How a Green Dream Becomes Reality

By Anne Machalinski

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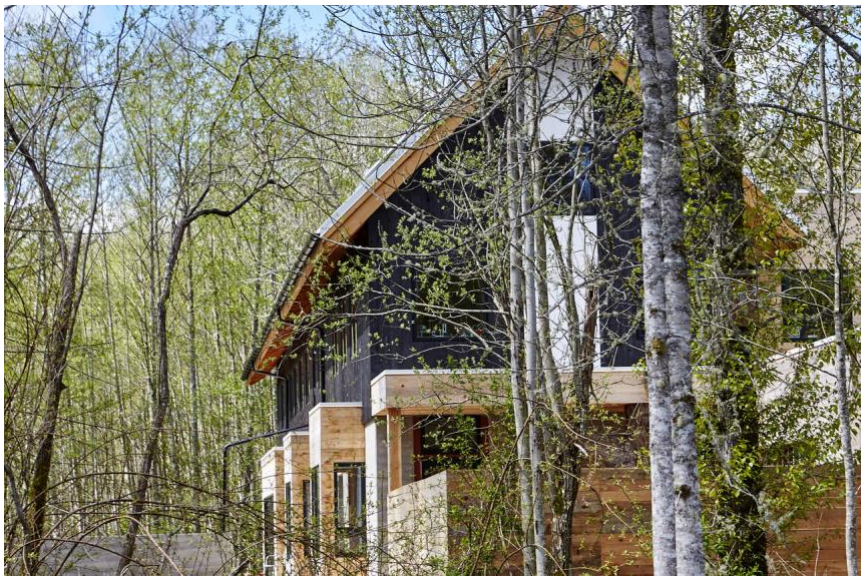


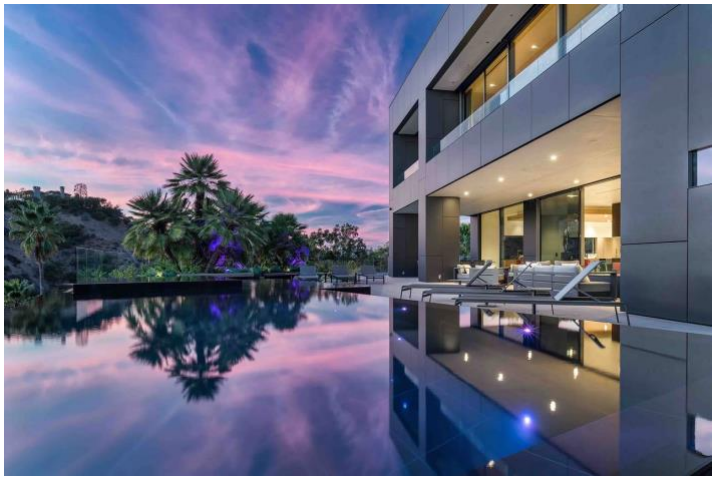
Architect Jason McLennan is one of the most prolific and well-known figures in the green-design scene. He launched the world's most rigorous green certification program, called the Living Building Challenge, in 2006; runs a Seattle-based sustainable design firm; and is founder of the nonprofit International Living Future Institute. He has also received the highest honor related to socially responsible design and was even hired by Leonardo DiCaprio to design Blackadore Caye, the actor's soon-to-open 68 villa eco-resort on an island off the coast of Belize. So, when it came time for McLennan to design and build his own family compound a short ferry ride away from Seattle, on Bainbridge Island, he naturally went all out.

The result is Heron Hall, a 3,300-square-foot home largely built with reused stone and locally salvaged wood. It's powered by solar panels and is entirely off the water grid, relying instead on collected and treated rainwater for showers, dishwashing, and drinking water. It also boasts compost toilets that make soil rather than waste, as well as finishes and furnishings free of asbestos, formaldehyde, phthalates, and volatile organic compounds.

After a five-year process that included time to find the land, understand the site, collect salvaged materials, and build, McLennan and his family moved in last March. So far, "it's been fantastic," says McLennan. "The air quality is amazing and the home is incredibly comfortable, with great acoustics and no draft. It's just very soulful and beautiful to live here."

Like McLennan, 44, plenty of other industry insiders have built their own green homes, driven by a desire to "walk the talk," as they say. Dan Sweeney, 59, director of project engineering and field service at energy-storage company Demand Energy, is one of them. He built an Earth Advantage–certified home that makes all of the energy it needs along the Little Deschutes River in Oregon about five years ago.

