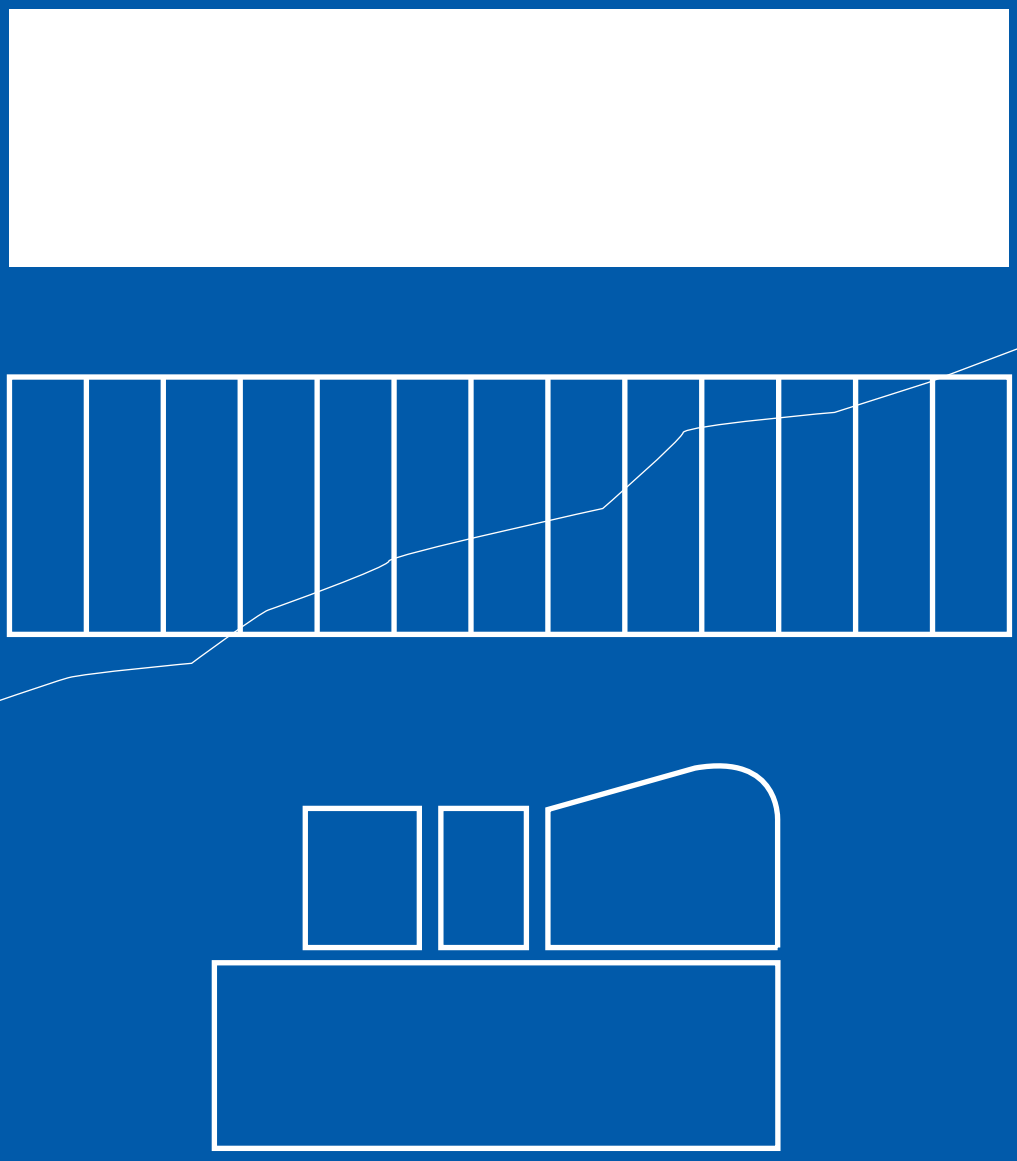
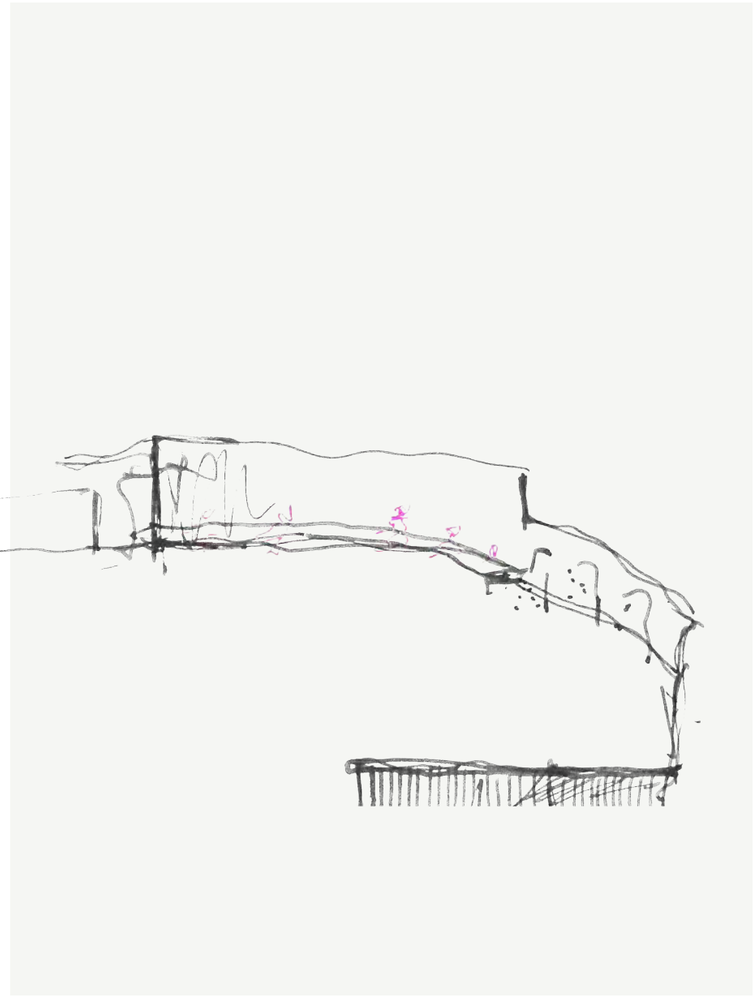
Beata Lindqvist | Examiner / Björn Gross | Supervisor / Mikael Ekegren | Building Tectonics | Department of Architecture and Civil Engineering | Chalmers University of Technology | 2021



MASTER THESIS

RANTZAUBADET



Rantzaubadet

Beata Lindqvist

Chalmers University of Technology
Department of Architecture and Civil Engineering

Architecture and Urban Design
Building Tectonics

Examinator Mikael Ekegren
Supervisor Björn Gross

Master Thesis
Spring 2021

CHALMERS
UNIVERSITY OF TECHNOLOGY

#01. Agnes Martin, Untitled #3, 1974

stone
wind
cold
salt

sun
breeze
shelter
wood

cold feet
ice cream
wave wind salt

acknowledgments

I wish to thank the following persons for all the help, interesting discussions, valuable material etc they have given me throughout the semester

Björn Gross *supervisor*

Josefine Kastberg ARKKAS Arkitekter, *external supervisor*

Varbergs kommun, especially
Liridon Haxhimustafa
Fredrik Johnsson
Ulrika Ljungberg

Peter Börjesson, *historian*

Anna
Victoria
Andreas
Teo

All my friends and fellow students at Chalmers

♥

Teo and I on the cliffs a summerday. Varberg, 2019

ABSTRACT

As a child, growing up in the coastal town of Varberg, I have always been surrounded by water. The sea has been a natural element for swimming, complementation, and play. The sport swimming started to establish itself in Varberg in 1920 where the harbor basin was used as the arena for practice and competition. The old quarry ‘Stenbrottet’ became a starting point and location for the new outdoor swimming facility.

Today, the facilities that once were new, are old and worn out. The aim of the thesis is to design new facilities that can withstand the test of time and frame the beauty of the site while keeping the structure for the actual outdoor swimming basins.

Architects have a responsibility and play a great role in contributing to a sustainable built environment. Striving for handling construction, material, and building components with a high degree of feasibility and precision, as this master thesis direction underlines, is of high importance.

How can facilities be designed such that they withstand the test of time and resist the tear of salt water, wind and sun?

The dramatic landscape requires careful consideration in how to approach it with built structures. Due to the exposed location, building configurations that create spaces where one can shield from the wind or enjoy the sun and simultaneously frame the beauty of the site is of high importance. *How can I design and create architecture that respects and puts emphasis on the surrounding landscape?*

The project aims to use the possibilities of the site and be challenged by the existing structures, to create space through construction, spatial configuration, light and materiality that will enhance the new swimming facility.

Keywords: landscape architecture, water, quarry, swimming facility, spatial configuration

The terraces in granite at Simstadion covered in snow. Varberg, 2021

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AUTHOR

BEATA LINDQVIST

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Sustainable Development and the Design Professions

INTERNSHIP ARKKAS ARKITEKTER — 2018- 2019

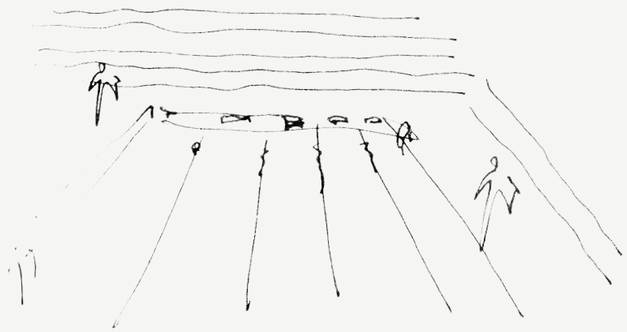
CHALMERS UNIVERSITY OF TECHNOLOGY — 2014- 2018
bachelor architecture engineering

> Research question

How can I design and create architecture that respects and puts emphasis on the surrounding landscape?

> Sub-question

How can facilities be designed such that they withstand the test of time and resist the tear of salt water, wind and sun?



INTRODUCTION

THE FRAMEWORK

AIM & PURPOSE

The thesis aims to design and create robust structures with a high care of detail and material that will stand the test of time and simultaneously respect and put emphasis on the surrounding landscape.

With this architectural basis, the structures will serve as new outdoor swimming facilities, at a site where the sport has been exercised since the 1930s.
Due to the exposed location chosen, the purpose is to, through spatial configuration, create spaces where one can find shelter from the wind and rain or enjoy the sun.

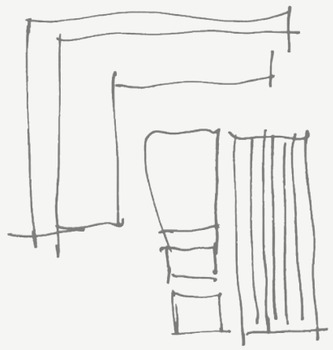
SITE

Varberg, Sweden

DELIMITATIONS

This master thesis is a speculative design proposal for new facilities to the already existing outdoor pools, with the interpretation to connect the pools visually and physically with the ocean. Focus lies to reconnect the swimming arena with its immediate surroundings as well as making it an obvious destination for everyone. The granite terrasses, alongside with the pools, constitutes the basis for the project from where the design departures.

METHOD



The project has primarily a research by design approach. Initially, references and case studies were reviewed and from these, strategies were extracted. A physical site model has been made and site visits conducted to understand the landscape. In addition, the technique of photogrammetry has been used where a drone has been capturing the landscape enabling me to get a 3D model as well as detailed contour lines. With this material and through this knowledge, iterations of the new facilities have been made through plan, section, and elevation with the aim to give my interpretation on how architecture can respect and put emphasis on the surrounding landscape.

During the second part of the semester, the same methodology has been used but has instead been applied on a zoomed-in scale. Now - construction, materials, and details have been studied and worked on in trying to give an answer to the sub-question: '*How can facilities be designed such that they withstand the test of time and resist the tear of salt water, wind and sun*?'

When questions and uncertainty arise about how to move forward, answers from chosen reference projects has been revised with the aim to extract a certain solution related to the project.

In addition, the design has continually been tested and communicated with tutors and fellow classmates who has challenged me and questioned my ideas.

The method chosen is certainly a fruitful way of working, it enriches my way of seeing things and gives me new perspectives on how to create good architecture.

Lina and I in front of Yayoi Kusama's yellow pumpkin on the island of Naoshima, Japan. April 2019

ARCHITECTURE RELATING TO LANDSCAPE

In Sweden, Architecture schools can be found in four different cities, where students are trained in how to design buildings that shall be able to withstand the test of time, be durable and work as shelters to the outside world. Landscape architects, on the other hand, get their education at different schools. Their education focuses on an ability to gain a holistic view of the outdoor environment, the landscape and how to treat it with additions or subtractions (Sveriges Lantbruksuniversitet, 2021).

In western society, there has been a tradition of separating things into certain categories. For instance, nature is one thing, and architecture (the built environment) is another. Thinkers like Aristotle and Kant introduced the notion of dualism which asserts nature in opposition to architecture. In eastern society, this matter has been looked upon differently. There, nature and architecture are linked and intertwined. The Japanese architect Kisho Kurakawa claims that the space in between those (in western society) opposites, there may be something of even greater importance. (Wachtmeister, 2003)

Architects have a responsibility in relating the built environment to the landscape and nature. "*One might say that architecture erects a temporary boundary between nature and culture. That architecture is matter (nature's matter) fashioned into space (human space). Arguably, architecture balances on the slash in nature/culture. Or indeed, perhaps it is the slash. One could speak of slash architecture.*" (Caldenby, 2013)

The island of Noshima is a part of the Japanese archipelago. The landscape has a paradise-like setting with its hilly topography, covered in broccoli-like trees, all surrounded by the deep blue ocean. Today, the entire island is filled with contemporary art, though in a very subtle way. Tadao Ando designed the Chichu Art museum as well as the popular Benesse house museum. Several other designers, artists, and architects have made their remarks in 'Naoshima Art house project'. A general theme among all the additions, such as installations and buildings is that they not only attract the eye in itself but rather enrich the surrounding nature.
Yayoi Kusama's yellow pumpkin, for example, stands on the concrete jetty, just in front of the ocean, where it doesn't steal the show but rather blends in, and becomes united with its surroundings.

In an ínterview held by the Pritzer architecture prize, the 1997 year's laureate, Sverre Fehn states that to build is something brutal. "*When I build on a site in nature that is totally unspoiled, it is a fight, an attack by our culture on nature. In this confrontation, I strive to make a building that will make people more aware of the beauty of the setting, and when looking at the building in the setting, a hope for a new consciousness to see the beauty there as well.*" (The Pritzker Architecture Prize, 1997)

If architecture can serve as a bridge in between humans and nature, creating a link – a gate that opens up one's vision and frame the surroundings – then architecture can be the concept of the slash in-between nature and culture. (Caldenby, 2013).

TECTONIC AND STERETOMIC

The basic concepts of relating architecture, structure and construction can be described through Kenneth Frampton's principles of solid construction and filigree construction. The 19th-century theory architect, Gottfried Semper, instead called the same matter stereotomic and tectonic.
Frampton's solid construction and Semper's stereotomic can both be described as a homogenous construction, using techniques and materials derived from the earth. In contrast, filigree construction and tectonic means lightweight framework – derived according to Semper, from the textile art of origin – the craft of weaving, knitting and braiding. (Hatz, 2006)

The relation between these concepts – architecture and construction has been looked upon differently through time. The modernist movement with architects like Mies van der Rohe and Le Corbusier challenged the traditional way of letting the structure be seen in the expression of the building. The latter praised the concrete structure's way of opening up the floorplan – which used to be divided into sections due to the load bearing walls and the Barcelona Pavilion by Mies neither built upon a rational grid nor a traditional 'pillar-beam-system'. (Hatz, 2006)
The Swedish architect Elisabeth Hatz writes in her review of the solid handbook 'constructing architecture', that the architects mentioned above, both were trained classically as well as having a genuine knowledge in building construction. According to Hatz, it seems like we today require the latter, of having a deeper knowledge in between those – design and construction. In Switzerland where the handbook is written – the bridge in between the concepts are closely related. One reason might be, according to Hatz, that the professions have a closer link - architects and constructors work closer together. Well, at least, if comparing with Sweden where the gap is much bigger. (Hatz, 2006)

As for me, who will be a newly graduated architect this summer, I see the understanding in between form and structure as elementary. To know certain basic structural elements and rules – and to understand what consequences that give the overall shape is, to me, of high importance. In the world of architecture – where there are no rights and wrongs – the gradient in between black and white is diffuse and one tries to refer to relevant references who might have created something grand and great, the construction and structural elements at least give one some basic framework where one's design and first sketches can derive from.

Gottfried Semper divided buildings into the four elements of architecture – a sort of architectural classification system. (Investigating the Tectonic, 2017)
The elements are called: the hearth, the earthwork, the framework and roof and the enclosing membrane or cladding – all referred to the Caribbean hut – to what, according to Semper, was "*a highly realistic example of a wooden structure taken from ethnology*". (The four elements of architecture , 2018)

These four elements were divided into two construction typologies: tectonic and stereotomic.
The term stereotomic originates from 'stereotomy' - the art of cutting materials, such as stone, earth or wood, into shapes that are used to construct elements tightly connected to the site. These are typically the earthwork and the hearth. The tectonic, on the other hand, is instead referring to the more delicately assembled structures, such as carpentry, from which the word originates.

For Semper, each material should speak for itself. Wood should be used where timber is the most suited, if using brick – the bricks should be visible and the construction readable through that. (Investigating the Tectonic, 2017)

Comparable to my proposal – the stereotomic stone wall emerges from the former quarry with its task to protect the wooden, tectonic construction – which is an assembled timber structure with its primary function to hold the functions needed to run an outdoor swimming facility. □

#02. The Caribbean hut, illustrated by Semper

REFERENCES

THE FRAMEWORK

The references presented can be seen as my starting points, from which I've been extracting knowledge and strategies throughout the project. The focus area lies within *architecture relating to landscape*, *buildings where the construction is clear and legible*, and lastly, *bathing facilities*.

The presented references below all have a close link on how to approach the landscape with built structures, in a respectable manner.

