

Through the St(r)eam

A public bath next to Göta Älv

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The aim of this master's thesis is to design a public bathhouse at Röda Sten, Gothenburg. To explore the public bath architecture as a upcoming topic in Swedish society since it is a building type that are being renovated a lot today. Some of the questions that would be investigated through this thesis to better understand the existing public bath architecture are; 'What are public bath architecture today and has it changed since the 70ties when the most bath houses where built?' and 'Which are different important factors and possibilities when designing a public bath today?'

Since the project is done in the studio Building Design it is a goal to reach as high detail level as possible when it comes to space, construction and materials. To faster get in to the design process the time for deciding place and program have been shortened down.

A lot of the existing bath houses today in Sweden are built during the 70ties. Over the years different functions like water slides and wave machines have been added when the use of the public baths changed from not only being the place where the people are learning to swim. Today we have come to a time where new public baths are being build since the old ones are starting to be a bit too old to renovate and also because of economical reasons. What are the use of public baths today?

The idea are to design a public bath on the very shore of Röda Sten. Some important aspects found from the site analysis is the walkway following the shore and the height difference of the water and the walkway. Important qualities was to keep the walkway and to have a close connection between the bath house and the river. From these factors came the idea to let down the bath underground to make free passage for the walkway to continue over it. This concept led the master's thesis to investigations about strategies to let in light from the sealing without getting too much transparency. And also: 'How do we build in the landscape?'

Content

5	abstract
9	authors background
10	introduction
12	context
18	reference projects
24	program
26	process
32	midterm seminar
44	design proposal
59	discussion
61	reference list

Emma Asplund

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During primary school I trained swimming and have always loved to spend time in different swimming halls since then. Often when traveling I take the opportunity to visit different public baths in different countries. Some of the more famous baths I've visited are Peter Zumthor's Thermal bath in Vals and Széchenyi Baths in Budapest. I also visited some different baths in Vienna and Munich.

For me public baths are a place to work out, but also a place to have some everyday relaxation in the sauna after having a work out. Since swimming is a quite gentle training form it is a training form that suits many kind of different people, which can also be seen in the public baths where all kind of people meet in the same place. Today's swimming halls is usually a combination between swimming hall, teaching pool, spa, adventure baths, jumping towers and can be a quite stressful and messy environment to be in. I want to design a public bath for the people that do not really care about the adventure part but more want to work out and then have some everyday relaxation in the spa afterwards. Or why not to the old lady needing to do some muscle rehab in the pool?

When doing my internship I was working a lot with projects that was much more in detailed than projects have been in university. I started to be more interested in interior design and to really understand how much the details actually means for a project. This led me in to that my thesis should mainly be to design a building more in to detail and the studio Building Design.

Main Question and Objectives

The purpose of this thesis is to design a public bath at Röda Sten in Gothenburg. To explore bath house architecture in Sweden today and to investigate what factors and possibilities there are when designing a public bath. The objectives is to reach far in the design process to achieve a high detail level of the building.

After working some with the thesis i decided to design the public bath under ground. The research questions then became 'How to build in the landscape?', 'How to build the landscape on top of the public bath to make it a view point and a pause on the walkway?', 'How do I use the landscape on top of the building to let light down to the public bath?' and 'How do i work with the shore of the water?'.

My personal opinion is that today many bath houses are a quite messy place with a lot of functions in the same place. Usually therefor also targeting a large group of different people. I want to create a bath house with a more specific target group for the people that want to work out, rehab or just have a relaxing time in the sauna. These people are not interested in jumping towers or water slides but are maybe more interested to cool down in the river after their work out.

BACKGROUND TO PUBLIC BATHS

Baths is one of the most popular activities among people in Sweden and use to be in the top in different investigations. Baths works as a meeting point for people from different backgrounds. For the younger visitors the baths are used for playing and practising while for the older visitors more for exercising and rehab. For schools baths are a important factor in the swim education.

In Sweden the most Baths are built during the 60ties and 70ties and the lifetime of bath houses are said to be between 30-50 years. Many of the public baths today are said to not be worth renovating. Today many of the old baths have moisture and corrosion problems due to changes of the requirements of higher water and air temperatures, but also because of the high numbers of visitors. We have to choose between building new bathhouses or renovate the old ones. The advantages of building new ones are to meet todays requirements when it come to accessibility and energy efficiency. If the old building is in too poor condition its also more economically efficient to replace it with a new. (Malmryd, 2016, p49)

READING INSTRUCTIONS

Pictures and illustrations that does not have a caption is taken or made by the author.

Method

The method will be to look at different reference projects. To investigate what kind of qualities they have and what defines them as qualities. What concept do they have and what different design elements do they use? Do they have any specific strategies? To look back at the references again during different phases of the thesis is also something that I think can be useful to get different perspectives.

Physical models will be used in different scales to get a better understanding for the size of the slope and how the public bath can relate to that. Models in a bigger scale will also be used to easier understand the spaces i create. Model photos is also something that is used to get perspectives of the bath when walking on the two walkways on the site.

Early layouts for both booklet and posters have been used to make the last phase of the thesis less stressful. I have also decided to try to only work standard working hours and to only work in university also to make it less stressful. When working with graphics I have worked with references consisting of illustrations and drawings with similar graphics that I wanted to have.

DELIMITATIONS

To faster get in to the design phase and avoid to get stuck in a big program or a comprehensive site analysis I have decided to work with a limited program and to not question the site of the bath house. The program could for example be extended with a cafe that could be an access for both the visitors of the bath house and for the people just passing the site. Another extension of the program that have been suggested is to have some kind of outdoor pool connected with the public bath. But this is also something that i have decided to not take in to the program because of the time limit.

LITERATURE

Raumplan Versus Plan Libre - by Adolf Loos & Le Corbusiers

A comparison between Adolf Loos Raumplan and Le Corbusiers Plan Libre about different structural and design strategies to build up plans, facades and sections.

Strategi för Göteborgs sim- och badanläggningar - by Malmryd

This is an investigation from the municipality about public baths in Gothenburg from 2016 and have been used mostly as a source for facts and not a text of design rules that have to be followed.

Arkitektens Handbok 2016 - by Bodin, Hidemark, Nyström and Stintzing
My architecture encyclopedia.

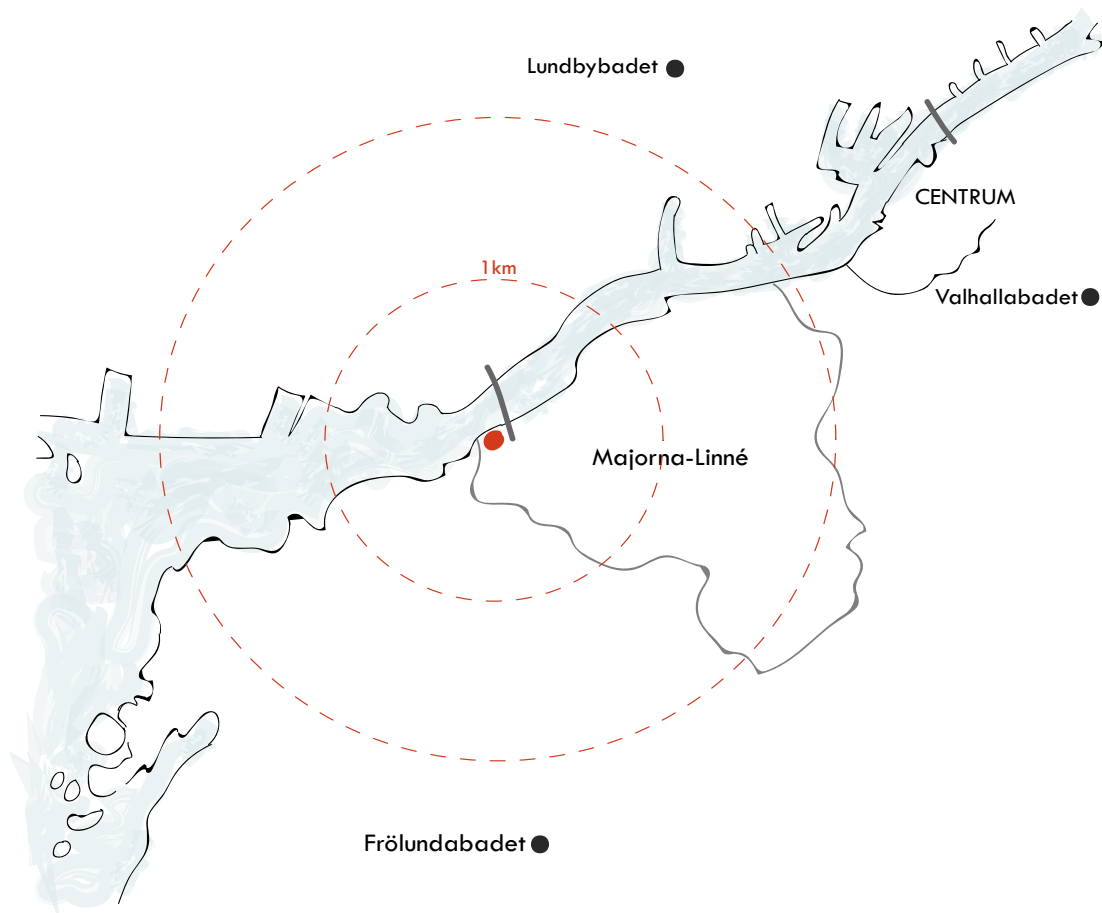
The Surrounding Area

Gothenburg's municipality are in the future planning to build a new public bath in the area Majorna-Linné. One of the most common reason to build a new bath house is to increase the swim skill among the inhabitants. In this area the swim skill is mostly good and the reason for placing a new bathhouse here is to get closer to schools and the inhabitants of the area but also to easy the amount of visitors in nearby baths.

The municipality want this bathhouse to be used for teaching, sport and exercise. It should have

public functions and be suited for families with children. From the municipality it is specified that it should contain a 25m pool, a smaller teaching pool and a family area.

According to the syllabus for children 12years old they are supposed to manage to swim 200m and to manage emergency situations at water with help tools of different kind.(Malmryd, 2016, p21, p23, p67)



Introduction to the Site

From the illustration underneath we can see that the site is on the border where the city meets the nature. It is also between the river continuing out in the sea, a bigger road and the big bridge.

Since its an area quite close to the city i think most people would arrive by public transportation, walking or by bike. If visitors would arrive by car there is a car parking with a walking distance of 400m from the site.

With public transportation you can arrive here by

boat, buss or tram. If you arrive by buss or tram you arrive at the two stations marked with a H in the map and the walking distance is about 900 - 1200m from the stations. If you arrive by boat you arrive at 'Klippan'.

When looking at the different ways of getting to the site we can see that most people would come from the same direction.



