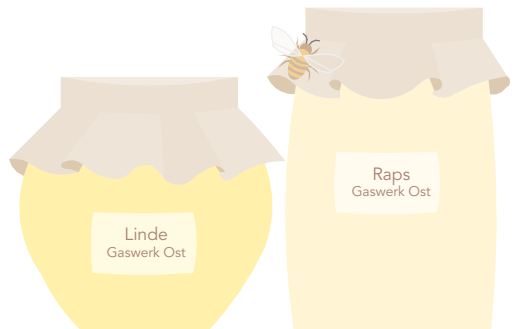


Stephanie Wachtel - 1216686
WiSe 21/22 by Prof. Fach

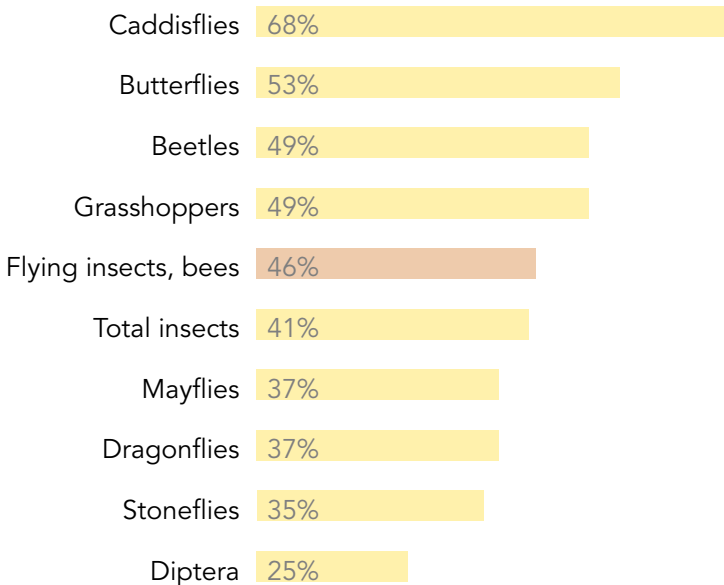
E8 Stadtholzhaus
Beekeeping and Residence of five



CONCEPT & STUDIES

Not enough people are concerned with bees and their work. But bees are really essential for the world. Personally I have a special connection with this subject because my grandfather is a beekeeper. In my opinion the location of the property is perfect for urban beekeeping. Even people from the next big cities can be close to the bees, buy the products and see the processes. The store is combined with a small cafe, so you can even taste the honey together with a cup of tea before buying the products. A visit can also be combined with a guided tour through the workshop area.

Insect deaths: Percents of declining insect species (2019)



Environmentalists have been warning of dying out of bees for years. Insects are essential not only for pollinating plants, but also as food for other animals.

The alarming result: worldwide, more than 40% of insect species are threatened with extinction.

The main reasons are shrinking habitats, climate change and large-scale use of pesticides in agriculture.

Source (08.11.2021): <https://de.statista.com/infografik/17074/anteil-ruecklaeufiger-insektenarten/>

SURROUNDING


The location of the mobile bee houses depends on the blooming periods.

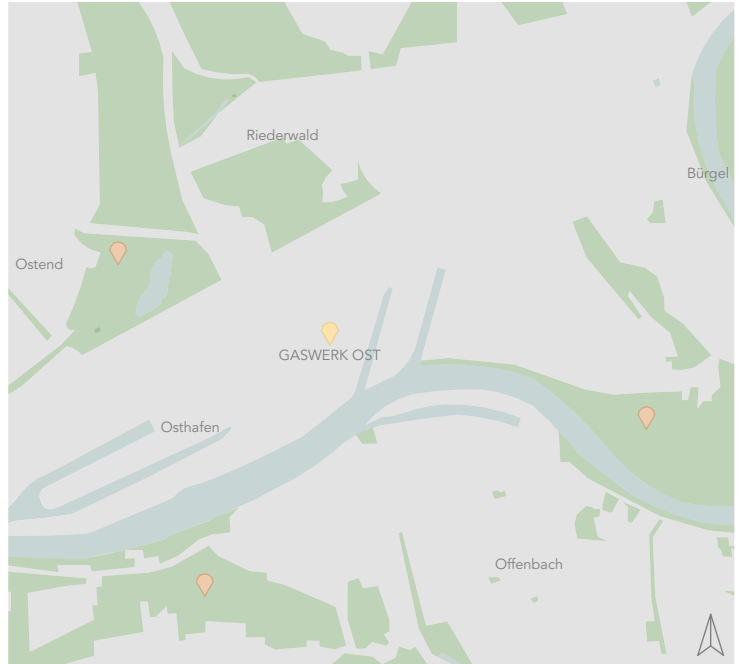
There are a lot of options that include not only flowers but also trees.

Some examples:

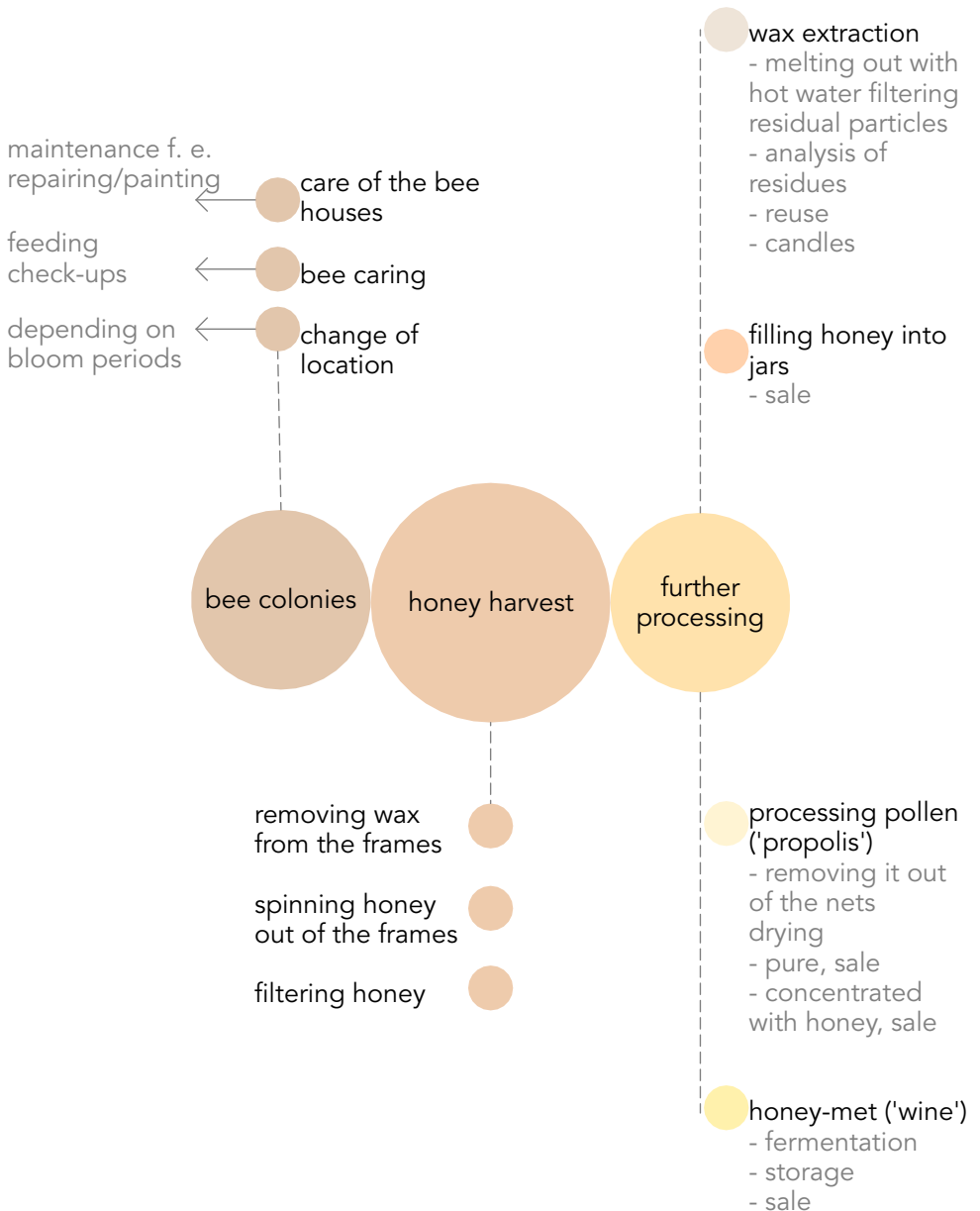
- Linde
- Rape
- Dandelion
- Sunflowers
- Forest-honey (a mixed version)

 Stadtholzhaus

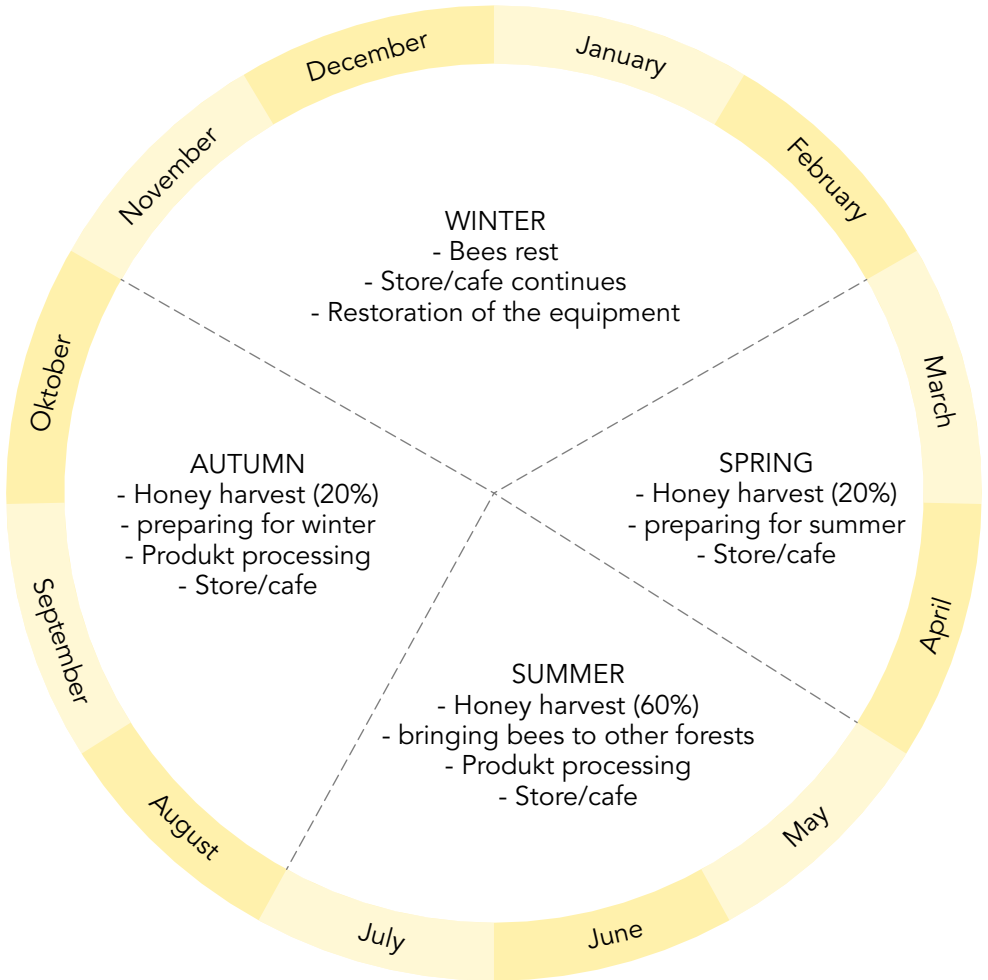
 Mobile bee houses



PROCESSES



WORKING TIME



PEOPLE

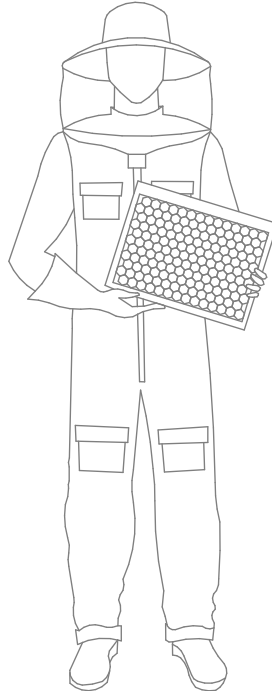
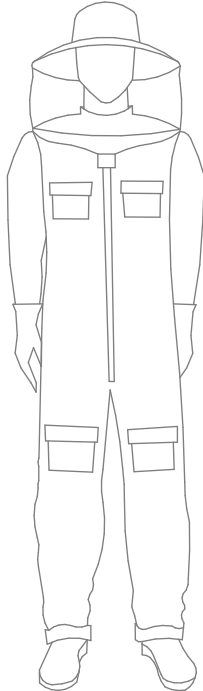
bee colonies/honey harvest



bees

beekeeper 1
- seasonal Worker
- 35 y/o
- only during summertime in germany
- travels in the cold months to australia

beekeeper 2
- Father
- 45 y/o
- ambitious bee lover
- a tradition from his grandfather



