ISLANDSBERG

the site of a lighthouse

Authors | Klara Bolin & Leopold Pretzel

Master Thesis 2024

Chalmers School of Architecture

Department of Architecture & Civil Engineering

Examiner | Björn Gross

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CHALMERS

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ABSTRACT

Architecture arguably encompasses a profound understanding of context; a miscellaneous phenomenon constituted by a constellation of values, seen as a layered landscape. Through the process of writing this thesis, parts of the so-called layered landscape have been revealed and analysed to inspire the development of a proposed design.

The project focuses on a remote lighthouse site, Islandsberg, located in central Bohuslän on the Swedish west coast and investigates how contextual values can affect the design process and how architecture in its physical form can answer to the context in which it is situated.

To achieve a comprehensive understanding of the site, a multifaceted approach is employed. Numerous site visits using various methods for documentation and analysis, continuous contact with stakeholders, and studies of local history, literature and reference projects regarding chosen subjects form the basis for our work in an effort to construct a so-called deep map of Islandsberg.

Inspired by the deeply rooted local tradition of using timber in building construction, the objective of this project is to establish a looping hiking trail and create a collection of small structures that not only resonate with the site but also provide local value that enable and enhance the experience of it, drawing attention to its natural and cultural significance, while simultaneously adding a new layer to its narrative. The design includes an entrance facility, two bothies, a sheep hut and a wind shelter.

The task has been to develop a structural concept to enhance the site synergistically as well as allowing different functions to interact in a considerate way. The result is presented in the final design of a proposal able to generate accessibility while also protecting the natural ecosystems and strengthening the natural environment to restore the character of the land to how it was a hundred years ago.

Keywords: Layered landscape / Natural and cultural preservation / Contextualism / Lighthouse
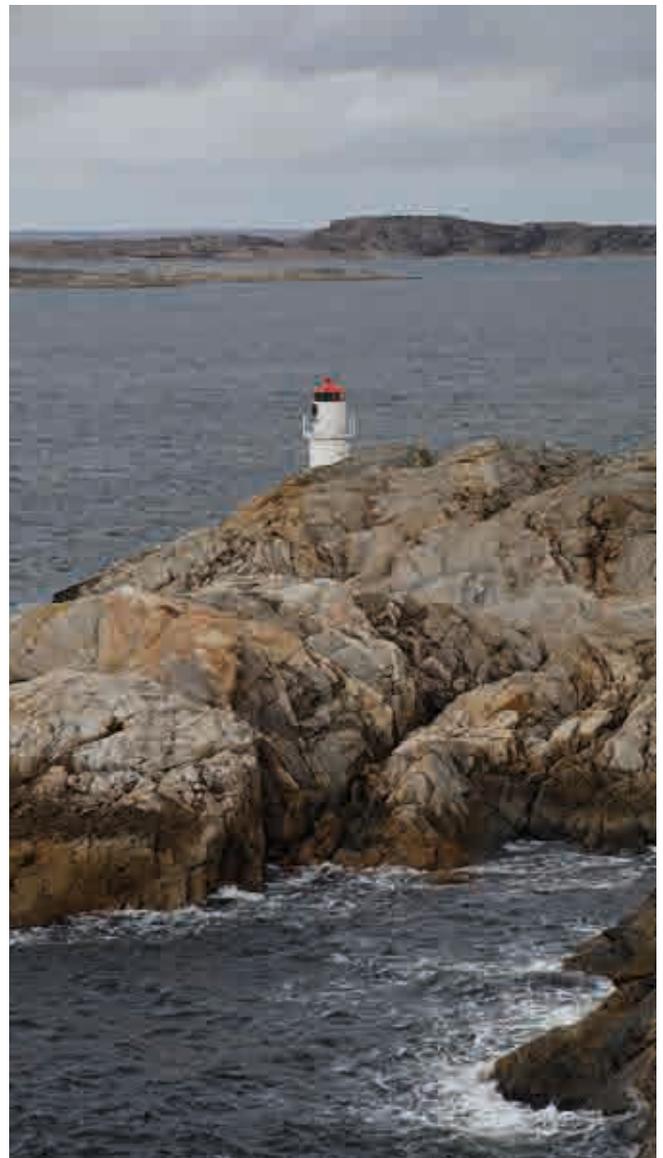
Fig. 01 New lighthouse at Torskepallen, Islandsberg

PREFACE

"A tiny, compact, comprehensible world in the midst of the big, incomprehensible one. And, the crowning glory, the lighthouse beam in the night. The security of knowing that I am here, where the lighthouse is. Not out there, in the great black terror."

(Rietz, 2001, p. 11)

Fig. 02 Stone cairn at Islandsberg

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if not otherwise stated, images are the authors' own work

1 | INTRODUCTION

Fig. 03 Red painted fishing hut in Grundsund

1.1 | Problem description

Human values are shaped significantly by their usefulness and define our collective memory. Things that cease to be useful for us are easily forgotten and turn into a state of neglect and decay. The challenges of our present and future however, require a continuous assessment of the past and an active dialogue between the immediate apparent valuable and the seemingly invaluable.

This master thesis is concerned with a curious perspective on the transformation and activation of cultural heritage. The preservation of culturally important objects is a cornerstone of modern society and the context of that society in history. The study of cultural heritage is a broad subject filled with a multitude of historically important artefacts and ideas. It is important to continuously reassess and take inventory of those parts of history from which we can learn and which we can use to improve our own future.

We have been fascinated and intrigued by the coastal and maritime heritage, specifically of the Swedish west coast which in many ways constitutes an old answer to an old problem. The lighthouse, seen as an historical artefact, defined both by its value for the maritime culture and its isolated relation to the landscape has been the central guiding element for our work as it has been for so many seafarers of old.

The issue of focus in the present work is the fact that many of the old lighthouses and the associated sites are inaccessible and therefore lacking in our collective memory.

The site of a specific lighthouse, Islandsberg is the particular focus of this thesis (for reasons that will be elucidated upon in later chapters), which works with analysis, contextualisation and improvement, as part of a small-scale effort to design and construct architectural additions that incorporate consideration for landscape, building traditions and craftsmanship related to the lighthouse and its context.

1.2 | Purpose and aim

The purpose of this master's thesis is to investigate the transformative potential of small-scale, scattered and function-oriented architecture in the context of coastal landscapes associated with lighthouses. By realising the unique cultural and natural ecosystems that surround these sites, we aim to protect by making available, albeit in a careful and sustainable way, these places of great interest and discovery. By activating such a place in a thoughtful manner, culture and nature can be preserved, highlighted and even synergistically enriched, thus strengthening their local context as well as firmly embedding these historical sites into our collective knowledge.

1.3 | Thesis question

Exploring the transformative potential of small-scale architecture:

> How can the infusion of sensitive design not only safeguard natural and cultural legacies but also invigorate coastal experience intertwined with lighthouse narratives?

1.4 | Objectives

The primary objective of this project is to create a collection of small-scale architectural additions that not only pay homage to the lighthouse's historical significance but also add a new layer to its narrative. By embedding these additions seamlessly into the local context, we aim to preserve the authenticity of the site while providing usable amenities that enhance its attraction, ensuring that our design maintains the delicate balance between history and progress.

1.5 | Delimitations:

The various stakeholders involved in this context, site and project have been outlined in *Chapter 03 Investigation* and serve as valuable inputs and as guidelines for the development and outcome of our project. However, their influence is somewhat limited in the sense that we take them into consideration, while at the same time allowing a creative freedom that does not require to adhere to the specific requests, wishes or limitations coming from any of the stakeholders. Instead, the largest possible synthesis between creative freedom and stakeholders' ideals has been targeted, while also considering certain a priori requirements that were determined by us, such as the requirement for the smallest possible impact on the natural qualities of the site and the adherence to a degree of historical accuracy.

Accessibility standards serve as a general guideline for design but are applied only to scenarios where the investment and consequences seem appropriate. While the goal is to make the destination more accessible in a broader sense, the project also approaches the site sensitively and therefore exhibits a careful consideration of where and how to apply accessibility.

Lastly, although the explicit aim of this project is to work as an example and inspiration for other projects with similar purposes (both as applied to other lighthouse sites as well as cultural heritage sites in a broader sense), the scope of this project was limited to one site, essentially to make the deeply context driven methodology implementable.

1.6 | Reading Instructions:

The master's thesis is divided into four major sections:

With Chapter 02 Discourse, we introduce and position our work, describe the theoretical framework, and explain our method of working with references. This serves as the basis for our investigative work.

Chapter 03 Investigation zooms into the context of our chosen site and maps out the site from a variety of perspectives: from the influence and history of Grundsund, Lysekil municipality and Bohuslän to personal accounts of individuals living in the area. Considerable attention was paid to this part of the project. Importantly, this constellation of perspectives does not converge in a synthesis (no summary will be presented in this chapter) because it is our conviction that the different perspectives have to be considered and regarded individually.

Chapter 04 Implementation presents an architectural design proposal that responds to the previous chapters. Both Chapter 03 and 04 are to be understood as a contributing attempt to expand and collect cultural heritage. Both the collection of material and the addition of material are part of an iterative, open-ended deep mapping process.

With Chapter 05 Discussion, we intend to reflect on our work and open for a discourse through speculative and open questions. Additional material, important for the underlying work of the thesis, has been collected in the six appendices presented at the end of this booklet.

Fig. 04 Islandsberg lighthouse 1910

2 | DISCOURSE

Fig. 05 Fishing gear

2.1 | Conceptual framework

Our mindset going forward with this project was rooted in the firm understanding that no architecture exists by itself. This is in part a reaction to developments in architecture that in a modernist tradition place the building in the centre of the analysis from the start, and in part based on our personal convictions, namely that great architecture must be done in relation to some external reality (external to the building and the architect).

Theoretically, the concepts of deep mapping, and that of the layered landscape are useful perspectives for incorporating a multitude of information into a constellation of knowledge. Our implementation of these conceptual approaches is based in the tradition of contextualism, a philosophy that encapsulates our intuitive approach to architecture well.

The theoretical underpinnings for these starting points are further elucidated in this chapter. Taken together, the history of the lighthouse, the imminent importance of its location, the method of deep mapping and the productive translation through contextualism provide a pipeline for the cultivation of one cultural heritage site in this thesis.

2.6.1 | Deep mapping and the layered landscape

Starting with the situationist movement in the late fifties, the realisation of a need for a more advanced and all-encompassing study of geography was increasingly apparent. The scientific conception of geography, with its arguably narrow focus on structural and quantitative instruments, was, under postmodernity's critique of metanarratives, deprecated (Bodenhamer et al., 2022, p. 1). Postmodernist theories such as deconstruction (Derrida, 1998) were highly critical of the claimed universalism still widespread after modernity. An increasing recognition of a multitude of human experiences subject only to language, retreated from an objective view of the world to becoming highly subjective. This opened the door for art, politics, poetry, and subjective experience amongst other things. The concept of a deep map is a conscious effort to appreciate this multitude of qualities of a place in the comparatively narrow context of site analysis. It turns from the global to the local. Bodenhamer describes this as a "sense of space as [a] social process and not simply [a] geography" (Bodenhamer et al., 2022, p. 3). We interpret this concept of a site as truly existing in a social, historical, and cultural layer just as much as it does in a geographical layer.

Tim Robinson contributed greatly to the development and establishment of Deep Mapping as his works on the Irish regions of Connemara and the Aran Islands became popular works of literature together with his initiative "Folding

Landscapes" as he accomplished to map these regions based on the concept of Deep Mapping and changing the perspective into a deeply cultural and historical influenced region and uncovering hidden layers of these landscapes (Quirke, 2021).

Deep mapping is a methodological framework that recognises the juxtaposition of a multitude of domains in a given place. This is a broader approach that recognises the pragmatist worldview (Creswell, 2009) that in turn focuses on the synergy between domains such as geography, history, culture, experience etc. (Bodenhamer, 2007; Bodenhamer et al., 2022). More concretely, this could mean taking into account interviews, paintings, poetry and other literature, ecology, historical accounts and many other sources of information when describing a site. This is encapsulated recommendably by Haggärde and Løkken in their book "Layered Landscapes Lofoten" (Haggärde & Løkken, 2018), one of many examples of a deep map.

Further, deep mapping as a theoretical construct, recognises that this juxtaposition is non-reductive, meaning that it does not intend to be summarised but rather stands before us as a constellation. The following quote illustrates this succinctly:

> "A constellation is a juxtaposed rather than integrated cluster of changing elements that resist reduction to a common denominator, essential core, or generative first principle" (Jay & Adorno, 1984, pp. 14–15).

The concept of a constellation, according to this, rhymes quite well with the foundation of the deep mapping methodology. Borrowing from Haggärde and Løkken (Haggärde & Løkken, 2018), the deep map could be construed as a layered landscape, a concept which we will use continuously throughout our work, due to its terminology being more suitable to our study (as opposed to the term "constellation"), considering that it is a landscape that we are analysing primarily. In a sense, we see the concepts of a layered landscape and that of deep mapping as being closely related to each other. The former focuses on a description whereas the latter should be construed primarily as a method. This distinction lacks greater significance to our work and will not be given further attention in this thesis (although we recognize that this could be an interesting research question in and of itself). Instead, the concepts will be used more or less interchangeably, picking the terminology that is most appropriate from an explanatory standpoint.

In summary, deep mapping represents a way to uncover the many layers of a site. It is best described as a recognition of the juxtaposition of multiple ways of looking at a location, that is, as a constellation. The concept of a layered landscape ("layers" here referring to layers of information), is analogous to the deep map but useful for terminological purposes.

2.6.2 | Contextualism

Complementary to this, contextualism is a theory that aims to base architectural design on its immediate or wider, concrete or abstract contexts (AlFadalat & Al-Azhari, 2022).

In accordance with our theoretical framework about layered landscapes and cultural heritage, it is crucial to specify and define a suitable toolset that helps to translate the mapped layers into an architectural language and furthermore provide a clear foundation for contributing to the existing cultural landscape through new layers. The most relevant architectural approach for our thesis can be found within the theory of Contextualism.

Contextualism can be understood both as an architectural style that relates to the immediate and wider context of the site in which architectural projects are situated, but also as a set of values highlighting the importance of the specific context. Where deep mapping is a method of collecting and recognizing the complexity of a context, contextualism provides the imperative to incorporate this complexity into a design. This approach to design emphasises the integration of the existing physical, natural, cultural, and historical context into the design (AlFadalat & Al-Azhari, 2022). Importantly, this can be done both indiscriminately and critically.

Contextualism can be further divided into sub-theories. Vernacular architecture represents the unintentional incorporation of context, such as materials, local needs and local historical styles. This is often described as "architecture without architects" (Bianco, 2004) and will, by definition, not be applicable to this thesis.

Regionalism is a version of contextualism that, contrary to vernacular architecture, makes use of context with intention. Incorporating contextual elements becomes a mandate, rather than a subconscious result. This is in opposition to global, international architecture – a one-size-fits-all type of style that is based on a modernist discourse. Regionalism not only works with the immediate surroundings, but more specifically considers broader cultural, historical and social aspects of a particular region (RTF, 2022). The translation into a design methodology is achieved by reflecting the unique identity and character of the specific geographic area or culture with the aim to preserve and celebrate the distinctive qualities of the region.

Thirdly, critical regionalism tries to bridge the gap between universalism (modernism) and particularism (localism). This can be done, for example, by focusing on one specific element of the local context with the materiality of functionalism. Critical regionalism has part of its roots in critical theory which can express itself in the critique of local or global social phenomena

through design. The influence of critical regionalism is especially relevant in the tectonic realisation of the intended architectural additions as it puts a deep focus onto the emotional and sensory qualities of architecture (Frampton, 1983).

2.2 | Lighthouse history

The lighthouse is an ancient tool to guide seafarers across waters at night and day. The story of the Swedish lighthouse therefore has no accurately defined starting point although the seventeenth century is regarded as the start of the lighthouse era in Sweden. During the nineteenth century the Swedish lighthouse collection significantly expanded. At the start of the 20th century there were around 100 manned lighthouses along the Swedish coast (Thunman, 1992, 2000).

In the twentieth century, lighthouses went through a significant modernisation period; from sites with significant dedicated manpower and infrastructure to automated waystations. Both long periods of significant craftsmanship surrounding lighthouses and later automated technologies together with often isolated geography have created a unique and multilayered context (Thunman, 1992, 2000).

There is significant discussion around whether the technological developments surrounding lighthouses have impacted their necessity (Rietz, 2022; Thunman, 1992).

As much as the lighthouse has had an impact on the location, has the location had an impact on the formation of the lighthouse. The superposition of the development of maritime culture, as well as the needs associated with it, and certain geographical locations tethered to their geological expression has preceded the concept of the lighthouse. This realisation shifts the focus from the lighthouse as an object to the lighthouse as a contextual entity in relation to its immediate surroundings, both structural as well as cultural.

2.3 | Historical building design around the swedish west coast

The building tradition of the Swedish west coast in Bohuslän encompasses a large amount of knowledge and has been well documented. The authors Finn Werne and Sara Östnäs have collected knowledge and written about Bohuslän in their book "Bygge i Bohuslän (eng. Buildings in Bohus county). In the 18th century, Bohus county was essential in the regional timber industry, especially regarding house- and ship construction. As a consequence of this, the landscape became barren and empty. Roads meandered around

scattered farms which were placed mainly on areas that were infertile, such as rocky hills and cliffs. These bush-lined hilltops, interestingly called "Fjäll" at that point in time (a word nowadays reserved for the much taller mountains in the northern parts of Sweden), were used as grazing lands and the valleys were used as farmland. Back then, these farmlands could rarely support more than one or at most a couple of households and at those rare spots where the farmland consisted of multiple merging plains, villages arose.

By the 17th century, many of the inhabitants of Bohuslän lived close to the sea in small fishing villages that could be found in protected bays and along roads, protected from storms and floods. The fishing industry was central in these parts at the time and the requirements of the fishermen left considerable imprints on the design of these villages. Along the coast, fishing huts were to be found, akin to a border between land and sea, between the place of work and the place of rest for the fishermen. Behind the fishing huts, one could usually find a road connecting them to the mainland where, in turn, the residences could be found, usually hugging the hillside granting a view of the sea from the second floor of the houses. This vertical movement allowed fishermen to keep watch of the mood of the sea.

Together with the decline of the fishing industry in the 20th century and the increase in railroad connections across Sweden, people started to move inland and the coastal building traditions no longer had to solely address the requirements of the fishermen.

The oldest houses in the area were constructed from materials that could be found locally but in the 18th and 19th centuries, when the herring period was booming and the population grew, economic relations with regions rich in forests were strengthened and log-framed buildings gained in popularity. Log frames were erected in the winter month, disassembled and transported, either by land or by rivers to the coast and out to the islands. The timber was tied together to form rafts which could then be towed by boat. The house was then delivered with the moss that was used as isolation between the rows of logs and the timber was assembled using square notches (Werne & Östnäs, 1983). It was common that buildings were disassembled and moved and structures were already beforehand constructed accordingly.

The small cubic houses along the coast of Bohuslän appear to be part of a maricultural era of rich seas (herring), fertile farmlands(oats), granite and woods (timber). The typical Bohuslän timber house is believed to constitute an assemblage of two houses on which the roof was centred. Due to the relative lack of wood, and with the need of protecting the already existing houses, the facades got cladded with vertical planks protecting the structure from weather and

wind, something that started during the beginning of the eighteenth century when wood was still expensive. The windows were centred and the facades were ornamented with delicate woodwork in a particular style called snickarglädje. Time-consuming and difficult details are being showcased. The facades were traditionally painted with Falu red, (swe. falu rödfärg), a pigment with its origin in the iron mines of northern Sweden where sludge and other residuals from the mining industry was found to produce an effective paint that could protect wood from the climate. This paint is still in wide use today and can be seen on fishing huts and barns, but has over time partially been replaced with brightly pigmented oil paint. (Ohlsson-Leijon & Reppen, 2001).

2.4 | Relevance for sustainability

In connection to Sustainable development goal 11 "Sustainable Cities and Communities", Target 11.4 (Transforming Our World : The 2030 Agenda for Sustainable Development, 2015), we intend to contribute and build upon new perspectives of coastal cultural heritage. At the same time, our thesis links to the consideration of approaching cultural heritage beyond mere preservation of the artefact itself. The aim is to extend our perspectives from a strict preservationist approach to a broader perspective of reinforcing and understanding cultural heritage as a deep-rooted part within a layered landscape.

Furthermore, the Swedish coastline is heavily influenced by tourism which potentially poses risks to the coastal environments, but also its cultural heritage. Despite its potential to create value for a region, tourism can significantly reduce or extinguish identities of a place and oppose values of local culture (Flannery et al., 2022, p. 438). Similar to the approach of "Sustainable tourism in the north" (Iceland Design and Architecture, n.d.), we intend to create architectural additions that enhance experiences of a cultural heritage site; an additional layer that considers the existing layered landscape and provide careful utilisation of the site.

A democratisation of a cultural heritage is created through the action of making the lighthouse site accessible for the common good. Careful transformation of the site in an inclusive manner implies an opportunity for the public to take part in its content. The cultural heritage is highly linked to its ability to provide a sense of local identity, belonging, and care by the people that experience it. If appropriately preserved, this could be enhanced (Flannery et al., 2022).

Considerable attention has been paid to Sustainable Development goal 15 (Life on land) when designing our addition. If implemented, our design has the potential to greatly improve the local ecology and ecosystem.

2.5 | Reference projects

2.5.1 | Bark & Warburg

Bark & Warburg was a companionship established in 1857 in Masthugget, Göteborg. The company produced prefabricated timber modules for the erection of smaller houses as well as larger halls and had a major impact in the wood processing industry as it was opening the first mechanical carpentry factory in Sweden (Fredberg, 2014).

The prefabrication of timber modules resulted in drastically shortened build-times. In the 19th century, the company was made subcontractor of the swedish Lotsverket (loosely translated as Office of Pilotage), whereby they came to construct housing, combinations of housing and lighthouses, as well as storage buildings for different lighthouse sites around Sweden. Islandsberg constitutes one of the many locations to which the company sent buildings via boats. The lighthouse at Islandsberg was erected in 1883 as part of a large order of 18 small wooden lighthouses with huts by Lotsverket to the Bark & Warburg company. All of these lighthouses were meant to function as beacons, some mounted on raised plinths in order to raise the lantern high enough in certain locations where this was necessary (Elsby, 2021).

We conducted a comprehensive search of various archives and studied several drawings of these types of smaller lighthouses which increased our appreciation for them in their economical and modest construction. The logical design is using square frames that are raised from the ground and anchored into the bedrock using thin rebar for increased stability against strong winds. The lighthouses are protected using wooden cladding and altogether, form certainly follows their highly specific function.

In April 2024, we conducted a site visit to Stångehuvud nature reserve together with ecologist Renata Chilarova and landscape architect Sara Chronvall from Lysekil municipality. The lighthouse located here is made by Bark and Warburg and the visit allowed us to study their construction in detail and thereby further strengthened our connection to this companionship. The realisation of the importance of their design in the historical perspective has guided our own work in many ways, for example in our determination to emphasise their contribution but also concretely in our own proposal simply because their ideas are still highly relevant for the conditions of our chosen location
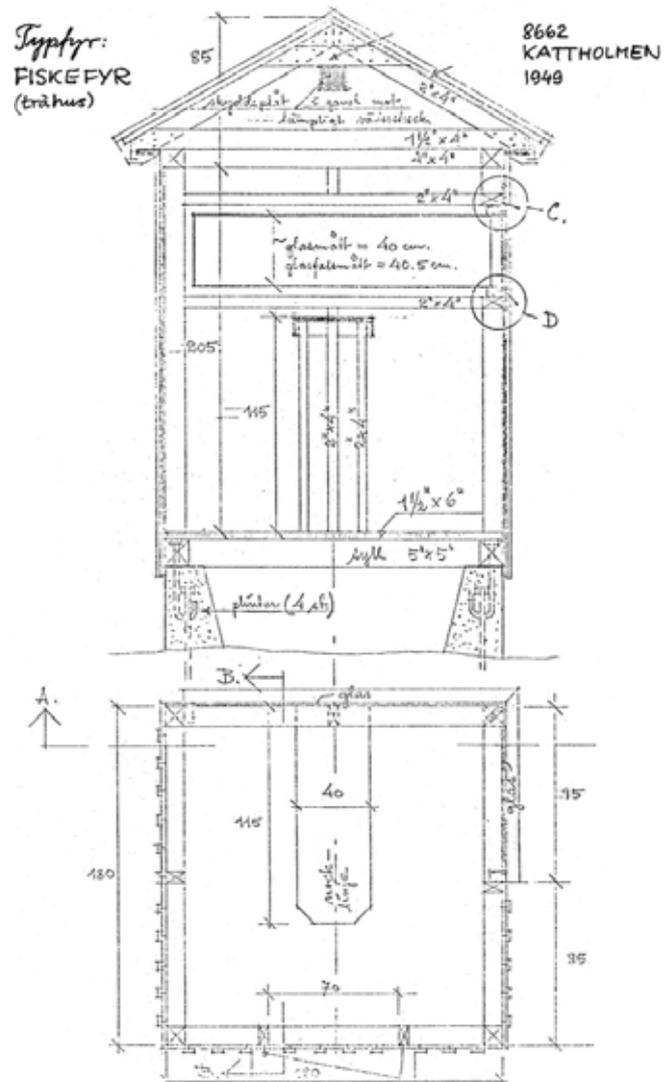

Fig. 06 Drawing of Typfyr, Fiskefyr (trähus) at Kattholmen

2.5.2 | Strandskogen

Our approach towards the landscape of Islandsberg is characterised by treating it not just as a site for potential buildings but also as an area defined by its unique natural values and rich ecosystem. Therefore, it is crucial to work with the landscape through a careful dialogue of human intervention and natural preservation.

The Strandskogen trail project by topia landskapsarkitekter (Topia landskapsarkitekter, 2013) works with a riparian forest area located in the Täby municipality in Stockholm and attempts to make a delicate natural ecosystem accessible for visitors, while simultaneously conserving the unique environment.

This is accomplished through a careful placement of footbridges, platforms and viewpoints. One of the main features is the design of the footbridges. For improved accessibility, a wide elevated pathway was designed that wraps around existing trees and plays with grated metal surfaces to allow vegetation to peek through. In addition to the wide footpath, smaller, narrow footbridges branch out, allowing a freedom of exploration off the main path, all leading towards meeting platforms with views towards the river, benches to rest and signs for information (Landezine, 2018). The usage of varied footpaths and platforms allows for individualised situations while using simple and effective design solutions.

Apart from the trail design, the project employs a poetic and visual approach for their signage system and uses durable corten steel cylinders and plates with cutout text that lights up during the night.

This approach and its careful consideration of the context, to work non-destructively with it, and to make accessible that which is otherwise non-accessible, is much aligned with our own intentions. Aspects that do differ compared to our design are related to practical considerations, such as distance to shelter, which inspired a more encompassing design (including, for instance, shelter for both humans and animals).

Fig. 07 Strandskogen primary footpath

Fig. 08 Strandskogen secondary footpath

3 | INVESTIGATION

Fig. 09 Grundsund harbour

3.1 | Workflows

To achieve a comprehensive understanding of the site, we employ a multifaceted approach of investigating context. We conceptually divided our knowledge-gathering process into a collection stream and a processing stream. In the former, information on the site was gathered from a multitude of sources, such as:

- Photography
- Interviews with local experts and inhabitants
- Multiple site visits at different seasons, time of day and in different weather conditions
- Historical accounts from literature
- Ongoing municipal plans
- GPS data from our movement on the site
- Topographical data from GIS

The processing stream consisted of:

- Sketching
- Mind-mapping
- Digital modelling
- Physical modelling
- Geographical mapping

These methods serve as tools for a holistic exploration of the site, both in terms of its tangible features and its intangible, historical significance, in what we call a layered landscape. The two streams are not temporally distinct but interdependent, one informing the other.

Some of these methods will be explained in more detail in this chapter.

3.2 | The site of a lighthouse

First, we devoted our attention to the lighthouse site in general, that is not to any specific location.

3.2.1 | Literature review

With the motive of obtaining an extensive understanding of the layered landscape that is constructed on the site of a lighthouse, an initial investigation was initiated. Based on and inspired by the in-depth 30-year-long undertaking of Tim Robinson to reclaim the cartographic reality of the Irish regions Connemara and the Aran islands and his methods

to trace the layers of the Gaelic landscape through mapping, prosaic texts and art (Smith, 2015, p. 285), we borrowed his approach to mapping layered landscapes. In the collaborative works of John Elder, Nicolas Féve and Tim Robinson in the book "Connemara and Elsewhere" (Robinson, 2014), methods of cartography, photography and written text were combined to create an interdisciplinary body of work that recognises and traces the lost or hidden heritage of a cultural landscape. We tried to incorporate and structure our own study of the landscape of the lighthouse based on these works.

One has to consider the lighthouse as more than the isolated object meant for navigational purposes. The lighthouse as an embodiment of the "coastal cultural landscape" goes beyond the simplistic view of being purely functional. The term is derived from the "maritime cultural landscape" initially coined by Christer Westerdahl in "The maritime cultural landscape" (Westerdahl, 1992) and includes the subjects of mariculture and the Swedish term "sjöbruk".

> "It comprises the whole network of sailing routes, old as well as new, with ports and harbours along the coast. and its related constructions and remains of human activity, underwater as well as terrestrial." (Westerdahl, 1992, p. 6)

In relation to this concept, and based on our site visits, the lighthouse is understood as part of a wider context, including not only its connection to other lighthouses and maritime institutions as a nautical network but also its mutual relationship of culture and landscape (Honko & Löfgren, 1981). Over the duration of its existence, the lighthouse developed into an artefact, slowly losing its initial purpose and remaining as a trace of human interaction and water (Ford, 2018b) and therefore revealing itself as something more profound and ingrained into the human relation with the sea.

The maritime cultural landscape is manifested within the harbours, fisheries and villages along the coast and, just as relevant, also within the seafaring sub-cultures of pilotage, lighthouse systems and nautical navigation (Westerdahl, 1992, p. 5). This manifestation is essentially what is represented as a simple line on the map. Though, as explained by Ben Ford in "The shore is a bridge" (Ford, 2018a) the coastline is not a line clearly definable through cartography but described by several authors as something "seamless" (Ford, 2018a), "fractal" (Robinson, 2014, p. 2) or most relevantly in our context as a transitional zone between landscape and seascape (Ryan, 2016) and thereby signifying the multilayered connection between the coast, the lighthouse and the cultural landscape encompassing all within, leading to the impression that the lighthouse as a cultural entity is the reification of the land meeting sea and culture meeting nature.

