

SOLID WOOD LOG HOMES

*The Original and Sustainable
Green-Living Abode*

by Judi Burton

The smell of wood and fresh air is the first thing that comes to mind when I think about living in a log home. Being wrapped in a cocoon of Mother Nature and all her glory is the feeling a log home generates. I think about its sturdiness and history—how there are 200-year-old log homes still standing. I think about the “greenness” factor: no drywall—with the potential to absorb leaks and grow deadly mold—no plastics, no fiberglass, no vinyl, and no paint. While log homes are often thought of as rustic dwellings in the mountain forests, the vision I have of mine is one located near the beach. And, as it turns out, being that they are so heavily built, almost like concrete, they have the added advantage of surviving hurricanes.

Log homes, which have been around since the 1600s, were the original domestic shelter in the United States. Pioneers and homesteaders erected these buildings because they used what nature offered: trees, which were found in abundance, to create hand-hewn and fitted logs, and mud to seal the joints. The inherent genius of the primitive log home wasn't just the frugality of the components and that it could be built without complicated milled parts, but the fact that warmth was efficiently trapped in the house in the winter and the solid wood resisted harsh summer heat.

Instead of small, simple cabins, today's log homes are magnificent structures, with humongous windows overlooking lake and mountain views. Designers have become very savvy at designing homes that don't express the look of raw logs at all, and instead can match the appearance of traditional craftsmen homes. Don't get me wrong; if you want a log home with the rustic look of logs, you can still get that, too.



SOUTHLAND LOG HOMES

Southland Log Homes, based in Columbia, SC, is one of the largest log home manufacturers in the country, milling the components for exacting fit, and selling building packages with windows, doors, cabinets and trim for a complete home you can build yourself or contract to have built on your site. I went to see the factory and get a better idea of what it would be like to live in a log home, being that I've wanted one for such a long time. At the Southland Log Homes plant in Irmo, SC, I met with CEO Ken Sekley and Director of Marketing Rob Whorton for a tour, beginning in one of the model log homes of the company's earliest design. After all the pleasantries were out of the way, we delved right into discussion of the green and sustainable factors relating to log homes.

IT'S ALL GREEN

"There are some basic green aspects that apply across the board for just about any log home, not just Southland," explained Sekley. "The outer shell, which accounts for much of the home, is made out of sustainable raw materials." Most log homebuilders only buy logs from sustainable forests,



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he added. Later, I did a little research to find out what exactly constitutes a sustainable forest.

Jerry Shrum, a retired forestry commissioner of 13 years who now owns his own environmental education consulting firm, spoke to me about what makes a tree farm sustainable. The Southern Yellow Pine, which covers our beautiful state, only takes about eight to 12 years to grow to full maturity. The tree farmers cut down every third and fifth row so that they can move their equipment around the forest. Those young trees that are cut

early are often sent to the paper mills. When the entire plot is ready to be cleared, they cut in jagged lines and edges, instead of big squares, so that the wildlife in the forest won't have far to relocate. If there is an endangered species or a historical landmark on the plot, that area is roped off so as not to be harmed in any way. Shrum told me about a site he had been to where they had roped off large boulders in the middle of the plot. Back during the Revolutionary War, some brave SC women of Newberry County detained Cornwallis' men (as they were head-

ing North) on the rocks with tea and scones, allowing the American soldiers to catch up to them. The tree farmers are also responsible for maintaining healthy streams and lakes. They all have to abide by these rules, which are enforced by the South Carolina Forestry Commission. "The days of cutting down a thousand acres at a time are over," said Shrum. "It is done with the utmost care for wildlife and the environment." The trees absorb carbon dioxide from the air and lock the carbon into the wood for a century or longer, he explained. New trees take their place in the forest and continue producing oxygen and trapping carbon.

On the tour, Sekley pointed out that they only buy SC trees. This lowers fuel consumption, further shrinking their carbon footprint. He went on to talk about the things that will never be needed for a log home, but will always be needed for a conventional home. "You're eliminating the need for dry wall, vinyl siding, paint on the inside and outside of the house, and fiberglass insulation; not having all of these things lowers cost, and reduces waste and consumption of resources." Also eliminated are layers of vapor barrier, sheathing, sealants, flashing, and other small pieces found in conventionally built lightweight wood-frame homes.

The only common homebuilding materials needed for a log cabin would be whatever plumbing and electrical systems, windows and doors, and appliances you decide to go with; and instead of the mud "chinking" between logs of the 1600s, builders now use a thin foam gasket and strip of caulking to give an airtight seal between log sections. No other finish is necessary, and the caulk lasts 20 years, with only spot repairs needed after that. "These logs are all precision built so that they all fit together tightly to create better energy efficiency," explained Sekley. "The average percentage savings is 35 percent for heating and 25 percent for cooling versus a conventional home with similar dimensions."