PEOPLE

station 1-3



store/cafe



employee 1

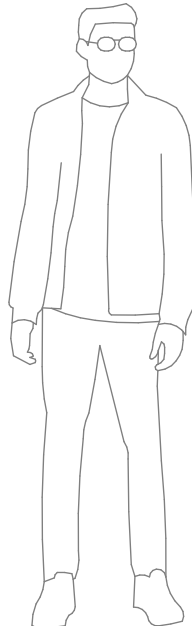
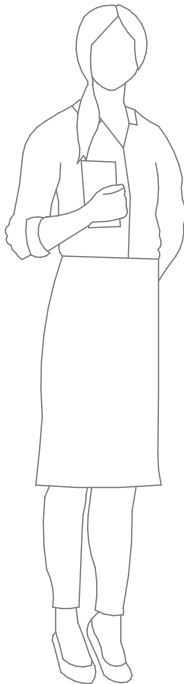
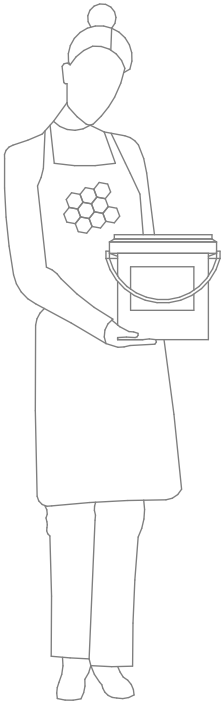
- Daughter
- 17 y/o
- loves nature and helping with the honey processes
- has a "green thumb"
- needs her own space for gardening

employee 2

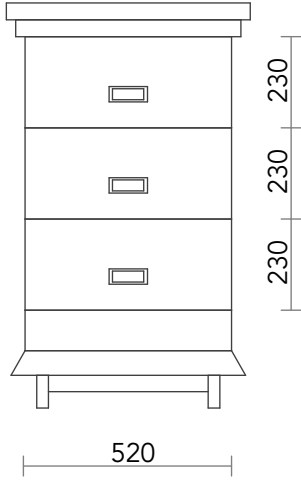
- Mother
- 43 y/o
- helps in organisation/ logistic
- does the office work and offers

resident

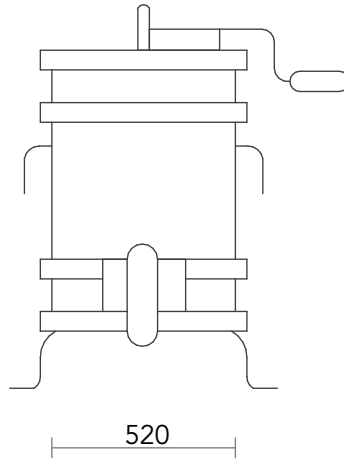
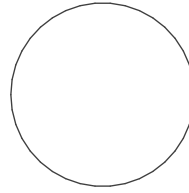
- Son
- 14 y/o
- not sure about the bee business
- loves to read and needs his own little library



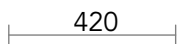
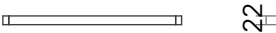
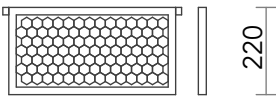
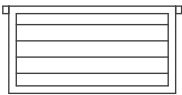
EQUIPMENT 1:20



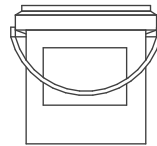
bee hive



honey extractor



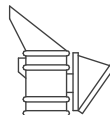
honey combs frame



honey canister



bees feeding

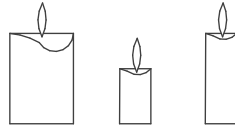


bee smoker

TOOLS/ENDPRODUCTS 1:5



honey dipper



beewax candles



bee brush



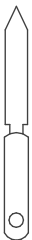
honey met



uncapping fork



big honey jar

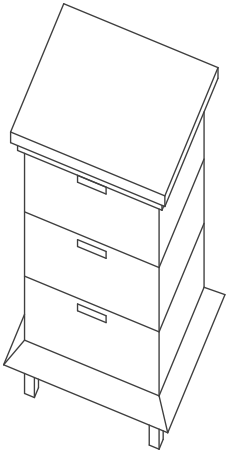


uncapping knife

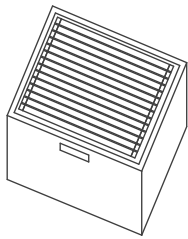


small honey jar

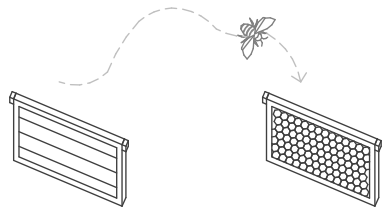
BEE HIVES



bee hive



one level
of the hive



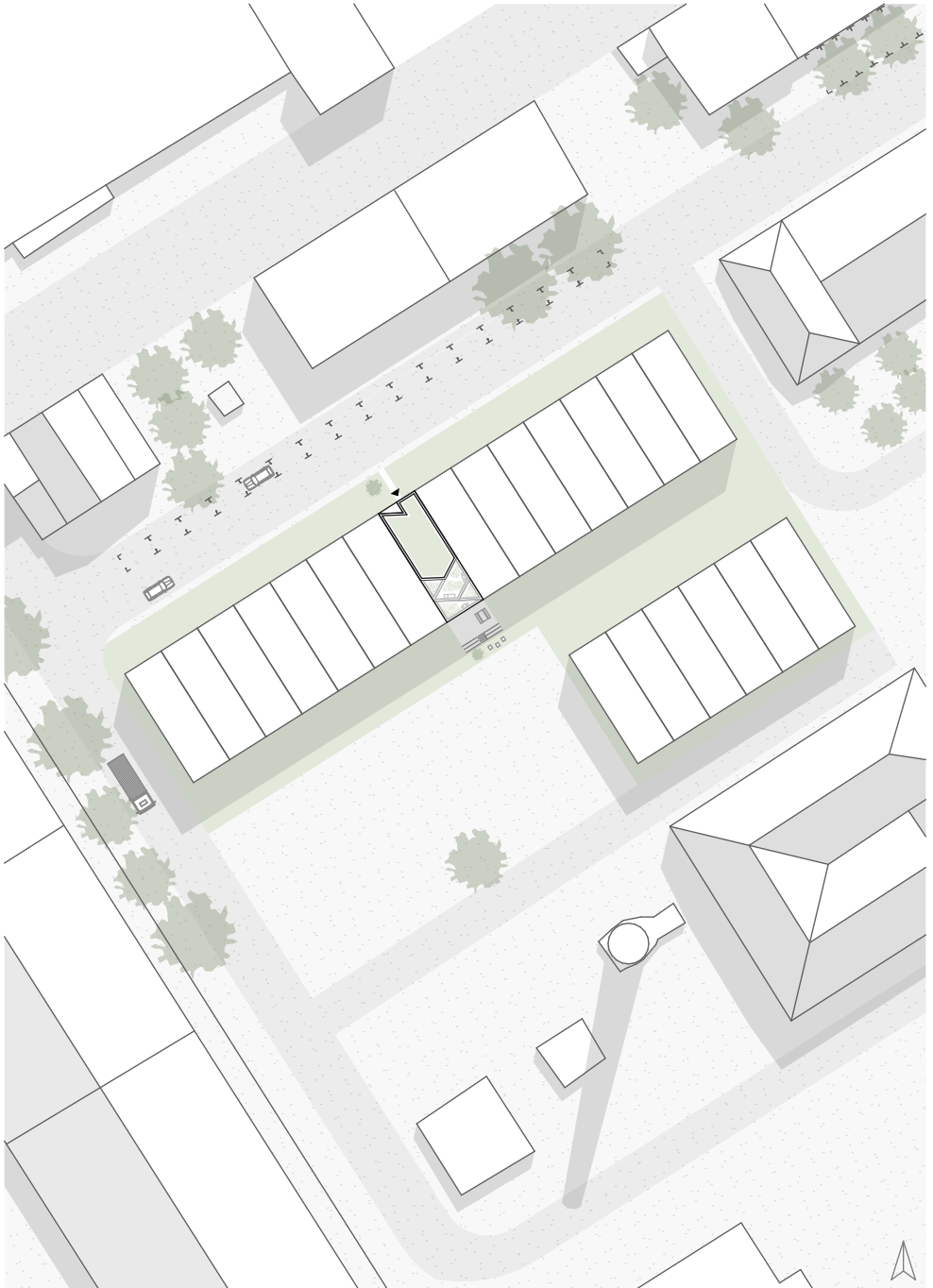
empty frame

frame with
honey combs



Source Picture (14.02.2022): https://www.lindner-group.com/de_DE/news/detail/bienenstoecke-auf-dem-gelaende-von-lindner-in-baden-6903/

AREA



ROOMPROGRAMM WORKSHOP

bee colonies

- I. main working space
- in the garden
- also outside in forests or fields

small workshop
(for maintenance,
repairs)

12,0 m²

honey harvest and further processing

- II. main working space
- 1) working tables with sink/stove
- 2) honeycomb spinner

