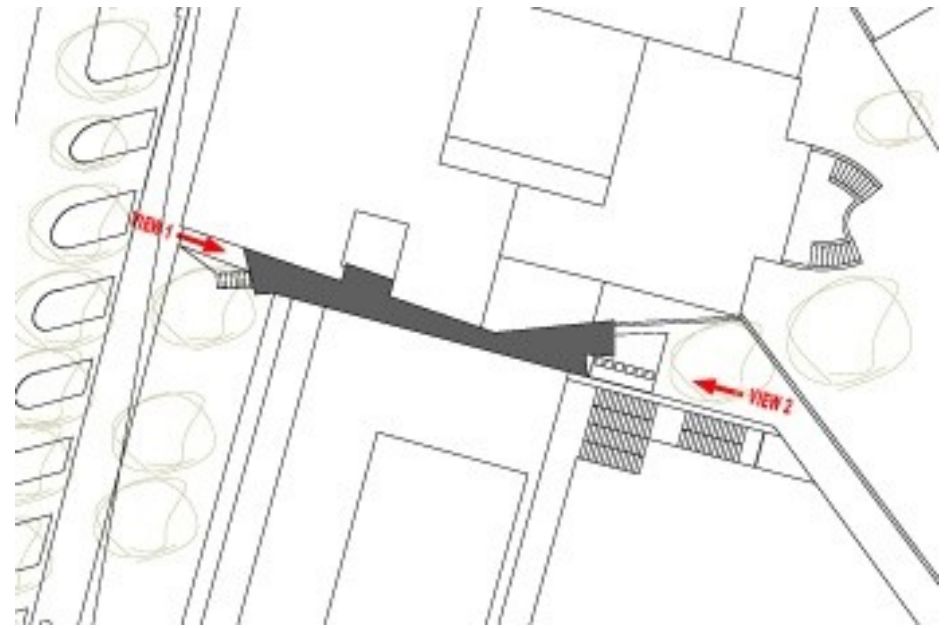
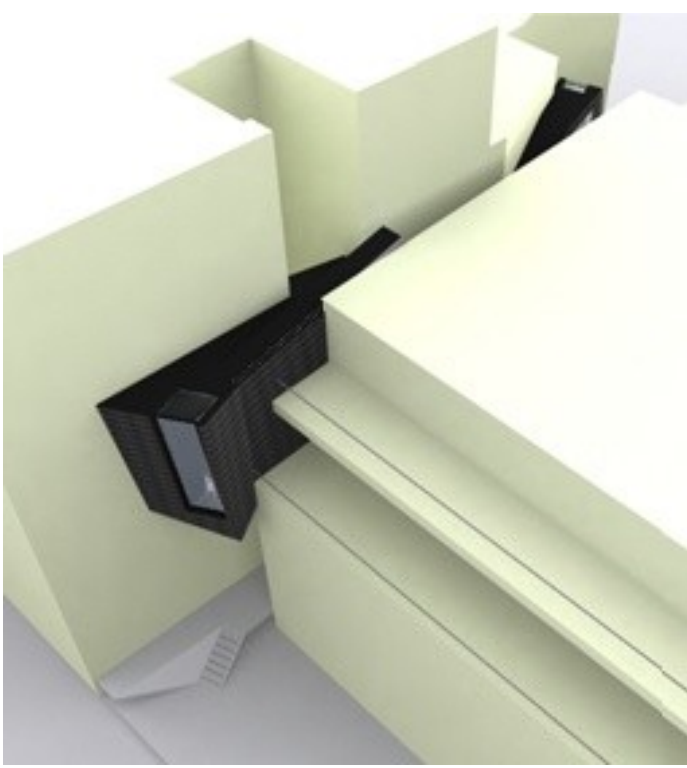


