# Biobased Experience house is eye-catcher of restructuring site

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An important, eye-catching part of the Interreg 2 Seas project FACET is the construction of the Biobased accommodation. It stands on the site of Rothuizen Architects and Advisors located in Middelburg and is an eye-catcher on the so-called silo site on Kleverkerkseweg. The site is on the eve of restructuring. In this work, the old sheds and buildings will be preserved as much as possible and circular building materials will be used in renovations.

It is one of the reasons why architects Taco Tuinhof of Rothuizen and Derk Thijs of Thijs + Gutberlet are closely involved in the development and construction of the accommodation. It must become the eye-catcher of the site.

Thijs was involved from the start of the project a few years ago, when he was still a lecturer at HZ University of Applied Sciences, with former Rothuizen architect and HZ lecturer Ben Westenburger. At the time, they asked HZ architecture students to make a design for a biobased house, because it seemed to them a nice demonstration object. "We wanted to make a living lab in which you could live," says Tuinhof.

## Preconditions

The students' initial designs were ambitious, especially in terms of size. "We asked again later and then set some boundary conditions," Thijs said. In this round, the design was allowed to be only 25 square meters in size. "If we want to be sustainable, we have to build smaller in the first place. In the Netherlands, houses are 65 square meters on average. We can't keep that up if the population keeps growing," Thijs said. Besides the limited size, the students had to consider a budget and make sure it would fit aesthetically with the site and the silo building with its grids.

The sketches submitted provided sufficient reason to proceed. "They came up with a rectangular building with a wooden scaffolding around it that looked like a grid," says Tuinhof. Tuinhof and Thijs elaborated on the design to make it fit (even) better with the rest of the site. "We wanted something beautiful, because it's the calling card of this site," Tuinhof explains. "We're going to restructure it sustainably here, in an architecturally interesting way. That had to be reflected in the house. We ended up making it more exciting by simplifying it."

The accommodation will be built circularly. Everything can be reused. However, not all materials are biobased. For example the wood. The architects preferred to use wood from Zeeland, but due to time constraints, they opted for responsible wood "that has taken a longer road," Thijs says. "We also have to be honest about the things that haven't worked out yet."

## Enthusiast

Because the architects chose windows in the corners, four continuous façade planes were created. An experimental, biobased material supplied by different producers is to appear on each façade plane. They are enthusiastic, because the producers are looking for showcases for their materials. It is a special experiment because most biobased composites are made for interiors. Whether the exterior cladding will

hold up remains to be seen. "It is allowed to fail. You learn from that too," Tuinhof and Thijs emphasize. "For us, it's interesting to see what the material does in practice."

The house does not have a lab function because there is no baseline measurement. It's all about the experience. In the coming years, the house will also continue to evolve. New materials are being added all the time, but the architects and the college also want to work with old materials, such as Dutch reeds. "Nowadays almost all thatch for roofs comes from China. You can question that too in terms of sustainability," Thijs states.

Currently, only 2.1 percent of building materials are biobased. Of that, 2 percent is wood. Only 0.1 percent are the "really exciting things," as Thijs calls it. According to the pair, this must change quickly, otherwise the situation will become untenable in view of climate agreements. It's mainly in the costs and risks that are not yet properly covered. Tuinohof and Thijs hope that the move to large-scale production of bio-based building materials can be made quickly. "Once the sense of urgency is there, things can move quickly," says Tuinhof.