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September / October 2020

# SEAB

SOUTHEAST ASIA BUILDING

## Eden Singapore

**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

ISSN 2345-7066



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# 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.

The 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.

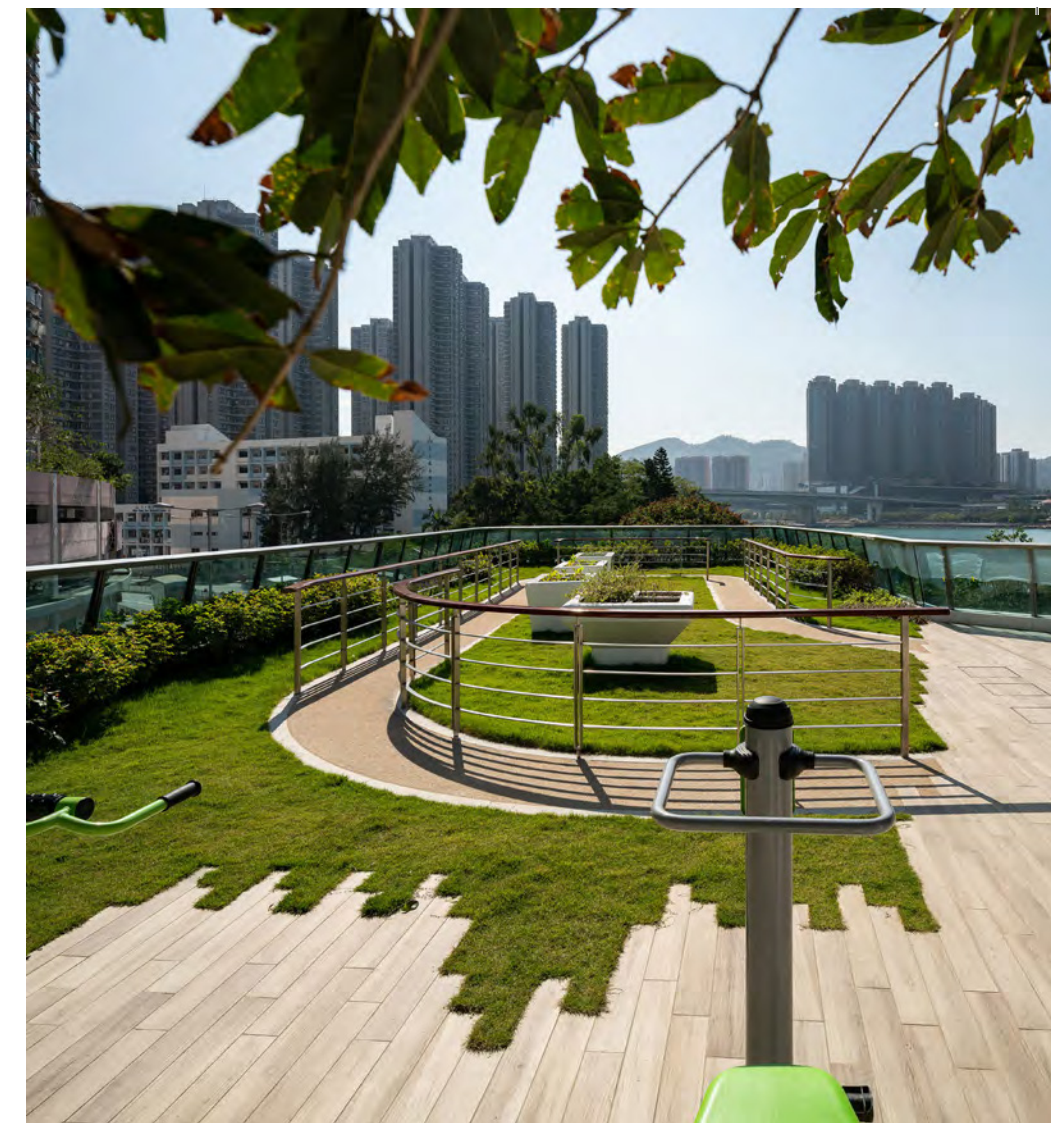
The themes of 'sunshine' and 'yachting' was carried all the way from macro building form, elevation, interiors, down to micro details such as door handle and signage designs.

