

Dementia Village

- Anneberg -



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Residential Healthcare

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abstract

to create a dementia village for elderly citizens, in accordance with their special needs and the constraints of the given site

Anneberg is a currently underprogrammed area, under the jurisdiction of the Kungsbacka Municipality. There exists a local masterplan, intending to turn it into a modern dwelling area, which would provide its residents with convenient infrastructure, while maintaining the local atmosphere and low-scale architectural expression.

The masterplan suggests including a dementia village in the neighborhood. In accordance with the Chalmers AUT164 design studio course, we focused on this part of it and the proposal for the Village design became the outcome of our work, which we will present further, in this booklet .

We conducted a profound analysis of the future residents' needs, as well as the conditions and constraints of the given site in Anneberg. We believe that the final results reflects our efforts in shaping the village complex as a friendly space, filled with architectural, residential and ecological qualities.

table of contents

abstract	2
about us	5
CONCEPT	
project goals	6-8
lifestyles	9
SITE ANALYSIS	
site analysis	10,11
DESIGN	
form evolution	12, 13
situational plan	14
situational diagrams	15
visualisation of cultivation garden - V1	16, 17
entrance floor	18
entrance floor diagrams	19
zoom-in north	20, 21
zoom-in south	22, 23
visualisation of a common area - V2	24, 25
second floor - plan	26
third floor - plan	27
apartment types	28, 29
visualisation of an apartment - V3	30, 31
section a-a	32, 33
section b-b	34, 35
daylight simulation	36, 37
emission balance	38, 39
facade - west	40, 41
facades - from outside the village	42, 43
3D overview	44
reflections and conclusions	45

about us

We are a group of three Chalmers Master students in Architecture. We come from different backgrounds, both in the sense of our countries of origin (Sweden and Poland) and the master programmes which we are taking, MPARC (Architecture and Urban Design) and MPDSD (Architecture and Planning Beyond Sustainability).

We formed the team, within which we developed the design exhibited in this booklet, in the particularly difficult time of the 2020 COVID-19 pandemic. We can gladly state that we all committed to the work in the unusual conditions of the lockdown, in order to complete the project without compromising its quality, while still enjoying the process and the learning that comes from it.



architectural qualities

residential qualities



Tactile Materials

The architectural design should stimulate the senses of the residents to improve their quality of life and comfort.



Village Typology / Small Scale

The buildings should strive to resemble an actual village in terms of small, divided volumes with a maximum of two floors.



Daylight

The indoor and outdoor environments should have good daylight conditions and there should be options to suit individual residents preferences.



Social Engagement

The village should provide social settings that simplify meetings. In addition to planned activities or visits, the settings should welcome spontaneous encounters.



Safety

The village should promote independence and privacy whilst being completely safe. The village should also be a safe place for all during current and future pandemics.



Stimulating Activities

The residents should have access to a variety of individual, social and physical activities which they can engage in based on their abilities and desires.



Walkability

The entire village should be accessible for all residents independently of their capabilities & provide a variety of spaces on multiple levels.



Lack of Visual Boundaries

To boost the feeling of freedom among residents, visual boundaries such as fences should be kept to a minimum.



Contextualization

The architecture should connect to the context of Anneberg and Kungbacka. It should take inspiration from local typologies, materials, colors and details.



Recognition and Wayfinding

Design elements should be used to simplify wayfinding. This could promote independence and a reduction of stresslevels among residents.



Lifestyle Adaptation

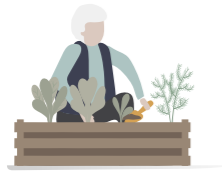
The units should support a range of popular lifestyles/ interests in order to create a larger sense of home for the residents.



Contact with Nature

The village should enhance everyone's connection to nature through outdoor views, environments and activities.

ecological qualities



Local Food Production

The village should have space for its own and/or cooperative cultivation. The produce can be used within the village itself or be sold at arranged village markets.



Low Carbon Emissions

The village should strive to be as emissionfree as possible. The buildings should have massive-wood structures and the use of concrete should be minimized.



Biologically Active Space

Biodiversity within the village should be promoted through an abundance of greenery and plantation. This will benefit the local environment as well as its inhabitants.



food, cooking & baking

for those who enjoy food, the village includes a restaurant, grocery shop and its own production of edible goods

handiwork, craft & art

the village shop supports creativity among residents, and their creations can later be exhibited or sold at hosted village markets



beauty & fashion

the village offers a selection of fashion in the second-hand store as well as beauty products and treatments in the salon



music, theatre, movies & literature

the integration of a library and a flexible space on the second floor supports a variety of activities and events



health & fitness

the active garden creates opportunities for light exercise among residents, and the gym is available for those who enjoy staying more active



nature, animals & cultivation/plantation

for the those with a love for the outdoors, the village incorporates gardens of different characteristics and winter gardens between the units



sports, games, TV & computer games

the village offers something for everyone by hosting game and sports nights in the flexible space or in the restaurant and café



site analysis

site analysis

references from Anneberg & Kungsbacka



VIEWS:



riverside



greenery / park



housing,
up to 2 storeys



apartment houses,
over 2 storeys

RISKS:



drowning



rocks



car accidents



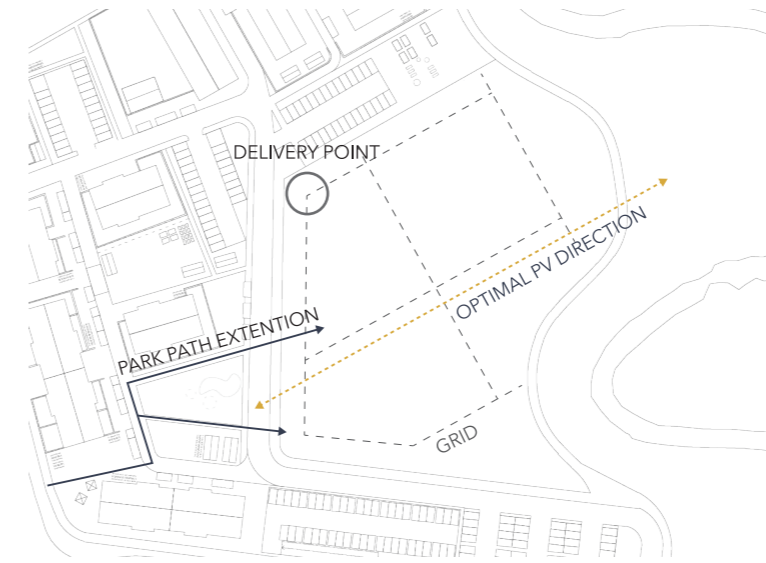
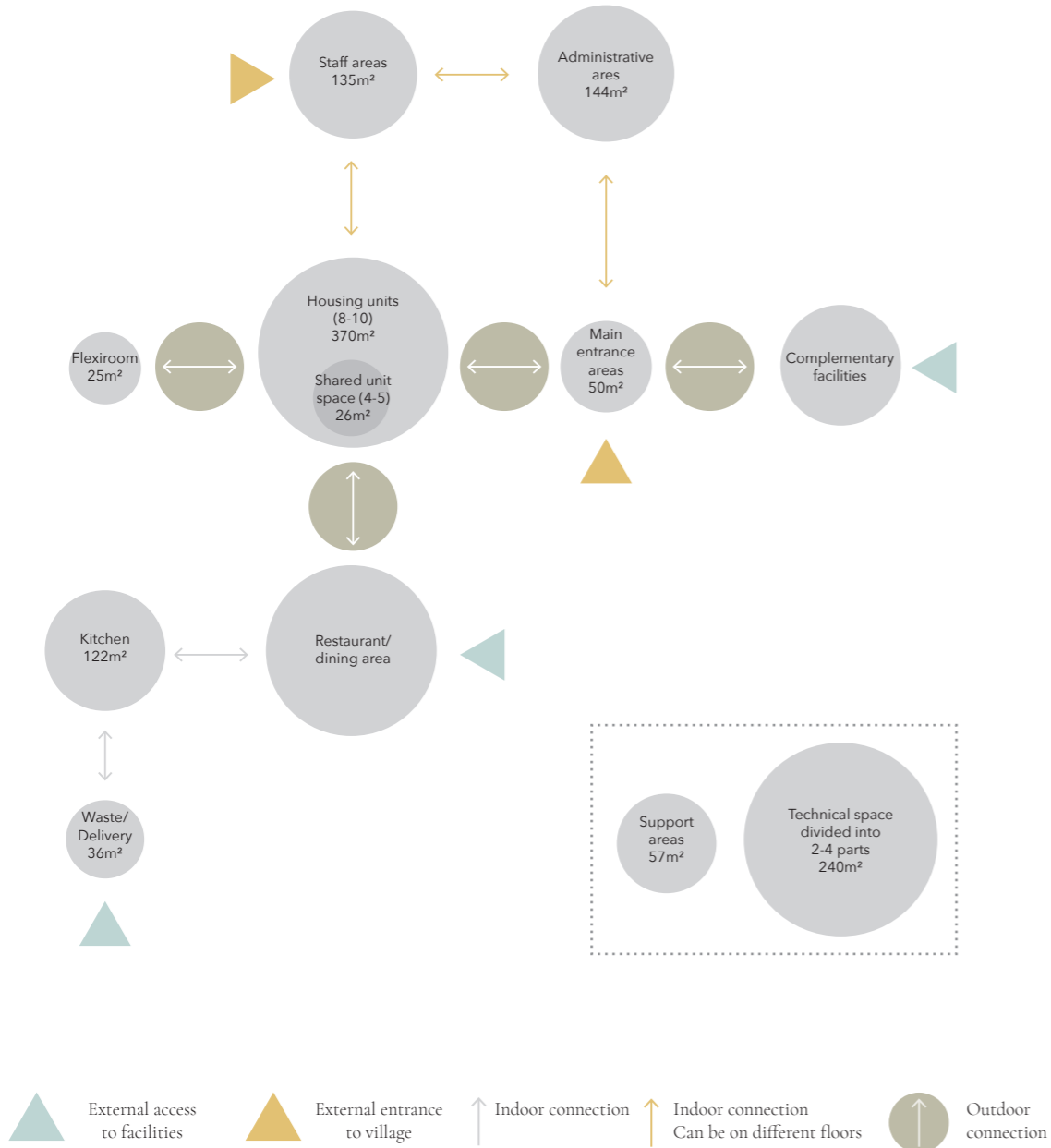
delivery trucks



railway

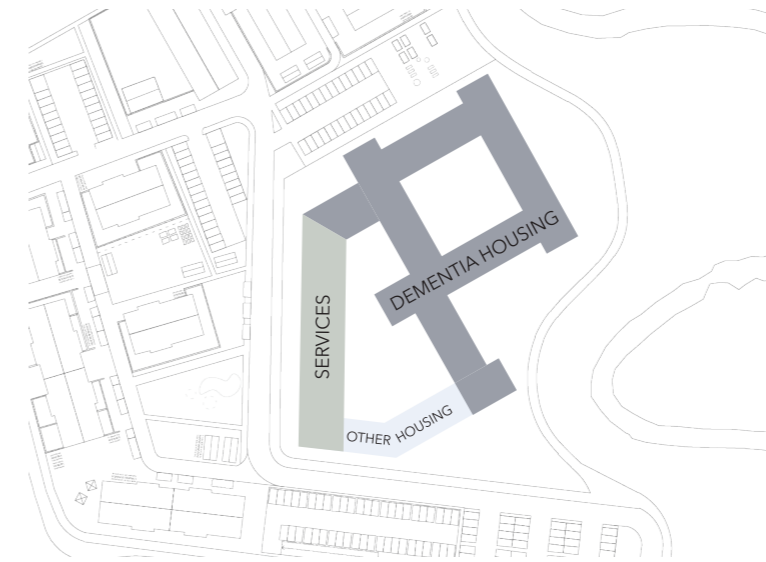


brief organisation



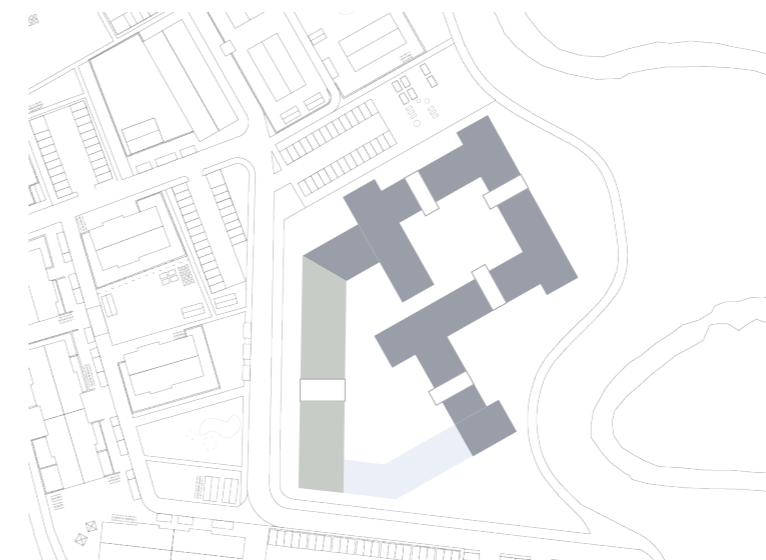
analysis

the optimal angle for PV placement, strategic positioning of the entrance to the village and deliveries guided the design process



zoning

the dementia housing is placed toward the greenery in the east, while the services, accesible for residents and visitors alike, is placed along the street with the other housing in the south



dividing the volume

the placement of the wintergardens between the volumes breaks them up and gives it the feeling of a village

design

situation plan

It has been our objective from the start, to make the Dementia Village in Anneberg fit with its surroundings. We did not want it to dominate the landscape or to stand out when compared to the esthetics of the rest of the neighbourhood.

The volumes of the complex are designed in a way to expose the gables of the buildings on the main view lines, while walking around Anneberg, rather than making the passerby limit their view range with a dead-end wall perspective.

