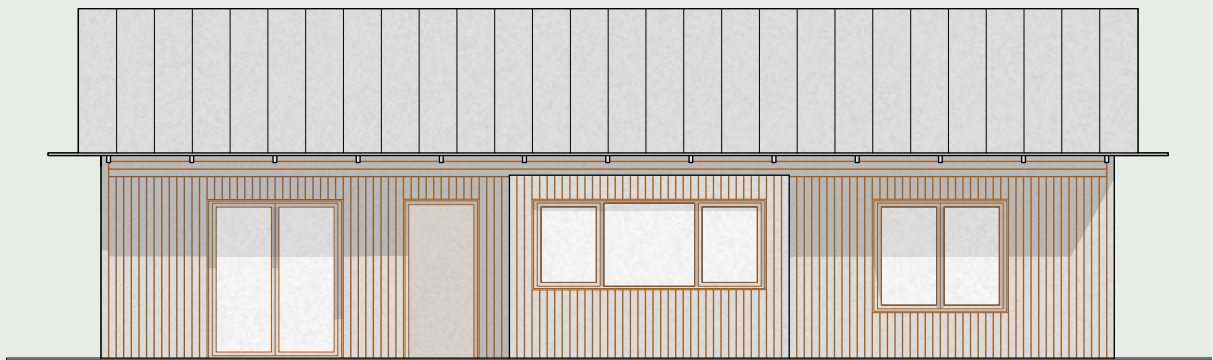


Villa Wintzell



Maja Wintzell

Examiner / Mikael Ekengren

Supervisor / Björn Gross

Building and Tectonics

Architecture and Urban Design

Department of Architecture and Civil Engineering

Chalmers University of Technology

2023



CHALMERS

Villa Wintzell

*An exploration of wood construction, composition and expression as
a way of re-imagining the summerhouse as a year-round home.*

Maja Wintzell

Examiner / Mikael Ekengren

Supervisor / Björn Gross

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Exterior perspective - physical model



Abstract

The Swedish summer is sacred to those of us living through the Scandinavian winter, and our lives take on a whole new character with the start of spring. Therefore, the summerhouse is a common addition to the year-round home. It is a place where architecture can take on a simpler form, and sustain a carefree life in close connection with nature.

Our summerhouse, located in Bohuslän, represents all of these things to me. It was bought by my grandparents in 1967, and what was their way of reconnecting with their roots, has since become our entire family's way of coming home. It is because of this that my parents want to build a new house to retire in, just across the street from the summerhouse. This new house figures as the design task for this master's thesis, and the thesis question accumulates in the final design of the house.

This master's thesis investigates what a summerhouse is, what it consists of and stands for, and if it is possible to translate architecture that is so deeply rooted in the escape of everyday life, into architecture that houses it. It explores the history and heritage of summer houses, with a focus on our existing summerhouse and ultimately the ideals that shaped it. This investigation is done through both research on design and research by design. The research on design ends in a definition of what a summerhouse is, and moves on to an exploration of wood construction and composition that support that definition. While wood is the obvious choice for this master's thesis, it is carefully explored so as to convey the defined expression.

The research by design results is a design proposal of a year-round home for my parents to retire in, including an additional building. In the end, it is a house that stands confidently among the already existing summer houses besides it, in a way that resembles them, without copying them. It is not a summerhouse, but it is a similar escape to a simpler and freer lifestyle supported by an equally carefree architecture.

Keywords: summerhouse, vacation home, building composition, building details, wood construction

Student background

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Architecture (M. arch.)
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ARK636 - Master's thesis preparation course 1

ARK496 - Reality studio
ARK153 - Architectural competitions
ARK164 - Future visions for healthcare, housing and work 1: Residential
healthcare - housing for seniors
ARK650 - Sustainable development and the design professions

Architecture (B. arch.)
Chalmers University of Technology, 2018-2021

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Thesis question

What are the characteristics of a summerhouse, and how can they be re-imagined in a year-round home?

Discourse

Purpose and Aim:

The purpose of this master's thesis is to identify the characteristics of a summerhouse in both a practical sense of construction and composition, as well as in a theoretical sense of a general and personal value, and translate both into a design proposal of a year-round home. The aim is to explore the expression of the summerhouse and exemplify it as a typology, and essentially, attempt to capture the essence of a summerhouse. The aim is also to be as realistic as possible, by following the development plan of the area, and having economic and ecological aspects in mind.

Method:

This master's thesis is conducted through research on design and research by design. The research on design is guided by literature studies, case studies, and most importantly by our existing summerhouse and neighbouring summer houses as examples to follow. The research by design is concluded in a design proposal for a year-round home, presented through drawings, technical drawings and physical models.

Delimitations:

This master's thesis aims to be as realistic as possible, and the design proposal is limited to the existing development plan and building regulations of the area, which is originally conditioned for summer houses, and therefore quite strict.

The research on design focuses on summer houses and on defining it as a typology, and excludes all other types of vacation homes, with the exception of a few references. Similarly, the research by design primarily focuses on summer houses designed for seasonal living, and excludes year-round houses that are converted into summer houses.

The exploration of construction is limited to wood constructions, and is focused on the construction of the wall and the roof, excluding any details of window setting.

I / Introduction

Summer of 1999
Our summerhouse, Bohuslän
Photo from our family archive



Me, during my second summer at our summerhouse.

A history of summer houses

Today, almost every other swede has access to some sort of vacation home, and there are more than half a million vacation homes in Sweden (Bohuslänsmuseum, 2023). These little retreats can be found all over the country, and while they add up to an array of different categories, from mountain cabins up north to summerhouses down south, they can also be sorted into two categories of origin. The first one consists of houses that started out as year-round homes, and first later were converted into vacation homes, and the second one consists of vacation homes that were designed for seasonal living.

This desire to retreat back to the countryside originated from the same desire to live in the city, about 150 years ago. 20th century Sweden saw the proper launch of urbanisation, as well as a higher standard of living across the country, which then led to the possibility of owning a vacation home. The sudden surge of empty houses left behind in the countryside and in smaller communities outside of the city were instantly turned into vacation homes, and those who didn't already have access to older houses, built new ones. Thus, the summerhouse, and a new branch of Swedish architecture, came to life.

This master's thesis is set in Bohuslän, on the Swedish west coast. It stretches out along the coastline, from Gothenburg in the south to Strömstad in the north, and into the sea with over 3000 islands. It is known for its archipelago and small fishing villages, and in the middle of the 20th century it suddenly became a vacation destination. Today, the traditional Swedish west coast house, inspired by classicist ideals, is the epitome of a summerhouse. In a sense, these small fishing villages have become a symbol of summer. And yet, new summerhouses symbolise something even more.

Our summerhouse, which was built in the 1960s, belongs to a surge of new ideals during the mid-century, where classicist ideals were replaced by a desire to live a simpler and carefree life, soaking in summer, and in close connection with nature. Therefore, it is one of the main inspirations for this thesis, and will be investigated both as a lifestyle and as its own typology before being re-imagined in a new year-round home.

Spring of 1967
Our summerhouse, Bohuslän
Photography: Stig Thanner



The first ever spring at our summerhouse, just as construction were finishing up. Before any grass had grown, but just as friendships started to.

From left to right:
My grandfather, our neighbour, her daughter, my great grandmother,
my father, my grandmother

The story of our summerhouse

In the year of 1967, my grandparents came across a new development of summer houses close to Strömstad, Bohuslän, on the Swedish west coast. My grandfather was born and raised in Strömstad and my grandmother was from Varberg, another coastal town an hour south of Gothenburg, and to them this was a way of connecting with their roots. They picked the first house in a row of three similar ones, the white and green one, and closed on it before it was finished.

What followed is a long history of summers spent together as a family, as well as with friends and neighbours of the community. To us, our summerhouse is just as much about the people in the community as it is about the house, and although it only comes alive during the summers, the friendships we have there last year-round, and across generations.

Subsequently, our summerhouse, and the Swedish west coast in general, has been the scenery of many special days throughout my childhood. Both Easter and Midsummer is a yearly occasion, but the occasional birthday, baptism and wedding has also been celebrated there. My brother was baptised close by in 1990, and my sister got married to her husband in the same church in 2021. Today, my nieces and nephews are part of the third generation of children growing up and spending their summers there, and it is our desire to keep connected with the roots we have put down there.

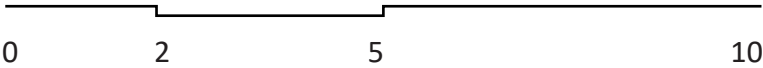
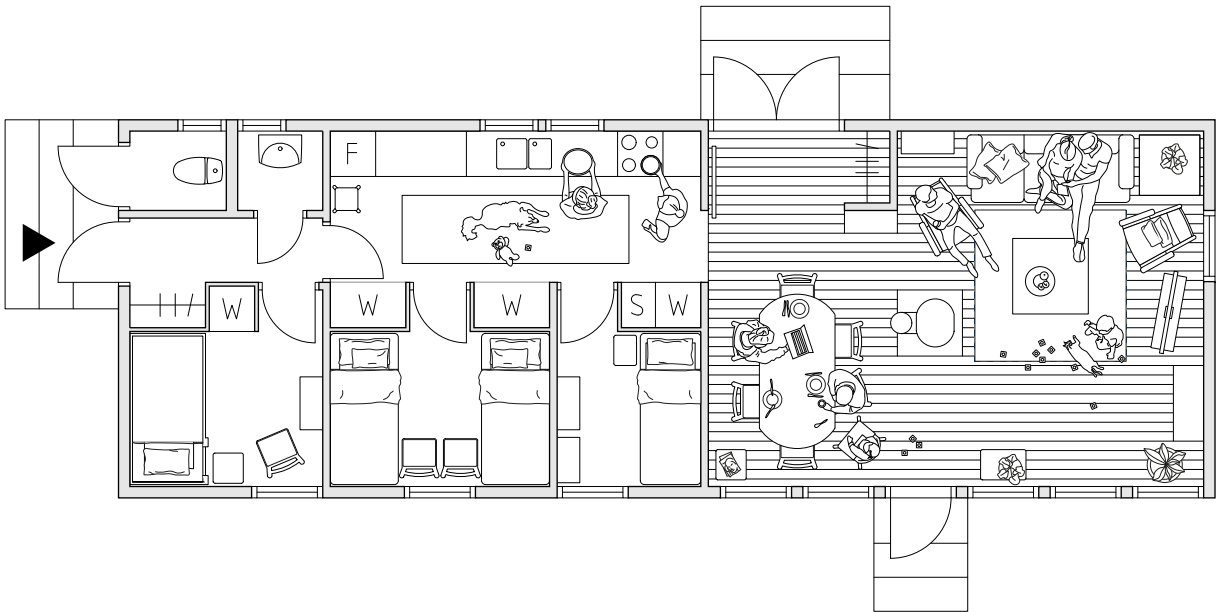
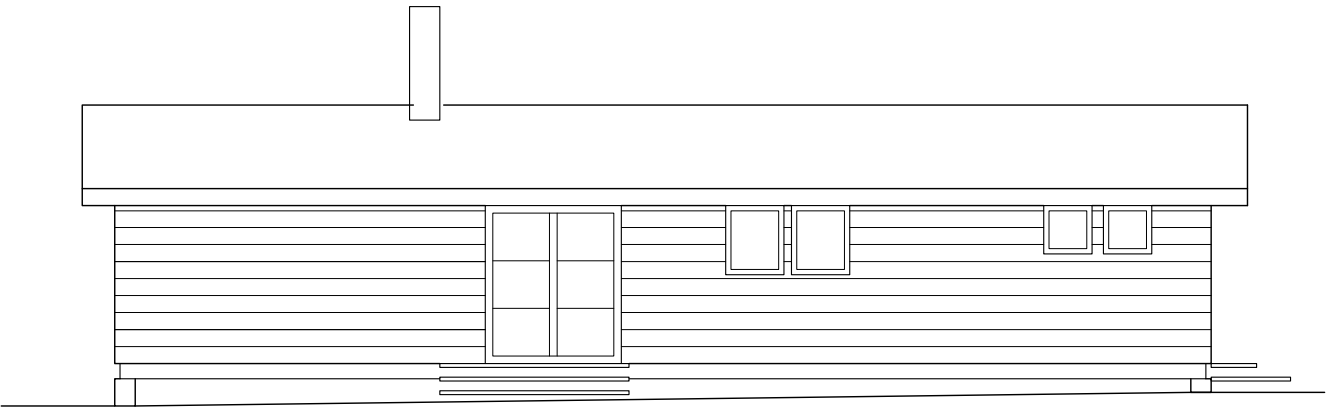
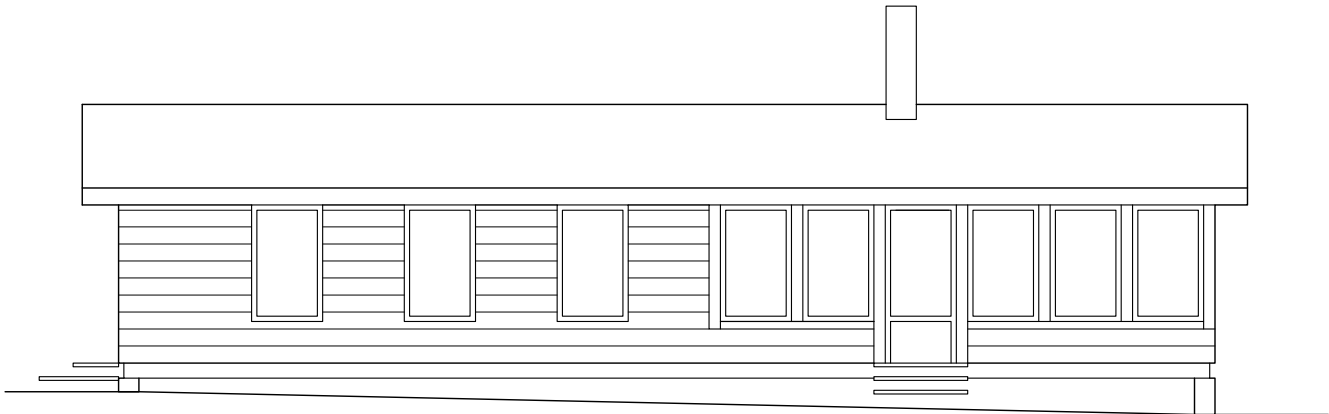
A few years after my grandparents bought the summerhouse, and they fell in love with it, they bought an empty plot of land just across the street from it that they later gifted to my father. This empty plot of land, which is the design task of this master's thesis, is where I will design a new year-round home for my parents to retire in. It is also our opportunity to create more space for our already expanding family, and make sure that we can keep making memories in this place that we all already love.

Summer of 1997
Our summerhouse, Bohuslän
Photo from our family archive



My father and sister, enjoying the morning sun on the front steps of the summerhouse with a magazine, a sandwich and a glass of chocolate milk.

Drawings of our summerhouse



Summer of of 1997
Our summerhouse, Bohuslän
Photo from our family archive



Our summerhouse.

II / Background

The summerhouse as a typology

In a way, our summer house was my first experience of architecture, and it continues to be my favourite. Life in the summerhouse has always felt simpler and freer. With such a small house, the doors were always open, and as children we could run in and out of it like the floors were made out of the grass outside. On those really hot days, we could eat lunch in the shaded backyard, and in the evenings we could gather in the sun on the terrass. It was my first experience of architecture that speaks to its environment, and enhances it, and it continues to be architecture that inspires me.

With that said, summer houses come in various shapes and forms, and I'm not the only one that loves my summerhouse. On the contrary, there is a widespread appreciation for vacation homes. This is showcased in the book, *The Architects Home*, by Patric Johansson, Kenneth Kauppi and Marja Pennanen. The book, which is a collection of various houses, and the second one in a series, looks specifically at vacation homes belonging to architects. The question of the series is how architects, who continuously create homes for others, make a home for themselves. And in this case, what makes up their vacation homes.

"Alright, this is how I live - but you should come and look at my vacation home!" - A common response from interviews done for *The Architects Home*

In *The Architects Home*, vacation homes from all over Sweden and Europe showcase a widespread variety in history, heritage, location and function from one vacation home to another (The Architects Home, 2010). In a way, it is impossible to pin-point what common characteristics these houses have, and at the same time they represent the same sort of retreat from everyday life. A vacation home is a place of pride, but it is also unpretentious, and it shows. The outlook of not only life, but on the house itself and its material things, changes from the year-round home to the vacation home.

"Contrary to the interior design of our home in Stockholm, the things we have here have history. Everything is simple and nothing is too expensive." - Marianne Aaro, for *The Architects Home*

A vacation home is allowed to have mis-matched furniture and messy kitchen drawers. The walls can be cluttered with photos and artworks, and the closet can be filled with old and worn out clothes. It is all part of the experience of slowing down and living a carefree life. And in a similar way, a vacation home is also free to be changed from time to time, in a way many other houses struggle to. With so many different histories, heritages, locations and functions of vacation homes, they are free to be what ever they want to be.

In other words, a vacation home is a place where creativity can flow free, and where architects can let loose (The Architects Home, 2010). The lack of style makes it easier to design spontaneously and instinctively, and to live and furnish the same way. It means that architects can try out new things, or lean into old and unconventional ones, and they can do so without feeling the pressure of conventional expectations.

And yet, it seems like most architects end up with similar ideals for a vacation home. There is a widespread desire to design for a simple and carefree life in close connection with nature, which sets the precedent for most vacation homes.