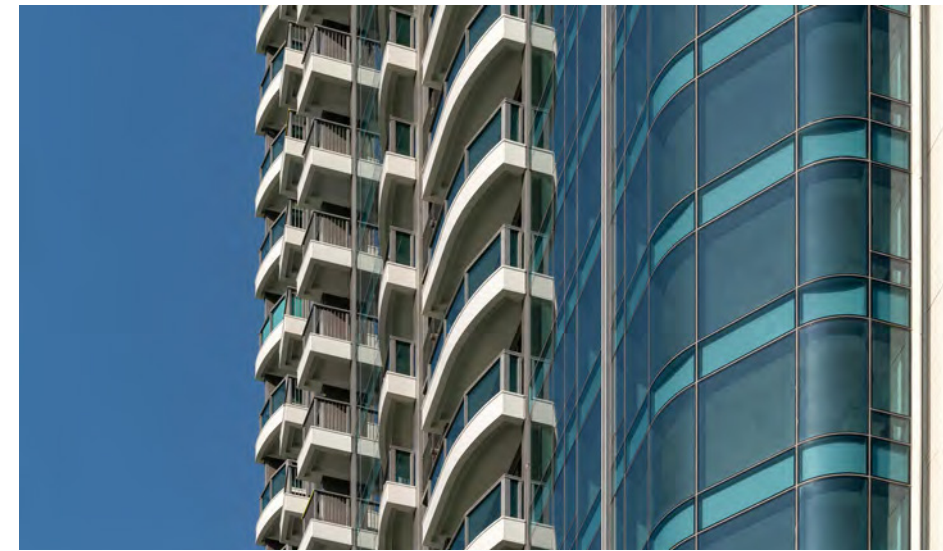
The nautical design language and visualisation of sunlight is articulated through and highlighted by the streamlines that

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





HC Chan. Photo: © LWK + PARTNERS

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 hard-pavers in the development are recycled materials, while food decomposers are installed to minimise the impact of waste to the environment.

