

FUNCTIONS IN DETAIL
GROUP 2

SLEEPING | SOPHIE

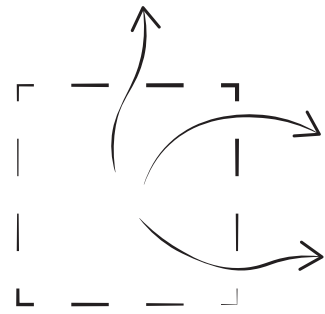
RECREATION/RECOVERY | ESZTER

WORKING | PEIYAO

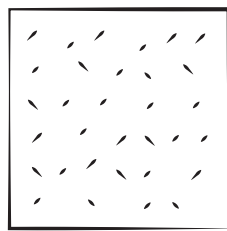
PLAYING/HOBBIES | XINGHE

HYGENE/BATHING | YIDIAN

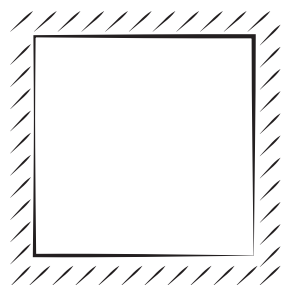
EATING/COOKING | MOA



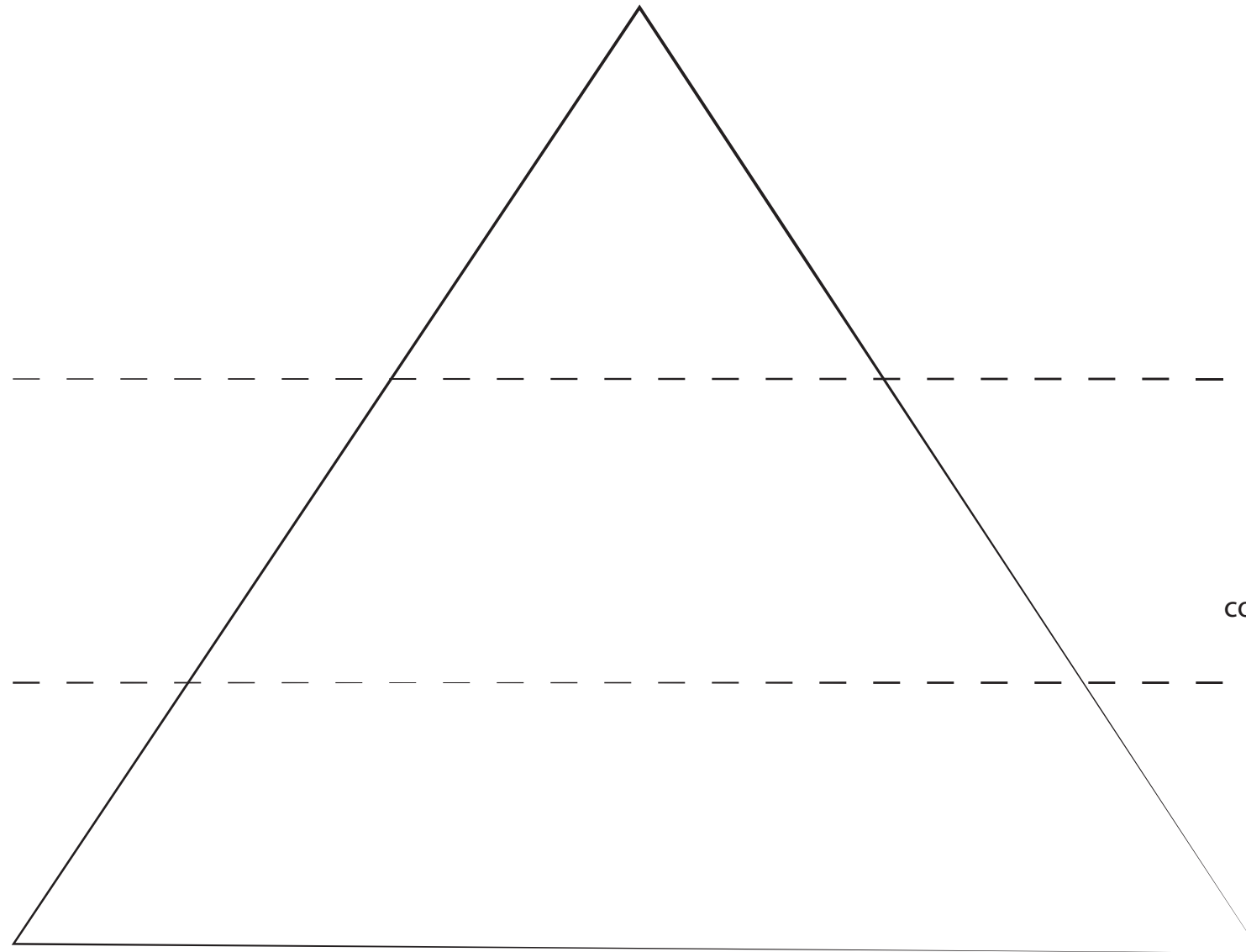
... the effect



... the inside



... the framework



the space could have...
a self-expressive function

...in order to leave room for
freedom / creativity / individualism

the space should have...
a emotional function

...in order to provide
comfort / mental health / community / privacy

the space must have...
a protective function

...in order to provide
health / well-being / physical needs

1. Use natural materials.
2. Consider a minimal footprint.
3. Make use of natural light and a natural airflow.
4. Create a shape that allows for different functions and movement.
5. Allow for outdoor extension / relate to outdoors.
6. Work with different heights to achieve different feelings.
7. Use a tilted roof.

JOINT GUIDELINES

SLEEPING

RECREATION/RECOVERY

WORKING

PLAYING/HOBBIES

HYGENE

EATING/COOKING

TOOLS



size

temperature

density

color

material

TOOLS: How Do We Do This?

light

location

acoustics

flexibility

humidity

separation/connection

shape

SLEEPING

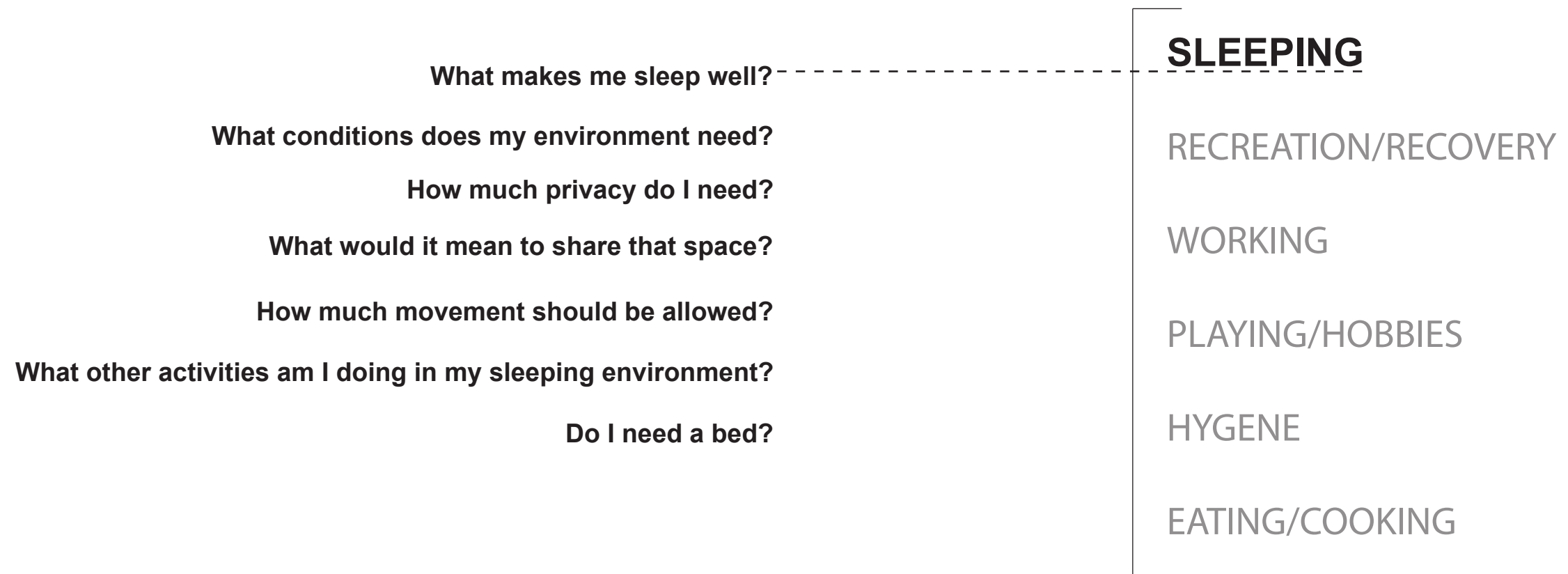
RECREATION/RECOVERY

WORKING

PLAYING/HOBBIES

HYGENE

EATING/COOKING



effective shading / calm light

warm colors

head close to the wall not towards the door

16-18°C

privacy

silence

cool and fresh air

small light, shelf, plug



Comments from the Interview

„silence, darkness, safe feelings, and being close to wall make me sleep well.“

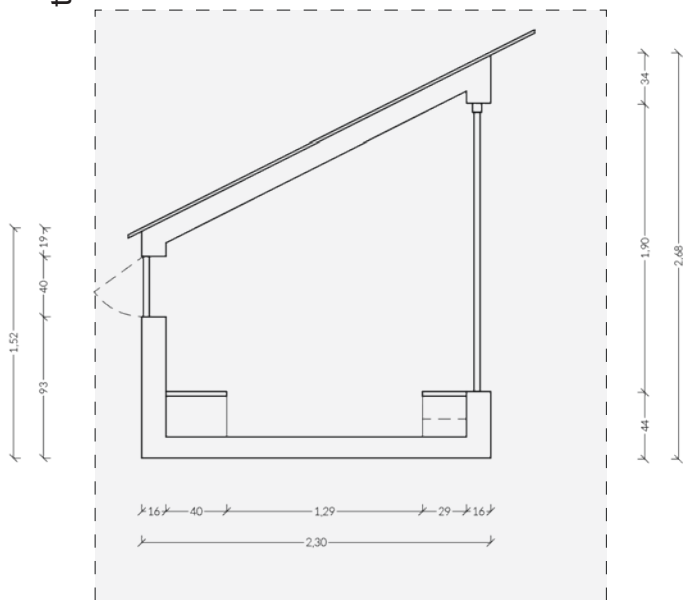
„I like reading before sleeping.“

„ I want the maximal privacy and separation from everything else.“

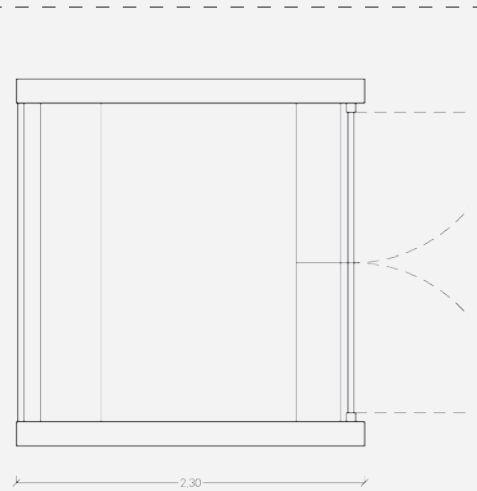
„I want to feel as save as possible“

„I do not like to wake up in a dark room“

the hammock

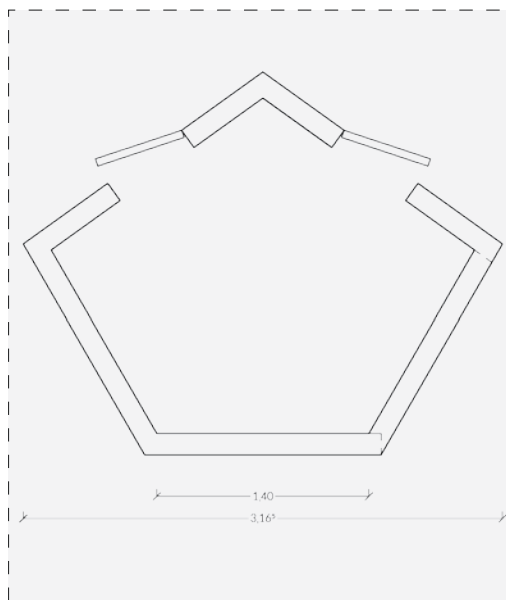


Proposal/sketch

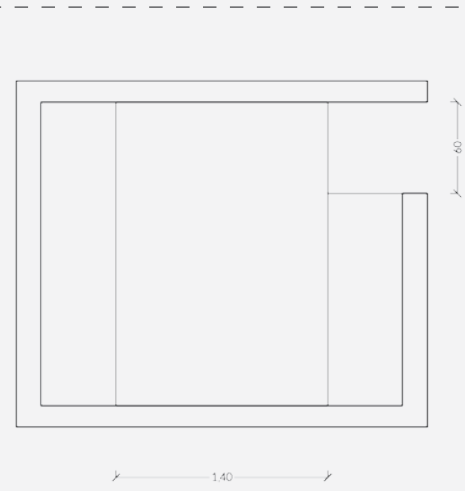


we appreciate the nature experience but still, we are looking for a save shelter

the dormitory / the kang oven bed

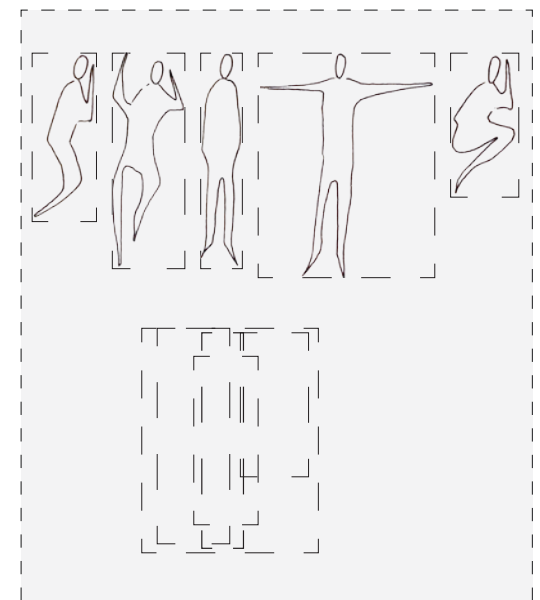


Proposal/sketch

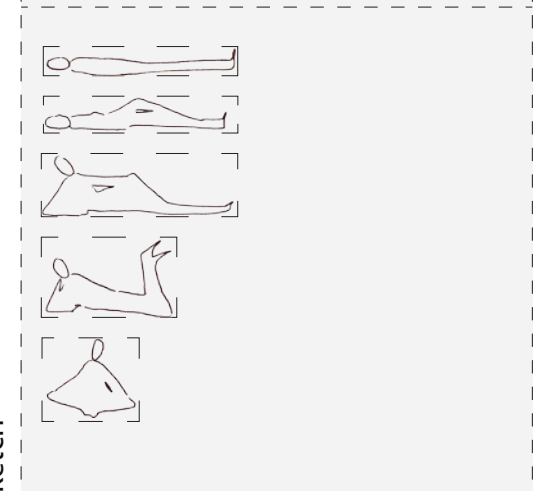


there examples for shared beds though... we prefer our privacy

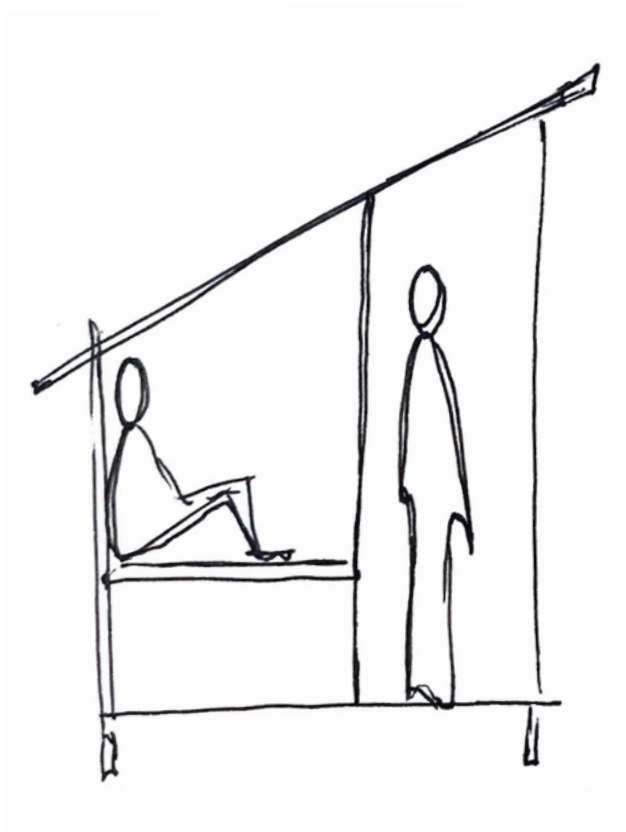
The „out of space“ bed



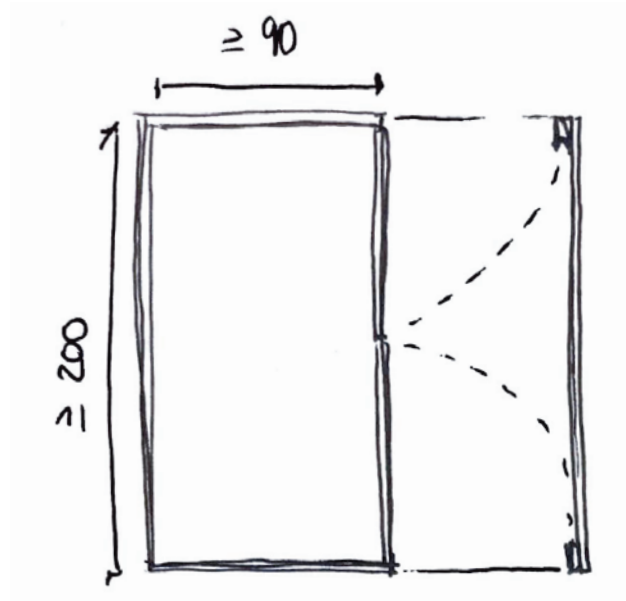
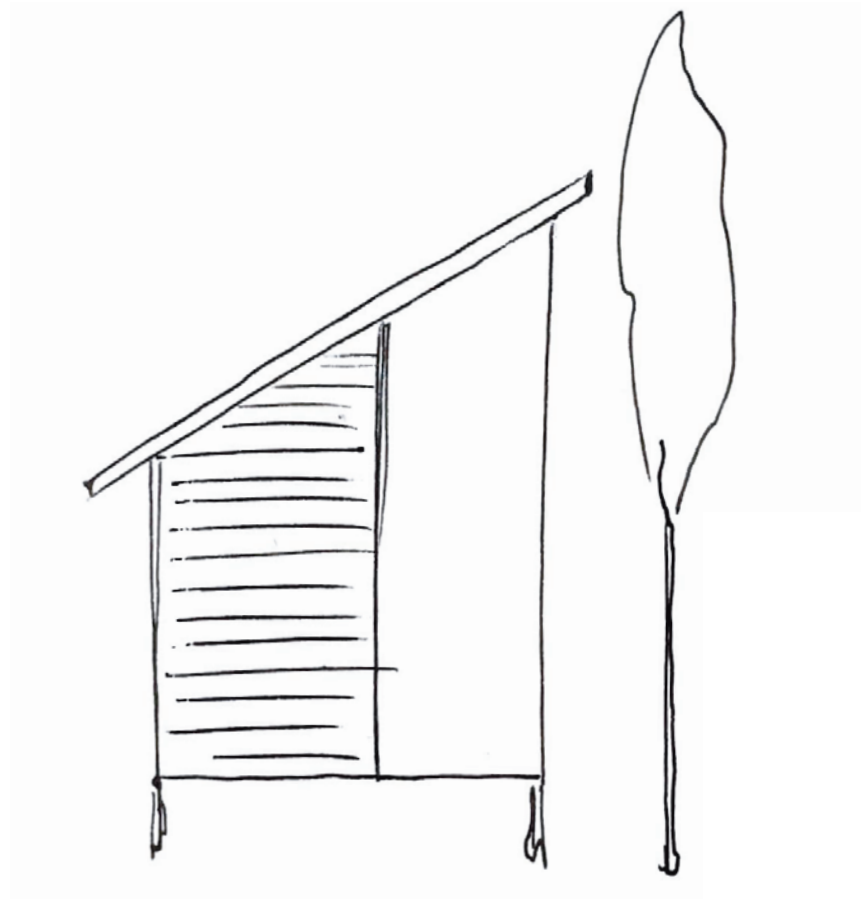
Proposal/sketch

