AN OPEN-SOURCE COLLABORATION TO CREATE THE ULTIMATE NET-ZERO BUILDING

Located in Rockport, Maine, the BrightBuilt Barn peeks into the future to show what's possible at the outer limits of sustainable design

Spotted: The BrightBuilt Barn, designed by Kaplan Thompson Architects and built by USA-based Bensonwood, is demonstrating what the next generation of sustainable building practices could look like. The net-zero building is designed with future adaptations in mind, allowing the building to change over time, adapting to both use and the environment.

Naming the project the “200-year house”, Bensonwood aims to build houses that last generations, using a process called “open building”, where components in the house can be easily swapped and upgraded.

“In today’s building culture, there is little economic incentive for a developer or original owners to create structures that outlast their lifetime. This means that the carbon debt incurred by building the structure has a relatively brief period of utility, before the structure is demolished and another structure built, incurring additional carbon debt,” said Bensonwood.

To eliminate waste, 90 per cent of the project was fabricated off-site. The barn envelope was assembled on-site in 3 days. With the option to choose from a 600 square foot studio, a 750 square foot one-bedroom, or a 970 square foot two-bedroom plan, the BrightBuilt Barn has been occupied daily as a home office and art studio since its completion in Autumn 2008. The design offers lots of options for work, leisure, or living in a compact footprint.

As a net-zero building, it will generate more electricity over the course of a year than it uses. Moreover, team members have used web-based communication systems to send and exchange
information, allowing the project to maximise the potential of sustainable buildings with an open-source collaboration.

Written By: Katrina Lane

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Email: j@brightbuilthome.com
Website: brightbuilthome.com/brightbuilt-barn

**Takeaway:**

Both stability and change are realities in our contemporary, built environments. Likewise, the open-building approach recognises that buildings aren't static artefacts either. Particularly during times of social and technical upheaval, such as the world is facing right now, design craves adjustment in order to remain safe and useful.