

The International House in the International Zone

Building sustainably is the driving motivation behind the expansion project of The International House. It will use discarded petrol hoses, recycled corrugated TetraPak panels and papier-mâché. The aim is to utilize 90% recycled materials in its construction.

A long-standing dispute finally was finally resolved when the US Pavilion Group, Auroville International USA, the International Zone Group, and L'Avenir d'Auroville town planners agreed that the US Students Dormitory, built as the first phase of the USA Pavilion in the International Zone, could become an international student dormitory and be expanded to accommodate more student groups and house the caretakers. The building was renamed 'The International House'. The USA Pavilion will now be built elsewhere in the International Zone, near Darkali and the Matrimandir Nursery.

International House was built in 2002-2003. Dr. Bill Leon from the Board of Auroville International USA helped arrange the building project through the University of Washington where he was teaching. The design was implemented by the Design/Build Mexico student team under the careful supervision of Sergio Palleroni, who was at that time a Research Fellow at the Centre for Sustainable Development, University of Texas, Austin and founding director of the BASIC

transport the rainwater, collected from the roof and channelled along massive guttering, into a large underground tank. From here the water is pumped up to the water tower. All water used here at present is originally harvested rainwater.

In the garden there is a reed bed, into which all the grey water from the kitchen and bathrooms is piped. The reed bed comprises layers of gravel and sand with plants on the surface. Once the grey water is filtered, a number of channels route the water to a banana plantation. Bananas are one of the plants which can survive on poorer quality water.

The toilets are all compost toilets which use very little water, are easy to maintain and provide high quality compost after approximately 6 months. All the power is solar-generated. 'B', another caretaker, says that the batteries used to store power are nearly four years old now and not as efficient as they should be. They have plans to incorporate some kind of hybrid wind/solar system to maximise on the available renewable energy resources.



The 'super roof', a steel structure covered in wood, protects the inner dorm rooms, bathrooms and office



Corrugated roof panels made from recycled TetraPaks

Initiative, an academic outreach programme. The challenge was to design and build a self-sustaining educational and residential facility in an area which had no infrastructural resources, such as power or water. They chose to use steel, ferrocement, compressed earth bricks and mahogany in the construction. A 'super roof', an enormous steel structure covered in wood, protects the inner dorm rooms, bathrooms and office from the elements. The original architects were inspired by the banyan tree in their design. The dorm rooms represent the tree trunk and the pillars the distinctive rooting system of the great tree. Yet, not all of those supports are 'supports'. There are many surprises here.

Garima, one of the resident caretakers, tells us that the outer steel pipes

Clearly, sustainability is the driving force here. The new project underway is to build additional dorm facilities to the side of the current building. This is to house the 15+ students who come to Auroville under the umbrella of programmes like 'Living Routes' or through programmes sponsored by institutions like the University of Washington.

'B' explains that the extension



The composting toilets

plans had been there for some time. However, lack of funding, plus concerns relating to the identity of the Pavilion stalled progress. B says that it is important that the International House has a distinctive identity of a learning environment with dormitory facilities for students who come to participate in the sustainable development of the International Zone. It is not, as some people have termed it, a guest house. Garima tells us that the project is something which remains very dear to the hearts of all those involved.

Mogdha and Venu, both architects, came to Auroville three months ago to attend an architectural seminar. They became involved in the project and volunteered to help design and develop the new building. They show us the plans for the apex style framed structure and add that the project aims at utilizing 90% recycled materials in construction. Like the current structure, the dorm walls will be made from compressed earth bricks. 'B' confirms that they are looking to promote new ways of building at a lower cost. The team are undertaking research and experimenting with all kinds of rubbish, literally. 'Zero waste' is high on the list of priorities. The team has partnered with various departments within Auroville to utilize a lot of the waste which would ordinarily be sent to the

landfill site. While the harder materials, such as broken stoneware, glass and pottery, are not good for roads as they are too sharp, they are ideal for foundation filling and as additives to concrete. One surprising ingredient they are hoping to utilize is Styrofoam. They have a growing collection which is being supplied by the Eco Service. This will be mixed with the cement instead of sand and stones.

They say that this has already been successfully used in construction elsewhere and is much lighter. The group has decided to hold back the start of construction until after the monsoon. By this time, the cost of the other materials required will also have reduced.

This brings us to the TetraPak roofing panels neatly stacked up in the bike shed.

TetraPaks are the milk and juice cartons we merrily throw away. They became an eco-nightmare because nobody could recycle them. But the Daman Ganga Company in Gujarat is doing just that. They recycle and compress used TetraPaks for making corrugated roofing sheets, which are silver grey with flecks of colour and a bit thicker than ordinary roofing sheets. While the sheets cost half that of traditional steel or GI roofing panels, most of the savings were offset by the transportation costs. Garima tells us that they have been able to supply some sheets for sheds in Auroville, including at the Visitors' Centre and Sadhana Forest. The durability of the sheets is yet to be put to the test in our extreme climate, so they have been looking at some kind of added protection for the roof.

Manu, who is also a resident caretaker, Garima explains, is the head of the architectural team of

which Mogdha and Venu are a part. Together with B, they have been investigating innovative ways to use waste materials for construction. It was Manu who came up with the idea to utilize discarded petrol hoses for the previously mentioned roof protection. Safety regulations require that these pipes are replaced regularly by petrol stations, but the used pipes are difficult to dispose of due to their highly hazardous nature. Manu discovered that the structural strength of these pipes is very good, and by filling them with lightweight Styrofoam cement mix, they can be precast into many shapes.

The final innovation for the new building will be a papier-mâché floor. Some of the Auroville textile units have already agreed to provide waste fabric as the mix is prepared using paper and fabric.

The team here seem to be taking recycling to another level. They even speak of zero waste as if it were somewhere part of the Auroville Charter. Is it possible that the housing crisis could be solved by the garbage crisis?

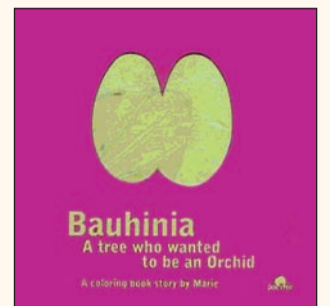
Louise

About the US Pavilion and the history of the dispute see AVToday #209-201, June-July 2006, and #222, November 2007.

NEW BOOKS

The bauhinia tree is also known as mountain ebony, purple orchid tree or simply orchid tree. *Bauhinia, A tree who wanted to be an Orchid*, is a colouring book for children that tells the story of a bauhinia tree which wished it had legs like Vladok, the bullock and could roam all over the place. Later, it spies Slava, the butterfly and wished it could fly. With every stage in its life, its wishes change, until one day, the tree realises it has no other wish than to be itself.

Bauhinia, A tree who wanted to be an Orchid, by Marie. Published by Auroville Press Publishers/Series Poetree, Rs. 195.



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