

“Dementia-Friendly design for Aging Couples: An Architectural Perspective”

P5 presentation
July 2nd 2024

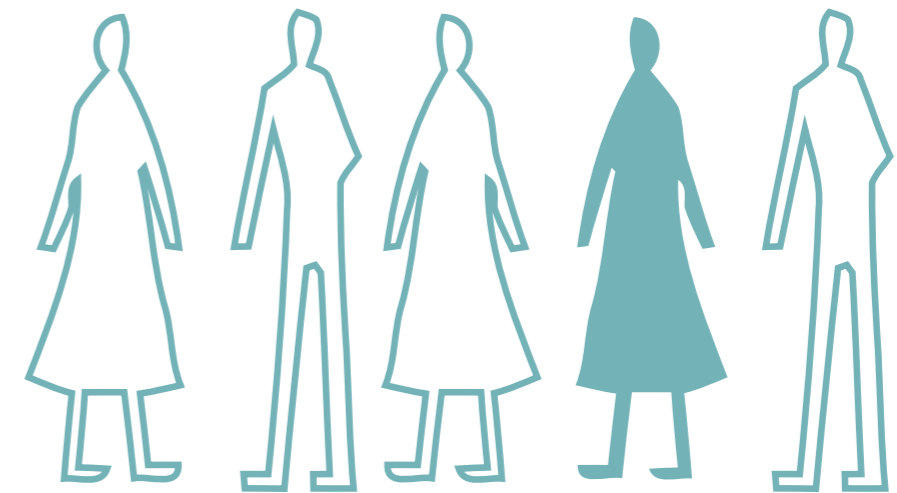
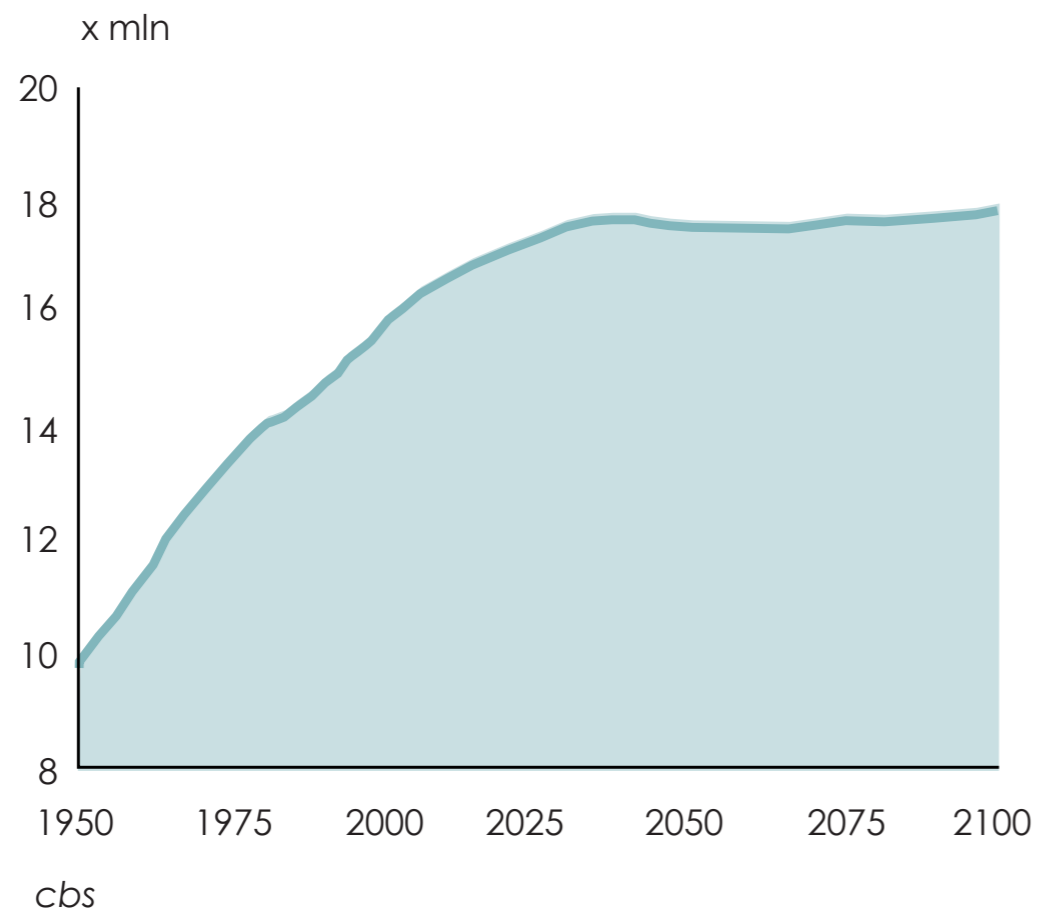


Muriël de Ridder

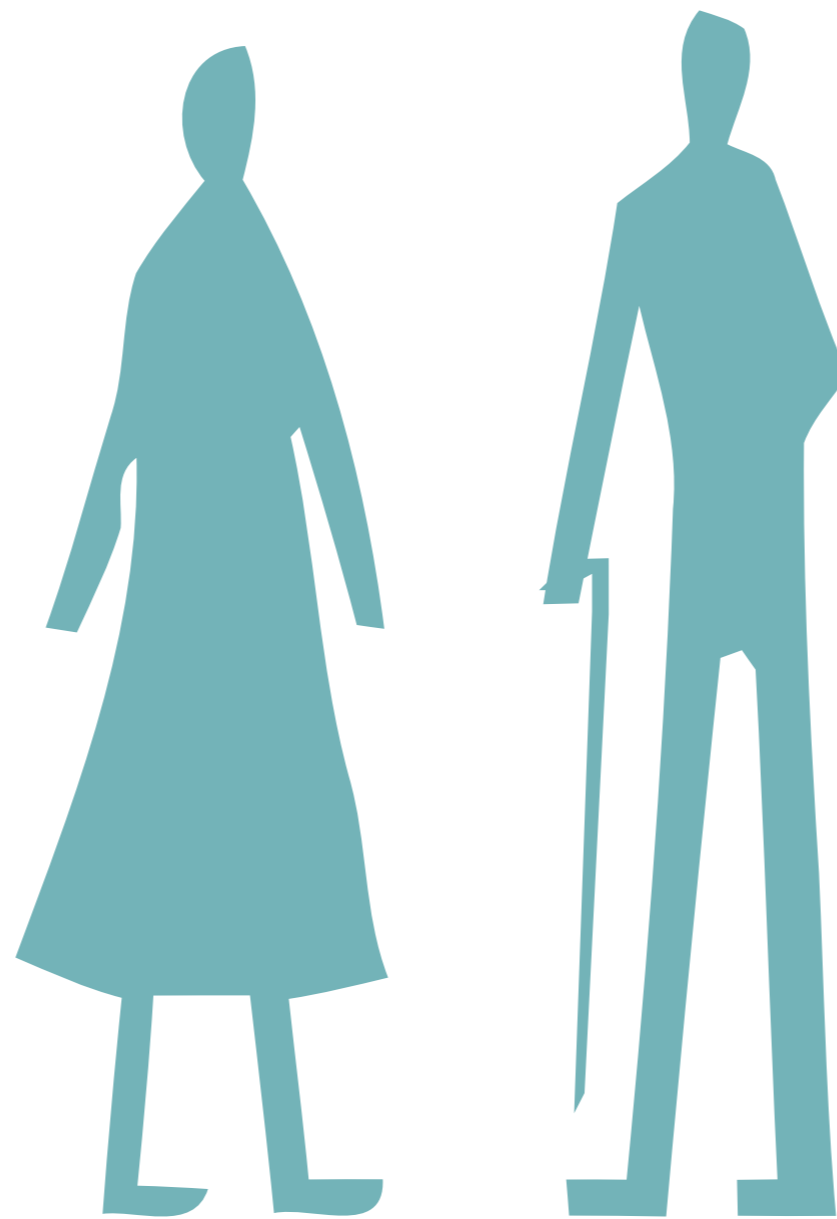
Dwelling Graduation Studio: Designing for Health and
Care in an Inclusive Environment

Designing for Health and Care

- Designing for people with specific needs
- **Growing elderly population** in the Netherlands (vergrijzing)
- 1 in 5 people develops symptoms of **dementia**



Connie & Will



Will has dementia



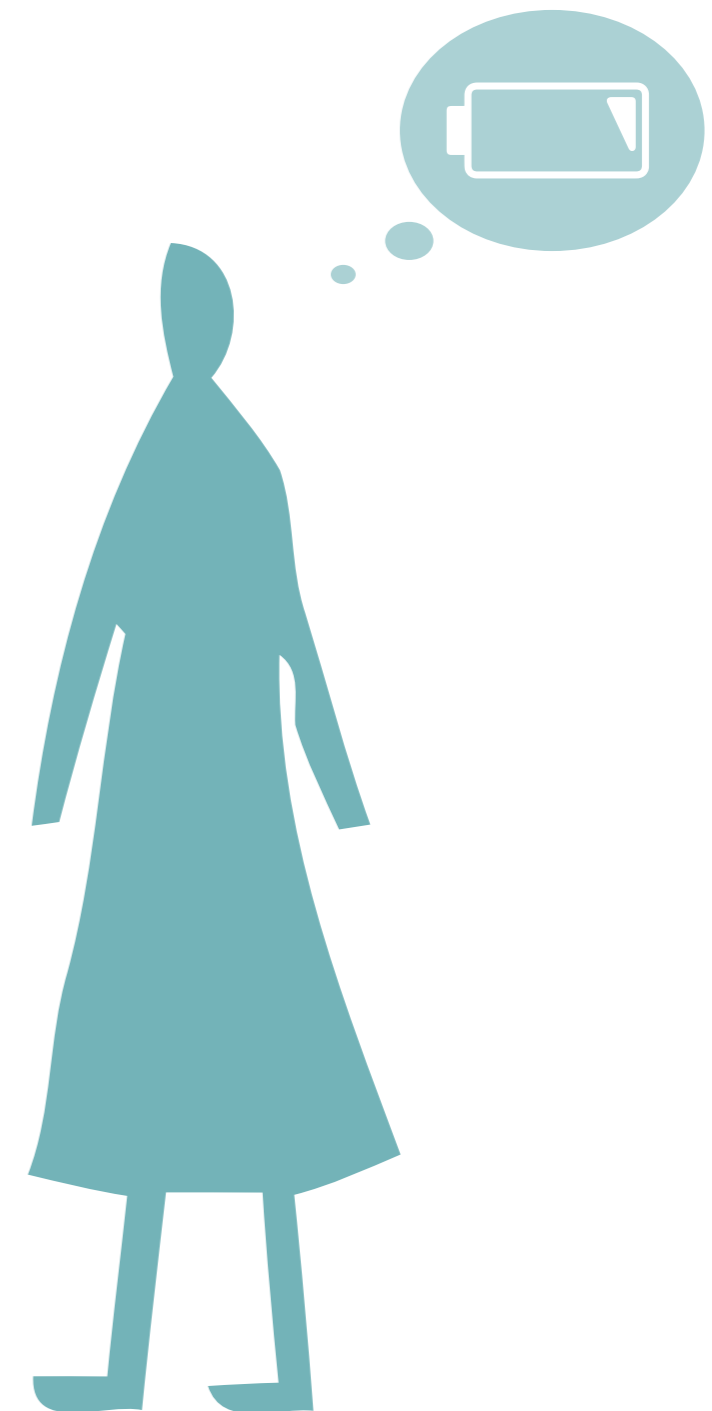
Connie becomes Wills informal caretaker



Caregiver burden

- Informal caregivers who live with and care for a person with dementia often feel fairly **burdened or overloaded (59%)**.
- More than **one in six** informal caregivers feels overloaded or heavily burdened. This often concerns the partners.
- **46%** of cohabitants report a disturbed night's sleep.

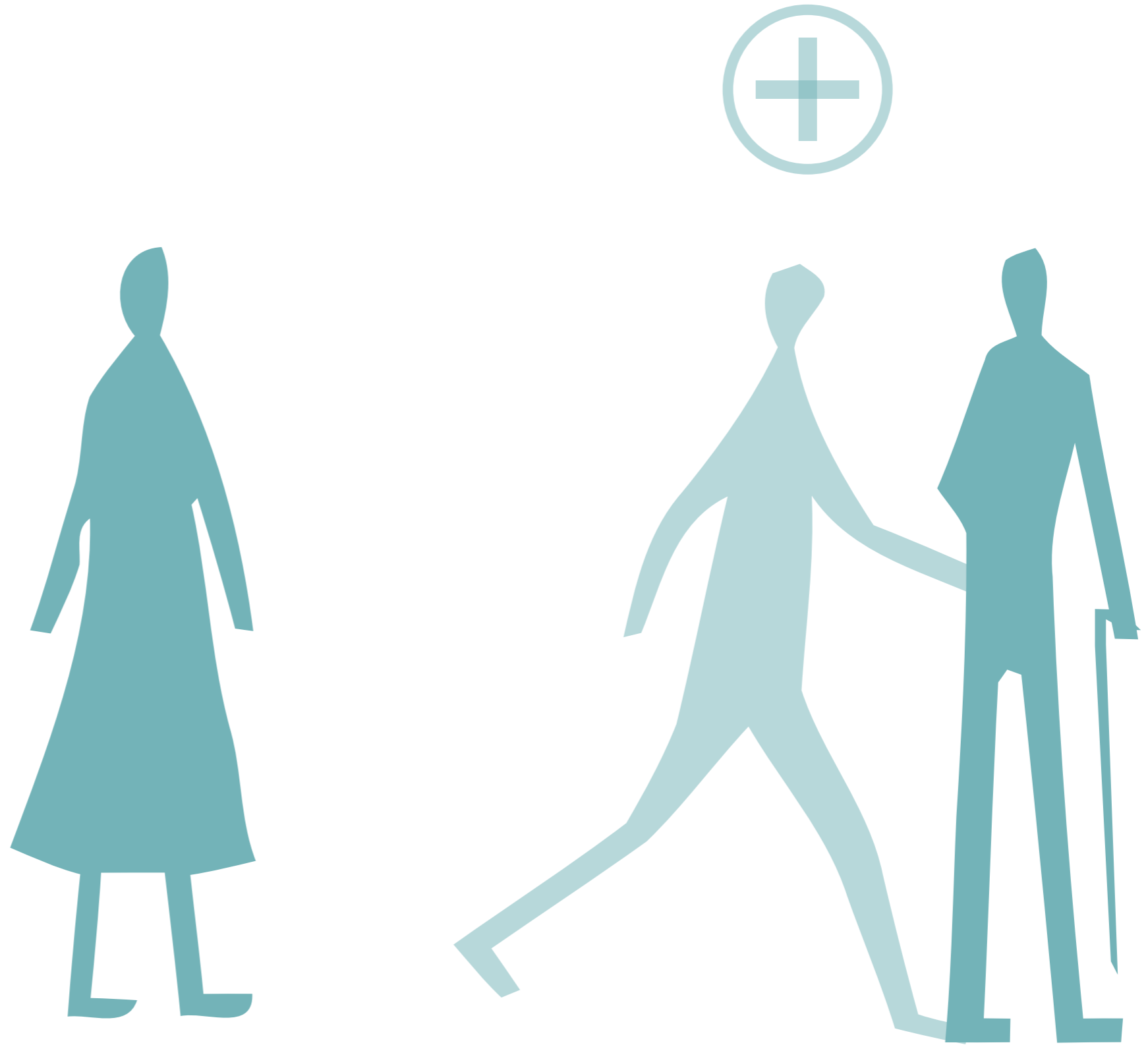
Alzheimer nederland



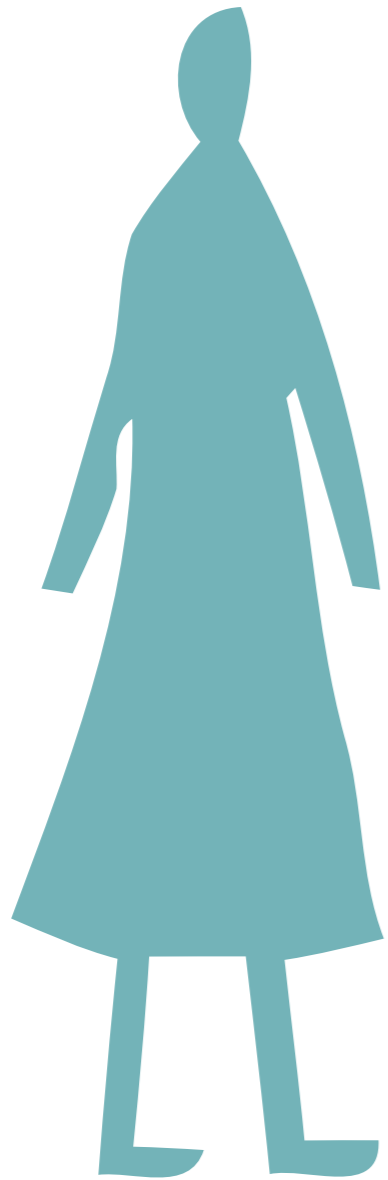
Will stays at home for as long as possible



Will moves to a care facility



Current situation

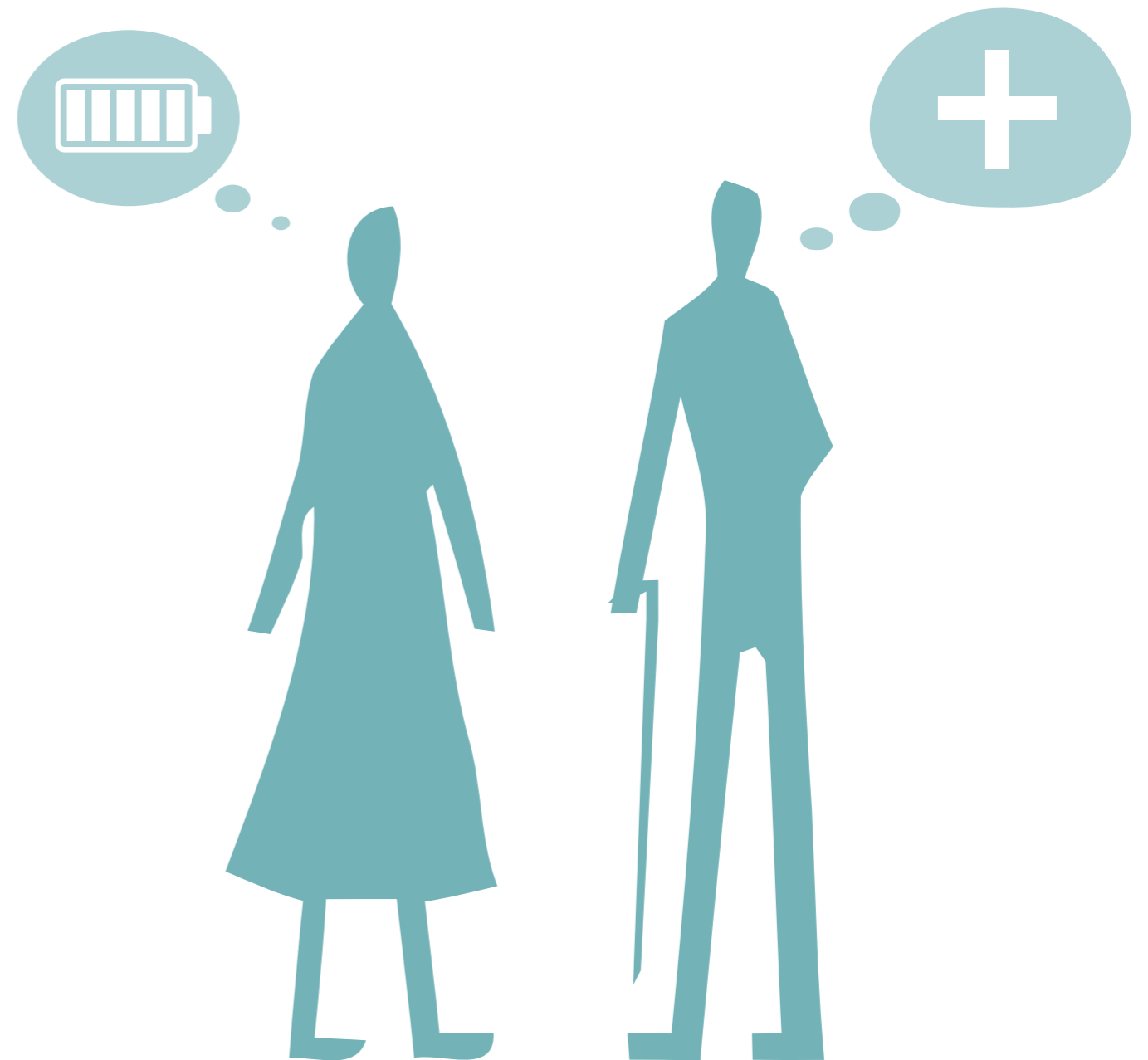




Portraits from the documentary "uit elkaar".

Research aim

- Identify and propose design solutions that cater the collective requirements of both individuals.
- This involves recognizing the needs of the person with dementia while also acknowledging the partner's role as an informal caretaker and cohabitant.



Research question

“What living environmental features can support elderly couples who wish to live together while one of them experiences dementia, to maintain their shared living arrangements?”

Fieldwork and interviews

“I said yes to good and bad times”

“I bike for 30 minutes everyday to visit my wife”

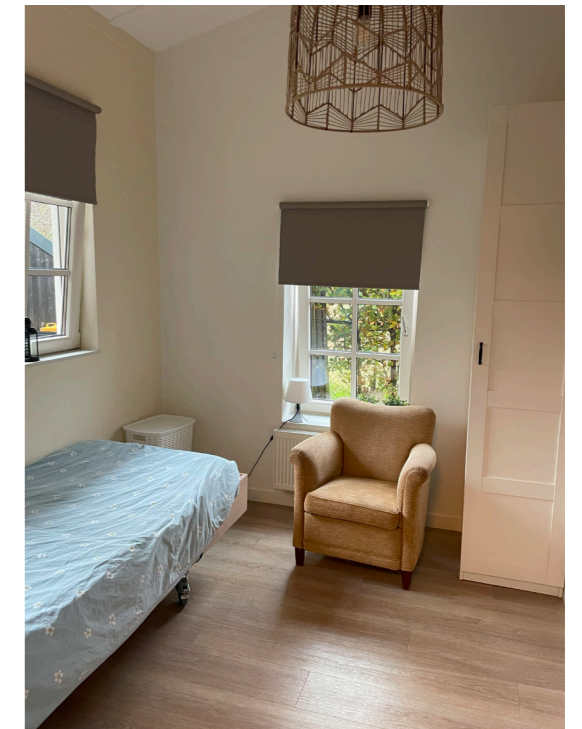
“My wife lives across the street in a care facility, so it is easy for me to visit her”.



