

GREEN BEATS 02

Issue No 2, March 2018

S11 House

Discover how an existing old house built in the early 1960, dilapidated and run-down, being transformed into a new green tropical house designed to achieve the highest-level Platinum rating of Green Building Index.

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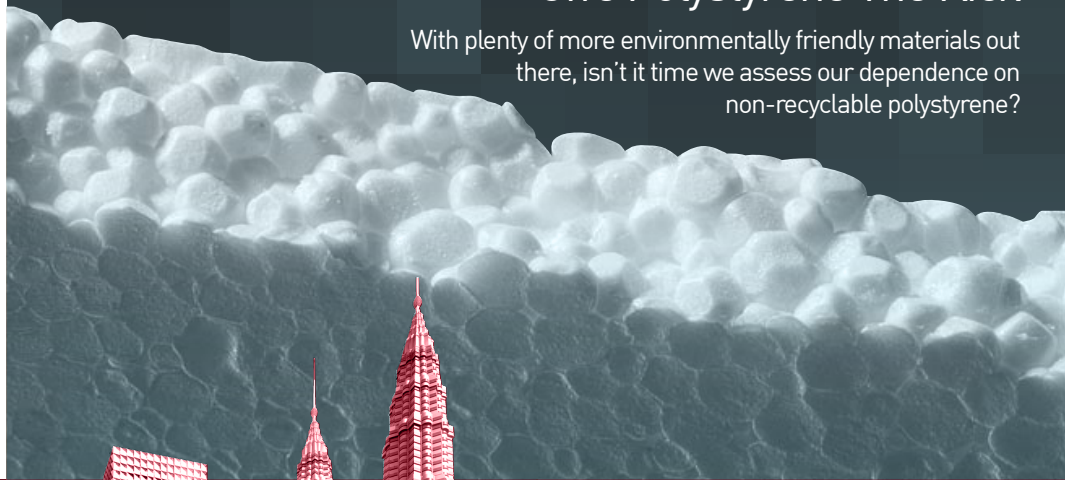
Malaysia's Investment Tax Allowance

To strengthen the development of green technology, the Government continues to provide incentives in the form of investment tax allowance for the purchase of green technology assets and income tax exemption for the use of green technology services and system.



Give Polystyrene The Kick

With plenty of more environmentally friendly materials out there, isn't it time we assess our dependence on non-recyclable polystyrene?



MGBC PAM Design Competition

A design competition poised to design environmental friendly and sustainable building in a modern university campus setting to be used as Malaysia Green Building Confederation's (MGBC) office and training centre.



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Malaysia's Investment Tax Allowance

The world's first tax incentive for green buildings

At the 2009 COP15 in Copenhagen, Prime Minister, Dato' Seri Najib Tun Razak pledged to reduce Malaysia's emissions intensity of its GDP by 40% by 2020. This doesn't necessarily mean a reduction in total carbon emissions, instead it's a promise to not increase emissions relative to economic growth. As Malaysia works towards achieving this goal, proponents of the green building industry in this country successfully lobbied in 2009 for a financial incentive to encourage the uptake of green buildings. Rather than a subsidy, this incentive has come in the form of a tax exemption known as the investment tax allowance (ITA).



In October 2009, as part of the 2010 Budget, Dato' Seri Najib announced the incentive, making Malaysia the first country in the world to introduce a tax incentive for green buildings. The key objective of the incentive is to encourage investments in, and acquisitions of, green buildings, as well as the use of locally developed certification tools.

Following the Budget announcement, members from GreenBuildingIndex (GBI) were invited to meet with Lembaga Hasil Dalam Negeri (LHDN) to discuss how to apply the policy and to frame the new gazette. GBI proposed that the ITA should be applied to the incremental cost of 'qualifying expenditure' (QE), i.e. the additional costs spent on using certified green products in buildings that achieved certification with GBI. LHDN agreed that this calculation would be the fairest method for both government as well as building owners, as they didn't want it to seem as if green buildings were subsidised, therefore falling victim to greenwashing.

Another element discussed during these meetings was how to ensure the figures were legitimate and how to keep the process safe from exploitation. It was decided that the best way would be to have self-regulating professionals (architects, engineers, quantity surveyors) be responsible for the signing off of figures and approval of applications. The result is a review process that is both rigorous and accountable at each stage (detailed below), thus safeguarding against unscrupulous claims and greenwashing.

