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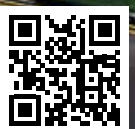
MAR/APR 2016



Victoria Theatre & Victoria Concert Hall

Empress Place, Singapore

ARCHITECTURE Palace Garden Bazaar in Budapest; Alkaff Upper Serangoon Mosque in Singapore; Musee de l'Homme in Paris **INTERIOR** The Park Lane, Hong Kong; NUO Beijing; Hotel Express Inn in Nashik, India **LANDSCAPING** Gloucester Gateway gets a new green roof; The Vertical Garden by Patrick Blanc **SHOW REVIEWS** GreenUrbanScape Asia 2015 & International Stone, Marble and Ceramic Show 2015



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- Damansara City
- Setia Sky Residences
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SLIDEHIDE increases the attractiveness of new housing development project to potential buyers and investors through offering a superior, thoughtful and spacious floor layout.

"TRANSFORMING WASTED SPACE TO USABLE SPACE"

BEFORE

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AFTER

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SLIDEHIDE transform wasted floor areas into usable space to allow homeowners more space for storage or to enhance their living environment.

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BEFORE

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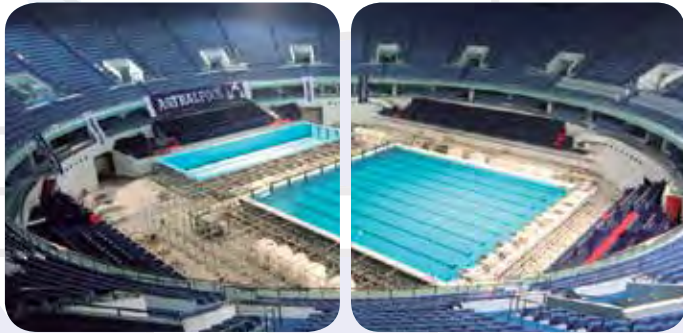
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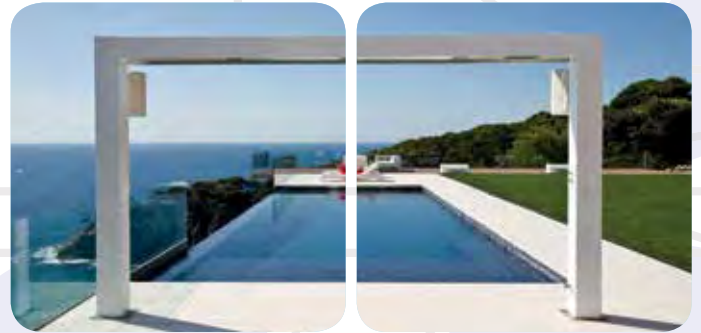


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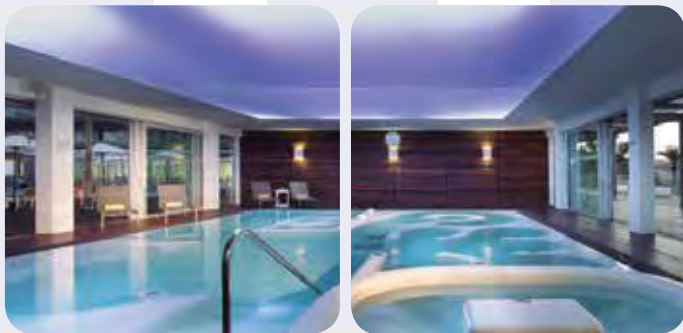
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On the Cover: Victoria Theatre & Victoria Concert Hall in Singapore. Photo Courtesy of Victoria Theatre & Victoria Concert Hall

Cover design by Fawzeeah Yamin



GCC Sliding And Stacking Wall System



GCC Sliding And Folding Wall System

The three core principles of **GCC** are to provide **good quality, creditable and consideration products and services** to our customers since its establishment.

GCC has dedicated huge efforts in glass hardware and system development since 1981. **GCC** also provides variety of great solutions for users to create wide, fresh, and comfortable spaces. The product range cover from houses, office buildings, restaurants, hotels to department stores, etc.

Space planning is always a key point that designers and users focus on. To better serve user's expectation and the market trend, **GCC** launches "**Heavy Duty Sliding And Stacking Wall System**" and "**Sliding And Folding Wall System**". There are two major features of these two creative systems. First of all, it dose not require to drill through glass and no need to use AB glue on glass. These two features offer more convenient operability to users and significantly cut down the installation time. Moreover, it dose not require floor guide anymore, and it keeps the floor flawlessly from washing and dust and maintains simple and neat partition system. In addition, **GCC** offers anti-UV PVC seal, weather resisted rubber seal and weather brush to keep mosquitoes and insects away. All these options allows customer to flexible apply **GCC's** products in different conditions.

To provide great living experiences to customers, **GCC** has its QC team to oversee the product with high-standard, and never compromise product quality, safety and endurances of market price competition. **GCC** develops its unique designs and holds patents in many countries. Quality assurance is always the top priority for **GCC** and we hope thorough our effort we can see application for glass hardware and systems in numerous spaces.

Looking forward, **GCC** will continue to devote its effort in developing more user-friendly systems to offer more effortless solutions, and most importantly to provide better living experiences to users.

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editor's note



Good day dear Readers! Here's another interesting issue of *Southeast Asia Building* to read on. Conservation and Preservation Architecture is the main theme of this issue and we have put together a number of restoration and refurbishment building projects, which show how architects have cleverly renewed the character and charm of old buildings. Gracing the cover of this issue is the Victoria Theatre & Victoria Concert Hall in Singapore.

Next, we have featured hotel projects to showcase what kind of design it takes to make a hotel's interior appealing and attractive to hotel guests. Lastly, in the landscaping section, we look at the popularity of green walls and green roofs in the building industry. Patrick Blanc, a French botanist working at the French National Centre for Scientific Research, gives us an overview of vertical garden via a scientific and artistic approach.

Towards the end of 2015, we participated in two local exhibitions – GreenUrbanScape Asia 2015 and International Stone, Marble and Ceramic 2015. You can read about the products that were launched at the exhibitions as well as the companies that exhibited, in both the show reviews.

On an ending note, *Southeast Asia Building* is improving its social media presence. We invite you to "Like" our Facebook page and "Follow" us on Twitter. Happy reading!

Amita Natveelal

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Aurecon wins major property project in the Philippines

Singapore – Aurecon has been appointed by property developer SM Prime Holdings Inc. to provide structural engineering design services for a major new project in the Philippines – the SM Megamall Towers, a high-rise office building being developed in Metro Manila.

Global engineering consultant Aurecon will work closely with Arquitectonica, the architect on the project, helping the company bring its vision to reality from the concept engineering phase right through design development.

The 50-storey SM Megamall Towers development will dominate the heart of Ortigas in Mandaluyong City, a major commercial business district within Metro Manila. The Tower's 124,200 square-metre floor area will also feature three levels of underground parking, plus above-ground parking.

Aurecon will lend its structural engineering expertise to four initial phases of the project, including concept design, schematic design, design development and construction documentation review.

"The tower is S-shaped in elevation," said Aurecon's Market Director – Built Environment, Asia, John Webb.

"And so one of the biggest challenges is developing a structure that can be constructed effectively with edges that move in or out at every level without compromising the ability to withstand seismic activity," he added.



Artist's impression of the SM Megamall Towers at night.
Photo: © Arquitectonica

Singapore designated UNESCO Creative City of Design

Singapore – Singapore has been designated a UNESCO Creative City of Design. It is one of the first two ASEAN cities to get the designation. Singapore, together with Bandung (Indonesia), Budapest (Hungary), Detroit (United States of America), Kaunas (Lithuania) and Puebla (Mexico) will now join 16 existing member Cities of Design in the UNESCO Creative Cities Network (UCCN).

The designation of UNESCO Creative City will widen Singapore's global design network and create more opportunities for collaborations between the Singapore design industry and other member cities. The international cooperation and knowledge exchange will contribute towards capability development of Singapore's design industry and also help Singapore keep abreast with the latest international design developments, best practices and international benchmark.

"We are glad to receive this affirmation from UNESCO and I am delighted to share this joyous news with all Singaporeans. As a UNESCO Creative City of Design, Singapore will continue to use design to improve the lives of Singaporeans and make Singapore a more liveable and lovable city. We will also work towards helping businesses be more innovative through design. The designation will spur us on in building a pervasive design and innovative culture that involves everyone – designers, communities and the public," said Dr Yaacob Ibrahim, Minister for Communications and Information.

"We are elated to receive this good news. The designation will support the development of a creative eco-system where the National Design Centre (NDC), plays a key role in Singapore's contribution to the UCCN," said DesignSingapore Council Executive Director, Mr Jeffrey Ho.

Sunray Headquarters, designed by DP Architects, wins the President's Design Award

Singapore – Sunray Woodcraft Construction Headquarters (Sunray Headquarters), an industrial project at the Sungei Kadut furniture hub in Singapore, has been awarded the prestigious Design of the Year accolade at the President's Design Award 2015.

Sunray Headquarters was one of 13 projects to win this award, now in its 10th year, conferred by the President of the Republic of Singapore, Dr Tony Tan, and recognised in Singapore as the highest symbol of excellence for design.

The judges called Sunray Headquarters "a ray of light in a drab industrial area". They commended the seamless workflow of spaces with varying function, and praised the design as a "refreshing and cherry interpretation of the industrial factory building... a welcome departure from the norm that provides a benchmark for future developments of this kind".



South view of the Sunray Headquarters. The building stands as a testament to the company's values and identity.
Photo: © DP Architects



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Asia's first outdoor charging fitness equipment installed in Singapore



Recumbent Bike



Hand Bike

Singapore – Playpoint has installed a 'green' outdoor fitness equipment at 234 Bukit Panjang Ring Road in Singapore. The outdoor fitness equipment is claimed to be the first installation of its kind in Asia that converts the user's energy into usable electricity to charge mobile phone. Designed and developed by The Great Outdoor Gym Company from United Kingdom, the 'green' energy range is environmentally friendly and embraces the concepts of sustainable living, which is part of Future Singapore initiative.

Comprising of The Energy Cross Trainer, Hand Bike, Spinning Bike and Recumbent Bike, the green energy gym offers people to exercise and a way to recycle their own energy. It also creates healthier and greener choices for people.

When exercising on the equipment, users can charge their mobile phones by connecting their phones via a cable to a USB port located on the equipment. Depending on how much energy is generated, the watt counter located on the machine indicates the electricity generated by the user. The average user can sustain between 50-100 watts during his/her entire workout.

The 'green' outdoor fitness equipment is available in Singapore from Playpoint (Singapore) Pte Ltd.



Users of the equipment can charge their mobile phones by connecting their phones via a cable to a USB port located on the equipment.

Urban Land Institute Singapore wins grant to investigate a car-less future

Hong Kong – Could Singapore have a car-free future? This issue will be investigated by Urban Land Institute (ULI) Singapore after the national council won an ULI Urban Innovation Grant to rethink the future of urban mobility in the City state. The US\$20,000 grant, which was awarded at ULI's annual Fall meeting, is given to submissions that recognise or launch innovative public/private partnerships and advance the responsible use of land in building healthy, thriving communities worldwide.

"There were a number of creative and impactful proposals submitted this year that have the potential to change the lives of individuals and make a difference in communities around the globe," said Jury Chairman Thomas W. Toomey, chairman and chief executive of UDR, Inc. "The 14 projects that were selected as Urban Innovation Grant winners will go a long way towards increasing public sector engagement with ULI, creating healthier and more vibrant communities, and developing innovative public-private partnerships that are so vital to the future and sustainable growth of cities worldwide," added Thomas.

ULI Singapore's submission "Disrupting Mobility - Car Share Singapore: Urban mobility options for future cities" aims to rethink the future of urban mobility. Although Singapore has been a leader in urban transportation mobility, it still devotes significant amount of its limited land and resources to building roads. Roads already account for 12 percent of the city state's land area today, only a little under housing, which takes up 14 percent.

Emerging technology and socioeconomic trends favour car-less and car-light lifestyles, offering an opportunity to reshape travel patterns and choices. "Thanks to this grant we have the chance to completely rethink the future of urban mobility in Singapore and to plan for a scenario whereby people live their lives without the need for private cars," said Pauline Oh, Senior Vice President for ULI Asia Pacific.

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Romilly Madew, CEO of GBCA, receives International Leadership Award

Sydney, Australia – Romilly Madew, Chief Executive Officer of the Green Building Council of Australia (GBCA), has been honoured with a prestigious International Leadership Award.

Ms Madew was presented with the award by the US Green Building Council on 19 November 2015 at the annual Greenbuild Conference in Washington D.C.

The award, now in its 13th year, recognises outstanding individuals and organisations that embody vision, leadership and commitment to the evolution of green buildings and communities.

Presenting the award, Chief Executive Officer and Founding Chairman of the USGBC Rick Fedrizzi paid tribute to Ms Madew's "open mind, innovative spirit and infectious passion for sustainable development".

"Romilly's long-term leadership of the green building movement in Australia, and her clear success with Green Star, have been instrumental in helping us advance global market transformation of the building industry," said Mr Fedrizzi.

Ms Madew, who has led the GBCA since 2006, wrote the seminal Dollars and Sense of Green Building, which established the first business case for sustainable design and construction in Australia. She was the inaugural Chair of the WorldGBC's Council Development Committee, and today sits on its board of directors. The WorldGBC is a non-profit organisation comprising around 100 national green building councils in six continents.



Romilly Madew (third from left) accepts her award from the US Green Building Council's Chief Executive Officer and Founding Chairman Rick Fedrizzi, incoming chair Fiona Cousins and Current Chair Marge Anderson.

Vietnam's first ever integrated destination resort to be managed by Mövenpick Hotels & Resorts

Hong Kong – Vietnam's first ever integrated destination resort will be operated by Mövenpick Hotels & Resorts. In a strategic move that cements its presence in the fast-growing Asian hotel market, the Swiss hospitality firm has signed a management deal with Ngoi Sao Cua Duong Joint Stock Company for the high-profile Mövenpick Resort Phu Quoc, which will be developed by MIK Land covering some 51.62 hectares on an island that's tipped to become the region's next big tourism hotspot.

The fully-integrated beach-front destination resort, which faces the stunning Gulf of Thailand, will encompass a wide range of outstanding facilities including 250 hotel rooms, 100 residences and 50 luxury pool villas, when it opens in 2017. A themed retail village, water park and lagoon-style pool, destination spa, beachside wedding and special events 'sala', 1,000-square-metre convention area, amphitheatre, cooking school, beach club, kids club, water sports centre, fitness centre and an adventure and teambuilding activity course will also be part of the extensive offering at the one-of-a-kind Mövenpick Resort Phu Quoc. A hotel school complete with staff accommodation is another groundbreaking feature of this unique development.

Mövenpick Resort Phu Quoc will be developed on Ong Lang Beach, close to the island's largest town, Duong Dong, and to Phu Quoc International Airport.

Schindler awarded elevator and escalator contract by The Mall Group in Thailand

Hong Kong – The Mall Group, one of Thailand's prestigious mall operators, is investing over USD1.4 billion in the development of new world-class shopping centres across the country as well as in the revamping of existing malls in Bangkok.

The move is prompted by the group's vision of Thailand becoming a major retail and entertainment hub within the ASEAN Economic Community (AEC), which is to be implemented by the end of 2015.

Schindler was awarded a contract pertaining to five of these projects, namely, the development of The EmSphere, BLU PORT, BLU Pearl and Bangkok Mall, as well as the revamping of the Mall Korat.



Photo: © The Mall Group

Sunseap commissions 9th solar system in its Cambridge Industrial Trust portfolio

Singapore – Cambridge Industrial Trust (CIT)'s 3 Pioneer Sector 3 facility recently became the 9th site in Sunseap's real estate investment portfolio to be installed with a solar system. The installed system at the 3 Pioneer Sector 3 facility has a capacity of 1.5 MegaWatt peak¹ (MWp).

Like the 8 sites prior, Sunseap provides a zero-cost, one-stop solution from installation to maintenance of the solar system in a model known as solar leasing. In this model, CIT pays only for the amount of energy used at a tariff rate that is competitive against prevailing electricity retailers' rate.

Philip Levinson, CEO of Cambridge Industrial Trust Management, the Manager of CIT, commented: "It is imperative that businesses take responsibility for their environmental impact, and operating sustainably is unquestionably the right thing to do. CIT is committed to sustainable business practices and we are driving CIT's green agenda forward to the benefit of the environment,

our unitholders and our tenants, who will receive reduced energy costs over the long term. The installation of this ninth solar panel array is the latest milestone in our journey towards realising our ambition to be Asia's greenest Industrial REIT."



Photo © CIT

¹ A MegaWatt peak is the unit of measurement for the maximum power output under optimum conditions



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BUILDING TRUST



Benoy announces new projects in Australia

Hong Kong – Benoy announced the details of its first live projects in Australia. Working with Australian developer Federation Centres, Benoy has been appointed to complete the significant redevelopment and expansion of two regional retail centres in Western Australia.

“Entering Australia is a milestone for Benoy and we are incredibly excited to now confirm the details of our first projects in the country. These appointments with Federation Centres reflect Benoy’s reputation in the international retail sector and what we, as a design firm, can bring to the Australian market,” said Tom Cartledge, Global Commercial Director at Benoy.

Benoy has been appointed as the Design Consultant for the Galleria Shopping Centre redevelopment in Western Australia’s capital. Overall, Benoy’s appointment will see the centre repositioned as a state-of-the-art retail and leisure destination in a location close to the heart of Perth.

In Western Australia’s second largest city, Benoy will be working on the redevelopment and extension of Mandurah Forum. Leading the Interior Design Concept, and collaborating with local practice and project architect Hames Sharley, Benoy is delivering its design expertise to the malls and public areas. The concept design draws inspiration from the geography of the surrounding Mandurah area and the relaxed coastal lifestyle; celebrating the city’s location with the seaside to the West and hills to the East. The concept will help to create a different character for each of the zones and provide a balanced retail experience for the development as a whole.

“Retail centres are becoming increasingly leisure orientated with an emphasis on Food and Beverage, fresh markets and spaces for ‘Pop-up’ and independent retailers; the new Mandurah Forum will accommodate these activities in an attractive and partially externalised environment,” said Robert Bishop, Benoy Director.



Mandurah Forum in Western Australia. Photo: © Hames Sharley

Mitsubishi Electric to build elevator factory in South Korea

Tokyo, Japan – Mitsubishi Electric Corporation announced that it will build a new factory for Mitsubishi Elevator Korea Co., Ltd. (KMEC) in the Songdo area of the Incheon Free Economic Zone in South Korea. Relocating KMEC’s development and manufacturing bases to the new facility will strengthen Mitsubishi Electric’s capability to respond to global needs for high-speed elevators, including by expanding annual production capacity 2.5 times to 4,000 units.

The facility’s R&D centre will absorb selected development functions currently based in the Inazawa Works, Mitsubishi Electric’s elevator and escalator mother factory in Aichi Prefecture, Japan. The move will enable KMEC to collaborate more closely with the Inazawa Works in product development and thereby strengthen its response to global market needs.

A special emphasis will be placed on the strategic integration of sales, engineering, development, manufacturing, installation and maintenance functions. As a result, market needs will be more fully reflected in KMEC’s product development and verification processes.

The new facility will help to upgrade Mitsubishi Electric’s lineup of high-speed elevators for customers worldwide. Utilising KMEC’s advanced engineering capabilities, Mitsubishi Electric plans to begin offering high-speed elevators capable of speeds of up to 360 metres per minute in the foreseeable future. Also, production in South Korea will contribute to the price competitiveness of Mitsubishi Electric’s high-speed elevators. In addition to expanding Mitsubishi Electric’s capability to supply global markets, especially in the ASEAN and Middle Eastern regions, KMEC will help to meet demands for high-speed elevator renewals in these same markets and beyond.

Notably, the new factory will boost production of NexPia series elevators designed specifically for South Korea’s growing market of small and midsize low-rise buildings. Demand is expected to remain stable, as the country’s market for new installations of elevators and escalators will reach about 24,000 units in the fiscal year ending next March.

GuocoLand celebrates topping out milestone for Tanjong Pagar Centre

Singapore – GuocoLand Limited celebrated the topping out ceremony for Tanjong Pagar Centre on 13 January 2016.

Tanjong Pagar Centre is an award-winning integrated mixed-use development, which is scheduled for completion in mid-2016.

Mr Lawrence Wong, Minister of National Development was the Guest-of-Honour at the ceremony to mark the important milestone by signing a Commemorative Plaque for the development, which will be the tallest building in Singapore at 290 metres high.

"Tanjong Pagar Centre is GuocoLand Group's \$3.2 billion flagship development in Singapore. It will add to our growing portfolio of large-scale integrated mixed-use investment properties in Singapore and the region. This is in line with GuocoLand's growth strategy to grow our investment income through iconic mixed developments in selected gateway cities in Asia," said Mr Raymond Choong, President and CEO of GuocoLand Group, in his speech at the ceremony.

Tanjong Pagar Centre integrates 890,000 square feet of premium column-free Grade A office space at Guoco Tower, a 100,000 square feet dynamic lifestyle and F&B component, 181 luxurious homes, 222 5-star hotel rooms as well as a 150,000 square feet Urban Park.

Tanjong Pagar Centre will change the skyline and transform the Tanjong Pagar district in Singapore's Central Business District ("CBD") into a premium business and lifestyle hub. Each of five components will come together seamlessly as an 'Integrated Vertical City' that will provide a holistic, end-to-end work-live-play experience. At the same time, the whole development is seamlessly integrated with the Tanjong Pagar MRT, one of the busiest MRT stations in Singapore.

The TOP is scheduled for mid-2016.



Artist's impression of Tanjong Pagar Centre. Photo: © GuocoLand

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HDB unveils new generation of neighbourhood centres

Singapore – Residents in Punggol, Hougang and Sembawang can look forward to more facilities and convenience with four new neighbourhood centres coming their way. To be completed by 2020, the new generation neighbourhood centres will increase the supply of HDB shops in these towns and ensure that residents have access to adequate facilities when they move into their new homes.