Fieldworkweek



Location visit



Fieldworkweek

Conclusion: design guidelines



Personal furniture and elements ★★★★★



Small scale building/living ★★★★★



Visual accessibility between locations ★★★★★



Colour or textural contrast ★★★★★



Plants to reflect 'seasonal change' ★☆☆☆☆



Daycare ★★★★★



Flexible community spaces ★★★★★



Safety measures within home ★★★★★



Windows open to nature for positive sounds ★☆☆☆☆



Differentiations in size, form, color, and lighting ★☆☆☆☆



Implement circular walking routes in landscape ★☆☆☆☆



Utilize kitchen or living room as reference points ★☆☆☆☆



View outside from the corridor ★☆☆☆☆



Visit partner easily ★★★★★



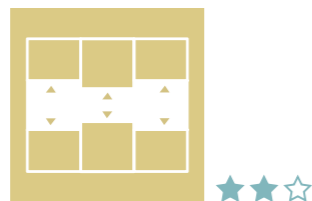
Spare room to retreat ★☆☆☆☆



Connection to neighbourhood ★☆☆☆☆



Circulation system of straight corridors ★☆☆☆☆



Rhythmic niches in hallways ★★★★★



Spaces for both retreat/privacy as well as social inclusion ★★★★★



Sufficient lighting indoors ★★★★★



Basic amenities nearby ★★★★★



Outside walking paths ★☆☆☆☆



Reduce noise by closing off rooms ★☆☆☆☆



Sequence of spaces ★☆☆☆☆



Vegetable garden ★☆☆☆☆



Provide shade in garden ★☆☆☆☆



Personal furniture and elements ★★★★★



Direct connection to outside and communal spaces ★★★★★



Safe wandering areas ★★★★★



No use of elevators ★☆☆☆☆



Decrease amount of repetitive doors ★☆☆☆☆



Navigation markers implemented in landscape ★☆☆☆☆



Additional space in bathroom ★☆☆☆☆



Include winter garden or a heated summer house ★☆☆☆☆



Acoustic insulation ★☆☆☆☆



Swimming pool nearby ★☆☆☆☆



Illuminate garden ★☆☆☆☆



Conclusion: design guidelines

Wayfinding

Home-like environment

Visibility

Accessibility

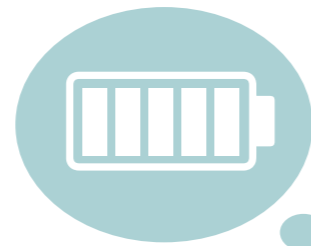


Conclusion: design guidelines

Take pressure off the healthy partner

Wayfinding

Live a normal life



Home-like environment

Ensuring safety of the affected partner

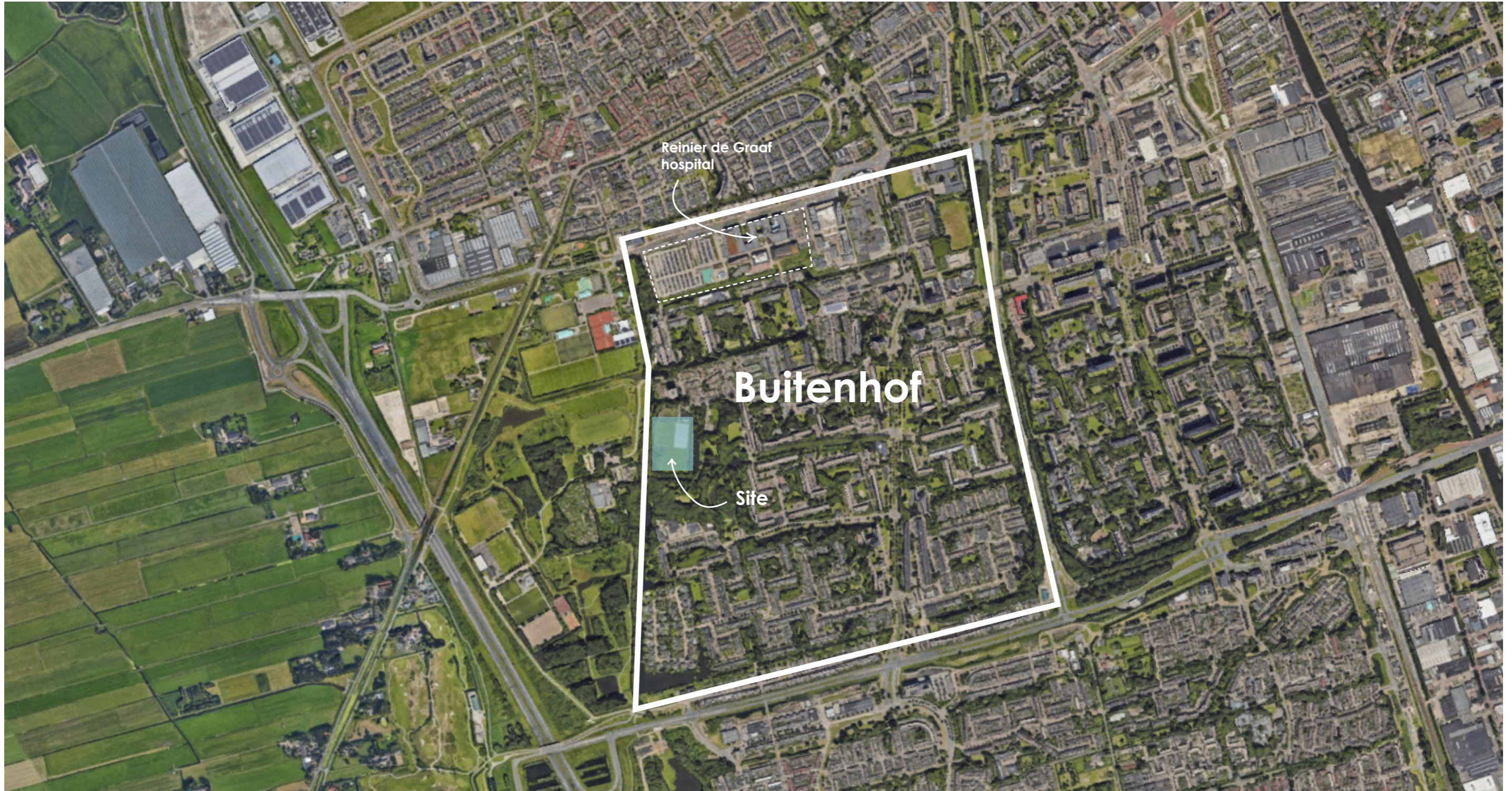


Visibility

Doing things together and apart

Accessibility

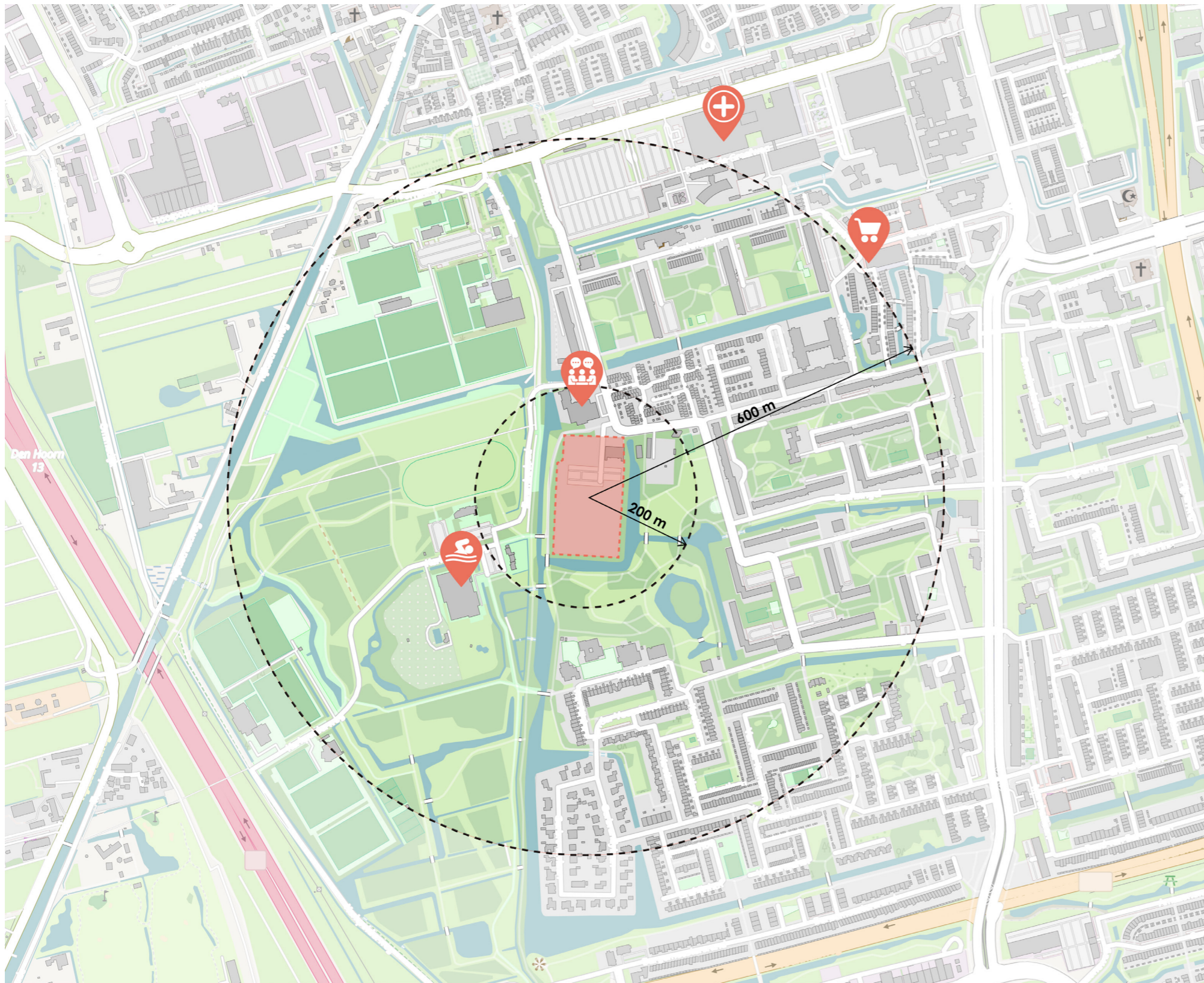
Location



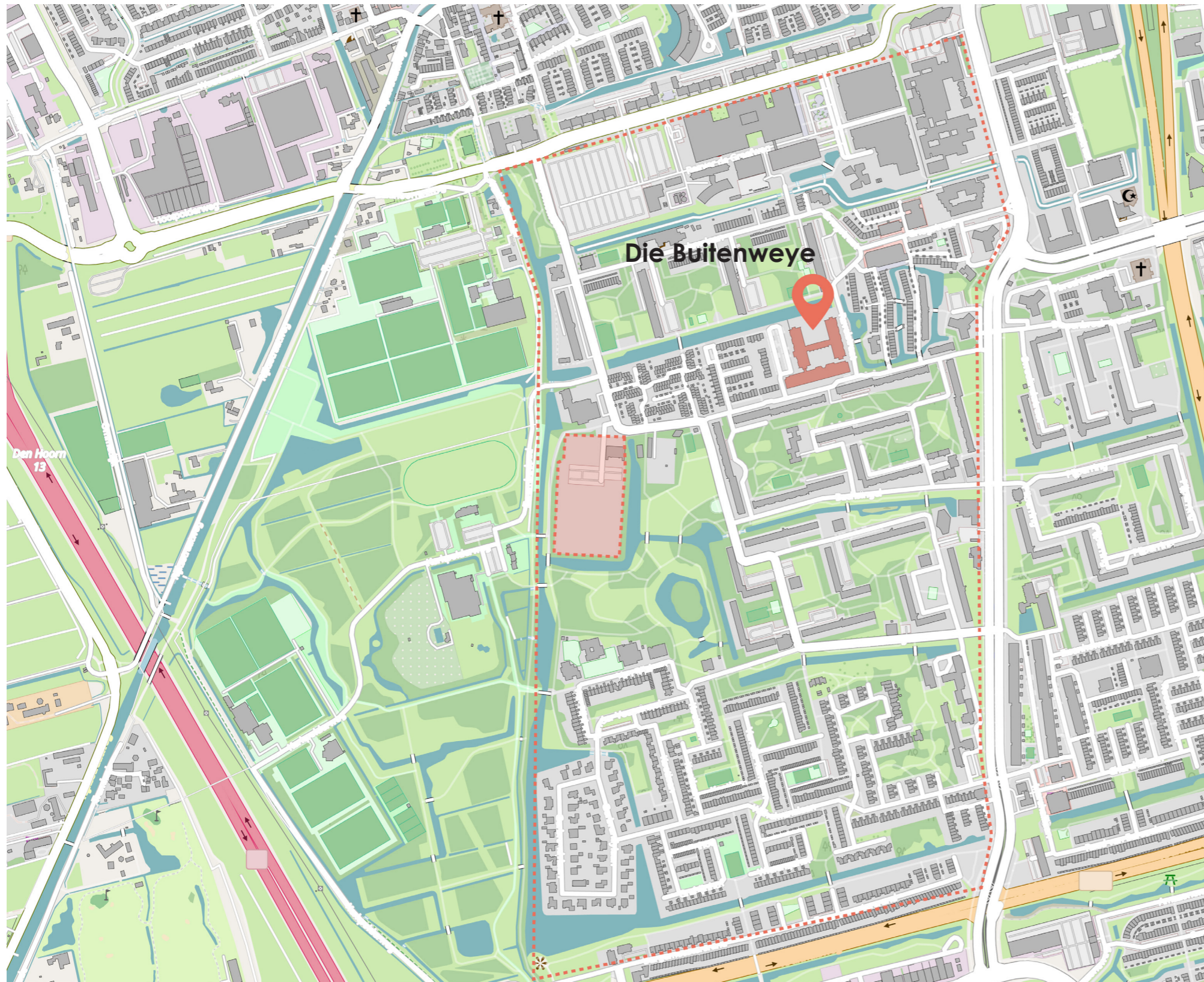
Location



Strengths: facilities and green



Weaknesses: lack of housing options



21% is 65+

Only one care facility for elderly with dementia (Die Buitenweye)

No option for the health partner

Opportunities: expanding the current dementia housing supply



Program



Small scale living group for people with dementia



Two person apartment, where one has dementia



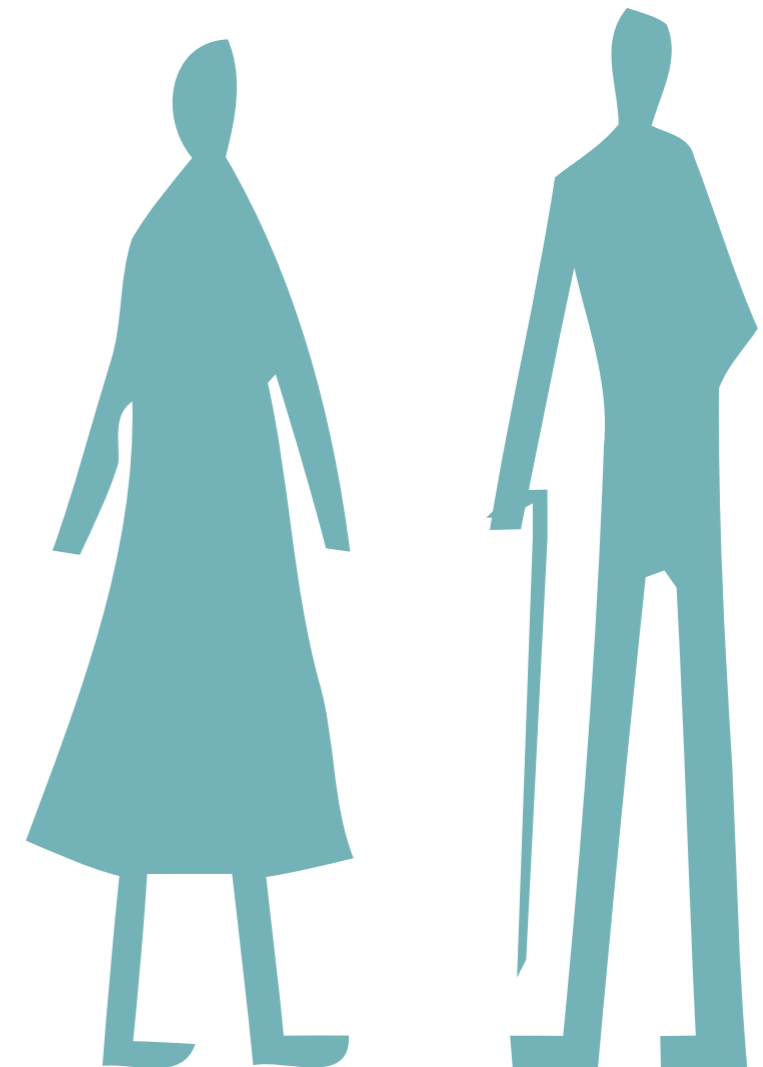
One person apartment, elderly without dementia



