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ON THE COVER 'Cardboard' Cathedral in New Zealand **ARCHITECTURE** The Cathedral of the Northern Lights in Alta, Norway **INTERIOR** Chatrium Hotel in Yangon, Myanmar; The new Grand Hyatt Shenyang in China **LANDSCAPING** Green Wall Projects **SHOW REVIEWS** Architecture and Built Environment 2013 & Build Eco Xpo (BEX) Asia 2013 **PLUS** Interview with Diane Kelly, Regional President of ASEAN/ANZ/INDIA for Dow Corning



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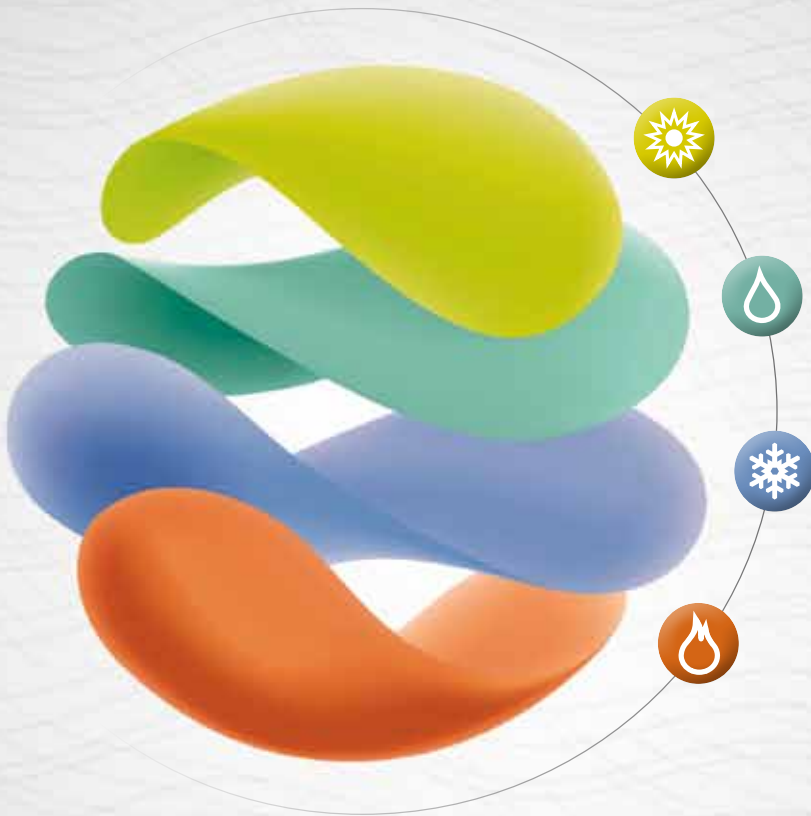


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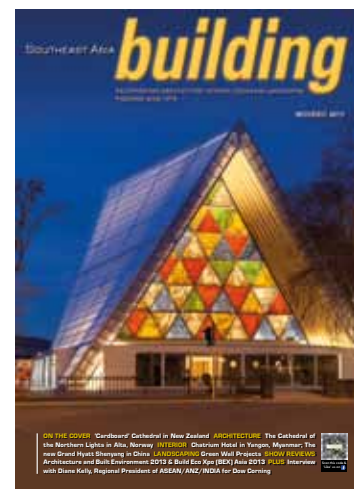
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On the Cover: 'Cardboard' Cathedral in New Zealand. Photo: © Bridgit Anderson

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editor's note



Here we are here the final issue of this year. It has been an incredible journey and my team and I would like to thank each and every one of our readers for their continued interest in the magazine. It has been a good experience documenting the excitement and the highs and lows of the architectural industry.

We've packed this issue with a lot of news, projects, product stories and exhibition reviews. If you want to know how modern-day religious buildings are being designed, then you need to read about The 'Cardboard Cathedral' in New Zealand and The Cathedral of the Northern Lights in Alta, Norway. Both are beautiful examples of amazing and unique modern church design.

Hotel projects are also becoming increasingly interesting and focused on striking first impression. We look at how the interiors of some hotels have been designed to make them appealing to guests wanting to enjoy unique accommodation.

Next in the landscaping section, we look at the growing popularity of vertical greenery in urban spaces. These living green walls not only increase the aesthetics of the building but also offer environmental advantages.

Also in this issue, we have put together show reports of ABE 2013 and BEX Asia 2013 exhibitions held in Singapore. If you want to know more about the industry trends and products that were highlighted at these shows, don't miss these reviews.

We hope you enjoy this issue and if you have any comments, please e-mail me at seab@tradelinkmedia.com.sg.

Amita Natverlal

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PUBLISHER

Steven Ooi (steven.ooi@tradelinkmedia.com.sg)

EDITOR

Amita Natverlal (seab@tradelinkmedia.com.sg)

GROUP MARKETING MANAGER

Eric Ooi (eric.ooi@tradelinkmedia.com.sg)

MARKETING MANAGER

Felix Ooi (felix.ooi@tradelinkmedia.com.sg)

MARKETING EXECUTIVE

Devy Lee (devy.lee@tradelinkmedia.com.sg)

HEAD OF GRAPHIC DEPT/ADVERTISEMENT

CO-ORDINATOR

Fawzeeah Yamin (fawzeeah@tradelinkmedia.com.sg)

GRAPHIC DESIGNER

Siti Nur Aishah (siti@tradelinkmedia.com.sg)

CIRCULATION

Yvonne Ooi (yvonne.ooi@tradelinkmedia.com.sg)

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Trade Link Media Pte Ltd, 101 Lorong 23, Geylang,

#06-04, Prosper House, Singapore 388399

Tel: +65 6842-2580 Fax: +65 6842 2581

Editorial e-mail: seab@tradelinkmedia.com.sg

Website: www.tradelinkmedia.com.sg

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From inception, the company had the vision to allow generations after generations of controllers to be compatible with each other, keeping ease of transition and future upgrades in mind. AAM also provides excellent technical support, field support, sales support, marketing support and a whole range of training classes for both solution integrators as well as end-users.

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Please contact: **Melvin Tan from CNA Group Ltd**
28 Kaki Bukit Crescent Kaki Bukit Techpark 1 Singapore 416259
T: +65 6511 0082 F: +65 6842 9606 M: +65 9824 7313
E: melvintan@cna.com.sg

The Big 5 2013 to expand with dedicated Building Interiors zone

Increasing product sectorization to provide streamlined sourcing for buyers in every market.

Dubai, UAE – With a current value of \$1.5 trillion, the GCC construction market is one of the most buoyant in the world at present.¹ To ensure that each sector of the industry has the opportunity to showcase its products and technologies in an effective environment, The Big 5 2013 has further expanded its product specific zones with the addition of Building Interiors.

As the UAE and Saudi Arabia continue to hold their prominent position for total worth of current and upcoming construction projects, with \$629b and \$494n respectively, the GCC is looking for new inspiration. Products related to kitchens and bathrooms, ceramics and fittings are some of the most sought after solutions in the industry at present and the new Building Interiors zone will showcase the latest products from across the region as well as the likes of Italy, Spain and Greece.



The leading event for the building and construction industry within the Middle East for more than 30 years, The Big 5 has seen the ongoing evolution of the GCC market and the increasing need for tailored sector solutions.

“We regularly host focus groups and meet with our advisory board members who help us each year to build an event that is relevant for those professionals who influence the procurement of construction products,” said Group Event Director, Andy White.

“Our research has shown us that there is a clear need for a dedicated zone for building interiors products, particularly for the interior designers and architects who attend our show. A common misconception is that The Big 5 is a building-products-only event, however for many years we have also hosted some of the world’s top interiors brands at the event,” added White.

Bringing together more than 2,500 exhibitors from 65 countries, with over 60,000 construction industry professionals on site from 25-28 November at Dubai World Trade Centre, The Big 5 is claimed to be largest event for the building and construction industry in the Middle East. Collocated with The Big 5 2013 will be Middle East Concrete and PMV Live, events dedicated to the Concrete and Machinery sectors.

The popular schedule of live demonstrations will also continue in 2013, with exhibitors taking advantage of the opportunity to create an ‘as-live environment’ for their products and showcase innovative technology and solutions directly to their target audience.

The importance of knowledge-based content will also continue to play a key role throughout this year’s event, with free-to-attend seminars taking place in the specifically allocated theatres on the event floor. Industry leaders will present research and insight from across the building and construction industry, sharing upcoming trends and innovation, with a strong focus on sustainability, which continues to be a central theme to all elements at The Big 5 this year.

Building on the success of the LEED workshops that have taken place over the past few years at the event, The Big 5 will also be hosting sessions dedicated to Abu Dhabi’s sustainable building code, Estidama, as well as workshops from Dubai Municipality and Dubai Central Laboratory.

The conference at The Big 5 for 2013 has evolved to encompass the spirit in which the dedicated new product arena, building interiors, was devised. The Sustainable Design & Construction Conference will take place from 26-27 November and is set to host debate and discussion across a range of industry topics, including *Master planning for sustainable cities of tomorrow* and *New methods and strategies to drive sustainable building practices across the region* as well as information on updated sustainable building guidelines from Dubai Municipality and design showcases from a range of iconic sustainable structures in the UAE, including The Cleveland Clinic in Abu Dhabi and DEWA headquarters in Dubai.

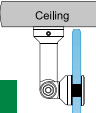
“Education has been a strong platform within The Big 5 for a number of years, and each year we aim to provide as tailored opportunities as possible,” said White. “We want to ensure that there are forums for attendees to learn about the most up-to-date information and trends from across the industry. Sustainability is a common thread running across all these platforms, and there will be information available to attendees that provide the very latest in regulation and application for sustainable construction in the region.”

Sustainable innovation will continue to be recognised at The Big 5 through the return of the Gaia Awards, now in its sixth consecutive year, rewarding innovation that supports sustainable construction. Organised in coordination with Green Technologies, the Gaia Awards have grown to become an important accolade for both exhibiting and non-exhibiting companies at The Big 5. Unibeton Ready Mix took Gold in 2012, with its Self-Compacting GREEN Concrete, which is designed to be low-cost, light weight, high strength, insulated, with low carbon emission.

For more information, visit www.thebig5.ae. ■

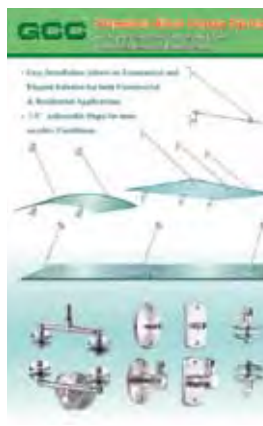
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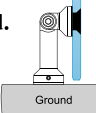
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Atkins designs the “tallest” landmark building in Shenyang, China

Hong Kong – Atkins is designing the Baoneng Shenyang Global Financial Centre in Shenyang, China. The mixed-use development, with total investment estimated at RMB10 billion, crowned by two towers of 565 metres and 328 metres respectively, will be the landmark of Shenyang, the largest city in Northeast China. The 565-metre tower claims to become the tallest building in Shenyang, and signals the continuing growth of the city.

The towers occupy a prestigious site to the south of the iconic TV tower, and form part of a masterplan covering an area of 58.5 hectares along the famous “Golden Corridor” Youth Street in the central business district. The development overlooks Youth Park and the Nanyun River to the east. In addition to the two tall towers the complex will contain five luxury high-rise residential towers each approximately 200 metres high, above a large lifestyle-culturally themed life style shopping mall.

Atkins has been commissioned by the client, Baoneng Real Estate Development Ltd., for the architectural design of the two tall towers including concept design, schematic design, preliminary design, and façade design development. The 565-metre tower will contain 111 floors, accommodating class A offices and other amenities including a luxury executive club at the top. The 328-metre tower will contain 34 floors of office with a 320 room 5-star luxury hotel above, which will be the only hotel in Shenyang over 200 metre high. Hotel podium facilities include a 3,000 square metre banquet hall plus 6,000 square metres associated facilities, which can accommodate luxury automobile showcases. Shenyang, traditionally a heavy industrial city, is now among the largest and most important centres for the automobile industry in China.

KY Cheung, senior design director at Atkins in Asia Pacific, said: “Our client challenged us to design a super tall building that is iconic, yet simple in structure and efficient, a development that meets the tight construction schedule, seismic codes, forecasted market standards, and the expectation from the city for a new landmark. It showcases Atkins’ expertise in designing super tall towers, but more importantly to design a building that meets the client’s and all stakeholders’ expectations.”

Construction of the complex started in spring of 2013. The 565-metre tower named “Pearl of the North” is due to be completed in 2018. ■



Carrot Home appoints Gain City as exclusive distributor in Singapore

Singapore – Carrot Home is pleased to announce the appointment with immediate effect of Gain City Best-Electric Pte Limited (“Gain City”) as Exclusive Distributor of all its Carrot Home Automation products in Singapore.

As exclusive distributor, Gain City will handle all sales and marketing activities including promotion, retail and project operation, and after-sales service in Singapore, while Carrot Home’s innovative product line will become key driver for Gain City’s Smart Home Business Unit. The collaboration is expected to result in wider coverage and market penetration, making Carrot the most accessible Home Automation Solution for the Singapore market.

“What impressed me most about Gain City are their customer-first culture, trustworthy workmanship and their vision of improving lifestyle,” commented Mr Robert Shum, CEO and Founder of Cypress Group (parent company of Carrot Home). “Home Automation is in essence a lifestyle product and that’s why in Cypress we champion Total Lifestyle Solution for our customers. Imagine soon you can walk into any Gain City Lifestyle Home Concept showroom and experience this lifestyle firsthand.” Indeed, Gain City’s relentless focus in lifestyle and customer service has been a tremendous source of synergy between the two companies.

Gain City has been proactively promoting the use of energy-labeled appliances to reduce greenhouse emissions and is the first company to be recognised for its efforts by the National Environment Agency, Singapore. “Green and sustainability is a major focus for Carrot Home and in the coming months, I expect to work with Gain City to introduce many energy saving solutions for Singapore, including the HDB market,” added Mr Man Lam, Director of Carrot Home. ■



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Technal GEODE curtain walling

C40 & Siemens inaugural City Climate Leadership Awards honour 10 cities for excellence in urban sustainability

Singapore – Siemens and the C40 Cities Climate Leadership Group (C40) announced the winners of the inaugural City Climate Leadership Awards at a ceremony at the Crystal in London. The Awards honoured 10 cities for excellence in urban sustainability and leadership in the fight against climate change. The winning cities and their award categories are:

- Bogota (Urban Transportation)
- Copenhagen (Carbon Measurement & Planning)
- Melbourne (Energy Efficient Built Environment)
- Mexico City (Air Quality)
- Munich (Green Energy)
- New York City (Adaptation & Resilience)
- Rio de Janeiro (Sustainable Communities)
- San Francisco (Waste Management)
- Singapore (Intelligent City Infrastructure)
- Tokyo (Finance & Economic Development)

“The C40 & Siemens City Climate Leadership Awards are dedicated to the idea that cities – by refusing to wait for action from national governments and international bodies – can lead the way in addressing the risks posed by climate change,” said C40 Chair, and Mayor of New York City Michael R. Bloomberg. “Using innovative local approaches, cities are having an impact on climate change globally. I congratulate the ten award recipients and look forward to seeing their projects progress and then spread across the C40 network and beyond.”

“The world’s cities are facing similar problems. And taken together they account for up to 70 percent of worldwide greenhouse gas emissions. We all know two things: the fight against climate change will be decided in cities. And it is through co-operations that we can tackle climate change. The City Climate Leadership Awards are a prime example of our successful cooperation with C40. It helps cities to optimise their performances and share their experiences. Its value is immeasurable,” said Roland Busch, CEO of Siemens’ Infrastructure & Cities Sector. ■

MKPL Architects’ Kent Vale – Faculty Housing wins RIBA Awards 2013

Singapore – MKPL Architects Pte Ltd announced that its design of the Kent Vale – Faculty Housing of National University of Singapore has won the 2013 RIBA Awards – International Awards for Architectural Excellence.

The RIBA Awards programme champions and celebrates the best of British architecture as well as that of its international members worldwide. No matter the shape, size, budget or location, all RIBA Award winning schemes set the standard for excellent architecture.

Located at a pivotal landmark standing at the gateway to the existing university campus the National University of Singapore Faculty Housing bridges the realms of domesticity and civic monumentality. The challenge for the architect lay in the melding of distinct uses; firstly a new administrative centre and bold statement of the client’s vision for a new campus ideal and, secondly a quiet oasis for residents to interact and enjoy. This was achieved through purposeful and deliberate spatial hierarchy, transitioning from bold public galleries to discreet private spaces sensitive to the human scale.

The appropriateness of material selection and proportion of structural elements and details is expressed in bold off-form elements that lend themselves to civicness. These are accented with dark glass, which gradually succumbs to refined layers of leaf-patterned perforated screens and finer detailing. The layering of materials enhances and softens the facades honest and functional visage.

In a constrained site where land must be optimised the development was designed with an overall masterplan facilitating growth and intensification over time to meet the client’s expanding accommodation needs. Integration and enhancement of an existing development called for intensification but this was achieved with sensitivity of execution.

Vertical greenery through the adoption of a modular planting system designed to be low maintenance draws the greenery at ground level up and through the facade.

Rather than pursue a technical solution to energy conservation a passive sustainability strategy with emphasis on long-term use was adopted. Perfect orientation of the building facades with adjustable screens to attenuate the sunlight creates a comfortable living environment. Expansive lobbies and well-ventilated rooms aid air movement, encouraging the reduction in mechanical cooling. Even the administrative offices and communal facilities benefit from a shading strategy that utilises the swimming pool on the roof of the podium block as a large insulated canopy. ■



Photographer: Mr Robert Such



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Changi Airport Group announces plans to construct a new mixed-use complex

Singapore – Changi Airport Group (CAG) has unveiled its concept plans for a new, iconic mixed-use complex to enhance Changi Airport's offerings and strengthen its position as an international air hub.

Code named 'Project Jewel', the new mixed-use complex is envisaged to be a world-class, signature lifestyle destination that will enable Changi Airport to capture tourism mindshare, and strongly boost Singapore's appeal as a stopover point for global travellers. The complex will offer aviation and travel-related facilities, a wide range of retail offerings, as well as unique leisure attractions.

To be constructed on the car park site fronting Terminal 1 (T1), Project Jewel will optimise use of the 3.5-hectare plot of land.

There will, for example, be a new multi-storey basement car park. As part of the redevelopment, T1 will also be expanded to allow more space for the arrival hall, baggage claim areas and taxi bays. These enhancements will increase T1's passenger handling capacity to 24 million passenger movements per annum.

Project Jewel is being designed to be architecturally iconic, with a stunning glass and steel façade that presents an impressive view of the complex – from both Airport Boulevard and the sky. Designed by a consortium of design consultants led by world renowned architect Moshe Safdie, comprising Benoy and local architects RSP, a key feature of the complex is a large-scale, lush indoor garden with a breathtaking waterfall.

Mr Lee Seow Hiang, CAG's Chief Executive Officer, said: "We are very excited about this opportunity to create at Changi Airport an iconic global attraction that will capture the hearts of both tourists and Singaporeans. For tourists, we envisage Project Jewel to be a must visit Singapore attraction, located strategically at the doorstep of one of the world's busiest air hubs, and an extension of the Changi brand promise that many travellers worldwide have come to know us for. For Singaporeans, it will be an exciting world-class destination right here at home, where they can relax and enjoy with their loved ones, again and again."

To be seamlessly connected to Terminals 1, 2 and 3, Project Jewel will serve as a node linking the terminals, improving inter-terminal connectivity. There are also plans for the complex to provide a central communal facility for the 32,000-strong airport community.

Against an increasingly competitive landscape, where airports around the world are actively growing their destination appeal, Project Jewel will boost Changi Airport's position as an air hub of choice for travellers. ■



Project Jewel is an iconic mixed-use complex being planned at Changi Airport. It is envisaged to be a world-class lifestyle destination that will strongly boost Changi's attractiveness as an air hub. Photo: © Changi Airport Group

PALME Vietnam returns in November 013

Singapore – The 3rd Vietnam's International Exhibition for Pro Audio, Lighting, AV, and Broadcast returns to Ho Chi Minh City after a one-year hiatus.

Following the successful showcase in Ho Chi Minh City and Hanoi, held in 2010 and 2011 respectively, PALME Vietnam 2013 exhibition returns to HCMC from 6-8 November 2013 to be held at the Saigon Exhibition and Convention Centre, promises to be more exciting showcasing the latest products and technologies for the entertainment and broadcast industry.

The three-day event will comprise over 130 exhibiting companies and brands from over 25 countries from Europe, USA and Asia. The leading brands include AKG, Antari, Antiq, Black Magic Design, BSS, Christie Digital, Clay Paky, Crown, D.A.S. Audio, DTS, Ecler, Extron Electronics, FBT, Globaltruss, JBL, Laserworld, Lexicon, L-Acoustics, Loud Professional, LSC Lighting, Martin Audio, Master Audio, Midas, Nexo, Percon, Pioneer DJ, RCF, SAE Audio, Sennheiser, Sharp, TOA, TW Audio, Vistron and many others.

Held alongside the exhibition is a series of seminars and manufacturers' product workshops. Hear from the renowned speakers on the latest broadcast technology developments in Vietnam such as Over-The-Top (OTT) technology, High-Tech Broadcast sets, and Multi-Windowing Display. Attend and be updated on all the important developments in Vietnam's broadcasting industry.