Not long after working out these details, Malaysia Green Building Confederation (MGBC) representatives attended a conference in Houston to formally register MGBC with the World Green Building Council. At the mention of the tax incentive, they received a standing ovation for their exemplary efforts.

As the 31st December 2014 end date of the first gazette drew closer, GBI requested that LHDN should extend it. They reasoned that construction of buildings takes time and that many buildings already registered to be certified by GBI weren't due for completion until after 31st December 2014. With the support and efforts of the Malaysian Investment Development Authority (MIDA) and the Malaysian Green Technology Corporation (MGTC), the new gazette was finalised, and Dato' Seri Najib announced in the Budget 2015 that it would even be expanded to include other green technology products and services, too.

For their efforts in promoting green development in the country, in January 2014, GBI was recognised by the government as one of Malaysia's Top 30 Green Catalysts for transforming Malaysian buildings to be more eco-friendly.

How the Investment Tax Allowance Works

The Investment Tax Allowance (ITA) can only be claimed by the applicants, i.e. the building owners of commercial or industrial buildings that have been awarded green building certificates from government-approved locally developed rating tools or certification bodies. The ITA can only be claimed against income derived from that building, and can be off-set against the statutory income until it is fully utilised. The ITA will apply so long as the Qualifying Expenditure (QE) is expensed on or before 31st December 2020, i.e. it is a continuation without any breaks from the earlier gazette that ended on 31st December 2014.

The process of assessment of the GBI Green Cost Certificate (detailed below) remains the same and is as stringent as the process agreed to, and accepted by, LHDN then confirmed by MIDA and MGTC. All projects must apply to MIDA complete with proof of GBI registration as part of the pre-requisites for final submission to MGTC.

When the project is completed, it must then apply for GBI Final Certification (CVA) and GBI Green Cost Certificate. Once these are obtained, they're submitted to MGTC for QE approval, complete with the GBI CVA and GBI Green Cost Certificate. This is required for MGTC to confirm whether there are other deductions before the application can be presented to LHDN.



The process for calculating the Green Cost Certificate is as follows:

1. The applicant submits the qualifying capital expenditure figures, calculated on an incremental basis and certified by the project's QS, to GBI for assessment.
2. GBI's Technical Team assesses the figures and after reviewing with the project's QS, recommends them to the GBI Accreditation Panel (GBIAP) for endorsement.
3. GBIAP reviews and endorses the submission then prepares the Green Cost Certificate and presents it to the Lembaga Arkitek Malaysia (LAM) for the signature of the LAM Chair.
4. The LAM-signed Green Cost Certificate is issued to the applicant.
5. The applicant then submits it to MGTC for QE approval. If approved, the applicant presents it to LHDN and the exemption is automatically applied.



S11 House

Who lives here?

Ar Dr Tan Loke Mun, his wife, 2 teenage sons, mother-in-law, 1 maid, 2 toy poodles

Location:

Petaling Jaya, Selangor

Rooms:

8 bedrooms, 8 bathrooms, 3 powder rooms, 1 AV room, 1 living room, 1 family room, 2 offices

Size in sq m and sq ft:

1,100 sq m / 11,840 sq ft

Dimensions of the land:

1,240 sq m / 13,347 sq ft

Date started:

2008, started construction 2009

Date completed:

End 2010

Final cost:

RM 2.1m

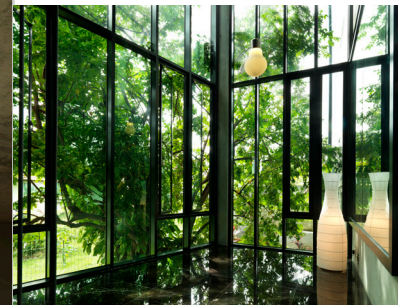
GBI Green Cost:

RM 224,297.73



The S11 House in Petaling Jaya is Malaysia's first – and only – residential building to have been awarded platinum certification according to the Green Building Index rating tool. The architect and homeowner, Ar Dr Tan Loke Mun, showed me around the bungalow and shared his experience of building a green home and what he hoped others could learn from it.

When you walk up to the S11 House, it suggests a sort of grandeur and technical precision. Its colour scheme is dark without being harsh – the kind of earthy darkness you associate with being deep in the jungle.



It's exactly this connection between the built environment and natural world that Ar Dr Tan Loke Mun wanted to create when designing this three-storey, eight-bedroom bungalow. He has been a practising architect for 27 years, and in that time, has achieved many things,

including being elected as PAM President (2007-2009) and Chairman of the PAM Sustainability Committee. Ar Dr Tan was also part of the core team that set up Green Building Index.

