

The Eco House

by Vicki Preston, June 2007

A remarkable building project is under way in Isthmia where Athenian publisher (of the Kedros publishing house), Vangelis Papatathanasopoulos, is using the very latest in eco-technology to build his home on the island. Using a series of power-saving and "green" solutions, the house sets an example not only in Greece, but around the world and is in the same class with homes such as that of Ted Turner's daughter, Laura Turner Seydel, - "The EcoManor" in Atlanta - recently featured in Fortune Magazine.

The most obviously impressive aspect of the building is the geothermal heating and cooling system. Using coiled pipes buried in the earth beside the house at a depth of two metres, the system uses the ground temperature (almost always a steady 18oC at this depth) to heat the water pumped through these pipes which is then fed back into the house where the warm (or cool) air is circulated by a fan. Except for the few watts of electricity needed to run the system, no additional power is consumed and no fossil fuels are burned to keep the house warm in winter and cool in the summer.

Vangelis has long been interested in the subjects of natural health and ecology and so it was a logical step for him to start researching the practical alternatives available for his house to be constructed in the most environmentally friendly way possible when he decided to build a home here on Paros. His publishing house had recently published a book by eco-architect Costas Tisiparas who introduced him to the company which makes the geothermal systems (which, by the way, are guaranteed for 30 years).

On Paros, Vangelis hired local architects Manolis Issigonis and Olga Tzannetaki who he says warmly embraced the whole concept of eco-building and were very open to working with each of the innovative and avant-garde ideas he wanted incorporated in his house.

A second important aspect is the sewage system - only the second one of its type to be installed on the island (though there are many others in mainland Greece and elsewhere in Europe). Designed to avoid wasting water, while simultaneously protecting the water table from contamination (as is sometimes the case with the standard soakaway septic tank systems) it uses all the "grey" water from the house for the garden, enabling the creation of a beautiful and lush green area which does not need additional watering (except when the house is vacant and there is no waste water being produced).

Purchased through the company Bamar Hellas (www.bamarhellas.gr) and installed under the personal supervision of chemical engineer Giuseppe Palli, the biological treatment system is odour free and uses natural processes (no chemicals) to filter and purify the waste water.

Two main drainage pipes separate the kitchen waste from the rest of the house so as to collect the fats from the former and process them in a special tank. From the processing tanks, pipes lead to a series of large prefabricated polyethylene containers filled with pebbles. A cloth membrane is placed over the pebbles (to keep the earth out) and then they are buried. Just be careful not to put too much chlorine or detergents down the drains, Giuseppe warns, as this is harmful to plant growth.

Inside the house, the aroma of fresh lemons is evident - due to the use of the all-natural paint "AURO" (www.auro.gr). Produced in Germany, AURO organic paints are fully biodegradable and are manufactured from natural raw materials (minerals and plant matter). AURO varnish will also be used on the wooden floors.

Photo voltaic modules and wind power will be installed for some of the house's power needs. Cooking will be on a gas stove, and a thermal fireplace - which provides 50% more heat than a regular one - will be used. The entire house is stone-built, so the thickness of the walls ensures excellent insulation, keeping it warmer in winter and cooler in summer.

The more commonplace solar panels for water heating and a cistern for rainwater collection complete the line-up of environmentally friendly solutions Vangelis has managed to implement.

Though he agrees that some of these have, of course, added to the construction cost (the geothermal system was around 40,000 euros, the sewage system is around 4-5,000 euros for a 4-5 person size and the Aura paint added about 30% to the painting cost), still there are distinct advantages aside from the immediate one of helping to protect the environment.

For one thing, natural heat is much more comfortable than artificial heat, and for another Vangelis will have no fuel bills to pay! In time, too, as systems like these become more and more frequently requested, the price paid now in construction costs will surely add to the overall value of the house.

For further information on using any of these solutions for your property, contact architects Manolis Issigonis and Olga Tzannetaki on 22840-41175, email: isigonis@par.forthnet.gr.

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