

Design Portfolio

A PROJECT COLLECTION OF THREE YEARS BUILT ENVIRONMENT

This book contains a general explanation of projects that have been working on during my study Built Environment supplemented by some projects I have done next to my study.

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online portfolio
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QR



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Who am I?



Stefan Thomas Vuijst

Personal Details

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Educational Background

School : CS Vincent van Gogh Lariks Assen
College : Hanzehogeschool Groningen
HBO Built Environment
Major Bouwkunde
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Interests

Architecture: : Sketching
3D Modelling
Non-architecture : Music
Flying sailplanes

Languages

Dutch : First language
English : Advanced



Skill Set

Software

Sketchup : Advanced
Revit : Advanced
Lumion : Advanced
AutoCad : Intermediate
PhotoShop : Beginner

Microsoft office

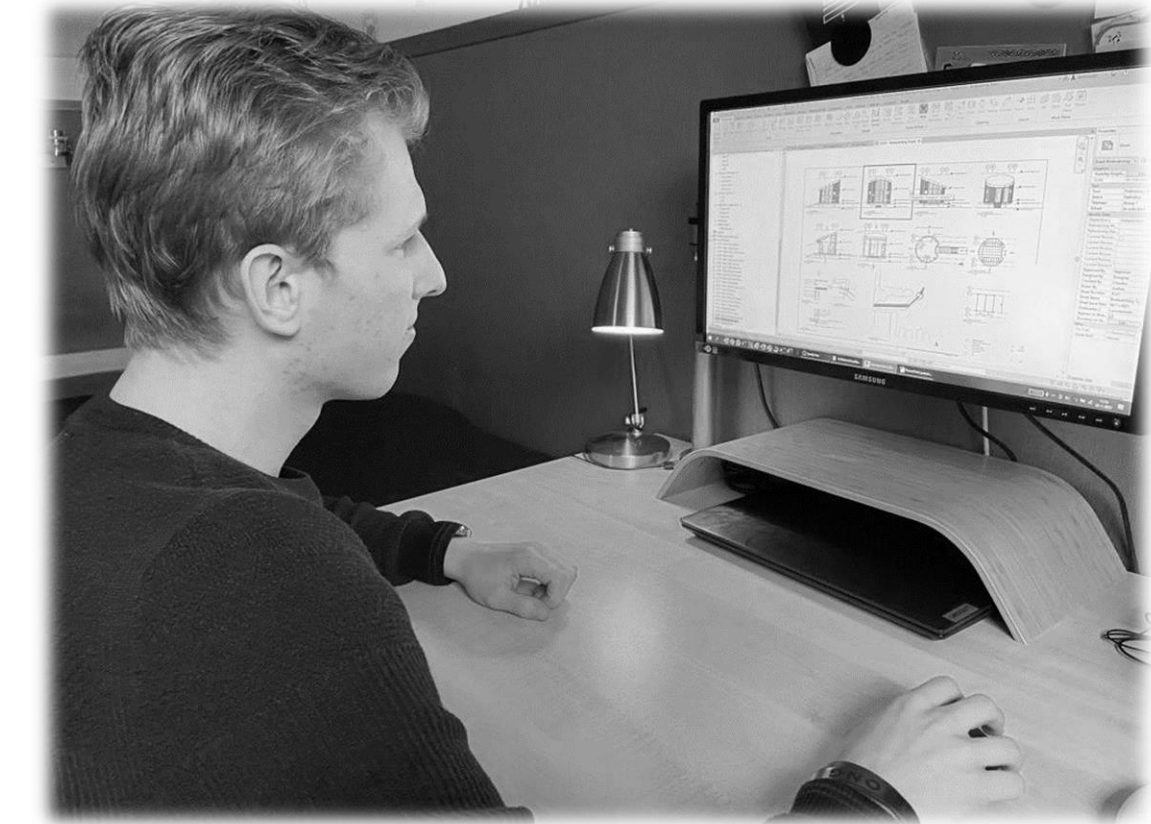
Word : Advanced
PowerPoint : Advanced
Excel : Intermediate

Certificates

2019 : Havo Certificate
2020 : Propedeuse Built Environment
2021 : Wiskunde T Certificate

Work Experience Built Environment

2021 - : Internship Sacon Architects
2021 (Zwolle)
2021 - : StudioJK (Assistant Designer)
2022 (Oosterwolde)



In short

"I'm Stefan Vuijst. I am a motivated and hard worker who always goes for the best result. Nowadays, I am a third year Architecture student at the Hanzehogeschool in Groningen. I am very creative and I really like to transform idea's into unique designs. Sustainability is one of the topics I am most interested in. My ambition is to work for a firm which combines these topics into their designs"



Bird Observation Tower
Ezumakeeg

“Make a new design for the burnt-down bird watching tower”

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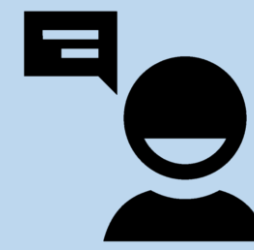
4 / 6 Architects

In collaboration with:
Sofie Mortensen, Nicky Fokkema and Marco Zinger



Lauwersmeergebied

Problem and Task



This project took place in **the Lauwersmeer area** and was commissioned by **Staatsbosbeheer**.

Lauwersmeer is a nature reserve in the northern part of the Netherlands on the border of Groningen and Friesland. The area is located on a former seabed and has different types of nature and animals. However, the Lauwersmeer is mostly popular of its diversity in birds. The reserve is located among one of the biggest migration routes for birds; the East Atlantic flyway.

Around the Lauwersmeer there are 3 bird observation huts. In the years before 2020 there was one observation hut more; **the Sylkajút at Ezumakeeg**. Ezumakeeg is part of Lauwersmeer and is located on the western side of the reserve. It is a naturally closed off wetland. The Sylkajút was a popular observation hut for birdwatchers and –photographers. Unfortunately, the hut was burned down, probably due to vandalism.

Staatsbosbeheer has planned to **rebuild the bird observation hut** at the same place at Ezumakeeg for birdwatchers and –photographers.

Our goal was to design a new bird observation hut for Staatsbosbeheer that included some new elements, but still meets the wishes of Staatsbosbeheer and the future users of the hut.



Analysis of the problem

Before we visited the location we did some research to the area. We noticed that the area about 100 years ago a part was of the **Lauwers-sea**.

Nowadays there is an open connection between the Wadden-sea and the Lauwersmeer.

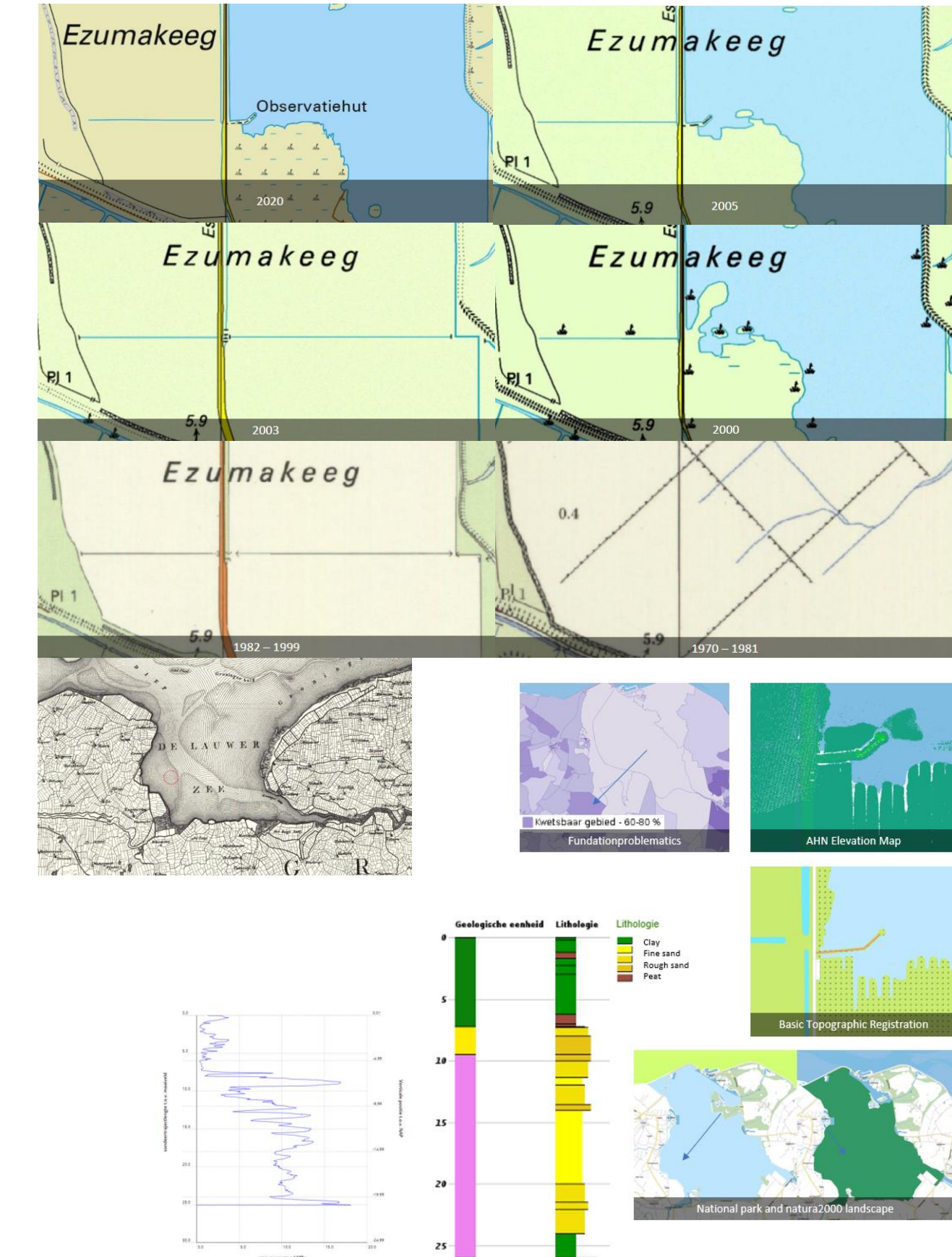
The soil of the around the Ezumakeeg contains out of clay and sand. The soil base layer in the area is at about 4 metres beneath sea level.

We also concluded that the Ezumakeeg is located **far away from the civilized world**. This is probably one of the reasons that the bird observation tower has been burned down. Youth can hang out in this area without been interrupted.

We concluded that in the new observation tower it was necessary to make the interior as **uncomfortable for youth** as possible. Our guiding theme during the design phase was relatable to this exclusion: **'Included Exclusion'**.

The main elements we wanted to focus on became:

- Vandal-proof
- Easy maintenance
- 360° view
- Sustainable
- Footprint



Shape study

In the interview we did with the bird watchers and Staatsbosbeheer we noticed that the bird watchers were very content with their old observation tower. We agreed that the new observation tower should have many similarities with the old tower. Staatsbosbeheer also requested to use the same footprint as the old tower had. We decided to use the old blueprints for the new hut. We counted 16 corners so the new building should have 16 corners as well.

Most elements of the bird observation tower do have **almost circular shapes**. The shapes however are not totally circular. Just like the old building the footprint is **hexadecahedron**.

This has an effect on the size of the wall panels. The panels in the front of the building are much bigger than the panels on the backside.

The construction of the building contains out of an hexadecahedron frame placed on four columns. These columns can be placed on the same location as the columns of the old building



The building shape

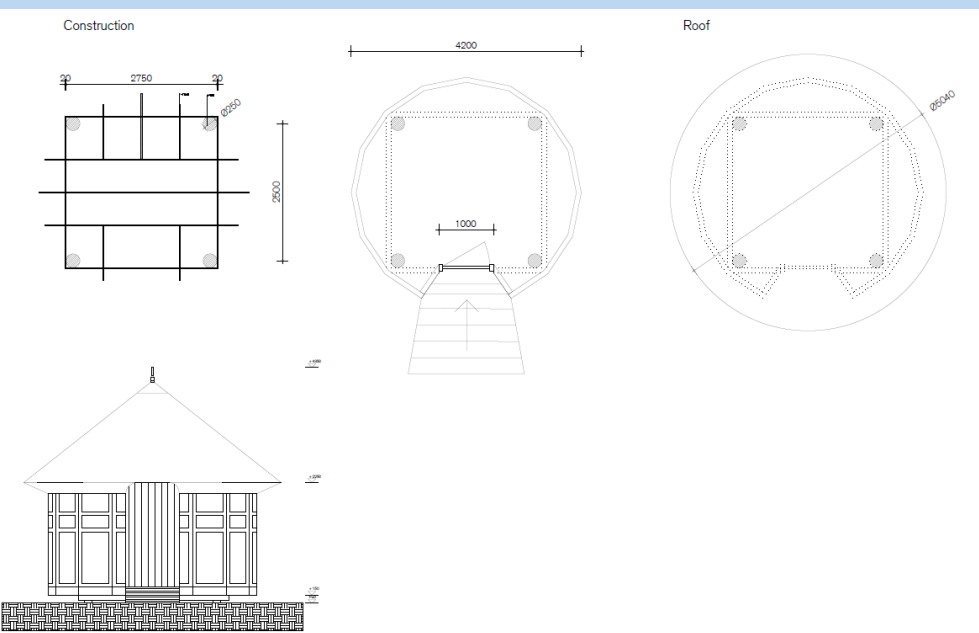
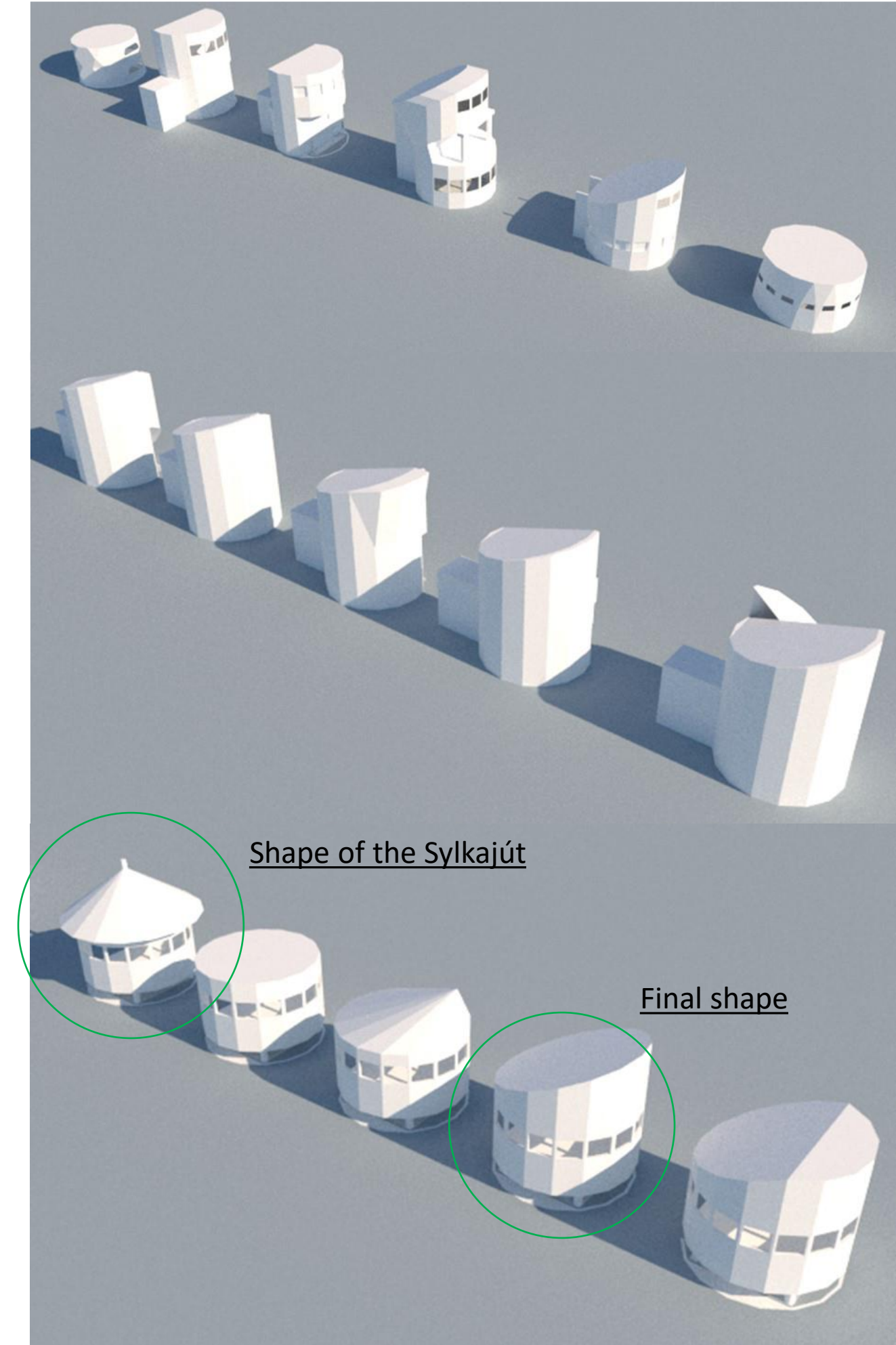
Before we started sketching shapes we did a reference study to other bird observation, or bird watching towers. We noticed that there were a lot of different shapes used for bird observation towers.



We started with individually designing a shape for the hut

We extracted the best parts of the 'random' shapes into six new designs. Later on we decided we did not want a second floor

The last part of the shape design came from the last hut and we developed it further on the design choices of the first shape



Interior



The main focus of our design was about making the observation hut **vandal-proof**

From our guiding theme 'included exclusion', we decided to add separation walls in our floorplan. The idea behind this guiding theme is including the right users and excluding the people with the wrong intentions.