LECA SWIMMING POOLS
architecture relating to landscape

A BOOK ON BASIC ARCHITECTURAL DESIGN
frame levels

SPRINGHILL HOUSE
simplicity/legible construction

BADPALATSET
cold bath in stockholm

JÄRVABADET
outdoor swimming facility

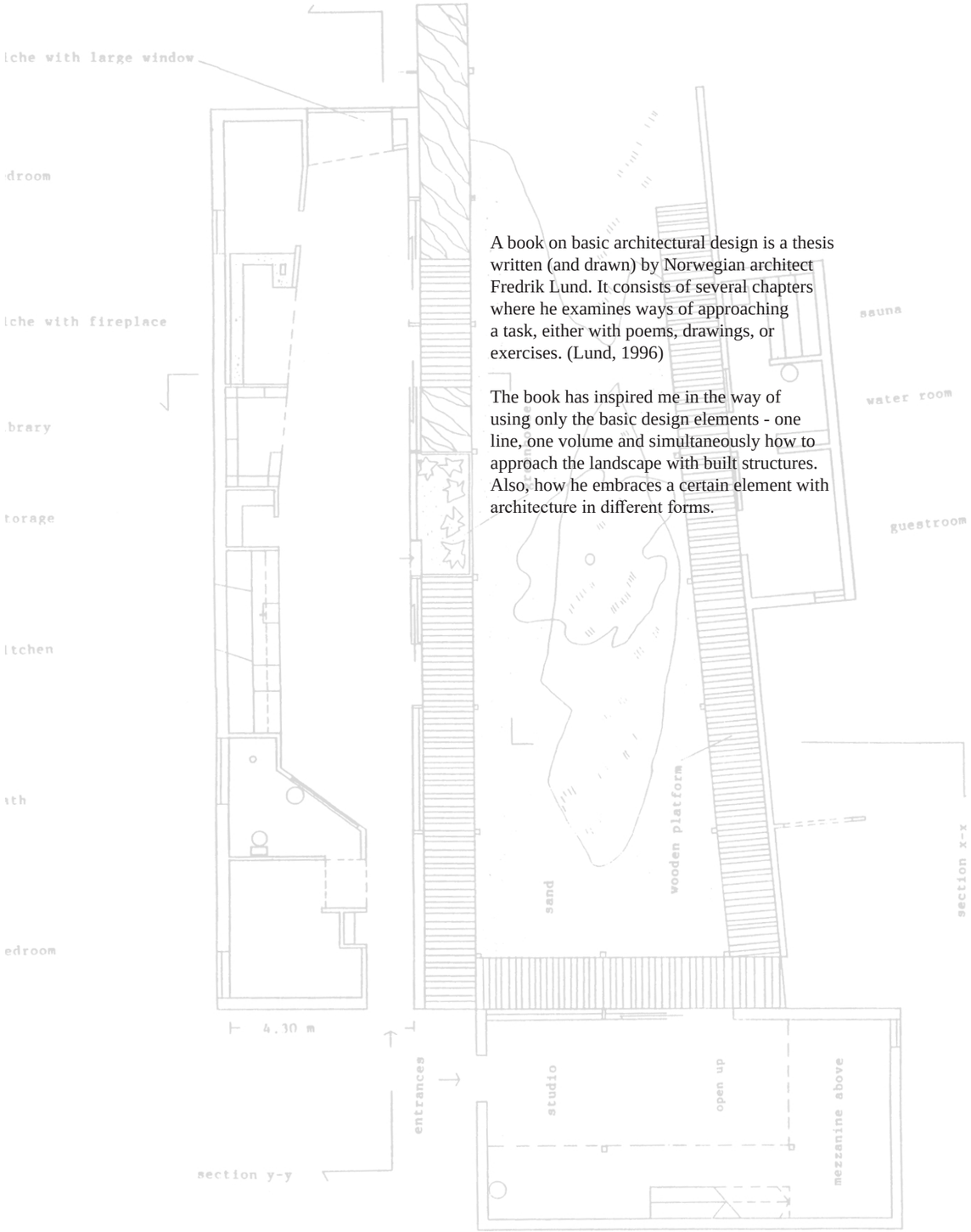
KALLBADHUSET
cold bath in Varberg

RAMMED CONCRETE
sacular retreat

On the Portuguese shoreline, north of Porto, on the beach of Leca, the swimming pools are situated. The project was designed by Portuguese architect Alvaro Siza and was constructed in the sixties and is said to be one of Siza's most interesting, early works. The pools and their associated facilities are situated at a low point, appearing only as a strip when looking towards the ocean from the coastal road next to it. Throughout the project, raw material like concrete hits the natural landscape and cuts the granite cliffs with distinct shapes. (Trigueiros & Gaenshirt, 2005)

From the very start, Alvaro Siza's Leca swimming pools have been an important reference. How his structures blend into the landscape with a very precise shape of the buildings, ramps, and stairs. The project has been a reference and great inspiration in how I am working with the connection to the sea.

#03. Leca Swimming pools, Alvaro Siza



A book on basic architectural design is a thesis written (and drawn) by Norwegian architect Fredrik Lund. It consists of several chapters where he examines ways of approaching a task, either with poems, drawings, or exercises. (Lund, 1996)

The book has inspired me in the way of using only the basic design elements - one line, one volume and simultaneously how to approach the landscape with built structures. Also, how he embraces a certain element with architecture in different forms.

#04. Studio house for Simo Heikkilä, Fredrik Lund

Out in the country, in the state of Victoria in Australia, a private dwelling named Springhill house is situated, designed by Lovell Burton. Similarities of the construction can be seen in traditional Australian sheds where the pitched roof covers an outdoor area where one can shield oneself from unwanted rain or sun (the latter will probably be the case in Australia). The building consists of a series of glulam beams that supports the roof and covers the paddock as well as the actual dwelling. (Burton, 2021)

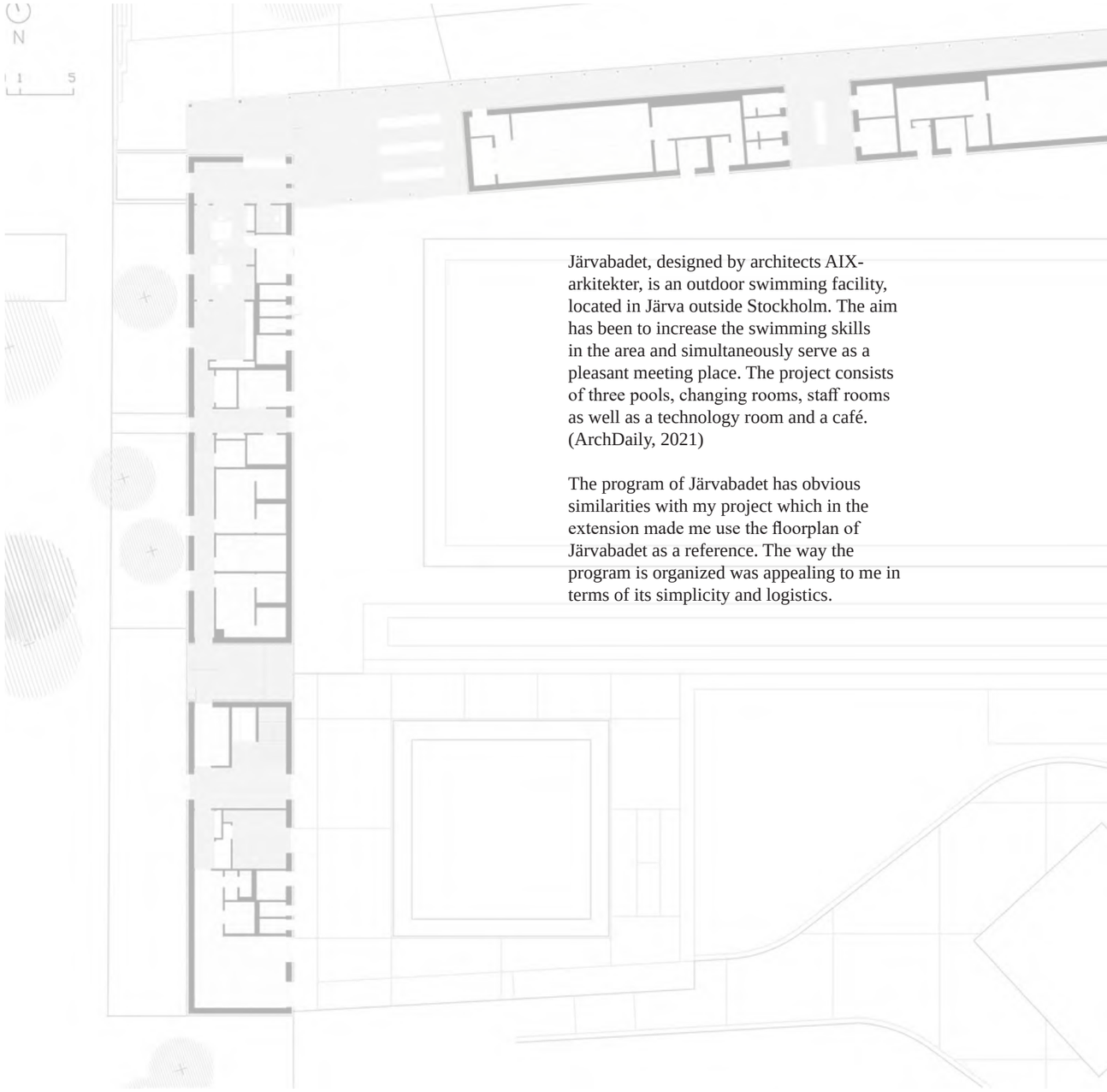
The project has been a reference on how the clear structural language is shown, it gives the observer a well-defined readability. Simple materials are used with standard measurements. The project has inspired me to stick to my grid and use it in both floor plan and choice of façade material. Like the Springhill house, my project consists of standard sheet sizes of internal plywood as well as the measurements of the galvanized steel. The simplicity and choices of materials used in this project have been a great source of inspiration.

#05. Elevation of Spring hill house, showing the galvanized metal sheets

Badpalatset is a ‘kallbadhus’ which is supposed to attract a wide range of people and serve as an obvious meeting place. The project is not yet realized but has recently received the first prize in a competition. The bath has a clear and distinct room organization that separates the *dressed*, the *undressed* and the *bathdressed*. (Fogelström & Andrén, 2021)

I found out about this project quite late during the thesis semester but it has nevertheless been an important reference – both in terms of material choice but also a reference in how the project is displayed and visualized.

#06. Visualisation of the cold bath bassin, Badpalatset



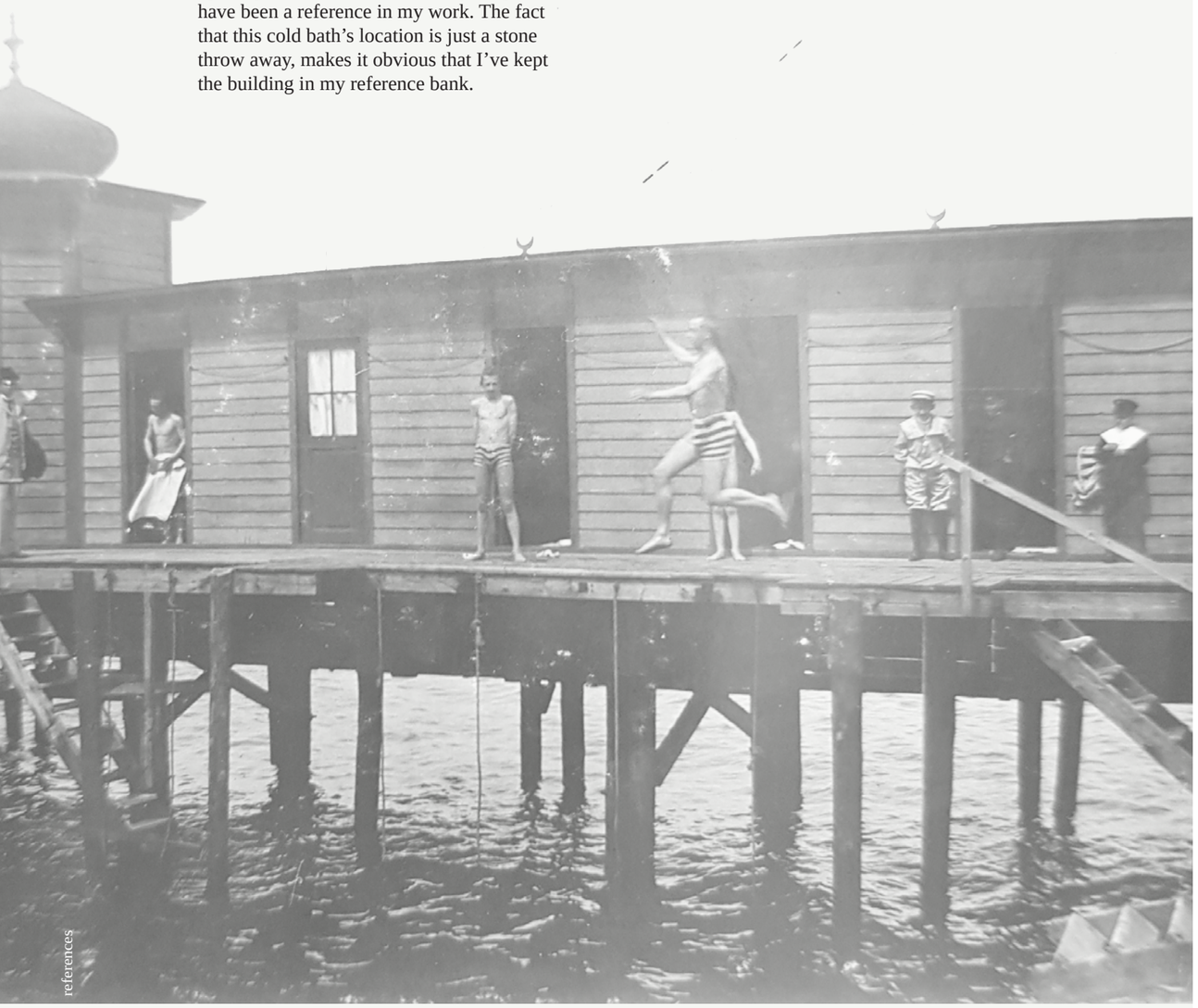
Järvabadet, designed by architects AIX-arkitekter, is an outdoor swimming facility, located in Järva outside Stockholm. The aim has been to increase the swimming skills in the area and simultaneously serve as a pleasant meeting place. The project consists of three pools, changing rooms, staff rooms as well as a technology room and a café. (ArchDaily, 2021)

The program of Järvabadet has obvious similarities with my project which in the extension made me use the floorplan of Järvabadet as a reference. The way the program is organized was appealing to me in terms of its simplicity and logistics.

#7. Floor plan, Järvabadet

Rhythm. Proportions. Bath. Ocean. Varberg.

The proportions and the rhythm that the openings towards the inner courtyard give have been a reference in my work. The fact that this cold bath's location is just a stone throw away, makes it obvious that I've kept the building in my reference bank.

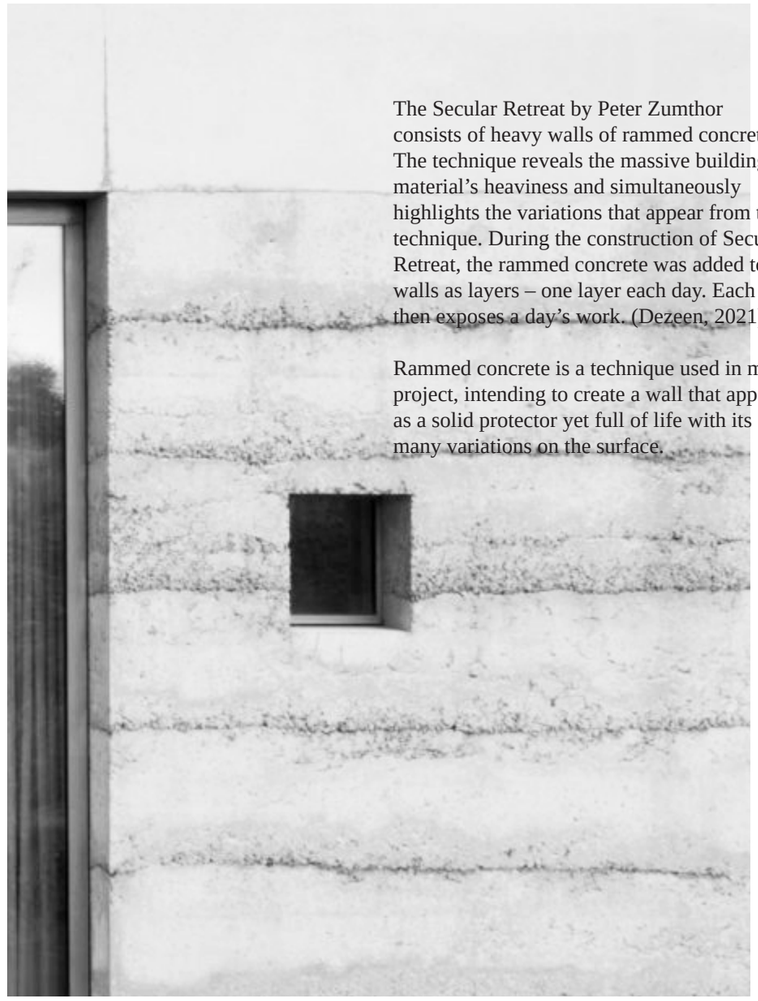


references

#8. A man is jumping from the jetty at Kallbadhuset in Varberg. Summertime around the turn of the century

The Secular Retreat by Peter Zumthor consists of heavy walls of rammed concrete. The technique reveals the massive building material's heaviness and simultaneously highlights the variations that appear from the technique. During the construction of Secular Retreat, the rammed concrete was added to the walls as layers – one layer each day. Each line then exposes a day's work. (Dezeen, 2021)

Rammed concrete is a technique used in my project, intending to create a wall that appears as a solid protector yet full of life with its many variations on the surface.



#09. Elevation of Secular Retreat, showing the rammed concrete

BACKGROUND

the existing granite terraces

ABOUT WATERS AND VARBERG

Growing up in the coastal town of Varberg, I have visited the outdoor swimming facility ‘Simstadion’ countless times. On rainy summer days, I participated reluctantly in swimming school and during the summer months, the physical education lessons were usually held there. Always freezing and cold. During a walk together with my mum and sister, along the coastal path *Strandpromenaden* during the summer prior to the thesis semester, we started to talk about ‘Simstadion’ when walking past the facilities. We all shared similar thoughts regarding that its a shame that such valuable location hosts such worn-out facilities. With the ocean just in front, the historic fortress from the 13th century in the north, and the city center a stone’s throw away, the site has enormous potential.
This walk sowed a seed to what came to be the aim of my master thesis - designing new facilities for *Simstadion*.

Since the early 19th century, there has been a tradition of Varberg being a health resort due to the health well *sv. hälsobrunn* Svartekällan in the area of Apelviken. During the second half of the 19th century, Varberg’s popularity as a health resort was strengthened when communication such as steamboat and railway was established. The town’s first hot bathhouse was built in 1823, located right next to the ascent to the fortress. In 1866 a new hot bathing house was built, located in front of the existing cold bathing house, connecting to it with a bridge. (Lennartsson, 2017)

In 1920 many smaller towns started to build bathing houses, still with the main purpose to get clean. Simultaneously *bath rooms* started to be included in modern houses and apartments, to let people take care of their hygiene, privately, at home. At the time, an interest in bathing and swimming emerged from the younger generations of the town.