When we sat down to discuss the building, he revealed that it was a pilot project, a 'test model', for GBI's green rating tool, which was launched in 2009 specifically for the Malaysian tropical climate and environmental context.

"As architects, we have been taught from school days to build responsible, sustainable buildings and sustainable architecture. When I became involved in GBI and started to understand all the criteria, I realised that it was not just about design but also other aspects that we used to not pay too much attention to. As long as the house was oriented north-south then that was it."

"Recycled materials are becoming more popular in construction now though, so they can be quite difficult to come by."

The timber isn't the only recycled material that Ar Dr Tan has used in this building. The brick wall is the reincarnation of bricks from the previous house on this approx. 13,500 sq ft piece of land, which, interestingly, is not the first time he has built a house here.

"I actually bought this piece of land in 1992, when I first came back from Australia and was looking for old houses to do up and sell. It was a deceased estate, abandoned for many years. The three big frangipani trees were already here then. In six months, I restored the collapsed roof, repainted the house then sold it."

"When we we went into each of the details of the GBI rating tools, I realised that we didn't naturally think much about environmental quality. So I wanted to test it out. Would they work? Can there be a platinum-rated GBI house?"

The S11 House is the result of Ar Dr Tan's testing. There is no air-conditioning on the first floor, instead it's cross-ventilated and the temperature is steady at 25-26 degrees. It feels like a resort.

"It's a good example of green building – I did almost everything you could do, and now it's a test case for future designs."

The stone used for the driveway was formerly waste from other building projects. In the construction chain, each party tends to over-accommodate for wastage, so around 25% of the stone supplied for each building project often is unused or rejected. By using stone that would have just been wasted, Ar Dr Tan eliminated that much extra waste and saved himself a significant amount of money. A single stone would ordinarily have cost RM8, but he managed to get them from the reject pile for just 50sen each.

To the right of the driveway are a saltwater swimming pool and a frangipani tree – one of three that Ar Dr Tan designed the house around. Throughout the front yard are several wind chimes with polystyrene windcatchers. Polystyrene is a terrible material for the environment, but Ar Dr Tan had found them discarded on the street and decided to make use of them. He cut them into the shape of a fish to reinforce that connection with nature. He says that we "inherently seek" that connection to nature, and when we see something moving, we become hyperaware of it.

The front door and first floor decks are made from recycled chengal wood Ar Dr Tan collected over many years from old kampung houses. The timber is more than 80 years old.





"Years later, in 2008, I saw in the newspapers that there was a piece of land for sale and it was nearly 15,000 sq ft. I thought to myself, 'I don't know any piece of land in PJ that size except for this one.' So I called up the agent and I asked whether it had big trees in front. He said yes and I met him that morning and bought it back there and then, nearly 20 years later."

As you walk into the living room, on either side is full-length sliding glass doors that each open onto a deck – one that faces the swimming pool and another that houses a koi pond. The water features and sliding doors are placed here to the north and south ends of the house for the combined purpose of cross-ventilation and evaporative cooling.

Keeping the house cool naturally was one of the biggest properties of the project, which is why there are few windows on the east and west walls of the house. Malaysia gets most of its heat from east and west, but we also get wind from the west.

So how did Ar Dr Tan manage to draw wind from the west over his water features for the cross ventilation and evaporative cooling effects? When wind from the west hits the wall on the east side of the pond, a channel is created and guides the wind into the house. A narrower gap for the wind to travel through means it has more force behind it.

"In the early days we were always taught cross-ventilation, but once you build a house and understand GBI, you realise that it's not just about cross-ventilation but, rather, controllable ventilation. So normally I don't open the doors at this hour, because mid afternoon is the hottest time. I normally shut the doors entirely. Right now it's only got one foot open there on the north side, and on the south side I've opened it a bit more because it's shaded. What happens when you open it fully is the air inside becomes the same temperature as outside. Currently that the inside is cooler than the outside by maybe 2-3 degrees."

"On top of that, the koi pond is used for evaporative cooling. There is a hole in the ceiling that allows the sunlight to hit the water and evaporate it, then the wind blows it through the building. When the water evaporates, it touches your skin and brings your skin temperature down."

On the deck are the exit points of ventilation shafts that service the basement of the property – the perfect place for a home theatre. Looking through these shafts from the basement you can see small wind turbines drawing the air out by both wind and convection. Ar Dr Tan says that the one thing he wish he had done differently is line these shafts with reflective paper.

