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Starting point

About a little over two years ago my grandfather was no longer able to take care of himself. He had increasingly gotten worse over the last four years. He didn't just forget simple things, but started looping the same stories from things that happened in his young adolescence over and over. He got mad and paranoid, and blamed his increasing lack of control on us, his closest family members. I remember my father having to frequently drive from Oslo to Drammen on what strangely felt like his behest. The confusion he experienced was contagious.

It is tough to take away the control of a loved one. We wanted him to be able to take care of himself as long as we could.

In November 2019 my grandfather was admitted to Fredholt Bo- og servicesenter, which is a small nursing home located in Konnerud, Drammen. We also figured out he had been diagnosed with frontal lobe dementia, which is common in older people, and in his case suspected it was caused by a minor stroke he had a couple of years earlier.

It was a defeat for everyone to interfere with his independence like that. But what I witnessed upon visiting him in the nursing home was even worse.

He was placed in a basement floor of the building - he's room, like all the others. There were almost no daylight or no activities. Just a bunch of defeated souls waiting for their imminent demise. And among them was my grandfather, he was sad, he was angry, and he was lonely. He would go through the whole spectre of emotions.

That is all he could do as this nursing home didn't offer anything to distract him from his own illness. After my first visit this almost immediaty sparked my interest in the subject from an architectural point of view. How can a building ment to help people be so completely bereft of anything to support a persons quality of life. It was built as a final destination based on the assumption that all of these people are so sick that all they can do is wait for their death. Sustaining them, but not giving them any opportunity to thrive in any way.

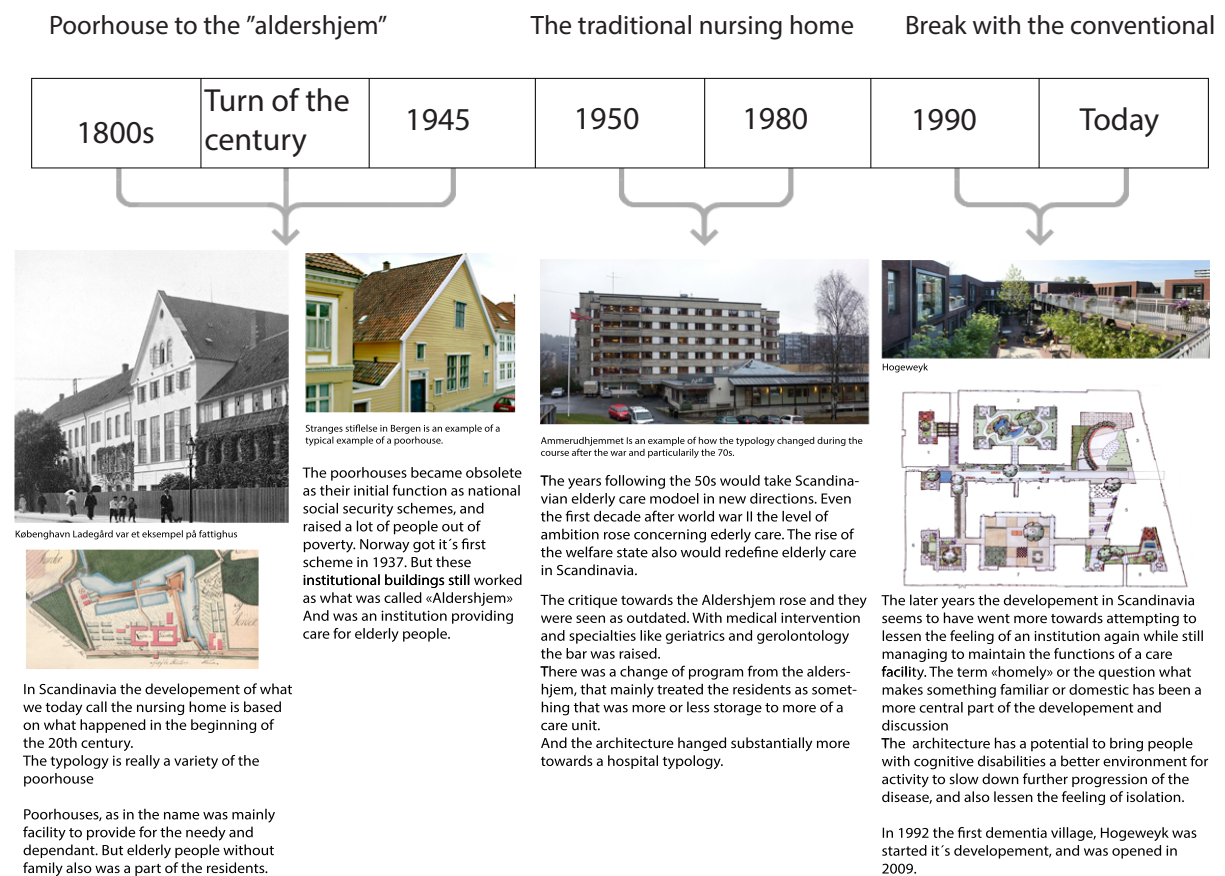
When I talked to my grandfather he was daydreaming about going back to his cabin in telemark being his crafty old self. He loved creating stuff, and was very good at working with wood in particular. He had an outhouse which he had made into a workshop where he spent most of his freetime. But now he was robbed of any possibility to ever use his hands again. He died 11 months after his admission at the age of 88. I'm wondering if he would have lived longer if he had felt there were any reason to. Although he had his physiological problems, and the dementia, of course, upon the admission his vitals were fine.



Fredholt bo- og servicesenter. The nursing home where my grandfather stayed.

What is a nursing home

With this very personal, emotional and subjective experience as a catalyst I had to transform it into something informed by research. I then compiled that research into a timeline, attempting to understand the history of the "nursing home". In doing so I figured out that the topic is very relevant. And to my relief, there are already measures being taken attempting to improve senior citizen homes. Also that there's a difference between somatic wards and specialized institutions, and more importantly that a lot of otherwise healthy individuals suffering from dementia are admitted to somatic hospitals.



Dementia

Dementia is an umbrella term and does not refer to a cause, but rather to a symptom. What happens is that the neurons in the brain no longer are able to send neurotransmitters, this gets worse over time and it is always terminal. It can be caused by a lot of different things. Some examples are:

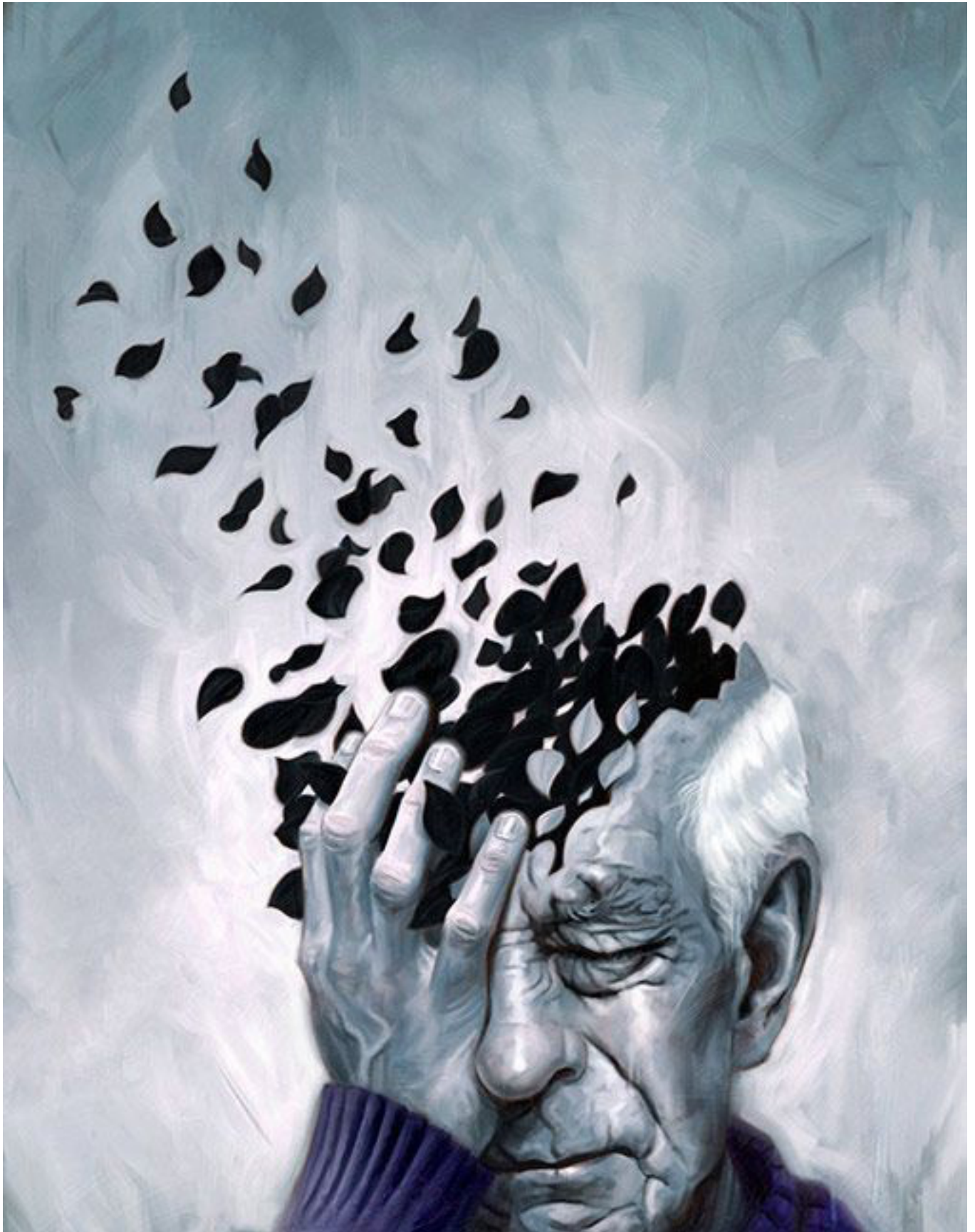
Alzheimers: A brain disease where cells dies and the brain shrinks over time

Stroke: Usually called vascular dementia and is caused by the lack of bloodflow to certain areas of the brain

Alcohol abuse: Damages the ends of neurons, and increase the chance for dementia.

Dementia, no matter the cause is progressive and has different stages, you don't just suddently get full amnesia, and it doesn't only affect memory. It affects a lot of other functions controlled by the brain; like motor function, emotions, immune system and the ability to speak. It also affects younger adults not only elderly people, and doesn't immediately or neccessarily come with any physiological symptoms.

To get a deeper understanding of dementia, it's treatment and how architecture could play a role in the betterment of people affected I conducted some interviews.





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Something they have done in Tjøme is to have two units being on one server, a lot of primary functions does not need to be in every unit, and eight people, four in one unit can have shared functions»

« Our canteen is more like a café that can be used by everyone « We used to have a climbing wall in the past, the people who regularly used it, sat in the café when their sessions were over»

Anne

«The kitchen in the somatic ward, for instance, the staff had their own room, and the residents was out in a food hall»

«There were no union in the somatic ward as opposed to the closed one that was specifically for people with dementia related illnesses»

«What I liked about the common area, and something that was reflected in my interviewees was that there were some sense of familiarity» «This diminished the feeling of confusion»

Nora

«All the apartments has a view towards the common area» «It´s important for people with dementia to be able to see something familiar»

«Another thing is wandering routes, it´s documented that patients get less restless when they don´t have to walk inside the nursing home corridors»

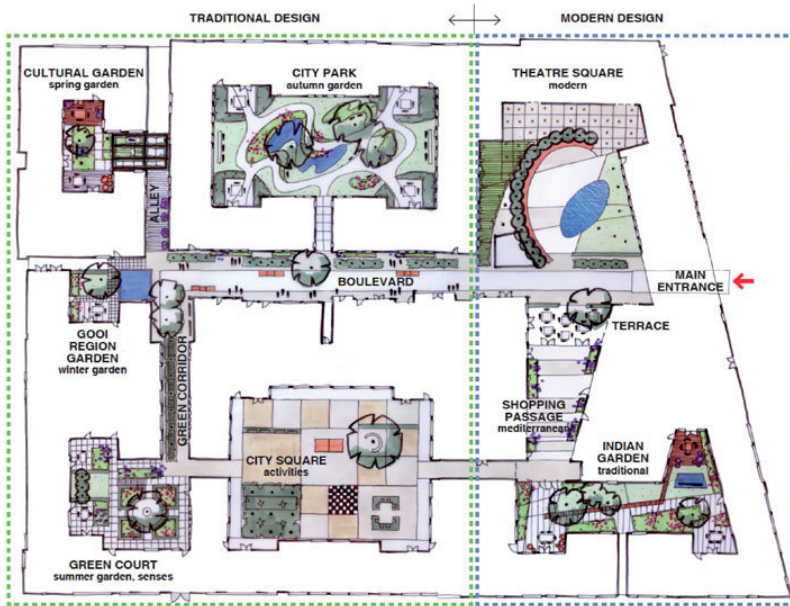
Program

The experience with my grandfather, my hypothesis and previous knowledge and opinions and the following research and interviews were all relevant tools in forming the program. As so I felt encouraged to create my own version of a specialized program for people with dementia in the form of a project.

Adapting majority of aspects from the dementia village program and typology, I was still critical to the closed off enclave wanting to make my version more open. Focusing on normalising the everyday of the inhabitants by ensuring full interaction between the nurses, health workers, residents and the locals.

Activity based programs will be a priority, both as newly build on site, but also having an interaction with what already exists in the site of choice.

A plethora of different activities are important to fulfill the needs of the residents as people have different needs. The activities should also be commonly known and liked. As the program is composed by many, there will be smaller categories represented as verbs integrated into broader categories. I thereby create the smaller categories based on those verbs. For instance: eat = kitchen, restaurant, café, canteen etc.



The dementia village is a major influence to my project

| | | | | | |
|----------------------------------|--|---|---|--|---|
| Living 3030 sqm | | | | | |
| Appartments 1980 sqm | Sleep | Eat and drink | Sanitary | Socializing | Other |
| | Bedroom | Private Kitchen Common Kitchen 100 sqm | Private bathroom Rineroom 100 sqm Common bathroom 50 sqm Rails in the ceiling if necessary (bed/shower/toilet) | Common areas for residents 200 sqm Common areas for visitors meeting residents 200 sqm Common areas for all 200 sqm | Private storage 150 sqm Storage and delivery for staff 50 sqm (medical equipment etc) |
| Activity 1980 sqm | | | | | |
| | Essentials | Eat and drink | Exercise | Socializing | Entertainment and other |
| | Grocery store 70 sqm Barber 70sqm Post office 70 sqm | Café 150 sqm Restaurant 150 sqm Pub 70 sqm Bakery 70 sqm | Hiking route primeval forest Indoor gym 150 sqm Swimming pool 200 sqm | Outdoor meeting for visitors, residents and people passing by, as well as general shared spaces 200 sqm Village house for special occations (grendehus) 100 sqm | Hobbyroom 100 sqm Theater and cinema 200 sqm Gardens (greenhouse) 150 sqm Kiosk 70 sqm Storage 30 sqm Bathroom 100 sqm |
| Administration 900 sqm | | | | | |
| | Face outwards | Working | Security | Socializing | Other |
| | Space for reception counter 30 sqm Lobby area 100 sqm | Office spaces for staff (nurses/receptionists) 400 sqm | Office space for security guards 20 sqm | Common areas for staff (eat and drink) 100 sqm | Storage 50 sqm Wardrobe 100 sqm Bathroom 100 sqm |