Open working
spaces in one
room

- station 1 harvest
- station 2 propolis
- station 3 wax
- station 4 met

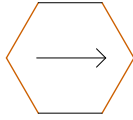
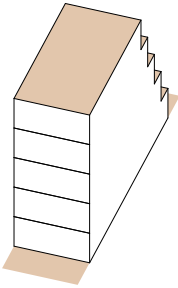
20,0 m²

storage/store+cafe

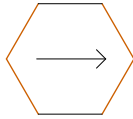
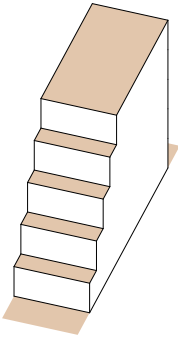
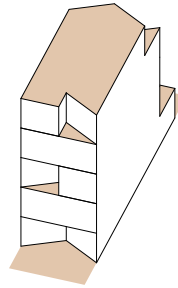
- tables, counter and display cases
- storage (pharmacy, endproducts, products in progress)

store/cafe 20,0 m²
storage (honey grill) 10,0 m²

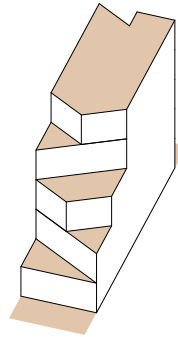
DESIGN



Front

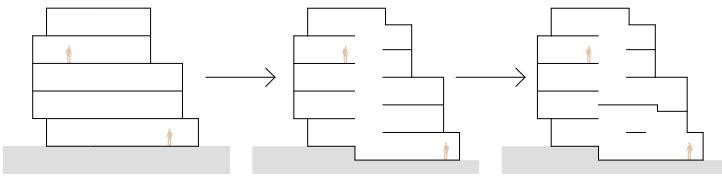


Back



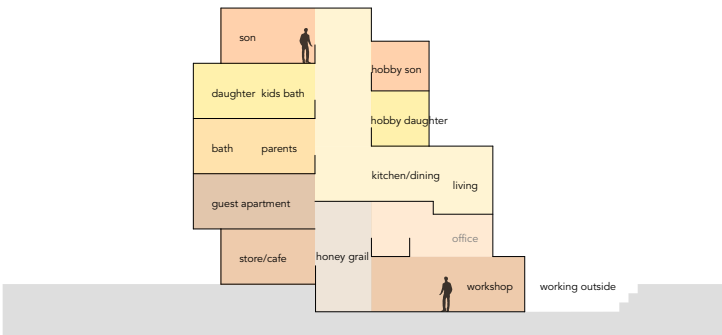
Roof terraces

- more green areas, good for bees
- facing the backyard
- basic shape: hexagon (honey comb)



