

SUSTAINABILITY
– THE NEW
BUZZWORD



PAVING THE PATH TOWARDS SUSTAINABILITY



Tan led the development of the GBI rating system by PAM and the Association of Consulting Engineers

THE seed of eco-culture and the green building movement germinated and grew from the Rio Earth Summit in 1992. Incidentally, Local Agenda 21, a non-binding, voluntarily-implemented action plan of the United Nations on sustainable development, was also adopted at the same summit.

For Malaysia, the green building movement took a while to take off as compared with other developed nations. The country's first green rating tool, the Green Building Index (GBI) was introduced about half a decade ago, and in a strange twist of fate, the idea for GBI was first mentioned in one of property developer S P Setia Bhd's conference rooms in a project meeting in 2008.

"We were discussing the importance of sustainability and the eco concept for a project in Setia Alam, Shah Alam in Selangor. It was then that Datuk Khor Chap Jen proposed that the Malaysian Institute of Architects (PAM) as an independent professional body, should develop a credible green rating tool for Malaysia," recalls architect Tan Loke Mun, director and founder of Archi-Centre Sdn Bhd and past PAM president. A strong advocate of the green building movement in Malaysia, Tan led the development of the GBI rating system by PAM and the Association of Consulting Engineers.

Following the meeting, Khor, who is currently Rehda Selangor chairman and executive vice-president of S P Setia, wrote to PAM to develop a green building rating tool as S P Setia was prepared to

fund it. The proposal was tabled at PAM's Council meeting under the then presidency of Lee Chor Wah, where it was decided unanimously that PAM proceed to develop the tool with its own funding.

"I offered to be the team leader to develop this new tool. PAM allocated RM100,000 seed money for it," Tan says, adding that a team of professionals and property industry people volunteered their time for the next few months and by the end of 2008, the new tool was ready for pilot testing.

"Constant meetings were held with the Building Industry Presidents Council (BIPC) and the new tool had the full support of the entire building and property industry, as well as the federal government who then provided several tax incentives for the new tool in the 2009 Budget," he recalls. State governments such as Penang and local governments including Kuala Lumpur City Hall (DBKL) and Petaling Jaya City Council also provided support.

In May 2009, the GBI was officially launched, and since then, many Malaysian developers, especially the leading ones such as S P Setia, have embraced the green building transformation.

NOT A PASSING FAD

"Green is not just a temporary buzzword," says Khor. He stresses the importance of long-term sustainability and livability so that the community can reap the benefits for the long run.

In the early days at S P Setia, the developer was always conscious of the need to build sustainable homes. But the real big push towards



Setia Alam



Khor: Green is not just a temporary buzzword



Tan: Right from the start, we wanted a very green and sustainable township

sustainability came when it bought 4,000 acres of oil palm plantation land in Shah Alam in 2002.

“Right from the start, we wanted a very green and sustainable township. A lot of thought went into it. We looked into factors such as the environment, the community and security,” says Tan Hon Lim, Bandar Setia Alam divisional general manager.

From the original 4,000 acres acquired, approximately 600 acres were sold to the Selangor State Development Corp (PKNS) and another 2,525 acres were allocated for the Setia Alam township.

Setia Eco Park, a joint-venture project with Great Eastern Life Assurance (M) Sdn Bhd and the Employees Provident Fund, took up the remaining 791 acres.

About 10% of Setia Alam is gazetted as green spaces which include beautifully landscaped large-scale townparks with amphitheatres and well-equipped playgrounds. Bicycle tracks have also been incorporated to link residential areas to each other and recreational facilities. This is to promote lower carbon commuting while increasing opportunities for social interaction and

the pursuit of healthy outdoor activities among residents.

The township also boasts passive green design aspects such as the north-south orientation of the homes, with waterways and pockets of green spaces between the residential clusters of about 300 homes. “Studies show that this is the optimum figure to promote healthy social interaction, which is in line with our *LiveLearnWorkPlay* development philosophy,” Khor adds. The single entry point system also makes it easier to manage traffic flow and security.

