

# A TREES' GESTURE

REGENERATING FARMLAND  
THROUGH FOOD-FOREST PRACTICES



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EXPLORELAB 25/26  
RESPONSIBLE SUPERVISORS: INGE BOBBINK, RUFUS VAN DE BAN

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# INTRODUCTION



*Vedute for ExploreLAB, Jillis Hulleman. Image by PhotoLAB TUDelft.*

Balancing between the acts of cooking and making, I find myself asking the same questions to both: To what extent are we allowed to modulate materials/ingredients to satisfy ourselves? What is the threshold of a material's soul?

Both extractivist, though essential practices, cooking and architecture feel elemental.

I want to explore the role that architecture can play in a world that needs regeneration. By linking food with architecture, parallels between the two worlds can be explored and help foster our relationship with the earth/soil.

The link between architecture and food production has led me on a journey towards regenerative agriculture practices, which in turn made me critically assess the extractivist practices of both.

We are constantly entangled in complex ecosystems. It sometimes feels we cannot get a full grasp on them at all; always on the frontiers of research, new species, or mutual relationships or interdependencies are uncovered. Accepting the constant dynamic, fluid process of knowing and unknowing, how do we design for systems that we will not fully understand? Without imposing ourselves and leaving porous gaps for agency/nature as an actor in the design practice?

Through material discourse, a constant negotiation with these complex systems. In my veduta, I have tried to uncover the influence of technicities on material, and the way natural morphogenetic processes, such as the material or evolution of the branches' shape, can inform our modulations on a material as such.

# LOSING TOUCH

WHY ARE WE KILLING OURSELVES?



*Landerijen in Drenthe: het oranjegeel gewas is bewerkt met glyfosaat. Foto Harry Cock / de Volkskrant*

If we zoom out and look at the Earth from a faraway place. A lot of things we do, do not make sense.

Taking into account the fact that we need air to breathe, water to drink, food to eat, one earth to live on, we have far surpassed the boundaries of the earth.

As can be seen in the image above, pesticides and herbicides are extremely effective in poisoning plants and temporarily increasing a desired output (effective production). But it needs no long time to realise the irreversible effects of pumping and filling our soils with poison.

We were brought up by a flawed system, a system that has taken advantage of our biggest strength, which is our ability to adapt to certain situations, to attune.

Thus, we have been blinded.

Drifting further and further into a madness (Koyaanisquatsu)

# REGENERATION

WHY ARE WE KILLING OURSELVES?



*Tom Hegen, Greenhouse Series NoTGS01*

One of these weaving errors in our system is the commodification of nature. It has been enabled to trade in rare earth materials. Nature has become a byproduct of a calculation, an externality, instead of a crucial factor. This has led to depletion of soil quality and a rapid decrease in biodiversity in order to sustain our enormous growth.

The depletion of both soil quality and biodiversity is in direct correlation with the invention of pesticides, the increased use of manure, and intensive ploughing.

Following this rhetoric, a question naturally arises: Is there a different way to farm? What does that look like? What are its consequences? How does this impact the way we live?

Permaculture implies it has an answer to this question.

Sustainability for agriculture has thus far implied less ploughing and spraying.

Whilst permaculture focuses on making a positive impact in the sense of

Absorbing more CO<sub>2</sub> than we emit.

Create more life than we take away.

Build valuable communities

and lastly, generate profit.

# VOEDSELBOS KETELBROEK

WOUTER VAN ECK



*Ooit was Voedselbos Ketelbroek een kale akker, Gabriela Hengeveld.*

A Food Forest Fascination started while working on a farm in Sicily. Though very different contextually, a global wave of pioneering gardeners and farmers is pushing a forefront of a combination of indigenous and state-of-the-art knowledge, exploring new possibilities of land-use. The Dutch landscape was relatively late with implementing and experimenting with the possibilities of these practices, on which I can only speculate it might be due to current pressure on our agricultural landscape to provide, and produce, leaving almost little room for experimentation, and alternative knowledge.

However, in 2009, Wouter van Eck, bought a degenerated piece of corn field and transformed it into the first Dutch food forest.

For food forests are heavily reliant and sensitive to local conditions, and play with these conditions at the core of the practice, to globalize this practice, every country, region

and microclimate has to be treated differently, uniquely. In order for it to succeed.

This involves, but not excluding; soil analysis, organic matter contents, carbon analysis, nutrient contents of soil, water level, soil type, direction, slope, sun analysis and ecosystem analysis of present animals, native plants already growing in the surrounding, personal interests and local market.

# VOEDSELBOS SCHIEBROEKSE POLDER

PAUL DE GRAAF



*Voedselbos Schiebroeksepolder with Paul de Graaf, Jillis Hulleman.*

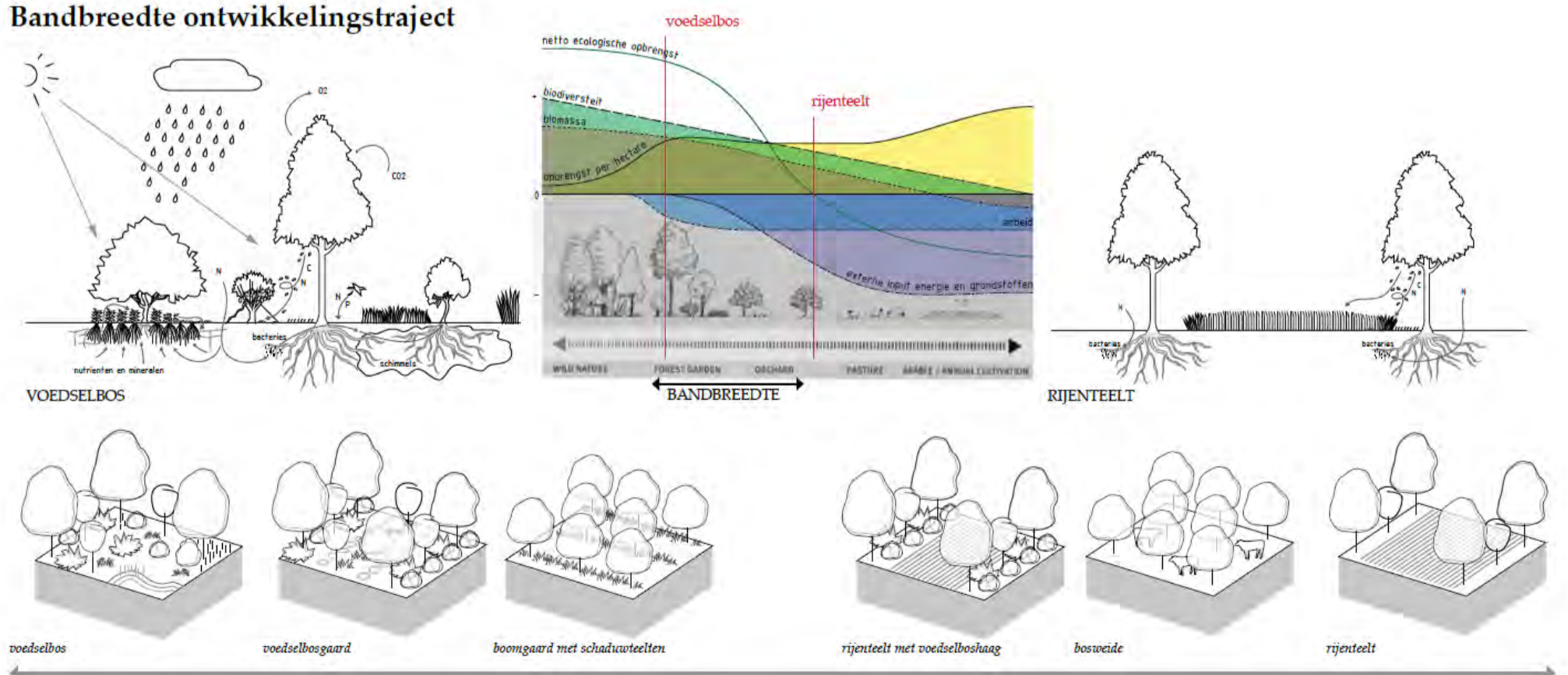
This report is also the story of pioneers, of dreamers and fools. This picture is taken at Paul's voedselbos Schiebroekse polder close to Rotterdam. You can see Paul explainig what is happening in his food forest. It takes a little imagination standing in seemingly dead plants reaching knee-height to realise the potential of his ideas.

# WHAT IS A FOOD FOREST?

A food forest is a type of agriculture that mimics the edge of a forest, with a focus on producing food for people. By using a polyculture of perennial plantings and working with different layers, it creates opportunities to regenerate soil quality. The high diversity of species in the planting increases biodiversity and allows the system to protect itself against pests and diseases, while eliminating the need for external inputs such as fertilizers and pesticides. It works with nature instead of against it.

Within agroforestry, marked by the red lines in the image below, Food Forests position themselves towards the wild forest, replicating a forest's edge, whilst maintaining a focus on food production.

## Bandbreedte ontwikkelingstraject



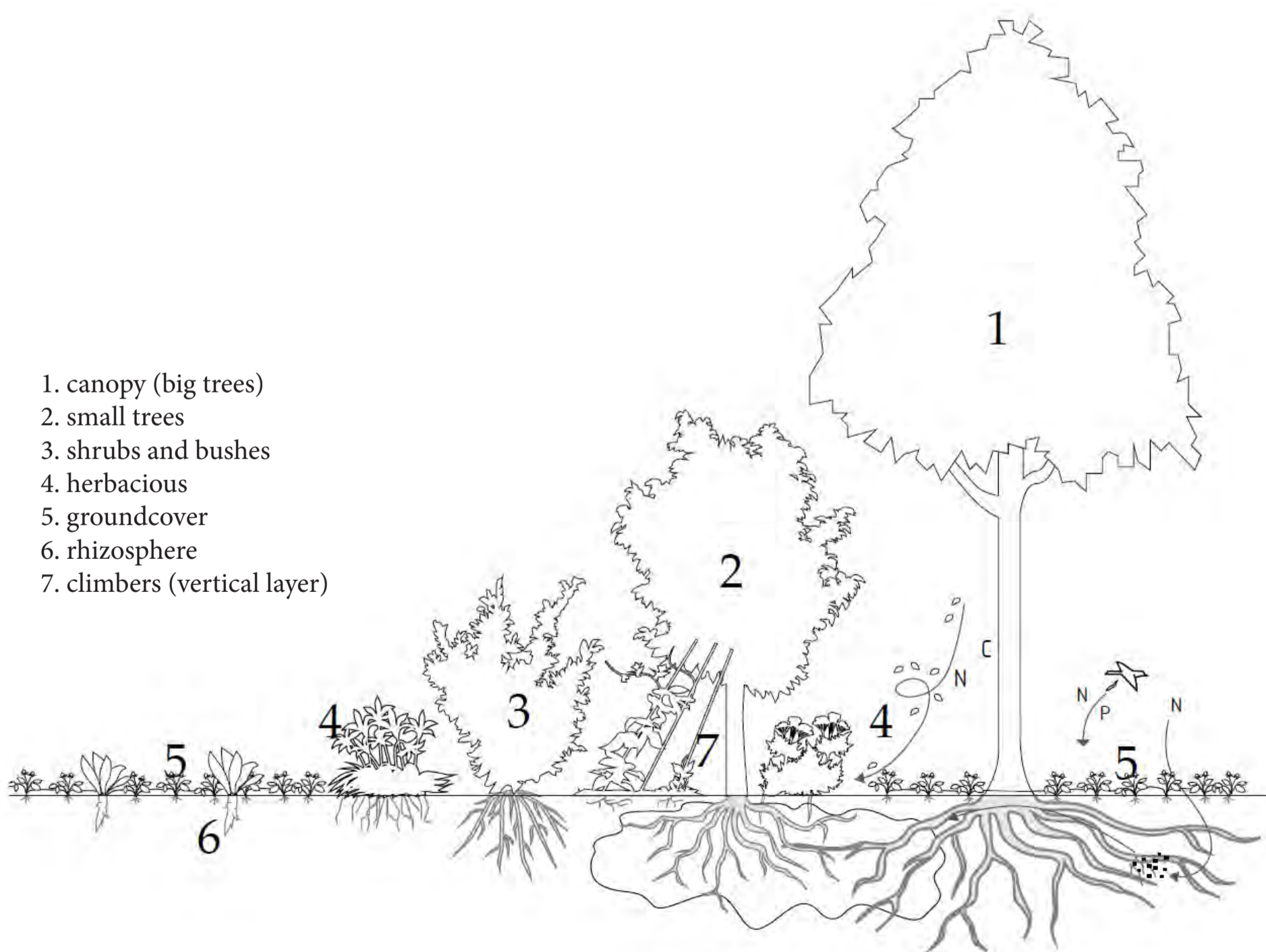
# PERMACULTURE AND AGROFORESTRY

Here an important distinction is made between a rational and a romantic food forest. The romantic food forest has a freer planting design, while the rational one focuses on making the food forest system more structured, arranged in more rational rows, without compromising its perennial nature, species diversity, or layered structure.

When discussing an economic model and production, calculations are only made using the rational model developed by Boulestreau and Van Eck, although both variants have proven valuable in practice and can be profitable.

A food forest is often described as the dream of the lazy farmer, because it does not require land management in the form of ploughing, spraying, fertilizing, or tilling. Only harvesting remains, alongside the initial planting phase, which often involves community participation.

Because the system works with perennials, there is also no need to replant new crop rotations multiple times per year.



# PERMACULTURE AND AGROFORESTRY

THE GREEN DEAL



*Dwarsprofiel van een voedselbos - © Plantschap*

## **Een voedselbos heeft:**

- Een kruinlaag van hogere bomen;
- Minimaal drie andere vegetatielagen van respectievelijk lagere bomen, struiken, kruiden, bodembedekkers, ondergrondse gewassen en klimplanten;
- Een rijk bosbodemleven;
- Een robuuste omvang, dat wil zeggen: minimaal 0,5 hectare in een ecologisch rijke omgeving; in een ernstig verarmde omgeving is een oppervlakte van minimaal 20 hectare vereist.

## **Agroforestry**

Voedselbossen zijn een vorm van agroforestry: een brede categorie van landgebruikssystemen waarbij bomen en struiken bewust worden gecombineerd met landbouwgewassen en/of landbouwhuisdieren. Op grond van hun ruimtelijke structuur worden vier subcategorieën van agroforestry onderscheiden:

- A. Rijenteelten (alley cropping); rijen bomen/struiken in een akker;
- B. Bosweides (silvopasture); grazend vee op gronden waarop ook bomen/struiken groeien;
- C. Oeverstroken (riparian zones); lijnvormige beplantingen langs terrassen en watergangen;
- D. Voedselbossen (food forests); ecosystemen met de gelaagde structuur van een natuurlijk bos.



# RESEARCH & DESIGN

MORPHOGENIC FORMS

COLONIAL

WHAT SHOULD BE THE FOCUS OF THE FOOD FOREST?

- FARMING TYPE
- TYPE OF HUMAN EXPERIENCE OF THE PLACE
- AGRICULTURAL REQUIREMENTS

FRAGMENTED LANDSCAPE  
FRAGMENTED ARCHITECTURE

URBAN - RURAL DICHOTOMIES

HOW TO TRANSLATE A FOOD FOREST TYPOLOGY  
TO ARCHITECTURE?

- TO WHAT EXTENT ARE WE ALLOWED TO MODULATE NATURE  
IN ORDER TO CREATE SPACE?
- HOW DO WE DESIGN FOR OUTDOORSY PEOPLE?
- WHAT ARE THE ACTIVITIES CARRIED OUT?

- IMAGINING  
SCENARIOS  
TYPICAL  
ERAS

BELANGENSVERSTRENGELING,  
PLANT: FOOD CRITIC: I HAVE SEEN MANY  
RANDSTELINGEN DIE DACHTEN DAN ZE  
EVEN ANDERS KONDEN GAAN BOEREN

# SIGN QUESTIONS

GOOD FOR THOUGHT

L PARADOXES

LOCATION FRAME - PROGRAMMATIC FRAME

- VELUWE
- WADDEN
- WETLANDS
- DEGENERATED FARMLAND
- URBAN

APES

ECTURE

WHAT IS A FOOD FOREST?

HOW DO WE USE A FOOD FOREST?

AGINAR-

FOR FU-

E GEN-

TIONS

WHY SPECIFICALLY A FOOD FOREST?

- REGENERATIVE AGRICULTURE CONTEXT

FOOD FOREST DESIGN:

- SOIL TYPE
- WETNESS
- TYPES OF LANDOWNERSHIP
- MARRIED WITH COMMUNITY LIVING?
- LOCAL SPECIES - INVASIVE SPECIES
- WHO WORKS THE LAND? TYPES OF CULTIVATION

# METHODOLOGY



*Voedselbos Schiebroeksepolder with a group of volunteers, Jillis Hulleman.*

Talking about community engagement without physically engaging and fostering new connections does not feel satisfying. That is why immersing in such practices is at the core of my methodology. Next to a theoretical framework, informing the morphogenetic questions coined in the last slide, getting my hands dirty with soil and meeting new people will be a crucial part of this project. This will be done by participating in community activities such as maintenance, planting, and personal interviews. To gain new insights into the actual activities and meanings behind a food forest.

In the first phase, the focus will be on creating new connections, which can be fruitful for the design and critical

position, as well as a dive into texts that are both familiar and unfamiliar yet to me. The interviews conducted in the latter part will also help to establish a colorful image of the way people are already engaging in the practices that are at the forefront of the project. Giving also more grasp on the already existing context out there, and a more grounded and critical positioning of the proposal itself.



*Job with his Food Forest recipes, tasting at Food Forest Schiebroekse Polder, Jillis Hulleman*

But also making food from food forest ingredients.

For we need to change the way we eat and produce food, since our current system is unsustainable and inefficient.

Plant > meat conversion

So broadening our palette. And trying things with which we are unfamiliar or uncomfortable.

The same in a way can be said about the building, we need to change our perception of comfort.

With more extreme weather conditions, keeping a steady indoor climate becomes more challenging.

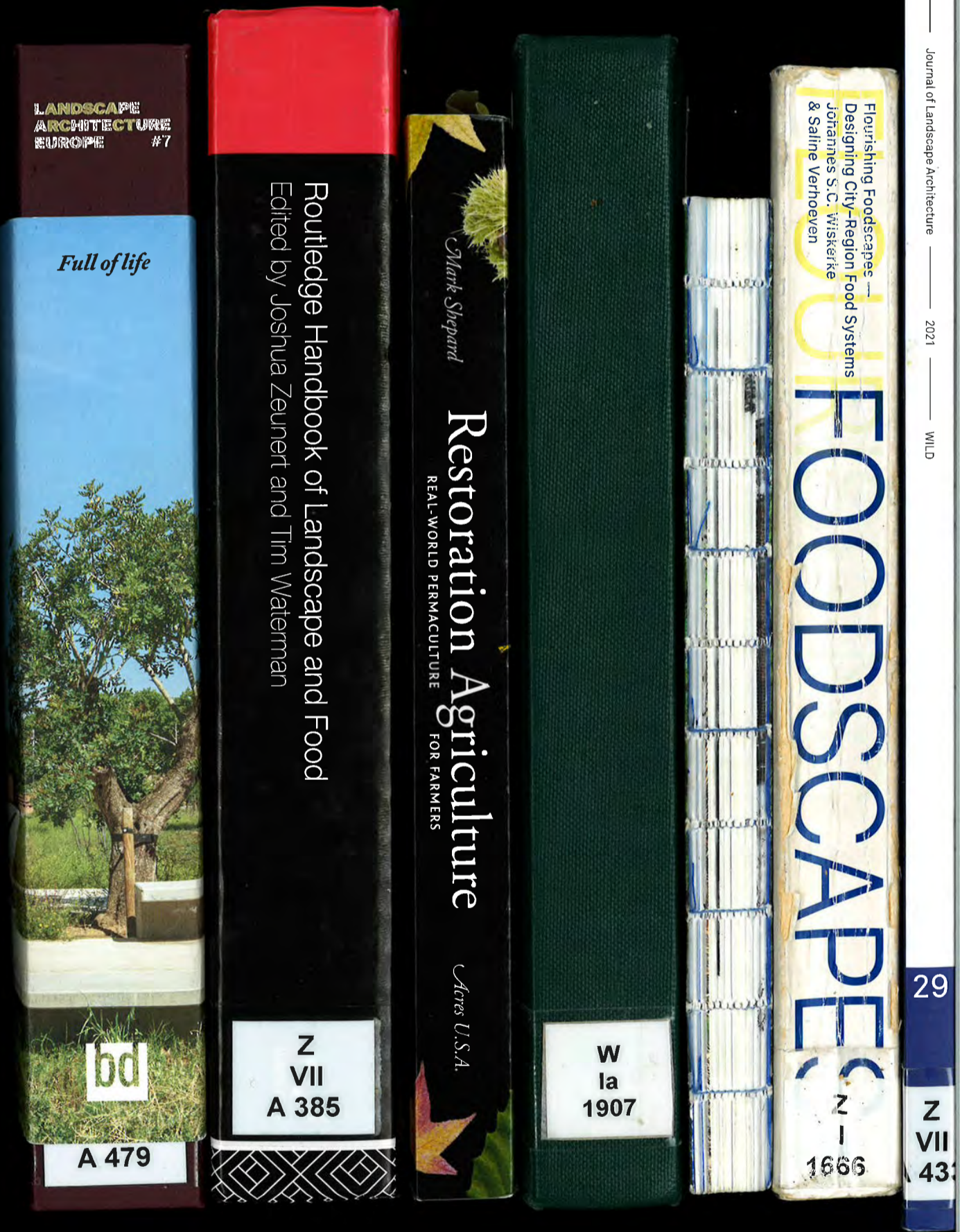
And this cascading effect can have disastrous consequences

So being a little bit more uncomfortable now, or getting used to this discomfort, ensures future generations don't suffer from our current pampered manners.



# RESEARCH

NOT BABIES



# THEORETICAL BACKGROUND

ECOLOGICAL ENTANGLEMENT IN ARCHITECTURE

## CRITIQUE ON DICHOTOMIES, RATIONALISM AND CONTROL OVER NATURE

Western architecture and theory have been profoundly influenced by rationalist philosophy, particularly the dualistic thinking introduced by René Descartes. The Cartesian separation of mind and body, subject and object, and culture and nature has historically positioned humans as external observers of the world, legitimizing practices of control, optimization, and extraction, which cut up and divide land. Within this paradigm, architecture functions as an instrument that imposes order upon an externalised and passive “nature.” Instead, this project positions itself within contemporary ecological and post-human discourses that understand humans, environments, and technologies as mutually constituted. Architecture is reconsidered not as a tool of domination, but as a mediating practice embedded within complex ecological systems.

## MOVING BEYOND LINEAR THINKING

We need to move away from linear thinking and see architecture not as something static, finished, and immovable, but as a constant modulation and fluid structure, being adaptable and evolving over time. How do we deal with this?

## LAYERING AS SPATIO-ECOLOGICAL STRATEGY

Layering is introduced as a central organisational principle that draws from ecological models, particularly food forests. In contrast to singular, hierarchical structures, layered systems accommodate multiple functions, species, and temporal rhythms within a shared spatial framework. Through this vertical form of coexistence, new dimensions are opened up and thus a more diverse and resilient system can be created.

## OPEN-ENDED ASSEMBLY AND INTERDETERMINACY

his research proposes open-ended assembly as a methodological response to ecological uncertainty. Instead of designing closed, deterministic systems, architectural elements are conceived as adaptable components capable of reinterpretation and reconfiguration over time.

Such indeterminacy allows architecture to accommodate changing uses, environmental conditions, and social practices. Multiple interpretations are not considered design failures but indicators of resilience and inclusivity.

## MULTISPECIES HABITAT

The distinction between architecture and habitat is deliberately destabilised. By incorporating ecological processes such as growth, decay, nesting, and succession, architecture is redefined as a multispecies environment rather than an exclusively human domain.

Design considerations extend beyond human comfort to include non-human inhabitation, acknowledging that not all forms of occupation are visible, controllable, or economically productive. This perspective challenges anthropocentric performance criteria and expands architectural responsibility.

To what extent are we allowed to modulate nature to create comfort for ourselves? How much do we take?

# THEORETICAL BACKGROUND

MAKE KIN/ NOT BABIES

## POST-HUMAN LANDSCAPE / POSITION

Posthuman discourse argues with one of the weaving flaws of the system, which it argues is the root of many problems, namely the decentralising of the human. Architecture is understood as operating within a network of human and other-than-human actors, including plants, animals, microorganisms, materials, and climatic forces. Within this framework, “nature” is not treated as a stable or external category, but as a dynamic condition produced through ongoing interactions. Architecture thus becomes one agent among many, participating in ecological processes rather than attempting to control them.

## RECIPROCITY AND KINSHIP

Some literature moves even beyond the specific stance of posthumanism most commonly found in anthropological literature. Robin Wall Kimmerer, in her book, beautifully introduces us to the concept of reciprocity through a critique of our economy and language model. “The currency of an economy is not money. The currency of those gift economies is gratitude. And there’s trust that when you have more than you need, you will share it with me because we have this currency of a reciprocal relationship. That’s how the natural world works. While Donna Haraway, in *Staying with the Trouble*, argues for string figure games with companion species, in a constant becoming with, without invoking posthumanism. Both ecofeminist writers, in their own respect, engage with radical thought through both physical immersive and conceptual academic engagement with indigenous practices. Reframing human relationships, living together, as an act of cohabitation, acknowledging long-term obligations between humans, non-humans, and the land.

## RHIZOMATIC (SPACE)

Spatial organisation within the project follows rhizomatic principles, favouring networks over hierarchies. Circulation and access are distributed rather than centralised, enabling multiple entry points and patterns of use.

This non-linear spatial logic reflects ecological systems in which resilience emerges from connectivity and redundancy rather than rigid order. Architecturally, it supports informal appropriation and evolving social practices.

## A POROUS MONUMENT

Porosity functions both for nature and for social intrusion. Materially, porous structures allow for plant growth, symbiosis, and decay. Socially, porosity enables informal use, participation, and collective maintenance. Thus, the building should, in a way, reflect our human body, from the understanding not as a single entity but rather as a holobiont, from many different organisms working together.

The structure should encourage intrigue or curiosity. Show activities being carried out, parts of the building, but also open activities, gardening days, open ateliers, land arts, dinners, etc.

# THEORETICAL BACKGROUND

## COLONIAL COMPLEXITIES

### COLONIAL PARADOXES

“Ik was al veel idealistische stadsjongens tegengekomen met wilde plannen om op een heel andere manier te gaan boeren. Dat eindigde meestal in onkruid en frustratie.” - Mac van Dinther on Wouter van Eck

This quote is an example of how often urbanized thought is being imposed on the rural landscape and way of working. Most interest in food forests is from non-agrarian practitioners and stakeholders on an agrarian landscape. (Paul de Graaf Phd.)

Also rural or agrarian land-use can be viewed as colonizing land, using it for our own food production. Colonization can come in many different forms, not being singled out by cultural colonization, but also imposing structures on the land. Rural on the land. Colonizing ‘nature’ with monocultures drives away biodiversity and degrades the land.

It also lacks in the sense of designing for a multi-species habitat since the landscape is still being viewed as needing to be productive from an anthropocentric view.

But what does it mean to be critical?

After his first visit, food critic Mac van Dinther, calls Ketelbroek an epiphany. Is this new form of agriculture an optimistic escape from the dreadful way we cultivate our land? Maybe not to feed the whole world, but at least come a long way?

A food forest is an ideology but it is NOT IDEAL.

It is a form of balance between food production and biodiversity increase, trying to achieve a flourishing, productive foodscape.

### SUCCESSION / WORKING WITH NATURE INSTEAD OF AGAINST IT

Ecological succession demonstrates that landscapes naturally tend toward increased complexity. Monoculture is a constant fight against the natural process of succession, while if we work WITH nature instead of AGAINST it, we can reduce or eliminate the use of pesticides and external inputs.

### MATERIALITY AND ENGAGEMENT

The tangible relationship between food and architecture can be found, not directly, but through the abstraction of the interactions we engage in in both practices, leading to the earth and soil. Through material discourse, a constant negotiation with these complex systems. And through the act of eating, what’s on your plate? Where did it come from? Seeing both practices as interactions or interfaces through which we engage and interact with the earth.

Both extractivist though essential practices, cooking and architecture, feel elemental.

To what extent are we allowed to modulate materials/ ingredients to satisfy ourselves? What is the threshold of a material’s soul?

Drawing on the work of Martin Heidegger, particularly his reflections on craft and engagement, architecture is framed as a form of situated knowledge. The act of making becomes a mode of understanding that emerges through interaction with materials rather than abstract representation.

# THEORETICAL BACKGROUND

ENGAGING INTERFAC

## THE PLOW / THE PROBLEM RUNS DEEP

For centuries now, the plow left my skin devoured.  
It has shaved me and left my skin bare, only to turn it inside out  
Fragmenting soil networks, hampering the possibility of growth.  
This is not a story of numbers but of growth, and of complex ecosystems.  
ungraspably complexity.  
Before trying to grasp it, we need to accept that we will never fully understand.  
We are mere surface scratchers

We are constantly entangled in complex ecosystems. It sometimes feels we cannot get a full grasp on them at all; always on the frontiers of research, new species, or mutual relationships or interdependencies are uncovered. Accepting the constant dynamic, fluid process of knowing and unknowing, how do we design for systems that we will not fully understand? Without imposing ourselves and leaving porous gaps for agency/nature as an actor in the design practice?

I eat my food, where is it from? I have no clue, get it from the grocery store.

I eat my meat, dairy, vegetables, oils, fruit, and grains, all from the land. Don't you see? governing body.

My meat requires water, corn, corn requires water, water, and land.

The problem, however, runs deeper, dig Lazarus DIG. one shovel after another. feverishly digging to the root of the problem, until I realize the problem is the roots, Rich soil, the first time I held it in my hands, pulsating almost. We as humans are blind as well as deaf, our nose is noting and our taste buds...

Our nose can pick up the smell of soil starting from 8ppb of good soil. Isn't that crazy?

The interface reveals itself upon realization and always leaves the aware with a choice.

Where did all the flowers go?

Where did all of a sudden all the tools come from?

a shed? something more? something less?

How many people do you need to maintain this land?

8.5ha of productive land. The lazy farmers dream. No right?

What tools do we need to maintain this land?

Where do we keep these tools?

And still it's not about what we build, but how we build it.

I find myself in a forest.

I need shelter,

but where does it come from?

A tent?

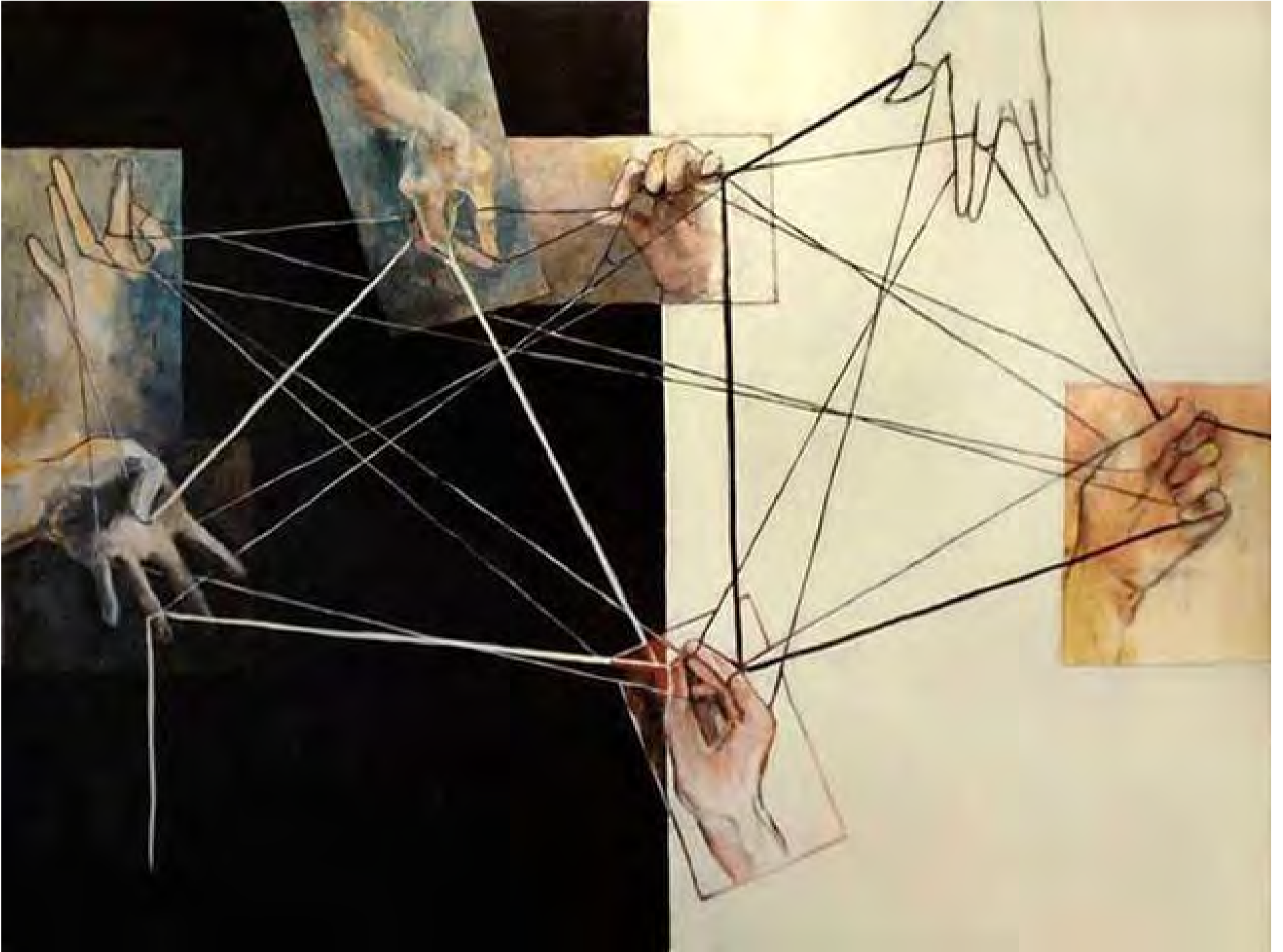
A pioneer hut?