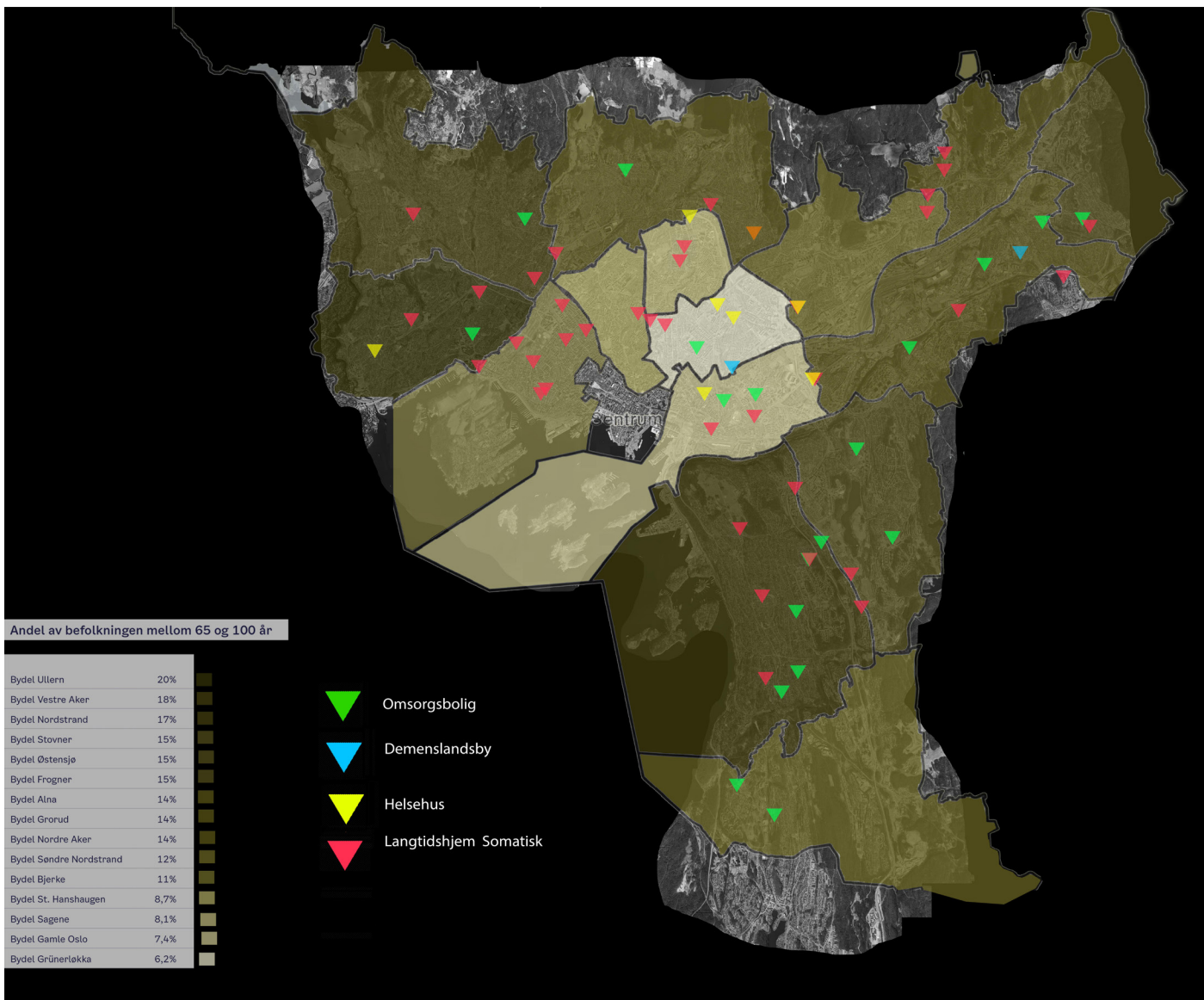
Sum: 6950 sqm

The initial program, size is based on site, regulations and consulting with Nora Bille (see page 11)

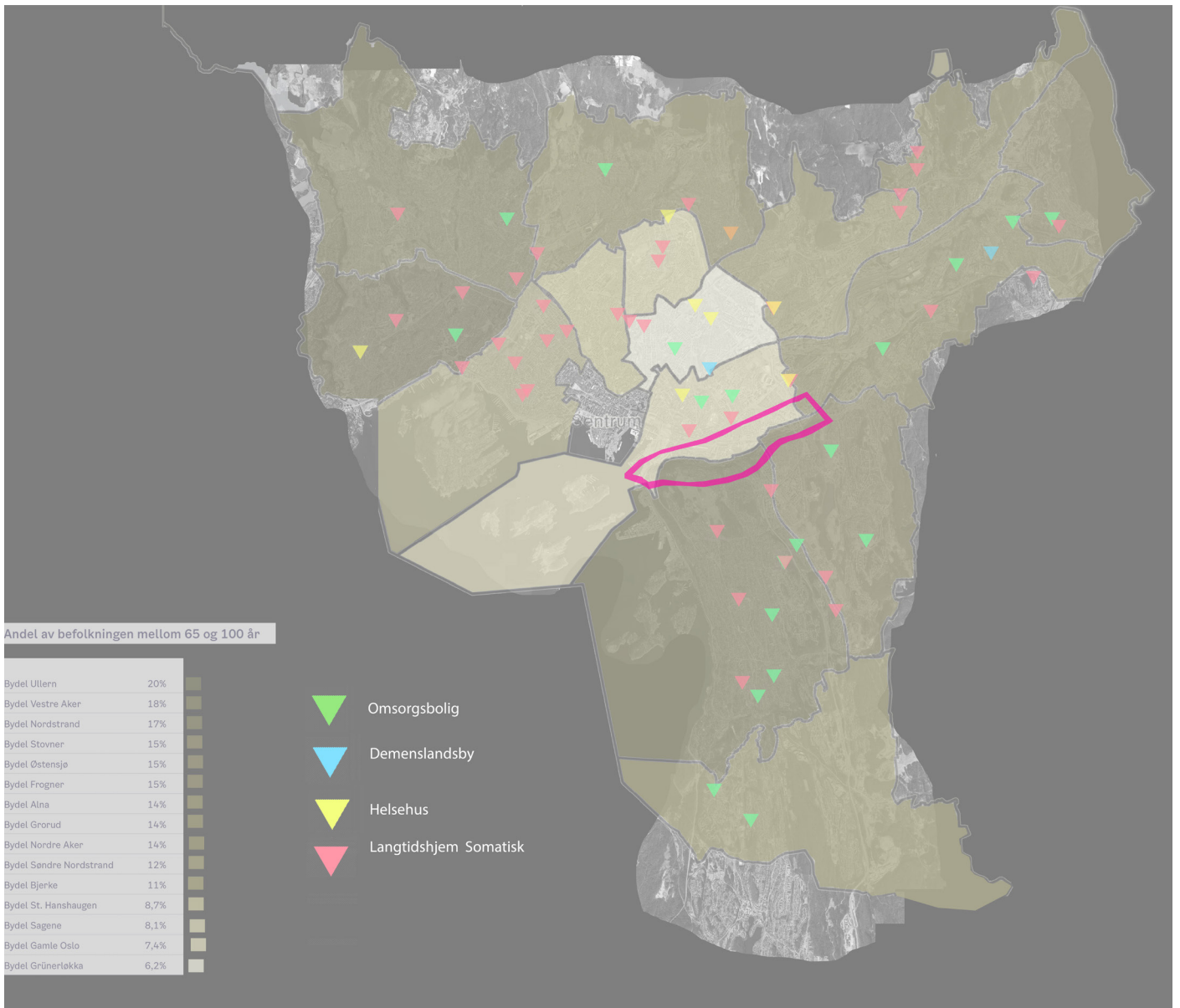
Site

Finding the site was challenging as there were so many different qualities that were potentially interesting answers to the needs of whoever were to inhabit the project. Using a recurring word from the interviews "familiar" as a thematic base became an important method. That is to say familiarity is important for a person suffering from amnesia. Familiarity diminishes confusion, recognizing where you are is very important for people suffering from dementia related illness.