This year, there will also be a Live Outdoor Line Array Sound System Demonstration where several exhibitors demonstrate their state-of-the-art sound systems. This is proudly presented by the following renowned brands: DAS Audio (Spain), Loud Professional (Italy), JBL (USA), Master Audio (Spain), Nexo (France), Next-Proaudio (Portugal), TW Audio (Germany) and Z-Sound (China). Visitors will be able to experience the best of sound from these international brands specially brought in for the Exhibition. In addition, Bao Duong Co. Ltd. has specially organized the "Pioneer DJ & Me Competition" alongside the exhibition, for visitors to participate and meet fellow DJs. Log-on to www.baoduong.com.vn for more details on this DJ competition.

For more information on PALME Vietnam 2013, please visit www.palmeseries.com/vietnam. ■

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CleanTech One officially opens



Minister for Trade & Industry Mr Lim Hng Kiang at the launch ceremony of CleanTech One. Photo: © JTC

Singapore – JTC Corporation's (JTC) CleanTech One, the first development at CleanTech Park, was officially opened by Minister for Trade & Industry Mr Lim Hng Kiang on 15 August 2013.

The Green Mark Platinum 6-storey, 37,500-square-metres CleanTech One provides specialised business park, laboratory and office space for key local and international cleantech-related organisations to form a vibrant cleantech ecosystem in CleanTech Park. The Park is located next to the Nanyang Technological University (NTU), which is set to promote the cross-fertilisation of knowledge and ideas between academia and industry. Dr Loo Choon Yong, JTC's Chairman said: "CleanTech Park's location at the forefront of the largest manufacturing node in Singapore, comprising Jurong Industrial Estate and Tuas, provides a strategic linkage between academia and business. This linkage will enable cleantech research to be translated into industry-relevant applications."

The co-location of businesses, practitioners and academia seeks to catalyze innovation in cleantech research through the formation of strategic alliances within the CleanTech Park community.

Recognising the value proposition of CleanTech One, President and Group Chief Executive Officer of energy solutions company Diamond Energy Mr Dallan Kay said: "JTC's openness to experimental research work and their willingness to consider the adoption and deployment of new technologies was one of the main reasons that attracted Diamond Energy to relocate its Demand Response Operations Centre to CleanTech One. Here, SMEs have the opportunity to partner world class research institutes to advance their development of cleantech solutions." ■



CleanTech One. Photo: © JTC

MAD Architects completes the China Wood Sculpture Museum in Harbin



Photo: © MAD architects

Beijing, China – MAD Architects announced that it has completed the China Wood Sculpture Museum in Harbin, China.

Appearing so evident amidst a thriving metropolitan district of Harbin, China, spanning 200 metres in length, the China Wood Sculpture Museum sits as a locational anomaly, seemingly out of place, surrounded by a densely populated Chinese-style neighbourhood and residential complexes. The museum embodies some of the foremost conceptual and formal ideals that define the work of MAD, bringing out an expression and abstraction of nature to an otherwise quotidian surrounding. The boundaries between solid and liquid are blurred throughout this 13,000 square metres building, referencing the local natural scenery and landscape.

The building's exterior is covered by polished steel plates, mirroring the surroundings and the changing light. The solid walls ensure minimal heat loss while the breaking and twisting motion of the emerging skylights splits the surface and allows in light from the low-hanging sun of northern China; this provides sufficient natural diffused illumination to the three halls on the interior.

The museum mainly houses local wood sculptures as well as paintings depicting the ice and snow of the regional scenery. In the context of the large-scale modern urban setting, the museum itself serves as a new interpretation of nature. The surreal interaction between the museum and the city breaks through the tedium of the urban shell, revitalising the surroundings with a new cultural feature. ■

Top global mega trends propel green development in Asia's buildings sector

Hong Kong, China – Global mega trends such as urbanisation and economic and technological development are changing the demographics and financial outlook in Asia which have given a thrust to economic activities in the region, inevitably leading to a boom in the demand for residential and non-residential building spaces. New analysis from Frost & Sullivan (<http://www.buildingtechnologies.frost.com>), Asia-Pacific Buildings Sector: Macro to Micro Implications of Mega Trends to 2025, finds that the Asia-Pacific market for building construction is expected to reach US\$2.73 billion by 2025, growing at an average annual growth rate (AAGR) of almost 7 percent from 2011.

The buildings sector is known as one of the biggest consumers of energy and emitters of carbon dioxide. To reduce energy intensity and carbon emissions, Green Buildings are likely to be one of the main solutions, which will eventually generate opportunities for prefabrication/modularization, light emitting diodes (LEDs), building management and services and etc. With an expected annual growth of nearly 30 percent from 2012, the size of the green buildings market is likely to reach US\$1.20 trillion in 2025 and 35-45 percent of green buildings revenues are likely to come from green retrofit of non-green buildings, and the rest from new green buildings.

The building construction community is anticipated to prepare for the boom of green buildings developments. Architects, engineers, interior designers, developers, facility managers, contractors and governments are eager to learn and source the latest products and technology available in the market. As a one-stop platform gathering the whole building construction community together under one roof, Build4Asia 2014 is one of the best places for suppliers and manufacturers to promote their business and products, meet face-to-face with their targeted buyers and the fulfill the upcoming market demands. Organised by the Hong Kong Exhibition Services Limited, 500 international companies will be participating at the Hong Kong Convention and Exhibition Centre from 7-9 May 2014.



Held biannually, this industry renowned 4-in-1 Sustainable Architecture, Design, Building Services and Electrical Engineering Tradeshow comprise 4 sub shows namely Asian Elenex, Asian Building Technology, Asian Architectural Interiors and Asian Hospitality Design and Technology is focused on Energy Efficiency this to embrace all you need from planning, building, managing to renovating a building. 15,000 professionals from the industry from around Hong Kong, Macau, Southern China and Southeast Asia will be attending the show as well as gaining insight through various onsite conferences, forums and networking functions.

For more information, visit www.build4asia.com. ■



International Skyrise Greenery Conference returns in November 2013

Renowned international thought leaders and local experts to present topics on the theme of Density & Greenery.

Singapore – Following a successful first edition in 2010, the International Skyrise Greenery Conference (ISGC) will return from 7 to 9 November 2013 at Singapore EXPO Convention and Exhibition Centre.

With the theme of “Density & Greenery”, ISGC 2013 will feature renowned international thought leaders and local experts, including USA’s Kathryn Gustafson, Italy’s Stefano Boeri, Germany’s Dr –Ing Manfred Koehler, Switzerland’s Nathalie Baumann, as well as

Singapore’s Dr Liu Thai Ker and Wong Mun Summ. The ISGC 2013 will be held alongside the inaugural GreenUrbanScape Asia, an international trade exhibition for landscape, leisure, greenery design, construction, and technology.

ISGC 2013 is jointly organised by the National Parks Board (NParks), Centre for Urban Greenery and Ecology (CUGE), Landscape Industry Association (Singapore) (LIAS), Singapore Institute of Landscape Architects (SILA), and Singex Exhibition Ventures Pte Ltd, with International Green Roof Association, Green Roof Australia, International Federation of Landscape Architects and Urban Development Authority (Singapore) as Supporting Organisations. This partnership aims to create a collaborative, multi-disciplinary knowledge-sharing platform for all skyrise greenery stakeholders. Taking place in a city that has gone through five decades of greening, the Conference will be a rewarding time for delegates, as they will gain insight on some of the world’s best skyrise greenery practices and projects right here in Singapore.

ISGC 2013 will include four keynote presentations, three plenary sessions, multiple concurrent conference sessions, and a technical tour component. The speakers will present topics such as:

- Urban greenery planning and policies
- Research and development in skyrise greenery
- Ecological approach to greening cities
- Greenwall and greenroof installations and techniques
- Highlights of international skyrise greenery projects



Damian Tang

Mr Damian Tang, Chairman of ISGC Committee and President of SILA, said, “Skyrise greenery is becoming ever more urgent and demanding, given the need to mitigate against the effects of climate change. Design aspirations, space constraints and development densities present excellent opportunities for multi-disciplinary collaboration and open knowledge sharing. Singapore, as Asia’s skyrise greenery hub, is a model for other metropolises around the world. By gathering various stakeholders in Singapore, and delivering a programme with a wide range of topics, we believe that ISGC 2013 will set the pace for the holistic exchange of ideas in urban greenery innovations, and fulfill its potential of transforming our cityscapes and people’s lives.”

Technical tours to provide insight on Singapore’s greening successes

Over the past 50 years, Singapore has successfully evolved into a metropolis renowned for environmental sustainability and urban greenery. Delegates will have the opportunity to participate in technical tours for on-site exposure to industry-acclaimed projects in Singapore. The tours will include guided visits to sites such as PARKROYAL on Pickering, 158 Cecil Street, KhooTeckPuat Hospital, ITE College Central, 6 Battery Road, Nanyang Polytechnic and Punggol New Town, where green roofs, green walls, and other forms of horticulture have been fitted seamlessly into the built environment.

Skyrise Greenery Awards 2013 & GreenUrbanScape Asia

On 7 Nov 2013, the Skyrise Greenery Awards will be presented at ISGC 2013. Since 2008, the Skyrise Greenery Awards has honoured outstanding projects that demonstrate creativity in integrating green elements into buildings. This year, the participants will stand a chance to receive attractive cash prizes of up to \$8,000.

ISGC 2013 will be held alongside the inaugural GreenUrbanScape Asia, where 150 international exhibitors will be showcasing their latest landscape products and urban greenery innovations to some 4,000 trade visitors from across Asia. Taking place from 7 to 9 November at Singapore EXPO Convention & Exhibition Centre, GreenUrbanScape Asia is supported by various respected associations and organisations in the region and around the world. ISGC 2013 and GreenUrbanScape Asia are key events organised in commemoration of 50 Years of Greening Singapore, a year-long showcase of community efforts to keep Singapore green and vibrant.

For more information, visit www.greenurbanscapeasia.com. ■

Lumiglass Industries LLC successfully achieves CE Mark – a top European Glass Certification

Dubai, UAE – Lumiglass Industries LLC, a component of Glass LLC, leading processors of laminated safety glass in the Middle East and a subsidiary of Dubai Investments PJSC, announced that it has received the European CE Mark certification – the regulatory approval for competing in the European market.

The CE Mark and label certification, in accordance with EN 14449-2, validates the company's strategic direction and its commitment to the production of Building-Laminated and Safety Glass to the highest manufacturing standards.

CE marking is a mandatory quality and safety conformity mark for products placed on the market in the European Economic Area, consisting of the 27 member states of the EU and European Free Trade Association countries Iceland, Liechtenstein and Norway. With this certification, the company can now carry the CE Mark and label on its laminated and the laminated safety glass products.

Ziad Yazbeck, Senior Vice-President – Sales and Marketing, Glass LLC, said: "The CE Mark certification to Lumiglass is a major milestone in our journey to further expand the business. The certification reinforces our commitment to the highest standards of quality and safety on our laminated glass products, which enables us to market our range throughout the European Economic Area. Since our inception in 2003, Lumiglass has maintained high standards of quality and the CE Mark certification allows us to aggressively expand our global reach."

He added: "With this certification, the business opportunities ahead for Lumiglass in the European market are significant. As a company, we are very competitive in our pricing model and the desired quality CE certification gives us added advantage in the international markets."

The CE Mark certification requires manufacturers to employ continuous conformity assessment and technical documentation at every step – initial type testing, factory



Lumiglass plant. Photo: Courtesy of Dubai Investments PJSC

production control and auditing of the product across all parameters required for regulatory purposes. This is to ensure that the products are manufactured in accordance with the stipulated quality requirements.

Lumiglass Industries was the first company in Dubai to achieve the ASI (Accreditation Services International) and ANSI Z97.1 (American National Standards Institute) accreditations as well as internationally recognized armor glass certification for ballistic protection such as NATO STANAG 4569, NIJ 0108.01 and EN1063. The company has also received the United Kingdom Accreditation Service (UKAS) certification for its improved bullet-resistant product line. DOT certifications for automotive glass safety and British Standard BS 6206 for impact safety in buildings additionally endorse Lumiglass products. ■

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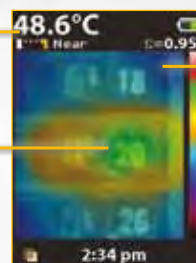
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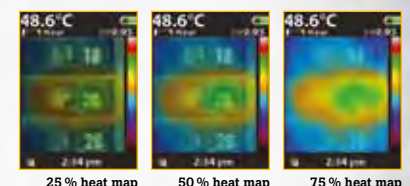
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Asia is tipped to be the world's fastest growing construction market between now and 2020, with Indonesia and in particular Jakarta forecast to have the highest potential in terms of both market growth and profitability

Singapore – Construction spending in Asia is forecast to account for almost one half of total global construction spending by 2020. Recent rapid growth in the region has largely been at the expense of declines in both Western Europe and North America, according to the latest *Asia Construction Outlook* report launched by AECOM and Davis Langdon, an AECOM company.

Published twice a year, *Asia Construction Outlook* is designed to provide a regular review of, and forecast for, the construction markets in Asia.

Asia Construction Outlook 2013 presents the latest update of the construction market in Asia midway through 2013. The report reveals industry activity levels in 2012 and provides near- and longer-term forecasts for construction by region, country and city. The findings are based on analysis of sector statistics combined with the results of market sentiment surveys undertaken by 41 AECOM construction experts across nine countries in Asia.

"Market intelligence of this type is invaluable for proactive organisations looking for new or alternative markets to enter and is something that can be overlooked by construction businesses, which often tend to be reactive" said Dr. David Crosthwaite, author of the paper and associate director of AECOM's business intelligence team.

AECOM's analysis highlights the following key trends:

Asia will be the world's fastest growing construction region between now and 2020.

While Western economies have slowed, Asia has maintained strong growth and has been less impacted by the global economic downturn in recent years. Asia has also become increasingly dependent on domestic demand, through burgeoning affluence and urbanisation, for its continued growth. Asia is the largest regional construction market worldwide, accounting for some 40 percent of global construction spending in 2012. Indeed, construction spending in Asia is forecast to account for almost one half of global construction spending by 2020.

Growth in India depends on its ability to attract private finance.

Given its population size comparable to that of China, India

offers a significant level of opportunity, however, its construction sector is only about one-third the size of the China market. With public investment levels likely to be constrained, India's growth will greatly depend on its ability to attract private finance.

Indonesia is identified as a strong potential growth market after China.

China accounts for some 41 percent of the Asia-Pacific region's total construction spending, with expenditures of US\$1.25 trillion last year. In addition, Indonesia emerges as a particularly interesting market. Construction spending in the world's fourth most populous country accounted for more than a quarter of the nation's GDP in 2012, with around half of this expenditure funding infrastructure projects. Meanwhile, the AECOM's survey also found that Jakarta, the capital of Indonesia, is viewed as the number one city in the region for potential market growth and profitability.

New spending and funding trend in the construction sector identified.

Construction activities will shift away from non-residential structures and, instead, move towards infrastructure and then, in the longer term, to residential projects. Funding models are also evolving in Asia, with growing use of private finance, including public-private partnerships (PPP).

Japan's construction spending is unlikely to sustain.

Japan is also identified as a key growth market through to the end of the decade. Japan is expected to see sizeable growth in construction spending through to 2018 as the earthquake/tsunami reconstruction effort gathers pace. However, the reconstruction is only expected to provide a short-term spike in construction activity which is likely to return to trend later in the decade.

"Coupled with our 40 years of experience in the market, I believe this paper will provide an insightful perspective for the industry to understand the construction trends and activities in the region," added Dato' Sri Kandan, Chairman, Davis Langdon KPK. "Long-term planning and managed implementation are the keys to the sustainability of the construction industry, particularly in Asia." ■

313@somerset becomes the first retail mall to be recertified under the Singapore BCA Green Mark Platinum Award under the Existing Building v3 criteria

Singapore – Lend Lease is pleased to announce that 313@somerset, a mall managed by Lend Lease, has received the BCA (Building & Construction Authority) Green Mark Platinum Award for the second time, through re-certification under the stricter Existing Non-Residential Building v3 criteria. This is the highest recognition in the BCA's benchmarking scheme, which incorporates best practices in environmental design and performance.

Mr Thirukumaran Jallendran, Head of Sustainability, Asia said: "At Lend Lease, we strive to make a difference in the building industry by focusing on innovative technology and initiatives that ultimately produce a greener built environment. This award is a strong affirmation of Lend Lease's continued commitment to sustainability and 313@somerset is proud to be recognised as the first shopping mall to win this award under the Existing Non-Residential Building version 3 criteria."

Under the scheme, certified Green Mark buildings are required to be reassessed every three years. Key innovations towards

sustainability have propelled 313@somerset's success. Amongst the sustainability initiatives maintained and introduced, the introduction of Performance Contracting on 313@somerset's ACMV (Air Conditioning and Mechanical Ventilation) systems with an energy consultant was key and strategic to the achievement of the high efficiency levels for the ACMV systems.

Instead of a conventional ACMV maintenance contract, target efficiency levels for the systems were set and pre-agreed such that when the contracted targets are met and energy consumption is reduced, monetary energy savings will be co-shared with the energy consultant. This mutually beneficial approach proved to be extremely effective as it ensures that the energy consultant proactively reviews, monitors and manages the efficiency levels of the ACMV systems. This is innovative as it differs from the conventional contractors who sign typical servicing contracts.

313@somerset is also the first to implement Green Lease in Singapore. It is a tool used by Lend Lease to encourage tenants to embrace Lend Lease's sustainability objectives and incorporate such elements into their store. ■



313@somerset. Photo: © Lend Lease

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Herzog & de Meuron win international design competition in Melbourne, Australia

Melbourne, Australia – The Government of the Australian State of Victoria has announced HASSEL + Herzog & de Meuron as the winner of the international two stage Flinders Street Station Competition in the city of Melbourne. Based on the recommendation of an international selection jury, the team was selected ahead of six other short-listed architecture firms. Flinders Street Station with its historic main entrance building - an important Victorian landmark - is the hub of Melbourne's fixed rail network.

Besides the revitalisation of the existing heritage building, the proposal of HASSEL + Herzog & de Meuron features a new vaulted iconic roof structure including new concourses and extended platforms. It transforms the site in a new civic precinct with a museum for Oceanic and Contemporary Art, a public plaza with amphitheater and a marketplace. Flinders Street Station is Herzog & de Meuron's first development for a train station.

"We are excited that our first project in Australia will be a truly public building with such a rich history and inspiring context," said Jacques Herzog. "Our proposal for the Flinders Street Station underscores the civic nature of a train station by complementing it with cultural and public functions rather than purely commercial activities," said Ascan Mergenthaler.

"The articulated filigree vaulted roof-scape is a respectful yet dynamic interpretation and contextual response to the history, function and location of this very special place in the heart of Melbourne," said Mergenthaler.

"Over the years, Flinders Street Station has been compromised by successive changes. Today it is a place that people generally choose to hurry through. Our design makes it a destination, with new buildings and features that will attract people to the precinct," said Mark Loughnan, from HASSELL. ■



Photo: © 2013, Herzog & de Meuron Basel

Architects One Space designs Luxury Hair Salon BRUNEBLONDE at the Grand Hyatt Hotel Hong Kong

Hong Kong – Architects One Space has brought Parisian luxury to the Grand Hyatt Hotel Hong Kong, with the opening of independent hair salon BRUNEBLONDE. Founded by celebrated hairstylists Roland Boutinand David Gouygou, BRUNEBLONDE provides the finest luxury salon experience, to which their discerning clientele is accustomed.

The salon is yet another credit to One Space's impressive list of luxury commercial, retail and residential projects created for its sophisticated clients – from high-net-worth client spaces for the most prestigious private banks, to exquisitely tailored executive suites and sumptuous residences. The architects worked closely alongside Boutin and Gouygou, who achieved international recognition for their innovative and distinctive approach to hair styling, to create a world-class salon that provides the very best for their fashion-conscious clients from around the world.

Explaining BRUNEBLONDE's design, One Space's architect co-founder Greg Pearce said, "The salon required an intimate interior of world-class ambitions, for which we created a sumptuous Parisian 'appartement' setting – a modern reinterpretation of that city's 1940's-era grand salon interiors. The space exudes a sophisticated yet comfortable apartment look-and-feel, whilst sustaining the sometimes demanding conditions that any hair and beauty establishment entails." The overall appearance of the "living-room-cum-hair-salon" was accentuated by the judicious insertions of the owners' private collection of furniture, *objets d'art* and artworks.

The Grand Hyatt's lobby is enlivened by the salon's



Women's styling area. Photo: © One Space

presence, visible from several vantage points. But the main event lies through the transparent frontage: Crafted timber wall paneling in anthracite and white loosely defines the Reception area's boundaries and is integrated with deep-set and internally lit voids, for the display of the salon's own custom-formulated hair and skin products. The lighting of the salon has been carefully designed to achieve perfect colour rendition and shadowless illumination, essential for the precision of the stylists' craft, whilst generating a relaxing and restorative customer experience.

BRUNEBLONDE features two distinct areas, a women's styling area and men's styling area, the former being characterised



Men's styling area. Photo: © One Space

by its simple, elegant ambience, with white leather styling chairs on natural grey limestone floors. An 8m long wall of hand-crafted, highly-polished copper, sculpted in three dimensions to emphasise its mass, mediates between the hectic pressures of the outside world and the soothing tranquillity of the salon's inner sanctuary. Along the opposite wall, a flowing, line-drawing-style mural created by Italian artists Vittorio Locatelli and Carlo Ninchi is mysteriously reflected in the nearby copper surfaces.

