



A CIRCULAR PAVILION

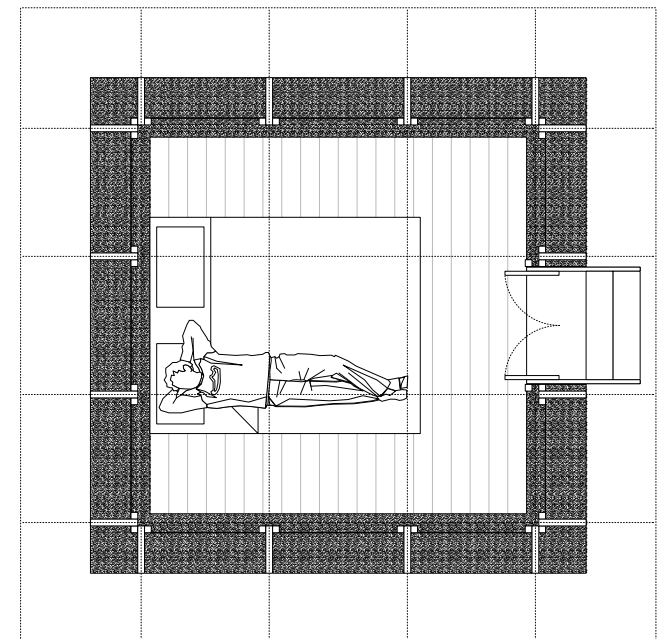
ROTTERDAM, NL

Studio ACTE (Estelle Barriol)

Client
CULTURE CAMPSITE Rotterdam

Surface : 10 sqm2
Programme : a sleeping cabin
Fase : Built - April 2021

This cabin is an experimental and craft made project. The design has been following a clear process always involving hands-on detailing, from the maquette towards the final built object. The pavilion follows a very simple logic using always the same wooden section. The neutrality of the facade allows a dialogue between nature and architecture. The aesthetic of the rammed earth base emphasises the contrast between natural and artificial materials. The acrylate can be perceived as a glass, reflecting the color of the sky or showing the continuity of the structure from outside to inside. As an ensemble, this temporary object highlights the potential of circular and re-used materials.



RAMMED EARTH

Farms and folk houses have been built using the Pisé technique (rammed earth) for centuries. A few architectural firms are taking up this old method in Europe as in Paris and in Brussels. Using a left over of excavated soil from local construction site offers great opportunities for low impact but also has architectural qualities. Earth is material in which there is still a lot to discover and should be researched in the Dutch context and environment. Pisé is the ancestor and future of cement concrete. It is simply raw earth compressed in a formwork.

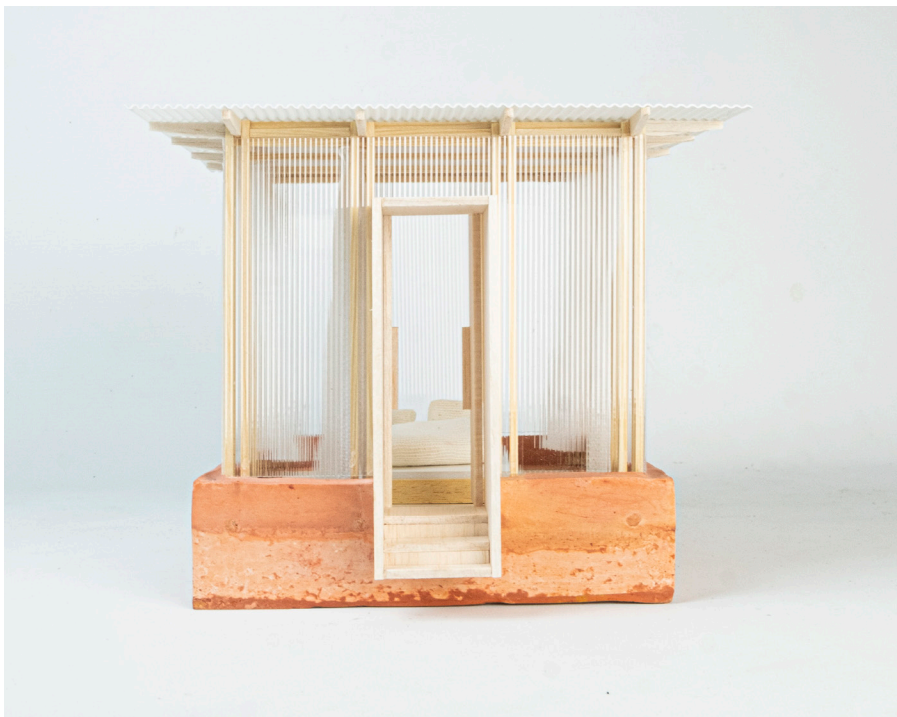
This construction technique is no more than the blueprint of the current concrete methods. The process consists of collecting the required soil while its properties are monitored and optimized. Prepare the formwork, mix the soil, stamp the soil into the formwork, remove the formwork and let it air dry. A simple, sustainable and universal process. Rammed earth can be used for load-bearing elements, floors but can also be turned to any prefab elements.

