

# Annehem

Studio: AUT164 Residential Healthcare  
– Housing for seniors

## Group 5

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*“Though ageing can be limiting in a lot of ways,  
the physical environment should not.”*

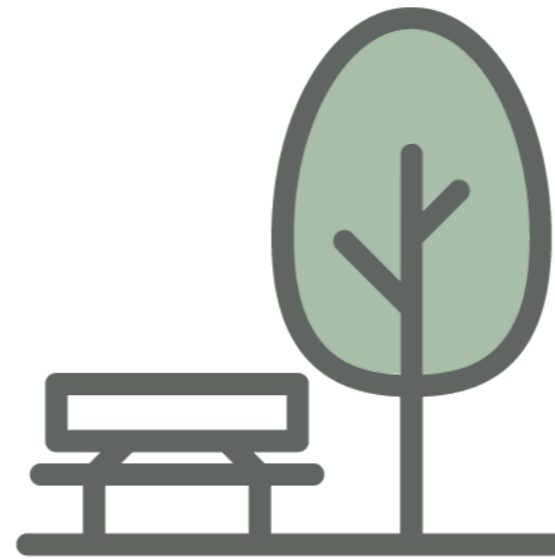
# Vision

## The Village



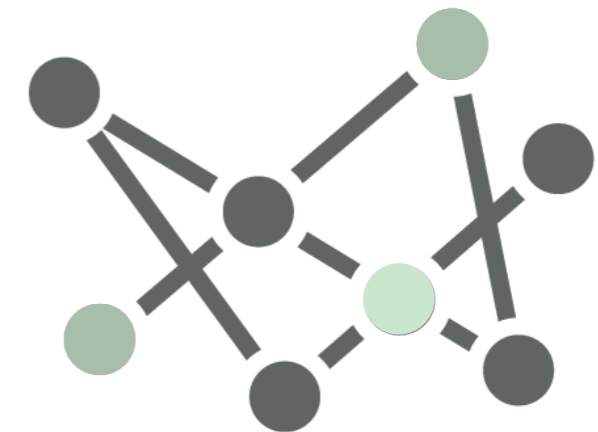
The small scale and familiarity are what creates a positive feeling of belonging and home. To know your neighbours well but not have too many of them to keep track of around your unit.

## The Garden



Nature boosts well-being and recreation, as well as helping to reduce stress. We want to work with implementing different kinds of green areas for different kinds of use.

## The Connections



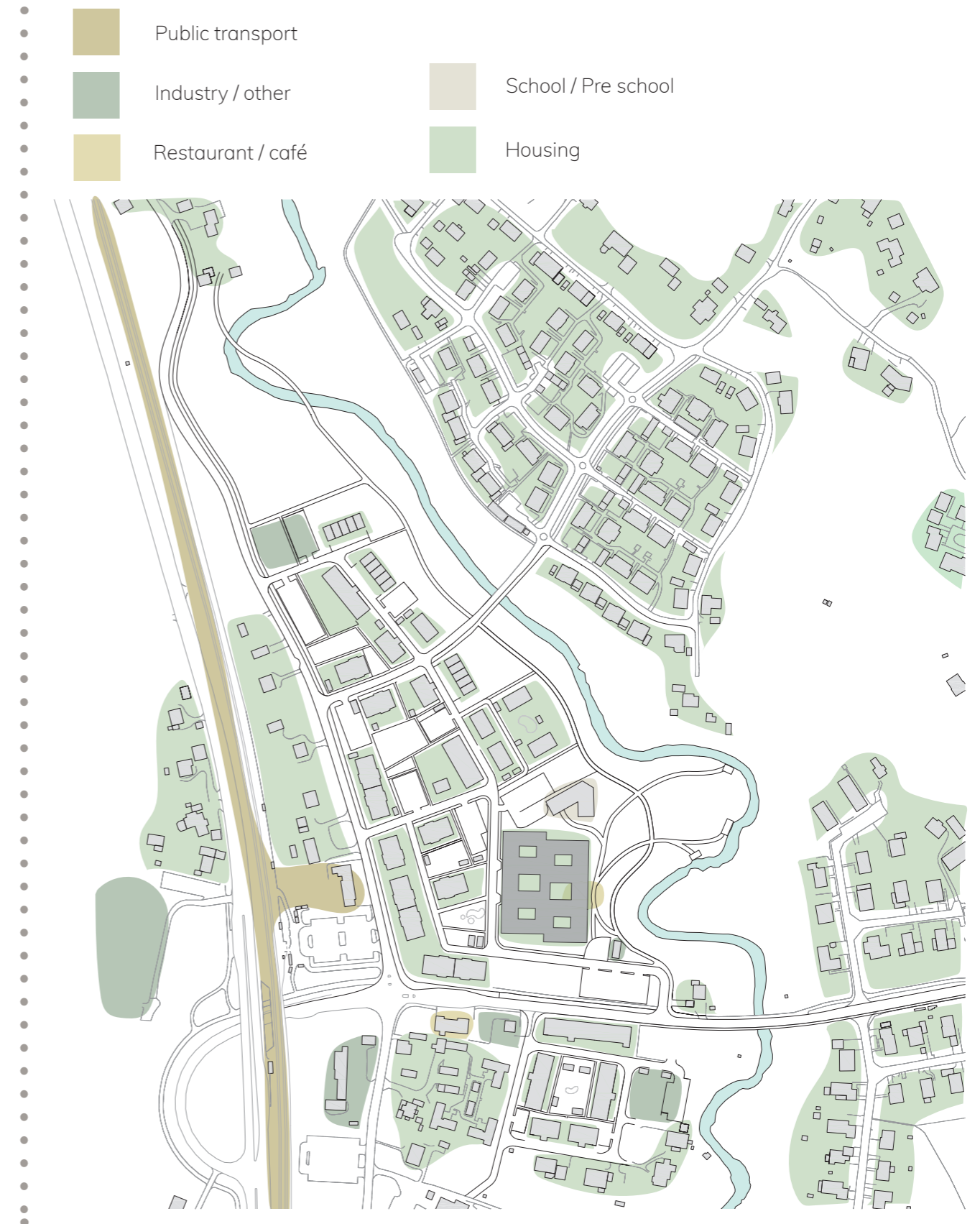
It is important to us to not feel restricted when moving around the facility. You can easily walk around the units without being too far off anywhere, and with only two floors it's easy to go up or down.

# Site analysis



## Greenery

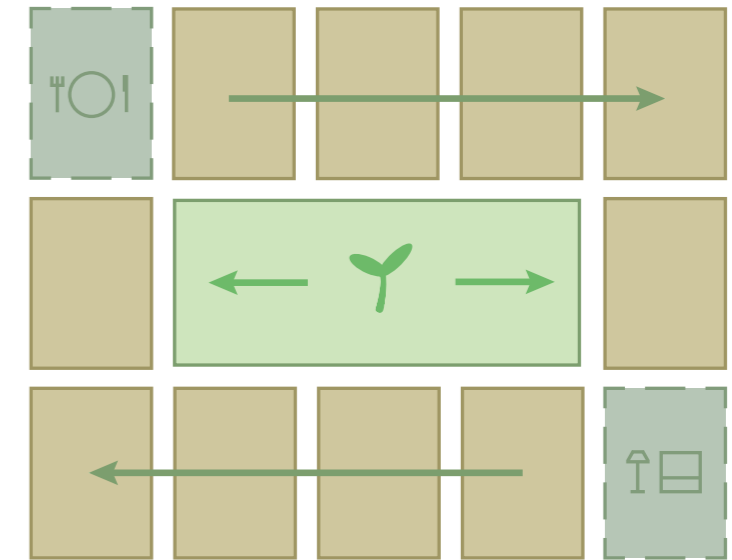
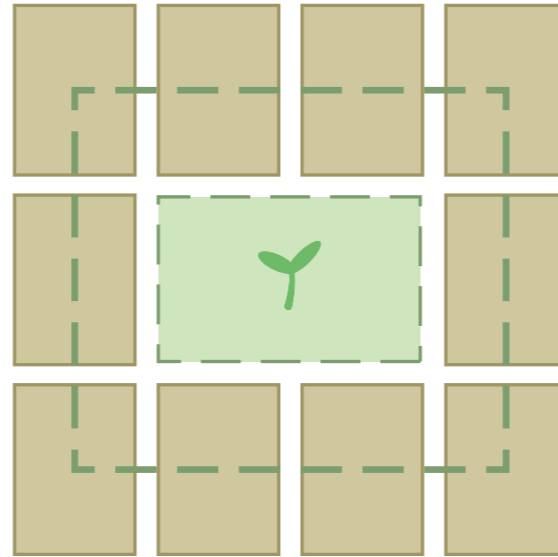
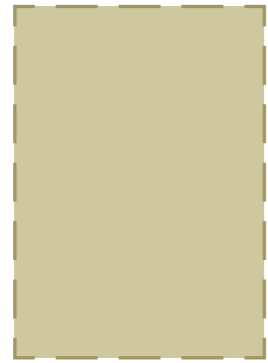
There's a lot of greenery and nature around the facility, with bigger areas of forest and the creek nearby. The access to nature is great, with a bigger park just outside the facility. The greenery is therefore easy to take part of and that is a quality.



## Infrastructure

There's a lot of housing nearby and planned in the area, with the trainstation and some smaller shops and industries nestled within. The plans for the area includes smaller community functions on the bottom floors, to add more flow in the area and create new meeting places. There's also a lot of parking in the immediate area to the facility.