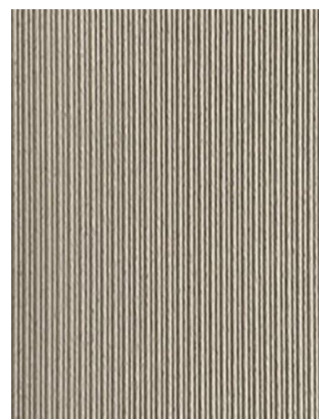
The effect of these walls is:

- Less group gathering
- More privacy
- Fire retardant



Another important part of our design was the accessibility for everyone that wants to visit the bird observation hut. We made the **hut wheelchair accessible** and used peepholes on different heights

Neolife® panels



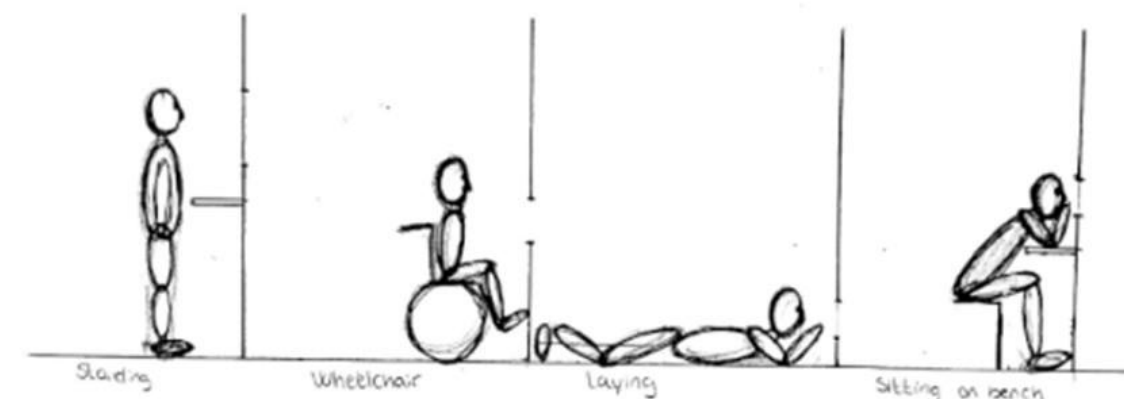
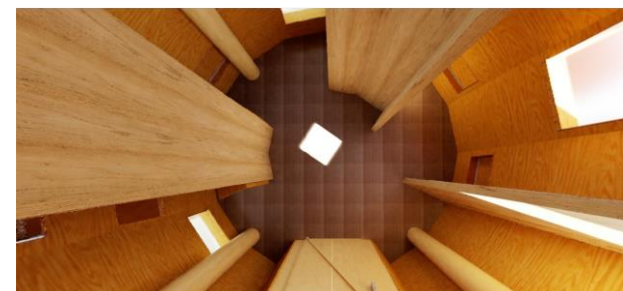
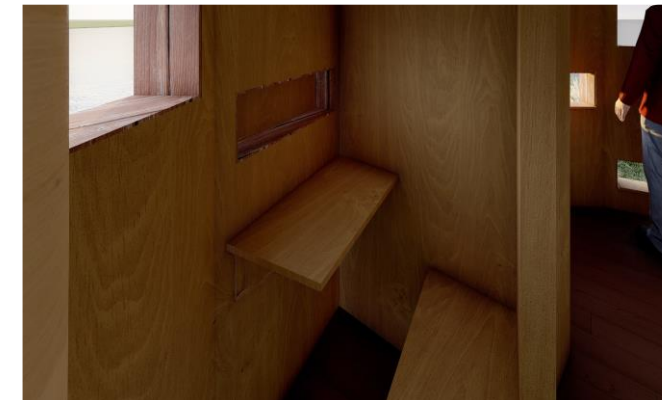
Treated plywood



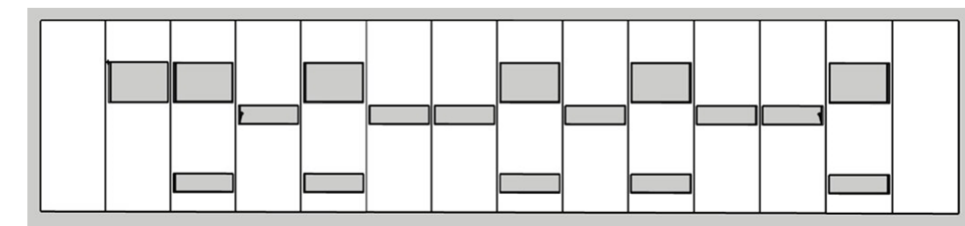
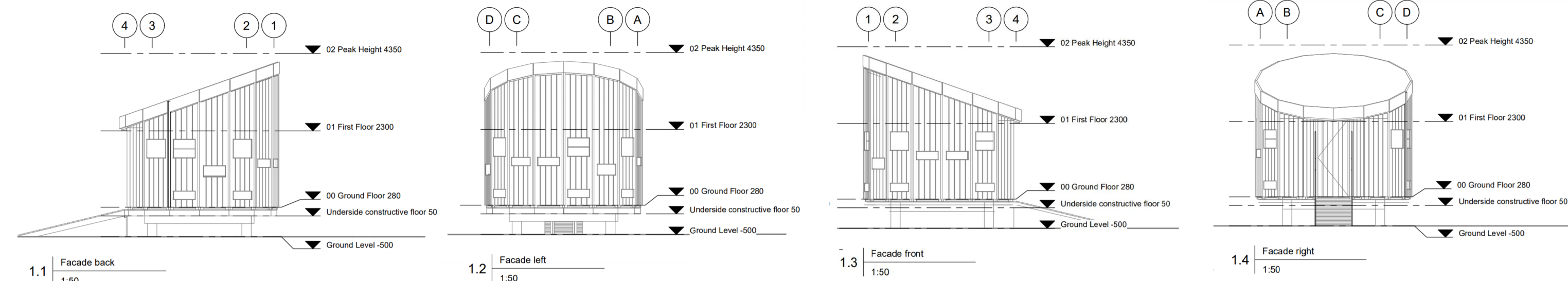
Green roof



Painted meranti wood



Exterior



The bird observation tower will become an almost circular building. When you unfold the façade panels into one straight line, you can see the pattern of the different peepholes. The holes are **composed in a balanced manner**. The lowest holes are for photographers who want to take pictures just above the water. The middle holes are for sitting users and persons in a wheelchair. The top peepholes are bigger, this way the length of the person does not affect their view. All peepholes are **lockable with shutters**.

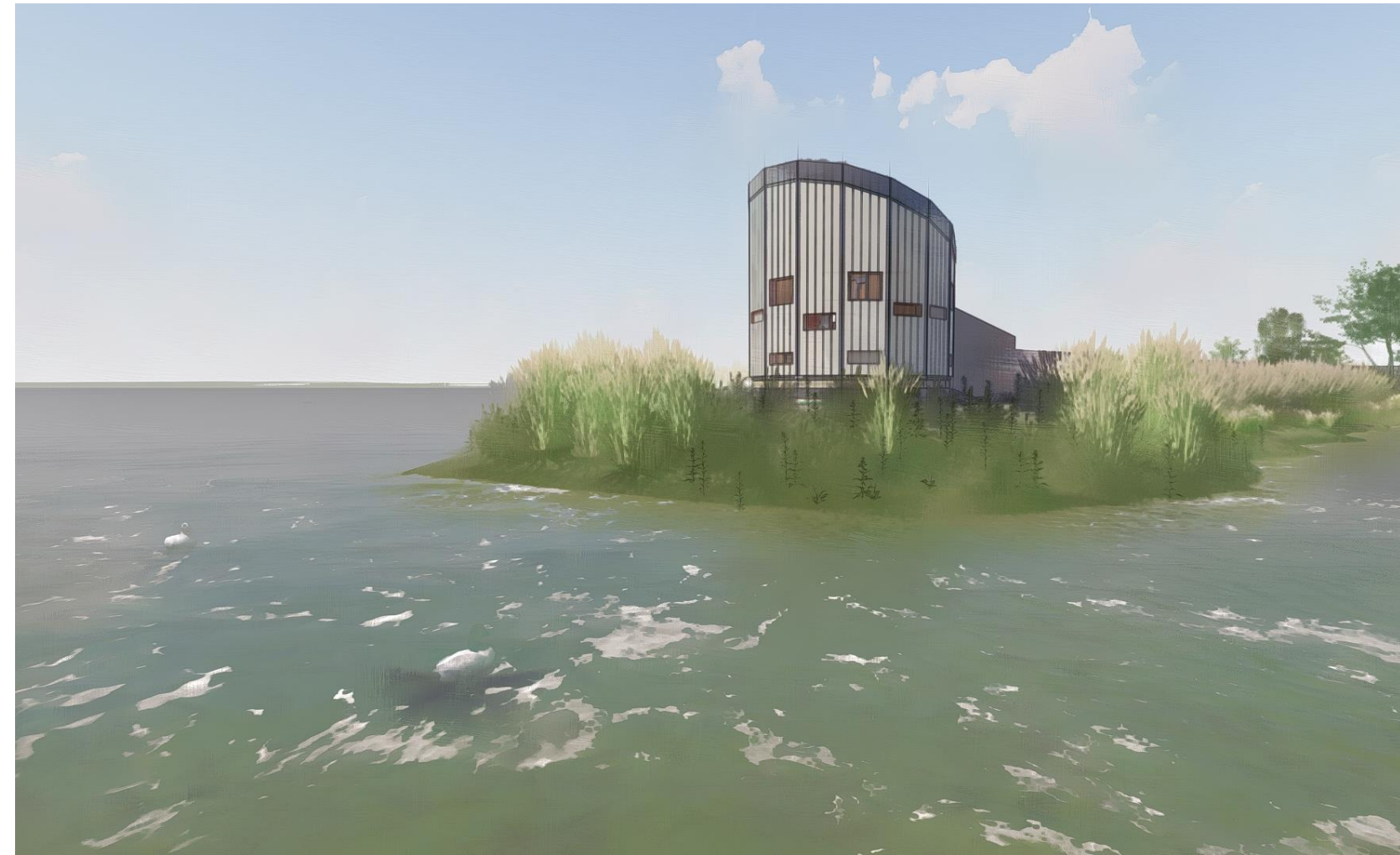
The new building contains only one story. This has two reasons. The first one is that the client did not have a very high budget for the tower. The second one is that bird watchers and bird photographers answered in a survey that they didn't need a much higher tower. The old observation tower did have the optimal elevation.



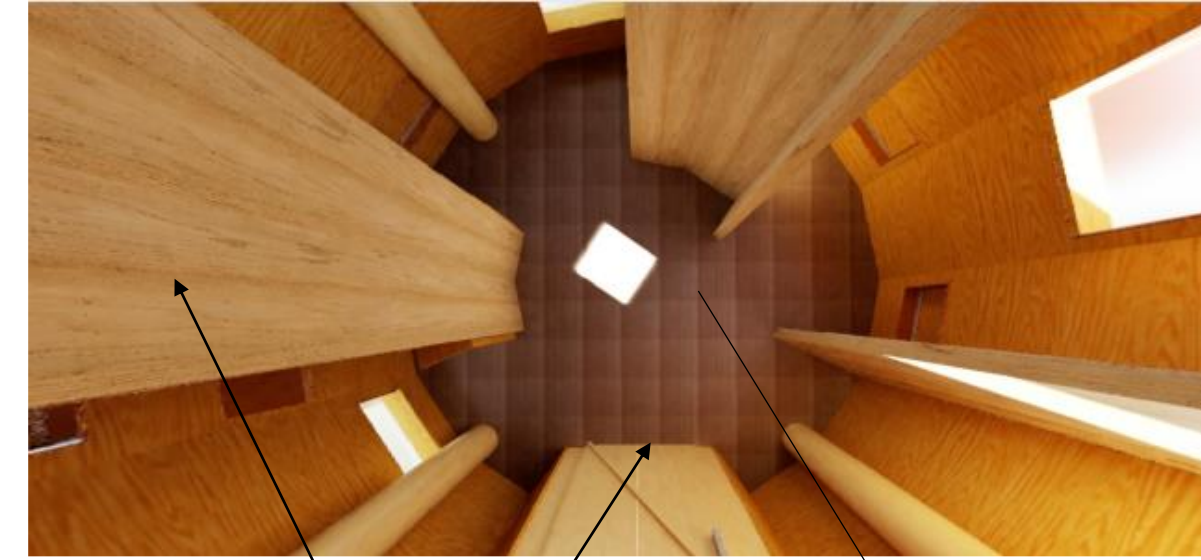
Sustainability

Despite that the client did not have any restrictions to the sustainability of the project, we thought that making the environmental footprint of the building as small as possible should contribute to the status of the building in the nearby future.

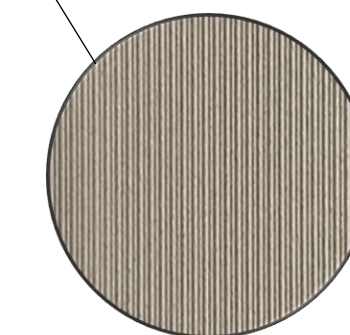
Because of this, we chose for using privacy walls to exclude unwanted guests. We have also thought about using solar panels and security cams but we knew that this was not the most sustainable and even practical solution. We also knew that wood was one of the most sustainable building materials. The problem about wood however is that it isn't always fire resistant. That is why we chose to use Neolife® façade panels and flooring in this building. Neolife® is very fire resistant and has also a very natural look.



Exterior vs Interior

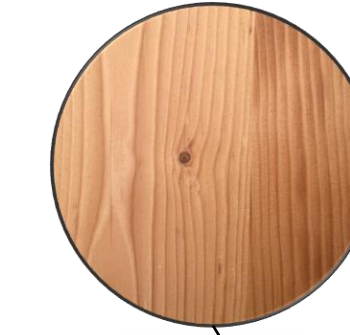


Treated plywood



Neolife® panels

Treated Douglas wood



Painted meranti wood



Green roof



Most of the interior is made out of treated **plywood**. Plywood can be made out of local tree-types and can be made almost fire resistant. The exterior will be made out of **Neo-life® façade panels**. These panels contain for about 90% out of composite and 10% out of wood. This makes the panels almost **fire resistant**. The green roof makes the building blend in its surrounding.



Construction

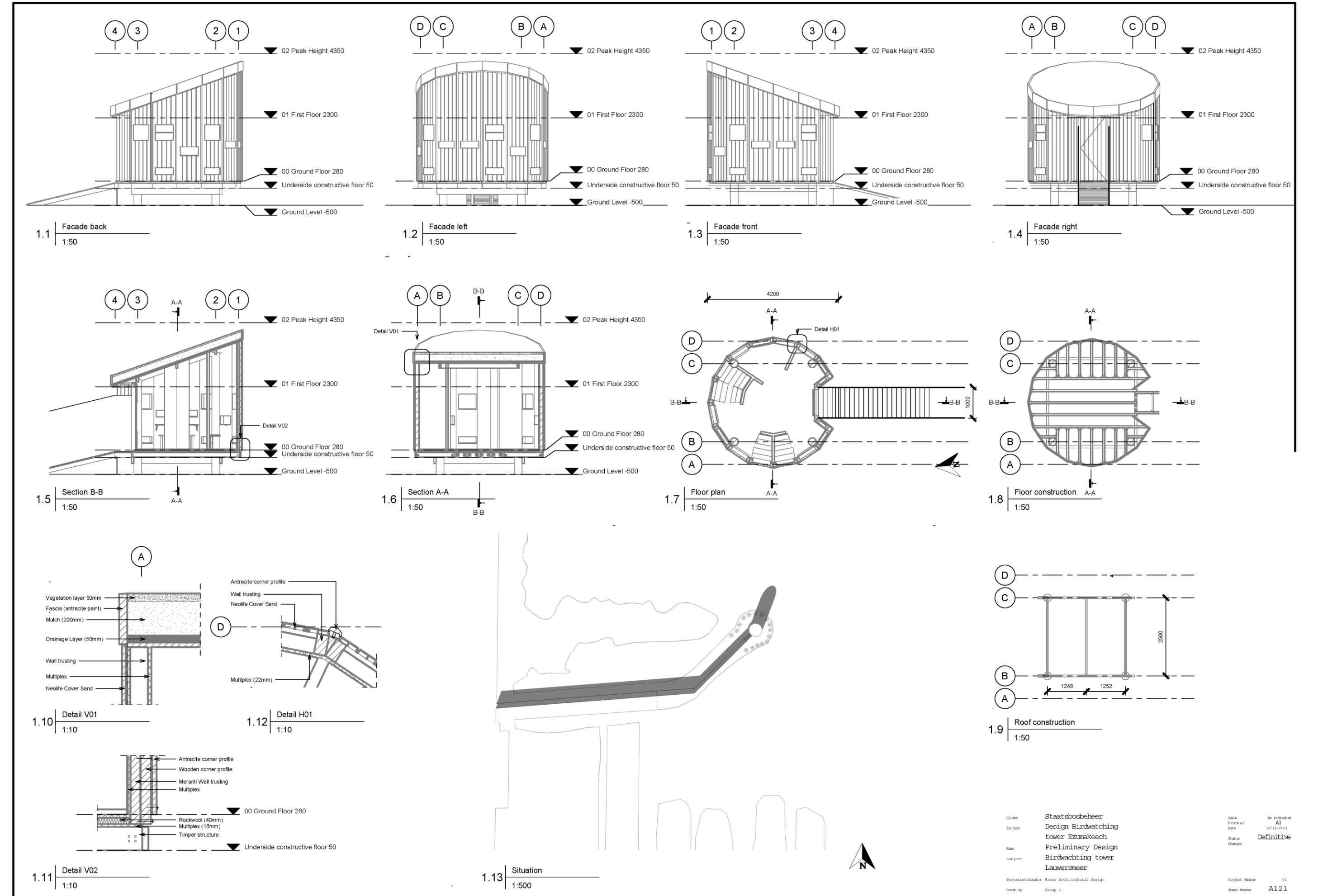
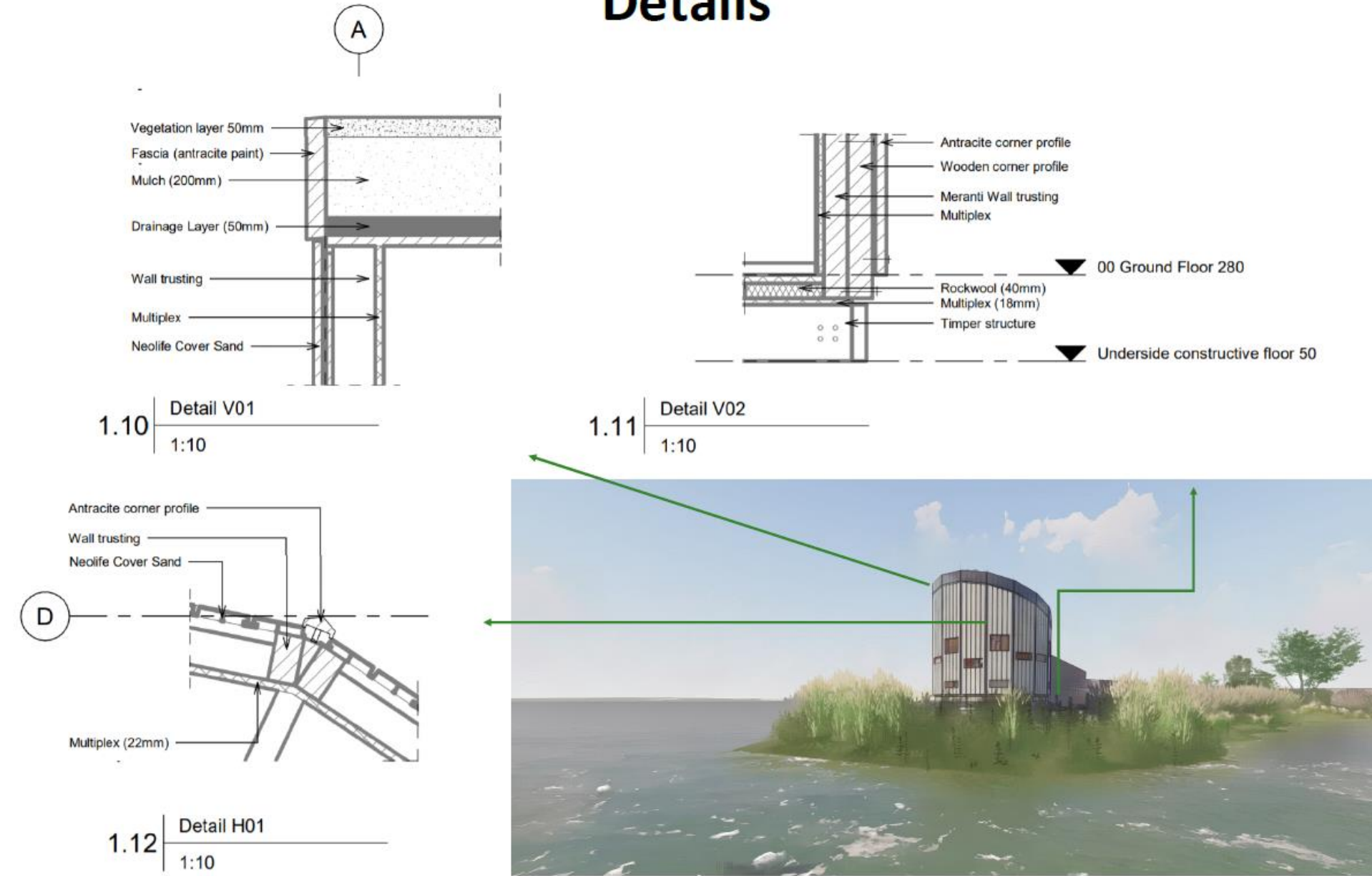


For this project we did not have a lot of time. We had only two weeks to work out the entire design. We knew that we needed an unique selling point. This became the more specified construction of the building. We started to take a better look to the construction of the old bird observation tower and we used it as a reference for the new design.

