

Green living

Sustainable living is a lifestyle that attempts to reduce an individual's or society's use of the Earth's natural and personal resources. How does Malaysia fare in this respect? AZILEA BADRI speaks to two eco architects to find out.



VIEW FROM THE FRONT OF DR TAN'S AWARD-WINNING HOME. THE USE OF RECYCLED MATERIALS, LOTS OF CONTROLLED CROSS VENTILATION AND RAINWATER HARVESTING ARE JUST SOME OF THE FEATURES THAT SCORED POINTS IN THE GREEN BUILDING INDEX

HOW many of us remember homes of the past? Where most of the walls had slits in them, not for aesthetic reasons but to allow for ventilation? There wasn't a need for air conditioning back then too, as features such as air wells were added to promote ventilation (climate change and global warming were terms and phenomena that hadn't come into existence yet).

Fast forward to present day and such features which were predominantly used in the past are no

longer employed. Instead, developers prefer to seal everything up, citing insects and pests as reasons for doing so. Indeed, it would seem a whole lot easier to seal everything, but then the little details of the past (that provided both form *and* function) would be relegated to just that, a thing of the past.

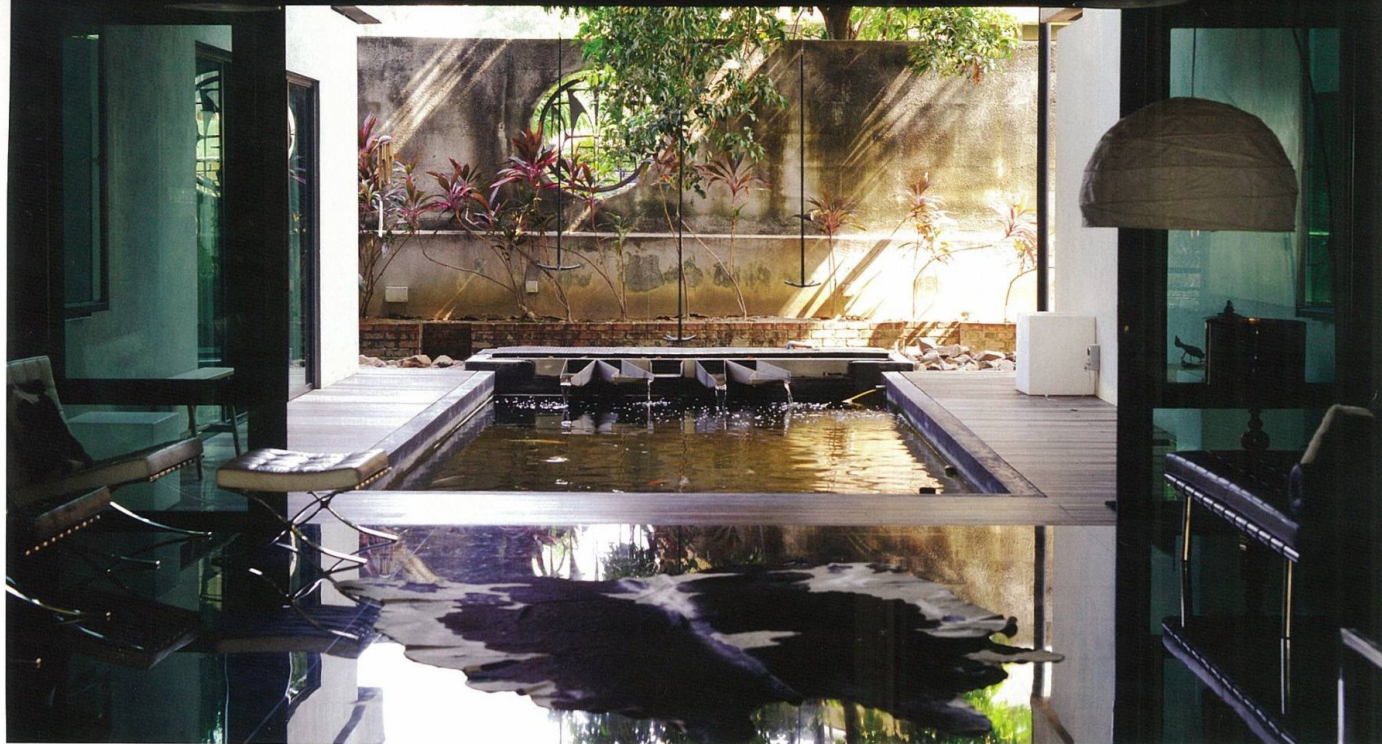
But before you think the future of green buildings looks bleak and holds no promise, hold that thought. It isn't really. There are those out there who are fighting the good fight, who are pushing the green agenda in buildings, so that we live in harmony with our environment. While it is a collective effort – the government, local authorities, developers, architects, property purchasers all play a role