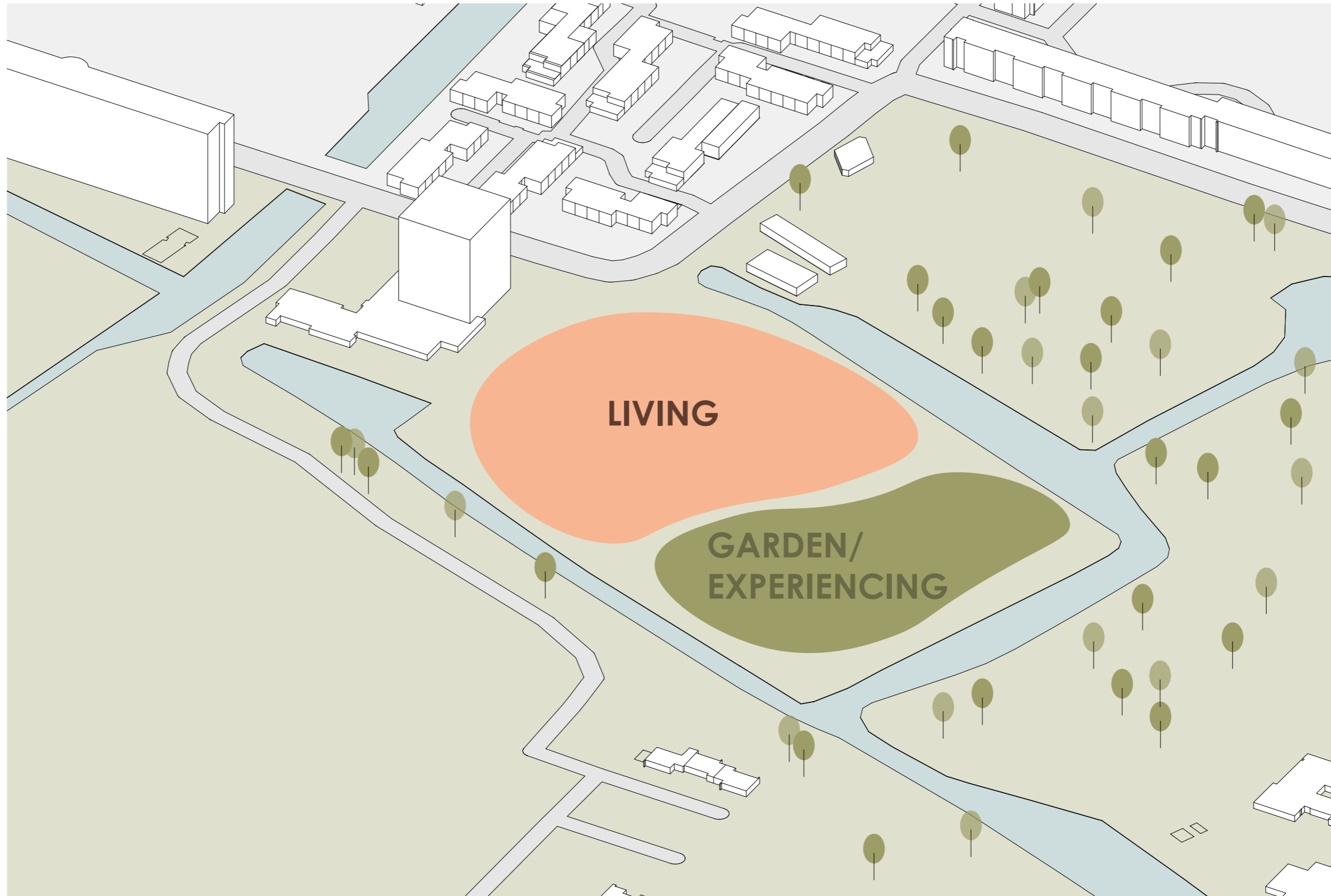
Public space



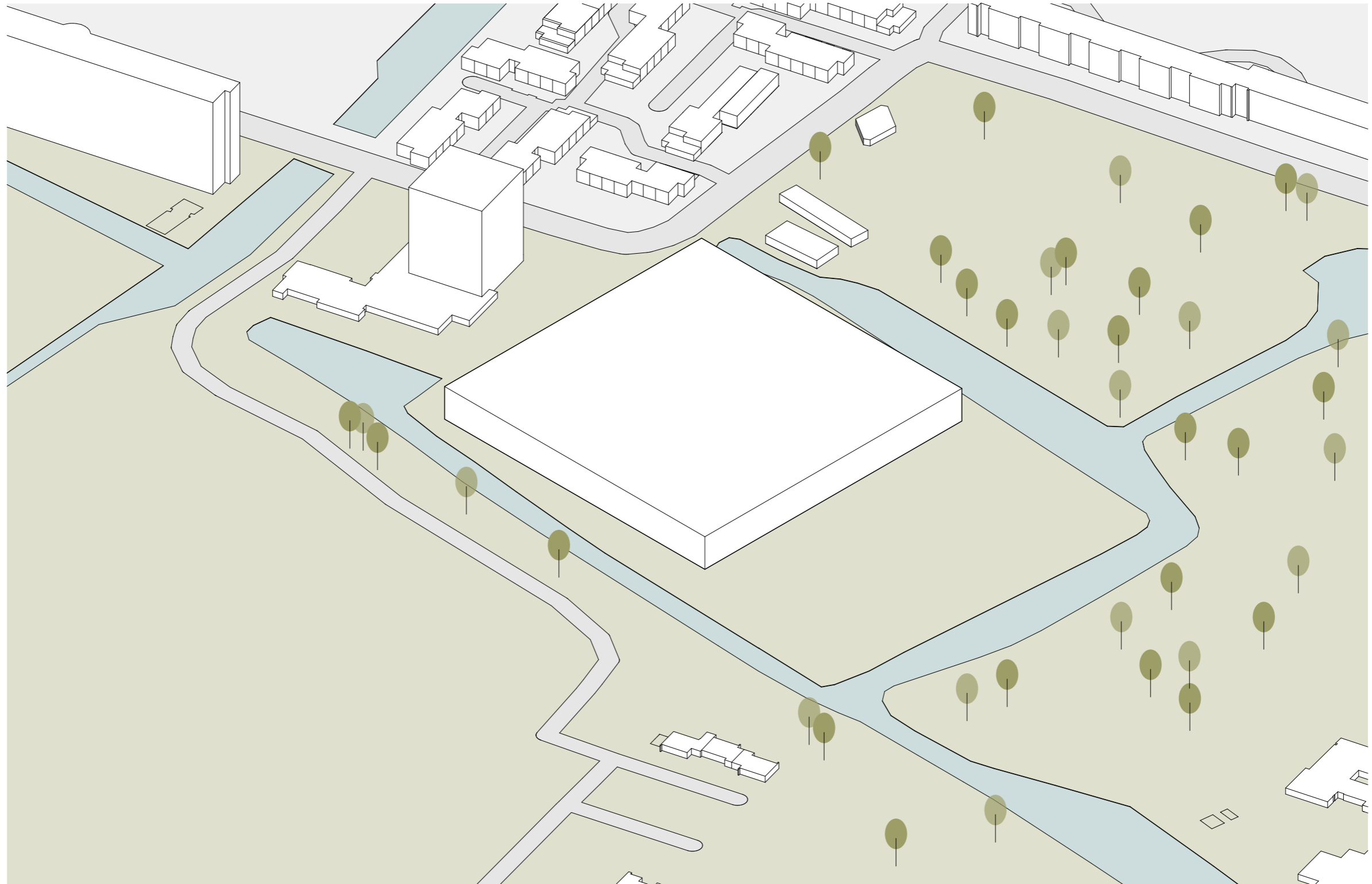
Room for caregivers



Zones



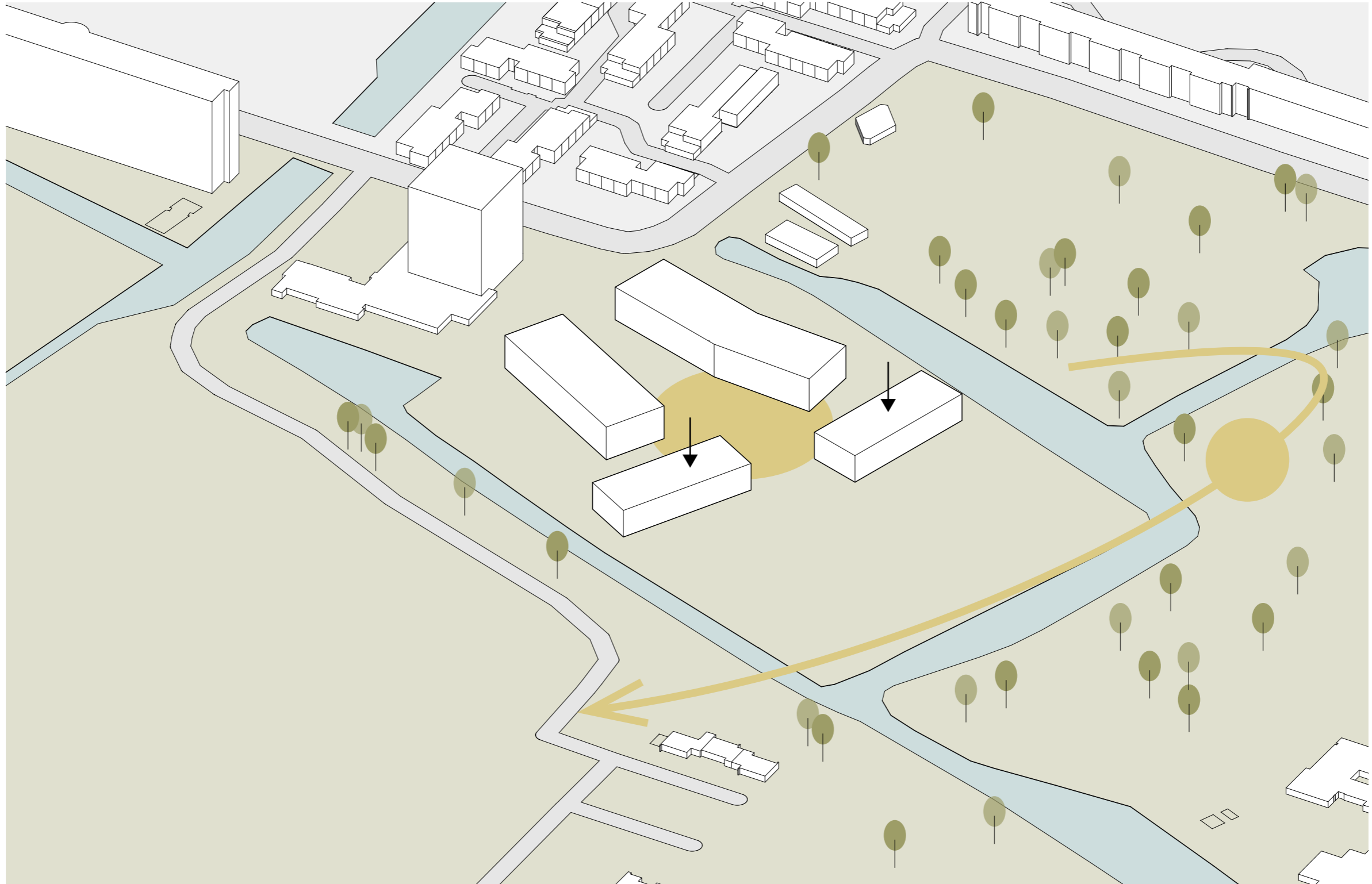
Massing



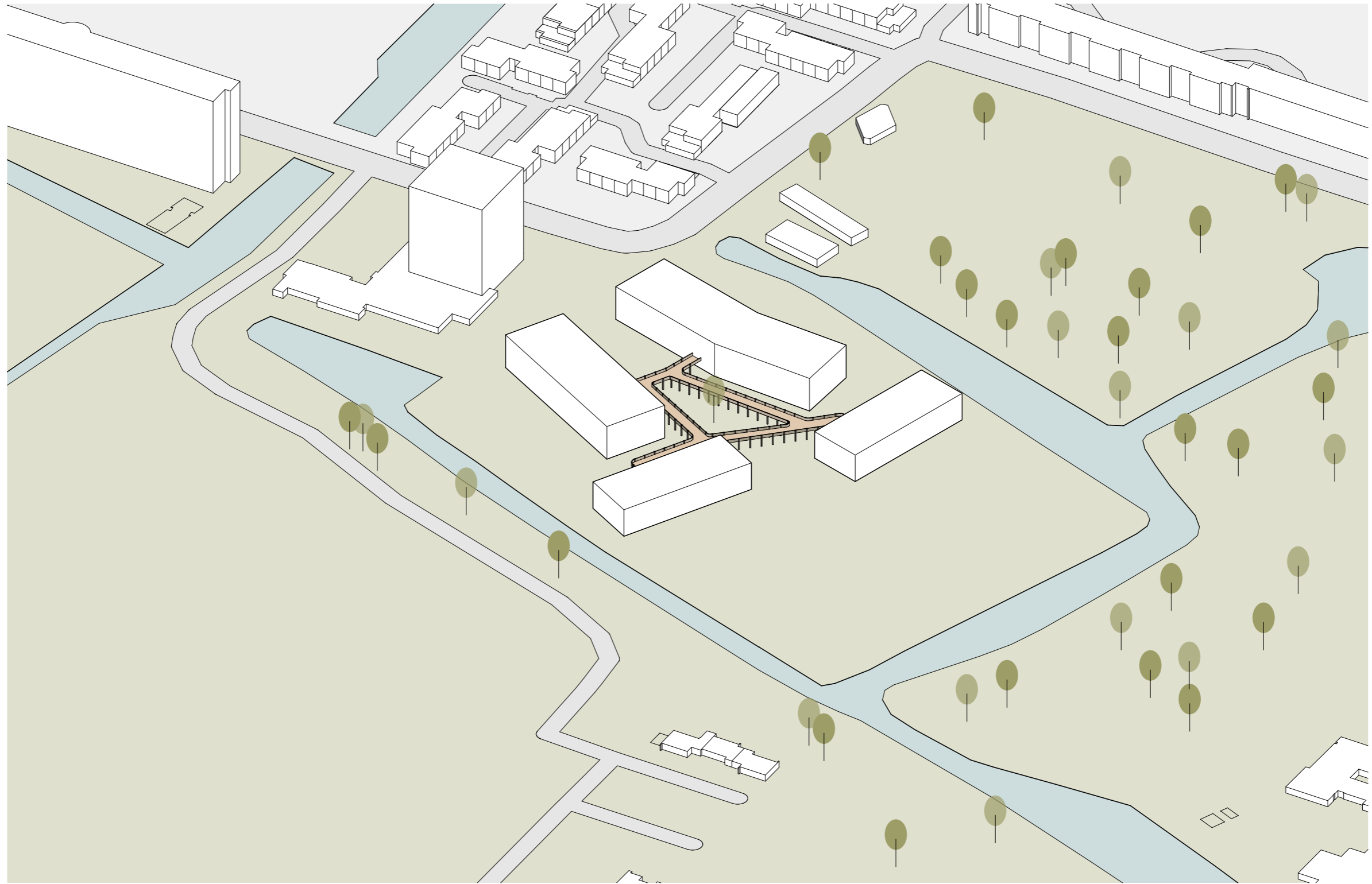
Massing

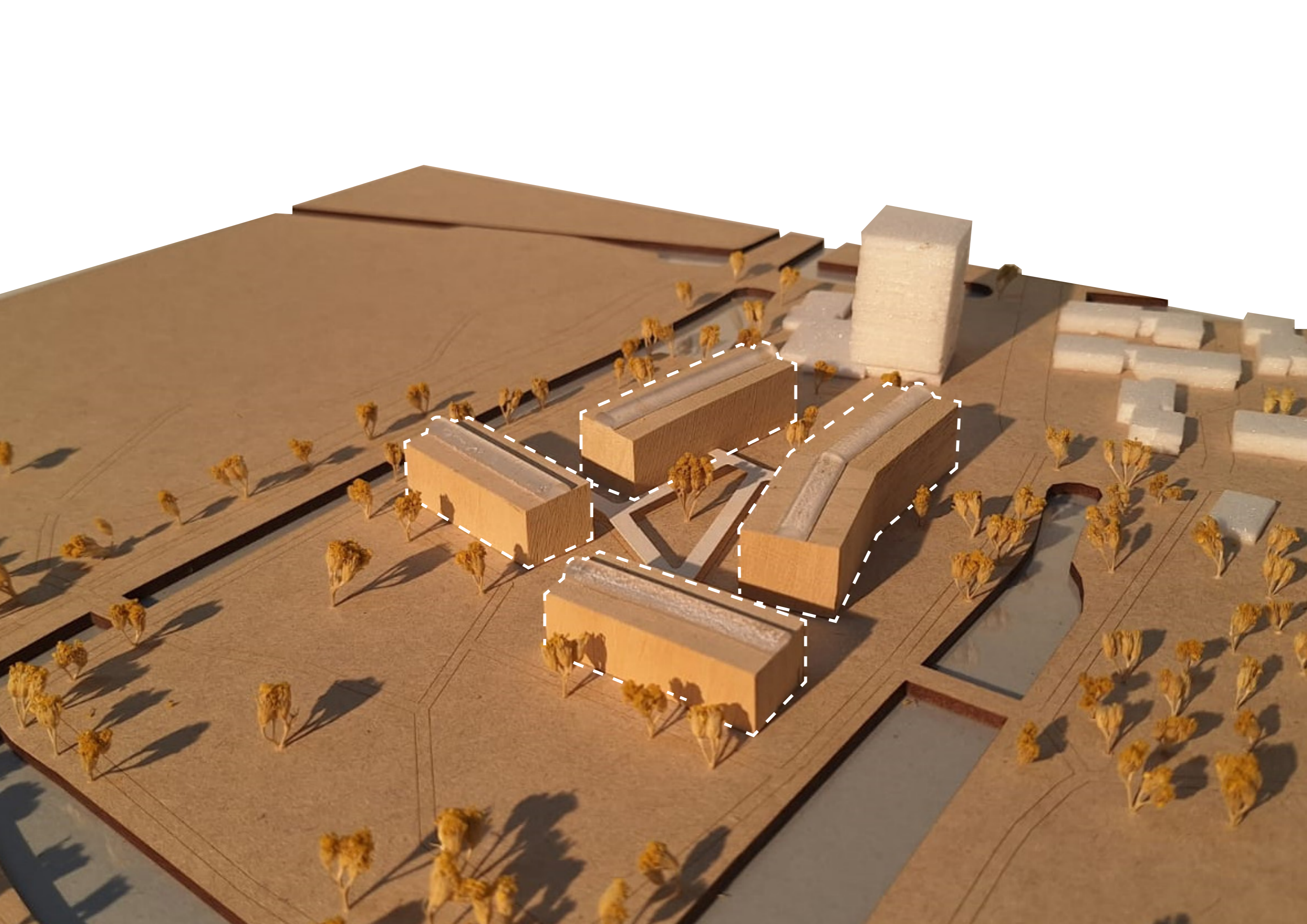


Orientation

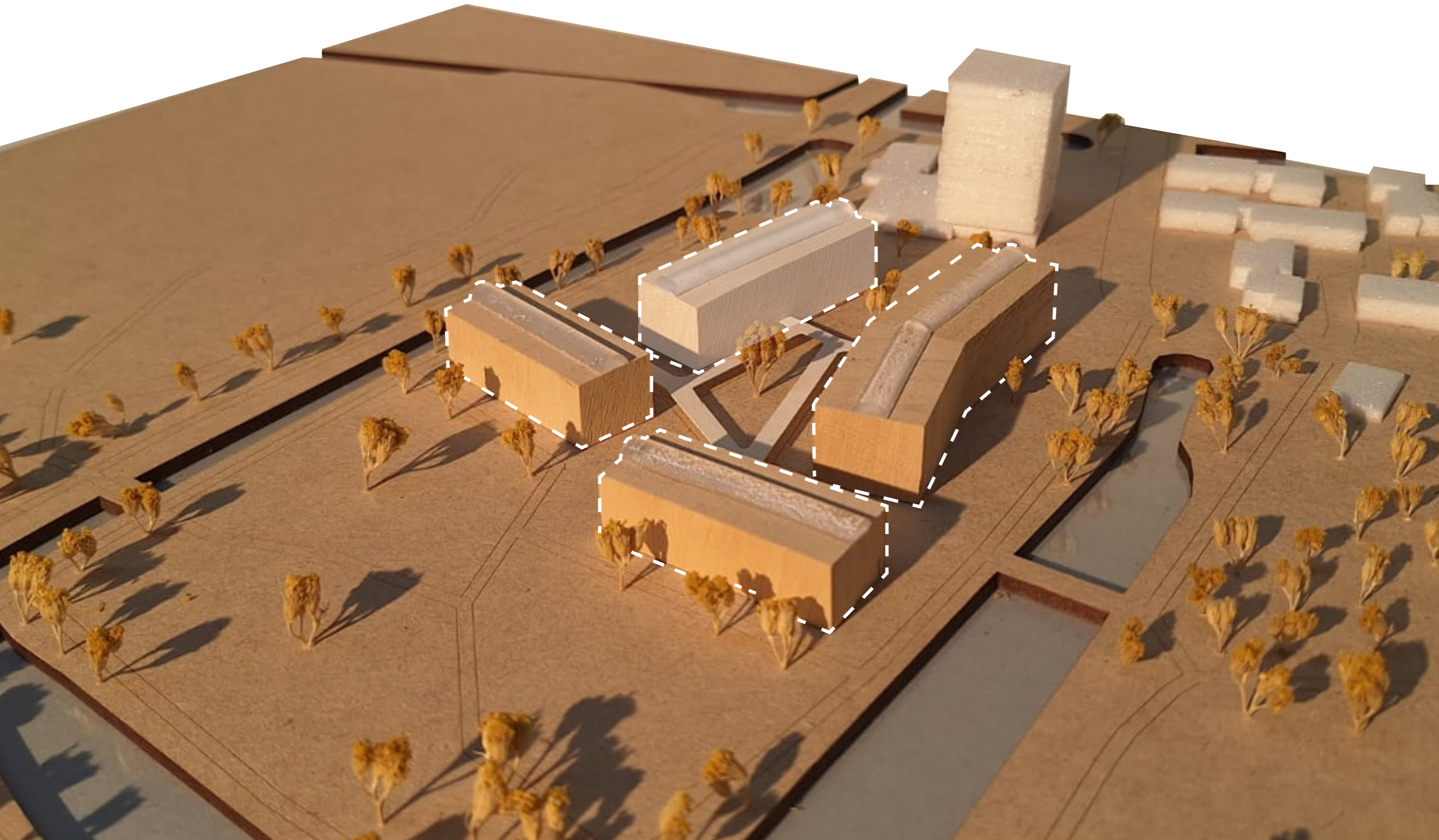


Wandering

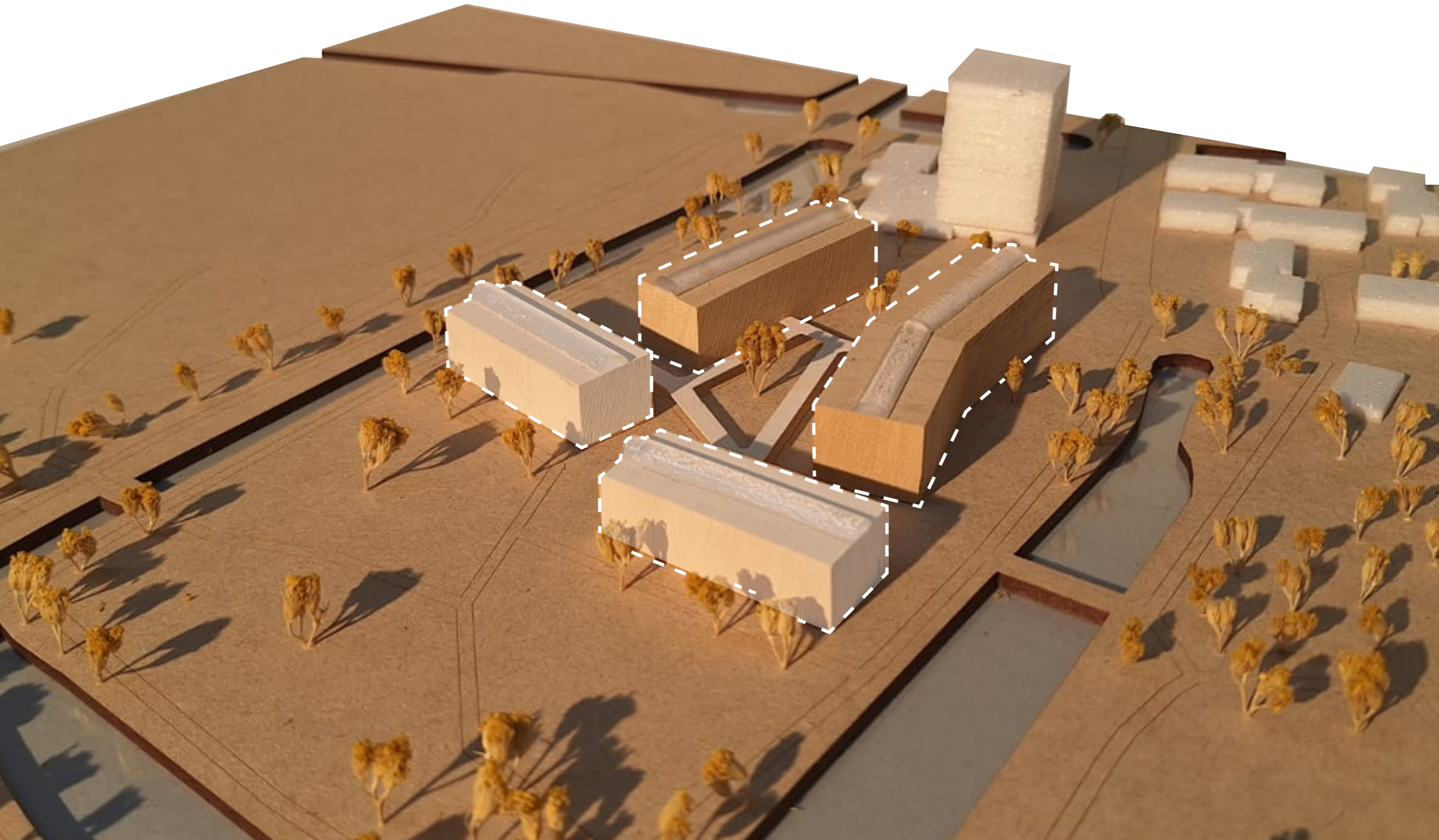




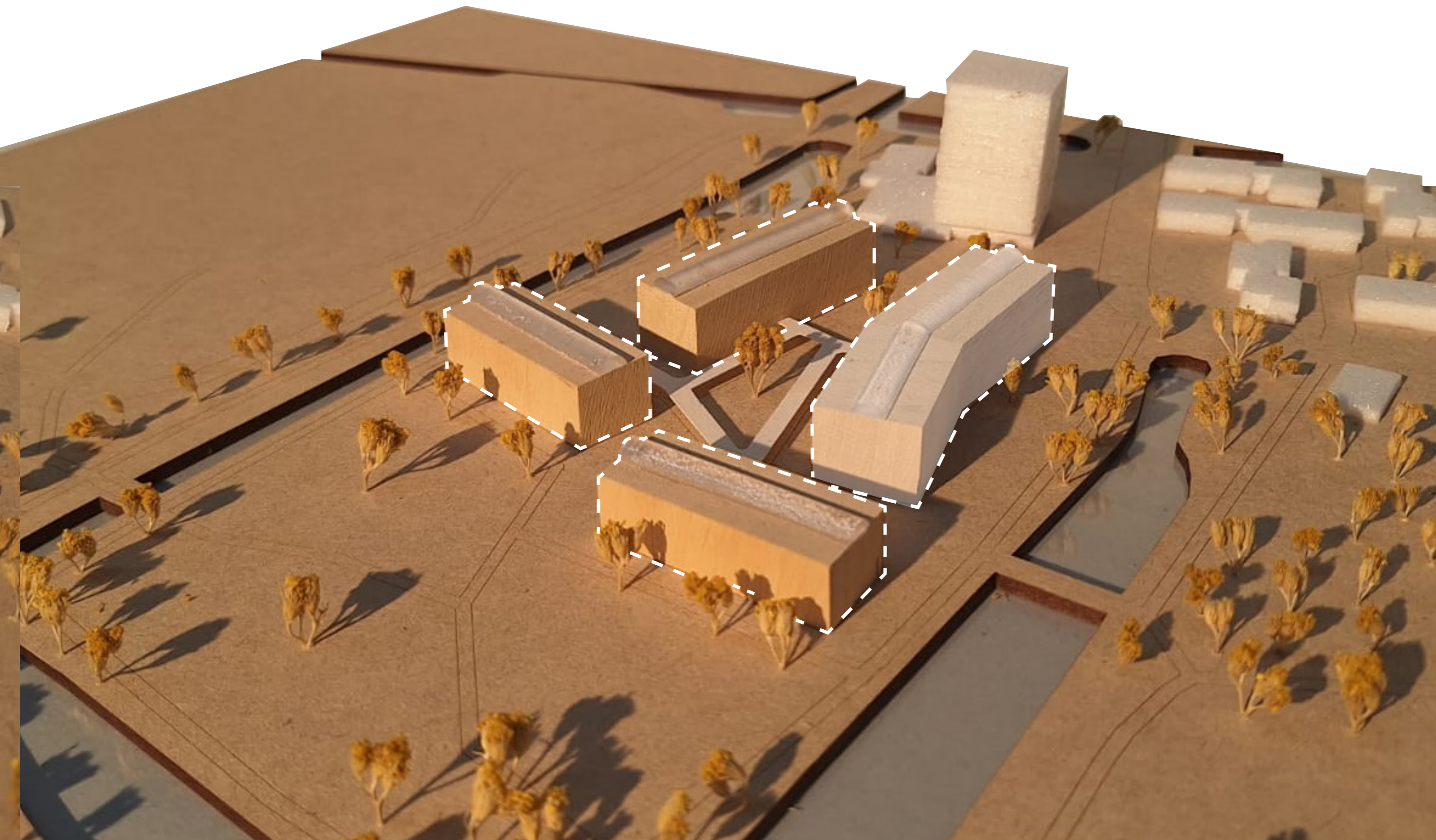
Underground parking
Child daycare
Elderly + dementia housing



Elderly + dementia housing
Daycare elderly with dementia



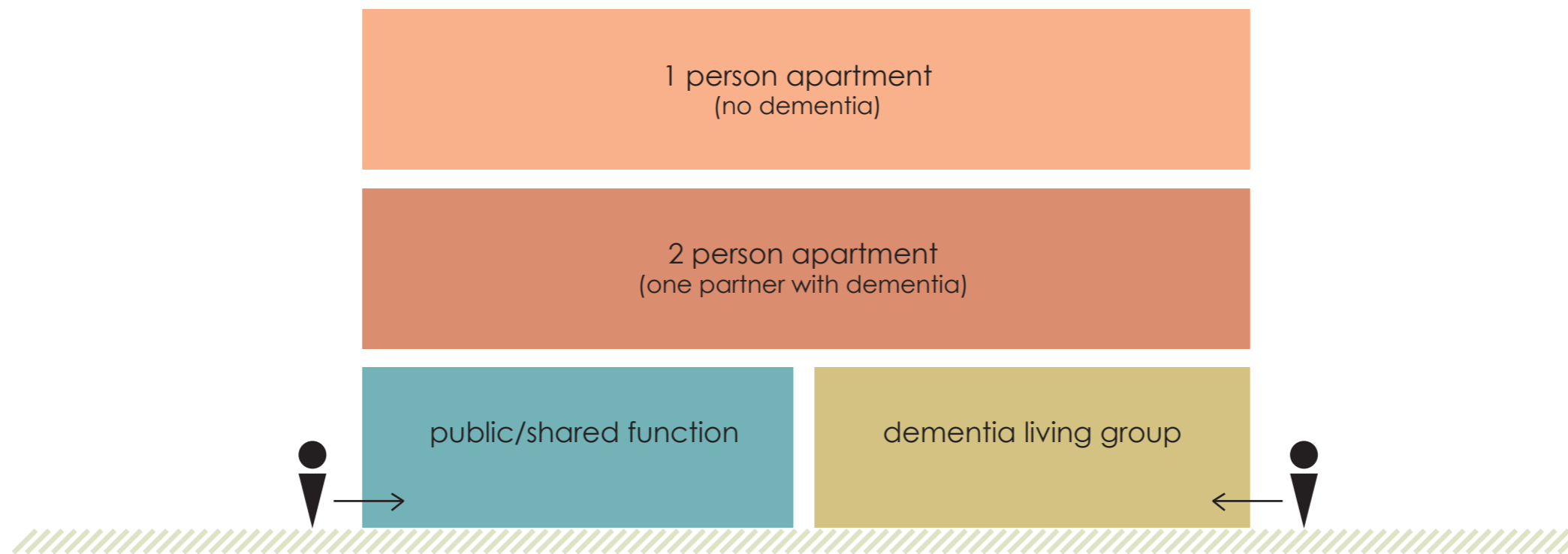
Elderly + dementia housing
Public functions



