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editor's note

Hello and here's wishing all our readers and advertisers Happy New Year 2014 in advance! Let us wish that the new year will hopefully be off to a good start.

We have made some great changes within the company and I have some good news to announce to you!

NEWS#1 – We have launched a redesigned website with a number of new features intended to "enrich the editorial and advertising experience". The new site offers simplicity, ease of use and a strong focus on content delivery in mind.

Information on our six publications is now easier to find, thanks to the new layout. Each publication has its own domain name, which allows you to directly access the publication's site to read the latest industry news or to download the PDF of the magazine. We hope you like the fresh new look to the website and the improved navigation as much as we do! Check out our new company website, *http://www.tradelinkmedia.biz* and SEAB's website, *http://seab.tradelinkmedia.biz*.

NEWS#2 – We have created an official Facebook page, as a new platform to communicate with our readers. Please like us at *https://www.facebook.com/TradeLinkMedia*. On this page, you will links to the individual Facebook pages of our six publications. Readers of SEAB can click on *http://www.facebook.com/southeastasiabuilding*. We hope to keep you updated with exhibition reports, news, trends and anything new and exciting in the architecture world.

If you have any comments or feedback regarding our new website and Facebook pages, do let us know. Meanwhile, I hope you enjoy this Jan/Feb 2014 issue of SEAB. It is packed with the latest news, features, and show previews and reviews.

Amita Natverlal

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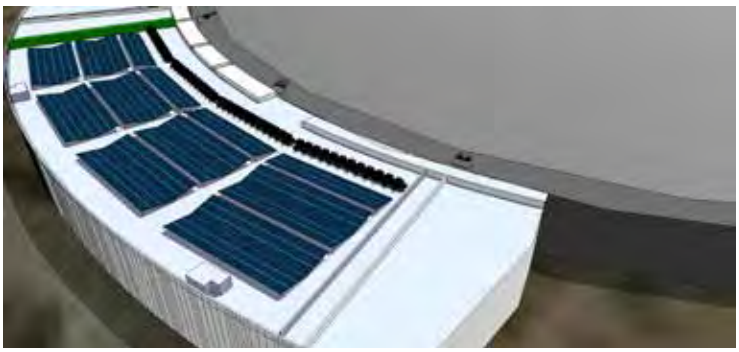
Phoenix Solar to build a 707kWp photovoltaic (PV) system in the Singapore Sports Hub

Singapore – Phoenix Solar Pte Ltd will design and construct a 707kWp photovoltaic (PV) system at the Singapore Sports Hub, a Public-Private Partnership established between the Singapore Sports Council and SportsHub Pte Ltd.

Among other facilities, the Sports Hub will include a new 55,000-capacity National Stadium with a retractable dome roof. The PV system will offset the energy required by the stadium's bowl cooling system, making it carbon-neutral.

Phoenix Solar will own and operate the system and has signed a 21-year solar power purchase agreement with SportsHub Pte Ltd. This gives Sports Hub stable electricity prices for the next 21 years, with no up-front investment.



Partial view of the Singapore Sports Hub PV System. Photo: © Phoenix Solar

"This is a great project for Phoenix Solar. PV is commercially viable today, and the Sports Hub is a perfect setting to demonstrate the integration of PV in Singapore's urban landscape," said Mr Christophe Inglin, Managing Director of Phoenix Solar.

Constructed using REC modules and SMA inverters, the PV system will occupy an area of approximately 7,000 square metres. Its prominent location within the Sports Hub will provide a unique showcase for PV technology, with exposure to a wide cross section of the population – both local and international.

"We are very pleased to work with Phoenix Solar. They have combined solid technical expertise with an aesthetic design to integrate their PV power plant in the Sports Hub campus. This is just the beginning of the Singapore Sports Hub's plan to integrate innovative technologies into this state-of-the-art sports, entertainment and lifestyle hub," said Philippe Collin Delavaud, Chief Executive Officer of SportsHub Pte Ltd.

Singapore Sports Hub wins World Architecture Festival Award

Night view of the Singapore Sports Hub. Photo: © SportsHub Pte Ltd

Singapore – The Singapore Sports Hub was awarded the World Architecture Festival (WAF) Award for Best Future Project in the leisure-led development category at the World Architecture Festival, held at Marina Bay Sands on October 2-4, 2013.

The Sports Hub was one of seven projects across the globe to be shortlisted for this prestigious award. "From the start of this project, our design ambition was to create a sustainable, fully integrated sports, entertainment and lifestyle hub that is accessible to people from all walks of life. We are extremely happy for this socially meaningful project to win and greatly honoured that our efforts have been rewarded; being the homegrown architect of the winning design team made it even more fulfilling," said Teoh Hai Pin, Director, DP Architects.

Clive Lewis, Arup's Lead Architect for the Singapore Sports Hub added: "It is great to see a sport and leisure project winning this accolade. This is a reward to 12 years of planning, 8 years of intense design work and the amazing foresight and vision of the Singapore Sports Council who made this project happen. We are so excited to win this award and look forward to seeing the Sports Hub completed next year."

Philippe Collin Delavaud, CEO, Singapore Sports Hub, who expressed his delight at the win, said: "Winning this award is an achievement for the team at Singapore Sports Hub who have worked hard to make this possible. The uniqueness of Singapore Sports Hub is its flexible and scalable nature.

When it opens in 2014, the people of Singapore will not only have a place to watch, play and support world-class sports and entertainment but will also have a host of community programmes, Sports Experience initiatives and Retail Mall facilities for their everyday use."

The Singapore Sports Hub consists of a unique cluster of integrated world-class sports facilities, including the iconic National Stadium, the Aquatic Centre and the Sports Halls. The multi-usage nature of the facilities was a key factor in swaying the judges' decision. The National Stadium itself is the first in the world designed to host athletics, football, rugby and cricket all in one venue.

According to the judges, the "Singapore Sports Hub won this category due to its exemplary masterplanning vision, engineering, solutions and handling of diverse programme scales – [in order] to generate an important new addition to Singapore, which will be open to all."

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IIAC hosts groundbreaking ceremony for the 2nd Passenger Terminal

Incheon, South Korea – Ministry of Land, Infrastructure and Transportation (Minister Seung-hwan Seo) and Incheon International Airport Corporation (President & CEO Chang-soo Jung) held the groundbreaking ceremony for the 2nd passenger terminal in construction site of the terminal on 26 September 2013. This 2nd passenger terminal represents one of the main facilities of the 3rd Phase Construction Project.

Ground breaking ceremony. Photo: © IIAC

Around 1,000 people from politics and the government join the ceremony including: Prime Minister Hong-won Chung; Vice Minister Hyeong-goo Yeo of Land, Infrastructure and Transportation; President& CEO Chang-soo Jung.

The Prime Minister said: "Incheon International Airport would raise its status not only in the North East Asia but in the global arena, boosting Korean economy at the same time" adding that the 3rd phase construction project is expected to create 93,000 new jobs and KRW 17 trillion of economic effects, positioning itself as a leading model of creative economy.

He pointed out that the project would also help make the 2018 PyeongChang Winter Olympic Games as a venue for global festival. In addition, he asked the workers at the construction site to be committed to building high-quality terminal as well as preventing accidents, with a solemn sense of duty.

To meet the passenger demand which has been on the rise over 6 percent ever since its grand opening on 29 March 2001, IIAC completed the second phase of the construction project by building the 3rd runway adding to existing ones, and concourse, June 2008.

Because of this growing passenger demand, main facilities such as passenger terminal and apron are expected to be saturated in their capacity by 2017. In that sense, IIAC decided to undertake the 3rd phase construction project with the central plan of building the 2nd passenger terminal.

Artist's impression of the second passenger terminal. Photo: © IIAC

The 3rd phase construction project would help make IIAC meet the increasing aviation demand as well as leading the competition with neighboring countries, which would be completed by the end of 2017 before the opening of PyeongChang Winter Games.

Around KRW 4.9 trillion would be invested in the 3rd phase construction project among which: KRW 2.2 trillion for constructing the 2nd passenger terminal; KRW 920 billion for building traffic network; KRW 230 billion for the 2nd transportation center.

IIAC's passenger processing capacity will cover 62 million passengers from today's 44 million and cargo handling capacity from 4.5 million to 580 million tons, once the 3rd construction project is completed.

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Schneider Electric's Variable Speed Drives receive Green Building Product Certificate

Singapore – Schneider Electric announced that the company's Altivar 212 and Altivar 61 Variable Speed Drives (VSD) have been conferred the Green Building Product Certificate by the Singapore Green Building Council.

The certification establishes both Altivar 212 and Altivar 61 as certified energy efficient products, which will assist building and facilities managers in their application for Green Mark certification in Singapore.

The Altivar 212 and the Altivar 61 VSD are the first products in their range to receive the certification. Both VSDs were received the certification in recognition of the products' features which reduce energy consumption by up to 30 percent, thus allowing buildings to reduce their environmental impact.

These features include an integrated EMC filter, which allows for a more compact size and simplified wiring, reducing equipment costs while optimising performance. Both drives are able to adjust motor speeds to the required flow of air or fluids, saving energy in the process. Also engineered to provide additional cost savings, the drives come with electronic motor controls that reduce the mechanical stress on belts, piping and ductwork and eliminate valve or inlet guide vane maintenance.

"Schneider Electric is honoured to be the first VSD manufacturer to receive this certificate. It strengthens our positioning as a leader in the smart buildings space and will enable us to better help companies that want to go green," said Ang Koon San, Country President, Schneider Electric Singapore and Brunei. "It is a testament to our commitment to innovation and we will continue delivering top quality products to our customers."

Singapore Country President Ang Koon San receiving the Green Building Product Certificate for Altivar 61.

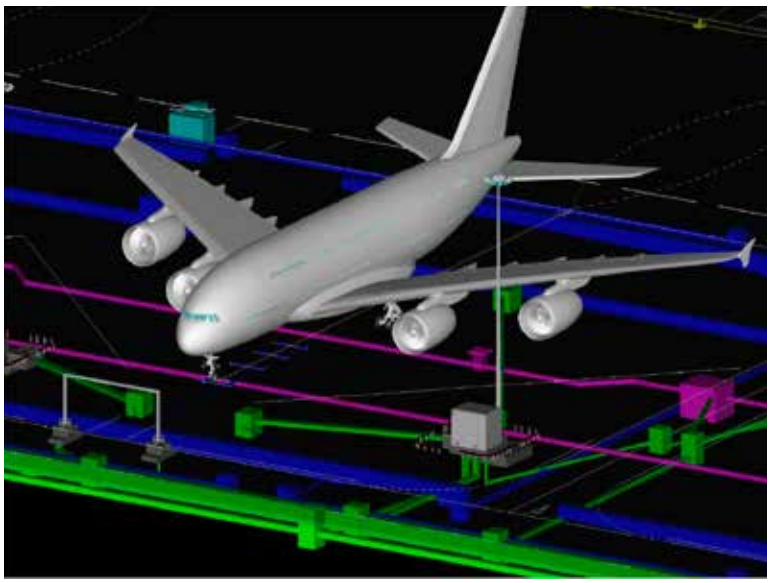
The Altivar 212 and Altivar 61 VSD are available directly through Schneider Electric, as well as through channel partners.

Atkins wins third expansion contract on Hong Kong International Airport

Hong Kong – Atkins has won a further contract from the Hong Kong Airport Authority as lead consultant responsible for the scheme design of the airfield and apron extension works which form part of their overall development plan to meet future demand at the Hong Kong International Airport.

In a response to the latest capacity study for the Hong Kong International Airport, 10 additional passenger aircraft parking stands are required to serve the new Midfield Concourse Building, which is currently under construction. The apron extension will provide further flexibility for future airport operation and development.

Damian Creally, Atkins' project director, said, "Over the last few years, the Hong Kong International Airport has grown in capacity, currently handling some 56 million passengers a year and is the world's busiest airport by cargo traffic. Key to its future success is the expansion programme, which we are delighted to be involved with. Atkins has a history of working with the Hong Kong International Airport dating back to 1994 when we were appointed to design the airfield and apron pavements for the entire airport."



3D visualisation of aircraft parking stand showing underground services.

The project includes the design of taxi lanes and apron pavement, airfield and apron drainage systems, aviation fuel system, combined potable water and fire hydrant system, automatic people mover system expansion, apron services and communications systems infrastructure and associated ancillary buildings. The works also include airside road traffic modelling.

The scheme design works are expected to be completed in mid 2014, with an option to extend the services for detailed design and construction supervision.

Atkins is also currently involved in the scheme design for the Third Runway Development reclamation and various other infrastructure works contracts at the Hong Kong International Airport.

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Teal unveiled as Colour of the Year 2014

Singapore – AkzoNobel ColourFutures™ has unveiled Teal as the Colour of the Year 2014 at the World Architecture Festival 2013. The Colour of the Year was chosen by a panel of international colour experts assembled by AkzoNobel's Global Aesthetic Center. These experts had arrived at their decision after distilling and discussing trend and colour concepts that made waves over the past year.

Teal was chosen as the Colour of the Year 2014. It represents balance as well as sophistication, tranquility and versatility. Photo: © AkzoNobel

The theme for 2014 is "Unlocking Potential", where we encourage the world to harness and explore the potential found in everyday spaces – in our homes, offices, schools and even factories.

Teal was chosen as the Colour of the Year 2014 as it is the amalgamation of blue and green. Sitting somewhere between these two colours, it represents balance as well as sophistication, tranquility and versatility.

In addition to the colour of the year, ColourFutures also identifies five broad colour design trends for interior and exterior decoration, and presents palettes of complementary colours that can be used to create these trends in the places where we live, work and play. These five trends are:

Silent Revolution. Photo: © AkzoNobel

Managing Director, AkzoNobel Decorative Paints for South East Asia & Pacific Jeremy Rowe unveiled Teal as the Colour of the Year 2014 at the World Architecture Festival 2013. Photo: © AkzoNobel

(1) SILENT REVOLUTION

This trend is very subtle, using slight shifts in hue and tone to create delicate combinations of tinted white and neutral mid tones. This palette gives a restful and silent effect that showcases the trend's use of texture and natural materials.

(2) URBAN FOLK

The Urban Folk palette is alive with friendly and robust shades that feel familiar, and yet at the same time look new. The colours of this palette are inspired by the homely shade of a cross-stich pattern, the bright ornamentation of Russian dolls, the light and cheery decoration of Scandinavia as well as the sumptuous fabrics of India, South America and China.

Urban Folk. Photo: © AkzoNobel

(3) MARGIN OF PROOF

This palette was inspired by how we map our fast-paced lives. This is a mature and measured neutral palette accented with colours such as bright teal, scarlet and ochre, which complement natural materials like dark wood, marble, cork and concrete.

Margin of Proof. Photo: © AkzoNobel

(4) SECRET GARDEN
This look is romantic, poetic and curious, with misty shades adding a subtle veil of surprise to create a feminine, yet enigmatic effect. It is filled with soft, smoky tones of green and lilac.

Secret Garden. Photo: © AkzoNobel

(5) DO IT NOW
This palette represents "Get Up And Go For It!" This is a high-octane, energetic medley of colours where anything goes. This is a palette that creates a riot of colours, where there is something for everyone.

Do it Now. Photo: © AkzoNobel

Commenting on the unveiling, Managing Director, AkzoNobel Decorative Paints for South East Asia & Pacific Jeremy Rowe said, "Colours play a very important role in everybody's lives. Colours are everywhere and they influence the way we feel and behave. As the global colour authority, AkzoNobel introduced ColourFutures™ to understand and anticipate what the trends in the future are and to map them to a colour for people around the world to incorporate into their lives in the next year."

AkzoNobel launched ColourFutures™ in the hope of inspiring the world to add a spectrum of colours and shades into their lives, and 2013 marks a decade of its existence.

Since its introduction, ColourFutures™ has earned global recognition and is now the trusted source of colour inspiration for countless professionals in industries such as interior, industrial, product, fashion and architectural designs.

Mr Rowe said, "As we look back on the decade and reflect on how colours have shaped our lives, it is important for us to look ahead and develop even more vibrant colour palettes for the world in the next 10 years. It is our hope that ColourFutures™ can continue to serve as inspiration for people as they live their lives at work, home and play."

Hilton Kuala Lumpur redefines itself with a new urban park design concept

Kuala Lumpur, Malaysia – Hilton Kuala Lumpur, an award winning flagship hotel for Hilton Hotel and Resorts in Asia, continues to push the envelope with a new urban park design concept that is inspired by themes and motifs from nature.

This new design language totally transforms the entire lobby area of the hotel and infiltrates into its five new concept dining outlets. With a bold and contemporary modernist approach, it is a complete departure from traditional hotel design with its open concept, alfresco like environment.

Taking inspiration from the wonderful green vista of the Lake Gardens that acts as a backdrop to the hotel, the urban park concept is designed to bring the serenity of this natural landscape into the hotel's main public areas and new concept dining outlets, creating an oasis of serenity and calm for hotel guests, a sanctuary from the hectic frenzy of urban existence.

Motifs, colours, patterns and textures inspired by nature along with organic shapes and structures are used to create a holistic design language. However, they are interpreted and expressed in different ways so each area in the hotel still has its own distinct character.

In addition, in keeping with its reputation as a leading hotel for the international business traveler, all the redesigned public spaces feature data points to support electronic devices and Internet access.

The new design concept was part of a major refurbishment the hotel underwent in the first half of this year to create a dynamic new environment in its main public areas for it hotel guests and to introduce five new F&B concept dining outlets.