– each party also has a singular role to play in ensuring that the sum of all parts work in one cohesive manner.

In this regard, two individuals are playing their singular role in helping to realise this green agenda. Dr Tan Loke Mun and Michael Ching are two architects who via their firms Archicentre and CH&I Architecture respectively, are blazing an ecotrail towards green living in the country. Both were also instrumental in the formation and setting up of the Green Building Index (GBI) in 2009, a tool used to measure green buildings in Malaysia and thereby setting the pace of the green agenda in the country.

“At that time, the world, particularly Malaysia, was

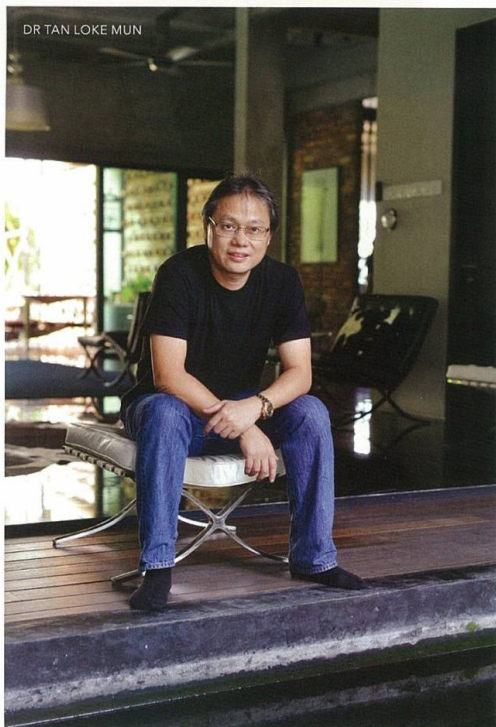
THE OUTDOOR WATER FEATURE ACTS AS AN EVAPORATIVE COOLING ELEMENT AS CONTROLLED CROSS VENTILATION CARRIES IN AIR THAT'S COOLED BY THE WATER INTO THE LIVING ROOM



not so deep into the green movement. So when I came back (from overseas studies) I joined Pertubuhan Akitek Malaysia (PAM) and PAM started this sustainability committee – where they wanted to develop GBI. I was in the pioneer group,” says Ching, who now sits on the accreditation panel of the GBI. “In short, the group of people who formulate the policies in GBI to push its marketing,” he adds.

While everyone can claim to be “green” adds Ching, there must be a benchmark. And GBI, which is recognised in the world by the World Green Building Council (WGBC, a network of national green building councils in more than 100 countries), is this barometer.