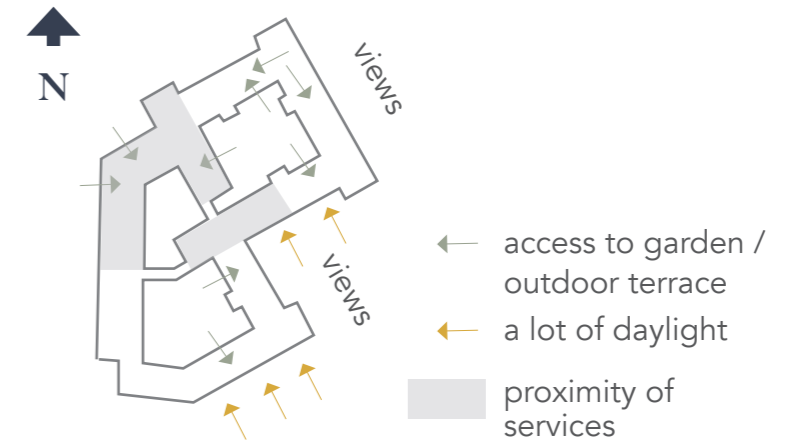
The roof pitches are also planned carefully, for the solar power optimization, which will help to make the Village powered by green energy.

We have conducted a profound study on the qualities of all of the sites on our plot and we worked to locate the dwelling units in the way which would benefit the residents the most, in terms of the daylight quality and variety and the views, which they would have from their private windows and balconies, as well as the common spaces.

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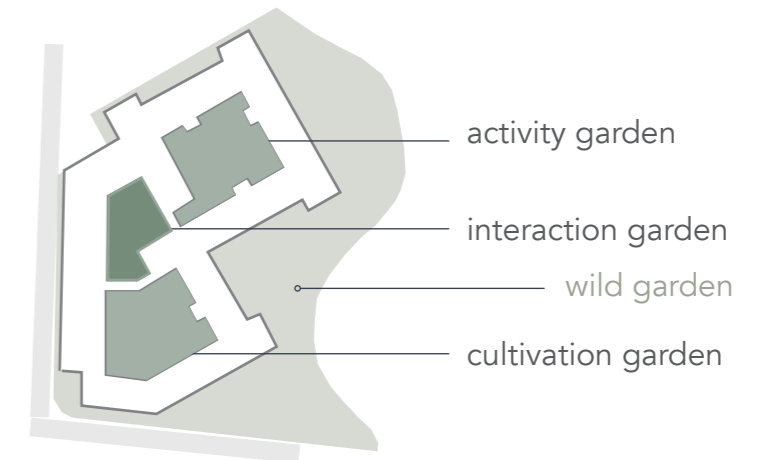
0 25 125 [m]

diagrams



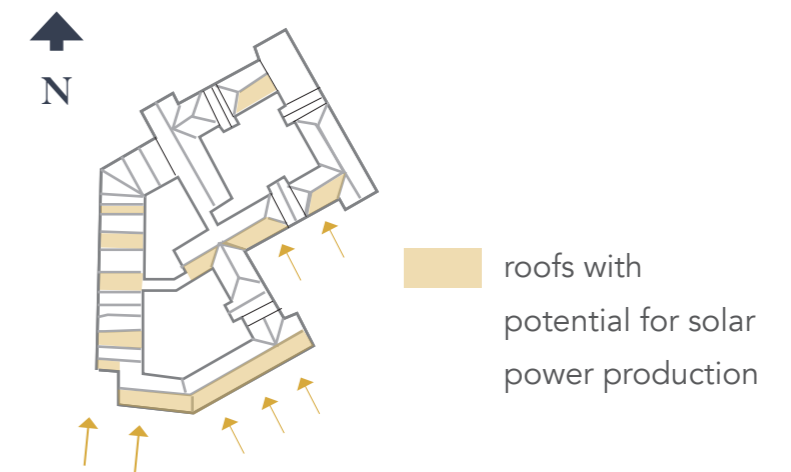
qualities on each side of the village - how the residents benefit

The spaces between the buildings in our village form gardens and courtyards - each of them designed with a unique theme, allowing the residents to choose from a variety of atmospheres and activities.



types of gardens and location of the greenhouses

The village volumes were composed in such a way, to maximize the potential for producing solar power. Most of its biggest area roofs have the southern exposition and the slope of the roof ensures efficient functioning of solar panels.



solar panel scheme - benefitting from orientation



design

visualisation of the cultivation garden - VI

We provided connections for walkability under-roof and the outdoor terraces, as well as through the gardens and the courtyards

The variety of expressions in the facades and volumes ensures easier way-finding experience

The greenhouses allow for an easy passage from one to the other side of the most of the buildings, without having to go through units

The village offers a variety of gardens and courtyards, more programmed or more relaxed, depending what the residents are looking for, in the time they dedicate to relaxing outdoors.

This variety contributes to the ease of finding your way around the village.



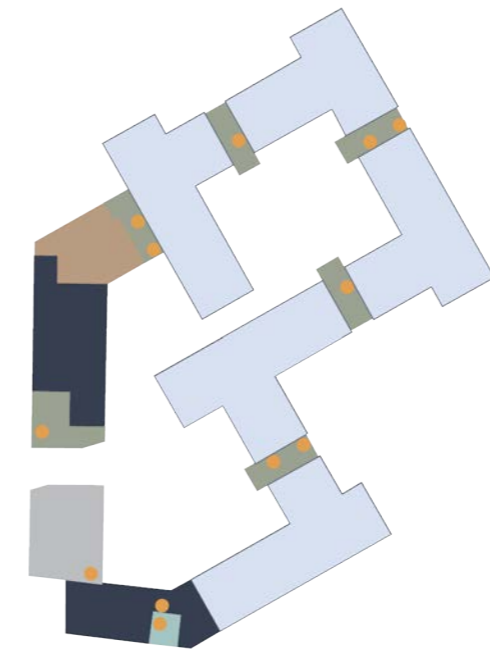
design

ground floor



zones & flows diagrams

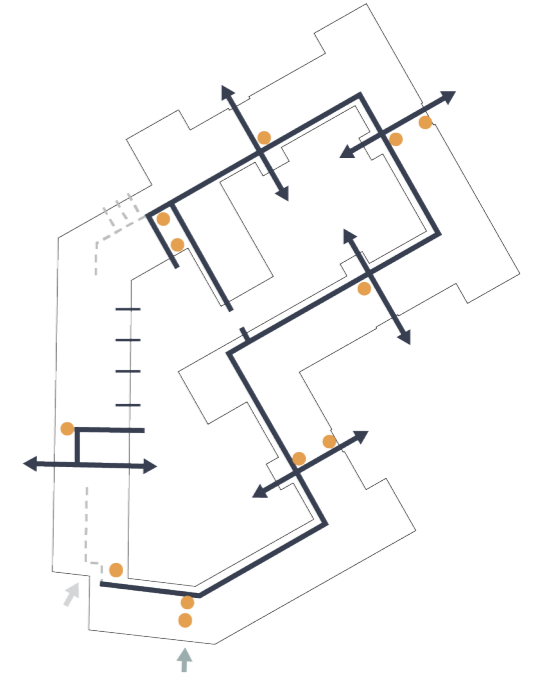
functions



first floor

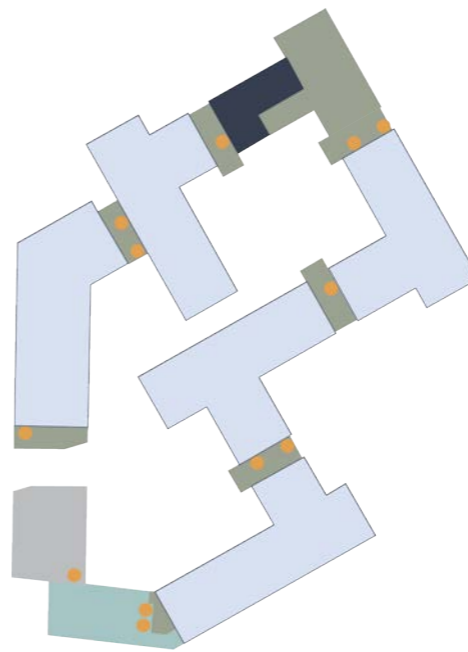
- units
- shared space
- common functions
- staff
- kitchen
- external tenants
- communication

