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SOUTHEAST ASIA BUILDING

November / December 2020

Courtyard in The Rajasthan School

Ras Village, Rajasthan, India

PROJECTS Educational Buildings
TRENDS Windows, Doors & Building Profiles
ARCHITECT'S CORNER Interviews on Workplace Design Post Covid-19

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Dear readers, hope all of you are keeping safe. The pandemic is not over yet, but many countries are easing their coronavirus lockdown restrictions. Bars, restaurants cinemas and businesses are slowly reopening after months with precautions and social distancing measures in place.

Employees are also coming back to their offices and expect that their companies have a safe working environment for them. In this issue, architects and interior designers tell us how workplace designs will change post Covid-19 and what changes they can expect now.

In the Projects section, we feature a wide range of educational buildings, which aim to showcase that design can be functional as well as aesthetics. Architects discuss how design can have an impact on the way students learn and play. Some of the new designs include open spaces, greenery, natural/recycled building materials and sustainable strategies.

We hope you enjoy reading the last issue of 2020. Next year, we will be back with more trending topics in the industry. Take care and see you again soon.

Amita Natverlal

NEXT ISSUE THEMES

- Projects – Conservation and Restoration
- Trends – Digital Architecture
- M.E.P. Systems (Refer to Media Kit)
- Products – Paints & Coatings (Advertorial)

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Society of Interior Designers (Singapore)

The Hong Kong Institute of Architects

Vietnam Green Building Council

Green Institute Nepal

Interior Designers Association of Nepal

Singapore Institute of Building Limited

Society of British and International Interior Design

Bidadari Alkaff Crescent gets nature-themed playground based on cloud, mountain, sea and wetland elements

Singapore – Playpoint (Singapore) Pte Ltd has completed a new nature-themed playground for Bidadari Estate based on four natural elements: cloud, mountain, sea and wetland.

Within Singapore's diverse population, one of the key institutions that bind people together, is communal living in HDB communities. A major aspect of that includes shared spaces within these housing enclaves, like void decks and playgrounds, where residents of all ages converge.

The Bidadari Estate is a fairly new development and is rising in popularity among young families. Playpoint figured it would only be fitting to build new playgrounds in the estate, which would strengthen communities ties, give the estate its own identity, and give children an exciting play experience.

This playground project spans across three levels of a large development, and creating a unique identity for the site while giving each playground a distinct and unique theme is challenging. Being an ambitious company, Playpoint wanted a design that is woven between Nature and Bidadari geographical location. This design draws on the embodiment of different realms of nature with elements that are unique to each level as well as each space. Distilling down the latitudes in nature, Playpoint reinvented environments of water, mountains, clouds into play spaces.

Let's reinterpret and appreciate Nature

Inspired by what was once the old Alkaff Lake Gardens, on the lowest level is a water-themed playground. In line with the water theme, this playground features a gigantic wave structure that captures your attention the moment your gaze lands in that direction. This playground includes wave-like mounds that children can run atop, jump on, and slide down, almost like they are playing in water. There is also a hammock forest for resting and a big trampoline that can make children feel like they are floating. The bright blue hues of this playground, gives the surrounding areas a calming, yet inviting, view, and will complement the new Alkaff Lake which is currently underway.

Similar to the sea-themed playground, the wetland playground draws inspiration from the rich nature surrounding the Bidadari estate. The wetland-themed playground sits at the middle level, and has a water lily flower structure forming the main visual piece. The striking water lily flower also forms a maze-like structure that children can run around. This playground includes multiple 'lily' platforms for children to run around, a trampoline, balance ropes, a spinning disk, and a toddler slide. The vivid green of the water lilies and contrasting hot pink of the flower offer a stunning visual sight, even to passers-by and adults supervising children.

Located at the top level are the mountain- and cloud-themed playgrounds, which correspond to the different layers of nature, and provide a different play experience from the two playgrounds at the lower levels. The mountain-themed play area provides a hilly terrain for children to climb and run around. It includes climbing ropes, a mountain slide, a crawling tube maze, spinning disks and a big trampoline. Children can role-play as hikers and mountaineers on this playground as they traverse the hills. While the other playgrounds have more vibrant, outstanding colours, the earthy colour scheme of the mountain-themed playground blends it in and seamlessly integrates it into its natural surroundings.

The last play area is a cloud-themed playground with a huge cloud centrepiece that will definitely not miss your eye. The lighter colour scheme and round arches transform this play area into a bright and visually soothing sky. Inside this gigantic structure, you will also find little bowls for lounging and spinning, a tube slide, and climbing ridges. To layered in more excitement, monkey bars and swings are added for the Drop!

These different play areas offer a variety of play options to children, which is sure to make every play session fun and different. Due to the differentiated spaces, this overall playground plan also minimises congestion at any one play area, and there is more than enough space for children to run around and share facilities. The overarching theme of the playgrounds is a reflection of the abundant nature of the Bidadari Estate, and a nod to the up and coming Alkaff Lake and Bidadari Park.

Wetland theme. Photo: © Playpoint

Cloud theme. Photo: © Playpoint

Mountain theme. Photo: © Playpoint

Sea theme. Photo: © Playpoint

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Singapore's Town Councils take on Eco-Office Plus Challenge

Singapore – Tampines Town Council (TTC) is currently spearheading initiatives to engage residents as part of its push toward being an Eco-Town. As one of the initiatives, TTC has already taken the lead to get its office certified under Eco-Office Plus, an eco-certification administered by the Singapore Environment Council (SEC) that assesses green practices at the workplace.

Led by Dr Teo Ho Pin, former Coordinating Chairman of PAP Town Councils, TTC is the first town council to lead this Eco-Town initiative. As part of this initiative, TTC has already attained the Elite Tier, the highest of four categories under the Eco-Office Plus certification. It will also be leading a drive to get other town councils certified under Eco-Office Plus.

The Eco-Office Plus certification benefits town councils by providing clear guidance in increasing eco-consciousness amongst staff, the key foundation of any long-term green initiative. The certification features a tier system introduced in December 2018 that helps organisations improve over time, and to recognise their efforts and achievements. Ms. Cheng Li Hui, Chairman of Tampines Town Council said, "The Eco-Office Plus certification has helped empower us to take the lead in promoting environmental habits through the smallest of behavioural changes in our daily habits."

Ms. Jen Teo, Executive Director, Singapore Environment Council said, "Employee mindset and everyday practices hold the key as people lie at the heart of this shift towards a more sustainable workplace and future. This reflects our overall GreenDNA philosophy at SEC that every small change we do can have a great impact on action against climate change."

Getting the Eco-Office Plus certification and leading the push for the other town councils to getting certified is just one of the many initiatives that TTC has put into place. TTC has already been engaging its residents and grassroots with sustainability initiatives prior to their announcement as an Eco-Town during the Committee of Supply 2020.

