

# TIME TO DWELL

- an exploration of a primitive dwelling through elements of nature



**Jonna Kündig Hörberg**

Examiner: Daniel Norell

Supervisor: Peter Christensson

Chalmers School of Architecture  
Department of Architecture & Civil Engineering  
2024



# TIME TO DWELL

- an exploration of a primitive dwelling through elements of nature

JONNA KÜNDIG HÖRBERG  
MASTER THESIS 2024

CHALMERS SCHOOL OF ARCHITECTURE  
DEPARTMENT OF ARCHITECTURE AND CIVIL ENGINEERING  
M SC PROGRAM IN ARCHITECTURE AND URBAN DESIGN (MPARC)



PROFILE: ARCHITECTURAL EXPERIMENTATION, BEFORE AND AFTER BUILDING  
EXAMINER: DANIEL NORELL  
SUPERVISOR: PETER CHRISTENSSON

## AUTHOR

JONNA KÜNDIG HÖRBERG

### ACADEMIC EXPERIENCE

2024 MSC ARCHITECTURE AND URBAN DESIGN (MPARC)  
CHALMERS UNIVERSITY OF TECHNOLOGY

2023-24 ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE,  
EXCHANGE SEMESTER, YEAR 2  
- STUDIO CAMPONOVO BAUMGARTNER

2021-22 CHALMERS UNIVERSITY OF TECHNOLOGY  
MSC ARCHITECTURE AND URBAN DESIGN (MPARC), YEAR 1  
- STUDIO: MATTER SPACE STRUCTURE 2, AFTER BUILDING  
- STUDIO: RESIDENTIAL HEALTHCARE

2018-21 BSC, ARCHITECTURE,  
CHALMERS UNIVERSITY OF TECHNOLOGY

2017-18 FOLKUNIVERSITETET, ARKITEKTUR STHLM

### INTERNSHIP

2022-23 WHITE ARKITEKTER, STOCKHOLM

## INDEX

AUTHOR	02
INDEX	//
ABSTRACT	04
INTRODUCTION	06
- RESEARCH QUESTIONS, AIM & DELIMITATIONS	07
BACKGROUND	08
- CONTEXT	09
- SITUATION	10
THEORY	16
REFERENCE STUDIES	22
METHOD & PROCESS	25
OBSERVATIONS FROM SITE	27
DESIGN EXPLORATION	37
- IDENTIFICATION TOOL	38
- SPATIAL EXPLORATION	40
- PHOTO COLLAGES	46
DESIGN PROPOSAL	50
- THE FIREPLACE, FIRE	54
- THE OASIS, WATER	60
- THE BARN, EARTH	66
- THE SHELTER, AIR	70
DISCUSSION & REFLECTION	76
BIBLIOGRAPHY	78

## ABSTRACT

This thesis explores a primitive dwelling that seeks beyond our contemporary lifestyles, speculating on how it can stimulate a slower pace of living through the interplay between nature and architecture.

The thesis has its starting point on a site situated in Boxholm municipality in Östergötland, Sweden. The site, consisting out of four timber houses built in the 1890's, is characterized by its strong presence of nature, situated in a sloping landscape between open fields and a preserved forest. The site functions as a source of knowledge to give historical insights of past lifestyle patterns and placement of functions. It serves as a starting point for the design explorations.

The thesis has developed through an iterative process that intertwines both philosophical and rational perspectives. These focuses on understanding the relationships between the built environment and the natural world, exploring how acts of dwelling takes place in the interactional world between the two and how architecture can enhance the ritualistic activities.

Since nature is focal throughout the thesis it is envisioned through the four elements of 'earth, fire, water and air' to make it more tangible. The thesis is further based on historical perspectives of dwelling, as well as references of domestic space. Through the theoretical framework, places in the dwelling can be identified through the four natural elements and constitute a foundation from which a design exploration is developed. This is achieved through identification of the natural elements in the context of the site and the spatial necessities based on fundamental acts of dwelling. The exploration results in a design proposal that suggests four spatial configurations designed in relation to each natural element and their associated functions. In addition, the space in-between these physical configurations is explored and valued as key within the dwelling as it allows human movement and interaction with the natural setting of the site. To conclude, the final design proposal composes a dwelling that reflects a balanced co-existence between human, nature, and architecture.

Keywords: environmental elements; primitive; dwelling; rituals



Photo of barn at site.

## INTRODUCTION

The topic of this master thesis developed during my exchange semester in Switzerland at EPFL. I was particularly influenced by Pier Vittorio Aureli's course on 'The origins of modern domestic space' as the course prompted a crucial question: *Why do we design the way we do?* To unravel this question, a journey through time became focal, diving into the historical evolution and functionality of dwellings and domestic spaces.

We design according with our way of living, meaning the way we live influences the contemporary architecture. Conversely, what we design affect people's ways of living. Reconnecting to the question by Vittorio Aureli, would understanding historical dwellings make us design differently? I wonder how insights from historical dwellings can be utilized in a design approach to advocate a slower pace of living.

Since a while back, I have had a site in mind that I thought would be a potential playground for the architectural experimentation this thesis seeks to explore.



## RESEARCH QUESTIONS

*How can a design approach be developed based on the four elements 'earth, fire, water and air' and the ritualistic activities associated with dwelling?*

*How can this approach be used to explore a site-specific dwelling that recognizes a balanced co-existence between human, architecture, and nature?*

## AIM &amp; DELIMITATIONS

Through insights from historical dwellings and architecture, this thesis aims to evoke a discourse on the transformative possibilities of dwelling, offering inspiration and encouraging for change during our time of urgency.

The objective is to formulate a sensitive design approach, capable of influencing not only the physical spaces of a dwelling but also the associated lifestyle.

This thesis focus on the uniqueness of the site, shaping a design approach suited to its placement, existing factors and environmental context. The project uses the existing buildings on site as a source of knowledge and historical insights for a speculative design exploration, it does not aim to focus on preservation of the existing buildings.

Since this thesis focuses on a conceptual and experimental housing project it does not limit itself to any specific standards or regulations such as building permits or 'BBR'.

BACKGROUND

CONTEXT

SITUATION

## CONTEXT

This thesis acknowledges that in our current time in history, humanity confronts unprecedented challenges with regards to climate change and rapid growth that calls for collective global action. Architects, along with other professions shaping the foundations of our future societies, bear a responsibility to foster resilience and adapt to the consequences of climate change and human well-being. While acknowledging that no single project can address all these complex issues, this thesis seek to explore the potential of architectural design that inspire alternative ways of living through re-connection with nature.

By integrating architectural theory and sustainable living practices, this thesis aims for a holistic design approach that recognizes an interplay between humans and the surrounding nature.

## SITUATION

### STRÅLSNÄS, ÖSTERGÖTLAND

The choice of site, situated in what some might call the 'middle of nowhere,' was chosen not only due to personal acquaintance with the owners, but primarily because of its intriguing potential to serve as a canvas for exploring the concept of dwelling within a context of rich nature and landscape.

Situated in Boxholm municipality in Östergötland, the site resides at the boarder of the village called Strålsnäs. Strålsnäs comprises a school, a church, villas, and an abandoned train station next to the railway that was once part of 'Östra Stambanan'. The village is enveloped by farms, farmhouses and cottages that gracefully dot an expansive landscape of fields and forests. Additionally, the presence of the stream 'Lillån', enriches the natural allure of the surroundings. Nature takes center stage in Strålsnäs, which is a main character, aligning with the theme of this thesis.

A few kilometers outside of Strålsnäs the site 'Johannesberg' is situated in-between large fields and a preserved forest. The property consists of four small timber houses that dates to the 1890's. Johannesberg is reached by a small road that passes through the neighbor's yard, 'Löfsberg'.

The houses have been vacant since the last owner passed away, over a decade ago. Visiting the site today it appears almost like a snapshot of history, frozen in time, however, with time the houses has gotten into a very poor condition and is not habitable today.

With its existing buildings, materials, artefacts and surrounding landscape, the site is envisioned as a playground for the speculative design ideas of future dwelling spaces. The specific situation, with its strong connection to nature and natural elements, holds inspiration and influence for the explorations of this thesis.



Strålsnäs, Östergötland, Sweden



Aerial photo of Johannesberg, Source: Lantmäteriet (2023.11.12)





Photo from site showing the main house.



Photos from site.  
The outhouse with a fallen tree laying on the roof.





THEORY

THE FOUR ELEMENTS OF NATURE

RITUALS OF DWELLING

THE DWELLING ACCORDING TO THE FOUR  
ELEMENTS

## THE FOUR ELEMENTS OF NATURE

The book "Earth, Water, Fire, Air" provides a collection of essays, where architect and professor Philip Ursprung suggests in his essay "Limits to architecture" that the natural elements of 'earth, fire, water, and air' serve as thresholds that challenge traditional notions of architecture and its boundaries. By focusing on these natural elements, Ursprung believes we can explore the liminal space between what constitutes architecture and what lies beyond it, blurring the distinction between the human and the non-human realms.

Discussing architecture in relation to the four elements, Ursprung proposes an alternative approach to architectural discourse. Rather than rely on binary models such as "city versus landscape", which can be limiting and reductive, he advocates for embracing the complexity and fluidity inherent in the interaction between architecture and its environment. By acknowledging the significance of these elements, Ursprung suggests that we can uncover new pathways for architectural exploration and innovation. Viewing architecture through the lens of the elements allows for a richer understanding of the dynamic relationship between human intervention and the natural world, opening possibilities for interpretations and interventions within the built environment. (Ursprung, 2014)

Philosopher and author David Macauley explores the elements in his book 'Elemental Philosophy' (2010) in relation to environment. In this exploration, Macauley invites us to delve deeper into the symbolic significance of each element and contemplate their influence on our environmental ideas and collective imagination.

Earth is associated with stability, solidity, and grounding, it "carries the weight of the world", as Macauley puts it. Earth symbolizes the material world, fertility, and the cycle of life. In philosophical terms, earth represents the physical realm and the basis of existence.

*"All things of earth, and the earth itself as a whole, flow together into a reciprocal accord." - Heidegger (Macauley, 2010)*

Air is linked to breath, movement, and change. It represents the invisible forces of the atmosphere, including wind, weather patterns, and the breath of life. Phi-

losophically, air signifies the dynamic and ephemeral nature of existence.

Fire symbolizes energy, transformation, and illumination. It represents both destructive and creative forces, embodying passion, vitality, and purification. Fire is associated with warmth, light, and the spark of inspiration. Lastly, water is connected to fluidity, renewal, and purification. It symbolizes the flow of life, emotions, and regeneration. (Macauley, 2010)

## RITUALS OF DWELLING

### WHAT DOES IT MEAN TO DWELL?

In 1969, the German philosopher Martin Heidegger published his influential book 'Building, thinking, dwelling'. Heidegger explores the concept of dwelling in relation to building and thinking, meaning that dwelling is not only a physical act of inhabiting a space but encompasses a deeper sense of being-in-the-world. He means that dwelling involves a fundamental relationship between humans and their environment and that this relationship is characterized by belonging, care, and attunement to the world and nature around them. (Leach, 2005)

Heidegger suggests that modern ways of building and dwelling have become disconnected from the essence of dwelling itself. He argues that buildings should not be only functional objects designed to fulfill human needs and desires but they should foster meaningful relationships between humans, their built environments, and the natural world. (Leach, 2005)

A perspective on dwelling that compares to Heidegger's ideas and is built on phenomenological ideas of the French philosopher Maurice Merleau-Ponty is given by David Abram in his book 'The Spell of the Sensuous: Perception and Language in a More-Than-Human World' (1997). Abram suggests that dwelling is fundamentally an embodied and participatory engagement with the 'more-than-human' world. This 'more-than-human' world acknowledges the interconnectedness of all life forms beyond human existence, highlighting the value and significance of non-human entities. Abram's perspective challenges human-centric views and encourages a deeper sense of relationship, responsibility, and humility toward the ecological community of which we are a part. He emphasizes the importance of sensory perception, tactile

experience, and immersive interaction in shaping our sense of place and belonging. For Abram, dwelling involves a deep attunement to the sensory qualities of the natural environment, including its textures, sounds, smells, and rhythms.

#### RITUALS AND ARCHITECTURE

Quoting Vittorio Aureli and Tattara (2019):

*"Rituals are activities performed according to a predefined set of actions. The performance of a ritual always involves the definition of a place whose form is clearly organized in order to ensure its continuity."*

Aureli and Tattara's definition of rituals suggests a defined interplay between human and architecture. This encourages to explore the fundamental architectural elements we encounter in our everyday life.

In 2014, Rem Koolhaas together with OMA took part in the Venice Architecture Biennale, with an exhibition called 'Fundamentals'. The exhibition, based on Koolhaas's book 'Elements of Architecture' showed a wide repertoire of fundamental architectural elements, highlighting the variety of elements from different eras and contexts, exhibiting historical, contemporary, and future versions of architectural elements to narrate the evolution of their character, power, symbolism, and appearance. The fundamental elements consisted of floor, door, wall, ceiling, toilet, window, corridor, balcony, facade, hearth, and roof. (Crawshaw, 2014)

In relation to architectural elements and rituals, the author Marianne Hem Eriksen provides historical perspectives on this in her book 'Architecture, society, and ritual in Viking Age Scandinavia' (2019). Eriksen provides a deep and detailed explanation of the relationship between ritual and architectural elements found in excavations of Scandinavian longhouse settlements from the Viking Age.

Eriksen put emphasis on the door as one of the most fundamental architectural elements in our daily lives. Countless times, we pass through, open, or close doors yet its significance often goes unnoticed. Functionally, the door transcends physical boundaries, serving as a linkage between internal and external spaces, connecting human spaces with the broader world beyond.

Gaston Bachelard reflects on the multifaceted symbolism of doors, representing various aspects of life's journey, including hesitation, desire, security, and respect. (Eriksen, 2019)

From an architectural perspective, doors hold significant influence over human emotions, behaviors, and self-perception, with the capacity to evoke feelings of disclosure, exclusion, or confinement within built environments. The door is directed by social parameters as well as it can reflect and shape boundaries and direction within existing social structures. The excavations of Scandinavian longhouses also reveal that the placement of the door indicates the profound impact on social structures, rituals, transitions between domestic zones and patterns of lifestyle. (Eriksen, 2019)

#### ZONES WITHIN A DWELLING

Furthermore, Eriksen explains how the Scandinavian longhouse developed from being multifunctional to become divided by function when walls made the previously open spaces, enclosed rooms. Walls made the boundaries evident, giving physical division to the zones within the home. Edward Hall's theory of proxemics suggest these zones to be known as 'territorial zones' and are divided into the four zones of public, social, personal, and intimate. This analytical framework can be applied to understand levels of social engagement in a dwelling. With the longhouse as an example, this could be seen as an embodiment of Hall's theory. One would enter the public zone of the 'home territory', transition into the 'personal zone', and further inside the house find the most intimate zone known as the 'body territory'. (Eriksen, 2019)

#### THE DWELLING ACCORDING TO THE FOUR ELEMENTS

How does the four elements 'earth, fire, water, and air' influence the conceptualization and ritualistic activities associated with dwelling?