# Concept



## The home

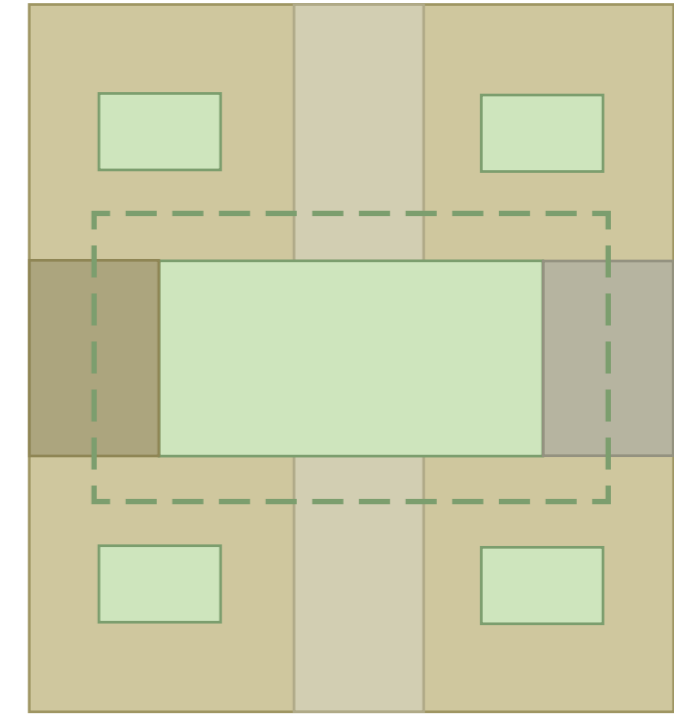
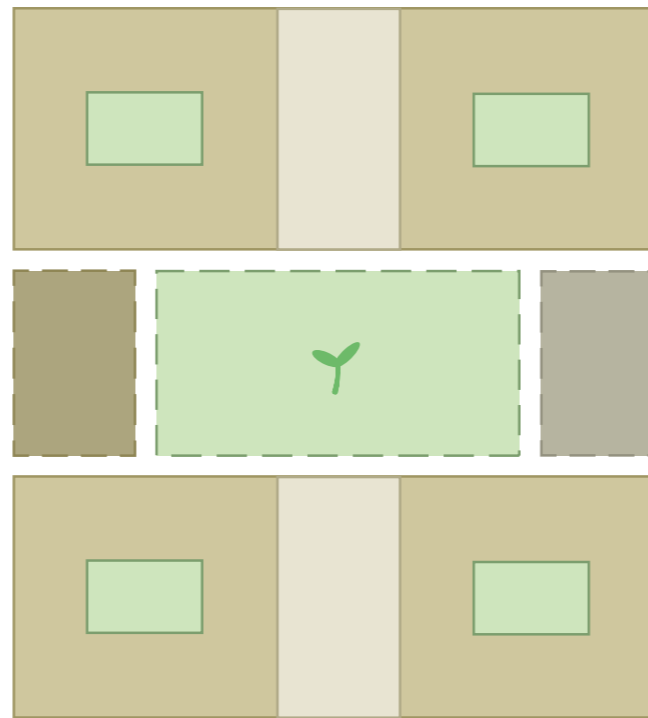
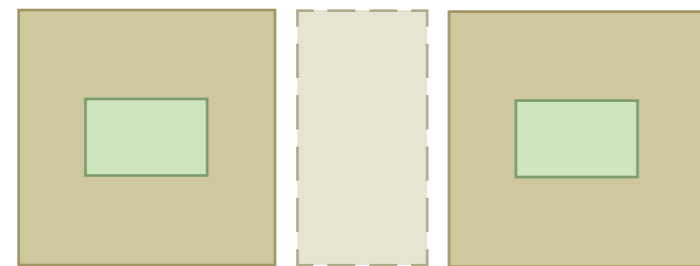
The apartment is the most private space in the facility. It should be easy to access.

## The unit

All apartments in one unit share an atrium, for connection with nature, daylight and your neighbours.

## Expansion

The units expand to fit two common rooms: one kitchen and one living room. More space to socialize.



## Between two units

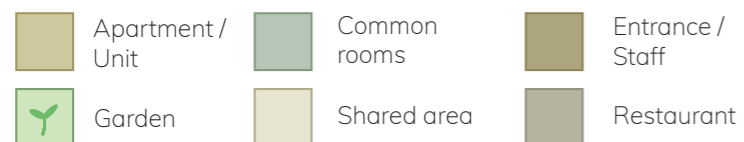
Necessary rooms such as laundry and waste are placed between the units as a separator whilst being easy for both to access.

## Connecting the units

The different units connects through the entrance, common garden and restaurant.

## Accessibility

You can access all units through multiple pathways, making the whole facility connected.



# Process

## “Four islands—village”

— First version

- 2 storeys for the feeling of village,each floor has 4 units with 40 apartments;
- Every apartment has their own terrace as private green space;
- Each unit has separate common space,a winter garden and a private courtyard,which form the short footprint in one unit;
- Put the administration and restaurant function in 2 separate buildings as the central part of the facility;
- Use corridors to connect units and other buildings;

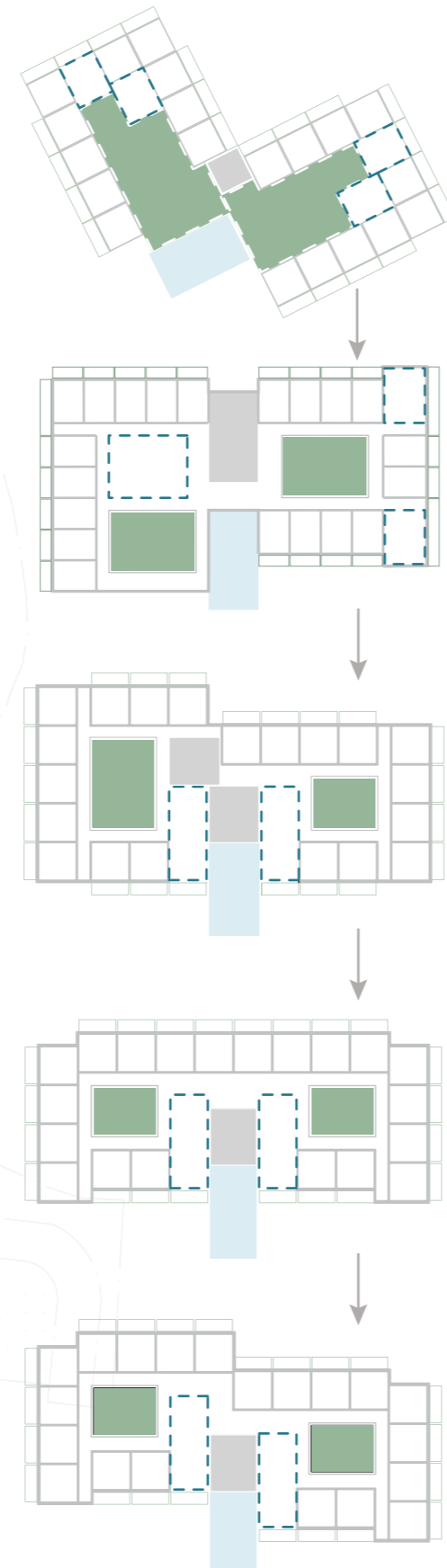


— Problems

- It is not convenient for the staff to work since there is no sharing area between the units;
- Facility in the plan almost takes up the entire space,and there is no room for the pre-school;
- Distance between the buildings couldn't meet the fire requirement of 8 meters;
- Inside the facility,outdoor space for residents to communicate with the public is not enough.