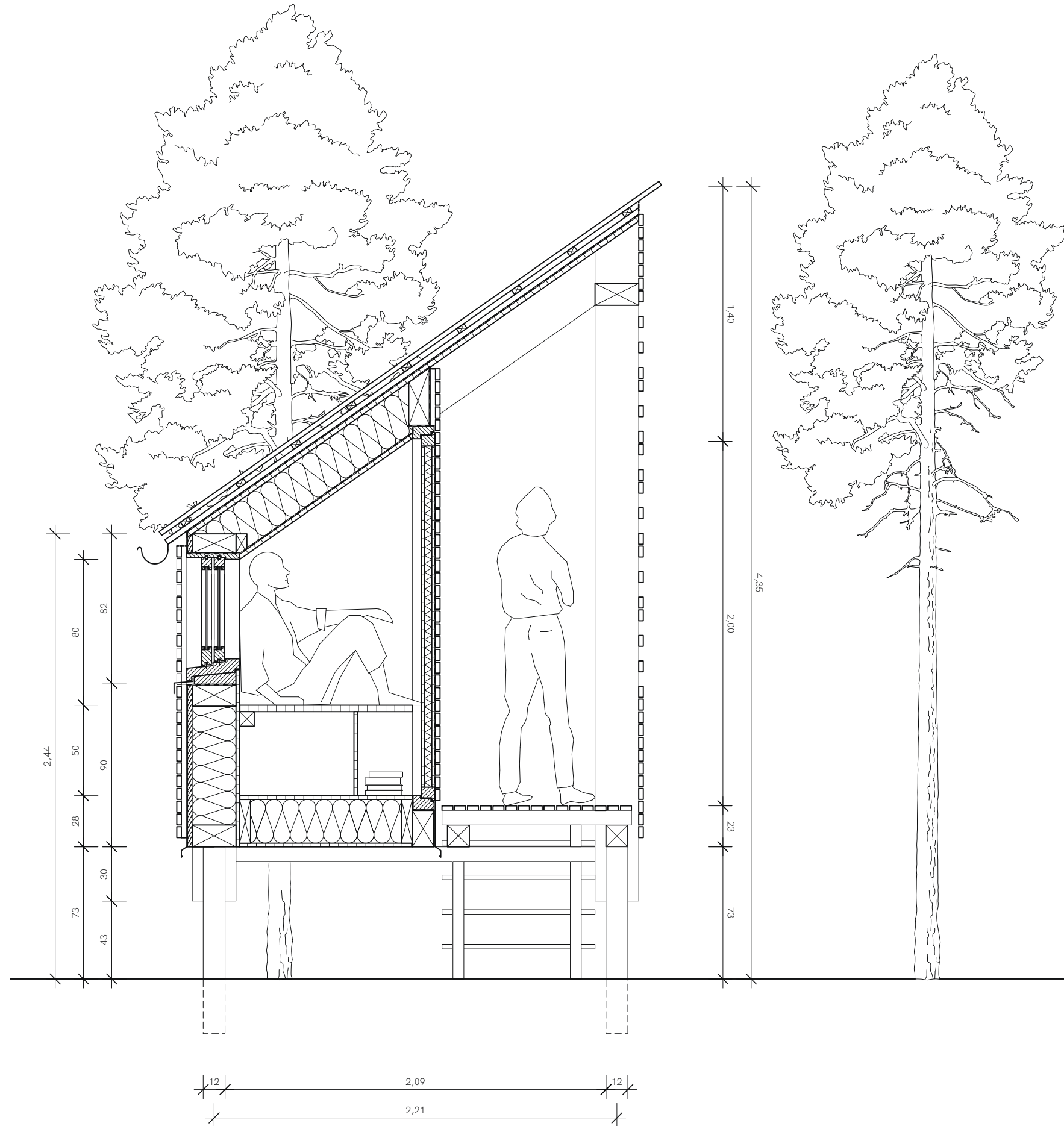


We'll move 20 to 40 times each night



material: wood
windows north / shading
16-18°C
silent atmosphere
head close to the wall
privacy
allow for airstream / cool air



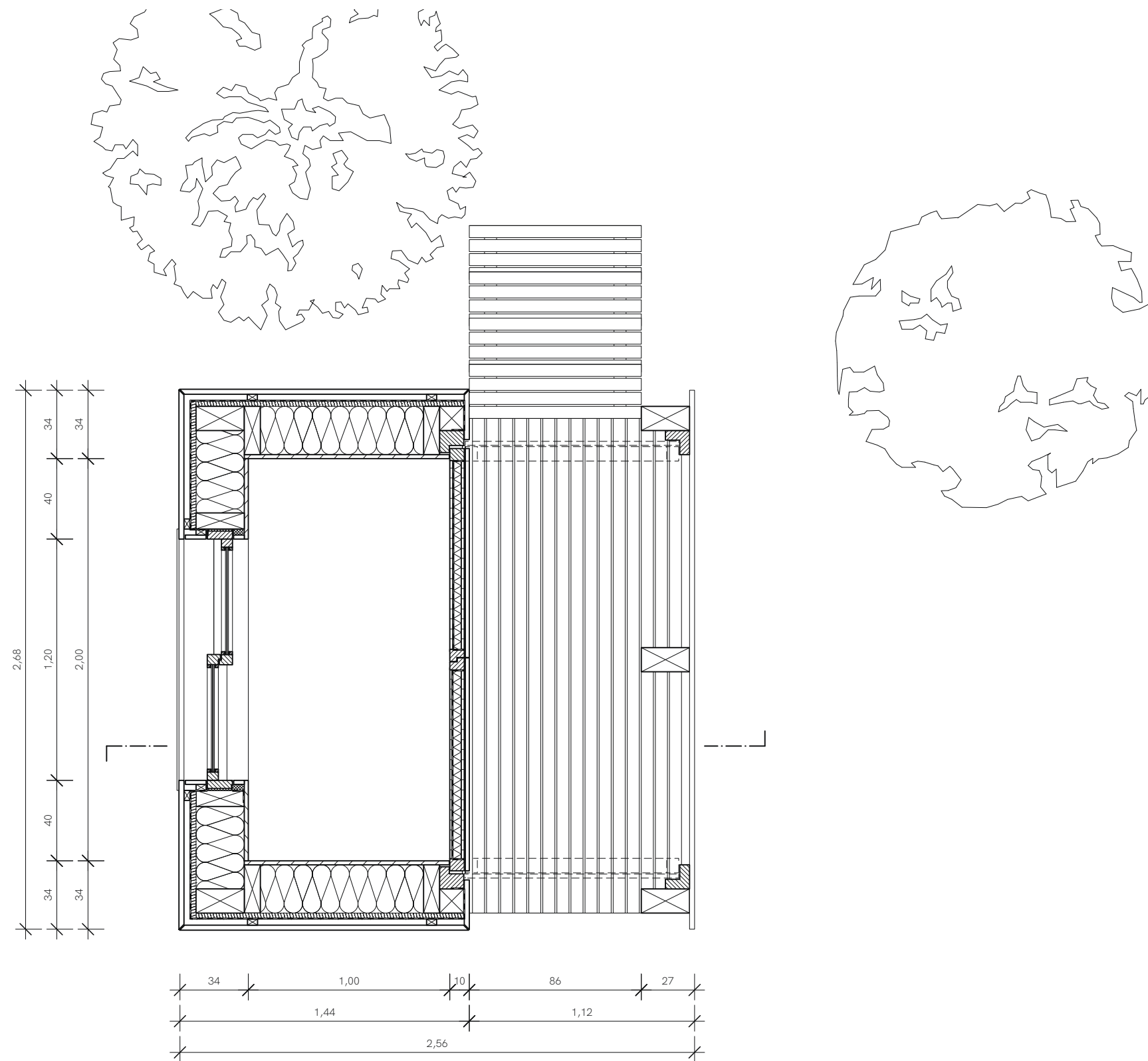


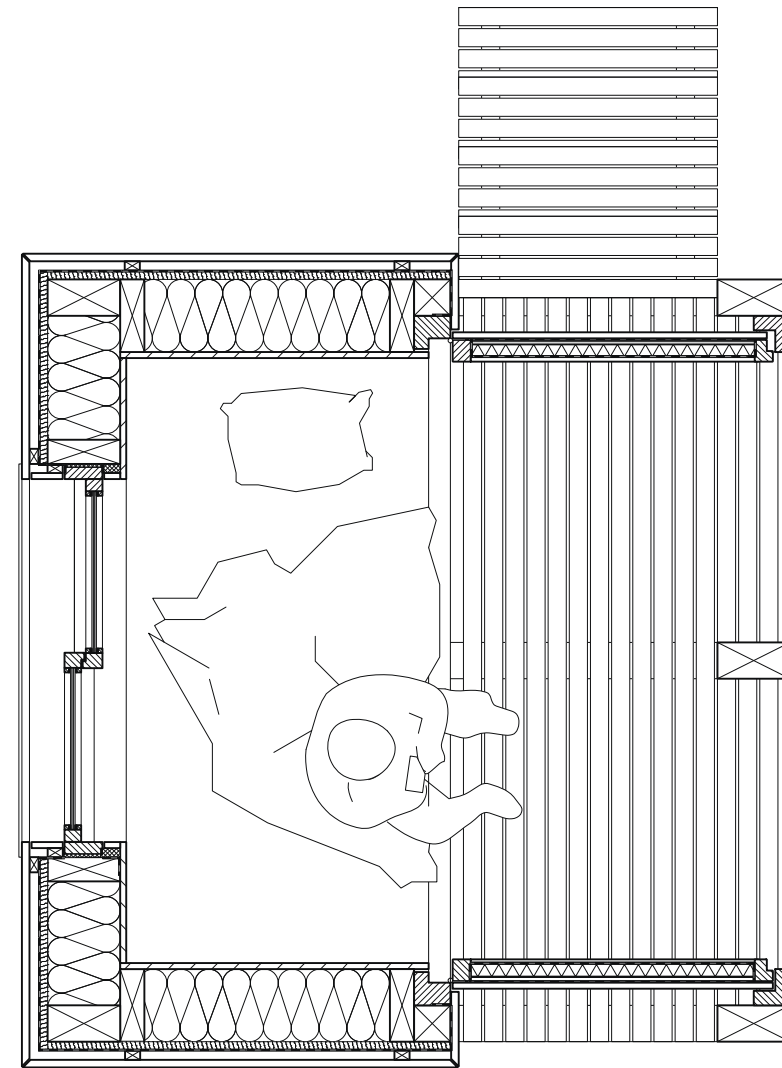
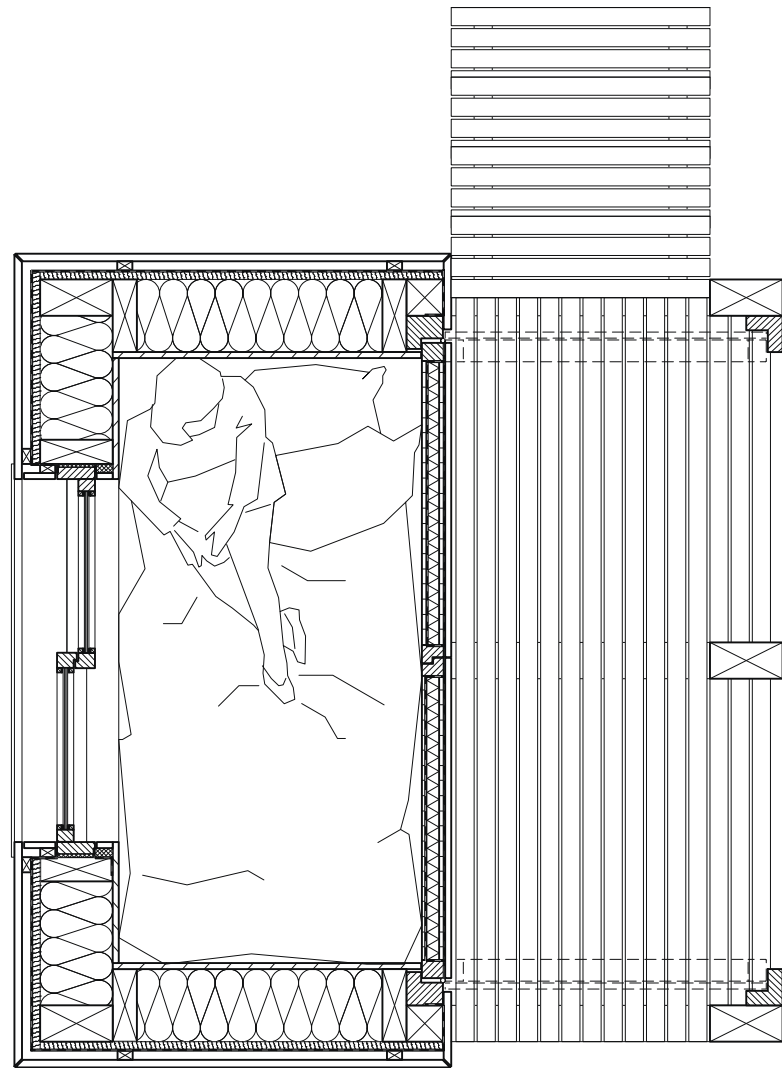
exterior wall

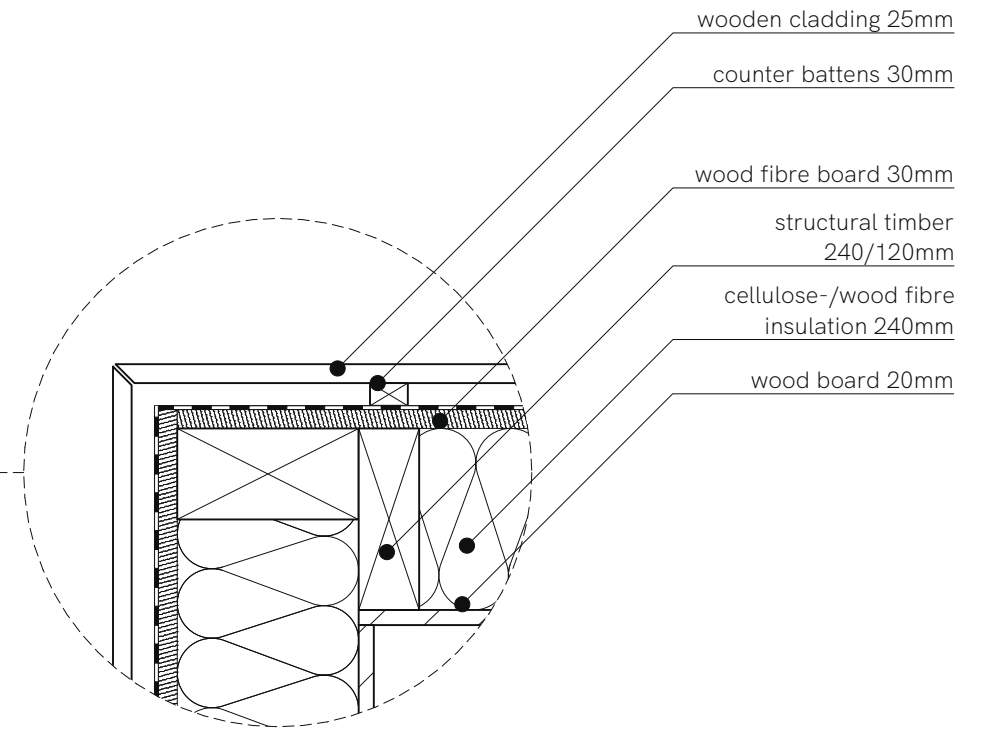
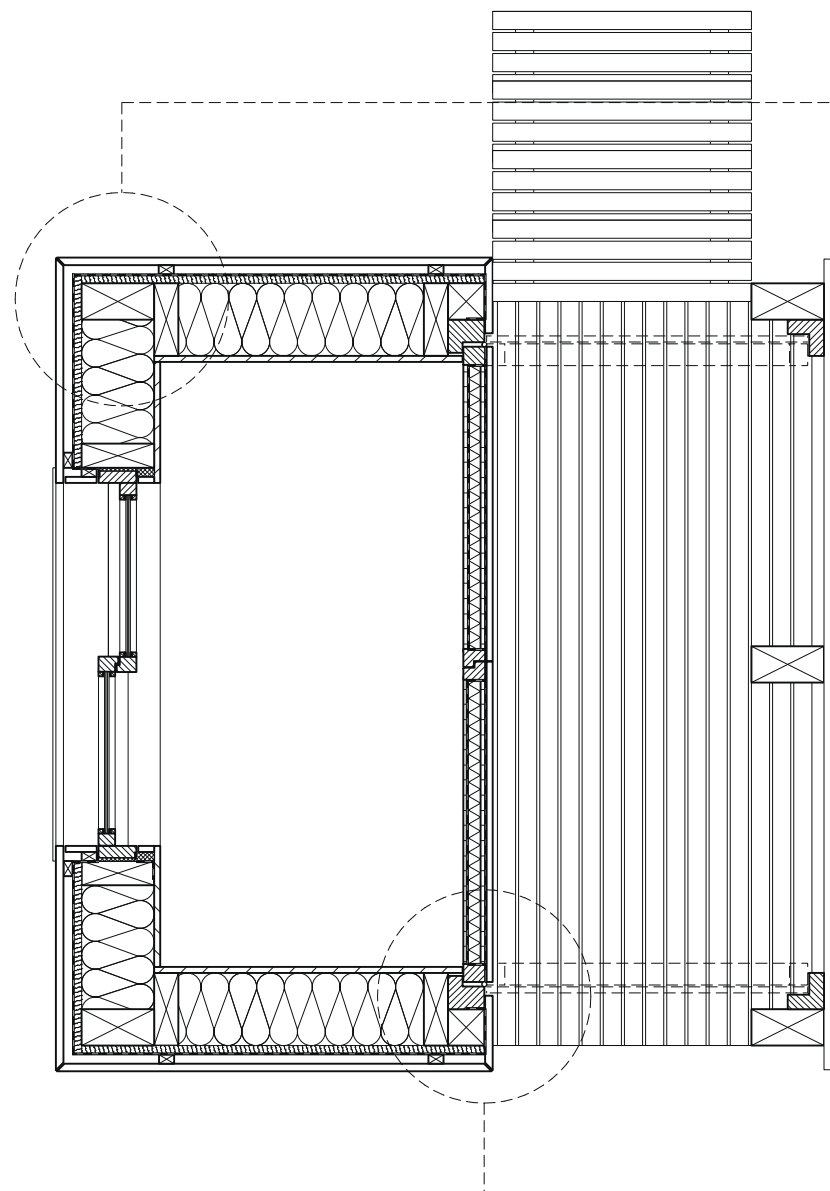
- wooden cladding 25mm
- counter battens 30mm
- airtight foil 0,5mm
- wood fibre board 30mm
- structural timber 240/120mm
- cellulose-/wood fibre insulation 240mm
- wood board 20mm

roof

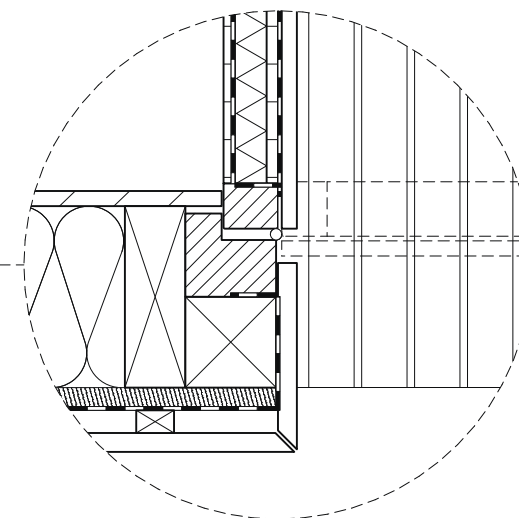
- wooden cladding 25mm
- counter battens 30mm
- watertight foil 0,5mm
- wood board 20mm
- cellulose-/wood fibre insulation 240mm
- wood board 20mm