How the assessment works is that there are 100 total points in GBI, with 50 being the minimum a building needs to score to achieve green status (see sidebar for more on GBI). Since its formation in 2009, 17 buildings in the country have been completed and certified with



DR TAN LOKE MUN

THE SUSPENDED STEEL STAIRCASE THAT GOES UP TO THE FIRST AND SECOND FLOORS OF THE HOUSE. DR TAN USED STEEL BECAUSE IT IS SO PLENTIFUL IN THE COUNTRY.



green cost. Green cost refers to the cost incurred by the developer to turn his building “green”. This green cost has first got to be certified by the GBI via a certificate. With this certificate, the developer/owner can then offset the income derived from the building, for instance in the form of rebates over tax. This is just one incentive that the government has done since 2010. The second incentive benefits purchasers, who when purchasing a property that is GBI certified, only pay for instance 90 per cent of the stamp duty for their new home.

So has the green building movement caught on in Malaysia?

“Malaysia is a late starter but we are fast catching up.

Green architecture is closely tied to locality and climate. As a developing country we have developed very strongly in passive and lower cost green solutions that suit the tropical weather that is generally wet and hot. In this aspect we are perhaps even way ahead of the rest of the world. There is a current idea forming in the minds of green thinkers that sufficiency is superior to sustainability. The big difference being doing enough to thrive versus consuming more to sustain,” says Dr Tan, who adds that every project that comes through his design office today is built on a green DNA template.

♦ See page 10



THIS BUNGALOW, DESIGNED BY CHING'S FIRM CH&I ARCHITECTURE, WON THE SILVER AWARD FROM MY DREAM HOME 2011 UNDER THE GREEN HOME CATEGORY. SOME OF THE DESIGN STRATEGIES INCLUDE THE BODY OF WATER, WHICH ACTS AS A COOLING LOAD AS WELL AS RAINWATER HARVESTING; THE BUILDING PLINTH IS MINIMISED. 60 PER CENT OF THE SITE REMAINS AS GREENERY AS WELL AS MINIMISING HEAT GAIN INTO THE BUILDING VIA ORIENTATION AND DOOR/WINDOW OPENINGS.

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Ching agrees with Dr Tan, adding that before the GBI benchmark was established, developed countries like England, the United States, Japan and Singapore had their own standards, with Singapore being the only tropical green tool benchmark in the region. Malaysia is also one of the fastest, having recently achieved 100 million square feet of certified green building, which is quite a feat.

"The benefit of starting slow is that we get to study the green movements and assessment tools of countries like the UK, Singapore, Australia, Japan, and also study their mistakes so we don't make the same ones. So we have some forward-looking assessment criteria," says Ching. He adds that even the US, which has the most green buildings under its belt, recently revised its own assessment tools and a few of its criteria to follow Malaysia's.

"That is how forward-looking we are," he says.

In terms of architect firms and developers in Malaysia that are leading the way towards ecologically sustainable homes, Dr Tan cites architects Ching, Datuk Dr Ken Yeang and Serina Hijias and developers like SP Setia, UEM Sunrise, Sime Darby, Ken Holdings, Goldis, Utama group and Lend Lease, among others. Ching says only a fraction of firms have tried the green approach.

"Like it or not, in Malaysia, 75 per cent of homes are still very developer-driven. To change that is tough, but there are a few developers who are starting to move towards green, like SP Setia and Sunway Group," says Ching.

"So we need the big boys to come in and push the boundaries, then the smaller ones will come in. Once it becomes the market force, it will be easier. As architects we are pushing the boundaries, pushing the clients."

Creating awareness towards green living is key, says Ching, who believes that developers, purchasers, collectively need to do it together.



MICHAEL CHING

"Because sustainable living is the key for the next generation."

In terms of future trends, Dr Tan believes zero energy and totally self-sufficient homes will be the game-changer in the future. "Homes will get smaller but better planned and equipped. Some large homes will still be built mainly for family reunions and also as headquarters but these will have to be flexible to seasonal changes in numbers of occupants. As such these homes will need to be totally green – low consumption and operational costs."

Meanwhile according to Ching, besides the 3Rs – reduce, reuse, recycle – that's currently in practice today, his firm also adopts two other Rs – retain and regenerate. He says the natural characteristics of a space, such as stream, rock profiles and trees for instance, should be retained because these characteristics represent the entire spirit of the space.