The project is through that theme defined as a senior citizen home that is offered to people living close by. Residents do not move far away from the environment in which they are used to. To specifically find the site I mapped all the different institutions in Oslo municipality, as that was my chosen city. I then overlapped that map with the percentage of people over 65 years of age divided by districts.

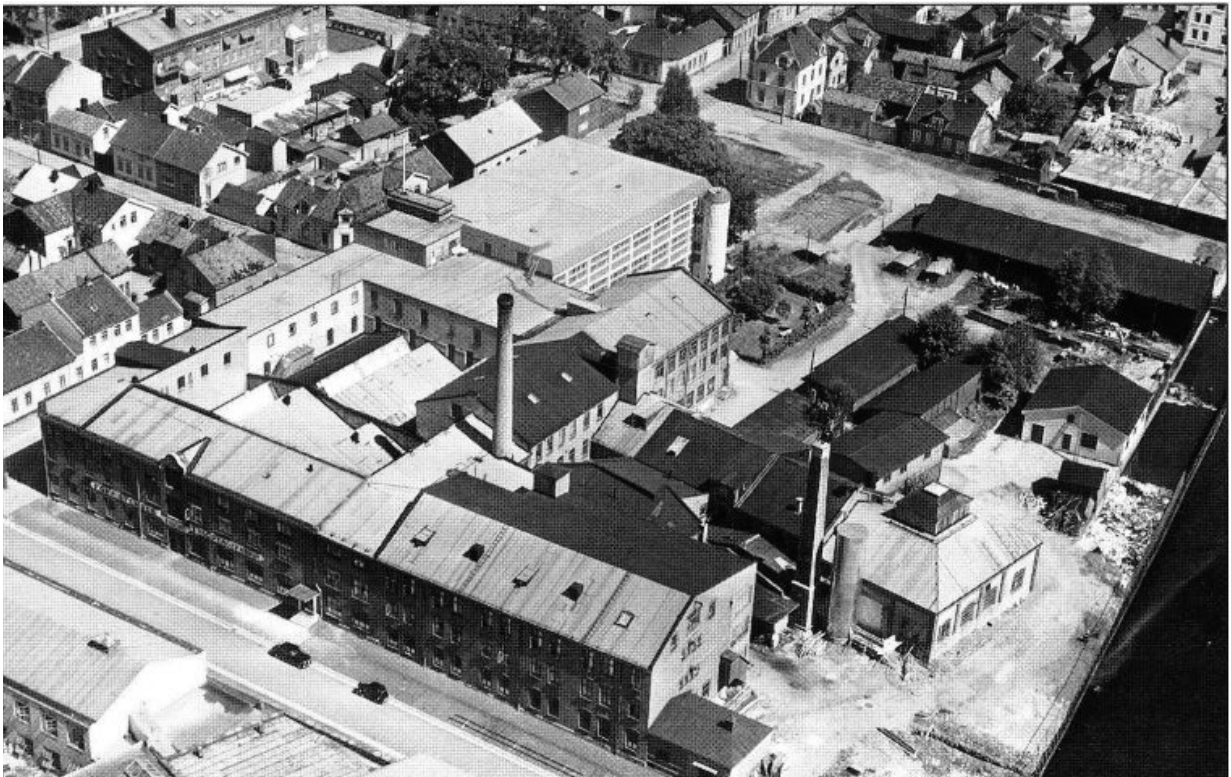


I didn't want the demographics to be homogenous, so I looked for contrast between the districts. That were the case with the districts of Nordstrand and Gamle Oslo. This lends itself to my wish for interaction between residents, staff and the local environment. Versatility gives a potential for interesting synergies.



So almost on the borderline between Gamle Oslo and Nordstrand you have this interesting in-between area that is recognizable to people who lives in the surrounding: Vålerenga, Etterstad, Kværnerbyen, and Bryn. And in the middle you have a rare arctic primeval forest called Svartdalsparken. As people with dementia commonly are otherwise physiological healthy and often restless, opportunity to use your body and there are a lot of hiking routes along the forest stretching around the Alna River. Another aspect that intrigued me about this area was the amount of old industrial building, as my grandfather worked in a Tricotage factory. He talked a lot about that. Maybe it would be something recognizable for people living in the area.





Old photo of the Christensen's Tricotage Factory where my grandfather worked. It was active from 1907 to 1967



Old industrial buildings along Svartdalsparken



Lush primeval forest giving hiking opportunity

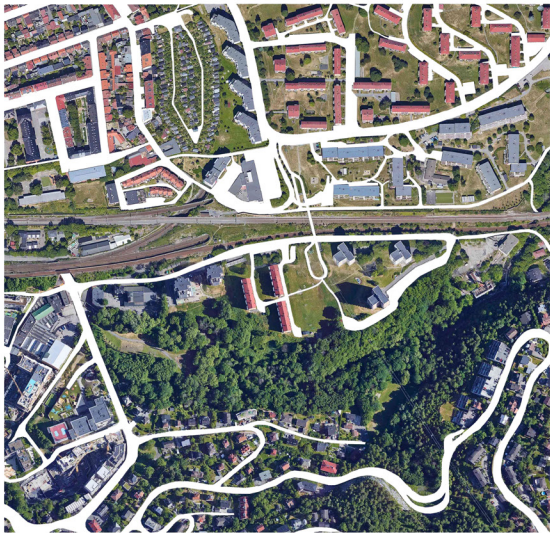
As this is quite a complex situation I thought it would be interesting isolating the different aspects of the site.



The River

The river is the oasis of the forest. Beautiful. It is going to be opened more, there are sections where it's underground between the park and kværnerbyen. There is a lot of development, and some of the old industrial areas are being refurbished and reprogrammed into residential areas.





The Infrastructure

Anrijot Gellines vei seems pretty cut off from the rest of the context.



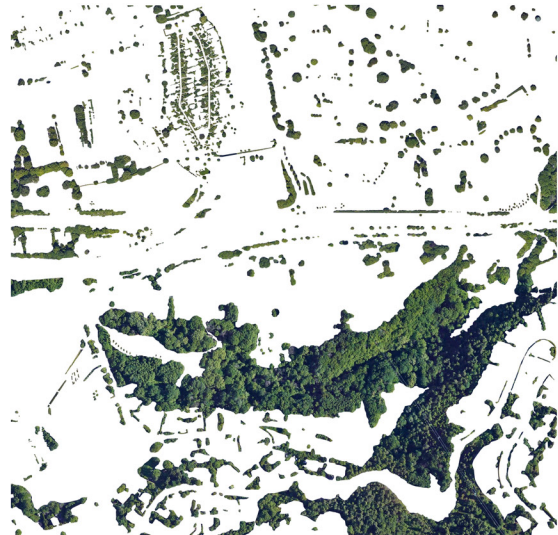
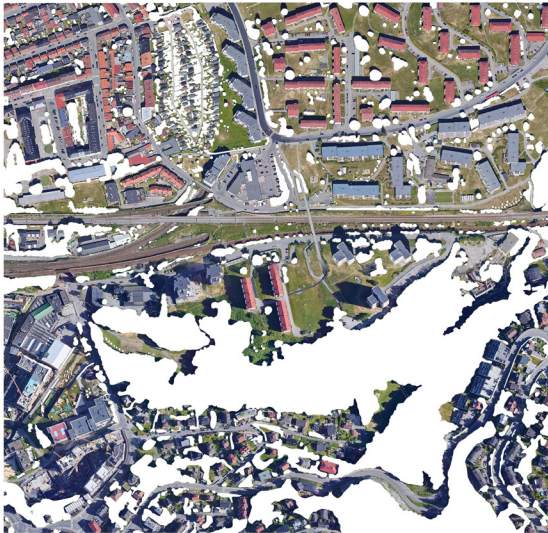
The Railway

The railway that cross the site is a product of its proximity to the largest hub in Norway; Oslo S. Regional trains going to Gjøvik and Lillestrøm, as well as the Oslo airport and the more overall domestic options of commute.