This approach to architecture replaced the popular classicist ideals during the middle of the 20th century, and this change in approach among architects was captured by Erik Thelaus in his book, *New Swedish Houses*, in which he applauded Swedish architects for stepping away from traditional ideals and going with the contemporary flow from further down in Europe (Thelaus, 1958). The book, which was published in 1958, is a collection of homes and vacation homes around Sweden, and is an obvious appreciation of the newfound creativity. With it, Thelaus proudly proclaimed a new style-less style.

“On the other hand, it is obvious that, as regards the design of detached houses, it is always a pleasant task for the architect to seek to arrive at the correct balance between the house and its surroundings or milieu. But, it would appear to be more correct today to employ the abstract functions of architecture, a proper connection with the landscape, a suitable length and height scale and well-chosen building materials, than to achieve this harmony by borrowing direct from the nature of the surrounding buildings, their building methods and the materials used in them.” - Erik Thelaus

In other words, architects during the mid-century were shifting focus from looking at surrounding buildings as references, to simply letting the surrounding landscape shape the building after it. These new ideals also went hand in hand with the desire to connect with nature, and the vacation home became an opportunity to enhance the experience of each unique landscape. According to Thealys, this was starting to show on all scales, from positioning on the site to materials and details, and especially through the use of untreated wood, tile, glass, brick and concrete.

Although Thealys spoke of it as style-less architecture, it was the start of a new typology of summer houses, which were designed for seasonal living and had thin constructions where their composition and materiality could shine through. These vacation homes, which only needed the mere essentials, were the perfect place to perfect this new way of connecting with nature, and it still rings true to this day.

Today, the standard of living is a lot higher than it was during the mid-century, and the expectations for a year-round home exceeds that of a summer house in more ways than one. And with more and more regulations in place for year-round homes, summer houses continue to be a place where creativity can flow free.

References

Ljunghusen

The first building of *Ljunghusen*, by the architect Per Friberg, was first completed in the 1960s as a summerhouse for his family (Atlasofplaces, 2023). It has since seen many additions and changes throughout the years, as his family has grown, and now consists of three building volumes and a sequence of decks that tie them together. All the buildings stand on plinths, and waver over the ground so as not to disturb it too much. This way of relating to the environment, as well as the open concept of the building, has inspired many architects throughout the years.

All the buildings are made out of wood, and they have floor-to-ceiling windows and sliding glass doors, which gives the buildings a transparent look. The construction and the raw materials are all visible and true to their functions within the building.

Ljunghusen is a summerhouse designed for seasonal living, and while it is smaller than Villa Wintzell, it also has a lot less needs to attend to.

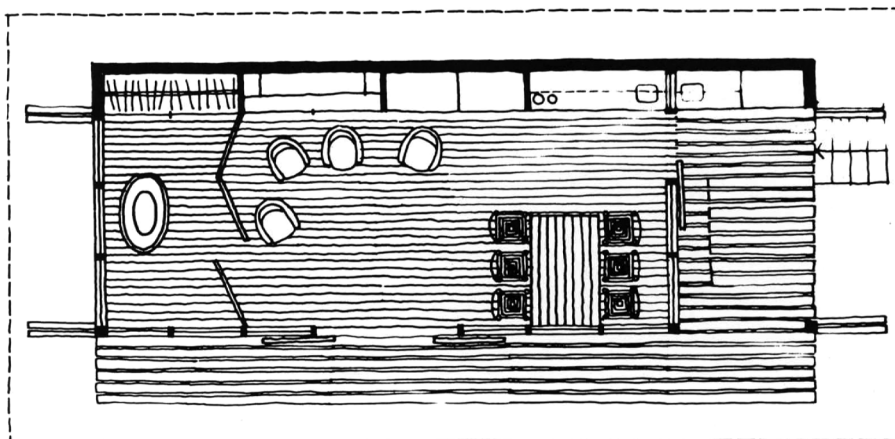


Figure 1

Skåne, Sweden
Started in the 1960s and added to over time
Architect: Per Friberg
Photography: Åke E:son Lindman



Figure 2 & 3

References

Morran

Morran is the transformation of an old and damaged summerhouse from the 1950s, with an addition made during the 1970s, by Johannes Norlander (Svenska Fritidshus, 2016). The original building was an even smaller building than the one later transformed, and Norlander describes it as standing humbly on the site. As he took on the transformation of the building they had the opportunity of taking it down and starting over to get a better view of the sea, but he opted not to. They choose to stick with the initial ideals of the building, and continue to be respectful of the environment.

The building is now completely clad in plywood, from the inside and out. The facade is painted with pigmented tar, an old method of preserving wood, while the interior walls are left as untreated wood, and the roof is clad with tar paper. The original windows have been replaced by floor-to-ceiling windows and sliding glass doors, to let nature in, and the inside is left raw and simple, to make it easy to furnish.

Morran is a summerhouse designed for seasonal living, and while it is smaller than Villa Wintzell, it also has a lot less needs to attend to.

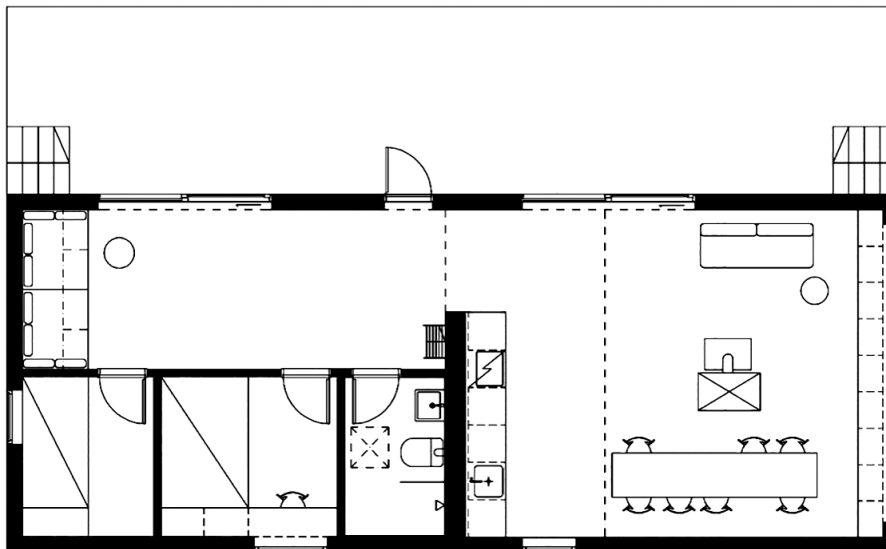


Figure 4

Brännö, Göteborg
Built in the 1950s and transformed in 2010
Architect: Johannes Norlander Arkitektur AB
Photography: Rasmus Norlander



Figure 5 & 6

References

Tallbacka

Tallbacka is an up- and coming project by Per Nadén, Fabian Reppen and Shuyang Li (pernaden, 2023). It is located in Varberg, an hour south of Gothenburg on the Swedish west coast. It is a one-family house with two additional buildings on the same site, which are all designed and planned for at the same time.

The building is clearly inspired by summer houses in the same area, and is proportioned to look like a thin construction. The walls are clad with wood panelling, from the inside and out, and the roof almost floats over the building, which is enhanced by the gutters that line it. The building also has floor-to-ceiling windows and swinging glass doors that open up the courtyard between the main building and the additional buildings.

Tallbacka is a one-family house designed for year-round living, which resembles a summerhouse, without being limited to the same size of a summerhouse the way Villa Wintzell is.



Figure 8

Varberg, Sweden

Waiting for building permit at the time of publishing

Architect: Per Nadén, Fabian Reppen and Shuyang Li

Picture: Nadén Arkitektur



Figure 8 & 9

Defining the summerhouse

In this master's thesis I acknowledge that there are a few different categories of vacation homes that differ in location and function, from mountain cabins that embrace an outdoor lifestyle of skiing, fishing, and hiking in any weather, to abroad apartments of warmer countries to escape the Scandinavian winter. A vacation home can be found anywhere and serve any of these functions, as long as it is some sort of retreat from everyday life. However, not all vacation homes are summer houses.

In this master's thesis, a summerhouse is defined as more than a short retreat, and as especially designed or used for seasonal living. This effectively excludes all vacation homes that can be used all year around, or that are only used for a week or two at a time. Then again, summer houses can have two different origins, and in this master's thesis a summerhouse can be a converted year-round home if it is used for seasonal living. For example, the majority of the traditional Swedish west coast houses have been converted into summer houses, although they were used as year-round homes when they were built.

With all of this in mind, I've been able to identify some common characteristics of summer houses. First of all, I identify a light and simple wood construction as a defining characteristic for a summerhouse. Wood is the most common use of material, and the construction is often light and simple not only because it is economic and ecological, but also because of the ideals from the mid-century that shaped the summerhouse as a typology. Secondly, I also identify freedom to live and design freely as a characteristic for a summerhouse. But since that is fleeting, I will use our existing summerhouse as my main inspiration when designing the new house.

Describing the design task

In this master's thesis, I aim to explore the possibility of re-imagining the summerhouse as a year-round home, although in many ways, a year-round home can never be what a summerhouse is.

As already stated, summer houses offer an escape from everyday life, especially during the summer. The mere concept of a summerhouse is that it is only available during the warmer months, and in this thesis I'm designing a new house for my parents to live all year round in. Their everyday lives will take place there. Additionally, summer houses are designed to open up for the summer warmth and be closed down during the winter cold. The beautifully light construction and unique approach to the landscape is conditioned to a few months a year, and limited to a vacation home. The new house I'm designing needs proper construction, insulation and necessities. And while a summerhouse can make do with one kitchen drawer of kitchen utensils, the new house has to have space for a lifetime of belongings and personal effects.

To summarise, this new house will not be a summer escape, and it has to be adapted to survive all months of the year, and house everything needed to do so. And it has to do so, while restricted to the same development plan as our existing summerhouse.

Development plan for the site:

Stand-alone house of maximum:

75 sqm

3 metre in building height

30° sloping roof

Additional building of maximum:

30 sqm

4 metre in building height

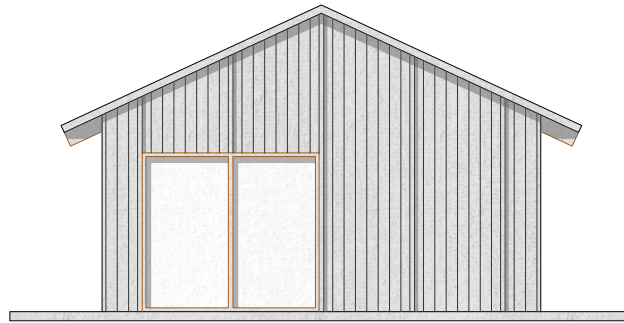
Shed of maximum:

15 sqm

3 metre in building height

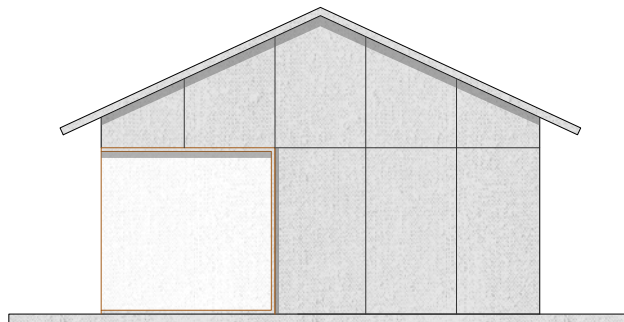
III / Exploration

Concepts for explorations - facades



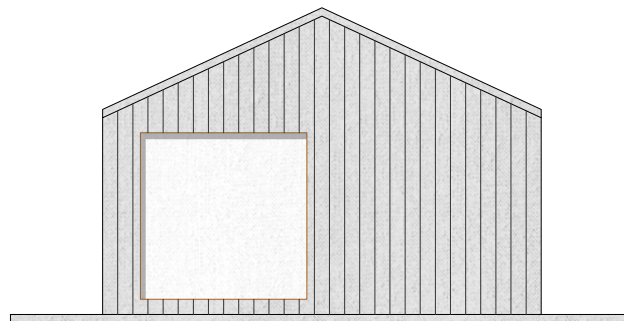
1.

A strict and visible stud-wall construction that is easy to read and dictates the house from inside out.



2.

A heavy but concise CLT construction, constructed and imagined as parts, like a card-house.



3.

A solid and concise stud-wall construction that is hidden under the surface, and allows for a free expression.

Description of exploration

In my definition of a summerhouse, I identified a light and simple construction as one of the defining characteristics of a summerhouse, and it applies to our existing summerhouse as well. Our existing summerhouse is a light stud-wall construction, with wood panelling on both the outside and the inside, and the untreated wood on the inside is one of the most defining features of the house.

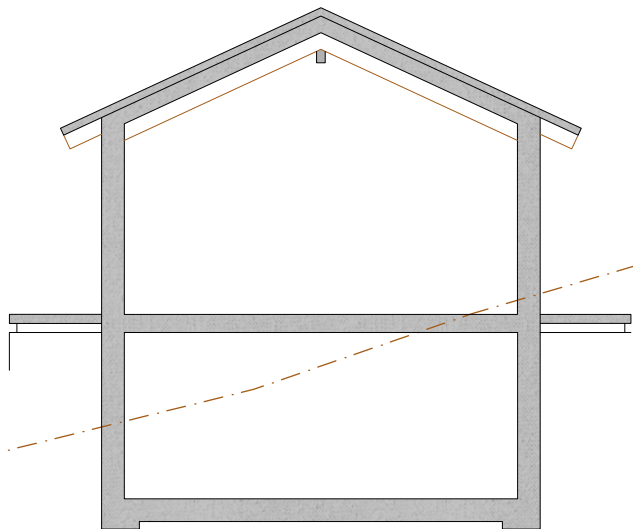
With this in mind, it seems obvious that the new house has to be in wood. Wood is a local and historical asset and craft in Bohuslän, and Sweden as a whole. It is the bones of all traditional Swedish west coast houses, our summerhouse, and most other houses in the area, and more often than not it is also the cladding. However, there are many different ways of constructing a house with wood, which leads me to this exploration.

The new house will be a year-round home, and can not have a similar light and simple construction to our existing summerhouse. However, I believe something being light and simple can be interpreted in more ways than one, and the expression of the house can weigh in on how it is perceived. If the construction can't be light in itself, can it be visible and easy to read instead? And if the construction can't be light or visible, can the expression be free instead?

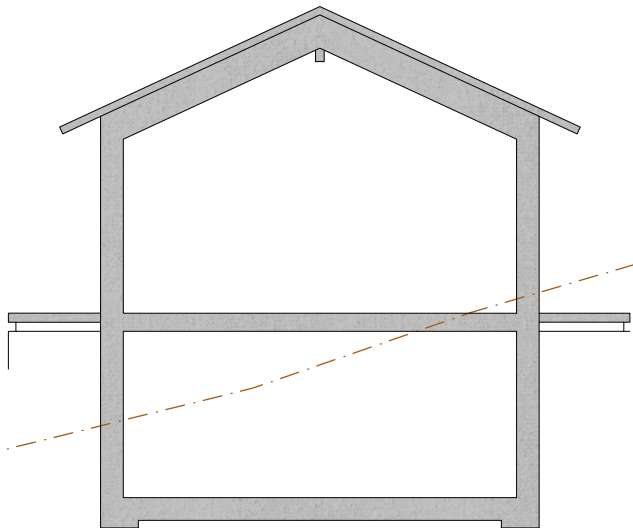
In this exploration, I try out two different wood constructions, and three different compositions and expressions they can give. The exploration is focused on the construction of the wall and the roof, excluding any details of window setting.