Programs

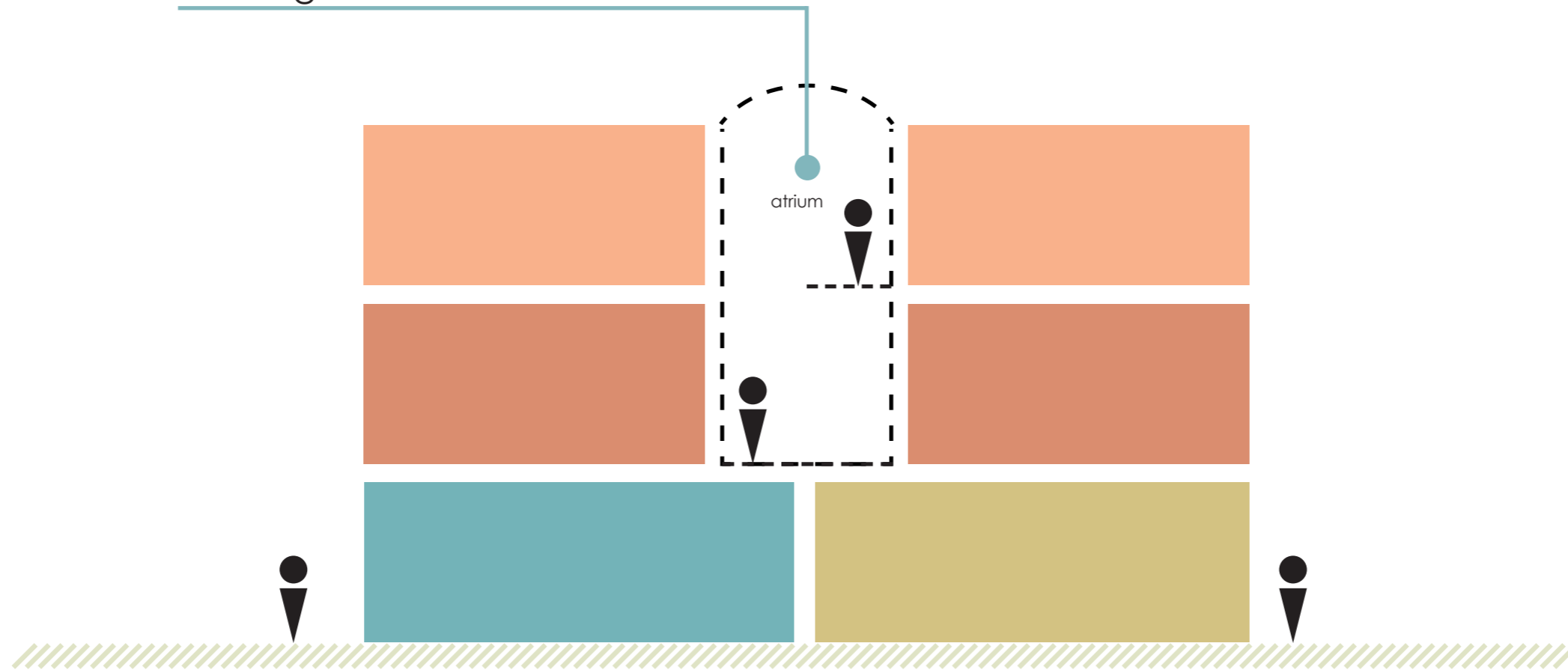


Programs



Programs

Meeting others

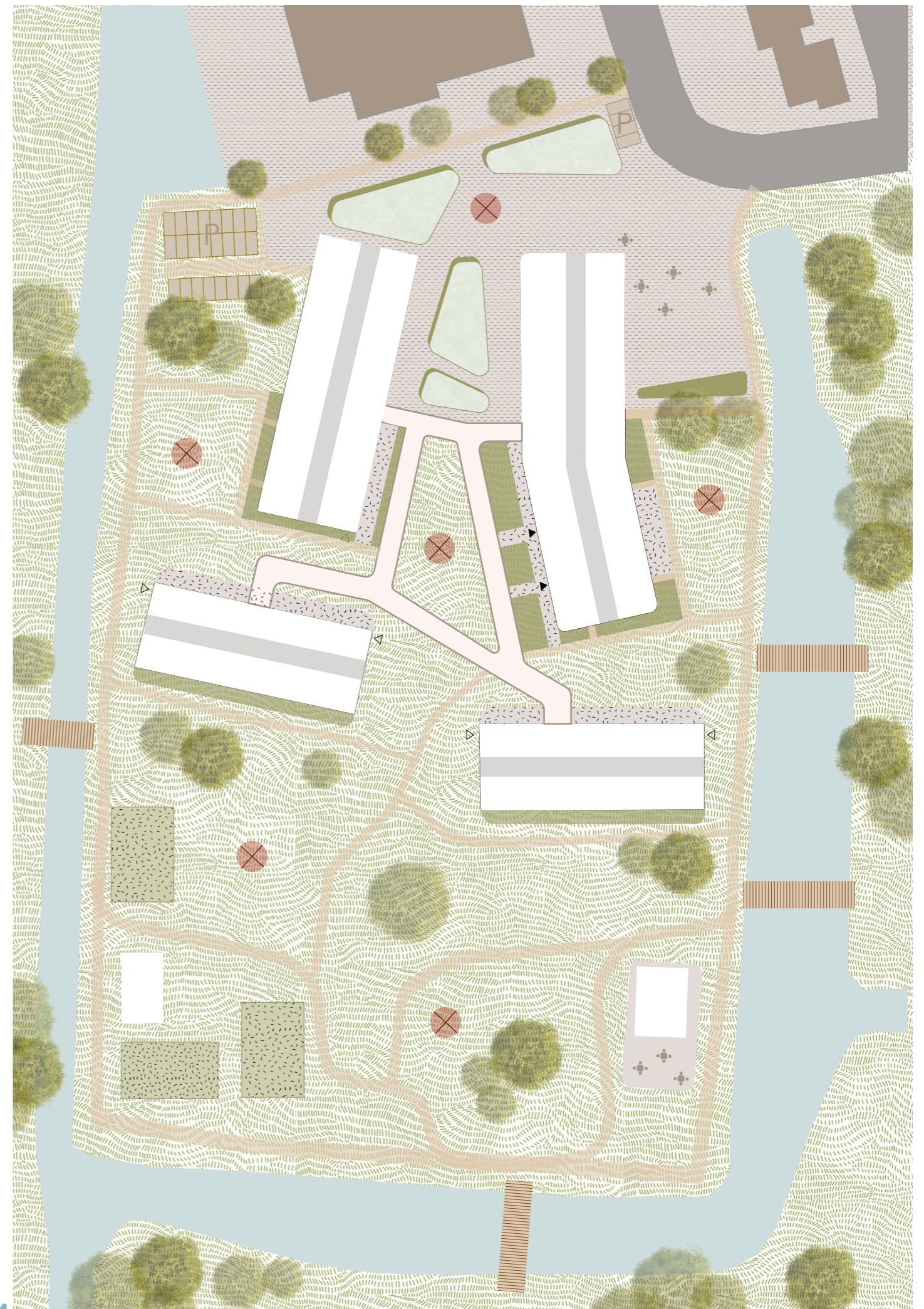


Programs



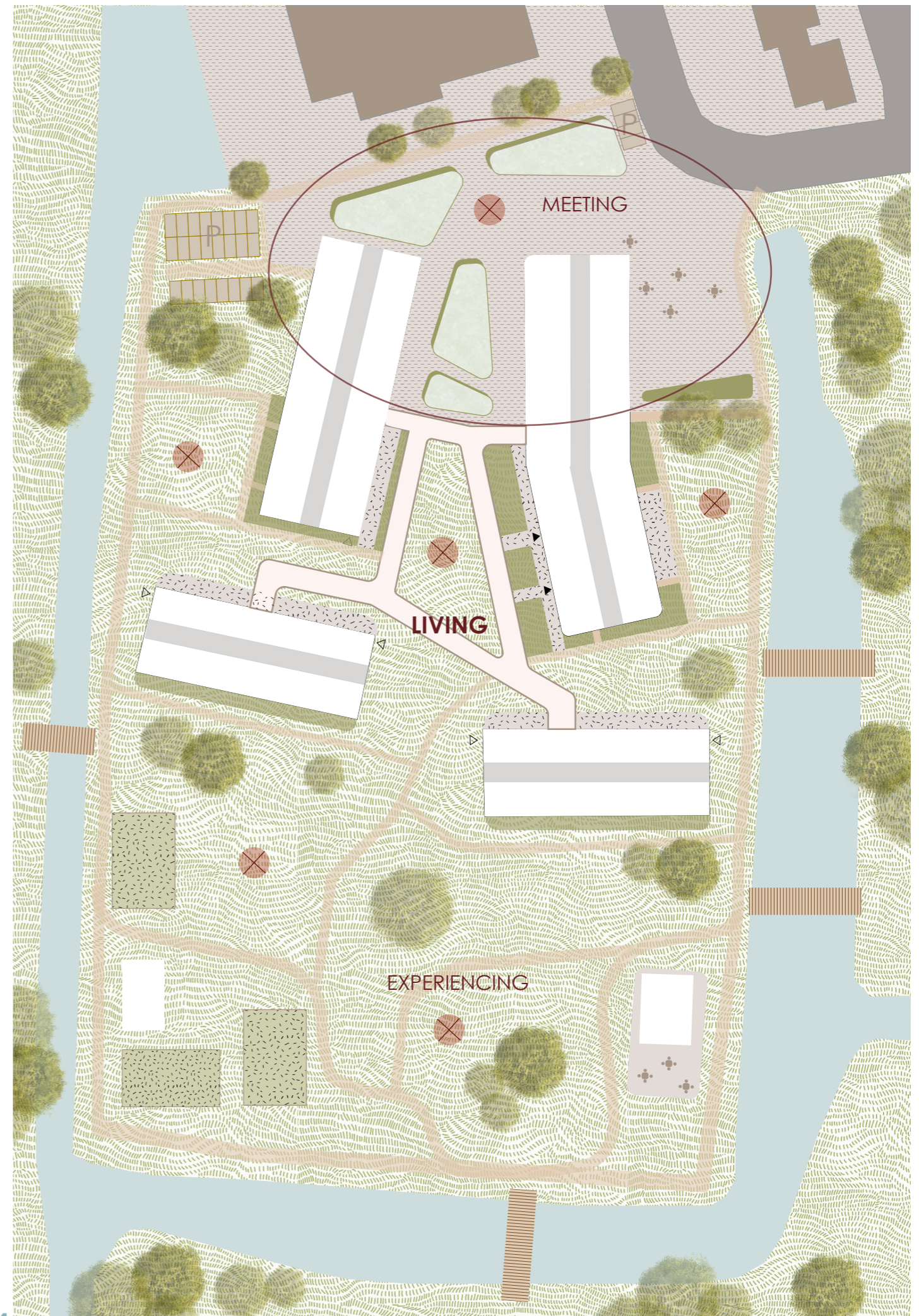
Landscape

- Sensory landscape
- Landmarks
- Circular walking routes



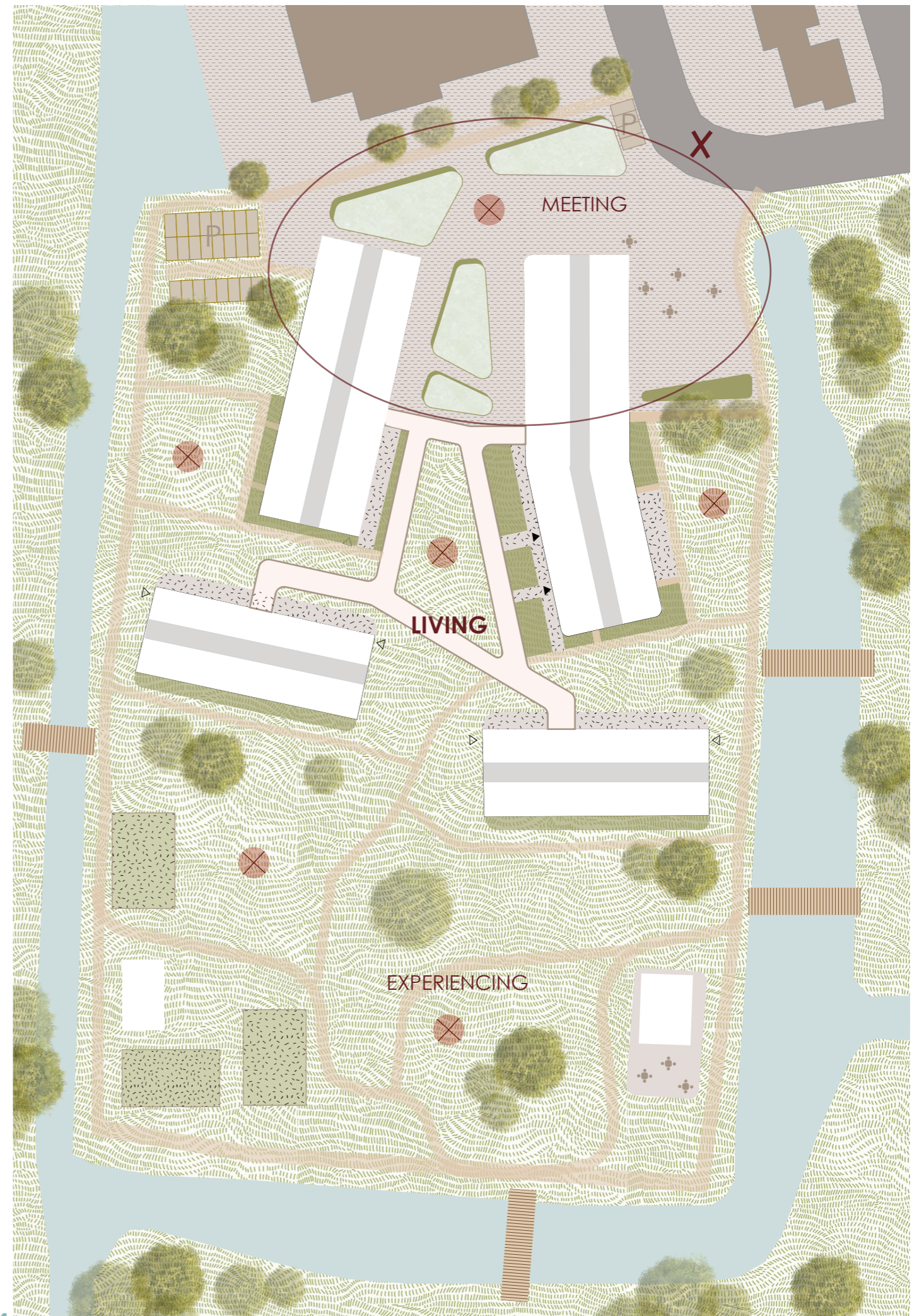
Landscape

- Sensory landscape
- Landmarks
- Circular walking routes



Landscape

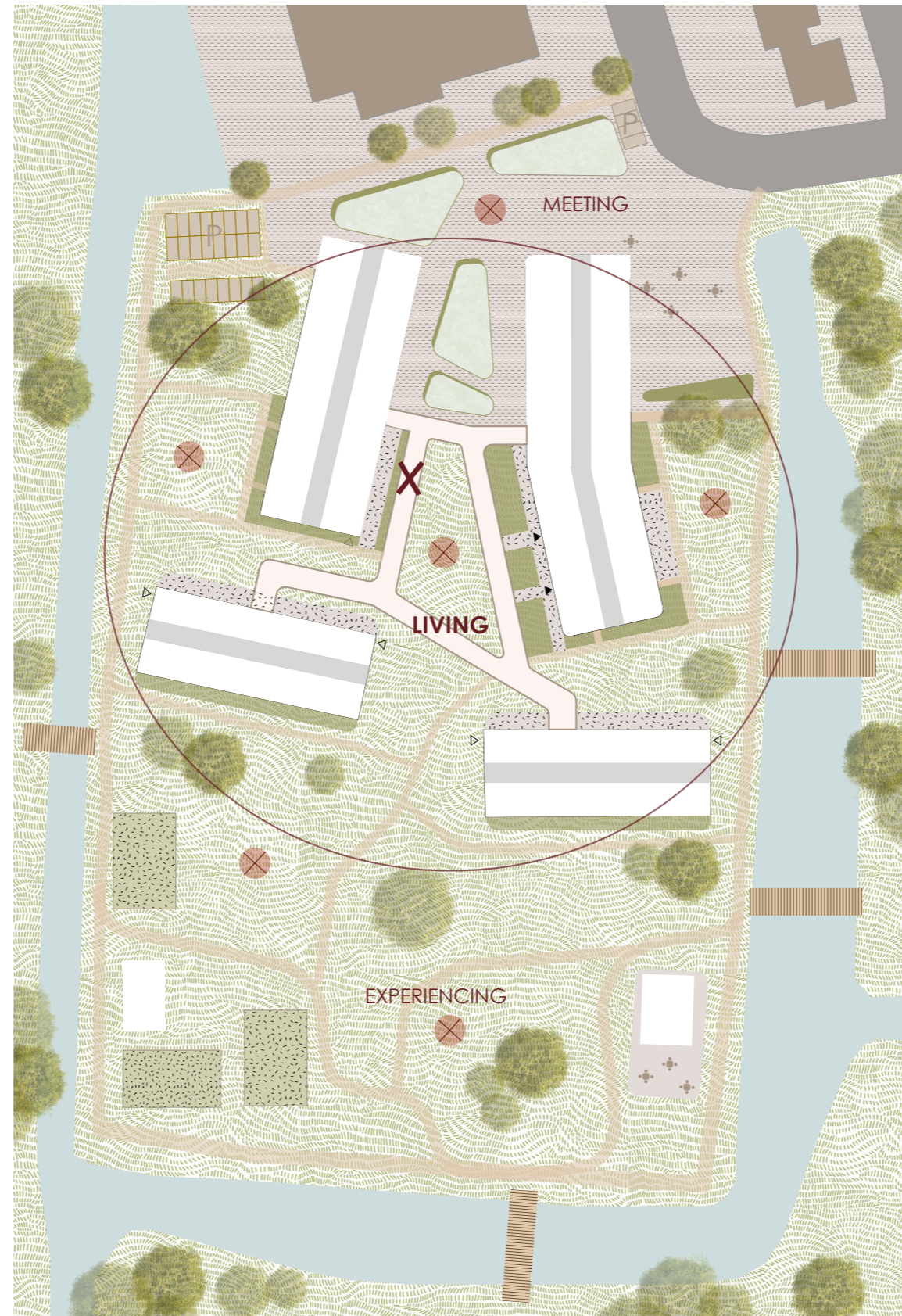
- Sensory landscape
- Landmarks
- Circular walking routes



