



LILLEKÄRR

Dementia Village in Hisings Kärra, Gothenburg

STUDIO PROJECT

Studio

AUT164 - Future visions for healthcare, housing and work
1: Residential healthcare - housing for seniors.

MPARC. Autumn Semester 2021.

Team

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(Team 2)

Project Description

The task is to design an assisted living for people with dementia located in central Kärä, a suburb north of Gothenburg. Representatives from the City of Gothenburg will act as the client of the studio project. The concept of "Dementia Village" is a role model for the assisted living in this Studio project.

The Pandemic

The pandemic has affected the life of seniors all over the World tremendously. The mortality rates are high among elderly people and minimizing the spread of infection is an important aspect in this project.

A Dementia Village

The concept of Dementia Villages origins from a project in de Hogeweyk in the Netherlands. The idea is to create a living environment that has the qualities of a village, where the residents can live as normal as possible.

Program - in short

There are currently just a few Dementia Villages in Sweden, the program for this project is based on the competition programmes of two projects in Norway and Denmark (Dronning Ingrid's Hage and Demensplejehjemmet Aalborg Ost).

The Village

The Village should contain 10-12 units, with approximately 100 apartments in total. A main entrance with a reception, a restaurant, admin areas and staff areas. Additional public functions.

The Unit

Assisted living facilities are commonly divided into units with 8-10 apartments each. Each Unit should have access to laundry, disinfection/waste room and storage. These functions can be shared between two units.

Each unit should contain a common kitchen, dining area and living room spaces should be included within each unit. 8 apartments are the maximum to avoid automatic closing doors within the unit.

DEMENTIA

Dementia is a general term that covers a wide range of medical conditions. Common for all is that they are caused by abnormal brain changes. The most common Dementia disease is Alzheimer's disease that accounts for 60-80 percent of all cases.

Globally, the total population of older people is growing faster than the population of younger. In Sweden, 20 percent of the population is over 65 years today, and this is expected to increase. An increase of dementia patients can also be expected as the risk of developing dementia increases with age.

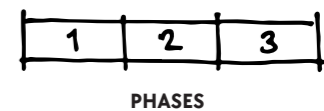
Some symptoms of the disease are: short term and long term memory loss, keeping track of belongings, planning ahead, caring for a household, feeling anxious or confused, getting lost but also feeling unsettled and in constant search, feeling a need to move, walk.

The symptoms of dementia are progressive, meaning they usually start slowly and gradually gets worse. They are generally permanent and currently incurable, measured in stages advancing from one to three. However, a person with dementia can commonly still be very physically capable, and the symptoms vary a lot depending on the individual and current stage of the disease.

When the past and the future is out of grasp, the present becomes even more important to a person with dementia.



60-80 %
ALZHEIMERS



Common Symptoms



Designing for Dementia

Six principles to follow to help make the lives for persons with dementia easier.

Orientation / Flow: a possibility to walk around (circling) and avoiding dead ends.

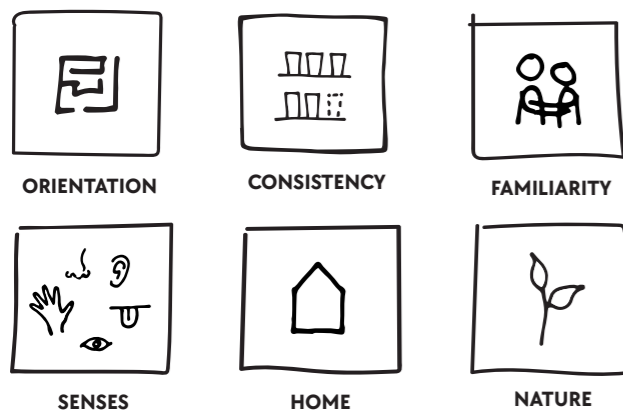
Consistency: keeping functions and personal belongings in same spots to avoid unnecessary memory effort.

Familiarity: Allow the residents their own spaces furnished with their personal belongings.

Senses: Sensory experiences. Using the senses can bring back memories and provides a possibility to enjoy the present, a distraction from uneasy thoughts or feelings.

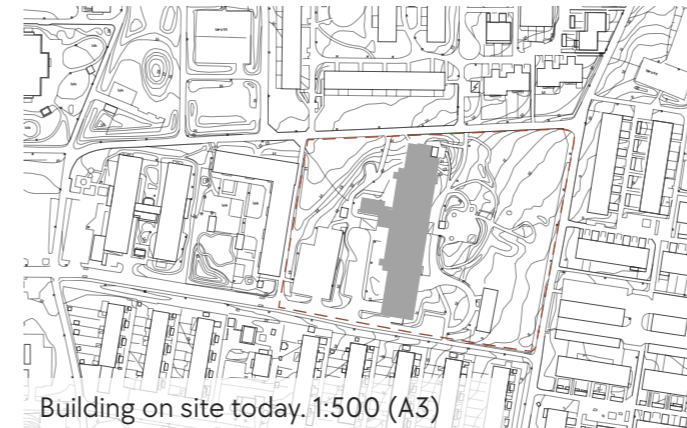
Home: creating a warm and safe environment. Avoiding a facility-like atmosphere. Providing both privacy and room for social meetings.

Nature: Connection to nature is both proven to be health beneficial and can give a sense of familiarity and help bring back memories, since most people have a relation to nature from earlier on in life.

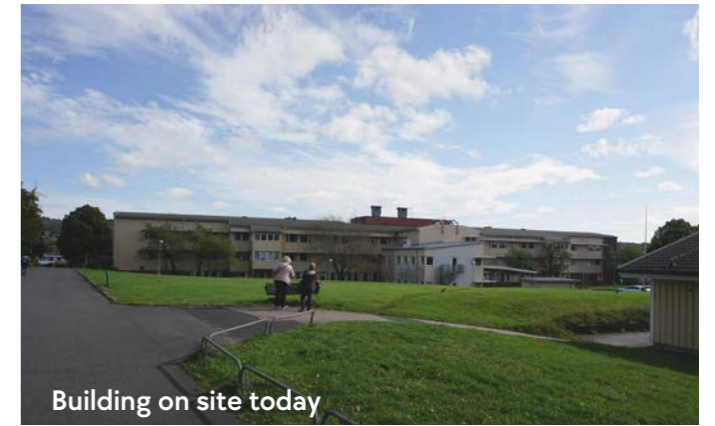


Existing Building

The existing building works as a care facility today. Its position interfere with our village concept and due to its condition it is questionable if it is either more environmentally or economically sustainable to transform it and sustain it over the years to come. We have decided to demolish it and build new. Trying to keep as many large trees as possible.



Building on site today. 1:500 (A3)



Building on site today



Kärra Centrum



North walkway



Some of the present trees on site.

Kärra

The site for the Dementia Village is located in central Kärra, a suburb north of Gothenburg. Kärra was mainly developed in the early 1970's with housing, schools, sports facilities and a local center with smaller shops. In the near future Kärra is about to go through a refurbishment and densification with about 300 to 500 new apartments.

Site

A walking path cuts through the area connecting our project site to Kärra Centrum. We believe this stroke will be an important communication to keep and activate for the future due to its central position through Kärra. Neighbouring the site is a kindergarten and mainly residential housing. Today another care facility is situated on the site.