3.2.2 | Site visits and synthesis

Six lighthouses along the Swedish west coast were visited: Subbeberget, Krogstadsudde, Skallen, Mollösund, Islandsberg and Söö. For further in-depth reports on each of our visits, see Appendix II.

Throughout our studies and excursions, the landscapes presented to us that the transition of land and sea is hardly definable as a static property but rather understood as a dynamic and highly time-related change of states and energies. In some places, the coastline defined itself as abrupt, chaotic and direct, whereas other places were situated in a greatly stretched and spread-out zone of water reaching into the land and slowly transforming the seascape into archipelagos, bays and straits. Some even regard the seas reach into the land goes as far as towards Lake Vänern and Lake Vättern, ultimately linking the coastal sjöbruk with the cultural landscape of the lakes and being exemplified when finding entities of maritime culture such as fishing huts, piers and most importantly lighthouses placed all around the lakes (Holmström, 2000).

The lighthouses for us as land-bound visitors turned out to be solely accessible by day under the light of the sun and therefore did not reveal their full character. Quite contrary to our baseline experience, the lighthouse seems to be most alive during the night, when the sun has set, and the emitting light of the lamp is the only thing reminding us of safety. For seafarers, the lighthouse starts to appear truly in darkness and begins to communicate with the lone souls out on the sea.

As the active services of lighthouses slowly get decommissioned and their purpose replaced by modern technology, the glowing light of belonging ceases to be lit. It is therefore most important to acknowledge its ingrained importance for human culture and cultural heritage and understand its imminent power to attract and safeguard (Rietz, 2001).

3.3 | The deep map of Islandsberg

3.3.1 | Landscape

Out of the six lighthouses we visited, Islandsberg was something special. This peninsula is the site that we have chosen to explore further. A place that entails both an extinguished lighthouse

and a newer one that continues to shine light across Skagerrak, a roaring sea of bad reputation for those who travel over water.

The landscape appears to be a windswept mountain of sparkling gneiss. In its lower parts, a moorland is hidden, partially covered by the widespread heather, crow berries and bear berries, all of which manage to find their way out and up above the rocks. The path gets narrower and trickier to find further away from the mainland. It passes the homestead Arsund, built in the beginning of the 20th century. Stone walls and mounds of stones testify that the landscape once was used for grazing animals (Lysekil Kommun, n.d.). Islandsberg's cairn, a 2,5-metre high, white-painted seamark built in 1875 (Lat. N 58 11. Long. E 11 24.) helps those to navigate who want to reach their destination (Söderlund, 2015). Gåsö is found to the north while Gullholmen and the nearby island Jonsborg are seen in the south.

The formation of the landscape of Islandsberg has been thoroughly described by Hillefors in his book Fjord- och sprickdalslandskapet i mellersta Bohuslän (Hillefors, 1983). Islandsberg has been transformed from an island to a peninsula due to land lifting and silting of narrow straits and constitutes the most southwestern tip of Skaftö. The coast of Bohuslän is characterised by the fjord coastal terrain. An effect of how granite pushed forward and lifted up the gneiss has created the characteristic shape of Islandsberg at which ridges with a flat slope face southeast and steep walls face northwest. A characteristic trait of formations continuing also under the sea and out to the outskirt islands. Cobble fields can be found on the western side of the island and weathered material and marine mud have accumulated in the valleys. Depressions in the landscape and hollows in the bedrock are now occupied by bogs and the most northern of them have been used for peat mining. The vegetation spreads sparsely on the outermost parts of the island and seeks its way to the accumulated rainwater. Aspen trees are found above the moraine and wind whipped pine trees manage to exist further out on sandy ground (the latter is planted on the island). On the southeastern part of the island old farmlands and fruit trees can be found and aspen trees, low growing oaks and ash trees are growing protected from the harsh winds from the west and lichen and heather covered rocks alternate each other.

3.3.2 | The Lighthouse

On the 7th of November in 1883, the lighthouse of Islandsberg was lit for the first time. The lighthouse is located on the western part of Islandsberg, south of Grundsund (Hillberg, 2007). When one reaches what at first glance appears to be the outermost part of the island, a ten-metre-high rock formation is revealed, plunged towards the sea. This part of the landscape, called

Fig. 10 Map of Bohuslän 1:50 000

0   750   1500   3000 m

Islandsbergs huvud (the head of Islandsberg), is separated from the rest of the island by a gorge filled with large rocks. A bridge leads down to the site itself. The magnificent rockwall that appears between the old lighthouse site and Islandsberg makes the place feel completely isolated from the rest of the world and exposed to all the winds of the western sea. The water between Islandsberg and Jonsborg seems to be the only calm water traversable during a storm. When this occurred, purchased provisions had to be carried over the mountain.

The precipice creates two naturally protected bays around with lifting devices, duckboards and other functional structures that have been built to enable the bays to be used as harbours. In the north bay, a boat can be taken out of the water by pulling it along a metal structure if the weather gets too harsh. When the weather was calm, the south bay was used as a harbour for the loading of goods, such as fuel for the lamp (Elsby, 2012).

The elevated location of the site meant that a tower wouldn't be needed to house the beacon. The lighthouse therefore stands out from others built during the same period (Carlsson-Lénart, 2015). Consequently, a combined lighthouse and residential building, containing two apartments and in which the light (a paraffin lamp with wick) was placed on the west side of the attic floor, was built. Below the room that houses the lighthouse apparatus was an office for the lighthouse master. A balcony stretches along the entire west-facade which enabled cleaning of the windows (Elsby, 2012).

The lighthouse was prefabricated in a carpentry workshop in Gothenburg by Bark & Warburg and was transported to the site by boat and had room for both a lighthouse master, a lighthouse keeper and his family. Apart from the white-painted facade facing the sea, making the lighthouse a seamark even during the day, the house is cladded with red-painted clapboards, standing on a stone foundation (Riksantikvarieämbetet, 2000).

In addition to the lighthouse, a shed for storing firewood, a carpentry workshop, a lime shed, a storehouse, a privy and piers were built. On a windy day in September 1969 the privy blew out to sea and disappeared (Brovik, 2020). Rainwater was collected and stored in a basin as a well was missing on the site and in 1893 a shed was built to store paraffin (Elsby, 2012).

The corners of the house and the window framings are painted white. Two entrance doors are located on the white part of the building and are painted in the same colour, and every other plank is sawn with a triangular profile at the bottom. The roofs are covered with slate, and on the site where the privy previously stood, now sits a new building containing the same function. The smaller buildings are constructed in a similar style, but the doors are painted blue and the roofs are slanted instead of a saddle roof. A cannon is also found at the site, which we believe was used as a foghorn to warn and guide

seafarers through dense fog. Furthermore, a well was dug by the first lighthouse master up on Islandsberg (Elsby, 2012).

The lighthouse only shone for 55 years (1883-1938) before it got extinguished and de-staffed. A new white AGA-lighthouse with a red-painted roof was built 425 metres north of the site at Torskepallen. Its light is elevated 13,5 metres from the surface level of the ocean and has the following character: Fl(4) WRG 12s 7M. It was built on a concrete foundation, but the octagonal iron tower had to be replaced by a round plastic one due to rust damages (Elsby, 2023). Between the years 1945 and 1948 the progression of ownership is somewhat conflicting between sources (Carlsson-Lénart, 2015; Elsby, 2012, 2023). The old lighthouse was unoccupied until then but has been in private ownership ever since. It has been a motif for many artists, including the Gothenburg Colourist Karin Parrow, who together with her husband bought the house in 1948 (Elsby, 2023).

3.3.3 | Site visits - analysis

We visited Islandsberg on seven occasions during the writing of the thesis. These visits were distributed across different seasons and times of day which allowed us to experience the site in different settings and from different perspectives. One of these visits was during the nighttime (See Appendix V). The remaining visits were made between 10th of October and the 20th of May. We studied the location under diverse weather conditions, from snowfall and rain to clear skies, partly cloudy and completely overcast skies with no precipitation. During the visits, we focused on different parts of the site on different occasions.

This intense schedule of visits under many kinds of conditions facilitated a deeper understanding of the site. It also allowed for spontaneous interactions with locals from whom we could gain valuable insights into Islandsberg and opened up a wider network of people of interest which we could interview.

Numerous impressions and facts were learned during the visits that could be integrated into a deep map. First, and most generally, Islandsberg was the most multifaceted location that we came across from many perspectives. In terms of ecology, for instance, a diverse set of biotopes were discovered on the island; from barren rocky surfaces that converts into heathers and further transforms into a myriad of small water bodies. It also became evident that this site has been used by humans for a considerable time, evident by discoveries such as old fruit trees, dug wells and stonewalls.

This extreme variety of environments layered on top of historical remnants most of all created a site of never-ending surprise. As we shall see in Chapter 04 Implementation, this realisation has been fundamental for our design de-

velopment which had to be highly adapted to not only the site as a whole, but to individual conditions of the site.

3.3.4 | Adjacent communities and its history

Bohuslän once belonged to Denmark and it was at that time that people settled on each side of the narrow bay that stretches between the shallow Värbofjorden in the south and Gåsöfjorden in the north. The fishing village Grundsund, once called Grunnesund and Grönsun, expanded during the rich fishing period and constitutes the closest village to Islandsberg. Herring was caught closer to shore, while whitefish was caught far out to sea, making it possible for the village to raise a church in 1799 on Ösö, the western side of the village which was completed in 1818. Narrow alleys wind their way in between the fishing sheds down to the harbour. These paths remain publicly accessible even today. As an attempt to increase the harbour's capacity to accommodate warships, a canal was dug during the first world war, dividing the village in two parts (Lind & Leandersson, 2002).

Lennart Grundborn has collected memories of Grundsund in the book "Havet vi ärvde: Grundsund i tidens hav" (Grundborn, 2012). Originally, Grundsund was only a shallow strait and the location on the eastern side of Ösö proved to be optimal for the establishment of a fishing village. Värbofjorden is located south of the village and Gåsöfjorden to the north, towards which the original harbour was built. Ösö was connected to Skaftö as a result of land uplift and sedimentation and the village therefore had a bay on each side of the strait.

During the 18th century, large quantities of herring appeared along the west coast and small communities were created around the fishing industry, consisting of fisheries, salteries and trancookeries. The herring populations fluctuated strongly and when the herring disappeared, agriculture involuntarily became more relevant. At the turn of the century, herring populations returned again.

In 1799, Grundsund became the official name for several small communities including Värbo, Bovik, Söhalla, Hagen, Udden and others. The harbour was heavily burdened by northerly and westerly winds and the few houses that existed had been moved from the calm, shallow bay towards the Värbofjord. On November 26, 1900, a harbour order with a harbour master and committee was appointed in Grundsund. A grant from the state was approved to rebuild the harbour and an amount of 620,000 SEK was granted on the condition that the ownership of land be transferred to the crown and that movement of existing boat houses would be of no cost to the state. The land closest to the water was redeemed and transferred to the state. The idea was that the land would not be owned by any individual and instead make the harbour area accessible to all residents. In 1914, the state built both a breakwater and channel through the community, which divided the strait into a western and eastern side. The two areas were connected through an openable bridge and breakwater in the north. The channel was blown between Skuteviken and Värbofjorden and in 1916, the port was drained and blown up to accommodate bigger ships. In the year 1918, the harbour was completed and reached the state that it has up to this day (Grundborn, 2012).

3.3.5 | Interviews with stakeholders

As previously stated, the context of our site was of utmost importance for the present work. It is crucial to mark the importance of firsthand accounts from people living, in some way, in the context of Islandsberg. In many ways, these accounts formed a basis on which to build a design proposal. Interviews with stakeholders can inform the deep map, and thereby the design process in several ways.

First, expert knowledge was essential to learn the boundaries of what was and is practically feasible in terms of actual construction, how cultural heritages can be curated and how to care for the local ecology.

Also, interviews revealed what locals wanted from the location and plans that were already set in motion. It also became clear that locals wanted to have the site more accessible for sustainable experience.

Västkustiftelsen

One interview was conducted with Saga Karlsson, one of the architects at Västkuststiftelsen, a subsidiary foundation of the county administrative board (swe. Länsstyrelsen), responsible for planning of infrastructure projects for the foundation.

Through this, we learned, amongst many things, that one goal for Islandsberg, as it is with other locations of similar cultural and historical significance, is to restore the site to the same state in which it was around a 100 years ago (primarily in terms of its ecology). The foundation is concerned with caring for the natural habitat and has experience with some of the destructive consequences of human contact with a site. (S. Karlsson, personal communication, 7 February 2024)

In the discussion, we also concluded that the maximum amount of accessibility that is compatible with a preservation of the site in its optimal state, is a worthwhile objective. This does not, however, mean that every part of the area should be made accessible to everyone. Arguably most importantly, we learned of the use of grazing animals and their role in restoring the ground

to its original state. Lastly, a certain restraint and conservatism in adding infrastructure to these sites was also a valuable insight that was imprinted on us.

Länsstyrelsen (The county administrative board)

In an interview with Isabelle Kahr Dekhla, manager of marine preservation at the county administrative board, we learned that there is an ongoing process to formally convert Islandsberg into a nature reserve. In a Swedish context this entails the development of plans and regulations for the explicit protection of the site. At the same time this also creates an interest for the site as a whole which can come with upsides (resources, increased knowledge of the site and its history) and downsides (an increasing amount of visitors can potentially damage a site and has to be managed proactively).

Lysekil municipality

Recurring dialogue with several experts at the department of civil development in Lysekil municipality. Sara Chronvall, landscape architect, and Renata Cihlàrovà, municipal ecologist, were our main speaking partners.

From Sara and Renata we learned foremost of a large-scale plan of a network of hiking trails meant to be constructed in the larger area. As a part of this project, a substantial survey with around 160 participants was conducted with the locals, targeted at determining what needs and wishes people living in the area had in regard to natural access (Cihlárová, 2023). Amongst other things, people were asked what specific areas in the vicinity were of interest. Islandsberg was one of the locations that was of particular interest to the locals, as were many of the existing trails that connect to Islandsberg. When asked for particular requirements in destinations of interest, study participants pointed out a need for social infrastructure such as grilling spots and seating areas. Wind shelters and other camping solutions were also requested. Additionally, the state of existing infrastructure, such as foot paths, bridges and trails were criticised and the accessibility for people in wheelchairs and strollers was lacking.

Fyrsällskapet

We interviewed the editors Leif and Maria Elsby of the magazine Blänket, the official magazine of the Swedish lighthouse society (SLS). SLS, who are experts in the field of lighthouses and have, among other things, created the largest digital database of lighthouses in Scandinavia, Fyrwiki. From Leif and Maria, we derived a lot of the historical information on Islandsberg (See Chapter 3.2.2 The lighthouse).

Locals

During our many site visits, we encountered several locals that gave valuable insight into the context of Islandsberg. We were in contact with Lena Hermansson, owner of Skaftö Vandrarhem, while staying in Grundsund for one night. We received valuable insight into the local history as well as the discourse around the future of Islandsberg within the community. We also learned about some of the difficulties with tourism in the region and the very noticeable economic seasonality.

During a later visit we met Oskar Mårtensson, who recently purchased land on Islandsberg having relatives living there. Interestingly, Oskar has been rather intensely trying to work the land on Islandsberg using appropriate and small-scale methods in direct dialogue with Väskustiftelsen.

3.3.6 | Development plans for Islandsberg and public surveys

In 2023, the municipality of Lysekil started a project meant to enable sustainable contact with nature and the outdoors (Cihlárová, 2023). In particular, hiking trails in the vicinity are addressed and the project aims at ensuring and evaluating the quality of both existing and projected trails as well as to increase their usage.

The project has conducted a survey within the local community in 2023. Noticeably, around 50% of respondents are outdoors daily. This includes a variety of activities, including walking, hiking, grilling and socialising outdoors. Most use trails between 4-10 kilometres in length or shorter. Respondents value in particular the prioritisation of nature, qualitative information, clean and maintained trails, shelters/halting places/views. Responders rate Islandsberg amongst the most beautiful places to visit and the lack overnight facilities, site-specific information and cleanliness.

Lysekil has also taken inventory of so-called Natura 2000 habitats around Skallhavet, the bay to the east of Islandsberg and some of its coastline (Dabolines & Edvardsson, 2022). The basis for this investigation is the fact that the county administrative board has plans to declare the area as a nature reserve. Specific conservative measures are proposed such as preservative deforestation of certain invasive trees, the restoration of the heather-dominated habitat, and the reintroduction of grazing animals.

Parking areas are considered lacking, and the looping trail is

proposed to be lengthened, with no foreseeable risk to the local ecology. Resting places and grill areas are planned as well along the trail. Substantial trails and signage could compensate for the increased number of visitors, protecting the environment.

In an article from Lysekil municipality published online, the area is described as a cultural environment and any new infrastructure has to take considerable account of this when determining locations and design(Lysekil Kommun, n.d.). The farmlands are to be kept open and their historical value is to be preserved.

In the Natural care plan from 2010, the vegetation on Islansberg is considered to be one of the prime examples in of heather landscapes Sweden (Naturvårdsplan 2010, 2010). The existence of nationally unique types of lichen and unique rock morphology make Islandsberg an object of national interest for nature conservation and outdooring and it ought to be considered for nature reserve designation as well as an area for large-scale restoration and development.

Taken together, these official documents show the importance of the site both in terms of nature conservation and as a site of interest to the local population. It also underlines the incentive for careful development of the area in a historically accurate and ecologically considerate manner.

3.3.7 | Photography

Photography was used to capture intriguing and important observations in our many visits to Islandsberg and other lighthouse sites. The camera allowed us a direct capture of impressions in an immediate and spontaneous way. The extensive collection of photographs collected in this way, spread across multiple visits, contributed greatly to the understanding and comprehension of context.

Furthermore, this collection of photographs shows clearly what specific sites and objects captured our attention. This, by itself allowed for an ongoing investigation and allowed us to extract important details that helped construct the deep map of Islandsberg.

The broad temporal conditions under which the site was photographed create an interesting narrative of the landscape and how it changed throughout the project and in between visits.

Lastly, specific buildings were studied in this way which allowed us to create collections of different building details that could later inspire our own design effort. An example of this can be found in our facade analysis (See Appendix IV Photographies).

3.3.8 | GPS analysis and integrated geographical information

A fact that became apparent rather early on was the relatively disorganised trail network on Islandsberg. It was by no means obvious how one ought to navigate the Island in a logical way.
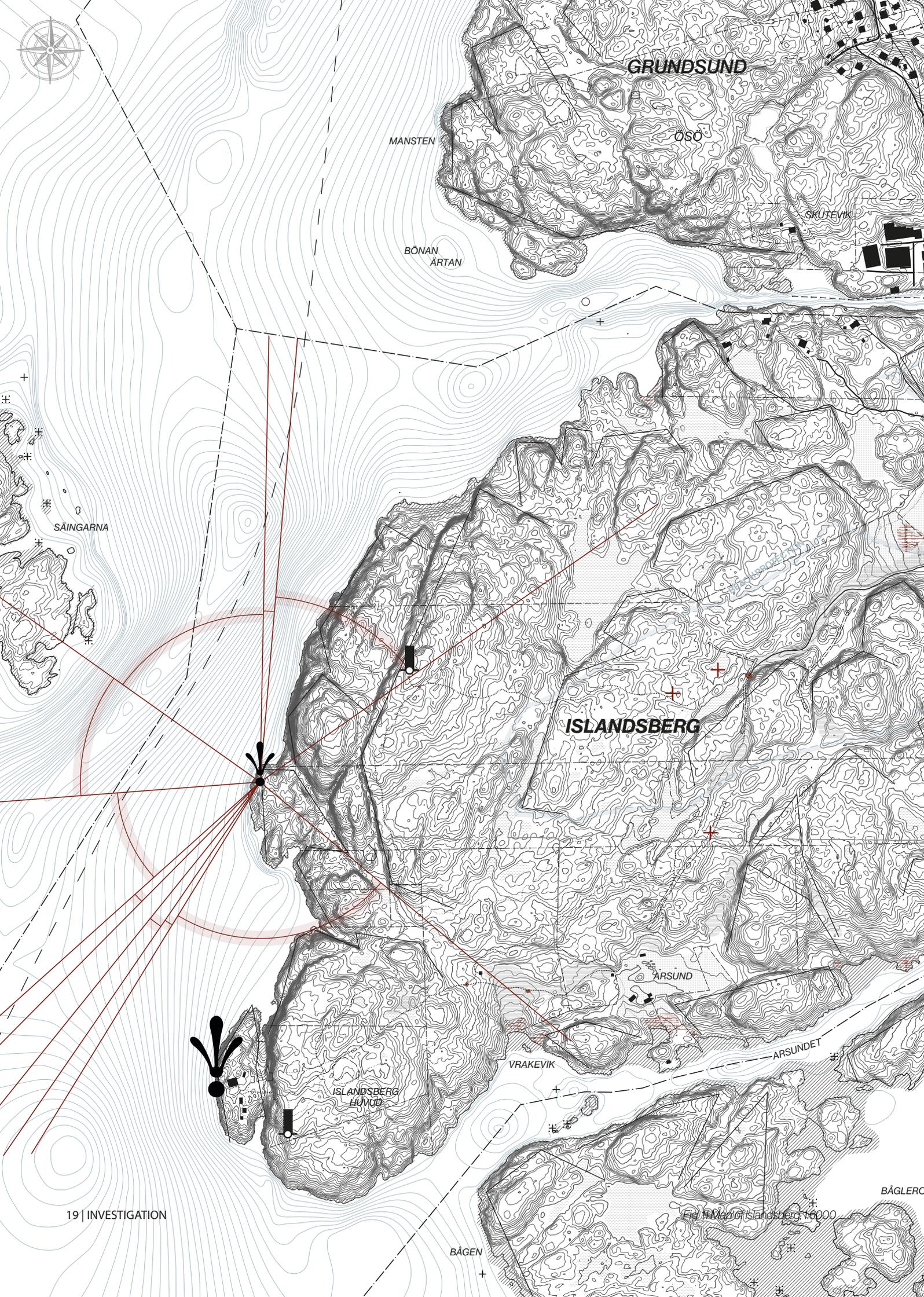
During the site visits, we explored different paths along the island, often without any navigational aids. This explorative analysis was recorded using the STRAVA application (STRAVA, n.d. Strava, Inc, San Francisco, US), which allows for GPS based movement tracking which can be analysed post-hoc in vector format and in turn be exported to GIS software which allows for an integrated analysis of the landscape and the movement of people across the island in particular. Movement tracking, satellite imagery and GIS data were used extensively to document the complexity of the site and trace features, both historic and currently existing.

3.3.9 | Target group

Within the effort of contributing to the knowledge and fabric of a cultural landscape through deep mapping, we intend to highlight, uncover and combine layers of context in order to make them accessible for the public. This includes on the one hand tourists (people foreign to this context) in both a literal and a metaphorical sense. A sensitive approach to experiencing cultural heritage aims to sustain it and increase robustness to the arguably ignorant perspective of tourism. The introduction of public and semi-public functions will help to direct the public in a way to conserve, enhance and appreciate the existing landscape.

On the other hand, this project also affects people inherently part of this context. The dynamics of time and erosion can loosen the connections between people and their history. Throughout careful uncovering and reinstating, our deep map has the potential to express and resurrect fragments of lost connections. The goal is to strengthen these links and make them visible, experienceable, and accessible to the people living within this context and invoke a sense of care of a place that enables these layered landscapes to continue to exist.

This project presupposes a certain responsible culture of use which we believe is mostly ingrained in Swedish society. It will also require the visitor to contribute with expendable resources such as firewood and food. Additionally, a certain discipline regarding waste management will be assumed. This should be realisable to a high degree, with only minimal human oversight and supported through design.

GRUNDSUND

MANSTEN

ÖSÖ

SKUTEVIK

BÖNAN
ÄRTAN

SÄINGARNA

ISLANDSBERG

ÅRSUND

ÅRSUNDET

VRAKEVIK

ISLANDSBERG
HUVUD

BÅGLERO

BÅGEN

Fig. 1 Map of Islandsberg 1:6000

FÅGELKÄRR

VÅRBO

LÖNNDAL

VÅRBOFJORDEN

ÖN

TRÄNGESUND

JONSHOLMEN

BAKAREN

SKALLHAVET

JONSHOLMEN

USHOLMEN

KASTEN

JONSBORG

Sector field
Seamark, Buoys
Underwater cable, electric
Pipe
Telecommunication cable
Shallow water
Underwater obstacle
Nautical route
Birdprotection area
Strandskydd
Main road
Village road
Private road
Gravel road
Established trail
Inofficial trail
Stonewalls
Waterbodies
Property Borders
Markings
Buildings
Tectonic development
Moorland
Beach / Reet
Farmland
Forest
Channel / Bridge
Where land meets sea
Cairn
Well

01 MAR - 15 JUL

0   125   250   500 m

4 | IMPLEMENTATION

4.1 | Program

1. Entrance
Size: 20 m² heated structure, 31 m² open structure
Difficulty: multiaccess
Site: former farmland, young forest, reed, creek, deciduous trees
Weather conditions: protected
Description: heated structure with restroom and water station + open structure with info point, fire wood, seating area and waste management

2. Sheep hut
Size: 5 m²
Difficulty: multiaccess
Site: former overgrown farmland, fruit trees, creek
Weather conditions: protected
Description: small shelter for four full grown sheep

3. Bothy I
Size: 13 m²
Difficulty: moderate
Site: moorland, bedrock, heather, pine and aspen trees
Weather conditions: semi-exposed
Description: spacious hut equipped with a wood stove, prep-bench/seating and space for 1-4 people to stay the night

4. Wind shelter
Size: 8 m²
Difficulty: easy
Site: bedrock, windswept trees, heather
Weather: conditions: semi-exposed
Description: sheltering structure for resting, simple cooking on open fire and possibly staying the night

5. Bothy II
Size: 9 m²
Difficulty: moderate
Site: heather, bedrock, stonewall
Weather conditions: exposed
Description: compact bothy equipped with a wood stove and space for 1-3 people to stay the night

ᛘ Islandsberg old lighthouse

Ỵ Islandsberg new lighthouse

🎇 White stone cairn

ᚱ Cairn

BUS 845
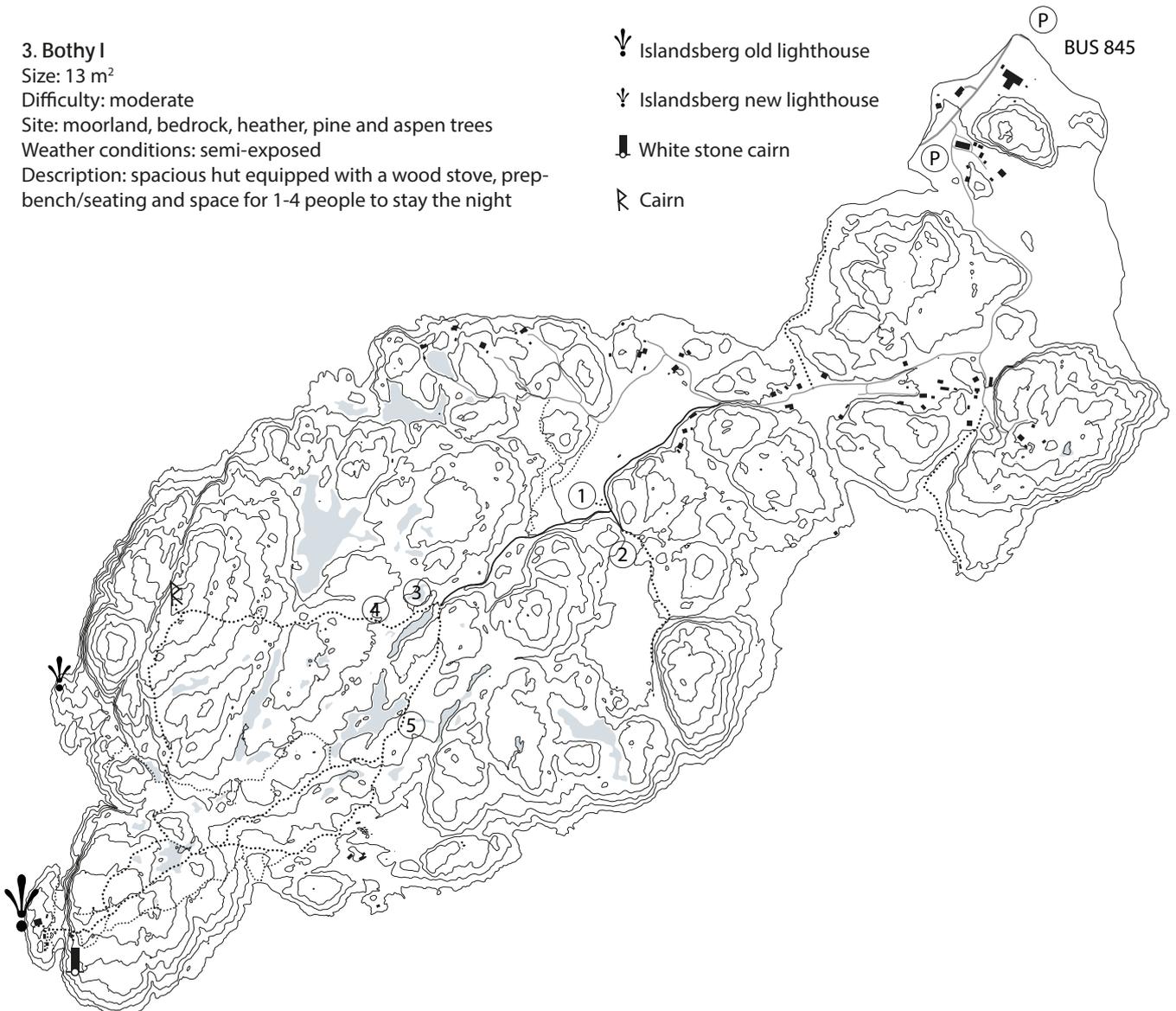
Fig. 13 Schematic map of Islandsberg

1.
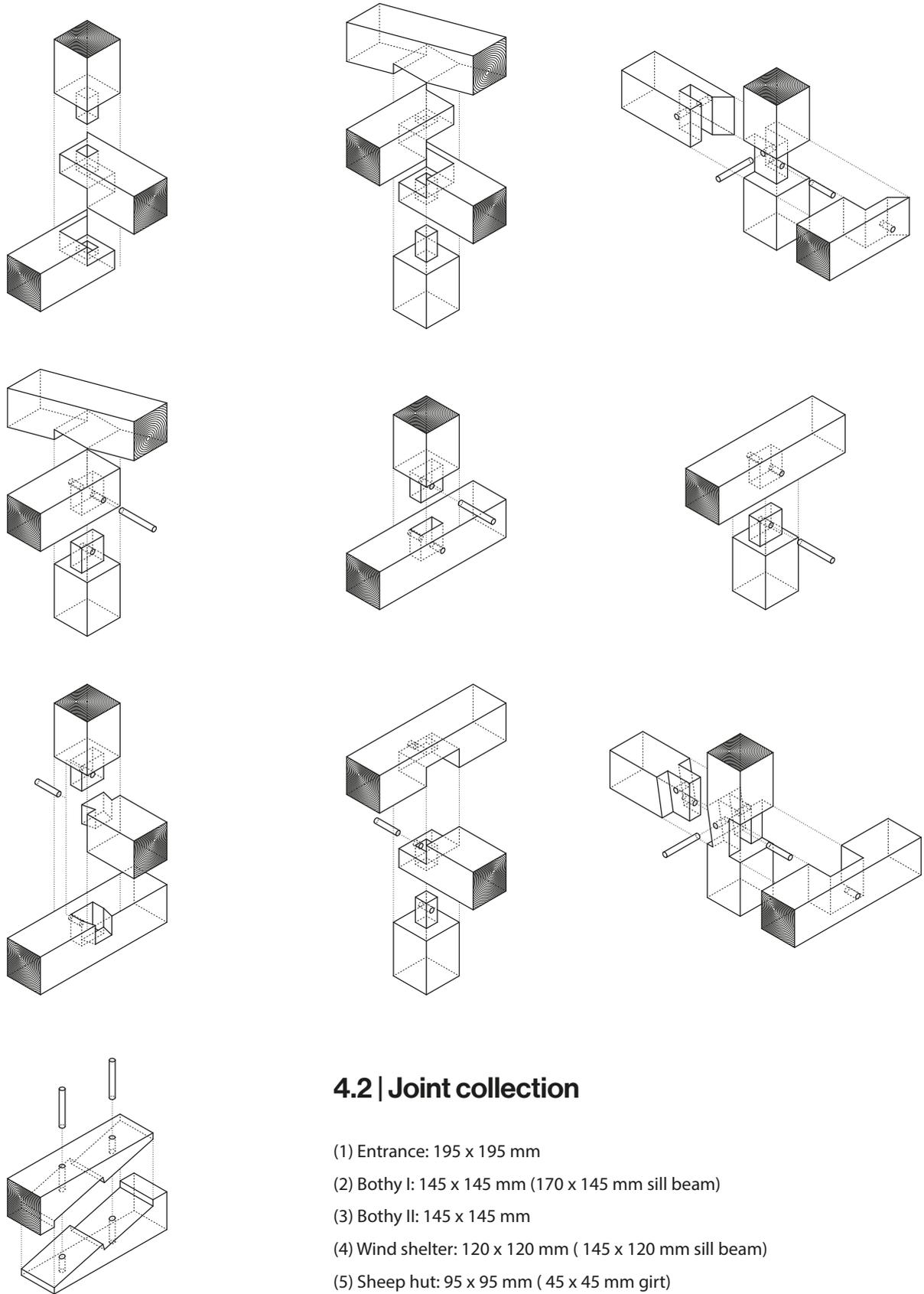
4.2 | Joint collection

(1) Entrance: 195 x 195 mm

(2) Bothy I: 145 x 145 mm (170 x 145 mm sill beam)

(3) Bothy II: 145 x 145 mm

(4) Wind shelter: 120 x 120 mm (145 x 120 mm sill beam)

(5) Sheep hut: 95 x 95 mm (45 x 45 mm girt)

Fig. 14 Joints used in (1) Entrance

2.