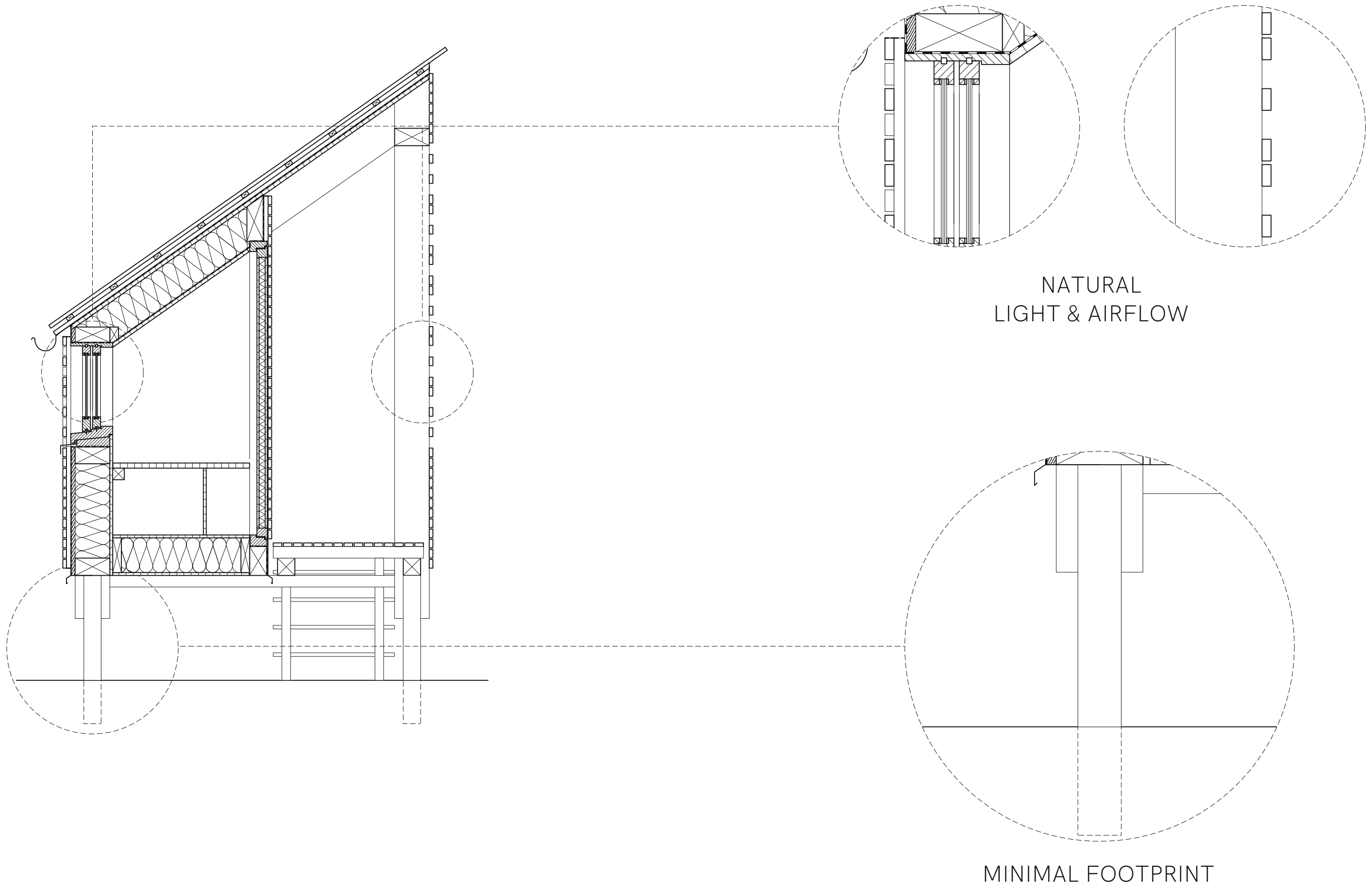


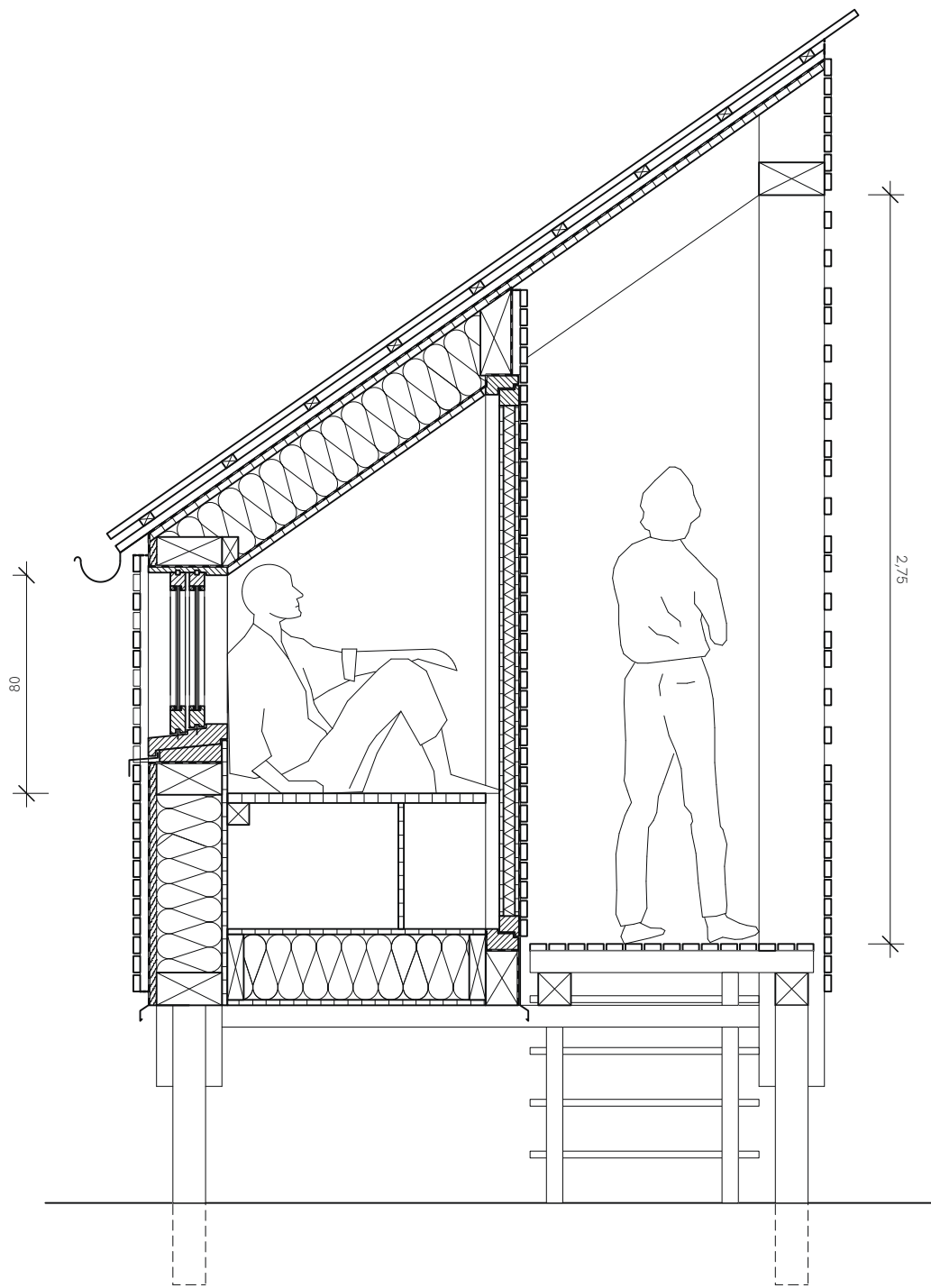


USE
NATURAL MATERIALS



ALLOW FOR
OUTDOOR EXTENSION





TILTED ROOF

constructive protection

THE SHAPE ALLOWS FOR DIFFERENT FUNCTIONS

sitting
lying
storage
standing

USE DIFFERENT HEIGHTS

protection
openness



FUNCTIONS IN DETAIL 1:25 MODEL | **SLEEPING**

What kind of atmosphere makes me calm and relaxed?

How big space do I need for recreation?

What objects do you use for recreation?

What kind of atmosphere makes me energised?

What activities fill me up with energy?

SLEEPING

RECREATION/RECOVERY

WORKING

PLAYING/HOBBIES

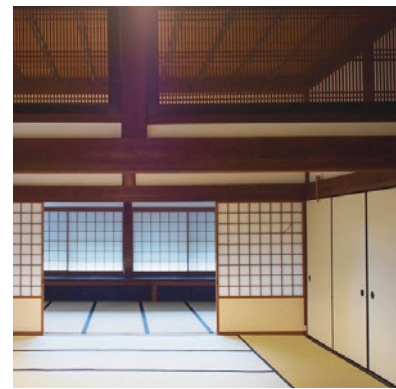
HYGENE/BATHING

EATING/COOKING

material: durable for sports
 light: flexible based on activity
 size: human body + moving
 colour: bright
 location: visible/physical
 connection to nature
 temperature: 10-25
 humidity: low
 acoustics: sounds of nature
 flexibility: highly needed
 shape: defined by human
 body, smooth surfaces



Relaxing
 Budapest, Rudas bath



inspiration:
 Japanese architecture:

,SHOJI AND FUSUMA
 Shōji (moveable screens) and fusuma (, sliding doors) were always included in old Japanese houses. Shōji consist of wooden frames with translucent paper, allowing light to shine through, while fusuma paper is opaque, therefore not allowing light to shine through. In most homes, they are usually solid white, though in shrines or temples they are often painted on. Despite their similarity, they differ in roles. Both shōji and fusuma are utilized as interior doors and partition, used to divide and re-divide rooms, though solely shōji are used as windows, exterior walls and exterior doors, as they allow light and shadows to flicker into homes, adding a cozy feel. Both became well known in the West, becoming one of the first aspects of Japanese architecture to venture over.'

source:
<https://www.toki.tokyo/blog/2020/4/8/eight-elements-of-japanese-architecture>



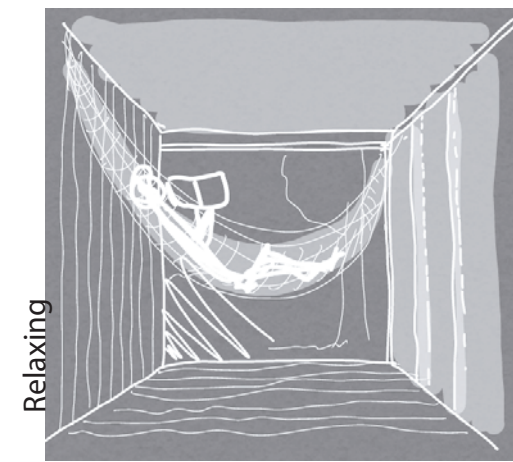
Prayer/meditation
 Mecca, Kaaba
 Helsinki, Kamppi chapel



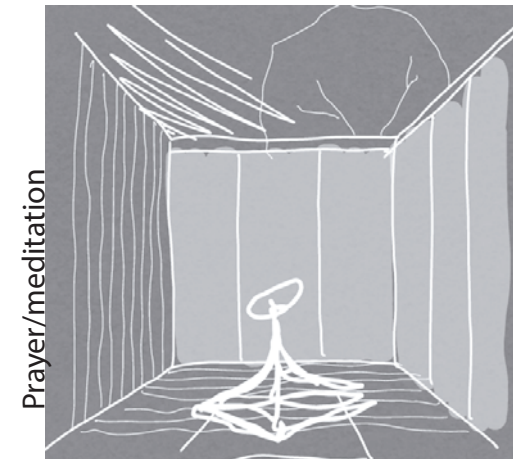
Comments from the Interview
 involves 3 activities: relaxing,
 prayer and sports
 can be shared and personal
 close connection to nature but
 turning inwards too
 can be connected to other
 functions but separation is
 also needed
 playing with natural light and
 connection with nature defi-
 nes the activity



Sports
 Rome, Colosseum



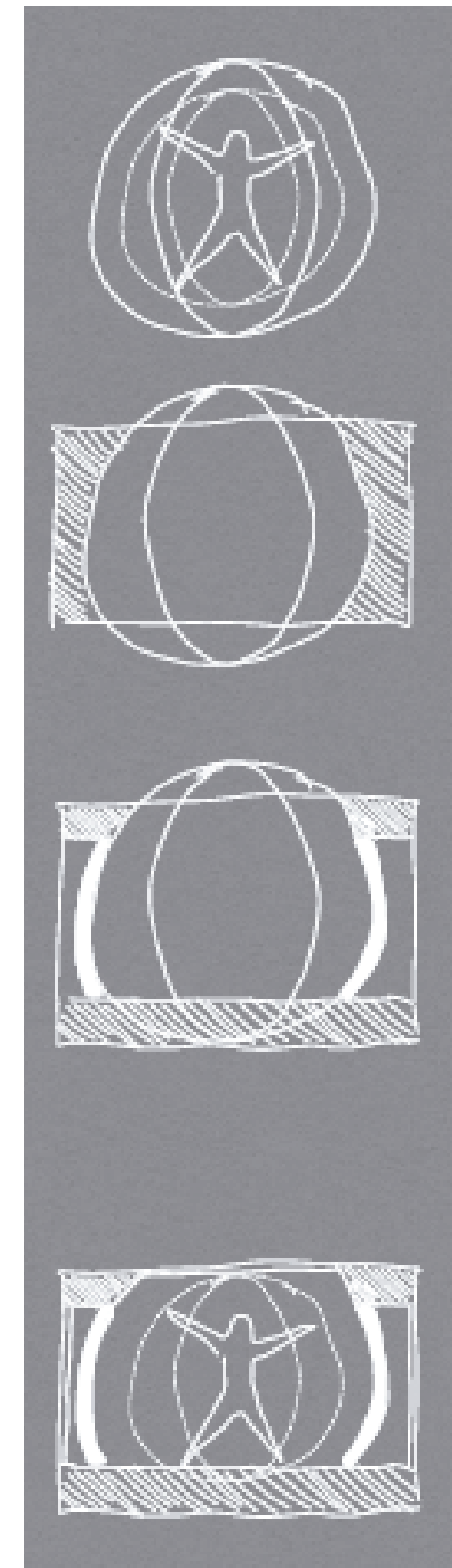
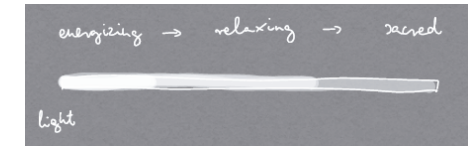
Relaxing



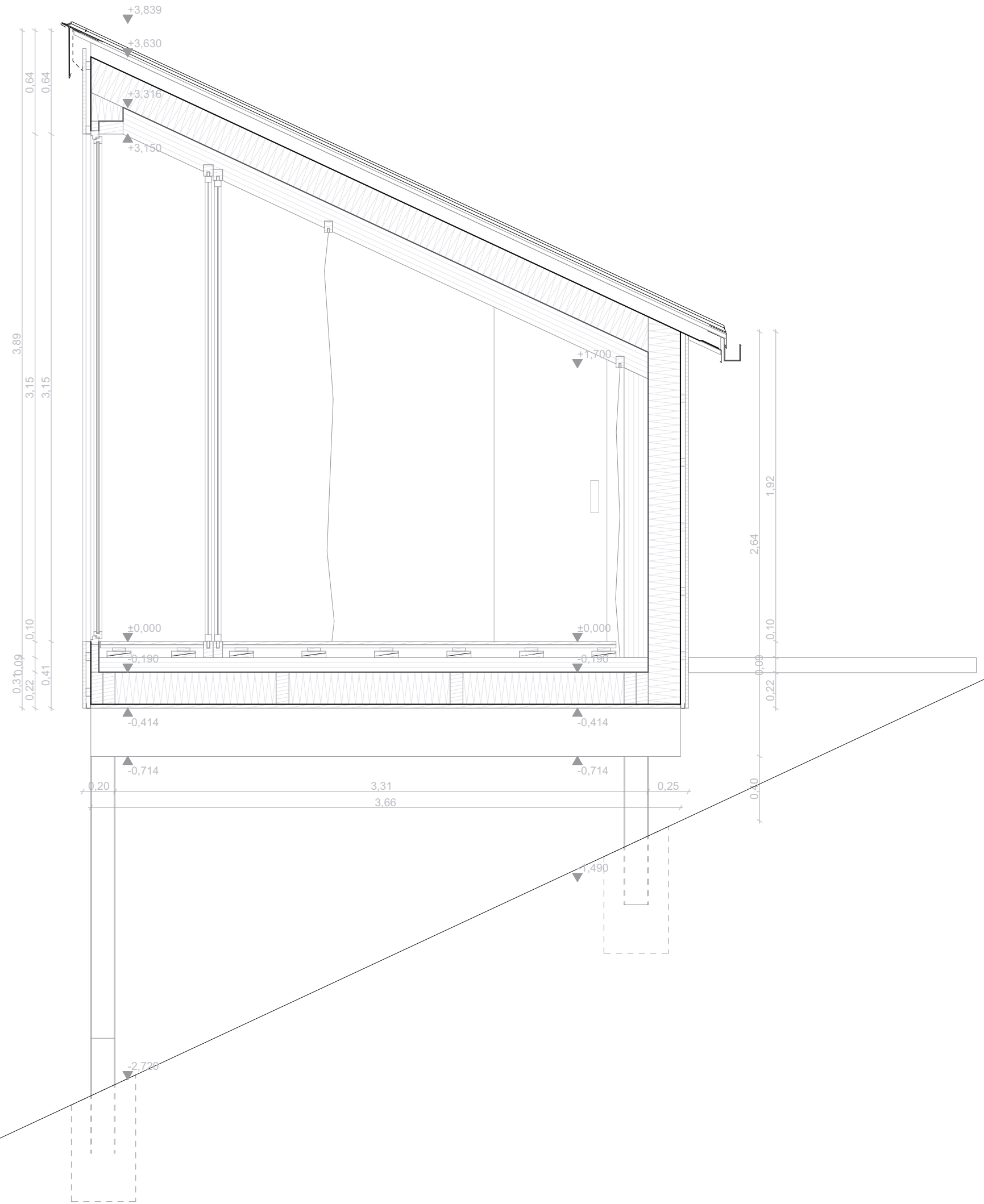
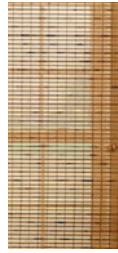
Prayer/meditation



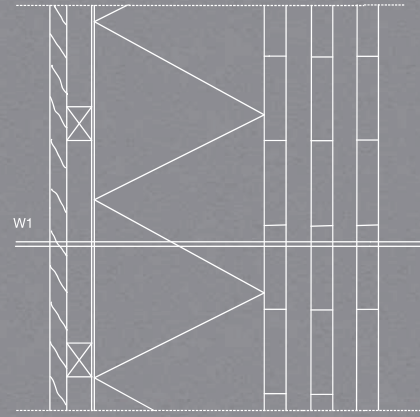
Sports



materials

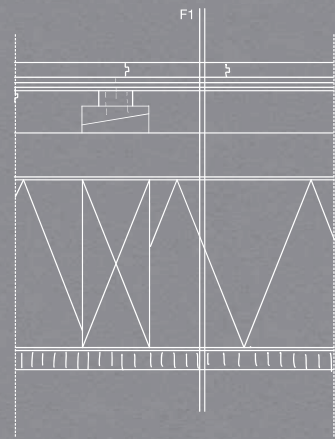


1, WALLS



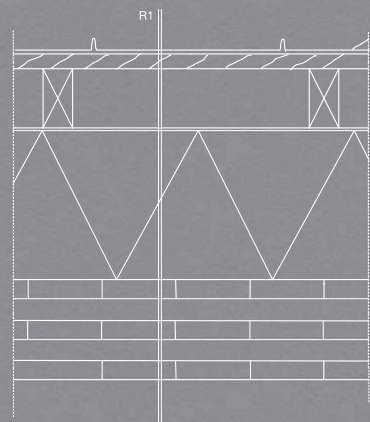
- W1
- 2 cm pine wood exterior wall cladding
 - 3 cm pine wood battens (30/50)
 - wind barrier vapor permeable film
 - 20 cm wood fiber insulation board
 - air and vapor barrier film
 - 15 cm (5 layer) CLT
- 40 cm

2, FLOOR + FOUNDATION

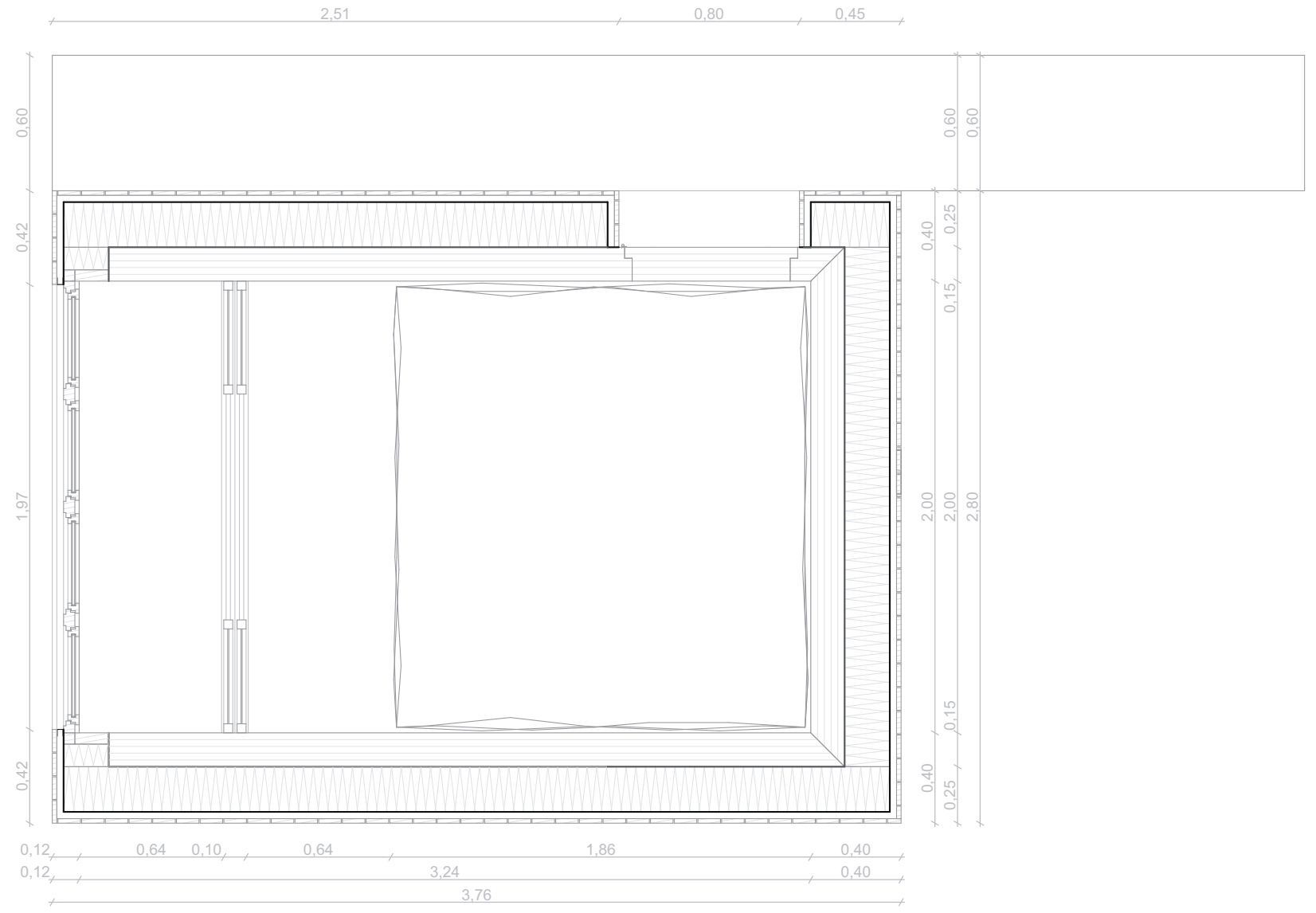


- F1
- 2 cm pine wood strip parquet
 - double pine wood underlay for sports floor (20x80 mm wooden beams, 2 layers crosswise)
 - 4 cm wedge pine wood underlay
 - 9 cm OSB (3 layers)
 - air and vapor barrier film
 - 20 cm pine wood open formwork with wood fibre insulation
 - tripling protection (wind barrier and vapor permeable film)
 - 2,4 cm pine wood cladding

3, ROOF



- R1
- sheet metal roofing on structured separation layer
 - 2,4 cm pine wood formwork
 - 8 cm pine wood counter battens (40/80)
 - wind barrier vapor permeable film
 - 20 cm wood-fibre insulation board
 - air and vapor barrier film
 - 15 cm (5 layer) CLT



How much space do I need to share it with other people?

How much space do you need at work?

What is your mood when you work?

What do you use when you work?

What kind of environment do you need at work?