The men's styling area is arranged to recall the glory of the classic barber shop, modernised to suggest a more



Customer journey copper feature wall. Photo: © One Space

sophisticated take on the traditional haircut experience. This room is a deliberate departure from the women's area, invoking elements of masculinity in robustly detailed timber paneling, charcoal leatherwalls, chrome detailing and oak floors.

Boutin and Gouygou, the salon's founders said, "Our clients are people who are accustomed to the finest and most discerning lifestyle, and we want them to feel just as at-home at BRUNEBLONDE as they would be if they were out with their friends, at their favourite restaurant, on their yacht or even at home. This is what we insist on at BRUNEBLONDE and this is what our team continues to strive towards." ■

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HDB presents 18 awards to industry partners

Singapore – A total of 18 awards were presented by HDB this year to consultants and contractors for their efforts in designing and constructing quality HDB projects. Acting Minister for Manpower Mr Tan Chuan-Jin handed out the awards to the winners during the HDB Awards gala dinner on 3 September 2013.

The HDB Awards is meant to recognise HDB's industry partners for their effort and support in providing quality public housing for Singaporeans. There are two types of HDB Awards – the **Design Award** and the **Construction Award**.

The Casa Clementi project swept top honours in this year's HDB Awards. Besides picking up the Design Award, the project was also accorded the Distinguished Construction Award – the pinnacle of the HDB Awards. The housing project

is one of the largest public housing projects developed by HDB with 10 high-rise residential blocks consisting of 2,234 dwelling units. Despite the scale of this project, it was completed on time and judges were impressed with its excellent design and quality.

HDB's Chief Executive Officer, Dr Cheong Koon Hean said: "Guided by the HDB Roadmap of creating well designed, sustainable and community-centric towns, HDB's priority is in designing and building new public housing flats that are of good quality. However, we cannot do this alone. The road to provide a better living environment for Singaporeans involves the support and collaboration of our industry partners. As can be seen from the many award winners this year, our industry partners have given HDB strong support to deliver quality housing."

HDB Design Award Winners

The HDB Design Award recognises consultants and architects who have produced outstanding design of public housing projects that meet the comprehensive design guidelines set out by HDB.

Among the Design Awards winners this year, the recently completed Casa Clementi and Punggol Breeze received the top accolades. The projects add to the distinctive identity and character of both towns.

The upcoming Build-to-Order (BTO) project, Waterway Cascadia also secured the Innovative Design Award. When completed, the residential development with its unique design, will offer residents a panoramic view of the Punggol Waterway.

HDB Construction Award Winners

The Construction Award recognises contractors who deliver quality housing projects through innovative solutions while upholding high construction standards. Punggol Sails stood out in this regard, achieving a CONQUAS score of 93.7 – the highest ever for a public housing project. This is comparable to the scores achieved by many private sector condominiums.

This year, a new criterion has also been added to the evaluation, to recognise contractors that are not only competent in their craft but who also take the effort to engage residents and stakeholders. For instance, the builders of Casa Clementi actively engaged and maintained close communication with the residents and the school in the vicinity of their project, and worked to minimise construction disamenities. ■



Acting Minister for Manpower Mr Tan Chuan-Jin with the HDB Award Winners. Photo: © HDB



Acting Minister for Manpower Mr Tan Chuan-Jin delivering his speech at the HDB Awards Ceremony. Photo: © HDB



Acting Minister for Manpower Mr Tan Chuan-Jin, with (from left to right) HDB CEO Dr Cheong Koon Hean and HDB Chairman Mr James Koh, presenting the HDB Design Award for Punggol Breeze housing project to Mr Patrick Lee, from Surbana International Consultants Pte Ltd. Photo: © HDB

NParks publishes Commemorative Book - *Living in a Garden: The Greening of Singapore*

Singapore – The National Parks Board (NParks) has produced and published a book titled *Living in a Garden: The Greening of Singapore* to commemorate 50 years of greening Singapore. The book depicts Singapore's development into a City in a Garden over five decades.

The 200-page Commemorative Book is a highly illustrative publication, with over 250 vivid pictures contributed by more than 80 people, including volunteers, researchers, NParks staff, as well as winners from photography competitions. More than 40 people were interviewed by author Timothy Auger to obtain multiple perspectives of Singapore's greening journey.

Through various historical and contemporary photographs, the Commemorative Book contains insights of how Singapore became a lush and green city despite rapid urbanisation.

Living in a Garden: The Greening of Singapore was launched by President Tony Tan Keng Yam on 13 July 2013. It is available at \$29.90 from major bookstores as well as the Garden Shop and Library Shop at the Singapore Botanic Gardens. Its electronic version is also available at www.booktique.com for S\$12.90.

Commemorating 50 years of greening Singapore

On 16 June 1963, then Prime Minister Lee Kuan Yew planted a Mempat tree at Farrer Circus, signifying the start of Singapore's greening campaign. Through the dedication and commitment of Singapore's pioneers, the city is now filled with majestic trees, colourful flowers and vibrant parks. Singapore has also moved on to its next phase of greening - to become a City in a Garden.

Together with support from sponsors, partners and tenants, NParks has planned various activities for the community to be a part of Singapore's City in a Garden vision. Some of the key events include roving installations of nostalgic play sets, distribution of seed-planting kits to all Primary 3 students and the planting of 1,963 trees as part of the Garden City Fund's Plant-A-Tree programme. For more information on these key events, visit www.nparks.gov.sg/50years.

Synopsis of the Book

In Singapore, biodiversity is all around us. Parks, gardens and nature reserves contribute hugely to Singaporeans' quality of life. The greenery supports a level of natural biodiversity that is astonishing for such a land-scarce city-state. Greenery softens the urban environment, but it does more than that. It provides places where people can exercise or relax. It brings us close to nature, deepening our understanding of the world we live in.

For half a century, people from all walks of life have made it their mission to create and sustain the green spaces that make Singapore an attractive place to live in, despite the pressures of modern development.

Creative design, technical know-how, dedicated maintenance and public support have turned the island into an integrated green space, the various parts linked together by roadside planting and park connectors. Few other places can match Singapore's claim to be a "City in a Garden".

This book shows how the garden was made and introduces many of the fascinating plants and animals that live there. It shows how everyone can enjoy nature in Singapore, and play a part in sustaining it. ■

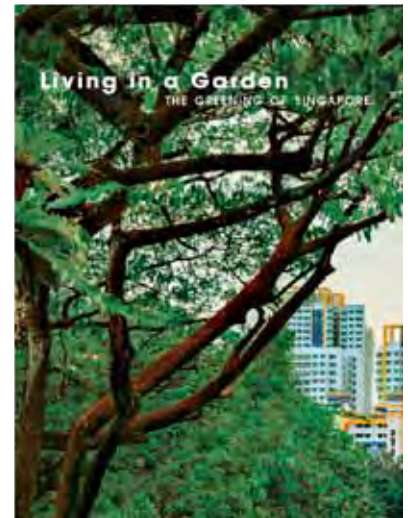


Photo: © National Parks Board

Playpoint (Singapore) Pte Ltd wins the 2013 Prestige Brand Award

Singapore – PLAYPOINT has won the 2013 Prestige Brand Award in the Established Brand Category.

The award is jointly organised by the Association of Small & Medium Enterprises and Lianhe Zaobao to recognise and honour Singapore Brands that have developed and managed their brands effectively through branding initiatives.

Notable projects completed by Playpoint include Gardens by the Bay, Singapore Zoo, Pinnacle@Duxton, Reflections at Keppel Bay, Interlace and D'leedon.

"Being the Winner make us more committed in the PLAYPOINT brand and differentiating ourselves from the competition," said Jason Sim, Managing Director, Playpoint (Singapore). This the first time that Playpoint has won this award. ■



Playpoint (Singapore) Pte Ltd receiving the 2013 Prestige Brand Award.
Photo: © ASME

CapitaLand retains global leadership in sustainability with listing in the Dow Jones Sustainability World Index for the second consecutive year

Singapore – CapitaLand Limited (CapitaLand) has been listed in the Dow Jones Sustainability World Index (DJSI World) 2013/2014 and the Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific) 2013/2014. This is the second consecutive year that the Group has been listed in the DJSI World. CapitaLand was also the first Singapore real estate company to be listed in the DJSI Asia Pacific when it was launched in 2009.

The indices were released on 12 September 2013 by S&P Dow Jones Indices, one of the world's largest providers of financial market indices and RobecoSAM, the investment specialist focused exclusively on Sustainability Investing. DJSI World features the best-performing 333 companies out of the 2,500 largest companies based on free-float market capitalisation in the S&P Global Broad Market Index across 45 countries worldwide. DJSI Asia Pacific contains the top 152 out of the 600 largest companies across six countries in Asia Pacific.

DJSI, launched in 1999, is a family of indices evaluating the sustainability performance of the largest 2,500 companies listed on the S&P Global Broad Market Index. It is the longest-running global sustainability benchmark worldwide and has become the key reference point in sustainability investing

for investors and companies.

Under DJSI, companies are reviewed based on RobecoSAM's internationally recognised Corporate Sustainability Assessment methodology. Following a best-in-class approach, companies are selected for the indices based on a comprehensive assessment of their corporate sustainability performance in the economic, environmental and social dimensions. Companies are divided into 59 industries and assessed based on general as well as industry-specific sustainability trends. Only firms that lead their industries based on this assessment are included in the indices.

Mr Lim Ming Yan, President & Group CEO, CapitaLand Limited said: "We are honoured to be listed in the DJSI World and DJSI Asia Pacific again this year. As one of the first real estate companies in Asia to be listed in both indices, we will continue our sustainability drive to stay ahead of global trends for the benefit of our stakeholders."

"Sustainable investing has increasingly gained traction globally in recent years. This is reinforced by the positive relationship between sustainability and financial performance. Even before sustainability became recognised as an important aspect of business strategy by businesses, CapitaLand had already

embarked on the journey. We have been actively engaging our stakeholders to understand their needs and encourage them to join us in our sustainability drive. An integral part of our business, a focus on sustainability is ingrained in every decision made in various stages of our real estate value chain - from designing and conceptualising a project, building, to operating it in a responsible and ethical manner."

Recently, CapitaLand was named both the Regional Sector Leader for Asia and the Global Sector Leader in the 'Diversified' property category by the Global Real Estate Sustainability Benchmark (GRESB). Among 74 real estate companies and funds surveyed in Asia, CapitaLand was the only organisation to be named a Global Sector Leader.

Sector leaders are recognised for their outstanding performance among regional peers and their best practices in sustainability performance illustrate the way forward for the real estate industry. The results were part of the GRESB's 2013 Report based on sustainability data gathered from 543 real estate companies and funds, providing aggregate information on 49,000 properties in 46 countries across the globe. Together, the 543 real estate companies and funds surveyed represent US\$1.6 trillion in gross asset value. ■

Phoenix Solar to build Singapore's largest PV system

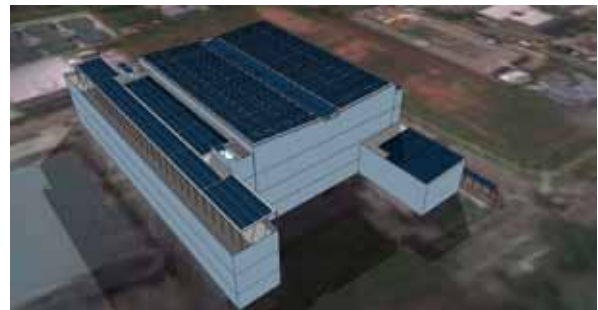
Singapore – Phoenix Solar Pte Ltd will design and construct a photovoltaic (PV) system with a rated capacity of at least 1.2MWp for C M M Marketing Management Pte Ltd (CMM), a wholly owned subsidiary of mainboard-listed holding company, Sheng Siong Group Ltd.

CMM selected Phoenix Solar to build the PV system on its corporate headquarters and centralised distribution centre located at 6 Mandai Link ("CMM Facility"). The PV system will occupy an area of approximately 11,000 square metres (or about 118,400 square feet), exploiting its available roof area to the fullest extent. Upon completion within the year, this will be the largest PV system in Singapore, said Phoenix Solar. The PV system is expected to start producing green energy by the end of 2013, and supply at least 15 percent of CMM Facility's electricity consumption. It will also mitigate at least 730 metric tonnes per year of CO₂ from Singapore's gas-fired power stations.

"The commercial and environmental returns of this project make it a viable business decision, which will continue to yield benefits for a long time," affirmed Lim Hock Chee, CEO of Sheng Siong.

This project illustrates a new trend in Singapore, where demand for bigger PV systems is growing. Massive increases in global PV module production capacity have driven costs so low in the last two years that an industrial rooftop PV system in Singapore now pays for itself in 7-10 years, resulting in an unlevered project IRR of 8 to 13 percent.

"Thanks to the attractive returns on investment, we expect the installed PV capacity of Singapore to more than double in 2013, reaching at least 20MW by December," said Christophe Inglin, Managing Director of Phoenix Solar. "If this growth rate continues, then within a decade, PV will become a mainstream source of electricity in Singapore," he added. ■



C M M-PV-System. Photo: © Phoenix Solar Pte Ltd

Starwood to open first Element hotel in Asia Pacific

Suzhou, China – Starwood Hotels & Resorts Worldwide, Inc. signed an agreement with Suzhou Science and Technology Town Kexin Cultural Tourism Development Co., Ltd. to open a new-build Element® hotel in Suzhou Science and Technology Town (SSTT), an eco-city adjacent to the commercial and administrative centre of the city's high tech industrial development zone.

Slated for completion in mid-2015, the hotel, Element Suzhou Science and Technology Town (Element Suzhou), marks the Element brand's entry to Asia Pacific, as well as the presence of all of Starwood's nine differentiated lifestyle brands in the region.

Launched in 2008, the Element brand has made history as the only major global hotel brand to mandate that all of its properties pursue LEED (Leadership in Energy and Environmental Design) certification for high-performance buildings. More than just a "green" hotel brand, however, Element hotels are designed to provide the balance that business and leisure travelers need to thrive on the road.

Located at the intersection of Jialingjiang and Wuyishan Roads, Element Suzhou will be situated in SSTT, an eco-city adjacent to the commercial and administrative centre of the High-Tech District. Since 2003, over 150 state-level research institutes, R&D organizations, tech-based innovative companies, training organisations, and outsourcing and design companies have settled in SSTT.

With seamless access to the Sunan Shuofang International Airport, high speed rail network and modern expressways, Element Suzhou will be conveniently connected to all parts of the city, including the famed Taihu Lake and downtown Suzhou. Also, as Suzhou is adjacent to the Shanghai Municipality, it can be reached via Hongqiao and Pudong Airports.

In keeping with the tenets of the Element brand, Element



Photo: © Element Suzhou Science and Technology Town

Suzhou's 190 stylish and sustainable guestrooms will feature the signature Heavenly® Bed, a fluid design of modular furniture, swiveling flat-screen televisions, large desks, and custom-designed closets. Bathrooms will be spa-inspired, with an invigorating rain shower and dual-flush toilet.

In addition, the hotel will offer approximately 10,764 square feet of versatile meeting space, a well-equipped business centre, a 24-hour fitness centre, and an indoor heated swimming pool. Other brand signatures will include Element's healthy breakfast and relaxing evening reception with hot and cold appetizers as well as beer, wine, and soft drinks. All day dining will be available with three to four private dining rooms, and a grab-and-go pantry for quick healthy meals.

"As we establish Element as the region's most eco- and guest-friendly extended-stay hospitality brand, we will continue to look for development partners who are as committed as Suzhou Science and Technology Town Kexin Cultural Tourism Development to environmental initiatives and sustainable practices," said Mr. Zhang. ■

TÜV SÜD PSB partners with Singapore Green Building Council to certify green building products

Singapore – TÜV SÜD PSB, a leading international service organisation catering to the strategic business segments of industry, mobility and certification, has signed a five-year landmark agreement with Singapore Green Building Council (SGBC) to establish a partnership for the certification of green building products under the Singapore Green Building Product labelling scheme.

TÜV SÜD PSB will be the assessment body providing all assessment services and issuance of certificates under the Singapore Green Building Product labelling scheme. In addition, TÜV SÜD PSB will maintain valid ISO/IEC Guide 65 accreditation by the Singapore Accreditation Council (SAC) for its assessment and certification services.

By attaining successful certification under the scheme, manufacturers and suppliers will be able to market their

products to the green building industry and consumers. This partnership allows TÜV SÜD PSB to continually provide our customers and the building industry with value-added services as well as enhance our commitment towards sustainability," said Mr Richard Hong, Chief Executive Officer, TÜV SÜD PSB. ■



From left to right: Mr Chia Ngiang Hong (SVP, SGBC), Mr Ng Eng Kiong (President, SGBC), Guest-of-Honour Dr Vivian Balakrishnan, Minister for Environment & Water Resources, Mr Richard Hong (CEO of TÜV SÜD PSB) and Mr Chong Kam Tuck (CFO, TÜV SÜD PSB).

Ecobuild makes impressive debut in Southeast Asia

Kuala Lumpur, Malaysia - Ecobuild Southeast Asia 2013 opened its doors at Putra World Trade Centre (PWTC), Malaysia from 17-19 September 2013. The event proved to be an important addition to the international series on Sustainable Design, Construction and Built Environment within the region. The inaugural event attracted over 5,500 attendees from some 43 countries.

Ecobuild Southeast Asia was strategically designed to incorporate Green Build Asia, Eco Light Asia and Solar Asia, and the opening ceremony was presided over by Y.B. Datuk Haji Fadillah bin Haji Yusof, the Minister of Works, Malaysia.

"I believe that Ecobuild Southeast Asia along with Green Build Asia provides a perfect platform for regional industry players and policy-makers to source for the latest information on sustainable products and green design in the construction and building industry," said the Minister.

The event will now be held annually in Malaysia with the goal of advancing environmental awareness and business success while providing a platform for exhibitors to develop working relationships with key decision makers. The 2014 event will again be held at the Putra World Trade Centre (PWTC) Kuala Lumpur from 17-19 September 2014.

"We came here looking for architects, designers and engineers to consider our products in their projects and form new relationships. Ecobuild Southeast Asia has allowed us to meet those expectations," said Ms. Pam Lawless, Exhibit Manager, Big Ass Fan (USA).

"We are happy to participate in this event as it is directly focused on building materials and has provided the opportunity for us to establish quality contacts – much more so than with other exhibitions," said Alan Lim, Assistant Marketing Manager, Monier Malaysia.

Ecobuild Southeast Asia 2013 played host to renowned sustainability experts from around the world in a three-day Conference and Seminar Programme that ran in conjunction with the exhibition. The Seminars were followed by highly informative debate sessions that featured BRE, Foster & Partners, Autodesk, AECOM, Carbon Trust, Faithful & Gould and many other experts who shared their knowledge and experience with attendees. There were over 20 Technology Symposiums and more than 20 high-powered Debate Sessions conducted throughout the exhibition.

For more information on next year's show, tel (+60) 3 2176 8788, e-mail ecobuild-sea@ubm.com or visit www.ecobuildsea.com. ■

NParks launches new certification scheme for projects with outstanding greenery

Singapore – The National Parks Board (NParks) has launched a new certification scheme to recognise development projects with outstanding greenery. Called the Landscape Excellence Assessment Framework (LEAF), the scheme is the first and only one in Singapore solely dedicated to the provision and management of greenery. With LEAF, NParks aims to encourage more greenery in Singapore's urban landscape. Nine developments were certified LEAF at the launch ceremony held in HortPark on 19 August 2013.

At the launch ceremony, Mr Khaw Boon Wan, Minister for National Development and Guest-of-Honour presented LEAF certificates to nine diverse developments including four condominiums, two HDB estates, a hospital, a hotel and an office building. They are:

New developments

- Corals at Keppel Bay (Condominium)
- Senja Parc View (HDB estate)
- The Interlace (Condominium)
- The Rainforest (Executive Condominium)

Existing developments

- 158 Cecil Street (Office building)
- Khoo Teck Puat Hospital
- Newton Suites (Condominium)
- Pangshan Grove (HDB estate)
- Siloso Beach Resort (Hotel)

Speaking at the event, Mr Poon Hong Yuen, CEO of NParks said: "Over the years, Singapore has developed a proven track record in greening our urban landscape amid economic growth. This sense of pervasive greenery is evident on our roads, in parks and park connectors, and also on buildings. This is achieved not only through government effort, but also the hard work and creativity of like-minded members of the community, including developers. Through LEAF, we are able to recognise developers and property owners who have creatively weaved greenery and nature into their developments."

Mr Tan Swee Yiow, President (Singapore), Keppel Land Ltd, said: "The LEAF certification for Corals reaffirms our commitment to develop properties that support healthy eco-systems as well as sustain natural resources. This is increasingly relevant as environmental issues dominate global agendas and homebuyers become eco-conscious."



Minister presenting plaques and certificates to the developments. Photo: © National Parks Board

Dr Cheong Koon Hean, CEO of HDB, said: "Good landscape and lush greenery are absolutely critical even as we build in a high rise and high density environment. Through our work with nature, I want to create a green and restful sanctuary and home for our residents."

