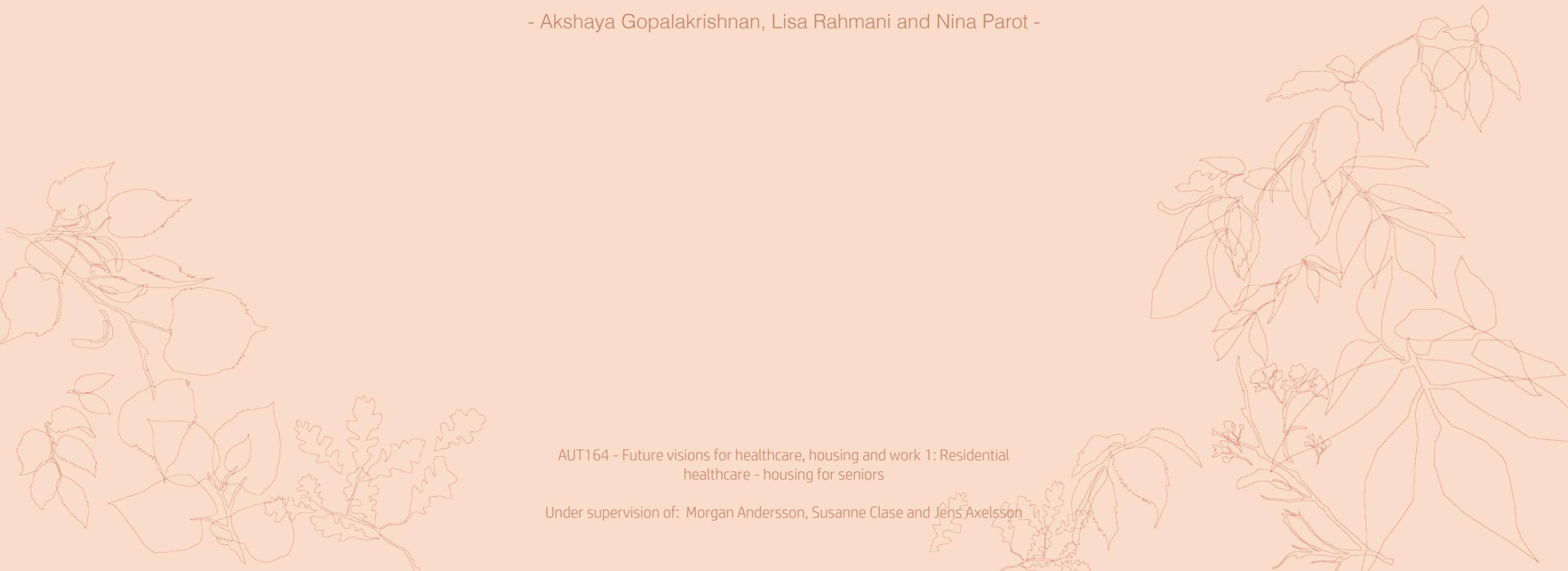


# Lövträdgården

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

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## Abstract

As the population in Sweden is aging, age related diseases are on the rise. The environment that we are commonly surrounded by is more often than not unsuitable, or in some cases hostile, to older people. In this project, the focus is set upon people with advanced symptoms of dementia. For them, the way the environment is designed can make a real difference. It could be a source of stress, dizziness and fear if not accommodating to their condition. Dead ends, reflections, inaccessible paths and the lack of contrast, are sources of confusion and could get in the way of understanding their surroundings. However if done correctly, the environment can also be a source of comfort and stimulation. The goal of this design is to create assisted living facilities in Utby, Gothenburg, that can be considered as a home. It needs to transpire a sense of safety and bring comfort to its inhabitants.

Three concepts are applied throughout the site: to create a neighborhood, to build a diverse and complex environment, to design with the local natural qualities. These guidelines will support a dementia village design enabling choice, flexibility, but also bring a sense of calm to its inhabitants.



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# Demography and concepts

## Living with dementia

How does it feel to become old? What do you need to be able to live as normally and comfortably as possible?

Dementia and fragility are common with old age and affect the way one thinks and acts in a space. Motivation, willpower, and curiosity are however still existing for the diagnosed elder, which is why it is important to find a good balance between the person's own abilities and what assistance can be provided.

### Meet Eva!

Name: Eva Svensson

Date of birth: 05/08/1947

Hobbies: Sunbathing and gardening

Health: Suffers from stage 6 dementia

Eva is in need of full time care as she is generally unaware of her surroundings and cannot recall recent events. Her motor skills worsened in the last months, though she is not relying entirely on a wheelchair yet.

Family situation:

Eva's close family couldn't afford to have her stay with them anymore. They come and visit when they can.



