

Dream Kitchens: Green Kitchens

By Denise Kersten Wills

As homeowners look for environmentally friendly ways to renovate, the choice of materials is growing and prices are falling.

When Alan Abrams set out to renovate the kitchen of his 1960s Silver Spring condo, the ecoconscious builder became a hunter-gatherer.

He scavenged soapstone from an abandoned Virginia quarry and put it to use as a countertop. He found yellow-pine rafters that had been salvaged from a demolished building and turned them into a breakfast bar. He collected steel pipes from a junkyard and fashioned them into sconces.

Abrams ordered cork flooring, which is made from bark peeled off trees. Finding “green” appliances was easy: He selected a refrigerator and dishwasher that had an Energy Star rating, a label that ensures they meet an efficiency threshold.

But Abrams’s quest ground to a halt when he tried to find affordable cabinets made from sustainable, nontoxic materials. “I spent two weeks on the phone talking to manufacturers and distributors,” he says.

An Oregon-based company, Neil Kelly Cabinets, uses low-VOC (volatile organic compound) glues and finishes, wood certified by the Forest Stewardship Council as responsibly harvested, and a formaldehyde-free alternative to particleboard made from wheat straw. But shipping cabinets from Oregon would have added thousands of dollars to the cost.

Closer to home, a handful of custom cabinetmakers have started working with environmentally friendly materials, but Abrams wasn’t able to find someone who could stay within his budget.

“I threw in the towel here,” he says, “but I ameliorated the problem three ways”: He ordered cabinets from the closest manufacturer. He chose plywood instead of particleboard because it contains less formaldehyde, a carcinogen. And he cut his cabinet order in half, installing open shelves—built with cedar left over from someone else’s construction project—above the counters.

Such compromises are part of designing an earth-friendly kitchen.

But sticking to ecologically sound intentions may soon become easier. New products have made green kitchens more affordable and attractive, and builders and architects say growing demand has gotten manufacturers' attention—meaning more options and better prices ahead.

When Margaret Campbell surveys the remodeled kitchen in her Vienna townhouse, her satisfaction comes not just from the room's look and functionality but also from the ecoconscious materials she and her husband, Edward Johnson, included.

Their cabinets were built by a master carpenter in Richmond who used certified maple, and all of their appliances are energy-efficient. "I feel good about it every single minute," Campbell says. "We're children of the '60s—do I have to say anything else?"

[Chris Donaghy](#), whose firm, [Kitchen Brokers](#), did the renovation and specializes in green kitchens, says his sales have tripled in the last year. Other ecoconscious builders and architects report similar growth.

Donaghy credits both growing environmental awareness and falling prices. He can now do a green kitchen for the same cost as a regular custom kitchen—starting around \$30,000.

Even designers who hadn't focused on green projects are getting on board. "It's a trend that I think is going to grow at an alarming rate," says Jennifer Gilmer, who has added bamboo flooring—a sustainable material that grows quickly—and other green products to her Bethesda showroom. "I'm trying to keep up with it and educate myself."

Innovative Counters

Keeping abreast of ecofriendly innovations isn't easy. "There's been an explosion of new products," says Chris Van-Arsdale, a green builder in the District. He points to the variety of countertop surfaces that provide alternatives to granite and other natural stones, which are nonrenewable and require large amounts of energy to mine and ship.

In his own kitchen, VanArsdale used concrete made with fly ash, a coal waste product that makes the concrete stronger and reduces the amount of energy needed to produce it.

He's also fond of PaperStone, a durable surface made from recycled paper and resin. Less expensive than concrete, it can be cut and installed by a skilled carpenter. In dark colors, it resembles slate. A competing product called Richlite is similar.

At Eco-Green Living, a store near DC's Logan Circle that sells everything from underwear to water heaters, owner Keith Ware displays countertop samples made from recycled glass, wood, porcelain, metal, and other materials, plus bamboo butcher's block.

One of the more interesting samples, a material called Alkemi, is made of recycled aluminum shavings set in either clear or opaque resin. Another surface, BioGlass, is made

of textured recycled glass and comes in four colors. In a frosty shade of light green, it has the coolness of a swimming pool.

Ware says many customers are drawn to IceStone, a composite of recycled glass and concrete that resembles terrazzo. The bits of glass give it a depth and richness that rival granite. It comes in 27 colors and can be customized to match any palette.

At a minimum of about \$95 a square foot including installation, the price leads many homeowners to take a second look at PaperStone, which isn't as dazzling but costs about half as much.

Searching for Cabinets

Alice Trembour and Rob Schware were able to splurge on IceStone counters in part because a neighbor's massive red oak landed in the backyard of their Takoma Park house in 2003. The tree caused only minor damage and helped them solve the biggest dilemma in creating a green kitchen—finding cabinets.

The couple had the tree hauled to a local sawyer. A friend and neighbor, environmentally conscious architect Bill Hutchins, put them in touch with a carpenter who was willing to work with environmentally responsible glues and finishes and—because he was just getting back into kitchen work—charged a low rate.

“For us, environmental concerns and the bottom line are about equal,” Trembour says. “With this kitchen I was able to have my cake and eat it, too.”

Most homeowners aren't so lucky. Because cabinet manufacturers haven't yet embraced the green market, many customers have to weigh imperfect options.

Bonnie Chamberlain and Mike Bopf would have preferred not to ship cabinets from Neil Kelly across the country, but they wanted to keep toxic glues and finishes out of their Bethesda home. The only other option they knew of was to hire a local craftsman, but the quote they received was much more expensive, even after shipping from Oregon.

Now that the kitchen is finished, Chamberlain says she's pleased with their choice: “It's nice knowing that our daughter isn't going to be breathing in a bunch of stuff for the next 20 years.”

