

CAPE
COD

VIEW

Lifestyles of the Cape & Islands

Top

2000

Expert Panel Picks Best Restaurants, Shops & Hot Spots on the Cape & Islands



Going for the

GREEN

By Terry Ward Libby

Photos by
Steve Viera and
Craig Peters

Earth-friendly homes are looking better and smarter all the time

In just three days, a sustainable design team in East Falmouth, each of the team was inspired from the original designs on the site.



Libby's eco-friendly is powered by photovoltaic solar panels on the roof. The house's owner is also solar heated.

What does "green" mean? These days, it's a buzzword expressed in a single word. Green is shorthand for anything renewable, sustainable, biodegradable, earth friendly or energy efficient. It's used by advertisers to describe everything from dishwashing liquid to automobiles. For some, green has become the bottom line to guide their choices, from paper products to political candidates.

But is a place like Cape Cod so traditional in its indigenous style, ready for green home design?

Alison Aloni, a partner at ABC Architects of Brewster, thinks so. Aloni is a member of the High Performance Building on Cape Cod Planning

Group, a coalition that promotes green home building. One challenge the coalition encounters, says Aloni, is that green home design is often equated with "extreme" design. "The ugly factor," she calls it.

"Some of the wacky and strange locales of the 1970s gave green building a bad reputation," says Aloni. But as far as aesthetics are concerned, green buildings today can be designed in any style. They often look no different than traditional construction, she says.

Green design is also perceived as costly, but "as home fuel costs continue to rise, more and more people are interested in the economic advantage of green building," Aloni says. Although

some green systems can be expensive to install, many will pay for themselves in just a few years. Green concepts are slowly but surely "creeping into the home building trade," Alessi says.

Joan Muller doesn't need to be convinced. She is ahead of the curve. In 2006, Muller bought a cozy, 1950s-vintage cottage on the shore of Round Pond in East Falmouth. Working with architect Ian Nispiely, green systems expert Tom Wiseman and builder Bruce Jones, Muller created what may be one of the "greenest" homes on the Cape.

Green systems are not just for newly built homes, says Muller, who is education coordinator at Wapsett Bay National Estuarine Research Center in East Falmouth.

"There are so many opportunities for doing rehabilitation sustainably," she says. "If you're doing a renovation, why not do it with high-quality sustainable systems?"

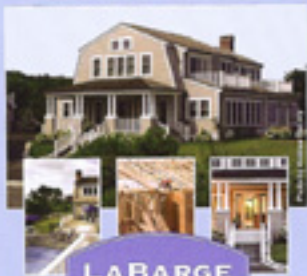
The first step in any green design, says Muller, is to create a "tight envelope." The house must be extremely well insulated and have no "thermal leaks" that cause heat loss. Muller used a recycled cellulose insulation behind the walls and, in her basement, a soft, dense, acoustic insulation made from shredded blue jeans.

On the south-facing side of the cottage, Muller added a sun room and kitchen. The floor of the addition is brick tile with a concrete slab beneath, plus an insulation layer between the concrete and the ground below. The floor functions as a "thermal mass" that absorbs the sun's heat during the day, then gradually releases it as the house starts to cool at sunset.

Muller's hot water system is supplemented by pipes that are heated by sunlight in rooftop panels. Also on the roof are photovoltaic solar panels that generate electricity. Muller's electric power is "grid tied," meaning that the system automatically taps into public power lines if her solar power runs low, but feeds power back into the grid if the solar panels generate a surplus.

"The meter actually runs backward

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The greenhouse in Chittuck, designed by Kirk Mendow & based and coded by passive solar engineering. The wood-burning room is only supplemental heat.

when that happens," says Keller.

Much of the beautiful wood used in the interior of Muller's addition came from Catawaw Sawmill, which specializes in lumber milled from wood that was salvaged from 1940s-down buildings. Some of the wood is from trees cut down in the nineteenth century. A new floor in Muller's bedroom is made from bamboo, which regenerates much faster than trees yet looks like traditional, high-quality, wood-plank flooring. The cost of building Muller's house was about \$100 per square foot, not including landscaping.

Green design is not only about mechanical systems and fuel-efficiency ratios. Many architects who have embraced green concepts find that they are inspired by its expanded, holistic approach to design.

Kirk Mendow of Boston-based Mendow Architects specializes in what

Green systems can be expensive to install, but many pay for themselves in just a few years.


he calls "environmentally sensitive architecture." It's an intuitive style that uses pleasing, durable natural materials and makes living spaces more comfortable, health-promoting and low maintenance.

Mendow's elegant but compact design for Arbor House, an 800-square-foot greenhouse on a secluded spot in Chittuck, won an Honor Award from the Boston Society of Architects in

2005. The house is heated and cooled by passive solar engineering, and it incorporates other green design concepts as well.

The last critical design issue was the siting of the greenhouse. Its predominant wall of windows faces south for maximum sun exposure. The interior floor is covered in Vermont blue slate supported by an insulated concrete slab — the same "thermal mass" heating principle used in John Muller's home. Two high-efficiency wood-burning stoves provide additional heat when needed.

During the summer, an exterior overhang above the windows prevents too much sun from penetrating the interior, and the windows open to the prevailing southwesterly breeze. The year-round greenhouse is comfortably warm in winter because it has the tight envelope needed for super-efficient heat retention.

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Platinum Architects

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Platinum Architects offers sustainable design for residential, commercial and institutional settings.

Capo Design

Susan Bucken, LEED-certified architect
131 Main Street, Cotuit
508-283-1706

Jim Shipley

34 Ocean Street, Cotuit
781-283-9204

CONTRACTORS

Building Diagnostics

PO Box 989 Fort Salvo
508-268-2222 • www.buildingdiagnostics.com
Building Diagnostics, owned by Bruce Turner, designs and builds high-performance homes that maximize the use of renewable resources. The company also improves the performance of existing homes.

Green Energy Design

11 Oak Lane, Oarville
508-438-5434
This company designs, constructs and maintains residential-scale and commercial-scale renewable energy systems, including wind solar photovoltaic and solar storage for heating and hot water. The owner is Tom Williams.

Thoughtforms Corporation

879 Pine Street, Oarville
508-409-1700 • www.thoughtforms.com
This builder of high-end homes has a strong history of incorporating green design elements.

EDUCATION & INFORMATION

Cape and Islands Renewable Energy Collaborative

508-427-7474 • www.cirenc.org
This is the Cape and Islands' major umbrella organization for individuals and groups who promote the use of renewable energy sources. Their website is a clearinghouse for information on local events and activity in the sector. Some of the collaborative's members are:

**Cape Cod Community College
Environmental Technology Program**
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