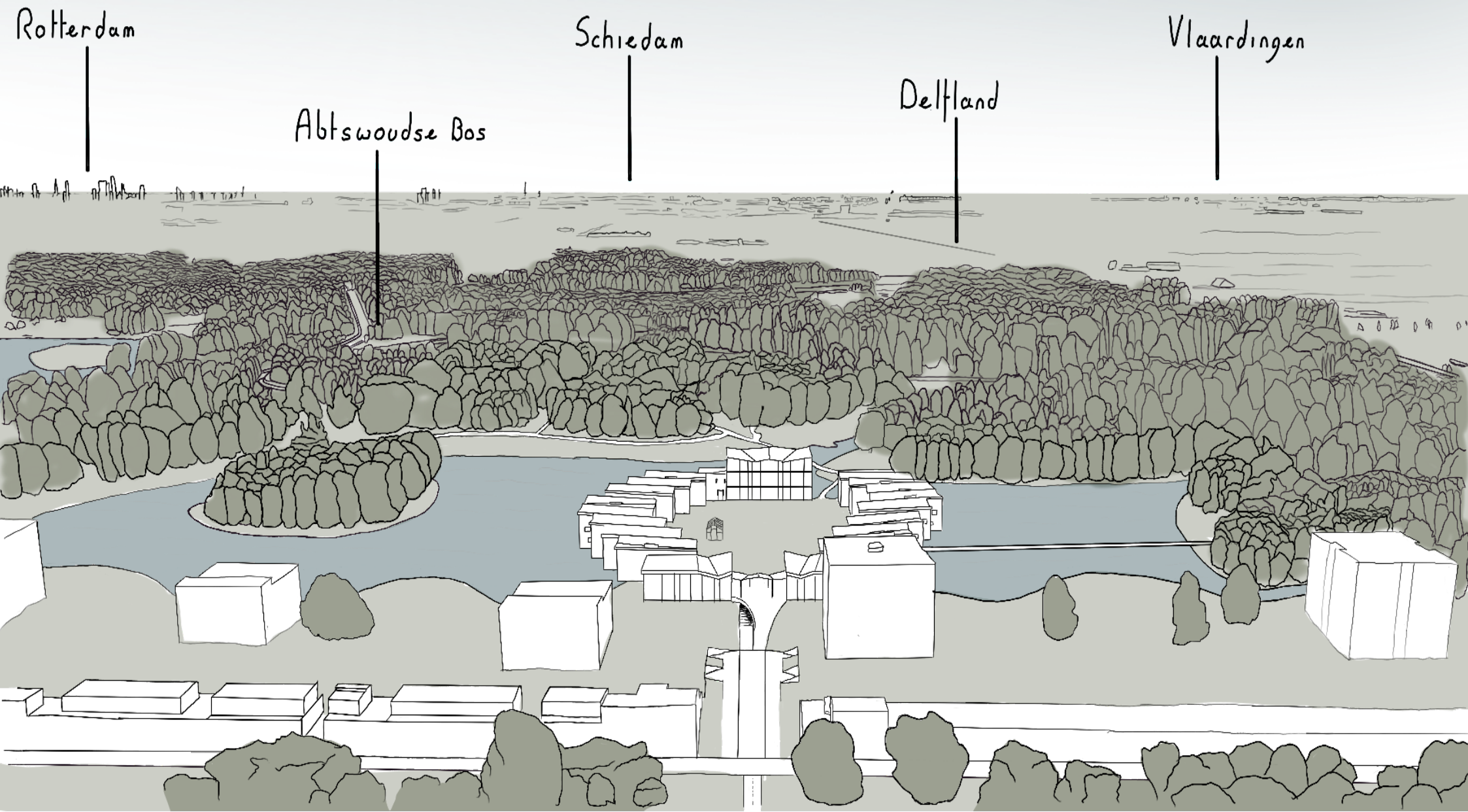


Community loop

AR3AD100 · Advanced Housing Design
P5 Presentation · June 27, 2024
Johan Boele 5062756



Rotterdam

Schiedam

Vlaardingen

Abtswoudse Bos

Delfland

CHALLENGES FOR THE NETHERLANDS



Climate change



Housing crisis



Aging population



CLIMATE CHANGE IMPLICATIONS

- Sea level rising
 - Harder to discharge riverwater into the sea
 - Salinization
- Extreme weather phenomena
 - Heavy rainfall and drought
- Soil subsidence from pumping the polders dry
- Biodiversity decline



HOUSING CRISIS

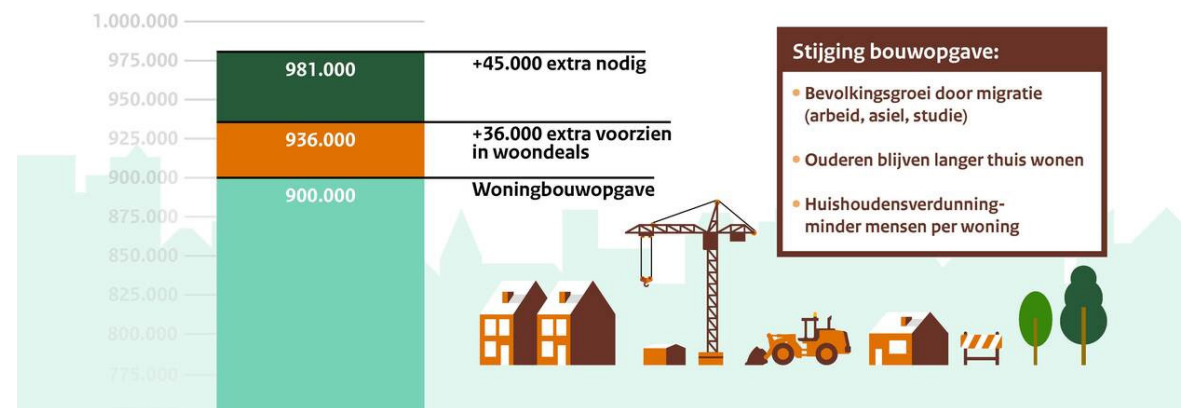
- already a shortage of 390,000 Houses
- 981,000 houses needed in 2030
- Build the right type of houses



Ministerie van Binnenlandse Zaken en
Koninkrijksrelaties

Woningbouwopgave tot en met 2030

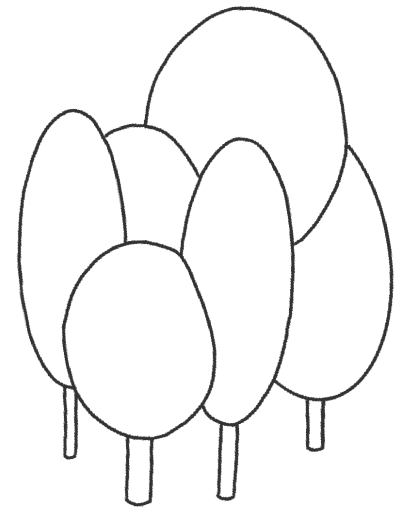
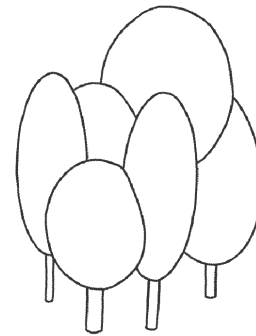
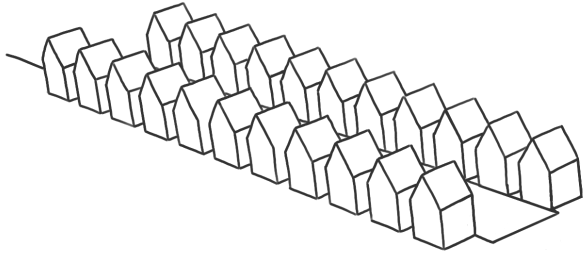
Door extra verwachte groei van het aantal huishoudens, stijgt de bouwopgave naar **981.000** woningen t/m 2030.
Dit vergroot de noodzaak om met meer tempo en meer regie, meer betaalbare woningen te bouwen.



Forecast of the housing task (Source: Rijksoverheid)

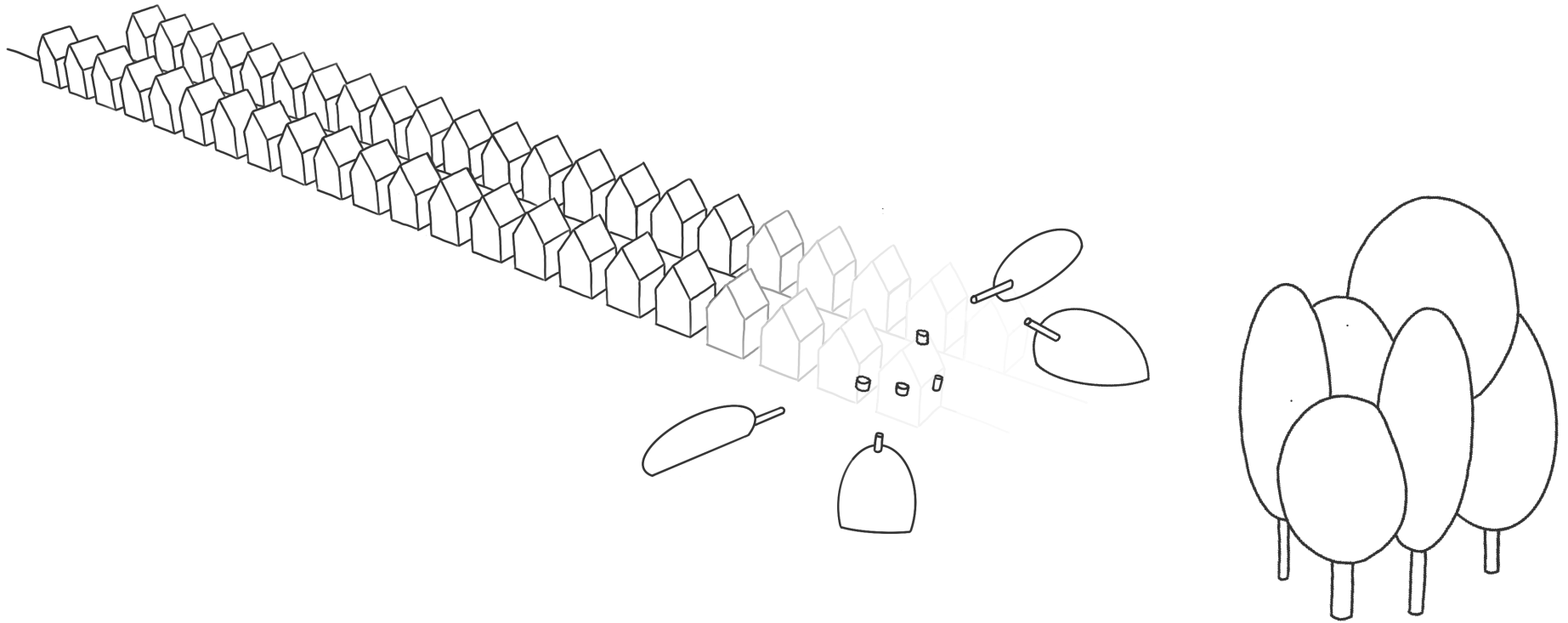


THE URBAN SPRAWL



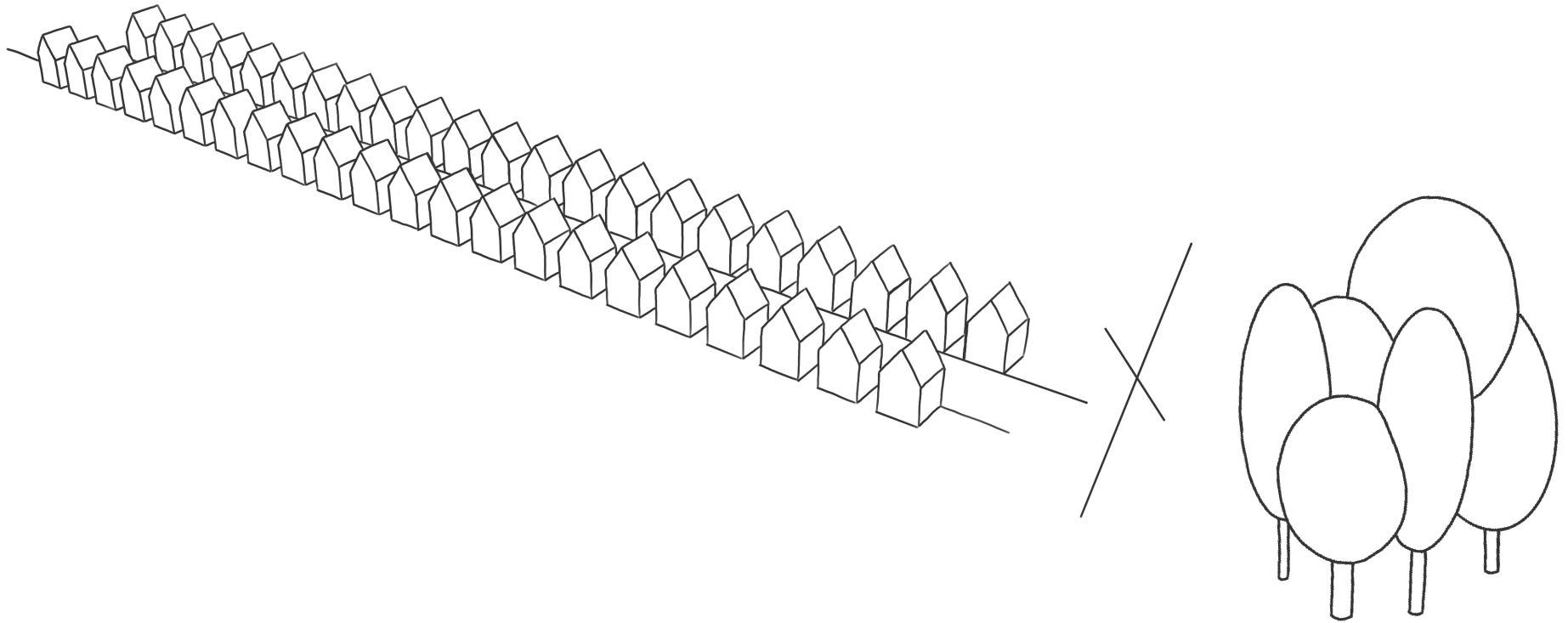


THE URBAN SPRAWL



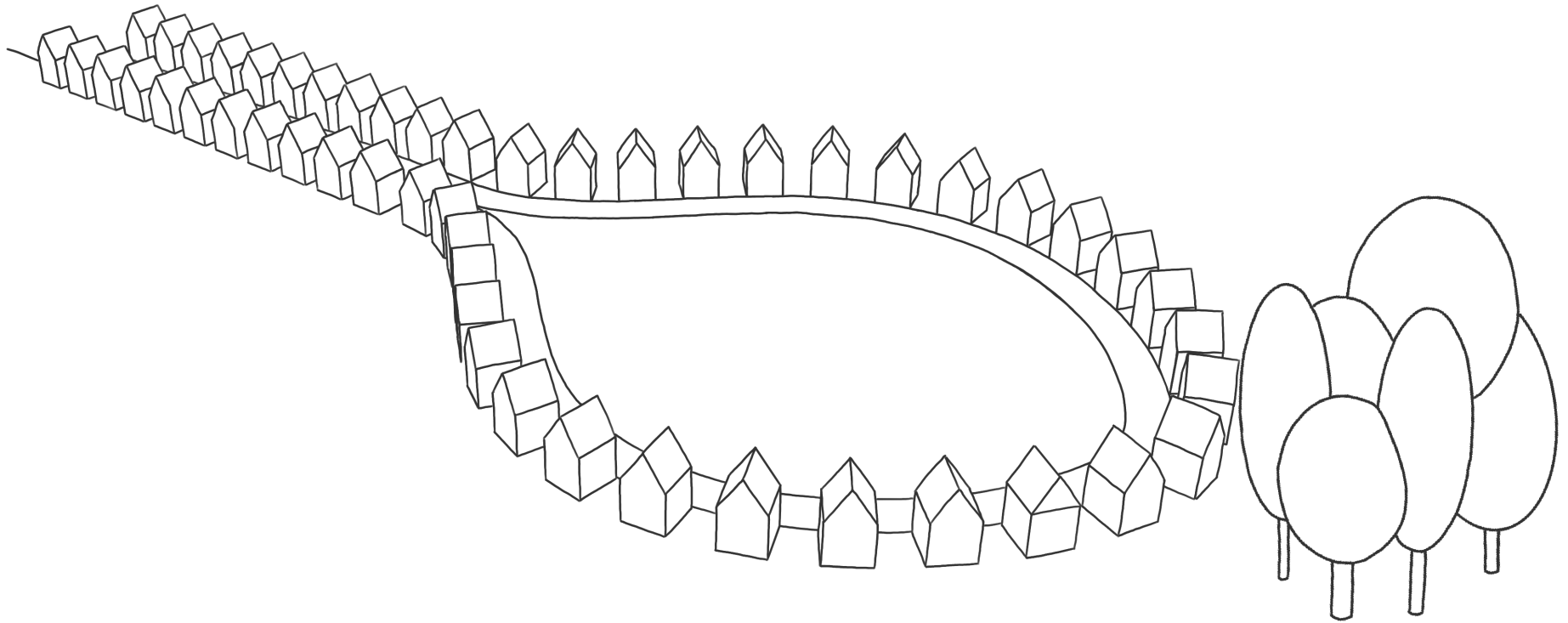


THE URBAN SPRAWL



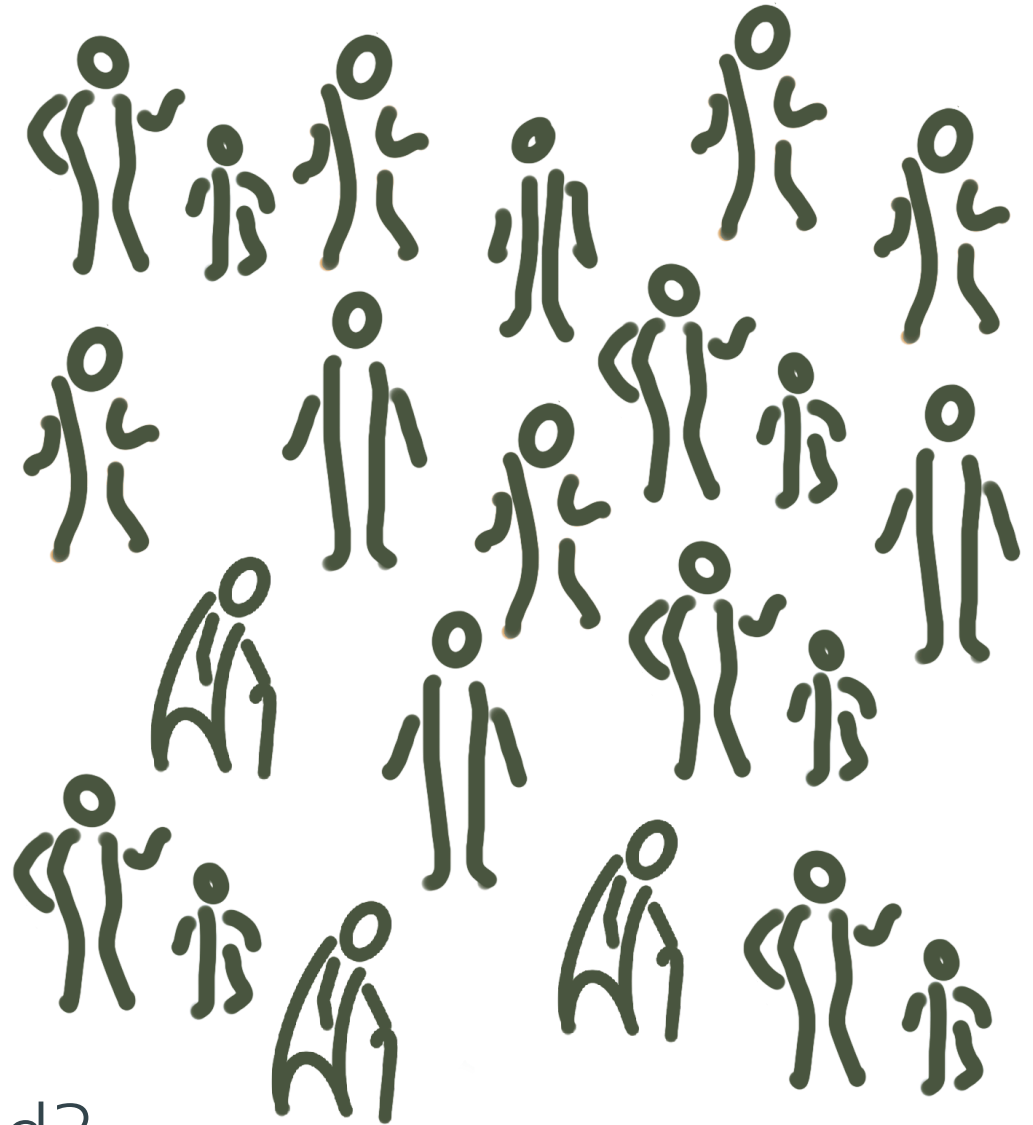


THE URBAN SPRAWL





HOUSING CRISIS



But for who should we build?



