



VISIONARY BAMBOO

**DESIGNS FOR
ECOLOGICAL
LIVING**

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Description

The building is located in the city center of Darmstadt in Germany. It is the first permanent building in Germany where structural Bamboo poles are used. Our intention was to create a high-quality ecological house with innovative building techniques and materials. Due to the strict german building regulations we decided to apply a simple construction and make use of a Bamboo joining technique which has undergone extensive research.

33 Bamboo poles „Guadua angustifolia“ carry the roof and characterize each room with their unique beauty.

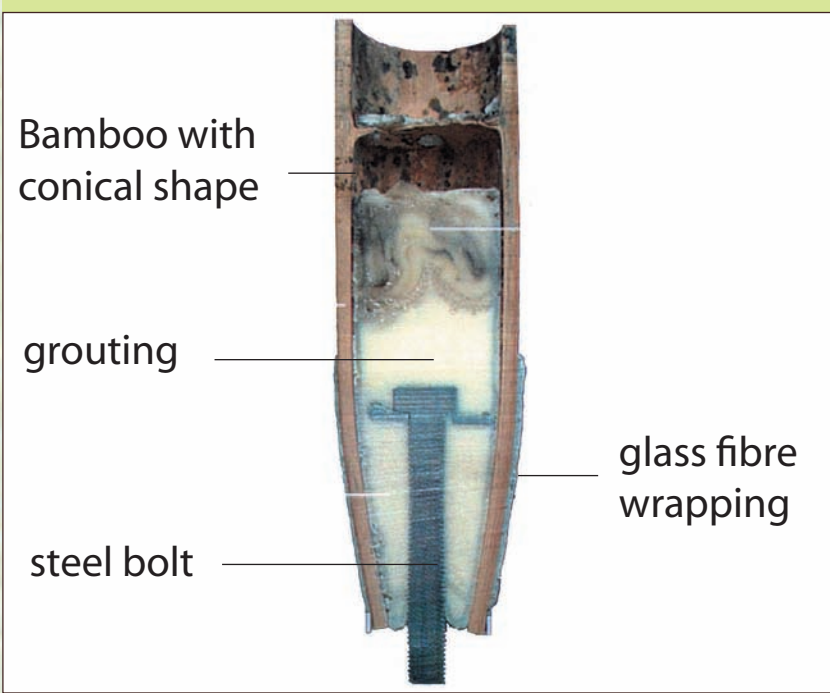
Natural materials are used in order to provide a healthy space and promote ecological building techniques. Curved strawbale-walls plastered with clay provide a very good insulation and consume little energy for production. The green-roof produces extra oxygen in the city.

The overall design is inspired by organic forms and shapes in nature.

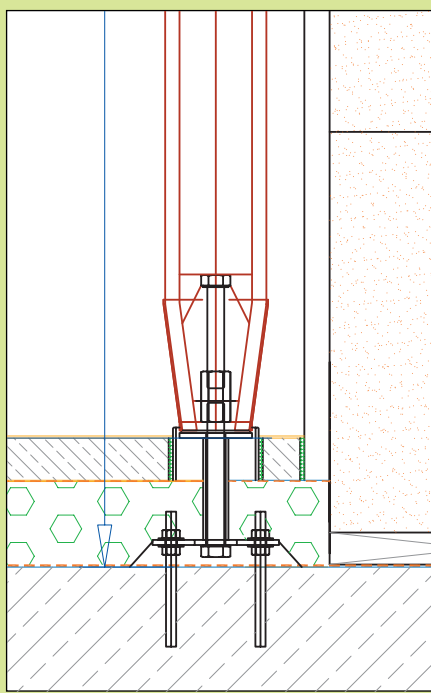
The building was finished in 2006 and is used as an office. Groundfloor area covers 85 m².