## Concepts implemented throughout the project

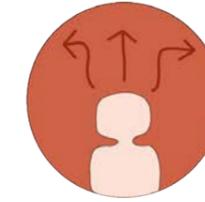


Creating a neighborhood

To us, the concept of a village lied in the intimate and shared bonds between residents, a strong sense of community and a variety of activities contributing to a complex environment.

The facility has been thought of as being part of the bigger context of Utby. It is designed as a new neighborhood with new qualities rather than an isolated health center. It responds and complements its surroundings.

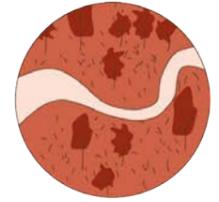
Public activities and spaces are strategically positioned to connect to the rest of the village. For example food is used as a facilitator between locals and the residents.



Building diversity and enabling choice

Creating a diversity of atmospheres in the living spaces was an important factor of the design. The residents have access to common or private spaces, indoor or outdoor, to social and active rooms, but also to calmer, quieter areas.

We valued one's ability to make their own choices and to feel free to use the unit as a whole and by extension, to use the neighborhood as a whole.



Designing with natural qualities

The site's trees, bushes, and stones have served as significant markers of what we believe connects to the experience of residing in a village. We included nature into this project through subtle sensory play. Whether it is views framing nature in its raw form, being able to feel the breeze of air or hearing the water pass the stone water collection system by the windows.

The materials are inspired by, but also sourced on site. Stones and trees that needed to be displaced have been conceptually repurposed throughout the design.

# The apartment

The combination of the apartments' double orientation and large windows ensures plenty of light throughout the day. The balcony, which runs along the entire width of the apartment, provides space to enjoy nature.

An open floor plan, with no door separating the bedroom and living room, allows for easy movement throughout the home. The similar volumes of the bedroom and living room create different furnishing options.

Ample storage is provided throughout in the form of counters and open shelves, which are framed by an accent wall that allows for personalization.

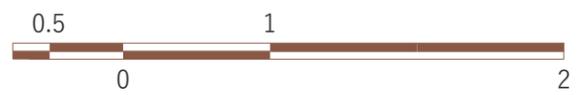


Interior view of the apartment



Area: 33 sqm

Floor plan 1:50



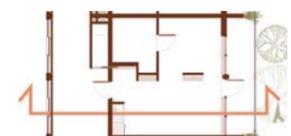
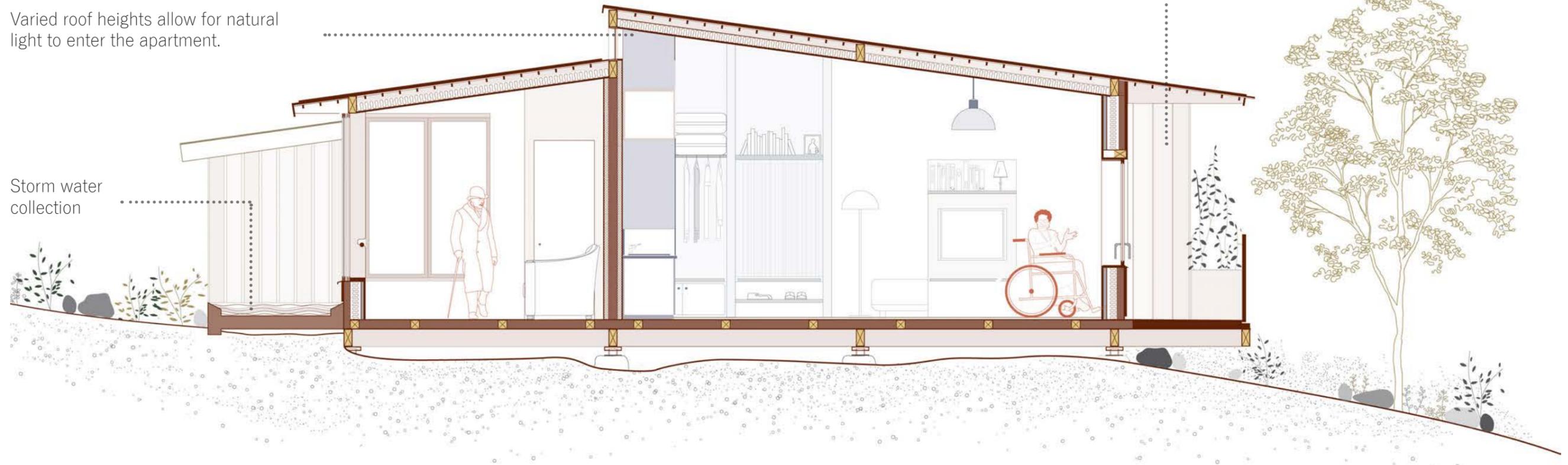


During spring time, Eva spends her afternoons on her balcony. She can garden and interact with her neighbour Karl thanks to a small planter at the end of the partition wall.

