Chronicling the Rise of Green Gables
By Ted Reiff

Two hours southeast of Kansas City, I steer my rental car down a series of country roads to a narrow dirt lane, dead-ending moments later at a sprawling three-story house on Lake of Ozarks. I’m here to see for myself how this 5,000 square-foot structure, known locally as Green Gables, came to be built almost entirely from discarded—and reclaimed—materials.

My organization sponsors a national competition to promote the use of salvaged building materials. Our mission is to keep reusable lumber and fixtures from clogging overburdened landfills—not an easy goal in a thriving consumer society—and the annual reuse contest is one of my favorite strategies. DIYs from throughout the country enter furniture, room additions, storage sheds, greenhouses, and dozens of other works for a chance to win a few modest prizes and some well deserved notoriety.

That’s how I learned about Green Gables. It is rare for someone to enter an entire house, unless it’s a playhouse or a guest house, so even though Green Gables was ineligible to participate, I was sufficiently intrigued to schedule a side trip on my next visit to Missouri.
The family Labrador retriever is the first to greet me, followed closely by Tom, the current owner of Green Gables, and his nephew Ken.

My hosts lead me up a short flight of wood stairs and through a wrought iron gate, explaining as we enter that the gate and adjoining iron railing were scavenged from a local demolition site. It’s the first of many such stories I will hear over the next two days.

We enter the house through arched double solid-wood doors with encased stained glass windows, the entire set recovered from an 1850s church in Kansas City. The entry, like the rest of the house, is finished in wood paneling. The ceiling overhead is made from 1x4 cedar fencing cut into squares, each router-carved with a circular motif. A second stained glass window is inset to the left of the entry. Just beyond is a half bath entirely furnished with used fixtures, right down to the mirror and vanity light.

Tom leads the way down a cast iron spiral staircase to the kitchen, dining and family rooms on the lower level. The steps, each weighing 150 pounds, originally led to the landing of a large boiler. The builders found the staircase during one of their junkyard scavenging trips, disassembled it for transportation and re-assembled it inside the house.

A mosaic of larch squares lines the stairwell. Larch is a deciduous conifer, native to certain cool areas of the northern hemisphere. The larch boards were rescued from a demolition site.

Tom’s wife Ruth sets out a platter of cheese and crackers and pours wine. For the next four hours Tom and Ken recount numerous scouring and scavenging missions throughout Western Missouri. Tom explains the provenance of each item; the histories are often elaborate.

Green Gables has six bedrooms, two full baths, four half-baths, an eat-in kitchen, great room, three spiral staircases and two immense fireplaces. With a 28x80 footprint, the house rises 32 feet from the concrete foundation to the peak of the gambrel roof. An adjacent three-bay boathouse is also built of salvaged materials.
The house was designed by Tom’s brother-in-law, Larry (at the family’s request, last names have been omitted), now deceased. There were no architectural renderings, only Larry’s rough sketch coupled with a tractor-trailer load of determination, ingenuity and midwestern grit.

Construction began in the early 1980s with the pouring of the foundation and lower floor and the construction of the two fireplaces, the largest on the lower floor and a second, smaller fireplace directly above on the main floor. Four separate chimneys encased in a single 28-foot brick and concrete stack vent the two fireplaces, a wood cook stove and an indoor grill. The stack and fireplaces took a full year to build and contain some 90 tons of concrete. All of the dampers are custom made.

Six relief sculptures depicting Irish river gods decorate the lower face of the chimney. A cast iron image of Neptune is inlaid higher up the stack.

Since the house is on a sloping lot, the lowermost wall is concrete and serves as a retaining wall. The side walls are part concrete, part wood-frame. All three floors are platform-framed, and the walls were constructed in panels built on the ground and then raised up. Each panel measures four by eight feet and is constructed with 4x8s and 2x4s sided with horizontal 2x6 lumber. The exterior walls are finished on the inside with 3/4-inch plywood and covered with 1x4 and 1x6 vertical paneling.