## Connection of two units

— sharing staff area and winter garden



- too little staff space;
- form some outdoor space that is hard to use

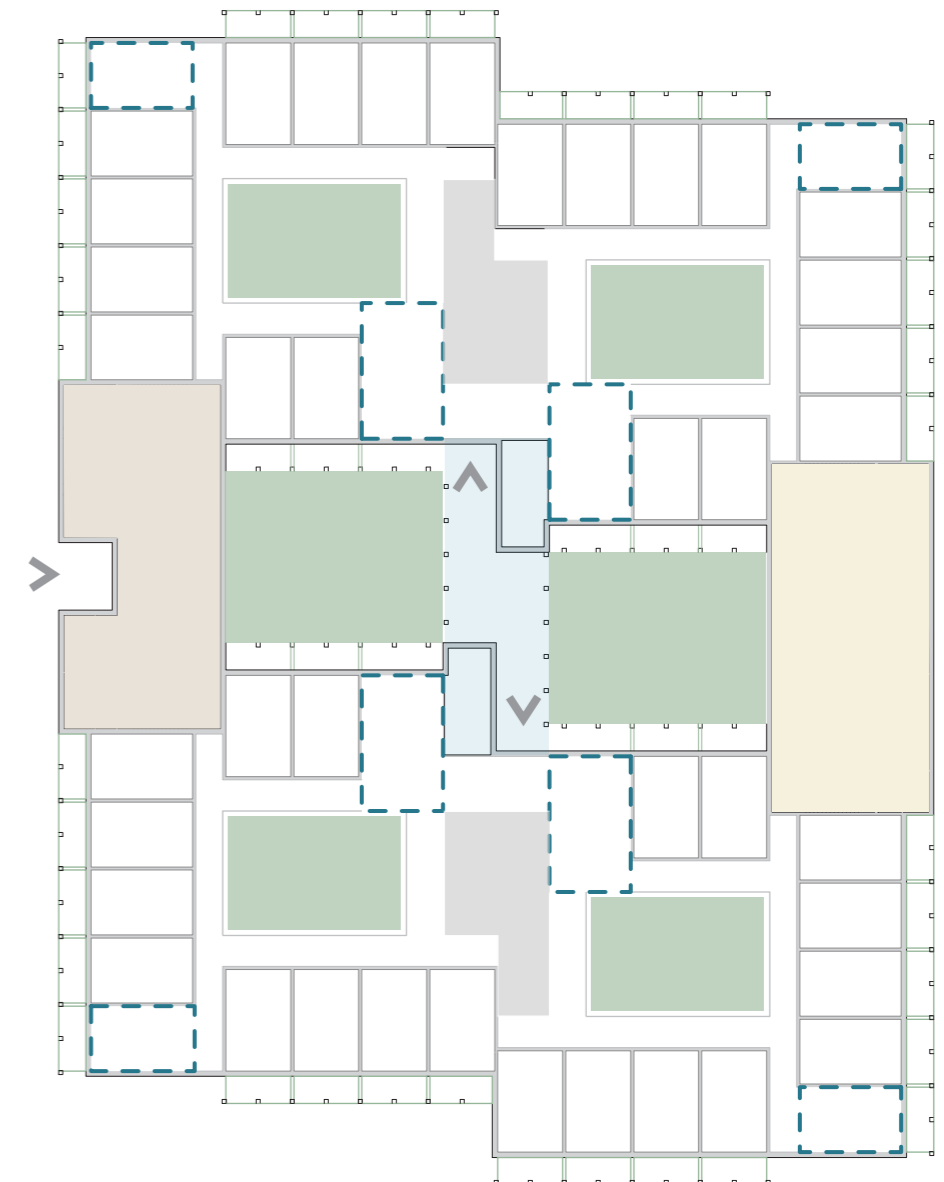
- unequal quality of common space

- unequal quality of atriums

- lack the feeling of village

- lack the view to the surroundings

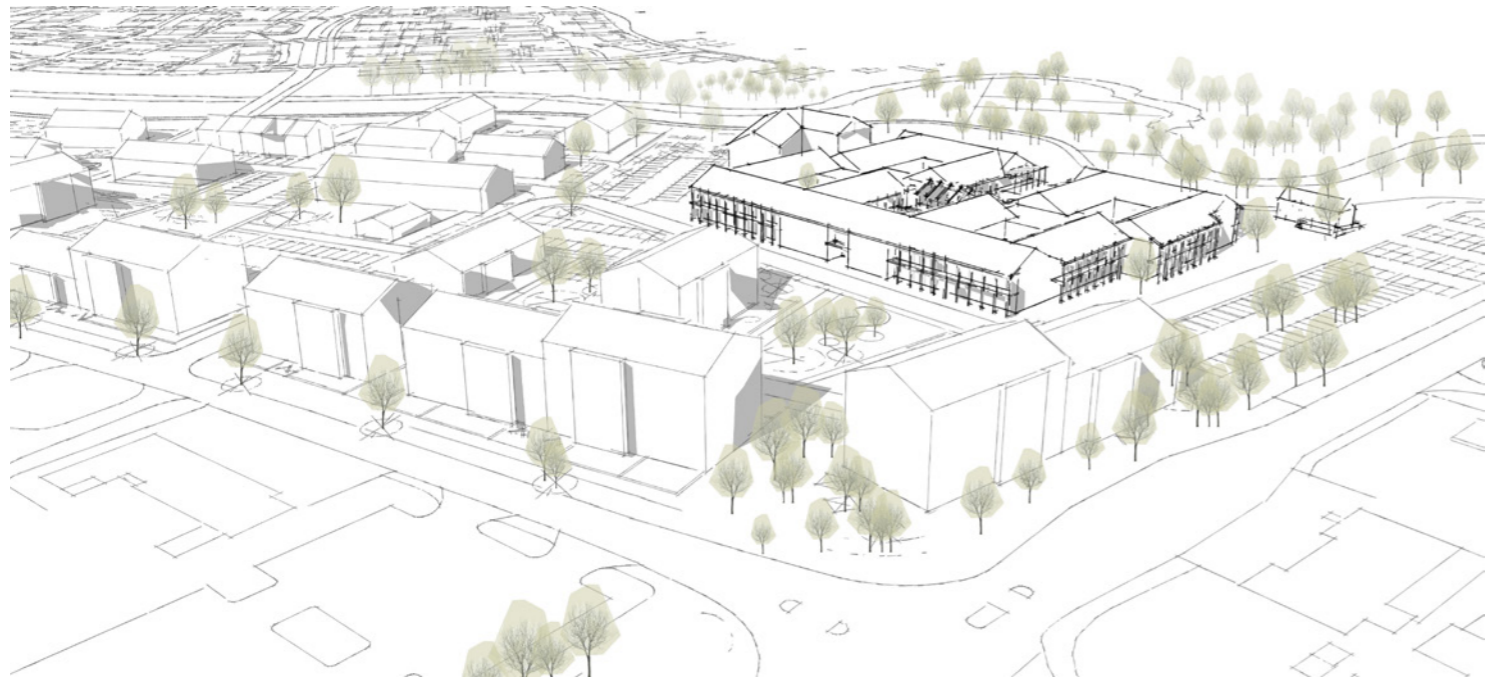
## High efficiency for all



- Use sharing staff area to connect and divide 2 units;
- Use wintergarden to divide 2 units and connect all units,therefore entrances for the residents located on the ground floor of the wintergarden;
- Create 2 separate common space for different kinds of view;
- The residents and staff can walk around the whole facility with indoor corridors;
- The plan forms different kinds of green space in terms of privacy requirement.

- Apartment
- Balcony / terrace
- Common space
- Staff area
- Courtyard / garden
- Wintergarden
- Administration / staff
- Kitchen / Flexi
- Corridors

# Context



Bird view, south west



Bird view, south east

## Connections

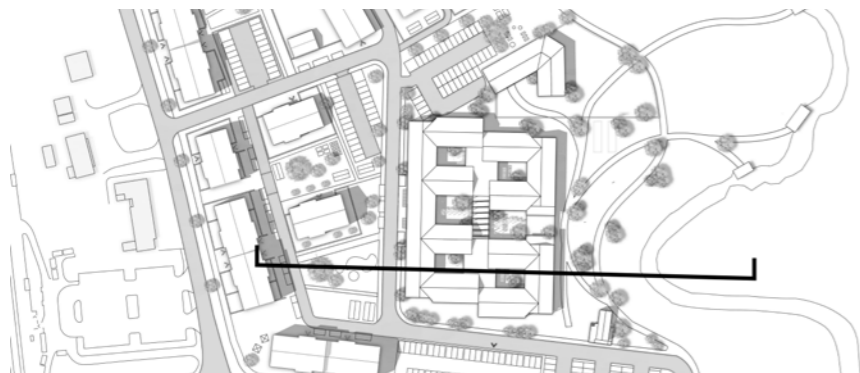
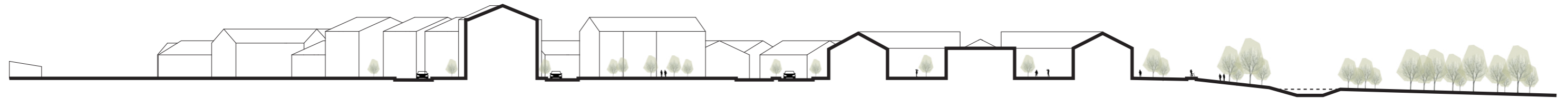
One of our focuses has been on creating rooms that connect inside with outside in different ways. One of these things are the arcades with balconies, where the structure is visible and acts like a passage between inside and outside.

## Scale

The height of the village is lower than the surrounding buildings. The low building height gives more access to sunlight in the atrium gardens, the common garden and the balconies.

## The green zones

Open courtyards and atriums are working as smaller, more private gardens for the residents. They complement the bigger park just outside the facility, together with the common garden in the middle.





# Site plan

- 1 Train station
- 2 Public park
- 3 Platform
- 4 Disabled parking
- 5 Bicycle parking
- 6 Boule court
- 7 Delivery / Waste station
- 8 Preschool



# Masterplan

^ North

## Placement

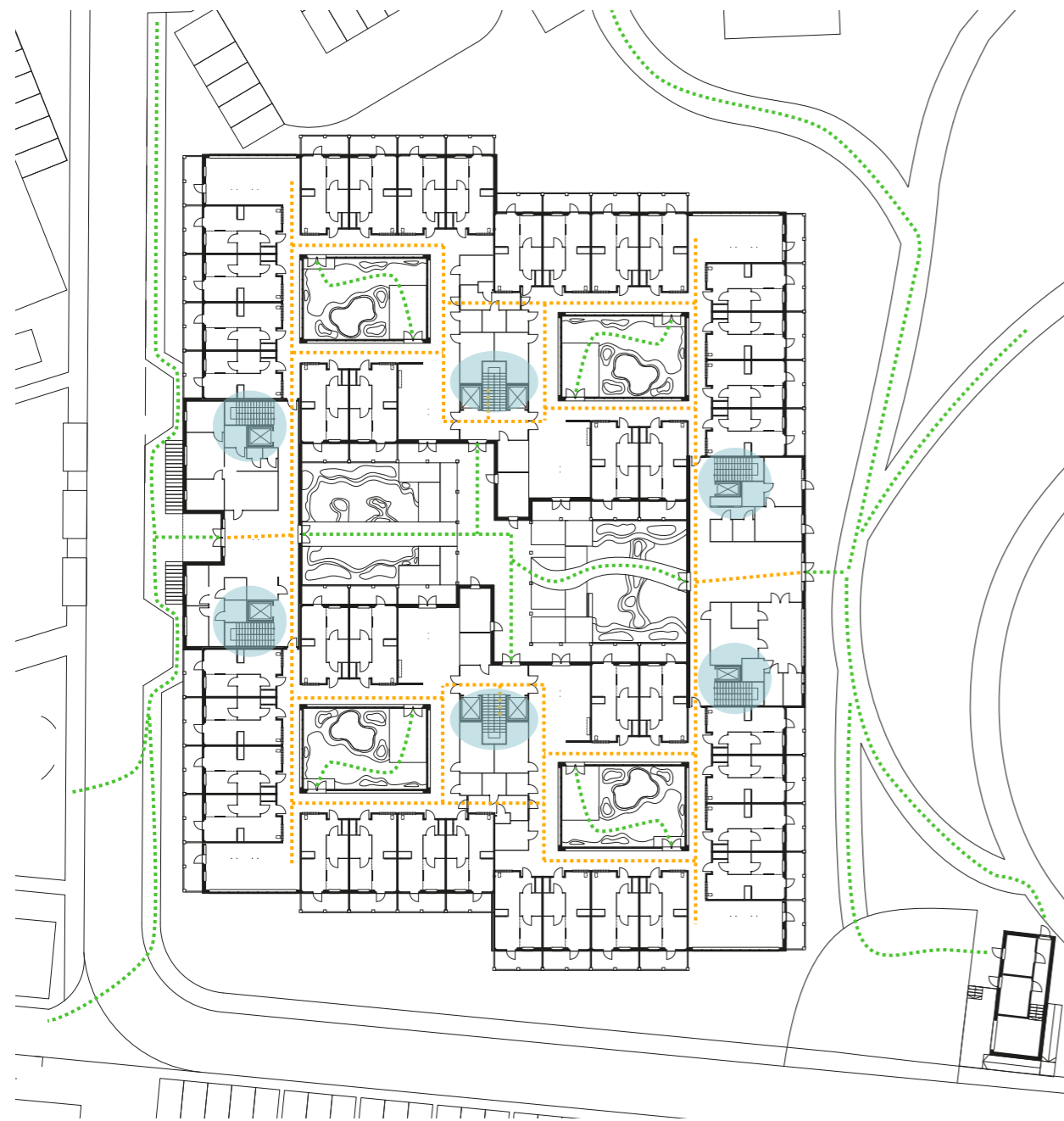
Facilities like reception, administration and multifunctional spaces are located between the residential buildings for easy access.