Varied roof heights allow for natural light to enter the apartment.

Protected balcony with shared planter boxes for gardening

Storm water collection



Section 1:50



# The unit

The units, which are shaped like a U, respond to an active garden while enclosing a smaller garden within. The public spaces are oriented toward the active gardens, which ensures privacy for the apartments and creates a gradual transition of activity as one moves through the unit.

With a total of 8 apartments in a single unit, common spaces include a common kitchen, lounge, active living rooms and quiet spaces. Each unit has an additional multi-purpose room with a private balcony that serves as a private space for the staff to unwind and relax.

Storm water collection troughs on the lower contours of the common corridor, as well as common balconies and decks, ensure a constant connection to nature.

Quiet living rooms are provided at the ends of the corridors to avoid dead-ends in the circulation.

## Legend

01	Living Room	20 m <sup>2</sup>
02	TV Room	15 m <sup>2</sup>
03	Dining + Kitchen	35 m <sup>2</sup>
04	Common balcony	18 m <sup>2</sup>
05	Cleaning Room	4 m <sup>2</sup>
06	Storage Room	5 m <sup>2</sup>
07	Extra storage	2 m <sup>2</sup>
08	Electrical services	1.5 m <sup>2</sup>
09	Staff Toilet	3.75 m <sup>2</sup>
10	Multipurpose room	15 m <sup>2</sup>
11	Quiet Living room x 2	16 m <sup>2</sup>
12	Outdoor deck	10.5 m <sup>2</sup>

Area: 773 sqm



Floor plan 1:200



View from the common kitchen

Unfortunately, Karl and a few of his neighbors have become ill and must be isolated inside their unit. However, the housing's independent circulation allows the facility to function normally and the residents in his unit to remain connected to nature.



## Material, façade, structure

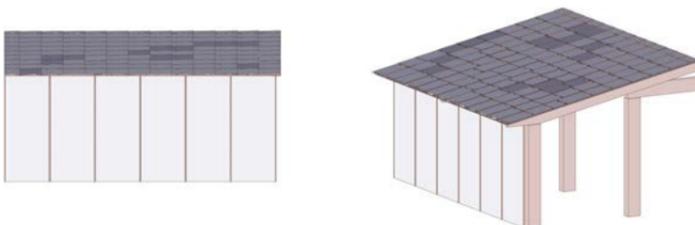
The focus of implementing the local nature continues through the design of the façades. Each one creates a different relation between the user and the outdoor environment through different size openings and their placement in the façade. This characteristic also helps differentiate the type of rooms laying behind it. For the apartments' façade, the wooden cladded wall is pushed in between the structure. By doing so, revealing the wooden posts, highlighting each apartment with regular intervals and therefore translating a home size scale. The walls are thereafter pushed forward in shared or common spaces, translating their public qualities.