As for regenerating, stresses Ching, whatever loss (arising from the construction of a building) must be restored. "Bring back the flora and fauna, the animals... bring back the connection to nature."

Should green homes and buildings be made mandatory for developers?

"Yes it should," says Dr Tan. "Minimum standards should start to be implemented on a gradual scale. This is good for the community and *rakyat* in the long run. Money saved can be used to improve the overall quality of life. Green homes are not only for the rich but their benefits are much more needed for the poor and the masses."

Best of the best

Dr Tan Loke Mun is an eco architect who also happens to own the award-winning S11 House, Malaysia's first all-green certified home

STEPPING into Dr Tan Loke Mun's eco award-winning home S11 House, I couldn't help but feel in awe – an undeniably cute (and quirky) black metal sculpture of a deer complete with antlers standing by the saltwater swimming pool – made the house even more endearing.

S11 is a platinum-rated home, the highest level of rating awarded by the GBI for a green home. This means the house fulfils all the requirements determined via the six criteria established by the body in order for a home to be certified green.

Everything in the house seems to be built on a grander scale – the living room is massive, the kitchen and dining are sprawling and meld into one another. With a built-up of 12,000 sq ft, the house is located in an established older suburb of Petaling Jaya. Prior to the house being built, there had stood an existing older house built in the 1960s. Dilapidated, the house had become run down over the years. That is until Dr Tan set his eyes on it.

"The house has an interesting history," recalls Dr Tan.

"I had just come back from Australia in 1992 after studying. I bought this house, did it up and sold it. Then I bought it back about four years ago."

The three 60-year-old frangipani trees in the garden did it for Dr Tan. "I remembered the garden. I saw in the papers that it was up for sale, a big piece of land in Section 11 so I called up the agent and asked if the house had three large frangipanis and the guy said 'Yes'."

He immediately went over to view the property and true enough, it was the house he had sold. "I bought it back right away! I demolished the old house. A lot of stuff from the old house is recycled in this new house."

The red bricks that used to be part of the old house now act as a divider between the car porch and the southern facing deck. The grilles are now used as a decorative feature, and hang on two walls in the living room. Dr Tan placed mirrors behind the grilles to create a window effect as well as bring more light into the living room.

Other notable green features of the house include energy efficiency (large canopy roof and overhangs), indoor environmental quality (fully cross-ventilated main living spaces), sustainable site planning and management (existing trees are maintained on the site), materials and resources (reused materials from old house), water efficiency (rainwater harvesting tanks) and innovation (water bodies for evaporative cooling).

Getting certified

THE Green Building Index (GBI) is the only rating tool in the country used to certify a building as green. For a building to be certified green, it only needs to score a minimum of 50 points and above. Silver is awarded to buildings that score 66 onwards; gold (76 onwards) and platinum – the highest – (86 onwards).

There are six criteria that must be fulfilled to score 50 points:

1. Energy efficiency
2. Indoor environmental quality – what is the air movement/temperature/humidity
3. Site management – how you protect the site during construction/how you allocate green percentage
4. Material and resources used – reused/recycle/sustainable timber, for example
5. Water efficiency – reduce consumption of water/efficient fittings/efficient landscape – landscape that does not consume too much water; using local plants instead
6. Innovation

Did you know?

There are three notable and forward-looking authorities that have green policies:

1. MBPJ (Petaling Jaya City Council)
 - Made it mandatory for developers to be green in order to get their building plans approved
 - Quit rent assessment discounts for those living in green homes
 - Provided free parking for those who owned hybrid cars, although this has now been revoked
2. DBKL (Kuala Lumpur City Hall)
 - Provides additional plot ratio to developers who have green projects
3. MPPP (Municipal Council of Penang Island)
 - Developers charged lower development fees if they are green