The authorities in Varberg decided to invest in a new bathhouse with a swimming basin, still with bath tubs for washing though. In 1925 the new facilities, built in *sv. nationalromantisk stil* was ready for inauguration. The bathing house still exists today, known as *Varmbadhuset* by the locals. It went through a renovation two years ago due to its bad condition, with the original drawings and images as inspiration. (Lennartsson, 2017)
In Varberg, many bathing and swimming facilities exist. Along the coastal walking path *Strandpromenaden* several of them are located. The ancient cold bathhouse, the newly built *Fästningsbadet*, nude bathing spots, Kusthotellet, just to mention a few. ›

me in varberg, summer 1994

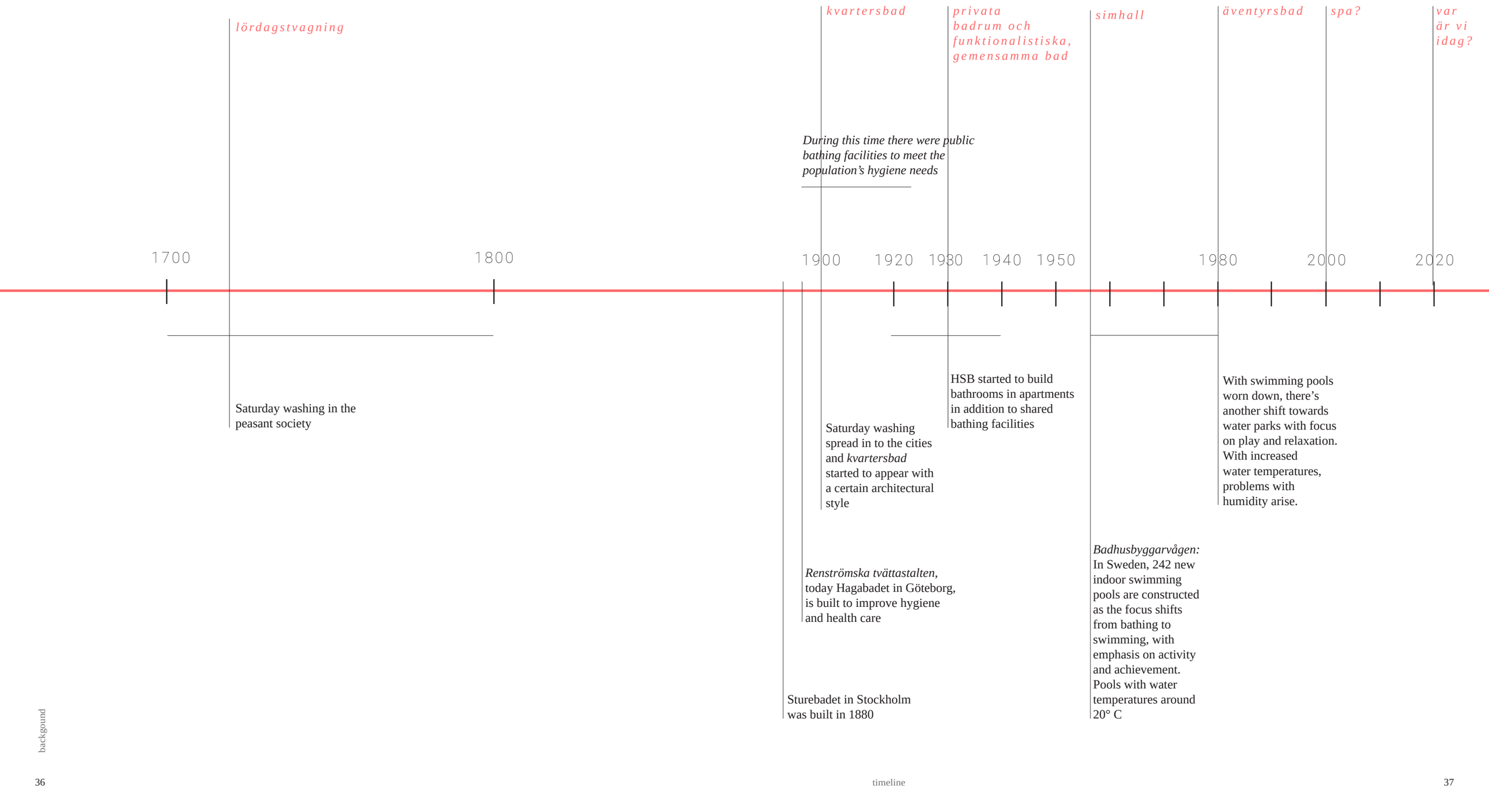
The bathing tradition of Varberg is well-rooted and indeed a part of the city’s identity.

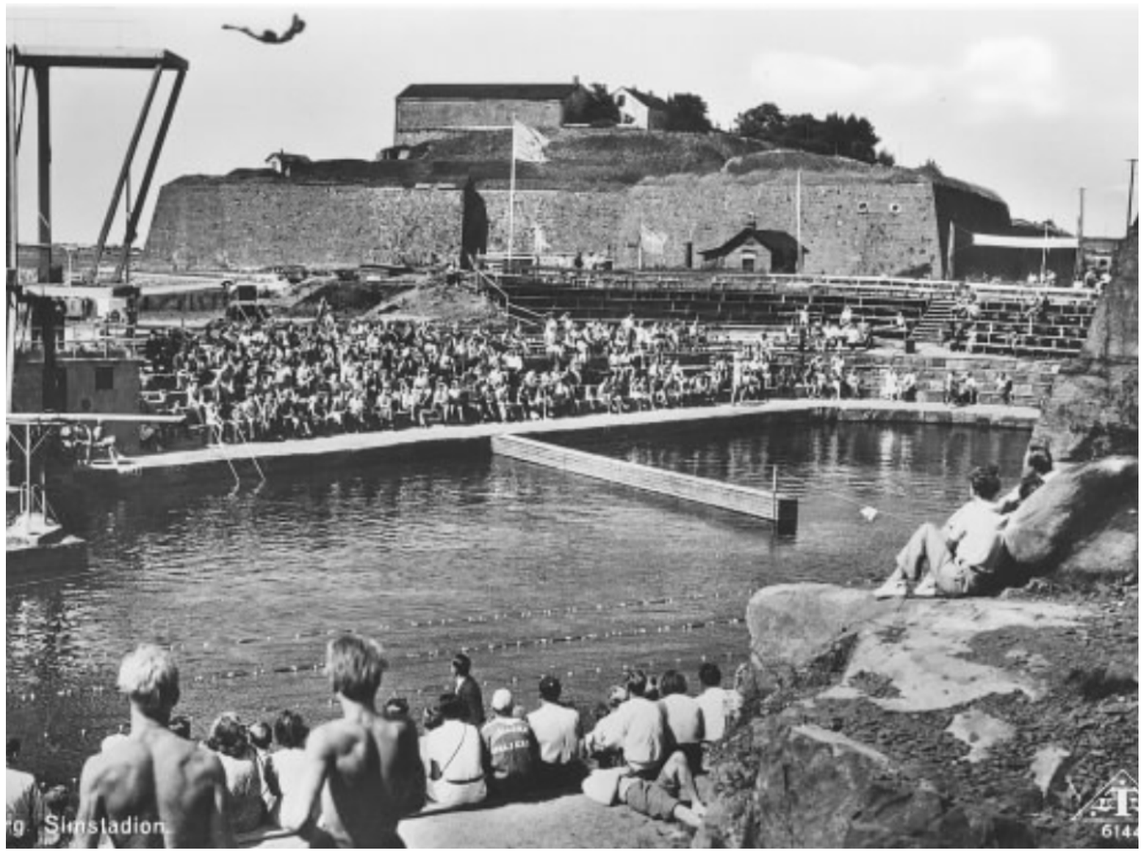
According to P. Börjesson, (personal communication, 9th of September 2020) at the same time as the town started to establish as a health resort, the Stonemasonry business started as well. Along the coast of Varberg, around twenty quarries existed. Due to the stone’s, called *Charnockit* (often called Varbergsgranit) advantageous qualities, it was used as a building material and as paving stones for the roads.
Due to replacement by other material, the quarries were left untouched and in 1918 the operations ceased.

In 1920, the sport of swimming started to establish in Varberg. Initially, the ocean and the town’s harbor was used for practice and competition.
The abandoned quarries around the town started to be filled up with water. Thoughts emerged on transforming the largest quarry *Fästningbrottet* into Sweden’s most modern swimming arena. Volunteer Labor realized the vision, and in 1932 ‘ Simstadion’ was ready for inauguration. The initial years were a success for Simstadion which led Varberg to be the host for the Swedish championships in 1945, 1947 and 1951. (*Varbergsidrotten*, 2010)

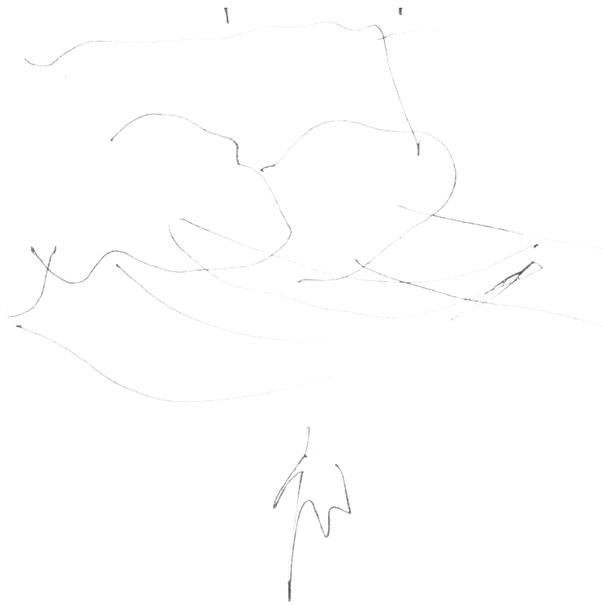
The spirit of Simstadion still exists and during summertime cheering people can be heard over to my parents garden, a stone’s throw away. Still today, the basins are filled with salt water from the sea as they have been ever since 1936, when the pump station was built.

The facilities today are old and worn out. These structures have been in use since the ’70s. The structures very much turn their back against the walk path and the ocean, though they probably fill the purpose of a shield against the wind.
There has been a political will in renovating the facilities. In 2014, decisions to renovate the indoor swimming facilities at ‘Håsten’ were made and therefore plans for Simstadion were put on hold. (Nilsson Loth, 2017) □


lördagstvagning
kvartersbad
privata badrum och funktionalistiska, gemensamma bad
simhall
äventyrsbad
spa?
var är vi idag?
During this time there were public bathing facilities to meet the population's hygiene needs
1700
1800
1900
1920
1930
1940
1950
1980
2000
2020
Saturday washing in the peasant society
Saturday washing spread in to the cities and *kvartersbad* started to appear with a certain architectural style
HSB started to build bathrooms in apartments in addition to shared bathing facilities
With swimming pools worn down, there's another shift towards water parks with focus on play and relaxation. With increased water temperatures, problems with humidity arise.
Renströmska tvättastalten, today Hagabadet in Göteborg, is built to improve hygiene and health care
Sturebadet in Stockholm was built in 1880
Badhusbyggarvågen: In Sweden, 242 new indoor swimming pools are constructed as the focus shifts from bathing to swimming, with emphasis on activity and achievement. Pools with water temperatures around 20° C



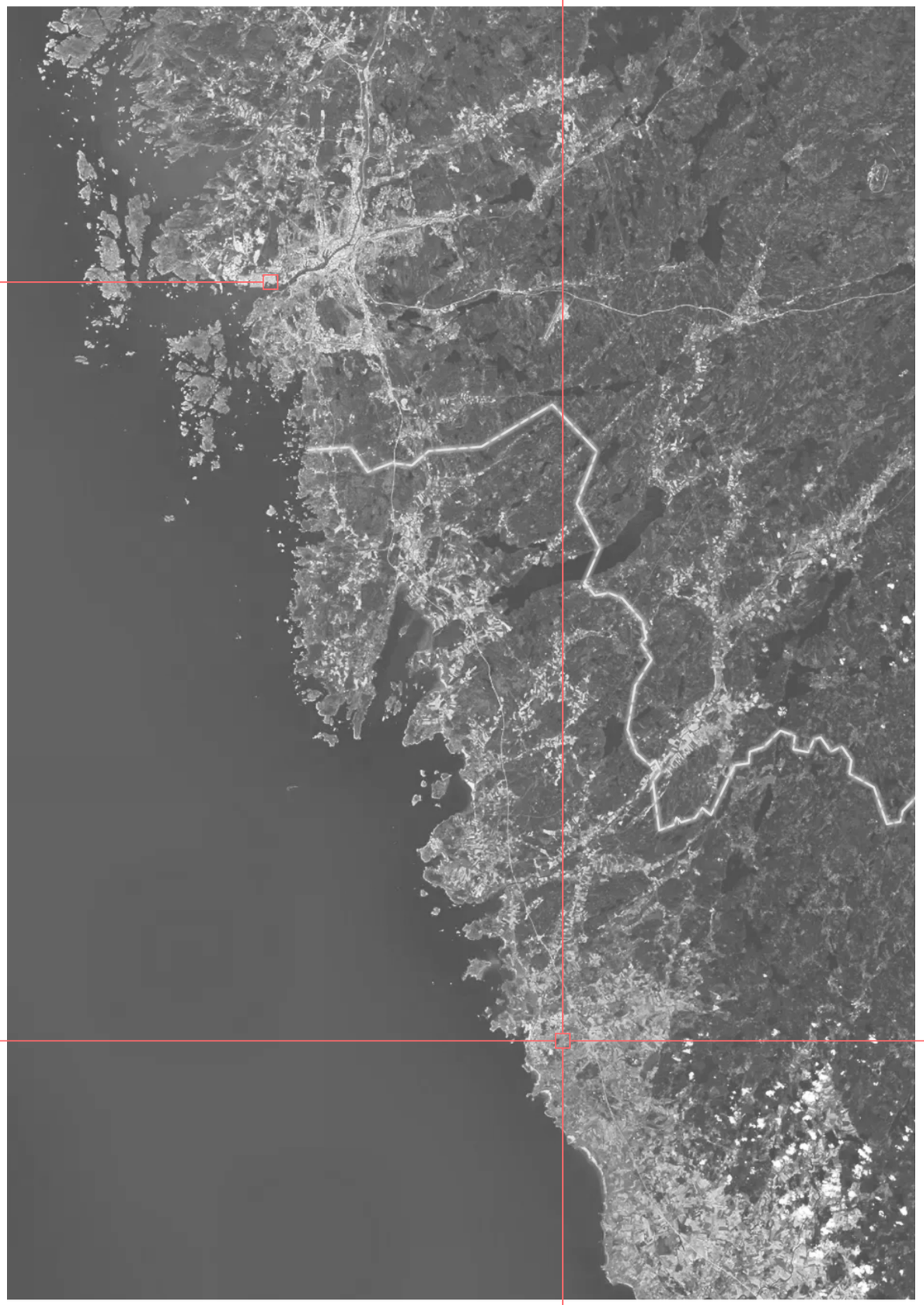
SITUATION

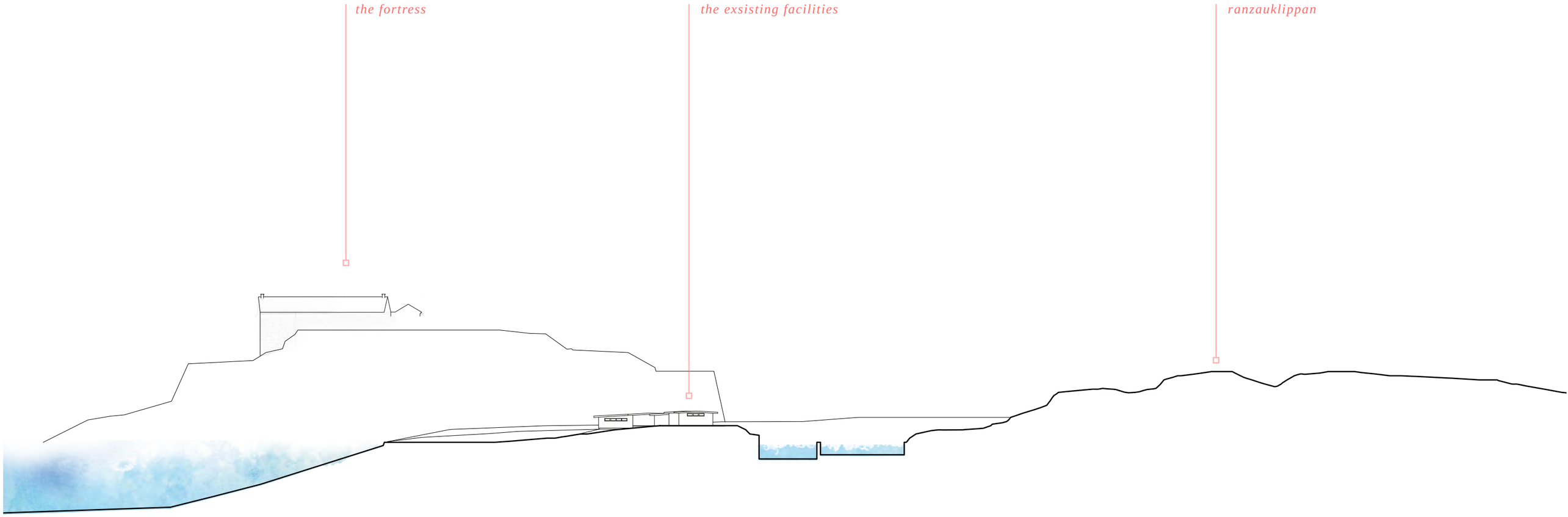


phyiscal model of the situation 1:400

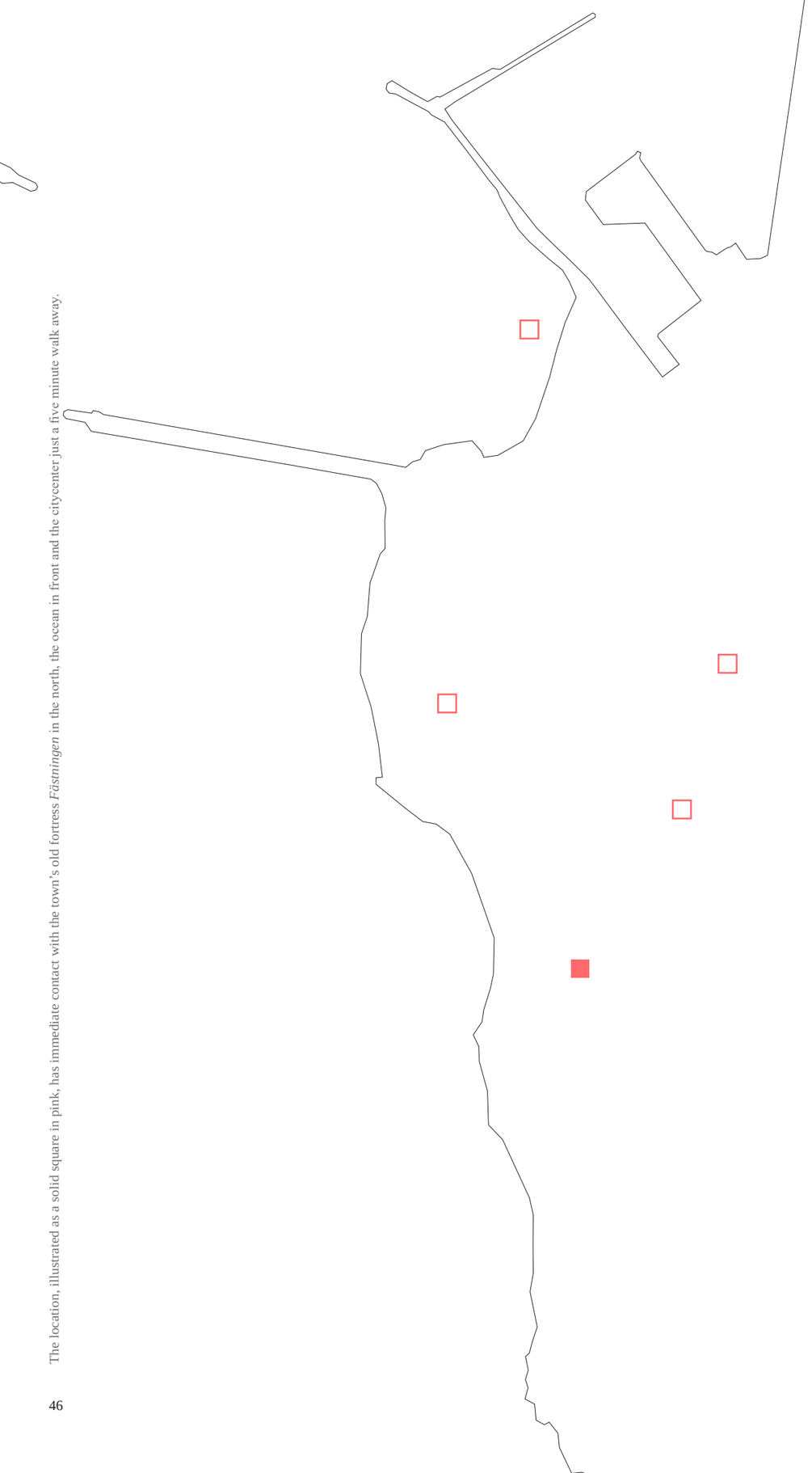
SITE

The site chosen for the master thesis is on the Swedish west coast, Varberg.
The location, illustrated as a solid square in pink (page 46), has immediate contact with the town's old fortress *Fästningen* in the north, the ocean in front and the citycenter just a five minute walk away.
Along the coast, there is a promenade *Strandpromenaden*, often used for walks by the locals where one can pass by the cold bath *Kallbadhuset*, dating from 1903, the acient warm bath house *Varmbadhuset*, built in 1925 and the quarry, *Stenbrottet*, left untouched in 1918.