THE AGING POPULATION

Age-in-place

Often the houses of older people are not suitable to age-in-place

Occupy single-family houses, because there are no alternatives



REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS





REQUIREMENTS



SOLUTIONS



Climate change



Housing crisis



Aging population



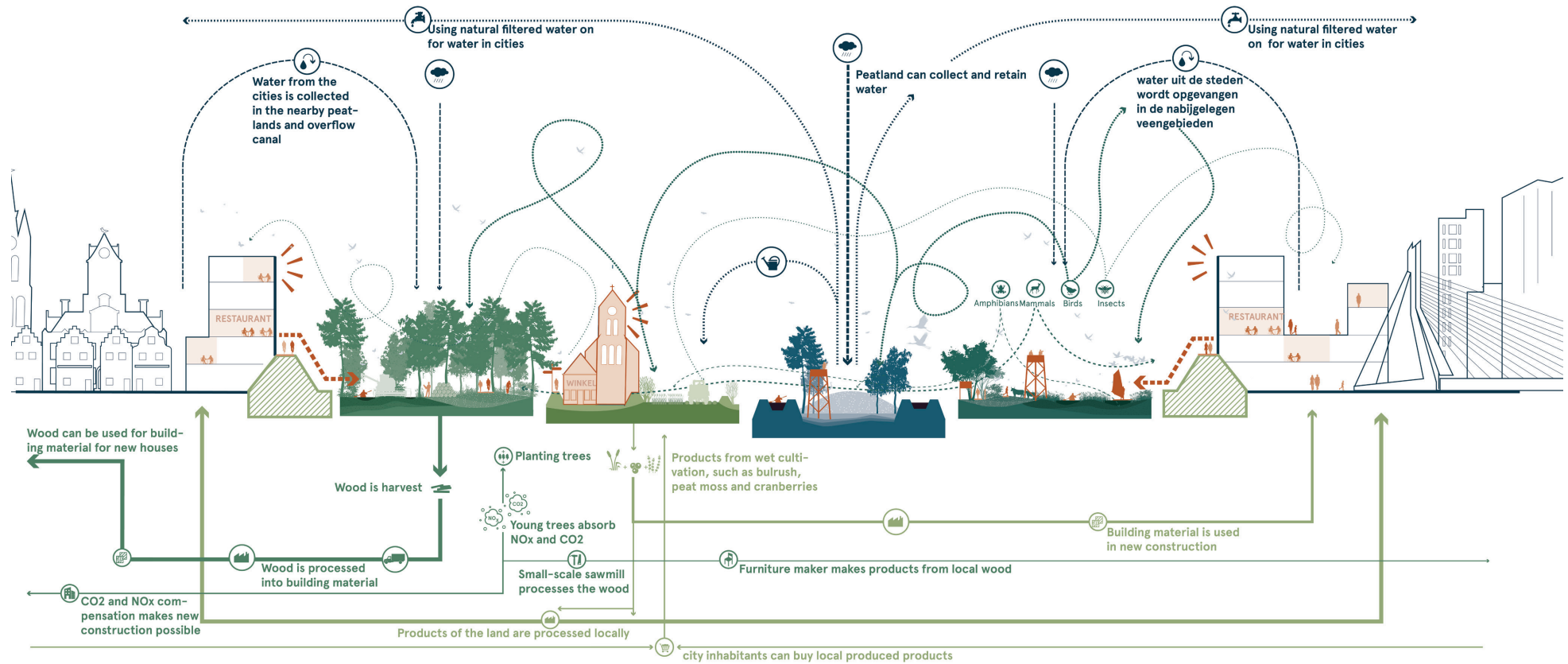
PLAN OF ZUS



Vision National Productive Park Delfland (Source: ZUS-Office)



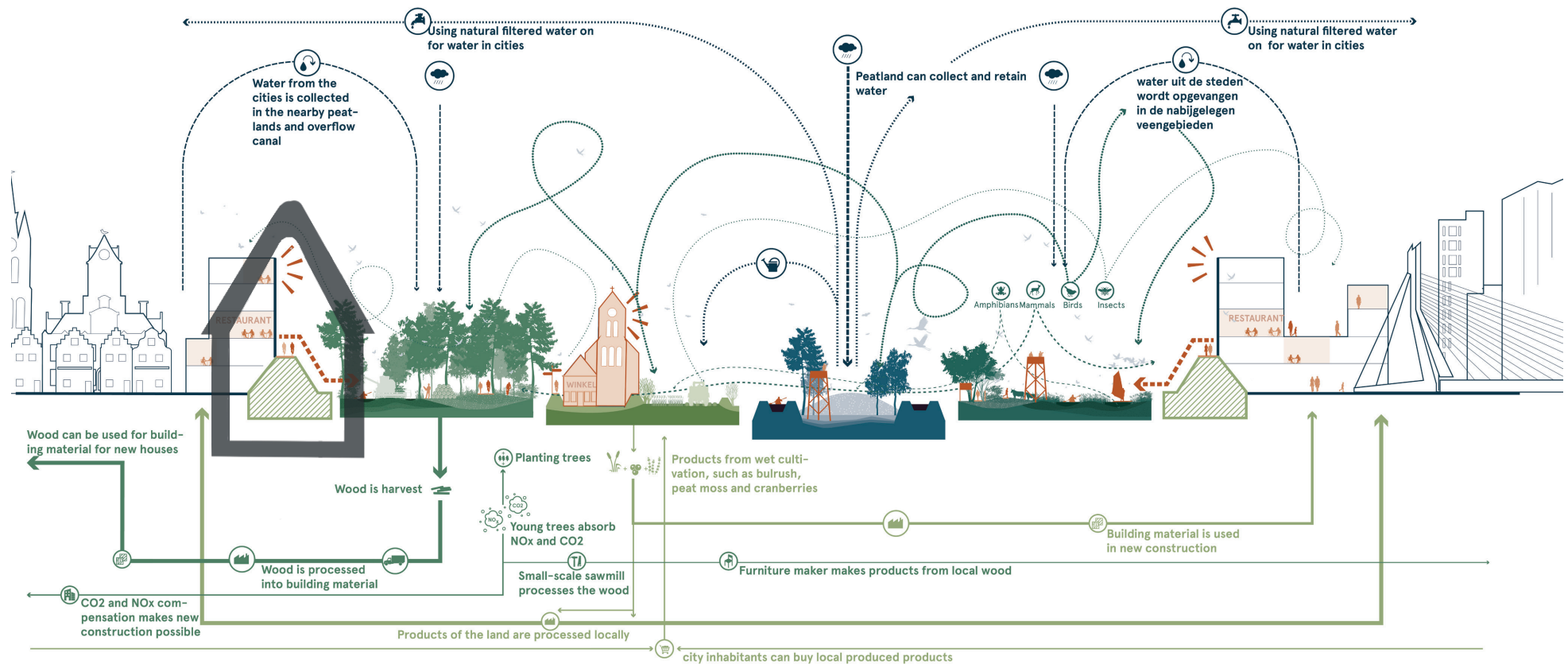
PLAN OF ZUS



Section of National Productive Park Delfland (Source: ZUS-Office)



PLAN OF ZUS

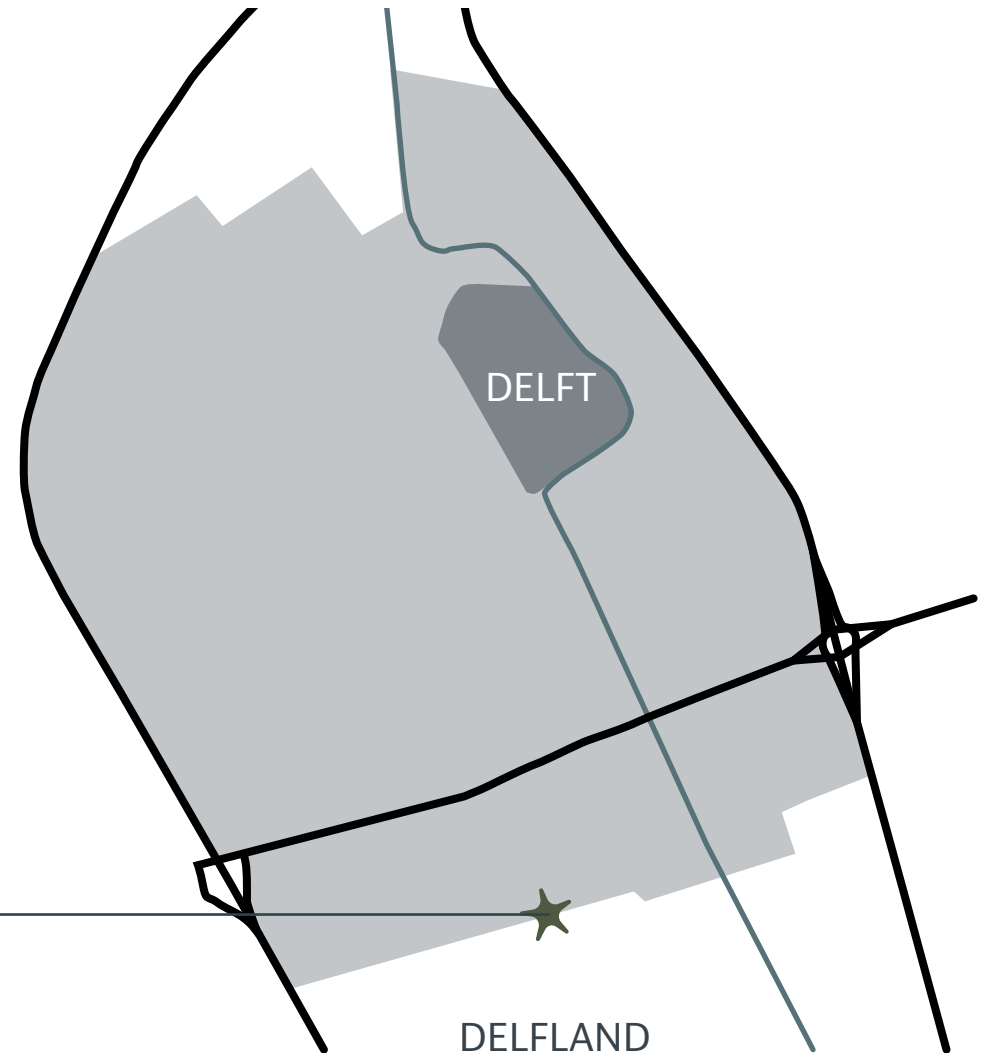


Section of National Productive Park Delfland (Source: ZUS-Office)



LOCATION

Delft Tanthof





LOCATION





LOCATION



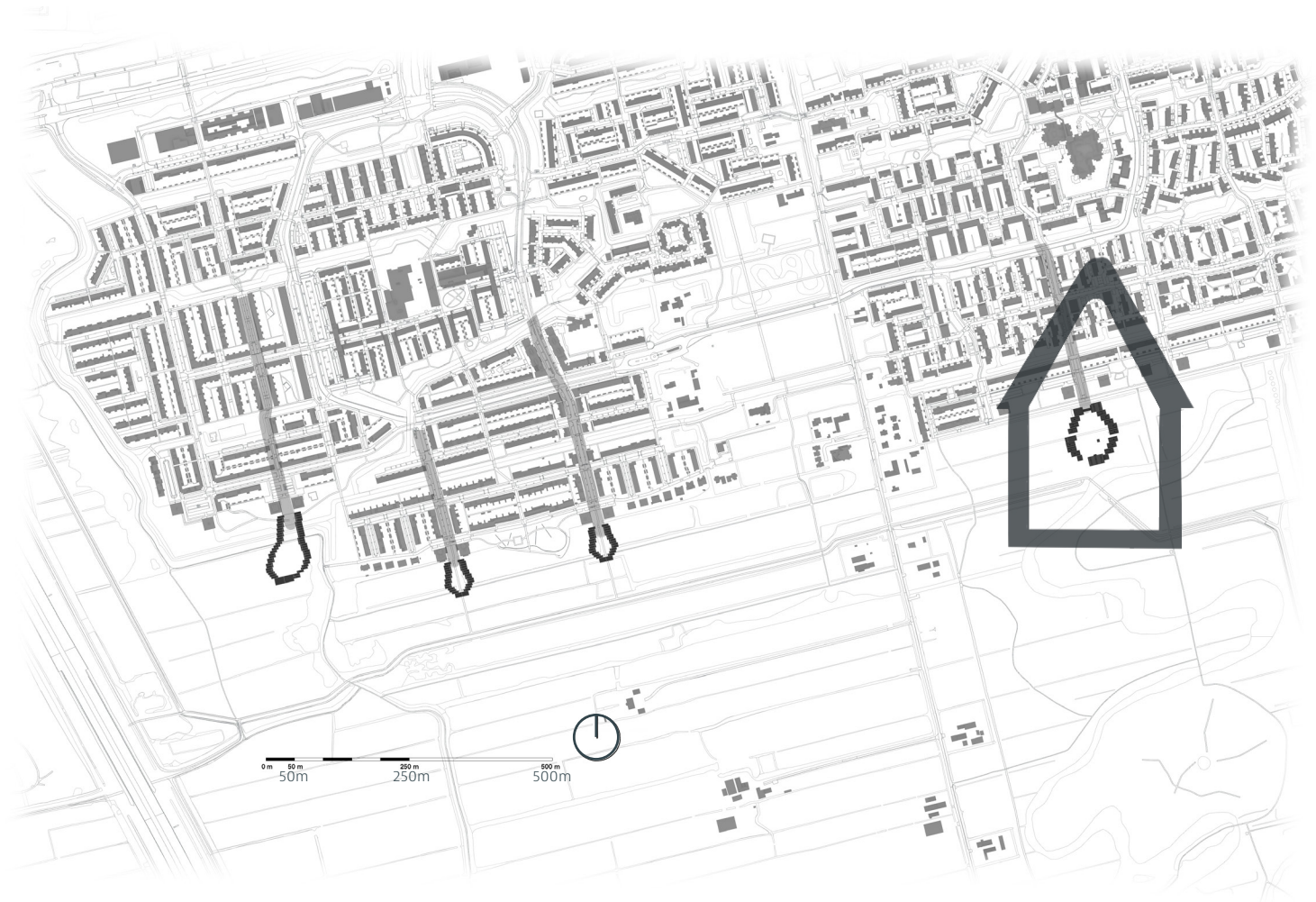


LOCATION





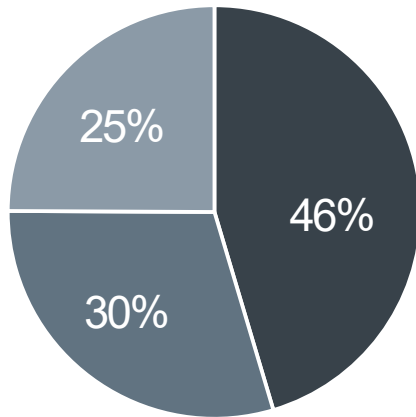
LOCATION





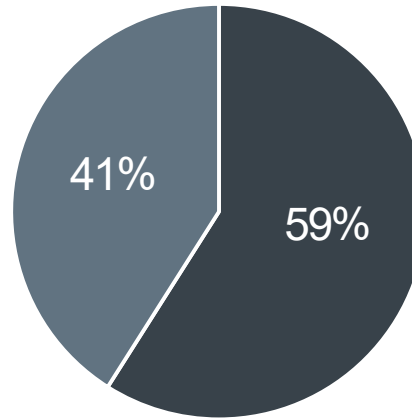
TANTHOF EAST

Type of household



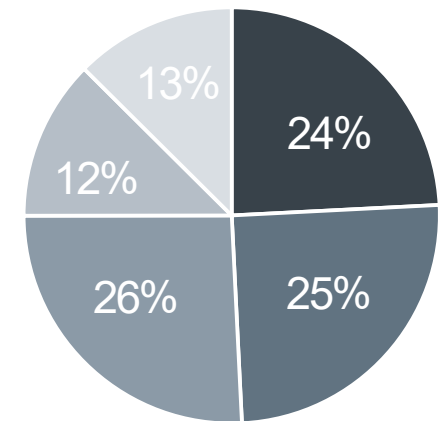
- Single
- Couple
- Family

Housing type



- Single family houses
- Apartment buildings

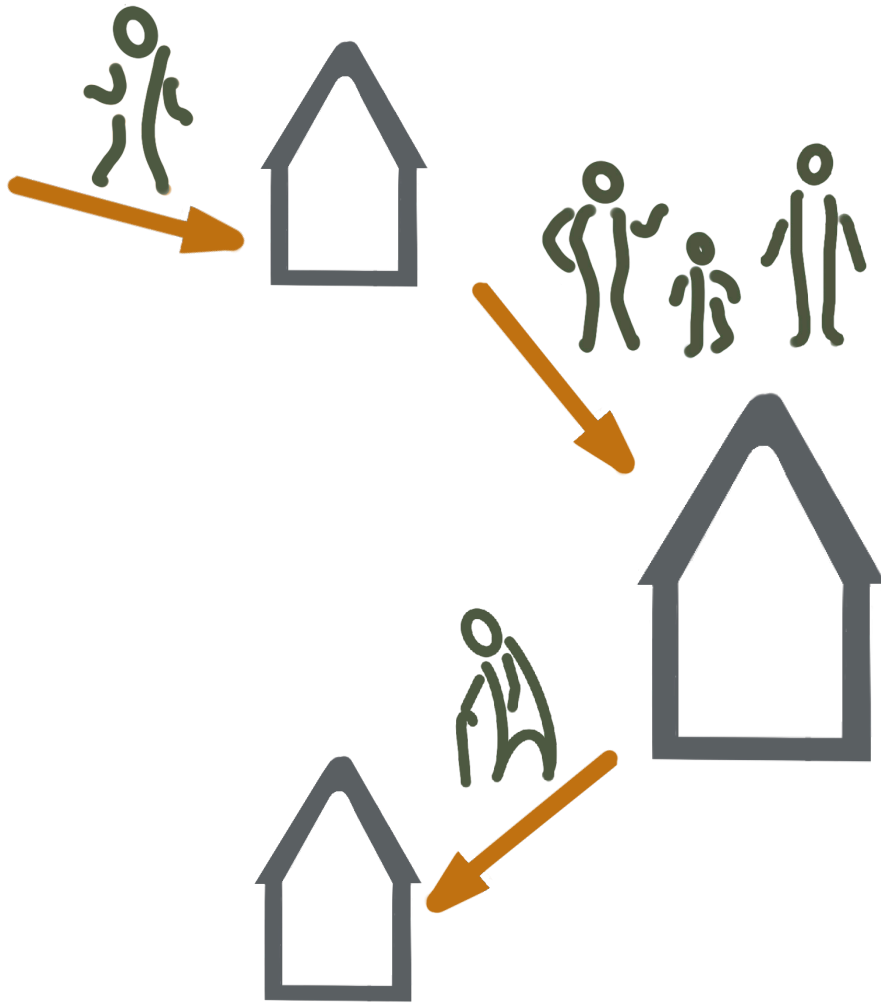
Age groups



- 0-15
- 16-25
- 25-45
- 45-65
- 65+



SOLUTION TANTHOF



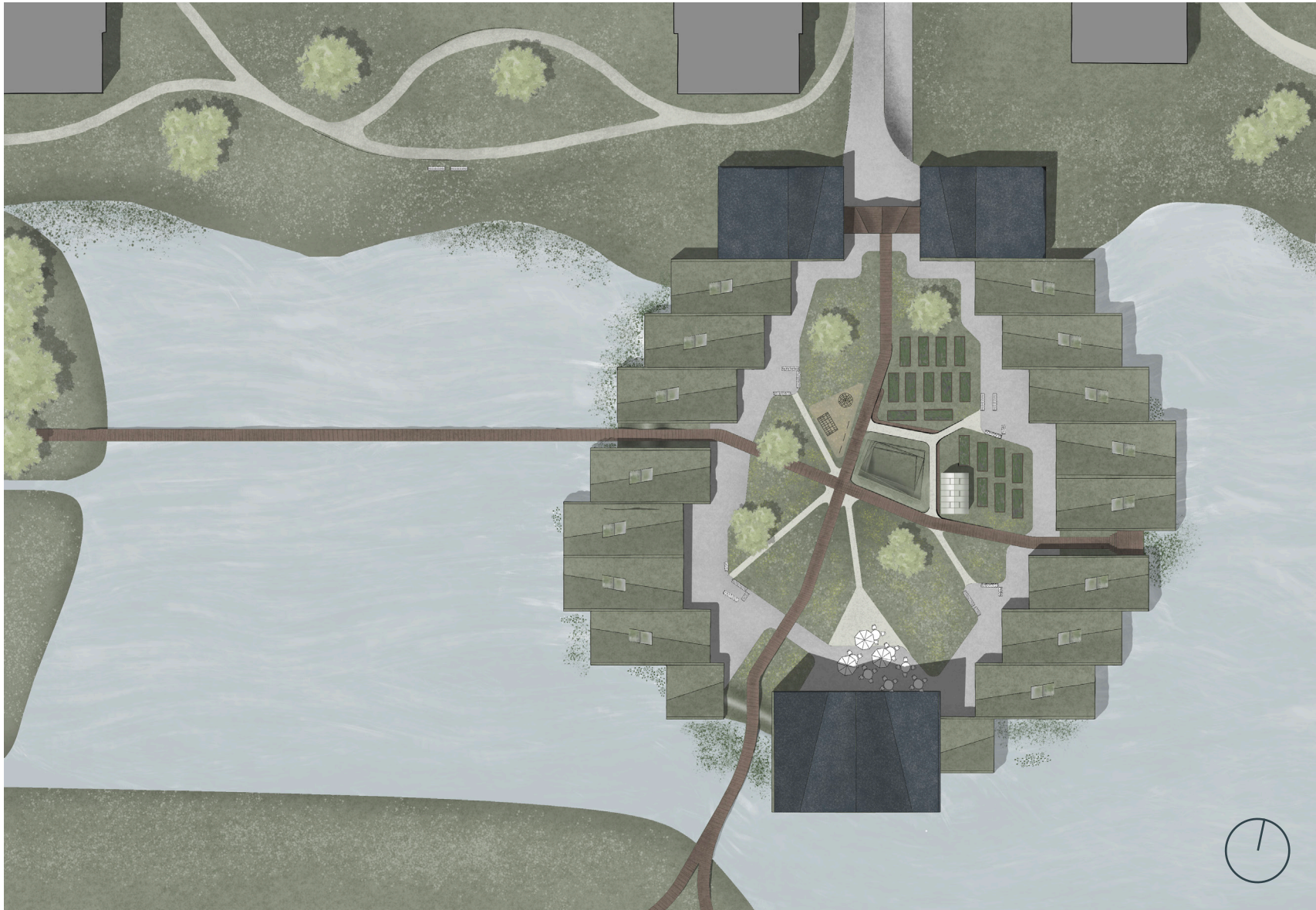
Housing from birth to grave

surface area
Communal
loop
house

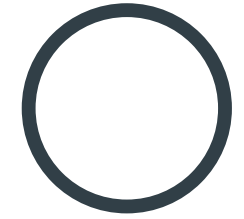
average
surface area
Single family
house