Some of these initiatives include the composting of food waste to encourage residents to plant some food crops of their own, as well as reverse vending machines to facilitate recycling. These initiatives have seen high levels of residential engagement. TTC has also been actively going on trips to learn about sustainability initiatives at places such as Hort Park and Jurong Lake Park. TTC is also in talks with the Ministry of Sustainability and Environment (formerly the Ministry of the Environment and Water Resources) – in partnership with Singapore Power and Temasek – for the installation of smart electricity meters and "Eco-Boards" at HDB blocks. These new facilities enable residents to track usage of utilities such as electricity and water in the block, as well as organise block-wide competitions to conserve resources.

Artist's impression of vertical gardening. Photo: © Tampines Town Council

Dr Teo, former Coordinating Chairman of PAP Town Councils, said, "These efforts are small building blocks in transforming Singapore into a green society. We are excited to roll out these initiatives around Tampines as well as the rest of Singapore to encourage residents to work together and build a society for future generations of Singaporeans to live, work, and play in."

Nippon Koei and Surbana Jurong partner to design sustainable and resilient urban development in Asia

Singapore – Nippon Koei, an international engineering consultant and Surbana Jurong, a global multidisciplinary urban and infrastructure design consultancy, have signed a Memorandum of Understanding (MOU), committing to deliver sustainable and resilient solutions to urban and infrastructure development projects worldwide. This is part of the firms' joint action on climate change mitigation and resiliency.

Under the MOU, Nippon Koei and Surbana Jurong will harness their combined knowledge and experience in climate change adaptation, resilience enhancement and smart technologies to deliver these solutions.

New Clark City in the Philippines. Photo: © AECOM

Each partner will bring complementary expertise to this collaboration. Nippon Koei has proven capabilities in disaster preparedness in Japan and government-funded projects in other countries including Official Development Assistance for world-class engineering design projects. Surbana Jurong, on the other hand, has a track record in delivering innovative and smart solutions for sustainability and resiliency in master planning, urban, residential and industrial development, coastal protection and reclamation around the world.

Both consulting firms have been collaborating on sustainability and resiliency since 2018. A notable project is the 9,460-hectare New Clark City in the Philippines. Slated for completion in 2065, it will be the country's first smart, green and disaster-resilient metropolis. Building on strong ties, Nippon Koei and Surbana Jurong will identify sustainable project opportunities globally, especially in Asia where public-private partnerships can encourage the adoption of smart technologies to scale up urban initiatives and solutions. This approach will contribute towards the shared vision of building sustainable and liveable cities.

Ken Wai, Aedas Global Design Principal, elected as RIBA Council member – Asia and Australasia

Hong Kong – The Royal Institute of British Architects (RIBA) has announced the results of its 2020 RIBA Council campaign on 11 August 2020. Honorary Chair of RIBA China Chapter and Aedas Global Design Principal Ken Wai has been elected as RIBA Council member – Asia and Australasia. His term starts on 1 September 2020.

Ken Wai. Photo: © Aedas

Composed of 49 members, 4 seats are allocated to International representatives. Each representative is responsible for collecting insight from the architects' profession and to guide the strategic direction of the organisation.

"RIBA is undergoing a massive transformation with a new governance structure. This development provides members in Asia & Australasia a once in a century opportunity to embrace this change and vote for a new frontier. What the pandemic has taught us is to connect on a global level, collaborating, and not exist in silos. It is not about one country but everyone from New Zealand to ASEAN to South Asia to North Asia. Connecting Universities and students, bringing all, together to celebrate architecture and design excellence. Showcase in learning, thought leadership, global professional standards, and ethics of the RIBA through a collective voice," said Ken Wai.

100 businesses, organisations and governments from across the globe commit to net zero carbon buildings

London, UK – The World Green Building Council (WorldGBC) announced that five world-leading companies joined the Net Zero Carbon Buildings Commitment (the Commitment). These new additions bring the total number of signatories to 100, which is a doubling of participation in the programme in just over one year.

Since inception, businesses and organisations signed up to the Commitment now cover nearly 6,000 assets, over 32 million square metres total floor area and $100 billion USD in annual turnover. By 2030, this means that the operational portfolio emissions of these Commitment signatories will be at net zero, affecting approximately 3.4 million tonnes of CO2 (tCO2e).

With the rapid growth and willingness to advance the net zero movement from private sector, WorldGBC calls for governments to #ActOnClimate as part of the 11th annual World Green Building Week event, happening 21 to 25 September 2020.

This steep rise signals a shift in momentum, ambition and leadership towards decarbonising the built environment as a way to combat the climate crisis.

These signatories range from small and medium enterprises to large, multi-national corporations, and span engineering, design and consultancy services to real estate owners and manufacturing. Their participation in the Commitment demonstrates that leadership towards net zero carbon buildings can be taken by any type of organisation across the world.

"Achieving this milestone, in less than two years since the launch, demonstrates the growing importance of net zero carbon buildings to governments, businesses and mayors," said Cristina Gamboa, CEO, World Green Building Council. "As countries look to recover from the economic impacts of COVID-19, there is an opportunity for net zero buildings to provide benefits for people, the planet and economies. By positioning net zero carbon buildings at the core of these recovery efforts, governments and policymakers can harness the incredible potential of net zero buildings to build back better and enable a green recovery," she added.

Cristina Gamboa. Photo: © World Green Building Council

The new companies and organisations are committed to ensuring that all assets they own, occupy and/or develop under their direct control will operate at net zero carbon by 2030, or earlier.

The Commitment is unique in positioning energy efficiency as a central component to achieving decarbonisation across global portfolios, in addition to generating and procuring renewable energy to meet reduced energy demand. This represents the most cost-effective, best-practice approach to ensuring buildings are fit for purpose, future-proofed against climate impacts, and able to provide healthy and comfortable environments.

The new corporate signatories to the Commitment are: Mott MacDonald, QIC Global Real Estate (QIC), United Metal Coating LLC, Bioconstrucción y Energía Alternativa, and Tritax Big Box.

World Architecture Festival goes virtual in December, returning as live event in June 2021

London, UK – WAFVirtual will be launched from 30 November – 4 December 2020, where the worldwide architectural community can engage in a week of live content, special prizes, talks, panel discussions and networking opportunities with peers and our WAF partners. Registration will be free for architects and design professionals.

Headline speakers will include Sir Peter Cook, Jeanne Gang of Studio Gang and Ben van Berkel of UNStudio. A series of talks will discuss pressing international topics including living with pandemics and winning new business in a post-Covid world, as well as looking at the very latest developments in product design, technical innovation, and emerging architects.

There will also be coverage of special prizes including the WAF/ PechaKucha 'Isolation Transformed' competition, The Architecture Drawing Prize, and the GROHE Water Research Prize, entry

details below.

In addition, the first edition of WAF China will take place at the end of November, including online awards judging, talks, and a live ceremony in Chengdu. More details soon to be announced.

Due to the global impact of the Coronavirus pandemic, World Architecture Festival and INSIDE World Festival of Interiors will now take place from 23 to 25 June 2021, remaining at the FIL exhibition centre in Lisbon. The festival will continue to include live judging, keynote talks, fringe events, exhibitions, and award presentations.