3.

4.

5.
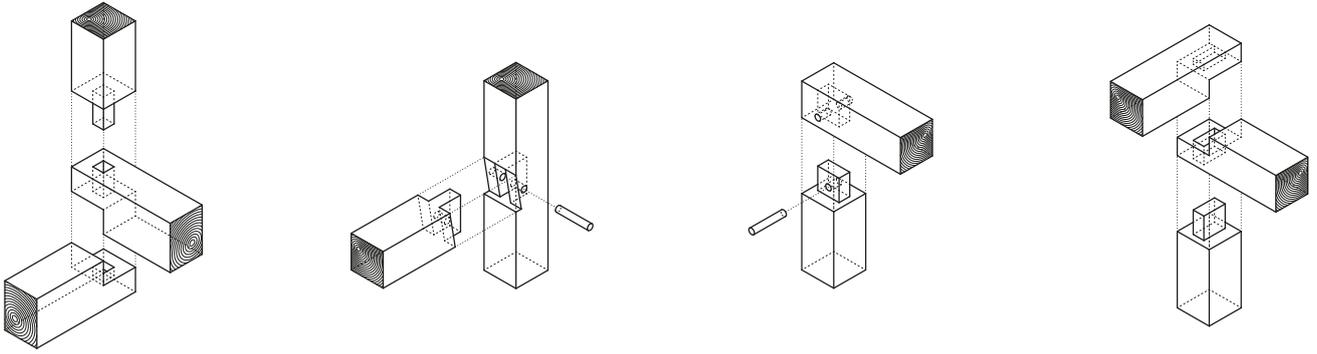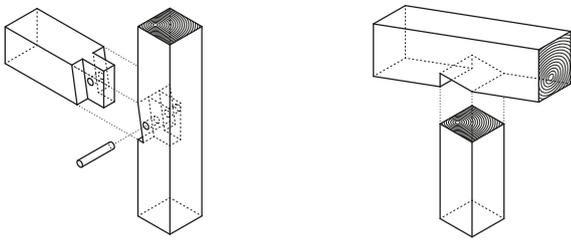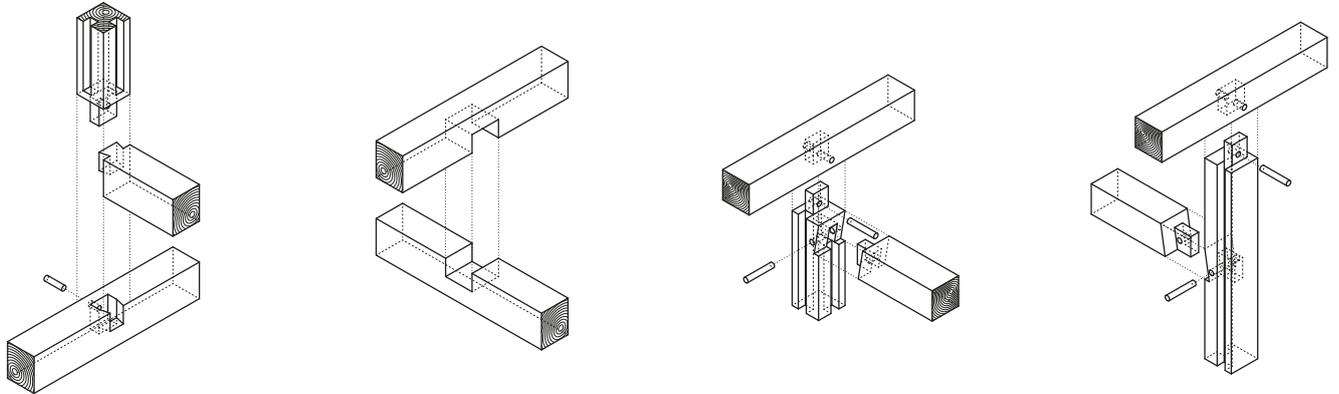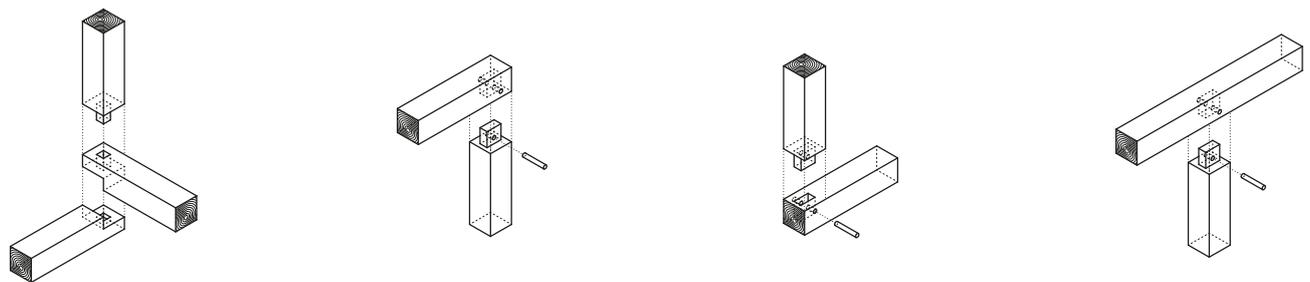
Fig. 15 Joiints used in (2) Bothy I, (3) Bothy II, (4) Wind shelter, (5) Sheep hut

4.3 | Entrance

The entrance is the first of the five structures that the visitor encounters on their way out to the lighthouse. It is located adjacent to the Islandsberg village and marks the fringe between residential areas and the natural landscape of Islandsberg. When approaching, the long east-facing facade is presented, though hidden behind the stonewalls and fruit trees that belong to the old farmland. Linking the entrance with the existing trail, a footbridge reaches out over a small creek into the reetfields, offering a place to sit under the lantern and to take a look back towards the village. Behind the entrance, an aspen tree forest emerges and a smaller footbridge branches off, leading back towards the trail.

The open structure offers a place to prepare for the stay, a firewood storage, an information board with a map and important facts about Islandsberg and a place to sit and rest. Additionally, it houses a waste disposal space, which is spatially separated from the seating area. The insulated structure offers an accessible toilet and a preparation area for freshwater access. In order to maintain the toilet facility, a technical room is located within the insulated building.

Its design language takes cues from the agricultural and rural typology of barns and boatsheds of Bohuslän, incorporating both an open, transparent timber structure and a closed, insulated one. The transparency of the buildings are further brought up through the open axis cutting through the building and allowing views towards both the west and eastside.

The buildings utilise an exposed timber-frame structure, highlighting the craftsmanship and tradition of woodworking of Bohuslän and are painted with a red tarpaint, retaining the wood grain while also protecting the surface from moisture. The facade is placed in between the timber-frame, emphasising the structural system of the structure and the corners of the structure are reinforced with diagonal timber braces to increase rigidity and protect against strong winds.

The timber-frame employs a variety of different joints such as customised mortise and tenon joints, dovetail joints, a stop-splayed scarf joint and lap joints, to accommodate for the multiple connections and the aesthetic quality of continuing the horizontal appearance of the beams. A special emphasis lies on the joints connecting more than 3 timber elements as they used a combination of different joint types.
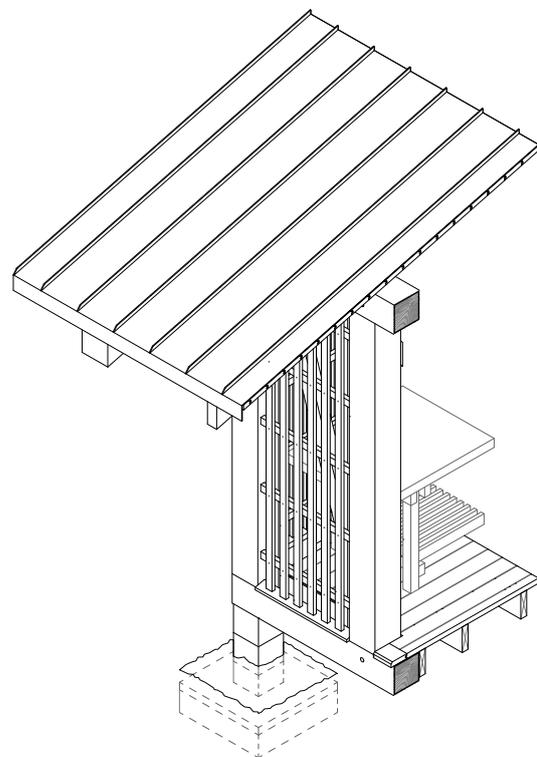

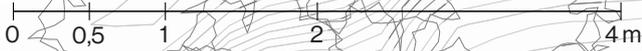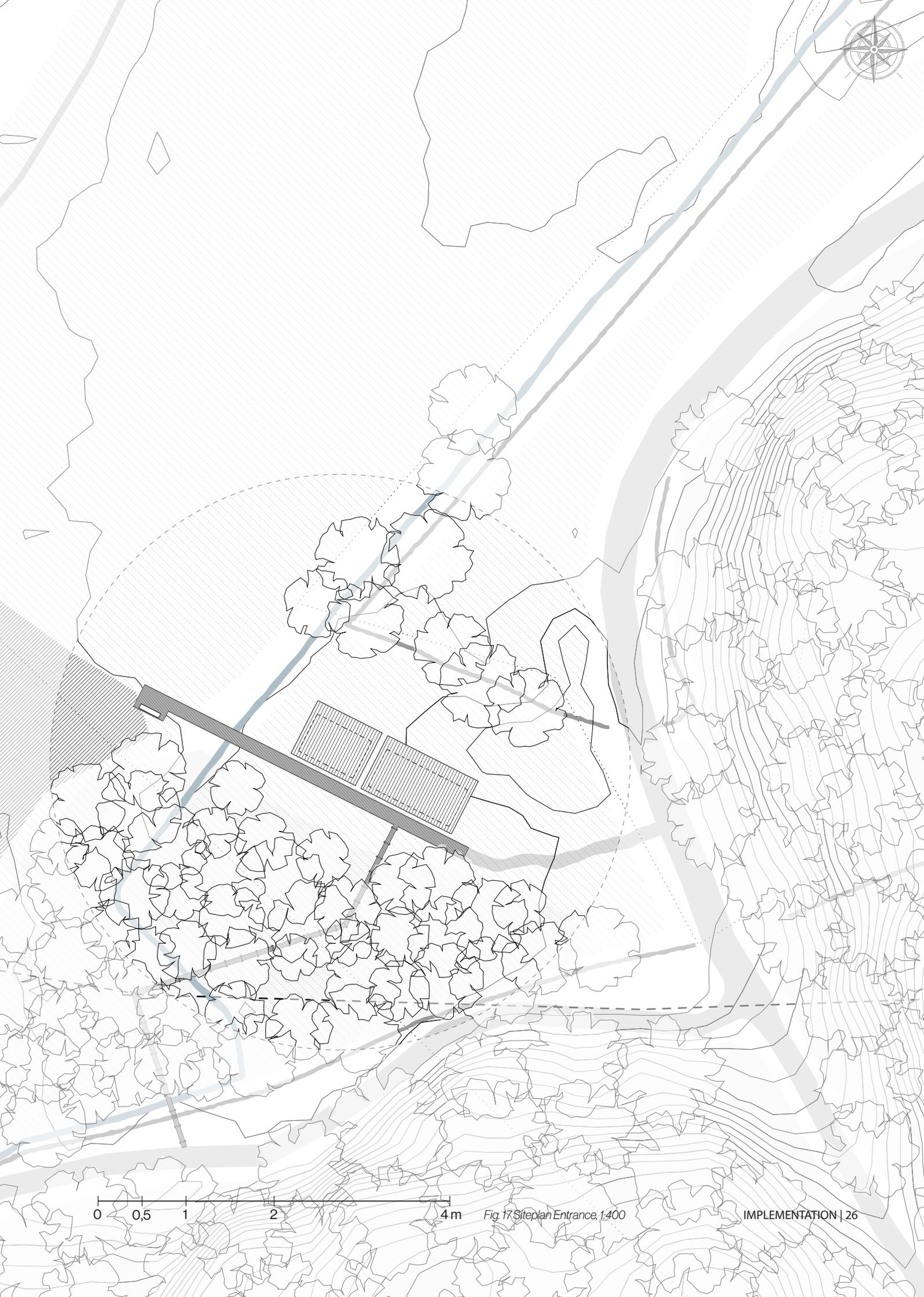*Fig. 16 Axonometric section of the Entrance (open structure), 1:50*

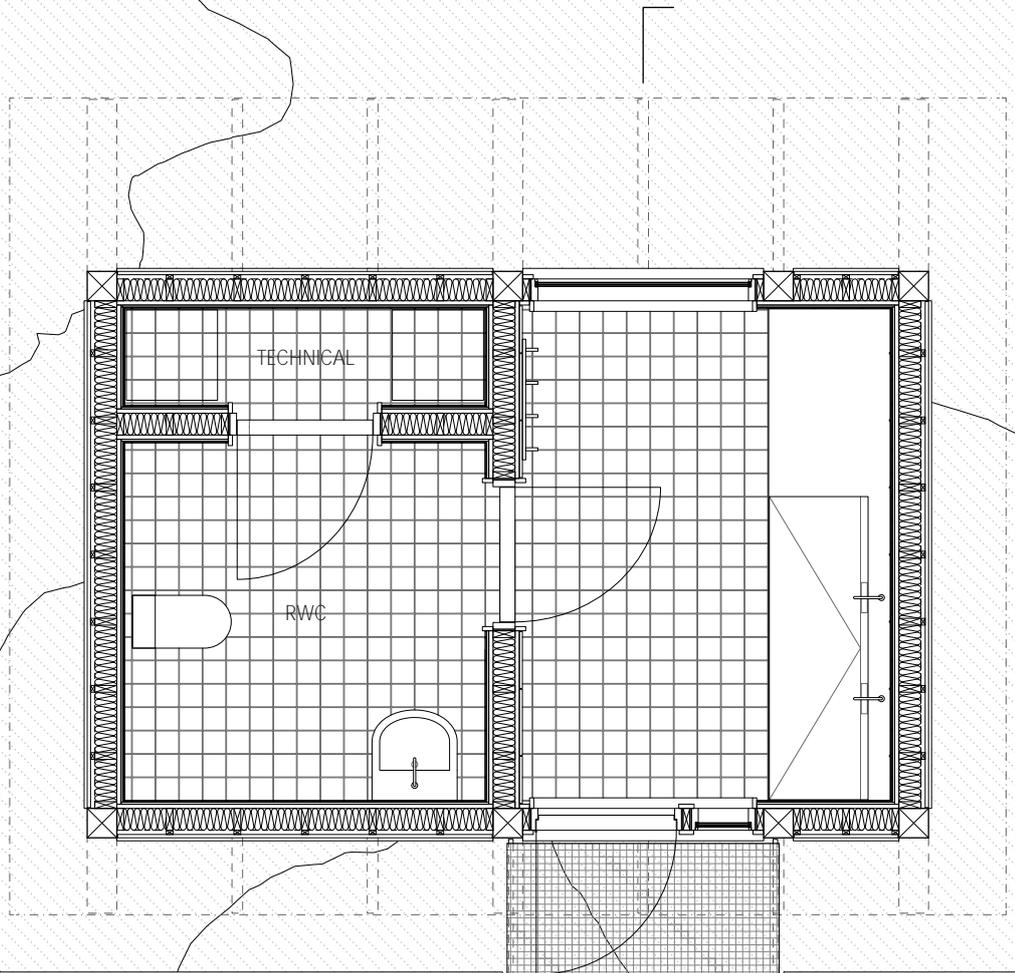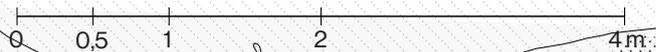0   0,5   1   2   4 m   *Fig. 17 Siteplan Entrance, 1:400*

TECHNICAL

RWC

Insulated wall: (outside - inside)
22 x 120 mm horizontal wood panels
28 x 70 mm batten / ventilation layer
wind barrier
45 x 145 mm studs/joists + 145 mm wood cellulose insulation
vapour barrier
28 x 45 mm horizontal batten / installation layer
12.5 mm gypsum board
4 mm thinset
8 mm ceramic tiles

Open wall:
22 x 45/95 mm vertical wood panels
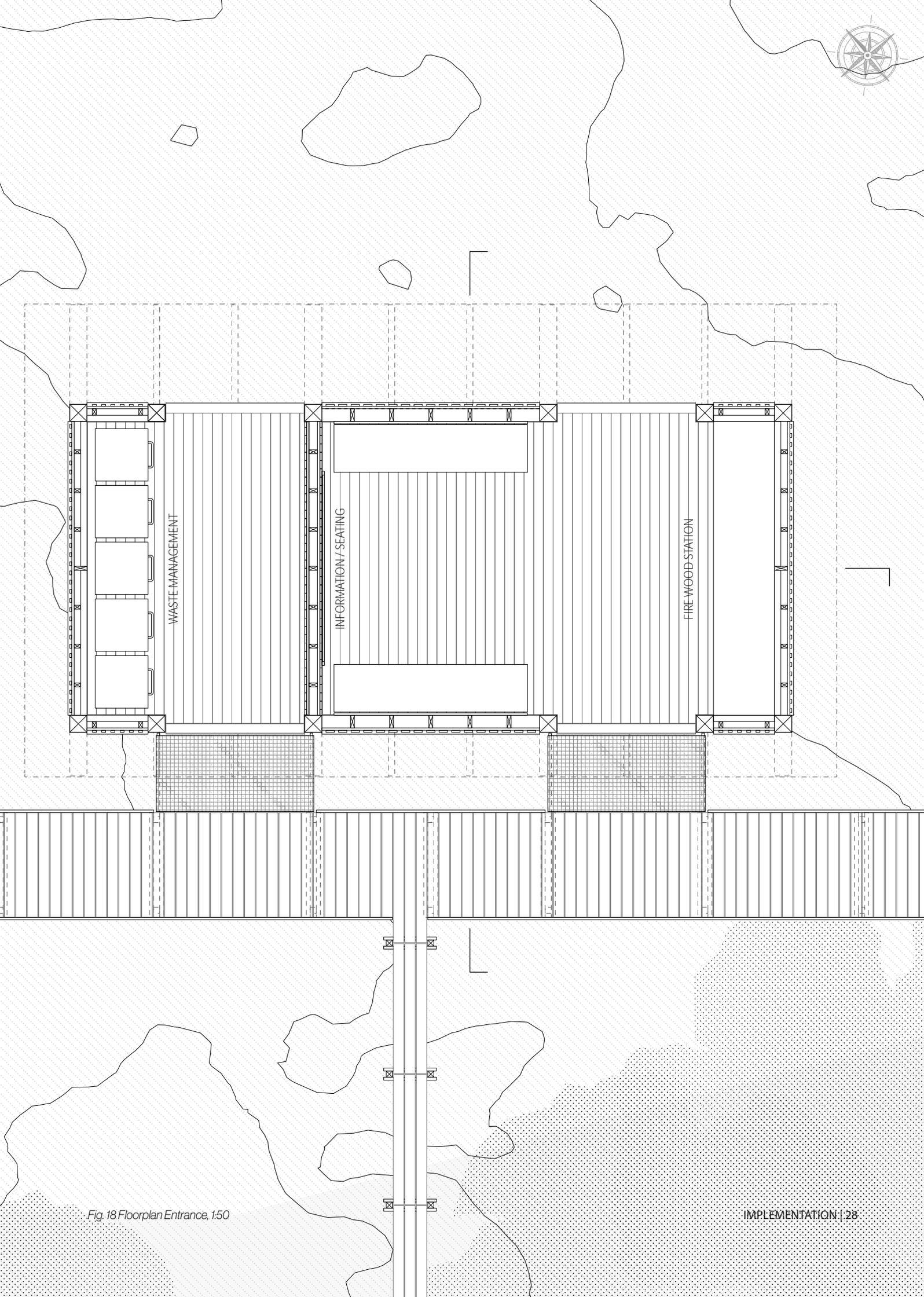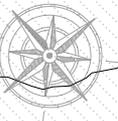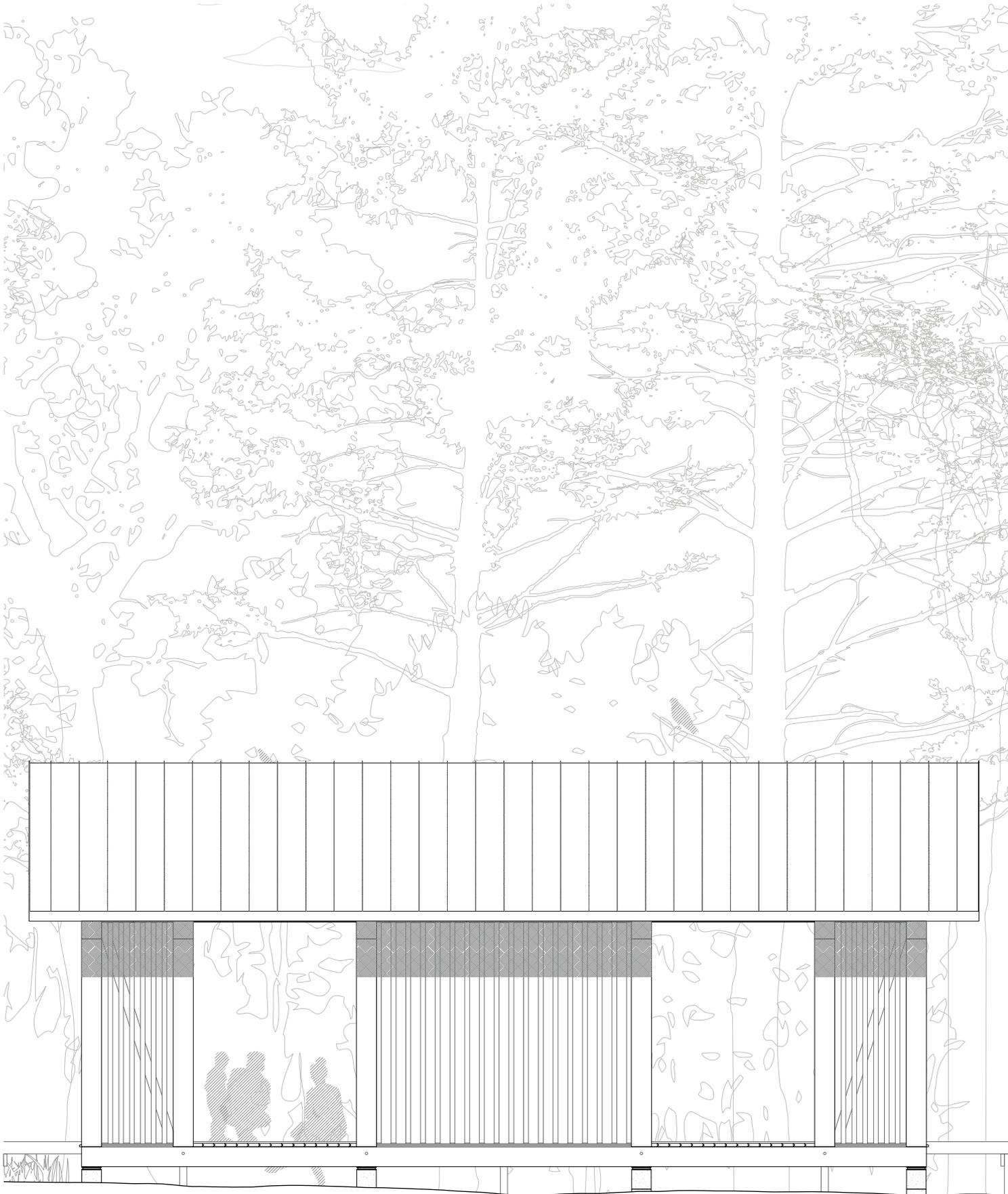28 x 70 mm horizontal batten
45 x 70/145 mm studs/joists

0   0,5   1   2   4 m

WASTE MANAGEMENT

INFORMATION / SEATING
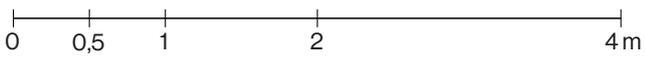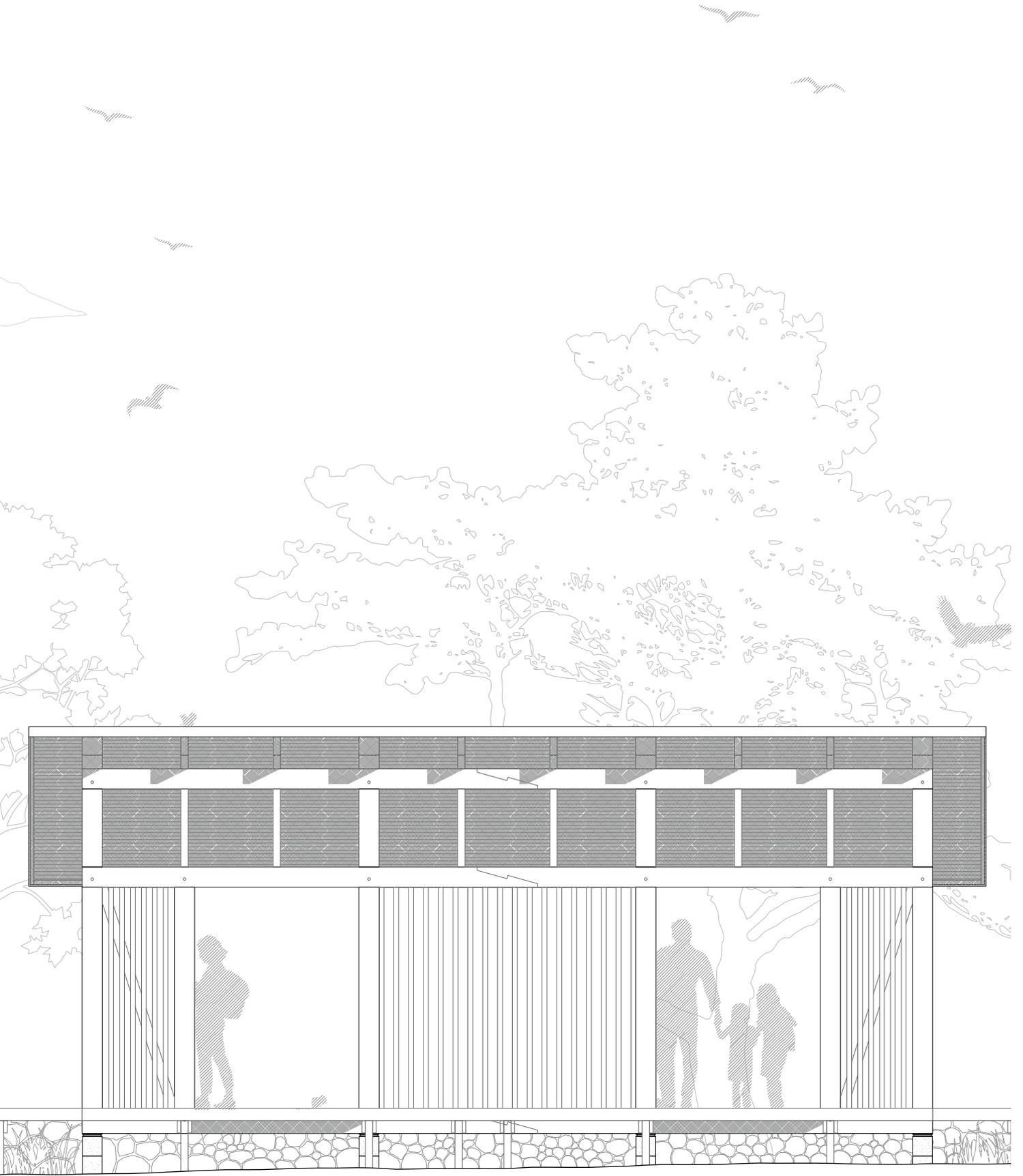
FIRE WOOD STATION