Lobby of Hilton Kuala Lumpur.
Photo: © Hilton Kuala Lumpur

Playpoint builds 'battleship' themed playground for Sembawang Park

Singapore – Playpoint (Singapore) Pte Ltd has designed and installed a massive battleship play structure in the middle of Sembawang Park.

Commissioned by National Parks Board in Singapore, the battleship themed playground was built in memory of two unsinkable British Battleships that sank after being attacked by the Japanese.

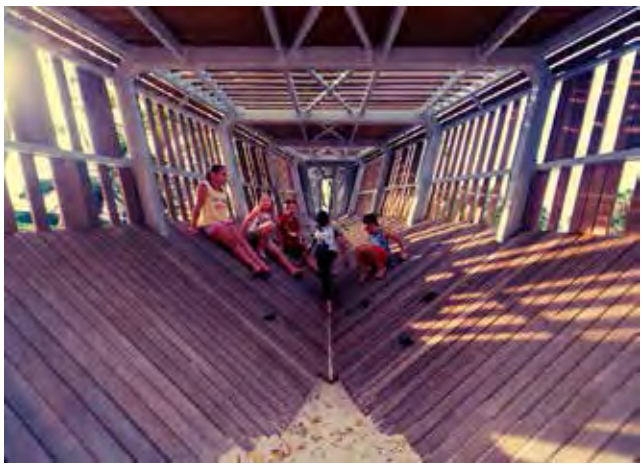
Designed and built by Playpoint, the battleship themed playground is made entirely of wood and steel. The playground comes complete with gun turrets, propellers, smoke stacks and even a rudder. A red climbing net, built in reminiscent of a naval flagstaff, is constructed beside the Battle ship. There are three main entry points to the battleship for the children to start off their battle ship adventure. Firstly is by climbing up a rope ladder, secondly is via a rock wall and lastly is through an escape opening at the side of the ship.

Upon entering the ship, kids can wriggle their way across a hanging grid net. Once the net is successfully navigated, all that is left for them to accomplish is to spiral downwards back to the sand below! For a greater adrenaline rush, they can climb up even higher for more twirling action!

In addition, children can challenge themselves by climbing on top of the decks and be rewarded by experiencing the feeling of being at sea. This is made possible due to the sloping decks.

The Battleship structure allows children to have pretend play, and associative play, This stimulate decision making and encourages children to climb, hide, jump, and slide. It allows children to use their creativity while developing their imagination when navigating through the ship.

Commenting on the project, Mr Jason Sim, Managing Director, Playpoint (Singapore) Pte Ltd said the National Parks Board approved the company's concept proposal for the battleship playground without any changes. But the most challenging aspect of the project, he said, was the execution. Playpoint spent almost one year on designing, sourcing for play parts and finally installing the 36-metres playground in the park. In addition, it had to obtain a BCA approval, the first of its kind for a playground in Singapore. "This is our first foray into a battleship theme playground and the entire process was very challenging but satisfying one. The finished play structure has created a highly positive impression and we are very happy with the outcome," said Jason.



PALM EXPO China scheduled for May 2014

Singapore – The annual PALM EXPO exhibition returns to China and will be held at the New China International Centre Beijing, China from 26-29 May 2014. With an impressive track record for the past 22 years, PALM EXPO is claimed to be the China's biggest and most established event in Pro Audio, Lighting, Music and Technology industry. PALM EXPO is also dubbed as the world's second largest event of its kind complete with exhibition, conference, seminars and workshops.

The 23rd staging of PALM EXPO continues to reign as the key sourcing platform for International and Asian industry professionals and buyers to penetrate into the huge China Market. The 2013 PALM EXPO China attracted more than 1,100 exhibitors; 50,000 visitors from 76 countries; and spreading over 110,000 square metres of floor space and supported by 57 international and local media partners, PALM EXPO is a must attend for all industry professionals.

PALM EXPO China 2014 is co-organised by China Entertainment Technology Association (CETA) - a national first-class social organisation in the Ministry of Culture, People's Republic of China, and is the authorised representative in the entertainment equipment industry of China, leading and coordinating the economic and technical development of the national entertainment equipment industry. With strong support from the local governments and associations, PALM EXPO is the perfect stage to gain direct access not only to major cities but also 2nd – and 3rd –tier Cities in Greater China.

Created by the industry, for the industry, PALM EXPO plays a critical role in bringing together industry players from around the world to showcase their latest products and services to all segments involved. For manufacturers, distributors, agents, dealers and OEM, PALM EXPO is not just the bridge to trade, professional and corporate users, but also the perfect platform to network with local and international key players, exchange ideas and cast spotlights onto the future trends, technologies, innovations and grow their market share.

"Being the largest exhibition in China, we consider PALM EXPO as the perfect platform to present to market insiders on what Shure has to offer. The show provides a direct connection for Shure and our end users, dealers and contractors, all over China. We leverage on PALM EXPO to show Shure full-line products and launch our new products to customers and industry veterans. PALM EXPO provides a good opportunity for us to communicate with our customers face to face," said Andy Chan Senior Manager, Shure Asia Limited.

Informa Exhibitions, Exhibitor Director, Ms Juri Tan added: "PALM EXPO has been a predominating event for the industry and has established itself as the event not to be missed. Our strong partnerships with the associations allow us to make it easier for our exhibitors to penetrate into the world's second largest economy and one of the world's fastest growing countries in our time."

Dubai Investments launches "world's first" coloured energy-generating solar glass

Dubai, UAE – In a step that is set to revolutionise glass technology across the globe, Dubai Investments PJSC (DI), the largest investment company listed on the Dubai Financial Market (DFM), has announced the launch of the "first-of-its-kind", coloured solar glass in the world which generates energy on its own.

The launch of the new technology coincided with the announcement of a new entity – Emirates Insolaire, entrusted to introduce the breakthrough concept across the world. Emirates Insolaire is part of Glass LLC, the glass pioneers in the Middle East and a wholly-owned subsidiary of Dubai Investments PJSC.

Emirates Insolaire is a joint venture using Kromatix™ technology of SwissINSO SA, a Switzerland-based pioneer in the development and application of new solar technologies and products. The company will produce the solar glass at the Emirates Glass manufacturing facility in the UAE, which has been modified to adapt the new technology.

The breakthrough glass, developed in close collaboration with the Swiss Federal Institute of Technology (EPFL – Ecole Polytechnique Federale de Lausanne), comes in virtually any colour. Optimised for both photovoltaic modules – which use cells to convert solar radiation into electricity – and solar thermal collectors, the glass provides a mat coloured, architecturally aesthetic appearance to solar panels, preserving more than 90 percent of efficiency.

Emirates Insolaire is targeting 10 percent of the global solar glass market within a short period. Over a billion square metres of solar glass – both photovoltaic and thermal – would be installed across the world by 2015, industry estimates reveal. Khalid Bin Kalban, Managing Director and CEO of Dubai Investments, said: "We are thrilled with the launch of this revolutionary solar glass technology here, which could literally transform the manner in which we use solar energy for our homes, offices as well as the commercial buildings. This is a significant paradigm shift in solar glass technology, and we see significant growth opportunities going forward as we accelerate market penetration. The launch of this new technology and product is in line with the green initiatives undertaken by the Dubai government to diversify energy sources and we at Dubai Investments have remained committed to sustainable business practices which led us to the prestigious ISO certification for our DI Headquarters building earlier this year."

Mr Khalid Bin Kalban, Managing Director and CEO of Dubai Investments, speaks at the press conference. Also seen - from left to right -Marco Kohs, Plant Manager at Emirates Glass LLC, Mr Rafic Hanbali, Chairman and CEO of SwissINSO, and Ziad Yazbeck, Senior Vice-President – Sales and Marketing, Glass LLC.

He added: "Kromatix is a first-of-its-kind business model not only in the region, but across the entire world. The technology is highly sustainable and is a major innovation for potential application in commercial and residential projects across the region – blessed with natural sunshine all year round. The solar glass will be launched in two phases – the phase one would involve glass adapted with the new technology while the second phase would encompass the manufacturing of the entire architectural panels. This launch is part of our commitment to adopting the latest technological innovation and making us the pioneers in the glass industry."

The coloured solar glass technology has already generated a lot of interest in the sector, with clients across several markets including Switzerland, Germany, United Kingdom, France, Italy, USA, Brazil, India, Singapore, Dominican Republic, among others, lined up to receive and certify their panels with the new technology from the manufacturing unit in the UAE.

The photovoltaic market, in particular, has achieved exponential growth globally over the years. The market was 40 GW (Gigawatts) in 2010, representing 200 million square metres of glass, and has grown 40 percent year-on-year. The number of installations foreseen for 2015 is 160 GW – approximately 800 million square metres of glass. The thermal solar glass market was 183 million square metres in 2006, and has been growing by 12 percent year-on-year since then. The faster growth pace today as well as for the future, is the photovoltaic integration on buildings.

The share of BIPV (Building Integrated Photovoltaic) for roofs and facades, one of the specialisations of Emirates Insolaire, is also witnessing rapid growth. It was 5 percent few years ago, and in the near future it is expected that the solar installations on roofs and facades will represent 60

percent of the total solar market.

Rafic Hanbali, Chairman and CEO of SwissINSO, said: "We are happy to work with Dubai Investments for the production of the coloured solar glass with Kromatix™ technology. This launch provides us with a significant first-mover advantage, a one-stop complete process, especially considering that the market potential for coloured solar panel is huge. The coloured solar glass technology is expected to become the norm and standards in the construction industry over the next three to five years, particularly when considering the present and expected growth of solar integration into buildings. These buildings, by will or by law, will have to become energetically independent and Kromatix™ is the only road available today for this integration."

He added: "In order to maintain the high efficiency and provide the aesthetical appearance for the glass on façades, roof-tops and utility installations, the glass at Emirates Insolaire receives several treatments of interferential nano-metric layers on one side and surface treatment on the other side. The result is a beautiful, highly-efficient Kromatix™ glass for solar energy with a masking effect occulting the inner captors, resulting in a mat non reflective surface."

The solar glass generates electric power, has an aesthetic look and is highly sustainable. On one side, no material used in the technology causes any potential harm to the environment while on the other side it allows all buildings to help sustainability by offering their façades and roofs for green energy production.

It is a known fact that the sun produces enough energy in one minute to power the Earth's population for an entire year. Each coloured solar panel with Kromatix™ technology can generate above 130 watts electric power per square meter on roofs or above 100 watts per square metre on façades. Approximately 2,000 panels on one building are capable of generating 200KW electric power.

First KONE UltraRope™ installed at Marina Bay Sands in Singapore

Singapore – KONE made its first customer installation of its new, super-light and durable KONE UltraRope™ elevator hoisting technology at Marina Bay Sands integrated luxury resort in Singapore. The new elevator hoisting ropes were installed in a passenger elevator that travels from the ground floor to floors 34-57, or 195 metres, in Tower 3 of the hotel.

Made up of three impressive hotel towers and a spectacular Sands Sky Park that connects them, Marina Bay Sands was opened in 2010. It houses 146 KONE elevators and 6 KONE escalators, and KONE also maintains the equipment. In upgrading the steel elevator hoisting ropes to KONE UltraRope™ for one of its elevators, the resort has made a further commitment into energy efficiency and smoother people flow.

Comprised of a carbon fibre core and a unique high-friction coating, KONE UltraRope eliminates the disadvantages of conventional steel rope. It is extremely light meaning that the elevator energy consumption in high-rise buildings, such as Marina Bay Sands, can be reduced significantly. It is also extremely strong, highly resistant to wear and abrasion, and has an exceptionally long lifetime – at least twice that of conventional steel rope.

"We have had a lot of interest in KONE UltraRope globally since it was announced in June, and I am very excited that the first global installation was made here in Singapore at the impressive Marina Bay Sands, a symbol of the city and of innovative building technology. Marina Bay Sands is a pioneer in adopting state-of-the-art technology and of smart building, and it is very fitting that our first KONE UltraRope installation was made here," said Noud Veeger, Executive Vice President and Area Director for KONE in Asia-Pacific and Middle East.

The modernised KONE MiniSpace™ was taken into use in September 2013, and was made public in connection with the World Architecture Festival (WAF), which is held in Singapore in the first week of October 2013.

KONE was a sponsor of WAF, the world's largest festival and awards ceremony for the global architecture community, dedicated to celebrating and sharing architectural excellence from across the globe.

Ari Virtanen, Senior Vice President, Access Control and Integrated Solutions, KONE

KONE People Flow Intelligence. The KONE People Flow Intelligence is a comprehensive and flexible suite of solutions for access control, destination guidance, information communication, and equipment monitoring. Based on KONE's industry-leading technology and world-class visual design, these solutions ensure smoother, smarter people flow, enable efficient building management, and add real value to a property. They are scalable, third-party compatible, and can be customised for new or existing buildings.

New Changi Airport Terminal 4 design unveiled

Singapore – The new concept for Terminal 4 (T4) at Singapore Changi Airport was unveiled at the T4 groundbreaking ceremony on 5 November 2013.

Appointed by Changi Airport Group (CAG), Singapore's award-winning SAA Architects, the lead consultant and executive architect of the Architect & Design Consortium (Consortium), collaborated with UK-founded design firm Benoy Limited on the concept and interior design of the new terminal.

Set to redefine the travel experience, Changi Airport's new terminal will be located along Airport Boulevard, and will accommodate up to 16 million passengers a year.

The 195,000 square metres building has been designed to celebrate both physical and visual transparency. The arrival experience will be surrounded by lush vertical landscaping and an impressive double-storey glazed façade. Inside, the concept is dynamic, vibrant and colourful with feature skylight lanterns illuminating the terminal. Gardens have been incorporated to enliven the airport interiors with green walls and an abundance of elegant tall trees growing beneath the natural light. Yeo Siew Haip, Managing Director of SAA Architects, explained the complexity of the large-scale project: "Since winning the project in mid February 2013, the SAA-led Consortium worked hand in hand with CAG and Benoy to bring the design of T4 from concept to commencement of piling works on-site.

Driveway to Terminal 4 Departure Kerbside: T4 presents a new passenger travel experience through its unique terminal design and innovative use of technology. Photo: © Benoy

SAA provided the Consortium leadership in managing concept refinement, stakeholder engagement, fast-track scheduling and value engineering."

"Finalising the overall design of T4 for the Main Contract Tender within the time frame we had is a feat in itself for the industry, especially with over ten consultants and specialists collaborating intimately in the intricate work scope, keeping the project on schedule," added Yeo Siew Haip.

"The planning agenda has centred on introducing efficiency and comfort to the travel experience," explained Meeta Patel, Director at Benoy. "State-of-the-art facilities including self check-in kiosks and self bag-drops will provide travellers with a quick and easy airport journey. To shape the boutique atmosphere of T4, Benoy has created walk-through retail zones, Peranakan-inspired shop fronts and mezzanine dining hubs which will offer views over the central interior gardens," added Meeta.

The main focal point of the building is the 'Central Galleria'; a glazed, open space that visually connects the departure, check-in, arrival and transit areas across the terminal.

David Buffonge, Director at Benoy said, "We are extremely excited about Terminal 4 at Changi Airport. We believe in the concept that has embraced energy and motion; creating a dynamic yet timeless design in a welcoming environment. The terminal has been designed to provide visitors access to a new level of travel comfort outside their traditional airport experiences."

"SAA's role as lead consultant and architect is not unlike a music conductor in orchestrating all processes to bring the design of Terminal 4 at Changi to reality. With CAG and Benoy, we strive to create a unique T4 experience that pushes the boundaries and inspires the traveller like never before," said Yeo Siew Haip.

The Consortium comprises a number of members responsible for various aspects of T4 including: architecture, design, civil & structural engineering, mechanical & electrical engineering, landscaping, acoustics and safety.

Arrival Hall: A centralised double-volume Arrival Hall gives passengers a sense of space in natural light, providing a warm Singapore welcome. Photo: © Benoy

Unique cultural shop fronts in Departure Transit Lounge: Singapore's heritage is showcased in retail stores featuring facades of old Peranakan houses. Photo: © Benoy

Members of the consortium
SAA Architects Pte Ltd - Lead Agency
Benoy Ltd
AECOM Singapore Pte Ltd
Beca Carter Hollings & Ferner (SEA) Pte Ltd

Project Facts
Project location: Changi, Singapore
Developer: Changi Airport Group
Size: 195,000 square metres
Consortium Leader/Executive Architect: SAA Architects Pte Ltd
Concept Design Architect: Benoy Ltd
Interior Designer: Benoy Ltd
Completion: 2017

Hill Asia celebrates 25th year anniversary

Singapore – Hill Asia celebrated its 25th year anniversary in Asia on 23 October 2013 at Raffles Hotel in Singapore with a Colloquium presentation and dinner. More than 40 selected clients and business associates of Hill Asia attended the event.

According to Derek Nelson, Senior VP and MD Asia of Hill: "As a business we provide expertise that is focused on identifying and providing solutions to our clients' business problems. For prospective clients that have not had the benefit of working with us previously that can be an intangible proposition. Rather than hand out free umbrella's, we took the opportunity on our anniversary to underscore not only Hill's longevity in the Region but to showcase that expertise and our collaborative approach to working by hosting a colloquium and publishing a compendium of papers penned by Hill's staff from around the world."

The event started off with a Colloquium presentation by four distinguished speakers – Christopher Chuah, Partner of WongPartnership LLP; Wendy MacLaughlin, Vice President of McLachlan Lister; Dr. Philip Chan, Associate Professor of National University of Singapore; and Rodman Bundy, Partner of Eversheds. This was followed by a cocktail and networking session right before dinner. At dinner, guests were served with a sumptuous 8-course Chinese banquet that started with the Eight Harmony Treasures. Guests were also enlightened with tales and experiences shared by Roderick Noble, Director of Asian Business and Johnny Tan Cheng Hye, Managing Partner of LT&T Architects during dinner.

