RANDWICK RACING TOWARDS THE FUTURE

Royal Randwick Racecourse and spectator precinct is a five level grandstand that combines sporting with unparalleled entertainment options.

ROYAL RANDWICK RACECOURSE / **AUSTRALIAN TURF CLUB & WOODS BAGOT**

Images The new grandstand and indoor spaces of the Royal Randwick Racecourse.

It is always something of a gamble to change an icon. In the case of Royal Randwick Racecourse, the Australian Turf Club's bet has certainly paid off, with the venue now reflecting its pedigree as the heart of Sydney racing.

The redevelopment included a complete structural and interior makeover for the pre-existing QEII stand, a new Owners Pavilion, refurbishment of the Paddock Stand, improved linkages and connectivity between spaces and an all new 'Theatre of the Horse' (TOTH) amphitheatre and parade ring.

The 4,500 capacity TOTH amphitheatre allows racegoers to watch the horses both before and after the races, either up close in open standing and seating decks, or from the wide terraces and extensive glazing of the new stand. A tunnel through the stand's basement connects the TOTH to the track.

"The key issue we had was the QEII stand was in absolute need of an upgrade," explained ATC Executive General Manager – Property Development, Mark Flanagan

"In its day, Royal Randwick was one of the top racetracks in the world. One of the criteria set by the previous ATC Chairman and then Vice-Chairman was to bring Randwick back up to an international profile. In the early design stages we undertook a study tour which included Royal Ascot in England, Hong Kong, Singapore and Japan, and we have taken inspiration from the best ideas at those racetracks.

"Our priority was to get as many spectator seats inside as possible to minimise the effects of bad weather on racegoers, and we achieved that, with over 80% of the seating now inside. We also wanted a diversity of dining spaces to allow us to achieve pre-bookings of spaces like the new tiered dining areas on levels one and three.

"ATC can now generate new income and guaranteed income, for example with the corporate boxes on level two and four, a new thing for Randwick, which are on three-year leases. One of the other criteria was being able to activate the spectator precinct seven days a week for non-racing events.

"There is always a tension with racetracks between facilities for the horses and the track, and spectators. This redevelopment had support from all the stakeholders, including two very supportive boards, members, the jockeys, the Minister, Racing New South Wales and the breeders.

"A lot of thought was put in by architects Fitzpatrick + Partners (base building) and Woods Bagot (fitout, interiors,), and there was good integration between the two. Though it's been benchmarked against the best in the world, there is not a lot to compare it to. The level of finish is very high – it's not your typical racetrack, it's more like a hotel or high class club venue." For Woods Bagot Principal Wade Little, the central theme for the whole project revolved around the idea of Randwick as a social destination, with a 'highly crafted' response and unique level of finish and detail.

"We asked, 'what is the key thing that ties this together?' And for us it is that everyone who comes will be in the best clothes that they own," said Wade. "This is a fantastic venue for the people of Sydney to come and enjoy for a full day of getting dressed up and being entertained."

The stupendous new Royal Randwick grandstand and surrounding spaces have a combined capacity of 55,000 people, and these massive crowds exist in a state of flux. On race days, there is a race every 45 minutes, which leaves considerable time when the action's focus shifts - to the betting arena on the ground floor, which hosts both local and interstate bookmakers; to the food and beverage offerings; to the TOTH; and to the sweeping terraces on the south western elevation which overlook Centennial Park and the city skyline beyond.

Designing for these shifting swells of people meant creating a very open ground floor space for the betting arena, clear connectivity between the different levels, and spaces which flow seamlessly through different aspects of the racegoing experience.

The design theme evolved from the concepts of fashion, patterns and fabrics, with a palette of black, white, shades of caramel, and FSC-certified timber veneers. Australian-made products feature throughout, including carpets made to Woods Bagot's designs, bespoke furniture made in Sydney, and all local joinery.

Sustainability was made a priority, with ATC aiming for a standard equivalent to Four Star Green Star. Initiatives include extensive use of natural light, rainwater harvesting, recycling of water for irrigating the TOTH and sensor lighting.

One of the major features of the new Royal Randwick grandstand is the magnificent ballroom on level two, which has the capacity to seat 1,000 for a banquet, making it one of Sydney's largest ballrooms. Woods Bagot's design for the space included an AV system in the ceiling which allows for a wide range of lighting effects.

"We put together a fantastic team," said Mark Flanagan.

"At one stage we had 900 people onsite – and we are so proud we can create something that employs so many people. "Brookfield Multiplex has done a good job completing it under challenging circumstances. We believe it sets a new benchmark for grandstands and gives the ATC credibility to roll out the rest of our masterplans, which includes the redevelopment of our other racecourses."

For more information contact Woods Bagot, phone 02 9249 2500, website www. woodsbagot.com.au
Australian Turf Club, phone 02 9663 8400 website www. australianturfclub.com.au

Below The combined talents of Peter Kelly Flooring, Brintons, and BASF Australia Limited Construction Chemicals Division deliver a winning result.

