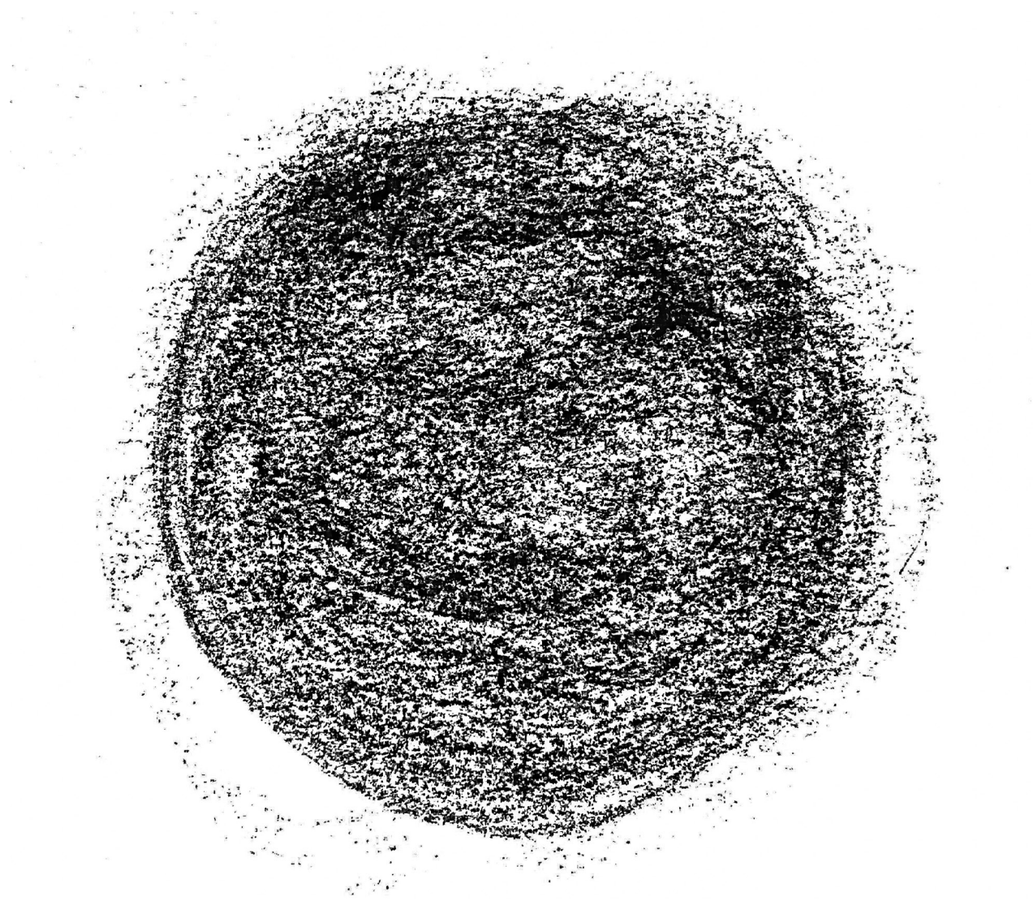
READING OF AN URBANISED LANDSCAPE
THE UNESCO SILENT STEWARDSHIP

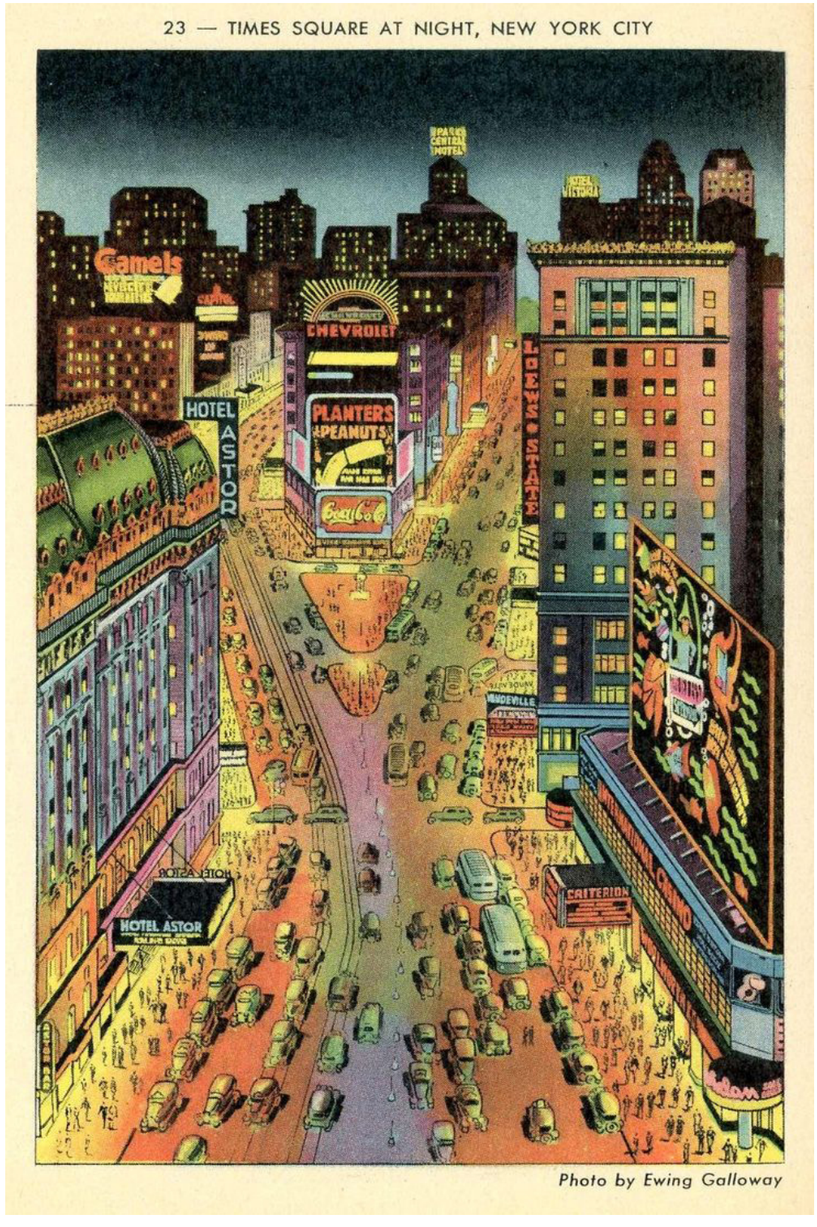


KEVIN MAZANEK & FRIENDS / EXPLORE LAB 25

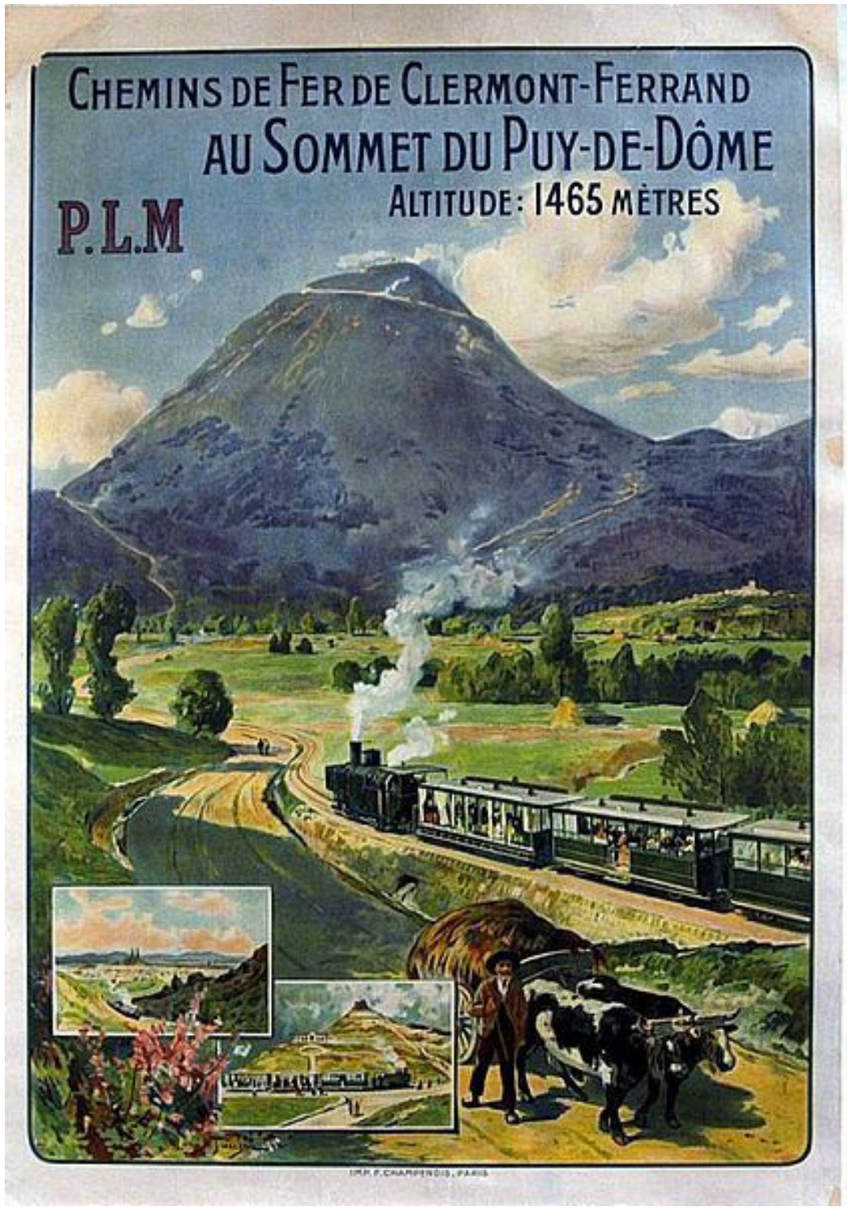
INTRODUCTION
POLISH CONTEXT
UNESCO SILENT STEWARDSHIP
REFLECTION



Jan Breughel & Peter PaulRubens: ***The Garden of Eden*** *(1615); Mauritshuis, Den Haag*



Modern City

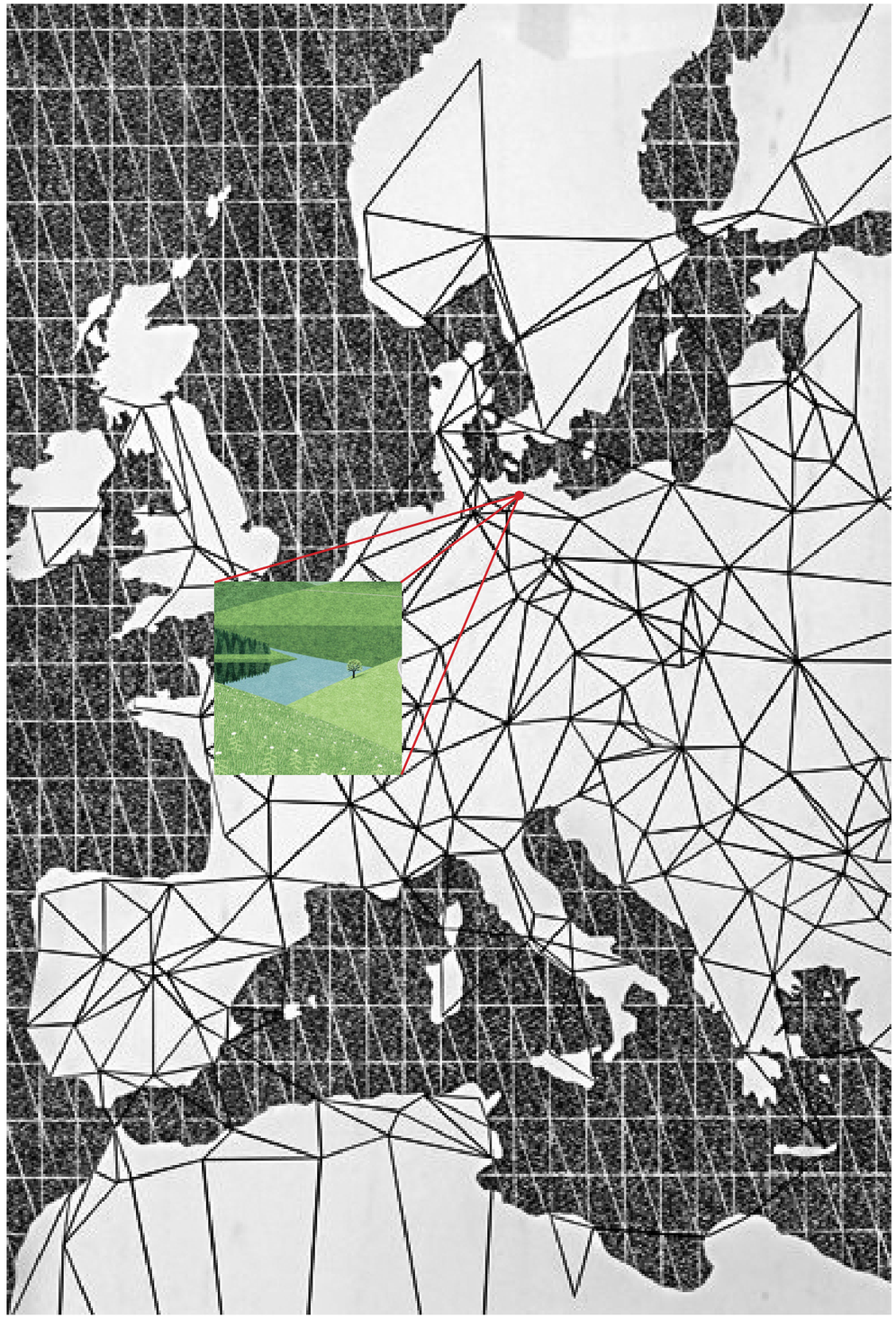


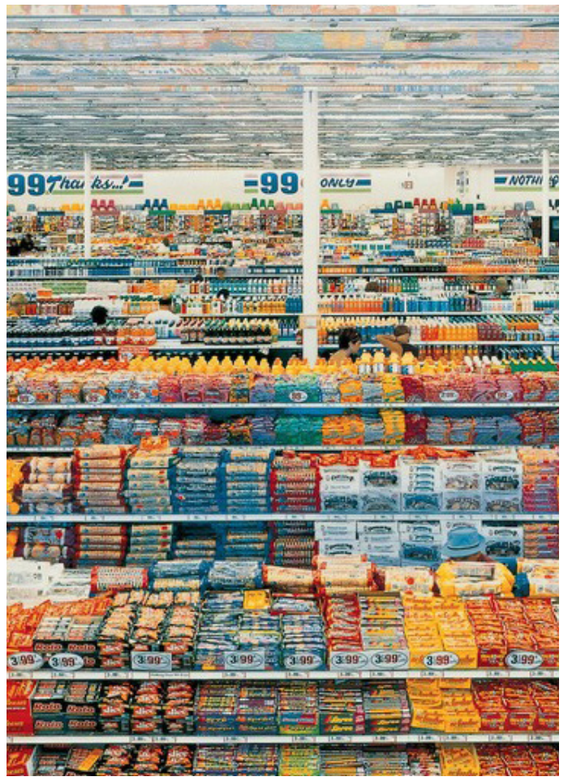
Traditional Countryside

URBAN-RURAL ANTAGONSIM



URBAN-RURAL ANTAGONSIM





Over-consumtion

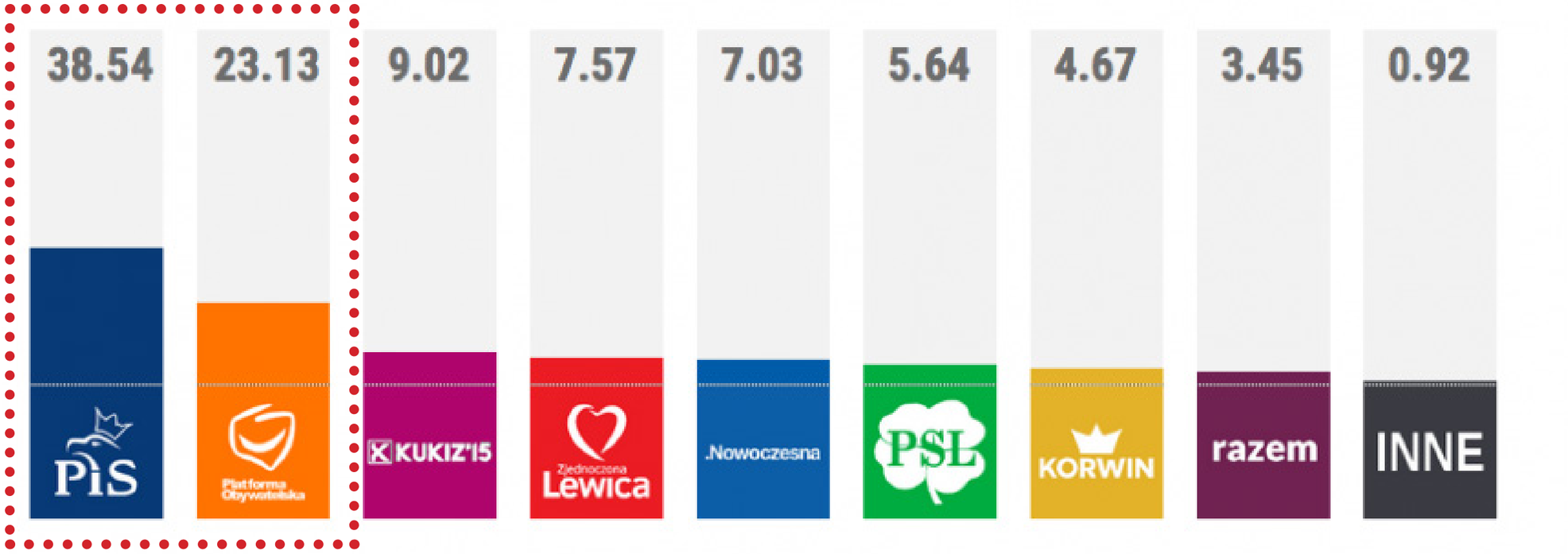


Worldwide migration

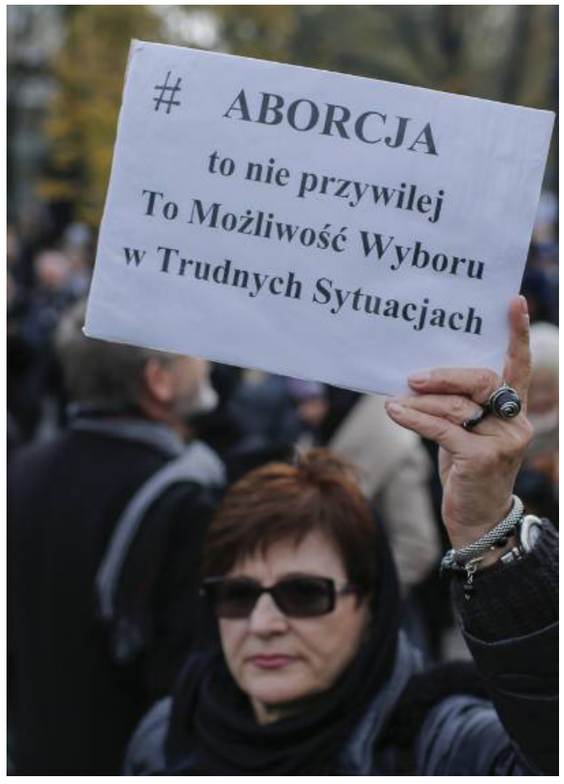


Heated politics


Lithuania
Kaliningrad
Калининград
Kaunas
Vilnius
Gdynia
Gdańsk
Olsztyn
Grodno
Гродна
Minsk
Мінск
Vitaŭka
Віцебск
Belarus
Kiel
Rostock
Lübeck
Szczecin
Bydgoszcz
Poland
Bialystok
Berlin
Poznań
Warsaw
Wolfsburg
Brunswick
Magdeburg
Brest
Брэст
Łódź
Leipzig
Dresden
Wrocław
Lublin
Kielce
Rivne
Рівне
Zhytomyr
Prague
Katowice
Kraków
Rzeszow
Lviv
Львів
Ternopil
Тернопіль
Nuremberg
Czech Republic
Ostrava
Zakopane
Vinnytsia
Вінниця
Ivano-Frankivsk
Івано-Франківськ
Khmelnytskyi
Хмельницький
Brno
Košice
Slovakia
Chernivtsi
Чернівці
Augsburg
Munich
Vienna
Bratislava
Salzburg
Austria
Budapest
Debrecen
Graz



ELECTIONS 2016
VOTER PARTICIPATION:47%



ABORTION



LAW-MAKING



WORKING CONDITION

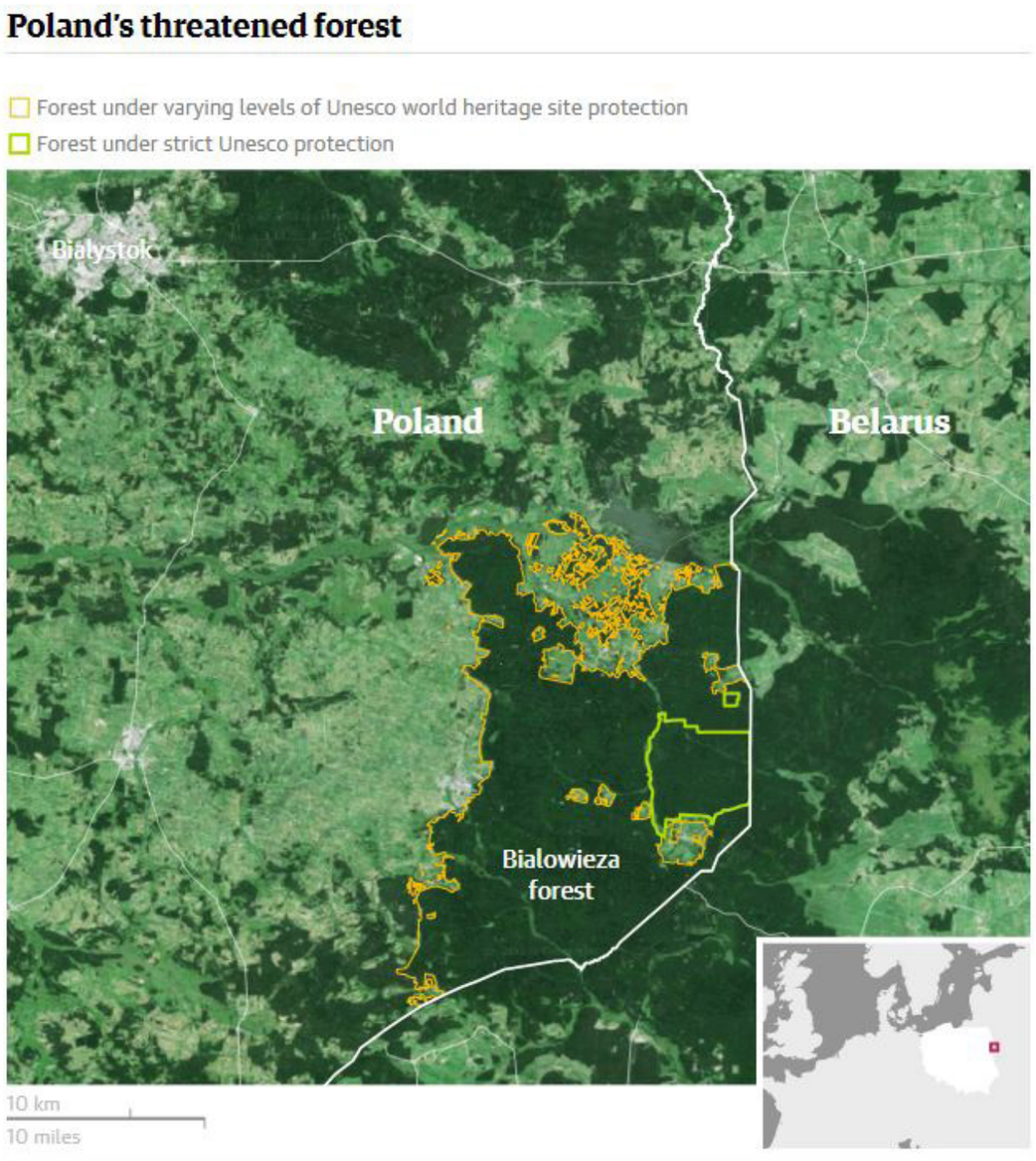
PROTESTS 2017



The guardian: Polish law change unleashes 'massacre' of trees



Białowieża forest,includes one of the largest surviving parts of the primeval forest that covered the European plain 10,000 years ago.


