

LEAN CLEAN ... GREEN MACHINE

How Bovis Lend Lease' latest eco masterpiece 30 The Bond has stirred not shaken the building industry.

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ THE \$112 MILLION DOLLAR PROJECT AT '30 THE BOND', CONCEIVED, DEVELOPED AND executed by Lend Lease at the site of the old gasworks on Hickson Rd, Millers Point, is a significant achievement in a number of ways.

It is the first office building in Australia to achieve an ABGR five star rating, producing 30% fewer green house gas emissions than other office buildings of similar dimensions. It is a development that not only involved the employees of Lend Lease, through workshops and incorporation of their ideals and aspirations into the design, but also involved community, residents and local groups in and around the site. It is a showcase of leading edge technology and innovation. Many companies have worked with Lend Lease to integrate their systems and products into a final collaboration of effective technologies, creating a highly intelligent building.

'30 The Bond' is a landmark building in every sense of the word. The advanced technology involved in the site's complex remediation received commendation from the EPA. The innovative construction process included a site wide safety mandate of not being able to fall more than 2 metres, and fitouts were expedited to the highest environmental criteria. Preservation of the heritage listed buildings, and the incorporation of the original hand hewn rock face of the gasworks with the nine-story atrium and entrance foyer, has maintained the originality of the site. It is a clear connection with the area's significant history.

Although the office tower is state of the art, the original heritage-listed buildings have been retained and now form part of the appeal of the entire development. The project consists of four areas, the commercial building which houses 18,700m of office space, 30 The Bond owned by Deutsche Office Trust, three heritage buildings, owned by Delmo, and a residential building also Delmo-owned. The residential building is comprised of 49 apartments over 11 levels with offers of studio, one, two and three bedroom apartments. These areas are linked together via a public plaza and a suspended staircase that runs downhill from Jenkins Street to Hickson Road, between the office and heritage buildings.



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↑ ABOVE: Chilled beams for cooling instead of Air Conditioning are just one example of the Eco-friendly technology being used.

→ Deutsche Office Trust purchased the land at Millers point in May 2002 and engaged Lend Lease to develop, design and construct the new commercial premises, whilst maintaining the significant heritage value of the site. For Lend Lease it was not only an opportunity to relocate their Sydney headquarters to the new premises, but an outstanding chance to demonstrate the future of development as they visualised it. The project became an opportunity to display the unique aspirations and vision of Lend Lease: their commitment to ecologically sustainable development (ESD), and their absolute dedication to quality, cost efficiency, functionality and innovation.

Bovis Lend Lease is a company that prides itself on being a market pioneer leading the way in its core business of providing project management and inventive construction services globally. Their management of the project at '30 The Bond' is reflective of the principles that are present throughout the Lend Lease group of companies - principles that are incorporated into their worldwide operations spanning six continents and over 43 countries. These principles have landed the Lend Lease Group their current position as world leaders in project management, development and construction.

Lend Lease's adoption of ESD initiatives, the constant search for new and better ways to build and maintain their development whilst enhancing the efficiency and practicality of those developments, is clearly evident in this project. The practice of development and construction with an awareness to avoid harming the planet's finite resources or compromising existing ones is undoubtedly the way of the future. Lend Lease have strongly embraced this perspective.

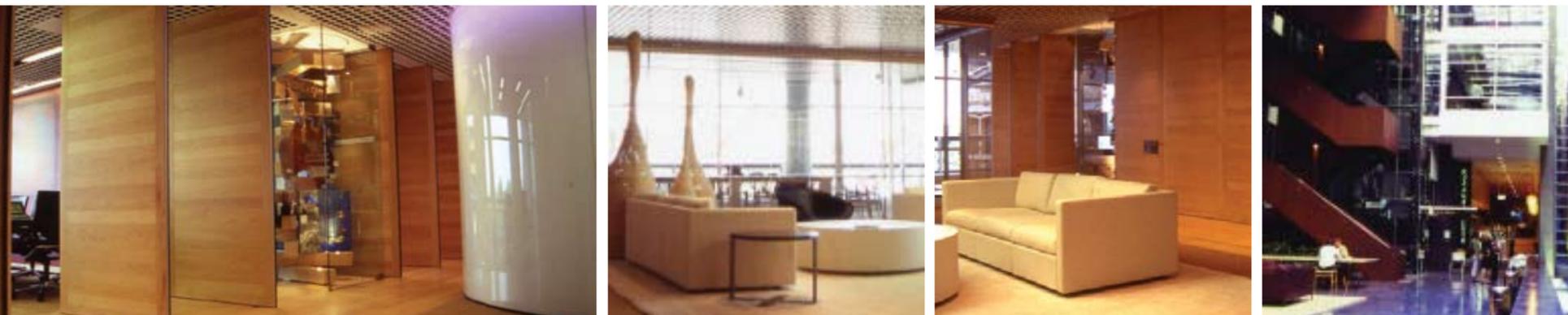
By putting people at the heart of their project '30 The Bond', Lend Lease sought to develop a synergistic process whereby the project reflects the needs and aspirations of the people who will ultimately be using and interacting with it on a daily basis. By involving and respecting the human environment, that is; the local residents, community groups and other businesses in the area, they sought to integrate themselves and the new development into the existing community with a minimum of disruption or friction. Contacts made during this process are still being maintained through community meetings and an ongoing involvement with the neighbourhood has been established with significant benefits to all parties.

The consultation with the local community resulted in an agreement between Lend Lease, Deutsche Office Trust and the residents involving the public areas of the development and how they were to be maintained. As a result of this community input, the rooftop was lowered within the building envelope and the rooftop space was used to create a native wildflower garden, which improved the view for residents in nearby buildings. This is a clear example of how collaboration between Lend Lease and the community can work to profit everyone involved.

As well as the consultation and involvement of the local community, Lend Lease sought input from their own staff. The result was a series of ESD 'Aspirations' rated in order of importance according to what criteria the staff of Lend Lease felt were most significant. These led to clear design aspects including: wide open floor plans, balconies and open areas to improve the interior quality of the building, the use of excellence in materials selection that met strict environmental guidelines and the desired reduction in green house gas emissions.

'30 The Bond' is a landmark building, technologically ahead of its time, and environmentally significant in its design and construction. Perhaps the real legacy of this entire project will be the collective synergy between Lend Lease and the many companies involved in and dedicated to the project.

The input from these companies, under the guidance of Lend Lease, has created, a lasting monument to the combined vision of all those involved. A vision to create something unique that has never been created before. A building that enhances the environment, showcases quality and innovation yet is functional and pleasing to work in. '30 The Bond' is the future of development, not only as envisaged by Lend Lease, but as an outstanding industry benchmark for prospective developments in years to come.





JIGSA W STRATEGIC RESEARCH

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ IN RELOCATING THEIR HEAD OFFICES

from Australia Square to '30 The Bond', Lend Lease required the help of many companies and people who shared their vision. The challenge for Lend Lease was to create a unique and environmentally sustainable building, within strict heritage guidelines, whilst keeping the local community informed and involved and providing an opportunity for staff to have input into the project.

Lend Lease have a well earned reputation for their innovative approach not only with regards to their world class developments, but also towards the people that are involved with and impacted by their actions. As a result of this paradigm of 'people first', Lend Lease sought the advice of Jigsaw Strategic Research, another innovative market leader with a long and successful association with Lend Lease.

Jigsaw Strategic Research was established in 1994 and specialises in qualitative and quantitative research. The work they have done with Lend Lease on a number of projects before, including; Charlestown and Erina Fair, has made them a valuable addition to Lend Lease's plans.

Eva Ladas-Meyer, Associate Director of Jigsaw, took on the task of developing Lend Lease's vision of '30 The Bond' into a concrete plan. She began to look at methods of incorporating staff and community involvement into the project. This was done in two main ways: Firstly, with the design and co-facilitation of 'Blue Sky' workshops where the Lend Lease staff were able to explore possibilities both tangible, as in future physical realities and practicalities, and intangible, such as the heritage feel and the atmosphere of the new premises.

Secondly, through the 'Domain' community engagement program where key community members were invited to participate in discussions about the use and design of public areas, raise concerns and facilitate Lend Lease's integration into the community during and after construction.

From the discussion and brainstorming of the 'Blue Sky' workshops, the staff came up with a seven point plan of aspirations for the new development. Of the seven points it was decided that greenhouse gas reduction and the enhancement of indoor environment quality were most important. Lend Lease will achieve all of these aspirations including a 30% reduction in greenhouse gas emissions for the building.

The "Domain" project provided Lend Lease with an in depth understanding of the Millers Point area. It highlighted the uniqueness of this area with its diverse mix of people and strong industrial heritage. The project also identified what Lend Lease would add to the area. This included functional aspects such as increase in retail amenities, increase in community facilities, greater connectivity and also more greenery in the area. There were also some non tangible benefits in the move with Lend Lease creating a fresh addition to the area

With regards to the actual building, the community supported the idea of a rooftop garden, and the lowering of the actual building roof height. The garden provides a diverse and picturesque solution to the usual 'ugly' office rooftop. An amenity deed between the residents and the developers Lend Lease has established ground rules for the maintenance and operation of the rooftop garden as well as other public areas.

Through their research, Jigsaw has identified and documented a number of issues and concerns of both staff and the local community. These issues have been addressed and incorporated into the overall brief for the development and as a result, the project not only has significantly improved environmental friendliness, but improved human friendliness too.