Wood? Chips?

Hemp? Flax?

Why are birches pioneer species?

# PLAYING STRING FIGURES WITH COMPANION SPECIES



## THE HUMAN AS HOLOBIONT, TOWARDS A MORE BIOTIC ARCHI- TECTURE

“To think about shelter, we have to think about the microorganisms that invented interior space more than four billion years ago - and in so doing eventually made humans possible.” This is a quote from Beatriz Colomina and Mark Wigley, who, in March 2026, hosted a lecture in a lecture series in the Berlage room at TU Delft. Their theory draws upon the ‘recent’ understanding that the human body can be seen as a symbiosis of a multiplicity of bacteria, viruses, and other microorganisms, which constitute our body as suspended within this network. Thus, placing this symbiotic system at the center of human-centered thought, and thus constituting a paradigm shift in thinking about the human.

Our bodies are merely suspended. This, and in my opinion, other thoughts from different professions like social studies, anthropology, philosophy, and (micro-)biology are being incorporated into architecture more and more. Colomina and Wigley make a charming, intriguing, and dynamic duo, interweaving the theory of the holobiont and architecture as one of the main drivers of modernism, and its influence on the decrease of our gut health.

To combat this, a slight nudge is being made into creating a more biotic architecture, ex-posing our bodies and children more to a variety of bacteria, thus increasing their resistance.

# MYCORRHIZAE



Subconsciously, movements like this, together with New Materialism, and post-humanism, more-than-human species relations, and Haraway's argued shift from Anthropocene towards Capitalocene (or Cthulucene) are the theoretical framework that holds up this architectural project, and should be able to defend it in academic worlds.

of creating, give back to other species? the small plants, the living, the giant, more-than-human. the ones that have far surpassed us, outlived. the ones we do not consider lively, like the earth and the sun. the water. rocks and soil.

// jillis

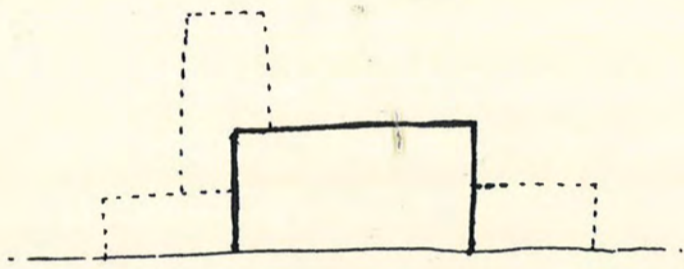
Playing string figures is about the entities holding the strings, as well as the figure that is created, which is rich in meaning. In architecture, this translates to different modules, relationships, and influences. If you tweak one, the other changes, and if a location shifts, so do the routes, and thus the experience of place.

That is why we have to be tactful of the composition of the whole, the assemblage.

Routs and routes, fertilizing worlds, the food-forest-creating architecture-making system is a multispecies platform: the roots, the layers, the habitat, and the mammals. benefiting from the abundant giving nature. Can we, in our process

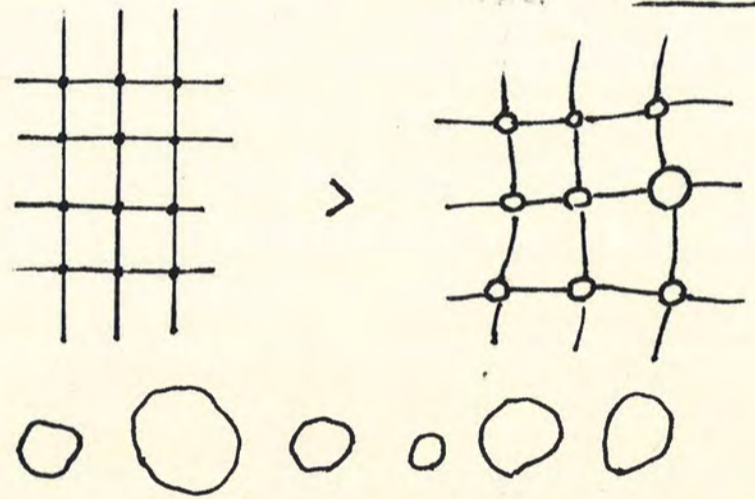
## BUILDING THAT GROWS.

/MOVING AWAY FROM WEAR THINKING.



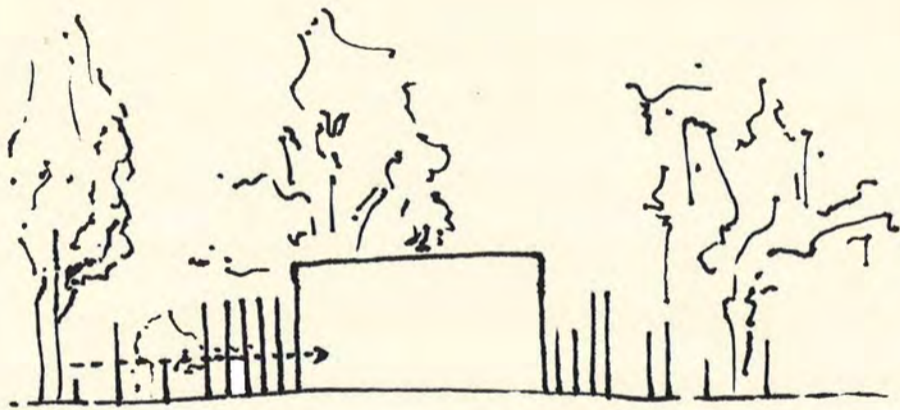
## DESIGNING WITH NATURE

EMBRACING IRREGULARITIES...



## MONUMENT AND POROUS STRUCTURE

OVERDIMENSIONS, INDETERMINANCES AND INTRUSION.

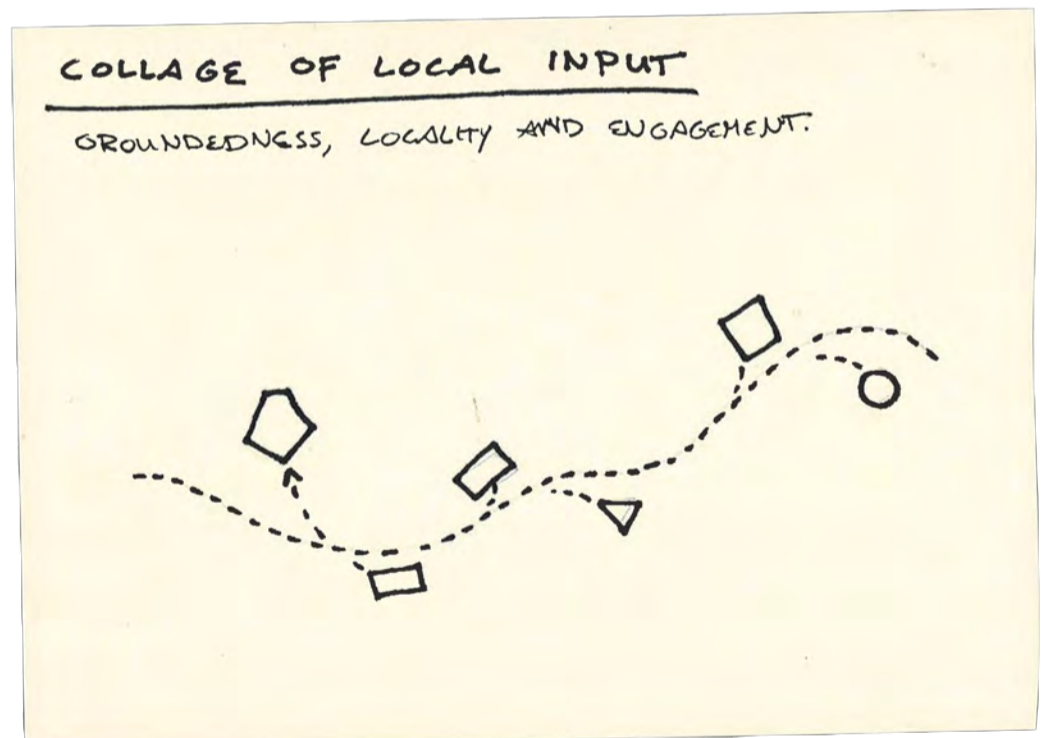
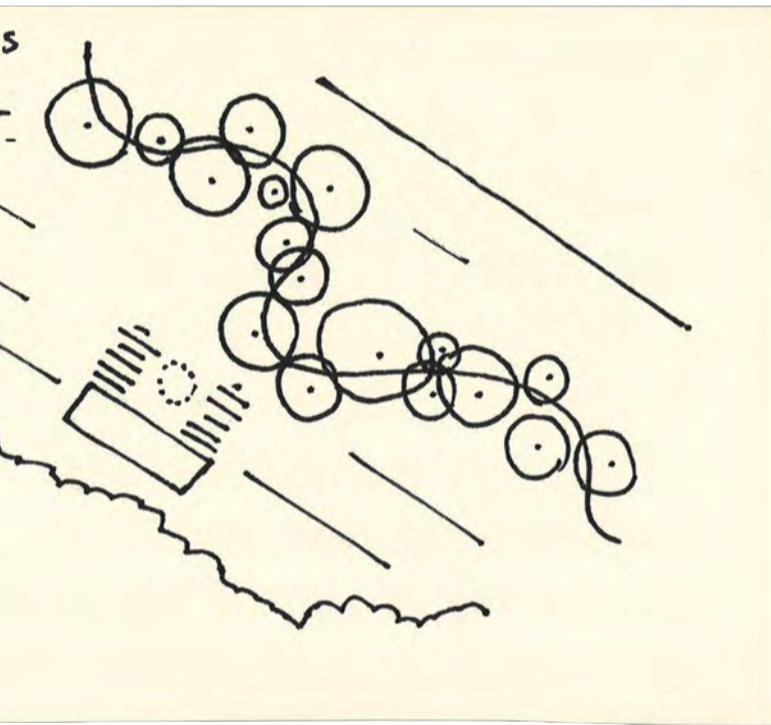


## MULTISPECIE HABITAT

RADICAL BIO DIVERSITY



# PRINCIPLES



# FRAMING

ORDERING 7

	LITERATURE WADDEN	LITERATURE VELUWE	L WE'
<b>FOOD</b> INCREASING AWARENESS OF RELATIONSHIP WITH CHAIN	ARMHUIS	PLANKEN KAMER    WAMBUIS/BLAUWE	MORE TEM
<b>EXPERIENTIAL</b> MAKE PEOPLE EXPERIENCE PRODUCTION AND BIODIVERSITY	ELONGATED STRETCH	GROVE DEN	RAIN B
<b>PRODUCTION</b> MAKE BIG CHANGE WITHOUT CHANGING PERCEPTION OR AWARENESS	NORTH SEA INCLUDED PRO- DUCTION	SANDY SOILS	SHORT
<b>COMMUNITY BASED</b> LEAD TO HEALTHIER WAYS OF LIVING-TOGETHER	TOURIST INVOLVEMENT? WORKSHOPS	INTENSIVE WORKSHOPS	INTENS BASED

# G MATRIX

THE CHAOS

LITERATURE COUNTRYSIDE RURALLAND	LOCAL CONTEXT RESEARCH FARMLAND	LOCAL CONTEXT RESEARCH URBAN INTERESTING POSITION AND QUESTIONS ABOUT DICHOTOMIES
LAYERS TO FOREST SYS-	REGENERATION, DIFFERENT CULTIVATION? ALLEY CROP- PING	REALLY SHORT CHAIN - RESTAU- RANT SUPPLY
ROOTS, PATHS	FARMHOUSE	PARK
CHAIN TO RANDSTAD	WIDE VARIETY	PLUKTUIN
SUPPORTIVE RELATIONSHIP MODEL	COMMUNITY WORK-LIVING	LOTS OF IT

# DESIGN

VOEDSELBOS SCHIJNDEL, 20HA PRODUCTIEF VOEDSELBOS

## BODEMKAART VAN NEDERLAND 1:250 000

Ministerie VROM  
DOCUMENTATIE en  
BIBLIOTHEEK  
Boerhaavelaan 5  
Postbus 3001  
2700 KA ZOETERMEER



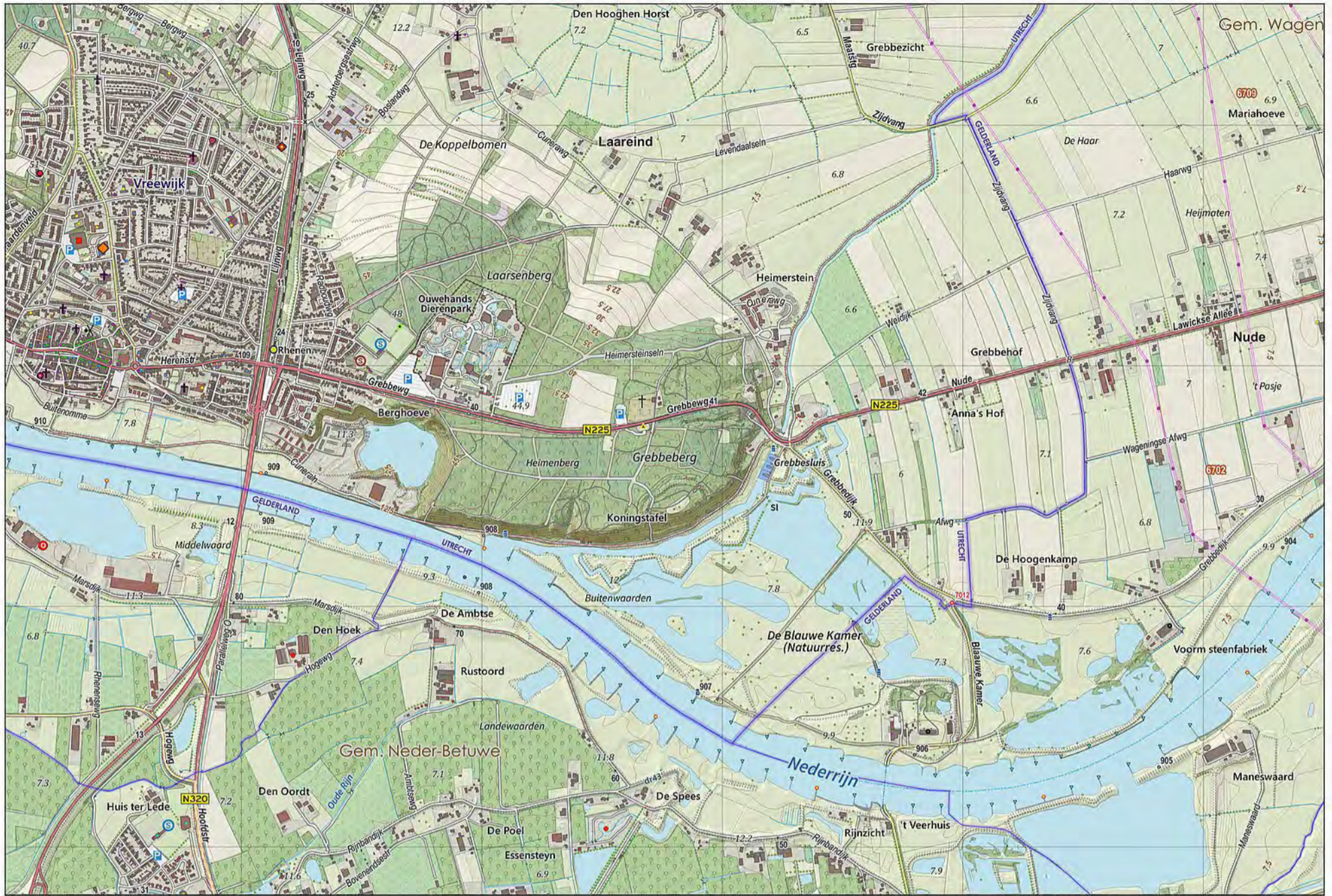


Bodemkaart van Nederland, kaartenkamer 2026, faculty of architecture TU Delft.

# UTRECHTSE HEUVELRUG

ALLOCATION MAP GREBBENBERG & LAARSENBERG

## GREBBEBERG en DE BLAUWE KAMER



Open topo map of Grebbeberg and Blauwe kamer.

This map shows some basic information of the site of Laarsenberg, Grebbeberg and Blauwe kamer. Three very distinct typologies. Blauwe kamer being a wetland, Grebbeberg the neighbouring slope, facing south, hosting a myriad of different trees, and the way more gentle slope, facing north, called Laarsenberg. Blauwe kamer is nature reserve. Grebbeberg is a palimpsest hillside, rich with being a defensive monster during the second world war, of which traces are still richly scattered through its terrain, and Laarsenberg, which has a focus on the northern edge of the forest, transitioning to farmland. Looking at this map, using the farmland alongside a forest's edge would suit creating a food forest well. Since the objective of creating a food forest is mimicking a forest's edge, why not use the landscape that is already there? A forest adjacent to farmland.

# MOSAIC UTRECHTSE HEUVELRUG

ALLOCATION MAP GREBBENBERG & LAARSENBERG

## Bijlage 7 Beheerkaart Grebbeberg en Laarsenberg



- Bos. Dunnen waar nodig.
- Bos. Bij dunningen rekening houden met oude eikenstoven.
- Oude eikenknotsen, hoog afgezet hakhout. Vrijstellen.
- Eikenspaartelgen. Dunnen gericht op structuurvergroting, met aanplant van hazelaar, winterlinde en zoete kers.
- Eikenhakhout. Periodiek en gefaseerd afzetten, eens per 10-12 jaar. Inboeten waar nodig.
- Bos. Bij dunningen rekening houden met oudbosflora. Soorten met basisch strooisel (o.a. gewone esdoorn) bevoordelen.
- Hellingbos Grebbeberg. Exoten verwijderen. Onderste strook met een variabele breedte van ca. 3-15m, als hakhout beheren: periodiek en gefaseerd eens per 10-15 jaar afzetten.
- Hellingbos gedomineerd door robinia. Omvormen. Aanplant inheems loofhout.
- Bos. Douglas en Amerikaanse eik verwijderen.
- Bos gedomineerd door uitheemse soorten, omvormen.
- Bos van uitheems naaldbout, geleidelijk omvormen
- Voormalige moestuin, inplanten met winterlinde aangevuld met andere inheemse soorten.
- Oud beukenbos, ongestuurde ontwikkeling.
- Laan. Periodiek gevaarlijk dood hout uit de bomen verwijderen.
- Open bos grenzend aan heideveldje. Op houden door opslag te verwijderen en periodiek te begrazen met een gescheperde schaapskudde.
- Heideveldje. Begrazen met gescheperde schaapskudde of maaien. Kleinschalig plaggen indien nodig en houtige opslag verwijderen.
- Grasland. Jaarlijks maaien en afvoeren. Zomen gefaseerd eens per 2 jaar maaien en afvoeren.
- Hooiland onderlangs de Grebbeberg jaarlijks (augustus) maaien en afvoeren. Onderdeel van de begrazingseenheid. Centrale plein ringwal idem.
- Akker. Wintergraanakkers, afgewisseld met zomergraan en kruidenrijke zomen. Ondiep ploegen, dun zaaien om het jaar licht met ruige stalme bemesten. Zomergraan deels als stoppels, deels ongeogst de winter in.
- Ringwalburg. Centrale plein jaarlijks maaien en afvoeren. Eiken dunner. Verruiging rondom centrale plein tegengaan door periodiek te maaien en af te voeren.
- Voor grazers onbereikbare deel Onderlangs. Struweel periodiek en gefaseerd afzetten, eens per 10-15 jaar.
- Akkers in reguliere pacht.
- Verpacht of verhuurd en bebouwing.
- Parkeerplaats Laarsenberg.

Beheerkaart Grebbeberg en Laarsenberg, Utrechtse heuvelrug 2025.

The 'Utrechtse Heuvelrug Beheerkaart' shows land managed by Utrechtse Heuvelrug, a NGO, "bringing together nature organizations (like Staatsbosbeheer and Natuurmonumenten), governments, and businesses to protect the local environment, heritage, and landscape" (Utrechtse heuvelrug 2026). In this map the allocated uses per plot can be seen and their visions with each one in a short term future. The way they assemble their plots tries to create a combination of forest and rural land-use. They do not have a direct say on urban land-use, and some plots for them are not available

in the municipality of Rhenen. Though looking at this map, they have say on quite some land. Relieving pressure from production needs and already creating more space for nature. Also coordinating these mosaic plots to work together can be achieved by having a central management. Though it is taking land out of the hands of local farmers.

# SURROUNDING LANDSCAPE

ALLOCATION MAP GREBBENBERG & LAARSENBERG

## MOSAIC UTRECHTSE HEUVELRUG

ALLOCATION MAP GREBBENBERG & LAARSENBERG



LAARSENBERG



GREBBEBERG

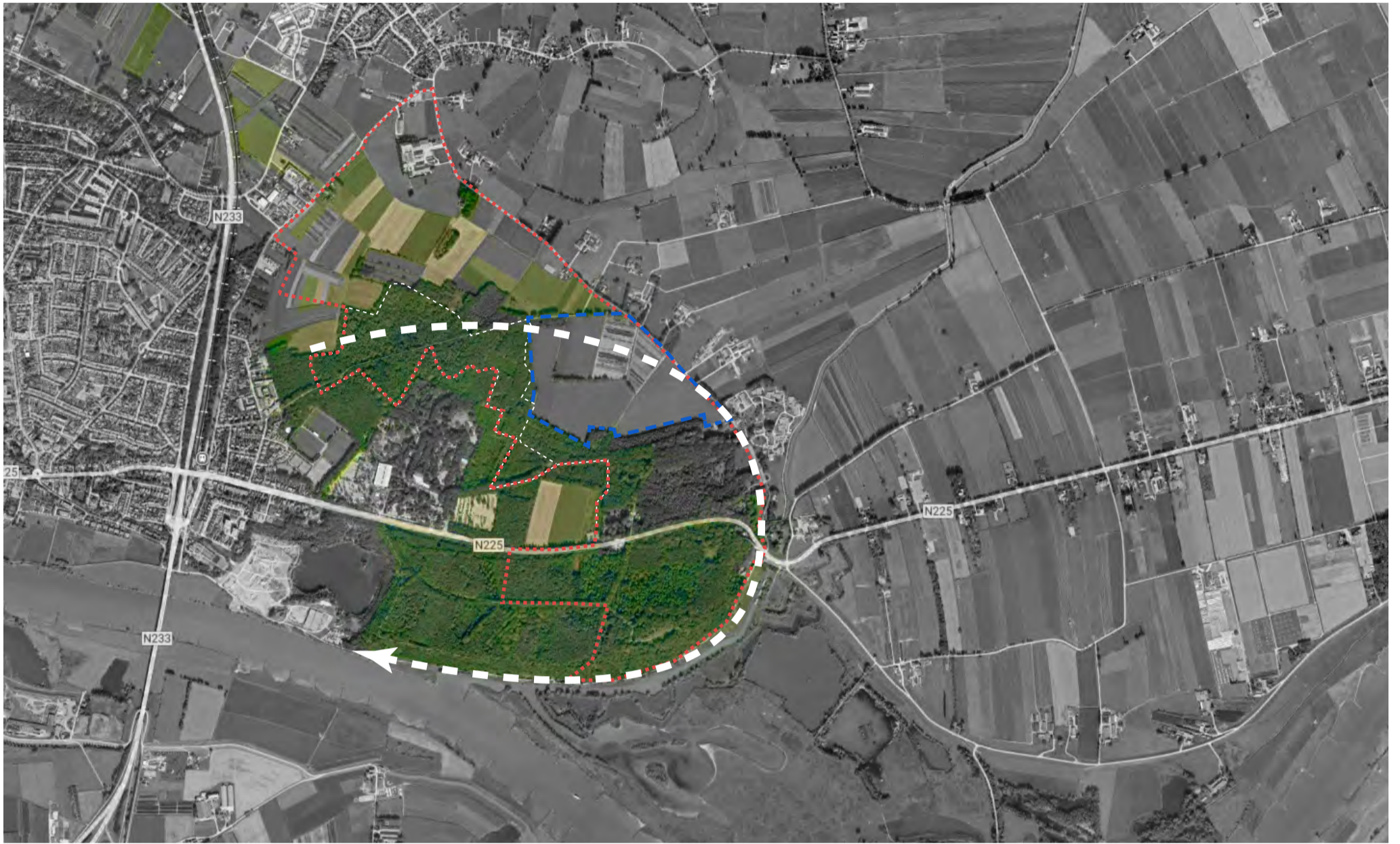


BLAUWE KAMER

*Different landscape types surrounding Laarsenberg. Utrechtse Heuvelrug collage courtesy of artist.*

# LANDSCAPE VISION

ALLOCATION MAP GREBBENBERG & LAARSENBERG



*Landscape vision diagram with chosen plot and implications for Utrechtse heuvelrug and experience of the surrounding landscape. Jillis Hulleman.*

The 'Utrechtse Heuvelrug Beheerkaart' projected onto a black and white satellite image of the surrounding area.

The current advised walking routes all share a starting point, but diverge from the beginning, all going out into different directions.

In my design I want to expand this experiential path by tying together this experience of the Grebbeberg and the Blauwe kamer, which are already part of the Utrechtse Heuvelrug, and connect these experiences in a more sweeping line, connecting all three landscape types. Start in the forest of Laarsenberg, leading you through the forest, opening up onto the sweeping fields of grain. Following this forest's edge, you are being led in again, walking through a wood dryer, spreading its pine scent. When this forest again opens up to fields of wheat weaving in between rows of trees. We can see a farm on the left, a little lower than we are walking, and looking back up the hill to the right, we can see vegetable

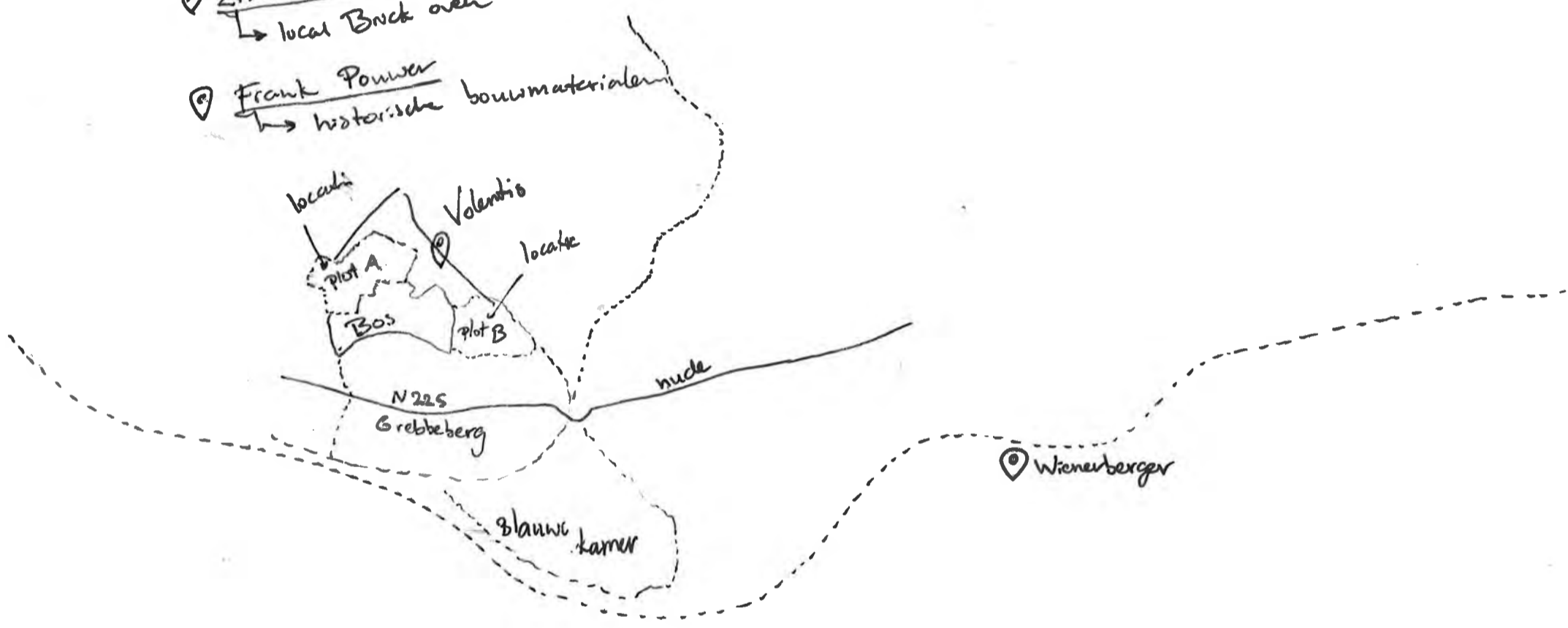
banks and allotment gardens beside a food forest's edge, out of which a wooden platform is poking its head, extending the landscape, a curious looking gesture resembling a tree. While being led further along the path, back into the forest of Grebbeberg, though a crossing with a small restaurant, where you can experience the forest and rich military history of the Grebbeberg, and refuel with a view of the Blauwe kamer, deciding whether or not you are ready to continue a bigger experience, walking through the nature and wild animal reserve that is Blauwe kamer, or continuing the walk along the Grebbeberg, with the sweeping views of Blauwe kamer on the left, instead of fully emerging in the wild nature reserve, continue the walk up the hill of Grebbeberg, along the way bumping into all sorts of WWII landscape interventions.

# SUPPLY CHAIN

ALLOCATION MAP GREBBENBERG & LAARSENBERG

- 📍 Volentis  
↳ Bomen
- 📍 Wienerberger  
↳ Ecobrick
- 📍 Zilver Schoon  
↳ local Brick oven
- 📍 Frank Pouwer  
↳ historische bouwmaterialen

|| Supply CHAIN ||



📍 Volentis

📍 Zilver Schoon

📍 Frank Polder



To situate this project in its context, a survey has been done of surrounding environmental and social conditions that could strengthen its existence. For example, the river Rhine can provide its specific soil type and history, which lends itself superbly for brick fabrication. To have these bricks play a role in the design would be a great mirror and understanding of the landscape. As well as local tree nurseries and re-used building material suppliers.

# CURRENT SITUATION

ALLOCATION MAP GREBBENBERG & LAARSENBERG



*Site visit March '26, Jillis Hulleman.*

This plot right now is not in management by Utrechtse heuvelrug, but will be the starting point of the proposed interventions. At the moment the hills are being alternately being used for ecosystem services, like planting patches of wild flowers and a mixed planting of potatoes with other species, for natural pest control.



Map of location, Google Earth PRO, 2005.



Current land-use on 22ha location of Laarsenberg, Jillis Hulleman.

# MOSAIC UTRECHTSE HEUVELRUG

ALLOCATION MAP GREBBENBERG & LAARSENBERG

bEZ30 - Hoge bruine enkeerdgronden; grof zand

Dikke eerdgronden.

De dikke eerdgronden zijn alle zandgronden met een niet vergraven A1-horizont\*, die dikker is dan 50 cm. Zij worden enkeerdgronden genoemd. Deze gronden komen in vrijwel alle pleistocene\* zandgebieden voor. Verreweg de meeste zijn zeer oude cultuurgronden die door menselijke activiteit zijn ontstaan. Gedurende vele eeuwen is met de mest ook enig zand op het land gebracht, waardoor een geleidelijke ophoging tot stand kwam. Het zand werd met het strooisel in de stal gebracht. Het strooisel bestond uit heideplaggen, grasplaggen, turfstrooisel, bosstrooiselenzand. Afhankelijk van de methode van mest maken, de methode van grondbewerking, het oorspronkelijke reliëf, de duur van de ophoging en het doel ervan, zijn minerale dekken ontstaan van zeer verschillende dikte. De ouderdom van de dekken is zeer verschillend. Uitgegaan van een ophoging van gemiddeld 1 mm per jaarkom je voor veel Gelderse oude bouwlanden tot een ouderdom van ca. 800 jaar komt. Er zijn verschillende onderzoeken gedaan naar de ouderdom. Sommigen gaan uit van een eerste aanleg vanaf de vierde eeuw.

Opdeling.