Another is Terry Hancock, 60, who owns Hancock Real Estate, a commercial real estate business, and has worked on projects that are LEED-certified projects, which stands for Leadership in Energy and Environmental Design. Five years ago, he built his own LEED Gold-certified vacation home on Oregon's central coast—ideal for family gatherings. "Our goal was to have the most energy-efficient home possible so energy bills would never run them out of the house," he says of his family.



Roland Schallibaum's high-performance spec house in Beverly Hills, Calif. PHOTO: BRUNO HEIBRING

Together, these homes demonstrate a key point that sustainable designers stress: You don't have to sacrifice anything to construct a home built to the highest environmental standards.

If you want to go green, experts say the most important part is the planning. According to Matt Power, the editor in chief of Green Builder magazine, basic and early decisions, which include considerations such as the home's location, size, and how it is oriented, are often overlooked. "Location is one of the very first green building concerns," he says, noting that a property should ideally be a short commute to work and schools, or near public transportation. "That's going to be 30% of your eco footprint."

The next step is finding the right team to work with. Power says it's best to look for professionals with experience designing and building what the industry calls high-performance homes. Often used in lieu of "green," this term refers in part to how efficiently a home uses water and electricity, but also to how comfortable the home is and how pure its air and water are. With a team in place, the next step is to outline goals, experts say. These can be related to materials you'll use; the home's environmental impact; health factors, such as water and air quality; and intended financial savings. This is also the time to decide what certifications, if any, to work toward.

For architect Nathan Good, of Salem, Ore.–based Nathan Good Architects, the sweet spot for most of his clients, who include Sweeney and Hancock, is about 3,500 square feet. But there are outliers, such as a 36,000-sq.-ft. mansion he built for a client south of Denver that has innovative heating, utilizes both passive and active solar energy, and cost $16 million to build.

A green roof on an Oregon home, designed by architect Nathan Good, provides fire resistance and extra insulation. PHOTO: PHOTOGRAPH BY NATHAN GOOD

The good news, McLennan says, is that while he prefers homeowners to build small, “the environment doesn’t understand house size. It understands impact.” That’s why he advocates that people building a bigger home should go for a deeper shade of green. “I would say that the more resources people use, the bigger responsibility they have to do more,” he says. Once you’re settled on an approximate size, an architect will also have to decide how to maximize the home’s placement on the land to exploit its natural features.

Getting this right is something that Pasadena, Calif.–based architect Douglas Ewing of D.S. Ewing Architects specializes in. Using what he calls a sustainable methodology, he builds homes that are fit to the land they’re built on and are meant to rely on the sun for warmth. “I build homes that at any time during the day and in any season, there’s a place in the sun and a place in the shade,” Ewing says, “so your home is always comfortable.”

When it comes to materials, every high-performance home builder will stress the importance of insulation. But from there, some, like Ewing, will choose to locally source materials, while others, like McLennan, will prioritize building with reused or salvaged materials. Others will opt to use specialized materials shipped from locations around the world because they’re considered the best-designed specifically with strength and resilience in mind.

Swiss-born architect Roland Schallibaum, who recently completed a luxury, high-performance Beverly Hills, Calif., spec build, is one of the last group. His 7,000-sq.-ft. ultra-modern house was introduced as a pocket listing in January for $17.5 million. Built entirely of metal and steel and overlaid with 36,000 pounds of fiber cement panels, which were interlaid with insulation air pockets—a type of technology never used in a residential home in the U.S. before—the result is a durable, resilient and energy-efficient home, Schallibaum says. It's also fire resistant, thanks to both the materials and the two green roofs, and is LEED Platinum-certified, with energy costs 40% to 50% below any similarly sized conventional house, he says. "There's nothing else like this house out there."

When it comes to decisions related to human health, people are increasingly opting to install high-end air and water filtration systems, and using all green surfaces throughout, including countertops made of recycled materials, formaldehyde-free wood floors, and walls painted with low- or no-VOC paints. Most green home builders will also opt for LED lights, high-rated Energy Star appliances, low-flow showerheads and faucets, dual-flush toilets, and Greywater smart-irrigation systems.

For people on the fence about whether to go green, experts note that it doesn't take longer to build a high-performance home, and costs can be similar to a typical, non-green home, or, at the high end, only 10% to 15% more. But when you figure in lower maintenance costs, lower heating and cooling costs, and lower water use, that amount could easily be recouped within a few years, Power says. Building green means putting money where your values are, McLennan says. "We're creating better conditions for life," he says, "and a truly sustainable future."