A building starting its new life with a solid foundation in humanity as well as the environment is a good indication of the quality of all those involved in its development



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TANNER ARCHITECTS

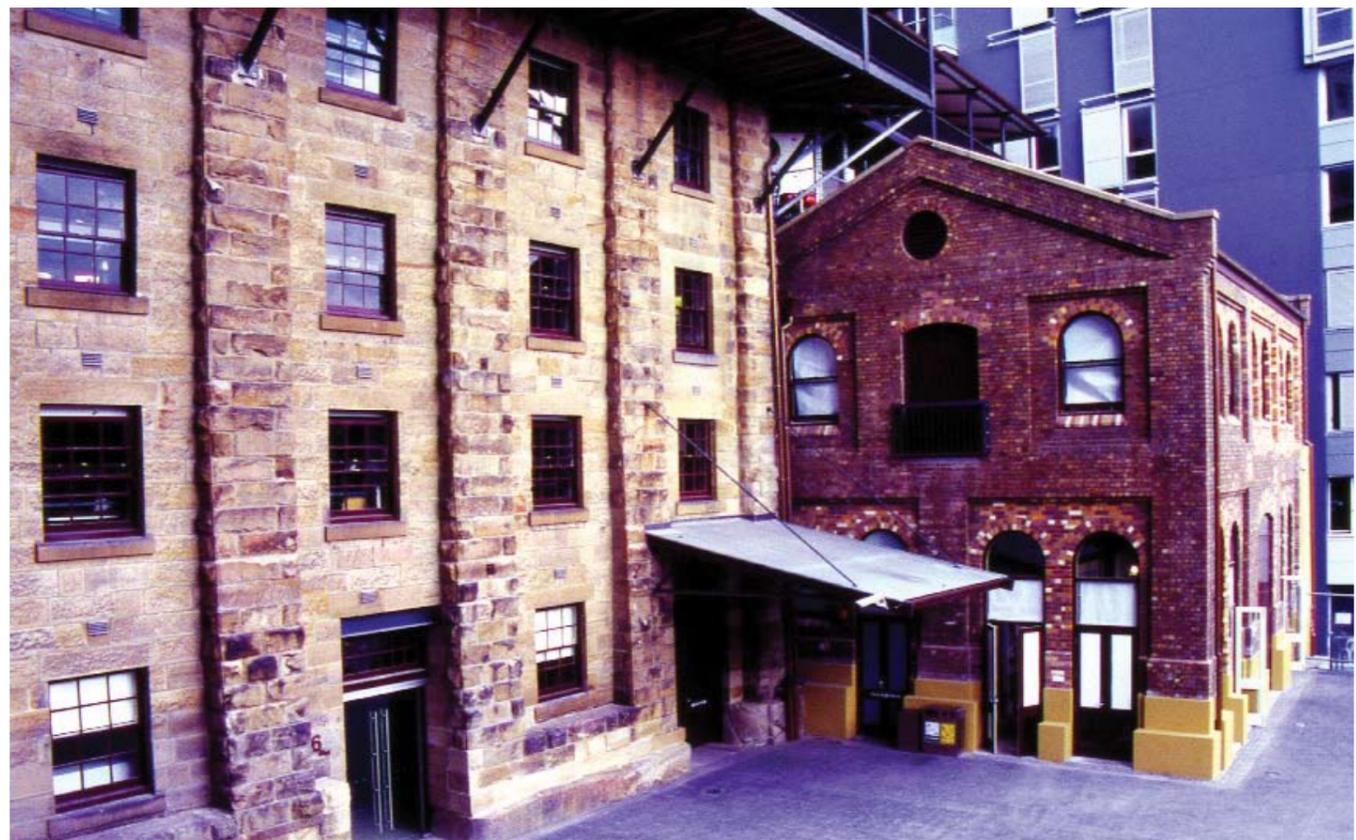
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TANNER ARCHITECTS



→ TANNER ARCHITECTS WERE A NATURAL CHOICE TO BE INVOLVED IN THE DEVELOPMENT OF '30 THE BOND', NOT ONLY because of their considerable expertise and proven track record in urban design, heritage conservation and adaptive reuse, but also because of the commendation they received from the City Council for their design in the earlier competition for new buildings on this site.

Celebrating their 30th year this January, Tanner Architects have taken a key role in the development of a complex that not only retains much of its fascinating history but also takes the first steps towards the future in environmental and ecologically sound developments.

Early involvement by Howard Tanner and Jocelyn Jackson as part of the team that formulated the urban design guidelines for the site ensured that their expertise helped determine the general form, massing and articulation of the new building.

The unique combination of past and present in the development provided a challenge that Tanner Architects undertook and excelled at. The four-storey high sandstone wall in the atrium, which was hewn by hand during the original construction of the gas works in 1871, is a prime example of how the old can compliment the new. The use of drainage to control seepage and the incorporation of this feature into the building is one of the highlights of the development.

The problem of dampness in the stone walls was widespread and a number of steps were taken to control this. Integral with the construction of the five-storey sandstone AGL offices and stores building in 1845 was the creation of very large cavity to separate the building from the rock face behind. However, this drainage cavity had failed owing to neglect and lack of maintenance with the result that damp had seeped into the building. In addition to repairing the original drain, a chemical DPC was introduced into the connection points between the rock face and the stone walls of the building to form a barrier against further seepage. The previously damp walls were then desalinated.

An extraordinary amount of work went into the research and documentation of other aspects of the development, including repairs to the stonework and brickwork walls, timber and concrete flooring, slate and steel roofing, timber windows shutters and doors, external steel stairs and internal timber stairs, new paving and glass panels. This work was carried out in the main by Megan Jones and Scott MacArthur of Tanner Architects. Megan Jones also guided the conservation works and heritage issues for the whole site during the project.

Further work involved documentation of the adaptation of existing facilities and the provision and coordination of new facilities including the special requirements regarding fire safety and the supply of amenities and electrical requirements throughout the heritage listed buildings.

Tanner Architects' involvement in '30 The Bond' is one of a number of projects, both large and small that the firm is currently working on. The firm has a unique position within the industry - marrying historic and contemporary architecture - and has received many awards and commendations for its work. With the completion of this development it is not hard to see why.



ABOVE: Cleanaway truck doing remediation at 30 THE BOND.

CLEANAWAY TECHNICAL SERVICES

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ THE REMEDIATION OF THE SITE AT 30 THE BOND WAS A MAJOR UNDERTAKING.

Complex contamination both in liquid and solid forms had existed for many years on the site after the Gasworks ceased operations in 1921. Extensive expertise was required in many areas to remove and dispose of the contaminated waste in a safe and environmentally responsible manner.

Lend Lease sought the help of Cleanaway Technical Services in the challenging process of site remediation. They needed the experience and expertise that Cleanaway possessed, to assess, treat and dispose of contaminated soils from the excavation and development.

Cleanaway have over 2000 employees and have been operating since the 70's. They now form part of the Brambles Group of companies and have maintained their position as an industry leader and innovator in the field of waste management services through constant attention to improvement in the technology and the services they provide.

Their knowledge and experience in remediation is extensive and this is illustrated in the range of services they are able to offer. Including licensed waste treatment facilities, on site treatment, re-use of organic waste, emergency response, household chemical collection, contaminated site remediation, industrial waste classification and bioremediation. They also specialise in environmentally sensitive emergencies such as chemical spills and quarantine waste.

During their involvement at 30 The Bond, Cleanaway placed a project manager on site to ensure that correct procedures were adhered to and to facilitate the smooth operation of their work.

On the project at 30 The Bond, Cleanaway sought the involvement of their partners, Dolomatrix Australia Limited with whom they formed a strategic alliance in 2001. Essential to the remediation of the site was the Dolocrete® process. A chemical fixation and stabilisation technology that is perfectly suited to the treatment of contaminated waste. During the project, 9000 tonnes of solid waste, 500 tonnes of industrial waste and 4000 tonnes of hazardous waste was removed and treated using the Dolocrete® process to downgrade its EPA classification and render it safe for disposal.

Cleanaway in association with Dolomatrix have demonstrated that even the most complex contaminated sites can be rehabilitated. Their expertise ensured remediation was completed within time and budget requirements and adhered to EPA requirements.

The clean start of the development has been fundamental to its final success, and the creation of a landmark building on what was once one of the most contaminated sites in Sydney, is a true achievement that Cleanaway and Dolomatrix can be justly proud of.



DELTA GROUP PTY LTD

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ DELTA GROUP HAVE BEEN OPERATING since 1974, and are experts in bulk excavation, site retention, earth anchor drilling and site remediation. Based in Melbourne, they have offices Australia wide, with Sydney being home to the company's major interstate office.

During their 30 years of successful operation, the award winning company has gained a wealth of experience in all forms of demolition and construction. They also gained an entry in the Guinness book of records for the demolition of Australia's tallest office tower, the 41 story, 139 metre Legal and General building in Sydney in 91/92.

Their expertise, know how and solid experience is what prompted Lend Lease to invite them to work on the project at '30 The Bond'. With a proven track record and a 'take on any job' attitude, from delicate work to bulk excavation Lend Lease needed Delta for this project.

Also having worked with Delta in the past a strong relationship between the two leading companies had been established and the synergy of the association was clearly displayed in the success of '30 The Bond'.

Delta undertook the demolition of existing, non-heritage structures and excavated over 20,000 m² of soil. Some of which was heavily contaminated from the sites previous use as a gasworks. A thorough action plan and attention to detail saw this work completed on budget and in time. With industry best practices employed in the area of occupational health and safety, and independent EPA approval of the disposal of contaminated waste, Delta Group demonstrated why they are the industry leader in innovative engineering services and why they have been at the forefront of excavation and demolition for 30 years.

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→ **THE SITE OF '30 THE BOND'** was originally the site of the Australian Gas Light company's first gas manufacturing plant in 1871 and as a result there were considerable challenges in decontaminating such a site in an environmentally responsible way.

Eclipse Environmental accepted this challenge and put their expertise in waste water treatment and groundwater remediation to work on the complex task of removal of contaminated groundwater throughout the construction process.

Eclipse installed a fully portable water treatment system on site that was used to dewater and treat the effluent to Sydney Water sewer admittance standards. This was done in a three stage process, firstly using centrifugally assisted settling tanks to separate the heavy solids and tar from the liquid, Secondly, adjusting the pH of the waste liquid to assist in the flocculation process and finally carbon filtration to arrive at the required standard.