The WAF awards entry deadline will be extended to 8 January 2021; all completed buildings up to that date may be entered, as well as future projects, interiors, and landscape designs.

Commenting on the updated programme, WAF and INSIDE Programme Director Paul Finch commented: "We have been closely monitoring the ongoing pandemic situation, and, with safety being our number one priority, have concluded that postponement of the physical festival from the original December date is the best course of action for all concerned. We are turning the challenge of postponement into opportunities to provide additional online content and to expand the WAF brand in China. We look forward to being able to meet in happier and safer circumstances next June, and thank our partners, supporters, award entrants, speakers and judges for their ongoing support."

For more details on World Architecture Festival 2021 or to register free for WAFVirtual in December 2020, visit www.worldarchitecturefestival.com.

Logo: © World Architecture Festival

ZAS unveils design for University of Toronto's new Learning Landscape

Toronto, Ontario, Canada – ZAS Architects, in collaboration with Denmark-based CEBRA Architecture, has unveiled the design for a new student-centred learning and support hub at the University of Toronto Scarborough Campus (UTSC). The new facility – Instructional Centre Phase 2 (IC-2) – is a dynamic learning landscape that promotes agile and asynchronous education through a complex arrangement of rooms and open public spaces spanning multiple floors.

"We envisioned a truly flexible environment that broke down traditional pedagogies and instead, encouraged a fluid learning experience unconfined by the walls of the classroom," said Paul Stevens, Founder, and Senior Principal at ZAS Architects. "Peer-to-peer learning is emulated in all aspects of the design."

Artificially-created terrain spills from the outside in, creating a hybrid of social and study areas that stimulate and support vibrant campus life. Students have access to a multitude of flexible, technology-enabled spaces, including 21 classrooms of various sizes and configurations ranging from a 500-seat auditorium to smaller 24-seat active learning environments.

UTSC exterior back side night view. Rendering: © ZAS in collaboration with CEBRA.

The framed grid that forms the building's facade creates a design that combines various volumes, scales, surfaces and spatial qualities. Inspired by the form of Printer's Tray predominantly used during the 19th Century, the building's four distinct facades mirror the tray's compartments and represent the diversity of spaces and educational environments within.

NEXT architects combines Chinese and Dutch cultures and creativity to create unique art village

Amsterdam, The Netherlands – China has undergone an unprecedented urbanisation process, from being a predominant rural society to having an estimated one billion Chinese living in cities in 2050. In this transformation so far, urban migration has left hundreds of thousands of villages abandoned. Many of these have dozens of generations of social, cultural and monumental value but are currently lacking major future significance.

To address this challenge, NEXT architects, together with IVEM (Dutch Institute for heritage and marketing), Smartland (landscape design), Total Design (graphic design) and numerous artists were asked by the Government of Jinxi, Jiangxi Province to develop a strategy for one of its 102 abandoned villages, Dafang. NEXT architects was responsible for the masterplan, architecture and interior.

"Rural revitalization is one of China's key future developments. We believe this asks for the design of balance between old and new, living and visiting, history and future," said John van de Water, partner NEXT architects Beijing.

Photo: © NEXT architects

Interventions are designed on three levels. Firstly, urban space, architecture and landscape are restored where possible, with new materials, creating a dialogue between old and new elements. For example: glass roof tiles are used to restore the roofs of the old houses and the ancient irrigation system has been restored adding elements such as a natural helophyte filter to clean the water.

Secondly, a watchtower and public hall have been added: new building structures that take cues from on-site precedents. In the centre of the village, a new public hall is realised. The hall is built on the former site of a courtyard building that was destroyed during the cultural revolution.

Thirdly, there is the programming of the spaces through art and activity. A new village museum, a library and artist studios are amongst the new functions that bring new life and creativity to the village. Artist are allowed to react on the village structures: to add, change, and transform its context. The floor of the public hall has for example been painted in a Mondrian-like pattern by a Chinese artist. Dutch artist Herman Lamers has installed an airplane in an old house, called 'The Dream'.

SOM and Fender Katsalidis to bring new, transformative public space and high-tech towers to Sydney, Australia

Chicago, Illinois, USA – SOM and Fender Katsalidis have won an international design competition for Central Place Sydney, a $2.5 billion commercial development that will contribute to Tech Central in Sydney's Central Business District.

Central Place Sydney. Image: © SOM and Fender Katsalidis

The design by SOM and Fender Katsalidis is set to transform the western edge of Central Station. New commercial buildings and public realm improvements will enhance this southern gateway to the CBD, revitalising and reconnecting the precinct to the city, and complementing the City of Sydney's plan to create a third new major civic square. The project is a partnership between developers Dexus and Frasers Property Australia.

The design for Central Place Sydney features two 37-and-39 storey commercial towers, woven together by a low-rise building anchoring the development and enlivening the precinct at street level. Landscaped public spaces surround the buildings, enhancing connections between neighbouring communities and the city's most prominent commercial axis.

Located at the southern edge of Henry Deane Plaza, the central building is a dynamic urban form that shapes the precinct's identity. It ascends in a series of tiers, which are staggered to open up garden terraces and views at each level. The curved sandstone forms respond to the scale and materiality of the precinct's existing character. The ground floor is highly permeable, accommodating a retail experience that flows into the plaza, while the upper commercial levels will be linked to the new towers to create campus-style floorplates.

"The building anchors the southern edge of the Plaza and combines creative workplaces, collaborative and community spaces, and active ground level retail along an internal pedestrian laneway. We aimed to create a place that's engaging both at street level and in its broader urban context," said Scott Duncan, Design Partner at SOM.

A core element of the Tech Central precinct, the project will encompass approximately 150,000 square metres of office and retail space. It will be one of the most sustainable commercial developments in Australia, with workplace environments that integrate nature and a range of amenities.

Green building 10-year achievement by HKGBC

Hong Kong – In the first half-year of 2020, though there has been turbulent time, we embrace the opportunities of green recovery ahead. Launched in 2010 by Hong Kong Green Building Council (HKGBC) and BEAM Society Limited (BSL), BEAM Plus is Hong Kong's leading initiative to offer independent assessments of building sustainability performance over the 10 years. It provides building users with a single performance label that demonstrates the overall quality of the new and existing buildings, regardless of whether it is new, refurbished or in use.

Since the launch of the BEAM Plus, up to 2 July 2020, the number of registered projects has reached 1,575, accounting for Gross Floor Area (GFA) of more than 50,000,000 square metres. Among these BEAM Plus projects, 677 have been certified with Bronze rating or above. The total estimated carbon emissions saved each year reached 625,400 Tons of CO2e, equivalent to 27.2 million trees planted. The Hong Kong's green building development figures and outstanding achievement of BEAM Plus in the past years could be found in the latest publication by HKGBC "Hong Kong: Green Building in Action 2019 Edition".

