The living pond

Team 4

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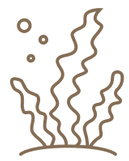

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Assignment

- **User groups** — People between 25 and 35 years
  Young families (3-4 person)
- **Flat sizes** — Flats **30 - 45 m²**

  by merging approx. 90 m² (or 2 x 30 - 45m²)
- **Extra rooms** — Common areas, community rooms, garden, bicycle storage room

  Good utilisation of the residential and staircase areas must be ensured.
- **Construction class III** — **o**ver **8 m to 11 m** (3 floors)

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Facts

- **Different flat sizes:** 4
- **Number of apartments in 1 building:** 12
- **Total number of apartments:** 72
- **Location:** Stegersbach, Burgenland
- **Parking space** 43 and 6 for disabled people
- **Floor area ratio** **55%**
- **Total number buildings** 6

Description

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The Buildings are in Stegersbach, Burgenland and are called “the living pond” because in the middle of the building site there is a pond where the rainwater is collected. There are 4 different types of flats and approximately 40m² big. The buildings are made as sustainable as possible by using wood.

Site plan

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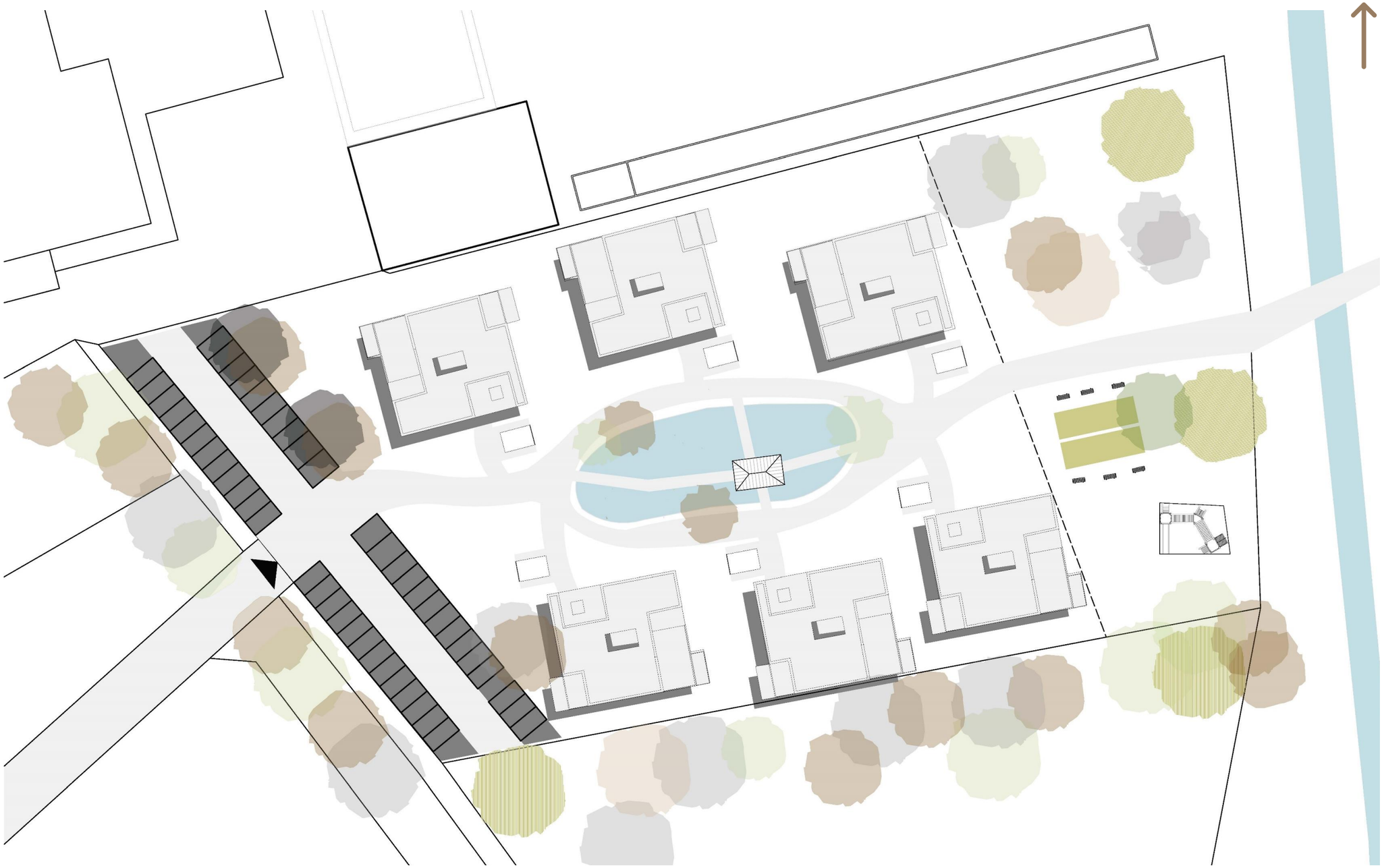