URBAN SPACE RECYCLING

Vienna / Austria



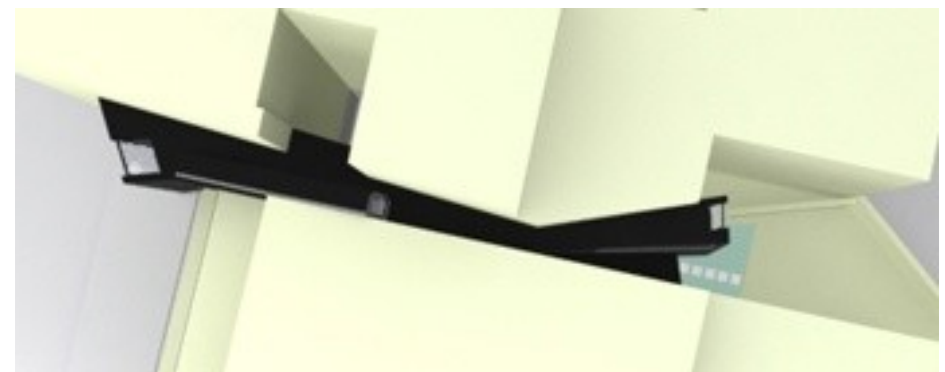
Siteplan 1:1000



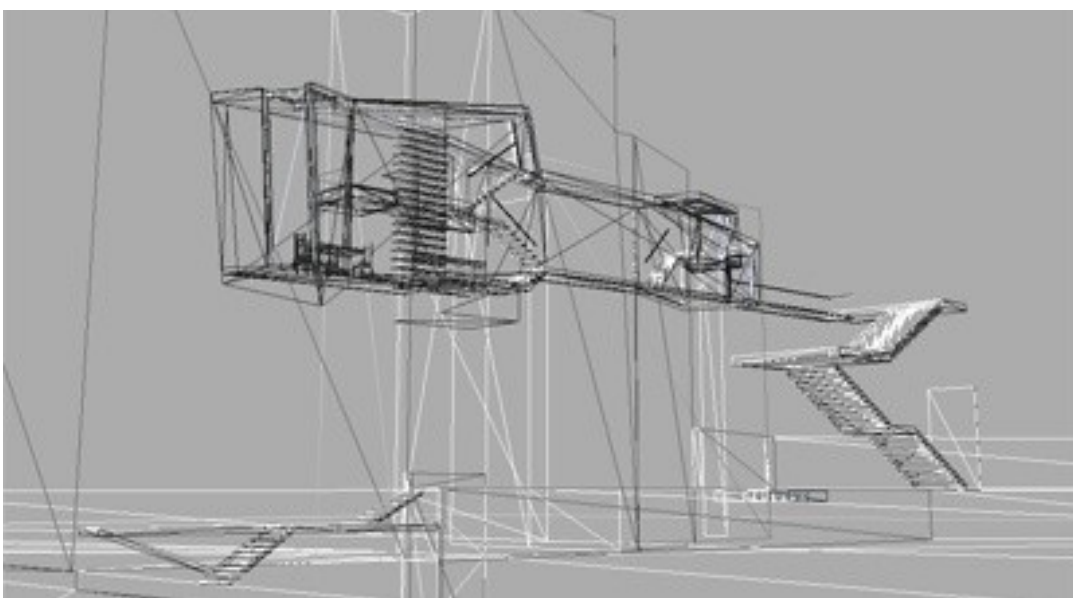
siteplan 1:500



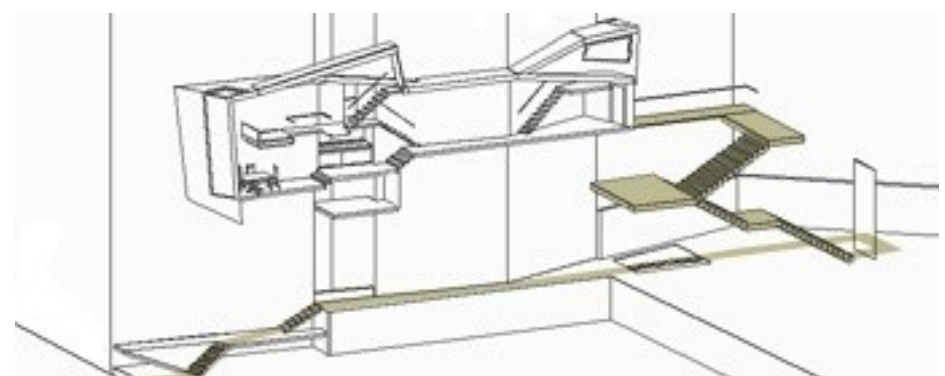
View 1 - 2



View 3



Prospective view



View 4



URBAN SPACE RECYCLING

Vienna / Austria

student Zanolin Martin Bohn Markus	Year 2007	Country Austria	city Vienna
setup Urban	structure Wood	Materials Wood, Cellulose, Clay, Old Tires	heating Passive isolation
U-Value floor 0.17 Wm ² K	U-Value ceiling/roof structure 0.15 Wm ² K		Energy rate 16 kWh/m ² .a
U-Value wall 0.18 Wm ² K	Heating energy quantity 960 kWh		

Program

sustainability starts with the site. it doesn't make sense to drive several hours to a sustainable home. the city provides all the infrastructure and the leisure facilities just around the corner. so the challenge was to combine timeless wishes of inhabitants, like a single house and a private garden, with a reasonable use of inhabited space. our building is situated in a small gap between two residential buildings, using a LEFT-OVER CITY SPACE

