



school, children, and climate

rethinking in/outdoor climate through field work
research and situated design

P5 presentation
Urban Architecture

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mentors:
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Lex van Deudekom
Eireen Schreurs





friche josaphat





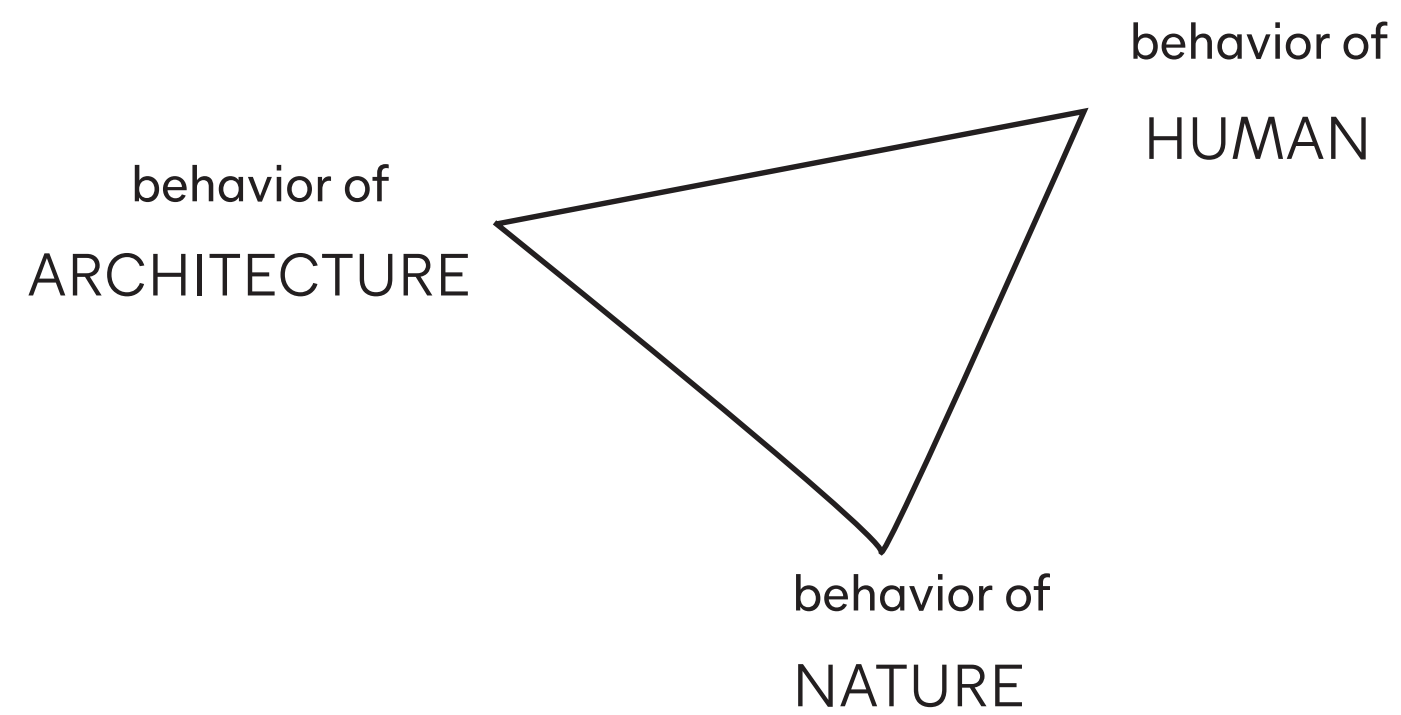






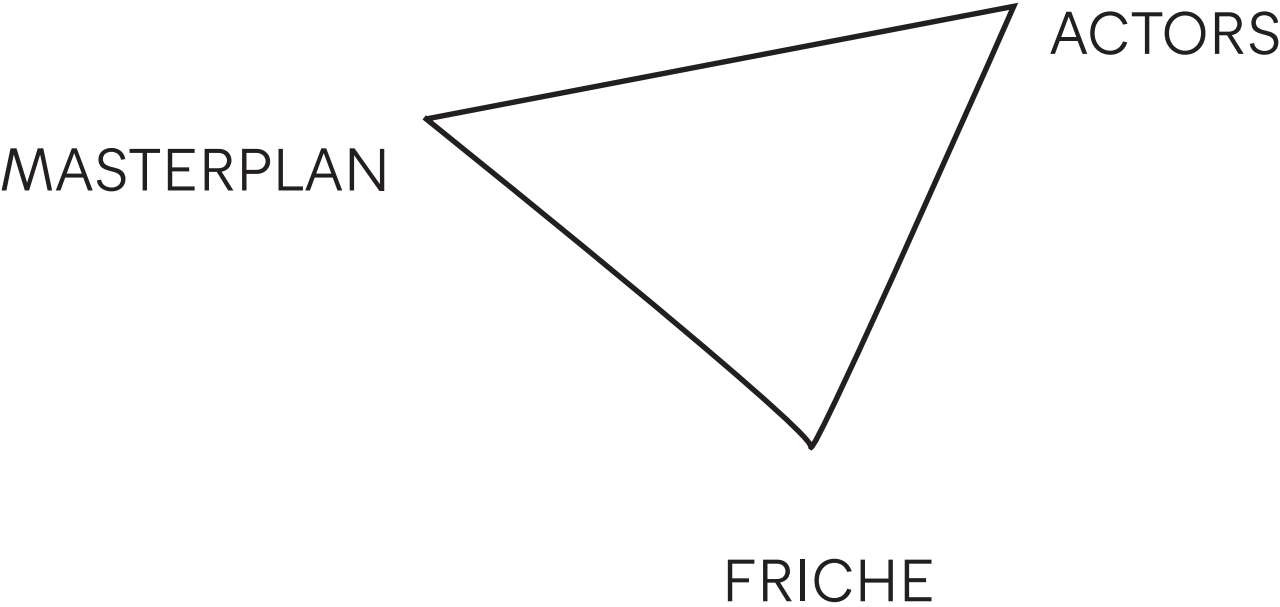






atelier bow-wow, 2010. behaviorology.

Never a void



Actors

Communal gardens



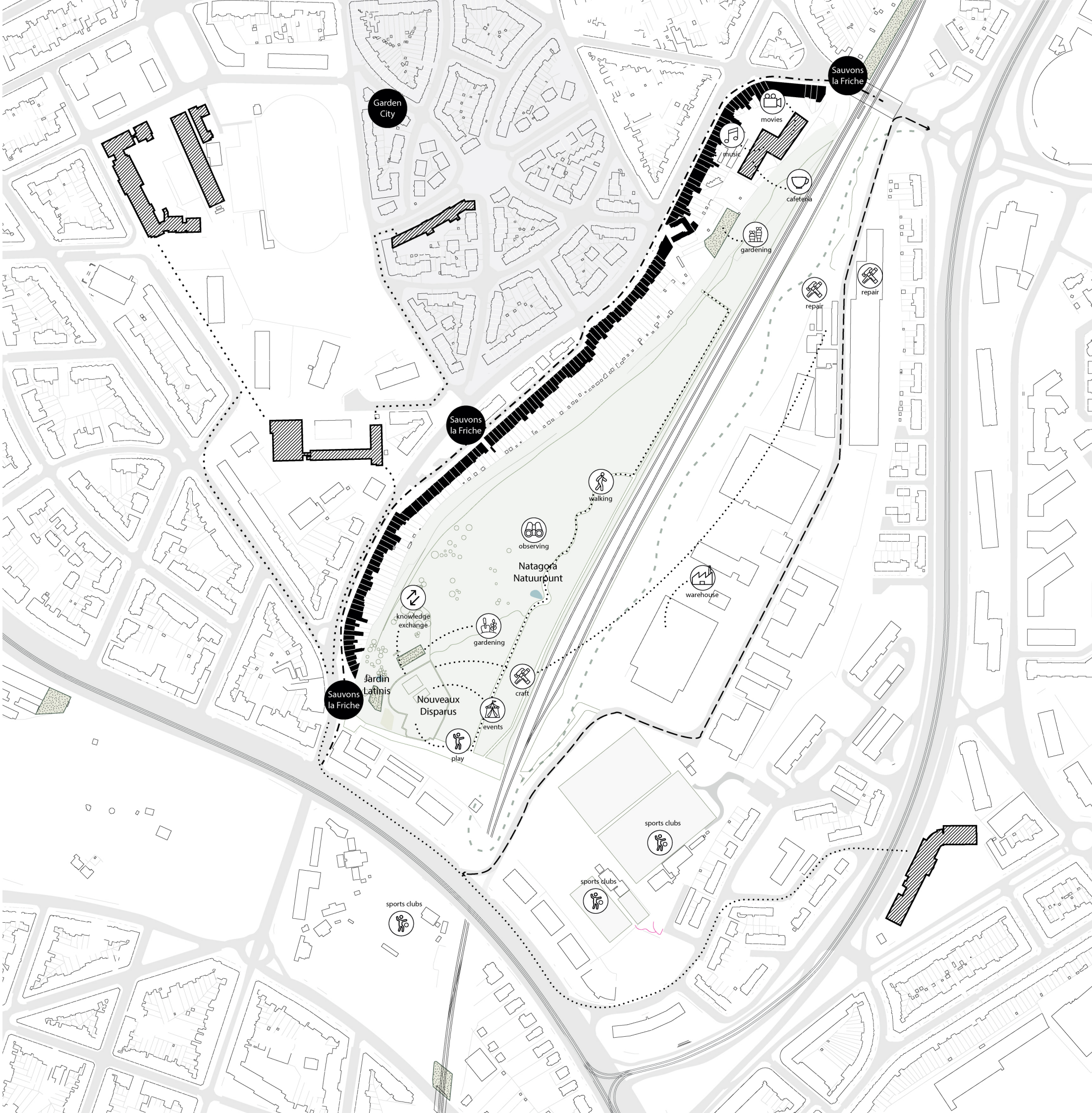
Recup kitchen, from farm to dining table



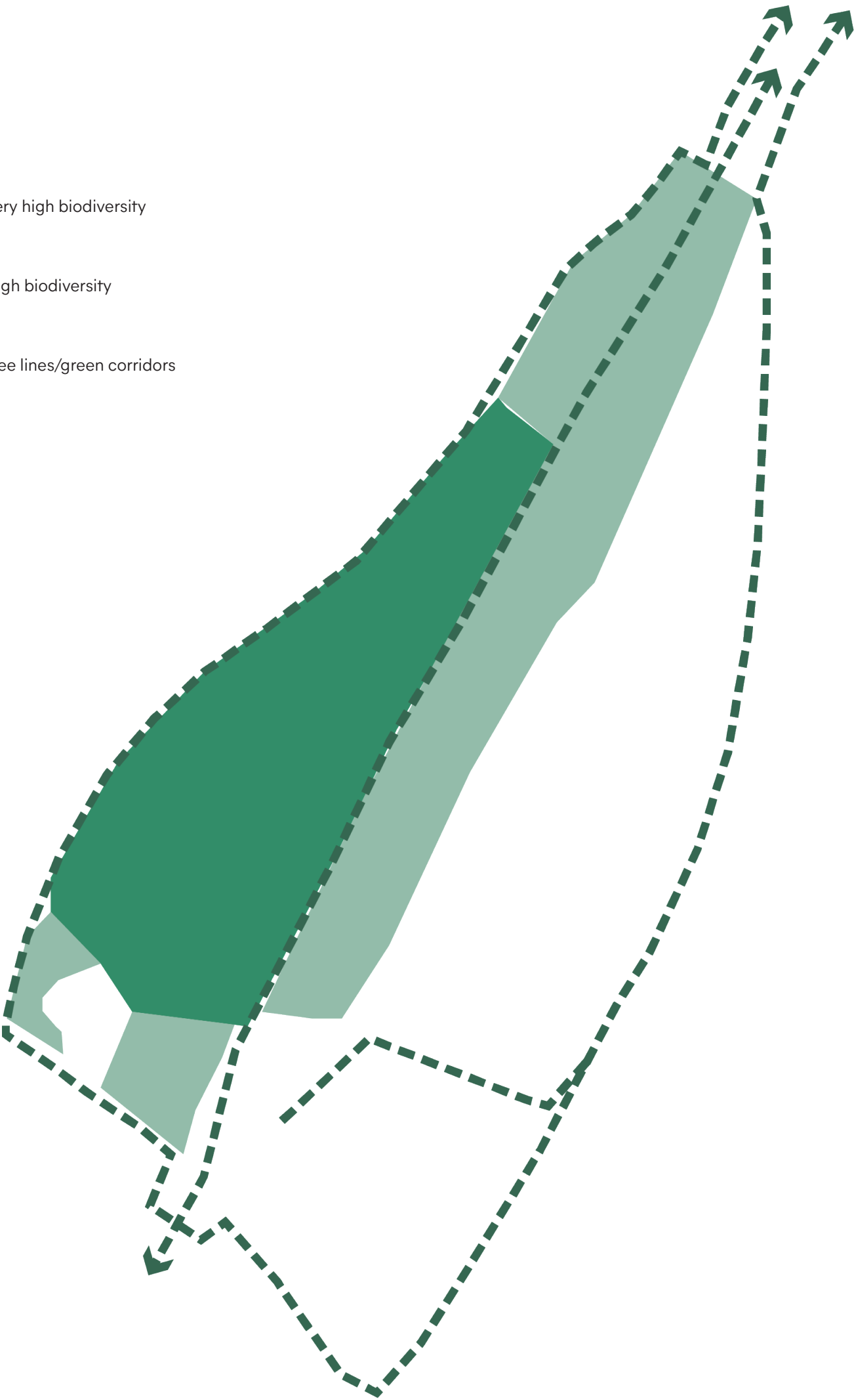
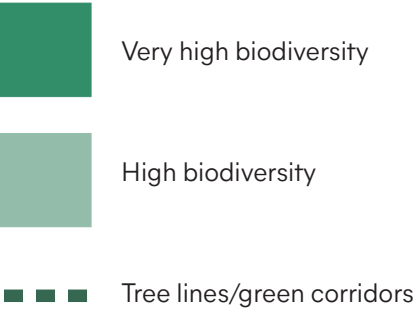
Observation: insects and animals