Over the past few years, HDB, guided by its Roadmap to Better Living in HDB Towns, has been developing well-designed, sustainable and community-centric towns. In its new generation of public housing, HDB has applied new design ideas and concepts to provide a complete live-work-play-learn environment for residents. Within each new housing area, HDB aims to create a variety of distinctive districts that offer residents new housing forms, and better connectivity

and convenience to amenities.

Greenery and sustainable features will also be consciously incorporated into the design. In addition, there will be ample shared spaces to encourage community interaction.

These new design ideas are similarly extended to the new neighbourhood centres, which are centred on four key aspects – Community, Convenience, Connectivity and Consultation.

The first four new generation NCs that have been designed with these new ideas and concepts are:

- i) Northshore Plaza in Punggol
- ii) Oasis Terraces in Punggol
- iii) Canberra Plaza in Sembawang
- iv) Buangkok Square in Hougang



Water Front Promenade at Northshore Plaza.



Garden Terraces at Oasis Terraces.



Cross-sectional perspective of Canberra Plaza.



Buangkok Square is integrated with its adjacent neighbourhood park, offering more opportunities for community bonding.

Kasem Nincharoen named on the Engineering Institute of Thailand's Board Subcommittee

Singapore – Aurecon's Technical Director, Kasem Nincharoen, is the company's latest appointee to the Engineering Institute of Thailand's Board Subcommittee on engineering for standard design and installation of power generation. The Engineering Institute of Thailand (EIT), under His Majesty The King's Patronage, made the appointment, based on Kasem's "overwhelming knowledge, capabilities and experiences in the engineering profession". In this role he will participate in development meetings with other board members, sharing his knowledge and experience, and helping advance the Thai engineering industry.

Aurecon's other EIT appointee is Dr Assawin Wanitkorkul who serves on the EIT's Board Subcommittee on engineering for earthquakes and wind loads. Kasem is Aurecon's foremost data centre expert in Asia with over 16 years of experience in data centre design, site supervision and project management of mission critical power systems in Thailand and in other locations. Some of his completed projects include the FaxLite's Green Data Center, the Securities and Exchange Commission's Data Center, and the PTT's New Data Center, all of which are in Thailand.

AECOM and Pininfarina win Istanbul new airport design competition

Singapore – iGA has chosen an innovative design by AECOM and Pininfarina as the winner of an international design competition for the regional Air Traffic Control (ATC) tower and technical building at the Istanbul New Airport. Unusually, the winning entry marries influences from the aviation and automotive sectors, with strong architectural design. The AECOM and Pininfarina collaboration was chosen from a total of six entries from international architectural teams, including Zaha Hadid, Fuksas, Moshe Safdie, Grimshaw-Nordic and RMJM.

The win marks AECOM's first collaboration with Pininfarina, the design house renowned for its car designs for Ferrari and Alfa Romeo, among others. The collaboration combines the expertise of AECOM's architectural and engineering teams with Pininfarina's distinctive architectural style that epitomises speed and movement, influenced by automotive design.

The ATC will be the landmark for Istanbul New Airport, which is set to be the world's largest new airport in terms of annual passenger capacity. The competition scope was to deliver the concept designs for the tower, showcasing contemporary sustainable architectural design that reflects the multi-cultural and historical characteristics of Istanbul city.

The AECOM and Pininfarina design evokes the aerodynamic forms used in automotive and aviation design, and includes an elliptical tower that will be visible to all passengers flying in and out of the new airport. The tower shape is inspired by the tulip, which has been the symbol of Istanbul for many centuries and is an important cultural reference in Turkish history.



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BMAM & GBR Expo Asia 2016 – Opening the doors for innovations in building maintenance, facilities management and green building

Bangkok, Thailand – BMAM & GBR Expo Asia 2016, co-organised by IMPACT Exhibition Management Co., Ltd (Thailand) & Sphere Exhibits Pte Ltd (Singapore), has announced to host two major international expositions comprising BMAM Expo Asia 2016, the 9th international exhibition & conference on building maintenance and facilities management for the Asia Market and GBR Expo Asia 2016, the 6th international exhibition & conference on green building and retrofits for the Asia Market at Hall 5, IMPACT Exhibition & Convention Center in Bangkok, Thailand, from 21-23 September 2016.

BMAM Expo Asia 2016 will act as a leading platform for building maintenance, facilities management and property management industry showcasing leading and quality new products, services and solutions to expected presences of 10,000 industries professional from Building & Construction and Facilities.

GBR Expo Asia 2016 features the latest update of green building trends, issues and knowledge with interaction of panel discussion of industry player making it attractive to developers and the building & construction industry. Various case studies and presentations will also be presented by renowned industry speakers locally and internationally with different expertise and achievements.

These two major exhibitions are expected to attract 150 exhibitors as well as international pavilions from leading companies such as Malaysia, Singapore, Taiwan and more than 10,000 trade visitors from ASEAN countries and around the world.

Ms Pornphan Bulner, Director of IMPACT Exhibition Organizer, IMPACT Exhibition Management Co., Ltd. said: "BMAM Expo Asia 2016 & GBR Expo Asia 2016 will accommodate the launching of AEC under the concept "Journey to AEC". We realise the growing of demand for facilities management and green building technology in ASEAN right now. This is the reason why BMAM Expo Asia 2016 & GBR Expo Asia 2016 are established to respond to those needs for both local and international industrial players. This is a great opportunity to discover new innovations and technologies for your business's advantage in order to be a strong key player in the market."

To make it more effective for the investors to seek for new clients, BMAM Expo Asia 2016 & GBR Expo Asia 2016 have added two new activities – VIP Hosted Buyer Programme and Business Matching Programme – which offer a great way for international buyers to meet with their targeted exhibitor to discuss and sign new contract for further business opportunities.

This year is a special year as BMAM Expo Asia 2016 & GBR Expo Asia 2016 will be held alongside with the Asian Construction Week – which comprises of a week-long series of exhibitions, conferences, seminars and networking events related to the building and construction industry. It is a one-stop shop featuring

innovative products ranging from concrete, cement, renewable energy technology, water efficiency management, waste & toxic management, building construction materials & systems, sustainable architecture services, facilities management, security, fire & safety, monitoring & measuring equipment, M&E maintenance, cleaning agents & chemicals, sanitation, waste disposal and more.

The Asian Construction Week consists of four mega expositions including:

- BMAM Expo Asia 2016
- GBR Expo Asia 2016
- PULIRE Asia Pacific 2016
- Concrete Asia 2016

For more information, contact Mr Chanon Ekarattanakul at tel (+66) 2 833 5208, fax (+66) 2 833 5127-9, e-mail chanone@impact.co.th or visit www.maintenance-asia.com or www.greenbuilding-asia.com.



Photo: © BMAM & GBR Expo Asia



Photo: © BMAM & GBR Expo Asia

World renowned British designer Laurence Llewelyn-Bowen announced as design curator for Singapore's Castlewood Group

Singapore – Singapore's Castlewood Group has announced a partnership with world-renowned British interior designer Laurence Llewelyn-Bowen, naming him Design Curator for their luxury commercial property developments.

Laurence's appointment as Design Curator celebrates his endorsement of Castlewood Group's commitment to exceptional design quality and standards set by their flagship development, Dream Phuket Hotel & Spa. Open since November 2015, the triple award-winning hotel has received recognition in the categories of New Hotel Construction and Design at the Asia Pacific Property Awards, the Asia Pacific Hotel Awards and the International Hotel Awards.

Laurence has been known over the last 20 years in the UK for era-defining

shows on the BBC and ITV such as Changing Rooms, and for bringing popular topics such as heritage, taste and style to the fore. He has also hosted iconic national events such as Her Majesty The Queen's Birthday, The Chelsea Flower Show, and Royal Ascot. Additionally, Laurence is widely recognised in the region as the spirited Head Judge of Asia's biggest design reality TV show, The Apartment, of which the most recent season, The Apartment: Celebrity Edition was filmed entirely at Castlewood Group's luxury villas in Phuket.

Building on his impressive portfolio of product partnerships with interior design, furniture and even lingerie brands in the region and beyond, Laurence will give his extensive background and expertise in

interior design to influence and guide creative direction behind Castlewood's pipeline of luxury commercial projects throughout Asia.

This partnership strengthens Castlewood Group's ethos of outstanding design standards in the building of successful and secure investment developments for their investors. Under Laurence's endorsement, subsequent projects will continue to embody the strength of handcrafted traditions and reflect a timeless blend of modernity and sustainability. Combining his charisma and artistic flair with world-class hospitality and entertainment concepts developed by Castlewood Group, this relationship will see exceptional hotel developments that will delight both guests and investors alike.

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Application for Zaha Hadid's first Victorian project lodged

Victoria, Australia – Zaha Hadid has been announced as the lead architect behind the 582-606 Collins Street proposal, which has lodged a planning application with the Department of Environment, Land, Water & Planning.

The application submitted is for a 54 level, mixed-use building in Melbourne's Central Business District that incorporates retail, commercial and residential components with diverse apartment typologies and designs. Working in collaboration with Melbourne-based architecture firm, Plus Architecture and Australian developer Landream, this represents Zaha's first Victorian project.

The built form seeks to align with the new CBD planning reforms introduced by Planning Minister Richard Wynne. The design aspiration is to elevate Melbourne's status as a global city and focus is on the balance of scale and density and the protection of heritage and character.

"The multiplicity of social and cultural attractions in the centre of Melbourne, which have made it the most liveable city in the world, have also naturally created a demand for new residential development," said Zaha Hadid Architects Director, Gianluca Racana. "582-606 Collins Street aims to satisfy this demand and take advantage of design features, which will create new opportunities for public space and offer a great blend of mixed use programs," said Gianluca Racana.

The site sits on the Western boundary of Melbourne's Central Business District, at the nexus between Collins Street and the Docklands, within an area of the city that is evolving into a new commercial precinct in its own right.

The Collins Street façade is comprised of an elegant colonnade of sculptural, curved columns that supports Zaha Hadid Architects' unique façade system. These solid elements seek to embody and emulate the finest examples of historic architecture that can be found within the Melbourne CBD, yet reinterpret them in a contemporary solution that is driven by the building's structural integrity and the logical division of its overall volume.

The design also proposes the creation of a new pedestrian route that would connect Collins with Francis Street, further alleviating pressure at the Collins and Spencer Street junction. 350 bicycle parking spaces and bays for electric vehicles and shared car clubs are included within the design.

Within the proposal, junctions between each vase invite the interaction fostered at a street level to continue inside the podium, where a rich mix of retail and commercial offerings as well as easily accessible communal spaces have been included in the proposed structure to promote public engagement.



Artist's impression of 582-606 Collins Street. Image: © Plus Architecture and Zaha Hadid Architects

Tuas Power launches Tuas Power Integrated Energy Management Solution



Singapore – Tuas Power Generation Pte. Ltd. (Tuas Power), an energy solution provider and leading player in the liberalised Singapore electricity market, announced the launch of Tuas Power Integrated Energy Management Solution (IEMS) for buildings and businesses.

The first of its kind launched by an electricity retailer, Tuas Power Supply (a subsidiary of Tuas Power Generation), Tuas Power IEMS provides an integrated suite of solutions tailored for building owners and tenants to better manage their energy consumption. With Tuas Power IEMS, building owners and businesses get an overview of their energy statistics, cost savings, and at the same time ensure that the building remains green and sustainable for the future.

In line with Building and Construction Authority's 3rd Green Building Masterplan, Tuas Power IEMS will pave the way for businesses to monitor their energy consumption online, allowing for better control over energy usage. Tuas Power IEMS will ensure that both building owners and tenants are accountable for their energy use

Photo: Mr Michael Wong, General Manager, Tuas Power Supply (left) and Dr John Keung, Chief Executive Officer, Building and Construction Authority at the launch of the Tuas Power IEMS. Photo: © Tuas Power

which will promote change in consumption habits and increase in energy efficiency. Usage patterns containing real-time data will easily be available and will help both parties understand their usage patterns and identify possible cost savings areas. Many renowned buildings and developers had embarked on this solution as part of ensuring their building remains green and sustainable for the future.

Dr John Keung, Chief Executive Officer, Building and Construction Authority attended the launch as the Guest-of-Honour, and felt that Tuas Power's latest initiative is a good step towards helping building owners manage costs and improve energy efficiency.

"The third Green Building Masterplan was developed to engage building tenants and occupants more actively to drive energy consumption behavioural change," said Dr Keung. "Tuas Power's Integrated Energy Management Solution for buildings and businesses facilitates tenants to better understand their energy usage pattern, thereby empowering them to make better decisions and adopt greener practices."

Together with Tuas Power's consultation expertise, the IEMS will consist of three main areas - *Automated Meter Reading (AMR) Solution*, *Building Management Solution* and *CusCare App*. With the AMR solution, businesses will be able to monitor their energy consumption through real-time, half-hourly data, allowing for better control over electricity usage. Jointly developed with NEC Asia Pacific Pte Ltd, Tuas Power's AMR solution automatically

collects energy consumption data from electricity meters, and simultaneously transmits this data for accessing through the TPS AMR Portal. This enables building owners to identify areas to increase energy efficiency, which in turn works to achieve a smaller carbon footprint.

The Building Management Solution in Tuas Power IEMS is a way of ensuring good energy management. With proven track records of handling more than 630 buildings since 2003, Tuas Power has professional and in-house capabilities to handle the management of tenants' electricity accounts, meters, billing and collection, electricity management duties, on behalf of landlords. The solution helps building owners manage and integrate their tenant's electricity accounts in an organised and systematic approach.

Rounding up these solutions in a convenient way is the mobile CusCare App – designed to give users a quick overview of their energy spend on a digital platform.

"In keeping with the Building and Construction Authority's vision to establish a future-ready built environment for Singapore, Tuas Power is committed to energy sustainability and continually strives to develop solutions and adopt technologies to aid building owners, along with their respective tenants to manage electricity consumption. Our goal is to help all involved monitor their energy usage, and provide solutions to make sustainable energy a reality," said Mr Michael Wong, General Manager, Tuas Power Supply.

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profine Group opens new regional office in Hong Kong

Hong Kong – The profine Group, a leading global producer of PVC-U profiles for windows and doors as well as a renowned provider of shutter system solutions and PVC sheets, announced the opening of a new regional office in Hong Kong, and the appointment of Mr Martin Neumann as its General Manager, in August 2015.

The new Hong Kong based office, called “profine Hongkong Co Ltd” (profine HK) will support profine’s sales and marketing efforts in the region. Apart from a global footprint, profine Group has offices and production sites in Tianjin, China and New Delhi, India.

profine HK will also provide close support to its partners and customers in the region as well as form a smart management and sales team to further develop the company’s sales network in Asia-Pacific. profine HK will serve the whole Asia-Pacific region with main focus in countries like South Korea, Japan, Thailand, Vietnam, Indonesia, Philippines and Australia.

Explaining the reason behind choosing Hong

Kong as the base for its new office, Mr Martin Neumann, General Manager of profine HK said: “Hong Kong is one of the places in Asia famous for its simple and transparent business environment which allows us to put more focus on sales development in the Asia-Pacific region. In addition to it, Hong Kong is very close to South Korea and Japan which are two of our focus markets.”

Currently, the regional office has two management staff and the company plans to grow to a head count of over 10 within the next four years. The opening of the regional office is also part of profine Group’s mission to extend its green footprint to Asia-Pacific. That includes joining regional “Green Building” bodies to promote the advantages of profine’s PVC-U window and door products, mainly in the areas of energy saving, sound insulation and healthy living environment.

“profine is characterised by quality thinking, innovative strength, efficient processes and responsibility. With our newly established office in Hong Kong, we want to extend these values to the Asia-Pacific market. We will only achieve this goal if we are close to our partners in the region by giving them best service in the shortest period of time. With the effort of our team, I have confidence that in the near future, profine will become the leader of quality profiles and sheets in the region,” added Martin.



Mr Martin Neumann, General Manager and Joey Chung, Senior Controller of profine Hongkong Co Ltd.

The Ritz-Carlton announces Paradise Valley Hotel

Hong Kong – The Ritz-Carlton Hotel Company, L.L.C. and Five Star Development Resort Communities, LLC have signed an agreement for the development of a new resort and residences in Paradise Valley near Scottsdale, Arizona.

“Paradise Valley in Arizona will be a great new destination for our brand in the Americas,” said Herve Humler, president and chief operating officer for The Ritz-Carlton.

“We are thrilled to be working with Five Star Development to create this unique desert resort for sophisticated travelers from around the world,” he continued.

The Ritz-Carlton, Paradise Valley will be the centerpiece of one of the largest new master-planned communities featuring both a resort hotel and residences in close to a decade. The affluent community known as Paradise Valley spreads from north of the Phoenix mountains to Cave Creek & Carefree and the McDowell Mountains to the east in greater metropolitan Phoenix, Arizona.

Spread out over 20 acres, The Ritz-Carlton, Paradise Valley resort will consist of 200 casita-style guest rooms and 20,000

square feet of function space to host luxury meetings for corporate and incentive clients or as the backdrop to stage weddings and local social functions.

The resort, with stunning views of iconic Camelback Mountain will also have a large destination spa with a health and wellness programme featuring both an indoor and outdoor desert-inspired treatment menu. A citrus orchard and garden will grow seasonal produce harvested for the on-site restaurants.

The Ritz-Carlton Residences, Paradise Valley will be developed by Five Star Development Resort Communities in several phases adjacent to the hotel with residence owners having access to services from and privileges at the hotel including a dedicated concierge, priority access to hotel guest accommodations and amenities, in-residence dining and housekeeping. The multi-phased residential community will include 45 single-family homes and 94 villa residences. Construction is expected to begin in July 2016 with the resort opening in late-2018.

Keppel Land China conferred Top 10 ASEAN Companies in China Award by China-ASEAN Business Council

Singapore – Keppel Land China Limited (Keppel Land China) has been conferred the Top 10 ASEAN Companies in China award by the China-ASEAN Business Council (CABC) on 19 January 2016. The Award honours model ASEAN companies which have achieved business success and contributed positively to the local Chinese communities they operate in.

Held in Beijing, China, the award ceremony was graced by Mr Liu Guchang, former Chinese Vice Foreign Minister and Chairman of China Foundation for International Studies, Mr Ge Zhirong, Counsellor of State Council and President of the China Entry-Exit Inspection and Quarantine Association, Mr Xu Ningning, Executive Secretary-General of China-ASEAN Business Council as well as ambassadors to China from all 10 ASEAN countries.

Mr Ang Wee Gee, CEO of Keppel Land Limited (Keppel Land), said: “We are honoured to be recognised as one of the Top 10 ASEAN Companies in China for the fourth consecutive year. As one of the first foreign real estate companies to enter China more than 20 years ago, Keppel Land has been privileged to contribute to China’s urbanisation and grow in tandem with the country.”

“Today, China is one of Keppel Land’s core markets and our portfolio of award-winning residential, commercial, waterfront and lifestyle developments across 10 Chinese cities is distinguished for its quality, sustainability and thoughtful innovations. We are committed to deepening our presence in the key cities of Beijing, Shanghai, Chengdu, Tianjin, and Wuxi, where we have established strong track records, networks and local teams,” added Mr Ang.



On behalf of the company, Mr William Tan (second from left), Regional Head of Keppel Land China, received the award for “Top 10 ASEAN Companies in China” by the China-ASEAN Business Council. This is the fourth consecutive year that Keppel Land China has been honoured for its economic and social contributions to the local Chinese communities. Photo: © Keppel Land

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Baca Architects releases new book 'Aquatecture'

London, UK – Baca Architects released a new book titled 'Aquatecture' through RIBA publishing in December 2015. Written by Robert Barker and Richard Coutts of Baca Architects, twice winners of the RIBA practice-based research award and specialists in waterfront architecture and flood-resistant developments, the book explores how to design in flood-risk areas and how water can be used to enhance architecture and design.

With water playing such a vital role in our lives and societies, the book lays out the case for the importance of designing for water, now and in the future, in order to best prepare us to adapt to the uncertainties of future climate change. Historical cases of issues with water and innovations in designing with water are examined, along with measures to mitigate the threat posed by water in the form of shortages, such as droughts, and excess, in the form of flooding.

The first part of the book explores the historical relationship between water and architecture over the centuries. Chapters proceed to assess how this relationship has evolved over time, and introduce the reader to a range of new techniques that will revolutionise the way we think about water, design and urban planning.

Amphibious housing, wet-proof buildings, zero-carbon development, rain gardens, flood storage and new methods of waterfront design are discussed and their effectiveness assessed.

Practical technical advice sits alongside truly groundbreaking



Aquatecture book cover. Photo: © Baca Architects

and ambitious ideas for the future. This book is an ideal reference tool for all architects, urban designers, planners and sustainability experts who have an interest in creating a beautiful, sustainable, intelligent and pleasurable built environment - on land, in water and with water.

Baca Architects designed the UK's first Amphibious House, completed on the banks of the River Thames in early 2015. Robert Barker and Richard Coutts are commentators on flooding and regular speakers on the subject of designing for flood-risk environments. **For more information on the book, contact Amy Dron at email adron@baca.uk.com.**

Broadway Malyan wins project for one of world's most innovative schools

London, UK – Broadway Malyan has won the commission to design a new international school in the heart of Singapore for one of Asia's largest education organisations.

The architecture, design and urbanism practice was selected to design the new Nexus International School (Singapore) campus along the Pan Island Expressway, the main arterial route between Changi Airport, the island's Downtown Core and the planned Jurong district in west Singapore.

Nexus is part of Taylor's Education Group, which operates universities, colleges and schools across Malaysia as well as the British University Vietnam and also owns student accommodation in the UK.

The new international school will be the flagship school for the Nexus brand, building on Taylor's successful growth of the school's cohort and ideology in a building which now doesn't meet their needs.

