

# LIMITED FOR FREEDOM

Dementia village in Önnared

AUT 164 | Residential healthcare - Housing for seniors



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# DEMENTIA

## 80

Every fifth person over 80 years is suffering from dementia



## 25 000

Becomes ill every year

## 150 000

People in Sweden are suffering from dementia

### Early stage of dementia

- One forgets names and events
- Increased difficulties regarding paying bills and other tasks of everyday life
- Worry and depression

### Mild dementia

- Loss of memory is now an obvious disability
- The affected person is aware of the problems and tries to find strategies to handle them
- Common to feel worry and shame, as well as feel irritation and frustration when one can not handle easy tasks anymore.
- Hard to express oneself. Words does not come automatically.
- Ability to orientate oneself has decreased
- The symptoms are now obvious for people in close relation
- Social relationships are affected
- Difficulties to follow a conversation

### Moderate dementia

- The number of symptoms increase and become more intense
- Some become apathetic and introvert while others are very restless and have a hard time to feel calm. Many needs support form the society in this stage, either home care or to move in to an assisted living.
- Difficulties to concentrate occur
- Common to change circadian rhythm and some starts to go wandering at night
- Can not get dressed, wash oneself and do other duties on their own
- The knowledge about the disease is decreasing
- Psychiatric experiences such as hallucinations can occur.

### Severe dementia

- Large parts of the brain are damaged
- Hard to relate to position, time and space
- Can not speak anymore or only uses a few words that repeats all the time
- The body is now affected physically. One can not eat, use the bathroom or get dressed by oneself
- Often one completely loses the ability to walk
- Last time of life one is dependent of care
- Many eventually die from other secondary diseases

### The number sufferers is increasing

In Sweden dementia really is a growing disease. Around 25 000 people are becoming ill every year. Most commonly it is happening in later life. After turning 65 years old, the risk is increasing significantly. Every fifth person over 80 years old is suffering from dementia and the total number of sufferers of today are almost 150 000 people. This number will increase as the population of elderly will grow.

### What is dementia?

Dementia is a generic term and a diagnosis for a number of symptoms caused by brain damages, where Alzheimer's disease is the most common one. Dementia is incurable and therefore have different stages in its progress. The progress of dementia can be divided into four stages. The progress of the disease is very individual. Some people live with the disease for three to four years and others ten years or even more.

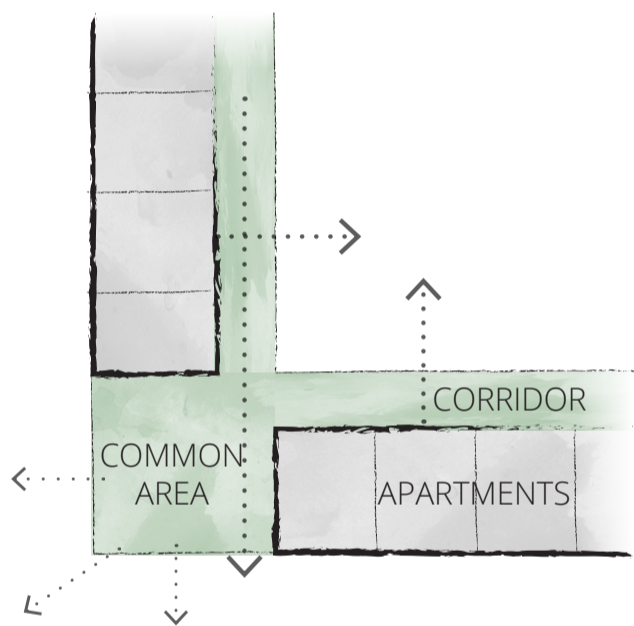
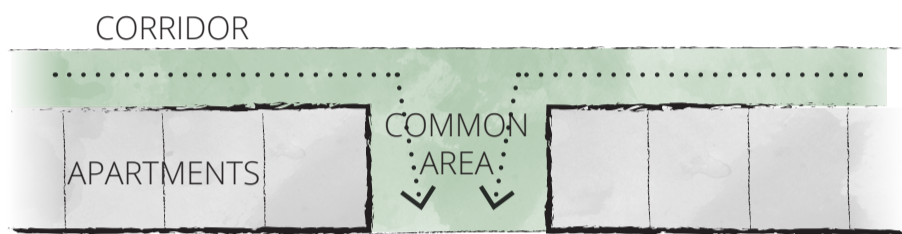
The design proposal is mainly addressing the two late stage of dementia, when one is in need of professional care.

### Dementia village

A dementia village is a newly developed concept first to be built and tested in The Netherlands. It is a Residential care home for people with dementia disease where the outdoor environment are planned for making it possible to walk around independently in a safe environment which should resemble everyday life with a selection of facilities and activities. The building itself creates a border, shaping a courtyard where the residents can move around indepentently without the risk of wandering off to far and get lost.

# DESIGN CONCEPTS

## Wayfinding and zones



### Strategies: zones

To be able to satisfy the needs in the different stages of dementia we have focused on creating varying situations and atmospheres in our project. Different zones regarding level of privacy, stimulus, activities and socialising has been taken into account. It has been aimed for designing places for socialising in varying sizes of groups, for different activities and environments.

### Indoor strategies

The common rooms are placed centrally in the units in order to shorten the distance from each apartment to the common areas.

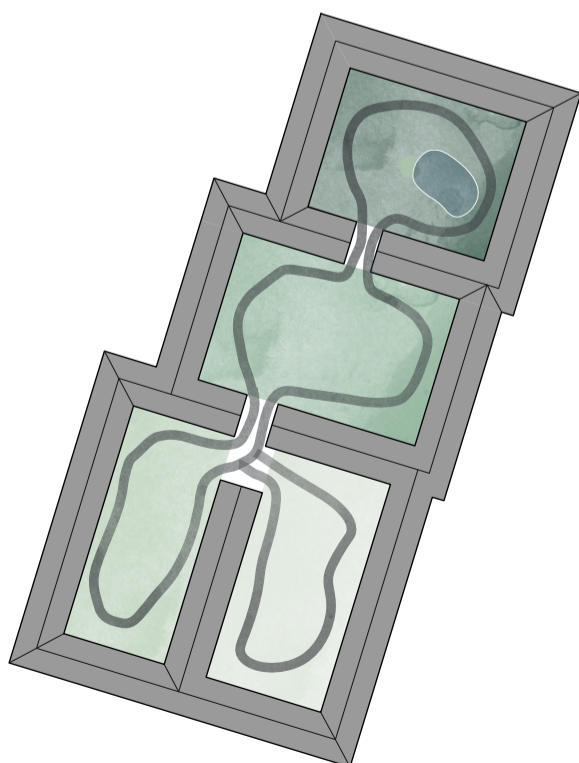
To provide good daylight conditions in the common room they are placed in the corners of the building, providing a good view outside of the building. This has contributed to the L-shape of the units as well as an visual contact between the corridor and common room, increasing the wayfinding for the residents. The one sided corridors also provides a visual contact with the garden, encouraging the residents to go out to garden.

### Outdoor strategies

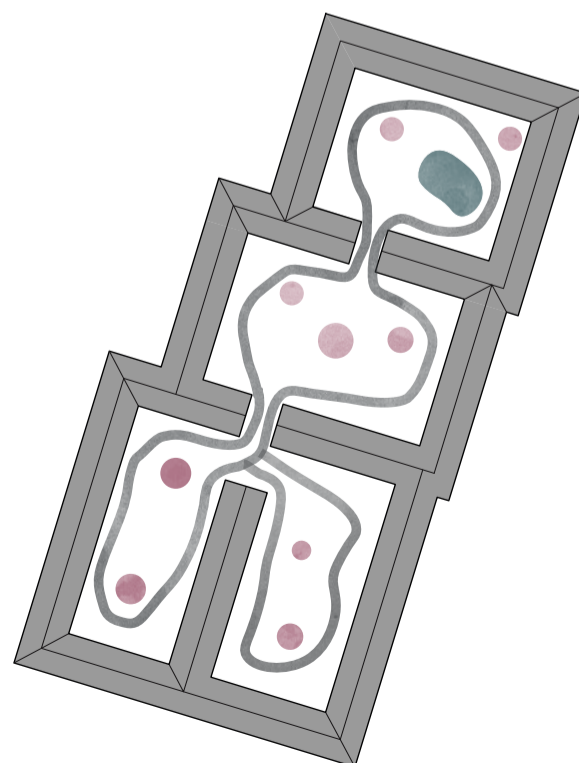
The garden is built up around a circular main path, leading through the different courtyards. The circular design of the path increases the wayfinding and feeling of security, as it always leads back to the starting point.

In order to increase the wayfinding and range of activities and experiences of the gardens all four of them have been given their own theme.