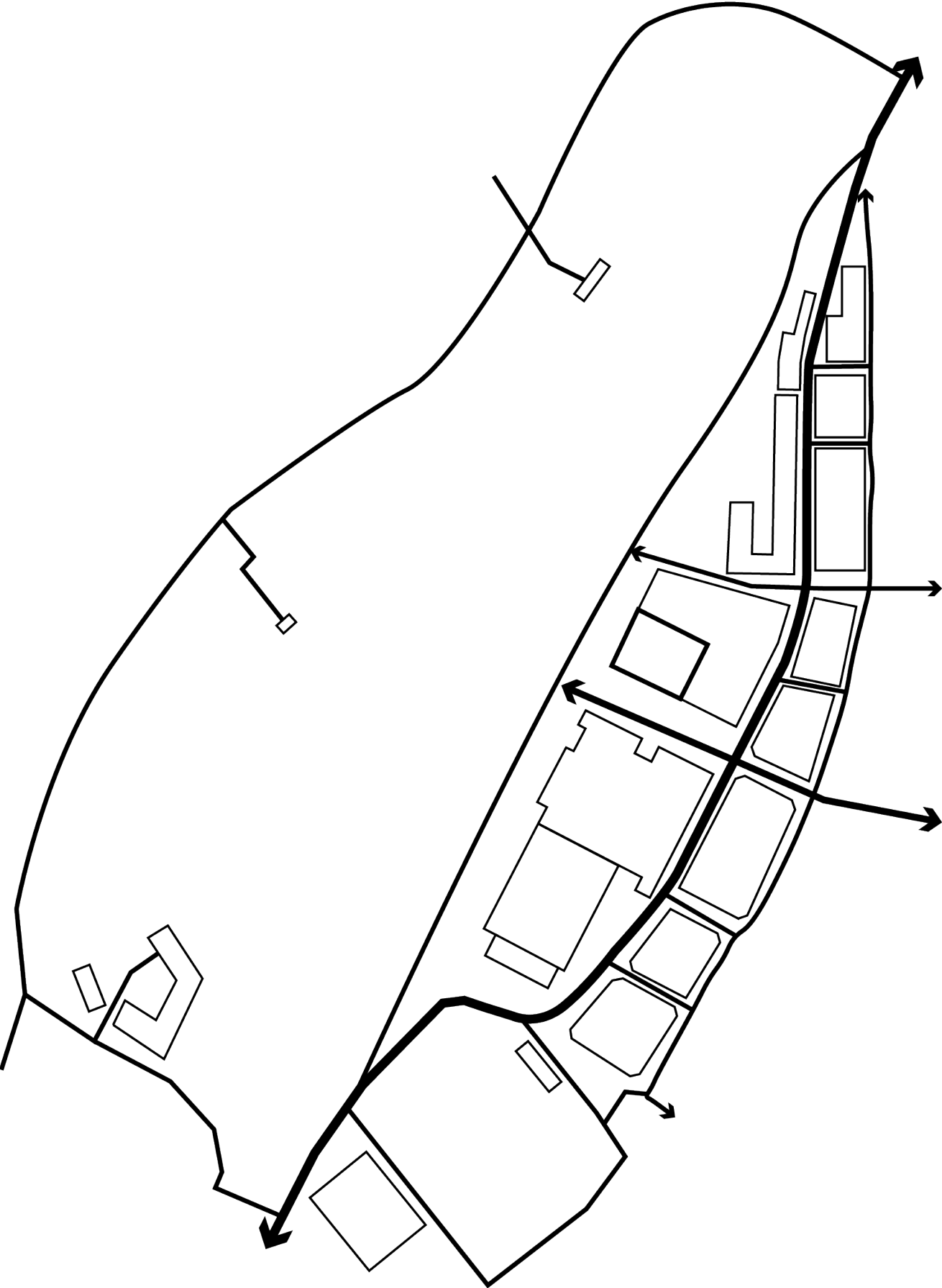
Education: science, stories & histories



Ecology

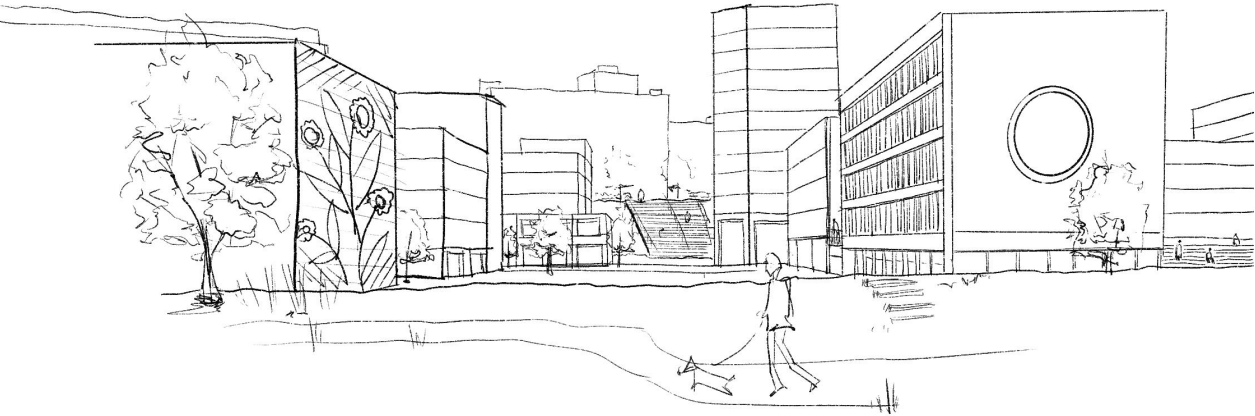


Masterplan



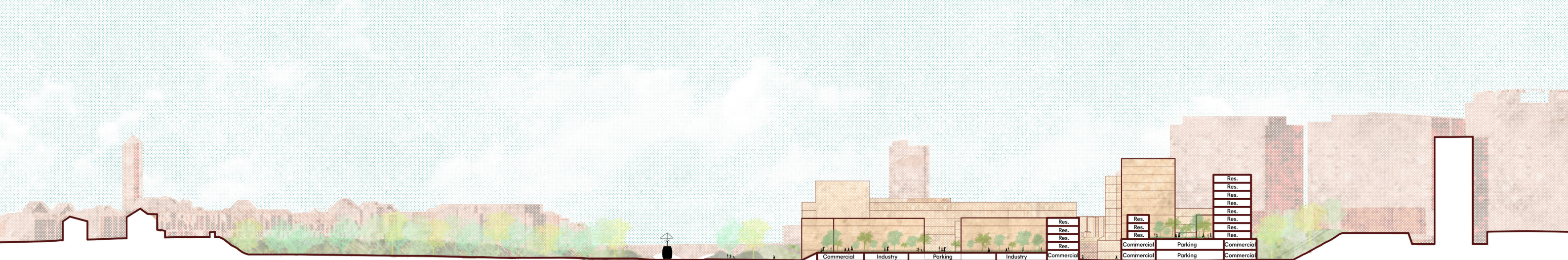
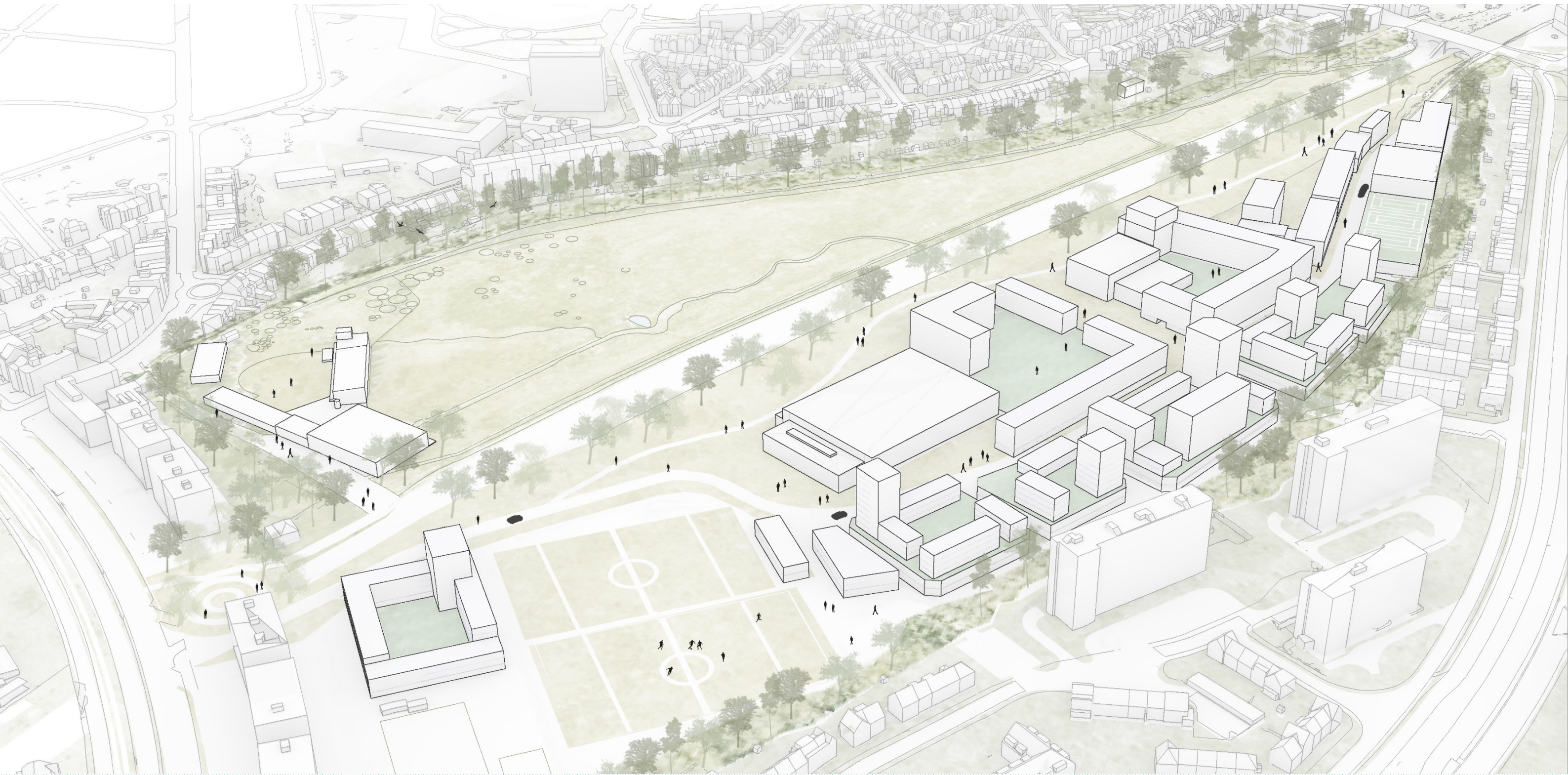
Masterplan

Housing	111,112m2 = 1270 houses*
Public function + office	66,700m2
School	3000m2
Indoor parking	7100m2
Food production	6000m2
Commons	5000m2



*[20% circulation, collective and service, 70m2 per house on average]



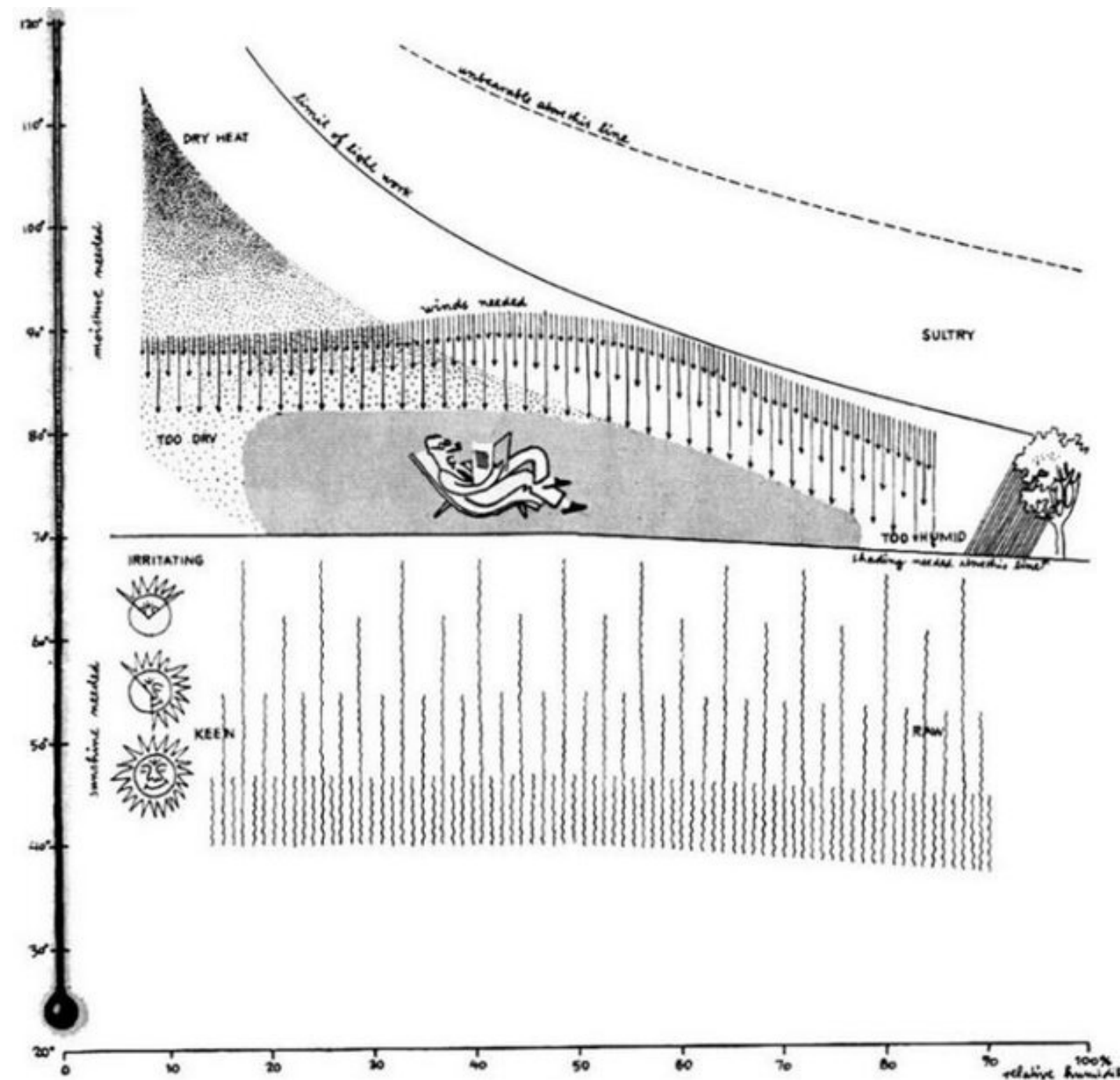


behavior of architecture

- shelter
 - friction of nature, friction of climate
 - architecture's effect on smoothening local climate at the expense of global climate
- indoor outdoor

Comfort indicates that one has risen above the inconsistencies of the natural world and triumphed, not only over nature and the weather but over chance itself.

Daniel Barber, On Comfort, 2019

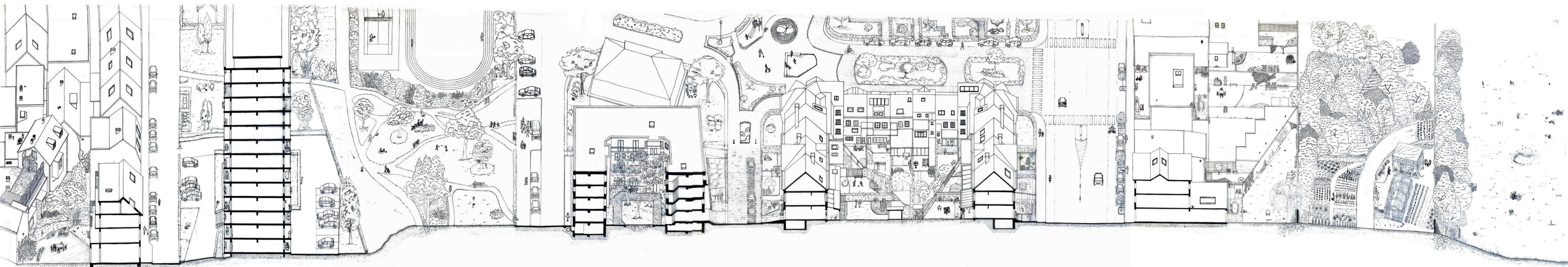


Bioclimatic chart proposed by
Olgay 1963

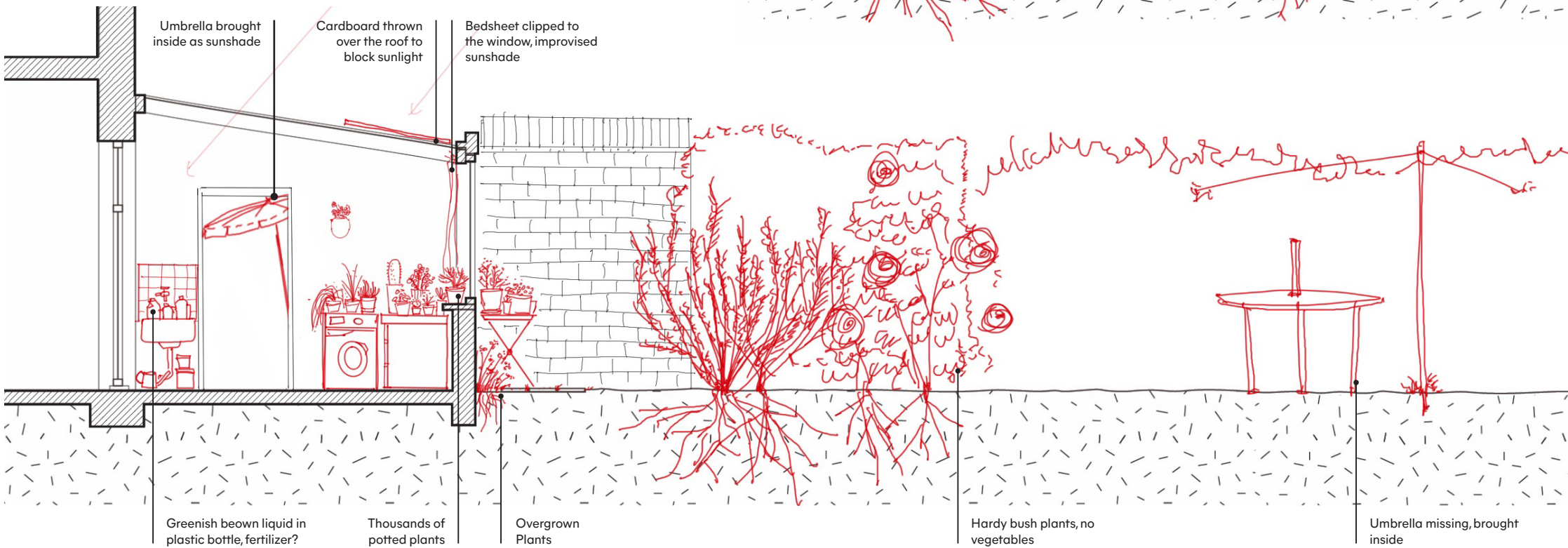
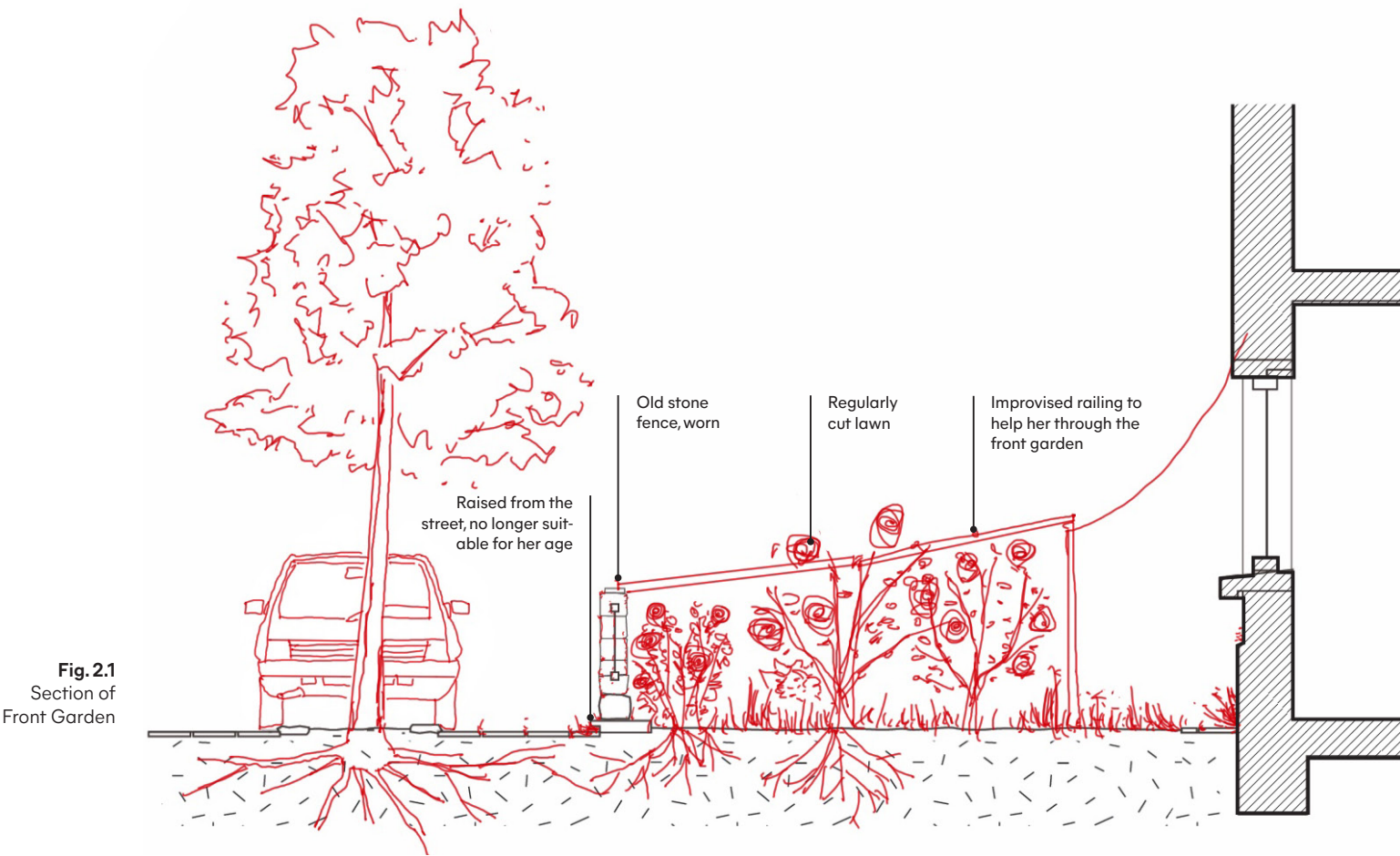
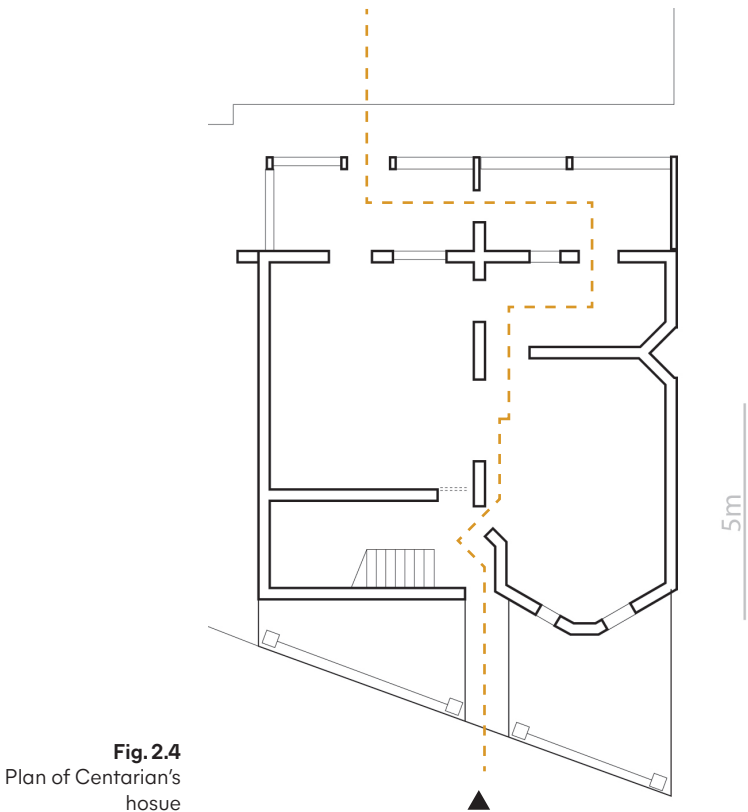
is comfort taken for granted?

what is the middle ground?

how do we rethink our approach to indoor climate?







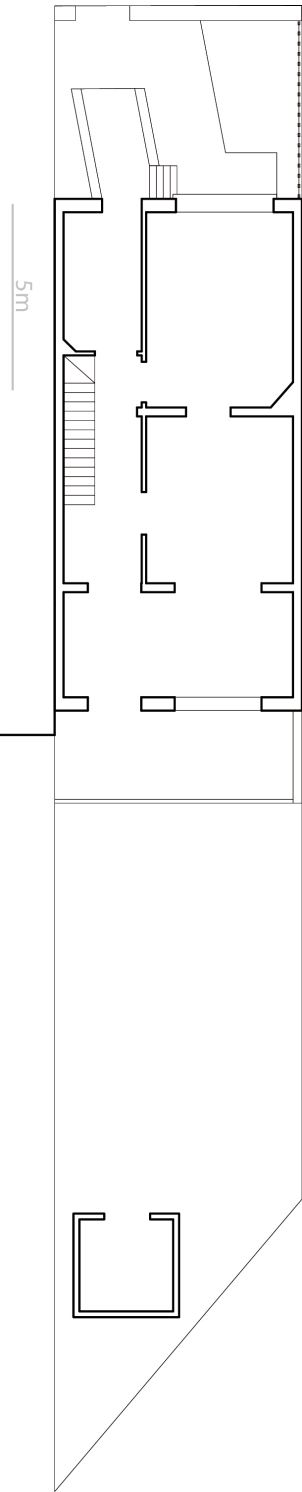
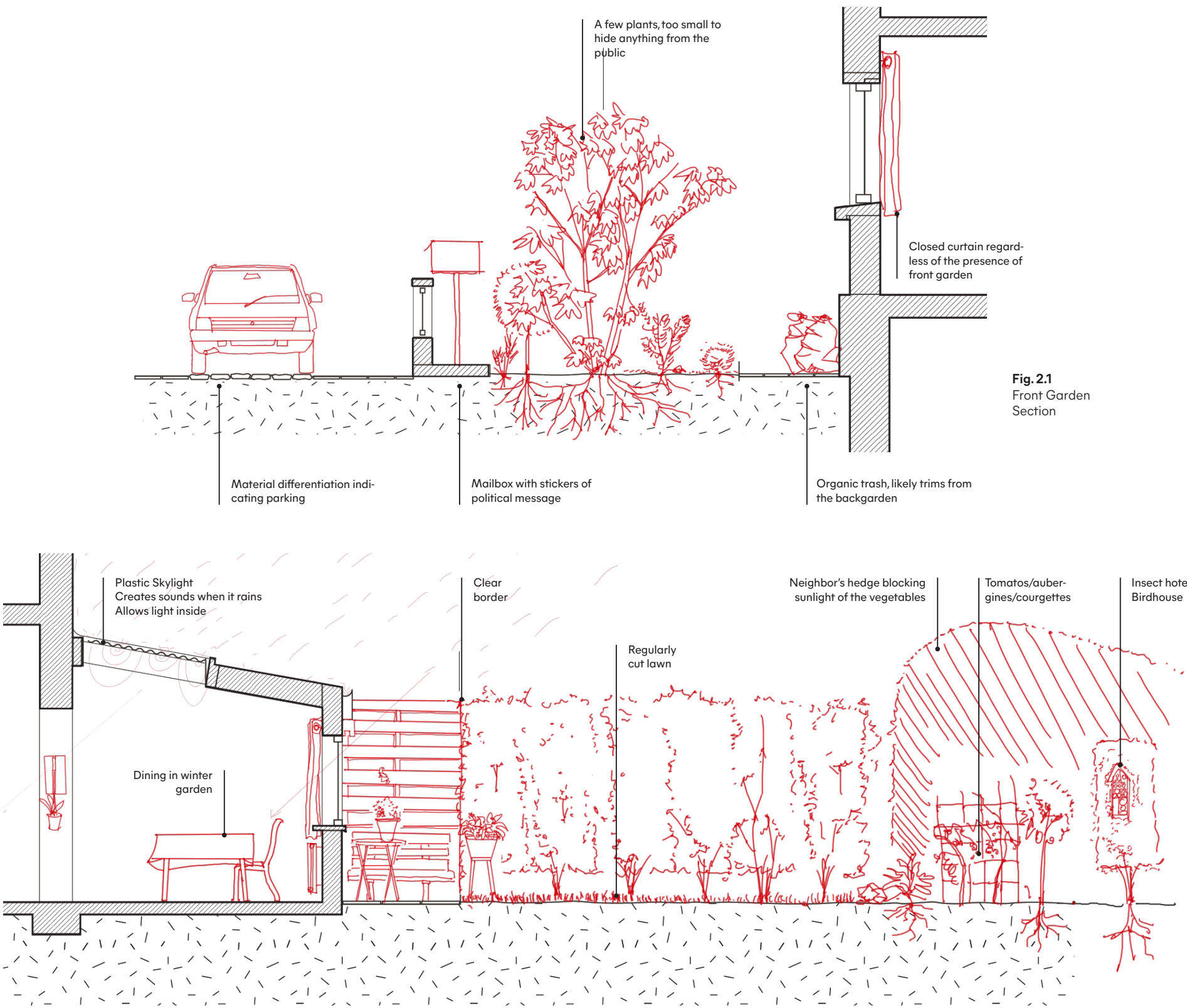