Sustainability

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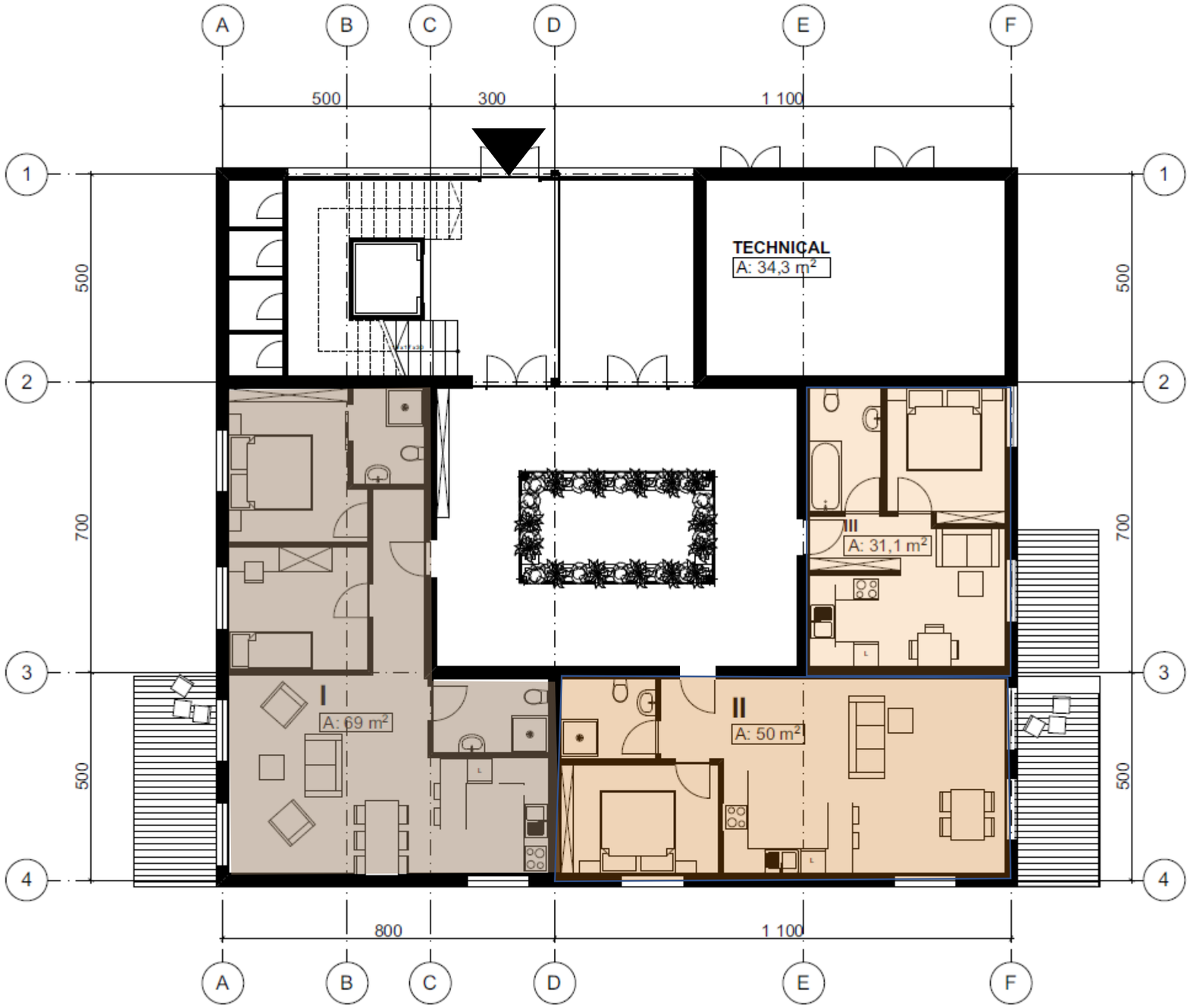
- no glue → screws
- local supplier for building materials
- e-cars charging port
- self sufficient material
- modular construction
- collecting rainwater → pond
- solar panels
- district heating

Recycled wood

- Domestic furnishing
- Panel bords
- biomass
- Mulches, composts and coverings
- Landscape surfaces