Within the courtyards situations with varying levels of stimuli and privacy are created to meet the different needs of the residents.



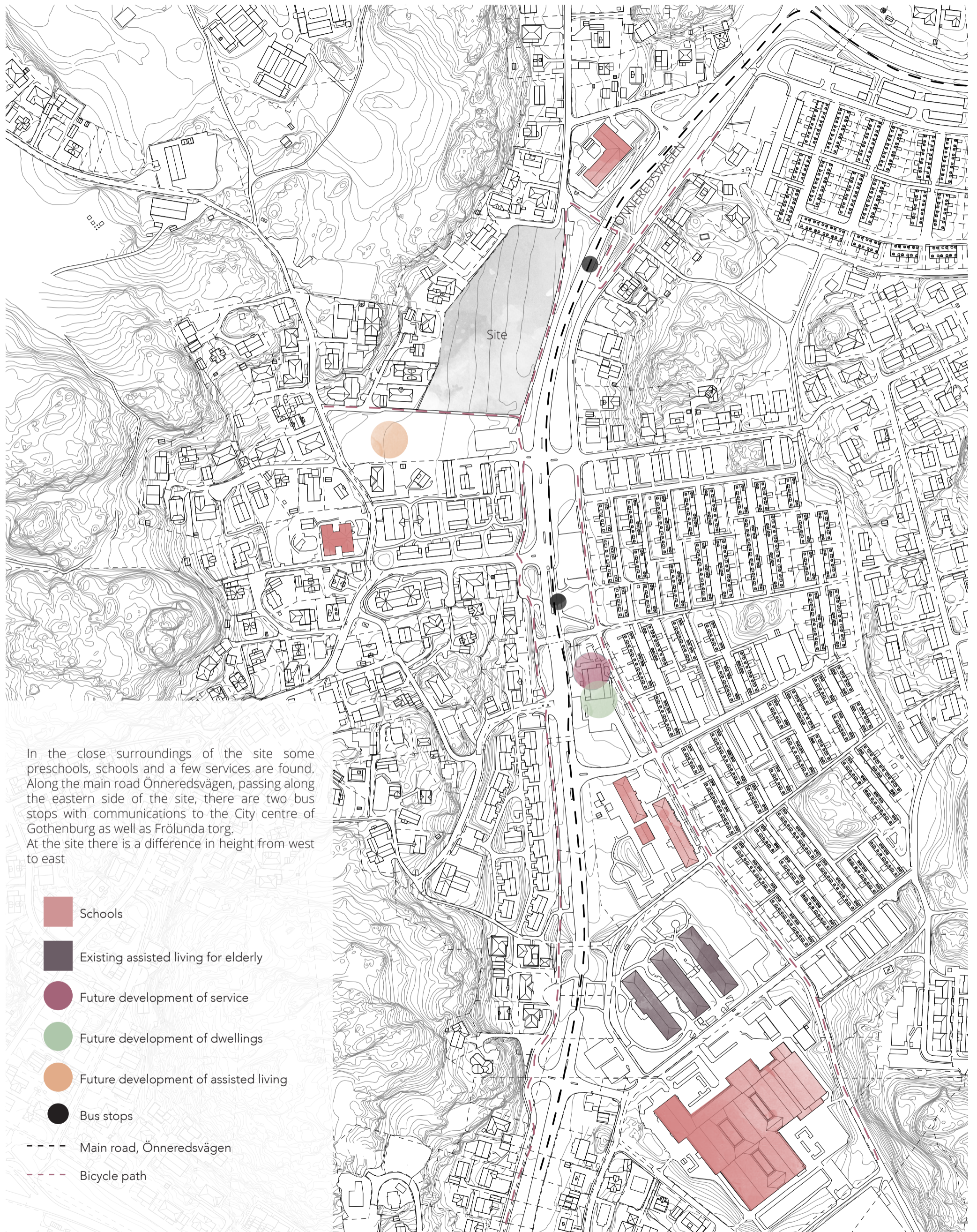
Themes of the gardens for wayfinding











Situations and landmarks for meeting different needs of activity and stimulus

# SITE ANALYSIS 1:3000

Önnered



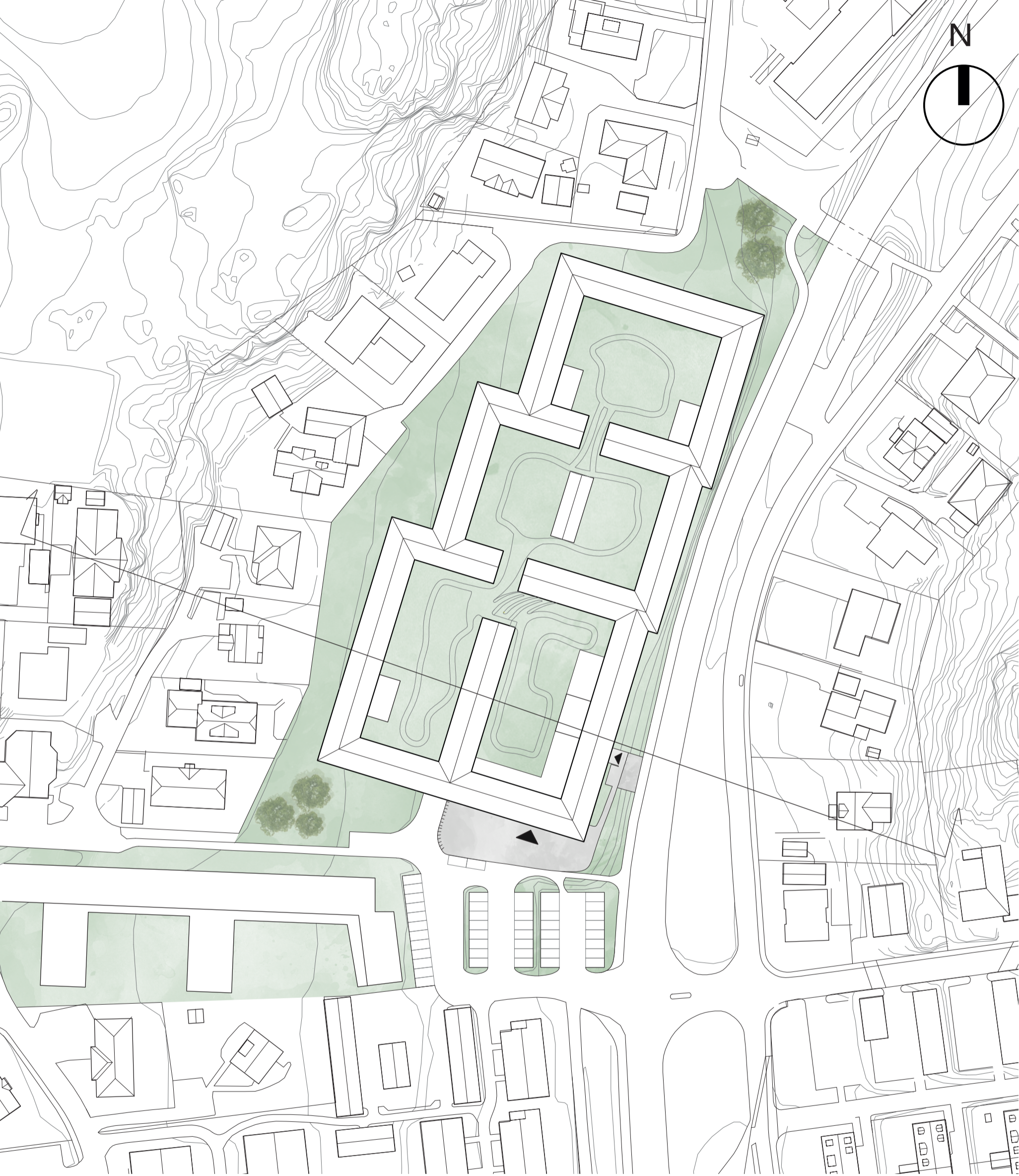
In the close surroundings of the site some preschools, schools and a few services are found. Along the main road Önneredsvägen, passing along the eastern side of the site, there are two bus stops with communications to the City centre of Gothenburg as well as Frölunda torg. At the site there is a difference in height from west to east

-  Schools
-  Existing assisted living for elderly
-  Future development of service
-  Future development of dwellings
-  Future development of assisted living
-  Bus stops
-  Main road, Önneredsvägen
-  Bicycle path