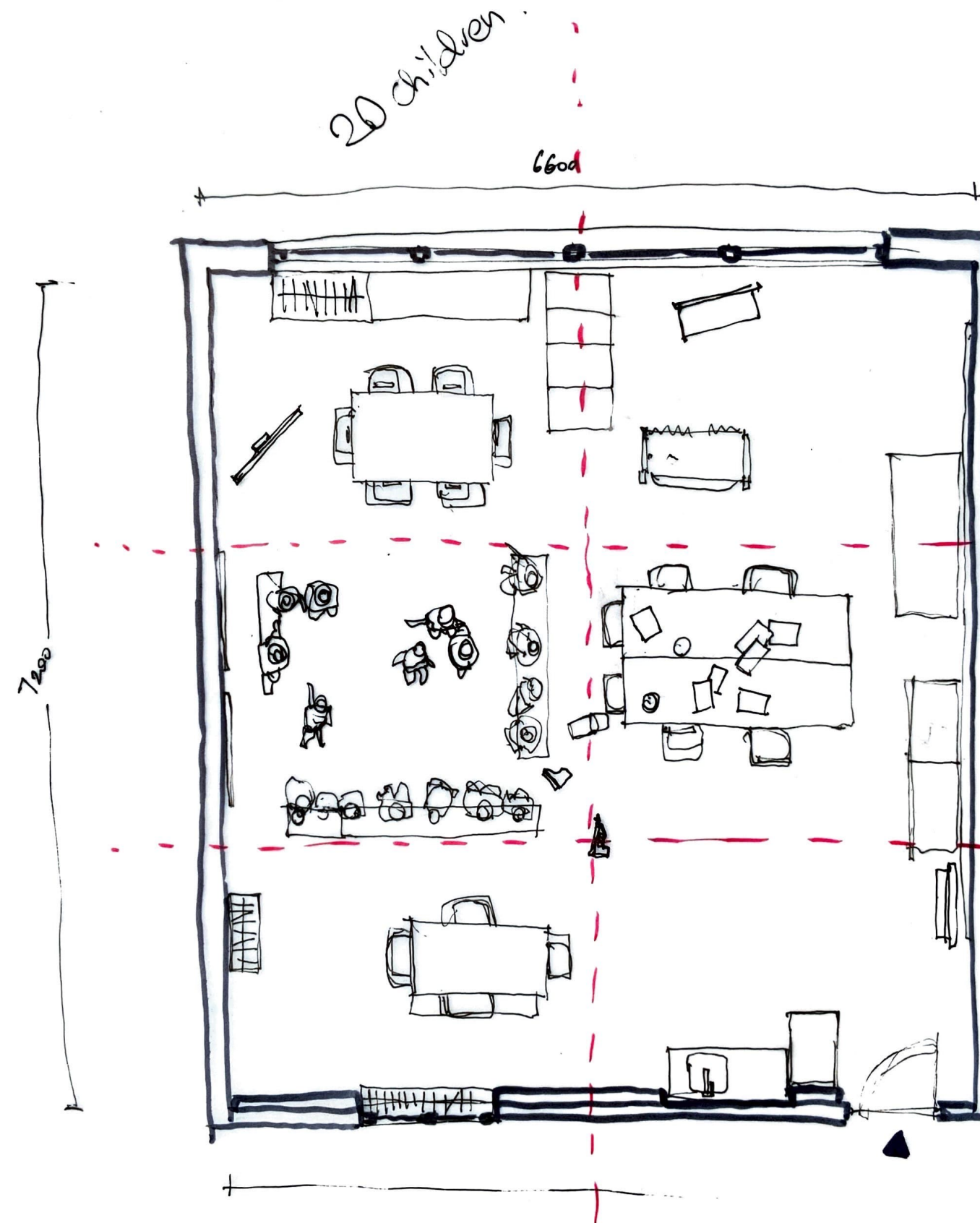
Fig. 2.3
Plan of the Italian
Couple's House

into the school



research booklet page 24

degrees of individuality to collectiveness



rough plan of a classroom during a class

"THE DIMENSIONS OF LIGHT"
"IT LOOKS LIKE A HOSPITAL, BUT IT IS GOOD
FOR THE EYES"

OPERABLE
WINDOW
ON TOP.
MANUAL

CONSTRUCTION
RELATED
CLOTH
HUNG FROM
WATER PIPE

ART
WORKS
ON A
CABLE

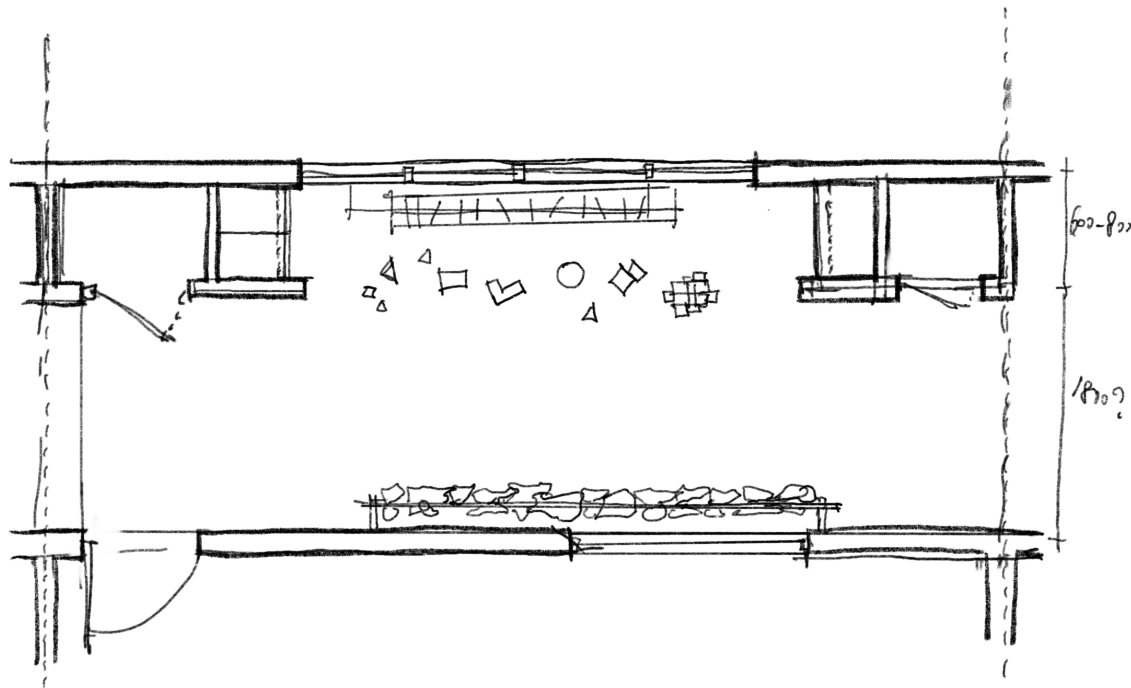
YES, PIN BOARD
IS IMPORTANT.
TO DISPLAY
WORKS
& COM-
MUNICATE

"SMALLER
CHILDREN
NEED
SMALLER
SPACES. & NICHES"

BANDSAW TOOL BOX
&
TAPE MEASURE

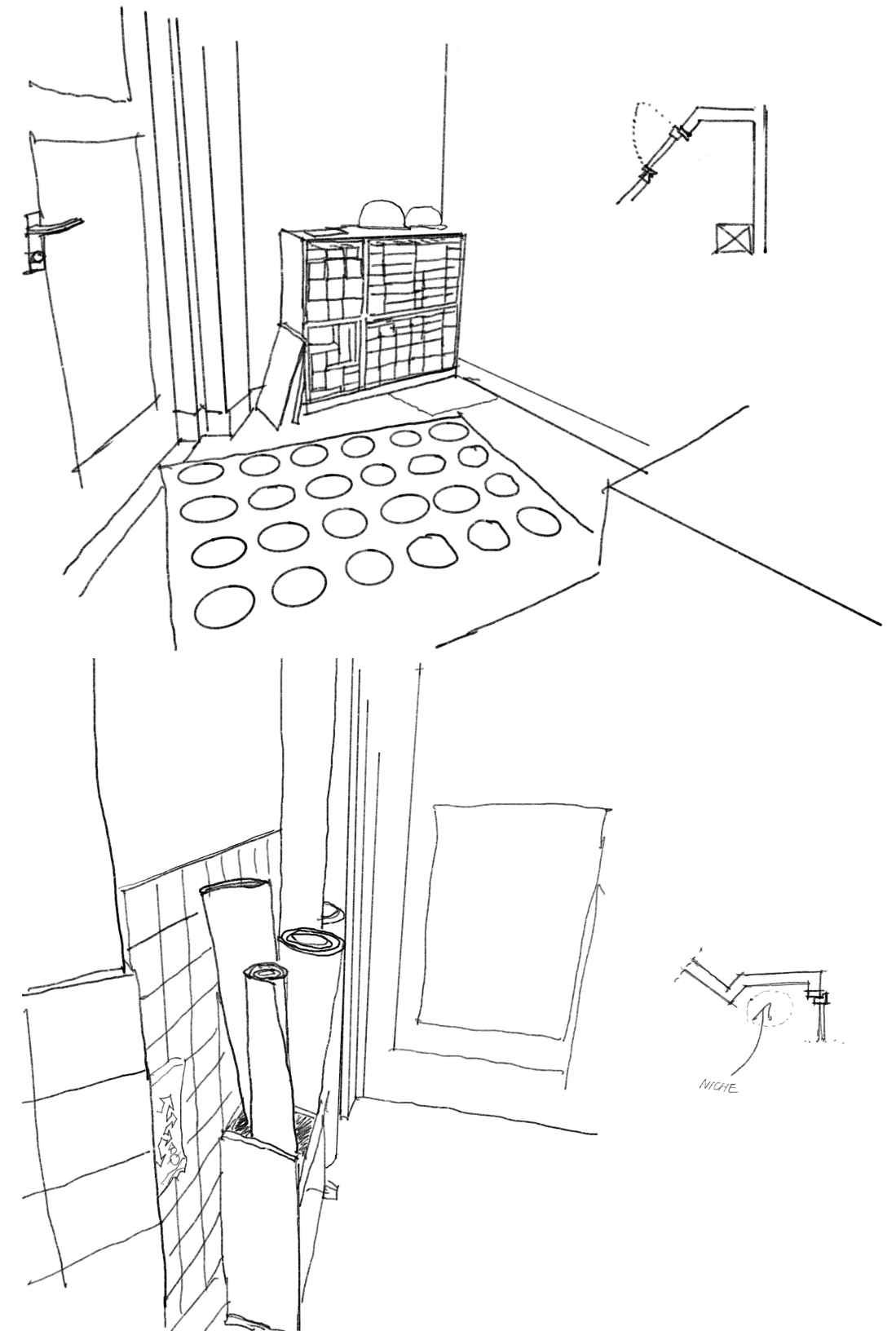
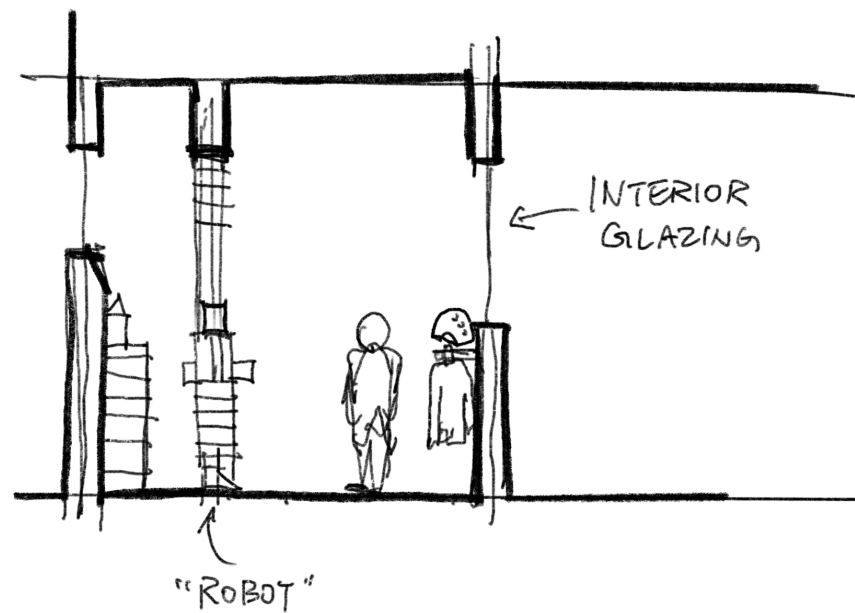


children



There are a lot of corners, or niches, for the younger children, also to display their work. For example, that 'robot' over there. Smaller kids need smaller, tighter spaces.

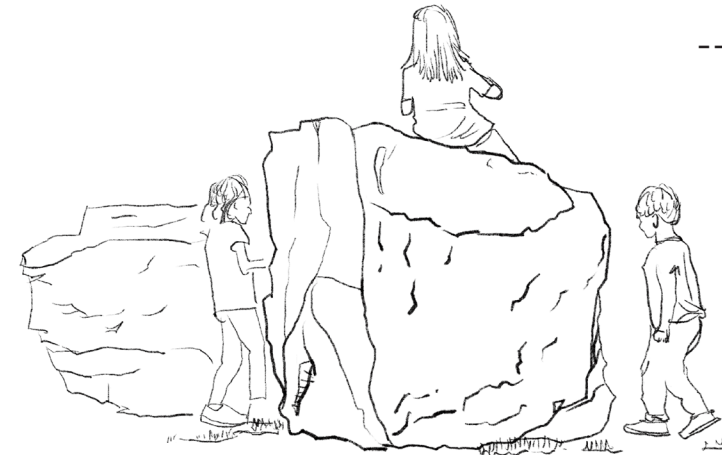
-- Arjen (Delft)



Delft Oostpoort primary school

When you have such a location (Friche Josaphat), I wonder how often the school visits it? Children needs discovery spots. Outdoor classes could also be a good idea. Smaller kids don't understand a whole lot, but they always benefit from a rich environment.

-- Arjen (Delft)



But again, it is about being in the real world. Learn about the seasons by experiencing them, and not reading it off a book.

-- Arjen



Children have a sense for danger. If they feel like something is dangerous, they will not do it. We had a kid one time who climbed on top of a pole. He looked down and decided it was too high for him to come down himself. So he cried for help.