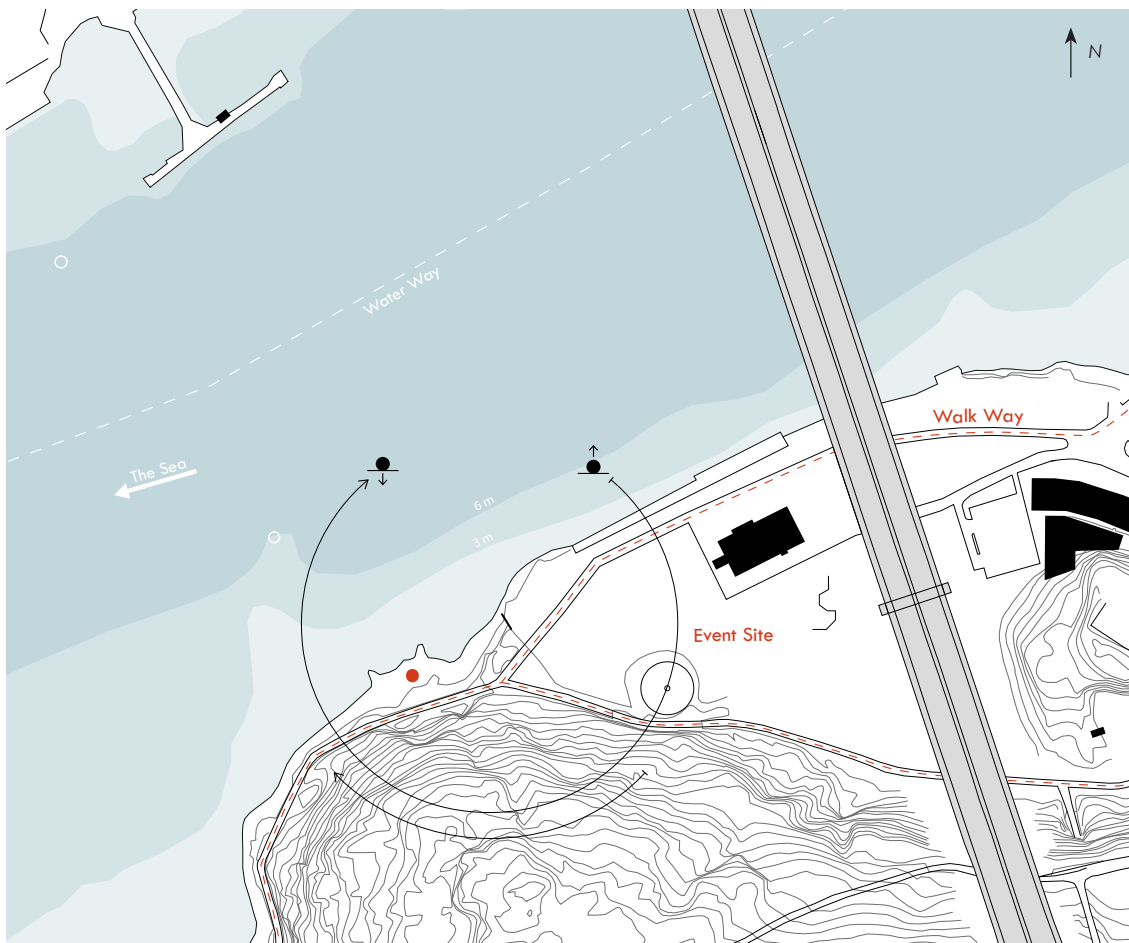
Analysis

Along the shore a walkway is passing, it's reaching pretty far beginning from a small fishing harbour in the east reaching almost all the way to Vöstra Frölunda. There is always a lot of people running and walking on this walkway and i think this is a big access for this site. Along the walkway it have been built on both sides of the walkway.

The closest building is the exhibition hall which together with the bridge sets the scale of the site. The area next to the exhibition hall is an event area which means that concerts and other

events can be hold here.

The water in Göta älv is usually not the cleanest one but it's possible to swim here most of the summer. In the middle of the river bigger boats are passing and the distance to them are around 90m. The water can rise about 0.5 meter up and down normally and the shore itself is not in a very good condition. The two sun paths shown are midsummer and midwinter.



History of Röda Sten

The area Röda Sten was earlier a industrial area until the bridge Älvsborgsbron was built year 1966. The industry taking place here was mostly the stone industry but among them also the company Svensk Sockerfabrik AB working with sugar. Svensk Sockerfabrik AB where using the building that are today called Röda Sten Konsthall and are used as a Exhibition hall. (GHT, 1973) Today Christmas markets are taking place here and there are also a restaurant situated in the building.

On the shore right next to the site a big stone have been painted red. This stone is also called Röda Sten, the Red Stone. It consists of an erratic made of red-gray granite about 2-3m in diameter.

There are a of theories about the stone, one is that through time ships have been rescued from storms and another one is that it was only used as navigation. (Fredberg, 1921, p33)(Lindroth, 1925, p41)







Thermal Bath

This is a spa designed by Peter Zumthor in the small village Vals located up in the Swiss mountains. It is connected with a corridor to a hotel higher up in the slope. From the hotel you can barely see the bath since the building is partly buried in the slope and the roof is covered with vegetation. It's like the building is a part of the mountain.

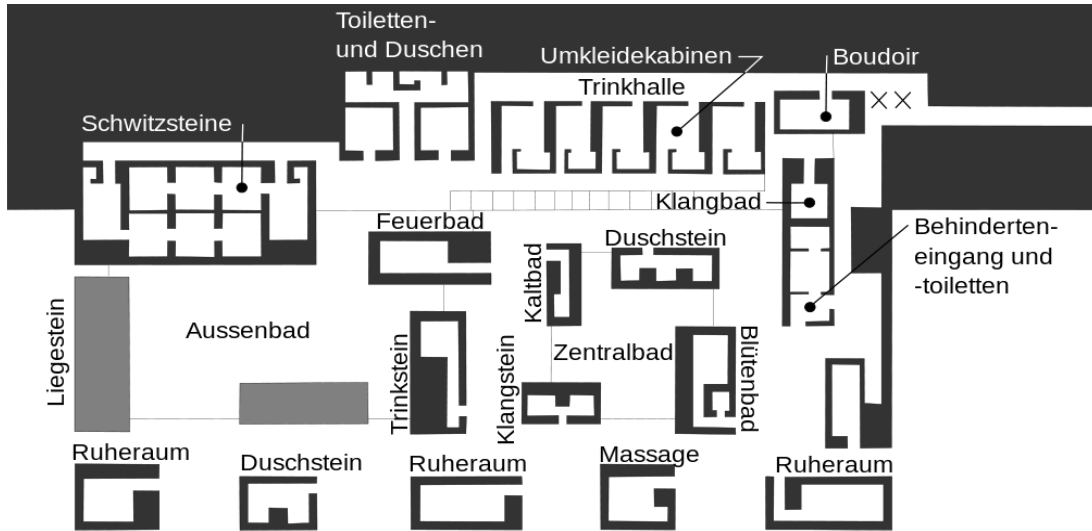
When entering the bath there is a number of small dressing rooms to choose from and then you continue to the showers further away. You enter the pool area along a long ramp going down. After this everything is a bit confused,

there are many stairs going down to different pools and a lot of other openings to investigate. The clues that are given for orientation are the views of surrounding mountains around seen through big opening-like windows.

I think it's interesting how he works with many different small and big enclosing rooms and also combines it with letting in sips of light in the sealing and sights through big framed outlooks. He also lets the framework be massive on the outside and lets this be his element for creating spaces.



Picture 1. Interior view of Thermal Bath, Vals (Fujimoto, 2014). CC-BY.



Picture 2. Plan of Thermal Bath, Vals (Rieser, 2010). CC-BY.



Picture 3. Overview of outdoor pool in Thermal Bath, Vals (Mantel, 2014). CC-BY.

H C Andersen Museum

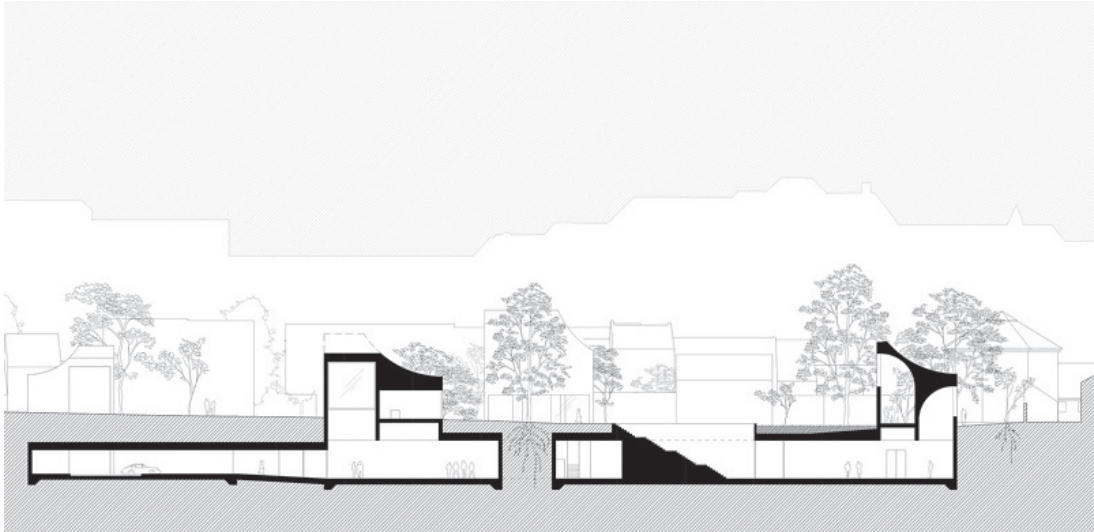
This is the proposal of the H C Andersen Museum made by the architecture office Norell/Rodhe. It won the second prize in the competition and is a public building combined with a park on top of it located in Odense, Denmark. (Norell/Rodhe, 2014)

I'm interested in this project because of its strategy to use the ground as a source for space and how it then hides under ground creating space for a park on top of it. In addition to this it uses different volumes connected to the

underground museum sticking up in the park and contributing to the space there. It also uses different strategies to connect the two surfaces, for example stairs between the levels and atrium also letting light in to the building.



Picture 4. Overview of the park on top of H C Andersen Museum, Odense (Norell/Rodhe, 2014). Reviewed with permission.



Picture 5. Section of the H C Andersen Museum, Odense (Norell/Rodhe, 2014). Reviewed with permission.



Picture 6. Overview of the H C Andersen Museum, Odense (Norell/Rodhe, 2014). Reviewed with permission.

Leça Swimming Pools

This is a public outdoor bath designed by Álvaro Siza Vieira from 1959 to 1973. It is located outside of Porto in Portugal on the beach at Leça da Palmeira.

These two pools are built in nature between the cliffs on the beach, like natural puddles from the sea. They are located next to a beach to be able to access the water even on stormy days when the water in the sea is too rough.

What I like with this project is that he is using the

height difference from the road passing along the shore and the beach to fit his changing rooms and other facilities inside the building who is hidden in the slope. Then he also uses the cliffs to create the pools without changing them and instead adds elements to keep the water in the pools. With the discrete material that he have chosen to work with the pools are melting in to the atmosphere of the landscape.



Picture 7. Overview of Leça Swimming Pools, Porto (Gänshirt, 2008). CC-BY.



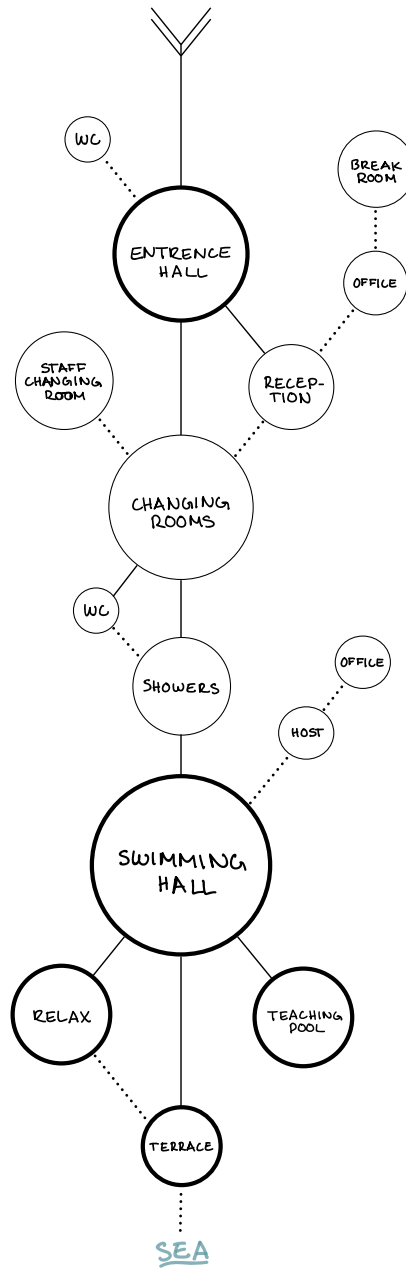
Picture 8. Overview of changing rooms Leça Swimming Pools, Porto (Gänshirt, 2008). CC-BY.



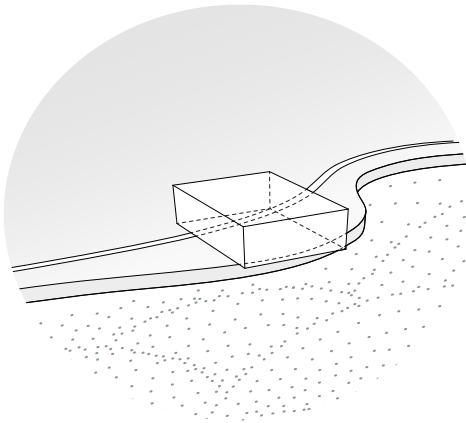
Picture 9. Cliffs meeting the pools, Porto (Janekpfeifer, 2004). CC-BY.

