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Celebrating Our 25th Year

The proposed pilot prerequisite attempts to remedy this by referencing multiple third-party verification standards. It also lists tree species that are protected by the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

Not that different

Based on BuildingGreen's analysis of the ASTM standard and the proposed prerequisite, the two may actually shake out to be fairly similar in practice. Under the existing ACP, project teams would likely be asking manufacturers for documentation of where the wood came from, which is also required in the proposed prerequisite. And they would have to do some additional work if the wood is sourced from a nation where illegal logging and trade are common. The major differences between the two:

- The existing ACP does not include guidance on documentation. Documentation is the primary focus of the proposed prerequisite.
- The existing ACP asks for verification of legality, while the proposed prerequisite asks for documentation of reduced risk. That might lead to similar documentation in practice, but the difference in wording and underlying philosophy is significant.
- The existing ACP does not require verification of tree species, while the proposed prerequisite does.
- The existing ACP requires that *all* the wood be legal and that *some* of the wood also be certified under one of several programs, including SFI and ATFS. The proposed prerequisite focuses entirely on legal sourcing, referencing non-FSC certification systems as part of the verification process. Again, for building professionals attempting to demonstrate compliance, these may not turn out to be that different.

"I would enjoy the opportunity to test language like this with my project to see what kinds of reactions I get" from manufacturers, Baum told BuildingGreen.

Moving forward

Although Long said she welcomed the dialogue, she could provide no specific information on how USGBC plans to move forward. "All USGBC members are eligible to submit pilot credits for consideration," she said. "Once submitted, they are evaluated based on applicability to the goals of LEED, relative impact compared to other LEED credits or pilot credits, technical rigor, and achievability."

SFI's Metnick also declined to comment on specifics. BuildingGreen pressed him to offer opinions on how the proposed prerequisite references the CITES list, requires project teams to acquire specific documentation, and shifts framing from verification to risk management. Metnick emailed back, "I think my response below answers the question. As stated, we'll look to USGBC to address the path forward related to any alternative suggestions and are happy to be a part of that process."

For their part, environmental groups behind the proposal have minced no words in commenting on the existing ACP or USGBC's process in introducing it.

If they're going to let other certifications into LEED, Grant opined, "They really ought to take an approach that isn't so sleight-of-hand. They should stop pretending it's a legal wood prerequisite because it's not really what they're doing."

USGBC's "reputation is being unduly lent out to certifications that aren't responsible," complained Brindis. "SFI is going to use this to greenwash their reputation. I think [USGBC] members should really expect more."

Asked to comment on these criticisms, Long wrote, "USGBC has been addressing concerns over wood use in LEED for over a decade, and it is well documented this has been one of our challenges." She continued, "Our goal has always been and continues to be about creating an open process that hears from voices across all sectors to improve and advance LEED and forestry transformation. "

NEWSBRIEFS

Bark Cladding Is First Cradle to Cradle Platinum Product

C2C Platinum certification sets a very high bar for sustainability. A decade in, Bark House shingles are the first product to make the grade.

by Tristan Roberts

Cradle to Cradle (C2C) was the first certification to attempt to define in 2005 what true sustainability might look like in a building product. Since then, several hundred products have been certified at C2C's lower levels: Basic, Bronze, Silver, and Gold. But until now, Platinum certification, the highest level, has appeared more aspirational.

The first product to achieve C2C's highest bar? Bark. Specifically, Highland Craftsmen Inc. Bark House shingle and wall panels. The product is made from tulip-poplar tree bark that has been reclaimed from logs, flattened, dried, and trimmed into a durable finished product.

Harder than we thought

In the 2002 book *Cradle to Cradle*, William McDonough, FAIA, and Michael Braungart, Ph.D., envisioned our products and everything that goes into them as safe "nutrients" in ongoing technical and biological cycles. (For a status report on these concepts and how they're entering our buildings, see Circular Economy at Scale: Six International Case Studies.) The C2C certification fleshed out

this vision with five certification categories:

- material health
- material reutilization
- renewable energy and carbon management
- water stewardship
- social fairness

A product's overall rating is based on its lowest score in these five categories, so if you had Platinum for social fairness but Silver for water, you can only get an overall rating of Silver.