"I think the house is almost perfect. I spent so much time on it but I rushed the construction a little bit at the end. I should have lined the light shafts with reflective material. There are light boxes on the roof where the ventilation wind turbines are, but the light doesn't travel much through the shafts right now."

The kitchen and dining room are on the east side of the house. Though the east and west walls have largely been left plain, Ar Dr Tan didn't want the house to be inward-looking, so he placed a single full-length glass panel on either end to create a connection with the outdoors. Living walls have become increasingly popular in recent years but Ar Dr Tan confesses he's not a huge fan of them because they catch and hold water, creating a build-up of humidity and jeopardising the integrity of the wall. Instead, to minimise heat-gain on the east side, he has used cables to guide a grapevine and create shade over this glass panel.

In the north-west corner of the house is the staircase, which is made from salvaged steel. In fact, just over 90% of steel used in Malaysia's building industry is made from recycled steel. Here, Ar Dr Tan has used full-length glass again and a wide mirror on the inside wall to showcase the jackfruit tree and reflect sunlight. This minimises heat gain but also to reflects the jackfruit tree and creates the illusion of nature enveloping the space.

On the second floor are the family's villa-style en-suite bedrooms and double-volumed family room. What does his family think of their palatial villa?

"I think they love it. We used to live in a very small house until we moved here. I used to build big houses for clients and my wife would say, 'You always build big houses for other people. When are you going to build your own house?'"

From the family room you can walk out onto the timber balcony – with two more small ponds for cross-ventilation – and look out to the pool. The green vegetation on the surface of the ponds is used to feed the fish in the larger pond downstairs. Neither the saltwater pool nor the bio treated ponds need chemicals to keep them healthy. There is also no need to clean or change the water, as it is recycled and treated using filtration.

A second steel staircase links the second and third floors. Initially only the main staircase was part of the plan, but Ar Dr Tan installed this one as an afterthought for convenience of access and to link the family room to the mezzanine area upstairs, which was designed to be his space when working from home, but is now used to house his art collection. There is another office on the first floor that has its own rock terrace and features a wall-to-wall modular bookcase made from recycled plywood off-cuts.

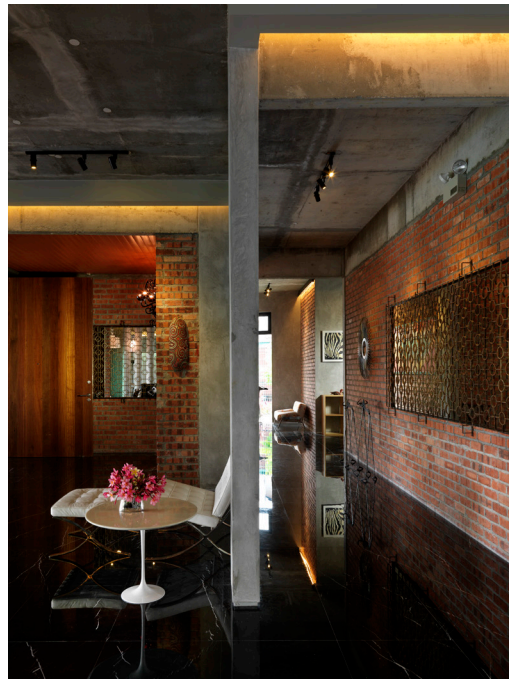
On the east side of the third floor is a large room dedicated to 5 water tanks: 3 for rainwater harvesting and 2 for domestic water usage. These rainwater harvesting tanks provide for the garden. A section of the ceiling is missing from this part of the house owing to solar panels that were blown away when the house was first built.

"The only troublesome element of building this house was the photovoltaic cells. At the time, PV was just starting to come in and the person who installed it didn't install it properly so I had to have it re-done. It's a relatively new industry, but it's something that has become very affordable. Six years ago, it cost RM25,000 for a 1 kW system. Today you can get it for about RM8,000 – so six years down the line the price has dropped to a third of the original."

Ar Dr Tan has used so many different elements of sustainable design in this house, making it as efficient as possible through the use of recycled and reclaimed materials, while reducing its carbon footprint through passive and active energy systems. More than anything the house was built to be an educational tool, and staying true to its original purpose, Ar Dr Tan often has groups of people tour the S11 House specifically for learning.