section through the landsape 1:1000



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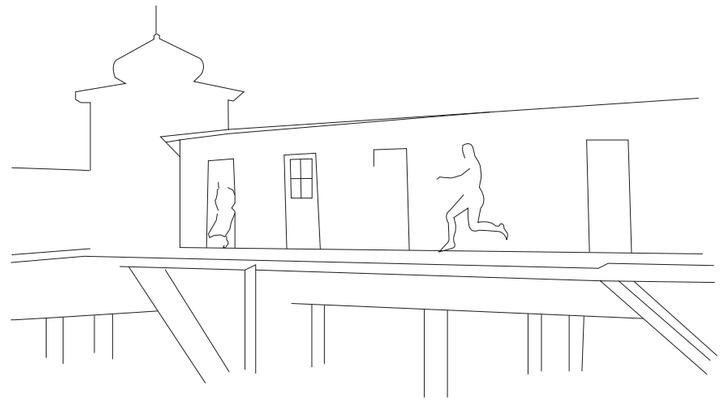
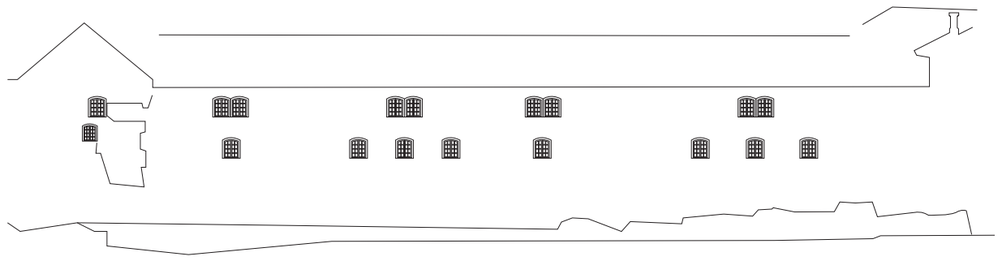
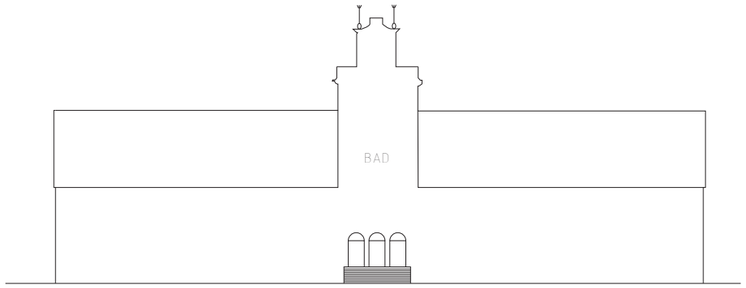
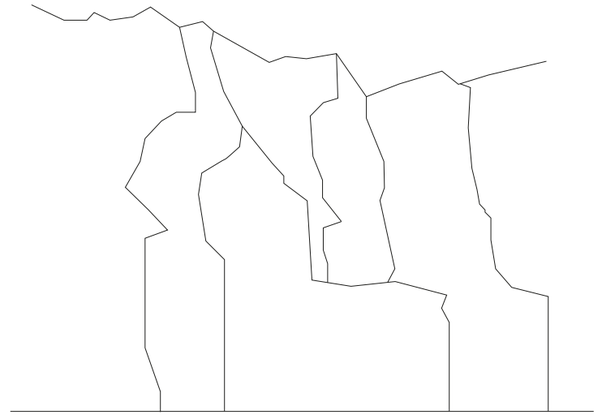






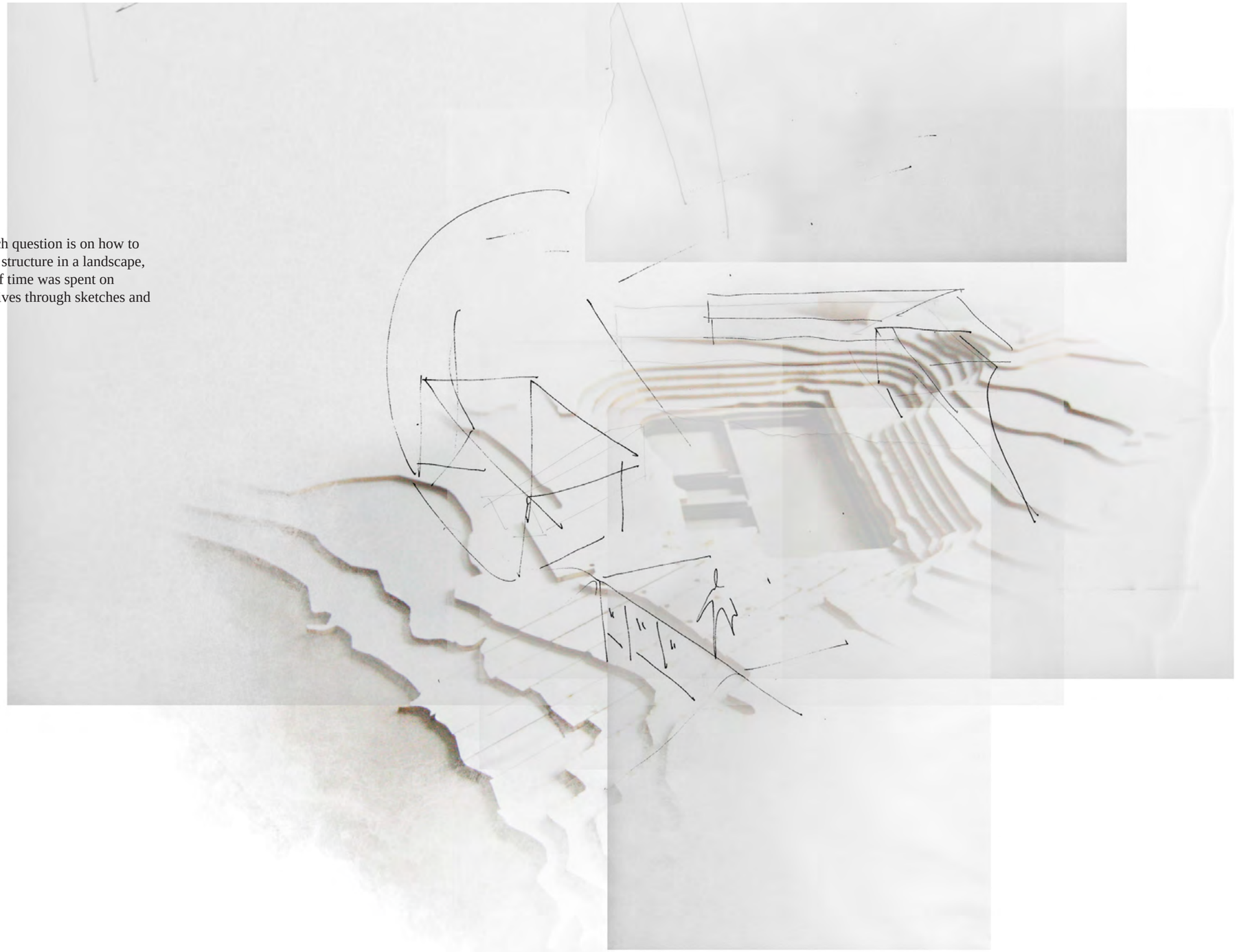


PROCESS, THOUGHTS, IDEAS, WORK

RAUNZAUBADET

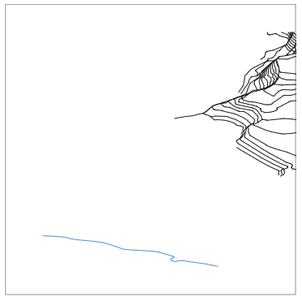
PROCESS, THOUGHTS, IDEAS, WORK

Since my research question is on how to carefully place a structure in a landscape, a large amount of time was spent on iterating alternatives through sketches and modelmaking.



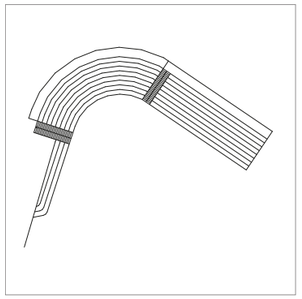
STARTING POINTS

As a starting point, I wanted to work with the existing elements of the site ›



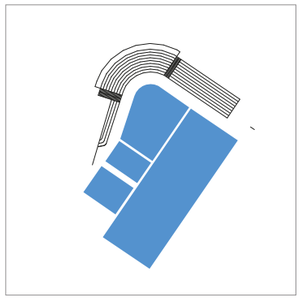
#1

the topography line



#2

the granite terasses

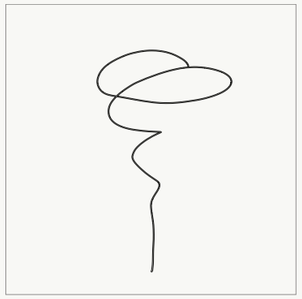


#3

the pools

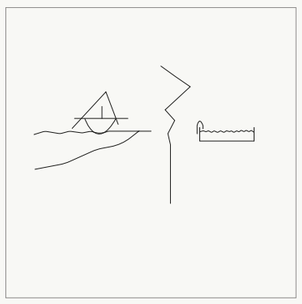
IDENTIFIED PROBLEMS

Early on I detected problems on site. The most dominant where ›



#1

the harsh weather and exposed location



#2

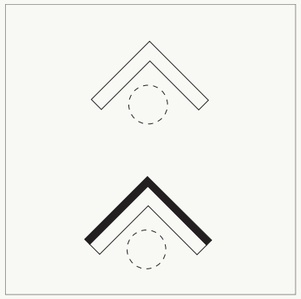
no connection to the sea

#3

the promenade interfering with the site

STRATEGIES

The strategies to solve the identified problems and guide my design have been ›

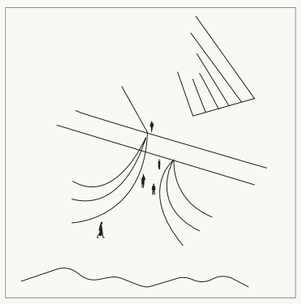


#1 *a*

the shape and placement of the structures in order to create a pleasent area within