The system had to operate 24/7 for over 18 months as groundwater infiltration was about 100 kd per day at peak with no onsite storage capacity.

Eclipse Environmental provides these 'Site Master' systems on a fully maintained rental basis, handling all statutory applications and water sampling to authority requirements.

Eclipse has its own EPA licenced vacuum tankers to remove filtrate sludge off site.

The set up and the number of units required can be adapted depending on the size of the job; From the treatment of small amounts of 'muddy' water, to large scale decontamination such as '30 The Bond' (where over 20 million litres of water was removed). Eclipse has previously gained much experience from the underground railway station at Sydney Airport and Olympics site which also posed complex issues for decontamination.

From the very beginning, the involvement of Eclipse Environmental in the development at '30 The Bond' has helped in establishing strong environmental credentials for the site. The concept of 'Seriously green' from the roots to the roof has ensured not only '30 The Bond's 5 star rating, but also Eclipses expertise in remediation.

The Developer, Bovis Lend Lease received praise from the independent EPA auditor for the way in which the site cleanup was expedited and this is due in part to the commitment of Eclipse Environmental and the leading edge technology and practices they put into use.

ECLIPSE ENVIRONMENTAL

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URS AUSTRALIA

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **THE UNIQUE AND COMPLEX REQUIREMENTS OF** developing '30 The Bond' from an abandoned gas works into a landmark 5 star greenhouse office building, guaranteed that Lend Lease needed expertise they did not possess, expertise in the field of environment and engineering management and consultancy specific to this development.

They sought this expertise from URS Australia (URS), a company that not only has a global knowledge base of proficiency and resources to draw on but, also has a proven track record, in Australia, with the remediation of large complex sites such as the 52 hectare gas works site at Breakfast Point, on the Parramatta River, and the former ICI plant and Berger Paint factory at Rhodes Waterside.

URS have been operating in the Asia Pacific region since the 1960's, they are a wholly owned subsidiary of URS Corporation of the USA and are part of a global company with over 26,000 employees in 50 countries. URS is a company with access to global solutions and expertise in the fields of environmental planning, site assessment and remediation, groundwater management, civil, geotechnical and structural engineering, water/wastewater management and management consulting.

The specialised local knowledge required, and the worldwide expertise of URS was integral to the process of conducting a review of previous investigations and undertaking further investigations as part of the formulation of a remediation action plan for the site.

URS were engaged as remediation consultants by Lend Lease. Their strategic advice and specific knowledge in this area was crucial in the excavation of contaminated fill and rock, and management strategies for groundwater. They advised on the handling of materials, collection of samples for analysis and conducted OH&S and environmental monitoring, including the monitoring of air quality, dust and odour.

URS also prepared Occupational Health and Safety guidelines for the remediation work and assisted in implementation throughout the remediation process. In addition, environmental and human health risk assessments were completed by URS and were integral to the development of the remediation strategy and validation of the site.

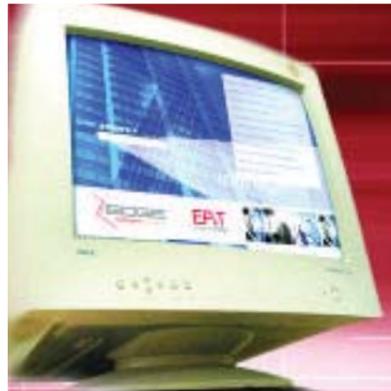
The documentation of the remediation of '30 the Bond' to ensure it met with NSW EPA requirements and the Development Consent for the works, was also carried out by the team at URS.

The Independent EPA Auditor for the site complemented Lend Lease on the speedy expedition of such a complex contaminated site and this praise is a direct reflection of the skills and knowledge that URS brought to the project.

Their proficiency in managing and controlling the varying risks through their OH&S plans and supervision, their environmental and human risk assessments, plus their extensive knowledge of the kind of problems and challenges involved, ensured that the works were carried out safely, environmentally responsibly and swiftly with the minimum of impact to the surrounding residents, other businesses and heritage listed buildings of the site. As a result, the development at '30 The Bond' begins its new life under the best of conditions, with a clean safe start.

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EP&T EDGE®

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ LEND LEASES NEW SYDNEY HEADQUARTERS

at '30 The Bond' is the first office development in Australia designed to achieve five stars by the Sustainable Energy Development Authority (SEDA) using the Australian Building Greenhouse Rating (ABGR) scheme. This Five Star rating means that '30 The Bond' will be the most energy efficient office building in Australia at the time.

The critical aspect of achieving this high level of energy efficiency is the management of electricity, gas and water consumption. EP&T Energy were commissioned to install its' EDGE® Utility Monitoring System to provide monthly reporting as well as identification of critical energy savings initiatives. Furthermore EP&T have been engaged to continuously monitor the on-going energy performance against the design targets to confirm the five star ABGR.

EP&T Pty LTD specialises in providing turnkey solutions to reduce Energy and Water consumption.

EP&T is a reputable company established ten years ago who has its manufacturing, sales and Research & Development in Chatswood with an additional office in Melbourne. It has distributors / re-sellers throughout Australia and service Asia from its office in Singapore. Today, EP&T has installed equipment in excess of 500 sites in Australia resulting in cost savings of about \$17 million to the energy users.

WHO USES EP&T'S PRODUCTS AND SERVICES?

EP&T's clients include well-established, high profile and widely regarded blue chip companies such as:

- Macquarie Asset Services - winner of the SEDA Annual Green Globes Award in 2003
- Investa Property Group - Winner of the 2004 FMA SEDA Facilities Management Environmental Achievement Award.

- Bovis Lend Lease - Construct and occupy "30 The Bond" Australia's First Five Star Greenhouse Office Building

- Leading property management companies such as Knight Frank, Jones Lang LaSalle, CB Richard Ellis

- Department of Defence

- Thakral Holdings - leading Hotel owner

HOW DO EP&T ACHIEVE THESE SAVINGS IN ENERGY?

EP&T use several Products & Services to action this;

Firstly, EP&T's EDGE® utility monitoring system that uses sophisticated technology is used to diagnose and identify savings for energy, gas & water usage.

Then EP&T would expand it to incorporate Smart Building Automation, Power Factor Correction, Variable speed controllers and Lighting control systems.

WHY DO LARGE AUSTRALIAN COMPANIES USE EP&T?

EP&T is a company that provides the design, manufacturing, installation, commissioning, service of energy reduction products, guarantee the performance and fund the projects at an affordable cost.

EP&T's involvement at '30 The Bond' will assist achieving the ABGR five star rating, and its continued involvement in a service and support role will ensure this rating remains. EP&T Energy are proud of the contribution their technology and expertise has made to this landmark development.



"The EDGE® system is an invaluable tool that provides a wide range of opportunities to building owners and managers to reduce their electricity, water & gas usage."

Keith Gunaratne - Director EP&T PTY LTD

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C3D INTERACTIVE

TEXT: JOHN ASPINALL IMAGES: C3D INTERACTIVE

→ DESIGN IN THE DIGITAL AGE

Architectural design is predominantly a visually orientated discipline. The observation of expressed intention against built reality provides the basis upon which the realisation of architectural theory can be judged.

To have imagined, 20 years ago, that an architect would have the opportunity to observe a digital representation of a design proposal in context, would have pushed the limits of credibility. However, the current reality is exactly that, and more.

It is now within the technical capabilities of most architectural practices to generate photorealistic images and even animations of their design proposals throughout the design process, not merely as a development application requirement or marketing tool. Utilising software originally developed within the film industry, where speed is essential, visualisation studios, such as C3Di in Sydney, encourage all members of the building design team to assess the impact of a new development in context, internally and externally, from the earliest stages of concept design.

The progression of the three dimensional model follows several defined stages reflecting the iterative process of design, from geometric considerations into compositional concerns involving material, surface texture, colours and lighting. These stages can be summarised as follows

Stage A: Massing Studies - Concept Design

Purpose: Investigation into context, visual impact, shadows, basic form and views.

Realisation: Rapid solid modelling enables informed design decisions to be made and approved at this very early, but crucial stage. The new development and its immediate context can be modelled very rapidly to generate simple rendered views and animations.

Stage B: Refined massing and elevational studies

Purpose: Study of proportion and articulation, sketch elevations in context.

Realisation: The development of built form in context allows an investigation of the relationship of solid to void and the impact of sun location. Part of this work can be achieved in 'real time', taking advantage of photo manipulation software to develop 'sketch' elevations.

Stage C: Design Development

Purpose: Material selection, glazing and framing systems, sun shading, landscaping, facility planning.

Realisation: It is at this juncture that 'real life' assessments become important, ie. true representations of light and shadow conditions, material qualities etc. Space and proportion internally can be more accurately assessed, using a combination of still images and animations.

Top Series: Showing facade design development by Lend Lease, over a 4 week period.

Bottom Series: Sequential still images taken from a 3 minute computer animation of the proposed development.



Stage D: Detail Design

Purpose: Material and lighting studies using true photometric data, service coordination, signage / exposure, pedestrian studies.

Realisation: The input of outside consultants can begin to feed into the model more actively at this stage. Accurate services coordination information can be derived from the interlinking of 3D data for all structural, mechanical and electrical requirements. 'Real time' experimentation with alternative materials and finishes is possible, accelerating design decisions and approvals.

Stage E: Consolidation

Purpose: Phases C & D combined and resolved to produce a complete model in preparation for production information.

Realisation: This represents the point at which all aspects of design are complete. The built form and its functionality have been sufficiently assessed through observation of the 3D model to allow an effective 'sign off' to be achieved.

Stage F: Presentation and production information.

Purpose: Creation of base drawings, photomontaged views, shadow diagrams, animations, multimedia presentations, sample boards.