The new design has been constructed on 4 foundation piles. There is a hexadecahedron frame connected to these piles on which the structural floor is attached.

The roof is carried by the same 4 foundation piles and also by the structural wall frames.

Details





Climate Design Centre
Ossenmarkt Groningen

“Make a new design for a Climate
Design Centre in the centre of
Groningen”

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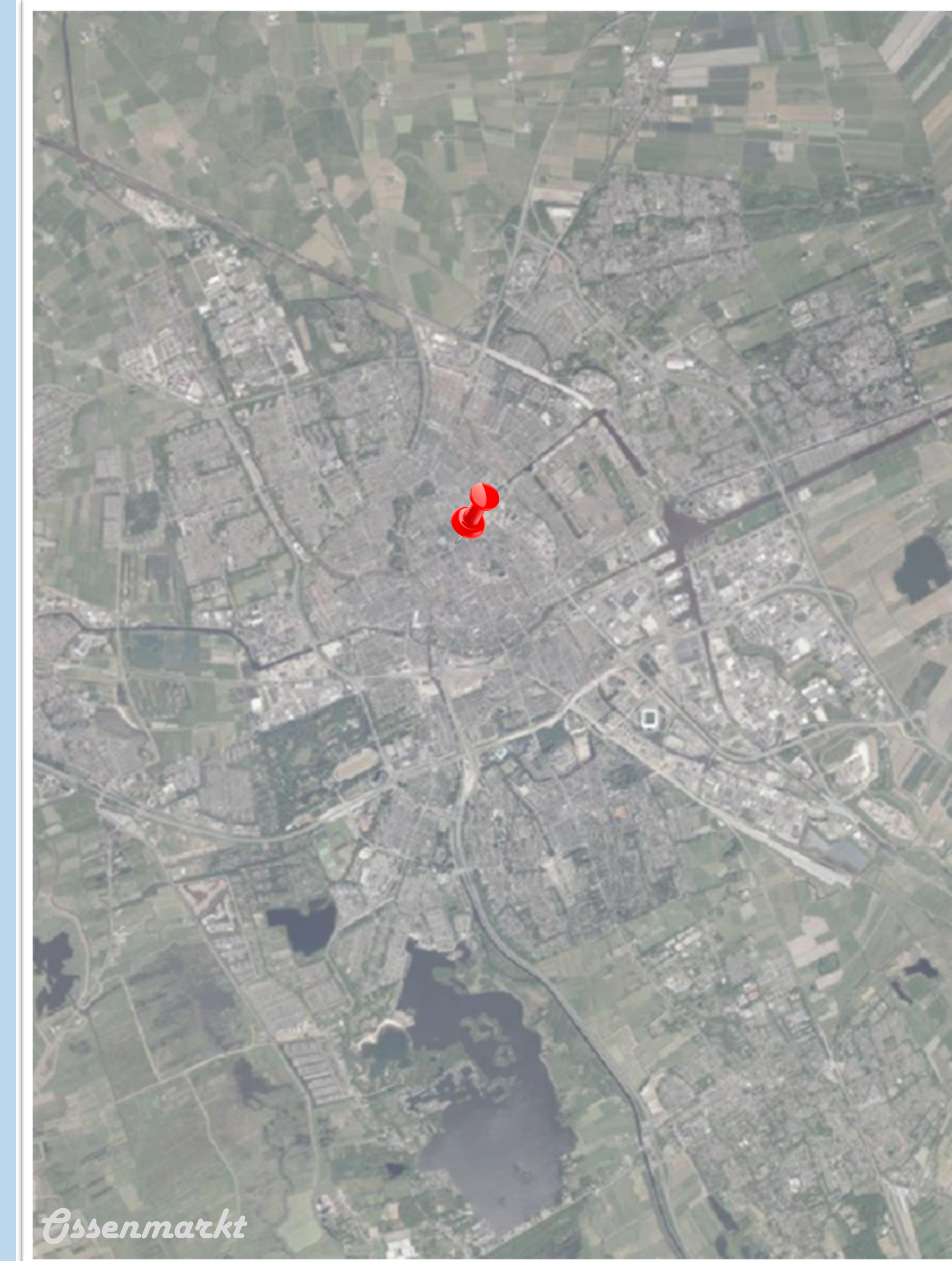
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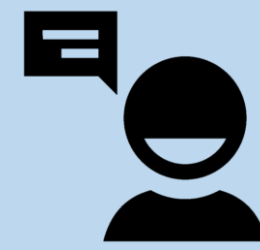


1/6 Architects



Ossenmarkt

Problem and Task



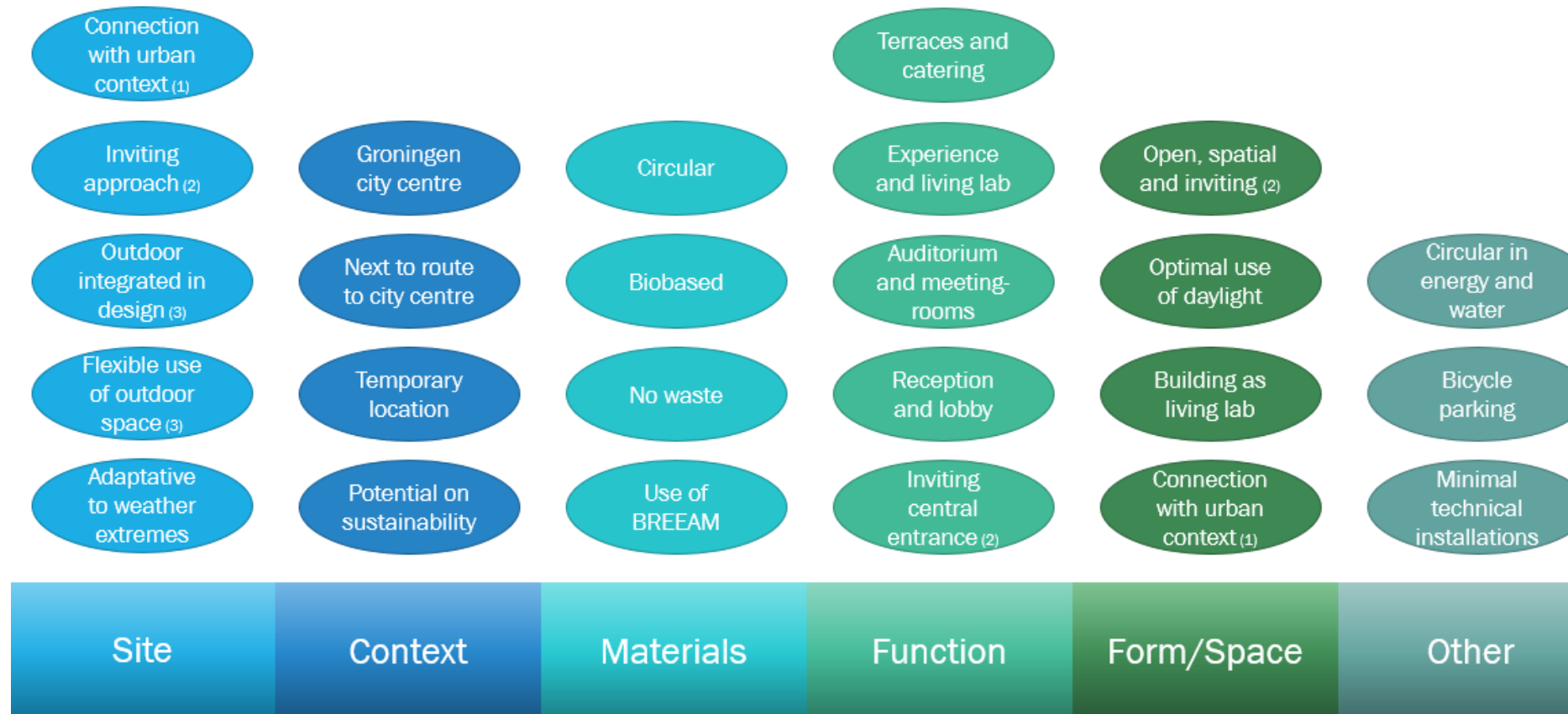
Every year, the consequences of **climate change** become more visible. The global temperature is rising, the poles are melting and the sea levels are rising.

The assignment this period was to make a design for a new Climate Design Centre in the city centre of Groningen. A **non-profit organisation** will make use of the building for making people more aware of the consequences of climate change and to motivate them to innovate their houses.

The client had set up a **program of demands**. In accordance with these demands, a new design should be made.

I tried to divide the demands between **5 domains**, as you can see in the picture on the right. I searched for some relations between the demands and put them into a phase I wanted to address this demand.

After I had clear what the demands were and when I was going to address those demands I started analysing the context and the site.



Research Phase	Demand
- Located somewhere in or directly around the Groningen city centre	Demand
- Location on or next to (pedestrian, bicycle) to city centre, part of public space	Demand
- Temporary location (not fixed) possible, then part of design proposal	Wish
- Location with potential on theme climate adaptation, circular and/or biobased design	Wish
Initial Phase	
- Direct connection with or part of urban context (passing public)	Wish
- Representative, inviting approach of building	Wish
- Design direct outdoor space integral part of building design	Demand
- Flexible use of outdoor space(s)	Wish
- Adaptation to changing seasons and weather extremes	Wish
- Space for experiments, living lab	Demand
- Terrace(s), connected with catering and public spaces	Demand
- Bicycle parking	Demand
Schematic Phase	
- Open, spatial inviting and inclusive atmosphere	Wish
- Optimal use of natural daylight	Wish
- Building as living lab: adaptive, circular, biobased with work and changes visible for visitors	Wish
- Representative central entrance	Demand
- Reception and lobby	Demand
- Toilets, including disabled	Demand
- Storage space	Demand
- Technical room(s)	Demand
- Experience: inspiration, awareness, advise and fun area	Wish
- 200m²	Demand
- Different possibilities for playing, testing and experiencing	Demand
- Catering incorporated	Demand
- Expertise: education, research and knowledge exchange	Demand
- Auditorium min. 50 p.	Demand
- 2 meeting (class) rooms min. 15 p.	Demand
- Flexible configuration: combining or splitting in different units possible	Wish
Preliminary Phase	
- Use of circular materials	Demand
- Biobased, local produced and/or harvested, innovative use, etc.	Demand
- No waste	Wish
- Use of BREEAM criteria	Wish
Definitive Phase	
- Balanced energy production	Demand
- Balanced water use, maximal reuse	Demand
- Minimize technical installations: use passive and adaptive systems: sun shading, ventilation, heat & cooling, etc.	Demand



Analysis of the context

Before I started designing I wanted to choose the best location for the building. The building had to be located into or near to the **city centre of Groningen** and be located next to a road with many **passers-by**. Several locations have been analysed before finding the best location for the new Climate Design Centre. **The Ossenmarkt** square turned out to be the best location regarding to the program of demands.

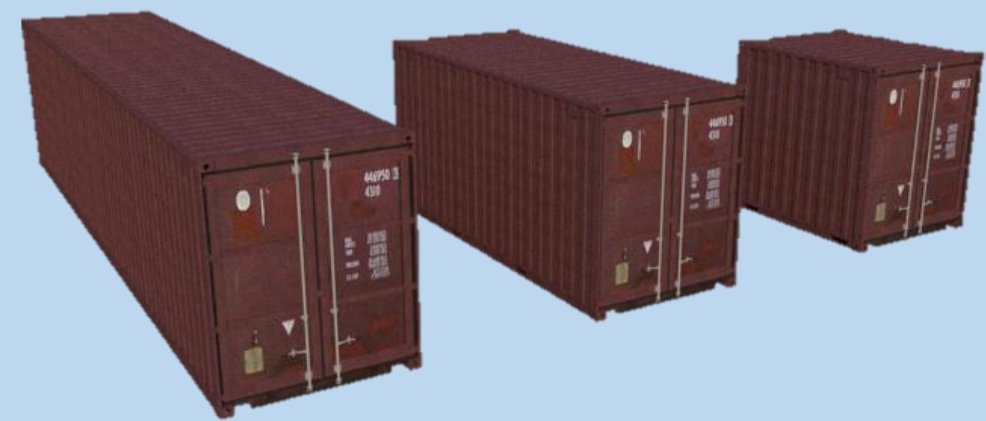
The Ossenmarkt is a square which is located only 400 metres from the Grote Markt, the heart of Groningen. The Ossenmarkt has a lot of people passing by every day and has an underground parking lot. Around the square are some **landmarks** but the square itself remains quite empty and requires its own interpretation.

During the entire design process there has been designed according to 5 domains: context/site, form, function and material.



Shape study

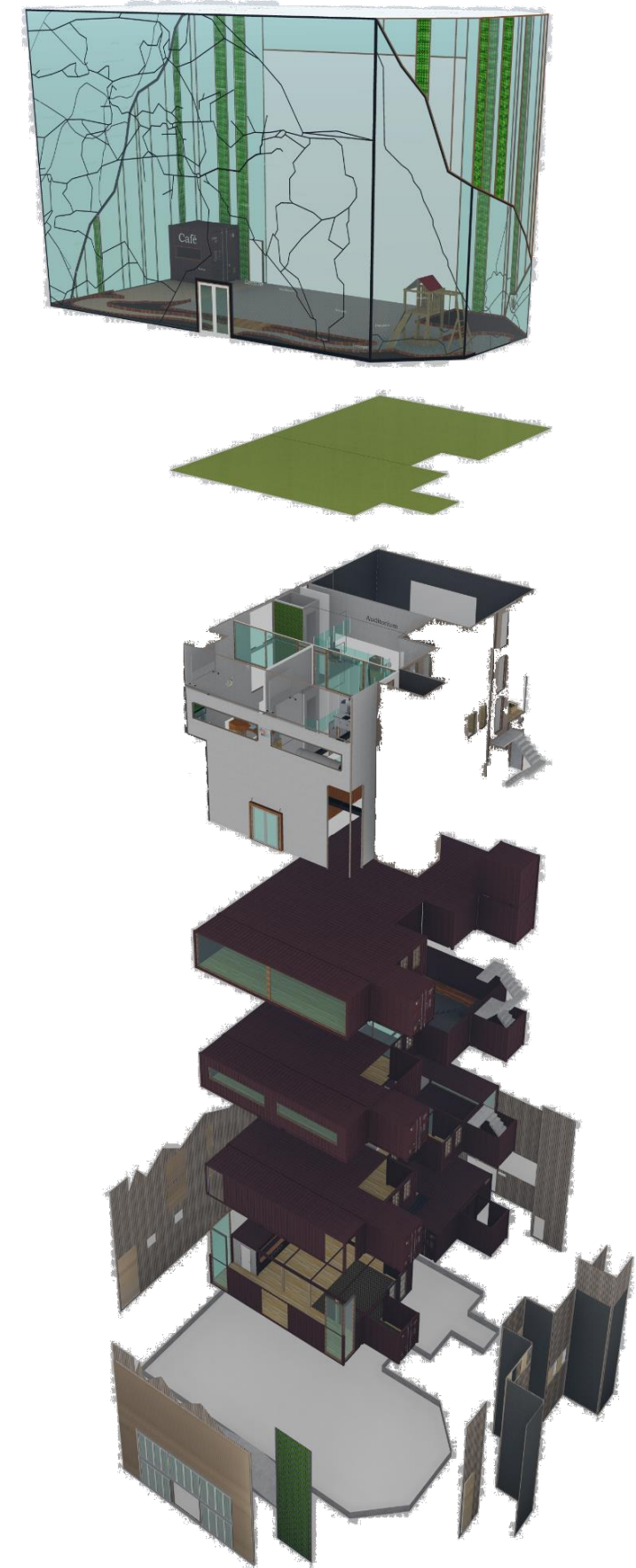
One of the demands of the client was that the location had to be temporary. That meant that the building had to be modular. I thought about how I wanted to achieve this. By the time I started this assignment I was working at a firm which was located in a building, built out of sea-containers. I used this building as a reference for my design. I did some research to different types of sea containers and I did a lot of research at how to make sea containers habitable. After this research I decided to take building with sea containers as my guiding theme during the design process.



The main part of the building will be **intersected by a glass box**. In this glass box, a catering function has been located. This makes that people can sit and eat inside the building or semi-inside.

The main part of the building consist out of 45 stacked **sea containers**. Most of the sea containers are 40 feet sea containers but there are some 20 or 10 feet sea containers used on the east side of the building

To make sure the building does not look too industrial, the building will be covered by a **wooden skin** with algae panels and shutters connected on it.