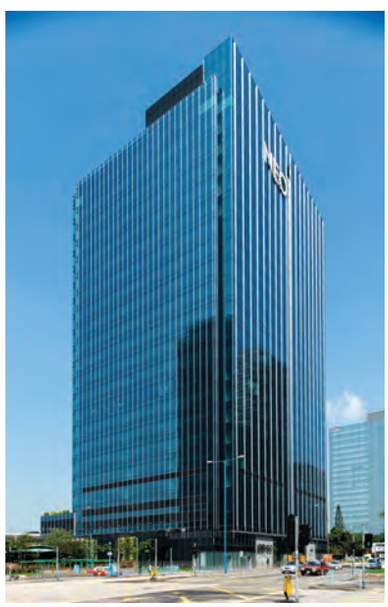
HKGBC keeps driving Hong Kong to transform into a sustainable built city through BEAM Plus. In recent years, green building designs have emphasised the enhancement of users' well-being as a healthy living and working environment has become more crucial than ever, especially in regard to the current global pandemic situation.

For commercial buildings, achieving Final Platinum rating under BEAM Plus New Buildings, One Taikoo Place helps creating a wind corridor of the city by setting back the building from the streets, resulting in better natural ventilation and surroundings. The building also achieved a total of 34 percent reduction in annual energy consumption obtained. As for other BEAM Plus Platinum-rated commercial buildings such as 8 Bay East / NEO, efforts have been made in reducing indoor air pollutants for better indoor air quality. Thus, a healthier indoor environment can be maintained.

Besides, Hysan Place demonstrates its exemplary sustainability performance throughout its building life cycle, from design to construction, then operation and maintenance. The building has achieved Final Platinum rating under both BEAM Plus New Buildings in 2013 and BEAM Plus Existing Buildings in 2018. It goes beyond its site boundary and aims to benefit the environment of the entire district by adding urban windows at lower floors that improve the microclimate in the neighbourhood, as well as maximise sunlight penetration at different floors.

Apart from commercial buildings, there are more and more types of projects such as revitalised heritage and infrastructure to go green and achieved the highest grade under different BEAM Plus assessment tools.

Recently, a Grade II historic building in Hong Kong – Wah Ha Estate has been converted and transformed into green buildings, achieving Final Platinum rating under BEAM Plus New Buildings. Formerly known as Chai Wan Factory Estate, the last H-shaped factory building in Hong Kong, Wah Ha Estate now provides 187 public rental housing flats for single people and small families. Not only 70 percent of the building structure is preserved, eco-wells are also added to enhance natural



Two BEAM Plus certified commercial buildings with Final Platinum rating – One Taikoo Place and 8 Bay East / NEO help to maintain better ventilation as well as indoor air quality through different green designs. Photos: © Hong Kong Green Building Council

Hysan Place achieved the Final Platinum rating under BEAM Plus New Buildings in 2013 and BEAM Plus Existing Buildings in 2018. Photo: © Hong Kong Green Building Council

From industrial use to residential use, Wah Ha Estate is also a showcase of converting a heritage building into a green building for residents' sustainable living. Photo: © Hong Kong Green Building Council

The upgraded Shek Wu Hui Effluent Polishing Plant has attained Platinum rating under BEAM Plus Neighbourhood by turning the traditionally obnoxious facility into an integral asset of the local neighbourhood. Photo: © Hong Kong Green Building Council

Desilting Compounds which are located along Kai Tak Nullah has achieved Final Platinum rating under BEAM Plus New Buildings. Photo: © Hong Kong Green Building Council

ventilation and introduce daylight into the residential flats, creating a more liveable environment for residents.

For the Shek Wu Hui Effluent Polishing Plant which helps treating the sewage for the public, its building facilities have achieved Platinum rating under BEAM Plus Neighbourhood and Provisional Platinum rating under BEAM Plus New Buildings. One of the features of the project is that the community has been extensively engaged on the design and development of the Polishing Plant, particularly on the public co-use amenities. By setting up educational tours and providing public open spaces, the general public can learn about sustainable living concepts in the future.

Another excellent case is located at the newly developed community – Kai Tak. Green buildings could be found more easily! Apart from the residential buildings and infrastructure which are covered previously, the Desilting Compunds No. 1 and 2 which are part of the reconstruction and upgrading works of Kai Tak Nullah has attained Final Platinum rating under BEAM Plus New Buildings. The building is well integrated with the surrounding environment with extensive greenery. It can help to reduce the ground and indoor temperature, as well as beautify the community in Kai Tak.

Green buildings are growing everywhere in Hong Kong. **You can get more information from BEAM Plus Online Exhibition at http://greenbuilding.hkgbc.org.hk.**

Society of Interior Designers Singapore launches T-shirt fundraising campaign with local designers in collaboration with the Ministry of Manpower

Singapore – COVID-19 has brought great disruptions to our lifestyle and the livelihood of many on an unprecedented level. This is particularly hard-hitting on our migrant workers who have been one of the key contributors to our economy. Many of them have been affected by COVID-19. During this time of hardship faced by our migrant workers, the Society of Interior Designers Singapore (SIDS) stands in solidarity with them and would like to design t-shirts that can spark unity among the migrant workers as well as our fellow Singaporeans.

The message is clear. "We will get through COVID-19 Together". While the overall message of overcoming COVID-19 will be highlighted in every design, every local business and community participating in this campaign will be listed on the back of the shirt. SIDS has the ability to connect with prominent designers from various disciplines in design, namely – Andrew Loh and Kenny Lim, Damian Tang, Jackson Tan, Janice Wong, Keat Ong, Kelley Cheng, Kenny Hong, Khairudin Saharom, Look Boon Gee, and Peter Tay – to come up with various T-shirt designs that would be stylish for Singaporeans to wear and to show support and solidarity for a common cause.

With the contribution from likeminded industry partners such as Admira, ATEC Design and Construction, Bathworld, Idee Etcetera, The Floor Gallery, Hitachi, ISH Interior Design, Keisuke, Luxx Newhouse, and MM Galleri on the needed funds for the printing of the t-shirts – SIDS together with the kind sponsors are pleased to make this campaign possible together with the support from MOM.

This is more than a T-shirt. This is about coming together as a community to show compassion and support to the migrant workers who have been instrumental in our country's economic growth. We hope that the general population can be generous and support this good cause.

"I am glad that the Society of Interior Designers Singapore has initiated this T-shirt fundraising campaign 'Operation De-COVID 19' to support our migrant workers. The proceeds, along with donations from the public, will go to the Migrant Workers' Assistance Fund, the humanitarian charity of the Migrant Workers' Centre. While we may face many challenges ahead, what we have built as a nation bears testament to how we can and will similarly emerge stronger," said Zaqy Mohamad, Senior Minister of State for Manpower.

The Migrant Workers' Centre (MWC) is a non-governmental organisation that champions fair employment practices and the well-being of migrant workers. The MWAF was set up in 2012 to fund all humanitarian and emergency assistance to MWC's case clients. The MWAF allows the MWC to cover and protect vulnerable workers up till their outstanding matters are resolved and concluded, and it is a key resource for MWC in providing proper and adequate help to migrant workers in Singapore.