In conjunction with the anniversary, Hill Singapore also published a limited edition Hill Compendium containing 33 selected articles and white papers written by Hill professionals over the years and across the world. The book, divided into 4 sections – Delay, Disruption, Acceleration; Contracts; Claims, Quantum; and Risk Management – was distributed to guests at the event.

Derek Nelson, Senior Vice President and Managing Director – Asia, Hill International, during dinner.

The celebration kicks off with a Colloquium presentation by 4 distinguished speakers.

Singapore hosts first dedicated urban greenery exhibition in Asia

Singapore – GreenUrbanScape Asia, the first dedicated urban greenery exhibition in Asia, took place in Singapore from 7-9 November 2013 at the Singapore EXPO Convention and Exhibition Centre.

Over 130 international brands from 19 countries exhibited at GreenUrbanScape Asia, showcasing innovative solutions aimed at improving productivity in all aspects of landscape and urban greenery, including planning, design, construction and management.

The inaugural event runs alongside the second edition of the International Skyrise Greenery Conference. Jointly organised by the National Parks Board (NParks), Landscape Industry Association Singapore (LIAS), Singapore Institute of Landscape Architects (SILA) and Singex Group, the three-day trade exhibition and conference facilitated the sharing of ideas and solutions with a cross-section of industry stakeholders on a global platform. It attracted over 4,000 participants, including 650 conference delegates and speakers from 25 countries around the world, making it the first time an event of such scale and range has been organised in Asia.

Left to right - Aloysius Arlando, CEO, Singex Group, John Tan, Chairman, Landscape Industry Association Singapore, Mr Desmond Lee, Minister of State, Ministry of National Development, Damien Tang, Chairman International Skyrise Greenery Conference Committee, Poon Hong Yuen, CEO, National Parks Board at the opening ceremony of GreenUrbanScape Asia 2013.

GreenUrbanScape Asia 2013 was officially launched by Mr. Desmond Lee, Minister of State for National Development. Minister Lee also presented awards to recipients of NParks' Skyrise Greenery Awards 2013 and launched a new book entitled 'Vertical Garden City, Singapore'. The book is published by NParks and the Urban Redevelopment Authority, and it describes the skyrise greening movement in Singapore, with profiles of selected projects in the city that exemplify innovation, creativity and the boldness to try new ideas.

Running in parallel with the trade exhibition was a business forum, which took place on 8 November 2013. Here, regional experts discussed key global trends, potential opportunities and case studies. A public forum on 9 November 2013 shared the latest technology and best practices in urban greenery.

2nd International Skyrise Greenery Conference

With the theme of Density & Greenery: Evolving into Collaborative Cities, the 2nd International Skyrise Greenery Conference featured the following:

(i) A list of internationally acclaimed distinguished speakers, including Kathryn Gustafson from the USA. She is best known for her award-winning projects in Europe and the United States, such as the Princess Diana memorial fountain at Kensington Palace Gardens. Italy's Stefano Boeri is also one of the speakers; he is renowned for his role in 'Bosco Verticale', the highly-anticipated, first vertical forest in Milan.

Kathryn Gustafson

(ii) Home-grown industry luminaries behind some of the region's pioneering greening projects, including Singapore's Dr Liu Thai Ker, best known for spearheading major revisions to the Singapore Concept Plan and key directions for heritage conservation; and WOHA's founder, Wong Mun Summ, the award-winning architect behind Singapore's PARKROYAL on Pickering.

There were also technical tours for on-site exposure to industry-acclaimed and award-winning projects in Singapore. The tours included guided visits to sites such as PARKROYAL on Pickering, 158 Cecil Street, Khoo Teck Puat Hospital, ITE College Central, 6 Battery Road, Nanyang Polytechnic and Punggol New Town, where green roofs, green walls, and other forms of greenery have been fitted seamlessly into the built environment. **For more information, visit www.greenurbanscapeasia.com.**

His Highness Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, opens The Big 5 2013

Dubai, UAE – His Highness Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, officially inaugurated The Big 5, Middle East Concrete and PMV Live 2013 on 25 November 2013 at the Dubai World Trade Centre.

Opening alongside The Big 5 was the Middle East Concrete, the largest event for the concrete industry showcasing innovative concrete products, technical seminars and live product demonstrations, as well as PMV Live, an interactive event for the plant, machinery and vehicle industry highlighting the latest heavy vehicles and related equipment throughout the four day event (25-28 November 2013).

Andy White, Group Event Director for The Big 5 2013, said: "We're honoured that His Highness Sheikh Hamdan has given his support to The Big 5 this year. The event continues to grow with each edition and is still considered the region's most important event for the building and construction industry. This year The Big 5 is once again giving architects, interior designers, contractors, developers and all other construction professionals, access to the full spectrum of products. Our educational programme has also expanded this year giving our visitors access to hundreds of free seminars, workshops and regulatory updates."

As part of The Big 5, international and regional experts have been invited to address industry issues such as sustainability and low energy emitting materials, project management in construction, building interior trends, façade design, fire safety and managing ageing structural asset portfolios at over 100 free to attend seminars running throughout the event. Best in class studies were presented during the Sustainable Design & Construction Conference including the LEED Platinum rated DEWA building and the futuristic White Sky iHouse. Dubai Municipality also presented an update to its Green Building Codes.

HH Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, officially inaugurated The Big 5 and collated events Middle East Concrete and PMV Live 2013.

This year's event also included a new arena specifically dedicated to building interiors, bringing together a wide range of products and services catering to this sector of the industry. The new arena provided a selective platform for this increasingly influential market segment, currently worth around $10 million within the GCC.

In addition to the new arena, the exhibition was broken down into product specific sectors, including HVAC, Coatings, Adhesives & Sealants, Kitchens & Bathrooms, Windows & Doors, Steel, Marble, Slate & Ceramics, Water Technology and General Construction.

Brickworks launches new sustainability website

Sydney, Australia – Australian building products company Brickworks Building Products has announced the launch of its new sustainability website at http://buildforliving.com.au.

The new site is a dedicated online platform for Brickwork's brands, and highlights the group's sustainability initiatives as well as the environmental efficiencies of its comprehensive product range.The website is split across four main categories including Make – which covers its production; Move – which focuses on the company's packaging and processing; Use - which focuses on the energy efficiency and environmental benefits of the group's products; and Re-Use – focusing on the recycling and reuse processes.

Comprehensive information is included on what Brickworks has done to improve its environmental performance, including the reduction of energy emissions, the commissioning of its state of the art factory, the sustainability advantage awards the company has received, land and development rehabilitation, and the group's reduced reliance on town water and improvements to its products.

Screen grab of the new sustainability website home page.

It also highlights how products from the Brickworks Building Products group can be used to improve the energy efficiency of a home, as well as reduce the solar absorbance on a roof, through site videos as well as access to detailed reports on product energy efficiency testing. Furthermore, the website features over 20 case studies that detail how Brickworks Building Products is improving its products and processes. Commenting on the new website, Mr Brett Ward, General Manager for Marketing at Brickworks Building Products said: "Sustainability with the Brickworks business and how our products impact the built environment is a very important part of the Brickworks culture."

"The new sustainability website has been designed to engage with our customers by offering them an increased level of information to help them understand the benefits of products and how we can help them achieve their environmental targets and concerns, while highlighting our overall commitment as a business to a sustainable future," he added.

Broadway Malyan-designed 17-hectare mega healthcare city launched in Singapore

London, UK – Plans have been announced for a mega integrated healthcare hub, to be built around Tan Tock Seng Hospital in Singapore, designed by global architecture, urbanism and design practice Broadway Malyan.

'Health City Novena' is spearheaded by Tan Tock Seng Hospital, the National Healthcare Group and Singapore Health Ministry, and will serve patients in Central Singapore, where the local population is aging faster than the rest of the country. Broadway Malyan's Singapore-based team is delivering the detailed masterplan, architectural and landscape design services, in collaboration with Surbana International Consultants, which is leading on project management and engineering services.

Artist's impression of Health City Novena. Image: © Broadway Malyan

The scheme will link existing healthcare facilities and the Lee Kong Chian School of Medicine to create the largest healthcare complex in Singapore, which will also host a new National Skin Centre.

It will offer a full range of acute to intermediate and long-term care and holistic care services, including wider research and education, commercial, leisure and public spaces.

When complete in 2030 it will serve 30,000 patients, visitors, staff, students and residents a day, double the current 15,000 who visit Tan Tock Seng Hospital. Existing low-rise old buildings will be replaced with space-efficient multi-storey blocks to increase the floor space from 250,000 to 600,000 square metres, the number of beds will be increased by 25 percent to 2,200 and 10 buildings will be physically connected, including Tan Tock Seng Hospital.

Broadway Malyan's community-focused design philosophy will deliver a highly-sustainable complex with a large, central open space featuring a new plaza, aimed at putting the community at the heart of the inter-connected buildings.

Practice Director Ian Simpson said: "The public launch is a major milestone in the delivery of this exciting project and our team of world-class masterplanning and design experts is working in close partnership with the client's team to deliver a scheme which transforms the experience of patients and the range of healthcare services in Central Singapore."

WorldGBC establishes new global network for green schools

Philadelphia, USA – A new global network has been established to build greener, healthier schools and increase the environmental literacy of the next generation of students.

The Global Coalition for Green Schools has been launched as part of the US Green Building Council's (USGBC) Greenbuild conference in Philadelphia.

The Coalition, which is powered by USGBC's Center for Green Schools on behalf of the World Green Building Council (WorldGBC), will consist of green building councils and other like-minded organisations from around the world, and will work at the grass-roots level to equip communities with the resources and support they need to transform their schools.

The Coalition's founding co-chairs are the WorldGBC's Chief Executive Officer, Jane Henley and the GBCA's Chief Executive, Romilly Madew. "We have solid evidence that the classroom environment can affect a child's academic progress over a year by as much as 25 percent. Every child deserves the opportunity to attend a healthy, high-performance green school," said Jane Henley.

"By bringing together the leaders in the global green schools movement, the Global Coalition aims to ensure every child learns in a green school within this generation," added Ms Henley. "Too many of the world's 1.2 billion students learn in school buildings that are too cold in winter, too hot in summer, badly lit and poorly ventilated. This affects student health and learning, teacher morale and school operational costs – as well as the environment," said Romilly Madew.

"Just as investing in quality teaching and quality resources is essential, so too is investing in quality learning environments," said Ms Madew.

Jane Henley

Each of the 28 founding members of the Global Coalition for Green Schools will establish a national network in their own country to connect stakeholders, build partnerships and create a movement to advocate for change.

"As members of the Global Coalition for Green Schools, we are united in our common pursuit of healthy, safe, resource-efficient schools that educate sustainability natives," said Rachel Gutter, director of the Center for Green Schools at USGBC.

"But what inspires us and keeps us humble is seeing how much we have to learn from one another. Our approaches to greening schools may look very different, but what we all desire is to give our children every possible opportunity to succeed," added Ms Gutter.

The Global Coalition will share best practice case studies of green education facilities, produce practical guides and support various project initiatives of the participating green building councils.

"Green schools save energy, resources and money – but they are also better places to learn. The Global Coalition aspires show the world that where our children learn is as important as what they learn," concluded Ms Henley.

Learn more about the Global Coalition for Green Schools at www.centerforgreenschools.org/globalcoalition.

BDP completes Chinese projects

London, UK – The first raft of BDP designed projects in China is now starting to complete with two civic projects in Suzhou, one of the country's most visited cities.

Earlier this summer saw the completion of the Suzhou Planning and Exhibition Hall. The building is an 8,000 square metres exhibition facility within the Science and Technology Smart City. The project showcases past, present and future developments of Suzhou District and sits on the edge of a new central parkland area, with great views of the surrounding landscape and hills. It houses a 1,000 square metres model of the new district, 3D viewing gallery, interactive displays, conference facilities and multi-purpose exhibition halls.

With a spectacular setting overlooking Taihu Lake, the Suzhou Tourist Centre consists of a banqueting, exhibition, conference space for up to 600 people, a centre for local design products and produce, three restaurants, VIP club and tourism centre. The design also creates a new public space, which overlooks the lake. The building was completed in May 2013 but an official opening ceremony will take place before the end of the year.

BDP opened a studio in Shanghai in 2011 and now employs 35 staff there. 2014 will see the completion of the first of three large retail led projects for Inter IKEA, in Wuxi, and also a new Faculty of Medicine at Nanjing Medical University.

Suzhou Planning Exhibition Hall. Photo: © Marco Jacobs

Suzhou Tourist Centre. Photo: © Marco Jacobs

Cooled Conservatories, Gardens by the Bay in Singapore wins 2013 RIBA Lubetkin Prize

London, UK – Cooled Conservatories, Gardens by the Bay in Singapore by architects Wilkinson Eyre has won the Royal Institute of British Architects' (RIBA) 2013 Lubetkin Prize for the best new international building. This is the second year running that Wilkinson Eyre have won the prize, with their Guangzhou International Finance Centre in China winning in 2012.

Cooled Conservatories, Gardens by the Bay. Photo: © Craig Sheppard

Cooled Conservatories, Gardens by the Bay are the biggest climate-controlled greenhouses in the world and a key project in the Singapore Government's vision of transforming it into a 'City in a Garden'. The project had the tough brief of creating cool growing environments in a pair of glasshouses, which are more commonly associated with creating warm conditions. The architects worked with structural designers, environmental engineers, landscape architects and horticulturalists to create an elegant and integrated solution to an unusual design brief.

The two other outstanding buildings competing with Cooled Conservatories, Gardens by the Bay were for the 2013 RIBA Lubetkin Prize were:

- Galaxy Soho, Beijing, China by Zaha Hadid Architects
- Via Verde – The Green Way, Bronx, New York City by Grimshaw with Dattner Architects

Speaking about Cooled Conservatories, Gardens by the Bay, RIBA President and judge, Stephen Hodder said: "There have been a number of attempts to design greenhouses to show people unable to travel widely what the natural world has to offer. The UK led the way with Kew and latterly the Eden Project. What Wilkinson Eyre have done in Singapore is much harder and an even more impressive achievement, in that cooling plants in a sub-tropical climate is necessarily less energy efficient than keeping hot-house plants warm in a temperate climate. Yet here they have produced greenhouses covering two hectares that are carbon-positive. What's more they have pushed the boundaries not only environmentally but also structurally, giving the city a new and public landmark. I am delighted to award Wilkinson Eyre the 2013 Lubetkin Prize."

The 2013 RIBA Lubetkin Prize jury was: RIBA President Stephen Hodder, architects Alison Brooks, Meredith Bowles and Peter Clegg and RIBA Head of Awards Tony Chapman.

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ALLWORLD EXHIBITIONS MEMBERS

Archifest Conference 2013 explores why small is still beautiful in architecture

Singapore – The seventh edition of Archifest, Singapore's annual architecture festival organised by Singapore Institute of Architects (SIA) took place from 27 September 2013 to 13 October 2013. Over the three weeks in Singapore, the festival featured over 50 programmes such as building tours, talks, exhibitions, workshops, and design competitions, for the public, design professionals, students and children.

Archifest 2013 explored a brand new theme "Small is Beautiful". Based on this theme, Archifest 2013 used the city as a laboratory and framed Singapore as an urban ecosystem beyond singular architectural projects. It explored and highlighted projects, design studios, communities, businesses and ideas that might be small by choice and circumstance but are large in ambition and impact.

Guide book on Archifest 2013. Photo: © Singapore Institute of Architects

SIA President Theodore Chan addressing the audience at the Archifest 2013 Launch Party. Photo: © Singapore Institute of Architects

Archifest Conference

A key component of Archifest 2013 was the annual Archifest Conference. It was held on 1st October 2013 at the Raffles City Convention Centre to coincide with the SIA Design Awards Presentation Ceremony, which took place at the same venue after the conference.

This time round, the traditional forum was replaced by the Archifest Conference. As many as six respected thinkers and practitioners from Singapore and abroad came together to share their thoughts on the various aspects of the theme "Small is Beautiful": Small eco-footprint, Small design studios, Small communities, Small projects, and etc. The speakers discussed their experiences and challenges and their hopes of a better future.

Speaker: Yoshiharu Tsukamoto (Keynote Speaker)
Position: Co-Founder, Atelier Bow-Wow
Associate Professor, Tokyo Institute of Technology
Conference Topic: Architectural Behaviorology

Yoshiharu explained how Architectural Behaviorology investigates the behaviours generated in and around architecture produced by different subjects such as natural elements, (light, air, heat, wind and water), the human beings, and the building. The behaviours appear differently with their own rhythms according to the time scale embedded in each subject. But even in the same subject, they appear with different rhythms depending on the time scale set for the observation. Architecture puts the behaviours of different subjects with different rhythms into balance. Then the sense of time is introduced into architectural design with the concrete means and manner.

Speaker: Chang Yong Ter
Position: Principal, CHANG Architects
Conference Topic: Nothing's Too Small

Chang Yong Ter talked about how architects are tasked to make decisions when working on projects – how spaces should be configured, why certain finishes are favoured over another, what lighting strategies to adopt, how many steps to reach the next level, etc. This is particularly for projects whereby the level of tailor-made is relatively intense, but nothing is too small or too frivolous to be addressed. He then shared his experiences of working on such projects.

Speaker: Colin Seah
Position: Founder & Director of Design, Ministry of Design
Conference Topic: Tracing a Trajectory – Ministry of Design's Back Story

Colin Seah shared Ministry of Design's background story through a variety of milestone projects and personal anecdotes – tracing a trajectory that is personal and intimate but also reflective of the zeitgeist of contemporary design practice in Singapore.