For the indoor areas of the new Royal Randwick Racecourse spectators area, the talents of three leading companies came together to ensure a high quality result for the floor coverings. Peter Kelly Flooring undertook the installation of carpets throughout and of durable, slip-resistant epoxy flooring in the food and beverage areas. The carpets were sourced from Brintons, Australia's leading manufacturer of woven Axminster carpets, and BASF Australia Construction Chemicals Division were the source of the speciality resin flooring material for the food and beverage areas and of cementitious levelling for the carpet areas.

Peter Kelly Flooring (PKF) are the leaders in the field of floor coverings and have been for over 30 years, undertaking projects across commercial, hospitality and government sectors including TAFE's, Universities, schools, hospitals and aged care facilities. As founding members of the Floor Covering Association of Australia, they take pride in delivering a superior standard of workmanship, and in using their wide experience to ensure product selection delivers a result that is fit for purpose and brings long-lasting satisfaction to the end users.

The installation work at Royal Randwick Racecourse was undertaken by a team managed and supervised by PKF Managing Director, Peter Kelly and Project Manager, Adrian Murphy. The company had 20 fulltime staff on site, who all adhere to the highest standards of workmanship, OH&S and professionalism. "PKF have gained a reputation for high quality installation, reliability and integrity of service and are known as a company who will go to any location to assist a client. PKF staff are industry professionals with many years of installation experience and have access to a large range of products," said PKF Company Spokesperson, Peter Kelly.

PKF have expanded from their Sydney base of operations to undertake projects in Queensland, Western Australia and Victoria. Their capabilities include supply and install of carpet, vinyl, rubber and timber flooring by quality suppliers including Brintons and BASF along with other manufacturers.

Other recent projects PKF have contributed their skills to are the new Royal North Shore Hospital; Chris O'Brien Lifehouse Project at Royal Prince Alfred Hospital; University of NSW Lowey Cancer Research Centre and Wallace Wurth Building Redevelopment; Rosehill Racecourse; Orange Hospital; Alan Walker Village; State Library; Thomas Holt Village; and Hornsby Hospital. PKF are currently working on One Central Park, RPAH Lifehouse and Stella Apartments with Cairns Hospital, Mackay Hospital, Townsville Hospital, Wagga Hospital and Rockhampton Hospital due to start.

BASF are also involved with PKF on the RPAH Lifehouse project, with BASF supplying under vinyl floor levelling material, from their extensive range of market-leading construction products. At Randwick, the big challenge for BASF was being able to ensure supply in a timely manner, with the flooring having a fixed deadline of being completed in time for the Racecourse to host the crowds attending the Autumn Racing Carnival, a key event on the Australian racing industry calendar.

BASF succeeded in ensuring the deadline could be met, with their global experience in the needs of major projects and their excellent management of the logistics of manufacture and delivery, combined with the superior qualities of the products, giving PKF and the ATC the result required. In July of this year, BASF cemented their niche in the Australian market with the launch of their Master Builders Solutions brand, which brings together all the Construction Chemicals Division products under one brand, including the performance flooring systems used at Randwick.

For a venue as iconic as Randwick Racecourse, no ordinary carpet would suffice. To be selected as the supplier for the project, Brintons design team in Sydney began with a brief from Woods Bagot's Sydney office of the desired carpet patterns and developed patterns, trials and specifications over a six month period. Once the carpets were ordered by PKF, Brintons developed a jointly planned schedule for the manufacture of the approved carpets.

"The design was large scale and needed to be planned to fit precisely. It is always difficult to show what the carpets look like on small samples with large design repeats so Brintons did a number of floor layouts for consideration by Woods Bagot," explained a Brintons' Spokesman.

"Brintons use Electronic Jacquard technology to achieve such large scale design and multiple carpet types, this technology allows the creation of patterns not achievable in previous years."

Brintons have over 200 years of experience in their trade, and work closely with clients to manufacture hard-wearing and luxurious Axminster carpets which meet the client's specific design requirements, and bring a floor to life through colour and design woven with the highest levels of technical skill into fine floorcoverings.

Brintons is a truly global company with manufacturing bases in 3 regions around the world, and a combined total of 1300 staff, with around 100 staff world wide contributing to pulling this project off from design through to project management, logistics and production. Other current Brintons projects include the Adelaide Oval and the refurbishment of Adelaide's Parliament House.

For Royal Randwick Racecourse, the combined talents of PKF, BASF and Brintons have delivered a real trifecta of durability, distinctiveness and quality.

For more information contact,
Peter Kelly Flooring, Unit 9, 6 Gladstone Road, Castle Hill NSW 2154, phone 02 9899 6688, fax 02 9899 2444, www.pkflooring.com.au
Brintons, 13/465-479 Parramatta Road Leichhardt NSW 2040 Sydney Office 02 9564 6222, www.brintons.net
BASF Australia Limited Construction Chemicals Division, 11 Stanton Road Seven Hills NSW 2147, phone 1300 227 300, www.basf.com.au

Below CTCI were responsible for installing 176 cubicles of their Waterloo® "Windsor" (Floor to Ceiling) partitioning system.