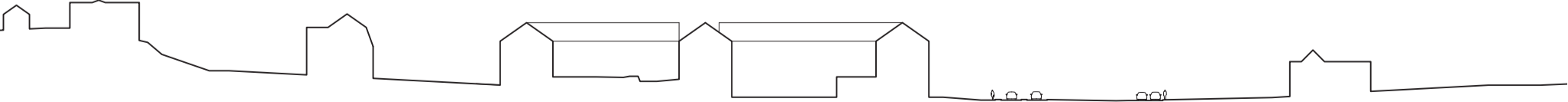
50 100 150 200m

# SITE PLAN 1:1000

Relation to the surroundings



Section 1:1000



10 20 30 40m

# FLOOR PLAN 1:500

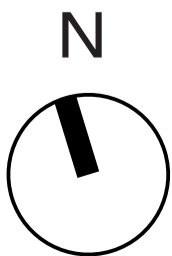
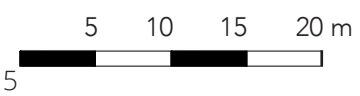
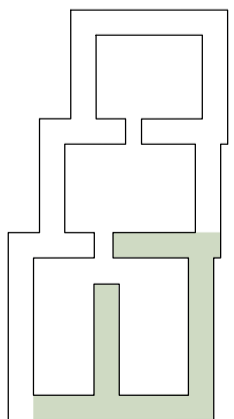
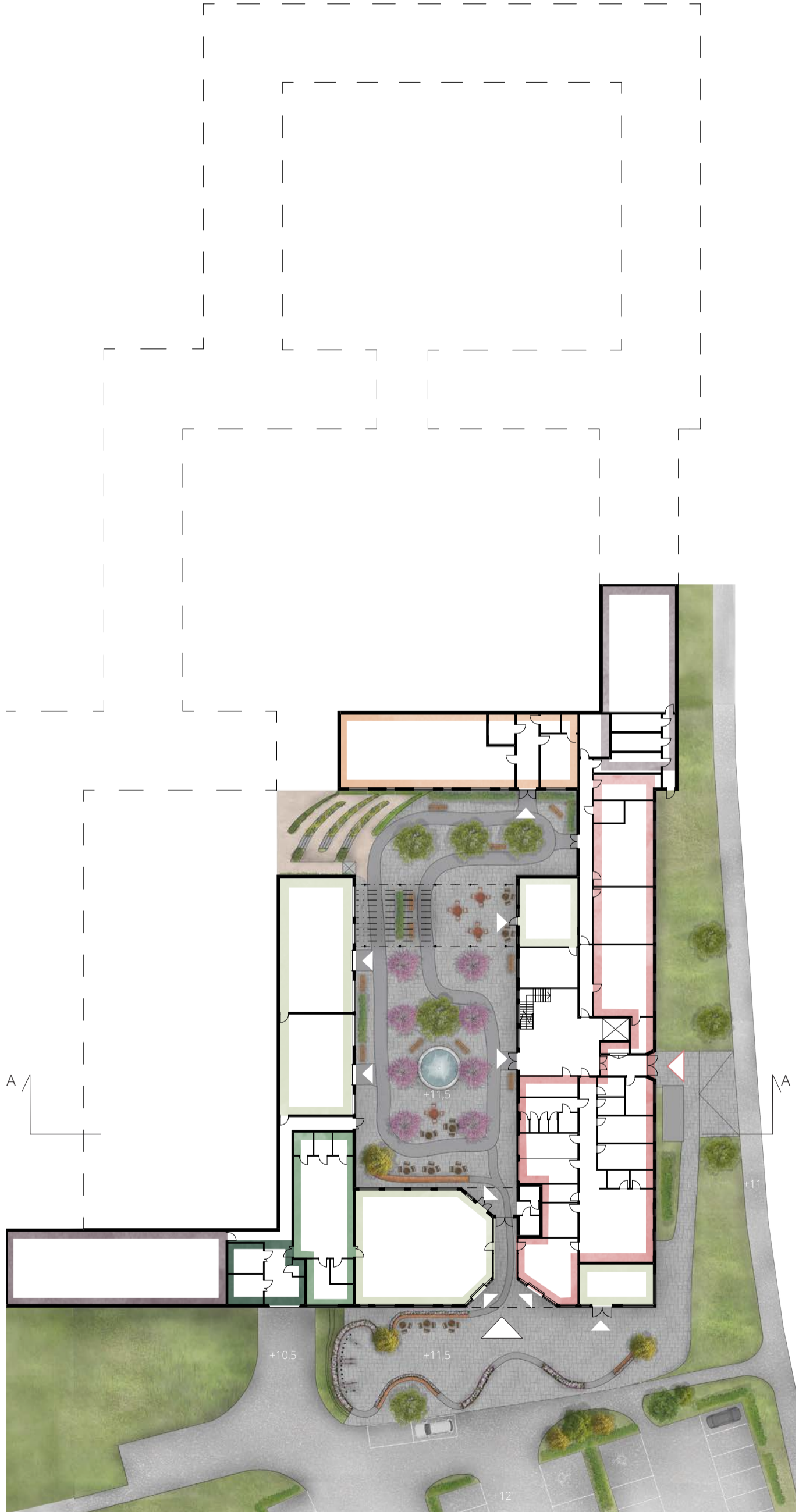
## Entrance floor

-  Public functions
-  Kitchen areas
-  Delivery
-  Facilities for the residents
-  Staff areas
-  Technical rooms
-  Main entrance
-  Staff entrance
-  Entrance

### An inviting entrance square




The building is meeting its surroundings through the entrance square placed south of it. This contributes to the possibility to take a pause on the bench in the sun while waiting to be picked up or to buy a flower on the way to loved ones. It also invites the public to visit the facilities of the building as well as it connects the building to the future building for assisted living, planned to be built south of the site.

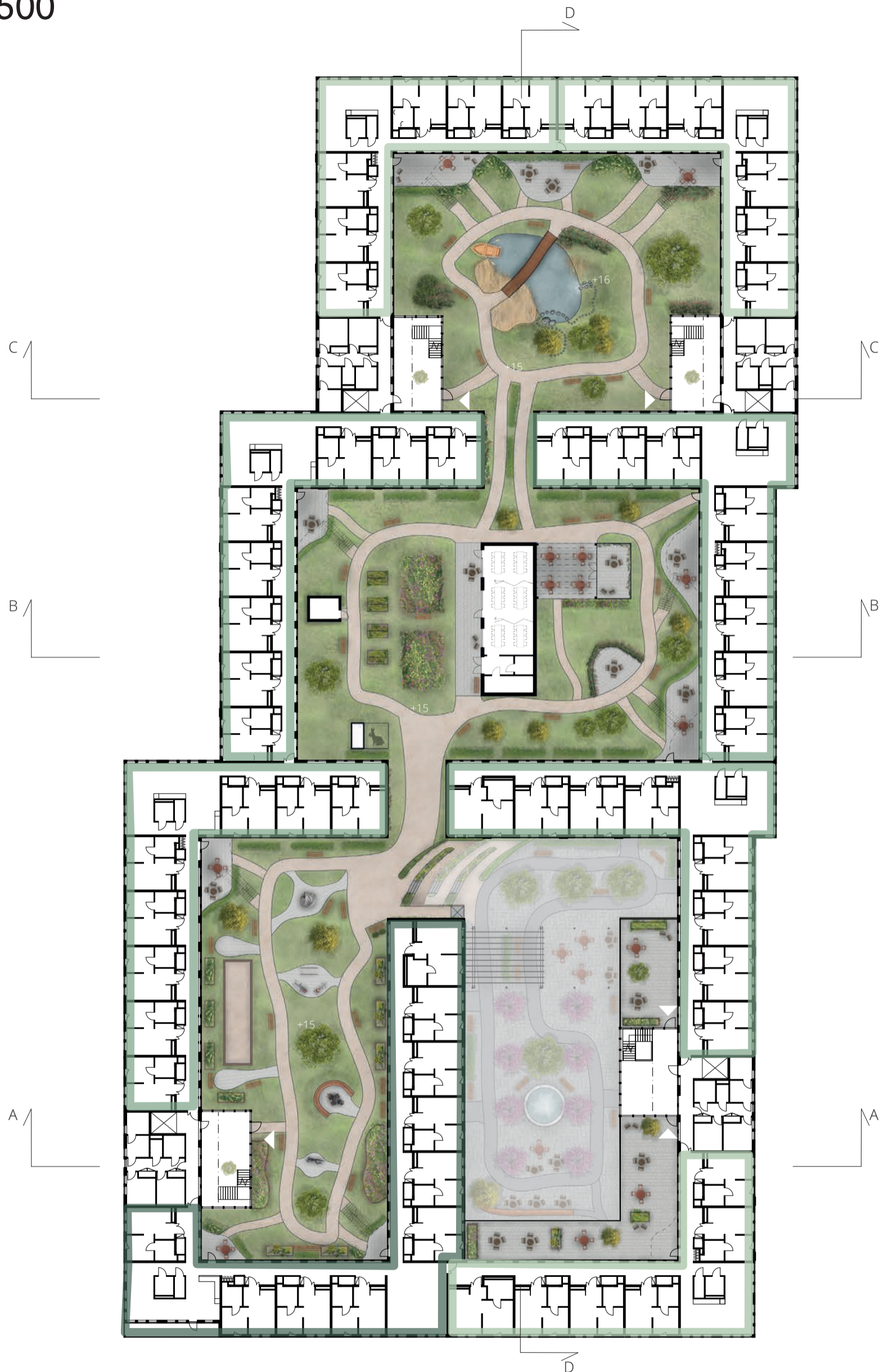
Parking lots are situated in the south near the entrance and space for parking bikes are found both on the square as well as outside of the staff entrance.