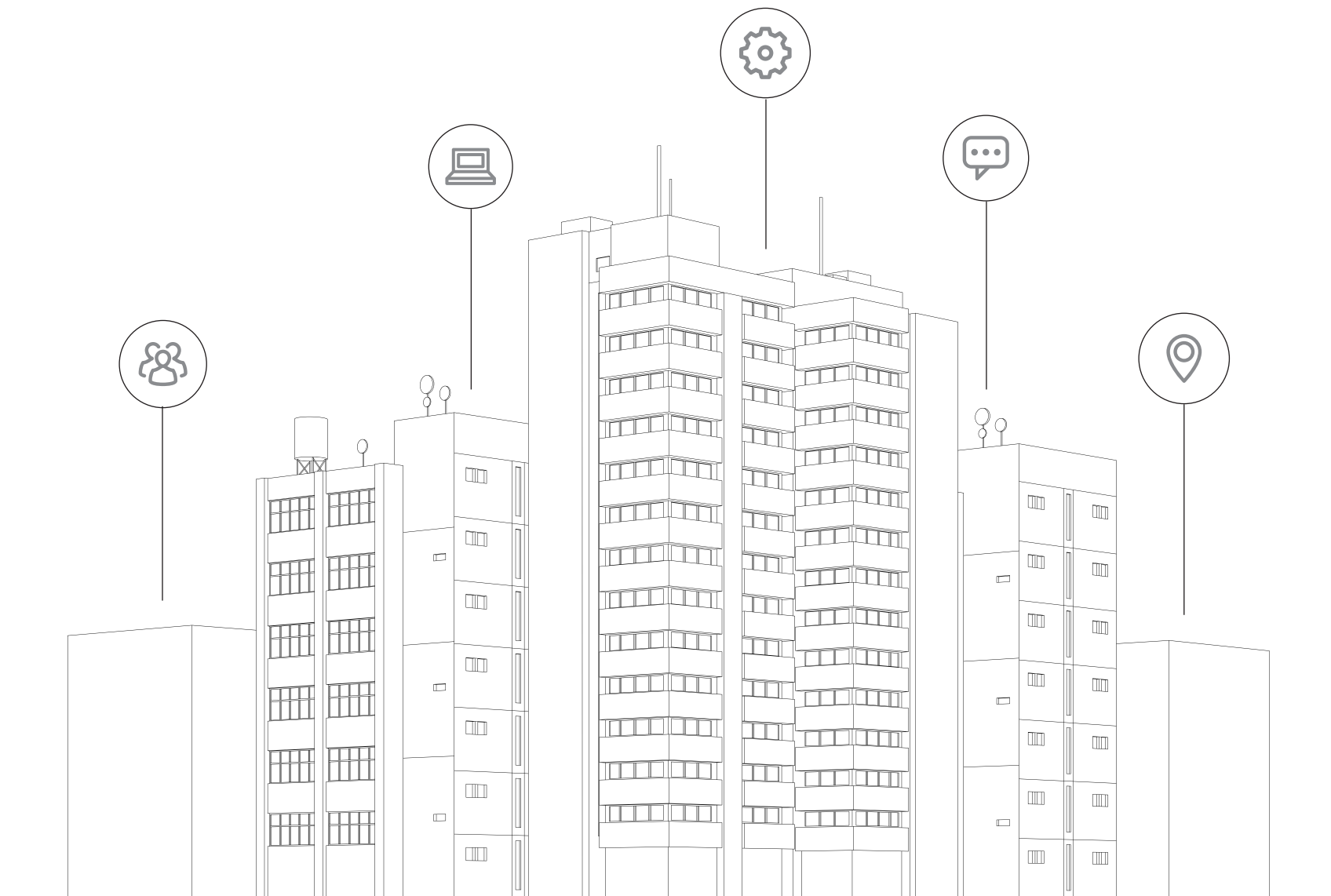


“Integration of yacht design into architecture skillfully straddle the line between deconstruction to reconstruction, shaping the urban skyline with its distinctive brand of architecture and offering its own interpretations of sustainable vision in close proximity to vibrant waterfront.”

– 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



# 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 Director, LWK + PARTNERS



HC Chan. Photo: © LWK + PARTNERS

The 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 fittings 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 smoothen 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?



Publication: Southeast Asia Building

Publication Date: September / October 2020

Original Articles: THE PAVILIA BAY, Smart buildings - trends shaping the future

## 柏傲湾

柏傲湾，由 LWK + PARTNERS 设计，是一个在蓝巴勒海峡暖阳下启航的高尚住宅项目。

项目临海而建，艳阳反照在海上的粼粼闪光深深触动了设计师的心灵——在阳光下，柏傲湾的设计概念逐渐成形。在紧凑的香港，这般壮丽开阳的景色必须被设计强调出来，因此项目亦可被解读为向大海航行的游艇。

从建筑外形、立面设计、室内设计等宏观设计，到门把、标识设计等微观细节，“阳光”及“游艇”两个主题贯彻了整个项目。

作为设计语言，航海以及阳光的体现，在建筑的流线外形上表露无遗。在立面设计方面，项目的立体曲线形态上并没有使用尖角或直线，令一般较僵硬死板的建筑变得更柔和，自然地融入周围的环境。设计采用了较中性的颜色，例如纯白、奶油、石楠灰、米色等，散发平静、平衡的氛围。项目的建材、质感、用色，全部都与超级游艇的概念形成强烈的联系。

为了发挥地块的优势，住宅大楼的座向经过细心调整，令每户都能看到最广阔的海景。项目设置多个室外露台和大平台，配以舒适的沙发、躺椅和透明栏杆，住客可以在无遮挡的环境下眺望蓝巴勒海峡的优美景色，也提升了建筑与周围环境的整体视觉联系。大型的特色且无遮盖的大型景观区域与主要的人行道相连，促进了居民之间的视觉接触，从而促社会融合。

