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Green By Example

The Star Malaysia, Wednesday, 19 July 2017

The triple height atrium upon entry gives you an idea of what to expect in the building: airiness and lots of light.

Exposed bricks and concrete flooring give off a minimalist vibe and natural feel.

What makes it eco-friendly

HERE'S a quick rundown on what makes 99L, Jalan Tandok, environmentally friendly.

> **Maximising natural daylight:** The entire north-west facade is clear glass while skylights above the straight-flight stairs within light up the south-east. More than 50% of the space is illuminated with natural light that streams in through large glass openings and skylights.

> **Maximising natural ventilation and thermal comfort:** Openings are crafted on all sides of the building to facilitate cross ventilation. A stack ventilation effect – also the chimney effect, referring to the air movement into and out of a structure – is created using stepped (ie, multilevel) atriums with wide openings. All public and circulation spaces are naturally ventilated, including lift lobbies, escape staircases, toilets, and the sub-basement.

> **Reusing existing structure:** The previous four-storey structure has been retained and incorporated into the new building, reducing the use of new building materials. The cafeteria, exhibition spaces, auditorium, storage space, training room, and prayer rooms occupy the old structure. Also, the building process used recycled content, regional materials, and materials with low levels of harmful volatile organic compounds.

> **Reducing heat gain and glare:** Egg crate-like sun shading devices and blinds installed on the north-west facade prevent glare and reduce the amount of heat penetrating into the office spaces. The shading cuts down 60% of the solar radiation reaching the facade glazing.

Trees planted in break out spaces also help reduce glare and shade the north-west facade. Also, the cold air trapped during the night in the building's south-east-facing concrete wall is naturally released in the morning, helping to further cool down the building.

> **Saving energy:** A high COP (coefficient of performance) value VRF (variable refrigerant flow) air-conditioning system reduces energy consumption. Also, the building automation system has an energy management element to improve energy consumption and user-friendliness by controlling general lighting via photo and motion sensors, energy monitoring via digital power metres, water usage monitoring via digital water metres, and educational displays and analyses of the building's energy performance.

> **Using renewable energy:** A 25kWp solar photo voltaic system is installed on the roof terrace.

> **Saving water:** Water-efficient fittings result in 55% of water savings. Also, all water requirements for flushing and irrigation is fully met by a rainwater harvesting system.

> **Green surrounds:** Trees planted in tubs within the building on all floors help absorb carbon dioxide and produce oxygen. Vertical greenery and herb gardens are also in place for human comfort and consumption respectively.

> **Waste management:** On-site composting allows building users to become involved in and educated about organic waste processing and to contribute to the building's landscape sustainability.

> **Promoting a green lifestyle:** Hybrid vehicle charging stations and bicycle racks outside the building encourage greener modes of transportation.

Green by example

The new Pertubuhan Akitek Malaysia Centre in Kuala Lumpur leads the way in green design.

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THE almost 100-year-old Pertubuhan Akitek Malaysia (PAM) finally has a place to truly call home, one that was redesigned specially for the institute by its own members.

PAM, or the Malaysian Institute of Architects, were occupying Wisma Bandar on Jalan Tangsi, Kuala Lumpur, when it bought a four-storey former warehouse in 2010 to turn into its new home.

The new PAM Centre is an eye-catching, contemporary eight-storey building located along Jalan Tandok in Bangsar, Kuala Lumpur, completed last May at a cost of RM17.8mil.

The most distinct feature is the black aluminium screen that envelopes the building's concrete facade, as well as the diagonally-stacked and landscaped open atriums that can be seen from the street, as if etched into the building. These stepped atriums promote cross ventilation and complement a long, single-flight stairway within.

"This is the first time that we are occupying our very own building, which we designed and built. It serves as our new PAM Centre as well as a Centre of Architecture," said PAM president Ezumi Harzani Ismail at a press conference last week, adding that the centre is also a public space for architecture and art-related exhibitions and events.

Today, Selangor Ruler Sultan Sharafuddin Idris Shah is scheduled to open the centre and launch a book, *In The Eye Of The Storm*, which documents the journey that led to PAM getting its own centre.

PAM also honoured the institute's first two presidents by naming the council room and the roof terrace after the late Datuk Ikmal Hisham Albakri and the late Datuk Kington Loo respectively.

Ezumi, on the eight floor roof terrace, looking down at the skylight above the stairs within the building.

The centre's design was chosen from a competition that was open to all PAM corporate members in 2012. The winner, HMA & Associates, led by Mohd Heikal Hasan, produced a design that is "elegant and an efficient solution on a very tight and highly constrained site."

"The design of the building features a no-boundaries concept. The space itself is like a gallery and has an open feel," said Ezumi during the media tour.

The centre has a definite minimalist vibe with its exposed brick and concrete walls. Squarish openings and skylights promote natural lighting, cool the building, and reduce the use of electricity.

The roof terrace is something Ezumi is proud of: it is an area filled with greenery that contains the building's solar system.

"It also offers the best views of Bangsar," said Ezumi.

More importantly, the centre received the highest rating of platinum under the national Green Building Index (GBI). The index is a rating system that was developed by PAM and the Association of Consulting Engineers Malaysia in 2009. Buildings are awarded ratings based on six key criteria: energy efficiency, indoor environment quality, sustainable site planning and management, materials and resources, water efficiency, and innovation.

"As PAM is behind the GBI, we have to walk the talk. Hopefully, this building will serve as a showcase for what we are capable of doing," said PAM past president Saifuddin Ahmad who was also at the media preview.

Jnique feature: Diagonally-stacked and landscaped open atriums through the building's centre promote cross ventilation – not to mention an interesting aesthetic touch. — Photos: SAM THAM/The Star