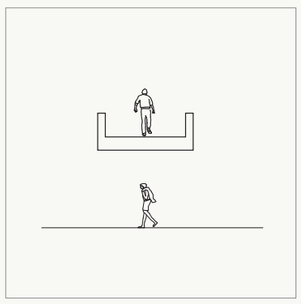
#1 *b*

the solid wall as a protector



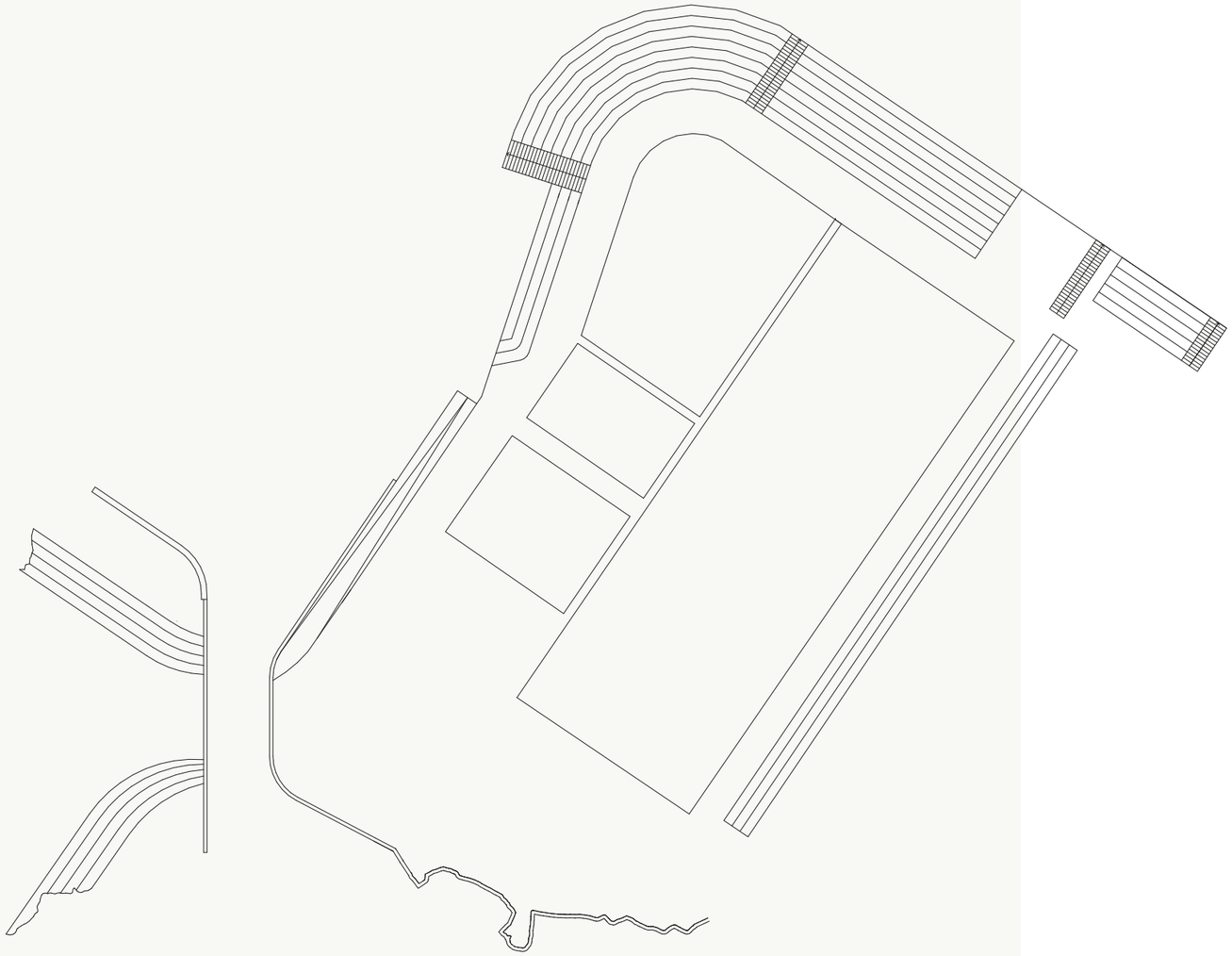
#2

gently carve out the landscape to connect the pools and the ocean



#3

strandpromenaden redirected onto a bridge over the carved out area



DESIGN PROPOSAL

RAUNZAUBADET

worthwile

a
building
can be

crying out

trying

by all means available
to attract attention

a building
can speak

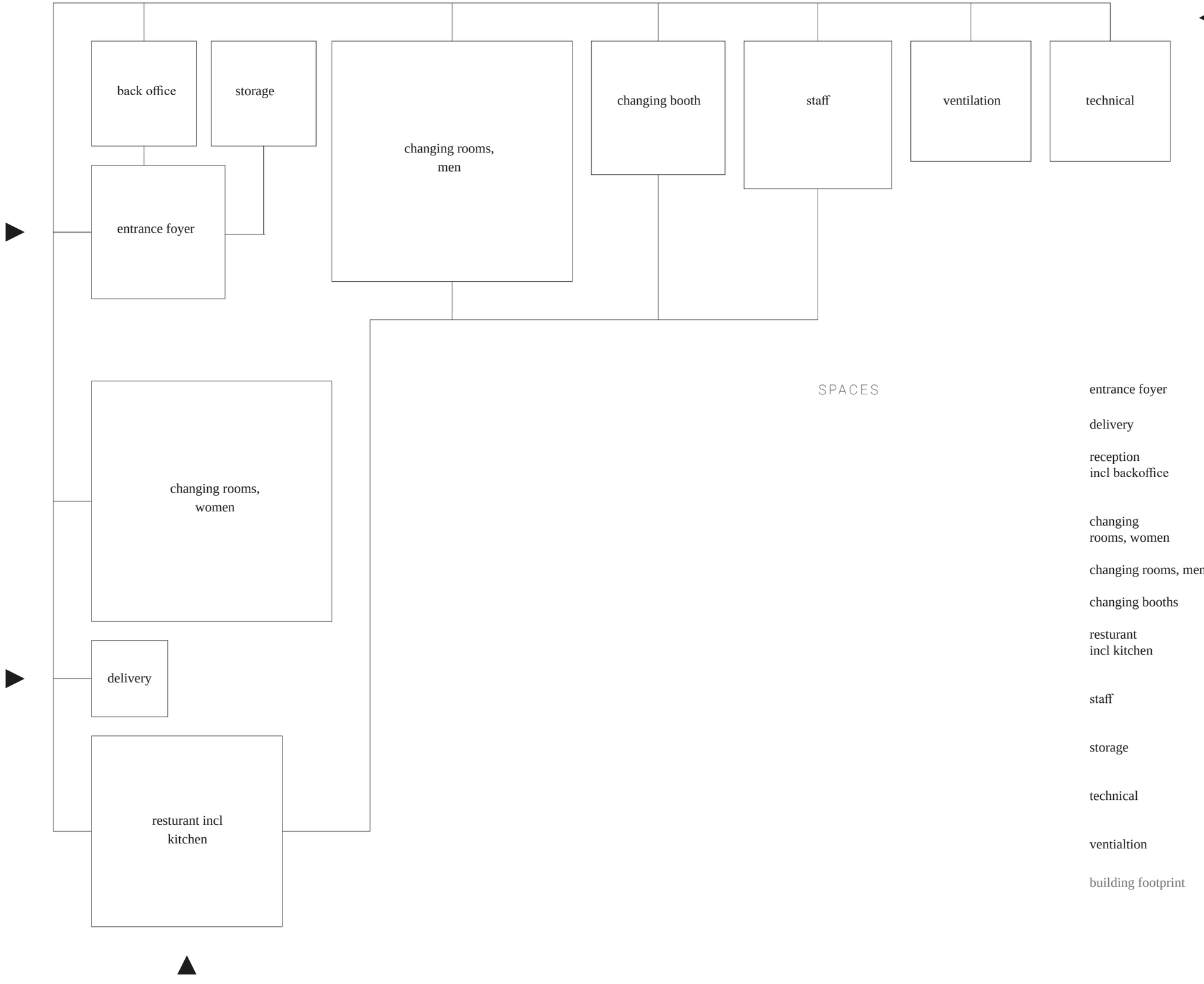
with quiet intensity

making it worthwile

passing

every day

Fredrik Lund

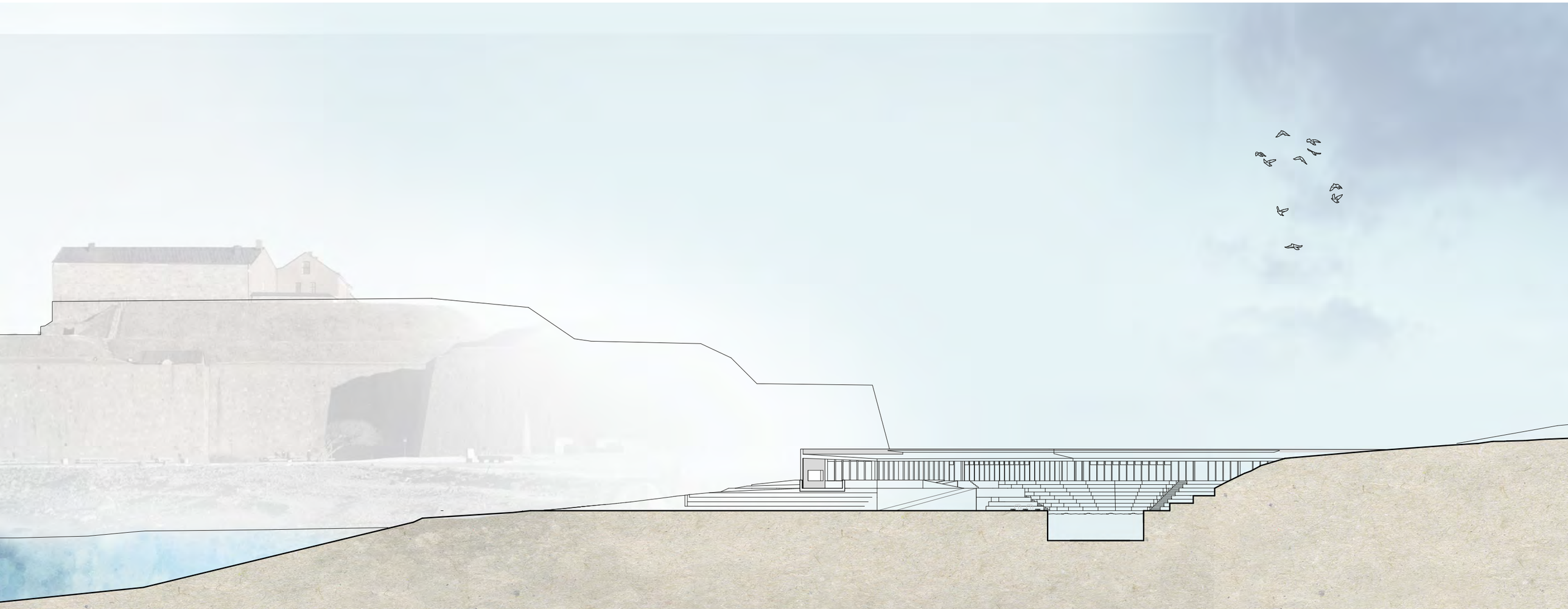


SPACES

entrance foyer	50 sqm
delivery	15 sqm
reception incl backoffice	30 sqm
changing rooms, women	160 sqm
changing rooms, men	160 sqm
changing booths	50 sqm
resturant incl kitchen	100 sqm
staff	60 sqm
storage	30 sqm
technical	40 sqm
ventialtion	40 sqm
building footprint	1100 sqm

Descending from Raunzauklippan towards the ocean, one gets this view over the bath and the fortress in the background.

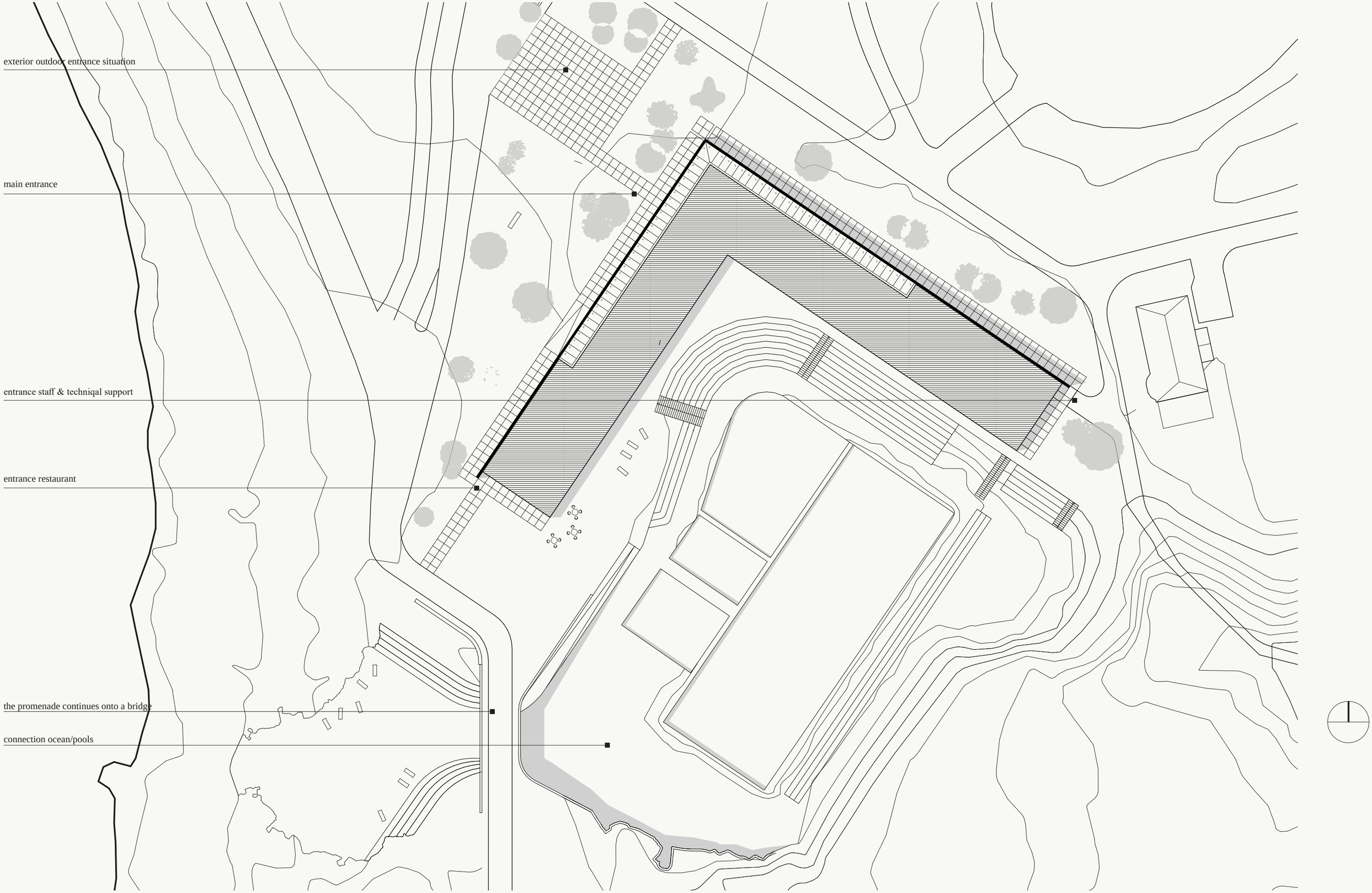
The new facilities embrace the qualities on site and protects the bather from cold winds and heavy rains



SECTION OF SITUATION | 1:300

When placing a structure in the landscape, one must consider if it should blend in or contrast it. With the grand fortress in the back and the walls of the quarry in the east, the answer for me was quite clear.

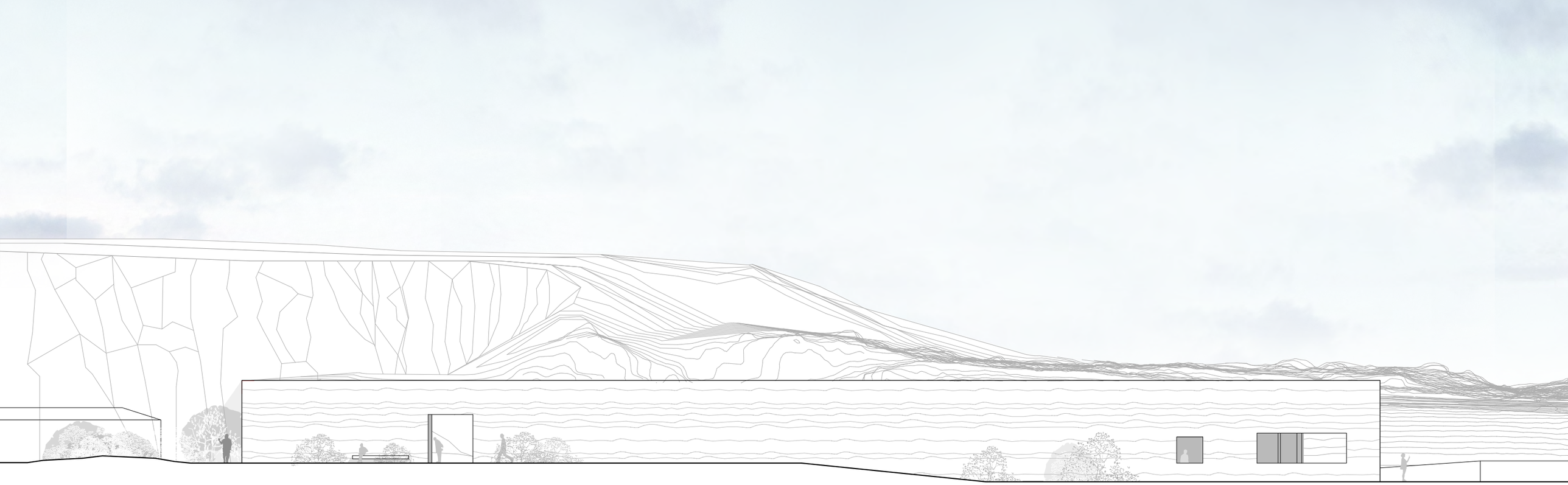
I decided I didn’t want to compete with it but instead blend in within the landscape. I wanted it to sit gently in the landscape and somehow - just simply be there as the slash in-between nature and culture.



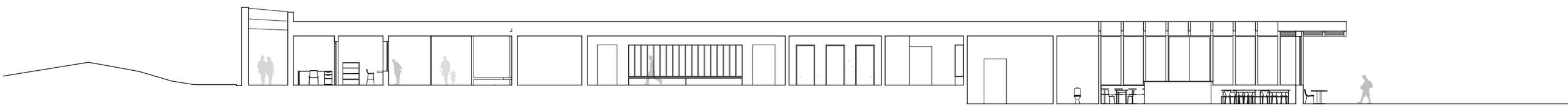
SITEPLAN | 1:500

Once you approach the main entrance it’s something very solid. It just stands there as if it always has and always will. The outer wall has only a few openings. The entrance has a clear sightline, following the building’s north wing towards the east.

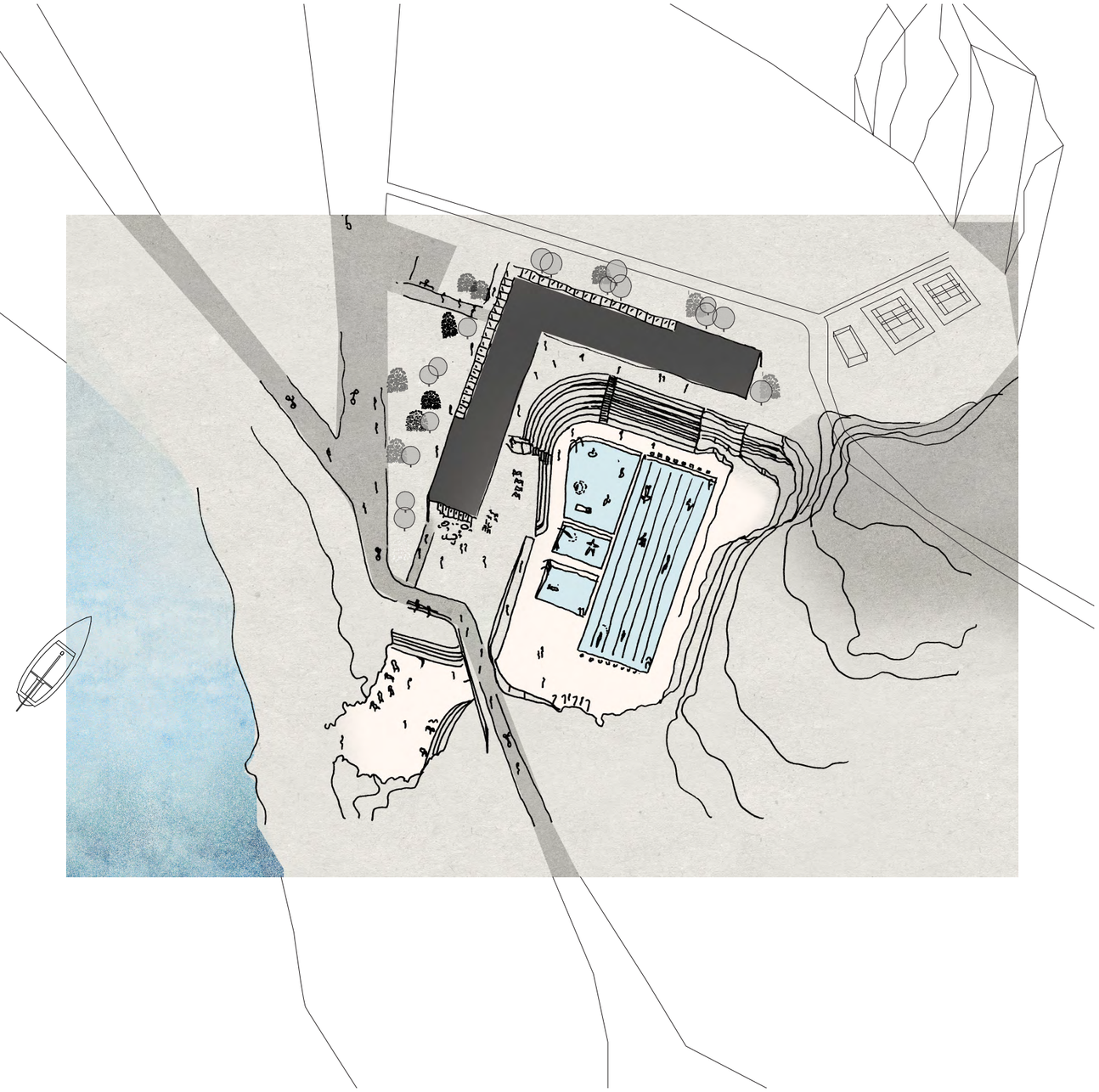
view of the entrance



WEST ELEVATION | 1:200



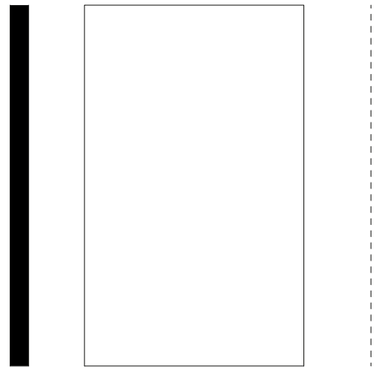
SECTION B-B | 1:200

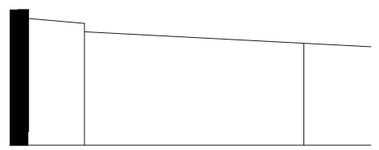


Considering I’m designing an outdoor bath - that shall be running only during the summertime I have been investigating what spaces really need to be indoors and what can be outdoors, insulated or uninsulated.

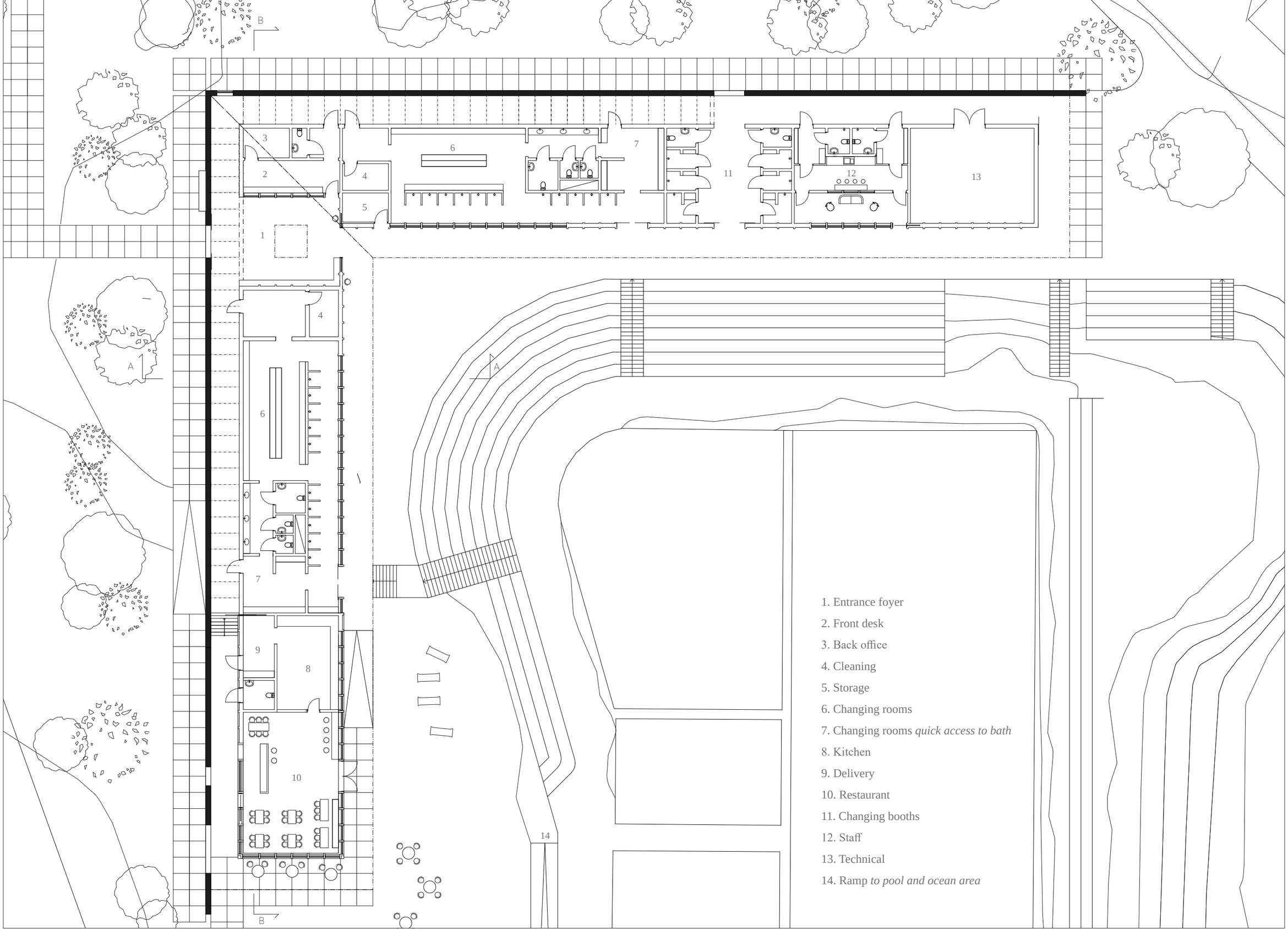
In the swedsih context - one wants to have a roof to be under when its raining, have something to protect you from the wind and let the sun warm you up after a swim.