SLEEPING

RECREATION/RECOVERY

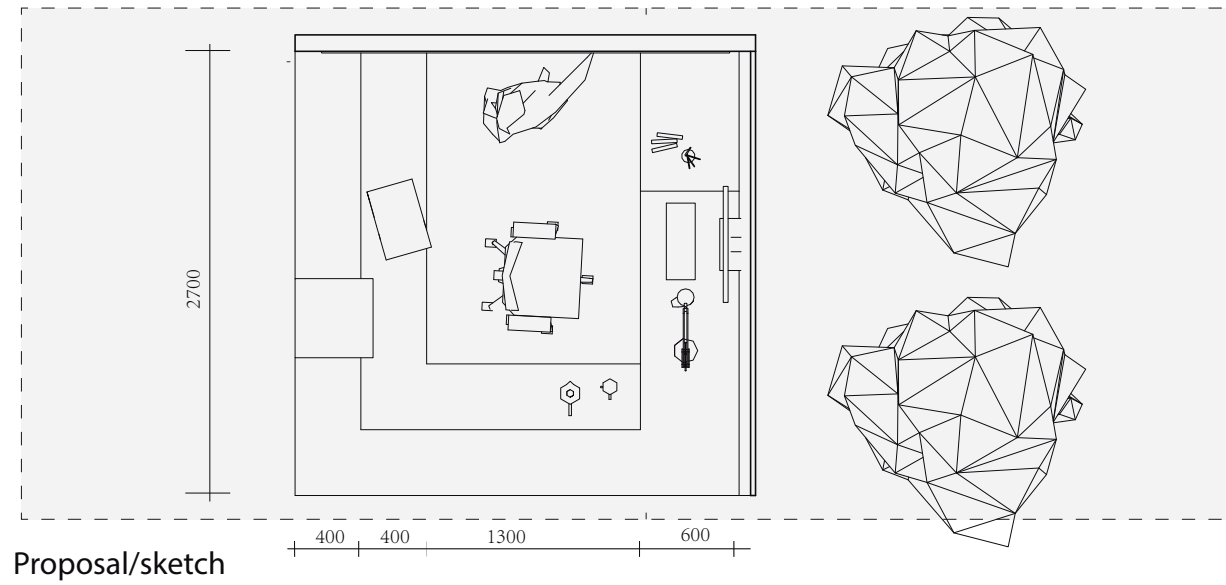
WORKING

PLAYING/HOBBIES

HYGENE/BATHING

EATING/COOKING

- Privacy/Shared
- Quite/good view
- Storage space
- Basic table and chair
- Plants
- Light
- Coffee/Water
- Electricity



Proposal/sketch



Traditional Chinese working space

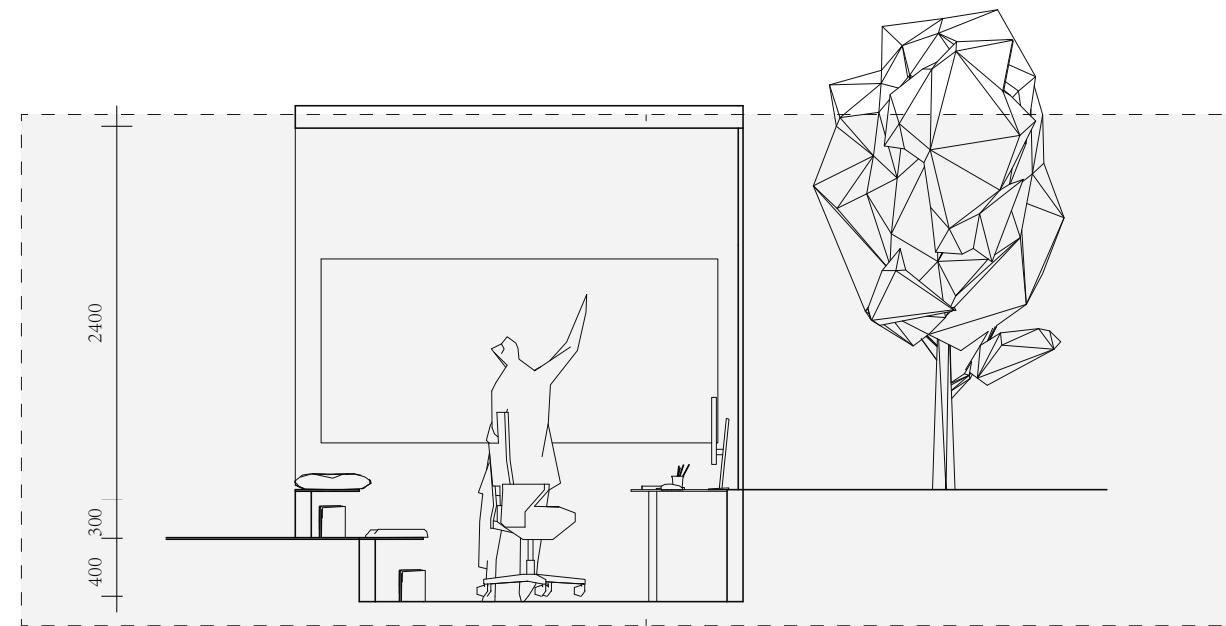
Traditional Chinese working space is a spiritual paradise for Chinese scholars, They all attach importance to the setting of their working space.

Comments:

"My mood is like creative/motivated/ clueless/burnout"

"Some where quiet or white noise is ok/I need cafe and water/ light/bigtable/electricity"

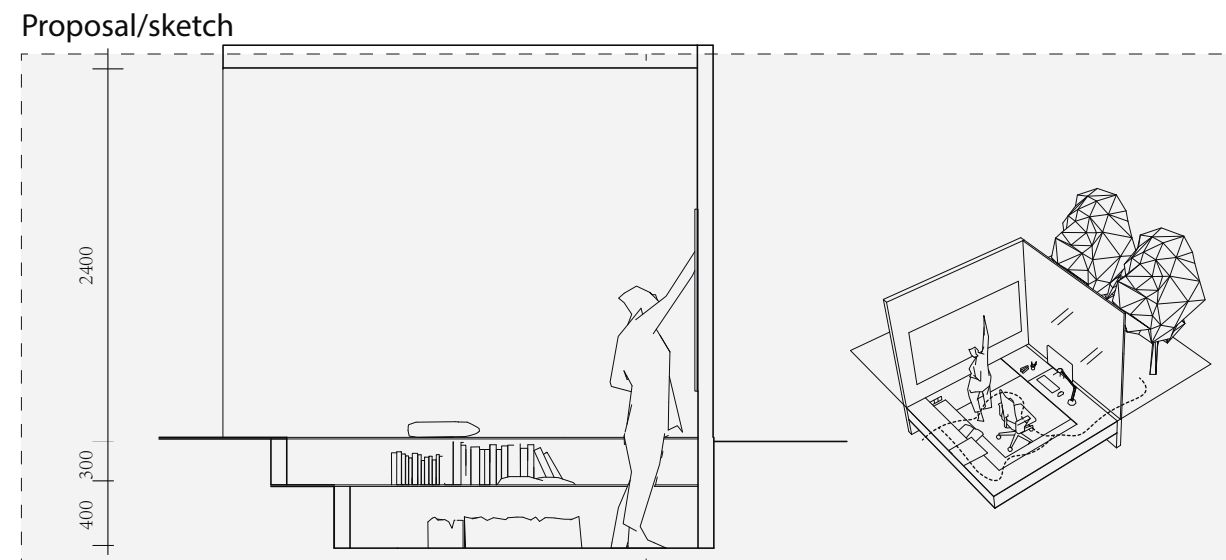
"Maybe a shared table with my partner"



Proposal/sketch



Traditional Chinese working space



Proposal/sketch

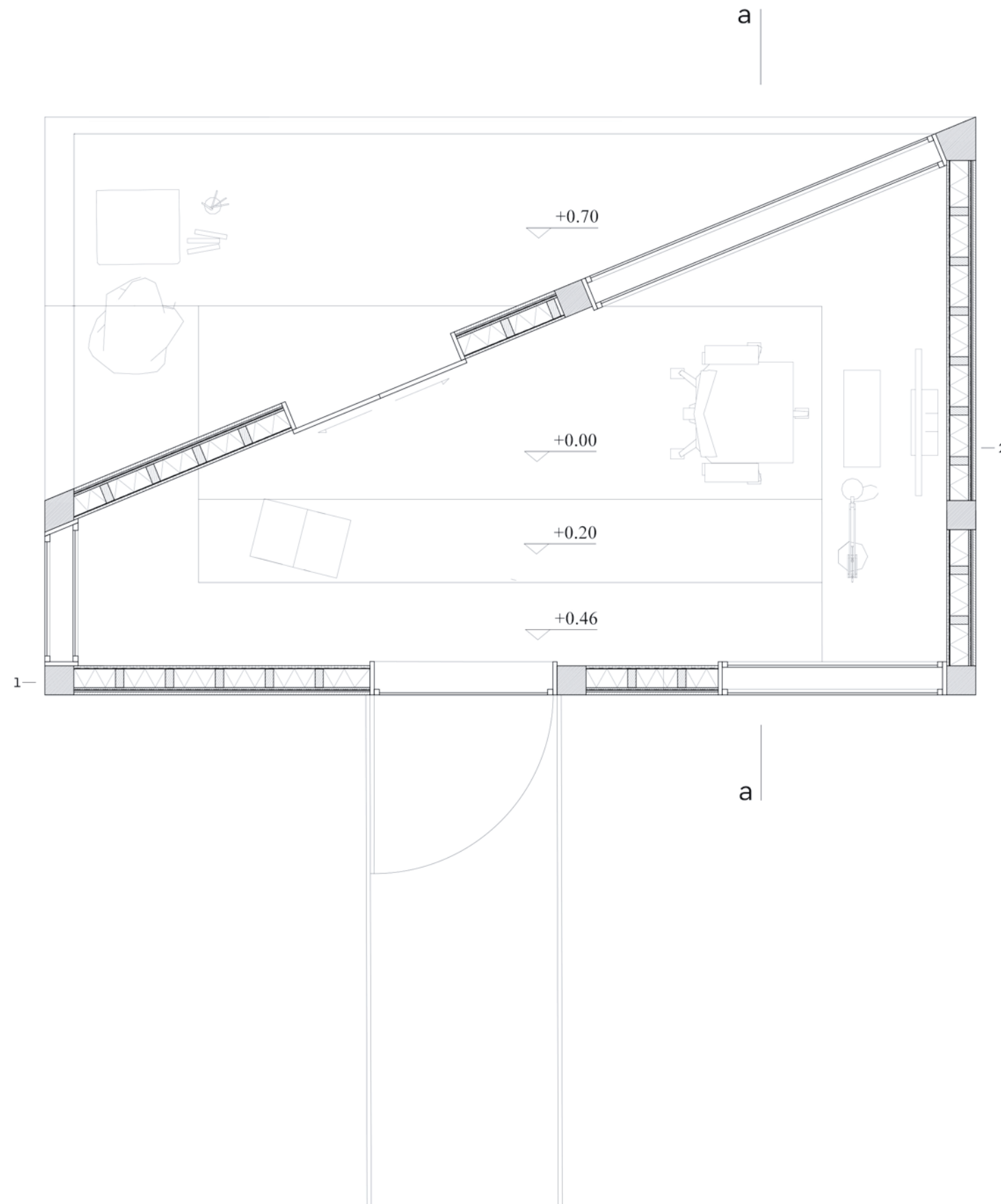
Gallery of House in Balsthal / PASCAL FLAMMER



1:50 sketches

7.29 m2 (2.7m x 2.7m)

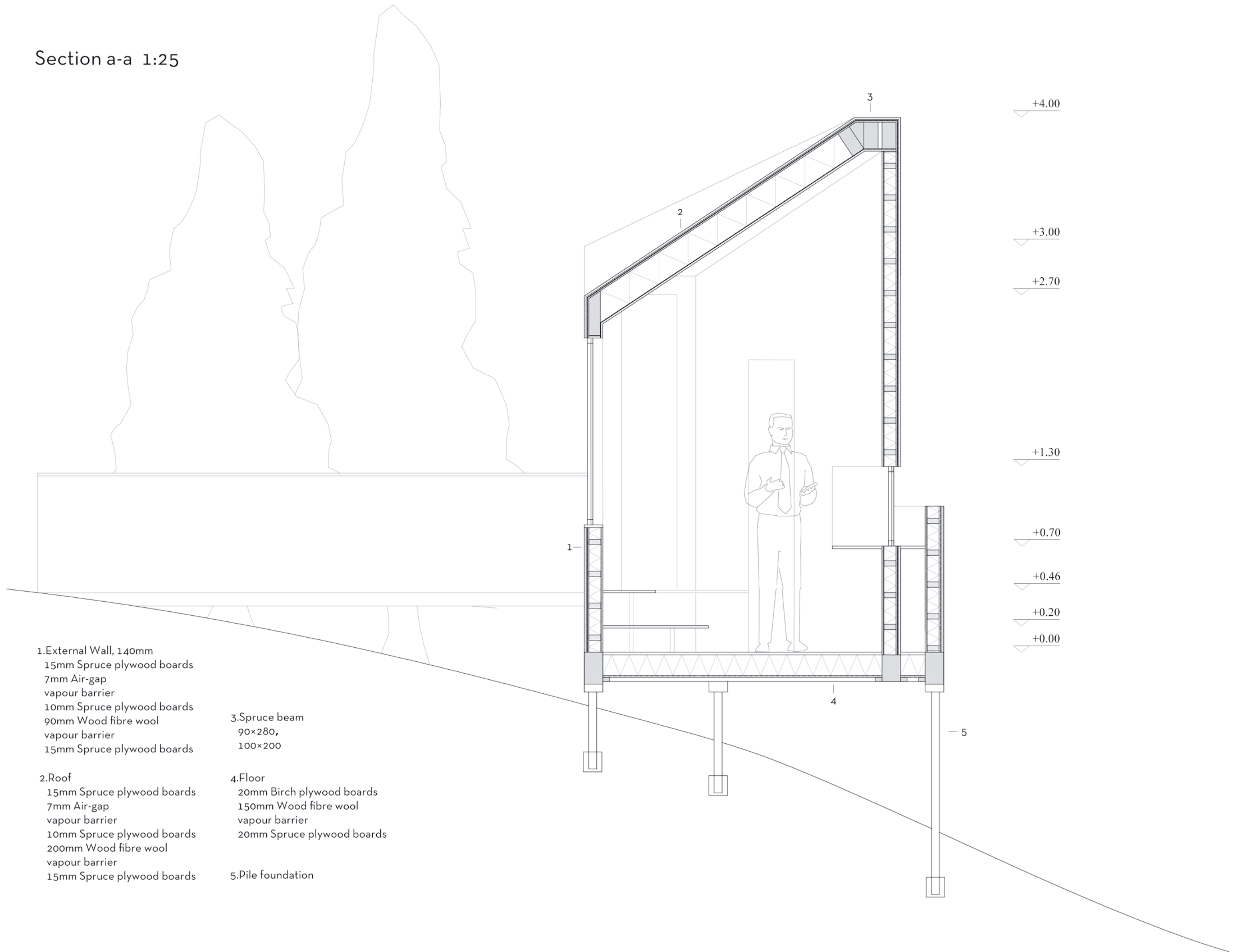
Plan 1:25



1.Spruce Column

- 2.External Wall, 140mm
- 15mm Spruce plywood boards
- 7mm Air-gap
- vapour barrier
- 10mm Spruce plywood boards
- 90mm Wood fibre wool
- vapour barrier
- 15mm Spruce plywood boards

Section a-a 1:25



1.External Wall, 140mm
 15mm Spruce plywood boards
 7mm Air-gap
 vapour barrier
 10mm Spruce plywood boards
 90mm Wood fibre wool
 vapour barrier
 15mm Spruce plywood boards

2.Roof
 15mm Spruce plywood boards
 7mm Air-gap
 vapour barrier
 10mm Spruce plywood boards
 200mm Wood fibre wool
 vapour barrier
 15mm Spruce plywood boards

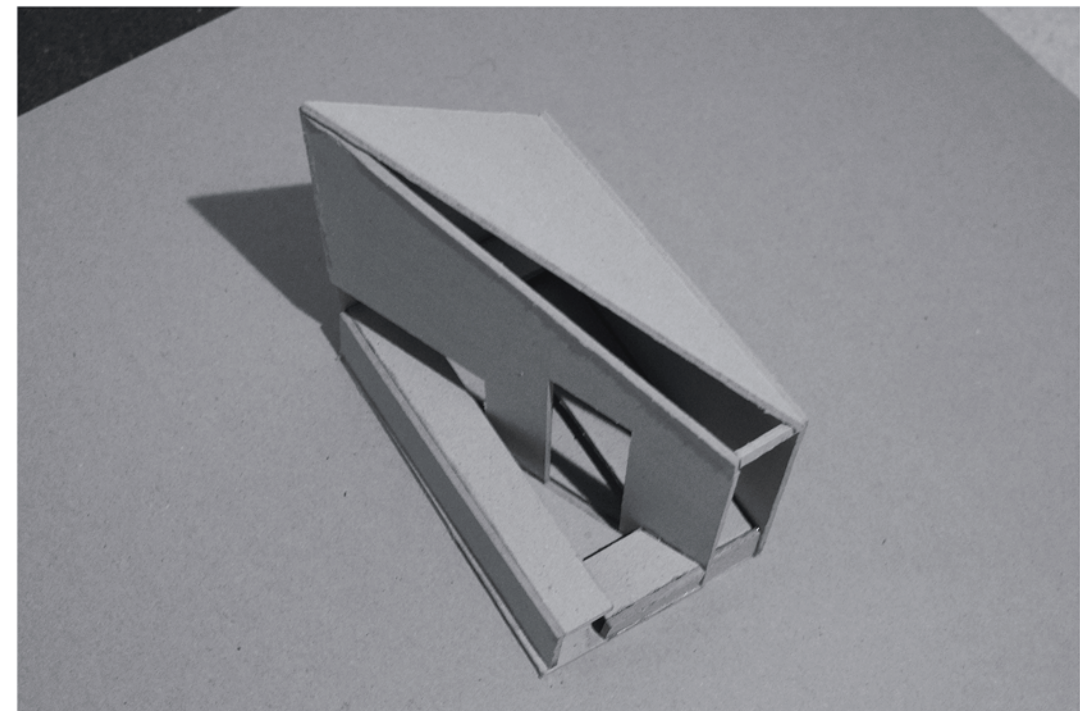
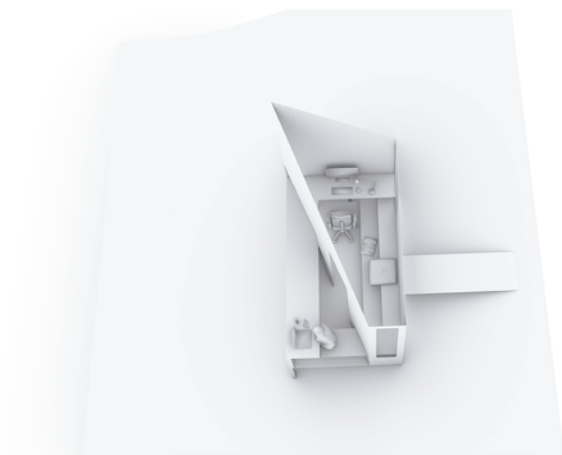
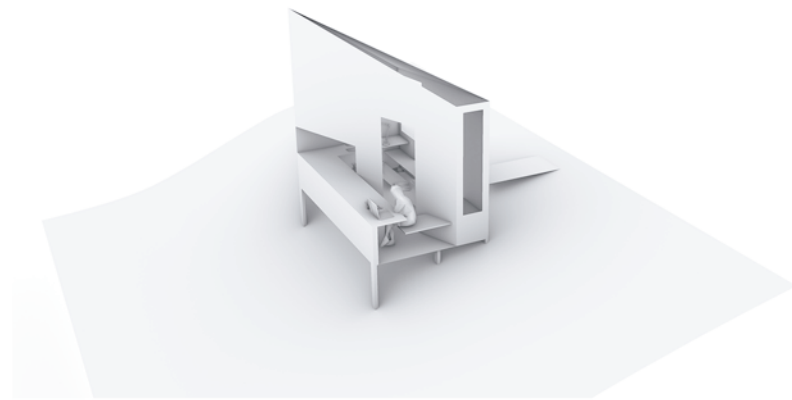
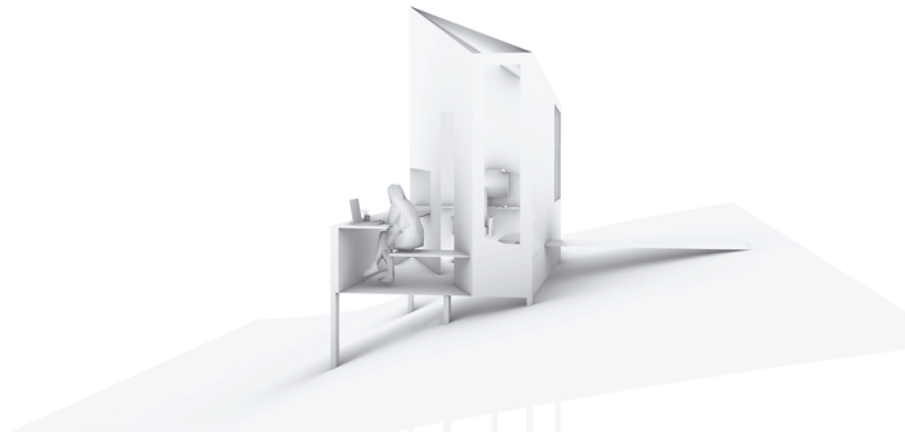
3.Spruce beam
 90×280,
 100×200

