

The cool office

V-Guard sets an example with its green office building

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An office where you can retreat to a rooftop garden for lunch? No wonder the V-Guard corporate office in Vennala, Kochi, was bestowed the 2009-10 'Gold Leaf' award for its architectural excellence in the public and semi-public buildings category in the State. Instituted by the Indian Institute of Architects-Kerala Chapter, the award honours the 13-storeyed "green building", which occupies 1.2 lakh sq ft area and is set in 2 acres.

With global warming and depleting natural resources becoming a hot topic, eco-friendliness is gaining mo-



mentum as a very real alternative, and green buildings are a way of neutralising the carbon points notched up by industrial activities.

V-Guard's green corporate office, which started construction in 2006 and became fully functional in January 2010, aims to conserve natural resources, reduce pollution and generate minimum waste, adopt energy efficient practices and use less water.

"I was born and brought up in a village in Kerala, the pristine beauty of which still lingers with me. So my idea of a perfect office space was a building that is environment friendly," says Mr Kochouseph Chittilappally, Managing Director, V-Guard Industries, who also owns Vegaland and Wonderla, the well-known amusement parks in India. "This was the reason for building an office space in the suburbs, at Vennala, even though we had a plot in the heart of the city. Besides, the massive industrial activities cause a lot of carbon emission to the atmosphere polluting it, which needs immediate attention. This building is an endeavour, in a small way, to uphold the principle of the need for being eco-friendly for a better future."

The building was designed to beat the heat on the south and west, which always get maximum sunlight during the daytime. So, each floor has a two metre-wide verandah lined with flower beds. The plants, as well as the verandah, help prevent sunlight falling directly on the walls. It reduces

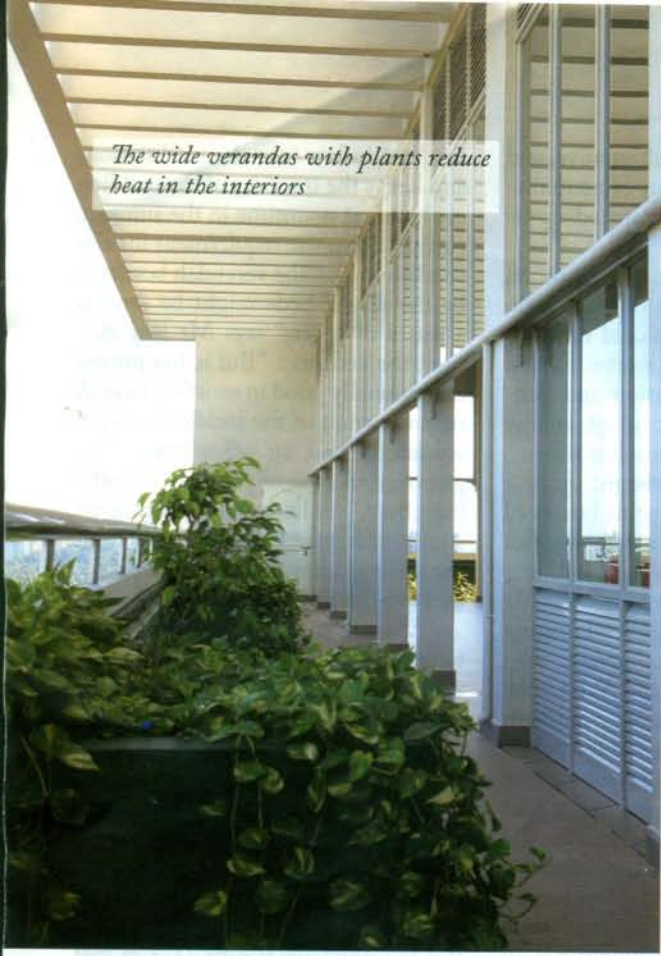
the heat inflow into the workstations and keeps the interiors of the building cool even at noontime in the summer, cutting down the requirement for air-conditioning. "The verandah bordered by the flower beds might be seen as a waste of space," says Mr Roy Antony, the architect. "But it has proved exceptionally good in resisting heat. A major portion of the incident rays get scattered. Also, an office space with greenery all around provides a soothing effect." A false ceiling with gypsum boards, which creates a void from the ceiling, helps reduce heat conductivity to the interiors.

Apart from a rainwater harvesting tank with a capacity of 3.3 lakh litres, water used for washing and cleaning purposes is directed to the 'sewage treatment plant' on the office premises, where it is treated and filtered and then used for irrigation purposes. Drinking water requirements are met with through a well after passing through a reverse osmosis mechanism to ensure purity. Any overflow from the rainwater harvesting tank is also routed to the well.

"The daily demand for water in the office is around 15,000 litres. Irrigation requires another 20,000 litres a day, a part of which is met by recycling the waste water from the office. So, in effect we need to use only 5,000 litres of water from the tank daily. An automatic drip irrigation system has been set up to water the plants. Our focus is on giving back more wa-

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The wide verandas with plants reduce heat in the interiors

ter to earth than we consume” says Bijoy A B, Projects Manager, V-Guard Industries.

“We are self-sufficient in water,” says Elvin Paduva, Civil Engineer, V-Guard Industries. “We don’t depend on the corporation water supply system anymore and we try to adhere to the concept of minimal water wastage at every stage.”

The tiles used in the ground pavement have pores, which ensure that rainwater is directed to ground rather than flowing away.

One of the highlights of the construction is perhaps the fact that, there is no need to put on lights during office hours. The building wall covers only two feet on top and bottom; windows occupy the rest of the area, allowing maximum light and airflow, so fans are also used only minimally. The anti-glare coating on windows cuts off 80 per cent of heat.

A one foot space above the windows is made with perforated nylon sheet, which allows uninterrupted airflow in the building throughout the day, keeping the air fresh. “The building is designed with the lift and the stairs in the centre, with the workstations around it. It helps in providing maximum ventilation inside,” says Mr Antony. “People are increasingly demanding offices and homes without air-conditioning, as they come to know the advantages such as lesser power consumption and pollution.”

According to Mr Bijoy, the initial investment for such a building is slightly higher, but the operational cost is much less compared to others. “Air-conditioning is restricted to highly indispensable areas, such as the data center and the electrical panel rooms, which amounts to less than 1 per cent of the whole built-up area,” he says. “So, electricity bills are slashed to one-fifth, of what they would have been. Aluminium is used for framing purposes, as it has no maintenance cost. We try to uphold the principle of saving today for a better tomorrow.”

The furniture is made from recycled material alone. A 1,500 LPD capacity solar water heater serves the hot water requirement at the office.

The building is designed with the best safety measures. Two stairs are constructed exclusively for the purpose of evacuation in case of an emergency. The fire safety system is the best in place with fire hydrants, smoke detectors and sprinklers to meet any emergencies.

The rooftop garden is a big attraction of this building. Half the area, paved with tiles, is made into a staff dining room while the other half is a lawn. The building also consists of a play area and fitness centre for the staff.

“The sight from the rooftop is amazing. We can have a glimpse of the city from here,” says Bijoy.

The management is in the process of setting up a unit which generates electricity by harnessing solar and wind power. Once functional, the frequently used electric line connections would be switched to this, saving on electricity consumption.

Hope this office becomes a trendsetter for the future buildings to come.



The rooftop garden which is also the dining hall