large vs. small spaces

collective vs. individual

loudness vs. silence

agitated vs. calm

discovery vs. comfort

freedom vs. boundary

active vs. static

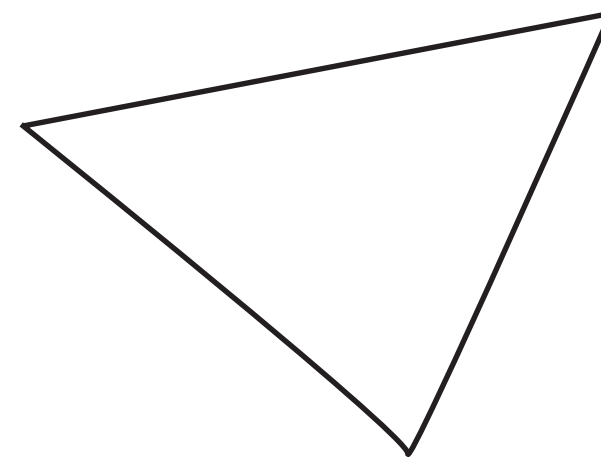
light vs. dark

into the site





SCHOOL



ACTORS

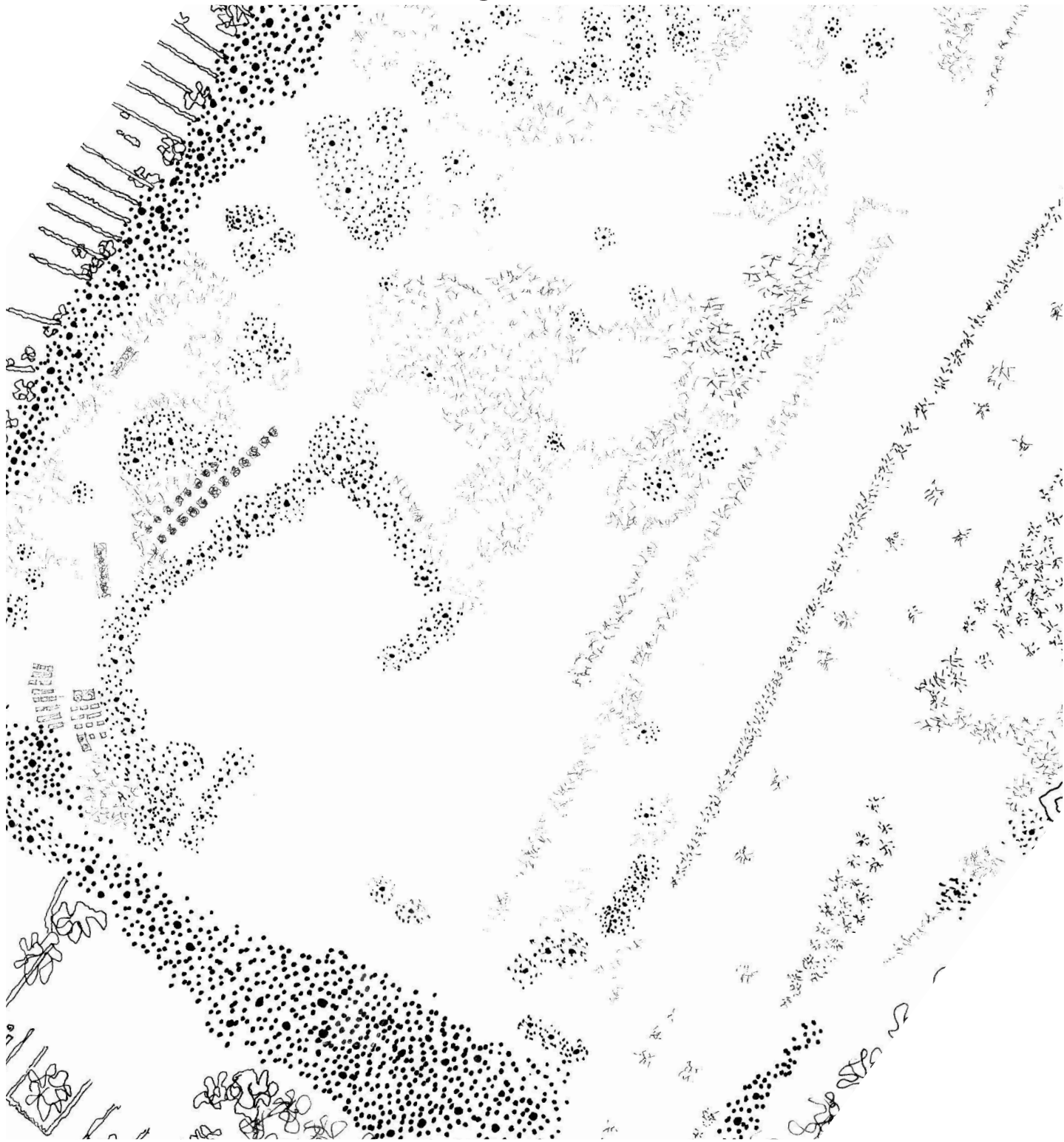
MICROCLIMATE



micro climate

microclimate

vegetation

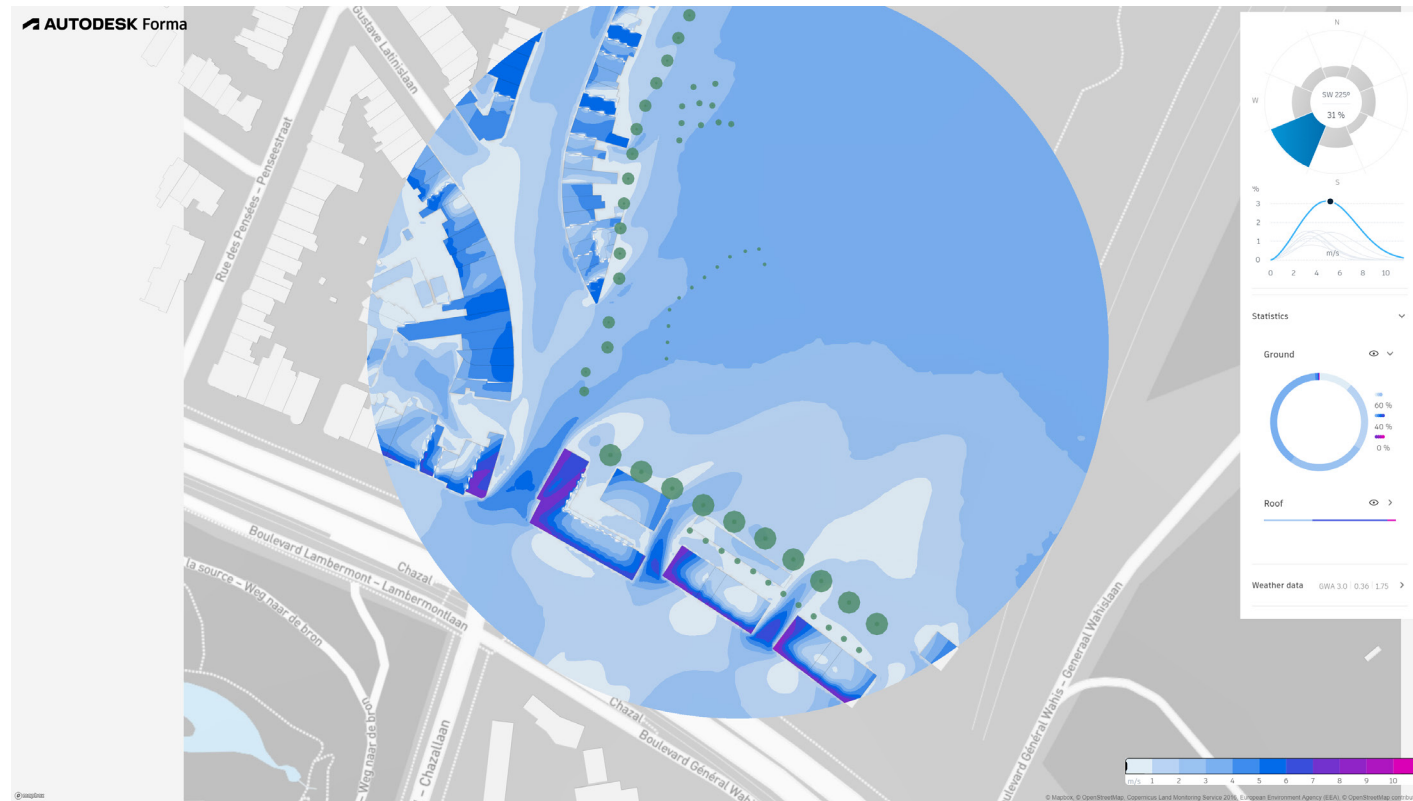


▲ groupwork: Nino, Prajwal, Tarini

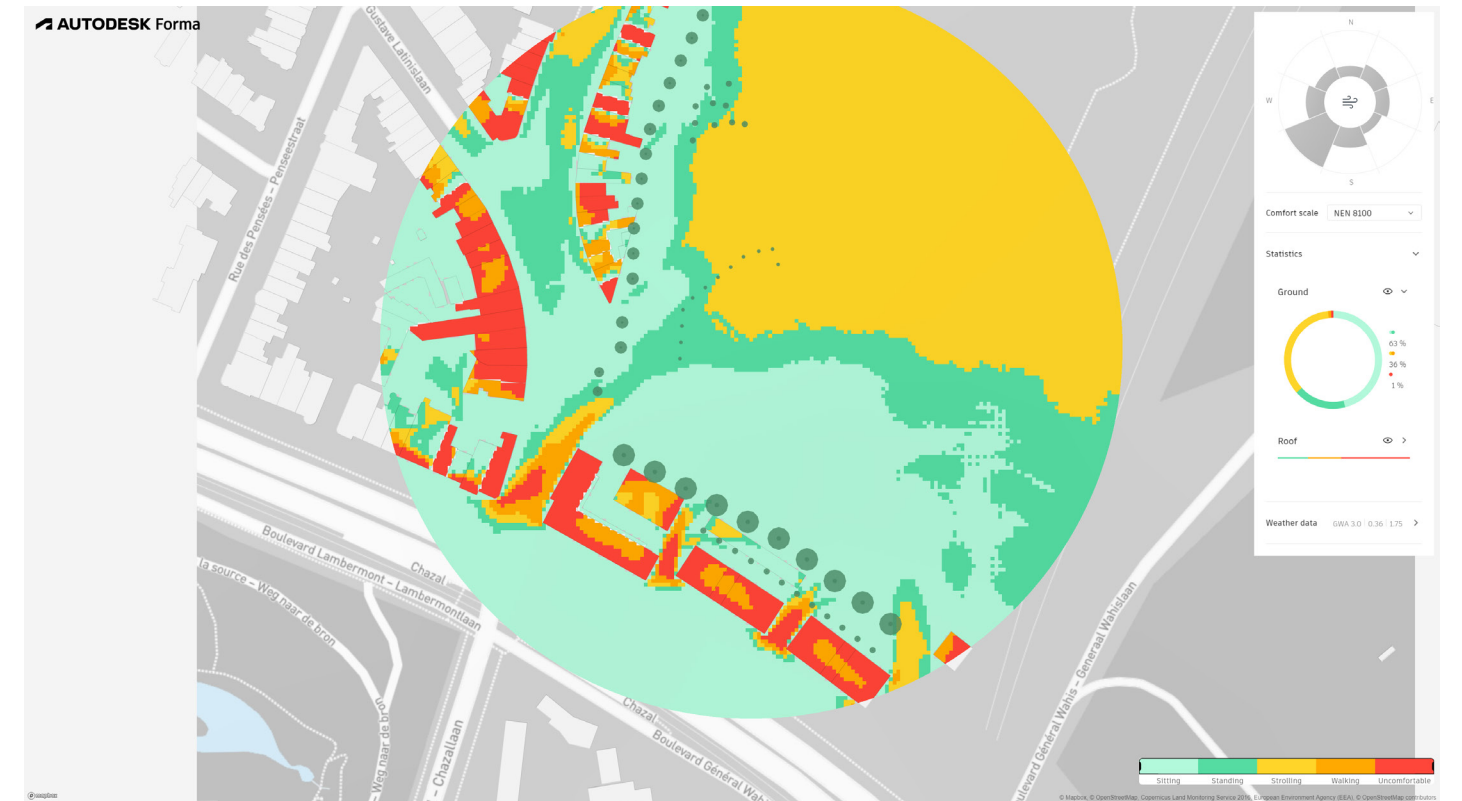
terrain & soil



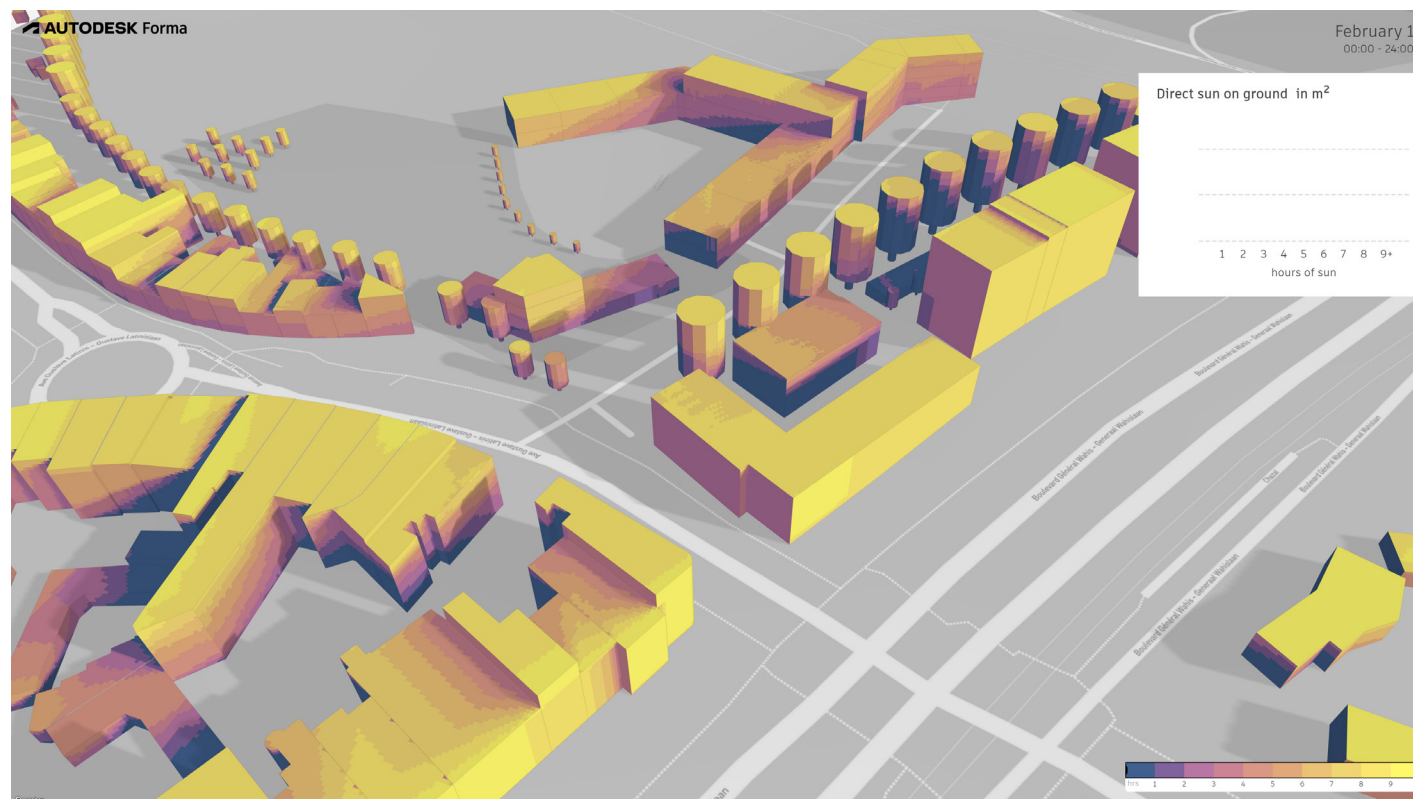
microclimate



Wind from South-west



Wind overall comfort



The existing terrain, vegetations and buildings are factors for micro-climate. Buildings on the south of the site causes higher wind speed and cast shadows. The tree lines act as a shade in the summer and let light through in the winter. The circus ground is encircled by additional trees, while sitting half a meter lower, creating a threshold.

simulation using Forma



Spaces marked by tree lines



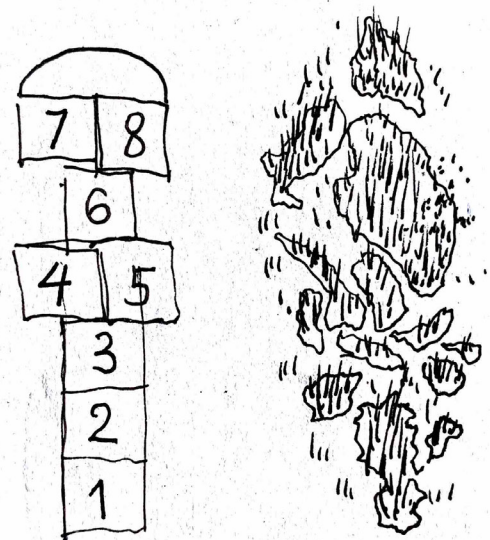
Shadow by buildings



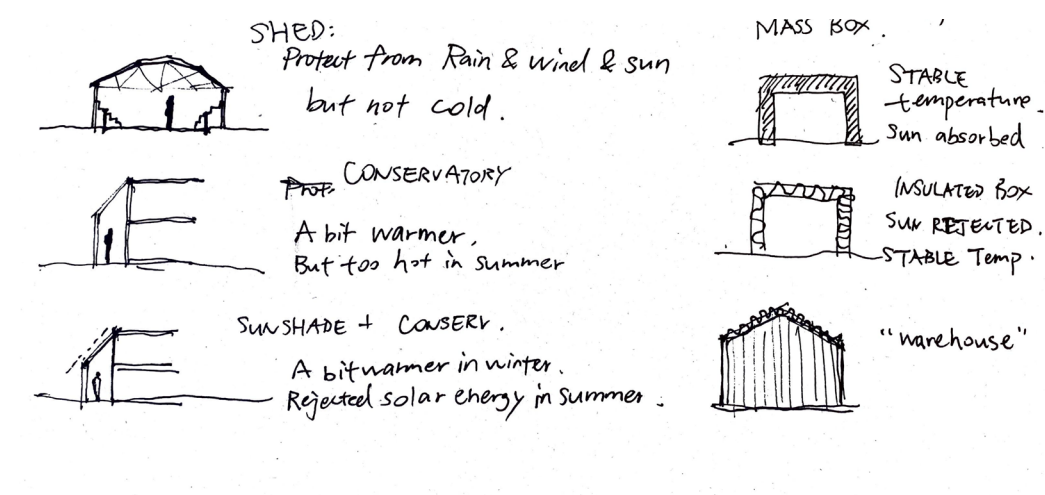
microclimate



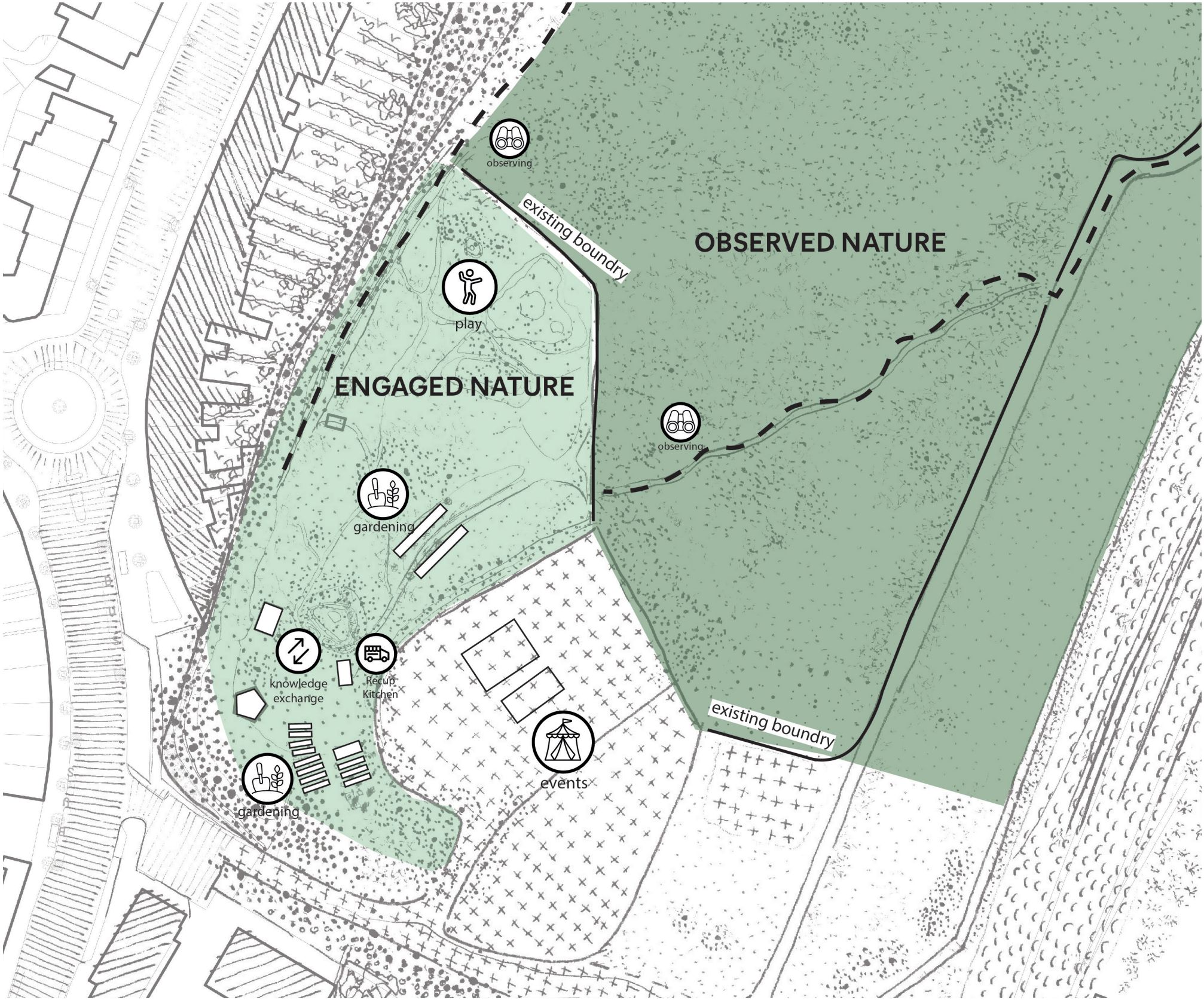
Visiting the site during different months highlights the site's sensitivity to climate., a real phenomenon inside a hardened and grey city. It behaves wildy differently each season, with winter being the most playful. Stepping over the marsh and puddles is like playing a game, bringing one back to childhood. When it freezes, the game is added with an extra crunchy touch.



microclimate (made)

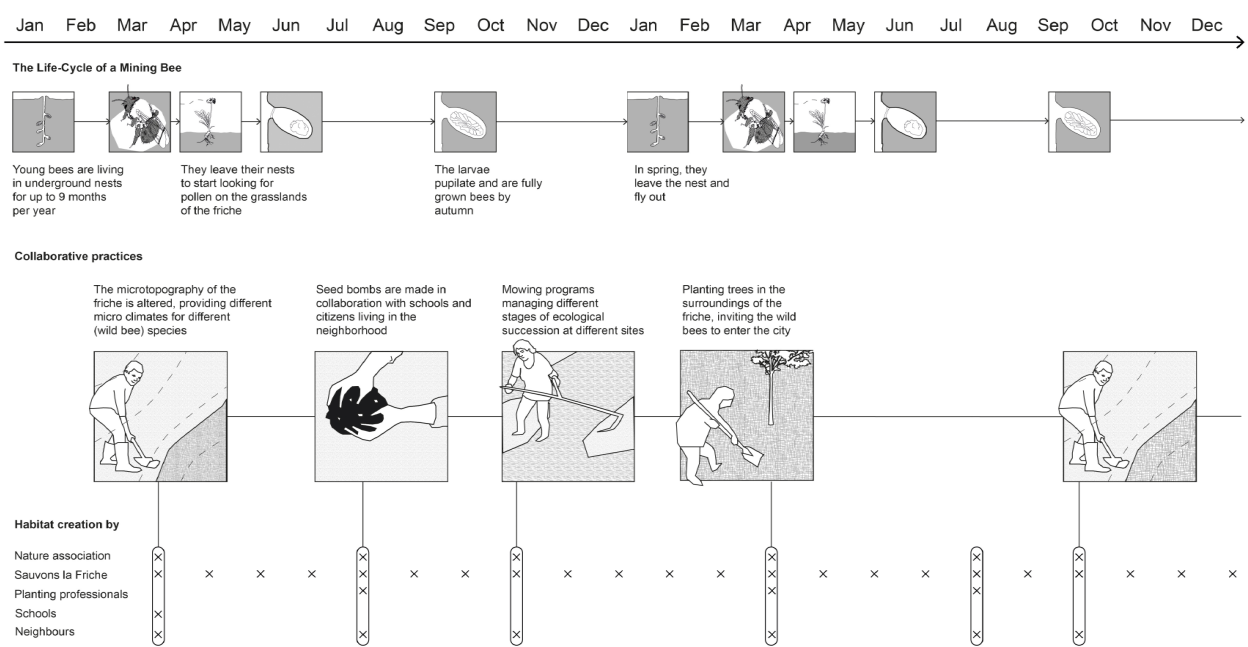


Under the radar of architects and planners, are the numerous structures the dwellers of Friche Josaphat have built for themselves. Structures in an around the Friche is a manifest of sufficiency and practicality. Here one can distill a few different degrees of sufficiency regarding the sheltering property of architecture. R for reduce.



activities

Lessons in nature: COLLABORATIVE PRACTICIES



BRAL & Natagora. (2021). Plan B Josaphat Manifesto. BRAL & Natagora.