S P Setia’s expression of its

holistic development philosophy can also be seen in the comprehensive range of amenities available to residents of Setia Alam and Setia Eco Park. This includes local national, Chinese and Tamil schools, private and international schools, a badminton academy and a wide array of commercial shops and offices dispersed throughout the townships.

In 2010, the developer upped the benchmark further in its sustainability efforts by launching the 240-acre integrated green commercial hub called Setia City within Setia Alam. The hub will comprise office towers,

hotels, serviced apartments and at the heart of it all, Setia City Mall.

To encourage more industry players to go green, all buildings within Setia City are required to be green-rated and physically connected to each other. This will make Setia City the largest integrated green commercial hub in the country.

LEADING BY EXAMPLE

Setting the standards at Setia City is Setia City Mall, one of the first green malls in Malaysia and the winner of *The Edge-PAM Green Excellence Award 2013*. The

Setia City comprises office towers, hotels, serviced apartments and at the heart of it all, Setia City Mall



Setia Eco Hill will feature a network of pedestrian and bicycle paths

mall was jointly developed by S P Setia and the Asian Retail Investment Fund 2 (managed by Australian property group, Lend Lease). It was opened in May 2012 with over 230 international and local retailers occupying 740,000 sq ft of net lettable area.

Setia City Mall boasts dual accreditation – the Green Mark from Singapore’s Building and Construction Authority and the GBI.

Judges had deliberated on its design, sustainability, implementation, cost efficiency and relevance to the community.

While it is not easy to quantify the long-term health and environmental benefits of going green, Setia City Mall is an excellent

example of how a green project can reap benefits for its occupants.

The eco-friendly mall is full of green features, including a high efficiency chiller plant, low-emission glazing, energy-saving lights with daylight sensor, rainwater harvesting and drip irrigation, as well as bio-waste composting.

The state-of-the-art green technologies cost the developer a premium of about 4% to 5.5%. However, it believes its additional expenditure on green features is well spent as it gained estimated savings of 20% to 30% in energy, and more than 40% in water.

Its tenants are also encouraged to do their part by installing

energy-efficient equipment and using recyclable materials. The mall has an in-house recycling centre with a current recycling rate of 24%. It plans to increase to a rate of between 30% and 50% in future, on par with some malls in developed countries.

Adjacent to the mall is a 10-acre park that features a children’s playground and a water plaza. The mall is connected to the Setia City Convention Centre via a covered walkway.

S P Setia will also be the first to relocate its headquarters to Setia City. The group’s new headquarters which is being completed and scheduled for occupation in early 2014, is a

GBI platinum-rated project.

“The buildings within Setia City need not all be GBI platinum-rated. We just want to encourage more companies and industries to go green. Even if they are baby steps, they will help create more awareness in the long run,” says Khor, adding that it was heartening that many of its partners embraced the push to go green wholeheartedly.

Other corporate names that will be following suit by constructing their own green buildings within Setia City include Top Glove Corporation Bhd, Khind Holdings Bhd, Century Logistics Holdings Bhd and Brickdotcom Sdn Bhd.

ECO-THEMED TOWNSHIPS

S P Setia has also pioneered eco-themed townships in the country such as the multiple award winner Setia Eco Park.

Construction was carried out according to the natural contours of the land, thus minimising earthworks.

The township has a 57-acre forest park, a 1-acre dog park and numerous lakes and waterways



Setia Eco Park homes were built according to the natural contours of the land



Setia Greens



Khoo: The value for buyers investing in green projects is mainly for the long term

which host ducks, swans and fishes, as well as other flora and fauna. Numerous phases of homes in Setia Eco Park are also fitted with Building Integrated Photo-Voltaic (BIPV) solar roof panels, rainwater harvesting channels and rooftop gardens.

As a follow-through on its success with Setia Eco Park, the group's RM3 billion Setia Eco Glades joint-venture township project in Cyberjaya, Selangor will leverage on the existing leafy, mature forest trees in the 268-acre site.

The team approached the Forest Research Institute Malaysia to help identify the trees that could be saved, which numbered about 1,350. They then used a Big John Tree transplanter to remove and replant the trees in the natural undulating terrain.

"Through trial and error, we have now achieved a 95% success rate thus preserving the beauty of these magnificent mature trees for the benefit of our residents," says Khor.