Landscape - Meeting



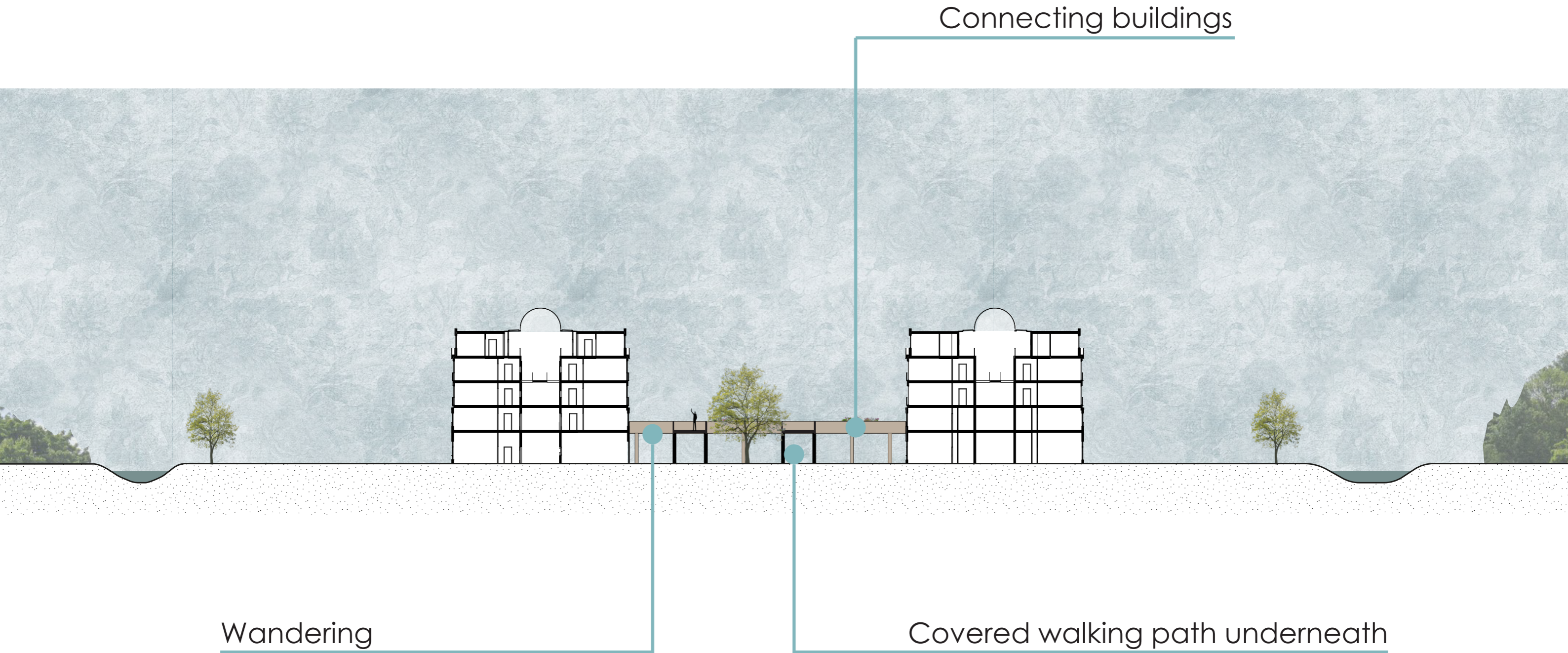
Landscape



Landscape - Elevated walking path



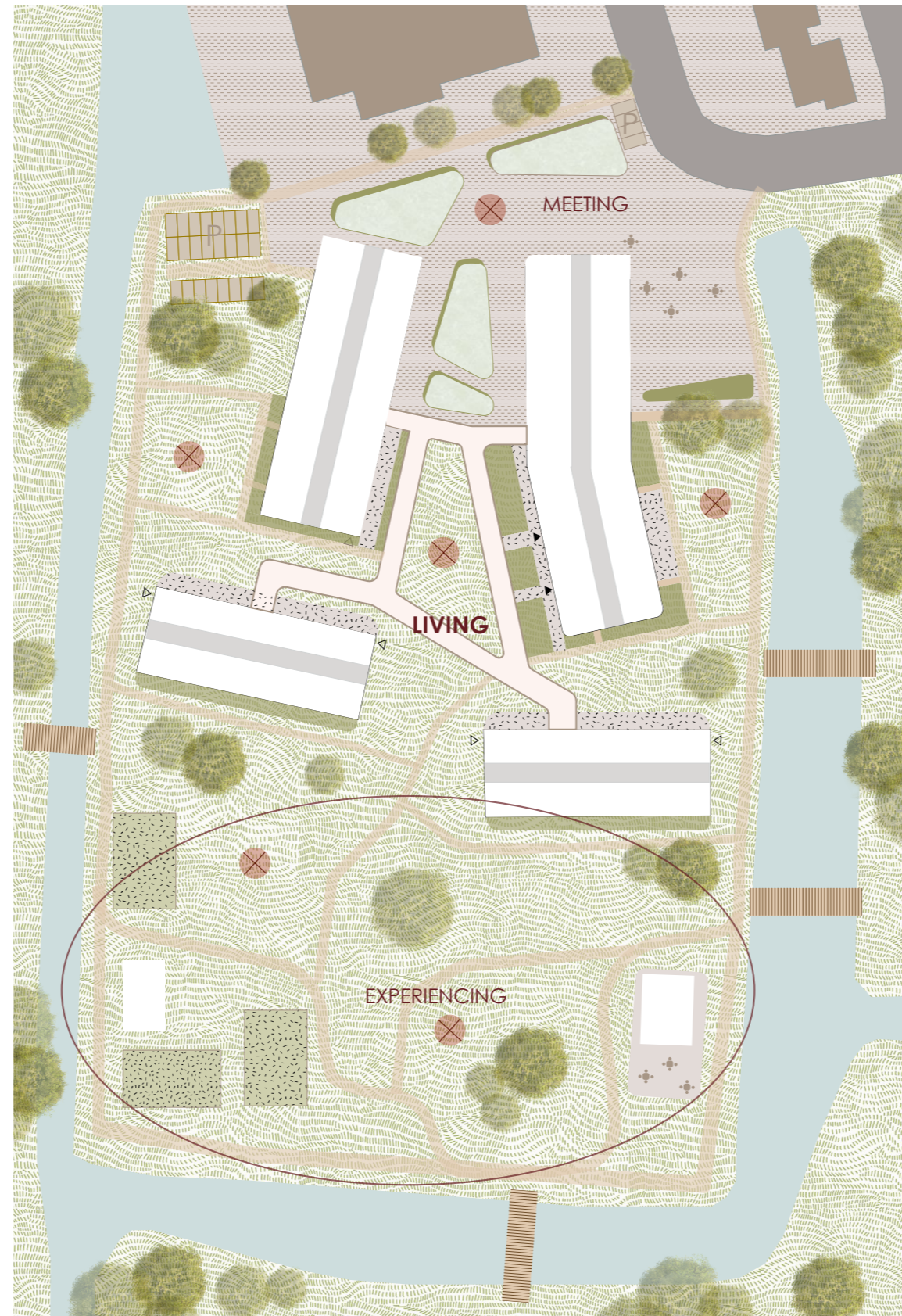
Landscape - Elevated walking path



Landscape - Elevated walking path



Landscape



Landscape - Sensory landscape and wayfinding



Sounds

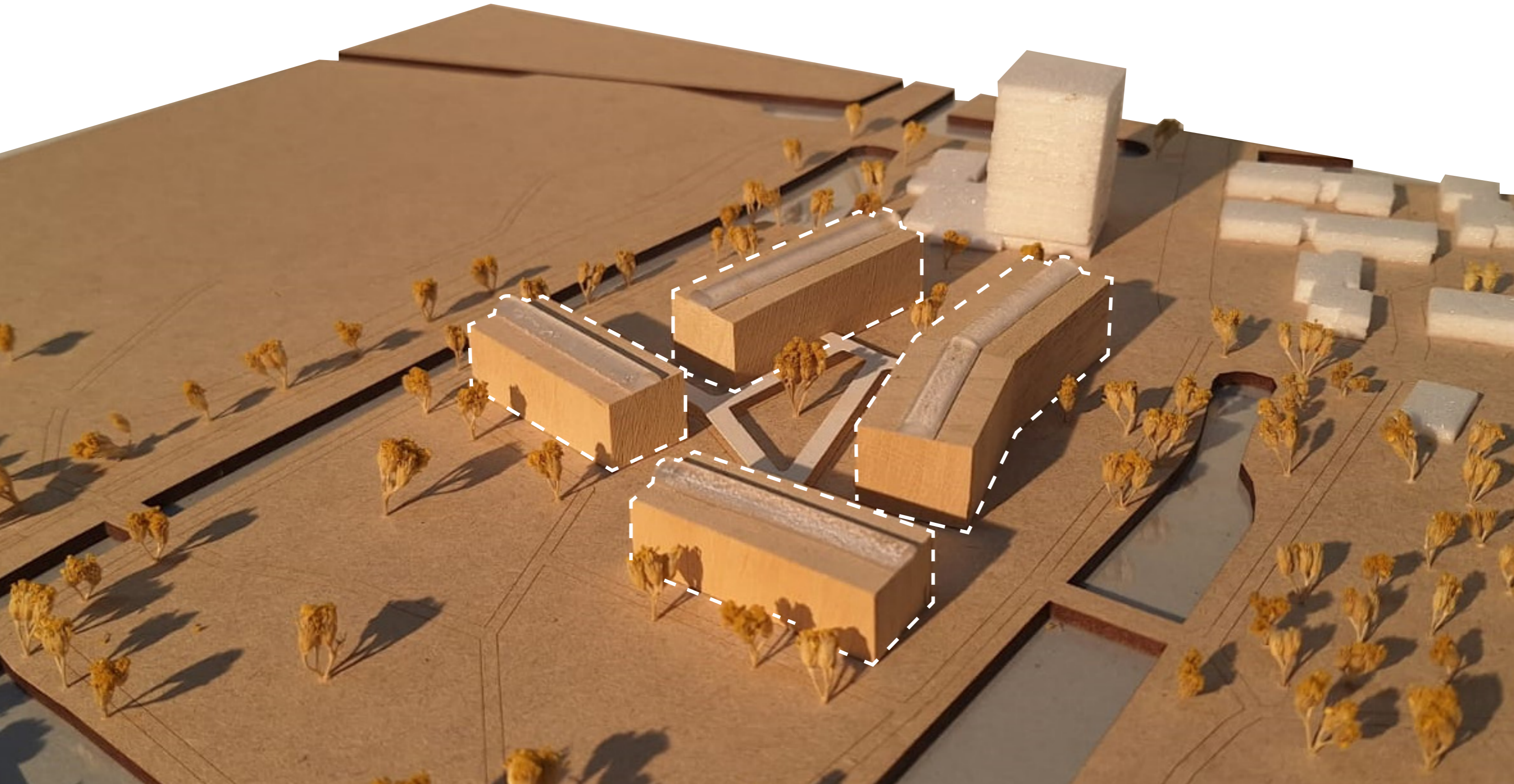


Smell

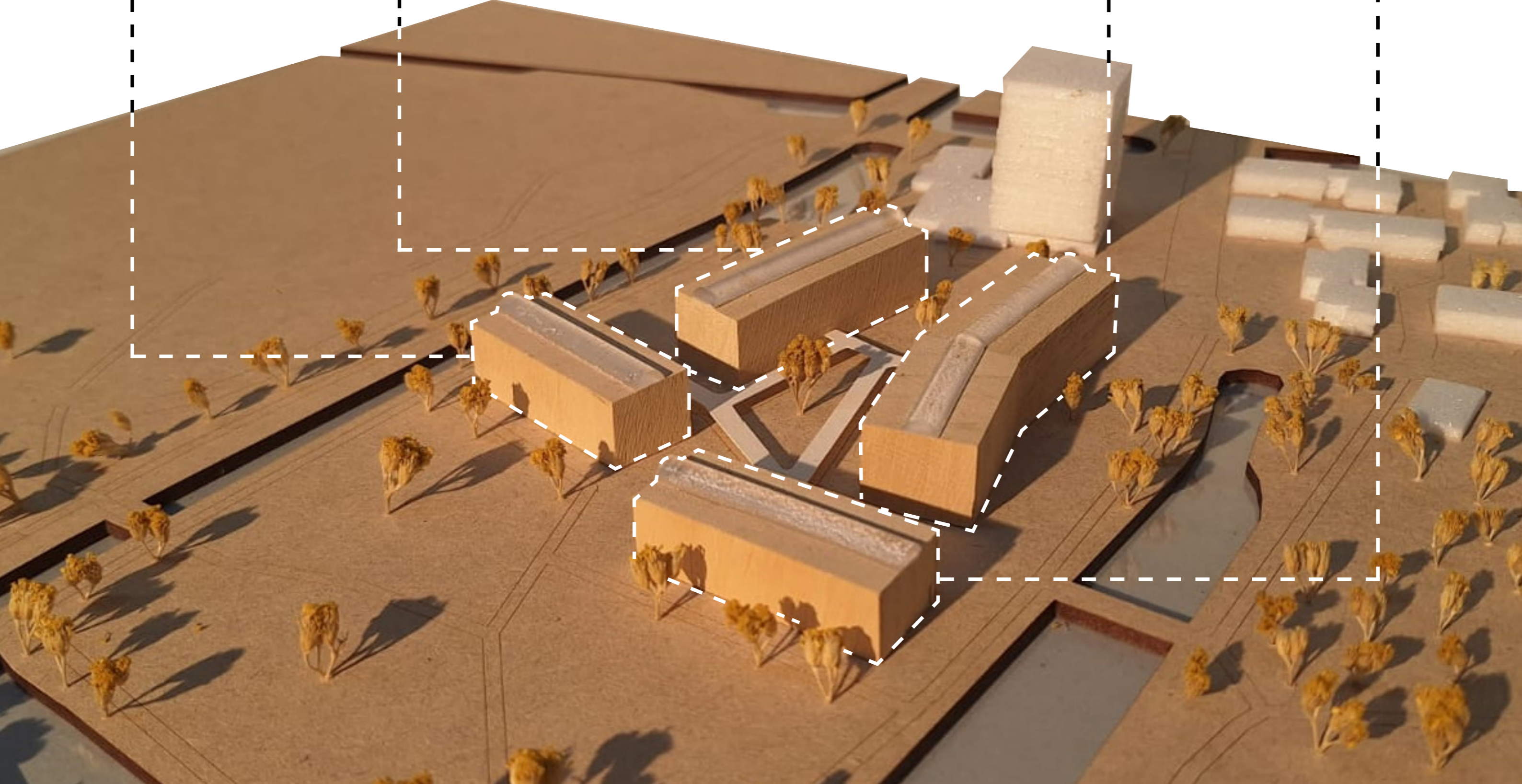
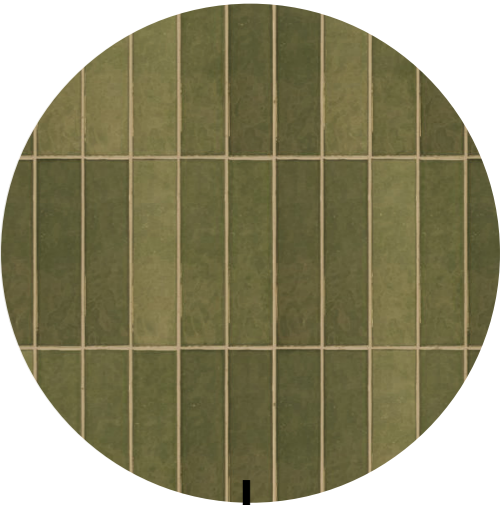
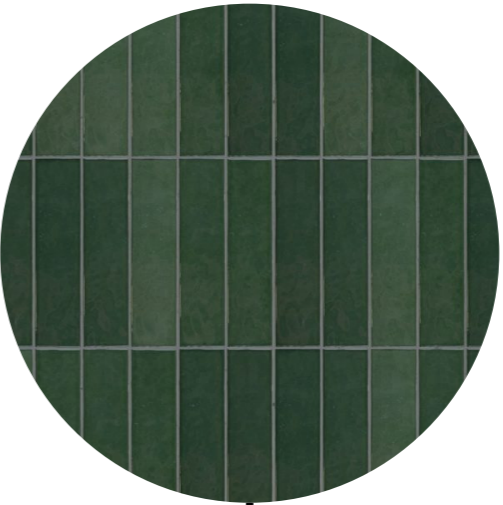
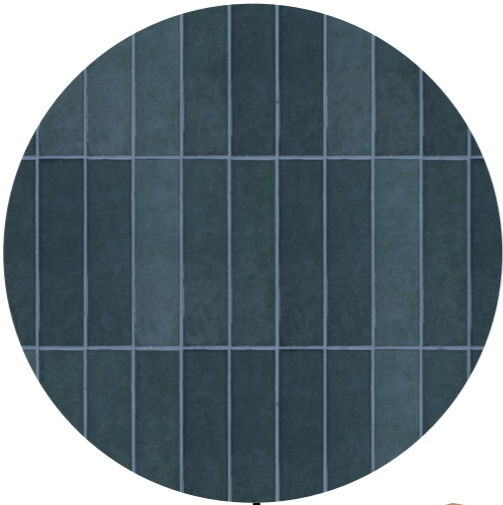
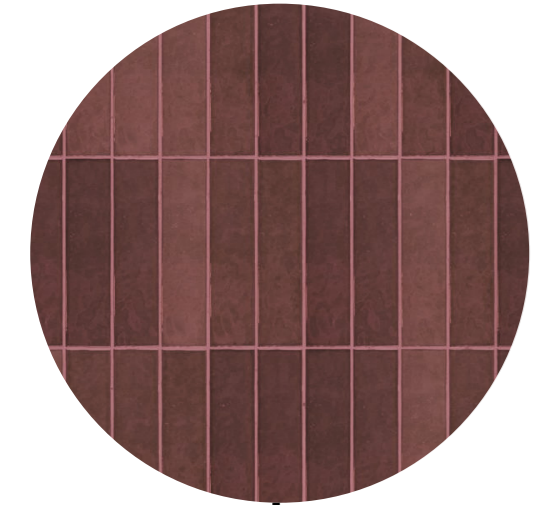


Touch

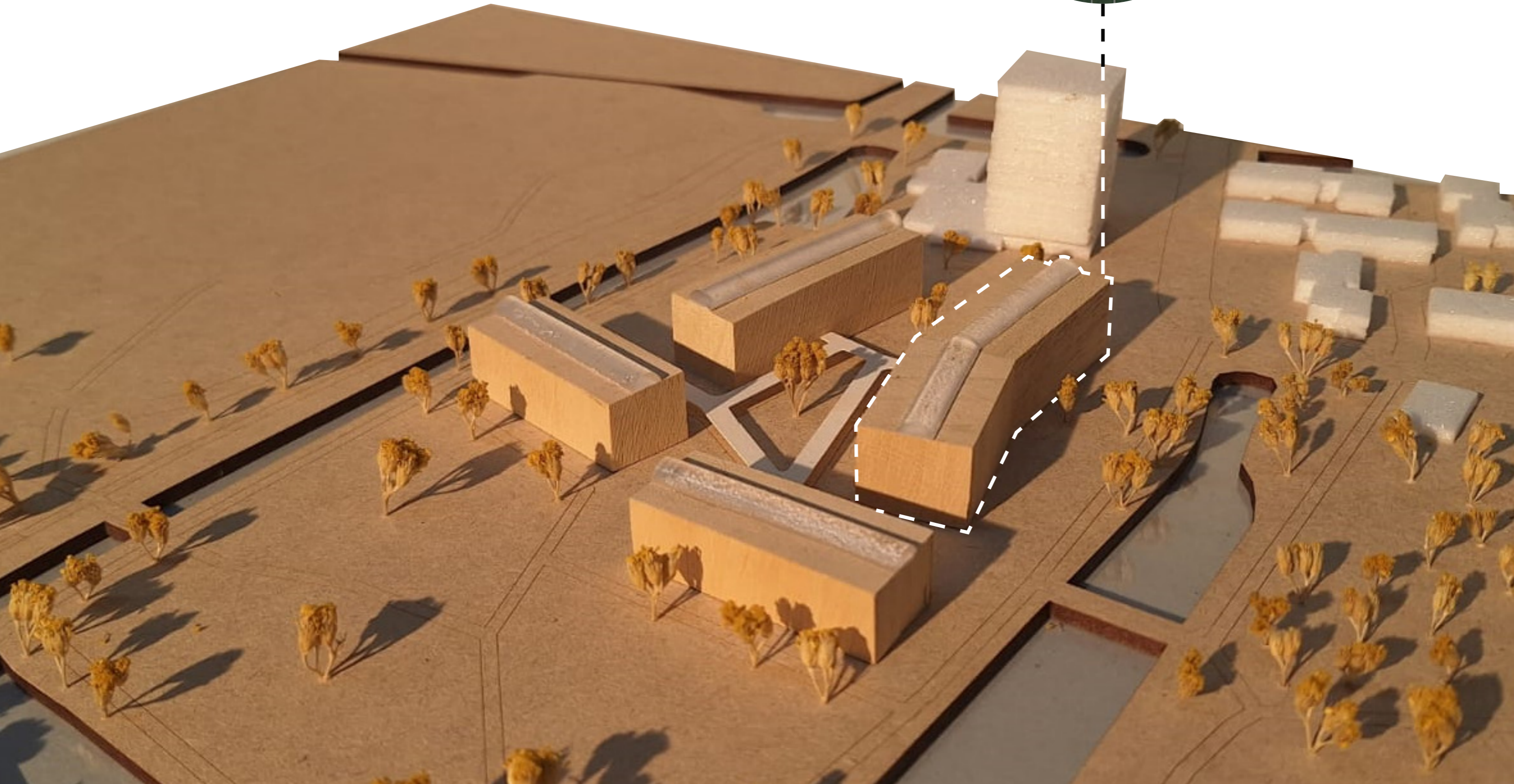
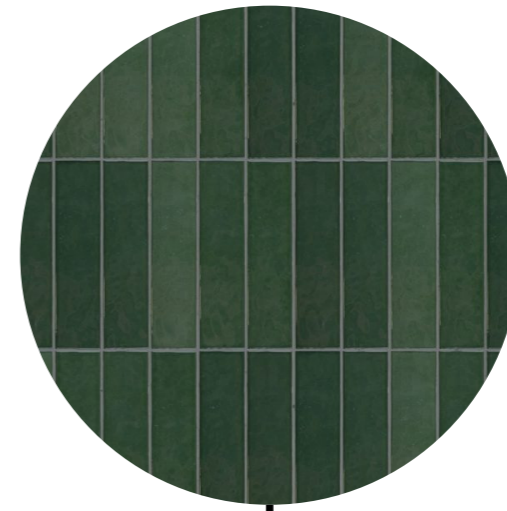
Facade



Facade



Facade



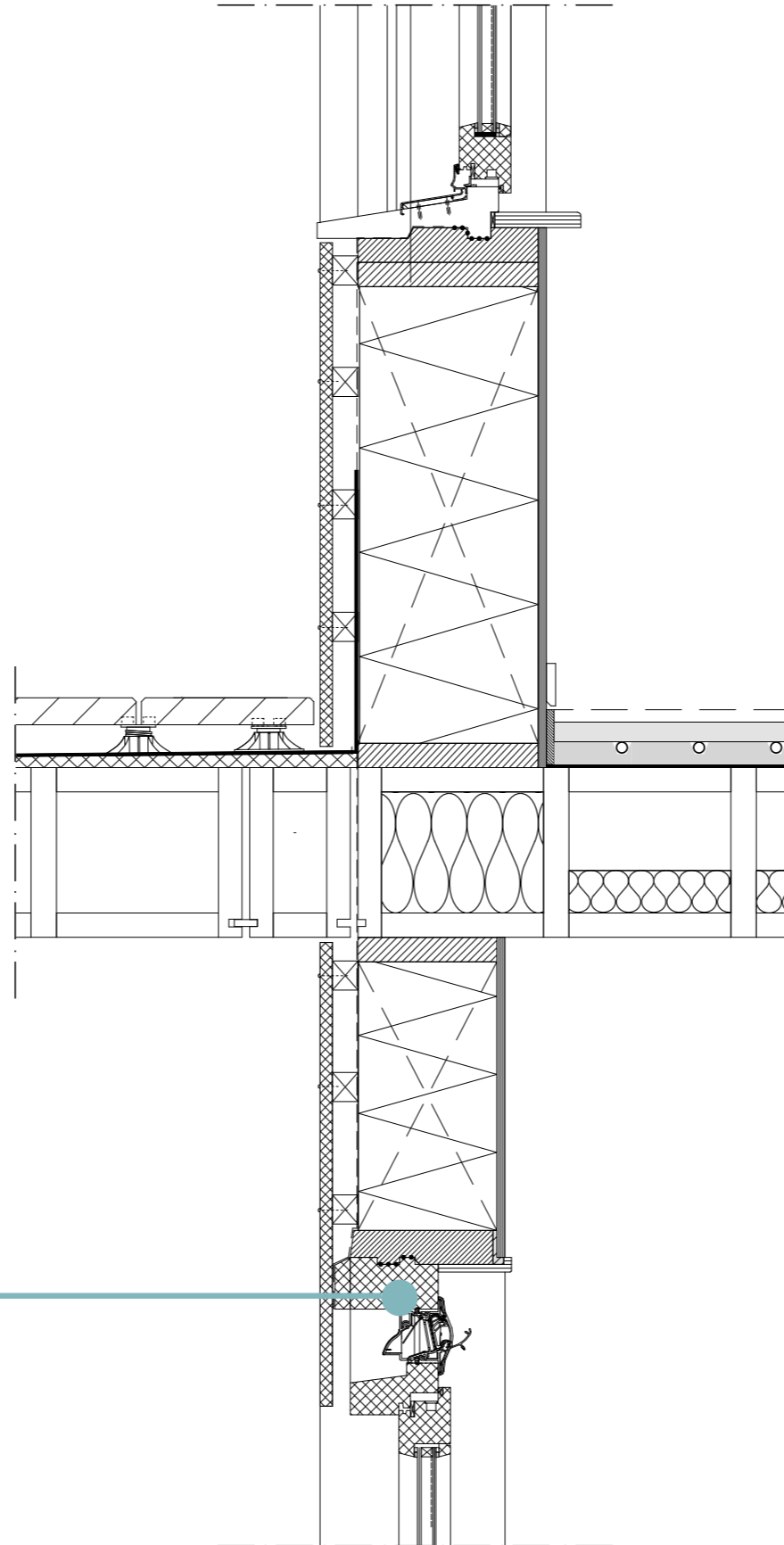
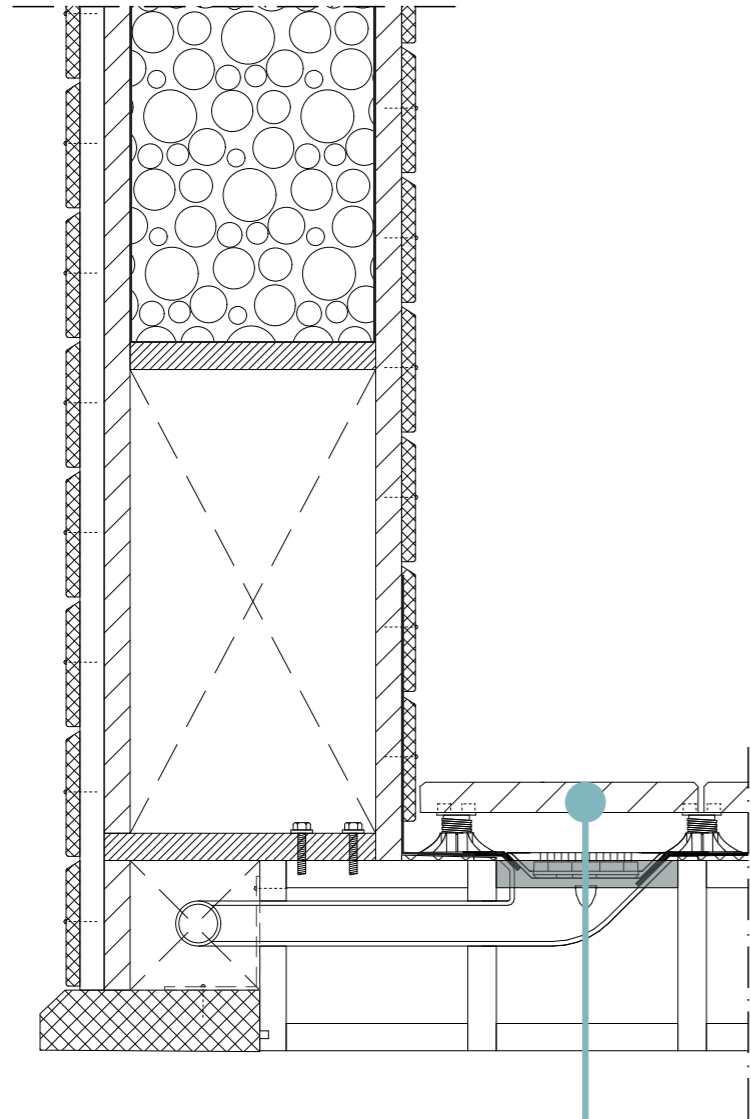