Broadway Malyan director Harry Hoodless, who has been involved in developing international schools across Asia, said the facility will set new benchmarks for sustainability and innovation. He said: "This is an incredibly exciting project for Broadway Malyan where we have the opportunity to create what will not only be a major landmark in Singapore but will help develop the template for the school of the future."

Facilities at the 2,000 student campus – which will also be open to the local community outside school hours and at weekends – will include a 50 metres indoor pool, a full size astro-turf sports field, recording studios, a library, auditorium, two sports halls as well as a raft of flexible learning spaces.

At the heart of the campus and in keeping with the philosophy of the new development will be the Innovation Hub. Through collaboration with the leading minds in their fields, it will be a showcase space dedicated to the development of new pedagogic ideas. A range of initiatives will work towards a design ambition of 'zero waste, zero water, zero energy' with technologies that will see the pool heated through waste heat from learning spaces, smart shading operated by sunlight sensors and rainwater management enhanced to deal with local climatic conditions.



Photo: © Broadway Malyan

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Vortex wins Chicago Athenaeum's Good Design Award for its Water Journey™ solution

Montreal, Quebec, Canada – Vortex Aquatic Structures International, a manufacturer and world leader in aquatic play landscapes and entertainment solutions, announced its Water Journey™ aquatic play solution has been recognised with a Good Design Award by the Chicago Athenaeum.

The year 2015 represents the 65th annual Good Design awards, organised by the Chicago Athenaeum Museum of Architecture and Design in cooperation with the European Centre for Architecture, Art, Design and Urban Studies. Good Design awards cover the most innovative and cutting-edge industrial, product, and graphic designs in Europe, Asia, Africa, and North and South America.

Water Journey is a collection of four different events – Labyrinth, Jet Dance, Race, and Tide Pool – that are inspired by nature's flowing streams. Each event can be used separately or connected to provide unique play experiences, providing guests with the ability to engage with different life-like stream behavior as water encounters creeks, flood plains, ripples and cascades.

"Water Journey is an example of how we try to think about play differently," said Vortex President and CEO, Stephen Hamelin. "It enables social, physical and cognitive development of children through playing with water but not necessarily getting wet. We're honoured that it has been recognized by the Good Design awards," added Stephen.

This is the second award in 2015 for Water Journey, marketed by Vortex and developed with design firms, Dikini and Daily Tous les Jours. Water Journey™ was previously recognised with a GRANDS PRIX DU DESIGN Award for Best Street Furniture.



BigMat International Architecture Award winners announced

Luxembourg – The BigMat Group distributors of construction materials has announced the winners of its 2015 BigMat International Architecture Award, in its second international edition. The awards ceremony took place on 20 November 2015 at the BOLLE Festsäle building in Berlin, Germany, in the presence of the 18 teams of architects competing for the top prize, the members of the international panel of judges and the companies making up the BigMat Group.

Out of a list of 750 projects from six European countries (Belgium, Czech Republic, France, Italy, Portugal and Spain), the panel of judges chaired by Jesús Aparicio and comprising Olivier Bastin (Belgium), Martin Rajnis (Czech Republic), Henri Ciriani (France), Francesco Dal Co (Italy), Manuel Aires Mateus (Portugal), Antonio Ortiz (Spain) and the Awards Secretary, Jesús Donaire, decided to give the BigMat '15 International Architecture Award to the office building located in Zamora, Spain, by the Campo Baeza Architecture Studio.

With respect to the winning design, the judges highlighted "... the correctness of the attitude adopted in order to resolve a modern-day programme in that they have been able to combine very wisely the contemporary nature of the building with a respectful understanding of its existing surroundings ...". The Grand Prize was awarded by the President of BigMat International, Claude Coutant.



Office building located in Zamora, Spain and designed by the Campo Baeza Architecture Studio is the winner of the BigMat '15 International Architecture Award. Photographer: Javier Callejas

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schmidt hammer lassen architects wins competition for major new urban development in Oslo, Norway

Aarhus, Copenhagen – schmidt hammer lassen wins international competition to design a 87,000 square metres masterplan in the area of Skøyen in central Oslo. Eureka Kvarteret will become a unifying urban development icon. It will draw a new skyline and a versatile reflection of city life by combining the diversity of the existing settlement as well as creating a connection to Oslo fjord. The plan will include a hotel and conference centre, housing, cafes and retail areas, offices and a day-care centre evoking a strong sense of community and urban life.

The site at Skøyen is situated close to the city centre of Oslo linking neighbourhood and nature. The new district will unify the main street of Hoff, Sofienlund down to Karenslyst and Bestumkilen, with an open, comfortable and inviting appearance. It will show a strongly defined framework for urban life by linking the area with the main transportation hubs.

The proposal is based on a qualitative interaction with the already existing structures, this multi-stage expansion will gradually create a fertile ground for the life between the buildings. The neighbourhood will open up from the first stage making a strong local engagement and creating awareness of this new panorama.

The scheme is rational with a clear “main street” network connected across North-South and East-West directions. These routes divide the site into five clearly readable blocks. Within these fields, schmidt hammer lassen is working with high rise and open block structures, generating internal passageways, shortcuts and promenades, making room for an extra layer in the street hierarchy. The design is flexible due to future demands for changing use and functions.



Photo: © the3dbakery

SICIS opens a new flagship store in London

Ravenna, Italy – Sicis, a worldwide leader brand of mosaics products, opened its first UK showroom in London, nerve centre of design and luxury, among the most important market for the Made in Italy.

The location will be in the heart of Mayfair, at 15A Dover Street, the most chic and prestigious neighbour of the English capital.

Hotels and luxury restaurants, elegant boutiques, exclusive art galleries and embassies will be the special scenario of the showroom. The space will be a meeting point and destination venue for architects and clients that appreciate authentic and quality products from the Maison, with an aesthetic of exclusive design.

The space will be developed in four floors on a surface of 5,500 square feet in a Victorian town house where in every floor will be shown a different part of Sicis universe.

The concept of the project takes up the points and the guidelines introduced by Massimiliano Raggi that proposes Sicis world in a Londoner key as an eclectic home thought in any detail, with the maximum modularity and personalisation typical of the brand.

The showroom will host all the best sellers of the Maison but also cutting edge new collections. There will be a constellation of mosaic of many materials like marble, silver and gold, bi and tri dimensional, artistic mosaic, furniture and lights. In the London flagship store Sicis will launch for first time new luxury fabrics that will re-evolve the Maison iconic patterns.



Plans submitted for LMJU's Copperas Hill development

Manchester, UK – Plans have recently been submitted for Liverpool John Moores University's new flagship building on Copperas Hill. BDP won the commission to refurbish the former Royal Mail Centre close to Lime Street Station in July 2014.

Architect director Sue Emms said: "Copperas Hill will be transformed into a vibrant, student-centred and convivial hub building and provide a new focus to LJM's campus. A new public route through the building will enhance civic engagement and connect existing campuses. The new central atrium creates a spiritual heart and a sense of place within the building and learning terraces step up uniting all levels, users and activities.

The terraces will animate the building externally and connect the new city park at ground level to a sky garden on the roof. The highly glazed building will showcase the university and be transparent, open and connected."

The five-storey building will be expanded to include two mezzanine floors and use of the roof for sports and recreation. It will house the university's library, restaurants and retail space, and student zones will be created around the building to accommodate different working methods, including quiet spaces and areas for creative and collaborative working.

A flexible central teaching unit will include a variety of lecture theatres, as well as general teaching spaces, seminar rooms and IT suites. The building will also be home to the Students' Union, providing a central location for its administrative functions, as well as enabling easy access to the facilities for its clubs and societies.

LJMU Vice-Chancellor, Professor Nigel Weatherill, commented: "Sometimes the term transformational is overused but the impact of the new development at Copperas Hill cannot be overestimated. Importantly for LJMU it will revolutionise the student experience and the physical shape of the university but it will also have a highly positive effect on the city itself."

It is expected the new building will be open for use at the start of the academic year 2018.



Photo:© BDP

Partnership to develop world-leading pool & spa event

Lyon, France – GL event, organisers of Piscine Global, Lyon, partners with leading Dubai exhibition organiser dmg events to bring Piscine Middle East (previously held in Abu Dhabi) to Dubai World Trade Centre from 17-19 September 2016.

The announcement of the new joint venture comes at a time when the Global Wellness Institute says that UAE is the "top spa growth powerhouse" in the Middle East and Africa, forecast to double tourism figures by 2017. Whilst Euromonitor International reports that UAE spa revenues will reach US \$ 495 million by 2019.

"UAE hotels and leisure attractions boast some of the most impressive and luxurious pool and spa offerings in the world," said Christine Davidson, group event director of the dmg events hospitality portfolio including The Leisure Show Dubai and The Hotel Show Dubai. "There is a huge demand for pool and spa facilities throughout the entire region in the many new hotels, gyms, tourist attractions and residential developments."

Noémi Petit, manager of the Piscine Overseas Pool Export Network for GL events Exhibitions (Piscine Global – Piscine Middle East and Piscine Asia), said: "We are excited to be entering the Dubai market, bringing our expertise in the global pool and spa industry together with dmg events' Middle East and Asia's knowledge of the market here. After two editions in Abu Dhabi Piscine Middle East will deliver the pool and spa market a dedicated show with not only the crème de la crème of local and international providers for pool and spa designing, building and renovation but also events for the pool professionals such as Piscine Water Tests (equipment demonstrations in real situation in a swimming pool), new products area and a technic visit to a recent swimming pool."

For more information on the show, visit www.piscine-middleeast.com.

The LEGO Group introduces Skyline building kits for recreating cityscapes

Billund, Denmark – The LEGO Group has launched the LEGO® Architecture Skyline Collection for recreating cityscapes.

The LEGO® Architecture Skyline Collection features iconic monuments and buildings that define different cities around the world and here combined into one product that offers a great building experience and a visually appealing model that celebrates architecture, creativity and history.

Launched in January 2016, Venice, Berlin and New York City are the first to be featured in the collection. Unlike The Lego Group's single-building Architecture series, these kits allow builders of all ages to recreate world-famous skylines by constructing up to six of each city's most iconic buildings and landmarks.

The New York City collection includes the Empire State Building, the Chrysler Building, the Statue of Liberty, the Flatiron Building and the newly opened One World Trade Center. The Venice collection includes the Rialto Bridge, St. Mark's Basilica, St. Mark's Campanile, St. Theodore, the Winged Lion of St. Mark and the Bridge of Sighs. Finally, the Berlin collection includes LEGO versions of the Reichstag, the Victory Column, the Deutsche Bahn Tower, the Berlin TV Tower, the Brandenburg Gate, and small decorated pieces of The Wall.

Each kit includes a booklet on the history and facts of each landmark so you're learning as you're building.



Photo: ©2015 The LEGO Group. Used with permission

DUS Architects create 3D printed façade for EU building

Amsterdam, The Netherlands - DUS architects has realised a façade design with large-scale bio-plastic 3D prints for the Dutch EU Presidency 2016.

The EU Presidency takes place in the Netherlands for half a year starting January 2016 at the Amsterdam Marineterrein (Marine Area). Here European politicians gather in the mobile 'Europe Building' made especially for this event. Eye catcher is the entrance façade designed by DUS architects, which consists of unique 3D printed elements made of bio-plastic that can be fully recycled after the presidency is over.

The entrance of the building is partially constructed with playfully shaped sails that refer to the historical sailing ships that used to be built in this area. This creates alcoves, which house EU-blue coloured 3D-printed benches. The printed patterns build up from large to small and round to square and depict the variety and community of the EU countries. At night the sails are lit gradually with a pulsing light.

Every seating element is parametrically designed and fits perfectly within each alcove. They are prototypes developed especially for the EU presidency, and printed locally with the XXL 3D printer of the 3D Print Canal House in Amsterdam. This life-size printer can print elements up to 2 x 2 x 3.5 metres. The prints are made of a specially developed bio-plastic and the seating surfaces are filled with a light-coloured concrete. The bio-plastic can be shredded and reprinted after the presidency is over. This is the first time in the world that these kinds of XXL 3D prints are being shown in the public domain.

The project is the first commercial spin-off resulting from the collaborations on the 3D Print Canal House: an initiative of DUS architects and partners. The production of the 3D prints has been done by Actual, an Amsterdam-based start-up that develops online customising software for building elements linked to XL 3D printing. The façade has been developed in a very short time span thanks to the close collaboration between the various parties: DUS (design), Actual (parametric development & 3D printing), Neptunus (temporary structures), TenTech (engineering), Philips (light), and Heijmans (construction and assembly). Heijmans, an innovation-driven building company, is a special partner of this project.



Photo courtesy of Ossip van Duivenbode

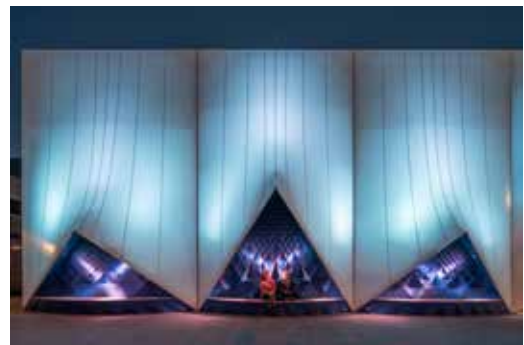


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Annual Green Building Conference & Green Building Awards 2015 hailed a success

Colombo, Sri Lanka – The annual Green Building Conference & Green Building Awards 2015 in Sri Lanka, which was held on 16 December 2015 at BMICH, was hailed a success.

Below is the message from His Excellency The President Maithreepala Sirisena.

GBCSL has a big role to play in the sustainable development of Sri Lanka and it has been recognised as the sole representative organization of WorldGBC in Sri Lanka.

I have been associated with the Green Building Council of Sri Lanka (GBCSL) from its very inception and played a supportive role in forming the organisation dedicated to sustainable building or green building. I also had the opportunity of visiting the first ever green hospital in South Asia in Singapore when I was the Minister of Health and I was instrumental in introducing the green hospital concept to Sri Lanka for the first time through an overseas funding arrangement. As a result, two green hospitals are coming up in Nuwara Eliya and Hambanthota.

This year's annual conference, I believe, was focused on the presentation of research papers on green technology and practices by researchers /delegates representing the Green Building Councils in many parts of the world. I am pleased to note that this landmark event was co-sponsored by the World Green Building Council (WGBC) and GBCSL has been recognized as its sole representative organisation in Sri Lanka.

I wish to congratulate all the companies and organizations that have received Platinum, Gold, Silver and Bronze Awards for the green buildings they have put up this year. I have noted that the GREEN^{SL} Rating System is becoming very popular in the building industry and among developers who are keen to confirm to the performance criteria and get higher ratings from GBCSL for their buildings. I am made to understand that the Product Labelling System, recently introduced by GBCSL is also becoming popular among green suppliers.

GBCSL has a big role to play in the sustainable development of Sri Lanka and I am confident that this can be achieved under the able leadership of Prof Priyan Mendis, Prof Ranjith Dissanayake and other Directors who have been founding members of this prestigious professional organisation.

I wish the Annual Sessions of GBCSL all success and that all delegates, both local and foreign, participating in the deliberations will enjoy the experience of contributing to the worthy cause of saving our country and our planet earth from the negative impact of climate change and other natural disasters and promoting sustainable development.



Message from Bruce Kerswill, Chairman, World Green Building Council

As a member of the WorldGBC Sri Lanka Green Building Council is committed to bringing together its local building industry and creating a movement that facilitates the transformation of Sri Lanka's building industry toward sustainability.

One of the ways Sri Lanka GBC does this is through their Annual Green Building Conference (AGBC 2015), which was held on the 16th of December. With the participation of nationally and internationally recognised speakers and other qualified attendees, it was a very important event for green building in Sri Lanka.



Message from A.J.M. Muzammil, Mayor, Colombo Municipal Council

With global interest to develop Green Building Concept, the Colombo Municipal Council and Green Building Council of Sri Lanka play a major role to develop this concept within the city and to enhance the sustainability of the city of Colombo.

In keeping with this objective I was pleasantly enthused to announce that the leading authority in establishing Green Building concept in Sri Lanka, the Green Building Council of Sri Lanka has successfully conducted a massive event "Annual Green Building Conference, 2015" on 16th December 2015 at BMICH.



Message from Prof. Priyan Mendis, The Chairman of GBCSL

GBCSL is now broadening their horizons with their holistic approaches by promoting GREENSL[®] RATING SYSTEM and GREENSL[®] LABELLING SYSTEM, which are based on the internationally accepted norms while incorporating the local conditions.



Message from Prof. Ranjith Dissanayake, The Ex. Vice Chairman of GBCSL

Since its establishment, Green Building Council of Sri Lanka has been committed to gathering knowledge, talent and wide-ranging industry support. During the last seven years, we have enjoyed exponential membership growth, held highly successful conferences, workshops and have been lucky enough to receive tremendous media coverage throughout the year.

Award winners of the Annual Green Building Conference & Green Building Awards 2015

GREEN^{SL}® Labeling System

Sri Lanka, like other countries around the world, is facing an immense challenge, to create sustainable buildings for the future. Building construction materials play a major role in converting construction industry into sustainable greener one. Each and every countries in the world more or less have its unique conditions with different resource availability. It emphasized the need of developing GREEN^{SL}® Labelling System, which adapt to Sri Lankan conditions while having a global recognition.

Green Labels which are also called Eco labels are affixed to products that pass eco-friendly criteria laid down by government, association or certification bodies. The GREEN^{SL}® Labeling System (GLS®) of Sri Lanka was initiated by the Lanka Institute of Eco labeling (LIOE) set up by a group of professionals engaged in environmental conservation and entrepreneurship with the inputs, encouragements and technical assistance from the Global Eco labeling Network (GEN).

The ultimate objective of these certifications is to ensure the credibility of use of proper products/materials with green features in construction industry, to promote the local manufacturing of green products/materials, to build increased awareness of benefits of green products/materials and to encourage the governmental authorities to grant concessions to green product manufacturers and importers. The main goal of developing the GREEN^{SL}® LABELLING is to promote the standards of local strategies of a greener sustainable environment, while the conventional goal is to ensure that the products/ materials have a minimal detrimental impact to the environment compared to the products serving the same function.

Winners of GREEN^{SL}® Labeling System



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Winners of GREEN^{SL}® rating system



A new standard template for financing energy efficiency retrofits for buildings



Singapore – An energy performance contract (EPC) can guarantee energy savings for an existing building without an initial financial outlay.

To help building owners overcome the initial financial barrier to retrofit their buildings, the Singapore Green Building Council (SGBC) has collaborated with the Building and Construction Authority (BCA) to develop a standard EPC template for building owners and EPC firms to use. The EPC template was developed in consultation with several established EPC firms and building owners. The standard template assists in accelerating the retrofitting process by clearly spelling out the key conditions of contract for both the building owner and the EPC firm so that building

owners can better focus on the critical component in any EPC: the amount of energy savings guaranteed.

The EPC template complements the Building Retrofit Energy Efficiency Financing (BREEF) scheme by BCA which offers financing to building owners, Management Corporation Strata Titles (MCSTs), Special Purpose Vehicles and EPC firms for energy efficiency retrofits.

In an EPC, the EPC firm will guarantee specific energy savings for the building over a set period of time, either in monetary terms or a savings percentage. The EPC firm can either provide financing to undertake all the necessary works to complete the retrofit of the building, or the building owner can finance the retrofit. For the first option, the building owner will not need to incur an initial financial outlay to start saving energy. In both cases, the cost of these works will be offset by the energy savings as a result of the retrofitting.

“With this standard template, building owners can ease into building retrofit projects, allowing their buildings to become more energy efficient, with a healthier environment for their occupants. Having in place an EPC will also allow building owners to focus on

other aspects of the building, knowing that the building’s energy efficiency and performance is in the hands of professionals,” said Mr Chia Ngiang Hong, President of SGBC.

As buildings present a tremendous opportunity to reduce emissions and mitigate the effects of climate change, this new EPC template is part of SGBC’s commitments made during Buildings Day at COP21 in Paris on 3 December 2015 to drive change and market transformation for green buildings.

In the latest BCA Building Energy Benchmarking Report 2015, a study on 83 existing buildings which are certified to have met the Green Mark Gold rating or higher, showed that retrofitting existing buildings can save up to \$41 million annually.

“There is a strong business case to retrofit energy inefficient buildings. The EPC provides a market solution to help building owners achieve energy savings and it has been gaining popularity over the years. It is now timely to launch the standard template contract, putting together the best practices. We hope that this will inspire confidence in building owners to make the decision to embark on energy-saving initiatives,” said Dr John Keung, CEO of BCA.

Singapore Green Building Council pledges commitments to combat climate change

Paris, France – The Singapore Green Building Council (SGBC) has pledged robust commitments to drive change and market transformation for green building at COP21 in Paris.

Broadly, SGBC will continue to work with both the public and private sectors to support the goals of Singapore’s Intended Nationally Determined Contributions (INDC) to reduce emissions intensity by 36 percent from 2005 levels by 2030, to continually promote green building design, practices and technology as well as to enhance current certification schemes to remain relevant to a dynamic marketplace.

“Since our inception in 2009, SGBC has been bringing together industry players and advocates for green building,” stated Mr Chia Ngiang Hong, President of SGBC. “Our strong public-private sector partnership has enabled the greening of Singapore buildings to progress steadily. We will continue to work with our members and partners to spread awareness on the role of buildings in climate change and greenhouse gas reduction, as well as the added benefits of lowered energy bills, healthier building spaces and a better environment for all,” he added.

The commitments were made at Buildings Day – the official COP21 meeting led by Mrs Ségolène Royal, the French Minister of Ecology and former presidential candidate. The Global Alliance for Buildings and Construction, aimed to scale up the implementation of ambitious sustainable actions, was also launched on that day, and the World Green Building Council along with all 74 member green building councils and their 12,000 member companies will be part of this new Alliance.