Setia Eco Glades also offers landscaped streets, rainwater har-

vesting channels, BIPV features, north-south house orientation and water-efficient sanitary ware.

Over at Setia Eco Hill in Semenyih, Selangor, the green township which spans 1,700 acres with a GDV of RM9 billion will feature a network of pedestrian and bicycle paths. The master plan also has provisions for a commercial centre and a farmer's market to provide opportunities for the nearby organic farms to sell their produce directly to the township's residents.

Up north in Penang, the developer's GBI-certified green projects include the Setia Greens landed development, Setia Pinnacle apartments, 11 Brook Residences (GBI Gold) and Subterranean Penang International Conference & Exhibition Centre (SPICE).

"The value for buyers investing in green projects is mainly for the long term," says S P Setia Property North general manager Khoo Teck Chong. "Of direct impact on the purchasers are savings in

electricity bills with solar heaters, savings in water bills with rainwater harvesting systems and water-efficient fittings, cool roofs and low VOC (volatile organic compounds) paints," he adds.

Khoo observes that the general public is more receptive to green initiatives nowadays, due to the efforts of the media and industry players in promoting green initiatives, resulting in greater awareness and knowledge about the benefits of the initiatives.

He cites an example: S P Setia's first landed green development in Penang called Setia Greens. "The project was well-received even though we were selling at a premium. The purchasers were convinced into buying our development and its green initiatives," he says.

Khoo foresees that green development is the way forward. "Most of our future developments have green concepts," he says, adding that S P Setia will continue to implement green building features as they will add value to the properties and benefit buyers.

PROVIDING ADDED VALUE TO A BUILDING

ACCORDING to Chan Seong Aun, the current president of the Malaysian Institute of Architects (PAM), many developers such as S P Setia which have a genuine concern for the environment, have appointed Green Building Index (GBI) facilitators to assist them in implementing green features for their projects.

The GBI facilitators have also helped the projects gain GBI certification. "The green features have subsequently yielded real benefits in lower electricity and water consumption, healthier indoor environments and less rubbish generated by the buildings," says Chan.

Green projects in the tropics are usually designed to reduce heat coming into the buildings by insulating and shading against direct sunlight. Based on these designs, the buildings would require less cooling, and the energy use for air-conditioning would subsequently be reduced.

The green developments are also designed to let in more daylight and fresh air, resulting in brighter and healthier environments.

Rain water harvesting is usually used for watering the landscaping for the project, thereby reducing the use of potable water. More advanced projects will even use rain water for flushing toilets, further reducing potable water use and giving long-term benefits to the building owners.

Green projects often also feature innovative use of solar water heating and BIPV panels which harvest solar energy to supplement electricity supply. Other features such as energy-efficient and high-efficiency equipment in green buildings will further reduce electricity consumption in green buildings.

"As of 2013, more than 500 buildings totalling more than 750 million sq ft have been certified by GBI," says Chan, adding that this is an incredible achievement and GBI is one of the fastest-growing green rating tools in the Asia.

Chan notes that green buildings are an important avenue for Malaysia to achieve its target of 40% reduction in greenhouse gases by 2020. This is because buildings consume 50% of the electricity generated in the country and any savings on this will constitute a massive reduction in carbon dioxide generated from the power stations in the country.

"I have designed and built a GBI platinum-rated home to test this and have



Chan: GBI is one of the fastest growing green rating tools in Asia

proven it to be true. The other not commonly-known fact is that we are all much healthier in such a home," says Tan Loke Mun, director of ArchiCentre Sdn Bhd, in sharing his experience.

Despite the benefits in the long term, there remain significant challenges in getting more developers to go green.

Many developers see the implementation of green features in their projects as additional costs, but fail to see the lower operating and maintenance costs.

Some developers also leave the decision to go green very late in the project, after much of the project design has been firmed up. Many of the green features then become add-on features and are seen as additional costs to the project. If they had started the project as green projects, many of the features would have been incorporated and in many cases would have no cost implications.

According to Tan, green rating tools and green buildings are just a small but important step in the green transformation. The ideology of sustainability began as a Western concept of trying to conserve while still maximising consumption to ensure economic growth and prosperity.