Main campaign poster. Image: © SIDS

The Dallara Academy

An external view of the Dallara Academy.

The Dallara Academy Complex in Varano de' Melegari in Italy, encloses an exhibition area and an educational and training centre to help convey the knowledge and passion for engineering in racing cars. Mapei was proud to be involved in this project.

Inaugurated in the autumn of 2018, the Dallara Academy is right next to the historic headquarters of Dallara Automobili in Varano de' Melegari (central Italy), which has been building racing cars since 1972. The structure has an audacious design, just the sort of look the founder and President of the company, Gian Paolo Dallara, had been aiming for: a research centre and a design centre, as well as a place for enjoyment and exhibitions. And it was thanks to the innovative nature of its design that led to the Dallara Academy winning the 2017 "Best Future Building of the Year – Under Construction" at the ABB Leaf Awards in London, a competition that acknowledges the designs chosen as a point of reference in architecture.

A multi-functional structure

The actual building of the Dallara Academy extends over two levels, connected together by a curvilinear ramp providing access for visitors to walk in. On the ground floor you can find

reception spaces for visitors and laboratories for local schools, while the first floor is the home of an area dedicated to graduate training courses and the auditorium. From a volumetric point of view, the structure is a collection of intertwined, primary geometric figures made up of cones, trapezoids and parallelepipeds, where the different volumes create connection points or develop into open spaces dedicated to the general public. A great deal of importance was also given to the various materials used to identify the different areas, from local natural stone to brass trims, finishing with a three-dimensional ceramic covering for the three cones.

Display ramp. The display ramp, which is open to visitors, features the cars that have played such an important part in the history of Dallara Automobili. You pass from the Miura to the X1/9, from the Sport models built in collaboration with Lancia to the IndyCars that race in the Unites States, from prototypes for Le Mans right up to cars designed for the Formula 3 and Formula E championships, to arrive at the latest model, the "Dallara Stradale".

Teaching laboratories. An area on the ground floor is dedicated entirely to the Training Workshops, designed for students from local middle and secondary schools, where they can experiment for themselves the laws of physics applied to the design and development of cars. Based on a philosophy of "edutainment", or learning while having fun, the aim of the laboratories is to directly involve youngsters in activities inspired by the three main activities of the Dallara company: the design and production of composite materials, aerodynamics and vehicle dynamics.

University area. On the upper floor, the Academy has reserved an area dedicated to graduate level studies. This is where they hold the second year of the MUNER (Motorvehicle University of Emilia-Romagna) degree course in "Racing Car Design", a partnership so strongly desired by the Emilia-Romagna Regional Council between local universities and the ten historisc engine manufacturers from what is known as "Motor Valley": HPE, Dallara, Ferrari, Lamborghini, Pagani, Magneti Marelli, Haas, Toro Rosso, Maserati and Ducati.

The display area in the ramp.

A close-up view of the cones.

The three-dimensional ceramic tiles were bonded to the external façade with KERABOND mixed with ISOLASTIC.

Auditorium. Inside the Dallara Academy there is also a 350-seat space designed to host conferences, meetings, presentations and team-building activities. The structure also has a bookshop and a cafeteria for its guests.

High Technology Intervention

Mapei Technical Services took part in the site work, initially by carrying out a series of surveys, and then by working alongside the contractors to help them choose the suitable products.

Installation of ceramic coverings on the sloping roof. To waterproof the roofs of the three structures, PURTOP 1000 two component, pure polyurea-based membrane was applied by spray with a bi-mixer pump. Before applying it, the surface was treated with PRIMER SN epoxy primer, which was then broadcast while still wet with QUARTZ 0.5 quartz sand. Special three-dimensional tiles (10x10 centimetres) were used to cover the roof, which were bonded in place with ULTRABOND ECO PU 2K two-component, solvent-free, high-performance, slip resistant polyurethane adhesive with very low emission of volatile organic compounds (VOC). The joints were then filled with ULTRACOLOR PLUS grouts. Expansion joints were created in the covering at a pitch of 3x3 metres and sealed with MAPESIL LM neutral mould-resistant silicone sealant.

The substrates of the cones were waterproofed with PURTOP 1000. The 3D ceramic tiles were installed with ULTRABOND ECO PU 2K and the joints were grouted with ULTRACOLOR PLUS.

Installation of ceramic covering on the facades. To install the three-dimensional tiles on the facades, Mapei Technical Services proposed a high-performance adhesive system made up of KERABOND powdered cementitious adhesive mixed with ISOLASTIC latex instead of water to improve its elasticity and characteristics. The joints were then grouted with ULTRACOLOR PLUS mortar and the expansion joints were sealed with MAPESIL LM.

Internal floorings. Mapei systems were also used to prepare 2,000 square metres of concrete floors inside the Academy and the mix used included DYNAMON FLOOR 10, an acrylic-based, super-plasticising admixture. The surface was then consolidated with MAPECOAT I 600 W, two-component, transparent epoxy primer in water dispersion.

PROJECT DATA

Project Name: Dallara Academy
Location: Varano de' Melegari, Italy
Period of Construction: 2017-2018
Year of the Mapei Intervention: 2018
Intervention by Mapei: Supplying products for bonding ceramic tiles in exteriors, admixtures for concrete, waterproofing compounds, systems for resin floors
Design: Atelier (S) Alfonso Femia AF517
Client: Varanobox Srl
Contractor: Mario Neri SpA
Resin Flooring Contractor: Resinsystem Italia
Ceramic Installation Company: Technoriunite
Mapei Coordinators: Carlo Alberto Rossi, Francesco Di Chiara, Andrea Bettini, Mapei SpA (Italy)
Photos: Provided by Mapei

For the floors in the bathrooms, the MAPEFLOOR SYSTEM 51 was chosen (average thickness 3 millimetres), a multi-layered epoxy system used to form water vapour-permeable floors which are moderately resistant to chemical products, frequent cleaning operations and wear and impermeable to oil and aggressive substances. Floorings made using MAPEFLOOR SYSTEM 51 also have an attractive finish. Before applying the coating, the substrate was mechanically prepared to ensure a perfect bond with the coating. After applying, by scratching, MAPEFLOOR I 500 W epoxy formulate, the surface was fully broadcast with QUARTZ 0.5 while still wet. The following day, the surface was lightly sanded in order to eliminate the quartz sand that was not perfectly bonded. The work was completed by applying another scratch coat of MAPEFLOOR I 500 W.

For the stairs, on the other hand, the preferred solution was MAPEFLOOR SYSTEM 32, a multi-layered epoxy system used to make 3.0-3.5 millimetres thick coatings on floors that are highly resistant to chemical products, frequent cleaning operations and aggressive substances. After the mechanical preparation of the surface, it was treated with PRIMER SN, two-component, pre-fillerized epoxy primer, prepared by adding about 20 percent by weight of QUARTZ 0.5. While the surface was still wet, it was fully broadcast with QUARTZ 0.5.