INNOVATION



Innovative Bamboo joining technique



Connection floor



Bamboo Pole top



Bamboo in Adobe wall



33 Bamboo Poles as loadbearing structure



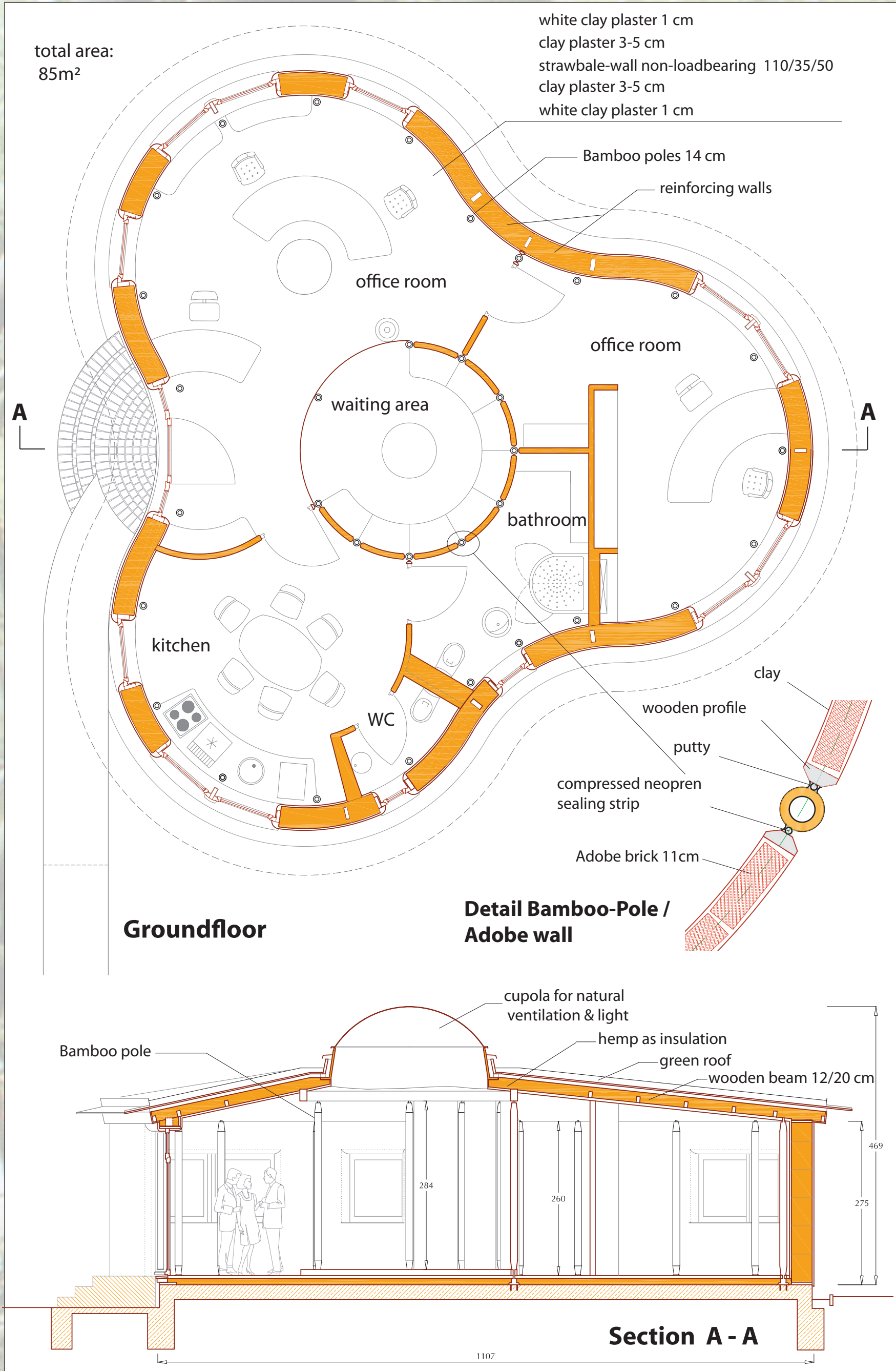
Roof structure



Reinforcement in strawbale wall



All Bamboo poles are visible



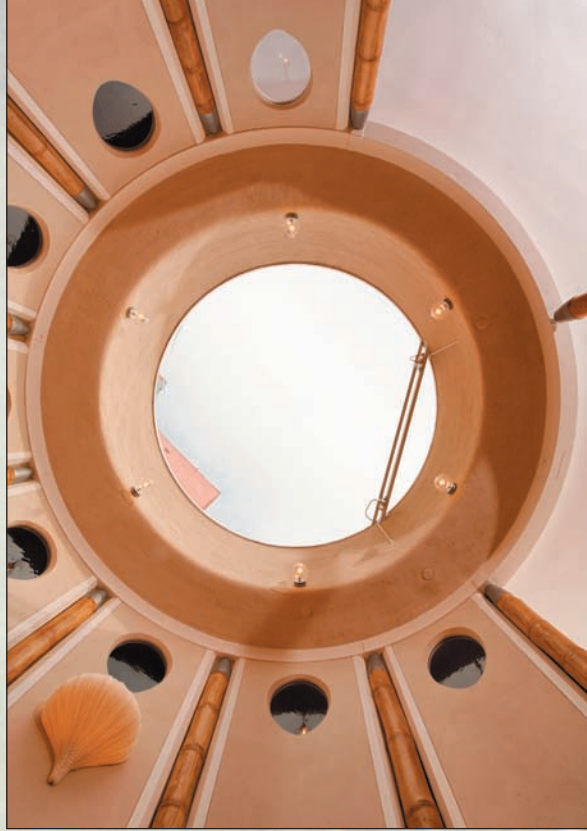
Central rotunda with 10 Bamboo Poles



Elevation entrance



Bathroom



Cupola with Bamboo poles



Main office & clients' area

Building Category:

Custom Houses
Hybrid Houses
Urban Buildings

1295

Low primary energy input



Straw-bale wall provides high insulation



First layer of clay on strawbale wall



Final layer of white clay



Adobe bricks are used for the interior walls



First layer of clay applied on reed mat



The green roof with cupola for ventilation



ECOLOGICAL ARCHITECTURE