All 74 national green building councils support the high level commitment from the World Green Building Council to achieve Net Zero carbon for new buildings and energy efficient refurbishment of the existing building stock by 2050. A total of 25 green building councils, including Singapore, also unveiled national commitments to register, renovate or certify over 1.25 billion square metres of green building space – almost twice the size of Singapore – and train over 127,000 qualified green building professionals over the next five years.

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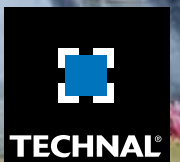
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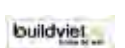




Photo Courtesy of Victoria Theatre & Victoria Concert Hall

Victoria Theatre & Victoria Concert Hall

Located along Empress Place, Victoria Theatre & Victoria Concert Hall reopened in July 2014, after a four-year renovation to restore the building's original 1905 structure and to create new commercial and civic spaces. Costing about \$158 million, the refurbished Victoria Theatre & Victoria Concert Hall combines its heritage elements with new state-of-the-art features in an impressive design.

PROJECT DATA

Project: Victoria Theatre & Victoria Concert Hall

Location: Empress Place, Singapore

Owner: National Arts Council

Managed by: The Esplanade Co Ltd

Architect: W Architects Pte Ltd

Engineer: T.Y. Lin International Pte Ltd

Contractor: Sato Kogyo (Singapore) Pte Ltd

Acoustic and Theatre Consultants: Arup Singapore Pte Ltd

First established in 1862, the Victoria Theatre & Victoria Concert Hall is one of the most recognisable landmarks in Singapore. The heritage building located in the heart of the city's Civic District contains a 614-seat Theatre and a 673-seat Concert Hall. In 2010, the national monument underwent a four-year refurbishment to restore its neo-classical façade while getting new state-of-the-art facilities and amenities. The redevelopment also saw the addition of two smaller rooms for music, dance and theatre rehearsals. Having played a role in the country's history for over 150 years, the Victoria Theatre & Victoria Concert Hall continues to be an exciting mid-sized platform for local and international arts groups and communities to stage their works.

Victoria Theatre

The Victoria Theatre was constructed between 1855 and 1862. Originally built as a Town Hall, it is the older of the two buildings. The Town Hall was converted into a theatre in 1908 and was renamed Victoria Theatre.

Victoria Concert Hall

The Theatre is one of the leading mid-sized venues for performing arts in Singapore. It is set in a black box within a historical exterior, offering an optimised seating capacity of 614 and providing the flexibility for the formation of an extended forestage or an orchestra pit when required. When the orchestra pit is in use, the seating capacity is 536. The intimate space features a curved seating plan that "hugs" the stage to bring the audience closer to performers.

Another feature of Victoria Theatre is the recycled cast iron components taken from the old Theatre's chairs that were re-purposed into horizontal bands set across the timber walls to improve the acoustics of the space. The Theatre is wheelchair accessible in the Stalls area.

Formerly called Victoria Memorial Hall, the Concert Hall was erected between 1902 and 1905 in honour of Queen Victoria. The Memorial Hall played a significant role in Singapore's history, including serving as a makeshift hospital during World War II and as a venue for the inaugural meeting of the People's Action Party in 1954. The Victoria Memorial Hall was renovated in the 1970s to serve as a concert hall. Today, the Victoria Concert Hall is the home of the Singapore Symphony Orchestra.

Containing 673 seats, the Concert Hall has retained much of its old world charm of classical proportions and elaborate ornamentation. In the latest refurbishment, the balcony overhang on the second floor was reduced and raised to free up volume and to enhance acoustics, simultaneously resulting in better views from all seats. A coffered ceiling has been installed to suit acoustic requirements and to harmonise with the proportions of the hall. A grand Klais pipe organ consisting of 2,012 pipes takes centre stage.



Victoria Theatre. Photo Courtesy of Victoria Theatre & Victoria Concert Hall



Victoria Concert Hall. Photo Courtesy of Victoria Theatre & Victoria Concert Hall



Atrium. Photo Courtesy of Victoria Theatre & Victoria Concert Hall

Atrium

The central passageway that links Victoria Theatre and Victoria Concert Hall on the ground level is an original feature when the landmark was completed in 1905. It was reinstated to provide easy access to surrounding arts establishments. The covered space represents the link between the building's past and present. Victoria Concert Hall's ornate archways and rusticated columns were conserved, while at Victoria Theatre's side, modern precast panels with etched reliefs were introduced to enhance the space. A transparent skylight between the two performance venues allows natural light to filter through while providing a view of Victoria Theatre & Victoria Concert Hall's iconic clock tower.

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An external view of the Palace Garden Bazaar.

PALACE GARDEN BAZAAR IN BUDAPEST

A UNESCO world heritage listed historical building regained new life.

The Palace Garden Bazaar was built in Budapest between 1875 and 1883 in Neo-Renaissance style after plans drawn up by the Hungarian architect Miklós Ybl. The building is one of the true masterpieces of Romantic architecture in Hungary, gaining much praise due to its sheer beauty and balanced ratios ever since its official opening in 1883.

It was initially used as a sales and trade centre while later hosted art studios, exhibition rooms and various educational institutions. The building was seriously damaged in the 2nd World War, then served as the Buda Youth Park from 1961 onwards, until its conditions became critical and it had to be closed down in 1984. Although numerous projects were drawn up about its possible utilisation, Palace Garden Bazaar remained unused for nearly 30 years. Today the Palace Garden Bazaar is an UNESCO World Heritage site, but at the same time it is listed as one of the 100 most endangered monuments since 1996.

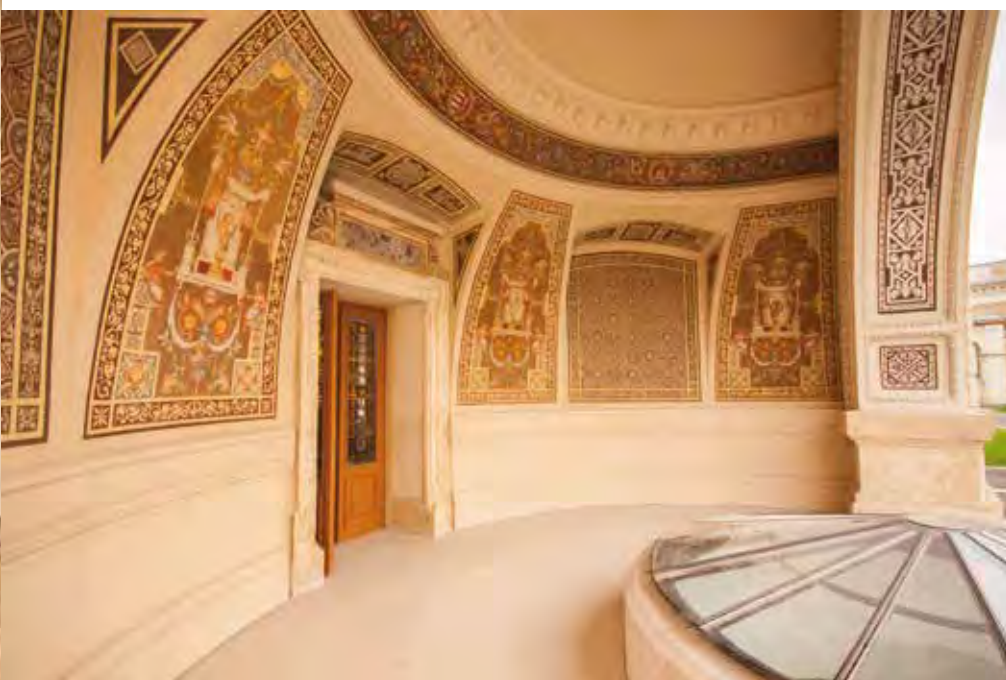
The preservation of even the smallest details of the original structure was the primary purpose of the renovation intervention that began in 2011. All the iron railings, gates and fences were restored and the floorings regained their original colours and patterns. The renovated complex now houses exhibition halls (2500 square metres), a multifunctional conference room (900 square metres), restaurants, shops and a tourist information point.

The renovation intervention

The renovation of the Palace Garden Bazaar was aimed at refreshing the cultural life and improving the public services in the Hungarian capital.

The project included the restoration of the existing 8988 square metres building, the construction of an underground garage and some new structures covering 17,722 square metres, and the completion of a 8734 square metres green space including a garden with a courtyard.

After the renovation project was launched in 2011, financial and architectural planning followed, contractors were then selected, and the actual reconstruction works started in the summer of 2013. Total costs amounted to about 28.5 million Euros, out of which 21.5 million Euros were paid by the European Union.



A detail view of the renovated decorations.



Installing stone and ceramics in a historical building

Almost all new floors were installed using Mapei products. Before installing the stone coverings, vertical and horizontal surfaces of the stairs had been levelled and smoothed with PLANITOP FAST 330 quick-setting, fibre-reinforced cementitious levelling mortar for internal and external floors and walls. This is a grey-coloured powder made using special cementitious binders, selected aggregates, synthetic resins and special additives. When mixed with water, it forms a blend with good workability which may be applied on vertical surfaces by trowel, characterised by its high bonding strength to all substrates normally used in the building industry.

PLANITOP FAST 330 hardens quickly even when applied in thick layers without shrinking or cracking, and forms a

strong layer suitable for laying ceramic, glass mosaic and stone coatings.

The 5 x 5 cm Javan lava stone slabs from Indonesia were bonded with KERAFLEX S1 (which is manufactured and distributed on the Hungarian market by Mapei Kft.) on a 5000 square metres surface. The walls and floors, as well as the surfaces of the columns and staircases in the multifunctional space facing the lecture rooms, were all covered with this kind of slabs.

The joints were grouted with ULTRACOLOR PLUS anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent DropEffect® and mould-resistant BioBlock® technology. The product is used for internal and external grouting of floors and walls in all types of ceramic, terracotta, stone material, and glass and marble mosaic. It is ideal for grouting floors and walls in areas subject to intense traffic (airports, shopping centres, restaurants, bars, etc.), in residential areas (hotels, private houses, etc.), as well as on facades, balconies, terraces and on swimming pools.

Stairs in service areas and the floors in the corridors, dressing rooms and bathrooms were covered with porcelain tiles using KERAFLEX cementitious adhesive with no vertical slip and extended open time. This adhesive is ideal for interior and exterior bonding of ceramic tiles, porcelain tiles, stone materials and mosaics of every type on floors, walls and ceilings. It is also suitable for spot bonding of insulating materials such as expanded polystyrene, rock and glass wool, Eraclit® (wood-cement panels), sound-deadening/reduction panels, etc.

The substrates had been previously treated with PRIMER G synthetic resin primer in water dispersion with a very low content of volatile organic compounds (VOC), then smoothed with ULTRAPLAN RENOVATION and ULTRAPLAN ECO 20 self-levelling smoothing compounds which are manufactured and distributed on the Hungarian market by Mapei Kft.



Photos on this page: The interiors of the Palace Garden Bazaar feature an interesting mix of historical and modern elements.



The bathroom substrates were waterproofed with MAPEGUM WPS quick-drying, flexible liquid membrane.

The substrates in the bathrooms were waterproofed with MAPEGUM WPS quick-drying flexible liquid membrane and MAPEBAND PE 120 PVC tape. MAPEGUM WPS is a ready-to-use, solvent-free, one-component, grey-coloured paste with a base of synthetic resins in water dispersion. It has a thixotropic consistency which makes it easy to apply on horizontal, sloping and vertical surfaces. After rapid evaporation of the water content, MAPEGUM WPS forms a flexible membrane which is not sticky and which is strong enough to withstand light pedestrian traffic. It also forms an excellent surface which bonds perfectly to adhesives used for laying ceramics, marble and natural stone.

Ceramic tiles were bonded in this case with KERAFLEX cementitious adhesive and joints were grouted with KERACOLOR FF FLEX mortar which is distributed on the Hungarian market by Mapei Kft.

For more information, email mapei@mapei.com.sg.

Article source: *Realtá Mapei International no. 54/2015*

Mapei products

Preparing the substrates: Eco Prim Grip, Planitop Fast 330, Primer G, Ultraplan Eco 20*, Ultraplan Renovation*

Waterproofing substrates: Mapeband PE 120, Mapegum WPS

Installing ceramic tiles and stone slabs: Keraflex, Keraflex S1*

Grouting joints: Keracolor FF Flex*, Ultracolor Plus.

* These products are manufactured and distributed on the Hungarian market by Mapei Kft.



Keraflex



The floor substrates of the stairs, corridors, dressing rooms and bathrooms were first smoothed with PLANITOP FAST 330, then covered with porcelain tiles using KERAFLEX adhesive. Joints were grouted with KERACOLOR FF FLEX which is distributed on the Hungarian market by Mapei Kft.

PROJECT DATA

Project: Palace Garden Bazaar

Location: Budapest, Hungary

Period of Construction: 1875-1883

Design: archt. Miklós Ybl

Main Contractor: Swietelsky VHB consortium

Period of the Intervention: 2013–2014

Design: Dévényi Építész Iroda and Tamás Dévényi

Client: Hungarian Government

Intervention by Mapei: supplying products for substrates preparation, waterproofing, installation of ceramic tiles and stone slabs

Works Director: Zsolt Kelemen

Contractors: Swietelsky-VHB consortium

Ceramic and Stone Installation Contractor: Ratskó Bau Kft.

Mapei Distributor: Ratskó Bau Kft.

Mapei Coordinators: László Nagy and Gergely Garay, Mapei Kft. (Hungary)

Alkaff Upper Serangoon Mosque reopens after two-year renovations



Alkaff Upper Serangoon Mosque, which was closed to the public since May 2012, reopened in 2014 and features a new two-storey annex block with a 50 percent increase in prayer space, new administration facilities and classrooms for Islamic education programmes. In 2015, the Alkaff Upper Serangoon mosque won the Urban Redevelopment Authority (URA) Architectural Heritage Awards in 2015 in recognition of its exceptional restoration works. Photos: © Shing Design Atelier Pte Ltd for Majlis Ugama Islam Singapura (Muis)

Alkaff Upper Serangoon Mosque, which serves the needs of Muslims living in the Potong Pasir housing estate, received a \$2.5 million grant from the Mosque Building & Mendaki Fund (MBMF) under Muis' Mosque Upgrading Programme (MUP). The mosque, which was identified to be safeguarded for conservation, required \$3.1 million in total construction costs, including upgrading works of current facilities. The original features of the mosque have been retained in accordance to guidelines prescribed by the Preservation of Sites and Monuments (PSM).

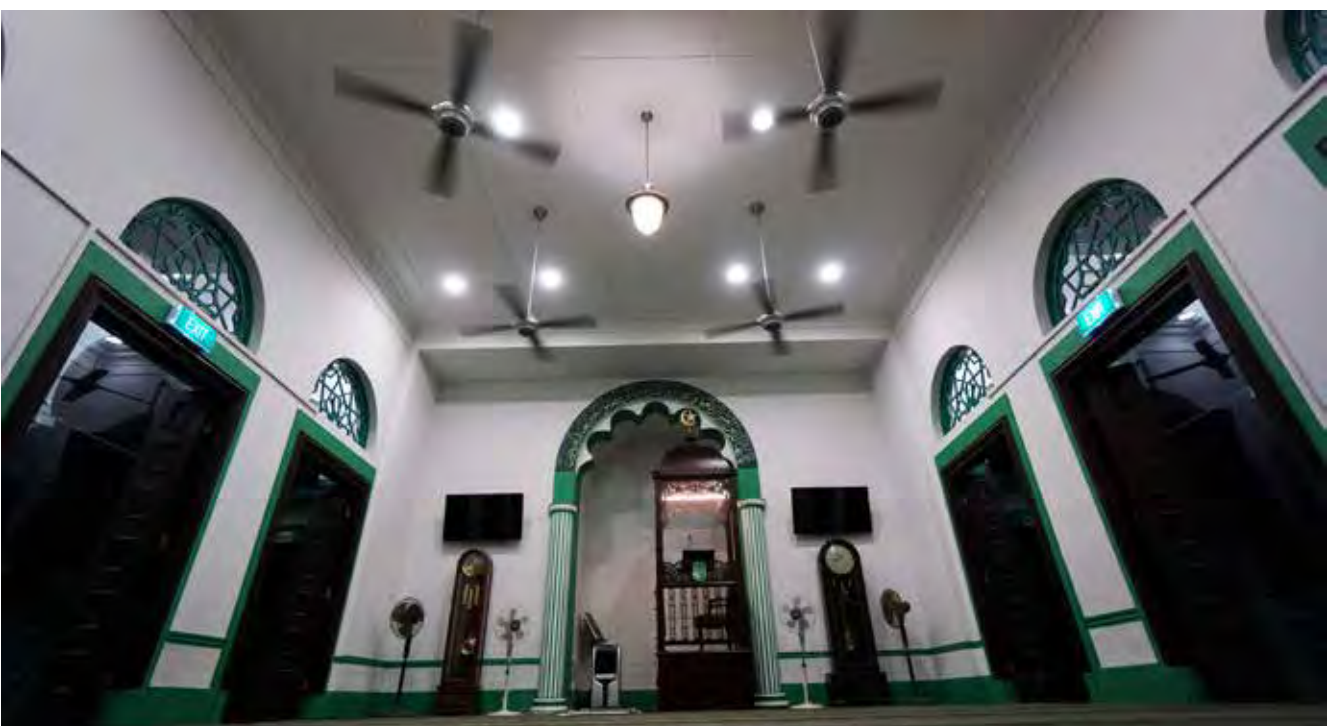
New and upgraded features

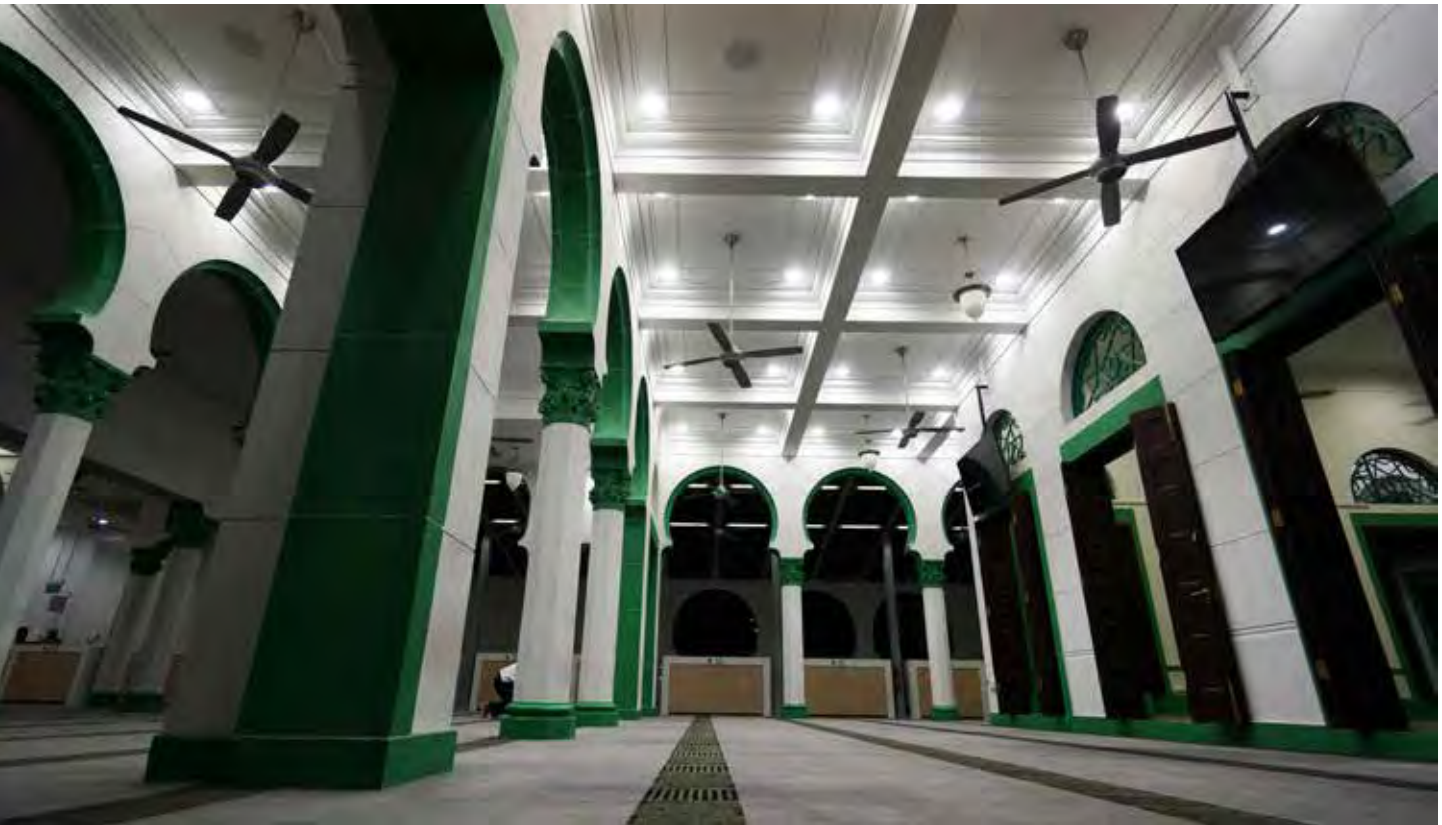
The completed upgrading works maximised available space for prayers, Islamic learning for the young and various community functions held throughout the year, as well as allow better access for elderly congregants by way of ramps and refurbished handicapped toilets. The upgraded mosque now has the following features:



- A new two-storey annex block which will house extended prayer spaces to accommodate high volume of congregants during Friday Prayers and Eid celebrations. This multi-purpose area can also be converted into three classrooms for Islamic education programmes
- A new gallery showcasing Alkaff mosque's rich history
- Barrier-free facilities including a handicapped parking lot, ramps linked-directly to handicapped toilets and a holding area for Persons With Disabilities (PWD)
- A new lift for better accessibility
- A new administration office at level one and additional office space located at level two of the new annex building
- New ablution areas at level one
- New male & female toilets with cross ventilation and better circulation areas at levels one and two.

