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Natural Building for Conventional Builders

[Building/Remodeling Green Building](#)

By:

Matt Alderton

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In a world where everything from snacks to clothing is made from natural materials, a new breed of builder is asking, “Why not homes, too?”

Among those builders is Dan Johnson, co-owner of Midwest Earth Builders, a Soldiers Grove, Wis.-based company that specializes in compressed earth block building. A former wildlife biologist, he got into construction in order to help builders provide housing while protecting the environment. In the process, Johnson developed a passion for natural building, which he describes as the practice of building with organic materials that are locally sourced and sustainably produced.

“Natural building is just one part of green building,” he explains. “Really, it’s taking green building a step further.”

Jack Stephens agrees. As co-founder of the [Natural Building Network](#), a trade association promoting natural building principles, materials and practitioners, he says natural building offers a holistic approach to environmentally friendly building. “While green building is really focused on energy efficiency, natural building looks at the entire lifecycle of the building—where our materials come from and what will happen to them when the building comes apart—and its impact on our environment, and the health and well-being of the builders, occupants and neighbors.”

What’s new is old

Although it’s novel to many modern-day builders, natural building is nothing new, according to Johnson. “Historically, everybody was building naturally,” he says. “Only over the last 100 years has that changed.”

While they offer the same benefits as the primitive houses that most people probably think

of when they hear the word “natural”—they’re naturally energy efficient, inherently durable, totally non-toxic and extremely affordable—many contemporary natural-build homes offer the same designs and features as conventional stick frame houses.

“We’re not building little mud huts,” he says. “Some of our buildings are million-dollar homes. They have all the amenities of any other home—we have electric and plumbing in our walls, just like everybody else—but they’re built to be non-toxic, good for the environment, healthy to live in and healthy to build.”

The next step for conventional builders

Because there are key differences between natural and conventional building, wannabe natural builders should take the following steps in order to get their feet wet:

- Consider the benefits: While the benefits to the planet are obvious, Johnson says natural building is equally good for homeowners, who get to live in healthy, energy-efficient structures, and for builders, who are exposed to fewer toxic materials on the job.
- Research appropriate building techniques: Natural building is not one-size-fits-all, according to Stephens, who says builders must choose natural building methods that are appropriate to their area based on its climate, geology, etc.
- Investigate local building codes: While natural building methods are already written into building codes in Europe and Asia, they’re absent in many U.S. communities that have never had natural buildings in them. “I suggest that builders new to natural building check with natural builders to find out what methods can work well in their local community, then work with planning officials to incorporate natural methods and materials into their projects,” says Stephens.
- Learn what you need to know: The best way to bridge the gap between conventional and natural building, according to both Johnson and Stephens, is to network with a natural builder in your area who can show you the ropes.

Because it’s a back-to-basics approach to construction, conventional builders are likely to love natural building, according to Stephens. “In an era where we’re trying to get buildings up for the least cost in the quickest way, it can get very redundant doing the same thing over and over again,” he says. “One of the things I love about natural building is that the materials require the full creativity, intelligence and craftsmanship of the builder, which makes it a lot of fun to do the work we love.”

Sidebar Title:

Natural Building Methods & Materials

Sidebar Body:

Although many natural builders incorporate contemporary, manufactured building materials into their designs, they typically try to minimize their use of such materials when it comes to foundations, flooring, walls, roofs and other fundamental structures. Instead, they rely on the following materials and methods, which are just a few in a long list of natural building disciplines:

- Adobe: Commonly used in the Southwest, adobe is little more than moistened dirt that’s left to dry in the form of bricks.

- **Cob:** Like adobe, cob is made from moistened dirt and straw, although it tends to have more of the latter than adobe. While adobe is usually shaped into bricks, cob is typically applied by hand in large gobs and typically has more insulating value.
- **Cordwood:** Cordwood utilizes short, round pieces of wood, like the kind often used as firewood. It's greatest advantage is its sustainability, as it makes use of wood that would otherwise be deemed "scrap."
- **Earthbag:** Earthbags—or sandbags—traditionally were burlap sacks filled with soil used in order to build sturdy, weather- and flood-resistant walls. Now, instead of burlap, builders use polypropylene bags—which have superior strength and durability—that they cover with plaster in order to create permanent walls.
- **Rammed Earth:** Like adobe and cob, rammed earth blocks—or compressed earth blocks—are made mostly of clay and sand. With rammed earth, however, the material is hydraulically compressed using special machinery into stable, well-insulated building blocks.
- **Straw Bale:** Straw bale construction uses traditional wood framing that's filled inside with bales of straw, which is a renewable and naturally insulating material. Because straw can rot when it's wet, and can be easily infested by rodents, walls must be properly sealed on both sides with plaster.