LEAF is applicable to new and existing development projects. They are assessed under two key areas: greenery provision and landscape management. Bonus points are given for additional effort to promote public appreciation of greenery. The certification is valid for three years; after which, a reassessment can be done to ensure that developments continue to maintain and manage their green areas. Developers and maintenance agents of new and existing developments can apply to be certified under LEAF via e-mail at nparks_leaf@nparks.gov.sg.

For more information on LEAF, visit www.nparks.gov.sg/leaf. ■



Minister touring the exhibition panels showcasing the developments' greening efforts. Photo: © National Parks Board

FloorScore® Indoor Air Quality Certification in China grows rapidly for resilient flooring products

SCS Global Services announces five new certifications.

Emeryville, California, USA – Five of China's leading manufacturers of resilient flooring – ChinaFloors Timber (China) Co. Ltd. (ChinaFloors), Taizhou Huali Plastic Co. Ltd. (Taizhou Huali), Zhangjiangang Elegant Plastics Co. Ltd (Eletile), DeZign® North America LLC, and Lamett recently received FloorScore® Indoor Air Quality certification from SCS Global Services for their luxury vinyl tile (LVT) products. By meeting the strict criteria for VOC emissions dictated by the FloorScore® certification standard, these products demonstrate compliance with the VOC emissions criteria of LEED, CHPS, Green Guide for Health Care, and a long list of international green building rating systems.

According to the Resilient Floor Coverings Institute, manufacturers now use advanced manufacturing processes to comply with the FloorScore criteria. LVT is increasingly specified for green building projects due to its unique aesthetics, durability and safety. LVT has become more attractive to specifiers, as it comes in countless textures, colours and styles. Combined with low-emitting attributes and a lower price tag than hard wood surfaces, LVT is in high demand.

"We are glad to see a growing number of Chinese manufacturers stepping up to meet FloorScore's indoor air quality requirements," said Stowe Beam, Managing Director of SCS Environmental Certification Services division.

SCS Global Services (SCS) has been providing global leadership in third-

party environmental and sustainability certification, auditing, testing, and standards development for three decades. SCS programmes span a wide cross-section of industries, recognising achievements in green building, product manufacturing, food and agriculture, forestry, retail, and more.

FloorScore®, developed by the Resilient Floor Covering Institute (RFCI) in conjunction with SCS Global Services (SCS), tests and certifies hard surface flooring and flooring adhesive products for compliance with rigorous indoor air quality emissions requirements. Flooring and adhesives that earn the FloorScore certification gain a legitimately enhanced market position.

ChinaFloors – Established in 2004, ChinaFloors produces solid and engineered wood as well as laminate and vinyl flooring. A consistent focus on sustainability, innovation and ease-of-installation has allowed the company to grow into a worldwide pioneer in the development and manufacturing of value added products. ChinaFloors' products are currently exported to over 70 countries with offices in the US, UK, Belgium, Russia and China.

Taizhou Huali – Serving customers and businesses around the world, Taizhou Huali was established in 2002 and globally exports vinyl flooring products including vinyl tile and planks. Taizhou Huali also

holds an ISO 14001: 2004 certificate for its environmental management system.

Eletile - A leading manufacturer of vinyl floor tiles in China, Eletile was founded in 1992 and has been serving customers worldwide for over 20 years. In addition to holding an ISO 14001:2004 certificate for its environmental management system, its FloorScore certificate adds to its established reputation as an increasingly environmentally-friendly enterprise.

Lamett is a flooring brand with European roots and worldwide presence with distribution and sales offices in the US, the UK, Belgium, Russia and China. Products include solid and engineered wood as well as laminate and vinyl flooring. With a consistent focus on its core values of sustainability, innovation, and ease-of-installation Lamett has grown into a worldwide pioneer in the development, manufacturing and distribution of value-added products.

DeZign® North America LLC is a premier manufacturer of hard surface floor covering. Its operations are world-wide and in 2011 it expanded into the US and North American markets. Its products include laminate flooring, solid wood flooring, pre-finished engineered wood, and pre-finished luxury vinyl planking (LVT). DeZign® develops stylish, high quality flooring products that are widely accepted in today's market place. ■

JTC opens next generation standard factory – Small Footprint Standard Factories

Singapore – Minister of State for Trade and Industry Mr Teo Ser Luck officially opened JTC's Small Footprint Standard Factories (SFP) located at Buroh Street, Tanjong Kling on 29 July 2013.

The SFP is one of JTC's innovative industrial infrastructure concepts targeted at SMEs to help them enhance competitiveness and increase land productivity. This next-generation standard factory is specially designed to house manufacturing activities that can traditionally be located on a single storey to three storeys. This development allows the factory to occupy a smaller footprint, thereby reducing the land area needed. By taking up less land, the SFP reduces business costs for industrialists and optimises the use of Singapore's industrial land.

The SFP's unique feature is its structural provisions, which provide flexibility for industrialists to install their preferred choice of materials handling systems that best cater to their operational needs. This enables production activities that are traditionally carried out over a single floor to be integrated over multiple floors, without the need for the industrialist to further modify the building structures extensively. This helps the industrialist enjoy faster start up and also reduces their upfront capital costs. In addition, the design layout of the factory unit ensures that the production process is seamless and provides optimal flexibility for industrialists to further expand their business operations.



VIPs on stage for the official opening of the Small Footprint Standard Factories. Photo: © JTC



Perspective of the SFP. Photo: © JTC

Mr Png Cheong Boon, JTC's CEO said, "The SFP is the latest innovative infrastructure piloted by JTC that caters to the needs of a broad segment of SMEs. SMEs could redesign their manufacturing processes so that they can be housed on multi-storeys thereby reducing the land area required for production. This in turn lowered their land and set up costs, and enhanced their competitiveness. We are encouraged to know that SMEs have responded very positively towards this development. JTC will continue to develop such innovative facilities to help enterprises improve productivity and competitiveness, and support the transformation of Singapore's industries."

At the official opening event, JTC announced that eight of the 18 units of the SFP have been taken up within the first year of the project's completion. Three companies have started operations at the SFP, and they are Globaltronic Precision Pte Ltd, Hoshin Kenzi (S) Pte Ltd, and SingYaSin Holdings Pte Ltd. ■

The legendary Waldorf Astoria experience arrives in the UAE

Singapore – Waldorf Astoria Hotels & Resorts, Hilton Worldwide's luxury brand of landmark hotels, has announced the opening of Waldorf Astoria Ras Al Khaimah, the brand's first hotel in the UAE and the 25th addition to the global Waldorf Astoria portfolio of 25 hotels and resorts, globally.

Offering sweeping views of the Arabian Gulf, the highly anticipated 346-room Waldorf Astoria Ras Al Khaimah will delight connoisseurs of luxury with many distinctive features and amenities designed to bring the luxury and sophistication of Waldorf Astoria to the award-winning Emirate of Ras Al Khaimah for the first time.

"Across the globe, Waldorf Astoria Hotels & Resorts are known for timeless elegance, inspirational environments and the extraordinary experiences provided to guests each day," said John T.A. Vanderslice, global brand head of Waldorf Astoria at

Hilton Worldwide. "Waldorf Astoria Ras Al Khaimah will epitomise these values to become a destination of choice for discerning travellers seeking refined style, True Waldorf Service and authentic moments that will stay with them forever."

Exclusively designed to mirror the magnificent classic features of an Arabian palace, Waldorf Astoria Ras Al Khaimah boasts a wealth of experiences and services including beautifully designed & incredibly spacious rooms and suites, a first-class 18-hole championship golf course, a stunning 350-metre private beach and two temperature-controlled outdoor pools.

Dining aficionados can select from an impressive choice of four signature restaurants including speciality dining from US steakhouse, The Lexington Grill, Japanese dining Umi and Emirati-inspired cuisine at Marjan. The hotel also offers six exclusive entertainment and dining venues including Camelia, a traditional

tea lounge; an intimate and exclusive nightclub; Waldorf's famous cigar bar and a choice of outdoor dining courtesies of Azure and Al Fayrouz – all reflecting the authenticity of individual cultures and styles.

For ultimate relaxation and wellbeing, Waldorf Astoria Ras Al Khaimah also offers a Waldorf Astoria Spa, one of the Emirate's largest Spas, featuring an impressive 1650 square metres of tranquil surroundings with 12 luxurious bespoke treatment rooms as well as a VIP room in which an array of treatments incorporating indigenous herbs and rituals will be offered. Waldorf Astoria Ras Al Khaimah is also destined to become a corporate favourite for meetings as well as business and social gatherings. With four state-of-the-art meeting rooms, separate boardroom and a fully equipped business centre, the hotel is also complemented by a range of exclusive and versatile outdoor event venues ideally placed for cocktail parties, soirees and intimate gatherings.

Notably, the hotel also includes two of Waldorf Astoria's famous brand signatures - a grand lobby clock and Peacock Alley, a public area that will become a hub for socialising. Inspired by the legendary Waldorf Astoria hotel in New York, Waldorf Astoria Ras Al Khaimah clock has been exclusively designed to honour



regional Arab culture and will include the five daily prayer times. Peacock Alley, located across ground floor and mezzanine levels, is reflective of the grand social promenade that connected the original Waldorf and Astoria hotels in New York - as a place to see and be seen. ■

Bespoke Products now an Azuma Speciality

New South Wales, Australia – Azuma Design has expanded its client capabilities to include the development of bespoke hardware for the construction industry.

With many construction projects around the Asia Pacific region requiring specific hardware simply not available 'off the shelf', Azuma Design now offers the capability to design, prototype, develop, tool for and manufacture bespoke products to meet those requirements.

Azuma's expertise is based on extensive recent experience developing and manufacturing short-run products for its partner businesses, in the window and door industry.

"Today's complex construction projects often require very specific hardware for particular applications, and often this hardware is simply not available 'off the shelf' and has to be sourced elsewhere," explained Mike Alchin, Azuma's Director of Design.

"Azuma's key skill set is that we bring to the table our problem solving abilities and experience. We have spent many years designing, rapid prototyping and developing hardware for the window and door industry, so it's a simple matter of offering that expertise more broadly," added Alchin.

Azuma Design has invested heavily in CAD CAE and rapid prototyping to enable it to apply unconventional ideas to low volume manufacturing.



Sample of the products tested at the Azuma Design facility.



The tool room at Azuma Design.

Importantly, Azuma can manage the entire product development, from initial design concept through making the prototypes and design development, to making the tooling for manufacture.

Azuma can also do the manufacturing itself, no matter how small the batch required. "Often these projects don't need a large volume of the bespoke hardware components, so we are set up for rapid manufacturing on a small scale of products simply not available from traditional sources," explained Alchin.

Azuma can manufacture in polymer materials or can diecast in zinc and aluminium using permanent mould type, sand cast and investment cast processes. Add to that retinue of expertise Azuma can provide stainless steel fabrication and investment cast manufacturing, as well as installation and on-site testing capability. ■

Fluke CNX Wireless Test Tools win Silver ACHR-The News Dealer Design Award

Everett, Washington, USA – Fluke® CNX™ Wireless Test Tools have won the Silver Award in the testing and monitoring products category of the 2013 Dealer Design Awards sponsored by *The Air Conditioning Heating & Refrigeration News* magazine (ACHR-The News). The award recognises excellence in HVAC/R product design.

This is the fifth award Fluke CNX Wireless Test Tools have won in 2013.

“When we designed the Fluke CNX Wireless Test Tools, HVAC/R professionals told us they needed tools that could quickly and easily troubleshoot systems by measuring and displaying for digital multimeters. “The Dealer Design Awards is validation that the CNX system is delivering the flexibility and efficiency contractors need when troubleshooting HVAC/R systems.”

The 122 entries in the 10th awards were judged by a panel of independent HVAC/R contractors selected by the editorial staff of the magazine. The panel reviewed each entry and judged it on its ease of installation and use, maintenance, application and repair, and competitive difference.

The CNX Wireless System is a set of test tools that wirelessly connects multiple measurement modules and sends simultaneous readings to a CNX main unit up to 20 metres away, allowing users to troubleshoot problems faster than with traditional tools. The rugged, customisable tool set allows users to choose various measurement modules, from voltage to current or temperature, based on their specific troubleshooting scenario. ■



Fluke CNX Wireless System. Photo: © Fluke

OMA masterplans Airport City for HIA Airport in Doha, Qatar

Rotterdam, The Netherlands – After winning an international competition, OMA has been announced as masterplanners for Airport City, a new 10 square kilometres development where 200,000 people will live and work, linking the new Hamad International Airport with the city of Doha, Qatar. OMA's masterplan is a series of four circular districts along a spine parallel to the HIA runways, intended to create a strong visual identity and districts with unique identities. Phase One of the 30-year masterplan, which links airside and landside developments for business, logistics, retail, hotels, and residences, will be mostly complete in time for the 2022 World Cup, hosted by Qatar.

Rem Koolhaas commented: “We are delighted and honoured to participate in the exciting growth of Doha, in a project that is perhaps the first serious effort anywhere in the world to interface between an international airport and the city it serves.”

Partner-in-charge Iyad Alsaka commented: “Doha's Airport City is an important addition to the realisation of OMA's work in urbanism and will incorporate unprecedented transport planning opportunities; we look forward to collaborating with the HIA to meet the objectives of this ambitious project.”

Each district of Airport City will be unique within the masterplan's overall identity. The Business District will centre on a major new transport hub linking with greater Doha; the Aviation Campus will accommodate office headquarters and educational facilities for aviation authorities; the Logistics District will provide cargo and warehousing facilities; and the Residential District, adjacent to the new Doha Bay Marina, will accommodate future employees. A Green Spine connects the districts, echoing their individual identities as it runs north-south. The landscaping scheme,

developed by Michel Desvigne, is a new public space for Doha that will be used by residents and tourists. A network of public spaces, gardens and plazas will stretch across the site, surrounded by a “Desert Park”.

The competition team was led by OMA partners Iyad Alsaka, Reinier de Graaf, Rem Koolhaas and OMA Associate Katrin Betschinger in collaboration with engineering consultants, WSP. The Airport City masterplan and development of its individual elements is being led by Partner-in-charge Iyad Alsaka, Project Director Slavis Poczebutas and Associate Katrin Betschinger. Before the 2022 World Cup, Airport City infrastructure and utilities will be completed along with the Western Taxiway and Aircraft Parking System adjacent to the HIA 2nd runway, the HIA Visa Building, and the visual concept planning of the future transport hub. ■



Photo: © OMA

Richard Meier & Partners break ground on first project in South Korea

New York, USA – Construction has started on the 150-room HH Resort Hotel and Spa designed by Richard Meier & Partners Architects. The new resort complex at Gangneung, South Korea, will be a one-of-a-kind boutique hotel composed of elegant guestrooms, a world class restaurant and a wellness spa that reflect the local culture, a Banquet Hall, Amphitheatre, Exhibition Hall, Beach House and various amenities.

Nestled in a dense hill with majestic old pine trees and facing the East Sea of Korea, the new HH Resort Hotel and Spa will be defined by two main buildings and several supporting facilities placed throughout the site. The hotel will be anchored to the summit plateau of this historically significant and one of the most prominent properties along the coastline. The Banquet Hall has been designed as a separate building that floats on pilotis on the lower beach and promenade level, connected by a bridge to the Arrival Plaza of the Hotel.

A series of sensitively incised spaces have been designed in procession from the approach on the main road along Gyeongpo Lake. The ascending road to the hotel meanders through the steep terrain and the pine forest with glimpses and framed views of the Gyeongpo Canal and the Hotel. The main building will have a four-storey base with subtle angles and shapes that follow the gentle curves of the topography, juxtaposed with a 15-storey trapezoidal tower. Almost all the guestrooms will have open views of the sea, and a few with views of Gyeongpo Lake and the distant Taebaek Mountains to the west.

Dukho Yeon, Design Partner-in-charge, commented: "It is quite a challenge to design a good building on a site so spectacular and powerful by itself. The design here embodies our firm's constant belief in the dialogue and striking the delicate balance of architecture and landscape, while creating a building both graceful and sensuous, and taking every advantage of the inherent culture and heritage of the site."

The crisp geometry of the tower will contrast with the soft shapes of the hill and lower floors of the restaurant and spa. Floating



Photo: © Richard Meier & Partners Architects

balconies, articulated planes, expressive and textured facades and canopies are characteristic elements of the design, intensifying the very different shapes and silhouettes of the building from various vantage points. The forms that are expressed in shades of white and composed of pre-cast concrete panel, metal panel, glass curtain wall, and local stone will transform throughout the day in the interplay of light, shadow and the reflections of the deep seasonal colours of its surroundings.

The equally distinctive interiors have been designed to provide comfort controlled with a soft, light, and elegant palette of materials, carefully crafted to enhance the experience of open, airy, and engaging spaces.

Richard Meier commented: "I am extremely pleased and excited to see our first project in Korea take shape, a project with a very special program in a wonderful setting. The design is a result of our close collaboration with the Owner, a dedicated team of local architects and consultants, James Corner Field Operations, and L'Observatoire International. I believe the design will complement the beautiful Korean landscape rich in history and tradition and offer striking architecture and interiors for an unparalleled world class resort." ■

Faithful+Gould expands Asia Pacific operations with new Thailand office

London, UK – International project and cost management consultancy Faithful+Gould is opening a new office in Thailand, its sixth in the Asia Pacific region, following offices in China, Hong Kong, India, Malaysia and Singapore. The office is located in the Empire Tower on South Sathorn Road in Bangkok.

The new office will further boost Faithful+Gould's presence and network across Thailand and the Asia Pacific region, providing strategic project support and servicing to clients with their regional operations.

"Faithful+Gould has been supporting clients in Thailand for several years. This is an exciting step forward for our growth and will allow us to get closer to our clients and strengthen our support to them in the region," said Barry Piper, Chief Operating Officer (Asia Pacific) at Faithful+Gould.



Colin Bird

Colin Bird, a veteran with more than 36 years experience worldwide will be taking up the position as director of Faithful+Gould in Thailand. He is currently spearheading the FMC Thailand MCC manufacturing facility project in Rayong Thailand. Immediately following his appointment, he has successfully closed a new deal of a 6000 square metres villa estate renovation project in Phuket.

Colin, who transferred from Faithful+Gould's Singapore office to Thailand, said, "Faithful+Gould has a great track record and lasting relationships firmly established with clients such as Michelin, Purac, Neritum and FMC in Thailand. We are looking to extend our range of project management led services delivered locally and regionally. This spans across the industries of pharmaceutical, biotechnology, agrichemical, chemical, high technology, manufacturing, commercial and hospitality & leisure." ■



Barry Piper

Stirling Lloyd receives prestigious Queen's Award

London, UK – Stirling Lloyd, specialists in high performance waterproofing and surfacing materials for the civil engineering, construction and highways maintenance markets, has been awarded the Queen's Award for Enterprise in recognition of its continued international success.

Considered the UK's most prestigious business honour, the Queen's Award is awarded to businesses who show outstanding achievements in their field and has a specific focus on international trade, innovation and sustainable development.

Based in Knutsford, Cheshire and with offices in the United States and the Middle East, Stirling Lloyd now sells its UK manufactured materials into more than 50 countries worldwide, all of which helped it triumph in the Queen's Award international trade category.

Exports Director, John Volpicelli welcomed the announcement: "We are delighted to win this prestigious Queen's Award for Enterprise for the first time, recognition of our products' reputation for excellence, quality and long term performance on the international stage, and for our dedication to customer care."

"Our company's overall expansion continues to be driven by export sales which have seen substantial growth, especially over the last three years, and now account for over 60 percent of our total business. This award is just reward for everyone involved in that success," added Volpicelli. ■



John Volpicelli, Stirling Lloyd's export director (seated right) and Ned Birley, export business development manager, oversee another export order out of the door.

SAS International's acoustic partitioning installed at first BREEAM Outstanding project

London, UK – SAS International is pleased to announce it has manufactured over 400 linear metres of fully glazed partitioning for the new Brent Civic Centre - the most sustainable local authority building to be completed in the UK. Situated between Wembley Stadium and Wembley Arena, the 40,000 square metres project has been awarded a BREEAM Outstanding rating, the first in its category to achieve this accolade.

The open plan and glazed offices offer flexibility to provide a future-proofed solution for the community's administrative needs. SAS International's System 7000 partitioning was specified to manage acoustics and deflection. For the atrium, over 60 linear metres of SAS International's fire resistant glazing was installed with up to 30 minutes integrity and insulation.

The partitioning incorporates acoustic door over panels with attenuators containing acoustic pads. These glass panels are back painted which allows for natural ventilation between corridors and offices without compromising the acoustic performance of the partitioning system. According to the architects the building features a 33 percent reduction in carbon emissions due to a combination of solar shading, natural ventilation, high-performance façade, and combined cooling, heating and power, which utilises waste fish oil. For the offices, 130 glass doors were installed, complete with drop seals for enhanced acoustic control. This relocatable partitioning system used for the offices, especially those situated on corridors, provides high levels of sound attenuation for privacy as well as strength and durability.



Photo: © Philip Vile

It is essential when designing and installing partitioning systems to allow for suitable building slab deflection as a live load will almost certainly cause some degree of movement which impacts on the space between the floor and ceiling slab. For this project up to ±15mm deflection heads were designed to suit specification requirements.