Observation: insects and animals



Education: science, stories & histories



Recup kitchen, from farm to dining table



Craft&building

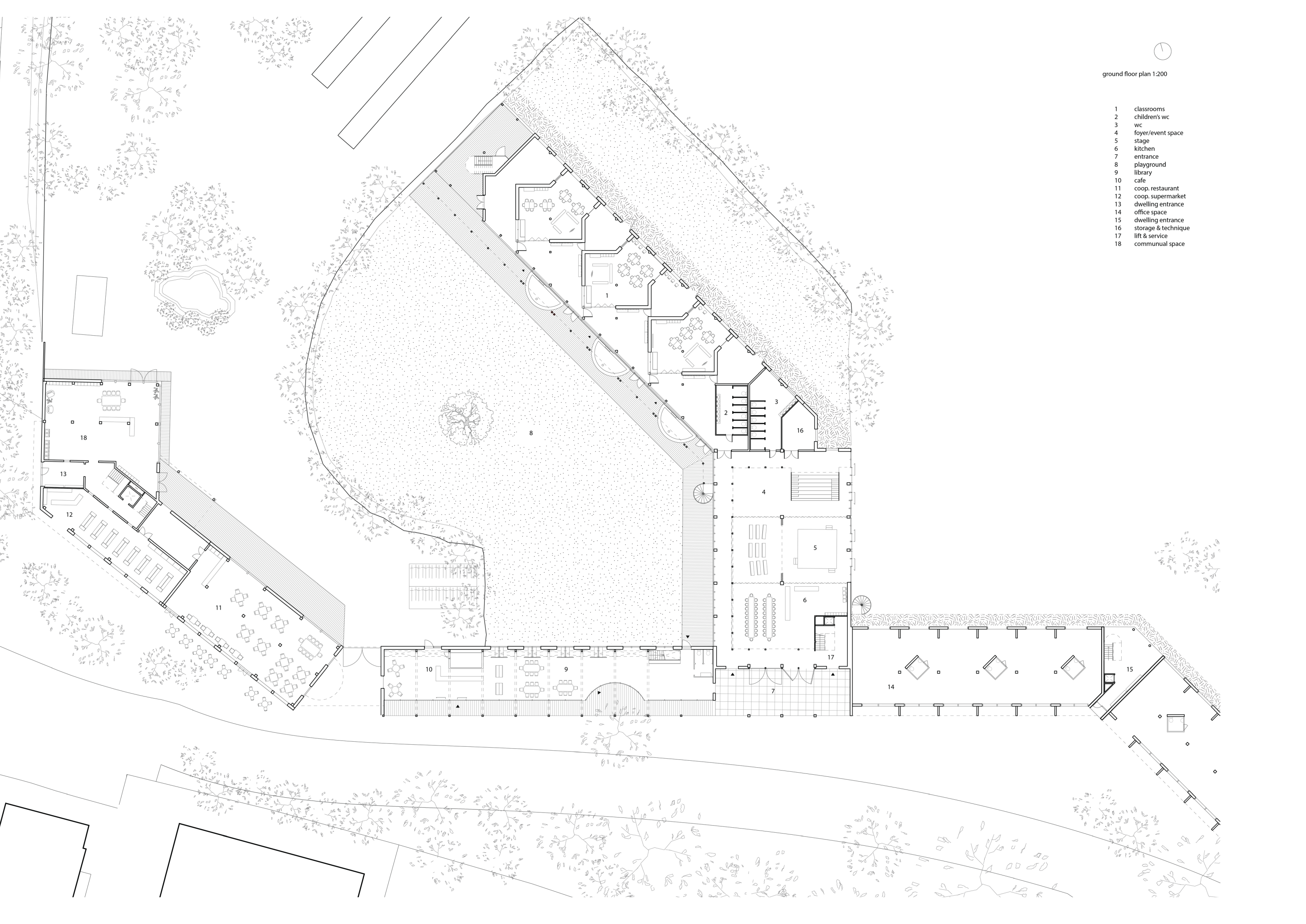


Play





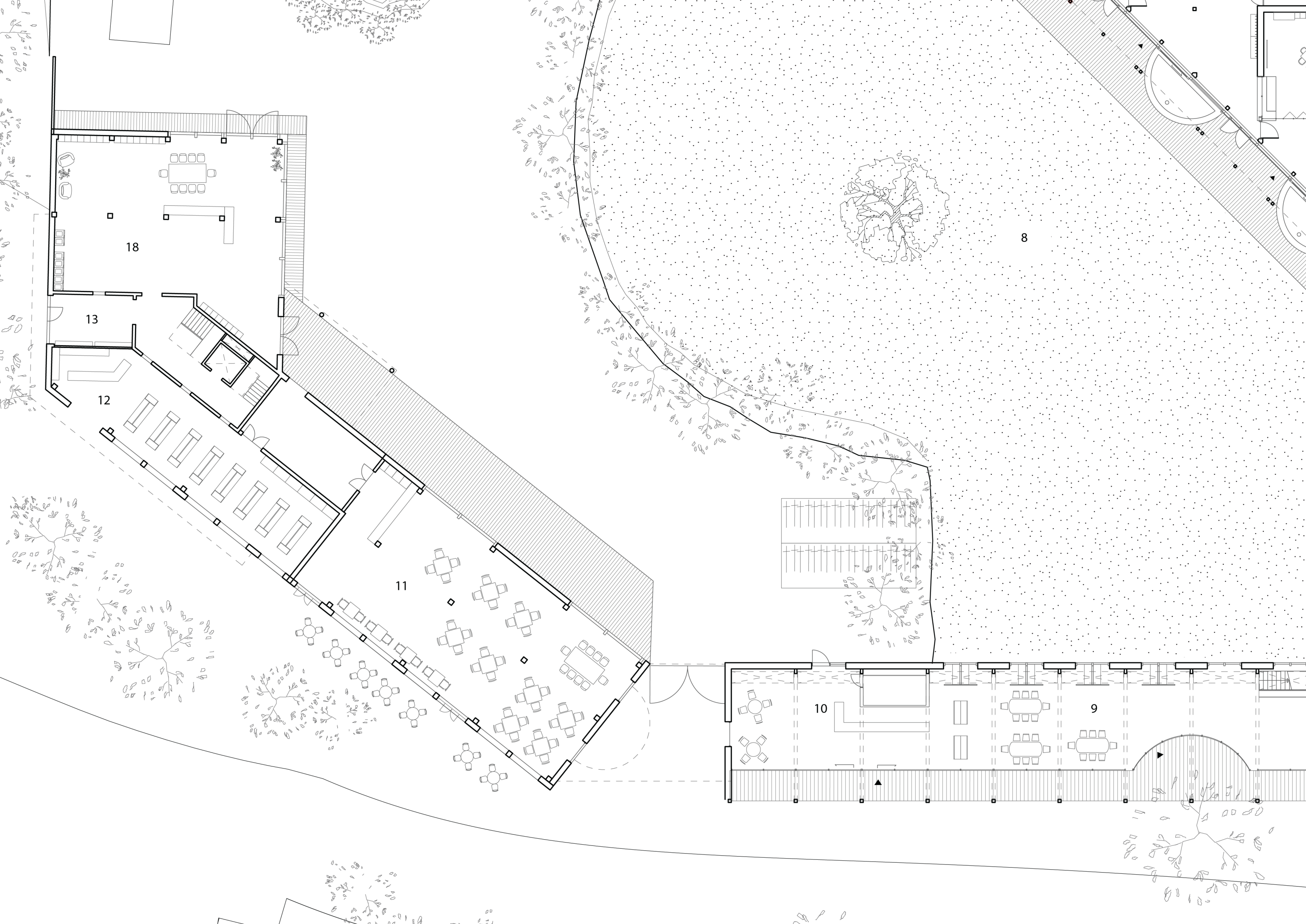
- 1 classrooms
- 2 children's wc
- 3 wc
- 4 foyer/event space
- 5 stage
- 6 kitchen
- 7 entrance
- 8 playground
- 9 library
- 10 cafe
- 11 coop. restaurant
- 12 coop. supermarket
- 13 dwelling entrance
- 14 office space
- 15 dwelling entrance
- 16 storage & technique
- 17 lift & service
- 18 communal space



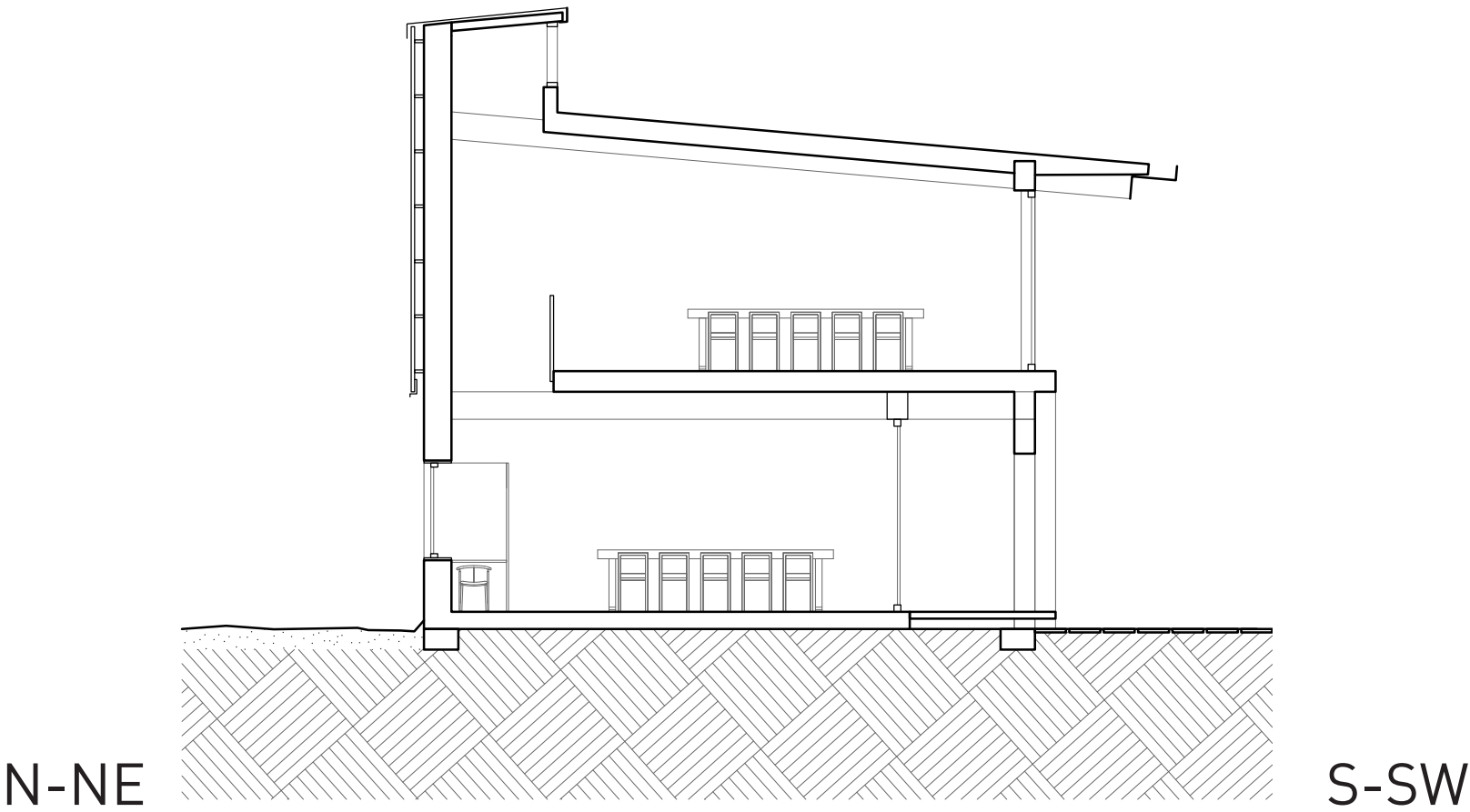


new pedestrian-cyclists street

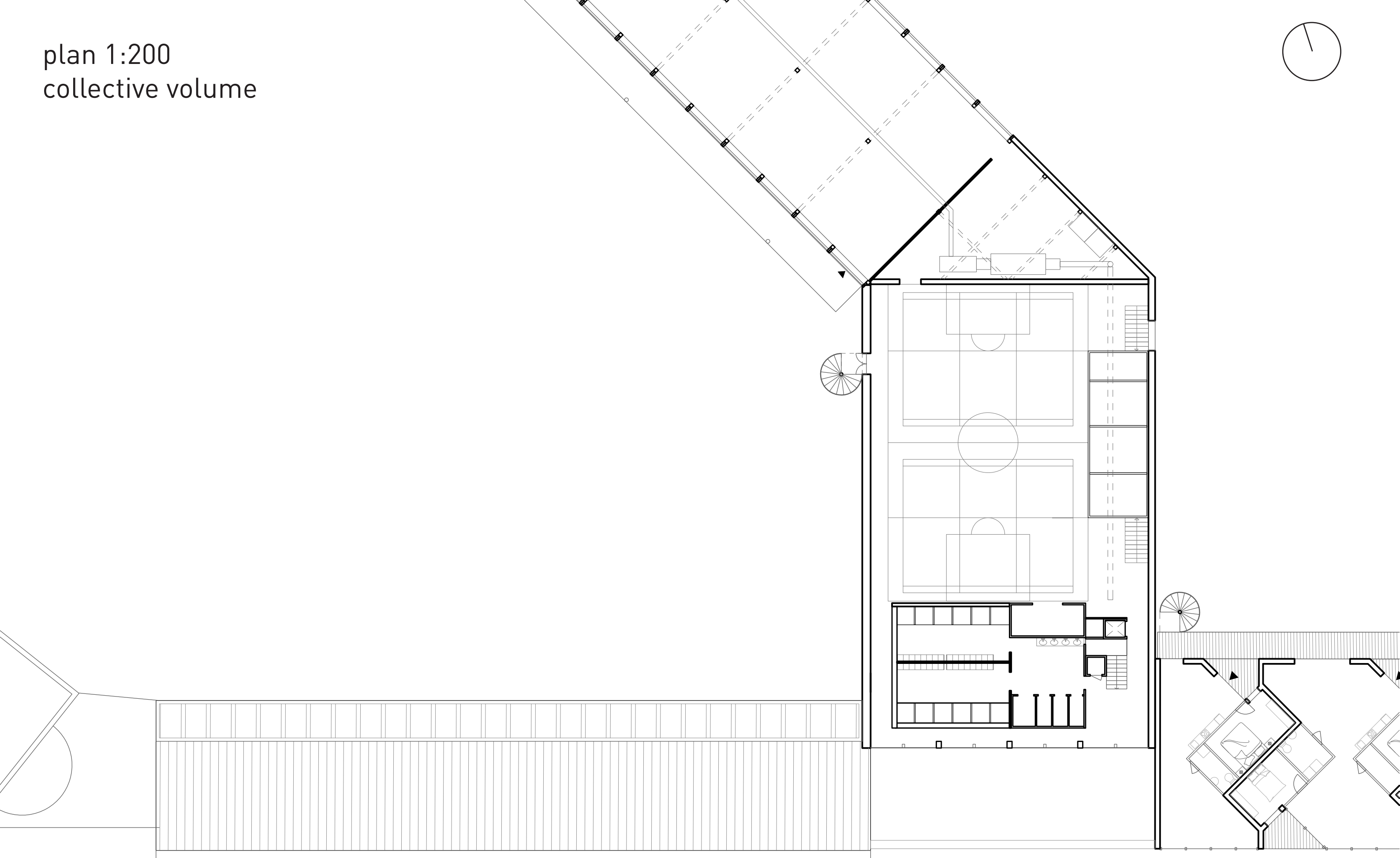
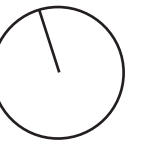