Speaker: Eoghan Lewis
Position: Principal, Eoghan Lewis Architects (ELA)
Founder, Sydney Architecture Walks (SAW)
Conference Topic: 1:1

Eoghan has established a practice of walking in parallel to his practice of working as an architect in the city. In his session, Eoghan discussed his work, walks and ideas in the context of societies' greatest cultural expression – the city.

Speaker: Luke Yeung
Position: Principal, Architectkidd
Conference Topic: Bangkok Vernacular

Luke shared how Bangkok represents an ideal city to experience, investigate and to create contemporary Southeast Asian architecture. Bangkok, like many developing Southeast Asian cities, is a place where people make things. It is possible to walk down the streets and discover people working with different materials on hand. Often, these activities take place outside, spilling out of the buildings and onto the streets. The daily practice of making things is exposed and can be seen everywhere – it is built into the urban fabric of the city. This kind of material culture is testament to a collective resourcefulness as well as inspiration for a new generation of architects and designers practicing in Southeast Asia. It is a place where disused materials can be re-used, craftsmanship that was seemingly lost can be re-discovered,

and accidental observations can be transformed into new spatial experiences.

Speaker: Manfred Yuen
Position: Founder, Groundwork Architecture + Urbanism Visiting Lecturer, Hong Kong Polytechnic University School of Design
Conference Topic: The Minimalists Rock-n-Roll: Groundwork Manifesto

In his talk, Manfred explained the need to restore a humanistic perspective towards architecture. The process of juxtaposing humanistic approach in architecture in this digital era is indeed a challenge, and this process of fusion becomes a catalyst for our works, so as the tension between idealism and pragmatism becomes vehicle of our growth. He also shared the journey of how our era and our fathers taught us to rock-and-roll as minimalists on a complex stage.

The conference also featured a panel discussion with the speakers. Photo: © Singapore Institute of Architects

Yoshiharu Tsukamoto. Photo: © Singapore Institute of Architects


Chang Yong Ter. Photo: © Singapore Institute of Architects


Colin Seah. Photo: © Singapore Institute of Architects

Eoghan Lewis. Photo: © Singapore Institute of Architects


Luke Yeung. Photo: © Singapore Institute of Architects


Manfred Yuen. Photo: © Singapore Institute of Architects

4-8 Mar 2014

CONEXPO-CONAGG 2014
Las Vegas Convention Center
Las Vegas, Nevada, USA
Website:
www.conexpoconagg.com

6-9 Mar 2014

Xiamen Stone Fair 2014
Xiamen International Conference & Exhibition Centre
Xiamen, China
Tel: +86 592 5959 616
Fax: +86 592 5959 611
Email: info@stonefair.org.cn
Website: www.stonefair.org.cn

10-13 Mar 2014

Maison & Objet Asia 2014
Marina Bay Sands Expo and Convention Centre
Singapore
Email: visit.maison-objet-asia@safisalons.fr
Website: www.maison-objet.com/en/asia

12-16 Mar 2014

WORLDBEX 2014
World Trade Center Metro Manila (WTCMM), the WTCMM East Wing & the Philippine Trade Training Center (PTTC), Manila, Philippines
Tel: +63 2 531 6350 / 531 6374
Fax: +63 2 533 2026
Email: info@worldbex.com
Website: www.worldbex.com

18-21 Mar 2014

MCE – MOSTRA CONVEGNO EXPOCOMFORT
Fiera Milano Rho, Milan, Italy
Tel: +55 11 3060 5000
Fax: +55 11 3060 5001
Email: info@reedalcantara.com.br
Website:
www.reedalcantara.com.br

17-20 Apr 2014

Mega Build 2014
Jakarta Convention Centre
Jakarta, Indonesia
Tel: +62 21 2556 5000
Fax: +62 21 2556 5040
Email: steven.chwee@reedpanorama.com
Website: www.reedpanorama.com

28-30 Apr 2014

International Facility Management Expo 2014
Marina Bay Sands
Singapore
Tel: +65 6278 8666
Fax: +65 6278 4077
Email: aubrey@cems.com.sg
Website: www.ifame.com.sg

31 Mar – 3 Apr 2014

Expo Build China 2014
Shanghai New International Expo Center, Shanghai, China
Tel: +86 21 3339 2117
Fax: +86 21 6437 0982
Email:
annie.shi@ubmsinoexpo.com
Website:
www.chinaexhibition.com

29 Apr – 4 May 2014

ARCHITECT 2014
IMPACT, Muang Thong Thani (Challenger 1-3)
Bangkok, Thailand
Tel: +66 2 717 2477
Fax: +66 2 717 2466
Email: info@ttfintl.com
Website: www.architectexpo.com

7-9 May 2014

Build4Asia 2014
Hong Kong Convention & Exhibition Centre
Hong Kong
Tel: +852 2804 1500
Fax: +852 2528 3103
Email: exhibit@hkesallworld.com
Website: www.build4asia.com

8-11 May 2014

SAMOTER 2014
Verona Exhibition Centre
Verona, Italy
Tel: +39 045 8298 111
Fax: +39 045 8298 288
Email: info@veronafiere.it
Website: www.samoter.com

22-24 May 2014

LED Expo Thailand 2014
Hall 7-8, IMPACT Exhibition & Convention Center
Bangkok, Thailand
Tel: +66 2 833 5328
Fax: +66 2 833 5127 to 9
Email: pakwanj@impact.co.th
Website:
www.ledexpothailand.com

26-29 May 2014

PALM EXPO China 2014
New China International Exhibition Centre
Beijing, China
Tel: +65 6411 7777
Fax: +65 6411 7778
Email: palmexpo@informa.com
Website: www.palmexpo.net

9-12 June 2014

GEBT 2014
China Import and Export Fair Complex
Guangzhou, China
Tel: +86 20 3839 6669-1007
Fax: +86 20 8527 2455
Email:
buyerservice@lightstrade.com
Website: www.lightstrade.com

25-28 June 2014

ARCHIDEX 2014
Kuala Lumpur Convention Centre
Kuala Lumpur, Malaysia
Tel: +60 3 7982 4668
Fax: +60 3 7982 1648
Email: info@archidex.com.my
Website: www.archidex.com.my

28-30 Aug 2014

Indo ICON / BIMEX 2014
Jakarta International Expo, Kemayoran
Jakarta, Indonesia
Tel: +62 21 649 3717/27
Fax: +62 21 626 5986, 639 0062
Email: info@peragaexpo.com
Website: www.peragaexpo.com

17-19 Sept 2014

Ecobuild SEA 2014
PWTC
Kuala Lumpur, Malaysia
Tel: +60 3 2176 8788
Email: ecobuild-sea@ubm.com
Website: www.ecobuildsea.com

8-11 Oct 2014

BuildTech-Malaysia 2014
Putra World Trade Centre
Kuala Lumpur, Malaysia
Tel: +60 3 7842 9863
Fax: +60 3 7842 7863
Email: info@tradelink.com.my
Website: www.tradelink.com.my

5-8 Nov 2014

PhilConstruct 2014
SMX Convention Center & World Trade Center
Manila, Philippines
Tel: +63 2 750 8588
Fax: +63 2 750 8585
Email: info@globallinkmp.com

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50450 Kuala Lumpur
Tel: 603 - 2176 8788 Fax: 603 - 2164 8786
Email: ecobuild-sea@ubm.com

205 Gipps Street

– Creative Reuse & Renewal

The 54 apartments and six townhouses are located in two buildings over a common basement.

The apartments are accessed through a secure entrance leading to the courtyard.

Five townhouses have direct access to the side street.

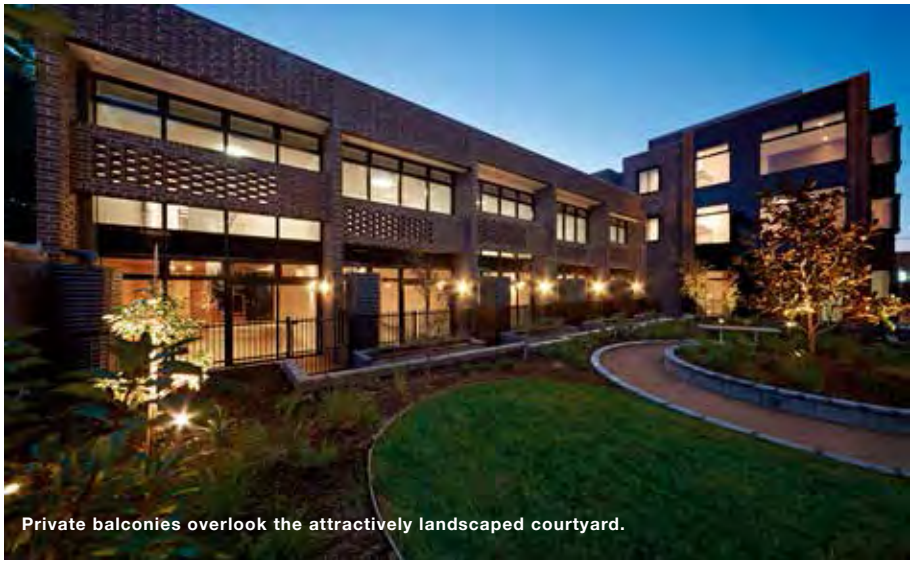
PROJECT DATA

PROJECT: 205 Gipps Street
LOCATION: 205 Gipps Street, Abbotsford, Victoria, Australia
DEVELOPER: Common Equity Housing Ltd
ARCHITECT: KANNFINCH
STRUCTURAL ENGINEER: Wallbridge & Gilbert
BUILDER: Becon Constructions
BRICKLAYER: C&S Lightweight
PHOTOGRAPHER: Emma Cross, Roger du Buisson

The red brick corner facade of the old factory has been incorporated into the new design.

A former factory site is the home of an unusual development combining private and social housing. Five townhouses and 34 of the 54 apartments were sold privately, requiring them to be attractive to the market.

"We wanted a good finish to the development so we were not keen to progress with a rendered or textured wall finish," said Peter Dunn, from Community Equity Housing Limited. The old red brick corner facade was retained. The two new buildings were constructed over a common basement and clad in Hawthorn Black bricks laid with alternating long and short sides, called Flemish bond.



Private balconies overlook the attractively landscaped courtyard.

"This particular bond gave us the opportunity to use three very different wall textures," said architect Max Bachimov. It allowed the designers to omit some brick ends to form a perforated wall, and project others to create shadow play. The unique brickwork demonstrates that "social housing is not about straight-up-and-down design," concluded Bachimov.

Austral Bricks was proud to supply Daniel Robertson® Hawthorn clay bricks to this project. Daniel Robertson's Hawthorn Range is a development of the iconic Hawthorn bricks that helped define the character of Melbourne's prestigious inner-ring suburbs. Their colours reinterpret the Hawthorn bricks while retaining their traditional charm.

The Tianjin Art Museum, which in April 2009 took first prize in an international competition, has space to house four permanent exhibitions. In addition to rooms for Chinese calligraphy, western art, sculpture, and modern art, there are also galleries in which changing exhibitions can be presented. Together with three additional cultural facilities (a library, an opera house and another new museum) the new exhibition centre forms part of a 90-hectare culture and leisure time development in the Hexi district of Tianjin. This new quarter is dominated by an extensive area of greenery boasting a lake. In the row of striking exhibition and cultural edifices, the art museum is located on the lakeside promenade, which its visible side and main entrance overlook. The new buildings used for cultural purposes face the road, i.e., in the direction of the city, thereby creating a harmonious overall impression.

In front of Tianjin Art Museum the promenade expands to form a plaza, from where visitors are guided via the pedestal storey to the museum's interior. A museum shop with floor-to-ceiling glass opens onto the entrance courtyard and forecourt. This special entrance creates a close link between the museum's interior and exterior. At the same time it represents a transition from the lakeside promenade to inside the four-storey exhibition building with its gross surface area totaling 33,000 square metres.

An imposing entrance hall some 14 metres in height across the entire width of the museum and welcomes the visitors on the ground floor. In addition to the entrance hall this level also houses the museum shop, rooms for the museum's collection and archive, administration rooms, a conference area, an educational section with child care, an approximately 500 square metre special exhibition section, as well as the VIP area with separate access for special guests.

In terms of spatial structure the museum is reminiscent of a solid stone cube with precise indentations, cut-outs and hollow spaces. All the exhibition rooms, artists' studio, a restoration room which only visitors can look into, the library, as well as conference and meeting rooms are housed in the solid part of the monolithic structure. The cascade-shaped sequence of stairs and landings leading to the exhibition rooms on the upper storeys seem to have been hewn from this solid slab of stone. This access area, which skylights in the central atrium flood with natural daylight, not only creates interesting spatial references, but also enables a wide range of different views and makes it easier for visitors to find their way around the exhibition building.

Furthermore, large glass facades provide gorgeous views of the lake and the adjoining park. These vistas, which in particular on the ground and first floors dominate the spatial experience, also forge a link between enjoying art and experiencing nature.

Eight metres in height, the first floor boasts a 1,000 square metre exhibition room and flexible exhibition space measuring around 650 square metres, thus offering diverse opportunities for presenting art. This main exhibition level can be reached via the entrance hall from the park as well as via an entrance from the road, which is why there is another entrance with an in-formation stand here.

TIANJIN ART MUSEUM

The, if anything, introverted exhibition rooms, which are accessible from the stairs, as well as the exhibition areas on the third and fourth floors, on which the rooms are grouped in a circle around the central atrium, create ideal conditions for concentrated viewing of the works of art on display.

With its horizontal layering the natural stone facade made of travertine conceals the different heights of the storeys in the new museum building. The appearance of the almost 30-metre high, sculptural edifice is structured by indentations and areas of glass alone. In addition, the facade features stone lamellas, which filter the natural daylight and protect the rooms behind from direct sunlight. The natural stone facade cloaks a cutting-edge steel construction with a regular grid of columns and two vertical access cores. The loads of the two upper exhibition levels, which appear to project, weightless, over the entrance hall, are likewise transferred to the foundations by means of reinforced concrete columns.

PROJECT DATA

PROJECT: Tianjin Art Museum
LOCATION: Hexi district of Tianjin
CLIENT: Tianjin Command Key Projects, Bureau of Urban Planning, Tianjin
ARCHITECT: KSP Jürgen Engel Architekten
COMPETITION: 02/2009, 1st Prize
AWARD: ICONIC Award - Category "Architecture – Public"
COMPLETION: 05/2012
SITE: 29,800 square metres
GROSS FLOOR AREA: 33,000 square metres
PHOTOGRAPHER: Shuhe Photography

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Creative Input into Working Spaces

An office interior communicates as much about a business as the people who work there…

Gone are the days when offices were typically cubicle, surrounded by white walls and lit by white fluorescent lights. Thanks to corporate giants like Google, Facebook and Pixar, more and more businesses are embracing the idea that a creative working environment can help to stimulate minds and inspire innovation.

From simply ditching the crisp white walls for graphical wallpapers to a total overhaul of the office layout, many strive for new ways to introduce a unique working environment to the team that will hopefully encourage some genius ideas along the way.

As the second largest surface in the office environment, the floor offers a great platform to get creative with design. Anything from original patterns and unique textures through to corporate signage and decorative colour mixes can all be achieved using innovate surface materials.

One of the most creative and malleable flooring options available to building owners and facilities managers is seamless resin based systems that are mixed and laid insitu through a highly-trained network of specialist applicators.

Recognised for its ability to fuse modern design trends with durability and performance, resin flooring is the chameleon of the floor coverings market, delivering on slip-resistance, hygiene and strength requirements while at the same time hitting all the right notes in terms of aesthetics and sustainable building materials.

This type of flooring offers the widest variety of finishes, is installed in a seamless application so as to positively assist cleaning and maintenance regimes, and, as a result of its resilient and hardwearing performance can offer significant lifecycle cost and energy savings to corporate clients.

Resin terrazzo harnessing decorative mirror and coloured glass aggregates, multi-dimensional metallic finishes, high-gloss, decorative coloured stone carpets and vibrantly coloured epoxy coatings are all a reality of modern office design.

Here, David McNeece, International Marketing & Business Development Manager for Flowcrete Group – a leading manufacturer of resin floor and wall finishes, guides us through the benefits of the most innovative commercial resin surface materials.

"Seamless resin terrazzo is one of the most durable and versatile surface materials to work with. The material can incorporate a wide-range of decorative aggregates, ranging from glass, marble, flint, granite and mother of pearl, which are included within the coloured resin matrix and diamond ground in-situ to reveal a sparkling, eye-catching and one-of-a-kind surface underfoot.

The material can be colour-matched to compliment neighbouring interiors, can be laid to tailored surface designs and patterns and is a popular choice for concourse areas, receptions and stairwells.

Resin terrazzo also represents one of the most cost-effective flooring solutions over time as its durability promotes a lifespan equal to that of the building itself and it's seamless, non-porous and robust performance reduces the cost of maintenance and cleaning programmes over its life-cycle, representing one of the best long-term flooring choices from a cost, performance and aesthetic point of view.

A recent flooring innovation to launch across Southeast Asia is a range of artistic finishes innovated from polyurethane chemistry including solid and multi-dimensional marbled colour systems as well as metallic finishes that offer a striking galvanised steel effect on the surface of the floor.

Each of these systems are intricately hand applied using a number of creative techniques, to deliver a one-of-a-kind surface that can never be fully recreated – or replicated for another clients. These new innovations merge cosmopolitan sophistication and artistic expression to create floors that are consistently inconsistent but which artfully interplay a raw industrial aesthetic with a soft and welcoming feel.