After the removal of the excess quartz by vacuum cleaner followed by a light sanding of the surface and a subsequent removal of the produced dust, MAPEFLOOR I 300 SL, two component, neutral-coloured, multi-purpose formulate, was applied with a straight steel trowel. The product was coloured on site by using MAPECOLOR PASTE. While the surface was still wet, it was fully broadcast with QUARTZ 0.5. The following day, the excess quartz sand was removed with a vacuum cleaner, the surface was sanded again and all traces of dust were again removed. A final coat of MAPEFLOOR I 300 SL was applied, again using a straight steel trowel on site by using MAPECOLOR PASTE. While the surface was still wet, it was fully broadcast with QUARTZ 0.5. The following day, the excess quartz sand was removed with a vacuum cleaner, the surface was sanded again and all traces of dust were again removed. A final coat of MAPEFLOOR I 300 SL was applied, again using a straight steel trowel.

Mapei Products

Installing ceramic tiles: Kerabond, Isolastic, Ultrabond Eco PU 2K
Grouting and sealing joints: Ultracolor Plus, Mapesil LM
Preparing and waterproofing substrates: Primer SN, Purtop 1000, Quartz 0.5
Laying resin floors: Mapecoat I 600 W, Mapefloor System 32, Mapefloor System 51, Dynamon Floor 10

PURTOP 1000

Article source: Realtà Mapei International no. 74/2019

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

The Rajasthan School

Courtyard in The Rajasthan School.

The Rajasthan School, designed by Sanjay Puri Architects, features a central courtyard covered in trapezoidal frames to provide shade from the harsh sun.

Situated in a remote desert village of Rajasthan, India, the Rajasthan School is a low-rise three-level school with open, enclosed and semi-enclosed spaces of varying volumes. It is situated in a township developed by a well-known Indian Cement manufacturer for the children of the staff working at their plant, in a remote area of Rajasthan.

The school design adopts from the character of Indian villages and old cities and contemporarises the interpretation. The school is fragmented to create a central courtyard covered in trapezoidal frames and sun-breakers, providing shade from the harsh sun and creating dynamic shadow patterns through the day. It thus creates a relatively cooler micro-climate for outdoor activities and allows the landscape to be interspersed with the built-mass.

Taking cognizance of the extreme desert climate of its location with temperatures in excess of 35°C for most of the year, each of the classrooms are north oriented to derive indirect sunlight through the day, and enclosed in angled vertical walls. These vertical walls act as sun breakers to reduce direct heat gain from the east, west and south sides generating cooler internal spaces.

The auditorium, primary school and administration space occupy the southern side of the plot opening into a large semi-sheltered courtyard towards

the north beyond which the secondary school classrooms, library & cafeteria are located.

The placement of the seldom used – 42' high auditorium is deliberately kept to the south to act as a heat buffer for the rest of the school. The triple height structure blocks the southern sun through the day, keeping the central courtyard in partial shade. Within the two buildings the naturally ventilated, open corridors traverse between the classrooms and the courtyard furthering the buffer effect.

This semi-sheltered courtyard has multiple angular pathways, connecting the two parts of the school with landscaped play spaces that foster engagement. Traversed by a series of linear trapezoidal frames and sun-breakers, this focal area has a constantly changing shadow pattern depending on the sun direction throughout the day.

The layout is intentionally fragmented allowing open landscaped spaces to be interspersed with the school's learning spaces. The entire school opens towards an existing multipurpose playground & athletics track on the northern side.

The entire circulation is through open naturally ventilated corridors traversing & skirting the focal semi-sheltered landscaped court in the centre.

The complete electrical power requirement is generated by the residual energy of the cement plant nearby. Solar panels are also installed for additional energy usage. There existed no vegetation on site, thus territorial plants have been planted, which would take less water to grow and reduce the burden on the water supply. In addition, the rain-water from the terraces is recycled & reused through the installation of rainwater-harvesting systems under the garden areas. The building by its design is thus extremely energy efficient.

The Rajasthan School derives its character from the organic old cities, with an informal layout, interspersed open and enclosed volumes, designed in response to the hot climate, creating a school that is exploratory in multiple ways.

Courtyard in The Rajasthan School.

Classroom corridor view at The Rajasthan School.

Courtyard in The Rajasthan School.

North view of The Rajasthan School.

Sanjay Puri

"These design solutions, help to achieve a climatically sensitive structure providing a comfortable micro-climate while merging the landscape with the built mass."

– Sanjay Puri, Principal Architect of Sanjay Puri Architects

South side view of The Rajasthan School.

PROJECT DATA

Project Name: The Rajasthan School
Location: Shree Cement Township, Ras Village, Rajasthan, India
Client: Shree Cement
Architecture Firm: Sanjay Puri Architects
Gross Floor Area: 93,000 square feet
Completion: February 2020
Photo credit: Dinesh Mehta

Bikurim

Sarit Shani Hay has conceptualised the interior design of Bikurim – the first inclusive school in Tel Aviv.

The first inclusive elementary school in Tel Aviv is a flagship project designed to support the inclusive learning model by creating an environment that works for everyone. The design brief was to foster inclusive experiences by rethinking the school's interior design.

The school supports the integration of students with disabilities into regular classrooms with the understanding that each child is unique with his/her specific needs. Twenty-five percent of students have physical disabilities, or are on the autistic spectrum and interact together in a space that encourages collaboration while celebrating the diversity of the students. The school is based on the inclusive model developed by Inclu Foundation.

The challenge in developing the design strategy was to create a pluralistic learning environment that encourages accessibility, equality and flexibility based on universal design. The process of developing the design concept was preceded by conversations with pedagogues and experts that understand the special needs in order to translate the idea into a physical environment.

The school includes rooms for different types of classes and treatments, such as physical therapy, yoga/meditation, as well as private study. Each room is walled with glass to support the inclusive philosophy.

The design strategy stems from various geometric shapes and how they can be molded to support group activities all children can take part in, regardless of their physical or mental abilities. Flexible furniture was designed alongside intimate soft nooks. Calm colours and wooden materials were used to avoid emotional overload.

Special attention was given to the public spaces between the classrooms, which were designed to encourage study through play. The concept of a group circle was used to create a circular seating

Sarit Shani Hay. Photography: Roni Cnaani

“This project was defiantly a great challenge and privilege for our studio. School is often the first encounter a child has with society. The earlier in life we learn to accept the other, to embrace our differences rather than fear them, the brighter our future will be. I truly believe in the power of design to make a change and it is my responsibility to strive for it. It is my hope and belief that this school’s embracing environment will inspire the children to explore, play, communicate and reach their full potential as equal partner in society.”