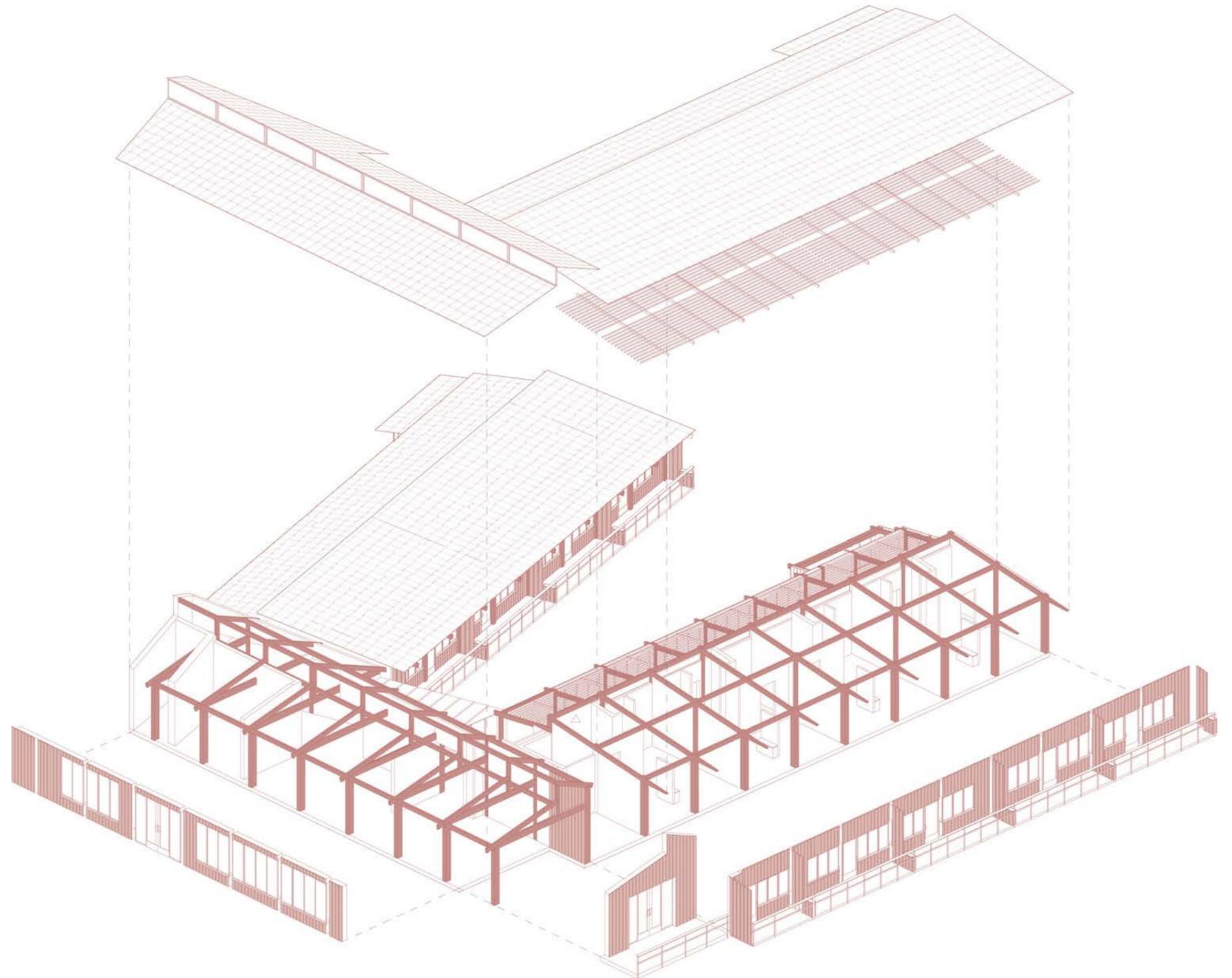
Elevation and axonometry of apartment façade



Elevation and axonometry of corridor façade



Elevation and axonometry of the façades of public circulation and public venues

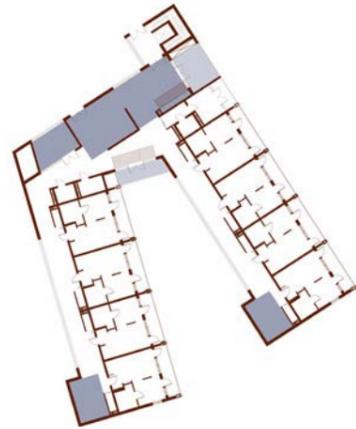


Exploded axonometry of the typical unit revealing the building's structure and division of space

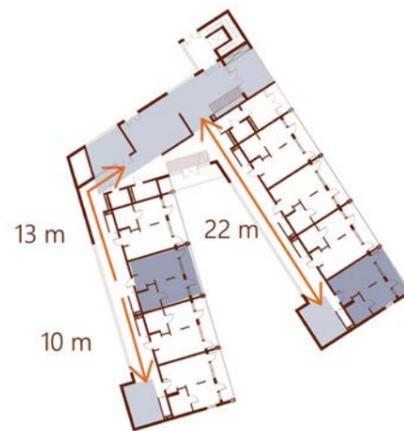


## Shared circulation

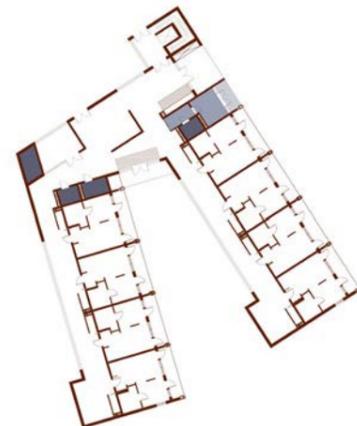
The common corridor is a transitional space that emphasizes the buildings' connection to nature. It is well lit thanks to the long vertical glass windows. It serves as an extension of the apartments, with seating for short stays. The integrated support handrailing along the sides also serves as a way-finding mechanism with recessed lighting. Residents can enjoy the water and nature outside with low window sills, and the quiet living room at the end of the corridor allows for unobstructed circulation - an important feature for those with dementia.



Social spaces with different levels of interaction



Proximity to common spaces in relation to the apartments



Distribution of services including storage, staff toilets, garbage room and multi-purpose room



Low window - sills with a railing that doubles as a way-finding mechanism



View of a unit's corridor



## Preserving local nature

A site analysis was completed at the start of this project, providing information about the many species of trees on the site, what we can protect, and what we can reuse for other structures on the site. The present diversity of species is an important asset of the site.