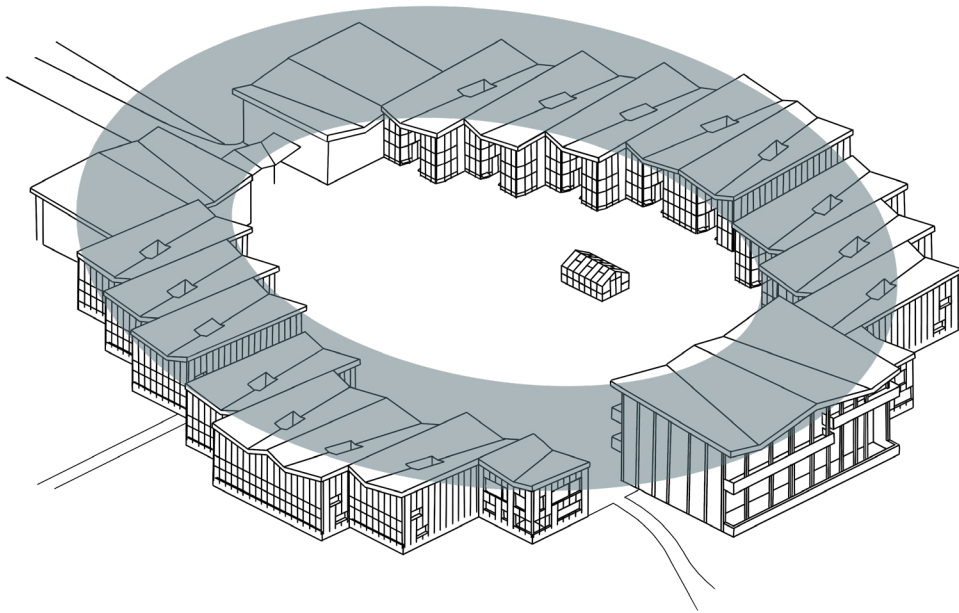
TANTHOF EAST



TYOLOGY

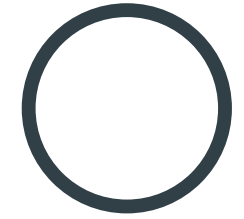


Closed community

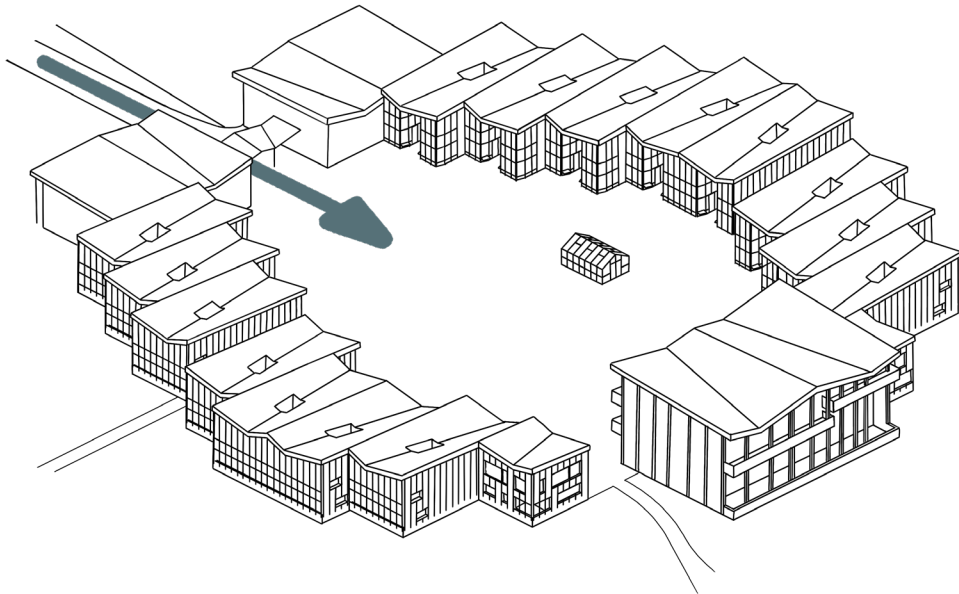


TYOLOGY

Closed community

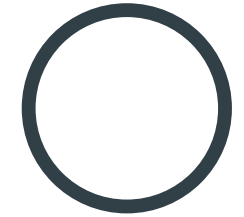


Invite visitors



TYOLOGY

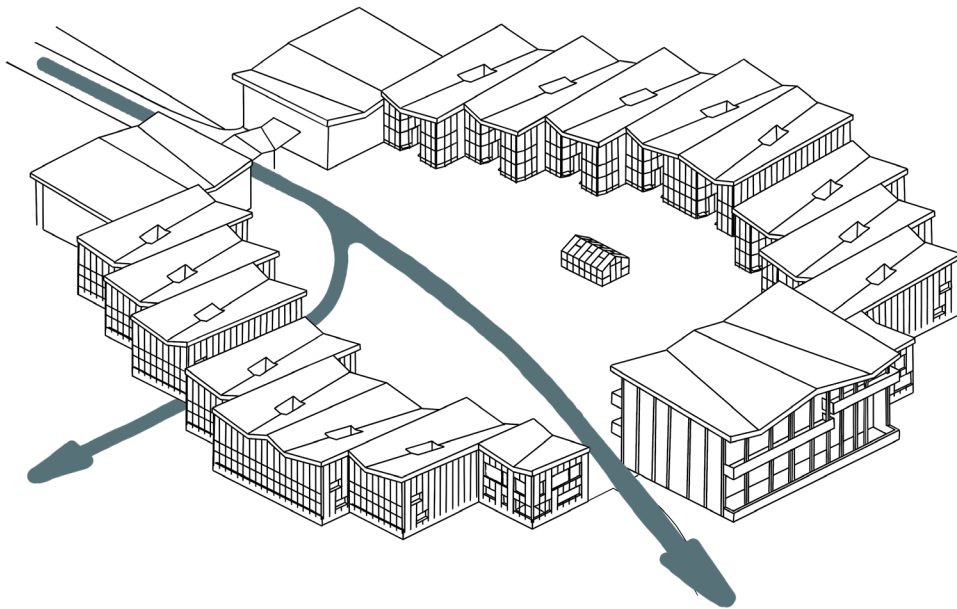
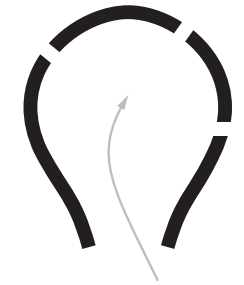
Closed community



Invite visitors

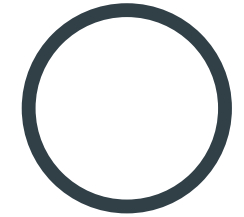


Create a routing



TYOLOGY

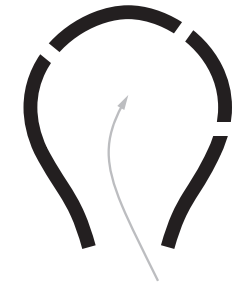
Closed community



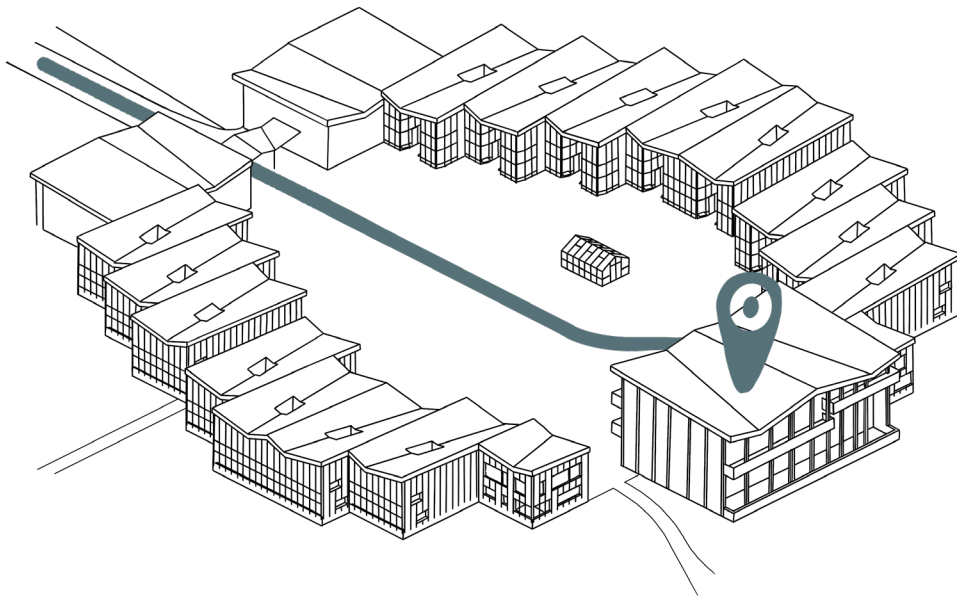
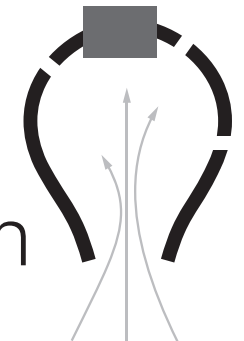
Invite visitors



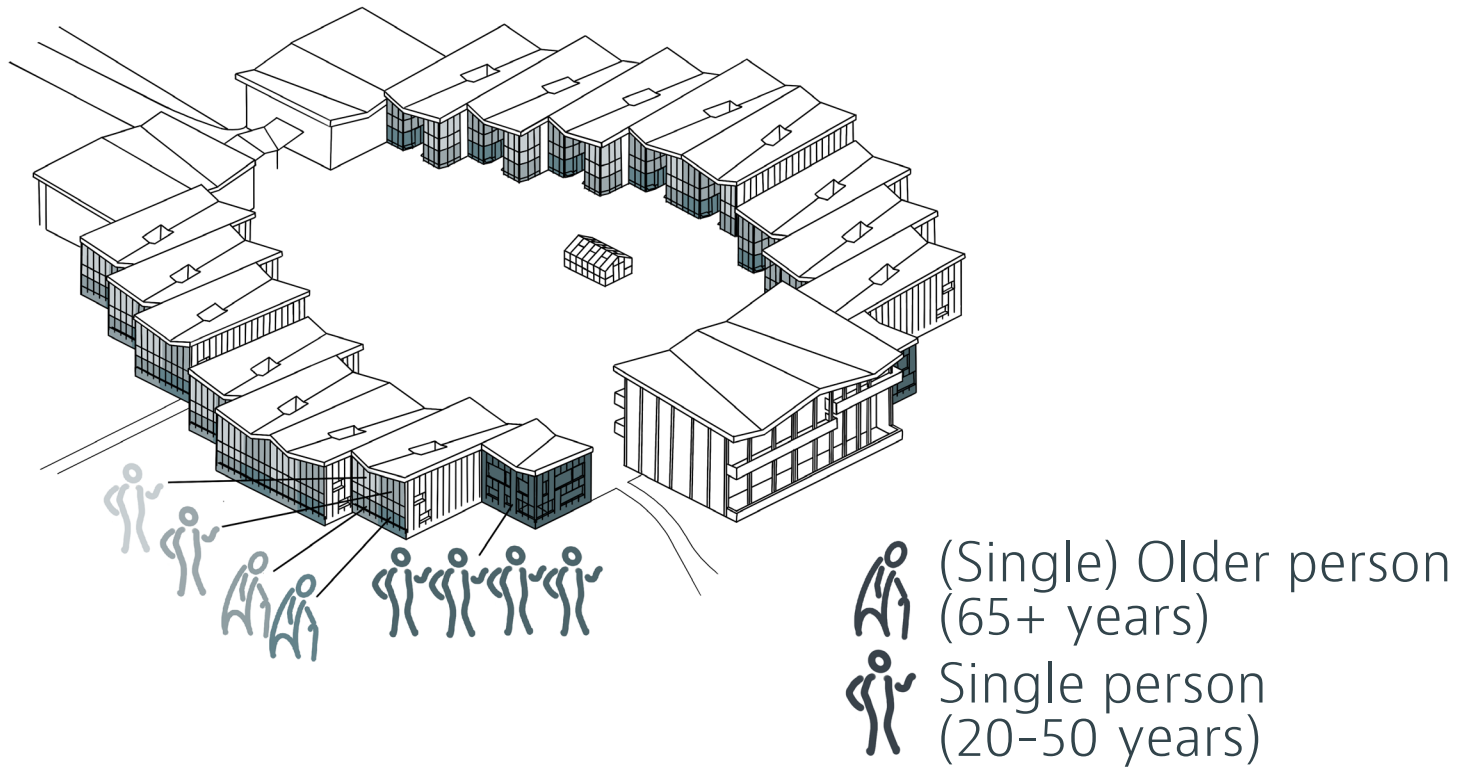
Create a routing



Create a destination

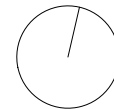
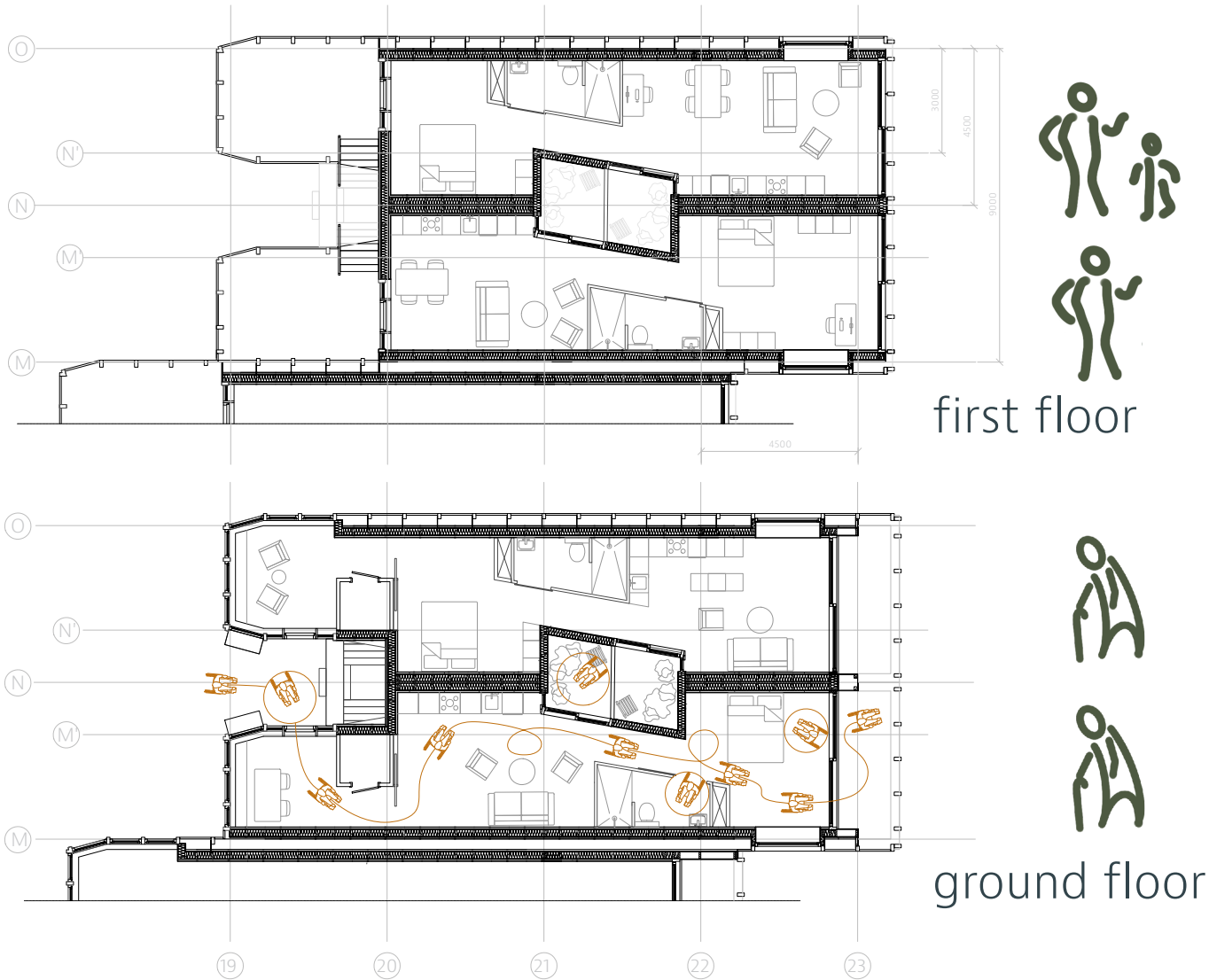