Realisation: Utilisation of the CAD model to generate a large proportion of the information required for the regulatory approvals process. Marketing imagery can additionally be produced from the same source.

At each defined stage, a 'sign off' can be achieved from all relevant parties, using the CAD model as the objective focal point. The visual portrayal of any potentially contentious areas of the design results in rapid and effective resolution of any issues.

It is the intention of interactive visualisation studios, such as C3Di to continue developing and enhancing these ideas, permitting a far more streamlined and effective design process. This will, inevitably, lead to considerable time and cost savings for all members of the design team. More importantly, in creating an environment in which architectural design can be more critically and objectively assessed, standards of design, both in terms of resolution and quality will inevitably improve.

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SYDMEC

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ DURING THE DEVELOPMENT OF '30 THE BOND', LEND LEASE SOUGHT OUT NEW and innovative ways to overcome challenges and problems that they faced in attempting to create a landmark building in environmental efficiency. They wanted a building that provided the occupants with improved interior quality and created an atmosphere that would be pleasant to work in.

Through their European colleagues Lend Lease learned of Chilled Beam Technology and the expertise and use of this technology was transferred to the project. Chilled beams are a revolutionary, but relatively simple form of air management within an office space.

Sydmecc Pty Ltd, were given the opportunity and the challenge to use their knowledge of mechanical piping installation to enable the integration of chilled beam technology into the project at 30 The Bond. This was a chance for Lend Lease to demonstrate the cutting edge technology involved in chilled beams and it was a chance for Sydmecc to display their skill in installing piping to service the system. It was also the first time a large-scale commercial building in Australia has been fitted with chilled Beams.

The principle of chilled beam air conditioning is relatively simple; Hot air rises and cool air falls. If cooling elements or beams are placed in the ceiling, cooled by pumping chilled water through them, then the hot air that rises will be cooled and fall back down. Sydmecc and their highly skilled tradesmen assisted in the final stages of design criteria, providing and maintaining an equal flow system to each zone of chilled beams and also the entire floor. During this construction process over 20 kilometres of pipe were installed by their team and the work was completed within the required time and cost.

Sydmecc have a reputation for skill and efficiency and their expertise in the installation of all forms of pipe work has grown over the past 10 years. Major projects they have worked on include; St Vincents, Concorde and Sutherland hospitals, the Qantas Jet Base and Fox Studios they have also completed projects at Erina Fair, 126 Philip St and the State Library.

The versatility of Sydmecc is an essential factor in their success. Their team comprises highly skilled trades people who have a wealth of experience and knowledge to draw on, enabling them to install many forms of pipe work, from copper to plastics to mild and stainless steel, the pipes they install carry a range of mediums, from steam to medical gas compressed air, vacuum, LTHW, HTHW and condenser water. Their input into the project at 30 The Bond, was integral to the projects overall success and environmental achievements.

The introduction of Chilled Beam technology into Australia on a large commercial scale will almost certainly see other leading companies adopt it in their new developments. Sydmecc have demonstrated their ability and skill in the installation of the required pipe work on a large scale and their services are sure to be in great demand as a result. Not only in this area but in the many other forms of installation they excel in.

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TRANE AUSTRALIA

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ 30 THE BOND ACHIEVED ITS AUSTRALIAN BUILDING GREENHOUSE RATING OF FIVE STARS, due in part to the innovative use of chilled beam technology. The cost savings and efficiencies of this technology along with other technologies reduced the buildings greenhouse gas emissions by up to 30% in comparison to other similar buildings.

Although new to Australia, chilled beam technology is well known in Europe and, using their international leverage, Lend Lease drew on the expertise of their European colleagues to incorporate chilled beam air conditioning into the development at 30 The Bond.

The central chilled water plant was supplied by Trane Australia. Trane Australia is a leading global provider of Heating, Ventilation and Air Conditioning systems (HVAC) and services since 1913. Its offerings include energy efficient heating, ventilation and air conditioning products, building automation systems, maintenance services and parts. Trane Australia has an extensive national presence, which includes sales and service offices located throughout Australia and New Zealand with 447 employees.

Trane's expertise in the HVAC field was of great importance in the selection and commissioning of suitable Machines that would operate to a high level of efficiency and provide the required amount of chilled water to the system. Trane's involvement in the project at 30 The Bond, required the sourcing of appropriate machines and the commissioning of new high efficiency water-cooled helical rotary chillers.

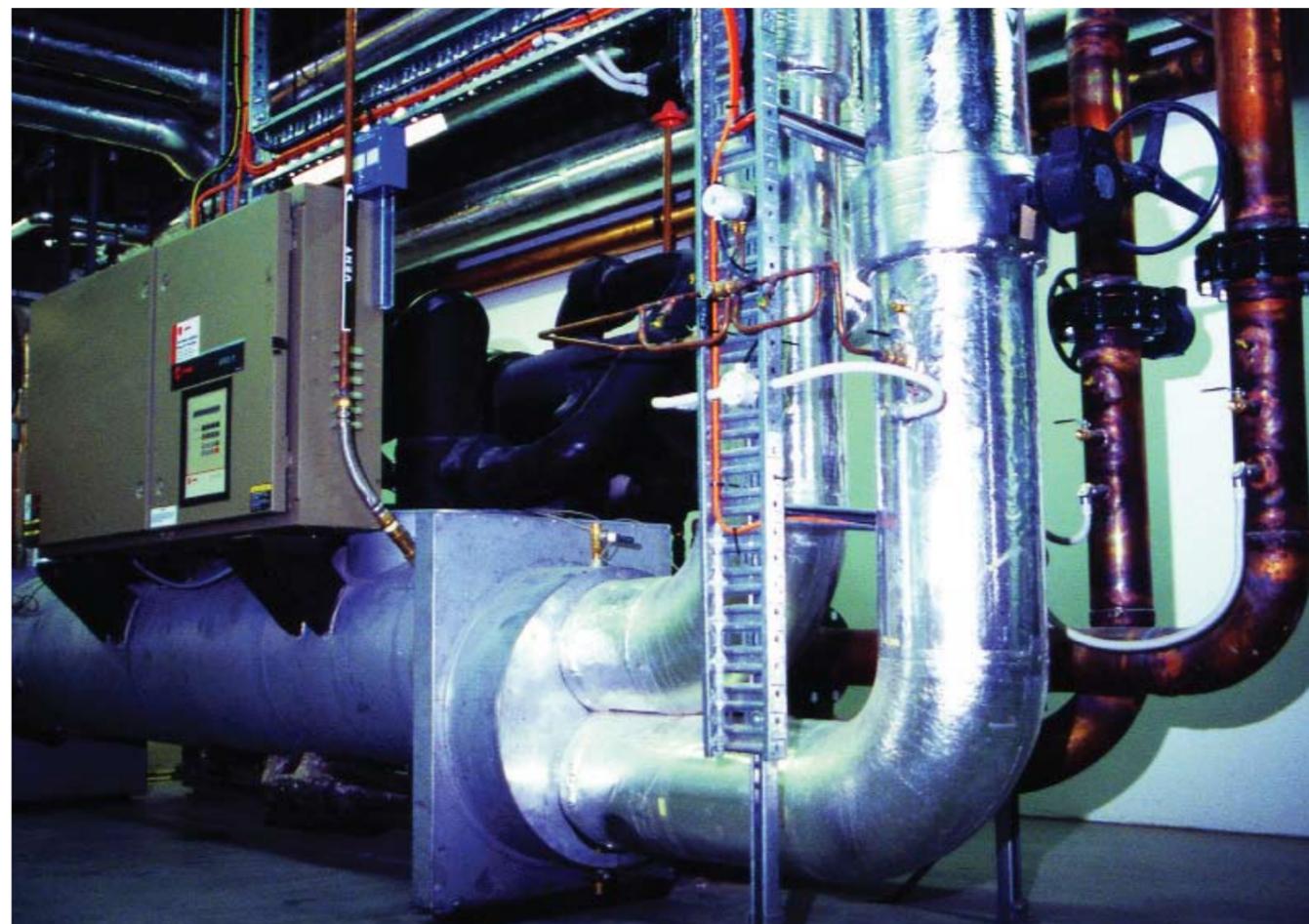
These new Helical Rotary Chillers were manufactured by Trane at their manufacturing plant in Pueblo Colorado to meet the specific requirements for effective operation of the chilled beam air conditioning system at 30 The Bond.

Once installed the Helical Rotary Chillers form the heart of the cooling system, the central chilled water plant that provides chilled water to the cooling beams on each level. Three chillers each with a nominal capacity of 850kw were manufactured, shipped and installed to provide the required cooling capacity and meet the high operating efficiency requirements identified by Trane.

The sourcing, manufacture and provision of these chillers by Trane ensured the chilled beam technology that is integral to the development at 30 The Bond operates to the highest standards of efficiency and reliability.



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BESAM AUSTRALIA MAKES AN ENTRANCE

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **BESAM IS ONE OF THE LARGEST MANUFACTURERS OF AUTOMATIC DOOR SYSTEMS IN THE WORLD TODAY** with an annual sales turnover of in excess of \$ 2 billion SEK (\$ 500 million AUD) Besam is the only truly global provider of automatic door solutions and service with 25 of it's own companies and 39 independent and certified distributors operating in over 70 countries around the world. Through this broad-based international organisation Besam has acquired in-depth knowledge about customer needs and service requirements. This wealth of knowledge and experience is shared throughout the group and has allowed Besam to develop globally adapted solutions.

Besam is truly a global organisation with a local presence. Besam revolving doors are used by many internationally recognizable companies and can be found protecting the indoor environments of Offices, Airports, Hotels and Shopping Centres across the globe.

There are many factors to consider when designing an ecologically sustainable development such as The Bond Project. Not the least of which is the type of doors to use at the entrances. To achieve an ABGR five star greenhouse rating it is critical to minimize the amount of conditioned air that is lost every time the door opens.