Poland's threatened forest
Forest under varying levels of Unesco world heritage site protection
Forest under strict Unesco protection
Bialystok
Poland
Belarus
Bialowieza forest
10 km
10 miles



Protests at Bialowieza forest in Poland


COHOUSING


OPEN
SOURCE
ECOLOGY


PROJEKT
FABCITY


MOOCE

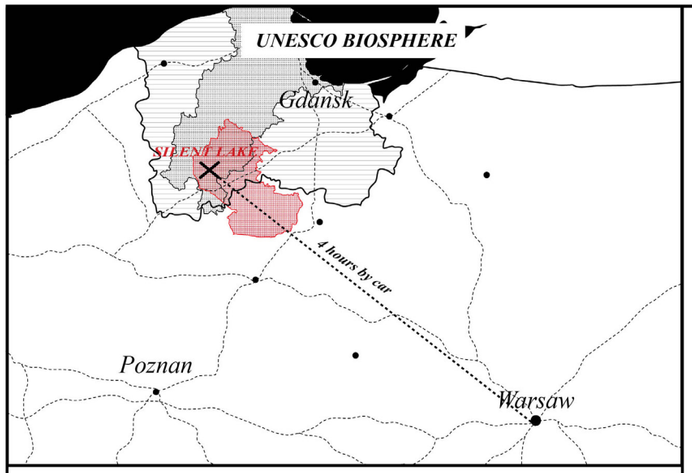

PERMA-
KULTURA

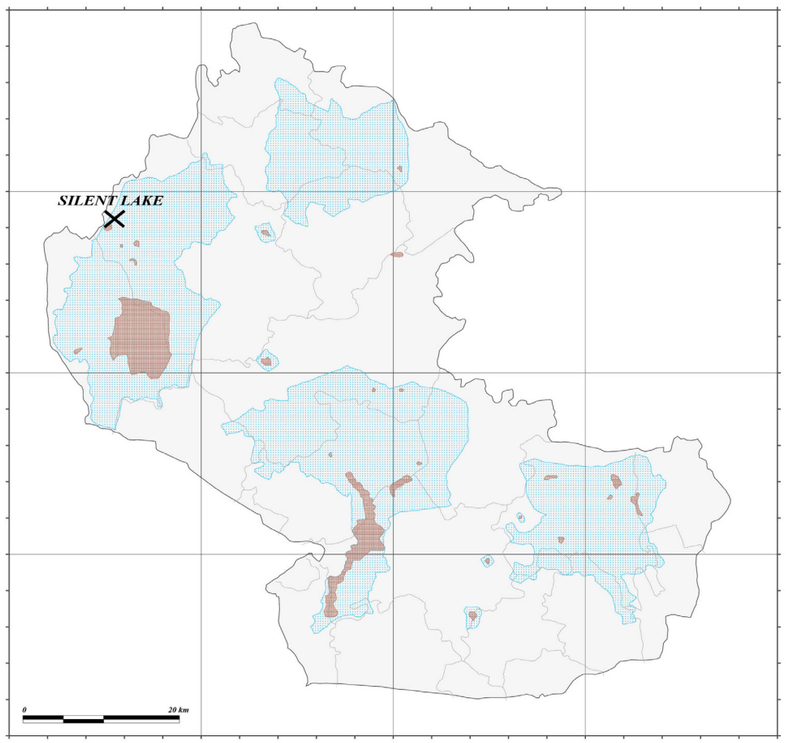

UNSCHOOLING

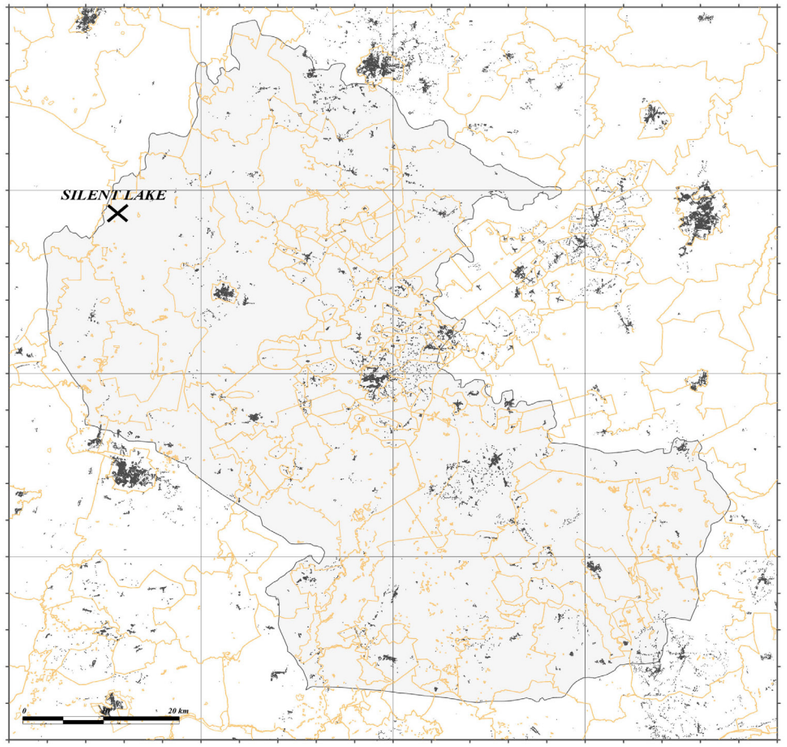


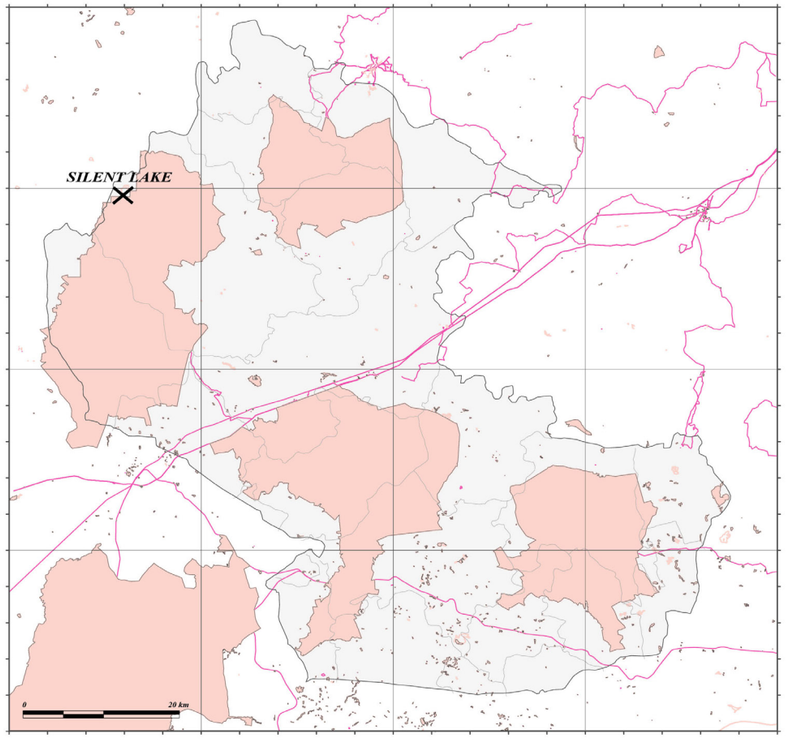
CONSTRUCTIONS AT THE SILENT LAKE, SUMMER 2017

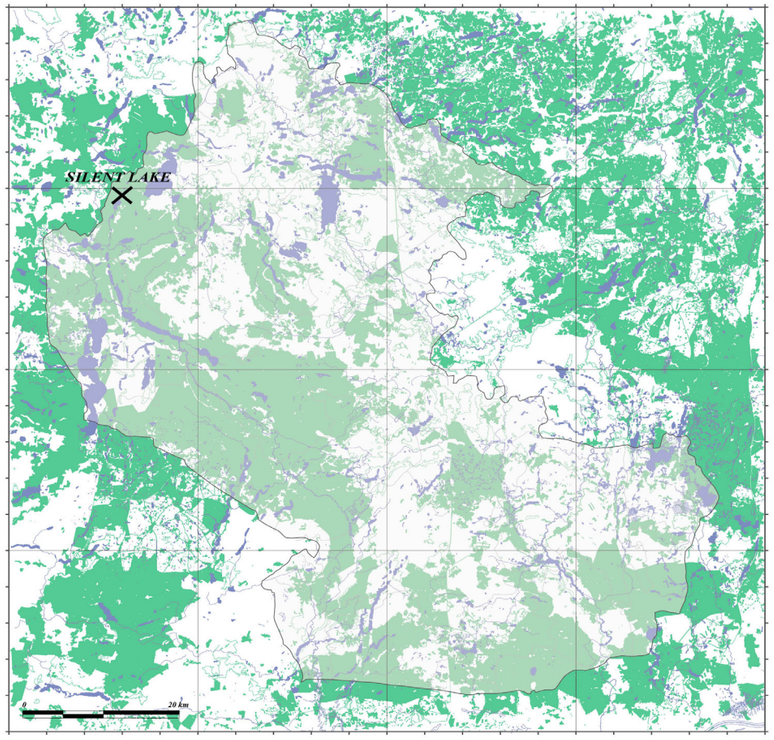
UNESCO BORY TUCHOLSKIE BIOSPHERE











CORE PROTECTED ZONE

BUFFER PROTECTED ZONE

BUILD STRUCTURES

POLITICAL DISTRICTS

TOURISM AREAS

TOURISM VAINS

WATERS

WOODLAND







"When arriving to the Silent Lake the ridig grid seen from above becomes an interwoven labyrinth of paths and the woods appear as flickering entity in which one looses his gaze"











“In a world outside the metropole, symbols and signs appear to have a bigger meaning.”








"Even Wolfgang Goethe made his way into the Bory Tucholskie forest."







“There is a variety of different settlements occupying the surroundings of the Lake, still they all share the space inbetween dwelling and forest . Verandas being a uniting architectural element reflecting the climate of the area”

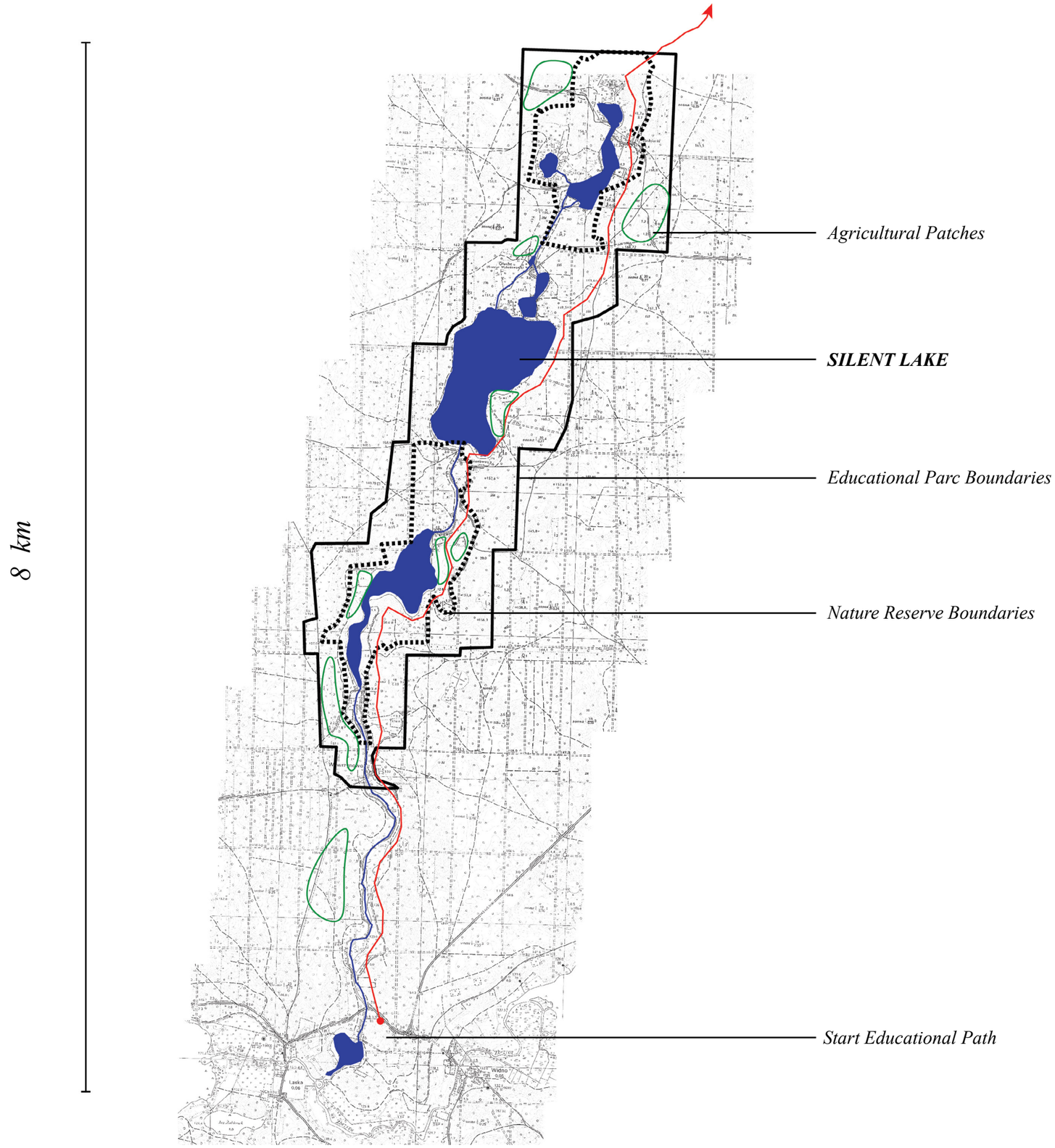




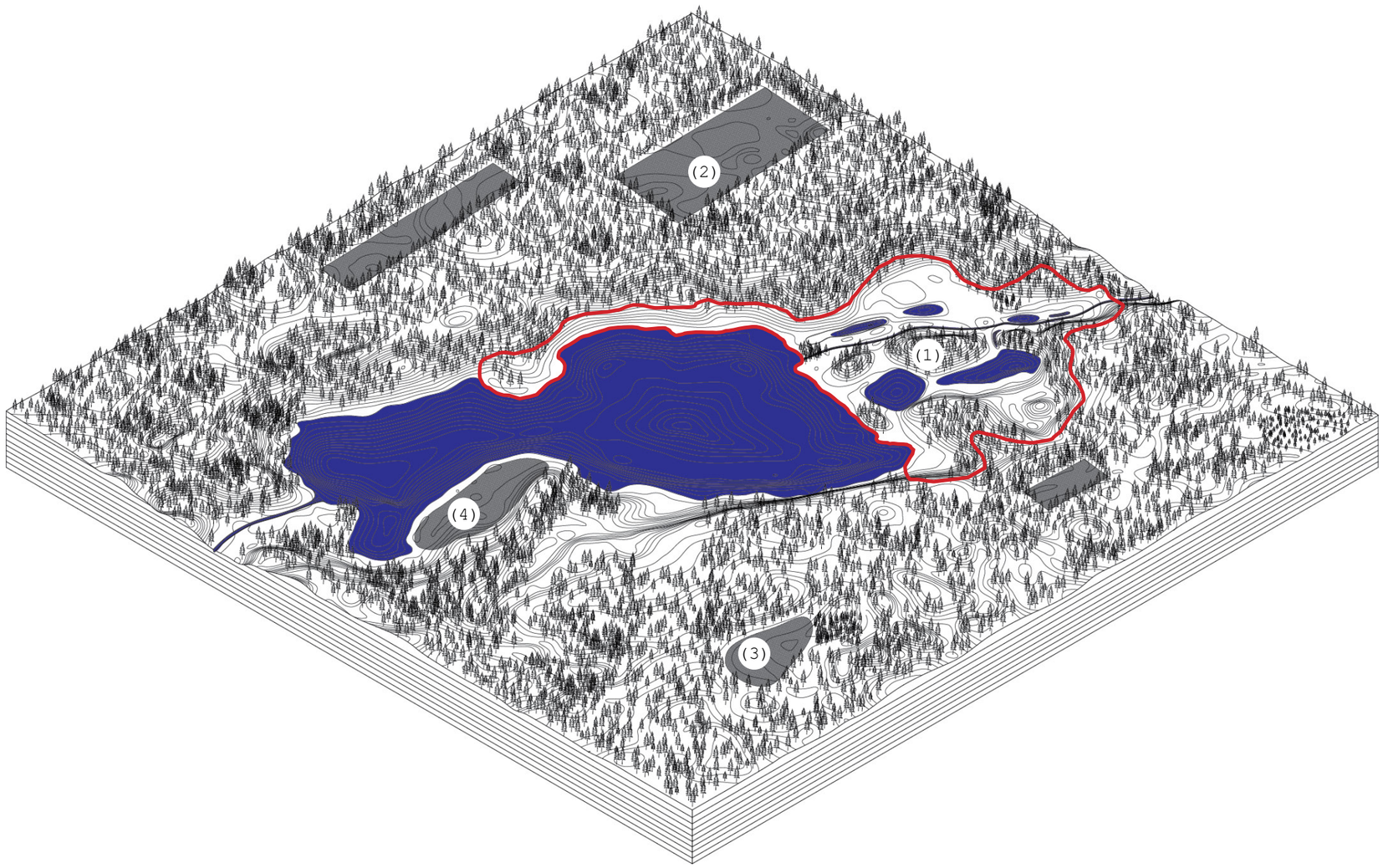


“The traditional architecture of the Bory Tucholskie forest shares its passion for verandas with the houses at the Silent Lake.”