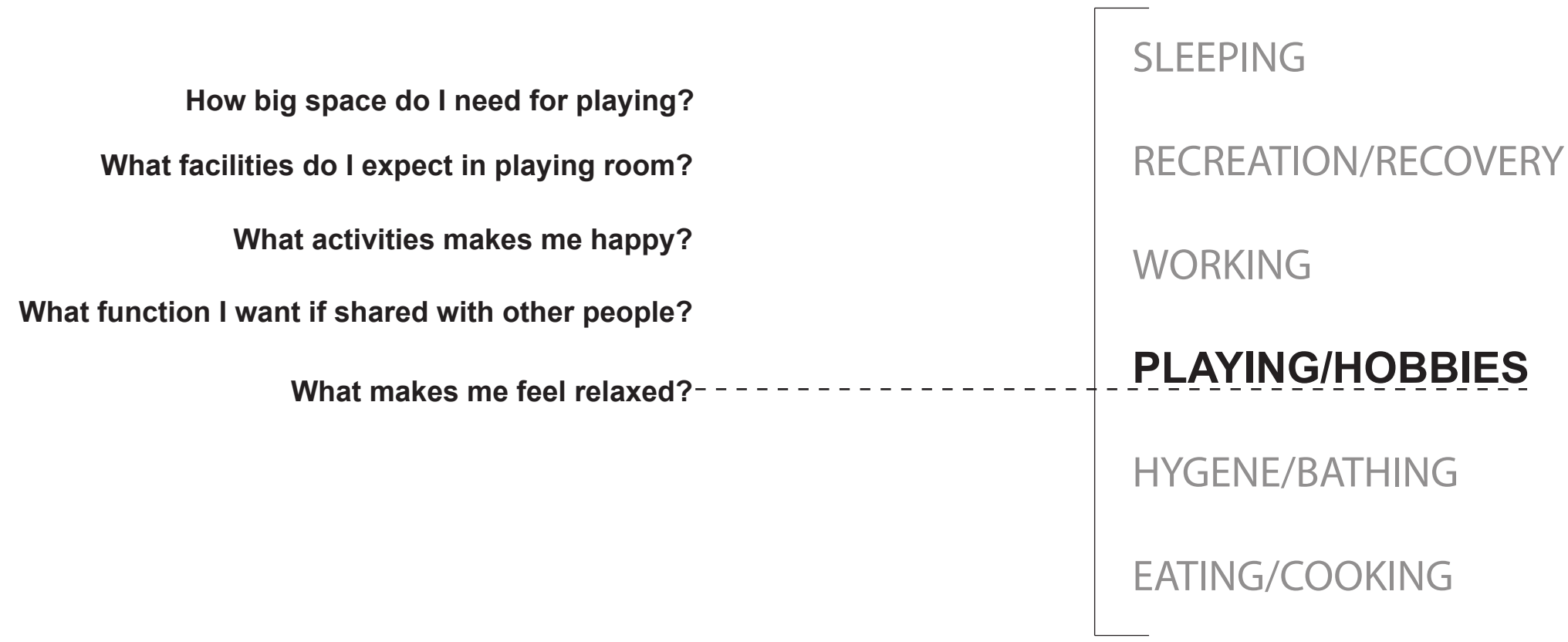
4.Floor
 20mm Birch plywood boards
 150mm Wood fibre wool
 vapour barrier
 20mm Spruce plywood boards

5.Pile foundation

+4.00
 +3.00
 +2.70
 +1.30
 +0.70
 +0.46
 +0.20
 +0.00

Model





PLAYING/HOBBIES

What makes me feel relaxed?

spare time /reading / drawing /cycling /hiking /a
hammock /nature/sunlight/activity/play game/
free time/somewhere familiar and chill

What facilities do I expect in playing room?

free space/A connection to the outdoor space/
move freely/creative furniture/some comfortable
chair

What function I want if shared with other people?

playgame/party/outdoor activities/cooking/craf-
ting+drawing/talking/ singing/ cooking+drinking/
Indoor chess

What other activities am I doing in my sleeping environment?

space to curl up / space to stretch out

How activities makes me happy?

outdoor activities/sports/movement/shopping/
playing card game/watch movies/zone out/do
yoga/cooking and eating/listening music

How big space do I need for playing?

larger / sufficient height/reasonable for wanted
activity

PLAYING ROOM

Privacy/Shared

spare time /reading / drawing /cycling
/nature/sunlight/activity/ game

outdoor activities/sports/movement
/zone out/do yoga/listening music

free space/A connection to the outdoor space
/move freely/creative furniture

space to curl up
/ space to stretch out

larger / sufficient height
/reasonable for wanted activity

Comments:
"Analyze the scale of human body
and recombine the
space of different heights"

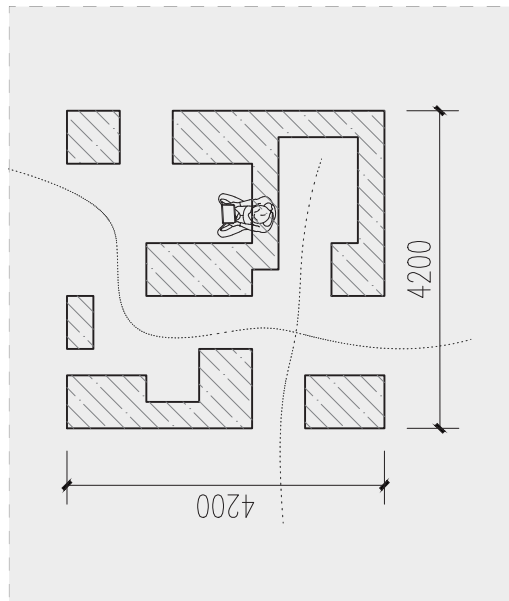
"It is suitable for the space of
human body scale, and can sit,
travel and stand"

"You can touch different heights
to meet the needs of
different activities."

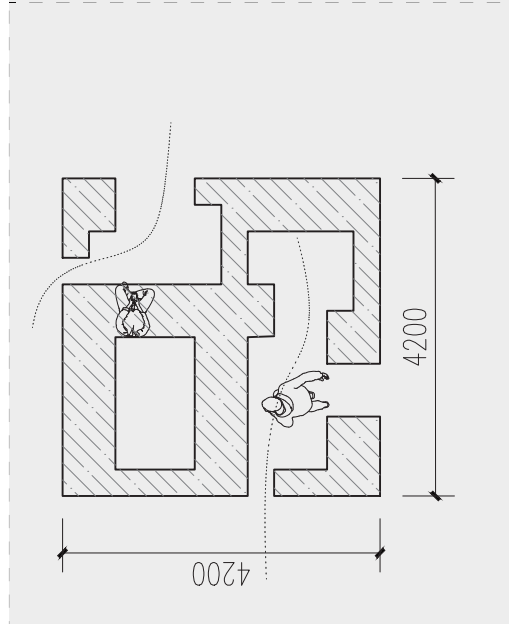
"Increase contact with nature
when reading, listening to music
, rest and entertainment"

17,64 m2 (4.2m×4.2m)

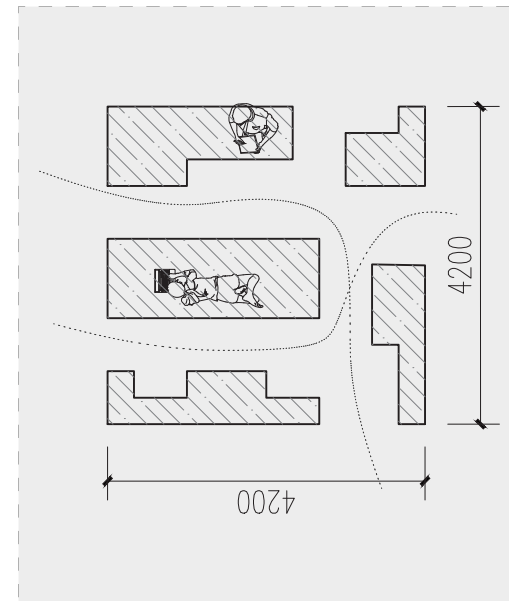
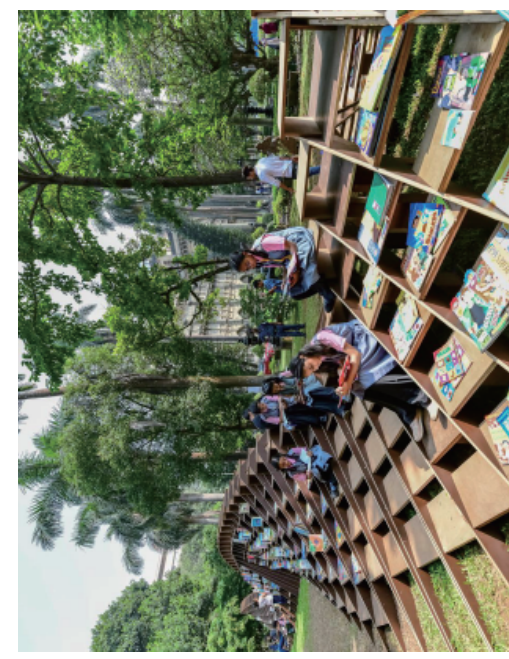
Playing space



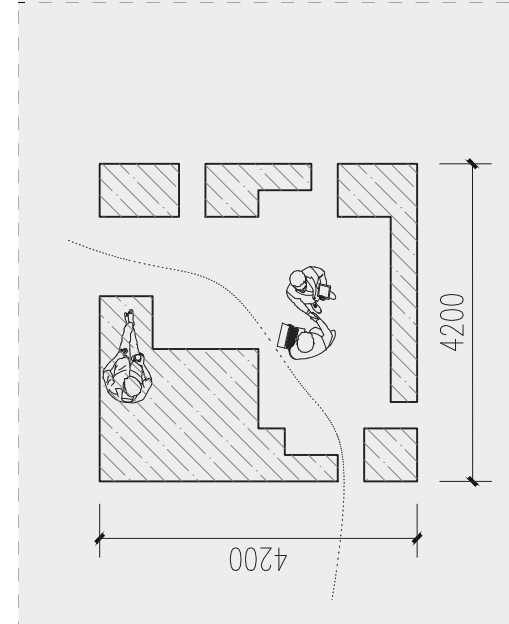
Proposal/sketch/plan



Reading space



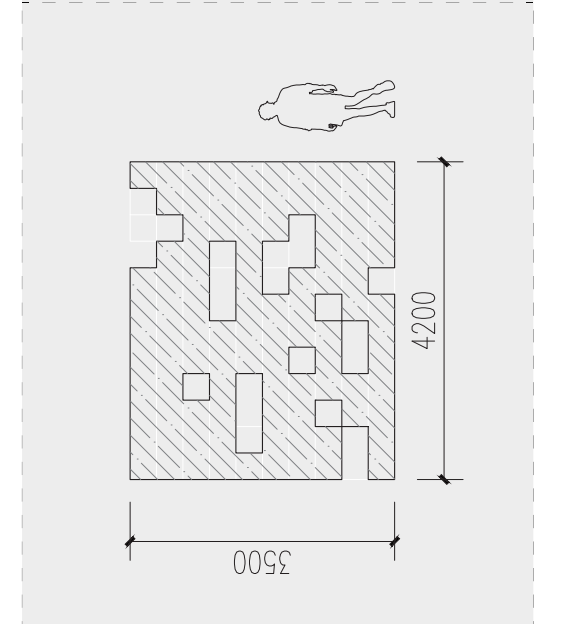
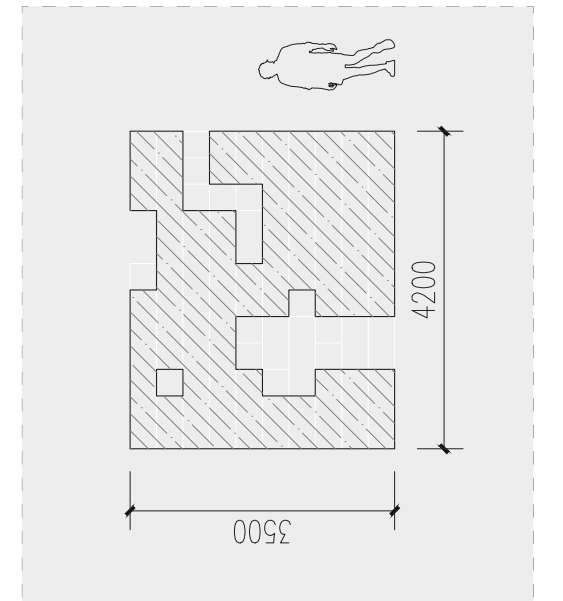
Proposal/sketch/plan



Sktech for spaces of different heights



Proposal/sketch/facade



1:100 sketches

PLAYING/HOBBIES

adapt tools to space and function

TOOLS:

material, color, location, light, size, temperature, humidity, acoustics, flexibility, separation/connection, shape, density

SELF-EXPRESS

Material: wood, etc

Light: full of sunlight

Size: human scale

Color: color of nature

Location: connection with spatial scale

Temperature: 10-25

Humidity: medium

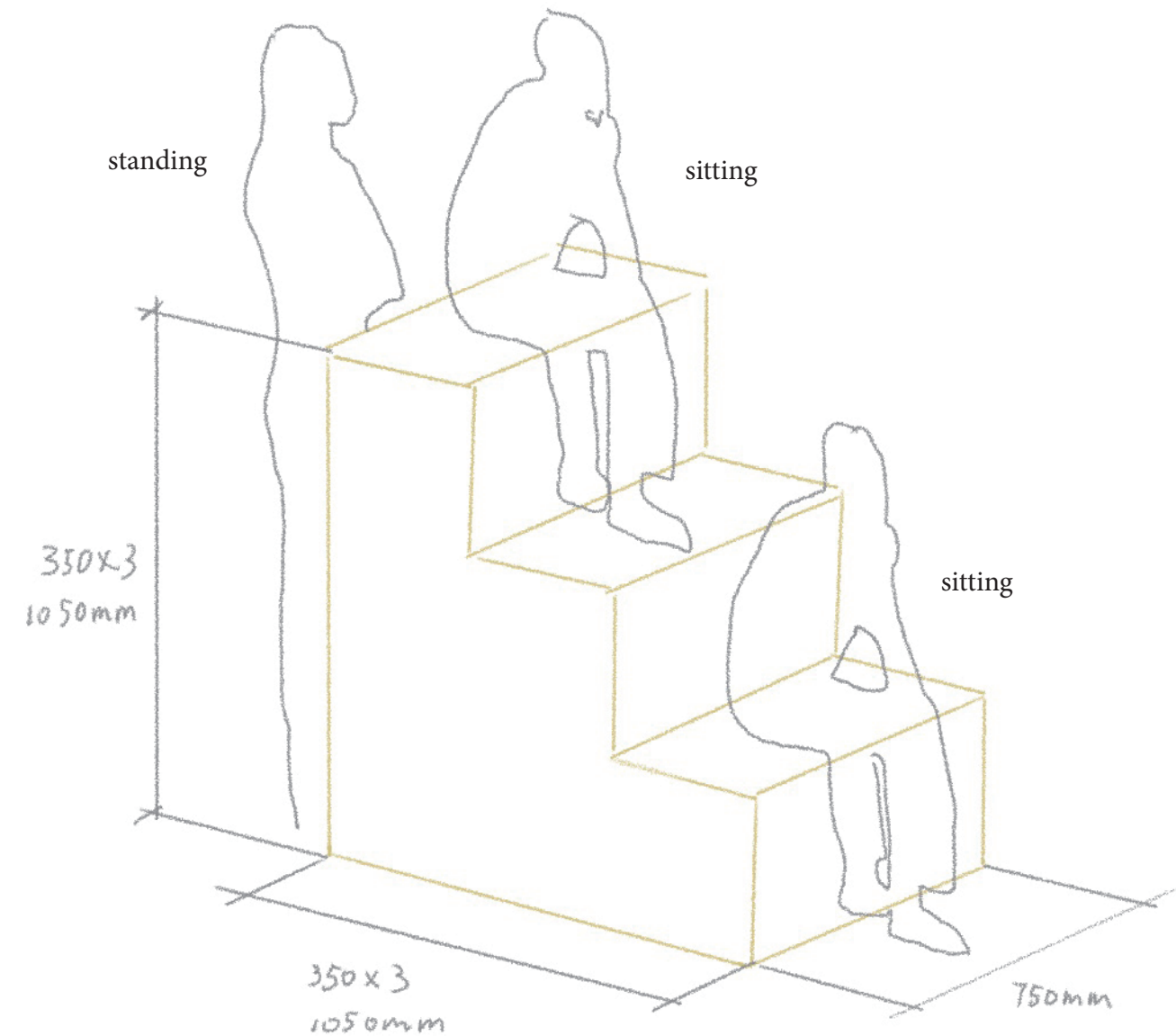
Sound: relaxing and pleasant music

Flexibility: more optional space/nature space

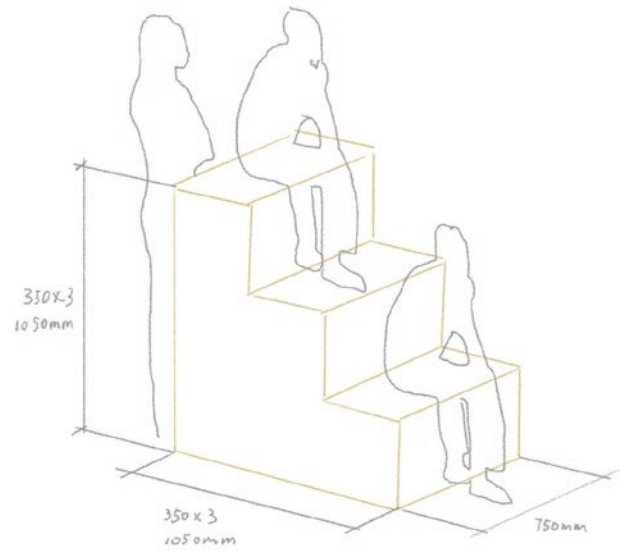
Separation: more nature/connected with nature