Program

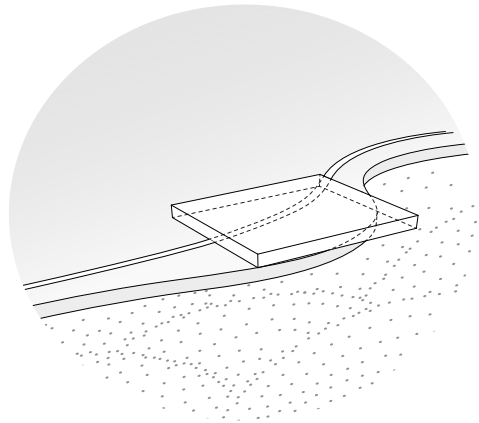
ENTRANCE HALL	85 m ²
- wind break	
RECEPTION	10 m ²
- two office places	
WC	9 m ²
GARBAGE ROOM	10 m ²
STAFF BREAK ROOM	40 m ²
- meeting staff 6 persons	
OFFICE	25 m ²
- 6 persons	
CHANGING ROOM	350 m ²
- Including showers	
WC	20 m ²
STAFF CHANGING ROOM	60 m ²
SWIM TEACHER'S OFFICE	20 m ²
BATH HOST	15 m ²
- view over pool area	
25 M POOL ROOM	350 m ²
- 1.2 - 1.8 m depth	
- pool size 25 x 16 m	
SMAL POOL ROOM	180 m ²
- 0.9 m depth	
SPA	100 m ²
STORAGE	40 m ²
- Close to pool areas	
CLEANING CENTRAL	30 m ²
- laundry & drying	
TECHNICAL SPACE	1150 m ²
- beneath the pool	



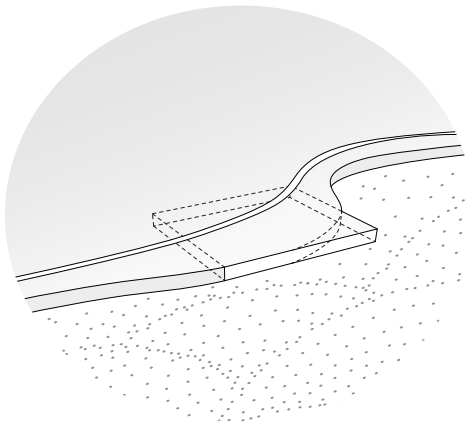
Building Concept



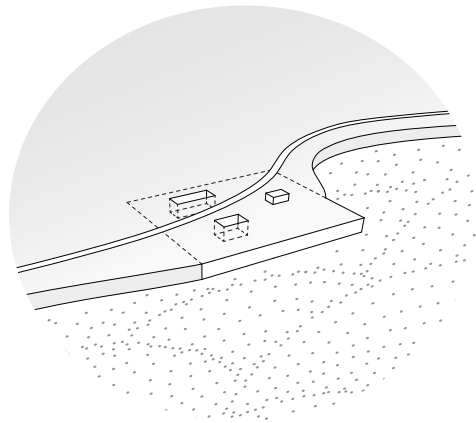
1. First iteration: placing volume on site, aiming to avoid the walkway along the shore and still having a connection with the water.



2. Shaping volume more suiting to inner connections between functions.

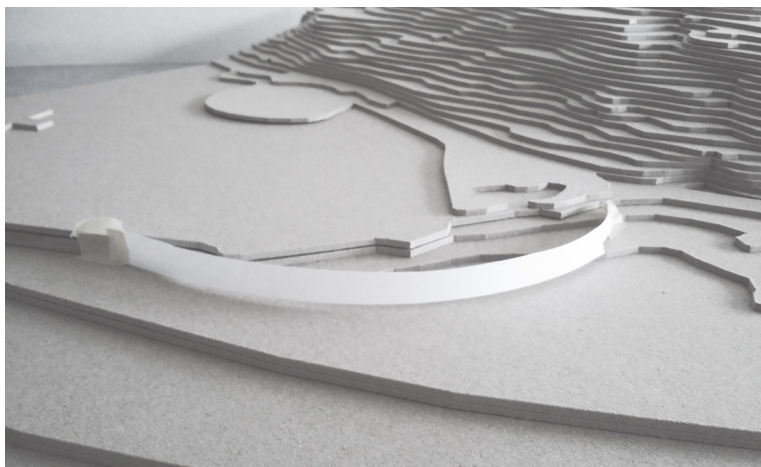
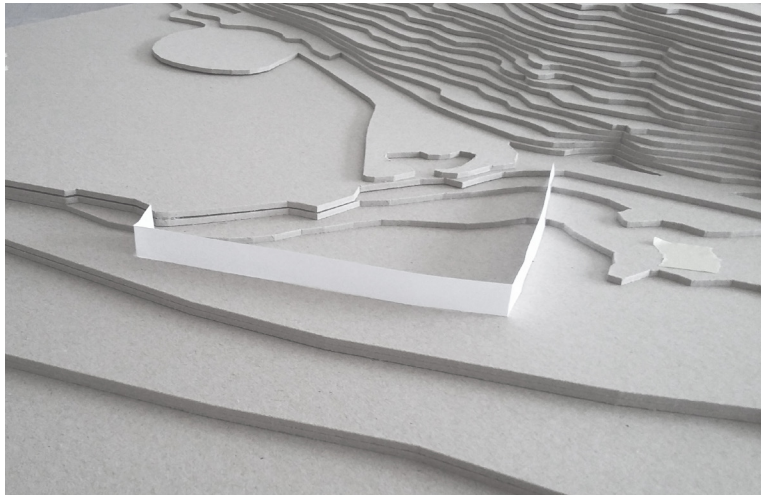
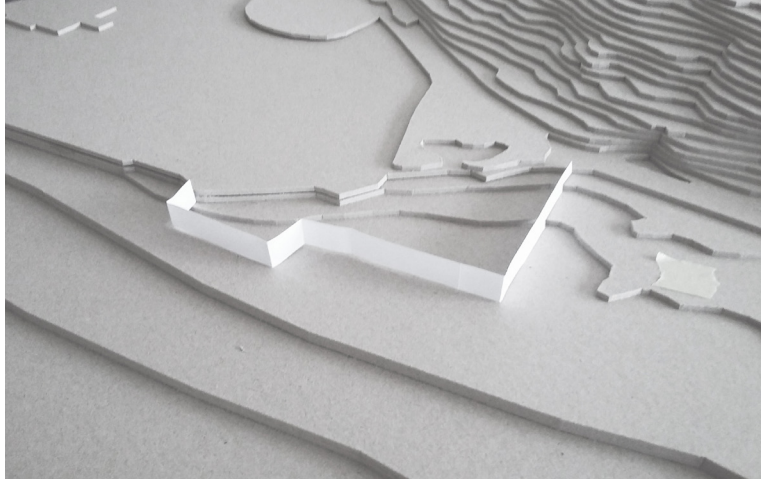


3. Immersing building down to the ground, letting the walkway continue over the roof.

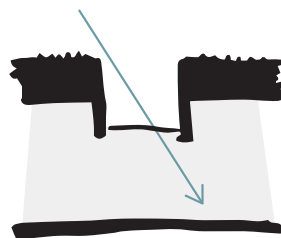
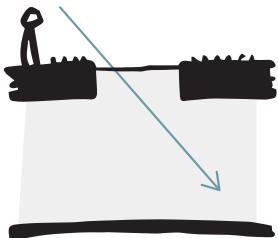
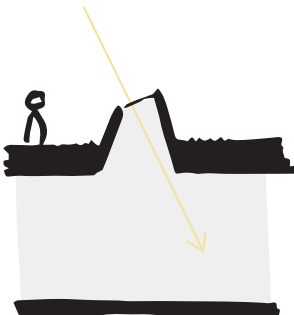
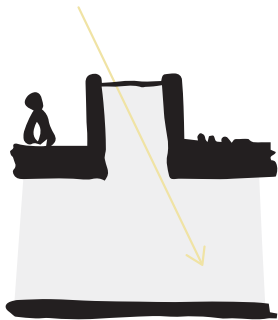
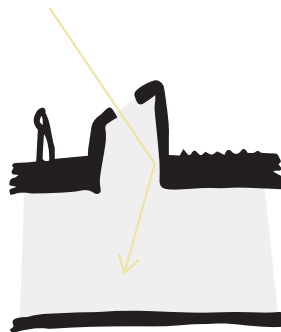
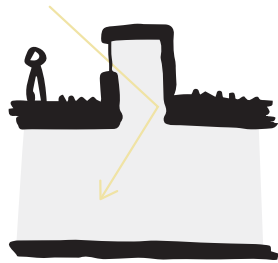
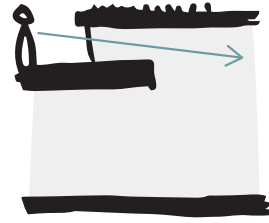
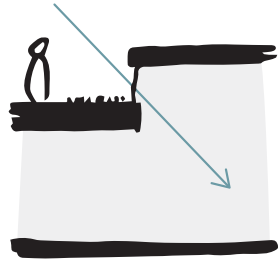


4. Adding roof landscape to create a stop and view point along the walkway.

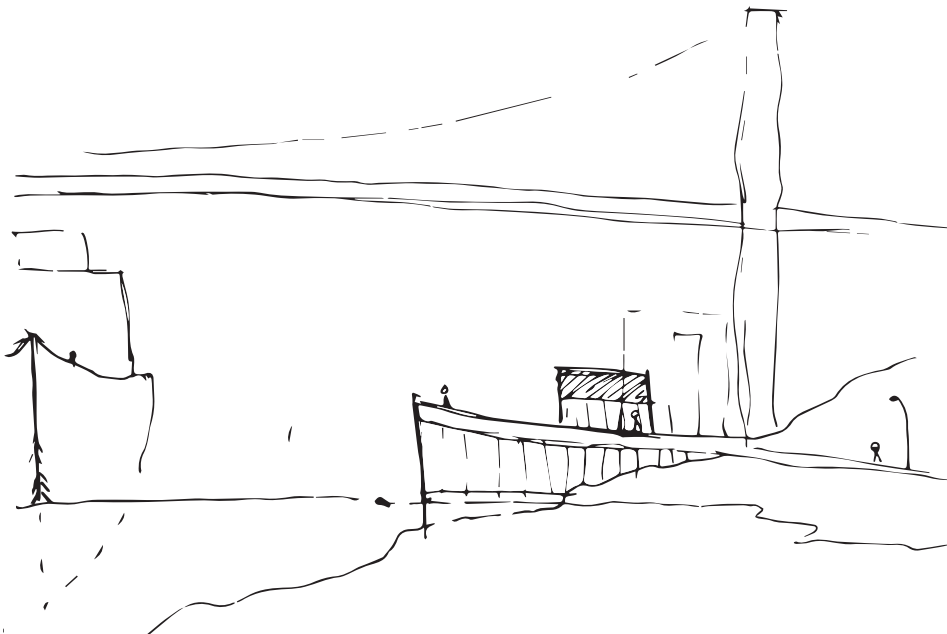
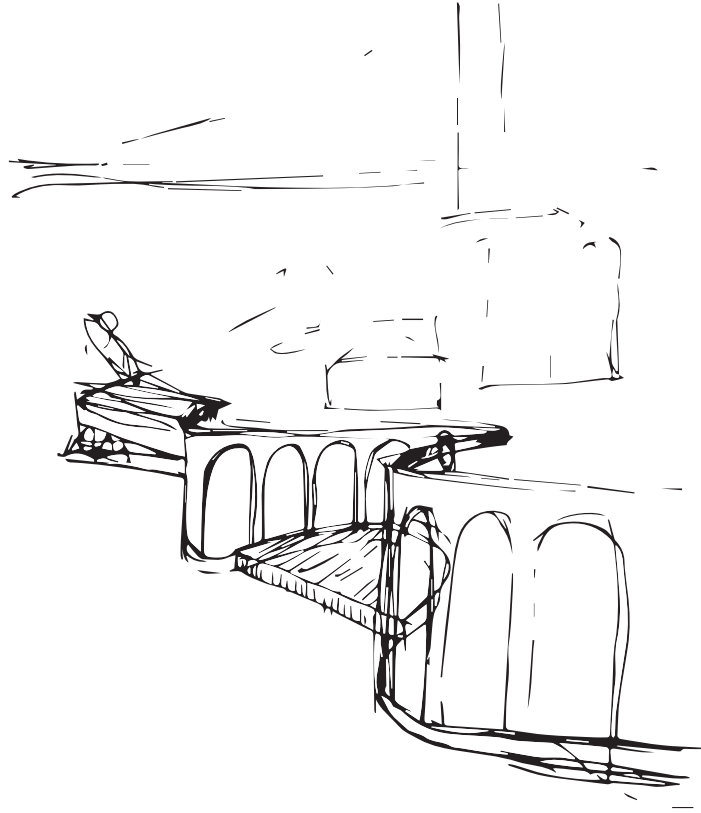
Investigation of Shoreline