Site Plan
1:5000 (A3)

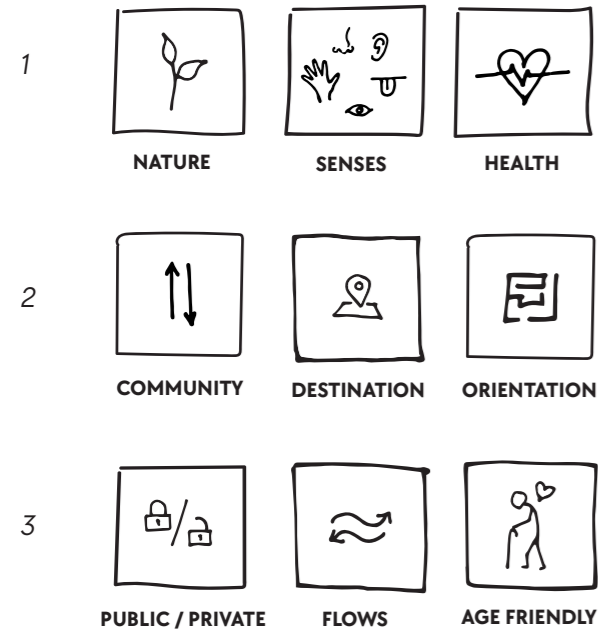
- Pedestrians
- Car access site
- Bus Line
- Bus Stop
- Library
- Stores (or similar)
- Kindergarten
- School
- Swimming hall
- Church
- Dementia Village

0 100 200 300 m

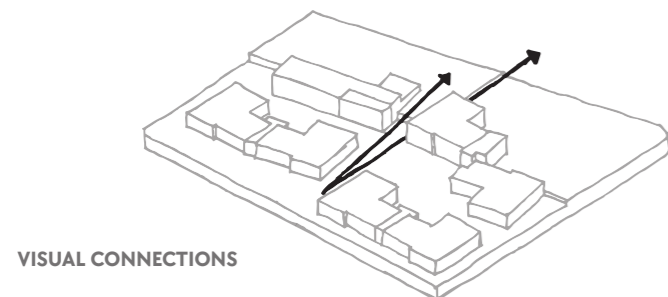
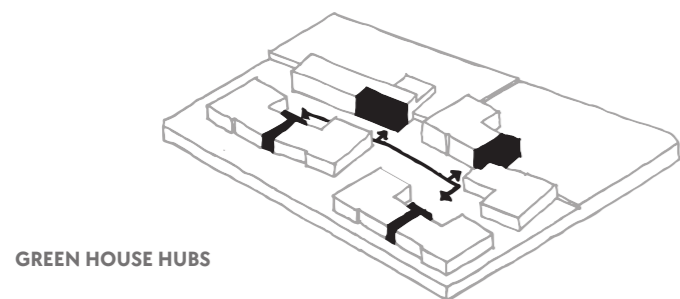
THE VILLAGE

Aim

- 1 Nature for health promotion
- 2 Interacting with the community
- 3 Levels of Privacy, integrity of a home



Isometric diagrams



Accessing the Village

Entering the village is possible from two directions. With a car, you arrive from the southern street and the central square allows drop-offs and pick-ups. By foot or bike, you can also arrive from the northern street that is car free and has a close connection to the bus stop and Kärra Centrum.

Deliveries

Deliveries are kept outside the main village area with an assigned road to the west on the site.

Parking

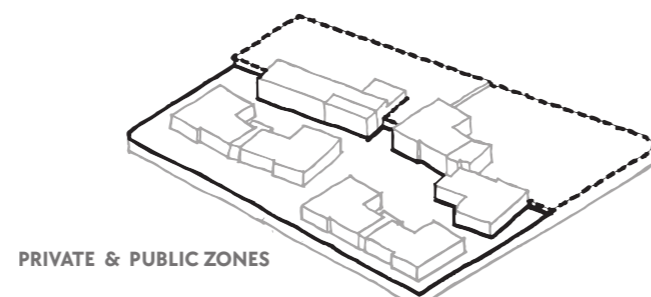
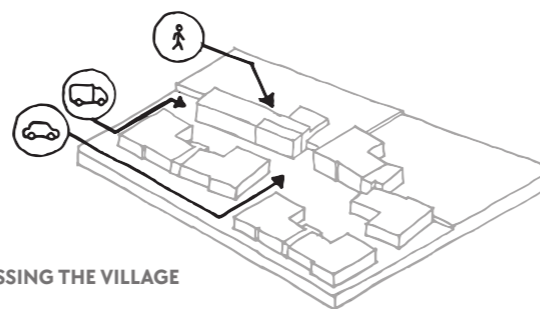
Parking is kept before entering the central village and three additional short time spots on the square.

Main Entrance

Main reception is situated in the culture House.

Units

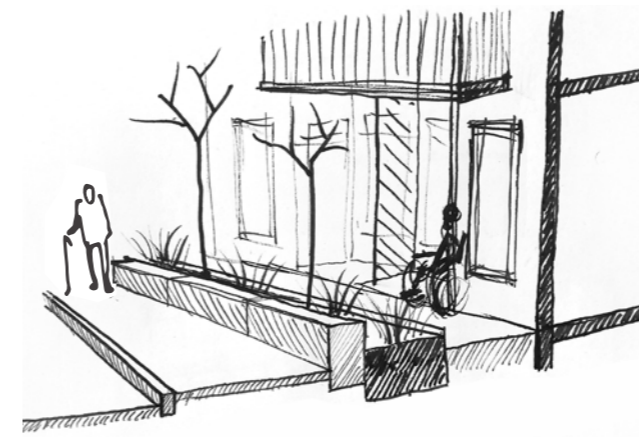
A visitor can access any unit directly without passing through the main reception or any other unit.



Flows / Connections

The north and south entrances connect through a v-shaped axis through the village. The square is easily reached from all units through roof-covered trellis.

Units have entrances via common greenhouses. Due to this it is possible to isolate each unit to minimize the spread of infection in a virus outbreak.



Village

North Park

A public park is located north of the village. Saving the beautiful tree alley and providing a green space for the community. A destination for residents of the Dementia Village as well as the children from the neighboring kindergarten.

Village Park

The village park is not closed for visitors but has a semi-private character. The park is divided by the main communication strokes and aims to provide garden spaces of varying characters for the residents. A sensory garden, green trellis walkways, urban farming and sitting spots.

Culture House

The Culture House contains public functions such as reception, restaurant and kitchen, a large community hall for events, offices, meeting rooms, conference rooms, café, farmers market, workshop and staff areas.

Levels

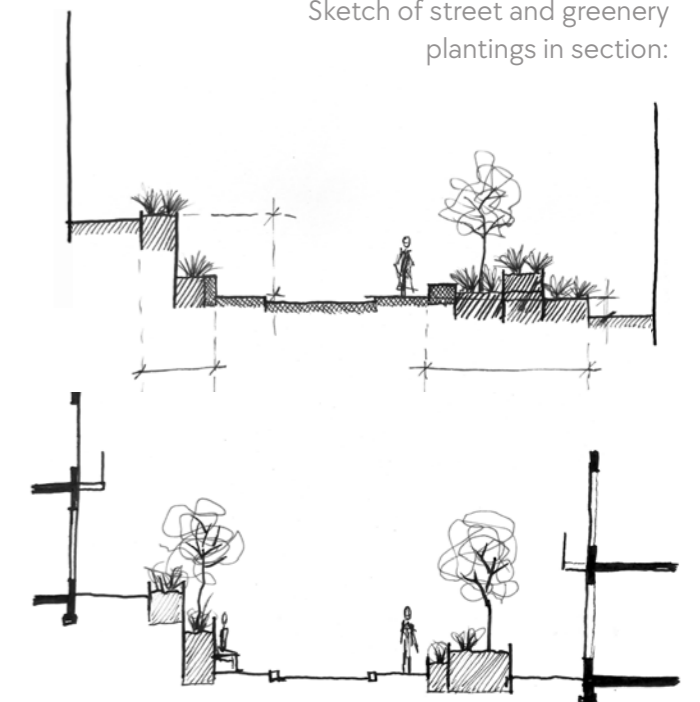
The site is sloping with a total height difference of seven meters from the highest point in the north-west corner to the lowest in the south-east.