These conclusions led to a conceptual idea, shown here in both plan and section:
the wall - sheltering an uninsulated communicating corridor throughout the whole building
The load bearing insulated wooden structure within - serving as the core of the building.
Finishing off with the cantilevered roof.

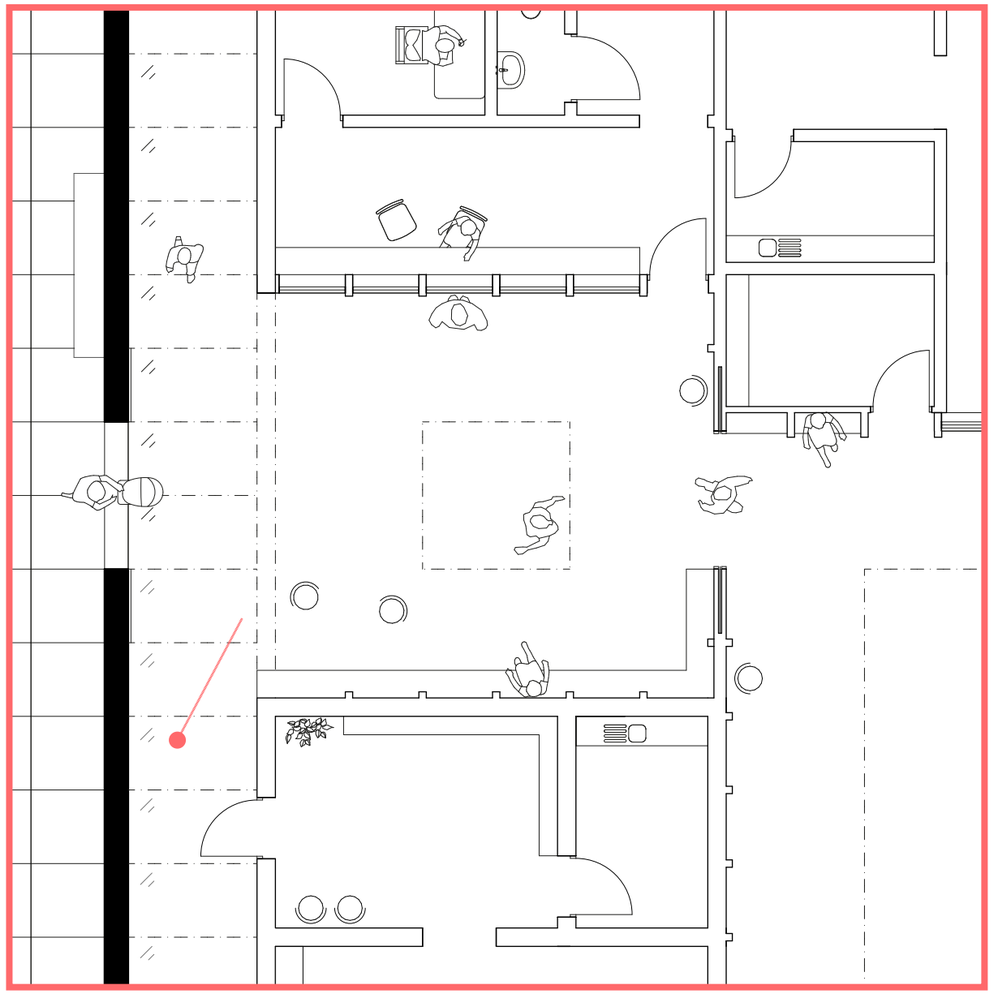


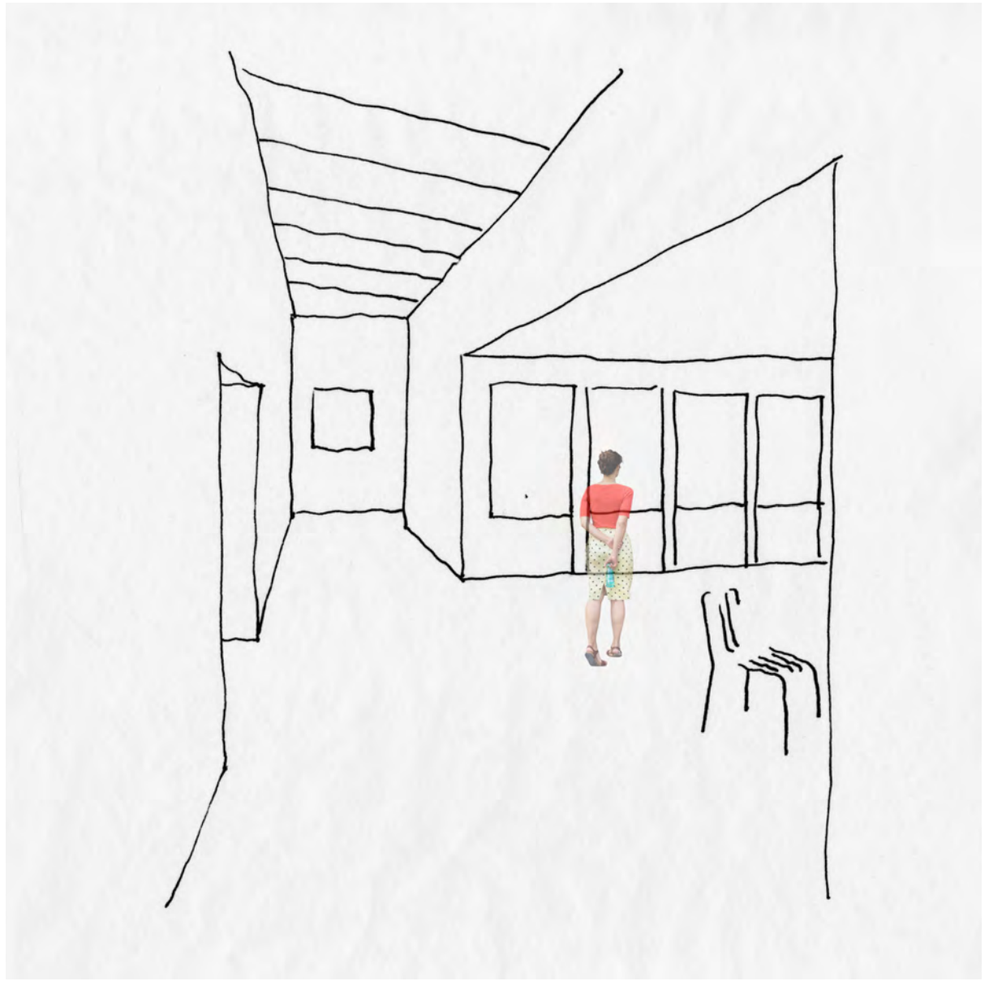


Raunzaubadet shall be a place for everyone and serve as a meeting point. My project aims to create a bath, not only for the participants of sporting events, but rather welcome anyone who wants to enjoy the pools, ocean and the facilities.

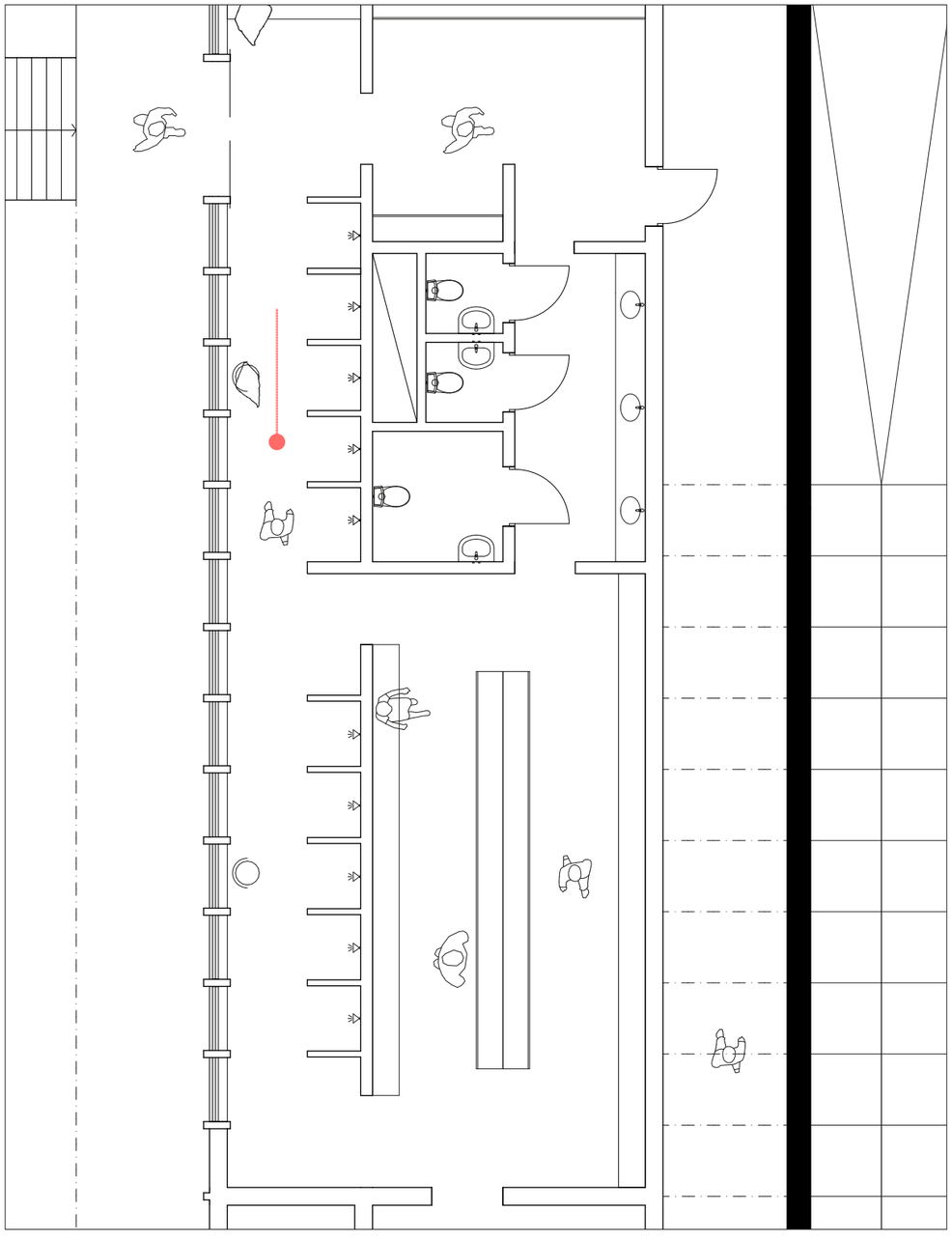

1. Entrance foyer
2. Front desk
3. Back office
4. Cleaning
5. Storage
6. Changing rooms
7. Changing rooms *quick access to bath*
8. Kitchen
9. Delivery
10. Restaurant
11. Changing booths
12. Staff
13. Technical
14. Ramp *to pool and ocean area*

Once you enter the building you’re being welcomed into this entrance square where you can pay the entrance fee, buy an ice cream or simply take a seat on a bench while waiting for friends.

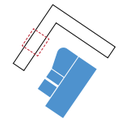


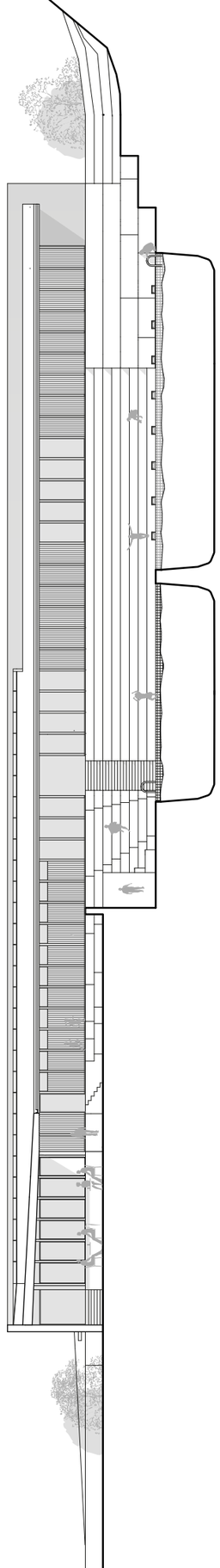


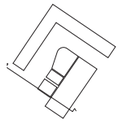
ENTRANCE | 1:100



The changing rooms follow the simple logic of separating the *dry* and *wet* parts - where showers and toilets share the same wall.
My initial idea was to have the shower section uninsulated - strengthening the notion of a rough outdoor bath. Due to the swedish climate however, one might want a warm shower experience after swimming on cold days. I therefore kept the showers in the insulated area - where the inner walls are covered in galvanized metal sheets aiming to still create a rough feeling and give a sense of semi outdoorness.

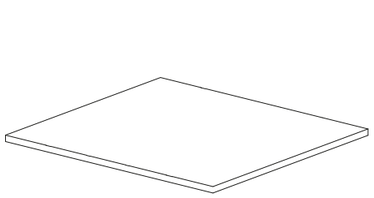


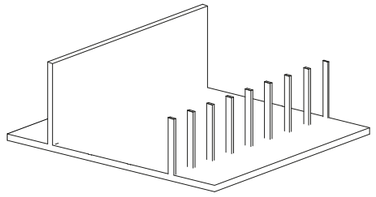


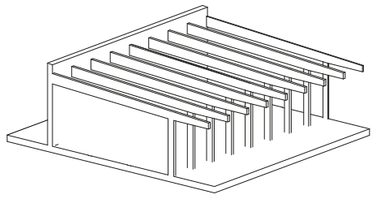


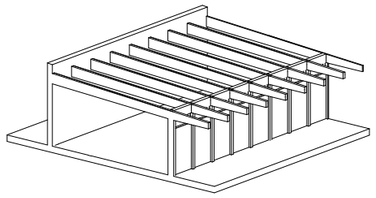
SOUTH ELEVATION | 1:300

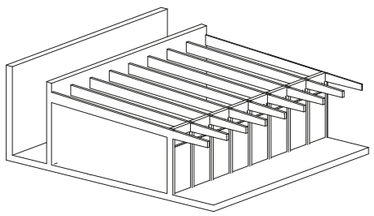
After a swim, one ascends the granite stairs and hits the opening to the changing rooms

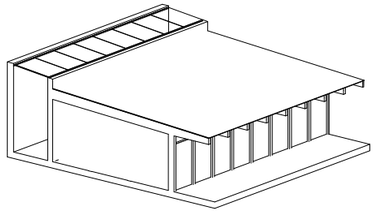










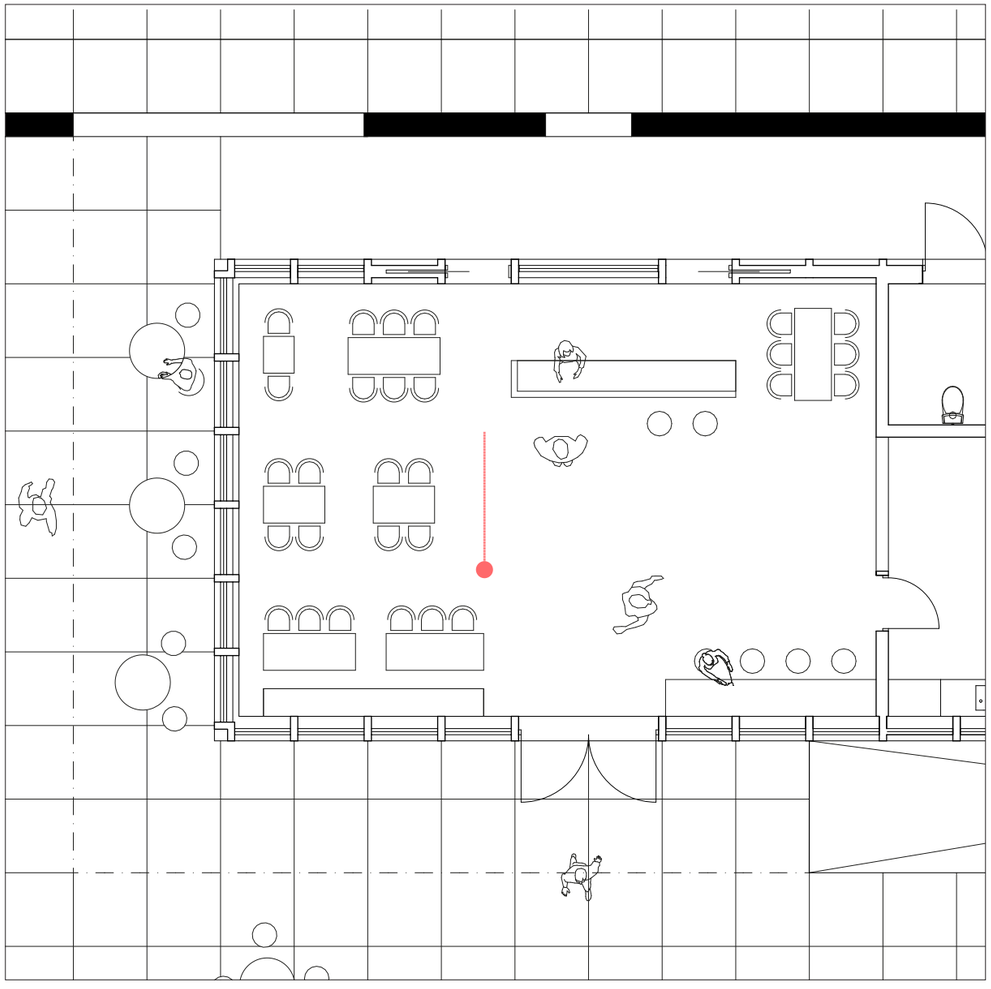


showing a principle of the construction

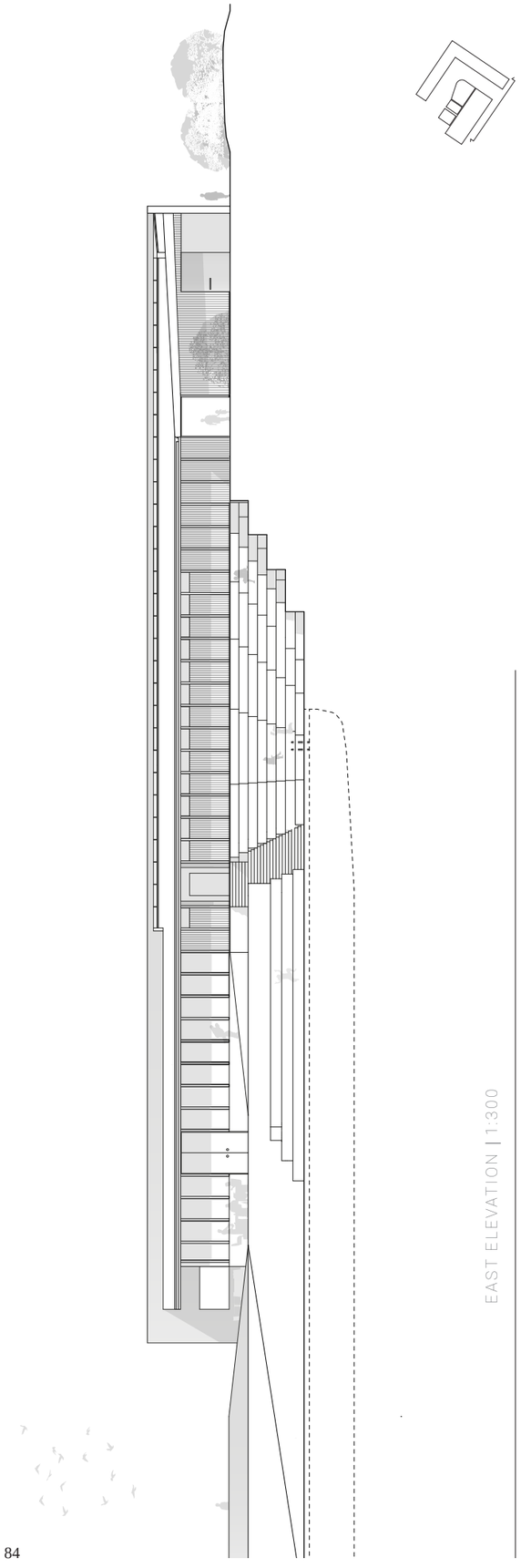
The building consists of an outer wall in rammed concrete, serving as a protector against harsh weather.
The wooden construction within stands on a set of pillars and walls holding up the roof beams. The construction is based on a simple 1.2 x 1.2 meter grid which serves like a theme throughout the structure.