For a place as legendary as the Royal Randwick Racecourse, it's not only the trackside area of the new spectator precinct which needs to be top class. Australia's largest designer and manufacturer of wet area joinery, CTCI Pty Ltd, has made sure that the new amenities for the public and the jockeys also reflect the thoroughbred nature of the venue, and ensured safety, hygiene, privacy and aesthetics are catered for.

For the general public area, CTCI have installed 176 cubicles of their Waterloo® "Windsor" (Floor to Ceiling) partitioning system. Constructed from Laminex® Compact Laminate, a self-supporting, high pressure laminate based on thermosetting resins, homogenously reinforced with cellulose fibres. The product has numerous advantages for the ARC, including excellent resistance to scratches, graffiti, vandalism and water.

For the jockey facilities, CTCI installed 26 cubicles of shower and toilet partitioning; and on the ground floor of the QEII they installed 15 cubicles of their Waterloo® "Quintrex" (Blade Mounted Overhead Braced) partitioning system, which is constructed from Laminex® 32mm structural board, a moisture resistant E0 MDF board which is factory-laminated on both sides.

In conjunction with other trades, CTCI also supplied wall panelling and privacy screens throughout the bathroom fits outs which complemented other FFE and fitout elements. As befits an icon of the Australian racing scene, the colour scheme for the items CTCI manufactured for the project was distinctive.

"The colour scheme was predominately black across the face of the cubicles to match the tiling, with the divisional panels adding the contrast by being a different colour throughout the floors and also differed between male and female bathrooms. To further enhance the longevity of the product, concealed hardware was utilized to help minimize vandalism," said CTCI Spokesman, Gregg Longmuir. "Our innovative range of products and our proven ability to deliver on similar large sporting facility projects made the specification of the Waterloo brand an easy selection. We specialize in wet area joinery, and our experience gives us the ability to adapt to and resolve any unforseen site issues.

"Utilizing Laminex® compact laminate for the project will give the ATC peace of mind that they will not incur any swelling of panels that make contact with water. In fact, the product selection allows for hosing out in the cleaning process, which will save the ATC time and money. The antibacterial properties of Laminex® compact laminate also ensure that the highest level of hygiene is always maintained."

The installation was conducted over six different stages, working from the basement up to the top floor of the grandstand. The project's works program allowed for a consistent and integrated workflow for planning, measuring, manufacturing and installation of the cubicles. All of CTCI's 35 fulltime staff contributed to the project from initial estimating and negotiations through to project planning, manufacturing and installation. The installation was completed by CTCI's team of seven subcontracting installers, who have extensive experience in meeting the high quality standards and timely workmanship which typify a CTCI project.

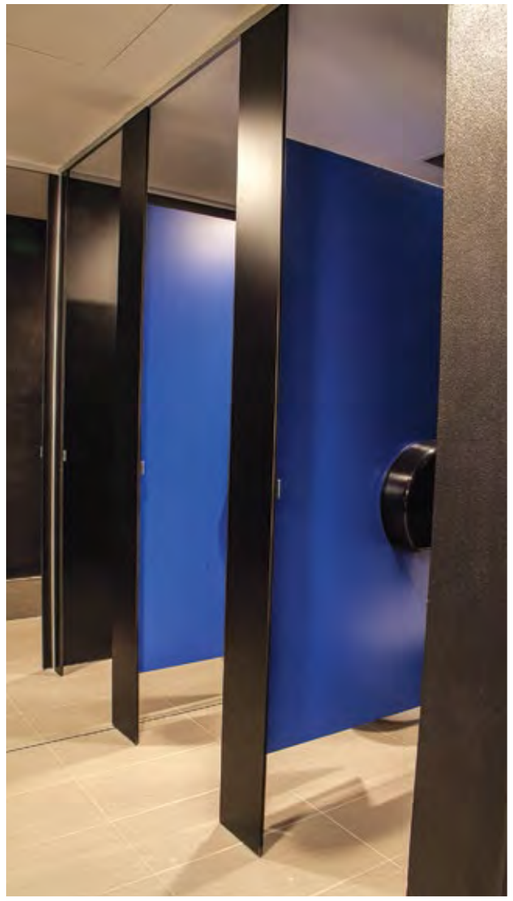
"The challenge of this project was working to time restraints in the initial handover. There were a large number of subcontractors on site, all striving to meet the deadline, and all working together to deliver a quality fit out," said Gregg. "CTCI would like to thank both Brookfield Multiplex and the ATC for the opportunity to be associated with this premier sporting facility, and for the support that was afforded to us in the delivery of the toilet and shower cubicles throughout the project."

As specialists in the use of compact laminate for the manufacture of high quality fitout items, CTCI are continually engaged in innovation and product development in response to market needs. In addition to the wide range of wet area joinery the company has been supplying for the past 14 years, CTCI also manufacture and install wall and island seating, and locker systems which incorporate state-of-the-art lock systems manufactured by Ojmar in Spain. CTCI are also about to launch a new range of cafe tables and alfresco kitchens for both interior and exterior settings, which are customisable in different sizes depending on requirements.