The mosque now has a total prayer space of 1,200 congregants – an increase of 50 percent from before upgrading works.





The mosque is the fourth under MUP Phase 1 to be completed. Other mosques upgraded and reopened under MUP Phase 1 were Muhajirin (Braddell Road), Hajjah Rahimabi Kebun Limau (Kim Keat), An-Nur (Admiralty) and Al-Ansar (Bedok) Mosque.

Its restoration works were so impressive and well planned that the mosque was among the four winners of the URA's Architectural Heritage Award 2015. The mosque was also declared by the National Heritage Board on 19 December 2014 as the 68th National Monument.

History of Alkaff Upper Serangoon Mosque

Masjid Alkaff Upper Serangoon was built in 1930 by Syed Abdul Rahman Bin Shaik Alkaff, nephew of Shaikh Bin Abdul Rahman Alkaff who was the first from the Alkaff family to arrive in Singapore in 1850s. The planning of the mosque was mooted in 1920 but only materialised in building in 1930. The architect of the original mosque worked for a well-known British architecture firm, M/s Swan & Maclaren. This is the same firm which built Sultan Mosque in 1824.

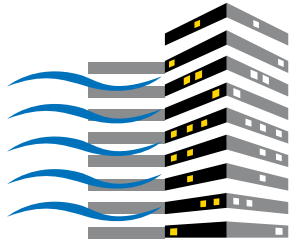
The mosque was originally managed by Trustees appointed by the court. The last Trustees appointed in 1939 were Shaikh Omar Bin Abdullah Bamadhaj, Hadjee Manjoor Sahib Marican and Kassim Ahmad Angullia.

The mosque was originally a small building with a main prayer hall, a veranda surrounding the main prayer hall that acted as extension to the prayer hall. At the time it was the only mosque to feature a Turkish influence minaret. The mosque has undergone several renovation works – the last was carried out in 1998 when its praying hall was extended to accommodate 800 congregants.

There was another mosque which carries the Alkaff name i.e. Masjid Alkaff Kampung Melayu at Jalan Abadi (off Jalan Eunos). The original mosque was phased out in 1994 and was replaced with a new MBMF mosque with the same name at its current location at Bedok Reservoir Road.

Alkaff Upper Serangoon Mosque will serve the religious needs of Muslim residents in Potong Pasir, Sennet Avenue and parts of Geylang Bahru, as well as office workers and students of nearby schools. The mosque will also serve residents of the future Bidadari housing estate. Weekend classes and Islamic education for adults can now be held at the *Masjid* in comfort.





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Permasteelisa outfits the renewed “Musée de l’Homme” in Paris

The Paris Musée de l’Homme, part of the National Natural History Museum dedicated to the history of human evolution, has reopened after six years of restoration.

After a six-year renovation project the historic “Musée de l’Homme” in Paris was re-opened in October 2015. It was founded in 1938 as part of the National Museum of Natural History, and is dedicated to the study of the history, development and evolution of mankind down through the centuries and millennia.

Located in the Passy wing of the historic and prestigious Palais du Chaillot in the Place du Trocadero, the Musée de l’Homme has undergone a comprehensive architectural renovation under the direction of architects Brochet-Lajus-Pueyo, winners of a contest launched in 2006 for the redesign of the interior spaces. The museum outfitting was designed by Zette Cazalas’ Zen+dCo agency.

Permasteelisa Group worked closely with Zen+dCo to design and implement all the structures needed to display the important exhibits the museum owns, including the only intact Cro-Magnon man skull. The Permasteelisa Group lent its expertise to the renovation project, transforming the architects’ visual and tactile ideas into reality.

The new Musée de l’Homme has a total space of 16,000 square metres (172,200 square feet) covering four floors. There are more than 3,000 square metres (32,200 square feet) of museum exhibition space and over 70,000 items on display. They are organised into three general themes – understanding mankind and our relationship with other living things, mankind’s origins and an examination of how we should adapt to tomorrow’s world.

The new architectural design was inspired by concepts like transparency, integration and harmony with the environment. This was achieved through the extensive use of natural light, enhanced by enlarging the existing windows and removing part of the ceiling in the main pavilion to create a light well. This allows light to flood into the central areas of the museum.

Permasteelisa’s role in fitting out the Musée de l’Homme’s new layout involved supervising project management and coordination between the participating companies, including the contractors handling electrical, mechanical, audio/video and alarm systems. Integrating all the multimedia equipment and functional and maintenance systems enabled the project to be carried out to a very high standard. The Group also managed the construction and installation of more than 2,000 custom-made supports, located inside 30 air-conditioned showcases measuring up to 12 metres long and 4 metres high, equivalent to more than 800 square metres (8,600 square feet) of glass. These were fitted out with 20 display compositions, all screen-printed with graphics designed by the project’s architects.

Permasteelisa oversaw the construction of two interactive booths and three custom-made tables, two fibreglass architectural sculptures and several other exhibition tables and installations, from fibreglass tables to bronze sculptures.

Renovating a 19th century building meant that Permasteelisa was required to develop architectural solutions to preserve the existing structure - smaller loads distributed in such a way as to lighten the suspended floors, installing anti vibration materials between outer shell and structure, ensuring every base structure concealed the underpinning supports, and installing fabric ceilings to conceal equipment and retain the soft lines of the museum interiors.

Permasteelisa employed about 50 people for this project including technical, planning and logistics personnel, a purchasing office and installation technicians. The team worked at a rapid pace out from January to October 2015 to comply with the customer’s tight deadlines.



Photo: © MUSEE DE L’HOMME



Photo: © PERMASTEELISA GROUP



Photo: © PERMASTEELISA GROUP



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CL3 Architects unveils design for The Park Lane

The Park Lane Check-in Reception. Photo: © Edmon Leong

Hong Kong-based design firm CL3 Architects has completed their latest refurbishment project for The Park Lane, Hong Kong, a Pullman Hotel. Led by renowned architect and interior designer William Lim, the award-winning team has introduced a new design scheme for the hotel's welcome area and lobby lounge. Breaking the conventions of lobby design, the revamp integrates artistic elements with contemporary sophistication, catering to both savvy globetrotters and business travelers.

Located in the heart of Causeway Bay, The Park Lane Hong Kong, a Pullman Hotel enjoys direct access to the city's top shopping district, while affording remarkable views of the harbor and Victoria Park. "The design scheme was inspired by its location. Our design team reconfigured the lobby layout entirely to bring in elements from its surroundings. Materials such as marble, copper, steel, timber and glass have been incorporated to create stunning visual contrasts against a raw industrial framework," said William.



The Park Lane Check-in Reception: Photo: © CL3 Architects

Hotel entrance and lobby

As part of the renovations, CL3 has given the hotel entrance a complete overhaul. Replacing the former conservative look is a striking black façade, balanced by an orange Alucobond ceiling to create a unique, ultra-modern exterior. The building's pillars at the drop-off area are decorated with black mirror stainless steel and lit from within to welcome guests into the hotel.

Inside the lobby, grey marble flooring and exposed ceilings add a sense of depth and spaciousness. As visitors approach the reception, a large video feature wall gives a striking first impression with colourful digital displays, while two check-in counters crafted in timber with black mirror stainless steel highlights are positioned in front. CL3 has also designed bespoke desk lamps to match the minimalistic lines of these marble counters.

A unique luggage-themed backdrop wall, which doubles as storage space, is located behind the VIP check-in area and Concierge. Decorated with leather, horsehair and metal accents, the visually striking design becomes a key feature within the lobby. Beside the Concierge, three VIP marble check-in counters are matched with a hanging globe lamp, rounded copper stools and purple carpeting, adding an intimate yet playful vibe to the space.

Lobby lounge

The newly refurbished lobby lounge - Ebb & Flow – is a stylish hangout featuring a mini-gallery of specially commissioned artworks. Using a semi-private layout, the space is divided into different zones with the use of glass panels and metal folding gates. At one end, floor-to-ceiling windows offer views of Victoria Park and allow natural light indoors. In the middle, cozy banquettes and sofas are available for those wanting to relax and unwind. At the other end, a large communal table in wood features an array of magazines, interactive screens and iPads for guests to stay connected. The bar and coffee station, positioned adjacent to one another, are constructed from white marble and natural wood respectively, while timber was also chosen for the floor and ceiling, adding warmth to the design.

In addition to custom-made furniture by CL3, Lim has also handpicked a selection of designer pieces for the lobby lounge, including chairs and stools by Stella Works, Martela and Ferlea. Designed with flexibility in mind, the layout of the lounge can also be rearranged to suit different types of events, parties and art exhibitions.

Stylishly redesigned, the upgraded lobby at The Park Lane, Hong Kong, a Pullman hotel redefines the guest arrival experience with beautifully-designed interiors that combine art, technology, functionality and comfort.



The Park Lane Lobby. Photo: © Edmon Leong



The Park Lane Ebb&Flow Seating. Photo: © Edmon Leong



The Park Lane Suitcase Feature Wall. Photo: © Edmon Leong

HOTEL EXPRESS INN IN NASHIK, INDIA

Express Inn is a textbook example of how state-of-the-art technology combines with modern architectural principles to create a sustainable and energy efficient structure. The hotel's design combined with its strategic location has rendered it the most popular and sought after destination for not only the regular business traveler but also for families on outings and functions. This premium business hotel is ideally situated on the NH3 Mumbai - Agra Highway just off the Ambad Industrial Estate.

The overwhelming response to the first phase of the hotel, led to an adjoining recently completed second phase. The client purchased an adjoining property to create Phase 2, which is now connected to Phase 1 via a sky walk.

Approximately 100 rooms including six suites, 17 deluxe rooms, 17 executive rooms, four family rooms and 51 standard rooms comprise in Phase 1. Each room has been designed simply but with a contemporary elegance giving one a feeling of security and comfort with all one needs on hand. The fine dining restaurants and banquet halls create a superlative ambience.





While the second building expands the number of rooms, it also incorporates upgraded amenities such as health club, temperature controlled outdoor swimming pool, banquet halls, multipurpose hall, conference rooms as well as a landscaped podium.

The front façade of Express Inn is made of glass that makes it visually appealing while the water body at the entrance gives a calm relaxing effect. The enormous double height entrance lobby is modernity combined with an aura of warmth, a thorough speciality of ARK. While the coffee shop and restaurant are in modern designs, there still exists a beautiful ethnic touch. The banquets designed in warm tones and elegant grills create a beautiful rhythm. Kabul has experimented with the lights by shunning away from the typical chandeliers and selecting the ultra modern, chic and contemporary light fixtures and barezool ceilings. To sum it up, ARK has fashioned a multilevel hospitality all equipped with every lifestyle facilities which includes a health club, business centre, spas, outdoor temperature controlled pool, a state-of-the-art gym with sauna, steam baths and Jacuzzis. From the ingenuity of the ingredients, to the flawless execution every aspect of the hotel is set to entice, a signature of Reza Kabul.



PROJECT DATA

Project: Hotel Express Inn

Location: Nashik, India

Client: Shelar Properties

Interior Design Firm: ARK Reza Kabul Architects Pvt. Ltd.

Type: Hospitality

Scope: Architecture + Interiors

Keys: 200

Completion: Phase 1 – 2012
Phase 2 – 2015



HBA and Canvas Art Consultancy create masterpiece interiors for NUO's Beijing debut

All photos: © Kylie Hood Photography for HBA

Global hospitality design leader Hirsch Bedner Associates (HBA) called on the expertise of art consultancy division, Canvas, in creating Ming-inspired interiors for new hotel brand, NUO. Developed by Kempinski Hotels specifically for the Chinese domestic market, the chain's debut property is situated in the heart of Beijing's historic Chaoyang district. Set to expand nationwide in coming years, the brand celebrates China's diverse cultural traditions, heritage and aesthetics through a localized approach to art and design. Striking a careful balance between authentic and avant-garde, creative flair and commercial viability, HBA and Canvas set the stage for world-class service and unmistakable luxury.

Steeped in history, NUO's Beijing locale provided the catalyst for Canvas and HBA's stunning interventions. The hotel is a short distance from Beijing's signature hutongs - walled networks of alleys and lanes, home to countless courtyard houses. These nearby emblems of Beijing conjured a similarly representative aesthetic for NUO's flagship property: Ming dynasty China. A cultural high point, the 14th to 17th centuries saw Chinese painting, ceramics, lacquerware and porcelain flourish, presenting HBA with an abundance of inspiration. In particular, the design trope called on international art consultancy Canvas' full scope of expertise, from conceptualization, sourcing and commissioning of artworks, through to procurement and installation.

Moon Wong, Art Director of Canvas Singapore explained: "HBA worked with Kempinski to identify NUO's key brand tenets of *Chinese, Contemporary, Luxury*





and *Green*. Beijing's grandeur complements those principles perfectly, and our research in libraries, museums and private homes led us to what we call 'Modern Ming.' From there, we sought artists and artworks that evoke the artistic traditions of the Ming period in a way that remains vibrant, fresh and contemporary." From Shanghai's world-renowned Peace Hotel to Shenyang's iconic Grand Hyatt, a diverse portfolio of high-end hospitality projects in China and beyond has seen Canvas develop an unparalleled network of artists, galleries, collectors and dealers throughout China. After careful consideration of the unique demands and spatial possibilities of each of NUO's various areas, as well as the property's intended character and tone, Canvas commissioned a collection of artworks to match the client's expectations.

"We see ourselves as much consultants as curators," explains Tonya Burke, Director of Canvas Singapore. "We incorporate a range of media, all the while considering the function of the space. Size also plays a part, and it's important that artworks complement, not dominate interiors. Our aim is to introduce works that pique guests' interests and inspire: comfort matters, so we seek artwork that allow the mind to wander, rather than confront or confuse."

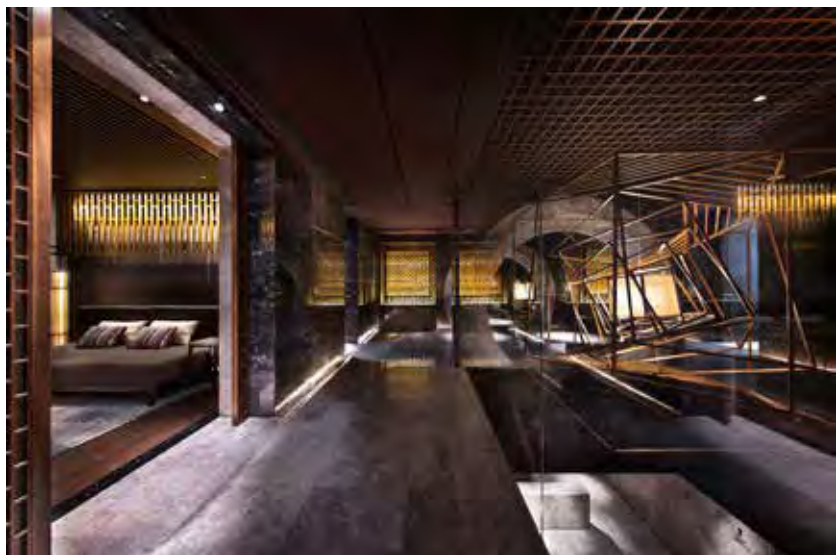


With that in mind, the consultancy commissioned Hubei-born artist Zeng Fanzhi to create vast oil on canvas, *Abstract Scenery*. All vivid hues and meandering lines, the work evokes a timeless, otherworldly landscape that is in direct contrast to the bustle of NUO's Beijing locale. Long synonymous with Chinese craftsmanship, porcelain flourished during the Ming dynasty. Here, the medium is reimagined through Wu San Bao's towering vases, each painstakingly hand painted. Positioned in the main lobby, they greet guests in stunning style. Elsewhere, two of Pascale Marthine Tayou's signature 'Totems' see blue and white vases stacked to the ceiling to form deceptively precarious-looking pillars.

Throughout the 439-room hotel, Ming traditions such as calligraphy, ink painting and *shan shui* get a modern-day makeover by a who's who of contemporary artists. Together, and in the context of China's ancient capital, they create a compelling sense of familiarity, laced with an unmistakable edge. For example, the hotel's 42 suites were inspired by the musings of Ming dynasty scholar, Wen Zhen Heng. At NUO, that translates to bespoke furniture, unique artworks and hand-painted plaques in redolent shades of blue.

Ian Carr, CEO of HBA said: "Collaboration with Canvas lends an added dimension to HBA's interiors. They bring not just creativity and expertise, but also a confident hands-on approach when it comes to liaising with artists, installing artworks, and briefing hotel staff. Without a doubt, unique art offset by bespoke design offers a superlative guest experience, as is made abundantly - not to mention beautifully - clear in our latest collaboration."

Indeed, such has been the response and interest in artworks installed by Canvas internationally that consultants provide hotel staff with an Art Acquisition Book detailing each and every work on display. Offering a customised approach to luxury, Kempinski Hotels' NUO raises the bar for the Chinese domestic hospitality market through its one-of-a-kind approach to art, design and luxury. Reinforcing the brand's discerning yet contemporary edge, Canvas' carefully curated artworks installed throughout the flagship property brings calibre and prestige to this year's most exciting hotel launch yet, complementing HBA's Ming-inspired interiors beautifully.





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All photos above: © Gloucester Services

GLOUCESTER GATEWAY gets a new green roof

The image for Gloucester Gateway was to build a building, that didn't look like a building. The new service station on the northbound side of the M5 between J11 and J12 was a leap forward in service station design and engineering. The clients aimed to do something different from the average motorway services. No franchises, no big brands, but instead a sense of where you are - a sense of place; homemade food and farm shops that work hand in glove with small, artisan producers from the local area and beyond. The idea that has been successfully used at the Tebay services in Cumbria for 40 years.

The 4,000 square metres state-of-the-art green roof project was designed by Sky Garden Ltd, a leading green roof specialist in the UK, to disguise the new service station as a part of the landscape. Being a Greenfield site, flanked by the Cotswolds and Robinswood Hill, great care was required to minimise the environmental impact and blend the building

into the surrounding countryside. The buildings and petrol filling station are covered by a Sky Garden Biodiverse living roof, designed to encourage local flora and fauna to flourish.

The wildflower seed mix is tailored specifically to the surrounding area and features many wild grasses that are abundant in the region; with wildflowers rich in nectar such as Self Heal, Yellow Rattle, Birdsfoot Trefoil and Meadow Sweet. "Our aim is to support pollinating insects such as bees and preserve the heritage of our UK native wild flora habitats," said Tom Storrer, sales and marketing, Sky Garden Ltd.

The vegetation sits on top of Sky Garden's rigid 20mm drainage board and filter fleece. The 110mm specialist substrate supports the natural growth of the selected regional wildflower and grass mix. After seeding, the brown roof took time to develop but now the roof is looking great and blends into the surroundings as though it was never there.

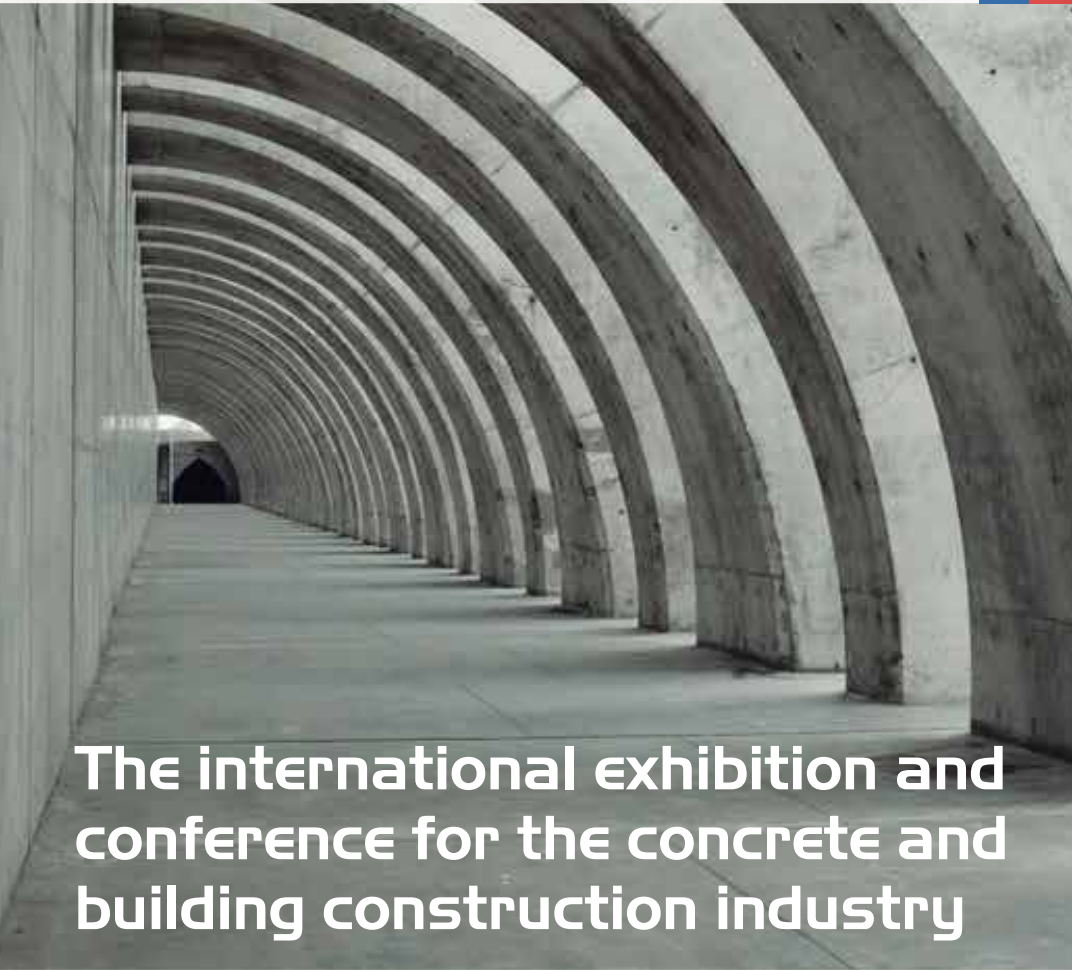


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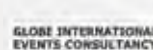
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The Vertical Garden

A scientific and artistic approach by Patrick Blanc. Patrick is a French botanist, working at the French National Centre for Scientific Research, where he specialises in plants from tropical forests.