Ground Floor



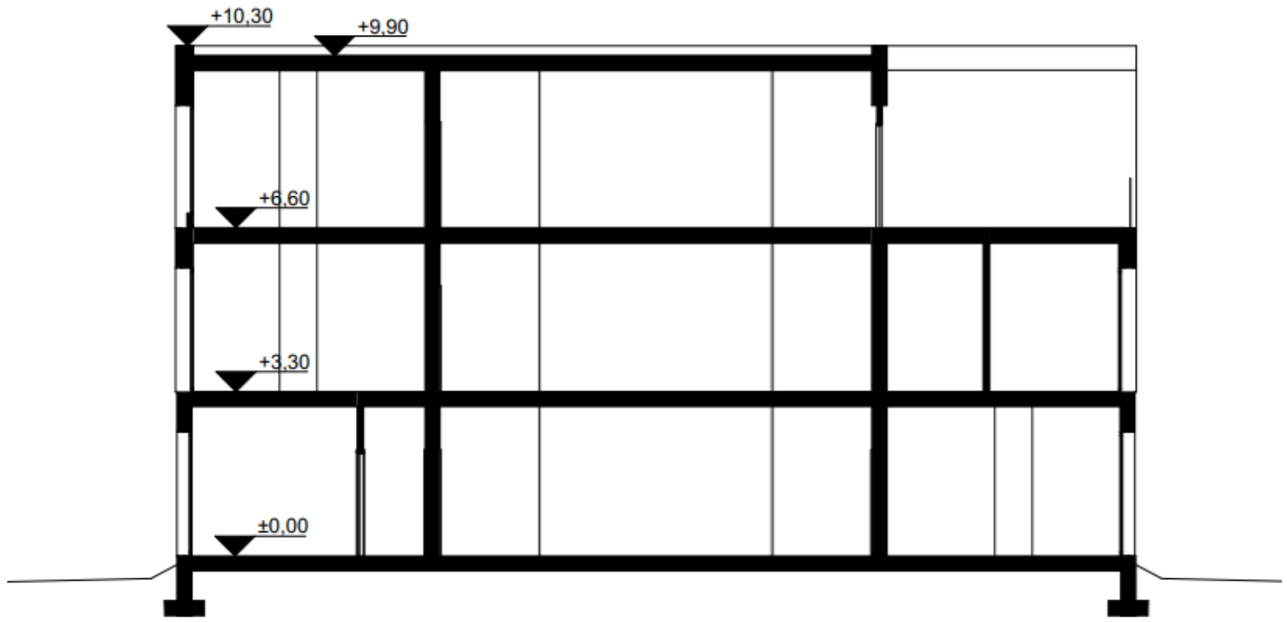
1. Floor

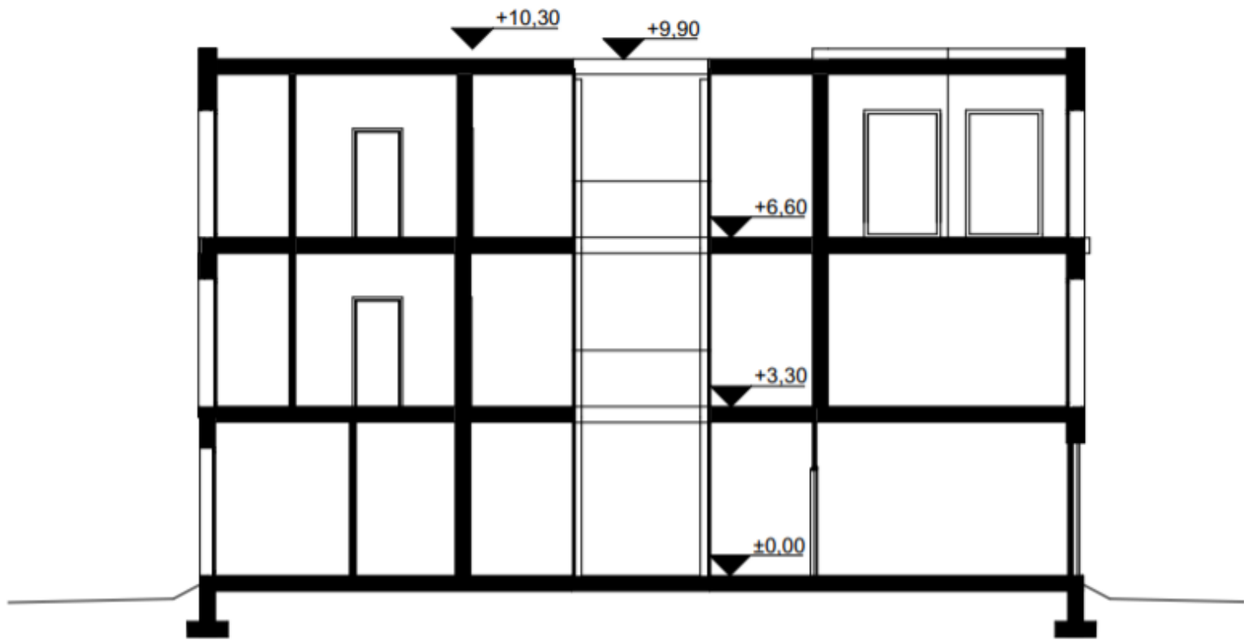

A
B
C
D
E
F
500
300
1 100
1
2
3
4
500
700
500
700
500
II
A: 50 m²
III
A: 31 m²
II
A: 50 m²
IV
A: 40 m²
300
1 100
500

2. Floor


A
B
C
D
E
F
1
2
3
4
500
300
1 100
700
500
COMMUNICATION
A: 31,2 m²
II
A: 50 m²
II
A: 31 m²
II
A: 50 m²
300
1 100
500

Section





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Thermal transmittance

Outer shells thermal transmittance is very low, there isn't any thermal bridges and thermal performance values are clearly under regulations.