THE SILENT LAKE LANDSCAPE



THE SILENT LAKE LANDSCAPE





(1)



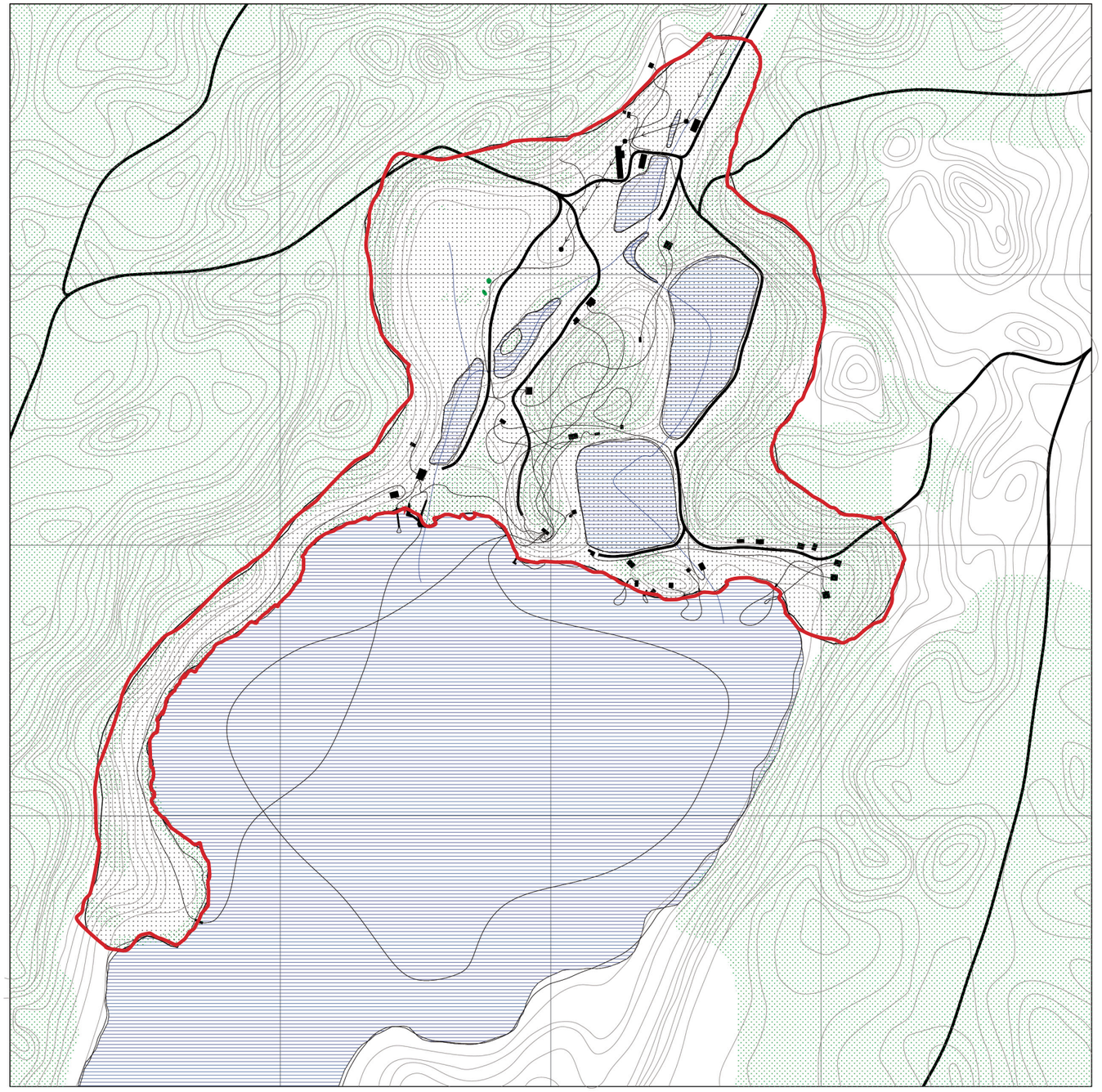
(2)

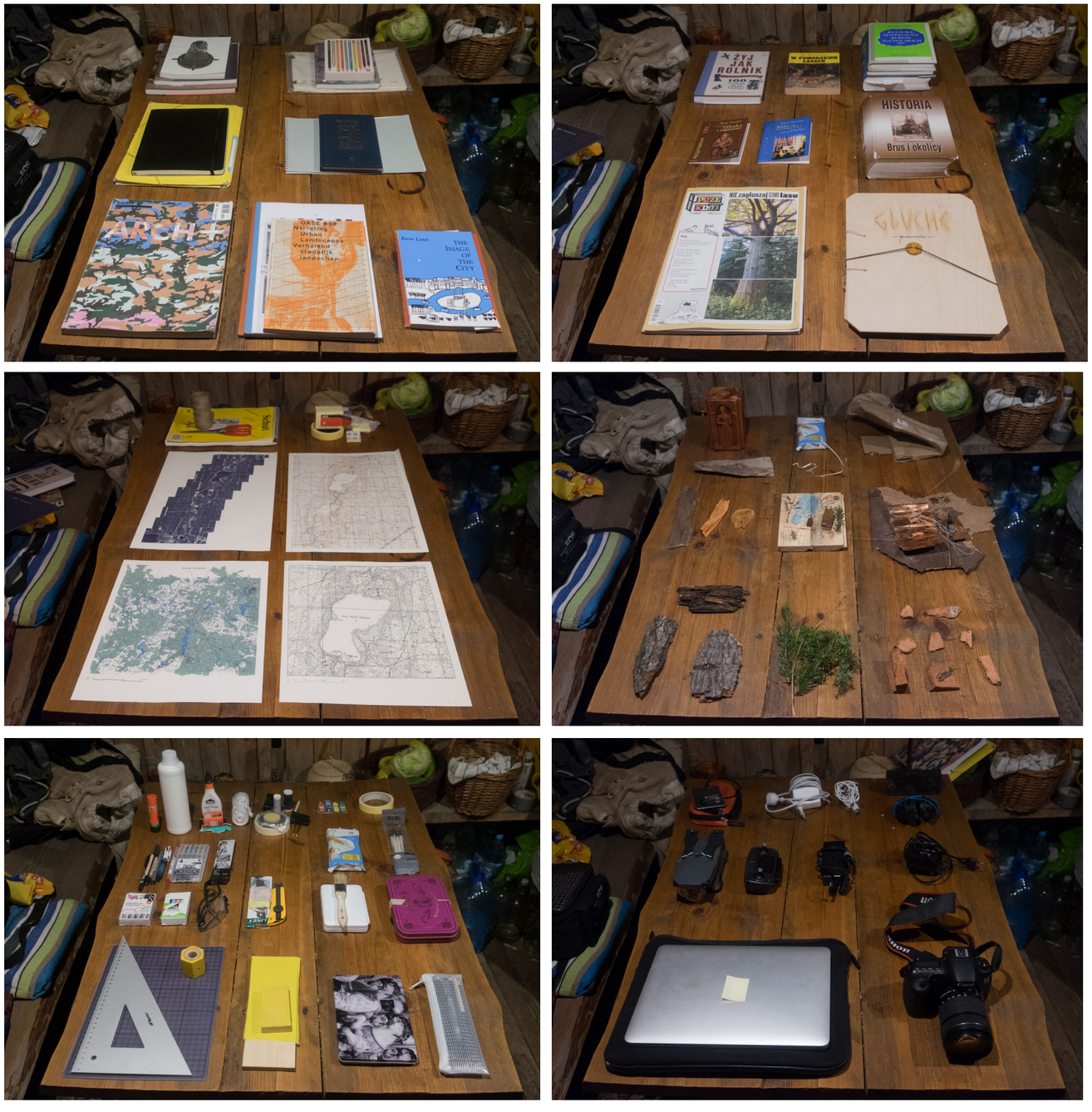


(3)



(4)

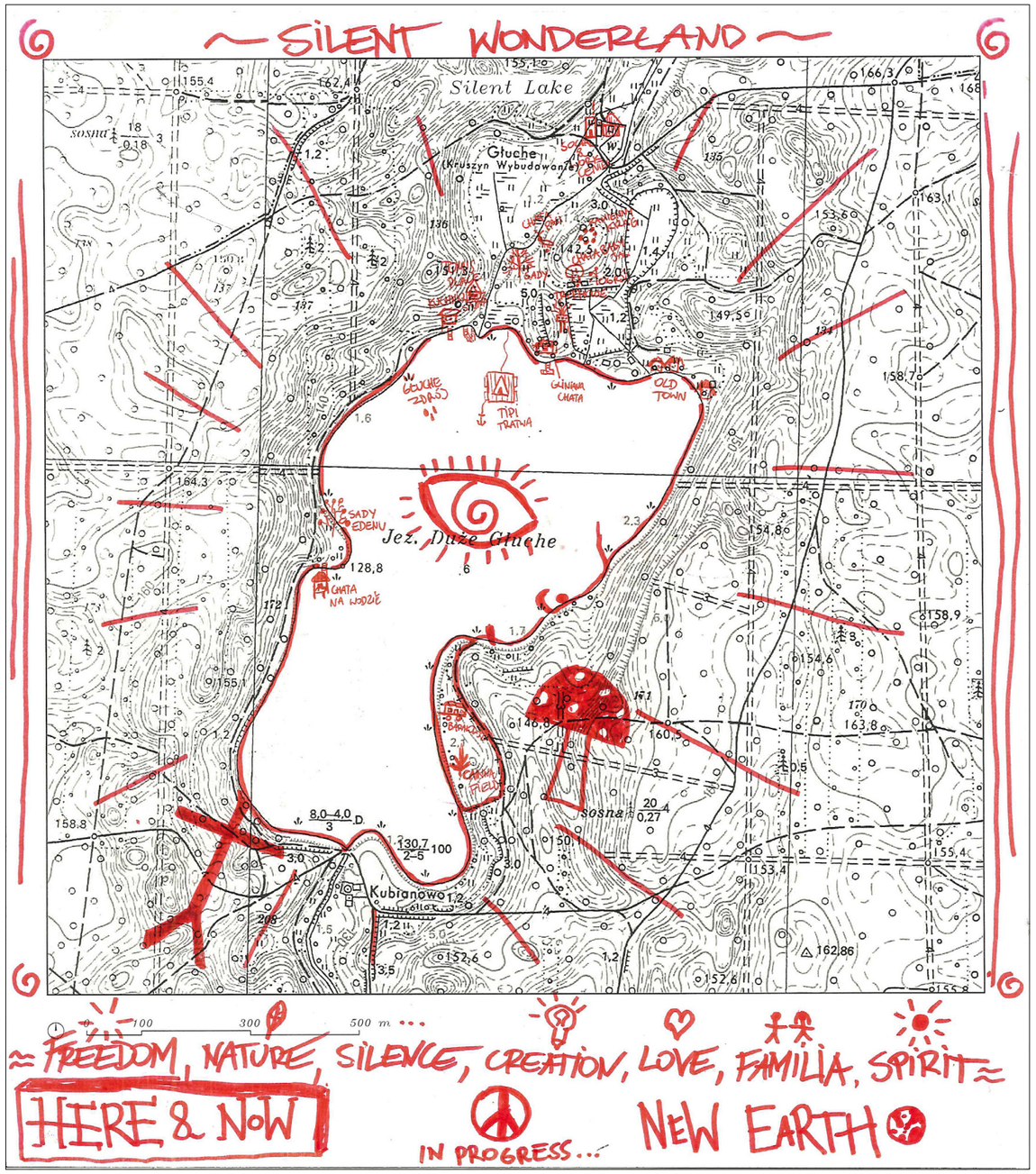

0
300
600
900
1300 m

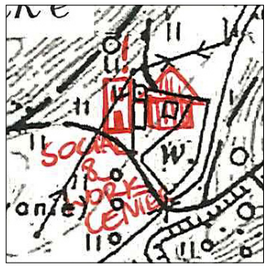


TOOLS AND RESSOURCES USED DURING THE WORKSHOP

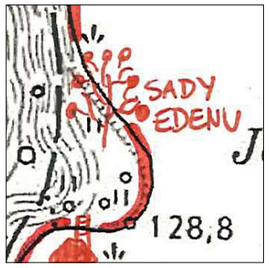
PARTICIPATORY WORKSHOP













CARTOPGRAPHY EXERCISE

WHAT KIND OF PEOPLE ARE PRESENT?



Settlement: Newly build wooden house with additional auna and Kitchen.

Infrastructure:	Solar Electricity
Heating:	Furnace
Area:	60 m²
Construction:	Wood /Conrete Base



Settlement: When arriving to the Lake restored an existing house with reused materials.

Infrastructure:	Solar Electricity
Heating:	Furnace
Area:	24 m²
Construction:	Wood



Settlement: Started using one of the existent houses that he will renovate with his brother.

Infrastructure:	No Electricity
Heating:	Furnace
Area:	42 m²
Construction:	Wood



Settlement: Built their own summer-house at the Silent Lake.

Infrastructure:	No Electricity
Heating:	Furnace
Area:	18 m²
Construction:	Wood



Name:	T.
Age:	-
Background:	Fotography
Profession:	Entrepreuneur
Occupancy:	Regular Weekend trips.



Name:	Mariusz
Age:	26
Background:	Clothing Design
Profession:	Entrepreuneur
Occupancy:	Lives at the Silent Lake.



Name:	„Pasi Koni“ (Grashopper)
Age:	31
Background:	Constant travel
Profession:	Filmmaker
Occupancy:	Lives at the Silent Lake.



Name:	„Gorale“ (Moutagnards)
Age:	71 & 74
Background:	Pharamcists
Profession:	Retired
Occupancy:	Stay during the Summer.







"The way of building is orchestrated by the elements present in the landscape. Reused objects combined with local wood, earth and reed become a guiding theme."



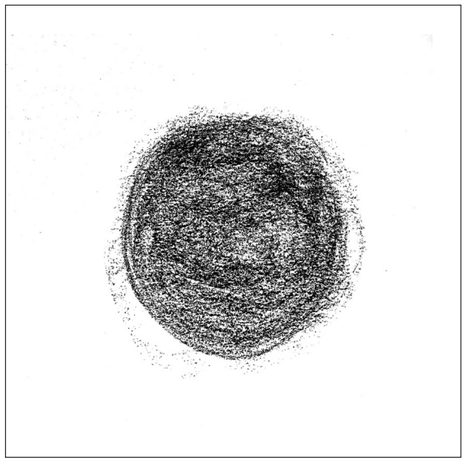


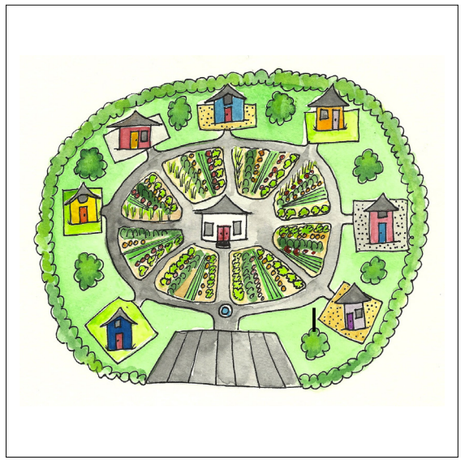


"The settlers of the Silent Lake have a passion for growing their own food and share a big respect for nature."