Designed by Hopkins Architects, the building's spaces are arranged around a soaring, naturally-lit foyer and atrium which houses a large public amphitheatre and staircase that will host arts and cultural experiences. It houses Brent's civic, public and administrative functions, providing office space for 2,000 staff. The facility will also include a town hall, conference centre, wedding venue, public library and cafe. ■

Xaar launches new website for world's best ceramic printhead

Cambridge, UK – Xaar plc has launched a specialist website dedicated to helping the global ceramics market learn more about the significant benefits of digital inkjet ceramic tile decoration and featuring the Xaar 1001, claimed to be the world's best ceramic printhead. The new website – <http://ceramics.xaar.com> – is designed to be a useful resource for ceramic tile producers, helping them understand how the Xaar 1001 differs from competitor printheads and why it is the first choice for manufacturers.

Visitors to the website can find information about the many advantages of digital inkjet ceramic tile decoration, including: higher quality, high creative flexibility enabling wider product ranges, reduced wastage, efficient small batch production and more. For those that wish to look more deeply into Xaar 1001 technology, animations show how the printhead works at a microscopic level, helping manufacturers to understand and appreciate the benefits that the Xaar 1001 brings to ceramic tile decoration.



Xaar 1001 ceramic printhead.

The new Xaar digital inkjet ceramic tile decoration white paper is available to download in English from the site. In addition, visitors are invited to use the website to contact the leading tile printer manufacturers and approved ink suppliers, all of whom work with the Xaar 1001. The website is delivered in nine languages (Chinese, English, German, Gujarati, Italian, Polish, Portuguese, Spanish and Turkish). ■



Xaar ceramics website screen grab.

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EXHIBITIONS
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Indoor Air Testing

BELL Laboratories, specialists in the sampling and analysis of Workplace Air and Indoor Air Quality Testing, provided air sampling and air testing services to commercial offices in Brisbane. The occupants reported the presence of offensive odours over a two year period.

Brisbane commercial offices – offensive odour assessment

The client's offices were located on an upper floor in a high-rise building in Brisbane's CBD. Office staff reported that the indoor air possessed an offensive, sewage-like odour, which had persisted for over two years. The odour was considerably greater after office hours and on weekends, when the HVAC system was turned off. It also seemed to linger and be concentrated in a particular corner of the building.

Solution

BELL Laboratories launched a thorough investigation and air analysis. The company conducted air sampling and air testing with the HVAC system both on and off, monitoring the condition.

Bell Laboratories' investigation led them to a discussion with the building manager, which revealed that there was a stand-alone air conditioning system servicing the boardroom. This was near the most heavily affected area.

An inspection of the ceiling cavity uncovered a drain that was feeding into an open tundish. It was assumed that the drain connected the stand-alone air conditioner to the sewer on the street below. It was also clear that the offensive odour was stronger in the ceiling cavity, suggesting this was the origin of the smell. The sewer below was affecting the indoor air quality via the open tundish.



A view of the ceiling cavity, where the problem was located.

Results

Bell Laboratories simply flushed out the trap with tap water to observe the effect on the odour. The odours quickly dissipated and no further problems were reported.

"On the day of testing no obvious sewer odours were present, a common situation with reports of intermittent odours. Detection is difficult, the key is persistence and talking to the staff. A conversation with the receptionist led us to the building manager," said Mr Wayne Anderson, Air Quality Specialist of BELL Laboratories Australia.

For further information, visit www.bell-labs.com.au.



Wayne Anderson, Air Quality Specialist, BELL Laboratories Australia



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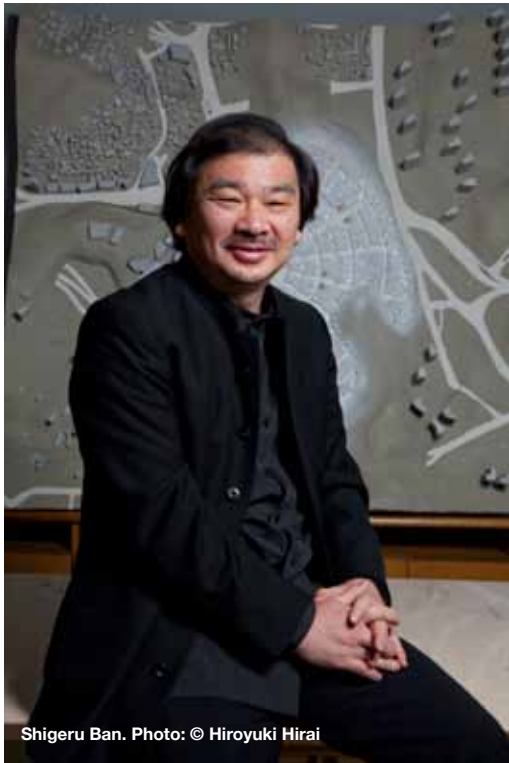


'Cardboard' Cathedral



opens in New Zealand

Photo: © Bridgit Anderson



Shigeru Ban. Photo: © Hiroyuki Hirai

On February 22nd, 2011, Christchurch experienced a devastating earthquake. 185 people lost their lives. More than 80 percent of buildings in the central city were either destroyed or damaged beyond repair.

The spire of Christchurch’s iconic ‘Cathedral in the Square’ collapsed. The remainder of the building was severely damaged.

In May of 2011, plans began toward building a transitional cathedral. The ‘Cardboard Cathedral Project’ was born.

Recently completed, this building gives to the city a memorial space, and a versatile venue for music, exhibitions, community activities and civic events.

The Transitional ‘Cardboard’ Cathedral concept was created by internationally renowned architect Shigeru Ban.

Shigeru Ban specialises in designing temporary public buildings and homes for people anywhere in the world who are affected by natural disasters. He has given his time pro-bono to this project, visiting Christchurch post earthquake, on average, every six weeks.

The Transitional ‘Cardboard’ Cathedral is situated next to the Canterbury Television site where 115 people died



Photo: © Bridgit Anderson



Photo: © Bridgit Anderson

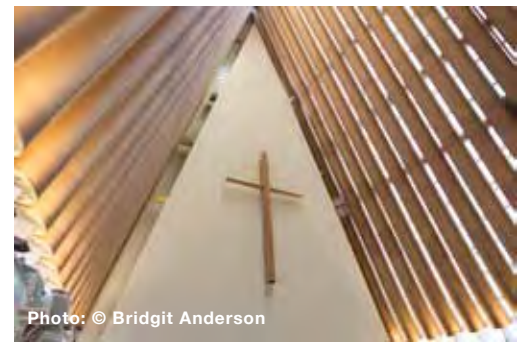


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on February 22, 2011. Of these, 13 were students from the City of Toyama, attending a language school in the building. Two more Japanese students were severely injured.

A Memorial Sculpture in memory of the Japanese who died will soon be situated in the foyer of the Transitional 'Cardboard' Cathedral. A Chapel of Memories in the main body of the building will provide a place for people to gather and remember those whose lives were lost and those who continue to suffer.

Shigeru was ably supported on the Transitional 'Cardboard' Cathedral Project by a talented and dedicated team of local consultants and contractors. Between them, consultants, contractors and suppliers have contributed in money, services and supplies, over \$1.3 million NZ.

New Zealand Construction Company Naylor Love completed the building on a 'zero profit' basis.

The Cathedral of the Northern Lights in Alta, Norway



The Crown Princess of Norway, Mette-Marit, has just inaugurated the Cathedral of the Northern Lights situated in the Norwegian town of Alta approximately 500 km north of the Arctic Circle.

Even before the inauguration, the 47-metre-high cathedral, designed by schmidt hammer lassen architects in cooperation with Link Arkitektur, was perceived as a symbol and an architectural landmark for the entire area.

In 2001, when the architecture competition for the Cathedral of the Northern Lights was arranged, the city council in Alta did not just want a new church: they wanted an architectural landmark that would underline Alta's role as a public venue from which the natural phenomenon of the northern lights could be observed.

"The Cathedral of the Northern Lights is in its design a result of the surrounding nature and local culture. The building is a landmark, which through its architecture symbolizes the extraordinary natural phenomenon of the Arctic northern lights," explained John F. Lassen, Founding Partner at schmidt hammer lassen architects.







He continued: "The cathedral reflects, both literally and metaphorically, the northern lights: ethereal, transient, poetic and beautiful. It appears as a solitary sculpture in interaction with the spectacular nature."

The significance of the northern lights is reflected in the architecture of the cathedral. The contours of the church rise as a spiralling shape to the tip of the belfry 47 metres above the ground. The façade, clad in titanium, reflects the northern lights during the long periods of Arctic winter darkness and emphasises the experience of the phenomenon.

Inside the main area of the cathedral, the church room creates a peaceful contrast to the dynamic exterior of the building. The materials used, raw concrete for the walls and wood for the floors, panels and ceilings, underline the Nordic context. Daylight enters the church room through tall, slim, irregularly placed windows. A skylight lights up the whole wall behind the altar creating a distinctive atmosphere in the room.

The cathedral, which can accommodate 350 people in the church room, also has administration offices, classrooms, exhibition areas and a parochial area.

PROJECT DATA

PROJECT: The Cathedral of the Northern Lights

CLIENT: The Municipality of Alta

ARCHITECT TEAM:

schmidt hammer lassen architects
Link Arkitektur A/S

AREA: 1,917 square metres

ENGINEER: Rambøll AS, Alta

MAIN CONTRACTOR: Ulf Kivijervi AS

ART WORK: Peter Brandes

PHOTOGRAPHER: Adam Mørk

CONSTRUCTION SUM: €16.2 million

COMPETITION: 2001, 1st prize in restricted architecture competition

STATUS: Construction period 2009 – 2013



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Mapei's projects cover a wide range of building types including religious buildings. In this article, we look at two projects, which Mapei was involved in: the Nagarathar Sivan Temple in Penang and The Church of San Giovanni Bono in Milan.



Nagarathar Sivan Temple

Georgetown, Penang, Malaysia

The island of Penang, off the north-west coast of the Malaysian peninsula, was a British colony from 1786 to 1957. Known as the "Pearl of the Orient", the island is a renowned tourist destination, famous for its beautiful beaches, resort hotels, traditional local cuisine and diverse, cultural heritage.

Indians form one of the main ethnic groups, most of them followers of the Hindu religion.

Many of the Hindu temples on the island were founded by the Nattukottai Chettiar, the first Indian settlers in Malaysia, who were mainly merchants and financiers of local commerce and industry. One of these temples is the Nagarathar Sivan, constructed more than 150 years ago. The three roofs of the temple were starting to leak through cracks, which had formed following the previous restoration works about 10 years back. The Temple trustees decided to carry out waterproofing works to solve the problem and selected the Mapei proposal because it offered very fast installation with minimal labour, as well as resistance to UV rays and durability in the tropical climatic conditions typical of the area.

The proposed Mapei system comprised the application of PRIMER SN after the surfaces had been thoroughly cleaned, sprinkling quartz sand on the surface of the primer to enhance mechanical strengths, and then spraying the surfaces with a coat of PURTOP 400 M hybrid polyurethane waterproofing membrane. The cycle was completed by applying a coat of MAPEFLOOR FINISH 55 two-component polyurethane finish which is highly resistant to UV rays and wear, and sealing the expansion joints with MAPEFLEX PU 45 polyurethane sealant.

Mapei Products: Mapeflex PU 45, Mapefloor Finish 55, Primer SN, Purtop 400 M.



Photo 1: Roof deck ready for Purtop 400 M application after surface preparation, crack repairs and priming.

Photo 2: Setting up the pump for spraying Purtop 400 M.

Photo 3: Spraying of Purtop 400 M in action.

Photo 4: Application of Mapefloor Finish 55 sealer coat.

Photo 5: Application of sealant Mapeflex PU 45.

PROJECT DATA

PERIOD OF CONSTRUCTION: Late 19th Century
PERIOD OF THE MAPEI INTERVENTION: March 2012
CLIENT: Registered Trustees Nattukottai Chettiar Temples
CONTRACTORS: Adept Technical Services Sdn Bhd, Living Factory Sdn Bhd
MAPEI CO-ORDINATOR: Lim Kean Meng, Mapei Malaysia Sdn Bhd (Malaysia)



The Church of San Giovanni Bono

Milan, Italy



The parish church dedicated to San Giovanni Bono is located in Milan, in the centre of the Sant'Ambrogio district.

The church, built entirely in reinforced concrete, with its strange profile and double pitch roof, which almost touches the ground, is similar in shape to a tent, and is inspired by the construction techniques of a Gothic cathedral.

A new heating system was urgently required for the church, because the old system was no longer suitable for this type of building and its needs, and this proved also to be the perfect moment to completely rebuild the flooring.

And so in 2012, a new floor with an antique finish was installed, made from minerals and coloured paste mixed with MAPEFLOOR I 300 SL epoxy resin formulate used as binder.

The colour chosen for the new flooring was similar to that of the previous one, and also contains a design representing the "tree of life".

The work, which started by removing the temporary textile flooring, consisted of the following application procedure:

- applying PRIMER SN to improve the adhesion of the next layer, sprinkled with QUARTZ 0.5 quartz sand until it is saturated;
- applying by trowel the mix made up of ultra-fine powdered minerals, coloured paste and MAPEFLOOR I 300 SL;
- wet grinding and polishing the surface with diamond disks and then grouting the micro pores formed in the surface
- polishing the surface with fine-grained polishing disks to get the final aesthetic effect required.
- final waxing treatment.

PROJECT DATA

YEAR OF CONSTRUCTION: 1966

PROJECT: Arrigo Arrighetti

YEAR OF THE MAPEI INTERVENTION: 2012

PROJECT: Donatella Forconi

CLIENT: Milan Diocesan Administration

LAYING COMPANY: Ricordi Resine, Castelfranco Veneto (Italy)

MAPEI DISTRIBUTOR: Ricordi Resine

MAPEI CO-ORDINATOR: Giovanna Novella, Mapei SpA (Italy)

The design for the "tree of life" was created in the new flooring with decorative elements with "terrazzo-alla-veneziana" effect and coloured glass.

Mapei Products: Mapefloor I 300 SL, Primer SN, Quartz 0.5.

Article Source: Realtà Mapei International no. 42/2013

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High Flying Hotels

David McNeece, International Marketing & Business Development Manager for Flowcrete Group, considers the changing face of the hotel and leisure industry, looking in particular at the wide range of modern flooring innovations available as well as the role of the floor in creating an enhanced customer experience.

In his 1897 four-act play 'You Never Can Tell', Irish playwright George Bernard Shaw professed that "the great advantage of a hotel is that it's a great refuge from home life." Not only true at the time, but more than a century later this still carries resonance as the hotel continues to serve as a home from home, setting the foundations and atmosphere for an excellent escape.

With competition high and customer expectations higher than ever before there is an increasing need for the hotel and leisure industries to focus on 'wowing' guests from the moment that they arrive to ensure that first impressions are not only great impressions but that this feeling remains for the duration of their stay.



The interior design of a building is such an important factor in making people feel good – both as a guest or a member of the service team. The whole scheme needs to be designed with the customer and staff firmly in mind and flooring is such a key part in setting an interior look and feel – offering the biggest platform for design after walls. The choice of flooring can make a place feel warm, relaxed and inviting or conversely exhilarating and contemporary.

Huge advances in material technology have driven huge innovations in flooring design. As hotel and leisure establishments strive to stand out from the crowd by offering a unique experience to that of their competitors, so too have flooring manufacturers pushed boundaries to create materials that sculpt a unique and impressive environment from the moment customers walk through the door and wind their way into individual lodgings and communal amenity areas.

As colour, pattern and multi-dimensional textures make a revival in the sector, designers now have full creative freedom to express themselves, create a drama and sense of place, or simply create the desired look with a host of materials, colours and textures available. International resin flooring manufacturer, Flowcrete, is proud of the range of innovative and expressive commercial resin flooring products it now offers to this alluring sector. From decorative terrazzo systems that sparkle underfoot through to fruity epoxy floor coatings with a wet-look, high gloss finish, virtually any floor design is achievable.

Flowcrete's terrazzo range, Mondéco is a cost-effective alternative to granite and marble tiles. Not only is the product available in a range of colours and with a decorative mix of aggregates to choose from; mother-of-pearl, marble, flint, coloured glass, mirror glass to name just a few, the product can also be installed in a series of complicated design and patterns to create a real talking point under foot. Not only this, but the product is available in an environmentally pro-active formulation using recycled aggregates and offers an impressive lifecycle in excess of 20 years with correct maintenance to offer designers a sustainable flooring option in eco-conscious developments.

Other flooring innovations available from Flowcrete include colourful, seamless and ultra-modern high-gloss resin systems, fast-cure finishes that feature multi-coloured flakes broadcast over a pigmented resin system and decorative systems that see coloured quartz beads sealed with a clear resin aggregate.

The company's latest innovation, Expressions, which launched to market in 2013 features a number of artistic finishes including Urban Expressions – a multi-toned polyurethane system that is expertly installed by hand to give a multi-dimensional swirl effect on the surface of the floor as well as Metallic Expressions a glittering polyurea system with a metallic pigment designed to dazzle in high-end, glamorous settings.

For more than 30 years, Flowcrete's dedicated product development team has worked to provide a versatile and extensive range of flooring products that equip designers with the tools they need to create a unique aesthetic. Offering bold colours, intricate patterns and design flexibility combined with durability and environmental credibility, it's no surprise that Flowcrete materials continue to tick all the right boxes in the hospitality industries.

For more information, visit www.flowcreteasia.com.

Twitter: @FlowcreteAsia

CASE STUDY: Impiana KLCC Hotel – A project by Flowcrete

A unique flooring system from Flowcrete has enabled designers to achieve a stunning effect in the upscale coffee-house at the newly opened Impiana KLCC Hotel in Kuala Lumpur.

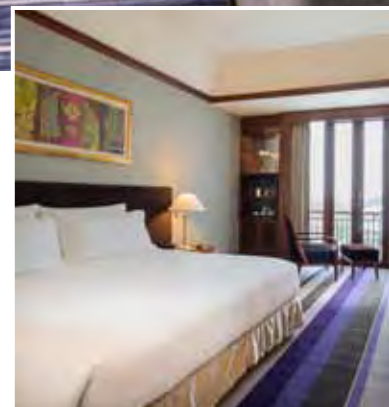
Flowcrete's decorative epoxy terrazzo system, Mondéco Crystal, was used in two special colours to create an eye-catching design featuring more than 150 oval shapes within a 350 square metre setting.

Having originally considered marble or granite for the space, Mondéco was later chosen for its ability to achieve the unique design to the quality required.

Before installation of the Mondéco Crystal, a semi-dry, cementitious levelling screed, known as Isocrete K-Screed, was applied to the concrete substrate.

The intricate design was then executed using brass oval rings to set out the unique pattern across the floor before later diamond grinding and sealing using a semi-gloss UV resistant clear seal coat.





Chatrium Hotel, Yangon, Myanmar

*Text and photos courtesy of
dwp | design worldwide partnership*

International architecture and interior design firm dwp were commissioned to completely renovate the three restaurants and bars, as well as the executive lounge and suites, of the Chatrium Hotel in Yangon, Myanmar. As one of the city's top hotels, in a superb central location, the real challenge was to blend a new, modern design, with the existing spaces. The design concept of 'Purity' was chosen, derived from the country's preserved culture and religion, with the lotus flower as the perfect symbolic expression of this, since it is also the feature of the hotel's logo.



The main colour of the all-day dining restaurant was warm beige, to mesh with the existing cream marble and timber floors. To provide a warm vibrant ambience, this was freshened up with the different shades of fresh lotus flowers. Synthetic rattan furniture, accented with brightly coloured Thai silk cushions, further added warmth and texture, allowing for a continuation of outdoor dining on the terrace. A 2-storey-height carved timber panel was featured between columns, depicting traditional Burmese screen patterns, to emphasise verticality. Most materials were sourced

from Thailand, to ensure quality and craftsmanship.

Strong colours of deep red, gold and highly contrastive dark grey were used in the Chinese restaurant, to create a modern, polished, fine dining atmosphere, layered with texture. The central lounge area is surrounded by ivory-coloured timber screening, patterned with the structure of lotus leaves, offering a touch of sheer privacy. A soft, dreamy lotus-petal-style fabric accentuates the ceiling, while white furniture sits on a deep red area rug, decorated with traditional Chinese ink

painting. Walls are treated with antique gold trim and molded detailing, an effect softened in the private dining room, with padded panelling, covered in a luxurious gold lotus silk fabric and fine embroidery.

This fresh modern perspective, with utmost comfort, was carried through to the executive suites and club lounge design, with rich fabric choices complimenting the overall space and echoing the design concept, for consistency and integrity of the hotel's theme.

For more information, visit www.dwp.com.

The new Grand Hyatt Shenyang

Combining ancient culture with vibrant modernity

Hotel façade. Photo: © Jimmy Cohrssen

HBA designers enlist the language of ‘warmth’ to create a welcoming environment in Northeast China’s economic hub.

Global hospitality interior design leader Hirsch Bedner Associates (HBA) molded ancient culture with vibrant modernity in the styling of Grand Hyatt Shenyang, the first Hyatt-branded hotel in Northeast China.

The hotel features nine restaurants as well as 353 luxurious rooms and suites, which are some of the most spacious guestrooms in the city. HBA’s design vision was distinctly rooted in Shenyang, reflecting its people, history, and prominence as an international hub of commerce.

HBA’s design of the Grand Hyatt Shenyang is thoughtfully multi-layered, integrating contemporary brand standards with the influences of the region’s cultural history, economic vitality, and dramatic physical presence. HBA embraced the idea of coming “home” to a hotel and transformed the property into a second-home



Arrival Lobby on level 1. Photo: © Jimmy Cohrsen

destination for business and leisure travellers, as well as affluent locals.