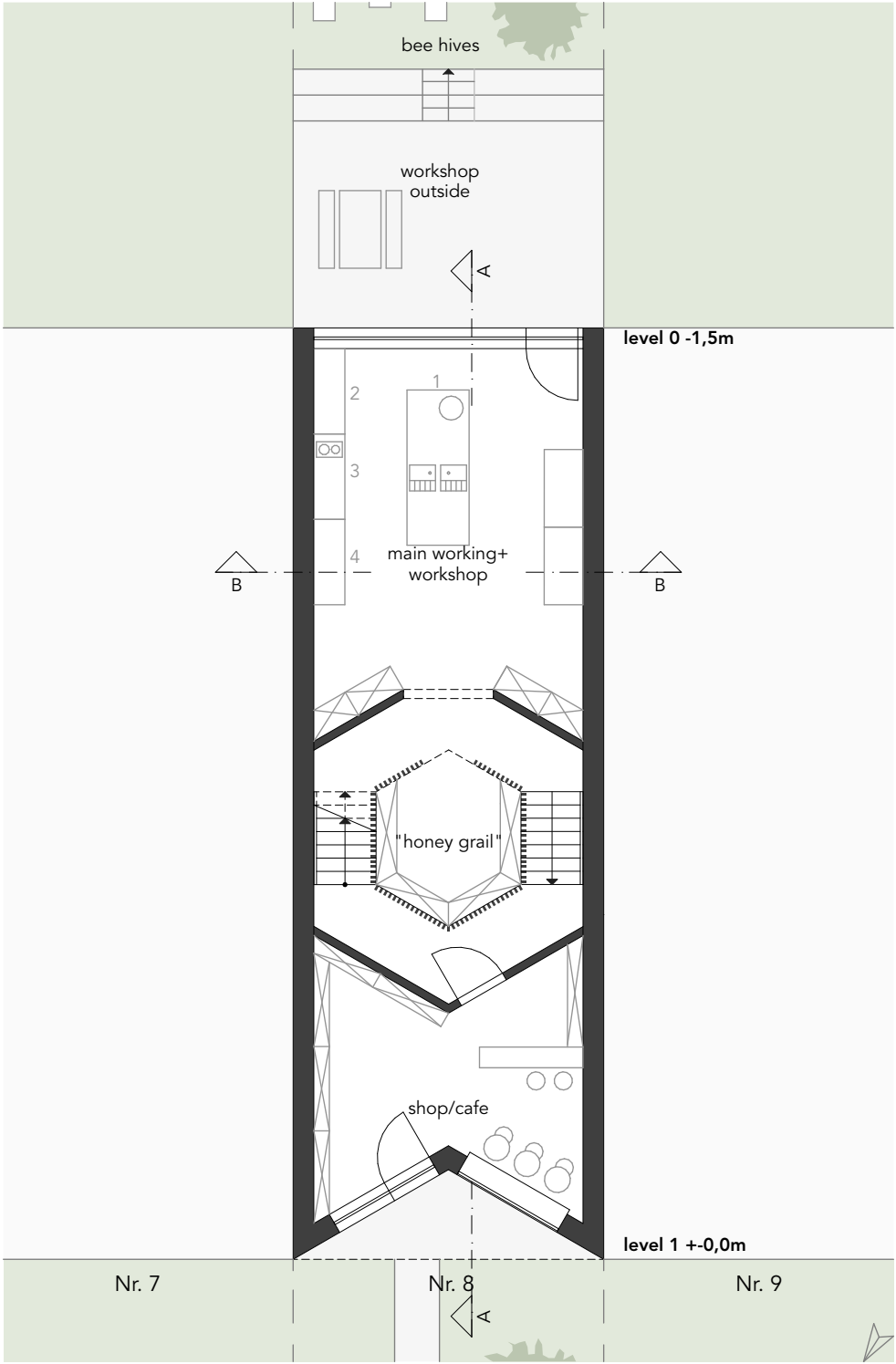
Development

- movement
- splitlevel
- air space



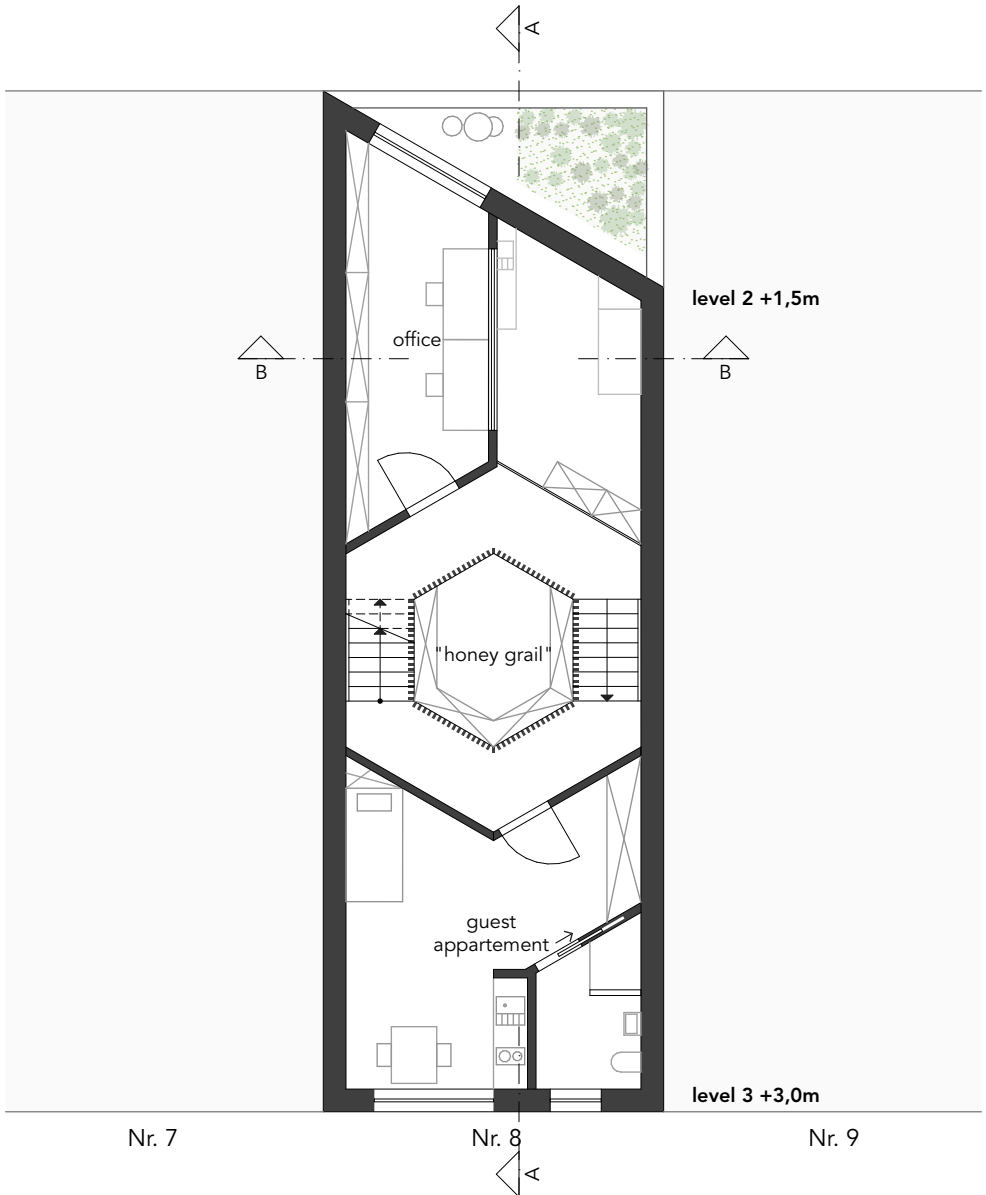
VISUALISATION





Floorplan 1:100

DESIGN

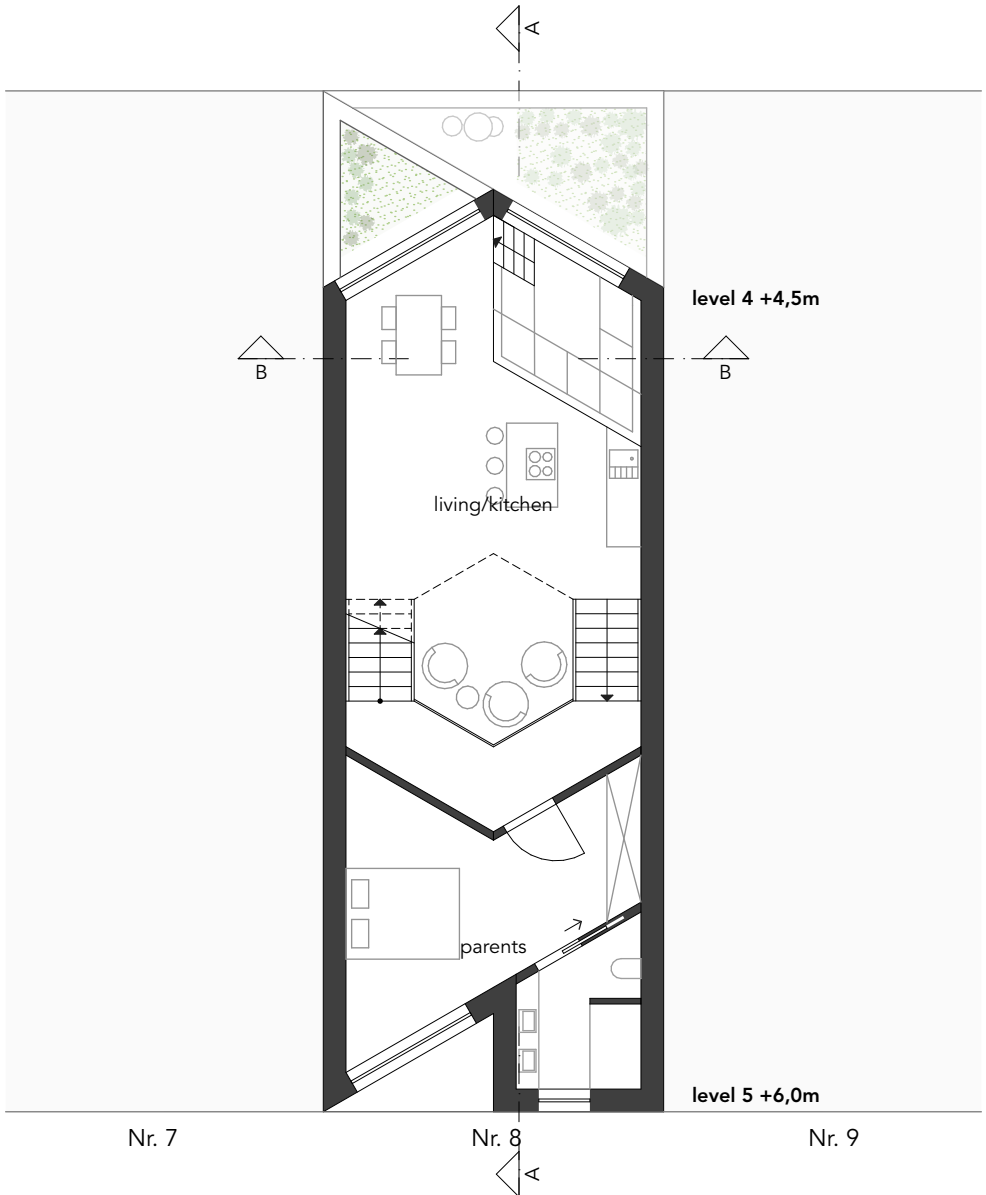


Nr. 7

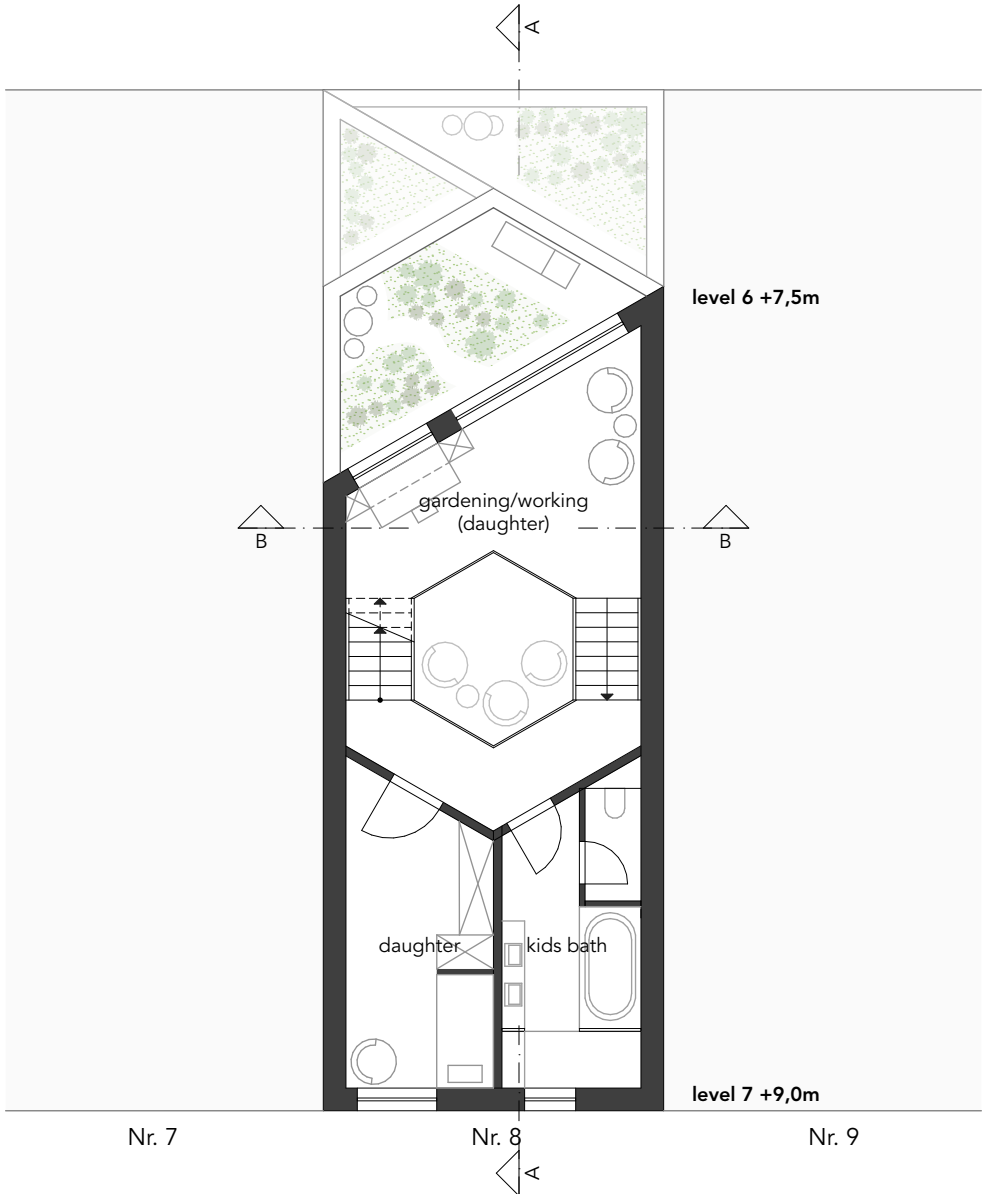
Nr. 8

Nr. 9

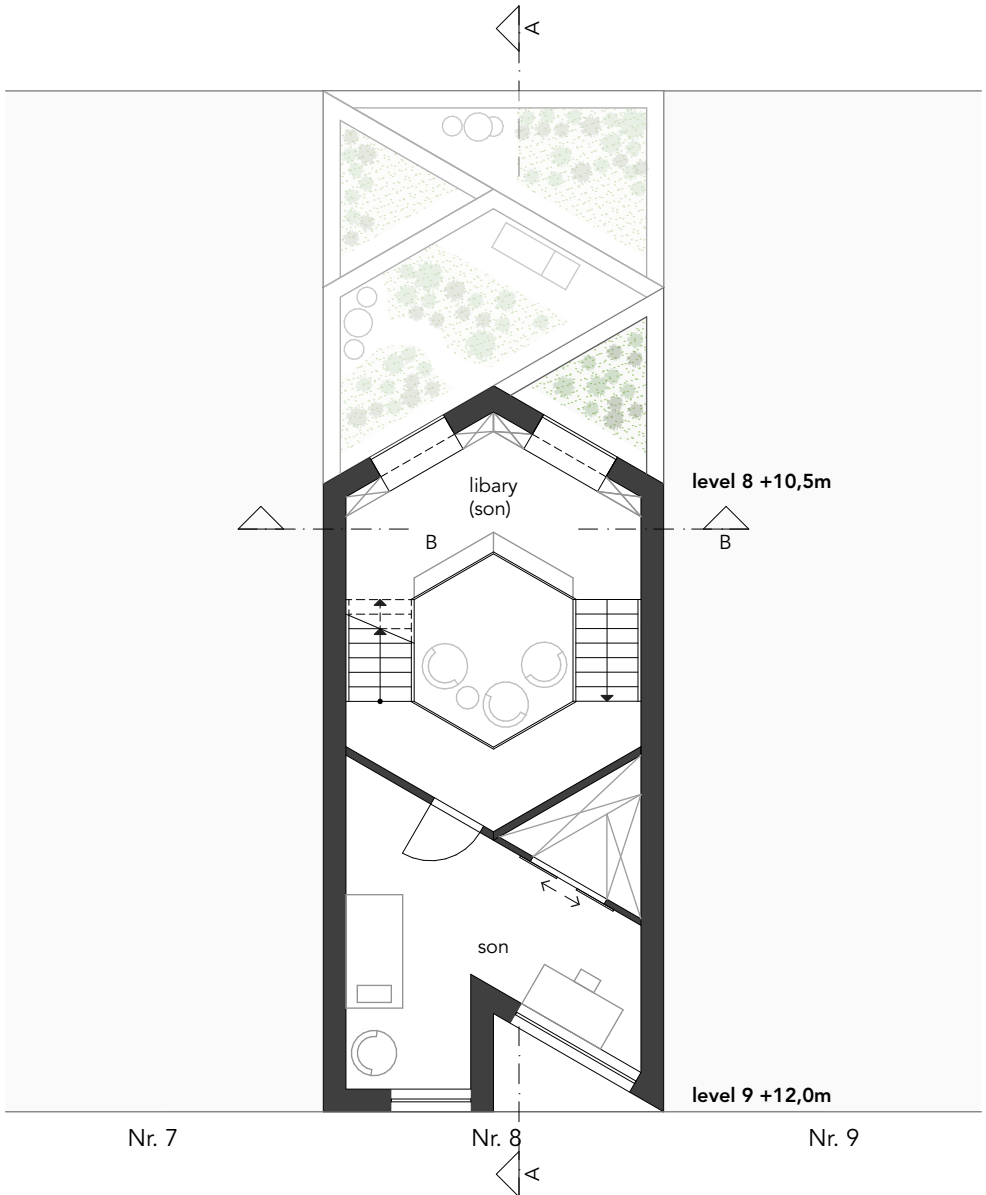
DESIGN



DESIGN



DESIGN



VISUALISATION



VISUALISATION



Working and hobby area from the daughter

DESIGN



DESIGN

roof +15,3m

level 9 +12,0m

level 7 +9,0m

level 5 +6,0m

level 3 +3,0m

working space outside level 1 +0,0m

roof +13,8m

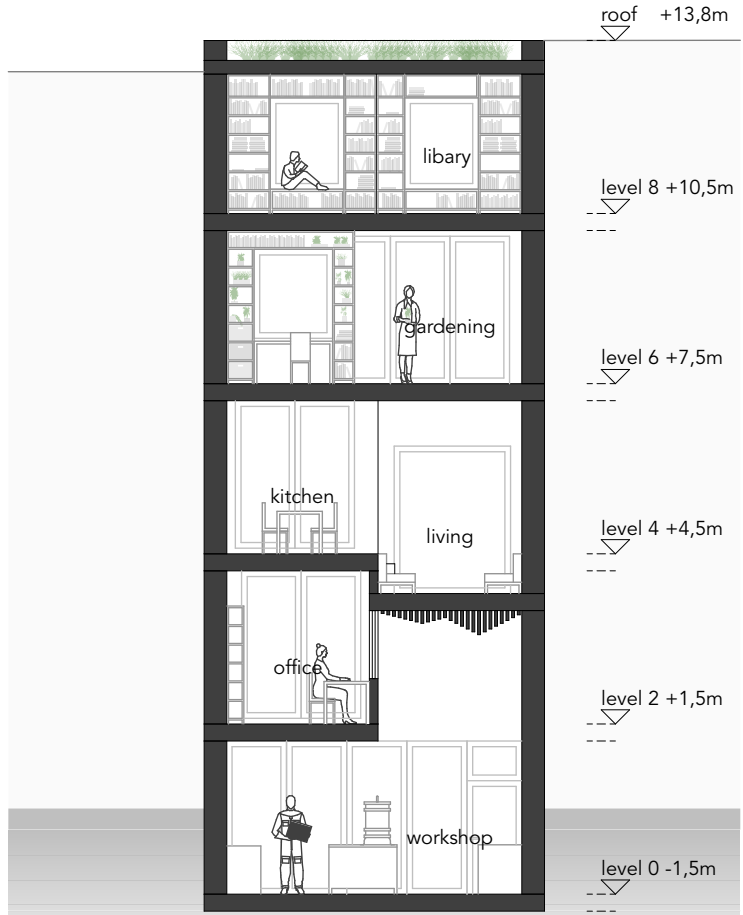
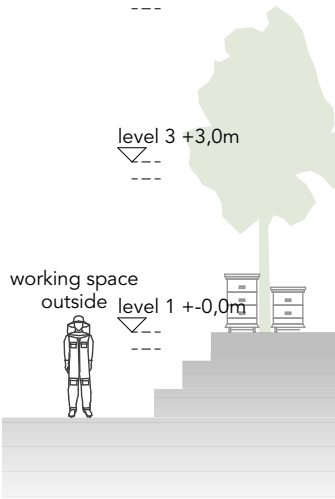
level 8 +10,5m