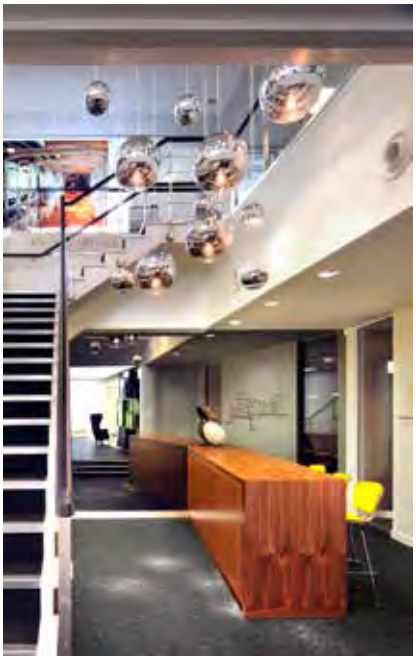
Other decorative resin-based innovations include seamless stone carpets that have been designed to harness the natural beauty of the outdoors within an interior design scheme. These systems are striking in meeting rooms, receptions, WC facilities and outdoor spaces.

In addition, acrylic resin systems, incorporating a decorative mix of colourful floor flakes, offer clients the additional benefit of fast turnaround installation, minimising disruption to operations and any potential loss of revenue throughout the office fit-out project.

Resin flooring is also able to satisfy a number of environmental considerations. Resin flooring has an outstanding record for durability with many floors typically lasting the lifetime of the structure. On top of this, resin flooring can often be restored to its original lustre at a fraction of the cost of replacing the floor.

Post-consumer recycled content can be incorporated within the resin matrix to serve as decorative aggregates, plus epoxy and polyurethane resin materials are low VOC, non-porous and inherently do not support microbial growth, helping to improve the indoor environmental quality of an office building.

Creating an inspiring and welcoming office space should be a corporate priority as it reflects a company's culture. Not only does it offer a sense of pride for employees but also an attractive selling point for new recruits. Far from the fluorescent strip lighting of the past, today working, thinking and break-out spaces filled with vibrancy, colour and interesting patterns can play a big hand in stirring up employees' creative juices."



For more information visit www.flowcreteasia.com.

Envision, Shanghai

M Moser Shanghai was tasked to redesign the Shanghai office of Envision, a world leader in smart wind turbine business. The outcome was a space that offered freedom of movement and collaboration. Photography: Vitus Lau

There are intentional similarities between what Envision does with the flow of air, and what the company's newly redesigned office in Shanghai does with the flow of people. In the former case, Envision's expertise in harnessing air currents to generate energy has made it a leader in windpower technologies. A similar dynamic served as the inspiration for their office environment, designed to encourage people to move, communicate and collaborate freely to generate innovation.

Aims & inspirations

Formally known as the Global Cloud Computing Control Centre and Office, the nearly 1,000 square metre space is located on the eighth floor of Building A, SOHO Zhongshan Plaza and was conceived as a support facility for Envision offices around the globe. "The project brief called for a 24-hour facility that would bring the firm's field technicians and office-based expertise under one roof. The ultimate goal of their co-location would be enhanced collaboration and faster, more effective problem-solving," said Cynthia Chan, Director, M Moser Shanghai.

Led by Chan, M Moser's Shanghai team began their response to Envision's brief by going beyond the brief, engaging with the client – including Envision Director, Business Development & Cloud Services, Mel Badheka, who had considerable input to the final design – to discover the fine details of their working culture and operational goals, and to hone potential solutions. As Douglas Newkirk, M Moser Shanghai, relates, "Our initial concept was inspired by the physics behind air movement – something that relates directly to Envision's business.

"The idea was to design a space that offered freedom of movement and would accommodate how people naturally move around and collaborate as individuals and teams. We wanted to create a 'connective flow', like how different airstreams can smoothly come together into a single flow, and then disperse again."

Making spaces flow

How 'connective flow' is achieved in reality is evident as soon as one steps into the barrier-free expanse of the finished office. Enjoying sightlines that extend right across the space in every direction, the 75 staff members are seated at curved, custom-made workstations with integrated CPUs and monitors. The glow of blue LED lighting

and touches of light maple veneer add colour to the otherwise pristine white look of the furniture.

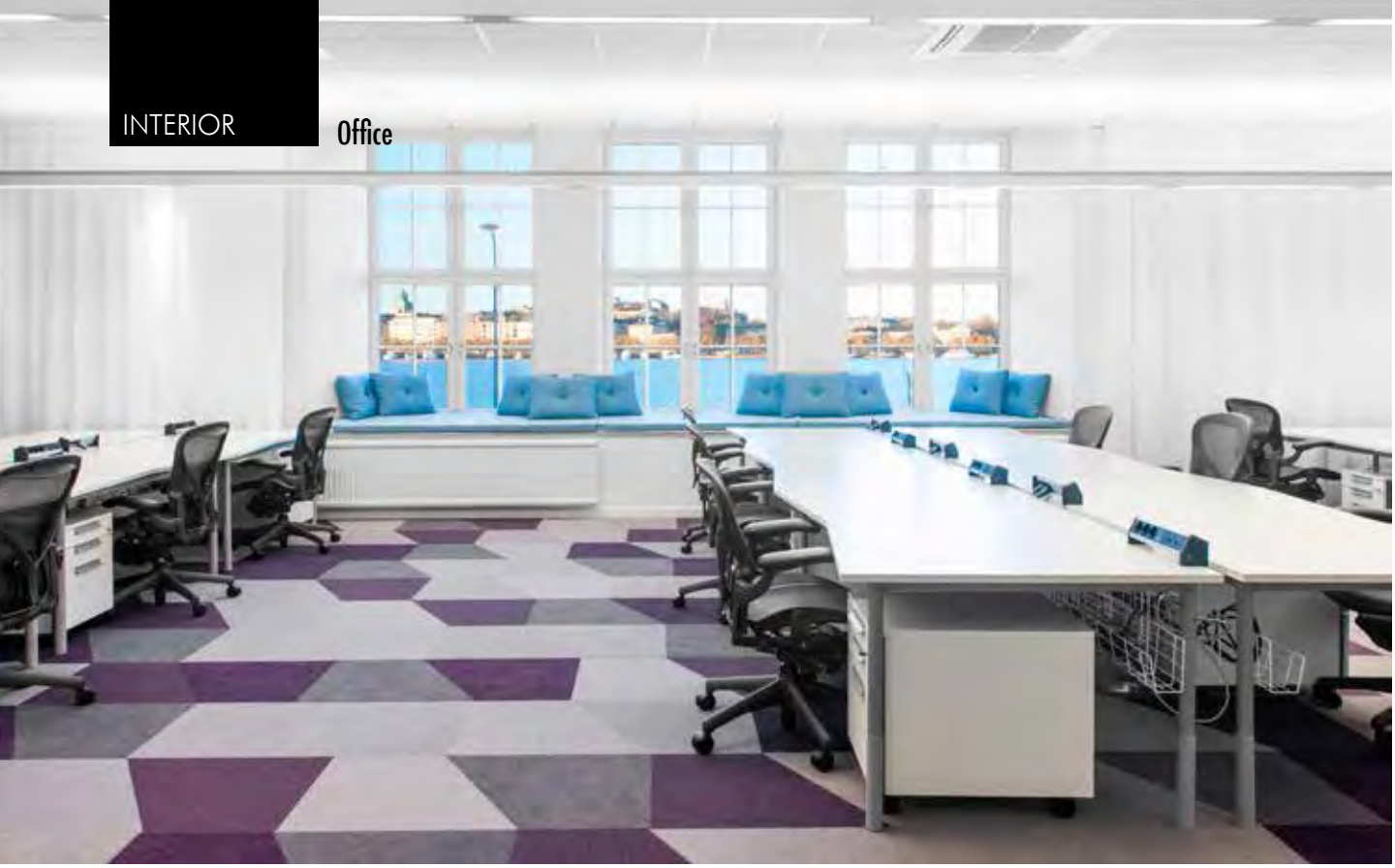
"Integrating the equipment into the desks was a way of creating an evocative aerodynamic form as well as cutting down on the visual clutter you usually see in an office. It also makes each individual's space look larger than it really is," said Manuel Garcia, M Moser Shanghai.

The impression of fluid, flowing space in the work area is accentuated further by the office's unique ceiling. "We wanted a ceiling that would create an impression of light penetrating through clouds. The design uses softly curved white drywall that envelopes an array of coves for indirect lighting," said Douglas. Other areas of the ceiling were left exposed, but are adorned with linear fins to designate key points in the floor plan, and to mimic the look of air intake grilles.

Integrated technology

In keeping with the design's mission of supporting communication and quick responses to global queries, the design even incorporates a lab where technicians can work on solving problems in simulated field conditions. Here as elsewhere, the environment is saturated with integrated technologies. "Ensuring that all this technology complemented the design and all worked together seamlessly and intuitively was probably the project's biggest challenge," related Cynthia.

Information from Envision locations around the globe is also disseminated via the freestanding videoconferencing tables located close by each of the office's five team areas. Seating up to five persons each, these are primarily used for instant, real-time collaboration with field technicians. Numerous additional digital projection and LED screens mounted on the office walls ensure each staff member continuous access to the data streaming in from Envision's wind turbines around the world.



New Skype Stockholm Office

PS Arkitektur AB was appointed to design the new Swedish office for Skype – and the result was a creative and playful atmosphere.

The project consists of audio and video studios, offices and social areas for 200 employees. The core idea behind the Skype software application has generated the design concept for the interior of the new office; the idea being that Skype is a useful and playful tool that allows chats, voice and video calls over the Internet. A pattern has been derived from an idea of voids emerging between the abstracted interconnected nodes visualising the interconnected world.

The scheme of this abstraction replicates itself in the flooring and in the design of the fixed interior. The idea of the bubbly furniture has evolved from the Skype logo. The Skype logo has also been reinterpreted as a ball-shaped light fixture, shining throughout the chill out space and the skylight. Created within a former brewery, a major effort has been made in order to accomplish high-end acoustics in the premises with efforts such as installing and designing soft wall absorbers. These efforts have been necessary for an office that predominately works with audio- and video development.

This focus on audio- and video development is visible in the interior and expressed in the unique wallpapers with prints of cables, earphones and other devices linked to the audio-video and mobile technique.

The ebullient atmosphere and the vibrant colours are directly translated from the graphics of the Skype design. The contemporary interior generates not only an eye-pleasing environment but also an inspiring working place. Instead of the old fashioned offices with cubicles, this new interior creates a playful atmosphere that allows good, crazy and brilliant ideas to develop.

An office should encourage a creative and playful atmosphere and the Skype office truly does that!

PROJECT DATA

PROJECT: Skype Stockholm office
LOCATION: Münchenbryggeriet, Stockholm, Sweden
CLIENT: Skype
ARCHITECT: PS Arkitektur AB
HEAD ARCHITECT: Peter Sahlin
PROJECT ARCHITECT: Part 1 – Mette Larsson Wedborn. Part 2 – Mari Owrenn
LIGHTING DESIGNER: Beata Denton
ASSISTING ARCHITECTS: Part 1 – Erika Janunger, Thérèse Svalling. Part 2 – Martina Eliasson, Emilie Westergaard Folkersen, Thérèse Svalling
SIZE: 1680 + 1520 square metres
COMPLETION: April 2011 + November 2012
PHOTOS: © Jason Strong Photography


skype

GreenTurf installation at Lee King Chian Museum in NUS, Singapore.

A carpark rooftop project by GreenTurf. Artificial Turf was specified as a roof covering here to improve the aesthetics of this architectural roof. An elegant design of simple clean lines lent a contemporary look to this roof. Being on a roof-top exposed GreenTurf's product to strong and harsh wind conditions. The company's installation guidelines required all joints and edges of the turf to be sealed with adhesives and anchors to prevent wind catch and to ensure a safe and durable installation. GreenTurf added a drainage layer to provide heat and sound insulation.

GreenTurf offers 'total' freedom to create

Every creative mind dreams of creating without limits. GreenTurf turns that dream into reality. Be it flooring, walls, ceilings, rooftops, green walls, indoors or outdoors, the company's range of premium synthetic turf and plants gives you the true freedom to create softscapes anywhere you want without the limits of conventional live greenery.

Combining the latest in turf technology and aesthetics, GreenTurf has achieved exceptional standards in artificial turf and green walls. The company's products are durable and safety-tested by internationally recognised bodies, helping you design and create with greater confidence.

GreenTurf Gaia-Landscape

GreenTurf Gaia, made in America, where field-green colours and broad leaf turf depict a healthy and fresh lawn look like the Kentucky Bluegrass. This colour contrasts nicely with the more warm green colour used in Southeast Asia and provides strong contrasting colours for designers to create distinct designs.

The use of GreenTurf Gaia also contributes to the green building design and therefore the Green Turf Gaia series have been awarded the Singapore Green Label. The award reflects the company's commitment to constantly strive for environmentally friendly and sustainable solutions.

In addition to its versatility, durability and comfort, synthetic turf has long been accepted as an environmentally friendly flooring solution due to its role in energy and resource conservation.

- GreenTurf Gaia-Landscape is the *only fully recyclable* system designed especially for home and commercial landscaping. Instead of using conventional backing like Polyurethane and latex, GreenTurf Gaia-Landscape uses a revolutionary backing system which employs Polyethylene-based glues and geotextile as the secondary backing, allowing the entire system to be *recycled without additional processing*, thus simplifying the recycling process and responsible end-of-life management.
- The revolutionary backing system does not require large heat during ovens and reduces both energy and space required for manufacturing.
- GreenTurf Gaia-Landscape is made from recycled plastics, with *52.7 percent recycled content by weight*. In comparison to other similar products in the market, GreenTurf Gaia-Landscape provides *a significantly lower carbon footprint*.
- No watering required: Enables water to be conserved or channeled for other uses.
- No need for growth or weed mitigation equates to no chemicals and no contamination.
- No need for use of hazardous heavy metals for construction, thus reducing pressure on the earth.
- Free of chlorine and other prohibited substances

GreenTurf Gaia-Landscape is available in Singapore through Advance Sports Technologies Pte Ltd. **For more information, visit www.greenturf.asia.**

GreenTurf's installation on the rooftop of Good Class Bungalow at Lornie Road, Singapore. This good-class-bungalow went for an elegant and clean roof-top design. The challenge posed in this project was the installation of artificial turf with a drainage layer on an architectural roof with a slope of at least 45 degrees. The steep slope meant that the company had to take extra steps to ensure the safety of its staff during installation, and ensure that the waterproofing of the roof-top was not compromised.

Laying Synthetic Grass

1. Introduction

The advanced technology and in-depth studies now available have led industry to "get involved" in this sector, by introducing a valid, concrete alternative to natural grass playing fields: SYNTHETIC GRASS.

FIFA and UEFA have been following this project very closely for a number of years, and found themselves on the same wavelength when a new set of regulations were introduced in March, 2006.

The Italian National Amateur League (LND) was also quick to accept the new approach, and offered the services of their organisation as a sort of "pioneer" for this innovation. In fact, it is the only organisation in Italy, which has the right to approve pitches made using artificial grass, and of releasing a "Seal of Approval" for carrying out amateur and competitive games.

A technical innovation to overcome the effect of the atmospheric inconveniences typical in winter, to limit maintenance costs and to avoid long periods of inactivity of pitches, all of which is proving to be of great help to soccer at youth and amateur levels. One of the main advantages which may be attributed to synthetic grass pitches is the increased stability of their characteristics, even under extreme climatic conditions. For example, during the winter, when temperatures often fall to around, or even below freezing point, natural grass pitches tend to become very hard. The performance characteristics of synthetic grass pitches, on the other hand, remain practically unchanged.

MAPEI has always stood out for their commitment to the world of sport. Also in this case, thanks to their collaboration with Sport Service MAPEI in Castellanza, and with the main leading companies for the production of synthetic grass, not only have they been committed to the development of products and systems based on advanced technology, but also in the technical-performance assessment of synthetic grass-adhesives systems.

Resistance tests on the joints in synthetic grass surfaces carried out using the direct stress method, according to EN 12228 European Standards.

Application of ULTRABOND TURF PU 1K on the jointing tape, via extrusion from its aluminium package.

Positioning synthetic grass rolls.

Spreading adhesive on ULTRABOND TURF TAPE 100 using a notched towel.

Laying the ULTRABOND TURF TAPE 100 jointing tape.

Bonding the edges of the synthetic grass rolls.

2. Creating A Synthetic Grass Pitch

2.1 The Substrate

The substrate of a synthetic grass pitch may be made using various techniques, and without a doubt this is the element which makes the difference between one pitch and another.

The surface which sustains the rolls or panels of grass must be perfectly level, have good drainage properties and have the right slope to allow water to flow off, according to the technical specifications laid down by the various governing bodies (FIFA, UEFA and LND).

The picture to the side illustrates an example of a newly-installed, stabilised substrate, as required by the LND for certifying pitches in Italy.

2.2 Artificial Grass Layer Laying Technique

Once the drainage work has been completed and the various layers of the substrate have been installed according to the slope required, the artificial grass surface may be laid.