## Units

There are in total eight units with ten residents in each. Every unit has two common areas and an atrium garden to provide different kinds of spaces and privacy.

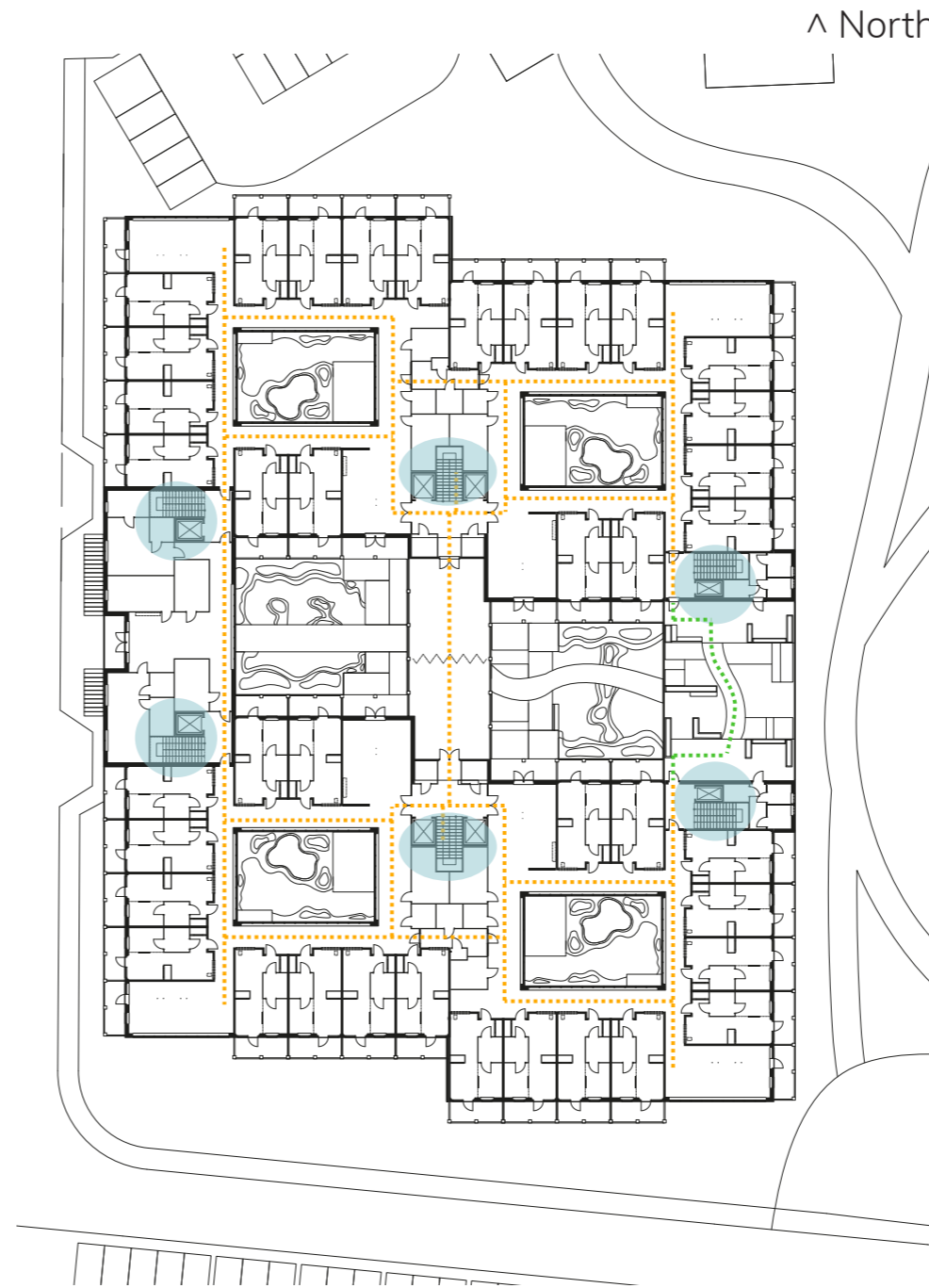


# Flow



Flow level 1

- Vertical Communication
- Outdoor communication
- Indoor communication



^ North

Flow level 2

## Communication in the village

- Connections to the neighborhood in West and East
- Everything is well connected
- No dead end corridors
- All spaces are accessible through indoor communication
- Smooth transitions from interior to exterior spaces
- Easy for residents, staff as well as visitors to find their way
- Flows that promote exercise
- Vertical communication evenly distributed in the building complex

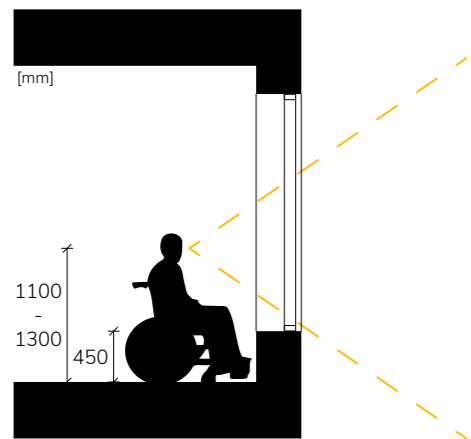
# Facades

The **arcade pillar system** is a dominant architectural feature. It frames the terraces, protects them from rain and provides shade. Vines can grow on it to further connect the village with its green settings.

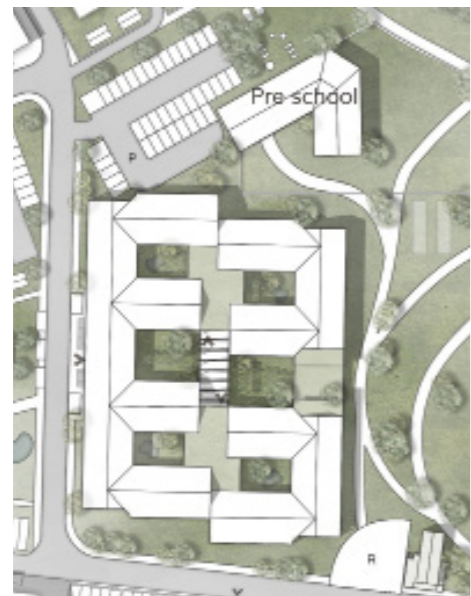
This feature is further implemented in the landscape architecture as arcade corridors, and pergolas in the gardens and public park.

The **fenestration** is simple and toned down, raised 450 mm above floor level which enables a great view for everyone regardless of disabilities.

**Sustainable ThermoWood and pitched roofs** clad by roofing felt protect the building against the Nordic climate. The warm color of exposed and heat treated pine is framed by the darker roofing felt and expresses a close relationship with the surrounding nature.