Light inlet concepts



Early concept sketches



Midterm

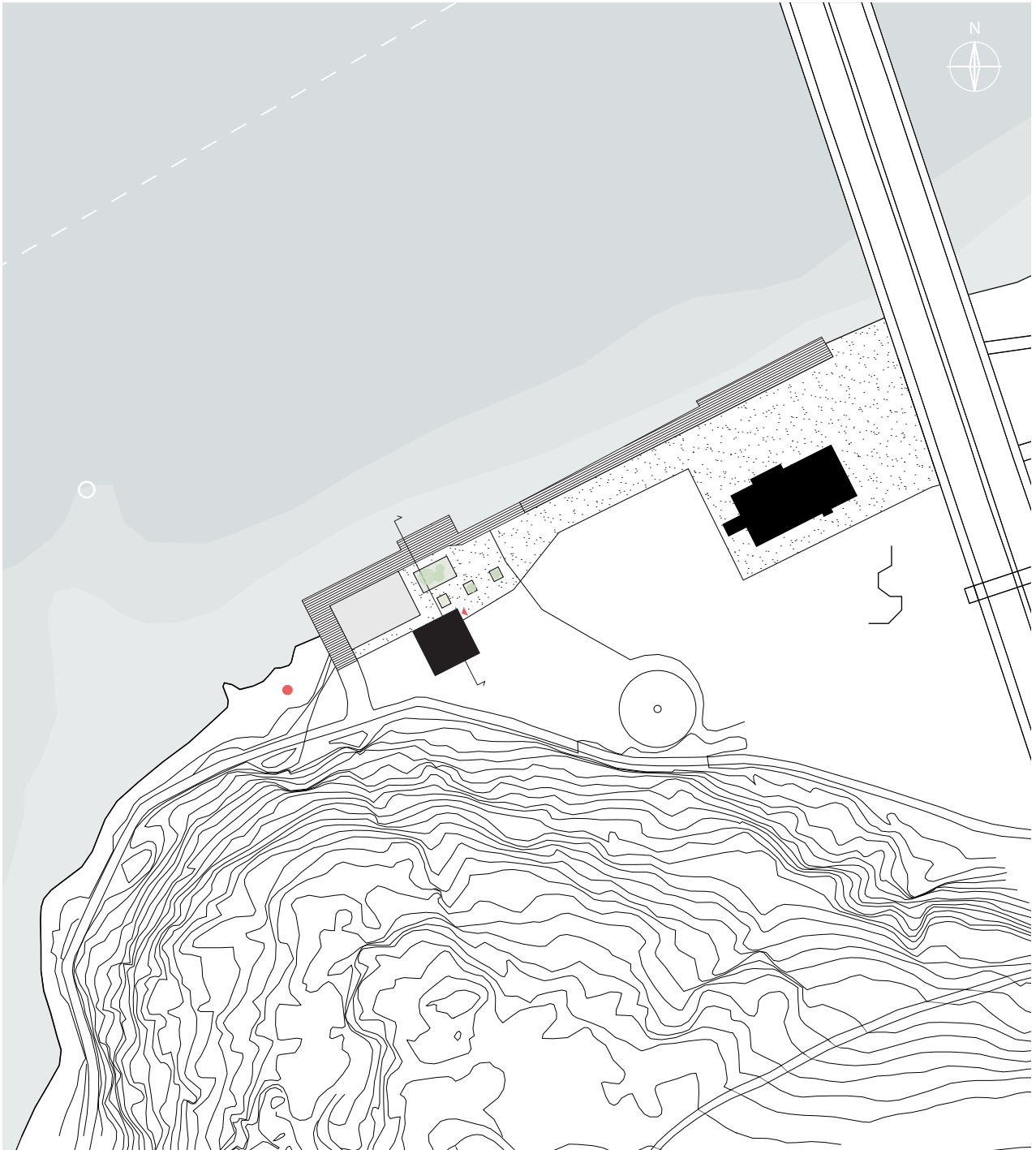
Half way in to the Thesis the Midterm Seminar take place. At this time i had gone through some different concepts and just decided to go through with the one that later also became the concept for the end result. This concept responds to the site analysis on the points that it does not hide the view from the people passing by but still gives the visitors of the bath house the view and the closeness to the water. This concepts also naturally gives something back to the walkway. After walking under the huge bridge then passing the old beautiful brick building you finally have the view of the sea and the building then creates a natural view point on top of the roof of the building. For the visitors of the bath the concepts also gives a sense of privacy from the walkway but also the closeness of the water when being in its level. It is also possible to take a swim in the outdoor water.

You enter the building through a small building containing mostly staff functions and the entrance hall. Then you are lead down by a stair to the bath area. From the end of the stair, on the lower floor, you have a glimpse of the bigger pool before you enter the changing rooms. The many small changing rooms gives a feeling of individuality and are being lit up by natural light coming from the atrium. After changing clothes and a shower we enter a corridor with a second atrium along one of the walls. Through the atrium we can again glimpse the bigger pool and also a smaller pool. From both of the pools we can access the terrace giving possibility for having a dip in the river and some relaxation in the sun on summer days. The zigzag of the terrace gives some protection from the wind on windy days.



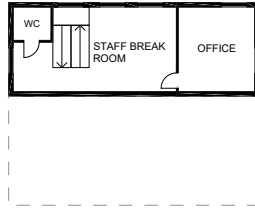
Site Plan

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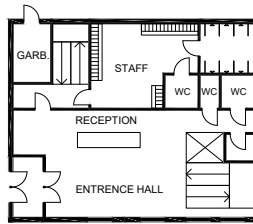
Plan 1

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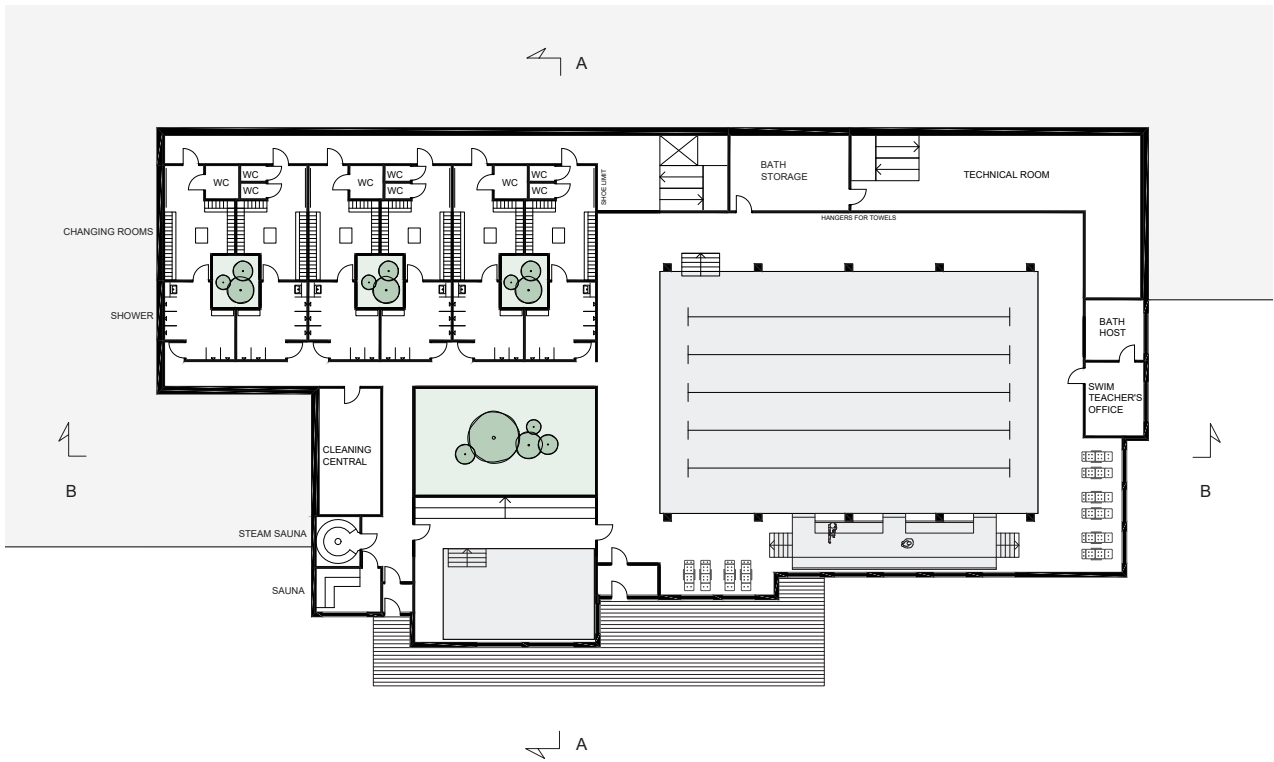
Plan E

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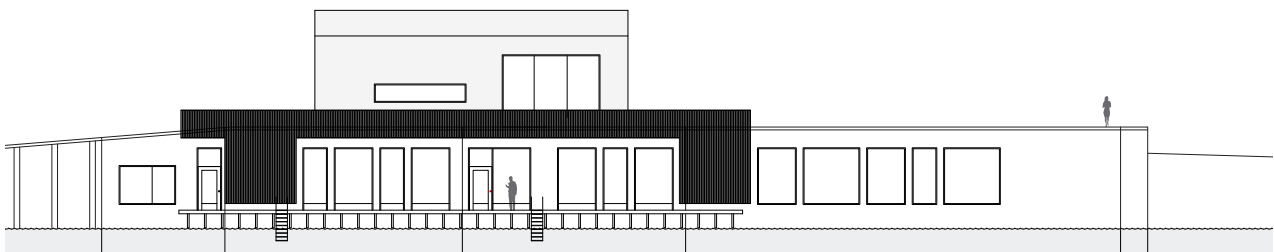
Plan -1

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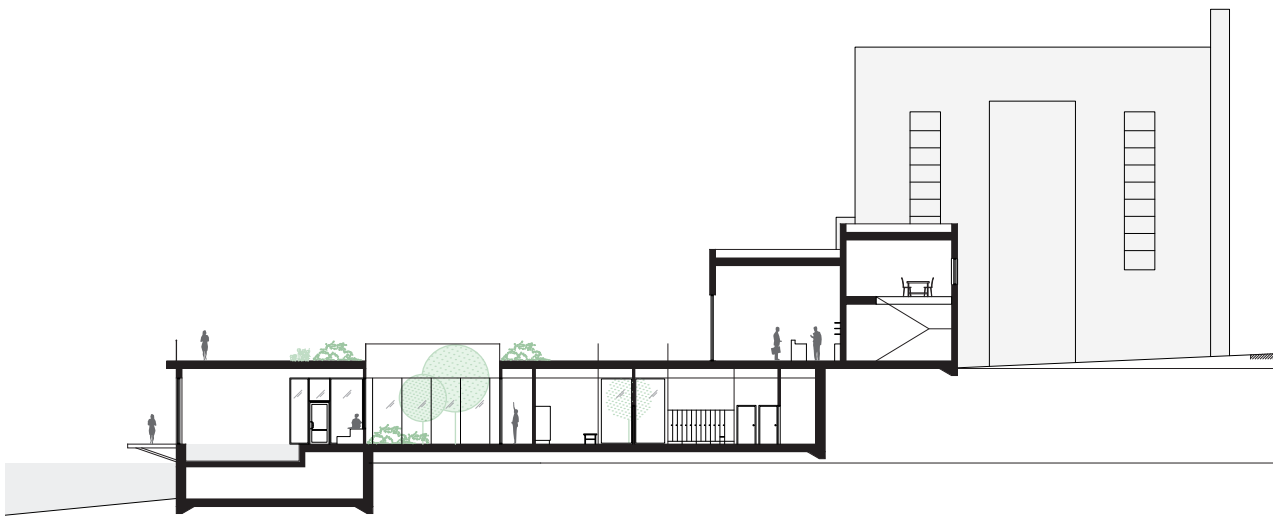
North Facade