Fig. 18 Floorplan Entrance, 1:50

Fig. 19 NE facade of the Entrance

Fig. 20 NE elevation Entrance, 1:50

0   0,5   1   2   4 m

Fig. 21 Long section Entrance, 1:50

Fig. 22 SW elevation Entrance, 1:50
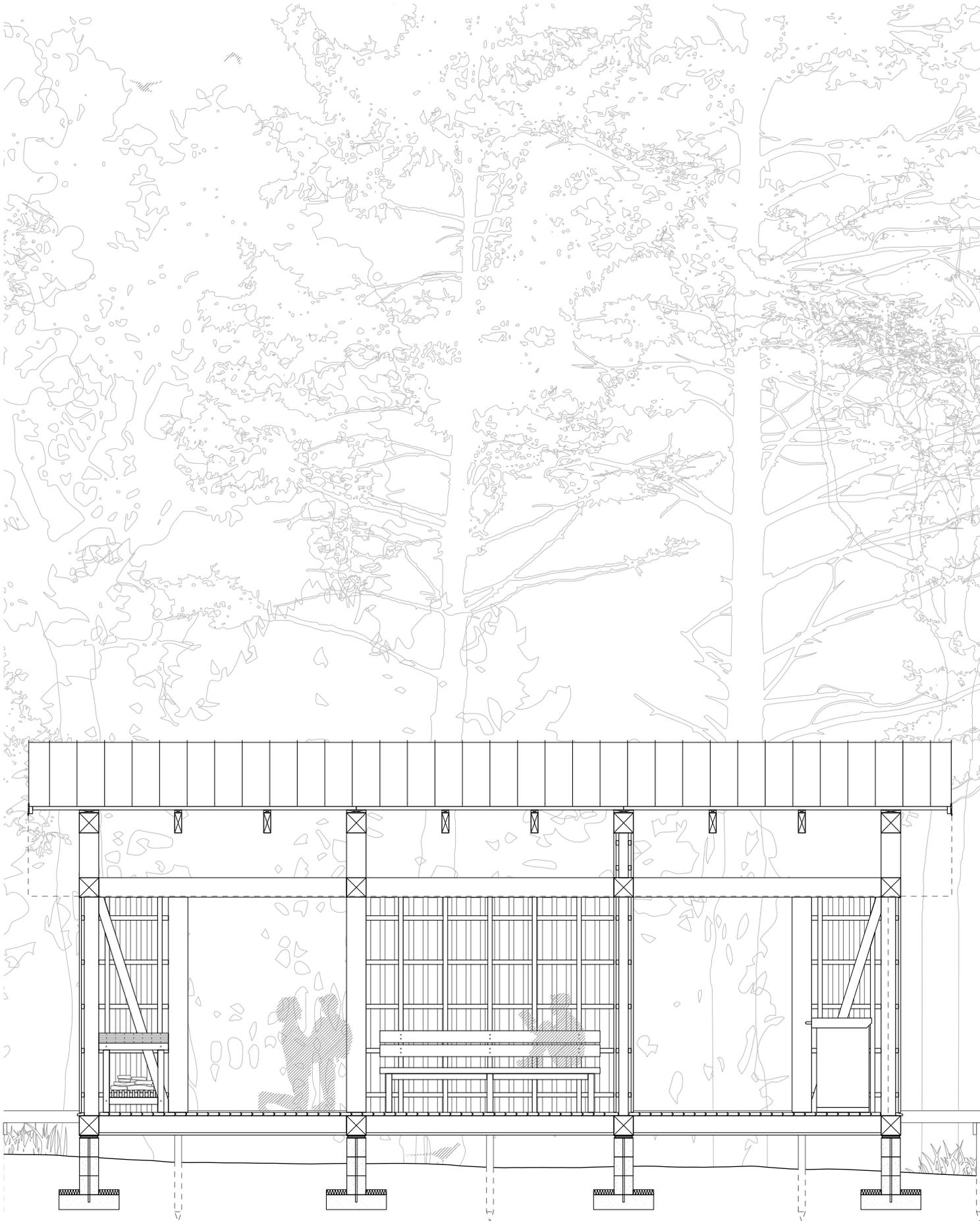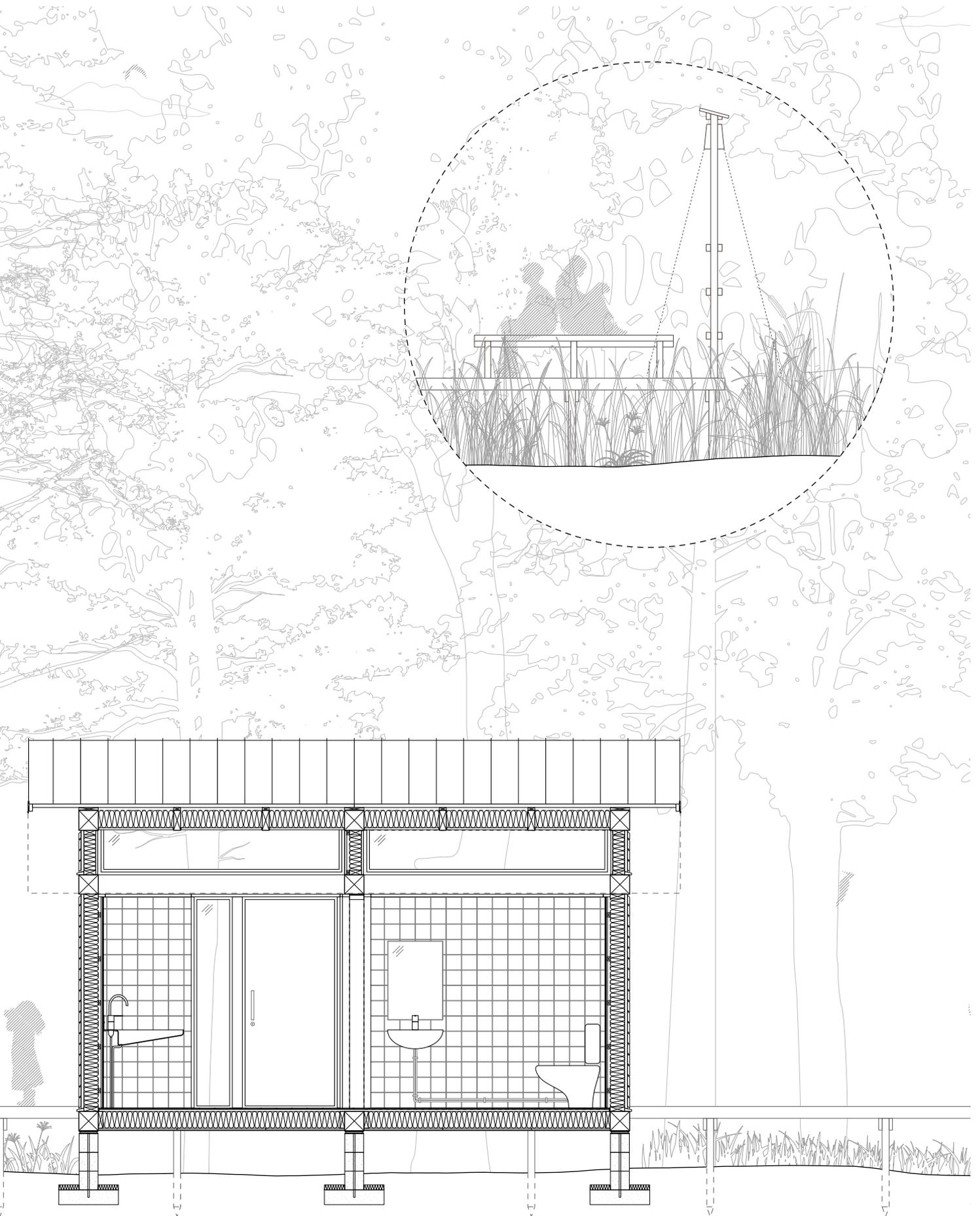
0   0,5   1   2   4 m
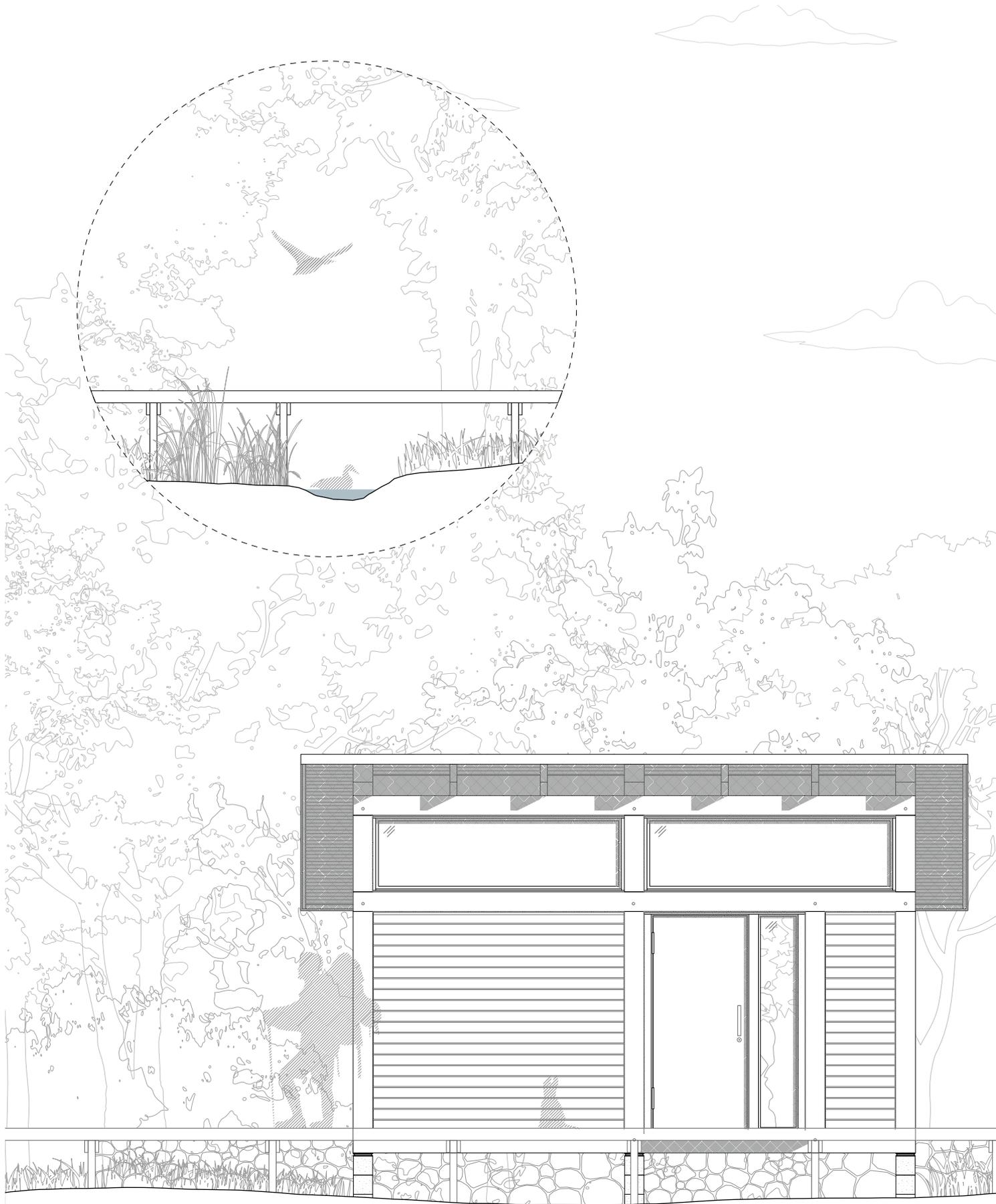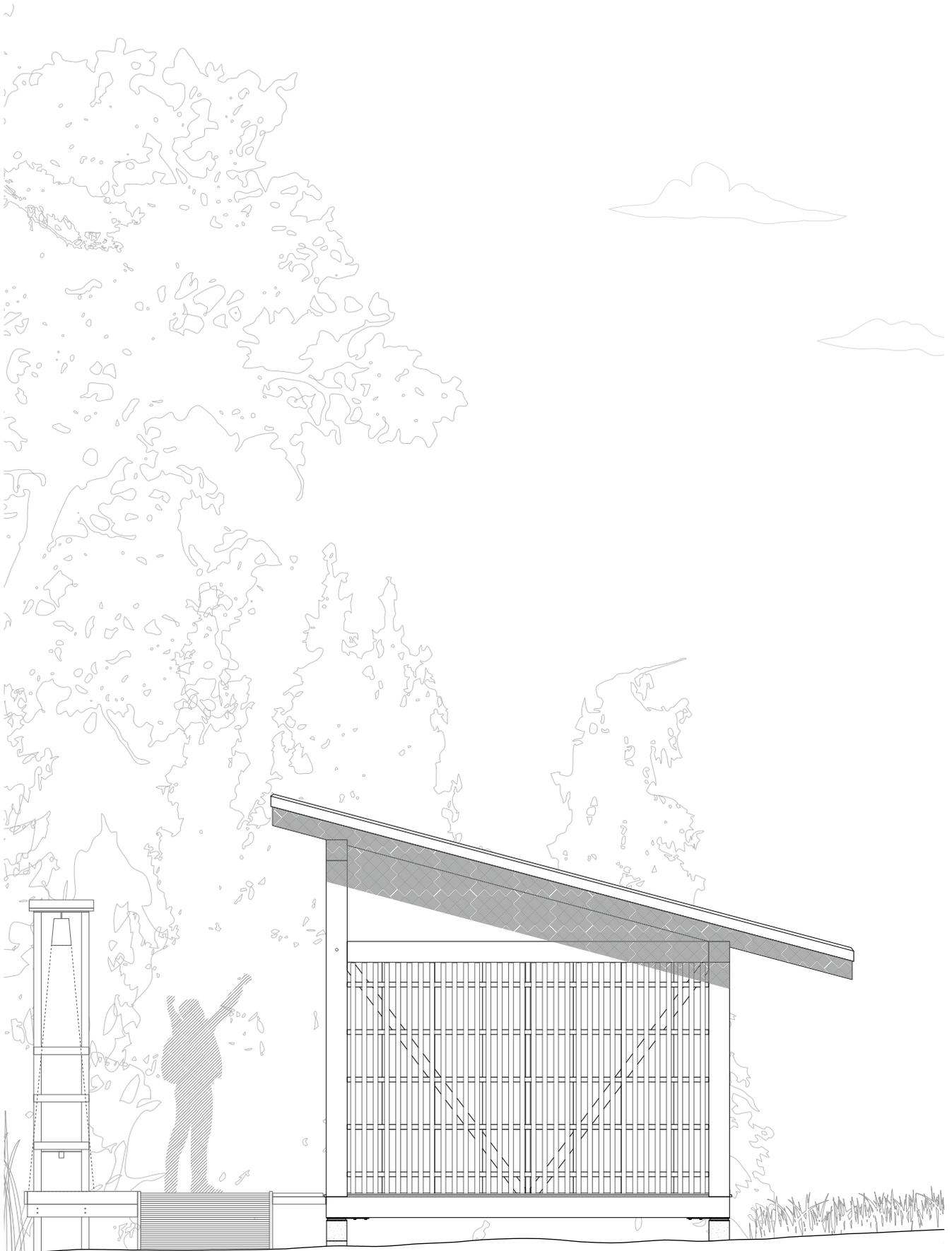
Fig. 23 SE elevation Entrance, 1:50

0   0,5   1   2   4 m

Fig. 24 Open structure Entrance,

Fig. 25 NW elevation Entrance, 1:50

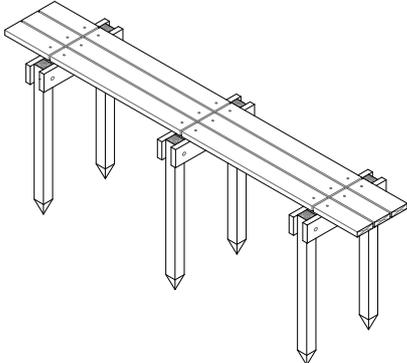| 0 | 0,5 | 1 | 2 | 4 m |
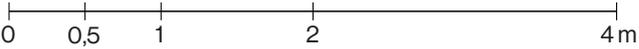
4.4 | Footpath

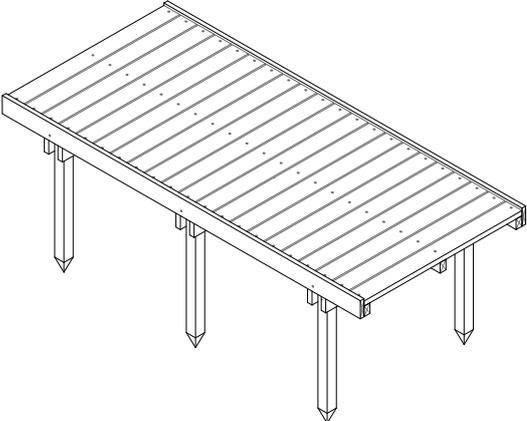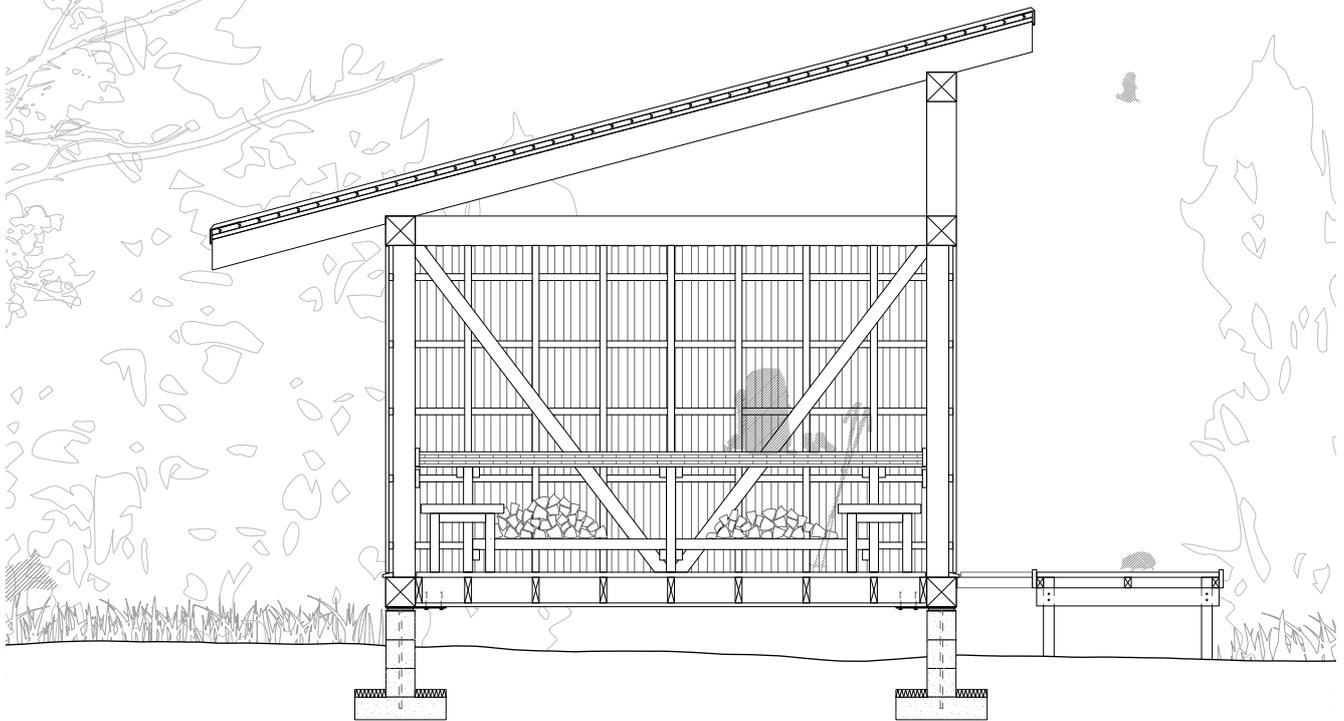*Fig. 26 Axonometric view of secondary footpath*

Fig. 27 Axonometric view of primary footpath

Fig. 28 NW facade and footpath

Open floor:
170 mm joists
34 x 120 mm floor planks

Open roof:
galvanised sheet metal roof
separation layer
34 x 120 mm planks
28 x 45/195 mm batten / ventilation layer
195 x 195/45 mm rafters

Fig. 29 Section open structure Entrance, 1:50   0   0,5   1   2   4 m

Insulated floor:
15 mm minerit boards (fiber cement)
170 mm joists + 170 mm wood cellulose insulation
22 mm OSB-plate
vapour barrier
4 mm thinset
8 mm ceramic tiles

Insulated roof:
galvanised sheet metal roof
separation layer
34 x 120 mm planks
28 x 45/195 mm batten / ventilation layer
wind barrier
170 mm joists + 170 mm wood cellulose insulation
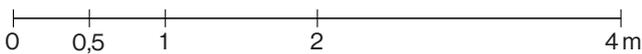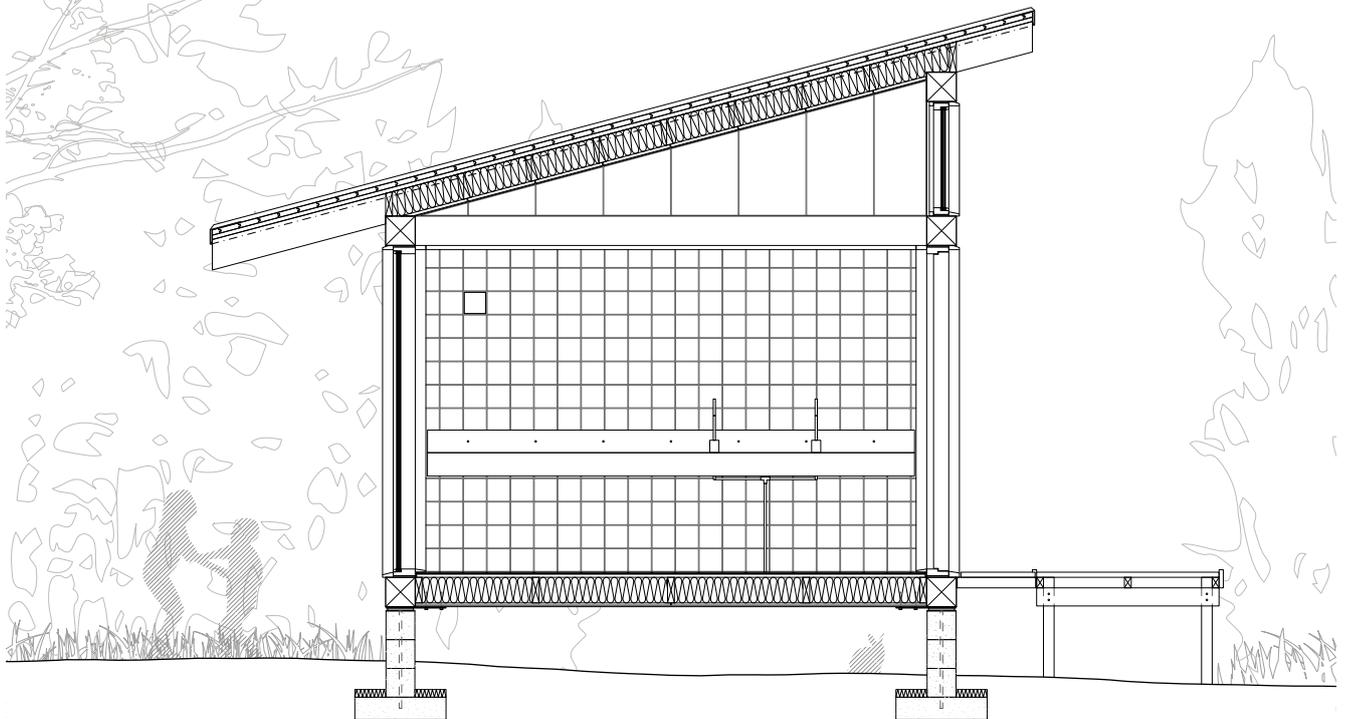vapour barrier
20 mm plywood

0   0,5   1   2   4 m   *Fig. 30 Section closed structure Entrance, 1:50*   IMPLEMENTATION | 42

4.5 | Sheep hut

Departing off from the main trail at the intersection next to the entrance, the visitor walks upwards through a denser pine tree forest and reaches another old farmland, which is overgrown and only sparsely maintained. Traces of stonewalls are visible and another creek is cutting through the farmland.

The local Oskar Mårtensson is slowly trying to take care of this land and aims to bring it back to its 'original' state from 100 years ago. The old farmland needs to be rid of non-local pine trees and overgrown vegetation. The reintroduction of grazing sheep is supposed to help with this goal and is inspired by nearby islands (Jonsborg) and their practice of grazing animals. In order to shelter the sheep, a small and relatively lightweight sheephut is introduced to the site. It protects from rain, sun and wind and additionally collects rainwater. Its size can house up to four grown domestic sheep and is able to be relocated when needed.

The sheephut is constructed as a timber-frame structure with additional horizontal beams on the outside, working as exposed facade elements to which an internal vertical facade is mounted. Additional diagonal braces reinforce the structure against strong winds. The timber-frame uses traditional tap joinery that is fastened with hardwood dowels.
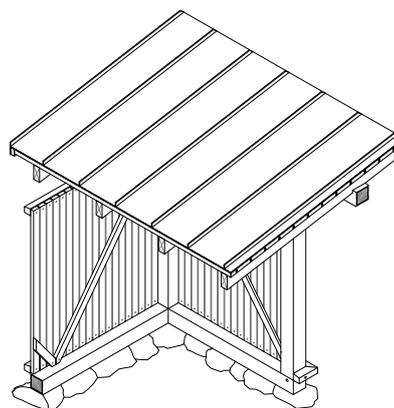

Fig. 31 Axonometric section Sheep hut, 1:50
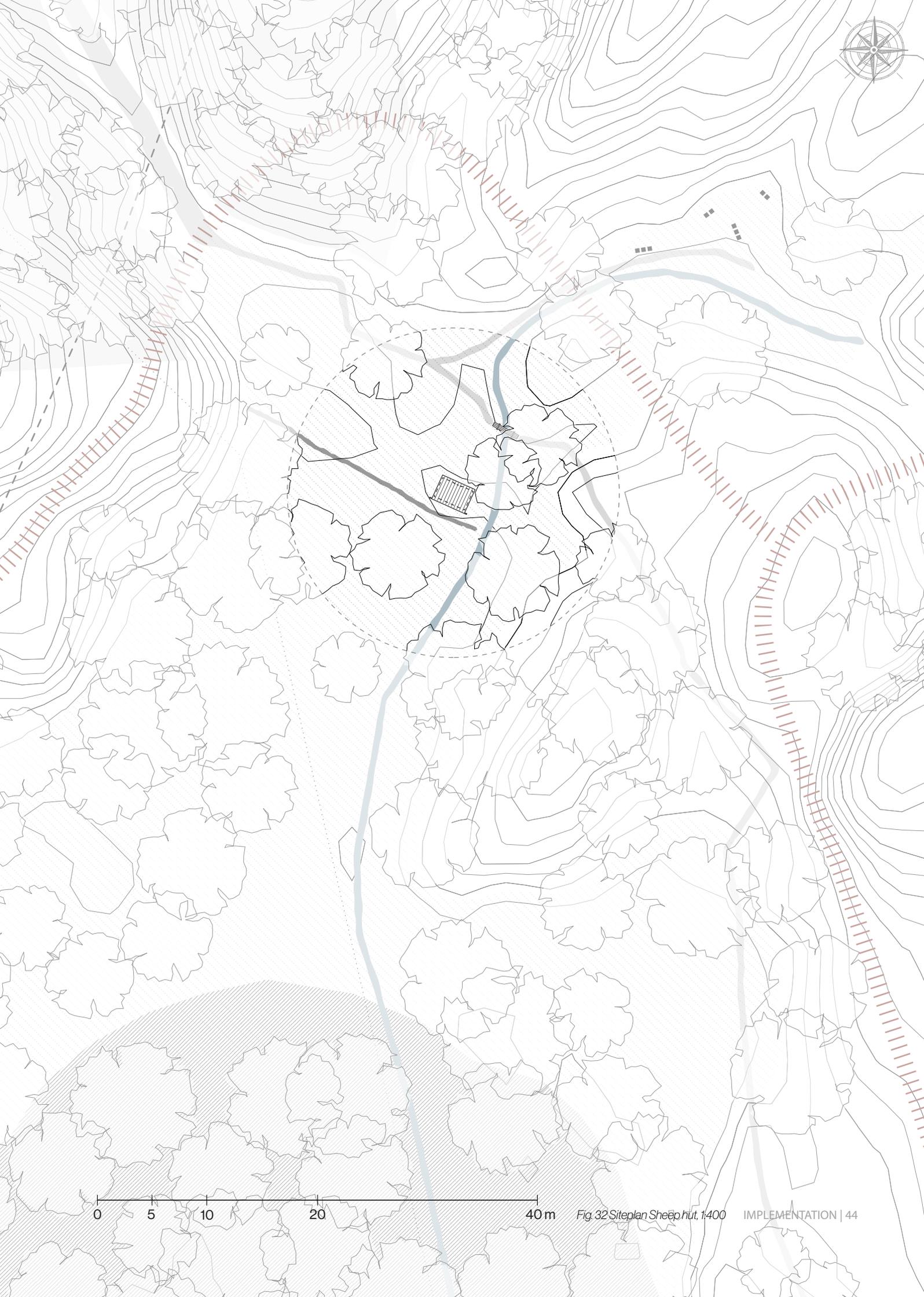
Fig. 32 Siteplan Sheep hut, 1:400