The building shape

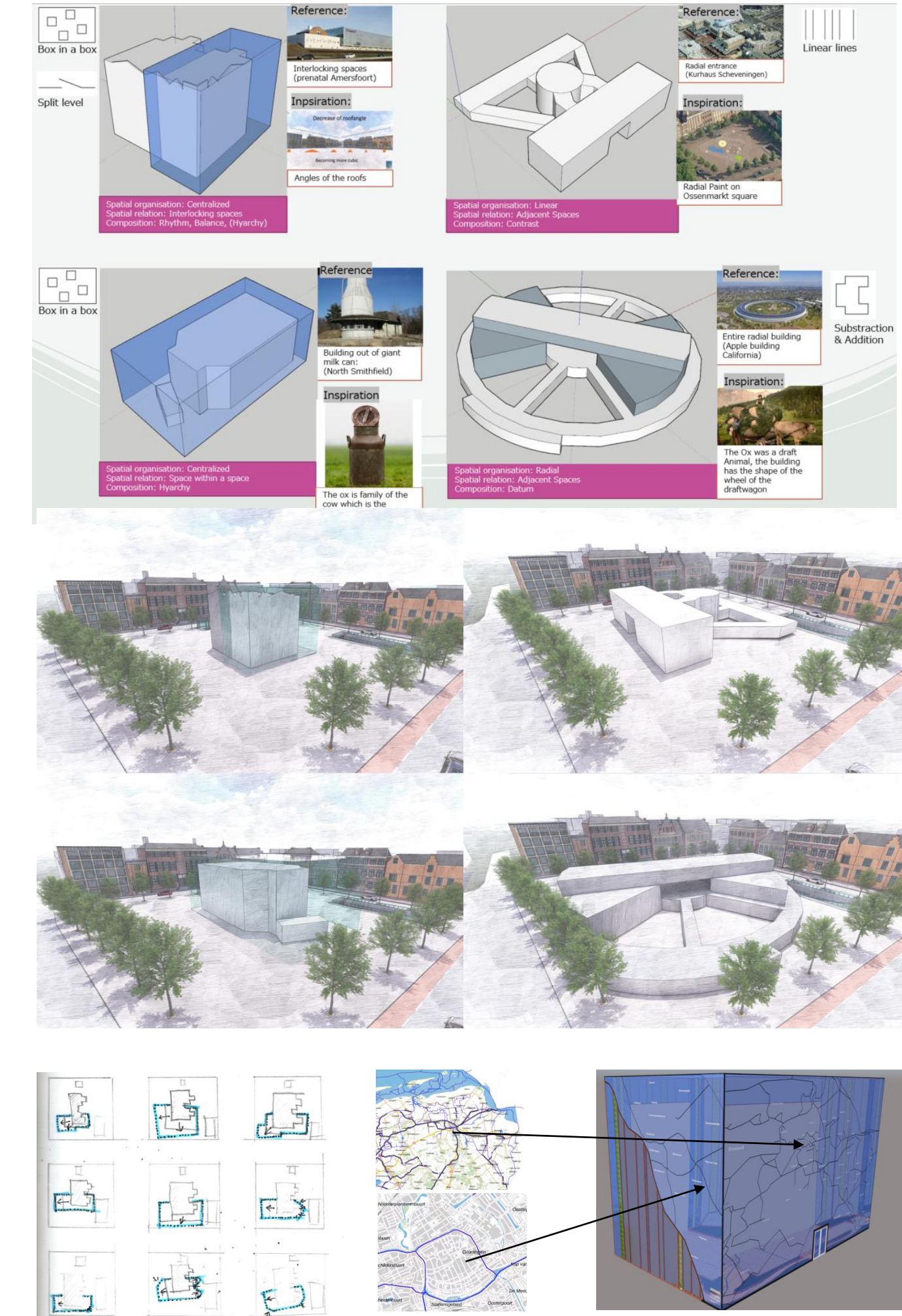
The guiding theme of this design has become building with sea containers. A reference study has been done about this topic and some of those elements are also used in the design of the Climate Design Centre.



In one of the first stages of the design process, I have been experimenting with some **spatial relations and compositions**.

I sketched the compositions in the context and looked for the composition that fitted the best.

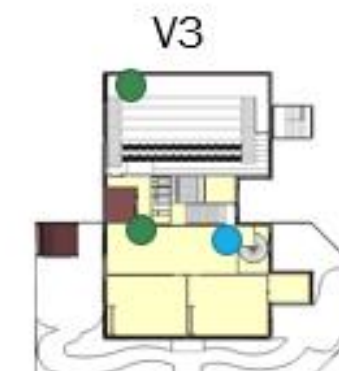
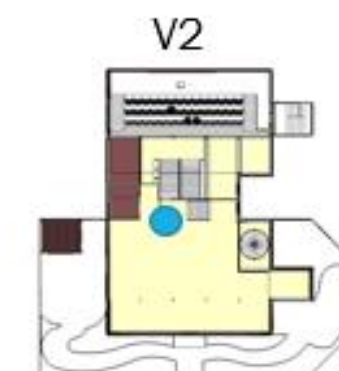
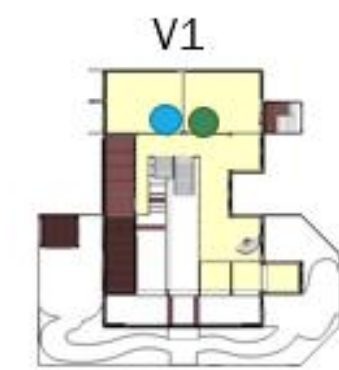
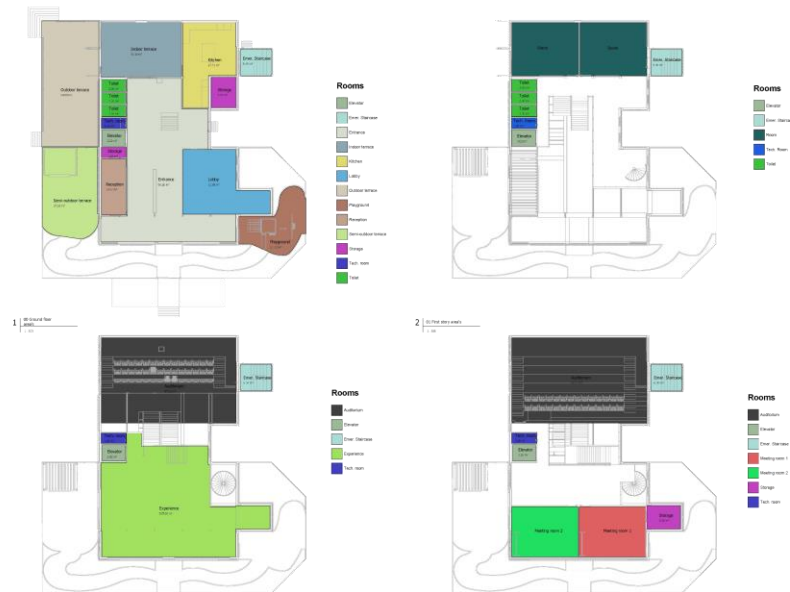
The glass, intersecting box has some cracks on the front sides. These cracks represent the **Groningen waterways** anno 2022 and 1963.



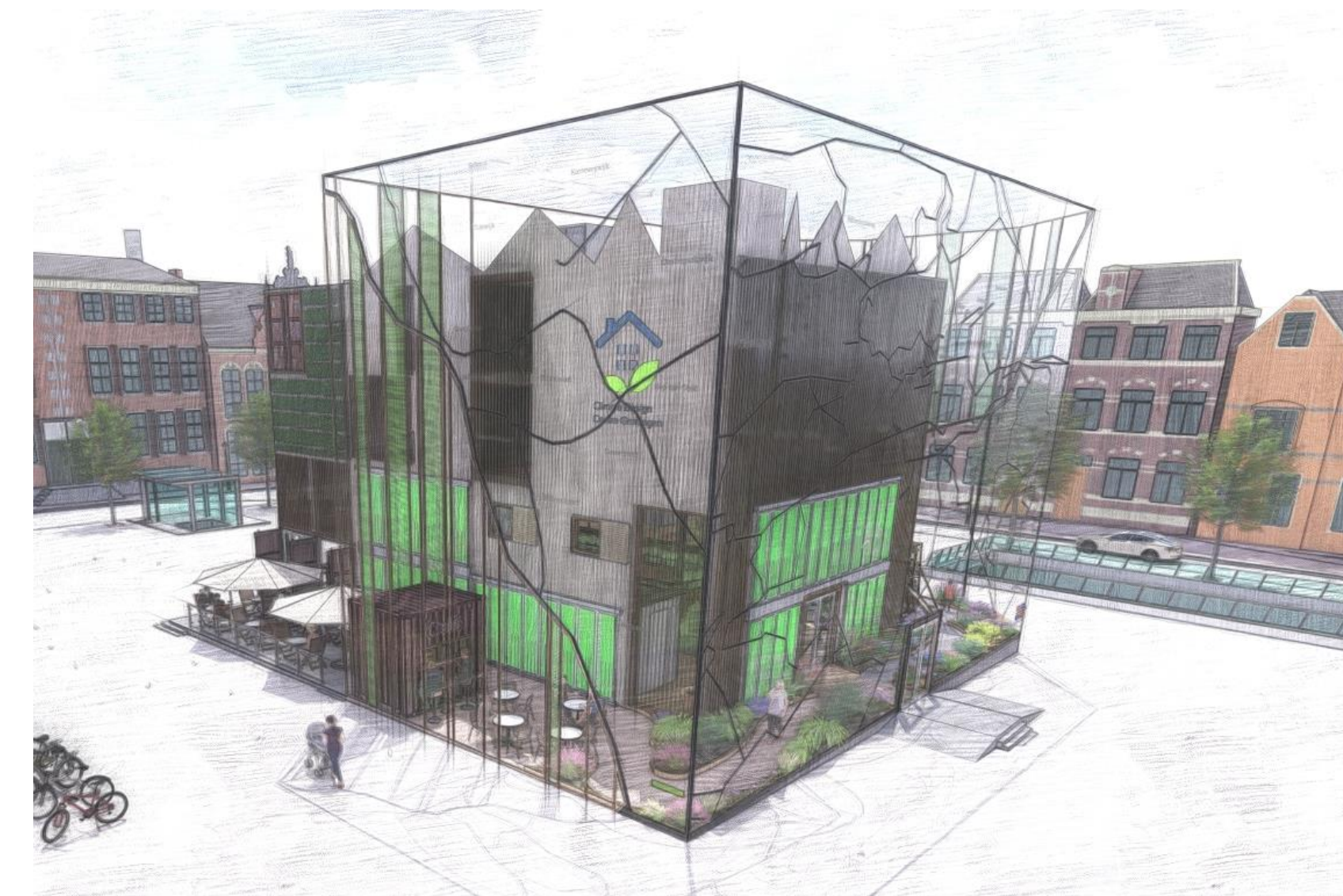
Interior



When you enter the main part of the building, you enter the atrium, also known as the heart of the building. On the left you'll find the reception which is located into a container that has kept its skin. On the right you'll find the lobby where you can relax or take a break. When you walk straight behind the staircase, you will find the catering with an indoor and an outdoor terrace. On the first floor you'll find the exposition room and the living lab. You can visit these rooms or you can go up one floor to the experience room where new products will be tested and designed. On the last floor you'll find the meeting rooms and the auditorium. Here you can follow lectures or show your findings to the world. The building as itself is a living lab as well. Everywhere through the building you'll find plants which get their water by rain through a piping system from the roof to the structural floor. The amount of daylight will be regulated by **rotating or sliding louvers** which are placed on every window that is situated to the east, south or west. In case of emergency people can leave the building by using the emergency staircase in the north-east part of the building.



Exterior



One noticeable thing about the buildings next to the square is that **the roof slope** is getting bigger walking clockwise through the square. This is one element that is also used in the new design of the main building. The glass intersecting box is also rectangular on the southwest side of the building and triangular on the northeast. The northeast side point specifically to the old buildings next to the square.

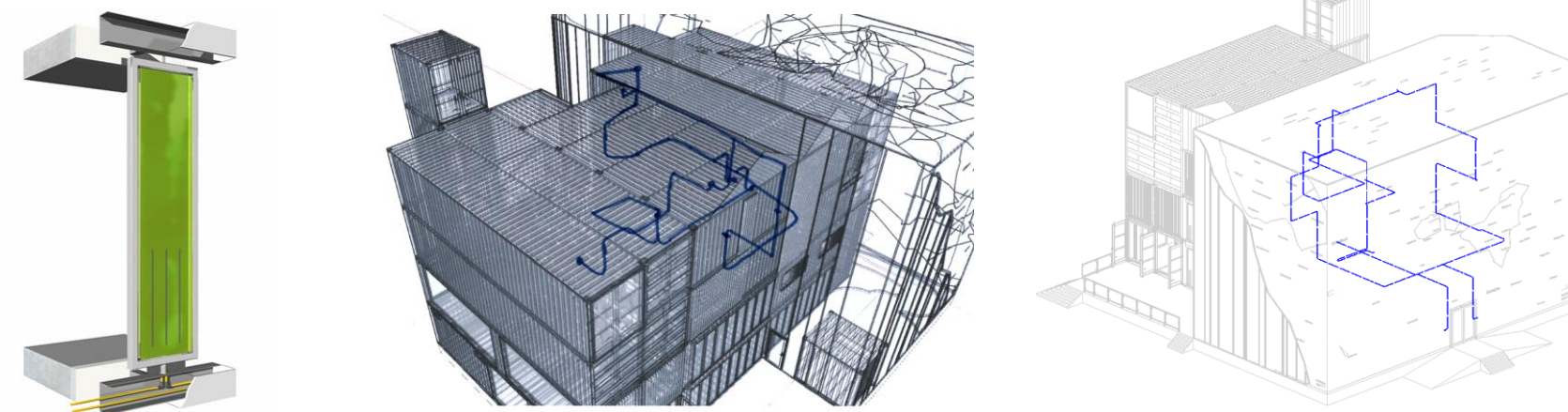
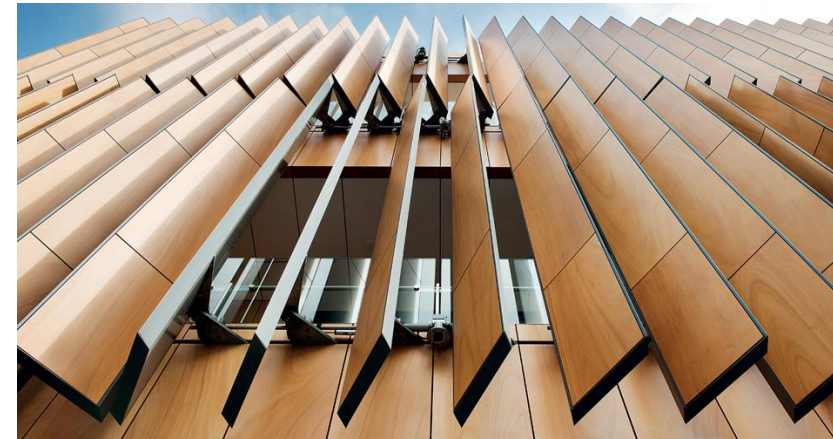
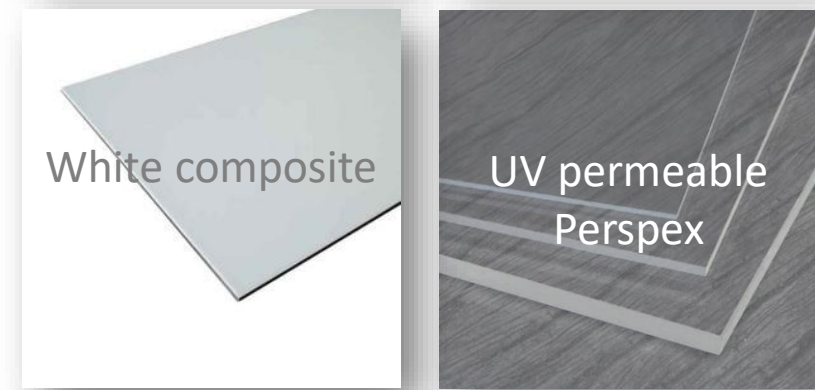
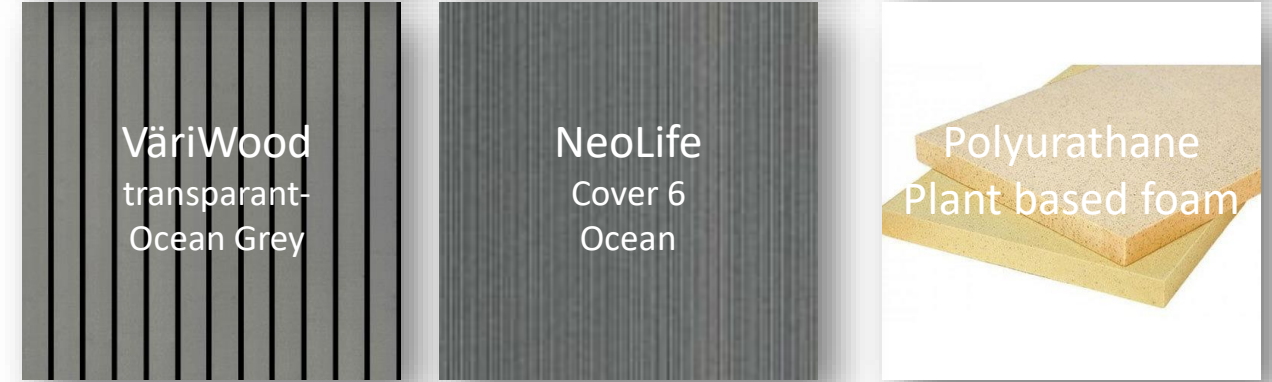
Sustainability

One of the demands of the design was that the building itself has to be climate adaptative, circular or biobased as well.

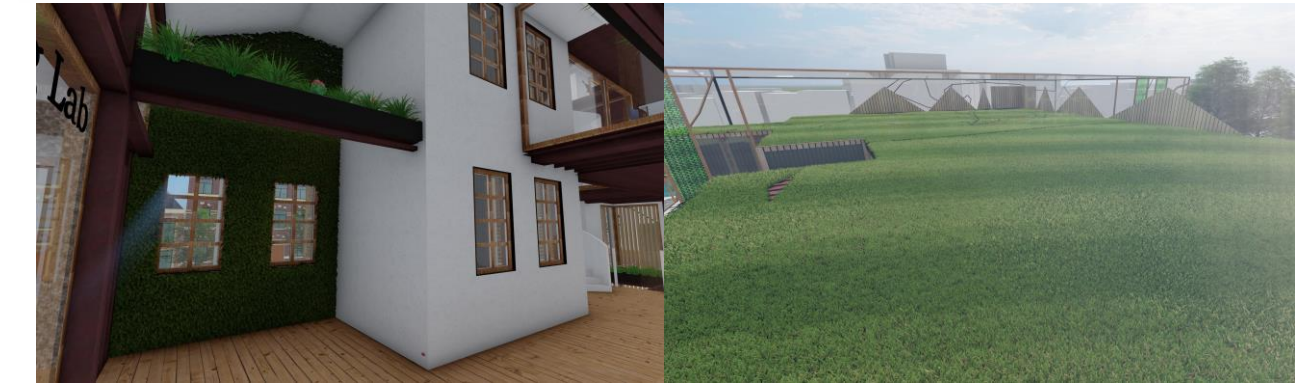
In order to achieve this, green walls and planters to bridge the beams have been used a lot in this project. Also the rainwater will be used for those planters. A piping system is going through the entire building: through the walls and through the roofs.

Another element that will be used in this building are algae panels. In Hamburg is already built a building with these panels. Some of the advantages of these panels are that those absorb CO2, they produce biomass and they regulate the interior atmosphere of the building.