Enkeerdgronden zijn op zeer verschillende bodems aangelegd. De voornaamste zijn moderpodzolgronden, humuspodzolgronden en zwarte beekerdgronden. Het vermoeden bestaat dat de moderpodzolgronden in het algemeen eerder zijn ontgonnen dan de humuspodzolgronden en de zwarte beekerdgronden. De aard van de dikke A1-horizont kan zeer verschillen. In sommige dekken treft men steeds stukjes houtskool, baksteen en gebrande leem aan. Het gehalte aan organische stof kan sterk uiteenlopen. Zijn de enkeerdgronden aangelegd op grof zand, dan is toch vaak het dek fijnzandiger dan de ondergrond. Vermoedelijk zijn veel plaggen gestoken in dekzandgebieden in de omgeving. De kleur varieert van bruin tot zwart. Ook vindt men bruin op zwarte en zwart op bruine enkeerdgronden.

De enkeerdgronden worden onderverdeeld naar

de diepteligging van het grondwater (lage enkeerdgronden en hoge enkeerdgronden)

de kleur (bruin-zwart)

de grofheid van het zand (fijn-grof)

het leemgehalte (leemarm en zwak lemig-lemig).

Er worden dus een groot aantal soorten onderscheiden.

#### HOGЕ ENKEERDGRONDEN.

Dit zijn enkeerdgronden met de grondwatertrappen V, VI of VII. Zij worden naar de kleur van het humeuze dek onderverdeeld in bruine en zwarte.

Hoge bruine enkeerdgronden zijn in zekere mate gebonden aan gebieden, waar men bemesting met grasplaggen heeft toegepast. Aangenomen wordt dat ook bij gebruik van bossstrooisel wel bruine enkeerdgronden konden ontstaan. In de regel is het humusgehalte duidelijk lager dan in de zwarte enkeerdgronden; het lutum\*gehalte is meestal hoger, vooral als de grasplaggen gestoken konden worden in beekdalen. Er komen veel overgangen van bruine naar zwarte enkeerdgronden voor. Alleen de duidelijk bruine zijn als zodanig onderscheiden. Daartoe moet in het mestdek binnen 25 cm een laag van ten minste 10 cm dikte beginnen met duidelijk andere kleur. De overige enkeerdgronden worden zwart genoemd.

Evenals de hoge bruine enkeerdgronden zijn de hoge zwarte enkeerdgronden ontstaan door bemesting uit potstallen. Verondersteld wordt dat voor de ophoging van deze gronden vooral heideplaggen zijn gebruikt. De hoge enkeerdgronden zijn op kaartblad 32 Oost op een uitzondering na zwart. Zij vormen vaak de grote engcomplexen rondom de dorpen. In laag gelegen gebieden komen zij veel voor op de dekzandruggen.

De enkeerdgronden hebben in het algemeen goede fysische

eigenschappen. De meeste zijn in gebruik als bouwland, maar er komt ook vrij geregeld grasland op voor als de ligging ten opzichte van het grondwater gunstig is.

De hoge enkeerdgronden worden onderverdeeld naar de grofheid van het zand en de lemigheid van de bouwvoor.

bEZ30 - Hoge zwarte enkeerdgronden; grof zand

Deze gronden hebben overwegend een diep zwarte bovengrond die 55 tot 70 cm dik is. Het humus\*gehalte ligt tussen ca. 4% en ca. 6%. In de ondergrond wordt meestal een moderpodzol aangetroffen. Hoewel de eenheid steeds de toevoeging g. . . heeft (grind ondieper dan 40 cm beginnend), is de grindrijkdom van het dek in het algemeen niet groot. Het ligt voor de hand dat men voor strooisel aan grindarme plaggen de voorkeur gaf.

#### BODEMTYPE

bEZ30 - Hoge bruine enkeerdgronden; grof zand

#### GRONDWATERTRAP (VIII):

meer dan 4 meter onder maaiveld.

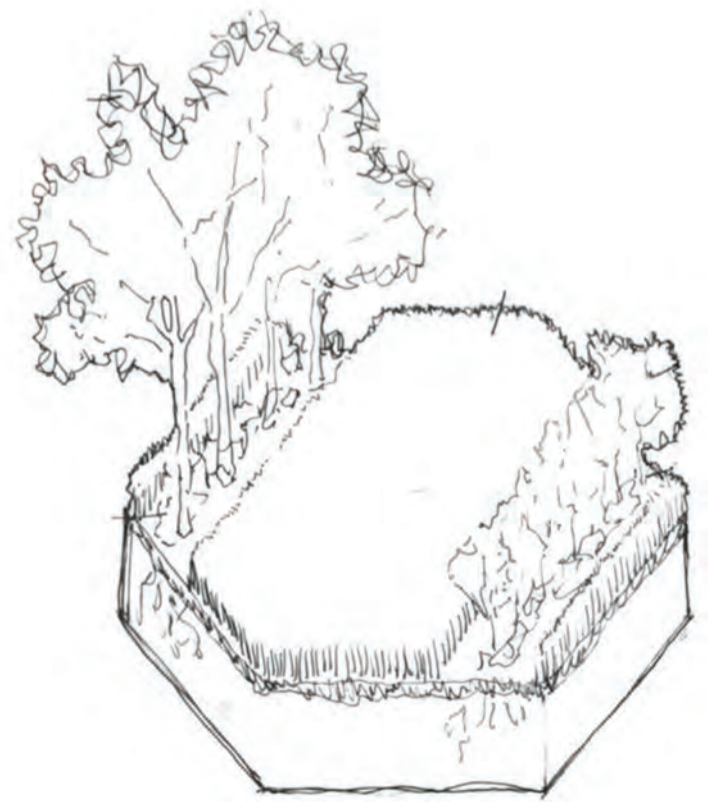
Aflopend van 22 meter onder het maaiveld tot 4 meter onder het maaiveld.

#### OPPERVLAKTE:

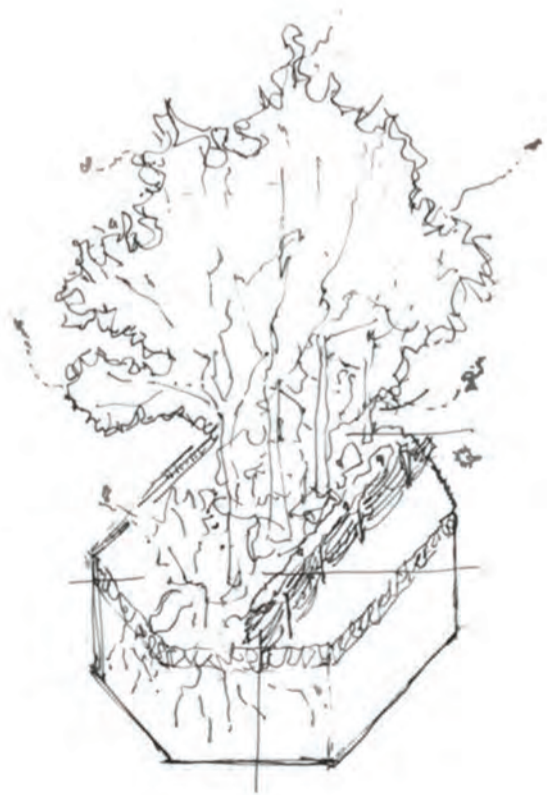
+/- 22ha

# LANDSCAPE PRINCIPLES USED FOR ASSE

ALLOCATION MAP GREBBENBERG & LAARSENBERG



# ASSEMBLING THE SITE



# LANDSCAPE PRINCIPLES USED FOR ASSE

ALLOCATION MAP GREBBENBERG & LAARSENBERG

01 - Native mixed Forest

## APPLIED SYSTEMS

04 - Native hedgerow

850m

Key aspects

Pruning waste wall as habitat  
Linear layered system to serve as wind shelter and habitat for other plant and animal species.  
Enabler

Species (layers)

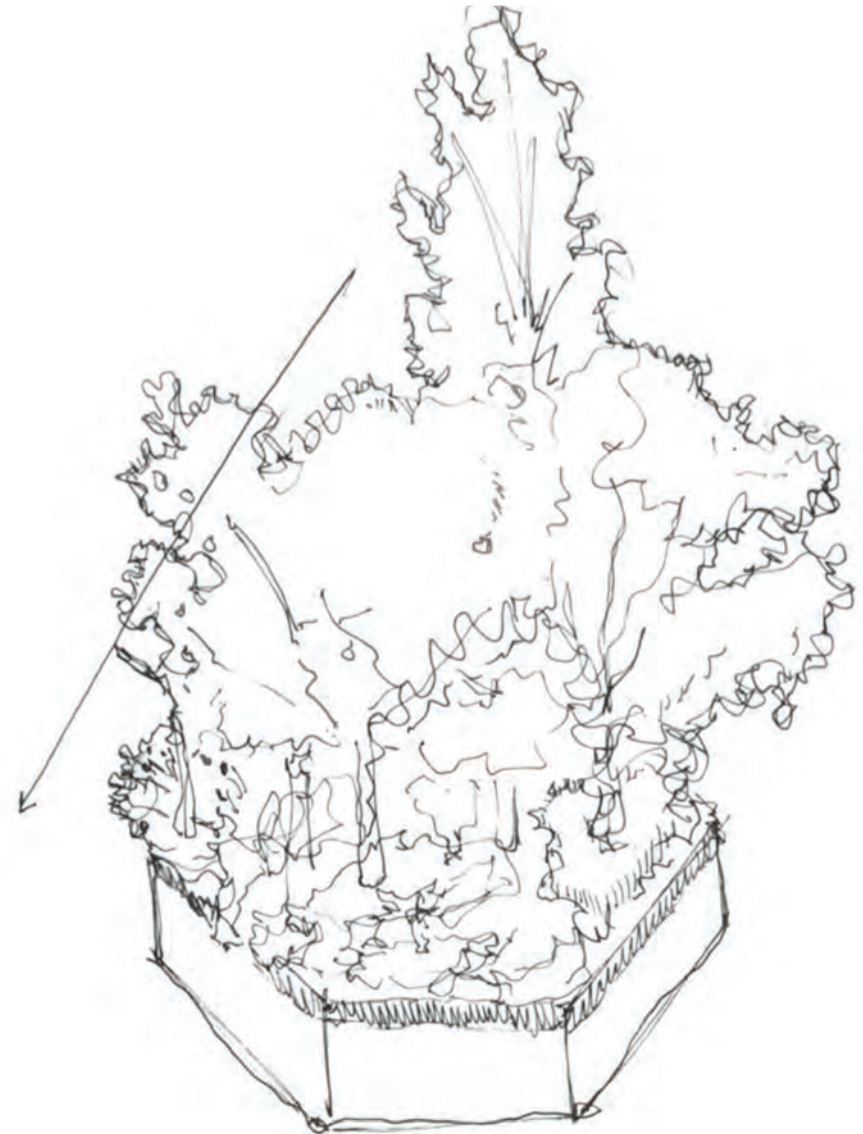
1. Birch
2. Willow
3. Hazel
4. Brambles
5. Buckthorn
6. Nettle
7. Cow parsley
8. Rapeseed

Output

Ecosystem service  
Shelter



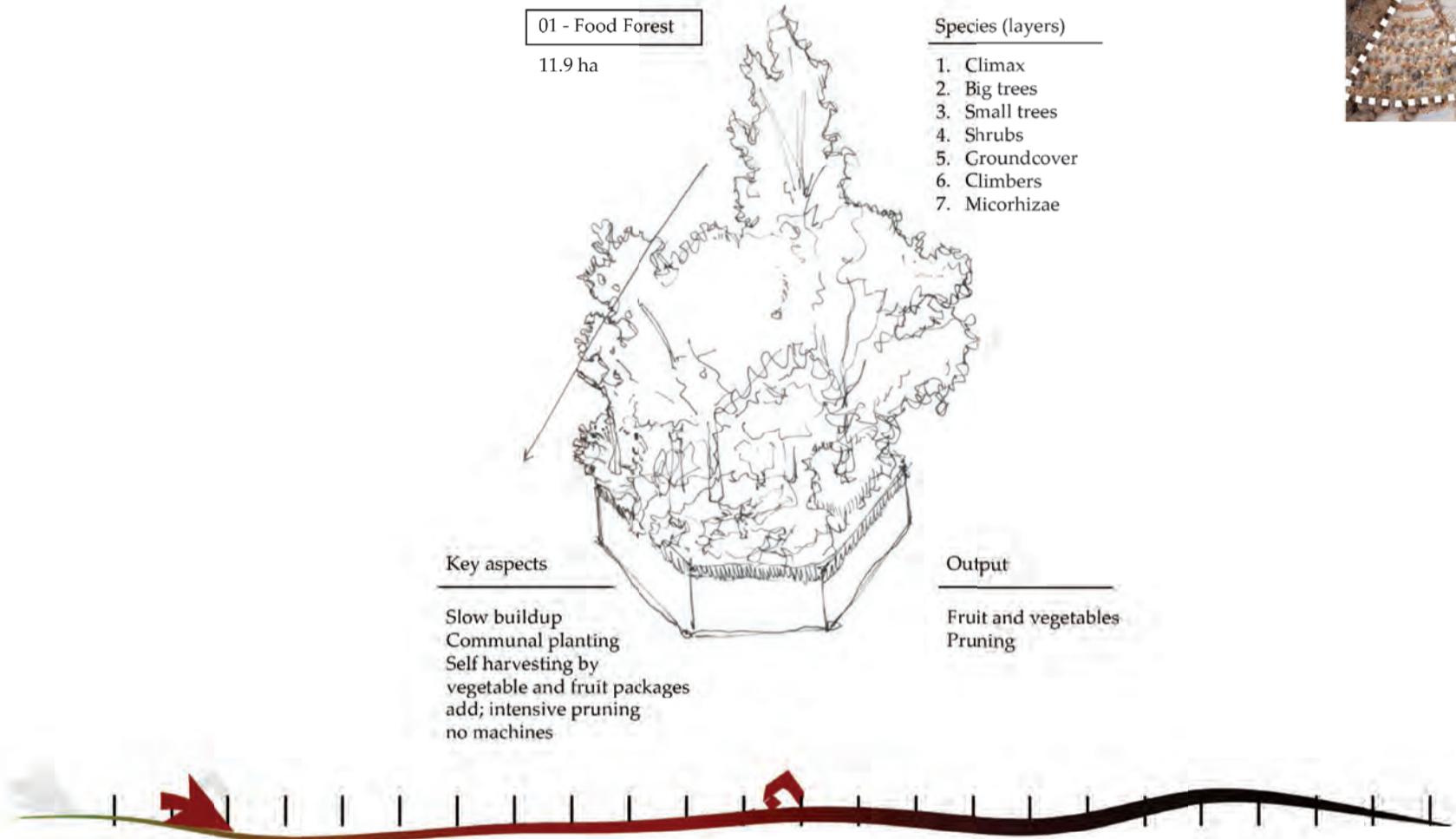
Combination of dicideous and evergreens.  
Not a lot of imported seeds are needed since this system is based on native plantings, and since the site is located next to a mixed forest, most of the plantings can be collected from the neighbouring systems.



# AMBLING THE SITE

02 - Food Forest

## APPLIED SYSTEMS



Combination of dicideous and evergreens.  
Not a lot of imported seeds are needed since this system is based on native plantings, and since the site is located next to a mixed forest, most of the plantings can be collected from the neighbouring systems.

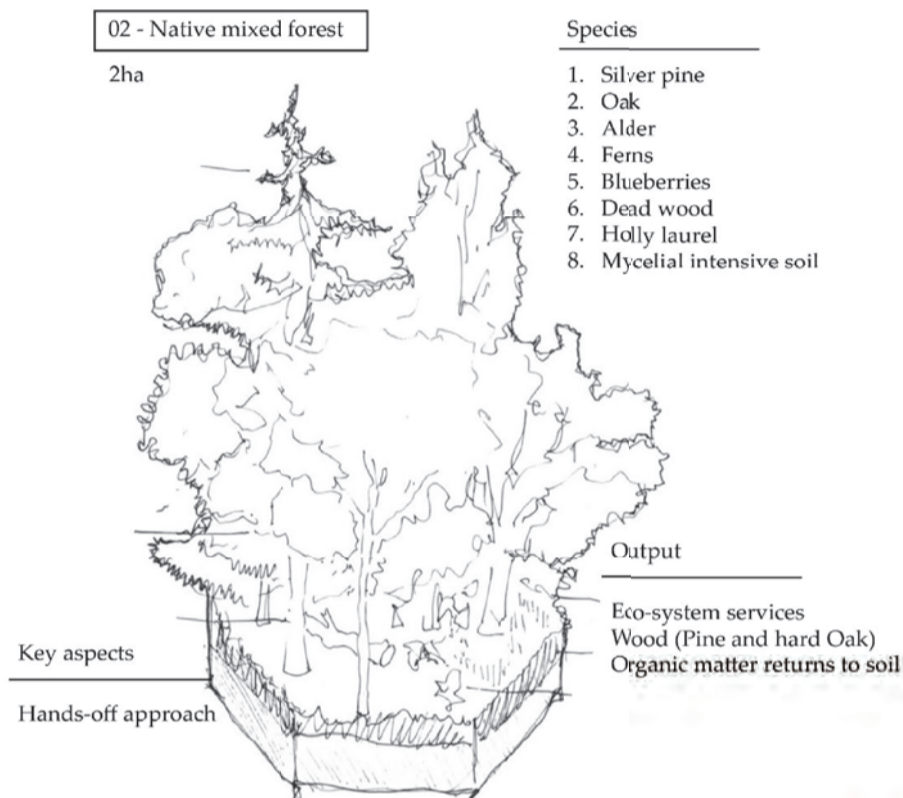


# LANDSCAPE PRINCIPLES USED FOR ASSE

ALLOCATION MAP GREBBENBERG & LAARSENBERG

## 03 - Silvoarable Agroforestry

### APPLIED SYSTEMS



20/55

The biggest part of the stable food and grain production is coming from a system called silvoarable agriculture, a system based on a yearly rotating system of grains, divided into 8 different sections, divided by lines of mixed trees, like oak, apple, sea buckthorn and other herbaceous perennials.

Rotating systems of annuals consists of wintergrains and wildflowers, swapping each year between:

hemp  
flax  
wheat  
barley  
oat  
rye  
spelt  
and buckwheat

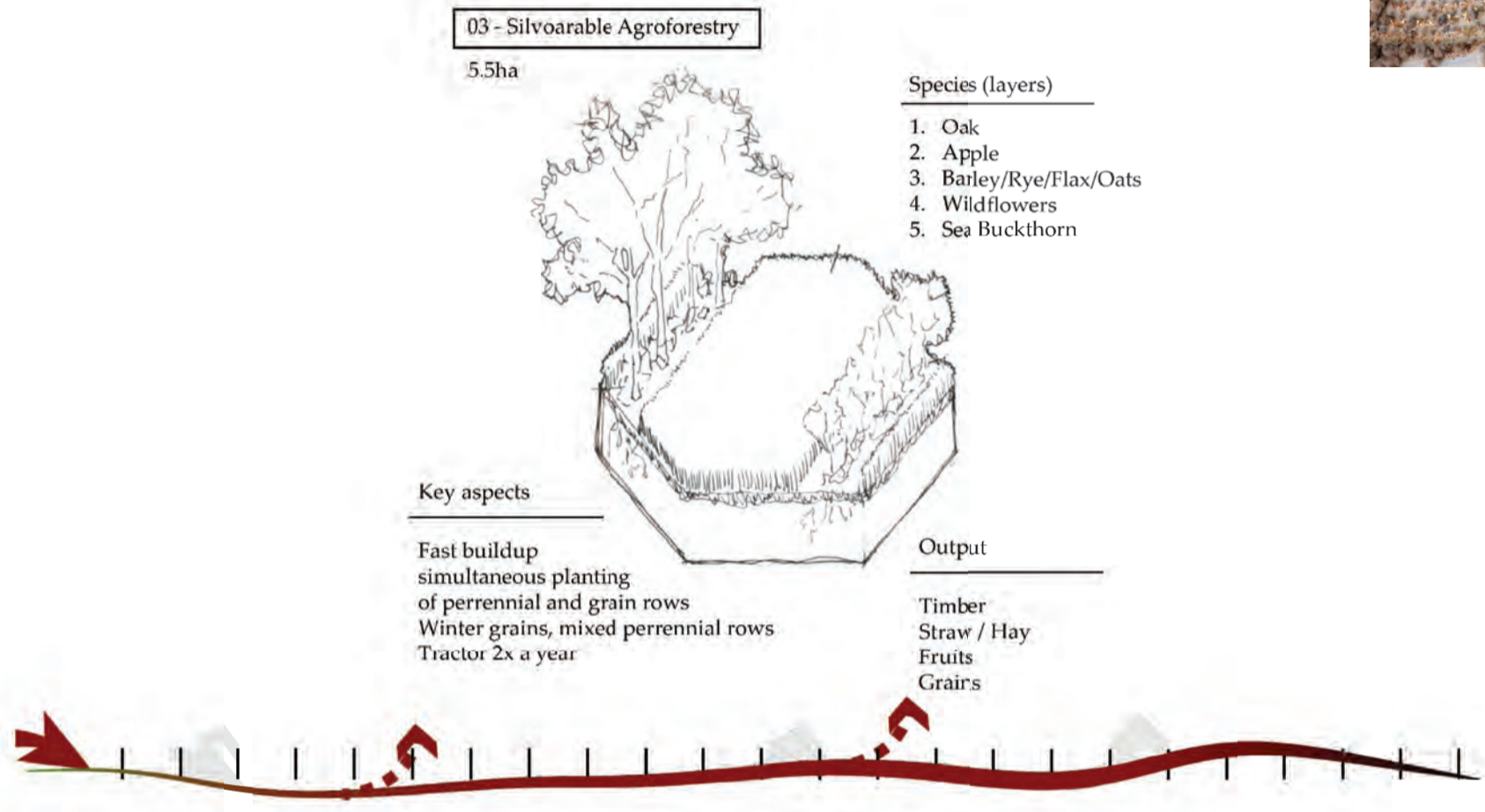
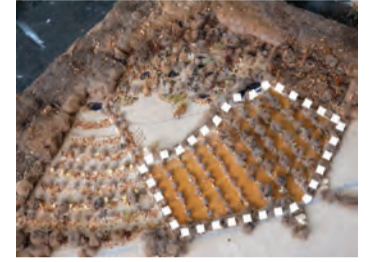
These are sheltered by perennial plantings of the aforementioned: oak etc.



# APPLYING THE SITE

04 - Native Hedgerow

## APPLIED SYSTEMS

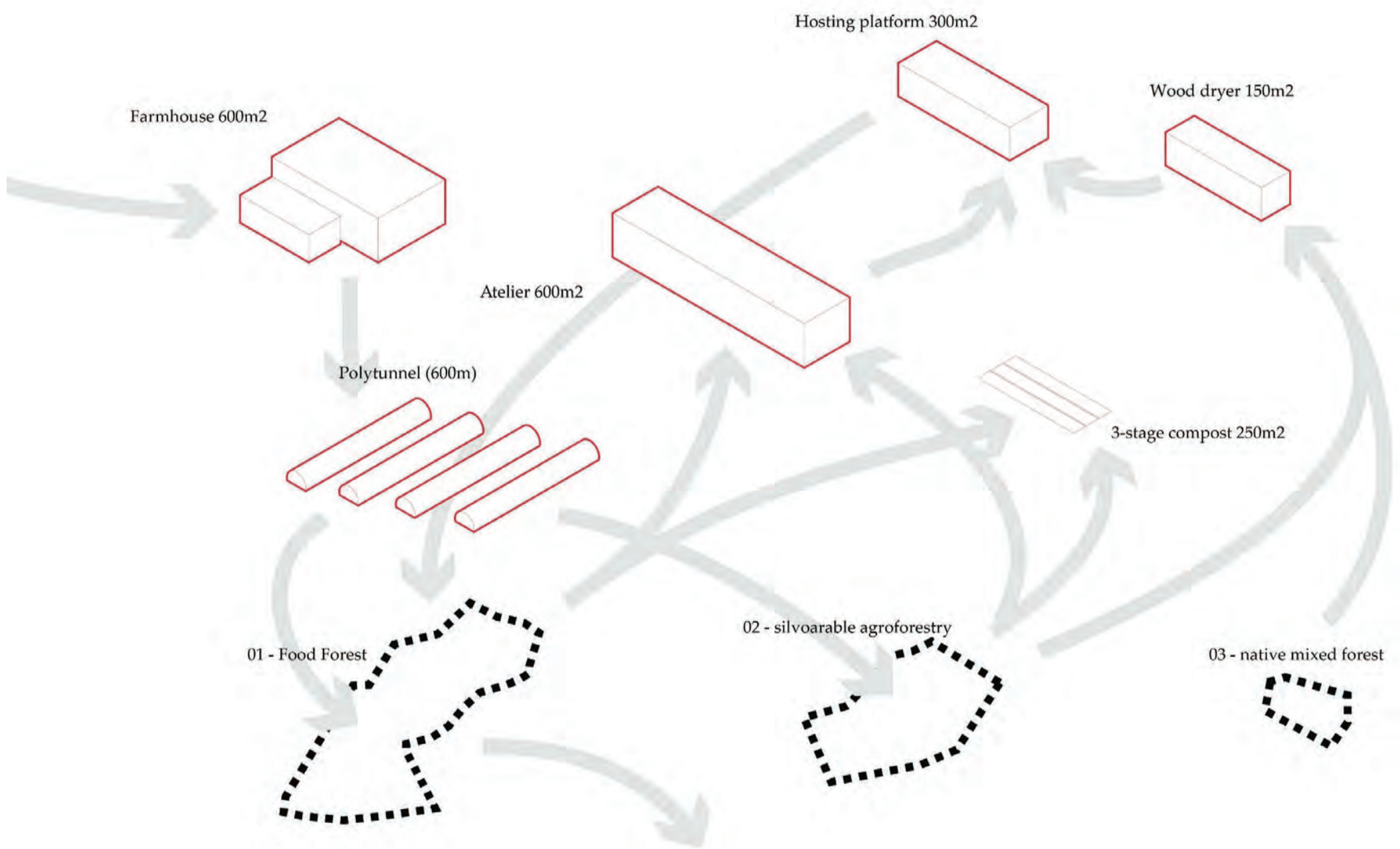


native hedgerow (inheemse houtwal) is a linear system, consisting of a small hill planted with trees and shrubs, continuing in a linear fashion, in this case made up from native species, ensuring fast and strong growth as well as habitat for native species.



# ARCHITECTURAL EVOLUTION

## APPLIED SYSTEMS



# DESIGN PRINCIPLES

## OUTPUTS

### BUILDING MATERIALS:

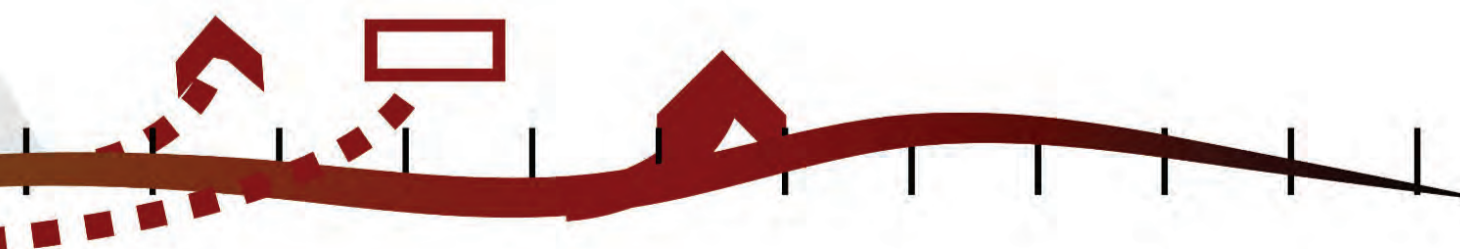
- Oak
- Pine
- Straw bales
- Hemp
- Flax

### FOOD:

- Grains
- Fruit
- Vegetables

## ACTIVITIES

- Planting
- Maintenance
- Pruning
- Harvesting



# LANDSCAPE EVOLUTION

2026 - CURRENT SITUATION



2026

KICKSTARTING PHASE



# DESIGN PRINCIPLES



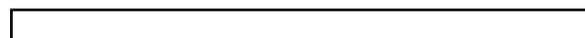
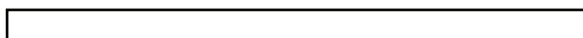
# LANDSCAPE EVOLUTION

2027 - TERRAFORMING



2027

KICKSTARTING PHASE



# DESIGN PRINCIPLES

- 6 CONTAINERS
- A TRACTOR
- A SHOVEL
- NEW PATHS
- WATERBODIES



# LANDSCAPE EVOLUTION

2028 - FIRST PLANTINGS



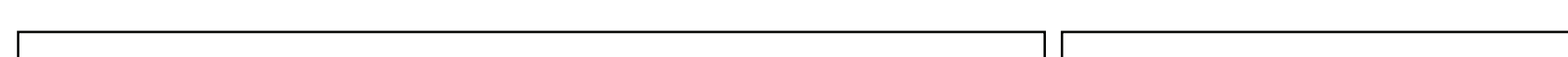
2028

KICKSTARTING PHASE



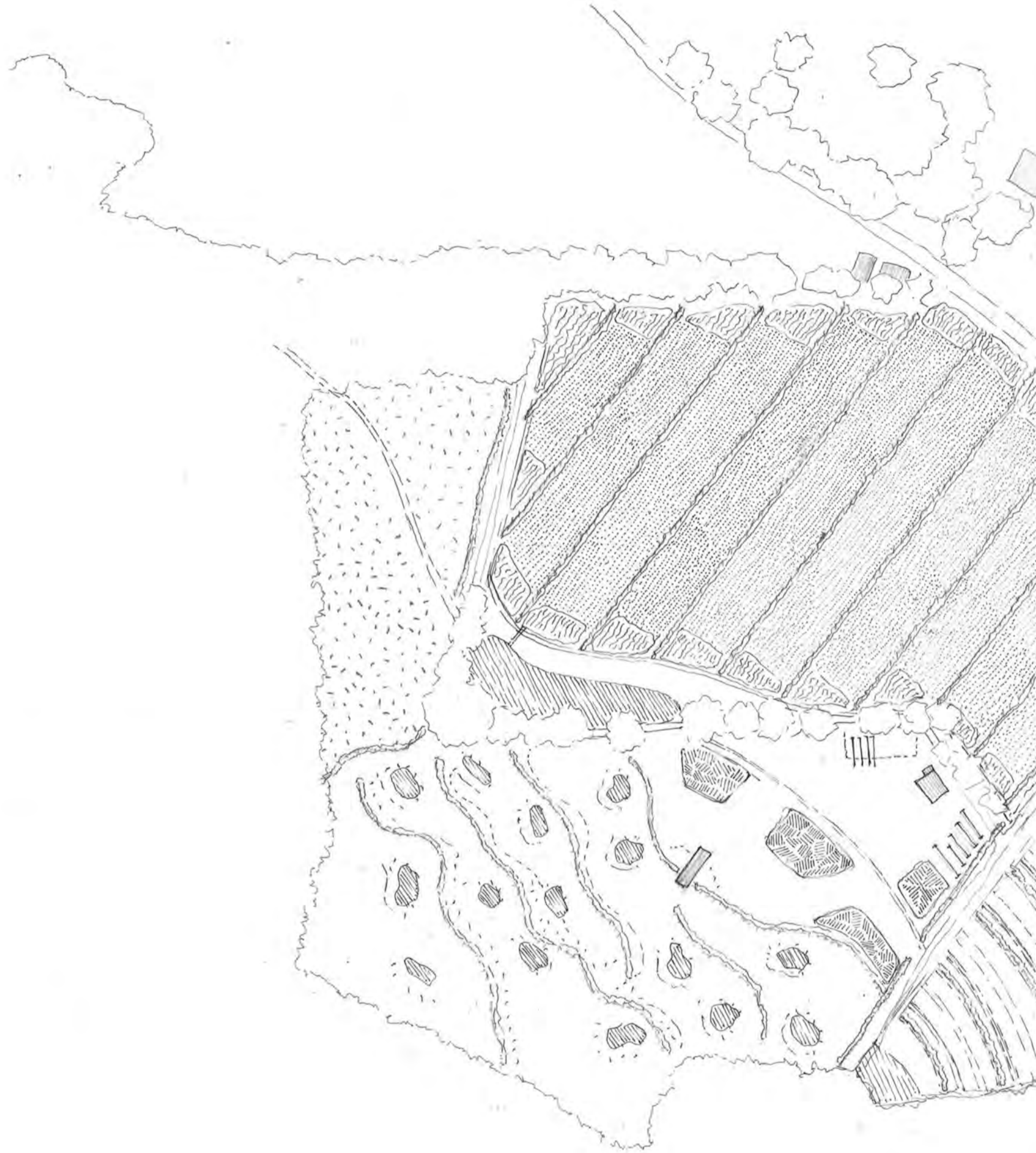
# DESIGN PRINCIPLES

- 6 CONTAINERS
- A TRACTOR
- A SHOVEL
- HEDGEROWS
- MIXED FOREST



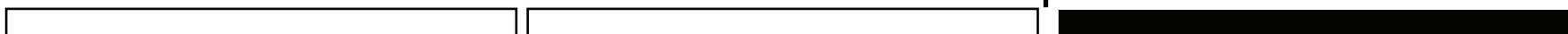
# LANDSCAPE EVOLUTION

2030 - MASS PLANTING



2030

MASS PLANTING



# DESIGN PRINCIPLES

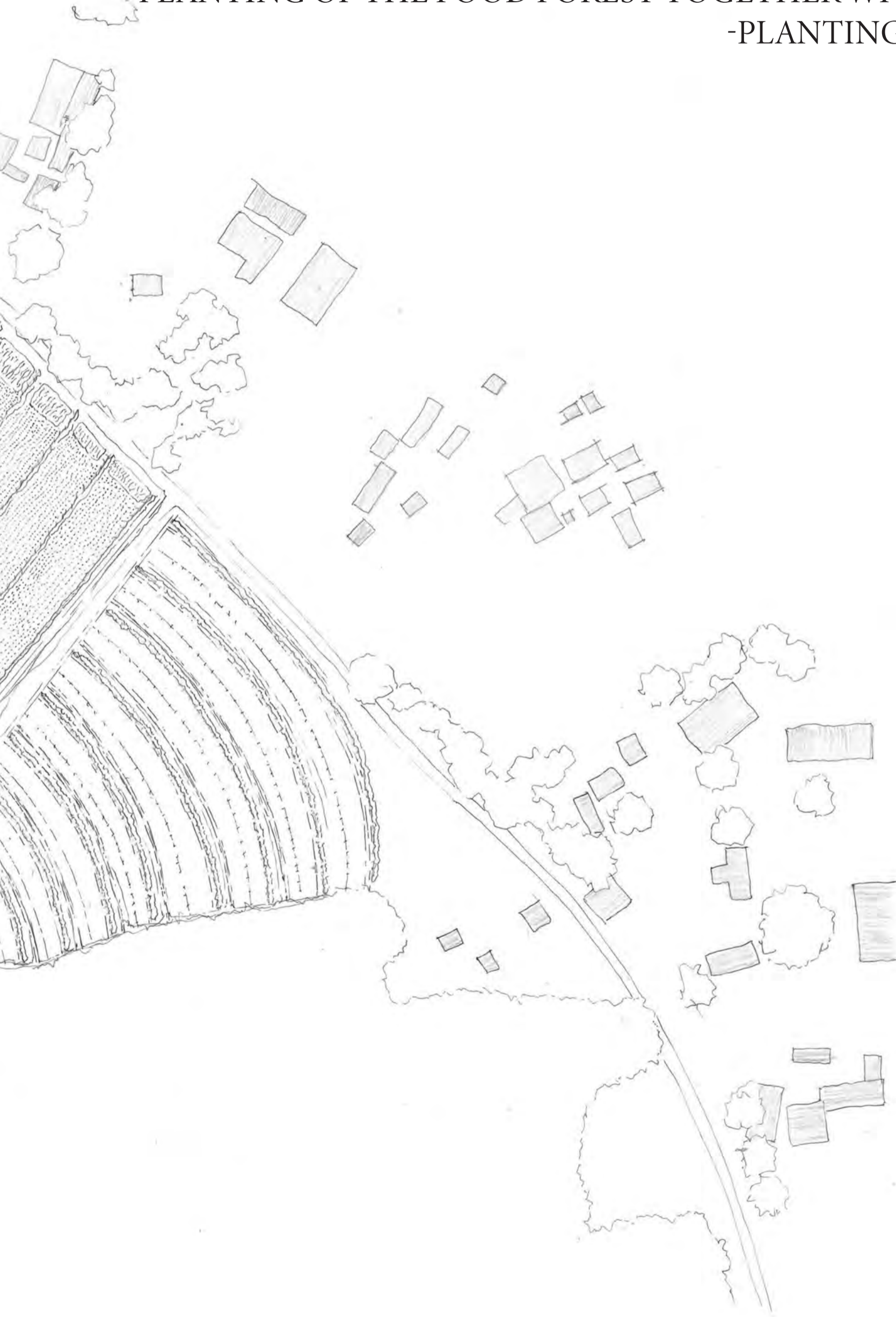
- A FARM (>300M2)