Quality, service and attention to detail are the hallmarks of CTCI's design and manufacturing process. This also includes attention to sustainability, with the development of new products focusing on the most effective utilization of wastage so as to minimise environmental impacts. CTCI products can be found across the nation in sporting facilities, surf club, schools and educational institutions, clubs, pubs, hotels, and CBD commercial buildings. Their state-of-the-art manufacturing facility in Bathurst NSW has the capability to manufacture specific products for any scale of project, and averages over 200 cubicles a week manufactured and delivered Australia-wide and for export overseas. All the company's Waterloo system installations have a lifetime warranty.

CTCI Pty Ltd offers a no-obligation free quote on wet area joinery – simply forward your drawings and quotation request to estimating@ctci.com.au

For more information contact CTCI Pty Ltd, phone 02 6334 3222, fax 02 6334 3225, email: estimating@ctci.com.au, website www.waterloosystems.com.au



Below SGI Architectural were responsible for the architectural façade panels on the public face of the building.

Below The P.A People have provided the Royal Randwick Racecourse with innovative AV systems to broadcast the excitement.

The redeveloped Grandstand at the Royal Randwick Racecourse required a façade that exuded contemporary elegance and timeless beauty yet maintained visual linkages to the surrounding heritage buildings. As specialists' in unique architectural building envelopes, SGI provided the perfect product for the projects iconic public face in the form of a 100% natural timber veneer composite panel from the Prodema ProdEx range.

ProdEx, exteriors by Prodema, combines warmth, sophistication and natural charm with guaranteed performance and durability. The eco-friendly panel is coated with a proprietary coating, based on synthetic resins and PVDF which not only protects the facade from the effects of sunlight, chemical attack and the damage caused by atmospheric agents but it allows architects, developers and builders to achieve levels of design previously thought impossible.

"The cladding material for the rear elevation was an important part of the composition of this highly visible face of the building. Prodema ProdEx cladding was selected early in the design process as it had the unique characteristics of combining a natural timber aesthetic in a durable and low-maintenance product. The subtleties of the colouration and visual texture of the panels give the façade a softness which, combined with the use of other materials such as concrete, aluminium and glass, creates a warm palette of materials that have a visual depth. This materiality responds to the subconscious characteristics of horses and horse racing and ultimately helps to create an environment, both within and around the building, of comfort and social interaction" – Rod Pindar, Project Architect, Fitzpatrick + Partners.

K-Line (the installers of Prodema at Randwick Racecourse) found the product to be very versatile, and due to the fact that Prodema ProdEx is a 100% Natural Timber Veneer, and no two panels are identical, K-Line perfected the art of panel randomization in order to produce a façade of sheer elegance, said SGI Architectural spokesperson, Clint Gavin.

For over 25 years SGI Architectural have been supplying quality building facades to the Australian Construction Industry including eco-friendly Alpolic fr Aluminium Composite Panels, Prodema Timber Composite Panels, Swisspearl Cement Composite Panels, Moeding Natural Clay Tile Facades, Eurobond Non-Combustible Rockwool Cored Sandwich Panels as well as Architectural Glass. Other recent projects that SGI Architectural have been involved with, include, Sydney Airports T2 Domestic Terminal, Boheme Apartments – Bondi Beach, Ocean Keys Shopping Centre – WA, Aurora Apartments – Canberra, Next DC Macquarie Park, Top Ryde Shopping Centre, University of Queensland Advanced Engineering Building and many more.

For more information contact SGI Architectural Pty Ltd, Unit 31/5-7 Inglewood Place, Baulkham Hills NSW 2153, Phone (02) 9620-7988, Website www.sgi-architectural.com.au

Throughout the new QEII Grandstand at Royal Randwick, passionate punters can keep pace with major races around the country, through the state-of-the-art networked television and audio distribution system designed and delivered by The P.A People. Performance specifications for the system were developed by leading consultants NDY, who were tasked by the ATC with conceptualising the AV requirements for a superlative experience. At the time Brookfield Multiplex (BMPX) assigned The P.A People the tender to deliver on NDY's ideas, the exact details of the fitout were still to be finalised.

The P.A. People engaged with the BMPX services team, the NDY consultants, the two teams of architects and the ATC themselves to design and develop the systems that bring every hoof-beat to life throughout the venue. "The performance specification called up a number of TV channels that would be required, and an indicative number of TV screens that were proposed. On the audio side, required acoustic performance criteria for each space and an indicative number of zones were nominated, along with an overview of functional requirements and environmental constraints," explained The P.A People Senior Project Manager, Josh Jones.

"The third element of the puzzle that formed part of the contract was a 1,000 port Ethernet network specifically designed to support both the IPTV and networked audio systems."

