



SCULPTING SENSATIONS

*Crafting Emotional Narratives through Sensory Synergy
in Architectural Spaces*

Graduation Presentation

Kim van den Bosch

21 June 2024

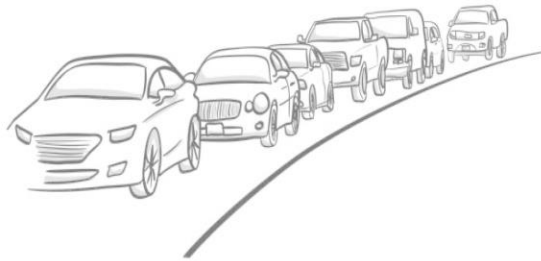




Fig. 1 multi-sensory collage(own work)

Is aesthetic value purely confined to the visual sense or does it engage the other human senses as well?

Project Question

How can architecture enrich the overall user experience by actively engaging each of the human senses?

Key Terms

Sensory Synergy

User Perception

Emotional Experience

research

design location

concept

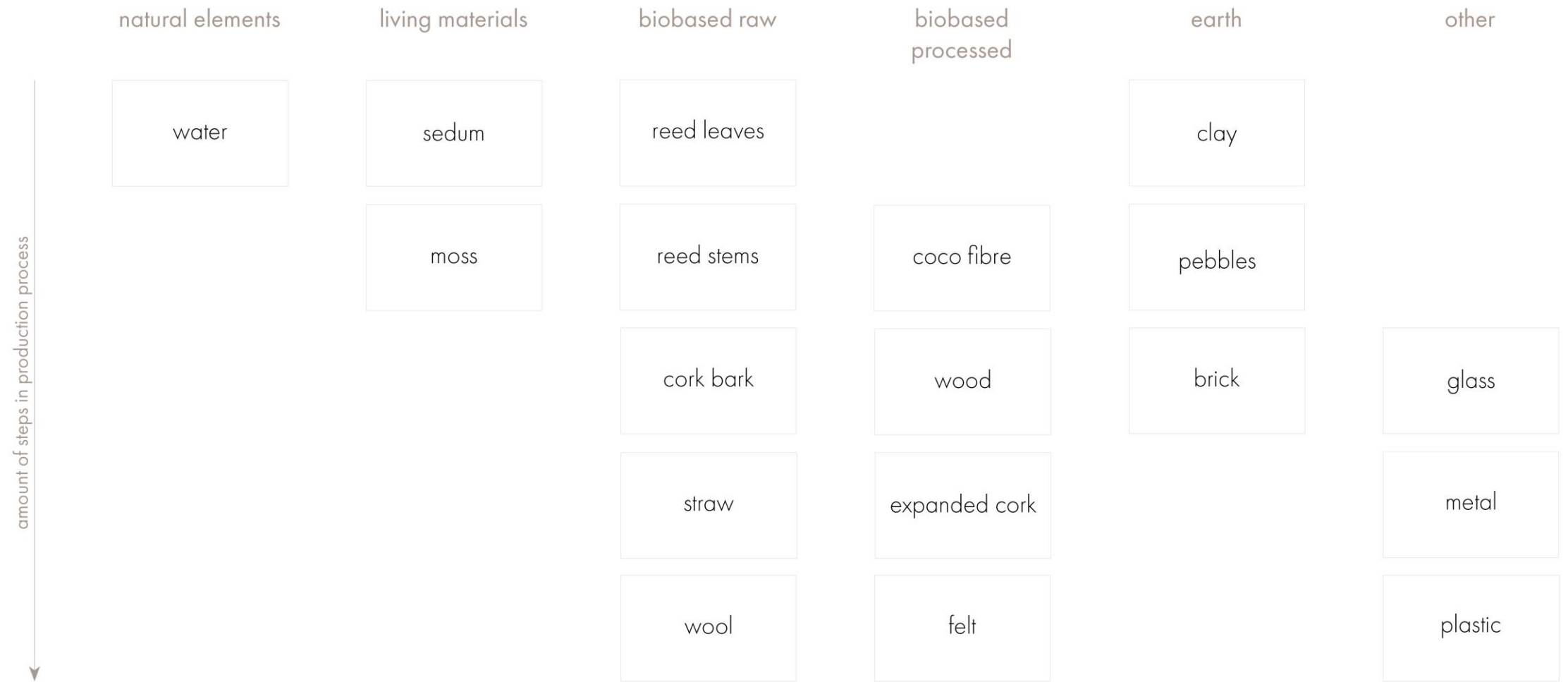


the design

Research Question

How can materials contribute to a multi-sensory experience?

Selecting the Materials











Tactile Experiment

Express anything that comes to mind while feeling the material.

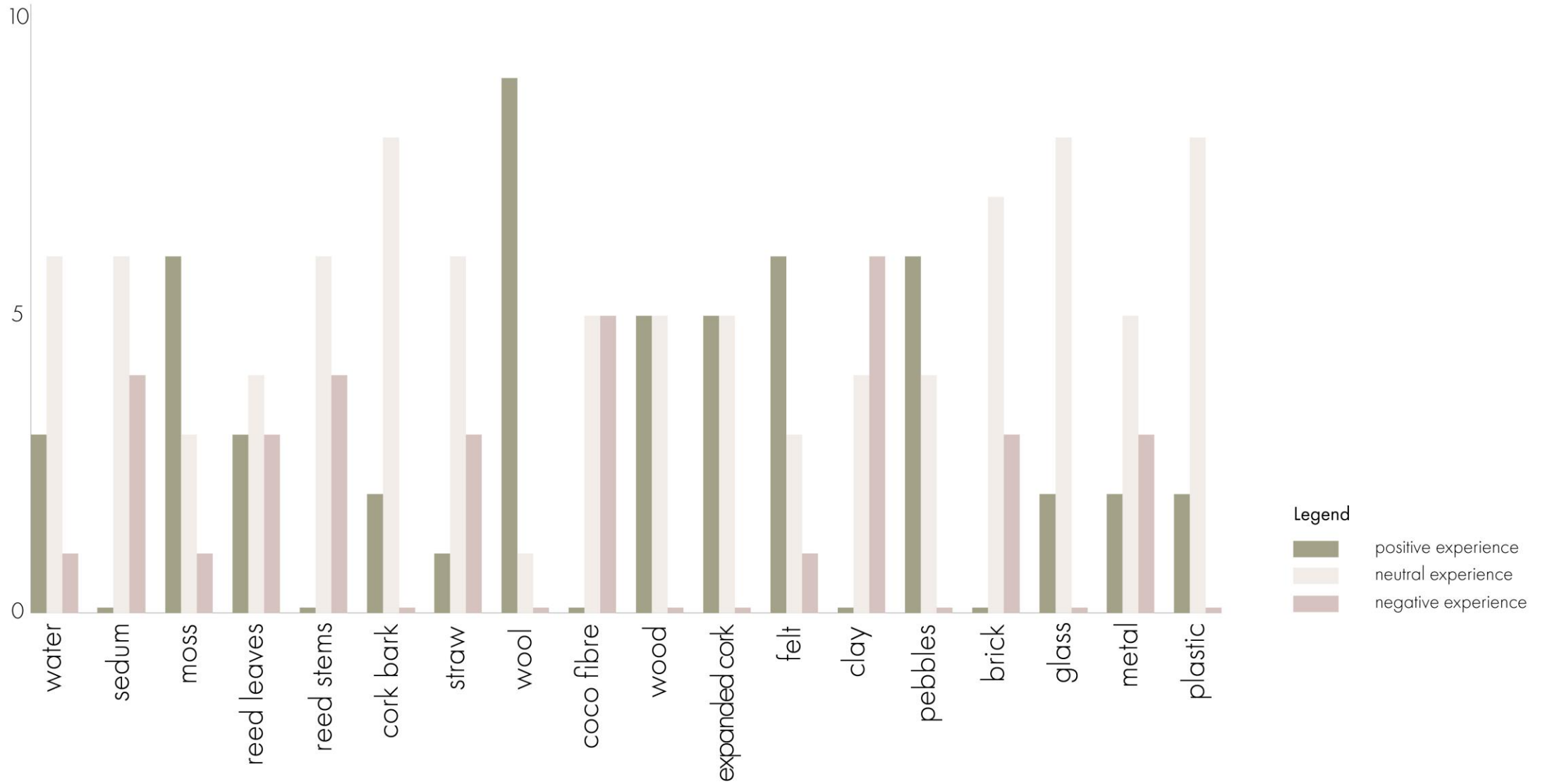


Fig. 2 graph showing all ranked tactile experiences (own work)

WOOL

'warm worden'

'wollig'

'vulling van een knuffel'

'lekker, fijn, zacht'

'kussenvulling'

'deurmat'

'contrast voor- & achterkant'

COCO FIBRE

'sensatie'

'vloerbedekking van vroeger'

'scheuren & kneden'

'creativiteit'

CLAY

'gum van vroeger'

'wijnfles openen'

'dofheid'

CORK

'prettig, luchtig'

'traumasensitief'

'warmte, rust, zacht, veert'

'strandstoel'

'zen tuintje'

'grint in vissenkomp'

'niet zo fijn in je schoenen'

PEBBLES

'spelen'

'het gewicht voelt wel fijn'

'egaal maken'

'veiligheid'

FELT

'zacht'

'matje voor prikken
op basisschool'

'kantoorvloer'

'niet vrolijk, saai'

'stevig maar flexibel'

'steriel'

'industrieel'

METAL

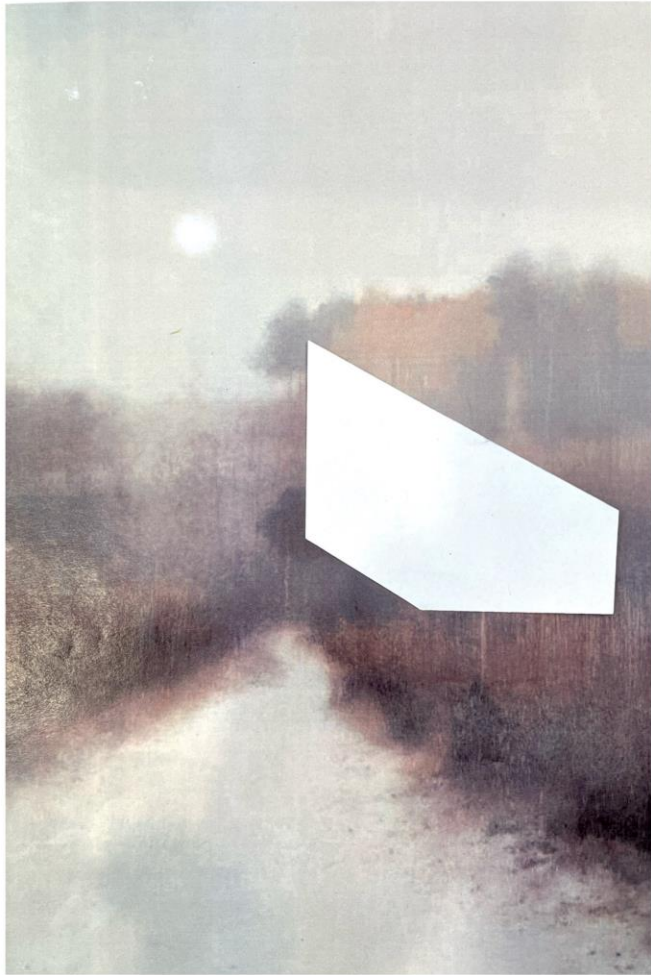
'stuk bowlingbaan'

'dempend'

PLASTIC

'gymzaalvloer maar harder'

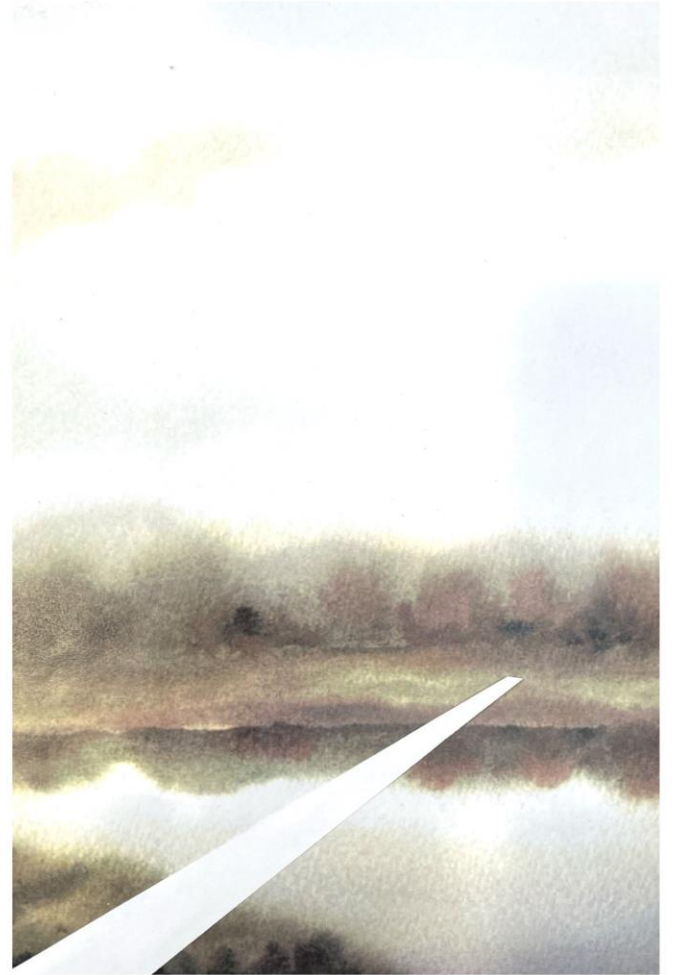
Architecture, Memory & Emotion



desire



tranquility



endlessness

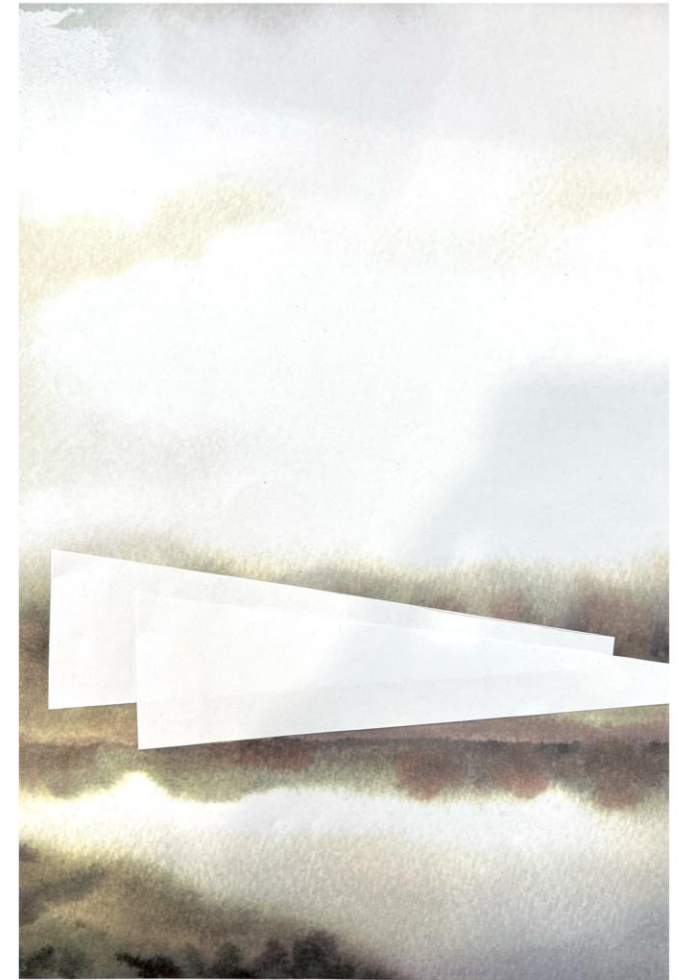
Fg. 3 collages (own work)



shelter



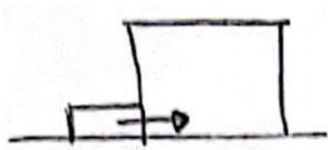
adventure



guidance

Fg. 4 collages (own work)