Concepts for explorations - sections

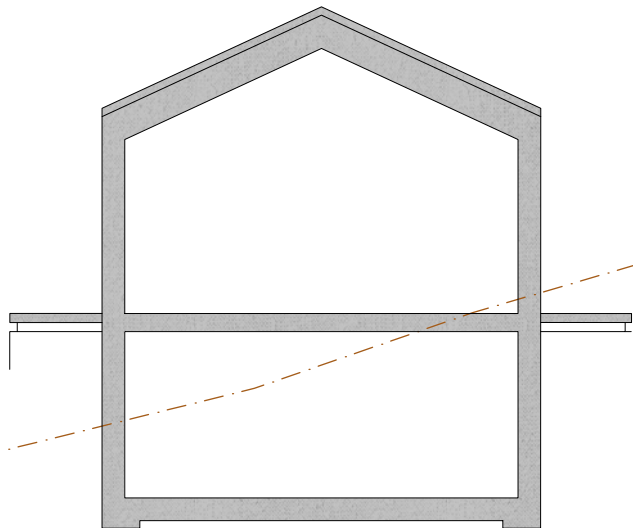
1.
Light stud walls
/ ecofoam



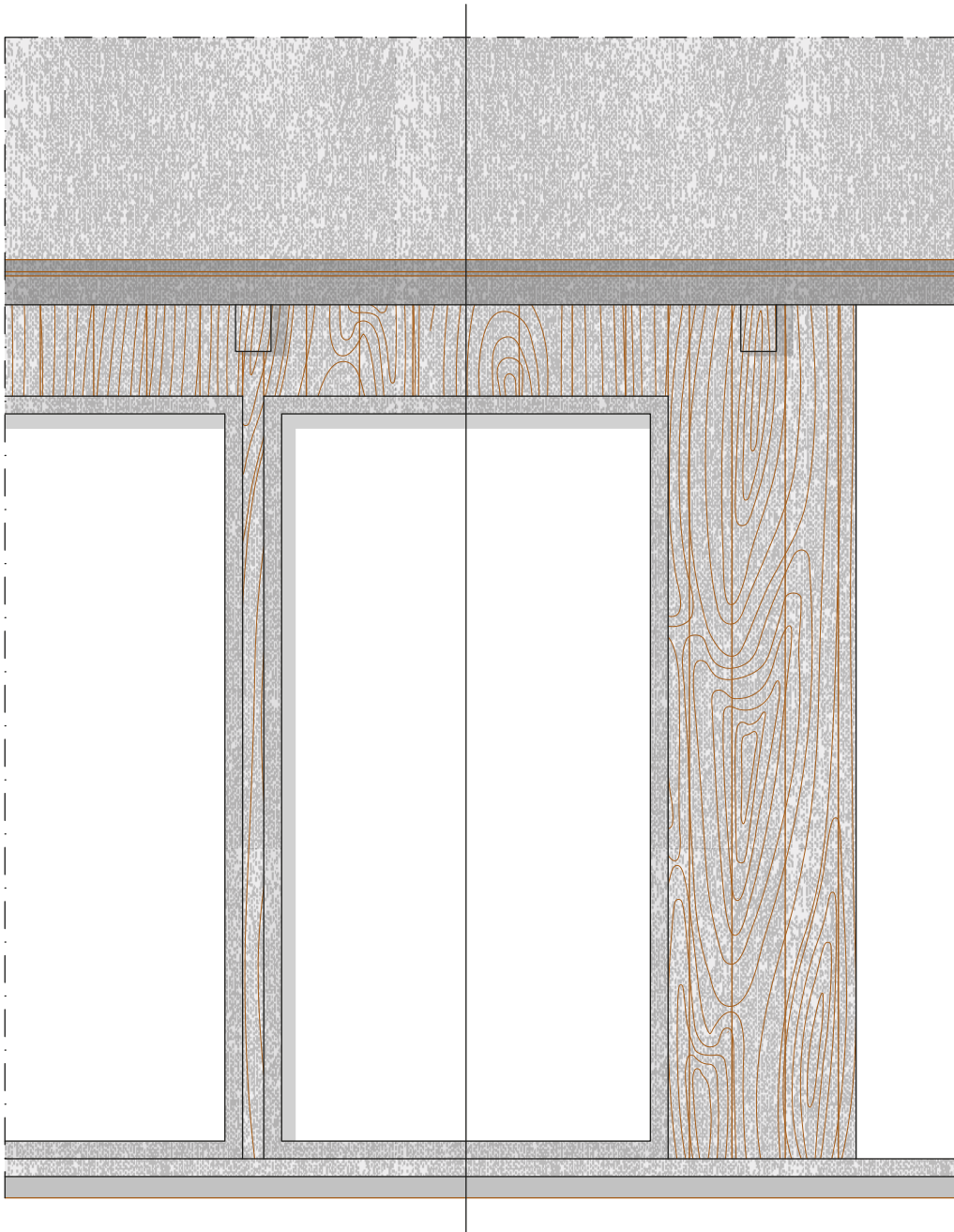
2.
CLT



3.
Stud walls
/ passive house



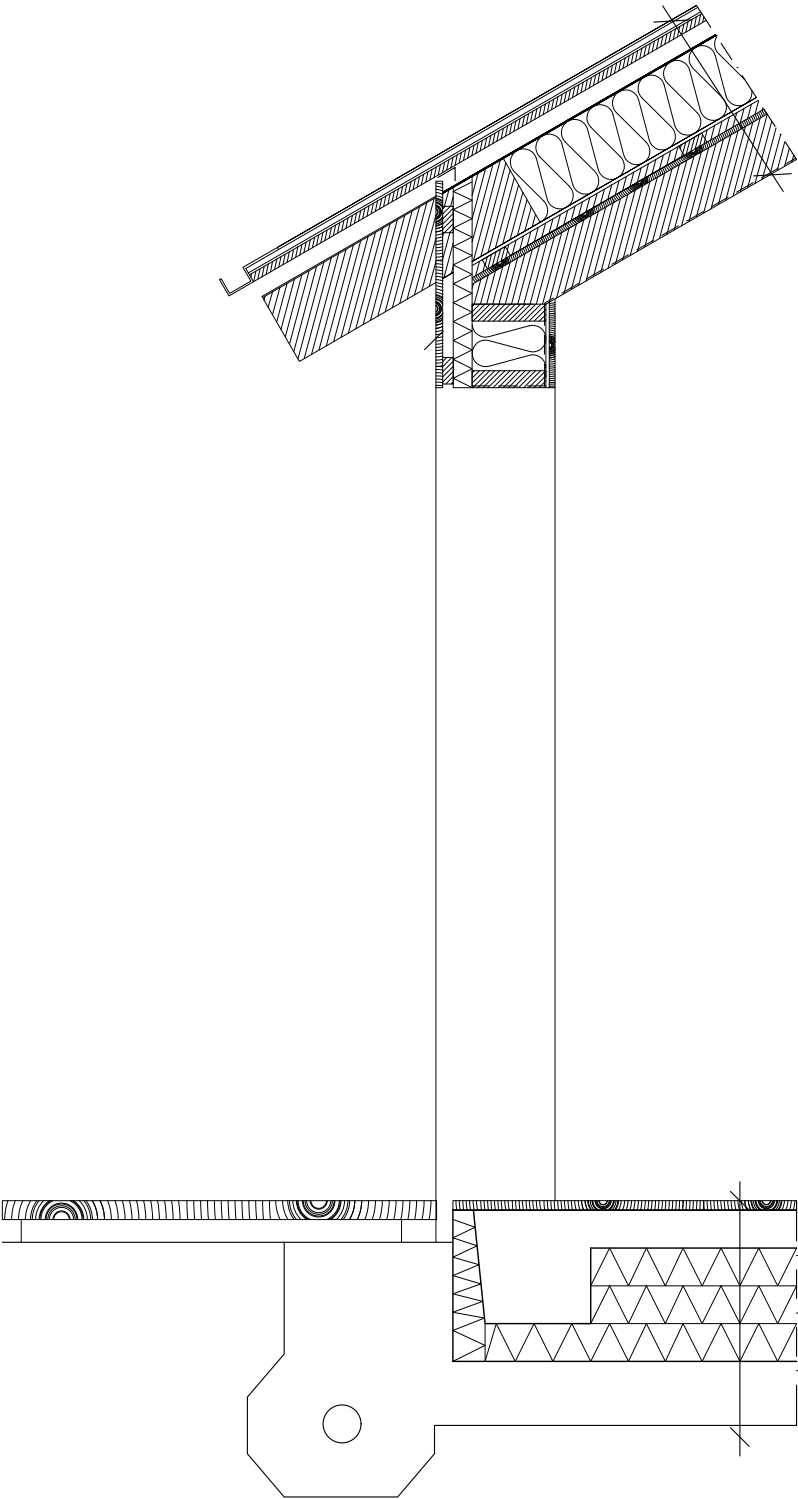
Elevation - exploration I



In this first exploration, the house has a light stud-wall construction, imitating a house that is only in use during the warmer months of the year. The house is constructed with a light stud wall, clad in wood both as facade and interior, and with visible roof beams.

The construction is simple in the way that it is visible, and therefore dictates the building from the inside out. This creates a rhythm and makes it easy to read.

Technical section - exploration I



Section I 1:20

Roof

- 6 Folded metal sheets
- 15 Multilayer woodboard
- 6 Building paper
- 21 Multilayer woodboard
- 45 Air gap
- 3 Masonite
- 0,2 Vapor barrier
- 28x70 Wood furring
- 15 Wood cladding

Outer Wall

- 18 Wood cladding
- 28x70 Horizontal joist
- 45 Rockwool
- 195 Insulation
- 0,2 Vapor barrier
- 15 Wood cladding

Foundation

- 25 Floor boards
- 100 Concrete
- 3x100 Insulation
- 300 Macadam

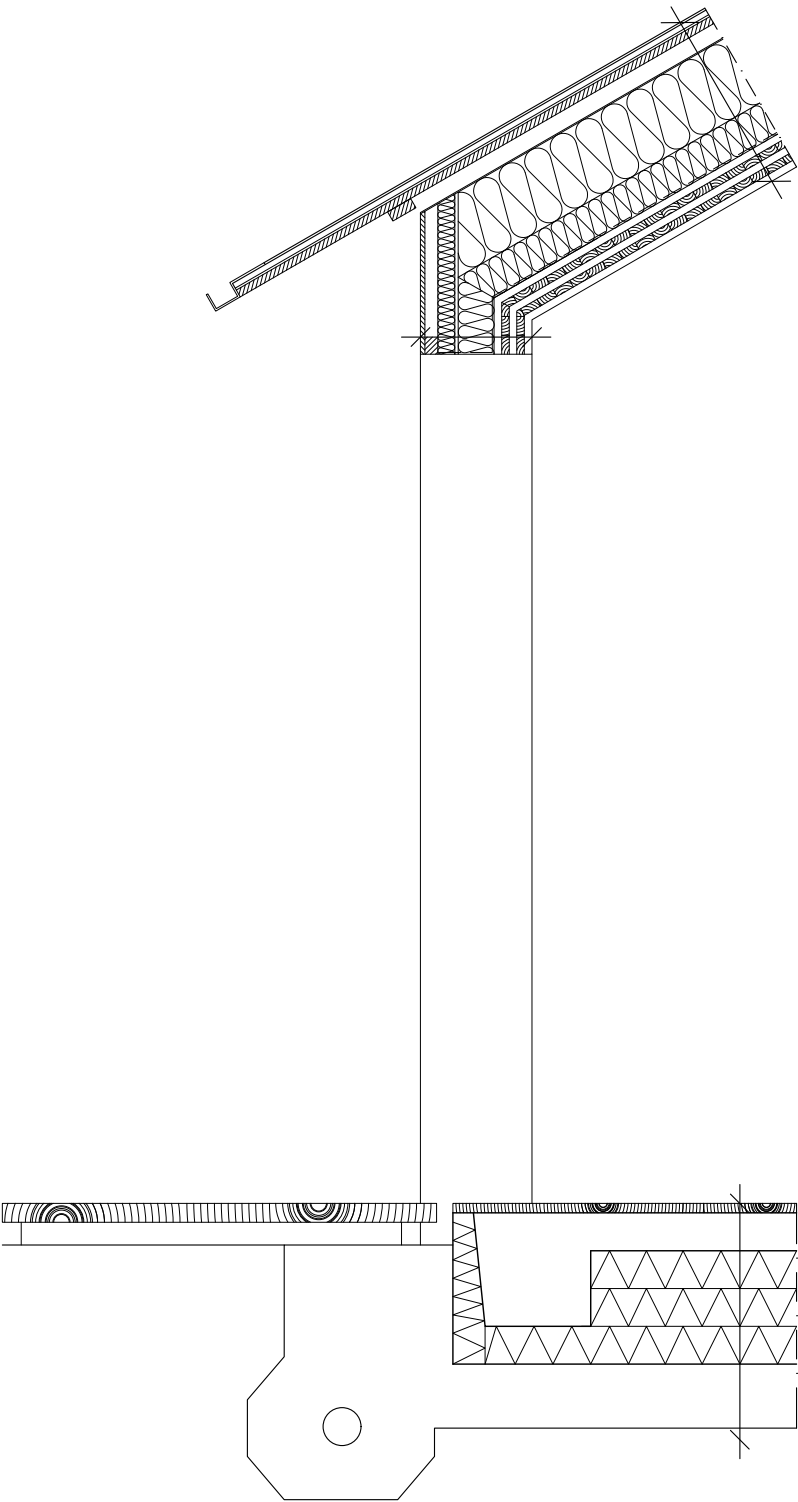
Elevation - exploration II



In this second exploration, the house has a heavy construction with solid wood, and is clad with plywood. The ridge is still visible, over which the roof is folded, making the roof and the walls like cards in a card-house.

The construction is light and simple in the way it communicates its parts, and has a freer form within.

Technical section - exploration II



Section II 1:20

Roof

- 6 Folded metal sheets
- 15 Multilayer woodboard
- 6 Building paper
- 21 Multilayer woodboard
- 45 Air gap
- 3 Masonite
- 195 Isulation
- 95 Dense insulation
- 0,2 Vapor barrier
- 100 CLT

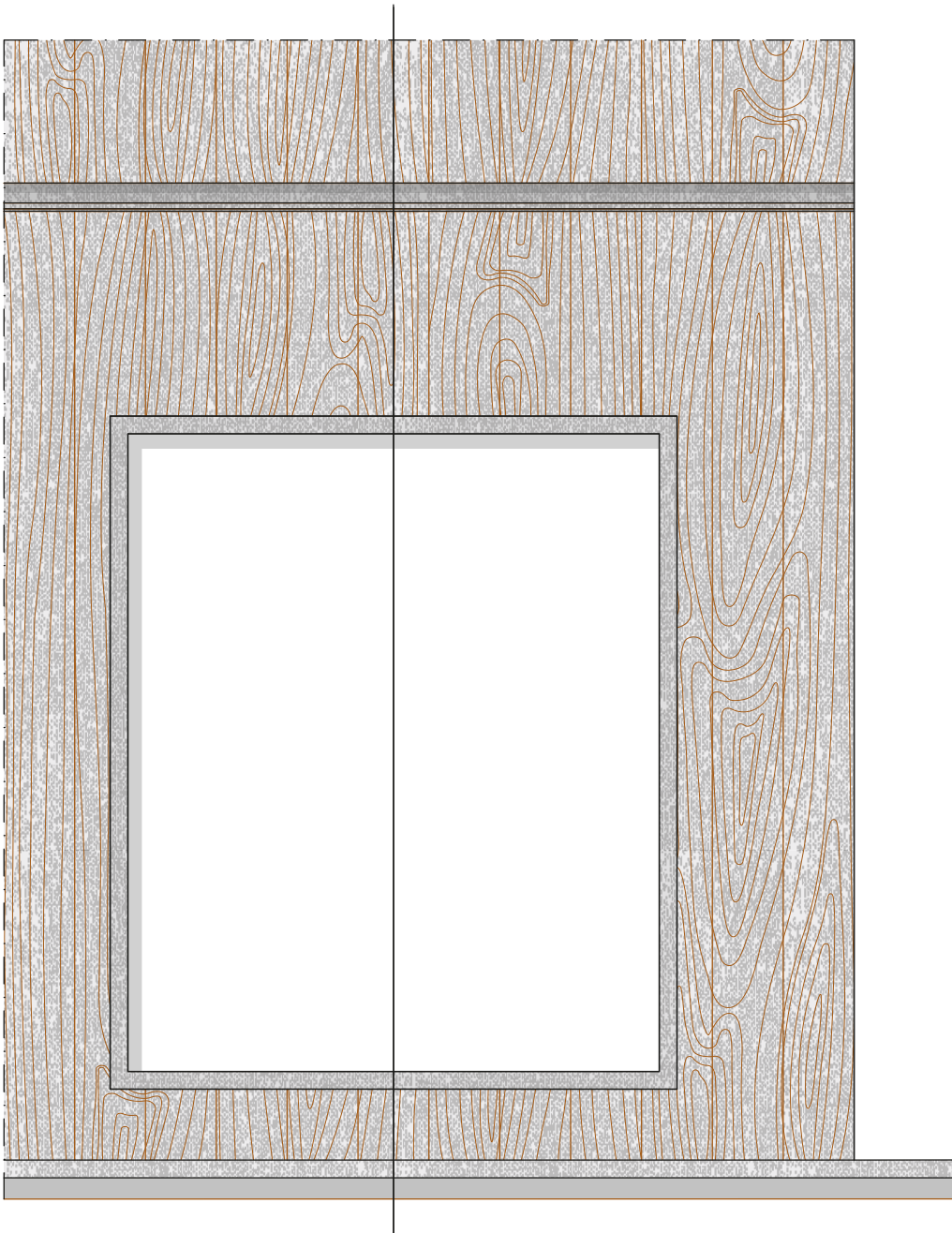
Outer Wall

- 12 Plywood
- 34x45 Vertical joist
- 45 Insulation
- 9 Weatherboard
- 95 Dense insulation
- 0,2 Vapor barrier
- 100 CLT

Foundation

- 25 Floor boards
- 100 Concrete
- 3x100 Insulation
- 300 Macadam

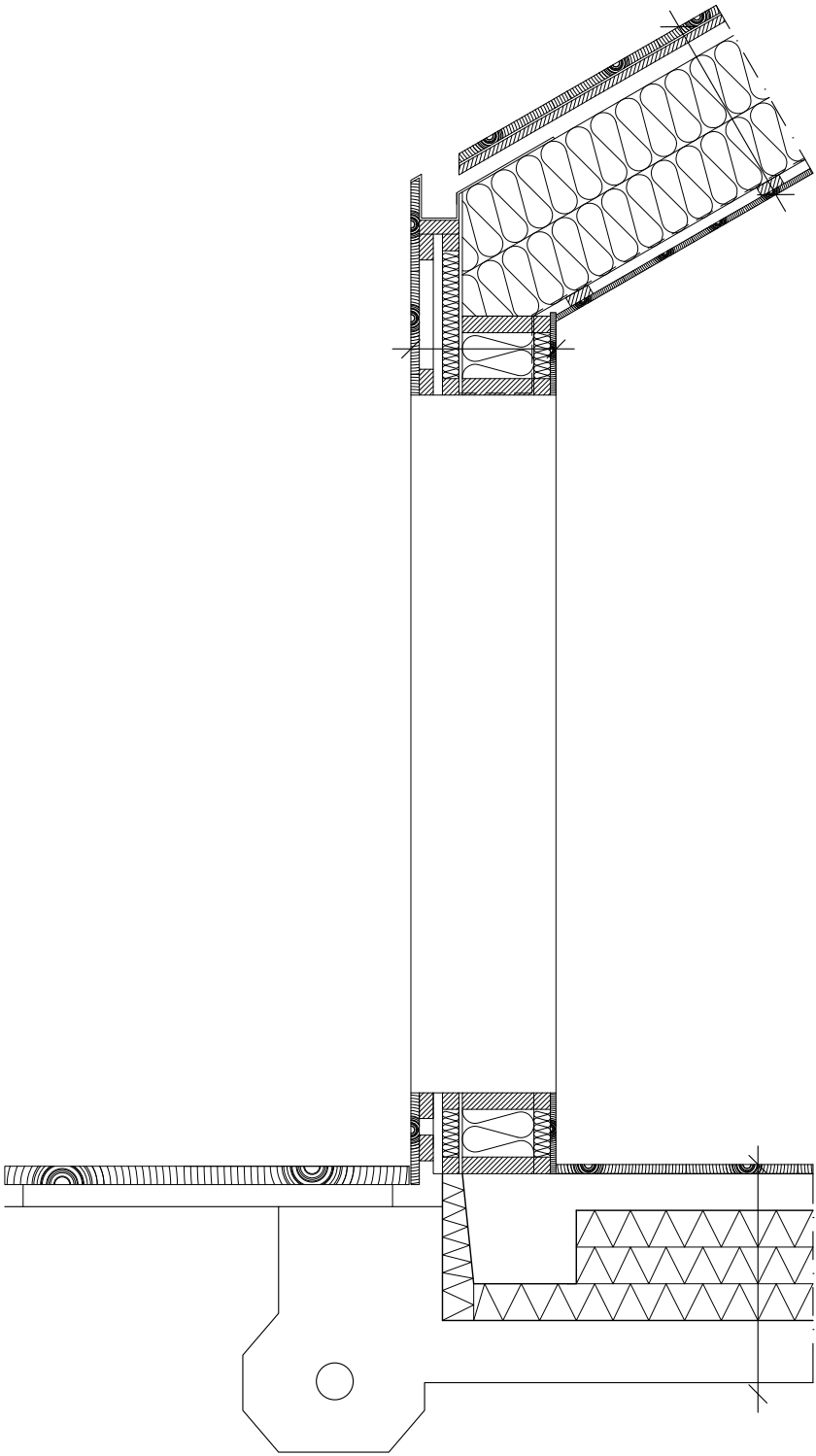
Elevation - exploration III



In this third and last exploration, the house follows the guidelines for year-round homes, and has a pretty heavy construction of three-layered stud walls. Therefore, the light and simple has been interpreted as a concise shape, with wood panelling that encloses it on both the outside and the inside.