0   5   10   20   40 m
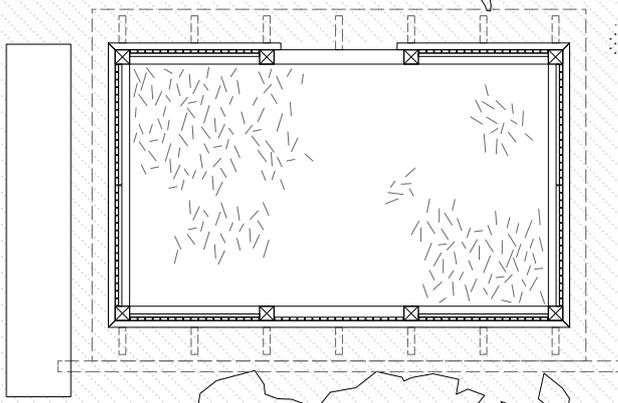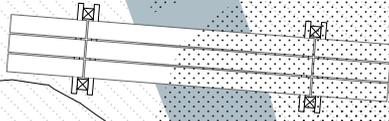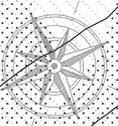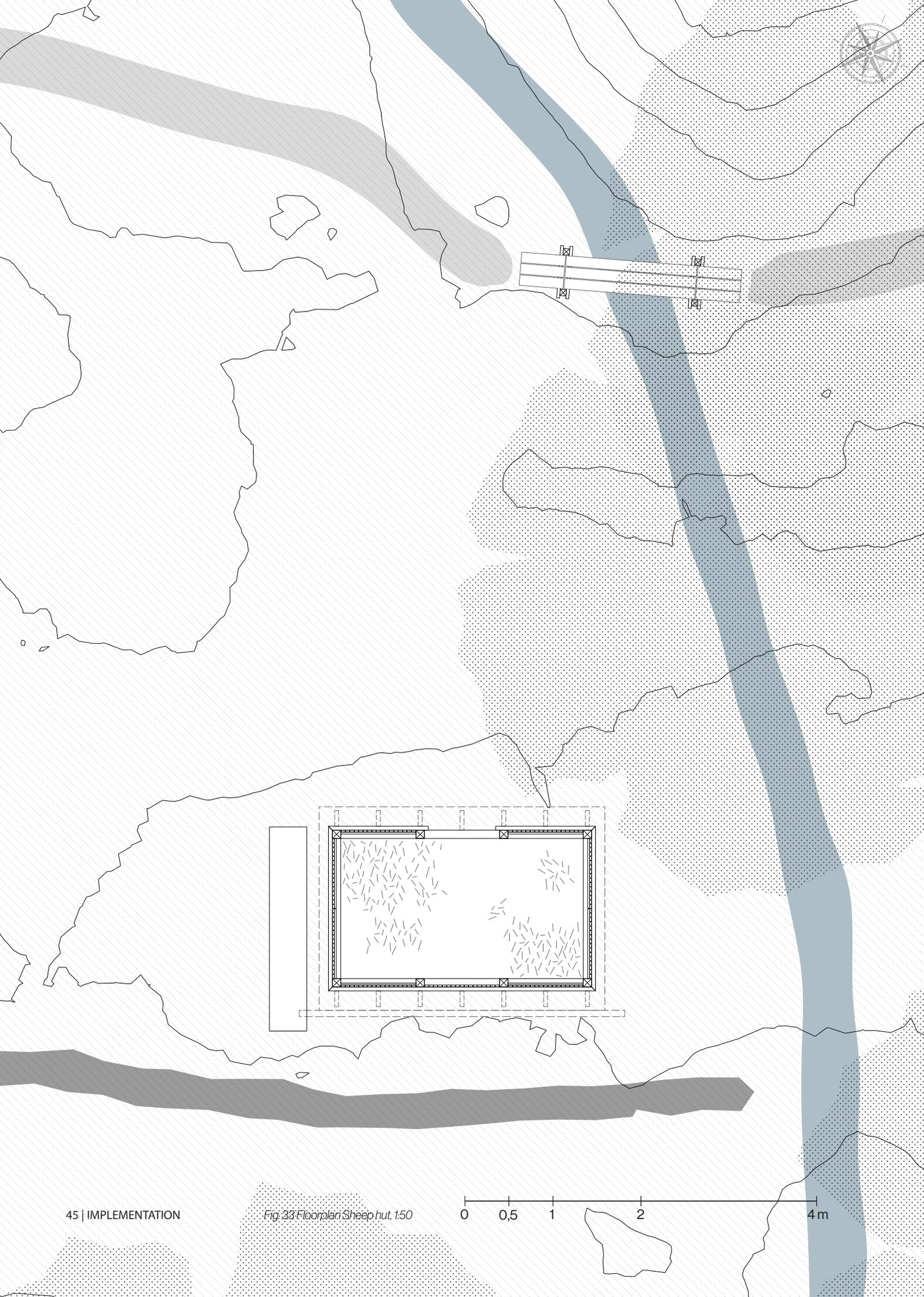
Fig. 33 Floorplan Sheep hut, 1:50
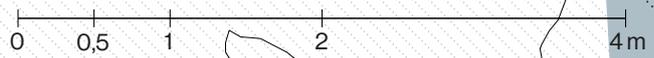
| 0 | 0,5 | 1 | 2 | 4 m |

Fig. 35 Sheep hut, spring

Fig. 36 Sheep hut, winter

Fig. 37 SW elevation Sheep hut, 1:50

0   0,5   1   2   4 m

0   0,5   1   2   4 m   *Fig. 38 SE elevation Sheep hut, 1:50*

Fig. 39 Siteplan Wind shelter (left) & Bothy I (right), 1:400

0   5   10   20   40 m

Bothy

*noun [**both**-ee, **baw**-thee]*
(in Scotland) A small, simple building on a
hill for walkers to shelter in, [or one that is
used on a farm for workers to live in].

('Bothy', 2024)

4.6 | Bothy I

After leaving the entrance and continuing on the main trail towards the lighthouse, the visitor walks through a pine tree forest along th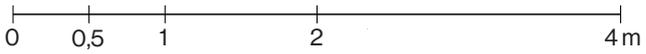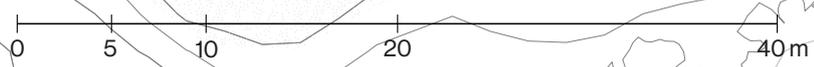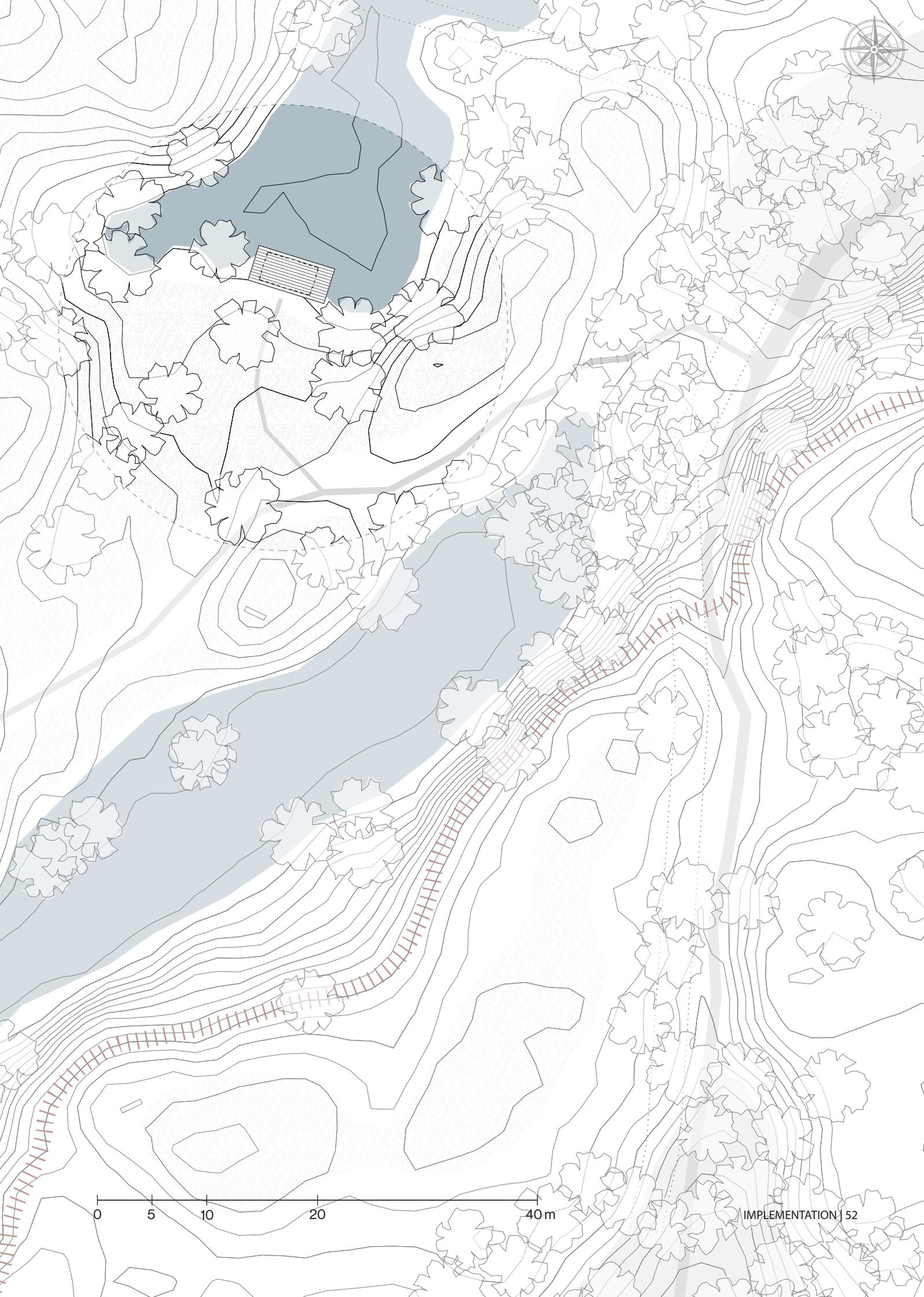e stonewalls and an accompanying creek. As the forest lightens up and becomes smaller in size and density, the trail splits in two. One leading further to the homestead Arsund and the other leading upwards to the 'Rune' (cairn) that marks the highest point of the island. At the beginning of the Runestig, the landscape opens up to become a heather-covered and hilly moorland area. Straying off the path, the Bothy I sits hidden between heather and small pine trees, facing a small wetland and turning away from the path.

The Bothy is primarily meant for visitors that intend to stay for the night. It's a refuge and a place to warm up, rest and prepare food. It has two large beds, accommodating up to four people, a woodstove, seating bench and a foldable table for preparing food. Firewood can be brought or collected from the entrance in advance.

Bothy I is inspired by Bark & Warburgs building technique of using a prefabricated timber-frame combined with a studwall system and using mortise and tenon joints and half lap joints. The timber-frame is cladded with a combination of horizontal clapboard siding and vertical timber elements that further fragment the facade, overall making the building appear smaller. The facade is painted with a black tar paint (trätjära) and its dark appearance hides calmly within the wild vegetation during all seasons. The roof is a slanted roof (pulpettak) commonly seen in service or secondary buildings and overhangs to one side, offering a place to rest while being covered from the rain. The main window opens towards the wetland and is placed in line with the door, while smaller openings offer views towards the east and westside.

4.7 | Wind shelter

Located very close to Bothy I, but further uphill and more exposed, sits the windshelter. The elevated position allows the windshelter to offer more expanding views towards the west and southwest. The building is located right next to the trail and has seating options towards all sides. The roof is angled towards the trail and the building points towards a smaller wetland. The windshelter is meant to be a place to gather and take a break during the hike or during a longer stay. Catering to more advanced outdoor visitors, the windshelter can be used as a night shelter, offering a protected niche within the structure.

The building is constructed as a 'Skiftesverk' (post and plank), using a timber-frame structure with slotted in horizontal planks. The roof is built as a 'Faltak' (board roof), making the building rely mostly on timber material and avoiding synthetic materials. The structure is elevated and placed on rocks, preventing moisture buildup and mould of the timber elements. The joinery used in for the wind shelter combines the slotting connections with traditional timber-frame joinery, employing both mortise and tenon joints, as well as lap joints such as the dovetail and the half lap joint.

Wall (Outside - inside):
22 x 95 mm vertical 'Fjällpanel' (clapboard siding) / 45 x 70 mm
vertical timber elements (5 mm capillary ventilation gap)
28 x 70 mm horizontal batten / ventilation layer
wind barrier
45 x 145 mm studs/joists + 145 mm wood cellulose insulation
vapour barrier
20 mm plywood
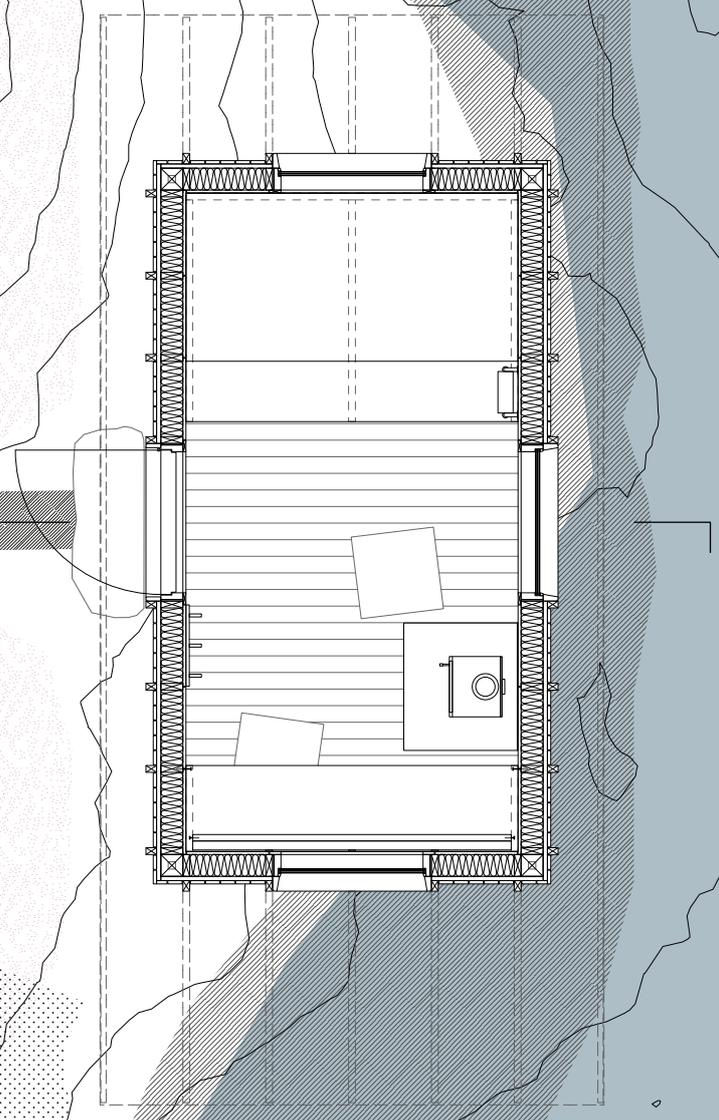
0   0,5   1   2   4 m

Fig. 40 Floorplan Bothy I, 1:50

Fig. 41 SW elevation Bothy I, 1:50
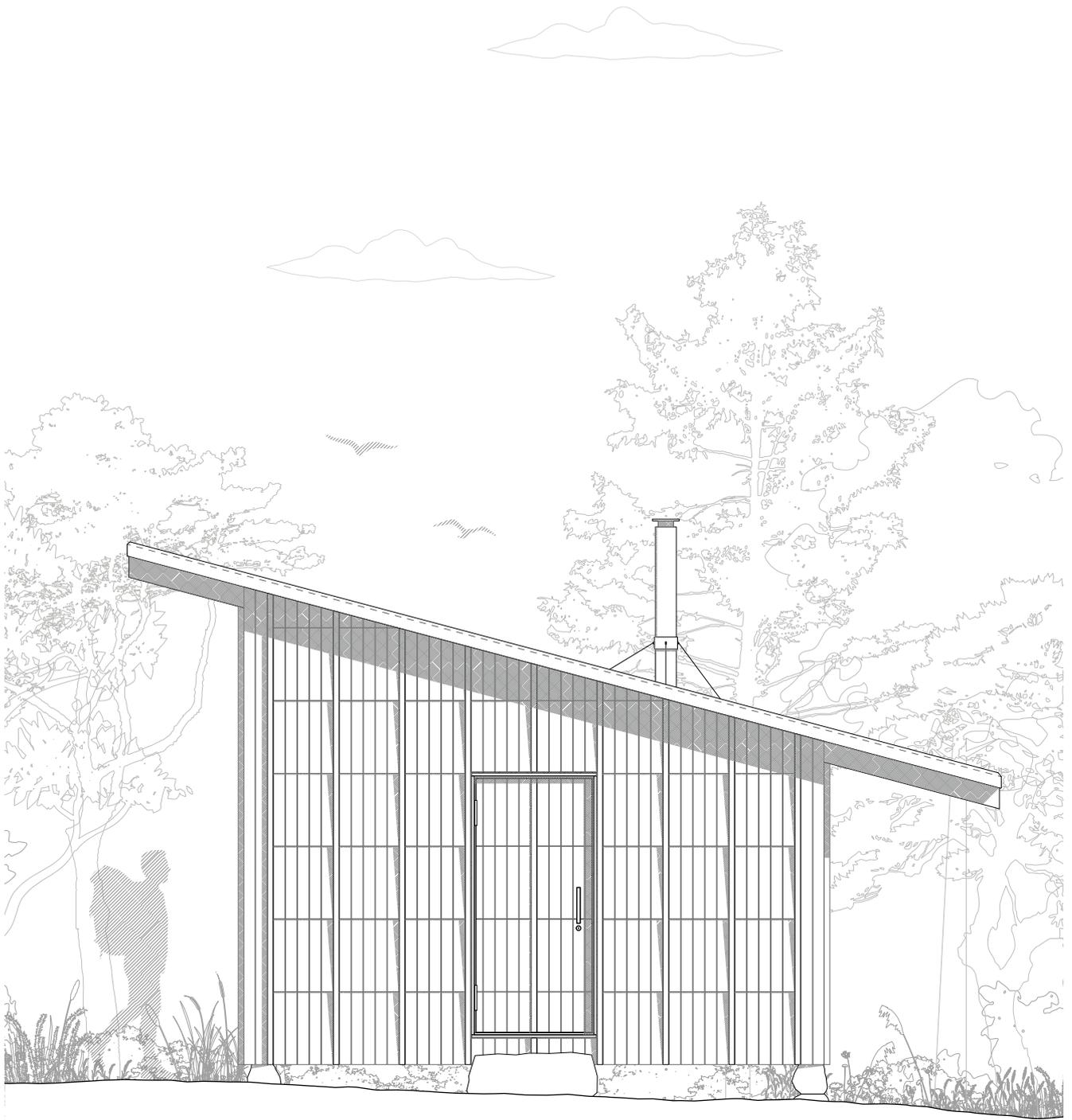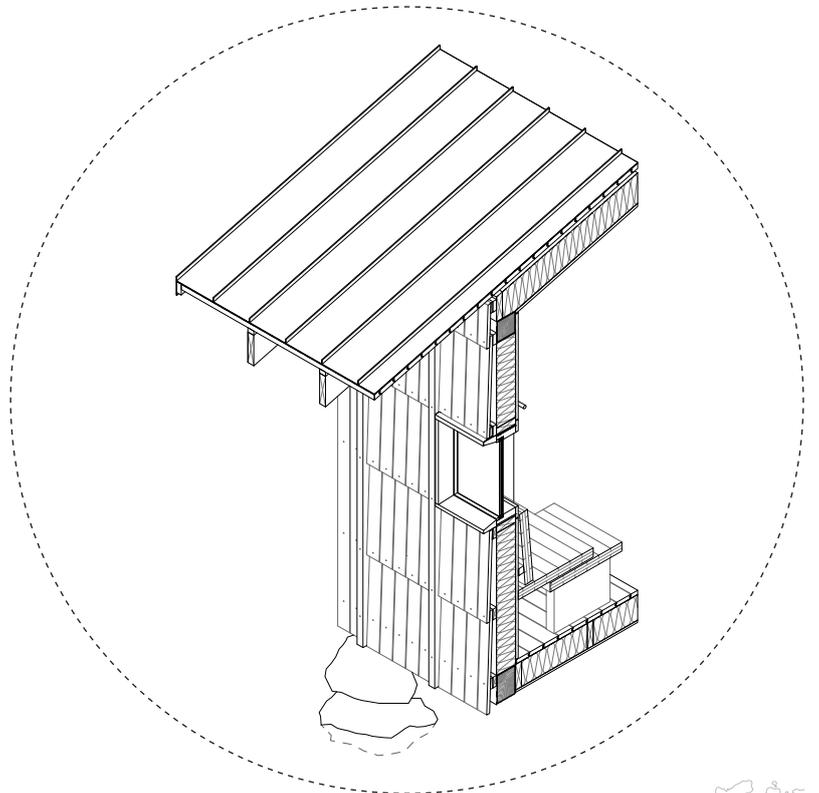
| 0 | 0,5 | 1 | 2 | 4 m |

Fig. 42 Axonometric section Bothy I, 1:50
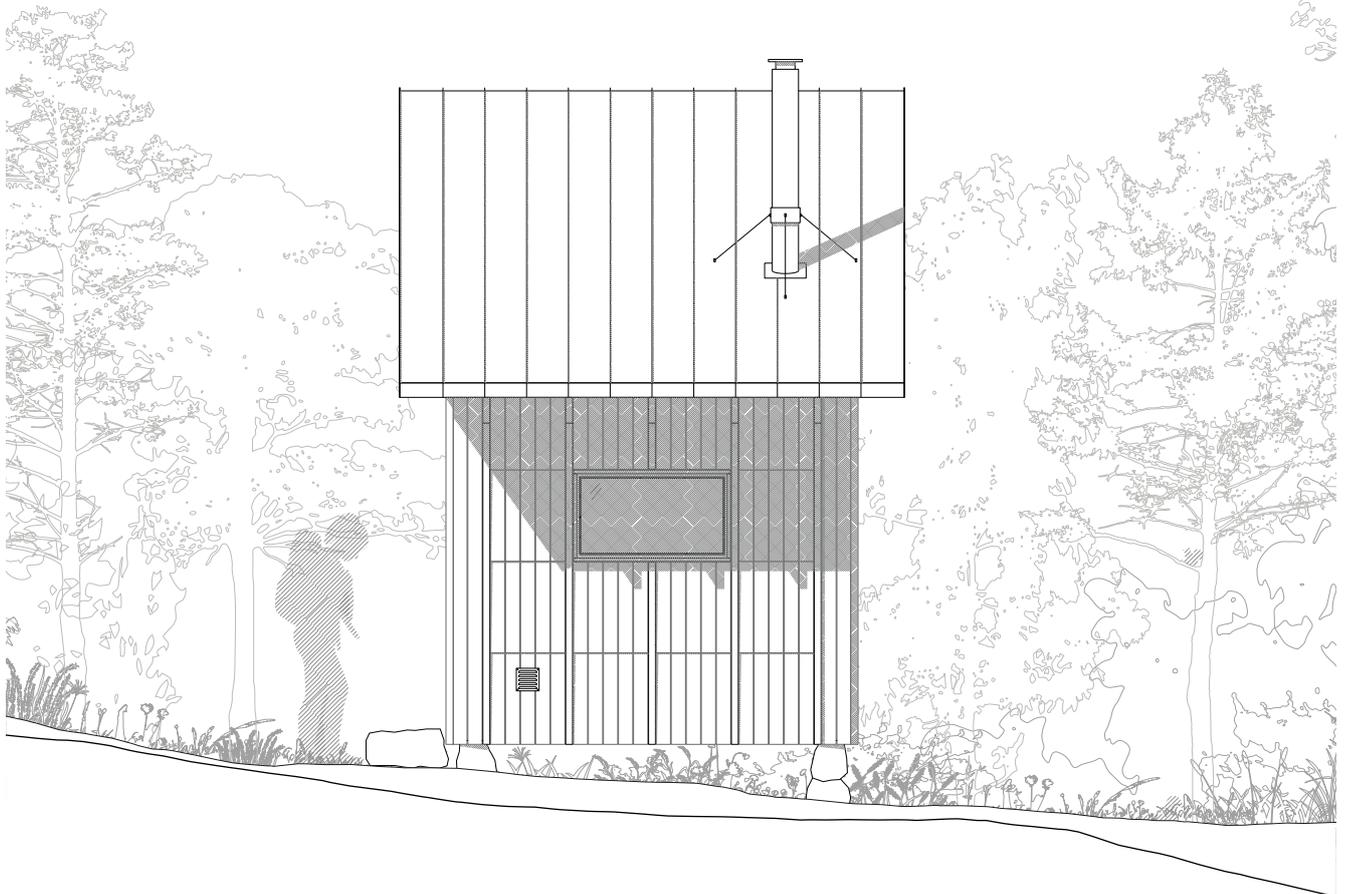
0   0,5   1   2   4 m   *Fig. 43 SE elevation Bothy I, 1:50*

Fig. 44 NE elevation Bothy I, 1:50

0   0,5   1   2   4 m

A bothy is a small building without electricity, water and fuel connections that is more than secluded from any habitable building or public road. It is primarily used for hikers to take shelter in.

(Licensing of Short-Term Lets, 2022)
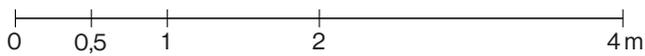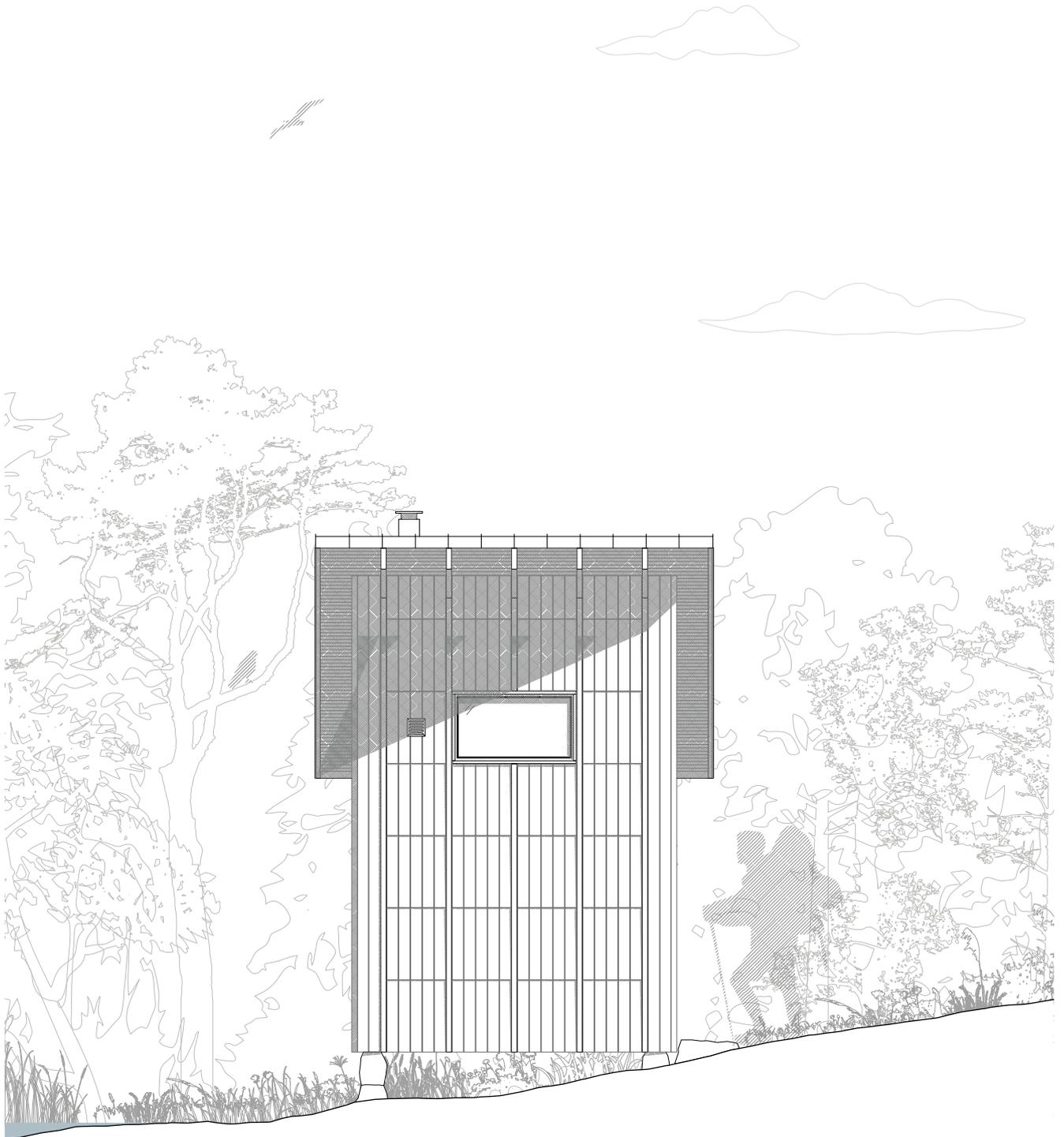
Fig. 46 NE facade Bothy I

Floor:
15 mm minerit boards (fiber cement)
45 x 170 mm joists + 170 mm wood cellulose insulation
vapour barrier
28 x 120 mm floor planks

Roof:
black sheet metal roof (standing seam)
separation layer
34 x 120 mm planks
28 x 45 mm batten / ventilation layer
wind barrier
45 x 195 mm rafters + 195 mm wood cellulose insulation
vapour barrier
20 mm plywood

Fig. 47 Long section Bothy I, 1:50

0   0,5   1   2   4 m

*" The lamp sizzled as it burned. It made everything
seem close and safe, a little family circle they all
knew and trusted. Outside this circle lay everything
that was strange and frightening, and the darkness
seemed to reach higher and higher and further
and further away, right to the end of the world. "*

Tove Jansson, Moominpappa at Sea 1965 (Jansson, 2022)