flows

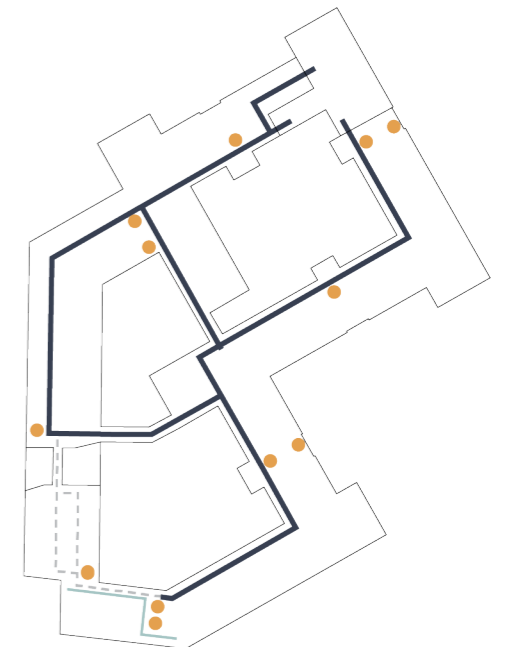


first floor

- entrance & passageway
- resident, staff, visitors
- staff only
- entrance staff
- entrance external ten.
- communication



second floor



second floor

design

zoom-in north

SCALE 1:200



DELIVERIES

UNIT-TERRACE

BOULECOURT

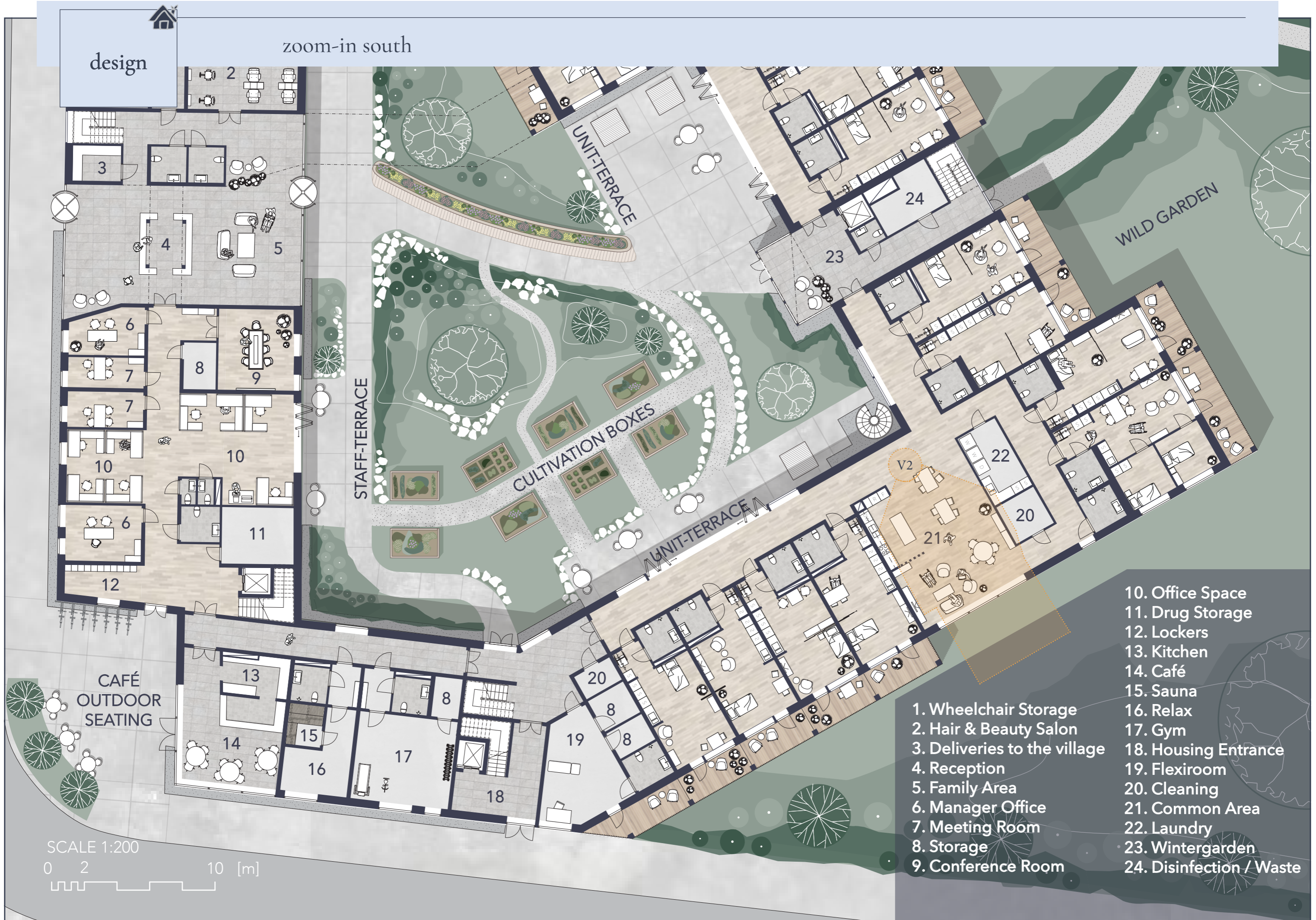
OUTDOOR GYM

RESTAURANT
OUTDOOR SEATING

- 1. Sprinkler Room
- 2. Grocery Store
- 3. Craft Store
- 4. Bar
- 5. Restaurant
- 6. District Heating
- 7. Incoming Electricity
- 8. Kitchen
- 9. Dish Room
- 10. Fridge
- 11. Freezer
- 12. Delivery
- 13. Waste - Kitchen
- 14. Waste - Units
- 15. Storage - Residents
- 16. Changing Room
- 17. Disinfection / Waste
- 18. Central Storage
- 19. Laundry
- 20. Common Area
- 21. Wintergarden
- 22. Storage - Units
- 23. Cleaning

design

zoom-in south



- 10. Office Space
- 11. Drug Storage
- 12. Lockers
- 13. Kitchen
- 14. Café
- 15. Sauna
- 16. Relax
- 17. Gym
- 18. Housing Entrance
- 19. Flexiroom
- 20. Cleaning
- 21. Common Area
- 22. Laundry
- 23. Wintergarden
- 24. Disinfection / Waste

- 1. Wheelchair Storage
- 2. Hair & Beauty Salon
- 3. Deliveries to the village
- 4. Reception
- 5. Family Area
- 6. Manager Office
- 7. Meeting Room
- 8. Storage
- 9. Conference Room