The lack of visible construction, and the loss of rhythm, instead becomes a freedom in expression, and the inside can connect freely with the landscape outside.

Technical section - exploration III



Section III 1:20

Roof

- 23 Wood cladding
- 6 Building paper
- 21 Multilayer woodboard
- 45 Air gap
- 3 Masonite
- 2x195 Isulation
- 0,2 Vapor barrier
- 28x70 Wood furring
- 15 Wood cladding

Outer Wall

- 23 Wood cladding
- 38x70 Horizontal joist
- 25x45 Vertical joist
- 45 Insulation
- 9 Weatherboard
- 195 Insulation
- 0,2 Vapor barrier
- 45 Insulation
- 15 Wood cladding

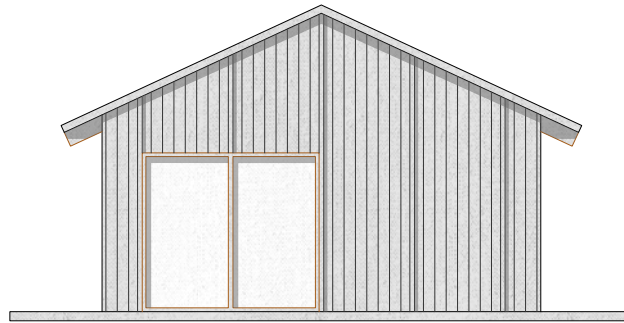
Foundation

- 25 Floor boards
- 100 Concrete
- 3x100 Insulation
- 300 Macadam

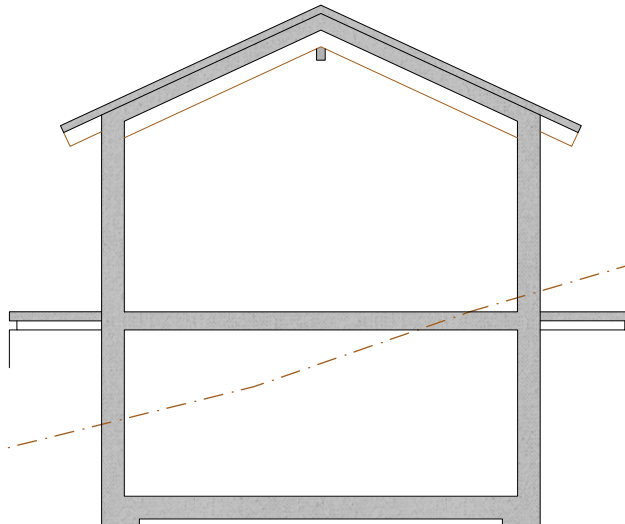
Conclusion of exploration

To conclude this exploration of wood constructions, I choose to keep working with the composition and expression of the first exploration, and the construction of the third exploration. In other words, I want the house to have a visible construction that structures the inside and the facade after it, as I think it gives the right symmetry to the house, and makes it resemble the existing summerhouse in a new and exciting way. But at the same time, I need the house to be a year-round home, and therefore I need to go for a wall with more insulation.

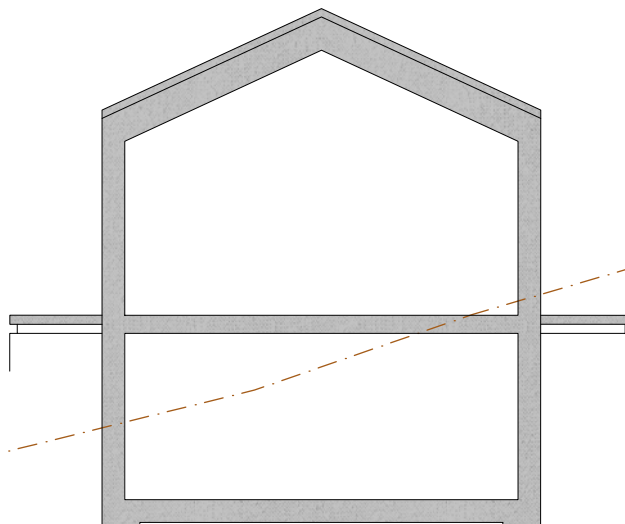
Additionally, to me, summer houses are examples of architecture that should allow for future change. I want the house to stand the test of time, and feel open to improvements, and I think a strict and visible construction allows for that. And the exposed beams are part of the architecture, as a feature to be kept for the future.



1.
A strict and visible stud-wall construction
that is easy to read and dictates the house
from inside out.



1.
Light stud walls
/ ecofoam



3.
Stud walls
/ passive house

IV / Site

Aerial photo of the site



Aerial photo of the site
(taken before the development of the summer houses)
somewhere between 1955 - 1967

Circled is the original farm up the hill from the site, from which a road leads down to what at the time was the agricultural land and forests.

Description of the site

Långekärr

The site for this master's thesis is an empty plot of land in a small community of summer houses, called Långekärr, which is also where our summerhouse is located. Långekärr is situated in Bohuslän, on the Swedish west coast, in between Strömstad and Grebbestad. It is part of the mainland, and sees quite a few islands in between it and the open seas. The archipelago consists of smooth and barren cliffs, but the main land also sees agricultural land and forests.

The community of summer houses is situated on old agricultural land, which can be seen in the old aerial photo of the area, and which belonged to the farm that is still there. The land was bought in the 1960s and then developed for seasonal living straight away, riding the wave of vacation homes popping up all around Bohuslän. This was also when my grandparents bought our summerhouse, as well as most of the other families of the area. This makes it a close-knit community where most people know each other.

It also makes it pretty easy to lean into the architecture surrounding the empty plot, as most of them were developed during the same time as our summer house, and each other. Most summer houses were built in the 1960s and share similar characteristics.

The empty plot of land is situated on a sloping hill, overlooking the community. Consequently, the ground is the biggest challenge to handle in a sensitive way, while still making it easy to build on. The plot could potentially have a glimpse of the sea in the future if the trees in front were to be thinned out, but the view of the community and the direction of the sun are the strongest aspects of the plot. It has lots of sunlight which can be soaked up on all sides of a summerhouse. From the morning sun in a private backyard up against the hill, to the evening sun on an open terrass.

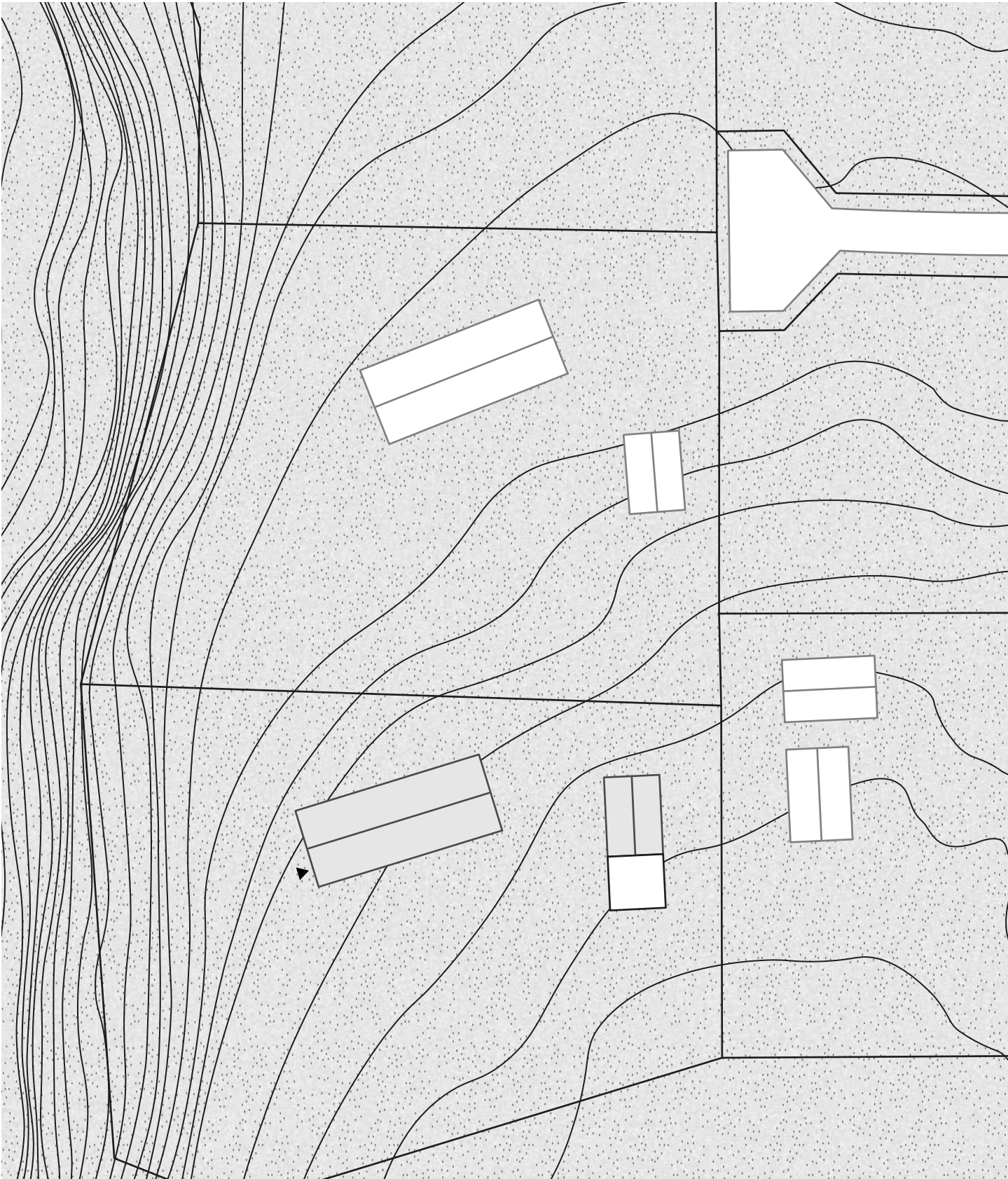
Situation plan



-  Existing summerhouse
-  Empty plot

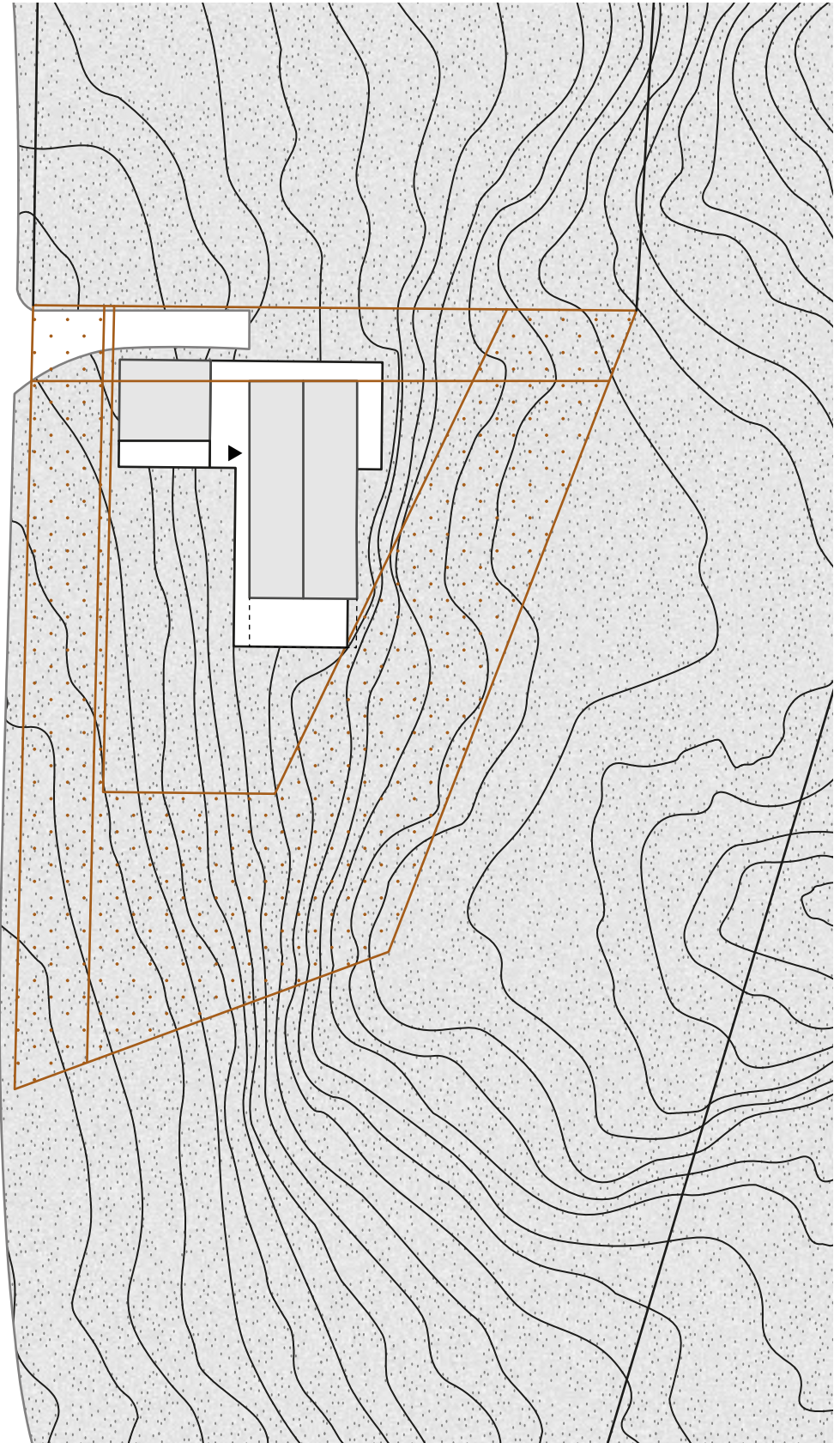
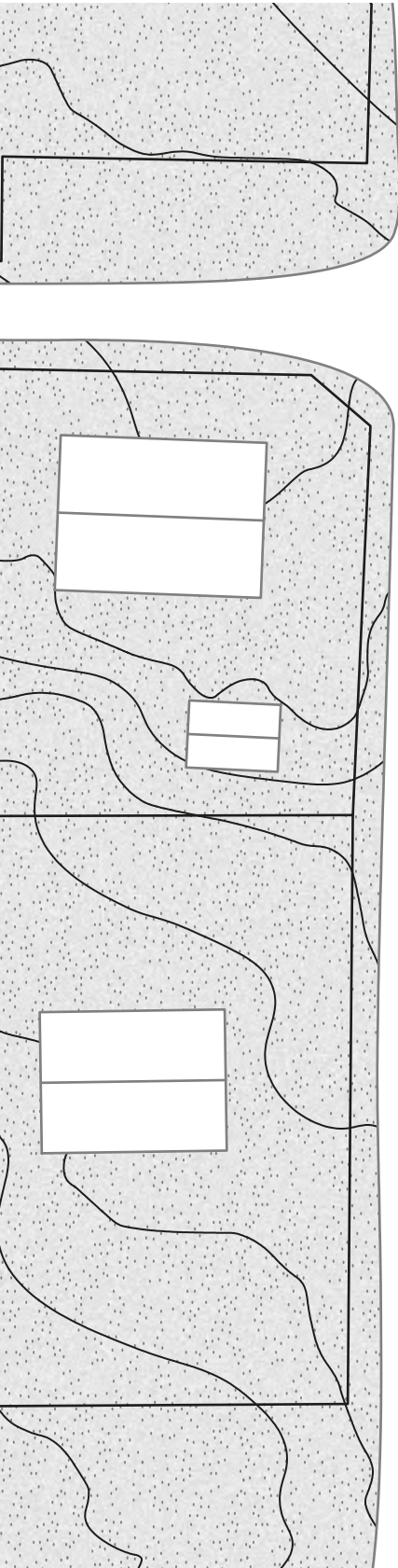