View inside the communicating corridor, facing north. Further down the corridor one can get a glimse of the skylight letting in the daylight.

Entering the restaurant. Here one can enjoy the view like paintings - through the openings in the concrete wall. The roof height is generous and the structure is visible - creating an open and airy feeling.



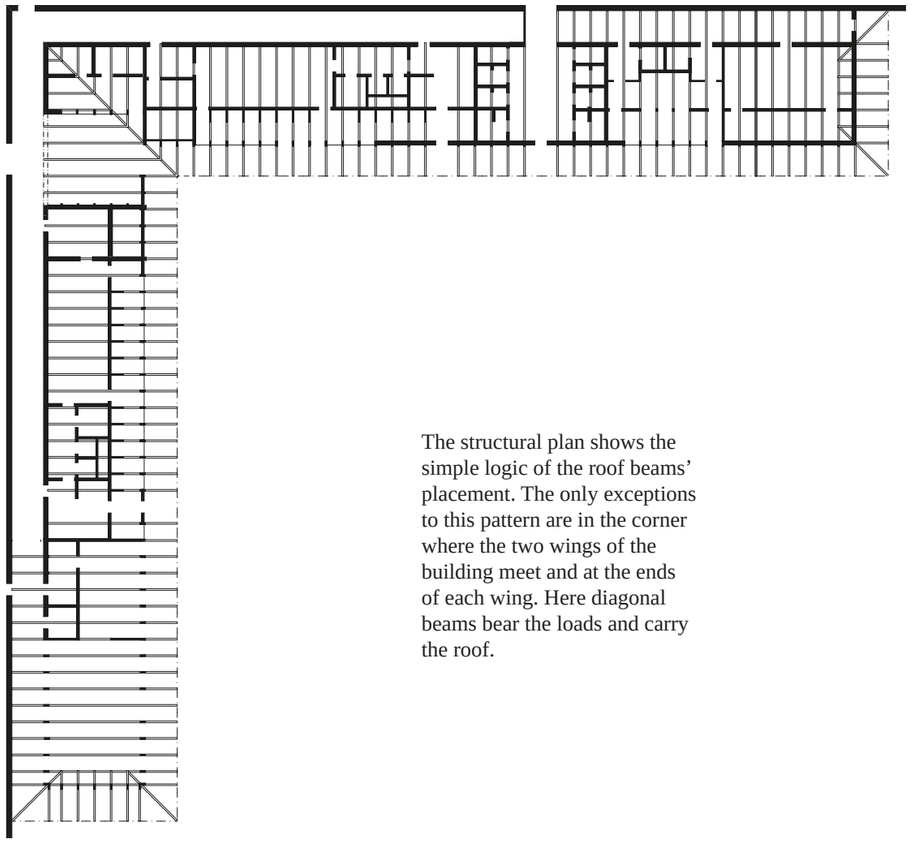
RESTAURANT | 1:100



EAST ELEVATION | 1:300

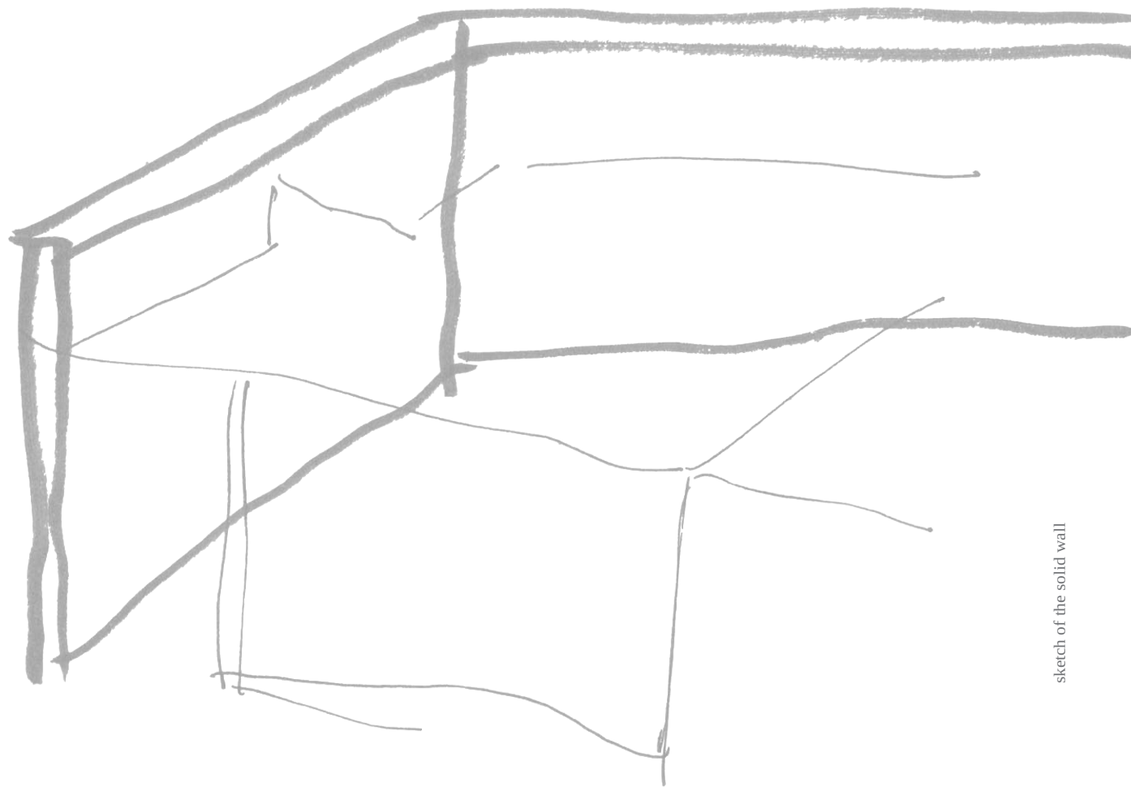
The facades towards the basins are covered in a warm wooden panel - serving as something soft for the bather to be embraced

NORTH ELEVATION | 1:200



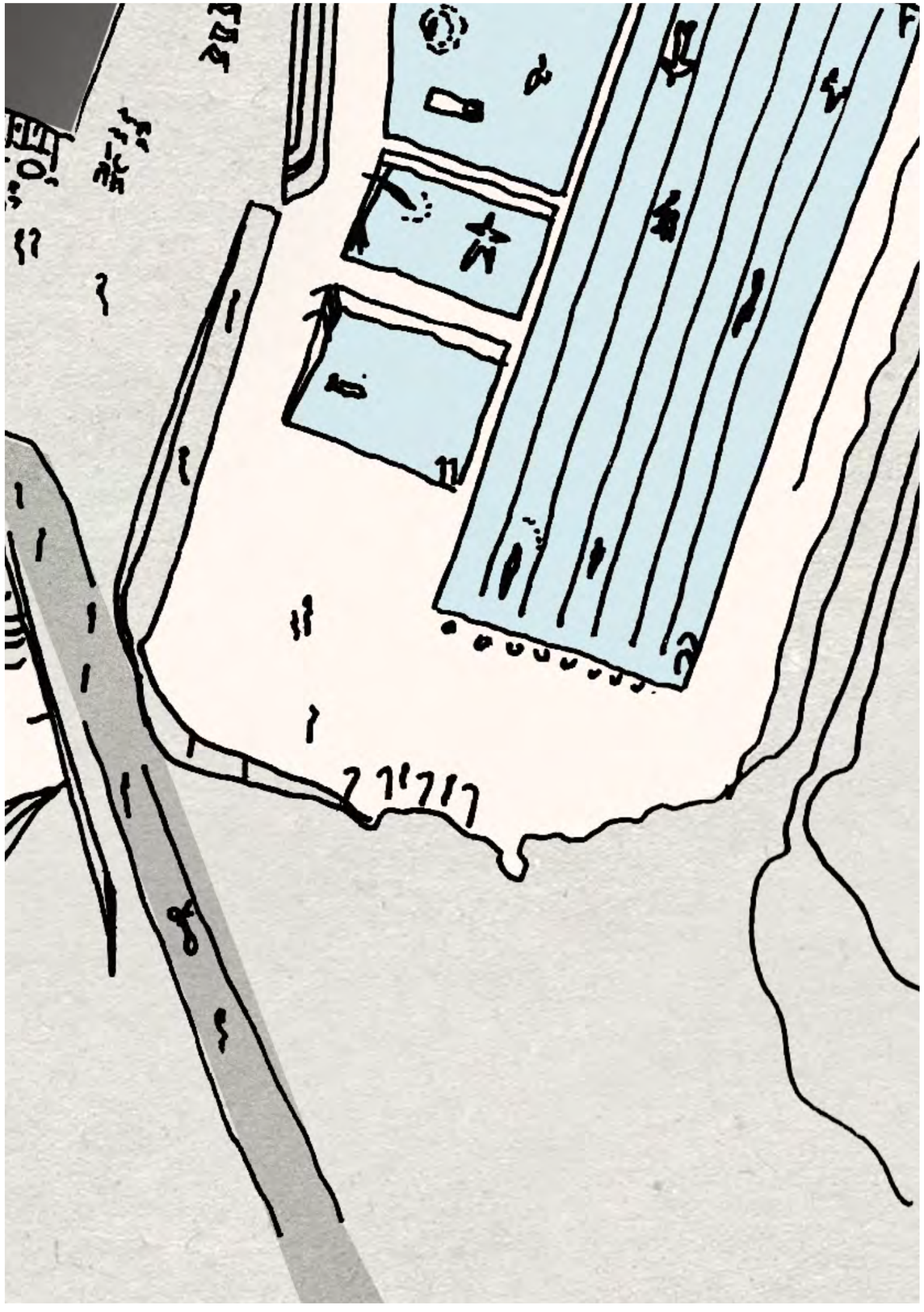
STRUCTURAL PLAN | 1:500

The structural plan shows the simple logic of the roof beams' placement. The only exceptions to this pattern are in the corner where the two wings of the building meet and at the ends of each wing. Here diagonal beams bear the loads and carry the roof.

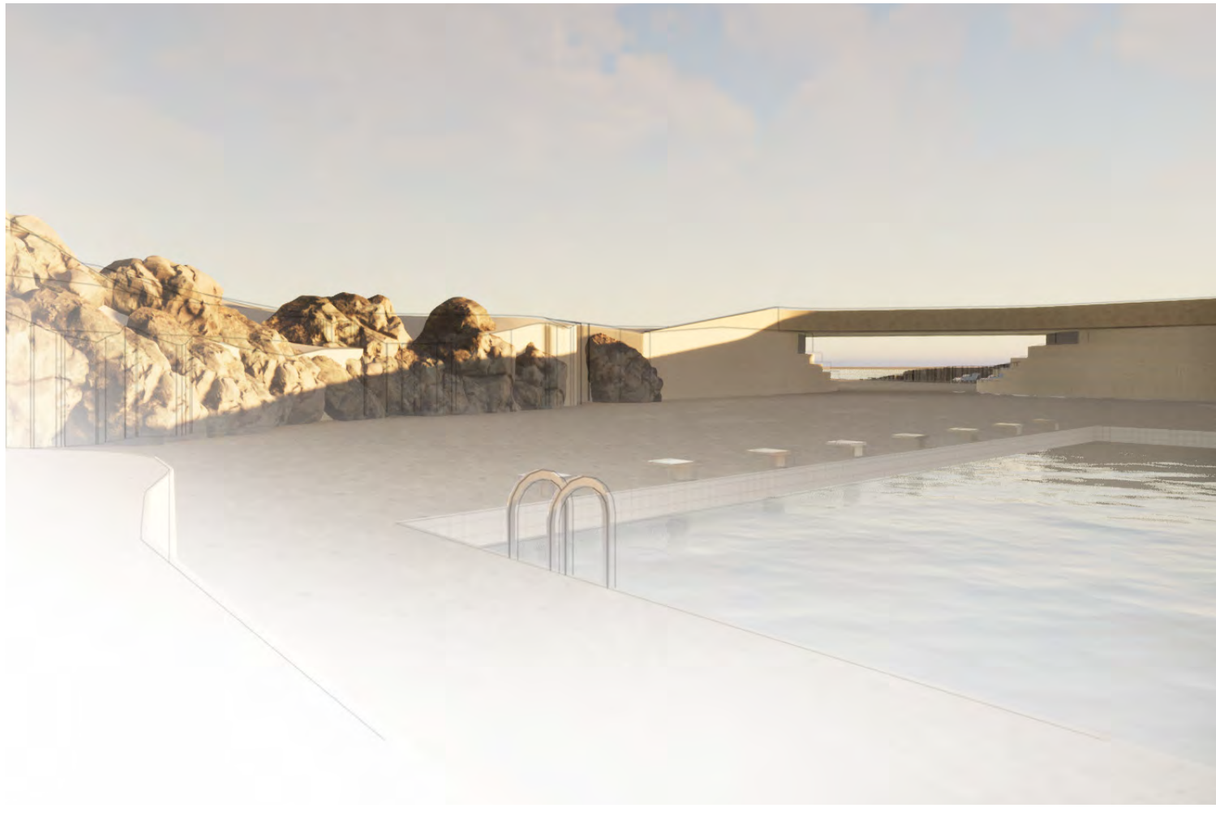


sketch of the solid wall

Moving outside - an exterior view of the restaurant



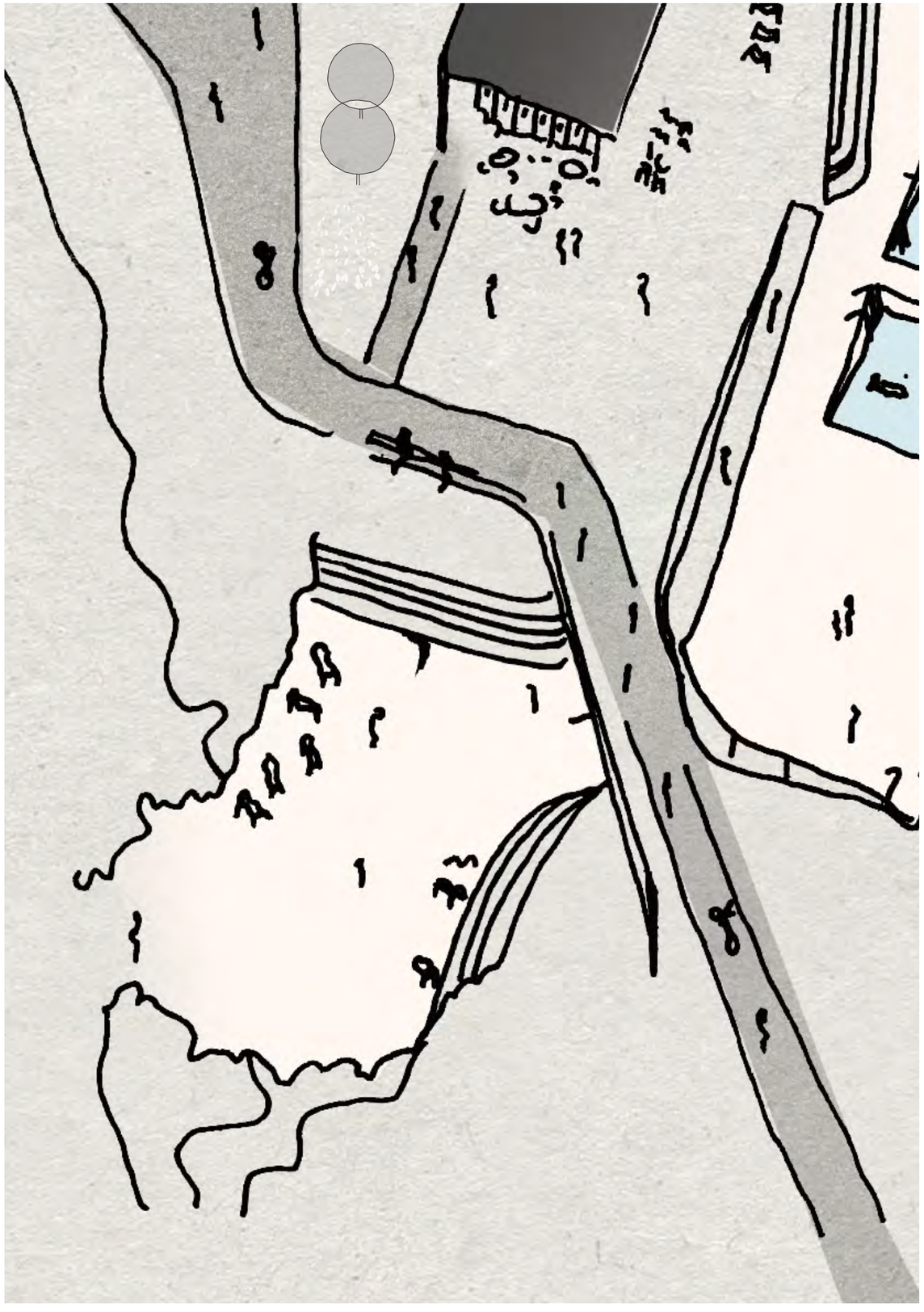
View towards the ocean, standing under the bridge



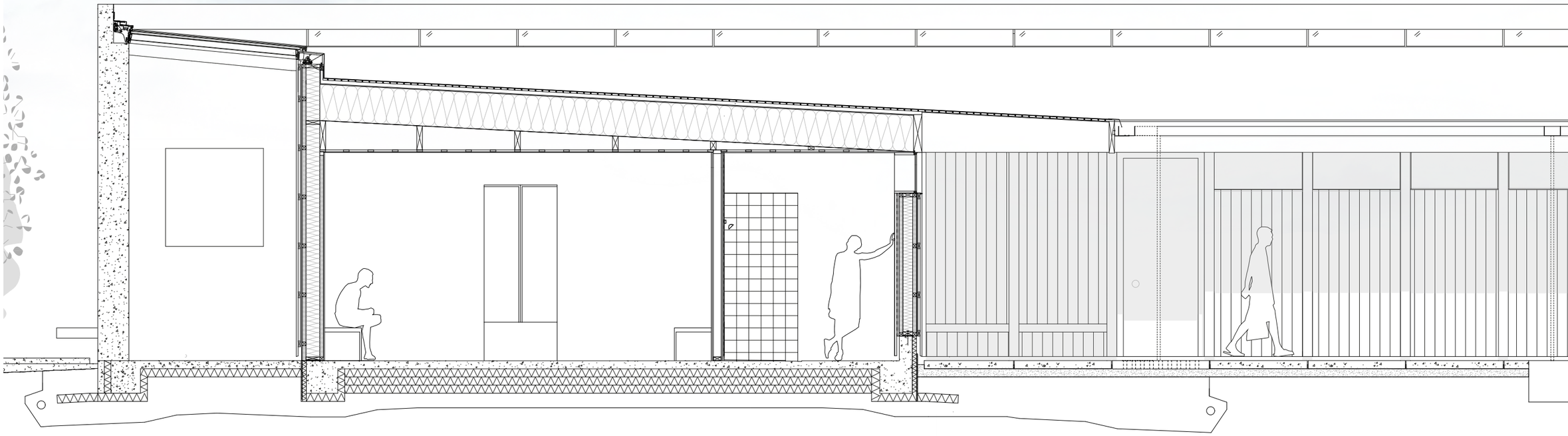
Descending three meters to the pool area - my intention is that it shall be an area full of life - with people walking in and out, under the bridge, between the ocean and the pools.