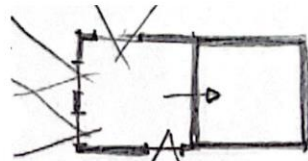
Guidelines for Intensifying Sensations



small | big



light | dark



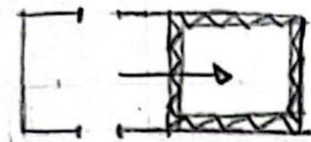
open | closed



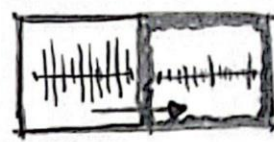
light | heavy



smooth | rough



cold | warm



loud | quiet



static | dynamic

Design Location

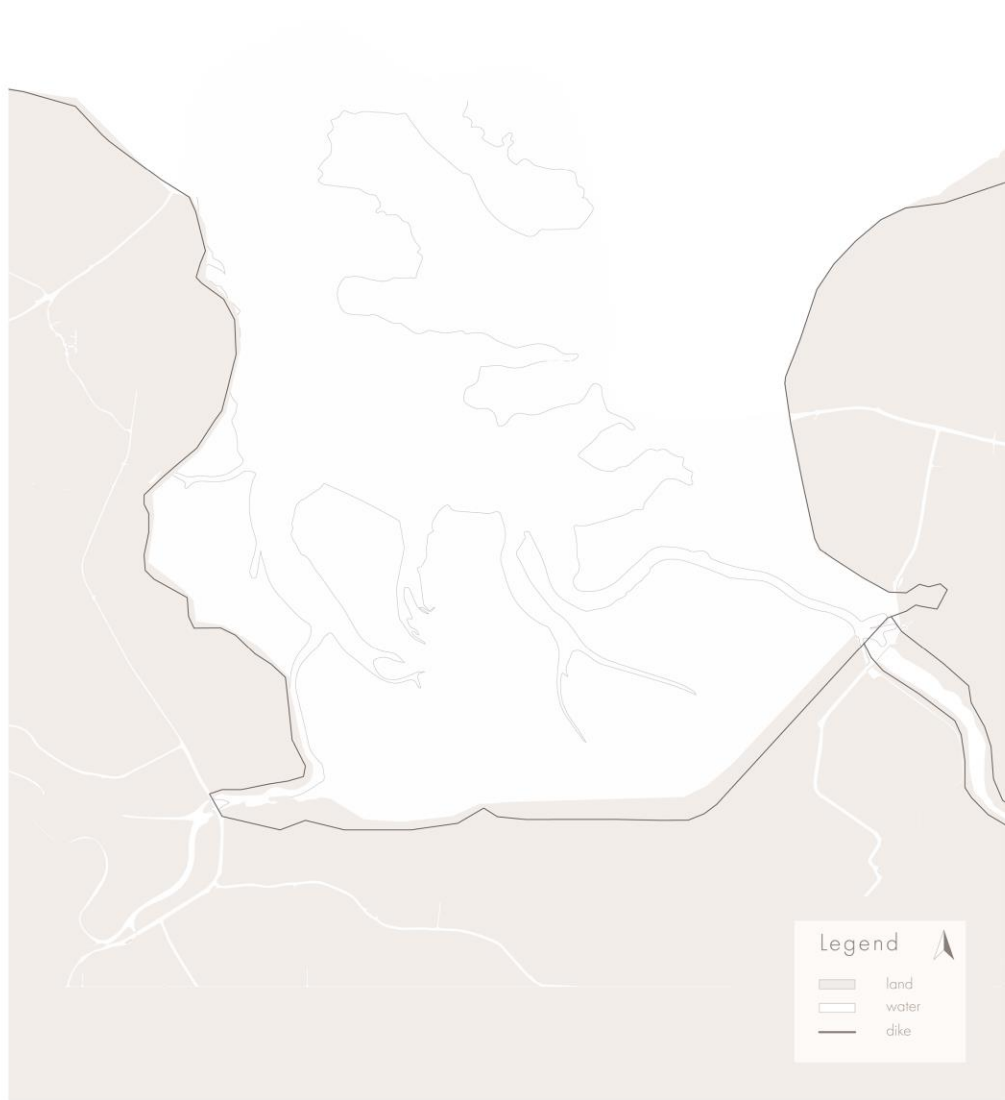


Fig. 5 map showing Lauwerssea (own work)



Fig. 6 map showing Lauwerslake (own work)

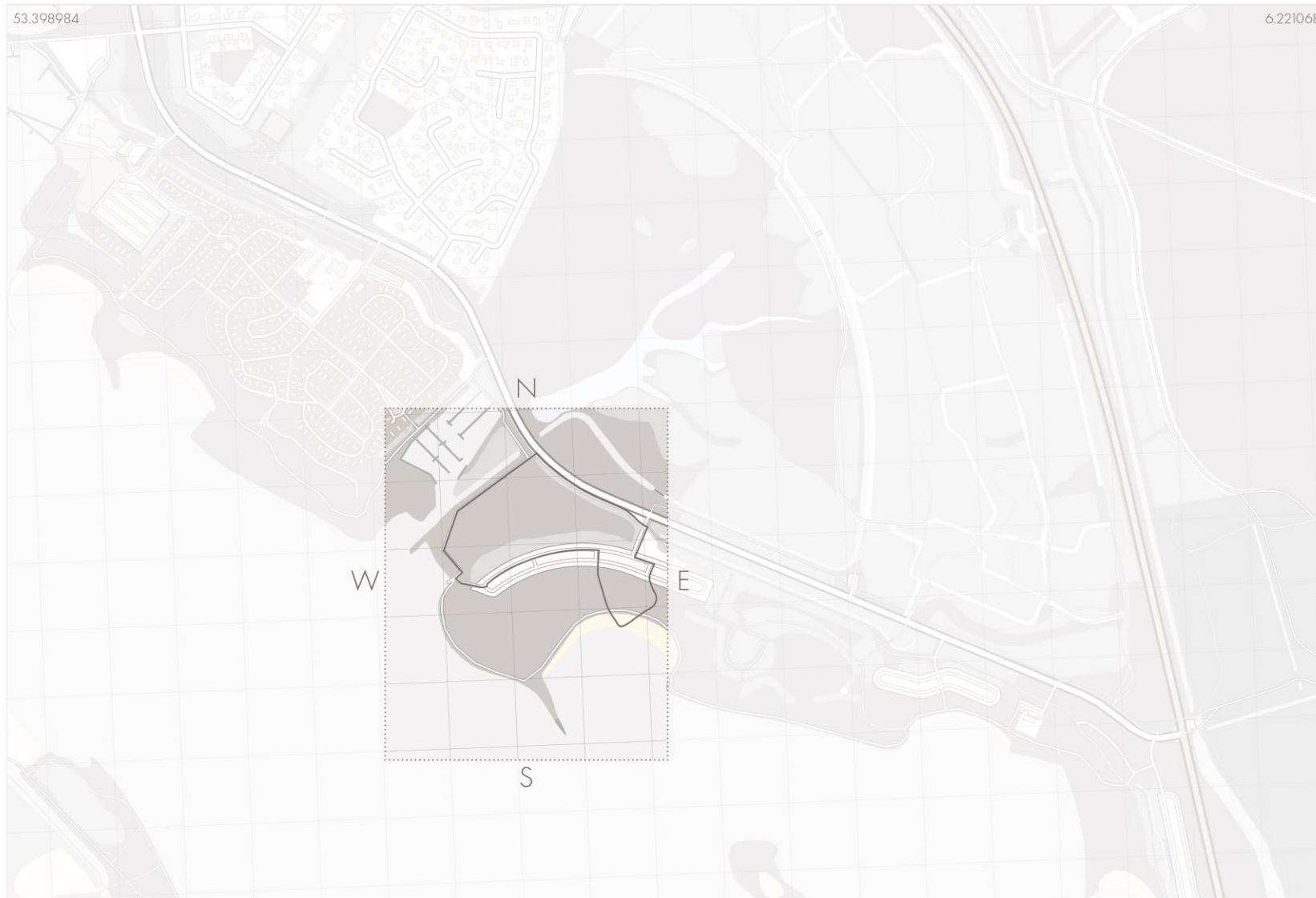
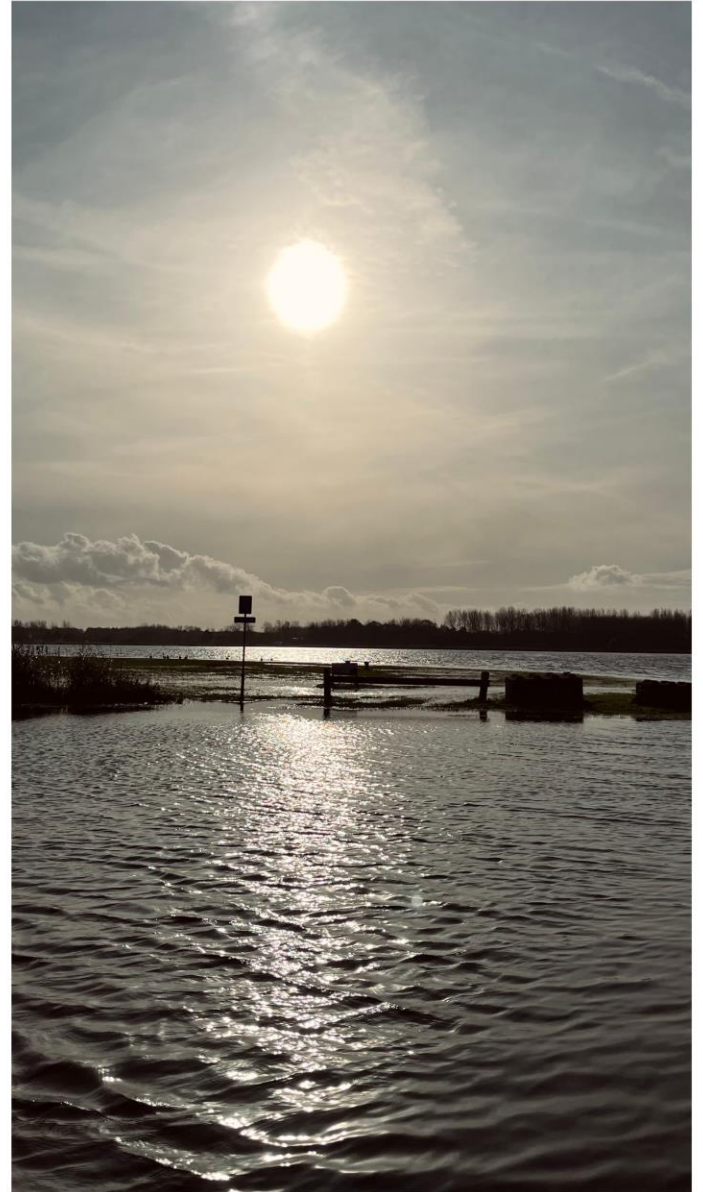
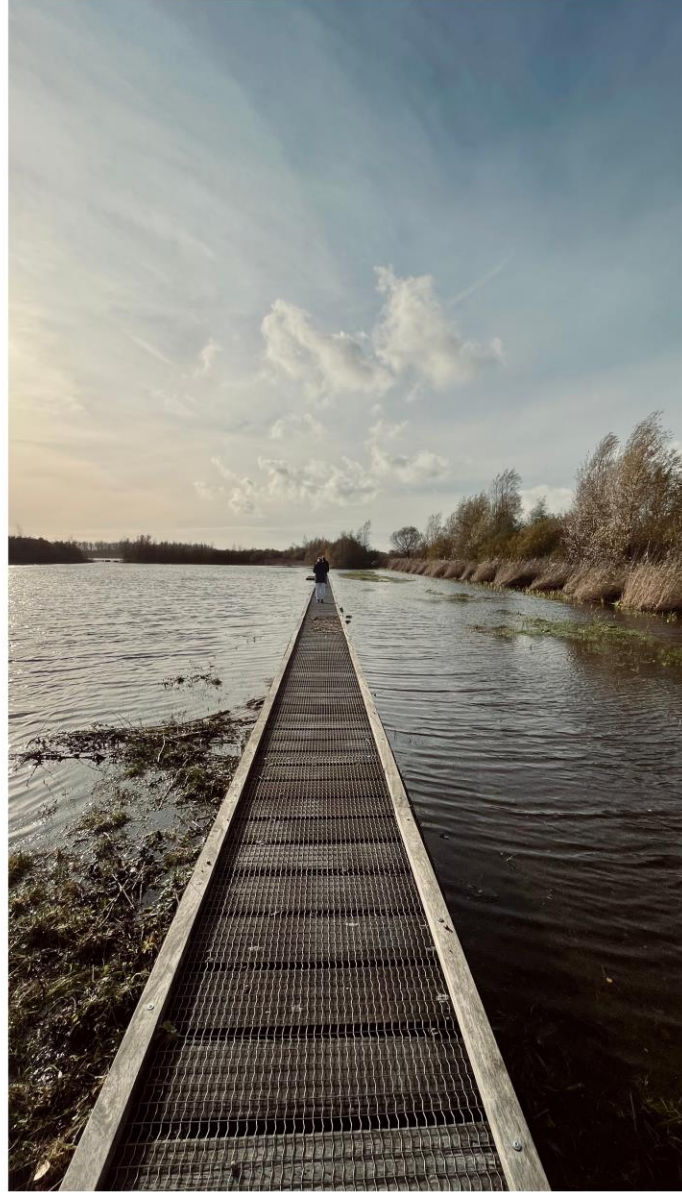
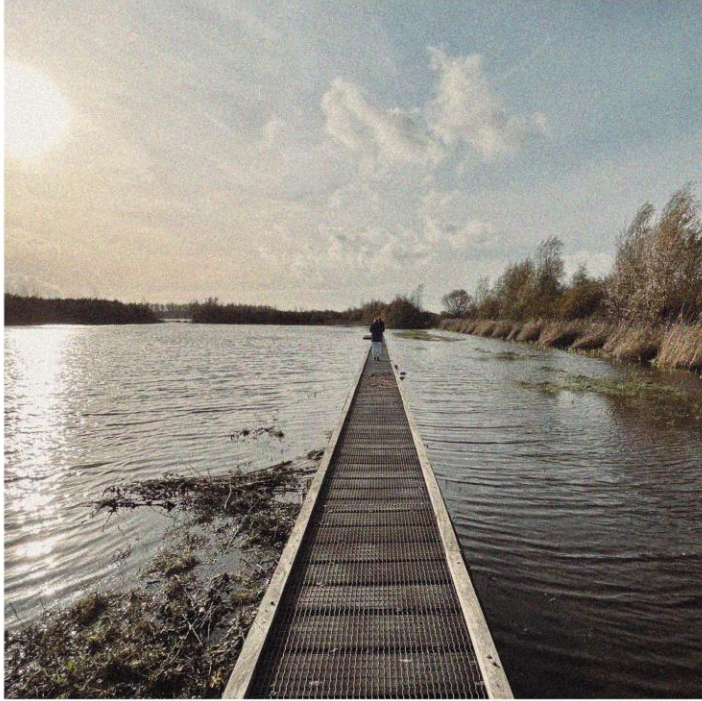


Fig. 7 site map 1:5000 (own work)

