# THE GREEN SCENE

A stellar renovation shouldn't leave a huge carbon footprint in the process. But with a sea of green out there, choosing eco-friendly materials isn't always so easy. Thankfully, Mike loves green and shows us how to find it.

More and more homeowners want their renovation to be as green as it can be. Considering today's environmental concerns it's the right thing to do. There are a lot of green options to choose from, but it's important to understand there are different shades of green. Decide for yourself if you want to be light or dark green.

### What makes it green?

Saying something is "natural" doesn't necessarily make it good. Asbestos is natural. So is mould. It's a good idea to look for third-party certifications – EcoLogo, Green Seal and Green Label are great – because you know the product has been tested and passed. There are many ways a product can be considered green. For instance:

- It's made of recycled or salvaged material.
- It uses environmentally safe and health-safe materials.
- It lasts a very long time and won't need to be replaced soon.
- It's made with a rapidly renewable resource that can be harvested frequently (such as straw bales or bamboo).
- It has low or no emission of toxic chemicals into the air (for example, no- or low-VOC – volatile organic compound – products).
- No toxins result from its manufacturing.
- It saves energy and water.
- It uses renewable energy.
- It can be recycled at the end of its useful life.
- The cost of transportation is low (for example, made locally, lightweight, can be built on location, etc.).

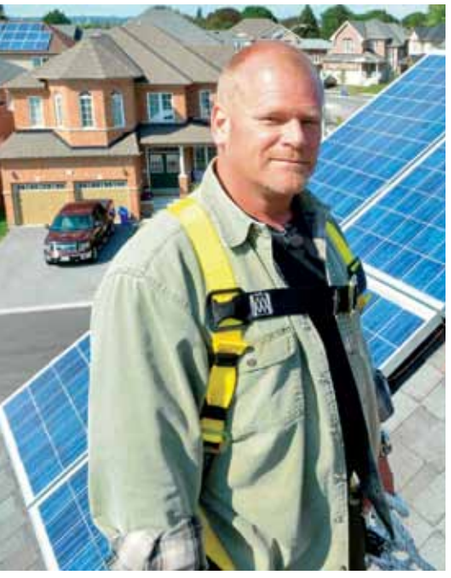


TEXT EXCERPTED FROM *MIKE HOLMES ATTICS AND BASEMENTS* (COLLINS/HARPERCOLLINS PUBLISHERS LTD., 2011)

THE EARTH YOU PULL FROM THE GROUND FOR A FOUNDATION CAN BE HAULED AWAY, AS LONG AS IT'S CLEAN FILL

But there are other questions to ask yourself: How is the material grown, harvested, processed, shipped and transported? Some products are green, but are they green across their entire life cycle? For example, some woods claim to be green for flooring because wood is a renewable resource. But that fact could be offset by improper forestry techniques and the long distances the wood has to travel to find its market.

Natural products are not automatically green either. A house made of 100 percent wood – a log cabin, for instance – should be very green, since it's all organic. But wood isn't a great insulator and that house will lose a lot of heat during the winter. It's not energy efficient, so really, how green is it?



MIKE WITH SOLAR PANELS, COURTESY OF THE RICK MERCER REPORT; ECO-FRIENDLY APPLIANCES PRODUCER, MORGAN LINDSAY

### What does recycled mean?

Some products are recycled and recyclable. That's a great selling feature, but maybe it's not such a great product in the end. Maybe it won't last long. Maybe it's only partly recycled. Does it use post-consumer or post-industrial materials in its manufacture? It's greener if the recycled material is post-consumer waste, instead of post-industrial waste, since consumer waste is more likely to end up in a landfill.

## Eco-friendly appliances

Several kitchen appliances account for the biggest share of energy consumption in the home. So it makes sense to look at some new options to bring that energy bill down.

The Energy Star-qualified Whirlpool Gold Series Dishwasher with Sensor Cycle has an eco wash and dry cycle that cuts the amount of water and energy used in half. Whirlpool, $949, whirlpoolappliances.ca

VitaFresh Bottom Mount Refrigeration by Bosch includes a technology that maintains optimal temperature and humidity levels to keep produce fresh. It also has LED lighting throughout and exterior controls. An Energy Star-qualified appliance. Bosch, from $3,499, bosch-home.ca

Panasonic Inverter Microwaves cook faster with less power output, up to 30 percent less than conventional models. Panasonic's NNSE992S Genius Prestige Plus Inverter Stainless Steel Microwave, $399, panasonic.ca

A new line of induction ranges by Brigade, formerly Viking Range, cooks food faster and minimizes the amount of heat in the kitchen, reducing energy use by about 20 percent. Professional Induction Range, Brigade, from $9,700, brigade.ca

### Green design

Green design includes many things. For example:

- Greater energy efficiency (programmable thermostats; increased insulation; a better-constructed building envelope; energy-efficient windows and doors).
- Improved indoor air quality (hardwood or tile instead of carpet; no- or low-VOC materials; high-efficiency furnaces).
- Water conservation (recycling rainwater for landscape irrigation/car washing to reduce load on sewer system; low-flow showers and toilets).