Sustainability

Site and infrastructure

a few hundred meters from the city center, the site provides an interesting view from the street into a separated garden in the backyard. the orientation of the gap is east-west. the existing emergency staircase of the neighbor building is used as main staircase to the entrance at 9m above street level. the building develops to the front, narrowing to 1m and expanding towards the street. a small atrium to the north provides space for a kitchen and a bathroom above.

Materials

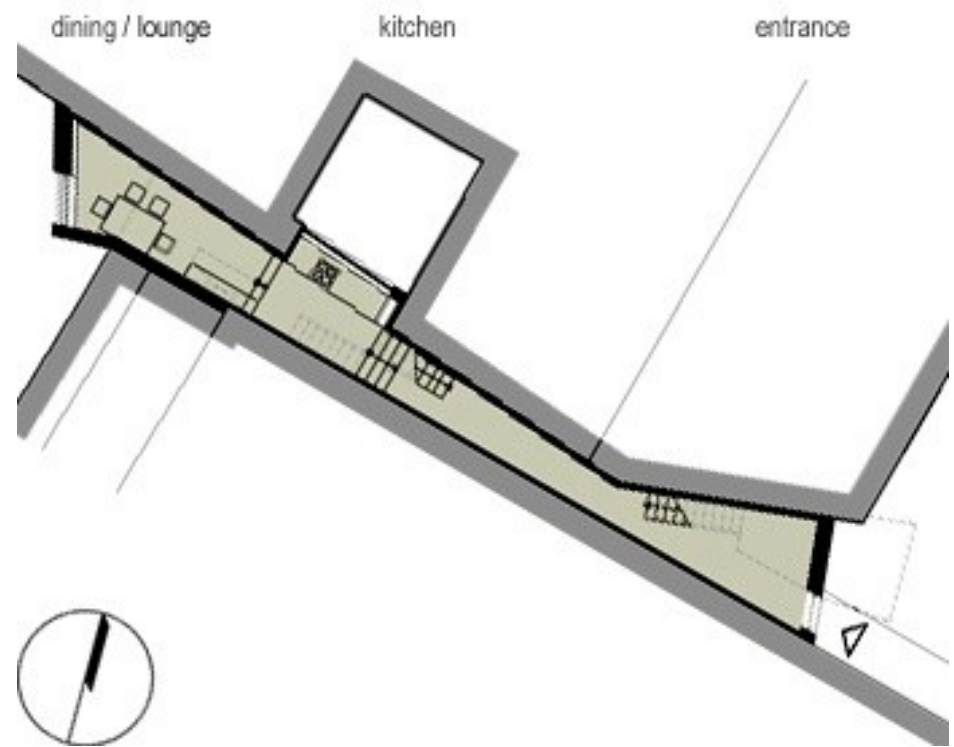
prefabricated WOOD elements with CELLULOSE insulation provide a high-quality thermal envelope. the innermost layer are CLAY-plasterboards on cross laminated timber boards, which creates a convenient room climate by working as thermal & humidity storage elements. since one main issue is to reduce traffic and transport - and the neighbour building is a former HQ of a tire producer - the ventilated facade is built of OLD TIRE treads, a waste product in the retreading process.