Wheelchair – range of sight



North facade



West facade



East facade



South facade

0 5 10 15 20 25 m

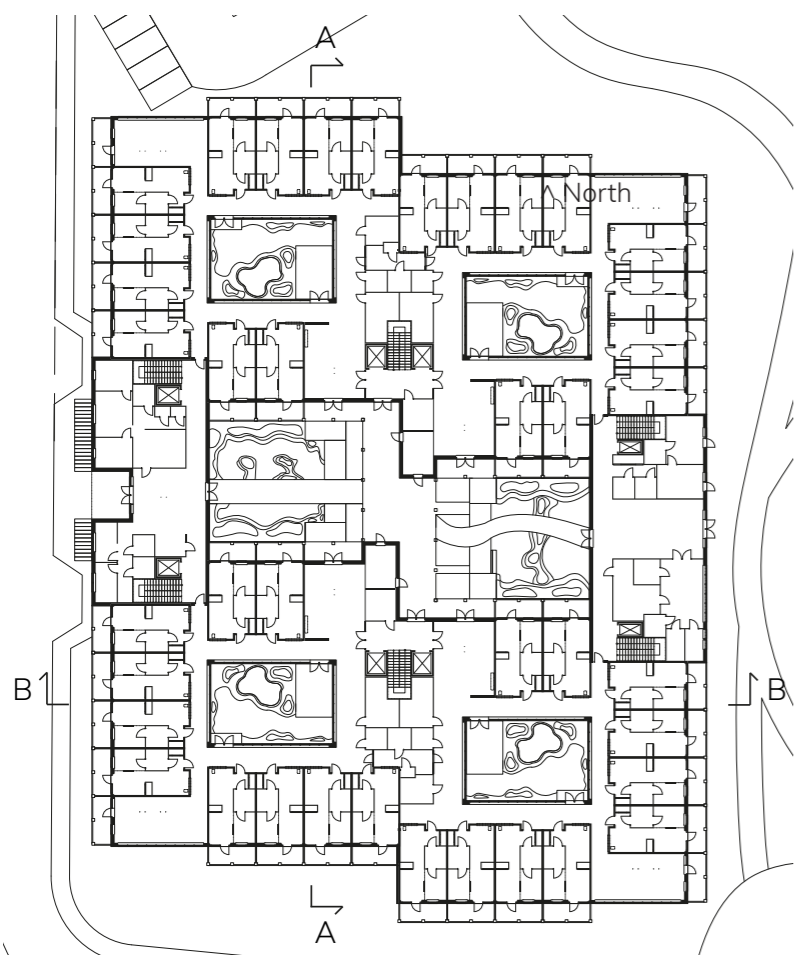
# Sections



Section A - A



Section B - B



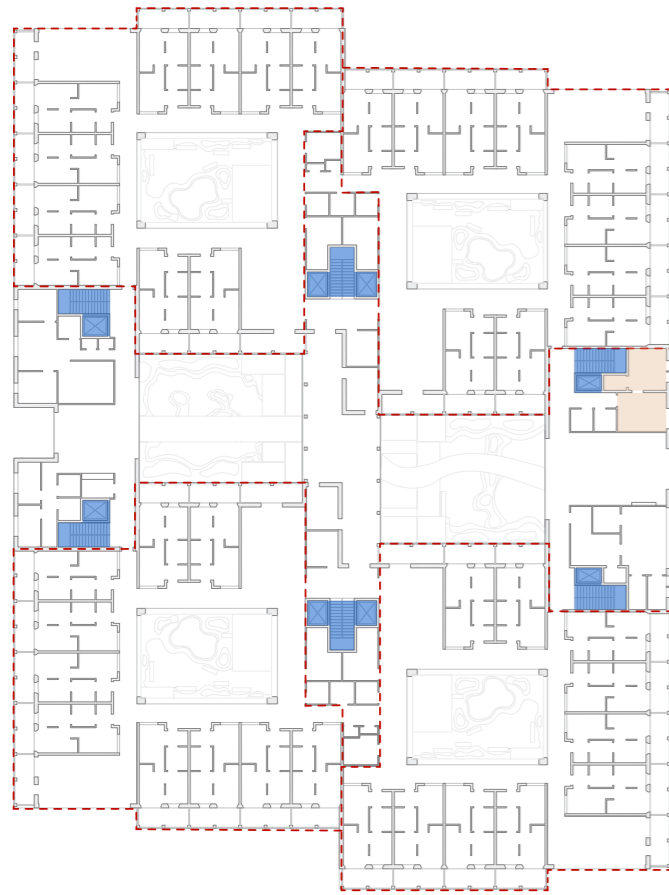
Section markers in plan

**For being only two stories high**, the village does not seem to have a large footprint thanks to the four atrium gardens and central courtyards. The atriums are wider than they are high, and the depth of the volumes is similar to the buildings in the neighborhood, which enables good daylight conditions for both outdoor and indoor spaces.

**The general ceiling height** is 2.8 meters, a comfortable height that gives a feeling of spaciousness to the rooms. Common spaces on the 2<sup>nd</sup> floor have full ceiling heights. The ventilation system is installed in the attic above the entrance volume.

**The wintergarden**, located at the upper level, connects the units and is visible from the common courtyard. This space is large enough to lodge events for all 80 residents, or activities like gardening or singing. It also acts as a roof above the unit entrances.

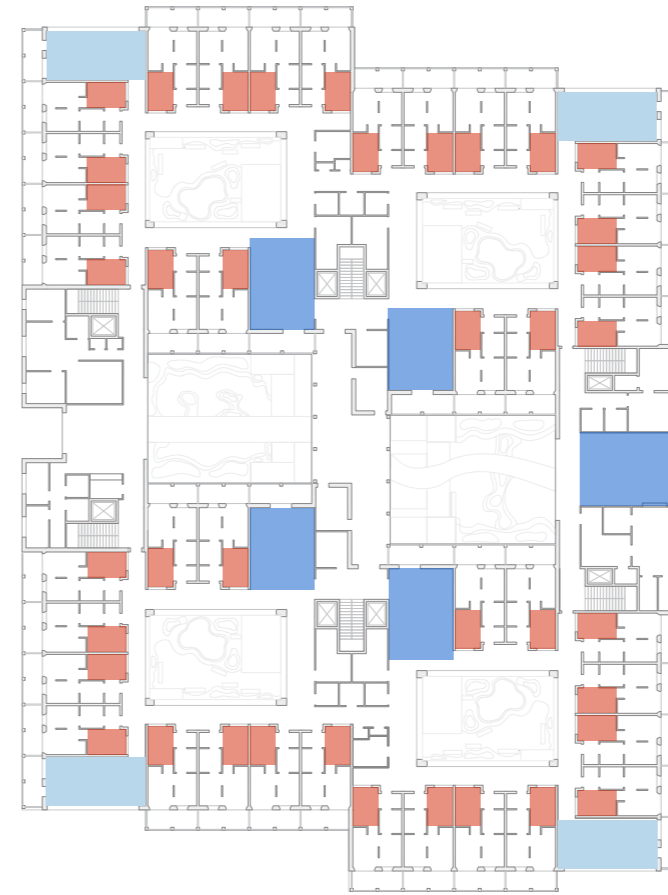
# Pandemic safety



## Quarantine

- Each unit can be divided from each other by doors of corridors, which is feasible to be isolated by region when an infected person appears in one apartment.
- During lockdown periods, the residents can go down or upstairs by choosing different elevators, which can decrease close contact and the risk of infection.
- There are 2 flexible rooms in the facility and isolated from the units, so they can be used for different purposes due to the pandemic conditions, e.g. medical exams.

- Partition
- Elevators/staircases
- Flexible room

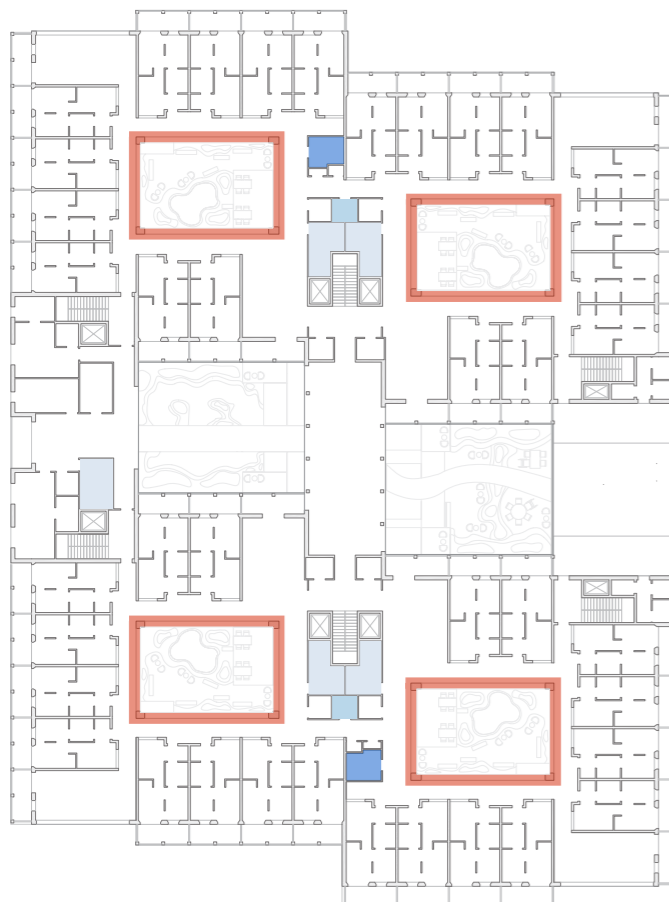


## Dining

During lockdown regulations, if a resident have symptoms, they should be isolated in the apartment alone. Each apartment has a kitchen and dining table that can provide daily meals for the residents, if they're not provided a prepared meal. It is also a good way to avoid close contact and sharing utensils, compared to going to the common dining room.

If one unit has been locked down, residents who don't have symptoms can have meals together in the corner common rooms, split into smaller groups.

- Common rest room
- Common dining sp
- Private kitchen



## Ventilation

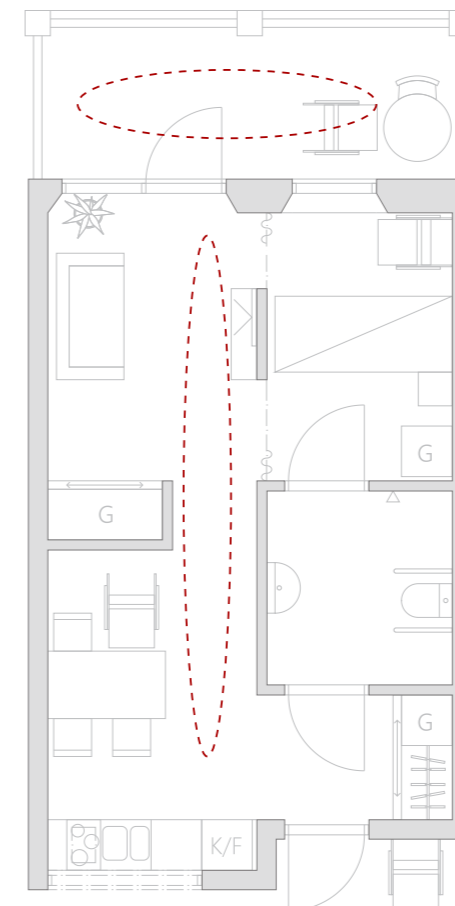
Single-sided corridors facing the atriums, as well as the windows ensure the natural ventilation with fresh air for each unit, the air flow can decrease the risk of virus transmission.

## Disinfection

Due to the lock-down regulations, the apartments and long corridors require regular cleaning and disinfection since they're the most frequently used areas.

There are large rooms for cleaning and disinfection in every 2 units, as well as a laundry room for each unit and staff area which is convenient for cleaning and disinfection.