Only a revolving door can provide a controlled environment inside, allow easy passage of traffic in both directions and create a stylish entrance. The "open-while-closed" design of a revolving door produces a 'climate zone', shielding the interior from anything the outside world can throw at it.

Rain, wind, dirt, noise and exhaust fumes are all kept outside where they belong while inside the conditioned indoor climate is protected and draughts are eliminated. The compact design Besam KDB three wing 3000 mm and 2400 mm diameter doors installed at The Bond have provided the ideal solution.

"ADS" (automatic door systems)

Besam's has a comprehensive range of automatic door systems. The recently released "ADS" (automatic door system) range also caters for heavy traffic in both directions whilst achieving a level of "seal" not seen before in traditional automatic sliding doors. The aesthetically pleasing modern design, flush glazing & complete perimeter sealing are just some of the features that make Besam "ADS" the ultimate automatic sliding door.

For more information on revolving doors, "ADS" or any other type of automatic door products Besam can be contacted on 1800 040 077



BESAM AUSTRALIA PTY LTD
8 NICHOLAS DRIVE
DANDENONG, VIC, 3175
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INTERIORS DONE IN A BIGWAY

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS



BIGWAY INTERIORS PTY LTD
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→ **WHEN LEND LEASE MOVED THEIR** headquarters to '30 The Bond' they saw the opportunity to create a showcase of innovative quality that reflected their position as global leaders in sustainable development and also promoted their own unique culture. Nowhere was this philosophy more important than in Lend Lease's Level 4 reception and meeting rooms; the first point of contact for many visitors and clients to '30 The Bond' and Lend Lease. It was deemed fundamental that the company presented an image and an impression in keeping with the building as a whole, but more importantly in keeping with Lend Leases business paradigm and aspirations for the present and into the future.

Bigway Interiors have had extensive experience working with Lend Lease over many years and on many projects. And their reputation for very high quality craftsmanship in glasswork, joinery, stonework, timberwork and metal work is well known, as Joseph Madoch, the owner of Bigway says, "We like to consider ourselves as masters of all trades and Jack of none!" Bigway have unquestionably demonstrated this in their work at '30 The Bond'.

A clear insight into the specific needs, goals and aspirations of Lend Lease has led Bigway to develop an understanding that is evident in the superior quality of the fit out completed for level 4. The team from Bigway; including Joseph Madoch, Graham Nash, Tom Ursino and Tom Jukic were integral in ensuring the that what Lend Lease and the designers envisaged was created, and the outcome is an exceptional quality, beautiful and practical working environment for the people of Lend Lease.

Bigway Interiors operated closely with the developers to ensure that the materials and practices used during the fit out were not only of the highest standard, but also met environmental guidelines and OH&S requirements. The design of the level 4 reception and meeting rooms by WHO Group was followed very closely without incident and the collaboration between WHO Group, Bovis Lend Lease and Bigway was a major factor in the smooth expedition of the required work.

Bigway interiors understanding of the job required, and their enthusiasm in undertaking the diverse and high quality work involved has allowed Lend Lease and Bigway to enjoy a smooth and productive relationship. Working together they have created a showcase reception for a landmark building.



TURNER BROTHERS

TEXT: MICHAEL BROWN
PHOTOGRAPHY: ANDY STEVENS



→ **ESTABLISHED IN 1906, TURNER BROS. STARTED LIFE AS A GENERAL STORE LOCATED IN KOGARAH.** Today, Turner Bros. are specialist shading systems and furnishings contractors with manufacturing facilities and offices located in Marrickville, employing 45 staff across the fields of administration, sales, manufacturing and installation.

Turner Bros. provide design, supply and installation of internal and external shading systems, as well as internal window furnishings and soft furnishings. They also design and manufacture lighting control systems, and specialised electronic control systems for internal and external shading systems.

Turner Bros. specialise in providing to the Hospitality, Health Care and Architectural/Interiors markets. However, Turner Bros product range generally covers all market areas, and their products and services can fulfil any furnishing or shading need.

For internal shading, Turner Bros. manufacture a plethora of window coverings including curtains, roman blinds, metal and timber venetian blinds, roller blinds, aluminium and timber shutters, hotel and hospital curtain tracking systems. Turner Bros. have a full range of internal soft furnishings including bedspreads, bed valances, scatter cushions, pillow shams, bedthrows, duvets, and sheeting.

For external shading, Turner Bros. can design, supply and install solutions to suit you. Turner Bros. manufacture and distribute aluminium and cedar external venetian blind systems, external aluminium shutters, external aluminium fixed and operable louvre systems, operable and fixed awning systems, and external roller shading systems as well as fixed and operable skylight and conservatory shading systems.

As well as their own range of manufactured products, Turner Bros. exclusively distribute Nysan Shading Systems specialist internal roller and shading systems, Kruelland Horiso external venetian blind systems, Arc Products fixed and operable louvre systems and Architen Landrel internal and external tension and membrane structures.

Turner Bros. were recently commissioned to custom design, supply and install an operable external shading system and corresponding control system for The Bond building at Hickson Road, to work in tandem with the building's mechanical services to achieve a 5 star energy rating. The Bond building marked the first attempt at a 5 star building rating in Australia.

The Bond site imposed difficult environmental factors. The building's main aspects faced North and West, and are exposed to the sun from early morning until sunset, and the facade is subject to potentially strong West and South West Winds. With full height glazing and no internal sun shading, the building required that the external sun shading system operate reliably and continuously, even through periods of high winds.

Turner Bros. researched Hickson Road's historical weather data, which indicated that wind speed regularly exceeded 20 knots. Traditional rolled form blade blinds with fixed side channel systems suffice for wind speeds up to 20 knots, but the Bond's blind system would have to operate in a wind range of 30-35 knots.

Kruelland Horiso blinds use flexible blades and cable guides that allow the system to flex and to effectively dissipate any build up of wind pressure. Flexible blades have a memory and can return to their original shape if exposed to any shock force. A full size mock up Kruelland Horiso external venetian blind system was mounted to a prototype window module for wind tunnel testing, which proved that Kruelland Horiso blinds maintained operation to at least 35 knots, a speed that would be exceeded at Hickson Road for only several hours a year.

Turner Bros. recommended Kruelland Horiso blinds for The Bond, and undertook Nysan Shading Systems to design and manufacture the blind control system. The control system automatically raises and lowers the blinds based on a suntracking program that calculates the time of day that the sun will start to hit the facade and incrementally lowers the blind to pre set stop positions to suit the sun angles at the time of day.

This automatic system effectively controls glare and heat gain into the building, saving sufficient energy to achieve the five star energy rating. The system also allows for local interface by the tenant adjacent to each blind panel, using a tilt only function controlled by a wall switch.

Bovis Lend Lease Facade Engineer Mr. Matthew Yates said, "The blinds are magnificently robust, and functioning as we intended, expected and hoped for. This is a major achievement and has been applauded by the project managers and senior tenant representative. I have no hesitation in providing a reference on the design, installation and operation of the system."

Contact Scott Turner, Director, Turner Bros on (02) 9519 7299.

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IR ARCHITECTURAL HARDWARE

Take time out, talk to us.

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **INGERSOLL-RAND ARCHITECTURAL HARDWARE, PRIDE THEMSELVES ON THEIR ABILITY TO UNDERTAKE AND** successfully complete different and original challenges. Being part the global group of Ingersoll-Rand companies, with a manufacturing presence in around 22 countries gives them a vast knowledge base to draw on. Their local presence with offices around Australia also provides them with expertise and access to Australian technology.

The work at '30 the Bond' was conducted by 'IR Dor-O-Matic', and they took great satisfaction in their capability and resourcefulness, demonstrating a complete commitment to quality and service.

The eight boardrooms on level four of the development run for 33 meters along the west side of the building, and with a brief to provide exceptional quality and functionality, 'IR Dor-O-Matic' came up with a unique series of centrally controlled, 'Mid Swing' doors to access the boardrooms and open up the area when required. Each of these doors operates in fully automatic mode, from a touch screen, semi automatic, where movement past 5 degrees opens the door, or fully manual.

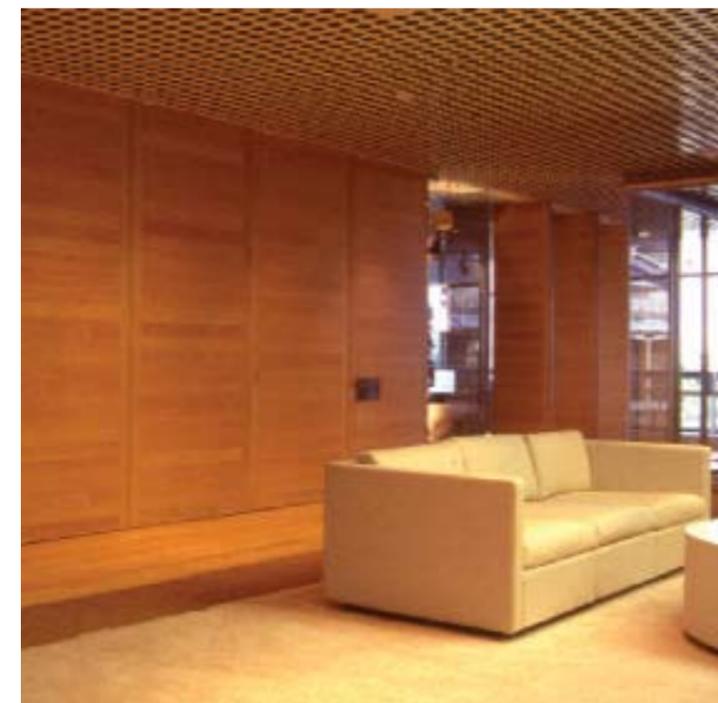
Each of the boardrooms has from 3 to 5 doors along the east wall, which also form part of that wall. They are beautifully crafted, timber slatted, with no handles or visible hinges, and when closed the impression is of a single uninterrupted partition. But, when opened, either individually or in any combination from 1 to all 28 from the touch screen operating system located at the level four reception, they reveal the expansive views west, over the harbour and docks.