View towards the ocean, standing by the foot of the 50 m basin

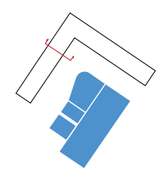
A few steps further towards the ocean



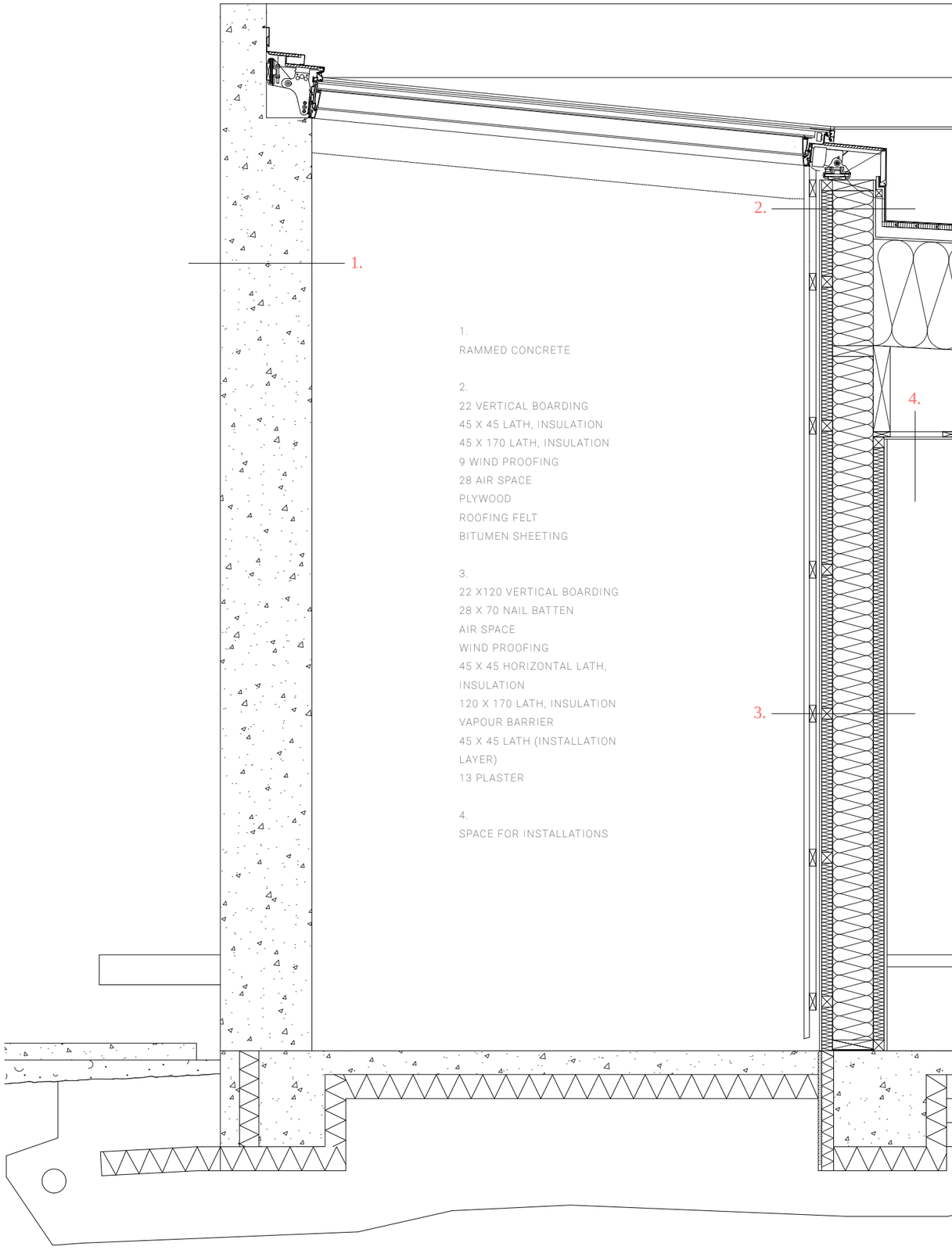
In order to have a further look into the actual construction and its connection to the choice of material - I’ve chosen to zoom in on this principal cross section.



SECTION A-A | 1:50

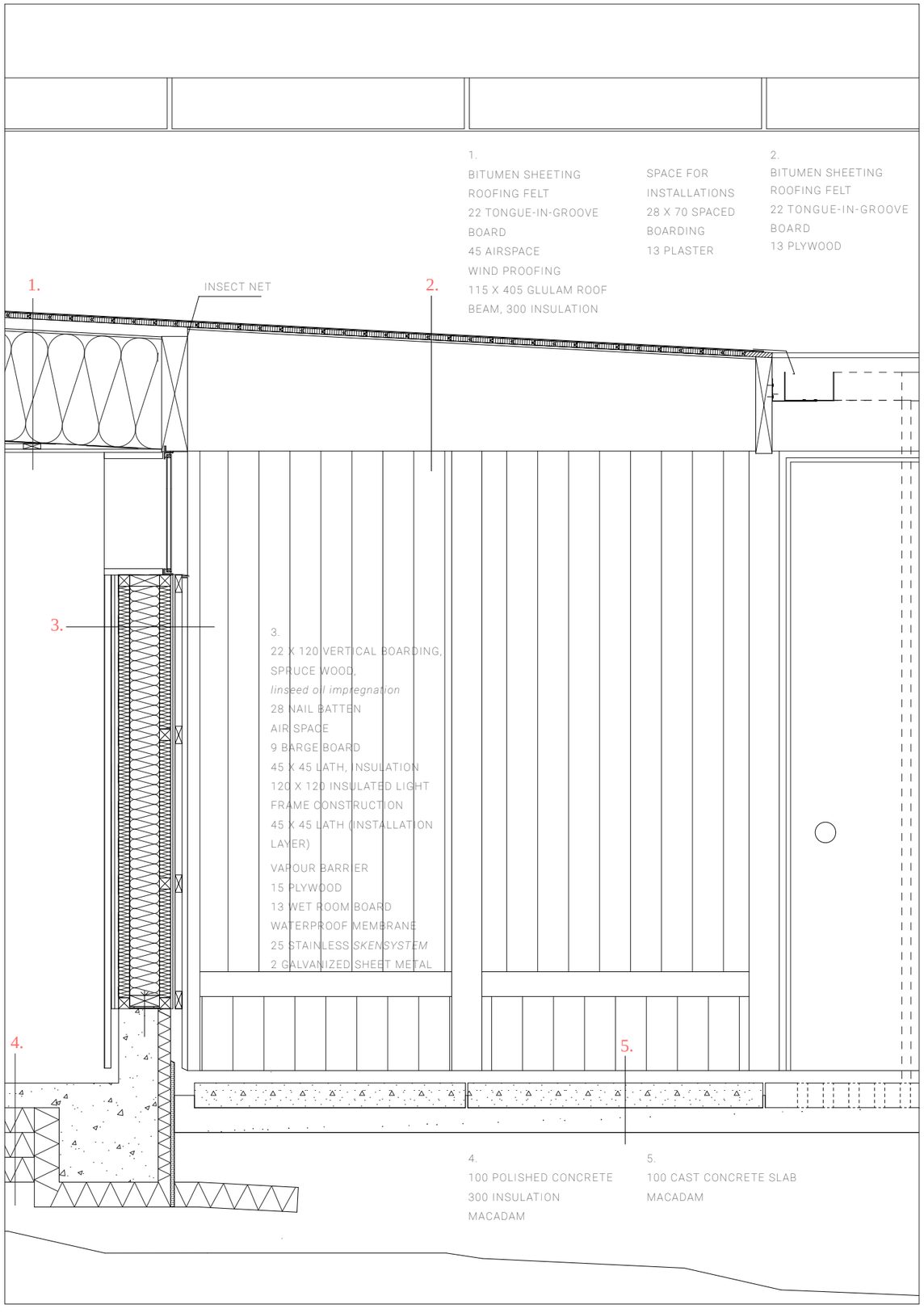


I’ve chosen rammed concrete for the wall. The material’s particular characteristics in terms of its heavy appearance as well its solid mass gives the building the protection it needs, to be able to stand for a long time.



The wooden structure within stands out with its characteristic protruding roof, that serves as a shelter for visitors on rainy days or when the sun is too strong.

The grid is clearly visible in the elevation, where the pillars meet with the glulam beams.
The facade panels of spruce wood are processed with linseed oil in order to keep obtain the warm tone.



CONCLUSION

As the project is coming to an end, I'm looking back over the last couple of months that have passed. What did I want to achieve, and did I do so? The inital task was for me to start trying out how to design and create architecture that respects and puts emphasis on the surrounding landscape. To really get to know my site, Simstadion in Varberg, I visited it almost every single day during the Christmas holidays. I sat at different spots, tried to capture locations from where I felt shielded from the wind, and from where I got the best view of the surroundings. As the Norwegian architect, Sverre Fehn nicely puts it: *"Try to find the best spot on your site, and don't build there"* (NRK, 2018).

Should my design blend in, or contrast the surroundings? When present at the site, the grand fortress fästningen, just north of the outdoor bath made a remark on me. With the question in my mind – and the image of the fortress in my head – the answer became quite clear. I didn't want to compete with it. Instead, I wanted to design a building that nicely would blend in with the surroundings – and simply be *"a building that can speak with quiet intensity, making it worthwhile passing every day"* (Lund, 1996). That also harmonizes with the building's purpose of serving as an outdoor swimming facility for everyone.

Going forward, the next step was to try out my ideas through sketching and modelmaking. Early on I made a landscape model in scale 1:400 – to have the whole site right in front of me. Through modelmaking and sketching, I tried out different locations for the structure that constantly were tested in dialogue with fellow students and tutors, who challenged me and that opened my vision to see new things and opportunities.
While working with this, I constantly thought about how to relate my design to the landscape and nature around it, how to respect the site and create something worthy of it. With this being something I have previously struggled with, this semester gave me the opportunity to dig into it, to approach the subject which has given me valuable knowledge within the field. Extracting knowledge from references and testing it through sketching and guidance, the work has been enriching and fun.

The second part of the semester has been more of a zoom-in of the project, where I have been trying to answer the sub-research question: *How can facilities be designed such that they withstand the test of time and resist the tear of saltwater, wind and sun*? The exposed site, with the ocean just in front, poses a great challenge for construction and the choice of materials.
I wanted to achieve obvious legibility in my project – where the construction and choice of material are obvious, and their advantages are used. My proposal consists of a wooden structure embraced by a solid wall. The wall of rammed concrete stands on the site as it would never go away, despite whatever storms hit it. The wooden construction is not only hugged by the wall, but has also a protruding roof, protecting the wooden façade to last longer. Detail drawings have also been conducted, where a deeper understanding of what small things within the construction can make a difference whether a building can last for long – or not.

BIBLIOGRAPHY

LITTERATURE

Deplazes, A. (2018). *Constructing architecture: Materials, processes, structures.* Basel: Birkhäuser.

Christan Norberg-Schultz (1996) *Nightlands - Nordic Buildings*

Various. (2009). *BATH VIEWS: FUJIMORI, INUI, FUJIMOTO, ISHIGAMI, TORAFU, NAGAYAMA.* TOTO PUBLISHERS.

Pallasmaa, J. (2012) *The eyes of the skin*

Nanfeldt, M. (Ed.). (2008). Gert wingårdh *: Thirty years of architecture.* ProQuest Ebook Central https://ebookcentral.proquest.com

Lefaivre, L., & Tzonis, A. (2003). Critical regionalism : architecture and identity in a globalized world. Prestel.

Durisch, T. (2014). Peter Zumthor : *buildings and projects*. Scheidegger & Spiess

Møller, H. S., Utzon, J., Udsen, V., & Nagel, P. (2004). *Jørn Utzon houses*. Living Architecture Pub

Caldenby, C. (2013). Snedstrecksarkitektur. i M. I. Tomas Lauri, *Naturum*. Arkitektur Förlag.

Studentportalen. (18 01 2018). Retrieved from: http://studentportal.chalmers.se: https://student.portal.chalmers.se/sv/chalmersstudier/programinformation/Sidor/SokProgramutbudet.aspx?program_id=1617&grade=2&conc_id=-1&parsergrp=1 (06 05 2021)

Sveriges Landsbruksuniversitet. (06 05 2021). Retrieved from: Landskapsarkitekt - Uppsala: https://www.slu.se/utbildning/program-kurser/program-pa-grundniva/landskapsarkitekt-ultuna/?gclid=Cj0KCQjwp86EBhD7ARIsAFkgakhZqf-ZDUIWmJ5SaUB2a-V8NL9JZUSfCBD9Fj4bKXsVm0Mju3BsME4aAssqEALw_wcB (06 05 2021)

The Pritzker Architecture Prize. (1997). Retrieved from: https://www.pritzkerprize.com/biography-sverre-fehn den 06 05 2021

Miyajima, T. (2001). *Art house project in Naoshima: Kadoya.* Okayama, Japan: Benesse Coropration.

Investigating the Tectonic. (2017). i C. Schwartz, *Introducing architectural tectonics* (s. xliii). Abingdon: Routledge.

The four elements of architecture. (2018). i A. Moravanszky, *Metamorphism*: *Material Change in Architecture* (s. 96). Basel, Switzerland: Birkhäuser.

Trigueiros, L., & Gaenshirt, C. (2005). *Swimming pool on the beach at Leca de Palmeira*. Blau.

Lund, F. (1996). *Frame Levels*. Göteborg : Published by the author

Burton, L. (06 05 2021). Retrieved from: Lovell Burton : https://www.lovellburton.com/springhill-house

Fogelström, & Andrén. (06 05 2021). Andrén Fogelström. Retrieved from: https://www.andrenfogelstrom.se: https://www.andrenfogelstrom.se/badpalatset

ArchDaily. (06 05 2021). archdaily-com. Retrieved from: https://www.archdaily.com/947487/jarvabadet-swimming-pool-pavilion-aix-arkitekter

Kallbadhuset. (10 05 2021). *Kallbadhuset Varberg*. Retrieved from http://www.kallbadhuset.se: http://www.kallbadhuset.se/historia/

Dezeen. (06 05 2021). Retrieved from: https://www.dezeen.com/2018/10/29/peter-zumthor-secular-retreat-living-architecture-villa-devon/

Architectsjournal. (06 05 2021). https://www.architectsjournal.co.uk/. Retrieved from https://www.architectsjournal.co.uk/buildings/spirit-of-place-peter-zumthors-secular-retreat

Lennartsson, Britt-Marie (2017). *Varmbadhuset i Varberg: Antikvarisk utredning av interiör.* Report, Skepparen 19, Varbergs kommun.

Varbergsidrotten (Varbergsidrotten 2010, 2010)

JOURNAL

Hatz, E. (2006). Samtal om en bok. *Arkitektur*, p. 36-41.

Articel in Hallands nyheter:
Nilsson Loth, A (2017). Framtiden oviss för Simstadion. *Hallands Nyheter.* https://www.hn.se/nyheter/varberg/framtiden-oviss-f%C3%B6r-simstadion-1.4512469
Articel in Hallands nyheter:
Nilsson Loth, A (2017). Simstadion – från sötvattengrop till SM-arena. *Hallands Nyheter*. https://www.hn.se/nyheter/varberg/simstadion-fr%C3%A5n-s%C3%B6tvattengrop-till-sm-arena-1.4512468

BIBLIOGRAPHY

Bille Brahe, S (2020). Weekend. (*Fall 2020, Issue 01*). Published by the author

VIDEO

Wachtmeister, J. (Director). (2003). *KOCHUU* [Film].

Dilthey, I (Director). (2016). *Having a cigarette with álvaro siza* [Film]. solo:film

Refugium på Kivik Art Centre, Petra Gipp:
Johansson, M. (2012-04-16). *Refugium på Kivik Art Centre.* Inslag i Sverige!. https://www.youtube.com/watch?v=8s98tpvuVcE

Arkitektens hjem. Einar Hagem (Season 4, episode 1) [Part of a TV show]. NRK. https://tv.nrk.no/serie/arkitektens-hjem/sesong/4

PODCAST

Staden Podcast (2019) *#111 Staden och hälsan - kroppens vågor och spår*

INTERVIEW

Interview with Peter Börjesson, historian from Varberg with local knowledge
Varberg the 9th of September 2020

IMAGE SOURCES

#01, Agnes Martin, Untitled #3, 1974
Retrieved from: https://www.moma.org/artists/3787
2021-05-09

#02, The Caribbean hut, illustrated by Semper
Source: Illustration by Gottfried Semper from *Style In the Technical and Tectonic Arts, p. 666*

#03, The Leca swimming pools, Alvaro Siza
Souce: Photography from *Swimming pool on the beach at Leca de Palmeira, p. 64*

#04, Studio house for Simo Heikkilä, Fredrik Lund
Souce: Illustration from *Frame levels, p. 134*

#05, Spring hill house by Lovell Burton
Retrieved from: https://www.lovellburton.com/springhill-house

#06, Badpalatset by AndrenFogelström
Retrieved from: https://www.andrenfogelstrom.se/badpalatset

#07, Järvabadet
Retrieved from: https://www.andrenfogelstrom.se/badpalatset
https://www.archdaily.com/947487/jarvabadet-swimming-pool-pavilion-aix-arkitekter

#08, Kallbadhuset
Source: Photography from Hallands kulturhistoriska museum

#09, Secular Retreat
Retrieved from: https://www.dezeen.com/2018/10/29/peter-zumthor-secular-retreat-living-architecture-villa-devon/

#10, Simstadion around 1940
Souce: Hallands kulturhistoriska museum

#11, Map of Swedens's westcoast
Souce: mapbox.com

My mum and I by the sea. Summer 2020

Rantzaubadet

Master Thesis Spring 2021