There are around eight hundred screens attached to the IPTV network over the entire site, capable of displaying over sixty channels and thirty different signage pages. The system was sourced from the Scottish specialist supplier, Exterity. "This is the fourth major IPTV system we have deployed from Exterity, and this is easily our largest system. It has settled down without any significant issues," said Josh.

Products from the US group Harman comprise the majority of the networked audio system, which features over 1,000 individual JBL loudspeakers across ten different models; 80 Crown amplifiers; and 12 BSS networked digital signal processing engines, which form the backbone of the system. The entire system is operating on its own dedicated HP Procurve Ethernet network, and the scale of the system is such that The P.A. People believe it is possibly the largest integrated networked AV system in Australia.

As specialists in high technology audio and visual systems, The P.A People bring to Australian projects the best in global innovation. The Randwick project coincidentally falls exactly 15 years after the company delivered the world's first networked audio system for a stadium, at the Olympic Stadium at Homebush (now ANZ Stadium), another iconic BMPX project.

For more information contact The P.A. People
Steve Drury 02 8755 8700, website www.papeople.com

Below Sebel Furniture designed, manufactured and installed seating to the new grandstand at Royal Randwick.

Below Channon Refrigeration provided cold beer without a massive carbon footprint.

When they are on the edge of their seats with excitement as the horses thunder down the home straight at Royal Randwick Racecourse, punters can be glad those seats were designed, manufactured and supplied by Sebel Furniture. Because when the race is over and they relax and contemplate the form guide and their betting slips, they'll be doing so in comfort.

Sebel have been supplying seating for sports fans around the country for several decades, including maintaining a long-standing relationship with the ATC. For the recent redevelopment, Sebel manufactured and installed approximately 2,600 seats for the new Grandstand, featuring a combination of the Viva and Podium tip up models. Dependent on the seating category, some of the Grandstand seating features padding and accessories such as cup-holder arms, which are the kind of extra design touches Sebel have developed in response to their thorough understanding of the spectator's needs. All the mouldings were manufactured in Sebel's Sydney factory, ensuring a thoroughbred level of quality control

"Experience and track record are extremely important on these projects," explained Sebel's Declan Brennan. "One of the challenges was that part of the existing grandstand was retained. This introduced further complications for our planning from a fire engineering and installation perspective, which our expertise effectively resolved."

The company is currently working on several other major projects, including spectator seating for the redevelopments of Adelaide Oval and the Sydney Cricket Ground. Beyond the sporting sector, Sebel design and manufacture a wide range of furniture including seating, tables, desks, general purpose outdoor furniture and special-purpose furniture items for projects across education, healthcare, aged care, entertainment and public space.

Sebel work continually to improve and diversify their products, building on their strength in design and manufacturing expertise through ongoing R&D. This focus on excellence is matched by their experience in installation and knowledge of their markets and client needs. Rigorous testing by an in-house NATA-certified lab ensures that every item they design will meet all relevant standards and deliver long-term value for money.

Like many of our great sporting talents, Sebel have also developed a substantial presence overseas, with their products exported to more than 50 countries around the world.

For more information contact: Declan Brennan Sebel Furniture, 92 Gow St. Padstow NSW 2200, phone 02 9780 2297, website www.sebelfurniture.com.au

With a capacity of 55,000 in the QEII stand, Randwick Racecourse has a large town's worth of thirsty punters to serve, making refrigeration for the food and beverage outlets an extremely critical item. Channon Refrigeration provided an innovative customised solution which delivers on performance while minimising long-term energy costs.

"ATC Randwick presented a challenge, as a traditional design of the refrigeration plants for a venue like this would mean at least 68 refrigeration condensing units," explained Channon Refrigeration Director, Chris Channon. "This was unacceptable due to many factors including power requirements, the high infrastructure onsite costs of providing mechanical services to 68 locations, and the speed of the build."

Channon Refrigeration's Project Team designed the system back to 4 Channon Engineered/Bitzer Central Rack Systems (CEBCRS). These were then refined individually to provide the lowest impact to the client, both for energy use and future movements in carbon pricing. To achieve this, Channon Refrigeration designed inverter compression as well as load shedding into the CEBCRS, from which 7kms of engineered refrigeration lines feed the QEII's 32 coolrooms, 5 freezer rooms, 4 keg rooms, 6 glycol tanks and 21 cabinets. Channon Refrigeration also designed with Lancer The Draft Beer System which dispenses beer throughout the grandstand via 1000m of Beer Lines installed across the 4 keg rooms.