#### EARTH: THE UTILIZATION OF THE GROUND

Every built space utilizes a piece of place, and it requires a foundation, or an element that defines its physical boundaries and roots to earth. Treating the foundation as an element alone, it can be recognized as a platform.

In 1962, architect Jørn Utzon, published his influential essay "Platforms and Plateaus." Utzon extolled the architectural significance of the platform. Emphasizing the platform's capacity to define space without enclosing it, Utzon unveiled an architecture of subtle manipulation, where the ground's essence is both harnessed and constrained. Utzon's essay invites further reflection on the nuanced interplay between architecture, politics, and digital mediation, highlighting platforms as potent symbols of control and facilitation.

This topic is further explored by DOGMA, in the essay "Platforms: Architecture and the Use of the Ground" (2019) written by Pier Vittorio Aureli and Martino Tattara. The authors revel in history to capture the evolution and utilization of platforms in domestic and urban spaces and highlight their symbolic meaning.

One example found from early houses, is where the dwelling consists of several platforms that each are designated for different dwelling activities such as cooking, eating, and sleeping, imbuing these functions with theatrical significance. This architectural feature is prominently illustrated in Çatalhöyük, an extraordinary Neolithic settlement in southern Anatolia dating from 6,500 to 5,500 BC. Instead of enclosed rooms, spaces within the houses were arranged around platforms of varying heights. This architectural arrangement reflects a deliberate organization of space, highlighting the centrality of platforms in structuring domestic life during that era. (Aureli, Tattara, 2019)

*"The floor thus turned the house into a stage on which to perform what was the essential purpose of early permanent dwellings: the ritualization of life." - Aureli, Tattara (2019)*

#### FIRE: THE FIREPLACE

Historically, the fireplace has held great importance within the household, serving as a literal and symbolic focal point. Often placed in the center of the house, the fireplace was the central source for survival and comfort, shaping the routines and activities of the inhabitants. The placement of the fireplace in the dwelling would affect the socio-spatial organization. It directed the flow of movement and interaction, while it shaped the dynamics of social life within the home. Beyond its practical utility, the fireplace holds deep symbolic meaning for the dwellers, being a grounding element

in experience of daily life. The fireplace embodies warmth, nourishment, and community, drawing individuals together around its flames. Much of daily life revolved around activities associated with the fireplace, such as collecting wood, building fires, and arranging gatherings around its warmth and light. Consequently, the fireplace transcends its mere utilitarian function, it is a symbol of home, community, and the shared experiences of daily life. (Eriksen, 2019)

#### WATER: A SOURCE OF LIFE

In Gaston Bachelard's book 'Water and Dreams' (1963), Bachelard explores the psychological significance of water and its connection to human dwelling. Bachelard views water as a symbol of the subconscious mind and the depths of the human psyche. He argues that water represents the fluidity of thought and emotion, as well as the potential for transformation and renewal.

In relation to dwelling, Bachelard discusses how water imagery can appear in our dreams and fantasies about home. He suggests that water symbolizes the primal source of life and the unconscious forces that shape our experiences of dwelling, meaning water is not only a physical element but also a metaphor for the inner depths of the human soul and the mysteries of existence. (Bachelard, 1963)

*In architecture, we gain from what is present, solid and form, and we utilize what is absent, void and space. Together, the presence of form and the absence of space form a unity, an inseparable reality.*

- Lao Tzu (Sirithanawat, 1990)

Simon Unwin presents, in his book 'Analyzing Architecture' (2010), architecture as identification of place, where he provides a comprehensive understanding of how architecture shapes and is shaped by its context. Unwin explores many different themes on architecture, and one of them is the sensory experience of architecture, exploring how elements such as light, sound, texture, and spatial configuration contribute to the atmosphere and character of a place. By considering the sensory qualities of architecture, Unwin encourages to appreciate the richness of one's spatial surroundings and the ways in which architecture can evoke emotional responses and enhance human experience.

In 1877, the British art critic John Ruskin wrote 'The poetry of architecture'. In his book, Ruskin emphasizes that the most impactful enhancements to natural scenery are those that animate the scene in harmony with its inherent character. He suggests that incorporating elements of life into natural beauty enhances its essence, but only if they align with and enrich the scene's existing spirit. He argues that when adding elements to a scene of natural beauty, such as buildings, it is crucial to ensure that the architecture reflect the tranquility and simplicity of the environment. Despite being written almost 150 years ago; Ruskin's ideas are relevant for the topic of this thesis.

*"What do we mean when we speak of architectural quality? It is a question that I have little difficulty in answering. Quality in architecture...is to me when a building manages to move me. What on earth is it that moves me? How can I get it into my own work? [...] How do people design things with such a beautiful, natural presence, things that move me every single time? One word for it is Atmosphere."*

- Zumthor, 2006 (Morichetto, 2017)



## REFERENCE STUDIES

THERME VALS BY PETER ZUMTHOR

VILLA LJUNGHUSEN BY PER FRIBERG

THE MORIYAMA HOUSE BY SANAA



### THERME VALS BY PETER ZUMTHOR

Evident in the work of Peter Zumthor is the strong presence of nature and sensible integration in the surrounding environment. One particular project that inspire this thesis is the Therme Vals in Grübunden built in 1996. Regardless not being a housing project, Therme Vals is a source of inspiration because of the way it conceptually embrace and interact with its surrounding nature.

In the design of the Therme Vals, emphasis is put on incorporating fundamental elements such as water, earth, air and greenery. This is done by using locally sourced materials, for example granite from the region. What is particularly inspiring for this thesis is the interplay between architecture and nature, the presence of natural elements, the importance of raw materials as they naturally appear in the context and creates a seamlessness between the architecture and the landscape.



Therme Vals, Switzerland. Photo by Andrea Ceriani. Source: Archdaily.com

### VILLA LJUNGHUSEN BY PER FRIBERG

In 1960, the Swedish landscape architect Per Friberg designed a summerhouse by the coast in southern Sweden, for him and his family.

The house is an inspiration for this thesis as it is situated in close relationship its natural setting. Poles elevates the foundation that rests on long wooden beams and floats above ground. The house is wedged between tree trunks and is reached by an elevated wooden pathway. The roof rests under the tree crowns, making this house approach its surroundings carefully and sensitively.

The robust but light wooden structure gives the house an openness and visual connection through the house and blurs the difference of inside and outside, making the residents connect to the surrounding environment. It is a great example of how a spatial experience can be designed with the presence of nature by only using few architectural elements.



Ljunghusen, Per Friberg. Photo by Åke E:son Lindman. Source: Atlasofplaces.com.

#### THE MORIYAMA HOUSE, BY SANAA

In 2017, Beka and Lemione published their documentary 'Moriyama-san', capturing an intimate portrayal of Mr. Moriyama in his house in Tokyo. The house, called Moriyama House was built in 1998, designed for Mr. Moriyama by Ryue Nishizawa, Sanaa. The house is an urban "forest village" consisting out of ten white volumes within a garden.

The documentary captures the daily life of Mr. Moriyama, who dwells alone in his house. The spaces within his home are intuitively used, as most of them are designed with very little intention of how to be used. The many entrances of the volumes of the site connects to an undefined outdoor space, a blurred threshold between zones that is creatively shaped by the act of dwelling. This 'in-between' space creates interesting dialogs between architecture and human activity.

A similarity between the Moriyama House and Zumthor's Therme Vals, is the division of functional rooms and how the emphasis is dedicated to the space between these volumes. In the Therme Vals, this is where the water is, seeming almost unlimited and enhancing the movement in the water. In the Moriyama house, the in-between space is meant for dwelling. This outdoor space between the house volumes is not dedicated to any specific function but is used the way it suits the resident.

Both the documentary of Mr. Moriyama and the Moriyama House are two relevant references for the discourse of this thesis. The documentary poetically captures the social, cultural and ritualistic aspects of Mr. Moriyama's way of living, while the presence of the architecture is evident and states that spatial design can shape the way residents' dwell without being limited to a certain function.



Moriyama House. Photo by Edmund Sumner.  
Source: Dezeen.com.

## METHOD & PROCESS

## METHOD & PROCESS

### PROCESS

The thesis aims to develop methods to design a dwelling based on four places designed according to the four elements of 'earth, fire, water and air'. The methods has developed through theoretical research and through identification of the four elements on the site.

Through the process of theoretical research and site analysis, this thesis aims to develop tools that explores the question: How can a design approach be developed based on the four elements 'earth, fire, water and air' and the ritualistic activities associated with dwelling? And how can this approach be used to design a site-specific dwelling that recognizes a balanced co-existence between human, architecture, and nature?

The first phase of the thesis focus on gathering relevant theory and references that helps frame the project. This is done in parallel with a site visit where observations and interpretations are made to create an idea of the historical and environmental context of the site and to imagine how the place once functioned as a dwelling. The site analysis is made through sketches, drawings, and photos.

The theoretical framework and the observation from site lay the foundation for an identification tool that is created to identify the most important functions in a dwelling and how they relate to the four elements. This tool is implemented in the design exploration to develop design ideas according to the aim of the thesis.

The design explorations are made mainly through two approaches. The first one is by producing abstract drawings that explores spatial configurations from a fundamental perspective. The second approach is to explore relationships between materials and proportions in the context of the site. This is made by photocollages. From these methods a design proposal is developed.

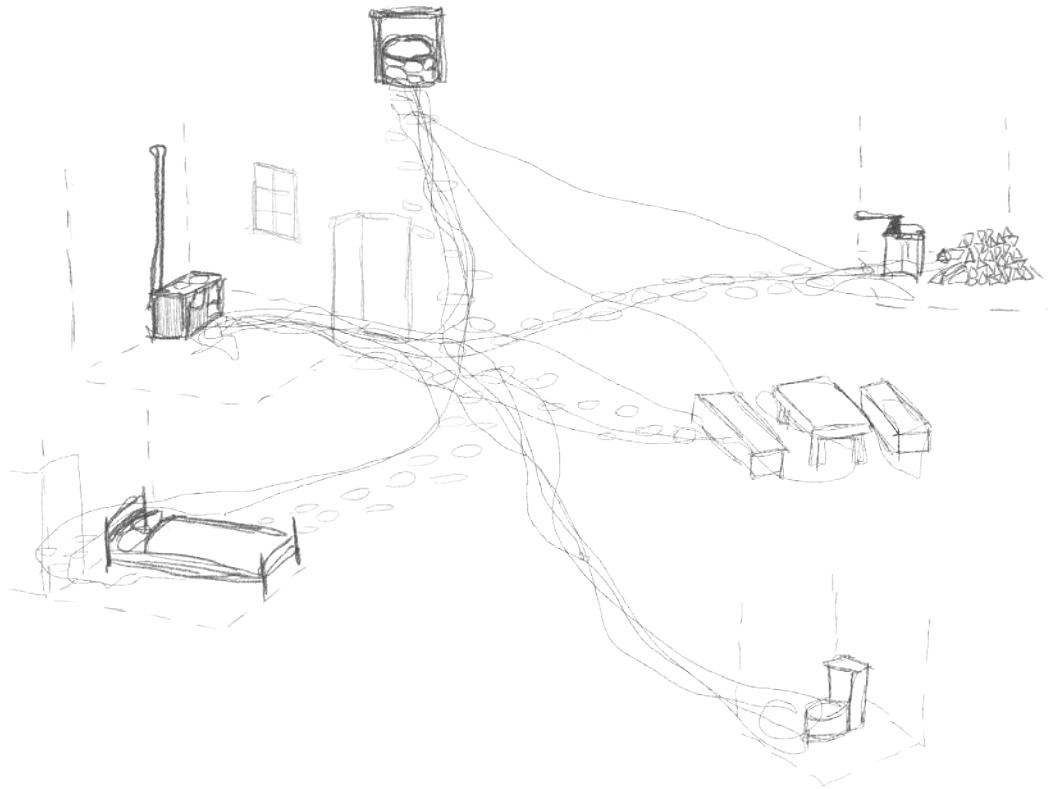
OBSERVATIONS FROM SITE

## OBSERVATIONS FROM SITE

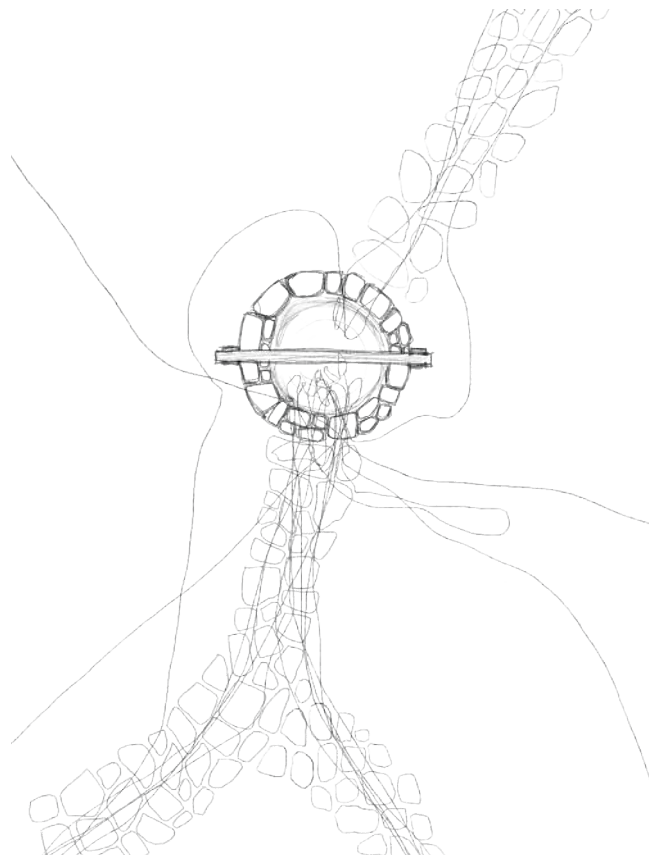
### RELATIONSHIPS BETWEEN FUNCTIONS

The site is observed through an analysis that focuses on finding the four elements of earth, fire, water and air within the existing houses and functions on the site. This is done through a set of sketches and photographs to capture the characteristics of the houses and the surrounding environment as well as interpretations to reflect on the idea of how the houses once were used as a residence.