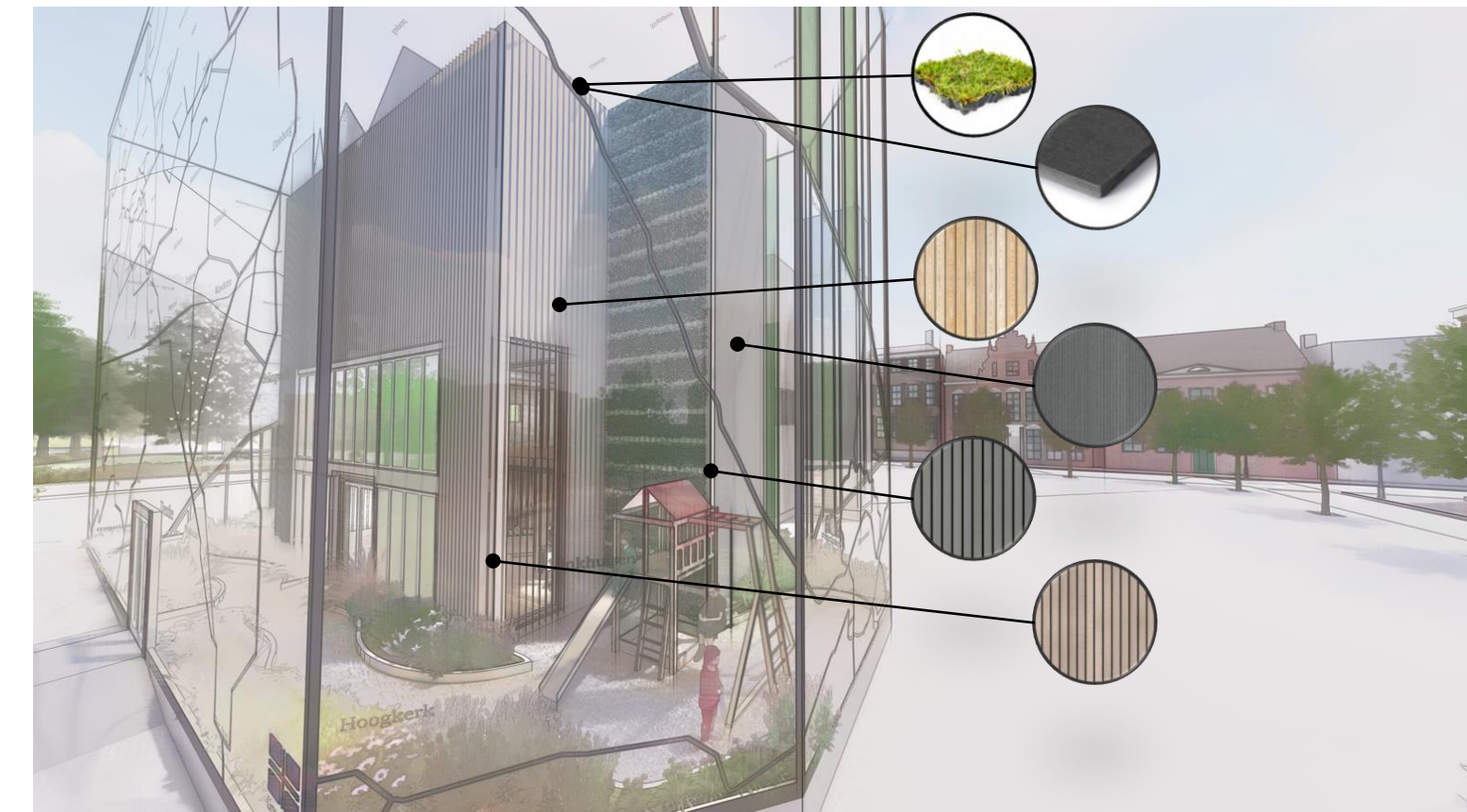
The last sustainable element that will be mentioned in this process book are the rotating louvers. These louvers will be placed on the west, south and east side of the building. This makes that the sun won't heat up the building to much and the inside climate will be comfortable.



Exterior vs Interior



The major building material that is used in this building is **wood**. Wood is a sustainable building material because it grow a lot faster than for example brick or concrete. Also a lot of planters are located as well on the inside of the building as on the outside. The green roof will reduce the **heat island effect** which is extraordinary high in the city centre of Groningen



Construction

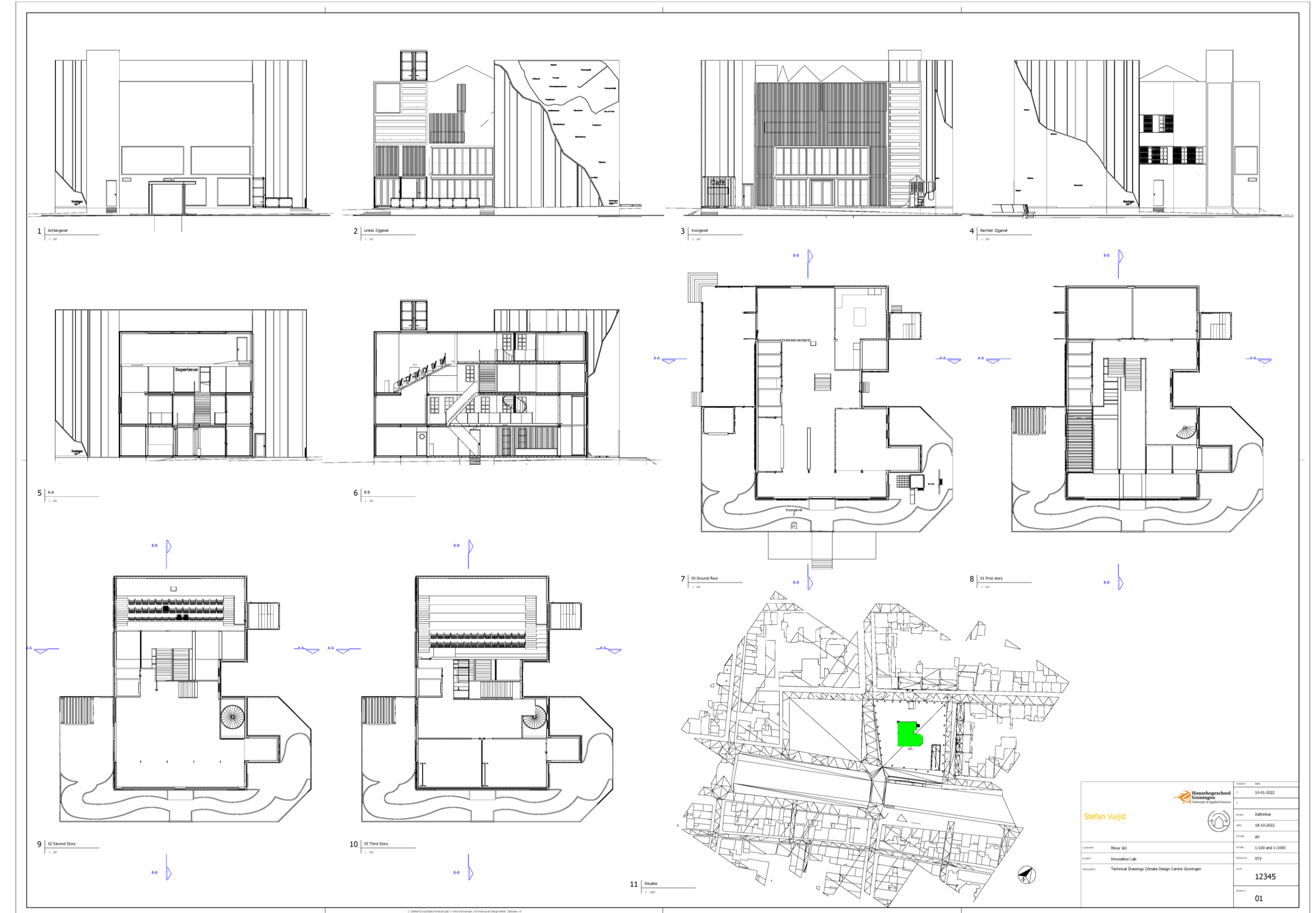
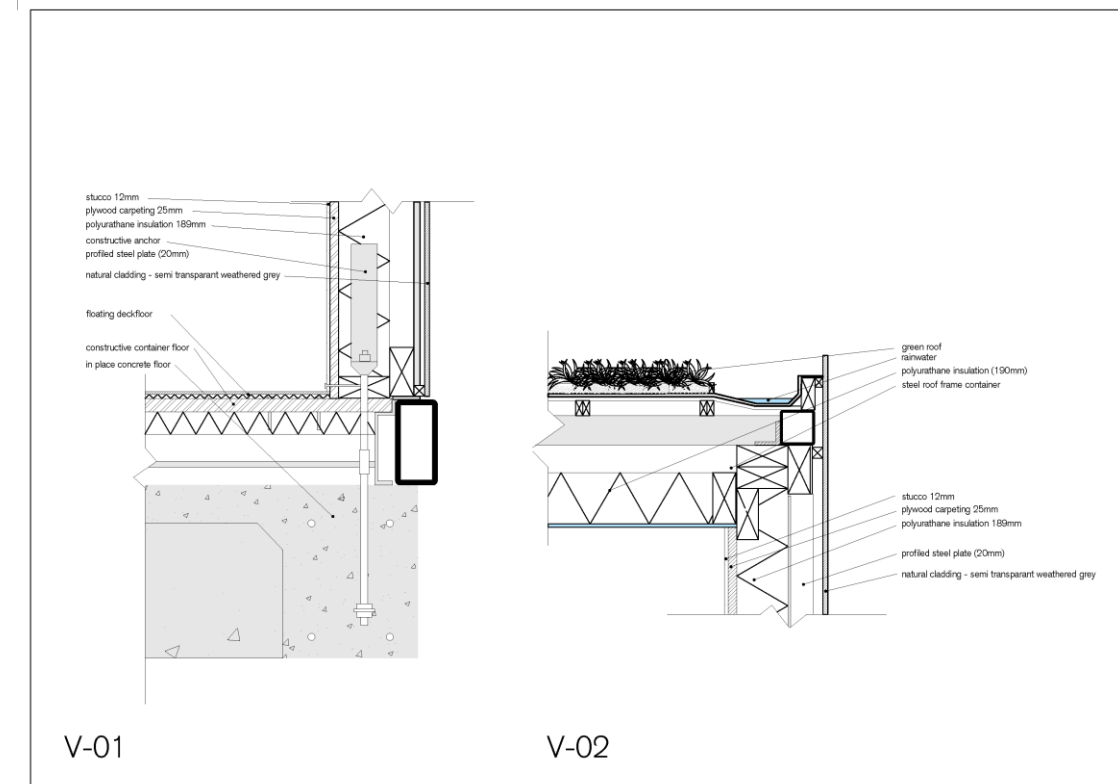
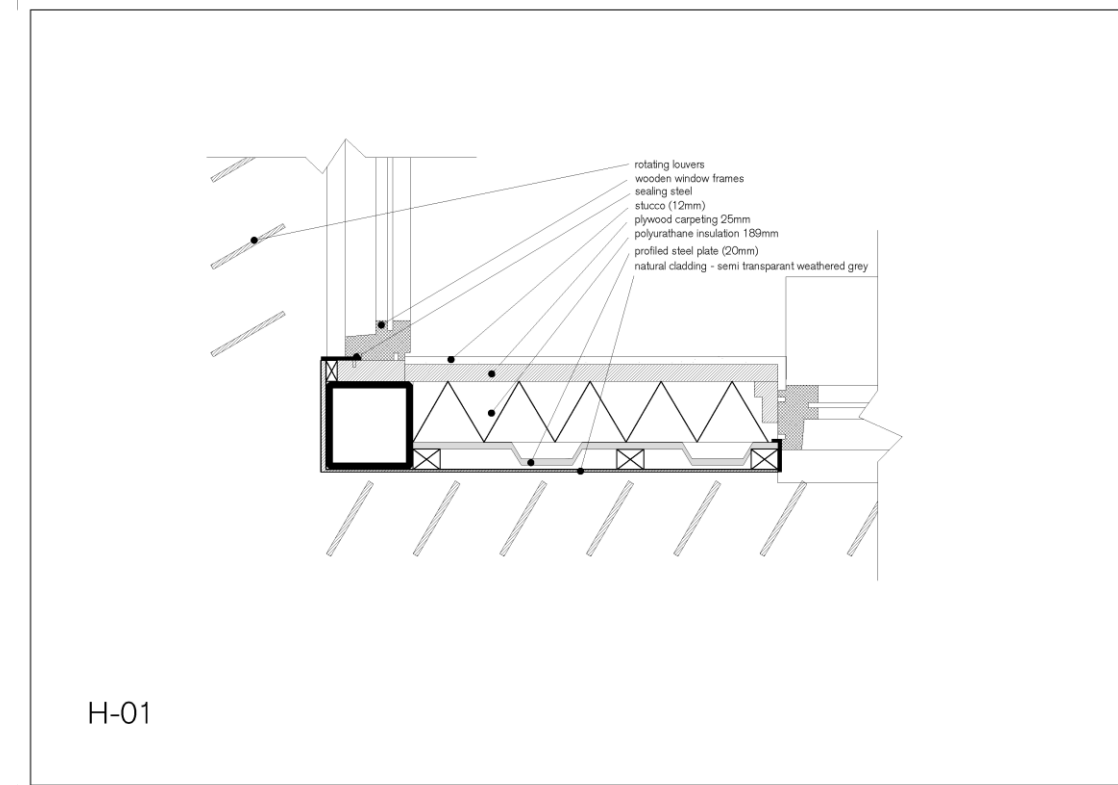
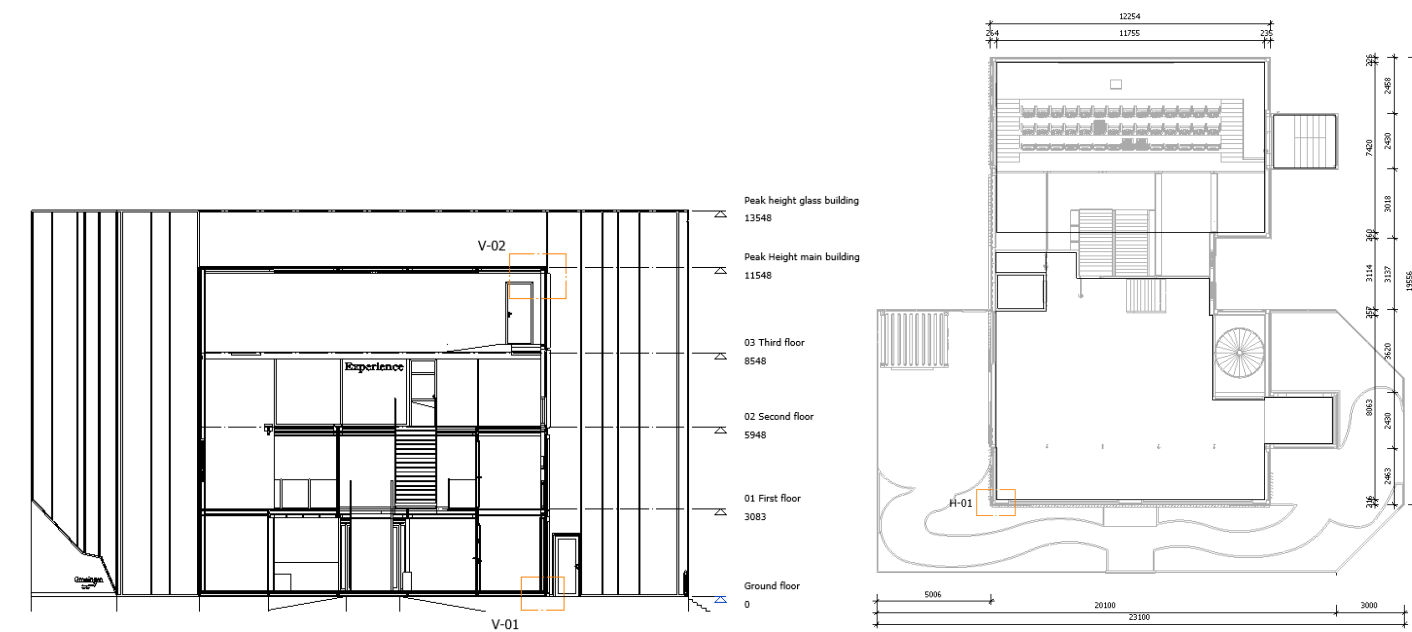


The main construction of the building will remain the one of the sea container. Every beam of column that has been removed has to be compensated with another one.

Containers on the ground floor are connected to an in place concrete floor using anchors.

The main construction of the roof of the container will also remain intact. On the roof there will become a green roof.

A rim still will be welded on the outside of the façade opening to seal the profile at the top and bottom. The sills themselves will be made out of painted meranti wood.





Student Housing
Friesestraatweg Groningen

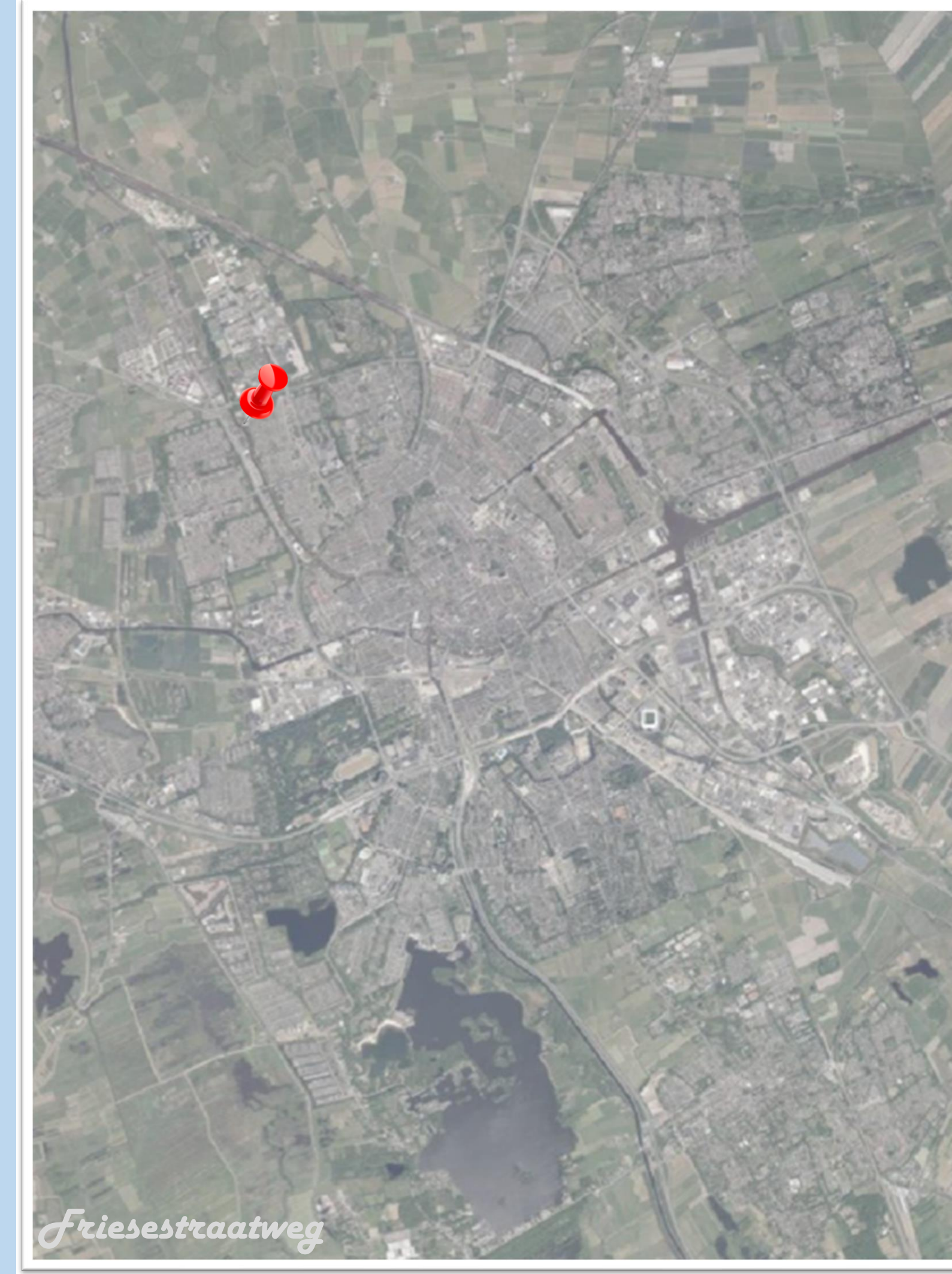
“Make a new design for a student housing complex at the Friesestraatweg in Groningen”

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Problem and Task



For years, there has been a large **housing shortage** in the Netherlands. In some cases people has to wait between 5 to 10 years for a new house. This is quite an issue of starters or for students. Also in Groningen the housing shortage is going to be a major problem. In Groningen 25% of the inhabitants is student but a lot of people want to move to Groningen but are not able to find a house.

