

Although industry players in Malaysia's architecture and engineering sectors have been seeing green for quite sometime, the national architectural association Pertubuhan Akitek Malaysia (PAM) only recently made

its love for sustainable practices official by combining forces with the Association of Consulting Engineers of Malaysia (ACEM) to introduce the Green Building Index initiative (GBI), a rating system which ambitiously aims to guide building owners and developers on the right path in terms of designing and constructing sustainable structures which will reduce the nation's

carbon footprint. Past president and acting representative of ACEM **Ir. Chen Thiam Leong** and PAM's **Ar. Chan Seong Aun** sat down with us recently to share their respective takes on the future of Malaysia's burgeoning green movement.

TEAM

Could you give us a bit of background on the founding of the Green Building Index?

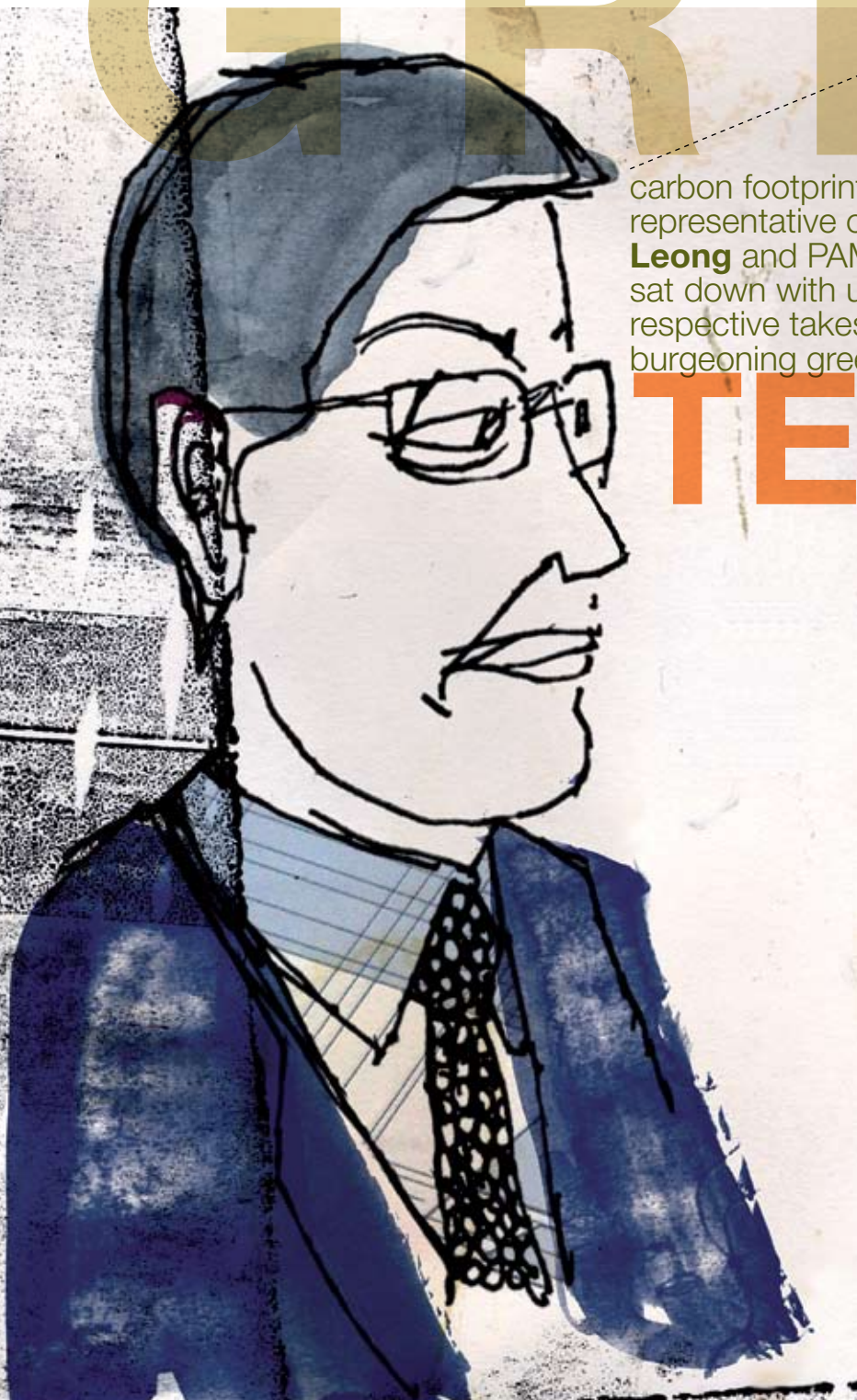
CTL: It may seem to people like we started off from scratch with the development of GBI but there's really so much history behind the whole process: at least four years ago, some of us in the industry thought it was about time that we got involved in devising more eco-friendly building methods. Approached by concerned developers, PAM later came to me and indicated that they also wanted to jump on board. Previous to that, I'd actually been in touch with another green-based organization that was also interested in working with me to develop a green rating tool. In the end, all parties decided that it didn't really matter who was involved in starting the whole business; our goals were really the same even if we had different agendas. We've also been working hard to get the GBI implemented into the uniform by-law in order to make its requirements compulsory. Even though we were earlier informed that this would be possible by 2003, we're still waiting for something to happen at this point.

If it isn't compulsory for Malaysian buildings to abide by a set of assessment criteria laid out by the Green Building Index, why did PAM and ACEM think it was necessary to launch an official rating system?