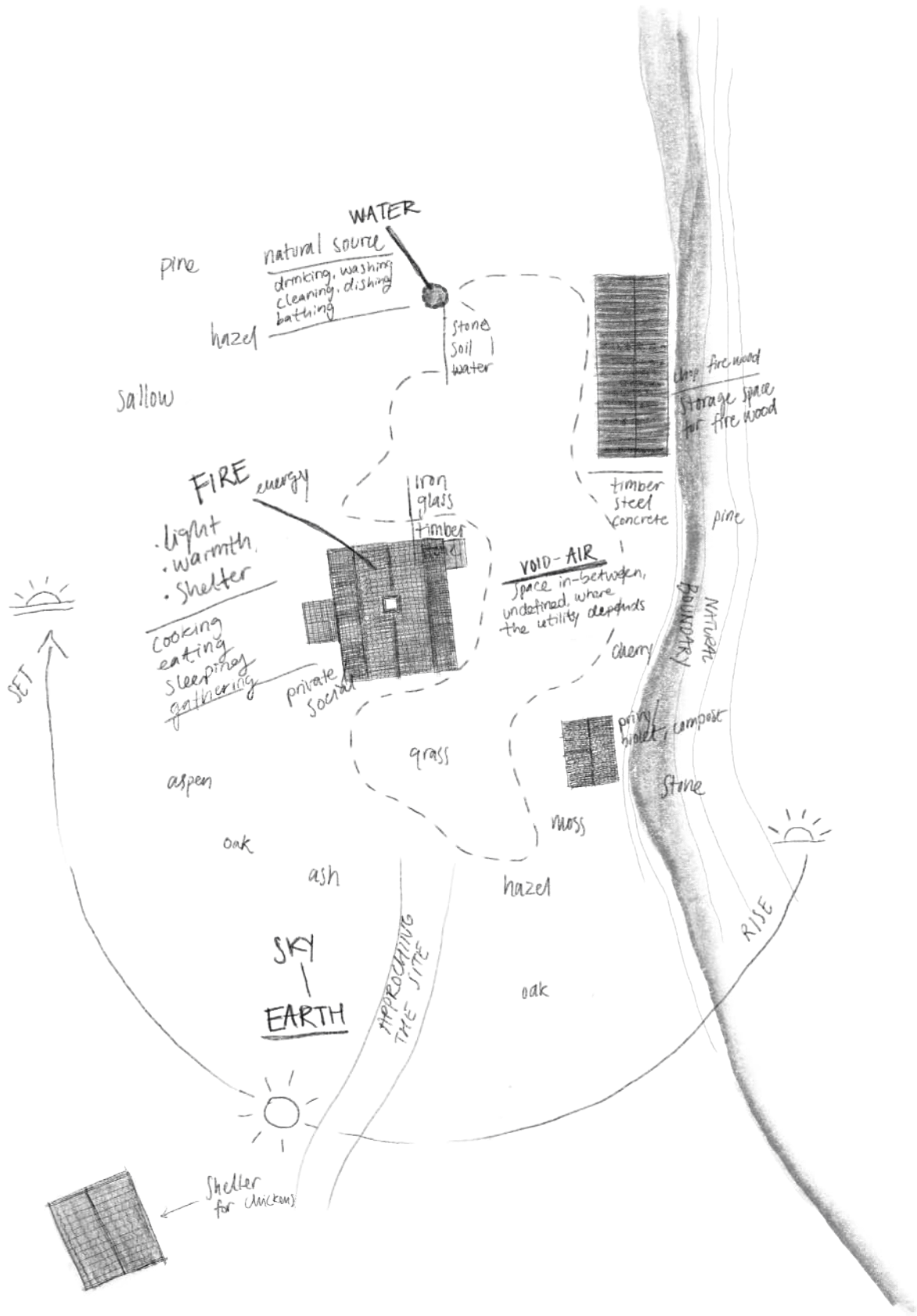
Questions arise when extracting the functions to imagine relationships between them. How many times does one pass between the different functions in a day? How often does one find themselves in the space between functions? What happens in this space in-between? In contrast to the Moriyama house by Sanaa, where the volumes are placed close to each other but far enough to create interesting spaces between them, this site has a similar relationship between its functions. However, with longer distances between places the space in-between is interpreted as space of connecting pathways.



Sketch of the main functions on the site and an interpreted movement between them.

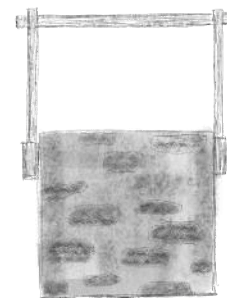
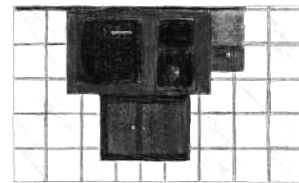
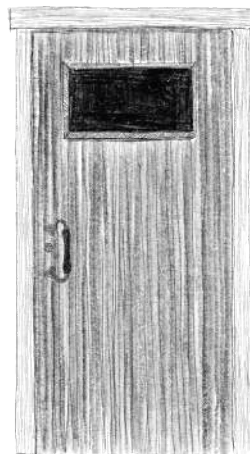
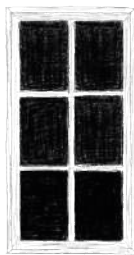
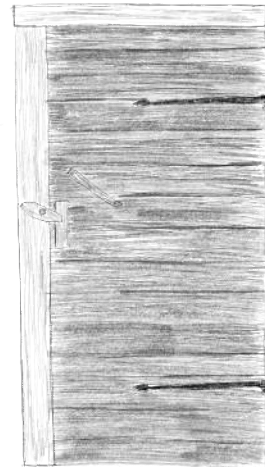
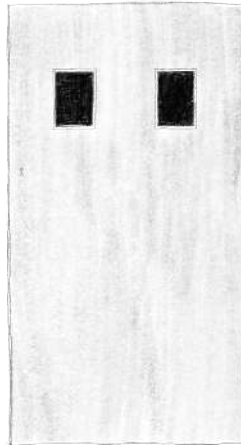


Sketch of the well, interpretation of movement.

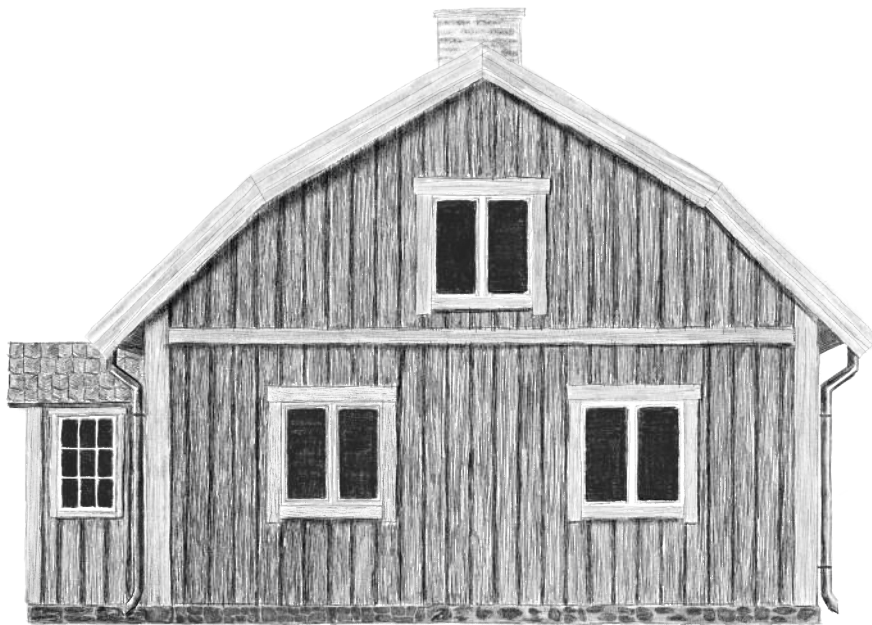


Site analysis. A method to identify the natural setting of the site and the functions in relation to the elements of 'earth, fire, water and air'.



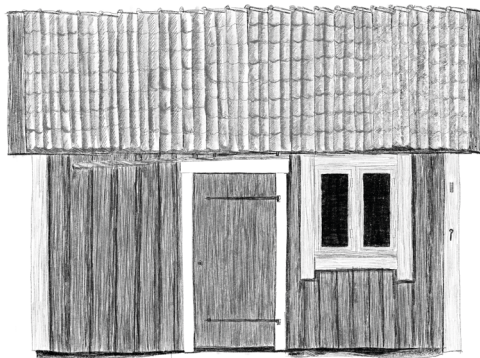


Pencil drawings showing a small selection of objects from site.



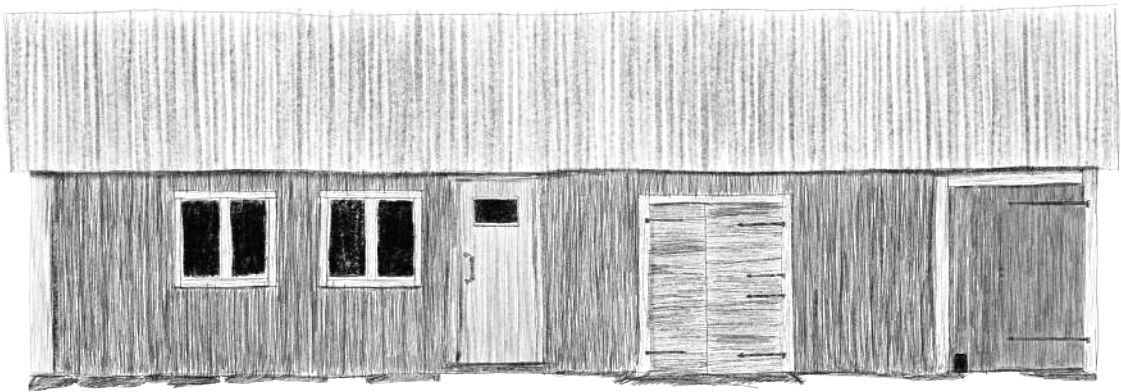
THE HOUSE: FIREPLACE / KITCHEN / DINING ROOM / BEDROOM

pencil drawing, no scale.



THE OUTHOUSE : TOILET / STORAGE

pencil drawing, no scale.



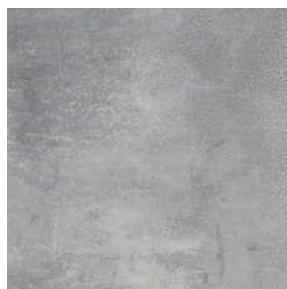
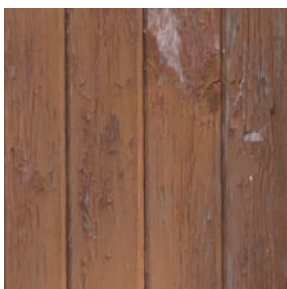
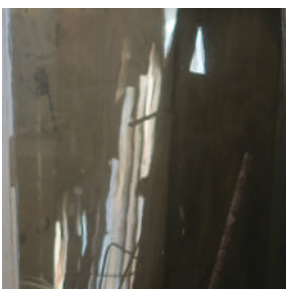
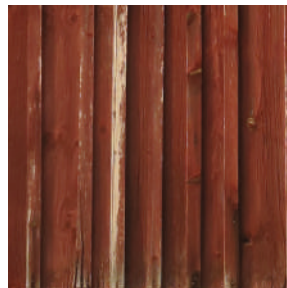
THE BARN: STORAGE / WORKSHOP

pencil drawing, no scale.



THE SHED: STORAGE / SHELTER FOR HENS

pencil drawing, no scale.



Photos from site representing materials on the site.

## DESIGN EXPLORATION

## DESIGN EXPLORATION

### IDENTIFICATION TOOL

To explore the relationship between the 'built world' and the 'natural world' through the four elements, an identification tool is developed. The tool is made to understand how places within a dwelling can not only integrate nature through design, but how the connection between architecture and nature can bring the residents into a close relationship with the natural world. The tool constitutes principles used in the design exploration.

By viewing nature through the four elements of 'earth, fire, water and air', it is translated into physical and perceptive factors that are part of our built environment and the way it can be experienced. By examining the elements through these factors, we gain an understanding for how the presence of nature can be manifested in architecture. By further identifying the fundamental activities associated with dwelling in relation to the elements, the tool connects elements to place.

The factors to identify elements and places within the dwelling are based on physical principles that together makes a place, as well as psychological and emotional factors regarding how a place is perceived and experienced. The chosen activities are the main actions taking place in a dwelling. Four places are identified when translated into zones, space, and element.

### FOUR ELEMENTS, FOUR PLACES

1. The heated and social space, with fire as a focal element. For cooking, eating, and gathering.
2. The sheltered, private space, with air as a focal element. For sleeping, relaxing, and resting.
3. The outdoor, private, and open space, with water as a focal element. For bathing, do dishes, washing, and collecting water.
4. The sheltered, private/social space, with earth as a focal element. For maintenance, working and storing.

The places are further explored through drawings and photo-collages that studies both spatial and material characteristics.



IDENTIFICATION TOOL - THE FOUR ELEMENTS

	FIRE	WATER	EARTH	AIR
object / function	fireplace / stove / Light	well / bath	foundation / platform / framework	window / opening / door
material	wood / stone / metal	stone / glass / metal	wood / stone / soil	fabric / glass
texture / temperature	hot	hot - cold / liquid	solid / soft - hard / dry - wet / hot - cold	hot - cold / dry - humid
perceptive	light / wild	source / unknown / constant / reflective	boundary / limited / stable	void / unlimited / atmosphere / noise
emotion	comforting / guiding / danger	calming / healing / relaxing	calming / nurturing / Grounding	changing / Liberating
activity	COOK / EAT / SOCIALIZE	BATH / DO DISHES / WASH	WORK / MAINTAIN	SLEEP / REST
space	sheltered / heated	sheltered / outdoor	sheltered / outdoor	sheltered / heated
zone	social	in-between	in-between	private

#### DESIGN APPROACH

The design exploration aims to discover how the four places can progress from a fundamental viewpoint. With this approach, the exploration aims to recognize relationships between the built world and the natural world, starting with exploring spatial configurations in relation to the four natural elements.

#### SPATIAL DRAWINGS

The first exploration is inspired by the non-compositional drawings by Pier Vittorio Aureli. Aureli's drawings showcase a repertoire of drawings where different spatial conditions and relationships are studied from a fundamental perspective.

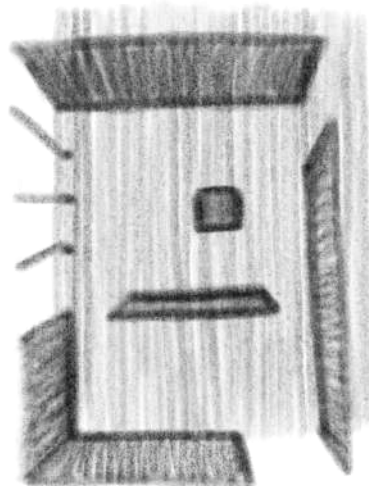
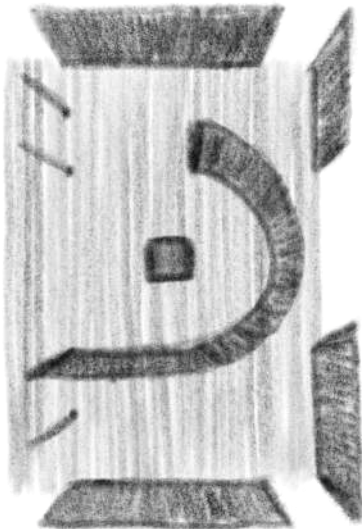
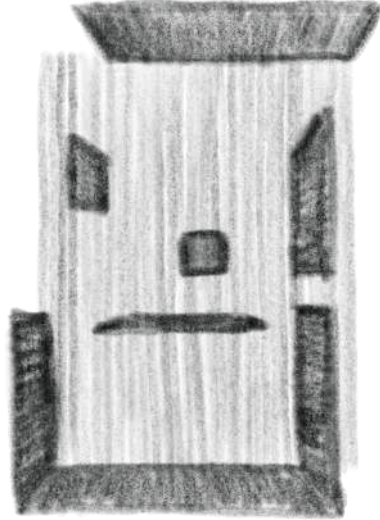
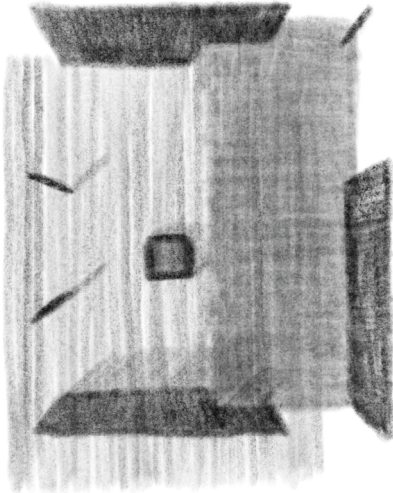
This approach is inspiring to the exploration of the thesis since it focuses on creating space with intention only to understand how different elements and shapes can elaborate to create certain spaces, not focusing on function or context. In this thesis this way of exploring is used as a tool to understand each space from a fundamental perspective.