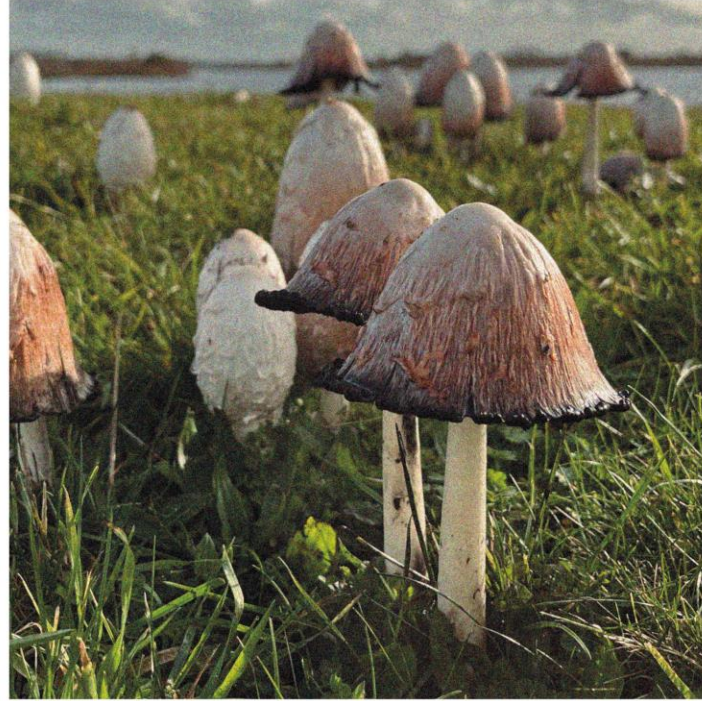


VISUALS

in the landscape of Groningen



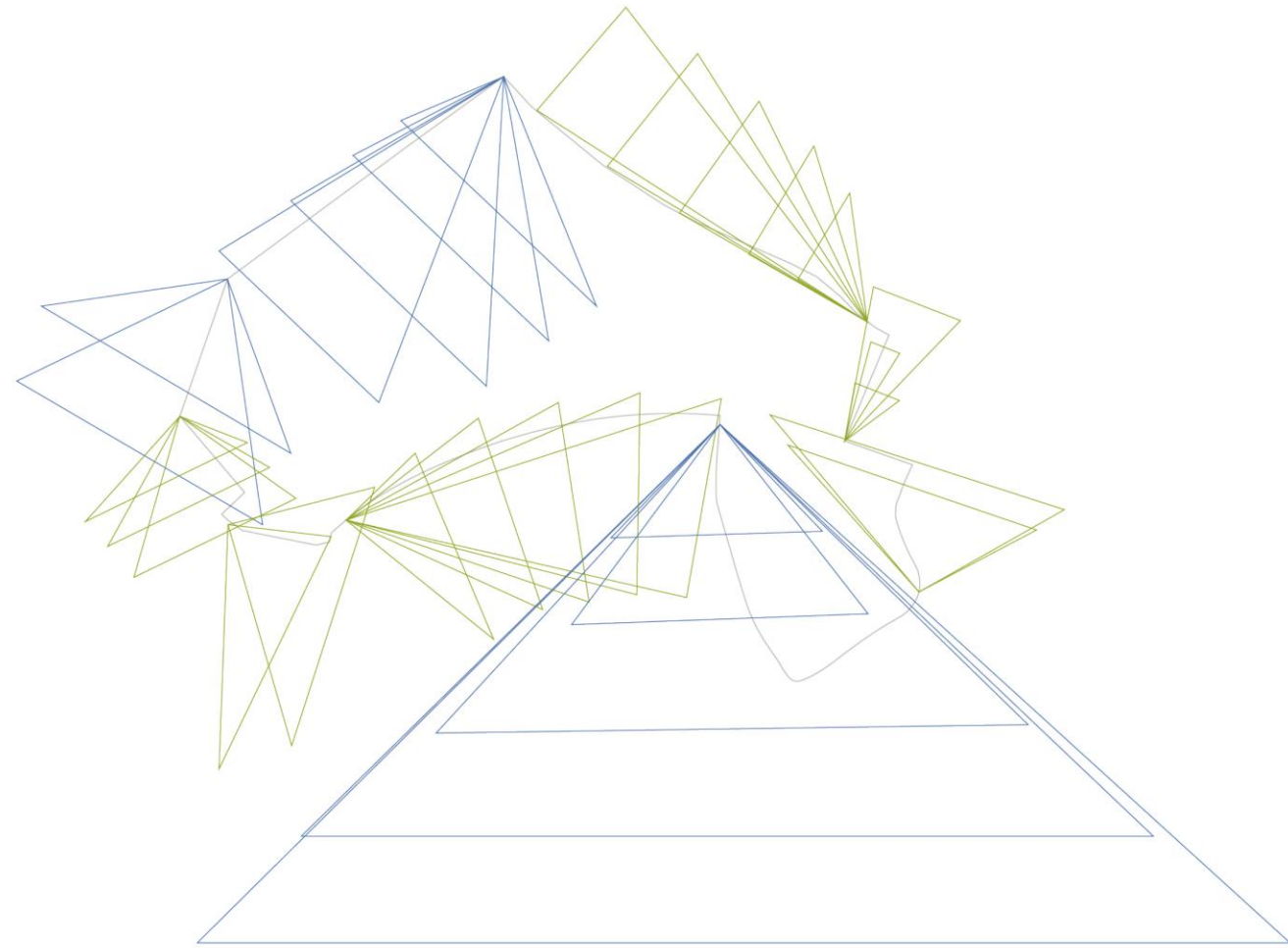
LINES



SHAPES



COLOURS



Legend



view on green
view on water
walking route



Fig. 8 sensory map of viewpoints on the design location (own work)

SOUNDS

in the landscape of Groningen



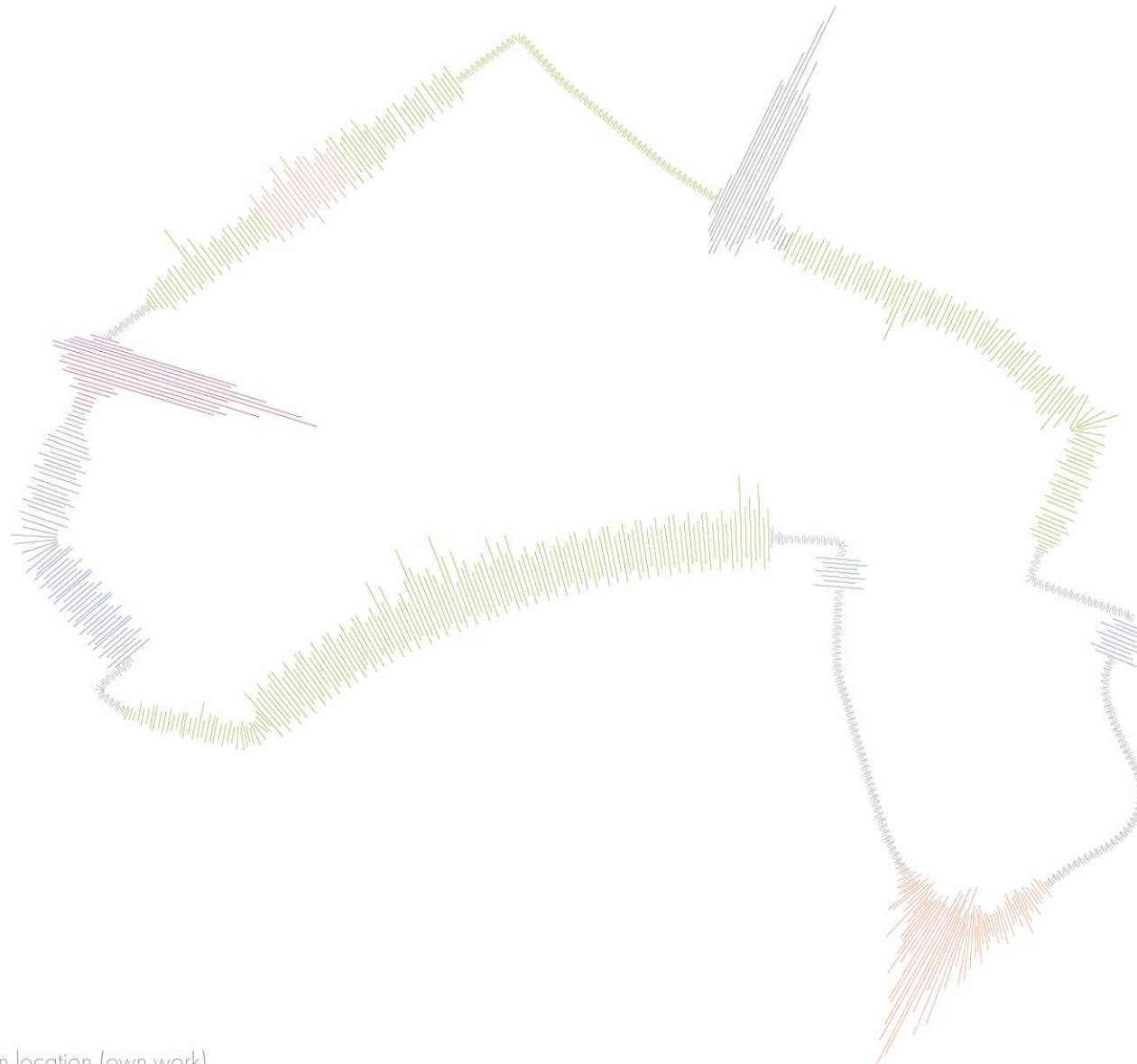
REED



BIRDS



WATER



Legend

- leaves
- reed
- water
- birds
- cars



Fig. 9 sensory map of acoustics on the design location (own work)

Program & Target Group

Museum of Emotions

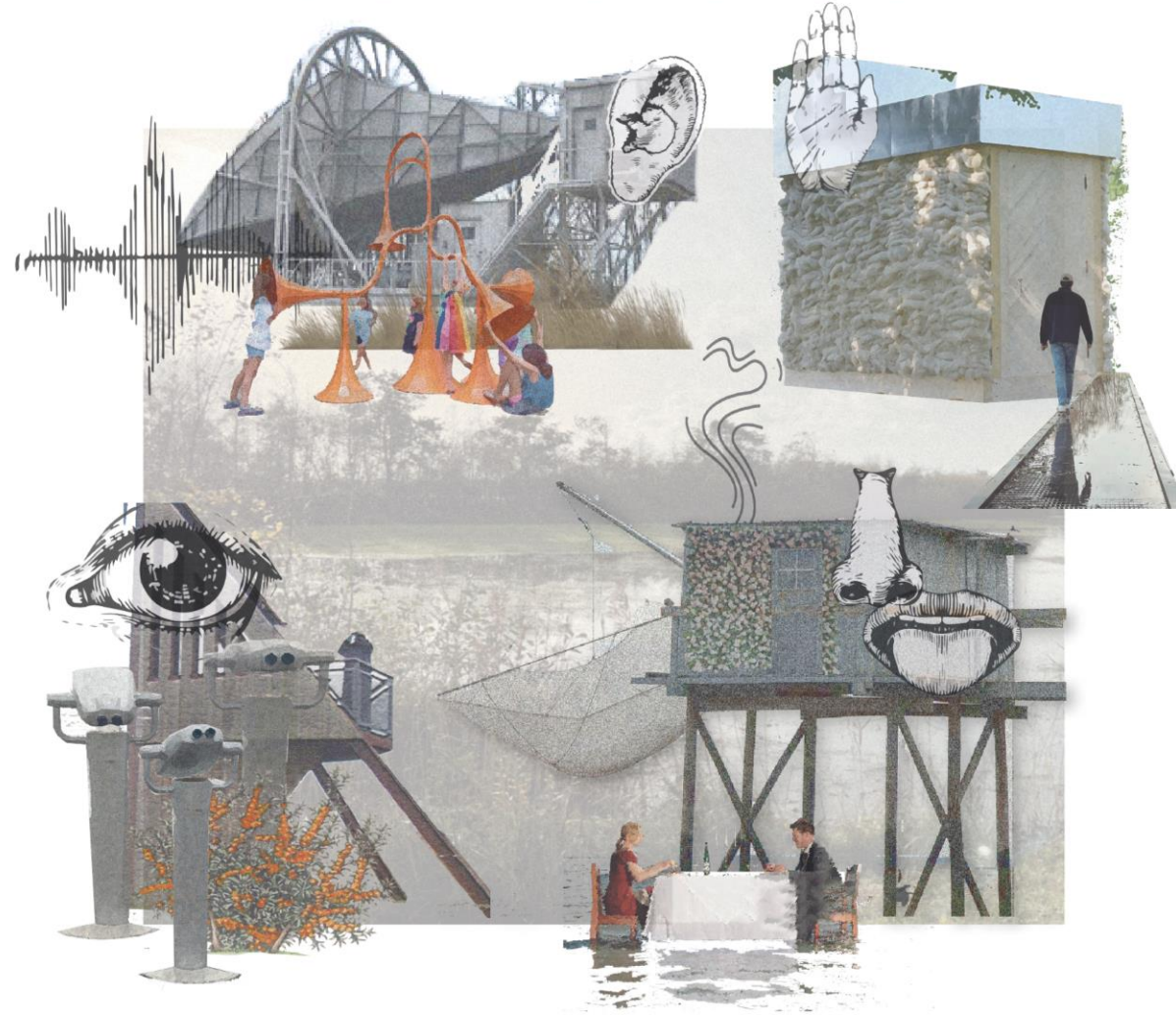


Fig. 10 collage representing artist-in-residence studios (own work)

Target Group

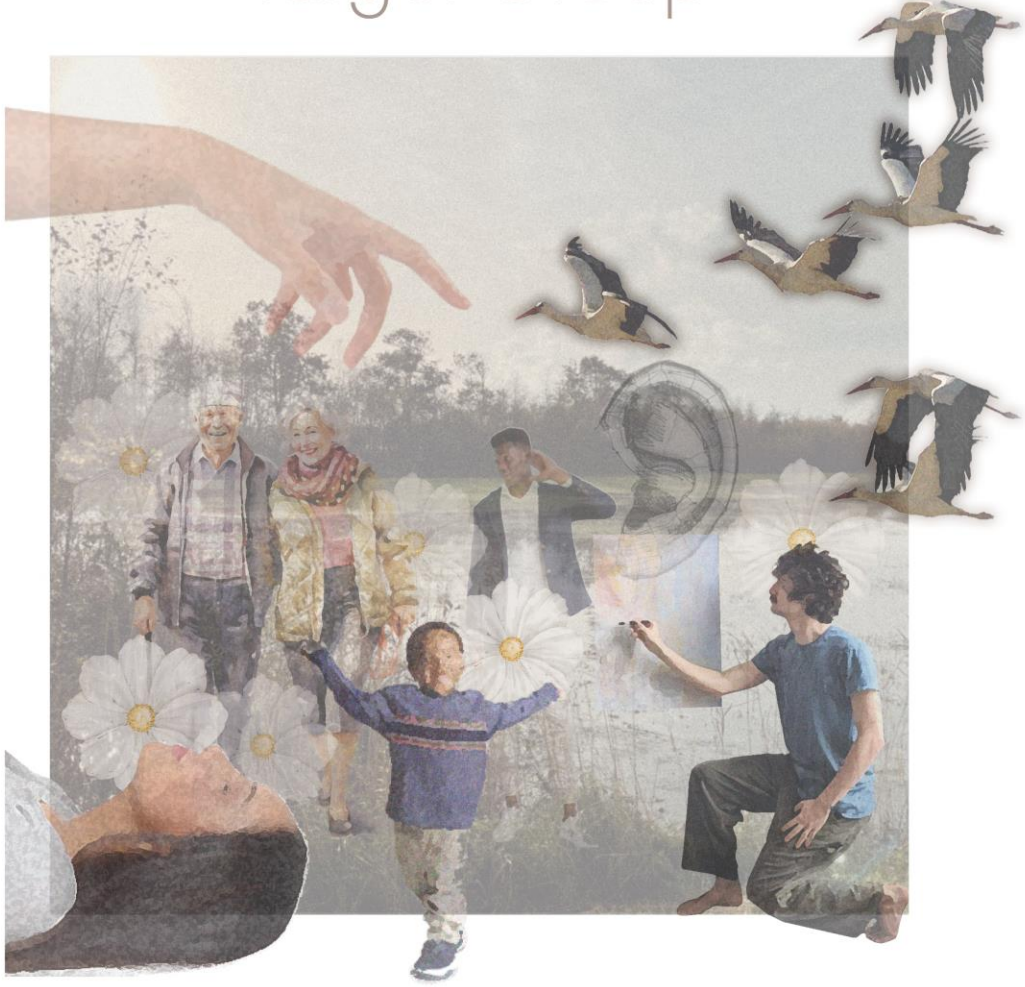
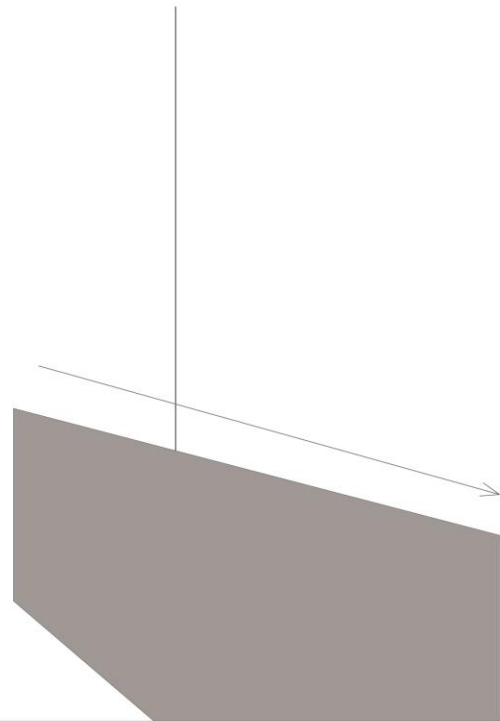


