BACKGROUND OF THE PAM CENTRE BANGSAR

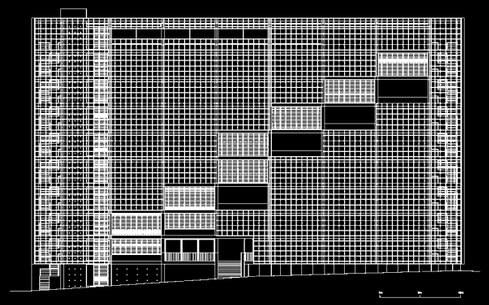
Pertubuhan Akitek Malaysia (PAM), through the PAM Education Fund (PEF), decided in October 2010 to purchase a four-storey building on Jalan Tandok, Bangsar with the initial intention of developing it into an architect-driven centre for contemporary arts, in the spirit of the National Art Gallery and Museum of Modern Arts (MOMA) in their formative days.

However, the plan changed when Dewan Bandaraya Kuala Lumpur (DBKL) issued a notice to PAM to vacate the PAM Centre premises at Jalan Tangsi by June 2012. The PAM Council then decided to change the initial design brief to accommodate a new PAM Centre and Centre of Architecture instead.

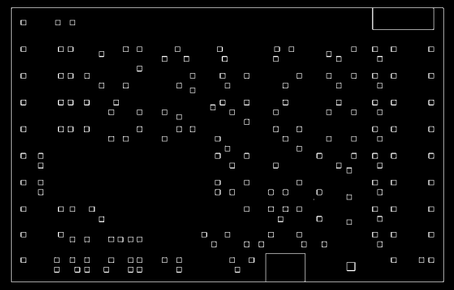
As part of the effort to encourage a truly collaborative process, a single-stage competition was held and opened to all PAM Corporate Members to submit designs of what they envision the new PAM Centre to be. At the closing date of the registration on 9 May 2012, a total of 55 submissions of registration were received. At the closing date of the design submission on 30 May 2012, a total of 36 entries were received. The judging of the entries was conducted on 4 June 2012.

The winner, HMA & Associates (Ar Mohd Heikal bin Hasan) came up with a design that was elegant and an efficient solution on a very tight and highly constrained site. Its east-facing front facade showcases a strong but simple grid that creates a flexible canvas for various screening devices to be deployed. The diagonally stacked and landscaped open atriums on the street facade make a distinctive tropical statement. The stepped atriums alongside the long single-flight stairs open up the stairs, creating a dramatic central connecting space to unify the whole building.

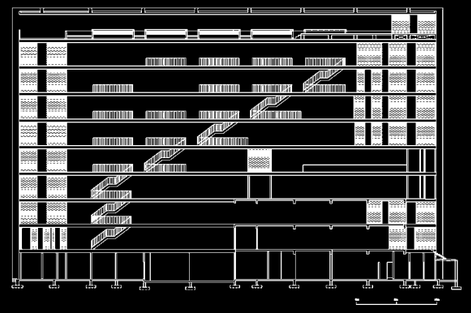
FRONT ELEVATION



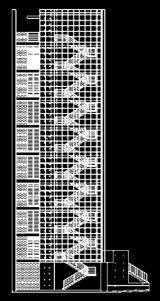
REAR ELEVATION



SECTION



SIDE ELEVATION



The PAM Centre is an energy efficiency demonstration project under the Building Sector Energy Efficiency Project (BSEEP), a national project implemented by Jabatan Kerja Raya (JKR) in collaboration with the United Nations Development Programme (UNDP), co-funded by the Global Environmental Facility (GEF).

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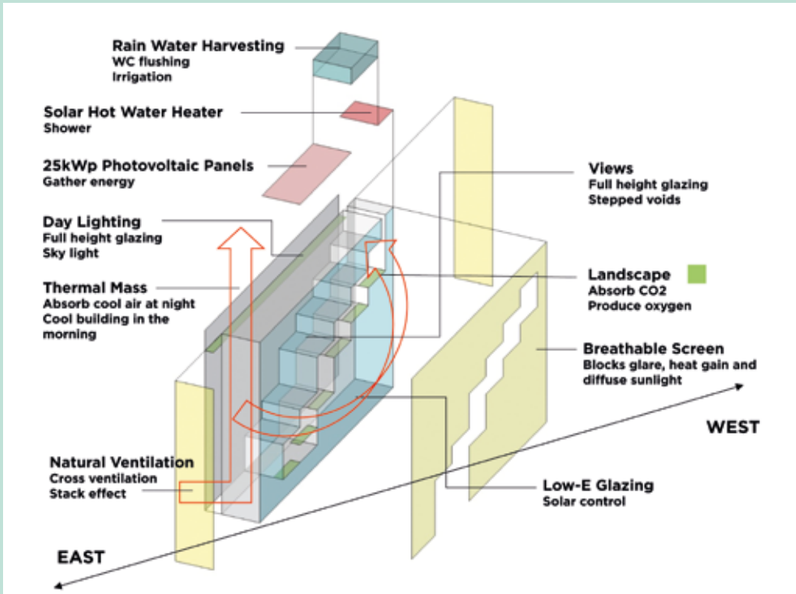
PAM™