#### PHOTO COLLAGES

The design is further explored by composing photo collages. The collages aims to capture the materiality of the spatial configurations and how they can be envisioned in context of the site.

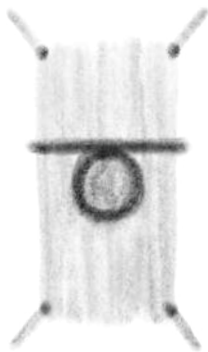
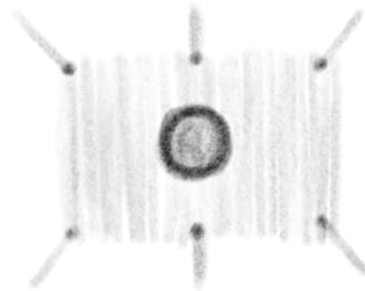
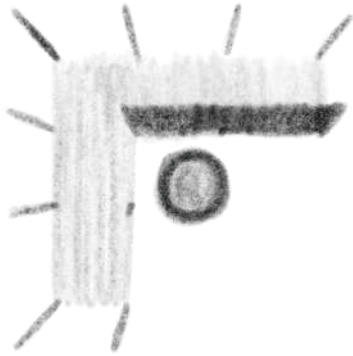


FIRE



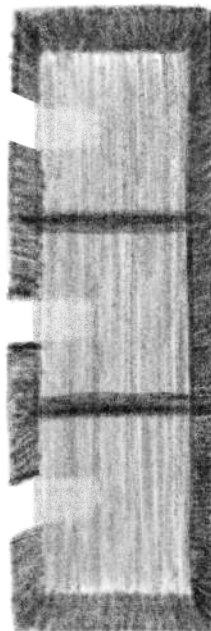
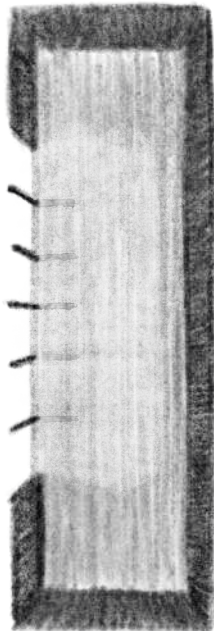
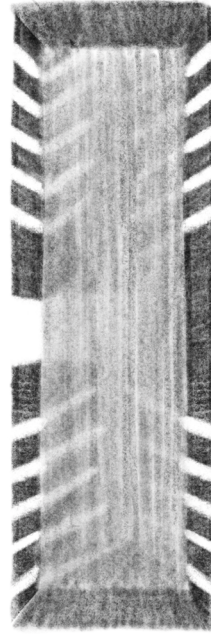
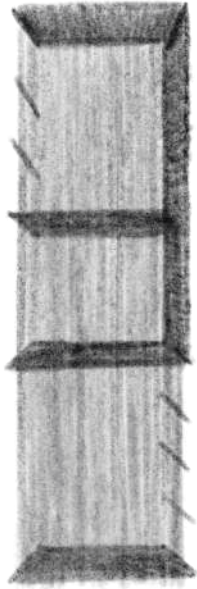
The sketches studies spatial ideas by using the footprint of the existing house on the site as a starting point. The fireplace, centered on the floor, is the directing element where walls, pillars and platforms are added to explore different spatial situations.

WATER



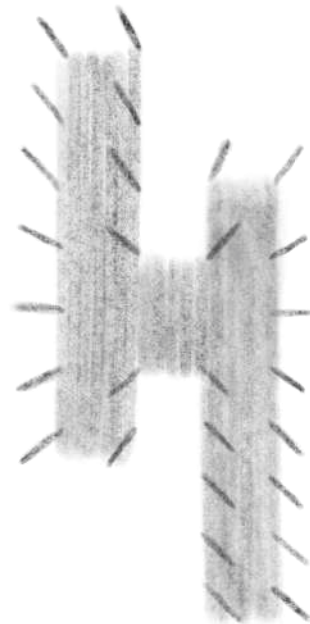
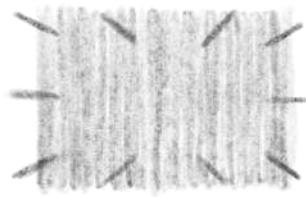
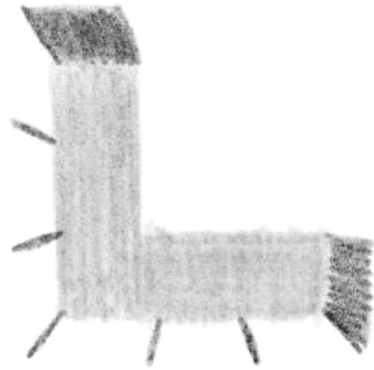
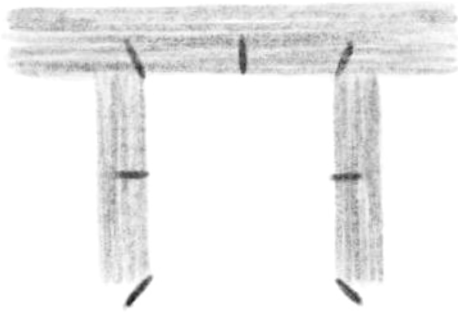
For the element 'water', the sketches uses the well on the site as a starting point to speculate on how spaces can be created around the element, exploring relationships between private and open spaces.

EARTH



For the element 'earth' the spatial explorations uses the barn on the site as its starting point and focuses on bringing light into the enclosed space.

AIR



The sketches representing the element of air, explores open structures to understand how presence of air can be enhanced in the spatial organisation.

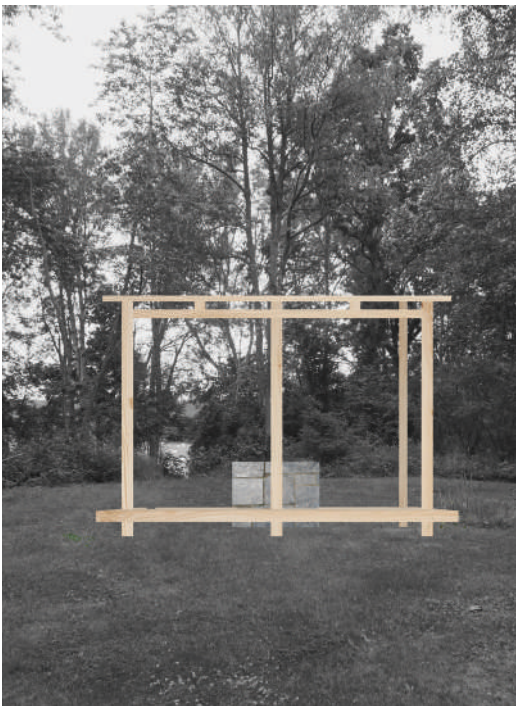
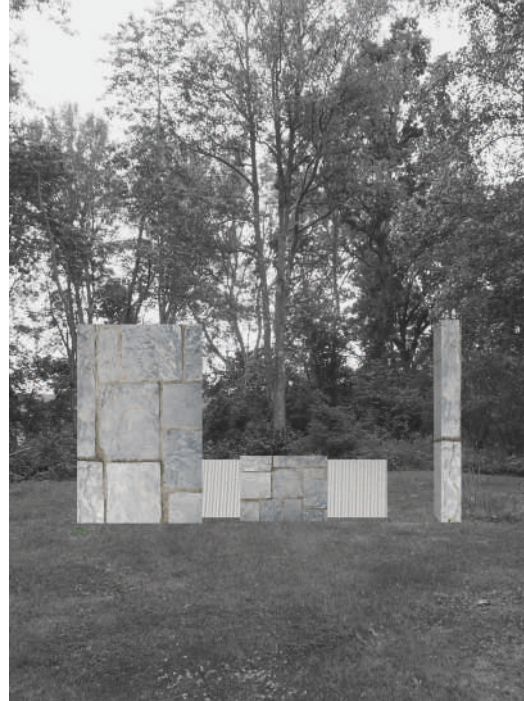
FIRE



The photo collages explore relationships between materials and architectural objects, aiming to find balance and a common character between the four places.



WATER



For the element water, space is explored around the existing well on the site.

EARTH



Photo collages of the barn as a method to continue explore spatial conditions but also balance between materials in relation to environment.

AIR

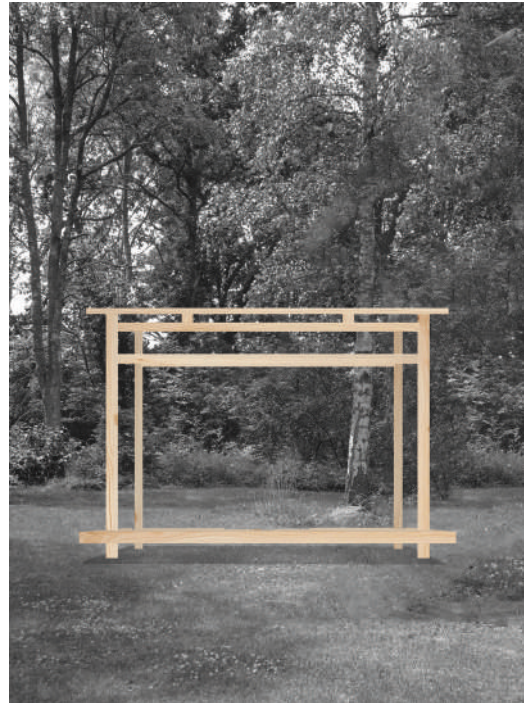


Photo collages to explore proportions and character of structures for the shelter representing 'air'.

## DESIGN PROPOSAL

### SPACES FOR A SLOWER WAY OF LIVING

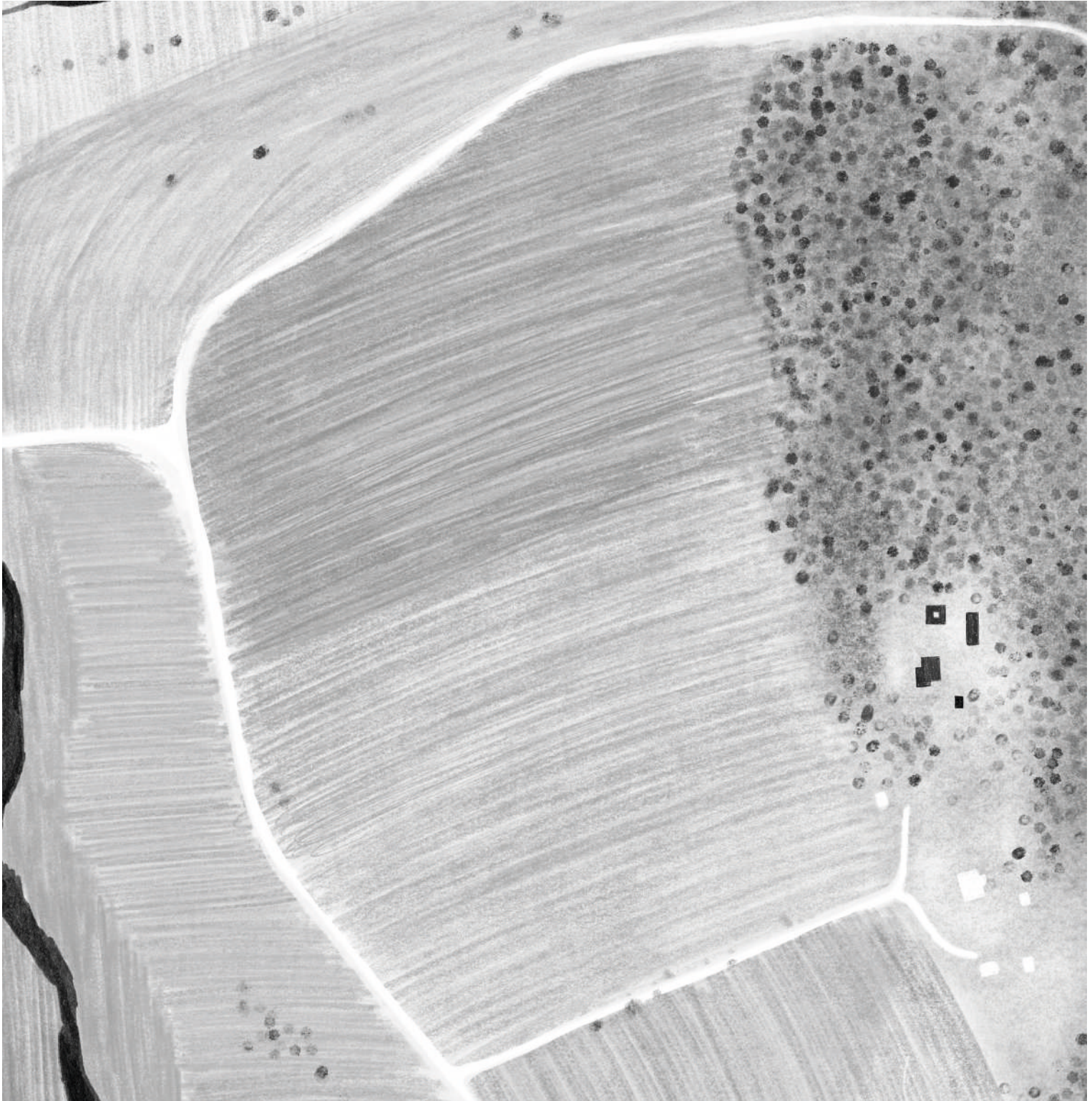
The final design proposal is a dwelling that consists of four places that are created around fundamental functions to provide the essential spaces for a primitive way of living.

The fireplace is the heart of the dwelling, this is a heated place for cooking, eating, and gathering. The water oasis provides the dwelling with water and serve as a shelter for all activities involving water. The barn is both a storage space and a workspace for maintenance of the dwelling; it is where firewood is kept and chopped and where tools are stored. The wind shelter is a simple shelter that can be used for different activities. During the warmer seasons it can be used as a sleeping shelter. Together the four places provide space and functions to dwell.

The proposal developed by re-interpreting the existing and historical residence on the site through the four elements 'earth, fire, water, and air'. The result is four places, designed according to each natural element and together they make a living space.

One important consideration in the development of the design was how a primitive dwelling and the associating lifestyle is maintained. Daily rituals of a primitive lifestyle naturally lead to a slower way of living since they require more time and effort to be performed. The four places are equally important for the lifestyle to be maintained, as they play different roles in daily rituals, i.e. the water oasis serves as a place for bathing and washing, but also for collecting water for cooking by the fire.