Shape: human scale

HUMAN BODY

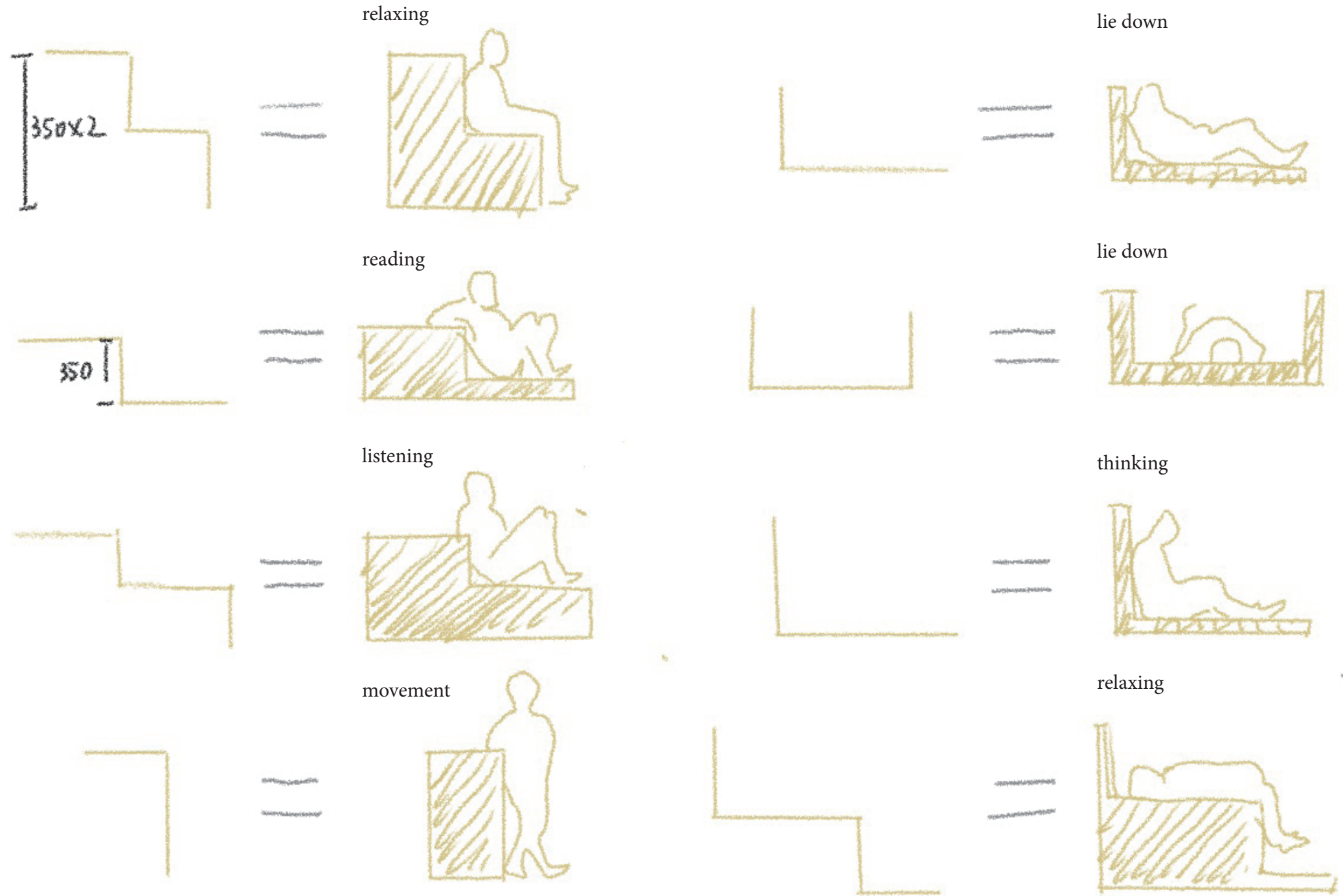


CONVERSION



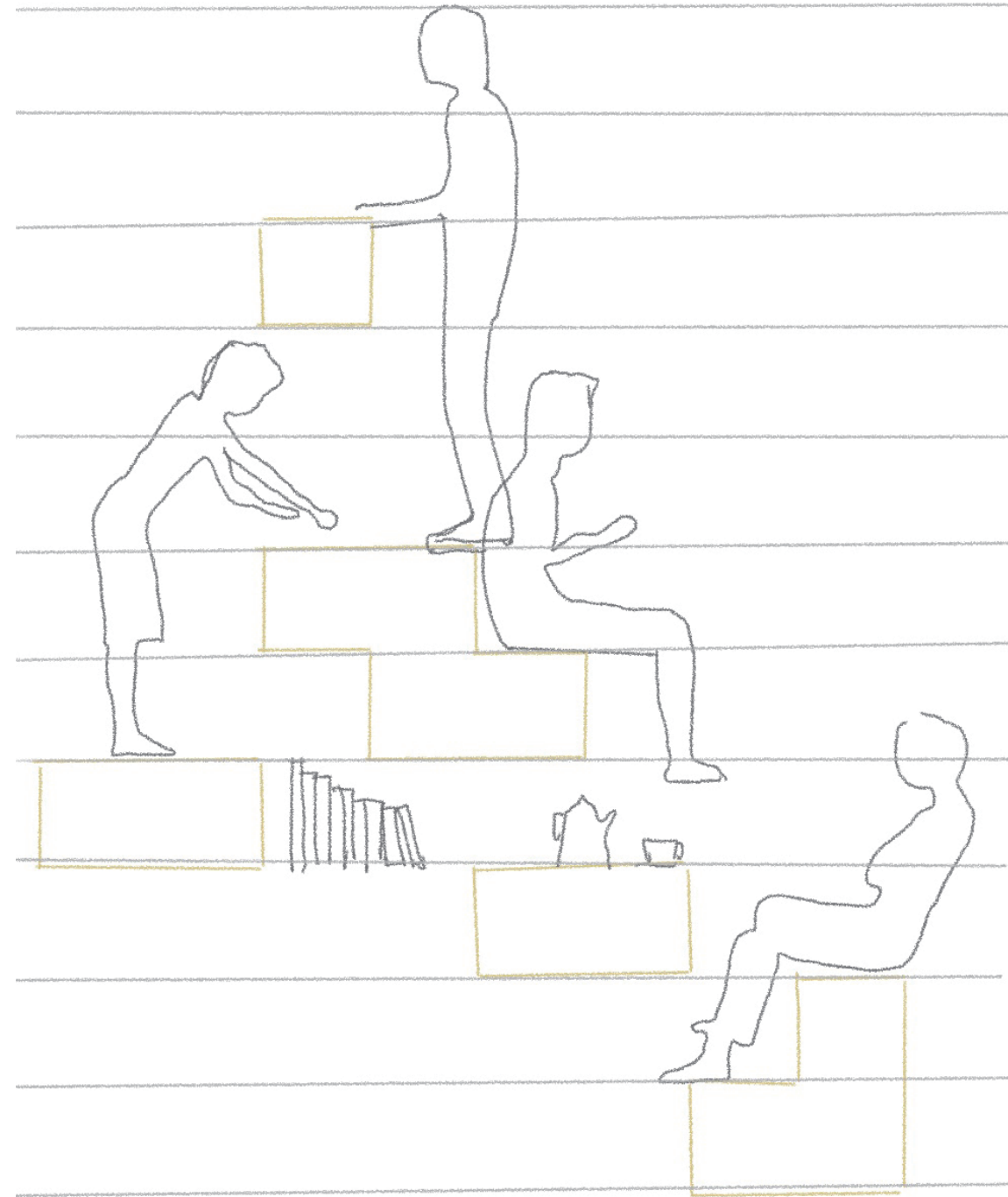
+

- reading
- eating
- drawing
- nature
- sunlight
- activity
- play game
- outdoor activities
- movement
- watch movies
- zone out
- do yoga
- listening music
- space to curl up
- space to stretch out
-

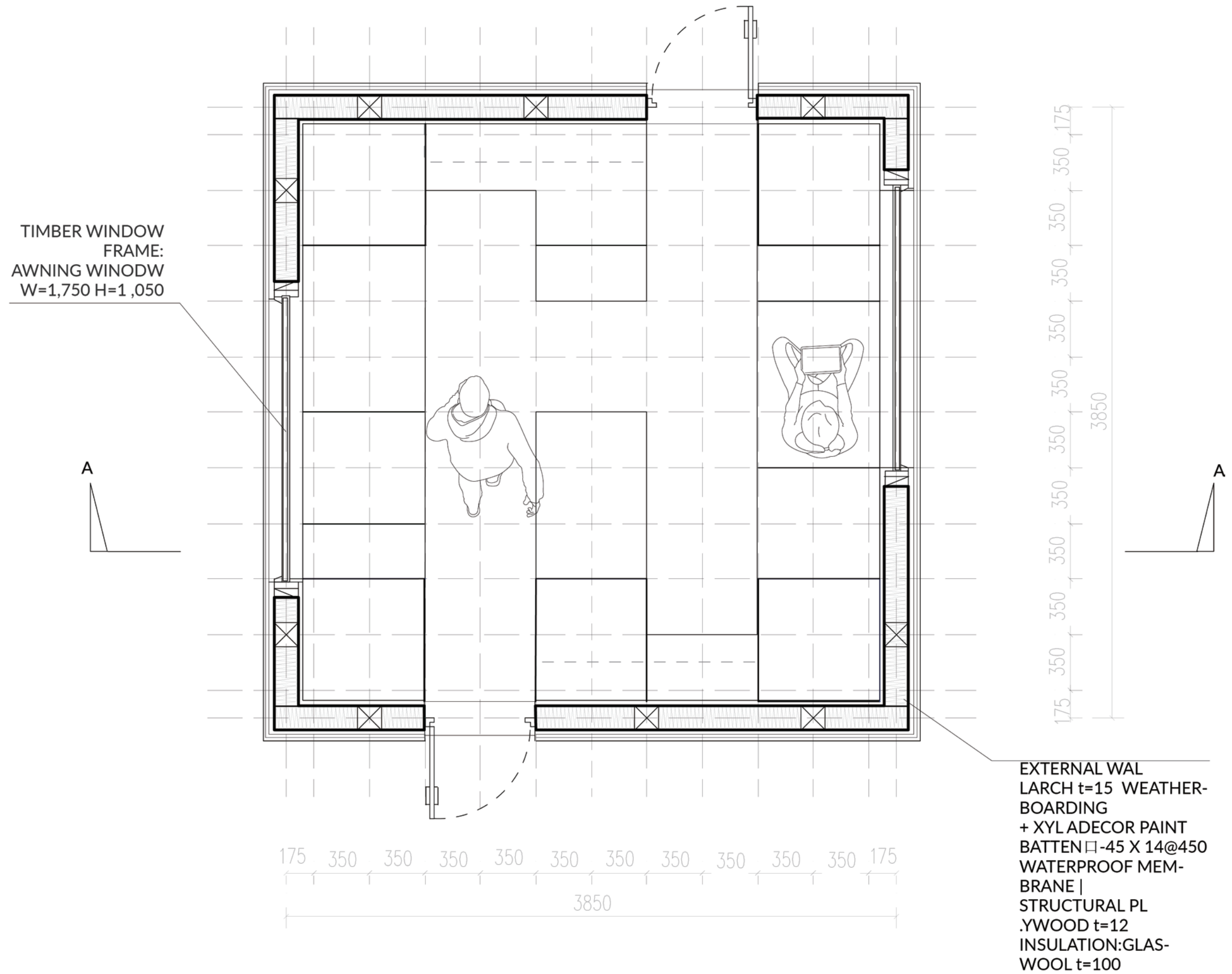


COMBINATION

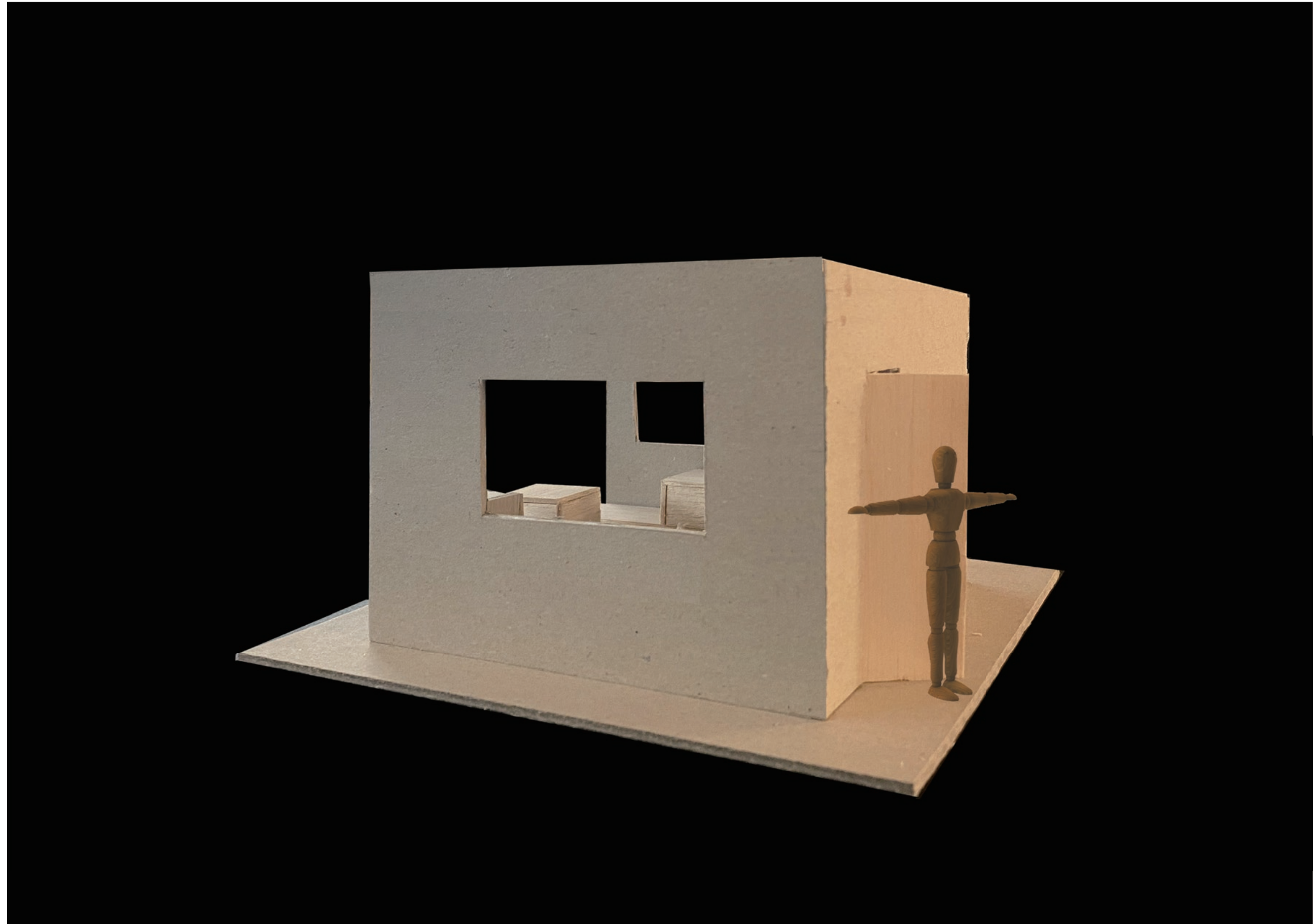
Different height survive activity



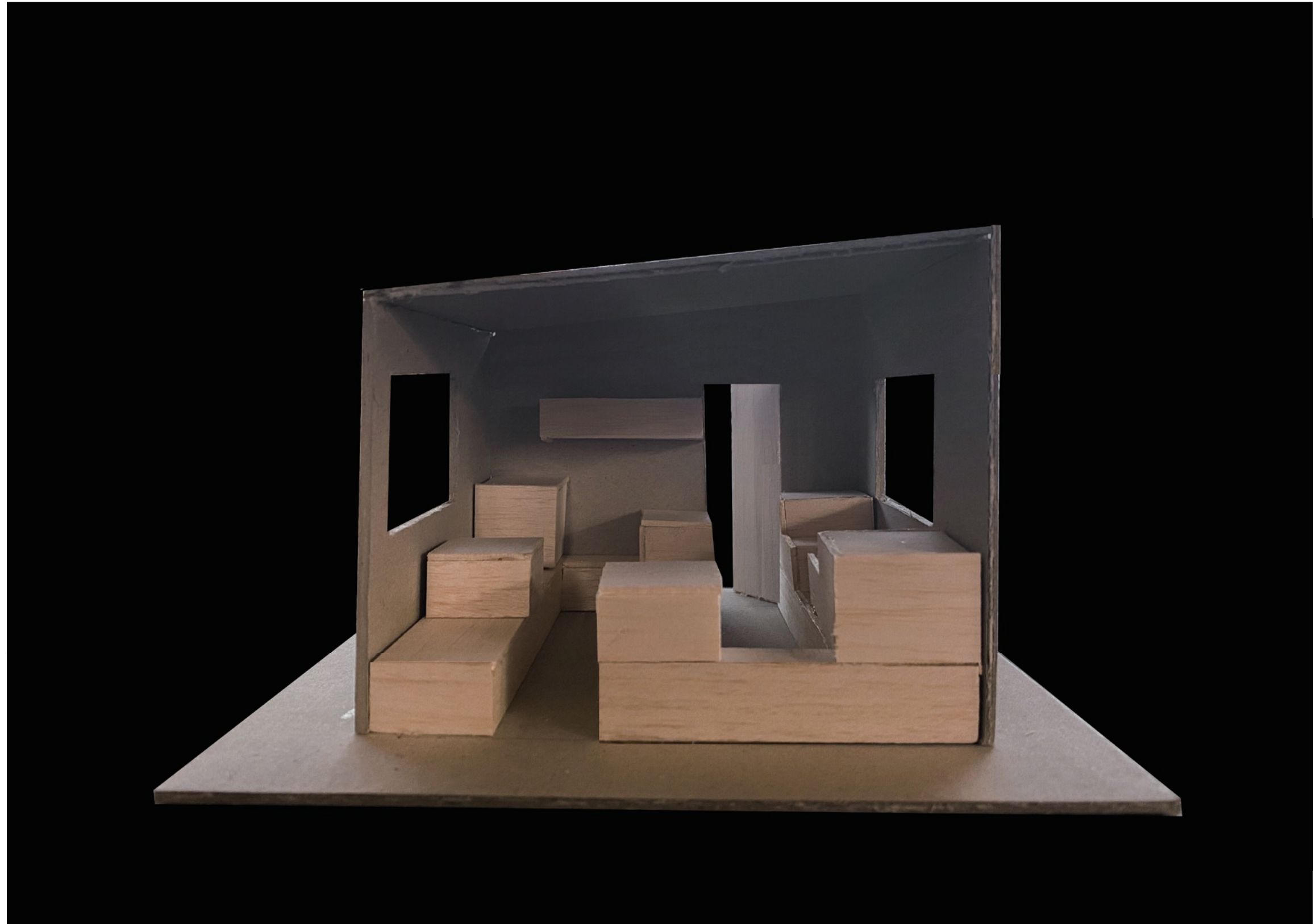
PLAN 1: 25



MODEL



MODEL



How much privacy do I need?
How often do you take a shower(clean your body)?
What other activities am I doing in my bathing environment?
How much time do I need?
What kind of view you prefer when you take a bath?
How bright should a bathroom light be?

SLEEPING

RECREATION/RECOVERY

WORKING

PLAYING/HOBBIES

HYGENE/BATHING

EATING/COOKING

Privacy/Shared

Nature(view)

Temperature

Acoustic / Nice Smell

Humidity

Pleasant Light

Relax

Electricity/Gas

Water

Daily <-> Ritual

Private <-> Shared

Cold <-> Hot

Dry <-> Humid

Single <-> Multiple activities

Comments:

"I take shower every day... but only spend 10-30mins."

"I thinking about life when I taking shower."

"I usually singing and listen to songs when I take a shower."

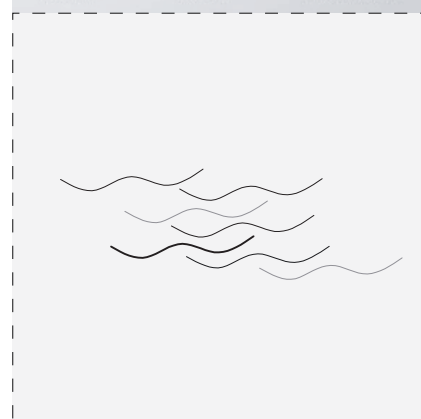
"for myself, can take a bath with people I feel comfortable with."

"for myself and no connection with outside."

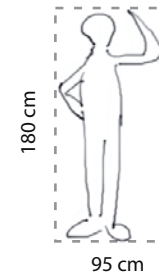
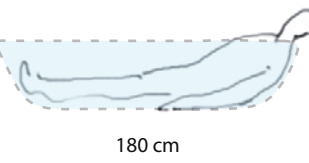
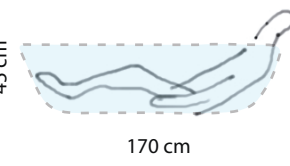
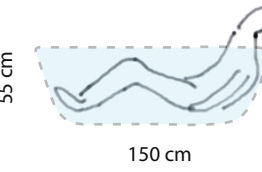
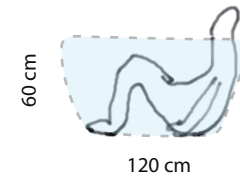
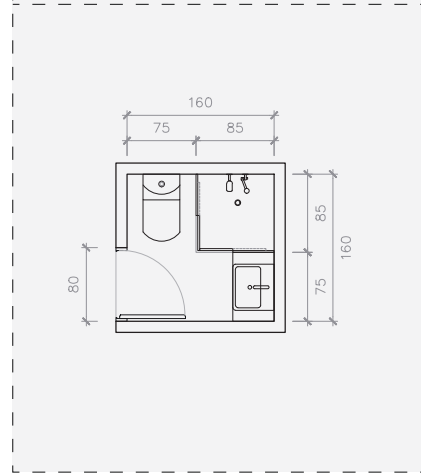
"i like both candlelight for a fancy bath and bright light for other activities"