The 'IR Mid Swing' operator is a low energy 'Start on Demand' power opening spring closing system. The door is driven to the open position and held for an adjustable amount of time, before closing under spring tension. The micro processor system allows for full adjustment of the doors actions, from opening speed, to closing time and 'pause' whilst open. All operating mechanisms have been located out of sight in the roof leaving the interior uncluttered and provided clear and free lines of vision to compliment the quality fit out.

The technology for the 'IR Mid Swing' door system is an example of the application of existing know-how in a way that produces something quite new. It was this innovative and unique application of existing expertise applied to the situation that created a functional and appealing solution to the challenge of incorporating the doors into the surrounding decor, whilst maintaining the ability to open the area up when required. This is a trademark of the IR Architectural Hardware approach. 'IR Dor-O-Matic' has a large range of entry systems to suite almost any application and budget. They have representatives, who are skilled in all areas from specifying and scheduling to compliance and building codes.

IR Architectural Hardware philosophy is to provide innovative products engineered to the highest quality, backed up by after sales service that will exceed the customer's expectations. In this respect, at '30 The Bond' they have delivered.

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FRICKER CEILING SYSTEMS

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **FRICKER CEILING SYSTEMS HAVE BEEN SUPPLYING CEILING** systems for over 11 years to Australia's most prestigious commercial developments. During this time they have built a well-earned reputation with their high quality solutions while meeting the needs of the country's leading building owners and developers. Recent projects successfully completed include;

NAB's Head Office at Docklands (VIC),
AMP's Angel Place (NSW),
Deutsche's Woodside Energy Project (WA).

Each of these projects required approximately 50,000 square meters of ceiling coverage.

Fricker were asked by Bovis Lend Lease to provide a ceiling system for their new head office at the Bond Building, Sydney that would accommodate the new chilled beam technology. Their brief was to provide a ceiling that would allow the beams to operate efficiently and effectively, whilst also creating an aesthetically pleasing appearance that was in keeping with the high quality interior fit out.

Fricker embraced this opportunity to demonstrate their skill and adaptability. As part of the process of designing a new ceiling system for 30 The Bond, Fricker developed a series of prototype metal pan ceiling tiles which were specially perforated to test the airflow required for the chilled beams. Once tested, new perforation tooling was manufactured to the same requirements so as to produce the optimal perforation pattern and size allowing for the smooth flow of air from the chilled beams situated above the ceiling.

These new design tiles were then integrated into Fricker Ceiling Systems innovative Two Way Access ceiling system. Each tile sits flush with the supporting aluminium suspension, providing a smooth line of sight and thereby eliminating shadows and disruptions between tile and grid. Service tiles incorporating fire sprinklers and down lights were factory produced to ensure the quality and finish of the ceiling was maintained.

In keeping with 30 The Bond's environmental credentials the tiles used throughout the building were manufactured from steel with a 25% recycled content. The final result produced within budgeted guidelines, and on time by Fricker is precisely what Lend Lease had envisaged. The new technology of chilled beam air conditioning operates out of sight above the ceiling without disruption the required airflow.

Services and fittings are incorporated neatly into the system creating a standard of finish that compliments the quality of the fit out while maintaining the 5 star environmental aspirations of the building.

Fricker Ceiling Systems involvement in the project at 30 The Bond, provides a clear example of their attention to detail and their innate understanding of customer requirements in the design, manufacture and installation of ceilings.

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AUDIO VISUAL SOLUTIONS PTY LTD

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **THE PIONEERING TECHNOLOGY INCORPORATED INTO EVERY ASPECT OF** '30 The Bond' has become a showcase for advanced, cutting edge innovations. A key example of this is the rear projection system Audio Visual Solutions designed, manufactured and installed for the Lend Lease reception area on level 4. It forms a point of interest for clients and visitors to Lend Lease's offices whilst they remain in the reception area, providing them with information and entertainment.

Audio Visual Solutions used a revolutionary on glass projection screen material called Primo, which has recently been released in Australia. Audio Visual Solutions is the first company in Australia to embrace this new technology. The on glass screen that was installed is 13m by 2.4m and is the largest such screen in the world, with an image size of 7.2m by 1.8. The Primo screen material was installed by All Protection Tinting Pty Ltd for Audio Visual Solutions.

The image created on screen is projected from behind by three Sanyo LCD projectors each projecting one third of the image and as such they can operate in unison to form one large image, or the screen can be divided into three separate images as required. Mylar mirrors imported from VICOM in Germany were used to ensure the optical accuracy of the projected image.

Audio Visual Solutions is a small, but highly skilled company established in 1989. They have been at the forefront of rear projection screens and custom built rear projection systems for many years and have built a reputation for innovative solutions to a wide variety of requirements. Their strength lies in their extensive experience base, their adoption of new technology as it arises and their complete understanding and employment of existing technology.

AUDIO VISUAL SOLUTIONS PTY LTD
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Over the years they have been involved in many projects, some of the more notable include; boardroom installations for Sydney Electricity, Energy Australia, Pacific Power, the RTA and the Bank of China. In 1996 they also custom built an outdoor rear projection system for the Hawksbury Race Track which is still operating. In 2000 they designed and built a 9m by 4.4m 24 screen rear projected video wall for POS Media in Brisbane, and more recently they have been involved with Hutchinson Telecommunications phone shops, installing 'on glass' rear projection screens in their outlets around Australia.

The reputation and proven track record Audio Visual Solutions have created is a clear indication of the exceptional expertise, attention to detail and the creative solutions they incorporate into their work. The custom built rear projection system at '30 The Bond' is a fascinating example of this.

UNIFOR OFFICE SYSTEMS

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ UNIFOR AUSTRALIA PTY LTD WITH THEIR PARTNERS VITRA PTY LTD ARE PART OF A GLOBAL company that is without question, the market leader in the design, manufacture and supply of office workstations, storage systems and furniture solutions. Their office systems are manufactured to the highest standards and environmental criteria and as a result Lend Lease sought their assistance in providing quality designed and functional work stations and office solutions for the project at 30 The Bond.

In keeping with the open and clear lines of sight within the building and following closely the design criteria, Unifor provided modular and flexible units, manufactured by Vitra that were installed within the office areas to ensure efficiency and practicality, and maintain the quality of the working environment; one of the original aspirations identified by Lend Lease staff. The provision of workstations that suited this purpose, but were also manufactured to the highest quality was of great importance. The environmental credentials of the workstations and units supplied were also tested to ensure they met with the strict criteria for all materials and processes used throughout the development.

Unifor is a privately owned company based Turate in Italy, outside Milano, with an annual turnover of US\$400 million. They have operations that span the globe and this is clearly illustrated by some of their recently completed projects overseas. From Hong Kong Telecom where they installed 10,000 work points to Ferrari in Modena Italy, to Cartier Foundation in Paris and JP Morgan Chase in London.

Locally, Unifor Australia has been in operation since 1987, and they became partners with Vitra in 1993, together they have maintained a policy of direct company to company contracts as well as local content. Recently they have been involved in work with the Bureau of Meteorology in Melbourne installing 1000 work points, BHP Billiton Global HQ, (Melb), Installing 1200 work points, Corrs Chambers Wesgarth, (Syd, Melb) 1000 work points and American Express in Sydney where they installed 2000 work points.

All product supplied by Unifor is manufactured by Unifor or their partners. This is a core policy of Unifor to ensure the high standard and quality of their office solutions.

Importantly, through Unifor Australia, the local component of product manufactured now constitutes up to 90% on some major projects. As part of its operations, Unifor Australia currently maintain close to 3 million dollars of stock, on call, to service major corporate clients with the utmost speed and efficiency.

Unifor and Vitra's involvement in the project at 30 The Bond ensured that the office work point, storage and seating solutions were of the highest standard and quality meeting all the specified requirements. In this respect Unifor and Vitra have been proud to assist Lend Lease in delivering an interior climate of exceptional quality that is also pleasant to work in.



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UNIFOR



ABOVE: Light sand vertical satin wide BT Bamboo Flooring

LEND LEASE CHOOSES BT BAMBOO FLOORING

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ IN SUPPLYING 'BT BAMBOO', ECO FLOORING SYSTEMS ARE PROUD TO HAVE BEEN able to provide a high quality, beautiful and hardwearing solution to the flooring needs of Lend Lease in their new Sydney headquarters at '30 The Bond'.

An Australian owned company operating since 1996, Eco Flooring Systems already has a proven track record in supplying high quality BT Bamboo flooring, including installations at David Jones Perth, David Jones Bondi Junction and the Chinese Consulate.

Lend Lease have been committed to incorporating environmentally sustainable development (ESD) initiatives into the project brief for '30 The Bond' and through employee workshops they identified seven ESD priorities, one of these seven priorities was that of 'materials selection'. The stringent criteria placed on all materials selected for the development has ensured that the product 'BT Bamboo' Supplied by Eco Flooring Systems has the highest environmental credentials.

In selecting BT Bamboo, Lend Lease looked at a range of factors including the manufacturing process, coatings and the glues used. They also looked at practicalities such as the hardness and durability, BT Bamboo is equal in hardness to Jarrah and Tallowwood and is quality assured (ISO 9002).