CSA: While a lot of architects have already been designing green buildings for ages, we badly needed to set down standards which were more concrete and official. In short, we don't want anyone to play guessing games when it comes to deciding what constitutes a sustainable building, especially the layman. The US has LEED, Singapore has Green Mark and now we have the GBI. In Malaysia, there are pockets of people who are involving themselves in the green movement – we also needed something official so that everybody could come together.

As stated in your presentation, statistics show that [the country] is really at the bottom of the barrel when it comes to reducing greenhouse-gas emissions. In light of this information, do you think that Malaysia has the potential to dispel its ongoing reputation for having a rather apathetic attitude towards the environment?

CTL: It's true that it will take some time before everybody – from industry professionals to homeowners – realizes that going green isn't an option or just a fashionable thing to do. The challenge is that our infrastructure doesn't support green-building at the moment. However, don't forget that the best situation may be the kind where decision-makers are subjected to peer-pressure in a sense that no one wants to get left behind. Awareness of sustainability will eventually sink in once enough people start adopting an eco-friendly way of living and pressuring governmental bodies to comply with their demands. Sure, we are ambitious but keep in mind that we are not starting from scratch as far as pushing the move towards sustainability – we do base our standards on existing research made by other assessment bodies. Malaysia's actually not as bad as people think. We may be behind in comparison to a place like Singapore where green buildings are mandatory by



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law but we are far ahead of many other countries that have yet to adopt a green standard of their own. I think neighboring countries such as Indonesia will be looking closely at us.

CSA: In order to make change happen, it is necessary to get through to the public. Once people realize that sustainability is a critical issue, then things can actually improve. When I'm working on a house, I usually try to recommend insulated roofing to the developer in order to enable better ventilation which reduces the need to use air-conditioning. Even though this is relatively cheap to incorporate into many homes, most developers don't see the point; for them, the reasoning is, "Why install something that homeowners can't see?" or "What's the problem with turning on the air-con if you feel hot?" Increased public demand for green features can change this attitude and turn things around.

Aside from generating greater public awareness of environmental issues, what are other challenges that Malaysia must overcome in order to be more sustainable on a whole?

CSA: I think problems are also directly connected with the way our cities have been designed. In Kuala Lumpur, for example, there's not enough emphasis on the linkages between different forms of transportation. Public transport is inefficient so everyone is reduced to driving cars. Not enough alternatives are being offered and even though the deterioration won't happen overnight, the effects will be completely obvious several generations from now. Unfortunately, people live for today and don't think about tomorrow but experts say that the window for change is within the next 10 to 20 years – after this period, things could be irreversible. This is an issue the government should definitely pursue as it affects us in the long-term. Sustainability not only concerns itself with the physicality of a building but also with the social aspects that are associated with how and where it is built. To be truly sustainable, you have to look at things from a holistic point of view.

What are the key characteristics that a building has to employ before it's worthy of being called 'green?'

CTL: The GBI operates slightly differently than other rating systems - it's designed to accommodate our bad habits. In Malaysia, we tend not to maintain our buildings very well post-construction so this factor is taken into account by the fact that our rating system is only valid for a period of three years. After that, you'd have to reapply to get re-audited by the committee. If the upkeep on a building is not up to par, it risks losing its green ranking. Generally, we base our assessment methods on a set of six criteria: sustainable site management where we ensure that the location or site is right for the building and vice versa; energy efficiency is also important to make sure that consumption is kept to a minimum (we are currently developing a user-friendly software for industry professionals to accurately calculate potential energy consumption which we are going to unveil at the launch of GBI this April); indoor environmental quality because air quality is important for tenants so this standard covers areas like controlled smoking, air-change

effectiveness and daylight glare control; materials and resources are also being considered – by this, I mean material reuse and collection (this is applicable for existing buildings); we also focus on water quality and look at how effectively a building harvests rainwater as well as its efficiency in terms of dealing with irrigation. Lastly, we assess a building based on its innovation and design.

Does it 'pay' to have a green building?

CSA: Definitely. Whatever we build wrongly today is going to have an effect on people 30 to 50 years down the road. If we don't build proper buildings now, the next generation might be stuck with the same problems which results in the buildings being misused and abandoned. A green building also saves the owner a lot of money spent on energy which is usually wasted with buildings that are constructed without the same considerations. Also, it's been proven that employees working in green buildings tend to be more productive. So in short, quality matters.

Aside from its upcoming launch, what are some GBI-related events/projects that are currently being organized?

CSA: We have already been approached by organizations, such as the Real Estate Housing Developers' Association (REHDA) who want their buildings rated in accordance with the GBI. After concentrating on new buildings, we plan to move into assessing older, existing ones.

CTL: With green-building, everyone has to learn to work as a team. In earlier days, architects looked at everything but because they are required to specialize in more specific areas nowadays, anything technical is being left up to the engineers. PAM has realized this so we are going to start a series of lectures on energy efficiency as part of the mandatory Continuous Professional Development (CPD) program that all practicing architects have to undergo. The pressure is on for designers to better educate themselves as the public develops a keener interest in green features.

Do you feel that engineers play a backstage role in terms of creating a piece of architecture?

CTL: Architects don't like hearing this but engineers are the only ones who can *legally* construct a proper building on their own – but then again aesthetics would take second place in this case!

CSA: Engineers tend to have a very isolated view of a project whereas architects are obligated to consider the overall picture. Design is all about establishing a balance between one thing and another. [Architects] have to look at the building from different perspectives while engineers will take the shorter, more practical route, for sure. To this very day, there is no computer software in existence that can design a house from scratch. The creative process that an architect goes through is really important because this is how a building winds up being shaped; simply put, the shape of a building dictates its function. In order to be effective, you have to work together but architects are usually the people who have to conceptualize something from nothing.