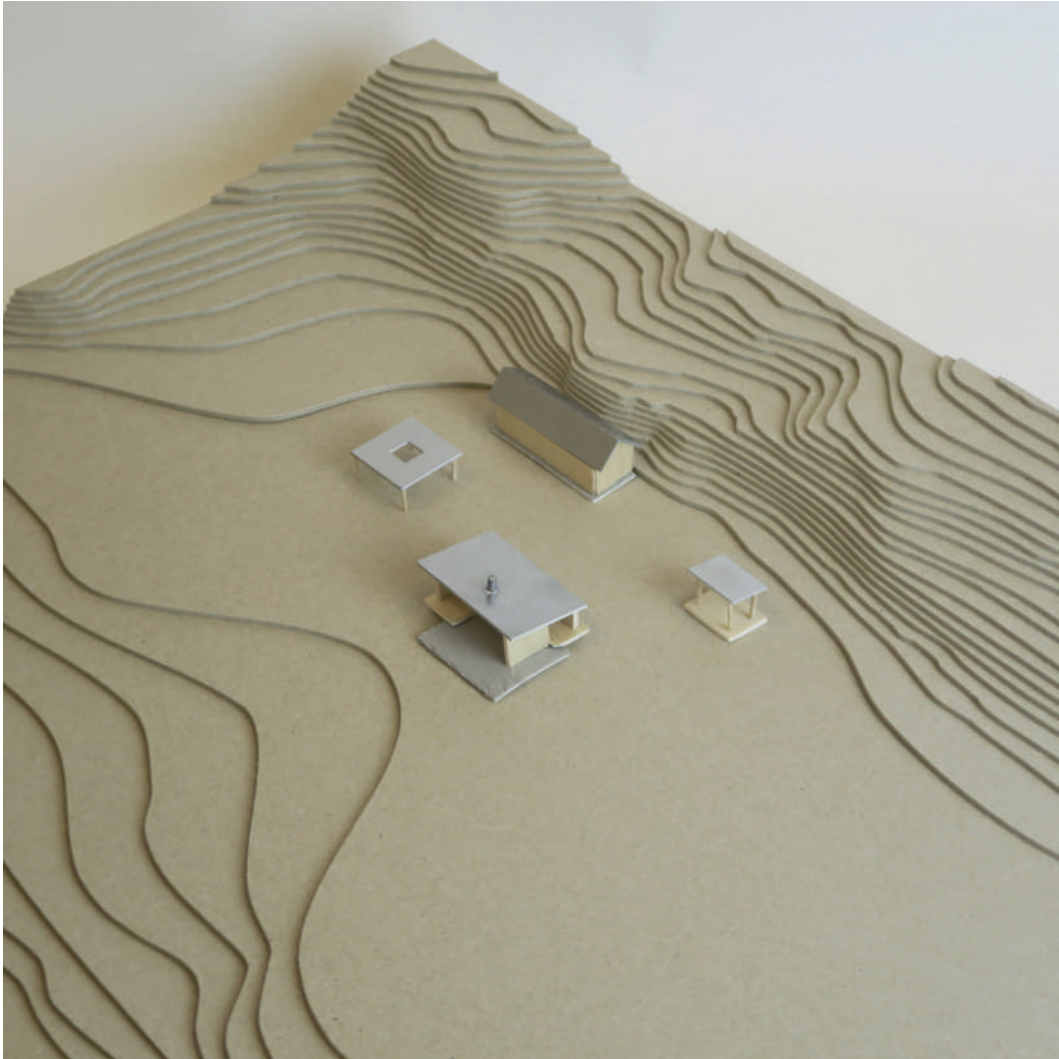
In the design proposal, spaces are not created for a defined set of rituals. Instead, the simplicity in the spatial design allows for different rituals to take place. Since the functions within this dwelling does not revolve around one activity, they require flexibility and adaptability to suit different situations and needs.



SITEPLAN 1:2000



Axonometric drawing of the dwelling on site, showing the relationship between the four places in relation to the natural surroundings.



SITE MODEL 1:200

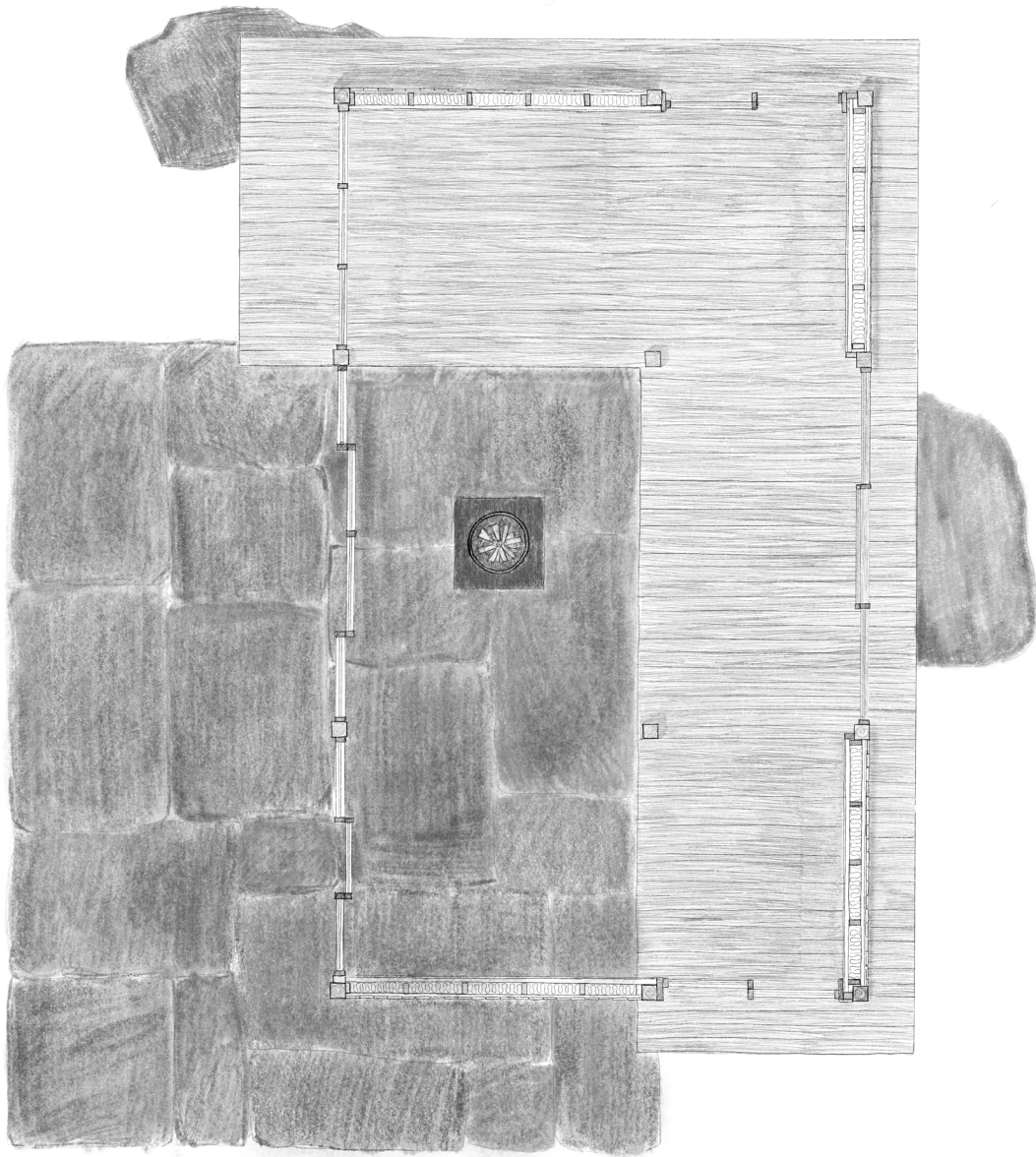
## THE FIREPLACE - FIRE

Through wooden pillars and glass doors the eyes meet the light of the fire. This is the heart of the dwelling. Many rituals within the home happens around its flames. Being placed in the center of the house it becomes a natural place to gather around, to cook and share meals and conversations.

By being built on the existing foundation of the old house, the new house leaves a small footprint on the site. The load bearing wood structure gives the house an openness where there are no defined rooms, but spaces are divided by a slightly elevated wooden floor that surrounds the stone foundation where the fireplace is found. The difference in height defines the social space around the fireplace while the pillar structure offers a possibility for temporary divided spaces around the wooden floor by adding curtains. Big windows and doors of glass allows air to flow through the house. Acting like a true heart, there are possible entrances on all sides of the house, allowing for an organic movement between inside and outside to easily reach the other functions on the site. The transparency also invites nature into the home and visually connects the fireplace with the other places of the dwelling.



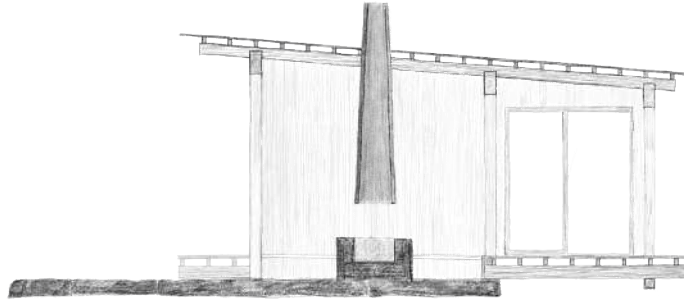
FIRE



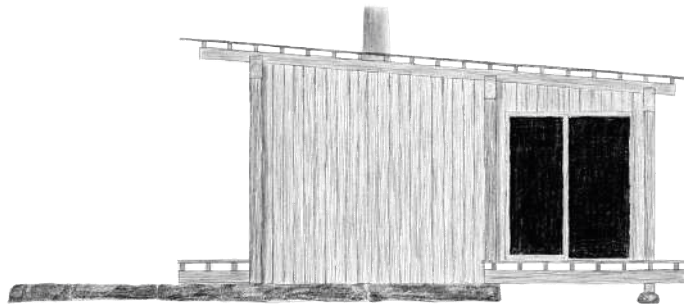
PLAN 1:75



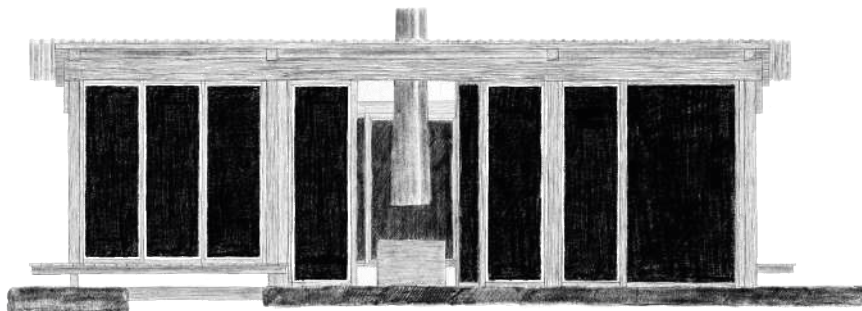
FIRE



SECTION 1:100



SOUTH ELEVATION 1:100

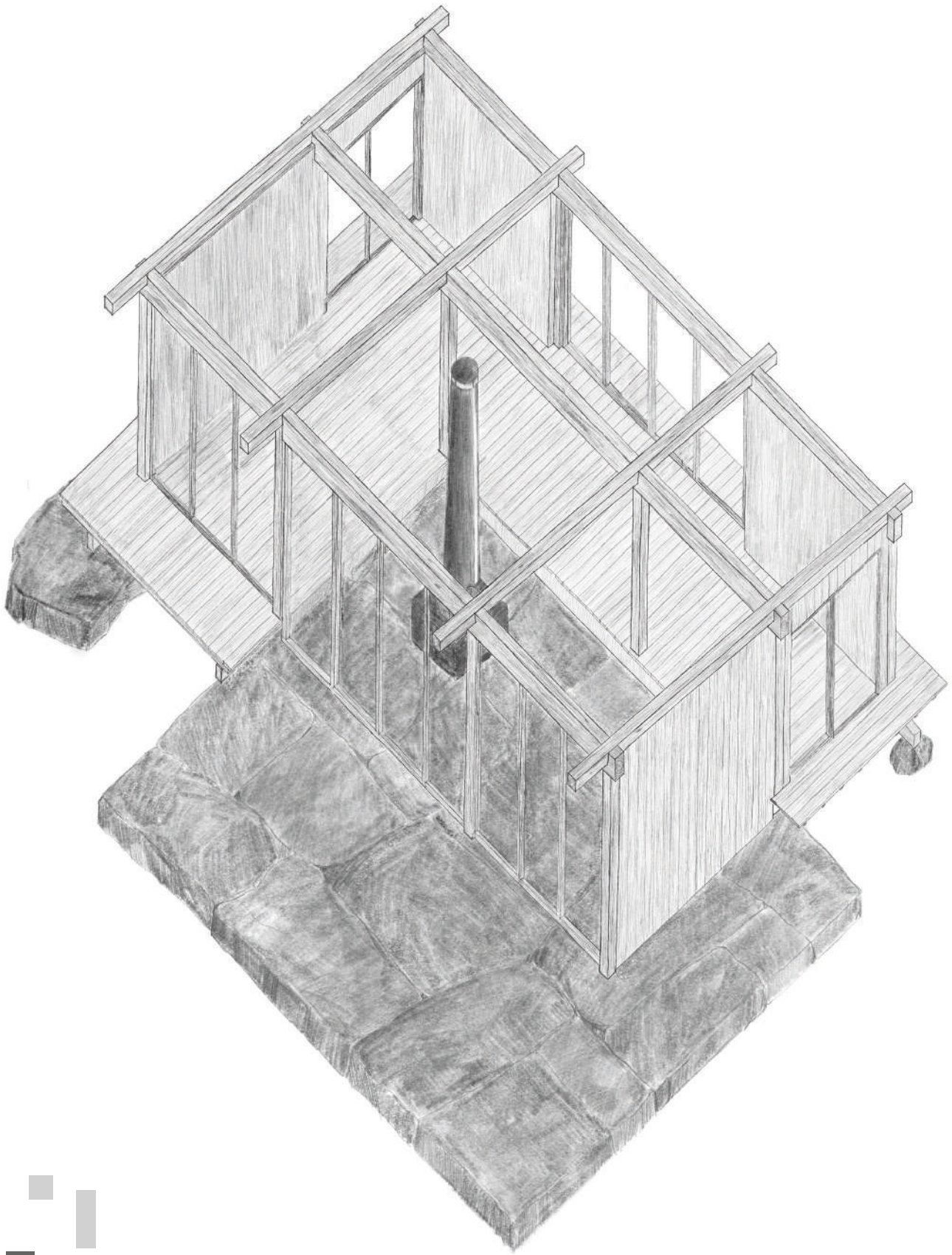


WEST ELEVATION 1:100

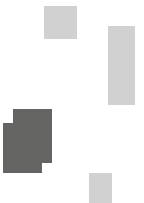


(Pencil drawings, digital)