- POLYTUNNEL (>600M)

- FIRST PLATFORM TO HOST VOLUNTEERS

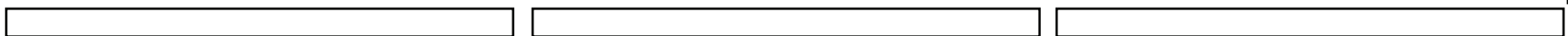
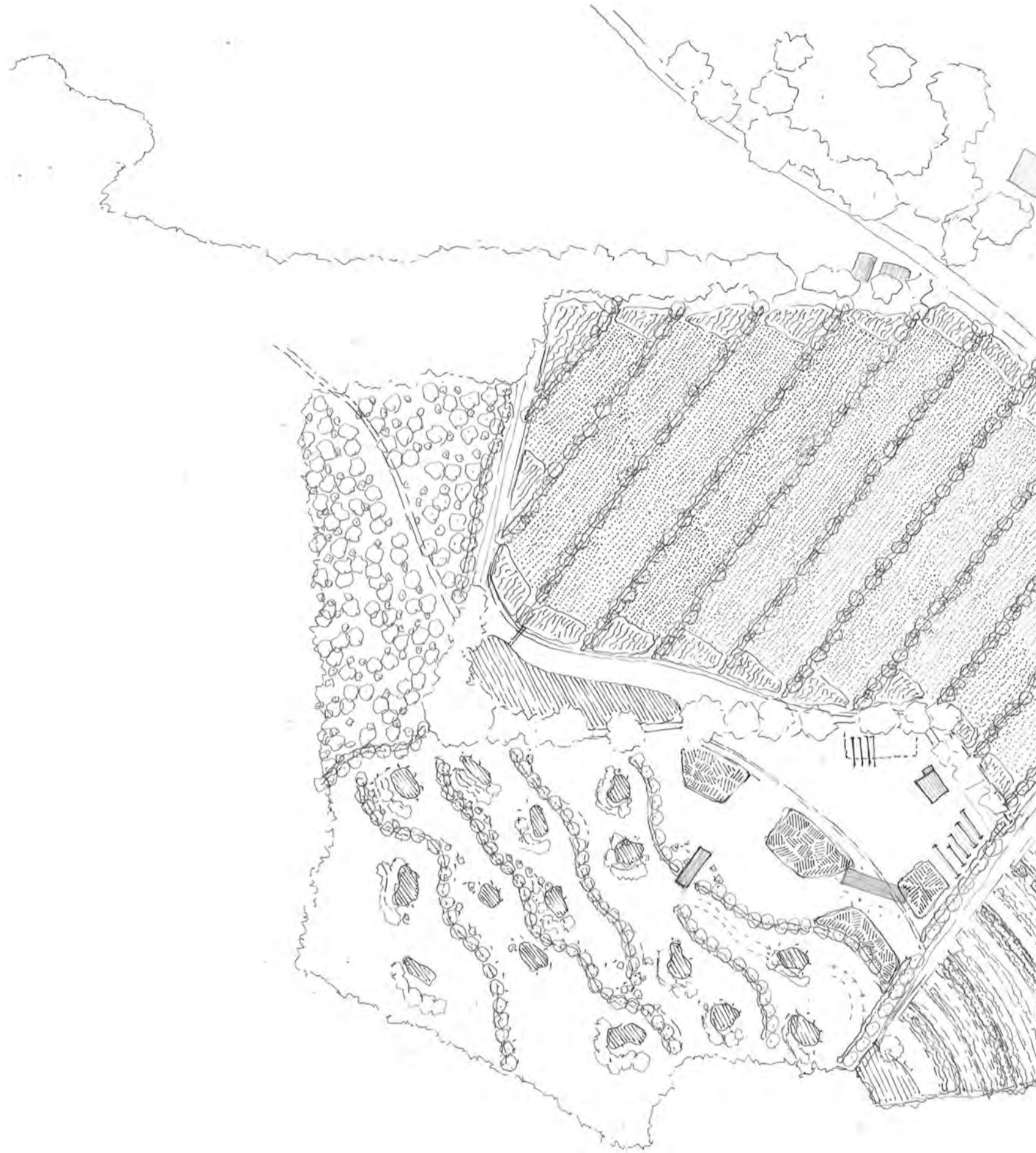
- PLANTING OF THE FOOD FOREST TOGETHER WITH VOLUNTEERS

- PLANTING OF THE GRAINS



# LANDSCAPE EVOLUTION

2045 - MIDSUCCESSION

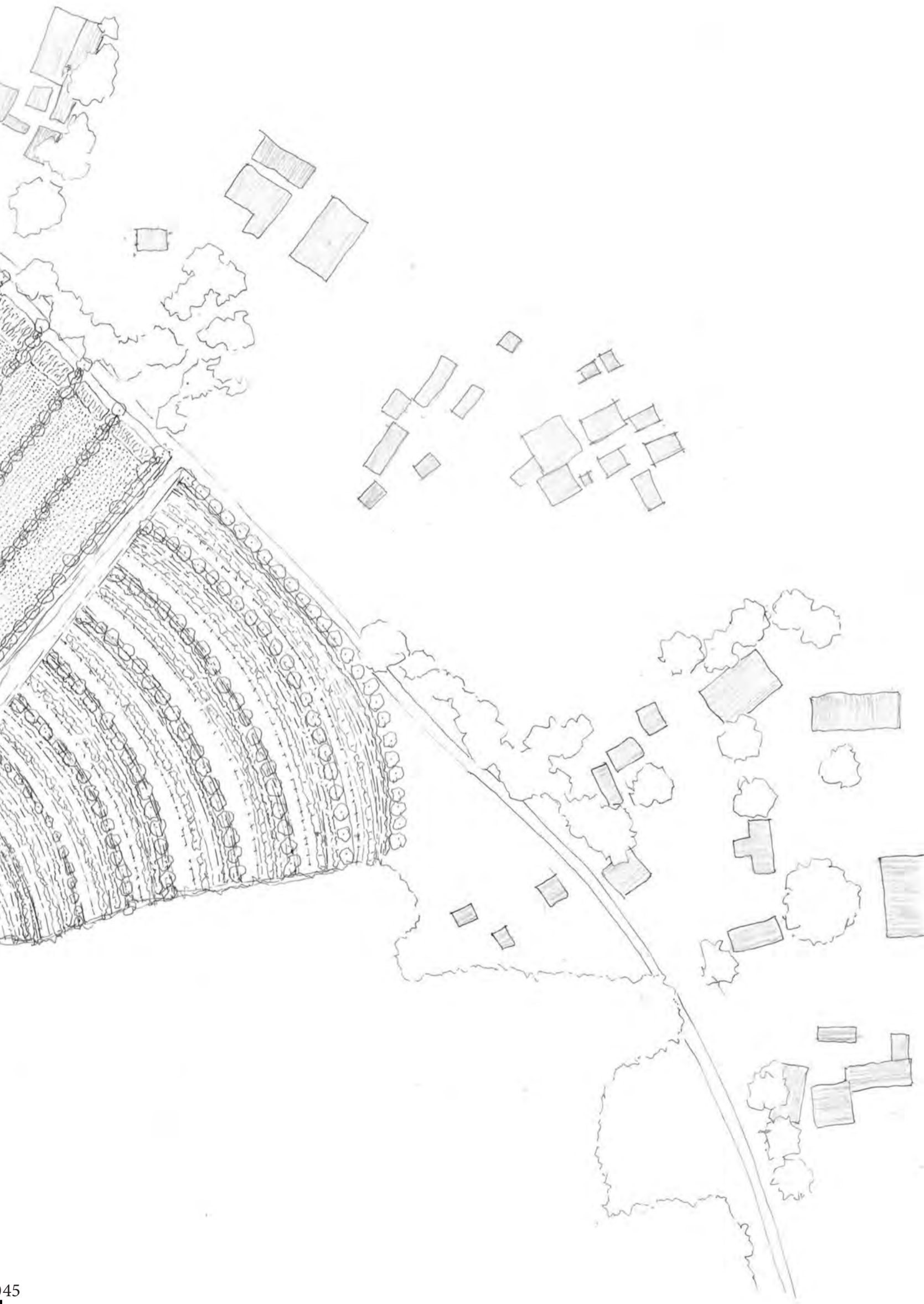


# DESIGN PRINCIPLES

- SERIOUS GROWTH AND THUS OUTPUT OF THINGS LIKE:  
NUTS, VEGETABLES, FRUITS, GRAINS AND HAY

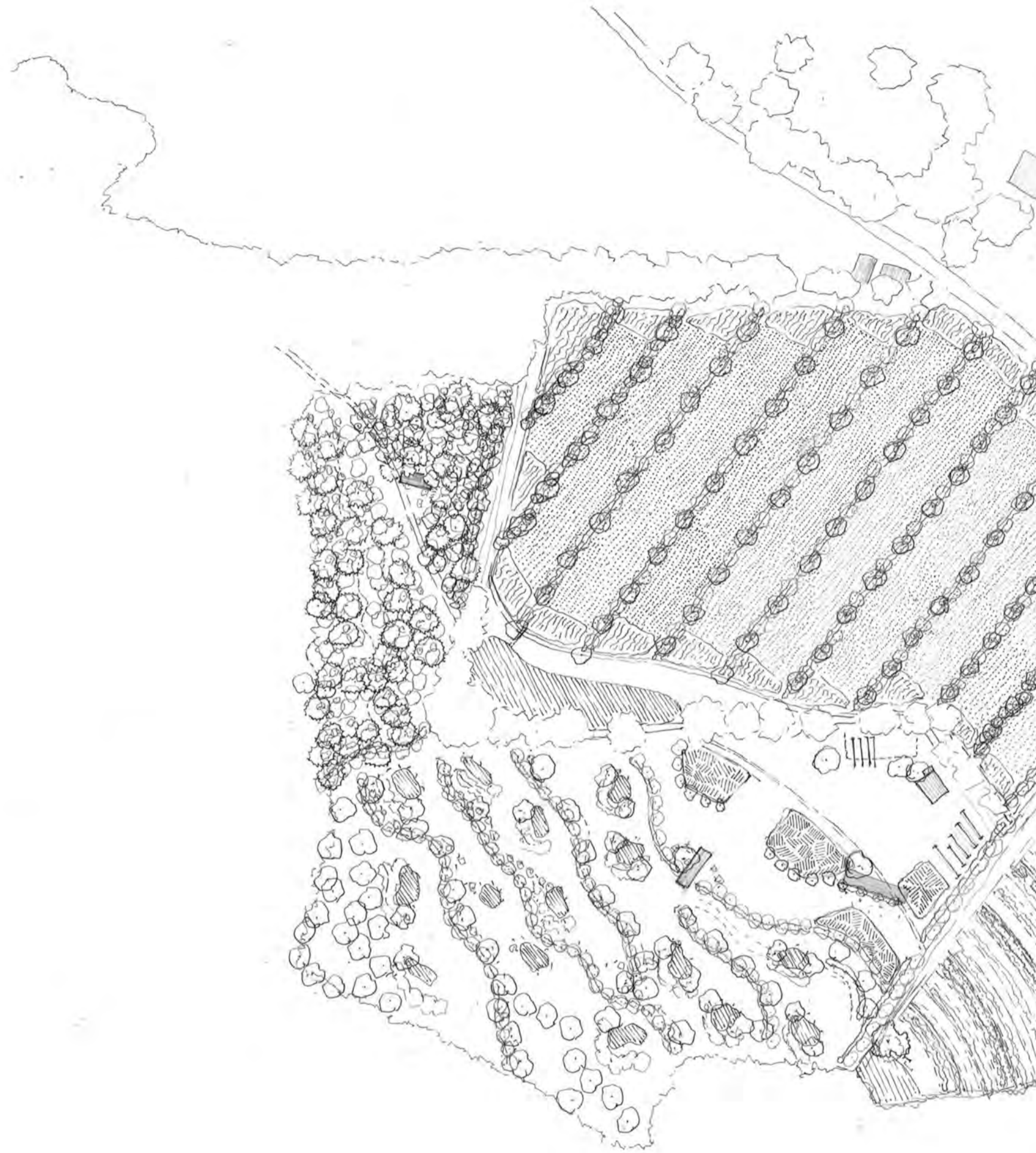
-600M2 ATELIER AND PASSERSBY CAFE

USED MOSTLY FOR STORAGE AND HAS A SECONDARY HOST FUNCTION



# LANDSCAPE EVOLUTION

2060 - MIDSUCCESSION

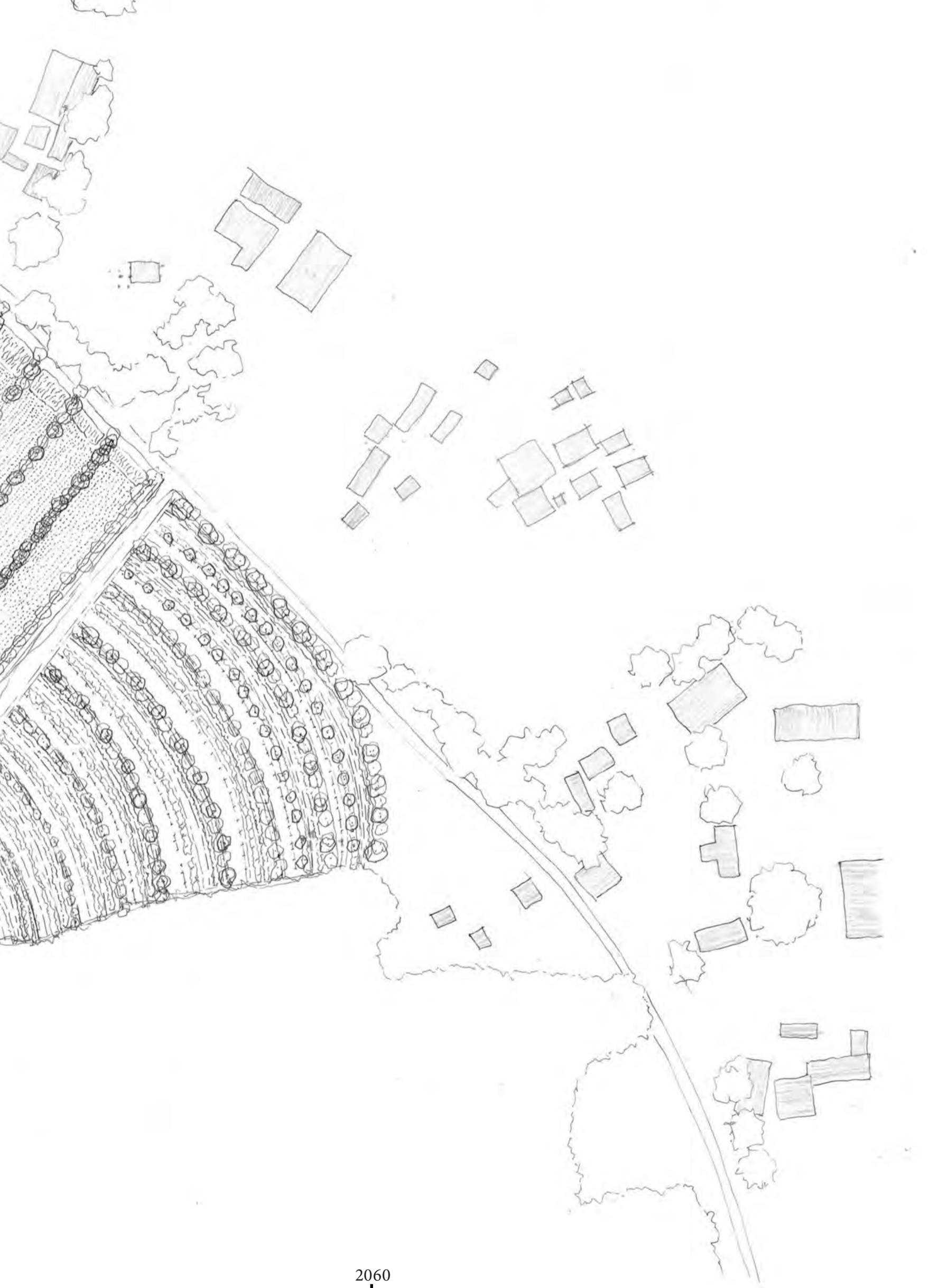


# DESIGN PRINCIPLES

- SERIOUS GROWTH AND THUS OUTPUT OF THINGS LIKE:  
NUTS, VEGETABLES, FRUITS, GRAINS AND HAY

-600M2 ATELIER AND PASSERSBY CAFE

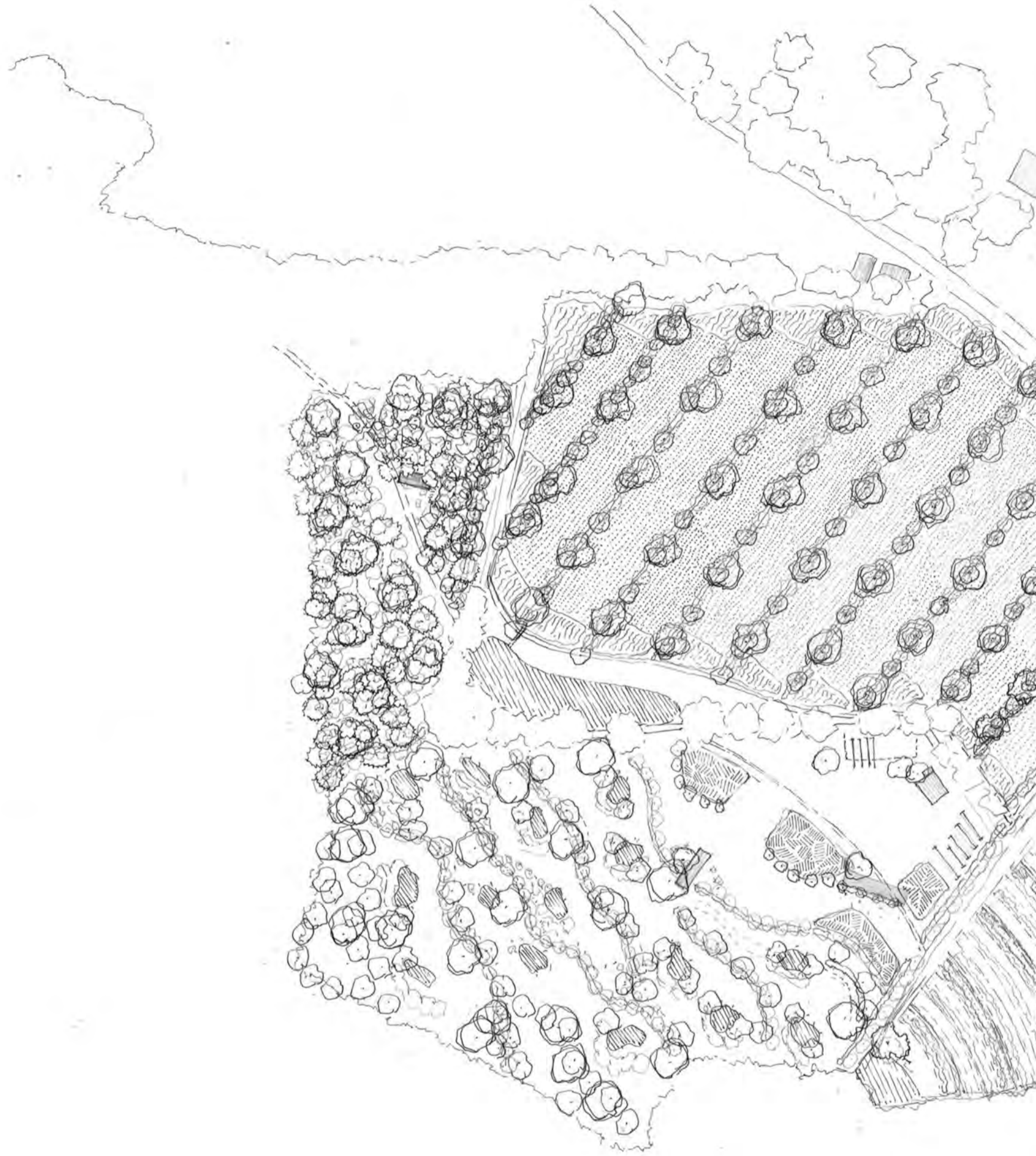
USED MOSTLY FOR STORAGE AND HAS A SECONDARY HOST FUNCTION



2060

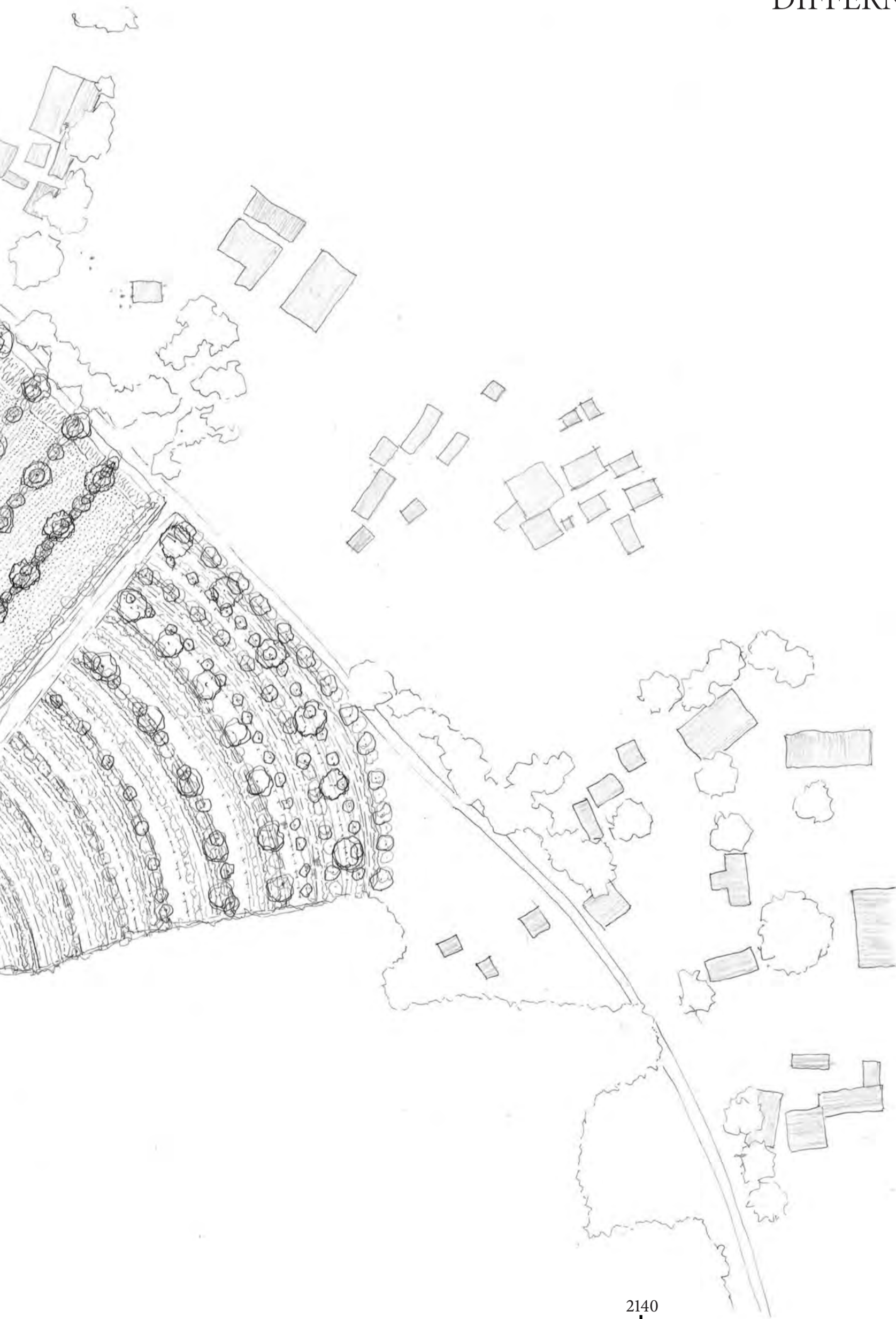
# LANDSCAPE EVOLUTION

2140 - CLIMAX



# DESIGN PRINCIPLES

- FELLING TREES LIKE OAK, SPRUCE AND PINE
- STARTING THE WOOD DRYING PROCESS
- PREPARING THE NEXT AREAS FOR BUILDING NEW PLATFORMS WITH DIFFERNT FUNCTIONS...



# LANDSCAPE EVOLUTION

2140 - CLIMAX



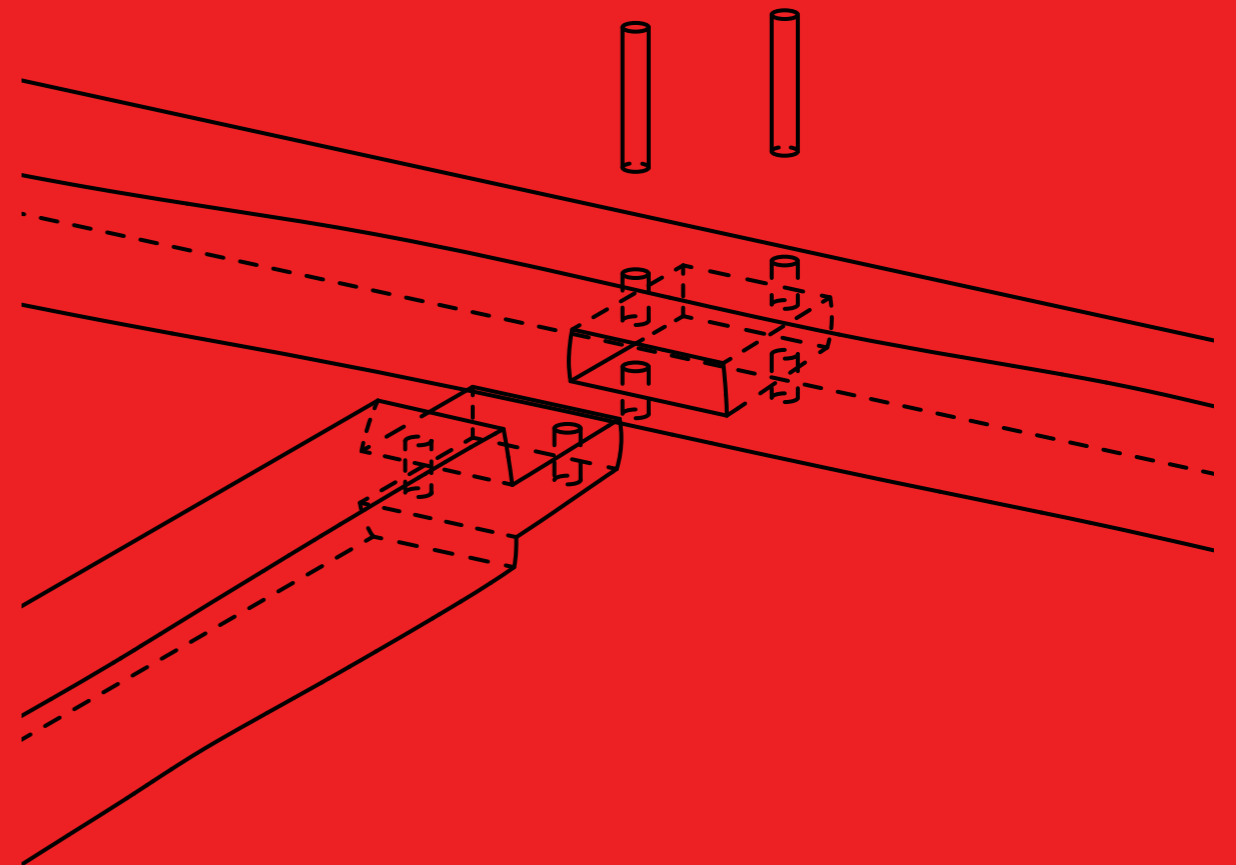
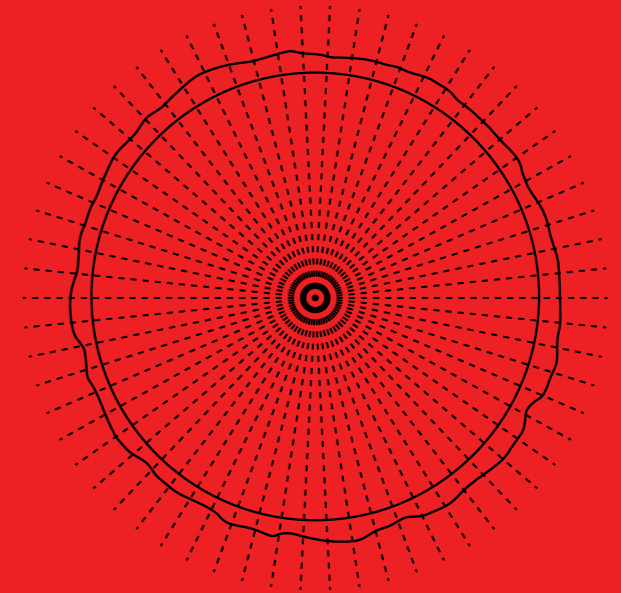
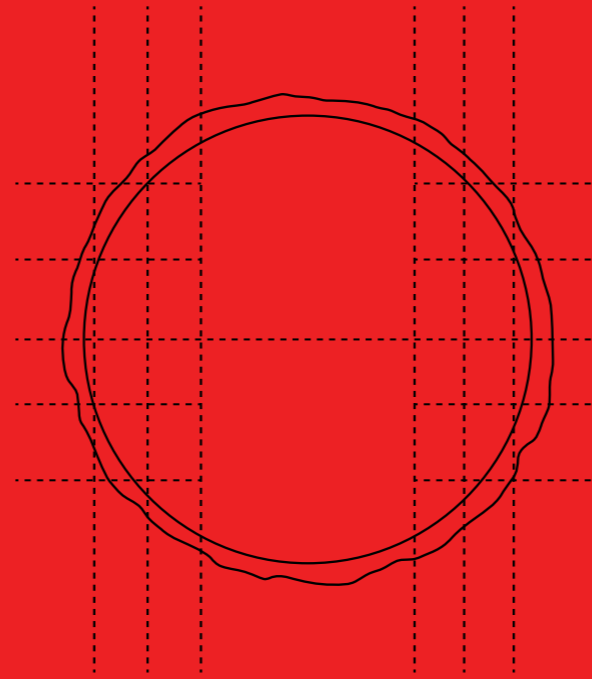
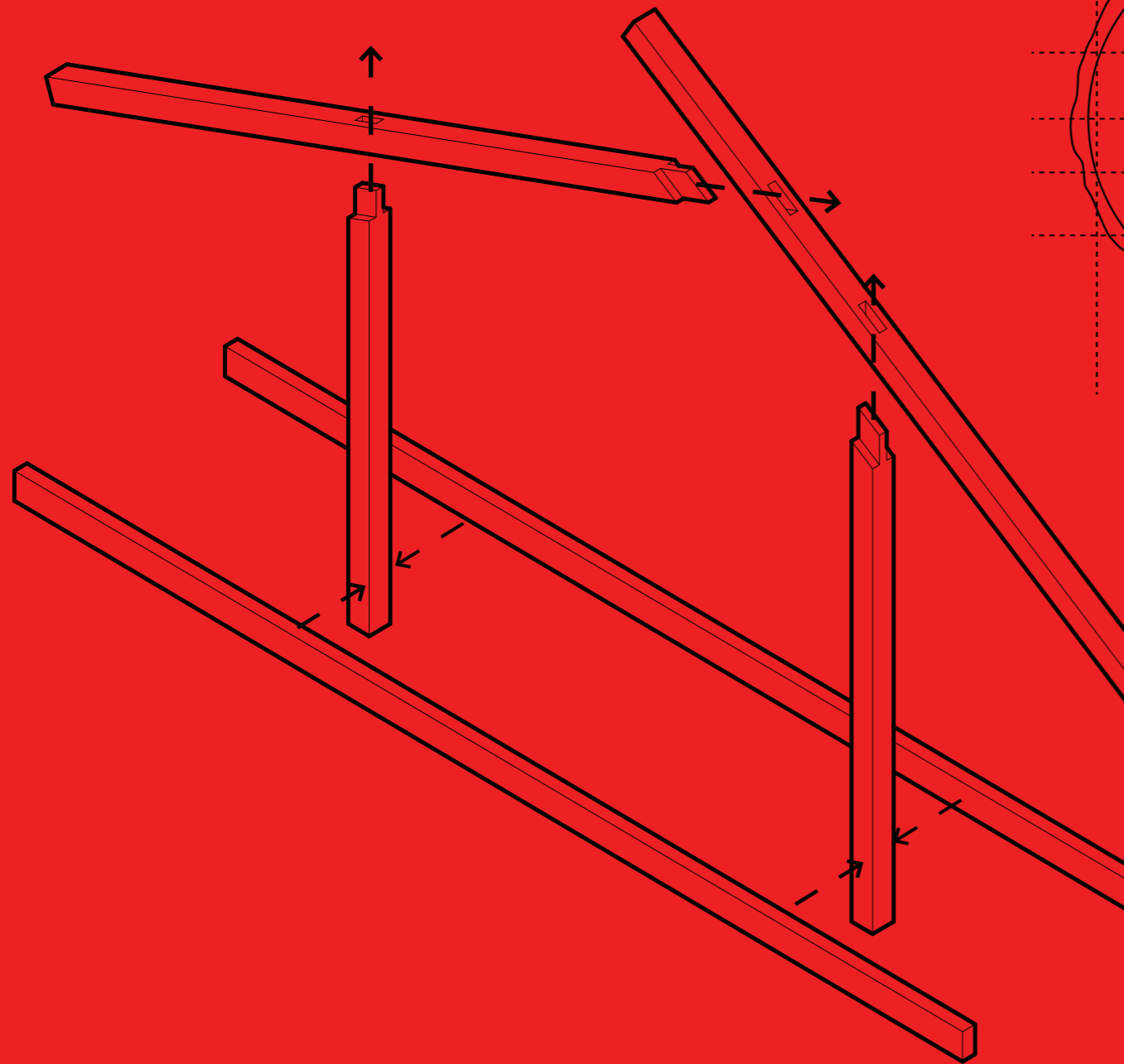