This is the reason that there has to be built a lot more houses in Groningen.

The assignment in the first period of the second year of Built Environment was to design a building which includes **20 student houses**.

The location of the building had to be the **Friesestraatweg** which is located in the north-west of Groningen near the Zernike Campus.

The pictures on the right include some of the demands for the design

- Functie
 - o In het gebouw moeten circa 20 jongerenwoningen worden gesitueerd. In dit complex zal de begane grond een gezamenlijke functie moeten krijgen.
- Harde eisen
 - Het gebouw moet een goede ontsluiting hebben.
 - o Het gebouw moet in het geval van brand goed begaanbare vluchtwegen hebben.
 - o Het gebouw moet begaanbaar zijn minder validen.
 - De begane grond moet voor alle bewoners toegankelijk zijn.
 - De begane grond moet beschikken over een wand met brievenbussen.
 - In het gebouw moet een ruimte aanwezig zijn waar de bewoners hun was kunnen doen.
 - Er moet voldoende parkeergelegenheid in of bij het gebouw gelegen zijn.
 - o Inclusief parkeergelegenheid voor minder validen.
 - Er moet zich voldoende plek in of rondom het gebouw bevinden voor het stallen van fietsen.
 - De overige ruimte op de begane grond dient ingericht te worden voor gezamenlijk gebruik.
 - Het gebouw moet voldoende stil zijn zodat hier ongestoord gestudeerd kan worden
- Zachte eisen
 - Het gebouw dient een centrale ontsluiting te hebben.
 - Rondom het gebouw moet voldoende groen zijn zodat men lekker buiten kan zitten.
 - De ruimte waar de fiets gestald moet worden is één grote ruimte

- Gebouw
 - o Het gebouw moet genoeg ruimte bevatten om er voor ongeveer 20 huishoudens onderdak te bieden.
- Harde eisen
 - Het gebouw moet op de zon zijn georiënteerd.
 - Het gebouw moet passen bij de omgeving.
 - o Veel kleur in de woning.
 - Het gebouw moet uitkijken op het groen en het water achter in de kavel.
 - Bij het gebouw moet voldoende parkeergelegenheid zijn.
 - De begane grond moet dusdanig zijn ingericht dat onbevoegden hier niet zomaar kunnen komen.
- Zachte eisen
 - Het gebouw moet een aansprekende vorm hebben.
 - De brievenbussen moeten makkelijk te bereiken zijn.
 - Op de begane grond moet binnen een fietsstalling en overige gezamenlijke ruimtes als bijvoorbeeld wasmachines en overige.

- Woongebruik: In het appartementencomplex komen kamers voor verschillende huishoudens. Zo moet er ruimte zijn voor:
 - o Eenpersoons appartementen waarin slaapkamer, woonkamer en keuken 1 geheel zijn
 - o Eenpersoons appartementen waarin slaapkamer, woonkamer en keuken niet 1 geheel zijn
 - o Tweepersoons appartementen waarin gescheiden ruimtes voorkomen
 - o Tweepersoons appartementen waarin voor een stel waarin alle functies gezamenlijk zijn

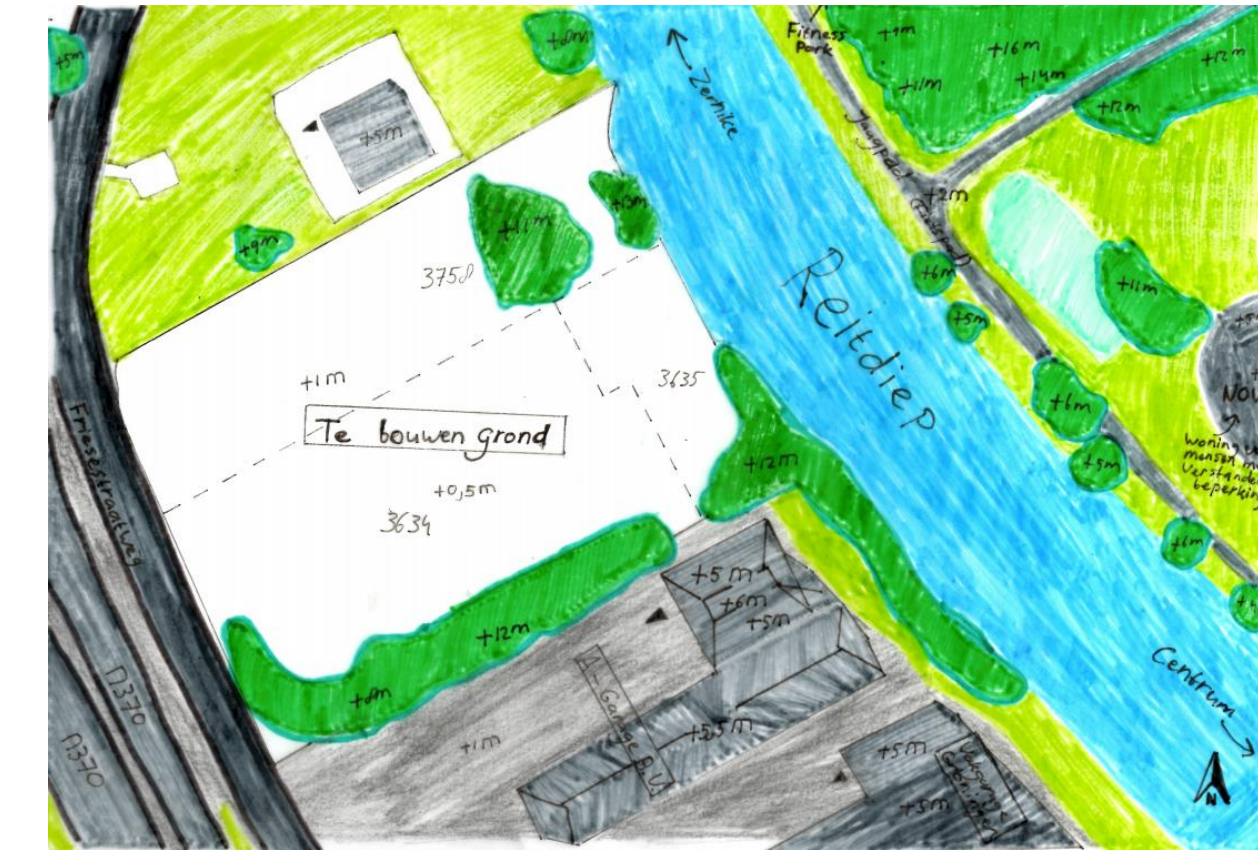
- Harde eisen
 - In de kamers moeten plek zijn voor de volgende functies:
 - o Slapen
 - o Koken
 - o Hygiëne
 - o Comfort
 - o Studeren
 - De kamer moet voldoende oppervlak hebben voor vrije indeelbaarheid.
 - Er moet voldoende loopruimte zijn.
 - De badkamer moet worden afgesloten i.v.m. stank en vocht.
 - De keuken moet voorzien zijn van een afzuigkap.
 - De kamer moet voldoende privacy hebben.
 - Er moet zich voldoende ruimte bevinden voor het verwerken van leidingen.
- Zachte eisen
 - De kamer moet voorzien zijn van een individuele buitenruimte.
 - Er moet ruimte zijn voor meerdere personen in 1 appartementen zodat de eigenaar gasten kan ontvangen.
 - Er moet voldoende ruimte zijn op de galerij om deze in te richten als zijne een soort voortuin.
 - De woonkamer moet op het zuiden zijn georiënteerd.
 - Een dankterras (gezamenlijk) zou erg wenselijk zijn.

Analysis of the context

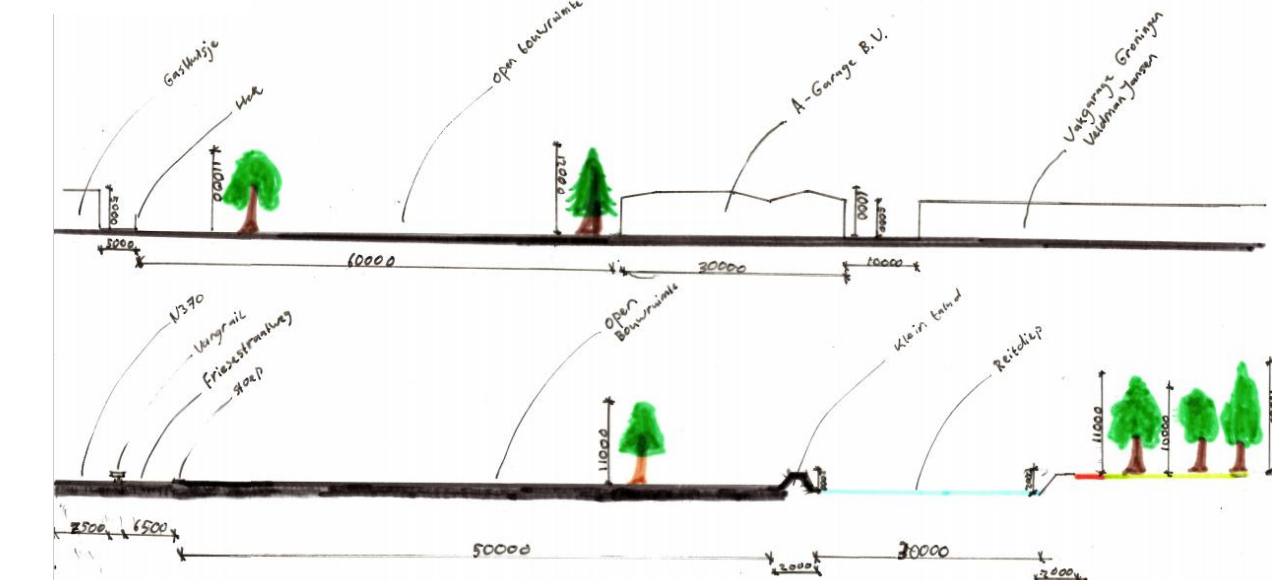
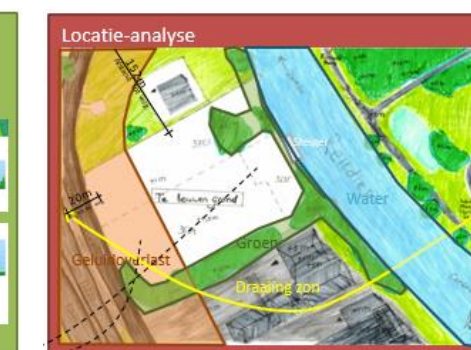
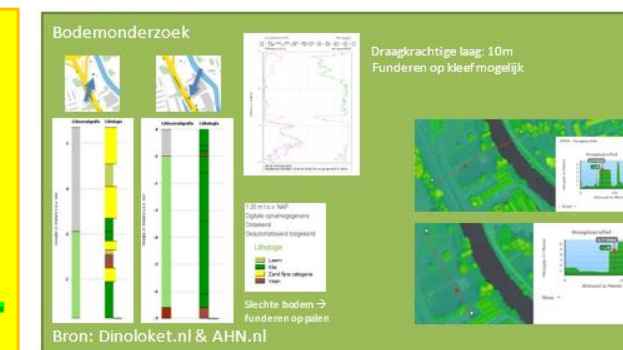
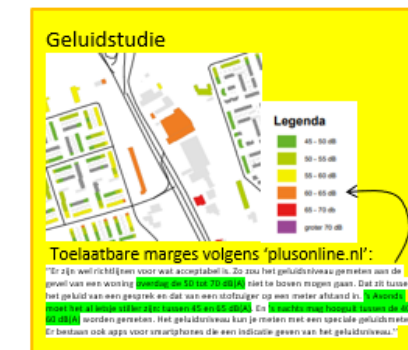
The location where the student complex had to be built was between the Friesestraatweg and the Reitdiep river.

When I did a sun study, I noticed that there was a conflict between the best view which was to the northeast and the rotation of the sun which was to the south.

I had to find a solution for this problem. I have chosen to design a **L-shaped** building so people can choose to sit directed to the Reitdiep or directed to the southwest.



Legenda	
	Boom
	Gras
	gebouw
	water
	weg
	Struik
	Nog in te bouwen grond
	Kavel-afzetting
	Hoogte



Shape study

I knew that students in Groningen love roof terraces. I was thinking about how I could create different small roof terraces so people from different households could use these roof terraces. This was one of the reasons I came up with the stepped building shape.

The building has seven floors with a total of 23 rooms. Some rooms are bigger than the others. By this households with different amounts of people can be located inside the building.



The building shape

I did also a reference study to different shapes and façades of buildings which I could integrate into this project for the student housing.



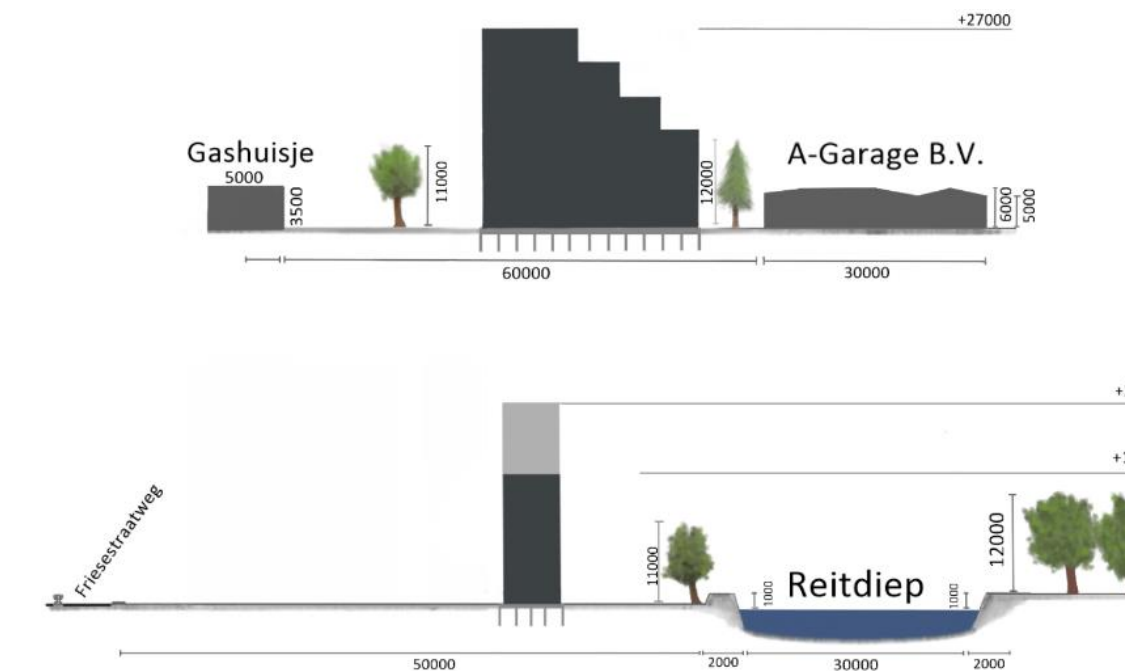
I have experimented with a lot of different shapes. I have also experimented with some other shapes than the L-shape.

	Ontwerp 1	Ontwerp 2	Ontwerp 3	Ontwerp 4	Ontwerp 5
Verschillende vormen					
Zon	1/ ochtends: ± 40% 1/ middag: ± 45%	1/ ochtends: ± 50% 1/ middag: ± 50%	1/ ochtends: ± 50% 1/ middag: ± 50%	1/ ochtends: ± 45% 1/ middag: ± 45%	1/ ochtends: ± 50% 1/ middag: ± 50%
Geluidsoverlast	± 25% van het gebouw	± 20% van het gebouw	± 14% van het gebouw	± 45% van het gebouw	± 10% van het gebouw
Aanplanting groen	± 20%	± 25%	± 18%	± 6%	± 6%
Aanpassingen					
Zon	1/ ochtends: ± 50% 1/ middag: ± 50%	1/ ochtends: ± 60% 1/ middag: ± 60%	1/ ochtends: ± 50% 1/ middag: ± 50%	1/ ochtends: ± 60% 1/ middag: ± 60%	1/ ochtends: ± 50% 1/ middag: ± 50%
Geluidsoverlast	± 14% van het gebouw	± 14% van het gebouw	± 14% van het gebouw	± 14% van het gebouw	± 14% van het gebouw
Aanplanting groen	± 20%	± 18%	± 10%	± 18%	± 18%
Vloeroppervlakte	± 1150 m ²	± 1260 m ²	± 1180 m ²	± 1150 m ²	± 1050 m ²
Aanpassing					

I noticed that the different shapes I had drawn were much to big so I started sketching smaller variants of the building.

	Ontwerp 1	Ontwerp 2	Ontwerp 3	Ontwerp 4
Verschillende vormen				
Weerstand tegen wind	Goed	Goed	Goed	Goed
Zon	1/ ochtends: ± 60% 1/ middag: ± 60%	1/ ochtends: ± 90% 1/ middag: ± 90%	1/ ochtends: ± 90% 1/ middag: ± 90%	1/ ochtends: ± 80% 1/ middag: ± 80%
Geluidsoverlast	Beperkt	Beperkt	Beperkt	Beperkt
Aanplanting groen	Beperkt	Beperkt	Beperkt	Beperkt
Aanpassingen (n balkon) (n galerij met trappenhuis)				
Vloeroppervlakte	± 175 m ²	± 266 m ²	± 272 m ²	± 244 m ²
Aantal kamers	± 20	± 23	± 23	± 20
Aanpassing (n-design)				

The biggest part of the building is pointed to the Reitdiep because people will get the best view in that direction.