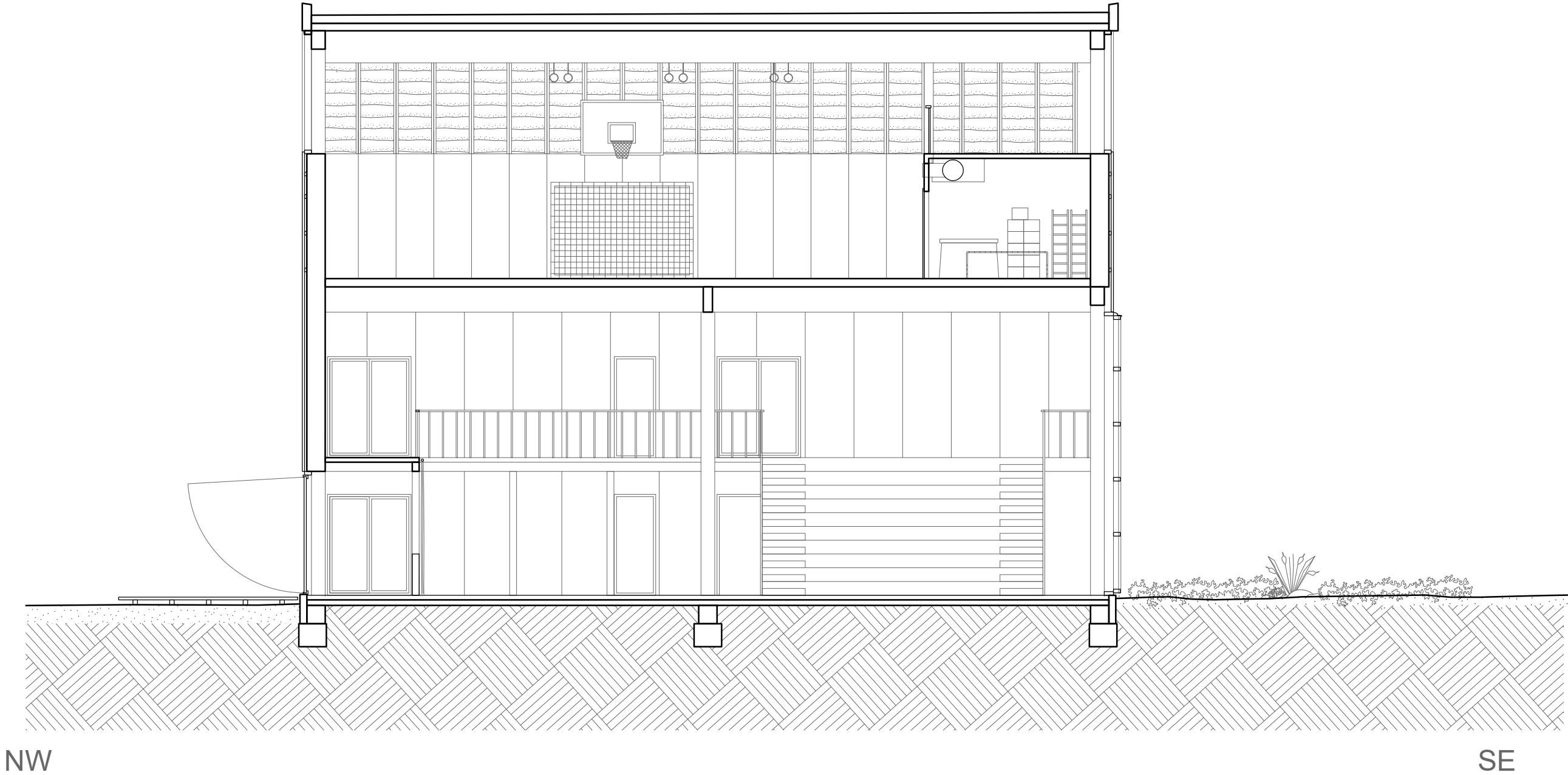
section 1:100
library



plan 1:200
collective volume

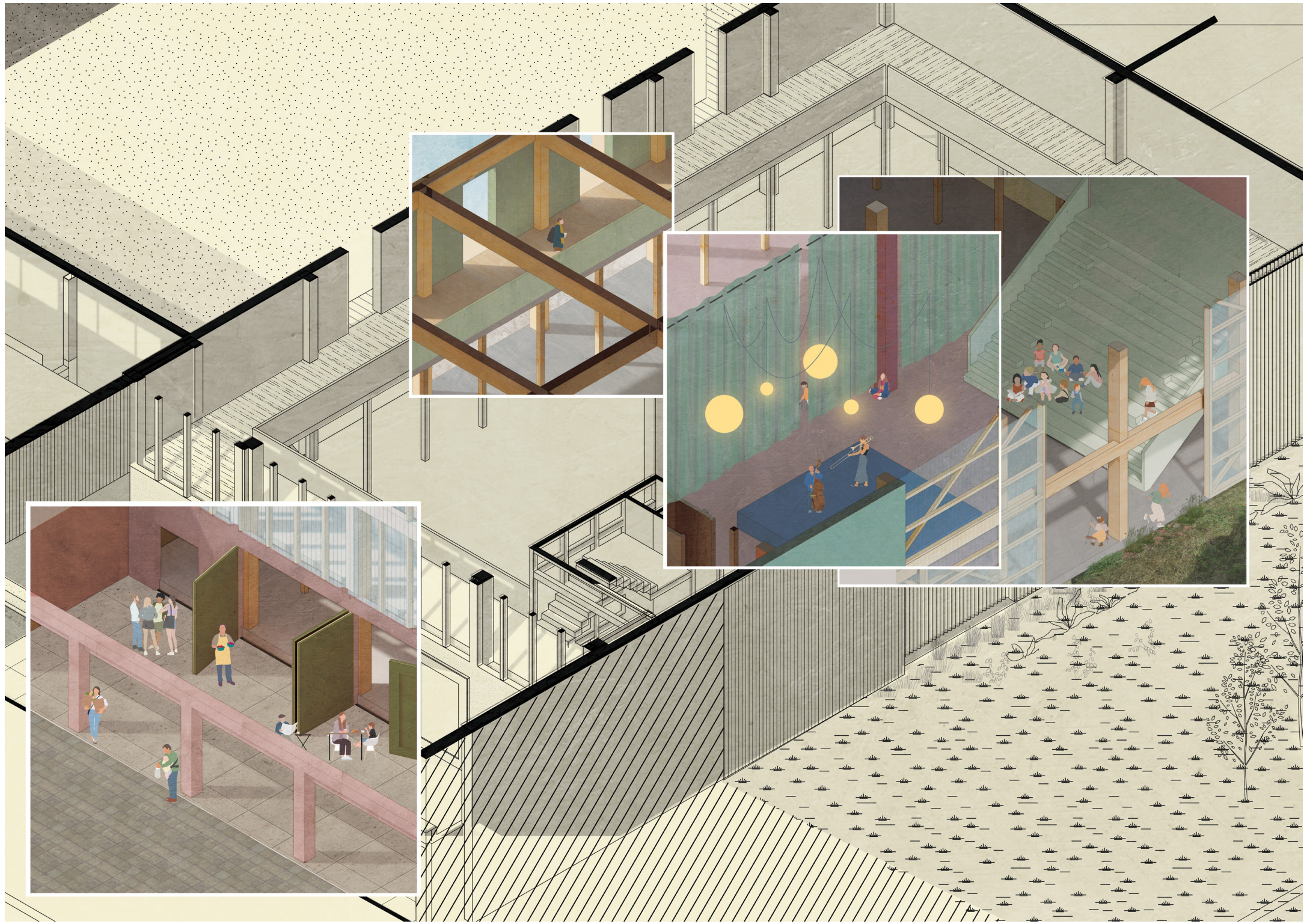


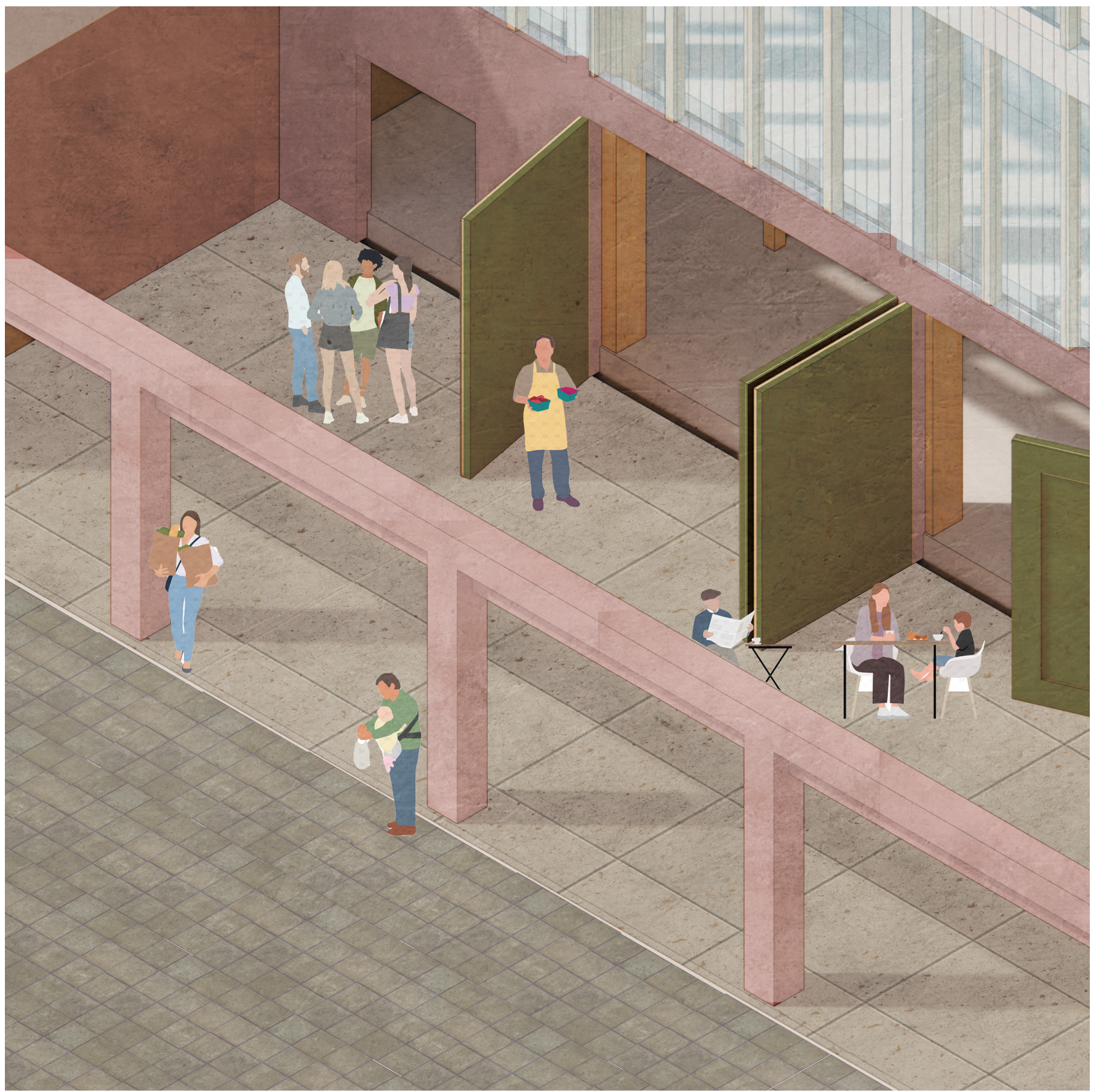
section1:100
collective volume













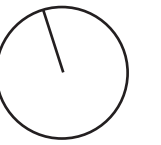




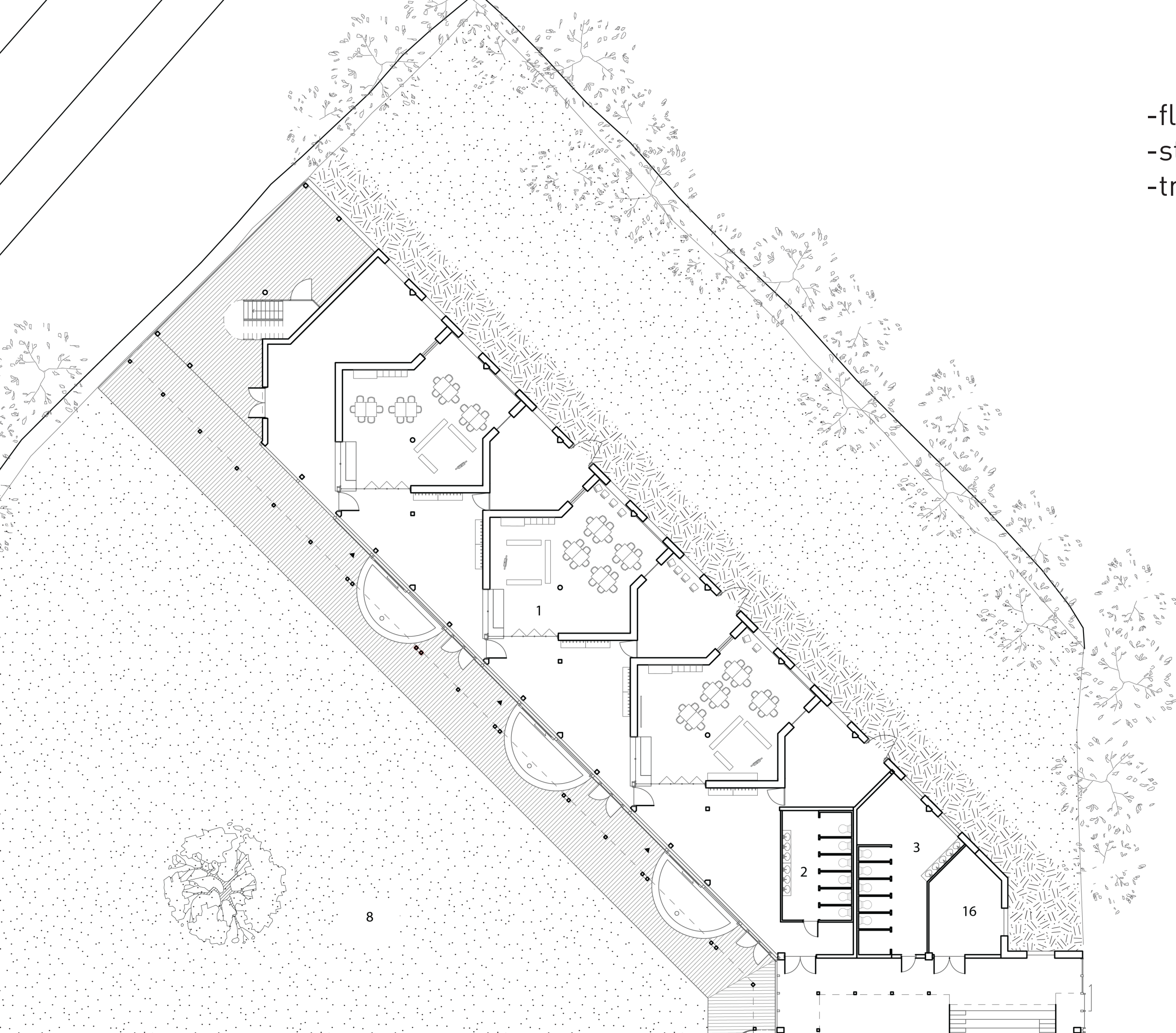


Behind the public “garden wall”



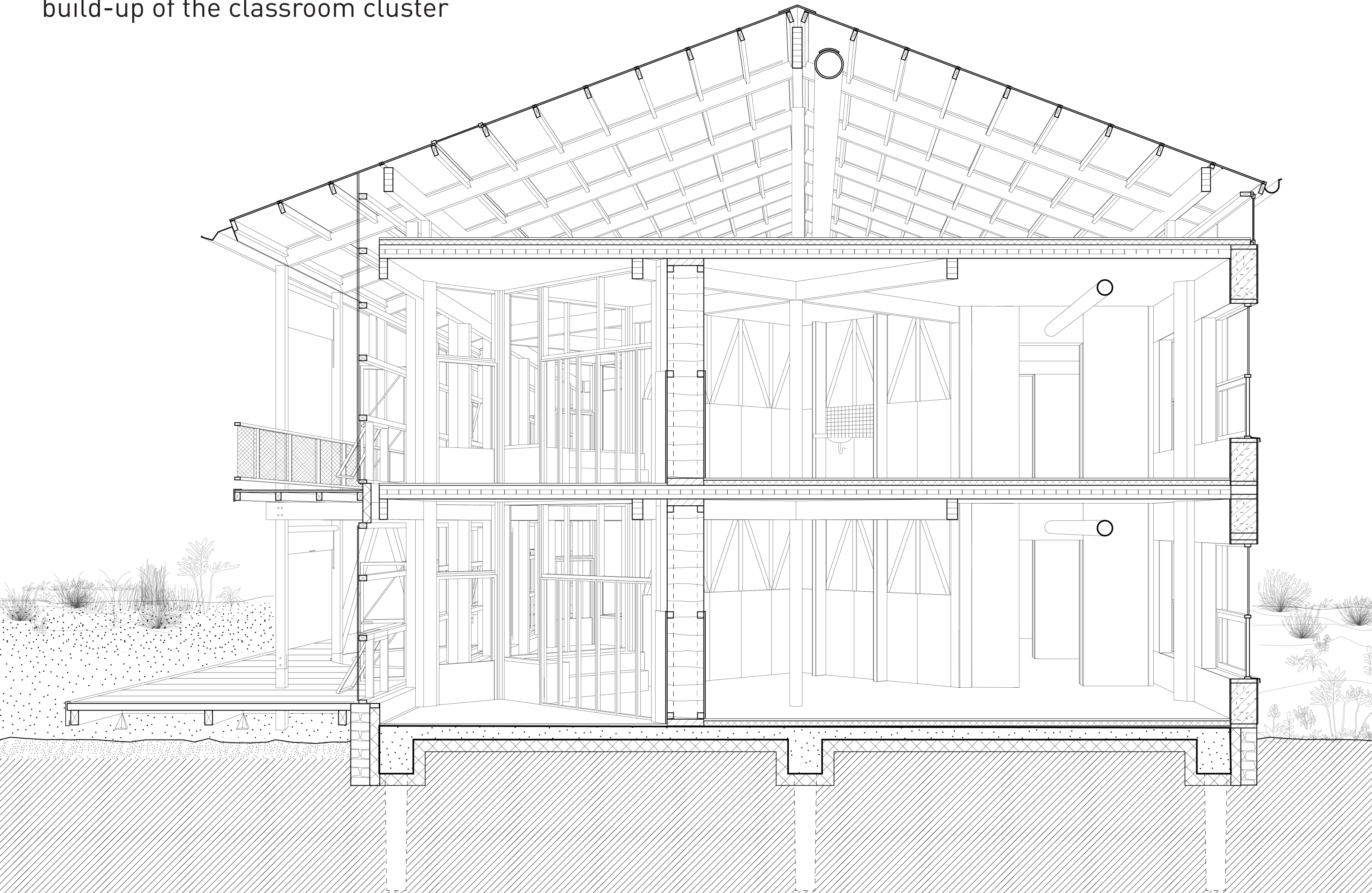


- fluctuating
- structure & space
- transition

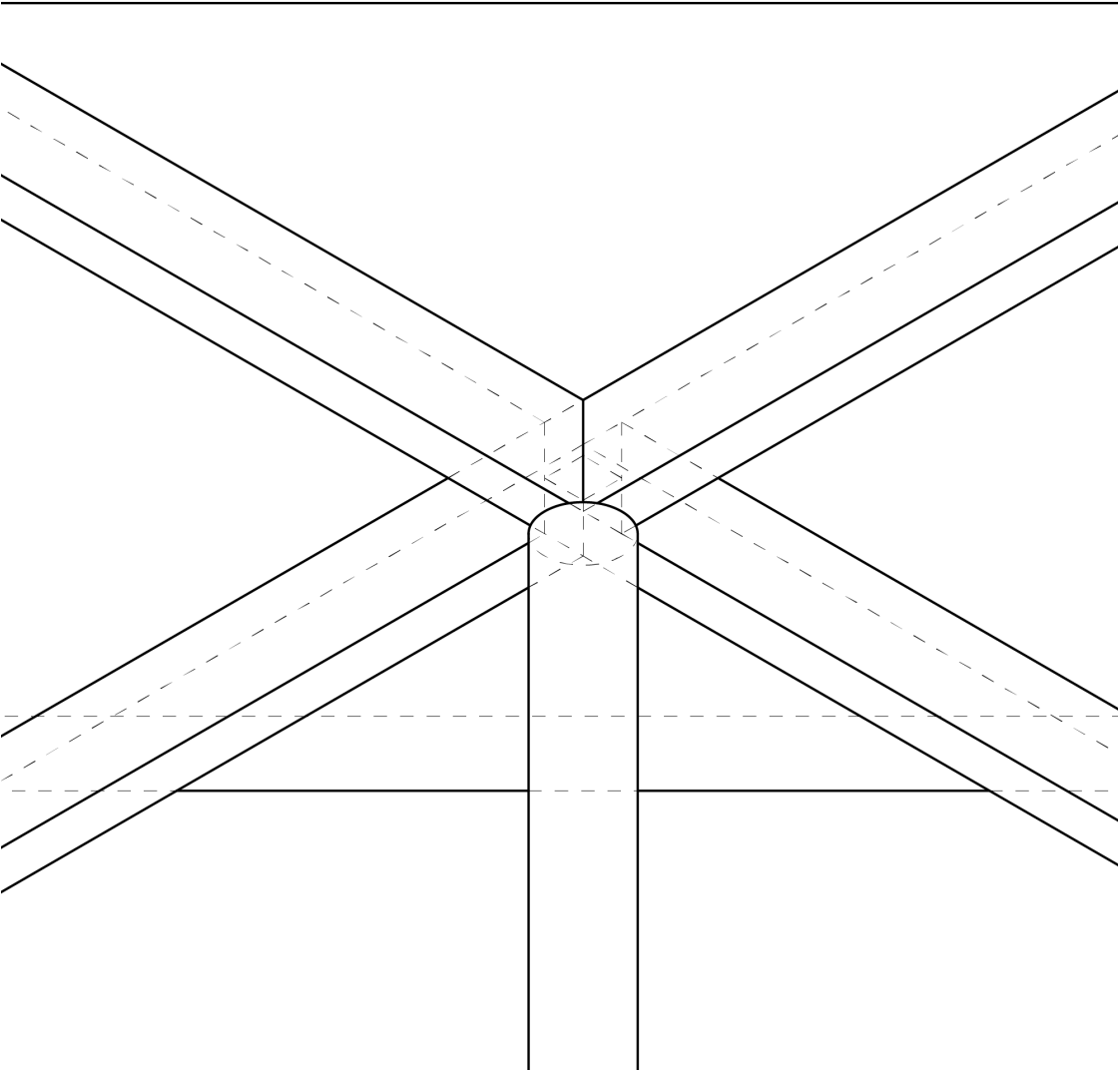
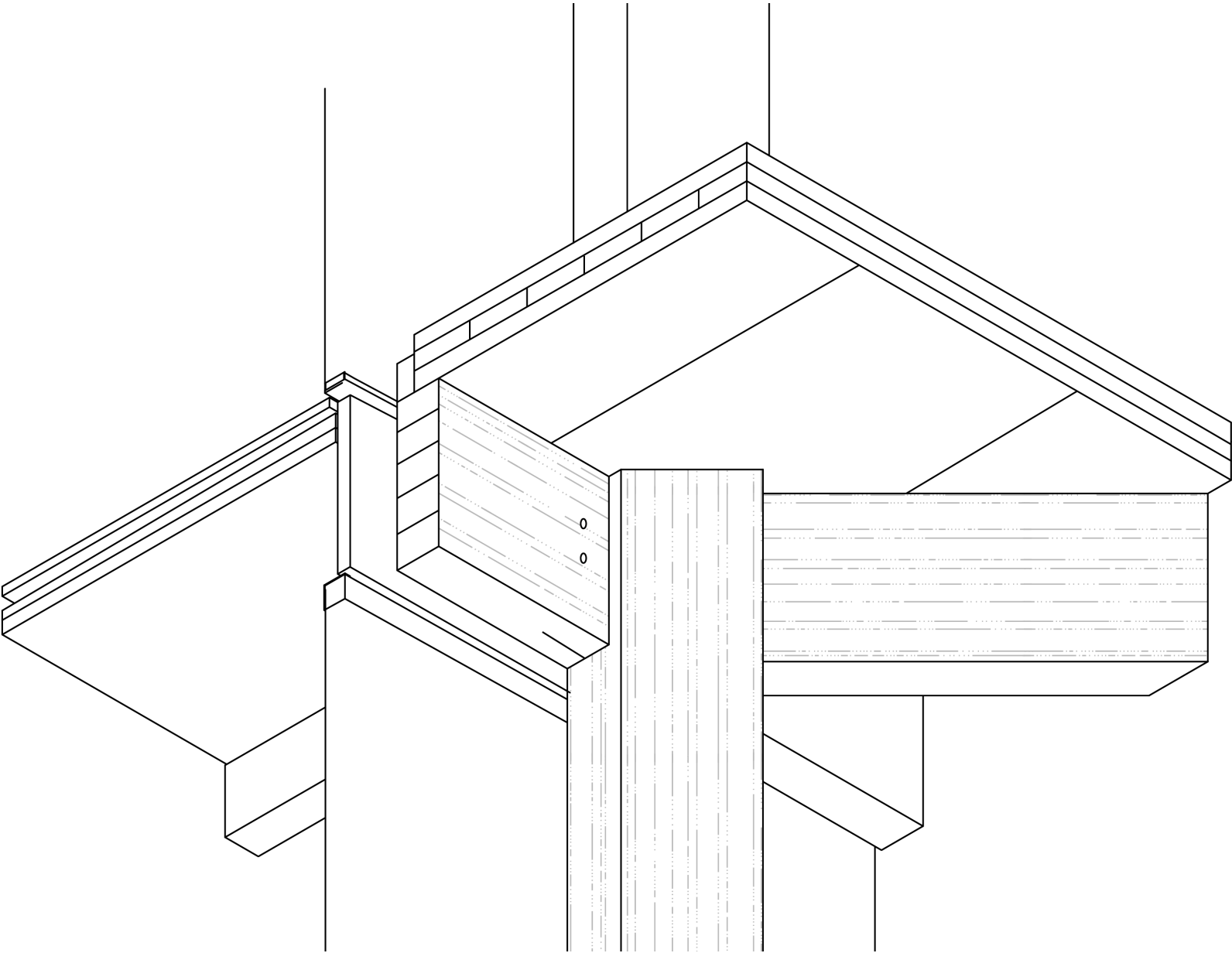