- Disinfection room
- Cleaning room
- Laundry room
- Corridors

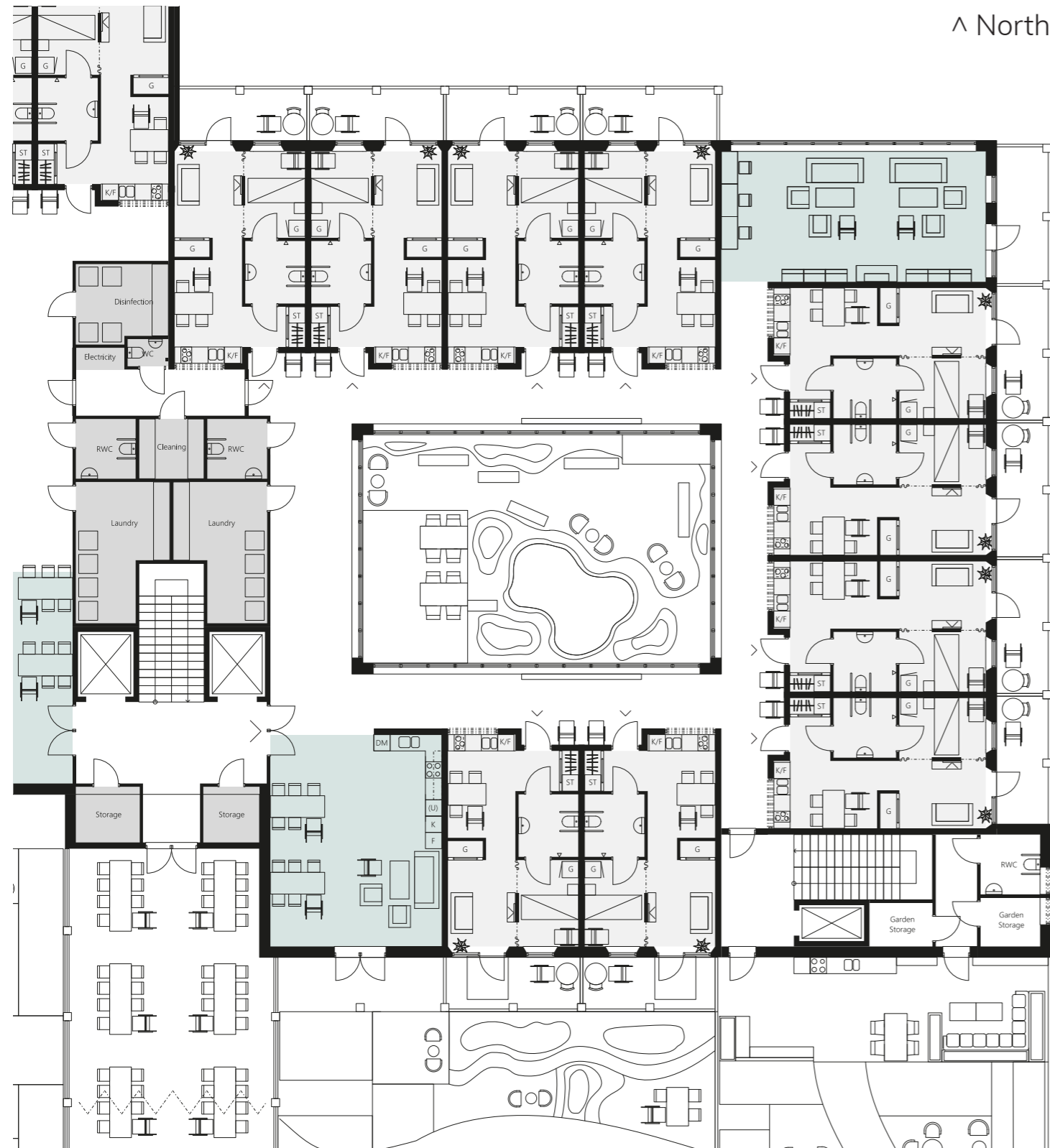


## Exercise

- There is a open flow in each apartment for the elderly to have a walk or running during lockdown period;
- The resident can have fresh air and outside view from the balcony .

- Walking path

# The unit

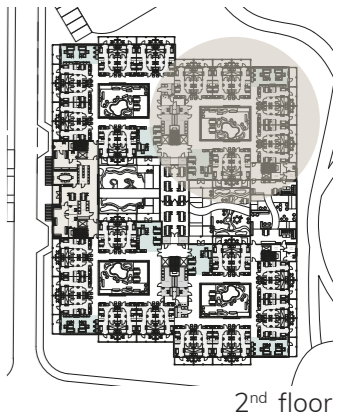
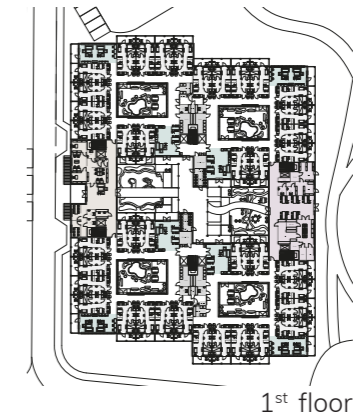
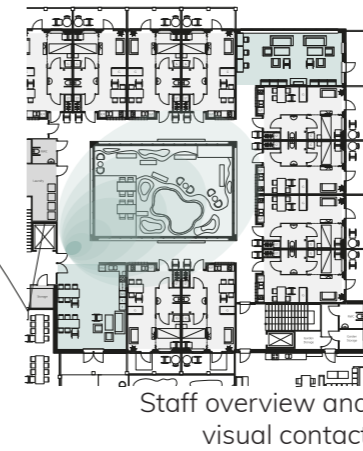


^ North

0 5 10 15 20 25 m

- Apartments
- Common space
- Facilities

Unit Plan 1 : 200



For someone with severe dementia, the unit is likely to be where they spend most of their time. It is very important that though the disease may be limiting in a lot of ways, the environment is not.

The village has eight units in two stories. With vertical communication strategically placed it is easy to move around the whole village and reach reception and staff area. Having only one button for up and one for down in the elevators is significantly easier than keeping track of three or more floors. This contributes to less confusion and easier way-finding.

Every unit is formed by ten apartments oriented around a centrally located atrium garden. Facilities like laundry rooms and bathrooms are placed as a darker core shared by two units for easy access and to separate the units from each other.

As a member of the staff here it is easy to have supervision of everything that is going on within a unit. Standing by the dining space it is possible to also get some sight of the corridors and the atrium garden.

The unit offer you a qualitative apartment and private terrace, with maximum three other apartments in a row for facilitated way-finding. In the corridors are niches for seating, simply to rest on your way somewhere, to socialize or to watch the greenery of the atrium garden.

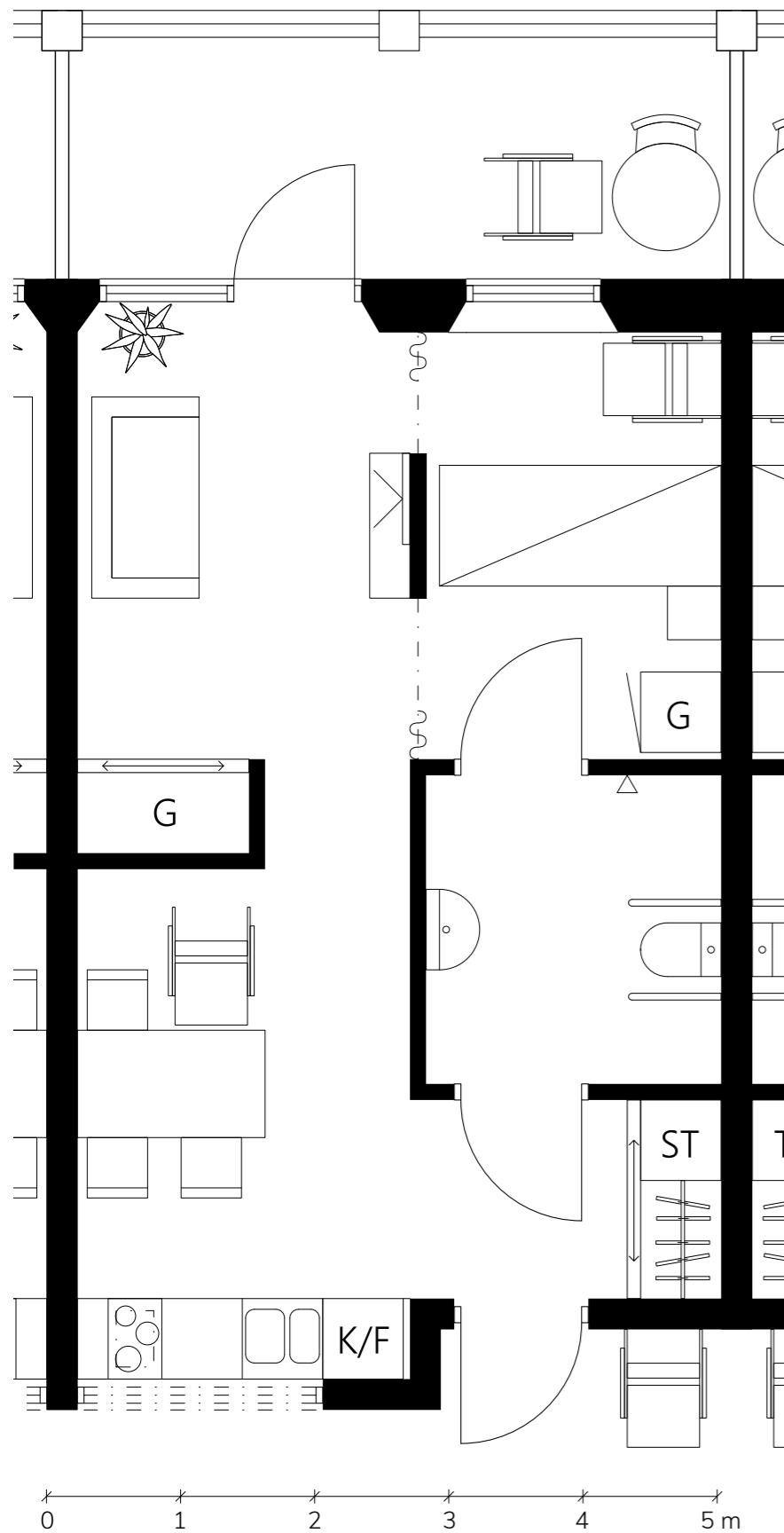
You have access to two common spaces, both with green outlooks and direct connection to a terrace. There is a dining room with kitchen close to the entrance where residents eat their meals and take part of cooking or baking activities.

The corner common space is located in a more quiet and secluded setting. Here residents can rest by the fireplace, enjoy the views of the neighborhood, listen to audiobooks or watch tv.