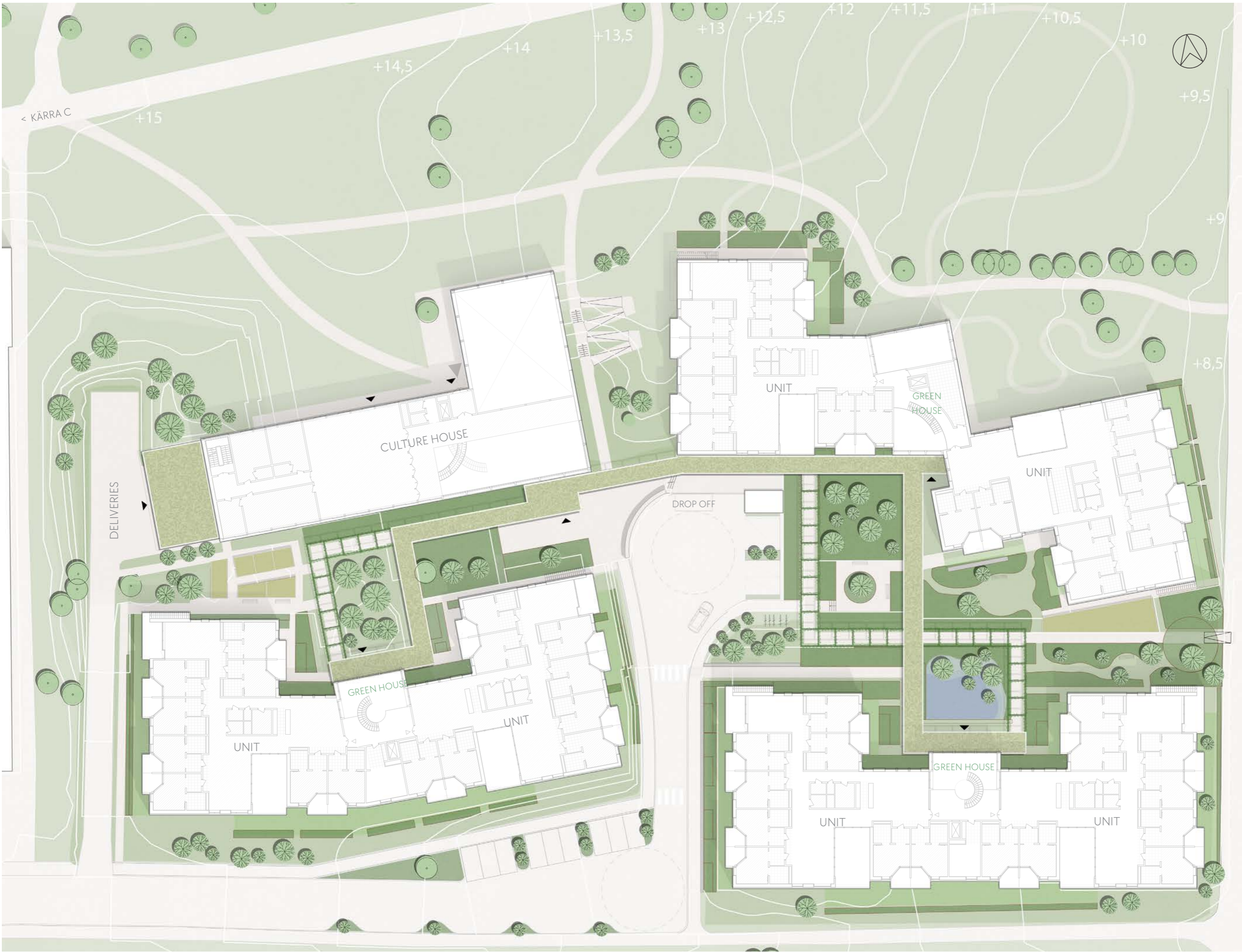
The difference in levels creates natural boundaries in the garden and brings privacy for the residents by breaking the visual connection from the street to the apartments.

Where the levels work in the opposite way, extra wide sections of greenery plantings have been added to provide privacy instead.



Sketch of street and greenery plantings in section:





Plan
 Garden & Park
 1:500 (A3)

- Park Area
- Private Gardens
- Planting
- Urban Farming
- Preserved Trees
- Planted Trees

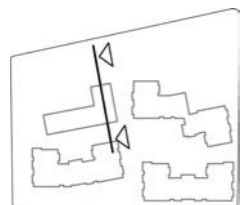
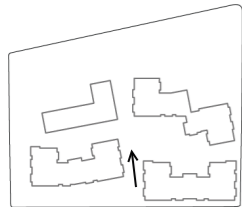
Saving Trees
 One of the aims from start was to preserve as many trees as possible on the site.



THE VILLAGE



Exterior
Central square, apartments to the left. Culture House in background.



E-E
1:200 (A3) Culture house



Staircase in greenhouse, with restaurant in the background and reception desk to the right (outside visualisation).

Culture House

Interacting with the community. Creating a destination point: park café, community hall, events. Public park.

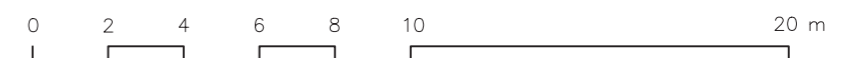
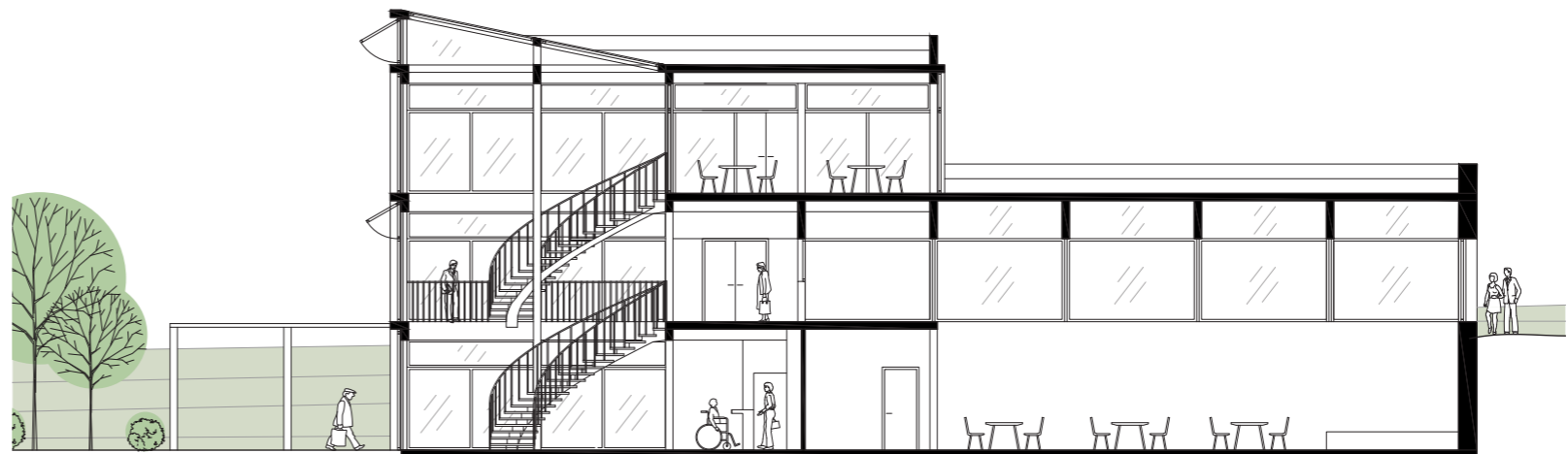
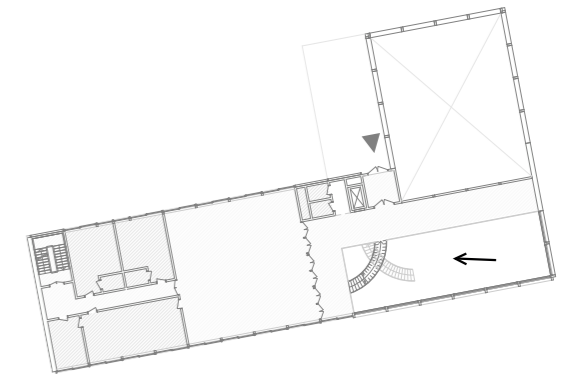
Easy orientation



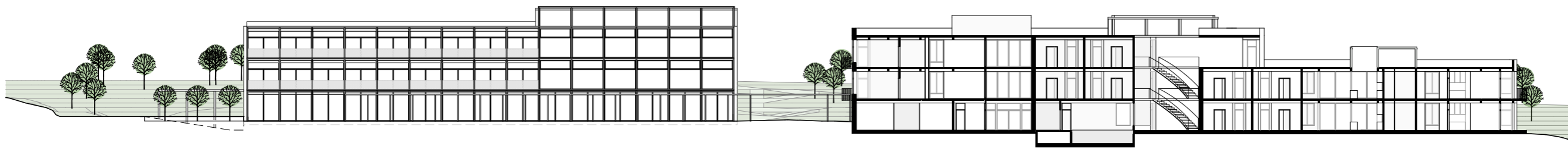
DESTINATION



ORIENTATION

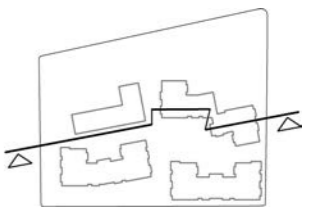


Floor Plan - level 1
Zones & Functions
1:500 (A3)



Facade Culture House + Pool + Unit

B-B
1:500 (A3)