When BuildingGreen took an in-depth look at the certification in 2007 (see Cradle to Cradle Certification: A Peek Inside MBDC's Black Box), the consensus was that a certified Platinum product:

- was at least three or four years away
- would probably be something "simple" like a coating
- would be the result of a conscious design process, not a conventional product modified to meet the standard

It's clear that C2C Platinum was harder than we thought.

Stepping up from Gold to Platinum

Highland Craftsman has been working with C2C (which several years ago moved from a private consultancy to the Cradle to Cradle Products Innovation Institute, or C2CPII) since 2008, and Bark House shingles were previously certified Gold. According to Highland and C2CPII, the company undertook the following measures to meet Platinum requirements in C2C's five categories:

- **Material Health:** Bark House shingles are 100% bark with no additives or coatings.
- **Material Reutilization:** The bark is harvested from trees that are already on their way to the sawmill. At the end of their useful life, the shingles can be composted, mulched, or otherwise returned to nature. It should be a long life: the company has been around for 25 years and says it monitors installations of similar bark shingles that pre-date it by another 60.
- **Water Stewardship:** No water is used in manufacturing, and the company participates in regional river and stream stewardship.
- **Clean Energy and Carbon Management:** All of the electricity used to make the shingles is generated with onsite solar power. The company keeps its footprint small by harvesting 90% of raw materials within 50 miles of its facility. According to the company, it dries its bark with gas-fired kilns and makes up for those carbon emissions by generating excess onsite solar power. The company also manages its carbon footprint with its product, which keeps carbon out of the atmosphere for much longer than it would otherwise. The bark would normally degrade naturally or be burned, releasing its carbon much sooner.
- **Social Fairness:** Highland Craftsmen is B Corp-Certified. The B Corporation framework is used by companies that have a mission to support the environment and their communities, and to provide optimal working conditions. This area of the C2C standard is also where material-specific certifications are covered. The company told BuildingGreen that it has worked to maintain a Forest Stewardship Council (FSC) certified supply but has been unable to do so because of lack of demand and FSC's lack of scalability for small Appalachian landowners. The company meets C2C's requirements for social fairness in part by supporting logger education programs that address sustainability and worker safety.

Courtesy Highland Craftsmen Inc.

Bark House shingles, shown here in the University of Chicago childcare center, were recently certified as the first Cradle to Cradle (C2C) Platinum products.

"Holistic approach to business"

"At Bark House, we have always taken a holistic approach to business, from the low impact of our product lines to the high impact of our social outreach," said Chris McCurry, cofounder for The Bark House at Highland Craftsmen Inc., in a press release. "This mentality is key to creating balance, and without balance, systems will ultimately fail."

According to McCurry, the company didn't make substantial changes in its product or manufacturing process in going from Gold to Platinum; it simply "reorganized processes in alignment to Cradle to Cradle's five points."

"Achieving an overall Platinum certification demonstrates the depth and commitment of the company's efforts to provide safe products that can be perpetually cycled and are manufactured in ways that respect humans and the environment," commented Stacy Glass, vice president for the built environment at C2CPII.

Bark House shingles come in a standard grade as well as a thicker, premium grade that has deep furrows and more-pronounced shadow lines. The company's interior-grade shingles and large wall panels are certified Gold under C2C. These are a more complex product: they can be laminated to order (low-emitting substrates are available) for use in cabinetry or wall mounts, or as an interior wall covering.

PRODUCT NEWS & REVIEWS

Treated Wood for Ground Contact, Minus the Toxic Pesticides

Accoya, now code-approved for fungus and termite resistance, relies on acetylation as a benign alternative to conventional pressure-treated wood.

By Paula Melton

Connect occupants with nature: great idea, but who asked for the toxic fallout?