# CONSTRUCTION MANUAL

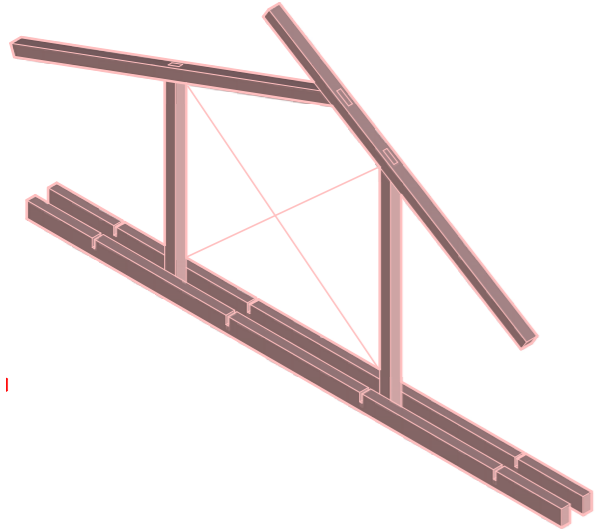
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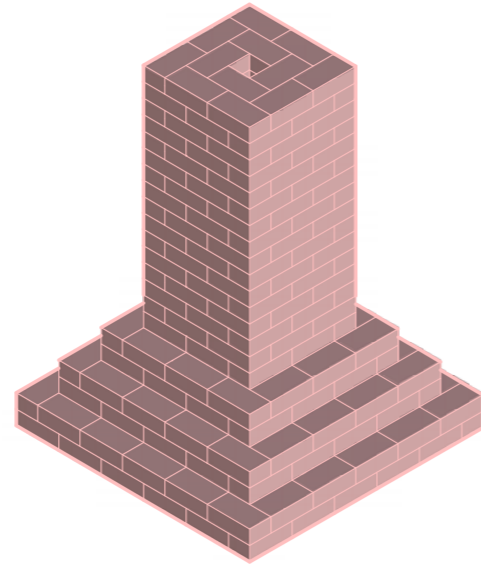
# 00\_MATERIAL APPENDIX

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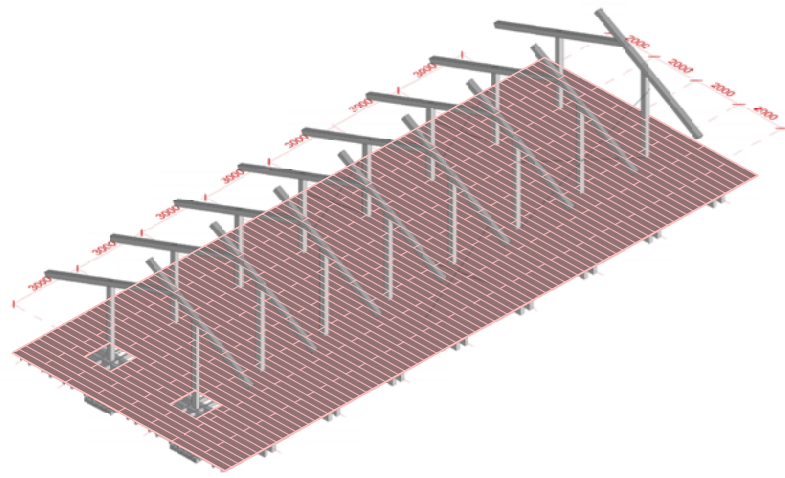
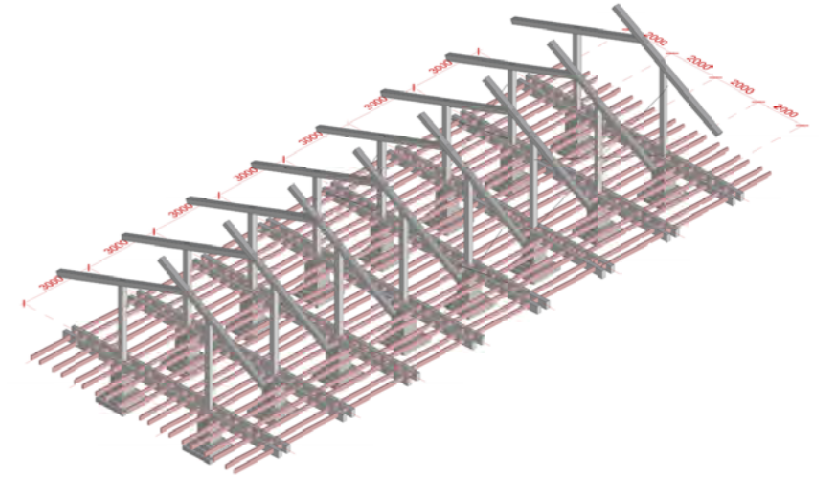
WOODEN FRAMES



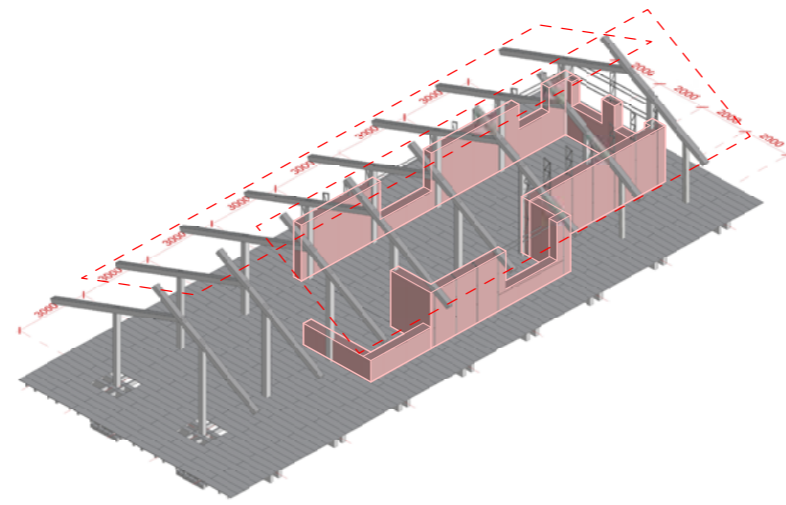
BRICK FOUNDATION



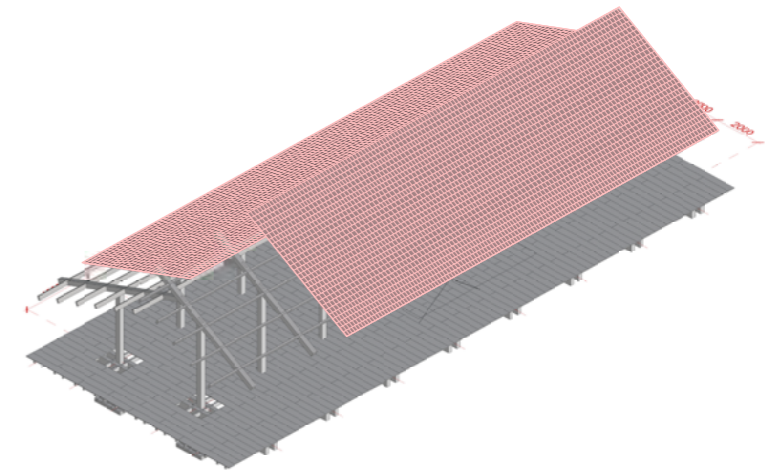
WOODEN STRUCTURE



FLOORING



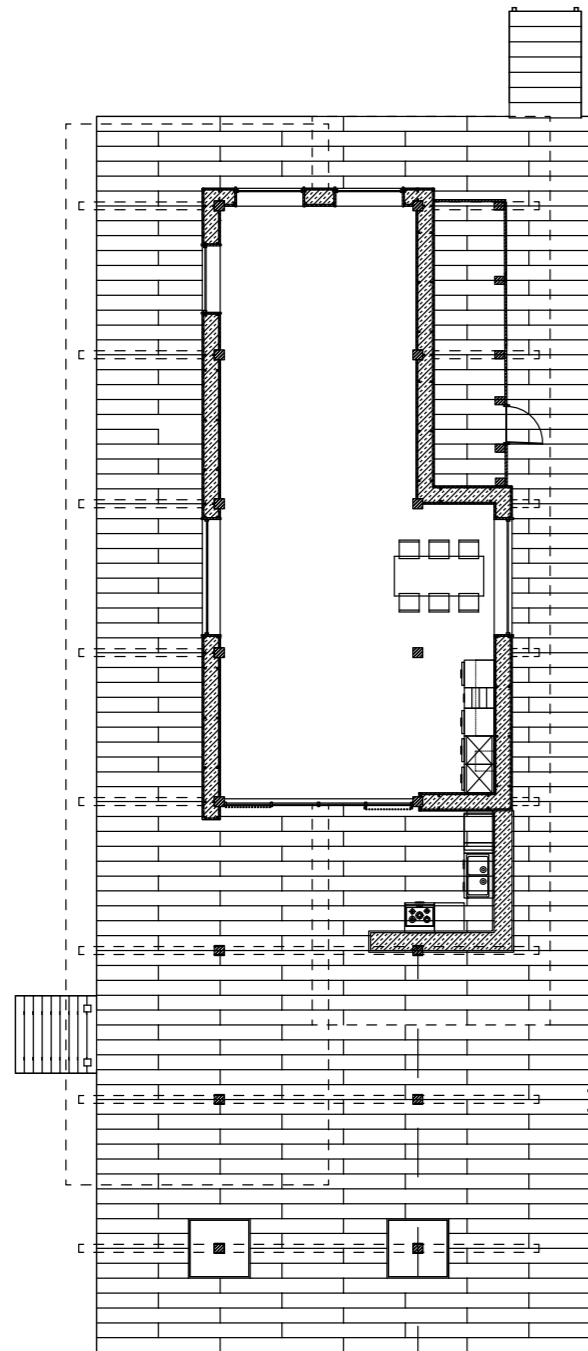
HAY + LOAM PLASTER WALLS



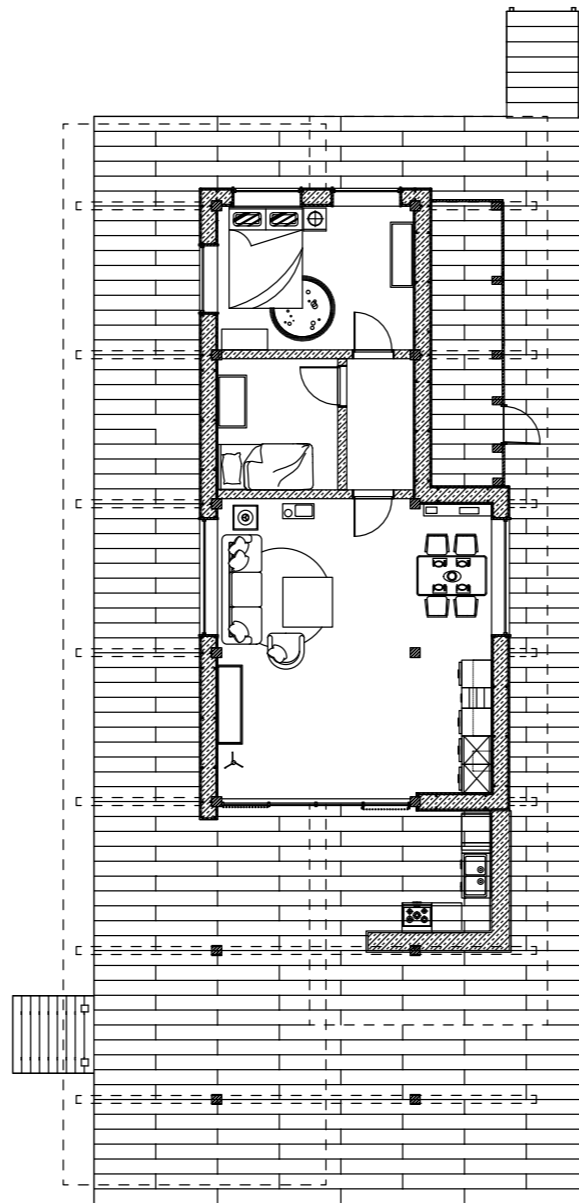
SHINGLE ROOFING

# 01\_ARRANGEMENT OPTIONS

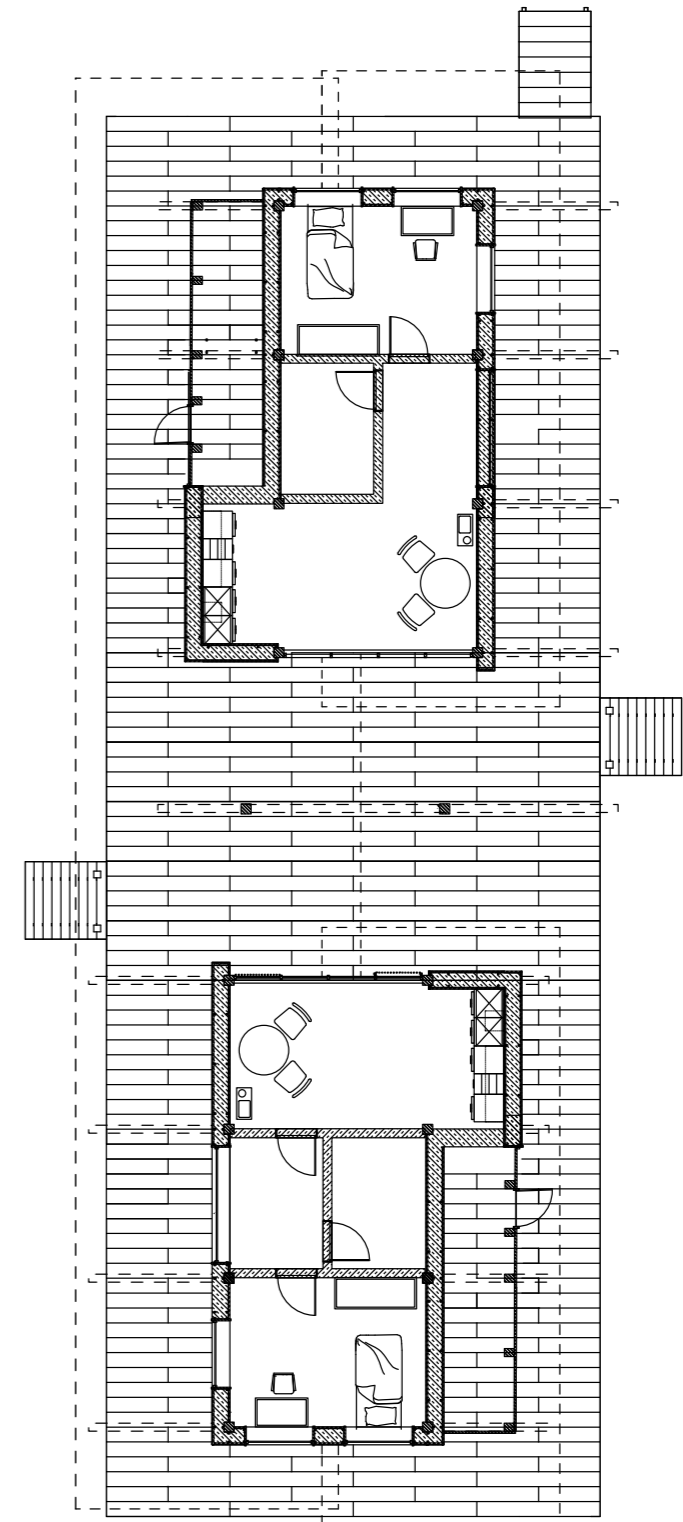
invitational platform



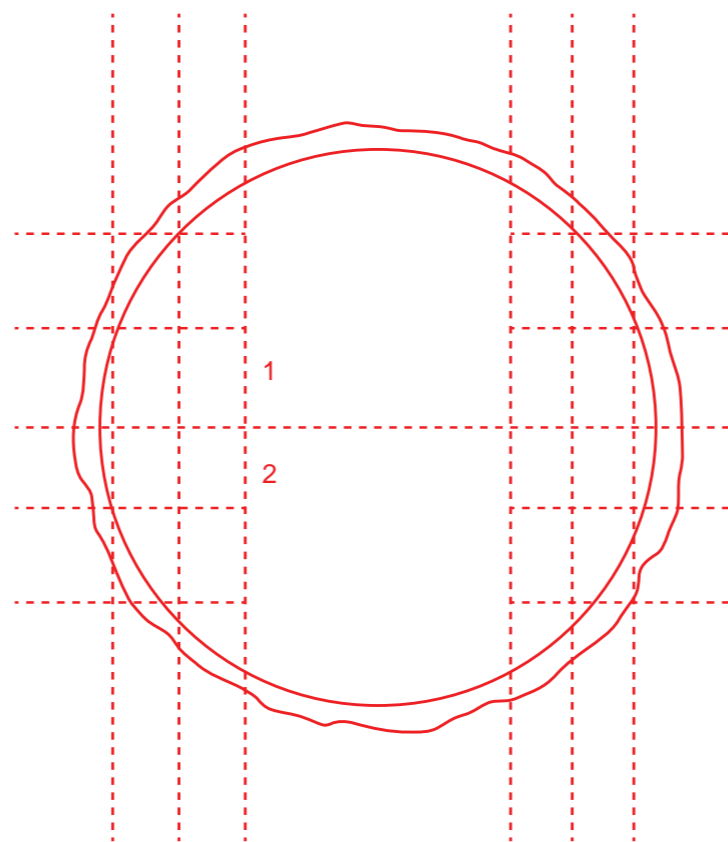
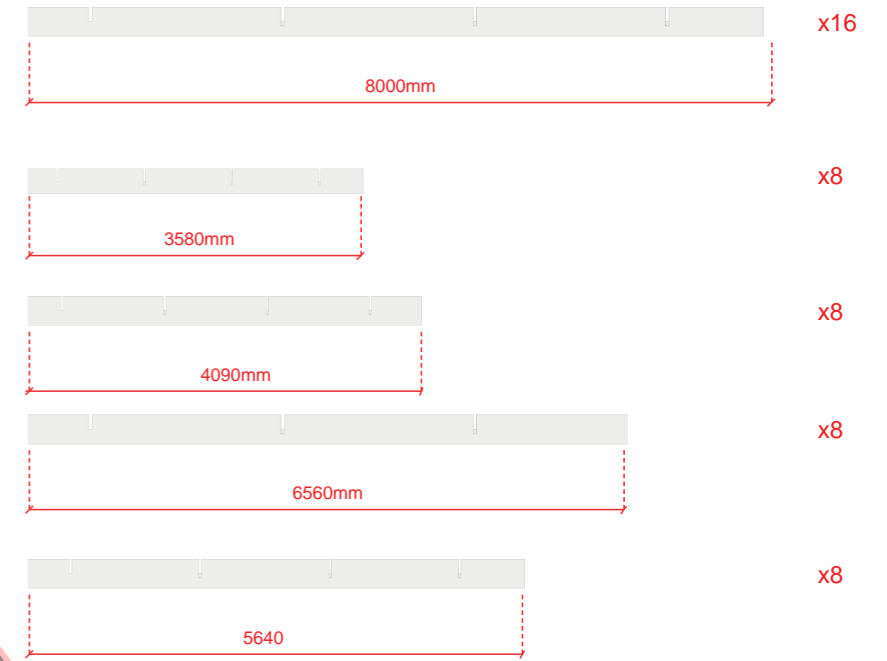
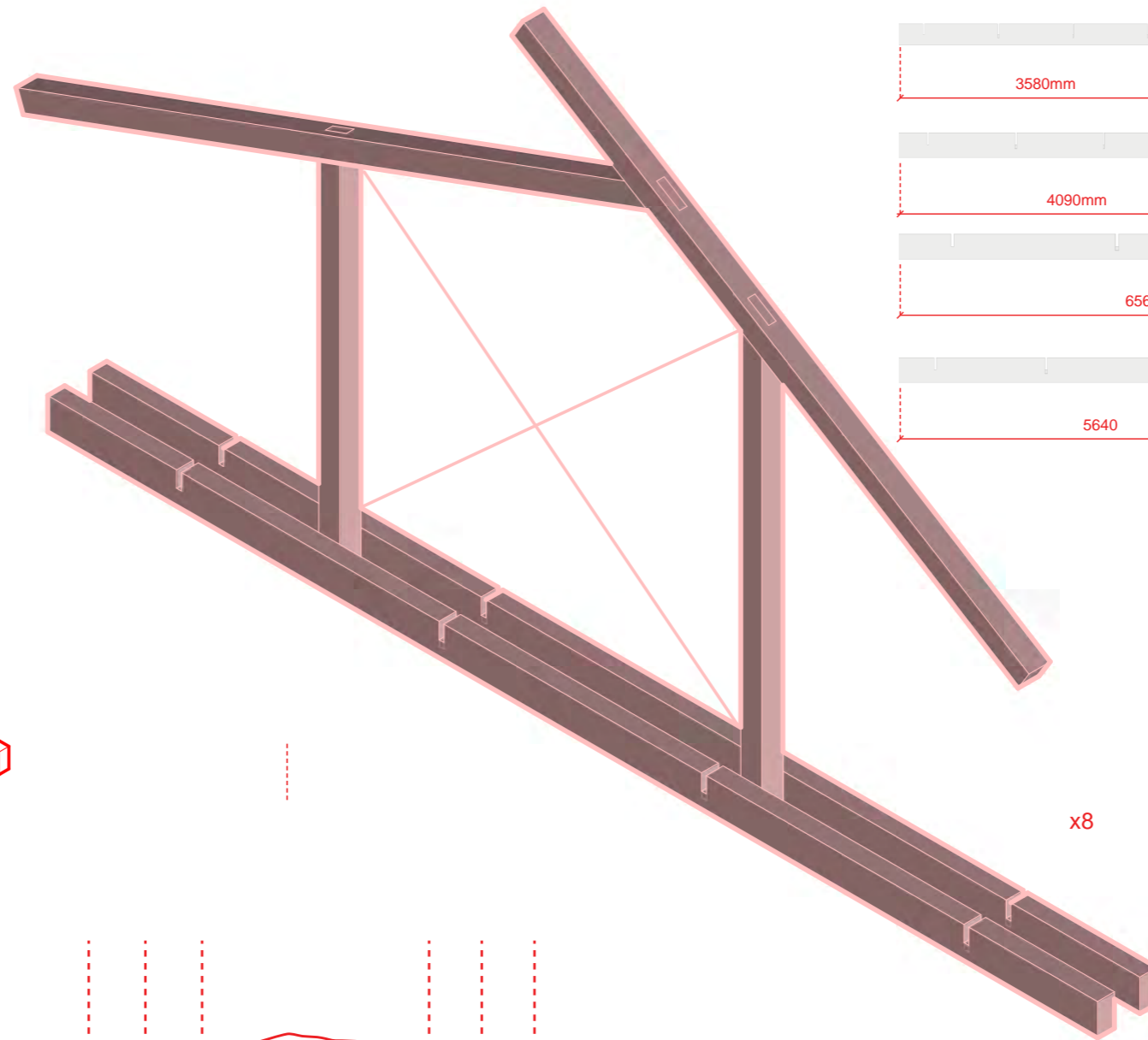
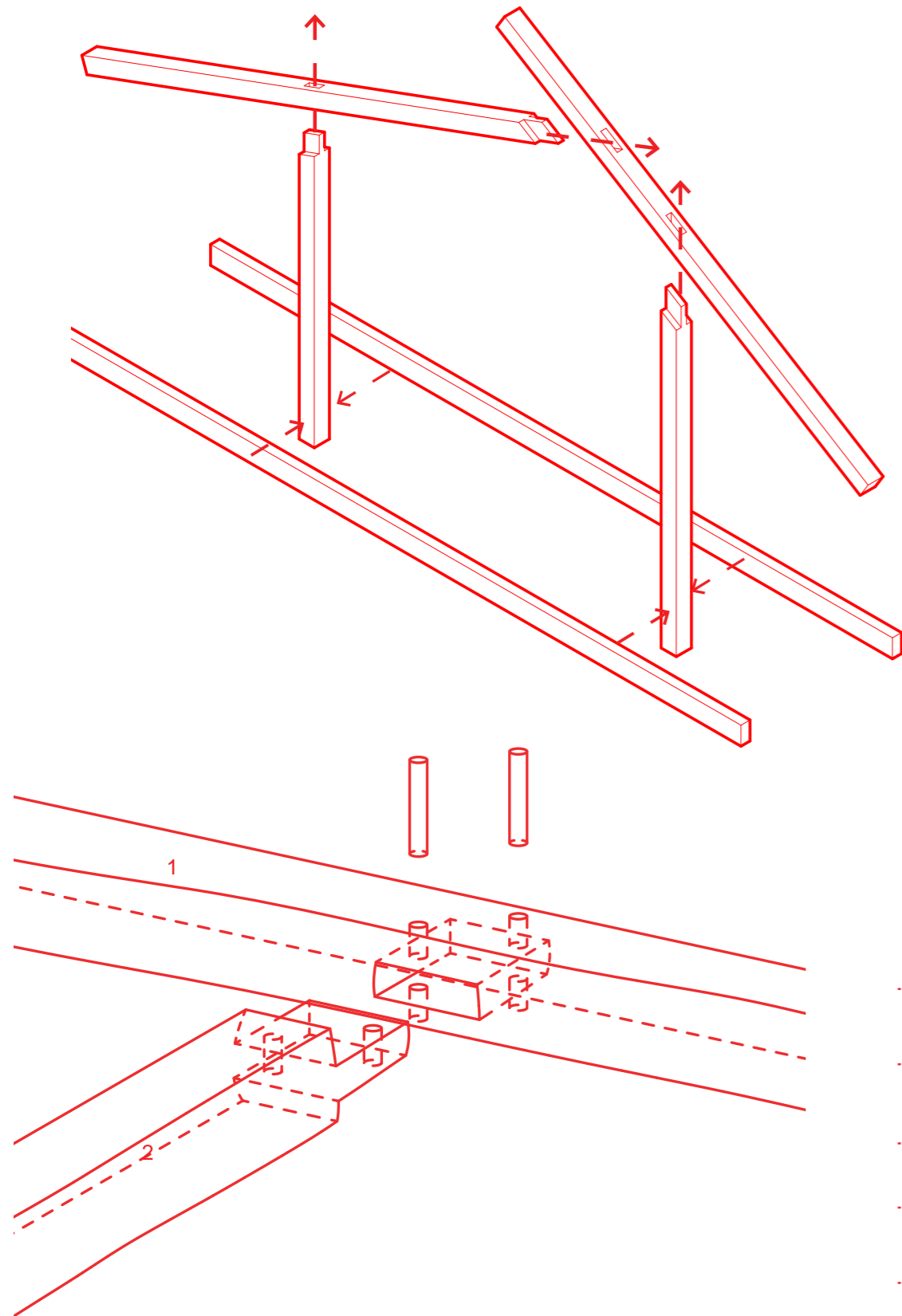
small family living



double artists residency



## 02\_TIMBER-FRAME CONSTRUCTION



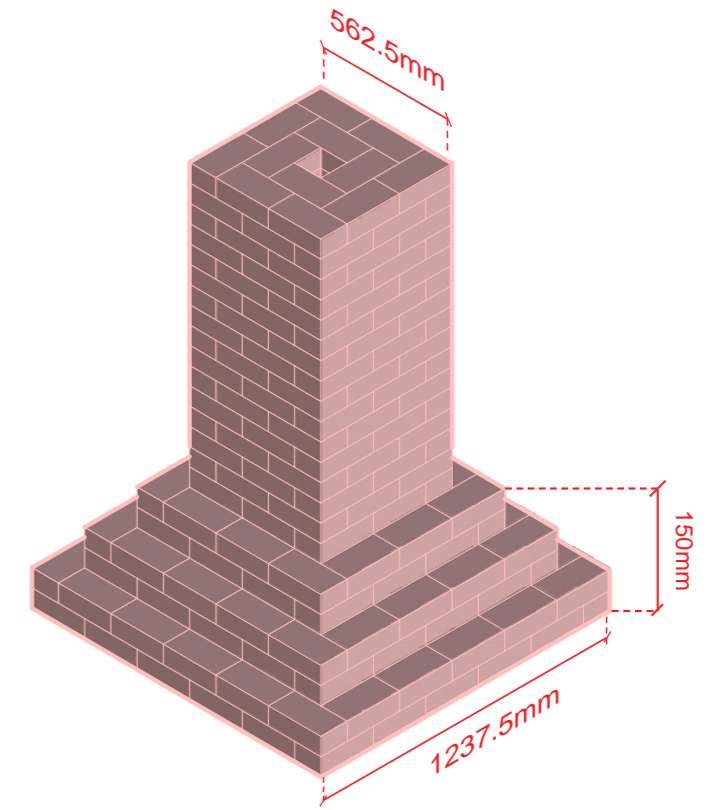
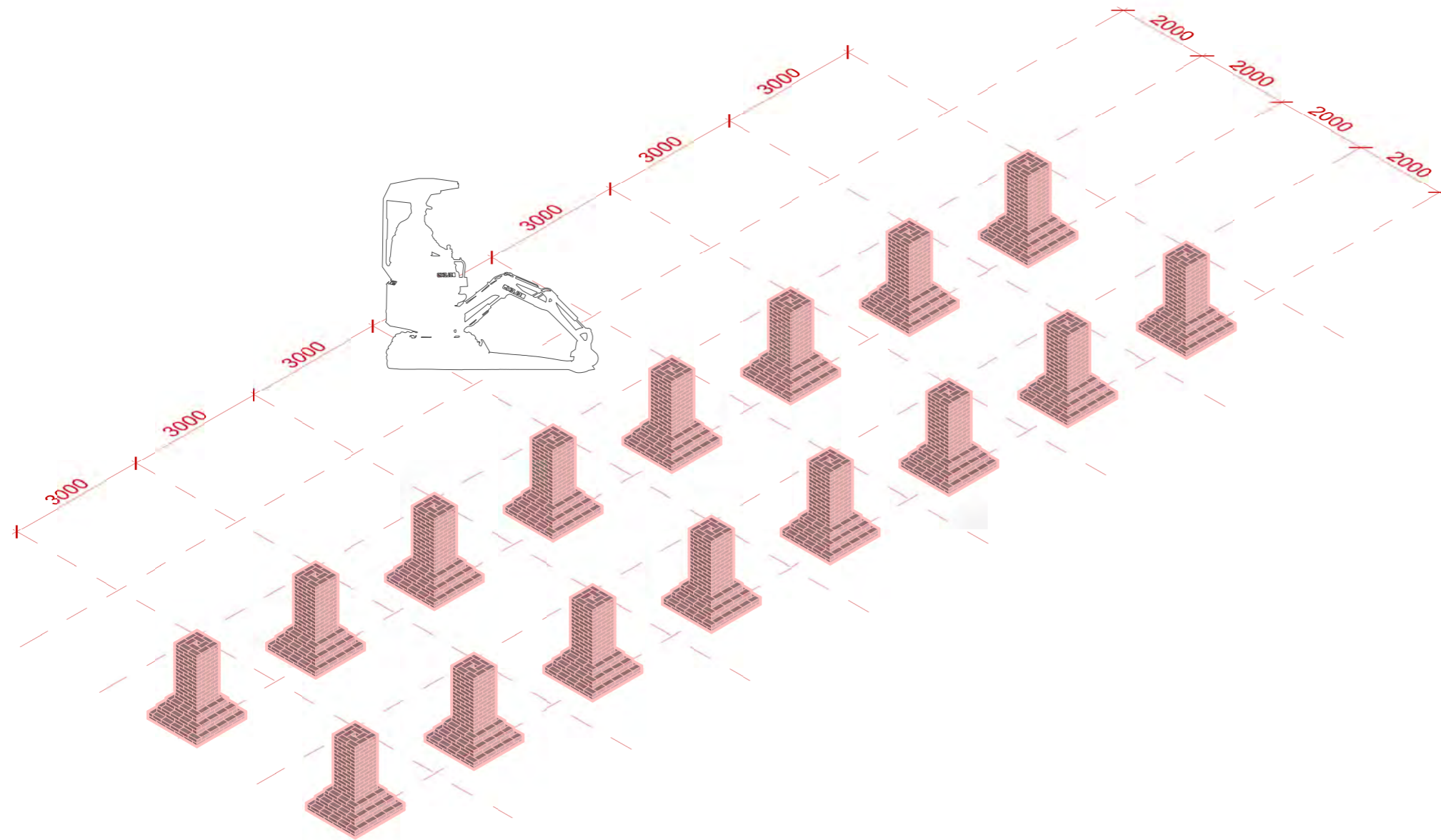
This wooden frame is the central element of the design. It can be made by cutting a wooden log in the manner that is shown in the image on the left. Cutting a piece of wood this way keeps its natural edge, which will be shown on the interior of the building, creating a playful strong image on the interior. Also cutting a piece of wood this way leads to less offcuts and is less intrusive for the piece itself, still after being handled showing its magnificent strength, and echoing its natural growing process in the final product.