Apart from the different terraces, the atrium garden is a great place to get some fresh air, listen to pouring water and have a conversation with a staff member, neighbor or visitor. Here one can sit down or stroll around for hours, surrounded by greenery to appreciate the garden with its pond and vegetation.

All units have close and easy access to the wintergarden and courtyard, from where you reach all other functions within the village.

# The apartment



Plan 1:50

**The apartment** is for one person and it is efficiently divided into five zones by the arrangement of bathroom and two storage blocks. This division provides the resident with a sequence of rooms that give the possibility of different impressions throughout the day. The apartment is 36 m<sup>2</sup> large with one m<sup>2</sup> storage included.

**Regardless of what stage of dementia** the resident has, the layout of the apartment promotes an independent lifestyle, with its full equipped kitchen, separate rooms for different functions and large private terrace.

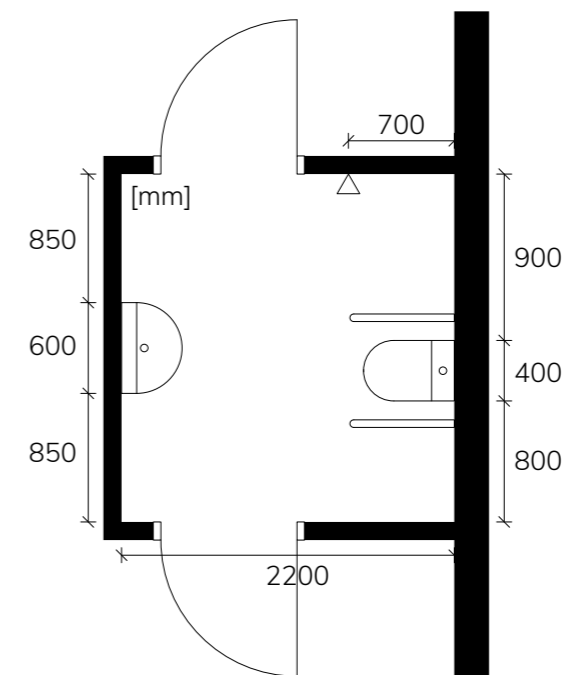
**The niche by the entrance** offers some space to change or leave the wheelchair before getting inside. In the hallway there are hanger and storage possibilities, as well as easy access to the bathroom and kitchen.

**An important quality is the two-door solution** for the bathroom. The bathroom is often used before leaving home and when coming home. It is also the room you go to right before bed, maybe during the night and when waking up in the morning. Due to the short distance between the shower and door, this door and frame is made of polystyrene and polyurethane to prevent moisture damages.

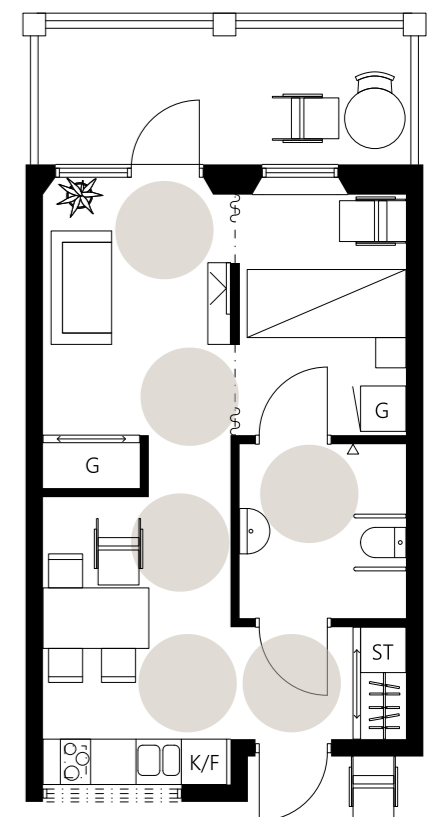
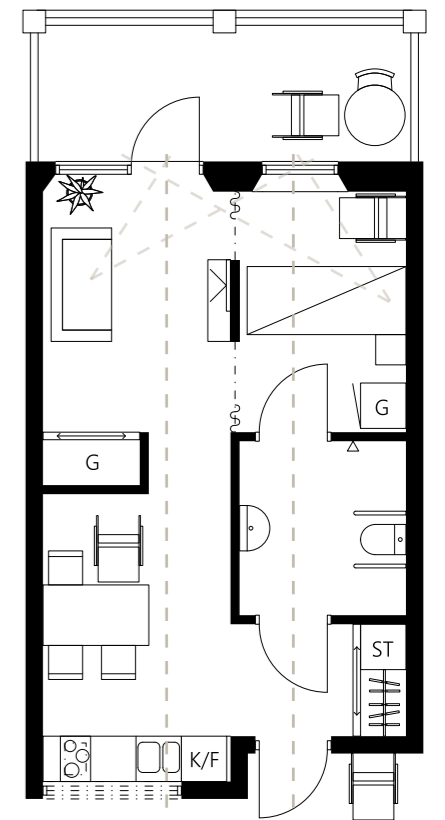
**The kitchen is fully equipped** and there is enough space for a large dining group. The living room is connected to a generous private terrace and the bedroom. Lying in bed one can enjoy the view through the bedroom window and the larger glazed part of the living room. Same goes for sitting on the couch.

**Daylight is coming in from two directions**, through the large openings to the terrace and through a wide window placed above the kitchen. Between the kitchen window and atrium garden is just a corridor width.

**All furniture and openings** are carefully placed to fulfill the accessibility requirements. There are multiple points in the apartment where one can turn around in a wheelchair.



Accessibility bathroom



Wheelchair turning points



# The apartment

**Research has shown** that our physical environment has a significant impact on our health and wellbeing. Daylight and nature seem to reduce stress, increase activity and help recovery. Brightness and green views have therefore been a great focus through this entire project, the apartment is no exception.

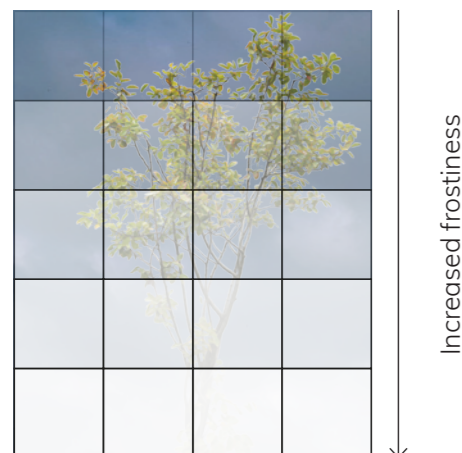
**The color scheme** is light, a combination of bright beige paint and wooden details. When suffering from visual impairment, which is very common by elderly people, it is important with contrasts to facilitate. Here it is easy to distinguish the floor from the walls, and by using wooden frames, the doors are easy to locate.

**Mobility impairment is another phenomenon** that can appear when getting older, with or without a walking device, it is of high importance that there is enough space to move from A to B. The corner by the terrace door is cut off for smoother movements.

**For some people with dementia**, the reflection of themselves in mirrors can be upsetting. When having large windows it is therefore good to have exterior lighting to reduce reflections. Thin curtains can also achieve this.

**Storage is of high importance** for most people, to be able to keep their most beloved items. The stationary wardrobes and bookcase can hold memories, books, photographs, technical devices etc. This gives the resident a possibility to express their identity and makes every home unique and personal.

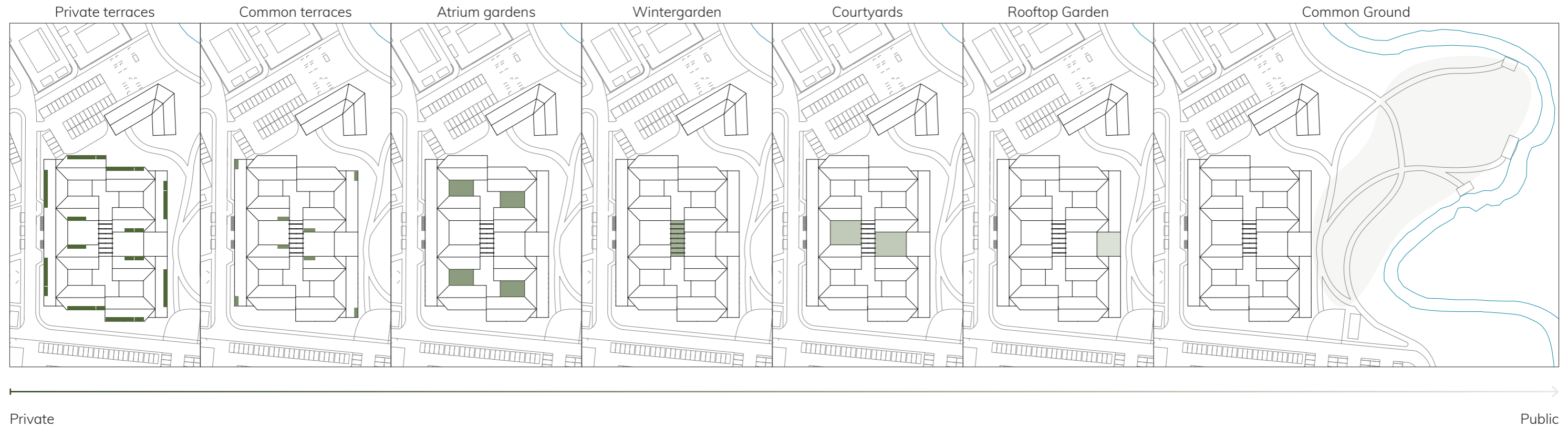
**With inspiration from the Optical Glass House**, a Japanese housing project, the terrace railings are constructed with steel bars and glass blocks. This to let in as much sunlight as possible. Depending on how frosted the glass blocks are, it is possible to get more privacy.



Frosted glass railings



# Outdoor spaces



The village is located in beautiful surroundings with a strong presence of nature. To utilize these qualities, all residents have access to a number of different outdoor spaces.