Earth has always been used in construction. Currently it is estimated that half of the world's population – approximately three billion people on six continents – lives or works in buildings constructed of earth. Raw earth is a 100% eco-friendly building material. A wall made from rammed earth technique (pisé) is as a natural air conditioner, guaranteeing a perfect climate during any season. Earth is an infinite and regenerative material that can be sourced locally. It does not need to be stabilized, which allows the material to return to its original state at any time. The recycling process is endless.

SUSTAINABILITY

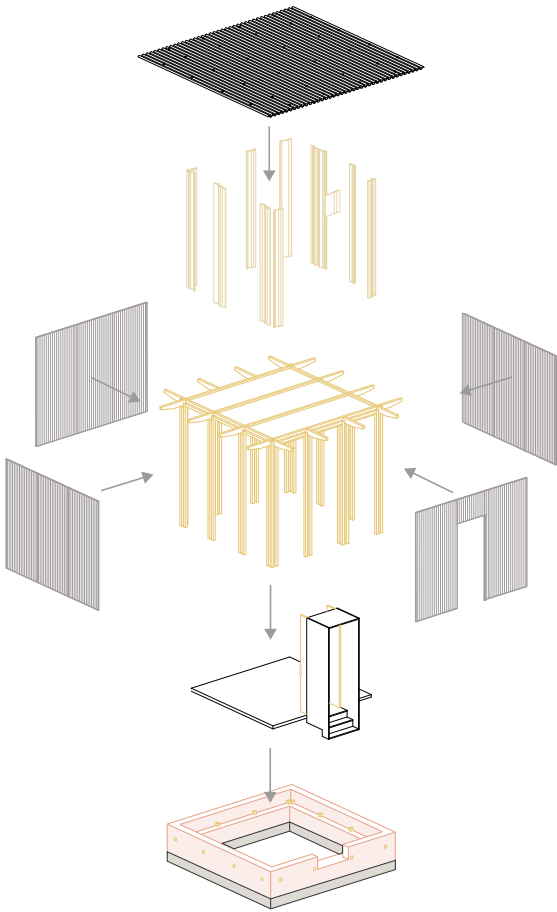
This temporary object will have at least two lives. For the first coming years, it will be used as a sleeping cabin in the heart of Rotterdam. After that, the project will be moved to another location. If the load-bearing wall would be a concrete massive block, it would be very complex to imagine to re-use it or move it to another location. Luckily, the Pisé technique makes it possible. The raw earth material can be dismantled to its origin and transported to another location where it can be re-rammed into a new wall. The same goes for the light wooden structure. Once detached from the base, it can be easily carried around.

This object has been designed in a recyclable and movable way because of its temporary context. The wooden structure could be moved to another space or dismantled and transformed. The earth wall can be returned to its original form or re-used to remount the wall somewhere else. The purpose of this object is to express sustainability and circularity in a generous volume. It demonstrates the qualities and craftsmanship of a rammed earth construction as much as re-used wood. Everything is circular, and the transportation is minimized. The walls are made from recycled excavated earth from Brussels (BC Materials). On top of the rammed earth base, the object is made of re-used wood and re-used polycarbonate from local secondhand shops. The entire project has been built by Studio ACTE. The rammed earth has been realized under a learning workshop process.





PRINCIPLES





WORKSHOP