The Typology

Low density right outside the city center creates a pointy typology.



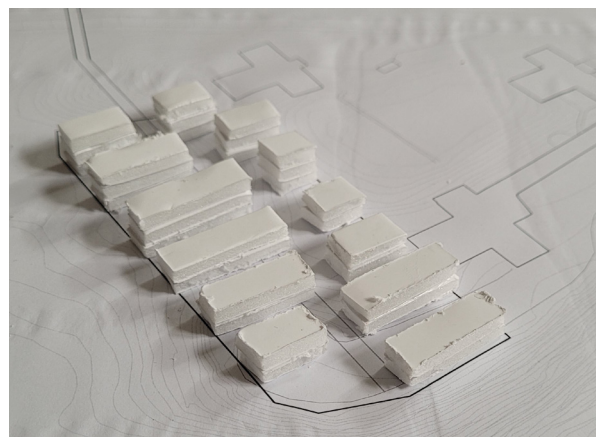
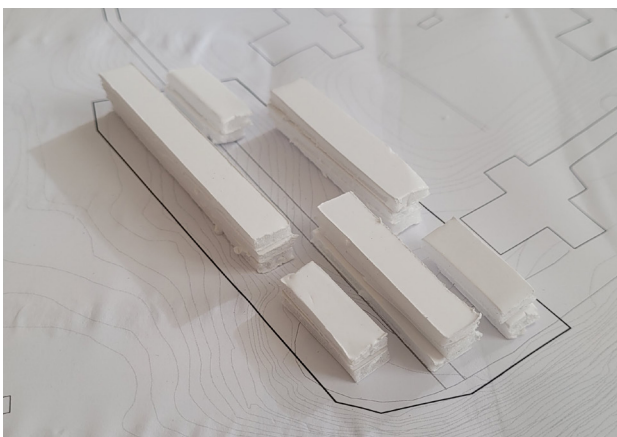
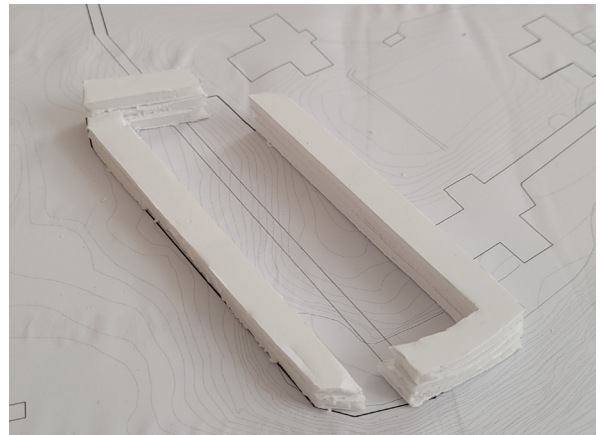
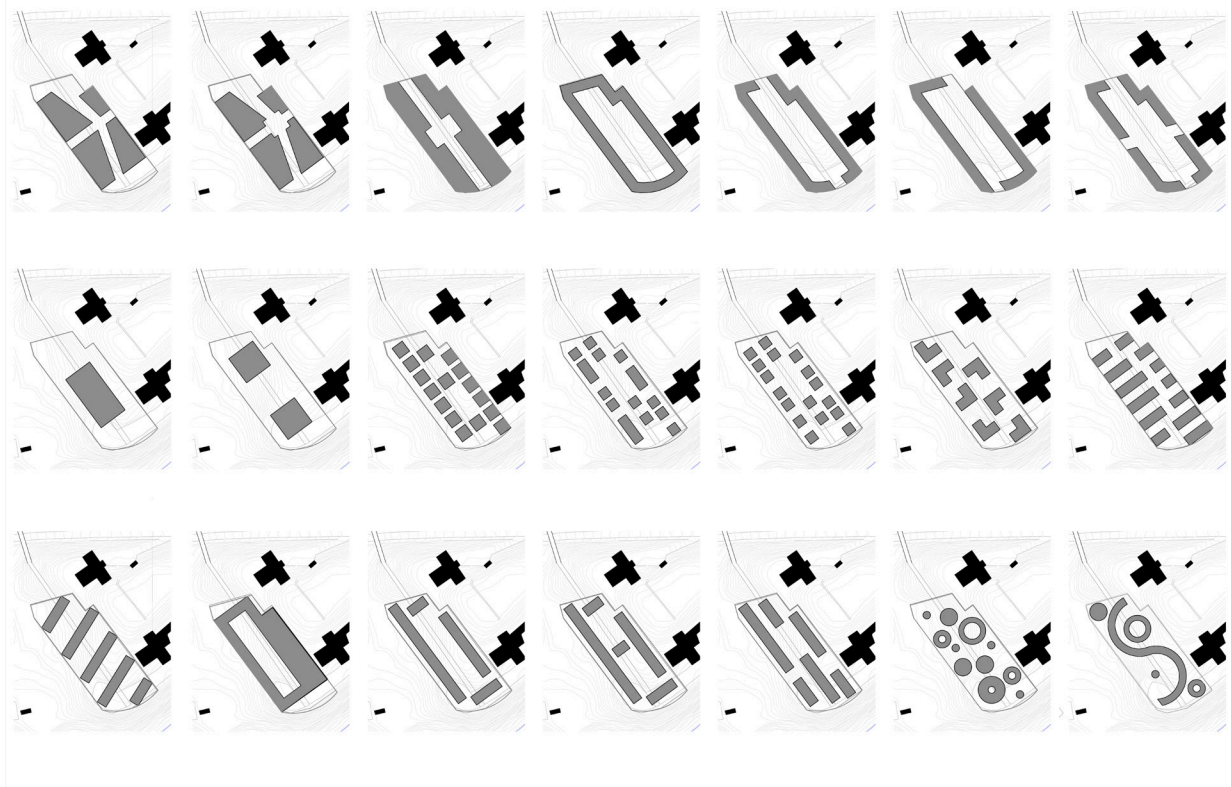
The Flora

The area is very lush because of the river, the flora is diverse and the primeval forest provides a lot of interesting wildlife. This is central to the program as n creating familiarity.

I knew I wanted the building to relate to the aspect of the surrounding environment that were easily recognizable to the people living there. And what I consider the most prominent and important quality of this area is the forest. I tried out some different typologies.







I wanted as much view towards the forest as possible, but I also wanted to establish a portal to lead the public towards it.