"Operational costs and product quality were of the highest concern. Channon Refrigeration designed the Beer Pump Systems driven from Lancer air compressors, minimising the Co2 usage throughout the venue," said Chris Channon. "The manifolding design and labelling provided a simple and 'easy to use' interface for the ATC Cellar staff, allowing for bars and products to be instantly turned on or off for the easy control of product dispense and security. Our system ensures only the coldest and freshest beer fills the glasses of ATC Members and guests." Both the Refrigeration fixtures and the Draft Beer System have been designed into a remote Supervisory System designed by Channon Refrigeration and Carel to provide temperature monitoring and alarms. Remote assistance via internet connection from Channon Refrigeration head office and the company's service engineers in the field via iPad. This digital interface allows ATC staff to view and monitor their equipment from their office - or anywhere in the world. This project is an excellent showcase of the company's expertise, which for 39 years has been providing specialist engineered refrigeration solutions across the Commercial, Industrial Refrigeration, Catering Installation and Design, and Draft Beer Systems Australia-wide, including other flagship projects like Ivy and RAS/Skoda Stadium.

For more information contact Channon Refrigeration, phone 02 9759 11 77, website www.channon.com.au

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EQUILIBRIUM AIRCONDITIONING

Below Equilibrium Air Conditioning was a sure bet for air conditioning innovation.

StrataSurv's long standing relationship with Brookfield Multiplex continued with their appointed for their survey works on this exciting redevelopment.

With over 700 workers onsite during the peak, **StrataSurv** were required to attend to a vast and varying arrays of surveys :

- Asbuilt surveys s of existing foundations and services to determine impact on new design for possible re-design
- Detail surveys of heritage buildings and interfaces for detailed design and steel fabrication
- Survey setout for Earthworks and new piling.
- setout new grid-lines on each level for various trade to start constructing internal and external works.
- Establish vertical survey control in circular drums for lift contractor and monitor structure loading of each additional floor to determine impact of new slabs on foundation
- Survey of final steel structure for additional steel fabrication.

The experience gained from **StrataSurv's** envolvement in some of Australias largest commercial/retail, residential and infrastructure projects for some of Australias largest constructors and developers ensured that the management of both the survey setout and as built data were delivered accurately and timely to meet the requirements of some 18 separate Managers, Engineers, Supervisor and sub-contractors. An example of the survey works and data captured can be seen from the photo of the remaining old stadium and 3D plan reflecting the surveyed data combined with the new structure.

StrataSurv would like to thank Brookfield Multiplex for their ongoing utilisation of StrataSurv resources on such an exciting yet difficult development.

For more information on StrataSurv and the resources that can be provided please contact Anthony Mitchell – General manager – amitchell@stratasurv.com.au

In terms of design and construction, the air conditioning and ventilation systems for Randwick Racecourse's new main building and the Theatre of the Horse put Equilibrium Air Conditioning through their paces. There were numerous complexities, including a demanding program of a two-stage handover with the dates for formal completion fixed by two major racing carnivals.

Equilibrium designed and installed a chilled water system with a combination of centrifugal and screw machines, with rain-water being reused for the cooling towers. A heat recovery VRV system was installed for the downstairs areas of the main building, back-of-house, jockey and basement areas, and an overhead system of multi-zone air handling units installed throughout.

"It was a challenge integrating the fitout during the construction process and still maintaining program," said Equilibrium Commercial Manager, Joseph Maric. "We had to vary the design since the project commenced as a base building construction, and then became an integrated fitout half-way in.

"The technical challenges included the extensive glazed roof areas. We had to engineer long throw air diffusion systems to cater for the large crowds of people in those spaces, and we installed multi-zone controls, as the crowds move around. The diffusion systems we designed are unique to this project. "We have the engineering expertise to innovate in-house. Acoustics are critical for this project both inside and outside as horses are very sensitive to noise. So we were quite discerning with our product choices, and undertook acoustic modelling, airflow and temperature simulations. We also co-designed the project's BMS system. Our team of engineers worked on the project, using their Accredited Green Star Professional expertise."

Equilibrium have been developing their business since 1968, continually seeking more effective and sustainable ways to deliver results for major commercial, retail, health and specialist projects. They use leading edge technology, including state-of-the-art 3D modelling which can integrate with BIM models.

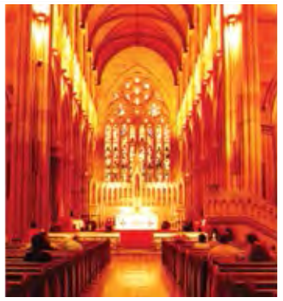
Other major projects Equilibrium has recently completed include ANSTO Buildings 20, 21 and 39; Sydney Adventist Hospital; Prince of Wales Hospital Mental Health Care; Stockland Merrylands Shopping Centre; Manly Corso Coles; Rydges Hotel at Sydney Airport and Shoalhaven Cancer Care.

For more information contact Equilibrium Air Conditioning (NSW) Pty Ltd, Joseph Maric, Commercial Manager 02 9439 4822, website www.equilibriumac.com.au

The P.A. People

EXPERIENCE INDEPENDENCE
TECHNOLOGY ASSURANCE

The P.A. People is a specialist integrator of sound reinforcement, audio-visual systems, IPTV and video displays.



PROJECT TYPES:
Sporting & entertainment venues, Performing arts centres, Educational facilities, Houses of worship, Transport terminals & precincts, Conference venues, Corporate facilities, Parliament and councils.