Masterplan



Existing summerhouse





 New house

V / Design proposal

Villa Wintzell

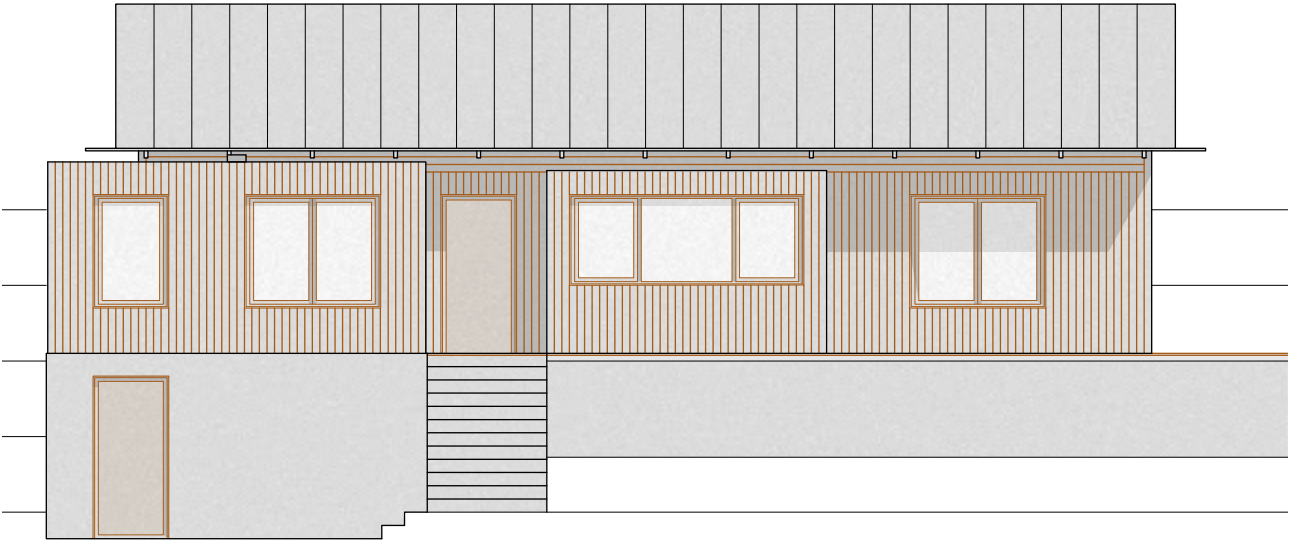
Villa Wintzell is a year-round home designed to capture the essence of a summerhouse. It is a small house that is all about slowing down and coming home to a relaxing space, mimicking an escape from everyday life. The house is designed with my parents in mind, and for them to retire in. It might not be an actual summerhouse, but besides bearing the characteristics of one, it is also an actual retreat from one part of life to another.

The house is situated a few steps back from the street, and a bit up the hill of the site. There, it attempts to create a feeling of privacy, while it also takes advantage of the height of the site to get a better view and a few more minutes of evening sun. To balance it out, the additional building greets the street and makes use of the height to get two floors, as well as guiding visitors up the side of it to the front door of the house. Together, the house and the additional building creates directions and flows on the site, and frame the outdoor space. The front door is both visible to visitors, and situated far enough back from the street that it feels secluded.

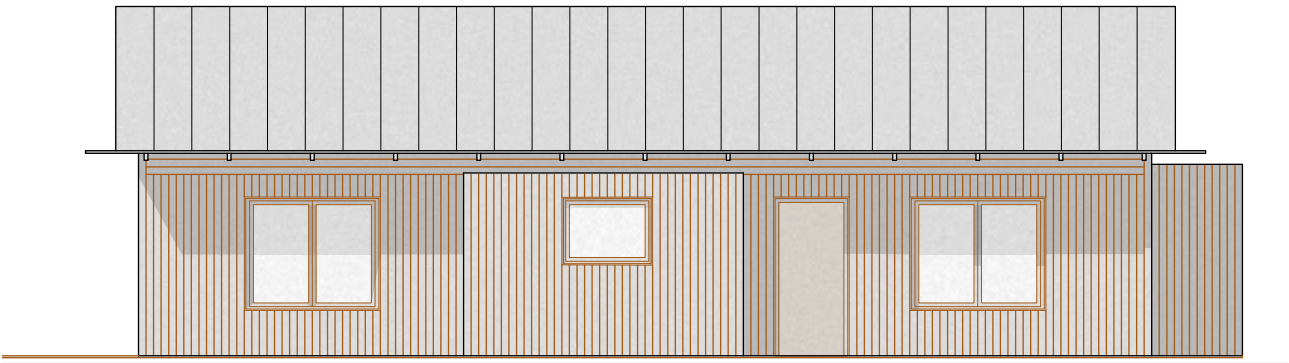
This balance between the public and the private is carried out throughout the whole house, additional building, and onto the site. The wooden deck that wraps around the house offers outdoor space in all directions, from a spot at the back to enjoy the morning sun in, to the front deck with evening sun and views over the community.

Villa Wintzell is inspired by the surrounding nature and neighbouring summer houses, and it speaks to it through these outdoor spaces, and through a similar composition and expression. It has the same proportions as the existing summerhouse, with an elongated form, a gable roof, and it also has the same subtle symmetry. Similarly to the existing summerhouse, the windows are symmetric, but also secondary to the inside. They respond to the inside by framing the view, and flooding it with just the right amount of sunlight. They come in standard measurements, and all windows and doors that are all hung to the side and swung open.

