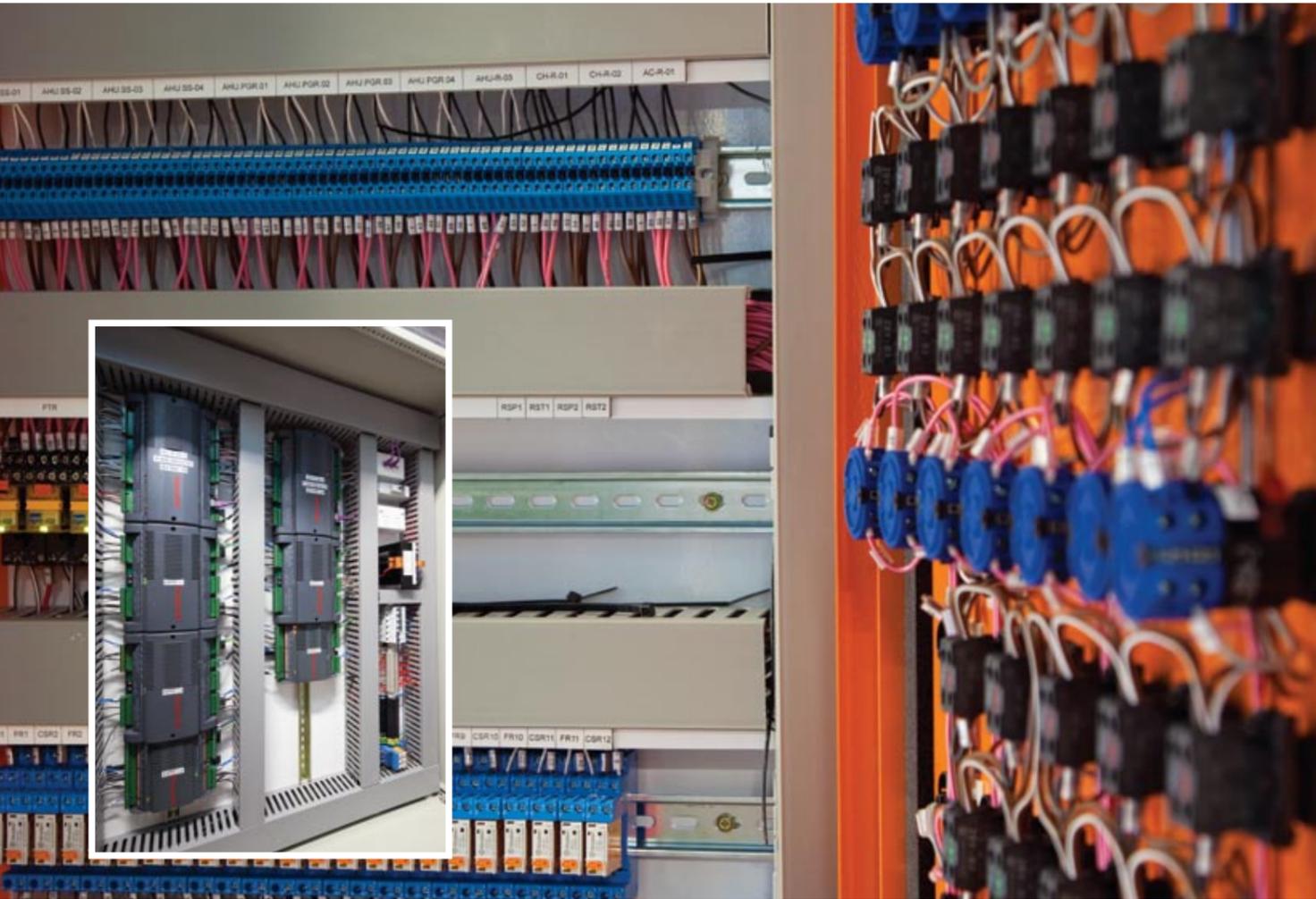
"This entailed lifting the awning from a semi trailer and placing it at the entrance of the Casino in an expert manner and in accordance to specific planning requirements," he said.

Whilst fulfilling their extensive responsibilities onsite at the Casino, the team from Harley Cranes liaised closely with other contractors to ensure minimal disruption to the construction process.

"Furthermore, our dedicated and flexible service meant we were able to fulfil our duties within the tight building schedule and deliver exceptional solutions to the client," Mr Hughes said. With a modern fleet, outstanding customer service and an ever-expanding business, Harley Cranes will continue to remain professional in the Mobile Crane industry.

For more information contact Harley Cranes, Adam Hughes, General Manager, phone 02 9738 1000, fax 02 9738 1111, email: info@harleycranes.com.au, website: www.harleycranes.com.au.

Below Honeywell has delivered a range of advanced Building Management technologies and services to ensure the Casino maintains a high level of air quality at all times.



Honeywell Building Solutions installs, integrates and maintains the systems that keep facilities safe, secure, comfortable, productive and energy-efficient. With a global network of expertise, Honeywell is able to harness the processes, technology and skills required to meet current and future business requirements. Honeywell consistently bring their world-class products and services to a range of projects and were recently involved on the significant Star City Casino redevelopment in Sydney.

Michael Brookes, Regional Leader, Marketing & Strategic Development – Honeywell Pacific, said throughout their involvement on the Casino they delivered a range of advanced Building Management technologies and services to ensure the customers and staff enjoyed a high level of air quality and comfort. “The solutions provided by Honeywell utilise advanced control strategies that enable Star City to realise increased energy efficiency and facility management,” Mr Brookes said. “Using our flagship solution, Enterprise Buildings Integrator, combined with ComfortPoint Controllers which are the latest in direct digital control technology and designed around an open platform, we have provided a centralised monitoring and management solution to the Casino. The solution includes HVAC Systems, incorporating the hot and chilled water system, air handling units and car park systems, as well as monitoring of energy consumption and alarm priorities,” he said.

Honeywell’s integration with a number of other systems also provides a range of benefits. These incorporate the management of the car park’s carbon monoxide levels using sensors located within the basement carpark; and the control of nitrogen dioxide and carbon monoxide levels, through the use of sensors in the loading docks.

Honeywell’s Enterprise Buildings Integrator also monitors the temperature of individual air-conditioning units, which were specifically designed to raise an alarm if temperatures reached abnormal limits. “These technological measures ensure the Casino maintains a high level of air quality at all times, providing a safe and pleasant environment for customers,” Mr Brookes said. “Given our industry expertise and project dedication, we provided the client with an outstanding selection of technological products and completed our responsibilities within the tight timeframes,” he said.

With an established reputation for delivering leading technological solutions to a range of projects, it is without a doubt Honeywell will remain a global leader within the Building Solutions industry.

For more information contact Honeywell Building Solutions, Level 3, 2 Richardson Place North Ryde NSW 2113, phone 02 9353 7000, fax 02 9353 8819, website: www.honeywell.com.



Star City Redevelopment, NSW