Do plants really need soil? No, they don't. The soil is merely nothing more than a mechanic support. Only water and the many minerals dissolved in it are essential to plants, together with light and carbon dioxide to conduct photosynthesis.

As a teenager, in the late sixties, Patrick Blanc conceived the Vertical Garden as a biological filter for his tropical aquarium. During his university years, he visited the Southeast Asian rainforests to observe his beloved aquatic *Cryptocoryne* species growing in the shaded forest streams and then he decided to study tropical botany. His Ph D, in 1978, concerned the growth habits of the plants of the Aroid family (*Anthurium*, *Philodendron*, *Monstera*, *Aglaonema*, *Cryptocoryne*). In 1982, he joined the National Center of Scientific Research (CNRS) and his research topic since that time concerns the adaptive strategies of the tropical rainforest understory species. This was the subject of his State Thesis (Doctorat ès Sciences) and he won the Botany prize from the French Academy of Sciences in 1993.



Patrick Blanc on a bench at the new Shinkansen station walkway, Yamaguchi, Japan in October 2015. Photo: © Pascal Héni

During these years he was also developing his Vertical Garden concept and finally patented it in 1988 and 1996. Consecutive to his first realisations in the late eighties (especially at the Museum of Science and Technology in Paris in 1986), he has been invited for the Chaumont International Garden Festival in 1994. The success of his work was immediate and then the Contemporary Art institutions considered he was an artist and then they commissioned different permanent installations. In 2001, Andrée Putman invited Patrick for a huge installation on a blind wall at the Pershing Hall hotel in Paris and suddenly many famous architects have been interested by Patrick's work. Now, the closest collaborations are with Jean Nouvel and Herzog and De Meuron. Besides these collaborations, Patrick Blanc now designs many projects by himself.



Amandolier, Genève, Entrance Vertical Garden in October 2013. Photo: © Patrick Blanc

Plants in the wild are growing on vertical surfaces

Wherever water is available all year long, as in tropical forests or in temperate mountain forests, plants can grow on tree trunks and branches (epiphytic habit) as well as on soil-less habitats: sandstone or granitic outcrops, limestone cliffs, caves, waterfalls as well as natural or man-made slopes. These situations provide perfect habitats for many species, most of them having a very narrow range of distribution. The most important plant families are *Gesneriaceae*, *Rubiaceae*, *Melastomataceae*, *Begoniaceae*, *Balsaminaceae*, *Urticaceae* among the *Dicotyledons* as well as *Orchidaceae*, *Bromeliaceae*, *Araceae* among the *Monocotyledons*, not forgetting the so many Ferns species. In Peninsular Malaysia, for instance, out of the 8,000 known plant species, about 2,500 are growing on these steep habitats, without any soil.

Even in the temperate parts of the world, many plants are growing on cliffs, cave entrances, waterfalls or fallen rocks. On such very steep places are growing many common shrubby species among the *Berberis*, *Spiraea*, *Stachyurus* or *Cotoneaster* genera. Their naturally curved branches indicate that they originate from naturally steep biotopes and not from flat areas like the gardens where they are usually grown. The situation is the same for many herbaceous species: for instance, all the *Hosta*, *Heuchera*, *Tricyrtis* as well as most Fern species that Patrick Blanc did observe in North America or temperate East Asia were growing on steep slopes.

Thus, as seen from nature, it is possible for plants to grow on nearly soil-less vertical / surfaces as long as there is no permanent water shortage.

Walls and Plants, a surprising, though long-lasting combination

Whenever roots are allowed to grow deep inside a man-made wall, they can easily damage the wall and cause its destruction. That is precisely what happened to the Angkor temples. This root-related damage can be excluded if the Vertical Garden is totally insulated from the existing wall. The Vertical garden becomes a second skin of the building and this is a living skin. The plant roots are then only spreading on the surface of the Vertical Garden structure, leaving the inner wall unaffected. Plants and architecture can thus cope with harmony.

The core innovation is to use the root ability of the plants to grow not only in a volume of soil but also on a surface; this is just what they do in their natural environment when their roots are growing on tree barks or among the mosses covering the rocks. Without any heavy soil, the plant-supporting system is very light and thus can be implemented on any wall, whatever its size. The Vertical Garden can be set up both outdoor and indoor. Of course, the plant species selection is set according to the prevailing climatic conditions.

The Vertical Garden is composed of three parts: a metal frame, a PVC layer and a layer of felt. The metal frame is hung on a wall or can be self-standing. It provides an air layer acting as a very efficient thermic and phonic insulation system. A 1 cm thick PVC sheet is riveted to the metal frame. This layer brings rigidity to the whole structure and makes it waterproof. A felt layer, made of polyamide, is stapled on the PVC. This felt is rot-proof and its high capillarity allows a homogeneous water distribution. Now, the oldest parts of felt, together with the "invited" plants, are 30 years old in Patrick Blanc home.



Global view of Rain Forest Chandelier at the EmQuartier in Bangkok.
Photo: © Patrick Blanc



The Rain Forest Chandelier as seen above. Photo: © Patrick Blanc

The roots grow on and inside this felt. Plants are installed on this felt layer as seeds, cuttings or already grown plants. The watering is provided from the top. If tap water is used, it must be supplemented with low concentrated nutrients. Of course, the best solution is to recycle used water, such as grey waters and also to collect the rain from the adjacent roofs as well as water issued from air conditioning. The whole weight of the Vertical Garden, including plants and metal frame, is lower than 30 kg per square metre. Thus, the Vertical Garden can be implemented on any wall, without any size or height limitation.

The Vertical Garden on concrete walls: a shelter for biodiversity and a cleaning system for cities

Thanks to its thermic insulation effect, the Vertical Garden is very efficient and aids in lowering energy consumption, both in winter (by protecting the building from the cold) and in summer (by providing a natural cooling system). The Vertical Garden is also an efficient way to clean up the air. In addition to leaves and their well-known air-improving effect, the roots and all the microorganisms related to them are acting as a wide air-cleaning ecosystem. On the felt, polluting particles are taken in from the air and are slowly decomposed and mineralised before ending up as plant fertiliser. The Vertical Garden is thus an efficient tool for air and water remediation wherever flat surfaces are already extensively used by human activities.

The Vertical Garden allows human beings to re-create a living system very similar to natural environments. It is a way to add Nature to places where people once removed it. Thanks to this botanical knowledge and long lasting experience, it is now possible to display natural-looking plant landscapes even though they are man-made. In any city, all over the world, a naked wall can be turned into a Vertical Garden and thus become a valuable shelter for biodiversity. It's also a way to add nature to the daily life of city inhabitants.

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Vibration Attenuation Characteristics of Victaulic Couplings

Text by Dave Hudson, Victaulic. Photos courtesy of Victaulic

Importance of vibration attenuation in piping systems

Vibration and noise in connected piping is typically generated by mechanical equipment such as pumps, chillers, fans, etc. This noise should be contained within the mechanical room as vibrations can be transmitted via equipment mounts and attached piping, and could potentially be felt and heard in the surrounding walls, floors and ceilings, affecting the comfort of building occupants.

Mechanical piping system designers have traditionally specified specialty products to absorb the mechanical vibration that can lead to noise, including rubber bellows or braided flex connectors. However, independent testing has shown that the solution to a building's vibration issue could be found in the piping system joints themselves.

In 2013, a test programme was completed at NASA's Vibration and Acoustic Test Facility on the effectiveness of Victaulic flexible couplings on vibration attenuation compared to double sphere rubber bellows and stainless steel braided pump connectors. It was found that the use of three Victaulic flexible couplings in close proximity to mechanical equipment provides superior vibration attenuation than either double sphere rubber bellows or stainless steel braided flex connectors.



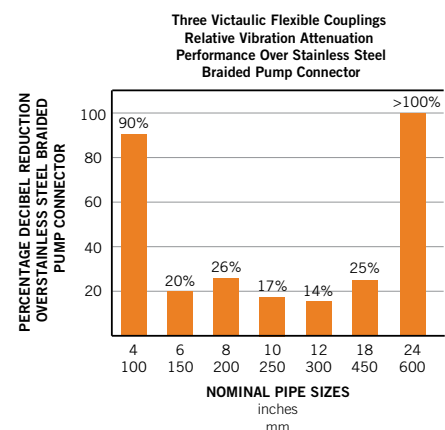
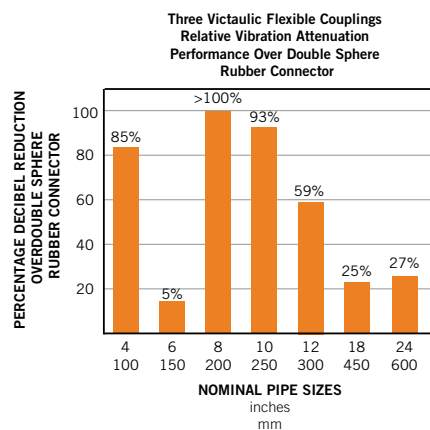
Test results

A series of test-article configurations were assembled using combinations of one, two, and three Victaulic flexible couplings, for pipe diameters of 4" - 12"/100 mm - 300 mm, 18"/450 mm, and 24"/600 mm. Test configurations were also assembled for each of these pipe sizes using double sphere rubber bellows and stainless steel braided pump connectors.



All pipe assemblies were filled with water and pressurized up to 300 psi/20 bar, which exceeds typical operating pressures of HVAC systems. Levels of vibration were measured both at the source and after the component being tested. The vibration tests were performed over a frequency range of 10 Hz – 2000 Hz.

The following charts, show the relative vibration attenuation characteristics of three Victaulic flexible couplings compared to double sphere rubber bellows and stainless steel braided flex connectors, respectively, for typical HVAC pump speeds. The test results show that in all sizes, the vibration attenuation provided by the three Victaulic flexible couplings installed in close proximity to the source of vibration, exceed the vibration attenuation characteristics of the other products tested. Additional flexible coupling features include linear movement and angular deflection capabilities and their ability to accommodate piping misalignment, which will reduce stresses at pump or equipment connections. For any given pipe diameter; vibration isolation increases as the number of Victaulic



flexible couplings increases (i.e. less vibration is transmitted with each additional coupling). The use of cut grooved or roll grooved pipe has the same vibration attenuation characteristics.

The vibration attenuation provided by three (3) Victaulic flexible couplings installed in close proximity to the source vibration is superior when compared to double sphere rubber connectors and stainless steel braided pump connectors. This vibration attenuation solution is cost effective and provides additional system benefits such as reducing loads at equipment connections and accommodating piping movement.



How Victaulic couplings attenuate vibration

The results of the described tests performed apply only to Victaulic flexible couplings and cannot be applied to other coupling manufacturers. Victaulic couplings have a unique proprietary design and use gaskets constructed from synthetic engineered polymers, whose chemical formulation and processing techniques are unique and optimised for long life.

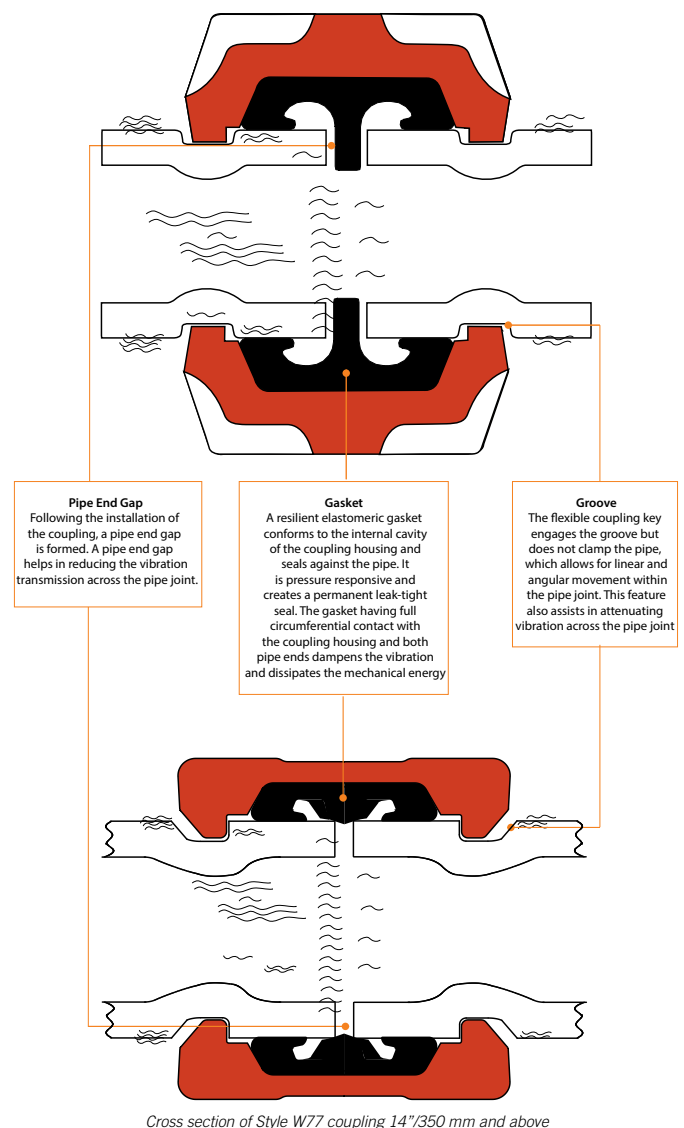
Victaulic flexible couplings permit controlled pipe movement within the couplings while maintaining a positive seal and a self-restrained joint. The design allows for expansion, contraction and deflection generated by thermal changes, building or ground settlement, and seismic activity. Since Victaulic flexible couplings are not rigidly affixed to the pipe, unlike welded, flanged or threaded joints, the couplings minimise noise and vibration transmission generated by pumps or other equipment to the piping system.

In addition, the elastomeric gasket within each coupling and the pipe end gap attenuate system vibration. Its construction enables the gasket to maintain a leak-tight seal against the pipe, while dampening the system vibration. The ductile iron housing fully encompasses the gasket and provides the pipe joint's mechanical strength and movement characteristics. The use of additional Victaulic couplings throughout the piping system, whether flexible or rigid types, will further reduce the transmission of vibration.

About Victaulic

Victaulic was established in 1919, and since then has established a strong position in production of grooved mechanical couplings and pipe-joining systems for demanding market applications. Claimed benefits of the system include increased safety, reliability and maximum efficiency. The company has 15 manufacturing facilities, 28 branches worldwide and more than 900 active global patents. The products are used in industries including oil and gas, chemical, mining, power generation, water and wastewater treatment, military and marine, commercial building and fire protection. **For more information, visit www.victaulic.com.**

Cross section of Style 177N coupling 2"/50 mm – 6"/150 mm



Cross section of Style W77 coupling 14"/350 mm and above

Inselspital Heliport, Bern University Hospital (Switzerland)

Builder: Properties and Buildings Agency of the Canton of Bern AGG

A new rescue helicopter landing pad measuring 40 x 25 metres was built for Bern's Inselspital in compliance with the latest safety standards. Jakob® supplied 250 square metres of Webnet netting for the horizontal fallstop perimeter.

Jakob Products

Safety nets Webnet rope Ø 3 mm, mesh aperture 100 mm

For more information, visit www.jakob.com.







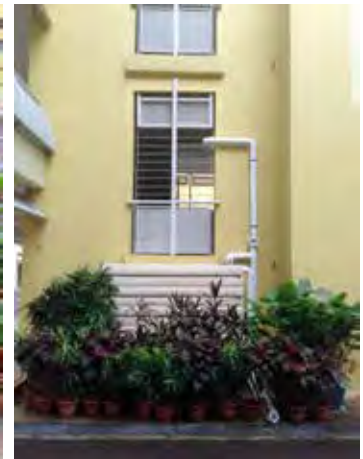
5-7 Nov 2015
Singapore Expo Convention and Exhibition Centre
Singapore

Smarter and greener urban solutions unveiled at GreenUrbanScape Asia 2015

GreenUrbanScape Asia, one of the leading events for urban design, landscape and greenery in Asia, returned with a bigger and better show in 2015. Held at the Singapore Expo Convention and Exhibition Centre from 5-7 November 2015, the second edition of GreenUrbanScape Asia recorded a 25 percent increase from the previous show, with 170 brands and companies from 23 countries exhibiting under one roof. **For more information, visit www.GreenUrbanScapeasia.com.**

Here are some highlights of the products showcased at the show.

Green Eco Harvesting Pte Ltd



Green Eco Harvesting Pte Ltd (GEH) specialises in Rainwater Harvesting solutions aimed at reducing the demand from main potable water source and use it on non-potable applications like irrigation, toilet flushing, general cleaning and cooling tower.

"Using integrated solutions by combining Rainwater Harvesting and Storm water management system together will allow our rainwater harvesting system to act as a detention and retention system, effectively tackling surface water drainage problems during heavy rainfall condition," said Ngooi Yaohe, sales & marketing manager, Green Eco Harvesting Pte Ltd.

GEH estimates savings up to 40 percent (residential) and 80 percent (commercial) of your drinking water by harvesting rainwater.

At GreenUrbanScape Asia 2015, the company introduced an Australian product called 'Thintanks'. Thintanks are manufactured from 100 percent U.V. stabilised, food grade virgin polyethylene resin. All Thintanks are made of a solid one piece construction

to ensure maximum strength. In addition, the tanks are fitted with 2 brass 20mm outlets at the bottom to allow joining of tanks together with ease.

"This is a new idea in the market. The construction of the tank is thin and slim so that it is space saving compared to conventional tanks which need to be on the ground or surface. You can also add flower pots to the Thintanks and convert it into a green wall," said Ngooi.

Thintanks is available in Singapore through its distributor Green Eco Harvesting Pte Ltd. For more information, visit www.geh.com.sg.

**Ngooi Yaohe, Sales & Marketing Manager,
Green Eco Harvesting Pte Ltd**



Perceptive Profile Sdn Bhd

Perceptive Profile Sdn Bhd is a manufacturer of Wood Plastic Composite (WPC) in Malaysia. In line with the Malaysian Government's green industry initiatives, Perceptive Profile believes in playing an important part in preserving the environment. The company optimises and re-uses virtually all sorts of natural waste such as wood flour, saw dust, etc to create an environmentally friendly and 100 percent recyclable product called 'Agro-Bio Wood', which has a trade name 'ABWOOD'.

ABWOOD is used in a variety of applications such as decking system, fencing system, roofing, doors, profiles & wall cladding and pergola & gazebo. One of the greatest benefits of the product is that it is water resistant and anti-termite.

"Our product is not only recyclable, but it is water resistant and termite resistant. This means that the product can last for a long time and no major repair work needs to be carried out in the future," said Clarence Cheah, managing director, Perceptive Profile Sdn Bhd.

ABWOOD has received the IBS (Industrialised Building System) status verification from CIDB Malaysia as well as the Eco label certification from SIRIM Malaysia.

For more information, visit www.perceptive.com.my.



Clarence Cheah, Managing Director, Perceptive Profile Sdn Bhd

Nyee Phoe Flower Garden Pte Ltd

Nyee Phoe Flower Garden Pte Ltd introduced 'Mosscape' at GreenUrbanScape Asia 2015 show.

Mosscape is an artificial moss, ideal for landscape decorating needs. It looks natural, pleasing to the eye and is easy to install. Perfect for indoor applications.

"We have been using Mosscape in our landscaping projects and are now launching it as a product on its own. Mosscape is a wonderful way to introduce a little green in your homes/workplace," said Myo Ko Ko of Nyee Phoe Flower Garden Pte Ltd.

For further information, visit www.nyeephoe.com.



Myo Ko Ko (right) and his colleague, Celestine, from Nyee Phoe Flower Garden Pte Ltd.



8-11 Dec 2015
Singapore Expo
Singapore

Inaugural International Stone, Marble and Ceramic show launched in Singapore

Expotim International Fair Organizations launched the first-ever International Stone, Marble and Ceramic Show 2015 from 8-11 December 2015 at the Singapore Expo, for professionals in the architecture, property, building and construction industries.

Authorised by the Turkish Ministry of Economy to organise exhibitions internationally, the exhibition was the first-of-its-kind in Singapore combining stone, marble and ceramic products under one roof.

The opening ceremony was witnessed by His Excellency Hakki Taner Seben, Ambassador of the Republic of Turkey, Mr Ahmet lihan Calikoglu, Chief Commercial Counsellor and Mr Hurol Karli, Commercial Counsellor, Turkish Embassy in Singapore and leaders and key players from the property, building and construction industries in Singapore and the region. Also present were members of the Istanbul Mineral Exporters' Association (IMIB), a professional non-profit association founded in 1976, which deals with all export activities in minerals sector.

The show consisted of exhibitors from Turkey who formed the largest country pavilion, as well as from China, India, Italy, Portugal, Oman, Vietnam and Singapore. Exhibitors displayed a wide range of products such as natural stone and marble in different sizes, colours and designs.

The show was launched following the recent successfully concluded negotiations for the Turkey-Singapore Free Trade Agreement (TRSFTA), which will boost greater economic cooperation between both sides. The TRSFTA is a comprehensive trade agreement that covers a wide range of areas, including trade in goods, trade in services, investment, government procurement, and newer areas such as intellectual property rights, e-commerce, competition and transparency. Singapore and Turkey businesses can look forward to a high quality FTA that will help to reduce barriers to trade and investment, as well as promote greater connectivity and flow between businesses and people.

For more information, visit www.singaporestoneshow.com.



From left to right: Mr Hurol Karli, Mr Ali Kahyaoglu, Mr Ahmet lihan Calikoglu, Mr Cagatay Ersahin & HE Hakki Taner Seben, Ambassador of the Republic of Turkey. Photo: © Expotim



Guest of Honour tours the International Stone, Marble and Ceramic Show 2015. Photo: © Expotim

Leonardo Mermer Madencilik A.S.