About the trees: Existing trees include elm tree, ash, beech, hornbeam, oak, maple and linden tree. The area is considered a deciduous forest meaning there are at least 0,5 hectare with at least 50 % deciduous trees and at least a further 20 % common deciduous trees.



View of a unit's small garden

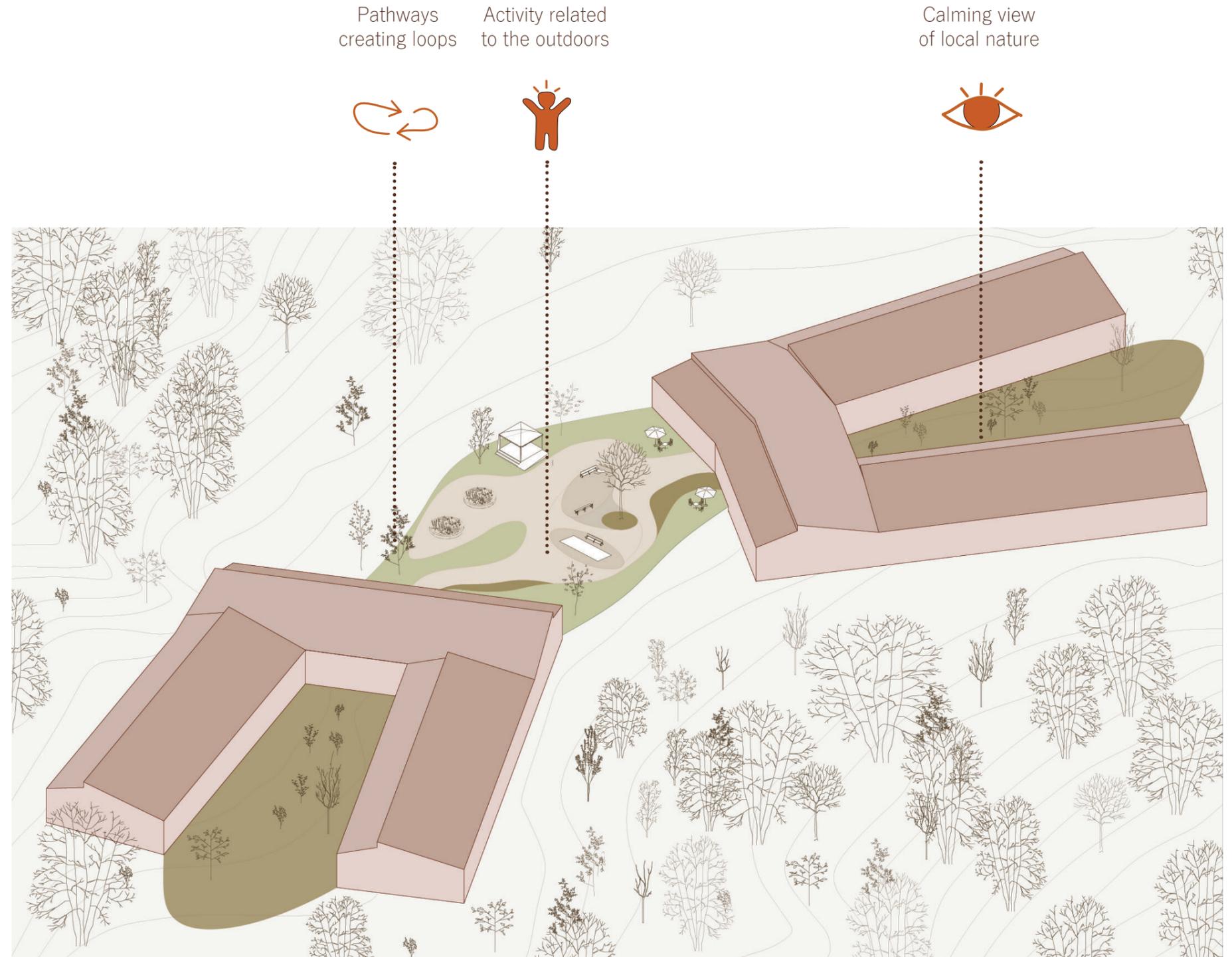


# Connecting the units

## The large garden as a meeting point between units

The larger garden can serve as a meeting point between units and between visitors. It connects two units and the spacious outdoor flat area can be used on a daily basis by residents, their visitors and the staff, but also on special occasion seasonal activities could be incorporated, markets, dinner parties in the summer for example.