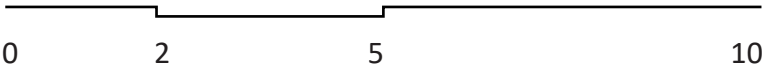
Facades

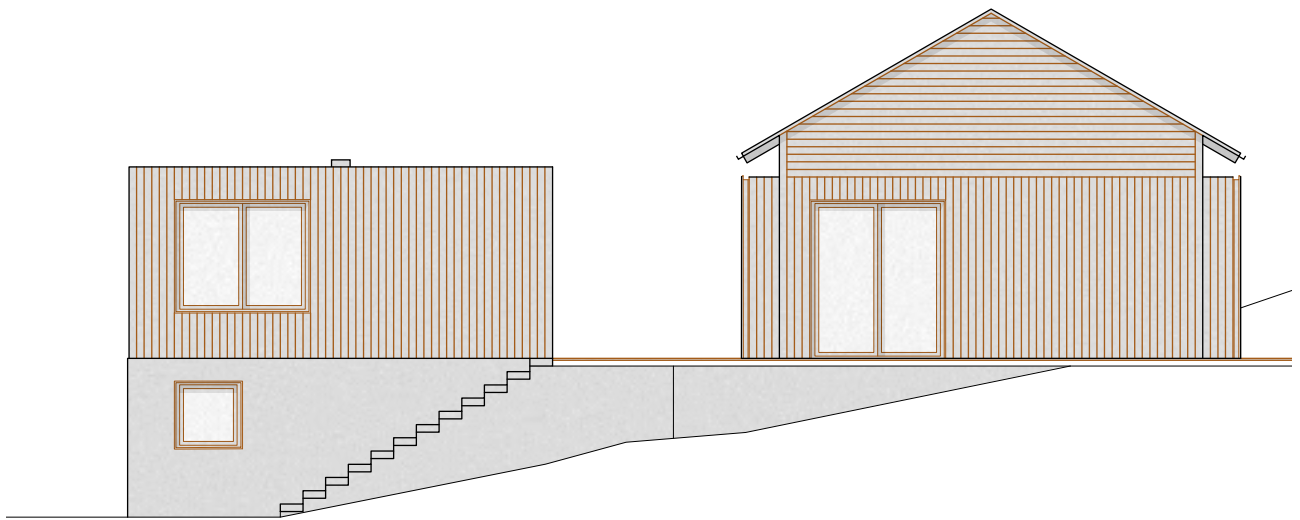


West

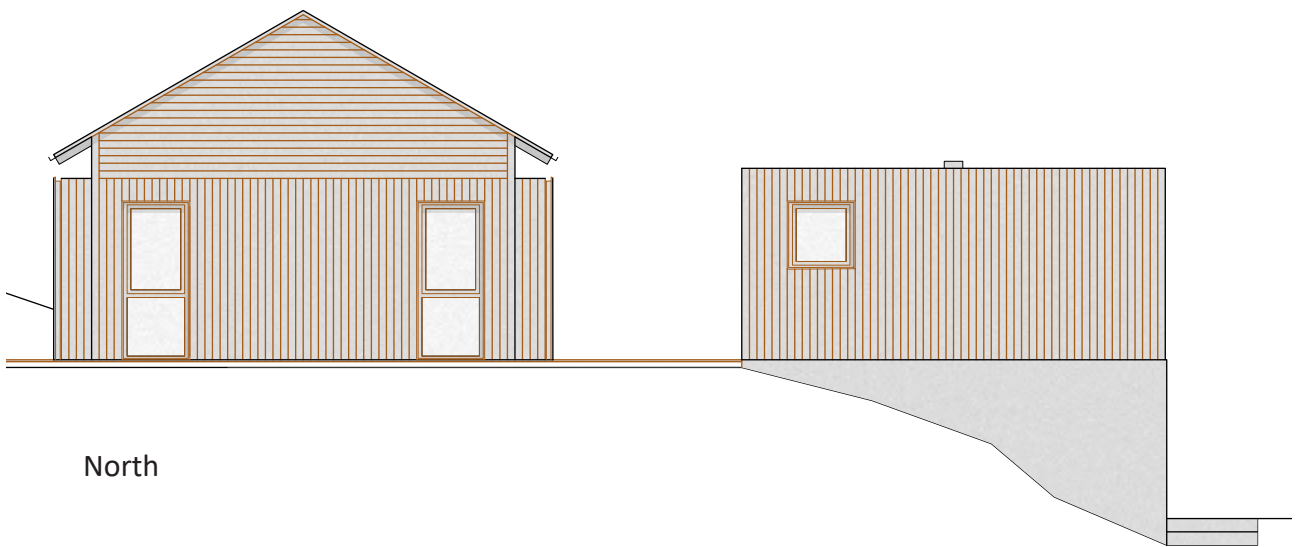


East



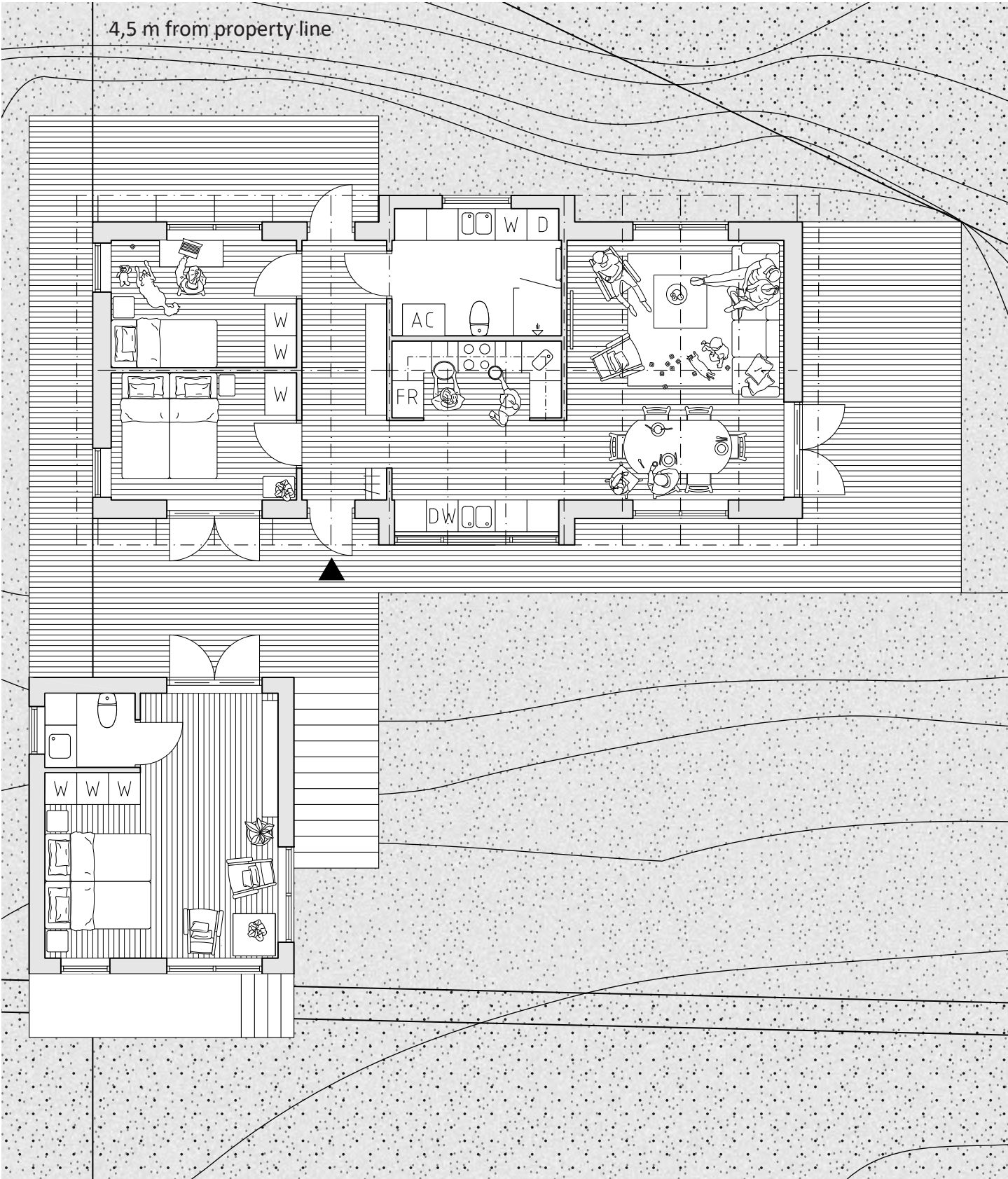


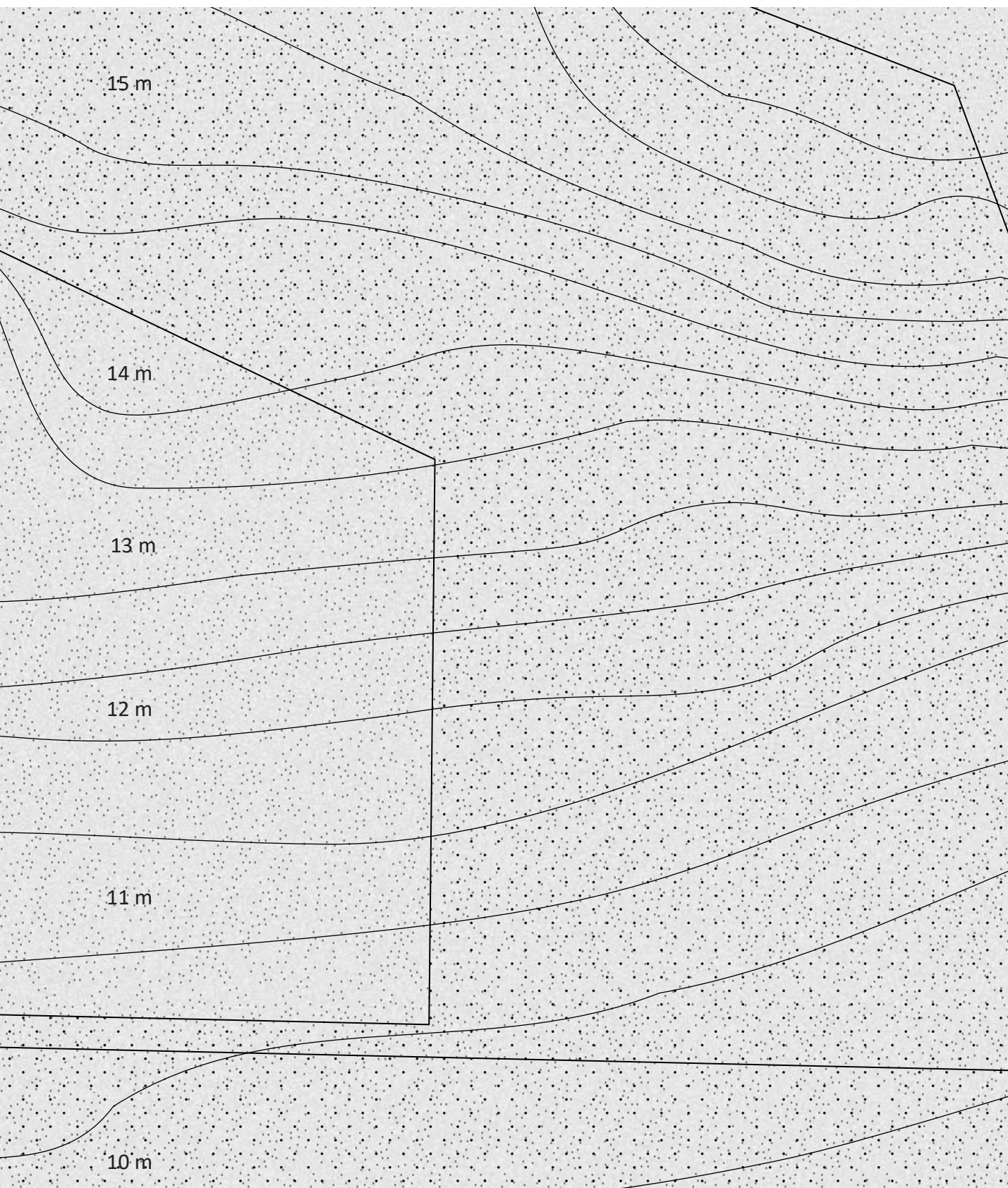
South



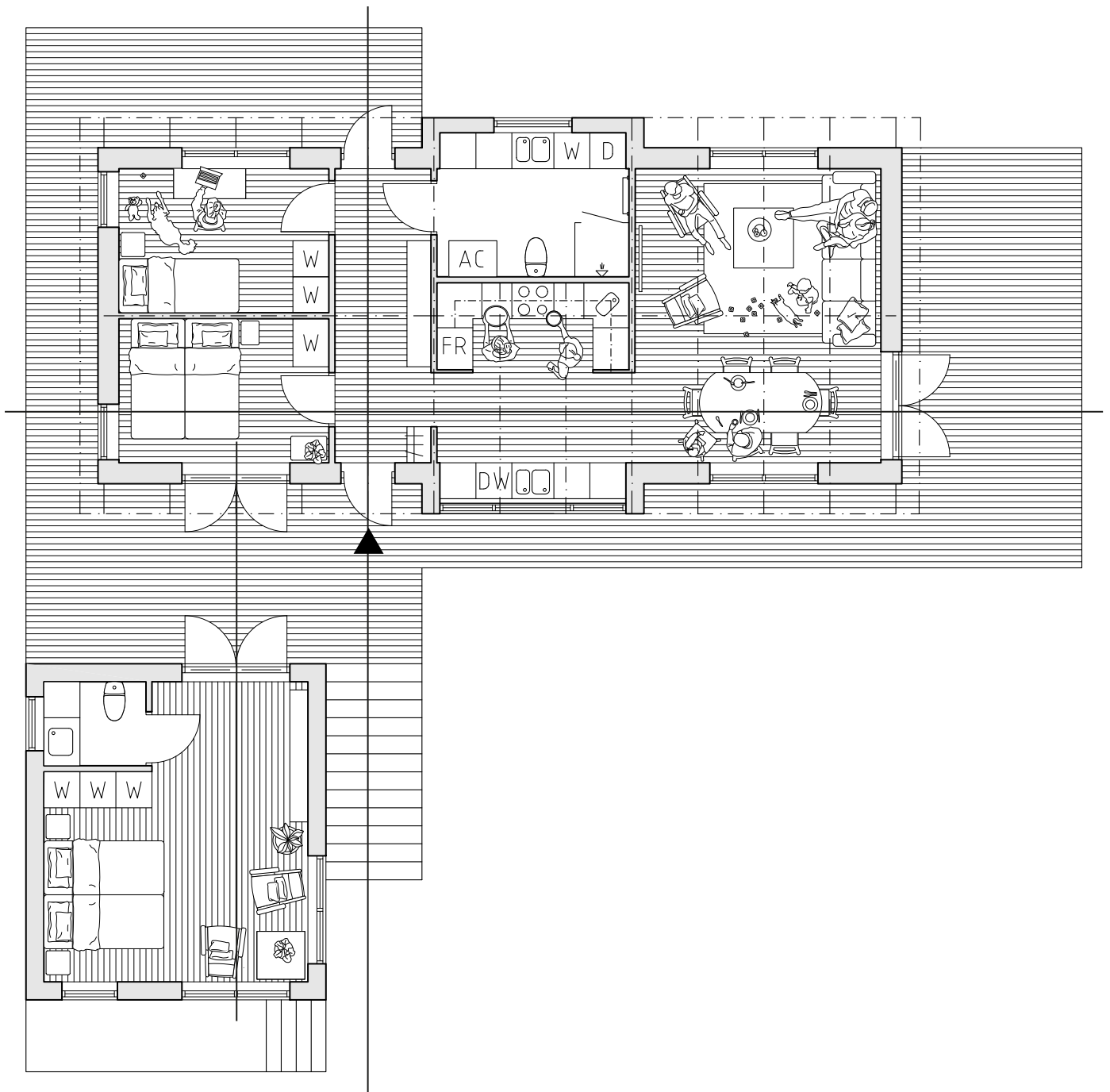
North

Floorplan





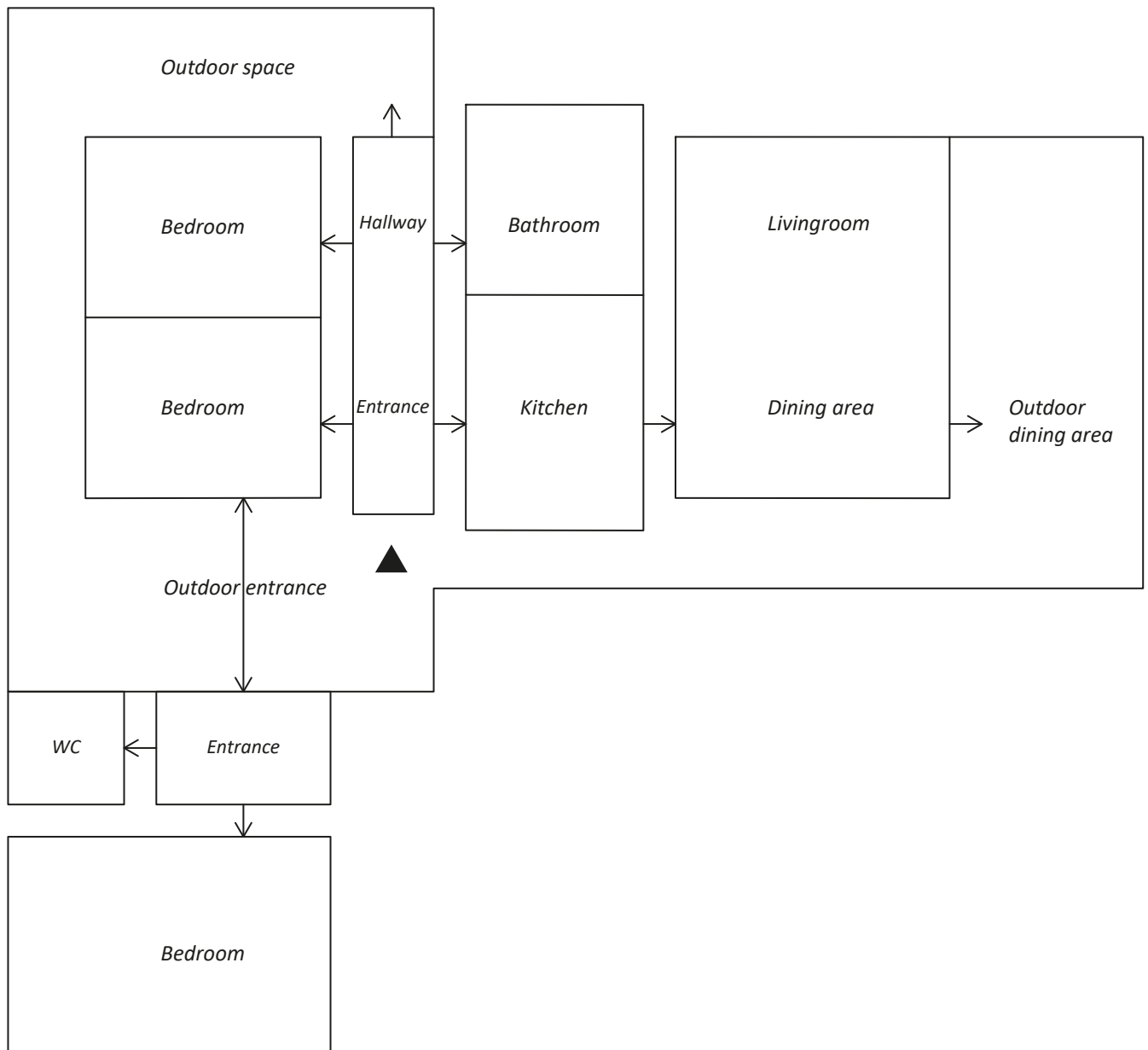
Exploring the floorplan



Villa Wintzell:

- Combined living- and dining-room at the end of the house. A designated TV-wall, and a bigger space to extend the dining table.
- Separated kitchen (parallel kitchen), facing the street.
- Two bigger bedrooms.
- One regularly sized bathroom with shower and washing possibilities.

Programme



Stand-alone house of maximum 75 sqm, including:
 Full-size kitchen, living- and dining-room in semi-open layout
 2 single-bed bedrooms, with possibility of double-bed
 1 bathroom, including washing machine and dryer
 Entrance

Additional building (attfallshus), including:
 Guest bedroom
 Guest bathroom
 Workshop/guest bedroom
 Long time/food storage

Description of the floorplan

Villa Wintzell is inspired by the existing summerhouse in more ways than one, and the floorplan is one. The house has the same elongated form, with a combined living- and dining room at the very end of it. The front door has been moved from the short side of the house, to the long side of the house, but there is a similar division from there and on. The kitchen is placed in the same place between the bedrooms and the living room, where it can be a part of the social spaces without being in the middle of it, but with views over the community instead of at the back.

In other words, there is a clear axis through the house, from one of the bedrooms, through the hallway, the kitchen and the living room, all the way out to the wooden deck. Throughout this axis, the view is framed to create a connection between the inside and the outside, and create a feeling of transparency without having too big windows.

This balance between the windows and the wall is proportioned after our existing summerhouse and to give it a similar expression, but it is also a way of making the house more furnishable. A year-round home should have space for belongings, and if my parents were to move there permanently, they should be able to bring their belongings with them. So, while adding floor-to-ceiling windows and sliding glass doors is tempting, a more restrained expression works to keep it grounded on the site and make it furnishable, while also being more economic and ecological.

The focal point of this new house is instead the construction, and the grid of visible wood beams. The kitchen and the living- and dining room are part of a semi-open layout, that is divided by walls, but opened up again by the open ceilings. And these open ceilings are the focal point of the house, and what the axis through it is pointing to. It is there that the house opens up, and the construction really is revealed. The exposed roof beams also land on a wood beam that lines the long side of the inside walls. This wood beam is part of the bearing structure of the wall, but acts alone over the bay windows, which makes it possible to push them out from the structure.

Interior perspective - view at kitchen



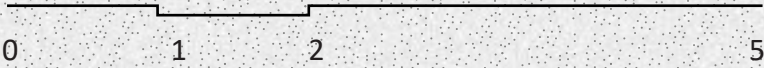
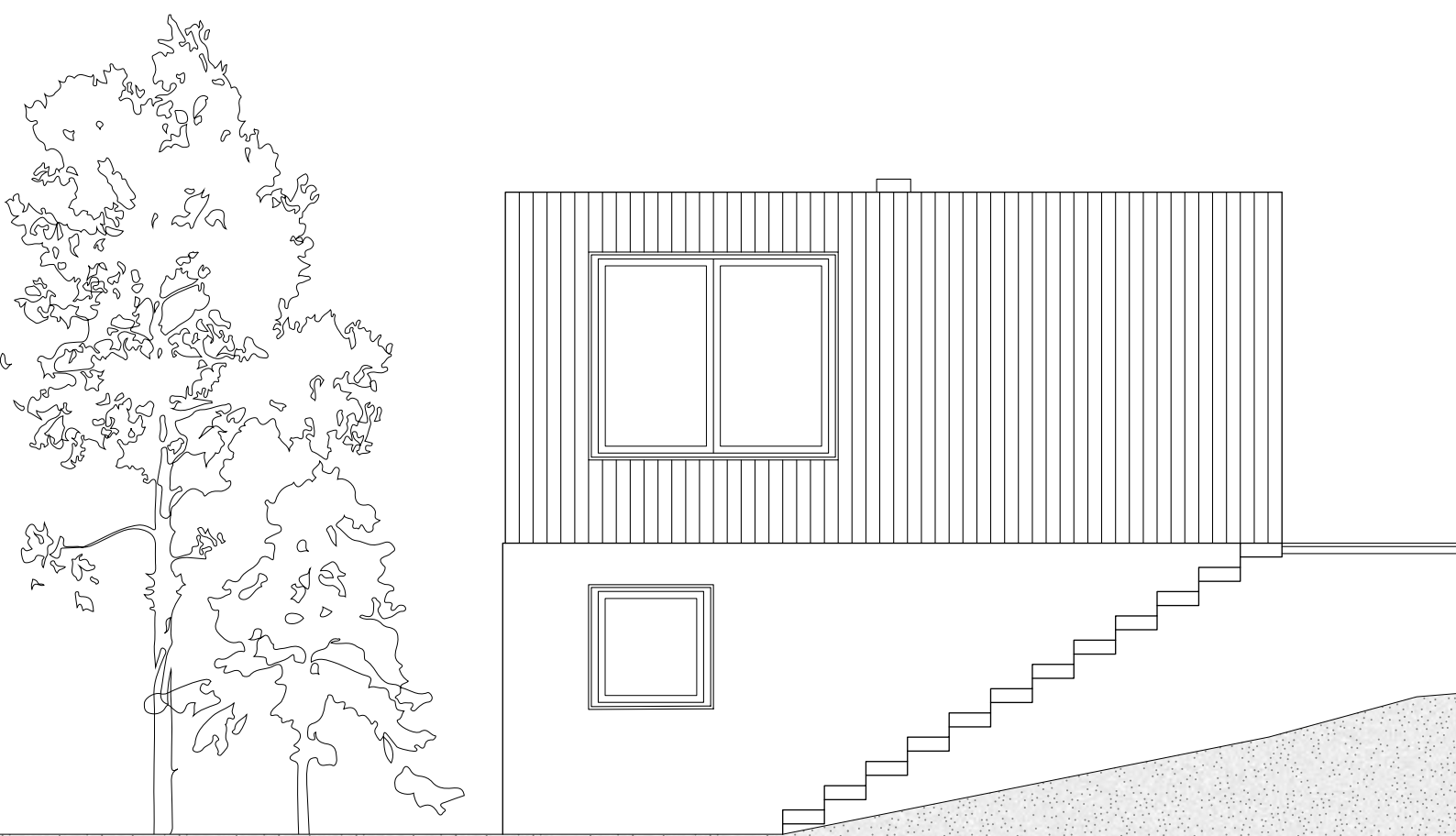
Interior perspective - view through kitchen

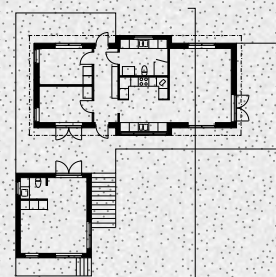
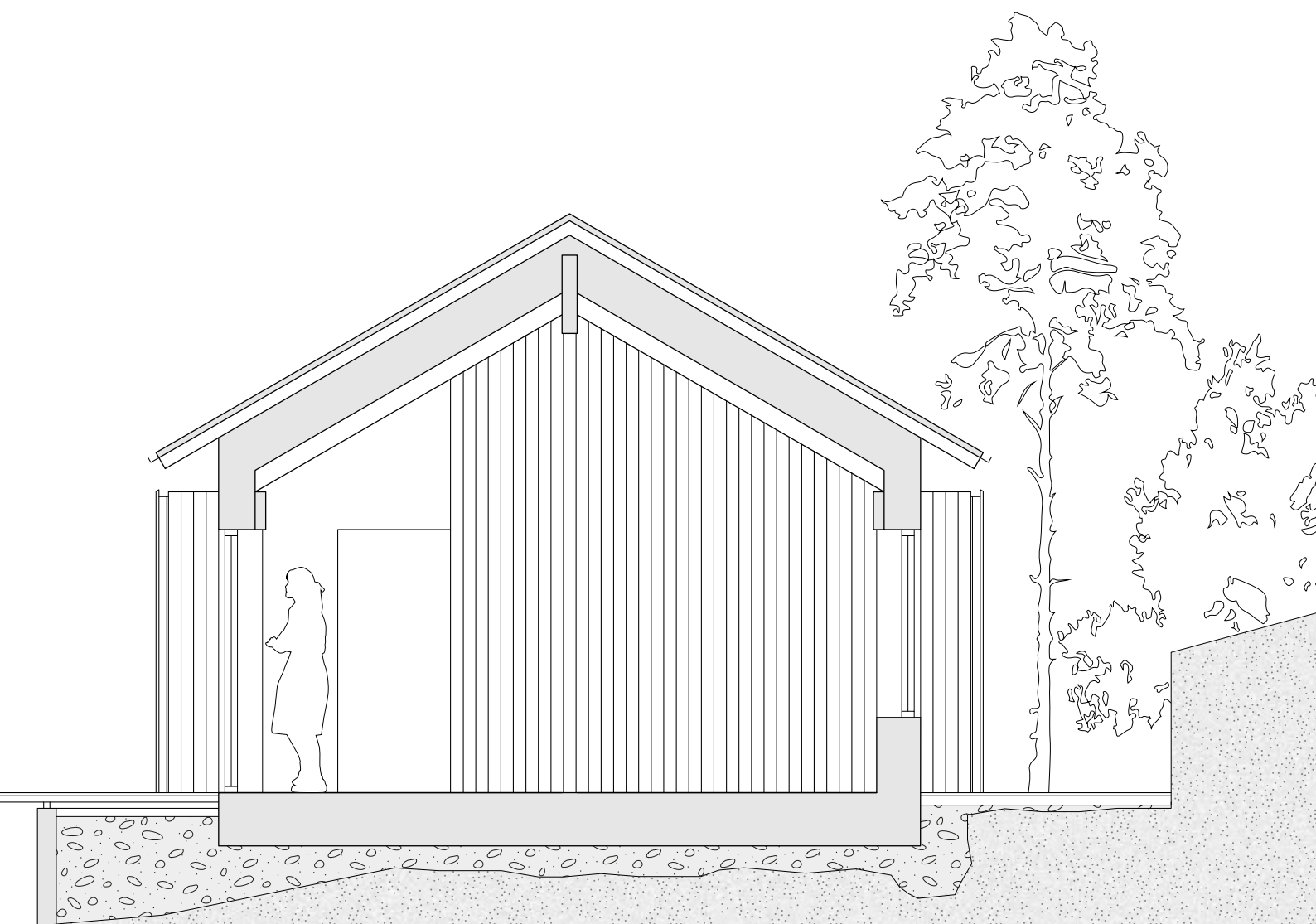