Connie Puar, Partner at HBA, Singapore commented: "We studied local architecture and historic sites very closely. We interacted with the people and paid close attention to their way of life in order to fully capture the essence of this vibrant city. The resulting design pays homage to the culture of Shenyang in a thought-provoking, design-forward way".

Agnes Ng, Associate at HBA Singapore added: "We wanted guests to feel that there is a new discovery with every experience through provoking personal spaces. We picked moments of drama coupled with moments of calm – it's important to strike a balance between excitement and refinement."

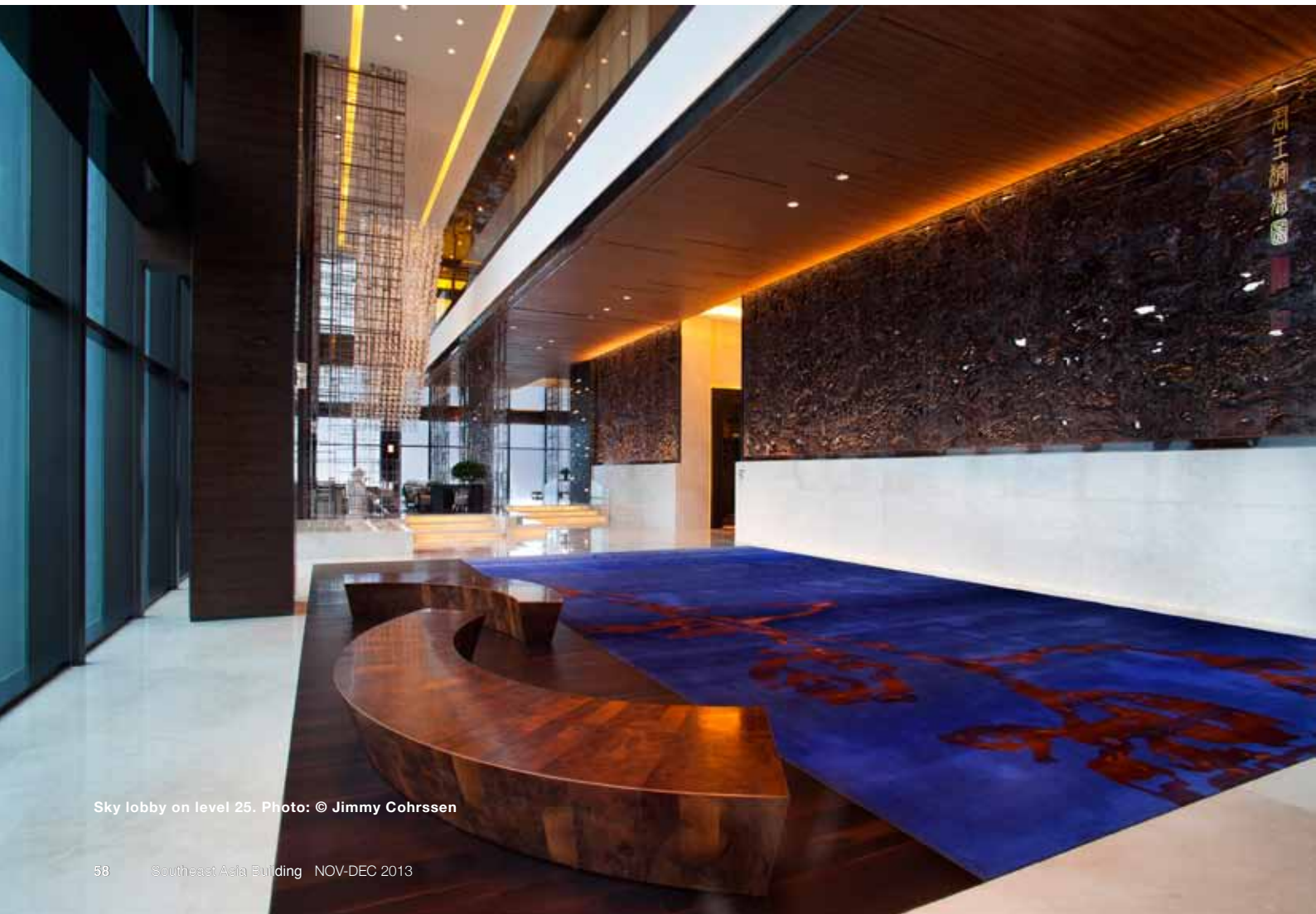
For the arrival Lobby, HBA envisioned a design to foster an intimate

interaction between international guests and life in Shenyang. Soaring 12 metres, the walls are clad in a subtle hue – a canvas of cream limestone. Scaling this backdrop is a bronze screen inspired by Shenyang's thriving industrial and manufacturing activity, a lattice work of interlocking metal rectangles that becomes a recurring design element throughout the hotel. The lattice is an immediate visual connection, inviting guests to explore upward, where three tiers of open lofts span the walls, like oversized bookshelves. These lofty ledges showcase bright white sculptures crafted exclusively for the property that represent "life" in Shenyang.

Situated on the 25th floor, the Reception Lobby broadens the theme of a warm enclave in Shenyang. It is here where the language of warmth becomes 'home.' Emerging from the elevators, visitors take in the open expanse of views, safely ensconced in subtle notes of ancient Shenyang within modern surrounds.



The Lounge entrance on level 25. Photo: © Jimmy Cahrssen



Sky lobby on level 25. Photo: © Jimmy Cahrssen



Spa Treatment Room on level 5. Photo: © Jimmy Cohrsen

The organic angularity of bronze screens from the arrival lobby continues here – a visual bridge between the levels. Illuminated from below, the reception desk features intricate carving inspired by motifs from Shenyang's Imperial palace. The carpet's bold violets echo the majesty and splendour of the Qing Dynasty, and lacey wisps of orange are drawn from the peony – a royal flower. These regal colours herald an imperial ceremony witnessed on the walls.

High walls above the reception area host a pair of ornately carved wooden panels, each several metres tall and running a full expanse. A theatrical portrayal of the "Grand Hyatt" – words which translate to "Royal Banquet" and "Hunting" – leisure activities associated with the aristocracy. Its fine detailing and craftsmanship beckons many a guest to explore down the halls, as castle tapestry might. Within this space is the Lobby Lounge. A carved bar displays a graceful sweep, framed by the bronze screens and capped by a dramatic and gleaming chandelier. This towering composition of crystal glass cubes, suspended glistening, cascades like a frozen waterfall.

In every corner, nature's textures and forms are balanced. Blonde timber lends a calming backdrop to the walls, while dark tones play against the contrast of buff stones on the floor, defining the space. Where gleaming marble meets natural timbers and sparkling crystals mingle with ancient crafts, luxury is tempered by subtlety – achieving a harmonious balance.

The Grand Hyatt Shenyang features 353 guestrooms that are envisioned to be living

spaces of functional luxury. The palette is exclusively natural tones and hues. Gently sheened light timber panels adorn the walls. Light creamy brown Lati and grey sycamore wood panels from Italy are a canvas of understatement and refinement. Flanking the left side of the bed is a custom designed desk which displays hints of detail from the bronze screens adorning the lobbies. The guest bathroom is a very contemporary space; corner mirrors create depth and layering. Cream Travertine walls soothe the senses, and golden bronze Onice Canyon vanity counters create a perfect balance.

HBA's design of the Grand Hyatt Shenyang elevates lounge areas into true living spaces. These meeting rooms have all the comforts of home, complete with loft kitchen and

bar. Oversized opium sofas, antique Chinese cabinetry and leather ottomans are paired with thoughtful accents and warm lighting transform afterthought spaces into inviting areas. The meeting rooms themselves defy convention as well. They too are living rooms in which guests can work and play – a sense augmented by marble topped loft kitchen are in the space.

The two levels of meeting rooms likewise employ the living room concept. Conceived to create two distinct guest experiences, a tasteful combination and application of materials was used to distinguish each level. The living room concept is woven through the Spa as well. The Chairman's Suite treatment room is part of a suite of two treatment rooms, joined by a spacious and comfortable light-filled living room and open pantry.

The spa at the Grand Hyatt Shenyang is inspired by the poetic shifting of seasons. The walls are covered in a natural distressed wood panel, styled as if reclaimed from an ancient house in Shenyang. A linear fireplace rests in a contemporary textured stone hearth. Crema Marfil split stone and reclaimed wood line the walls in the public areas, while Lati grey timber and Bianco Statuario marble compose the treatment rooms, which have a palette of clean whites and grays, imparting a sense of tranquility.

Sparkling under a skylight, the indoor pool is awash with natural lighting. While immersed, guests may enjoy relaxing under a summer sky, soaking under a sheet of white snow, or bathing under the glow of winter moonlight.



Typical Guestroom. Photo: © Marc Gerritsen



Aerial view of the ITE College Central's façade.

ITE College Central houses the world's "largest" green wall

At the newly built ITE Headquarters and ITE College Central at Ang Mo Kio, Singapore has probably set a world record for the largest green wall installation in a single development. Nature Landscapes Pte Ltd, which was appointed to install the green walls, is proud to be associated with the prestigious facility and to be able to provide its expertise to the project.

Located at 2 Ang Mo Kio Drive, the ITE College Central is ITE's third and final Regional Campus under the "One ITE System, Three Colleges" Model of Education and Governance. Designed by RSP Architects Planners & Engineers (Pte) Ltd, the ITE College Central campus is an epitome of a world-class educational institution built with sustainable and innovative green features.

It has set a vision of branding itself as a 'creative and innovative' learning institution. And to reflect its vision, extensive vertical greenery and boundary planting have been incorporated into the overall design to achieve an environmentally sustainable development. Approximately 340,000 plants growing on 5,300 square metres of green walls have been implemented as high as 35 metres on the facades of the campus blocks, thereby making it the world's largest vertical greenery installation at a single development.

The green walls not only offer UV protection but also help to cut down ambient temperature and keep the interiors of the building cool. This helps to reduce air-conditioning consumption and the carbon footprint of the ITE College Central.



Exterior green wall visible from the road.

Green walls everywhere

Strikingly visible from the road, the green walls create stunning aesthetics and provide environmental benefits to the whole campus. The green wall at Block G, for example, was built as a thermal insulation and to essentially protect this west-facing campus façade from the scorching sun and UV.

Upon arriving at the Central Green Spine, also called Inspiration Spine, visitors and students are greeted with extensive living walls at the school blocks. This skysire greenery design concept complements the boundary planting, in eight conical structures or Pyramid Gardens, which both defined the core planting plan.

For the green walls at Block C of the campus, a myriad of plant types and species were carefully selected not only for their aesthetic benefits, but also for sustainability and to promote biodiversity. The natural lighting into the blocks had to be considered due to the height factor causing graduated light intensities onto the walls. Hence, the plant selection criteria focused on its adaptability, cost sustainability, as well as ease of maintenance.

The vertical greenery design at Block D allows cross ventilation and also serves to purify the air while lowering thermal heat for students to interact in a comfortable space. Different pixels of colours are used on the wall surface of this block, which has achieved the BCA Green Mark Platinum Award.



Green walls at Block G.



View of green walls along exterior building blocks of H, J, and K.





The Central Green Spine showcases extensive green walls.



Green wall at Block D



Green wall at Block C



Green wall at Block E

Installation

Nature Landscapes carried out the installation by preparing the mounting structure using stainless steel support brackets and pilasters.

The Elmich Vertical Greening Modules (VGM) was chosen for their versatility and ease of installation which suited the demanding design requirements of this project. The system is certified to withstand wind uplift from various directions up to 110km/h.



The modular VGMs were pre-planted in a controlled nursery environment with selected green wall plants and orientated vertically prior to site installation. Plant choice differed according to the amount of light at different wall heights to ensure healthy growth and cost effectiveness.

Irrigation and fertigation is managed by an automated drip system, which controls the timing and duration of release of water and nutrients as well as provide alerts in the event of a malfunction of the M&E system.

The green walls at this ITE College Central recently won a Gold award in the Green Wall category in the LIAS Awards of Excellence 2013.

For further information, contact Nature Landscapes Pte Ltd at tel (+65) 6252 6802, e-mail contact@naturelandscapes.com or visit www.naturelandscapes.com.



Green wall at Wellington Primary School – In a class of its own

Located at 10 Wellington Circle in the vicinity of Sembawang, Wellington Primary School began functioning in 2001. Since its inception, the school is dedicated to empowering every student to become talented and good leaders.

To continue this mission, Wellington Primary School decided to invigorate its environment and add design elements that are not only visually compelling but educational too. In 2011, the school embraced the green wall concept as a teaching tool as well as an aesthetic design element.

The school put up a tender and Prince's Landscape & Construction Pte Ltd won the contract to design and install the green wall. One of the oldest nurseries in Singapore, Prince's Landscape has 50 years of experience in the industry. Started out humbly as a flower shop, Prince's has evolved into a full-fledge and leading landscape design and installation specialist.



Before the green wall installation. Photo: © Prince's Landscape & Construction Pte Ltd



Staff from Prince's Landscape installing the green wall. Photo: © Prince's Landscape & Construction Pte Ltd

Prince's Landscape proposed its Hi-Green wall Planter system to the school for two main reasons. Firstly, additional water storage reservoir in the planters can enable the plants to survive better using hydro plants; and secondly it was a safe choice as the green wall is less than two metres in height.

The total area of the green wall is around 70 square metres. The Planter system of the green wall was installed on Galvanized steel Metal Frames fixed to the classroom walls by anchor bolts. A Drip Irrigation system was installed with an Irrigation Timer to provide automatic irrigation.

The types of plants selected for the green wall were *Philodendron 'gold'*; *Episcia cupreata*; *Hemigraphis*; *Philodendron scandens*; *Syngonium cultivar*; *Philodendron 'green heart'*; *Pandanus* species; *Selaginella spp*; and *Mentha* species. The plants were first grown in Prince's Landscape's nursery at 53 Sungei Tengah Road. After two and a half months of growth, the pre-grown planters were transported from the nursery to the school's site for installation.

"The green wall has brought many benefits to the school: aesthetics, heat mitigation, screening effect, clean air, cooling effect and electricity savings," said a spokesperson from Prince's Landscape.

The green wall was installed in five days and the project was completed in the last quarter of 2011.



Green wall installation completed. Photos: © Prince's Landscape & Construction Pte Ltd

FYTOGREEN BRINGS VERTICAL GREENERY TO CITIES

Fytogreen is one of Australia's leading specialists in environmental extensive and semi-extensive roof gardens, lightweight intensive roof gardens, vertical gardens and green facades.

Since its inception, the company has grown to become one of the largest suppliers to the roof garden industry in Australia in component supply and installation, through to complete design, construction and maintenance.

The company's proprietary technology is backed with 24 years of international research and growing experience, modified and perfected to suit various climatic conditions around the world.

Produced as pure, environmentally friendly "foam", Fytogreen's Hydrocell growing media and nutrient additives retain an extraordinary high percentage of water and nutrients

by volume. The water and nutrients are released gradually over time, generating substantial irrigation savings over the life of a garden installation. The open cell nature of the proprietary material also facilitates ease of root propagation.

Fytogreen supplies the latest technology and systems for greening the built environment, including design, construct and maintenance services for:

- Green roofs
- Vertical gardens
- Green facades
- Amazing displays for trade shows, parties or property sales



Illura Properties in Melbourne – a recently completed project by Fytogreen. Photo: © Fytogreen



Fytogreen's green wall installation for Triptych apartments in Melbourne in 2010. Photo: © Fytogreen

More than 2,300 square metres of successful vertical garden projects have been completed by the Fytogreen Australia team in Australia and in international locations, including California, New Zealand and Dubai.

The Vertical Garden

Walls can become botanical gardens providing support to the Fytogreen Vertical Garden panel system which, uses its proprietary growing medium to deliver water and nutrients to specially selected plants living in the vertical environment.

Species competition and crown domination, plant selection according to their ability to withstand winds, large temperature differentials, how to grow without soil on a vertical surface, considerations about sunlight and lighting, weight of the garden – all these are issues that pose difficulties in the creation of each thriving vertical garden.

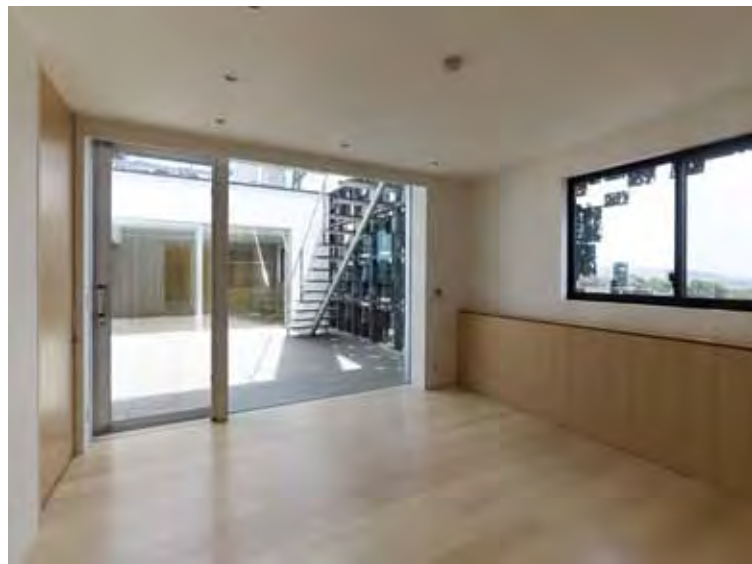
For further information, visit www.fytogreen.com.au.



Fytogreen supplied vertical gardens for 1 Bligh Street in Sydney, Australia. Photos: © Fytogreen



GREEN Cast





Kengo Kuma & Associates has introduced planters on the aluminium façade of a pharmacy and clinic in Odawara-shi, Kanagawa prefecture, Japan.

The façade of the building is covered with planters made of aluminum die-cast panels, which provides space for facilities. The 3 (up to 6) aluminum panels, which also form planters, are made in monoblock casting. Each panel is slanted, and its surface appears to be organic, of which cast comes from decayed styrene foam.

Equipment such as watering hose, air reservoir for ventilation and downpipes are installed behind the panels so that the façade can accommodate a comprehensive system for the building.

PROJECT DATA

PROJECT: Green Cast

LOCATION: Odawara-shi, Kanagawa prefecture

TYPE OF PROJECT: New construction (extension from existing)

PRINCIPAL USE: Shop, clinic, office and private residence

DESIGN AND SUPERVISION: Kengo Kuma & Associates

STRUCTURE: RC, steel-frame

NUMBER OF STOREYS: 1 underground, 4 storeys above

SITE AREA: 424.50 square metres

BUILT AREA: 207.64 square metres

TOTAL AREA: 1047.80 square metres (residence area: 181.61 square metres)

FLOOR AREA FOR EACH STOREY: BF: 288.68 square metres; 1F: 201.65 square metres; 2F: 189.13 square metres; 3F: 189.13 square metres; 4F: 181.61 square metres

MAXIMUM HEIGHT: 14.97 metres

STRUCTURE: Makino Structural Design

UTILITIES, EQUIPMENT: P.T. Morimura and Associates

CONSTRUCTION: Takenaka Corporation

TREE PLANTING: Sugiko

ALUMINUM DIE-CAST: Sanwa Tajima

CONSTRUCTION PERIOD: May 2010 - June 2011

PHOTOS: Copyright Daico Ano



Green On Wall

Aquatic Paradise Sdn Bhd has been specialising in Japanese Koi and Pond Building since 2009. Among the services provided by Aquatic Paradise Sdn Bhd are Japanese Koi Supply, Medication, Pond Consultation, Pond Building and Rectification (Includes hardscapes such as water features, artificial rocks and waterfalls). Over the past four years, Aquatic Paradise has attended to more than 150 ponds and has won numerous awards for Japanese Koi in local and international Koi competitions.

Since 2012, Aquatic Paradise started research and development in Vertical Gardens and became the International distributing agent for Florafelt (patented vertical garden product from USA) in Malaysia. Green On Wall was born as a Vertical Garden division for Aquatic Paradise Sdn Bhd focusing only on Vertical Garden Solutions and distributor for Florafelt products.

Green On Wall

After one year of product testing and research, Green On Wall made its first market appearance in July 2013. Since then, Green On Wall has built more than 10 Vertical Gardens mostly for private home owners and offices. At the moment, Green On Wall is appointed as the Vertical Garden consultant for several developers to design and implement Vertical Garden system for commercial buildings.

Among the services provided by Green On Wall are as below:

1. Vertical Garden Consultation, Design and Build (Customised Vertical Gardens Projects)
Green On Wall provides these services to all range of clients (residential & commercial) which includes:
 - Irrigation systems
 - Fertilizing systems
 - Customised Vertical Garden planters of any shapes and sizes.
 - Customised Vertical Garden structures.
 - Site analysis for plants species proposal and plants layout design.

Green On Wall caters to both indoor Vertical Gardens and also outdoor Vertical Gardens.

2. Distributor of Vertical Garden products (Ready Made Products & DIY products) which includes the following products:

- Patented USA Vertical Garden Panels, Florafelt Vertical Garden Planters which comes in 4 Pockets or 12 Pockets Panels which can be hung on wall easily to create a Vertical Garden. Many panels can be mounted on the walls to create a bigger Vertical Garden Wall.
- Recirculating Vertical Garden System, Eco Frame Series which comes in 3 sizes (4 pockets, 12 pockets or 36 pockets). Eco Frame Series can be hung on wall or can be placed free standing on tables or floor. Eco Frame Series are basically Florafelt that is integrated with a stainless steel frame and water storage tank which comes with a pump. Water



Mr Ken Lim, Founder of Green on Wall.

is stored in the tank and with a pump plus a timer, the Vertical Garden is self-watering according to the setting of the timer.