Energy choices

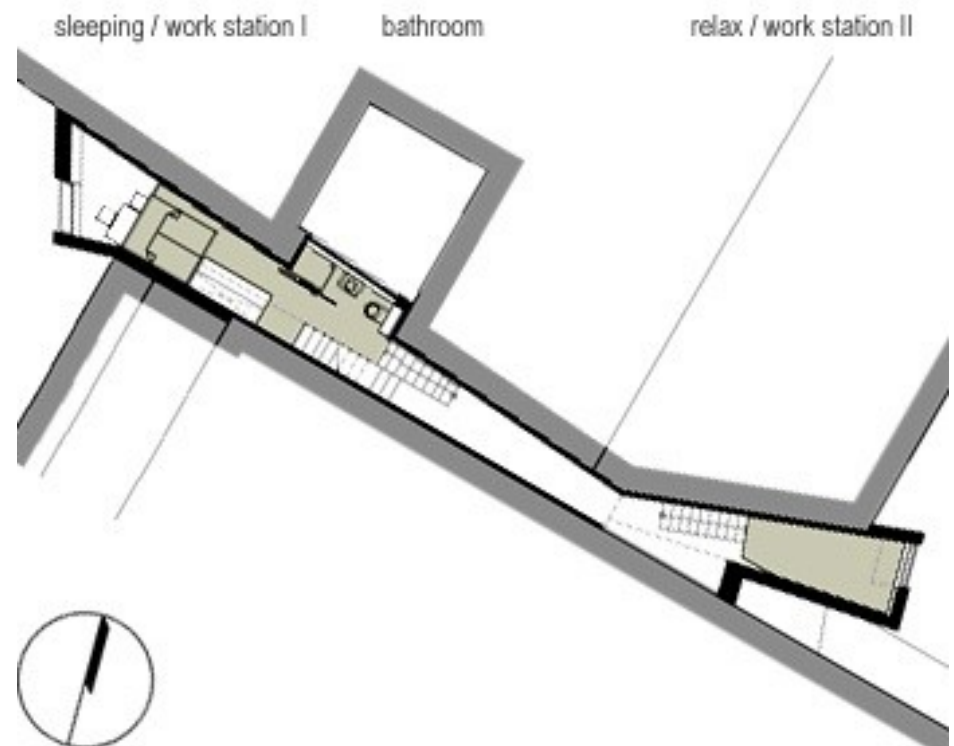
by increasing the thermal quality of the neighbour buildings as well as benefitting from these 'hosts', the building reaches almost passive house standards.

Water system

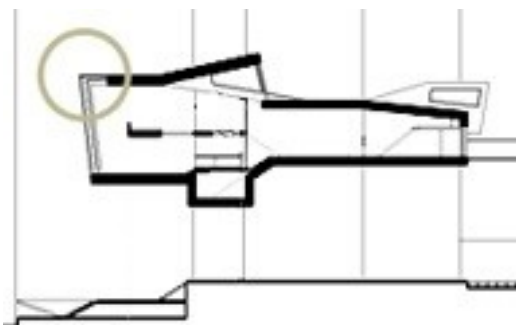
the rain water from the roof runs down the wall and is collected in a small pond in the backyard.