The trees and bushes are growing wildly and guided paths have been implemented to help the elderly to find their way to the different destinations. Pause points are also provided at regular intervals along the main paths. The material used on the ground indicates if the space is supposed to be used for transportational means or for taking a break. This way the different zones stand out and the contrast between the materials make it easier to understand the spaces, especially for someone with dementia.



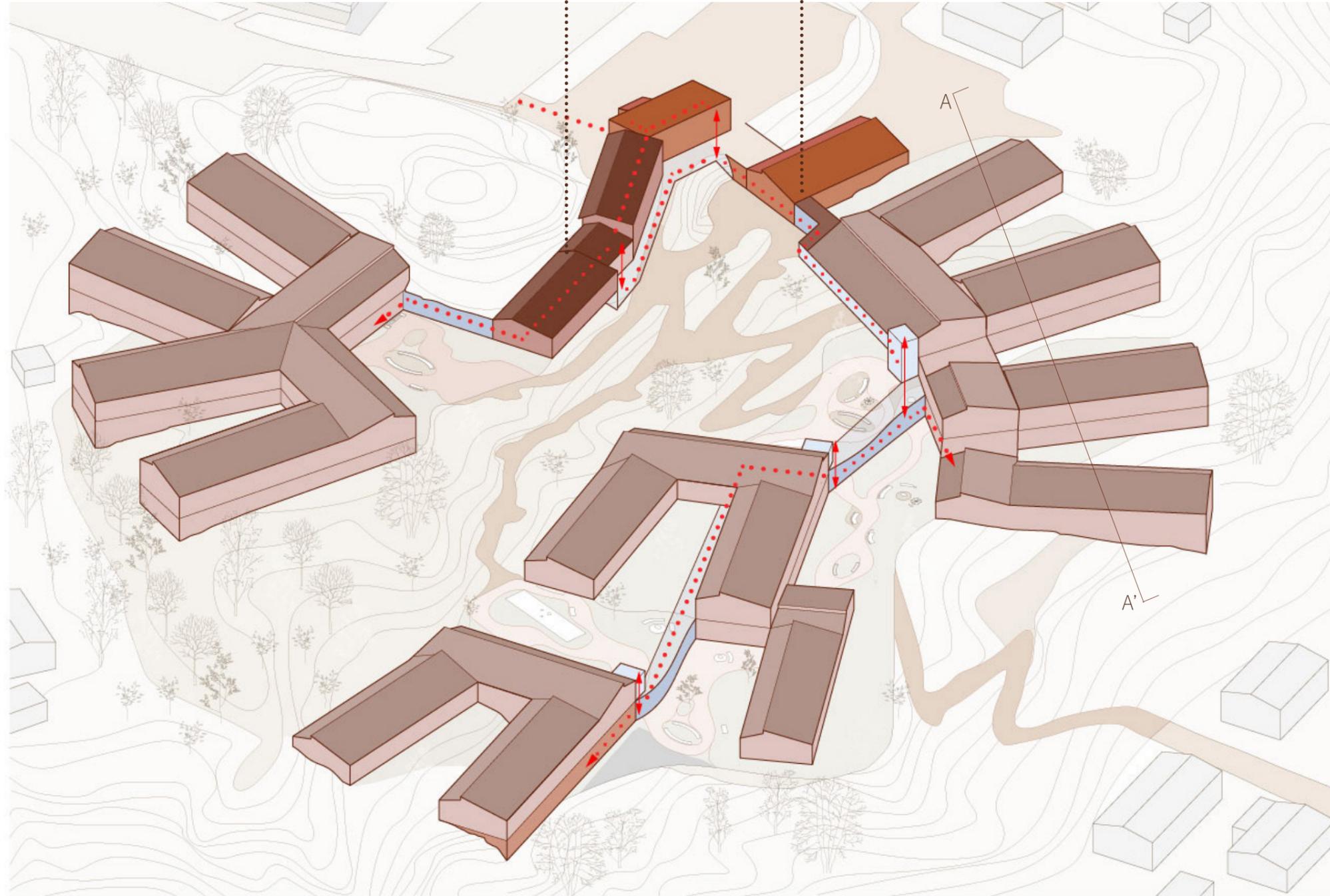
Conceptual organisation of garden spaces





Diagram of the function and communication between units:

Administration and staff    Restaurant and workshop



## The site

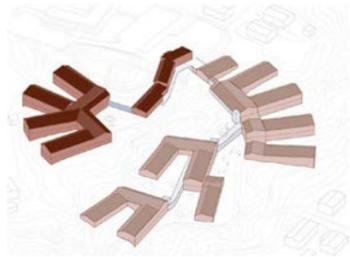
With a total of 80 apartments, the master plan highlights the natural elements of the design proposal. With vehicular entry restricted to a single point, the rest of the facility is free to enjoy unobstructed walking paths and gardens.