Since designing Chamberlain and Bopf's kitchen, Donaghy has started selling green cabinets made in Vermont, Quebec, and Oregon.

Jennifer Gilmer, who does high-end projects, is also trying to coax a manufacturer she works with to get on the bandwagon. In one kitchen she designed, the clients bought reclaimed wood and sent it to a cabinet factory.

That was an expensive kitchen; finding cabinets on a smaller budget is harder. Some who are in the green-building loop—including Hutchins and Ware—have arrangements with individual carpenters who they say will build ecofriendly cabinets at reasonable prices. The maple ones in Hutchins's home cost \$9,000. Ware says he can sell for less, as low as \$900 per linear foot.

One drawback of working with a small operation, though, is that it often requires a much longer lead time than big manufacturers do.

Another cost-saving option is to buy used or inexpensive cabinet boxes—the frame of the cabinets, typically made of particleboard or plywood—then to add doors and panels built with green materials.

Amicus Green Building Center in Kensington currently offers custom cabinets—either whole or fronts only—and owner Jason Holstine says he hopes to introduce a line of stock doors and panels soon.

Nature Neutral, a green-building-supply company in Edmonston, Maryland, and Charlottesville, plans to introduce a line of custom and stock cabinets at prices competitive with those at big-box stores.

Energy-Saving Appliances

In comparison with finding ecofriendly cabinets, choosing appliances is a breeze. The most important factor is how much energy and water they use.

The Environmental Protection Agency's Energy Star label identifies dishwashers, refrigerators, and freezers that perform much better than the federal standards on an efficiency test.

But not all Energy Star appliances are equal: Some barely squeak past the threshold, while others far surpass it. For a comparison, check the Energy Star Web site (energystar.gov) or the EnergyGuide label on every unit.

Pay special attention to the refrigerator; it uses the bulk of a kitchen's energy. A California company called Sun Frost makes the most efficient refrigerators, which perform about 50 percent better than federal standards, but nearly every brand has models that make the cut—including the pricey Sub-Zero and more affordable lines such as Kenmore and Maytag.

Side-by-side refrigerator/freezers are less efficient, as are units with icemakers and dispensers. And especially large refrigerators consume more energy.

In addition to saving power, Energy Star dishwashers cut down on the amount of water used. Of the popular brands, Bosch makes some of the most efficient units.

There's no EnergyGuide for microwaves, ranges, or cooktops, but cooking consumes a small percentage of a home's power. Microwave and convection ovens are more efficient than conventional ovens.

On the stovetop, induction heating is highly efficient because it transfers electromagnetic energy directly to the pot or pan without throwing off extra heat.

When choosing between comparably efficient appliances, it's greener to go with the one manufactured closest to home. Many European appliances are highly efficient, but shipping a refrigerator overseas takes a lot of fuel.

"There are always tradeoffs," says green architect Bill Hutchins. "Some people try to quantify this to come to a right answer, and I'm not sure you can do that."

Good Floors

When Alice Trembour and Rob Schware renovated their Takoma Park kitchen, the couple chose cork flooring. Contrary to the conventional wisdom—that cork doesn't hold up under heavy traffic—they found that it wore well even under the paws of their bear-size Bernese mountain dog.

It wore so well that they decided a few years later to replace the scuffed oak floor in their dining area with cork. The key, Hutchins says, is to buy good-quality cork and use a strong resin sealer.

Some green experts say cork and bamboo flooring have gotten a bad rap in part because of variations in quality and not enough oversight.

"There's been a rush of manufacturers and suppliers," says Holstine of Amicus Green Building Center. Bamboo, he adds, has also suffered from mistaken claims that it's harder than most woods. Good-quality bamboo is difficult to scratch but is only slightly harder than white oak—about average for a hardwood.

Marmoleum is another popular choice for green flooring. Made from natural materials including linseed oil, it looks like linoleum but comes in either large sheets or tiles. It's durable and low-maintenance.

In their foyer and breakfast room, Chamberlain and Bopf used Marmoleum in "natural corn" hue with a rust pattern. For a more traditional look, Gilmer suggests black-and-white checkerboard tiles.

Hardwood can also be green if the wood is reclaimed or responsibly harvested. The Forest Stewardship Council certification is a reliable indicator, and some green builders and supply stores have established relationships with local mills they've vetted.

Ware recommends installing radiant heat under the flooring to add comfort and help lower utility bills. Most of the floor in Eco-Green Living is covered with recycled bamboo and rubber, which Ware says could also work well in a kitchen. It's easy on the joints and on dropped dishes, and it comes in flecked patterns that resemble terrazzo or granite.

Green-Kitchen Resources

Amicus Green Building Center, 4080-A Howard Ave., Kensington; 301-571-8590; amicusgreen.com. A one-stop shop for green homes; an architect on staff advises do-it-yourselfers.

Arlington Green Home Choice Program, 703-228-4792; arlingtonva.us, then search for "green home." This county program has a directory of architects, builders, and other resources.

Community Forklift, 4671 Tanglewood Dr., Edmonston, Md.; 301-985-5180; communityforklift.com. Accepts and sells architectural salvage and building surplus.

Eco-Green Living, 1469 Church St., NW; 202-234-7110; eco-greenliving.com. Offers a good selection of countertop and flooring samples; design/build services available.

The Loading Dock, 2 N. Kresson St., Baltimore; 410-558-3625; loadingdock.org. A warehouse for surplus building materials.

Nature Neutral, located at the Community Forklift and in Charlottesville; 800-656-1961; natureneutral.com. The area's oldest green building-supply store. Online shopping available.