1:400



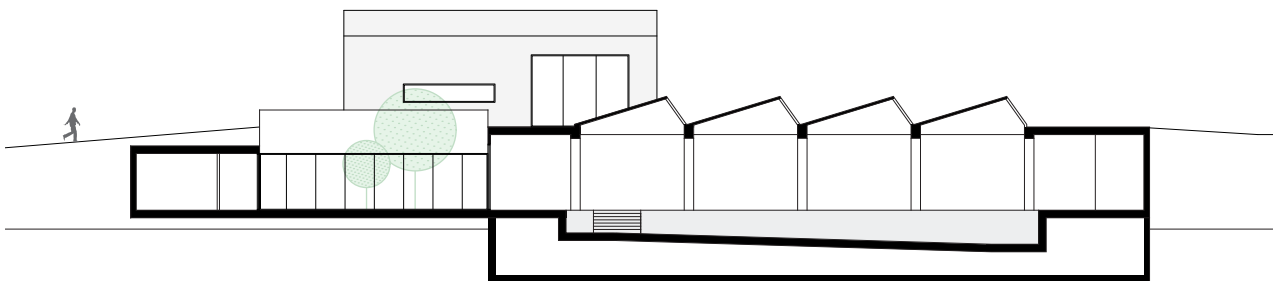
Section A

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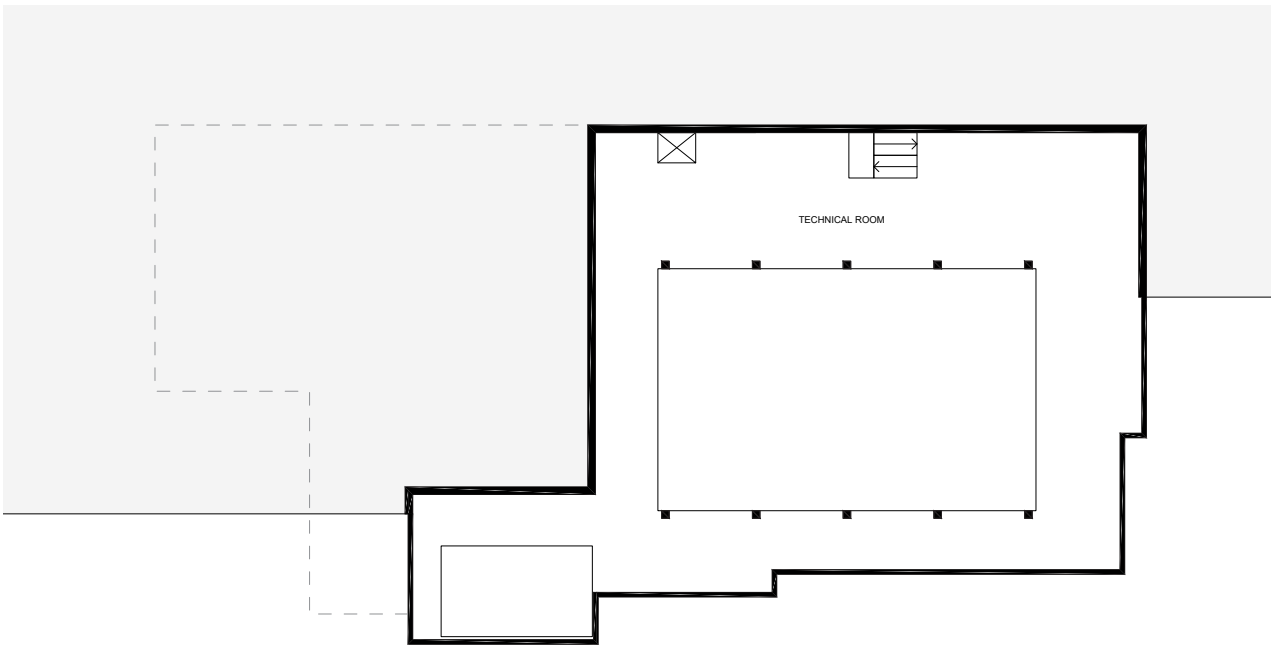
Section B

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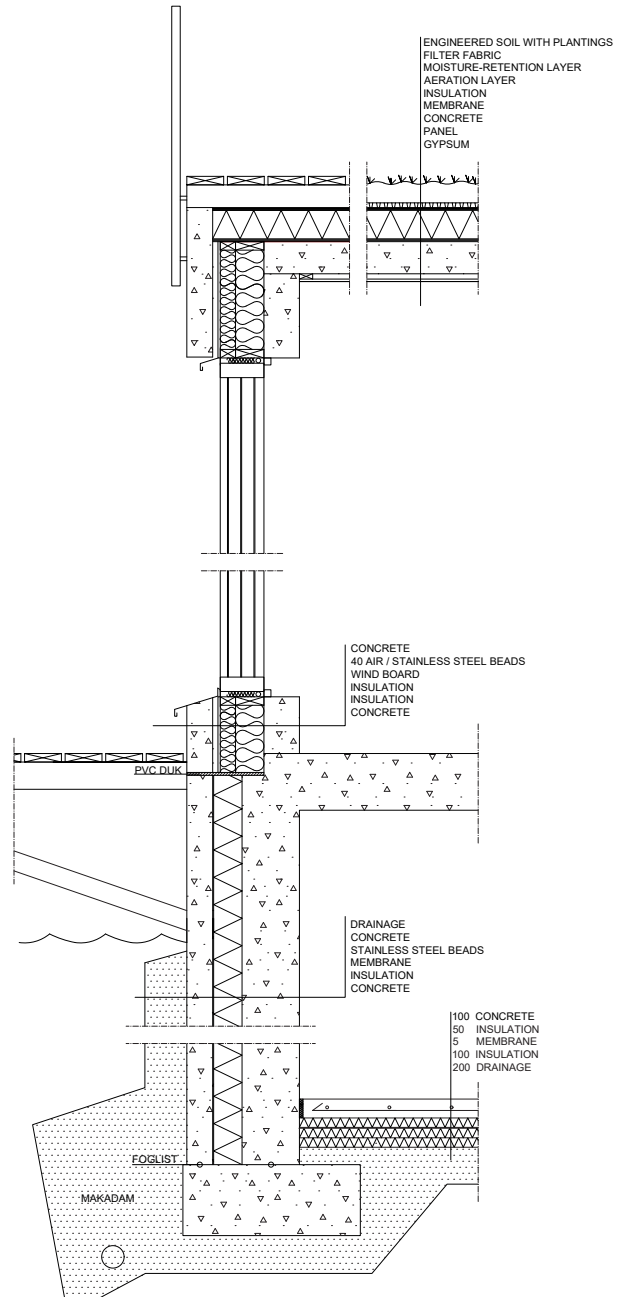
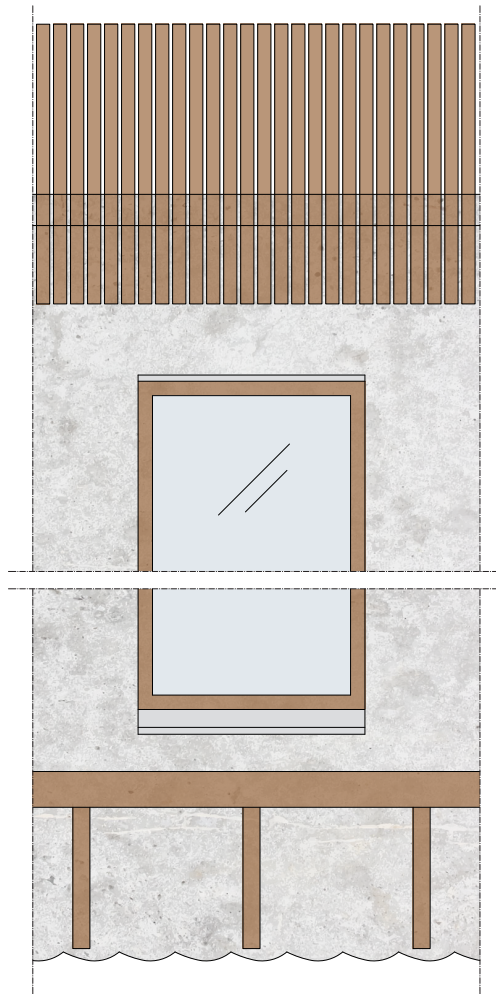
Plan -2

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Detail Section

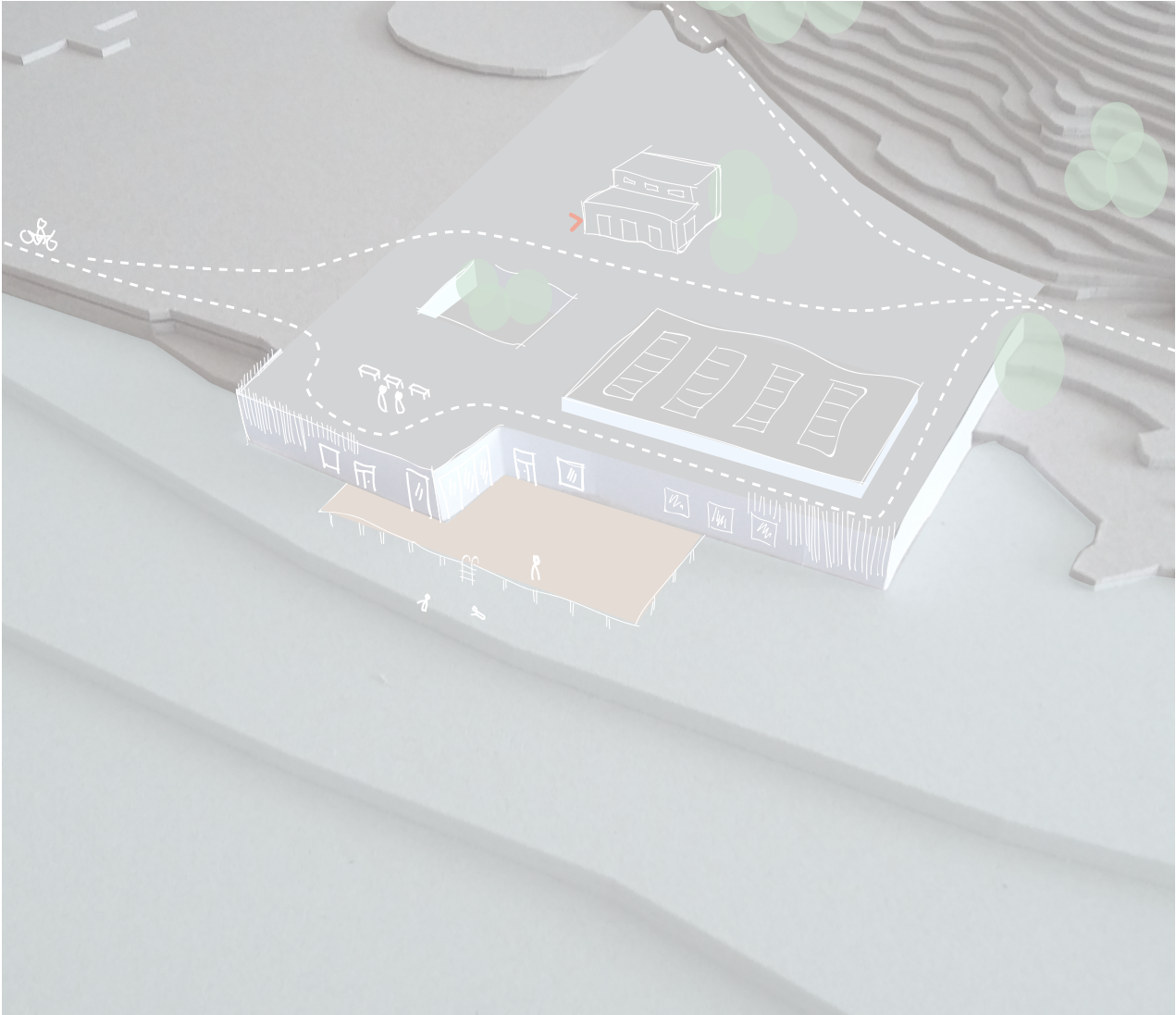
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After the midterm seminar I wanted to work more with the concept of the viewpoint of the walkway, to make it work together with the different ways of letting light into the bath. Something else that needed to more work was the facade concept and how the terrace would be designed together with the facade. The detail facade and detail section was also something that needed to be developed more.

During the discussion of the seminar the examiner and the tutor thought I had to make the concept more clear with taking away the small building containing the entrance hall and staff functions. The entrance where proposed to be a ramp or stair to an entrance atrium to more be a part of the landscape I am trying to create on top of the building. The new entrance would be the beginning of the journey that should be arranged inside.