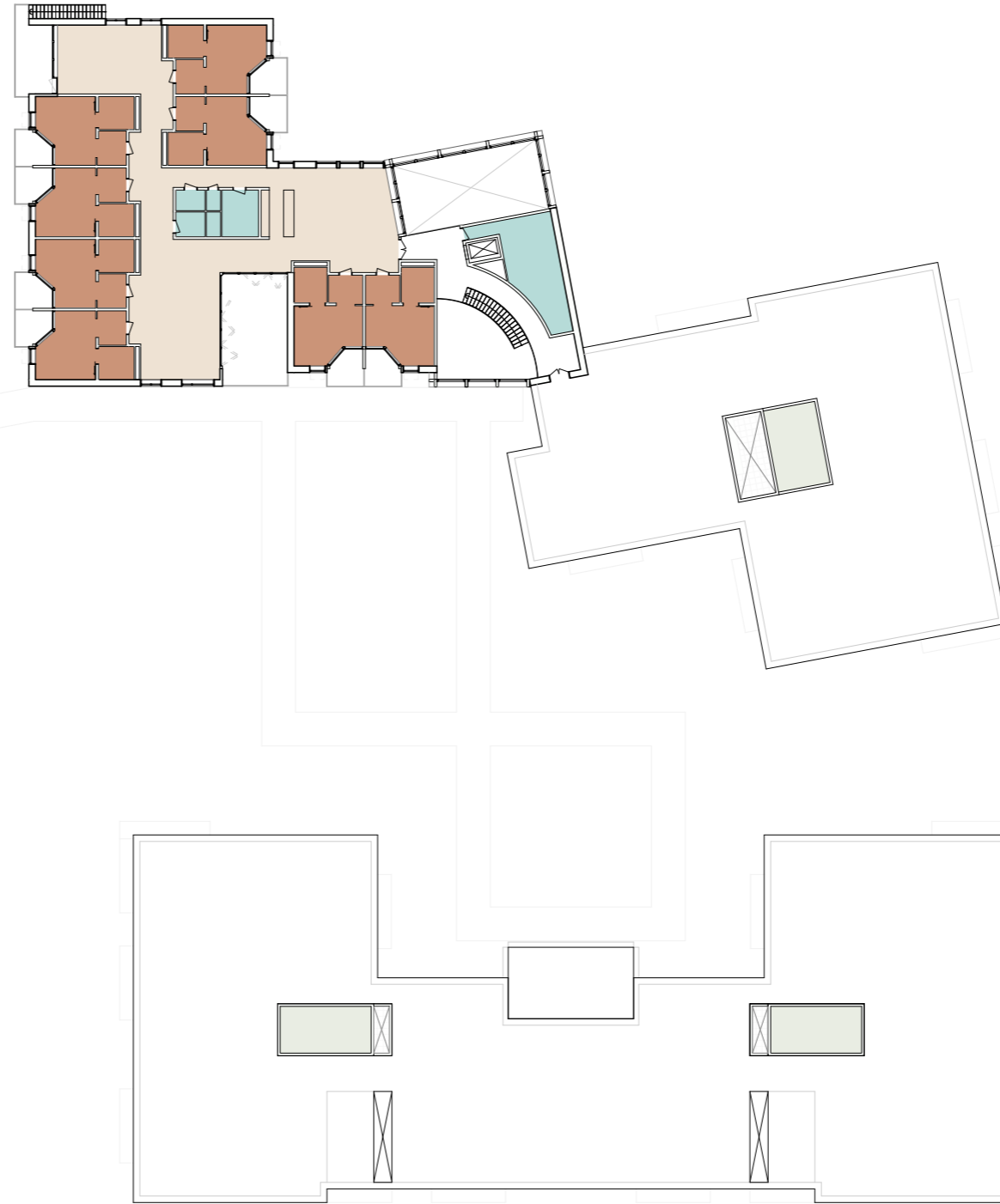


Floor Plan - level 2
Zones & Functions
1:500 (A3)



Facade + Section: Apartment and Common room

Floor Plan - level 3
Zones & Functions
1:500 (A3)



- conference
- administration
- staff area
- apartment
- living area
- staff rooms

Culture House

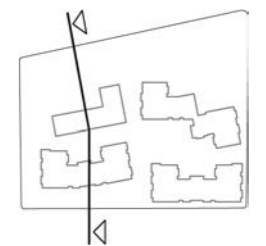
At the third floor the administration and staff areas are located. Also two larger conference rooms.

In the first floor is the two story high community hall, reaching up until second floor.



Culture House café/workshop + west garden + Unit

C-C
1:500 (A3)



THE UNIT

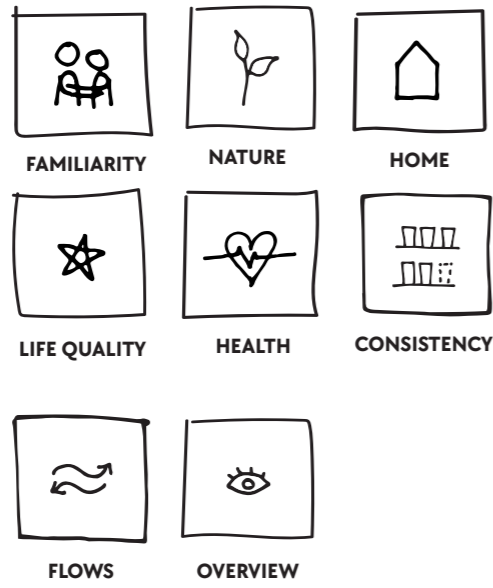
Aim

Residents

Health promoting
Familiarity & Consistency
Quality of life
Home & Integrity

Staff

Easy flows
Good overview



Spaces and flows

A home not a facility. An important goal for the design of the unit. By avoiding long corridors with dead ends and instead creating looping flows, unsettled and active dementia patients can be moving about easier without interruption.

Possibility to choose

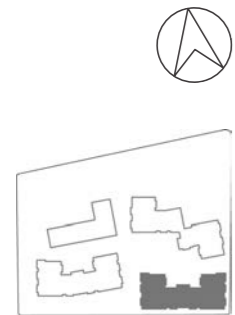
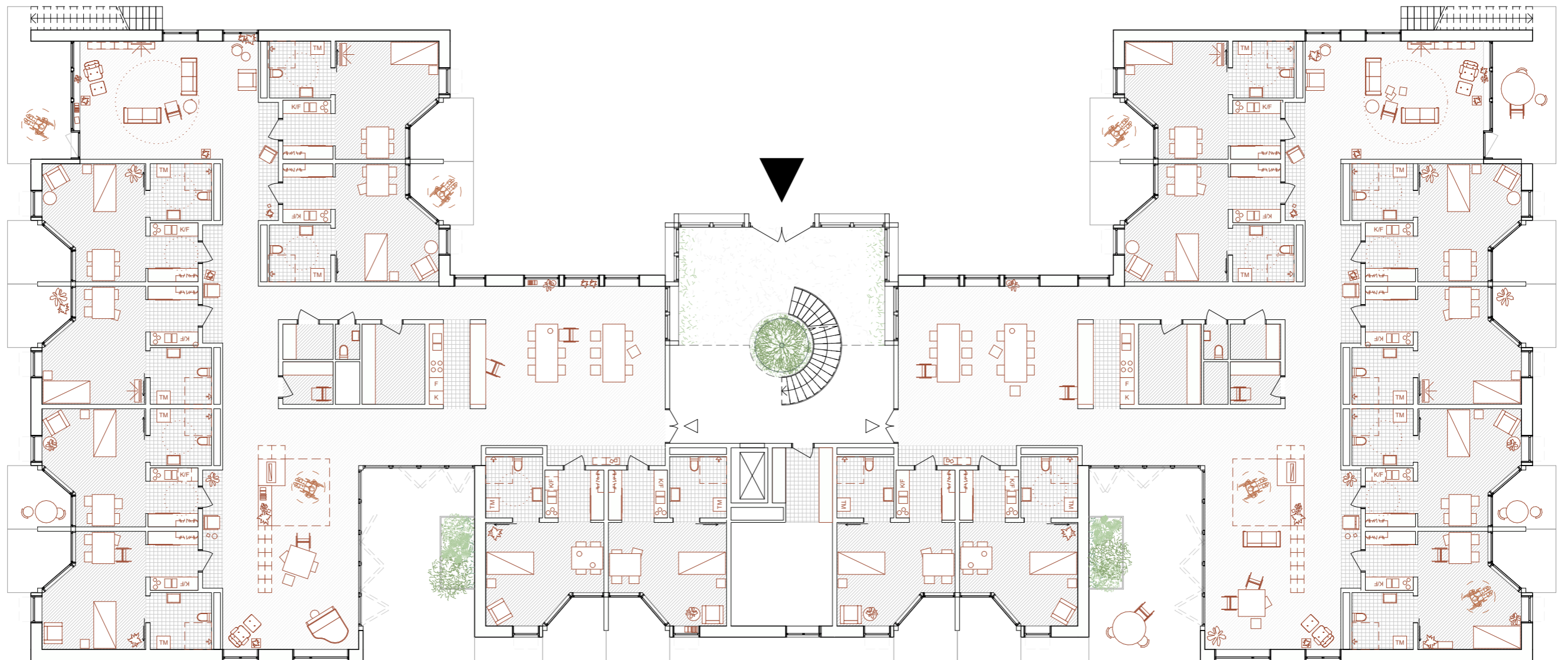
By providing common spaces of varying character for the residents to choose themselves how social they wish to be. Each apartment has a private terrace or balcony.