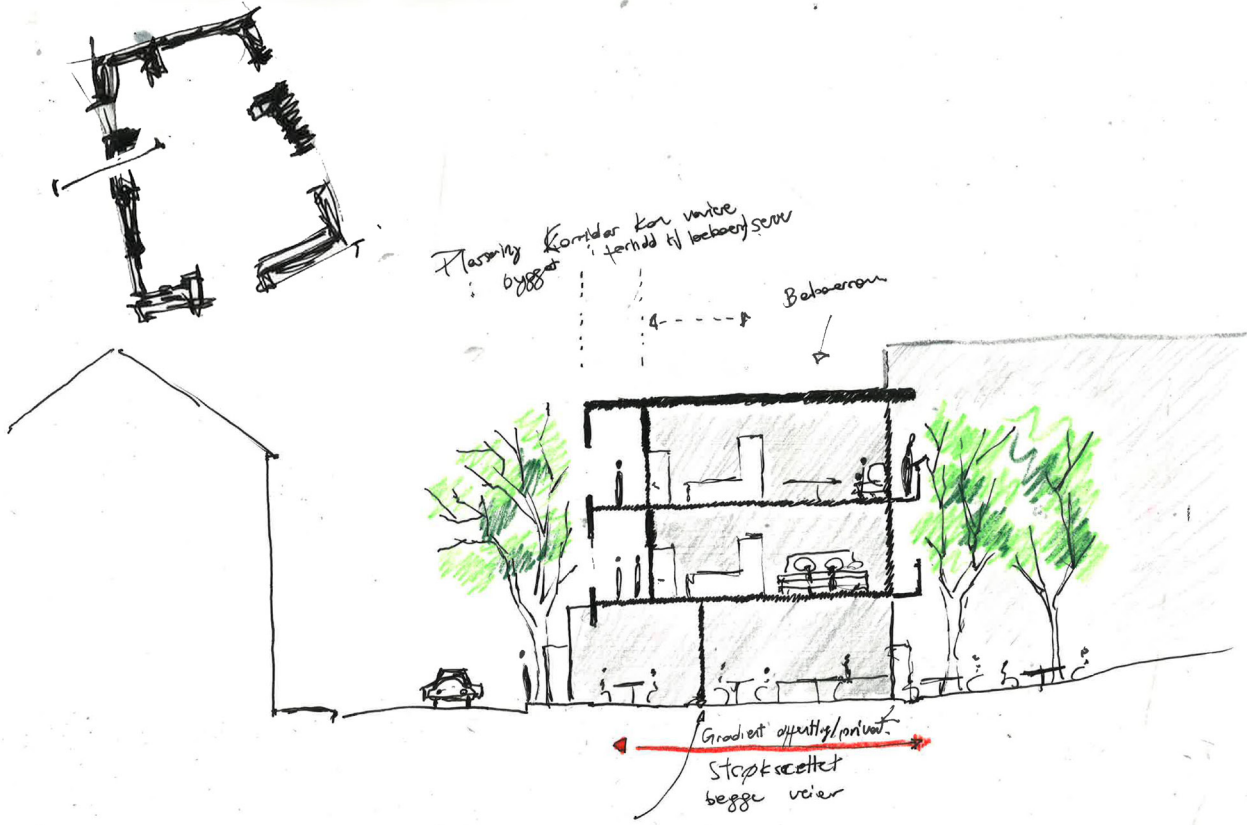
I also tried out several different variations of the first one, but It failed to interact with the forest and rather turned it's back on it, it also didn't create large enough spaces in between the bodies to bring the forest into the site. So I ended up making a hybrid between the two initial typologies I tested out. (page 34 and 35) The red line is a new hiking route connected on the existing one (dashed red line)



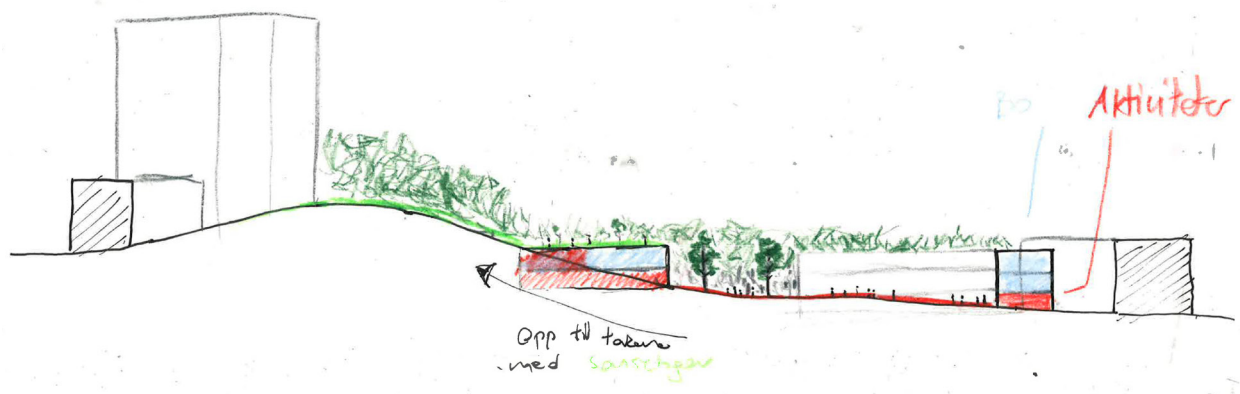
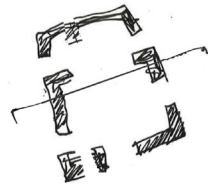
The red line represent an outdoor hiking route