STADIA / ARENA EXPERIENCE:

Brookfield Multiplex / BM — Royal Randwick Racecourse, ANZ (Olympic) Stadium

Baulderstone — Etihad (Docklands) Stadium, Adelaide Oval

WATPAC — Brisbane Cricket Ground, Robina Stadium, Metricon Stadium

John Holland — Energy Australia Stadium

AW Edwards — Sydney Cricket Ground, New Bradman Noble Stand & Trumper Stand, RAS Showgrounds Arena

Plus: Suncorp Stadium, Allianz Stadium, Canberra Stadium.

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Below ACT Stainless Steel installed and manufactured the stainless steel kitchens and bar areas of the Royal Randwick Racecourse.

Below Gillespie Cranes were responsible for raising the roof and everything else at the Royal Randwick Racecourse.

Producing upscale food and beverages requires the best possible equipment, like the bars and kitchens manufactured and installed by ACT Stainless Steel (ACTSS) at Royal Randwick Racecourse.

Since 1995, ACTSS has been producing superior workmanship in stainless steel products for commercial kitchens, laboratories, and architectural features. Other recent flagship projects include the main production kitchen at parliament House in Canberra, the Mess hall kitchen at ADFA, and QT Hotel on George Street.

The company uses CNC Machinery & 3D CAD software to design custom products for projects like Randwick, and their project management, state of the art fabrication facility and highly skilled trades workforce ensured the project's tight delivery and installation timeframes were met.

Having completed work on one sporting icon, their focus is now on another, with ACTSS now at work on the SCG's new grandstand, which is due for completion in time for the Ashes Tour.

For more information contact ACT Stainless Steel, Phone: 02 6228 1123, fax 02 6228 1129, email info@actstainlesssteel.com.au, website info@actstainlesssteel.com.au

By paying attention to every detail, Gillespie Cranes effectively managed the complex lifting requirements of the Randwick Racecourse Redevelopment. They were on site for almost 18 months, from initial demolition works through to final completion of the new QEII Stand. They provided a variety of Liebherr All Terrain cranes including one x 250 tonne, one x 130 tonne, two x 90 tonne, two x 60 tonne and one x 40 tonne. They also supplied up to four 20 tonne Frannas, one x 12 tonne franna and two x 16 tonne rough terrain cranes. They also provided a 400 tonne Liebherr All Terrain Crane for lifting the air conditioning plant and chillers.

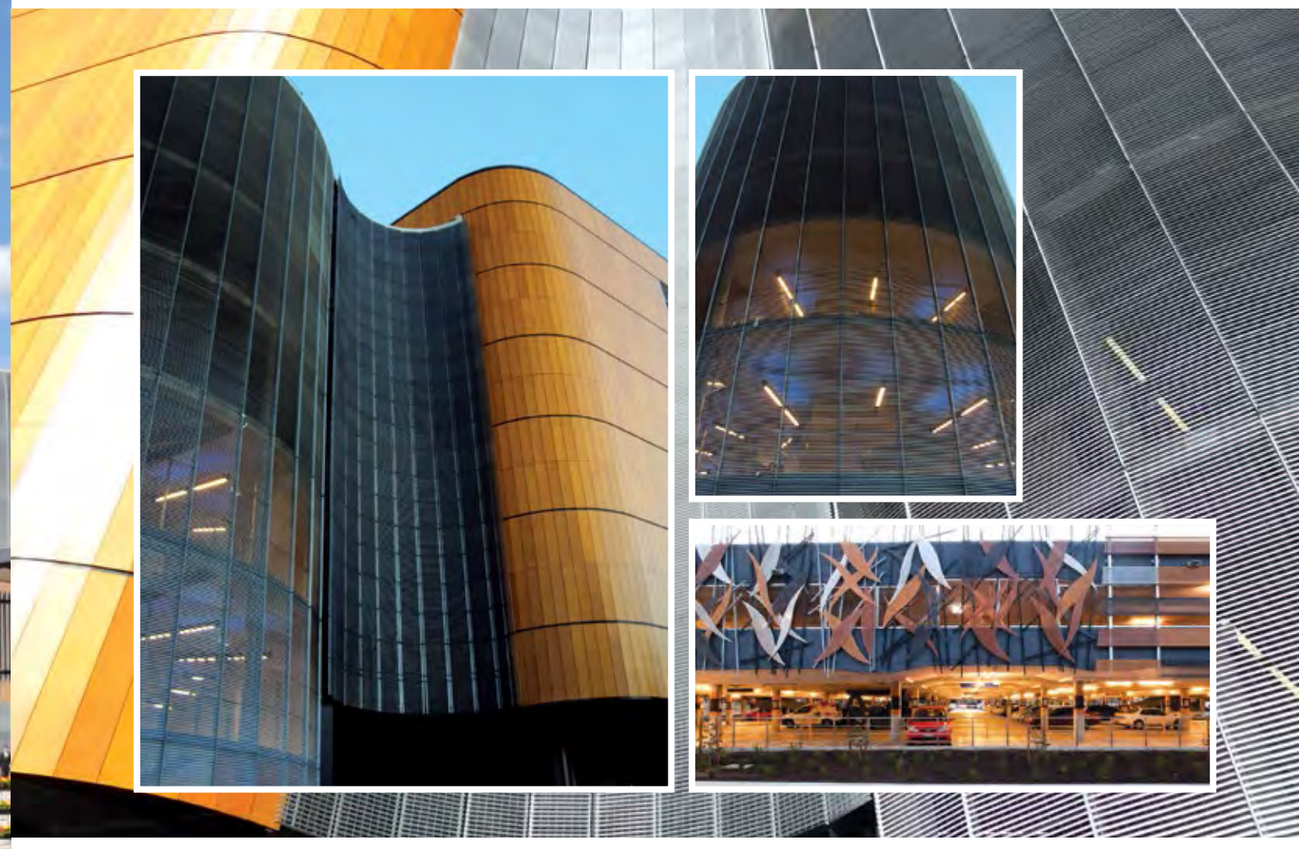
Their crew included operators, dogmen and riggers, all highly trained, extremely experienced and focused on safety, with daily toolbox talks held. Operations Manager Shane Lloyd-Jones was onsite throughout managing the complex logistics, which required constant variations to crane deployment depending on the Multiplex program. "This is the first major project I know of where Multiplex exclusively used mobile cranes," he said. "At one stage we had a 90 tonne crane operating on a suspended slab in the middle of the grandstand for four months. At the same time we had another 90 tonne and a 60 tonne alternating at the southern end, a 250 tonne near the middle crane and at the northern end another 90 tonne and 60 tonne alternating. "This was a very well-run project. All our operators had radio communications and ongoing communication with Multiplex, ensuring notification was given to people entering the lift areas." This family owned business has been providing cranes and access equipment to projects across the Greater Sydney area and the rest of NSW for over 63 years. When operations first commenced, Gillespie Cranes built their own cranes, and the hands-on tradition continues with the qualified mechanics of their maintenance division. The company also has a large fleet of boom lifts and scissor lifts available for hire, and a modern fleet of transport vehicles for the delivery of all of the company's equipment including crane counterweights.