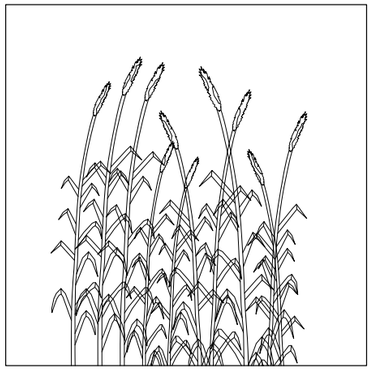
POLISH VACATION HABITS

SILLENT SETTLEMENT

ENCLOSED ECOVILLAGE

COHABITAT

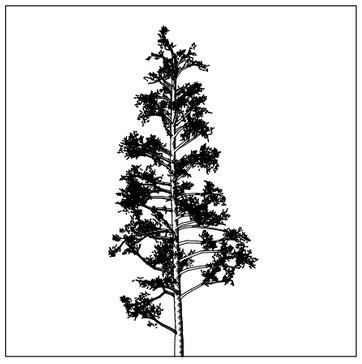
Reed



Thatch



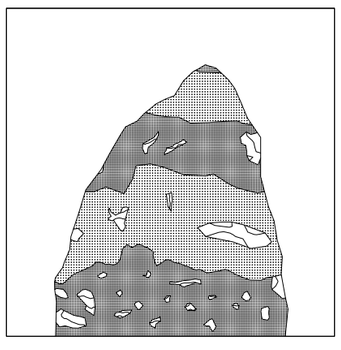
Pinetree



Timberwork

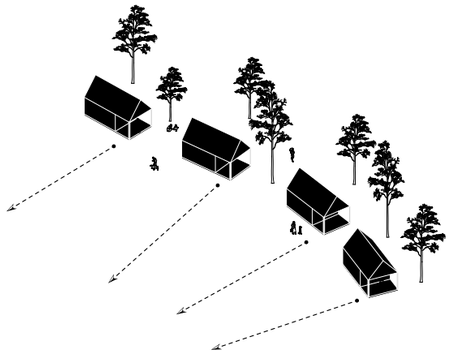


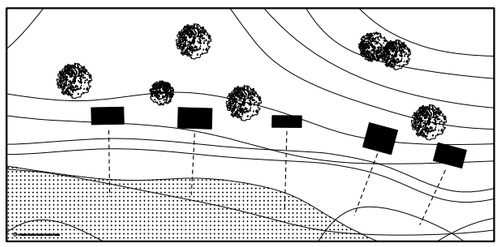
Earth



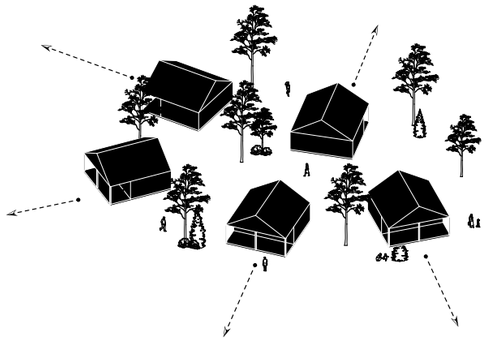
Clay Plaster

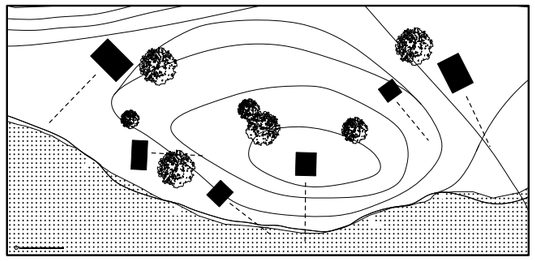




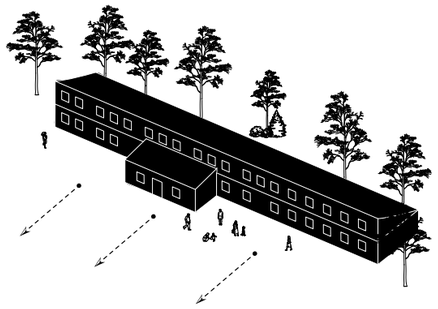


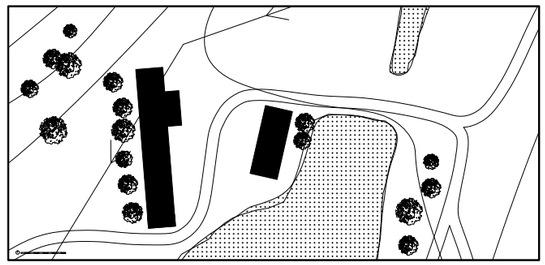
Aligned Housing



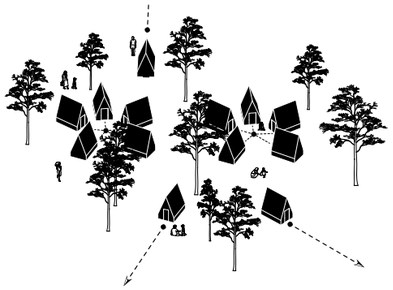


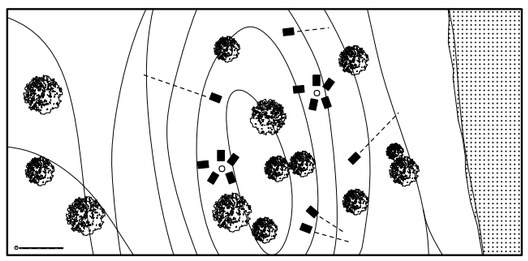
Disperesed Housing



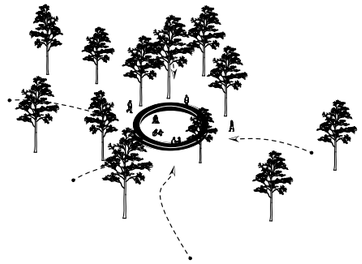


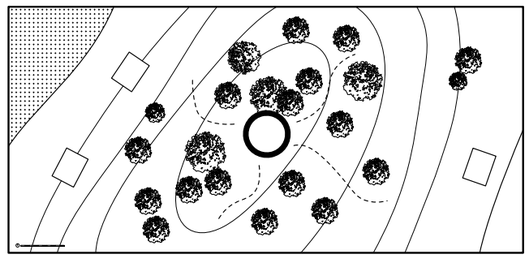
Temporary centered Housing



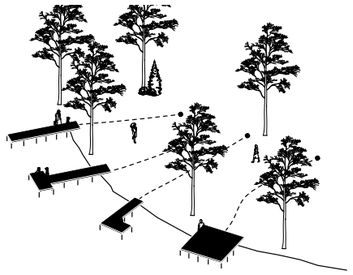


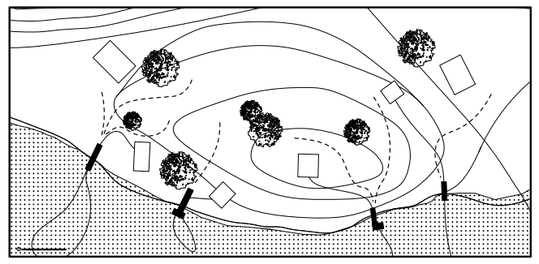
Temporary dispersed Housing





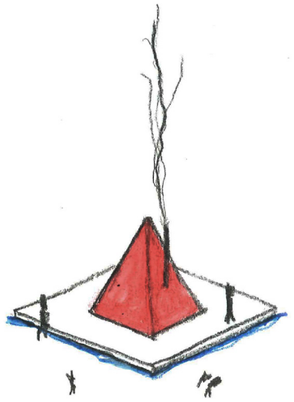
„Silent“ meeting Places





„Loud“ meeting Places

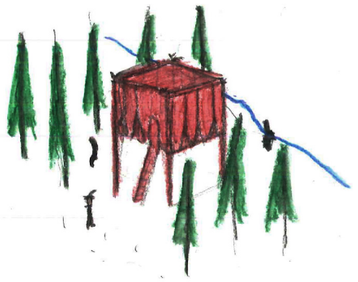
MEETING PLPACES



Floating Tipi



Quiet circle



Meditation Platform



Crossroads Cafée

INFRASTURCTURE



Hideouts



Greenhouse



Workshop

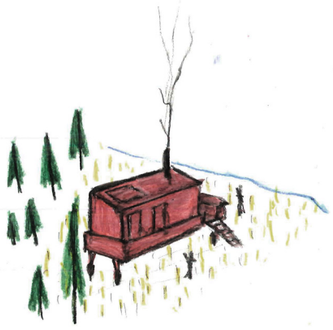


Jetties

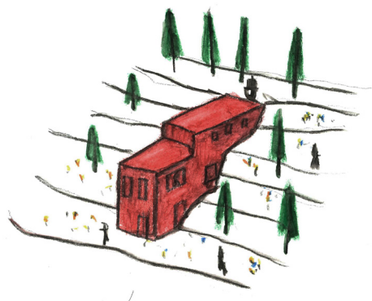
DWELLINGS



Huts



Caravans



Earth House



Culture Center

DEVELOPMENT IN TIME

PRIVATE PHASE

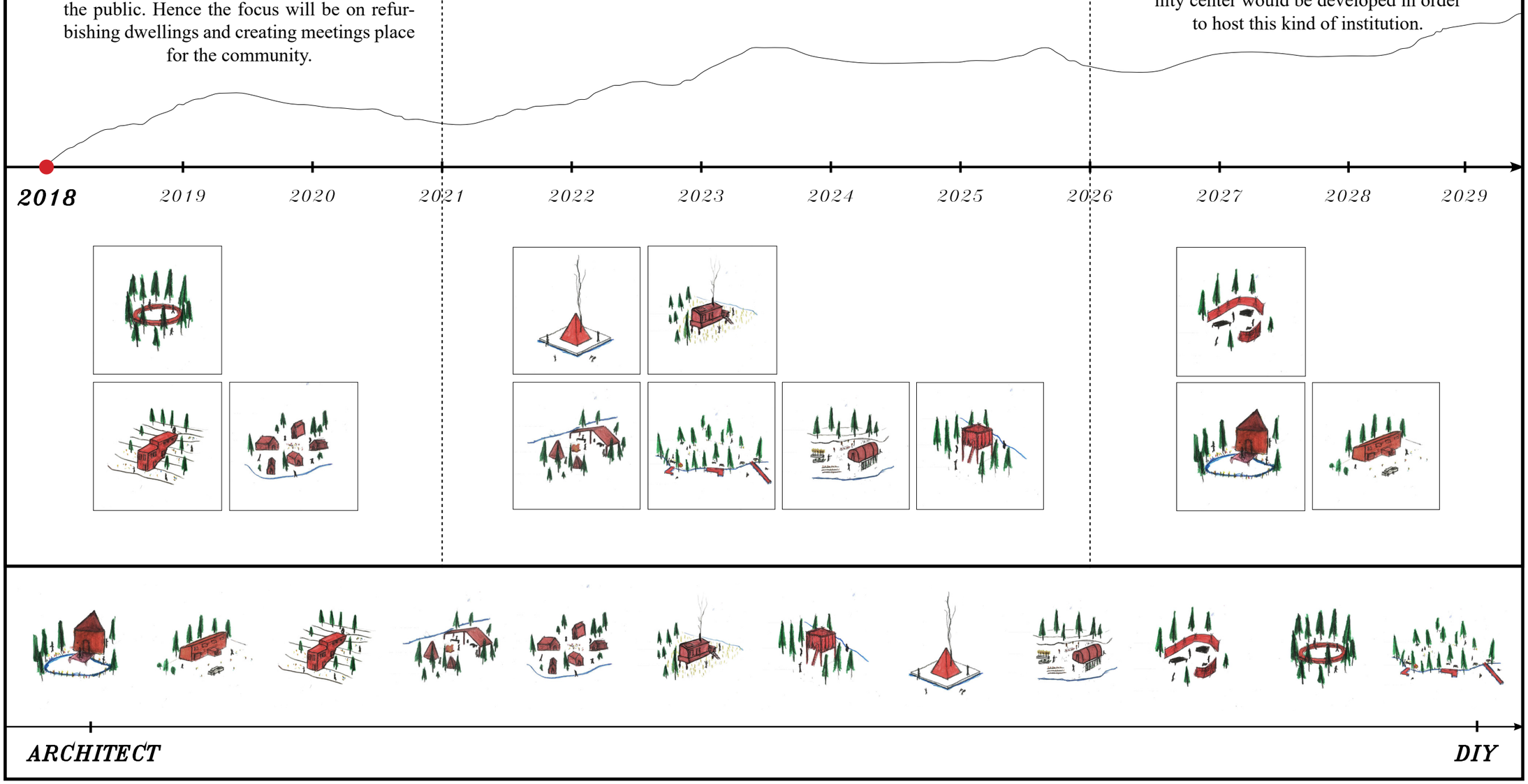
During the private phase the development of the Silent Lake community stays within its boundaries. The community is still in development of its practise and has not enough expertise to organise large scale events open to the public. Hence the focus will be on refurbishing dwellings and creating meetings place for the community.

SEMI PUBLIC PHASE

Within the semi public phase the comunity will expand its activities inviting visitors to particpitate in workshops in order to share their knowledge. Thus new places for accomodation and meeting are needed.

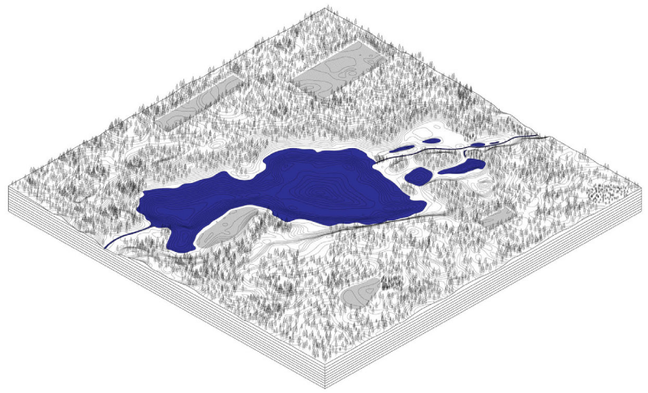
PUBLIC PHASE

After a couple years of practise the communtiy would be able to integrate ecological practises that could reinforce scientific research, monitoring, training and education. Therefor a new community center would be developed in order to host this kind of institution.



SILENT LAKE COMMUNITY

SILENT LAKE COMMUNITY



Materials available at Site



Reed



Pinetree

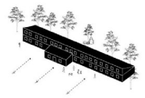


Earth / Clay

Occupancy Types and Areas



Alingned Housing



Temporary Housing Centered



"Loud" Meeting Places



Dispersed Housing



Temporary Housing Dispersed



Silent Meeting Places

Catalogue of Interventions



1) Floating Tipi



2) Quiet Circle



3) Meditation Platform



4) Crossroads Cafe



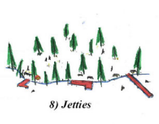
5) Hideouts



6) Greenhouses



7) Workshop Areas



8) Jetties



9) Huts



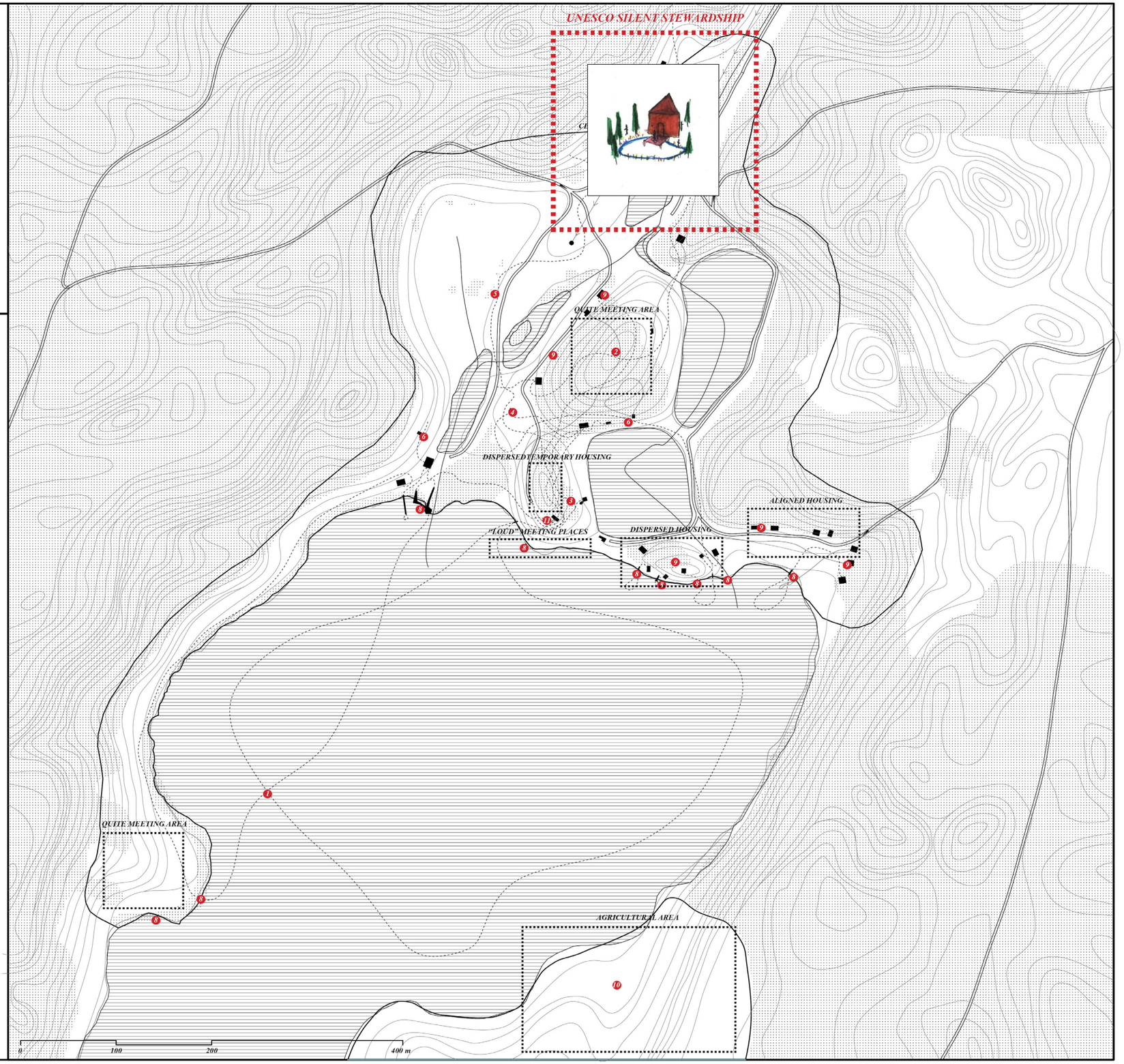
10)Farming Caravan



11) Earth House



12) Community Stewardship



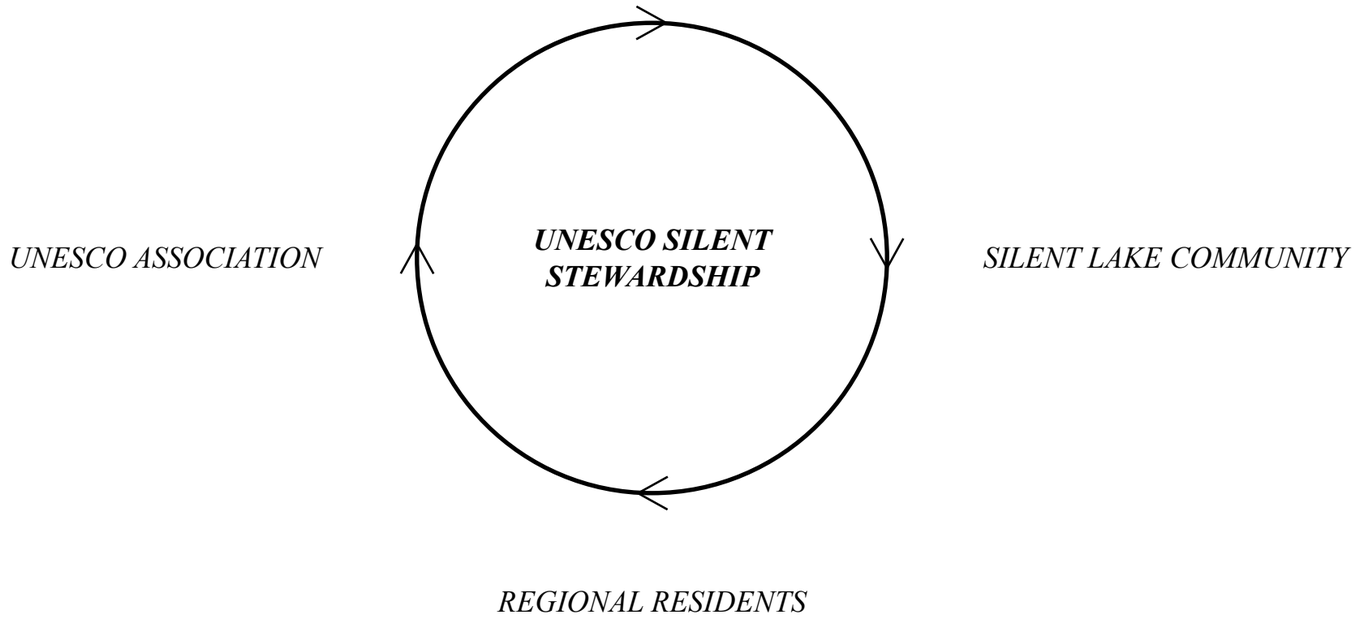
IGNACY'S FARMSTEAD

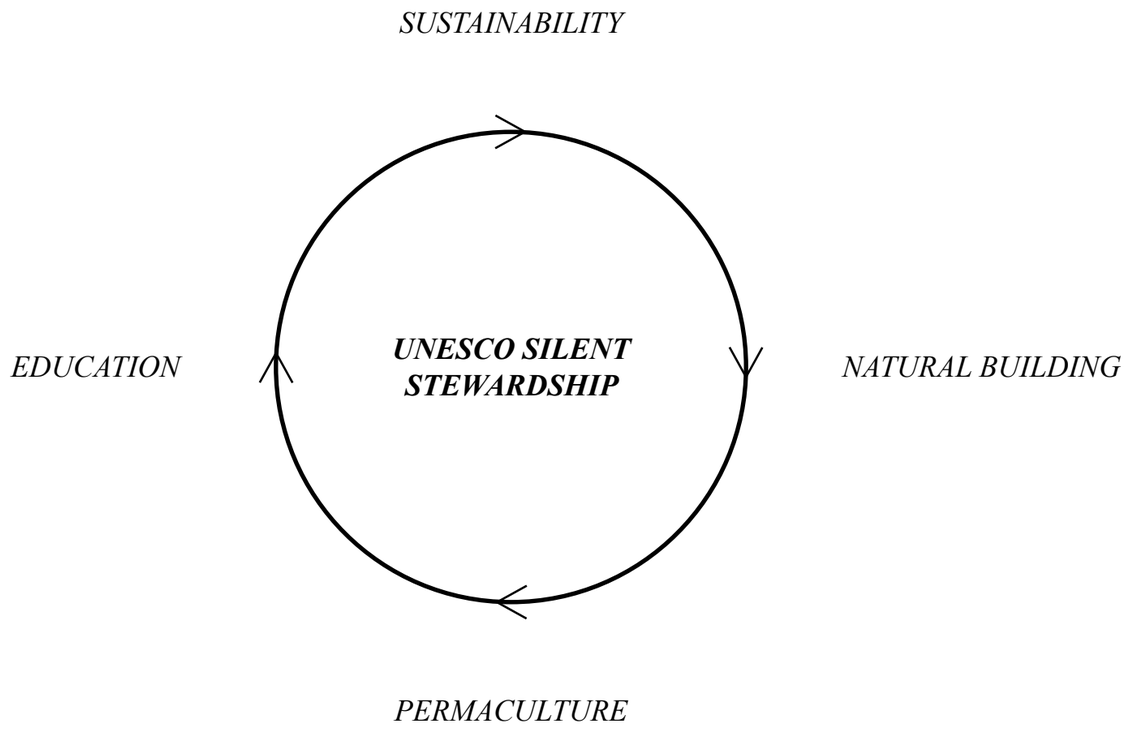






UNESCO SILENT STEWARDSHIP




SUSTAINABILITY
EDUCATION
UNESCO SILENT STEWARDSHIP
NATURAL BUILDING
PERMACULTURE

SOCIAL DEVELOPMENT

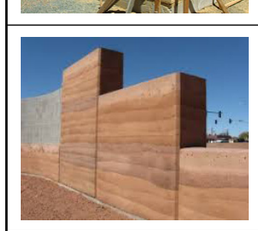
NATURAL BUILDING

CLIMATE DESIGN

PERMACULTURE

*The basis of natural building is the need to lessen the environmental impact of buildings and other supporting systems, without sacrificing comfort or health. N**atural building uses primarily abundantly available, renewable, reused or recycled materials**. The orientation of a building, the utilization of **local climate** and **site conditions** and the emphasis on natural ventilation through design, fundamentally lessen operational costs and positively impact the environment.*

COMPARISON OF NATURAL BUILDING TECHNIQUES

Foto	*Technique*	*Material needed*	*Structural properties*	*Thermal properties*	*Best application*	*Advantages*	*Disadvantages*	*Tools / Skill*
	***Straw bale***	*Straw bales, Timber, Logs or bamboo for pinnng; Baling twine or wire;*	*Loadbearing or infill; Good earthquake resistance;*	*Excellent insulation; Low thermal mass;*	*Exterior walls in most climates; Quick, temporary structures;*	*Goes up relatively quickly. Fairly easy to permit. Increasing pool of experienced designers/builders.*	*Very susceptible to moisture damage;Bales must be stored carefully; unfinished building must be protected from rain.*	*Simple building methode; basic tools needed. Experienced help for timberwork;*
	***Cob***	*Clay soil, sand, straw;*	*Loadbearing or infill; moderate earthquake resistance;*	*Good thermal mass; Low insulation*	*Exterior walls in moderate or sunny climates; interior walls; ovens and hearths; benches; garden walls; greenhouses; floors*	*Highly sculptural; enormous design flexibility.Combines well with other materials.*	*Labor intensive; goes up slowly, especially in cool, moist conditions. Permitting may take persistence.*	*Simple building methode; basic tools needed.*
	***Adobe***	*Clay soil, sand, straw or other fiber.*	*Loadbearing orinfill; poor earthquake resistance;*	*Good thermal mass; Low insulation;*	*Exterior walls in moderate or sunny climates; interior walls;ovens and hearths; domesand vaults in dry,non-earthquake regions.*	*Adobe blocks can be made in one place and transported. When blocks are made, wall goes up fast.*	*Making and storing adobe blocks takes a lot of space and dry weather. Prone to earthquake damage.*	*Simple building methode; basic tools needed.*
	***Rammed earth***	*Clay soil with highcontent of sand; often stabilized with cement & reinforced with steel.*	*Loadbearing; Good earthquake resistance;*	*Very good thermal mass; low insulation*	*Exterior walls in moderate or sunny climates; benches and garden walls.*	*Contractors, engineers and permits available.*	*Very labor or machine intensive. Requires forms. Professionally built RE can be expensive.*	*Simple building methode; basic tools needed.*
	***Earthbags***	*Woven polypropylene feed sacks filled with clay soil, sandy soil, sand, or gravel;*	*Loadbearing; foundations for other wall systems; good earthquake resistance;*	*Very good thermal mass; low insulation (unless filled with a light fill like pumice or scoria)*	*Foundations for cob, straw bale, etc.; exterior; benches and garden walls; Domes and vaults in dry, nonearthquake regions.*	*Relatively quick earth building techique. Allows for use of wide range of fill materials.*	*Poly bags very susceptible to UV damage; must be protected from direct sun; longterm-durability unknown.*	*Simple building methode; basic tools needed.*
	***Cordwood masonry***	*Wood cut into short lengths; mortar may include cement, lime, clay, sand, sawdust; lime/sawdust insulation;*	*Infill or loadbearing (roundstructures only); Poor earthquake resistance;*	*Good insulation; moderate thermal mass;*	*Exterior and interior walls*	*Decorative. Easy to attach wooden framing and furniture.*	*Wood must be very dry. Tendency for wood to expand and contract, cracking mortar and creating drafts.*	*Simple building methode; basic tools needed.*
	***Hempcrete***	*Hemp & Lime / Timber , Bamboo Structure*	*Infill loadbearing,*	*Good insulation; moderate thermal mass;*	*Exterior walls, Insulation*	*Produced everywhere locally, Low and high tech application; Extremely windproof ; Fully recyclable*	*Only one method of construction - timber frame structure, has been scientifically validated.*	*Simple building methode; basic tools needed.*