Leonardo Mermer Madencilik A.S. also exhibited at the International Stone, Marble and Ceramic Show 2015 in Singapore. The company, which is based in Istanbul, Turkey, presented Moca marble at the show. Moca is the product of the company's Elazig quarry with a 20,000 tons production capacity. According to the company, the product has found great demand in global markets and is popular with Turkish contractors and natural stone buyers.

This stone is sourced into two harmonious colours, Moca Gold and Moca Silver. With five different surface manipulations, the stone provides a variety of solutions to professionals in the building sector who are on the lookout for different textural effects. A versatile material for exterior cladding as well as interior decoration, Moca adds instant value to any architectural and spatial design.

"We are introducing this special marble called Moca at the show. It is readily available as slabs and answers to demand in manufacturing finished products in varying sizes," said Nurgul Diraz Turer of Leonardo Mermer.

She added that the company is making plans to expand its business in Singapore. Currently, it is working closely with UIS Asia Trading Pte Ltd in Singapore, a company specialising in granite, marble, onyx and limestone, etc. to projects and retailers in Singapore. "We want to enter the market in Singapore and we hope we can do through this show," added Nurgul.

For more information, visit www.leonardomarble.com.



Nurgul Diraz Turer (left) and Canan Arslan (right) of Leonardo Mermer Madencilik A.S.

Van Khoa Marble JSC

Van Khoa Marble JSC, owns a white marble quarry and factory in Hung Yen province in Vietnam. With a state-of-the-art plant staffed with almost 200 employees, the company produces mainly for the overseas market. It exports 100 percent of its production output to all over the world.

"We have been operating since 2010 and we now have customers in nearly all parts of the world. We hope to find some customers through this show, such as architects, builders and wholesalers, whom we can work directly," said Andrea Bassani, sales director, Van Khoa Marble JSC.

For more information, visit www.vankhoa.vn.



Jasmine Vu Hoang, Managing Director and Andrea Bassani, Sales Director, of Van Khoa Marble JSC.

Marcolini Marmi S.p.A.

Marcolini Marmi, based in Verona, Italy, has been specialising in natural stones production for the past 60 years. The company processes blocks into slabs, tiles, cut to sizes from its factory in Verona.

The company exports its marbles to all over the world including Indonesia, Thailand and Singapore, and is looking at expanding its business further. "We came to the show to promote our products and we would like to develop our brand in Singapore," said Francesca Marcolini, sales department, Marcolini Marmi.

For more information, visit www.marcolini.it.



Francesca Marcolini (centre), sales department, Marcolini Marmi and her colleagues.

Stone Terroir



Sait Merve Kilicturgay, Sales & Marketing Director, Stone Terroir.

Based in Istanbul, Turkey, Stone Terroir specialises in the marble and travertine. The company has been established with a vision to present the “best of the stone” besides volume production. Its experienced team can quarry the right blocks and detect the best selections of stones in a selection process and produce tiles, slabs alongside with all decorative pieces.

For more information, visit www.stoneterroir.com.

Hup Kiong Private Limited



From left to right: Dereak, Sales Manager; Xin Yi, Sales & Marketing Executive; and Xin Yan, Sales & Marketing Executive of Hup Kiong Private Limited.

Hup Kiong Private Limited is a leading tile supplier in Singapore. With two showrooms in Defu Lane and Balestier the company is one of the largest building material suppliers in Singapore. The company participated in the International Stone, Marble and Ceramic Show 2015 to meet its customers and promote its products and services. “We exhibited in the show to create more awareness for our natural stones,” said Xin Yan, sales & marketing executive, Hup Kiong Private Limited.

For more information, visit www.hupkiong.com.

Domos

Domos, part of Marmobon Srl in Verona, Italy, is your one-stop partner for the entire project, from the measurement to the careful selection of the materials to the installation of the finished product and, if necessary, final polishing by specialised technicians.

Domos can realise a wide variety of projects with any type of stone or marble, thanks to the constant evolution of know how and technology, to the ambience of collaboration established with architects and designers and to the support of a technical staff and internal and external consultants.

“We specialise in all types of marbles, both natural marble and composite marble (man-made) for various projects and requirements of customers,” said Dott. Daniele Dal Corso of Marmobon Srl.

The company exports its marble stones to many countries in the world such as China, Turkey, India, Oman, Portugal and Vietnam. It has completed some projects in Indonesia such as residential, commercial and contract projects like hotels and resorts. It also has an office in Bali, called PT. Lorenz Marble, to provide support to projects in Indonesia and some parts of Southeast Asia.

For more information, visit www.marmobon.it.



From left to right: Gianluca Lorenzato, General Manager, PT. Lorenz Marble; Nurul Rayya, Sales Marketing, PT. Lorenz Marble and Dott. Daniele Dal Corso, Marmobon Srl.

Bluestone Consultancy

Established 14 years ago, Bluestone Consultancy specialises in marbles, limestones and travertines. The company has two quarries of its own and exclusivity agreements with three quarries located in different cities of Turkey.

Bluestone's main goal is to provide high quality products and services to its customer by consolidating its vast knowledge in natural stones with its international trade knowledge.

"We can provide cut-to-size material and blocks & slabs to projects all over the world from Turkey with quality inspection to make sure that the client gets the best quality products," said Yigit Egilmez, country manager PRC, Bluestone Consultancy.

Bluestone has a branch office in Xiamen, China and a representative office in Bangalore, India. "We opened an office in Xiamen so that it is easier for us to respond to our customers' needs in China. Our plan in the future to do business in Singapore and Southeast Asia market," added Yigit.

For more information, visit www.bsc-tr.com.



Yigit Egilmez, Country Manager PRC, Bluestone Consultancy

Mart Marble and Mining Ind. Tra. Ltd. Co.

Mart Marble and Mining Ind. Tra. Ltd. Co., based in Izmir, Turkey, specialises in the production and export of white and beige marble. The company sells marble blocks & slabs, cut to size tiles and custom made tiles to the domestic and overseas markets. Currently, the company exports to Europe, Portugal, Greece, Kazakhstan and Thailand. It also has its own stockyard where it buys and sells to China. "As a leading natural stones seller, we are proud to be part of this show. We came to promote our stones and hope to get some new contacts," said Ethem Duygulu, global marketing executive of Mart Marble and Mining.

For more information, visit www.martmermer.com.



Ethem Duygulu (right), Global Marketing Executive, Mart Marble and Mining Ind. Tra. Ltd. Co. and his colleague.

Ozerler Mermer

Ozerler Mermer is a quarry owner, manufacturer and installer of crystal beige marble. Based in Istanbul, Turkey, the company produces blocks, slabs, cut to size marble and exports it to China, Mozambique, Saudi Arabia, Libya and Georgia (near Turkey). Commenting on the company's participation at the stone fair, Hakan Ozer of Ozerler Mermer said that there was a lot of potential for trading in Asia and he hoped to find some opportunities at the show. "Singapore, Malaysia and Indonesia are huge markets and we hope to sell our products to these markets in the future if there are good opportunities," said Hakan.

For more information, visit www.ozerlermermer.com.



Hakan Ozer (right) of Ozerler Mermer and his colleague.

Yeditepe Dogaltas ve Maden San. Tic. Ltd, Sti

Yeditepe Doğaltaş ve Maden San. Tic. Ltd, Şti was founded in 2010 to produce block marble in Kabalbaba quarry in Mustafakemalpaşa county of Bursa. Since then, the company has expanded its business. In 2014, its processed/finished marble factory started production in Akçalar Industrial Zone. The factory, covering a total area of 17,000 square metres, is equipped with Italian technology SIMEC name brand 2 gang-saws with 80 blades, 30+45 slabs epoxy line, marble slab honing and polishing machine with 16 mandrels, bridge sawing machine with rotating head. The company also uses Turkish made pah kirma and slab surface burning machine for its production.

For more information, www.yeditepemaden.com.

Fahri Hacıoğlu (left), Founder and CEO, Yeditepe Dogaltas & Maden San. Tic. Ltd. Sti. and his colleague Arzu Hacıoğlu, Co-Founder.



Xiamen Stone Consulting Co Ltd

Xiamen Stone Consulting Co., Ltd, established by a professional stone team, aims to help and support stone and construction companies worldwide.

Since its establishment, Xiamen Stone has become one of the most reputable, reliable manufacturers and exporters of natural stone products in Fujian province, China.

The company can provide granite, marble, slate, limestone, blue stone, sandstone in slabs, tiles, cut to size projects, countertops, vanity tops, facade, flooring tiles, etc. Its products are used as flooring, wall-cladding, paving, interior and exterior decorating products for projects such as office buildings, hotels, educational, residential, commercial and industrial.

For more information, visit www.xmscc.com.



Eric Zhao, Export Manager, Xiamen Stone Consulting Co. Ltd.

Madhusudan Marbles Pvt. Ltd

Madhusudan Marbles Pvt. Ltd is one of the oldest and biggest quarries owners and processors of natural stones in a Southern Rajasthan belt of India at Makrana and Udaipur City.

Over the last 40 years, the company has enlarged its field of work from a regional to global player due to its commitment, entrepreneurship, faith and confidence.

The company specialises in more than 300 types of materials and exports its products to all over the world, including Singapore. It has a total of five factories in India. "We are one of the largest marble companies in India and we are expanding our presence worldwide. We are already exporting to Singapore and we hope to sell it to the end-users in the near future," said Ankit Porwal, export sales manager, Madhusudan Marbles Pvt. Ltd.

For more information, visit www.madhusudanimpex.com.



Ankit Porwal, Export Sales Manager, Madhusudan Marbles Pvt. Ltd.

DN Mermer ith. Ihr. Paz. San. Tic. Ltd. Sti.

DN Mermer is a family owned marble and travertine slab, tile and paver manufacturer in Turkey. With more than 30 years in business, the company has two factories with four ST machine, and two gangsaw; and 50,000 square metres production capacity per month.

In addition, DN Mermer is a quarry owner of beige travertine in Denizli. The company can supply block, slab, tile and paver. Vein cut or cross cut, rough, unfilled, honed, polished, tumbled, brushed/chiseled edge finishes are also available.

DN Mermer specialises in Burdur Beige marble. It has more than 20,000 square metres in stock, 2cm, 3cm polished slabs.

Besides selling to the domestic market, the company also exports a large percentage of its production output overseas. About 80-90 percent of the production is for the export market. DN Mermer has been exporting more than 40 countries worldwide, some of them are USA, Canada, Colombia, BAE, Australia, France, Spain, Australia, Singapore, etc. DN Mermer also has a big warehouse in Miami, USA. "Most of our business is with USA, Middle East and Far East. We want to grow our business in the Far East and therefore we have come to the show," said Omer Dede, export specialist, DN Mermer.

The company is looking at entering Singapore, Malaysia, Indonesia, and Philippines as part of its future expansion plans. "We want to go to Singapore, Indonesia and Malaysia because we have heard that natural stones is widely used in the projects there," he added.

For more information, visit www.dnmermer.com.tr.



Omer Dede, Export Specialist, DN Mermer ITH. IHR. PAZ. SAN. TIC. LTD. STI.

Adalya Marble

With five factories and seven quarries in Turkey, Adalya Marble has grown to become one of the biggest companies in the country. About 70 percent of its production output is exported to USA, Australia, Africa, Asia and Europe, while the rest is sold to the domestic market.

Its manufacturing facilities are equipped with the latest technology machinery. It has made both renovations in machinery and new machinery purchases by giving priority to investments in plants especially in the last two years and doubled its production capacity.

"We hope to increase the brand awareness of our marble products through this show," said Meric Guleryuz of Adalya Marble.

For more information, visit www.adalyamarble.com.



Meric Guleryuz of Adalya Marble.

LEVER HINGE LH-86 | GOOD CREDIT CORPORATION

Is it possible to use only “two lever hinges” for a door panel over 45 kilograms? This is what Good Credit Corporation (GCC) had been working on for the last few months and finally the company made it.

The new GCC lever hinge LH-86 passed SGS endurance test for over 200,000 cycles and the door panel’s weight is 60 kilograms with only “two lever hinges”. For the designer, the benefit is to give a better vision by less hardware. For the user, it is a safe and durable product.

The elegant design and great surface finish is good for office partition. With GCC hydraulic overhead door closer ODC-680 or ODC-730, you can create an auto-close single action door panel easily.

To keep the shower room floor dry is very important to the users. GCC has also designed another type LH-86W specially for the shower use. The LH-86W has a special design to stop the water with the PVC seal.

For more information, contact GCC at gcctw@ms7.hinet.net or visit www.gccintw.com.tw.



LH-86



LH-86W



DOOR CLOSERS AND ARCHITECTURE HARDWARE | SMART LION INDUSTRIAL CO LTD

Established in 1981, Smart Lion Industrial is a leading manufacturer of construction and building materials in Taiwan. The company's products include door handles, pneumatic door closer, hydraulic door closer, knob latches, push button latches, fence and gate hardware, door levers, etc. Custom ODM and OEM specifications products are also available. Most of the products are exported to all over the world, including west Europe, north America, south Asia, Australia, Oceania, Japan and so on.

The company has two factories in Yun-Lin Hsien and one office in Taichung. The division of the factories is separated into two parts, professional mass production of Smart Lion's product and Original Design Manufacturer (ODM/OEM/OBM).

Besides first-class R&D technology and Rationalization of production process, the company has its own QA system. Raw materials, machining such as zinc and aluminum die casting, press, drilling holes, grinding, vibrating and polishing or assembling procedures, are all passed through automatic inspections and various inspections by the company's QA Department.

Having been in the field of construction and building materials for more than 20 years, Smart Lion offers products with high quality and competitive prices. Due to its excellent quality, good management system and superior customer service, Smart Lion enjoys a long-lasting and good reputation in the hardware market.

For more information, visit www.smartlion.com.tw.



Collage of 'building' magazine covers with a central blue banner that reads 'Southeast Asia Building goes DIGITAL' and 'View us on http://issuu.com/southeastasiabuilding'.

CONCEALED SLIDING DOOR SYSTEM | SLIDE & HIDE SYSTEM (S) PTE LTD

SLIDEHIDE is a factory prefabricated 3-D steel casing that integrates with a self-supporting tracking system to hide or conceal a sliding door inside the wall, thereby giving you an illusion that there isn't any door. SLIDEHIDE is the perfect solution in overcoming a tight space room layout design.

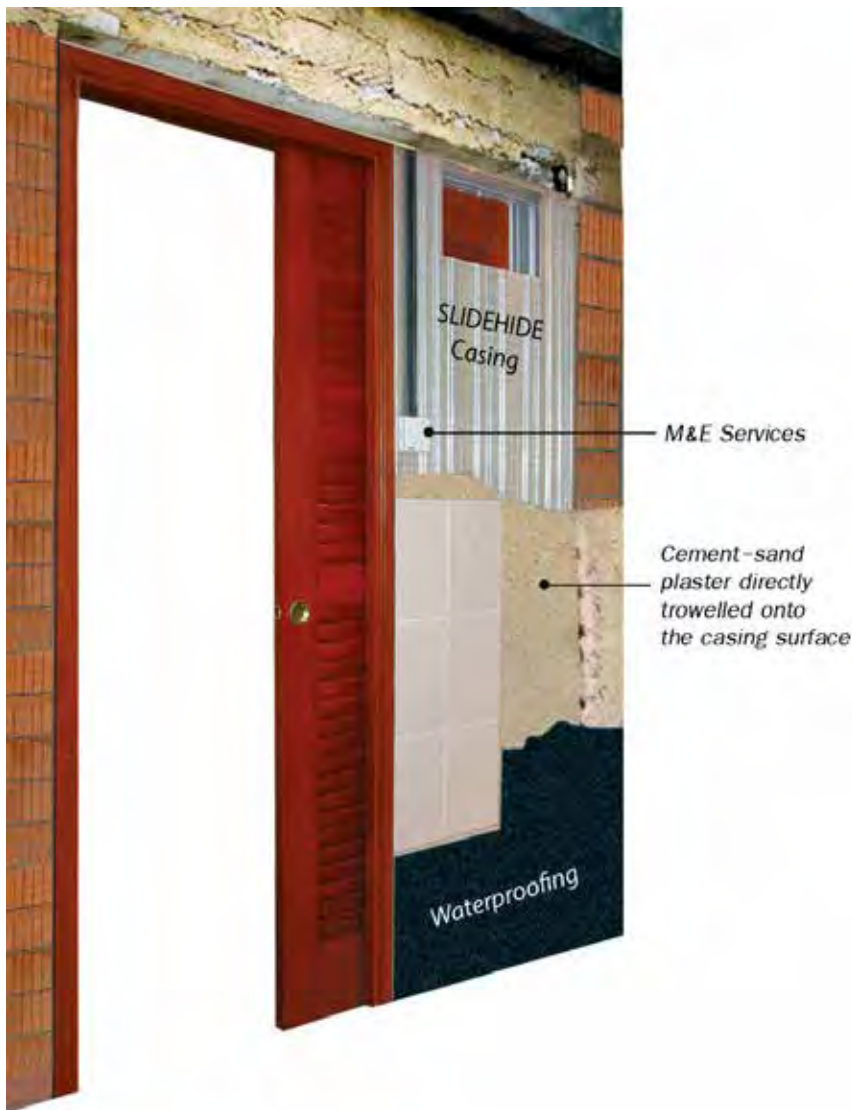
The patented 3-D casing is designed to replace a 100mm thick brickwall or a dry wall construction. Plastering, waterproofing material and wall tiles (if any) covering the adjacent wall will also cover the casing. Electrical switches/cables and water pipes can be fixed directly onto the casing surface and these fixtures can be embedded inside the finishes.

Designed and manufactured by a Singapore-based company since 1995, SLIDE & HIDE System (S) Pte Ltd is a leading manufacturer of SLIDEHIDE, a concealed sliding door system.

Over the years, the brand SLIDEHIDE had become well accepted by the real estate industry as a top-quality concealed sliding door system. SLIDEHIDE had been installed in Singapore, Malaysia, China, Japan, Dubai, Sri Lanka and other Asian countries.

SLIDE & HIDE System (S) Pte Ltd offers developers, architects and interior designers a wide range of SLIDEHIDE models to choose from for both wet and dry wall construction method, thus, allowing SLIDEHIDE to be widely used in applications ranging from bathroom, kitchen, walk-in wardrobe, lift lobby, etc.

With so many benefits and advantages, SLIDEHIDE offers a practical and affordable tight space solution for all residential, hotel and commercial projects.



SLIDEHIDE Applications



KITCHEN



BATHROOM



DINING ROOM



WALK-IN WARDROBE



BEDROOM

For more information, please contact the company at tel (+65) 6369 9988, fax (+65) 6369 9977 or email enquiry@slidehide.com.sg. You can also visit the website www.slidehide.com.sg.

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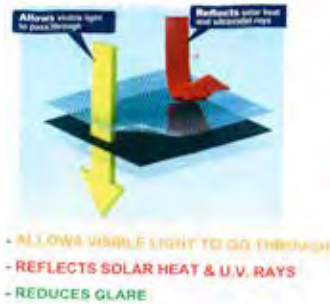
INFLECTOR® SEE THROUGH RADIANT BARRIER WINDOW INSULATOR TECHNOLOGY

IR ECOTECH SDN BHD

Although windows are necessary for light, ventilation, and a view, they are the most inefficient part of the building envelope and a primary cause of thermal discomfort in homes and buildings. A single pane window loses 20 times as much heat as the same area in an adjacent well insulated wall, and a double-glazed window loses 10 times as much. In reality, windows are thermal sink holes.

Control of solar gain and nighttime thermal heat loss is not only necessary in current highly glazed, poorly insulated buildings, but is critical in the design of new energy efficient residential and commercial green buildings.

The InFlector® See Through Radiant Barrier Window Insulator Technology gets right to the root of the problem. InFlector® See Through Radiant Barrier Window Insulator maintains interior comfort in the building by reflecting the transfer of heat back



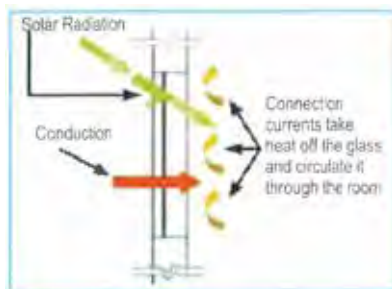
into the room before it can be lost through the window during winter, and reflects the heat back out through the window during the summer (acts as a heat mirror).

InFlector benefits

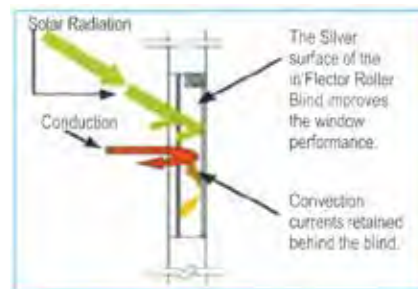
- Reduces energy costs up to 50 percent
- Contribute LEED points
- Makes unbearable work or living space bearable
- Reduces CO² output and carbon foot print
- Very durable with 25 year life span
- Full return on investment as little as 18 months (dependent on building envelope)
- Reduces the load on air-conditioning units as well as servicing needs / costs

InFlector prevents

- UV rays 92 percent
- Radiant heat 80 percent
- Solar heat gain 78 percent
- High energy bills



Normal window
(Graphic only – not to scale)
Unprotected window



InFlector® protected window
(Graphic only – not to scale)
InFlector protected window



InFlector® roller blind



InFlector® allows 50 percent of light to enter the room and also enable to see through and enjoy outside view.



InFlector® vertical blind to tall glass door and window.

For more information, contact IR Ecotech Sdn Bhd at any of its offices in Malaysia. Kuala Lumpur Office: Tel (+60) 3 8060 8653; Fax (+60) 3 8060 8654. Johor Bahru Office: Tel (+60) 7 241 3801; Fax: (+60) 7241 3811. You can also email the company at gen.enquiries@irecotech.com.my or visit www.irecotech.com.my for further details.