Facade



Facade - structure



Anti slip tiles

Sunscreens implemented

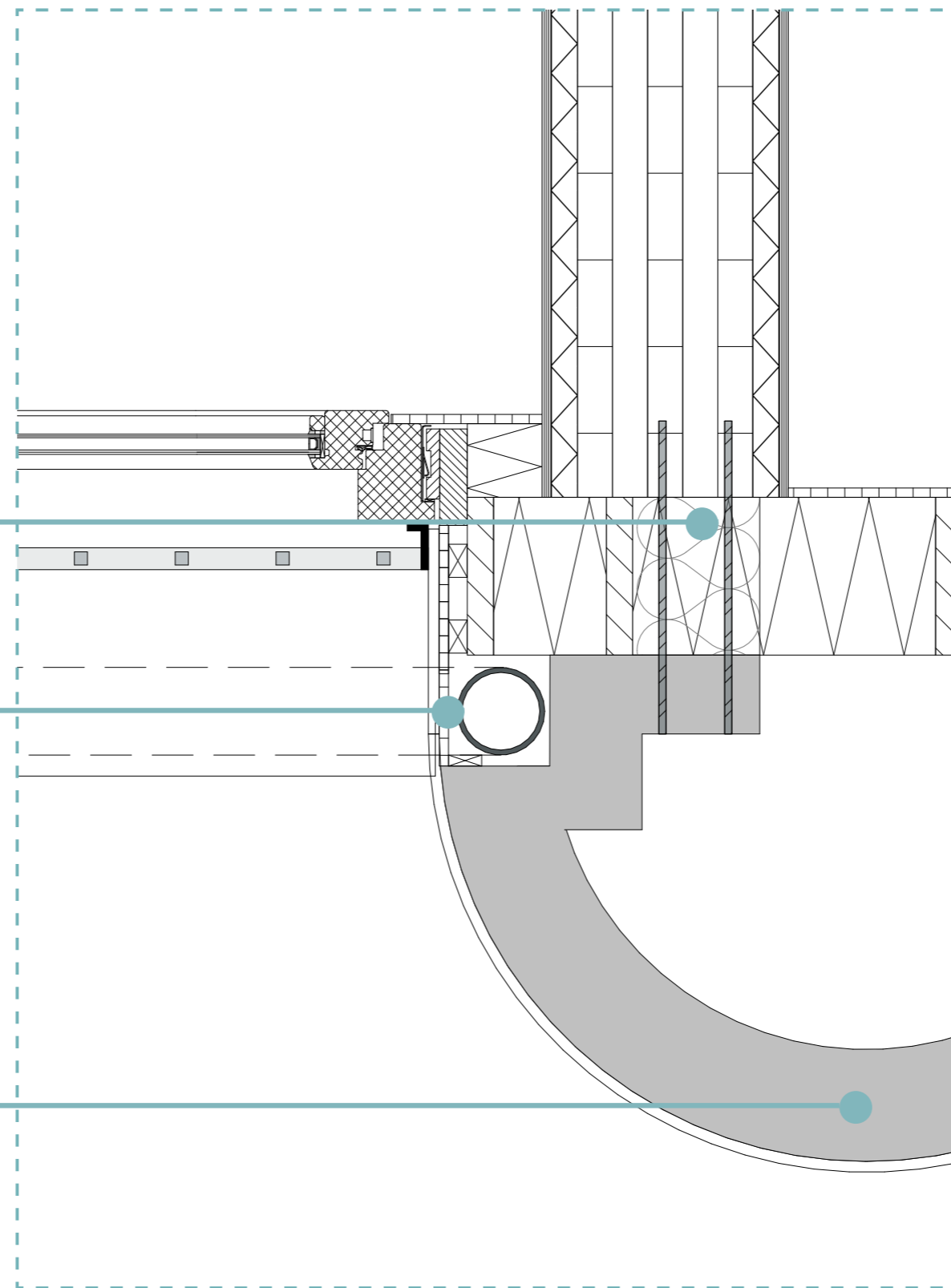


Facade - structure

Isokorf to connect concrete element to structure

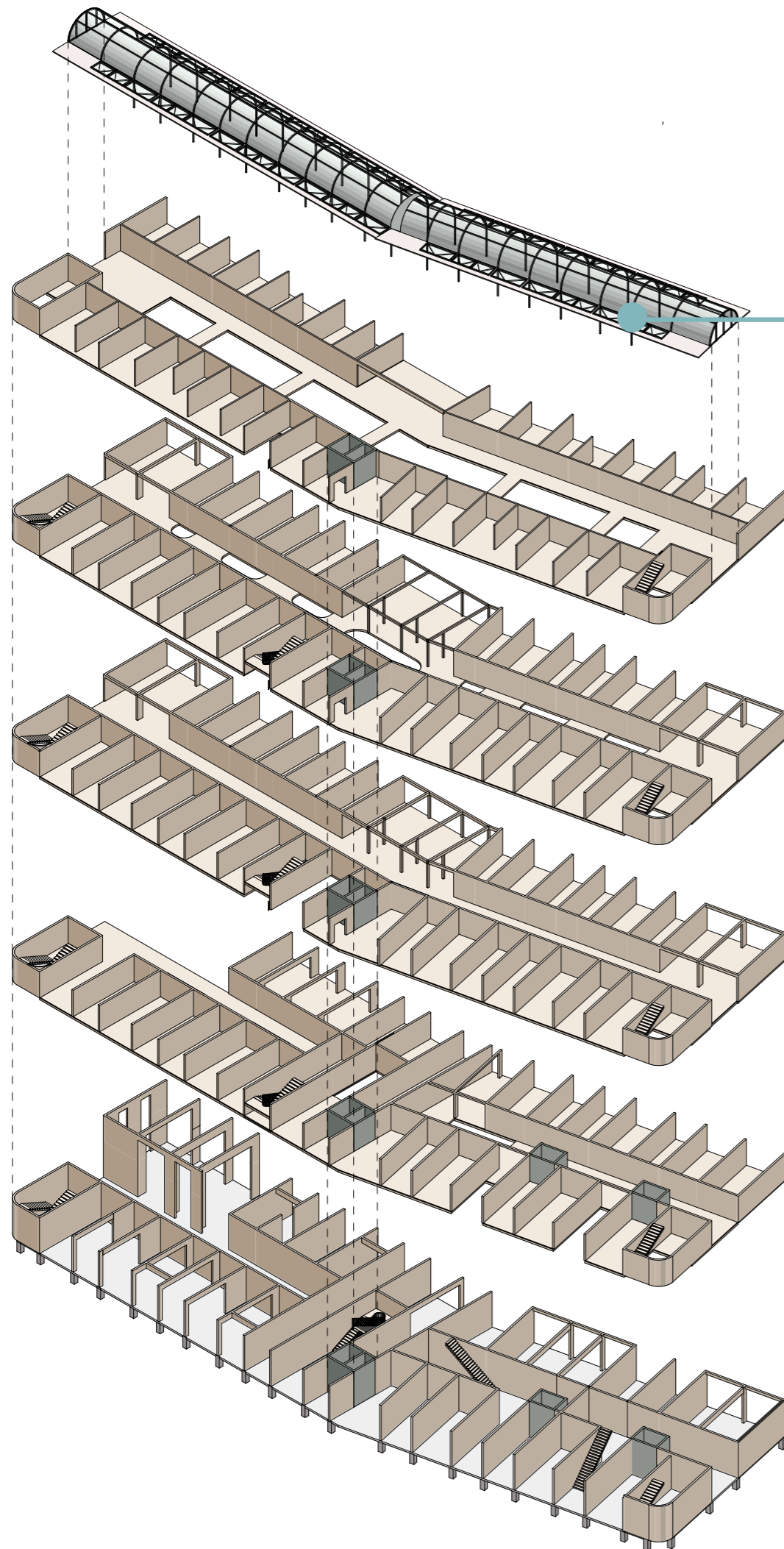
Rainwater drainage implemented

Concrete prefab element to adhere tiles to



Structure

Aluminium structure for atrium

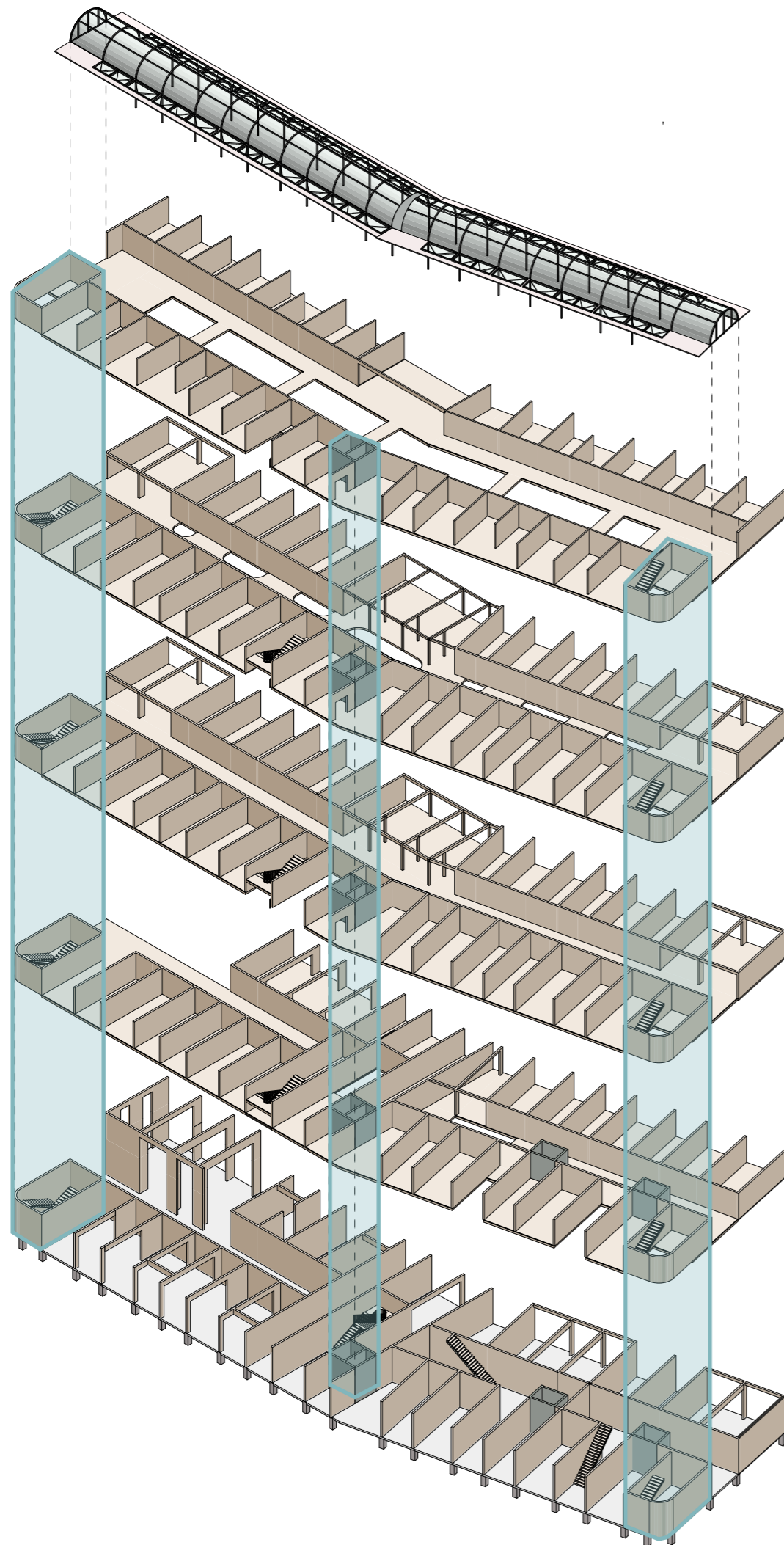


Lignatur floors with implemented noise isolation



CLT walls

Structure



Lignatur floors with implemented noise isolation



CLT walls

Housing options



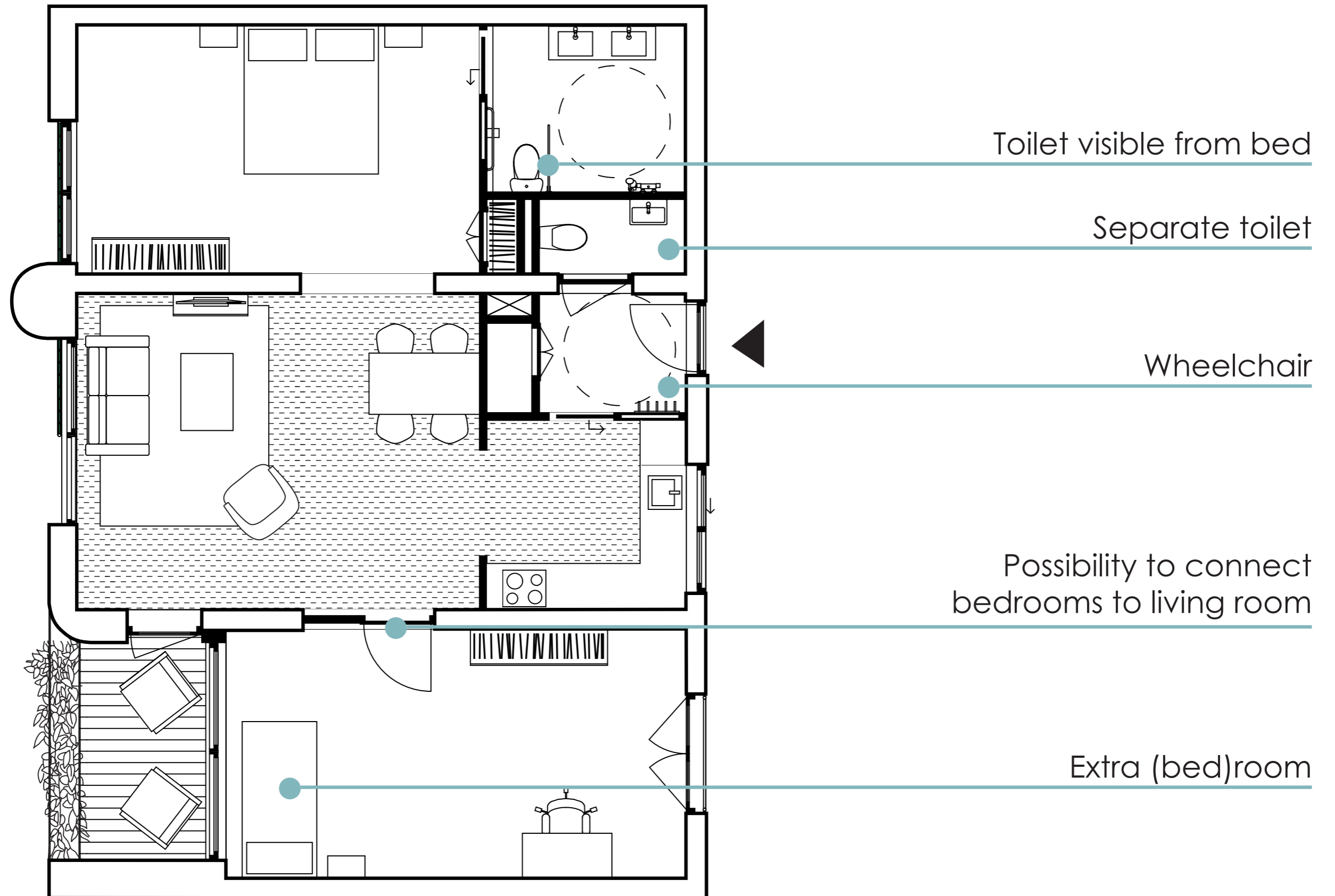
Connie & Will

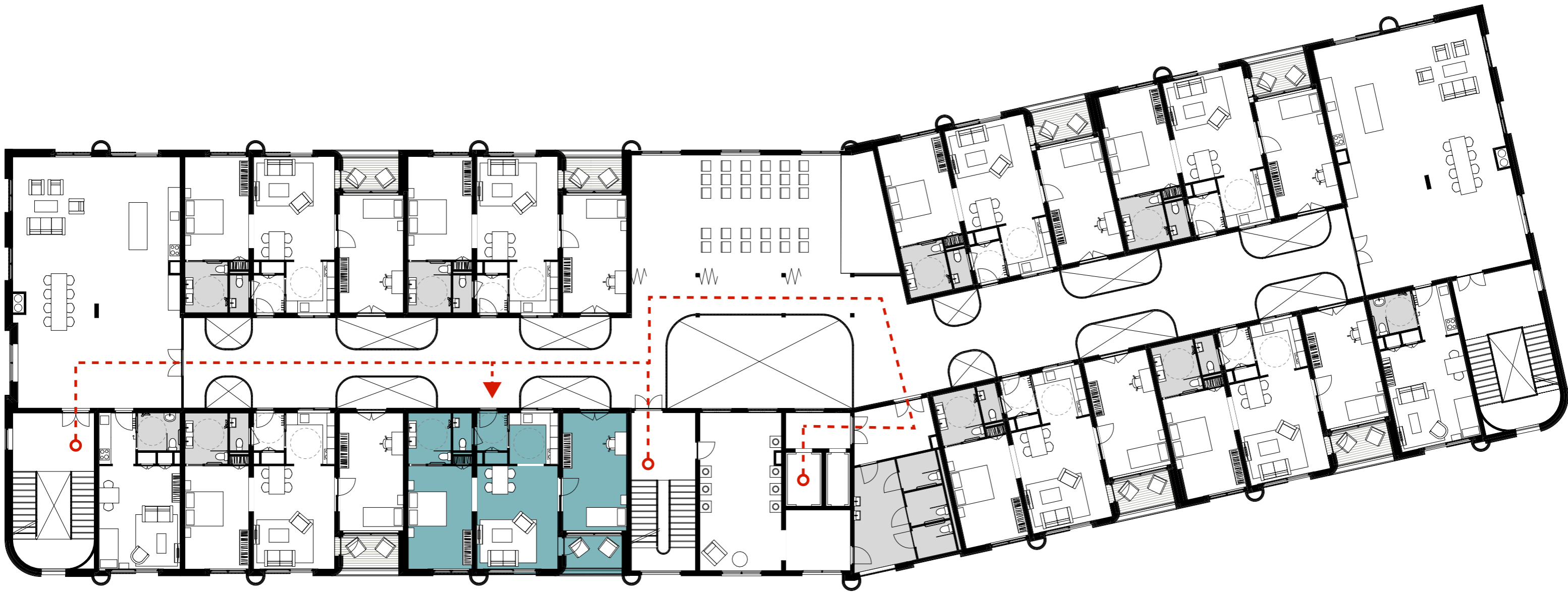
Living together



Connie & Will

Option 1: living together





⊖ 3rd floor plan

Communal room

performance space

Communal room



3rd floor plan

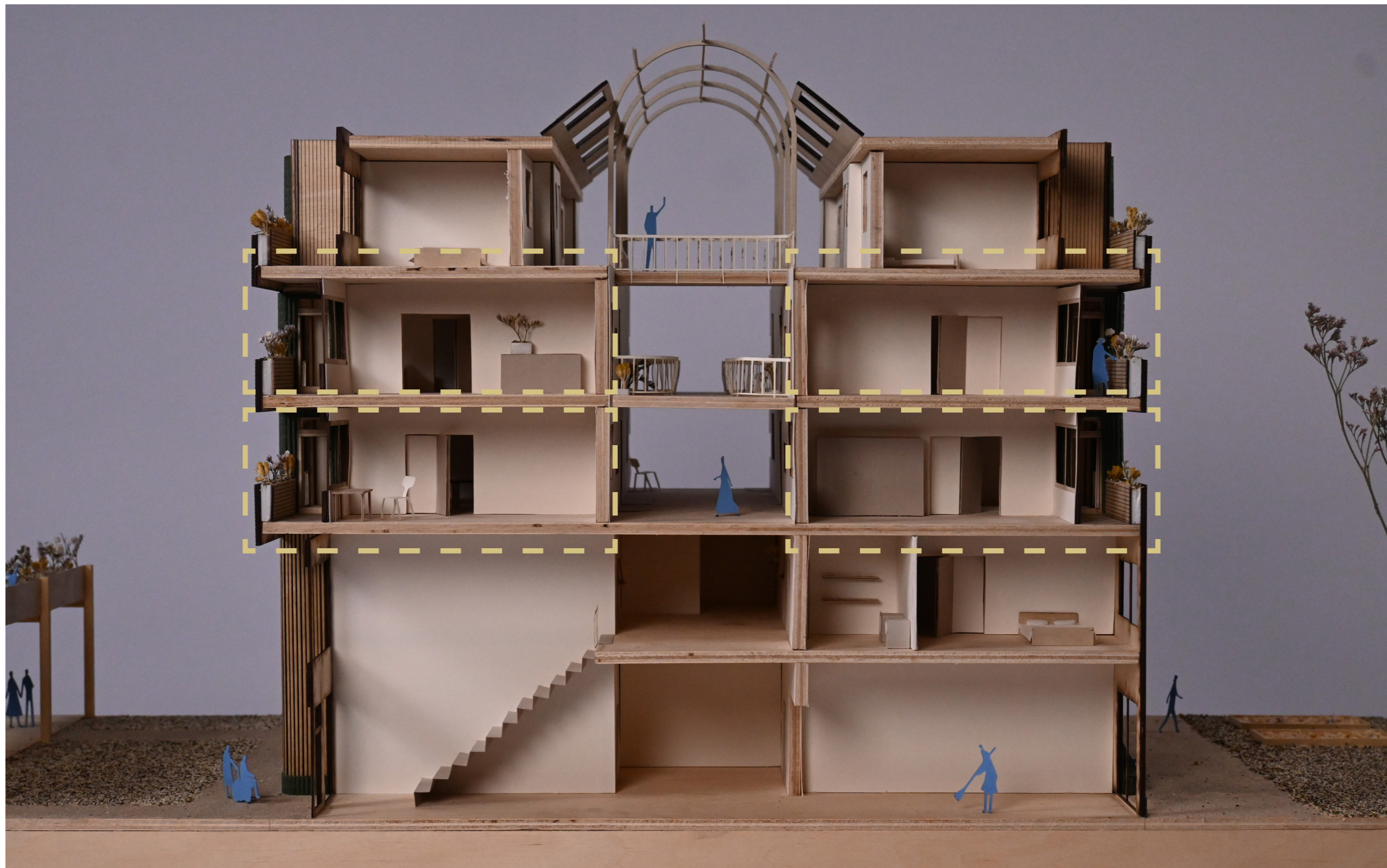
Safe wandering areas



Shared washing room

3rd floor plan

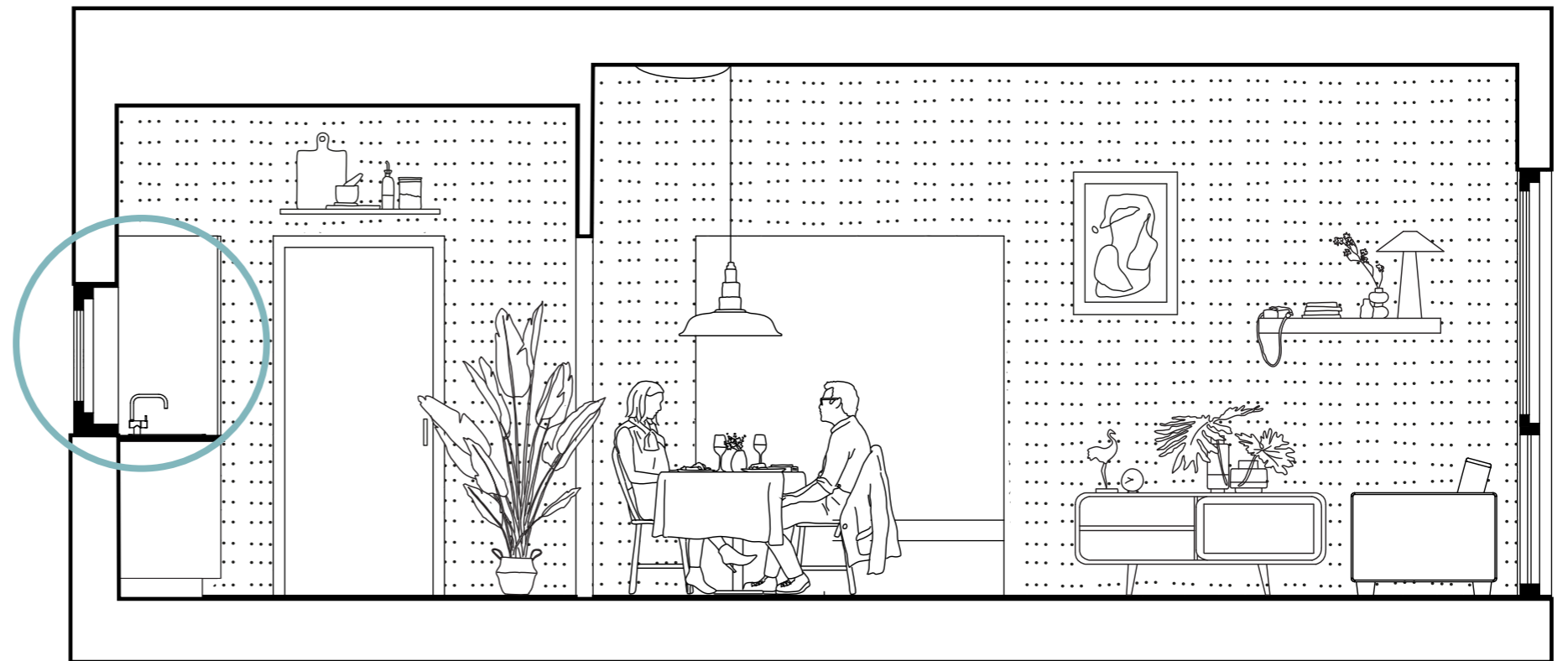
Option 1: living together



The atrium

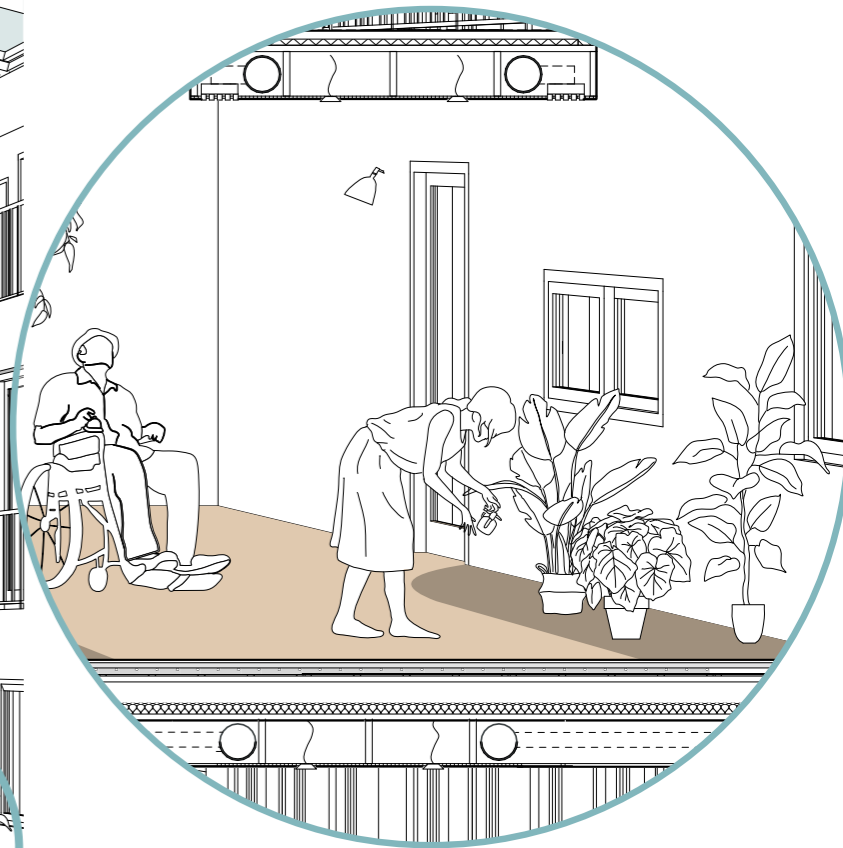
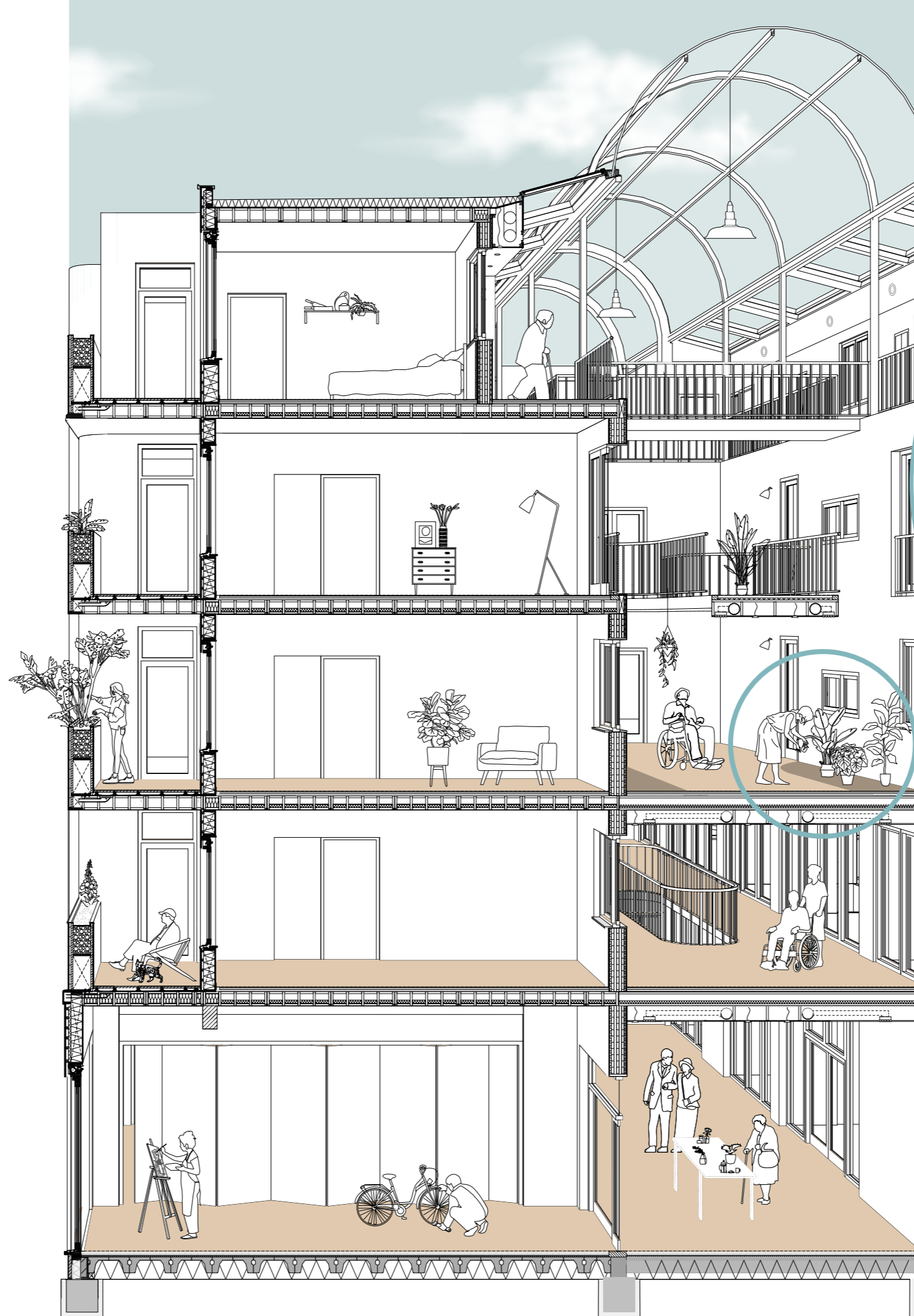


The atrium: informal encounters



The atrium: informal encounters





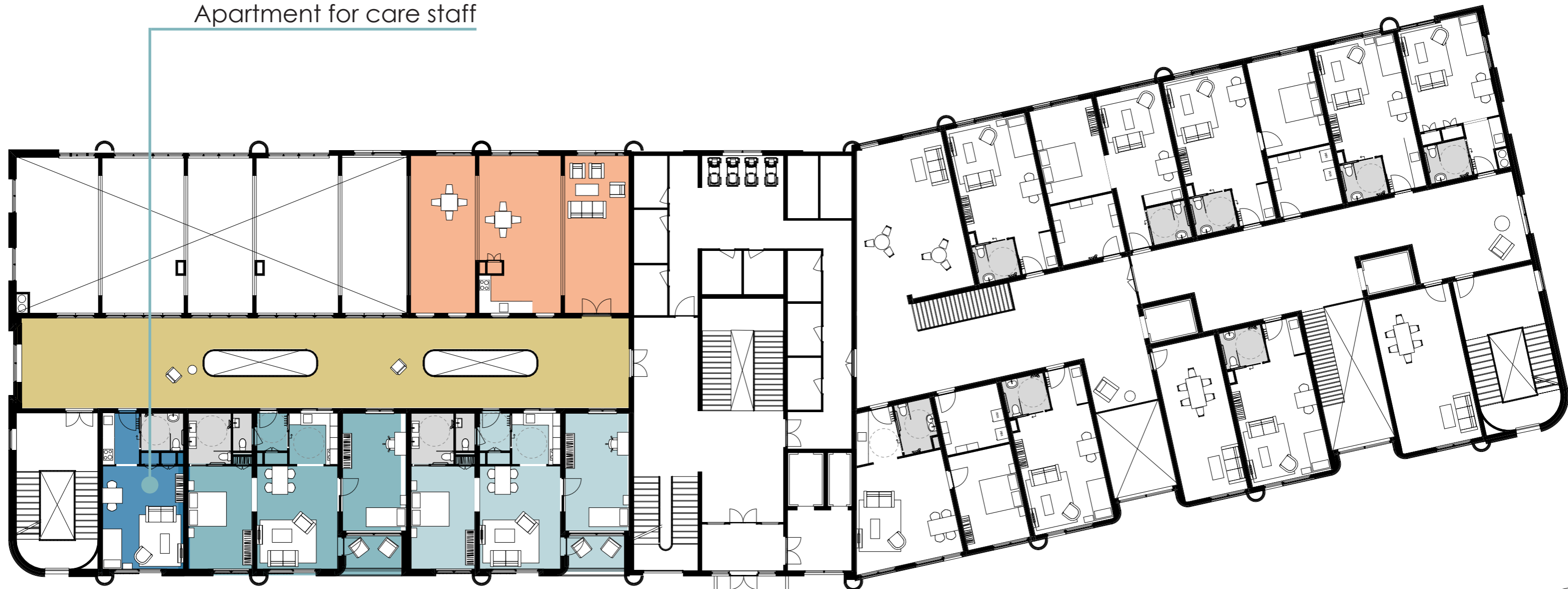
Bar (friday afternoon drinks)