Regional Supply Chain



Low Production Energy & Cost



Healthy Indoor Climate



Canada



Chille



Denmark



Italy



Japan



Poland



USA



Switzerland



UK



SCL Stawbale House - Jimmi Pianezzola

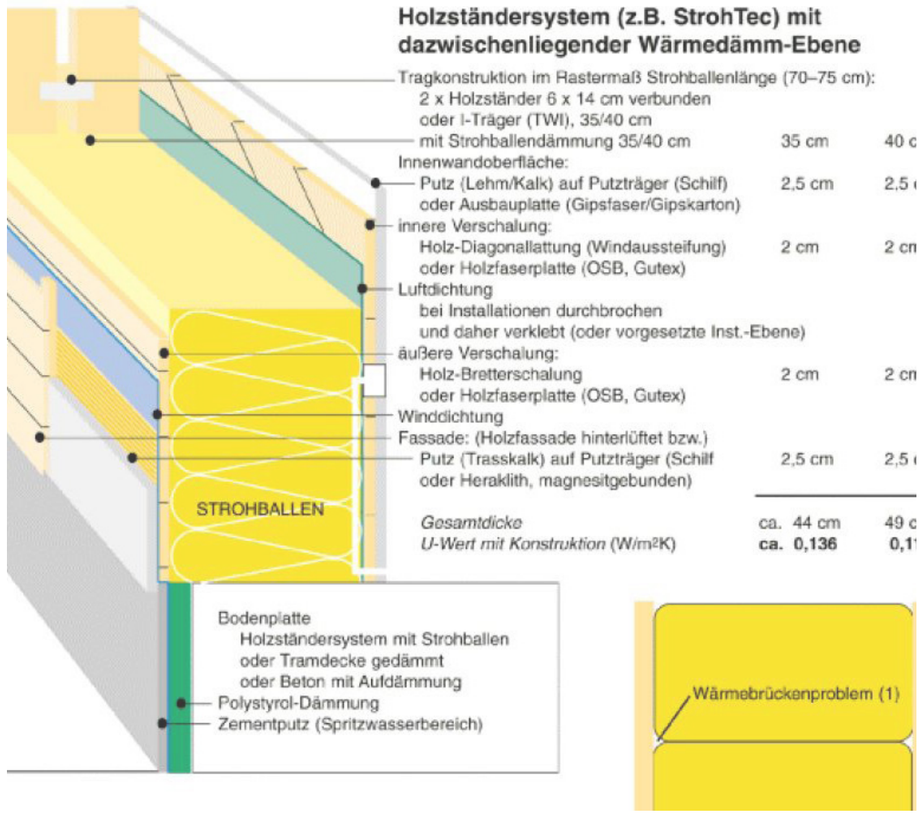


„Ephemeral Strawbale Construction“
Festival des Architecture - Montpellier

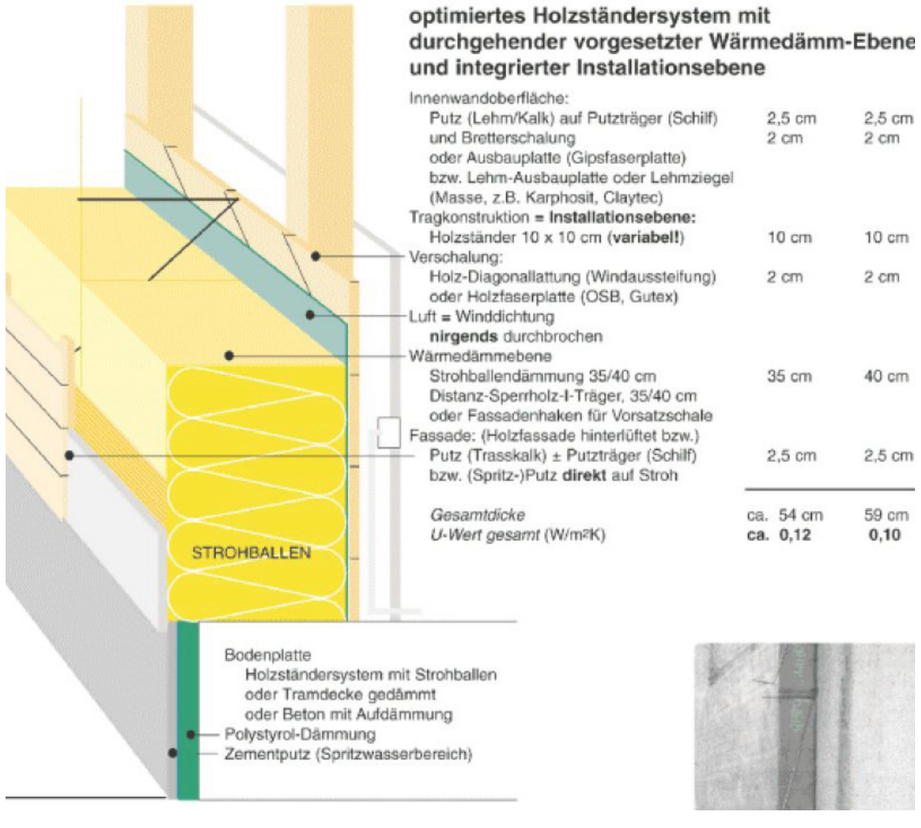


Prefabrication of Strawbale Panels

PASSIVHOUSE SYSTEM I

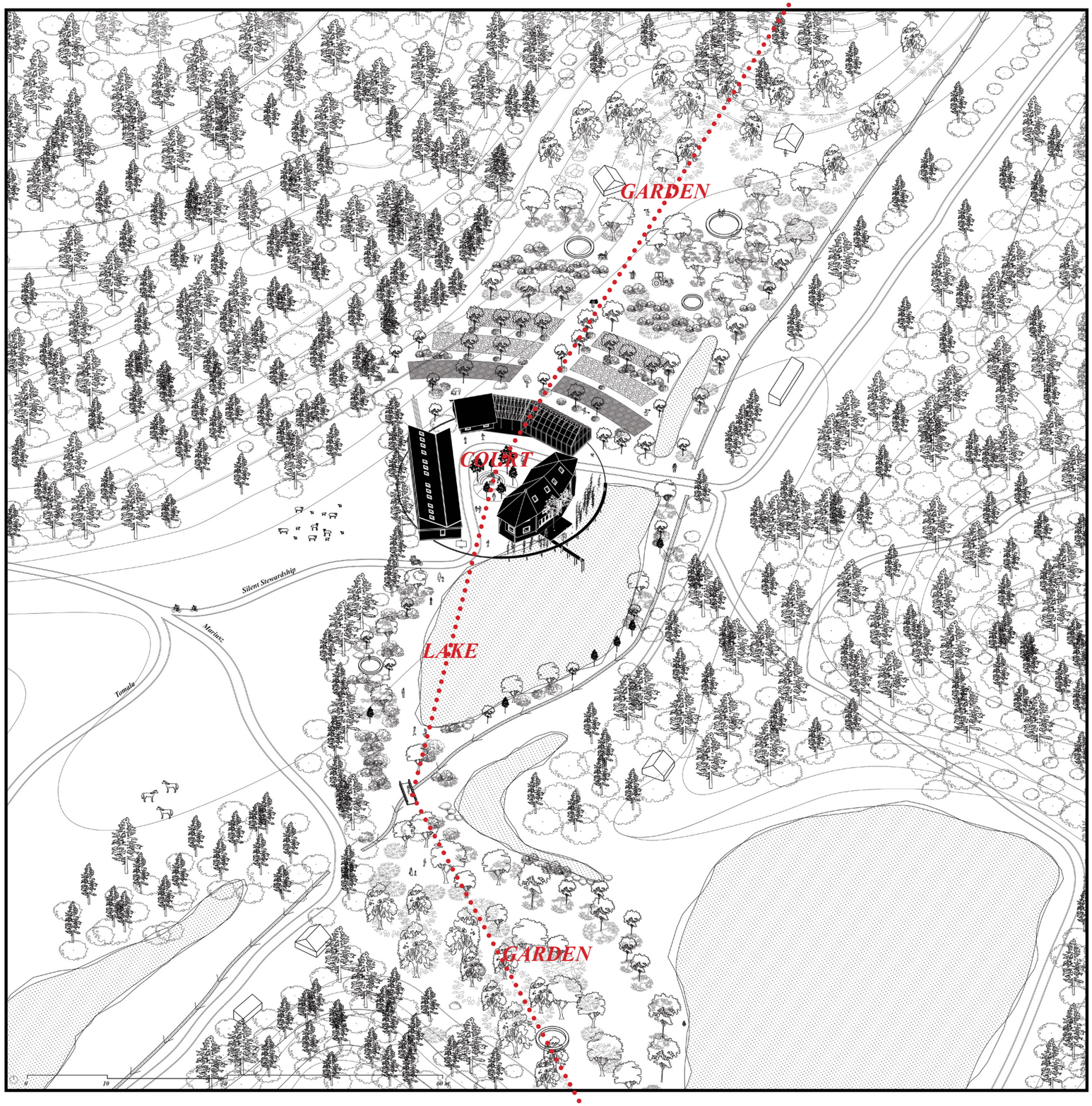


PASSIVHOUSE SYSTEM II



Both Wallsystems were developed and tested within the „Haus der Zukunft“ Research Programm of the GrAT research group of TU-Vienna

STEWARDSHIP SITE



STEWARDSHIP SITE





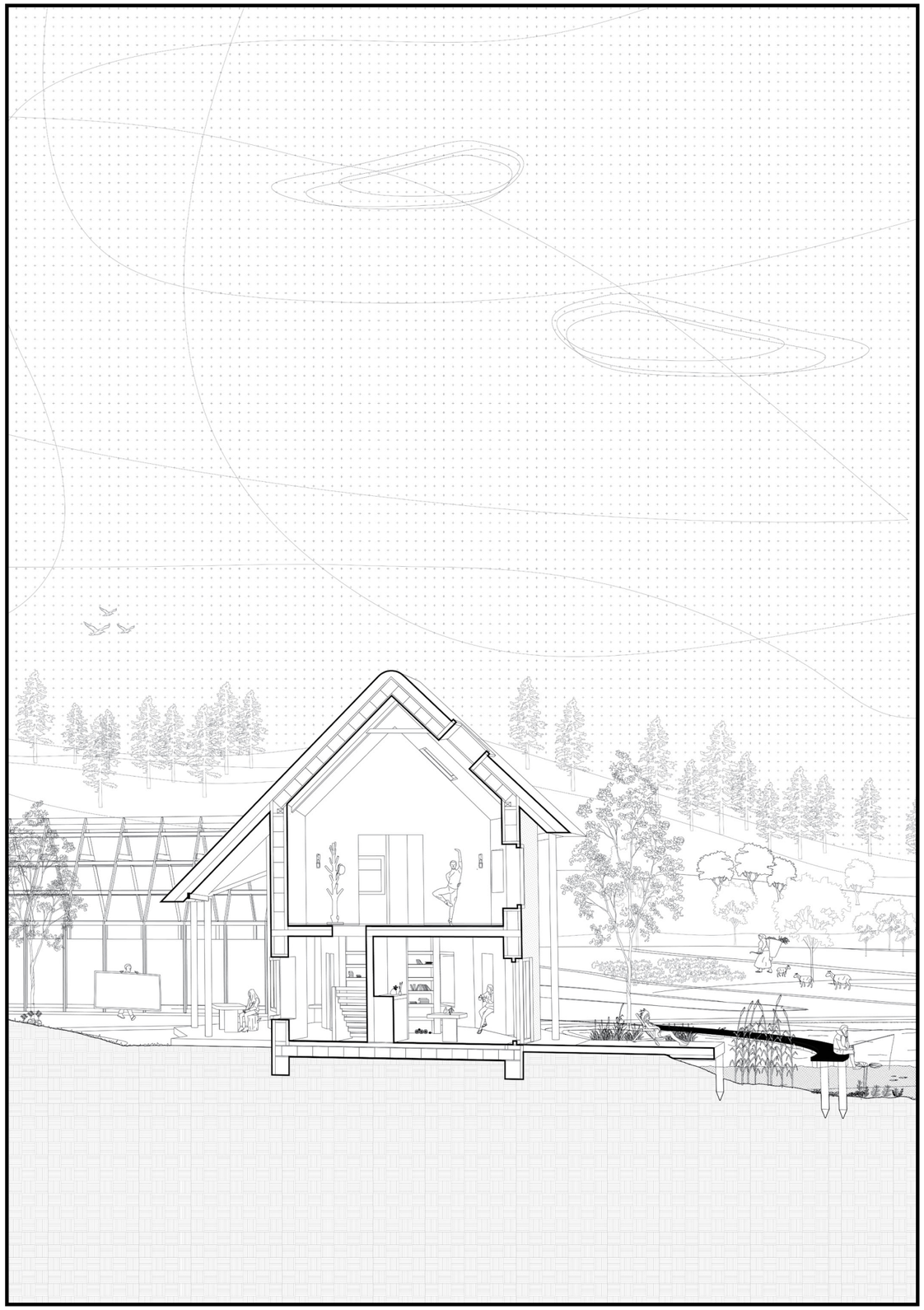
COMMUNITY HOUSE



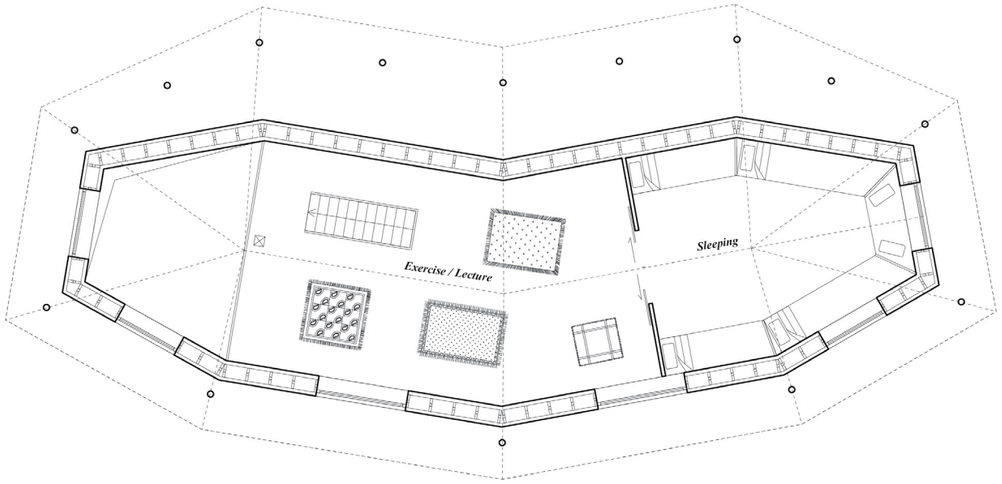
COMMUNITY HOUSE

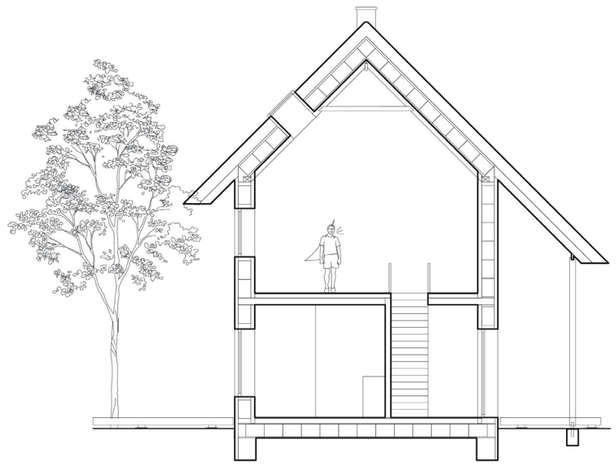


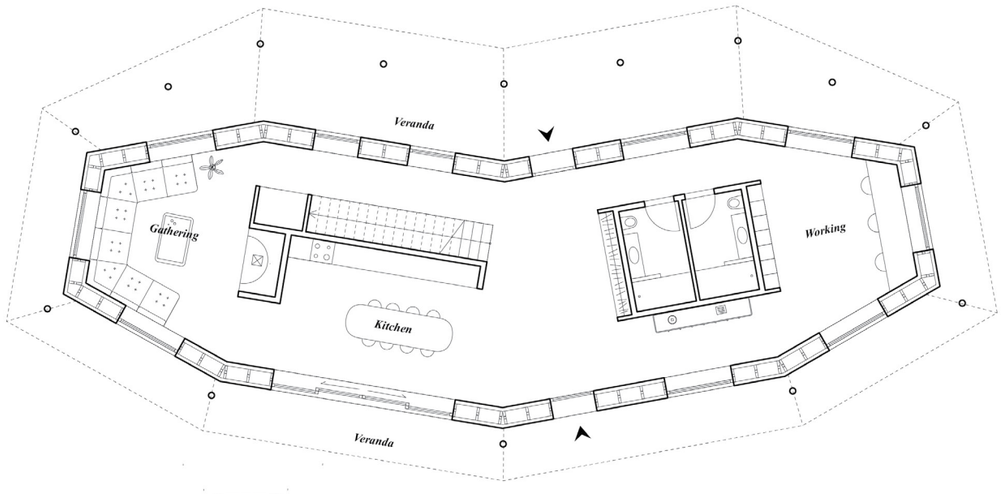
COMMUNITY HOUSE

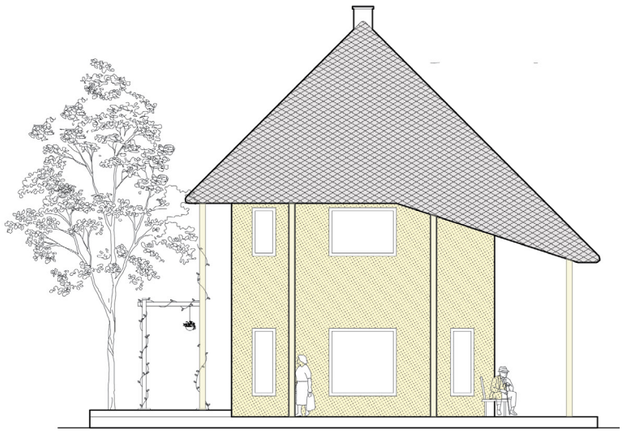


COMMUNITY HOUSE *1:100*



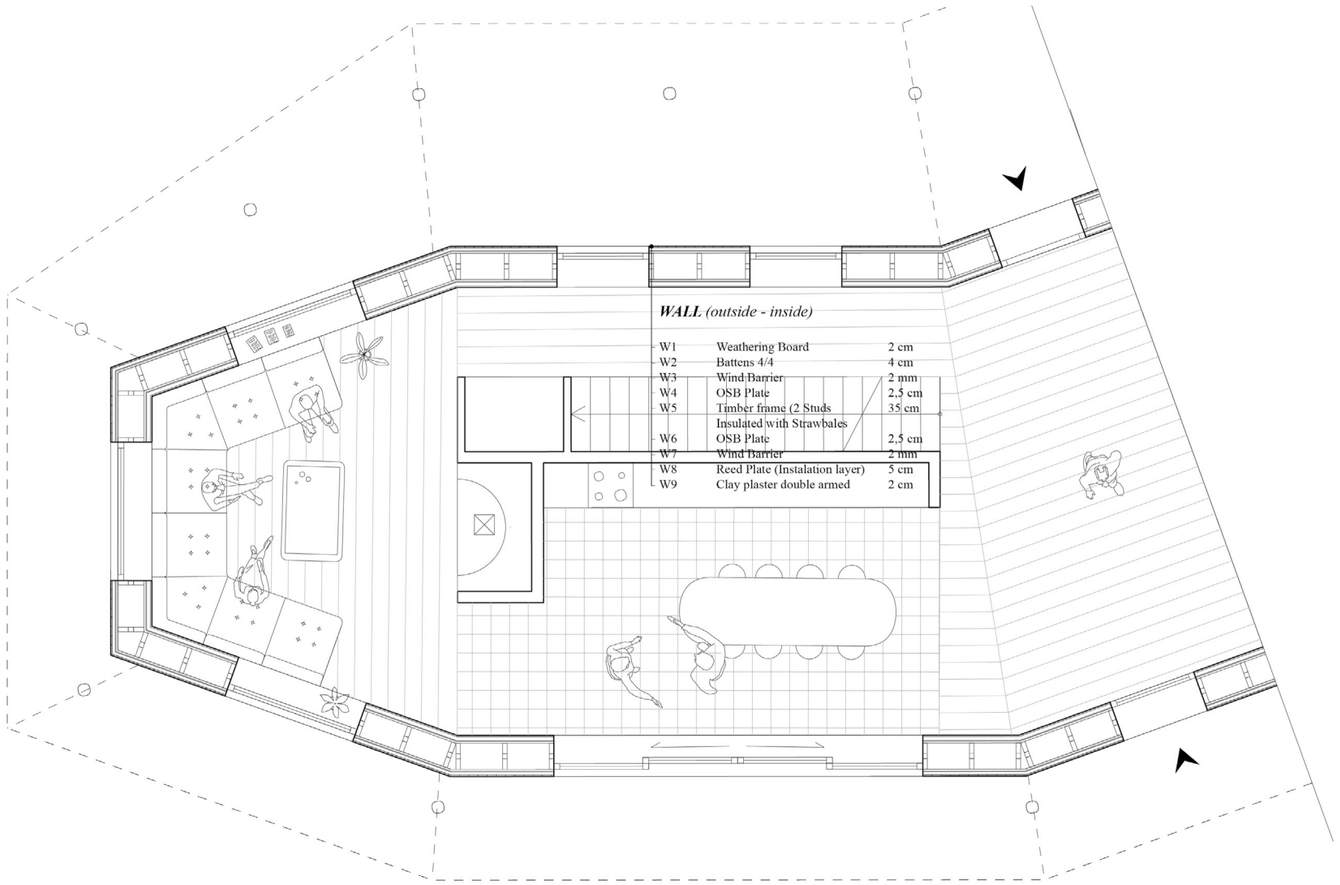








COMMUNITY HOUSE *1:50*



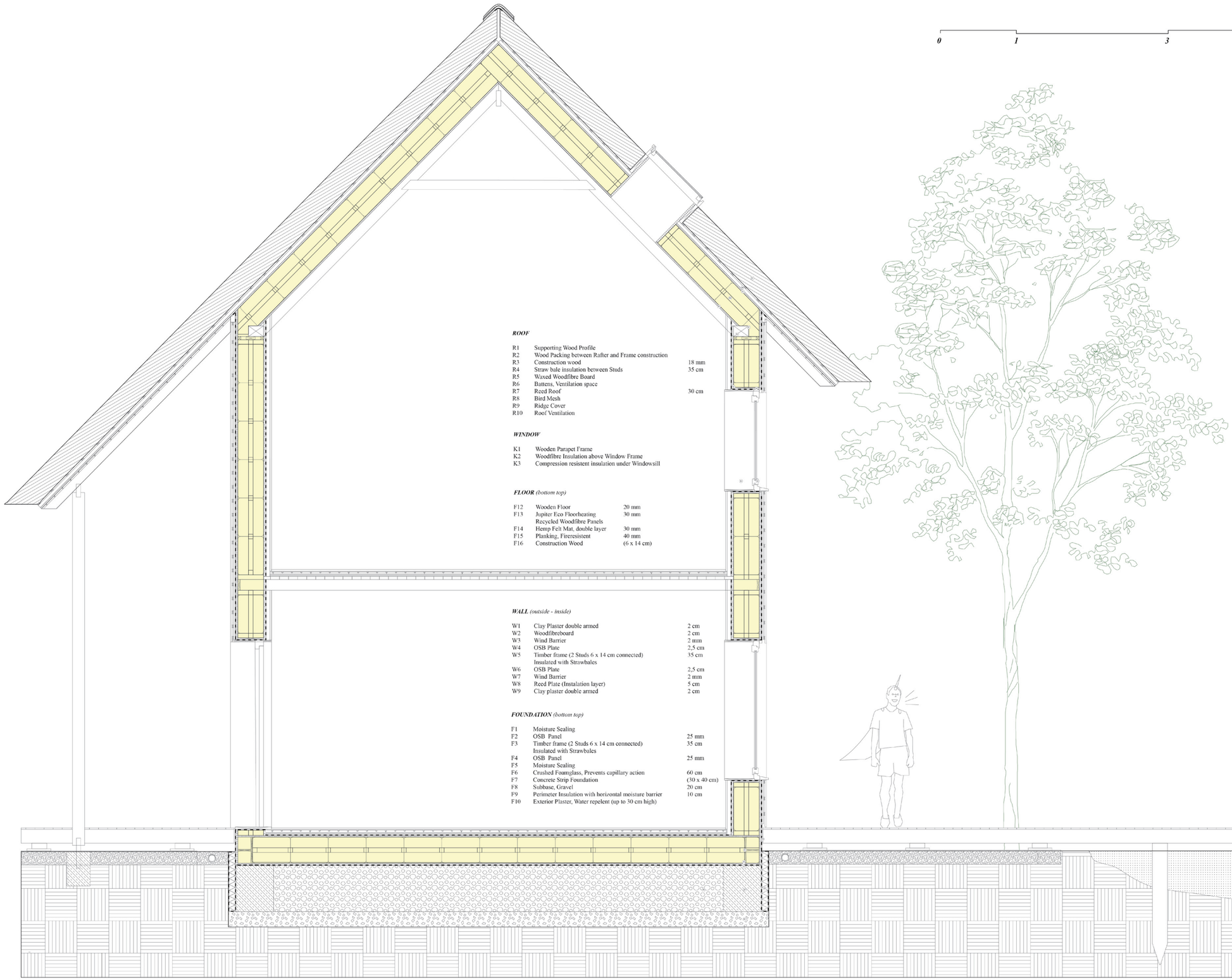




***FACADE DETAIL** 1:20*

SECTION 1:2O

0 ***1*** ***3*** ***6 m***



ROOF

R1	Supporting Wood Profile	
R2	Wood Packing between Rafter and Frame construction	
R3	Construction wood	18 mm
R4	Straw bale insulation between Studs	35 cm
R5	Waxed Woodfibre Board	
R6	Battens, Ventilation space	
R7	Reed Roof	30 cm
R8	Bird Mesh	
R9	Ridge Cover	
R10	Roof Ventilation	