Benefits of Green On Wall

Green On Wall uses felt material to create beautiful and sustainable Vertical Garden systems as felt material promotes plants growth and sustainability in several ways.

1. Allows root breathability, for healthy root growth and to prevent root rot and other fungus and mould disease. (Most plastic boxes are made has only few holes on the bottom while all the other sides of the boxes are solid surface which does not promote air exchange thus less breathability to plants roots causing root rots)
2. Water is distributed evenly to all plants and clogging are prevented because felt materials are porous and acts like a web for roots to grow and take a good grip on the material. (This cannot be achieved with plastic boxes where clogging always occurs over time and restricts root growth only in the container while clogging makes the roots flooded with water and causes root rot)
3. Uses less water because irrigation drippers does not need to be provided individually to every single plants and usually are provided to few top rows of the Vertical Garden because water will be distributed evenly to the bottom rows by gravity and the felt material. (Because plastic boxes usually clogs overtime, most Vertical Garden Systems using plastic boxes require drip irrigation to every individual plants.)
4. Flexibility of felt material makes it possible to design vertical garden of different sizes and shapes. The felt is also folded into pockets to allow easy replacement of plants if clients likes to change the look of their Vertical Garden. (Plastic boxes cannot be bended or cut into shape, therefore can only built rectangular or square shape of a Vertical Garden Wall.)
5. Eco Friendly because the felt material is made of high quality recycled PET plastic.
6. Durable because these materials are UV resistant and do not disintegrate over time.

Most successful and huge Vertical Gardens in the world are done using Felt materials and Green On Wall focuses on building Vertical Garden using felt materials to ensure sustainability of the Vertical Garden.

Projects

Green On Wall is currently doing consultation works and implementation works for several commercial projects. Recently the company completed two residential projects in Malaysia.

For more information, visit www.GreenOnWall.com.

Vertical Garden by Green On Wall in Desa Sri Hartamas

Owner: Mr Richard (Private Home Owner)

Location: Desa Sri Hartamas

Completed: September 2013

Vertical Garden Location: Car Porch

Plants types: Variety of shade plants with different colours and leaves shapes to create a beautiful and lush Vertical Garden.

Job Scope:

1. **Site Visit** – Wall is measured and dimension is recorded. Light intensity, humidity, water source, draining source and other considerations are recorded.
2. **Vertical Garden System Proposal** – Proposed Vertical Garden System where automatic irrigation to Vertical Garden is provided directly from water supply with fertilizers injected to the irrigation piping to provide water and fertilizers to the wall. Excess water after irrigating the Vertical Garden will be drained out to a drainage pipe. Irrigation frequency and duration for each irrigation cycle is controlled by a water source timer.
3. **Plants Selection and Layout** – Proposed plants species which are able to survive and thrive to the parameter of the wall location taking into consideration the light intensity and humidity of the area of the wall. Layout design is designed carefully to create a beautiful Vertical Garden with a variety of plants. The layout of the plants are designed to keep the left and right side of the Vertical Garden more flat or smaller leaves plants to keep the walking path spacious and does not obstruct the walk way to swimming pool and main door.
4. **Materials preparations** – Stainless steel structures were customised to make a frame for the Vertical Garden and also acts as a drain gutter for the Vertical Garden to collect as discharge excess water. Plants are ordered and pre-wrapped using root wrappers to ensure installation can be done neatly and fast.
5. **Installation** – Stainless steel frames are installed followed by the Vertical Garden Panels and then plants are inserted into the Vertical Garden panels according to planned layout. Then irrigation system is installed.

This Vertical Garden is located in the car porch and is a beautiful living feature wall for the client's house facing directly to the main gate. Apart from beautifying the wall, this Vertical garden also provides fresh air, reduces temperature and promotes green living as client's home is located in the city.



Vertical Garden by Green On Wall in Setia Eco Park

Owner: Dr. Choo

Location: Setia Eco Park, Shah Alam

Completed: September 2013

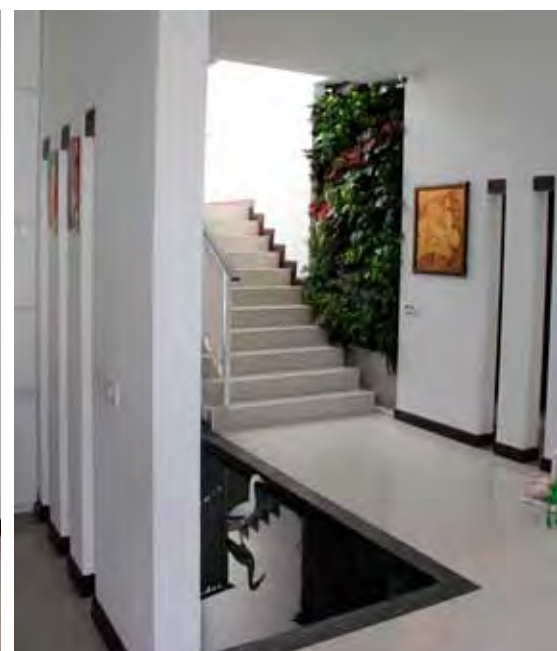
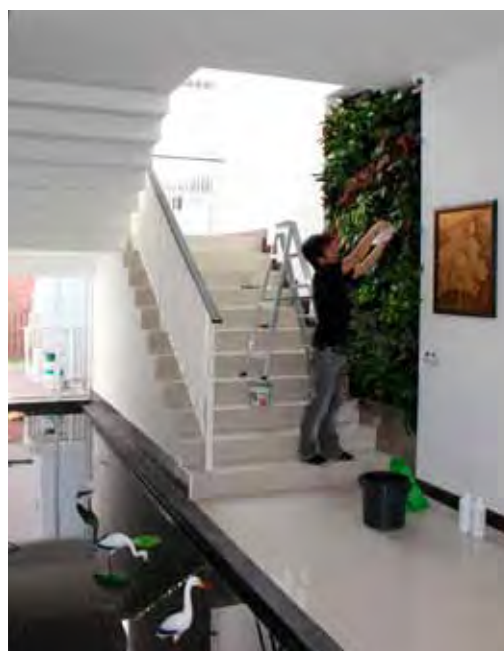
Vertical Garden Location: Indoor next to stair case

Plants types: Variety of indoor compatible plants with different colours and leaves shapes to create a beautiful and lush Vertical Garden while not obstructing the staircase walkway.

Job Scope:

1. **Site Visit** – Wall is measured and dimension is recorded. Light intensity, humidity, water source, draining source and other considerations are recorded.
2. **Vertical Garden System Proposal** – Water source and drain source are not available in the Vertical Garden Wall area, so Recirculating Vertical Garden System is proposed. Water storage tank made from customised stainless steel is required to store water for irrigation and irrigation are provided by the pump in the storage tank. A digital timer controls the pumps frequency of watering and watering duration. Fertilizers are added to the water storage tank directly.
3. **Plants Selection and Layout** – Plants species are selected carefully and only plants because light intensity and humidity is lower indoor. Most of the time, artificial light will be proposed to indoor Vertical Garden, however luckily for this wall area the light intensity is sufficient because there are huge glass which provides light from the top and also from sideway near the wall of the staircase area. Layout design is designed carefully to create a beautiful Vertical Garden with a variety of plants. The layout of the plants is designed to keep the Vertical Garden with smaller leaves plants to avoid obstructing the staircase walk way. Several plants that flowers are added to the wall beautify the Vertical Garden even more.
4. **Materials preparations** – Stainless steel structures were customised to make a frame for the Vertical Garden and also collect excess water to discharge it to the storage tank for collection to be recycled for the next irrigation. Plants are ordered and pre-wrapped using root wrappers to ensure installation can be done neatly and fast.
5. **Installation** – Stainless steel storage tank are installed followed by the frame and then Vertical Garden Panels. Finally plants are inserted into the Vertical Garden panels according to planned layout. Then pump is installed and connected to the digital timer.

This Vertical Garden is located right next to the staircase. Apart from beautifying the wall, this Vertical garden also purifies the air in the house, reduces temperature by absorbing the lights from the glasses and promotes green living.





Marina Bay Sands in Singapore. Photo: © Technal

TECHNAL Glazing Systems specified for architectural marvel Marina Bay Sands

Architectural aluminium glazing systems from TECHNAL have been supplied for one of the world's most challenging construction projects – Marina Bay Sands Integrated Resort in Singapore.

Marina Bay Sands is a US\$5.7 billion waterfront development in Singapore – the most expensive stand-alone integrated resort ever built. It was opened at the end of 2010.

Designed by Boston-based Safdie Architects for the Las Vegas Sands Corporation, the scheme is a magnificent feat of engineering, which has created an impressive icon on the Singapore skyline.

Three 55-storey hotel towers are crowned with a 1.2 hectare SkyPark – a tropical oasis that floats 200 metres high on top of the soaring towers and cantilevering 65 metres beyond. The SkyPark accommodates a public observation deck with spectacular 360° panoramic views, lavishly landscaped gardens, roof-top restaurants and a 150 metres long infinity swimming pool – the world’s longest elevated pool.

Two thousand of TECHNAL’s sliding balcony doors have been installed for the luxury hotel rooms, totalling 25,000 square metres of glazing. The system was specially adapted to accommodate glass up to 31mm, to provide a higher level of acoustic performance in line with the hotel’s opulent specification. The glazing also helps to maximise natural light.

TECHNAL also supplied its GEODE Visible Grid curtain walling which was used to areas of the hotel’s ground floor on each of the three towers.

Marina Bay Sands has created a completely new high-density urban district for Singapore’s waterfront and a new gateway to this densely populated island.



Hotel lobby atrium at Marina Bay Sands. Photo by Timothy Hursley



Hotel rooms with balconies. Photo: © Technal

According to architect Moshe Safdie, “Marina Bay Sands is really more than a building project, it is a microcosm of a city rooted in Singapore’s culture, climate and contemporary life. Our challenge was to create a vital public place at the district-urban scale – in other words, to address the issue of mega-scale and invent an urban landscape that would work at the human scale.”

Facilities at Marina Bay Sands include a 120,000 square metres convention and exhibition centre with one of the largest ballrooms in Asia; a series of layered gardens; a 74,000 square metres multi-level retail arcade for designer shopping; gourmet dining; theatres with seating for up to 4,000 people, and an art and science museum. Central to the development is the world’s most expensive casino – located on four levels, this atrium-style space sits under a spectacular 7-tonne Swarovski chandelier.

TECHNAL’s sliding window and door system, which is used at Marina Bay Sands, is a stylish, robust and high specification glazing solution. It features clean, narrow 41mm sight lines to maximise natural light, profiles can be flat-faced or curved, and there is a choice of window or door sizes to suit individual project requirements.

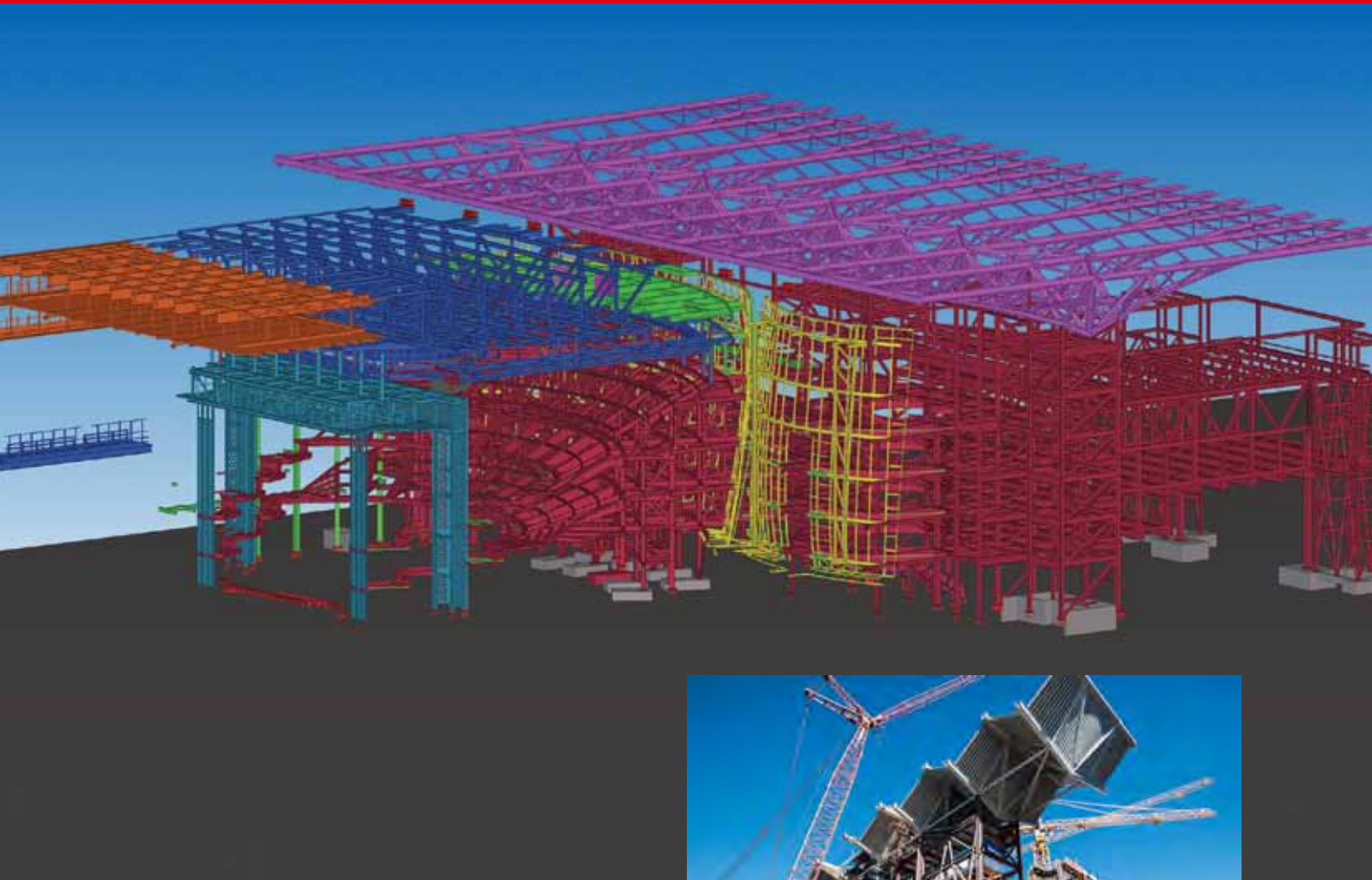
The system has been rigorously tested to 20,000 open/close cycles; fixings and mountings are concealed for an improved appearance, and it benefits from a 9mm flush polyamide thermal break for thermal efficiency. Other features include strong frames, durable hardware, structural accuracy, and a quality, unobtrusive track and roller system for reliability and a smooth sliding operation, even with the heaviest leaf sizes. Configurations range from a simple two-leaf system to a multi-panel sliding patio door or window on two tracks.

For further information about TECHNAL’s aluminium sliding window and door system, visit www.technal-int.com.

Curtains rise up in Orlando, with help from Seacad and Tekla

Tekla BIM helps to build Dr. P. Phillips Center for the Performing Arts in Orlando, Florida

The city of Orlando in the US state of Florida is home to such iconic attractions as Walt Disney World Resort and SeaWorld. However, the one thing it does not have yet is a 'signature' performing arts facility. Text and photos courtesy of Tekla



The lack of a venue means resident arts groups have to compete for the little space that is available. It also means that national touring shows often bypass Orlando.

To amend this situation, a 330,000 square feet, state-of-the-art centre is being built that will be a magnet for residents and tourists. The Dr. P. Phillips Center for the Performing Arts will house two performance theatres, a community theatre, an outdoor plaza, rehearsal rooms, administrative offices, an educational programming space and a community facility.

The project is located on a nine-acre site in downtown Orlando and the two-block site will also accommodate new restaurants, shops and public spaces. When completed, it will become a new cultural and social hub that will stimulate the local economy, create new jobs and enhance the city.

Construction of the centre began in mid-2011 and it will be built in stages over the next few years with the first phase being completed by 2014.

Interestingly, the construction of this iconic American building is partly being handled by a company in faraway Indonesia. Despite being more than 17,000 kilometres away, P.T. Seacad Services is able to do all the necessary work on the site, all with help of Tekla Structures.

Seacad is a Jakarta-based company that specialises in producing workshop drawings. Even though it is based in Indonesia, the company is internationally focused.

According to founder and managing director Phil Martin, all its work since 2004 has been for clients in the United States.

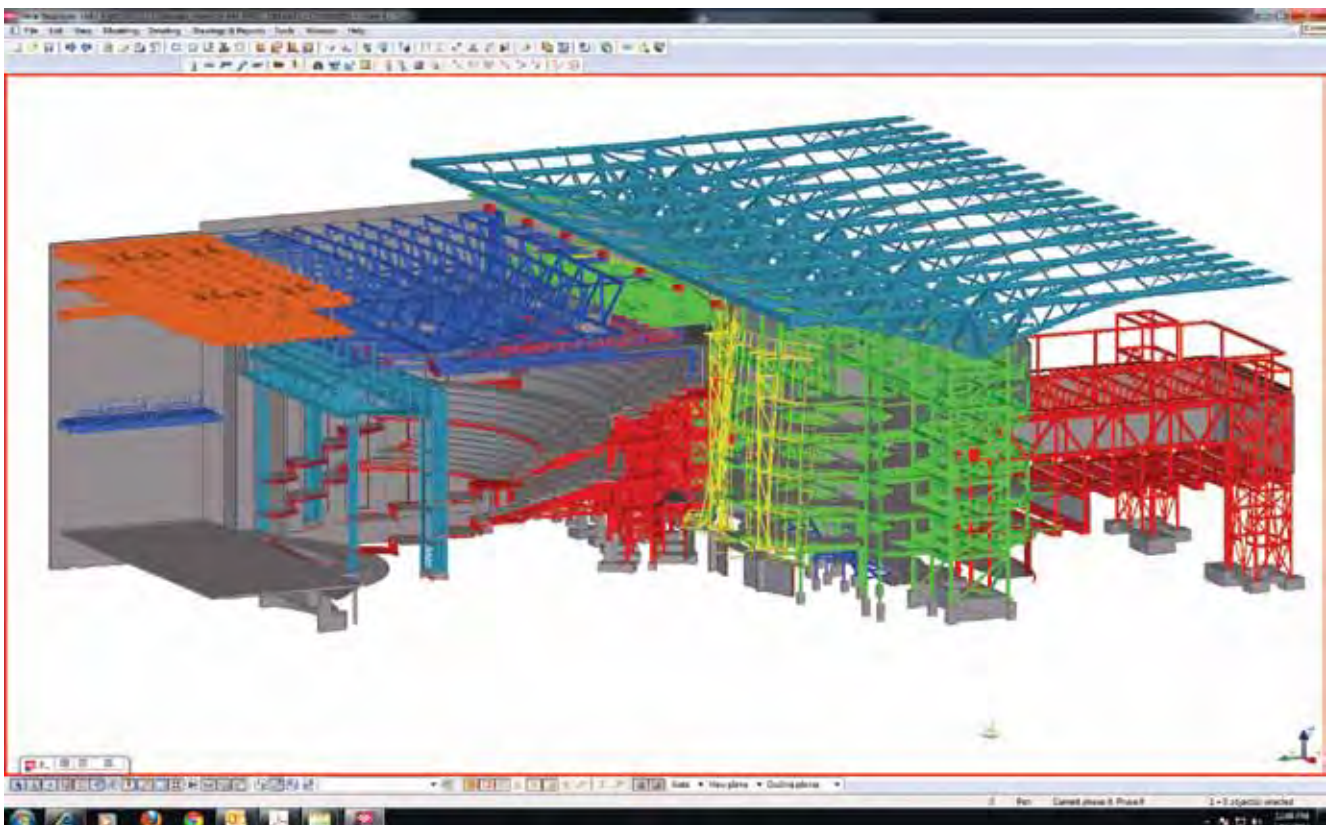


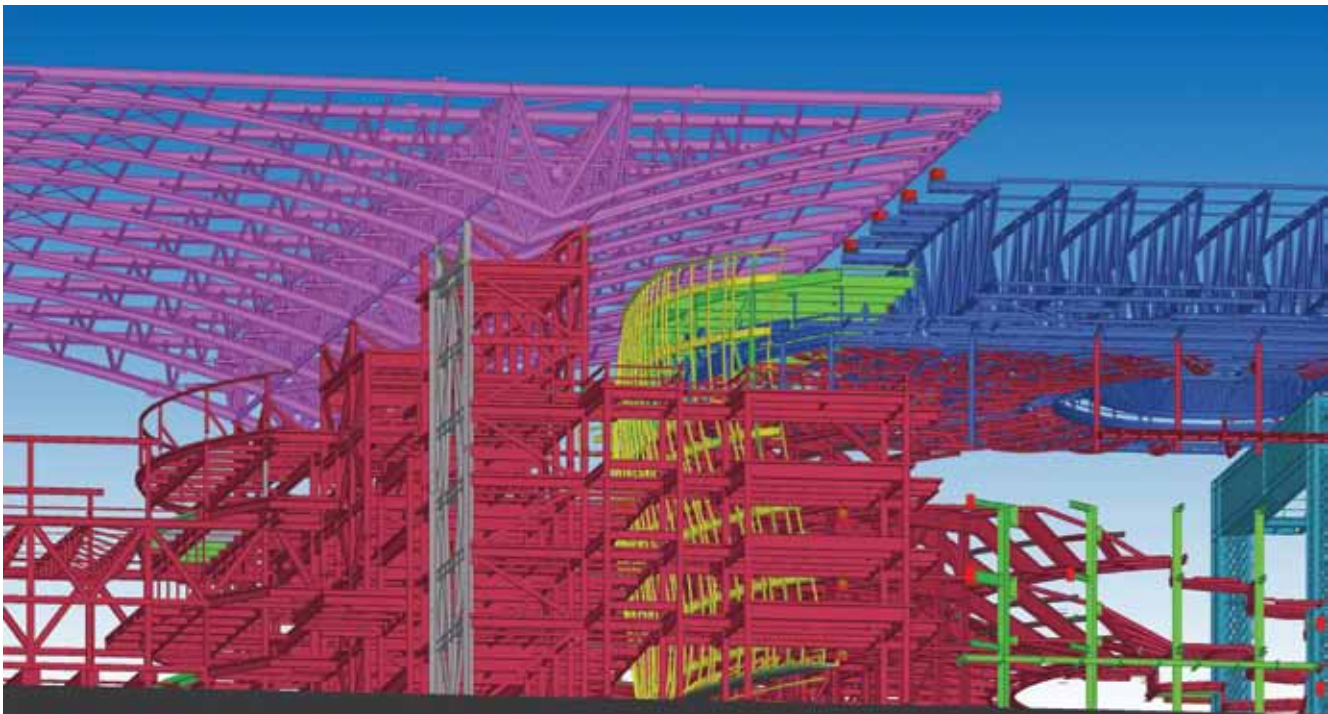
When completed, the Dr. Phillips Center will create a new cultural and social hub that will stimulate the local economy, create new jobs and enhance the city.