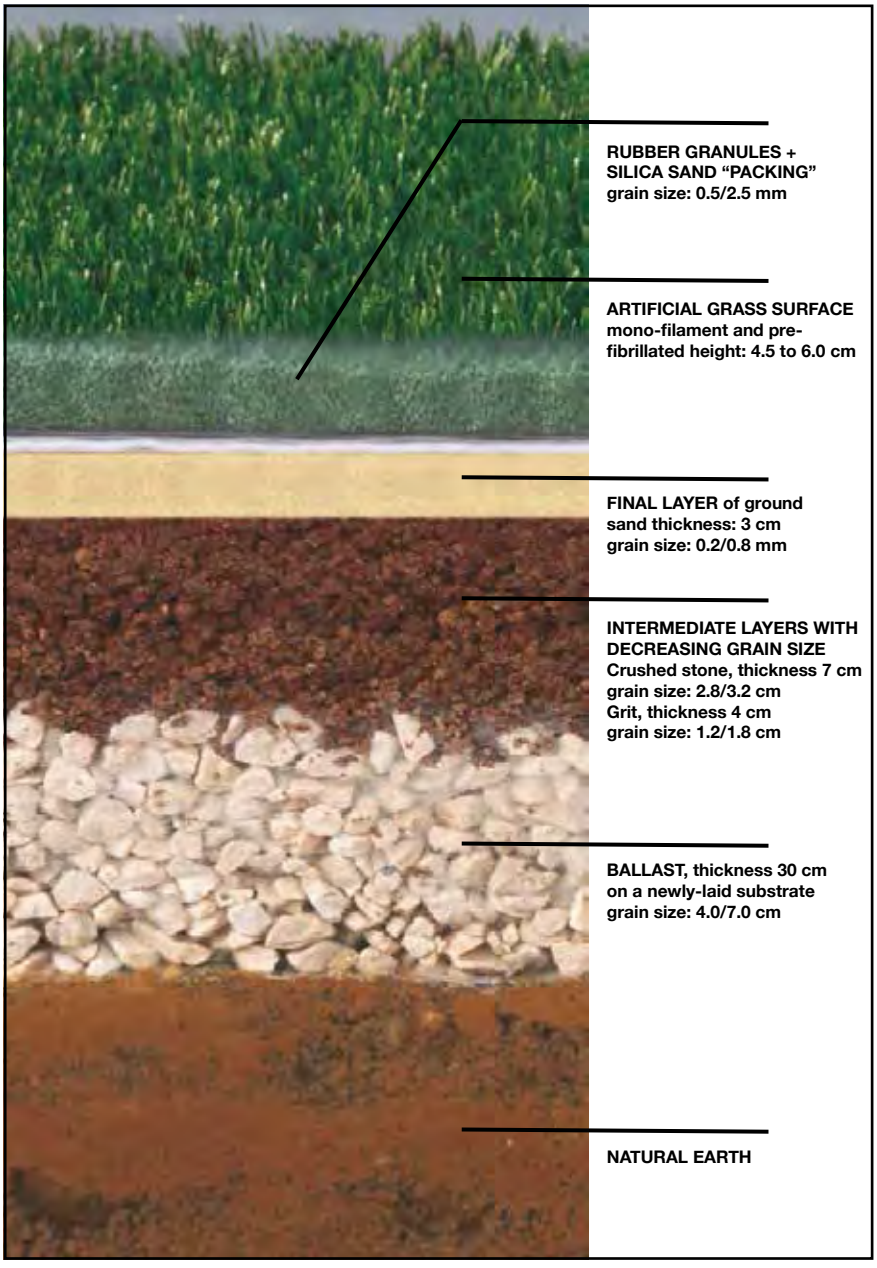
The single panels must be acclimatised by unrolling them a few hours before starting laying operations, and must be spread out to allow internal stresses caused by the packaging to be reduced.

Once laying has been completed, the joints must be bonded using **ULTRABOND TURF TAPE 100** special 40 cm-wide jointing tape. Using a notched trowel or a special applicator, spread on **ULTRABOND TURF EP 2K** two-component epoxy-polyurethane adhesive, **ULTRABOND TURF PU 1K** single component polyurethane adhesive or **ULTRABOND TURF PU 2K** two-component polyurethane adhesive with very low emission of volatile organic compounds (certified as EC1 R by GEV Institut). It is important to apply the correct amount of adhesive to guarantee that the back of the synthetic grass panel is completely buttered and to avoid detachment. After bonding the edges and once the adhesive has set, the lines of the pitch may then be marked out. This operation is carried out by rolling out regulation-sized white lines with the same characteristics as the grass layer directly on top of the artificial grass surface.

The same system as for joining the edges of the rolls is used to fix the lines, with **ULTRABOND TURF TAPE 100** and one of the special adhesives chosen from **ULTRABOND TURF EP 2K**, **ULTRABOND TURF PU 1K** or **ULTRABOND TURF PU 2K**.

The pitch must then be packed with silica sand and organic rubber granules to stabilise the grass surface and to promote drainage of surface water, as prescribed by the various governing bodies (FIFA, UEFA and LND).

This kind of playing surface must withstand highly variable temperature ranges according to where they are situated; for example, at very low temperatures in North-East Europe, where the temperature may drop to as low as -20°C when in service, or in the Middle East, where the temperature may reach more than +40°C. This is why all MAPEI products are subjected to severe testing, such as bonding tests, tensile strength tests, ageing tests, etc. to guarantee the best performance possible in order to certify the playing field.



3. Ultrabond Turf System

MAPEI has a complete range of products available to create playing fields in synthetic grass.

ULTRABOND TURF SYSTEM is made up of:
• **ULTRABOND TURF TAPE 100:** Jointing tape for joining panels of synthetic grass and for marking out pitches for various sports activities; and a complete range of adhesives, chosen according to the laying conditions and requirements of the layer.
• **ULTRABOND TURF EP 2K**: Two-component epoxy-polyurethane adhesive for bonding synthetic grass surfaces.
• **ULTRABOND TURF PU 2K:** Two-component, solvent and water-free polyurethane adhesive with very low emission of volatile organic compounds (certified as EMICODE EC1 R by GEV Institut) for bonding synthetic grass surfaces. Particularly recommended for use at low temperatures and for those subjects who are allergic to epoxy or epoxy-polyurethane products.
• **ULTRABOND TURF PU 1K:** Single component, polyurethane adhesive with very low emission of volatile organic compounds (certified as EMICODE EC1 R by GEV Institut) for bonding synthetic grass surfaces. Particularly recommended for those subjects who are allergic to epoxy or epoxy-polyurethane products. It is particularly suitable for bonding at low temperatures. This adhesive is a single component ready-to-use product and does not require a catalyser. Therefore, it is easier to use and blending errors are avoided.

Spreading the adhesive with a manual applicator.

Checking the buttering on the back of the grass surface.

Bonding the edges of the synthetic grass with a manual applicator.

ULTRABOND TURF adhesives for laying synthetic grass.

Source: "Technical notebook: Laying Synthetic Grass" by Mapei SpA

For more information, e-mail mapei@mapei.com.sg.

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Reflectivity – A "Glaring" Problem

New facade and roofing materials can help buildings reduce reflectivity problems.

Traditionally, building façade design used to take into account the amount of sunlight that passed through the façade. But today, the impact of sunlight reflected from building facades and onto surrounding buildings and passing traffic is receiving equal consideration and attention. This is because more and more buildings are being clad in glass and metal materials, causing potential hazardous reflectivity issues to motorists, pedestrians and adjacent buildings. Excessive glare from buildings is gradually becoming a serious problem in many cities as buildings are juxtaposed close to one another due to space constraints.

Glare is usually caused by the reflection of sunlight or artificial light from exterior facades that comprised of highly reflective glass or pre-painted materials from which the sun can reflect light. These include metal, aluminum composite panels and light coloured surfaces.

Materials have two types of reflectance: specular reflectance, which reflects light like a mirror, and diffuse reflectance, which reflects in all directions. Glare is often caused by specular reflection, the type of reflection that glossy surface reflects due to its highly reflective nature; turning sunlight into a visually-discomforting glare.

Although the properties of the façade materials largely determine the amount of light it will reflect, glare is also influenced by the position of sun, orientation of the building, roof design, colour choice of the material, etc.

Preventive measures

No matter how good or bad buildings are designed, sunlight is surely going to be reflected from their facades. The key responsibility of building designers is to limit the glare and avoid reflectivity problems for the neighbourhood. There are a number of building codes around the world, which address solar reflectivity in the design criteria.

In Singapore, the Building and Construction Authority (BCA) recently updated its building regulation to include reflectivity requirements for all kinds of facade materials such as metal roofs, aluminum composite panels, and powder coating for window frames. The changes, which came into effect on 28 October 2013, prohibit the use of any material with a daylight reflectance exceeding 20 percent on external surface of buildings. Before, such requirements were only applicable to glass. According to the regulation, daylight reflectance refers to the sum of both the specular and diffuse reflections of the material. To verify compliance, the Commissioner of Building Control may require submission of test reports from an accredited laboratory before issuing the temporary occupation permit or certificate of statutory completion. How the new regulation will affect architects and property developers in Singapore remains to be seen. However, it is important for architects to know and to identify the various reflective materials which can cause glare, and the solutions that are available to them to reduce their impact.

Commenting on the regulation, Mr Theodore Chan, President of the Singapore Institute of Architects, said that he welcomed the new regulation as a good move, especially in view of the population increase in Singapore. He said that the population growth in Singapore is expected to cause land constraints in the future and this may result in people living and working in "close quarters". In this context, architects in Singapore will need to work together to minimise the environmental impact of the buildings in the future. "Architects and designers in Singapore should take a concerted effort in posting minimal influence to neighbouring buildings in terms of heat, glare, etc. Also I do not think that the new regulation will stifle the creativity of our architects in any ways as I believe they are capable and are ready to rise up to the challenge," said Mr Chan. He added that besides the use of proper building materials, architects should also propose to their clients a method of construction, which is faster or more efficient.

Colorbond® Ultra Matt Steel

To help architects avoid potential reflectivity and exterior glare problems, NS BlueScope recently launched the 'Colorbond® Ultra Matt Steel', its new premium metal roofing material specifically developed with low gloss paint technology to reduce specular reflection (glare) in April 2013. The Colorbond® Ultra Matt Steel has a matt finish which carries lower reflection properties that enables it to drastically reduce specular gloss from roofing surface to as low as 7 (+/-3) gloss unit as well as block out direct sunlight yet maximising daylight. It is available in three colours: Oceania, Paver Grey and Ruby.

Unlike the regular glossy surface, Colorbond® Ultra Matt Steel offers a classy and contemporary look that works well with both traditional and modern roof designs. By combining beauty, durability, boldness and yet remaining minimalistic, the product makes for an attractive roofing material and one of the most fashionable options for consumers and architects. In addition, the Colorbond® Ultra Matt Steel is covered by NS BlueScope material warranty against perforation by corrosion for up to 30 years by weathering in the natural elements, and a warranty for up to 15 years against paint flake and peel as well as a warranty against excessive colour fading for up to 10 years.

In line with the company's environmental objectives, Colorbond® Ultra Matt Steel is accredited with the Eco-Label by SIRIM QAS International, a member of the Global Ecolabelling Network (GEN), which identifies a product's overall environmental impact and its initiatives to raise the green standards in the product and its services.

For more information, tel (+65) 6264 1577, fax (+65) 6265 0951, e-mail SGsupport@bluescopesteel.com or visit www.lysaght.com.sg.

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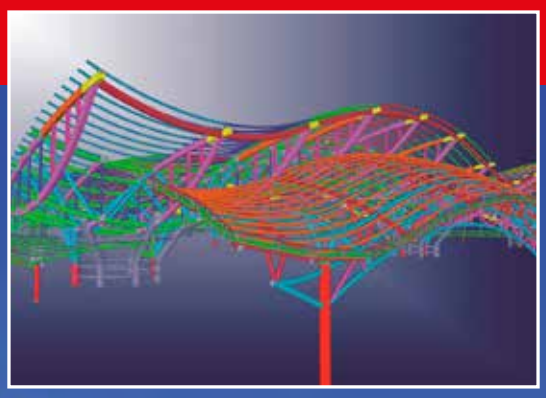
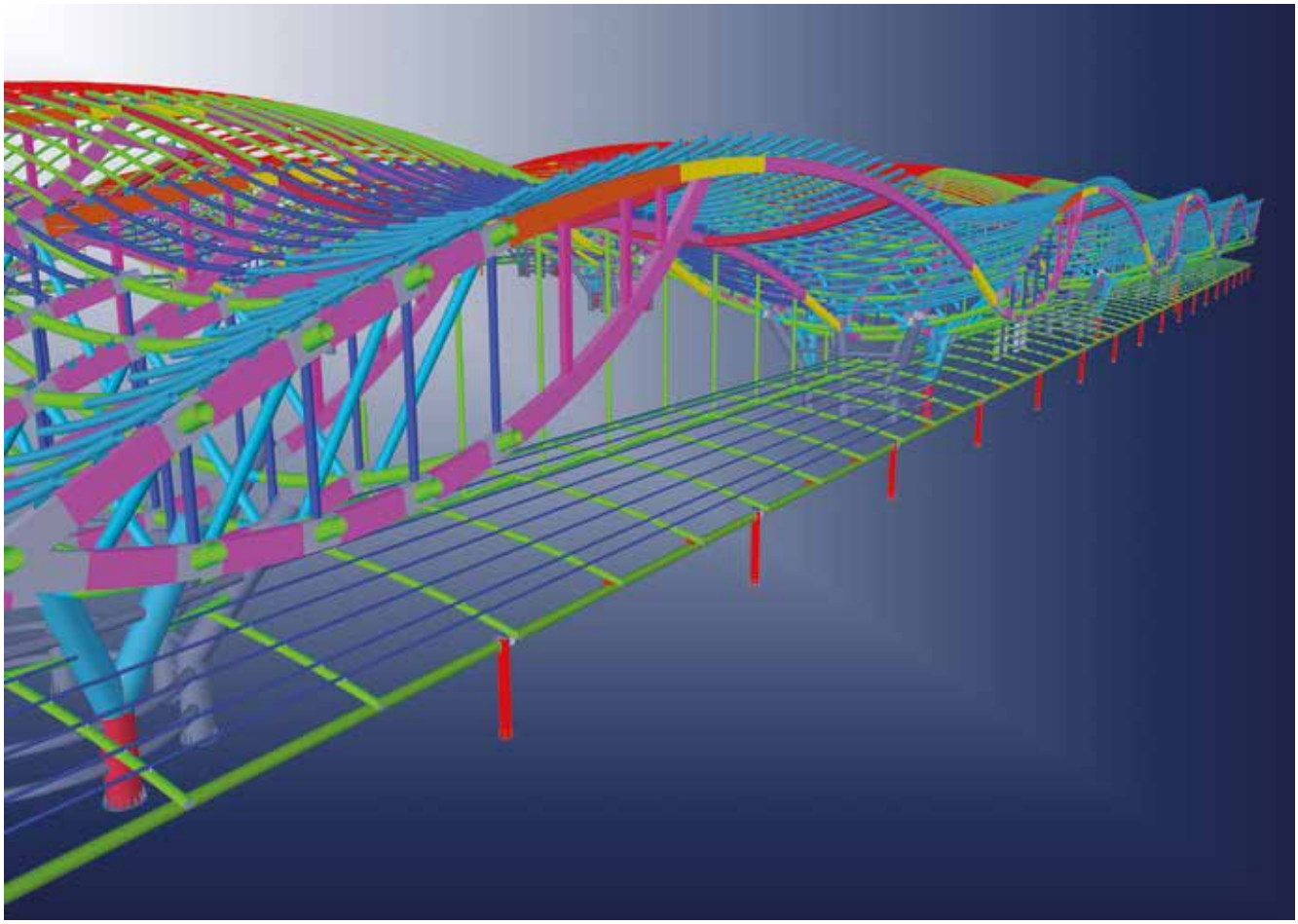


Tekla BIM helps to build the new International Terminal in Bali

The Ngurah Rai International Airport handles more than 11 million passengers a year and is one of Indonesia's busiest airports. To increase capacity, the Indonesia government is expanding the airport, and they are doing it with the help of Tekla.

Construction is well underway on a new 120,000 square metres international terminal. The existing international terminal will be converted into a 65,000 square metres domestic terminal. The new airport will have a capacity of 17 million passengers a year by 2020 and 25 million passengers per year by 2035.

One of the most distinguishing characteristics of the design is the undulating roof, which resembles the ocean that gives the island its famous beaches. The waves on the roof consist of tubular steel of varying sizes and diameters, painstakingly shaped by local steel fabricator P.T. Dutacipta Pakarperkasa (DCP). And helping DCP to build the new airport is Tekla software.



The roof of the new international terminal resembles the ocean that gives the island its famous beaches.

DCP got the contract to fabricate the steel parts for the airport in August 2012 and the team immediately chose Tekla for the design. DCP is no stranger to Tekla Structures, having used it for the Building Information Modelling on airports in Medan and Lombok, both in Indonesia.

DCP has been using Tekla for the last three years and they can no longer imagine going back to using run-of-the-mill 3D CAD software. DCP took about two months to create the 3D model of the airport's steel structure. Had they used ordinary CAD software, it would have taken at least twice as long, said Mr Yoki Triwahyudi, the company's Deputy Director of Design & Engineering. "In addition, we would have had to use 10 to 15 people. With Tekla, we only needed three or four people," he said.

"One person can work on the right section while another person is working on the left section. Both of them can design at the same time, and that makes them more efficient."

- Yoki Triwahyudi, Deputy Director of Design & Engineering, DCP

Easy to use

The difference between using ordinary CAD software and Tekla Structures is enormous, according to Mr Yoki. "It is like using Windows 3.1 versus Windows 7. Because of its user interface, Windows 7 is much easier to use. That is Tekla."

Because less time and fewer man-hours were used to create the model, DCP saved on design time and cost.