WINDOW

K1	Wooden Parapet Frame	
K2	Woodfibre Insulation above Window Frame	
K3	Compression resistent insulation under Windowsill	

***FLOOR** (bottom top)*

F12	Wooden Floor	20 mm
F13	Jupiter Eco Floorheating Recycled Woodfibre Panels	30 mm
F14	Hemp Felt Mat, double layer	30 mm
F15	Planking, Fireresistent	40 mm
F16	Construction Wood	(6 x 14 cm)

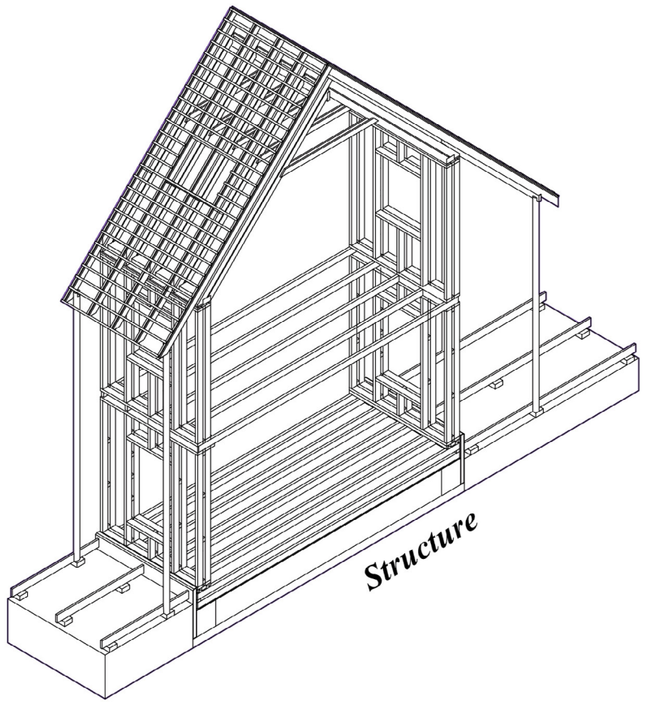
***WALL** (outside - inside)*

W1	Clay Plaster double armed	2 cm
W2	Woodfibreboard	2 cm
W3	Wind Barrier	2 mm
W4	OSB Plate	2,5 cm
W5	Timber frame (2 Studs 6 x 14 cm connected) Insulated with Strawbales	35 cm
W6	OSB Plate	2,5 cm
W7	Wind Barrier	2 mm
W8	Reed Plate (Instalation layer)	5 cm
W9	Clay plaster double armed	2 cm

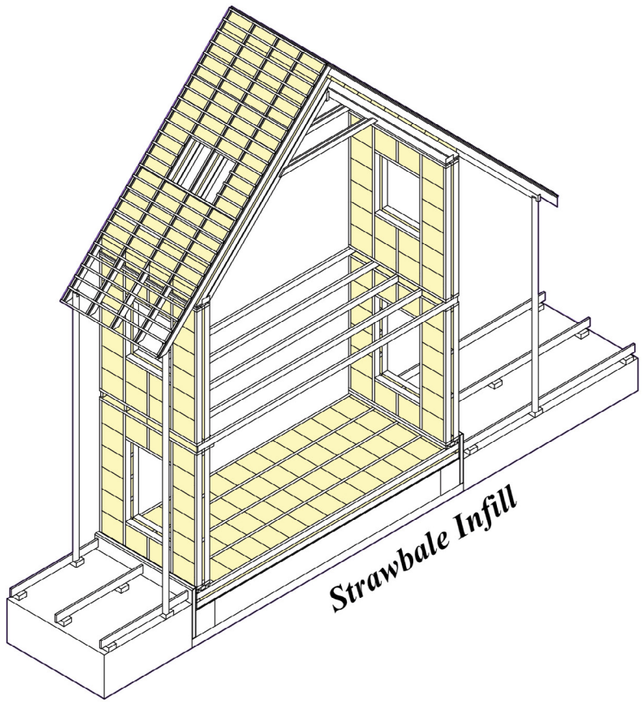
***FOUNDATION** (bottom top)*

F1	Moisture Sealing	
F2	OSB Panel	25 mm
F3	Timber frame (2 Studs 6 x 14 cm connected) Insulated with Strawbales	35 cm
F4	OSB Panel	25 mm
F5	Moisture Sealing	
F6	Crushed Foamglass, Prevents capillary action	60 cm
F7	Concrete Strip Foundation	(30 x 40 cm)
F8	Subbase, Gravel	20 cm
F9	Perimeter Insulation with horizontal moisture barrier	10 cm
F10	Exterior Plaster, Water repelent (up to 30 cm high)	