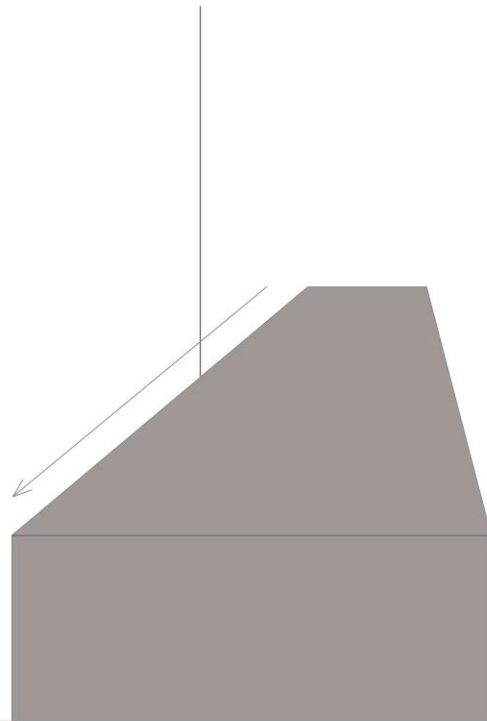
Fig. 11 collage representing target group (own work)

The Concept

embedded



embedded

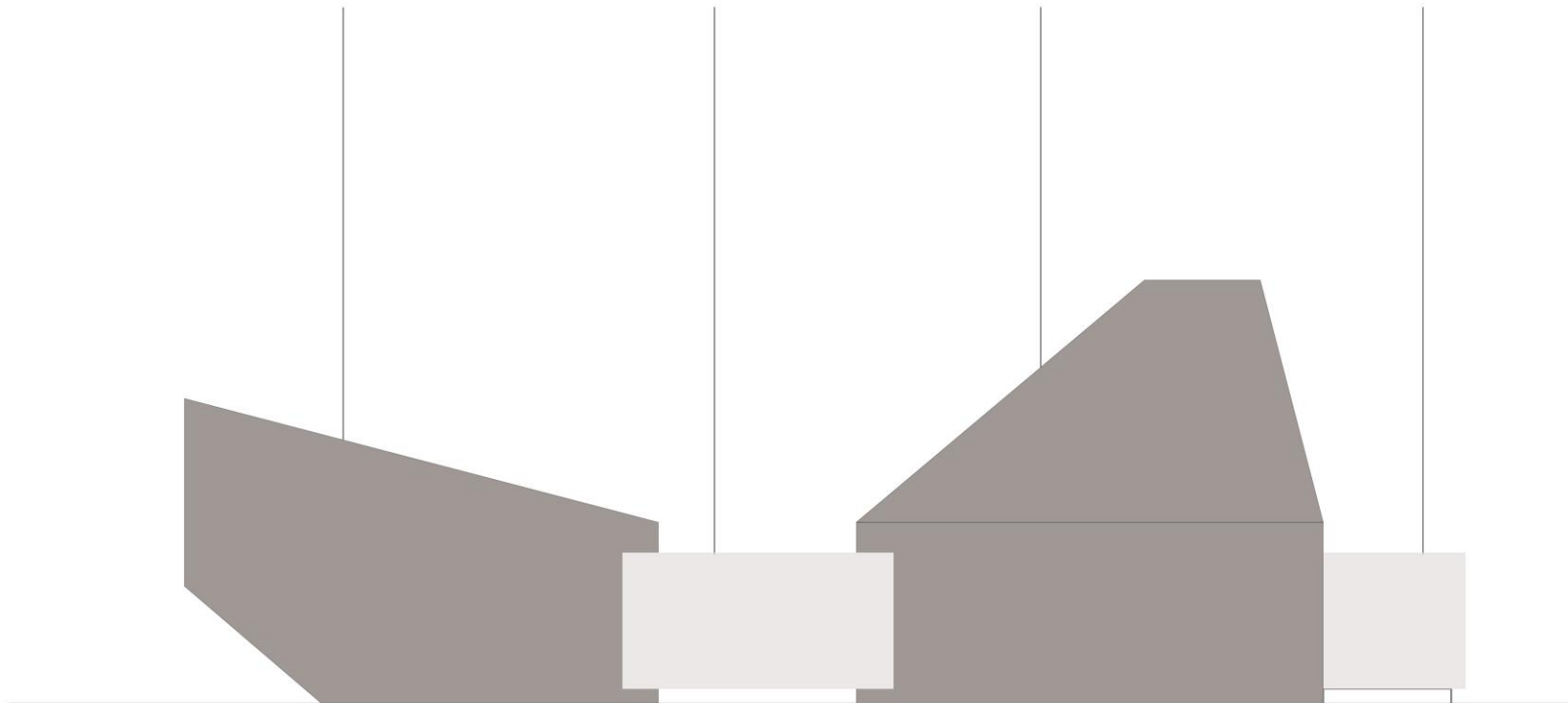


embedded

floating

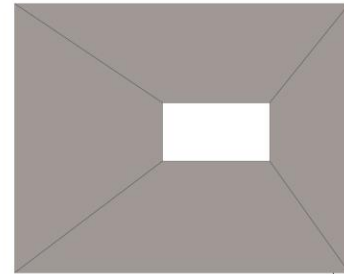
embedded

floating

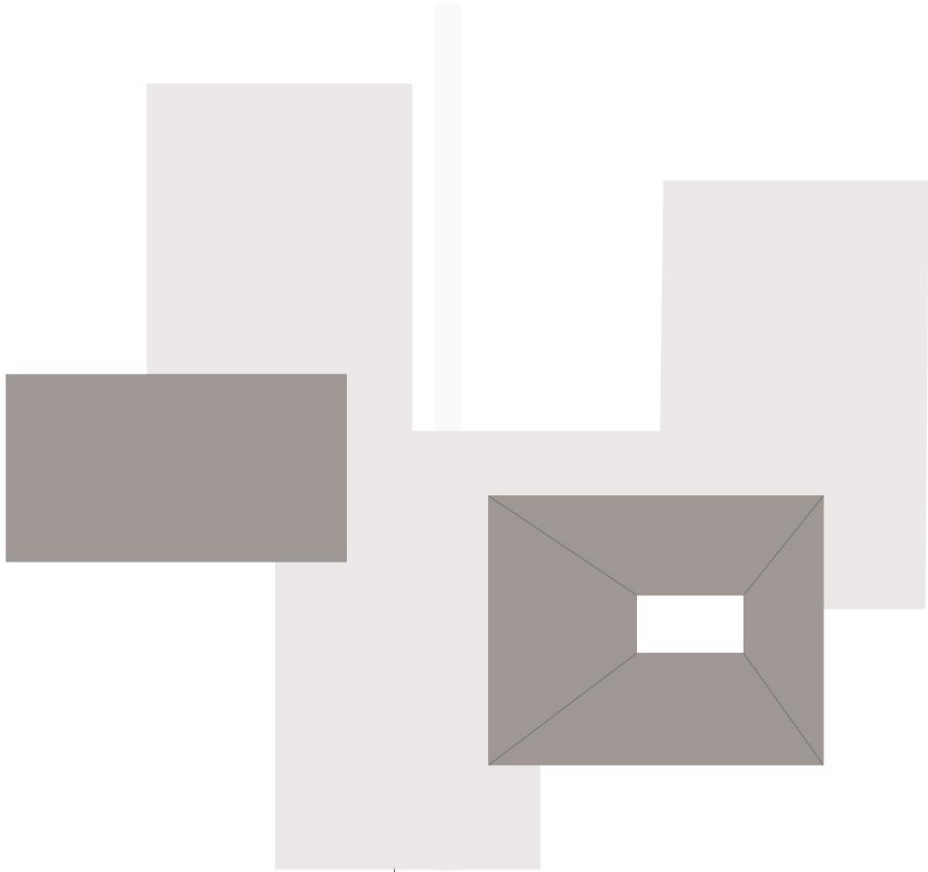




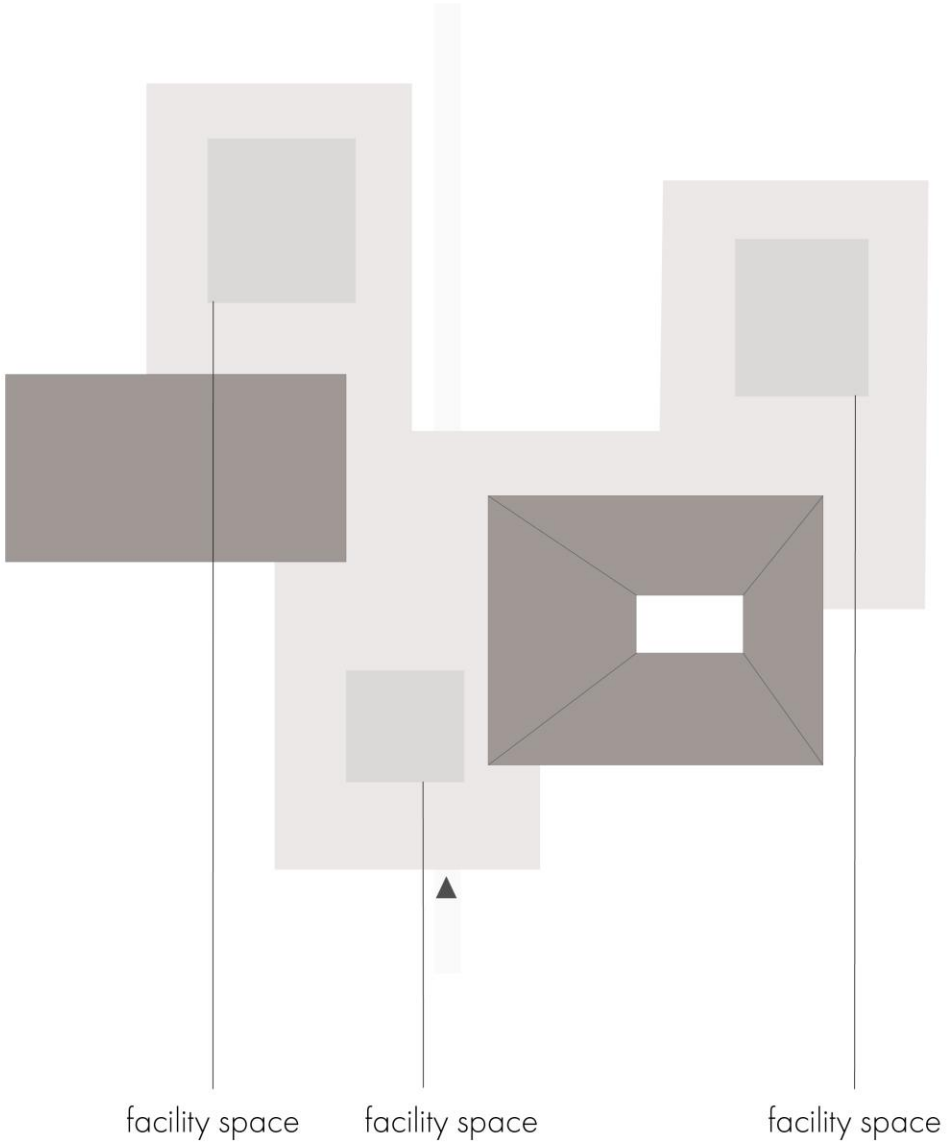
user space



user space



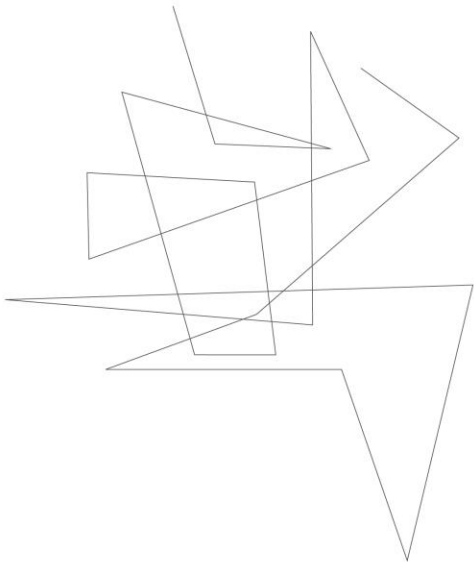
circulation space



Defining the Spaces

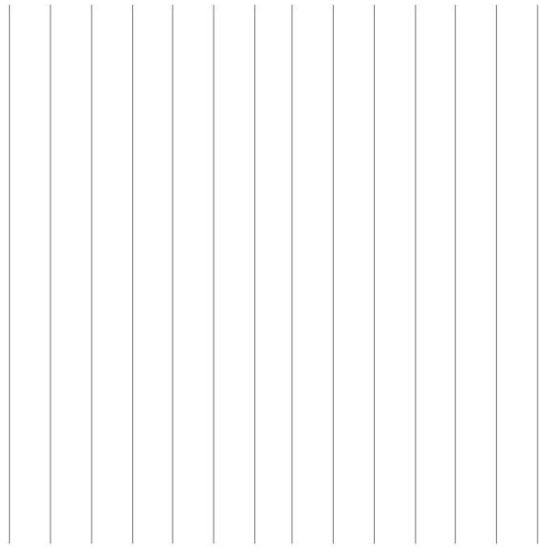
café

vibrancy buzz boisterous



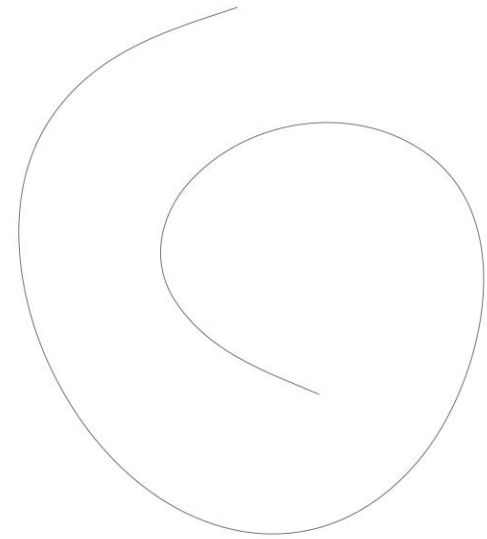
foyer

tranquility calm rhythm



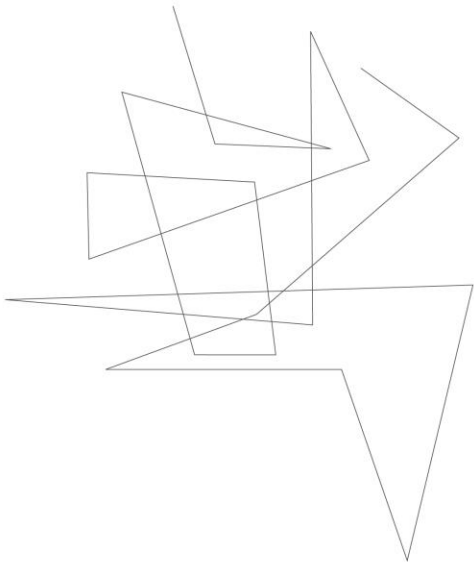
gallery

shelter silence soft