TENURE MIX

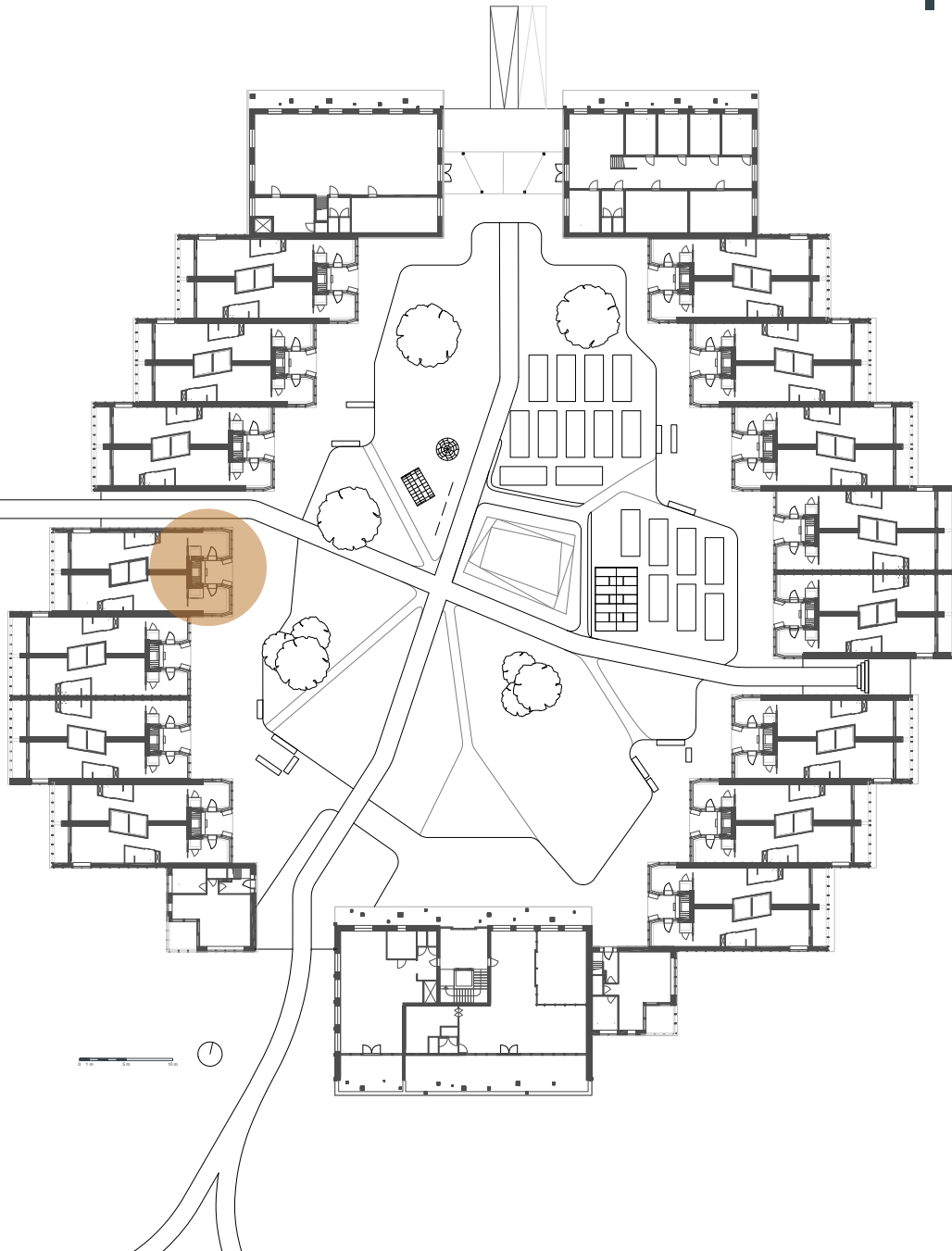




BLOCK OF FOUR



IN-BETWEEN SPACES



IN-BETWEEN SPACES

Aldo van Eyck



Hubertus House



IN-BETWEEN SPACES

Kisho Kurokawa



Nara City Museum
of Photography

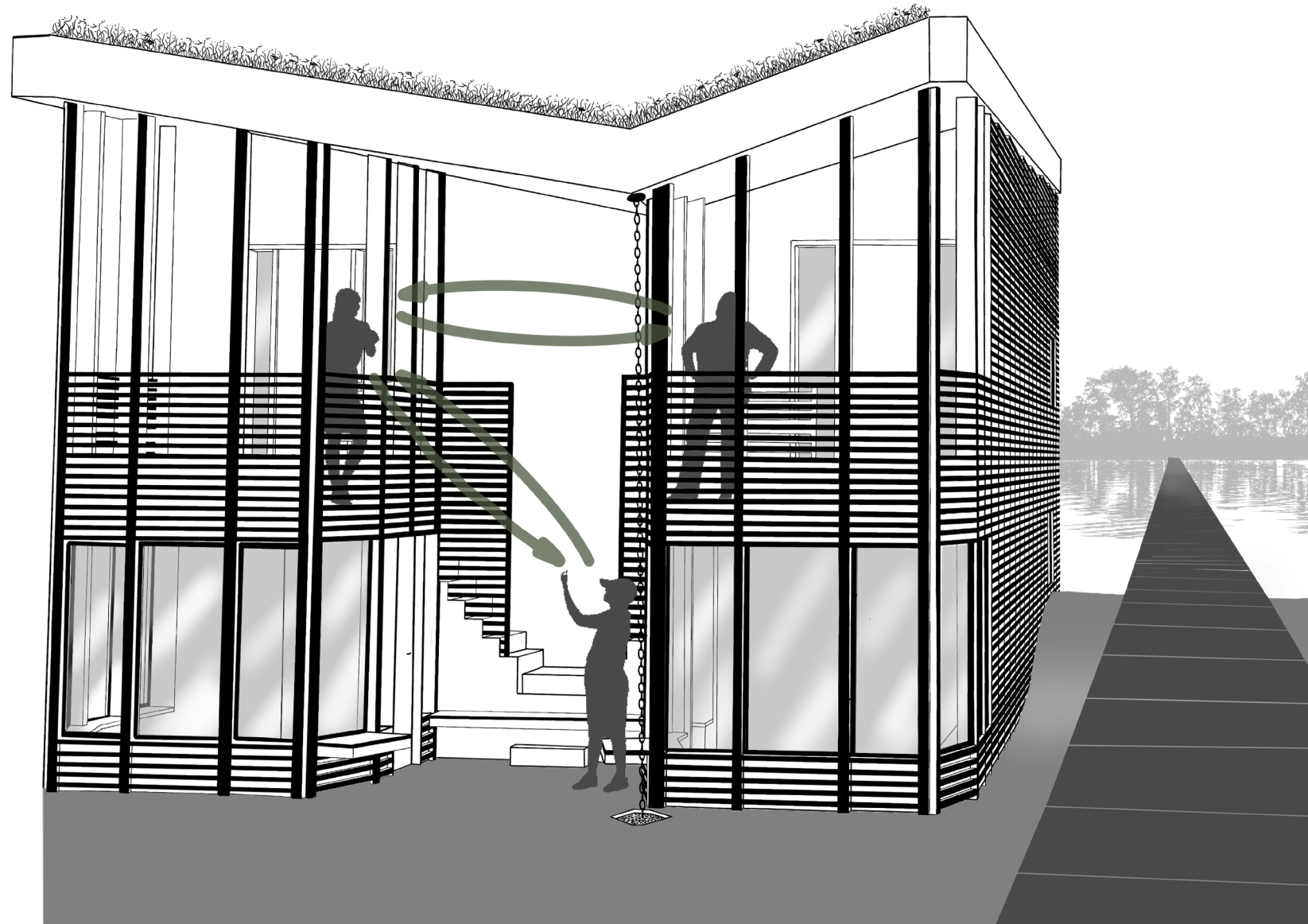


IN-BETWEEN SPACES

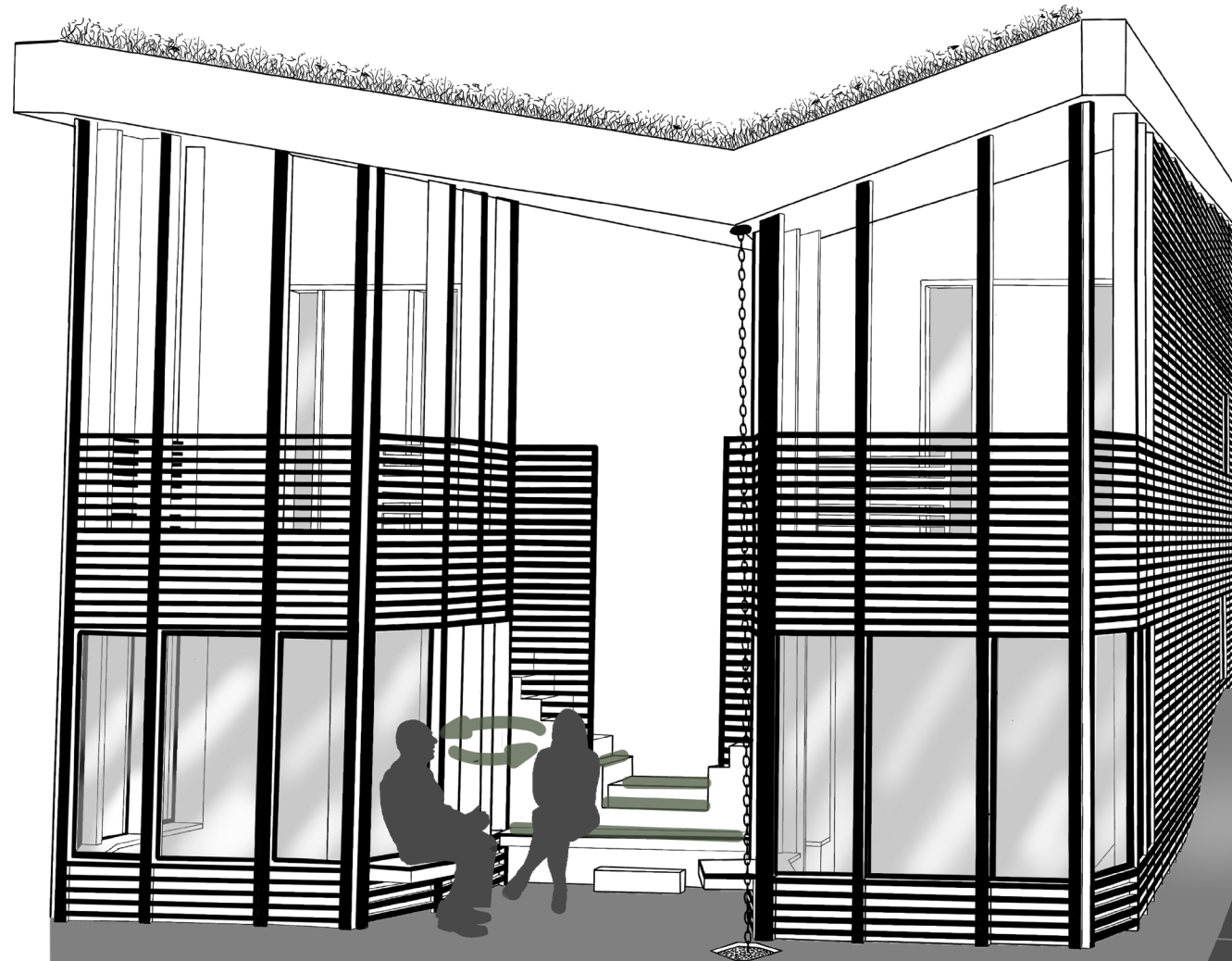
Herman Hertzberger



Dönche Kassel



IN-BETWEEN SPACES

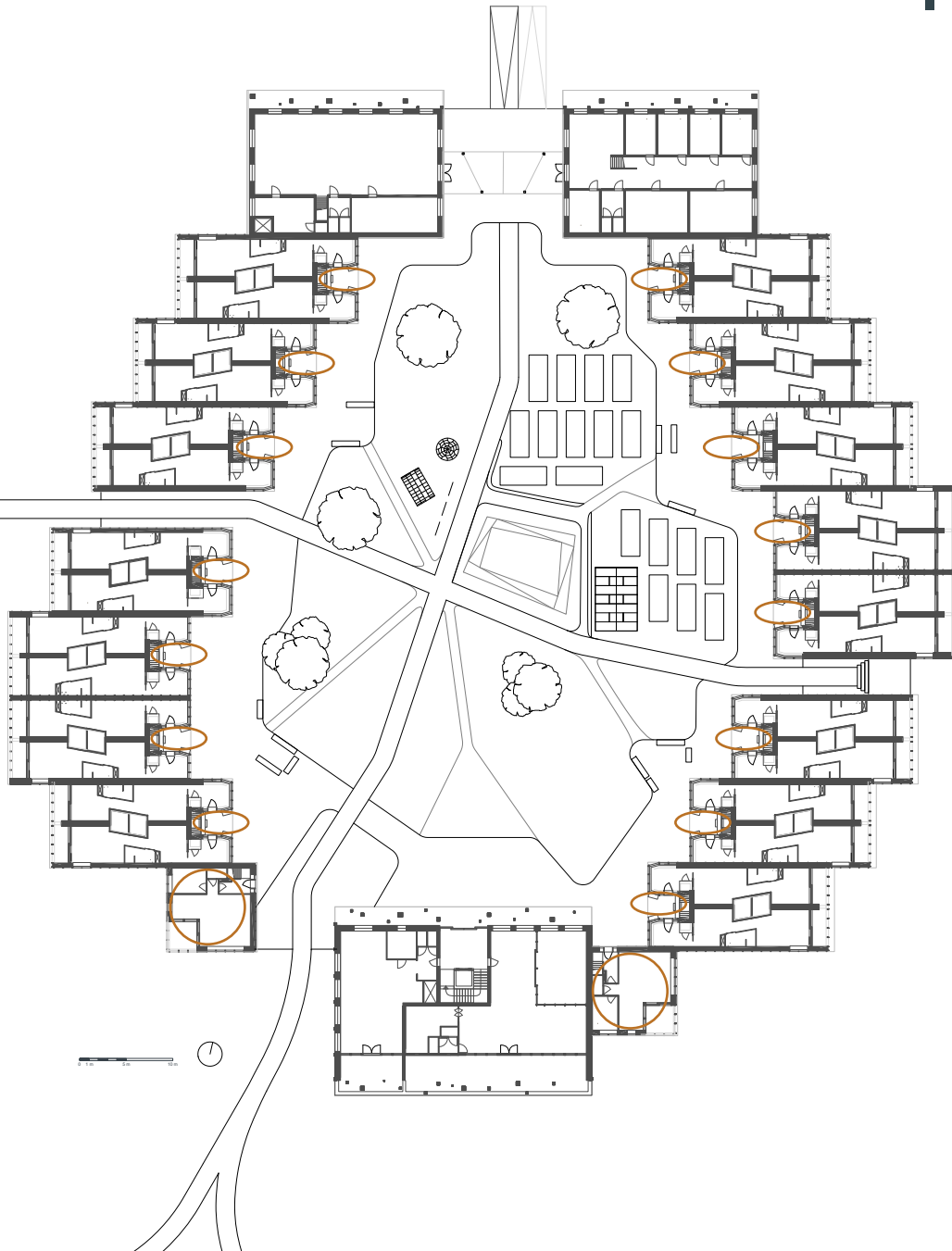


Herman Hertzberger

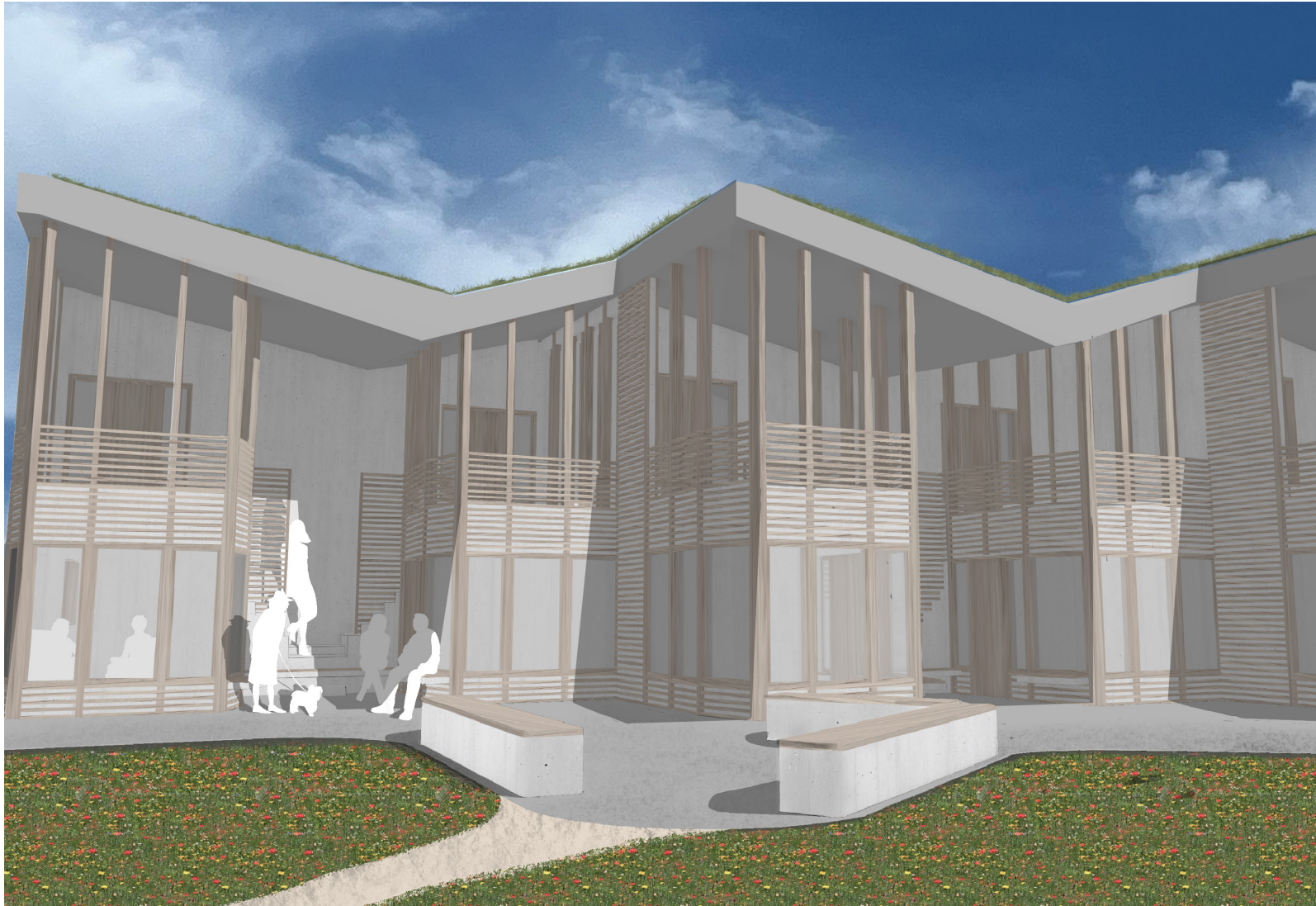


Apollo School

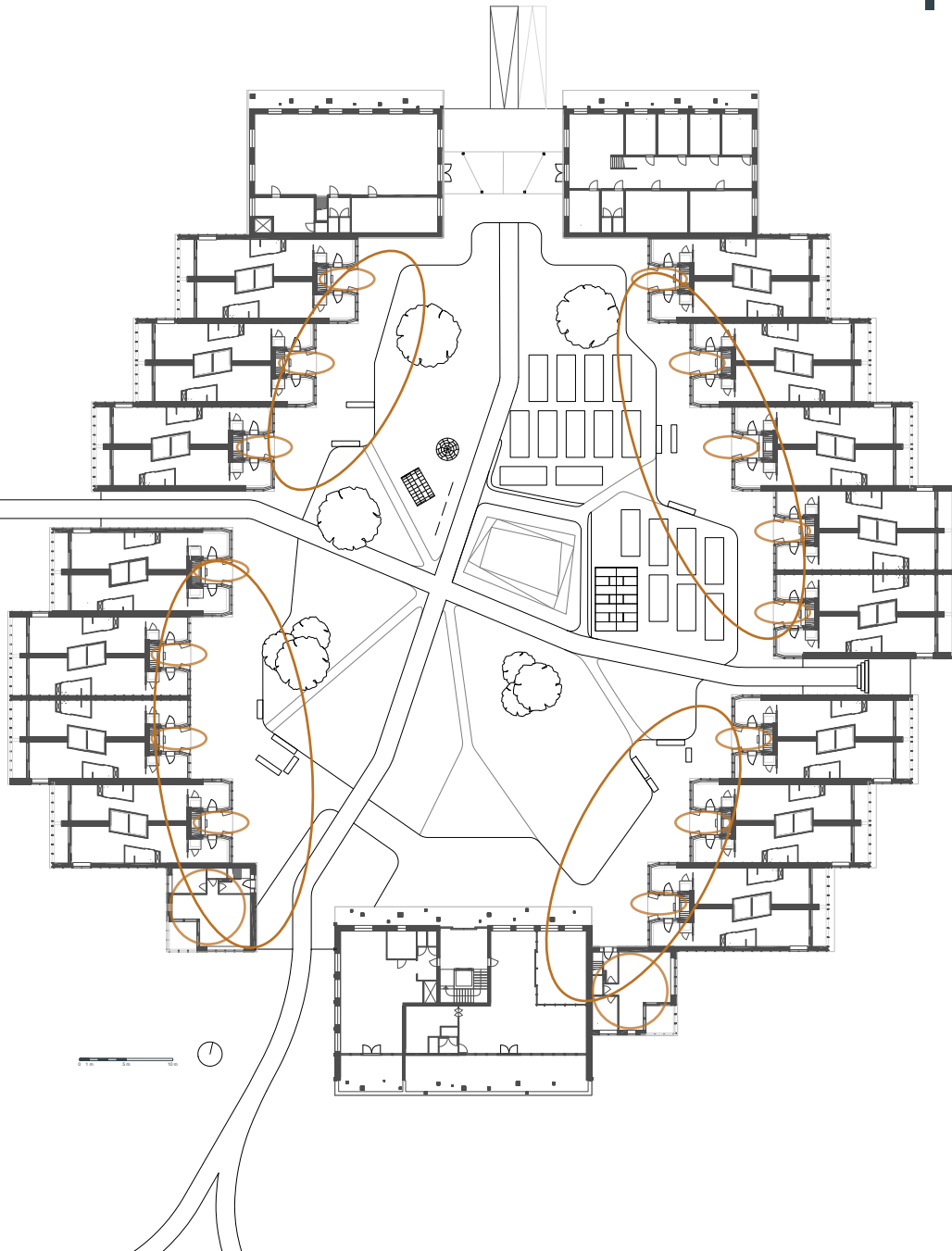
IN-BETWEEN SPACES



IN-BETWEEN SPACES