# FLOOR PLAN 1:500

First and second floor

-  Unit 6 apartments
-  Unit 8 apartments
-  Unit 10 apartments
-  Entrance winter garden-staircase and shared functions



## Two residential floors with easy outdoor access

The plan of the buildings first and second floor are the same, except from that the units on the second floor has balconies instead of terraces. Every two units share functions such as laundry and disinfection.

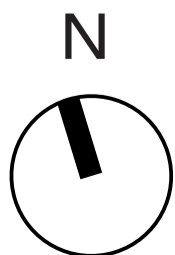
Every unit has convenient access to the garden, either reached directly outside the door or via a stair from the entrance balcony or in the winter garden. Elevators are also situated between two units close to the stair, connecting the floors within a winter garden. The winter garden also functions as a place in between outside and inside, where the climate is more protected.

## Circular paths for wayfinding

In order to satisfy the different needs of the residents there are different possibilities to use the courtyard. It is possible to take a walk on a path leading around one of the courtyards or to walk a longer walk through all of them and experience the different themes and environments. The circular path contributes to a feeling of security as it is always leading back to the starting point, in order to increase the wayfinding and recognition.

An aim for all four gardens has been to make it interesting during the entire year. This through using plants blooming at different times as well as evergreen plants. The elements of the garden has also been selected to stimulate all the senses while experiencing it.

5 10 15 20 m



# FLOOR PLAN 1:300

## Entrance floor

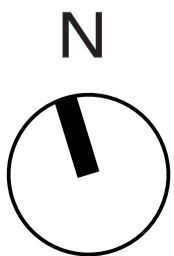
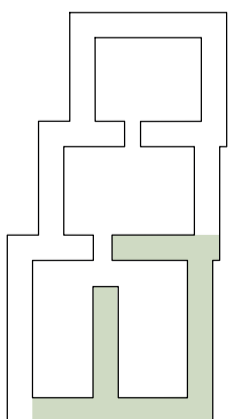


### Organic shapes relating to the garden

On the entrance square an organic shape, with seating areas and flower boxes leading towards the entrance of the building, relating to the organic shapes of the garden of the building. The restaurant and flower shop are allowed to float out on the square through seatings and opening up during summer time.

### The public is invited to the urban courtyard

The main entrance of the building, is reached from the square south of the building. The entrance is placed next to the reception which is connected to the staff areas. When passing the main entrance the Urban courtyard is reached. It houses several facilities open to the public, such as library and café, but also houses elements related to an urban square, such as city-like ground paving, a fountain, cherry trees, and benches providing seating in sunny and shaded positions.

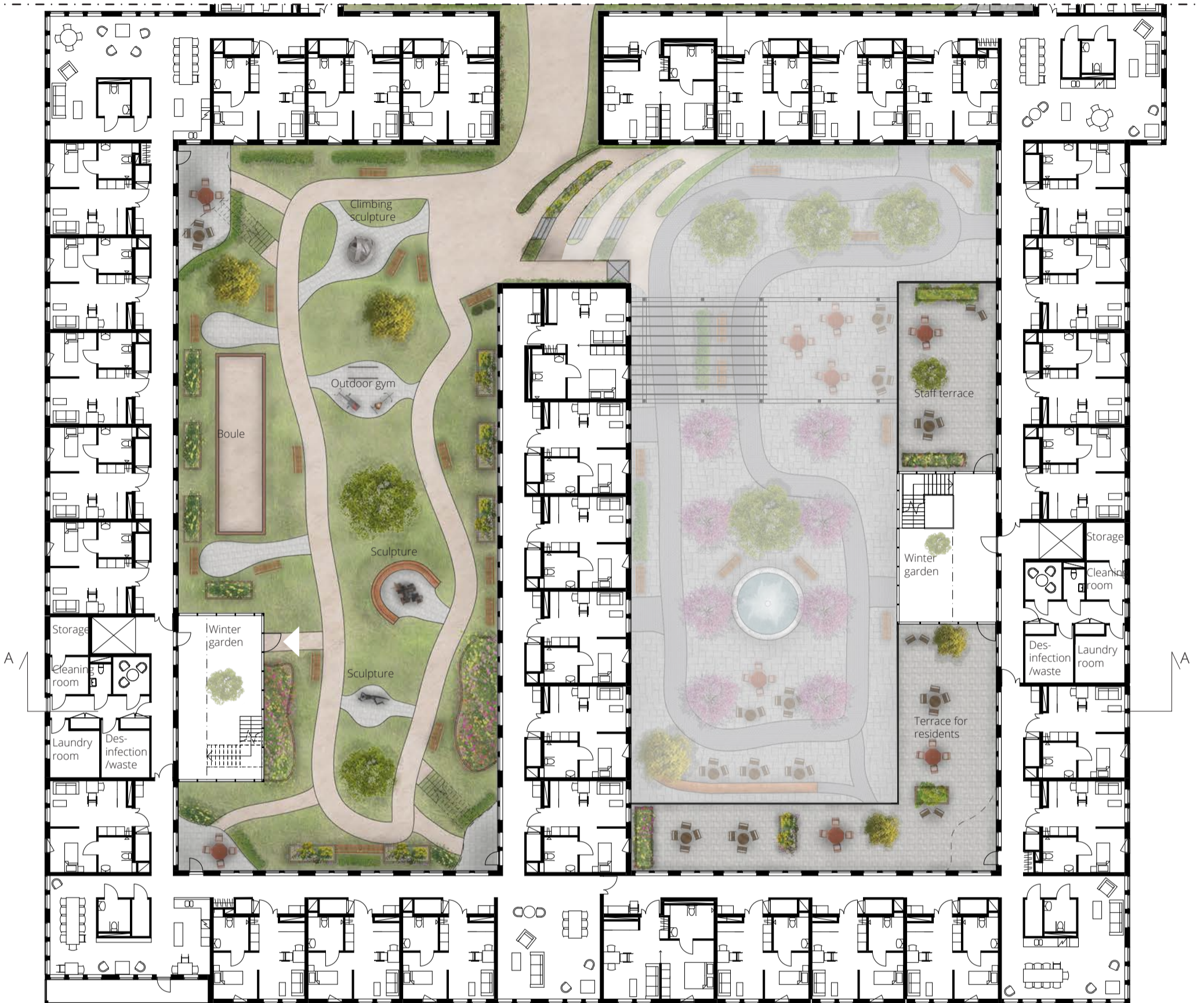


2 4 6 8 m

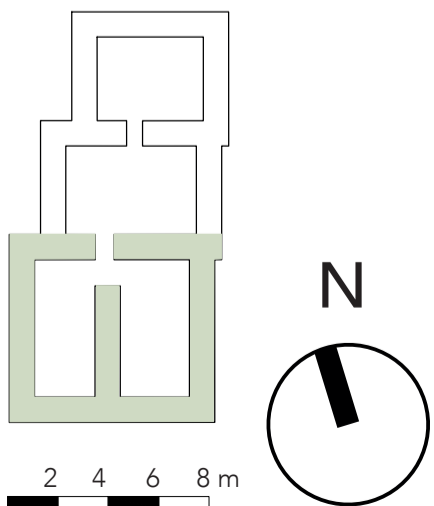


# FLOOR PLAN 1:300

First and second floor



Section A-A



### A winding ramp leads to the sculpture park

From the Urban courtyard a winding ramp leads to the others parts of the garden, located on the level of the first floor. The ramp also contributes to a difference in privacy between the urban courtyard and the other parts of the garden. Closest to the ramp is the sculpture park, which resembles a park of a city, containing elements such as sculptures, an outdoor gym and a space for boules. A discrete playground has been integrated in the park through a climbing sculpture.

### Terraces for residents and staff

The units located in east, located above the urban courtyard has direct access to a big terrace with seating areas and trays with plants. The terrace is connected to the winter garden with a stair connecting the floors. North of the winter garden there are a terrass for the staff to use.