SCALE 1:200
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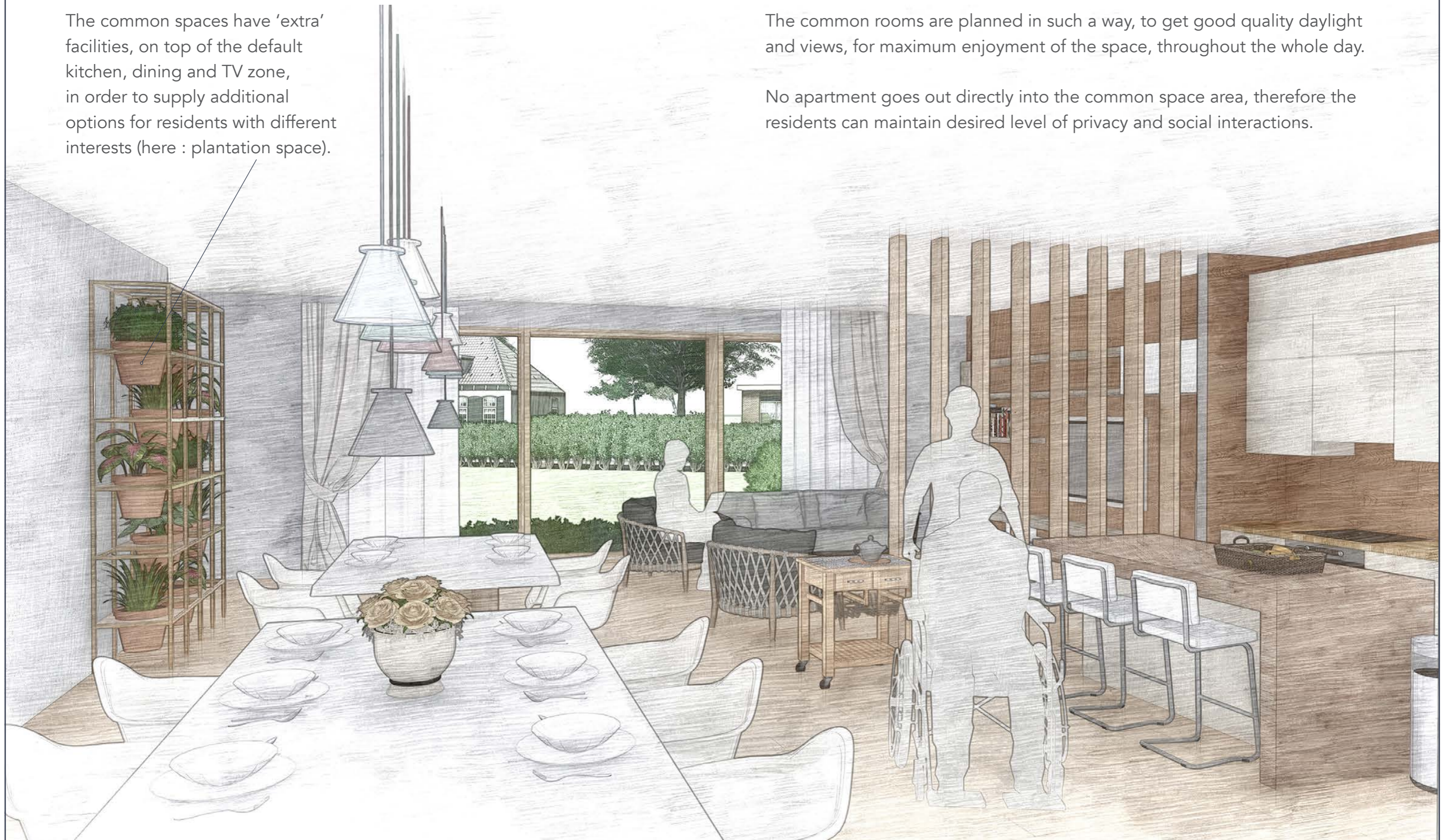
design

visualisation of a common area - V2

The common spaces have 'extra' facilities, on top of the default kitchen, dining and TV zone, in order to supply additional options for residents with different interests (here : plantation space).

The common rooms are planned in such a way, to get good quality daylight and views, for maximum enjoyment of the space, throughout the whole day.

No apartment goes out directly into the common space area, therefore the residents can maintain desired level of privacy and social interactions.