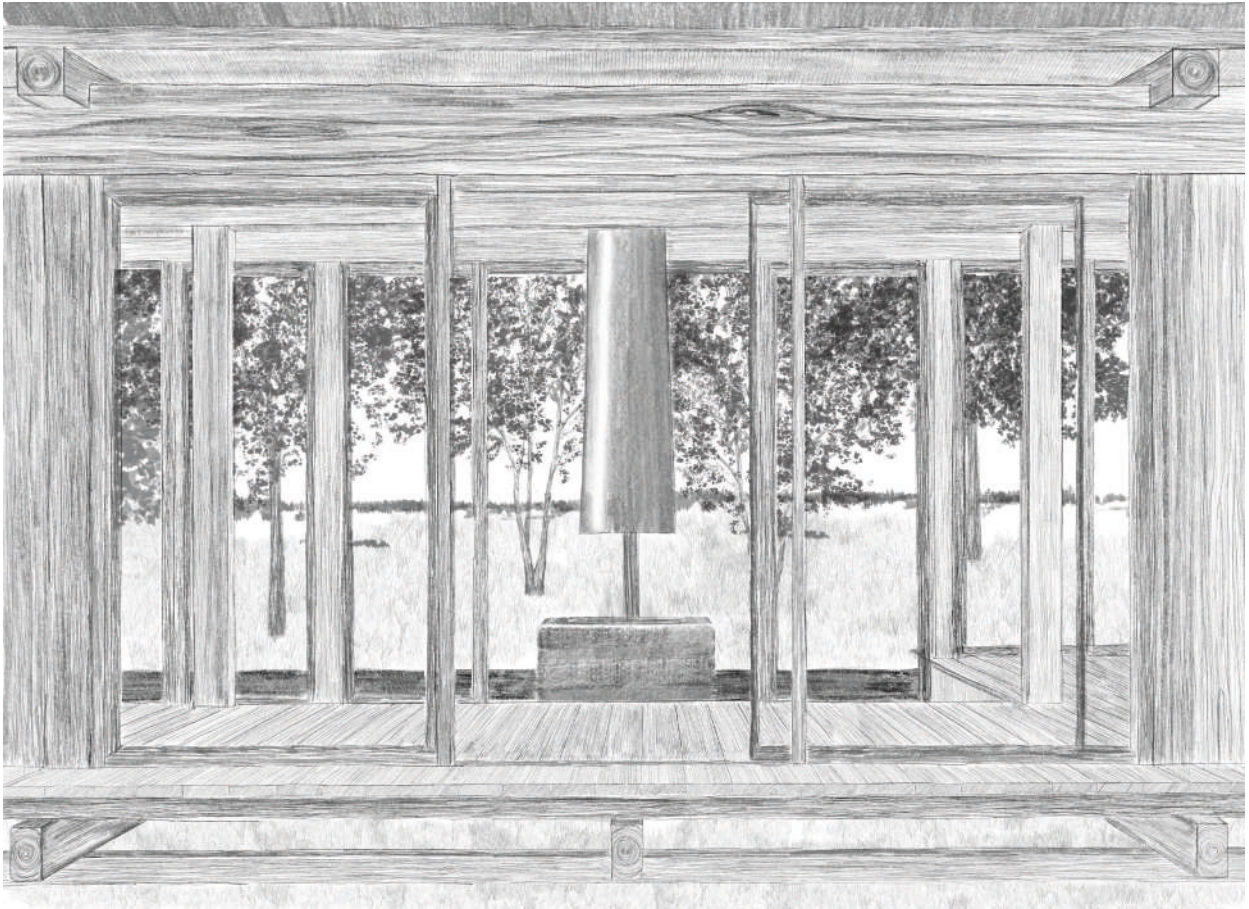
FIRE



AXONOMETRIC DRAWING 1:75



FIRE



PERSPECTIVE VIEW OF THE FIREPLACE

(Pencil drawing, digital)

FIRE



MODEL 1:25

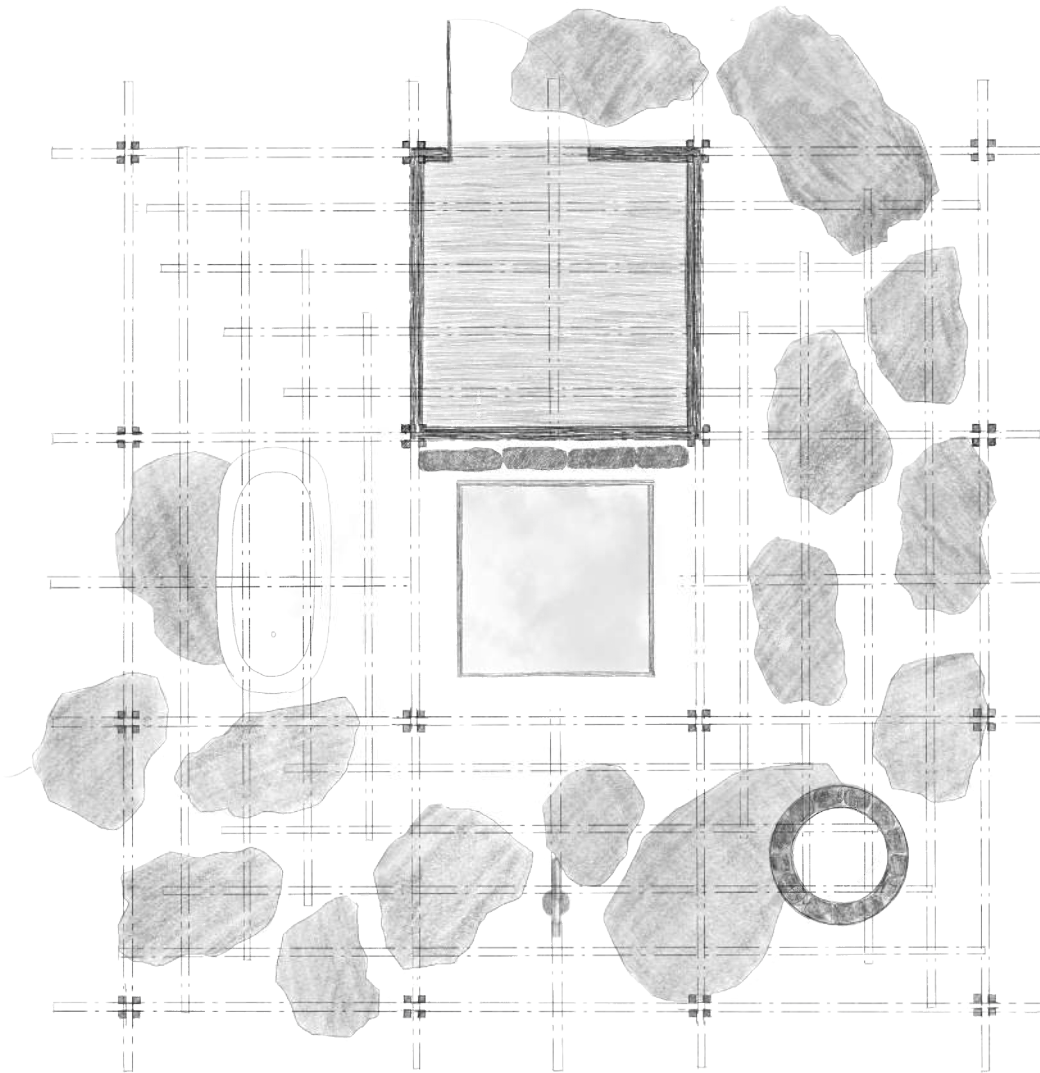
## THE OASIS - WATER

When approaching the well one can see how rays of light are reflected up on a stone wall. Below lies a water mirror that echoes the sky above. An oasis is created around the existing well on the site. This is the only place in the dwelling where water is sourced. The oasis provides space for all daily rituals regarding water, such as bathing, washing, and dishing. This is also where water is collected for cooking by the fire.

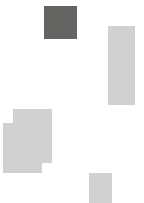
The design of the oasis integrates water to enhance a sensory experience, activated by rainwater. The roof, slightly sloping from the outer corners towards the opening in the center allows rainwater to run down and create a curtain along the four sides of the central opening. As it falls to meet the water mirror on the ground it creates an affect resembling a waterfall.

The symmetrical design of the shelter meets asymmetry in how functions are scattered under its roof. Since there are no walls giving this space shelter, functions are spread out to create distance and peaceful zones within the oasis. The water mirror in the middle centers the attention and divides the oasis with a stone wall that visually separates the oasis with the toilet placed in a shelter behind it.