Sitting at the dining table on the lower level, enjoying my second glass of wine, I look up at the ceiling, intricately covered with stained 1x4 tongue and groove red and yellow pine. Tom explains that the pine was once flooring in an old apartment building. Each board is blind nailed to 2x14 joists, many acquired from the same building. The joists are supported by an 8x12 beam held up by 8x12 posts that previously served as dunnage for generators shipped to Missouri’s Truman Dam from South America.

The next day, the tour begins in the 28x32-foot great room located on the main, or entry, level. The focal point is the fireplace, with its 8x16 solid oak mantel, fashioned from an old railroad trestle and weighing some 400 pounds. The walls are paneled with 1x8 tongue-and-groove red
The gambrel roof framing is exposed through an open ceiling over the entire expanse.

A large gable, high on the exterior wall of the great room, faces the lake. It features a brilliantly patterned stained-glass window and a non-functioning balcony with a wrought iron railing. At night, when the window is illuminated from the inside, it can be seen from the far side of the lake.

The center portion of the ceiling is finished with 1x8 larch, the lofts with 1x10 fir. The roof framing
consists of doubled 2x10 Douglas fir rafters bolted at the joint and a 2x14 ridge board. The roof sheathing is 2x8 tongue-and-groove from an old Kansas City warehouse. Seven gables adorn the facade, three facing the lake. The original composition shingles have been replaced with a standing-seam metal roof.

To build the exterior decks that run the length and wrap the sides of the main and lower levels, Tom and Larry used 2x12s salvaged from a dinner playhouse.

Wood species used in the construction of the house include red oak, southern yellow pine, red pine, loblolly pine, western red cedar, willow, red oak, Douglas fir, cottonwood, larch wood, poplar, pecky cedar, pecky cypress and hickory.

The family had plenty of time and space and took advantage of it. Three area demolition contractors would call when interesting projects crossed their desks. There were no restrictions. Ken and Tom would look at practically anything. However, searching out materials took time—lots of it—and having available storage facilities was crucial to protecting materials from the elements until they were needed.

According to Tom, the house is over 90 percent complete. It may never be entirely “finished.”

Whenever I investigate a project that relies heavily on salvaged materials, I ask two questions. First, approximately what percentage of the materials were purchased new. Second, what was the total cost of the project. In the case of Green Gables, the answers to both questions are as amazing as the project itself.

The only new materials used in the construction of Green Gables are one sliding-glass door, electric wiring and panel boxes, rough plumbing, metal roofing, the usual fasteners (nuts, bolts, washers, screws, nails and brackets), concrete and mortar (all mixed by hand), miscellaneous scrap lumber, and the five Irish river gods that adorn the exterior chimney.

The family’s reliance on salvaged materials was inspired by a deep appreciation for the character
of seasoned lumber and period fixtures, coupled with a determination to pursue the dream of a family vacation home, despite limited funds. To date, the total project cost, including materials, both used and new, and land—three lots totaling one full acre—is a mere $70,000.

Prior to experiencing Green Gables, I’d have predicted that a project of this size and scope would be nearly impossible without extensive materials-planning and machinery. Tom and Larry had neither. In the absence of forklifts, scissor lifts and cherry-pickers, they hand-carried everything, including concrete, up conventional ladders. To lift large framing members into place on the main and loft levels, they cut down a tall hickory tree and used it as the main post in a crane system, completing the device with a series of pulleys and a hand operated winch.

Anyone staying over lived in a plywood and tarpaper shack and used a chemical toilet until the house was ready for occupancy.

Construction didn’t stop when a desired fixture or material couldn’t be found. In most cases the builders kept searching until they identified a reasonable substitute—and then made it work.

What they did not do was head to the nearest home-improvement store and purchase something new, and that’s where they clearly differ from most of us.

While I wouldn’t expect many DIYs to embark on so extensive a project, Green Gables is a remarkable demonstration of what can be accomplished using salvaged building materials, with dozens of creative ideas and solutions under a single roof.

Ted Reiff is president of The ReUse People of America, a nonprofit organization dedicated to salvaging and distributing reusable building materials.