Thermal requirements in Austria:

- Wall 0.35W/m2K
- Roof 0.20 W/m2K
- Floor 0.40 W/m2K

Our Building:

Wall 0.20 W/m2K

Roof 0.14 W/m2K

Floor 0,12 Wm2K (200mm styrofoam+80mm concreate)

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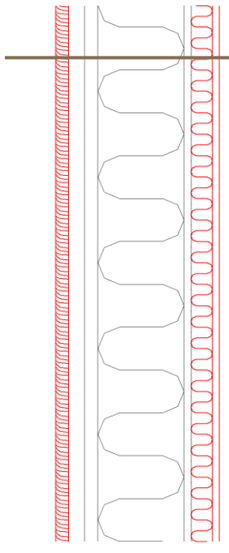
Level of prefabrication

External walls from vapor barrier in and facade is assembled on construction site.

Red layers are assemblet in construction site



12.5mm	gypsum plaster board
40mm	mineralwool + timber
160mm	mineralwool + construction timber
20mm	gypsum fibre board
30mm	ventilation
24mm	wall cladding

Facade Section

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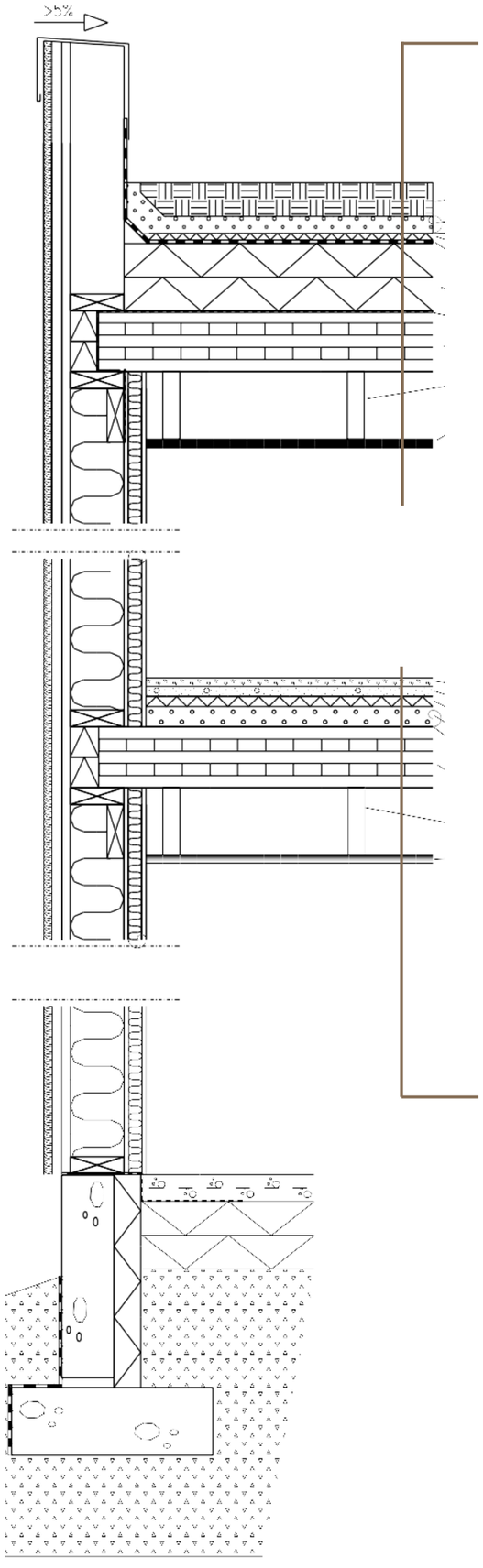
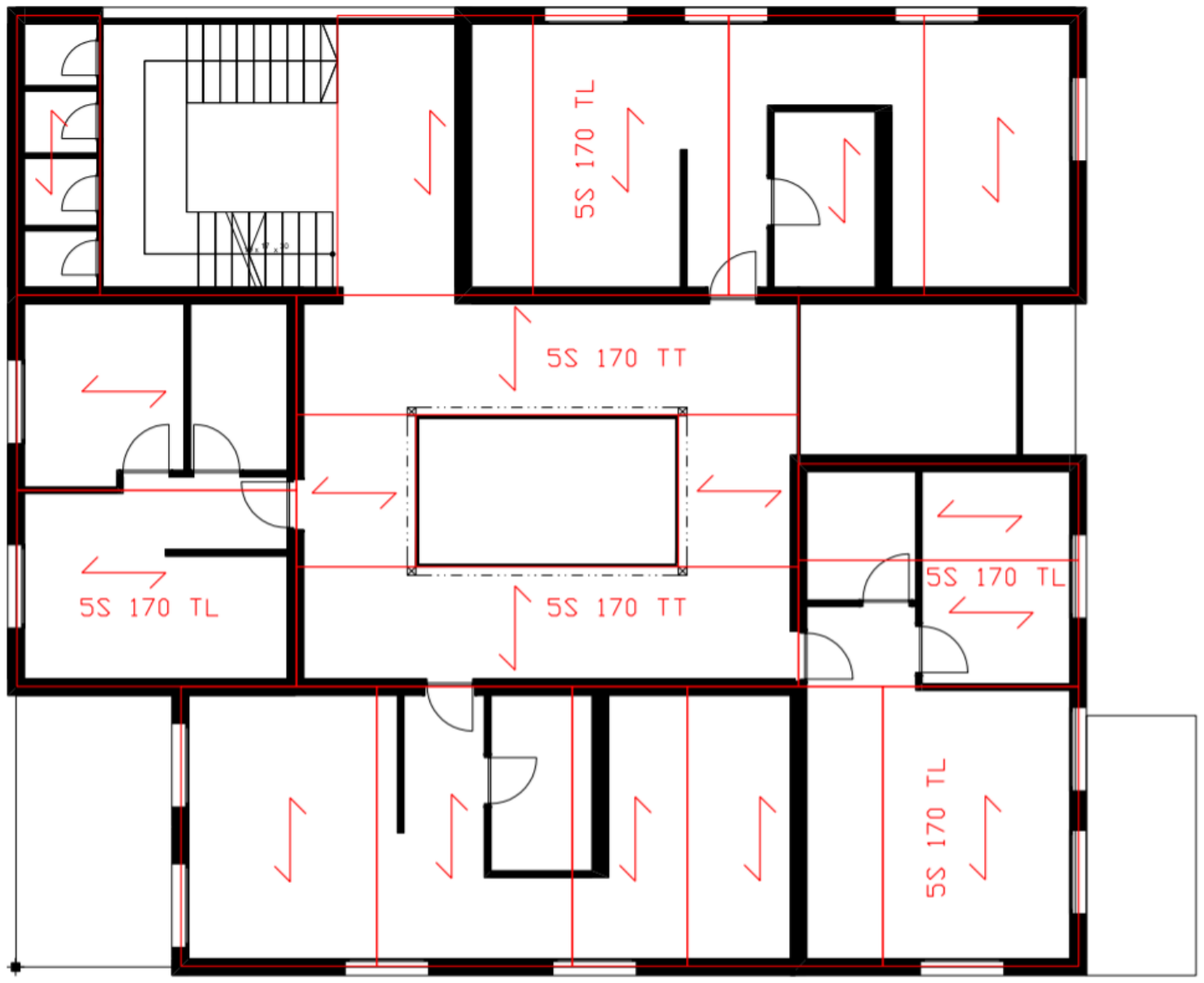
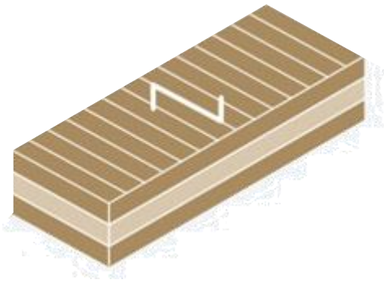