Insect- and rot-resistant boardwalk sleepers, decking, and exterior structural members are commonly needed to provide low-impact access to the outdoors. But there's really no perfect solution, especially given the need for products that are code-rated for ground contact. You end up choosing between wood treated with toxic metals and biocides on the one hand, or aesthetically and environmentally iffy plastics on the other (see The Great Eight: High-Impact Material Choices). But there may finally be a dark horse racing up to take their place.

Acetylated wood—treated with what amounts to really, really strong vinegar—has been on the market as a decking for a while now. Until recently, though, it wasn't code-approved for ground contact in the U.S and Canada. That changed in October 2015 when Accoya got the long-awaited nod from the International Code Council (ICC).

Very durable, mostly harmless

Accoya, produced by London-based Accsys Technologies, is available as decking, door and window framing, exterior cladding, and exterior structural members. Made of Forest Stewardship Council-certified (FSC) radiata pine sourced from New Zealand, the product is manufactured in the Netherlands and distributed globally. (*Pinus radiata* is an endangered species in its native habitat but not in New Zealand, where it's been cultivated since the early 20th century.)

Unlike conventional pressure treatments, which infuse the wood with chemicals but don't chemically change the wood, acetylation actually alters the chemistry of the wood's cell walls. The raw material is immersed in acetic anhydride (a strong, vinegar-like substance that gives the finished product a lingering vinegary odor) in a pressurized reactor. The chemical's primary effect, according to researchers at the U.S. Department of Agriculture Forest Products Lab, is to drastically reduce the wood's ability to absorb water.

With its low moisture content, acetylated wood cannot support the growth of organisms of decay. Conventional treatments accomplish this with copper, which is toxic to aquatic life, and proprietary fungicides—both of which gradually leach out into nearby soil and water. Accoya contains no formulated biocides and doesn't actually appear to kill insects like termites and carpenter ants, though it does deter these pests (more on this below). The product is certified Cradle to Cradle (C2C) Gold, but has a Platinum rating for material health impacts.

According to John Alexander, director of sales and head of product

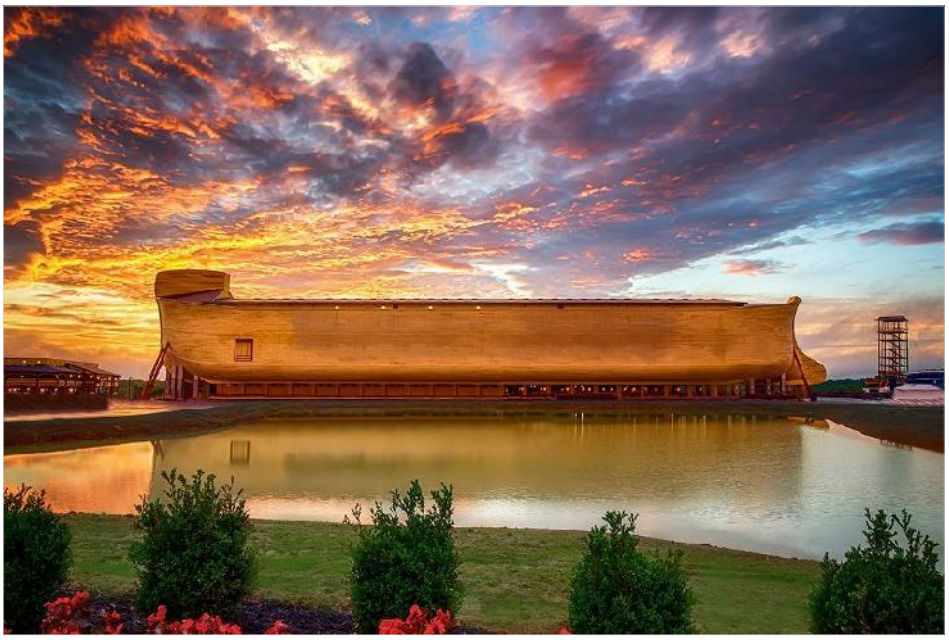

Photo: Answers in Genesis

The creators of this life-size model of Noah's Ark claim it is the largest timber structure in the world. The building is clad in unfinished Accoya.