Interior perspective - bedroom



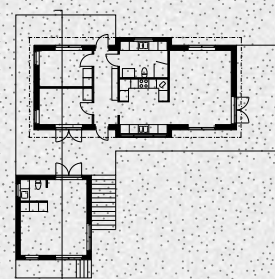
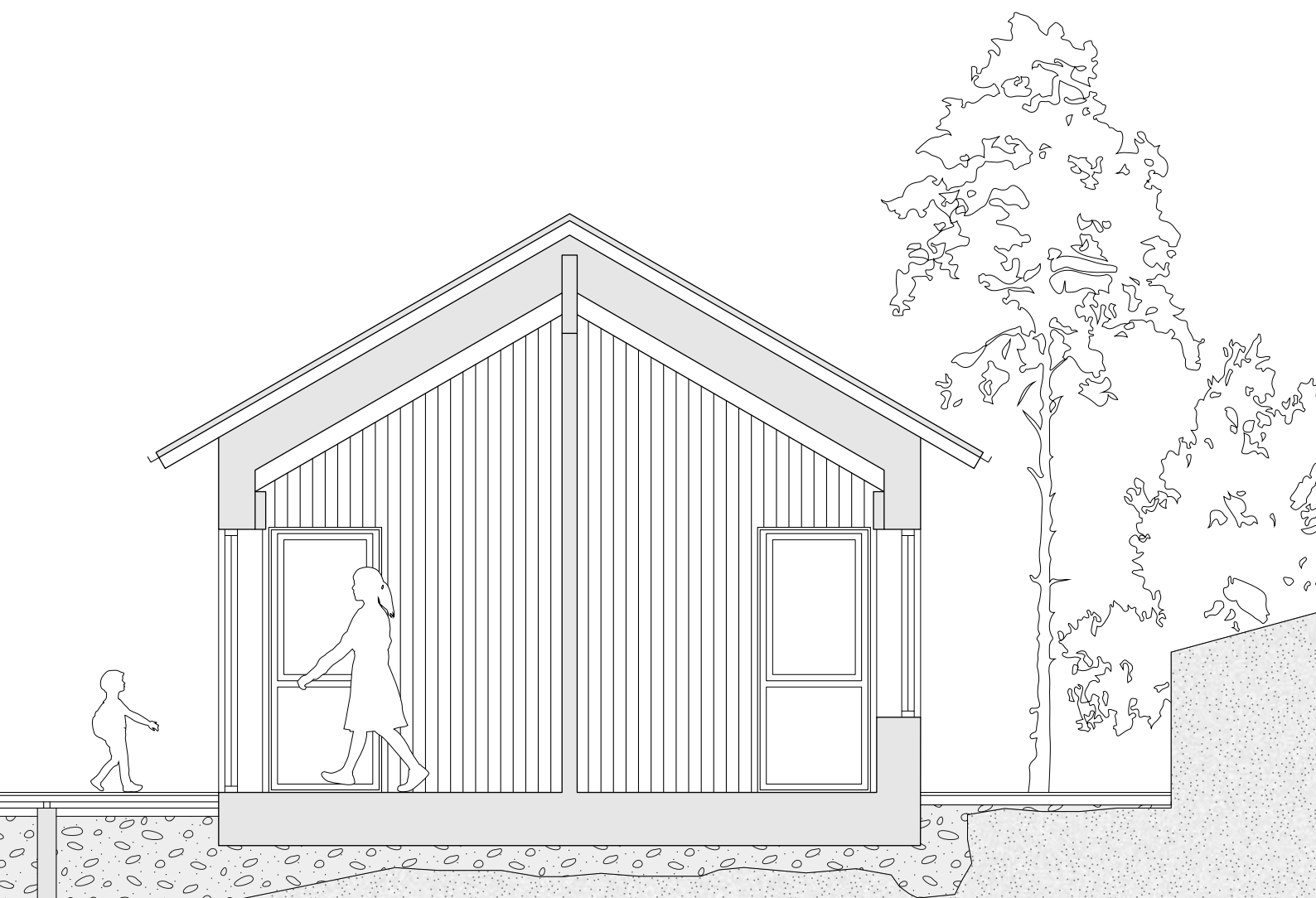
Section A-A



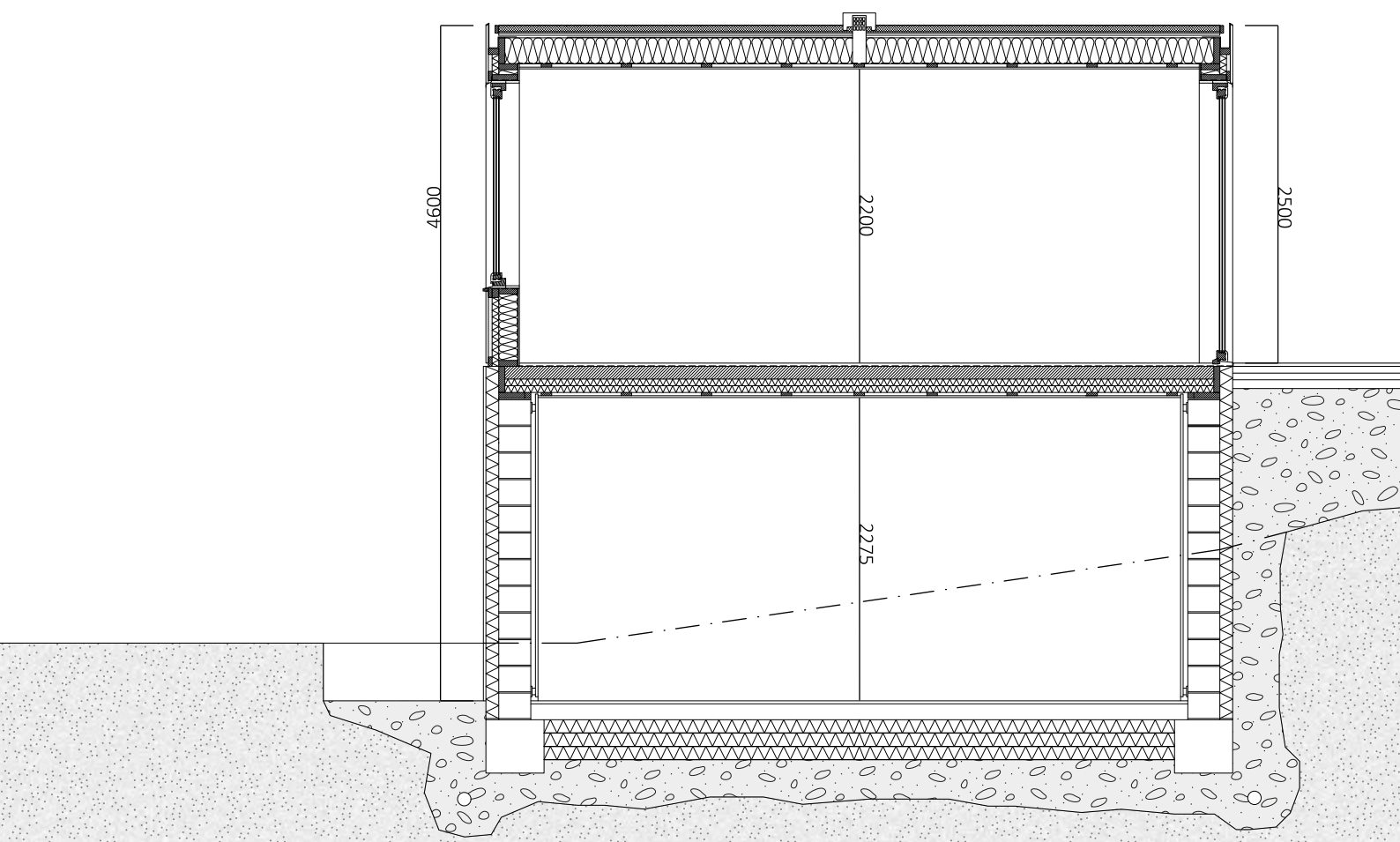


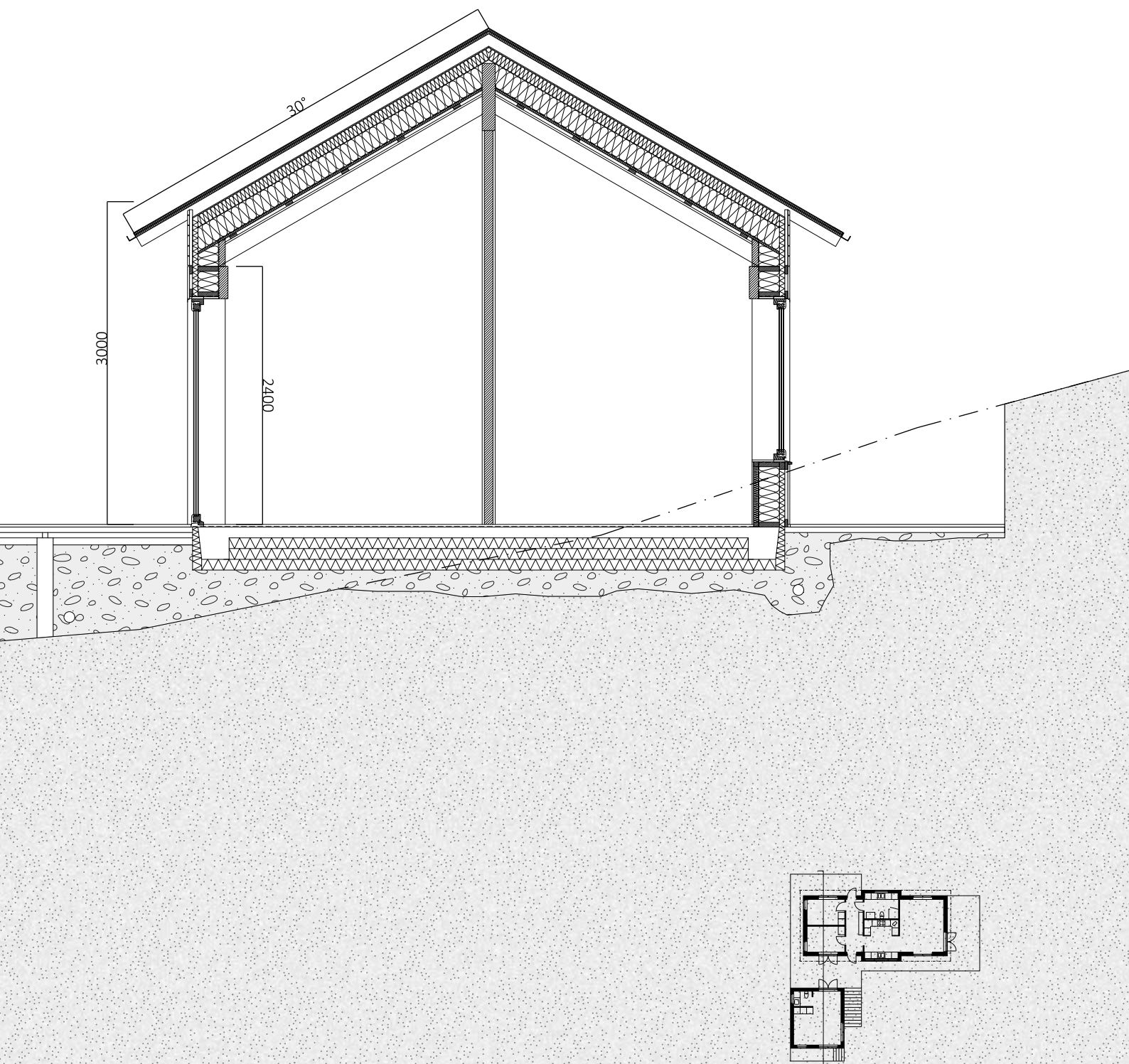
Section B-B





Technical section B-B





Elevation F

F

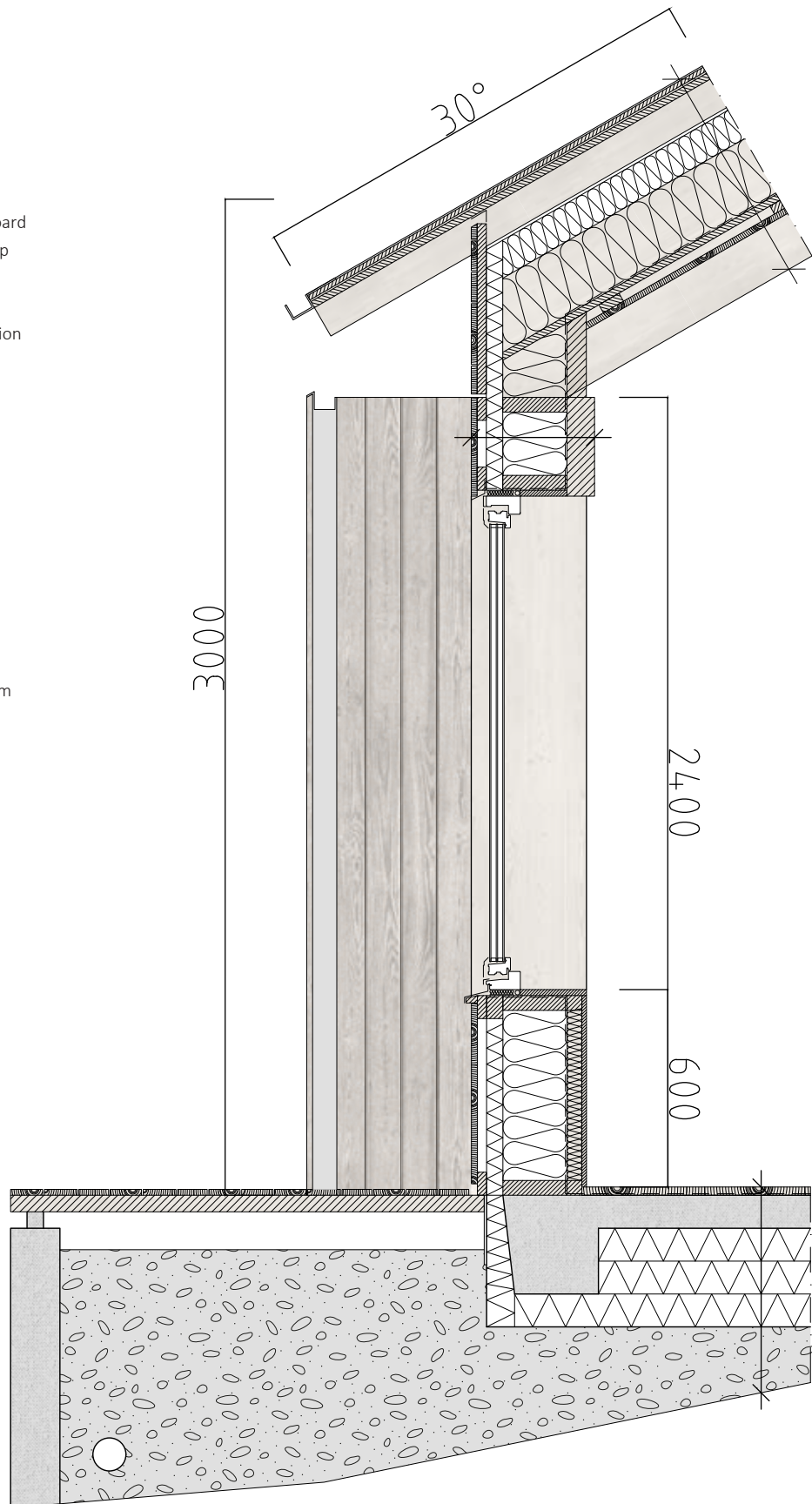


Technical section F-F

Roof	
5	Folded metal sheets
15	Plywood
6	Building paper
21	Multilayered woodboard
100	Wood furring / Air gap
3	Masonite
100	Dense insulation
195	Wood beam / Insulation
0,2	Vapor barrier
9	Weatherboard
195	Wood beam
28x70	Wood furring
18	Wood panelling

Outer Wall	
18	Wood panelling
28x70	Vertical joist / Air gap
50	Rockwool
195	Insulation
0,2	Vapor barrier
75	Horizontal wood beam