soil
6-16mm gravel
fabric
20mm EPS
30mm 3-layer bitumen (water/roots proofing)
20mm EPS
vapor barrier
220mm CLT
220mm hanger
18mm timber finish

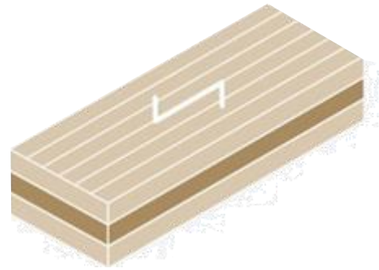
25mm dry screed
30mm quick therm natur
30mm impact sound absorbing subfloor
60mm elastic bonded fill
trickling protection
180mm CLT
220mm hanger
18mm timber finish

loads





5s TT



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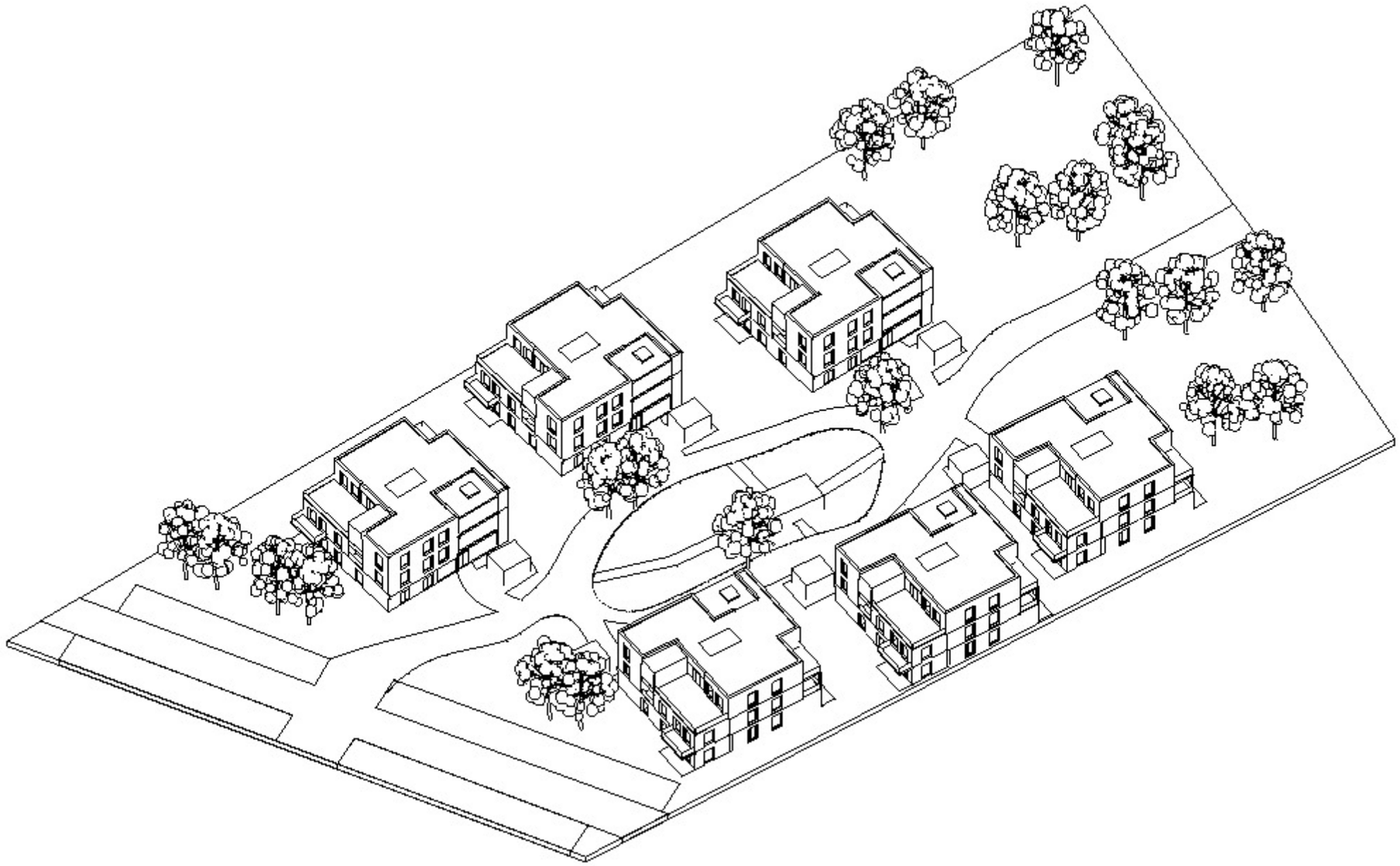
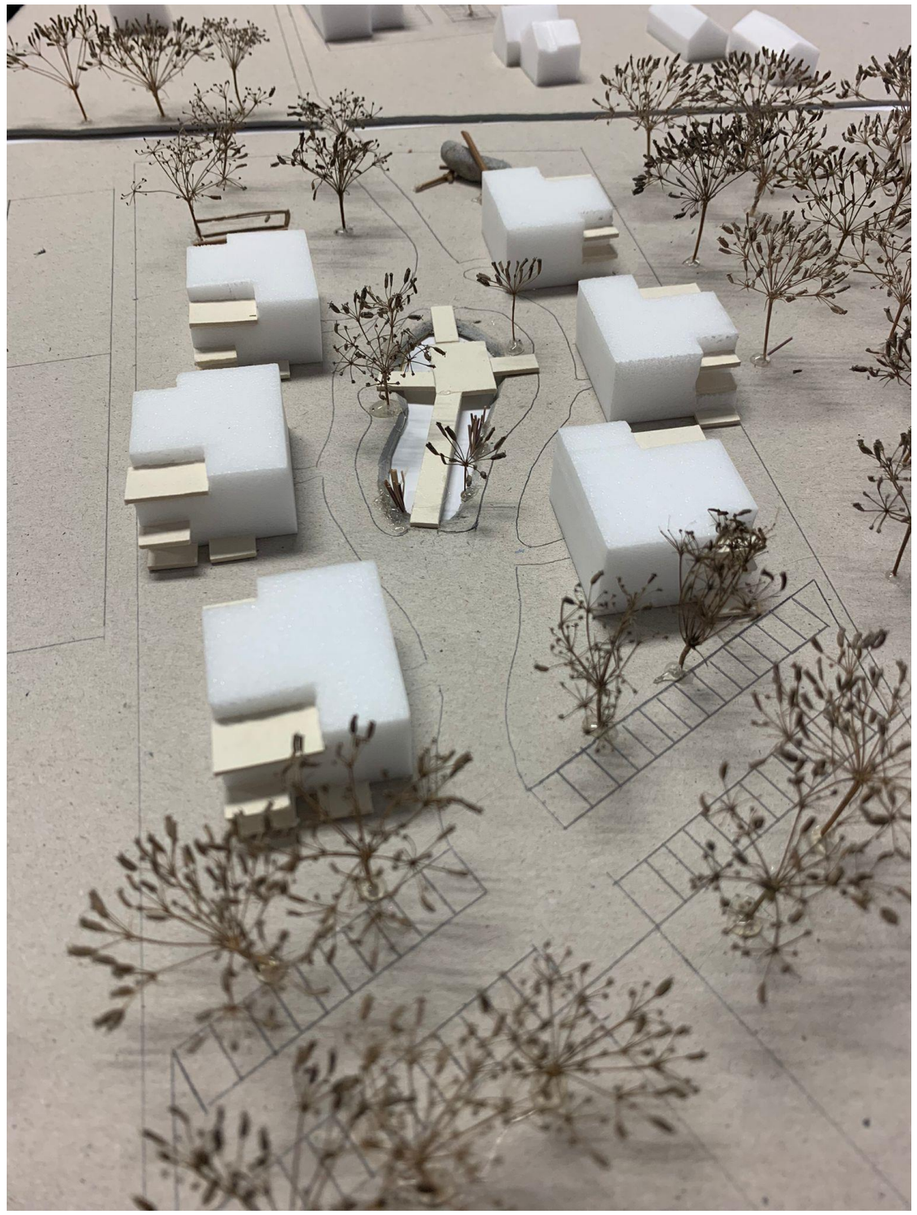
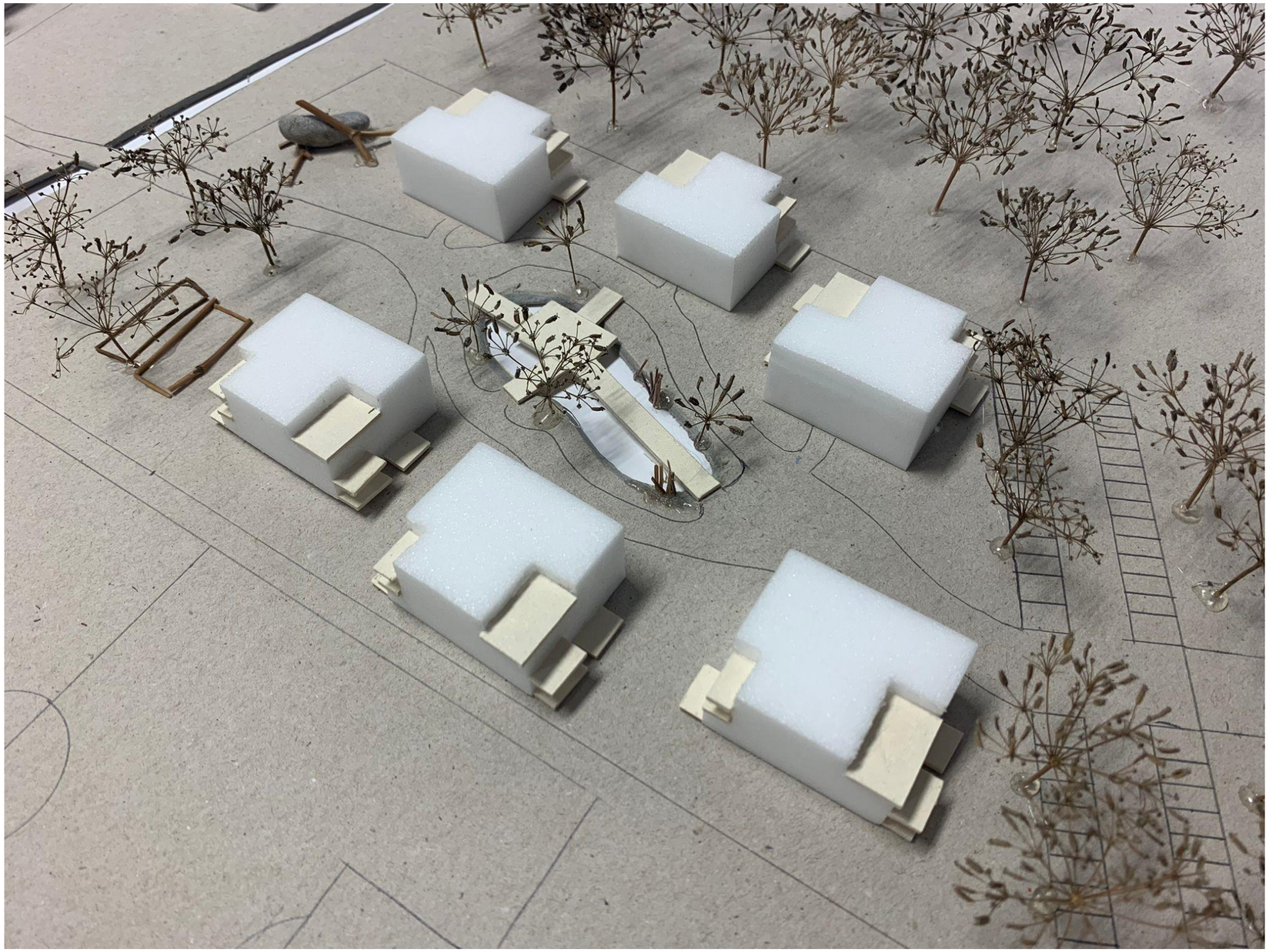