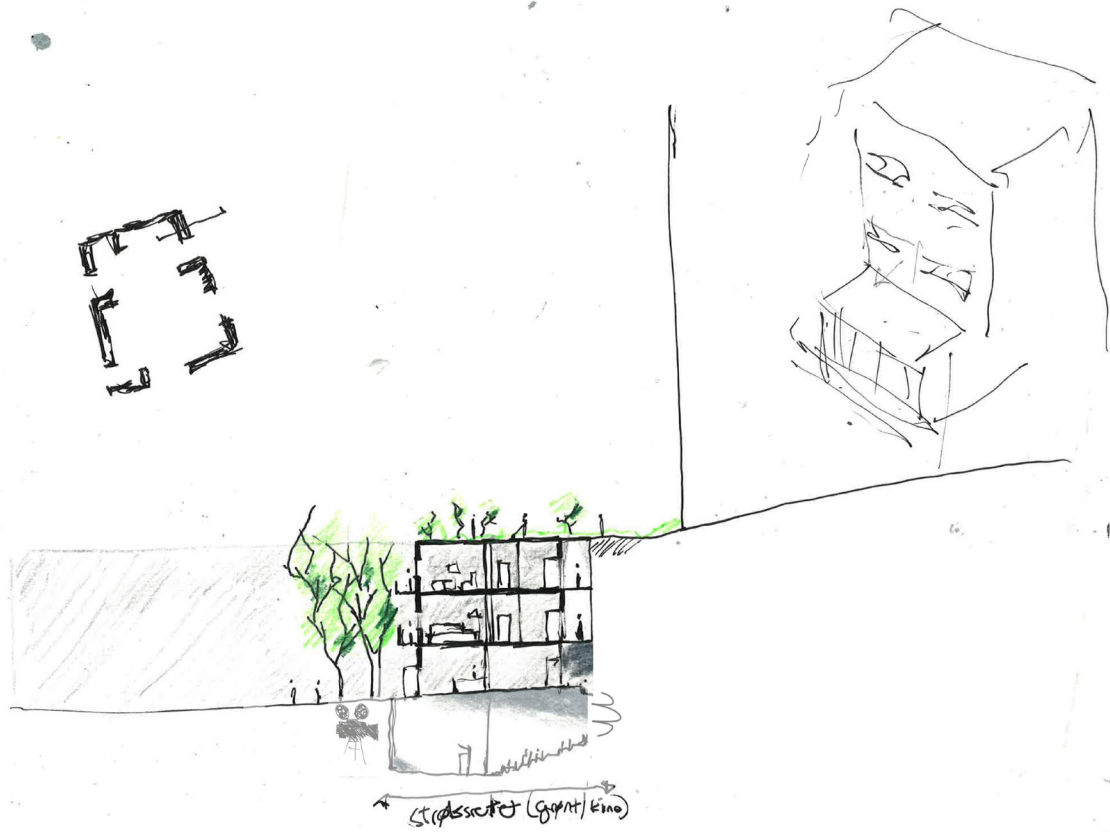


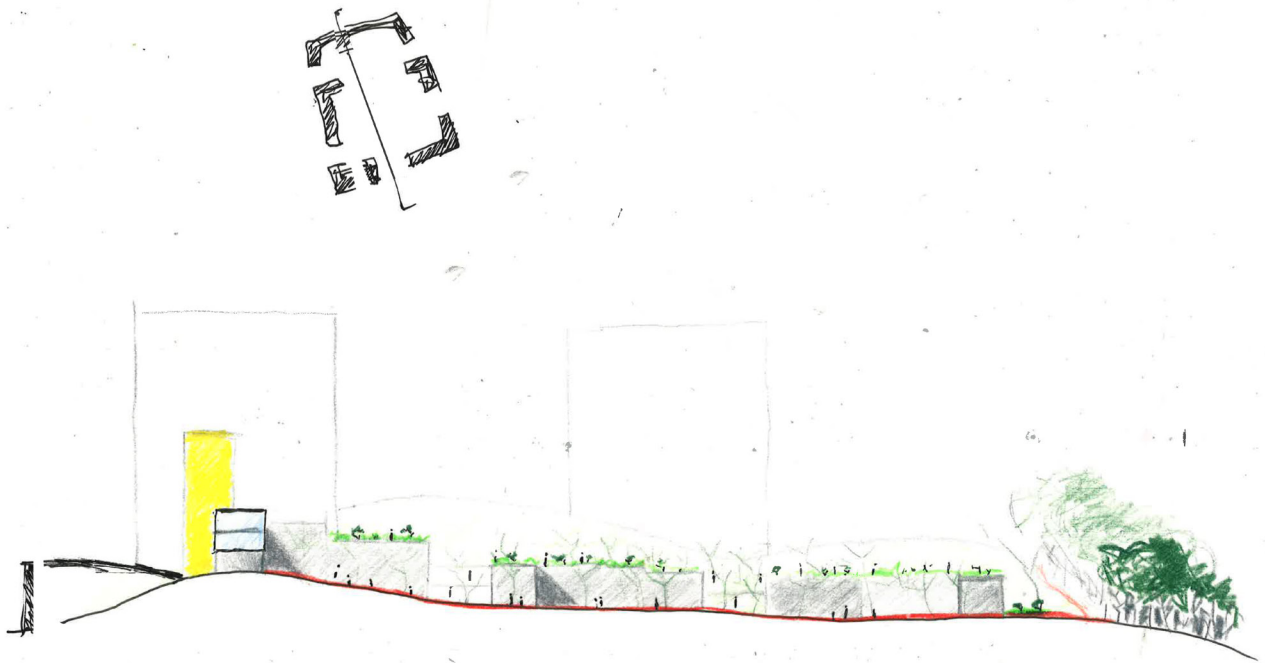
The blue line represent an indoor wandering route



Avgrrensning strøkerettet program gårdssann/kontekst (Grader av offentlig/privat?)







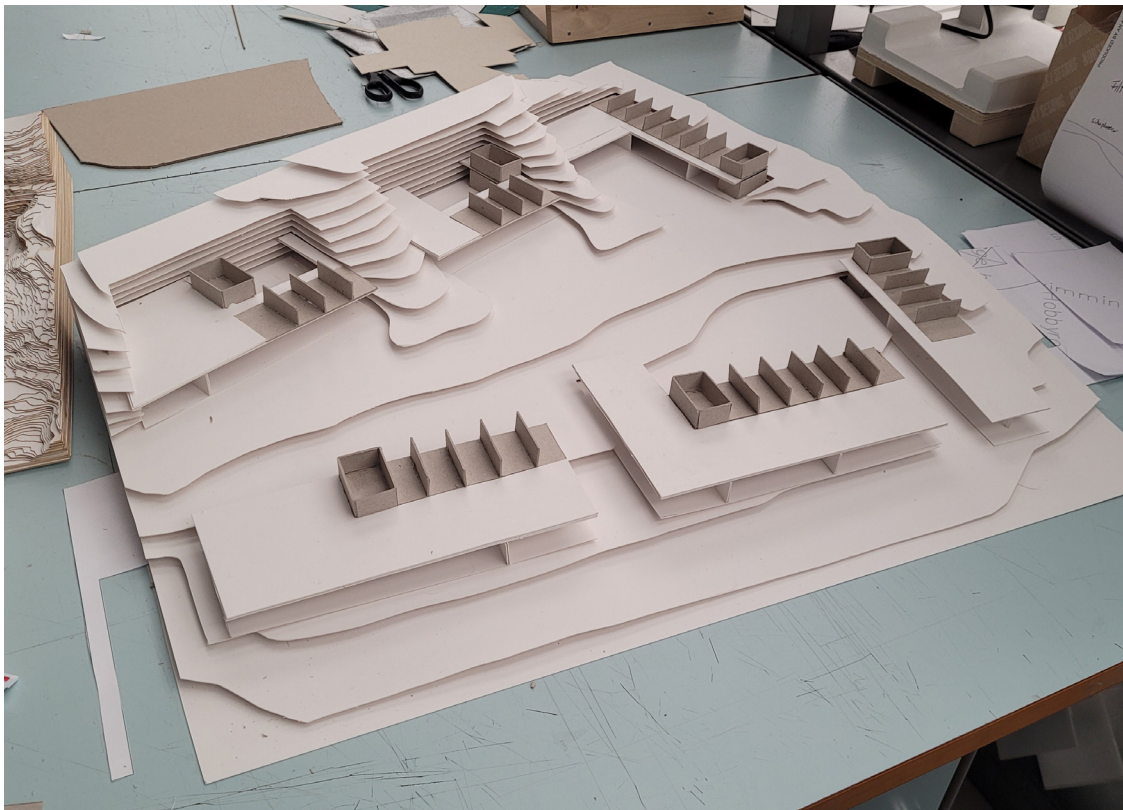
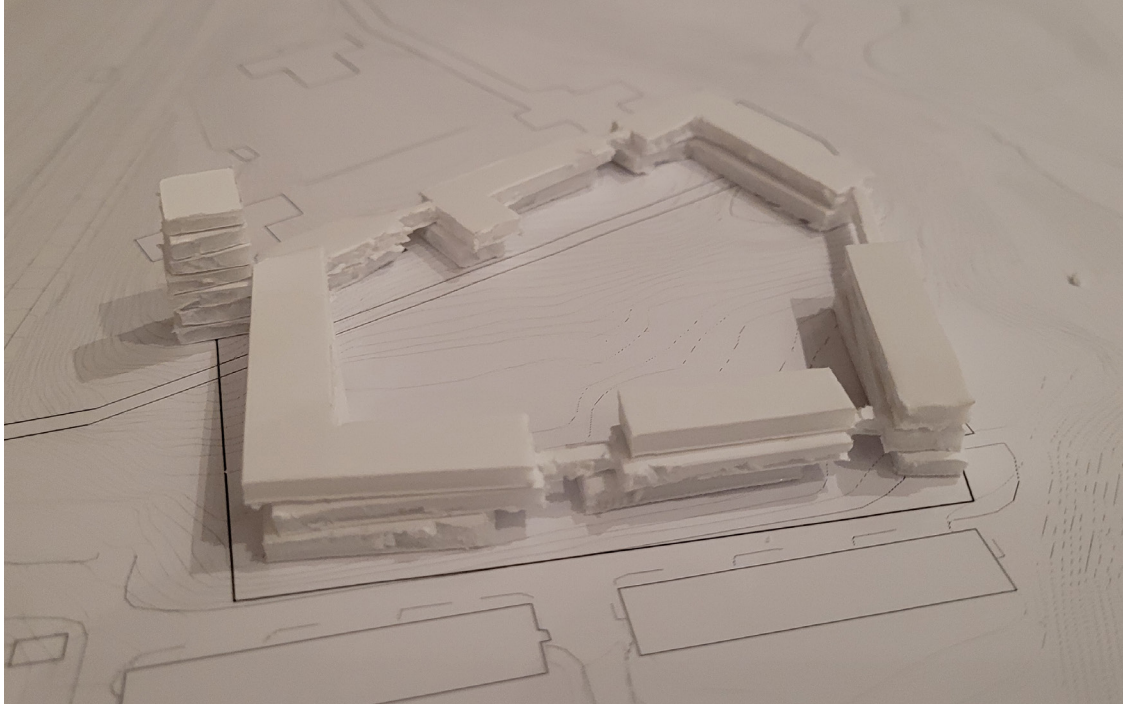




The diamond courtyard gives opportunity to let the landscape flow naturally through it, extending the qualities of the primeval forest into it. It also allows for roof access, which gives good view over Oslo. That again lends itself to the theme of familiarity.