The existing allotment gardens are retained and extended further towards the existing neighbourhood to function as a connect between the local community and residents in the facility.



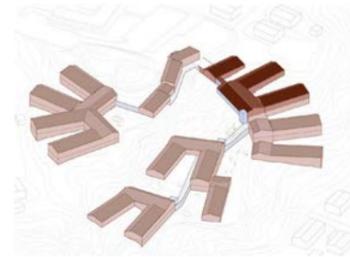
Master plan 1:1000





Reception, administration, office, staff break room,  
changing room, units 1-4

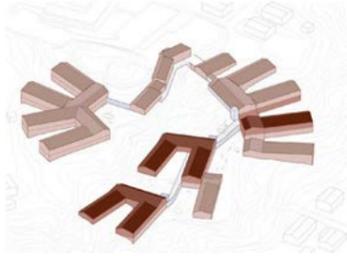
Plan at + 40m



Restaurant, communication and unit 5

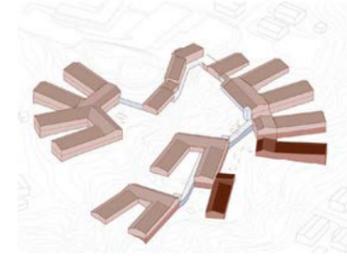
Plan at + 37m





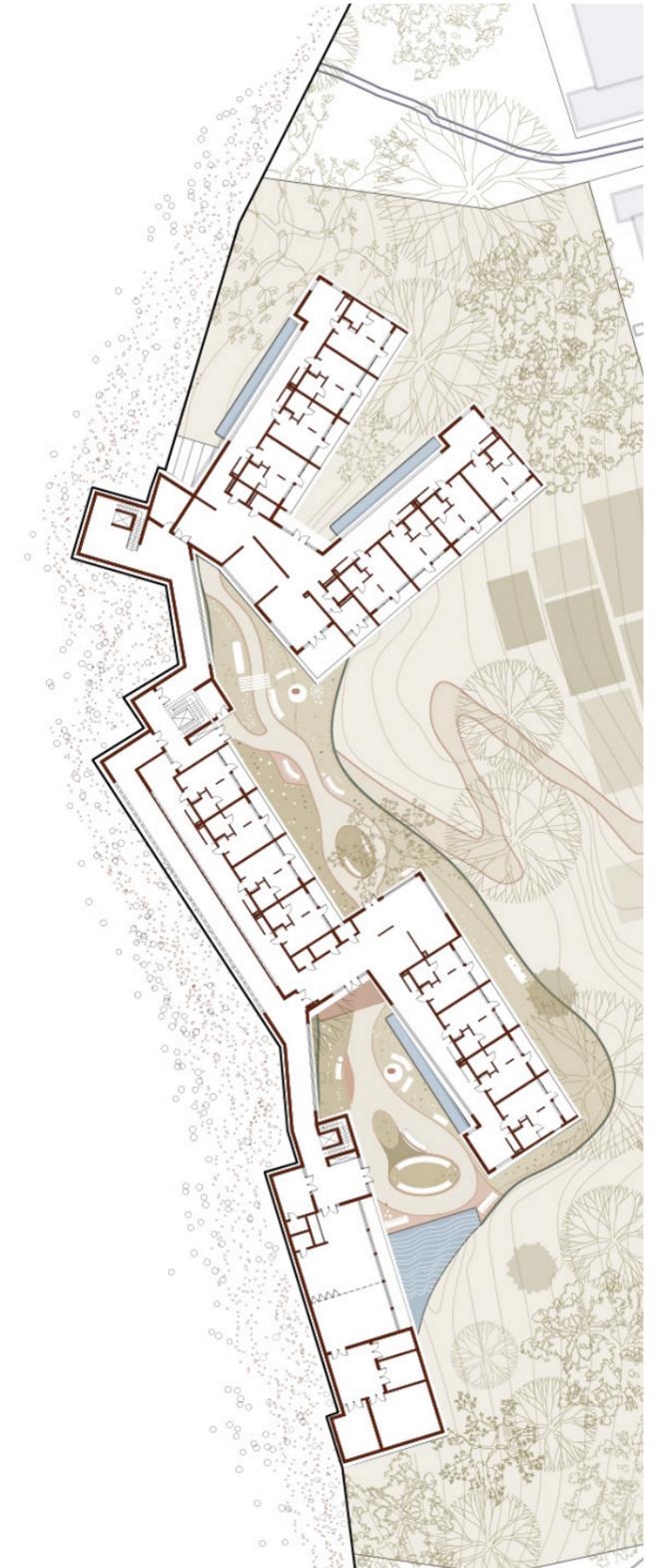
Units 6-8 and technical rooms

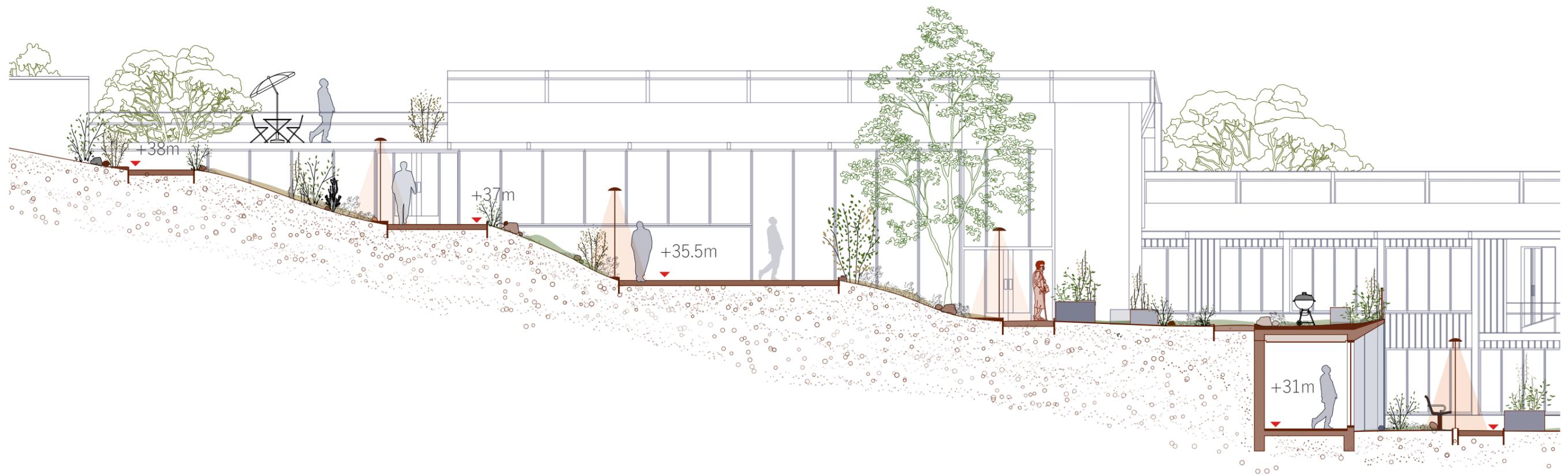
Plan at + 34m



Units 9-10, flexiroom and technical rooms

Plan at + 31m





Section BB' 1:500

By entering the site at the highest level, visitors can navigate the facility by following the natural slope of the existing contours. The cross section of the site reveals paths with a slope of 3-8% traced out to ensure accessibility and a walkable site. Gardens are established in relatively flatter areas to provide the residents with accessible outdoor environments and preserve the site's original shape as much as possible.

The path, which is dotted with pause points and benches along the way, leads to three different active gardens, each with a unique point of interest.

The indoor circulation that connects all units is concealed beneath these areas, resulting in terraced gardens. This allows for natural light and views into the corridor, as well as unobstructed views of the surroundings from higher levels.