"We used to do tours twice a week. The house is 6 years old now though, so there should be better examples out there. I have a lot of new architects on my staff, so they visit once every two months. I also give a lot of lectures about green buildings and a lot of friends' kids who want to study architecture come here."

"I think knowledge is very important, and I think GBI should do more to disseminate knowledge. It's like driving – the more skill you have, the better you are at driving."



S11 House

The GBI Facilitator for this project was Ar David Ong. Ar Dr Tan recommends highly the use of GBI rating tools and having a GBI Facilitator for any building project.

“Using the tools teaches you how green building works and it teaches you how to do your project from Day 1. In any building, the facilitator plays a big role because they can tell you from very early on what to do: what to buy, what to spend your money on. Most people are restricted by budget – in fact, every project is restricted by budget – so with this help, you’ll know what to spend on to get the best green effect. For residential buildings it’s not about scoring points, it’s about getting the best effect with the least amount of money.”

As for the essential elements to focus on in your own home, Ar Dr Tan has some simple advice:

“Firstly, download and read through the green building rating tool from the GBI website – it’s the best guide. You might not understand all of it but ask someone who is a green facilitator or who does green buildings. It doesn’t mean you need to get your house certified, unless you want to prove that you’ve achieved it.”

“Roof insulation is extremely important. Traditionally, 50mm of rock wool is said to be sufficient for a generally efficient home, but when I went through the calculations I found that this wasn’t enough. 70% of heat gain is through the roof. This house has 200mm of insulation of rock wool and on top of it is one foot of air space. Combined, they prevent the hot air from penetrating. I think the best thing I’ve done here, and in all the houses I’ve done since, is the use 200mm of rock wool insulation. It’s a no-brainer, it helps a lot.”



“Most houses have zero roof insulation so people have to use air-conditioning. Heat is thrown out, usually to the back lanes behind terrace houses, and increases the temperature there. If you’ve set your room temperature to 24-25 degrees and outside goes up from 32 to 41 degrees, the difference in temperature is the energy needed to make your room cool. The differential is the electricity you’ve got to use to bring down the temperature. So all energy use goes up. It saves a lot of energy. I used to design houses of this size for my clients. They used to tell me that their electricity bills were something like RM7,000-10,000 per month. My electric bill used to be about RM700 per month with the rebate from the solar panels, now it’s about RM1,100 because the price has gone up, but it’s still very low for a huge house.”

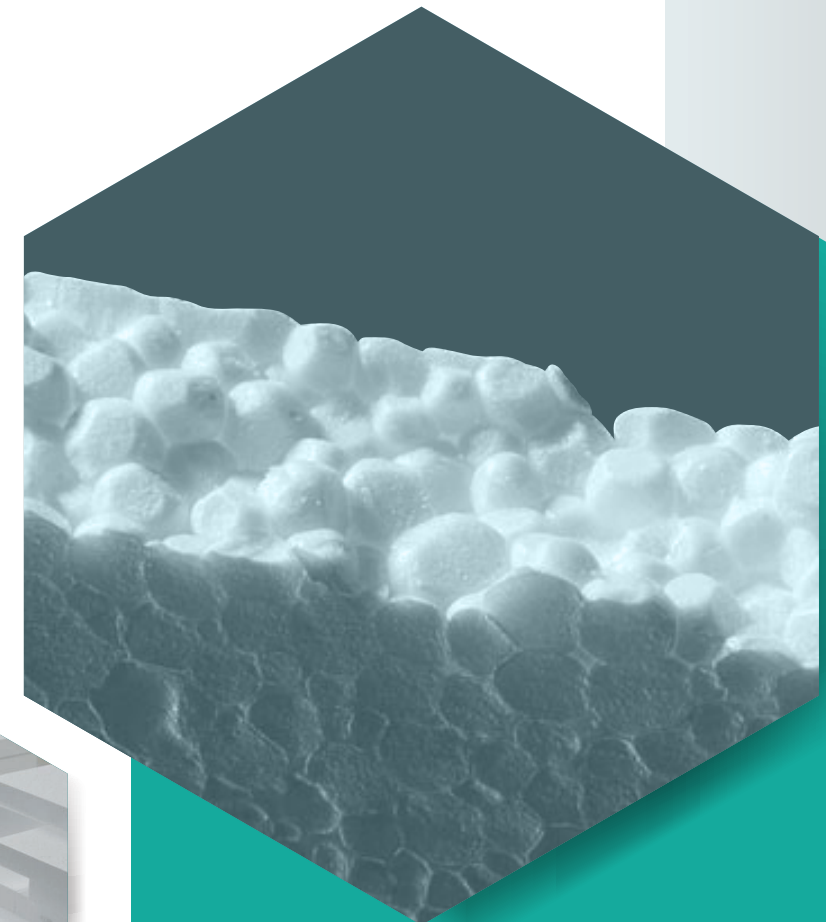
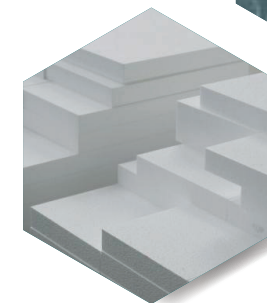
Ar Dr Tan also recommends LED lights, inverters in your air-conditioners and 5-star refrigerators.