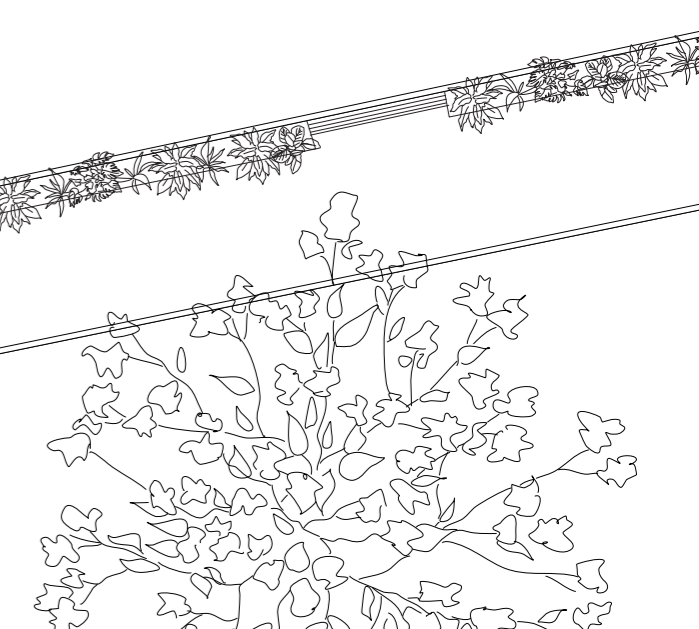
Arts and crafts room

2nd floor plan

Apartment for care staff

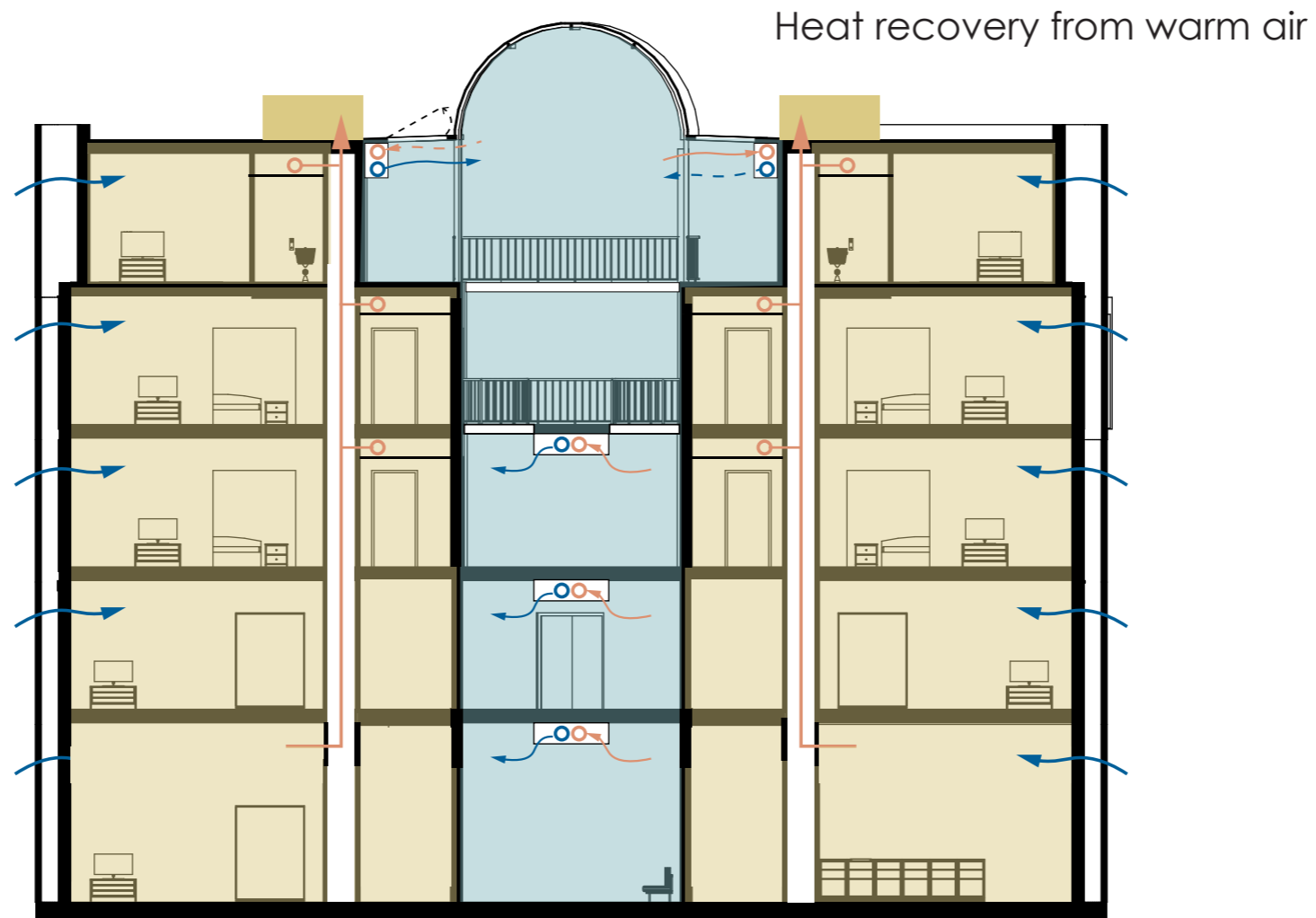


1st floor plan

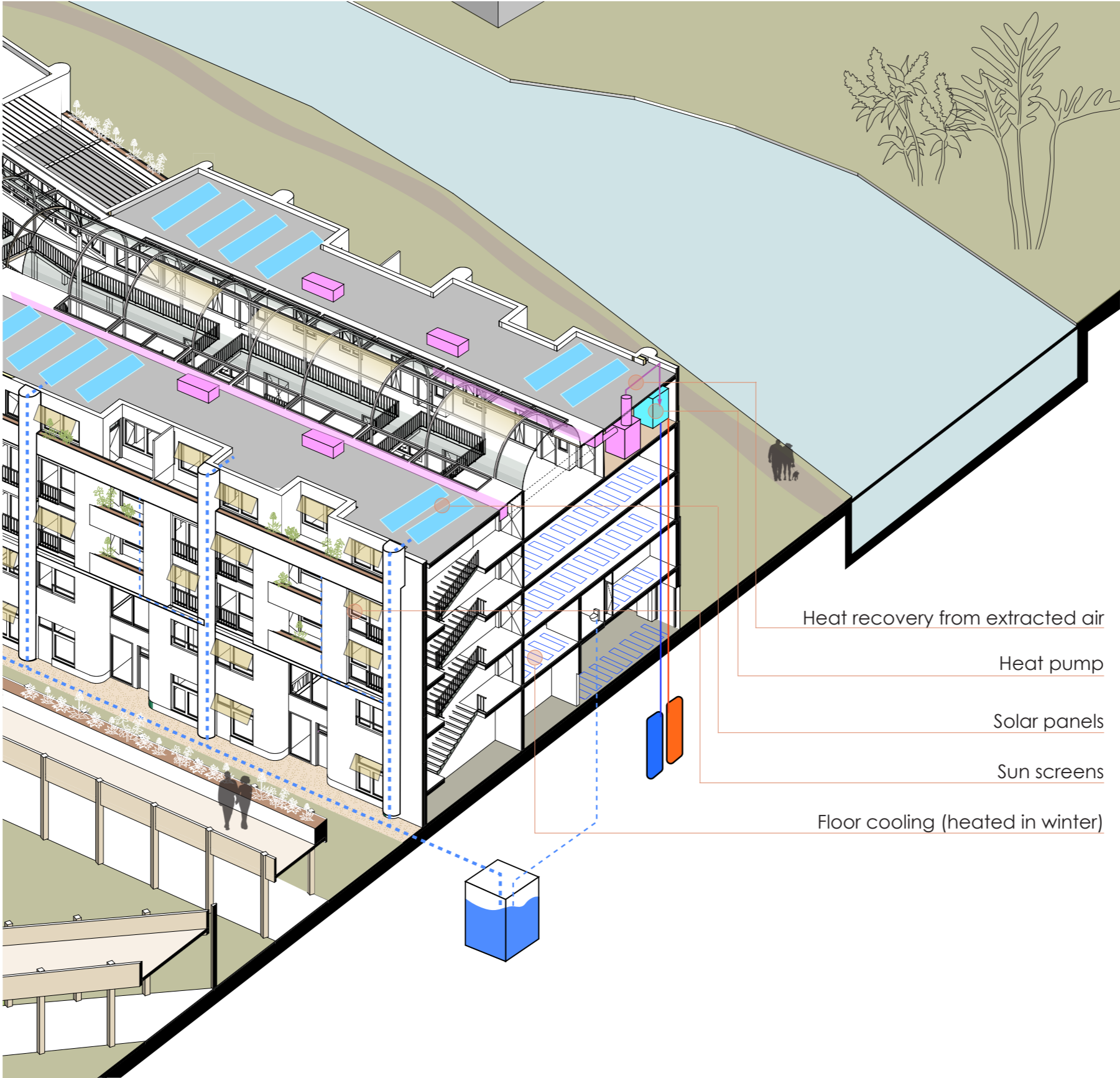


Climate - ventilation

- Mechanical out
- Mechanical in + out



Climate



Living separately (but close)

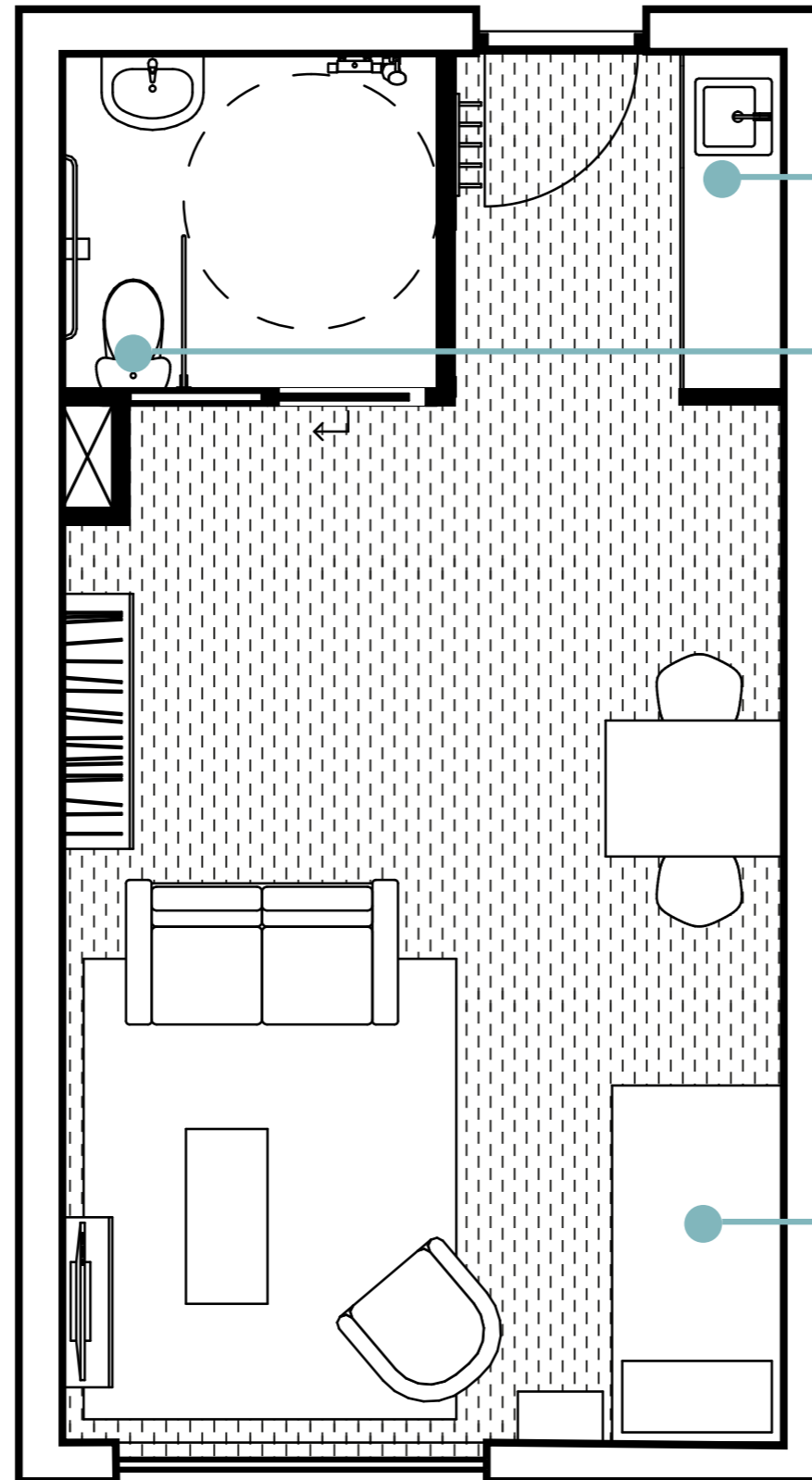


Connie



Will

Small scale dementia living group



Small kitchenette (no cooking)