Overview

A central common kitchen with good overview for the staff. Connection between the two units for easier overview over both at a night shift.

Greenery / Nature

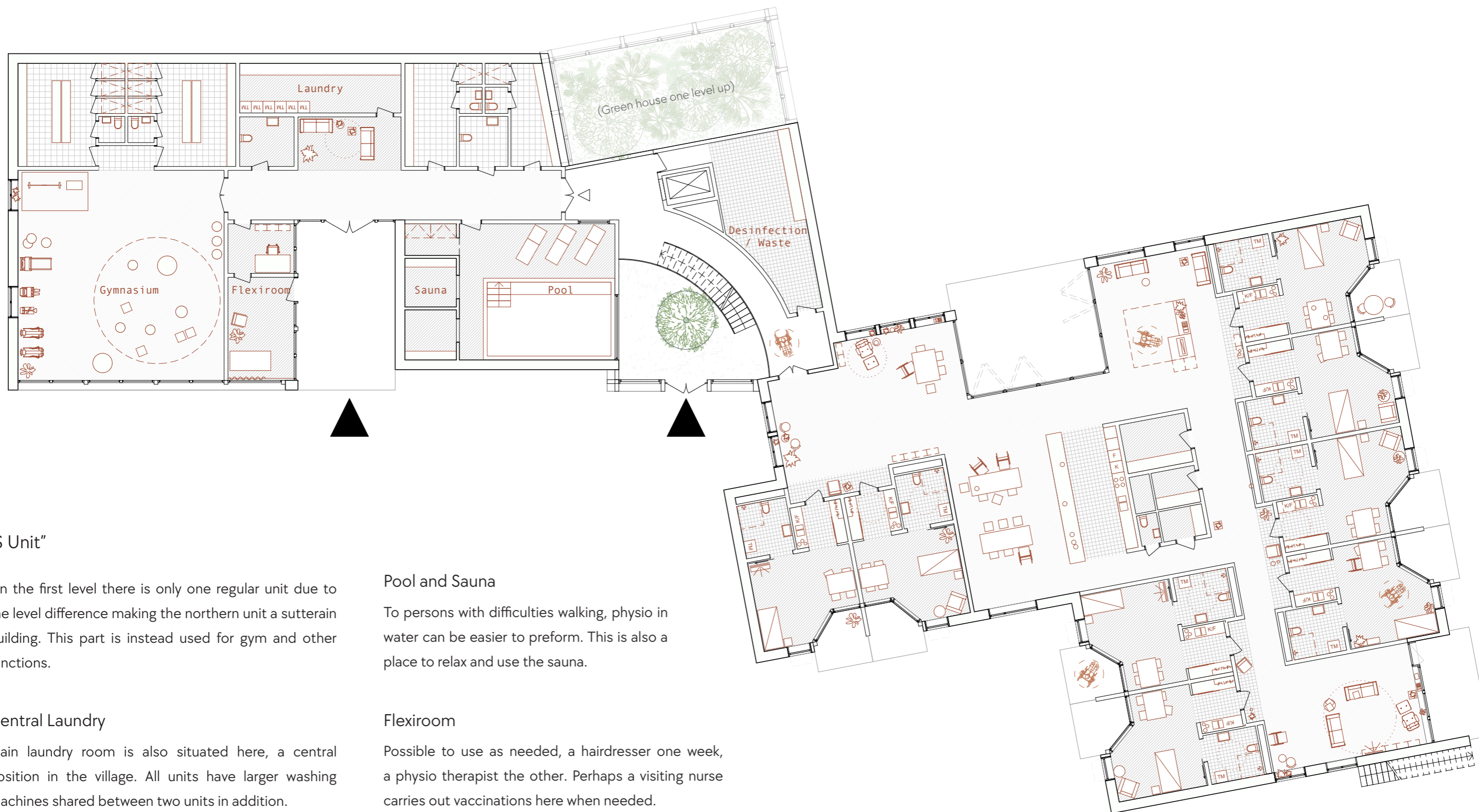
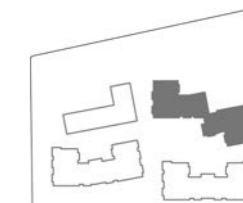
The access to greenery and nature. Through a common terrace with integrated plants. Each unit pair is connected through a greenhouse, that is also the entrance to the units.



Floor Plan,
Regular Unit
1:200 (A3)



Floor Plan, S-Unit
1:200 (A3)



"S Unit"

On the first level there is only one regular unit due to the level difference making the northern unit a sutterrain building. This part is instead used for gym and other functions.

Central Laundry

Main laundry room is also situated here, a central position in the village. All units have larger washing machines shared between two units in addition.

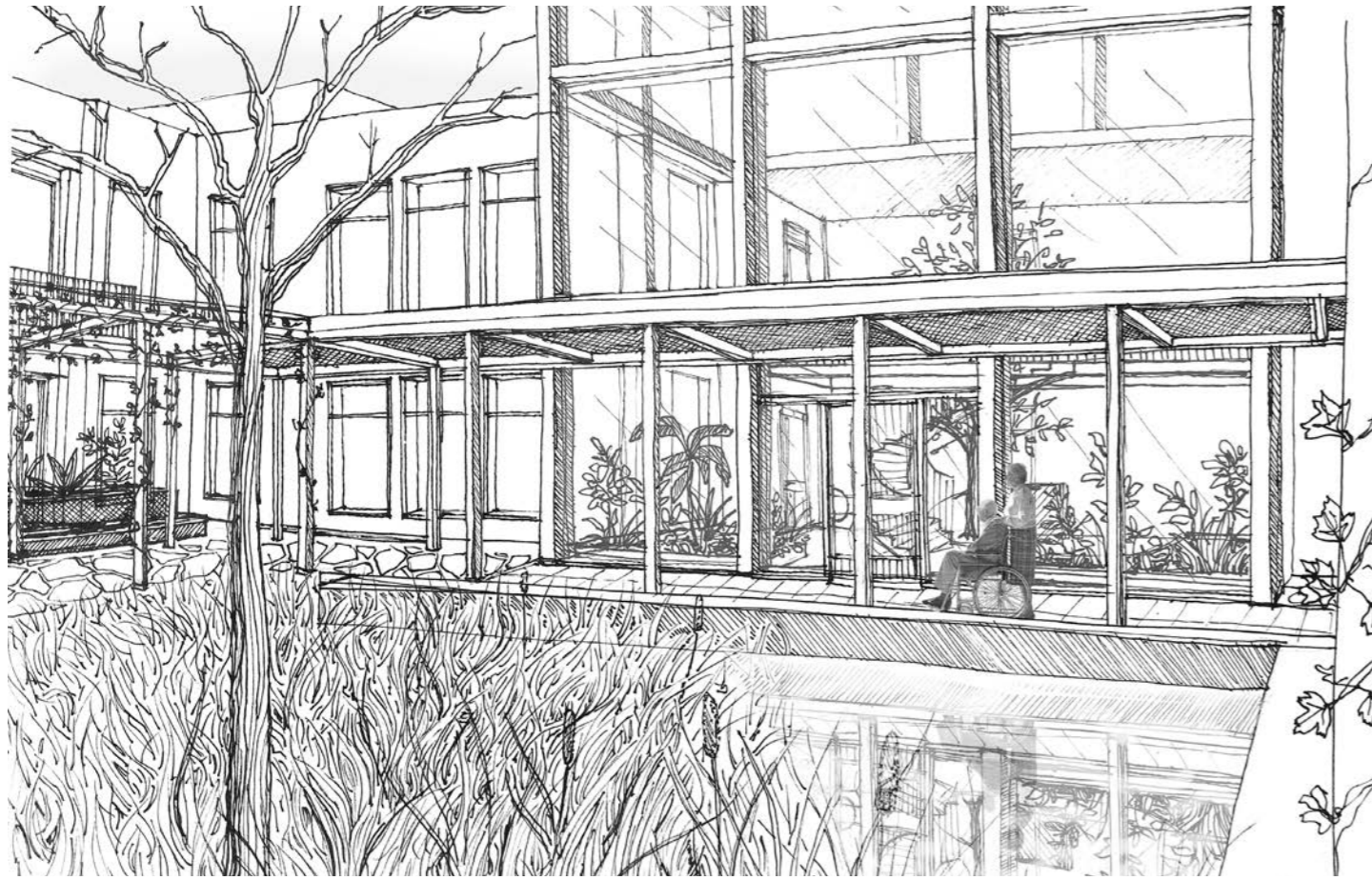
Pool and Sauna

To persons with difficulties walking, physio in water can be easier to perform. This is also a place to relax and use the sauna.