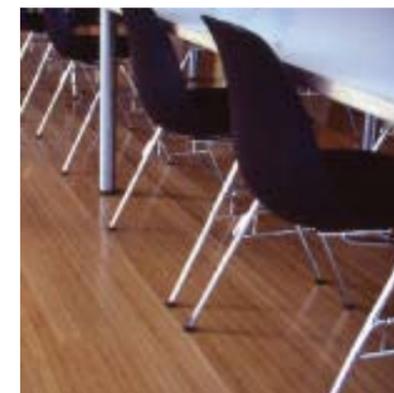
The zero emission water based coatings, non toxic glues and environmentally responsible manufacturing processes used to produce BT Bamboo satisfied the strict criteria placed on materials chosen for the development. The clarity of the flooring, and the fact that it is one of the few, pale yellow, solid hardwood timbers available that are suitable for this purpose made it a natural choice.

BT Bamboo flooring, whilst complying with the architect's requirements also complimented and enhanced the mood of the building and the overall theme of '30 The Bond', helping to create a light, open environment of quality in which to work.

BT Bamboo flooring was not only chosen by Lend Lease for its environmental qualities though, it is also a unique leading edge product that although widely used overseas is relatively new to Australia. This was seen to be in keeping with the innovative approach to the development.

Lend Lease chose light sand vertical wide boards with a satin finish and, as a feature for the new level 9 boardroom, darker, coffee coloured BT Bamboo carbonated amber vertical wide board was selected.

The selection of BT Bamboo flooring for this project is a demonstration of the innovative and careful choice of materials undertaken by the developers, and as such, they and Eco Flooring Systems have created a benchmark for future development projects that will be hard to match.



ABOVE: Carbonated amber vertical wide BT Bamboo Flooring

ECO FLOORING SYSTEMS PTY LTD
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THE FRAME GROUP

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ **INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) INFRASTRUCTURE IS ESSENTIAL TO ANY CORPORATION.** As a part of the decision to relocate its headquarters to 30 The Bond, Lend Lease Management took the opportunity to re-evaluate its ICT to ensure that it effectively and efficiently met business needs for now and the future.

The Frame Group Pty Limited (Frame) - is an ISO9001:2000 quality accredited professional management services company with extensive and proven expertise in ICT-and was commissioned to evaluate the current environment and propose solutions which would not only provide new capabilities and efficiencies to the business, but also contribute to the overall innovation showcased by the 30 the bond project.

To meet this requirement, Frame worked closely with Lend Lease to evaluate a number of converging technologies including: data, voice, video and power management. The resulting ICT design produced by Frame, allowed all of these components to be incorporated into a fully converged Internet Protocol (IP) network. This provided Lend Lease with extensive expansion and redundancy capability as well as ongoing flexibility to easily accommodate future business growth and configuration changes.

Frame's innovative design of the cabling infrastructure, uninterruptible power supplies (UPS), data centre and regional network, demonstrates the uniqueness of the project's management and design philosophy.

This converged approach has provided a single platform upon which all applications for voice, video and data, support the business. In the majority of cases, delivery of these services to the desktop is via a single cable. The flexibility of 30 The Bond's ICT design means that moving staff within the building can be undertaken with minimal cost and inconvenience.

The scale of the project required Frame to work closely with the many building disciplines on-site. The overall project required a sound management methodology to ensure all aspects of the ICT programme met time, budget and expected outcomes. Frame's project management methodology, incorporating the internationally recognised PRINCE2 standard, was used to design and manage the ICT component of the project. Frame's responsibility included coordination with thirdparty suppliers, carriers and other sub-contractors.

At 30 The Bond, Frame focussed on the key factors of quality, flexibility, security and user friendliness. Considerable design and planning was executed by Frame to ensure a smooth transition to the new headquarters. Frame is proud to have been a primary consultant to Lend Lease IT Asia Pacific during the design phase and Bovis Lend Lease during construction of this landmark project. These close partnerships permitted Frame to deliver ICT infrastructure that is fully integrated with the unique requirements of 30 The Bond.

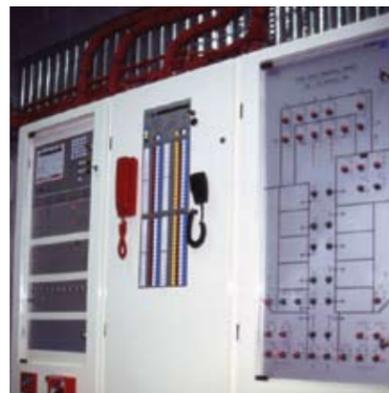


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PREMIERE FIRE PROTECTION SERVICES

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS



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Premier Fire



→ **THE NUMBER ONE PRIORITY OF ANY NEW** development is to ensure the safety of its occupants, and people who interact with the building on a day to day basis. The provision of adequate fire safety and security for employees and visitors to 30 The Bond was, understandably, a key element in the design and construction of the building and its environs.

Premier Fire Protection Services were invited to undertake the challenge of ensuring that the building met all fire protection requirements. The company has been involved in fire protection services since 1987 and is now one of the largest independently owned fire protection companies in NSW.

Having established a close working relationship with Bovis Lend Lease on many previous projects over the past ten years, such as Aurora Place in Sydney, Erina Fair Shopping Centre and the NRMA building, Premier Fire Protection Services were able to understand their client's needs and expectations and provide a fast tracked service solution of the highest level.

Premier's expertise falls in to two main areas; that of fire protection systems design, supply and installation into new and existing buildings (including the provision of sprinklers, alarms, intercommunications, hydrants, hose reels, extinguishers, emergency exit lights and fire doors.) and the testing and maintenance of existing or previously installed systems.

At 30 The Bond Premier provided all fire protection systems including, automatic fire sprinklers, fire detectors, and emergency warning and intercommunication systems throughout the building. They ensured that all the relevant codes and conditions were met as required by law to create a safe working environment. The eight story atrium provided some special issues regarding fire safety but these were dealt with in accordance with standard measures and practices.

There is no room for compromise in such an industry and the employees, procedures and equipment used by Premier, not only in 30 The Bond, but in all their projects are of the highest standard and quality possible. Premier was proud to be involved in the project at 30 The Bond and that involvement has strengthened the already strong ties between Lend Lease and Premier Fire Protection Services.



IT EFFICIENCIES AT THE BOND

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ ON MONDAY, 29 MARCH 2004, LEND LEASE STAFF MOVED INTO THEIR NEW HEAD OFFICE in Millers Point, with the expectation that they would immediately have access to all their normal office resources, including systems, applications and communications. There were a number of new and exciting technologies to discover when they walked into their workspaces at "The Bond", all of which have contributed towards the five-star energy rating for Lend Lease's new office building.

CRT screens had been replaced with flat panel monitors, and printers, faxes and photocopiers thrown out in favour of all-in-one or "multifunction" devices. The most cutting-edge technologies, however, are the IP telephones - 950 handsets in all - and wireless networking throughout the building. Systems integrator, Dimension Data Australia, completed the planning, design and implementation for these new services during a 10-month construction project.

Cisco Systems IP telephony replaces the PABX systems at Lend Lease with telephony services running over the data network. As both telephone and computer run on the single connection, IP telephony simplifies the management of communications systems, and also reduces the cabling and termination requirements for the office, therefore reducing materials used in construction, and installation labour. The cost savings on cabling at The Bond have been estimated at 30 percent.

Dimension Data has also installed Cisco wireless networking throughout The Bond. This is in tune with Lend Lease's mobile and flexible work practices, allowing staff connectivity throughout the office, without the need to provide spare network sockets everywhere. Wireless coverage also extends into the public areas, such as the cafe, ideal for staff meetings and working lunches.

In keeping with the flexibility of Lend Lease's work practices, Dimension Data has rolled out one of Australia's largest Cisco IP telephony installations integrated with Microsoft Active Directory. Active Directory stores Lend Lease's staff user information, and provides users with access to network resources, applications and the telephony systems. If a user needs to move to another desk or work area, they can input their extension number in the nearest phone and be reached instantly on that phone by internal and external callers.

Staff members also have access to a voicemail system that can be integrated with Lotus Notes to allow users to pick up email messages and synchronise their calendars with their voicemail system, so that callers can be told, "John Smith is in a meeting until 2:30. Please leave a message after the tone, or call back later."

New users can be quickly and easily provided with extension numbers, with this information quickly propagated throughout the network via Active Directory. The integration of staff identity and the telephone system will also allow future user-based applications to be built into the phones. Lend Lease is assessing future applications that can be built on top of the phone system to assist staff productivity.

Already, the Cisco handsets provide one really popular end user application: a live feed from Sydney's Observatory Hill so that every phone shows the temperature outside - great to know what you need to put on before you go out to lunch!

The project was a testament to the skill and dedication of the team, consisting of account management, project management, consulting and engineering resources from Dimension Data. The Lend Lease development is also a great working example of Dimension Data's IP Telephony methodology put to extensive use for project success.

With the work being undertaken in conjunction with site construction, not only did Didata staff have to comply with strict OH&S requirements and work in line with construction industry practices, they also often had to re-prioritise tasks based on other projects and fit outs going on around them.

Didata's lead consultant on the project, Paul Wilkinson, said that it has been a really rewarding experience.

"Over the past 10 months, we have had the opportunity to build a truly converged network, starting with a clean slate which allowed us to apply best practice design principles. It was a real challenge to work in line with, and as part of, a much bigger construction team. It made us really appreciate the effort that goes into producing a building of this scale and scope."

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ABOVE: (Left to Right) Bruce Duyshart and Lindsay Byron, Lend Lease, and Paul Wilkinson, Dimension Data.

ELECTROBOARD

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS



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→ **ELECTROBOARD WAS AWARDED THE CONTRACT TO** provide Audio Visual equipment to Bovis Lend Leases' Head Quarters at 30 The Bond Sydney in December 2003. The tender was very specific in that the solution provided by the Audio Visual Contactor needed to be able to be incorporated in the design vision of Bovis Lend Lease and yet still be state of art and user friendly. Electroboard was responsible for not only the Audio Visual but also the Video and Audio Conferencing.