Another advantage that they found was that it was easy to handle changes with Tekla software. This was important because the project was redesigned midway and so parts of the model had to be re-done. "In Tekla, there is a library so if we need to change the type of piping in the model, we can do so easily. We just have to find a template for the material and we can just drag it into the new design. It is very simple. With normal CAD software, we would have had to create it again, and that would require a lot more time."

Tekla software also handled the bending of the steel tubes easily. This was a critical part of the roof design and so it was important that Tekla could handle the geometries involved.

Said Mr Yoki: "To make the waves, we had to do bend the steel. That was very challenging, and it would have been very difficult to do without software. With Tekla though, almost everything is possible. To bend a pipe, we just had to draw the bend within the programme."

Another advantage was that Tekla software made it easy to demonstrate key aspects of the model to the client. "For wind stressing, we can show the customer everything that they want to know about what we use in the roof," he said.

Mr Yoki also liked that Tekla allows different groups of people to work on the same file at the same time. "One person can work on the right section while another person is working on the left section. Both of them can design at the same time, and that makes them more efficient."

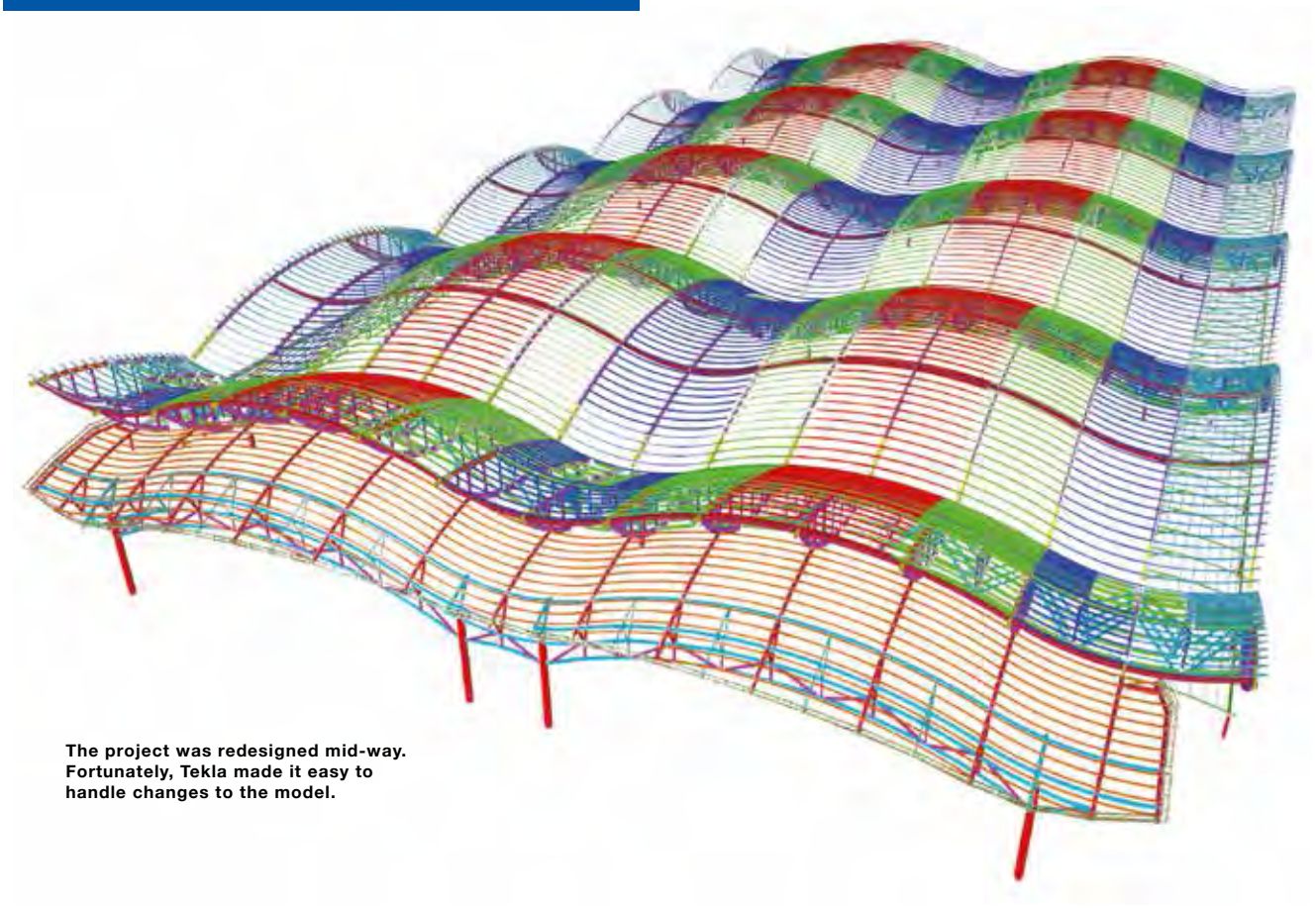
In addition, he appreciated the ability to zoom in on the model's details easily. "We use web viewer so when the customer asks about the joints, we can zoom in to just about any positions, and we can pan and tilt to see it from different angles. This allows us to give the customer greater satisfaction."

> "We just have to find a template for the material and we can just drag it into the new design. It is very simple."
> - Yoki Triwahyudi, Deputy Director of Design & Engineering, DCP

Tekla speeds fabrication process

Apart from its value at the design stage, Mr Yoki found Tekla Structures valuable at the fabrication stage. Tekla is able to directly produce the NC files that bending machines use. In addition, Tekla is able to produce a materials list very easily. All this is in contrast with CAD software, which would take a lot of time to convert their models into NC files. It is also harder to produce a materials list from CAD software.

At the erection stage, Tekla software continued to prove its worth. Erecting the roof was a challenge because of its size and complexity. The five-line roof measures 60 metres by 60 metres and each line had to be held up by three columns, some 60 metres in length. Accuracy was paramount.

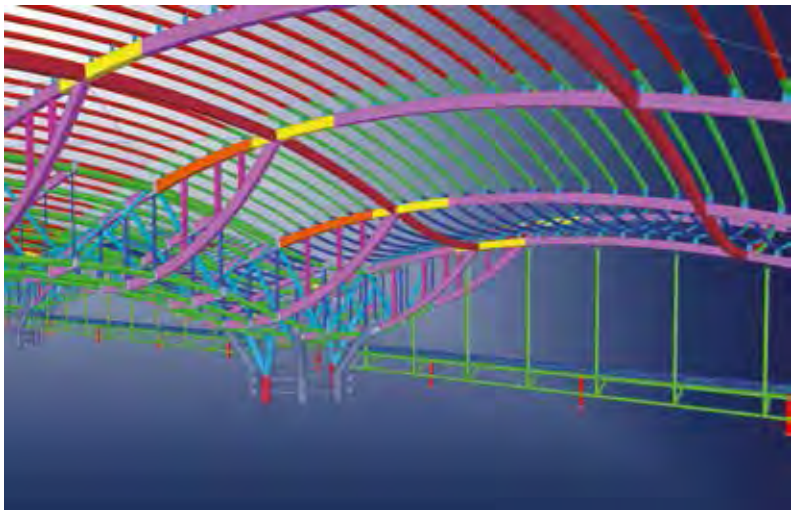


The project was redesigned mid-way. Fortunately, Tekla made it easy to handle changes to the model.

Construction is now well underway on the new 120,000 square metres international terminal.

"With Tekla though, almost everything is possible. To bend a pipe, we just had to draw the bend within the programme."
- Yoki Triwahyudi, Deputy Director of Design & Engineering, DCP

"We have the experience and we are ready for the next challenge."
- Yoki Triwahyudi, Deputy Director of Design & Engineering, DCP



Tekla also makes it easy to do a parts and materials list.

Because of the size of the roof, the pieces had to be transported individually to the site before being welded to the columns. The constructable 3D Tekla models helped the welders see precisely how each part was supposed to be joined together.

Thanks to the hard work of all the people involved, the Ngurah Rai International Airport project is on schedule. As for DCP, the experience has been a useful one for them. Although they had previously used Tekla for fabricating structures for power plants and coal shelters as well as for two other Indonesian airports, Ngurah Rai's curved roof was new to them. Having successfully built the airport, DCP is looking forward to the future with a renewed sense of confidence. Said Mr Yoki: "We have the experience and we are ready for the next challenge."

For additional information, visit www.tekla.com.

Customised greening solutions

Facade greening projects with Green Solutions G1 by Jakob AG

In the recent past, façade greening has become an increasingly important issue – not least in connection with growing ecological awareness. It was found that façade greening projects, circumspectly planned and implemented, not only create added value from an ecological and aesthetic point of view, they also offer advantages with regard to construction physics.

One of the key prerequisites for persuasive façade greening projects is the availability of suitable and robust training systems for the various climber and creeper plants that may be used. This is exactly where Jakob AG can offer excellent, proven expertise as well as a highly diversified product range. Spectacular reference projects such as the innovative MFO Park in Zürich-Oerlikon illustrate this genuine Jakob quality, and so does the "Green Solutions G1" programme. It showcases Jakob's proprietary standard systems for greening smaller and medium-sized surfaces (up to approximately 10 metres high and 15 metres wide). They can be customised to customer wishes and requirements. Within the scope of this programme – it addresses architects, greening planners, horticulturists and of course private homeowners –, Jakob AG offers optimised training systems for every type of plant. For assembly, a broad range of spacers is available to match the various construction and façade materials while accommodating a wide variety of wall configurations. Moreover, the quality of the materials used by Jakob AG ensures that the service life of the training systems by far exceeds the life cycle of the plants.

The wide application range of "Green Solutions G1" by Jakob AG is exemplified by two projects implemented last year: the façade greening of a single-family home in Baden and of a manufacturing plant in Neckarsulm.

In the case of the single-family home in Baden, the aim was not the greening of the entire façade but the installation of training systems for climbing roses and wild vine intended to cover certain parts of the building. Here, a simple system of stainless steel rope, spacers and cross clamps did the trick. The vertically and horizontally aligned ropes are interconnected with cross clamps to form an extremely unobtrusive wide-meshed net structure. This applies especially to the wood-lath-lined façades, where the horizontally arranged ropes run exactly at the height of the joints and are almost invisible from a greater distance. On the façades lined with bright siding, some of the horizontal ropes also run along the façade joints. Overall, the training systems appear as fine, decorative linear accents on closed façade surfaces. The single-family home in Baden documents a training systems application covered by the Green Solutions G1 programme. It is simple to plan and implement and is typical for many private homes.

Conversely, the greening of a manufacturing plant in Neckarsulm represents one of the more sophisticated tasks that can be solved with the standard systems developed by Jakob. In this case, a windowless, 8-metre high façade lined with aluminum panels had to be equipped with a filigreed training structure for ornamental vines and birthworts. For this purpose, the 180-square metres façade surface was covered with a Webnet of 2 mm thick stainless steel rope subdivided into several vertically arranged segments of 7.5 metres length and 2.75 metres width.

The upper and lower transversal attachment of the net was achieved with stainless steel pipes, while the vertical fixation was made with 6 mm thick stainless steel rope held in position at 4 points by spacers. This creates three narrow, lens-shaped openings between the individual net segments, providing the net surface with an interesting graphic structure before it disappears under the growth of the plants.

These two examples show that the Green Solutions G1 programme makes it possible to implement very different greening projects at moderate cost and in a technically sophisticated and aesthetically attractive way. This application-oriented approach, one of the key advantages of the programme developed by Jakob AG, is certain to arouse the interest of many builders.

For more information, visit www.jakob.ch.

PROJECT DATA

TEXT: Mathias Remmele, Basel
PHOTOGRAPHS: Photography, Brigitte Batt & Klemens Huber, Fräschels

SINGLE-FAMILY HOME BADEN, SWITZERLAND
TRAINING-SYSTEMS FOR GREEN FACADES: Jakob AG

MANUFACTURING PLANT IN NECKARSULM, GERMANY
OWNER: GNV Grundstücksverwaltung GmbH & CoKG
ARCHITECT: Dupper Landschaftsarchitekten
TRAINING-SYSTEMS FOR GREEN FACADES: Jakob AG

Five winners recognised for conservation excellence at the URA Architectural Heritage Awards 2013

The Urban Redevelopment Authority (URA) has announced the winners of the URA Architectural Heritage Awards (AHA). The five winning restoration projects are:

- 30 Mohamed Sultan Road (Hong San See Temple)
- 5 Chatsworth Park
- 48 North Canal Road
- 125 Joo Chiat Place
- Lorong 24A Shophouse Series

The Awards were inaugurated in 1995 to recognise the people who make conservation happen – dedicated owners, insightful developers, creative professionals and sensitive contractors. They exemplify the highest standards within the conservation movement and have gone beyond what is necessary to sensitively restore their heritage buildings for continued use. Now in its 19th year, the annual Awards also promote public awareness and appreciation of quality restoration of monuments and buildings with preservation and conservation status in Singapore. With the addition of these five winners, the total number of projects that have received the Awards has risen to 117.

Category A
This category is for National Monuments and fully conserved buildings in the Historic Districts and Good Class Bungalow Areas. Buildings fully conserved according to the restoration principles in other areas can also be considered under this category. They are assessed on how far they adhere to quality restoration principles of maximum retention, sensitive restoration and careful repair.

Category B
This category is for integrated "old" and "new" developments such as those in the Historic Residential Districts and Secondary Settlement Areas. They are assessed on the quality restoration of the "old" elements, the innovation and architectural excellence of the "new" elements, and how the "new" draws inspiration from the "old".

2013 Winners

Category A

30 Mohamed Sultan Road (Hong San See Temple): a temple for devotees

Main hall of 30 Mohamed Sultan Road (Hong San See Temple) restored. Photo: © Urban Redevelopment Authority

The 100-year-old Hong San See Temple, a National Monument, also known as The Temple of Phoenix Hill, has been passionately and faithfully restored. Through sheer determination, thorough research and investigations, exemplary teamwork with the consultants and experts, and community spirit, the owners have returned the shine to this rare and important 1913 national architectural treasure, richly influenced by early Chinese immigrants from Southern Fujian.

Category B

5 Chatsworth Park: a multi-generational family home

This delicately restored iconic Frank Brewer bungalow has retained its frontage and remains the centrepiece of the property. This is done through the deliberate design and use of a subdued grey colour tone for its extensive new wing as a backdrop and the clever re-positioning of its new driveway. The old-and-new integrated residential project now celebrates the character and heritage of this stately mid-20th Century colonial home.

5 Chatsworth Park iconic Frank Brewer bungalow restored. Photo: © Urban Redevelopment Authority

48 North Canal Road: an office complex

125 Joo Chiat Place Transitional-style shophouse restored as a modern family home. Photo: © Urban Redevelopment Authority

An impassioned effort to retain a slice of history with the faithful reconstruction of two 1940s and 1950s conserved shophouse units beyond structural repair has successfully restored the visage of the heritage streetscape along North Canal Road. The contrasting new building, linked via a new rear extension, adds a refreshing link to modernity.

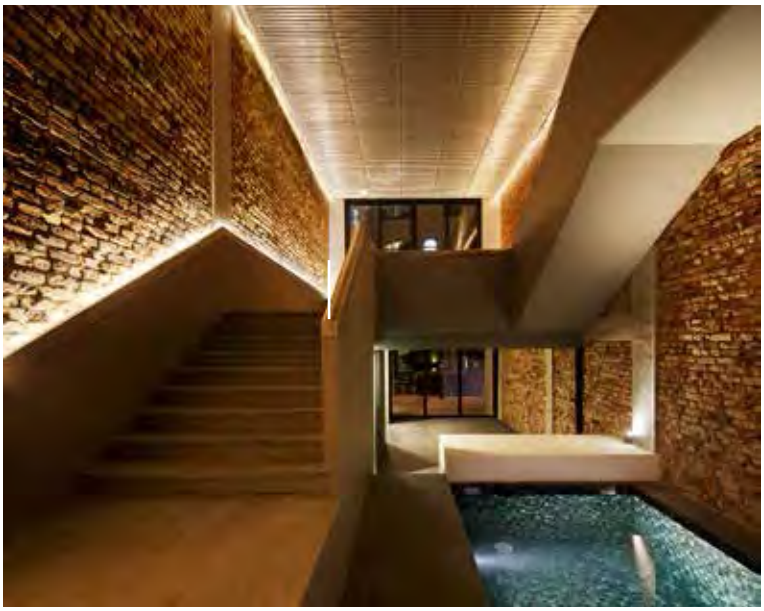
125 Joo Chiat Place: a residential development

North Canal Road conserved shophouses faithfully reinstated. Photo: © Urban Redevelopment Authority

With no hint of subtlety, this 1920s Transitional-Style shophouse, formerly The Lucky Book Store, has been restored and reinvented for its new purpose as a modern family home. This surprising and delightful outcome is a high impact, budget-friendly transformation that lays bare much of the building's past.

Lorong 24A Shophouse Series: a series of exhibition and living spaces

The facades of the eight units of conserved Chinese Baroque Style shophouses, built circa early 1900s, have been respectably restored. Entrusted to the hands of different architects, each unit has been given a new lease of life with a distinctive interior expression that accentuates the eclectic character of its Geylang neighbourhood and spurs the creative engagement that spills onto the streets.



Monolithic pool and exposed brickwalls at the restored Lorong 24A Shophouse Series. Photo: © Urban Redevelopment Authority

13th SIA Architectural Design Awards announced

Singapore Institute of Architects (SIA) announced the recipients of two prestigious awards: (a) 13th SIA Architectural Design Awards, and (b) Inaugural SIA-Rigel Bathroom Design Awards.