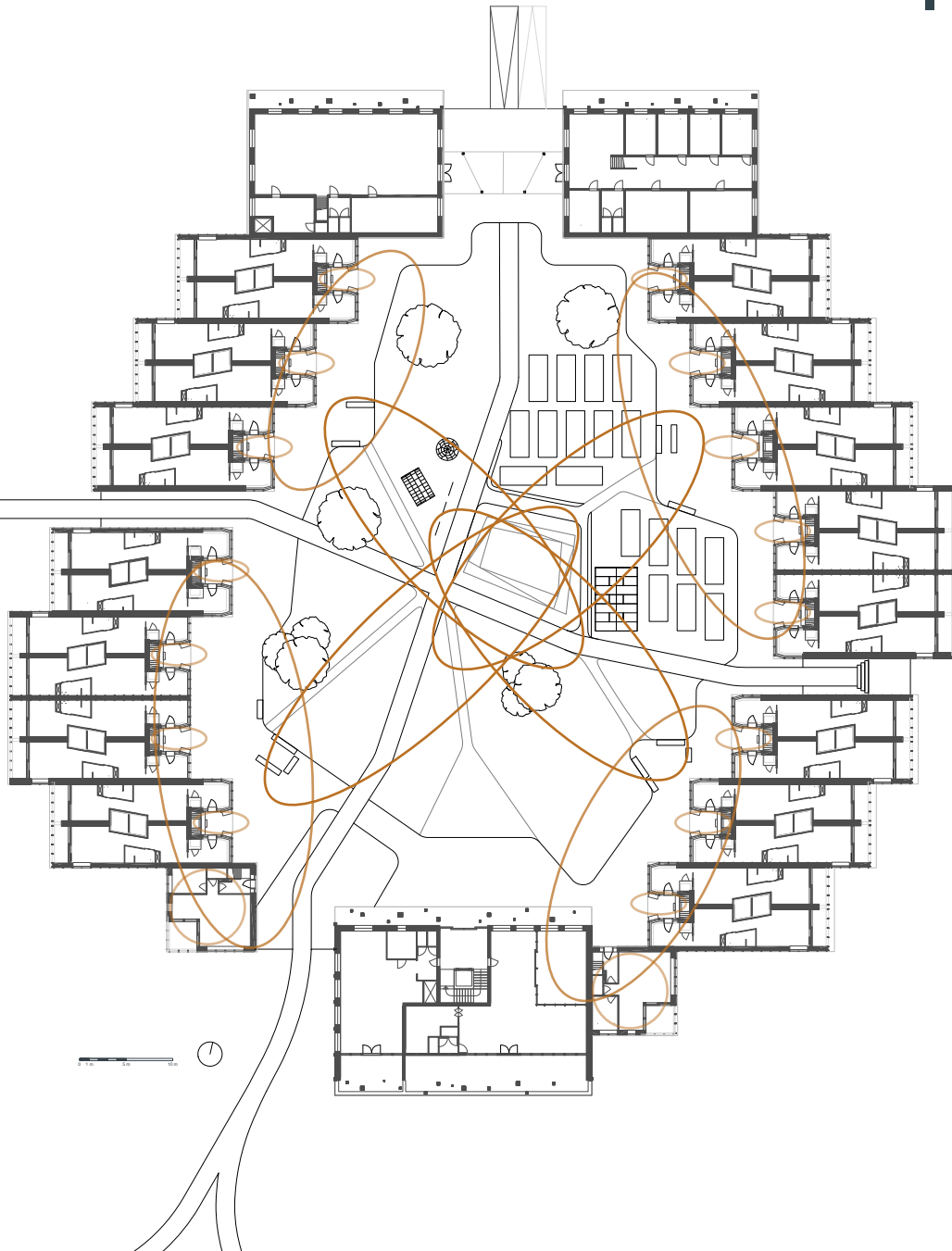
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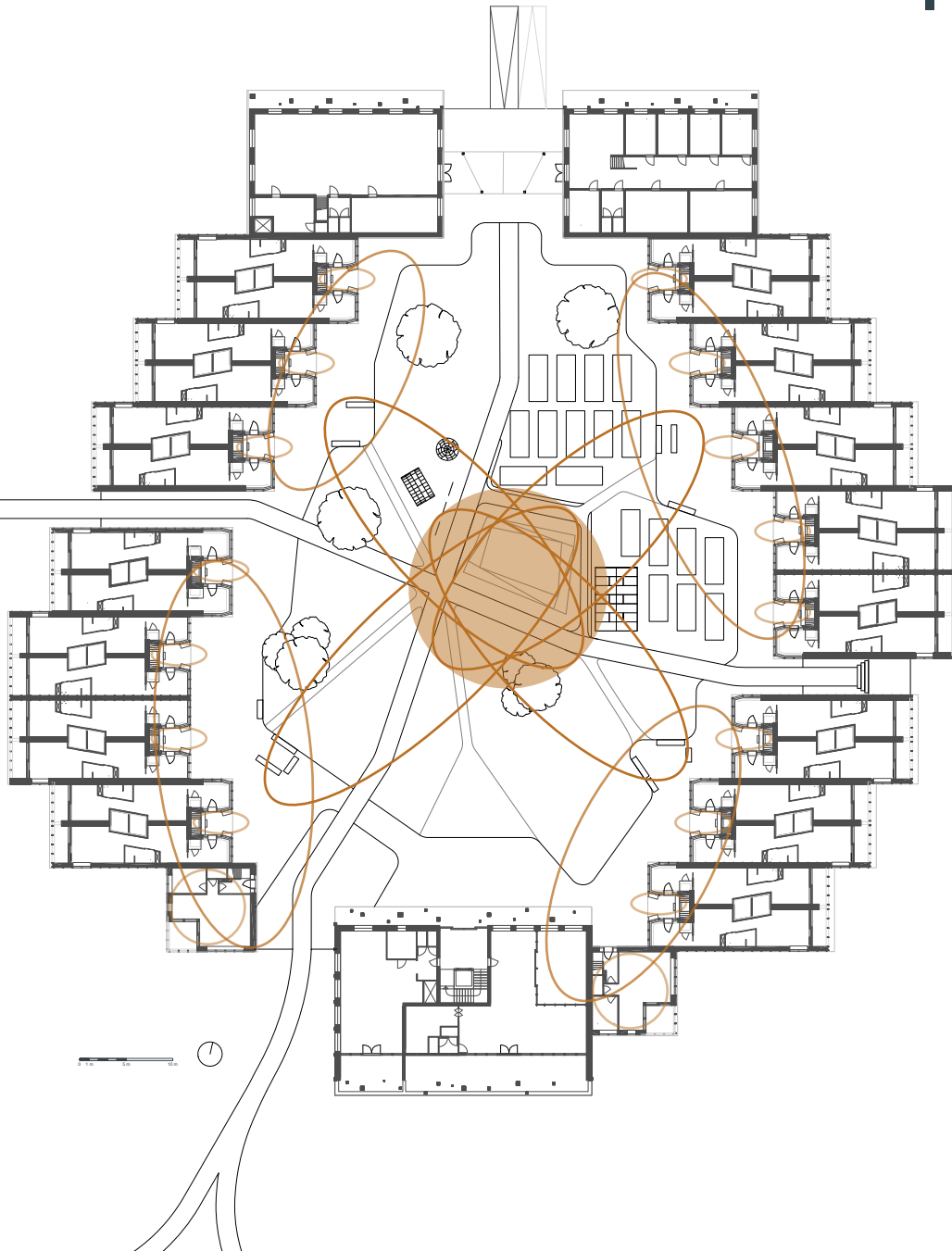
IN-BETWEEN SPACES



IN-BETWEEN SPACES



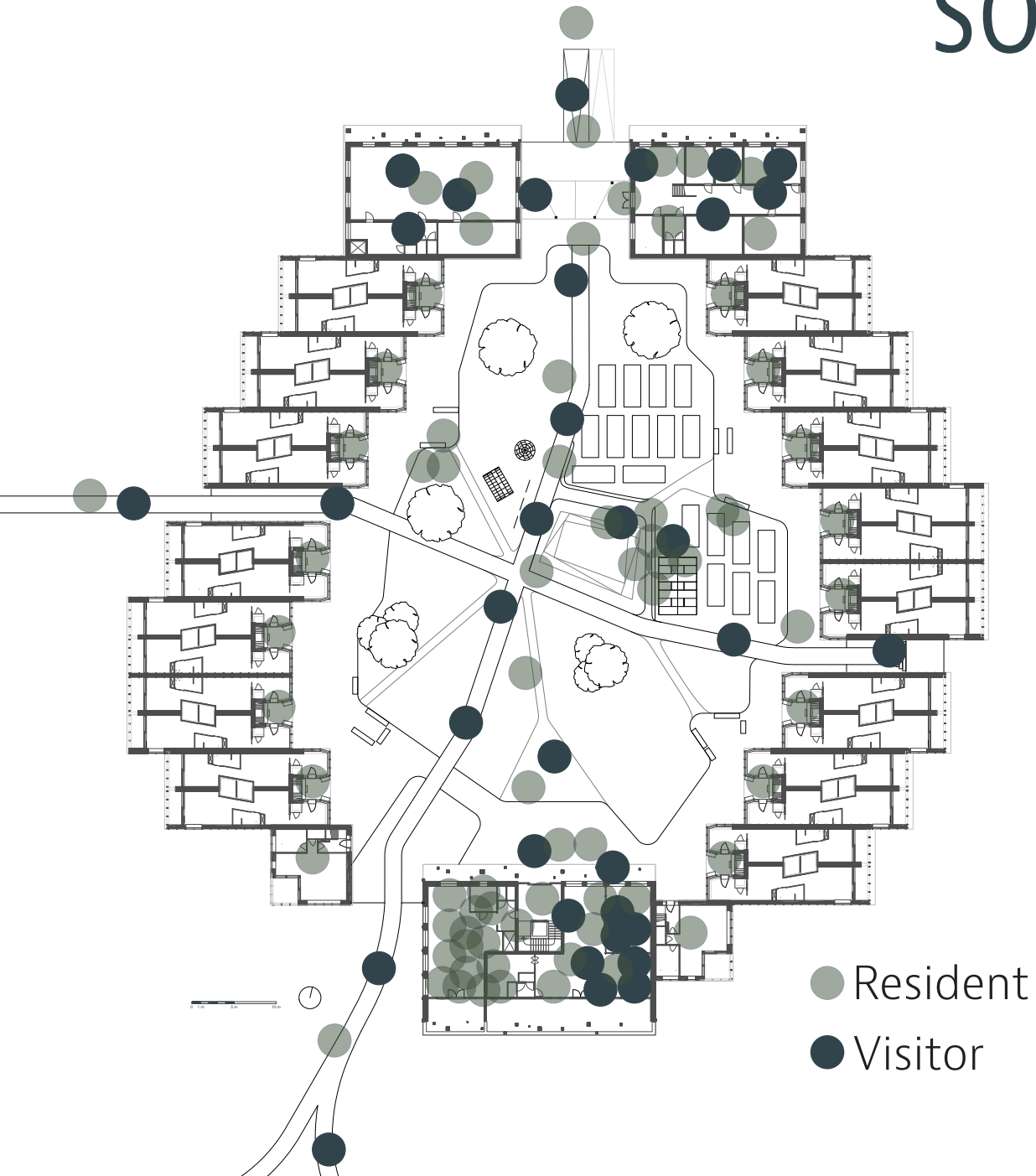
IN-BETWEEN SPACES

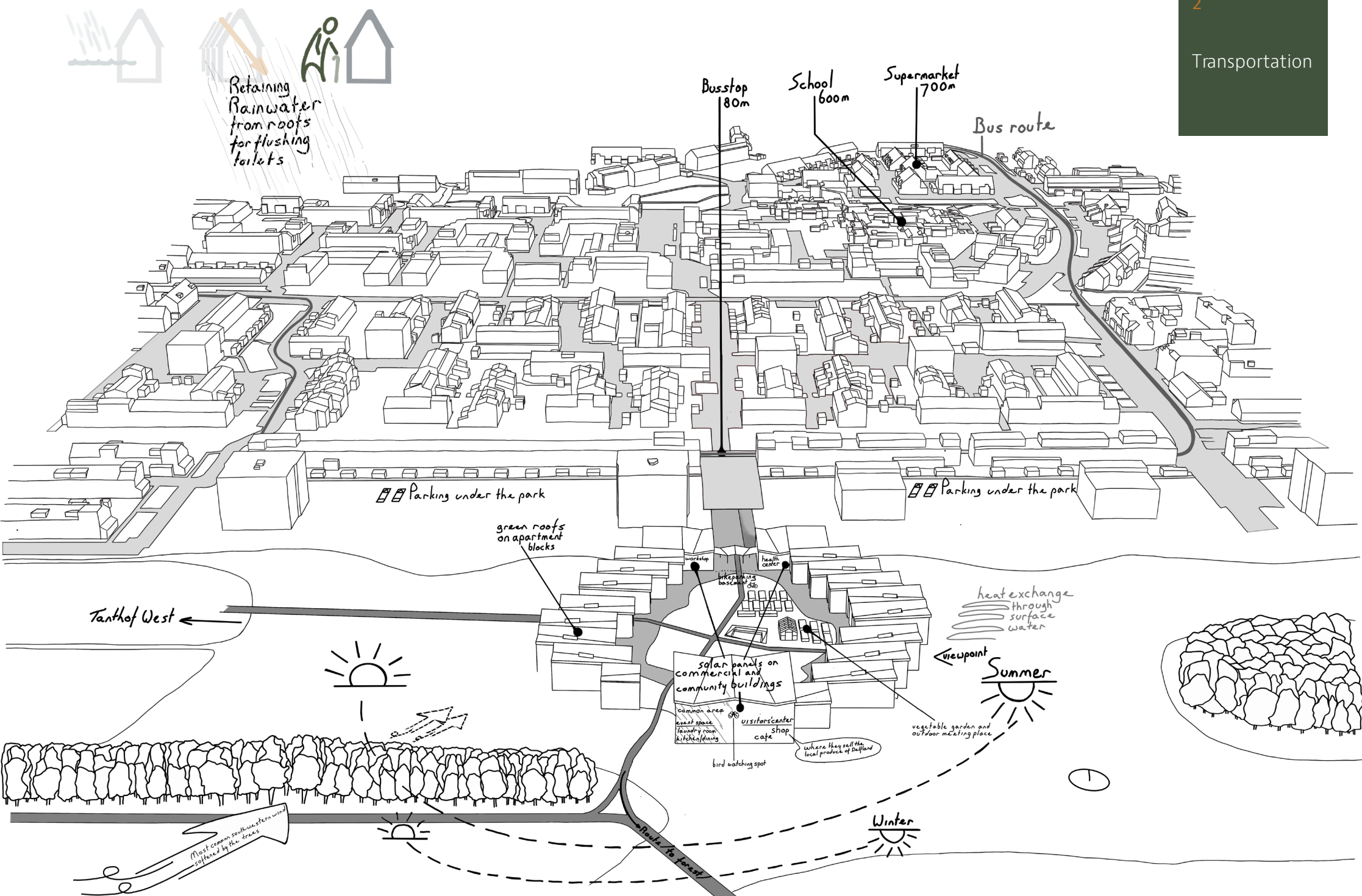


IN-BETWEEN SPACES



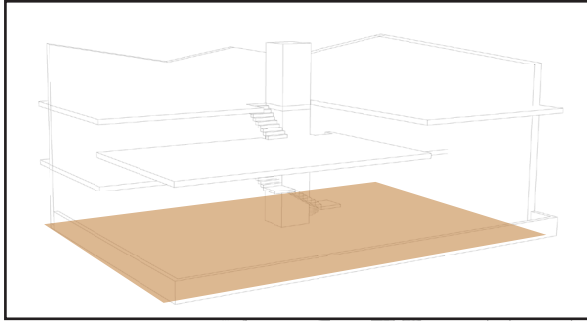
SOCIAL INTERACTION







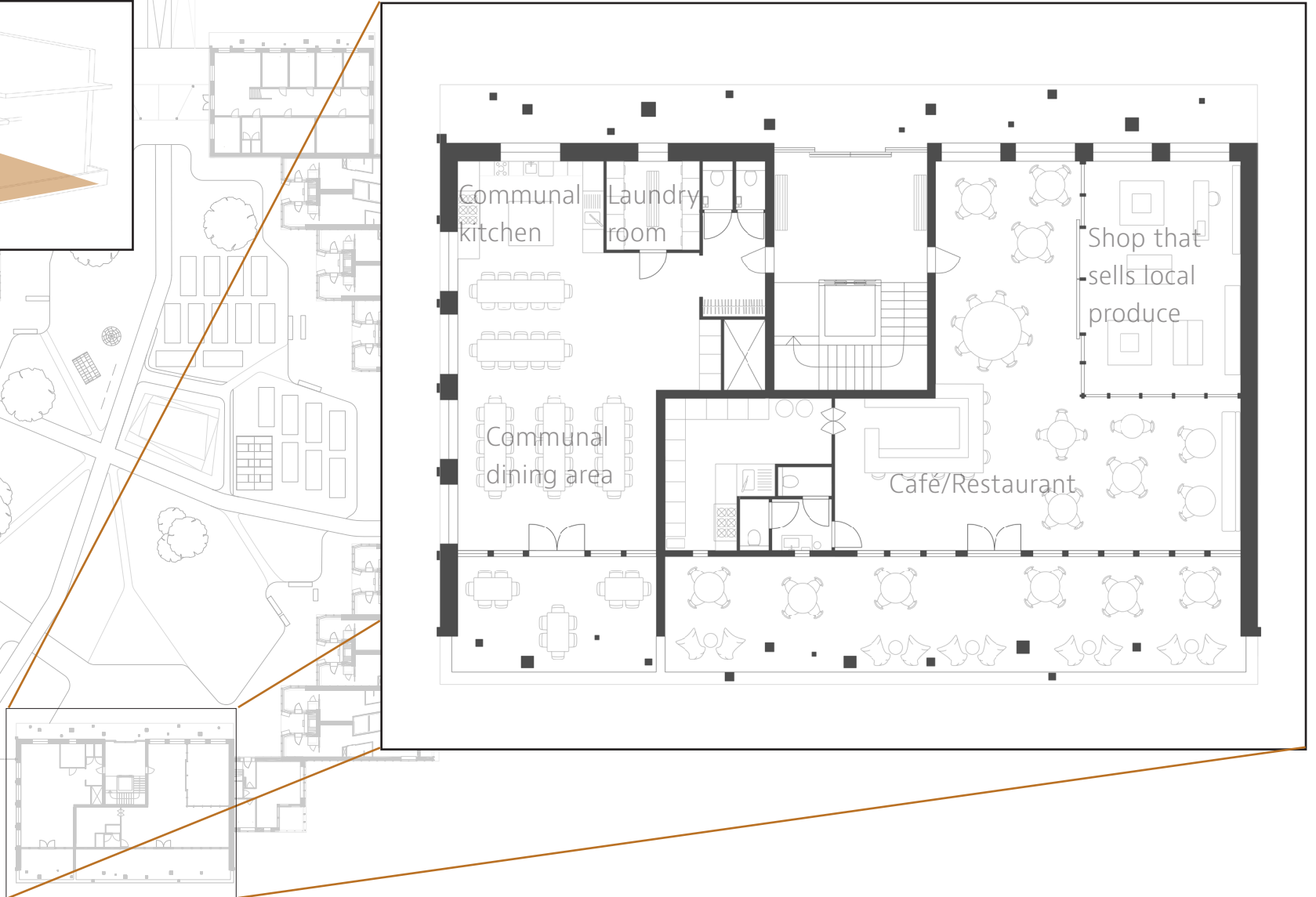
COMMUNITY LIVING



1
Community
Support
and
Health Services

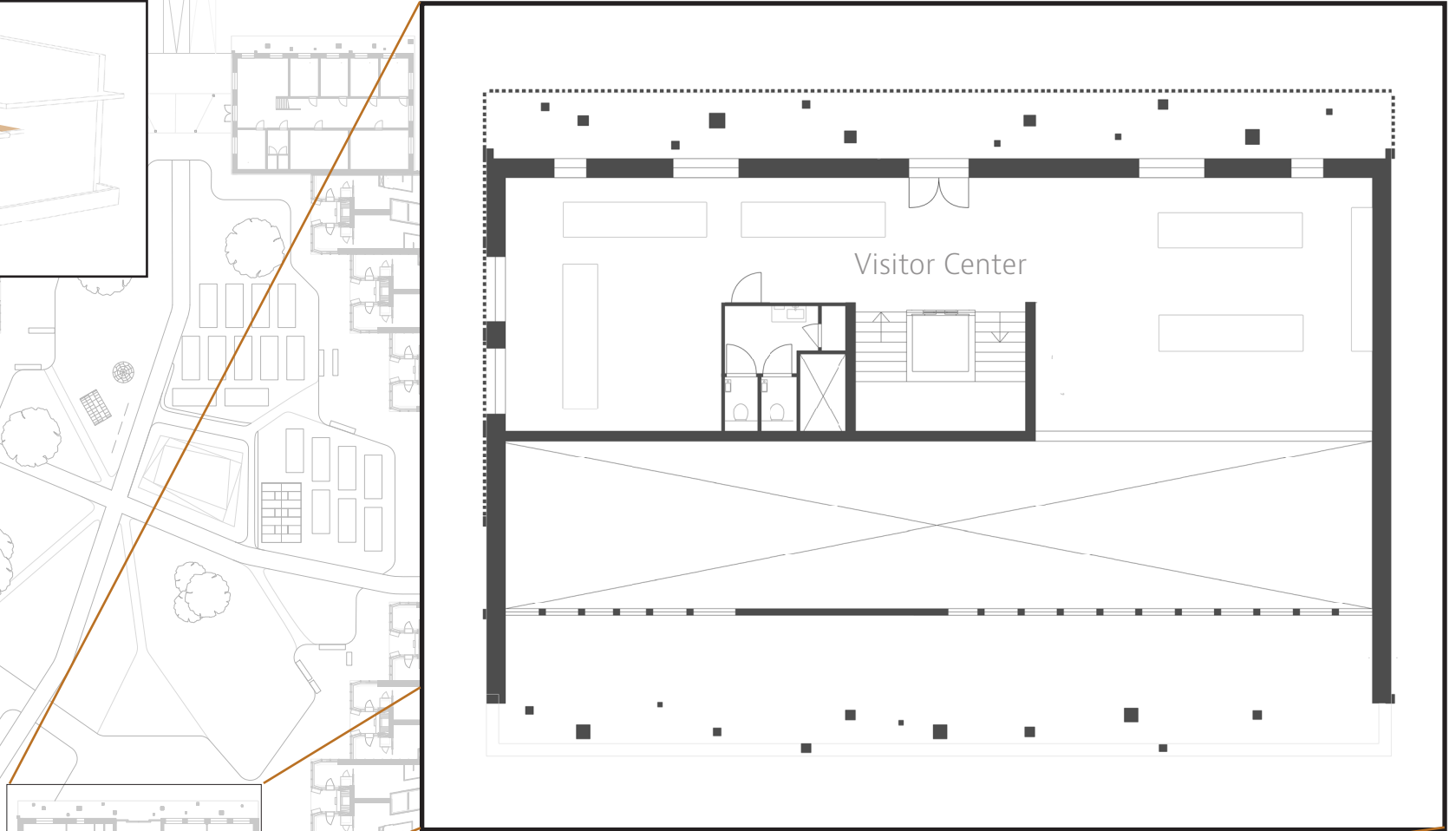
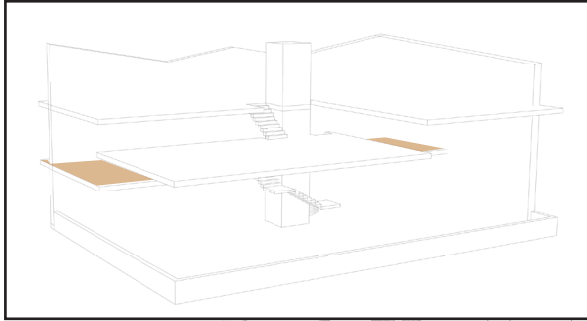
4
Social
Participation