In this design a mortise and tenon joint is chosen since it can be easily adjusted in terms of location, and be steadily fastened using wooden pins. And can be temporarily fastened with a steel girder for transport.

The wooden frames can be repeated in linear fashion to accommodate for different typologies as can be seen on the verso.

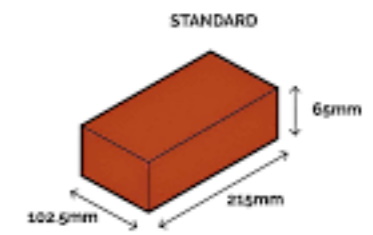
Here oak with a diameter of at least 60cm (aprox. 120yrs) is used to create beams with a crosssection of 30cm, spanning max 6.5m can be cut.

# 03\_IN-SITU FOUNDATION

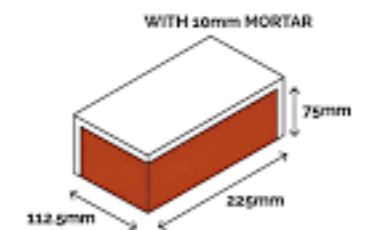


Using the fabricated wooden frames to measure the foundation locations since due to the natural bcurve of the wood, it will not be lined up exactly. The foundation can be constructed using brick, produced from nearby stone factories, echoing once again the natural soil contents of place. Holes alligning at the same depth (so dependent on height of soil a different depth for each hole) can be made to ensure the foundation is steadily consolidated in the soil.

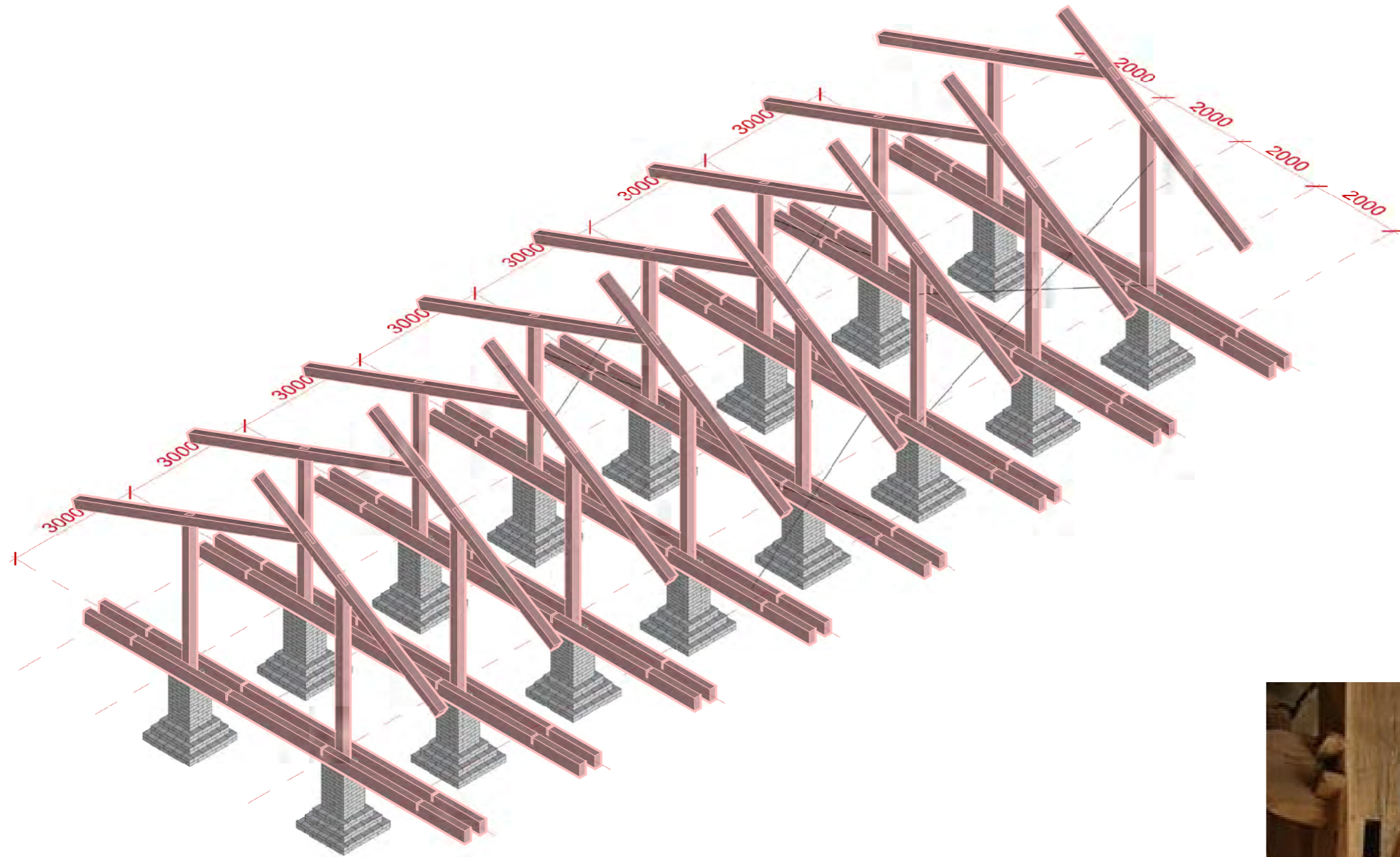
## BRICK DIMENSION



@CIVLENGINEERINGHELP



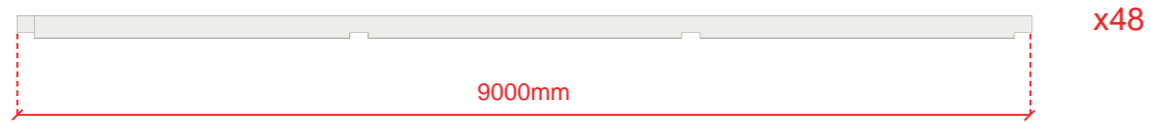
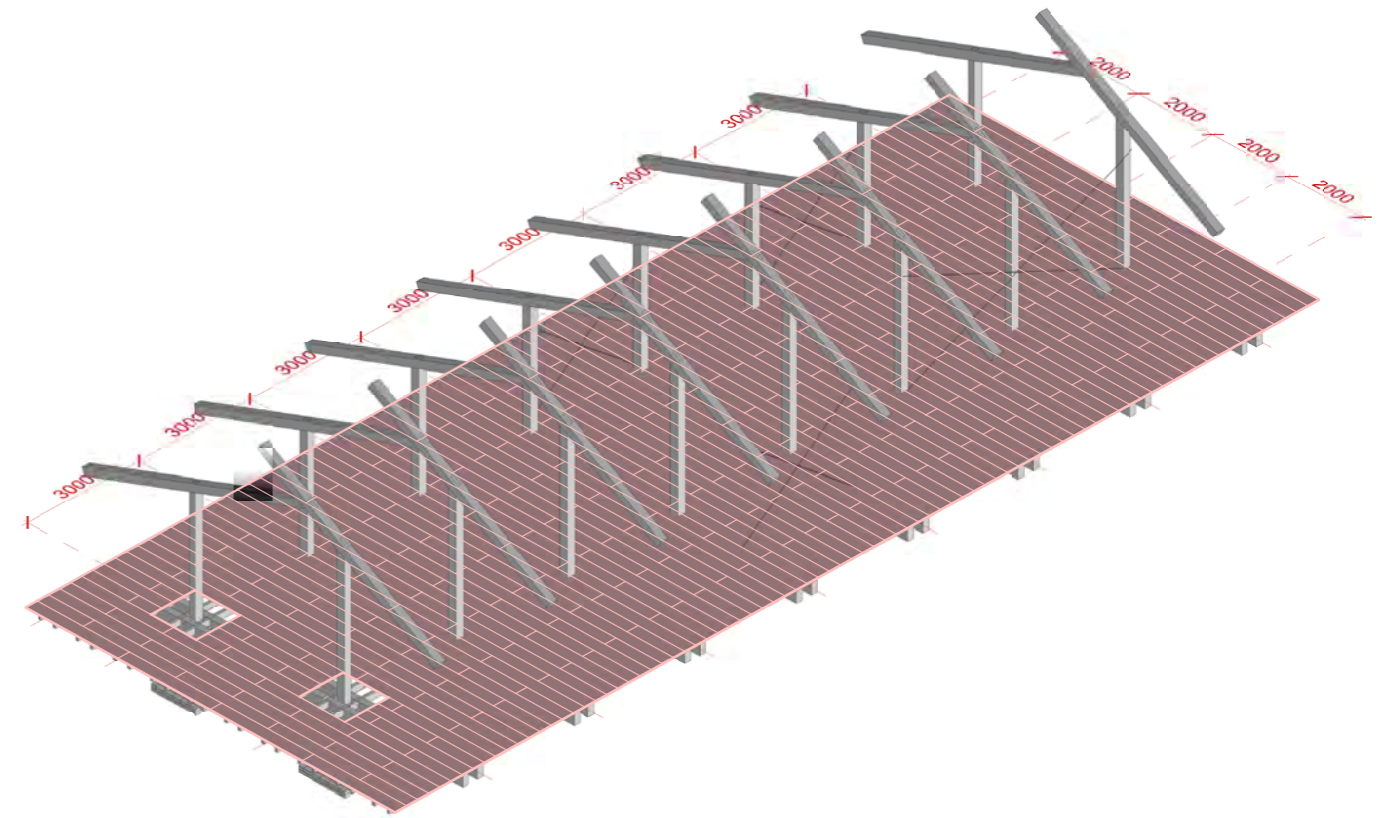
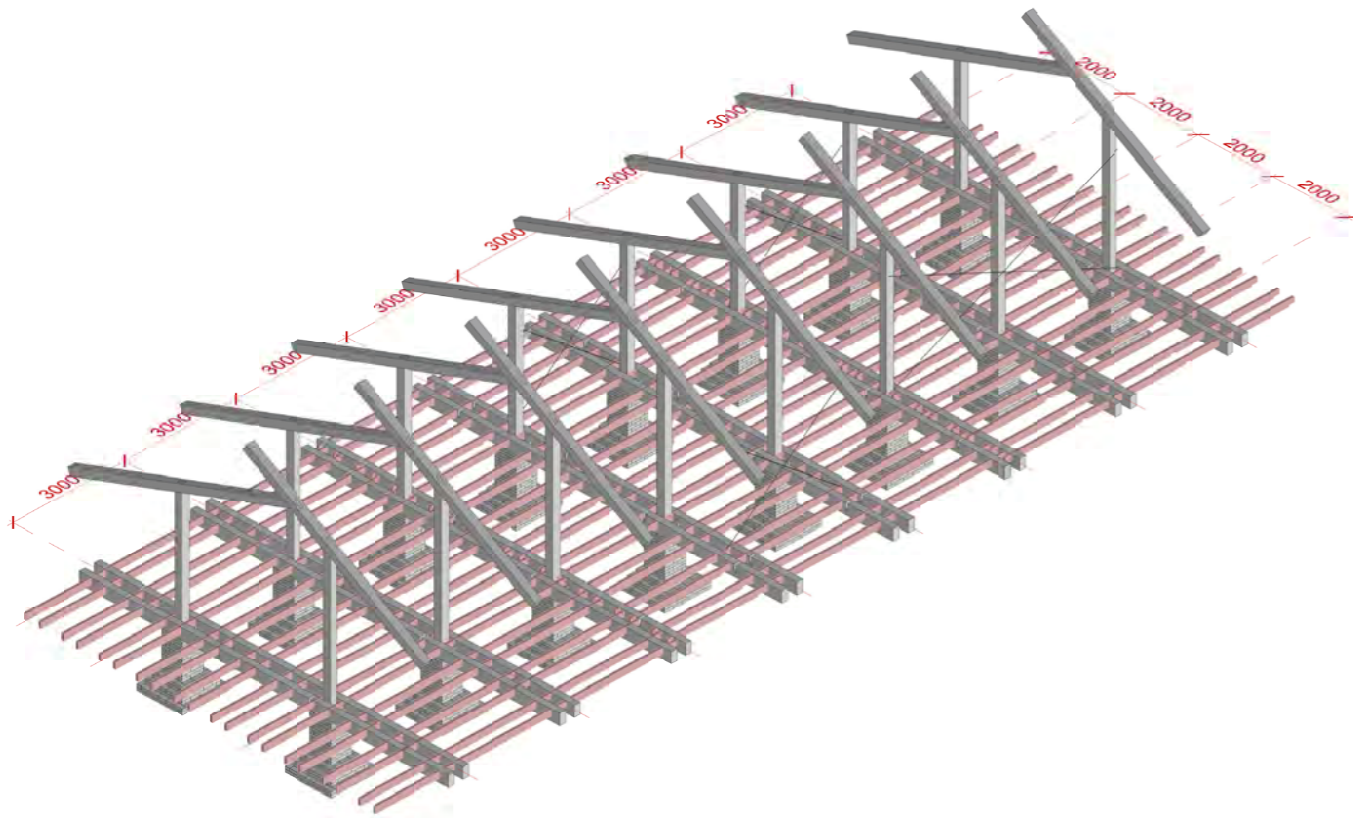
## 04\_TIMBER FRAME PLACEMENTS



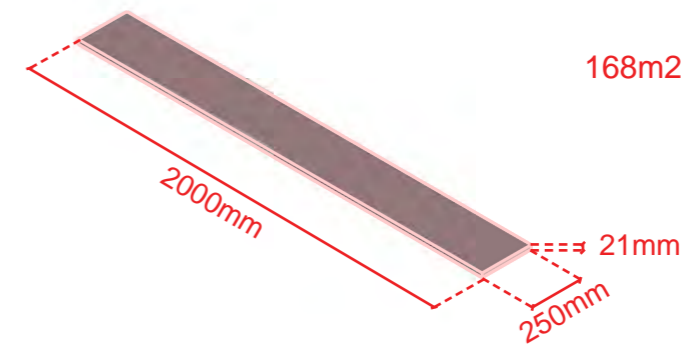
The next step would be placing the wooden frames on the brick foundations. The girders, previously used to hold the wooden frames stable can now be used to stabilise this assemblage.



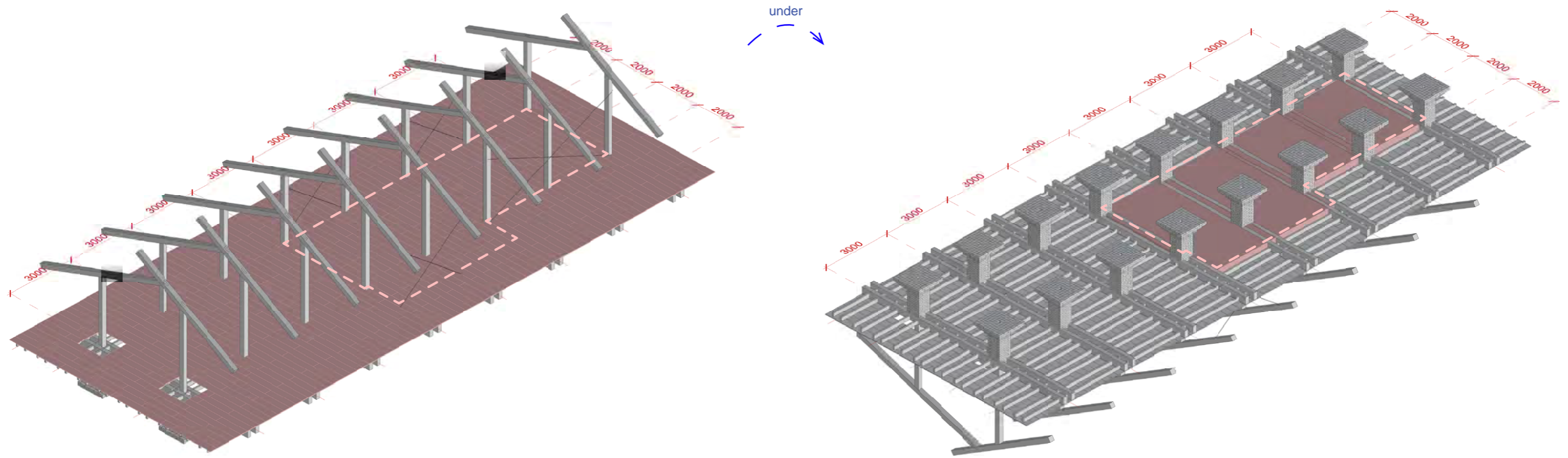
# 05\_FLOORING



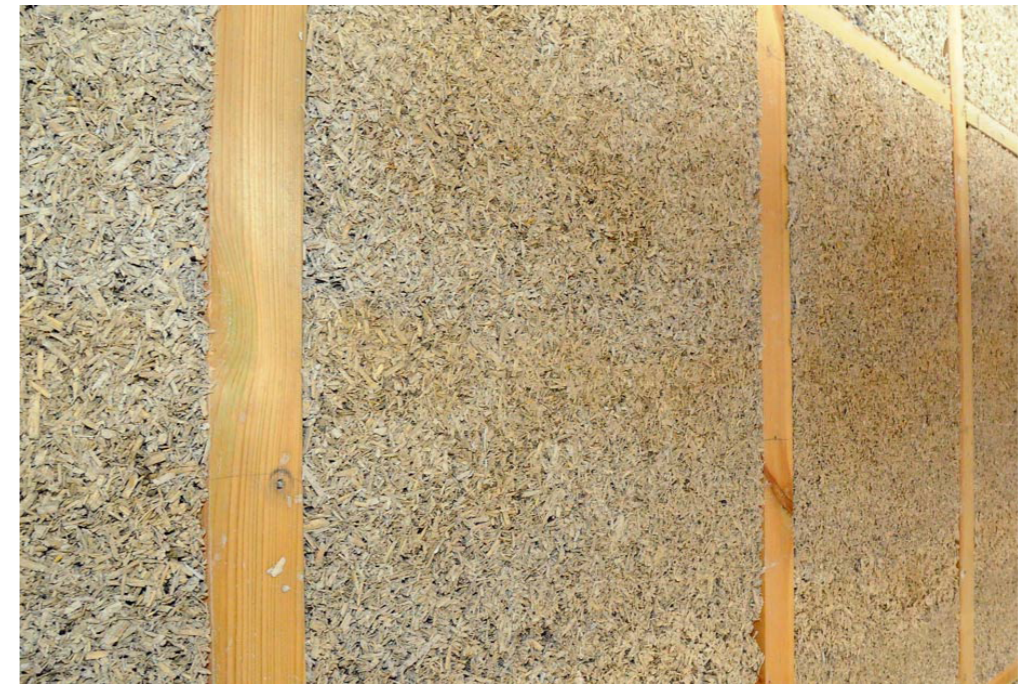
Here the secondary beams for the deck can be cut and attached to the primary joists. Using joists in this direction enables the builder to continue to attach the decking boards.  
The deck intentionally has two gaps at the end surrounding the final wooden frame, since this will be outside. These recesses can be used in order to plant climber plants like grape vines, in full soil. So no need for pots, aligning the platform even more with its surroundings. These plants can then freely climb the wooden frames.



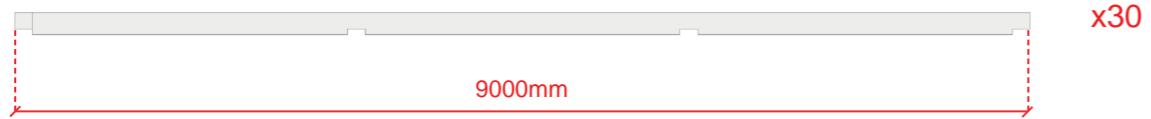
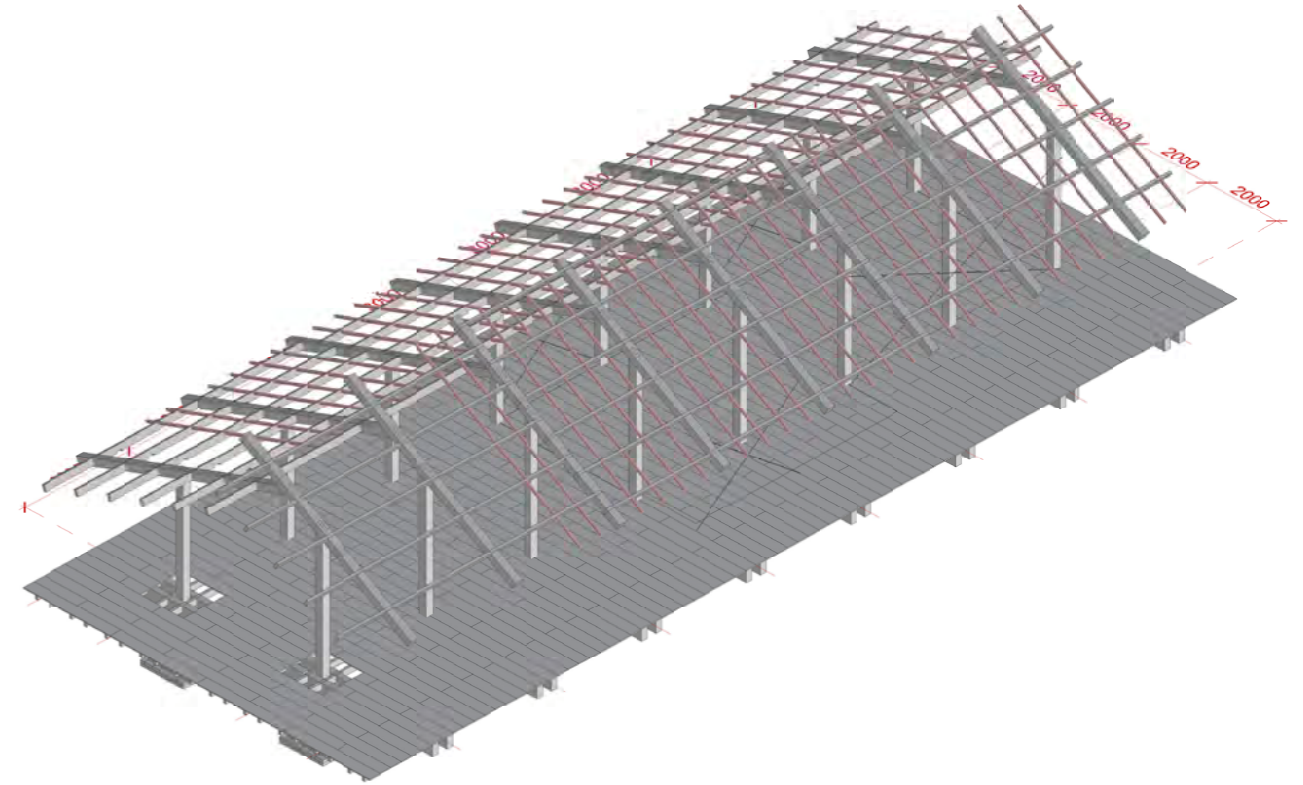
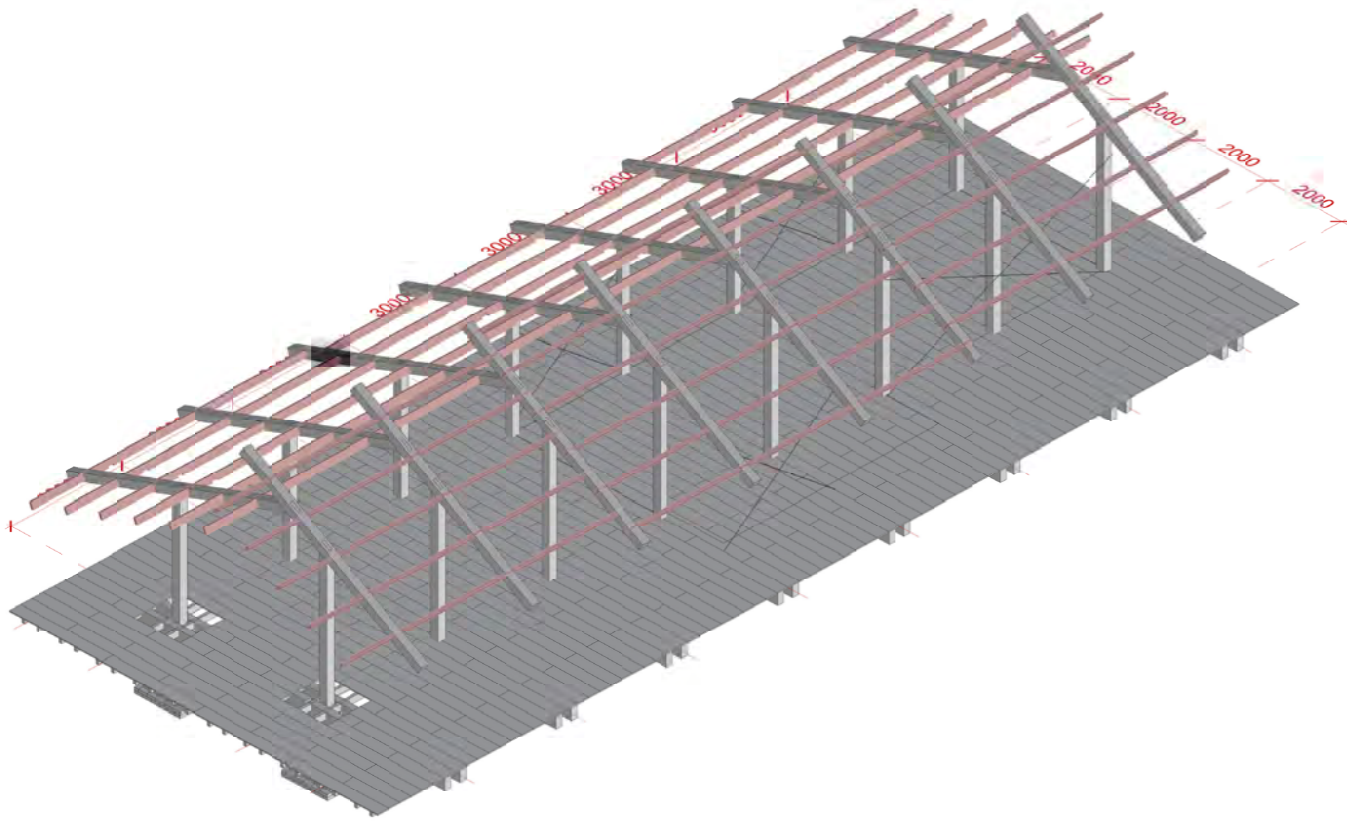
## 06\_FLOOR INSULATION



Underneath the decking boards, in the location of the flooring, bordered by the edge of the proposed walls insulation of 180cm thick hempcrete must be placed. This is a natural insulating material made from flax, which is one of the outputs of the annual grain cycle of the silvoarable agroforestry system.

