



Second in a Series

Is It Your Color?

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In the first installment of “Green, is it your color?” we looked at the four Rs of green design and build: rethink, reduce, reuse and recycle. This segment examines what it means to design and build green as well as how to tell when you have an authentically green product or home.

What does it really mean to design and build a green home? A common declaration in the “built green” sector is that a built green home “uses less energy, water and natural resources; creates less waste; and is healthier and more comfortable for the occupants because built green homes have better indoor air quality, lower risk of pest infestations, lower levels of allergens, and reduced risk of mold-related illnesses.”

This mantra is achieved by aligning any given project with the basic principles of green design and build:

Left: Reclaimed wood flooring, like the hickory shown here, is both stylish and “green.”

- Using natural resources prudently;
- Minimizing energy and water consumption;
- Using salvaged, recycled or agricultural waste content products;
- Minimizing toxic emissions, both inside and outside a home;
- Using durable, low-maintenance materials and finishes.

Building and designing green is not an “all or none” proposition. So whether your home addresses all of the points above or just a few, every little bit counts.



How do you know if you are really purchasing a green home? When referring to new construction, the answer is simple — green homes don't smell. They don't smell because there is little or no offgassing from the carpets, cabinets, caulks, sealants or painted surfaces. On a more serious note, look for a green home certification such as Leadership in Energy and Environmental Design (LEED) for Homes administered by the U.S. Built Green Council or the Built Green program developed by the National

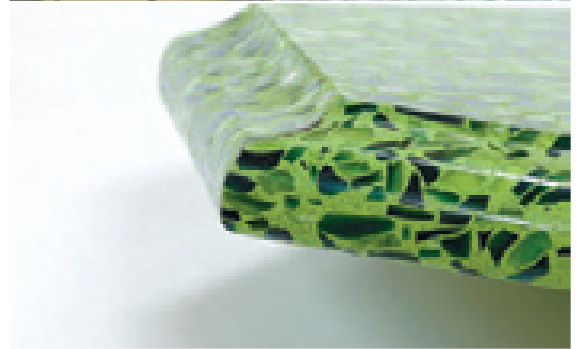
Is building green more expensive? Yes, but on the front end only.

Home Builders Association and its member chapters. (An item of note, the Kitsap Home Builders Association developed one of the very first Built Green certification programs in the United States). Both of these

certifications are based on a standardized checklist of actions, and points are awarded for construction methods/practices and materials used that achieve six primary environmental goals:

Site work: That minimizes the environmental impact of the house during and after construction: Preserves native vegetation and minimizes storm water runoff as well as irrigation requirements of new landscaping. ➤

Right: Recycled glass terrazzo is made from glass bottles. It can be used in a variety of ways and comes in many colors and styles. Like ceramic tiles, it can be combined in interesting patterns or used in large slabs. It is commonly seen in airports, schools, and hospitals as well as homes.



Energy efficiency: Uses Energy-Star rated appliances, doors and windows, location-appropriate insulation materials and takes advantage of natural day lighting and cross-breezes to minimize the need for artificial lighting and cooling.

Water efficiency: Uses low-flow or sensor-activated plumbing fixtures as well as low water usage clothes washers and dishwashers.

Use of recycled materials and materials whose production can be sustained without harming people or the environment: Reclaimed wood floors, recycled glass terrazzo countertops, recycled doors, windows, cabinets, etc.

Healthful indoor-air quality: Installing heat recovery ventilators, whole-house vacuum systems, radiant floor heating systems, using low-VOC paints, caulks and sealants, formaldehyde-free cabinets and shelving materials, etc.

Homeowner education: On the operation and maintenance of their green home: Providing a binder with all the appliance manuals and maintenance checklists to ensure proper environmentally friendly care and maintenance of the home.

LEED for Homes has four certification levels including certified, silver, gold and platinum. Designations are overseen by a third-party certifier and have an average cost of approximately \$2,000. The Kitsap Built Green certification program has three certification levels including one, two and three stars and is self-administered with an average registration cost of \$50 (plus a \$100 annual program participation fee).

How do you find sustainable building products? A wide variety of sustainable products and retailers can be found by conducting an Internet search under sustainable building products. Seattle is home to one of the nation's largest green building material suppliers, EcoHaus (formerly the Environmental Home Center), which has a brand new showroom and a mail order division. Home Depot is launching an environmentally friendly products program and expects to have 5,000 green products on its shelves by 2009, each with a special "green" tag.