Why else should you consider building a green home? Quality of life is a subtle but noticeable factor.

“My family and I have rarely fallen sick since living in this house. It also has a nice feeling, like a place you want to come home to and relax in. It’s a nice environment.”



Give Polystyrene The Kick



With plenty of more environmentally friendly materials out there, isn’t it time we assess our dependence on non-recyclable polystyrene?

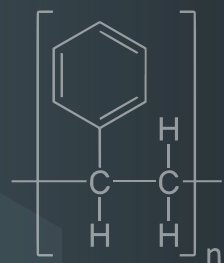
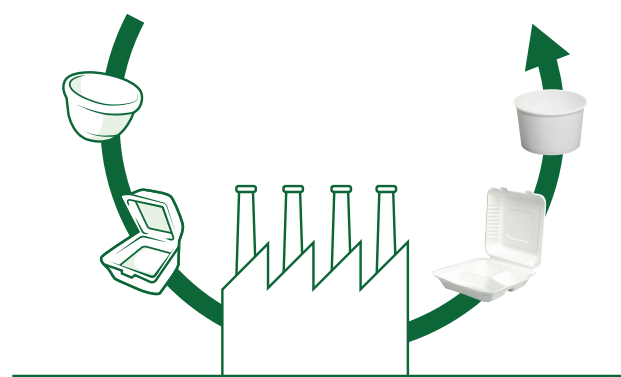
Next page to know more





Polystyrene is one of the most harmful materials around. It is a polymer produced from petroleum that appears in many common things, including plastic cutlery and disposable razors, and has the recycling code number 6. It's harmful not just because it takes centuries to break down, but because it's so ubiquitous in our daily life and is hardly ever recycled. For Malaysians, it's most visible in the form of food packaging.

Think about it... most of us have probably encountered polystyrene in the past three days – or at least the past week – whether it be as a styrofoam food container (we're a nation of people who like to 'tapau', partly because it's so easy) or as packaging or in building insulation – it's really good at what it's made for.



Why do we use it?

Polystyrene is cheap to produce, so it's good value for money. Heating quickly turns it into an easily malleable form, which makes it a highly versatile base material. On top of that, it's lightweight but strong, so it's easy to handle and holds its form, which makes it perfect for packaging and as building material. In the construction industry, polystyrene foam is used along with concrete to build the form and foundation of walls. It's also used for insulation.

All polystyrene building insulation contains the flame retardant hexabromocyclododecane (HBCD), which is a persistent bioaccumulative toxin (PBT), meaning it is highly resistant to degradation from abiotic and biotic factors. Increase in liver weights and thyroid-related hyperplasia are just some of the adverse effects from exposure to HBCD. Aquatic animals can also be exposed.

So while polystyrene has several characteristics that make it fit for purpose, what it's not so good for is the environment and our health.

Why shouldn't we use it?

A key component of polystyrene is benzene, and when exposed to heat, the polymer begins to break down and leech chemicals into our food and drink. It's suspected to be carcinogenic and known to cause acute symptoms, such as irritation of the stomach and upper respiratory tract, as well as longer-term effects such as disruption to normal hormone function and damage to the nervous system.

Penang is the first Malaysian state to have completely banned the use of polystyrene food containers. Sibu followed in 2014, and Malacca introduced a partial ban with a view to introduce a full ban. The disposable cups provided during tea break? The clamshell container from the coffee shop? No more! They've largely been replaced by biodegradable packaging made from oil palm waste material.

It's not just for health reasons that these cities and states have banned the polystyrene "white coffins". Malaysia especially has dismally low rates of recycling (currently 15%) and appallingly high occurrences of littering.