– Sarit Shani Hay, Head Designer & CEO of Sarit Shani Hay

PROJECT DATA

Project Name: Bikurim (Inclusive School)
Location: Tel Aviv, Israel
Client: Tel Aviv Municipality & The Inclu Foundation
Building Architect: Tsionov Vitkon Architects
Interior Design & Furniture Design: Sarit Shani Hay
Completion: 2019
Photography: Roni Cnaani

bench split into two halves, allowing for different seating arrangements wherever possible for any child wanting to join the group, for example, a child in a wheelchair. Additionally, a puzzle shape motif is repeated throughout the design reflecting the uniqueness of each child and how when brought together, create a whole.

Throughout the school, there are different stations that encourage both life-skill practice, as well as individual rooms and spaces for meditation and individual study. In one of the public areas, a domestic kitchen, a theatre corner and a shop were all designed to support imaginative learning. Tactile activity boards are hung on the walls to allow students to experience materials and textures alongside carved wood blocks to learn letters and their equivalent in Braille and Sign Language. The idea was to create a learning environment that strongly supports inclusive learning spaces that enhance the achievements and overall feeling of belonging amongst the students. This first inclusive school in Tel Aviv was launched as a pilot with classes for first and second graders with plans to grow into a fully functioning elementary school.

The school is a winner of the 2020 FRAME Awards for the social category.

Yongjiang Experimental School

West north aerial view of Yongjiang Experimental School. Photo: © Xia Zhi

DC Alliance has introduced the spatial concept mode of "Enjoyable Courtyard" in the Yongjiang Experimental School.

The purpose of school education is not only to teach students knowledge and solve their confusion, but also to stimulate their interest in learning and to make them enjoy it. Based on that thought, architects take "Enjoyment" as the theme and carry out two conditions from the point of architectural view to satisfy enjoyable space: The first is sense of space belonging which is brought by the enclosure of "independent world", the second is the maximum sharing of teaching resources and expansion of campus activity space, that is called maximum publicity. Based on the theme of "Enjoyment", the spatial concept mode of "Enjoyable Courtyard" is proposed.

Concept Introduction

The design method of "Courtyard Mode" which reflects designers' thinking in architectural education is adopted in this case. The way of courtyard mode is to arrange the building's functional entities at the boundary of the site to accomplish the maximum public area in this courtyard. In this design of school, classrooms, administrative office, etc. are put around the boundary of site appropriately to form the courtyard inside and large public rooms are arranged in it. Thus the public courtyard is made as a core of school space mode. The "courtyard" formed by this method is not a simple large yard enclosed by volume, but an enjoyable

Stadium rendering base on human's eye. Photo: © Gao Pan

learning courtyard combined by hybrid school system and several small themed yards. This mode is similar to WeiQi (A kind of Chinese traditional chess) in that it encloses the largest area of public space with the least building functional entities.

Project Innovation

The architectural design way of "Courtyard" has three advantages:

1. This way brings the maximum sharable school space and the highest space utilization.

Outdoor small theatre. Photo: © Xing Zhi Ying Xiang

Terrace of the second floor. Photo: © Xia Zhi

2. Due to the courtyard mode, the school's city image is complete and unique. A complete display interface is formed to face the city.
3. The courtyard mode forms a strong sense of spatial belonging and security internally and improves spatial experience and perception of users. Because the courtyard mode not only can solve the strict requirements in this case but also has its irreplaceable advantages, architects choose this mode and add the theme element of "Enjoyment" to form the enjoyable learning courtyard in Yongjiang School.

Design Challenges

Each mode will come with its unavoidable problems and the courtyard mode is not an exception. This design faces three challenges: The first is a sense of closure. In order to solve this problem, the underlying overhead is used to reduce building's volume. Then, four corners and four sides of the building are opened to face the city.

The second problem is western sunshine. In the enclosed layout of courtyard mode, there must be a part of the building in a poor orientation, which brings western sunlight problem.

Dong Yi. Photo: © DC Alliance

"Enjoyment" is the theme of the project. We want to design a school complex that can not only help students to learn knowledge but also enrich their activities through flexible and diverse functional spaces."

– Dong Yi, Partner of DC Alliance

Inner court. Photo: © Gao Pan

Architects use "Origami" facade as vertical shading, and calculate the angle and spacing size of the metal louvers according to the local summer solstice azimuth. Therefore, the vertical shading is arranged reasonably to solve the problem of western sunlight.

Third, there is lacking in spatial hierarchy. In order to avoid the situation of courtyard's large scale and hollowness, we eliminate this problem by superimposing the space of "one big courtyard + four small yards" and the common circulation at multiple levels.

PROJECT DATA

Project Name: Yongjiang Experimental School
Location: Jiangbei District, Ningbo City, China
Client: Education Bureau of Jiangbei District, Ningbo City
Architecture Firm: DC Alliance
Site Area: 34485 square metres
Building Area: 29500 square metres
Completion: December 2018
Photographs: Xia Zhi, Xing Zhi Ying Xiang, Gao Pan

Corridor space. Photo: © Gao Pan

Jinlong School Project

Photo: © Wu Qingshan

In Jinlong School Project, Crossboundaries created a multifunctional, predominantly prefab structure, with maximum flexibility and aesthetic personality through design accents whilst providing clever solutions for a high-density project.

In 2018, Crossboundaries designed a 36-classroom school, to be located in the newly established Pingshan district in the Chinese metropolis Shenzhen. The venture was not only an attempt to maximise the potential of prefab architecture but also an opportunity to realise and to contribute to a project of significant social impact.

Infusing flexible individualization into repetitive standardization

In the Jinlong School Project, Crossboundaries adopted prefabricated structures to a maximum, for approximately

Photo: © Wu Qingshan

75 percent of the project. This dramatically reduced on-site construction waste, required wet construction, labour input and the necessary construction period, thus saving budget and time. Due to the use of a local, Shenzhen based prefab elements factory, transportation costs were kept to a minimum. Additional advantages such as energy conservation, environmental friendliness and earthquake resistance were also incorporated.

The architects managed to give the school a distinctive aesthetic quality, its very own individual design character, whilst also paying attention to people-oriented spatial relationships. The overall complex hence represents a concise layout solution, with a compact conceptual approach. Modular applications are mainly used in the residential and educational buildings (e.g. dormitories, teaching and other classrooms) whereas public spaces and some other areas are configured in more conventional construction methods.

Crossboundaries integrated and introduced a combination of variations in an overall unified façade. For the three teaching buildings, the architects applied six kinds of prefab panels, with different width and different arrangements of window openings. Although the classrooms on each floor share the same layout, each of them has a different external wall.

This becomes especially evident on the outside, with the windows appearing in an alternating rhythm in sizes, vertical and horizontal rectangular shapes, also resulting in a change in density on the façades. Additional accents are set with yellow, protruding metal frames around selected window openings.

The colour concept further defines circulation areas (paths and corridors) in blue and meeting hubs for children/students (e.g. in the dormitory) in yellow. Yellow is therefore indicating zones where people stay and socialise, and move less.

The middle wing of the three teaching buildings was twisted a little, thus making the open spaces between buildings a bit more irregular and more unique, the shape of yards in between them are now defined as intriguing polygons, instead of being just simply square shaped.