There are, however a lot of different situations based on what part of the building you're in which is important to be conscious about. I wanted the activities to fit the location. For instance - the street to the west has a more urban quality than the facade to the south near the forest.

There is an outdoor hiking route that connects to existing paths in the forest, the same concept is inside with an indoor wandering route that connects six buildings. This is so the residents have the opportunity to relieve restlessness, which is a common symptom of dementia. Now having found a reasonable way to tackle the site, I started developing this diamond shape.



Model showing diagrammatic room organisation of the first floor. The activity based programs are in the ground floor. I would later develop this into a larger diversity of spaces. Splitting, mirroring, shifting and angeling spaces. The grey part represent apartment units and vertical communication white are common areas. One unite module is 5 x 8 meters.

Developing the project

When developing the project I worked in four different scales.

The largest scale was the hiking route running along the Alna river through Svartdalsparken.

The second scale was the site scale, or the diamond as I call it.

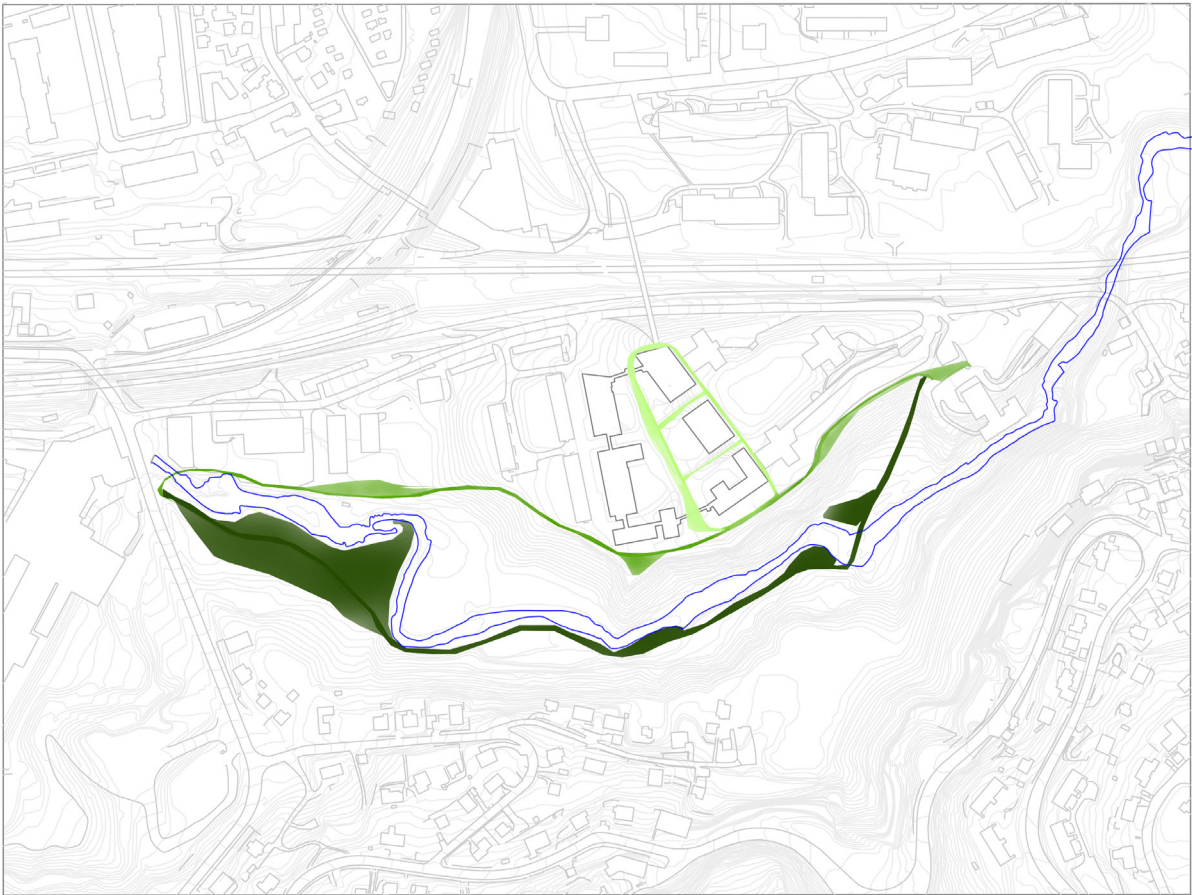
The third scale is the apartment section; each connected to a server providing necessary functions for staff and residents, like common areas, kitchen, storage and rinse room.

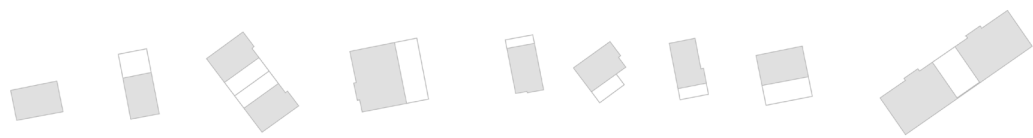
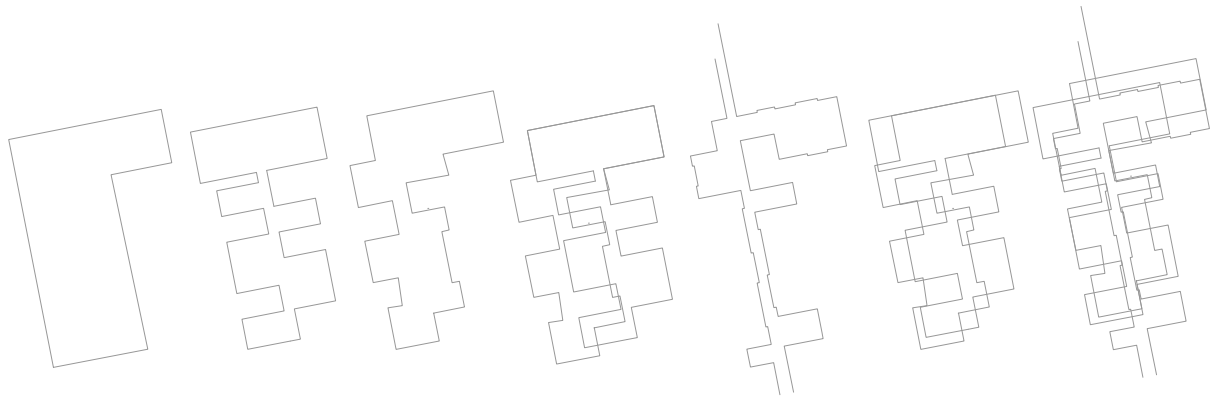
And the last and smallest scale are the apartments.





Collages showing how I envisioned the project





Diagrams showing the the development of the project in the four differnt scales mentioned above (see page 45)

Construction

The construction is in concrete, steel and cross laminated timber. The upper floors, that is to say from the first floor and upwards is in cross laminated timber resting on concrete columns, cores and load bearing walls.

There is an axis system going through the building with no more than five meter span in the first floor upwards, the concrete can span up to fifteen meters giving me the opportunity to have large spaces for the activity based programs on the ground floor. The steel are for trusses in the bridges connecting the six apartment sections.

The reason for the material choice is the relaxing property of wood, also I want to avoid non-transparent reflective surfaces, because it can be unsettling for people with dementia illness.



Material textures and construction axis in the first floor.

Thank You

See the posters for the finished project