0   0,5   1   2   4 m   *Fig. 48 Short section Bothy I, 1:50*

Fig. 49 Floorplan Wind shelter, 1:50
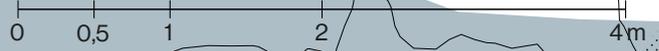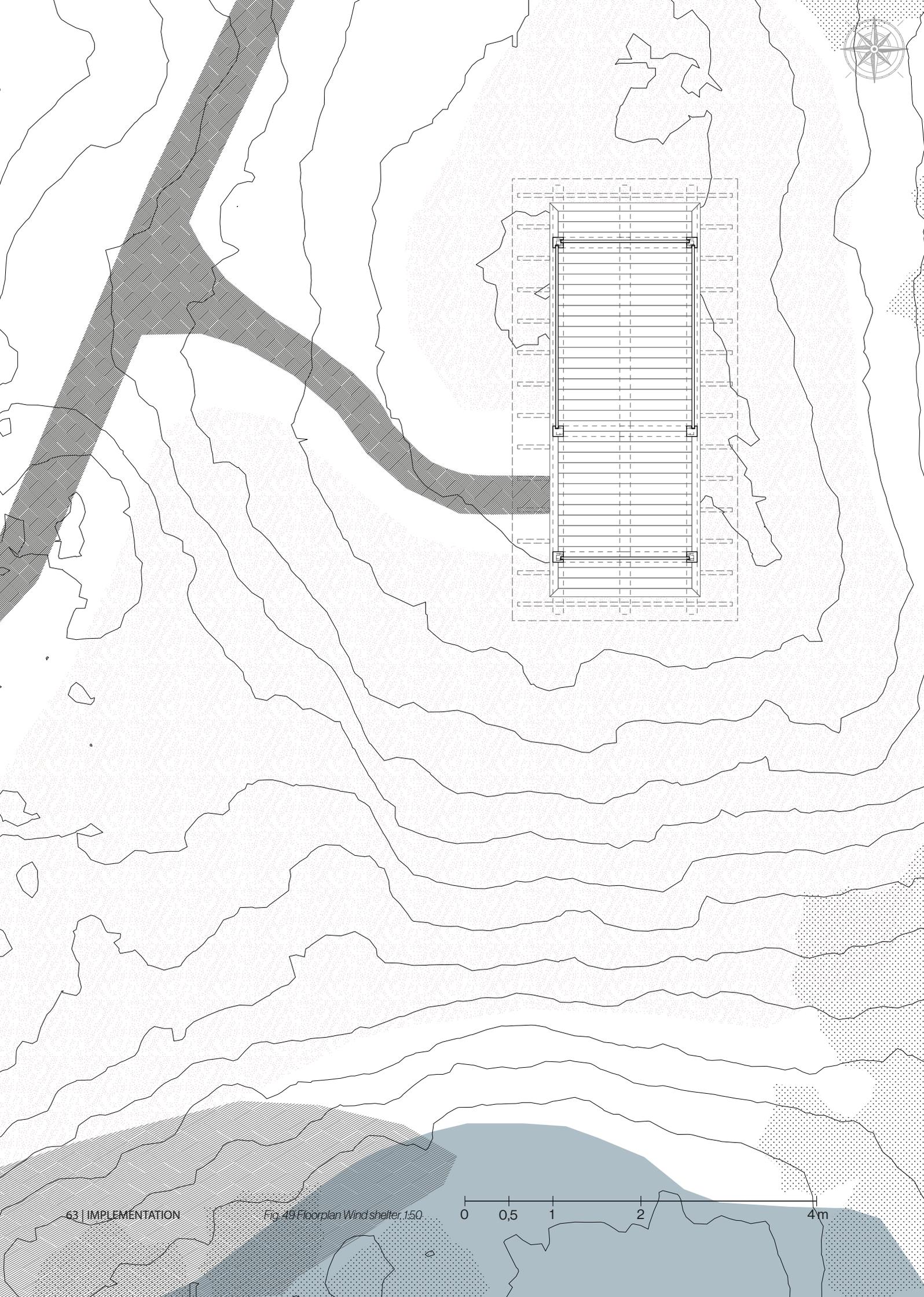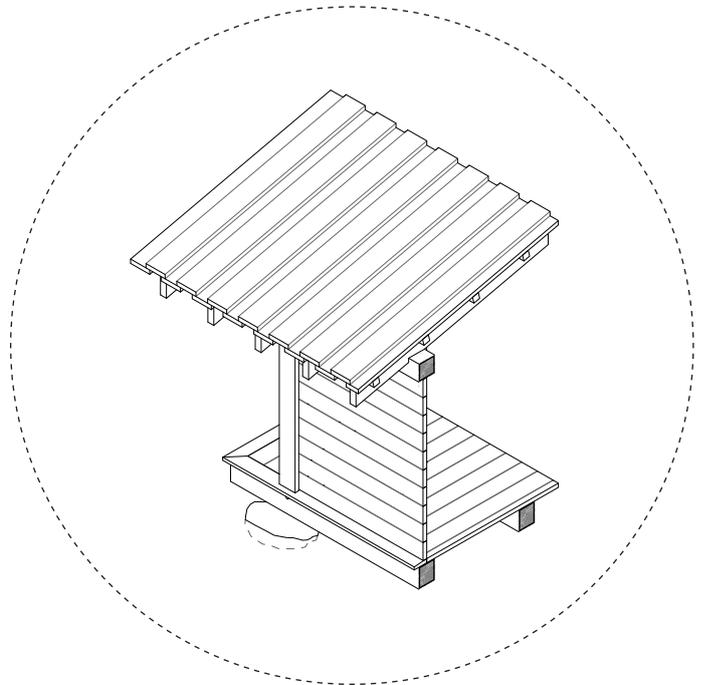
0   0,5   1   2   4m

Fig. 50 Axonometric section Wind shelterl, 1:50
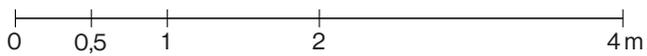
0   0,5   1   2   4 m

Fig. 51 W elevation Wind shelterl, 1:50

Fig. 52 S elevation Wind shelter, 1:50
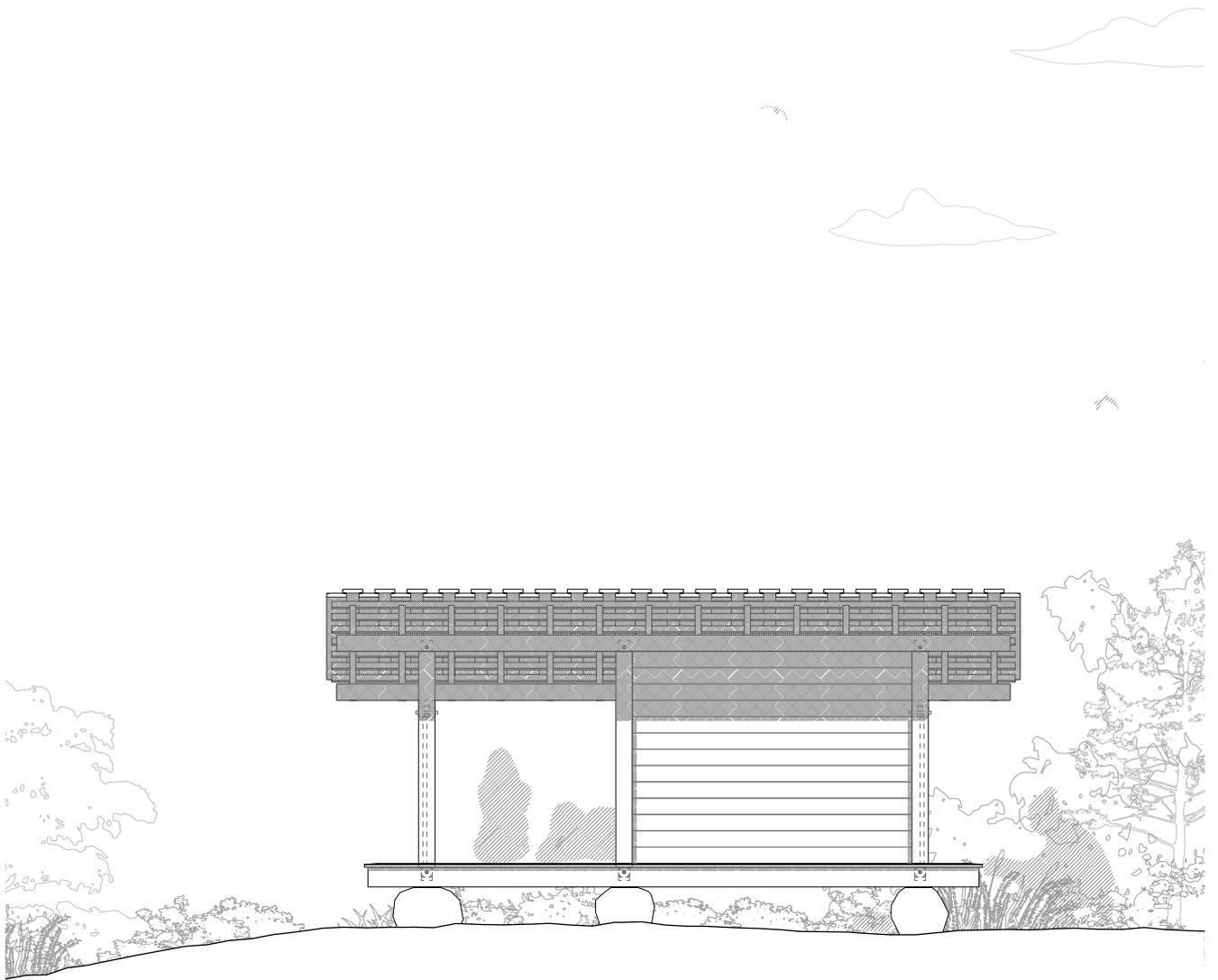
| 0 | 0,5 | 1 | 2 | 4 m |

Fig. 53 N elevation Wind shelter, 1:50

Fig. 54 Wind shelter, south facade

4.8 | Bothy II

Instead of venturing off to the Runestig, the visitors can take the official trail towards the lighthouse, passing the Arsund homestead, the well and the Vrakevik swimming spot. On their way, the landscape opens up more and more and transitions from forestry areas to a heather covered moorland. The trail leads up a steep slope and shortly before reaching the next intersection of the trail, the visitor can venture off the trail to an even more secluded place within the landscape. Behind a small ridge, covered in thick heather and shrubs and a stonewall guiding the way, the visitor will see Bothy II slim and striking silhouette peeking out of the slope. The building points towards the south, overlooking the stonewall which frames the view of Skallhavet and the setting sun.

The Bothy II has an even smaller footprint than Bothy I and is supposed to feel compact and encapsulating to the visitor. When entering, there is a woodstove to the left and a resting area to the right. Above the resting area sits an elevated bed. Both benefit from the large view out towards the sea. Hangers on the internal beams and on top of the windows allow clothes to be hung to dry or used as a curtain during the night.

The structure is similar to the entrance building as it tries to highlight the timber-frame through exposing it. Here, the timber-frame is the outermost element of the building and the insulated volume is placed within the timber-frame. The building relies only on one type of housed mortise and tenon joint and the roof rafters sit on top of the timber-frame. Additional diagonal bracing is achieved through steel tension cables fixed to the timber-frame structure. This not only ensures extra rigidity but also serves the aesthetic of an exposed structural system.
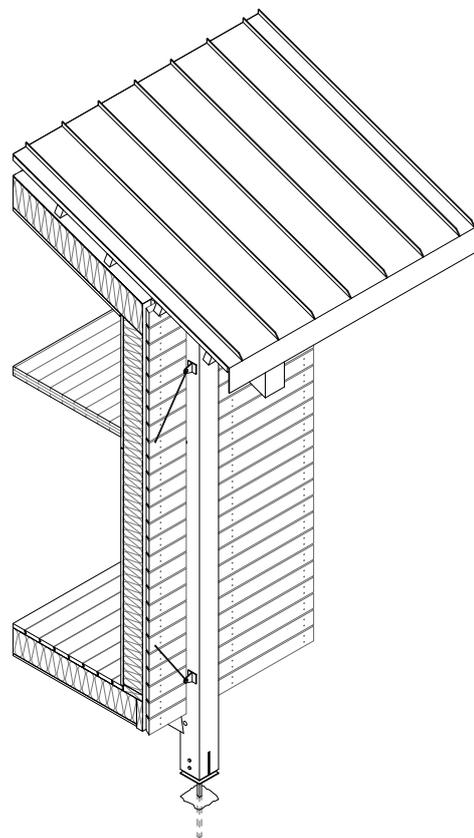
Fig. 55 Axonometric sectiion Bothy II, 1:50

Fig. 56 Siteplan Bothy II, 1:400

0   0,5   1   2   4 m
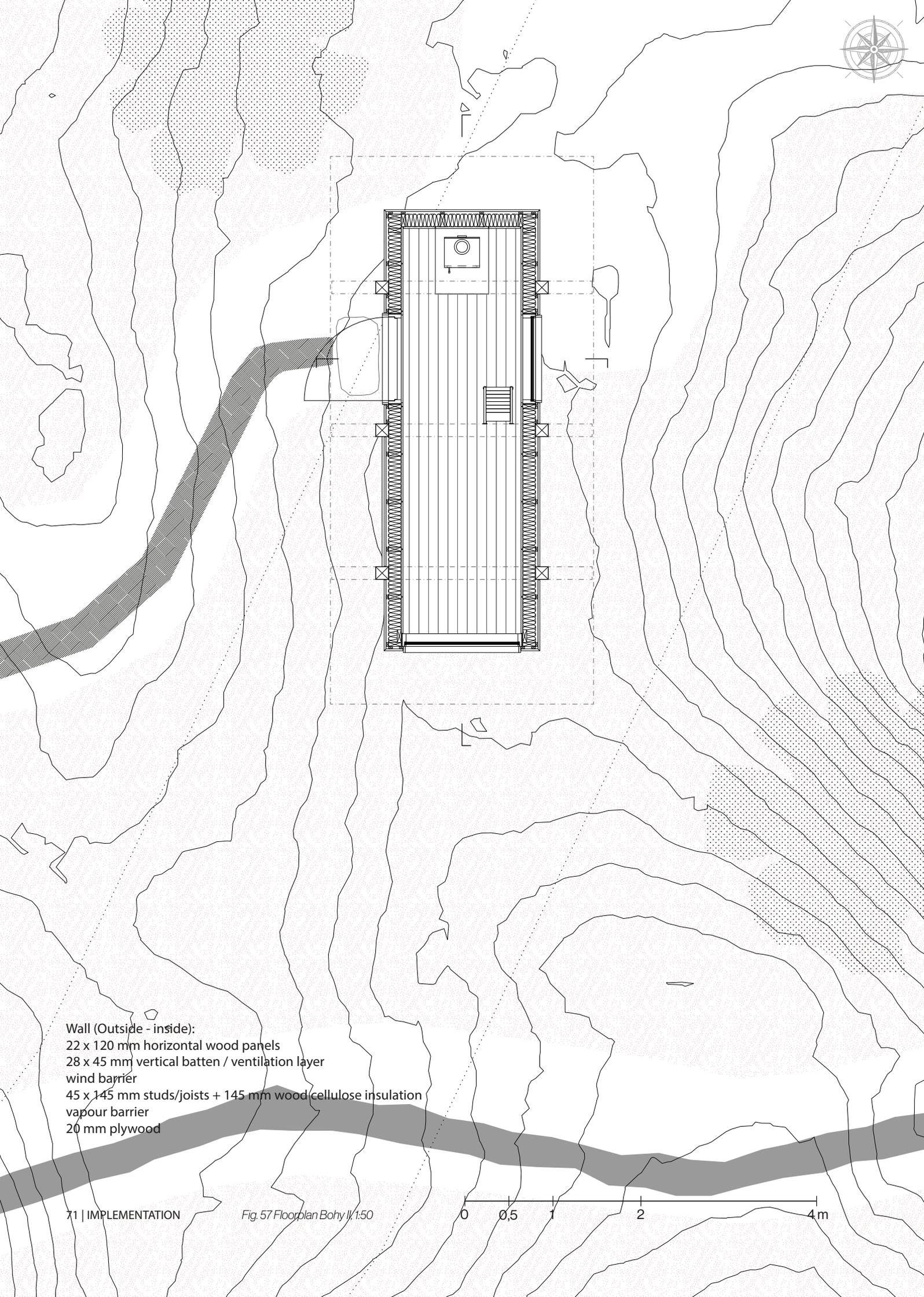
Wall (Outside - inside):
22 x 120 mm horizontal wood panels
28 x 45 mm vertical batten / ventilation layer
wind barrier
45 x 145 mm studs/joists + 145 mm wood cellulose insulation
vapour barrier
20 mm plywood

Fig. 57 Floorplan Bohy II 1:50

0   0,5   1   2   4 m

Fig. 58 S facade Bothy II
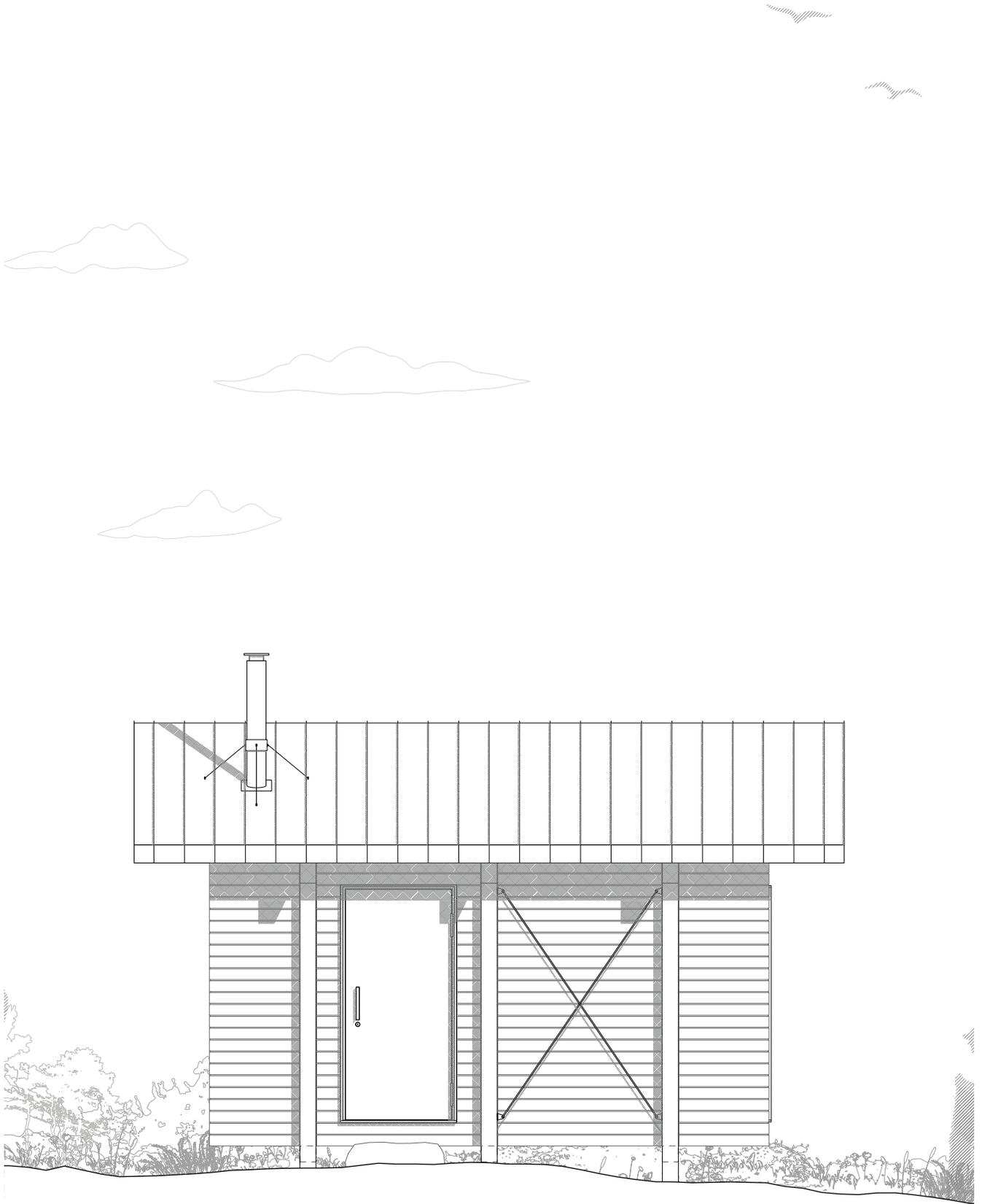
Fig. 59 W elevation Bothy II, 1:50

0	0,5	1		2	4 m
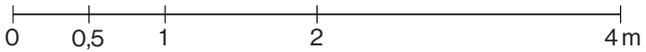
Floor:
15 mm minerit boards (fiber cement)
45 x 145 mm joists + 145 mm wood cellulose insulation
vapour barrier
28 x 120 mm floor planks

Roof:
black sheet metal roof (standing seam)
separation layer
34 x 120 mm planks
45 x 70 mm batten
28 x 145 mm batten / ventilation layer
wind barrier
145 x 45/145 mm rafters + 145 mm wood cellulose insulation
vapour barrier
20 mm plywood
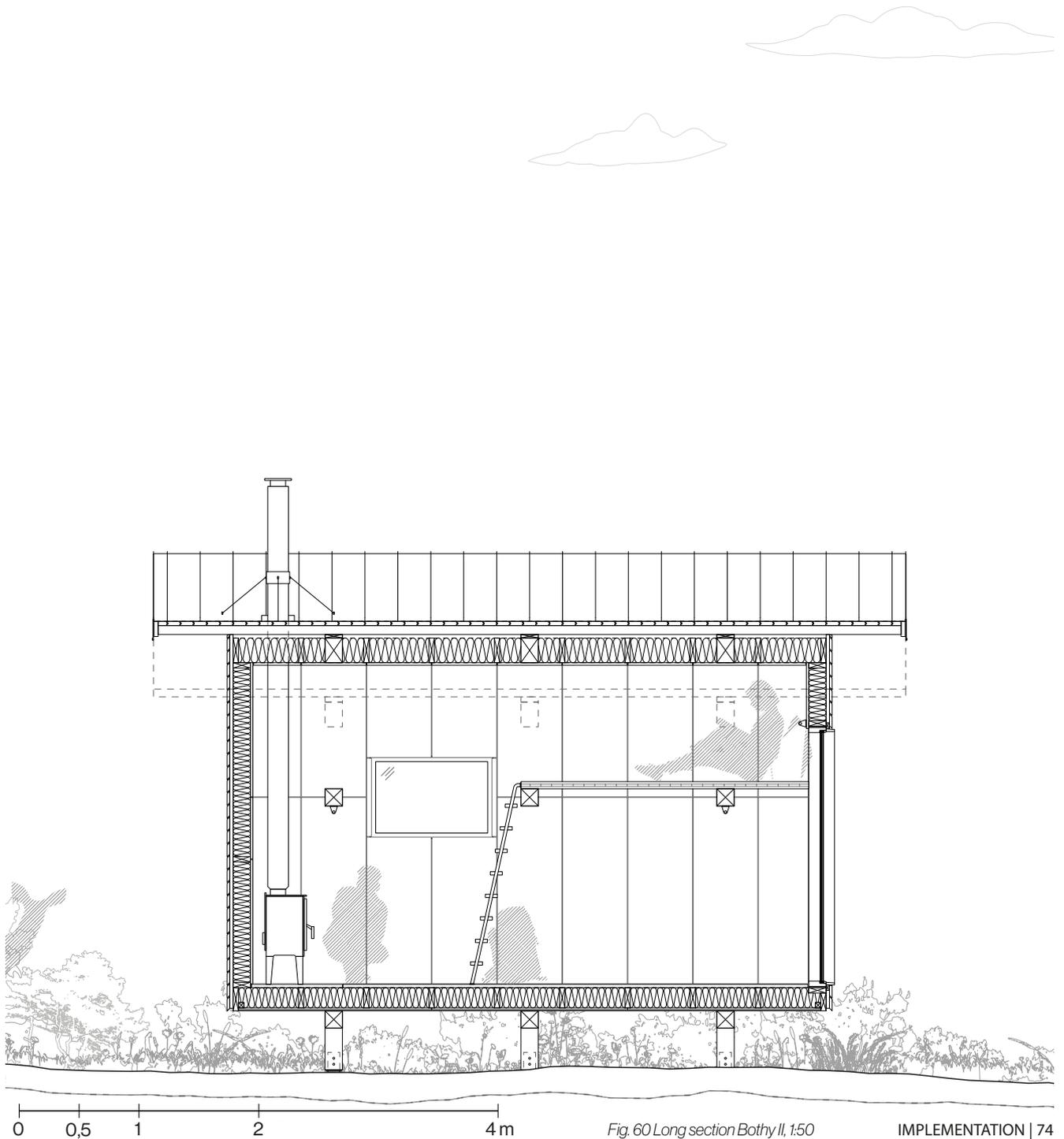
0   0,5   1   2   4 m   *Fig. 60 Long section Bothy II, 1:50*   IMPLEMENTATION | 74

Fig. 61 S elevation Bothy II, 1:50
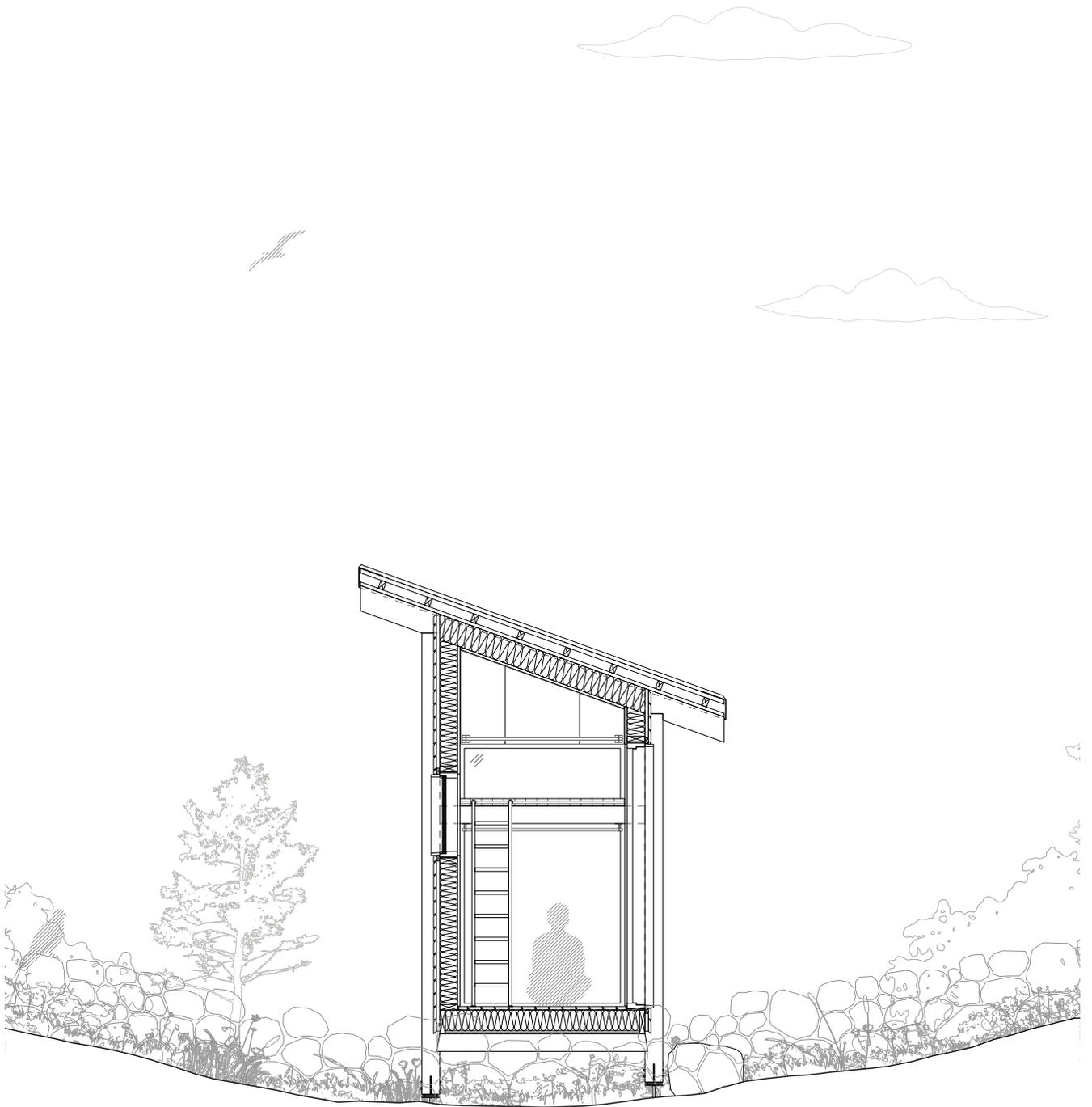
0   0,5   1   2   4 m

5 | DISCUSSION

Fig. 63 Fishing hut at Arsund

This project has addressed the western lighthouse culture and its significant historical and cultural contributions by proposing a small-scale design aimed at enhancing the site, meant as a prototype for other similar locations.

Many decisions regarding method and design had to be made along the way and these decisions will be subject to review through this section.

The key aspects that we intended to work with in our thesis project were:

- The activation of cultural heritage
- The adaptation of traditional craftsmanship
- And the balance between natural and cultural values, related to the site of Islandsberg

5.1 | Method

We have worked with the theoretical tools of Deep Mapping and the perspective of Contextualism. Our impression is that these helped to organise our intuitive perspectives on architectural design. They also helped in communicating the multitude of information that we have gathered.

The deep map, as elucidated in Chapter 02, was adopted as a way of conceptualising our strong adherence to local and regional pre-conditions and our conviction that robust architecture cannot be created in a vacuum. The primary concept behind Deep Mapping is to collect and make accessible, leading to an activated dialogue. In that regard, our design proposal can be understood both as a contribution to the context and as a starting point for discussion about the future of Islandsberg, and the site of lighthouses in general.

It is important to evaluate how efficiently this tool of a deep map allowed us to translate these convictions into our design. On the one hand, merely conceptualising a place as a deep map, that is, as a map with many layers (many more layers than any conventional map, i.e. topography and locations) does a considerable amount of mental work. Without this conceptualization, it would arguably have been more difficult to fully take into account those references and sources of information that are not traditionally part of a map or mapping process.

On the other hand, it is not obvious that the present work has fully reached the depth of the deep map such as it was originally intended by Heat-Moon and others. Further sources and types of sources could have been taken into account. This would, however, have exceeded the allotted time for this project, and could thus not be fully accomplished.

We believe that this method is open-ended and with given time could have been expanded into an even bigger, and more complex deep map.

Therefore, the concept of the deep map and that of conceptualism in general, does not account for integrating all of the information it so highly regards into an imperative proposal. The process of actually interpreting the contextual information provided, thus had to be done on more or less intuitive grounds by the authors. It remains an open question whether this process could also have been conceptualised in a way that would have further adapted the proposal to the locality.