level 6 +7,5m

level 4 +4,5m

level 2 +1,5m

level 0 -1,5m



Nr. 7

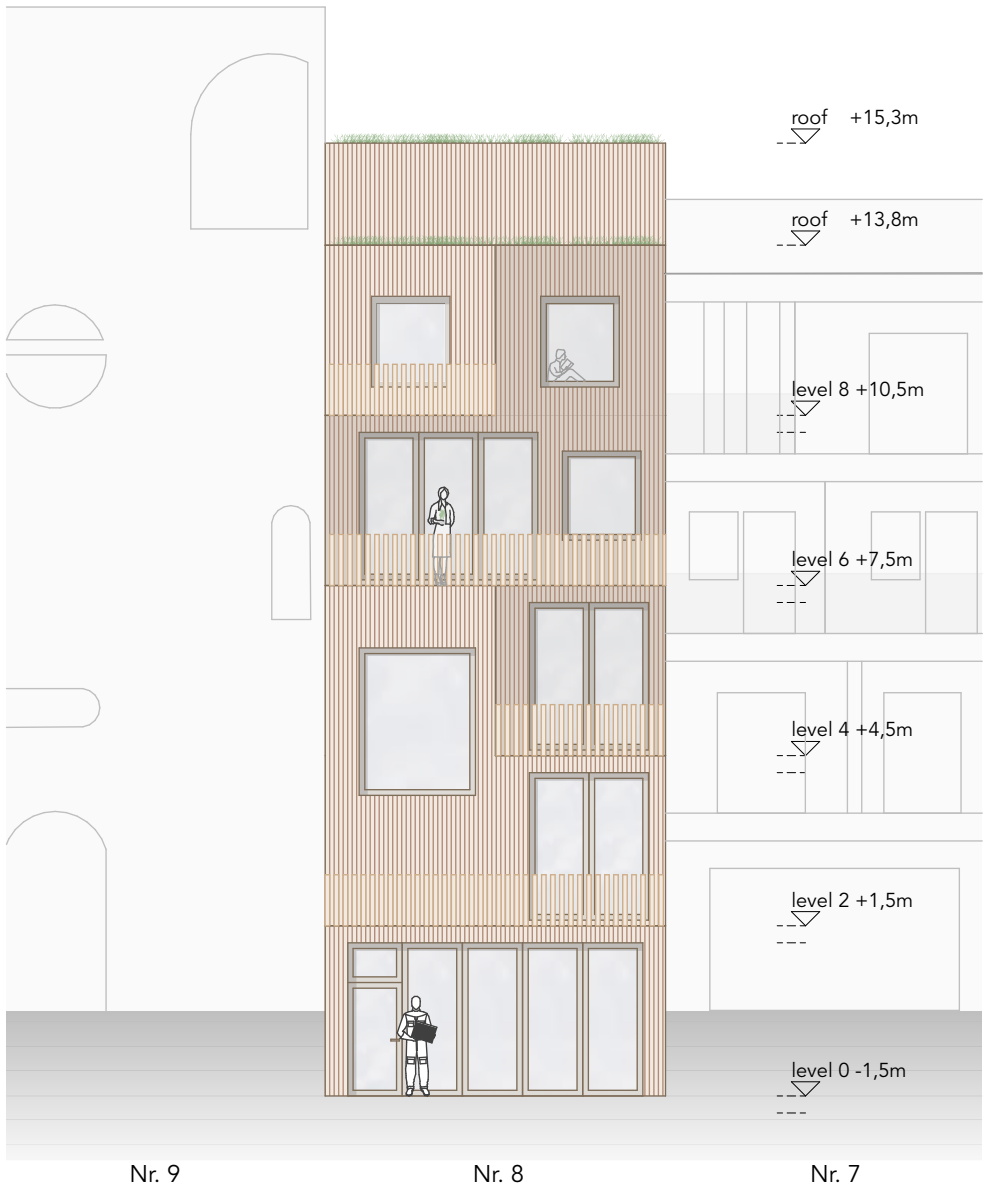
Nr. 8

Nr. 9

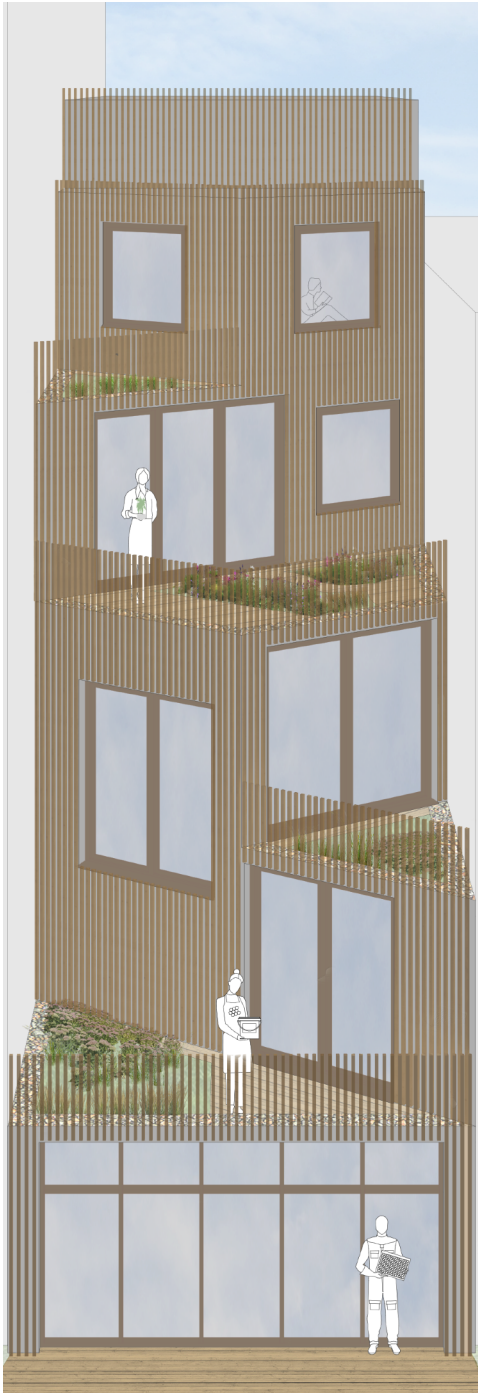
DESIGN



DESIGN



CONSTRUCTION



The complete structure of the building is constructed with CLT.

In the inside the timber is partly found again. It is combined with other materials.