Bathroom visible from bed

24/7 care available

Small scale dementia living group



Ground floor plan

Small scale dementia living group

shared living room



Ground floor plan

Small scale dementia living group



apartment for couples who both have dementia

staff room

Dementia group 1:
4 1-person rooms
2 -person rooms

8 people in total
+ staff

Dementia group 2:
5 1-person rooms
1 2 -person room

7 people in total
+ staff

elevator to transport extra bed or hospital bed

small shared room

counselling room



1st floor plan

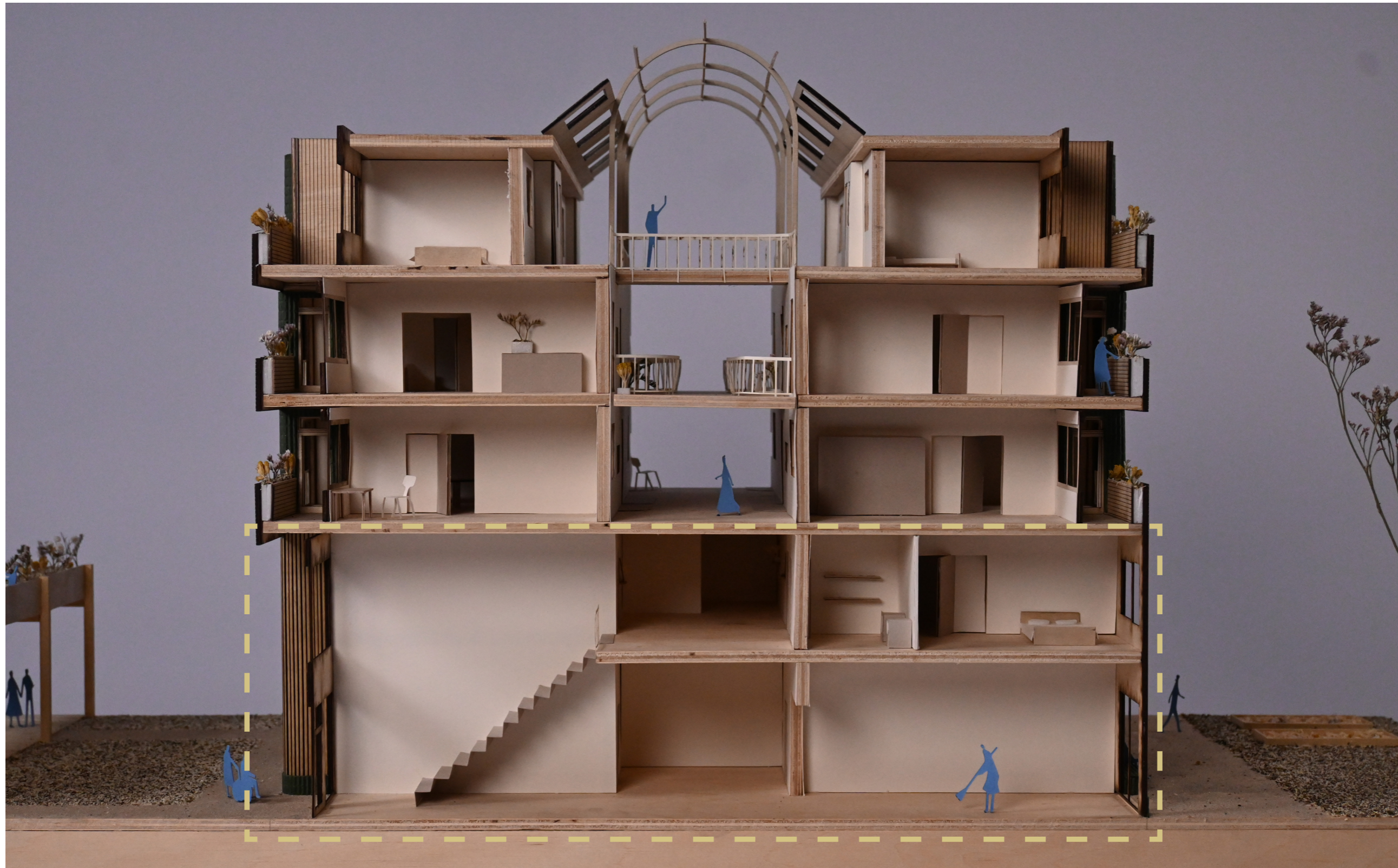


Ground floor plan

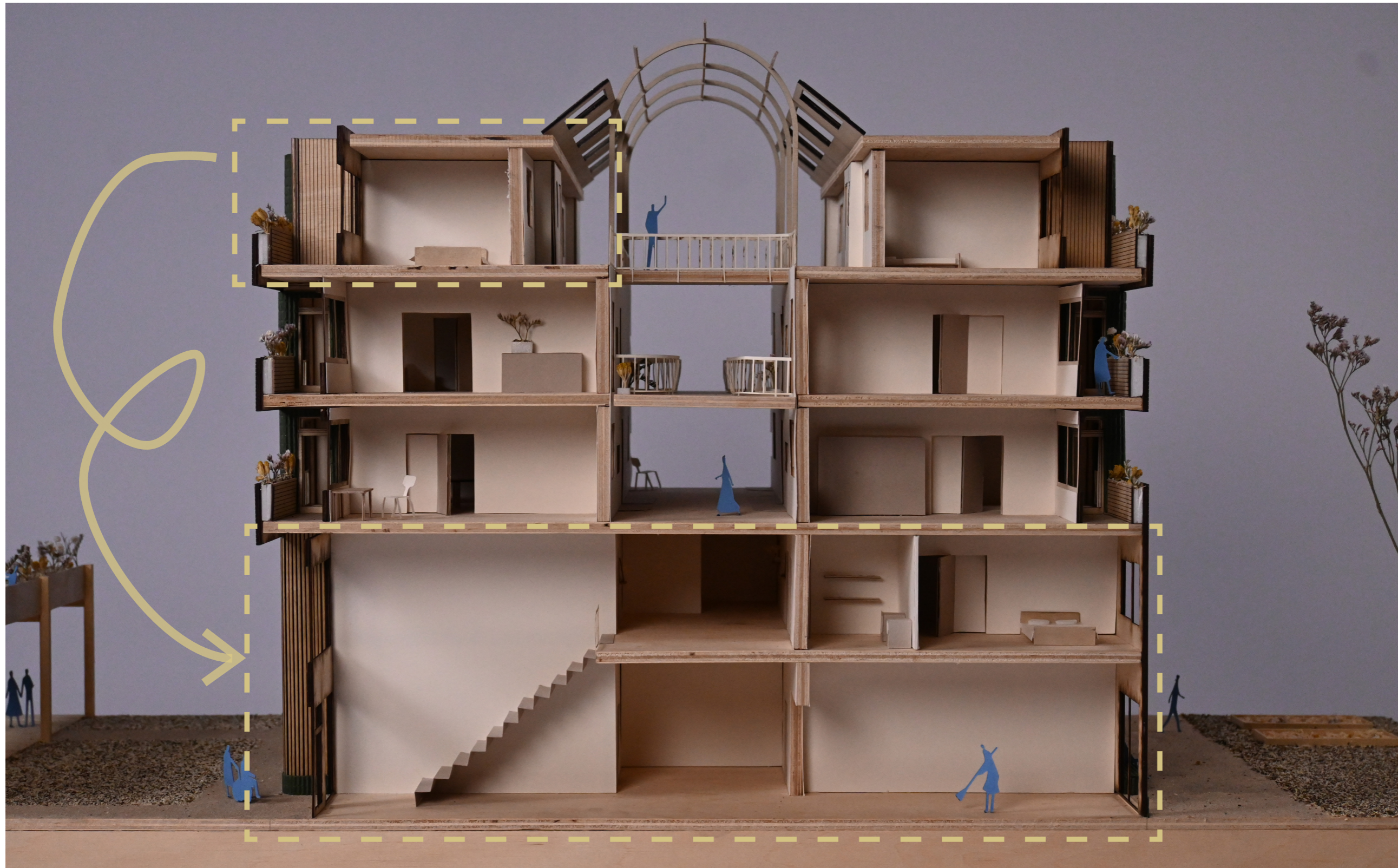
Small scale dementia living group



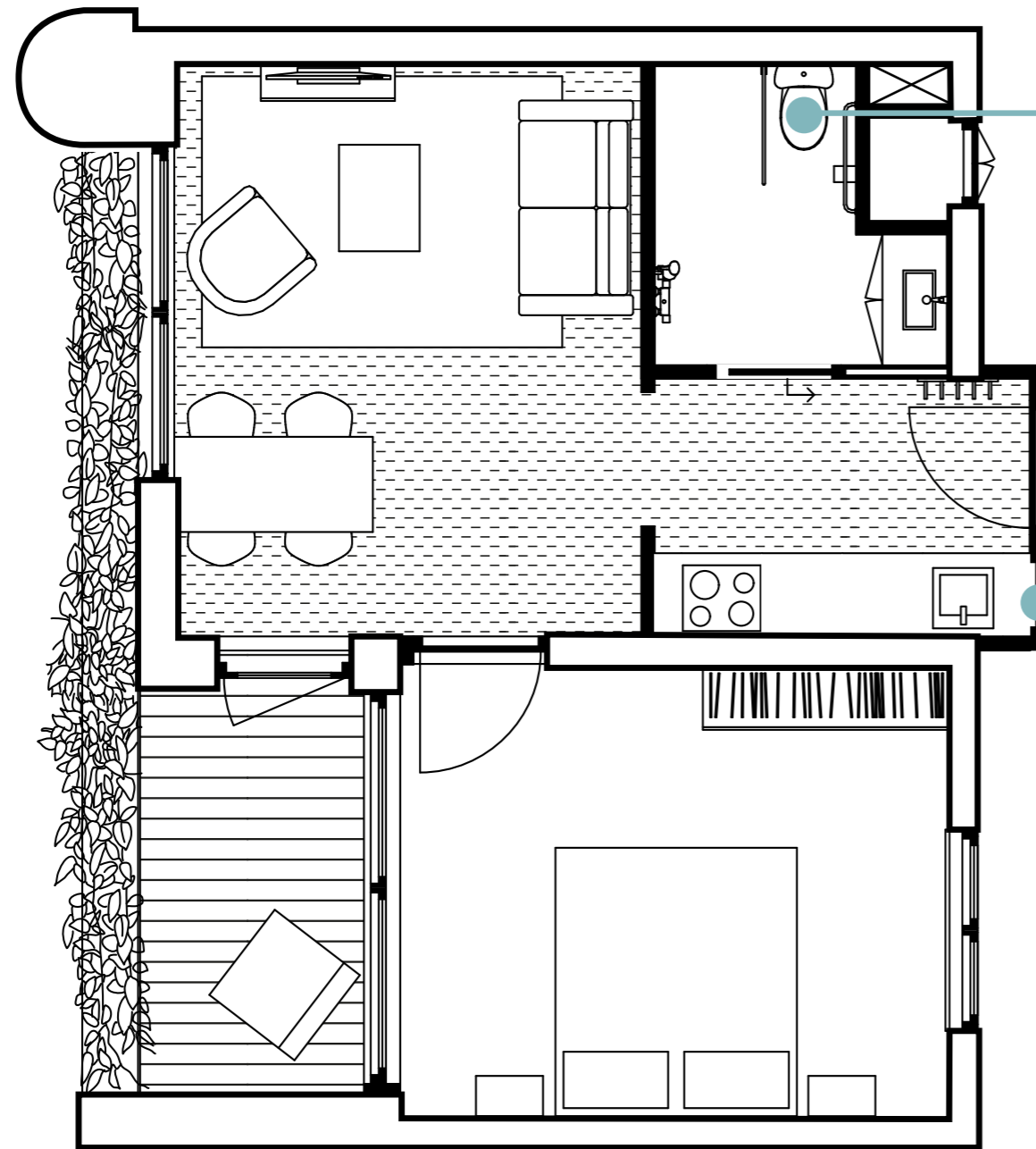
Small scale dementia living group



1 person elderly apartment

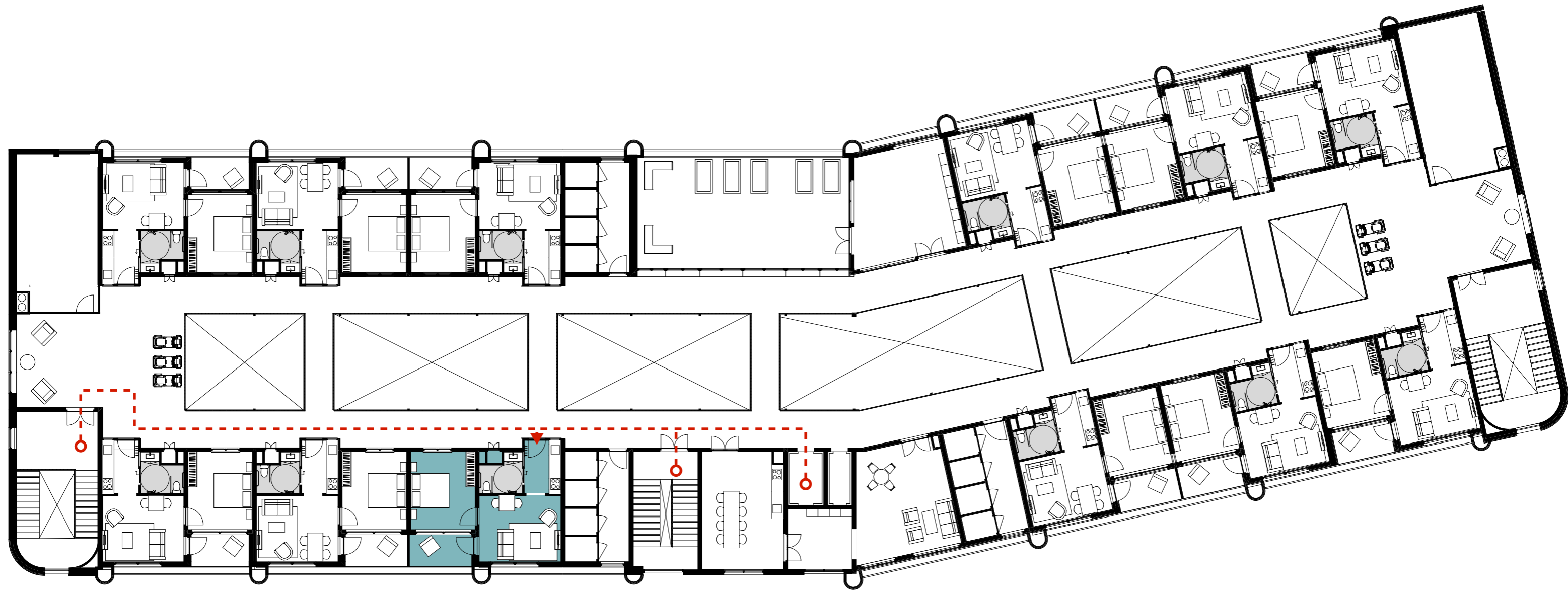


1 person elderly apartment

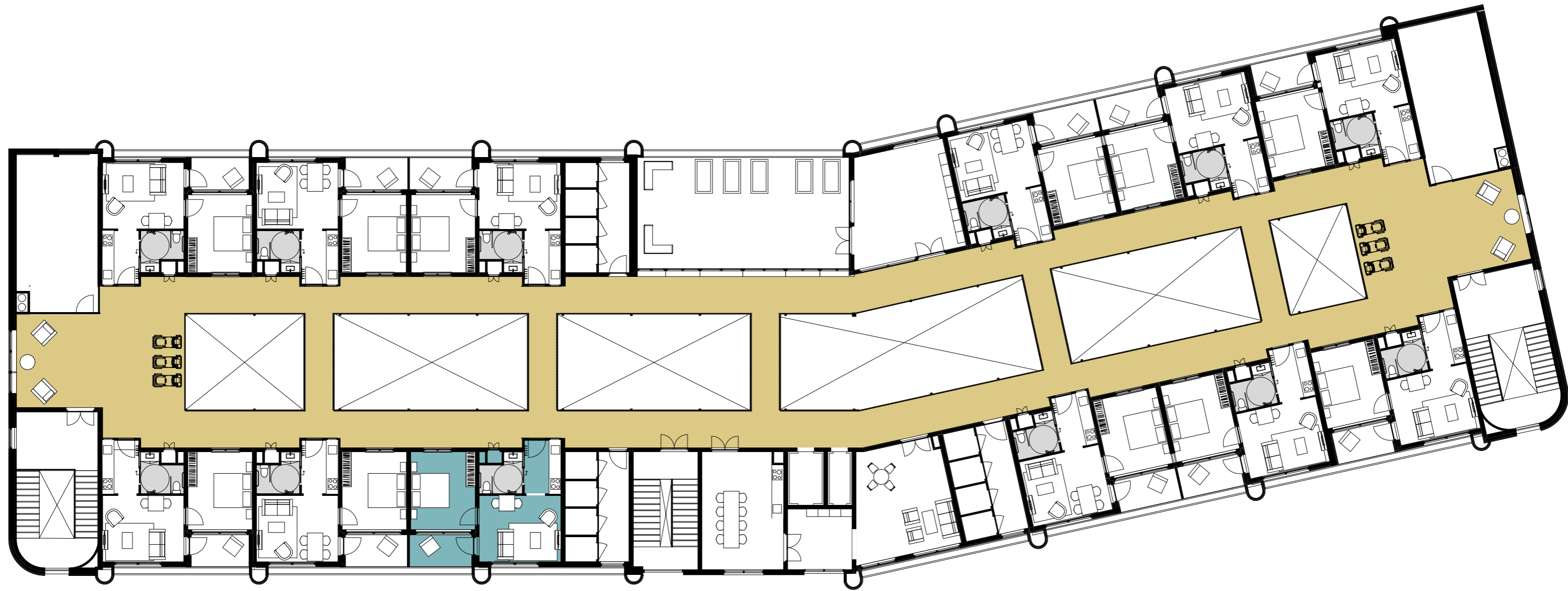


Wheelchair accessible toilet

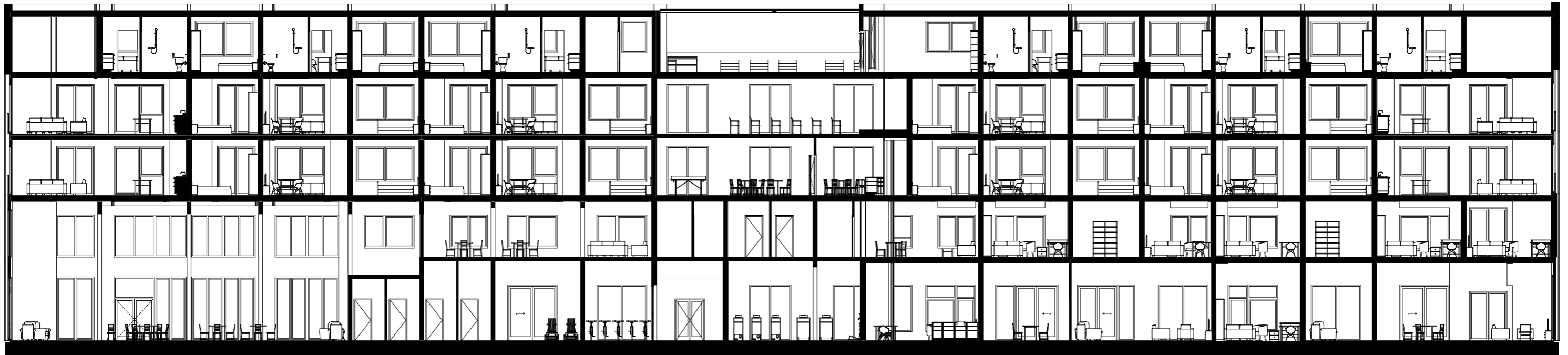
Window to atrium



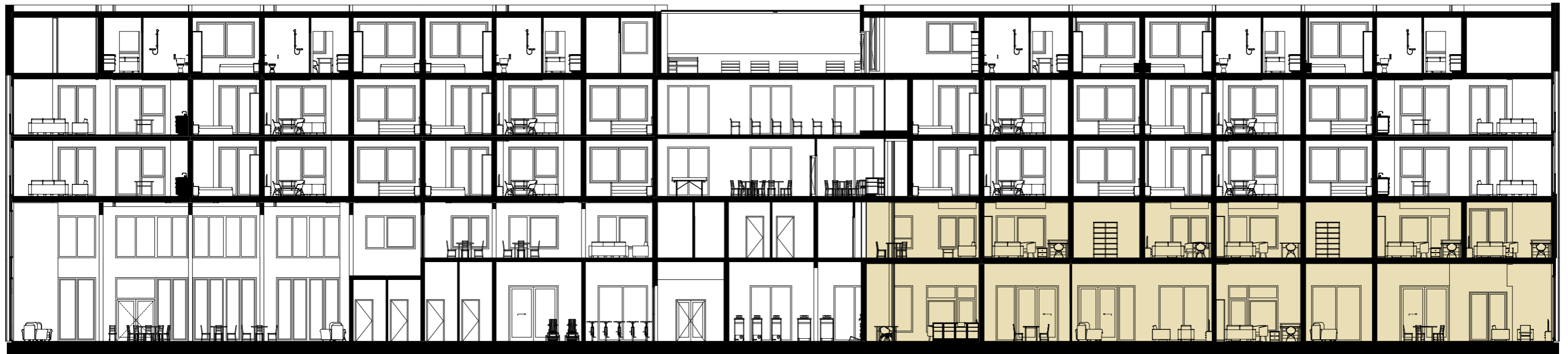
4th floor plan



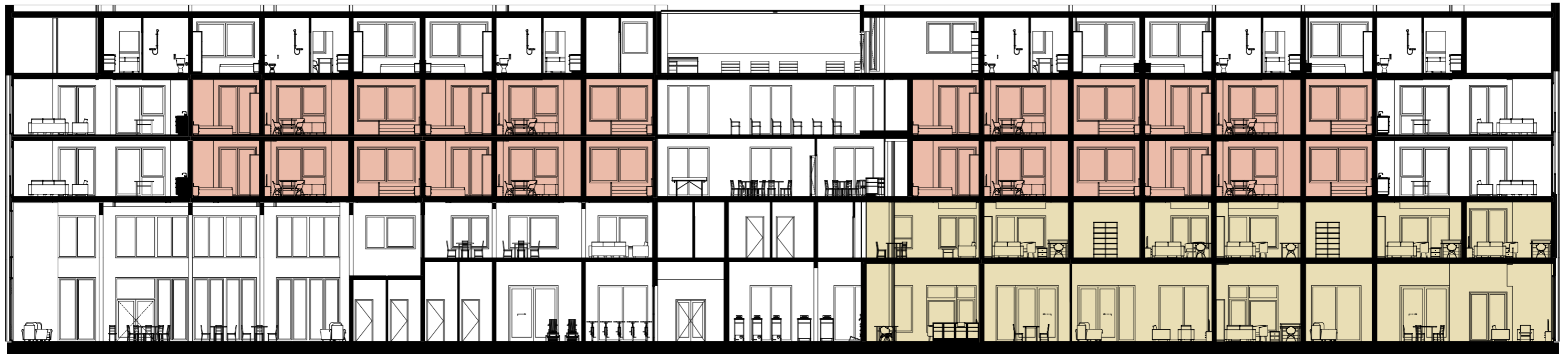




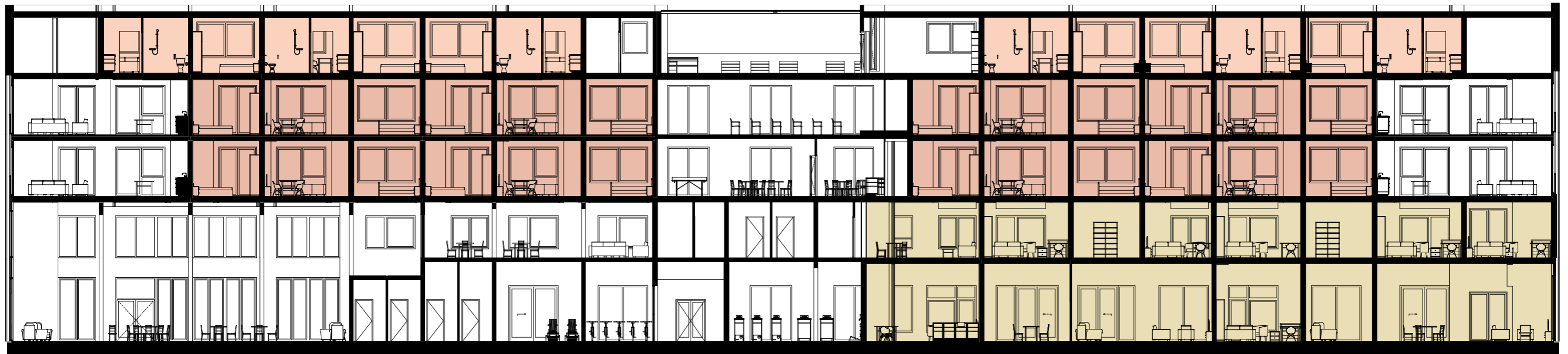
Dementia living groups



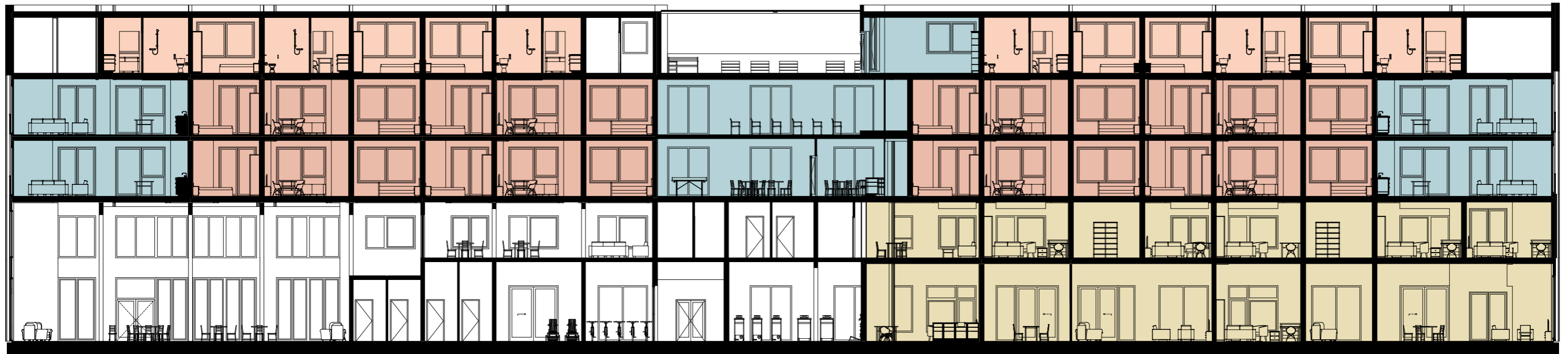
2 person apartments



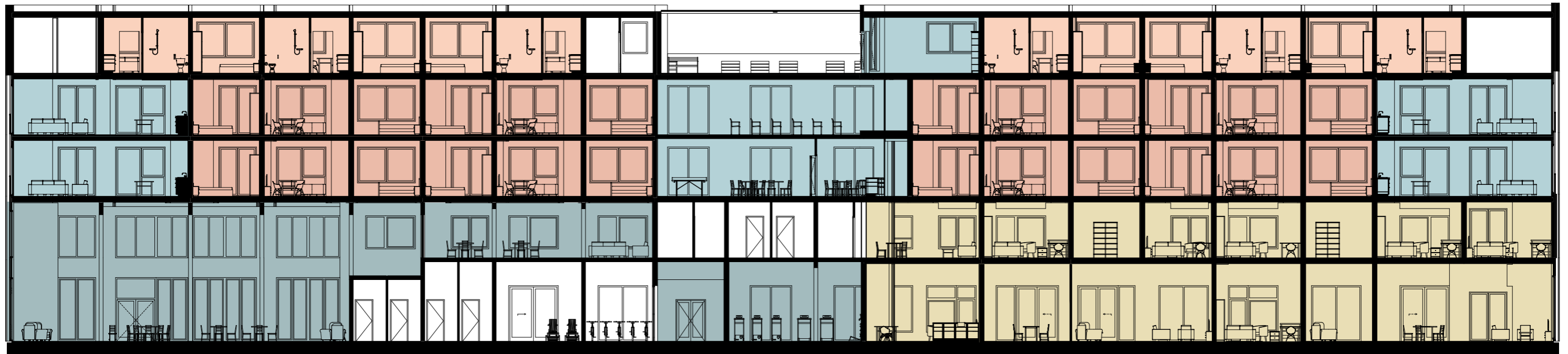
1 person apartments



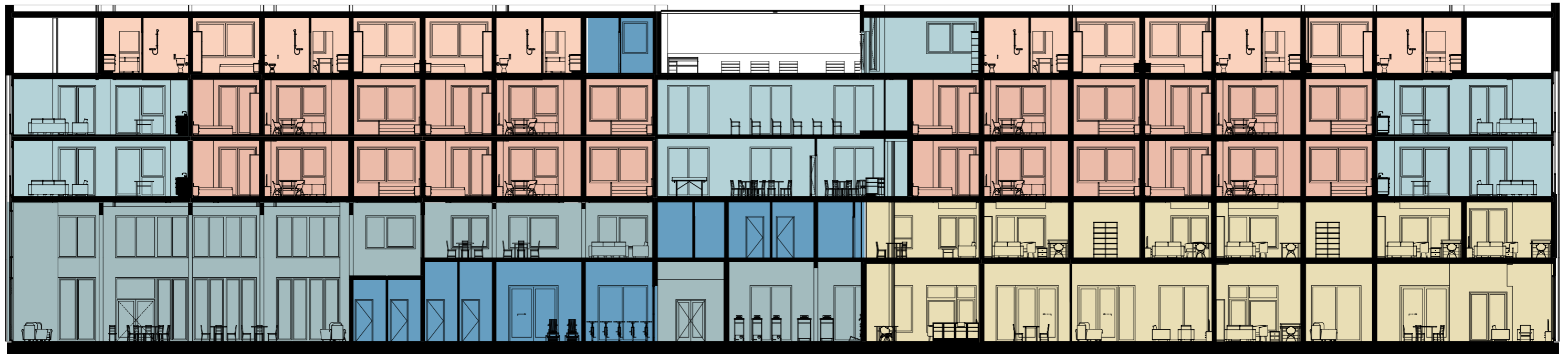
Communal rooms



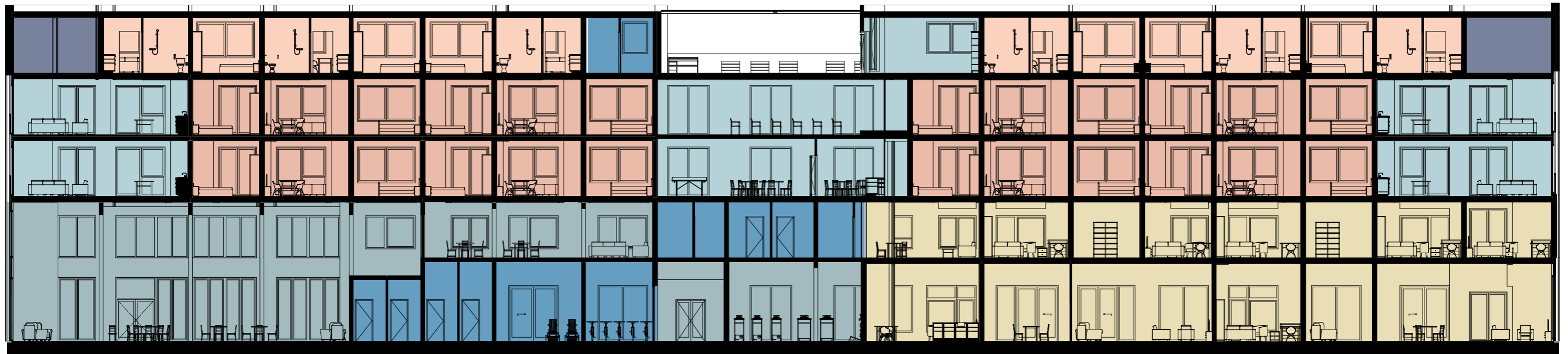
Public spaces



Storage space



Technical rooms

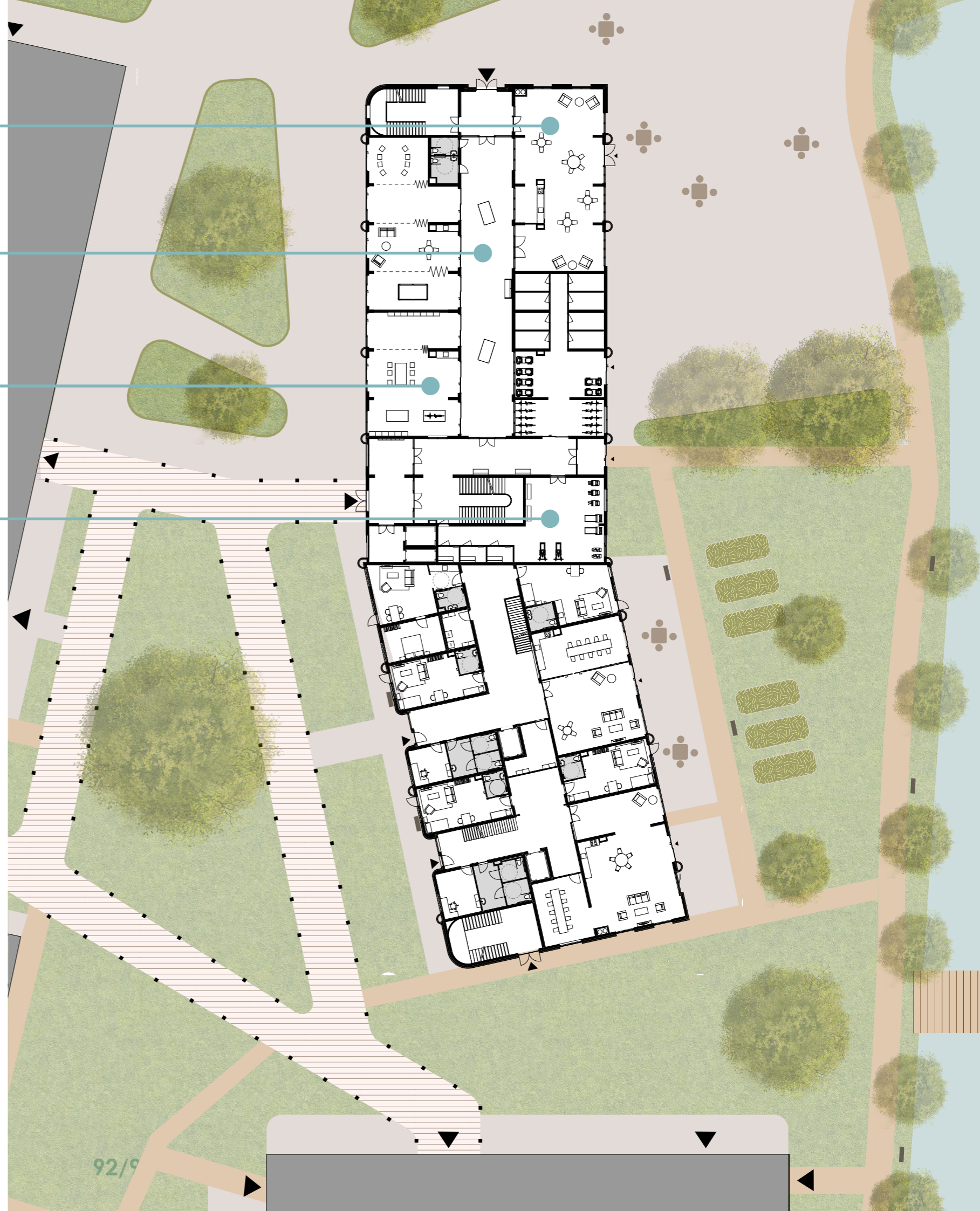


Cafe

Maakstraat

Repair cafe

Gym/fysio

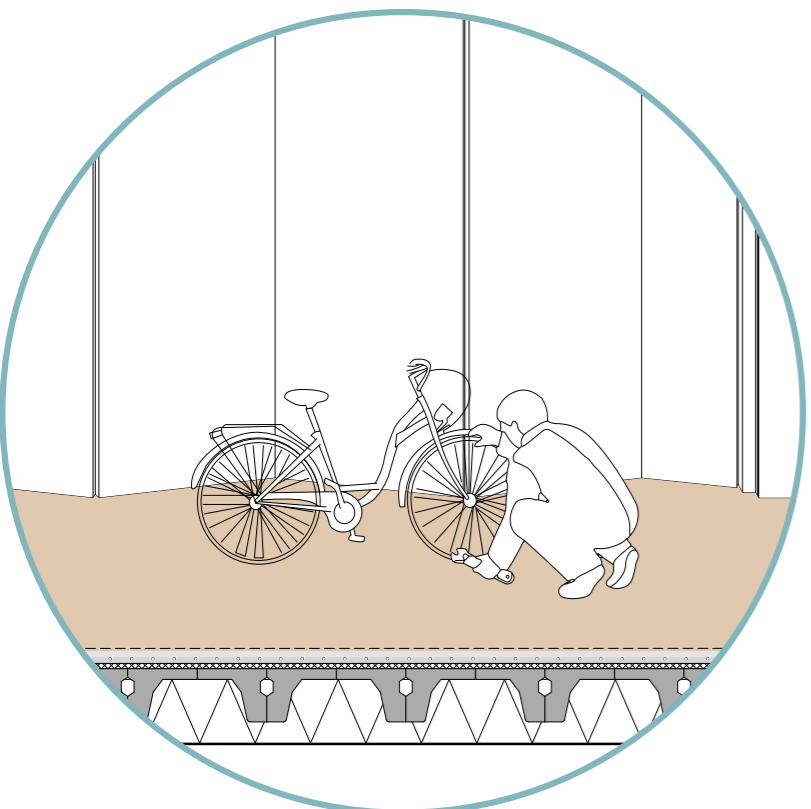


Ground floor plan

92/9



Repaircafe



Maakstraat



Thank you!