BY CHRIS YERKES

Traditional Siding for an Untraditional Hemp Home

Many homes on Cape Cod are clad with cedar shingles, but I'm confident none were built like the one that my company, Cedarworks, recently sided. As part of the homeowner's goal to reduce the project's embodied carbon—the upfront CO_2 released into the atmosphere as a result of the construction process (see "A Builder's Guide to Carbon-Neutral Building Practices," Nov/22)—general contractor C.H. Newton Builders of West Falmouth, Mass., had sprayed the walls and roof with hemplime insulation.

Hemplime (or hempcrete) is made from the hemp plant's woody core, a lime-based binder, and water. On this house, it took the place of sheathing, housewrap, and spray-foam insulation. The mixture is sprayed into the framing cavities from the exterior after battens have been nailed to the interior surfaces of the studs **(1)**. The result is a low-carbon, airtight wall assembly with an R-value of about 2.5 per inch that can be finished with lime plaster or, in this case, vapor-permeable cedar shingles over a rainscreen assembly (learn more about this project at capecodhemphouse.com, and about hemp as a building material at US Hemp Building Association, ushba.org).

Before we could install the rainscreen, all of the exterior walls needed to be finished with a lime render, a porous plaster that won't trap moisture. Then plywood blocks were screwed through the thick hempcrete into the wall framing with 12-inch-long screws **(2)**. We fastened vertical 1x4 battens to these blocks, shimming as needed to straighten the walls because of the irregular surface created by this construction method **(3)**. To complete the rainscreen, we installed horizontal 1x4 battens 5 inches on-center for the white cedar shingles, again using shims as needed to create flat wall planes **(4)**.

Once the rainscreen was installed, shingling was relatively straightforward. We started with woven corners to establish a 5-inch exposure for each course, nailing the corners together with stainless steel ring-shank 4d siding nails **(5)**. In the field, we used stainless steel narrow crown staples, keeping them short at $1\frac{1}{4}$ inches long to avoid damaging the plaster surface of the hempcrete underneath the rainscreen **(6, 7)**.

Chris Yerkes owns Cedarworks (cedarworksonline.com), in Brewster, Mass.


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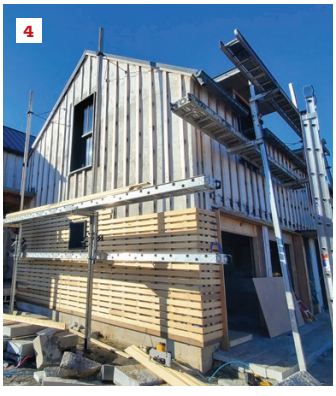
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Photos courtesy C.H. Newton Builders, except 4, by Chris Yerkes