## GOING GREEN

### Go for natural versus synthetic/man-made flooring

Many building products off-gas, especially man-made ones. Glass, ceramic tile, metal, stone and other hard and inert materials don't release any VOCs. Choose solid wood over composite wood products, which contain formaldehyde. Consider tile or hardwood instead of vinyl flooring, or natural carpet instead of synthetic.

Both cork and bamboo are bound and laminated with adhesives that are high in VOCs, which offset some of the environmental benefits in their use as flooring material. But many bamboo and cork flooring manufacturers use low- or no-VOC adhesives.

### Use custom solid wood cabinets

Although it's more expensive, custom solid wood cabinetry over composite wood products is a better choice as long as it has a low- or zero-VOC finish. Kitchen cabinets are usually made of medium-density fibreboard, plywood or particleboard that contain glues high in formaldehyde. And they often have a sprayed finish that will off-gas for many months. Pressed wood cabinets will off-gas for much longer. And, if the material is exposed to high temperatures or high moisture levels (e.g., in the kitchen), the level of emission will be higher.

### Read "green" labels carefully

Be careful when buying products and materials that say they are low VOC. A label might make that claim but, like calling your product "green" or "natural," it could mean anything. "Low VOC" from one company might just mean "lower than before," but it can be really high when compared to other similar products.

You need to buy products that have been tested, examined and certified to emit low levels of VOCs. One such standard to look for is the Green Seal (GS). This indicates that a product has been rigorously evaluated and tested and meets certain environmental standards. The Green Label certifies that carpets and adhesives meet certain low-VOC requirements.

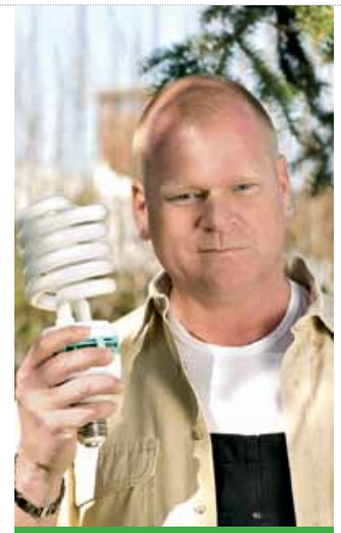
### Discuss materials with your contractor in advance

VOCs emit from all kinds of products you'll use in a renovation, including treated wood products, insulation and adhesives, as well as whatever you put into the finishing details – carpet, flooring, paint, cabinets and furniture.

Talk to your contractor and do your homework so you can make informed decisions about the materials you choose and how they impact indoor air quality. That includes the adhesives used when installing flooring, and the materials used in the structure of the home. Find out what the products are made of and whether they off-gas.

All engineered and manufactured wood products are made with adhesives and resins, and most of those will off-gas. That includes plywood, OSB (oriented strand board), laminated beams, MDF (medium-density fibreboard) and particleboard. If these building materials are used in the framing and structure of the house, they'll be separated from the living space by drywall and plaster, which will help to some degree with off-gassing.

Some products, such as spray foam insulation, will cure quickly. Within a few days, the VOCs are virtually gone or are at non-detectable levels. Other products will off-gas for much longer. You need to be informed. Ask plenty of questions so you know what you're getting – and more importantly, what you're breathing.



## ECO WATCH

Mike's picks for new eco products to consider:

- Mould-resistant products, including drywall, especially in the basement and bathrooms.
- Fire-resistant products and materials, such as PinkWood.
- Low-VOC paints and cabinetry (see page 92 for more on VOCs in paints).
- Low-flow bathroom fixtures like Water Matrix 3-litre toilets.
- Domestic hot water and heat recovery – in the right application it has a good payback and is zero maintenance.
- Passive solar design, which combines old technologies with new ones, such as installing shades and awnings on south-facing windows.
- LED lighting like Philips: the quality of the light that you can get with LEDs has improved and prices are coming down.
- Insulation: spray foam provides energy efficiency and air tightness. Roxul insulation offers improved fire- and moisture-resistance ratings.