Outro



Bird view

Outro



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Outro

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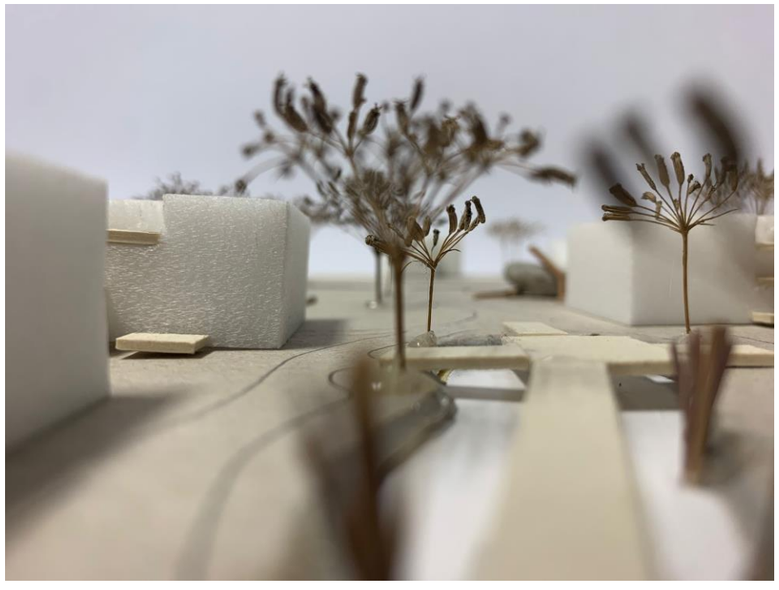

Outro

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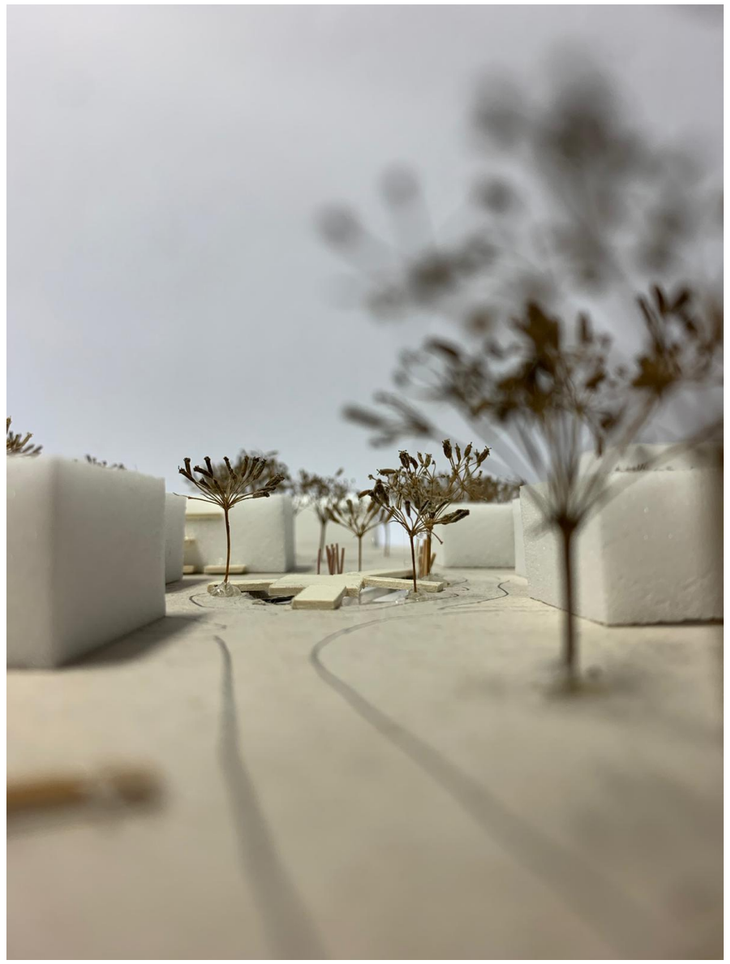

We really enjoyed working on the project

thank you,

- team 4