# FLOOR PLAN 1:300

First and second floor

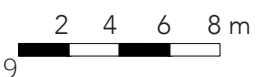
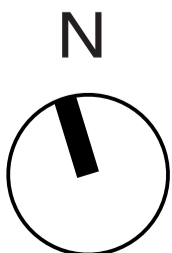
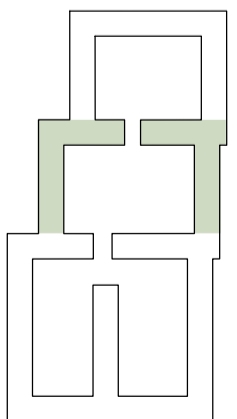


Section B-B

### A courtyard relating to the garden

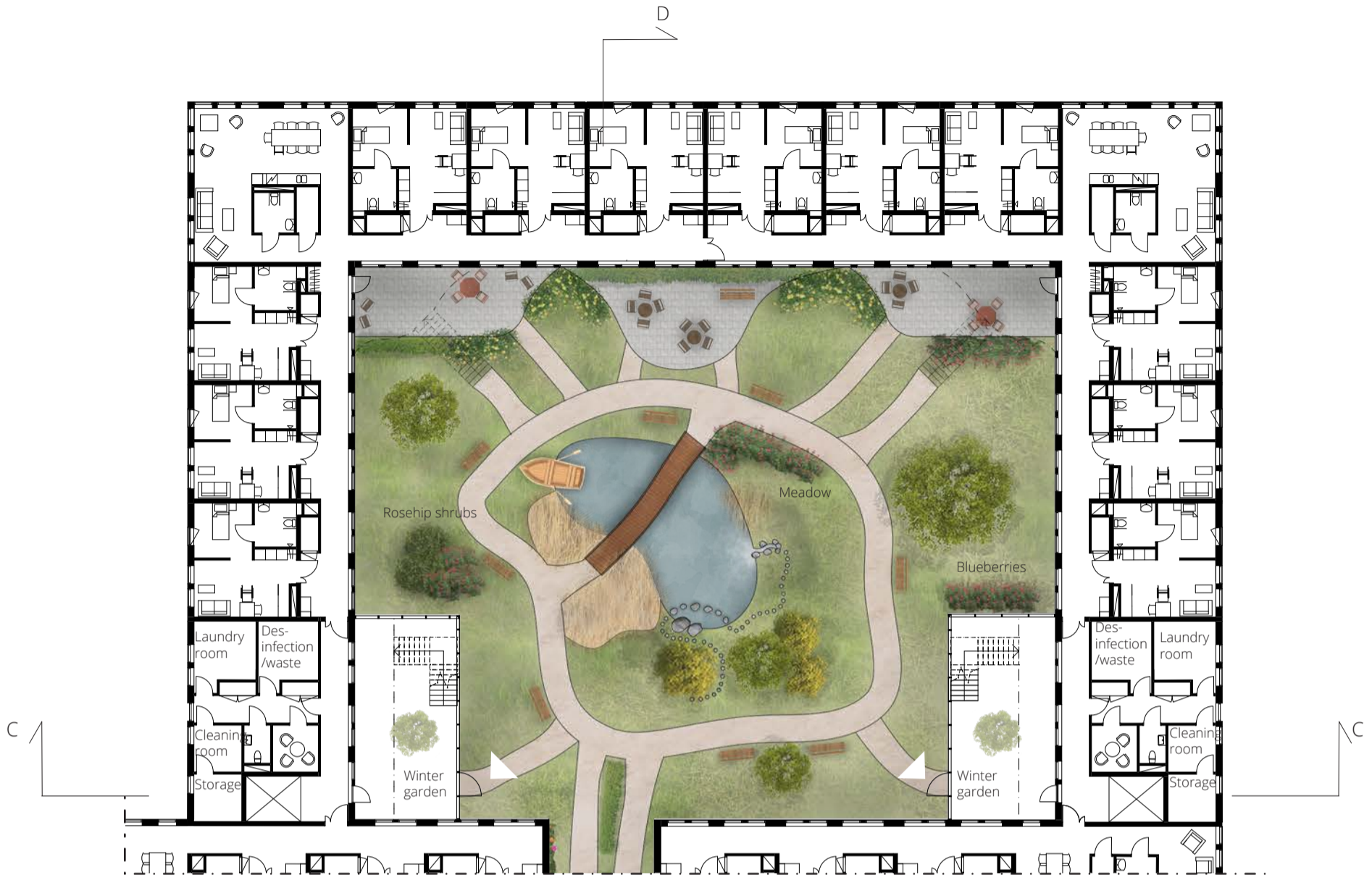
The courtyard called The Garden is arranged like a private garden. There are spaces for small scale farming, cuddle and care for rabbits, apple trees, roses, tulips and tulips to smell and plants that attracts butterflies.

In this courtyard the Multi-room is located as a place where the residents can gather around different activities such as listen to music, dancing, yoga, painting, handcraft, different study circles, celebrations and ceremonies or maybe rent for a birthday party. The Multiroom is possible to divide into three separate parts to fit the different activities need of space.



# FLOOR PLAN 1:300

First and second floor

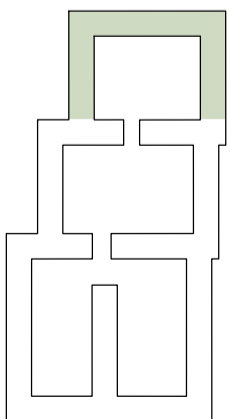


Section C-C

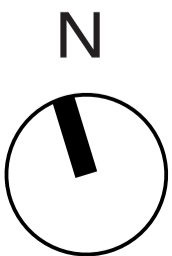
### A courtyard relating to nature

The most northern courtyard is characterized by nature. The plant species that are found in this courtyard also appears naturally in nature. The courtyard gives a natural experience with a touch of English garden. Example of species to be found here are reeds, rosehips bushes, meadow, birch, blueberry, raspberry and stones.

There is a small waterfall pouring into the pond, which has a calming effect. The pond also brings birds to the courtyard which can be nice to watch, feed and conversate about with other people. For the visiting kids a playground has been placed around the pond as stepping stones and a small boat placed at the shore.



2 4 6 8 m



# SECTION 1:300

Views and section



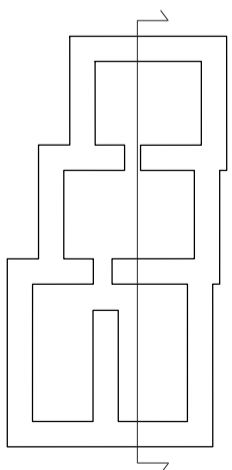
Overview of the entrance square



Section D-D

### A section through the building

The section above is through the entire building and three of the four courtyards, showing the difference in height and length between the urban square, the garden and natural garden. The section also shows the difference in height, as it has three storeys around the urban square and two levels around the natural garden and the garden.



2 4 6 8 m



View showing the organic structure on the entrance square and the corner of the flower shop



The urban square

# ELEVATIONS 1:300

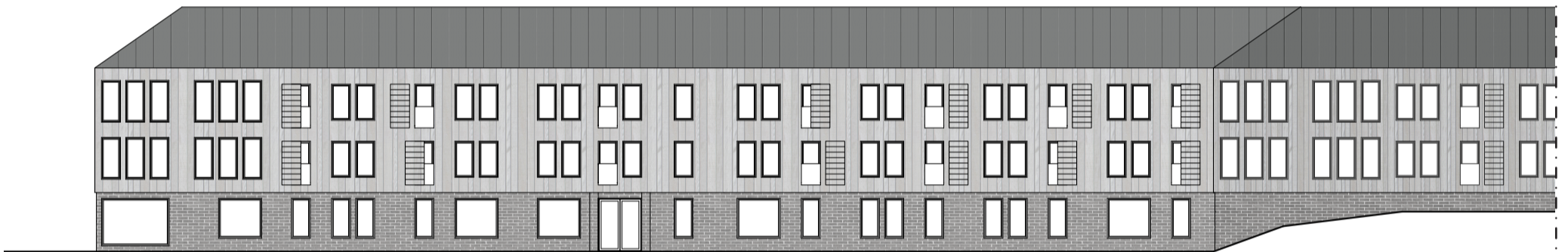
## Design and material

The cladding of the facade is a natural wooden panel in different dimensions. The base is consisting of bricks in a slightly darker shade of grey than the wooden panel. Window and door frames are in black aluminum and in front of every French balcony there is a raster for sun shading.

The pitched roof connects to the surrounding buildings and is covered by sheet metal painted in black. The roof gutter is integrated in the roof as the detail drawing shows. The load bearing wall consists of a timber frame structure.