5.2 | Design

Through the investigative part of our thesis, as outlined through Chapter 02, we have arrived at a few important decisions that were imperative for the continuation of our work.

The broad cultural and historical value of the site requires a delicate balance between invasiveness into the site and direct appeal for the visitor and had to be calibrated extensively. This is by no means a straightforward undertaking and only the collective impression and value gained by those visitors and inhabitants for whom this design is intended can be construed as an evaluation of this balance. As a result, we decided to interfere with the coast as little as possible - as it should be experienceable in its original form. Furthermore, each of the proposed design additions should be extremely custom to their particular location within their context and landscape in order to disturb it as little as possible.

Second, the complexity of timber-frame construction has to be critically examined. Compared to more modern construction techniques, timber-frames are surely more expensive to produce and more time-consuming to construct. In any real-world implementation of this project, this surely has to be taken into account.

Further, several assumptions regarding waste management and visitor behaviour regarding the integrity of the proposal over time were made. It is difficult to assign a certainty to these estimations. Will visitors keep the sites clean? Will visitors be motivated to support fire-wood supplies? Insights from similar sites can be taken into account but all of the peculiarities of any new proposal make it difficult to predict these kinds of behaviours with a high degree of certainty.

Lastly, our design proposals were developed with the potential to contribute to the overall goal of reverting the landscape back to how it existed a hundred years ago. This decision goes in line with the official plan and philosophy of Västkuststiftelsen.

ACKNOWLEDGEMENTS

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Fig. 64 Forest trail towards Islandsberg

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APPENDIX I | Contribution report

The entirety of the Masters Thesis has been produced in an intentional, joint process. Every part of the thesis has been worked on, discussed and iterated together, in person, which makes it difficult to identify the specific contribution of each student.

Digital production was deliberately organised in a highly intertwined and collaborative way. For instance, drawing designs were intentionally rotated daily to maximise creative input from both students.

All site visits were done together. Photography and GPS analysis was also done by both students.

The working references (literature, building, etc) used in this thesis project have been both in english and swedish. In the case of Swedish references, Klara Bolin assessed the material and did the translation that formed the basis for a collaborative analysis. After this initial assessment step, the references were available to both of us and were worked on together.

All interviews were conducted collaboratively, either together, in person or via email, each exchange having been reviewed by the other student.

The writing process had the following general structure:
• Preliminary discussions
• Collective production of material: text, images, drawings, etc.
• Iterative adaptation and reworking of material
• Collection and curation of material (individual) with follow-up coordination
• Concluding discussions regarding the entirety of the thesis and individual chapters, sections and elements of the project

Lastly, model building was also done collaboratively on all models.

APPENDIX II | Lighthouse inventory

II.I | A study of six lighthouses alonmg the Swedish west coast

Six lighthouses along the Swedish wes coast were visited: Subbeberget, Krogstadsudde, Skallen, Mollösund, Islandsberg and Söö.

We approached and experienced the sites as ordinary visitors; we travelled between the different locations by car, from which we proceeded towards each lighthouse by foot. The visits were spread over three days with Gothenburg acting as the starting point for each excursion. The specific sites were chosen to be visited due to their accessibility. Without the possibility of travelling over water, and the sea being too cold to swim in, we visited the parts of the coast that can be reached from the mainland.

We had predetermined plans regarding documentation and mapping of each destination, and these were executed in an intuitive manner. The visits aimed to enable exploration of the sites through physical and cognitive mapping of the lighthouse and its immediate surrounding, including observational studies of how the site related to others of its kind, photographical documentation, gathering of artefacts brought up by the sea and sampling of the colours found at site.

Before departure, we read and learned about the sites that we were about to visit, and we delved into literature dealing with lighthouses and coastal landscapes. Borrowed from the title of Anna Ryan's book we chose to analyse the sites with an emphasis on how land and sea meet. This led us to the realisation that "where land meets sea" might be what the lighthouse truly embodies (Ryan, 2016).

Collected material on site and how we approached each lighthouse was finally merged and visualised in a map and documented through text writing. This is presented in the following sections.

II.I.I | Glossary

WRG   Indicating colour of the sector fields (W-white, R-red, G-green)
30s   Duration of flashing intervals in seconds
17M   Height of the Light in the lighthouse in meter
LFI(2)   Group long flashing
FI(4)   Group flashing
ISO   Isophase
Q   Quick

(Beteckningar i svenska sjökort, n.d.)

Norway

Vänern

Kattegatt
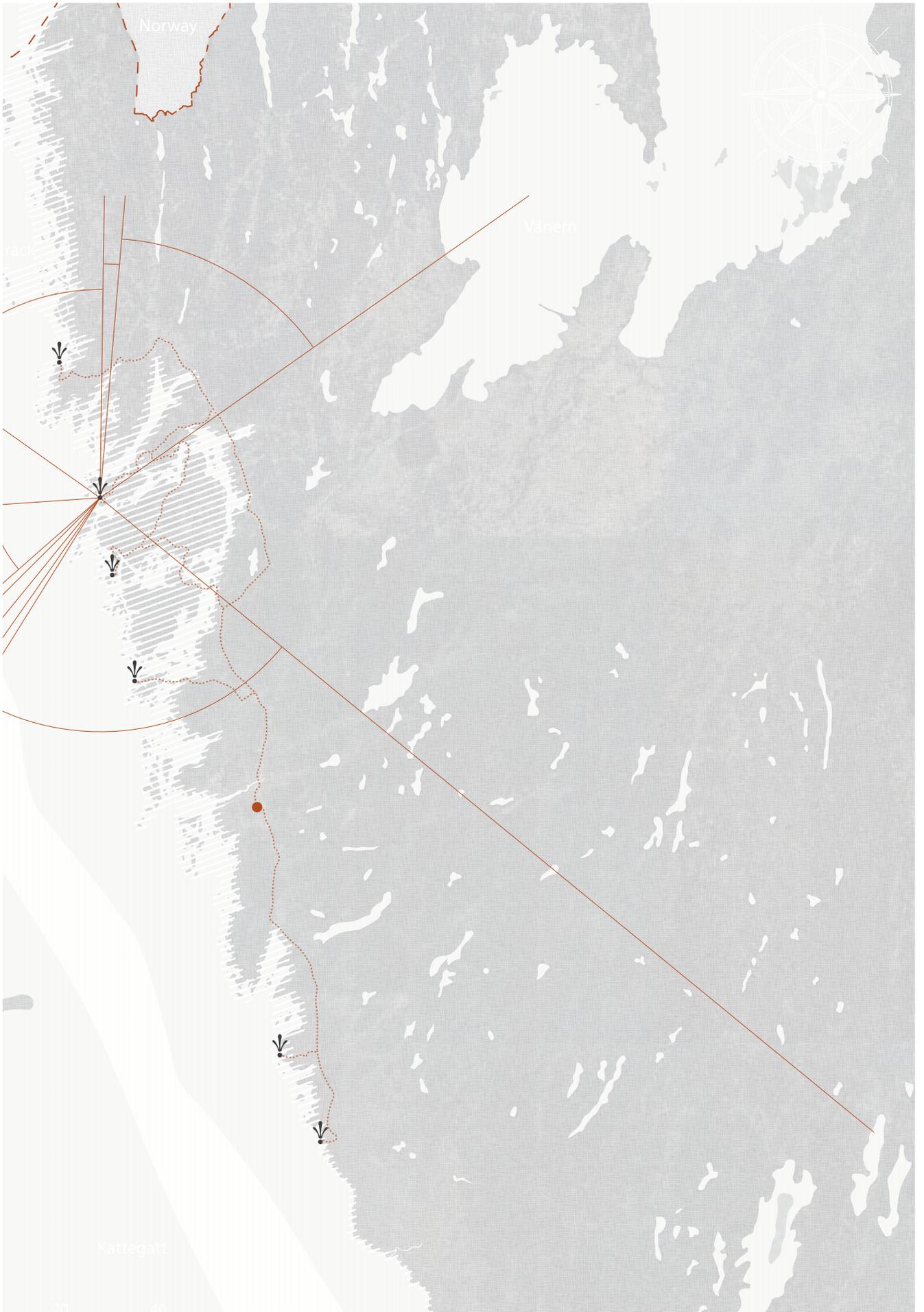
II.II | Subbeberget

Lat. N 57 05,3. Long. E 12 14,2

LFI(2)WRG 30s 17M

Our approach to Subbeberget was via the Kusthotell Varberg and thus gave a first impression of existing exclusively for the hotel guests. Later investigations revealed multiple access points to the site, however the Kusthotell as a major landmark acted as a visual and mental barrier to accessing the lighthouse. Once passing the Hotel, one is located at the lowest point of the site and closest to the sea. This area is part of a smaller bay and was significantly calmer than the open sea and its powerful waves. Following the established trail further up towards the cliffside and the lighthouse, the vegetation and landscape diametrically changed in relation to the increasing surges of wind.

The wind and the water felt as if merged into one element of energy. The more the wind pressed against the land, the more the waves crashed into the rocks and made it hard to view the coast as something static like a line on a map. Especially the saltwater-covered, dark rocks, once part of the land, were now in a state of everchanging belonging to both land and sea (Elsby, 2020).

Legend

- Sea
- Lighthouse
- Trail
- Where Land meets Sea
- Underwater Stones (-2m)
- Surf
- Powerline
- Visible Stone
- Water Tower

Subbeberget

LFl(2)WRG 30s 17M

Lat. N 57 05,3 Long. E 12 14,2.
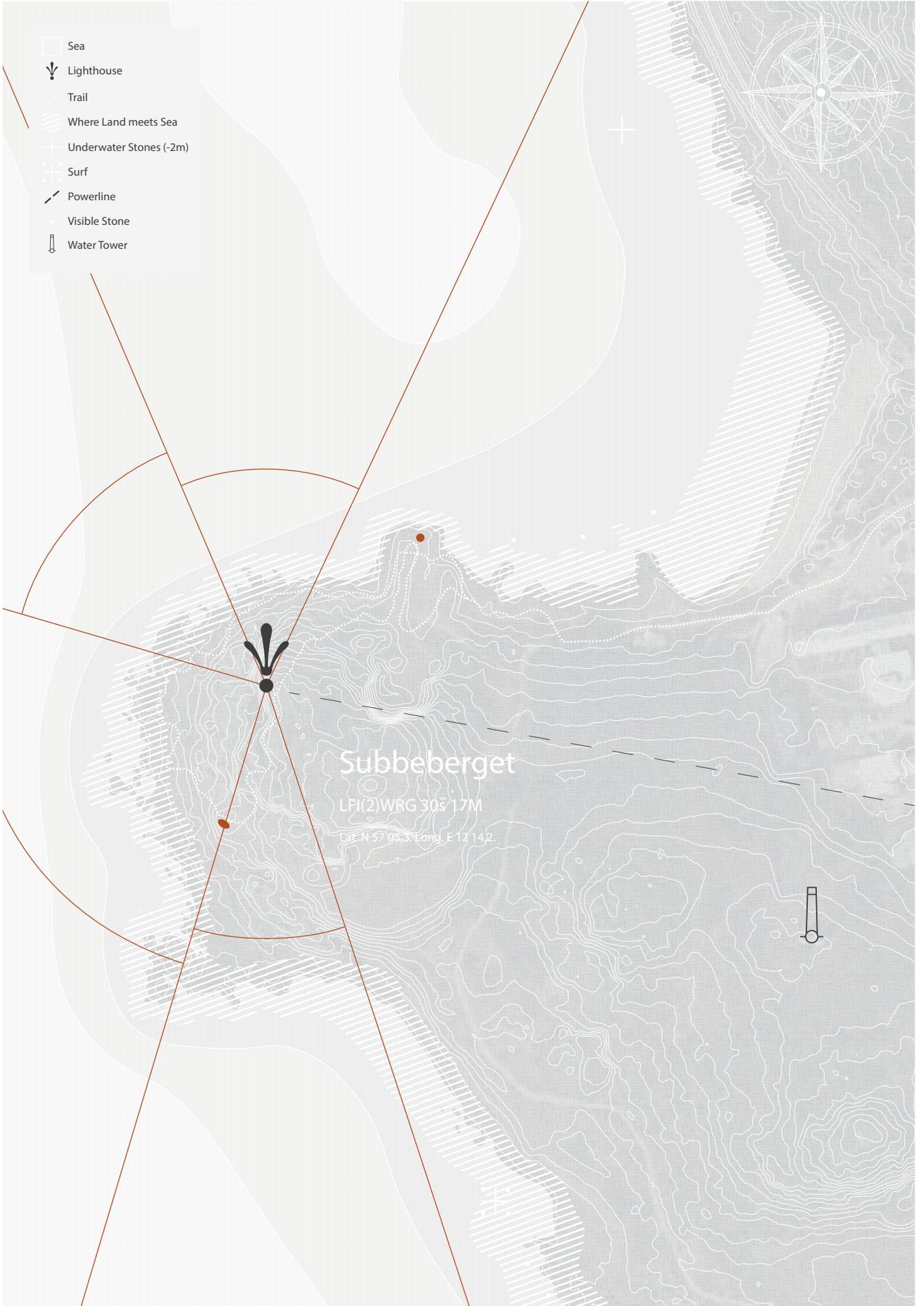
II.III | Krogstadsudde

Lat. N 57 14,5. Long. E 12 05,9.

FI(4)WRG 12s 5M

Krogstadsudde, as the first destination in our explorative journey revealed itself as a smooth transition from culture to nature. First arriving in the small coastal town of Bua, we already noticed a strange duality of the scales. Bua itself presented itself clearly and was quick to be overviewed and appeared as a small village, driven by local fishery and seafaring. Looking out into the bay, the horizon is dominated by a calm but devouring structure that is lingering in the fog, as if coming from the realm of Simon Stålenhags (Stålenhag, 2020) illustrations. A small gravel road out of town further towards the open sea led us to the actual site of the lighthouse and quickly diffused the town of Bua into the horizon, despite remaining as a small conscious presence of civilization. The presence of the ominous structure vanished behind the elevated islands, allowing the lighthouse to take place as the dominant feature of the landscape.

The geological formation of the peninsula dynamically flowed towards the lighthouse, marking its highest point and then abruptly sinks downwards and merges into the sea. The vegetation follows this dynamic like waves in the ocean, meandering in the creaks of the rocks and hiding from the ever-present force of the west-winds. Within the moments of land diving into the water and water climbing the land, the site created vastly different energies, varying from the calm and rhythmic surf in the bay to the chaotic and turbulent force on the outermost parts of the peninsula (Elsby, 2021a).

Krogstadsudde

Fl(4)WRG 12s 5M

Lat. N 57 14,5. Long. E 12 05,9.
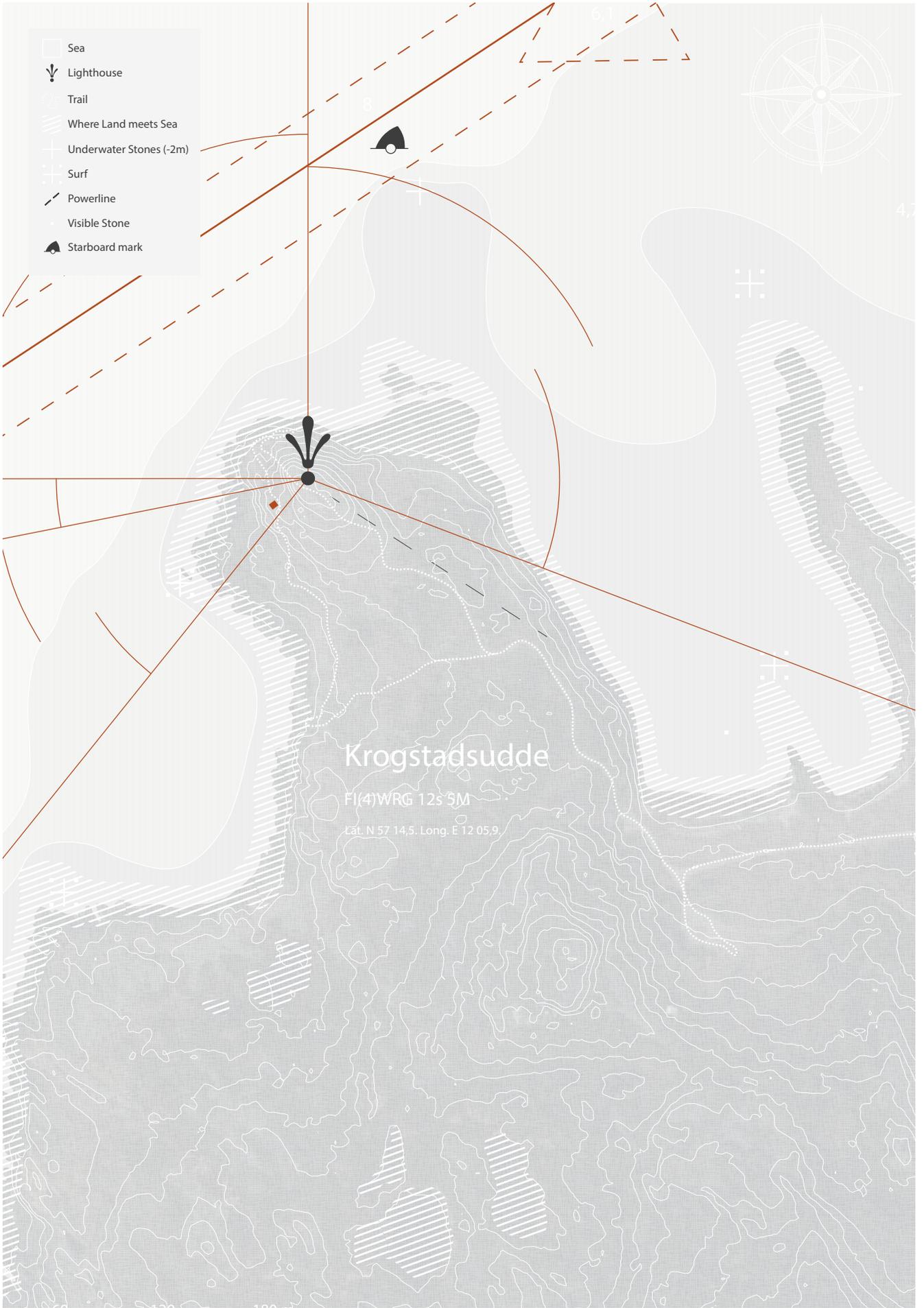
II.IV | Skallen

Lat. N 57 53,4. Long. E 11 33,5.

ISO WRG 4s 14M

Skallens Fyr as part of the Marstrand Islands revealed the difference of the coastal landscape of West Sweden to us. Whereas to the south of Gothenburg, the coastal landscape narrows down more into a coastline defined by beaches and cliffs, the northern regions widen up into vast archipelagos with waterbodies reaching far into the land. This change of landscape reflected also in the dynamics of the wind and the energy of the sea. The islands as natural wave breakers and wind barriers considerably stretch out as a transitional zone.

The lighthouse here represents much more the navigational difficulties of a specific landscape rather than acting as the cultural manifestation of a clear border of land and sea. The lighthouse can be seen more in relation to its landscape and as part of a network of seafaring rather than the isolated object.

The landscape itself however felt far more developed and integrated, despite its physical distance to Marstrand. Paths are laid out; bridges gap the natural fragmentations of the rocks and benches mark scenic spots and invite to pause. The Marstrand Fästning as a tourist attraction and a major landmark was only slightly present behind the elevating landscape but its touristic reach and influence was experienceable through-out the hike along the Island, not to mention Marstrands influence as a summer destination in itself (Elsby, 2022).

Legend

- Sea
- Lighthouse
- Trail
- Where Land meets Sea
- Surf
- Powerline
- Visible Stone

Skallen

ISO WRG 4s 14M

Lat. N 57 53,4. Long. E 11 33,5

Taudden

II.V | Mollösund

Lat. N 58 04,5. Long. E 11 27,9.

FI(2)WRG 6s

Present as well in the town of Marstrand, but exemplified even further in the village of Mollösund, we experienced the strong and chilling seasonality of coastal towns. When the season of summer already left months ago, the majority of the people left along with it and what remains are the empty summer houses and the few people that inhabit these towns. We, as visitors, felt strangely isolated and at the same time had the feeling of being observed while walking along the fishing huts and harbour houses towards the channel where the lighthouse is situated.

In contrast to the other locations, here the lighthouse didn't seek any attention towards the land and hid close to the water, not visible from the piers and huts. Along the lighthouse, few summer houses shared the landscape with it and made it feel restricted and inaccessible, despite the marked public trail leading right to it.

An alternative way of seeing the lighthouses relation to the neighbouring houses is how friendly and integrated it felt, contrary to the common characteristic of lighthouses as being isolated strongholds against the forces of the sea. Mollösunds lighthouse instead felt welcome and as part of Mollösund just as much as any other building in the town. This was underlined by the small recession in the rock that got transformed into a bench, combined with a small springboard right next to the lighthouse. It almost felt as if the lighthouse served as the protective and stable instance in the landscape, protecting swimmers from the wind and dangers of the sea (Elsby, 2021b).

Legend

- Sea
- Lighthouse
- Trail
- Where Land meets Sea
- Surf
- Powerline
- Starboard mark

Möllösund

Fl(2)WRG 6s

Lat. N 58 04.5. Long. E 11 27.9.

9.4

Slubbersholmen

II.VI | Islandsberg
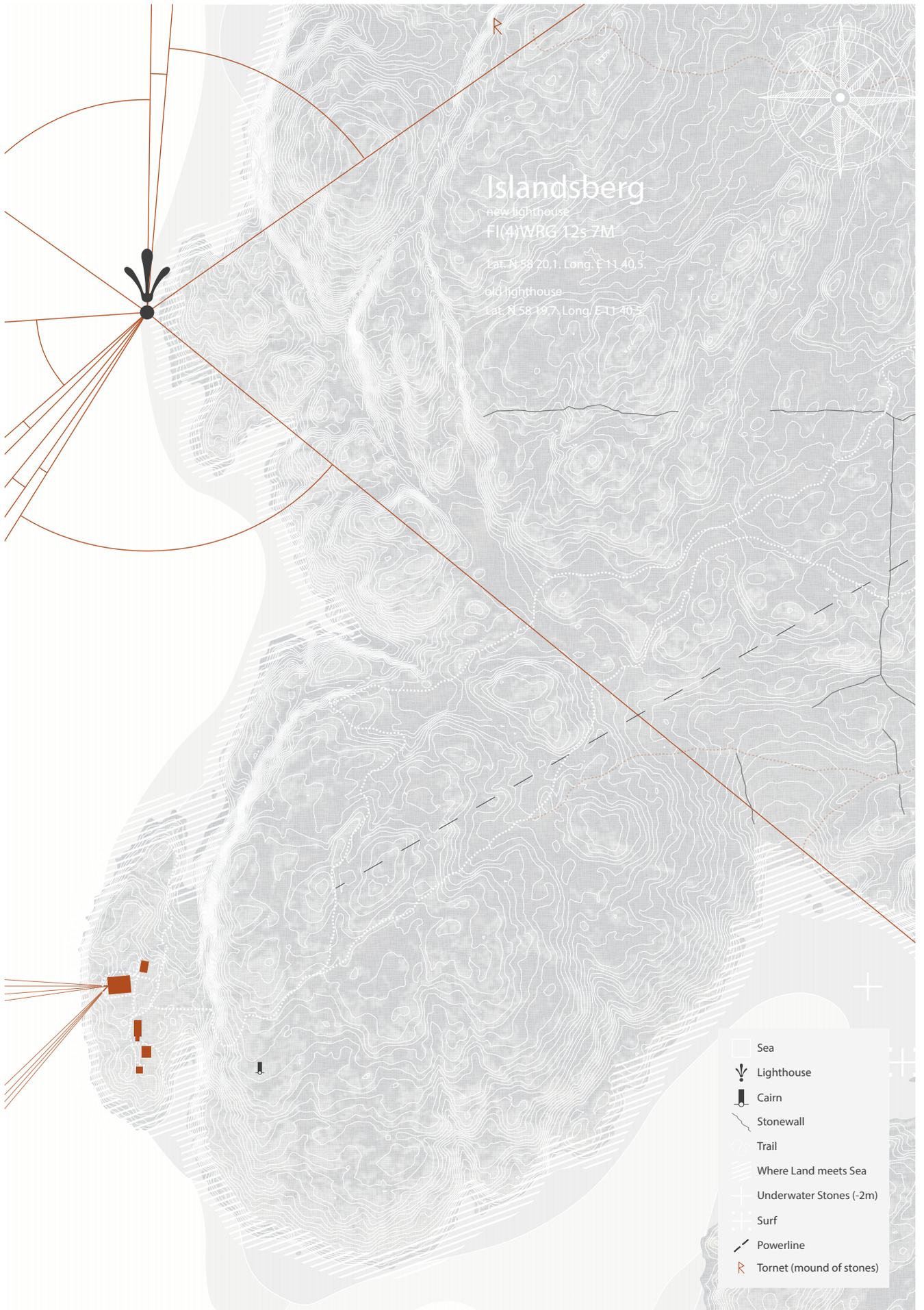
Old lighthouse: Lat. N 58 19,7. Long. E 11 40,5.

New lighthouse: Lat. N 58 20,1. Long. E 11 40,5.

FI(4)WRG 12s 7M

Islandsberg initially was not part of our journey as it hides so reservedly within the broader context of the Swedish lighthouses and their history. In fact, the old Lighthouse of Islandsberg is not what one first associates with the image of the lighthouse. The journey to Islandsberg felt more intimate than any of the previous sites. Once we got off the main road, we had to follow a small dirt road through untamed fields and trees with a few houses scattered around next to the road. None of these seemed to be inhabited by this time of the year but still felt so personal that it seemed wrong to intrude into their detached existence from the larger towns around the Lysekil municipality. Just as the road split, we decided to park the car and continue our way by foot. After an almost fairytale walk through the adjacent forest, the landscape opened up towards the horizon and offered the sight of hills and rocky surfaces scattered with low-lying heather shrubs which hid the underlying wetlands that seemed to have developed out of ages of rainwater accumulating and eroding the landscape into cracks, ponds and small valleys. The hike was long and the more we progressed, the more deteriorated the trail became. Soon enough, we saw ourselves trying to sneak around the vegetation and pogs to keep our feet dry. Wherever the heather grows, the landscape becomes indistinguishable from the vegetation and makes it hard to keep a stable footing.

The old lighthouse revealed itself only at the very end of the landscape as the it slowly reached higher, the closer we got to the sea. Once we reached the highest point, we were able to see what laid beneath us. A small peninsula called the Islandsberg huvud (head) with a few scattered buildings spread out, with only the dramatic cliffside "Torskepallan" separating us from reaching it. On the top of the cliff, we found a white painted cairn as big as ourselves that precedes even the old Lighthouse buildings of Islandsberg and reminded us of the meaning this place has for the sailors and seafarers that did not have the luxury of a steady ground below their feet.

Making our way down to the peninsula through a stone staircase that appeared as if carved into the cliff, we were halted by a metal gate and a small metal sign. The old lighthouse is now a private house and when the gate is open, visitors like us are welcome to enter. When the gate is closed, the owners are at home and want to keep their privacy. This day however, the gate was closed, but not even the slightest sign of human presence was visible. The blinds were down, the doors were shut, and the piers lifted out of the sea. Nobody was there, not even seagulls or other birds dared to stay at this barren site this day. We were alone (Elsby, 2023a).

Islandsberg

new lighthouse
Fl(4)WRG 12s 7M

Lat. N 58 20,1. Long. E 11 40,5.

old lighthouse
Lat. N 58 19,7. Long. E 11 40,5.

Sea

Lighthouse

Cairn

Stonewall

Trail

Where Land meets Sea

Underwater Stones (-2m)

Surf

Powerline

R **Tornet (mound of stones)**

II.VII | Söö

Lat. N 58 26,8. Long. E 11 15,5.

Q W 7M

Söö was the last destination of our excursion. The weather on the third day started relatively calm accompanied by clear blue skies (while in Mollösund) and slowly crept back into the grey atmosphere we expected after the previous days. While quite stormy and rough during the visit to Islandsberg, on our way to Söö the weather slowly settled into a grey and dawning, non-descript setting. As the sea calmed down and the wind ceased to oppress the skies, a wall of fog laid over the sea and blurred the boundaries of sea and sky. The only things emerging out of this endlessness were the occasional rocky islands and the Söö Övre (upper) Lighthouse, which despite its relative proximity to us remained inaccessible due to being located on the Söö island, a small stretch of rock reaching out of the sea. Instead, we continued to drive by the sight of it and followed the road over a small mole up to a parking lot directly at the water with just a few piers reaching out further into the sea. The lighthouse (Söö nedre) does not serve as a tourist destination and is rather functional and therefore did not have any established trail leading to it. Instead, we made our way over the rocky surfaces, stretching smoothly from the residential buildings on the top of the hill down to the water. The air was saturated thick with fog up to the point in which every surface was dripping wet. The smoothness of the rocks made it hard for us to navigate safely to the lighthouse. Once we reached the site through slow steps, crouching and sliding along the surface, we realized that the lighthouse served as the literal boundary between land and sea, meaning that once reaching it, we will as well be both on land and in water. The only way to not get absorbed by the calm but creeping bodies of water, was to hold onto the railing of the lighthouse and hoping not to slip or loose hold of the one thing that keeps us connected to the safe harbour of culture both physically and metaphorically (Elsby, 2023b).