在整个社区中布置了高效、安全和便捷的行人动线系统。景观元素专为主入口处的步行路线设计，以创造更好的步行体验，并将行人路及车路分开。

道路周围将种植树木和植物作为行人区的缓冲区，而通风良好的开放空间也提高了行人的舒适度。所有私家车将直接到地下停车场，以建立高效的交通系统。

团队进行了不同研究，评估不同建筑材料的影响，例如进行太阳能研究测试低辐射率隔热玻璃的热性能（Insulated Glazing Units, IGUs），而噪音影响评估是测试住宅单位内的噪音接收，例如竖向翘板、性能较强的玻璃和建筑物其他部分。

为了降低隔热层的不利影响，屋顶材料的反射系数不低于 78，这与 IGUs 一起便可以降低建筑物热量吸收并减轻空调的冷却负荷。兴建时采用的硬铺路材料中，有超过 10% 以上为可回收用料，同时亦安装了食品分解器，尽量减少废物对环境的影响。

“游艇设计与建筑的融合巧妙地跨越了解构与重建之间的界线，以独特的建筑品牌塑造了城市的天际线，并在充满活力的海滨提供对可持续愿景的诠释。”

—— LWK + PARTNERS 董事陈皓忠

## 项目信息

项目名称：柏傲湾

地点：中国香港

客户：新世界发展有限公司

建筑事务所：LWK + PARTNERS

建筑面积：62,710.038 平方米

竣工年份：2018

相片授权：LWK + PARTNERS

## 智慧建筑 – 塑造未来的趋势

来自世界各地的建筑师分享他们对塑造未来智慧建筑趋势的看法。

LWK + PARTNERS 董事陈皓忠

无疑，现时建造业所面对的各种困难：建筑年期太长、成本太高、人手短缺；尤其是个别工种的人手年纪日趋老化，及年轻人不愿意入行（例如钉板、扎钢筋、浇灌混凝土等），造成青黄不接的境况。以香港为例，随着建筑需求大增，政府联同建造业议会，领导业界创立建造业“装配式建筑联盟”（Design For Manufacturing and Assembly Alliance）。以凝聚特区政府、发展商、建筑师、结构工程师和屋宇装备工程师等专业顾问、承建商、生产商及各大专院校；共同推动装配式建筑以应付未来庞大工程量及业内人力资源短缺的情况。

### 装配式建筑和建筑资讯模型在未来智慧建筑中扮演着重要的角色

有别于传统建筑方法，装配式建筑（Design For Manufacturing and Assembly）是仿效工业产品一般、将在预制厂房先完成独立组装合成组件，全面推动场外建造，并鼓励业界更广泛采用由具规模预制工场所产生的预制组件；在场外的预制厂房以制造业生产模式完成大部分复杂工序；包括主体地台、立面，室内装修、屋宇设备安装和卫生设备等，然后把已完成预制的模块单元运送至工地，犹如“砌积木”般逐一定位装嵌成建筑物。这不但可以提升行业生产力及项目成本效益，更能够达到加强工程质量监管的目的。

这种“先装后嵌”的三维构造预制成品（Volumetric Precast Component）有赖配合创新科技的建筑资讯模型（Building Information Modeling）帮助及相关软件的技术突破，将建筑布局、结构设计和机电设备讯息化，而增强各范畴的相互协调效率，解决很多惯性出现矛盾和冲突的地方，如净高度、管线走向、结构梁深度等。

更难表达的曲线/曲面设计便于三维模拟软件上呈现更立体、更真实的效果，从而更能准绳地完善前期设计及跨领域协调相关工作，因此便能冲破过往二维空间的局限，促成组装合成建筑法。例如在香港，当局就透过推广“组装合成”建筑法，提升建造业整体的质量、进度和安全水平，达致具经济效益及低碳绿色的优质建筑。

作为建筑师，不可不提建筑是一门集美学、力学、文化和历史于一身的艺术。并非单纯能以自“工业革命”以来的工业产品制造模式，便可以单一化、规格化和标准化“因地制宜”和“以人为本”的建筑设计。换句话说，就是将我们生活的空间视为一个机械来加以把持与认知的

这套理念，如同工业产品般被制造的都市，将地域性以及土地固有的历史与文化加以排除，带来的只有单一、同质化的生活环境，这真是我们想要建构的都市吗？