Natural Formations



The minimum size of bathroom



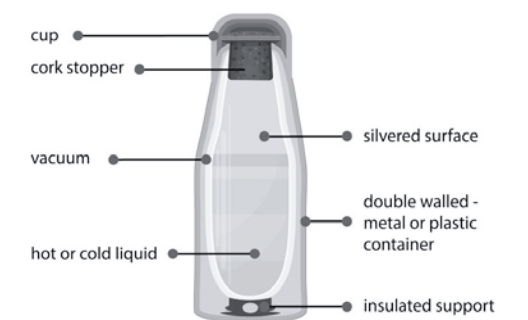
Proposal/sketch

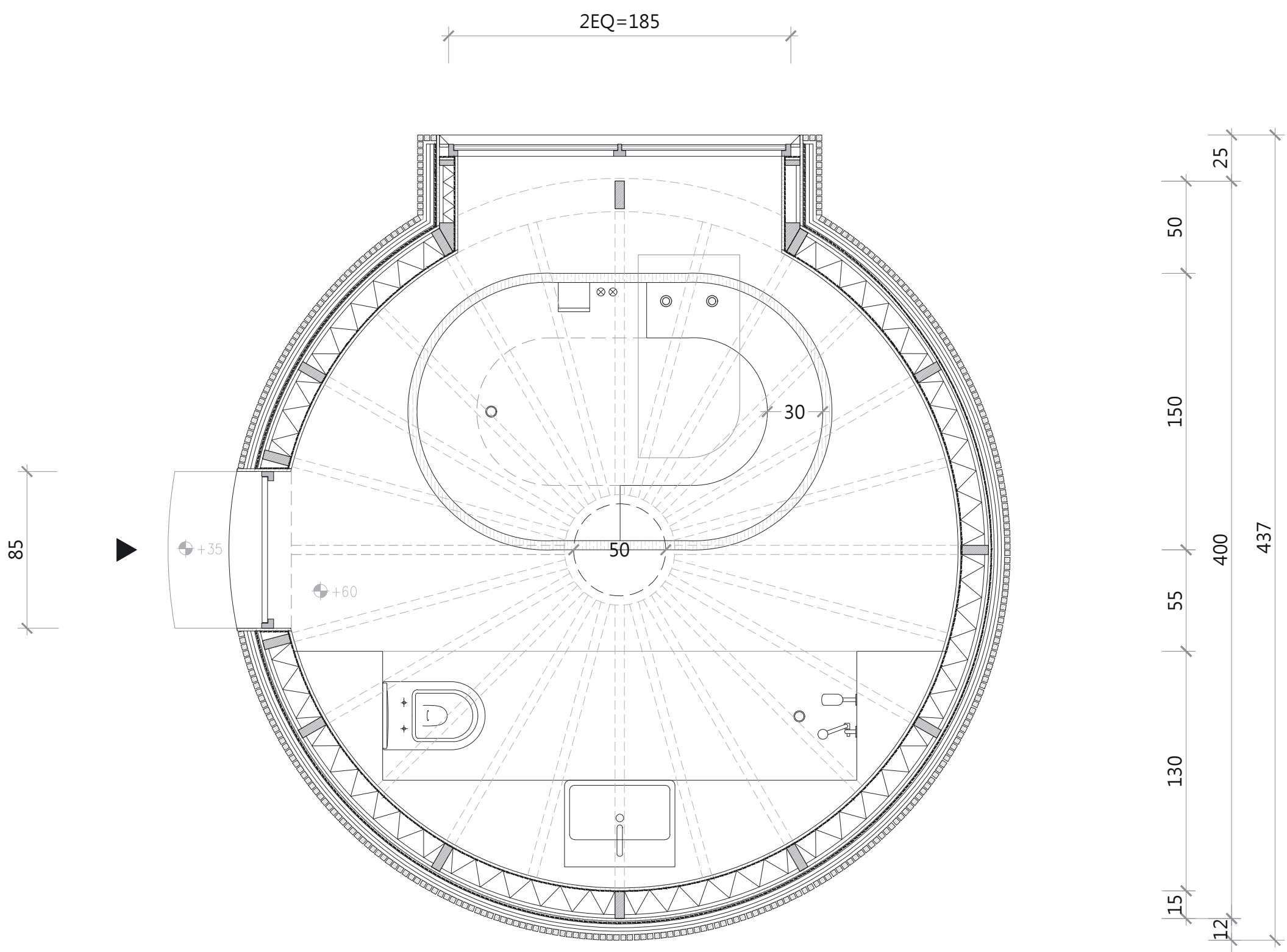


Roma bath/public bath house/hot sprin/sauna

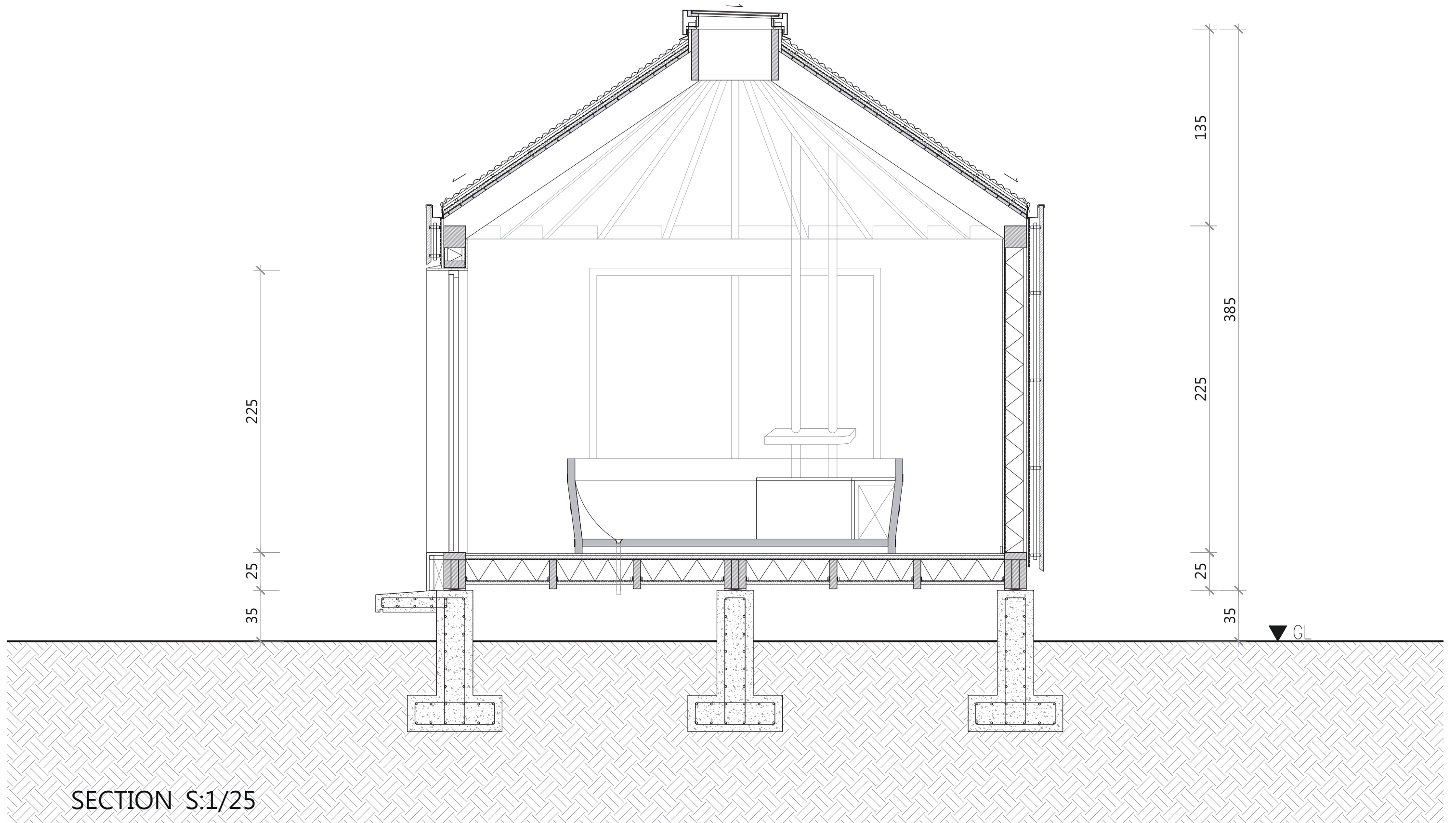


Temperture and heat / wood

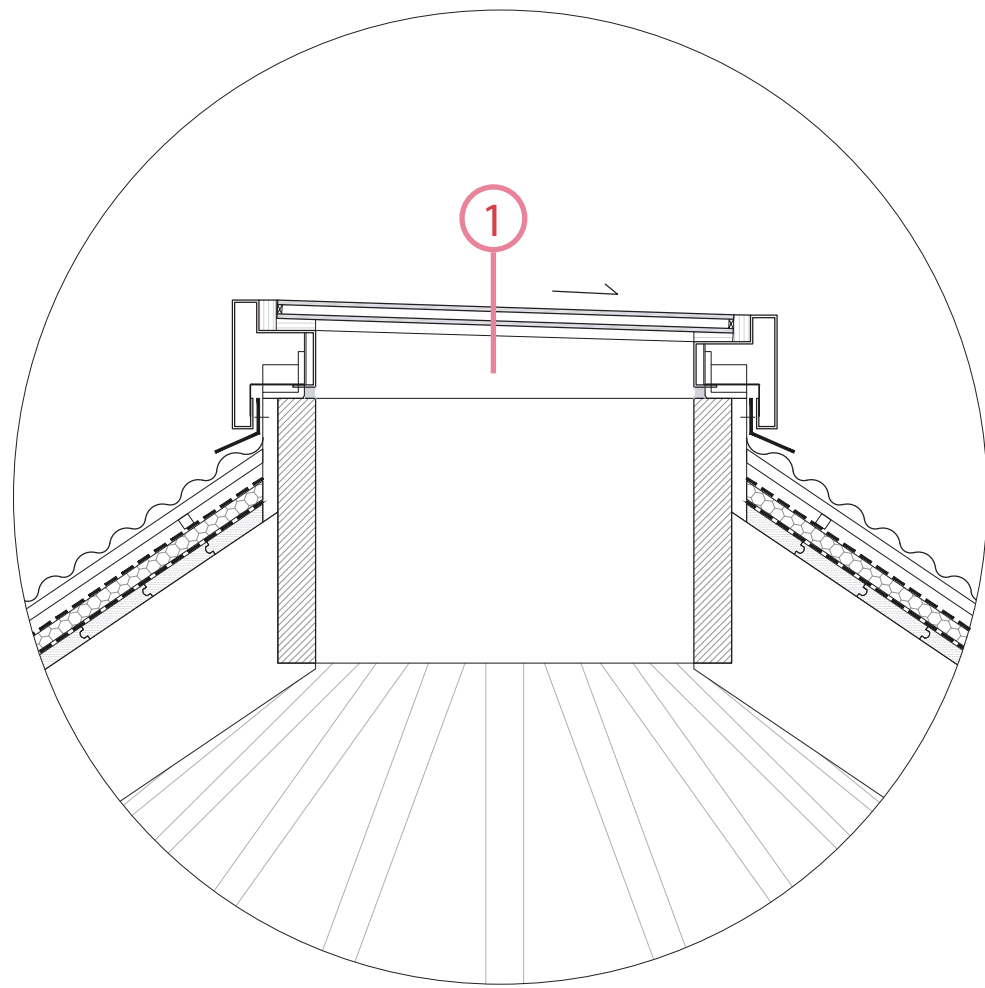




PLAN S:1/25

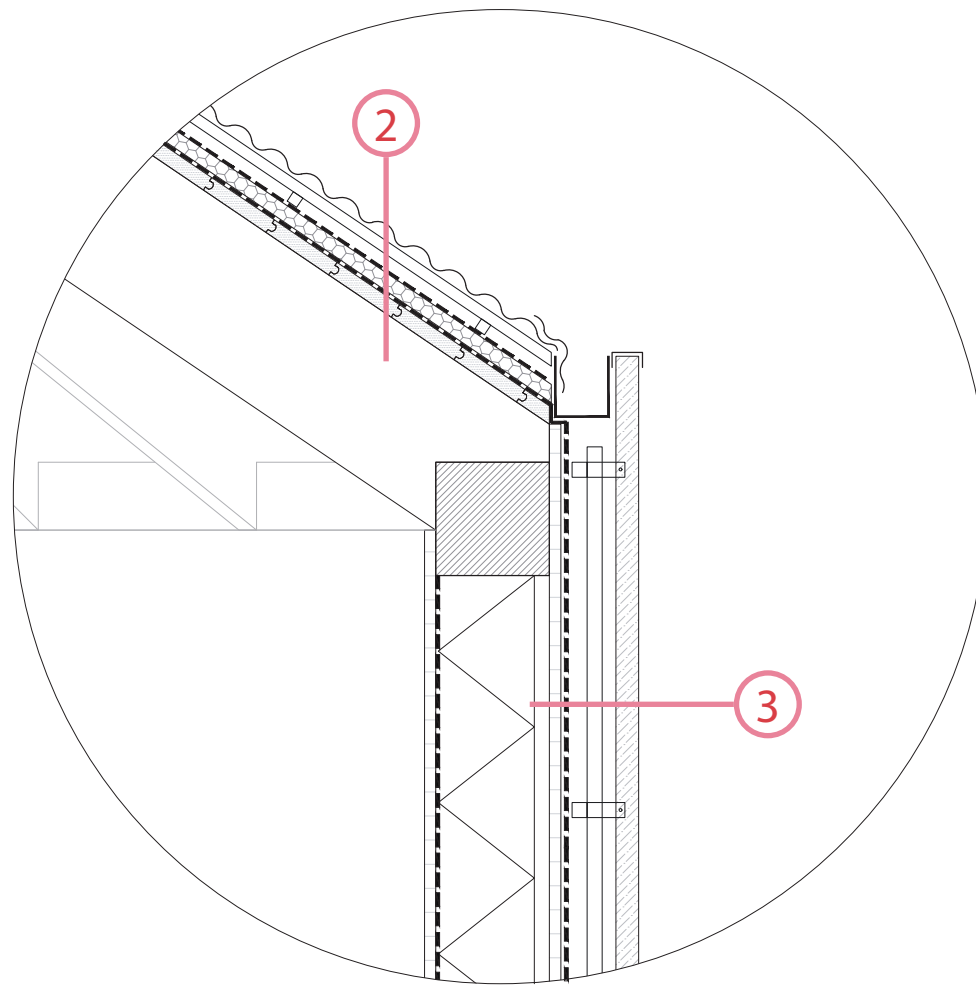


SECTION S:1/25



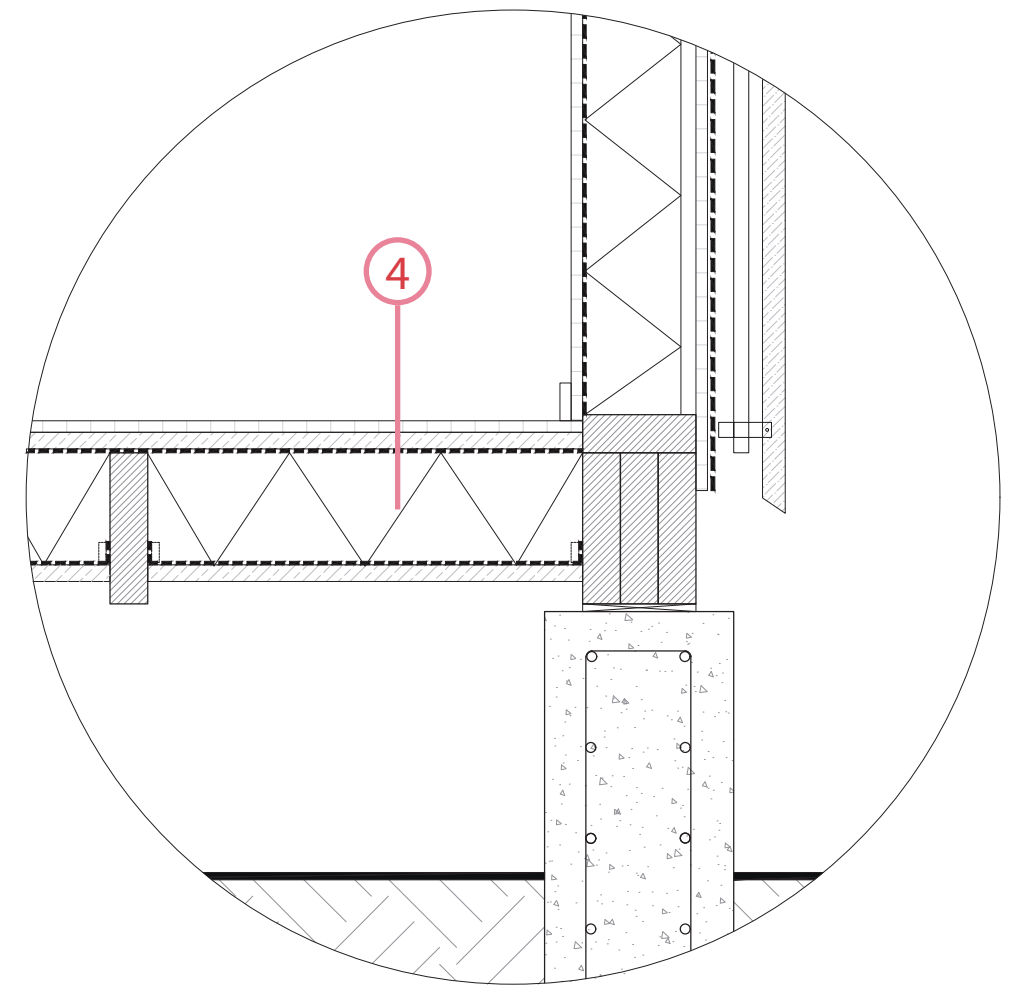
1 SKY LIGHT

Insulating Glass
Metal fixings
wooden ring beam



2 ROOF

metal sheeting
wood battens
wood distance pieces in short lengths
waterproof sealing layer
Insulation
vapour barrier layer
wood boarding with staggered joints
50/200 mm wooden beams



4 FLOOR

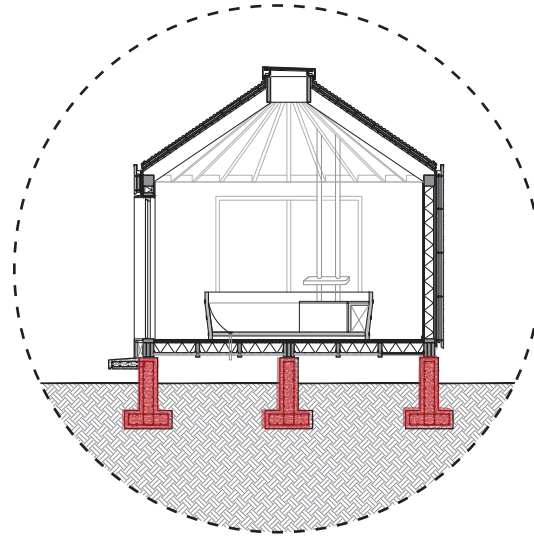
15mm plywood flooring
20mm chipboard
waterproof layer
150 mm rock-wool insulation
50/200 mm softwood joists
wind barrier layer
15 mm fibreboard

3 WALL

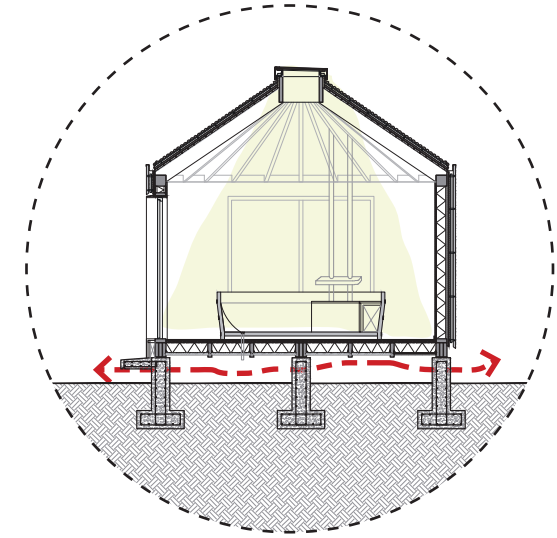
wood strips
Metal cladding fixing method
waterproof sealing layer
sealing layer 19 mm plywood
50/150 mm softwood joists
rock-wool insulation
vapour barrier layer
sealing layer 19 mm plywood



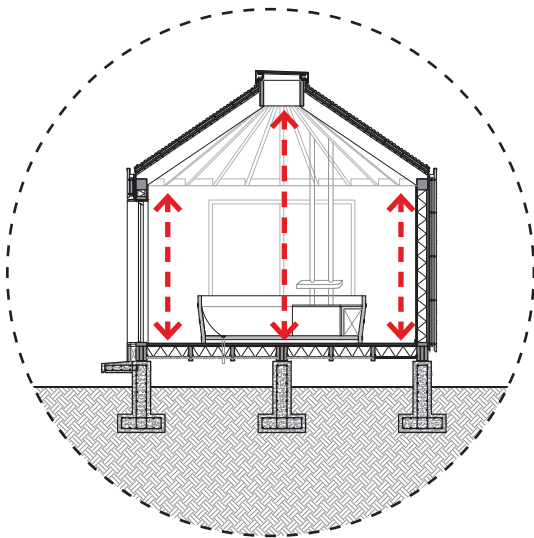
1. Use natural materials.



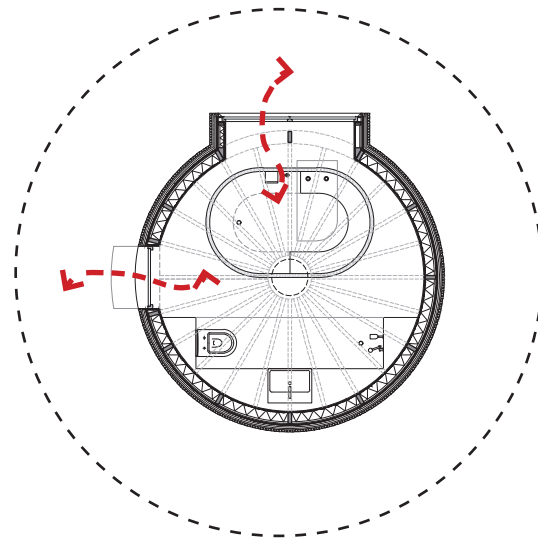
2. Consider a minimal footprint.



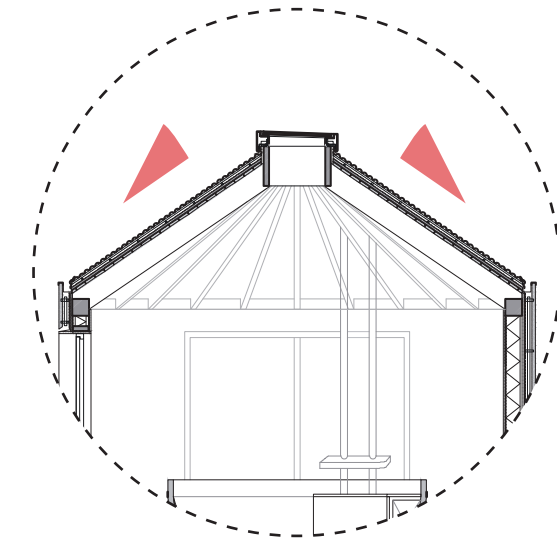
3. Make use of natural light and a natural airflow.



