

Towards greener buildings

Architects adopt an increasing awareness toward the environment



ALTHOUGH the way that we design and build homes has evolved through many cycles, a strong sense of the environment remain critical in the construction of homes that are both practical and good-looking. This is similar to good fashion sense, which stays fresh and vital all the time, in spite of the fashion trends that come and go.

In the West, for example, many architects and designers are coming back full circle to adopt greener methods of construction, in both method of building and choice of material used. This reflects an increasing awareness towards the environment, a trend that has been gaining ground in the last few years.

Throughout the world, people are paying more attention to sustainable and green initiatives. In the US, Barack Obama has vowed to go green, pledging US\$15bil a year in renewable sources of energy to create five million new energy jobs over the next decade – jobs building solar panels and wind turbines and a new electricity grid, he says. His go green policy will have a major impact on housing and the way that houses are built in future.

Over in China, the Shanghai Tower, destined to be the country's tallest building upon completion in 2014, will also boast many green elements. The mammoth complex comprising offices, residences, retail units and hotel will feature a rain water recycling system, a series of wind turbines to harness wind power and no fewer than nine sky gardens.

At home, the Pusat Tenaga Malaysia Zero Energy Building in Bangi, Selangor, is a pilot project that combines energy efficiency and renewable energy in the first working building of its kind in Asia.

Back in March 2007, our Prime Minister launched the Malaysian Green Building Mission, aimed at raising awareness and



The 4,000 sq m zero energy office building not only takes advantage of free sunshine to light its interiors and produce solar power, but also relies on insulated building materials to keep out the heat.

promoting sustainable building and construction in the country.

What's next?

Firstly, benchmarks and rating tools are needed to guide all involved parties towards achieving environmentally responsible buildings. Many countries have introduced guidelines and assessment methods on whether or not a building can be classified "green".

For example, Britain established BREEAM in 1990, the US has LEED, set up in 1996, while other countries such as Canada, Japan, Taiwan, Australia, Hong Kong and Singapore also have their own guidelines to green buildings.

This month, Pertubuhan Akitek Malaysia (PAM) and Association of Consulting Engineers (ACEM) initiated a Green Building Index – our first – meant to guide architects, designers, engineers and property developers in Malaysia towards constructing greener buildings.

The index provides an assessment of the various categories involved in green buildings,

including energy and water efficiency, indoor environmental quality, sustainable site management and innovation; and, based on these criteria, generates a green rating for the building. This initiative forms an excellent start and provides property developers with clear guidelines for achieving environmentally-friendly buildings. However, as it has just been introduced, it will be some time before the guidelines are adopted by the government and fully enforced.

In Singapore, for example, while the Green Mark was introduced in 2005, the compulsory adoption of certain criteria was not enforced until 2008.

There are also other factors to consider before we can adopt "green" fully. It would be necessary to educate all parties involved. This will be a long-term effort and will need to be done in a systematic way.

For example, if a green feature such as a green roof is to be incorporated into a building, the contractors would need to have the skills to build it, while the developers would

need to know how to maintain it in the long term. The public, too, would need to understand the benefits of living or working in a green building.

Another issue is cost. Green buildings cost more to construct and maintain. Solar panels, which can be used to heat water, for example, are still relatively expensive compared to water heaters that run on electricity.

This means that developers will have to incur more cost when developing a green building, purchasers will have to pay more to buy a green building as well as allocate extra maintenance fees in the long term.

In order to make it more attractive all round and accelerate the development of green buildings, the Government should introduce some financial incentives, not unlike those in Singapore, where the government has set aside S\$20mil to reward developers, building owners, project architects and M&E engineers who make extensive use of green building technologies.

In the meantime, developers should take steps to incorporate green elements into buildings wherever possible.

As a start, we can make our houses more environmentally-friendly by making sure that they have efficient layouts. Generous, airy spaces that are not hindered by columns or dead corners are ideal.

Energy efficient homes emulate nature. They are designed to take advantage of the environment in which they are located and to respond to the climate. Every small step in the quest to go green is important.

While we as property developers strive to ensure that our homes are well-lit, well-ventilated and efficiently designed; home owners, too, can take small steps to reduce energy consumption in their homes.

Any effort in this direction – from using energy saving bulbs to reducing the use of air-conditioners and being careful with water consumption – is beneficial for the environment and helps with the pocket, too!

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