Photo: © Yang Chaoying

Photo: © Yang Chaoying

Photo: © Wu Qingshan

For the dormitory building – highly visible from afar and facing Jinlong Boulevard, one of the main access streets to the school – the architects composed the facade out of prefab panels in different thicknesses and different colour hues. The most protruding ones are the brightest, the most set back ones the darkest. Evenly distributed openings function as balconies with a setback facade for the dormitory rooms behind them and allow for more depth in the overall appearance of the surface.

Clever interventions in a high-density space

With a construction area of more than 50,000 square metres and a site area of only around 16,000 square metres, the plot ratio of the Jinlong project is almost 2.5, representing a quite high index for a school. Due to the high density of the project, coupled with the extremely tight deadline and the demand to accommodate a manifold of functions, it was essential to design the public spaces following practical and at the same time clever considerations, trying to avoid repetitiveness and a sense of oppression as well as to set aside space for future educational innovation.

Because of the small site area and the high demand of functions, some areas of this school are elevated to arrange more public and common spaces on the lower levels. In conventional campus layouts the sports field is pushed to the peripheral area, disconnecting it from the learning spaces. The Jinlong campus positioned the running track in the middle of the campus between the residential and educational zones and is lifted up on a platform to allow for other sport areas, art, library and multifunctional spaces below. At the same time the sports field with its recreational qualities is in closer distance

Hao Dong (left) and Binke Lenhardt, Founding Partners of Crossboundaries, Beijing. Photo by Matjaz Tancic

“Looking at the briefing, there appeared to be so many limitations: limited time, a limited budget, a potentially limited creativity due to the mandatory use of prefab, a very small site area, with all those functions to integrate. Then again, we were extremely intrigued to take on this project, to create a human, people-oriented school within all those limitations, and at the same time to still be as creative as possible, in designing a space that provides a solution for a realistic problem that we all have to face in quickly expanding cities in the future.”

- Hao Dong, Founding Partner of Crossboundaries

Photo: © Yang Chaoying

to the higher classroom floors, optimising circulation.

The lower level becomes the cross-connection for the campus, a public corridor that runs through the whole length of the site, linking the educational and residential quarters, while on the site's wide stretch bringing together the entrance zone on one side with the adjacent future neighbourhood on the other.

Corridors connect the teaching buildings on different levels to each other and also to adjacent areas of the adjoining, elevated sports fields. They form a larger scoped network, facilitating pedestrian's free movement and student's active interaction out of different classrooms.

Photo: © Wu Qingshan

In the dormitory building, incorporated at different heights and emphasised in yellow, are multiple large-scale public spaces, to provide communication and meeting spaces for the dormitory's residents. They break the crowded and uniform feeling, the density evoked by the repetitiveness of the large number of residential units.

The school campus' design also takes into account the local, subtropical climate in Shenzhen. A lot of the school complex's public areas remain open and were not closed off like the classrooms, labs or other special areas. In addition, in order to allow for optimal air circulation, light facades composed out of perforated metal panels were applied to the teaching buildings, which – apart from their functional benefit – giving it additional visional qualities, revealing colours and movements behind.

PROJECT DATA

Project Name: Jinlong School
Location: Pingshan District, Shenzhen, Guangdong Province, China
Client: Shenzhen Pingshan District Building and Works Bureau
Architecture Firm: Crossboundaries, Beijing, China
Site Area: 16,172 square metres
Architecture Area: 54,465 square metres
Completion: January 2020
Photographers: Wu Qingshan, Yang Chaoying

Vidya Devi Jindal Paramedical College

SpaceMatters has designed a Paramedical College in the existing campus of the Institute of Medical Science in Agroha, Haryana, featuring red sandstone and exposed concrete.

This building is a gift from a reputed industrial house whose roots lie in the city. The brief was to design a modern, state-of-the-art facility within the Institute to provide affordable healthcare to a predominantly rural population. SpaceMatters took its design cues from the existing campus which uses the vocabulary of Corbusier's Chandigarh, and from the nearby 'Mounds of Agroha' that date back to the Harappan civilization (4th century BC).

The Paramedical College was designed to be a mound emerging from the earth, hence, the low, horizontal form. Red sandstone and concrete recreate earthy palettes of the prehistoric landscape. A triple-height white sandstone *jaali* / lattice-wall greets people at the foyer. The *Jaali* soothes the eyes in this dry and harsh region, while creating shade and bringing in cool air. The cuneiform symbols of the Harappan civilisation make up the lattice wall, making it a site of tribute to the knowledge and prosperity of ancient India.

At the heart of the rectilinear structure lies a courtyard, scooped out of the 'mound' to create a shaded oasis. An amphitheatre placed here functions as a spill-out space that also hosts assembly. Formal and informal, open and built space merge at the edge of this courtyard creating a place of shade that can support interaction and learning through the day and year.

The programme varies across the floors, and each floor is divided into wings (North-East, South-East, North-West and South-West). The four wings on the ground and

the first floor reduce to two wings seconds floor onwards. Academic spaces are on the ground, first and fourth floors while the second and third floors host staff offices and smaller libraries.

The 7000 square feet L-shaped library takes up half of the ground floor footprint. Enveloped in glass, it overlooks the garden on one side and the courtyard on the other. Flared mushroom columns, which meet the ceiling gently with an offset, give the impression

Moulshri Joshi (left), Amritha Ballal (centre) and Suditya Sinha (right), Architects & Partners of SpaceMatters.
Photo: © Akash Das, SpaceMatters

"Getting this right was important – a robust and imaginative campus within the public works budget & palette and in harsh north Indian climate. For us, this project is evidence & experience that the role of good design to transform public education should not be underestimated."

– Suditya Sinha, Partner-SpaceMatters

of a floating ceiling. Creating this sense of lightness in a heavy, solid structure establishes a dynamic architectural expression – making the building come alive! The region faces harsh summers, and a large overhang is designed above the library in order to reduce heat gain from the West. At night, the library glows – like a metaphorical lantern, akin to how education dispels the darkness of ignorance.

SpaceMatters' design uses materials judiciously and carefully for longevity and minimal maintenance. Autoclaved aerated concrete blocks generated a lighter structure since pile foundations were avoided (demanded by a brick structure of this scale). Stone on the facade was fixed with MS frame and SS clamps using a dry-cladding technique instead of a cumbersome wet-cladding one. Silicone coatings over the sandstone facade prevents water absorption, thereby delaying moisture damage. The design lets in maximum natural while reducing heat gain through the use of louvers and building orientation.

The site's grand past inspired SpaceMatters to create a serene space of learning, which reflects modern ambitions.

PROJECT DATA

Project Name: Vidya Devi Jindal Paramedical College
Location: Agroha, Haryana, India
Client: JSW Group
Architecture Firm: SpaceMatters, New Delhi
Site Area: 27,000 square feet (2,500 metre square)
Project Area: 90,000 square feet (8,360 metre square)
Completion: August 2019
Photos: © Noughts and Crosses