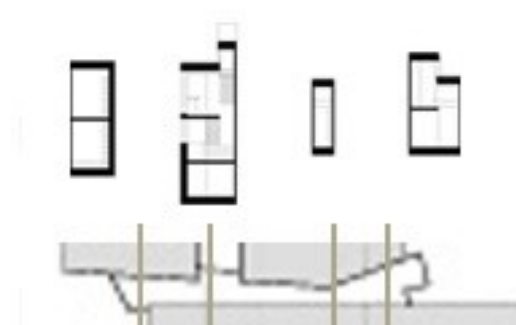
Layout plan (1 floor) 1:200



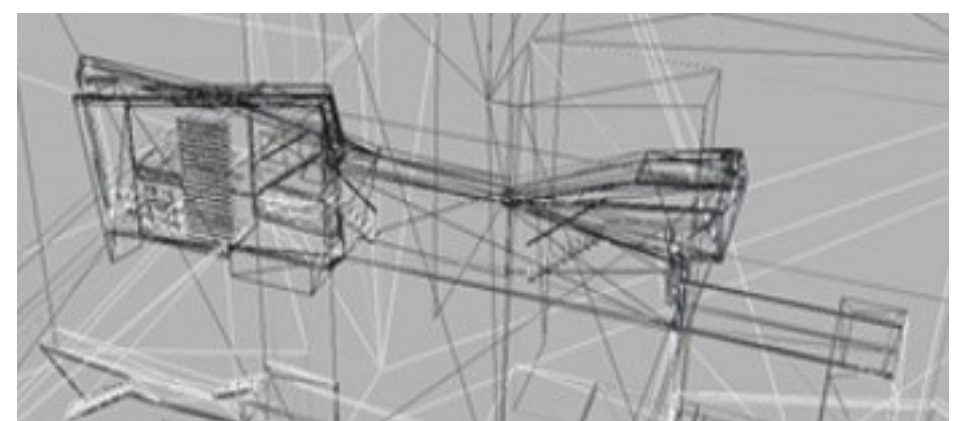
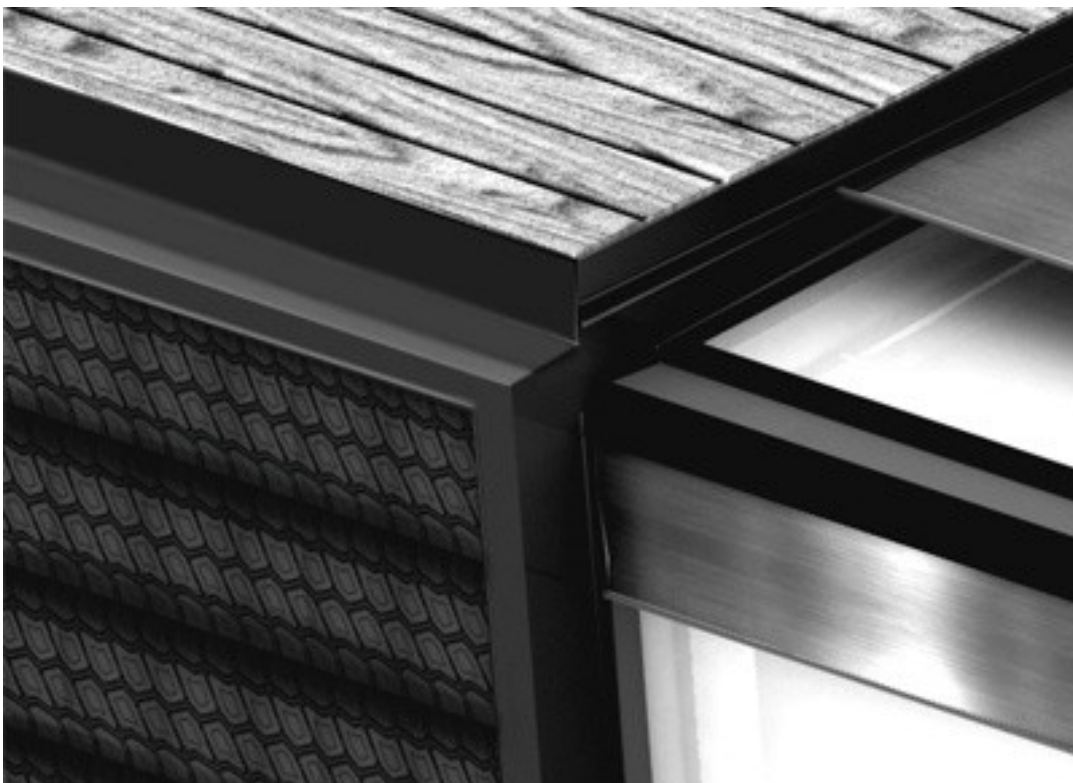
Layout plan (ground floor) 1:200