7
Civic
Participation
and
Employment





COMMUNITY LIVING



4

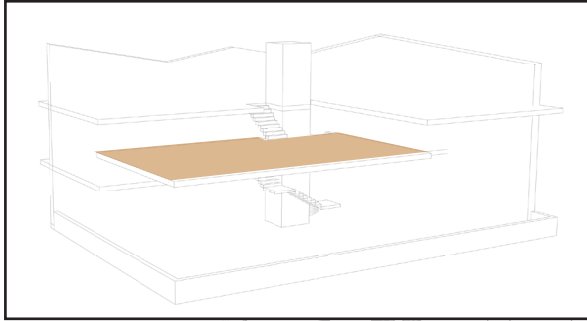
Social
Participation

7

Civic
Participation
and
Employment



COMMUNITY LIVING



8

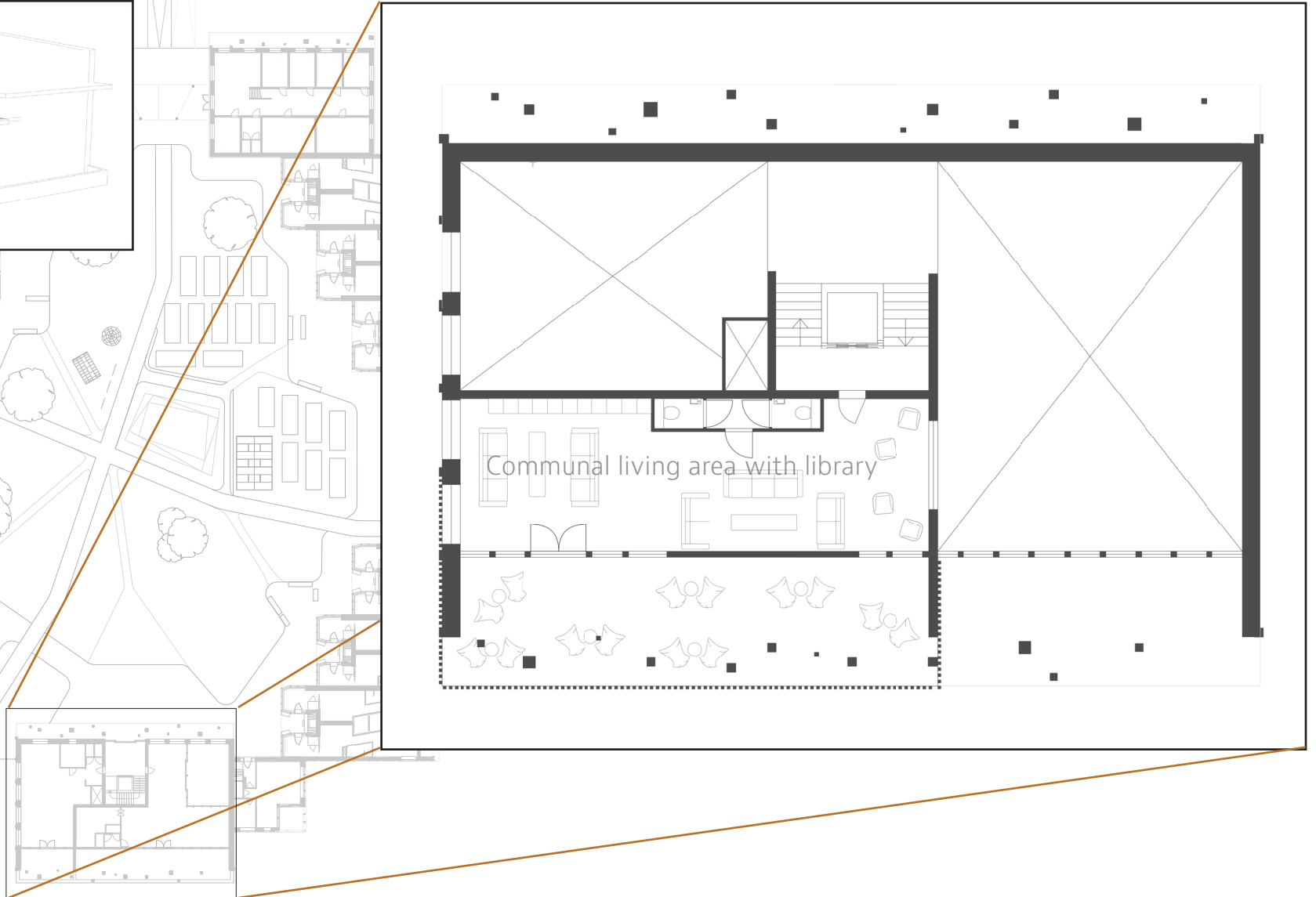
Communication
and
Information

4

Social
Participation

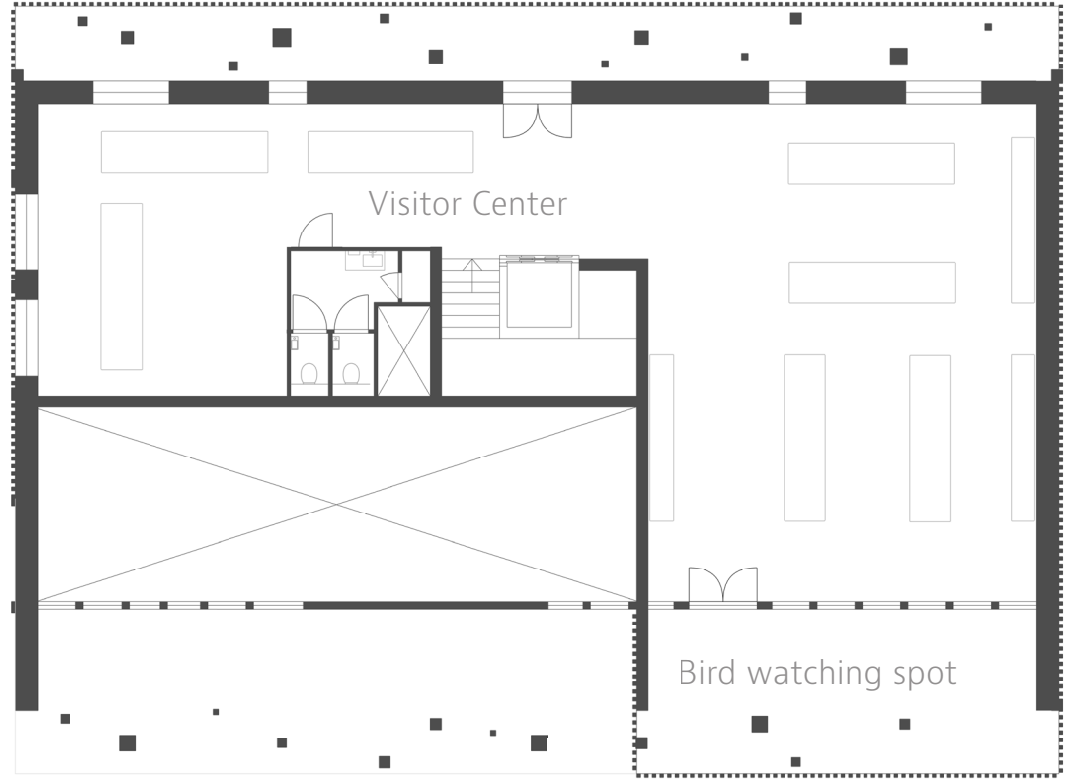
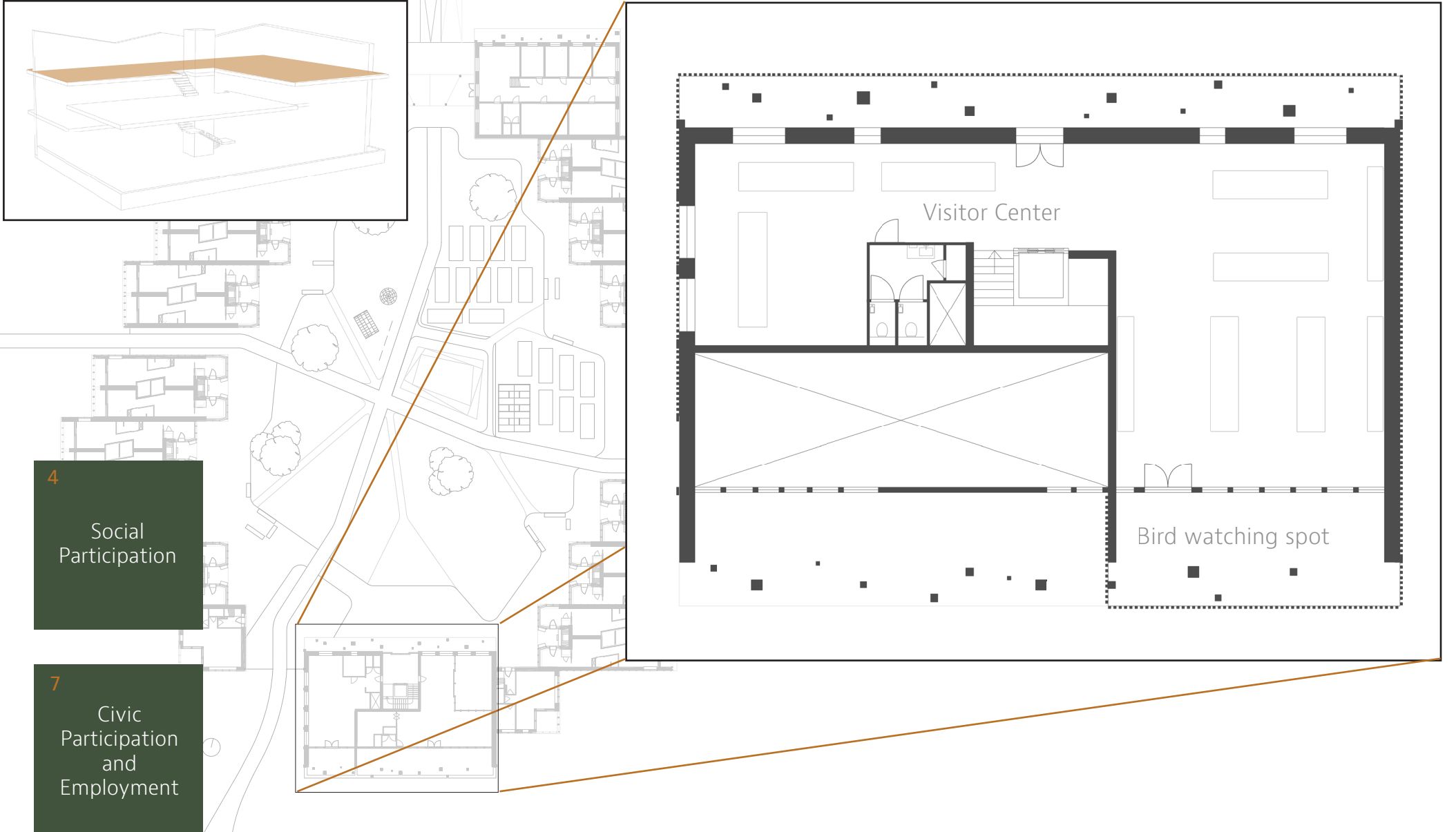
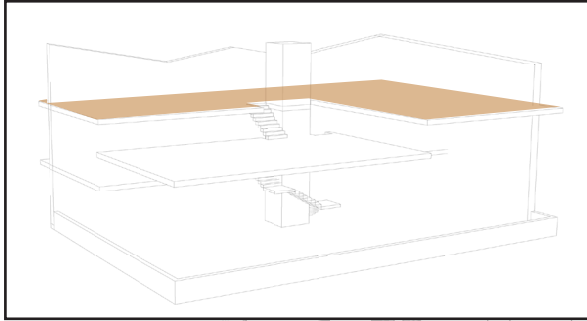
6