All the operators have extensive training and numerous tickets including the RISI ticket for Rail work, Emergency Rescue, Electrical Safety, and the MCIS waterfront ticket, which involves Federal Police security clearance. They have specialised skills in concrete tilt panel erection, and erection and dismantling of all types of tower cranes, with a level of skill and client-focused service which has gained them repeat contracts with all the major builders. Gillespie Cranes have worked on infrastructure projects, rail bridges, commercial projects and civil construction, including Lifehouse at RPA, the Cross-City Tunnel, Commonwealth Towers at Darling Walk and the Runway Extension at Mascot Airport.

For more information contact Gillespie Cranes, phone: John Gillespie 02 9818 1877 Or Shane Lloyd-Jones 02 8887 7888 (mob) 0419 633 606 Website: www.gillespiecranes.com.au

Top Image The TOTH area of the Royal Randwick Racecourse.

Below Aambianz were responsible for the architectural lourves on the external staircase that becomes a major design element of the façade at Royal Randwick Racecourse.



One of the most distinctive features of the new QEII stand at Royal Randwick Racecourse is the two drum-like cylindrical stairwell structures which Aambianz helped make possible. Aambianz designed, engineered, manufactured and installed all the architectural louvres which form a major part of the stairwell facade, working closely with the architects on the design.

"We tend to work with architects at the design stage. Our engineering skills give them freedom to think as we are able to engineer solutions which achieve their design goal," explained Aambianz Director, John Joseph. "Builders also like to work with us because we do not charge a premium to install our products – we provide an end-to-end solution."

The company also manufactured and installed the anodized aluminium swaged blade louvers for the link area, owners pavilion and plant rooms, a total of around 4000m^2 of facade. "Since the stairwell louvers were installed to a curved surface, the design and implementation was critical for the success of the project. We provided a complete solution, including the structural steel for installation, and the engineering planning of how to install them," said John.

Aambianz was established in 2004 by a group of engineers and facade designers and has grown to a company employing 40 staff across engineering, design, manufacturing, installation and project management. The company's capabilities include aluminium architectural, acoustic and ventilation louvers; fixed, operable and motorised sunshades; perforated and laser-cut aluminium panels; and custom-made sun-control systems.

Aambianz are members of the Green Building Council of Australia, and their products are designed to provide sustainability benefits by reducing power consumption for cooling through shading and ventilation.

Every project they undertake is a customised solution, with 3D modelling used during the design process to enable meshing of their engineered designs with the architectural plans. They can design for and produce any visual finish, as shown at Penrith Commuter Carpark, where the louvers reflect the colours and patterns of leaves.

Currently, Aambianz is working on fixed facade louvers and feature louvers for the Charles Perkins Centre at the University of Sydney; facade and plant room louvers for Canberra Airport; Rooty Hill RSL; and Next DC Data Centre.

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