Ceiling



Walls



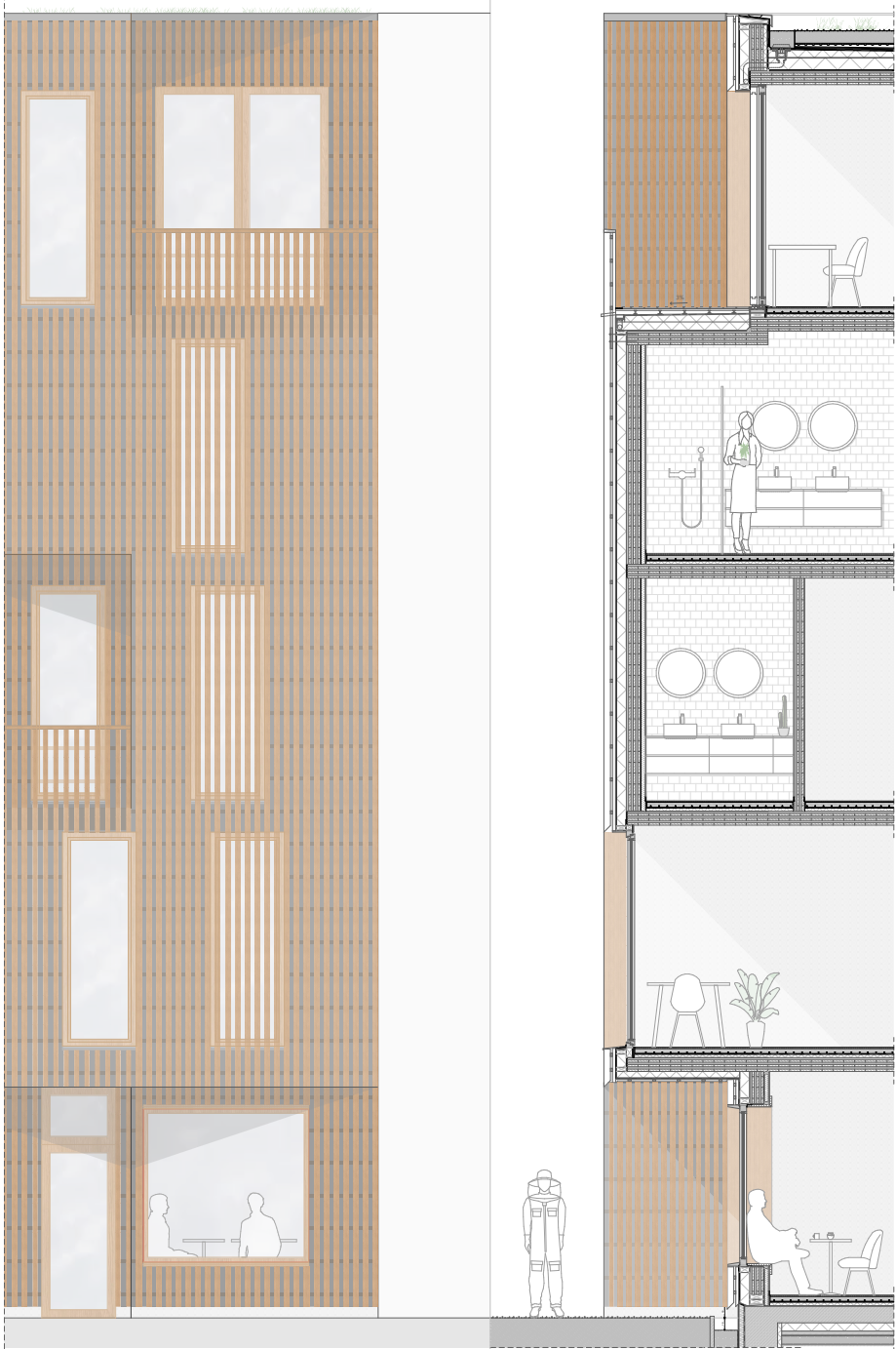
Floor



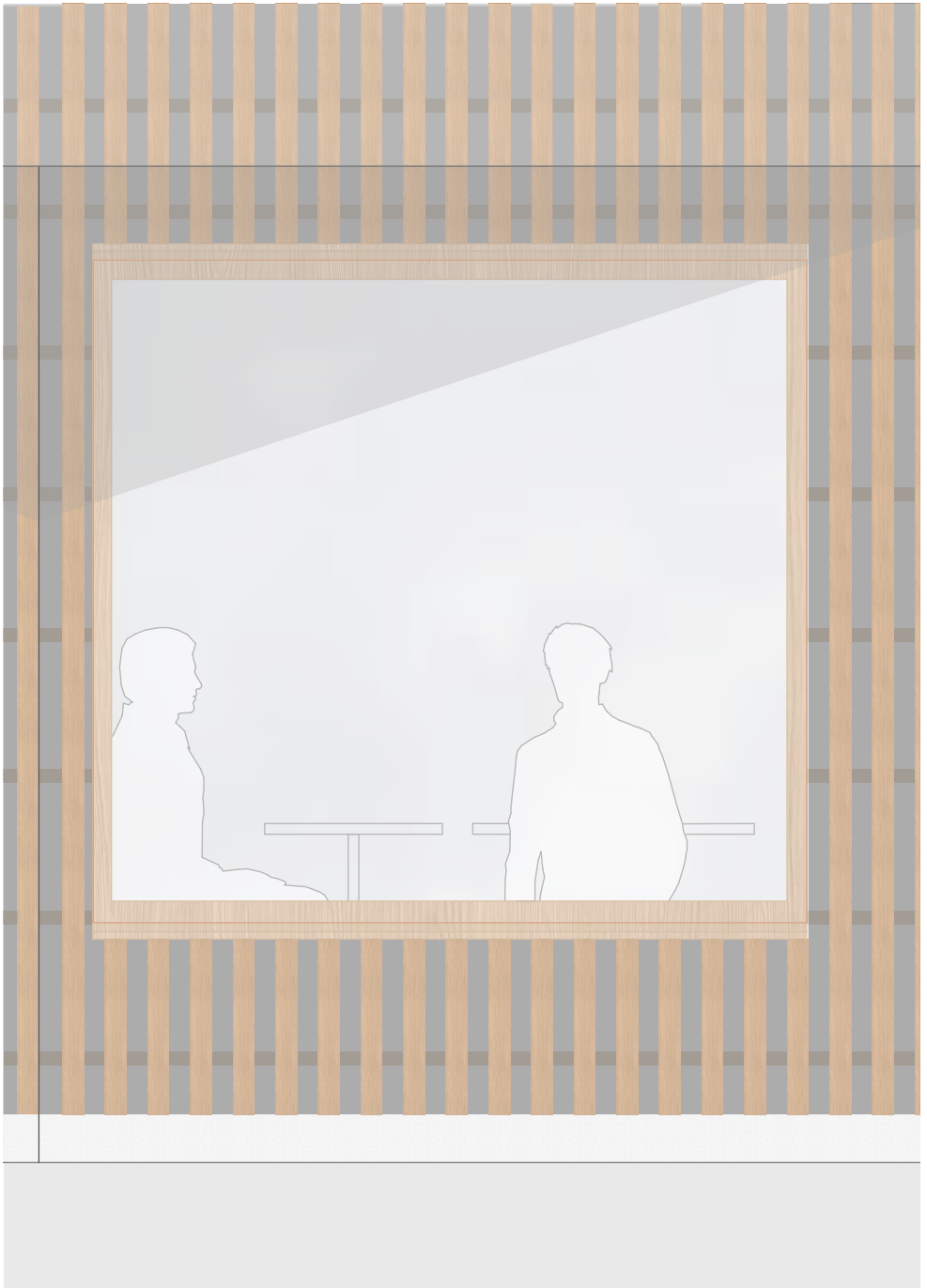
Facade



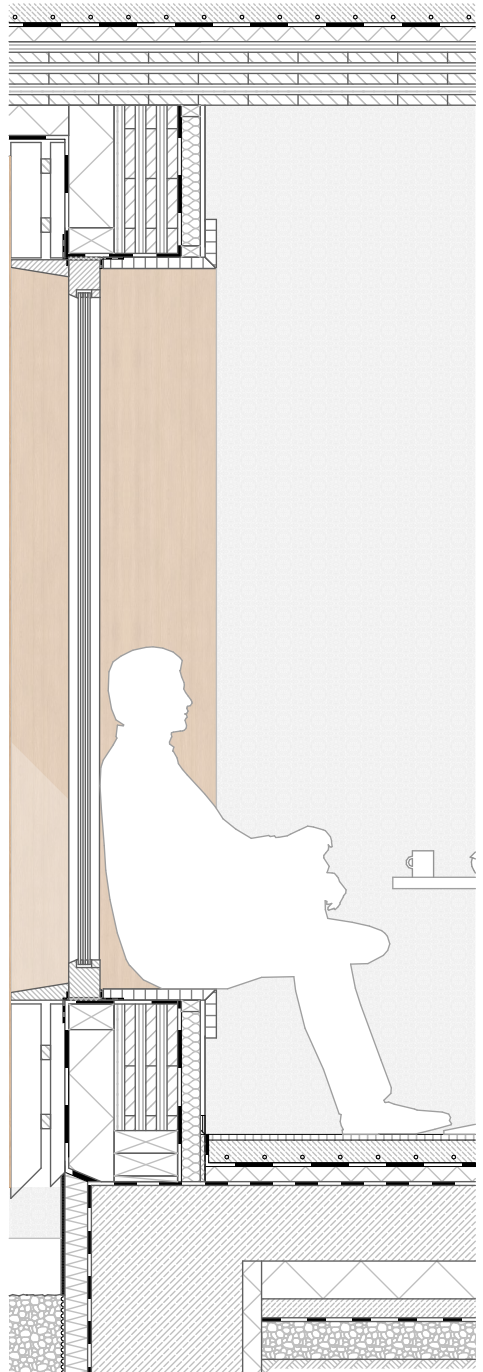
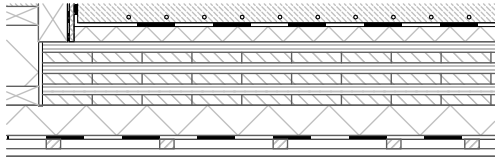
CONSTRUCTION



CONSTRUCTION

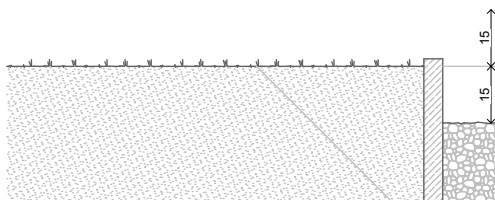


CONSTRUCTION

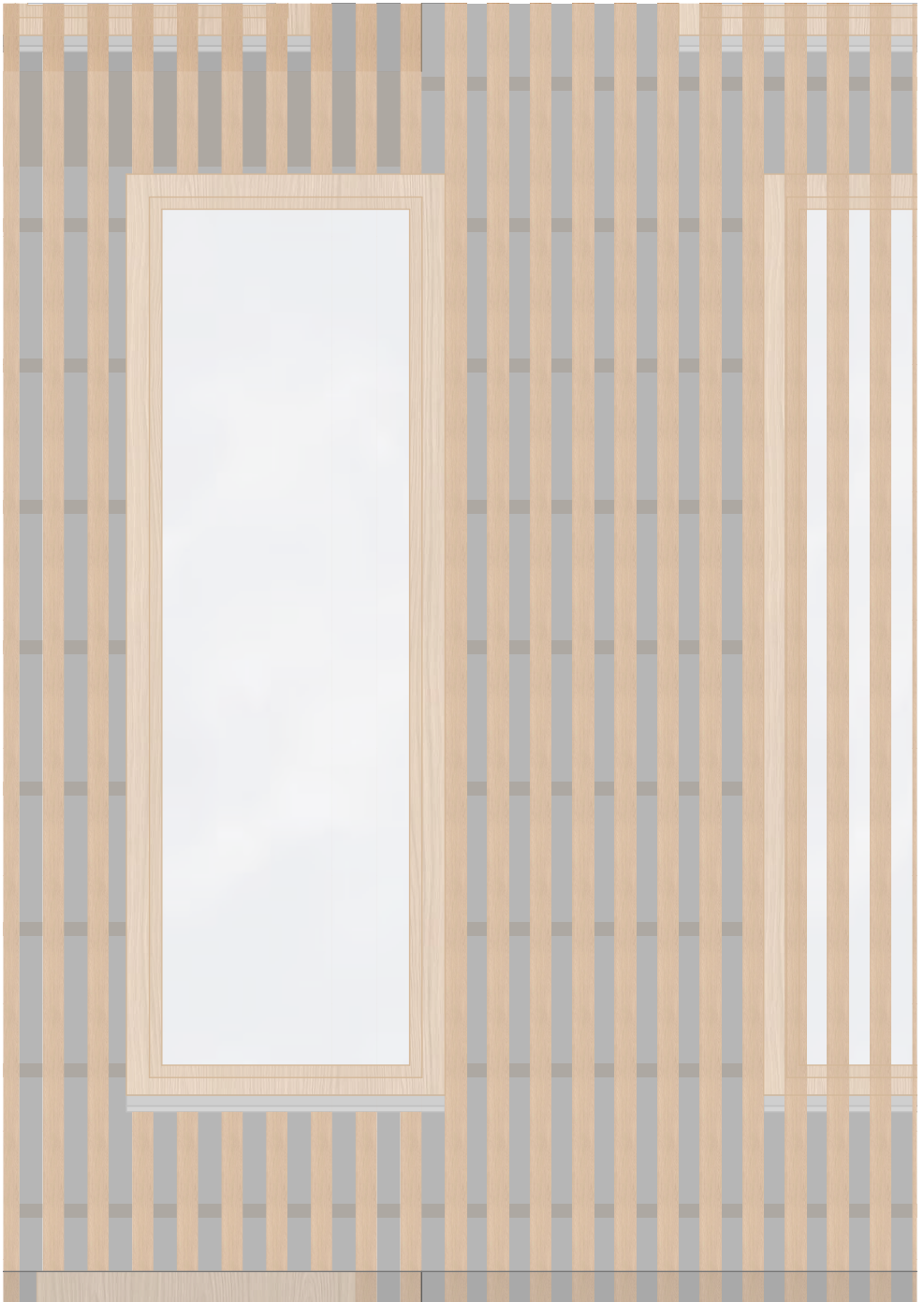


groundfloor construction

- 15 mm ash floor boarding
- 60 mm screed with underfloor heating
- 40 mm separating layer
- mm impact sound insulation, bonded
- 200 mm reinforced concrete
- 100 mm insulation
- 50 mm lean concrete
- mm separating layer
- 100 mm gravel

