

# Back to basics for sustainable design

BY WONG MEI KAY

Jason Pomeroy, an award-winning architect, master planner and academic at the forefront of the sustainable built environment agenda, has come a long way since that chance visit to St Paul's Cathedral in London when he was eight that sparked a lifelong passion for architecture.

"I learnt from my father that Christopher Wren was the architect of the magnificent structure and that the role of an architect was to shape space through the design of buildings. This trip would eventually lead me to Cambridge — a place that has many buildings designed by Wren — to study," he says in an email interview with *City & Country* recently.

At Cambridge, Pomeroy saw a different side to Wren's creations, which harnessed the benefits of natural light, ventilation and appropriate orientation of buildings to reduce negative environmental impact.

"Such a passive design approach is something architects and designers have been doing since the beginning of time. Yet, technology has allowed us to forget this," he says, adding that this inspired him to embrace basic design principles in his work, which he believes is key to successful sustainable design that is not only functional, but also cost-efficient and environmentally responsive.

Prior to establishing Pomeroy Studio, he worked at international construction, development and design firms such as YRM, Kajima and Broadway Malyan, and was based in places like Brussels, Amsterdam, London, Bahrain and Kuala Lumpur.

In 2008, Pomeroy relocated to Asia and established Broadway Malyan's Singapore office. As board director for Asia at the company, Pomeroy's award-winning projects included Sime Darby Property Bhd's Idea House in Shah Alam, Selangor — which is the first carbon-zero prototype house in Southeast Asia — and Vision Valley Malaysia, the developer's 80,000-acre integrated property development in Kuala Lumpur. Another of the firm's award-winning projects is Century Properties' Trump tower in Manila, the tallest residential tower in the Philippines.

Pomeroy had the privilege of collaborating with several fashion designers such as Versace on the Milano Residences, the first fashion-branded condominium in Asia, and Missoni on Missoni Livingstone, fashion-branded skycourts and skygardens. Both projects are located in the Philippines.

Pomeroy Studio also lectures and publishes widely, and is the author of *Idea House: Future Tropical Living Today and Skycourts and Skygardens: Greening the Urban Habitat*. He has spoken at such events as the World Architecture Festival, TEDx and PechaKucha as well.

Pomeroy is an adjunct professor at University of Nottingham and BCA Academy in Singapore and Mapua Institute of Technology in the Philippines. He also sits on the editorial board of the Council for Tall



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Buildings and Urban Habitat, and is a visiting professor at the University of Nottingham in the UK.

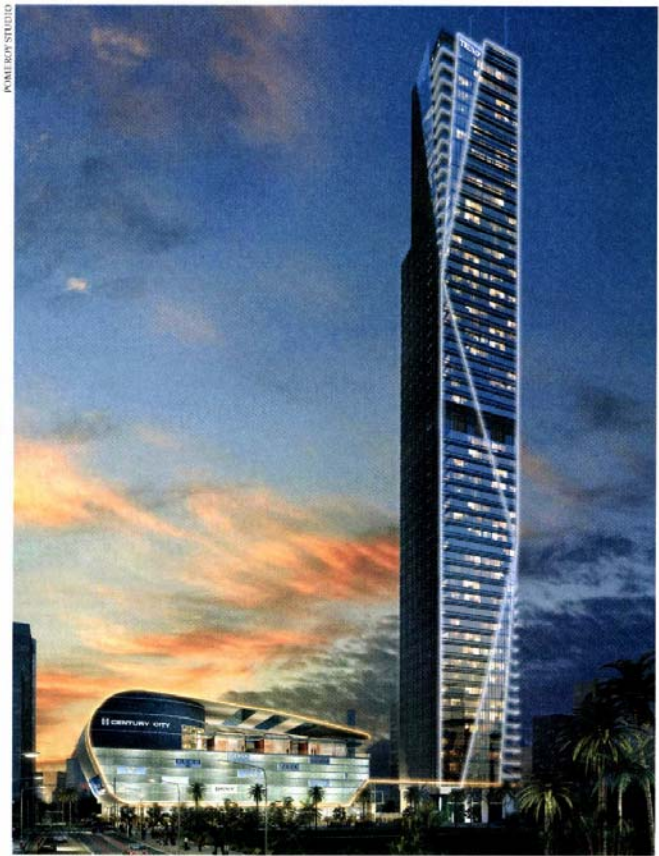
## Windows on the Park

Pomeroy Studio has been invited by Selangor Dredging Bhd (SDB) to provide a third-party review of its design for Windows on the Park in Bandar Tun Hussein Onn, Cheras, Kuala Lumpur.