**The private terrace** - Every resident has its own 10 m<sup>2</sup> large, weather protected terrace.

**The common terraces** - Every unit is provided with two large terraces connected to the common dining and living room. The dining room has outlooks to the courtyard and the living room has outlooks to the neighborhood in two directions.

**The atrium garden** - Residents from two units share an atrium garden of 100 m<sup>2</sup>. This is a calm space where one can relax to the sound of pouring water.

**The wintergarden** - All units are connected by the centrally located wintergarden, which allows the outdoor experience even with poorer weather conditions. It can host events for all 80 residents or offer activities for smaller groups of people.

**The courtyard** - Here is often a flow of people going to different facilities or activities since this space connects all units and facilities.

**The rooftop garden** - On top of the multifunctional building is a rooftop garden accessible for all residents. Here one can participate in gardening activities or simply enjoy the view over the surrounding greenery and stream.

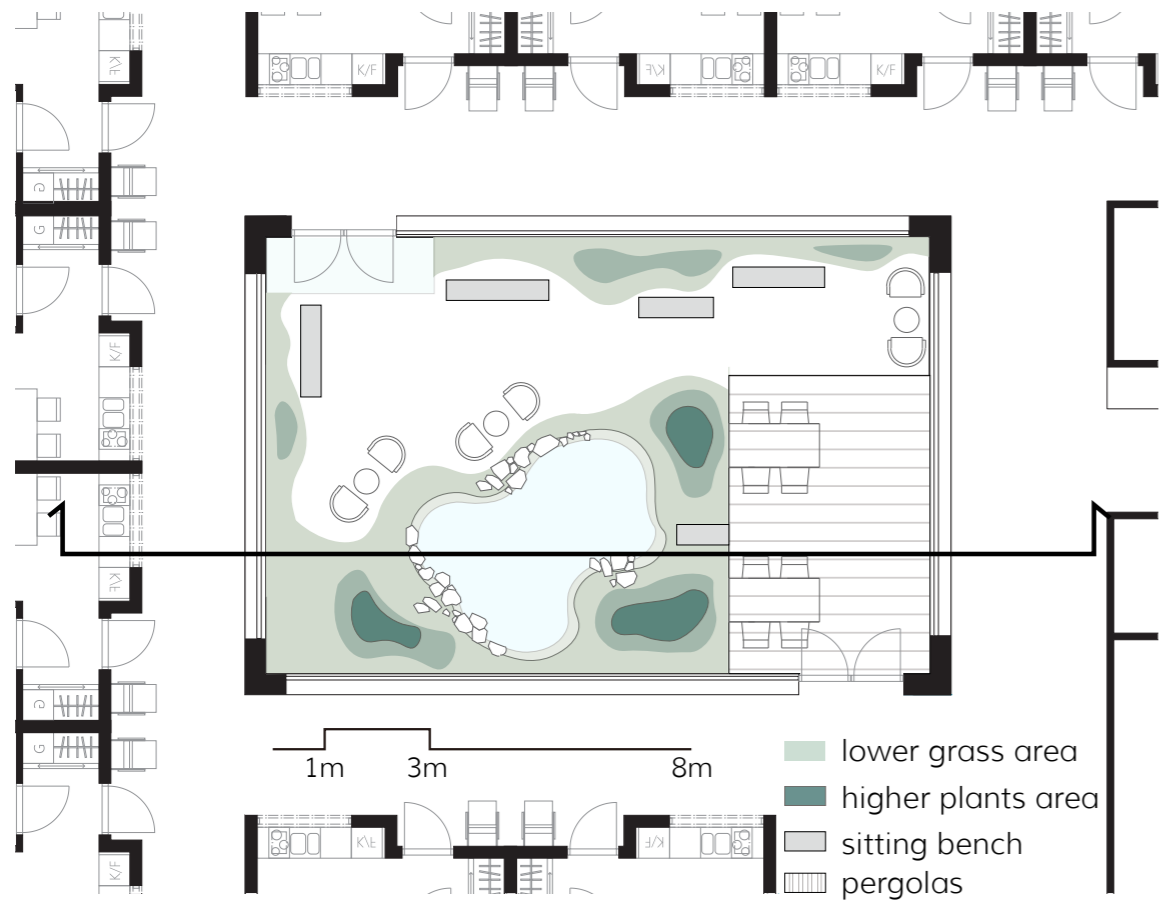
**The Common Ground** - This area functions as a meeting point for the entire neighborhood, a public recreational area for interactions between generations. Here one can take a walk by the water, play boule or exercise in the combined outdoor gym, obstacle course and playground.



Using soft barriers to ensure privacy close to public spaces

# Outdoor spaces

Atrium gardens — resting to a green view and the sound of pouring water  
interaction with relatives and visitors



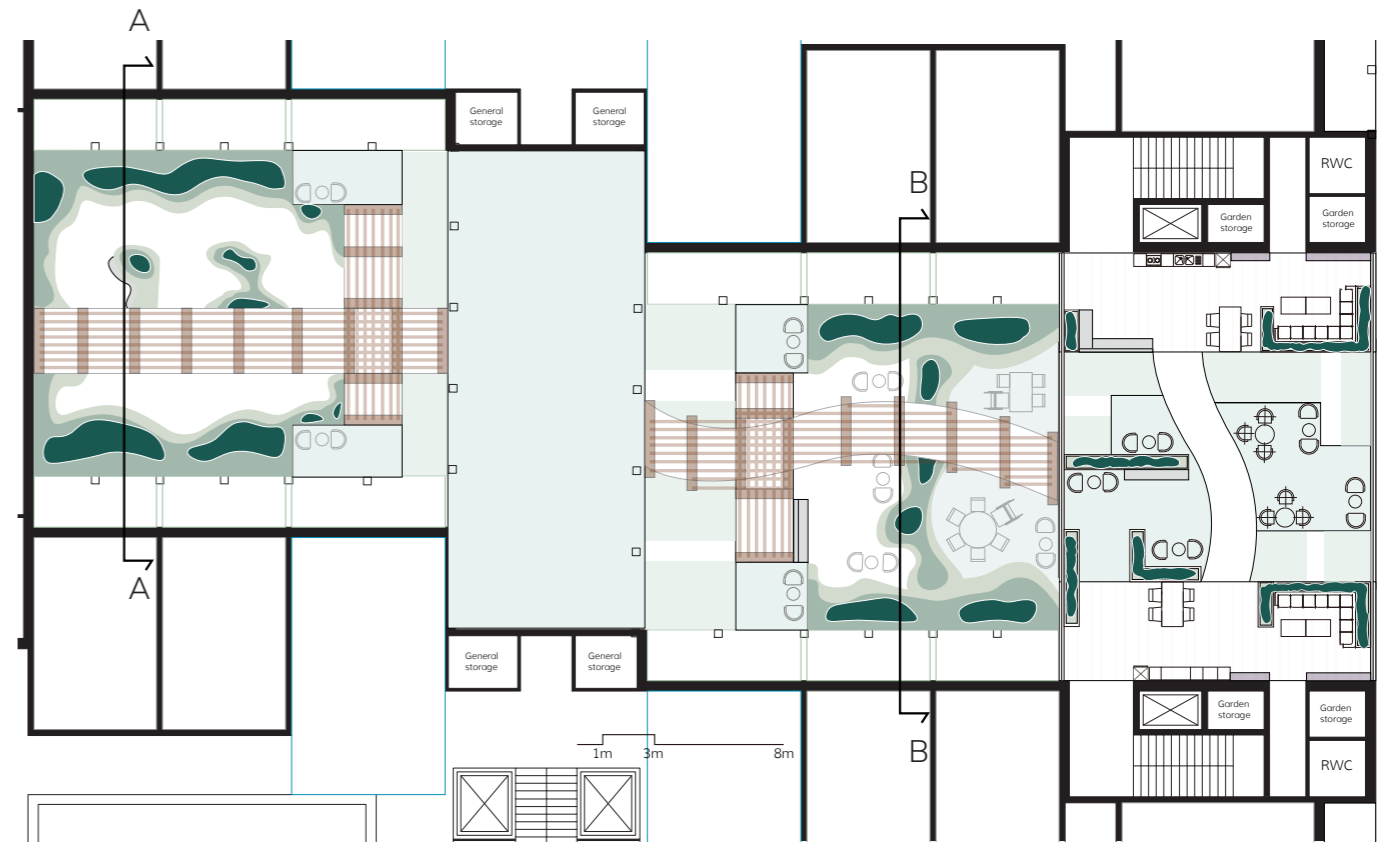
Pergolas with vines provide a semi-private sitting space;



Ponds surrounded by greenery form a quiet space to rest. 16

# Outdoor spaces

Common courtyards — walking surrounded by greenery  
sitting and interacting with visitors



Level 2

- lower grass area
- higher plants area
- sitting bench
- planting area
- pergolas
- shelf



1m

West courtyard Section A - A



1m

East courtyard Section B - B

# Outdoor spaces

Rooftop garden — gardening and outdoor cooking  
socializing with neighbors



The common garden and courtyard provides a pleasant view when entering the facility, as well as for resting and getting visits from relatives.



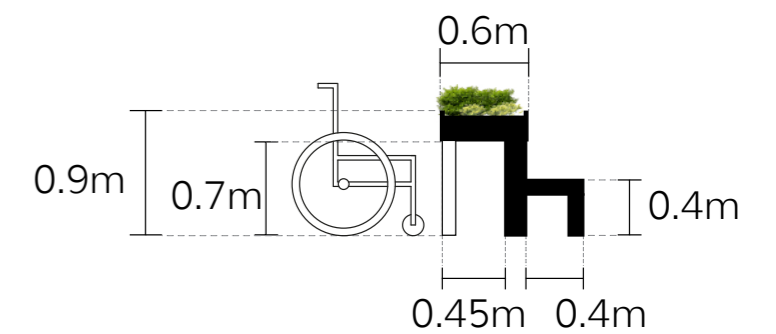
Gardening and planting give residents the daily working experience and close feeling of nature.



A view of greenery



Different interactions with the flower beds



Raised flower beds give the opportunity to do gardening without leaving the wheelchair



# Annehem

AUT164 Future visions for healthcare, housing and work 1:  
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