Longitudinal section 1:200



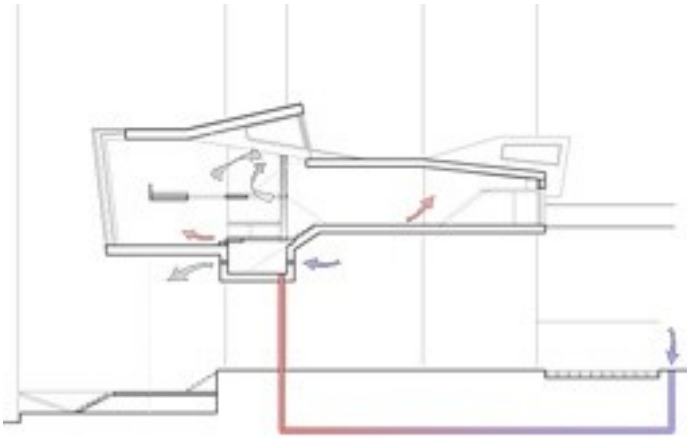
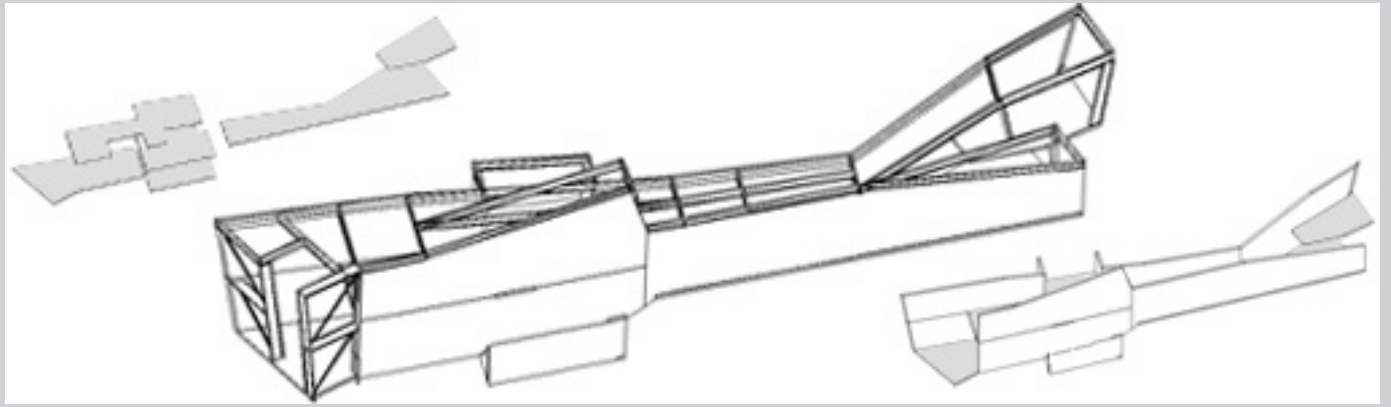
Cross section 1:200