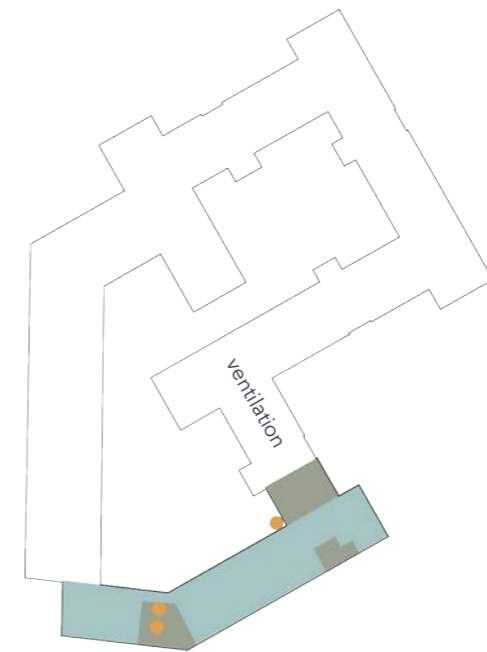


second floor



third floor

functions

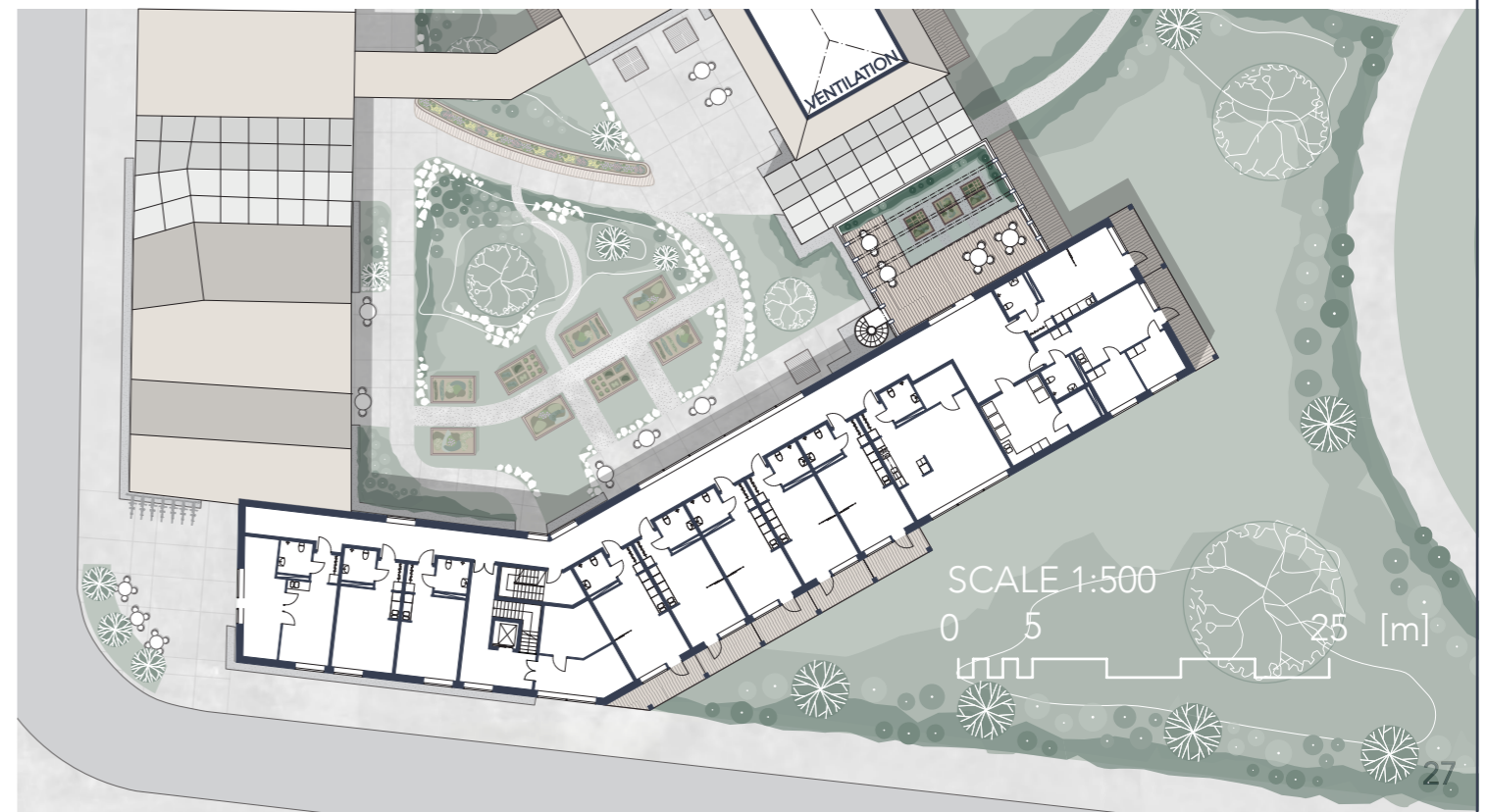


- shared space
- external tenants
- communication

third floor

The three-storey building in the southern part of the village contains apartments different than the ones planned for the residents of the dementia village. The presence of other tenants helps with making the neighborhood more vibrant, while not disturbing the functioning of the more internal parts of the village.

The second floor hosts a guest house, where families of the residents can stay for a short term. On the third floor, one can find commercial apartments, helping to create extra revenue for the village.



single apartment

a railing going from bed to bathroom for preventing fall accidents

the apartments are arranged in such way within the unit so that the bed area would be the furthest from noise sources

foldable wall for flexible space division

possibility of multiple furnishing versions and for swapping the bed and living room areas

private balcony / terrace in every apartment



twin apartment

all the double apartments are placed in the gables

the apartment allows for arranging separate bedrooms for troubled sleepers, or for extra day-space

the light gets in from two directions as the bedrooms have extra windows, compared to one-bedroom apartment type

SCALE 1:50
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design

visualisation of apartment - V3



The apartments are equipped with panoramic window and a glazed balcony door, to make the interior luminous.

The apartments are planned in a way, to have views which fit with the 'lifestyle' concept of the unit in which they are located.