Southwest 1:300



Southeast 1:300

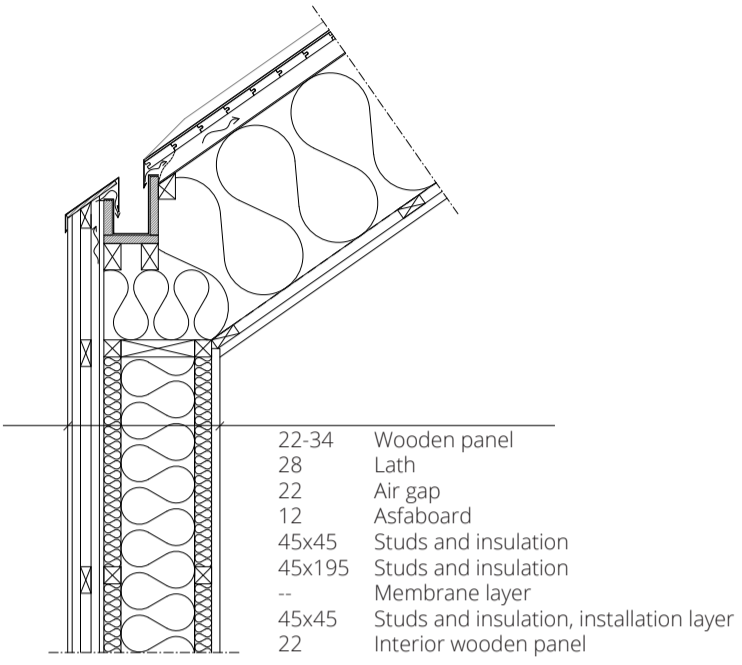


Northeast 1:300



Northwest 1:300

2 4 6 8 m



Detail 1:20

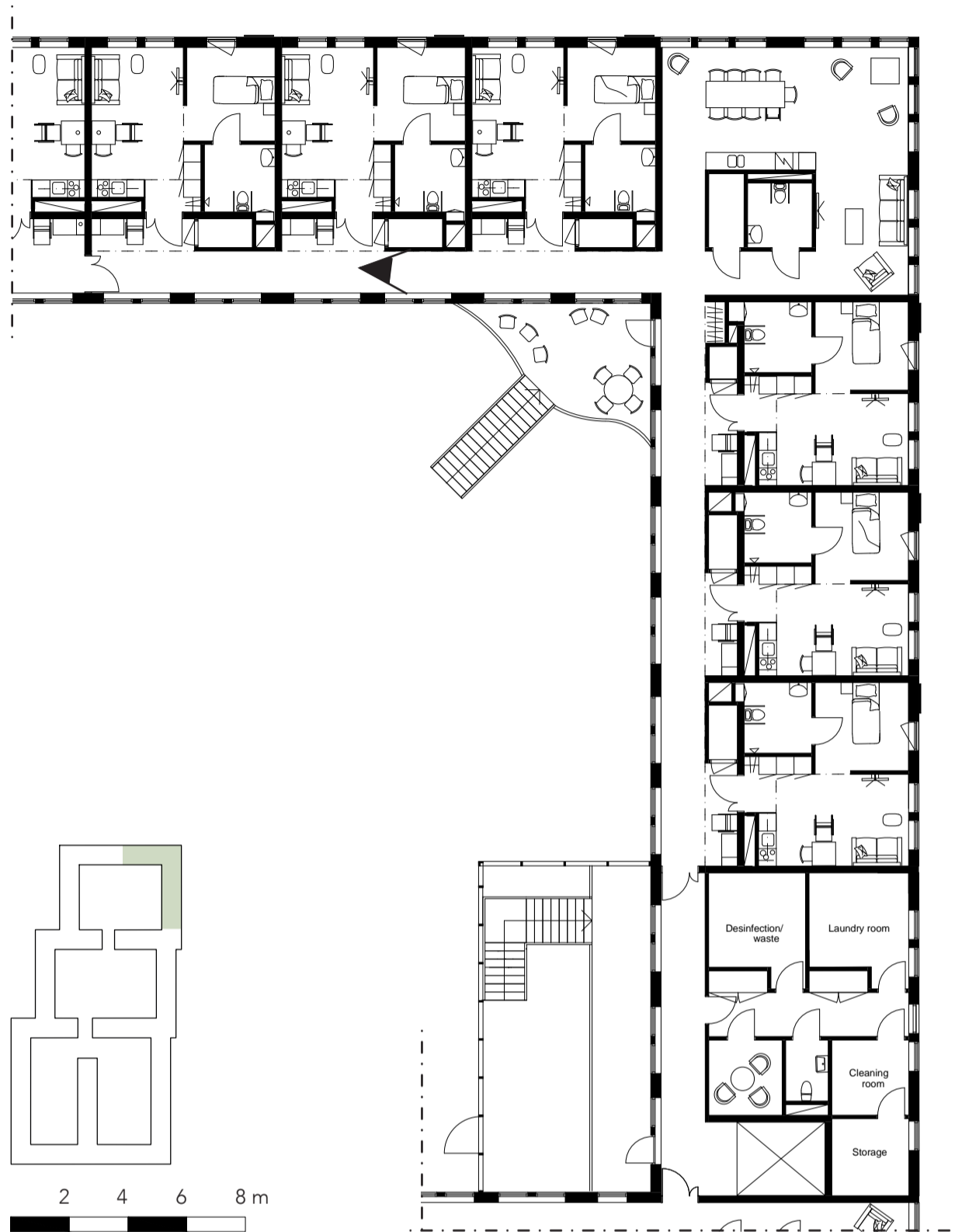


Elevation 1:100



# UNIT 1:200

Example of a unit for six residents



## Gradient of privacy, wayfinding and daylight

The units differ in size from six to ten apartments, but the same qualities are to be found in every unit.

Within the unit there are different zones to support different needs of stimuli. The apartment is the private zone, outside the apartment there is the semi-private niche in the corridor. The corridor is semi-public as the common room since it belongs to all residents within the unit. The winter garden in the main entrance to the unit is shared between four units and is even more public.

The common room is placed in a central position in a corner to offer good daylight conditions and views with longer sightlines towards the exterior surroundings. By placing the common room in a corner, long corridors can be avoided.

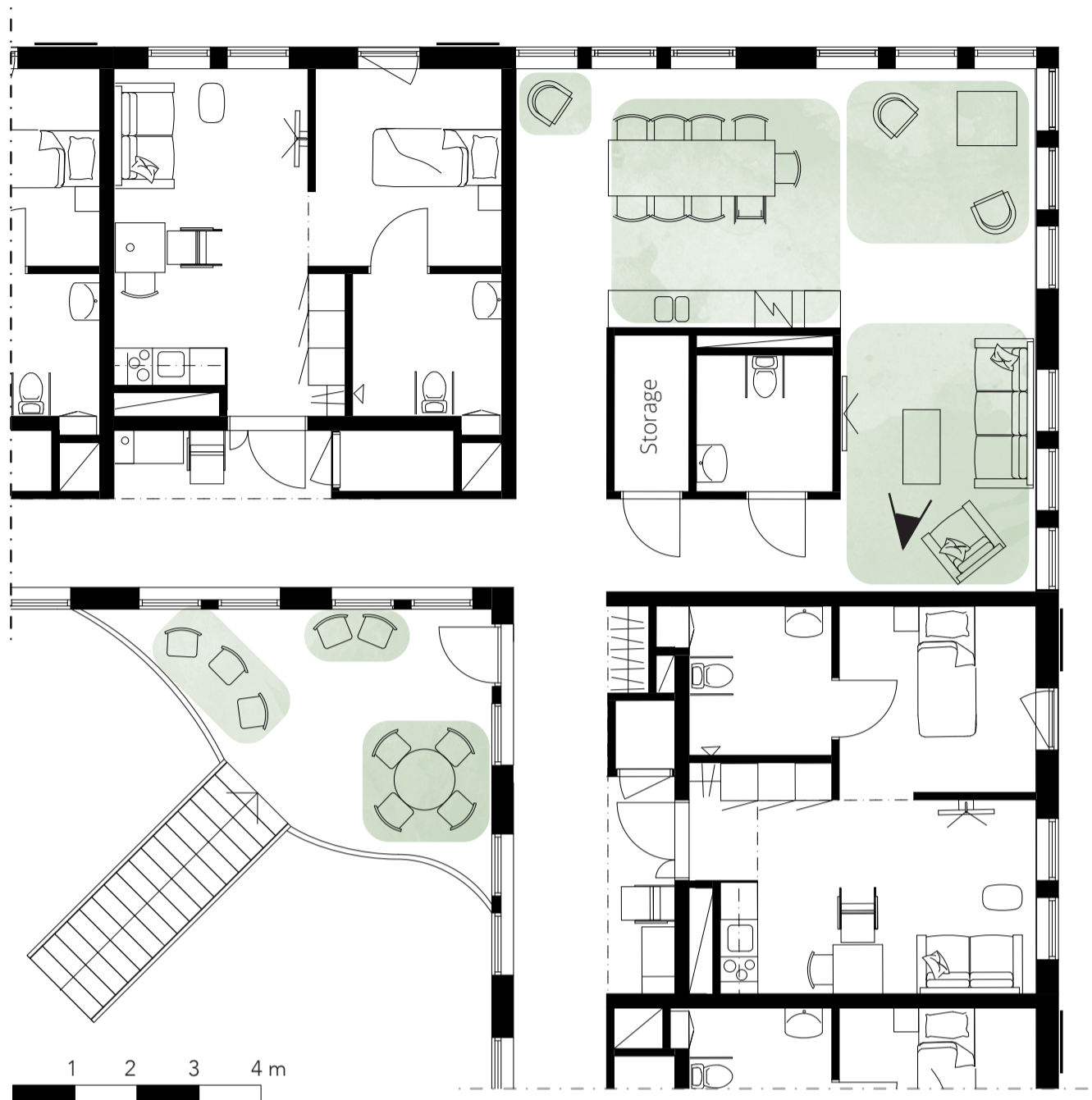
The apartments are placed on one side of the corridor which is highly perforated in order to let in light and to offer views for pleasure and sightlines for orientation towards the courtyard. One should be able to see what is happening and where it is possible to go, both indoors and outdoors.