3rd wing

build-up of the classroom cluster

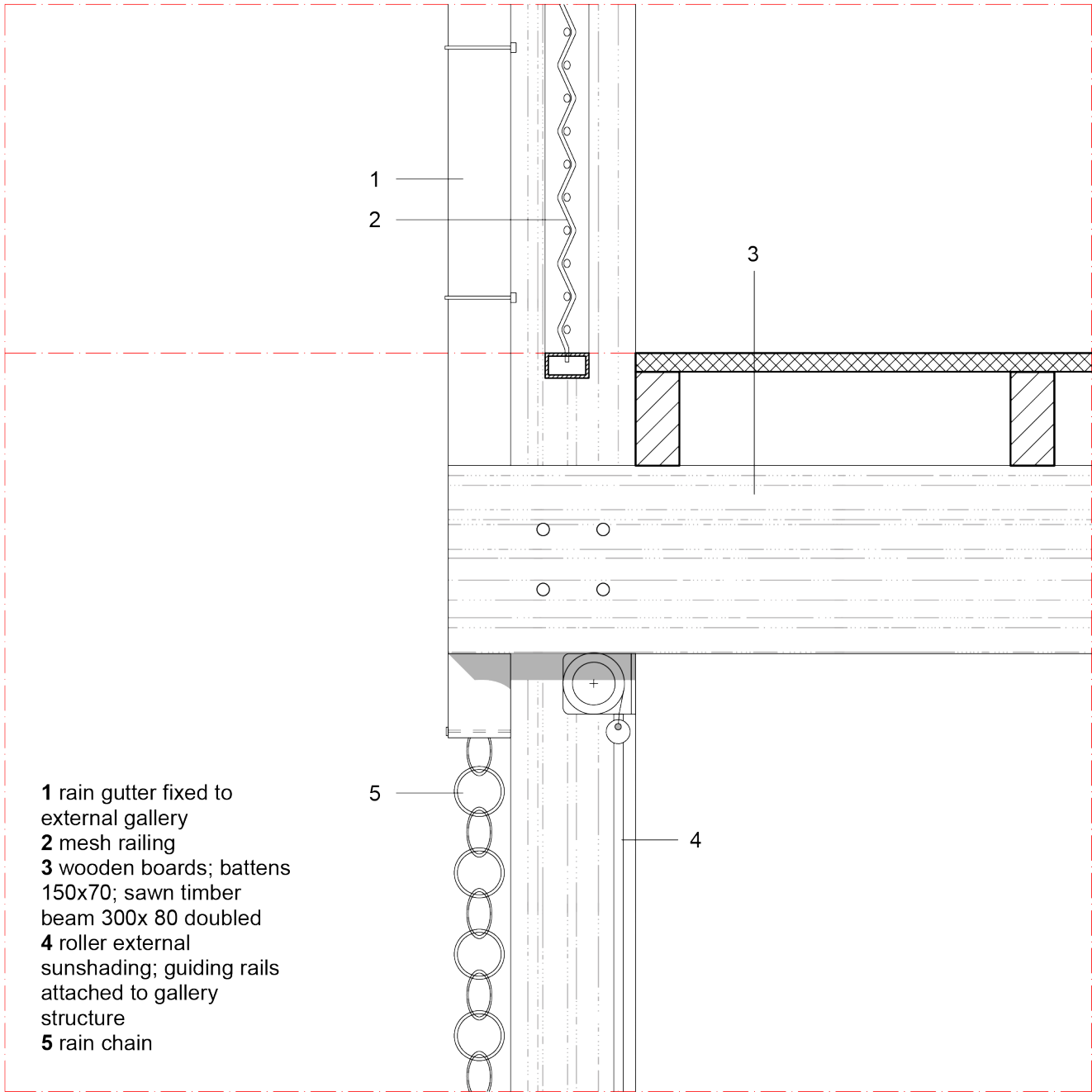


joinery details

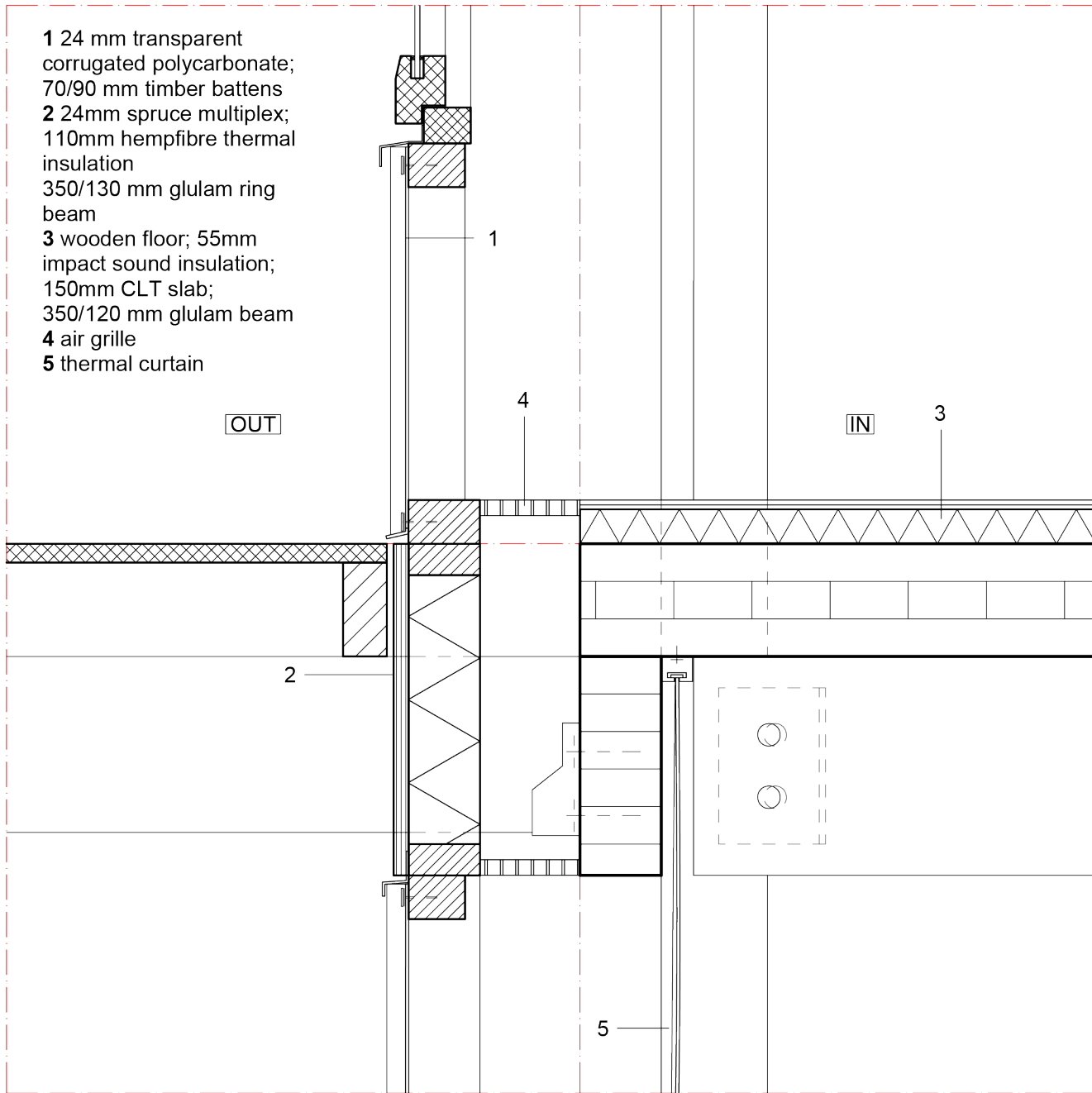


detail

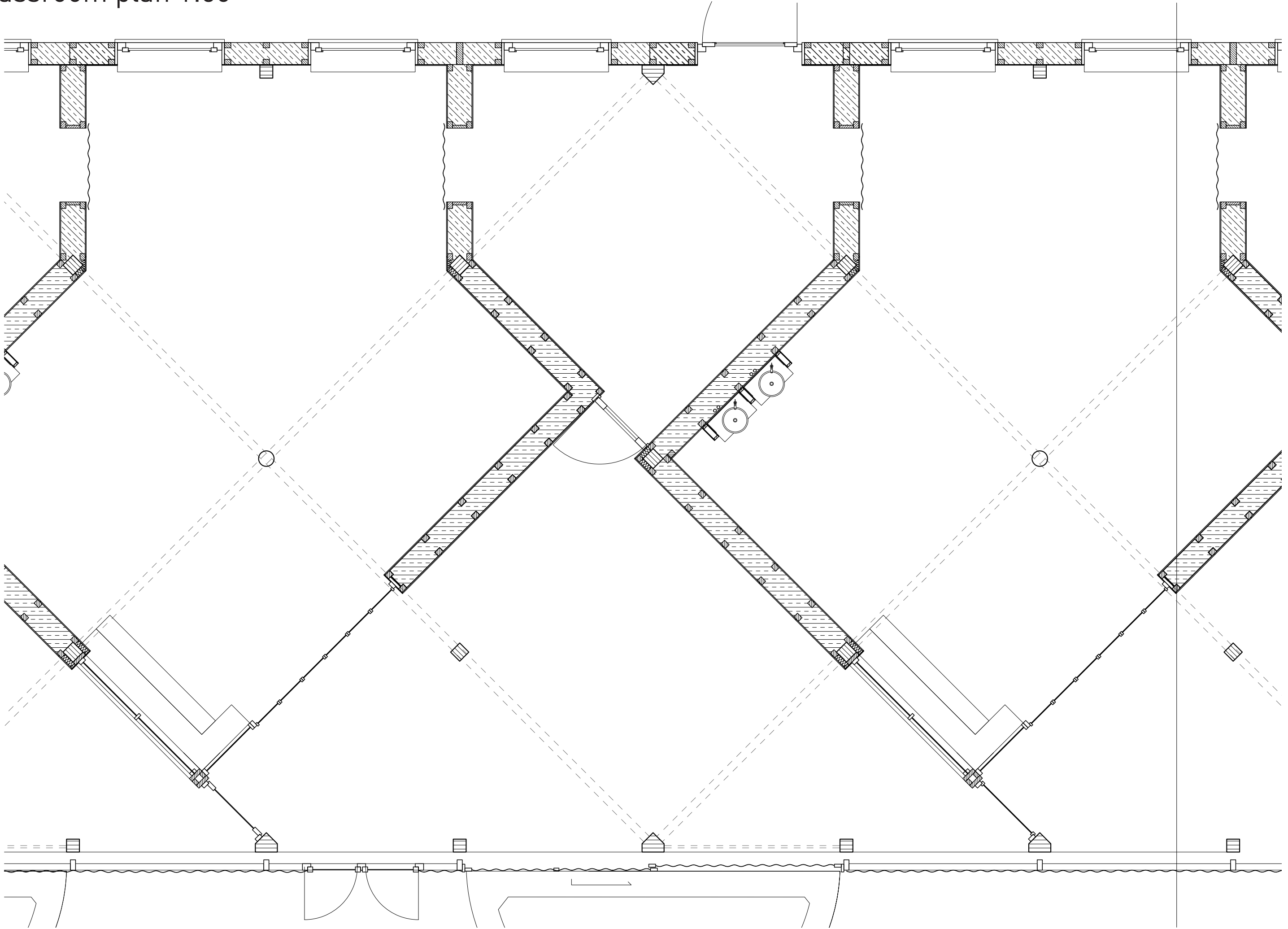
1:10 on A4



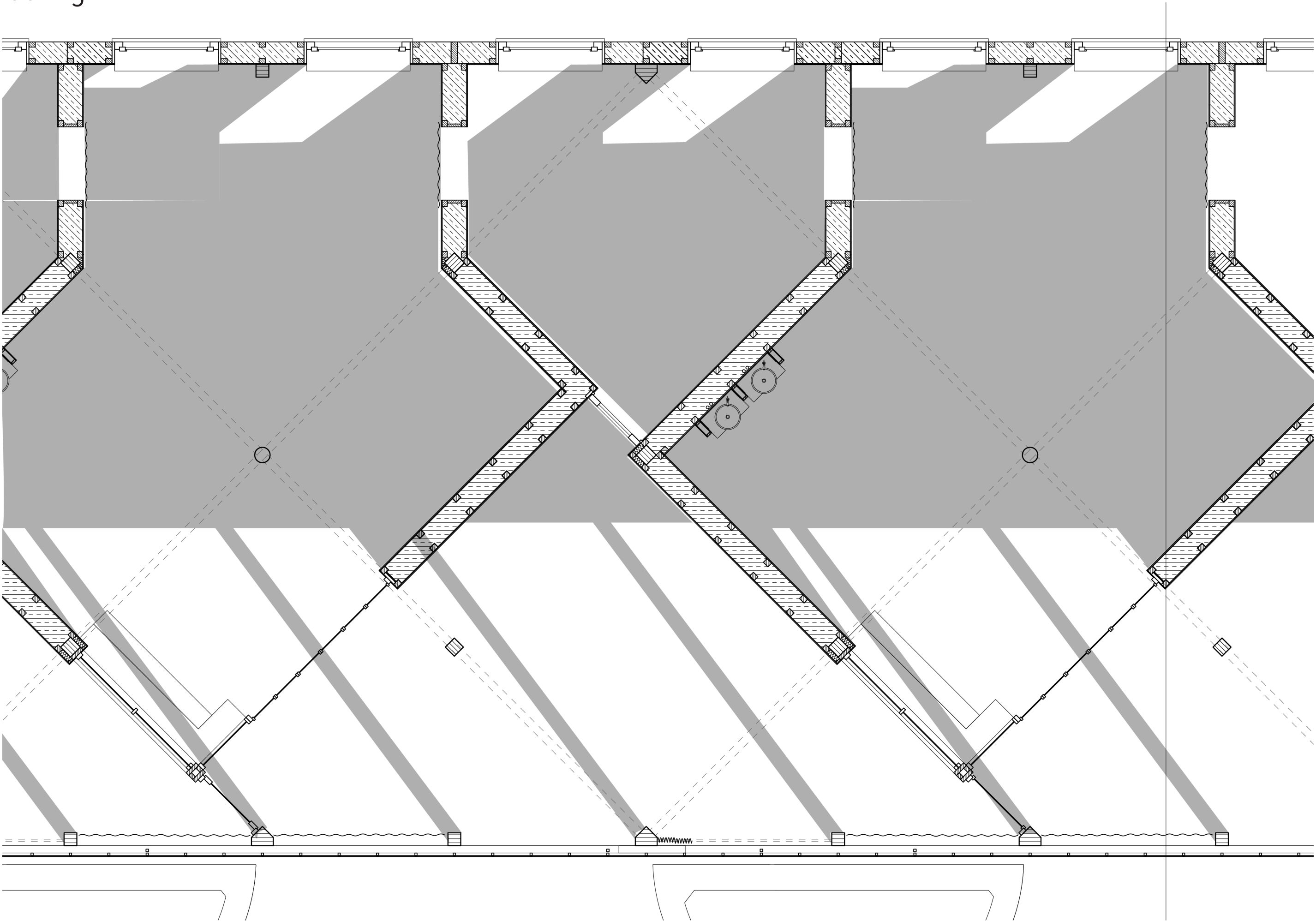
1:10 on A4



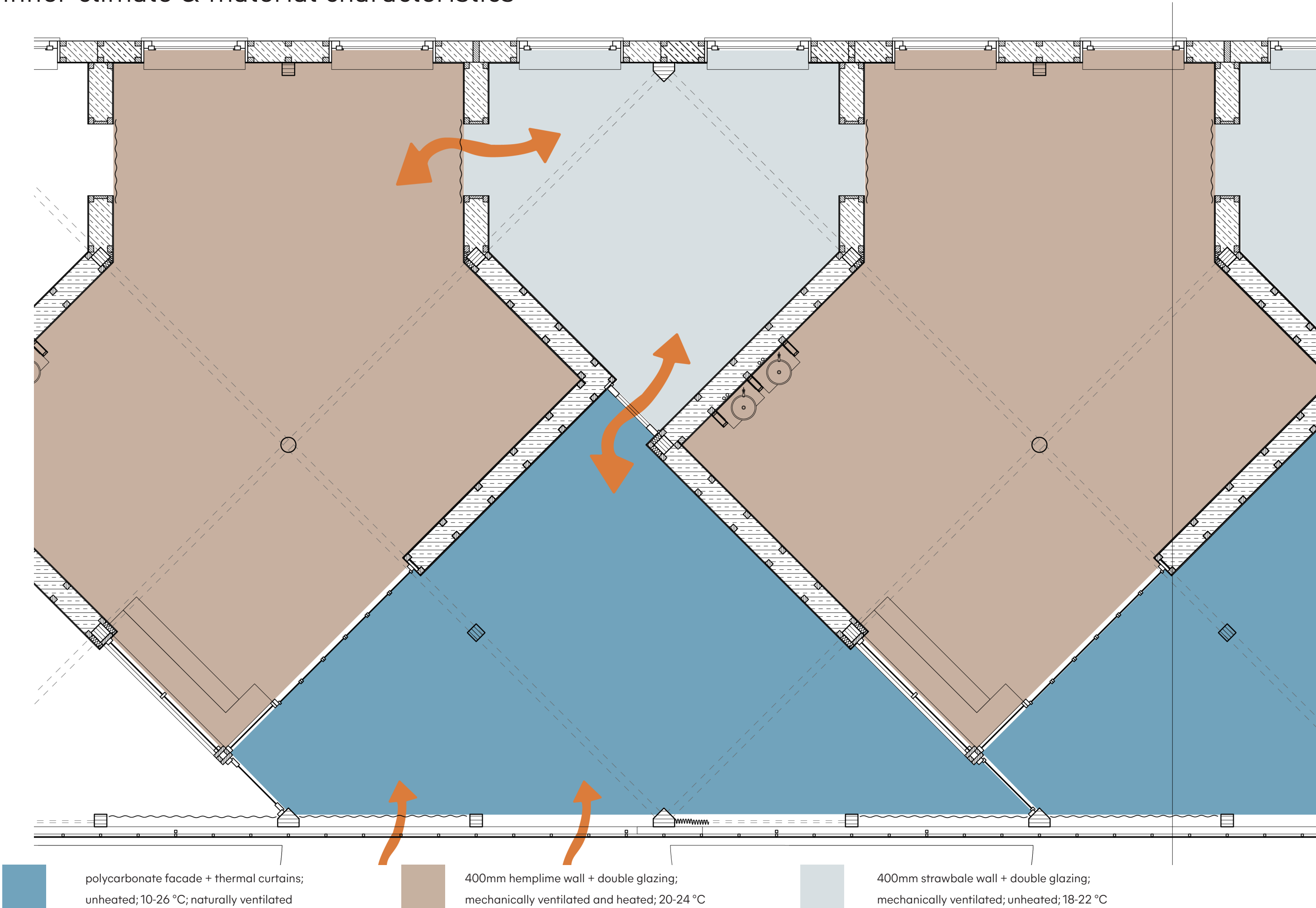
classroom plan 1:50



direct light



inner climate & material characteristics



Embodied study on thermal comfort

22.3C 46%RH



crowded studio space downstairs, winter

21.7C 47%RH



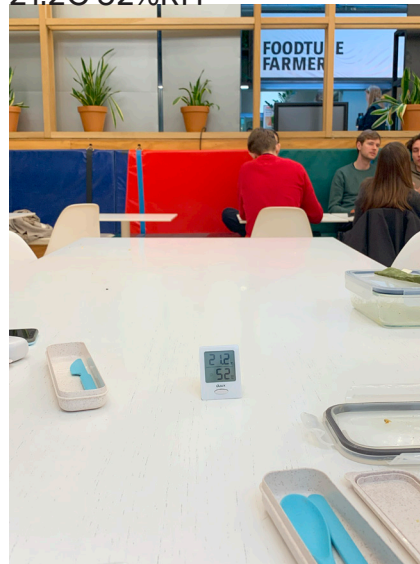
crowded cantine, winter

21.5C 52%RH



crowded cantine, winter

21.2C 52%RH



less crowded cantine, winter

22.3C 48%RH



model hall, winter

22.9C 46%RH



crowded studio, winter, rainy

21.2C 23%RH



empty studio, winter, sunny

19.8C 36%RH



arriving early morning in the studio, winter

22.5C 33%RH



double height studio space, ceiling vs. ground temp. (window open)