“With Tekla, you can handle the model almost as if you have it in your hands.”

– Mr Phil Martin, Founder and Managing Director, P.T. Seacad Services

According to Mr. Martin, the Dr. Phillips Center was a moderately complex project due to the shape of its walls. The walls of the centre are wavy, which made it more challenging to produce the drawings.





Once the detail drawings are completed, they are sent to the steel fabricator in Lynchburg, Virginia, some 16,500 km away.

“Using the latest version of the model, they can very quickly check the geometry and other aspects in different dimensions.” - Mr Phil Martin, Founder and Managing Director, P.T. Seacad Services

Tekla makes complex geometry easy

Because parts of the structure include complex geometry, Mr. Martin does not believe that it would even be possible to produce the workshop drawings manually for the Dr. Phillips Center. They include double curves, i.e., curves in two directions and conventional CAD programmes would struggle.

In contrast, it was a routine task to create the models in Tekla Structures. "With Tekla, you can handle the model almost as if you had it in your hands," he said.

"You can manipulate the 3D model like a physical model, almost like putty - all of which you cannot do with conventional CAD software".

Apart from the ability to handle complex geometry, Tekla was also invaluable to the project as preparing workshop drawings in Tekla is much faster than manually. This was particularly important with this project because even with Tekla Structures, Seacad has had to devote 31,000 man-hours on the Center. "If we had done it manually, it would have taken a lot more time than that," he said.

Tekla made it easy to handle design changes. When a model is changed, the ensuing workshop drawings immediately reflect the change as well. This is important because some 5,000 man-hours were expended just on the changes alone.

Doing clash checking and drawing up a parts and materials lists was also easier in Tekla.

Fabrication is easier with Tekla

Seacad's role is to produce the workshop drawings for the steel assemblies needed while Banker Steel, based in Lynchburg, Virginia, USA, fabricates these beams. The physical distance between Seacad in Jakarta and Banker Steel in Virginia is not a problem as communication happens on-line or by conference call and there is a two hour real time overlap at the end of Seacad's day and the start of Banker Steel's day.

After the workshop drawings are approved, they are sent to the fabricator in PDF format. Banker Steel has an engineer who uses Tekla Structures to view the model and to clarify the drawings for the workshop if and when required. "Using the latest version of the model, they can very quickly check the geometry and other aspects in different dimensions," noted Mr. Martin.

In addition, Tekla helps the fabricator to assemble different parts within a fabricated member. This is because Tekla is able to output the necessary NC and KISS files that will also scribe the beam to indicate the location of the welded fittings. "When the fitter comes to assemble the welded brackets, he can see the scribe marks to assist in attaching the fittings," said Mr. Martin. "We also provide extra check measurements to ensure alignment, especially in welded frames." This gives Tekla Structures a huge advantage over conventional CAD software.

When the Center finally opens its doors in 2014, the city of Orlando will have yet another world class landmark thanks to the efforts of Seacad, Banker Steel and Tekla.

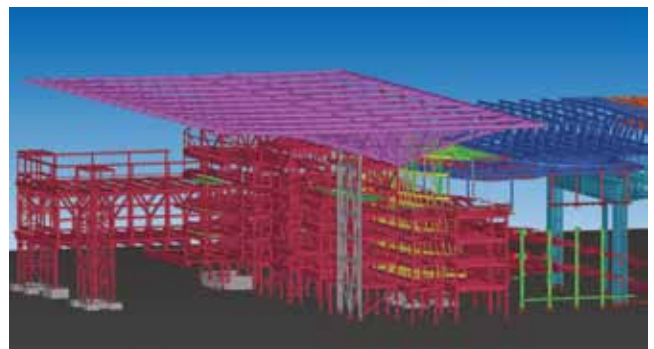
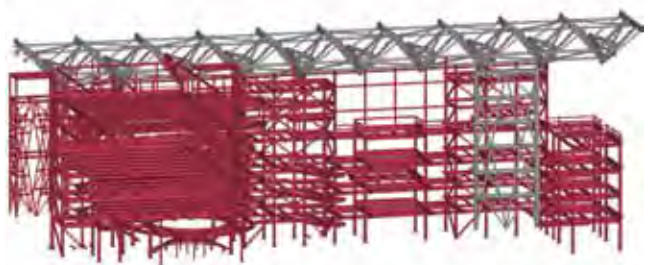
For additional information, visit www.tekla.com.



Seacad has spent 31,000 man-hours on the detail drawings for the Dr. Phillips Center.



Because parts of the structure include complex geometry, Mr. Martin does not believe that it would even be possible to produce the workshop drawings manually for the Dr. Phillips Center.



Tekla is able to output the necessary NC and KISS files that will also scribe the beam to indicate the location of the welded fittings.

Jakob at Sihl City

At Sihl City, the landmark shopping centre planned by architect Theo Hotz of Zürich, Jakob AG was able to implement several installations that play a key role in the design of the facility. They clearly illustrate that the company's products not only inspire aesthetic innovations but also offer cost-effectiveness benefits. Text by Mathias Remmele, Basel, Switzerland

Inaugurated in the spring of 2007 and stretching over an effective area of approximately 100,000 square metres, Sihl City in Zürich Wiedikon is one of Switzerland's largest and most advanced shopping and leisure complexes. Planned by architect Theo Hotz and built at a cost of approximately CHF 620 million, the large facility on the premises of a paper mill on the Sihl river attracts 20,000 visitors a day, offering a broad range of shops, restaurants, entertainment venues, and cultural events. Jakob AG participated in several facets of this project, which also represents a landmark from an architectural point of view. The eastern façade of the parking garage with a capacity of 850 cars was equipped with a "green wall" planned by Jakob AG, and the southern façade of the same building was covered with a stainless steel net across a large surface. In addition, Webnet structures were prominently used in the hallways of the shopping centre.



With a height of 23 metres and a width of 25.5 metres, the green wall of the parking facility at Sihl City represents a category of façade greening projects whose sheer size and resulting loads make it impossible to apply standard solutions. Jakob AG designed the training systems in cooperation with the planners of Raderschall, a Meilen-based landscape architecture firm, and implemented this façade greening task as a subcontractor. The scope of delivery included the planning and supply of the training systems but also their installation on site by experienced Jakob technicians.

The relatively wide-meshed training structure, formed by vertical and horizontal ropes of various thicknesses, is suspended at a distance of 70 cm in front of the eight-stories high, sectional-glass lined eastern façade of the parking facility in order to provide sufficient growing space for the plants which comprise in this case mainly Chinese wisteria and birthworts. Especially designed, rugged steel spacers permanently connected to the supporting structure of the building ensure safe anchorage of the ropes. The distribution of the spacers, mounted to the slabs of the second, fourth, sixth, and eighth floors, follows a clear-cut grid pattern that matches the facility's façade design which is characterised by a vertical strip pattern. The same applies to the vertical ropes of the training structure, which optimally matches the graphically strong aspect of the façade.

While the green wall on the eastern façade of the parking garage is particularly remarkable for its sheer size, the curtain over the building's southern façade with Webnet represents a hitherto unique application of this product. It is impressive with regard to both design and cost-effectiveness.

For this façade, architect Theo Hotz wanted a "skin-like", large-area structure that would preserve the original character and aspect of this sober and practical building to the greatest possible extent. A fine-meshed stainless steel net turned out to be the optimal solution of this task. Viewed from a distance, the Webnet appears here like a film tightly stretched over the edges of the fair-faced concrete building. Only a close view reveals the fine-meshed structure of the stainless steel net, which is very unobtrusively attached to the front surfaces of cantilevered floor slabs.

A unique visual effect is also created by the Webnet on the internal façade of the parking garage. Here, the visitor is offered a largely unimpeded view, which prevents the claustrophobic feeling that many people experience inside parking facilities. And to comfort more anxious souls, the external perimeters of the floors are additionally secured by a solid railing arranged in front of the Webnet curtain.



Thanks to Webnet, Theo Hotz was able to design a façade that is not just architecturally unique. The solution, implemented at relatively low cost, is also convincing from the cost-effectiveness point of view – not least because of the low maintenance costs of the stainless steel net.

Almost as remarkable as the Webnet façade of the parking facility is the design of the stairways inside Sihl City, where stainless steel nets replace the conventional banisters. This applies especially to the spiral staircases whose cores are secured with net stockings. The stockings are attached to the concrete ceiling of the staircase with a metal hoop and held in shape by vertically arranged stainless steel ropes running along the internal surface and fixed to the lateral surfaces of the slabs and steps. The seamless nets, finished at the factory, were installed on site in record time by Jakob AG technicians.

Cost considerations also influenced the choice of Webnet at Sihl City, but in addition to the price advantage, the architect was fascinated by the possibility of securing a flight of stairs with a minimum amount of material without compromising the lucid and pure appearance of the architectural assets. Quite to the contrary: the tightly stretched stainless steel stocking visually emphasises the cylindrical form of the central core, an effect that could not be achieved with a conventional banister.

For more information, visit www.jakob.ch.



PROJECT DATA

PROJECT: Sihl City
LOCATION: Zürich Wiedikon, Switzerland
OWNER: Investorengemeinschaft, vertreten durch CREDIT SUISSE FIRST BOSTON, Division Credit Suisse Asset Management
GENERAL CONTRACTOR: Karl Steiner AG
PHOTOGRAPHS: Photography, Brigitte Batt & Klemens Huber, Fräschels Switzerland
TRAINING SYSTEMS FOR GREEN FACADES, STAINLESS STEEL WIRE ROPES, NETS OF STAINLESS STEEL WIRE ROPES: Jakob AG

Buzon has been at the forefront of the pedestals industry for over 20 years and continues to offer unbeatable quality, durability, and environmental performance to building projects around the world. Here are two projects that the company completed recently.

Buzon pedestals specified in Reflections at Keppel Bay



Reflections at Keppel Bay. Photo: © Keppel

Having completed many prestigious residential projects around the world, Buzon was delighted to work with Woh Hup (Private) Limited to supply and install its pedestal systems at Reflections at Keppel Bay in Singapore.

Reflections at Keppel Bay has been designed by the internationally acclaimed architect Daniel Libeskind. It comprises a total of 1,129 luxurious waterfront condominium units housed in six glass towers of 24 storeys and 41 storeys as well as 11 blocks of 6- to 8-storey villa blocks. It offers choice units of 1- to 4-bedroom apartments and penthouses with sizes ranging from 700 square feet to a super penthouse of 13,300 square feet.

Reflections at Keppel Bay rises like an ascending symphony of chords, with its soaring towers and low-rise villa-styled apartment blocks.

The alternating heights and double curvature of the towers create a unique interplay of changing light planes and reflecting angles, presenting a spectacular sight at every turn.

Buzon pedestals were chosen for their proven performance, versatility, quality and safety. For this project, Buzon supplied approximately 25,000 pieces of pedestals to the area surrounding the big water feature in the development.

Buzon pedestals are 100 percent recyclable, thus making them befitting for the project which has bagged many awards since its completion in 2011. Reflections at Keppel Bay has won numerous prestigious local and international awards for being environmental friendly and architecturally innovative. Its awards include FIABCI Prix d'Excellence Awards 2013, Gold winner Residential (High Rise) Category; Universal Design Mark Award 2013, Platinum; Construction Excellence Award 2013, Merit; BCA Design & Engineering Safety Excellence Awards 2012, Merit; and The International Architecture Award 2012.



ROHMIX International checks in at Conrad Dubai

ROHMIX International L.L.C, a renowned representative for Buzon Pedestal International since 2005 for the GCC states, was pleased to work alongside Atkins Global to provide its high-quality pedestals to the new Hotel Conrad Hilton in Dubai, UAE.

Conrad Dubai, located at Sheikh Zayed Road, opened its doors to the public on 10 September 2013. The hotel, which offers top-notch luxury and sophisticated style, is within a short distance of Dubai's financial and shopping district.

Boasting an excellent portfolio of successful large-scale hospitality projects, ROHMIX presented a complete solution to meet the flooring needs of the hotel in the most efficient way.

ROHMIX installed around 2,300 pedestals at the children's swimming pool (700mm pedestal), beach area (450mm pedestals) and paver area (250mm pedestals) in the hotel. The total area installed with Buzon pedestals was approximately 500 square metres. The swimming pool and restaurant areas are operated by PUROBEACH a famous European lounge restaurant group.

ROHMIX was also appointed by Conrad Dubai as a sub contractor and installed a YOGA deck on one of the hotel's terraces without the pedestals. The company also placed parquet flooring in the hotel's spa, gym and two restaurants.

ROHMIX was delighted to provide its expertise and high-quality products to Conrad Dubai.



For more information, visit www.buzon-world.com.

Sika “engineers” complete flooring solution for Singapore Aero Engine Services

Singapore Aero Engine Services Private Limited (SAESL), commenced operations in 2001 as a specialist in the repair and overhaul of the successful family of Rolls-Royce Trent aero engines in Singapore. The company is a joint venture between SIA Engineering Company, Rolls-Royce and Hong Kong Aero Engine Services Limited.

With a reputation for service excellence and a well-developed customer base, SAESL is well positioned in the Asia Pacific region for continued growth through reliable and effective repair, maintenance and overhaul of Rolls-Royce Trent engines. Some of SAESL's partners are: Singapore Airlines, Malaysia Airlines, Thai Airways, Qantas Airways, Air New Zealand, Emirates Airlines, Qatar Airways, etc.

The company is constructing a new three-storey industrial building at Calshot Road, slated to be completed in the first quarter of 2014. Sika (Singapore) Pte Ltd is proud to be their strategic partner for supplying well-proven Sikafloor® Systems through Sika's applicator, Asset Protection Pte Ltd.

Sika (Singapore) Pte Ltd demonstrated to the client their expertise and understanding of the facility and worked with the project's main contractor, Boustead Singapore Ltd to create high-performance flooring surfaces for the building.

PROJECT DATA

PROJECT: New three-storey industrial building

LOCATION: Calshot Road, Singapore

OWNER: Singapore Aero Engine Services Pte Ltd (SAESL)

MAIN CONTRACTOR: Boustead Singapore Ltd

APPLICATOR: Asset Protection Pte Ltd

SUPPLIER: Sika (Singapore) Pte Ltd

PRODUCTS: Sikafloor® Systems

QUANTITY: More than 3,000 square metres

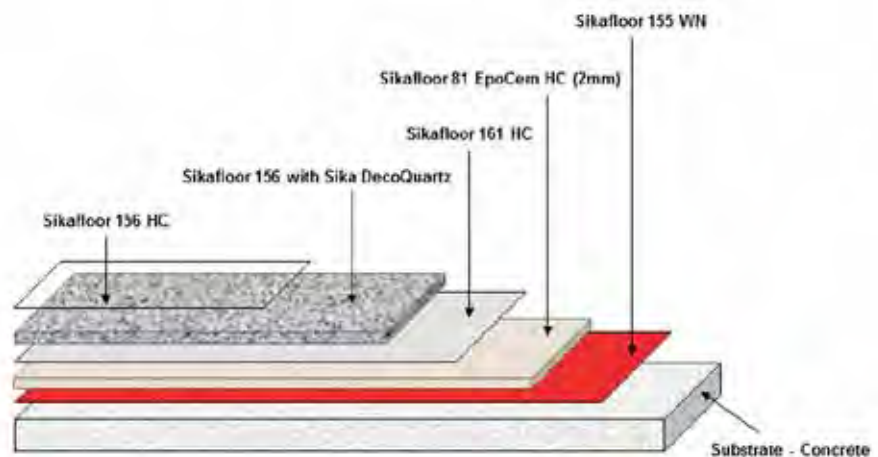
Sikafloor® Systems were installed for more than 3,000 square metres of area within the development, mainly at the Test Bed, Preparation Area and Control Block. The areas featured Sika's two market-leading products: Sikafloor®-81 EpoCem® and Sika®-DecoQuartz.

Sikafloor®-81 EpoCem® is a three component, epoxy modified, cementitious self smoothing screed. It is used as an intermediate temporary moisture barrier that reduces the high initial substrate moisture content of concrete, allowing the application of a coating of flooring to a green or damp concrete, reducing completion time and eliminating the risk of blistering.

Sika®-DecoQuartz is a highly decorative solution with excellent slip resistance. It allows the creation of a combination of functional and aesthetic requirements.

The Sikafloor® systems delivered exceptional results, assured a rapid and perfect finish and completion on schedule. This is a typical trademark of using Sikafloor® products and systems.

For more information, tel (+65) 6777 2811 or visit <http://www.sika.com.sg>.



Sikafloor® Systems build-up



Surface preparation



Application of Sikafloor® 81 EpoCem.



Application of Sika® DecoQuartz.



Image of the finished floor showing Sika® DecoQuartz.



Finished floor at the preparation area and control block.



Finished floor at the test bed area.

HUFCOR – The Acoustic Operable Partitions Expert

Catering to a broad spectrum of sectors.

As the global market leader in flexible space management, HUFCOR is a US-based corporation, with an internationally acclaimed heritage of over 110 years, providing one-stop total solutions from design, manufacturing, project management, to installation and product maintenance.

HUFCOR is reputable with its premier quality and highly acoustic performance operable partitions, which cater to a broad spectrum of sectors for customers all over the world e.g. hotels, convention centres, restaurants, offices, churches, schools, club houses, government building... etc.

With the rapid growth of business in Asia Pacific, HUFCOR had many projects installed lately and here the company shares a few projects from different industries with its premier Classic™ 7000 series and widely used Aluminum 5000R.



Nexus 5 Club House | Malaysia

Industry: Clubhouse

Heights: 7.5 metres

Completion: September 2013

Model: Classic™ 7000 series

Acoustics Level: STC 51



UNITAR International University | Malaysia

Industry: Education
Heights: 3.7 metres
Completion: August 2013

Model: Aluminum 5000R
Acoustics Level: STC 42



Church of Immaculate Heart of Mary | Singapore

Industry: Religious
Heights: 4.5 metres
Completion: April 2013

Model: Aluminum 5000R
Acoustics Level: STC 51

For more information, contact HUF COR in Malaysia at (+60) 3 8993 9218 or in Singapore at (+65) 6742 9062. You can also visit www.hufcor.com.hk to know more.

CNA prescribes perfect solution for National Heart Centre Singapore



Photo: © National Heart Centre Singapore

The National Heart Centre Singapore (NHCS) is a 185-bed national and regional referral centre for cardiovascular diseases. It provides one-stop comprehensive preventive, diagnostic, therapeutic and rehabilitative cardiac services for heart patients.

Each year, NHCS handles over 100,000 outpatient consultations, 7,000 interventional and surgical procedures and 10,000 inpatients. It is the first heart centre outside USA to receive the prestigious Joint Commission International (JCI) since 2005, which is an assurance for safe and quality patient care for the patients.

At 10,000 points, this was one of the biggest hospital wing projects in Singapore at the time of construction. **CNA**, Award Winning Master System Integrator, installed 560 American Auto-Matrix controllers into the building. With expertise in every field, from programmers to project managers, graphic engineers to green mark managers, CNA successfully implemented the American Auto-Matrix building automation system.

With that, NHCS was awarded the Building and Construction Authority Green Mark Platinum Award 2012 for integrating various energy efficient and eco-friendly features in its new building.

The new building will enjoy a hefty 30 percent reduction in energy consumption due to the absence of direct West-facing facades, extensive natural ventilation in the concourse area, installation of an efficient air-conditioning plant and management system and the use of regenerative lifts. This translates to annual energy savings of an estimated S\$1.3 million and a drop in carbon emission by 3,000 tonnes a year.

For more information, tel (+65) 6511 0082, e-mail sales@cna.com.sg or visit www.cna.com.sg.



Photo: © National Heart Centre Singapore