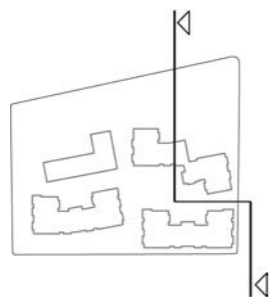
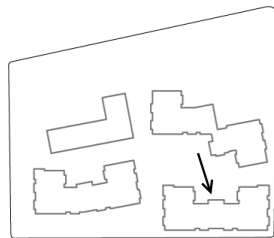
Flexiroom

Possible to use as needed, a hairdresser one week, a physio therapist the other. Perhaps a visiting nurse carries out vaccinations here when needed.

Entrance Unit



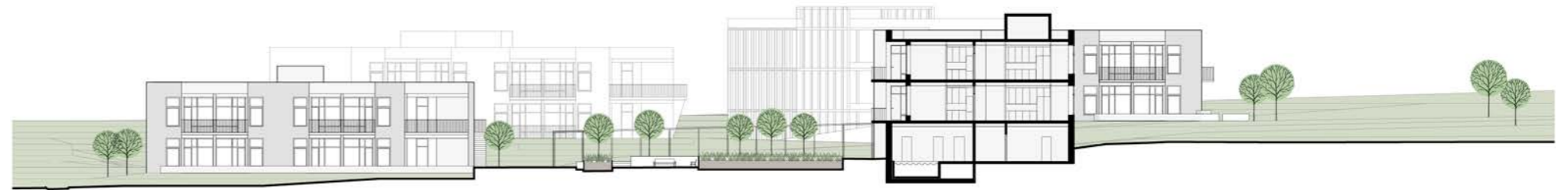
Trellis, Entrance Unit



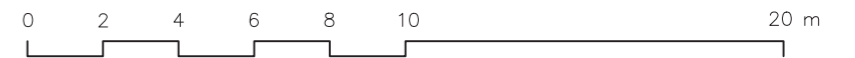
D-D
1:500 (A3)



Green House connecting to four units.



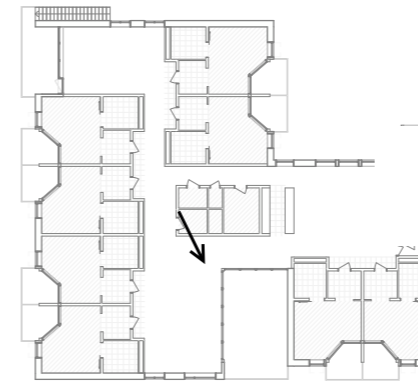
Section: S-Unit & Garden
Elevation: East Facade (South-East Unit)



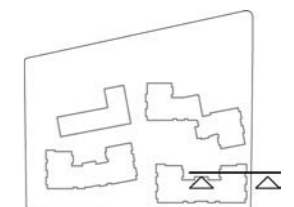
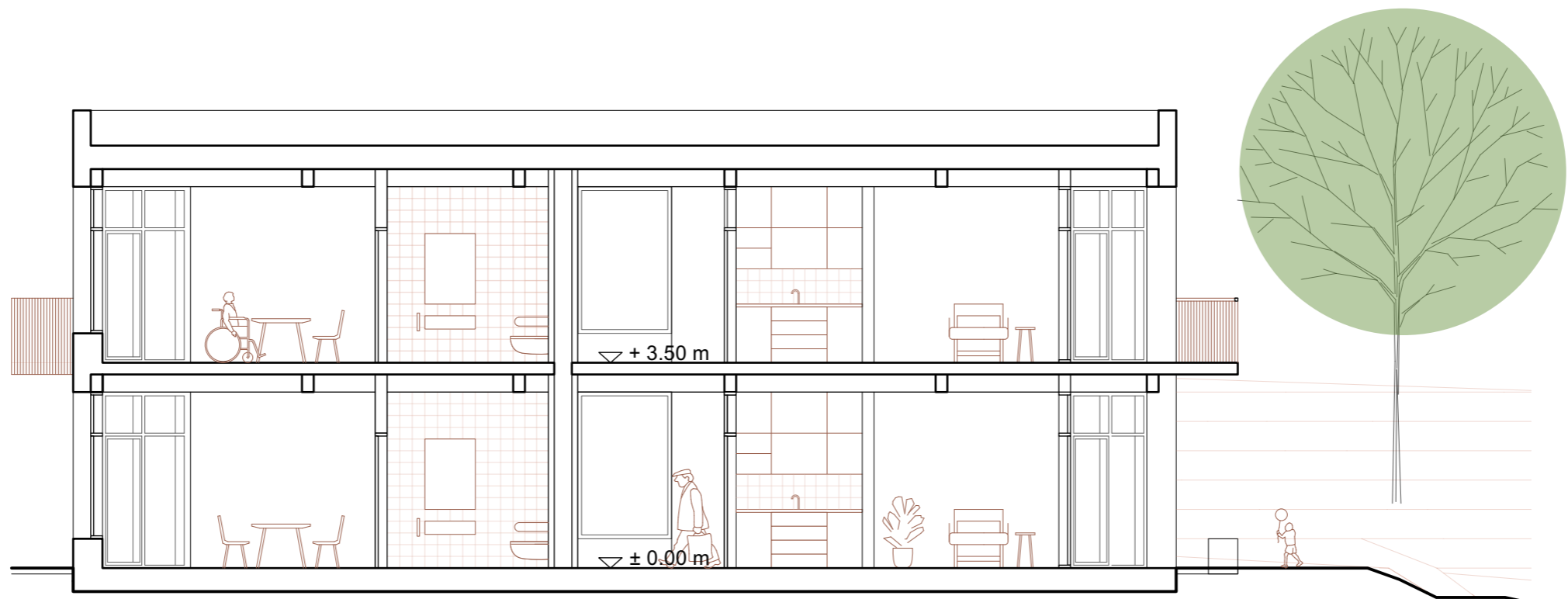
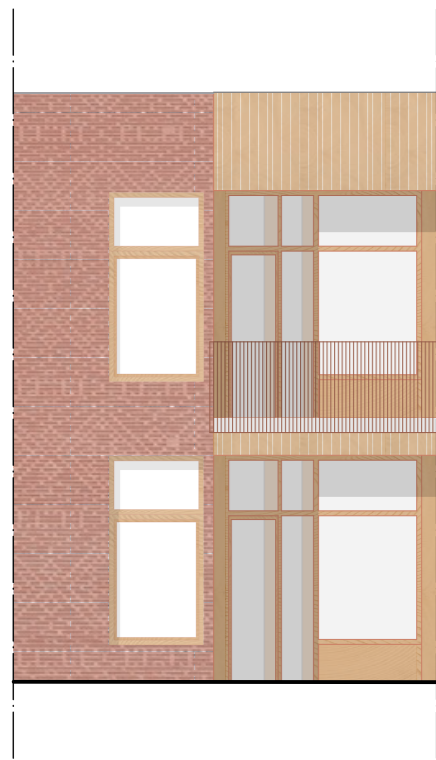


Unit Common Areas

Each Unit has common areas with a kitchen and dining area, living room areas and a fire place. A terrace possible to open up making the room larger in summers.



Common room, Unit. On a nice day the terrace can be fully opened to allow a free flow between outdoors and indoors.