The SIA Architectural Design Awards is the most prestigious award conferred by SIA to promote and encourage distinction in architectural design. The Awards recognises the achievements of SIA members in their pursuit of architectural excellence and motivates architects to push the boundaries with innovative solutions. SIA hopes to imbue architects with the relentless mindset of continually achieving greater heights, leading to the vision of Singapore architecture being acknowledged as world class standards. The Awards also aim to heighten the appreciation and patronage of good architectural design from both the architectural fraternity as well as the general public.

The SIA-Rigel Bathroom Design Awards were established to stimulate and encourage new ideas, innovations and development in the world of intelligent bathroom design. The awards aim to foster greater effort and commitment to the advance of sanitary technology and design.

The Presentation Ceremony was graced by Mr Desmond Lee, Minister of State for National Development as the Guest-of-Honour. It honoured 28 recipients (23 for the SIA Architectural Design Awards, and five for the SIA-Rigel Bathroom Design Awards) on 1 October 2013 at Raffles City Convention Centre.

SIA President and Chairman for the Jury of the two Awards, Theodore Chan commented: "In 2013, the Institute celebrates its golden 50th year and we are also proud to celebrate 2 presentation award ceremonies; the 13th cycle of the SIA Architectural Design Awards and the 1st Bathroom Design Awards. Where the SIA Architectural Design Awards evaluates submissions on overall architectural excellence, the Bathroom Design Awards looks at a detailed aspect of the design of an important but often overlooked development component; the Bathroom."

He added: "The Institute also launched a new award, G-Architect Awards (G meaning 'Green') at the Presentation Ceremony. The G-Architect Awards will honour an architect and his body of works that advocate and has advanced the theory and design practice of sustainable architecture."

Submissions of the 13th SIA Architectural Design Awards are evaluated based on attributes such as originality and innovation, sensitivity to context, sustainability, response to climate, response to users' needs and elegance of construction and detail; by a judging panel of industry professionals comprising

- **Mr Theodore Chan** (President, Singapore Institute of Architects),
- **Ms Fun Siew Leng** (Group Director, Urban Redevelopment Authority)
- **Ar Saifuddin Bin Ahmad** (President, Pertubuhan Akitek Malaysia),
- **Associate Prof Thomas Schroepfer** (Programme Director Architectural Design Architecture and Sustainable Design Pillar, SUTD)
- **Ms Rita Soh** (President, Board of Architects)
- **Prof Wong Yunn Chii** (Head, NUS Department of Architecture),

Moderator

- **Mr Seah Chee Huang** (Chair, SIA Awards Committee / Assoc Director, DP Architects)

A total of **14 Design Awards** and **7 Honourable Mentions** are awarded in 6 categories. Of the 14 Design Awards, one project is award as the **"Best Project Constructed under $1.5 Million"** and one other project as the **"Building Of The Year"**.

1. Category: Residential Projects

Design Award

- *Kent Vale*, MKPL Architects Pte Ltd
- *118 Killiney*, ip:li Architects
- *Courtyard House*, Formwerkz Architects
- *36 Victoria Park*, ip:li Architects
- *The Winged House*, K2LD Architects Pte Ltd
- *Namly House*, CHANG Architects
- *Green Collection*, RT+Q Architects Pte Ltd
- *Extended House*, Formwerkz Architects

Honourable Mention

- *Party House*, W Architects Pte Ltd
- *Svarga Residence @ Batujimbar*, RT+Q Architects Pte Ltd
- *The Longhouse 36*, Aamer Architects

2. Category: Commercial Projects

Design Award

- *Gardens by the Bay – Conservatory*, CPG Consultants Pte Ltd

3. Category: Institutional Projects

Design Award

- *ITE Headquarters and ITE College Central @ Ang Mo Kio*, RSP Architects Planners & Engineers (Pte) Ltd

Honourable Mention

- *Singapore Life Church*, LAUD Architects Pte Ltd

4. Category: Industrial, Transport & Infrastructure Projects

Honourable Mention

- *CleanTech One*, Surbana International Consultants Pte Ltd

5. Category: Special

Design Award

- *137 Market Street*, Teh Joo Heng Architects
- *Lucky Shophouse*, CHANG Architects
- *Gardens by the Bay*, CPG Consultants Pte Ltd
- *Archifest Zero Waste Pavilion*, WOW Architects

Honourable Mention

- *Changi Airport Terminal 1 Upgrading*, Architects 61 Pte Ltd
- *55 Blair Road*, ONG&ONG Pte Ltd

Best Project Constructed Under $1.5 Million

- *Lucky Shophouse*, CHANG Architects

Building of the Year

- *Extended House*, Formwerkz Architects

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Design Award

Kent Vale. Photo: © SIA and MKPL Architects Pte Ltd

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Building of the Year

Extended House. Photo: © SIA and Formwerkz Architects

Greening the Philippines

Text by Liza Morales-Crespo, a registered architect in the Philippines and New York state and a LEED accredited professional.

Liza Morales-Crespo

The recent calamities that have struck the Philippines brought the realities of global warming closer to home. We have begun to realise that the need to take care of the environment is a lot more urgent than what most people think. The need to reduce the country's carbon footprint: either by looking for alternative sources of energy or reduction of carbon dioxide emissions is critical together with the use of sustainable local materials.

Aside from the environmental benefits of switching to sustainable alternatives, the decision to go green also has serious economic implications on various industries as companies are looking for ways to reduce their operational expenses. The reality is that the Philippines is included in the list of countries with the highest electricity rates in the Asia Pacific region ironic, considering that the Philippines is considered a developing economy.

Fortunately, the Philippines is rich in natural resources with mild temperature swings throughout the year making it a good candidate for alternative sources of energy: hydropower, geothermal, wind and solar. Solar seems to be an extremely viable alternative as sunlight is available for most parts of the year.

About the author

Liza Morales-Crespo is a registered architect in the Philippines and New York state and is a LEED accredited professional. Her Manila based design firm, Liza Crespo Ecotecture, works on projects of varying scales from retail developments, residences, office buildings, to masterplan developments with a focus on sustainability. **Liza can be contacted at the following e-mail address: liza@lizacrespo.com**

Among the features encouraged by the Quezon City Green Building Ordinance is the provision of a green roof as part of the open space requirements.

The Philippine Renewable energy act of 2008 includes provisions for Net metering, which allows households and commercial facilities to receive credit for the surplus they feed into the distribution system. It also provides for Feed in tariffs, which helps accelerate **investment in renewable energy technologies through long-term contracts offered to those producing renewable energy. This policy mechanism works, as it is based on how much it costs to generate each technology.**

People are now looking into the feasibility of going solar in their homes and businesses. When before people were resisting the switch to harnessing the power of the sun due to the high capital investment commonly associated with the technology....they are now slowly embracing this green energy with the use of grid tie systems. This technology generates semi-autonomous electricity through a grid energy storage system. It works by feeding excess capacity back to the local mains electrical grid through links. It is expected that the first grid tie systems to make use of the feed-in tariff scheme will be operational in 2014.

Rating Systems

Buildings in the Philippines seeking certification usually adopt LEED (Leadership in Energy and Environmental Design). A rating system for the design, construction, operation and maintenance of green structures and neighbourhoods, LEED helps both building owners and operators become more environmentally responsible and efficient with resources. The suite of rating systems was developed by the US Green Building Council (USGBC).

There is also **Building for Ecologically Responsive Design Excellence (BERDE)**, the rating system which adapts international standards and criteria to the local setting.

Certification with these two rating systems is optional for building owners, slowly however, more and more cities within the Philippines are adopting an environment friendly stand with regard to the construction of new buildings. Cities, like Quezon City within Metro Manila, are offering incentives such as tax rebates as reward for green building certification. Various green features are encouraged to be part of new construction such as: bike racks, green spaces, the use of renewable energy sources for power generation and other sustainable elements.

Challenges

Among the many challenges the country has to deal with, with regard to becoming more sustainable, is that there is no certification system in place to rate products based on their impact to the environment. Unlike in Europe where certification systems such as EcoLabel are in place, there is no such thing in the Philippines, which often lead consumers to fall prey to greenwashing, wherein products are deceptively promoted as environmentally friendly without any actual standards to adhere to.

Another stumbling block is that there is this wide misconception that building green is always more costly than a conventional building. What property owners need to realise is that this is not always true, as the adoption of more passive techniques in building design can ensure a sustainable building and a financially sound one as well.

Conclusion

Despite it being a necessity in a country that is constantly plagued with the effects of global warming, sustainable building is still in its infancy in the Philippines. With the influx of donations and foreign aid after the recent calamity, there is a renewed interest in creating better buildings and infrastructure throughout the country. There is a need to incorporate green features as a requirement for new construction to help mitigate the effects of global warming. With the help of recent policy changes in the local level as well as the national level, there is hope that the Philippines can become a model of sustainability, rising from the ashes.

The Public Safety Savings and Loan Association Inc. headquarters along EDSA incorporates a 12 storey high green wall, among the tallest in the region. Meant to help reduce the carbon dioxide emissions generated by vehicles along a busy thoroughfare, it uses recycled rainwater for irrigation.

An interior atrium provides natural daylight for all the office spaces.

Text by Ken Greig, Partner, Greig & Stephenson

Tai Yuen Market in Hong Kong's Northern Territories has an upgrade

Visiting food markets in Southeast Asia is a real sensory experience; the smell and colour of the vegetables, the squawking of live chickens, the radiant variety of eye-catching fish and the noise and chaos are an experience that one never forgets.

However, in terms of health and hygiene and management of these markets there is often room for improvement. This was only too apparent to The Link, a real estate investment trust that owns and manages 153 shopping centres and 94 wet markets in Hong Kong.

The company accepted that there was a need to embark upon a refurbishment programme for a proportion of these markets to cater for an increasingly discerning shopping population and to ensure that its property assets could be better managed to produce a greater net income.

After taking advice it embarked upon a tender competition to find a firm of architects to undertake the redesign of Tai Yuen Market, in Tai Yuen Estate of Tai Po area, situated in the Northern Territories. Tai Yuen Estate is a 1970s mixed-use project comprising retail and a large amount of residential space.

It selected London-based architects Greig & Stephenson who had been responsible for master planning the conversion of Borough Market near the capital's historic London Bridge area from a wholesale to a retail market. Borough is now a highly popular destination for food lovers from all over London and the South East of England who travel large distances to buy top quality foods that they cannot find elsewhere. It is now one of the top 10 tourist attractions in London and this appealed to The Link because of the "organised chaos" design approach that Greig & Stephenson adopted.

Brighter and cleaner stall layouts.

Roof Garden

The Link didn't want a spruced up version of what was already there with serried ranks of uniform food stalls. What it wanted was a higgledy-piggledy concentration of large and small stalls, giving the feel of a proper Southeast Asian food market – in short "organised chaos".

The client brief also included the 'cleaning up' of many of the stall holders trading habits where the stalls spilled out onto the aisles in an unauthorised fashion and the floors were always awash with water from the fish stalls because of poor drainage.

And at the same time there was a desire to improve the offer of the market to provide other attractions including additional restaurants and a wider choice of stalls.

Brighter, improved stall layout

The Greig & Stephenson redesign involved an improved stall layout, which increased the gross to net layout with income increasing from approximately 35 percent to 50 percent and, as a result increased aisle width to improve circulation.

Originally, the finishes were very dull with a concrete slab floor, which hadn't been constructed to be maintained and ended up black and filthy. In order to improve the drainage the floors were raised

Before

After

to create deeper drainage channels and finished with a porcelain tile in a light grey colour, which is easy to maintain and throws off a lighter reflection.

In the public aisle areas the lighting was much improved by incorporating high-bay compact fluorescent lighting to replace the big-grid fluorescent illumination.

The individual traders were responsible for their own lighting and tile finishes but they had to follow a merchandising and lighting design guide that was created by the architects. Fluorescent lighting tends to highlight red meat colouring well as do green tile finishes, whereas halogen lights make fish look wetter and fresher.

The architects drew from their experience with shopping centre lay-out and design by positioning the highly popular chicken vendors – a staple Chinese food – deep inside the market to draw customers past all the flower, fruit, vegetable and fish stalls.

In an acknowledgement that the fresh meat, vegetable and fish stalls complete their trade during the day closing by evening the design was segmented so that separate access by way of a mini-arcade could be given to shoppers at night to buy flowers, bakery and accessories.

By creating a mini-arcade with a separate entrance the architects were able to demolish the anonymous brick wall fronting the street which gave it a uninviting closed-box feel and designed in its place a series of pavilions selling dry goods. The market is secured at night with shutters that are lowered between each of the pavilions. This highlights the predominant ethos for the redesign of "visibility, accessibility and permeability".

With an increasingly affluent population attention was given to providing further attractions and a cookery school and demonstration kitchen has been installed in the market to reinvigorate the idea of cooking from fresh especially for young professionals.

Initially there were plans to have restaurants anchoring the back of the market to supplement the restaurants on the upper levels. However, due to the success of the market stalls in phase one of the project, and that pay a higher rent than the restaurants, it was decided not to pursue this option.

At roof level the opportunity was seized to provide a green garden to grow vegetables for the market using composting from the food waste providing a sustainable recycling element. In addition the surrounding flats that overlook the market benefit from views of the rooftop garden.

The Chairman of the market traders' association describes the changes and improvements which have increased the trader density at Tai Yuen Market in a humorous way: "You potato eaters are cleverer than us rice eaters, because when I stand in my stall I used to see eight market stalls but now from the same spot I can see 24."

Following on from Tai Yuen, Greig & Stephenson has gone on to redesign two more markets for The Link, the Oi Man Plaza in Kowloon and Lok Fu, in Central Kowloon that has just been completed.

For more information, visit www.gands.co.uk.

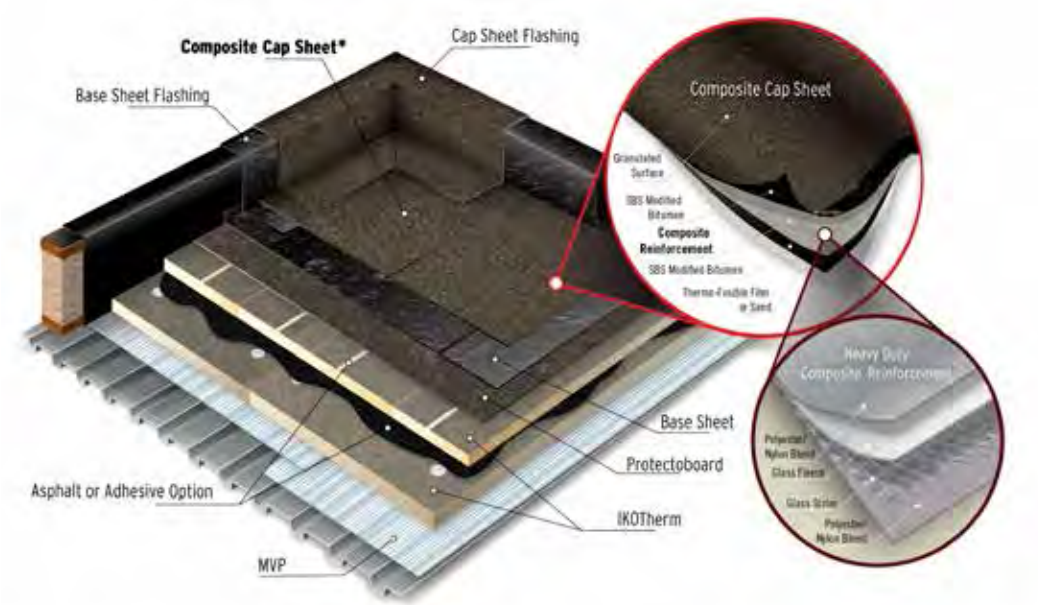
Before

After

IKO INTRODUCES NEW PREMIUM LINE OF HEAVY-DUTY MEMBRANES

Ontario, Canada – IKO, a North American pioneer and global leader in the roofing materials business, has introduced a brand-new line of cap and base products as part of the company's premium Heavy-Duty Composite Roofing System.

According to Akif Amin, Vice-president of Commercial Roofing Canada, the new products derive from IKO's proven manufacturing technologies. "Our engineers have built on the strengths, performance and success of earlier products to create the next generation of commercial roofing cap and base membranes."



Corner illustration of IKO's premium Heavy-Duty Composite Roofing System. Photo: © IKO

The company's new line consists of three heat-welded HD cap sheets and two HD base sheets. All contain a non-woven composite polyester mat reinforced with fibreglass fleece and scrim combined with a tough, high-end nylon/polyester blend which is then impregnated with IKO's SBS modified bitumen.

"This composite reinforcement offers superior force absorption plus tremendous dimensional stability both before and after application, whether that's hot or cold," explained Mr Amin. "When you combine all that with the products' exceptional resistance to aging, weathering and puncture, these new HD membranes are vital components of IKO's Heavy-Duty Composite Roofing System. They're sure to be sought after by commercial contractors for the most demanding building applications," he added.

IKO's new HD base sheets are available under the name Torchflex HD-FF for hot application and Fast-N-Stick-HD for mechanical or cold application. The latest HD cap sheet membrane line-up consists of three distinctive products. Torchflex TP HD delivers a monolithic bond; PreVENTTM TP HD boasts extra fire-retardant additives sufficient to satisfy Class "A" external fire-resistance ratings; and ArmourCool HD is embedded with highly-reflective white granules that surpass LEED requirements for reflectivity.

ALL UNDER ONE ROOF

We're working on expanding our Roof & Façade section to include more stories such as news, interviews, products and projects. We hope you enjoy these changes and our efforts to continue serving you with the best content. If you have an interesting story to share, please contact the editor at seab@tradelinkmedia.com.sg!