LIFT & SLIDE SYSTEM | GRETSCH-UNITAS GROUP



Photo: © Gretschi-Unitas

In 1958, Gretschi-Unitas claimed to become the first company to develop and launch a Lift & Slide system. This technical innovation shaped a market trend and set standards with regards to profile geometry, function and quality which still apply today.

With Gretschi-Unitas Lift & Slide hardware, the company offers a modular system allowing to fulfil the individual demands of end users with regard to safety, convenience and functionality which is suitable for timber, PVC, aluminium windows and balcony-doors. Simple, fast, safe is the name of the game when it comes to window fabrication. The fabricator-friendly design of the hardware components, the versatile range of installation accessories as well as the elaborate technical documentation enable products from Gretschi-Unitas to be installed easily and safely in no time.

All hardware variants have the following features:

- Outstanding smooth and quiet movement of sliding sashes operating with minimum effort
- High Performance and Heavy Duty Sash weight up to 300kg, and with tandem bogie up to 400kg, maximum of 600kg upon request
- Large sash leaf achieving heights up to 3250mm, 3750mm on request
- Barrier-free construction according to DIN 18040
- High burglar protection, tested to ENV1627 for burglar resistance class RC 2
- Cost effective
- Optional night vent module offers ventilation comfort

With upcoming innovation and design, Gretschi-Unitas is in a position to pursue completely new paths and to meet all market requirements. The Lift & Slide hardware is available in Singapore through Gretschi-Unitas (Singapore) Pte Ltd.

For more information, visit www.g-u.com.sg.

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TRANSLUCENT ROOFING | PLAZIT-POLYGAL

Plazit-Polygal, a producer of polycarbonate building materials, has launched Topgal, a modular range of translucent roofing material, which is attractive, economic, flexible and easy to install.

Suitable for any building, which requires natural light, the Topgal range can be used everywhere, from sports stadiums and commercial buildings to domestic structures such as pool enclosures.

Produced in five different colours; clear, bronze, ice, blue and polyshade silver, delivering different levels of light transmission, the Topgal sheets come in a variety of sizes and thicknesses to meet the most demanding of needs.

Durable and weather resistant, the system, which consists of the panels and a number of connectors, edge protectors and fasteners, can be installed with nothing more complicated than a screw driver.

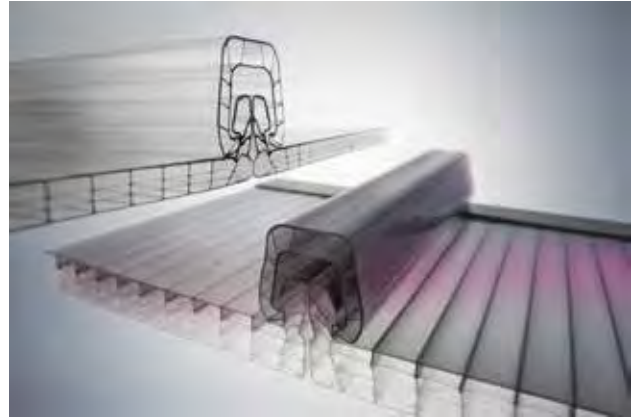
Topgal panels are linked together with easy to fit connectors which create a mechanical lock between the sheets ensuring strength and making the panels watertight. Fixture points are hidden and the sheets can be flexed to suit any type of structure.

"The Topgal system is translucent but all damaging UV rays are filtered out while heat transference is limited," said Tito Asher. "It is modular so units can be added as needed," added Tito.

The Topgal standing-seam panels and components integrate the unique properties of multi wall structure to deliver superior strength, rigidity and thermal insulation.

Topgal sheets are manufactured in 600mm and 1000mm widths (center to center) and in thicknesses from 8mm to 20mm. In addition to the standard colours, Plazit-Polygal can tailor special colours and solar radiation levels.

For more information: www.plazit-polygal.com.



Close up view of Topgal. Photo: © Polygal



Ecoplaza mall in Mosquera, Columbia. Photo: © Polygal

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CROSS LAMINATED TIMBER | STRUCTURLAM PRODUCTS LP

Cross Laminated Timber (CLT) has been manufactured in Europe for over a decade. CLT is a revolutionary building system that substitutes for concrete, masonry and steel in some applications. Made with precision planed 2x6 dimension lumber, layers are stacked at 90 degrees to the layer below. CLT panels can be used for floors, ceilings, or walls. At Structurlam, the company manufactures a line of Cross Laminated Timber called CrossLam. CrossLam panels come with 3, 5, 7, or 9 layer configurations and up to 10' wide by 40' long. CrossLam™ provides load distribution and dimensional stability in all directions.

CrossLam is versatile and integrates well with other construction materials. Its sophisticated European style makes it suitable for exposed applications. Architects are able to design using maximum cantilever to achieve open concept spaces. CLT Panels are manufactured and then shipped to the construction site. Less skilled labour is needed and construction times are significantly decreased.

With its cross-layered construction, reduced carbon footprint, formaldehyde free adhesive and ready to assemble system, CrossLam™ is the green choice for schools, health care facilities, public buildings, commercial buildings, and multi-family housing.

The environmental benefits of CrossLam™ speak for themselves. Because CrossLam™ is made of wood, it possesses a number of inherent positive environmental characteristics common to all wood products. According to life cycle assessment studies, these benefits include carbon storage, lower greenhouse gas emissions during the manufacturing process, and an overall lighter environmental footprint than non-wood materials.

CrossLam has many features and benefits that other structural materials just don't have:

- Carbon sequestration ensures reduced greenhouse gas emissions. Simply better for the planet.
- Precision cut in the factory means rapid install, no waste, and fewer skilled workers required.
- Aesthetically appealing; no additional finishing material required.
- Spans both directions; fewer intermediate beams required and cantilever options.
- Six times lighter than concrete makes for a lighter building overall.
- Engineered Cross Laminations provide dimensional stability.

For more information, visit www.structurlam.com.

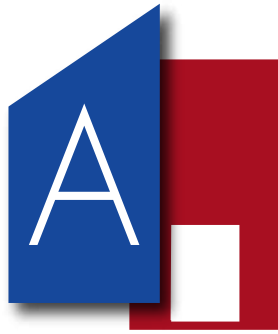


Wood Innovation and Design Centre in Prince George BC – the tallest wood building in North America.



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Fast Facts

- Minimum 7% GDP growth expected for the next few years.
- Political and social stability good for business investment.
- Overall supply in Phnom Penh expected to rise by 534% by end of 2018, driven by large-scale projects under Overseas Cambodia Investment Corporation's development.
- Condominium market in Phnom Penh continued to expand, claimed by CBRE in December 2014. Consequently investors enjoy capital gains of up to 30% from early off-plan purchase.
- Building materials, architecture, interior & decor ranked among top demand of construction driven by rapid urbanization.

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PIPING SYSTEMS | RAKTHERM

RAKtherm aims to be a leading international brand with global market acceptance.



RAKtherm's exceptional outstanding quality pipes emerge rapidly since it started and consistently increases its market share in the piping industry. When the construction industry flourished, a strong demand for building materials arose and this called for production of RAKtherm piping systems. Since then, RAKtherm drives for consistent growth to fulfil construction demands implementing new technologies and continuous innovation.

RAKtherm's brand ethic is based on approach that focuses on identifying new technologies to support the growing requirements of the global piping market. RAKtherm's intelligent piping solutions are positioned to showcase its proven brand credibility that will resolve any new plumbing challenges.

Having technical acumen and market knowledge, the company has successfully saturated over the greater areas and entire territories of Asia, Africa, Europe, and GCC, marking a significant increase of market volume in a span of eight months this year, from newly signed distribution contracts for export as a direct result of worldwide market demand. The company's venture with these new markets is its strategic move for further market saturation affirming global utilisation of RAKtherm, a German certified brand tested and conformed by DVGW, SKZ, HY, and TUV.

RAKtherm has a formidable market presence and extensive export distribution covering over several countries across the global piping market for its outstanding product portfolio of proven brand. Nevertheless, RAKtherm is a leading international brand with global market acceptance.

RAKtherm manufactures one of the world's most versatile and comprehensive piping systems combining technology and the in-house engineering team's expertise for performance-driven products that efficiently perform for over 50 years, and has supported numerous projects spread across over 35 countries worldwide. RAKtherm's PPR, PEX, REINFORCED, and anti-UV piping systems claims to deliver one of the most advanced piping technologies proven to be chemically stable, non-corrosive, extremely tough and durable and highly resilient even at the most extreme conditions.

For more information, contact RAKtherm at tel (+971) 7 244 7128, fax (+971) 7 244 7129, email sales@raktherm.com or visit www.raktherm.com.

CUSTOMIZABLE LIGHTING SYSTEM | TILE+LIGHT

Kano Ceramic Co Ltd, a Japanese ceramic tile manufacturer, has developed Tile+Light, a customisable lighting system that allows the user to create desired patterns on tiled walls and ceilings.

Kano Ceramic has produced Tile+Light in collaboration with Japanese Product Design company Carozzeria Cawai Corp. and Korean product designer Hyomi Kim, Kano Ceramic Co Ltd.

Tile+Light is a series of four differently configured light fittings. Their modular configurations enable the user to arrange them in relation to particular environment or according to the user's preference without exposed cables or difficult wiring.

Tile+Light is claimed to be excellent as a decorative feature in public spaces such as parks or pools. They serve as a guide light for corridors and exits, rooms, stairways, showrooms and public spaces.

LEDs (Light emitting diodes) have long life and low power consumption. They also have a wide range of applications to fit your desired designs. Due to less heat generation and ultra violet radiation, they protect artwork, artifacts and fabrics from damage.



Meanwhile, ceramic tiles have a decorative effect along with wall protection.

This combination of LED and tile may be created into something new, functional, artistic and unique.

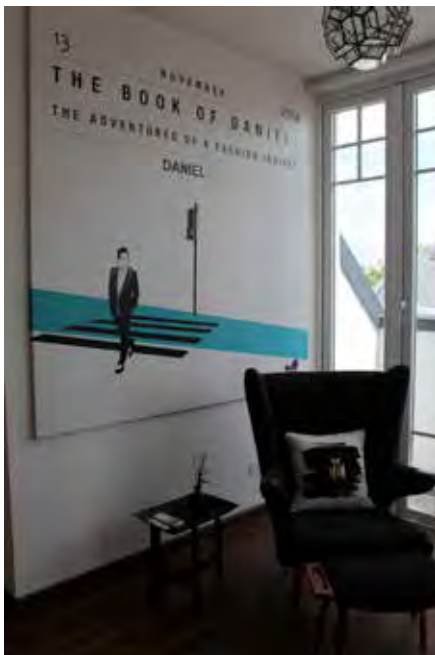
Kano Ceramic tile is the manufacturer of glazed tiles, having a history over 50 years and specialised in manufacturing exterior and interior tiles. Kano has acquired the know-how to manufacture many custom-made items since its establishment.

Due to the traditional and brand-new skills of craftsman, they meet diversified needs. Developing new tiles and exploring new markets is the company's mission and it will always try to come up with creative ideas about the future of ceramic tiles.

For more information, visit www.tilelighting.com.



CUSTOMISED DIGITAL PRINTED WALLCOVERINGS | GOODRICH GLOBAL



Customised Digital Printed Wallcovering for Celebrity client, Daniel Boey, by Goodrich Global.



Customised Digital Printed Wallcovering at MBS, Fuse Bar, Singapore by Goodrich Global.

Goodrich Global's custom digital printed wallcoverings are helping home and business owners add a personal touch to any room.

Digital printed wallcoverings inject new life into spaces by allowing the owner the freedom to transfer a treasured photo of their choice onto any wall whether residential or commercial, and thanks to UV printing technique, which can be applied over the ink printed wallpaper, digital prints can last up to seven years in an indoor environment, and three if exposed to direct sunlight.

UV printing includes uses of non-volatile organic compounds. They have a faster drying time, and sharper images that are more durable to scratches.

The process starts with a good quality high resolution digital photo or digital art. This could be a family portrait, personal photo, mural, cityscape, map, pattern, illustration, or precious memory captured on your own digital camera. When buying a digital photo, buy the highest resolution available then send your image and the size of your wall to Goodrich.

Subject to availability of materials, and upon confirmation of both the order and artwork, feature wall sizes can be completed within two weeks. All images must be of at least 500dpi (dots-per-inch). Suitable file types include TIFF, JPEG, PSD, AI or Vector.

For more information, visit www.goodrichglobal.com.sg.

HSW EASY SAFE HORIZONTAL SLIDING WALL | DORMA

HSW EASY Safe Horizontal Sliding Wall from DORMA securely holds even laminated safety glass, thanks to the company's proven Clamp & Glue technology.

Creative scope and lasting security

Functionality, design, safety and security count for a lot in the modern office. The HSW EASY Safe horizontal sliding wall meets these requirements in full:

- DORMA's innovative Clamp & Glue adhesive bonding technology means that, for the first time, laminated glass with all its safety advantages can be incorporated by simply clamping and bonding the door rail to the glass surface.
- Functional intermediate films within the LSG transform the sliding wall into a creative element, raising the standard in terms of both design and functionality.



Integral intelligence for more convenience and clarity

The top door locking device offers a colour code to indicate the status of the sliding / pivoting panel. Users can see at a glance which mode is activated, thus enhancing system safety.

Triple simplicity with clear advantages

The new multilock system combines three locking options in one compact unit: a front-face lock, an end face lock and a cylinder lock. The multi-lock assembly quickly and easily snaps into the bottom glazing rail.

Effortless and reliable planning and operation

These horizontal LSG sliding walls offer not only simplicity and enhanced safety but also planning and reliability, thanks to DORMA's EasyKIT, a modular construction system of standardised components. This enables the desired HSW solution to be implemented with eminent ease, not only facilitating easy configuration and efficient insulation but also reducing delivery times worldwide.



Hassle-free installation thanks to DORMA's new Clamp & Glue technology.



Lock status display for at-a-glance indication of the activated mode.



The three-in-one multilock assembly offers a new dimension in simplicity.

For more information, email cheecong.chan@dorma.com or visit www.dorma.com.sg.

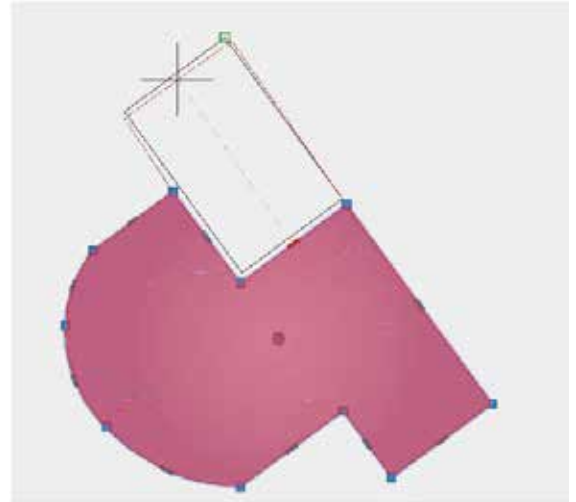
ZWCAD 2017 | ZWSOFT

ZWSOFT, an innovative supplier of CAD solutions to the AEC and MCAD industries, has announced that the ZWCAD 2017 will be released soon.

The ZWCAD 2017 offers users the most uniquely immersive experience with Advanced Grips, improved rendering effect and 64-bit and multi-platform compatibility – ground-breaking features empower workforce in a way users have never imagined.

Advanced Grips

ZWSOFT believes that they can do better in grip mode, and they have pushed every aspect of what's possible with ZWCAD to new heights, the outcome – Advanced Grips, it is more than just a grip mode. Users can reshape, move, or manipulate objects on ZWCAD 2017 in the fastest way, tailoring their ideas exactly into something they expect.



Rendering

For users to bring designs into life for the world to see, ZWSOFT has introduced Divew for the first time for users to view their 3D models in different perspectives. And ZWSOFT's imagination doesn't have an end point, in this new version, users can directly add materials and light to their models, fully realizing their visions into ultimate details.

64-bit and multi-platform

ZWCAD is built for performance. And ZWSOFT decides that ZWCAD 2017 should be considerate and efficiency-oriented for users. The upcoming ZWCAD 2017 runs on 64-bit computers in three different systems – Windows, Linux and Mac OS – a feature addresses various needs of users.



ZWSOFT has been devoted to innovative and better CAD products for over a decade, and this time, users are going to see ZWCAD 2017 in a whole new way, just be ready and embrace it the day it comes. And please stay tuned and see what ZWSOFT can further amaze you with.

For more information, contact ZWSOFT at tel (+86) 20 3828 9780, email prcontact@zwcad.com or visit www.zwsoft.com.

SILICONE RESIN EMULSION | WACKER

Munich-based chemicals group WACKER has now developed a silicone resin emulsion that provides wood with significantly longer-lasting protection against wet than conventional treatments. This has been made possible by novel silicone resins that are not only water repellent and breathable, but also flexible enough to withstand the swelling and shrinking of the wood. Called SILRES® WH, this functional silicone resin has been specifically developed for formulating wood preservatives. In line with the current trend to use waterborne products in wood protection, the product is designed to be a water-based, 50-percent emulsion.

Product features

Fewer fungicides – SILRES® WH can protect wood against attack by rot, fungi and insects and goes a long way to preserving the appearance of the wood. This is an attractive proposition for manufacturers and users alike, not only in ecological and toxicological respects, but also from an economical point of view.

Weatherability – Weatherability is the most important criterion by which the quality of water repellents for wood can be judged and the SILRES® WH offers long-lasting water repellency, as laboratory tests show.

Capillary water absorption – Capillary water absorption is usually determined in the floating test. Adapted from ASTM D 5401-03, this consists in placing each side of an untreated sample and of impregnated wooden boards, which have been exposed to UV light for different lengths of time, in water for 15 minutes at a time and then weighing them. The weight gain indicates the amount of water absorbed by the substrate. Even after 4,000 hours of irradiation with UV-B light – the equivalent of several years' open-air exposure – the silicone resin emulsion still affords outstanding protection.



Weathering test: these boards were left outdoors for 17 years. The surface of the untreated board (left) is now so porous that water penetrates it immediately. On the board beside it, on the other hand, the water rolls off in beads. The boards treated with SILRES® WH are still protected by the silicone resin's water repellency. Photo: Wacker Chemie AG



Passing the weathering test: even after 17 years of outdoor weathering, wood treated with the silicone resin is still water repellent. This affords a way of reliably protecting wood against moisture and wet for many years. Photo: Wacker Chemie AG

Long-term testing – Tests show that wood treated with a pigmented coating which has been modified with SILRES® WH enjoys very good protection against the consequences of direct sunlight.



The water repellency of SILRES® WH is still intact, even after 2,000 hours of artificial weathering. The wooden board on the right, which has been impregnated with the silicone resin, is just as protected as before: the water forms beads that roll off. This is not the case with the untreated board (left): the water spreads on the surface and penetrates into the wood. Photo: Wacker Chemie AG



Spruce boards after 1,000 hours of exposure to UV-B light. The board on the right was treated with a wood stain containing SILRES® WH. The wood stain exhibits pronounced water repellency, which causes the water to form beads on the surface that roll off. Photo: Wacker Chemie AG

Additives for wood stains

Wood stains contain much more binder than conventional exterior paints. Accordingly, they produce a water-repellent film when they dry. A good wood stain, that is, one with a high binder content, is characterised by low water absorption. Since the wood cannot swell or shrink as much, stains also boost dimensional stability. Unfortunately, their weatherability is often unsatisfactory. They show signs of cracking or even start to flake off after just one year's outdoor weathering. When that happens, the wood absorbs a great deal more water. This provides a great opportunity for the silicone additive. Even a small admixture is enough to influence the film properties and ensure that the paint

or stain is permanently water repellent. There are tests to show how the durability of a high-quality wood stain benefits from the addition of SILRES® WH.

In conclusion, SILRES® WH is a silicone resin emulsion that is flexible and elastic enough to reliably adhere to wood and thus protect it against water and moisture for many years.

WACKER first presented the SILRES® WH at the European Coatings Show 2015. The product is now available in Singapore from Wacker Chemicals (South Asia) Pte Ltd. For more information, tel (+65) 65426638, fax (+65) 65426632, email info.singapore@wacker.com or visit www.wacker.com.



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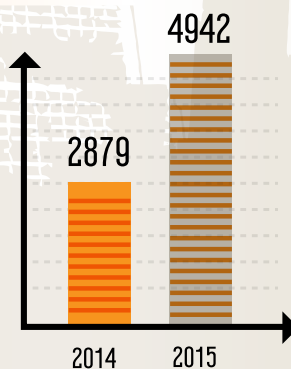
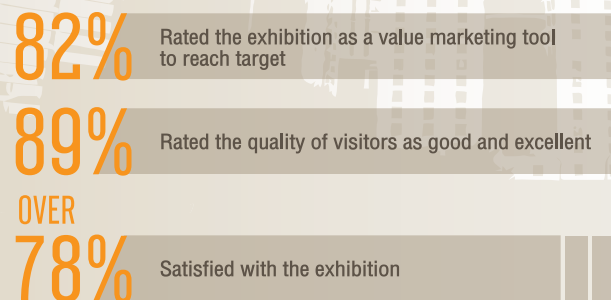


Fast Facts

- FDI projection was US\$ 5 Billion for 2014-2015 but was easily surpassed to US\$8.1 Billion.
- Estimated population of around 60 million offers huge potential market for import.
- Yangon, 7.3 million estimated population, ranked as one of Asia's top 5 emerging investment spots by Asia Property Report.
- Myanmar's construction forecasted to reach US\$6.6 Billion by 2018, with over 8% annual growth rate for the next 5 years.

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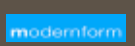
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The September/October 2016 issue of Southeast Asia Building

is dedicated to sustainable architecture, green building technology and eco-friendly building products. And we are looking for article contributions from you! If you wish to submit your project or product story for our consideration in this issue, you can write to the editor at seab@tradelinkmedia.com.sg

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