Under-counter refrigeration is gaining popularity due to its small footprint, high energy standards, and the availability of custom wood panels. An alarm beeps if the drawer is left open too long, to prevent food spoilage and energy waste.

Sub-Zero, Inc and Wolf Appliance, Inc.



Using natural lighting will minimize your energy bill.



Finding green products is relatively easy, but determining their green authenticity can take a bit more homework. To start, look for third-party product certifications such as WaterSense (www.epa.gov/watersense), which certifies water-efficient products and services; GreenSeal (www.greenseal.org), which certifies a variety of products including paints, caulks and sealants for environmental attributes such as low toxicity; or FSC (Forest Stewardship

Council, www.fscus.org), which oversees the certification of sustainably harvested wood products.

Not all green product manufacturers have their wares certified, so as a fallback you can perform a lifecycle analysis. Begin by determining what the raw materials are that go into the product: Do they require environmentally hazardous practices like copper mining or are they more benign, like harvesting bamboo? Second, what does it take to manufacture ➤

Top right: Bamboo is an excellent building material due to its high renewability. Its low moisture absorption makes it ideal for humid climates. Additionally, bamboo flooring comes in a wide variety of styles.

Middle right: These carpets were made entirely from recycled plastic bottles. They are gaining popularity due to their reasonable price and sustainable manufacturing process.

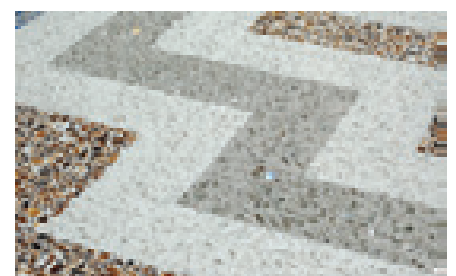
Bottom right: Recycled glass terrazzo can also be used in floors. Like other types of tiled flooring materials, it provides creative options and great versatility.



the product: Does it take considerable amounts of energy, such as the fabrication of stainless steel countertops, or minimal energy such as butcher block countertops? Third, how is the product transported and distributed? Is it shipped across the Pacific Ocean using an abundance of fossil fuel or is it manufactured locally, reducing the shipping and packaging requirements? Lastly, what are the options for the product at the end of its useful life? Can the product be recycled, is it biodegradable or is it destined for the landfill with a 2 million-year half-life?

By looking for certified products and/or conducting a simple lifecycle analysis,

you can weed out the authentically green from the "green washers." Green washing is the act of promoting a product or service as green when it really isn't. Recognize that many manufacturers and service providers run their businesses in an environmentally sensitive manner but their products are not eco-friendly per se. As an example, a large local cabinet manufacturer recycles its scrap wood, minimizes its emissions, is ISO 9001:2000 certified and is the recipient of the EPA's Evergreen award but it does not offer a formaldehyde-free cabinet with low-VOC finishes. Hence, its business practices are green but its product is not. ►



South facing windows are the most environmentally friendly because they absorb more sunlight in the winter months. Strategically adding windows to the southern wall of your home can cut winter fuel bills by up to 30 percent.



Look for products that are LEED (Leadership in Energy and Environmental Design) or EnergyStar certified.

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Induction cooktops, as shown here, work by setting up a magnetic field with your pot or pan. They have an 85 to 90 percent efficiency rating (compared to the 40 percent efficiency of gas).

Sub-Zero, Inc
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How should you select green products? Start by drafting your material list, check your budget and then look for the most energy- and resource-efficient, low-maintenance products that fit the design. For instance, consider using solar panels to fuel some of your home's own power needs (excess power can be sold back to your local utility) or install a sensor-activated faucet or pedal valve to save water at a busy sink.

Is building green more expensive? Yes, but on the front end only. According to a McGraw Hill Construction survey, in 2006, the average built green home was only 6 percent more than a conventional home. These costs are typically recouped in reduced utility and maintenance bills for the home. Further, there are several utility rebates and tax credits available for green products including windows, doors, insulation, heating/cooling equipment, water heaters and solar systems. For more information, visit www.energystar.gov.

As with a conventional build/remodel project, you can greatly control costs with good planning and a cohesive design/build team that appreciates the attributes of green building. By making the bulk of your design, build and product decisions in advance, you can reduce delivery delays, work stoppages and increase the overall efficiency of the work crew, not to mention minimize expensive change orders.

In life, there are many shades of green — it is just a matter of finding the right one for you. In our next installment we will look at specific products and principles for making your kitchen, bath or laundry room projects environmentally friendly. ♦

KNOW YOUR SOURCES

As green design goes mainstream, check the experience of your sources before trusting their information.