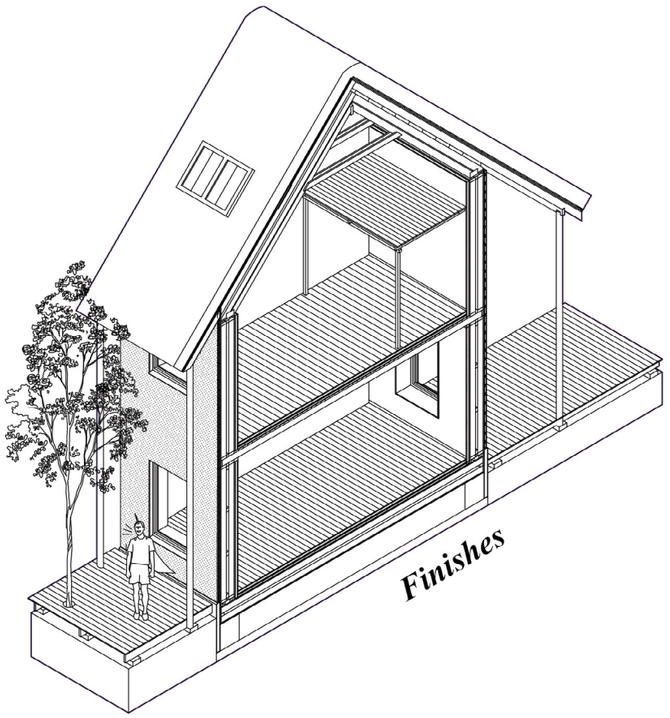
CONSTRUCTION LAYERS



Structure



Strawbale Infill



Finishes

STRUCTURE MODEL 1:20



Exterior Facade



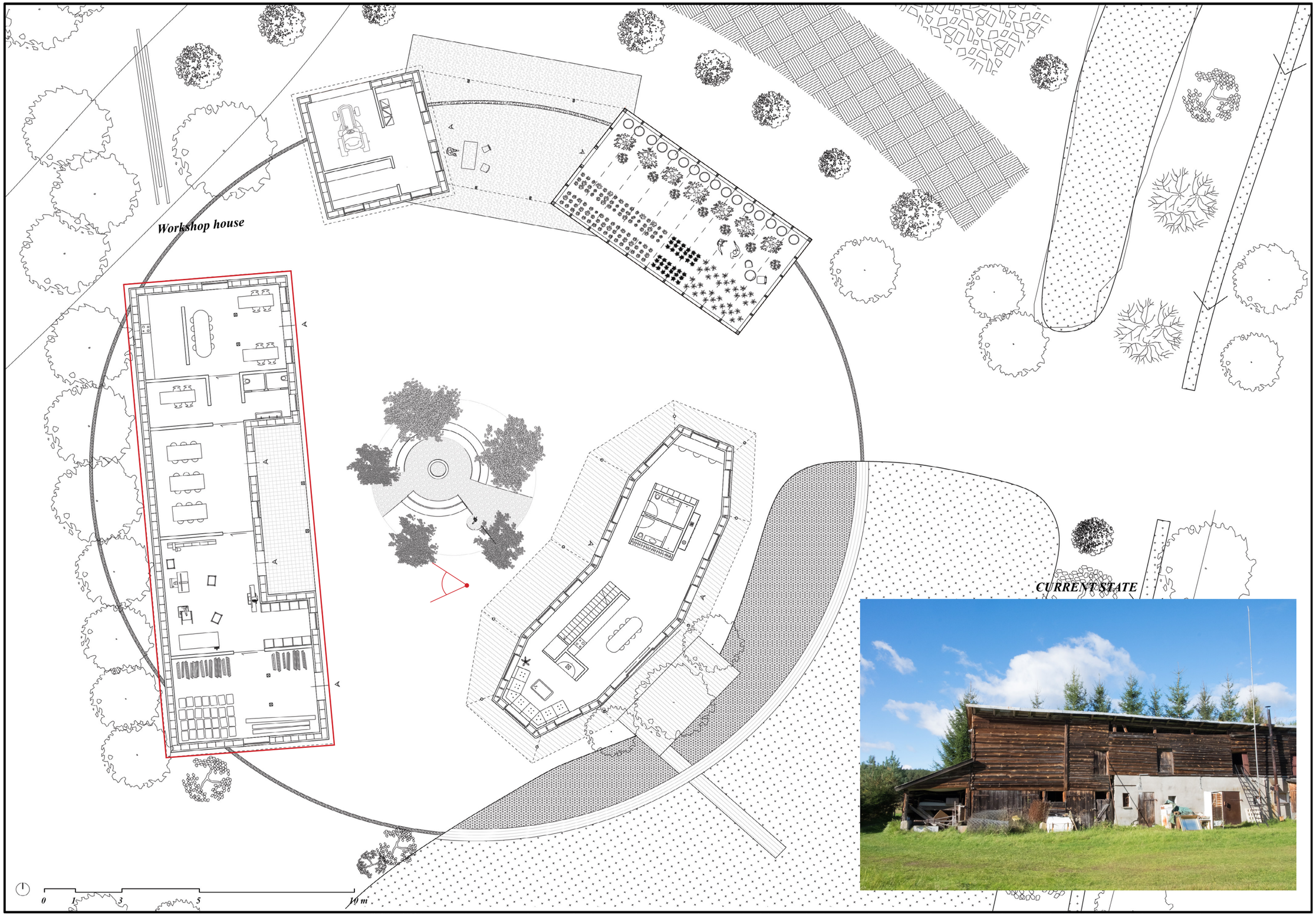
Interior Facade



COMMUNITY HOUSE

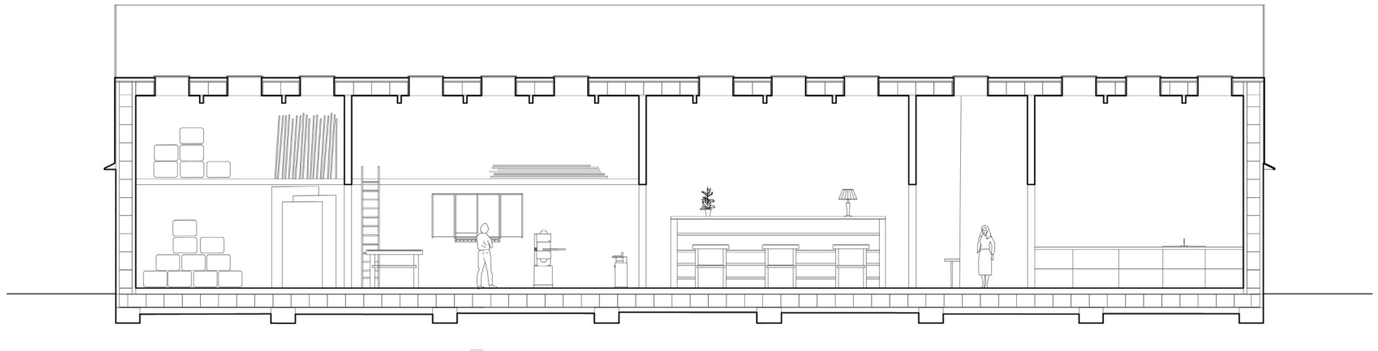


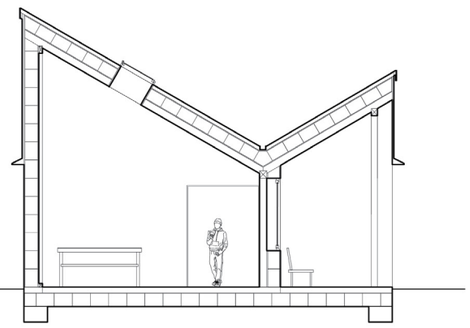
WORKSHOP HOUSE

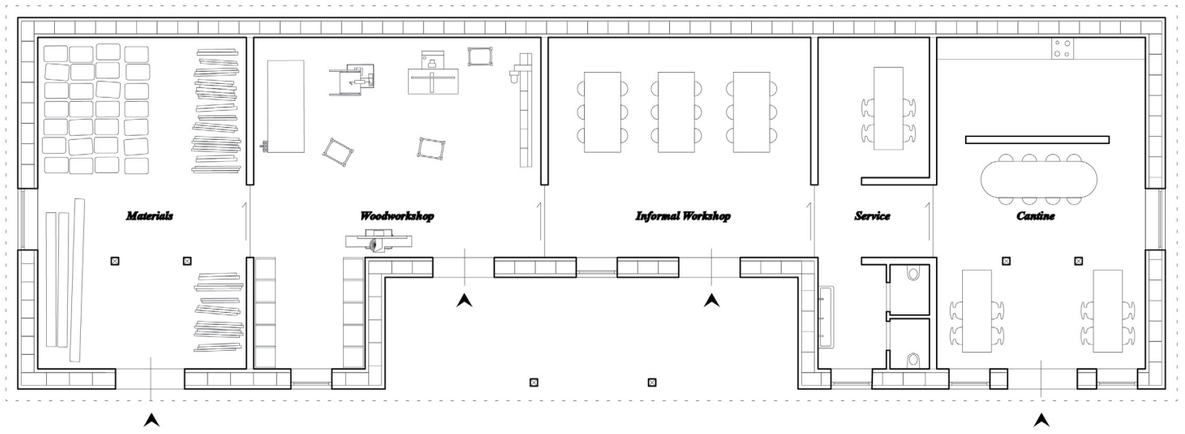


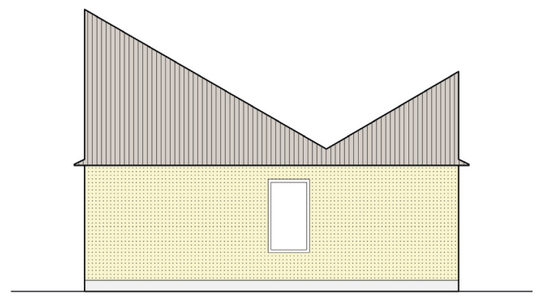


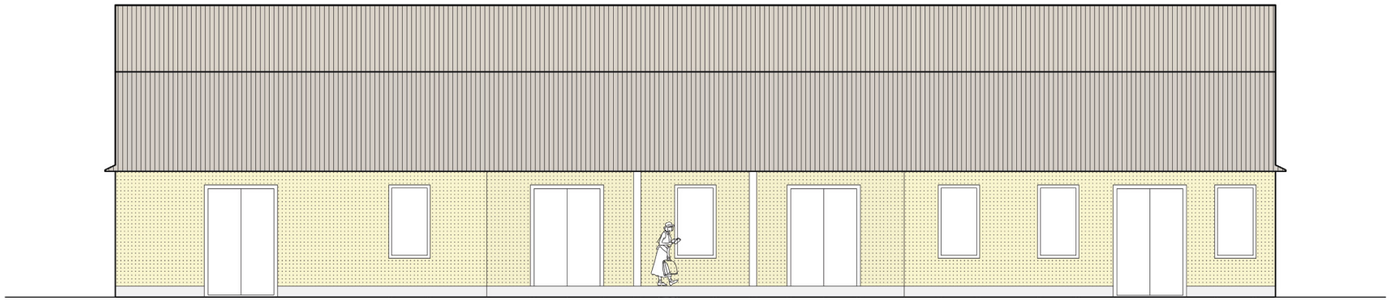
WORKSHOP HOUSE

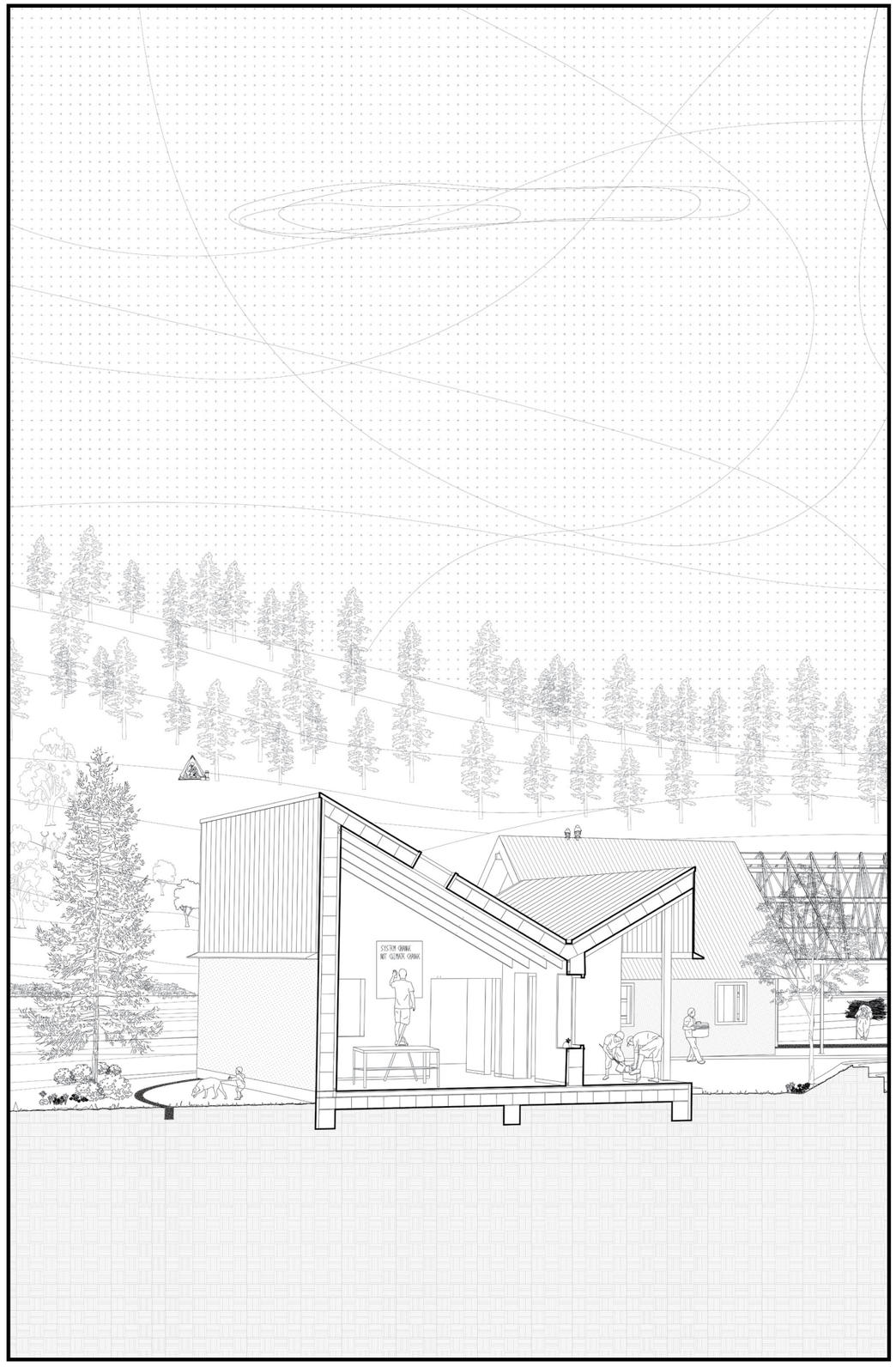




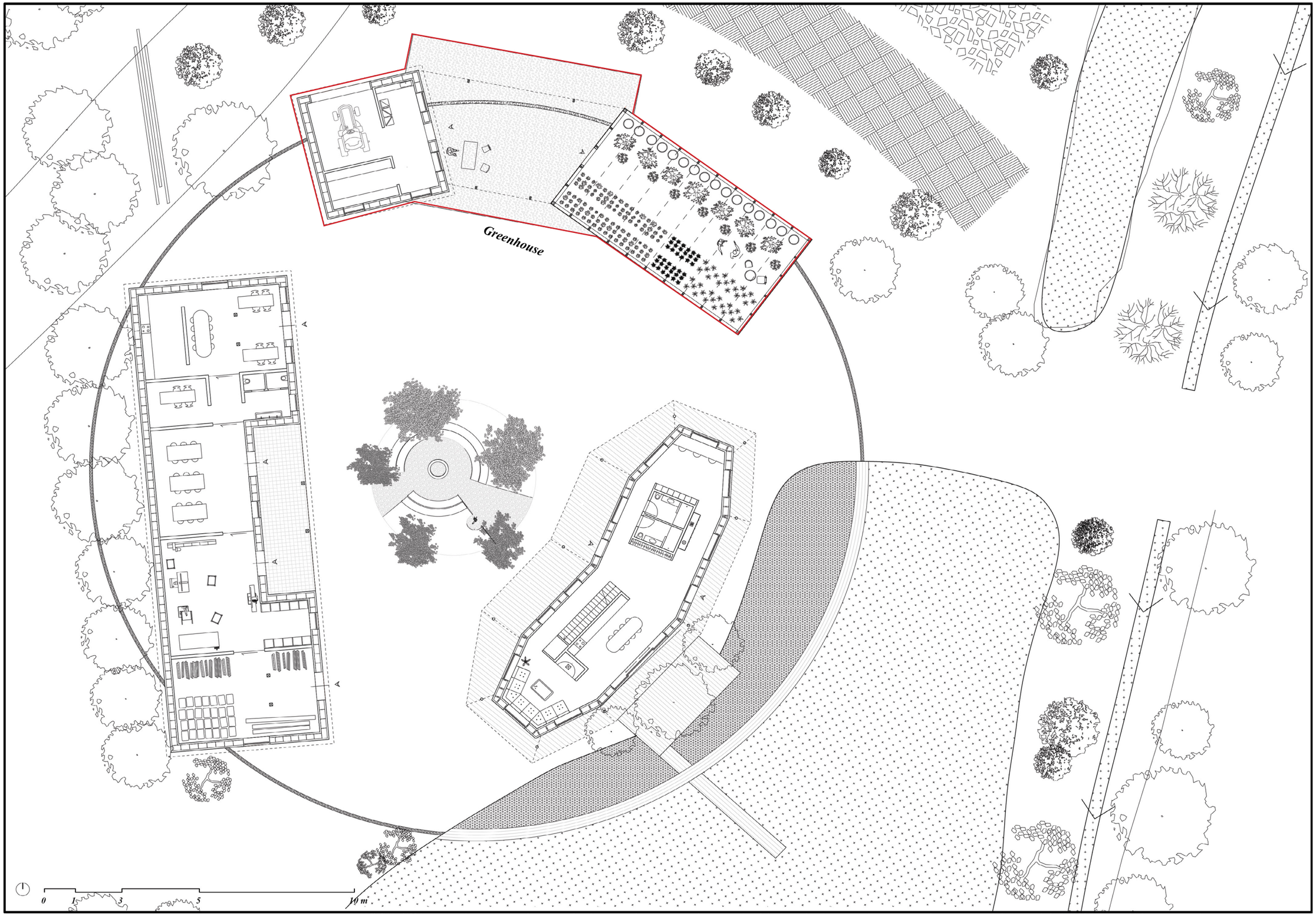







SYSTEM CHANGE
NOT CLIMATE CHANGE

GREEN HOUSE

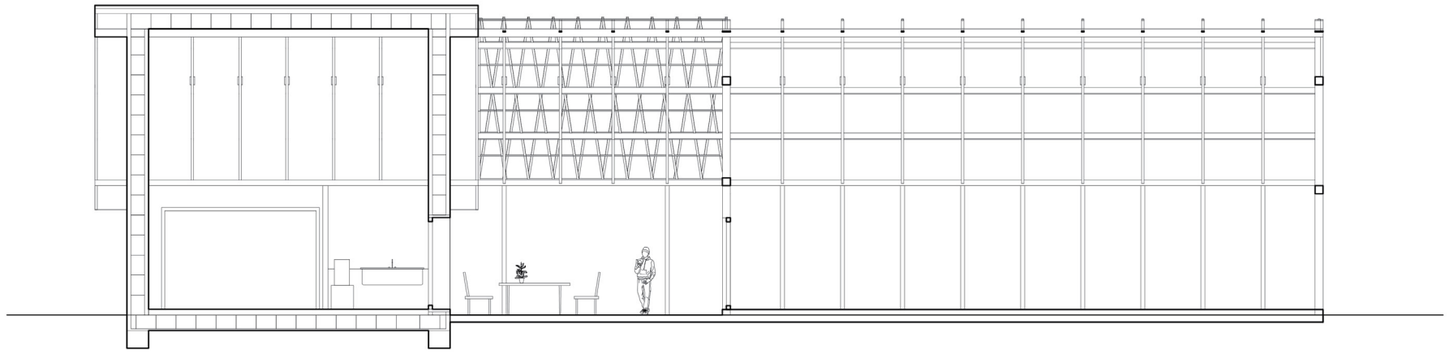


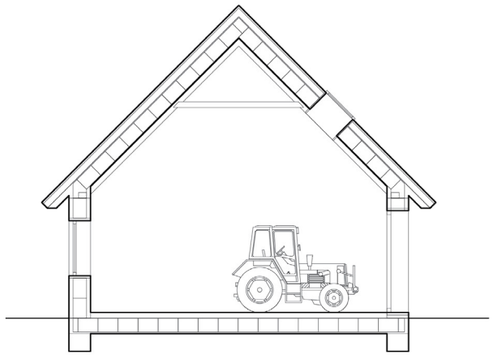
GREEN HOUSE

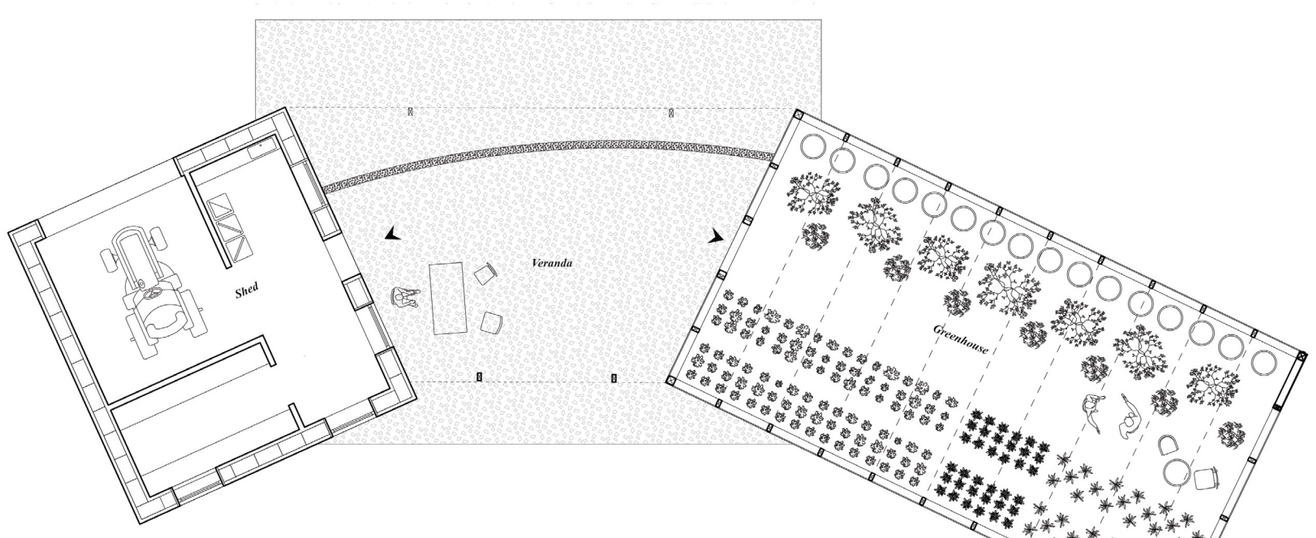


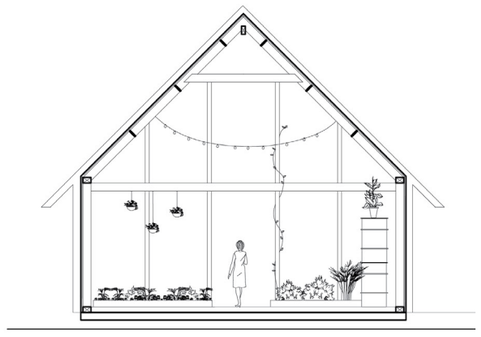
GREENHOUSE

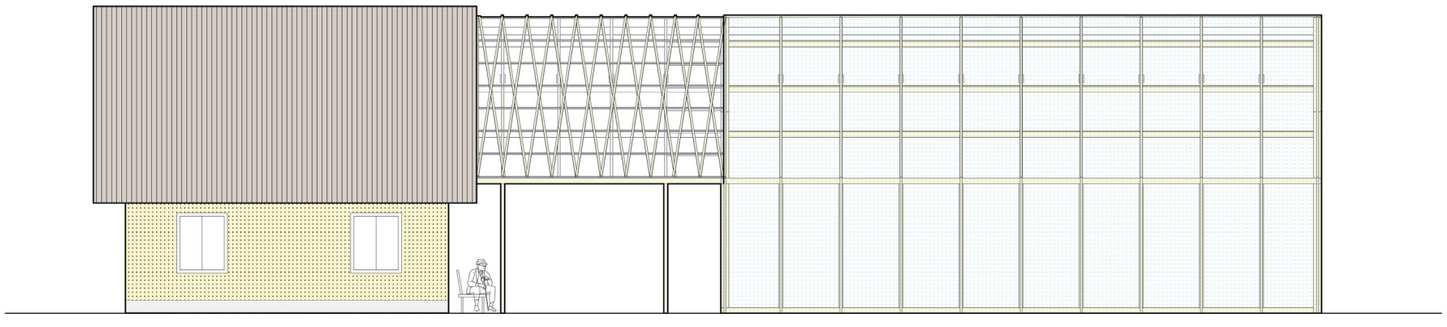
GREENHOUSE *1:100*











GREEN HOUSE





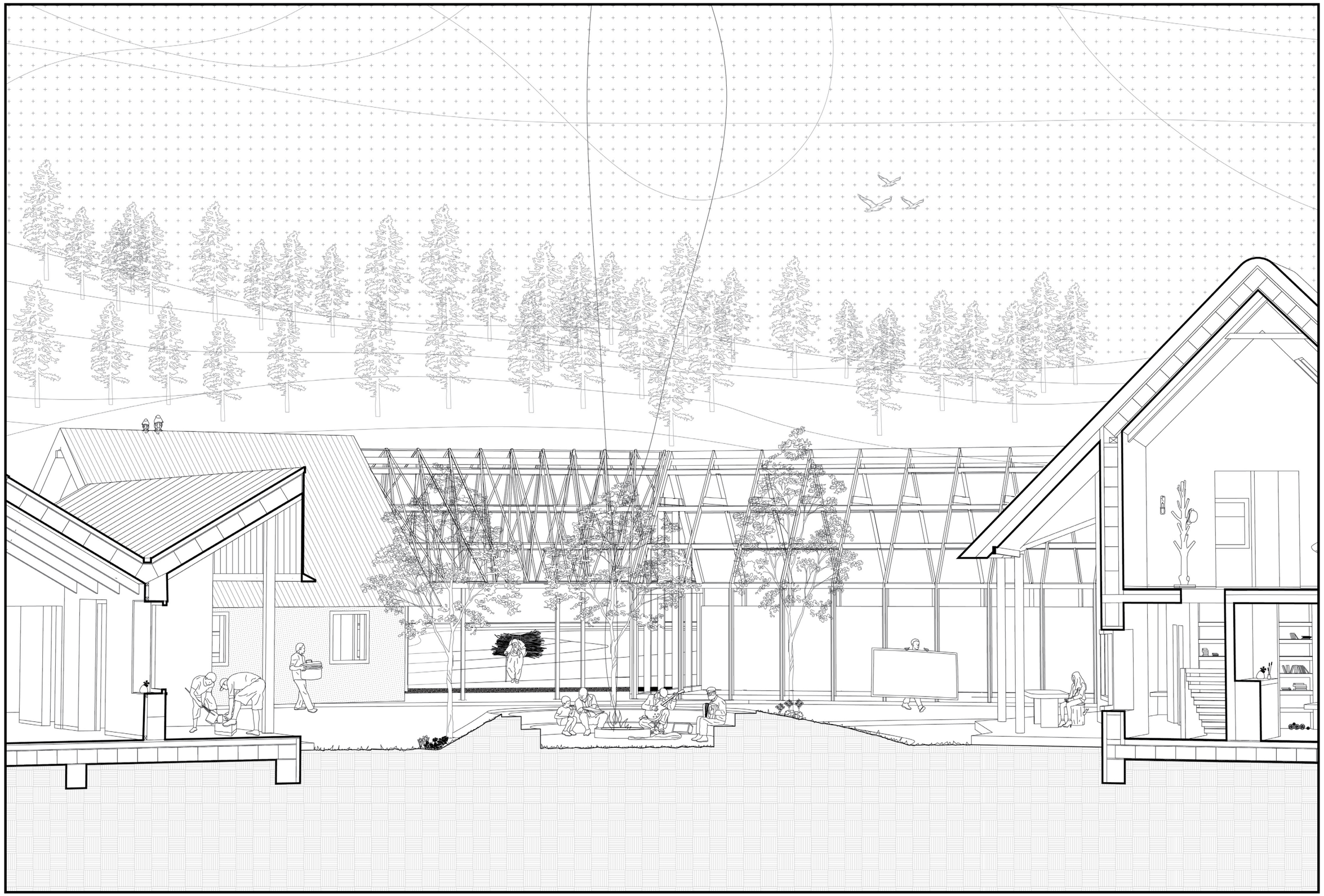
COURT



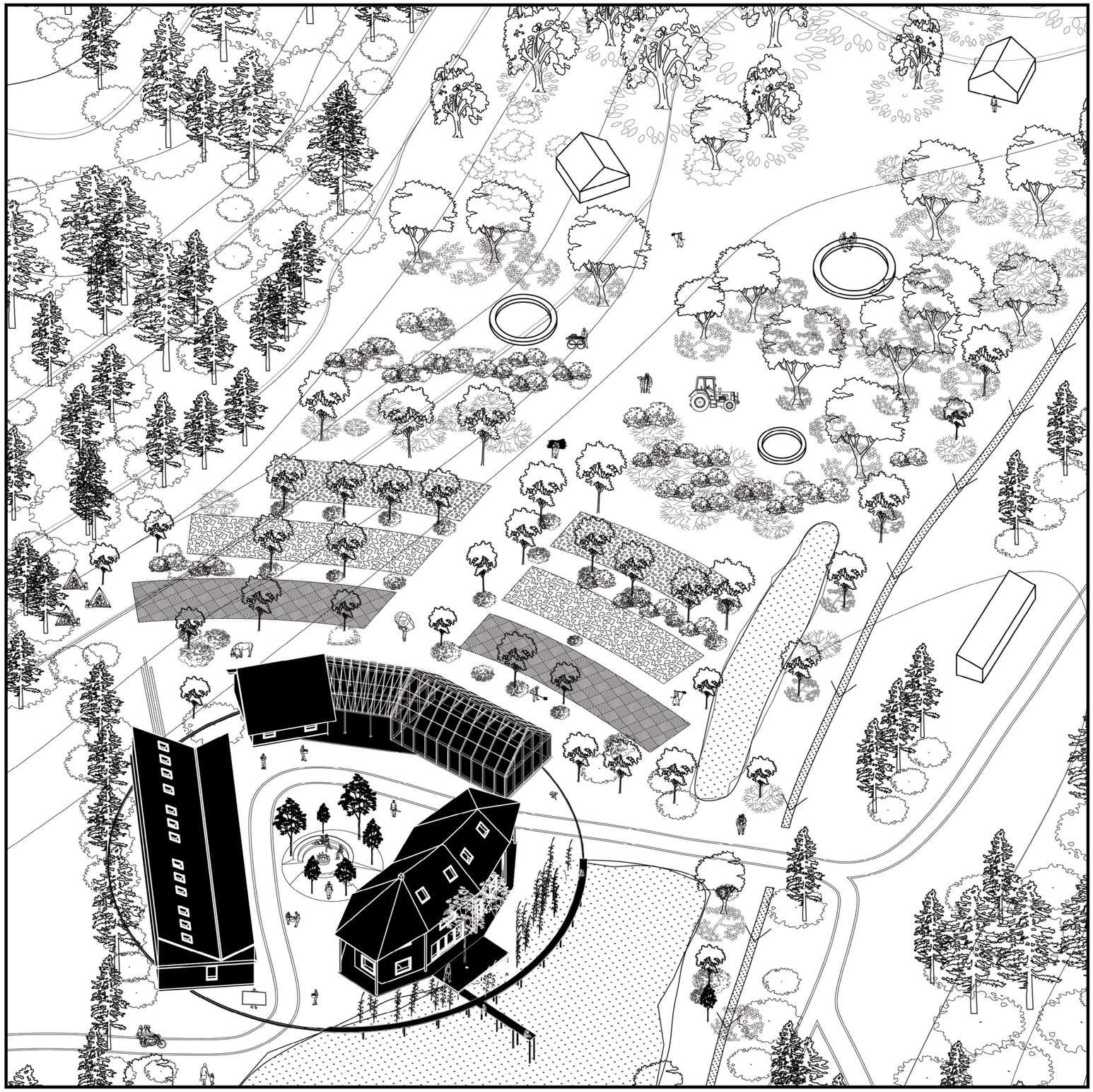
VIKING STONE CIRCLES FOUND IN BIOSPHERE



COURT

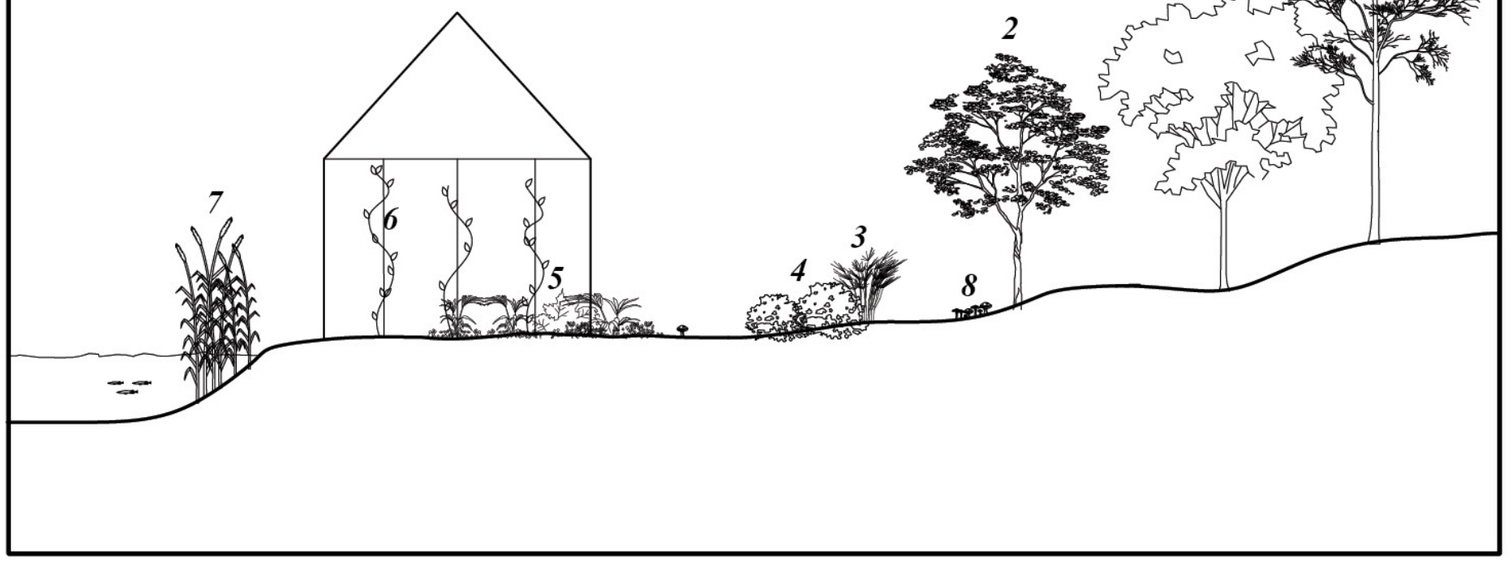


GARDEN



2) Food Forest Gardening

1 ***Canopy*** */ Large Fruit & Nut Trees*
2 ***Sub Canopy*** */ Dwarf Fruit Trees*
3 ***Shrub Layer*** */ Currants & Berries*
4 ***Herbaceous Layer*** */ Comfreys, Beets*
5 ***Rhizosphere*** */ Root Vegetables*
6 ***Climber Layer*** */ Vine*
7 ***Wetland Layer*** */ Reed*
8 ***Fungal Layer*** */ Mushrooms*



GARDEN

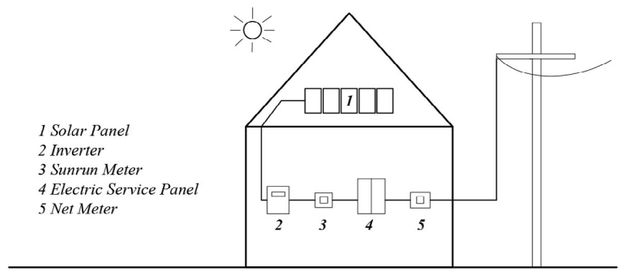






SUSTAINABILITY PRINCIPLES

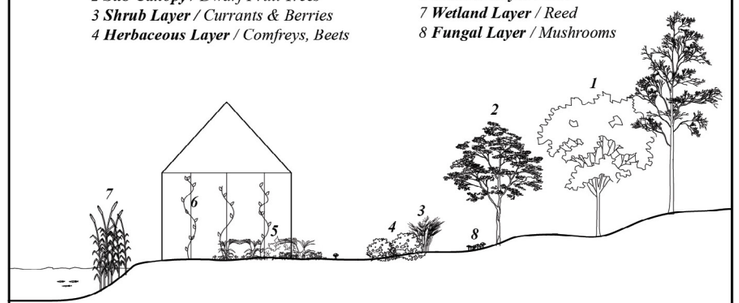
1) Solar Energy Collection



1 Solar Panel
2 Inverter
3 Sunrun Meter
4 Electric Service Panel
5 Net Meter

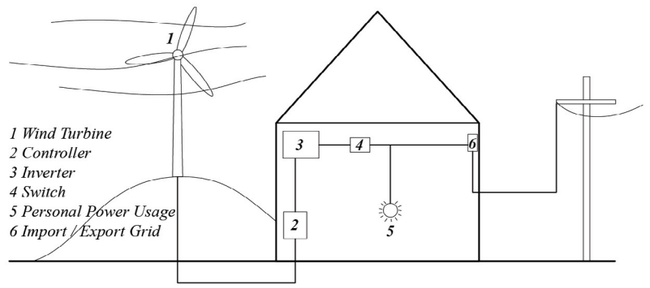
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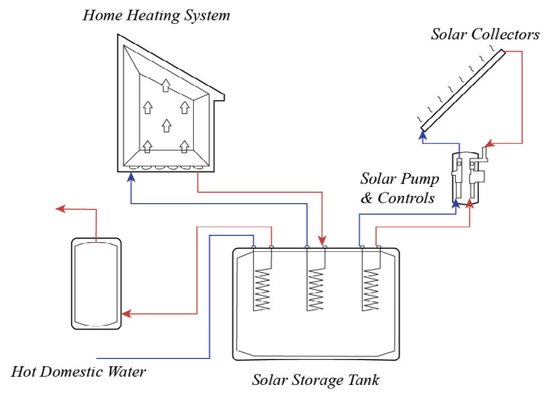