café

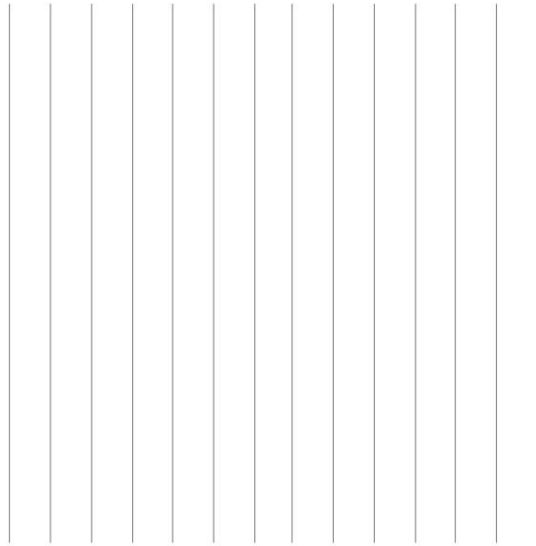
vibrancy buzz boisterous



travertine stone

foyer

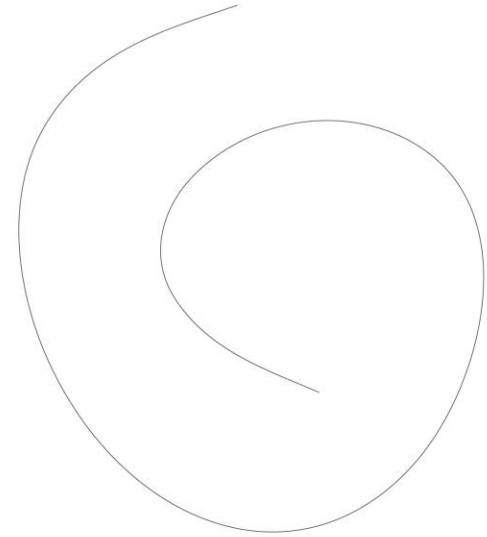
tranquility calm rhythm



oak wood

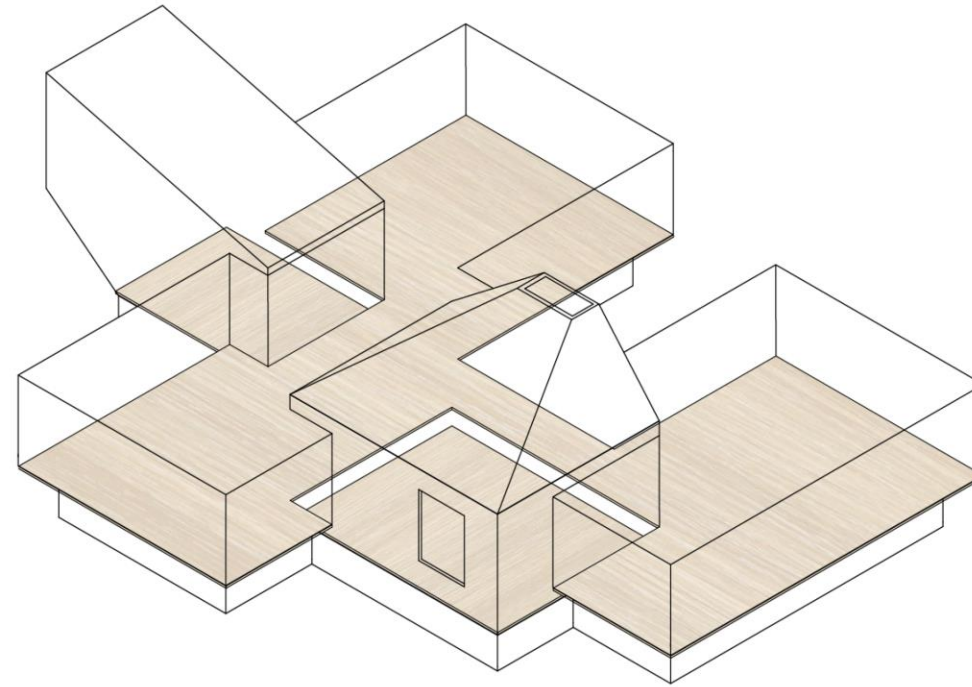
gallery

shelter silence soft



expanded cork

Flooring



Fg. 12 diagram showing flooring (own work)

The Design



Fg. 13 site map 1:2500 (own work)

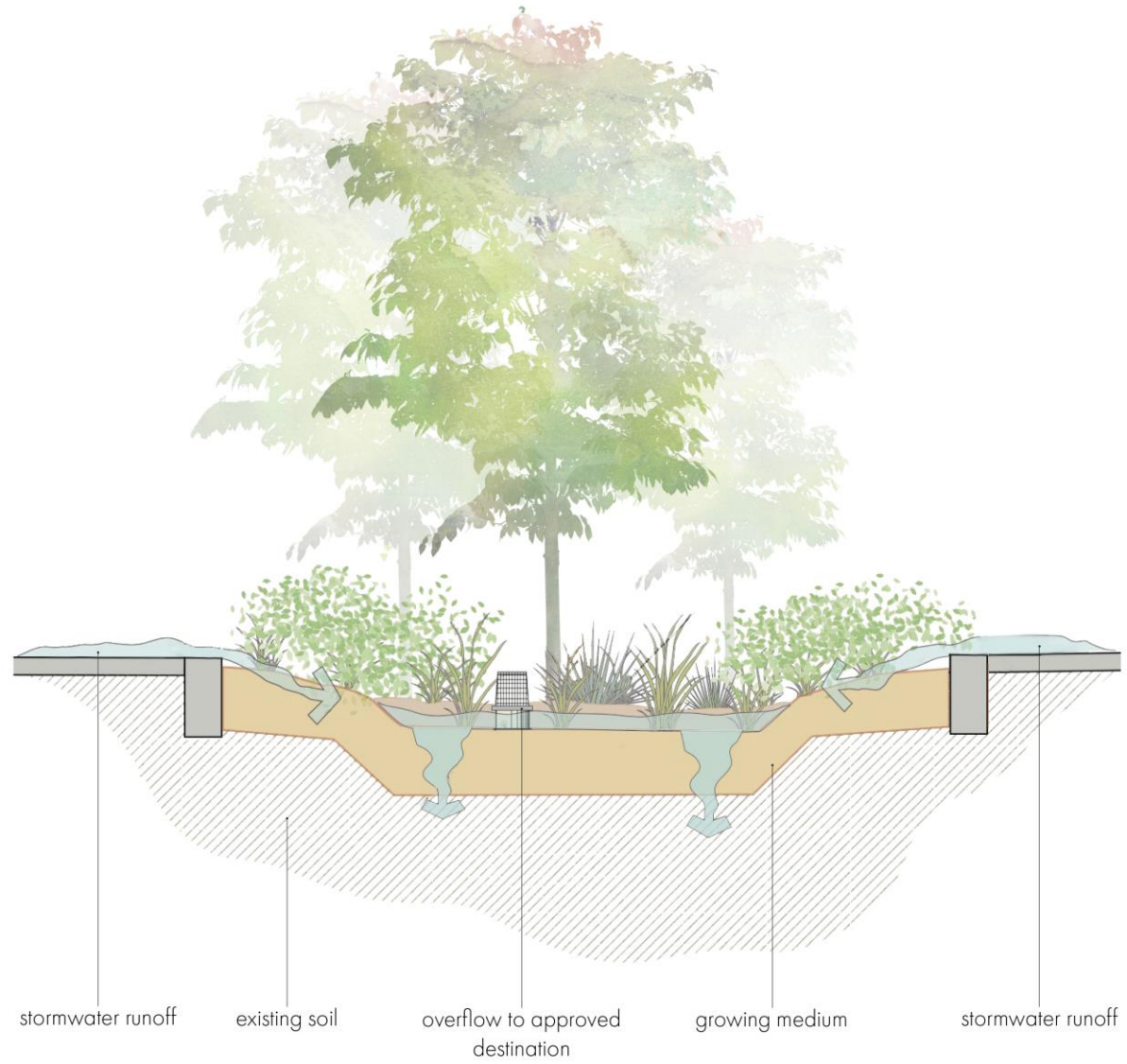


Fig. 14 schematic section of bioswale (own work)

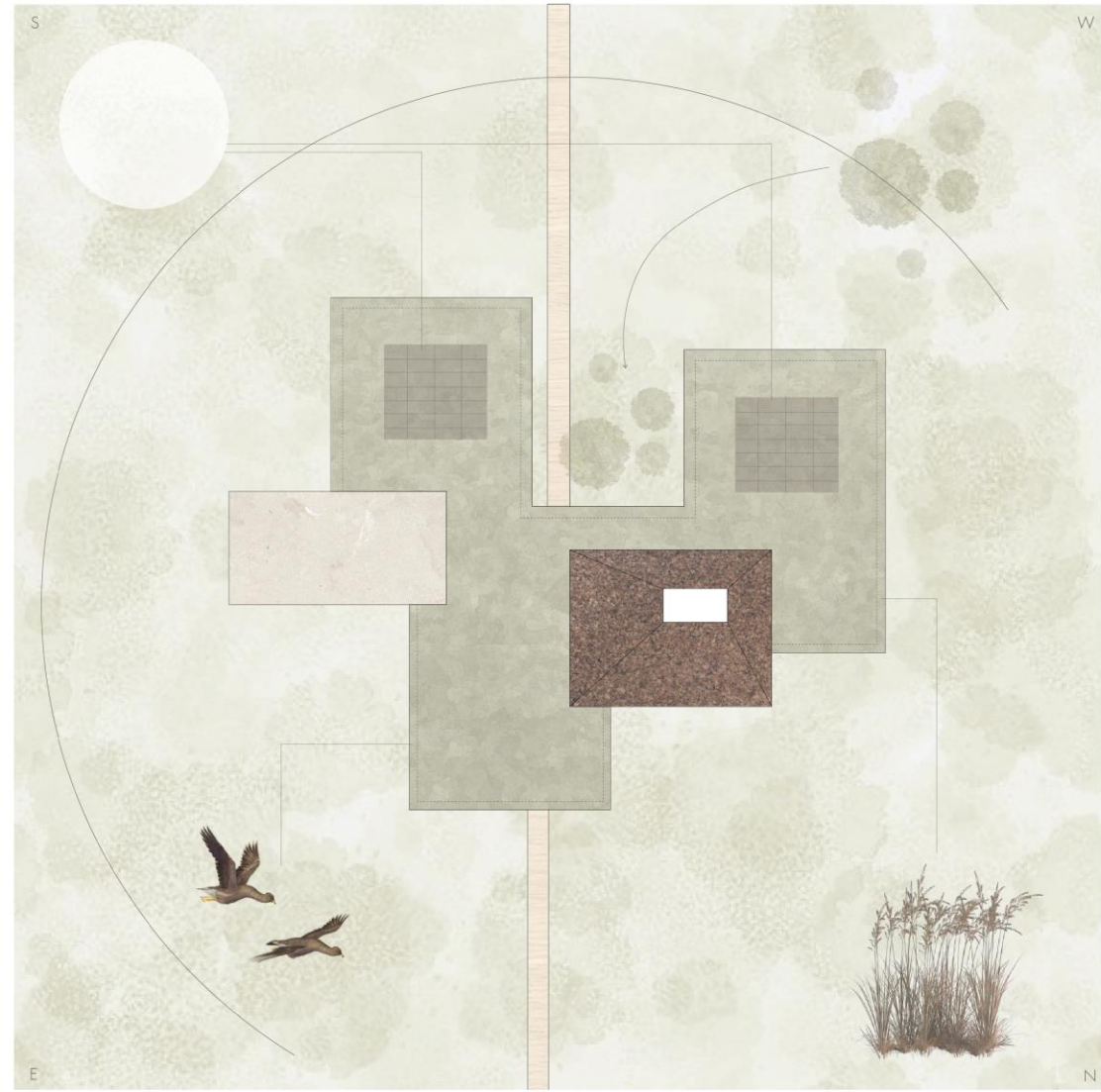


Fig. 15 roof view in landscape (own work)

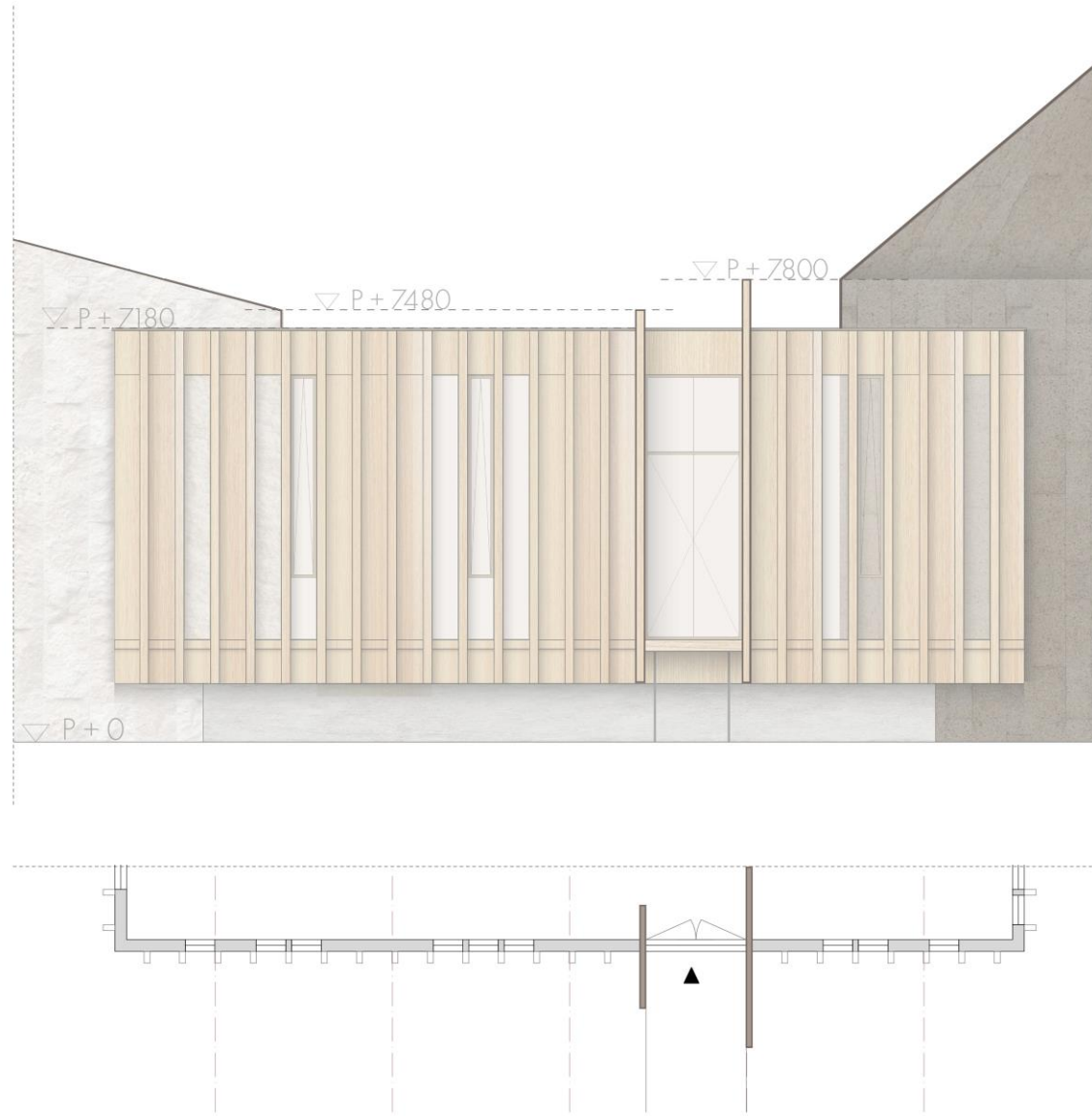


Fig. 16 north-east facade 1:100 (scaled)



Fg. 17 south-west facade 1:100 (scaled)