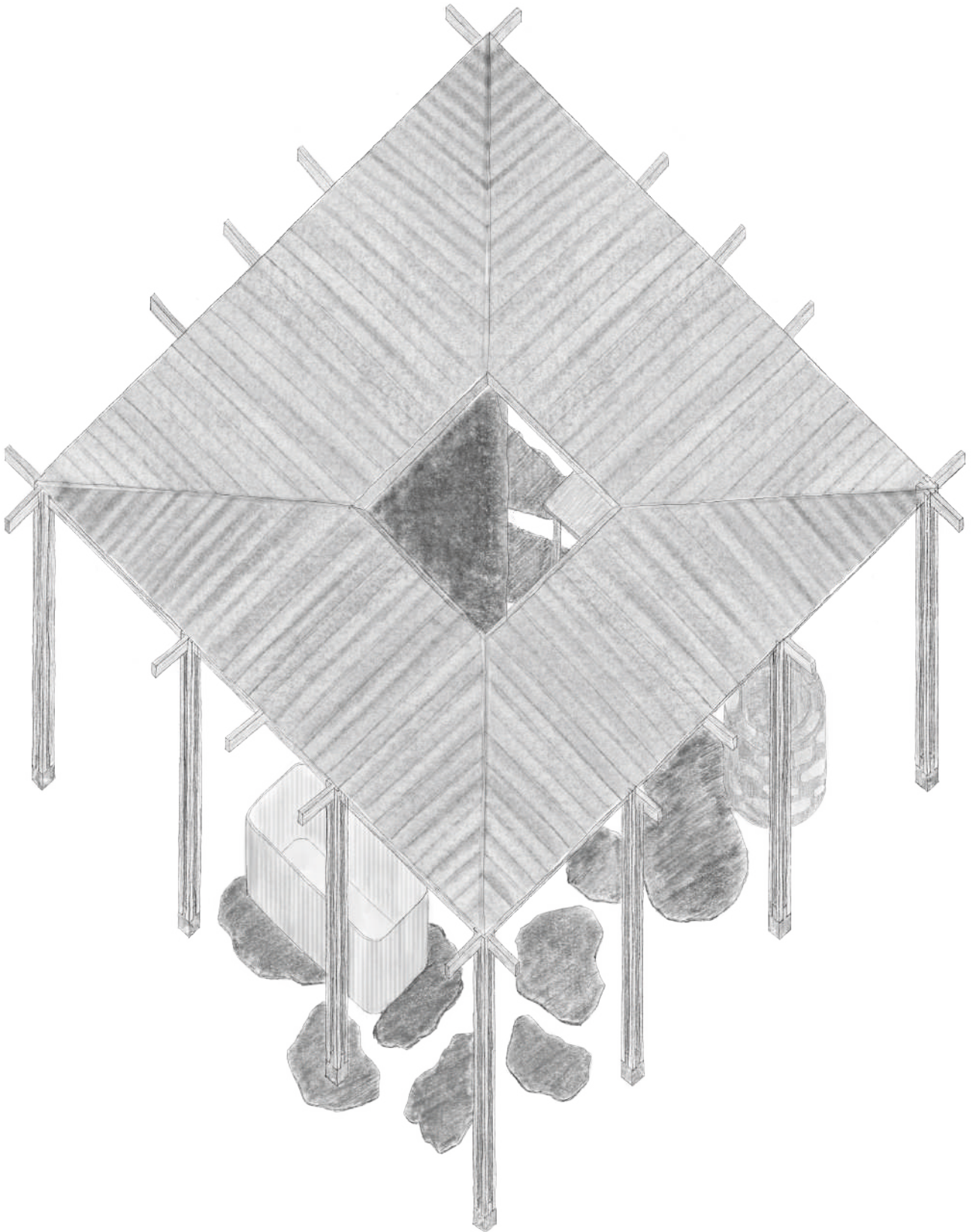
WATER



PLAN 1:50



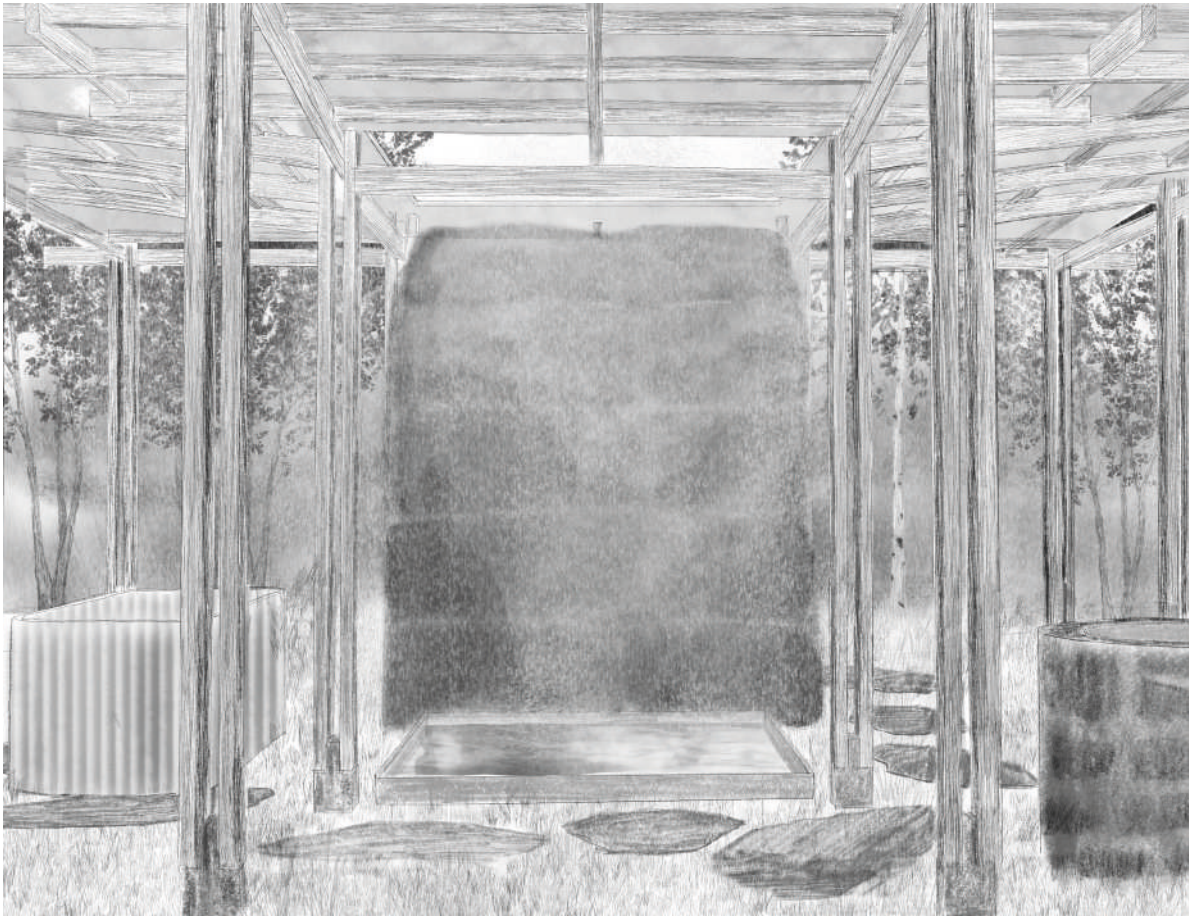
WATER



AXONOMETRIC DRAWING 1:50

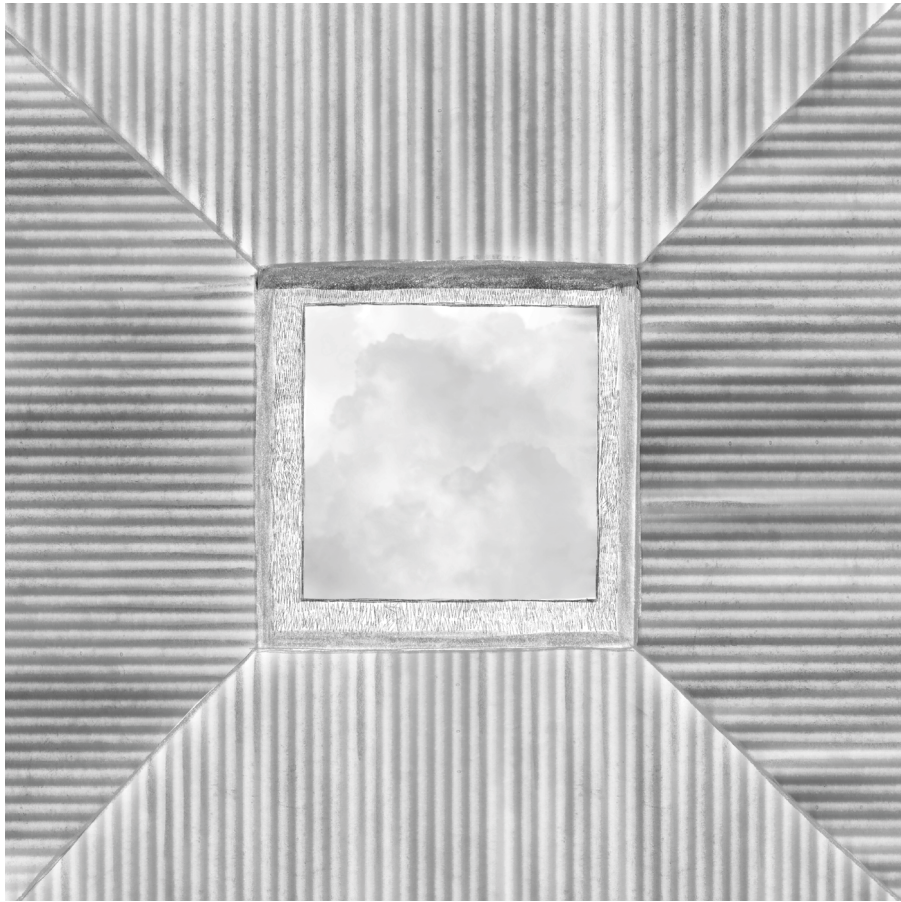


WATER



PERSPECTIVE VIEW OF WATER OASIS

WATER



PERSPECTIVE FROM ABOVE

WATER



## THE BARN - EARTH

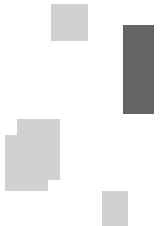
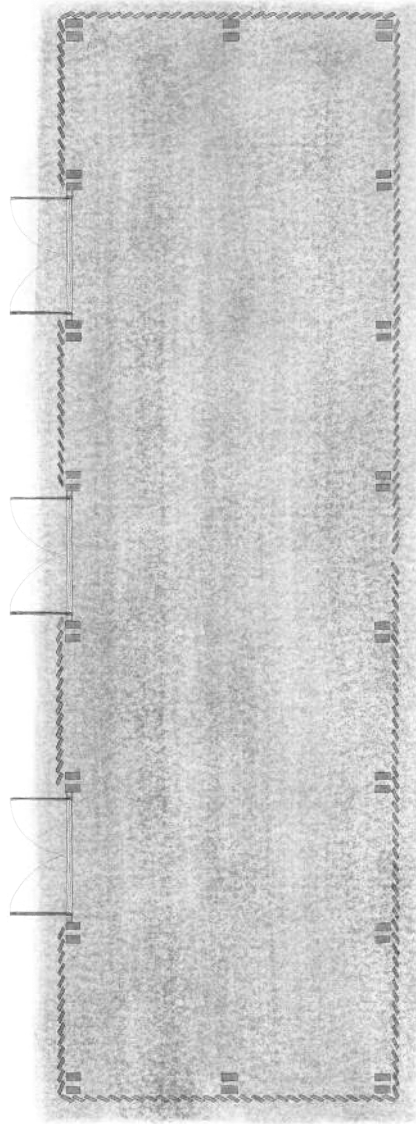
Earth is associated with stability, solidity, and symbolizes the material world, fertility, and the cycle of life. (Macauley, 2010) These symbols are also recognized in the barn. It represents roots, heritage and agriculture, and its connection to the use of the soil. The existing barn on the site is placed right next to the mountain wall. With the solid stone foundation, it seems just as grounded as the mountain itself.

The barn is important for the rituals associated with the other elements as it serves dual purposes, acting as both a storage space and a work area. Further, it houses firewood and provides a space for chopping, as well as storing tools.

In this proposal, the barn can be understood as an interpretation of the old barn. It is characterized by its elongated, narrow body and thatched roof. While it may appear as a contrast to the three other places on the site, the barn holds cultural recognition and serve as a corner stone of the dwelling making it possible for rituals to maintain.

The wooden panel of the facade is tilted and allows for natural light to infiltrate the interior, creating a warm and inviting atmosphere. Positioned at the original barn's foundation, with one long side facing the mountain wall, the barn exudes a sense of stability and support, appearing as an extension of the mountain.

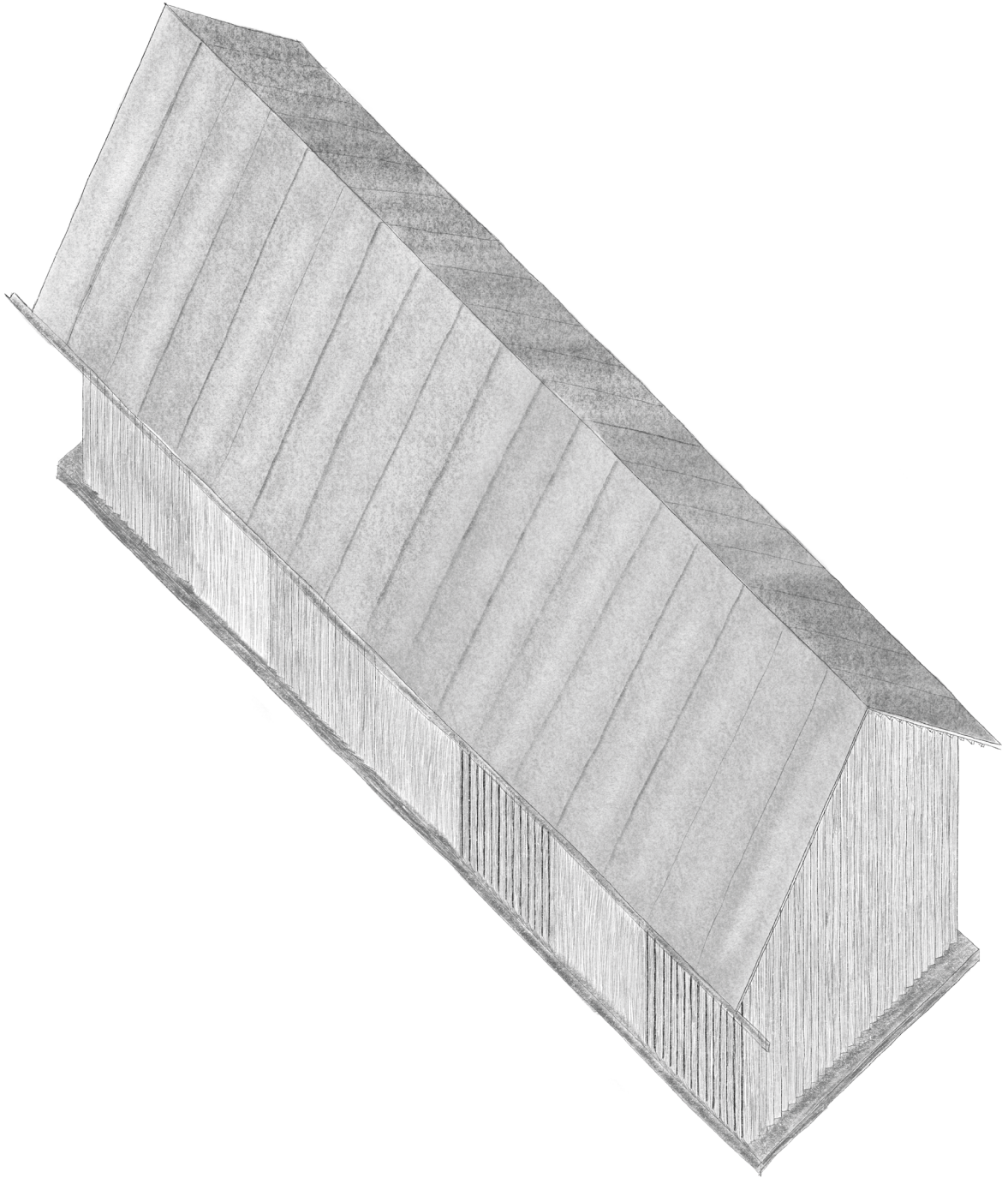
EARTH



PLAN 1:75



EARTH



AXONOMETRIC DRAWING 1:75

EARTH



PERSPECTIVE VIEW

## THE SHELTER - AIR

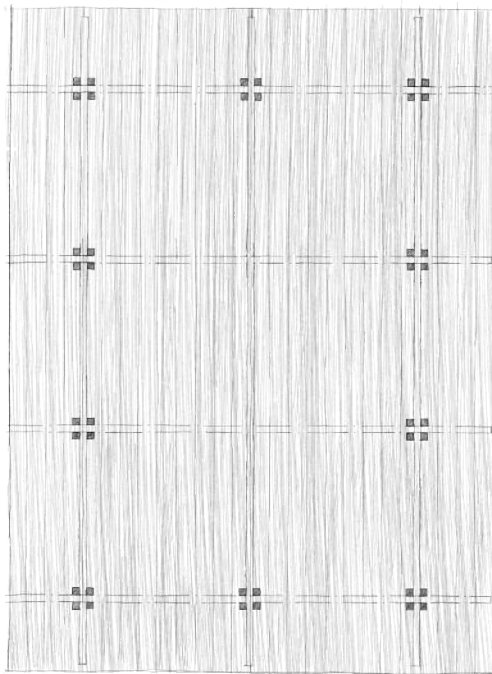
In nature, air makes its presence when the wind is strong, when trees are swaying and makes sounds as the tree crowns dance. Air makes its presence in the sky when clouds pass by above. Air is present as it carries sounds from afar and scents from our surroundings. Even in the void of enclosed spaces air is present and can be noticed by the breeze of one's own breath.

The shelter is a spatial structure that aims to enhance the presence of the element air. The shelter consists of a light and flexible wood structure with a slightly elevated floor, installed on stone attachments that meet the ground. According to activity, wall panels created from existing metal sheets from old roof panels and curtains can be attracted to the structure to give shelter and protection from sun, wind, and rain. The shelter houses space for two to four beds and can function as a sleeping shelter during the warmer seasons and where one can relax and simply dream away.

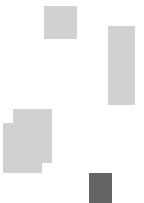
The light and slightly elevated structure make the air flow under and through. Being dressed in curtains it gives a transparency and enhances the presence of air through its movement by the wind. This contributes to a sensory experience.