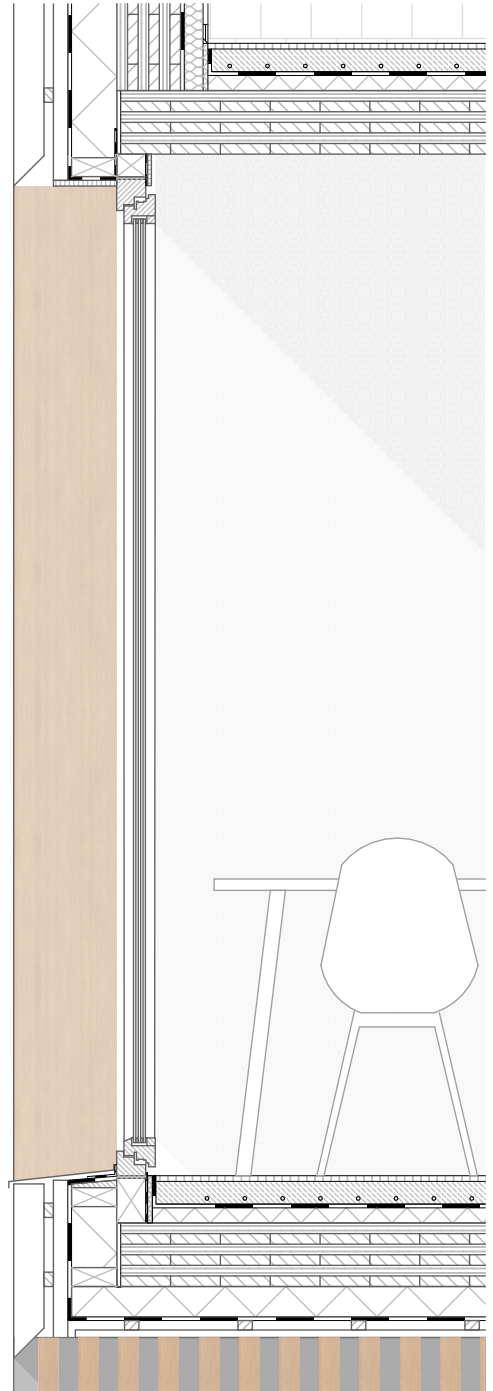


CONSTRUCTION

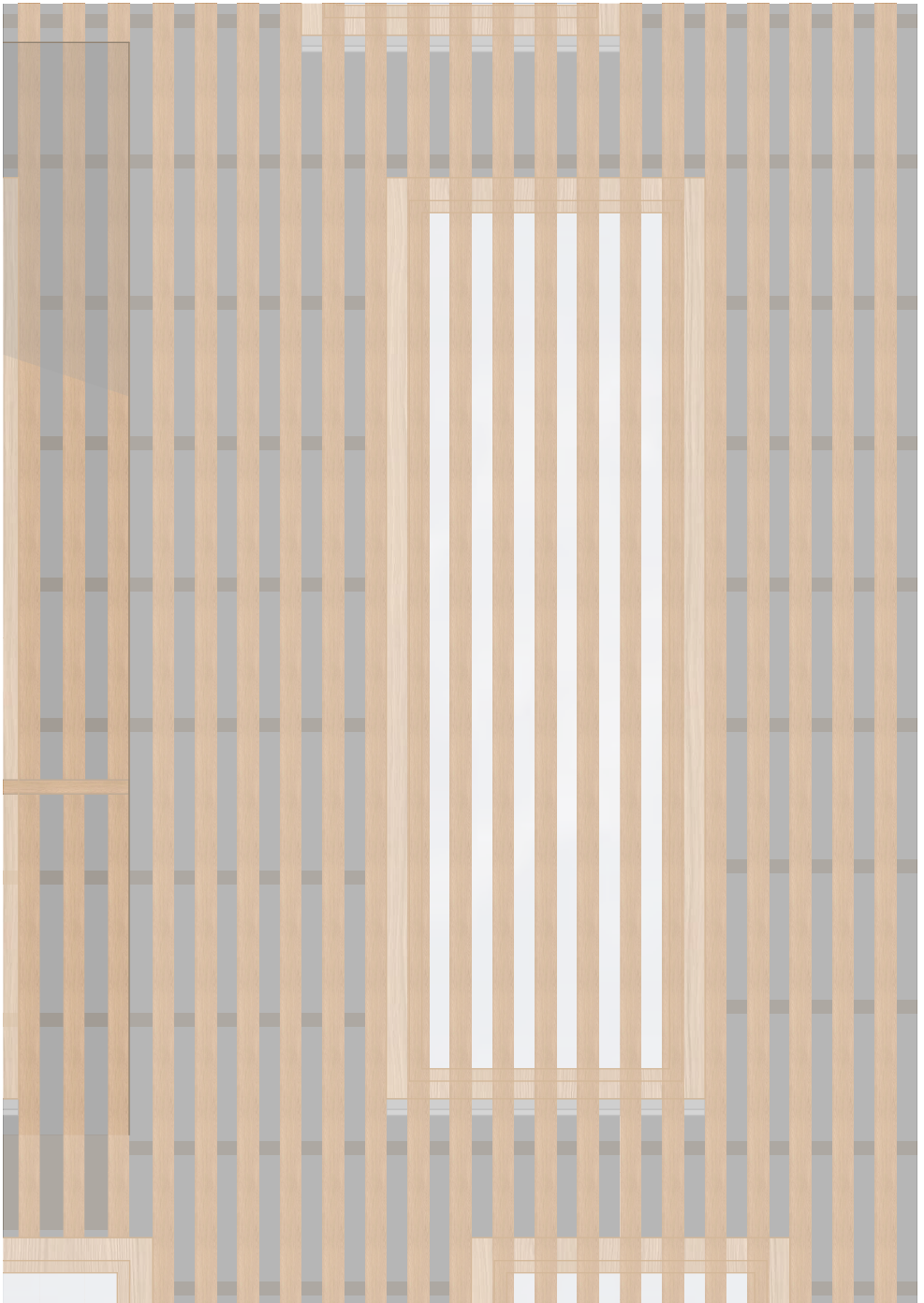


CONSTRUCTION

windows
timber profiles
triple glazed



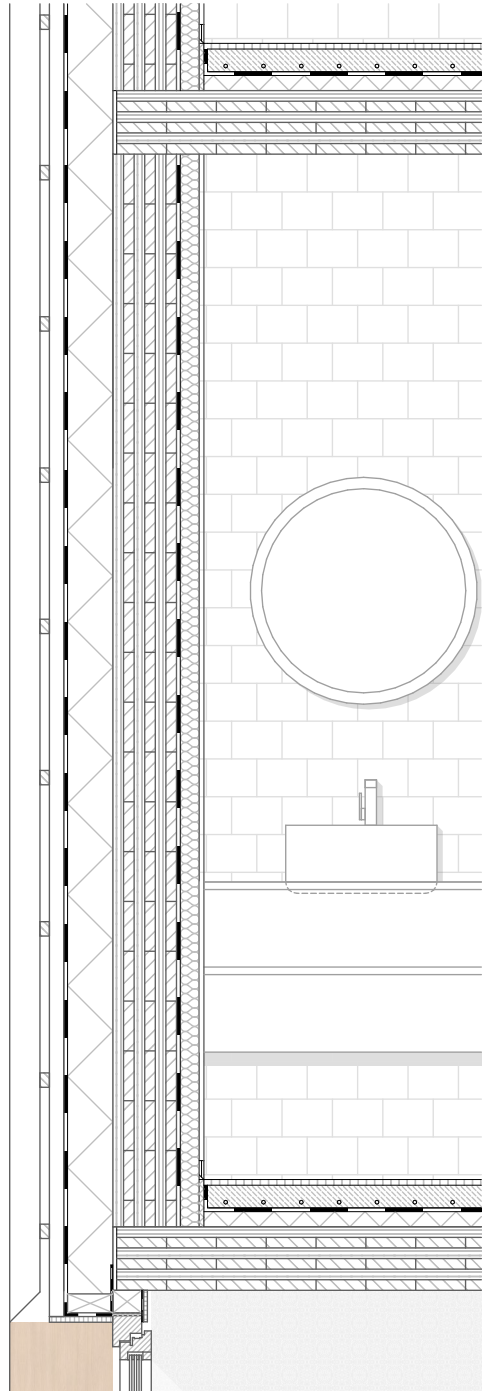
CONSTRUCTION



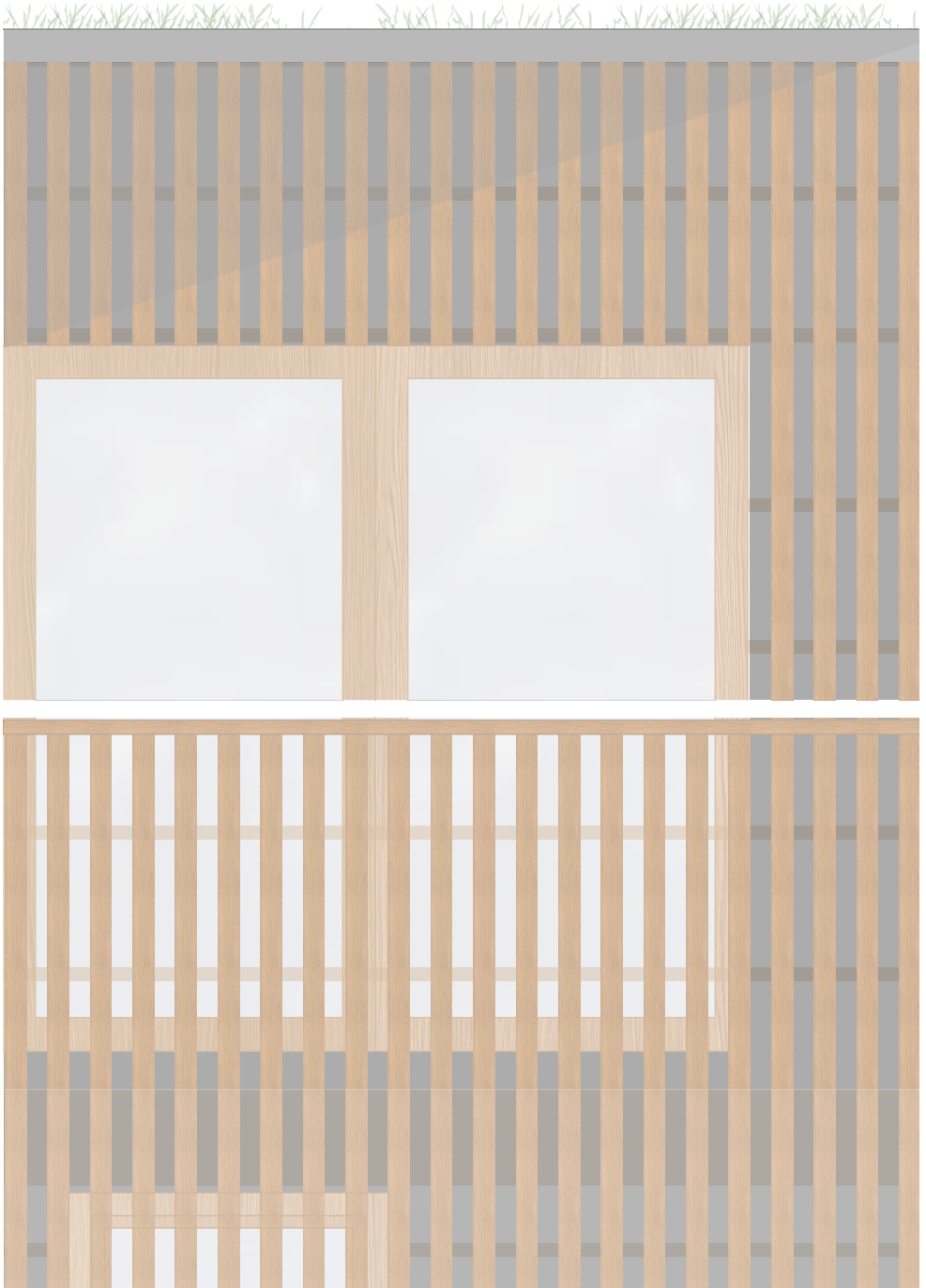
CONSTRUCTION

		wall construction
50	mm	sawn larch hardwood strips (80)
25	mm	battens (25/38)
38	mm	counterbattens (38/38)
-	mm	sealing layer
120	mm	thermal insulation, fire-resistant
170	mm	CLT (6 layers)
-	mm	sealing layer
50	mm	insulation
12,5	mm	plasterboard

		floor construction
15	mm	ash floor boarding
60	mm	screed with underfloor heating
40	mm	separating layer
-	mm	impact soundinsulation, bonded
200	mm	CLT (7 layers)