The image to the left is showing a sequence from the corridor towards the common room where one can glimpse an armchair and realize what kind of room it is. A view towards the balcony is telling that it is possible to go outside. The handrail is for the residents to feel safe, so is the sill height of the windows.



# COMMON ROOM 1:100

Situations, inside-outside communication and circulation



## Situations, circulations and outdoor connection

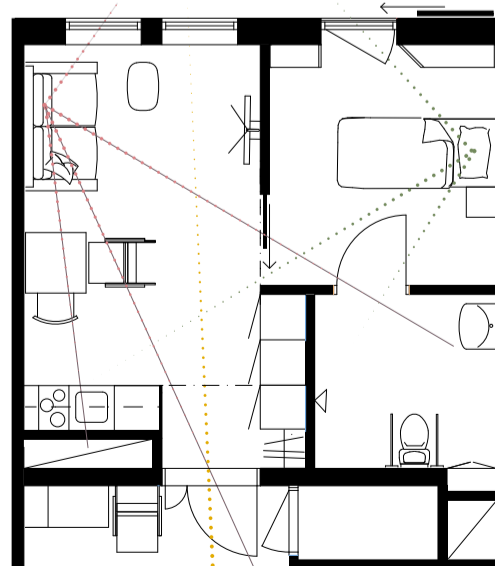
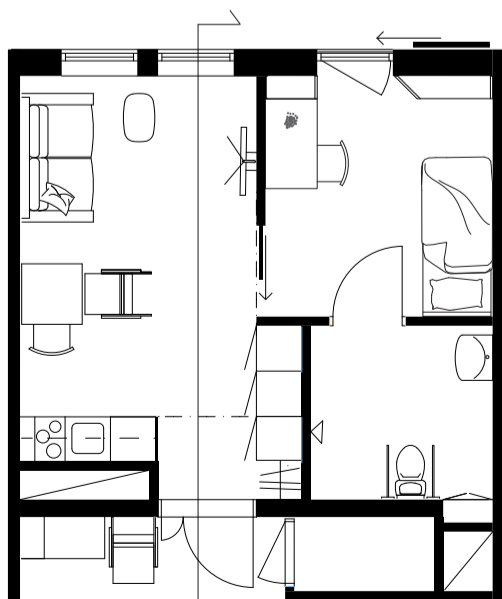
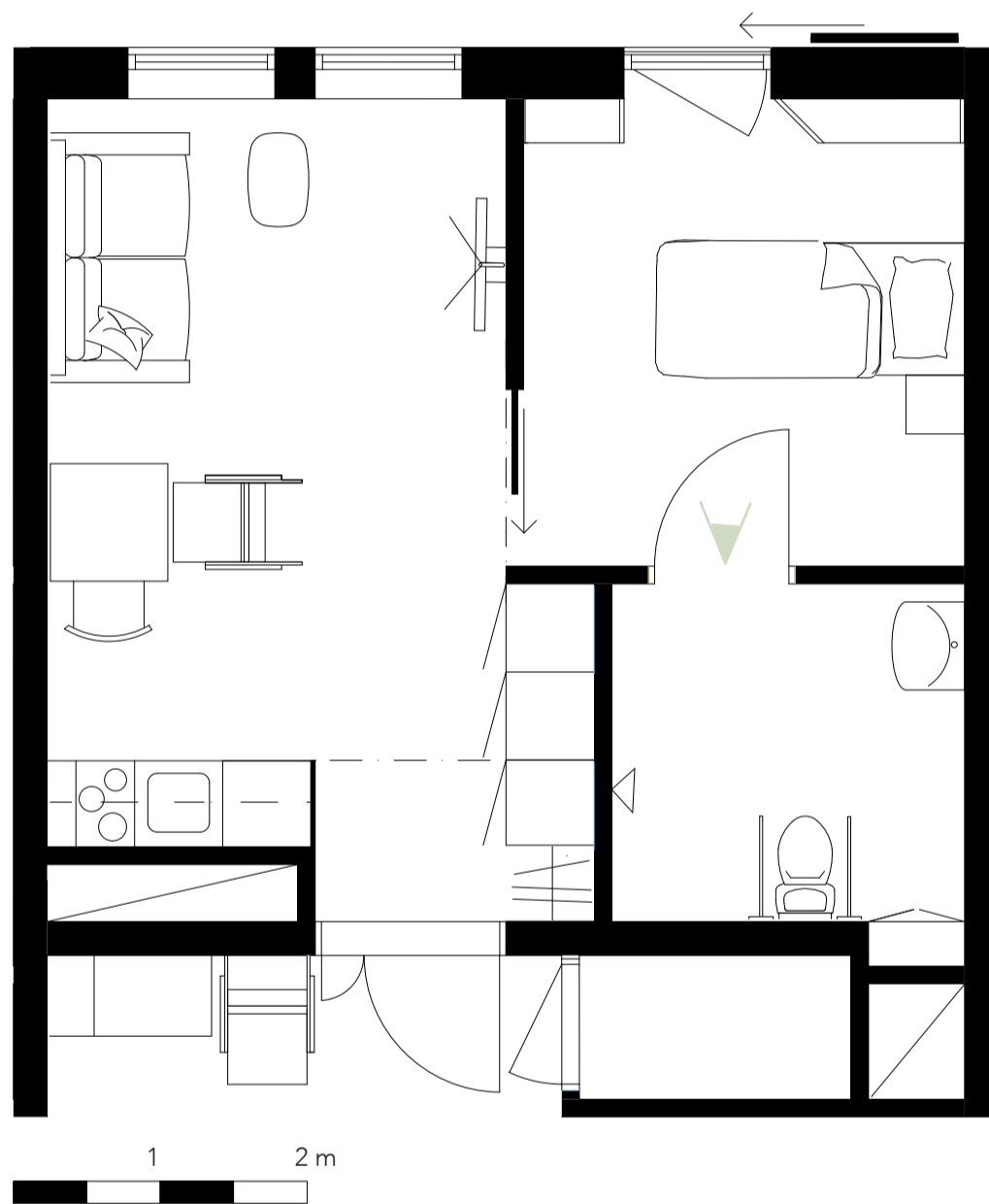
The common room is divided into smaller rooms by a core of functions in order to create different situations which enable the residents to choose the level of social interaction and stimuli. The core also gives the possibility to circulate, for those with restless legs.

In immediate connection to the common room one can easily access a balcony or a terrace in a sunny position from which one can access the courtyard.

The image to the left is showing a sequence of two situations.

# APARTMENT 1:50

Floor plan and section of single bed apartment 35 m<sup>2</sup>



The single bed apartment is designed to support furnishability, which is achieved by separating the bedroom from the livingroom. The bedroom wall also divides the care zone at night from the time awake during the day.

Sightlines have been an important part of the development of the apartments in terms of views, and wayfinding in order to create a safe environment.



### Spacious apartments

The apartments on the second floor are more spacious and offers a generous ceiling height in the living room. The niche, hall and bedroom have regular height in order to amplify the experience of the spacious living room.

The sill height of the windows is low in order to let in light and to suit those who are using wheelchair.

### A bedroom for views and memories

The bedroom is an important room due to the amount of time one spends in there depending on which phase of dementia the resident is going through.

Important qualities are the sightline towards the bathroom, to simplify wayfinding and decrease worry.

The view from the bed towards the outdoors which has calming and healing benefits.