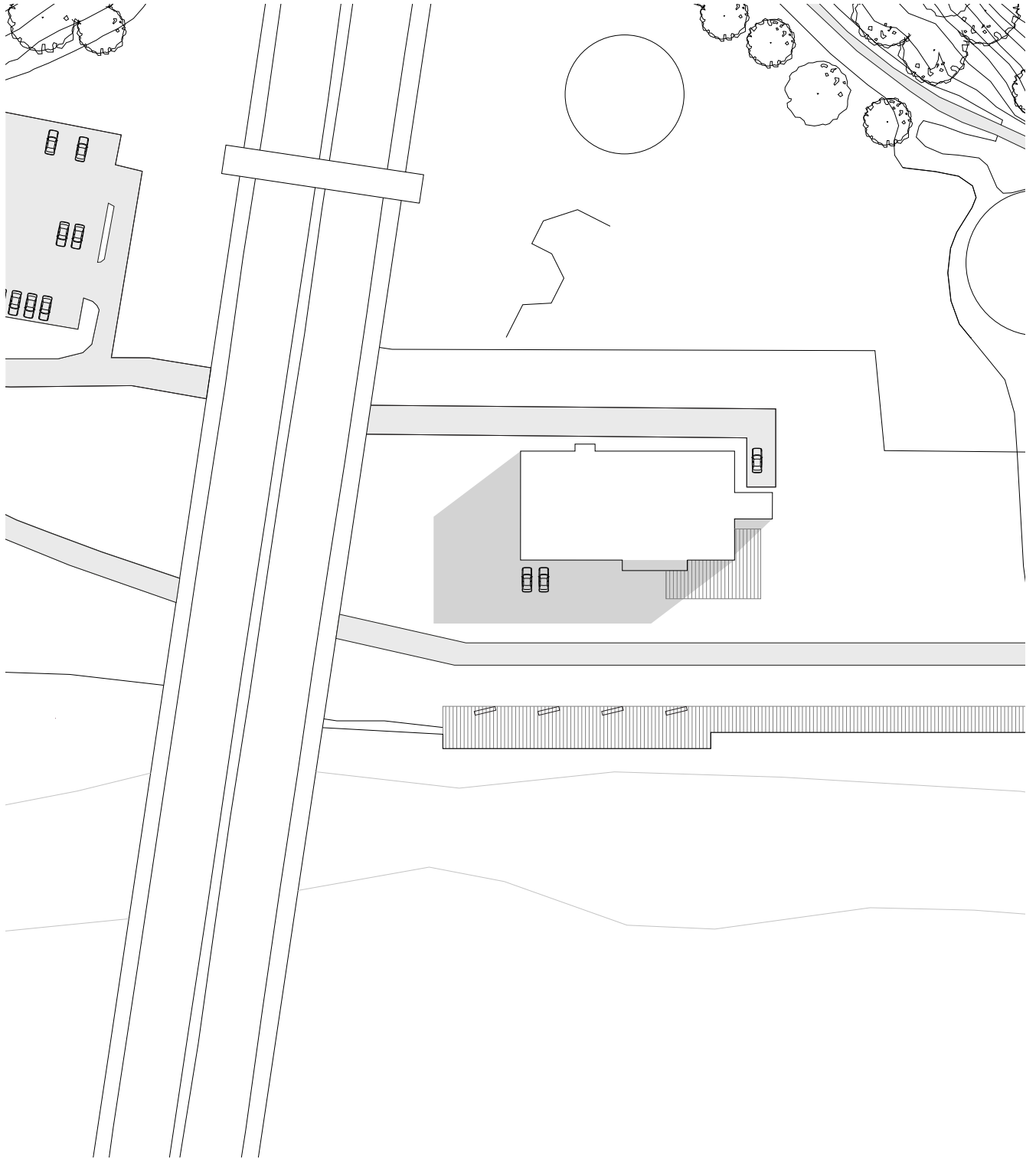
They also thought the landscape of the roof needed to be re-design to have a certain system or design of the pavilions to more satisfy the function of the viewpoint. The design of the skylights needed to be investigated more closely to ensure privacy for the visitors of the bath house.

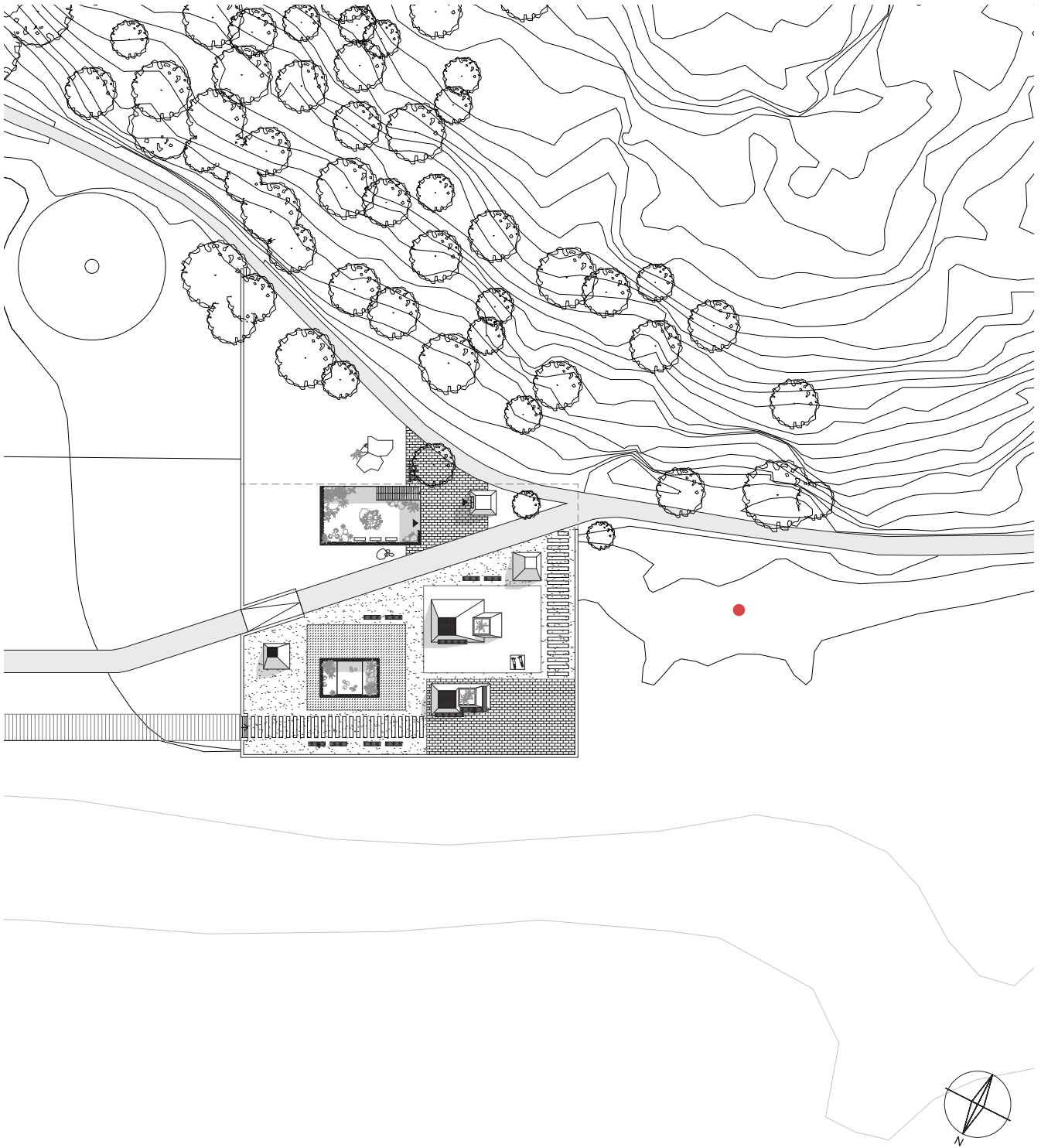


Proposal

Site Plan

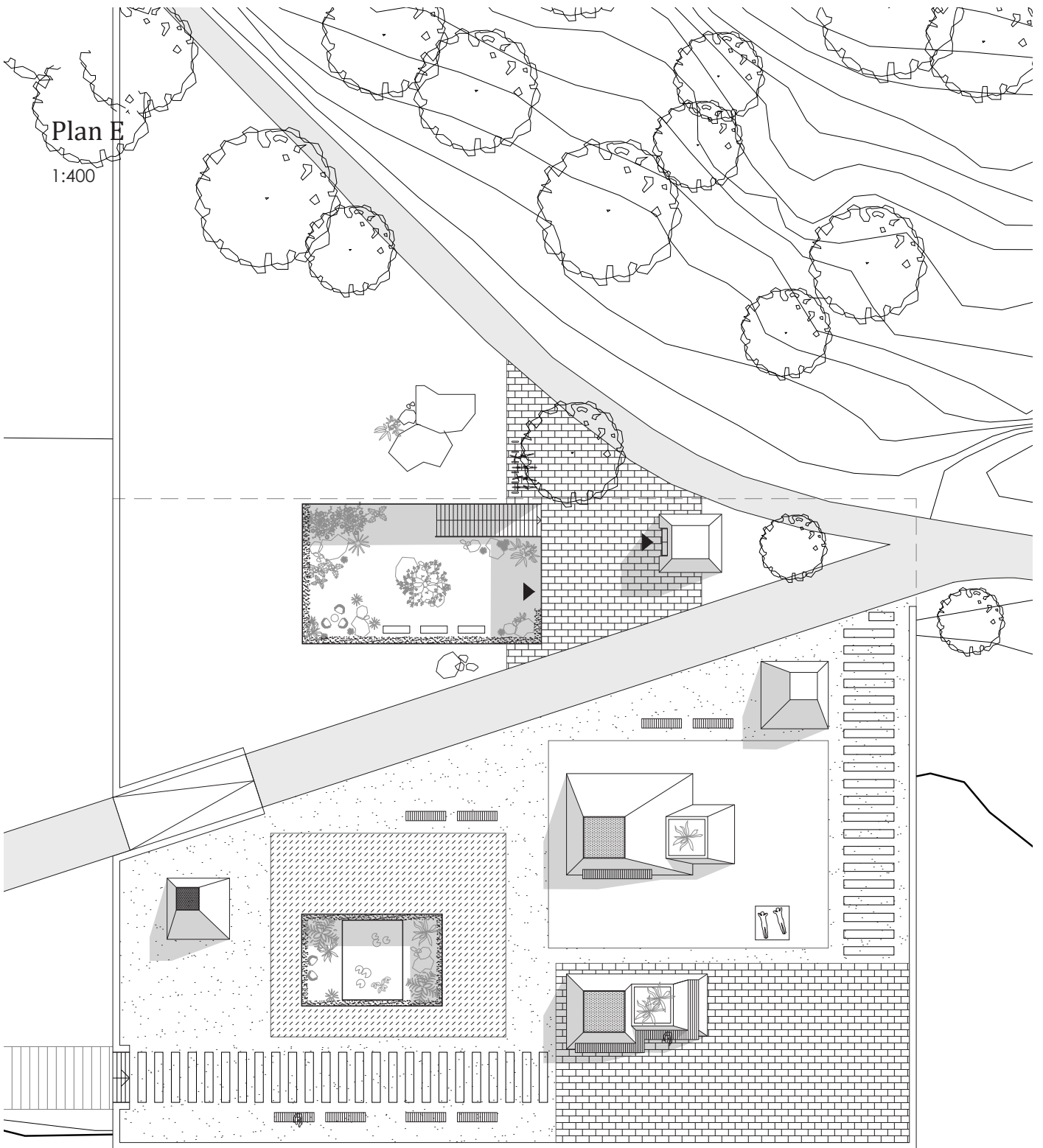
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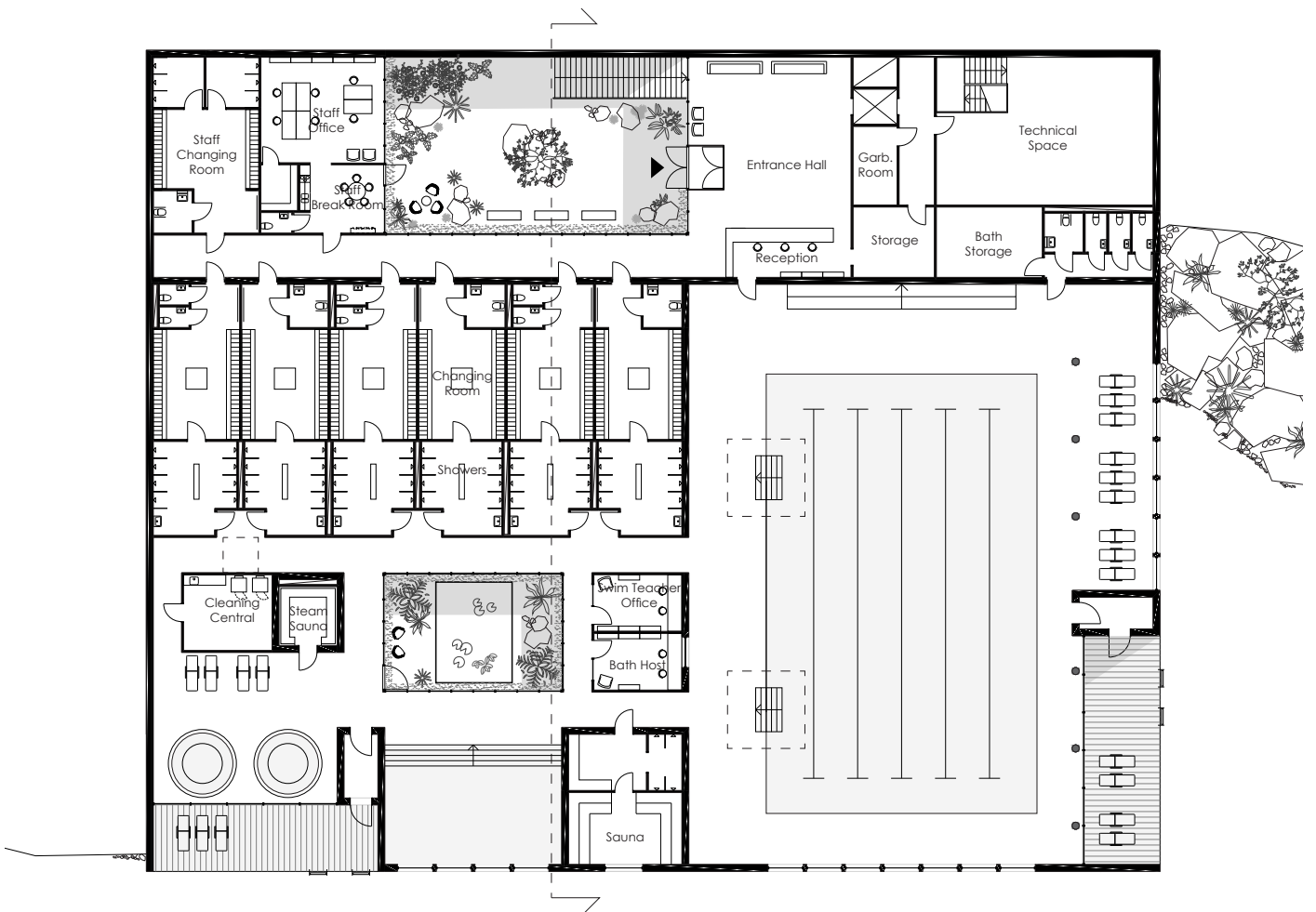