PAM CENTRE BANGSAR

LOW-ENERGY CONSUMPTION OFFICE BUILDING

ENERGY EFFICENCY FEATURES & GREEN BUILDING INDEX (GBI) DATA

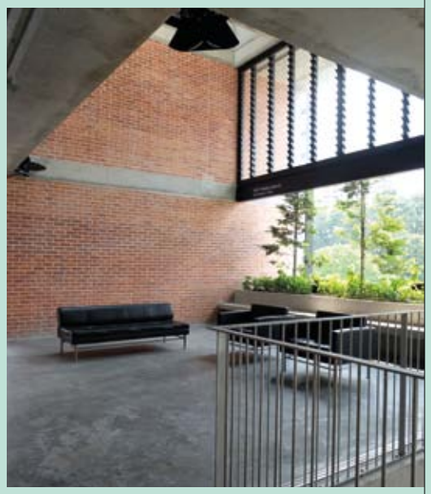


PASSIVE ENERGY EFFICIENT FEATURES

	INTENTION/PURPOSE	STRATEGY
1	To maximise the use of natural day lighting	The whole northwest facade from floor to soffit of slab is of clear glass. Skylights provided over the straight-flight stairs light up the area near the southeast facade.
2	To maximise natural ventilation/thermal comfort	Openings are provided on all sides of the building to allow for cross ventilation. Stack ventilation effect through the creation of stepped atriums with abundance of openings. All public and circulation spaces are naturally ventilated, including lift lobbies, escape staircases, toilets and sub-basement.
3	The reuse of existing structure	Retaining the four-storey existing structure and incorporating it with the new building reduce the amount of new building materials required. The cafeteria, exhibition spaces, auditorium, storage space, training room and prayer rooms occupy the existing structure.
4	To reduce heat gain and glare	'Egg crate' sun shading devices and blinds are provided at the northwest facade to prevent glare and heat from penetrating into the office spaces. The shading device negates 60% of solar radiation on facade glazing. Trees are planted at break out spaces to reduce glare and provide shade to the northwest facade. The cold air trapped at the concrete wall at the southeast-facing facade is released in the morning to cool down the building.
5	To maximise views/ visual comfort	Most of the spaces in the building are organised to have maximum views by providing floor to soffit glazing and voids across the buildings, thus creating indoor and outdoor relationship of spaces that provides comfort to the occupants of the building.
6	Greenery	Trees planted within the building on all floors help to absorb CO_2 and produce oxygen. Vertical greeneries and herb gardens are provided for human comfort and consumption respectively.
7	Innovation	On-site composting allows building users to be involved and educated in organic waste processing and to contribute to the building landscape sustainability.
8	Building materials	Recycled content materials, regional materials and low-VOC materials are used.

ACTIVE ENERGY EFFICIENT FEATURES

	INTENTION/PURPOSE	STRATEGY
1	Air conditioning system	High-COP VRF System to provide cooling with reduced energy consumption.
2	Lighting	Lighting zoning. Energy-efficient LED and T5 lighting.
3	Renewable energy	25kWp photovoltaic (PV) system.
4	Building automation	Building Automation System equipped with Energy Management System to improve building energy consumption and user-friendliness through control of general lighting via photo and motion sensors, energy monitoring via digital power metres, water usage monitoring via digital water metres, dynamic educational display and analyses of building energy performance.
5	Rainwater harvesting	Rainwater harvesting system to fully offset potable water requirement for flushing and irrigation.
6	Water-efficient fittings	WELS 3-ticks rated fittings.
7	Innovations	Hybrid vehicle charging stations and bicycle racks to promote greener modes of transportation.
8	Building Energy Intensity (BEI)	Combination of EE measures to reduce total building energy consumption, resulting in a BEI of <100.



GREEN BUILDING INDEX DATA

	PROGRAMME	SOLUTION
	GBI rating	Platinum
	Building Energy Index (BEI)	96.55kWh/m²/year (50% of the average energy index of office buildings in Malaysia)
	Shading device	Negates 60% of solar radiation OTTV = 48.54W/m²
	Daylighting	More than 50% coverage of Nett Lettable Area illuminated by natural daylight through large glass openings and skylights
	Natural ventilation	Natural ventilation through stack ventilation and cross ventilation at circulation and public areas
	Rainwater harvesting	100% potable offset for irrigation and WC flushing. 290m³ of rainwater harvested annually equivalent to 36% of potable water demand
	Reuse of existing building	Reuse of existing four-storey structure
	External views	More than 75% of Nett Lettable Area has external views and provides human comfort
	Water fittings	55% water savings. WELS 3-ticks rated fittings
	Lighting	Zoned lighting with sensors. Energy efficient LED and T5 lighting
	Photovoltaic	25kWP PV offsets 6% or 34,620kWh/year of building energy consumption
	Air-conditioning system	High COP (Coefficient of Performance) value VRF System with reduced energy consumption
	Compost bin	On-site composting allows building users to be involved and educated in organic waste processing and to contribute to the building landscape sustainability
	Hybrid vehicle charging station	To promote greener modes of transportation
	Vertical planting at stepped terraces	Provided at stepped terraces for human comfort
	Herb garden	Provided for human consumption
	Bicycle racks	To promote greener mode of transportation
	Building Automation System	Control of general lighting via photo and motion sensors. Energy monitoring via digital power meters. Water usage monitoring via digital water meters. Dynamic educational display and analyses of building energy performance