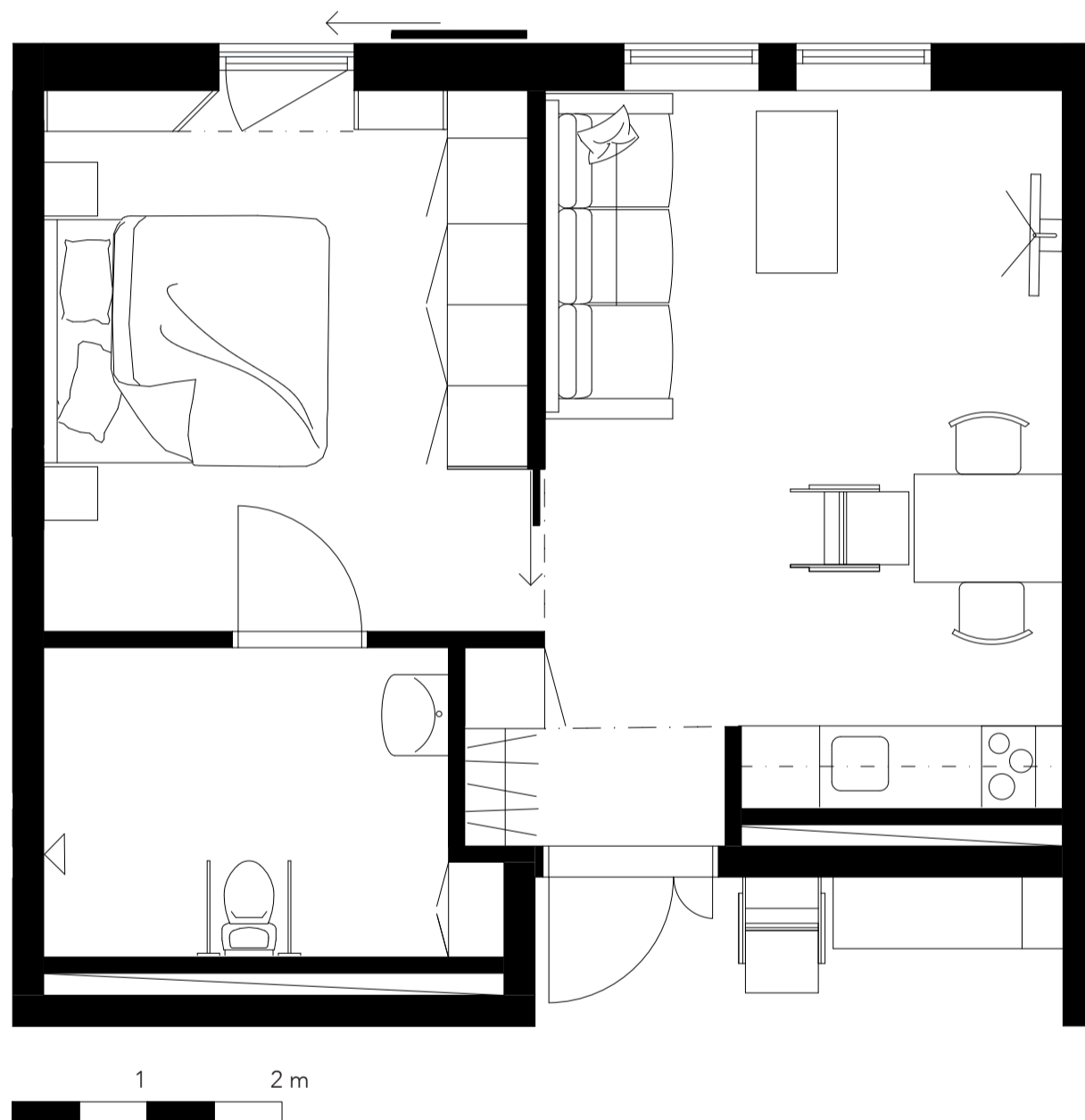
The built-in bookshelf creates space for the residents to bring belongings from their previous home in order to preserve memories and to make the apartment more homelike. An eye-catcher when you spend most of your time in bed in the later stage of dementia.

The french balcony enables the possibility to open up and get some fresh air and sunlight. There is a sliding raster on the facade to shade of the sun when necessary.



# APARTMENT 1:50

Double-bed apartment, 44 m<sup>2</sup>



## A more spacious living for couples

The double-bed apartment is very similar to the single-bed apartment. Both in layout and in qualities. The reason to make the apartment quite small is to enable the scenario of living alone.

Further qualities are the small situations that appears throughout the project. In the apartment sleeping, awake, livingroom, dining area, hall.

Right outside the door, there is a semi-private niche in the corridor where one can sit and view the courtyard. In order to increase wayfinding, one can personalize the niche by decorate it with photos and personal belongings. There is also room to park an outdoor wheelchair or walker.

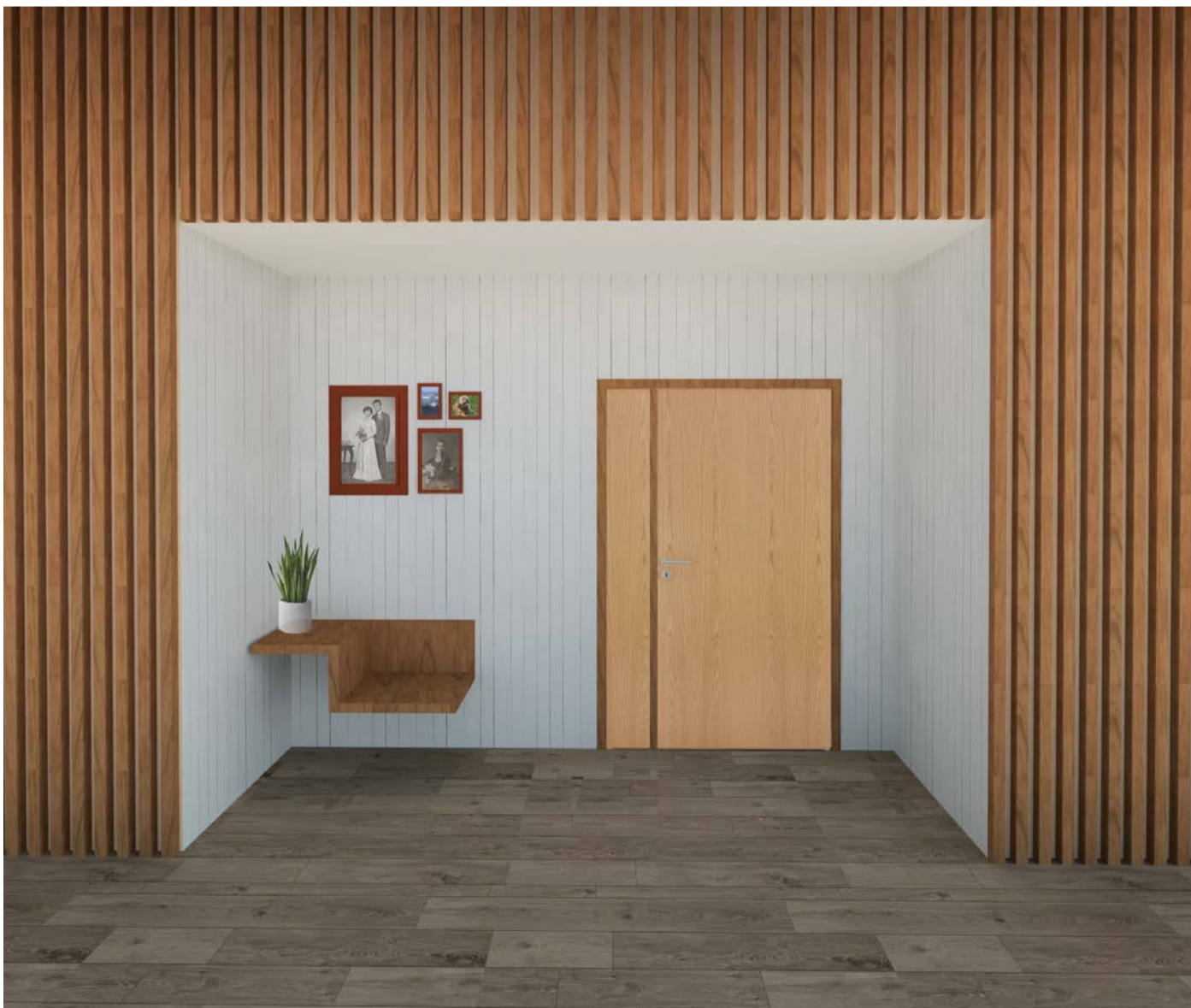
The wall in the niche is having the same painted wooden panel as inside the apartment. In contrast to the bright panel, the panel in the corridor is made of oiled cherry to give warmth to the atmosphere.



Possible furnishing  
1:100



Different situations in the apartment  
1:100



View of the niche. Contrasts to support reduced vision.