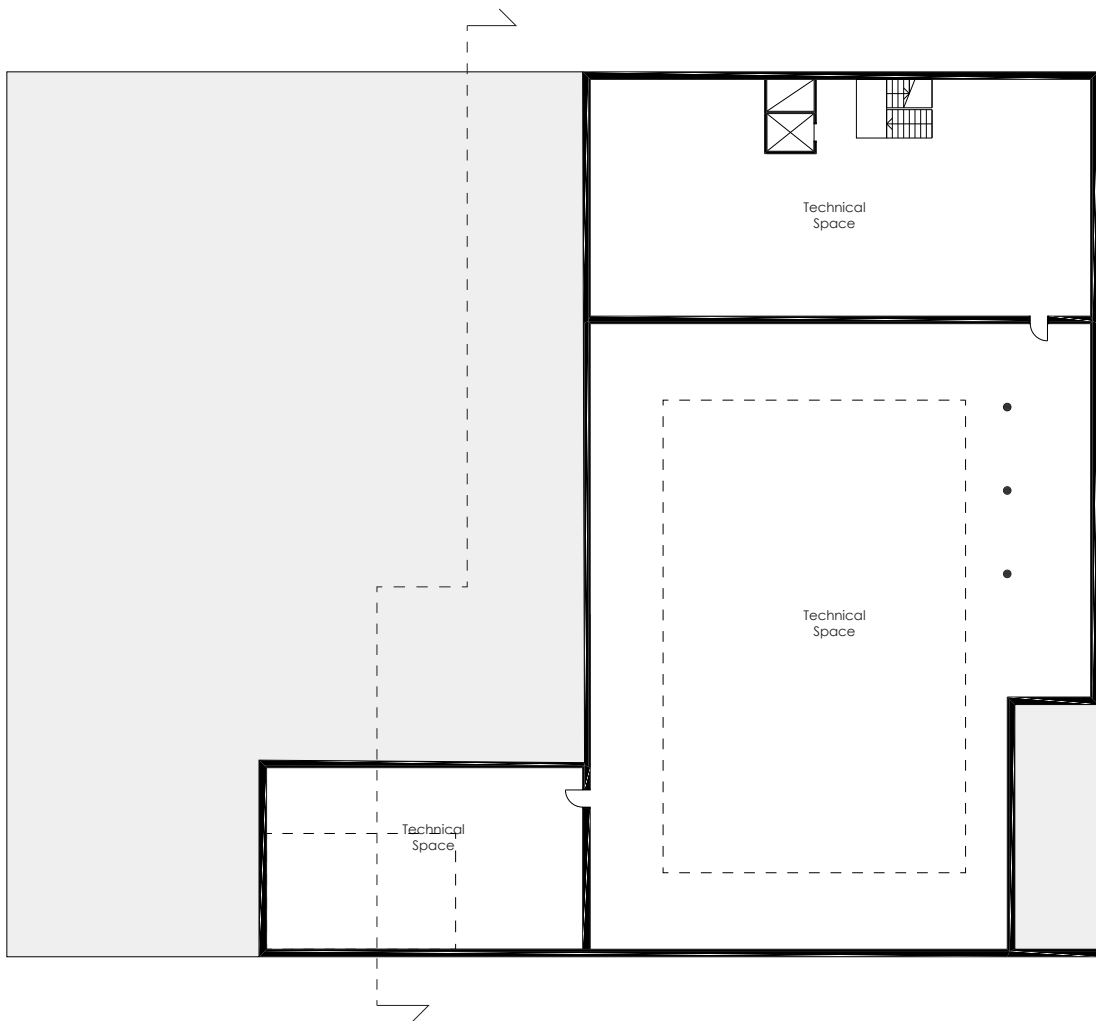
Plan -1

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Plan -2

1:400



Section

1:400



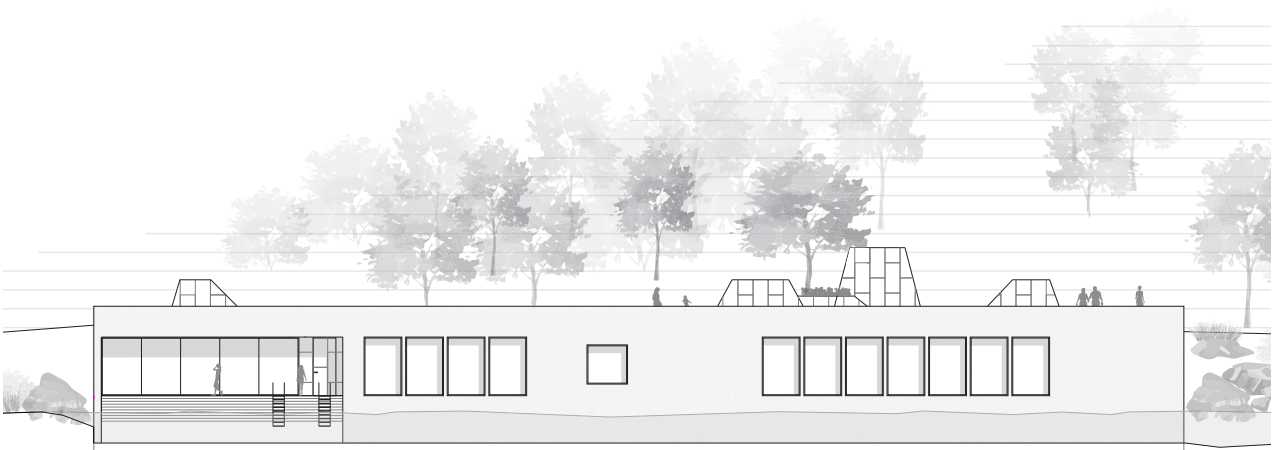
West Facade

1:400



North Facade

1:400





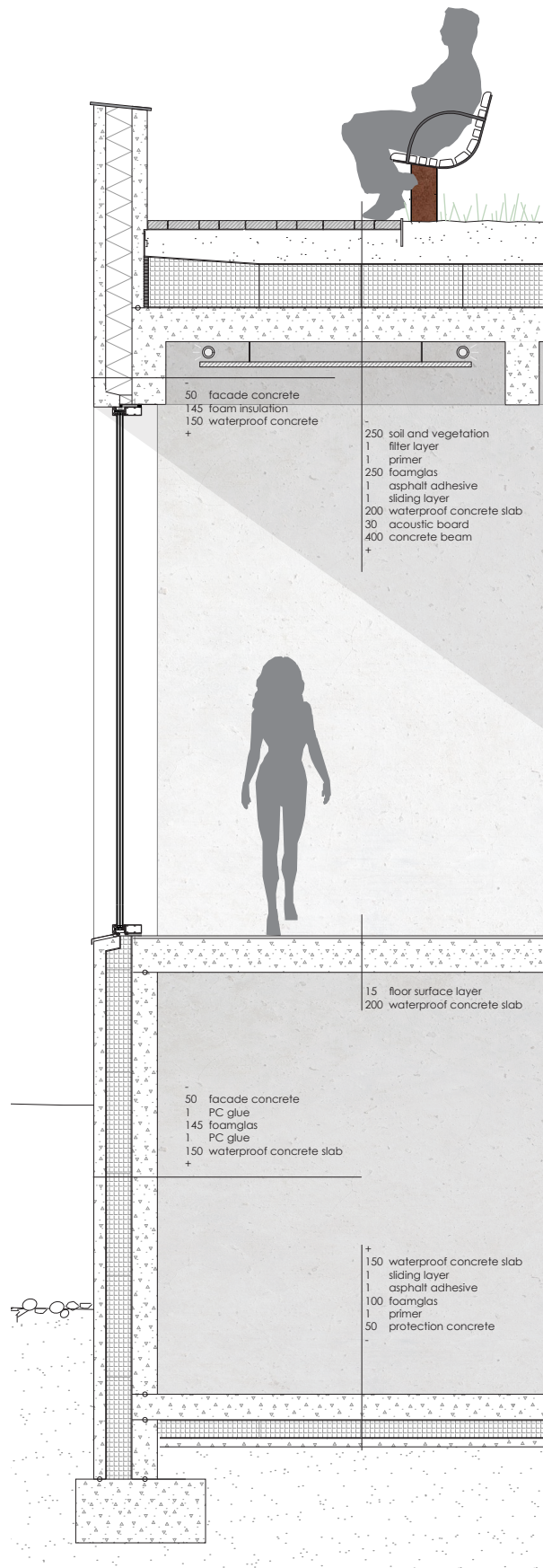
Detail facade

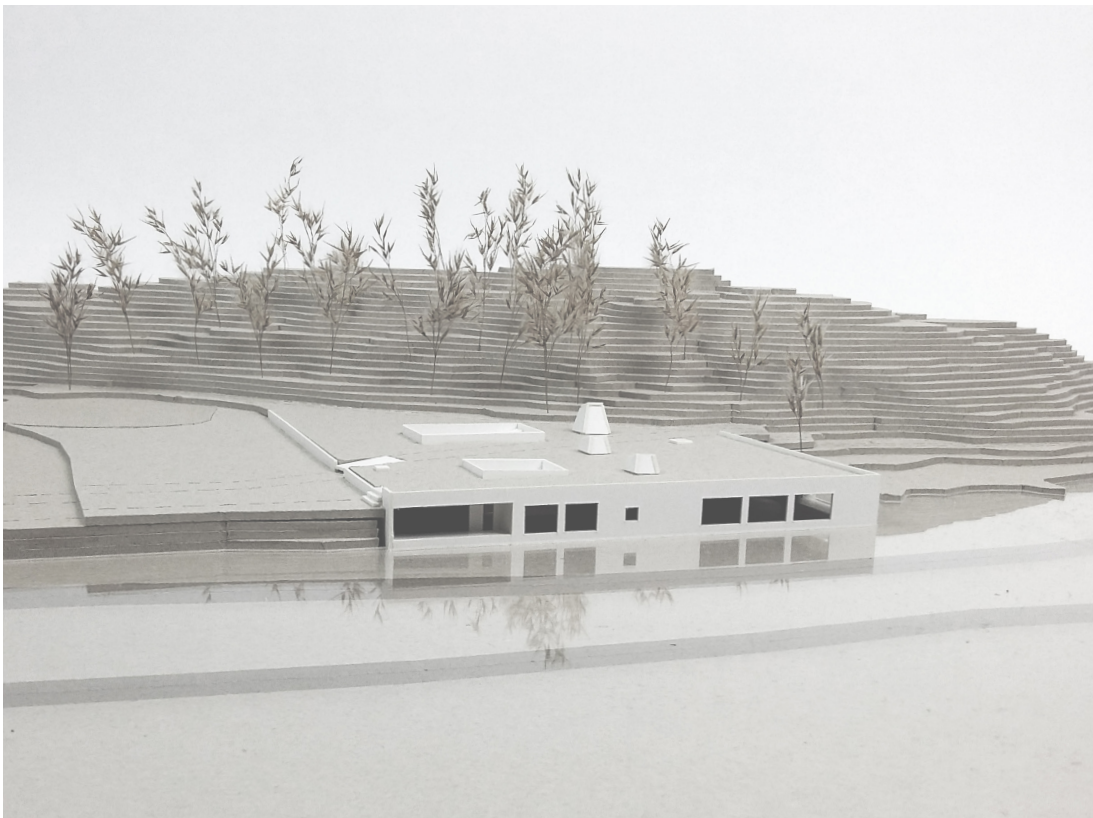
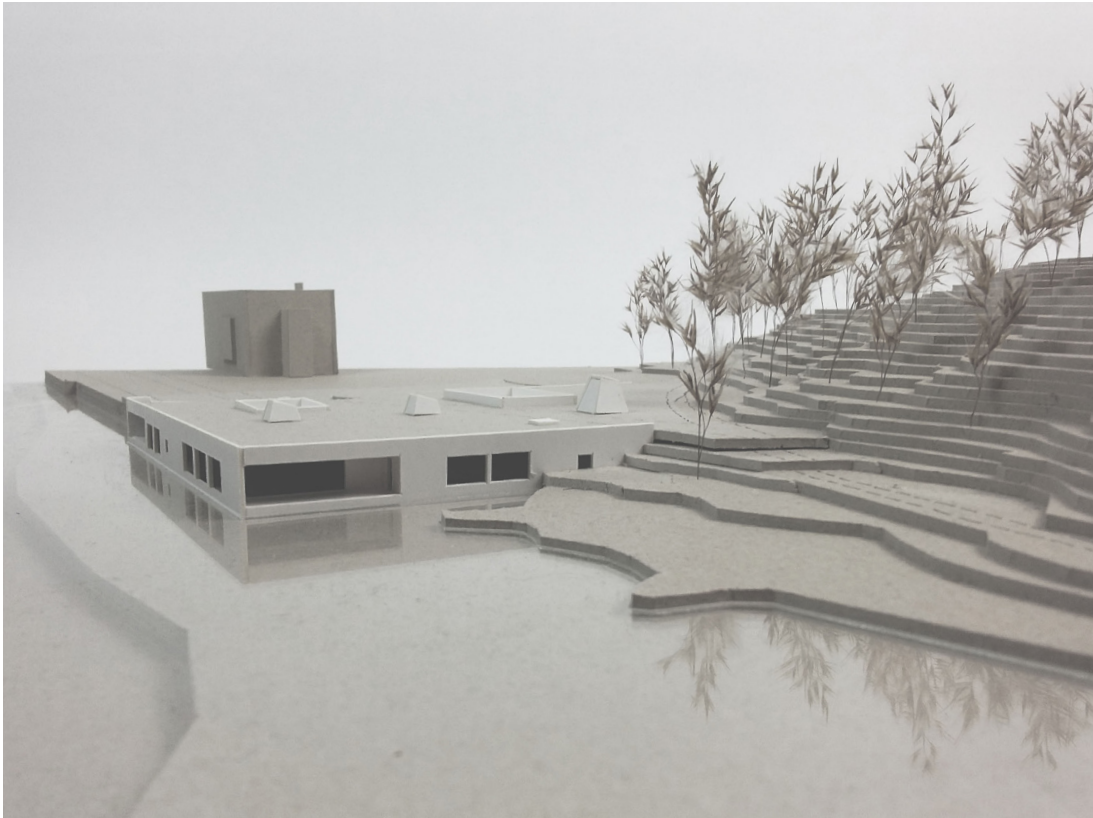
1:40

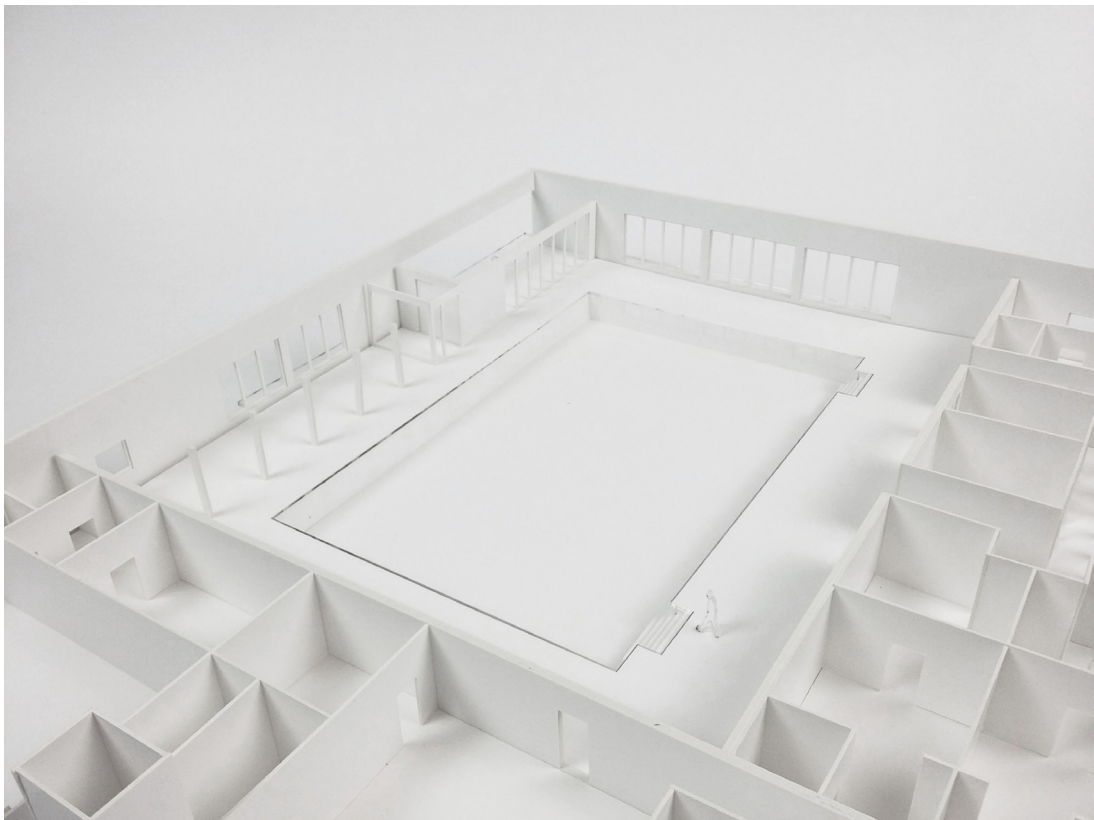
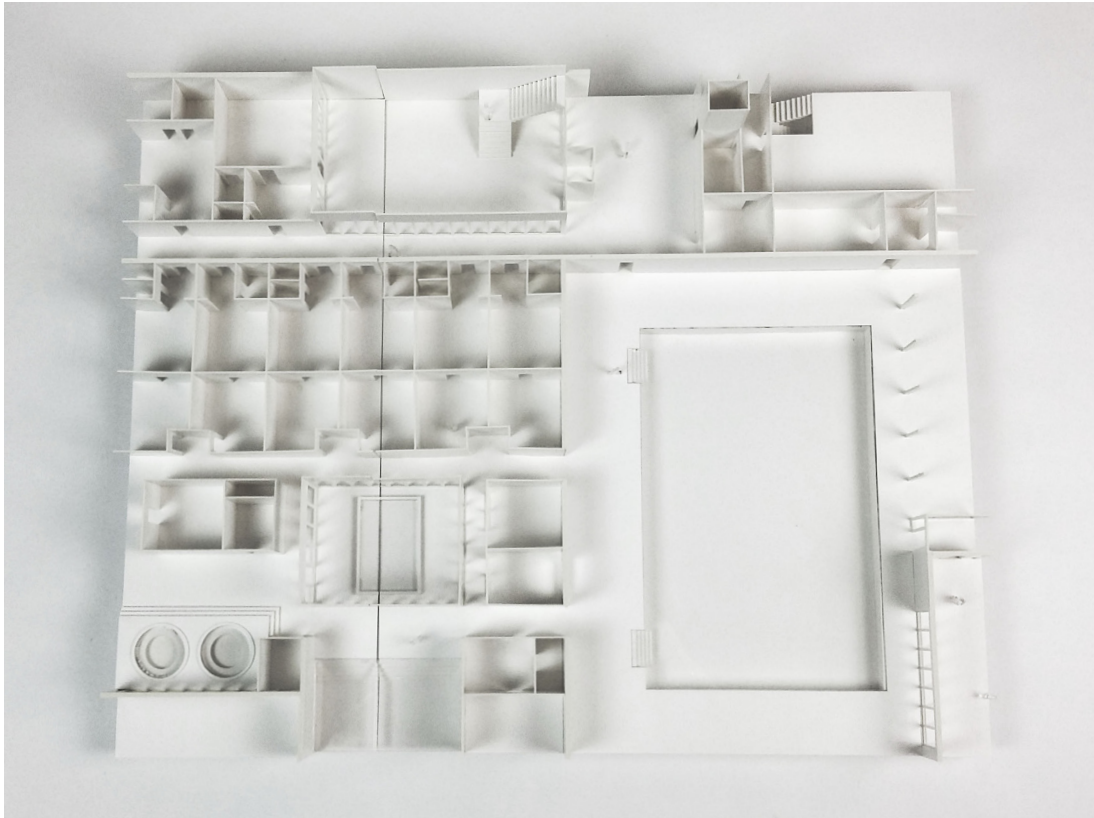


Detail section

1:40









Discussion

During this whole process I have been thinking a lot about what a good research question for this thesis would be and I've made the conclusion that it is not possible to specify one research question for this architecture project but instead it is many questions that have to be answered. When starting the project the site was the starting point for asking questions. Would it be interfering to place the bath on the shore between the walkway and the water, and at the same time block the view? Instead a new concept was found where the building is buried in the ground to still be placed between the walkway and the water but not blocking the view. The roof is created as a viewpoint and instead adding something to the walkway. The landscape of the viewpoint is defined with different light chimneys, pavilions and atrium working as volumes giving shelter from the wind and benches to have somewhere to sit. The concept also gives the bath privacy from the people passing by even when being outside on the terrace.