3) Wind Energy Collection

1 Wind Turbine
2 Controller
3 Inverter
4 Switch
5 Personal Power Usage
6 Import / Export Grid

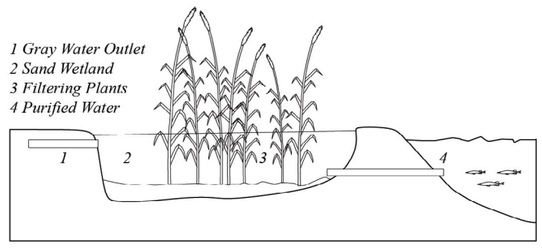


6) Solar Water Heating



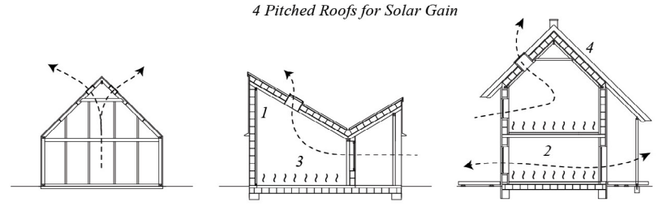
4) Biofiltration of Wastwater

1 Gray Water Outlet
2 Sand Wetland
3 Filtering Plants
4 Purified Water



5) Natural Climate Control

1 Clay Plaster
2 Solar Heated Floorheating
3 Crossventilation
4 Pitched Roofs for Solar Gain

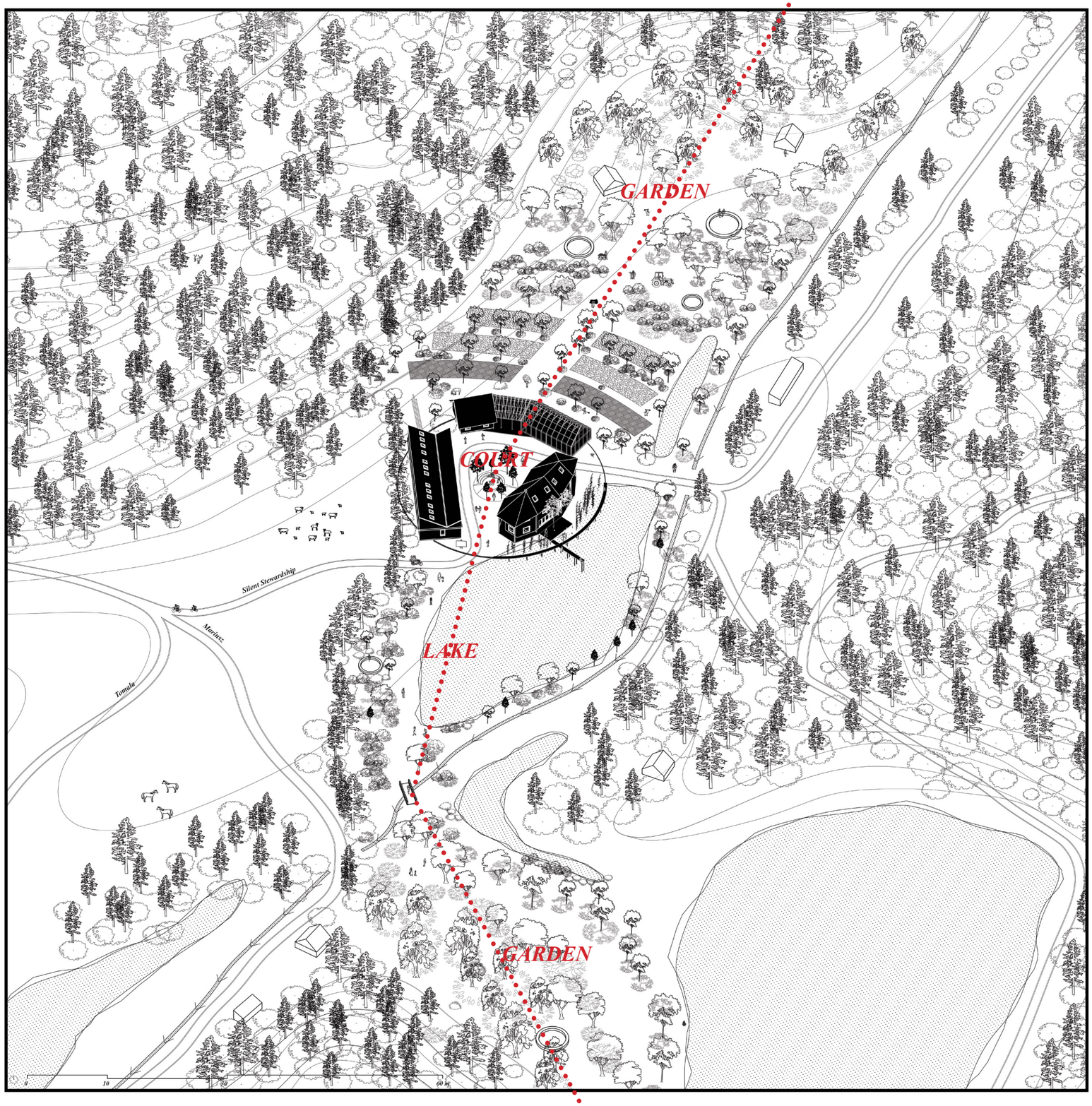


Energy Calculation

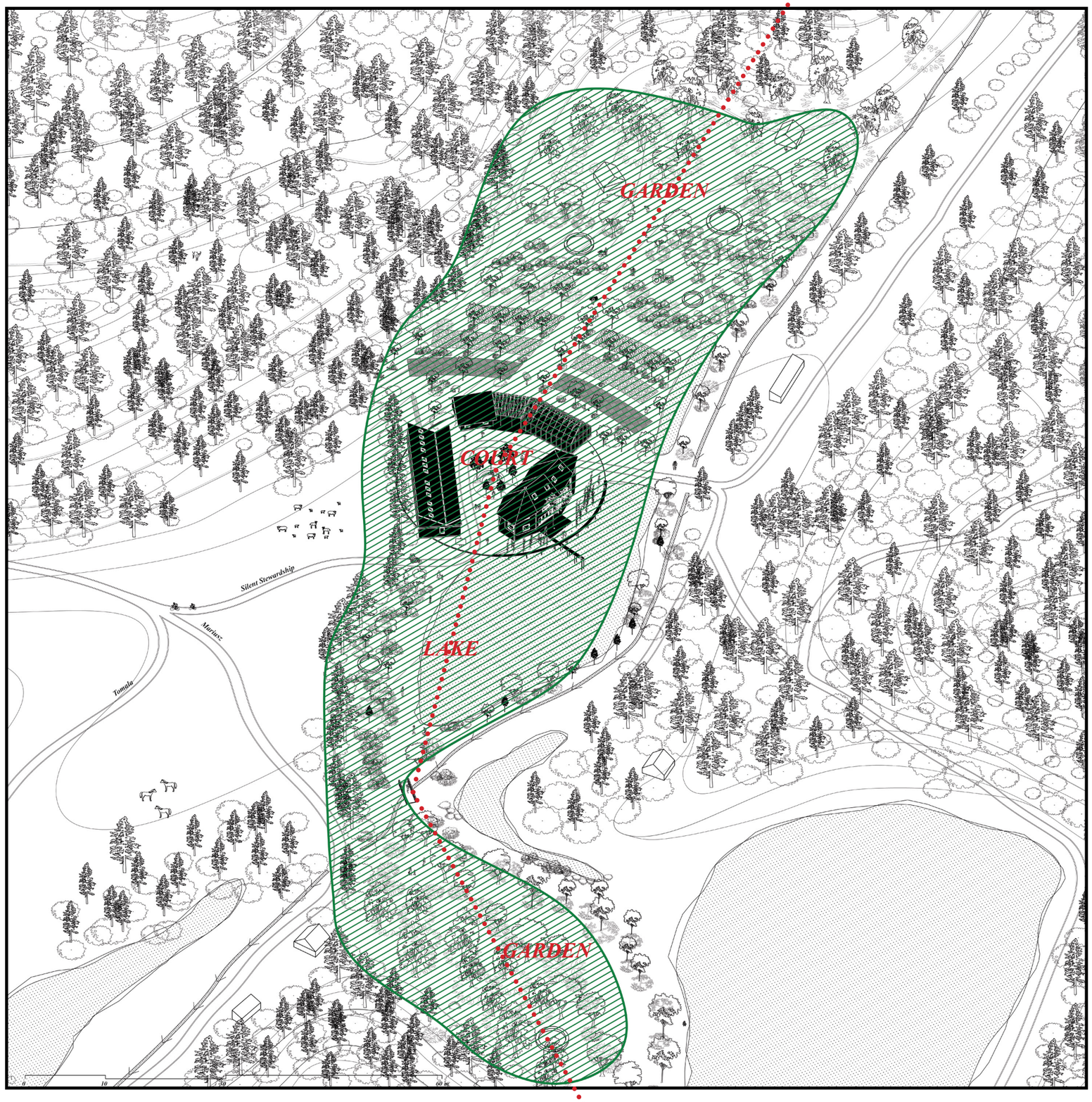
Yearly Energy consumption	*15.000 kWh / year*
Potential Solar Energy	*10.000 kWh / year (100m2 Roof Area)*
Potential Wind Energy	*13. 000 kWh / year (1 Windmill, 10 m high, 4,5 m/s Windspeed)*



STEWARDSHIP SITE



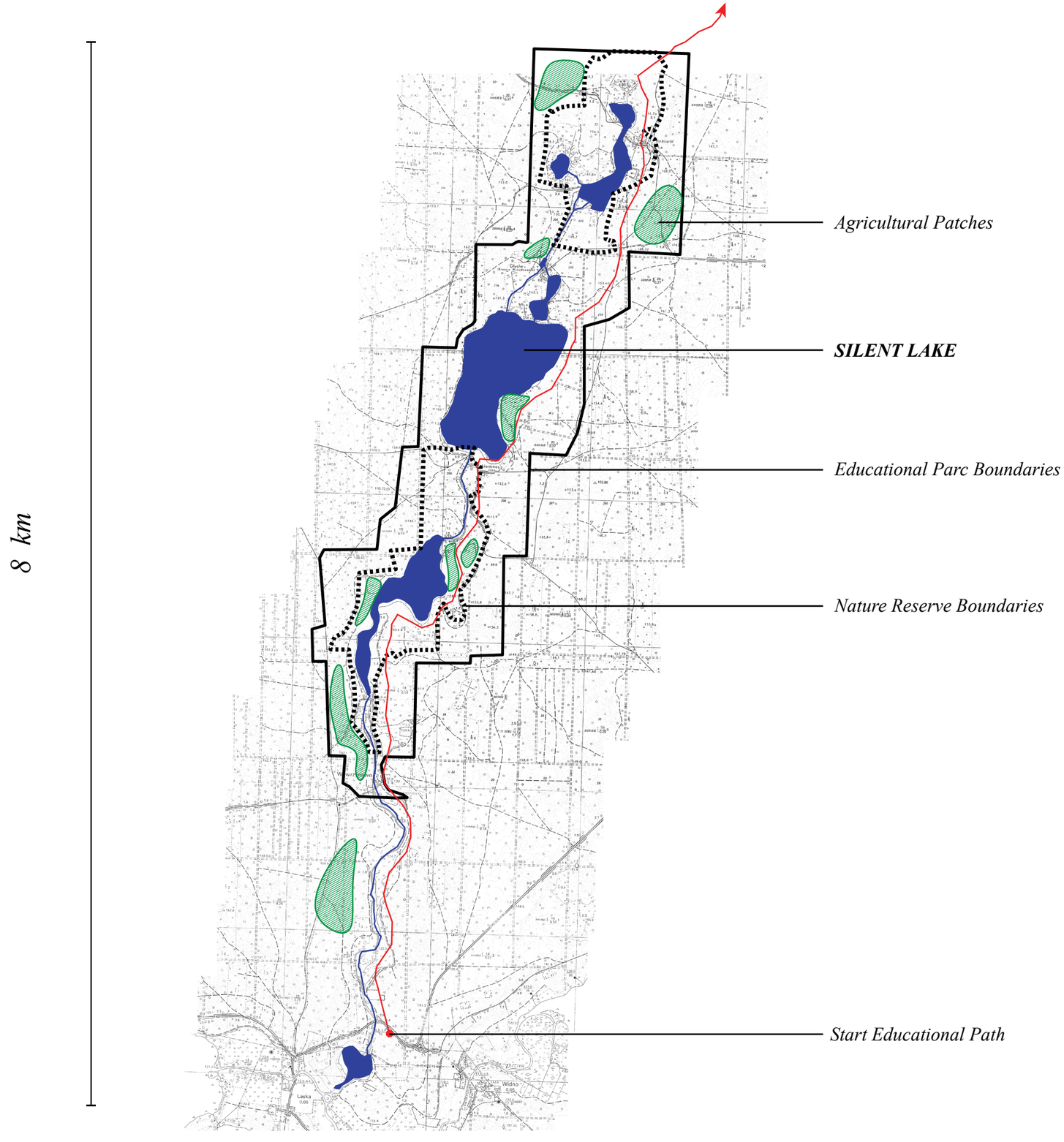
STEWARDSHIP SITE



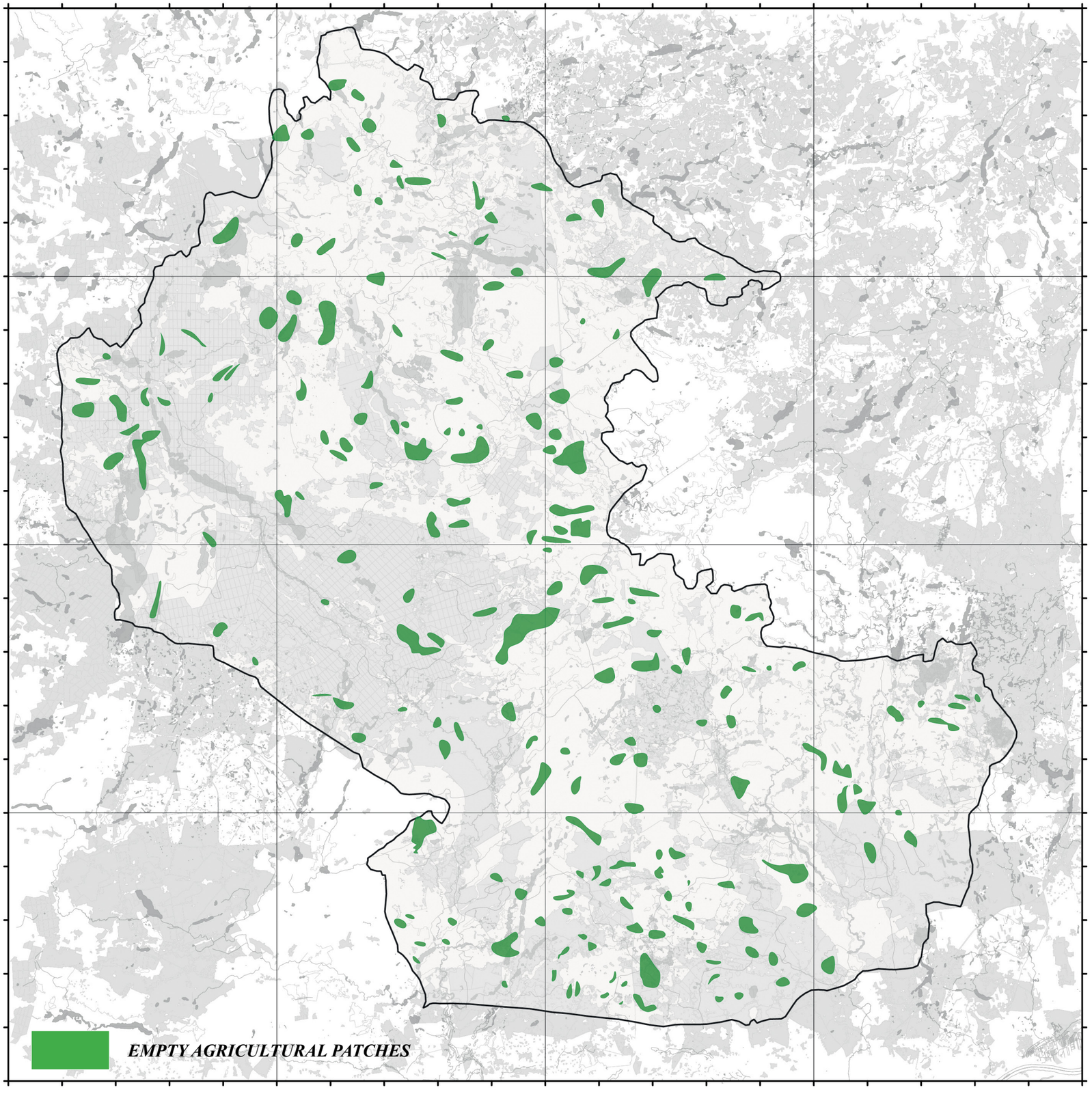
SILENT LAKE COMMUNITY



SILENT LAKE LANDSCAPE



UNESCO BORY TUCHOLSKIE BIOSPHERE

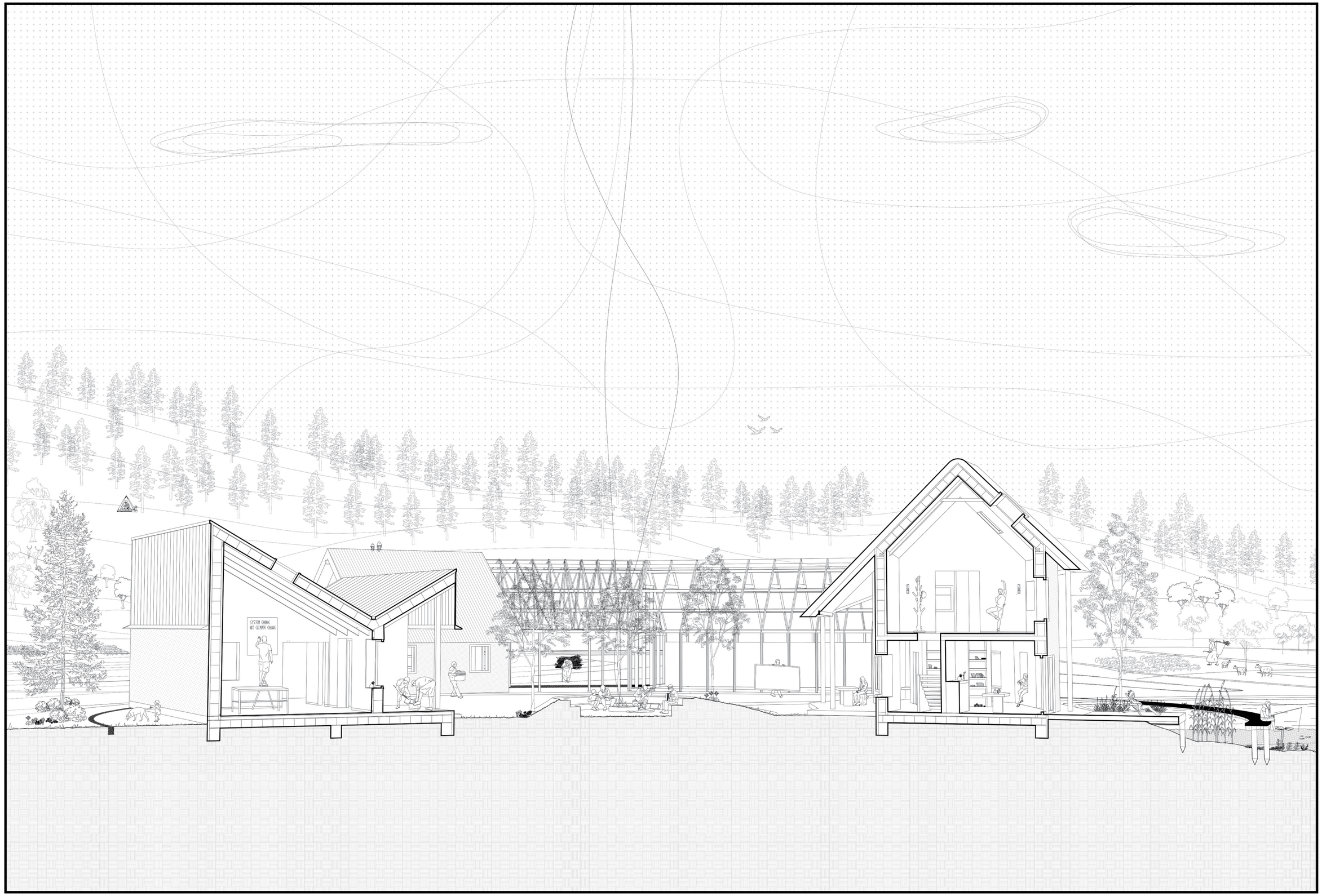







JARDINS (Arbres d'ornement)


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SYSTEM ERROR
NOT CLIMATE CHANGE