S Groto

Söö
lower lighthouse
Q W 7M

Lat. N 58 26.8, Long. E 11 15.5
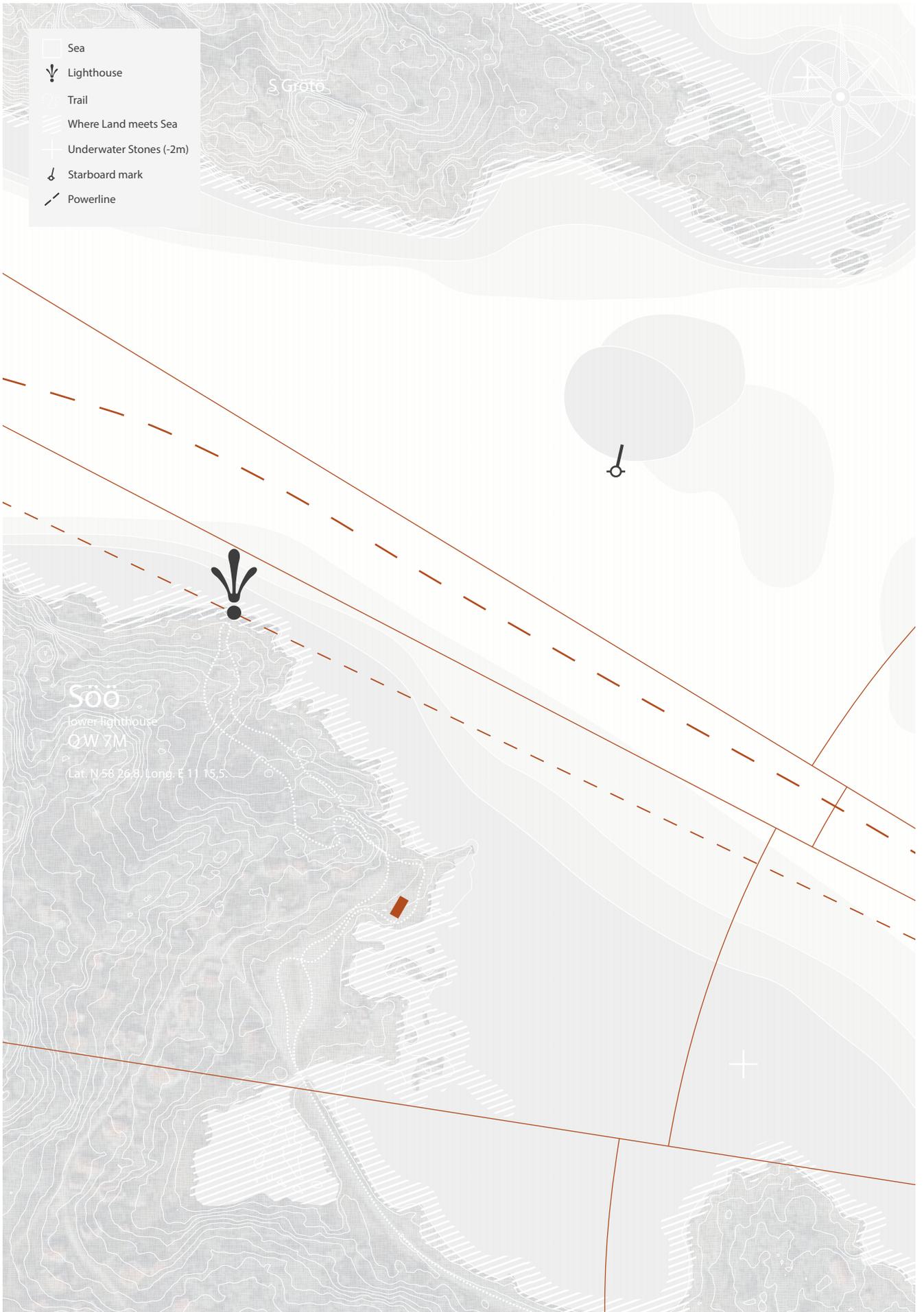
II.VIII | Colours found on site

Subbeberget

S 8005-G80Y	#403e34		S 4050-Y10R	#9d7120
S 8502-G	#272e2b		S 0502-Y	#f6f0e4
S 4055-Y10R	#a27620		S 6005-R80B	#64686f
S 5040-Y	#856827			

Mollösund

S 5030-Y80R	#884e43		S 1030-B50G	#8acdca
S 4550-Y	#8a6a10		S 0300-N	#f6f3ef
S 8000-N	#413f3e			

Krogstadsudde

S 5010-Y50R	#8f7767		S 4030-Y50R	#ab704e
S 6020-Y60R	#7b5140		S 6020-Y90R	#754c49
S 3502-R50B	#A8A7AB		S 3050-Y30R	#c07a3a
S 8502-B	#2d3134		S 0300-N	#f6f3ef
S 5030-Y80R	#884e43		S 6502-G50Y	#646762

Islandsberg

S 3502-G	#9ea19f		S 5040-Y80R	#7c342b
S 5010-B10G	#6b7d83		S 0502-G50Y	#eeeee5
S 0601-Y	#F7F6F2			

Skallen

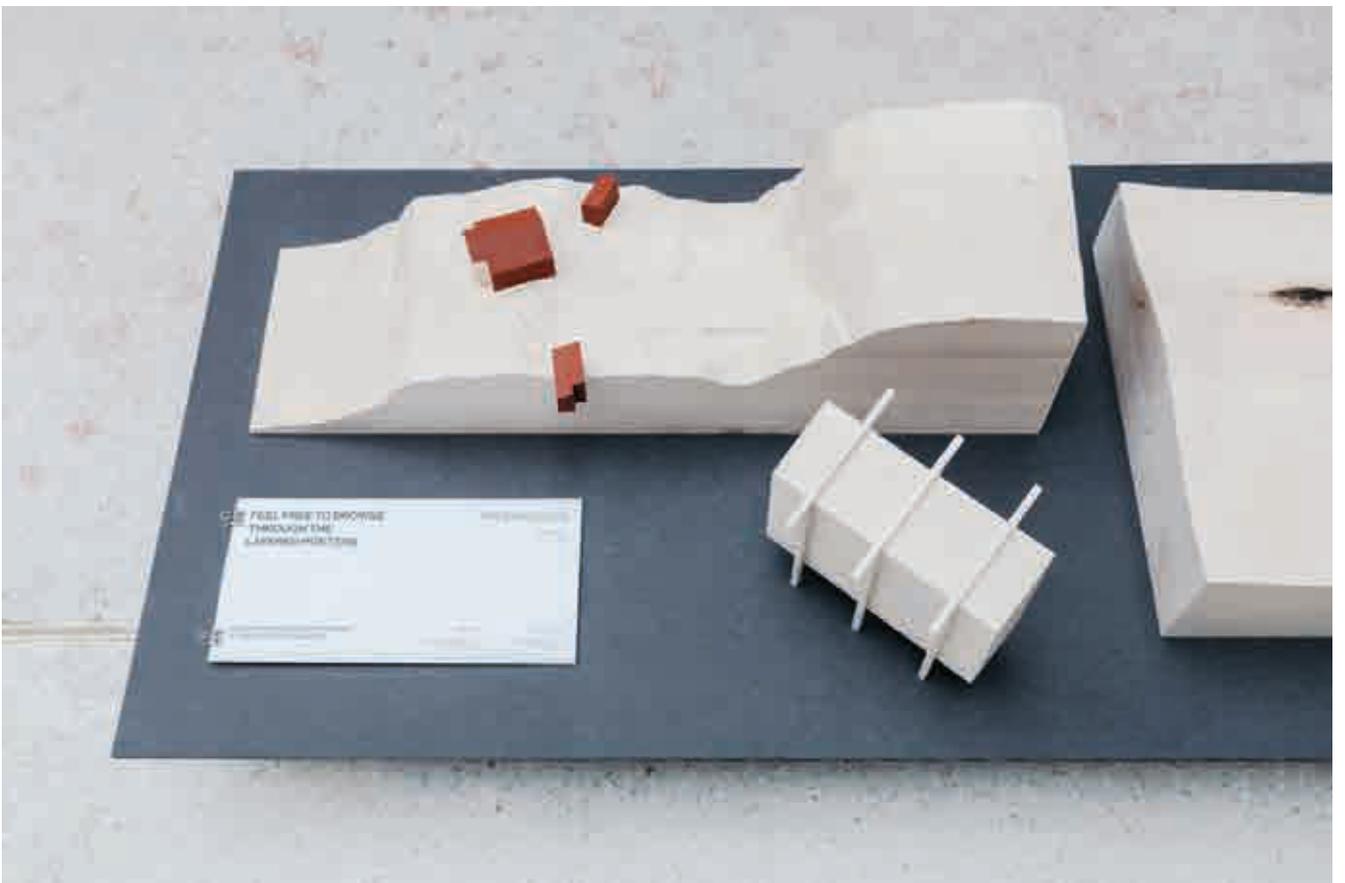|				
S 5030-B70G	#1f6c64		S 8502-G	#272e2b
S 4055-Y10R	#a27620		S 8000-N	#413f3e
S 0502-G50Y	#eeeee5		S 4040-Y90R	#9e504b

Söö

S 0502-Y20R	#F9F7ED
S 7020-Y70R	#5c3224
S 8502-G	#272e2b

APPENDIX III | Physical models

APPENDIX IV | Photographies

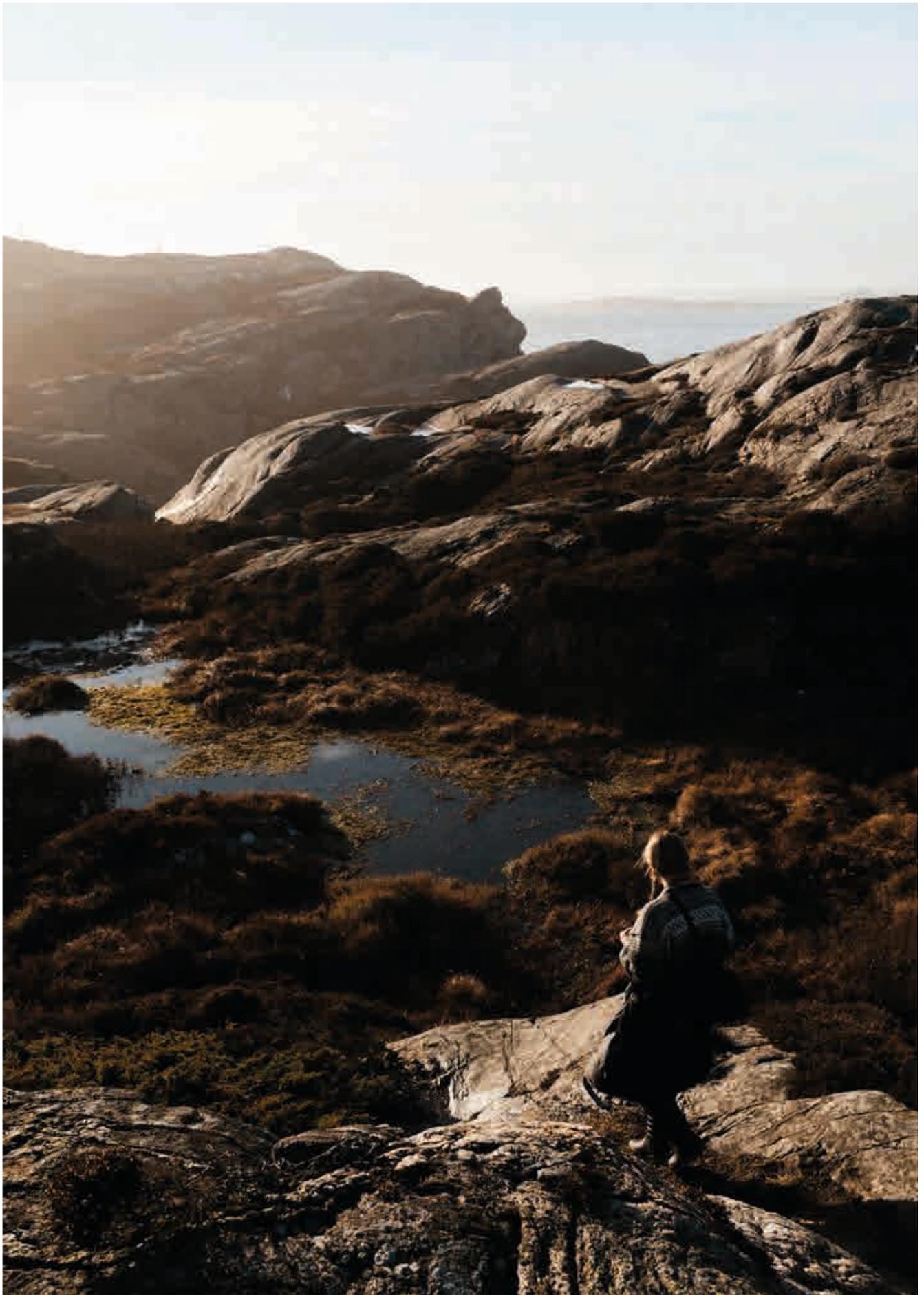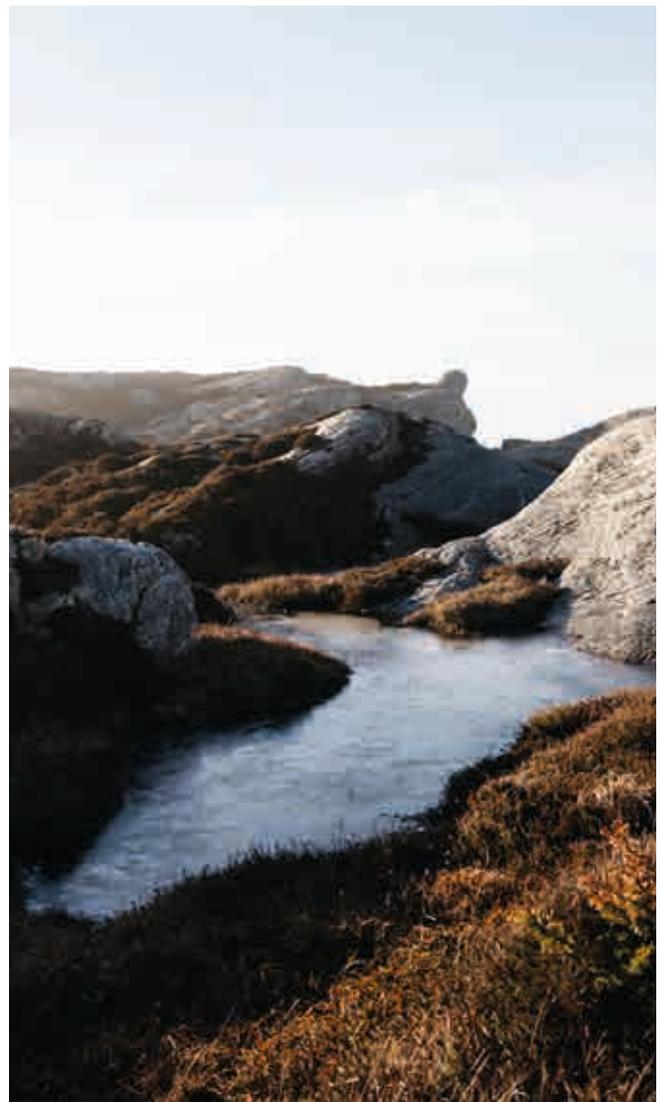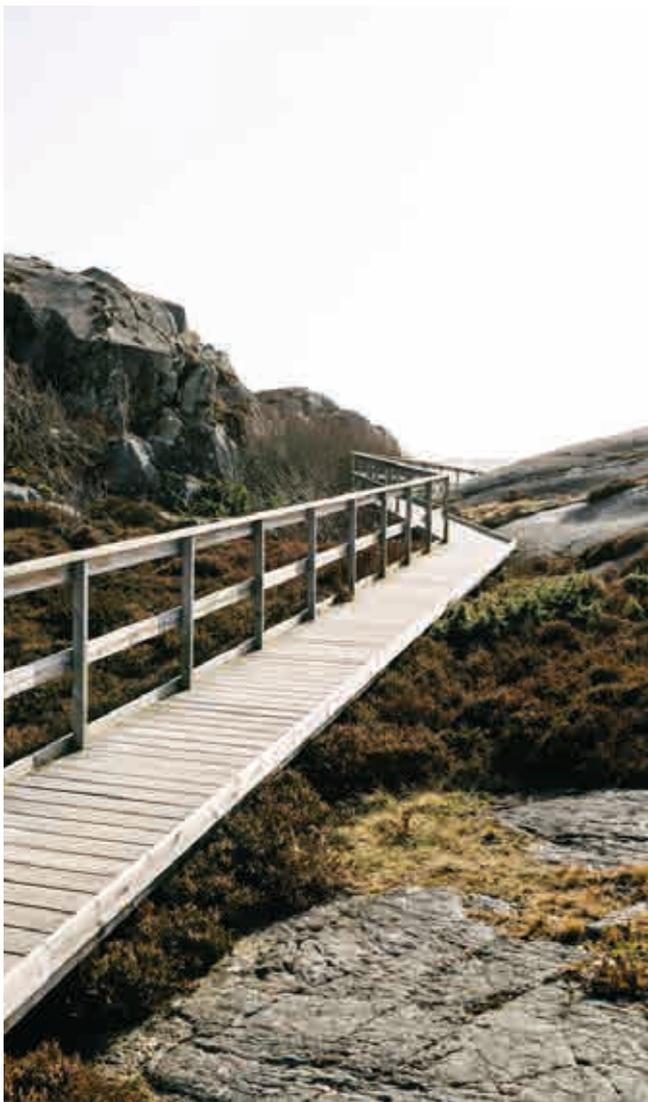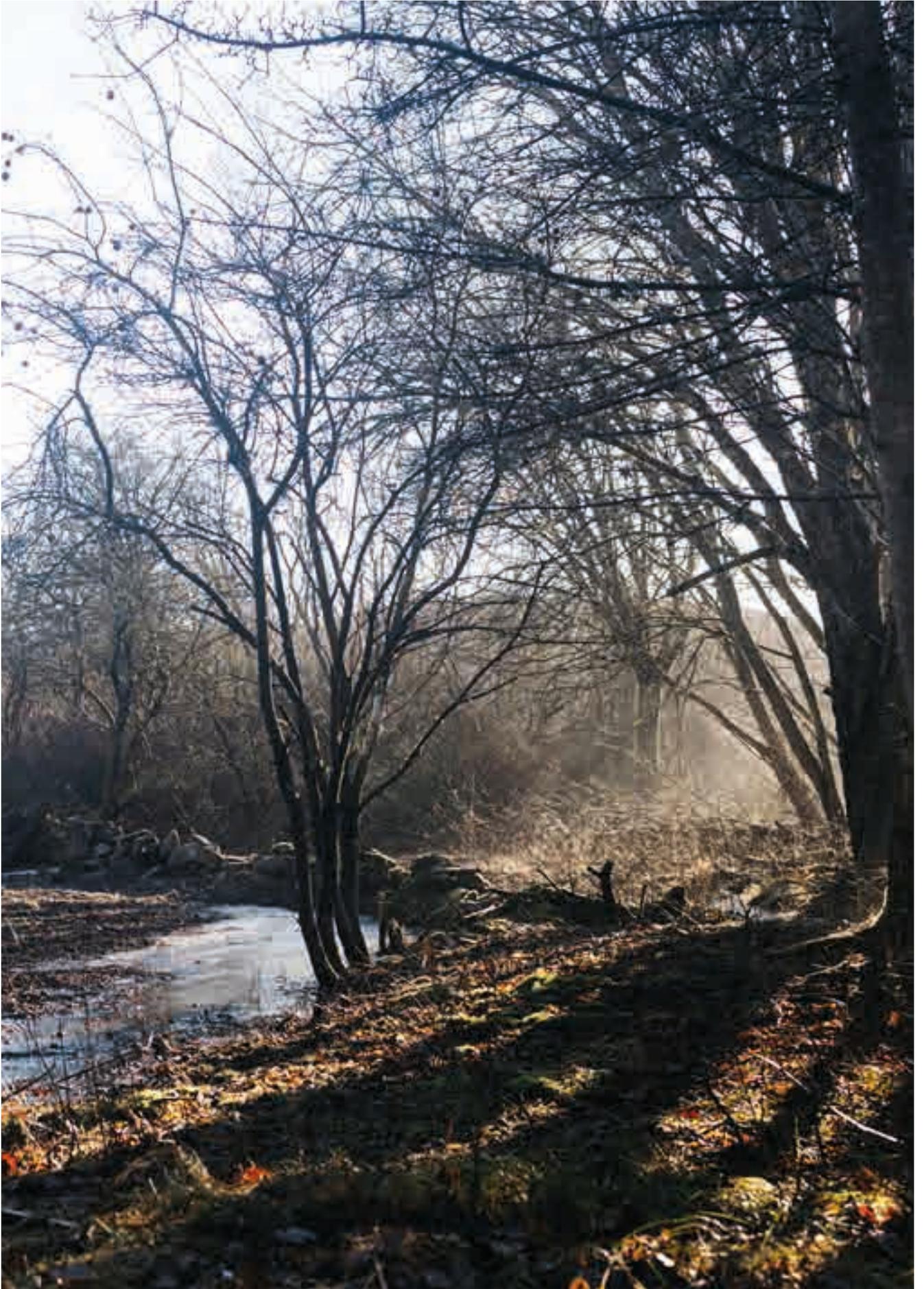# IV.I | ISLANDSBERG / GRUNDSUND

IV.II | FACADE STUDY

IV.III | JOINT STUDY

IV.IV | DETAIL STUDY

APPENDIX V | Night visit

V.I | The hike through the night

One of the goals of this thesis was to be able to visit a lighthouse site during the night. As we approached the context from a user/visitor perspective, the timeframe of the study visits was limited to the day.

Thanks to the generous Edith and Egon Plogrens fund which granted us 5000 SEK for study trips, we were able to book a night stay in the Skaftö hostel and B&B. The ability to extend a visit into the night, broadened the range of possible explorations significantly.

We arrived in Grundsund at noon and checked into the Hostel. At this time of the year, the tourist season has not begun and the hostel was empty. As the day was still at its rise, we decided to explore the village of Grundsund more and ventured off to the Munkeviksleden in the north. After a calm and sundrenched hike along the trail, we returned to the Hostel and prepared for the night hike. Our visit took place from the 22nd to 23rd of March and the air was still biting cold as soon as the sun vanished behind the hills and ultimately the horizon, which required us to be well-prepared for the hike. We made warm tea, packed plenty of snacks and dressed up in multiple warm layers. Additionally, we geared up with plenty of lights for safety and headlights to be able to navigate through the dark.

As we started our hike, the sun was slowly beginning to set and the sky turned into an orange burning hue. Though overall cold, the sun of the day brought some warmth and there was little to no wind. We departed from the parking spot, located at the main road at which the trail towards Islandsberg begins. The light quickly began to fade and it got darker with every step we got closer to the lighthouse. While walking through the forestry areas, almost all light had vanished and what remained couldn't find its way through the dense forest.

At this time, our behaviour changed from an excited and energetic one to a more inwards facing, calm and focused behaviour. Along with the light, most of the impressions were gone and we were forced to focus on the small beam of light in front of us, the ambient sounds around us and the light glow along the horizon. The closer we got outwards and into the rocky moorland, the harder it was to locate the trail and every step had to be taken carefully. Out there, the darkness brought a solitude and quieting atmosphere.

At the end of Islandsberg, the heather landscape is more scarce and the landscape elevates up, leading to a more exposed and rough environment. Almost reaching the cairn and for the first time being able to grasp the vastness of the ocean ahead of us, we felt what has been described by many about the maritime landscape. A feeling of dauntingness and the unknown came upon us. The visibility remained to be limited, and between the headlight and the horizon was only darkness.

The last step towards Islandsberg huvud marked the steep granite staircase, leading down towards the lighthouse and the ocean. As we reached the lighthouse, we understood what it must have meant to be a lighthouse keeper, isolated and alone, watching over the sea.

The ocean at this time was both calm and powerful at the same time. Waves of frightening size came rolling towards the cliffs as if slowed in time and only as they hit the rocks they truly unveiled their immense force. This was a moment at which we felt the ocean to be much closer and imminent than we have ever experienced before. After looking at the buildings at the site, we walked further down to the north facing bay with the harbour. A small stepped trail leads down and ends in a pier-like structure with a crane. The pier was very slim and everytime the waves crashed into the bay, water splashed up and onto the pier. The lights on our body and the lighthouse in our back were the only reminder of safety. Once we crossed the pier out to the end of the rocks, a magnificent view of the new lighthouse at Torskepallen revealed, sitting alone at the edge of the cliffs, facing the wide, dark Skagerrak sea. We took a moment to pause and take in the immense impression of isolation and solitude. With a small tripod and long exposure captures, we tried to hold onto this moment.

We returned to the old lighthouse building and looked around a bit more until the creeping cold of the night led us to start our way back to Grundsund. At last, we sat down at the stairway, covered by the overhanging cliffside, observing Islandsberg, the ocean and the night sky.

"There was the sea – his sea – going past, wave after wave, foaming recklessly, raging furiously, but, somehow, tranquil at the same time. He felt completely alive from the tip of his ears to the tip of his tail."

Tove Jansson, Moominpappa at Sea 1965 (Jansson, 2022)

APPENDIX VI | Inspirational projects

VI.I | Fleinvær Refugium: TYIN Tegnestue + Rintala Eggertsson Architects

The project Fleinvær Refugium by Rintala Eggertsson Architects in collaboration with TYIN Tegnestue provides a great understanding of architectural design that is highly site-specific and more importantly works with adjacent concepts of coastal landscapes in the Nordic context. Their approach to the site through a scattering of functions references vernacular Nordic architecture and allows for different architectural expressions depending on function, location, and relation to the landscape.

In addition to the physical properties of the design, Fleinvær Refugium has an intricate way of celebrating the roughness and weathered impressions of the site. The fragmentation of buildings creates a beautiful interplay and allowance of both being exposed to nature and retreat within protective structures.

Their careful approach to understand and analyse the delicate and fragile landscape by conducting a Photo-Scan of the site and marking the significance of protecting the ecosystem, vegetation and natural properties goes in line with our way of working with layered landscapes. This care is represented and translated well into the architectural design as most of the building's foundations refer to the vernacular use of elevated point foundations (traditionally done with stacked rocks). This creates a sensitive distance to the surface and allows existing nature to remain (Rintala Eggertsson Architects & TYIN Tegnestue, 2017).

"We have taken care to inflict as few wounds as possible on Fleinvær. We achieve this in part by making good pathways, spaces between the houses, and a common fireplace. This steers traffic away from the isles more sensitive areas" (Fleinvær Refugium / TYIN Tegnestue + Rintala Eggertsson Architects, 2017)

We question, however, the location of the building in relation to the site. Positioning them close to the coastline, where, presumably, the greatest animal interaction between land and sea will occur, seems as least as invasive as the destruction of vegetation would have been. Also, making such a location accessible by no means requires the buildings to be placed on top of the most interesting part of the site. In our view, this approach lacks nuance and any regard for the context is quickly overrun by the far too common human will to exploit the sites arguably most valuable aspects (such as the view of the sea for instance).

VI.II | Rautulampi Wilderness Huts: Manu Humppi, architect

The Rautulampi Wilderness huts (Humppi, 2021) stand out as a key reference project for this thesis as the typology, context and function closely align with our design goals. The Finnish architect Manu Humppi is specialised in wilderness architecture and has personal experience and a passion in hiking and the outdoors within the Sápmi territory context (Jutila, 2022). This experience and knowledge is very valuable as it enables an understanding and grasping of the context and environment. This goes in line with our theoretical framework of contextualism and reinforces our claim that an extensive knowledge of the immediate and wider context of a place can and should have a significant impact on the design outcome and quality.

The wilderness huts are located within the Urho Kekkonen National Park in Eastern Finland and have replaced the former burned down traditional wilderness hut. The program consists of a combined open and rentable hut, a day hut and an additional structure for firewood (Natnorth, n.d.) and reinterprets the traditional hut typology through a contemporary design language, making use of robust tar paper cladding for the angular roofs and prefabricated timber-elements for ease of construction and transportability by snowmobiles.

The project successfully integrates most functions and features that we deem both logical and suitable for the context of Islandsberg. The wilderness huts offer sleeping spaces for up to 8 hikers, wood stoves, a drying room, seating spaces and prep kitchen areas and highlighted views into the nature of the national park (Oikarinen & Vesikansa, 2022).
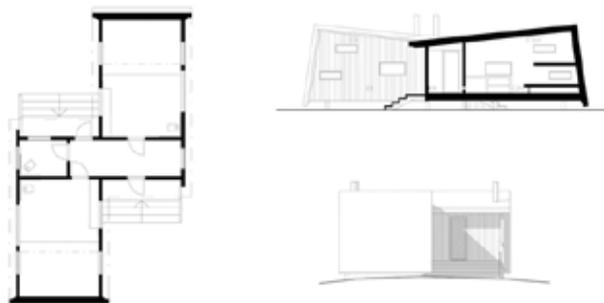
VI.III | Höghult / FABEL arkitektur

The project Höghult by the Swedish architecture firm FABEL Arkitektur serves as prime example of how immaterial qualities of a site were well translated into architectural design. The principles used in this project align deeply with the ideas of contextualism and help us to understand the methods used to achieve a sensitive translation from context into the built object.

The building is located on a site that is rich with historical and cultural references to the Swedish rural vernacular, but also relates to the intangible qualities of its immediate surroundings. Adapted into the design, the project uses traditional timber and joinery techniques that completely avoid metal connectors, nails or screws (Pintos, 2022).

One of the most intriguing aspects of this project is its delicate play with dualities. The building consists of two major volumes. One serving as a restrained and protective entity, using traditional "Timmer" (mass-timber log-building) (Fabel Arkitektur, 2020) and integrating purist material techniques such as the "Tadelakt" as a waterproof and distinct area for the fireplace and shower to not only separate functions but also make the interior readable.

The other volume is constructed as a "Stolpverk" (light timber framework) (Fabel Arkitektur, 2020) with an entirely transparent façade to emphasize on the special viewpoints and be able to interact with the natural environment. Both volumes work with the same proportions, materials and reference vernacular typologies, but manage to translate these into the contemporary context through innovative solutions such as the highly customised glazing that is easily replaceable and sophisticated at the same time.

This exemplifies the methods of contextualism (more specifically critical regionalism) as this project achieves the blending of the vernacular with modern solutions, while working physically and metaphorically with the local context. The dualities within the project of openness and closeness, Stolpverk vs log-building (lightness and robustness), an opposition of being protective versus exposing are easily understandable for the user and create an intricate composition within the landscape.

VI.IV | Fuglemyrhytta – A panoramic self-service cabin / Snøhetta

The project "Fuglemyrhytta" by Snøhetta is relevant to us primarily because it introduces valuable approaches to local and sustainable tourism and secondarily because of its functionality and self-sustaining characteristics.

The building is located north to Olso, Norway and serves as a touristic destination for locals from Oslo and the surrounding areas. The project works in collaboration with the Norwegian Trekking Association and therefore benefits from the already established services such as the booking system. This makes it easy for local people to organize and access this self-service cabin (Snøhetta, 2018).

Additionally, the project achieves to activate a site and furthermore a region through small-scale and low maintenance architectural additions by extending the range of accessibility for hikers and tourists significantly. The option to extend hiking trips over the night with a low effort allows users to broaden their range of experienceable area.

A clever and efficient space layout incorporating a wetroom (entrance hall), sleeping areas, a main common room and an outhouse with a toilet allow for enough functionality to be both resource-friendly and provide enough amenities to sustain the night comfortably.