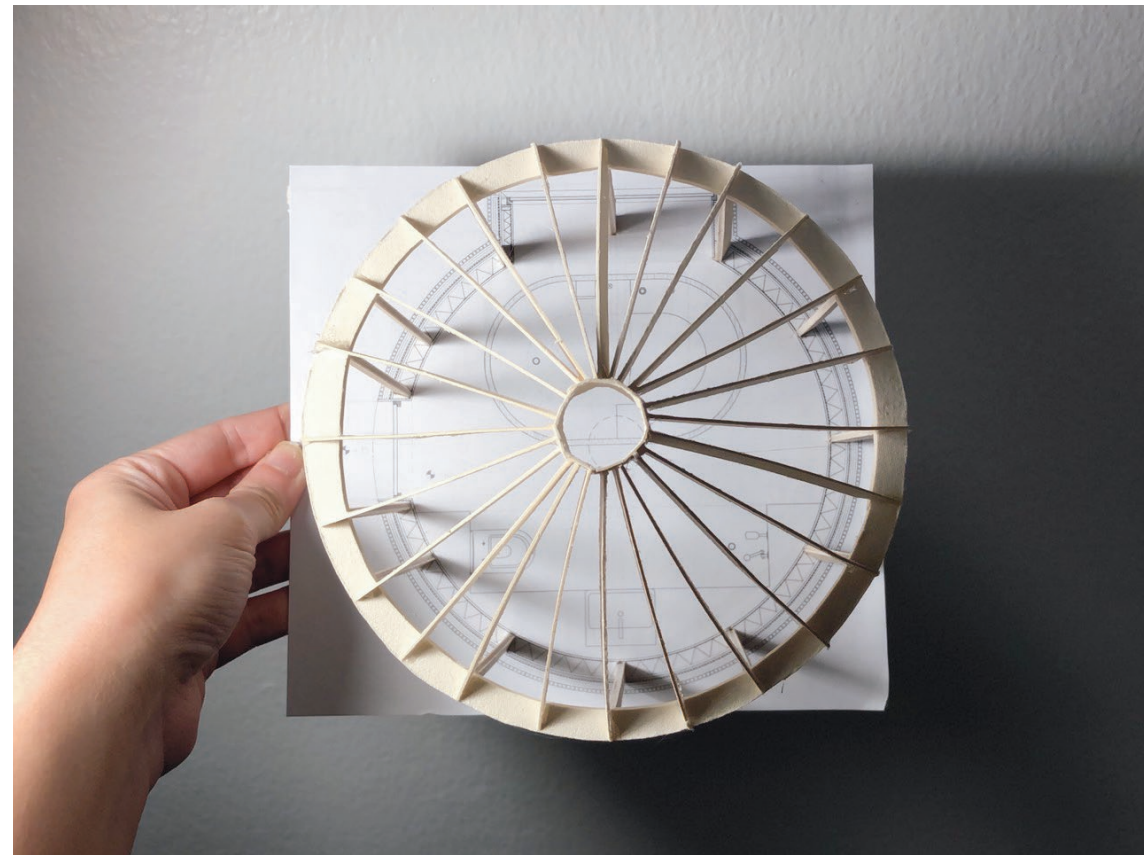
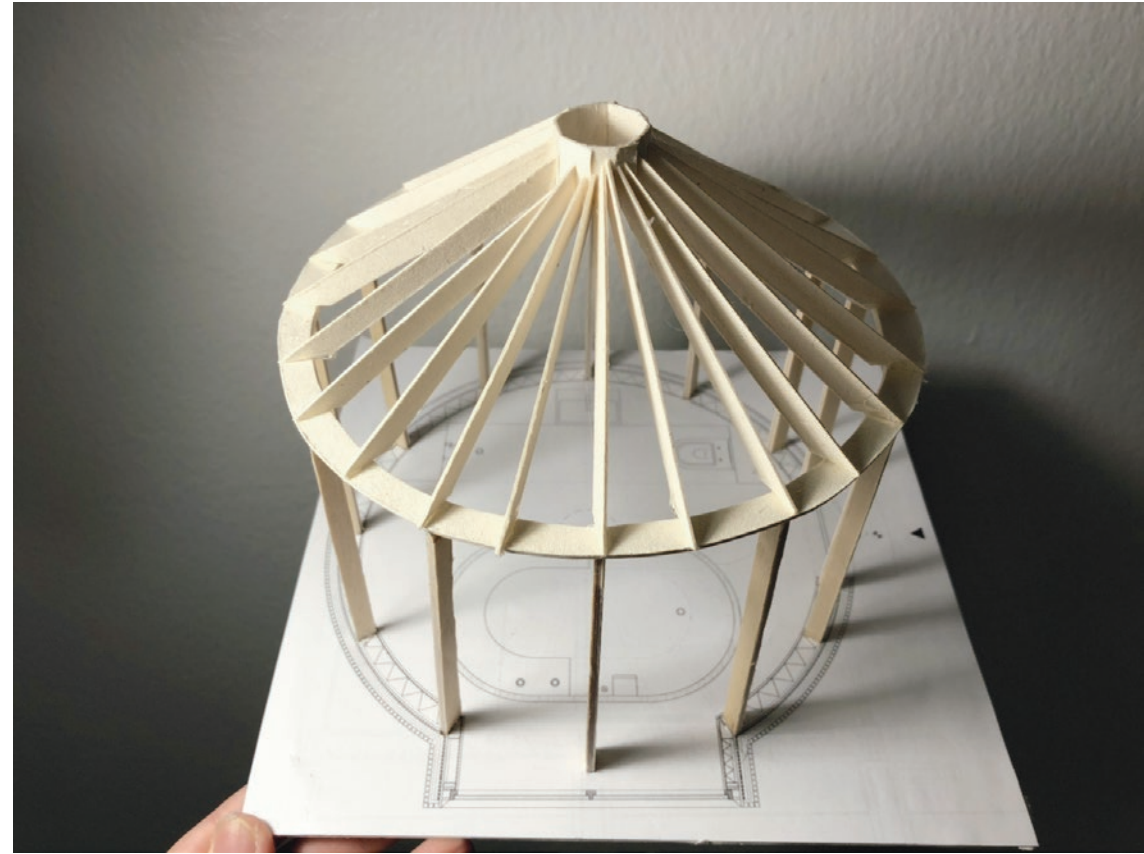
4. Create a shape that allows for different functions & movement.
6. Work with different heights to achieve different feelings.



5. Allow for outdoor extension. / Relate to outdoors.



7. Use a tilted roof.



MODEL

What is a good space for eating?
What facilities do I expect in my cooking environment?
What other activities am I doing in my cooking environment?
How much privacy do I need?
How much space do I need to share it with other people?
What does my relationship look like about eating / cooking?

SLEEPING

RECREATION/RECOVERY

WORKING

PLAYING/HOBBIES

HYGENE

EATING/COOKING

Privacy/Shared

Calm

Embracing

Effectivity

Temperature

Pleasant Light

Socialize

Acoustic

Electricity

Ventilator (fresh air, no smell)

Comments:
"access to chair and table, embracing and not centered in the space"

"I don't need privacy when I cooking but i would like to have some cover or window to separate the cooking smell with other space where I living in."

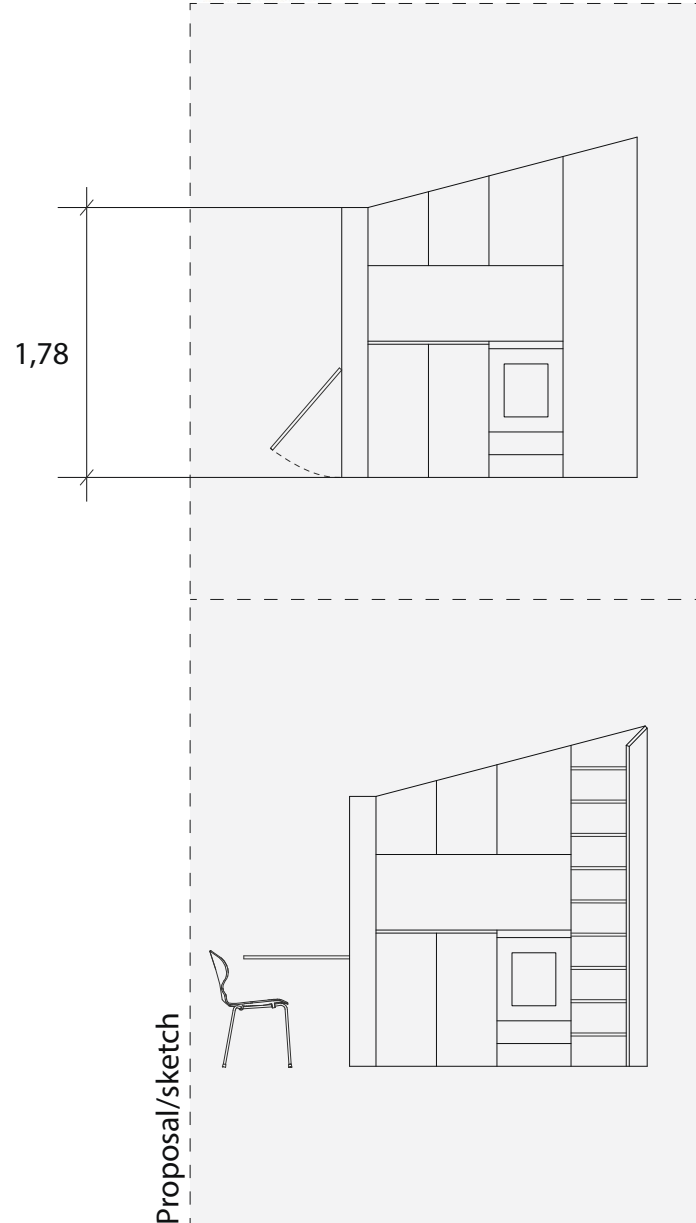
"In the morning I need more privacy (the space can be shared with other if I have access to a personal space)"

"Easy to clean, not crowded, can eat while watching TV or scenery"

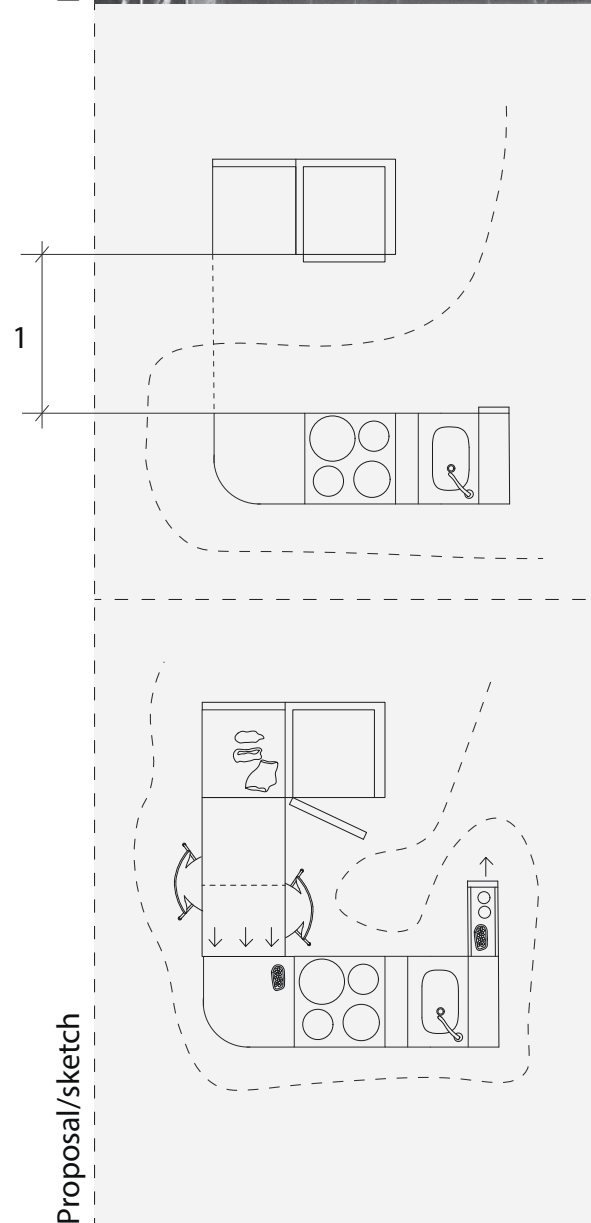
The Cornell Kitchen



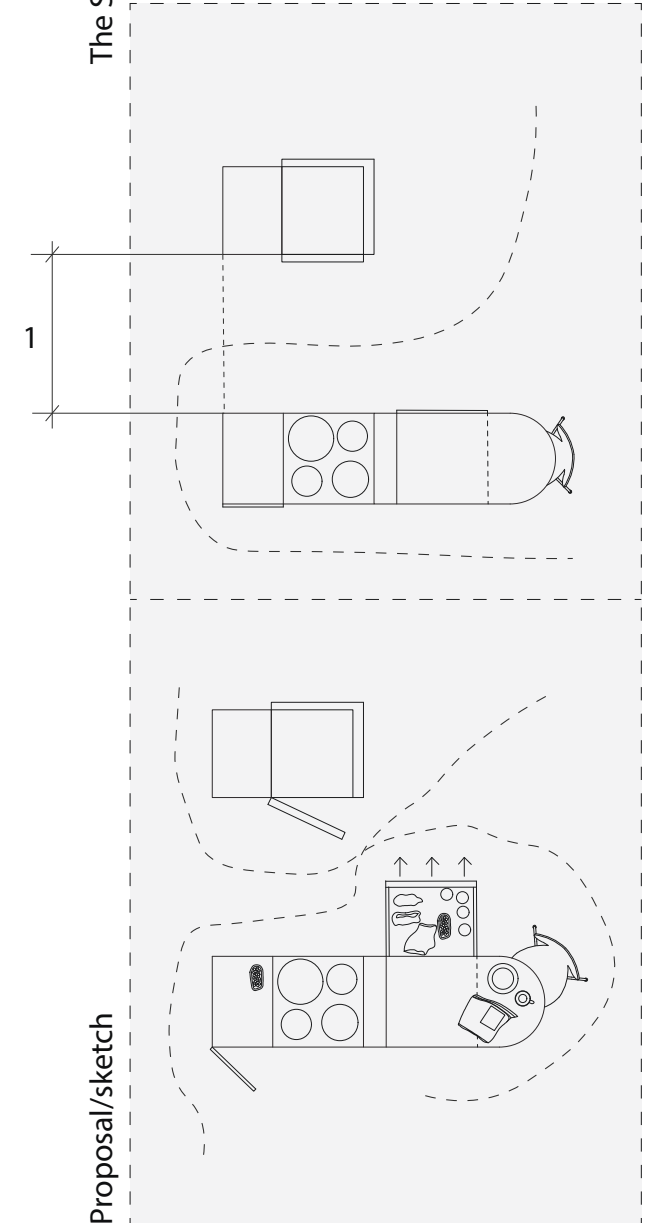
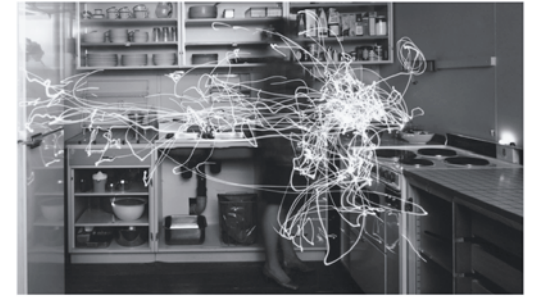
FIG. 10 Oven-refrigerator unit, 1954. Note pullout trays in fridge. (Source: CHES, Box 11, folder 18.)



Frankfurter Küche



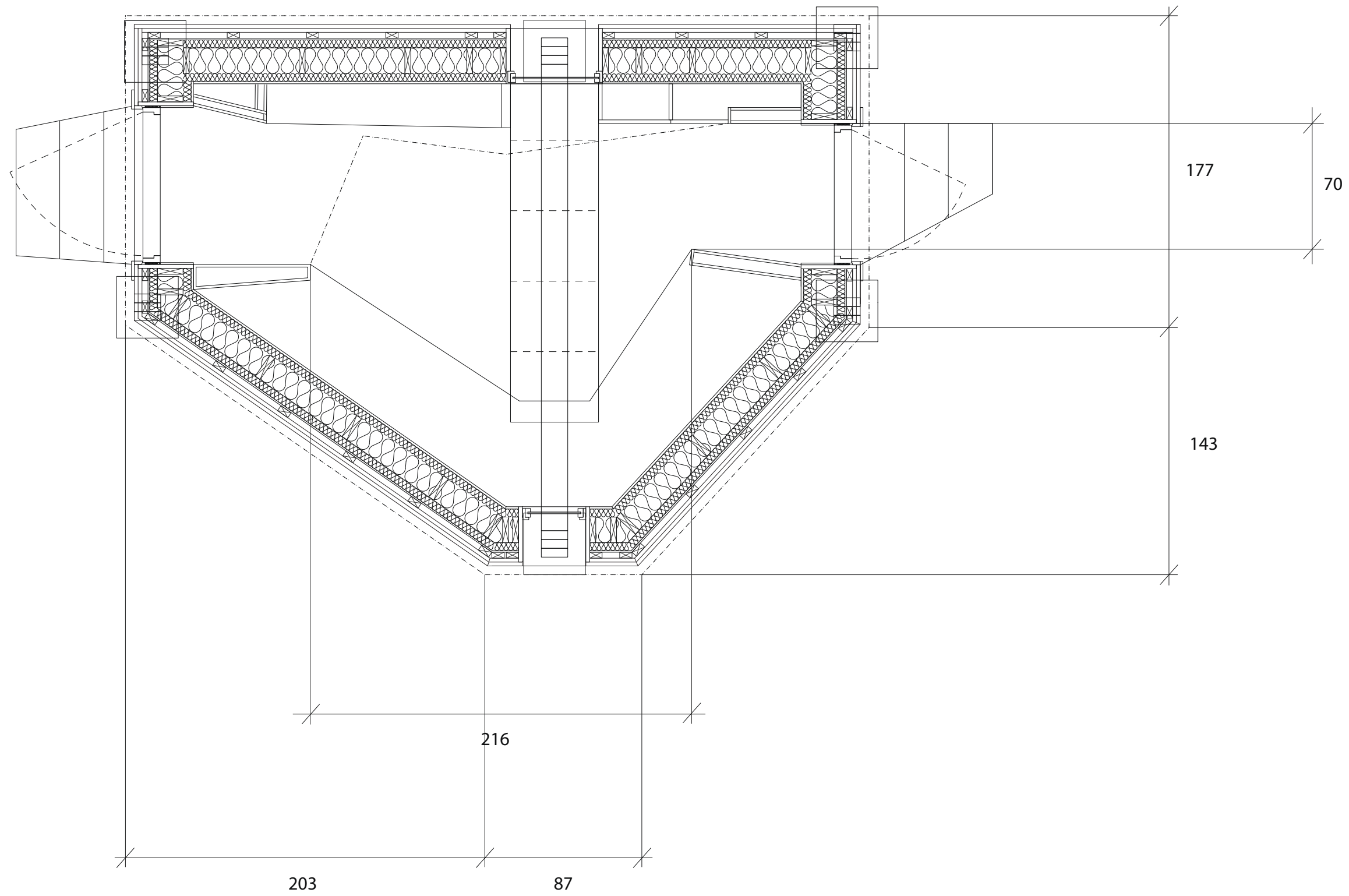
The Swedish "Folkhemmet"

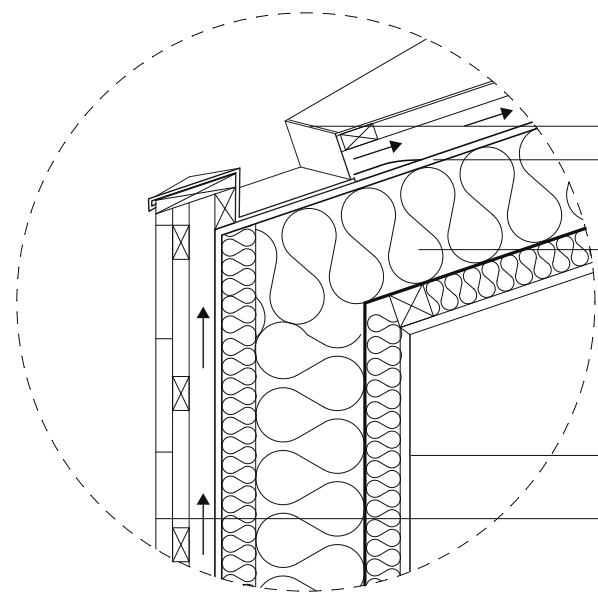


4,5 m2 (2 m2 walk space)

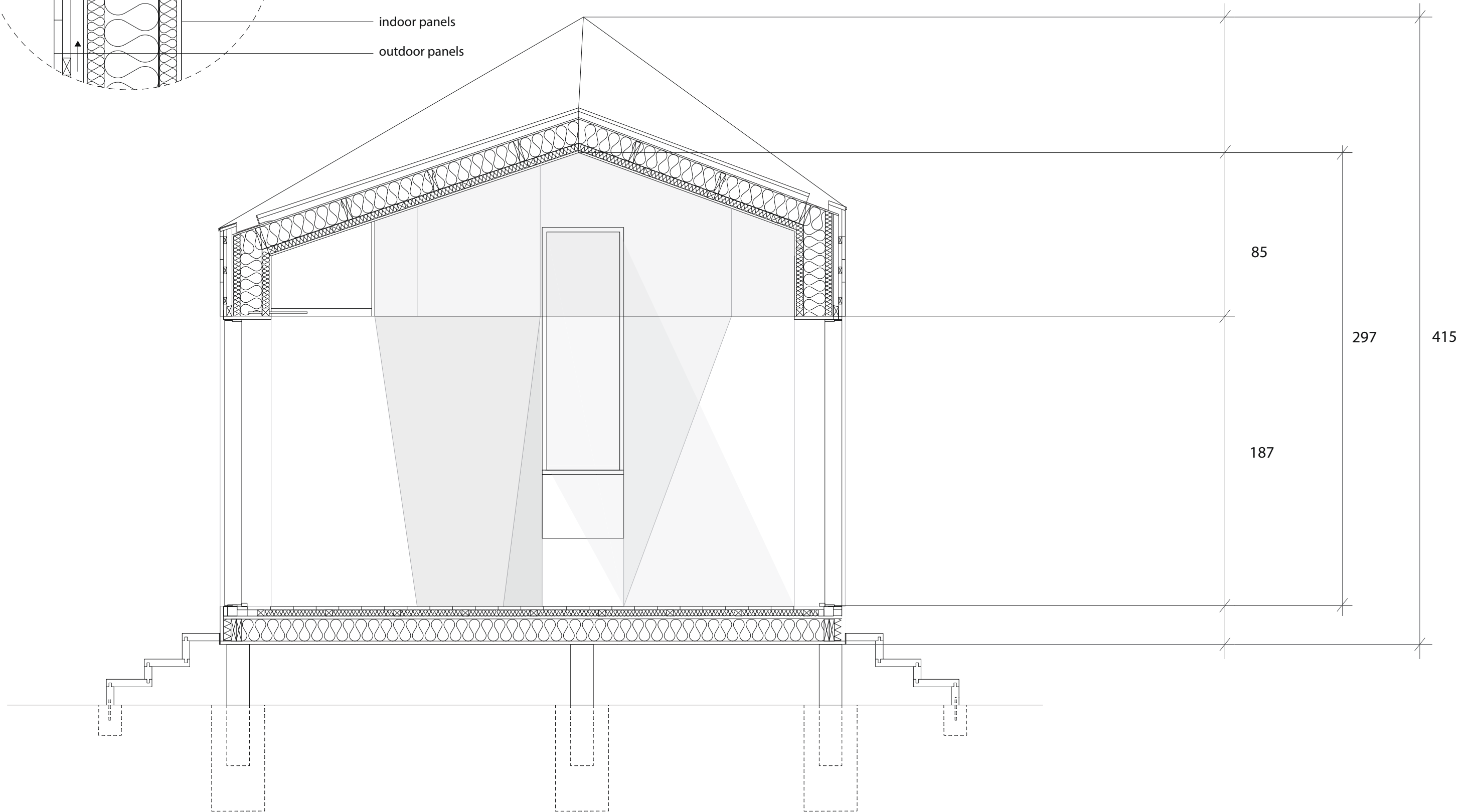
functions in detail | how do we use our tools? | movement | size | space

1:50 sketches





air inlet, weep hole
waterproofing layer / membrane
thermal insulations and battens
indoor panels
outdoor panels



85

297

415

187

