

How to live in a 'greenhouse'

▼ *Rolling Bay home first in county to earn LEED certification for 'green' design.*

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It's not much to look at now – just a bare seed of a home set in a plot along Valley Road.

But by the time spring showers have subsided, the Rolling Bay residence will have blossomed into the county's most certifiably sustainable home.

Through an array of design features, the 1,850-square-foot home will consume 50 to 80 percent less energy than a comparable, conventionally built structure, said its architect Russ Hamlet.

"We're pushing the edges with this," he said, taking hold of one of the home's exposed wall studs. "Right now, we're working on meeting the mandated construction standards. Beyond that, everything is gravy for us. So, we're shooting high."

Green by Design

This story is the third in a multi-part series on "green building" initiatives on Bainbridge Island.

Architect Russ Hamlet will host a public open house of the sustainably designed home taking shape at 9745 Valley Road on Sunday from noon to 2 p.m. Call 780-8366 for more information.

His sights are set on a lofty "LEED certification," awarded for buildings that take earth-friendly steps to minimize environmental impacts.

Named for the U.S. Green Building Council's Leadership in Energy and Environmental Design program, LEED certification requires a high level of energy efficiency, water conservation and the use of recycled materials.

Five buildings in Kitsap County are registered under the LEED program, but all, like IslandWood on Bainbridge Island, are large-scale business, government or nonprofit centers.

Hamlet's design will make the little house on Valley Road the first single-family residence in the county to garner LEED certification.

The project uses recycled flooring material, soy-based insulation and is engineered to use 25 percent less lumber in the building's inner framework. A heat recovery system will likely account for 85 percent of the building's heat, transferring warm air from the bathroom and kitchen to the rest of the house.

The house harnesses the sun's energy in a variety of ways, making it a standout model among the over 40 homes statewide undergoing LEED certification.

"They've really paid a lot of attention to solar – much more than most," said Alistair Jackson, a consultant who rates homes as part of LEED's two-year-old residential program.

Roof-mounted solar panels will generate about 35 percent of the house's overall power, while additional energy and cost savings will come from a solar water heating system.

"Passive solar" design elements include large, south-facing windows and concrete flooring to soak up and store



(Top) An 1,850-square-foot home under construction on Valley Road will use 50 to 80 percent less energy than a typical home. (Above) Architect Russ Hamlet, developer Lisa Martin and builder Geoffrey Hobert look over the soy-based foam insulation (above right) that is one of the key components to the efficiency of the house.

Home, green home

Not every home can achieve the deepest shade of 'green.' But there are a few quick and easy steps to turn an average home into an above average energy-saver.

1. Switch bulbs: Using compact fluorescent light bulbs instead of incandescents reduces heat production and energy use.
2. Plug leaks: Use weather stripping to plug air leaks near doors and windows.
3. Buy smart: EPA-certified Enviro-Star appliances often use 25 percent less energy.
4. Tune up: Regular cleanings and general check-ups of home heating and cooling systems can boost energy efficiency.

Source: U.S. Green Building Council

the sun's heat.

"It's just got oodles of solar," said developer Lisa Martin, who commissioned the home's construction but plans to sell it this summer. "This isn't your typical house, where you get the biggest bang for your buck. Sure it costs a little more, but we're not just thinking about today. We're thinking about the future of our planet."

Americans spend about \$160 billion a year to heat, cool and light homes,

according to the U.S. Department of Energy. Over 20 percent of the nation's energy use and 17 percent of its greenhouse gas emissions are linked to powering home appliances, light bulbs, heaters and air conditioners.

This rate of energy usage, combined with the boom in new home construction on the island, sparked a backyard discussion between Hamlet and Martin, who also happen to be next-door neighbors.

"We were just talking over the fence,

saying 'Do you see the development that's going on?'" Hamlet said. "So much has happened over the last two and a half years with all the condo properties. We thought it could be done a different way. Lisa took our words and put them into action."

How green, Valley

Martin, who formerly owned a retail enterprise in Chicago, purchased the Valley Road property and a few other parcels on the island with the intent of developing them slowly into green-built homes.

"I'm a child of the '70s and studied environmental issues in school and have always tried to live in an environmental way," she said. "This is new to me, but it's great. I'm putting my values into action."

Martin decided to hire mostly local labor to build the house, which also earns credits under the LEED program. Because comparatively few subcontractors – such as plumbers and electricians – are based on the island, Martin