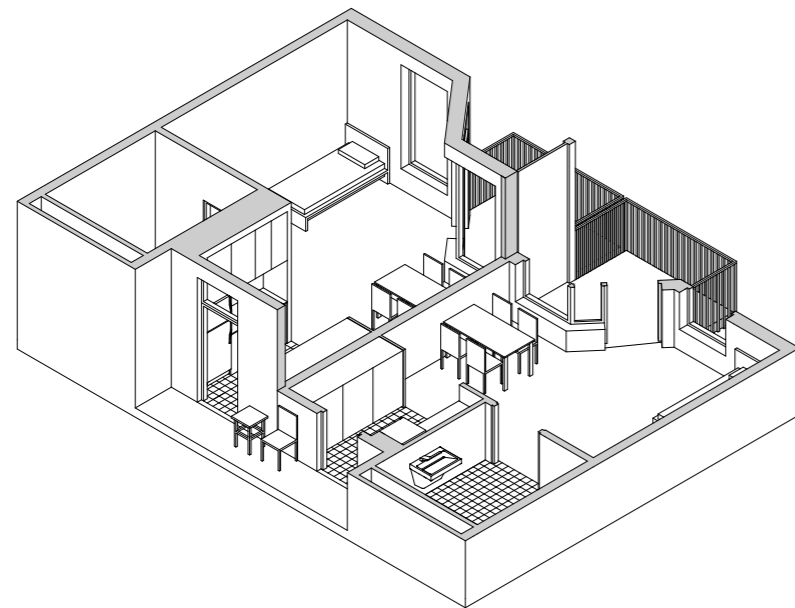
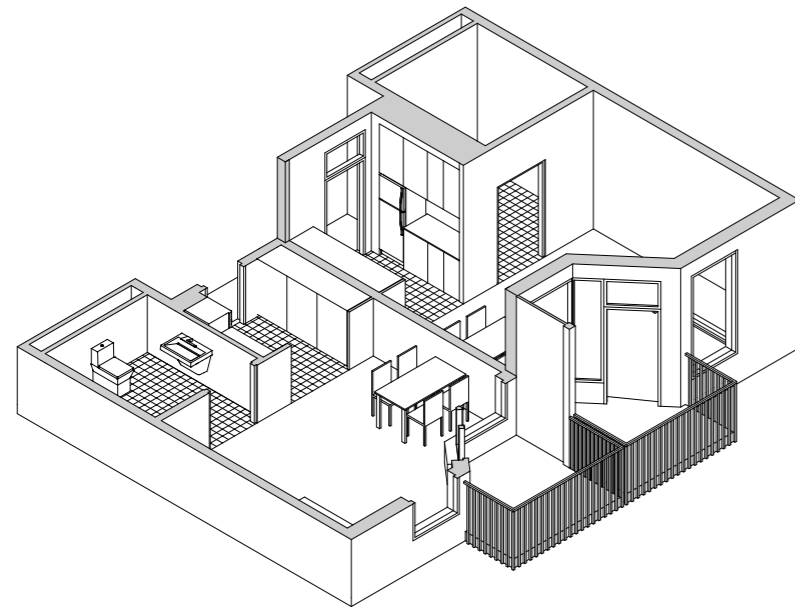
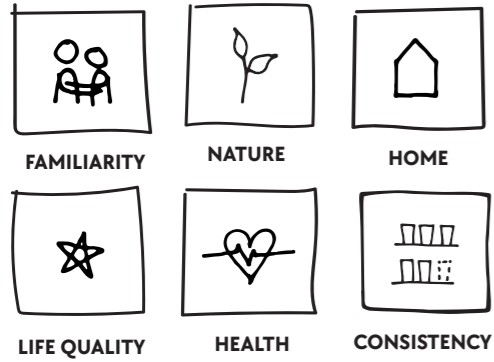


Unit + Apartment
F-F
1:100 (A3)

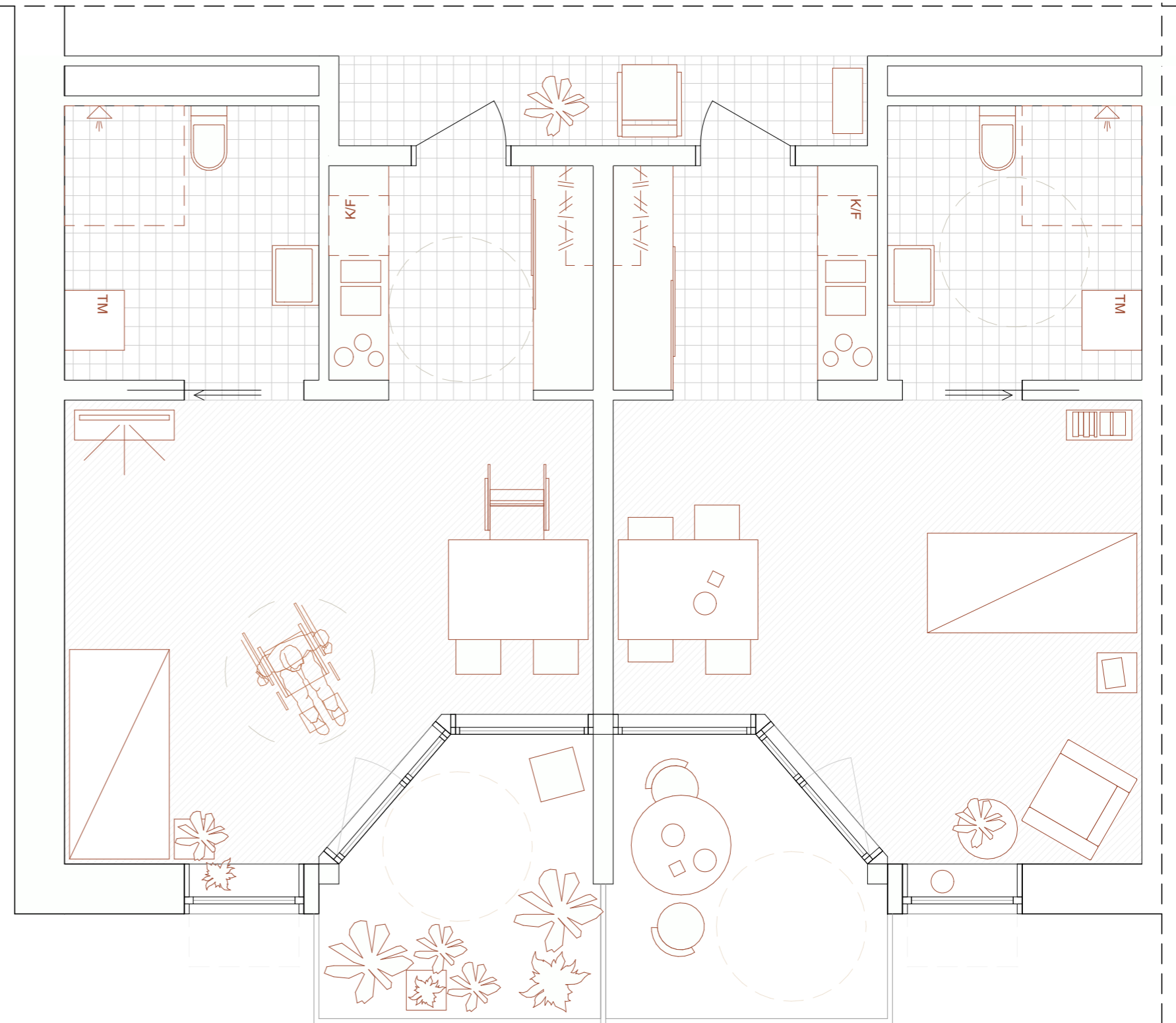


THE APARTMENT

Apartment Plan
1:50 (A3)



Apartment Iso



Home

Two apartments are always paired up, making it possible to install a connecting door inbetween, suitable for a couple living together.

The coupled apartment doors create a proper entrance and strengthens the feeling of a home. The residents use their own furniture in the apartments, familiarity is especially important for a person with dementia.