Floor	
25	Floor boards
100	Concrete
3x100	Insulation
300	Macadam



Elevation G

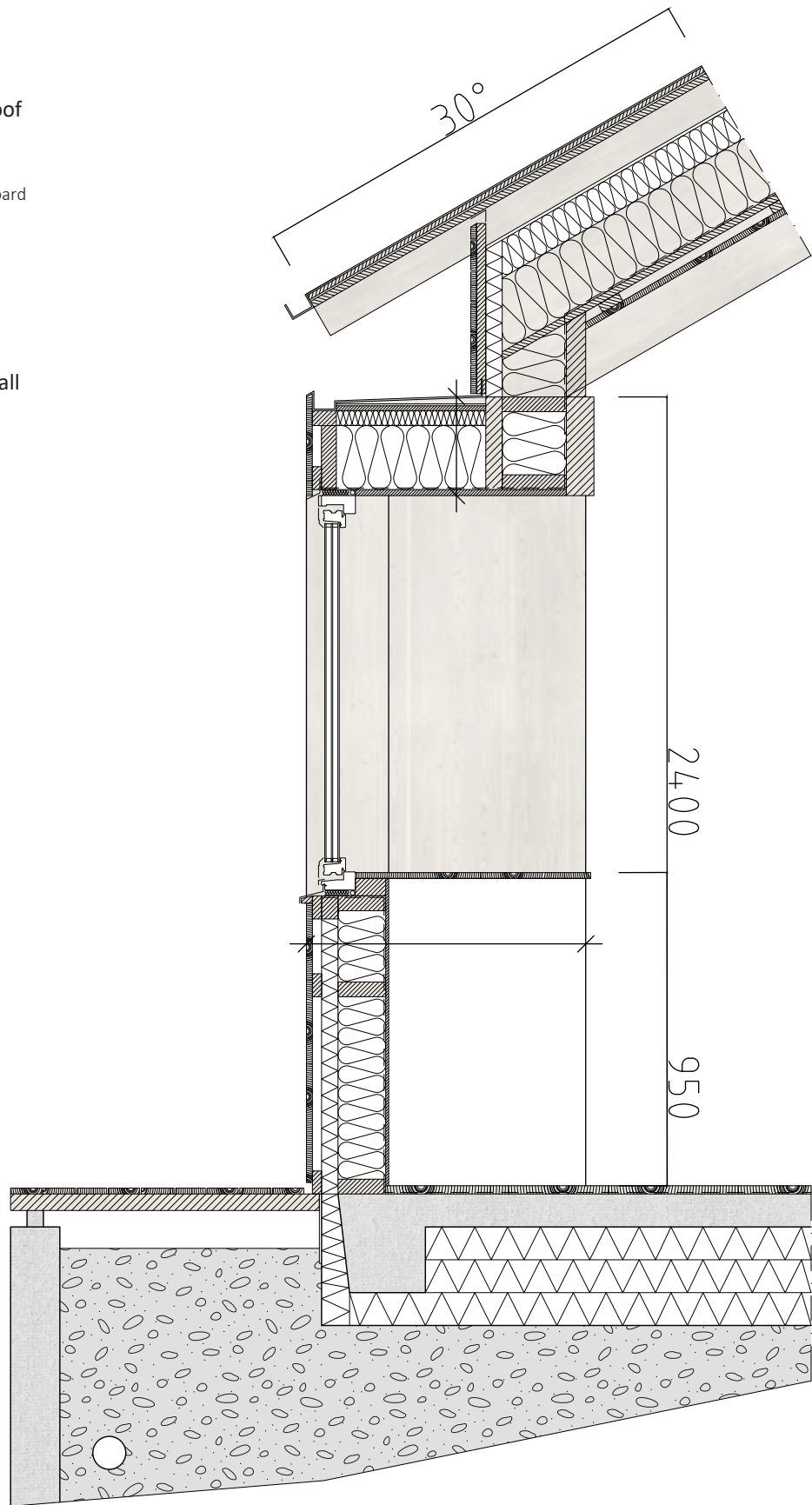
G



Technical section G-G

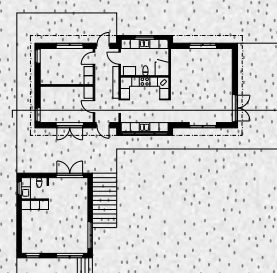
- Bay Window - Roof**
- 20 Folded metal sheets
 - 6 Building paper
 - 15 Multilayered woodboard
 - 3 Masonite
 - 45 Dense insulation
 - 195 Insulation
 - 0,2 Vapor barrier
 - 18 Wood board

- Bay Window - Wall**
- 18 Wood panelling
 - 28x70 Vertical joist / Air gap
 - 50 Rockwool
 - 145 Insulation
 - 0,2 Vapor barrier
 - 15 Wood cladding
 - 600 Kitchen bench

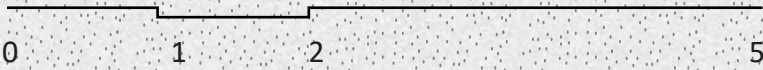


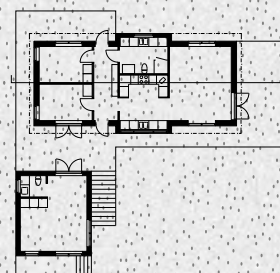
Section C-C



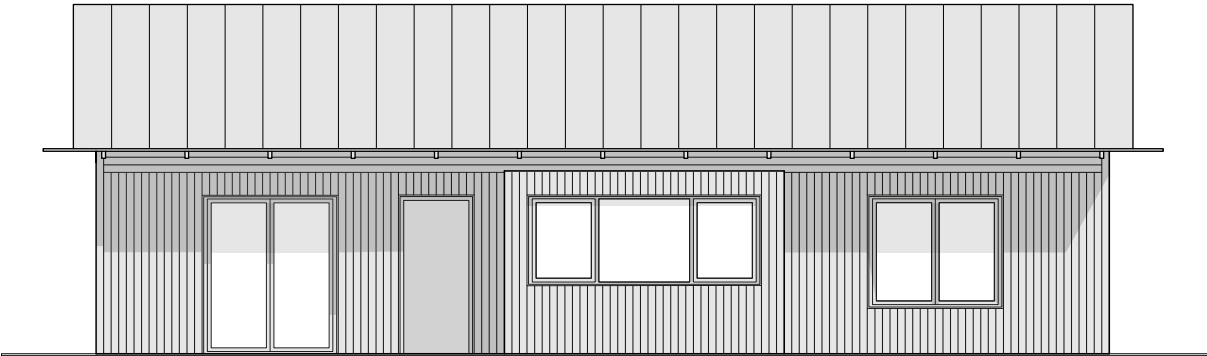


Section D-D

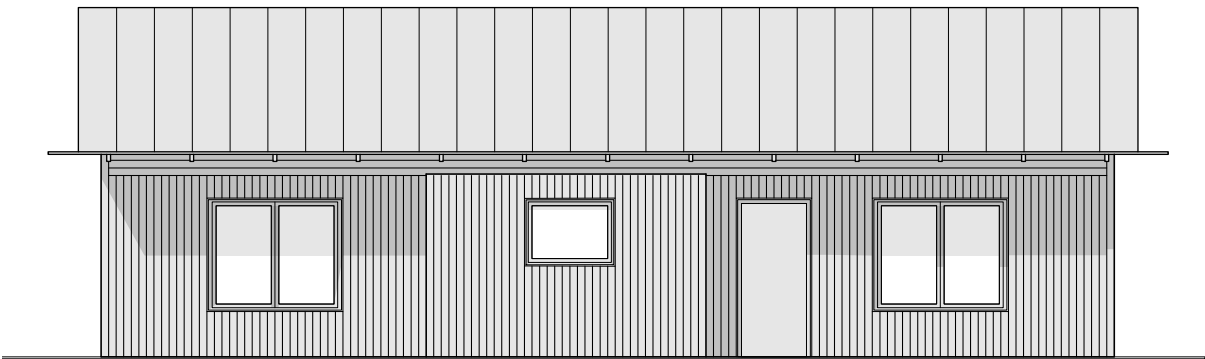




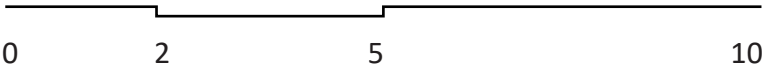
Facades - main building

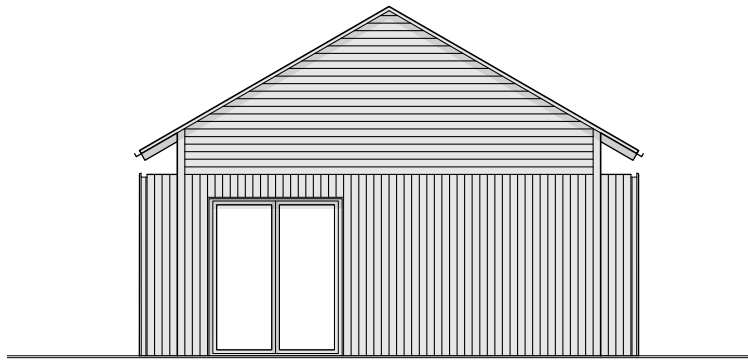


West

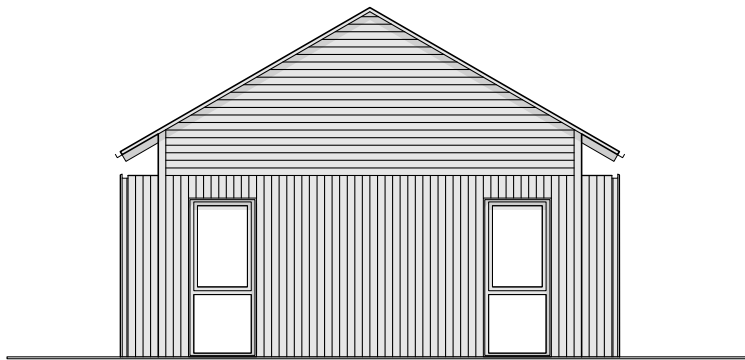


East



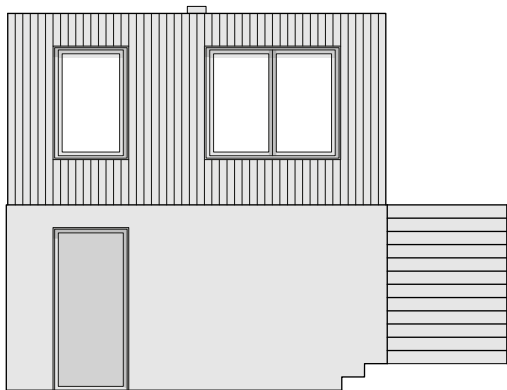


South

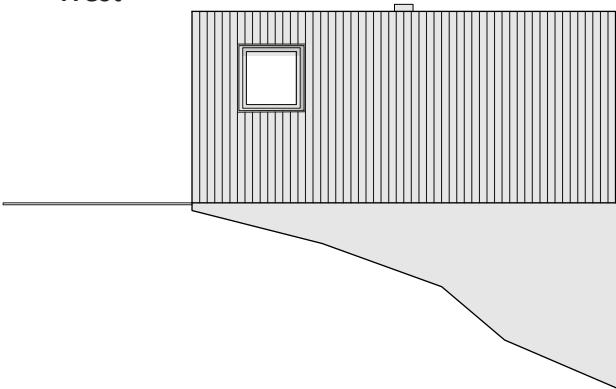


North

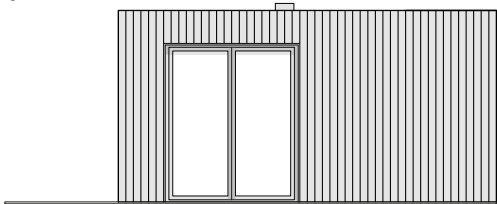
Facades - additional building



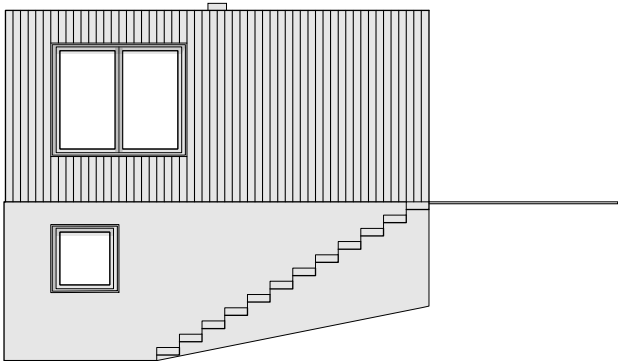
West



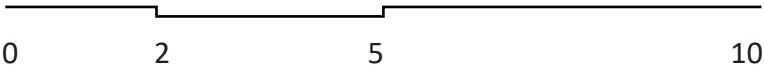
North



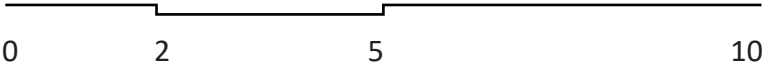
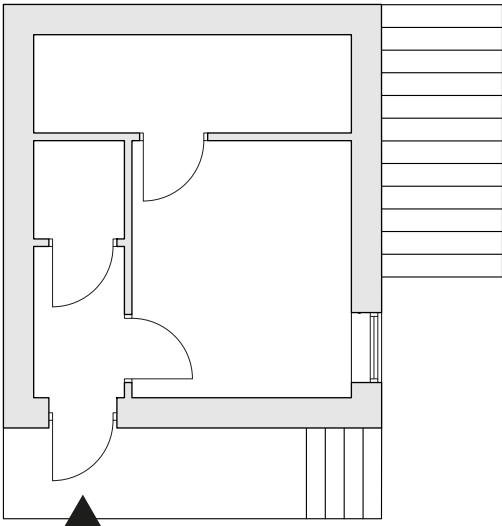
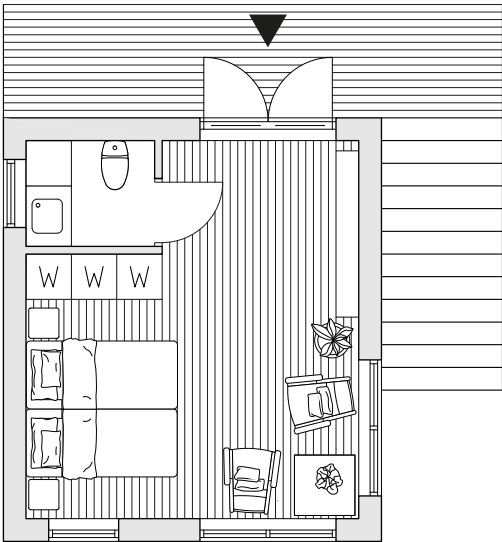
East



South



Floorplan - additional building



VI / Summary

Exterior perspective - physical model



Exterior perspective - physical model



Conclusion

At the start of this master's thesis I identified the summerhouse as a light and simple construction, and wanted to achieve this by both exploring different ways of constructing the house, and different ways of expressing lightness. In the end, I choose a three layered stud-wall that will be within standard regulations, which makes it both more ecological and economical, but that still is visible both on the inside and the outside. This strict construction is then carried through in the layout and facade, by arranging the house after it. As a result, the facade has a simple and logical pattern that responds to the inside layout and is symmetric, without being mirrored or repetitive.

This composition and expression of the house is then reversed in the additional building, which is in a concise and seamless shape. On one hand, it corresponds with the bay windows, and on the other hand it show-case the difference between a visible and a hidden construction. The additional building is a lighter construction, and yet gives a heavier expression.

Overall, the house shares the same proportions as the existing summerhouse, as well as a similar layout. The house ends with the same combined living- and dining room at the very end of it, and while the front door has been moved from the short side of the house, to the long side of the house, there is a similar division from in the house. The sequence of rooms are different, but there is a similar axis throughout the house. With other words, the house attempts to connect to nature through the same means as the existing summerhouse, while also creating better outdoors spaces to actually enjoy it in. It is a versatile house, which connects to nature in different ways, and during different times of the day.

In conclusion, there is a lot that can be said about summer houses, and it seems clear that it is easiest explained as an experience. However, if a new year-round home were to blend in with its neighbouring summer houses, this is one way of doing it. In conclusion, the thesis question of what and how the characteristics of a summerhouse can be re-imagined in a year-round home has been answered by the design proposal.

Literature:

Anderson, K., Belaieff, J., Svensson, Julia. (2016). Svenska fritidshus. Stockholm: Arkitektur Förlag.

Johansson, P., Kauppi, K., Pennanen, M. (2010). Arkitektens Fritidshus. Stockholm: Bokförlaget Arena.

Thelaus, E. (1958). New Swedish Houses. Stockholm: Esselte.

Pettersson, M. (2013). To build with cautiousness in the coastal landscape of Bohuslän [Masters thesis, Chalmers University of Technology] Chalmers library. <https://www.lib.chalmers.se>

Webb:

Bohuslänsmuseum. (2023). About summer houses in Bohuslän. <https://www.bohuslansmuseum.se/sommarstugan/>

Figures:

Figure 1: Friberg, P. (1960). Floor plan of Ljunghusen [Drawing]. <https://www.atlasofplaces.com/architecture/sommarhus/>

Figure 2: E:son Lindman, Å. (2022). Ljunghusen [Photograph]. <https://www.atlasofplaces.com/architecture/sommarhus/>

Figure 3: E:son Lindman, Å. (2022). Ljunghusen [Photograph]. <https://www.atlasofplaces.com/architecture/sommarhus/>

Figure 4: Norlander, J. (2010). Floor plan of Morran [Drawing]. <https://www.atlasofplaces.com/architecture/house-morran/>

Figure 5: Norlander, R. (2018). Morran [Photograph]. <https://www.atlasofplaces.com/architecture/house-morran/>

Figure 6: Norlander, R. (2018). Morran [Photograph]. <https://www.atlasofplaces.com/architecture/house-morran/>

Figure 7: Nadén, P. (2023). Floor plan of Tallbacka [Drawing]. <http://www.pernaden.se/>

Figure 8: Nadén, P. (2023). Tallbacka [Online Image]. <http://www.pernaden.se/>

Figure 9: Nadén, P. (2023). Tallbacka [Online Image]. <http://www.pernaden.se/>

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