Synergy in Composition



Fg. 18 elevation fragment of front entrance

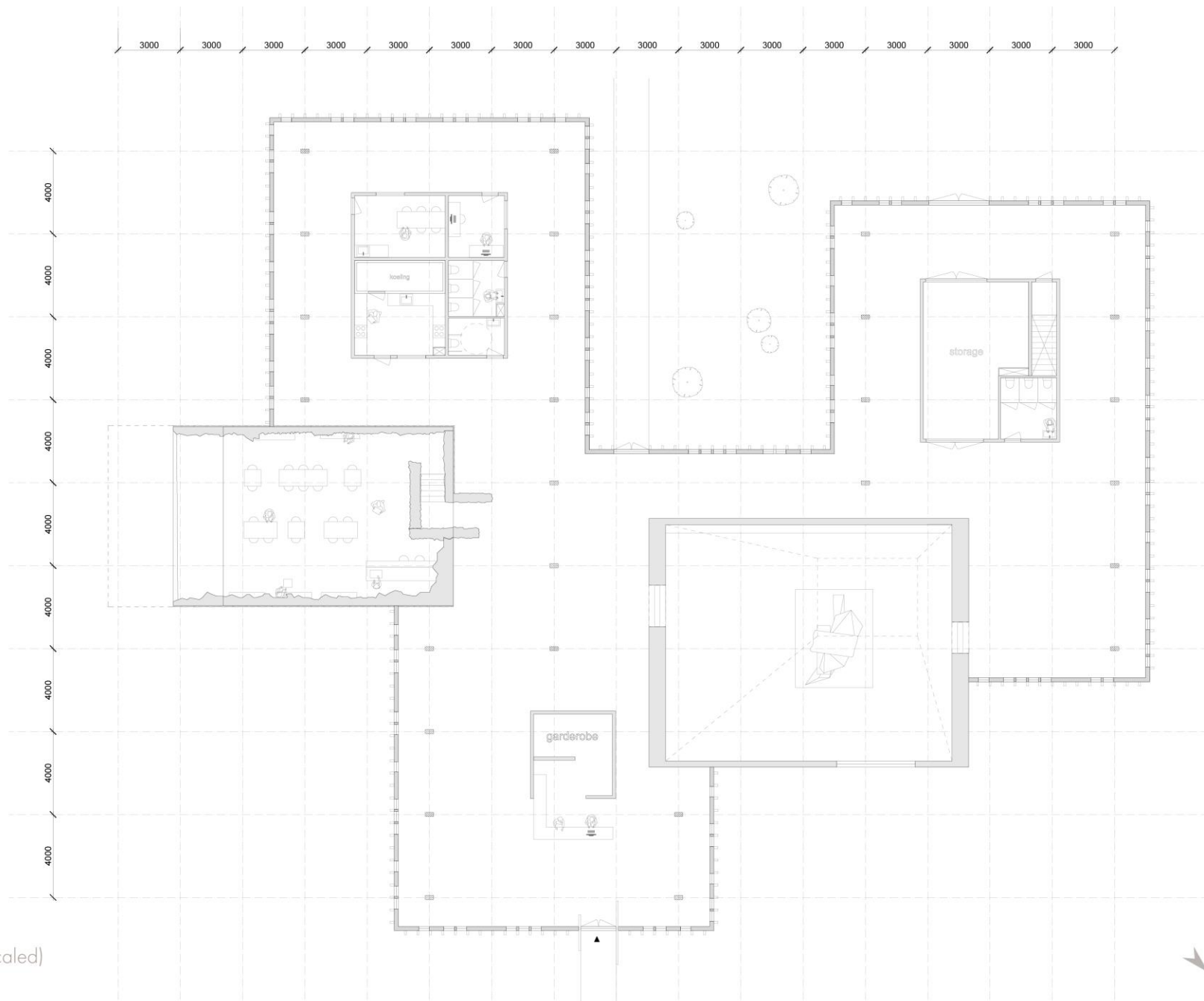
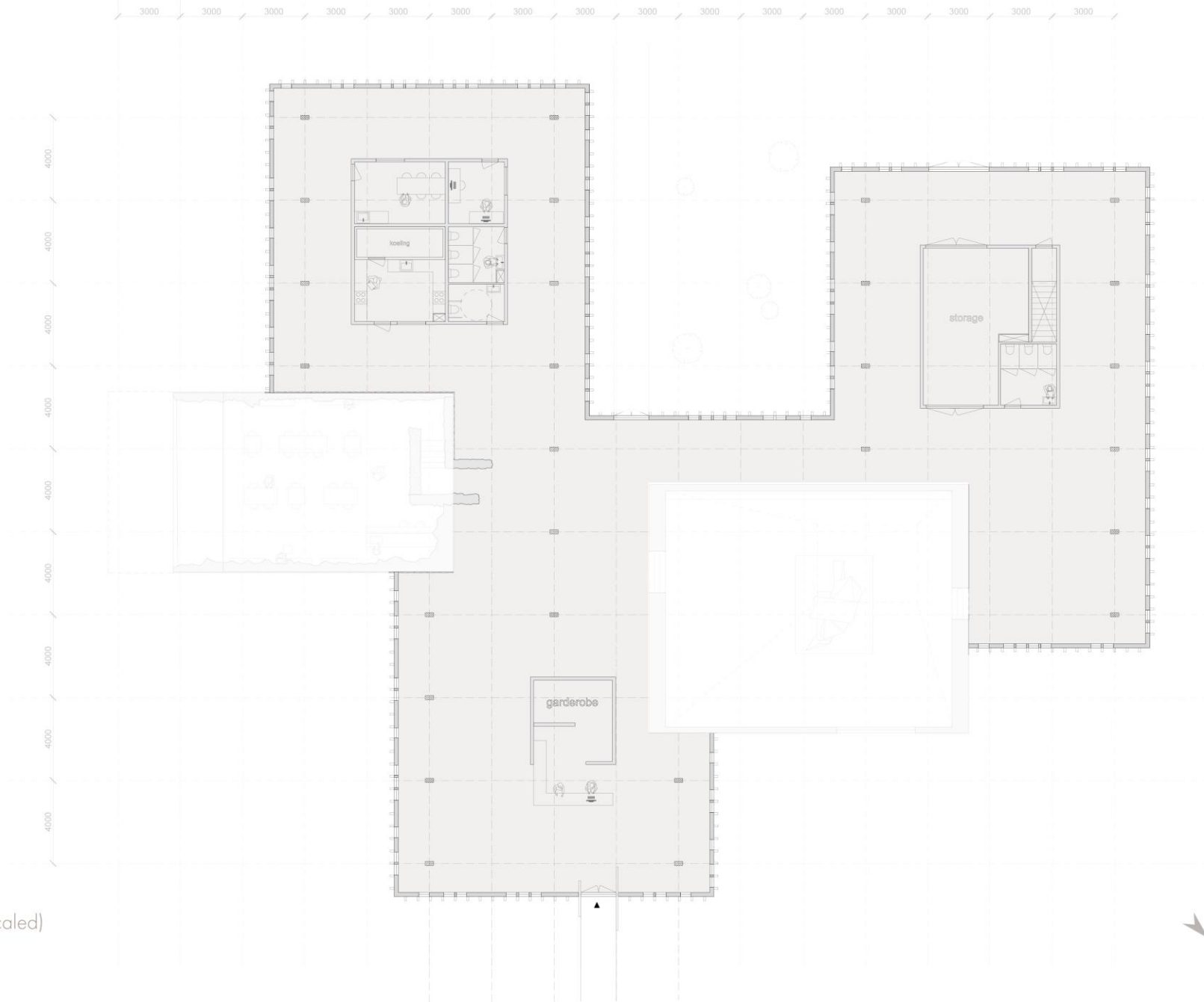
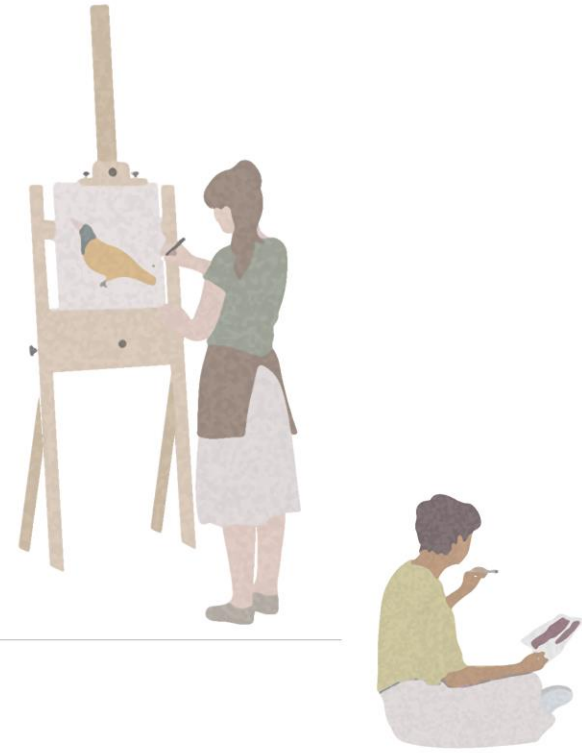
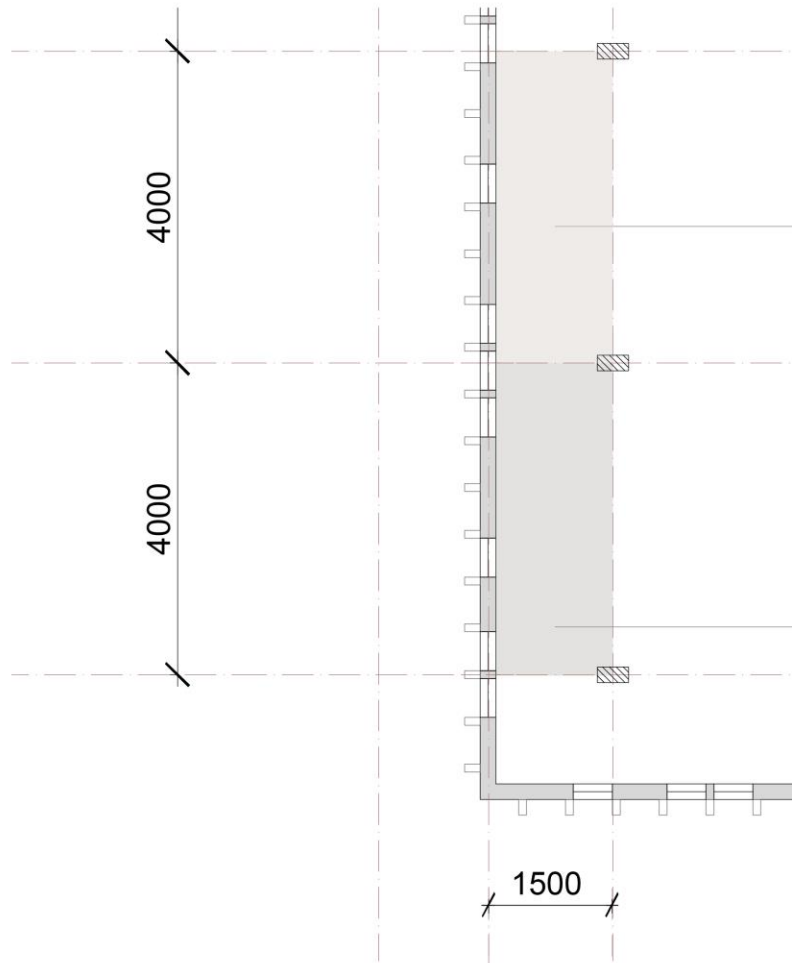


Fig. 19 floor plan 1:100 (scaled)

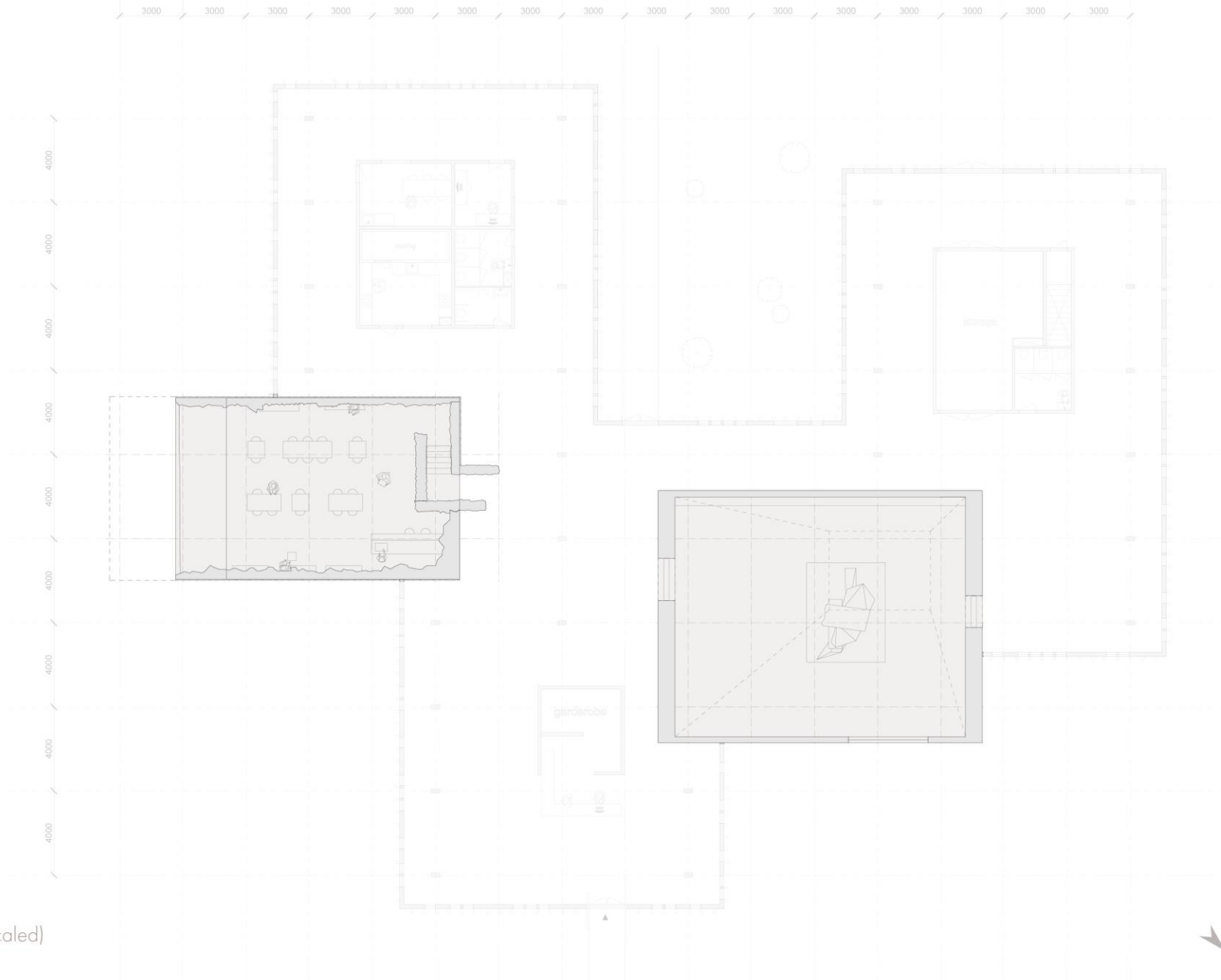


Fg. 20 floor plan 1:100 (scaled)