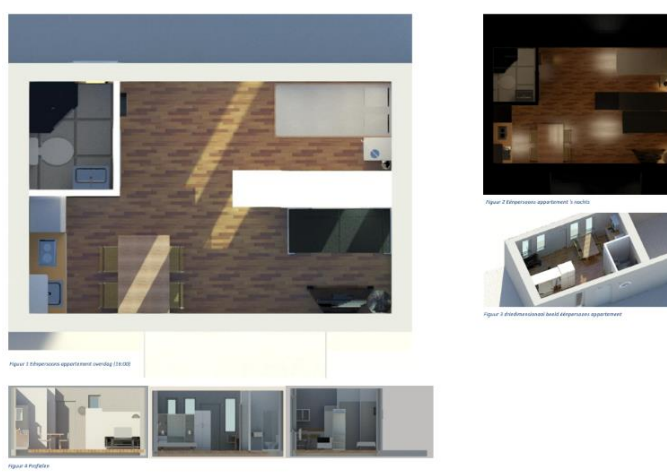
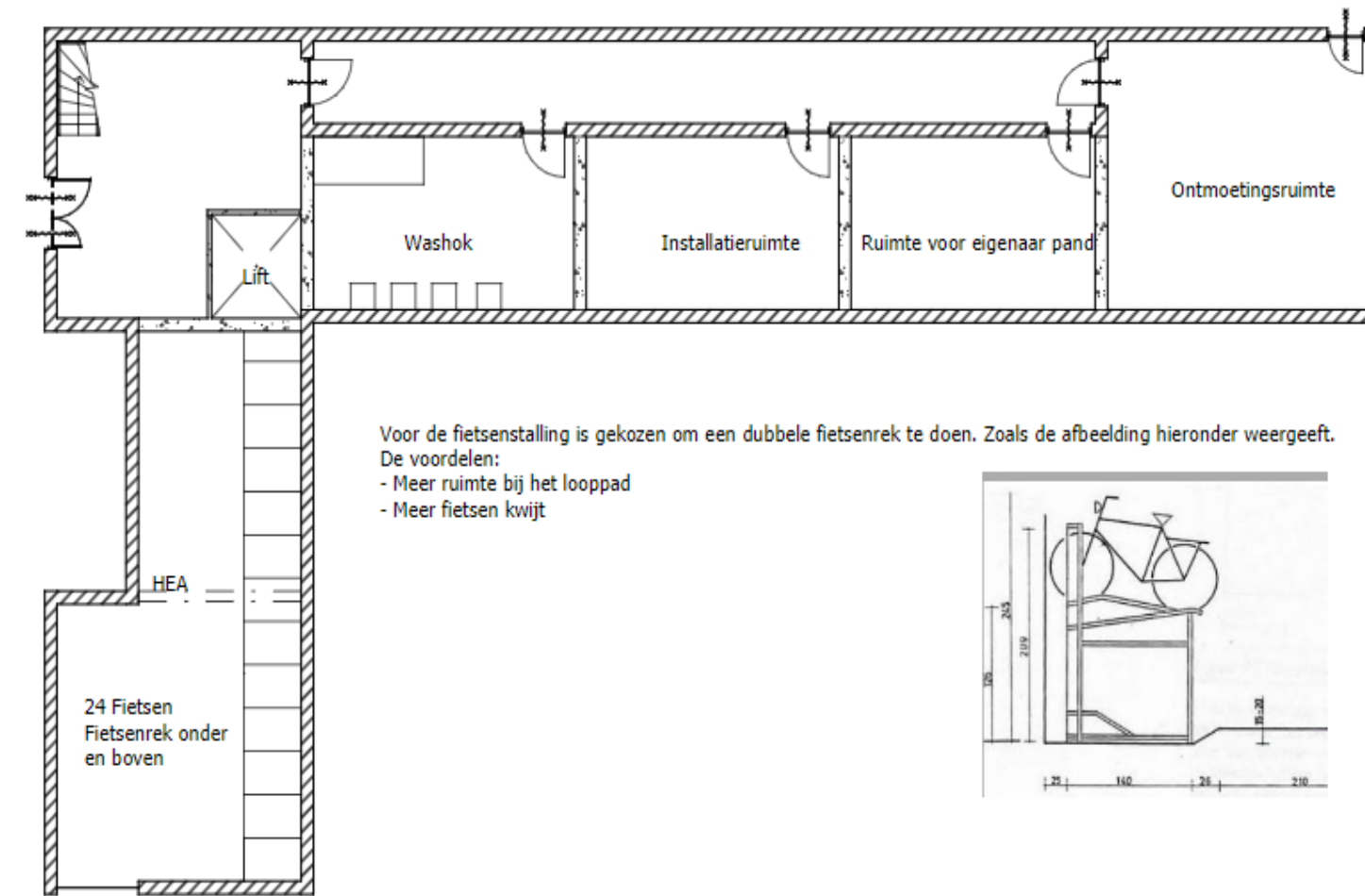


Space

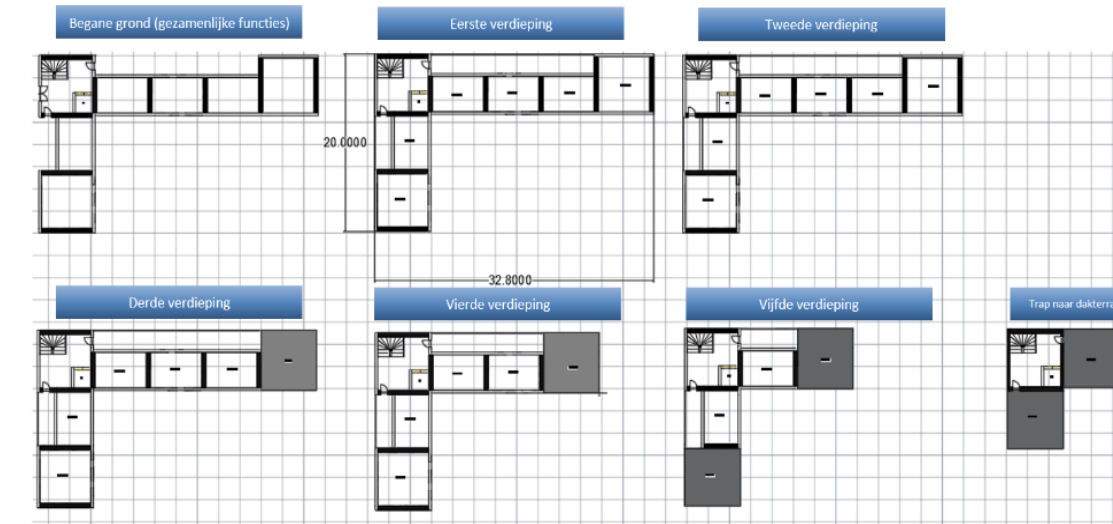


The building had different sizes of rooms. Some rooms had to have enough space to locate 2 persons and some rooms had to be large enough for being a study.
I designed some different lay-outs of the rooms and I chose some different I wanted to use inside the building.
The picture in the left bottom corner shows a rendering of one of the lay-outs I located inside the building complex.

On the ground floor of the building, a **bicycle parking** will be located. Groningen is a city with a lot of cyclists and a lot of student travel by bike so a large bicycle parking was a must-have.



Optie 1	Optie 2	Optie 3	Optie 4	Optie 5
Voordelen: - Voorkamer aan zonnkant - Bed afgescheiden door middel van laast - Keuken en badkamer bij elkaar - 1/2 dichterbij bij bed geen zon	Voordelen: - Voorkamer aan zonnkant - 1/2 dichterbij bij bed geen zon - Keuken en badkamer ver uit elkaar - Bed midden in kamer	Voordelen: - Voorkamer aan zonnkant - Keuken en badkamer ver uit elkaar - Bed midden in kamer - 1/2 dichterbij bij bed geen zon	Voordelen: - Voorkamer aan zonnkant - Keuken en badkamer ver uit elkaar - Bed heel dicht bij sofa - 1/2 dichterbij bij bed geen zon	Voordelen: - Keuken en badkamer bij elkaar - Bed afgescheiden door middel van laast - Voorkamer niet aan zonnkant - 1/2 dichterbij bij bed geen zon
Optie 6	Optie 7	Optie 8	Optie 9	Optie 10
Voordelen: - Keuken en badkamer ver uit elkaar - Voorkamer niet aan zonnkant - Bed midden in kamer - 1/2 dichterbij bij bed geen zon	Voordelen: - Voorkamer aan zonnkant - Bed afgescheiden door middel van laast - Keuken en badkamer ver uit elkaar - 1/2 dichterbij bij bed geen zon	Voordelen: - Voorkamer aan zonnkant - Keuken en badkamer ver uit elkaar - Bed afgescheiden door middel van laast - Voorkamer aan zonnkant	Voordelen: - Keuken en badkamer bij elkaar - Bed afgescheiden door middel van laast - 1/2 dichterbij bij bed geen zon - Bed midden in kamer	Voordelen: - Bed afgescheiden door middel van laast - Keuken en badkamer ver uit elkaar - Voorkamer niet aan zonnkant

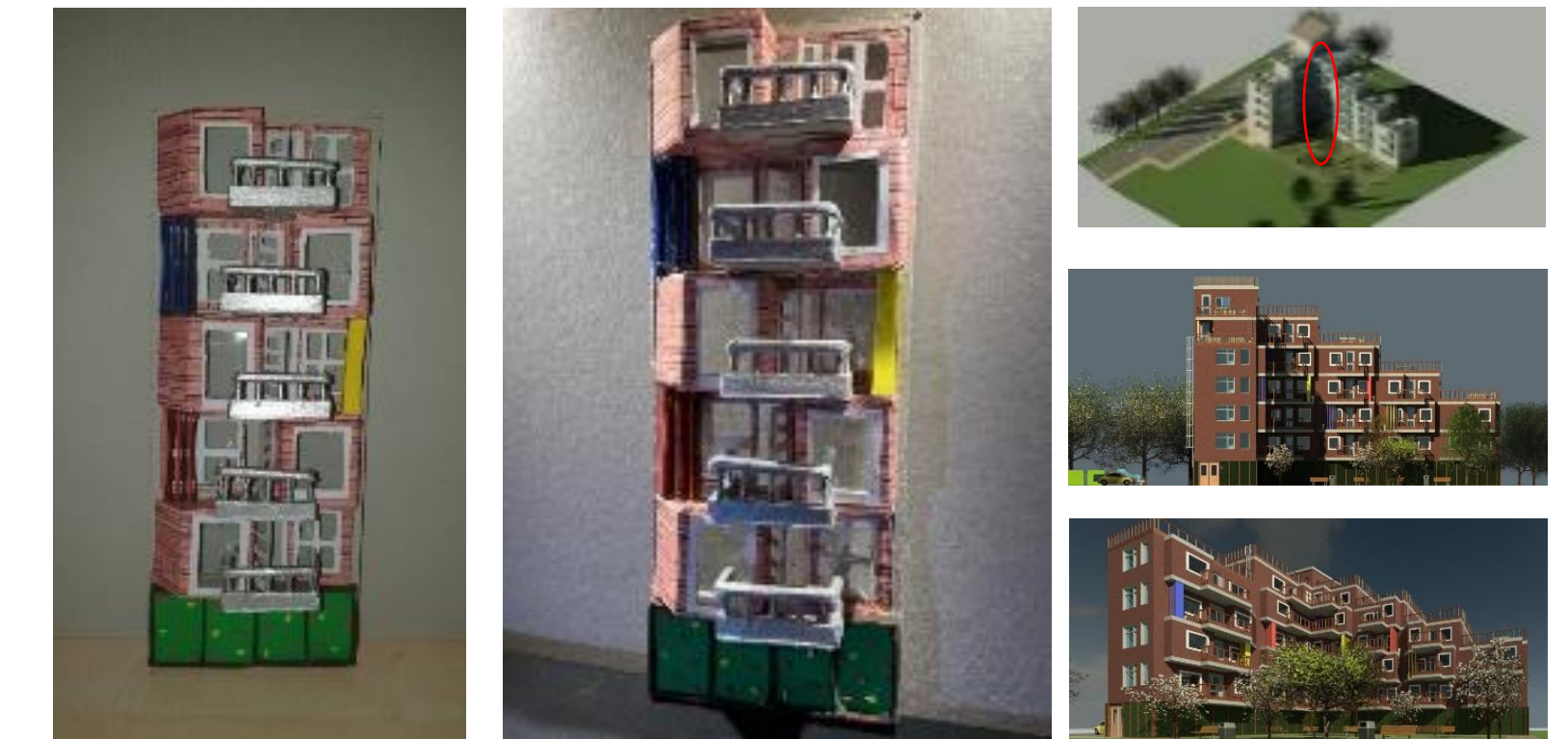
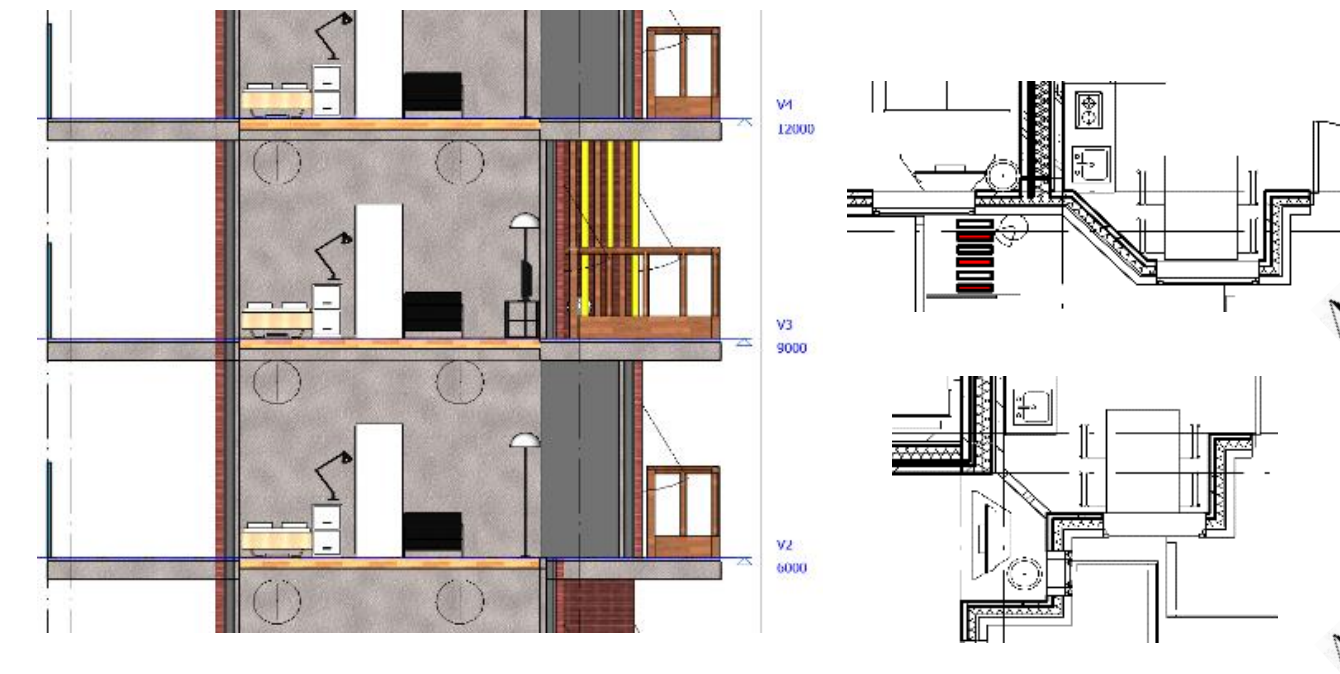


Façade



The design of an **special façade** was very important in this assignment. I have chosen to make some variants of a component of the façade.
I made these variants in SketchUp. After I had a clear view of which variant I wanted to work out further, I made a model of that component and made some adjustments to perfectionate this element.
This model is illustrated in the right bottom corner.