design

section a-a

main materials in the project



wooden chunks



clay plaster



structural wood



glass



wooden mullions



vegetation



flooring



unit

kitchen & deliveries

unit

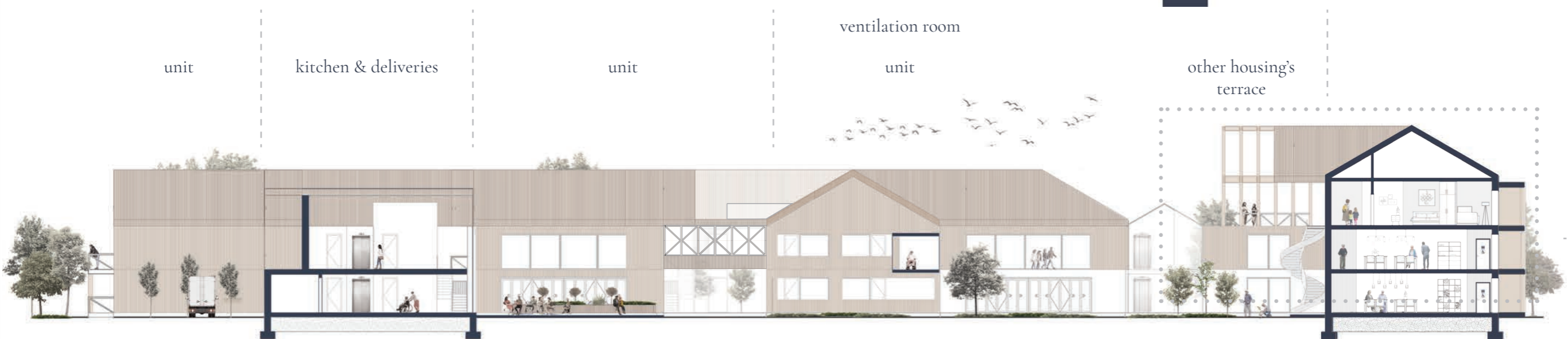
ventilation room

unit

other housing's terrace

other housing

unit



SCALE 1:300





design

section b-b



other housing

outdoor terrace

unit

unit

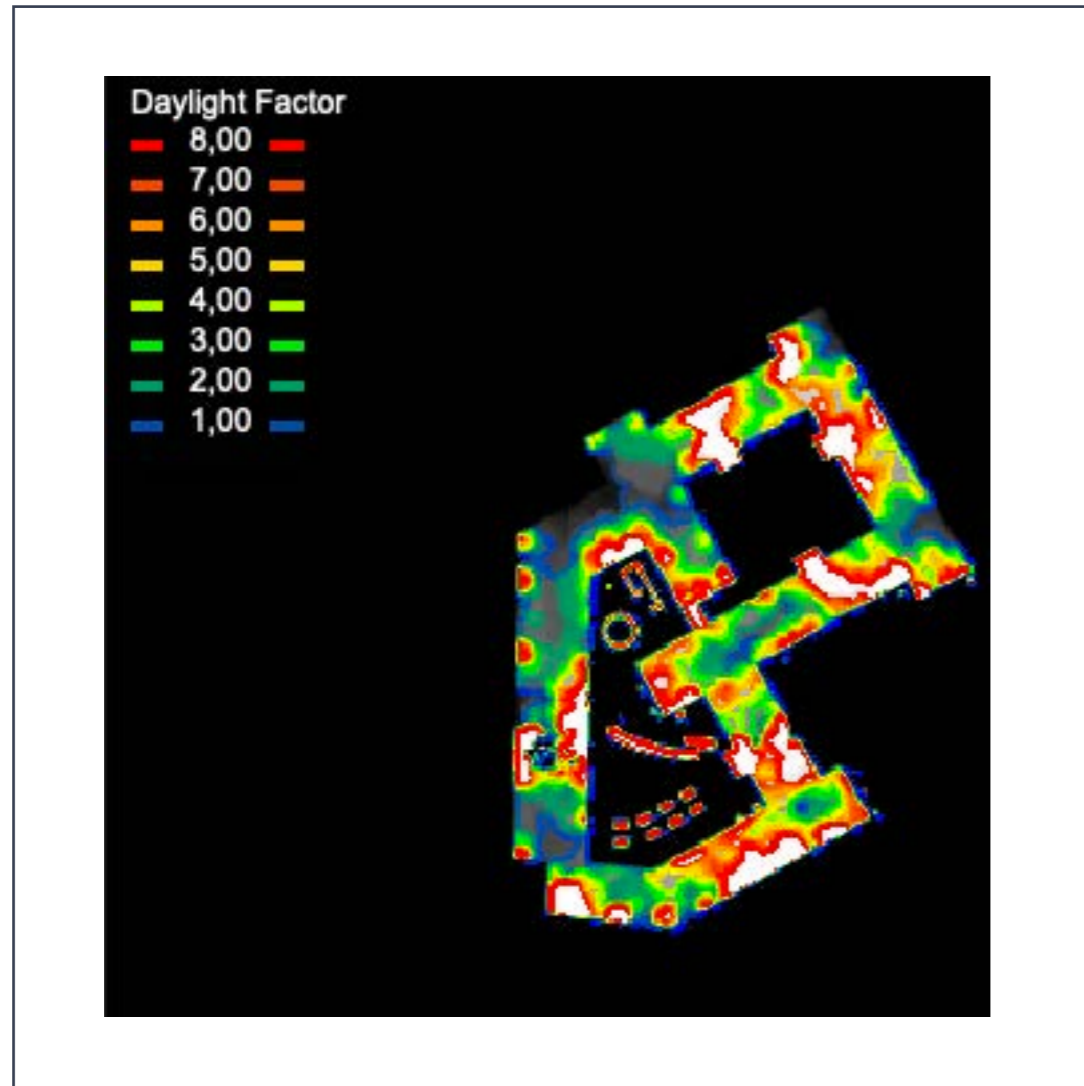
unit



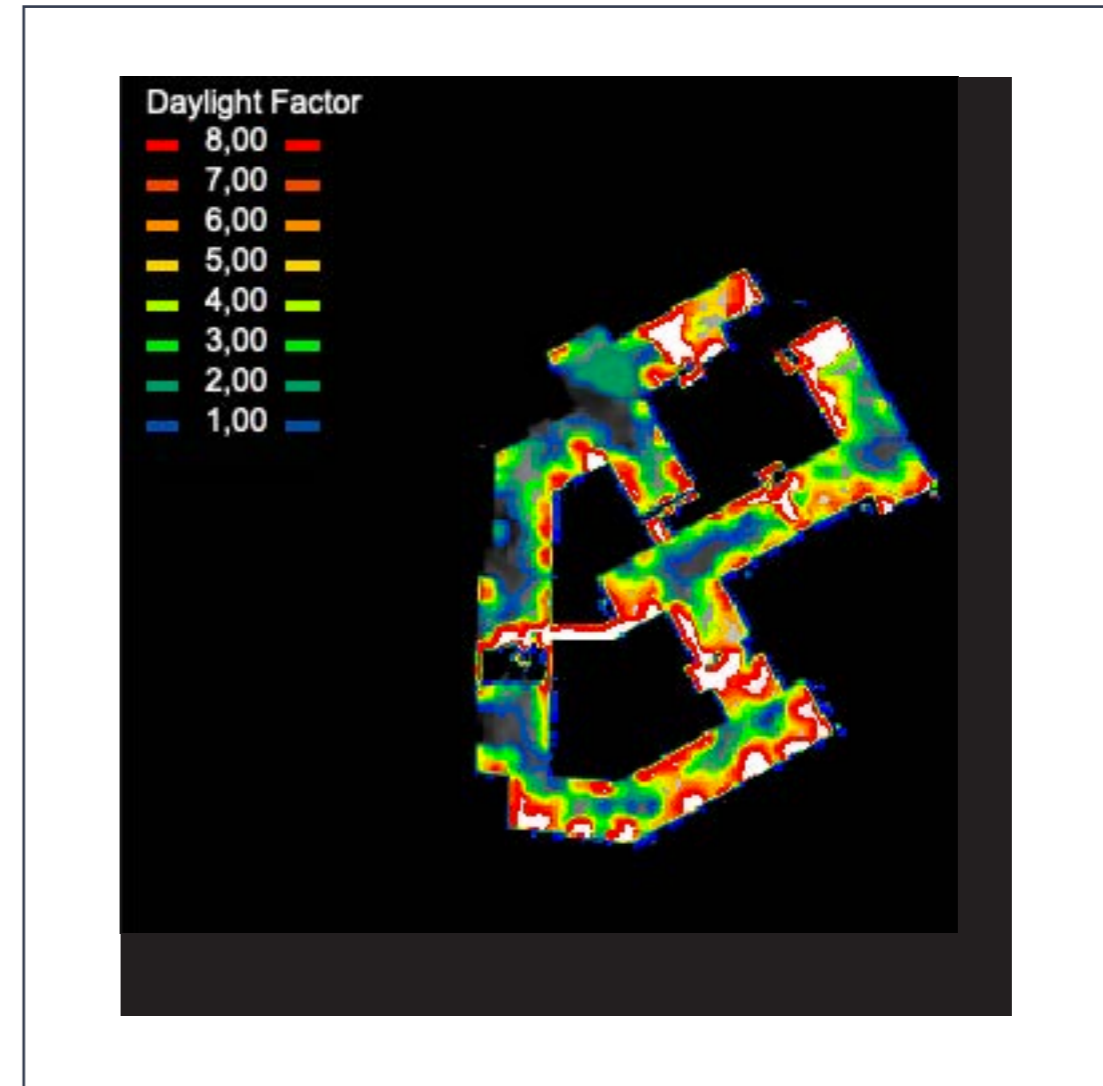
tech.

