

## VKP is contributing to the future of Sustainable Building.

November 2022

VKP is a specialist in industrialized construction with wood. The company offers a total solution in wood frame construction, structural carpentry, cladding, wooden window frames, stone strips and conceptual building! The bio-circular accommodation within the FACET project was realized in a collaboration between various partners. Due to VKP's experience in the field of circular and bio-based building, this party was a logical choice to ask for this cooperation. Within the FACET project, VKP was responsible for developing the building system and its finishing. This means that based on the architects' drawings, VKP designed and developed the various elements of the building for the floor structure, walls, intermediate floors and wooden construction.

### What materials were used by VKP?

This pilot involves a completely finished façade solution of Wood Frame Construction (HSB) which is delivered completely to a construction site with frames built into it and often finished with stone strips (click for more information). For the current project, however, recycled wood facade elements were used instead of the stone strips.

After the design and development of the elements and installation of the foundation by partner van Aken Schroeffunderingen, VKP started building a steel structure (uncoated) as a base for the floor of the building.

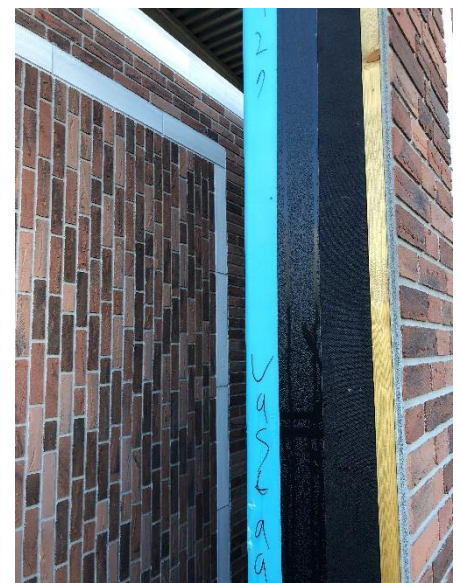
### The floor

The floor construction was done by means of a steel structure. On the foundation piles lies a steel frame. A wooden box structure was placed on top of this.

The advantage is that this steel construction is reusable and therefore circular: when the building has to be moved, this construction can easily be disassembled and then reassembled. The floor is constructed, seen from inside to outside, from the following elements: OSB Zero (18mm); pinewood beams; (between the joists) Isovlas isolation material; Cempanel (on the outside).

### Walls and cladding

The walls of the accommodation are composed of several layers. Seen from inside to outside, the following materials were used for this purpose: OSB zero (12mm); For the studs and battening: pine; Between the studs: Isovlas isolation material; Exterior walls: Pavatex isoair; Vertical and horizontal battens: pinewood.



For the first floor, the following materials were used: OSB zero 18mm; Isovlas insulation; CEMpanel. And finally for the roof floor: CEMpanel; Pine beam; Isovlas insulation; OSB 18mm; Derbigum cladding: various recycled types of wood such as frake.

### **Living project**

During the construction of the biobased experience building, every effort was made to minimize the footprint of this construction. For example, the wood construction around/over the building is Solid Douglas-fir construction wood.

Despite the intention, not all materials within this project are biobased and/or circular. For some elements a suitable solution has not (yet) been found to meet these conditions. The project is seen as a process and a wonderful test case in the road to bio circular building.