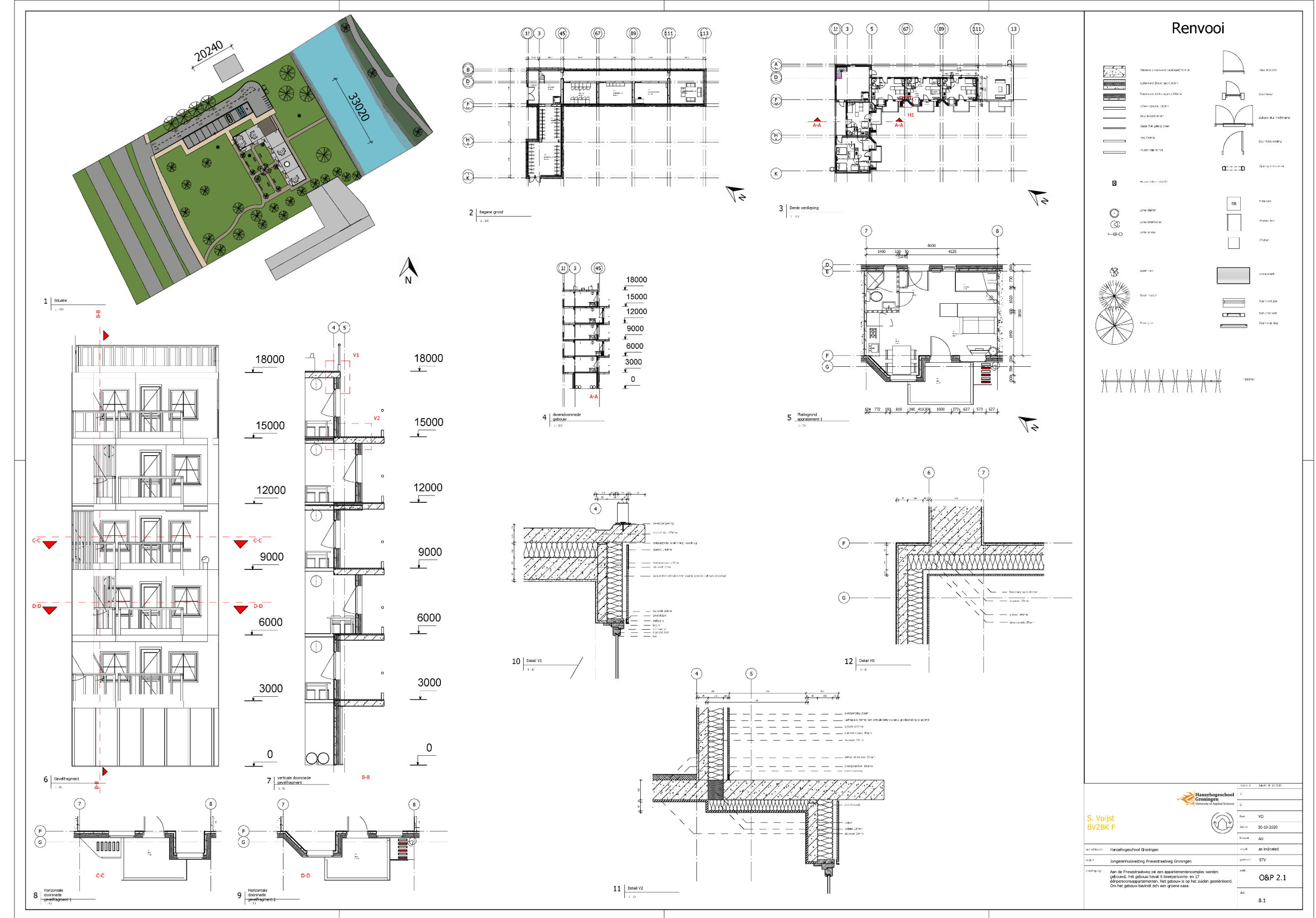
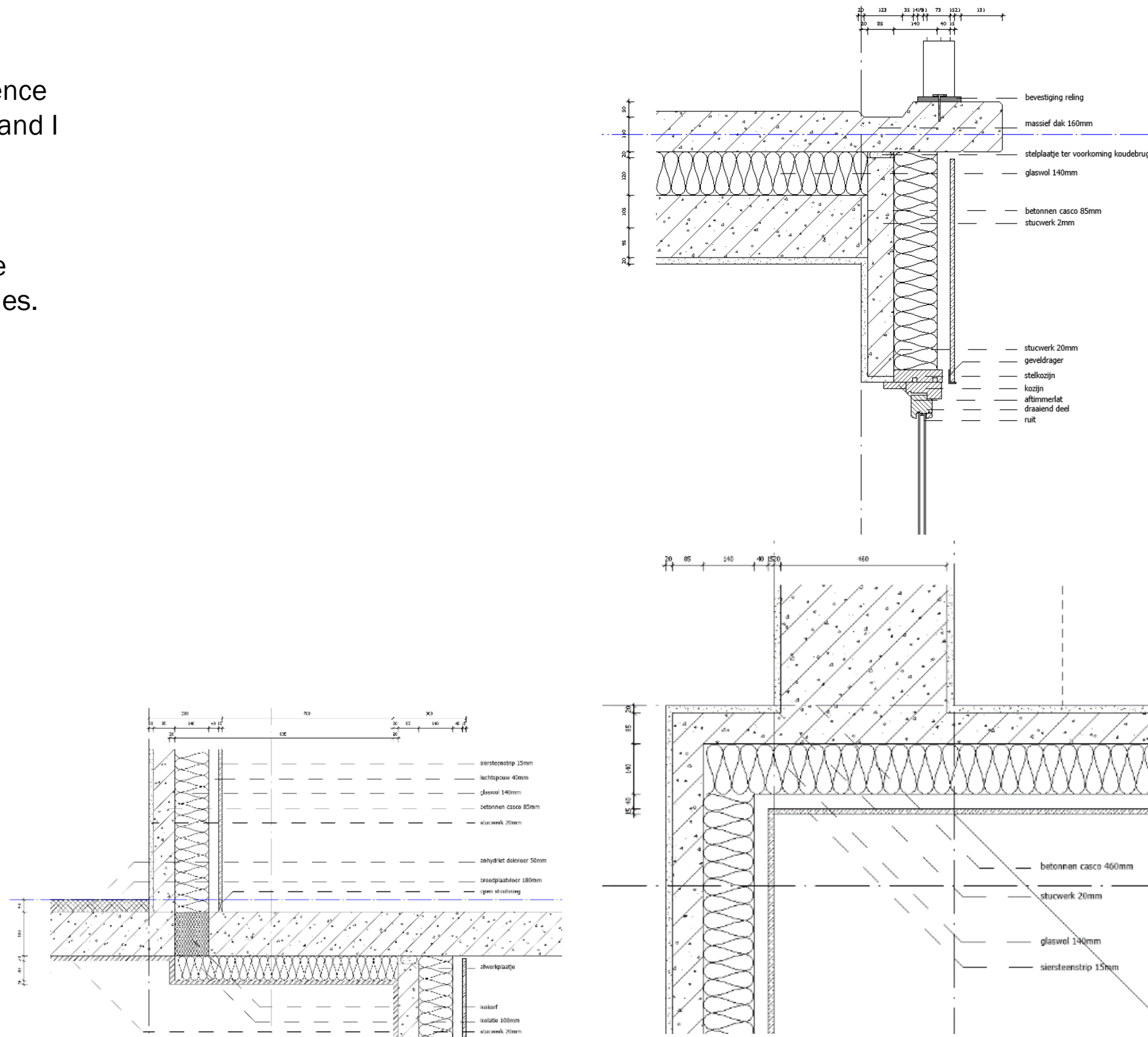
Afbeelding	Variant 1	Variant 2	Variant 3	Variant 4	Variant 5	Variant 6	Variant 7
Esthetisch	3	2	1	1	5	3	4
Modern	3	1	2	2	2	4	5
Kleurgebruik	2	1	1	1	4	4	4
Groen	3	3	2	3	3	4	4
Divers	2	1	1	1	5	5	5
Duurzaamheid	3	2	2	2	3	4	3
Driedimensionaal (ja/nee)	Nee	Nee	Nee	Nee	Ja	Ja	Ja
Totaal	$(\frac{16}{30}) \times 9 + 1 = 5,8$	$(\frac{10}{30}) \times 9 + 1 = 4,0$	$(\frac{9}{30}) \times 9 + 1 = 3,7$	$(\frac{10}{30}) \times 9 + 1 = 4,0$	$(\frac{25}{30}) \times 9 + 1 = 8,5$	$(\frac{24}{30}) \times 9 + 1 = 8,2$	$(\frac{25}{30}) \times 9 + 1 = 8,5$



Construction



For this project I put a lot of effort in finding good reference details. The building has some interesting connections and I wanted to make these connections buildable. One of the elements that has to be implemented in this building is the so called 'isokorf'. I also wanted to use stone strips on the façade because these elements doesn't weight as much as regular stones.





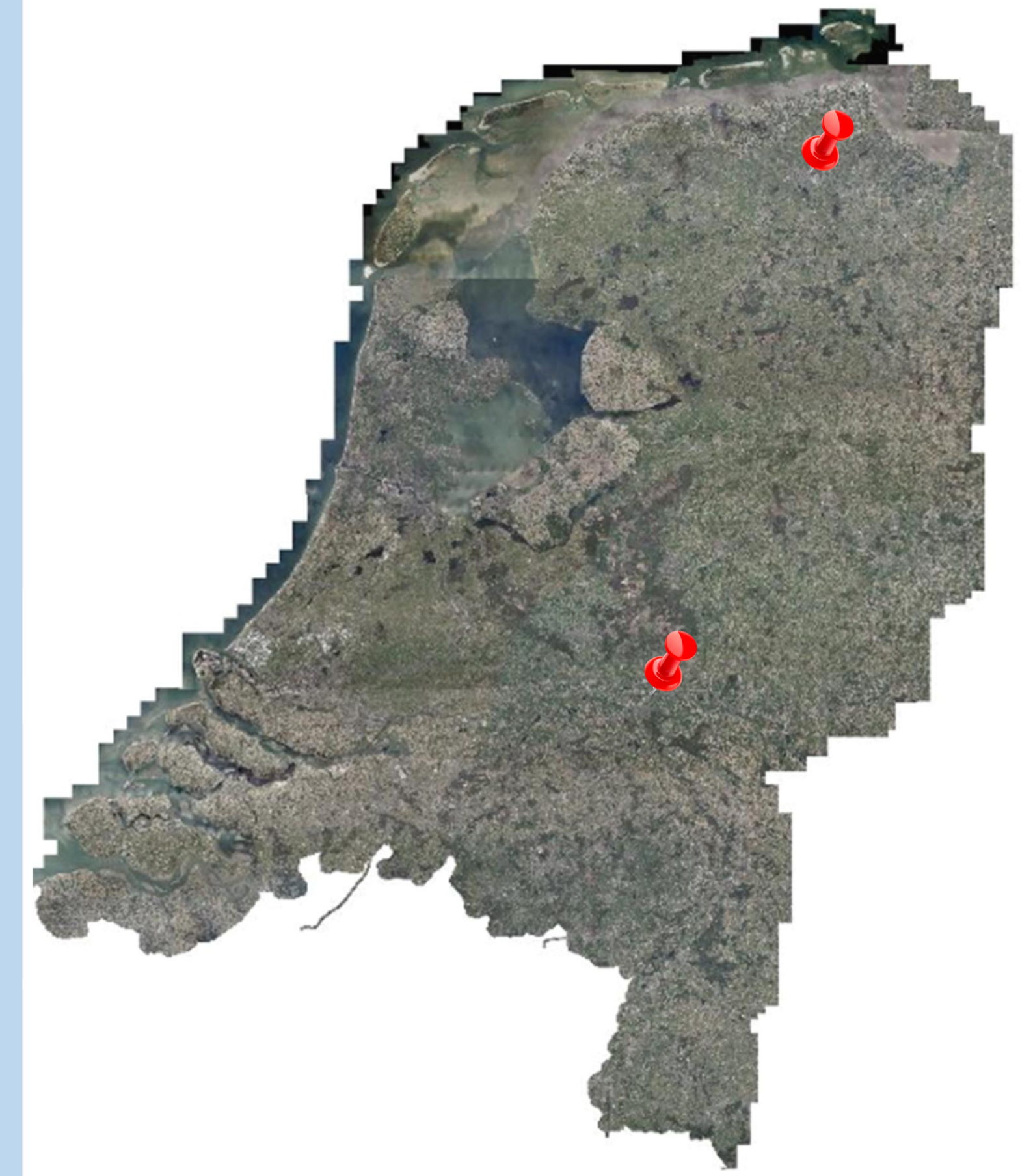
“Can you draw my new room into a 3D software so I can get a impression of how it is going to look like?”

Room-personalisation Impressions
Wageningen & Groningen

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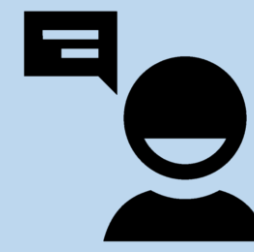
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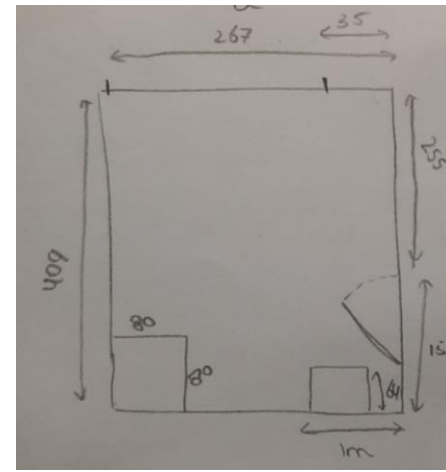


Friesestraatweg

Problem and Task

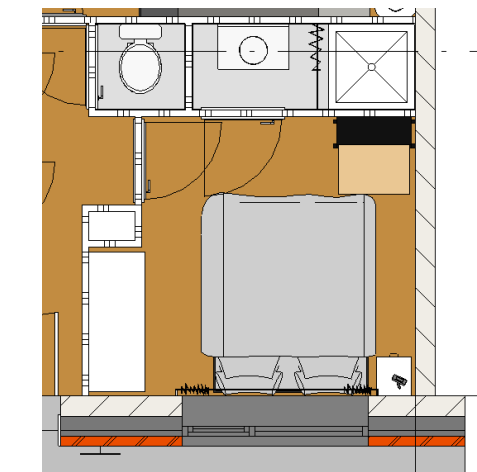
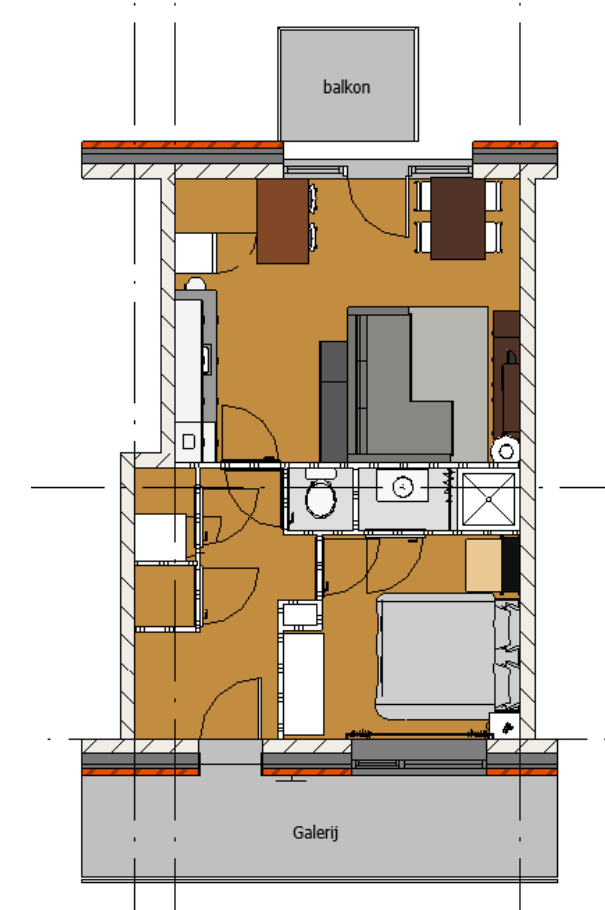


During my study Built Environment, I have become more and more advanced in **making impressions**. I used different tools in the past. So have I made renderings with first Revit, than with V-Ray and nowadays I make my renderings in Lumion. People really like my impressions so I get asked more often by the time.



Variant studies

I worked different possibilities out in accordance with the client. When I was finished I forwarded the variants and I gave a recommendation. The two projects had some similarities but also a lot of differences. The first project in Groningen is about an entire apartment of 40 square metres. The second project in Wageningen was only about one room which was very small and where the space had to be used very functional.



Impressions

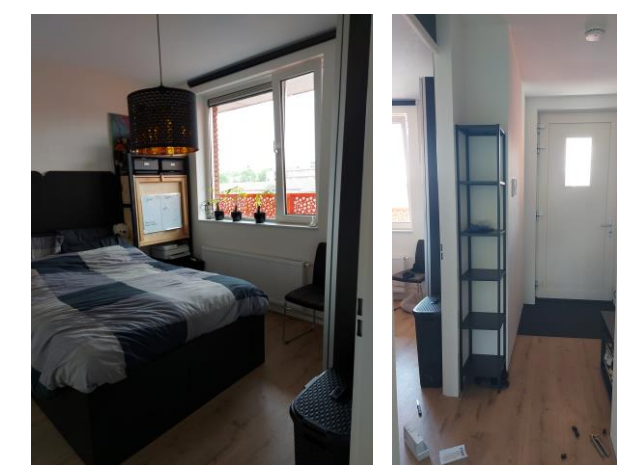
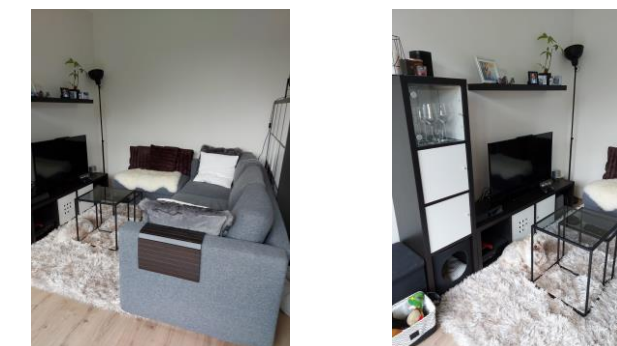
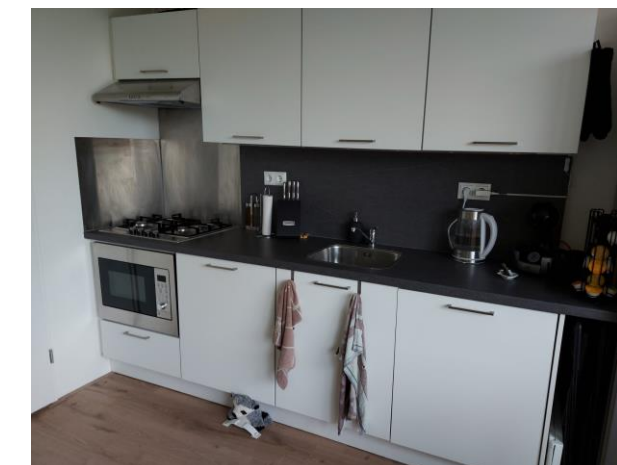
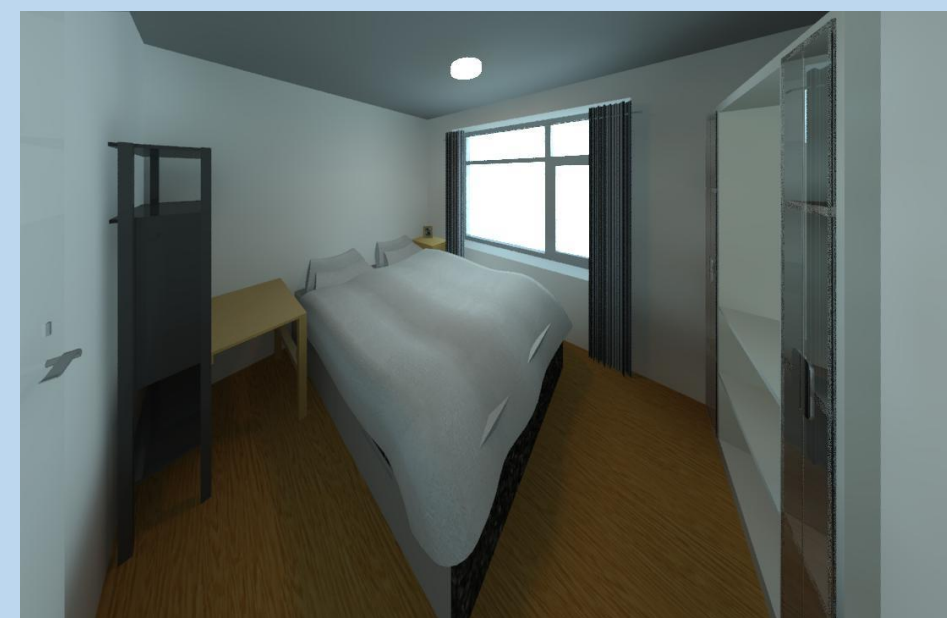
Wageningen

When we agreed on the lay-out of the room. We started to think about the paint of the walls. We wanted to create a warm feeling in this room. The 'Hazy Wind Paint of Flexa' makes this possible.



Groningen

The project in Groningen is already realised. The project in Wageningen is not done yet. On the right there are some pictures of how the room had become.



Stefan Vuijst

Architectural Designer