He, however, offers some food for thought. "Perhaps the real green concept should be based upon the more Eastern philosophy of 'sufficiency', where there is no need to maximise consumption for a meaningful life. Sufficiency could transform us from wanting to increasingly own and consume things to becoming stewards of all that is on the planet," he says.



FIRST GREEN-RATED INTEGRATED DEVELOPMENT IN MALAYSIA



Ong: The greatest challenge is to integrate multi-purpose segments into an overall green development

THE journey leading to the official launch of KL Eco City (KLEC) was long and fraught with challenges. Undoubtedly, it was one of the more difficult parcels of land in Kuala Lumpur to develop.

Previously known as Kampung Haji Abdullah Hukum, the 25-acre site which KLEC sits on was previously owned by several private landowners, the federal government and KTM Bhd. Hence, it took some time to resolve land ownership issues. Additionally, the site was physically constrained by the Klang River and Jalan Bangsar. Nonetheless, the delay turned out to be a blessing in disguise which gave ample time for developer S P Setia Bhd to come up with a world standard, eco-friendly integrated development that boasted excellent connectivity.

In 2011, the joint-venture development with Kuala Lumpur City Hall (DBKL) was officially launched. The green, mega project with a gross development value (GDV) of RM6.5 billion is a sus-

tainable development — a feature in all S P Setia projects.

KLEC, nestled among established commercial precincts of Mid Valley Megamall and KL Sentral, is designed by world-renowned architectural firm Jerde Partnership International, and will comprise commercial and residential components.

The ambitious project is envisioned to be the first integrated mixed-used development to be green-rated.

“The buildings in KLEC will achieve gold standard rankings under respective green-rating tools,” says Datuk Richard Ong, executive vice-president and project director of KLEC.

There will be three blocks of luxurious apartments, three high-rise office towers, 12 blocks of boutique offices, strata offices and a hotel sitting atop a retail podium. In total, KLEC will have a net floor area of 5.7 million sq ft. About 30% of the overall open area is dedicated to landscaping.

Connectivity is always an important feature in all of S P Setia's projects. KLEC has been designed to enable users to travel with ease and under covered areas within the development. There will also be a direct link nearby for pedestrians to go to IGB Corp's Mid Valley Megamall.

Ong says the greatest challenge is to integrate multi-purpose segments into an overall green development. He adds that the key objectives for the residential and commercial premises are to reduce carbon footprints and fuel consumption, promote the use of recycled materials, enhance indoor air quality and the microclimate, and increase efficient use of water and energy.

According to Ong, the strategy is to determine the rating tools best suited to the respective buildings and adopt Malaysia's GBI (Green Building Index), Singapore's Green Mark, or the US' Leadership in Energy and Environmental

Design (LEED) for the various buildings in the development.

“For instance, LEED is particularly suited for the boutique and strata offices where the developer will design and build to LEED gold standard. This ensures that the building has the requisite green features for the basic structures, building envelope and services,” he adds.

However, he says when the tenants or occupiers move in, their fit-outs, office layouts, renovation materials and use of space will not be subject to green rating points as the developer would not be in a position to impose prescriptive controls over these aspects.

Another significant contribution towards carbon footprint reduction is the building of an integrated public rail transport hub within KLEC, says Ong.

It took S P Setia much effort to procure land owned by the rail transport authorities and receive their approvals to construct the integrated station.

The development is one of the few in KL which will be serviced by three modes of public rail systems — the Light Rail Transit, the Mass Rapid Transit and the KTM Kommuter. With this initiative, S P Setia hopes that the provision of about 3,000 car park lots can be done away with by increasing the number of public transport commuters.

This will significantly reduce carbon footprints and promote S P Setia's green agenda, says Ong.

The developer has also invested more than RM150 million to build dedicated interchanges and an internal two-tier road system similar to the one at the Kuala Lumpur International Airport. Four dedicated ramps will enter and exit KLEC.

On the Federal Highway, there is a dedicated ramp coming in and another going out. Across the Klang River, the developer will construct two bridges for traffic coming into the development.

An artist's impression of KL Eco City — Malaysia's first integrated mixed-used development designed for gold certification under the GBI