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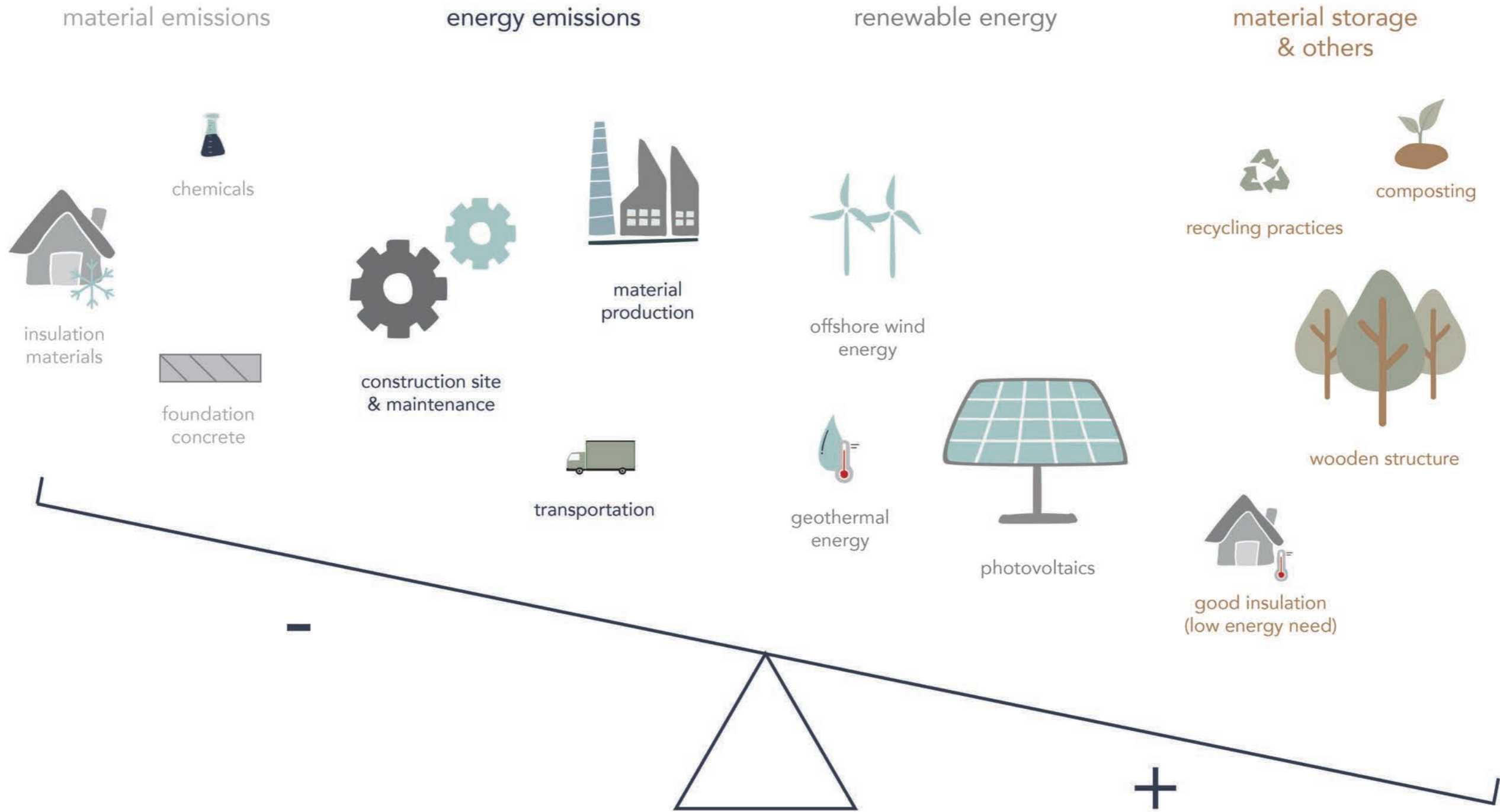


ground floor



second floor

The daylight simulations above show good or excellent conditions in the apartments and most of the common areas.





The material used on the bottom part of the western facade contributes to sustainable expression of the village - the wood chunks which it is designed with, can be retrieved as leftovers from other woodworks on site.

SCALE 1:50
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kitchen & deliveries

restaurant

shops & services

reception

staff & administration

rental housing



guest housing

SCALE 1:300
0 3 15 [m]



design

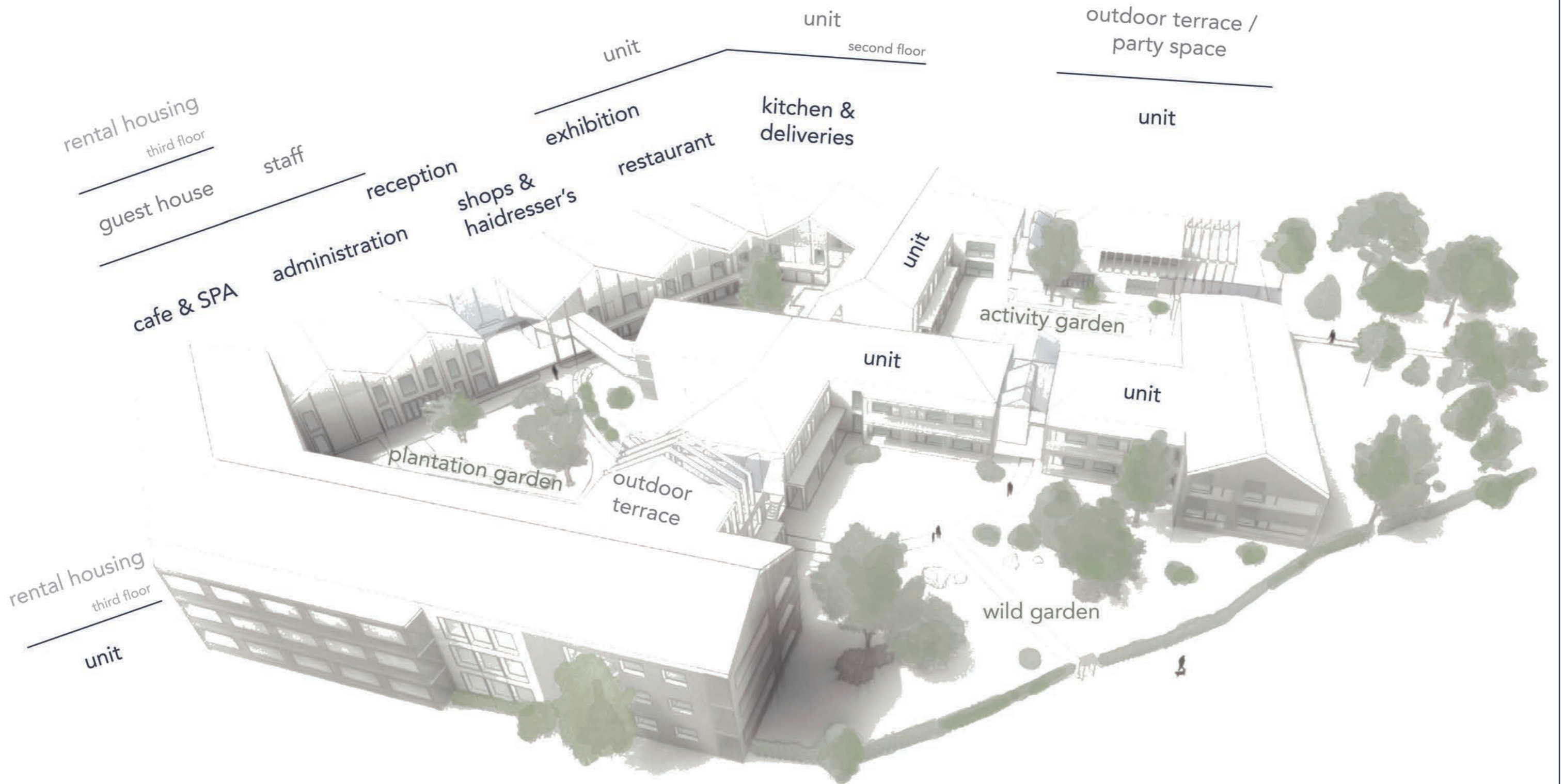
facades - from outside the village



The outdoor terrace in the north is equipped with its own kitchen and can be easily closed off for the village and rented out for external events, with the direct access through a greenhouse, from a parking lot.

On the southern side of the village, the balconies are enclosed by wooden mullion walls and equipped with blinds, which help with overheating and provide privacy, since the southern facade faces the street.





reflections & conclusions

From the perspective of having completed the project, we find the experience of working within the field of residential healthcare challenging, not only in aspect of the pragmatic, architectural design solutions, but also from the point of the empathy that one has to develop in order to understand the day-to-day functioning of a place such as senior housing and much more, a dementia village.

This semester we worked with the project in the particularly difficult time of the 2020 COVID-19 pandemic. It imposed additional challenges on our team, but we believe that we have balanced it out, with increased commitment to conducting project-related discussions, which helped us maintain the quality of its final outcome. We also tried to share and gain knowledge, despite the lack of the possibility to get peer-feedback on campus.

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