Electroboard is an ISO9002 quality endorsed company and they have built a strong reputation based on their dedication to providing a complete service and solution professionally suited to the customers needs. Electroboard's experience in this field is unmatched and they have been at the forefront of multimedia presentation technology for over 18 years. During this time they have established strong relationships with many of the leading suppliers of multimedia technology such as InFocus Systems, Sanyo, Pioneer, Bose and many more. These relationships have ensured Electroboards access to the highest levels of innovation technology and a reliable and efficient sourcing of those products.

Electroboards first major challenge manifested itself in, "how does one fit projectors, screens, speakers into a ceiling design that allows for nothing to be hung below it and a ceiling void that contains a chilled beam heating and cooling system". To meet this challenge we worked with Wilson & Gilkes to create a retractable projector lift with a short travel distance of only 165mm. The selection of Sanyo PLC-XC10 with its high lumen and squat housing made it possible to utilise the limited space and suffer no picture degradation. Using high quality JBL Speakers we were able to hang just above the ceiling line enabling excellent audio reproduction without impacting the design intent required.

A second major challenge came in the limited space for the storage of technology in the client services area. We designed special concealed racks for all the technologies in each of the presentation rooms, Boardroom and Dining Room. These racks were on wheels and a turntable enabling them to be removed from the wall cavity and accessed from the front and rear for easy service.

Our long and strong history with Polycom Audio and Video conferencing made them the perfect choice and we were able to offer a fully integrated solution on a IP backbone in the main Boardroom with twin 50" Electroboard Plasma's and twin 40" LCD's in the Presentation Rooms on a custom design arm, allowing for easy storage when not in use, integrated ceiling microphones, using Vortex technology to guarantee FM quality sound. For the roll about units we supplied the VSX7000 units.

All the main rooms use AMX touch panels both existing and new to drive all the Audio Visual technology. As Bovis Lend Lease employees had previous experience with AMX technology we worked closely with the customer greeting staff within Bovis Lend Lease to create interfaces on the touch panels that best resembled the existing whilst incorporating new features and functionality.

The use of an aggressive, resource rich implementation plan enabled Electroboard to deliver the project on time, on budget and most importantly we were able to provide all the functionality promised on day one. We are very proud of the work done by Electroboard and hope to continue to work closely with Bovis Lend Lease in the future.



INTERSTUDIO

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ INTERSTUDIO WITH THE FUNKY GALLERY STYLE SHOWCASE IN BOHEMIAN

Darlinghurst ,and its MODERN THINKING slogan has rapidly established a name for itself in the Industry circles in which it travels.

Check out most of the major fitouts in Burgeoning Sydney Law Firms, Financial Institutions and Accountancy practices and you'll be certain to find an item created by an emerging designer and supplied and promoted by Interstudio.

The most notable of these and an Interstudio product provided to 30 The Bond is the Tony Basile designed for Basile and Evans 3000 series Barstools. Interstudio markets these for Tony Basile and the timeless simplistic aesthetic combined with robust practicality has ensured the 3000 series phenomenal success. The 3000 series and many of the Tony Basile designed products are demonstrative of the style that Interstudio is renowned for.

Crisp and clean lines with a point of difference but always commercially viable with an insistence on value is what Interstudio promotes. Interstudio won't ever compromise on these guidelines which are paramount to the companies integrity.

Although in Australia for only 2 years the company shares its philosophy of cutting edge design and support and promotion where possible of emerging designers with Interstudio in Copenhagen.

Michael Gamborg the companies MD is a former Manager of the Danish counterpart and recounts how this strategy came to fruition. Design is everything in many European Countries particularly in Scandinavia. Danes are renowned for the Classics, but, although this gave the Country a taste of things to come there has been another 50 years of wonderful design that simply gets stifled because everyone looks just to the Classics.

We grew up with these items and it still kind of reminds me of a visit to Grandmothers House.

So when Interstudio started in Copenhagen the focus was just on new design from emerging designers and that design ethos has worked famously for the Sydney duo whom have started the first Interstudio outside of Scandinavia. We liken the support and promotion of emerging design to that of being a Galleria, says Shane Scully Interstudios Marketing Director and the Australian connection in the enterprise. When a gallery sells a work of art from a relatively unknown Artist there is great excitement you can often get a piece that you really like without the unnecessary pricetag with the added bonus that you may have procured a Masterpiece.

The 3000 series is destined to fall into the masterpiece category as are many of the other products marketed under the Interstudio banner. We hate to disappoint says Gamborg, so we keep developing and promoting new products all of the time. We have an amazing scatter stool system designed by Henrietta Goth Ellis, the Dice from Jorge Campos Bermudez and so many other designs that are fast becoming classics, that we may soon have to change our catch phrase to those designs by former emerging designers.

While browsing at Interstudio, or you may want to visit the outstanding website, as well as their fab furniture ranges you will find Flos and Loius Poulsen Lighting, lighting from emerging designer Maren Kohlwege, Art from Kurun Wurun, Malcolm Flinn and Julie Harris.

Challenge yourself and share some of the Interstudio philosophy—Modern Thinking.

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INTERSTUDIO



FELTEX CARPETS

TEXT: JOHN MORETON PHOTOGRAPHY: ANDY STEVENS

→ THE BRIEF AND ASPIRATIONS OF LEND LEASE TO CREATE A HIGH QUALITY INTERIOR AT '30 THE BOND' THAT WAS PLEASING

to work in, functional and original, was a key element in their choosing the 'Shinto' range of carpets produced by Feltex Carpets. Many factors were looked at in making this decision including cost, durability and aesthetic appeal and in all areas it was deemed that the Shinto Range met and exceeded these requirements. Feltex Carpets have been manufacturing high quality carpets for over 50 years. During those years they have built a very strong reputation for the manufacture of superior quality carpets. They have been involved in such projects as the Sheraton on the Park, Crown Casino in Melbourne, Quadrant Office Tower in Perth and Hoyts Cinema's Australia to name a few.

Feltex Carpets is a world wide company with offices in Australia, New Zealand and North America employing over 1700 staff. They also lead the way in exports to a global customer base that spans South East Asia, the Middle East and United States.

Feltex Carpets extensive operations include; a wool scouring plant, six spinning mills, three tufted carpet mills and a woven carpet mill. They are one of the worlds leading manufacturers of superior quality carpet with an extensive knowledge of the industry and a commitment to providing service of the highest quality.

Their range of product, including both tufted and woven lines of stock combined with a trained custom design team ensures that whatever requirements a customer might have, they can be accommodated and a solution found that suites their particular needs.

The supply of the 'Shinto' range of 40oz level loop carpet for '30 The Bond' was a product that Feltex, after discussion with Lend Lease, believed would suit the specified usage. It is a contract heavy duty, including stairs, wear graded carpet, and has a proven track record. For Lend Lease it was ideal for their specific heavy wear and durability requirements.

Feltex Carpets have earned their reputation throughout their history with the production of high quality carpets and their commitment to service and solutions. They have once again demonstrated this considerable ability in their involvement at '30 The Bond'.

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Feltex
CARPETS





PETER KELLY FLOORING

Safety Floorings

TEXT: MICHAEL BROWN PHOTOGRAPHY: ANDY STEVENS

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→ PETER KELLY FLOORING PTY LTD IS A FAMILY OWNED AND OPERATED BUSINESS with flooring experience dating back to their beginnings in 1979.

Peter Kelly Flooring are a commercial floor covering company, experts in supplying and installing flooring in a variety of materials for a wide range of purposes. Peter Kelly Flooring can install floors in vinyl, carpet, timber, rubber, cork and other interesting materials.

Peter Kelly Flooring installed flooring across nine levels of the 30 The Bond building. They installed Comcork Flooring throughout all communal areas such as corridors, lift lobbies, corridors, kitchenettes and meeting room break out areas. They also installed vinyl flooring in MDR communications rooms.

Peter Kelly Flooring installed flooring in specific use areas of the building, using an interesting array of materials supplied by Safety Flooring.

Outside an eighth level tearoom, Peter Kelly Flooring installed flooring emblazoned with teacups, giving an interesting aesthetic quality to the area. They were also responsible for installing the ramp flooring, featuring white cutouts of 'running men' on a black background.

Andrew Grierson, Project Manager for Peter Kelly Flooring for 30 The Bond said, "This was such an interesting building. I've never had a job with such few defects. The tradesmanship was brilliant. 30 The Bond was such a good project, it was just a pleasure to work on."

Contact Mr. Peter Kelly, Director of Peter Kelly Flooring, on (02) 9899 6688.

→ SAFETY FLOORINGS PTY. LTD. WAS ESTABLISHED IN 1990 AS DISTRIBUTORS OF ACL Comcork flooring products. Safety Floorings' owner, Ms. Loretta Pearson, was responsible for managing the sale and supply of flooring for 30 The Bond.

Ms. Pearson was approached by WHO architects and Bovis Lend Lease to provide flooring samples and supporting technical information. From these samples, Comcork Low Profile was chosen as the floor covering for corridors and foyers over nine levels.

Comcork Low Profile has a small convex stud increasing the slip resistance without generally increasing the cleaning regime. Ms. Pearson noted, "We developed some interesting new products for 30 The Bond."

"I was required to provide samples of Comcork Low Profile in the colour white, a colour never before produced in the Low Profile range. Comcork being an Australian made product, we at Safety Flooring were able to satisfy this request," said Ms. Pearson.

"A special cut out tool was also developed to cut 'running man' figures from the white Comcork. These figures were set into black sheets at the base of small ramps leading to the office areas," added Ms. Pearson.

The flooring installation was managed by Mr. Andrew Grierson of Peter Kelly Flooring Pty Ltd. "We've been involved with Peter Kelly Flooring in previous office fitouts using Comcork Flooring, and we have been consistently impressed by the quality of their installations and the way in which their jobs are managed," said Ms. Pearson.

Contact Ms. Loretta Pearson of Safety Flooring, on (02) 9980 2066.