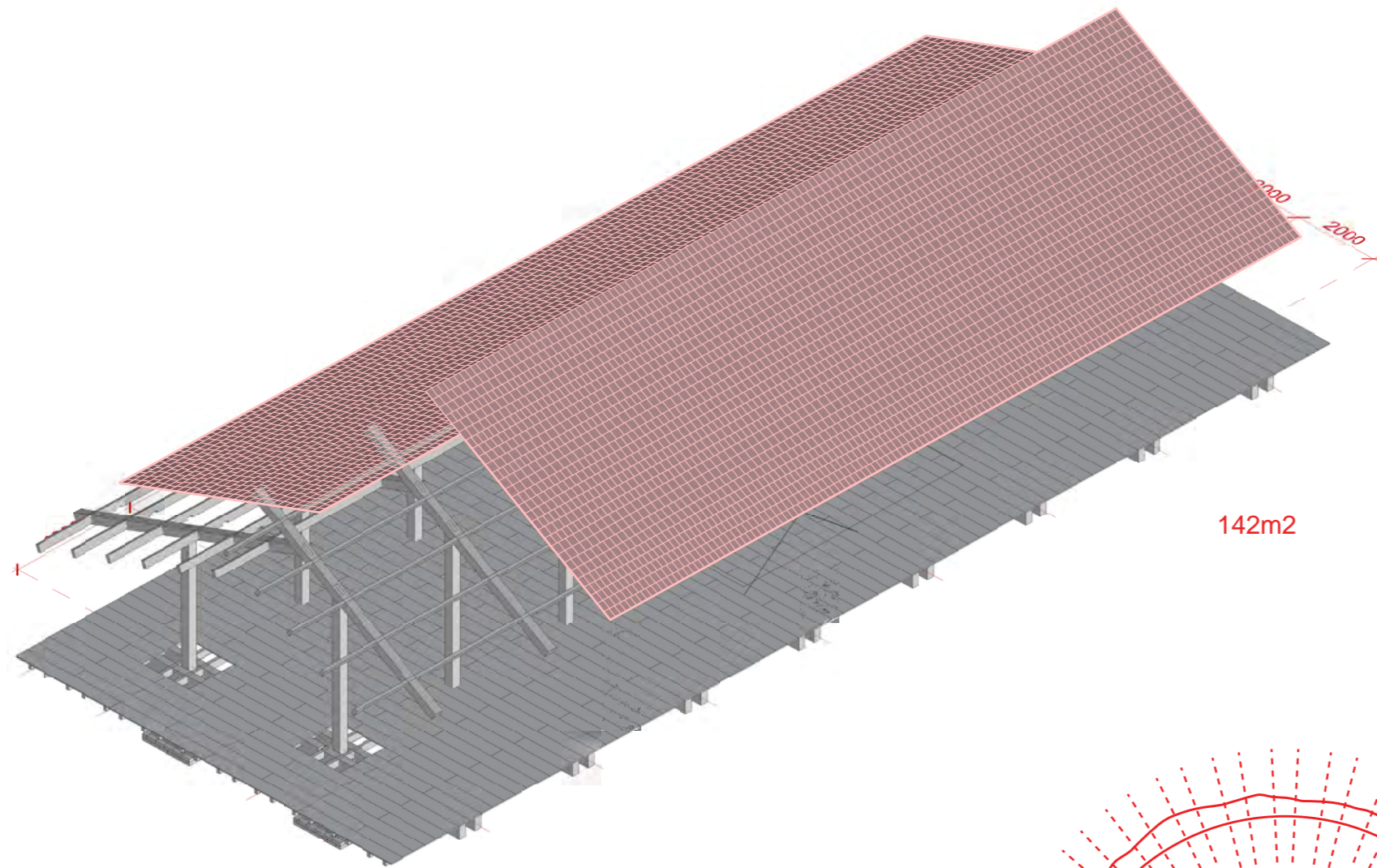


# 07\_ROOFING STRUCTURE

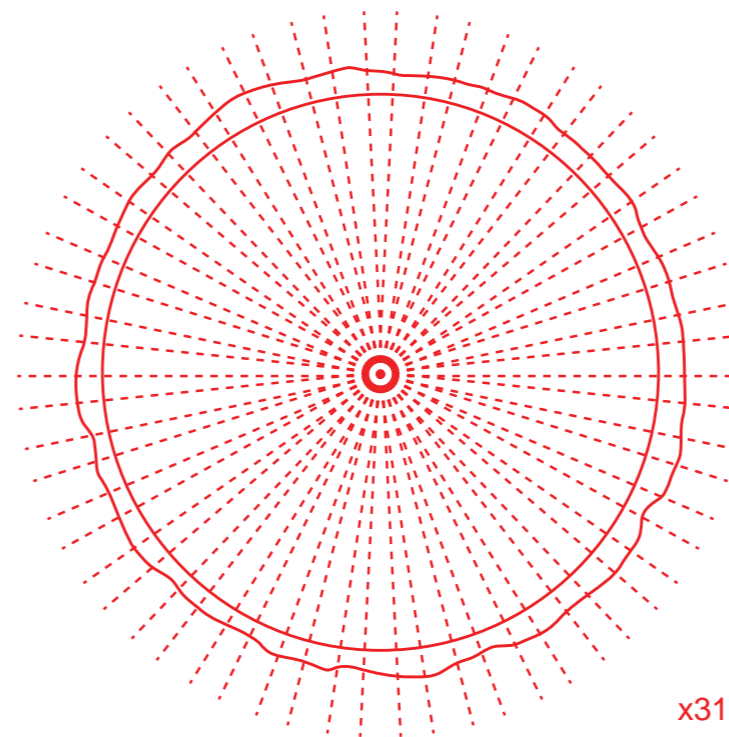


Beams spanning 9m (30pcs) are used to span and connect the wooden frames at the top. These beams are then connected using tertiary joist. The tertiary joists are used to distribute and carry the load of the roof onto the wooden frames.

## 08\_ROOF PANNELING

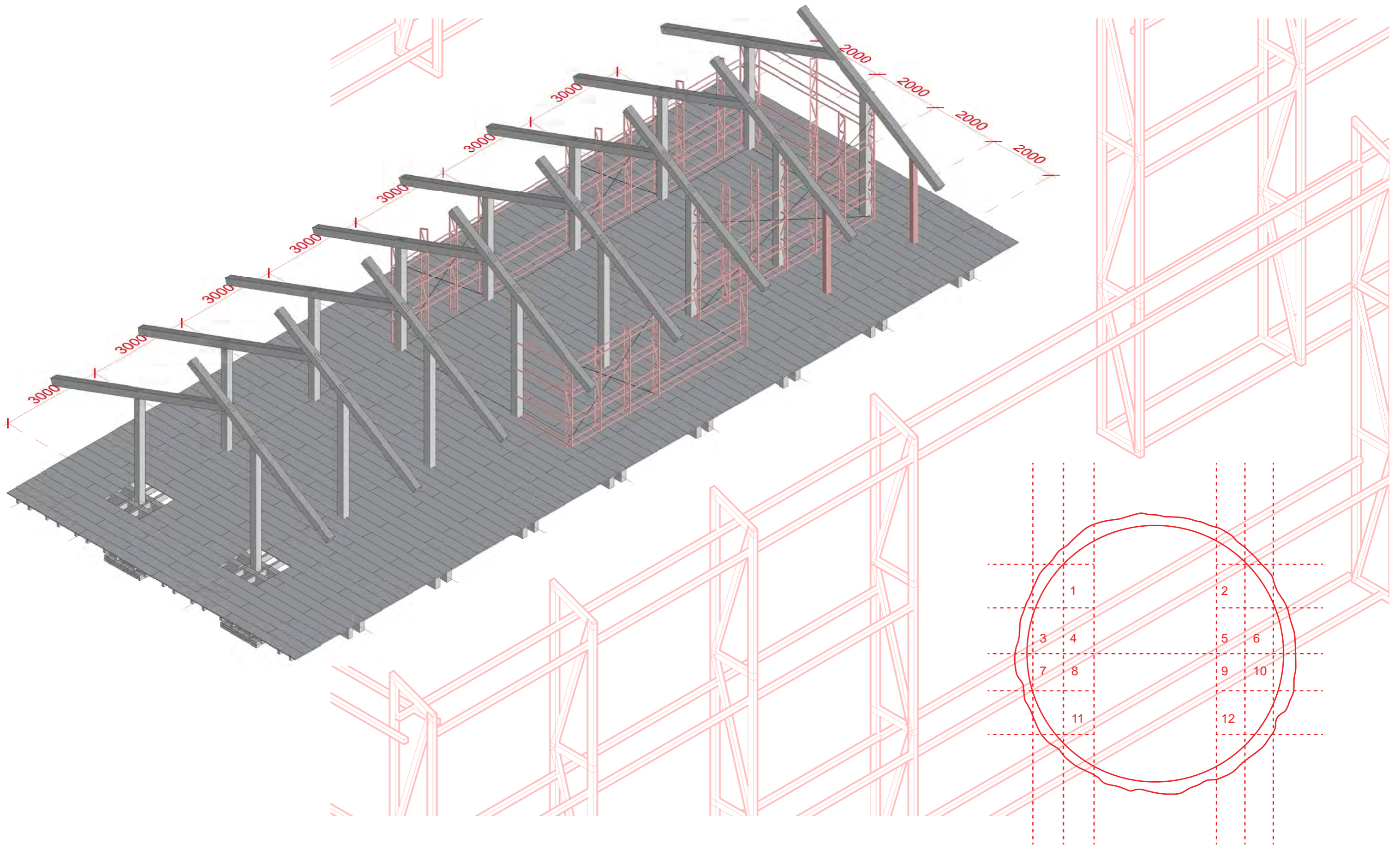


The tertiary joists are covered with a layer of multiplex and a breather membrane, and finally with 142m<sup>2</sup> of wooden shingles. These can be cut from either oak, cedar or cyprus, depending on the desired outcome. When using oak the following cuts can be made in order to create shingles, while when using Japanese techniques, different cuts can be made from wood like cyprus, using the bark and ripping it off, layer by layer to create beautiful shingles, while wasting very little wood. For this example I have decided to stick to the oak method.

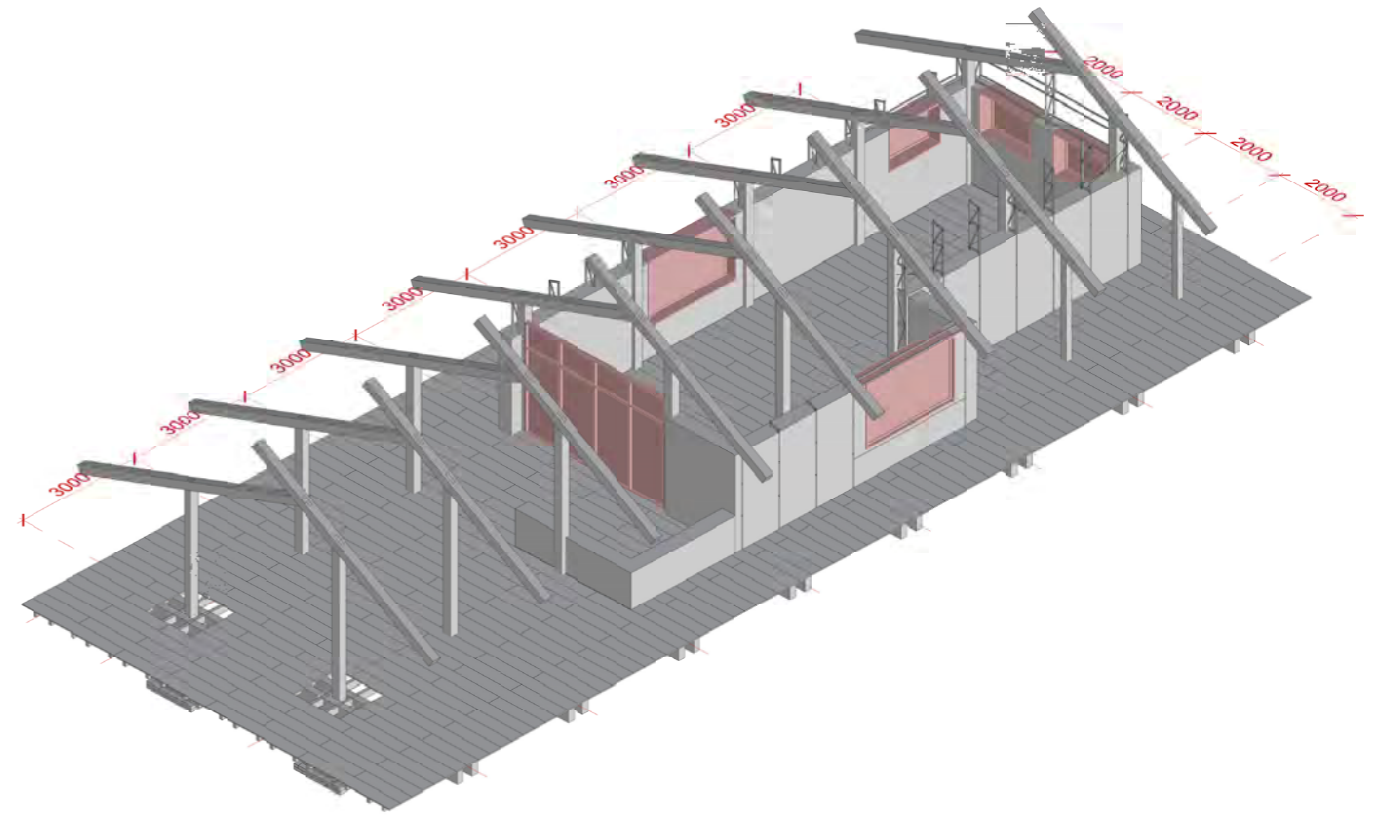
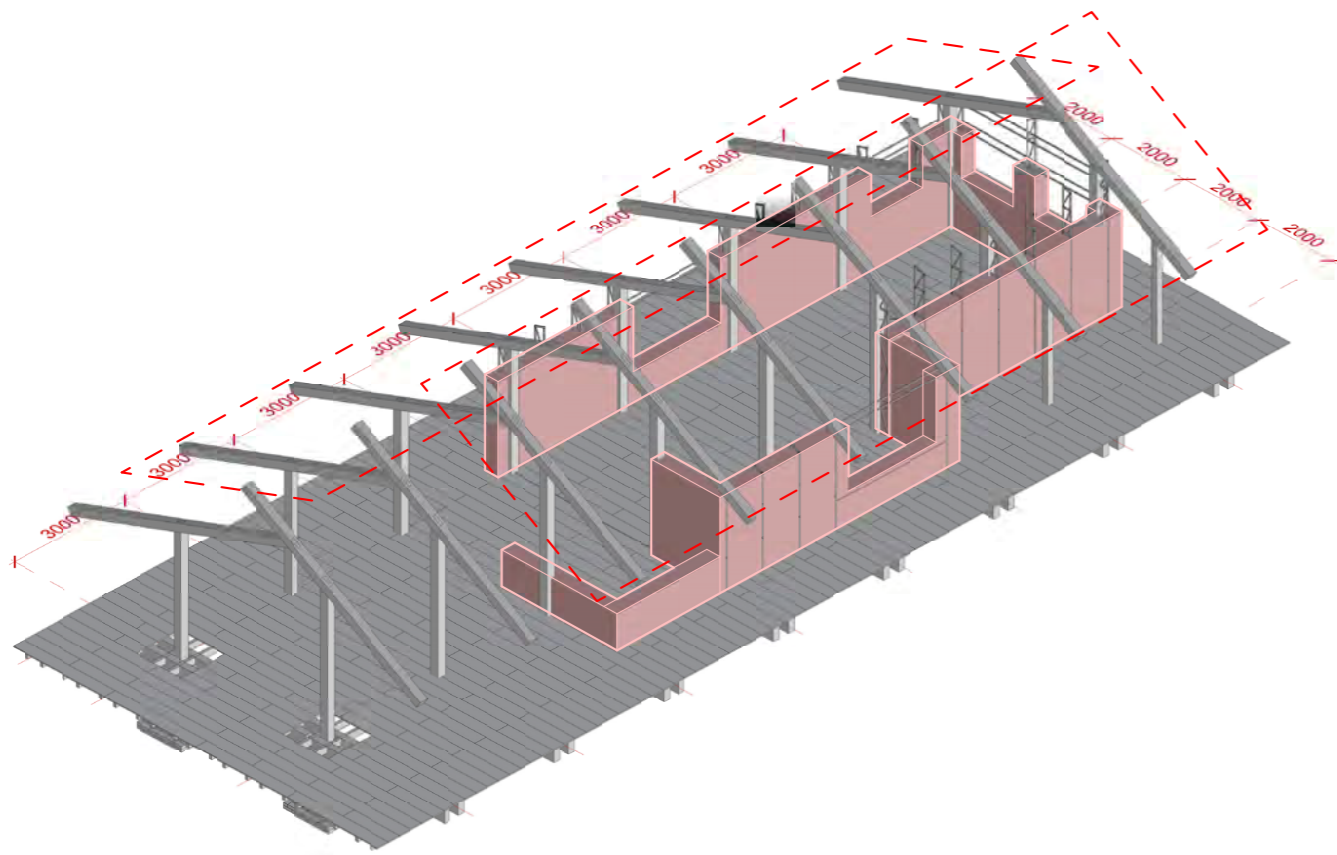


On the page to the right, a wooden frame, to hold the straw bale walls are being placed. This can be done by creating a wooden space truss structure, ensuring that it fits the straw bales "3-string" (38 x 60 x 115 cm), and also ensuring that the re-used windowframes fit and are hugged on all sides by the frame. This may take some measuring trial and error.

# 09\_WALL - TIMBER FRAME CONSTRUCTION



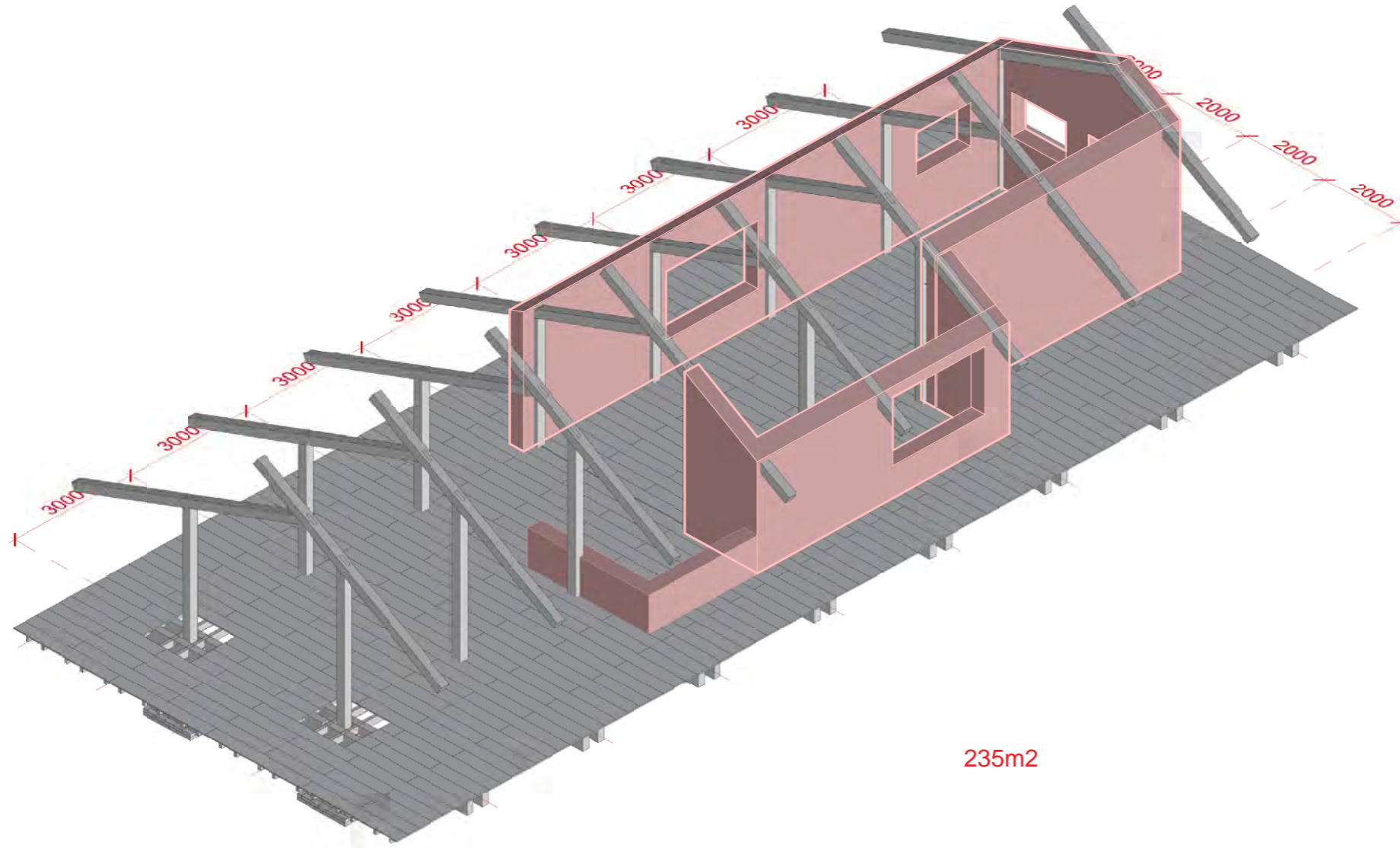
# 10\_WALL STRAW BALE STACKING AND WINDOW PLACEMENT



35m3



# 11\_LOAM PLASTERING

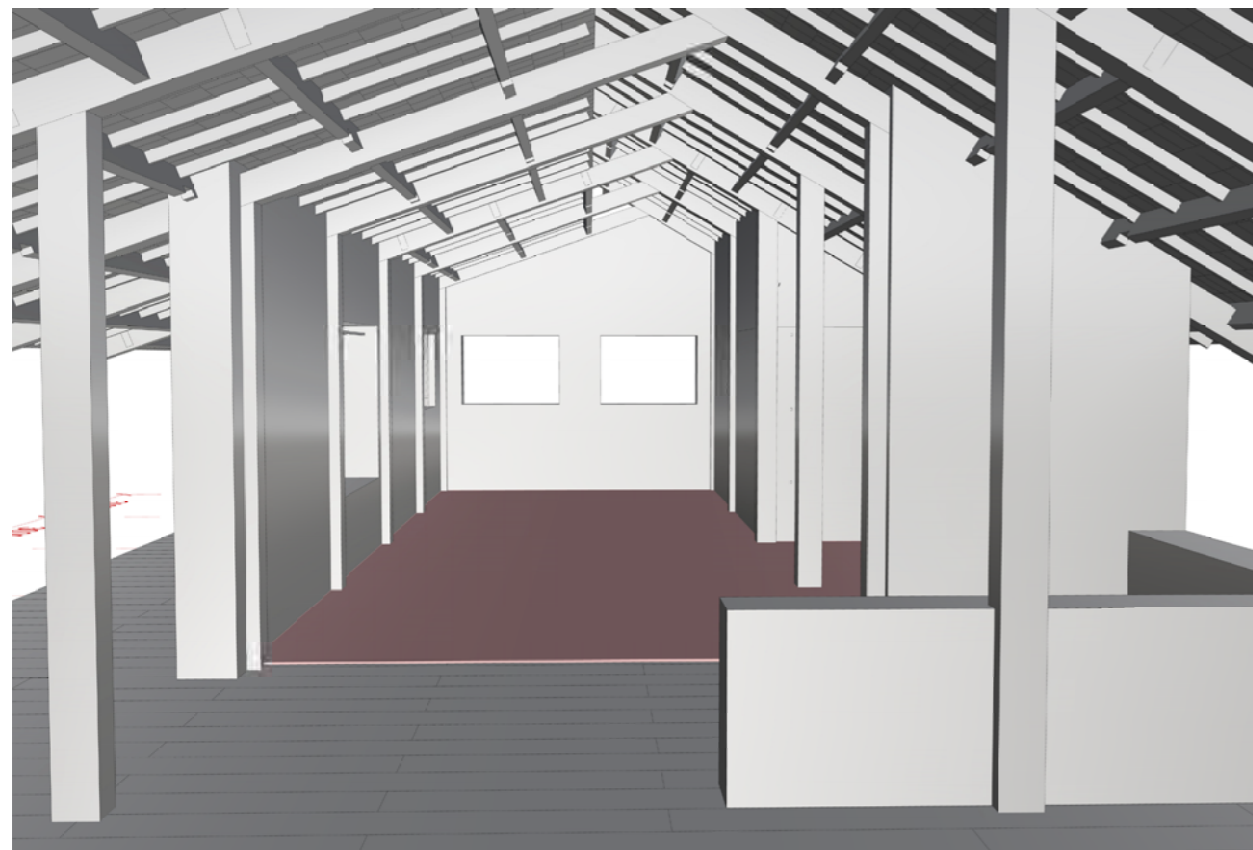
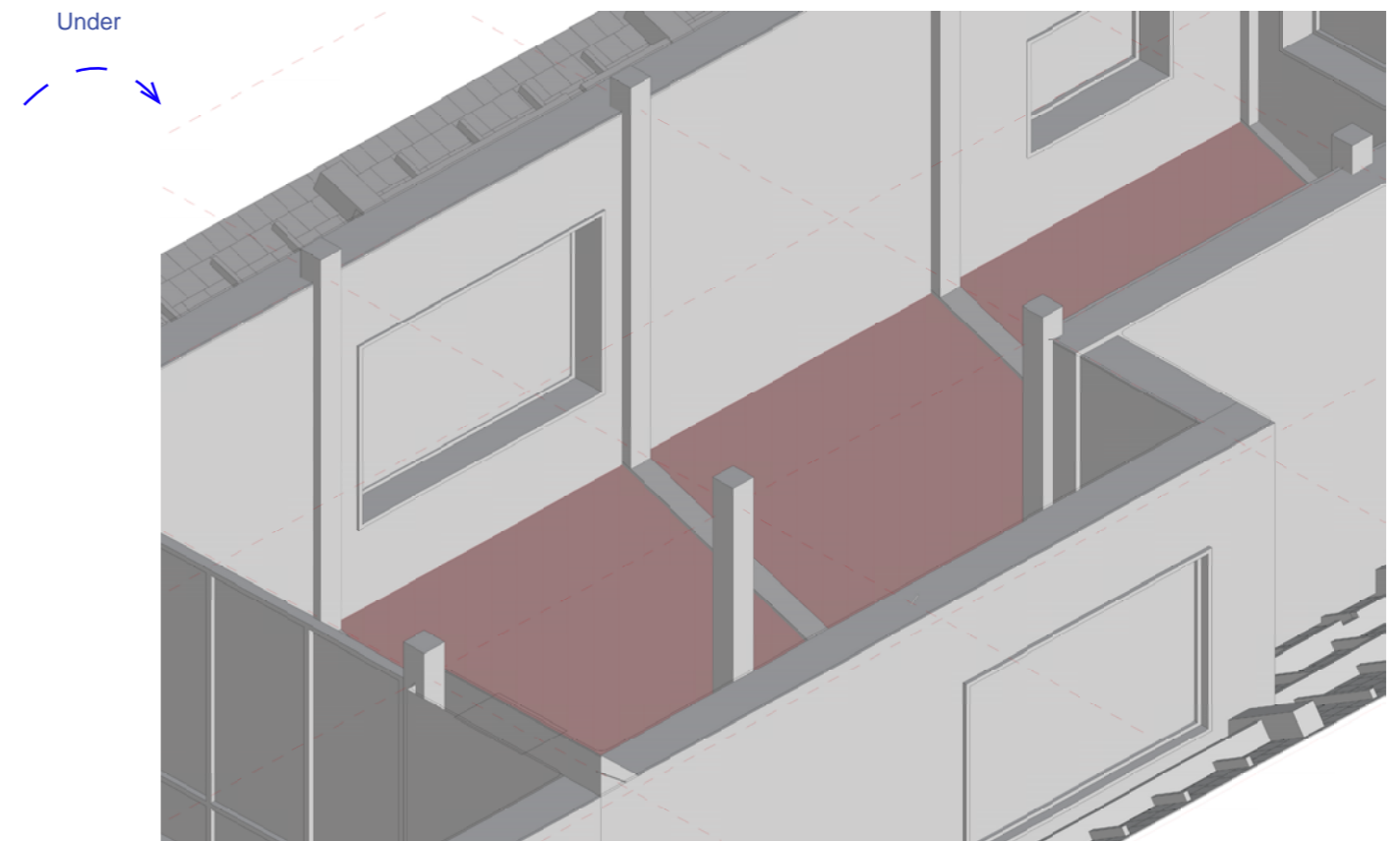
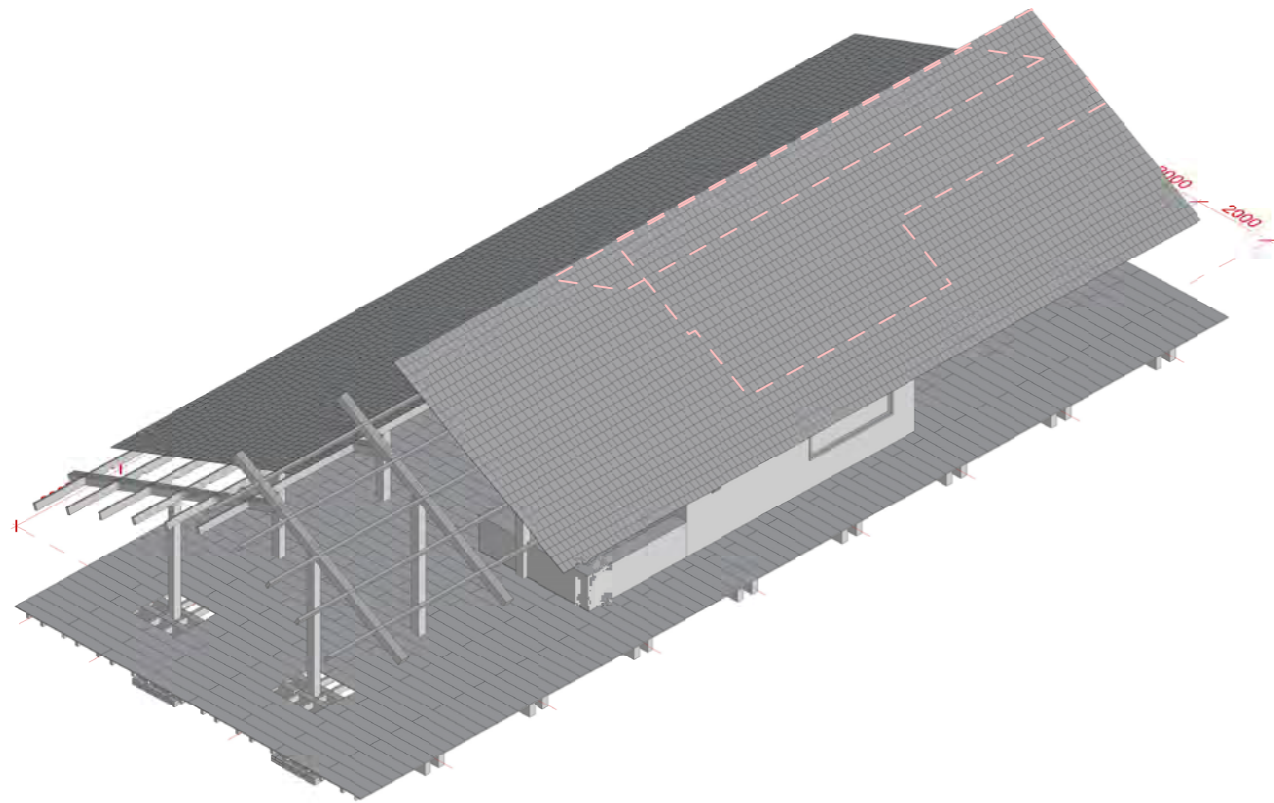


235m<sup>2</sup>

The entire straw bale construction is then covered in loam plaster, using mostly soil from the location itself since it's location allows for a varried mix of different soil types. Sand can be dug up on site, clay can be extracted from the river banks of the Rhine, and silt can be seperatly imported. For the first layer the loam plaster can be mixed with straw to give it some texture and more strength. While when finishing also a more smooth effect can be created by leaving this out, and plastering the inside to the desired finish.



