#### ARCHITECTURE INTERIOR DESIGN · LANDSCAPING . M.E.P. SYSTEMS

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SOUTHEAST ASIA BUILDING



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**PROJECTS Green Buildings** 

TRENDS Smart Building + Architects Share Future Trends and Their Views ARCHITECT'S CORNER Interview with Bhakti Loonawat, Design Associate at MuseLAB, on Winning the Coronavirus Design Competition PLUS Interviews with Architects on the Role of Green Buildings in Tackling Covid-19 Crisis



September / October 2020



# THE PAVILIA BAY

Designed by LWK + PARTNERS, THE PAVILIA BAY is a luxury and sustainable residential project in Hong Kong that sails under iridescent sunlight upon the Rambler Channel.

he project site sits on the waterfront, and the brilliant sunset over the waters struck the heart of the designer – basked in sunlight, the concept for THE PAVILIA BAY was thus conceived. In the dense city of Hong Kong, this magnificent open view must be highlighted - the project can be read as a yacht embarking its journey towards the waters.

The themes of 'sunshine' and 'yachting' was carried all the way from macro building form, elevation, interiors, down to micro details such as door handle and signage designs.

The nautical design language and visualisation of sunlight is articulated through and highlighted by the streamlines that

form the main character and feature of the building form. There are no sharp corners or straight lines in the three-dimensional curvy form of the elevation. This softens the often stiff and rigid architecture and allows the building to merge with the surrounding. The design also uses neutral colours such as white, cream, heather grey and beige to radiate a calm, balanced aura. The use of materials, texture and colour palette all have a strong association to a super yacht.

To take full advantage of the site, the residential towers are oriented to maximise sea view for each residential unit. The project features a large number of open air terraces and balconies with posh sofas, lounge chairs and transparent parapets, so that residents can have an unobstructed view of the Rambler Channel, enhancing the overall visual connection with the surroundings. The large on-grade featured and uncovered landscape area is connected to the main pedestrian route, encouraging visual contact between the residents, and ultimately promotes social integration within the development.

An efficient, safe, and convenient pedestrian circulation system is laid











out throughout the neighbourhood. Landscape elements are designed for the pedestrian route at main entrance to create better walking experience, and separate it from vehicular circulation.

Trees and plantings will be placed around the road as buffer to the pedestrian zone whilst the well ventilated open space also enhances pedestrian comfort. All private vehicles will be directed to the underground car park to create efficient vehicular circulation system.

Various studies were carried out to measure the impacts of the use of specific building materials. For example, solar study was carried out to determine the thermal performance of the low





emissivity insulated glazing units (IGUs), while noise impact assessment was carried out on noise sensitive receivers of the residential units, such as the vertical fins, enhanced glazing, and other parts of the building where needed.

To combat adverse effects of insulation, the reflectance of roof materials has a Solar Reflective Index of no less than 78. This, together with the IGUs, can lower heat gain and relieve the cooling loads of air-conditioning in the building. Over 10 percent of the hardpavers in the development are recycled materials, while food decomposers are installed to minimise the impact of waste to the environment.



HC Chan. Photo: © LWK + PARTNERS

**ff**Integration of yacht design into architecture skillfully straddle the line between deconstruction to reconstruction, shaping the urban skyline with its distinctive brand of architecture and offering its own interpretations of sustainable vision in close proximity to vibrant waterfront."

> - HC Chan, Director, LWK + PARTNERS

#### **PROJECT DATA**

Project Name: THE PAVILIA BAY Location: Hong Kong, China **Client:** New World Development Company Limited Architect Firm: LWK + PARTNERS Gross Floor Area: 62,710.038 square metres Completion: 2018 Photos: © LWK + PARTNERS

**A** TRENDS - Smart Building

**HC Chan** 

**LWK + PARTNERS** 

Director,



## Smart Buildings – Trends Shaping The Future

Architects around the world share their views on the trends that will shape the future of smart buildings.



HC Chan. Photo: © LWK + PARTNERS



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he construction industry is now facing a host of challenges: prolonged periods of construction, high costs and labour shortage. This is exacerbated by an ageing labour force as young people are reluctant to join the industry, creating a skill gap especially in fields like formwork, rebar fixing, concrete casting, etc. Taking Hong Kong as an example, with massive building demands coming in, the government and the city's Construction Industry Council joined hands to set up the Design For Manufacture and Assembly (DfMA) Alliance, engaging government authorities, developers, professionals like Architects, Structural Engineers and Building Services Engineers, Consultants, Contractors, Suppliers and Academia to study how DfMA might be a solution.

### DfMA and BIM is playing a significant role in the future of Smart Buildings

Unlike conventional construction methods, DfMA works more like the manufacturing industry. Individual parts are prefabricated in an off-site factory, moving most of the complicated processes there. This may include the main flooring, facades, interior finishing, building services, sanitary fitments and more. The prefabricated parts or integrated modules are then delivered to the site for assembly and 'stacked up' as a building. As a result, productivity and cost effectiveness are enhanced, while quality control is strengthened.

With DfMA, volumetric precast components are produced under the concept of 'factory prefabrication followed by on-site assembly', which is much more effective with the assistance of Building Information Modelling (BIM) and technical advancements in 3D software. BIM allows us to informatise layout plans, structural designs and electrical and mechanical properties, enhancing the efficiency of coordination among different disciplines and resolving common clashes and conflicts such as clear headroom, building service alignment and structural member depth.

Curvilinear or 3-dimensional surfaces design are also more adequately expressed in BIM software. Compared with 2D technique, it smoothens the multi-disciplinary coordination at early design stages. It facilitates the development of Modular Integrated Construction in Hong Kong, for instance, where its government promotes this new policy in order to facilitate the building industry to move forward in quality, speed and safety, paving the way for quality, greener construction with appropriate economies of scale.

Architecture is the art of blending aesthetics, engineering, culture and history. It does not benefit from the Industrial Revolution in the same way as manufacturing does: while manufactured products can be homogenised, specified and standardised through mass production, buildings shall be designed in response to site constraints and tailored to the human-oriented demands and comfort. If we treat our city as a manufactured object without considering its unique history and culture, we are doomed to have a monotonous, homogenous living environment. Is that what we want?