Respect
and
Social Inclusion





COMMUNITY LIVING

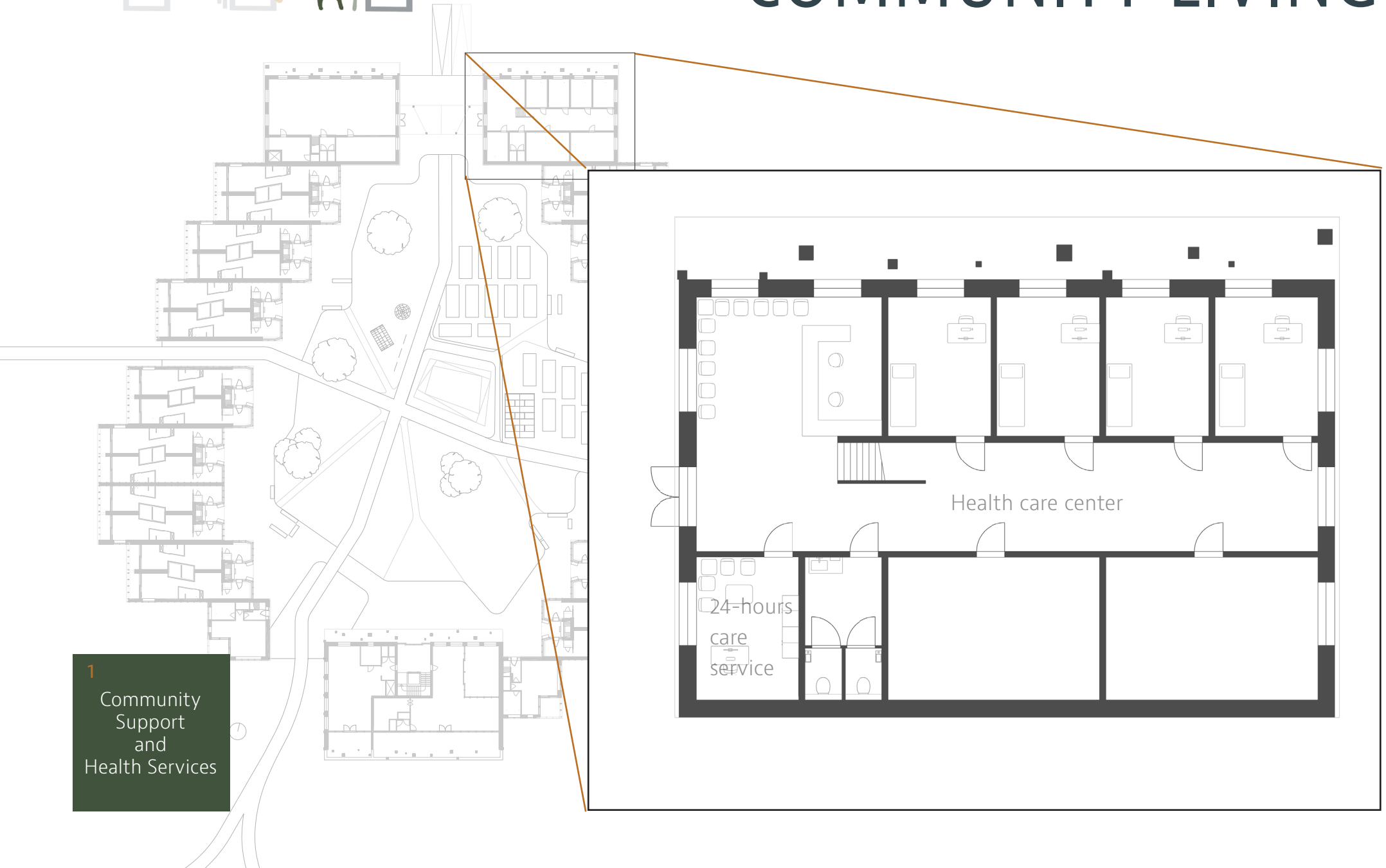


4
Social
Participation

7
Civic
Participation
and
Employment



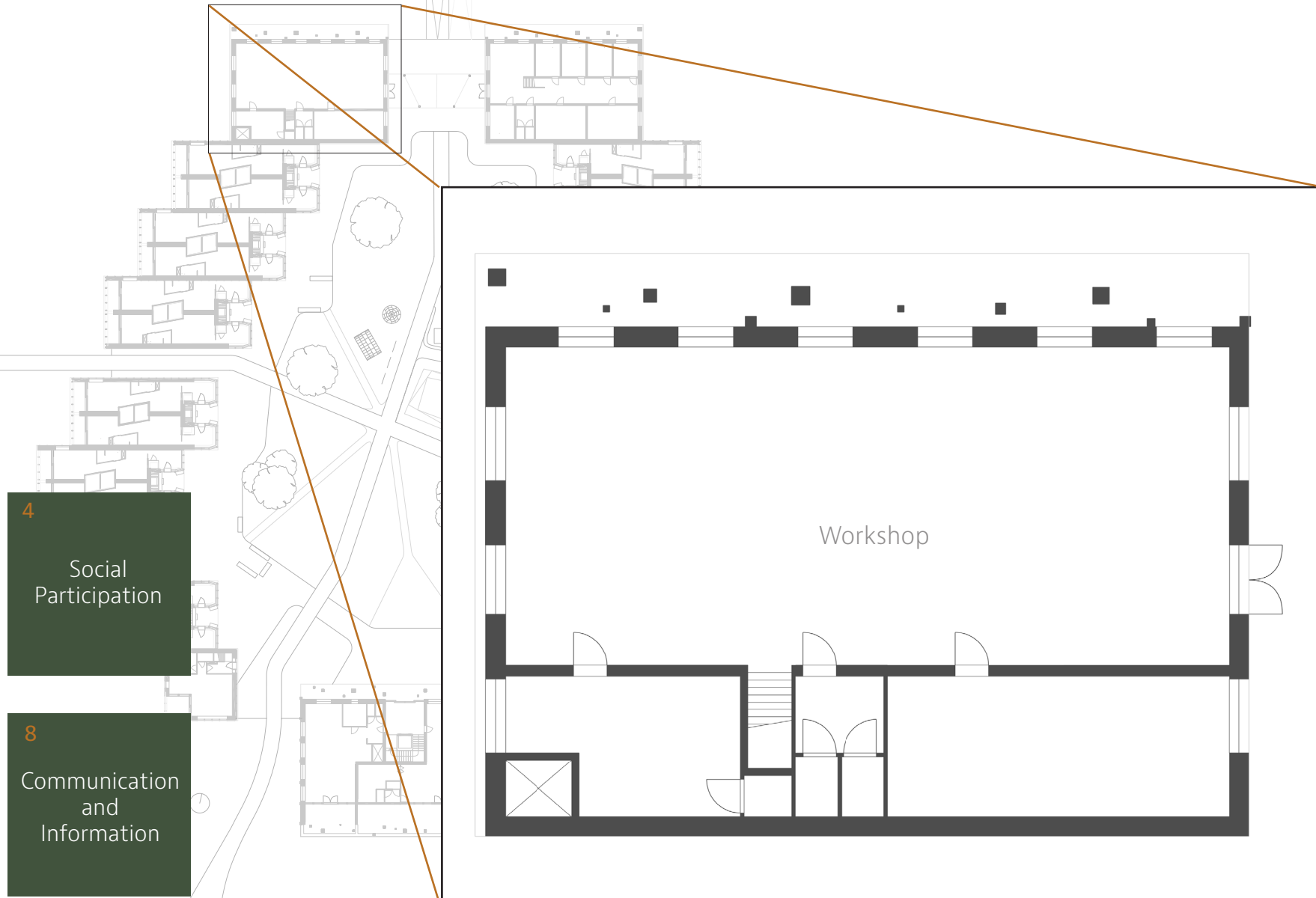
COMMUNITY LIVING



1
Community
Support
and
Health
Services

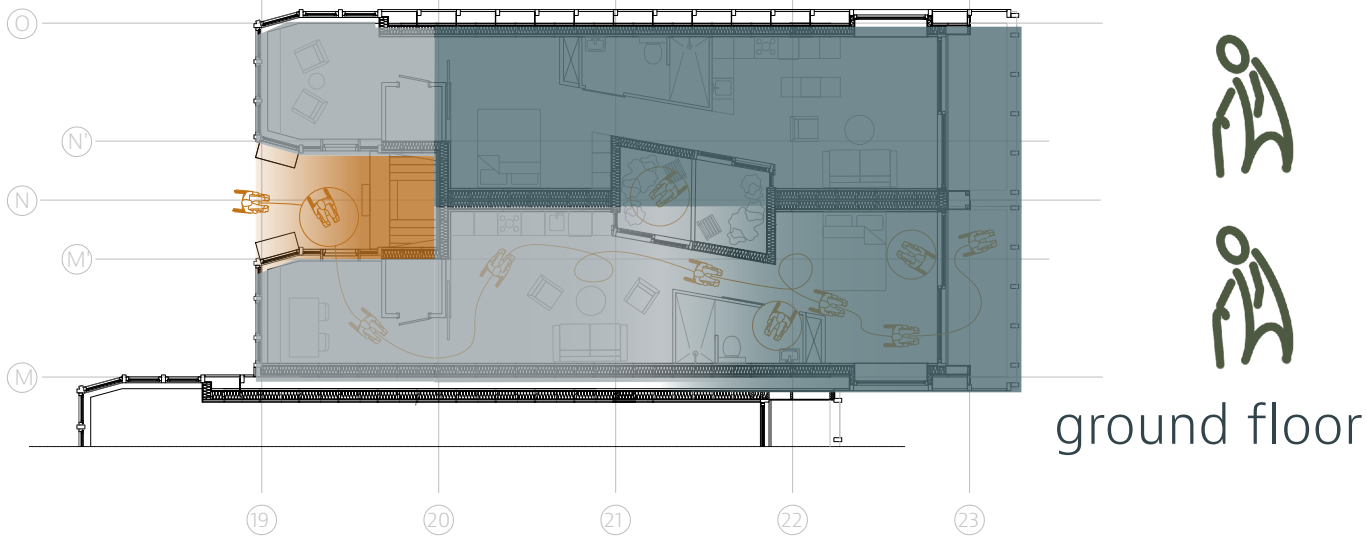
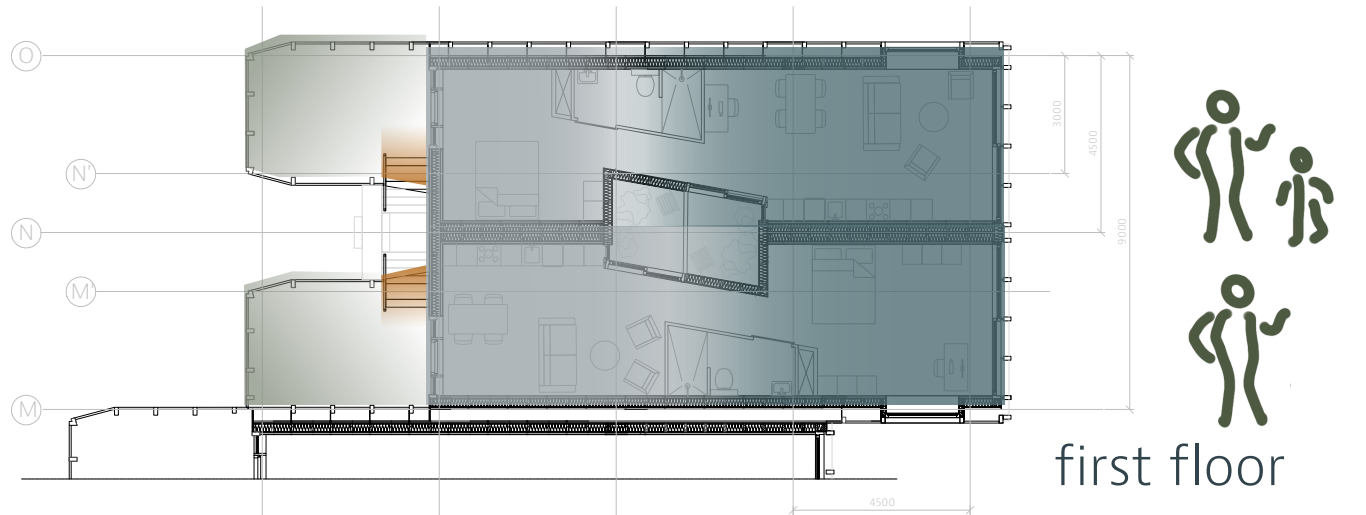


COMMUNITY LIVING

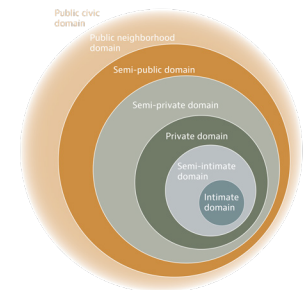
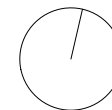




PRIVACY



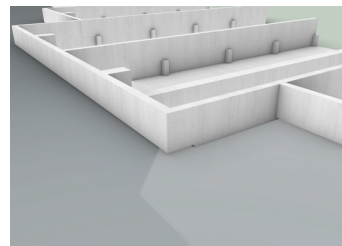
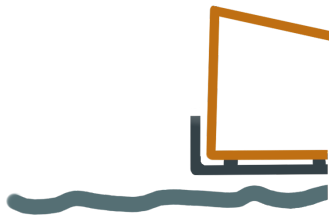
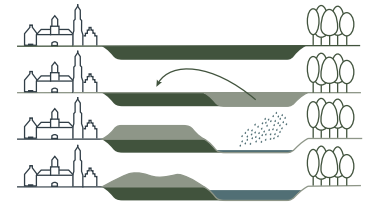
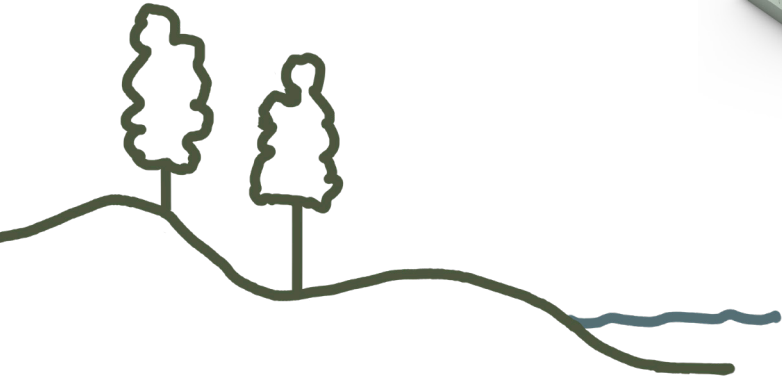
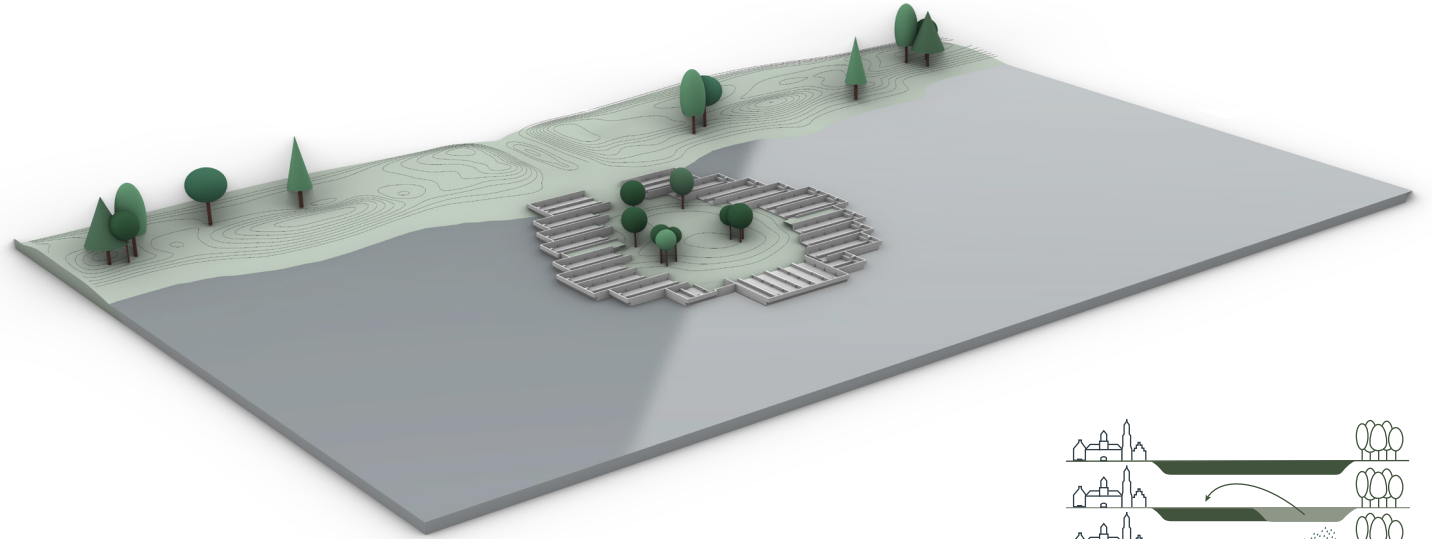
3
Housing



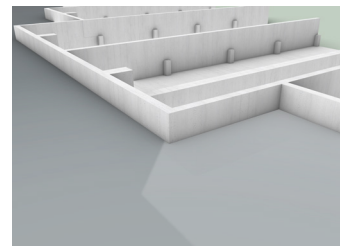
Julia Robinson's seven domains of privacy



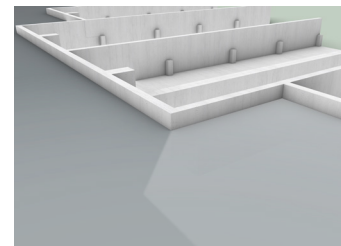
WATERMANAGEMENT



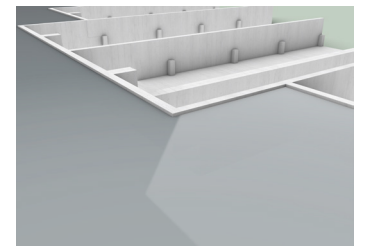
+ 0 m NAP (normal level)



+ 0.4 m NAP



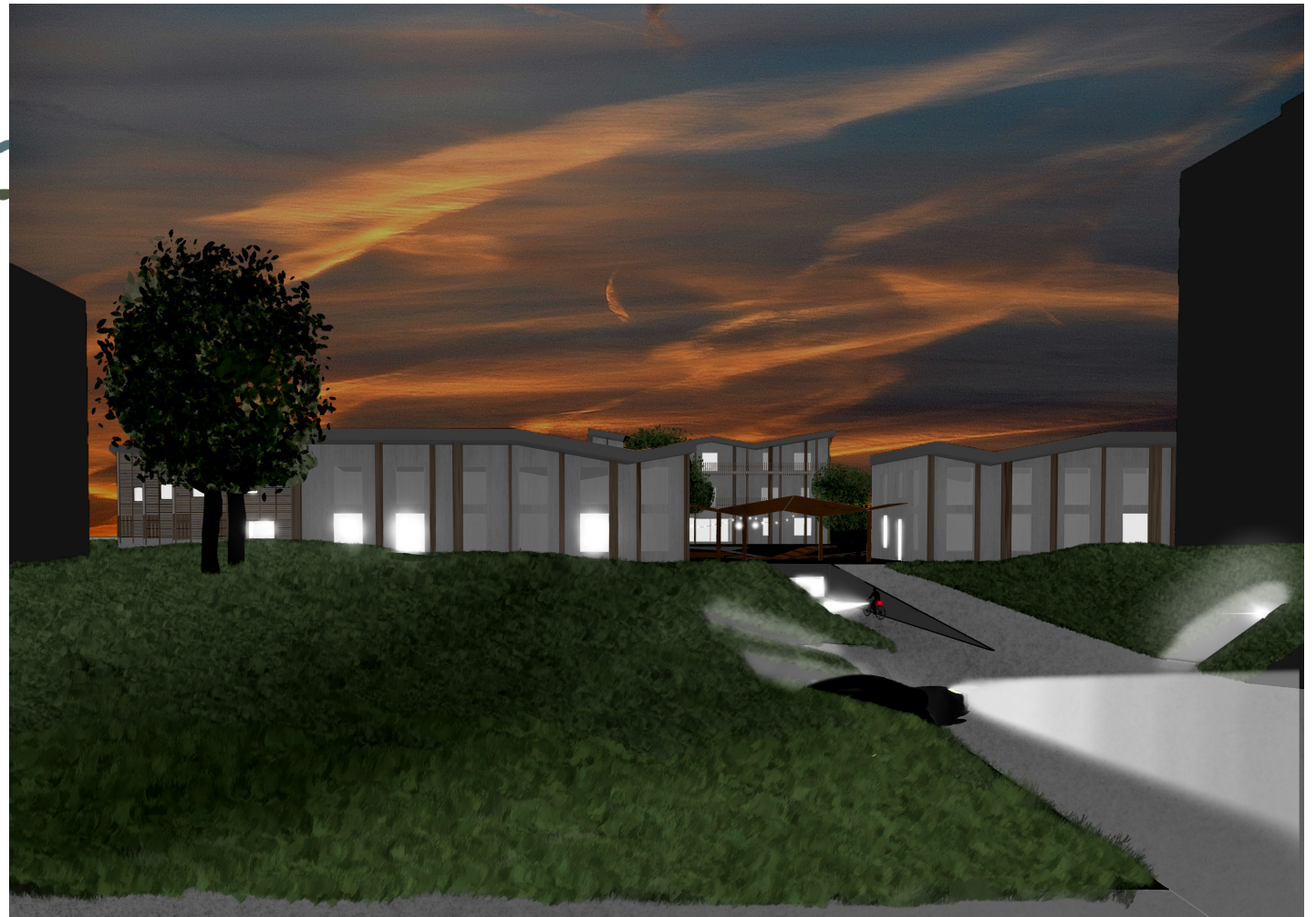
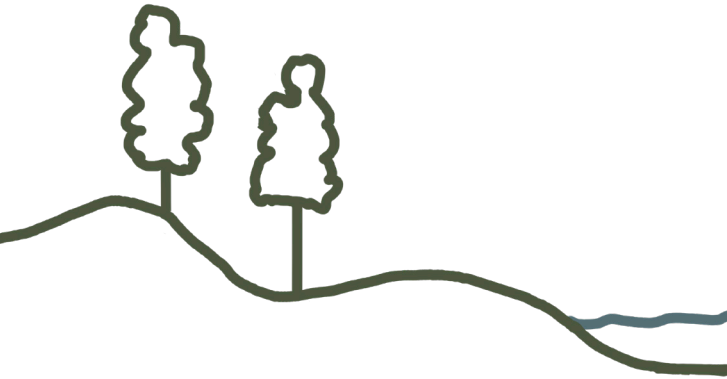
+ 0.8 m NAP



+ 1.2 m NAP (maximum level)

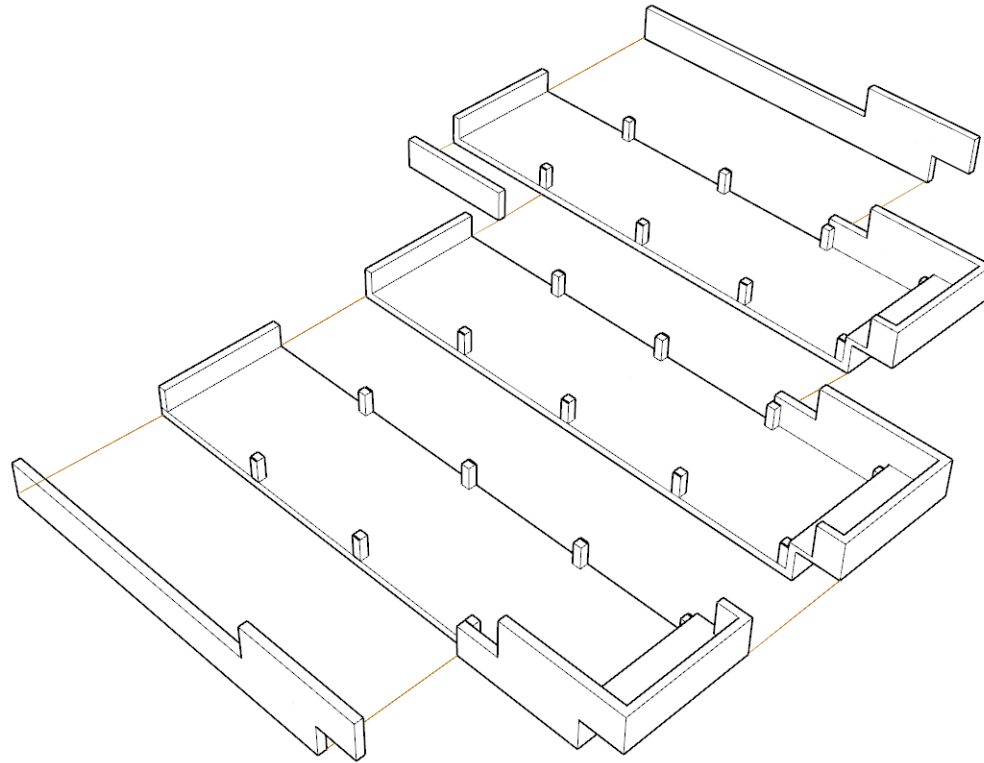
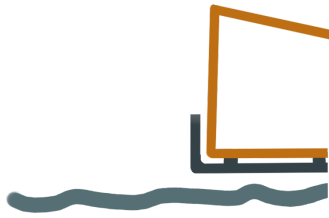