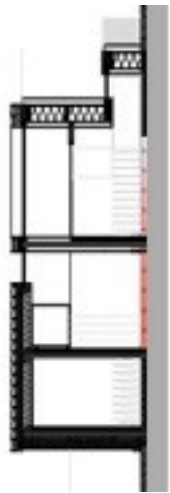


URBAN SPACE RECYCLING

Vienna / Austria



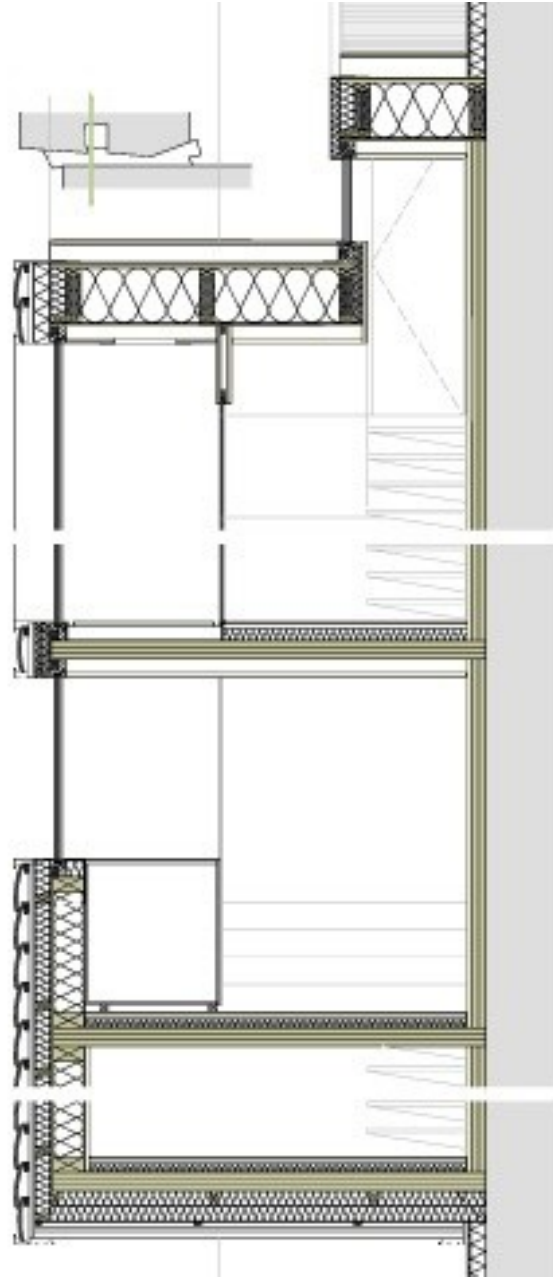
Air-Scheme



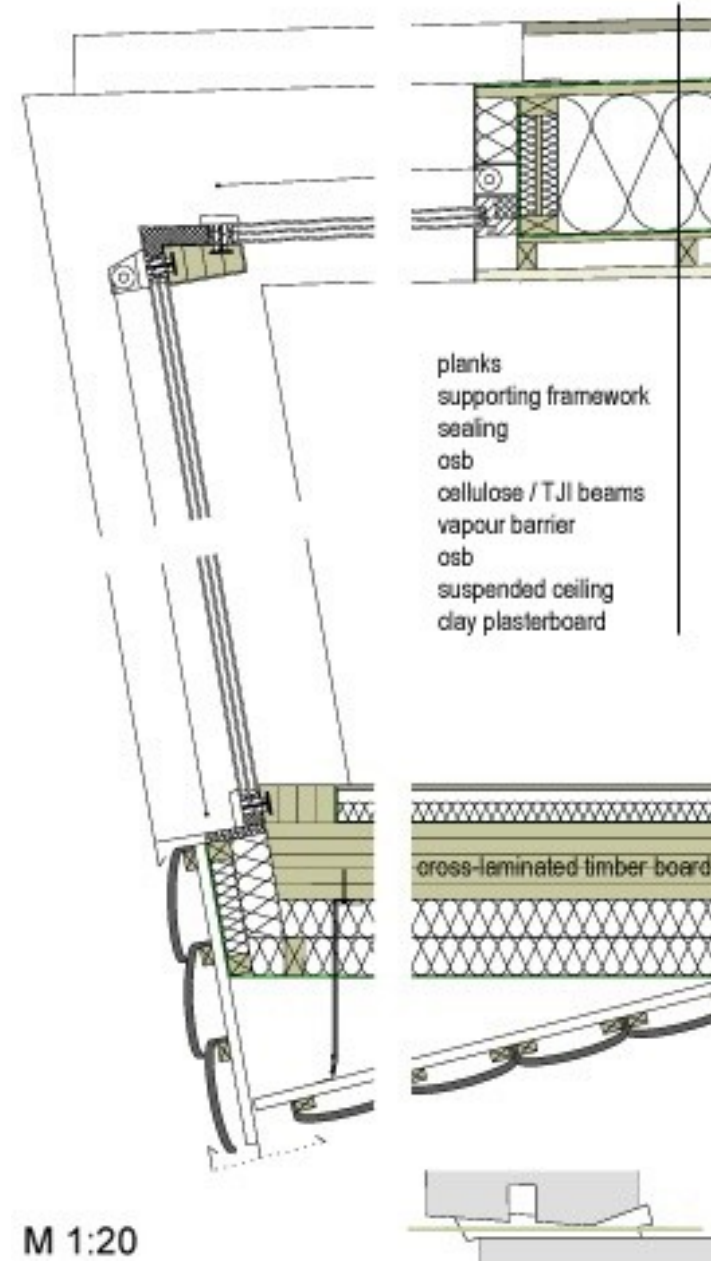
primary heating via controlled ventilation with heat recovery system & geothermal heat exchanger