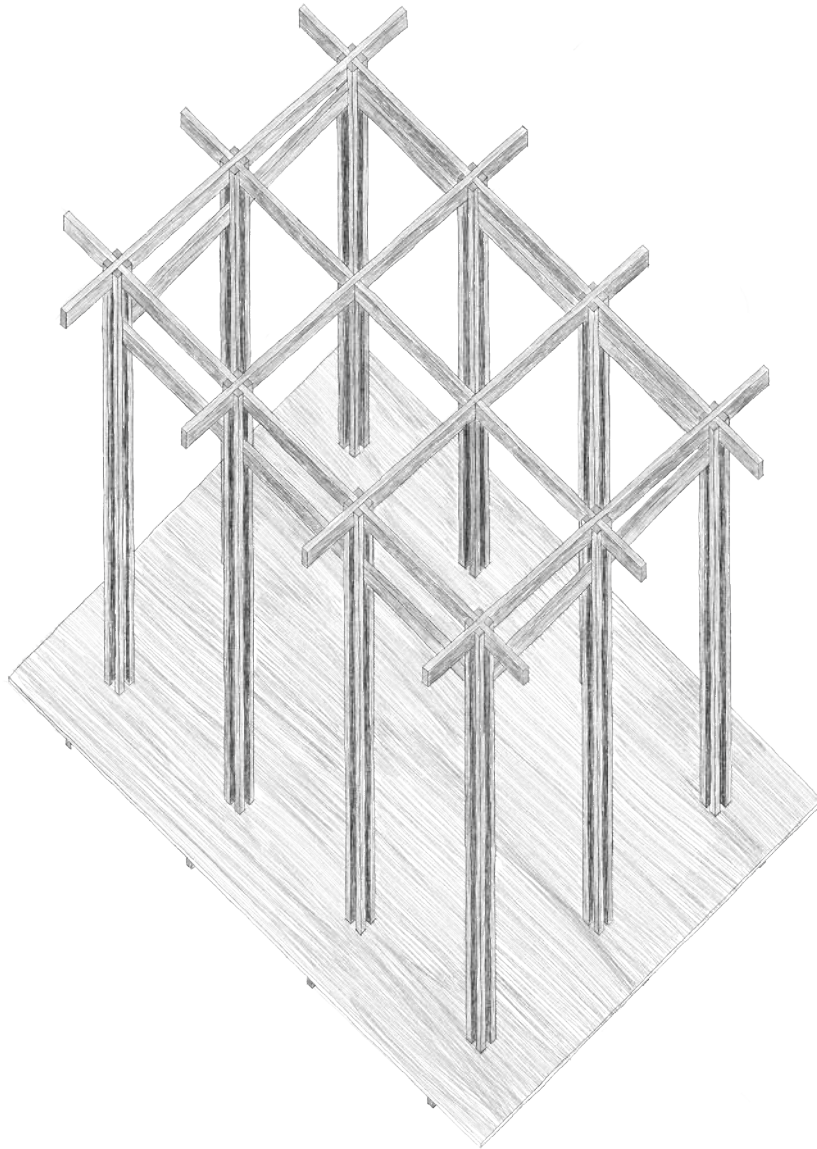
AIR



PLAN 1:50

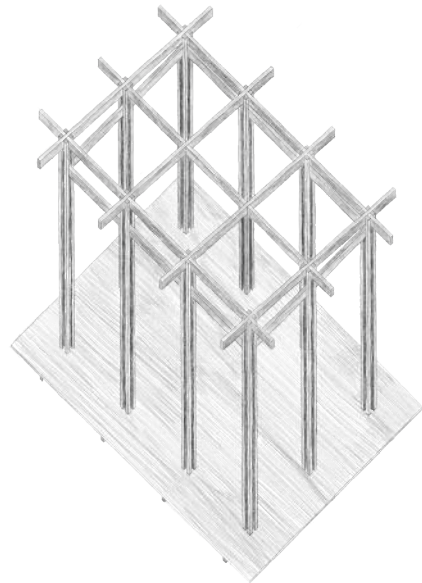
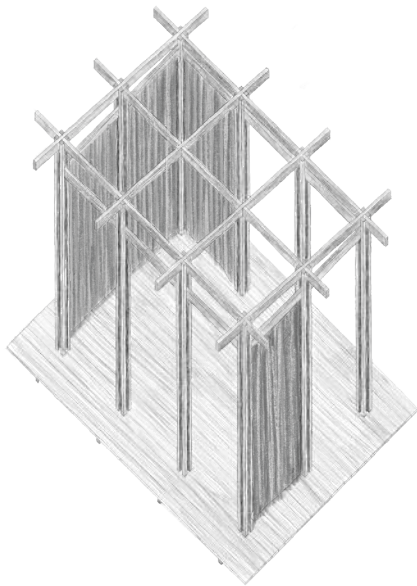
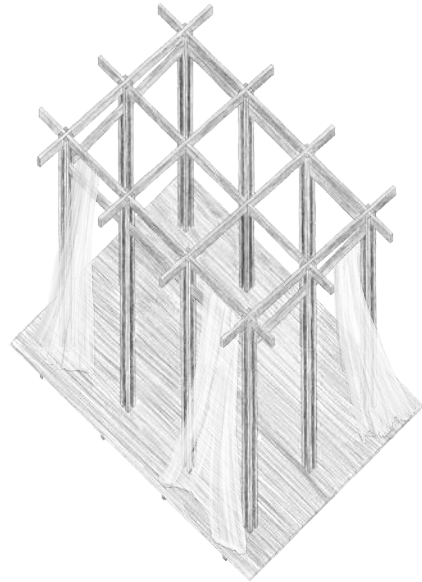
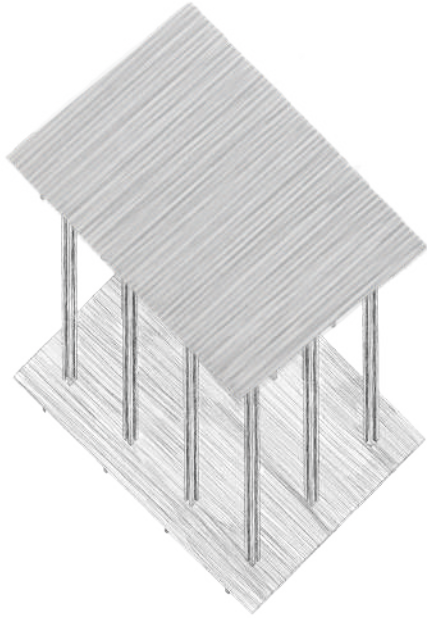


AIR



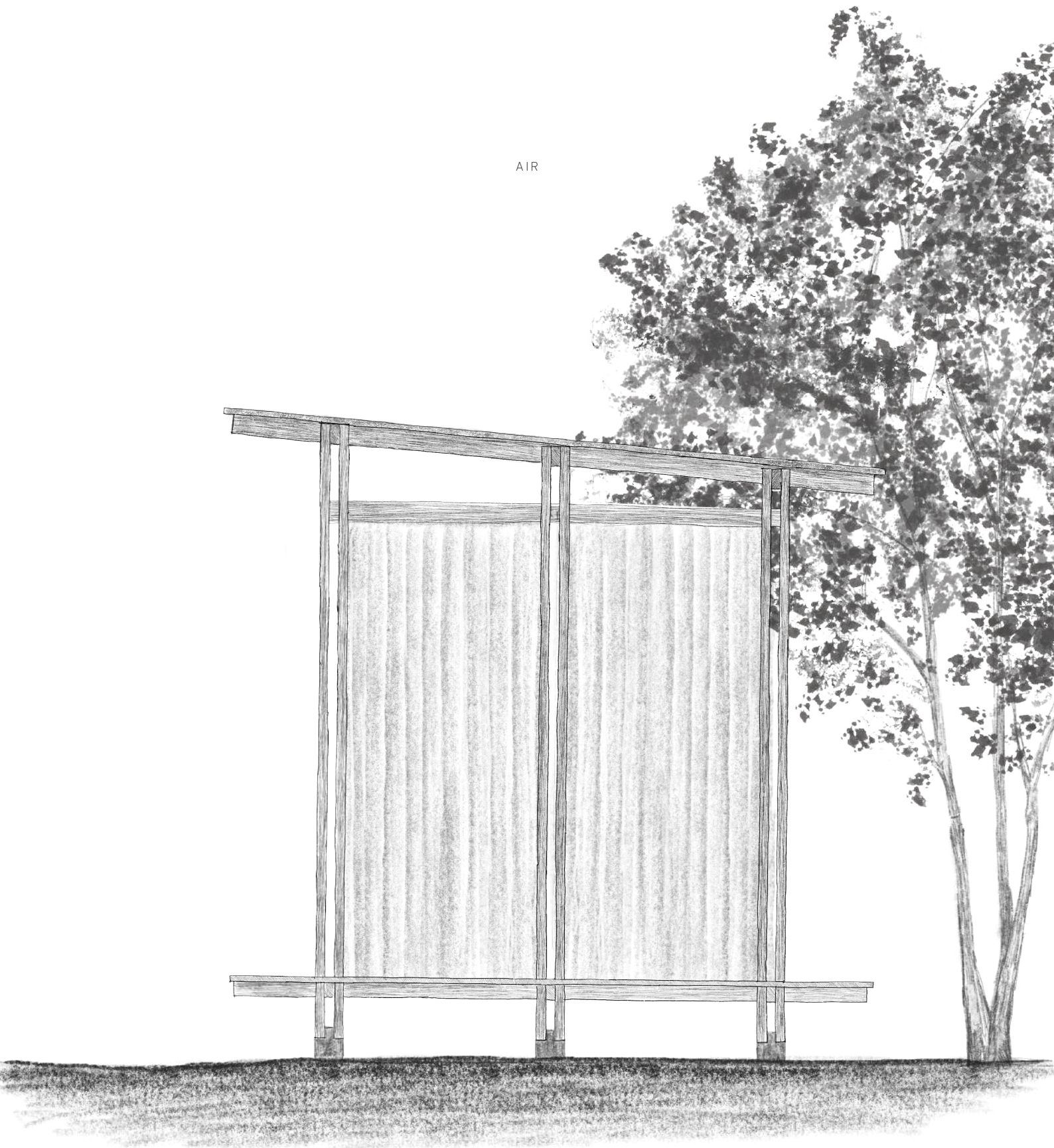
AXONOMETRIC DRAWING 1:50

AIR



AXONOMETRIC DRAWINGS

AIR



SOUTH ELEVATION 1:25

AIR



## DISCUSSION & REFLECTION

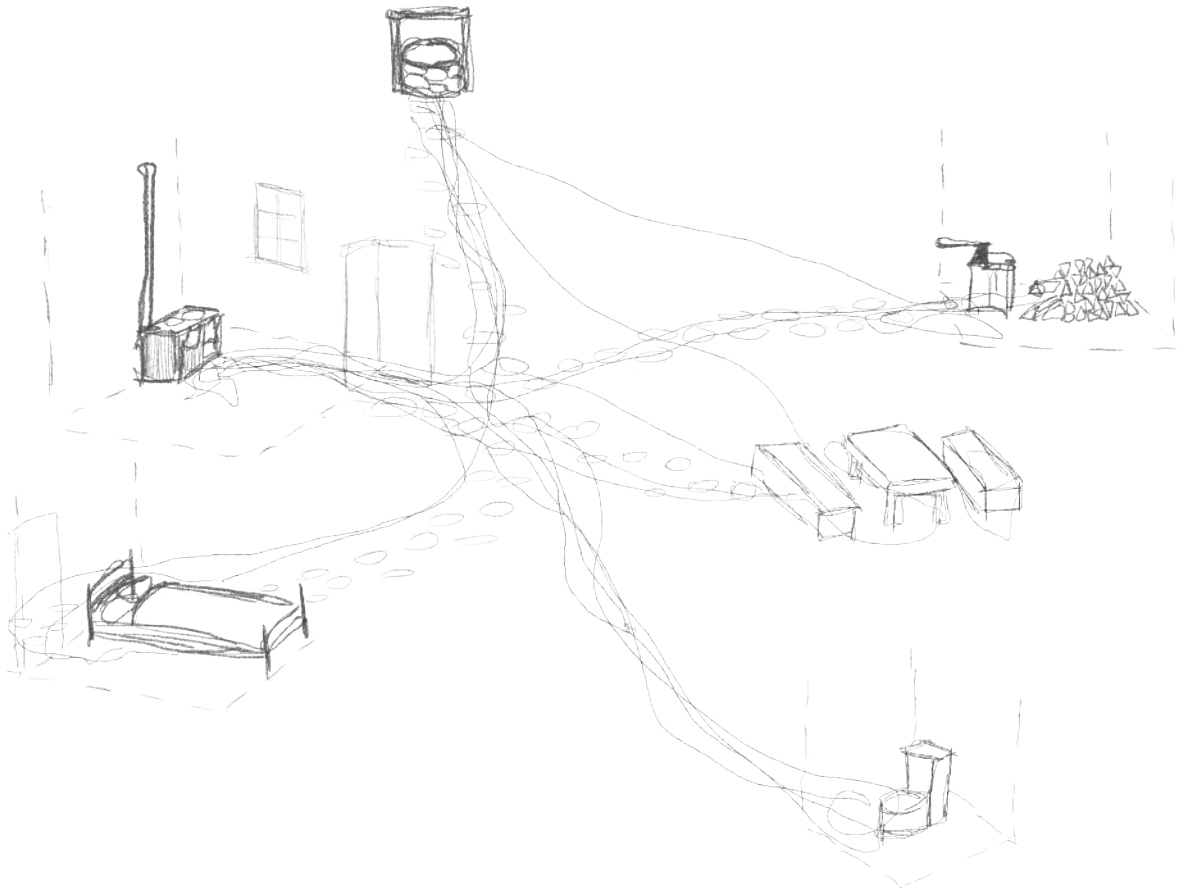
Reflecting on the process, the design explorations has revolved around exploring architecture from a fundamental point of view to understand what spaces are required for a primitive way of living.

By identifying the four natural elements in relation to place, the design explorations focused on creating spatial relationships around these elements with fundamental architectural objects.

Throughout the design process the focus has been on treating the four places individually according to each natural element. However, when the four structures were viewed in context on site, this led to further insights. By envision the relationship between the four places it became evident that this dwelling does not have a specific hierarchy of zones or rooms. This contradicts to the theories of Eriksen's (2019) application of Hall's 'territorial zones' (the public, social, personal, and intimate), in the Scandinavian longhouse. In contrast to the longhouse (and traditional residences), the limits of the design proposal do not measure from a facade or an entrance door. Instead, the public zone within the dwelling begins at the very edge of the site and as one approaches the center of the dwelling one transits into the social zone that occurs in-between the four places. The personal zone is found inside these four places, where one is connected to the associated functions of each place and the intimate zones are the enclosed spaces and the only private spaces.

When exploring the spatial configurations through fundamental architectural object, it is interesting to note that doors are rarely present, and in the design proposal, they are only found in few situations. The door which is known as one of the most fundamental architectural objects suddenly became less focal. The non-presence of the typical entrance blurs the boundary between the architecture and its environment. In contrary to Eriksen's (2019) idea of the doors, this proposal indicates that the boundaries between the zones of this dwelling is not necessarily defined by doors. Doors are not needed for one to be transitioned from one zone to another, as doors do not appear in our natural world. Instead, the open structure of the dwelling enables its inhabitants to approach the places from any direction, like how one may approach objects found in nature.

By exploring spatial design through the four elements this thesis has brought architecture and nature into a close relationship, fueled by the act of dwelling. Influenced by the placement of existing functions and houses on the site, the design proposal highlights the transitional space between the architecture and its environment. This dwelling aims to enable the dwellers to re-connect with nature through the actions required for maintaining a primitive lifestyle.



Sketch made during site visit, interpreting how movement and pathways connects different functions within the dwelling.

## BIBLIOGRAPHY

### LITERATURE

- Abram, D. (1997) *The spell of the sensuous: Perception and language in the more-than-human-world* ; New York : Vintage books, a division of Random House, Inc.
- Aureli, A. V., & Tattara, M. (2019) *Platforms:Architecture and the Use of the Ground*. E-flux Architecture.
- Bachelard, G. (1963). *The Poetics of Space*. New edition. London : Penguin Classics, 2014.
- Crawshaw, A. (2014) *How did we get here and where do we go?: 'Elements' at the Venice Architecture Biennale 2014*. Afterall. <https://www.afterall.org/articles/how-did-we-get-here-and-where-do-we-go-elements-at-the-venice-architecture-biennale-2014/>
- Eriksen, M. H. (2019). *Architecture, society, and ritual in Viking Age Scandinavia : doors, dwellings, and domestic space*. Cambridge ; New York, NY : Cambridge University Press
- Leach, N. (2005) *Rethinking Architecture: A Reader in Cultural Theory*. London : Routledge.
- Illich, I. (1983) *Dwelling*. Atlas of places (downloaded 2023-10-30)
- Macauley, D. (2010) *Elemental Philosophy: Earth, Air, Fire, and Water as Environmental ideas*, New York, NY : State University of New York Press
- Ruskin, J. (1877) *The poetry of Architecture*. New York : John Wiley & Sons.
- Unwin, S. (1997) *Analyzing Architecture*. London ; New York : Routledge
- Ursprung, P. (2014) *Limits to Architecture: Between the human and the non-human*. Earth, Wind, Fire, Air, pp.8-9.
- Sirithanawat, C. (1990) *Palimpsest: A Trace of the "Presence-Absence" in Architecture*.

### IMAGES

- Ceriani, A. (2009). Therme Vals, Switzerland [Photograph] <https://www.archdaily.com/13358/the-therme-vals>
- Sumner, E. (2017). Moriyama House [Photograph] <https://www.dezeen.com/2017/04/14/edmund-sumner-decade-old-photographs-ryue-nishizawa-seminal-moriyama-house-photography-architecture-residential-japanese-houses/>
- E:son Lindman, Å. (2022). Ljunghusen [Photograph]. <https://orthoslogos.fr/architecture/sommarhus/>

*All other photos are produced and owned by author if not listed.*

### OTHER REFERENCES

- Beka, I., & Lemoine, (2017, December 10) *Moriyama-san* [Video] <https://vimeo.com/ondemand/moriyama>



THANK YOU!

Supervisor, Peter, for the guidance this semester.

Jakob, for our philosophical discussions.

Anton and mamma, for all the support and for  
believing in me and my ideas.