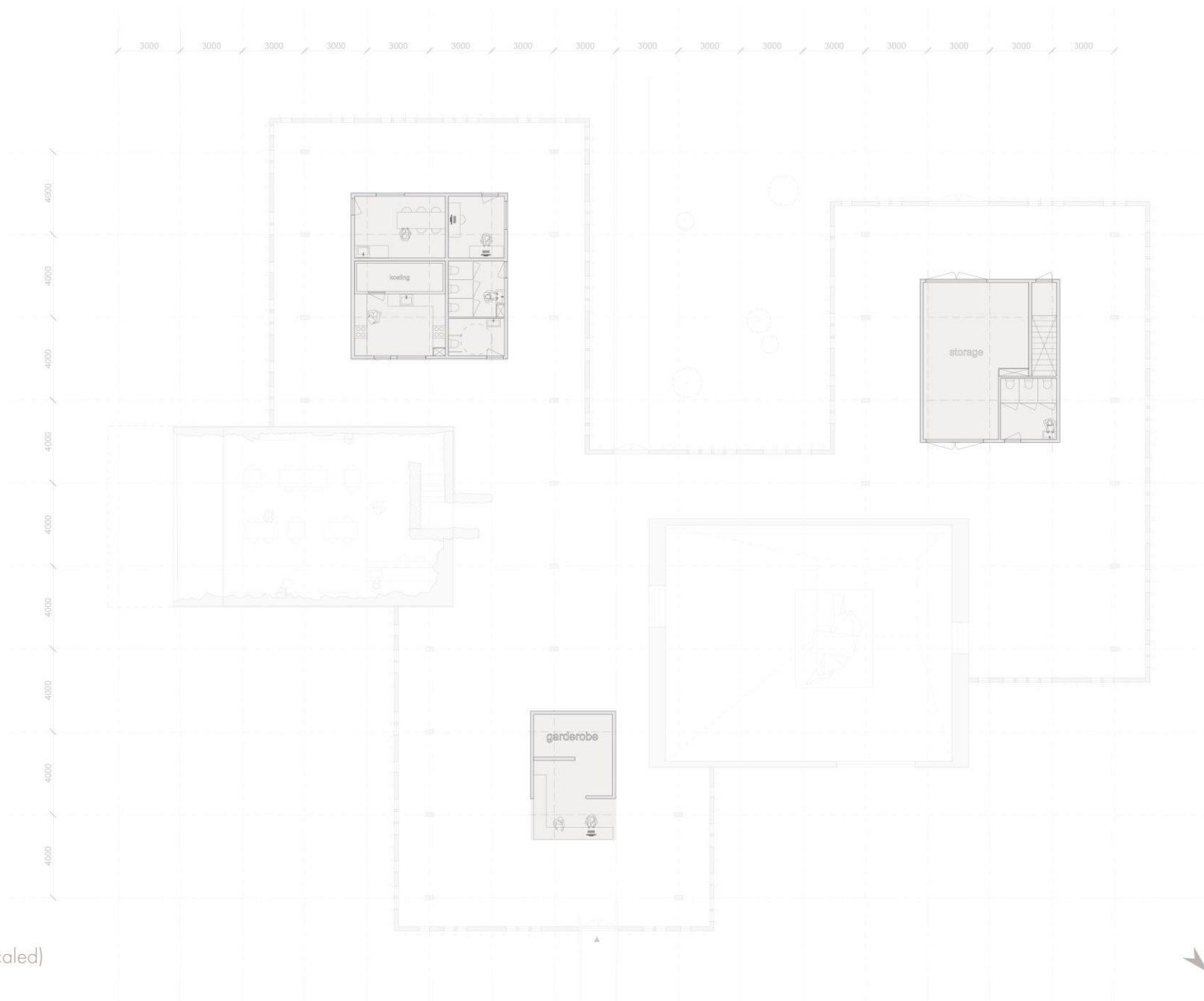


Fg. 21 floor plan fragment



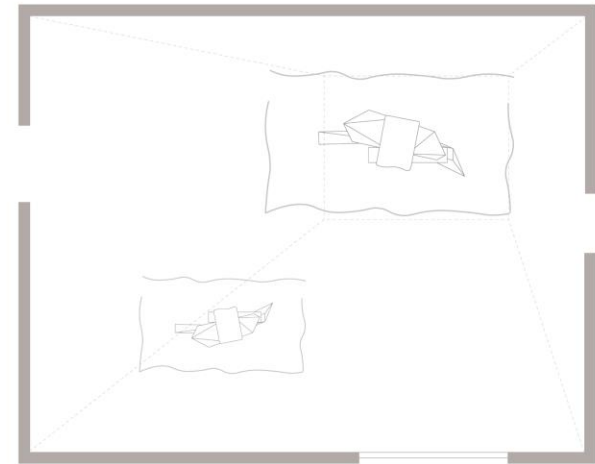
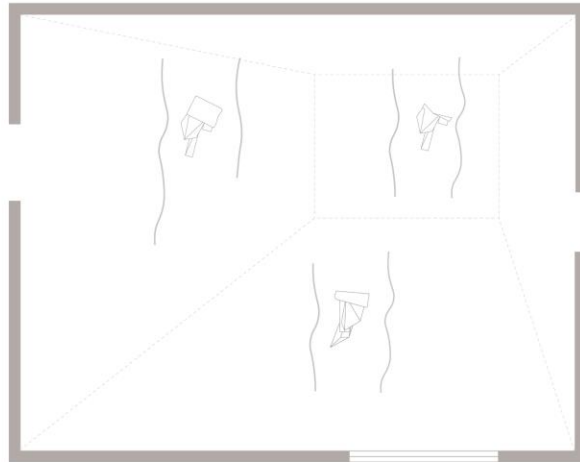
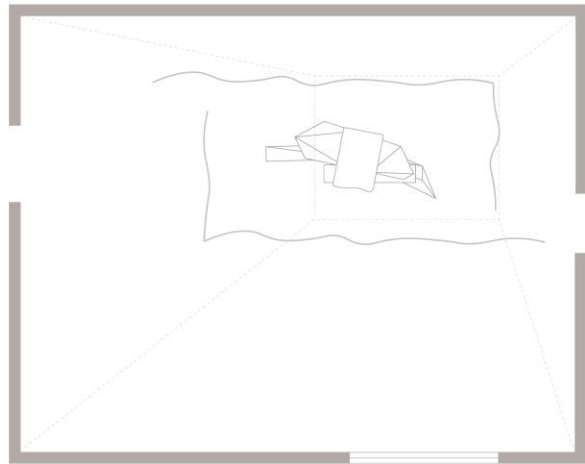


Fg. 22 floor plan 1:100 (scaled)



Fg. 23 floor plan 1:100 (scaled)

Layer of Curtains



Fg. 24 curtain configurations (own work)



Technical Design

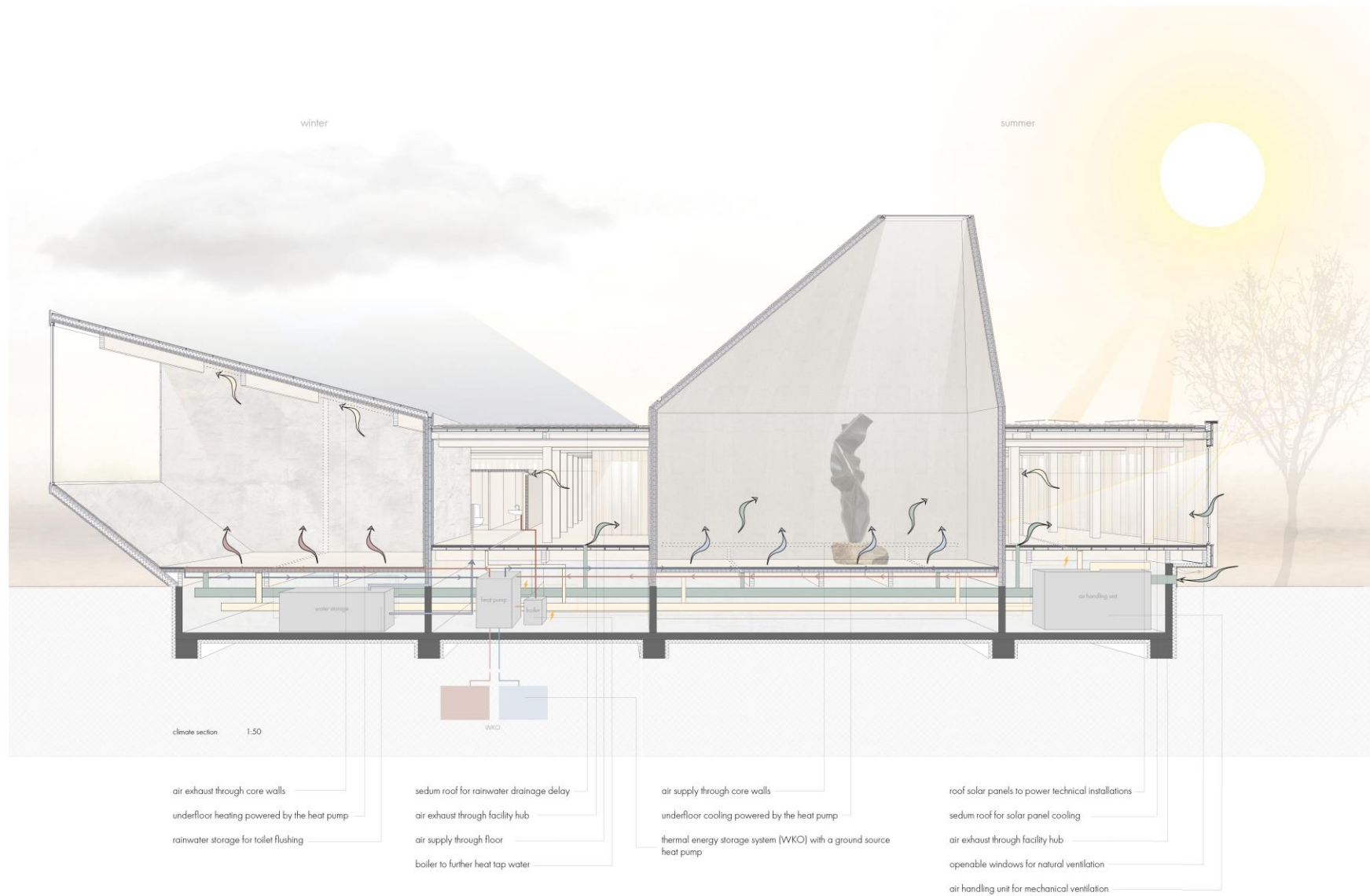
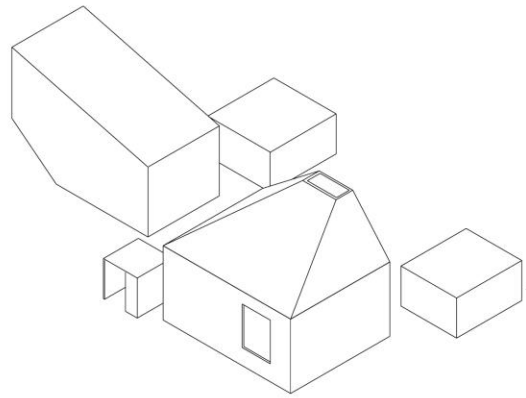
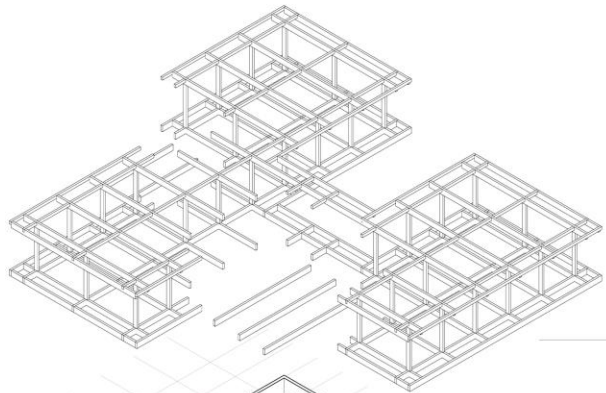


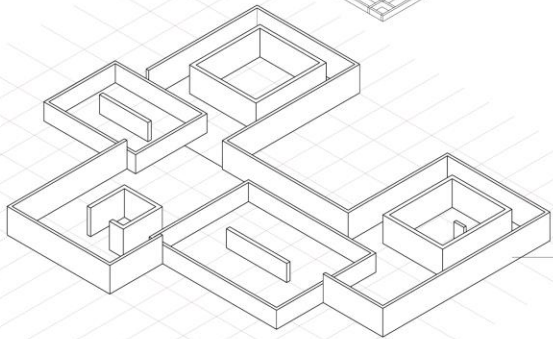
Fig. 25 climate section 1:50 (scaled)



cross laminated timber



oak columns
glulam beams



concrete

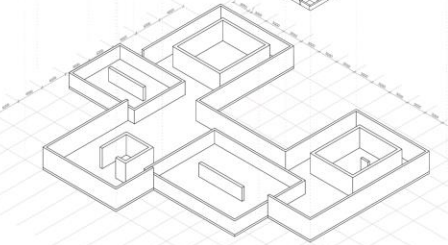
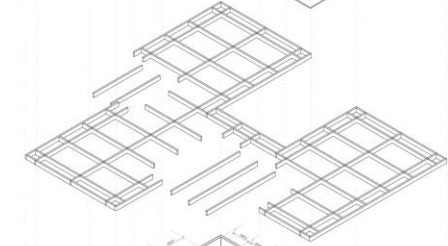
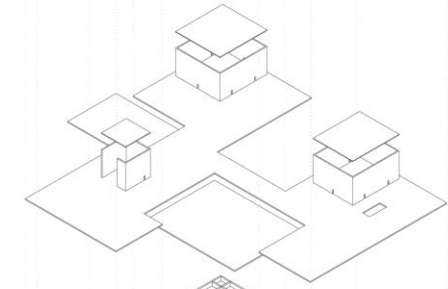
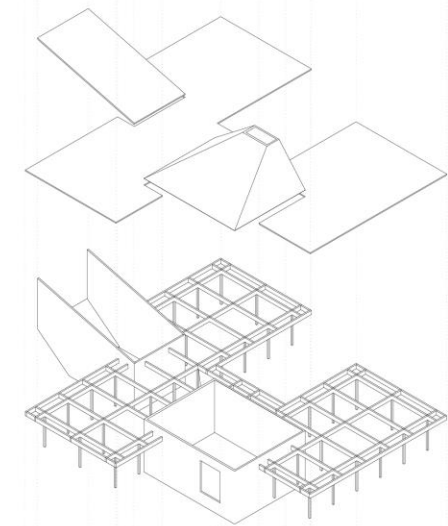
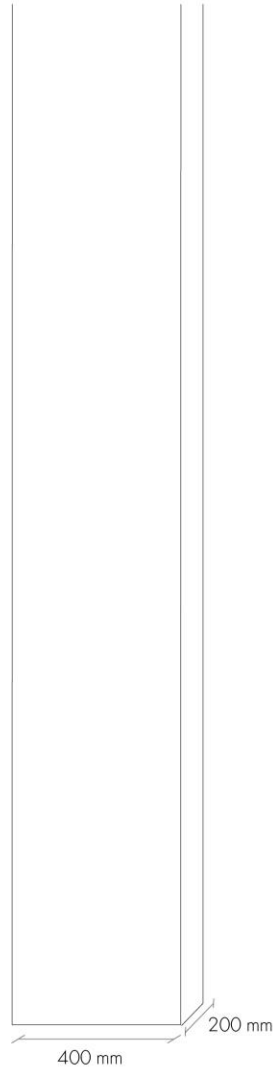
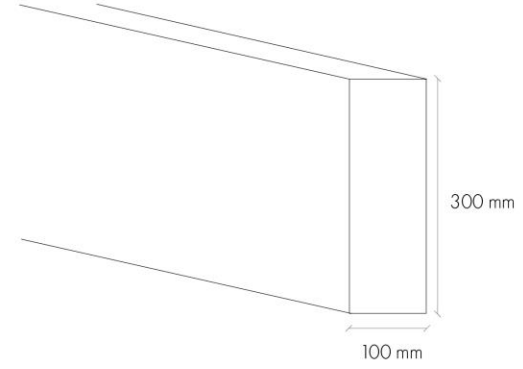


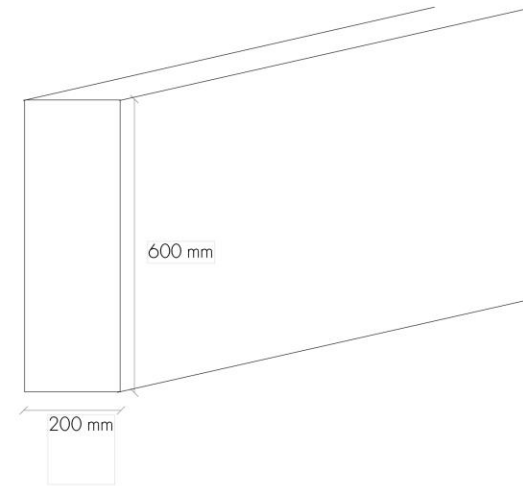
Fig. 26 exploded axonometric view of load-bearing structure