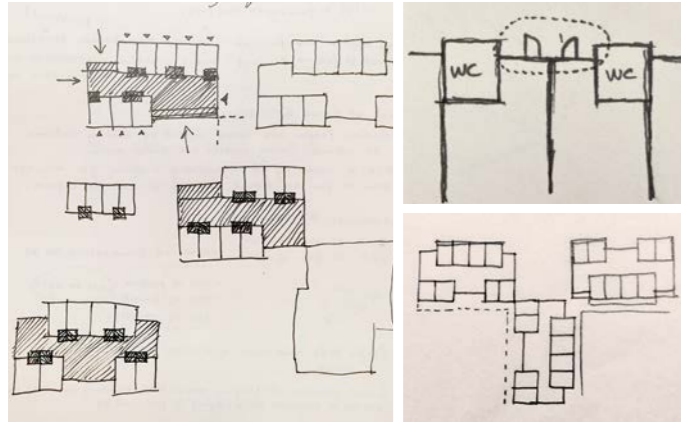
Nature connection

The access to greenery and nature is a central focus throughout the village. The low apartment windows makes it possible for a person laying in bed to have visual contact outside. Just the view of nature through a window helps a faster recovery.

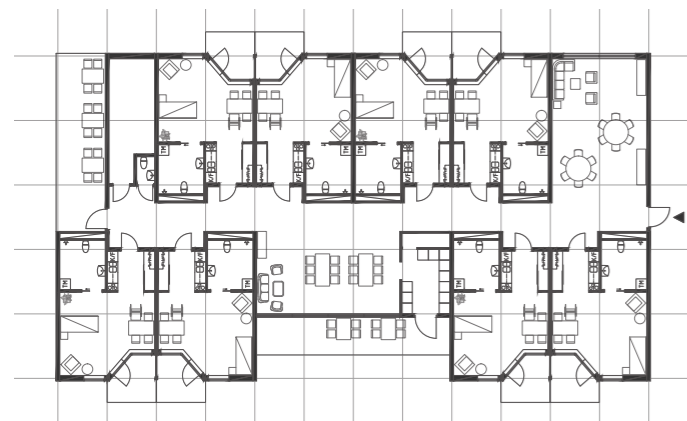
Each apartment has its own private terrace or balcony.



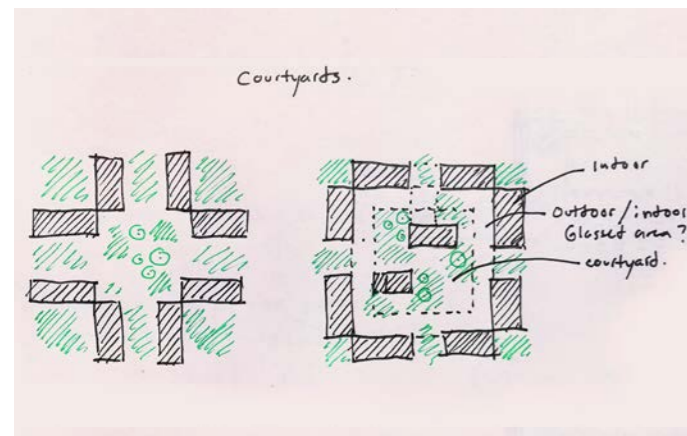
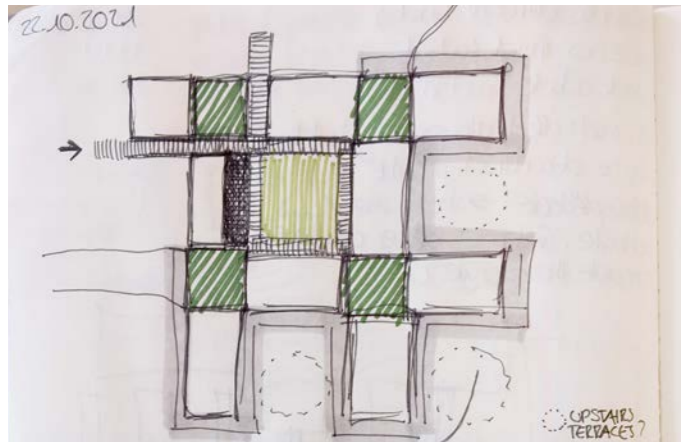
PROCESS



Unit, sketches.



Open or closed courtyards, sketches:



Parallel Sketching

The sketching process was carried out in different scales simultaneously. Apartment, Unit and Site. The process is not linear and follows several design principals at the same time, some listed below.

Unit

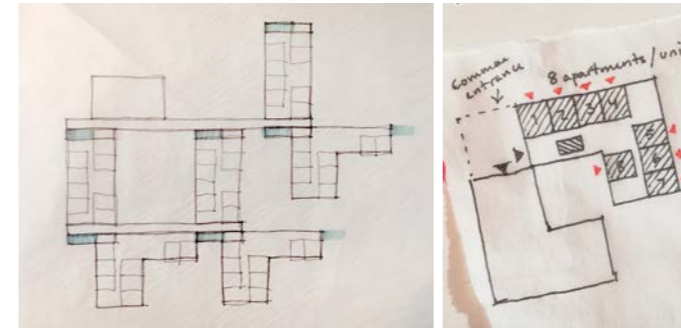
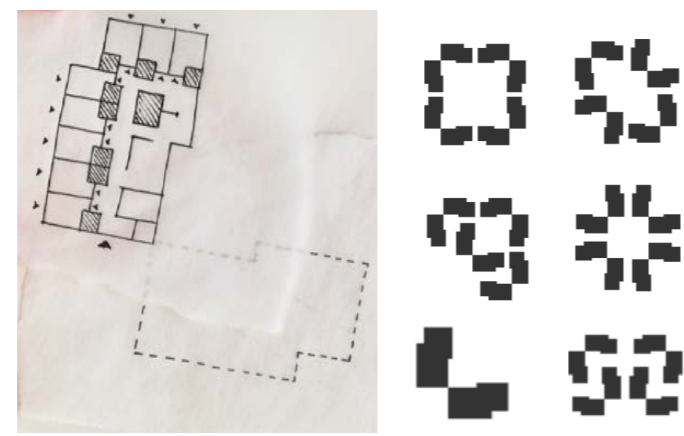
These were principals we strived towards:

- A shared entrance in-between to units.
- Cluster house: Avoiding long corridors.
- No north facing apartments.
- Different common rooms.
- A common terrace within every unit.

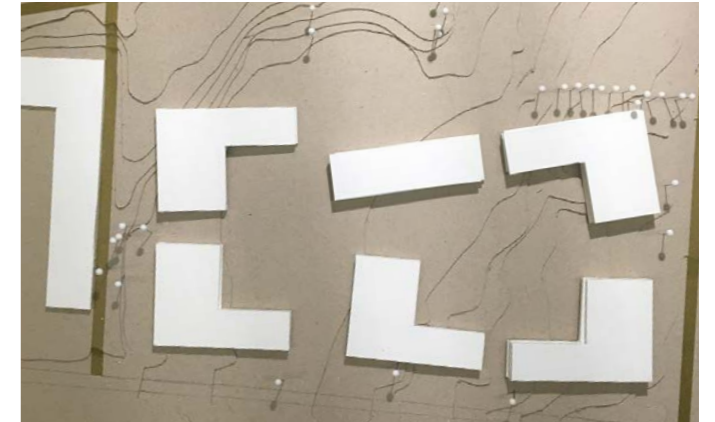
Village

The village configuration on site was mainly about:

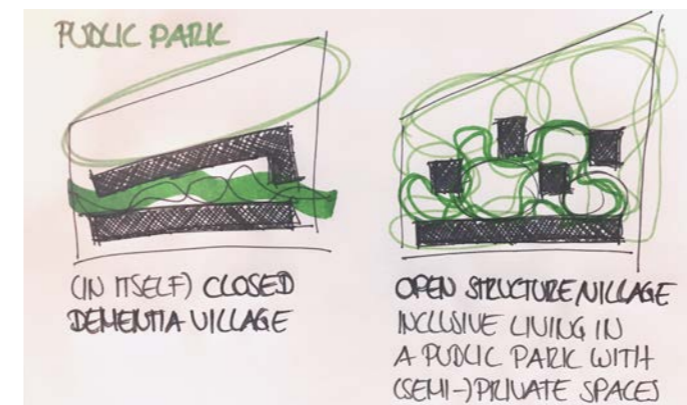
- Communication for the staff and visitors.
- Shaping the gardens/courtyards and saving trees.
- The interaction with the community.



Avoiding north facing apartments made us reconsider the layout of the unit towards a more L-shaped one.



Final Approach



Deciding on the approach of a open structure village to the north, but with more private gardens inside.

A central square and public building. Central private gardens and outer public park areas.

Separated delivery and visitor entrances. Creating a Culture House open to the community, activating the north side and public park.