When entering the building we enter through a quite anonymous atrium leading to the entrance hall and then slowly discovering the bath part by part. The many changing rooms are meant to be there to reflect on a more temporary architecture where man and woman not longer are the only sexes but also it is a easy way to give the experience more individuality. This is also the thing that makes this bath house a bath house more designed after today's society, its individuality and the way it is focused on well being and working out. The rest of the floor plan is designed after the sequence of the program where atrium give more lightness to the spaces and the skylights the possibility to light up specific points, like in this case the two stairs down to the big pool. The two terraces is designed to be protected from wind but there to have a close connection to the outside water.

Some critic I got during the open presentation was that I could have let the design of the landscape also be seen in the spaces of the bath house to connect the two worlds, this is something I would liked to explore more. My thoughts about this was instead that they are two completely different worlds and only coexist in the functional plan. An café would have been another possibility to create a connection with the two worlds.

I am happy with my result of the thesis and learned a lot during this time. If I would have done it again I would have worked much more with perspectives during the progress of plan and sections to be able to experiment and explore more.

TEXT

Malmryd, Gothenburg 2016
Strategi för Göteborgs sim och badanläggningar, p21, 23, 49, 67.

GHT, 1973
Varnade Röda Sten för hamnspärr?

Fredberg, Gothenburg 1921
Det gamla Göteborg - staden i väster, part I, p33

Lindroth, Gothenburg 1925
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