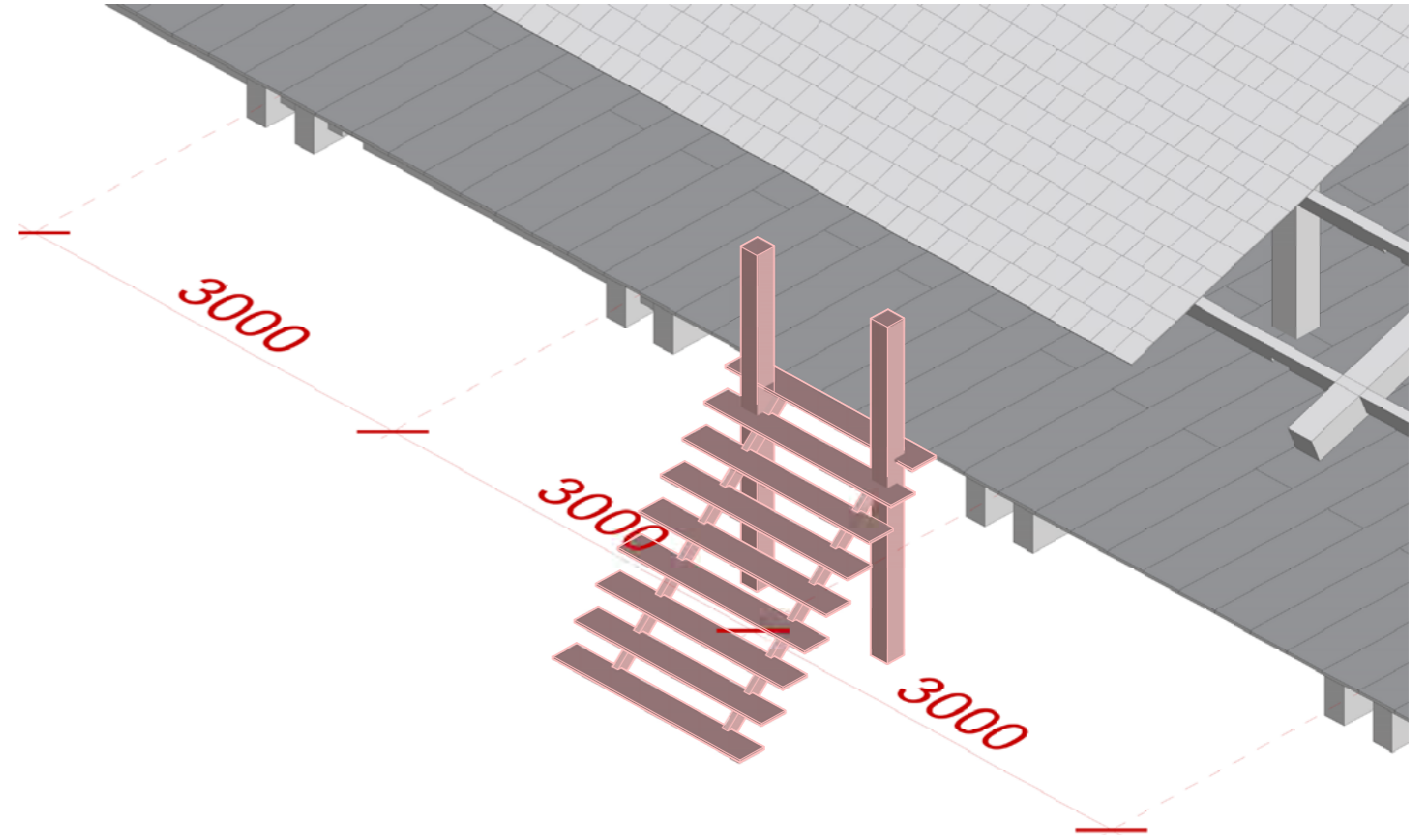
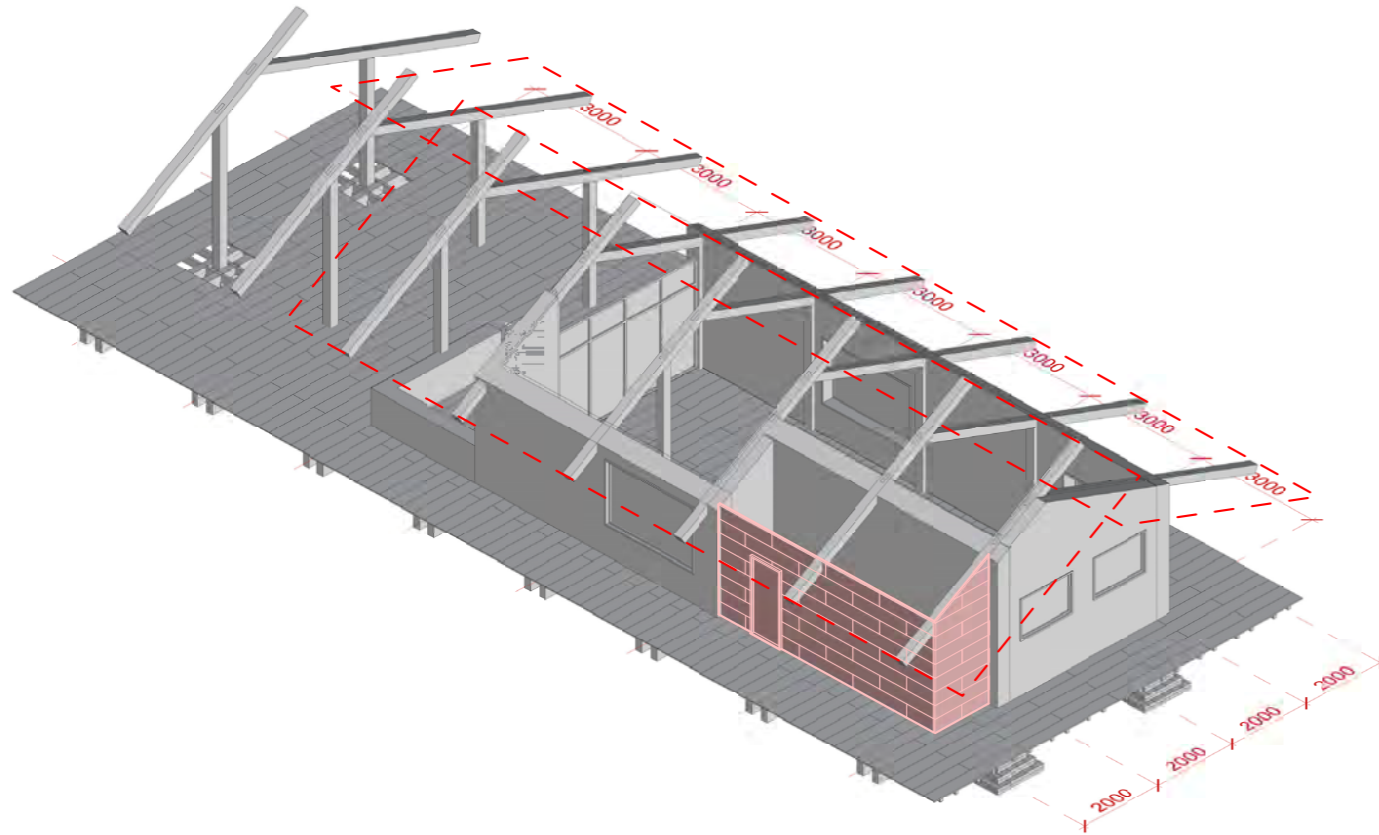
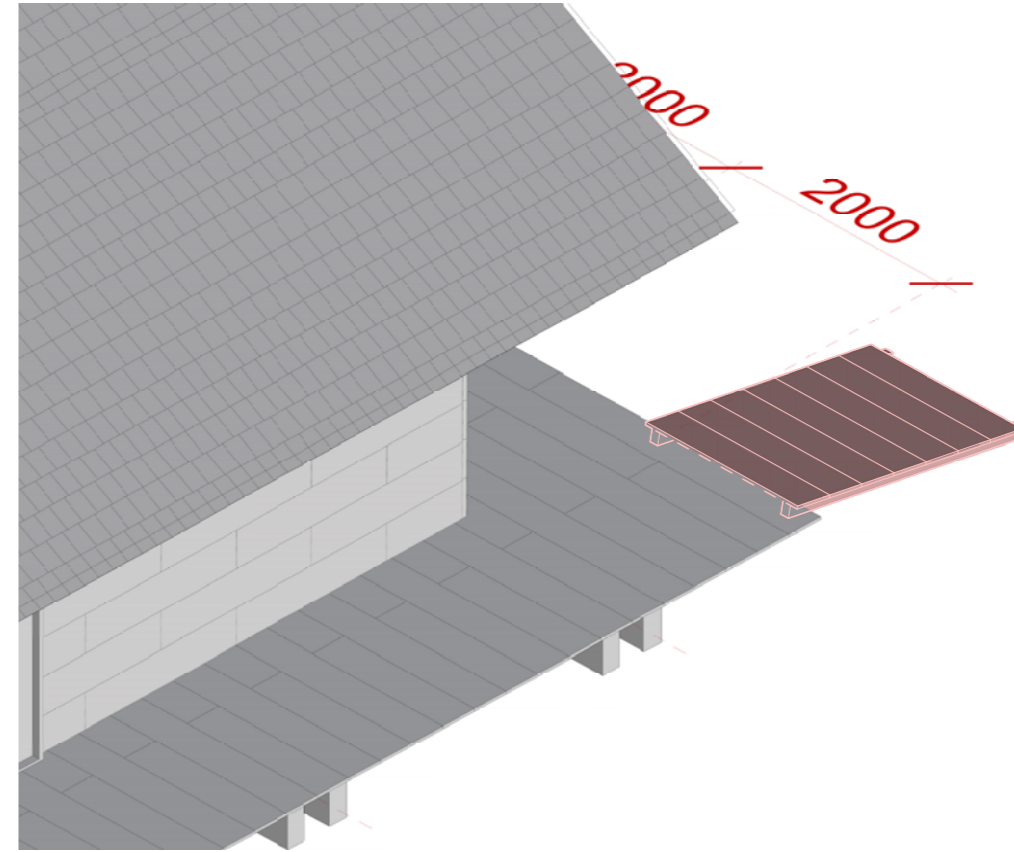
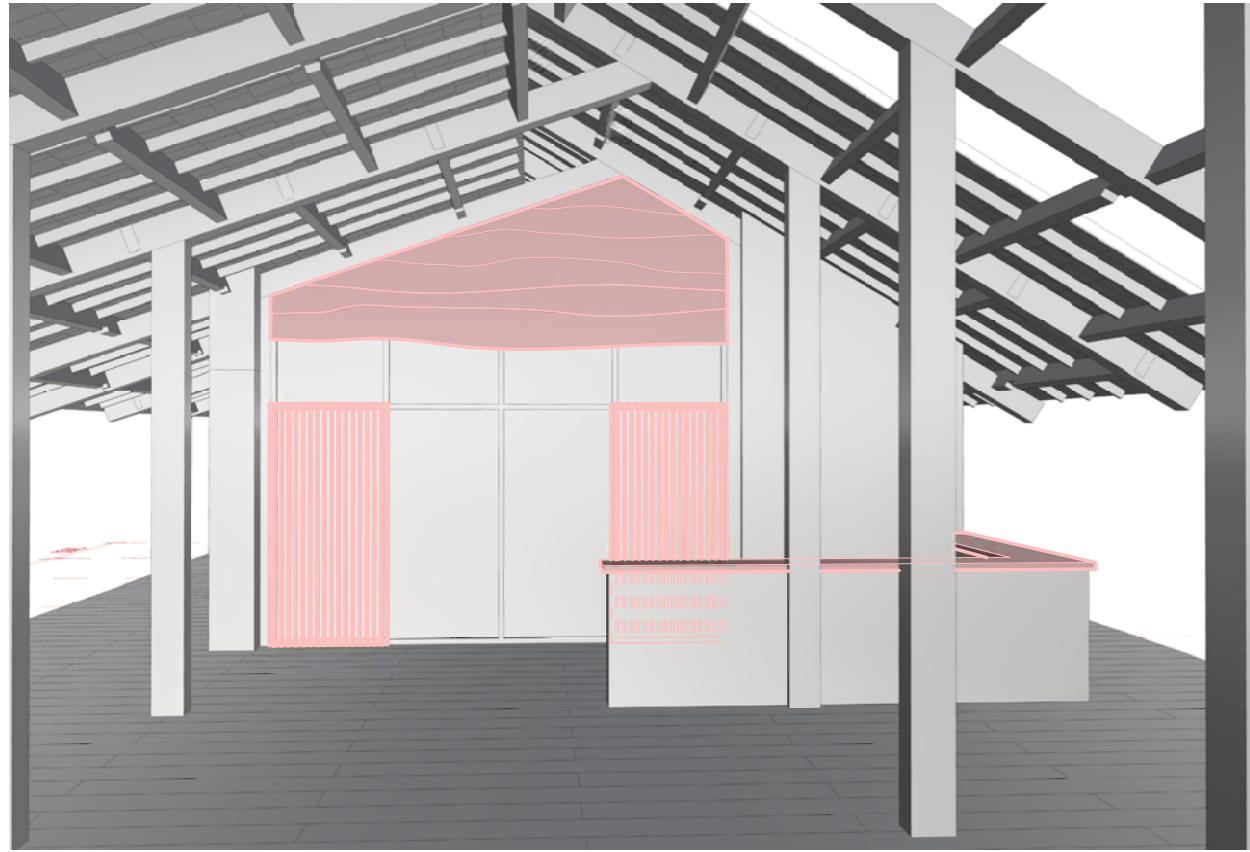
## 12\_ROOF INSULATION AND INDOOR FLOORING



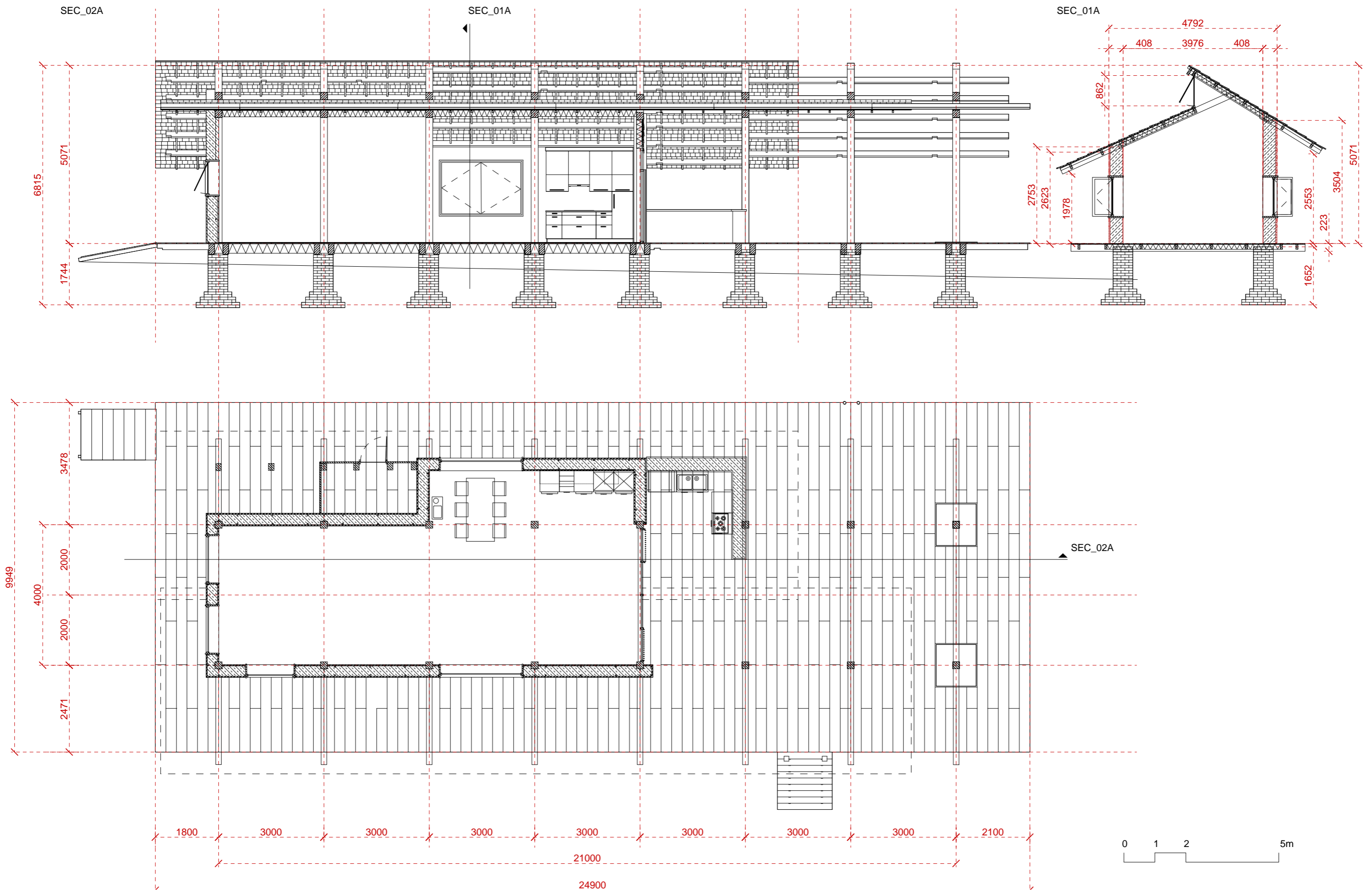
The roof insulation can now be placed, once again using the hempcrete, and a loam plaster floor can be poured and finished.

In the verso some finishing touches are made, for example finishing the entrance with live edge boards, highlighting the tree's gesture as an invite to go inside, as well as adding steps a ramp, and a little shed for storing tools and drying wood for the small oven inside.

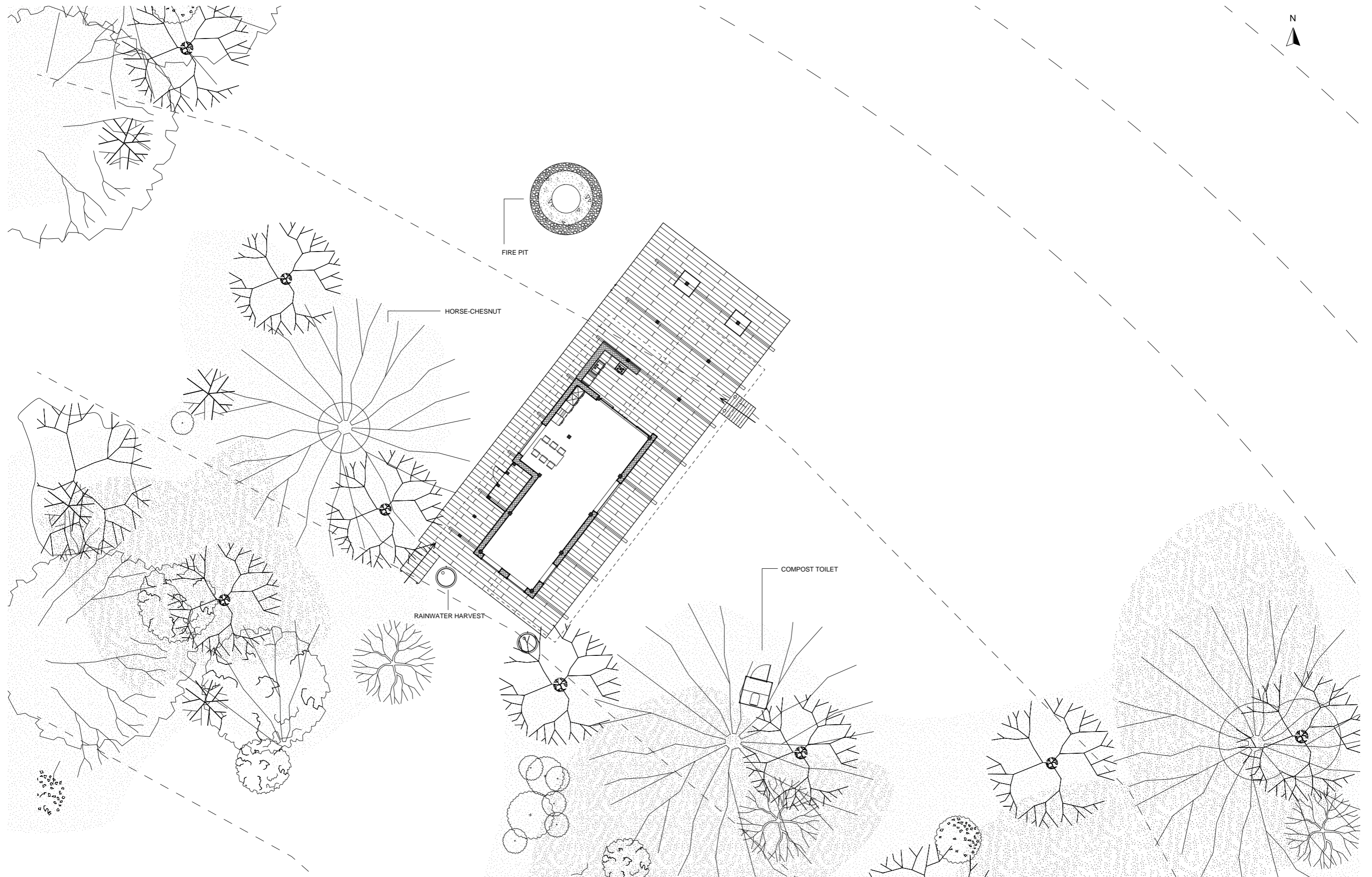
# 13\_EXTERIOR ADDITIONS



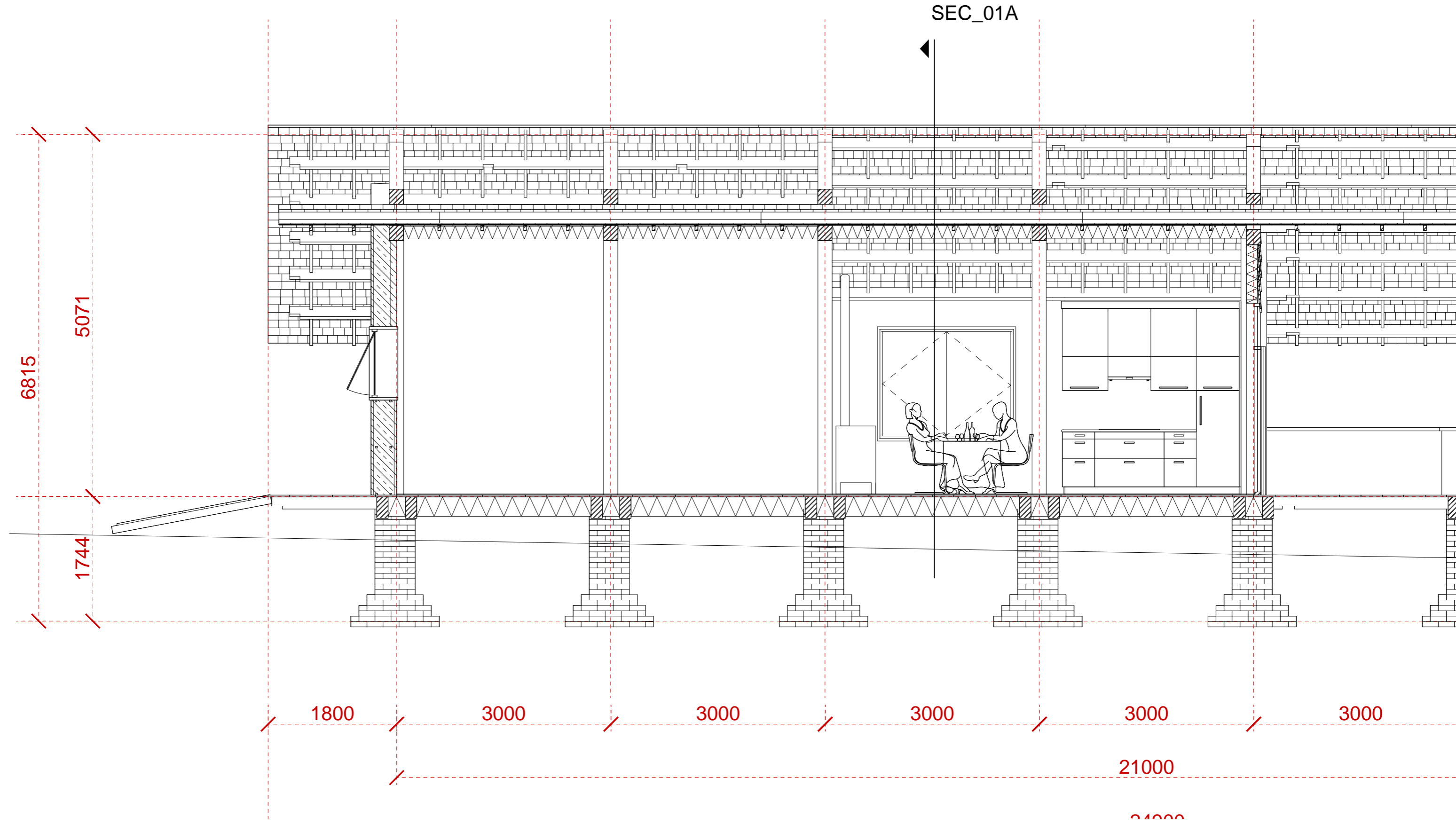
# 14\_1:100 FLOORPLAN, SECTION AND CUT



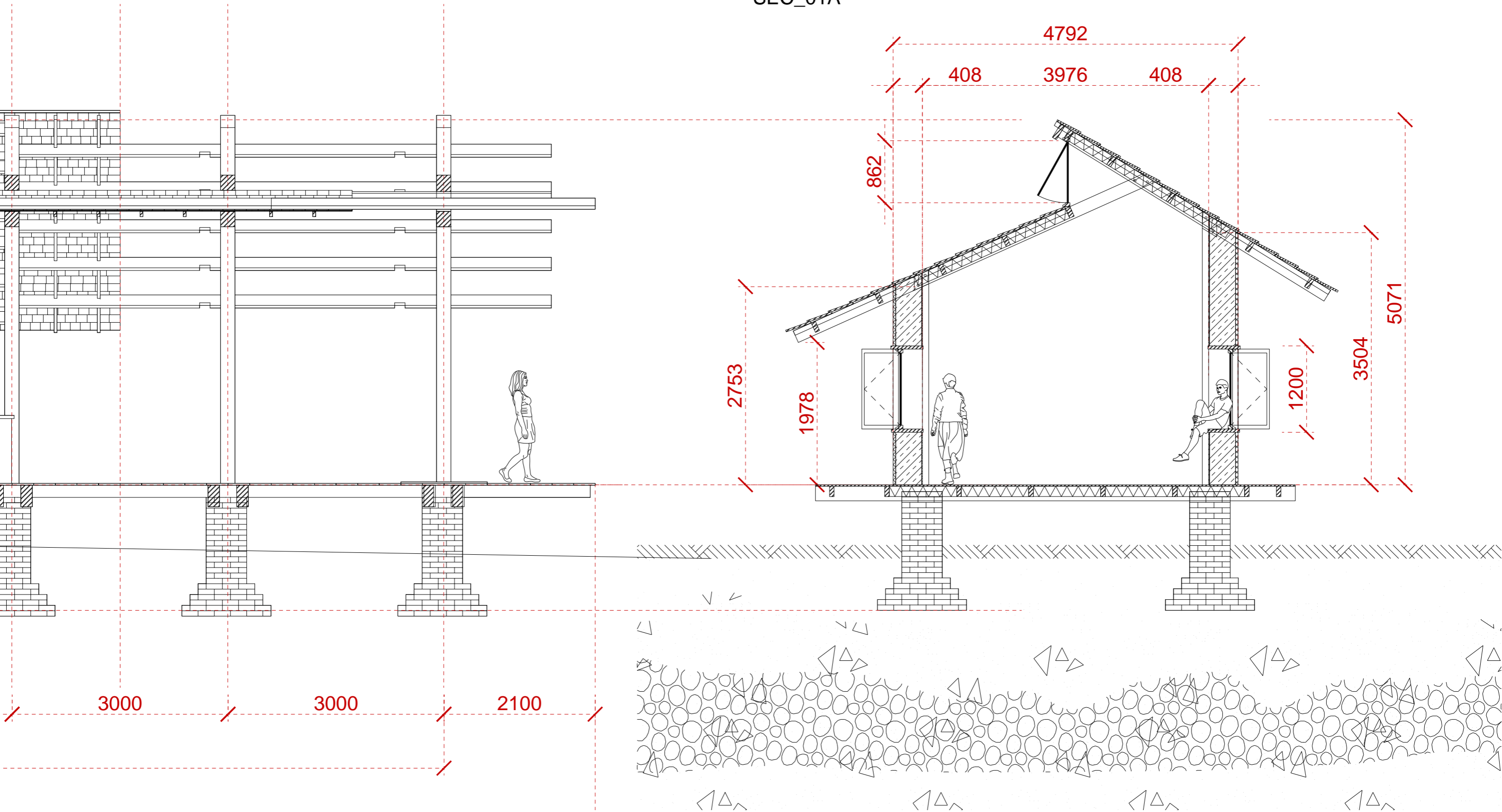
# 15\_1:200 SITUATIONAL SKETCH



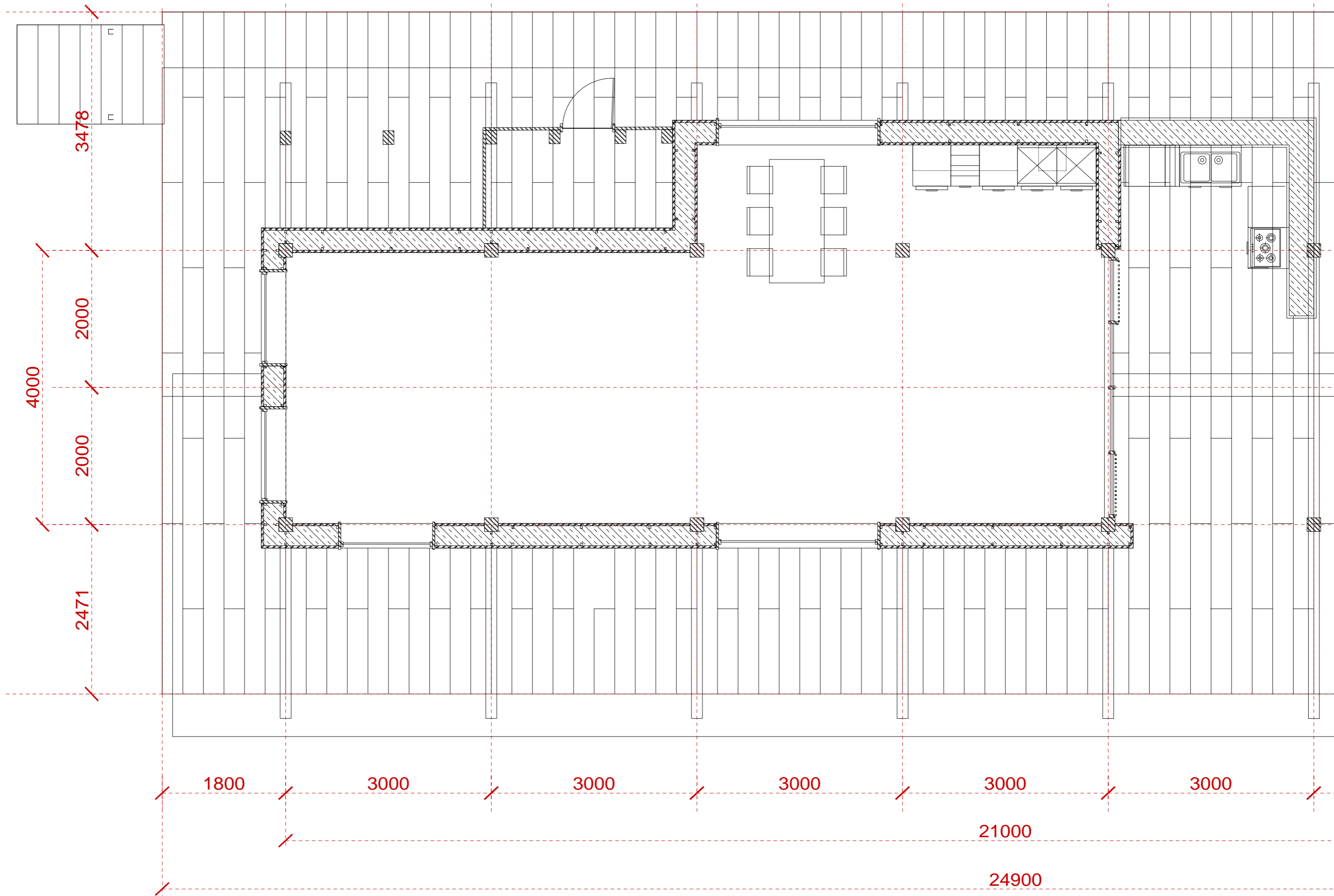
16\_1:100 SECTION, IN USE

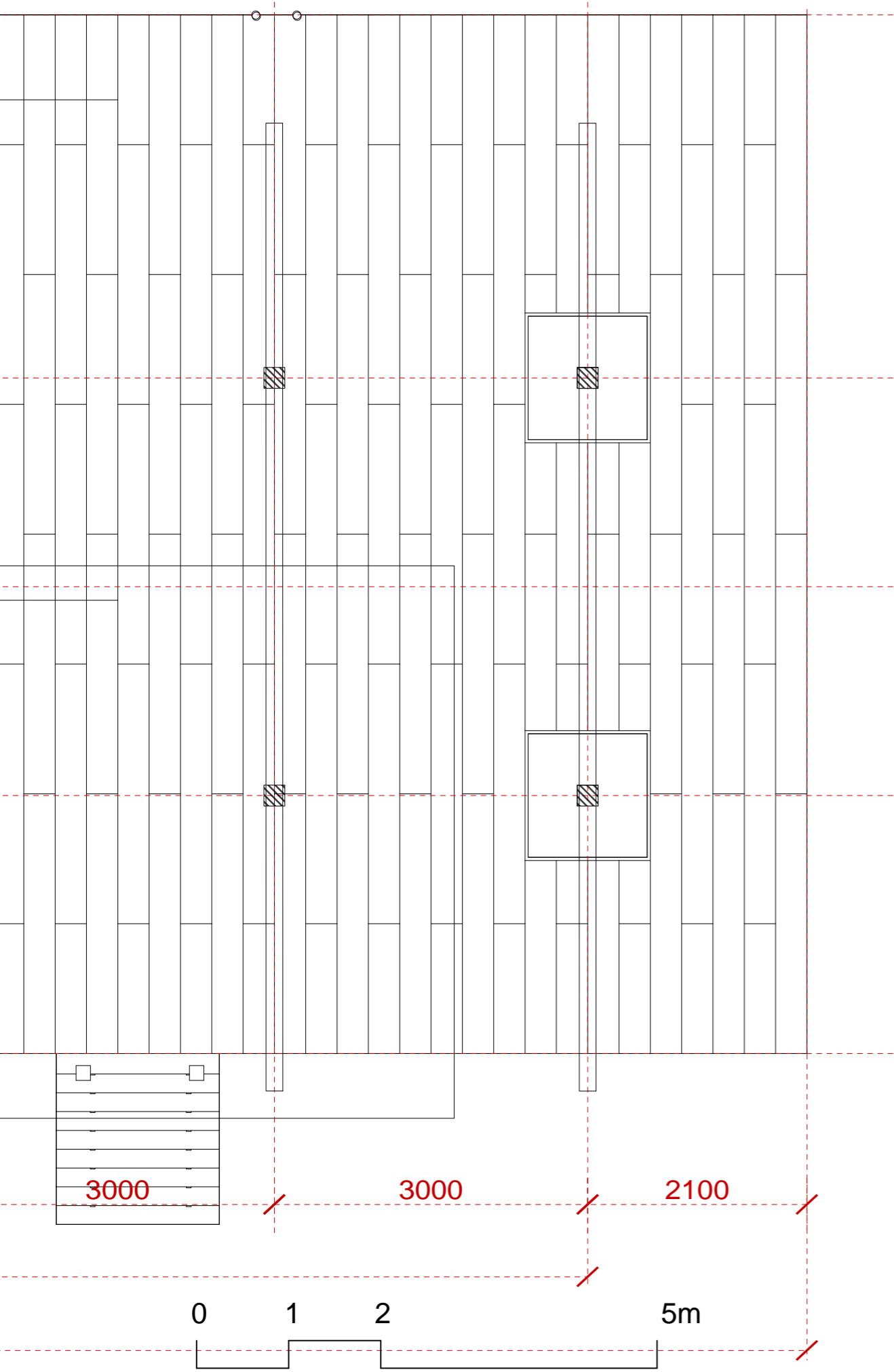


SEC\_01A



# 17\_1:100 FLOORPLAN IN USE





18\_DETAILS 1:5