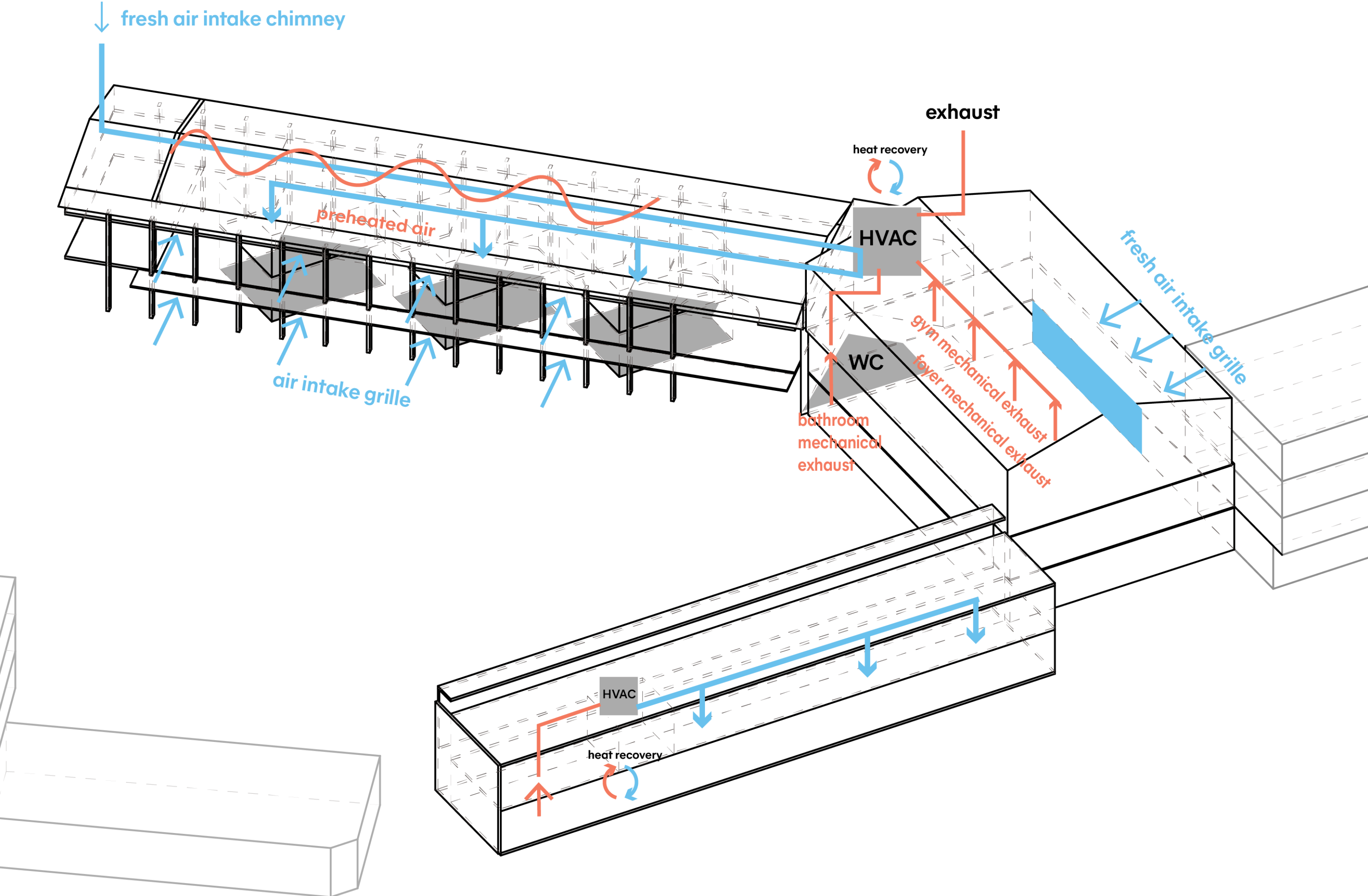
18.4C 39%RH

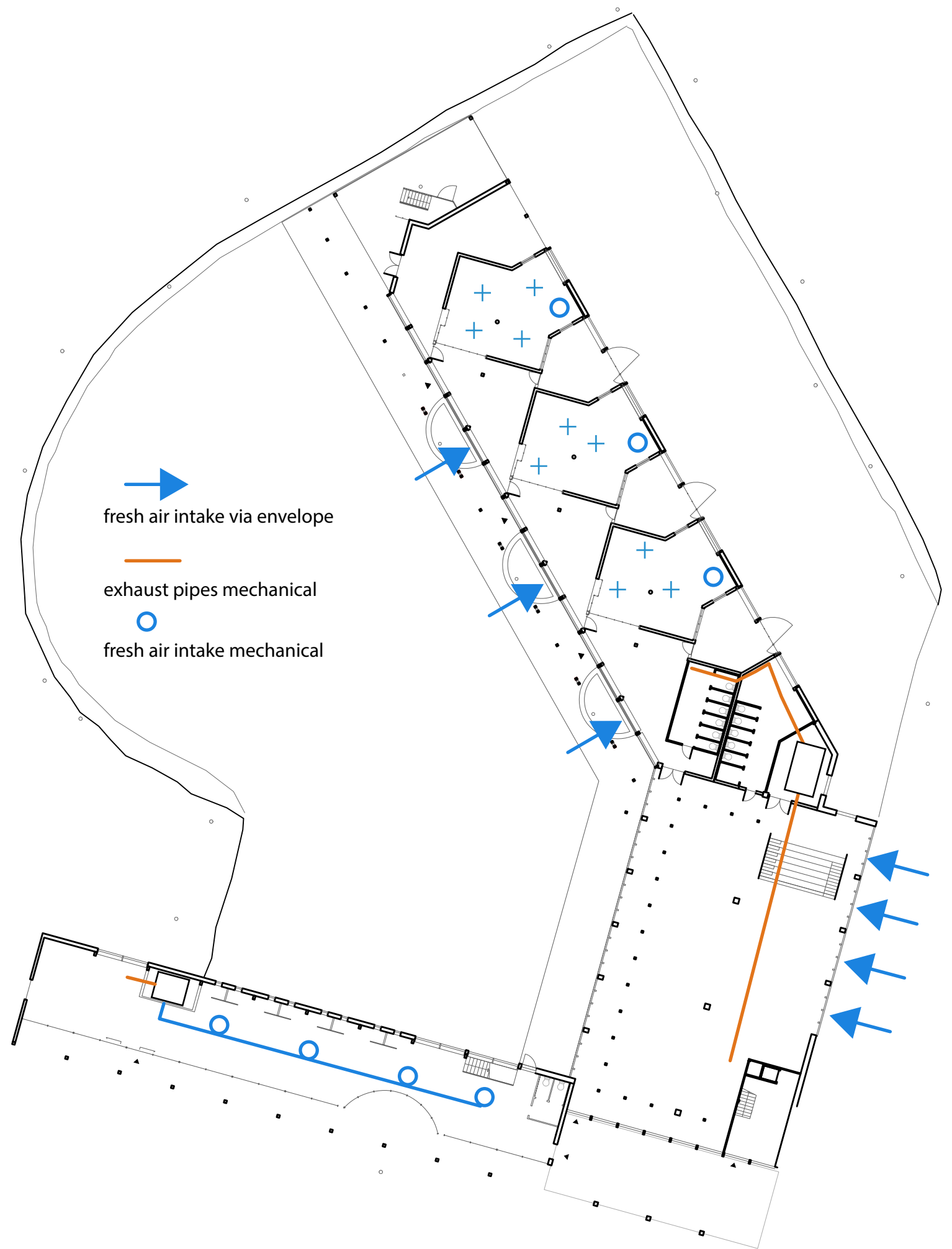


south facing bedroom (summer with direct light)

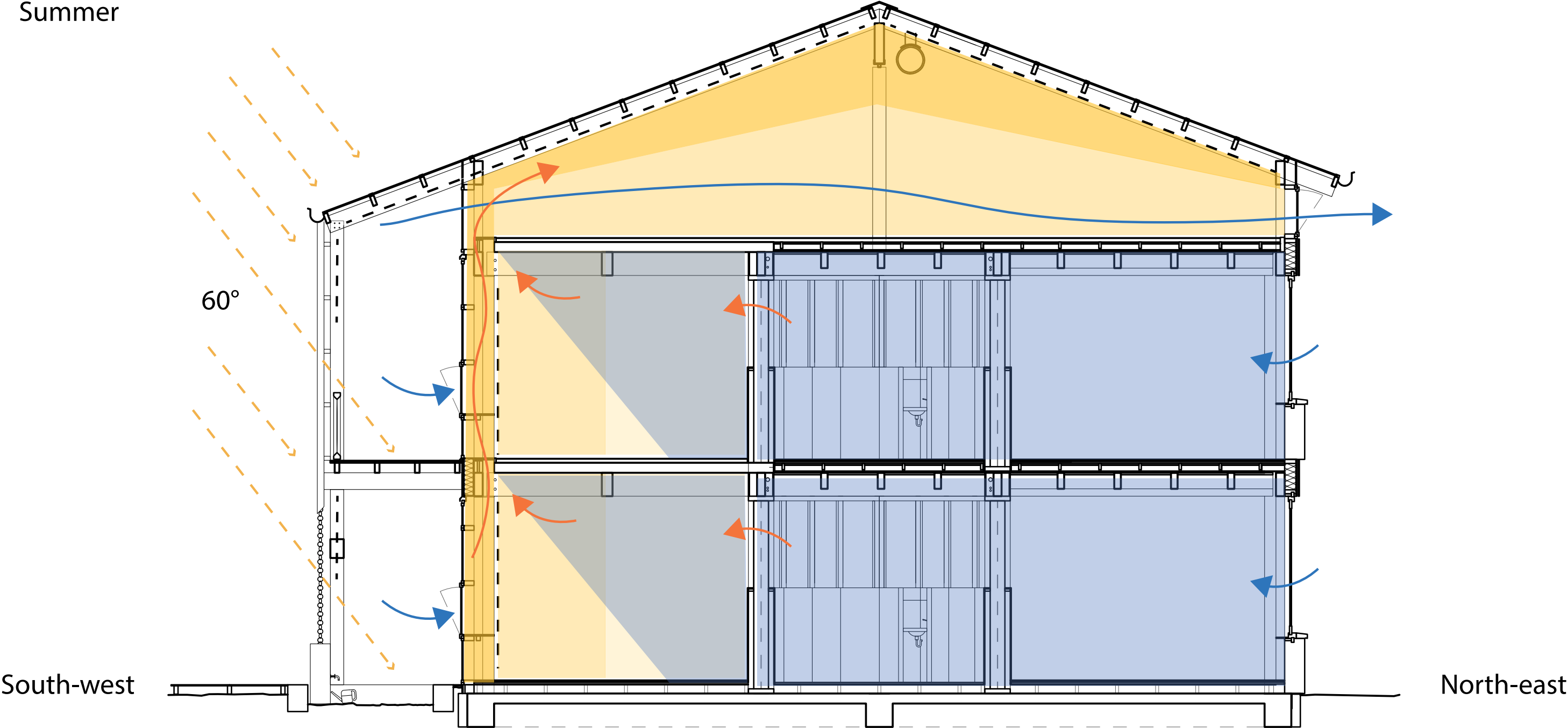


Building shape as a heat recovery process





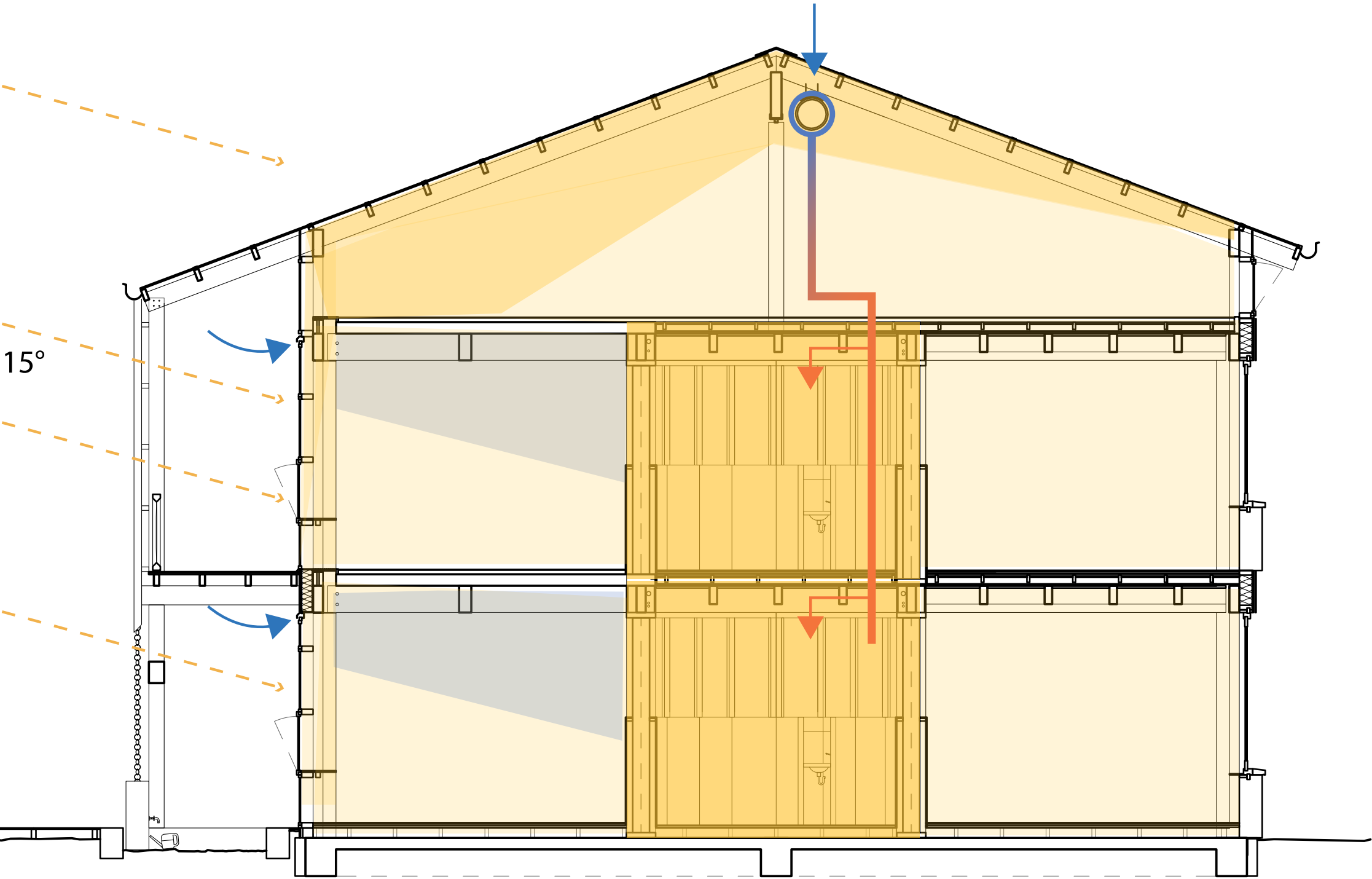
Summer







Winter



South-west

North-east

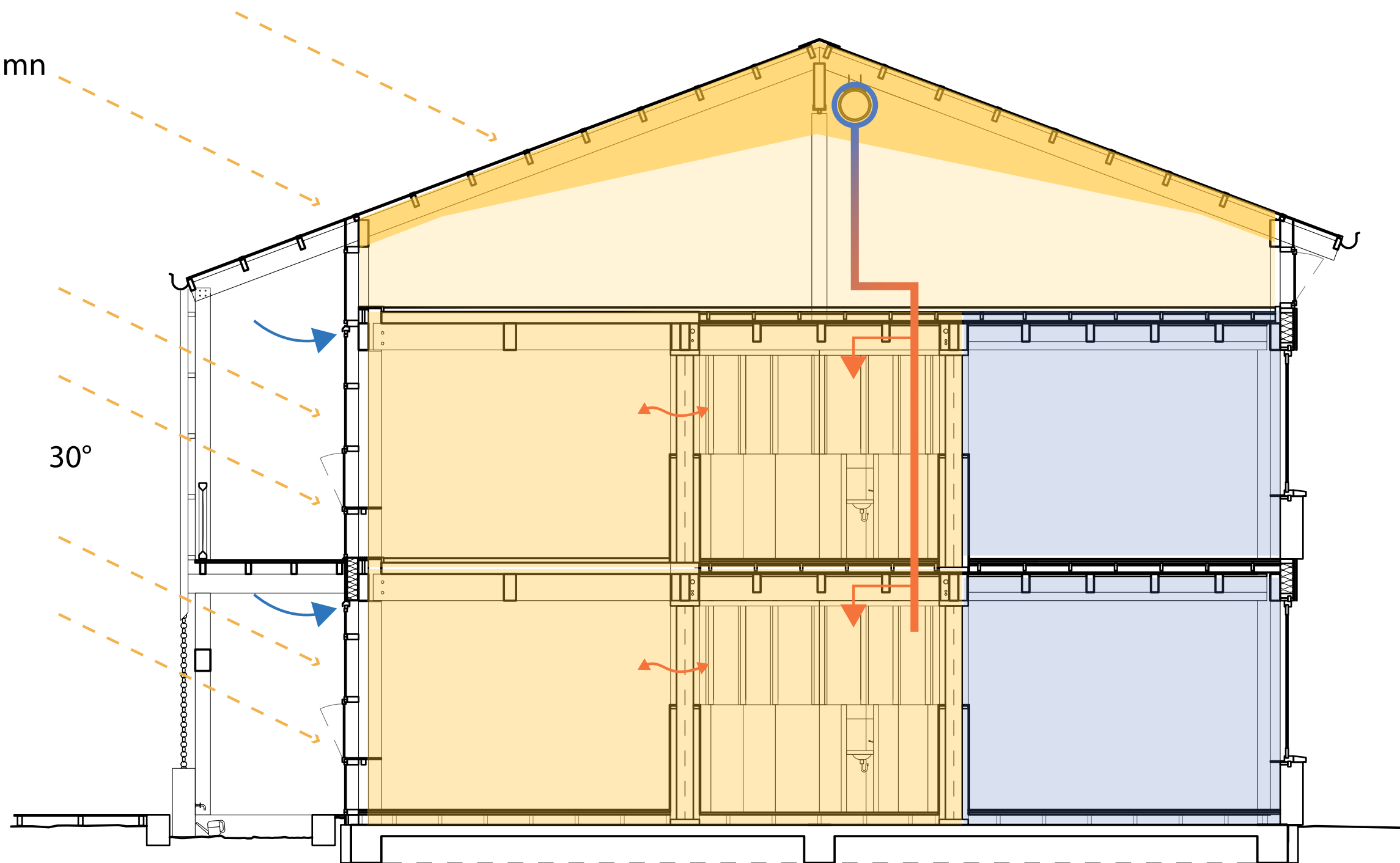


Spring/autumn

30°

South-west

North-east









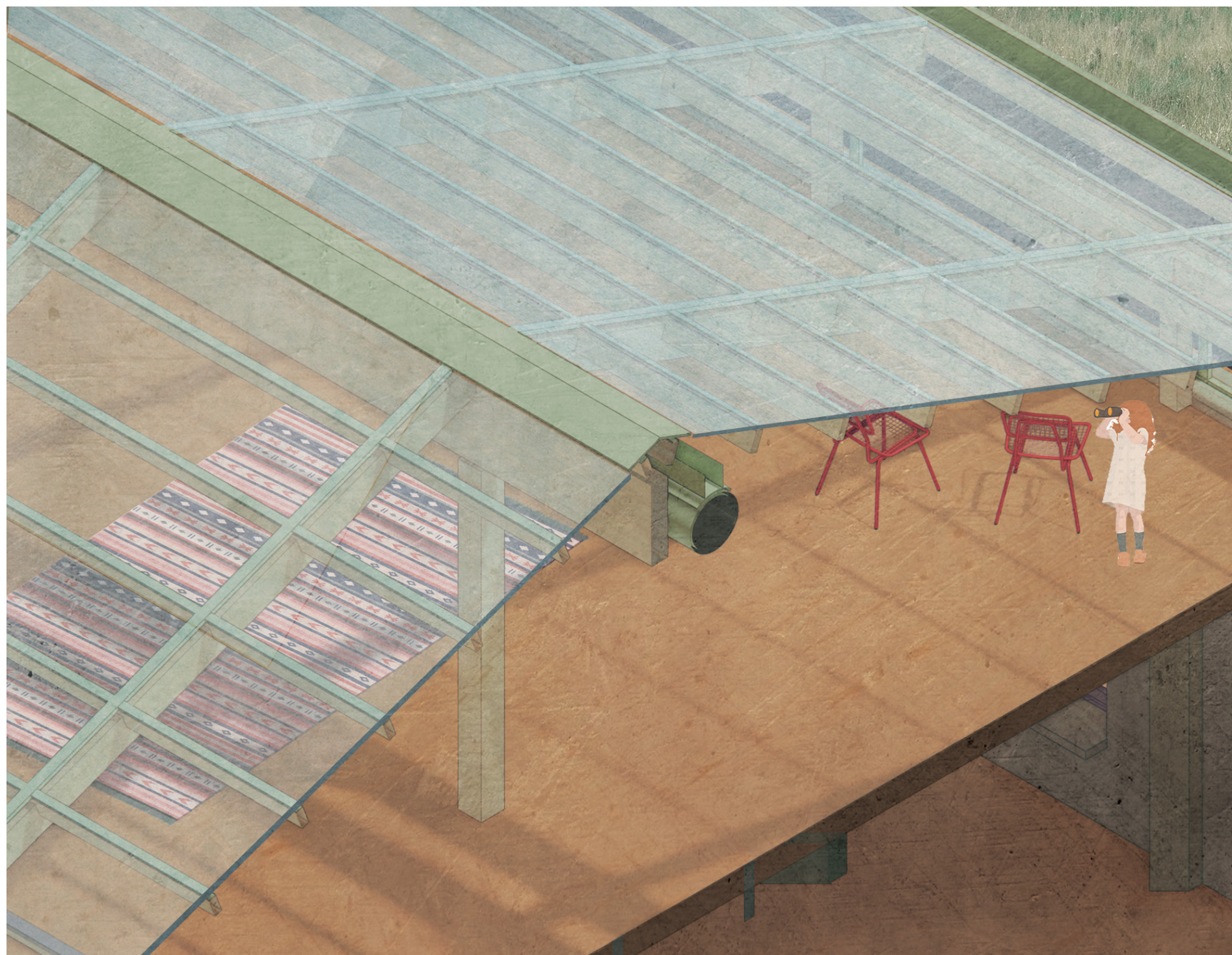












the end