View of the garden level 34 from a higher path

## Areas

SITE AREA : 22 640 sqm  
BUILT AREA: 9 770 sqm

NUMBER OF UNITS: 10  
NUMBER OF APARTMENTS: 80  
Apartment per unit: 8

TOTAL UNIT AREA : 773 sqm

Living Room: 20 sqm  
TV Room: 15 sqm  
Dining and Kitchen: 35 sqm  
Common balcony: 18 sqm  
Cleaning Room: 4 sqm  
Store Room: 5 sqm  
Extra storage: 2 sqm  
Electrical services: 1.5 sqm  
Staff Toilet: 3.75 sqm  
Multipurpose: 15 sqm  
Quiet Living room x 2: 16 sqm  
Outdoor deck: 10.5 sqm

APARTMENT AREA : 33 sqm  
added balcony and storage: 9.5 sqm

## Reflection

In this project we have learned more about design for elderly and living with dementia. We have visited elderly housing units and discussed diverse possibilities of how to live as part of the aging population. We have also had lectures on the psychological effects dementia can have on a people and how they might perceive space and light. With this knowledge we developed this dementia village together and focused on themes such as nature, choice and flexibility.

The interest lied in develloping the different units and understand the complexity of the site and its levels. It was also interesting to see how different ideas can develop and merge.

A last point is that now after the pandemic, it is interesting to see how we incorporated choice, flexibility and nature as main themes throughout each unit, giving multiple qualities that could come out useful in case of lockdown emergencies. Perhaps it is a response to the times we live in?