secondary: wall heating/cooling integrated in clay plasterboards

Heating-scheme



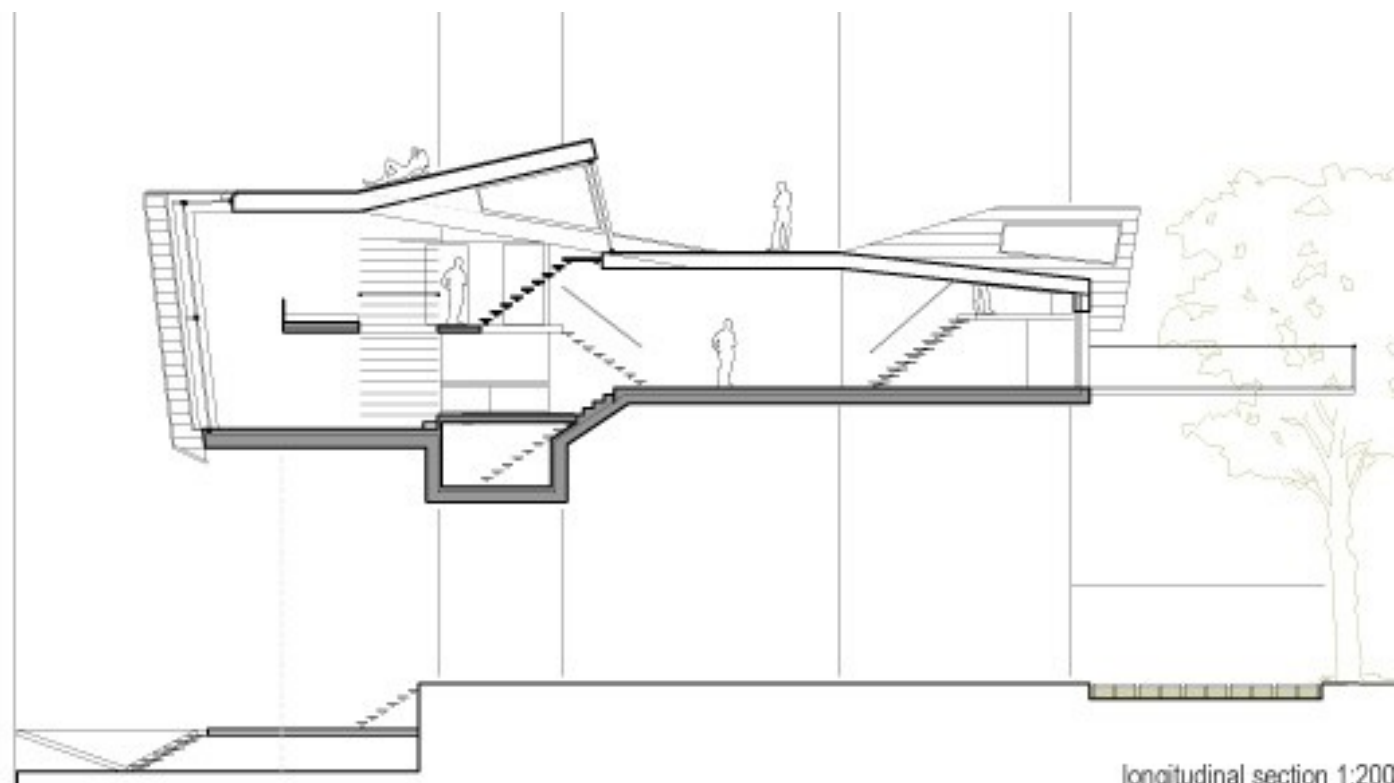
Detail drawing 1:50



M 1:20
Detail drawing 1:50

planks
supporting framework
sealing
osb
cellulose / TJI beams
vapour barrier
osb
suspended ceiling
clay plasterboard

cross-laminated timber board



Axonometric structure scheme

longitudinal section 1:200