Regarding environmental effects, polystyrene is non-biodegradable and it's not readily recyclable, it leeches chemicals when exposed to heat, and in its foam form is light and breaks apart easily. This means it often ends up in places it wasn't intended to be, such as in the stomachs of animals that mistake it for food.

Unfortunately, food grade polystyrene is largely not recycled. The recycling code #6 on the bottom of polystyrene food packaging marks it as a petroleum product that can be recycled if it is clean, but the reality is that most of the time, it ends up in landfill. When polystyrene is recycled, it is often turned back into single-use products (such as more packing material) so it's really important firstly to reduce its use at all, and also to recycle what we do use.

Penang's initiative has proved to be extremely successful. What this demonstrates is that with sufficient awareness and education, change is possible.

What are the alternatives?

There are several bio-based materials out there that can be used to replace polystyrene in food packaging. Corn and sugarcane are two common components in polylactic (PLA) resin, which is considered a compostable bioplastic. According to the American Society for Testing and Materials (ASTM), biodegradable plastics refer to polymeric materials that are 'capable of undergoing decomposition into carbon dioxide, methane, water, inorganic compounds, or biomass in which the predominant mechanism is the enzymatic action of microorganisms, that can be measured by standardised tests, in a specified period of time, reflecting available disposal condition'.

It might surprise you that the humble agar agar jelly can also be turned into food containers that are edible or can break down easily in landfill if you prefer. Indian company Bakeys makes edible cutlery out of rice, wheat and sorghum – in 3 flavours! And US company EarthShell makes packaging out of common natural resources such as limestone, starch and recycled paper fibre, which they claim to be 100% biodegradable.

The fact that each of these alternatives are compostable and that many places around the world are encouraging composting would suggest that there is reason enough for businesses to be switching from polystyrene packaging to biodegradable alternatives.

As for the construction industry, fibreglass with high recycled content, cotton, straw, cellulose and rock mineral wool can be used as alternatives for polystyrene insulation. Each type would need to be assessed for suitability as they each have their own benefits, drawbacks, carbon footprint and embodied energy through manufacturing.

For example, cotton and straw are both good for soundproofing and are generally 90-100% recycled, but neither are particularly airtight. Rock mineral wool will not absorb moisture so it is better than fibreglass for basements.

Why haven't we already made the switch?

While it may seem easy enough to find safer and more sustainable alternatives to polystyrene, many of these materials are still being tested for their resistance to heat, insulation R-values, degree of biodegradability and environmental effects during production. Pricing is the other aspect that needs to be considered. Most importantly though, if alternatives simply end up in landfill instead of recycling facilities or compost bins, the entire purpose is lost.

In general, many innovative green technologies are still relatively expensive. Technology needs to keep improving so that it becomes more accessible to more manufacturers and, therefore, the consumer.

In the meantime, here are a few things you can do to eliminate polystyrene from your community:

1. Talk to your local food businesses about polystyrene and get them to switch to biodegradable containers. It might be difficult to convince them to make a change that could be more costly to their business, but if they are aware and become more informed about the health and environmental effects, it would be unreasonable for any person not to. No change happens overnight and larger action may need to take place in phases. It's reasonable that food sellers finish using what stock they have on hand if they can't send it back to their supplier. Where demand goes, supply will follow.
2. Bring your own reusable food containers when you plan to take away your food. Biodegradable and recyclable are good, but reusable is better! Glass is the best kind of material for this because it doesn't leech any chemicals, but if you're only carrying the food a short distance and plan on removing them before reheating, regular plastic containers will do.

MalaysiaGBC-PAM Next Generation Building Architectural Design Competition

Winning design to be an innovative space for MalaysiaGBC's new office

MalaysiaGBC and PAM announced the winner of the Next Generation Green Building architectural design competition to coincide with the auspicious opening of the new PAM Centre. Representatives from MalaysiaGBC, UKM and Ajiya Berhad met on 17th June 2016 and shared their vision for this unique collaboration.

The most innovative Malaysian architectural designs were on display at the PAM Convention. These designs were part of a competition jointly organised by MalaysiaGBC and PAM, sponsored by building materials manufacturer Ajiya Berhad, and supported by UKM as strategic partner.

The competition was created as a platform for ideas from the architectural community and the "exuberant youth" on what they think the next generation of green buildings should be, to encourage awareness of green buildings, and to promote the use of Malaysia's GBI rating system amongst practitioners and the public.