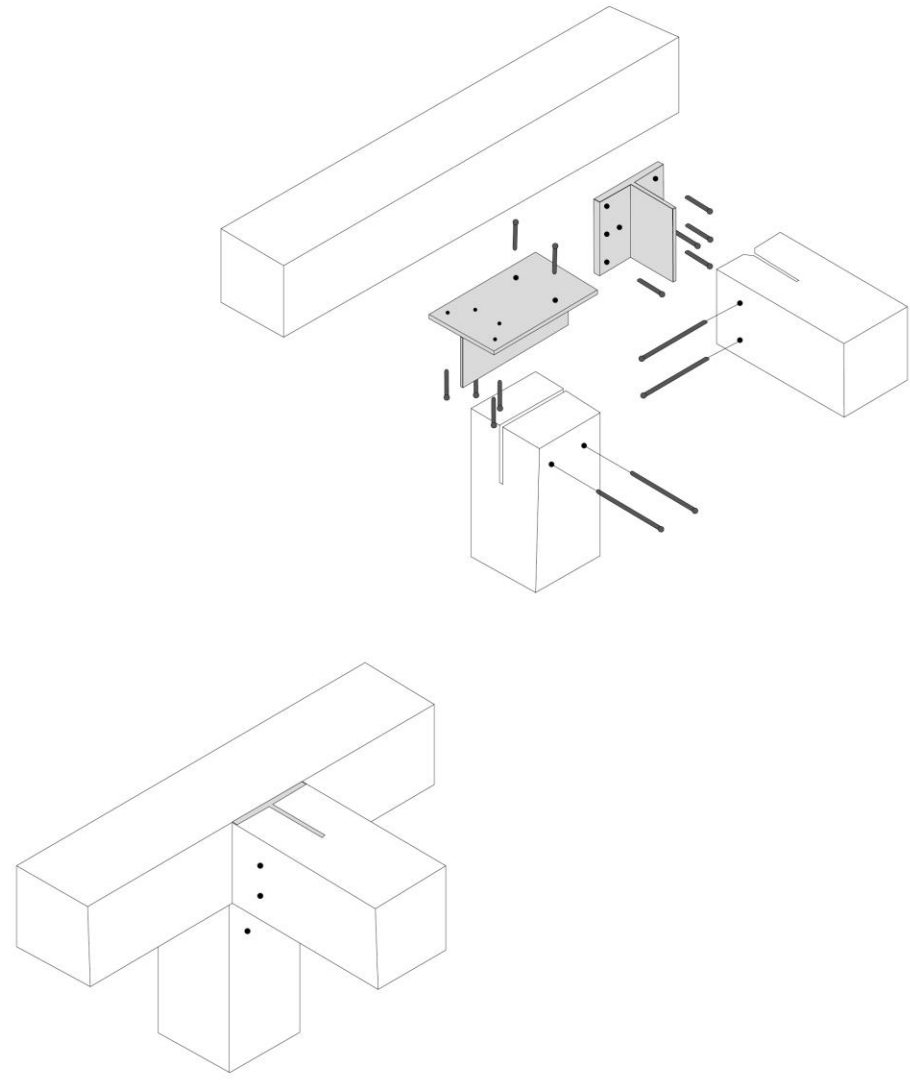
oak column dimensions



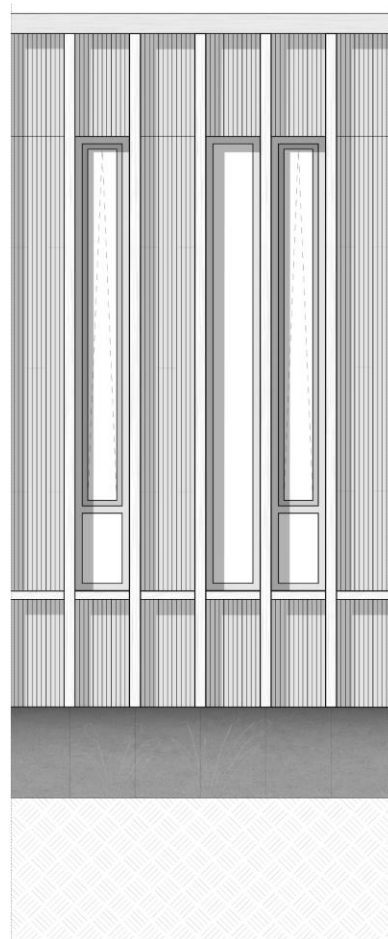
secondary glulam beam dimensions



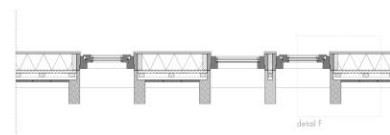
primary glulam beam dimensions



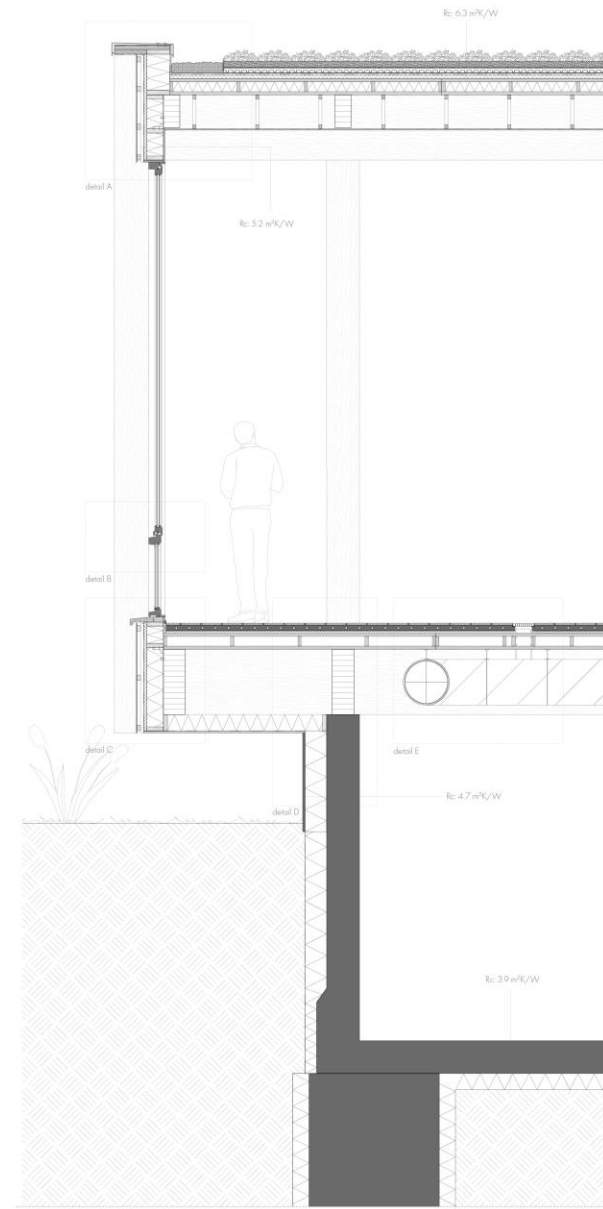
connection detail



facade fragment 1:20

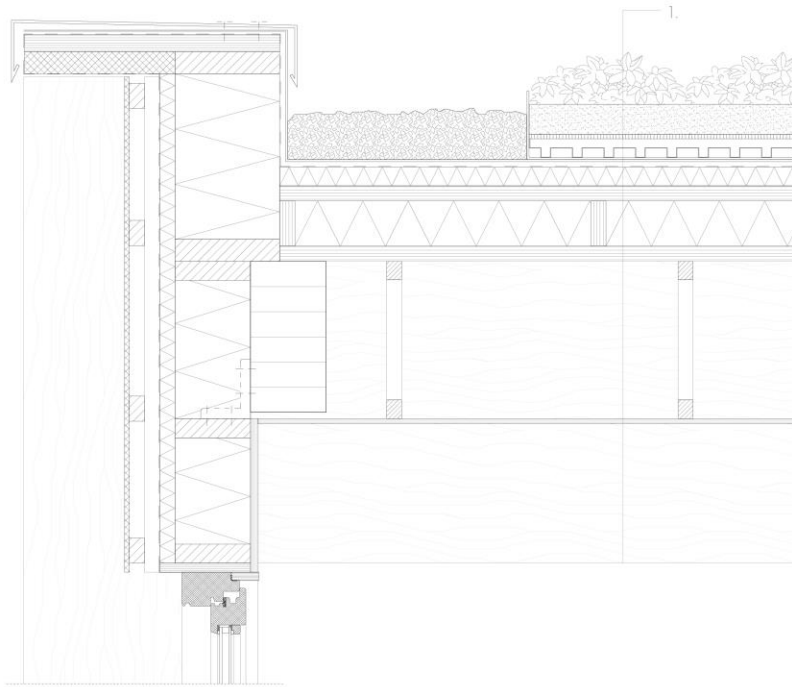


horizontal section 1:20



vertical section 1:20

ROOF DETAIL

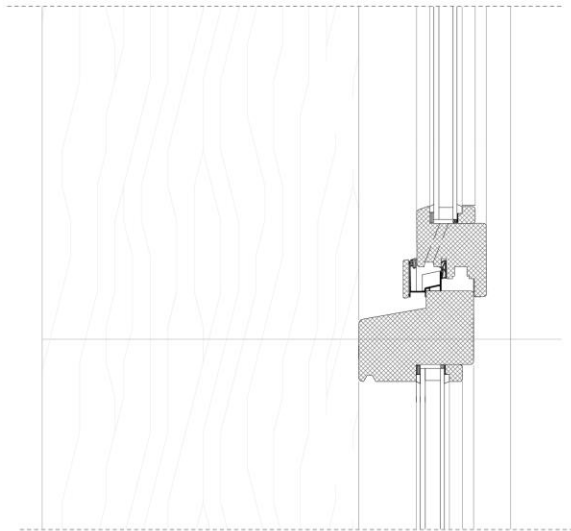


detail A

1:5 (scaled)

1.	sedum vegetation	50 - 150 mm
	substrate layer	60 mm
	drainage layer	80 mm
	root barrier	> 20 mm
	impermeable layer	> 2 mm
	sloped thermal insulation	+/- 35 mm
	kerto ripa roof box with insulation	150 mm
	glulam beam	600 mm
	ceiling anchor	300 mm
	wooden ceiling board	10 mm

WINDOW FRAME DETAIL

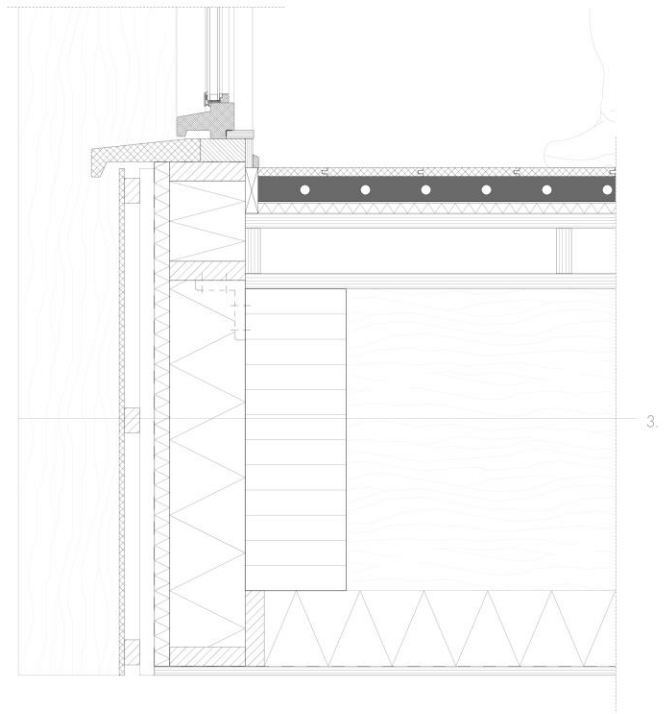


2. oak wooden slats 200 mm
oak wooden window frame 114 mm
HR++ glazing 24 mm

detail B

1:5 (scaled)

WINDOW SILL DETAIL

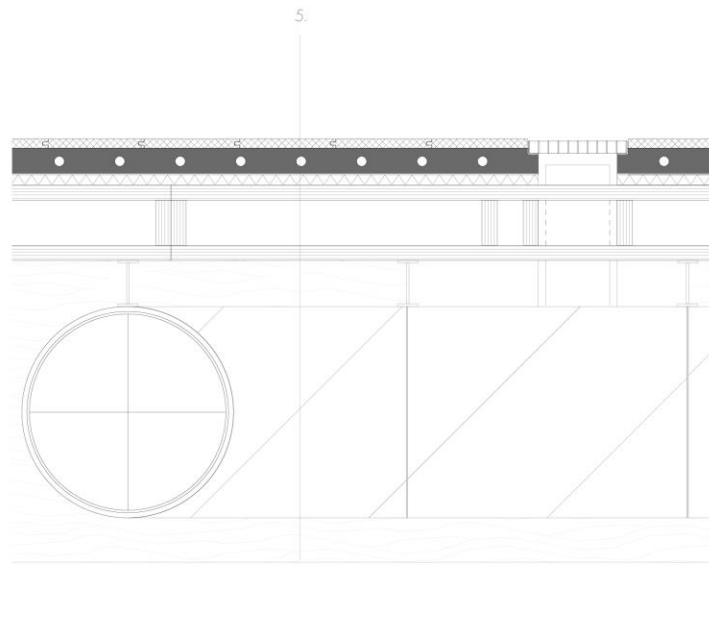


detail C

1:5 (scaled)

- | | | |
|----|------------------------------|--------|
| 3. | oak slats | 200 mm |
| | planed oak exterior cladding | 20 mm |
| | horizontal battening | 30 mm |
| | vertical battening | 30 mm |
| | waterproof layer | > 2 mm |
| | thermal insulation | 30 mm |
| | HSB with insulation | 150 mm |
| | vapor barrier layer | > 2 mm |
| | glulam secondary beam | 300 mm |

FLOOR DETAIL

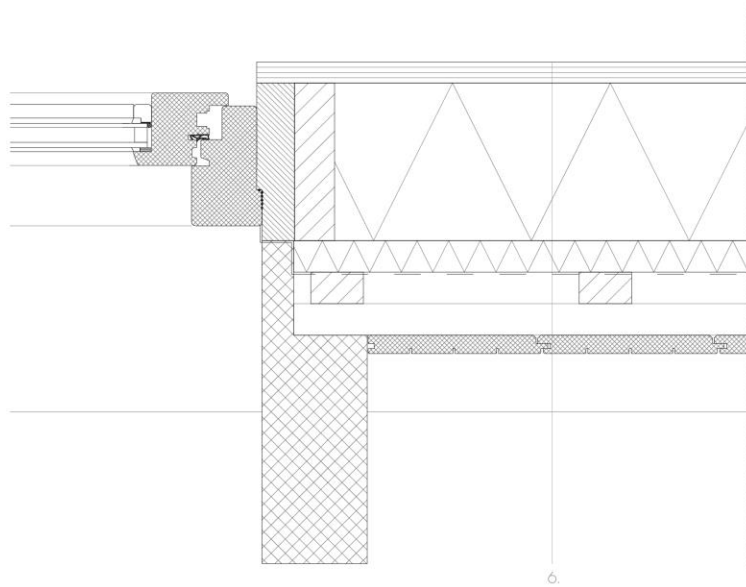


- | | | |
|----|-------------------------------------|--------|
| 5. | oak wood floor boards | 18 mm |
| | in-screed underfloor heating system | 50 mm |
| | insulation | 20 mm |
| | kerto ripa floor box | 250 mm |
| | gluman beam | 600 mm |
| | air supply ventilation duct | 420 mm |

detail E

1:5 (scaled)

HORIZONTAL DETAIL



- 6. oak slats 200 mm
- planed oak exterior cladding 20 mm
- horizontal battening 30 mm
- vertical battening 30 mm
- waterproof layer > 2 mm
- thermal insulation 30 mm
- HSB with insulation 150 mm
- vapor barrier layer > 2 mm
- interior finishing 30 mm

detail F

1:5 (scaled)

To Reflect...



THANK YOU FOR LISTENING

Graduation Presentation
Kim van den Bosch
21 June 2024



Museum of Emotions

1226 m²

foyer

748 m²

reception & cloakroom

25 m²

gallery

149 m²

café

113 m²

facility hubs

108 m²

kitchen

22 m²

toilets

23 m²

storage

38 m²

meeting room

15 m²

back office

9 m²

basement with technical
room & storage

926 m²



Fig. 23 collage representing target group (author's work)