



Simply Sustainable

The right materials made all the difference in an out-of-the-way island home.

2008

Essential Planning

Building an environmentally responsible home is challenging, but designing one that stands up to coastal elements can prove even harder. Add to that a site on a virtually automobile-free island and you have one headache of a project. “You have to plan ahead,” says architect Fred Stelle of the home he built on Fire Island, New York. “You can’t just run around the corner to the hardware store and pick up a pound of nails.”

Island Challenges

Noel and Ellen Berk-Rauch, who live less than two hours away in Brooklyn, came to Fire Island “looking for something simple,” Noel says. Fred offered a simple design, but he couldn’t do much about the complicated construction process. Each morning, supplies were delivered by ferry to the island and driven down the so-called streets, which are just wide enough for a golf cart.



COASTAL LIVING

Conservation Commitment

With so much energy expended on transportation and supplies, Fred—who tries to build green whenever possible—had to work extra hard to keep embodied energy costs to a minimum. Typically that might require incorporating an existing structure into the design, but he had to scrap the original house on the Berk-Rauches' land. "I hate throwing away stuff that's useful, and it's important to reuse and preserve the footprints of time," Fred says.



Long-lasting Design

He compensated by using durable building materials, which tolerate seaside conditions better than standard options. Though most of the supplies came from far away—the framing lumber and cedar from Finland and the bamboo flooring from China—Fred says their long life spans will counter their high embodied costs. With little need for replacement, less waste will be generated in years to come.



Making Sense

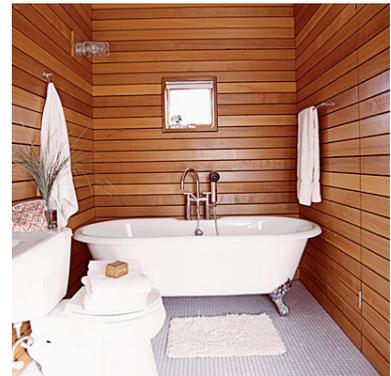
"It's all about using materials that make sense in this environment," Fred says. "The weather gets extreme—from very, very hot, humid days to raging Nor'easters where sand and salt water are blown at the house."



COASTAL LIVING

Innovative Building

Outside, instead of using pine, which can retain moisture and rot easily, he chose siding made of cedar and roofing crafted from cement (cast to resemble corrugated tin) that won't rust and should last 100 years. Inside, Fred also specified materials that could be easily fabricated and installed by a carpenter with just a saw and drill. He chose bamboo floors, which can withstand tracked-in sand, and limited detailed finishes. He left most of the surfaces unfinished but stained some inside walls a driftwood gray



Standing Solid

Over the life of a house so close to the ocean, some maintenance is inevitable. “We’re basically on a ship,” Ellen says. Metal—from bikes to pool equipment to hurricane light fixtures—corrodes with prolonged exposure to the salty air. But after seven years, even Fred is surprised that the structure has remained virtually the same. “This house hasn’t changed since we finished it,” he says proudly. It’s a simple testament to the value of thoughtful design and smart material selection.