"It is important to note that we are not the designers. We were appointed to undertake a quantitative analysis of the design, and we were heartened by the fact that they wished to go beyond obtaining a green rating to measure the environmental performance of the development," says Pomeroy.

The development's air quality, water consumption, optimised greenery, daylight penetration, ventilation and energy consumption were all assessed to ascertain and compare the design's performance.

Pomeroy says SDB's approach to sustainable design is very much in line with the "back to basics" concept, which seeks to optimise the passive design attributes of being less reliant on artificial lighting and ventila-



Clockwise from top left: Pomeroy believes basic design principles are key to successful sustainable design that is not only functional, but also cost-efficient and environmentally responsive; Trump Tower will be the tallest residential tower in the Philippines when completed in 2016; Passive Eco-House in Kajang

tion, hence reducing everyday consumption.

The appropriate orientation is able to minimise solar heat gain by 30%, while the slender floor plates are able to enhance daylight penetration by 57%. Pomeroy says SDB also took note of the combination of orientation and separation of the buildings to create a singular loaded corridor with optimised air flow and cross-ventilation in the living spaces by up to 70%.

Other projects being undertaken by Pomeroy include Trump Tower and Eco City in the Philippines, B House in Singapore and Passive Eco House in Kajang, Selangor.

## On Malaysian green buildings and future trends

Pomeroy says one should be conscious that a green building need not look like a green building, and that sustainable design need not be expensive as it should bear the essence of traditional building forms that are climatically and culturally responsive to reduce operational costs, and use technologies sparingly to reduce capital costs.

He believes there are four key emerging considerations from the green building industry in the future (see sidebar). In addition to that, he would like to see more attempts to reinterpret the cultural past in order to inform present-day design in Malaysia.

"Some of the greatest examples of green design have already been created. For instance, the flexibility of the Victorian terraced house. These structures require minimal technology, use local materials and have stood the test of time in being adaptable to suit the needs of subsequent generations and their living practices," Pomeroy explains, adding that features such as tall sash windows optimise daylight penetration and single-sided ventilation exploits height and differences in air pressure. **E**

## Creating more robust urban habitats

According to Jason Pomeroy, there are four emerging key considerations for the green building industry:

### 1. THE SUSTAINABILITY DOMINO EFFECT

We will see the continued domino effects of our carbon woes, with the correlating steps to counteract such issues. This might include global climate change legislation, tax incentives to "go green", tighter green planning policy guidelines and a realisation that sustainable design is an integral element of designing the urban habitat in an attempt to reduce material waste and running costs, and help preserve the environment for future generations.

### 2. AN INCREASING AWARENESS THAT SUSTAINABILITY IS A 'BACK-TO-BASICS' DESIGN

People will become more aware that sustainable design is not about fancy gimmickry, but is just good design grounded in simple building

physics that employs the lessons learnt from the past. Passive design forms the backbone of sustainable design and will hopefully be employed more as first principles when designing sustainable built environments, without the need to put in costly technologies from the outset to offset the energy and water consumed by inefficient design.

### 3. PEOPLE WANT TO KNOW THE FACTS AND TANGIBLE BENEFITS, NOT THE RHETORIC OF A CHECKLIST TO SCORE POINTS

People want to know in layman's terms what sustainable design can do for them. This requires the tangible benefits to be clearly spelt out and based on fact and reason.

Improved air quality, and reduced water and energy consumption and ambient temperatures can all be calculated and therefore provide an indication as to how much household money can be saved at the end of each month for the benefit of landowners and/or tenants. This will help demystify sustainable design.

### 4. RETHINKING THE 'TRIPLE BOTTOM LINE'

With the world population set to continue growing, this will result in three issues — heightened social and cultural transmigration as a response to urbanisation and rising land prices; privatisation of space and consequent depletion of those environments that once fostered social interaction; and continued rise in urban temperatures that contribute to climate change.

Sustainable design that embraces just the social, economic and environmental pillars of sustainability may not go far enough in addressing issues and requires three additional considerations in both the design process and the realisation of our built environment.

Spatial, cultural and technological sustainability would therefore seem parameters that are just as important and should be considered alongside the widely accepted "triple bottom line" to create more robust urban habitats. — By Wong Mei Kay **E**