Southland recently expanded its greenness even further by starting alliances with solar energy companies.

Your house should be as energy efficient as possible before adding solar systems, explained Sekley. With a log home, you already have a naturally energy-efficient dwelling simply because of the 8- to 12-inch solid wood walls of fast-growing sustainable SC pine. Since Southland can custom design your home for you, it is able to incorporate solar panels into your house design.



grooves on each side so that they can lay one on top of the other like pieces to a puzzle. Each log has long bolts and screws that make the walls of the home very solid and exceptionally strong. Logs at the wall base have a routed channel for electrical wiring.

A GREAT DISGUISE

Sekley mentioned that they built a log home in the Shandon area of Columbia on Duncan Street with a 5 Star Energy Rating. You can imagine that a log home in a venerable suburban neighborhood might stand out, but the log plank style of milled wood and trim mimicked the traditional clapboard style of several homes in

the neighborhood. It had also been stained with an opaque green stain and contrasting trim, and had traditional Southern covered porches. "You would never recognize it as a log home," said Whorton, who was schooling us on the different styles of logs. "The solid log provides the thermal mass, and then we shape it here at the factory for the style of your choosing." He showed us that each log has female and male

SURVIVING DISASTERS

Typically, one would think a log home would burn like an oversized campfire, but Whorton explained that the solid density and lack of air voids within the log walls suppresses fires. "There's no air in there for the fire to spread. It's a solid mass." I thought back to my third grade class when we were learning about fire drills and how fire needs oxygen to survive. Of course, a house made out of plastic and drywall and fiberglass with air pockets all around it would burn faster than a solid wood wall; and heavy wood chars and burns very

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slowly, retaining structural strength and integrity, whereas a wood-frame wall could burn quickly and collapse. The fire issue easily morphed into the topic of natural disasters. Living in South Carolina, we all worry about hurricanes. Southland has many log homes on the coast and they meet the extremely stringent standards for Miami-Dade hurricane ratings. Sekley told us about a Southland log home that survived Hurricane Katrina; it was found still standing among the rubble, while the surrounding homes had all been demolished. The sheer massive weight of solid pine, nearly a foot thick, and the myriad of steel bolts, screws and connectors, help make a log home a formidable, strong structure that is much better at weathering a hurricane than a house made of light framing and panels. However, with hurricanes, you also get floods. Curious about how well log homes do in floods, I did some research. Usually, all that needs to be done is to wait for the structure to dry, replace flooring and finishes, and scrub the bejeezus out of it. Lacking drywall, insulation or siding, there are no walls to demolish and replace, and wiring is easily replaced in the special routed channel behind the baseboards. There was one case where a log home was lifted off of its foundation and was floating around town. When the flood ended, it was towed back and replaced intact on its foundation. I was beginning to wonder if Noah lived in



a log home. The insurance companies I contacted have yet to do their homework, and haven't created special discounted categories for log homes.

We went into another model home, which was much smaller and had a spiral staircase ascending to the loft. I was particularly struck by how beautiful the floor-to-ceiling fireplace looked. My mind was already processing how I would design my own log home. The great part is that the folks at Southland will set you up with local electricians, plumbers and carpenters so that you will be able to finish your house with a locally approved contractor.

TERMITES

One would assume that after fire, the next biggest enemy of wood would be termites. "You can have the bait traps so that you don't have to spray all over," said Sekley. A little research revealed that traditional homes are just as susceptible to termites as are log homes. I think this is because the wood is kiln dried and dipped in a non-toxic borate solution, which is just a fancy word for salt. It is used as an anti-fungal and an insecticide, plus has fire-retardant qualities.

WOOD SMELLS GOOD

Later, we walked out to the factory yard and checked out the huge kiln. The main reason for the kiln is to dry out the wood as much as possible to deter rotting or insects. The wood chips left from milling are also recycled as bedding for pets. We strolled past the borate-dipping box near the mill and saws, shouting over the din. The smell of sawdust, which wafted through the air, brought back memories of my father building his first boat in our garage.

WOOD IS GOOD

We ended our tour at the largest model, which is also their main office. It was the kind of building you might find in the Rockies, with soaring beamed ceilings and great open spaces throughout. There were bears, eagles and images of nature carved into parts of the building, and I marveled that wood is good; a true gift of nature.

To live in such a natural atmosphere is the greenest thing about a log home. It is made from nature, embraces nature and withstands nature without harming it. I think that is probably the most important aspect. As I look around my house, I can count how many ways my standard frame house clashes with the Earth and nature, and can't wait to plan my own green-wooden oasis. I hope others follow suit and support the planet, the state, local sustainable forests, by saving energy, and keeping us closer to the heart of nature.

For more info on log homes, visit SouthlandLogHomes.com or call 800-641-4754. See ad, page 17.