CONSTRUCTION



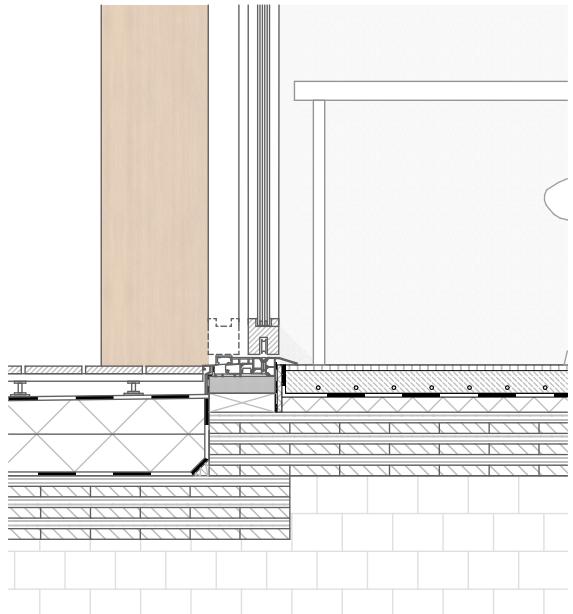
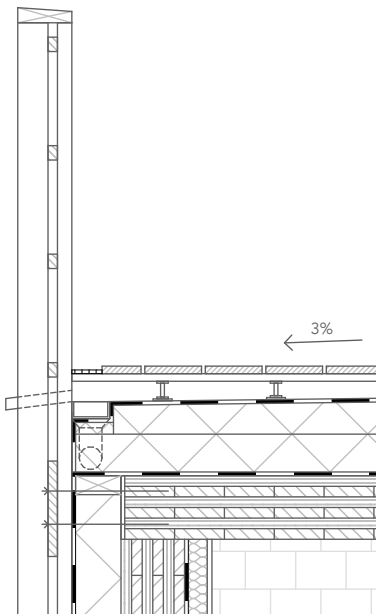
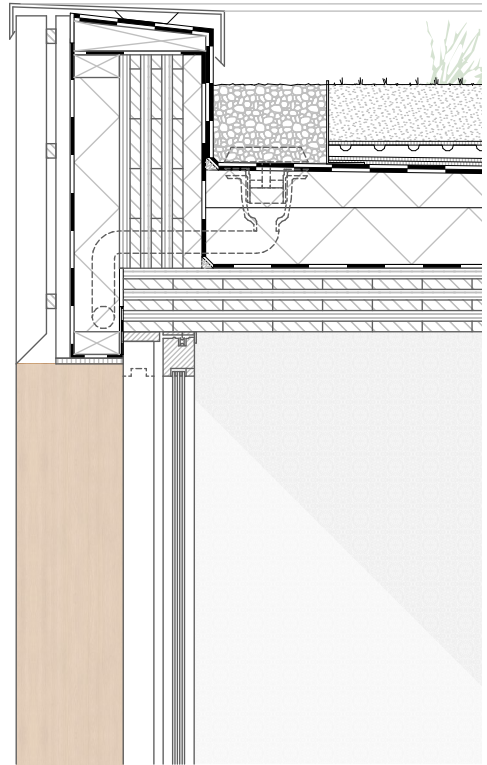
CONSTRUCTION

roof construction

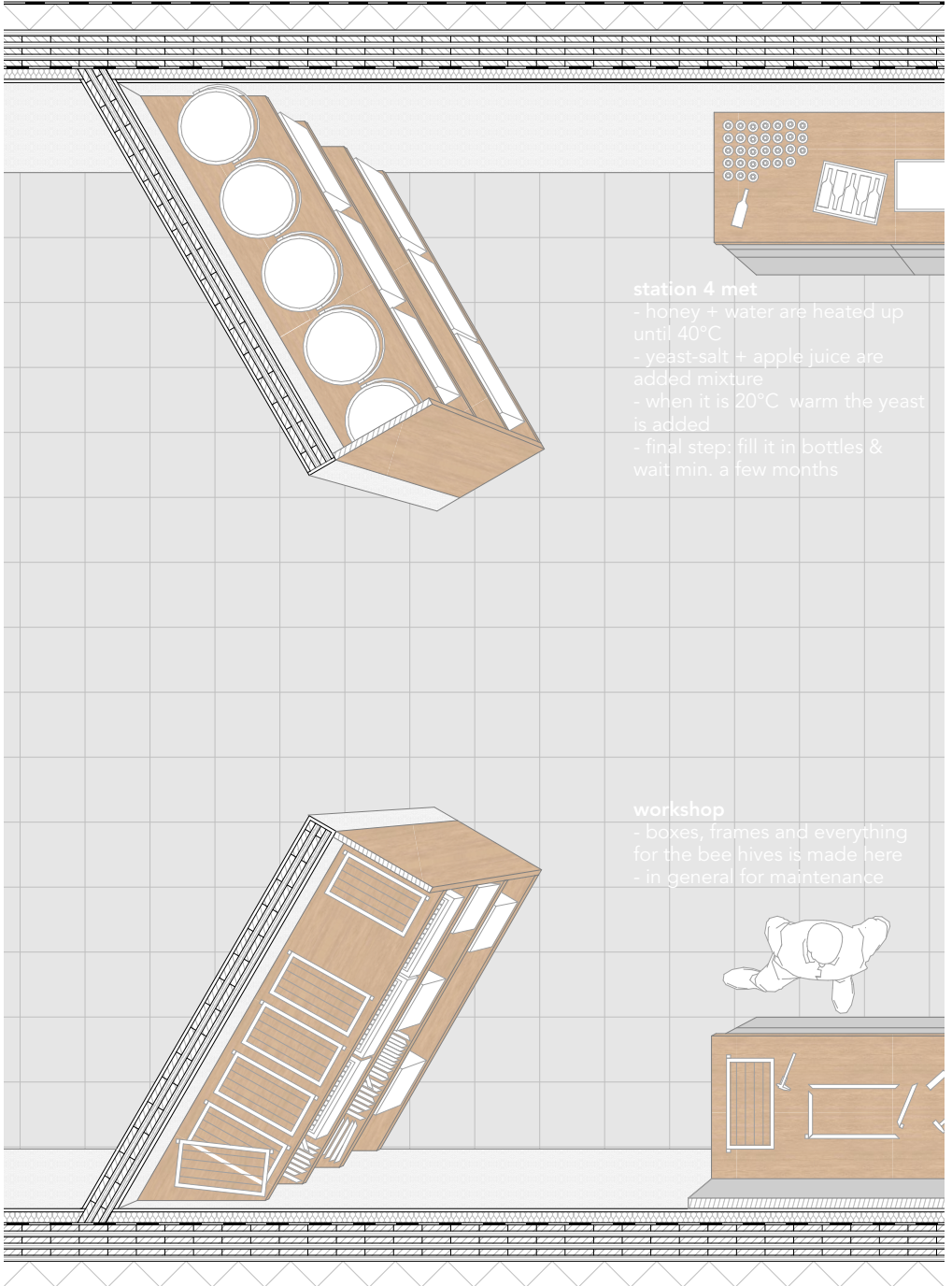
- 150 mm substrate: sedum planting
- 10 mm filter mat
- 50 mm water reservoir
- 10 mm fibre mat
- 10 mm separating and sliding layer
- mm two-layer bituminous seal
- 100 mm insulation to falls (XPS)
- 200 mm insulation (XPS)
- mm vapour barrier
- 200 mm CLT (7 layers)

loggia construction

- 20 mm larch slat flooring
- 20 mm battens
- 50 mm adjustable terrace foot
- mm sealing layer
- 100 mm insulation to falls (XPS)
- 100 mm insulation (XPS)
- mm sealing layer
- 200 mm CLT (7 layers)



WORKSHOP



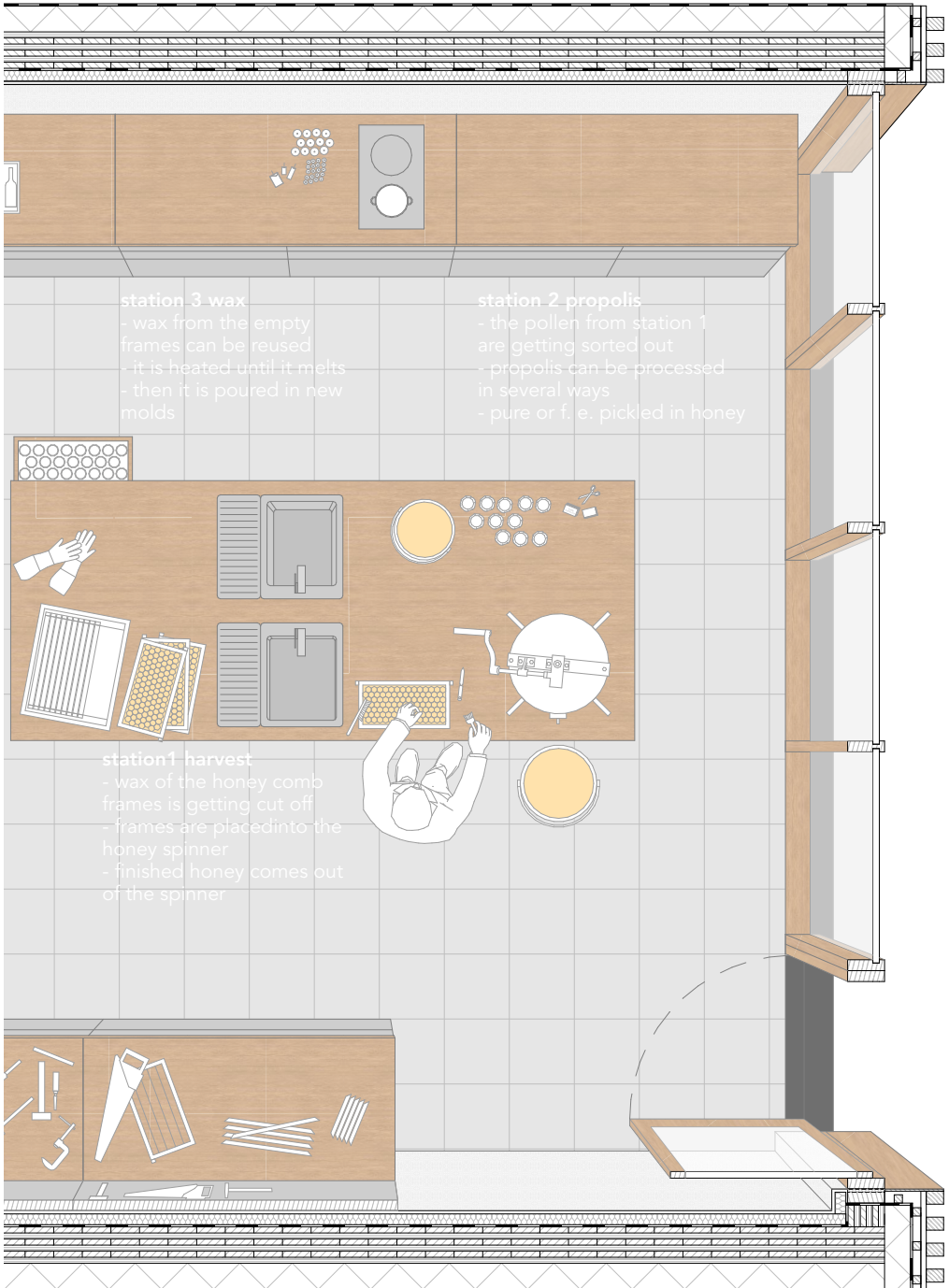
station 4 met

- honey + water are heated up until 40°C
- yeast-salt + apple juice are added mixture
- when it is 20°C warm the yeast is added
- final step: fill it in bottles & wait min. a few months

workshop

- boxes, frames and everything for the bee hives is made here
- in general for maintenance

WORKSHOP



MODEL



MODEL