The building will house the MalaysiaGBC Secretariat and serve as an events venue as well as a Green Research Innovation & Design Centre; in essence, a one-stop resource and research centre complete with meeting and conference facilities.

Submissions were made anonymously and assessed on innovation in design, sustainability, viability and other criteria.

MalaysiaGBC President Ir. Ahmad Izdihar said that the designs should take into consideration building design for tropical use the 'Malaysian way'. "These designs should be inspired by, and add value to, the local environment beyond energy efficiency," he said.

Should MalaysiaGBC decide to transform the winning design into reality, a new committee will be created to assess suitable siting, funding and timing. One element that is guaranteed is that public areas of the building - such as the library, auditorium and outdoor spaces - will be open to everyone.

Ar. Von Kok Leong, Organising Chair of the competition, said, "What we want to do is share awareness of what a living green building is like, and let people see and feel what impact green innovation can have on human and social behaviour."

"We want people to be able to have a practical experience of it and use it as a learning tool - not just for MalaysiaGBC but university lectures and excursions, and visits by other members of the public," he said. "We hope they can then share their experience with others, and spread the awareness of green building."

The site for the competition is a 1.3-acre piece of land in Bangi owned by UKM. Ar. Von added, "UKM was chosen as the strategic partner because it is recognised as one of the forefront institutions involved in green building research in Malaysia."

UKM Deputy Vice-Chancellor of Research and Innovation Affairs Prof Dato' Dr Mazlin Mokhtar said that the joint initiative is especially important for collaboration between academia and industry. He would like to see the groups continue to work closely on more research and innovation activities.

As Ajiya are the sponsor, a selection of their products are recommended in the brief. Ajiya supply a building system called the "Ajiya Green Integrated Building System" (AGIBS) that uses construction components manufactured off-site with minimum resource waste, which are then assembled on-site without utilising heavy machinery.

Managing Director of Ajiya Berhad, Dato' Chan Wah Kiang, described the competition as a project "that will change the entire Malaysian construction industry".

There were 73 submissions in total. A panel of judges created a shortlist of 16 (with no minimum or maximum number to ensure that all the best designs are recognised), to be showcased during the PAM Convention on 19, 20 and 21 July 2017. Those attending the event voted for the design which they thought most innovative, and the joint winners were announced on 4 November 2016 at MalaysiaGBC's Annual Dinner held at One World Hotel.

The details of the competition:

List of Juries:

1. CONVENOR - Ar. Amzar Ahmad
2. PAM PRESIDENT - Dr. Ar. Mohd Zulhemlee A
3. MGBC PRESIDENT - Ir. Ahmad Izdihar bin Supaat
4. CHAIR of GBI Accreditation Panel - Ar. Chan Seong Aun
5. MANAGING DIRECTOR of Ajiya Berhad - Dato' Chan Wah Kiang
6. AWARD WINNING Architect - Ar. Razin Mahmood
7. EMINENT ARCHITECTURAL ACADEMICIAN - Prof. Emeritus Dato' Dr. Ar. Elias Salleh
8. SERI DIRECTOR UKM PROFESSOR - Prof. Dato' Dr. Kamaruzzaman Sopian

Joint Winners:

- i. Ahmad Jaafar Architect (in collaboration with Spacefighters Sdn Bhd & Nitish Ramanah)
- ii. Kumpulan Senireka (in collaboration with MIIM Office for Architecture Co Ltd)

Winner of The Public Voting:

Arkitek Kamal Alwi

Recipients of Honorary Mention:

- i. Veritas Architect Sdn Bhd
- ii. Fenestra Malaysia Sdn Bhd (in collaboration with Design Atelier and Langdon & Seah Sdn Bhd)
- iii. Sarly Adre Sarkum Architecture Sdn Bhd
- iv. Wooi Architect

The RM200,000 prize was sponsored by Ajiya. This is believed to be the largest single amount ever awarded to the winning entry of an architectural design competition in Malaysia. The five honorary mentions each received RM5,000.

Malaysia is a leader in tropical green building design and is in a unique position to become a strong proponent for the industry. Prof Dato' Dr. Mazlin Mokhtar said that the country should strive to serve as "potential inspiration" for ASEAN, especially our emerging green building neighbours such as Cambodia, Laos, Myanmar and Vietnam.

Ar. Von Kok Leong, expressing high hopes for the outcome of the first architectural design competition of its kind in Malaysia, said, "We're aiming for World Green Building Council exposure at the next conference."



Readers are invited to send their comments and opinions to:

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