WATERMANAGEMENT



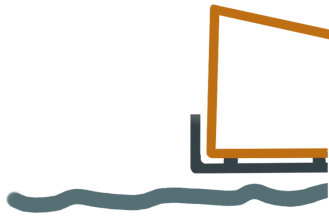


WATERMANAGEMENT

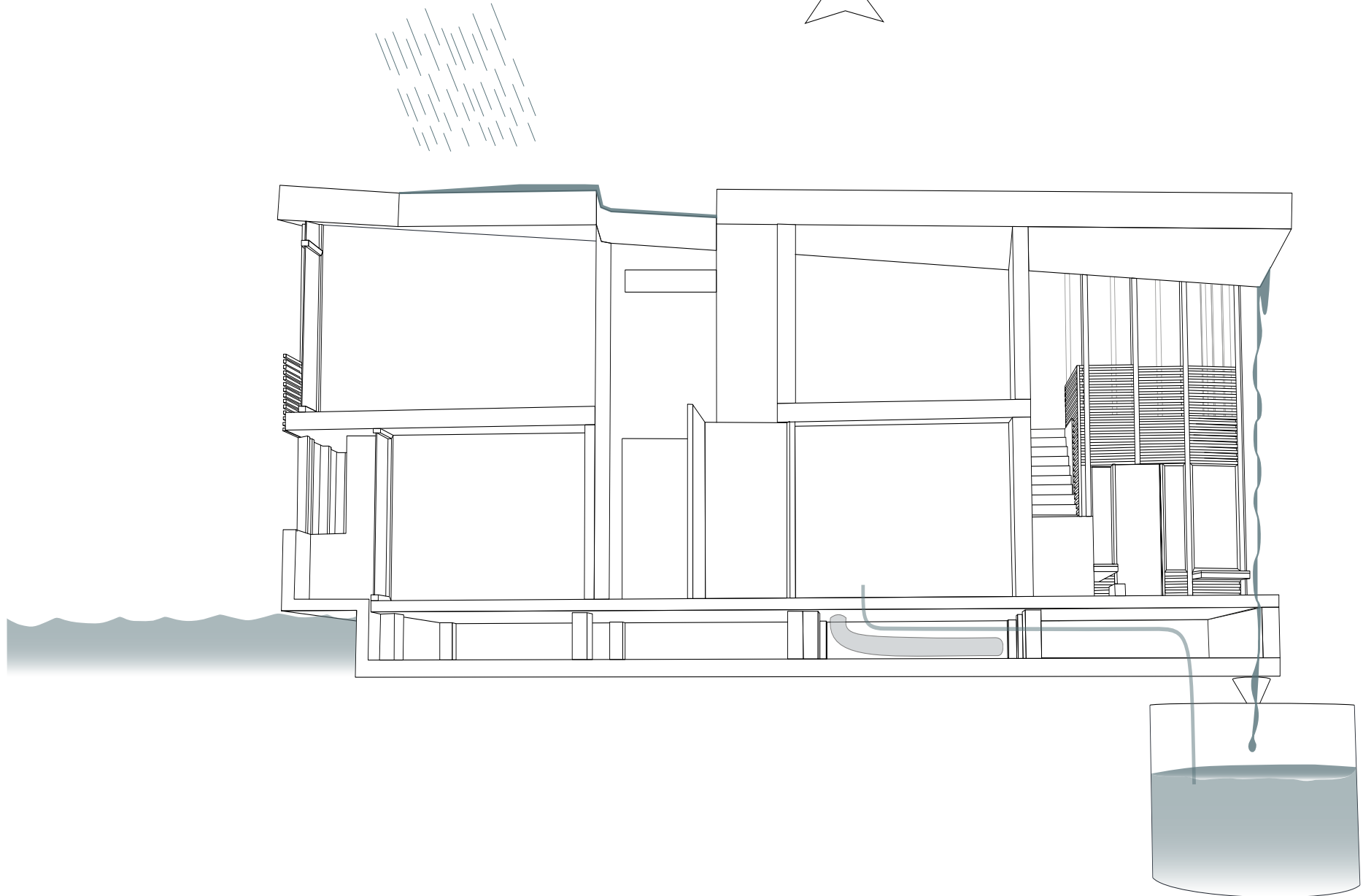




WATERMANAGEMENT



WATERMANAGEMENT



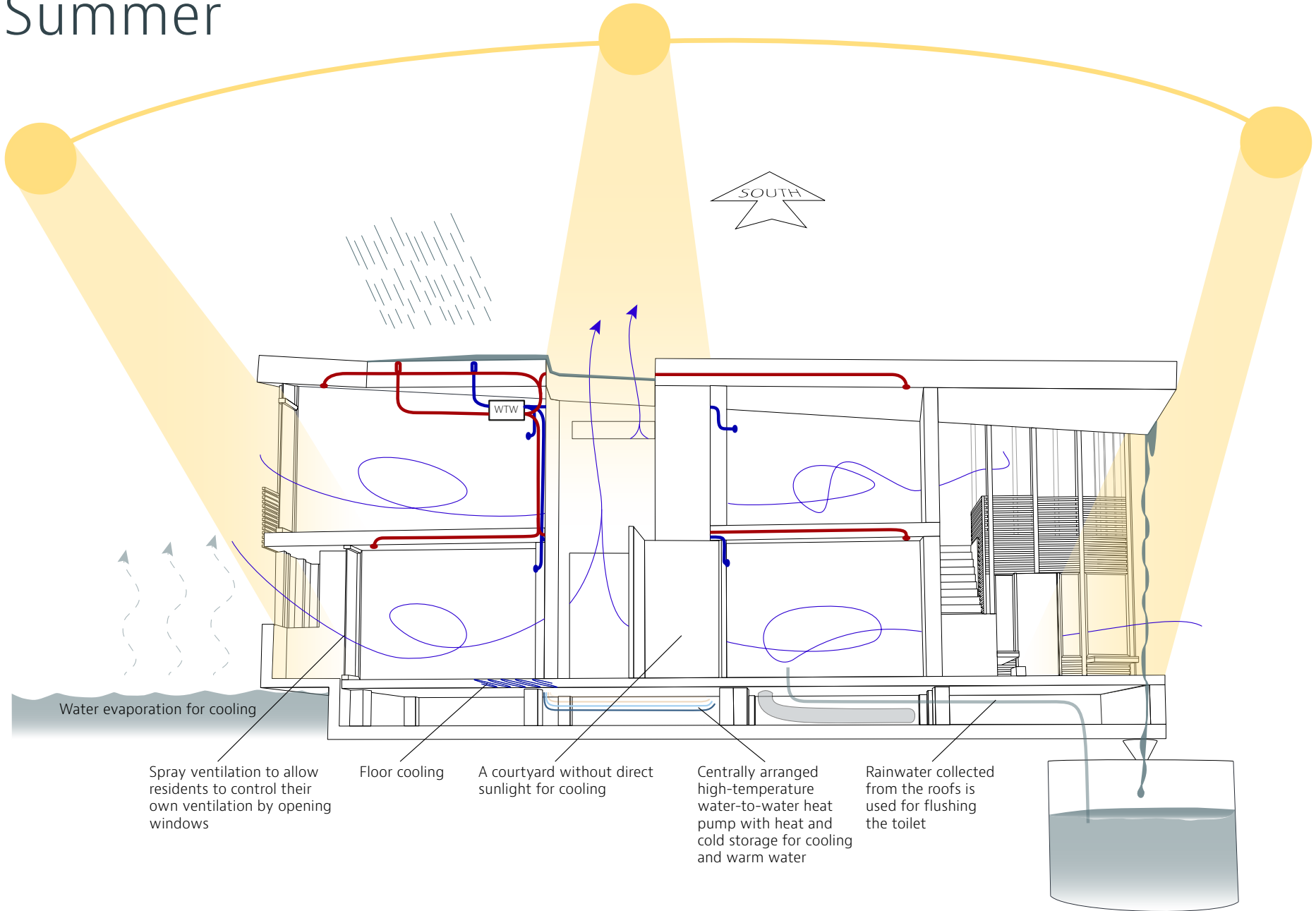


WATERMANAGEMENT



CLIMATE SCHEME

Summer



Water evaporation for cooling

Spray ventilation to allow residents to control their own ventilation by opening windows

Floor cooling

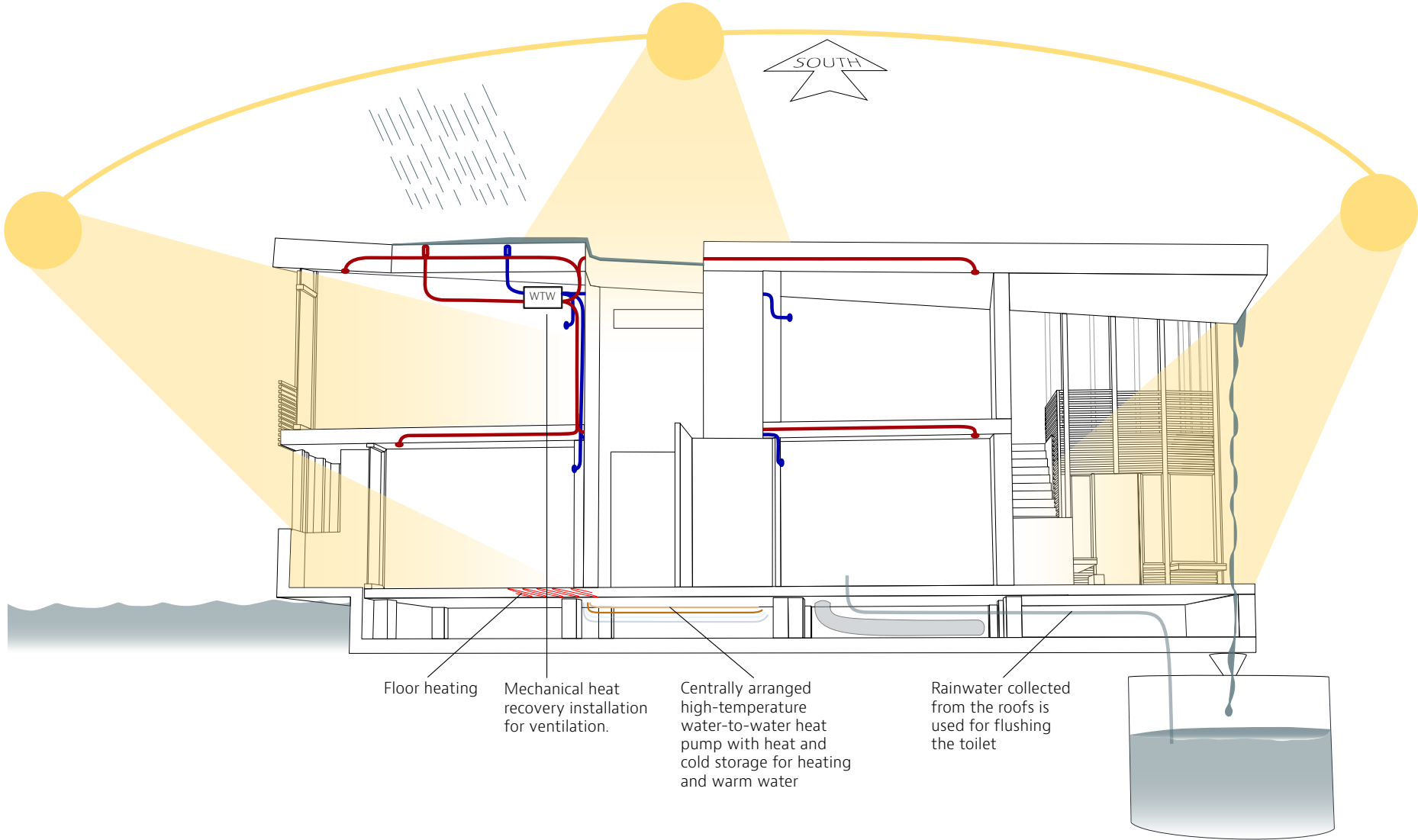
A courtyard without direct sunlight for cooling

Centrally arranged high-temperature water-to-water heat pump with heat and cold storage for cooling and warm water

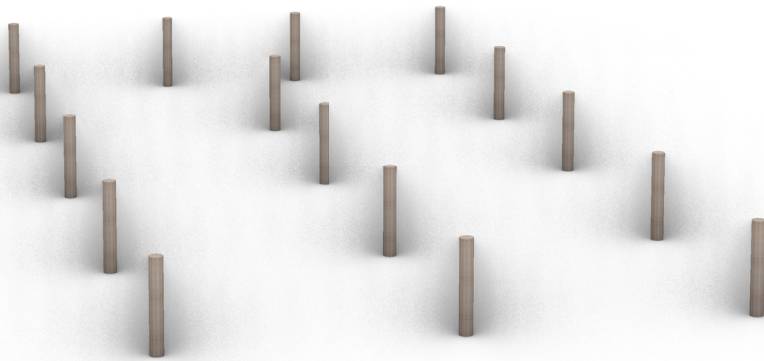
Rainwater collected from the roofs is used for flushing the toilet

CLIMATE SCHEME

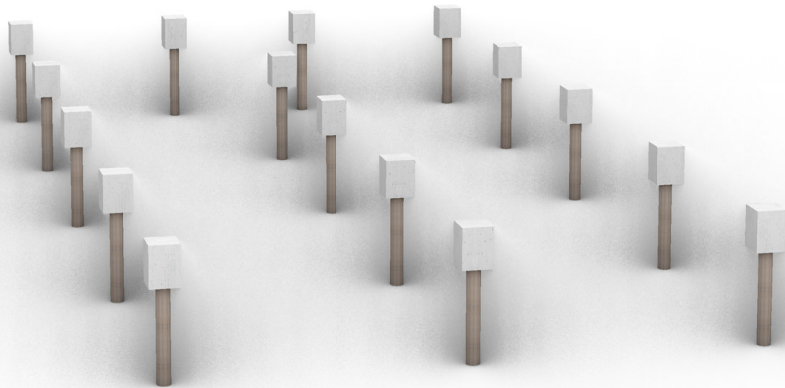
Winter



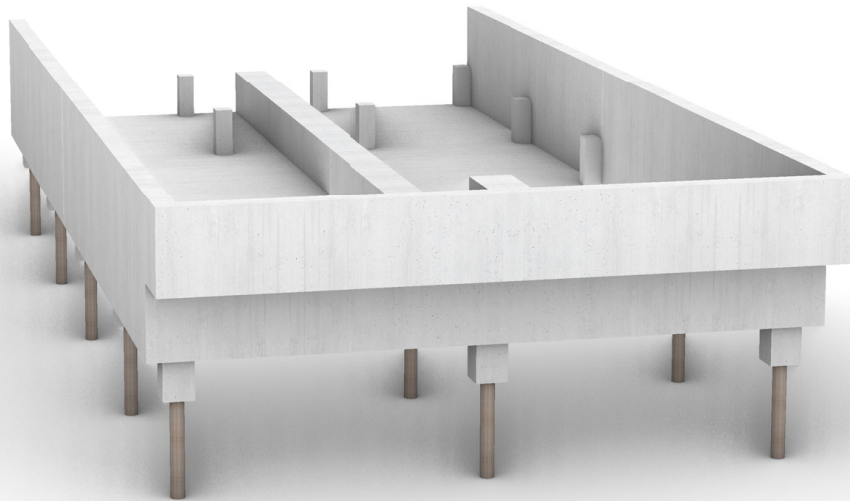
TECHNICAL DESIGN



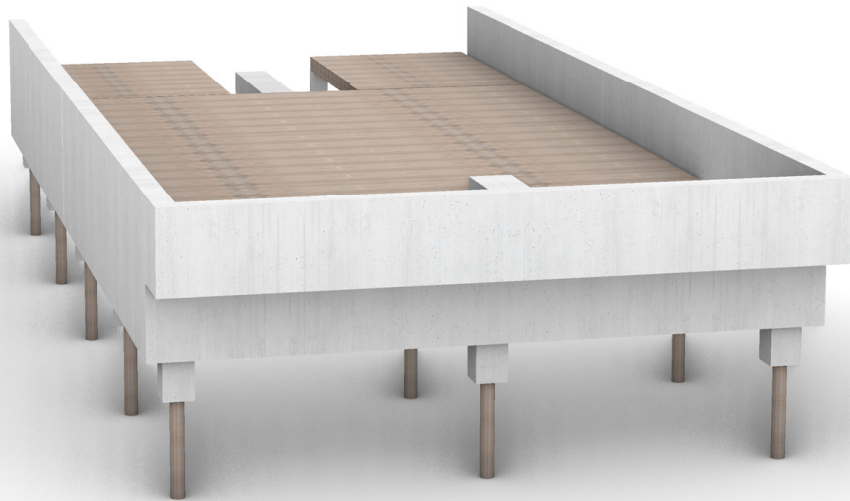
TECHNICAL DESIGN



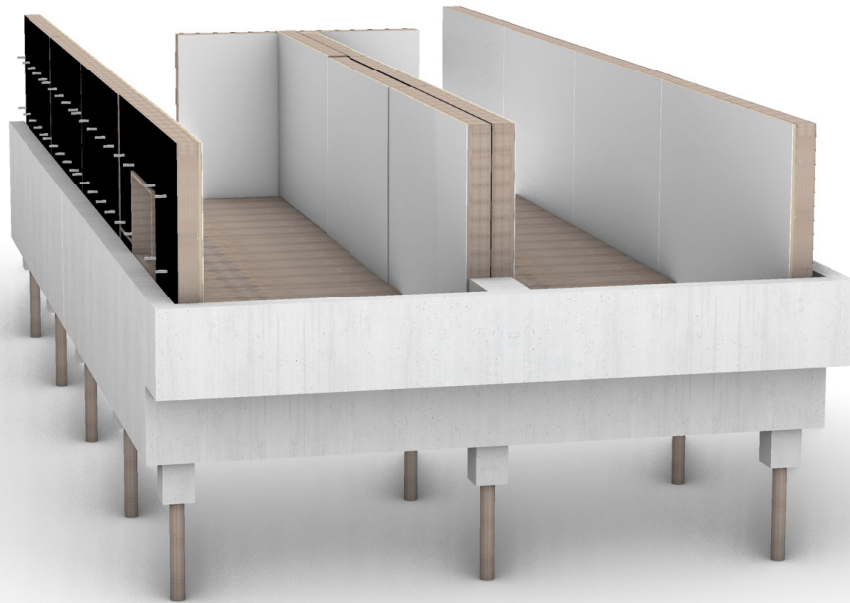
TECHNICAL DESIGN



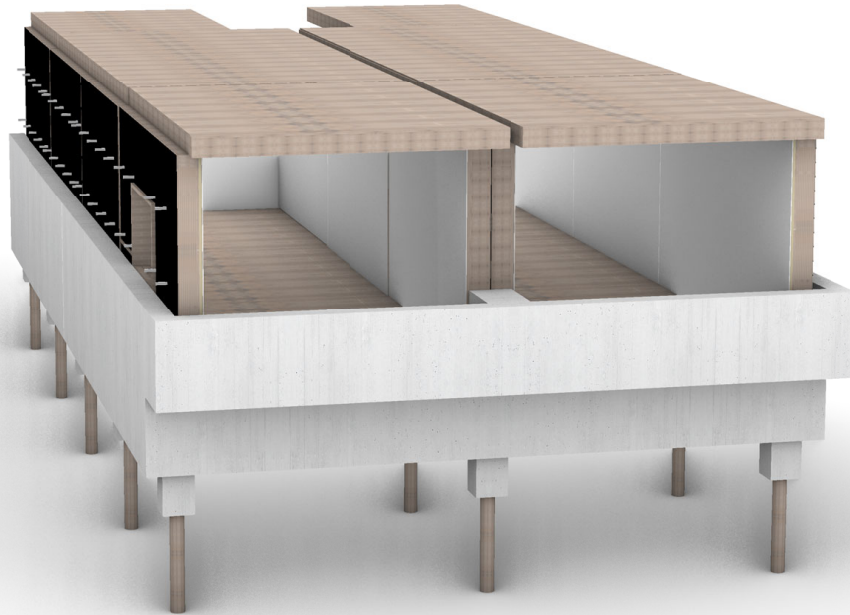
TECHNICAL DESIGN



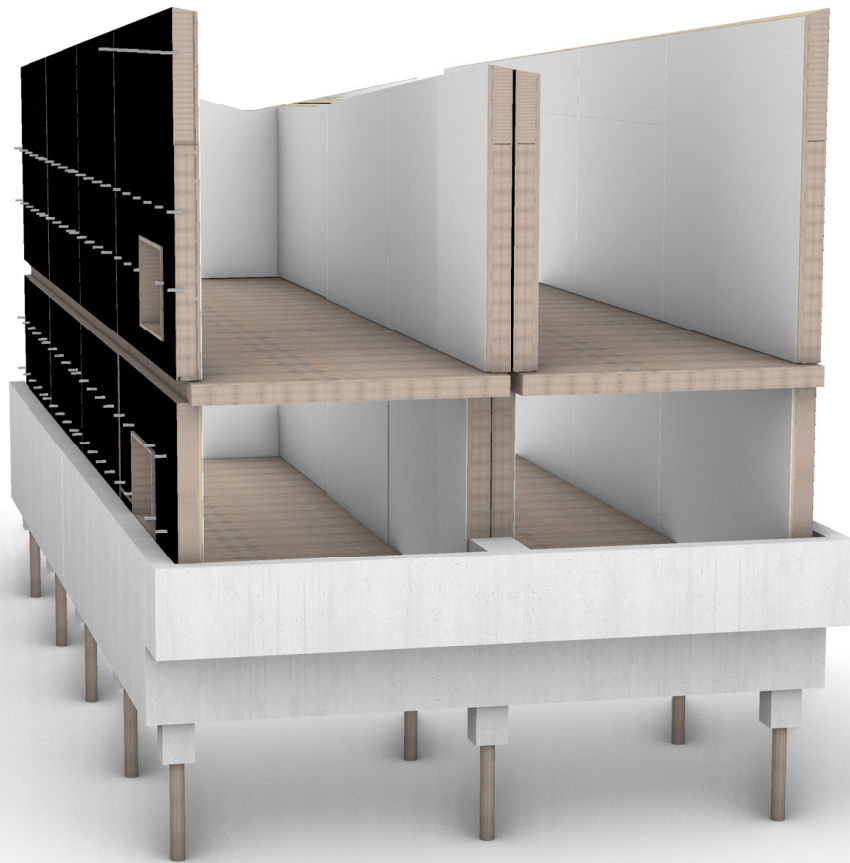
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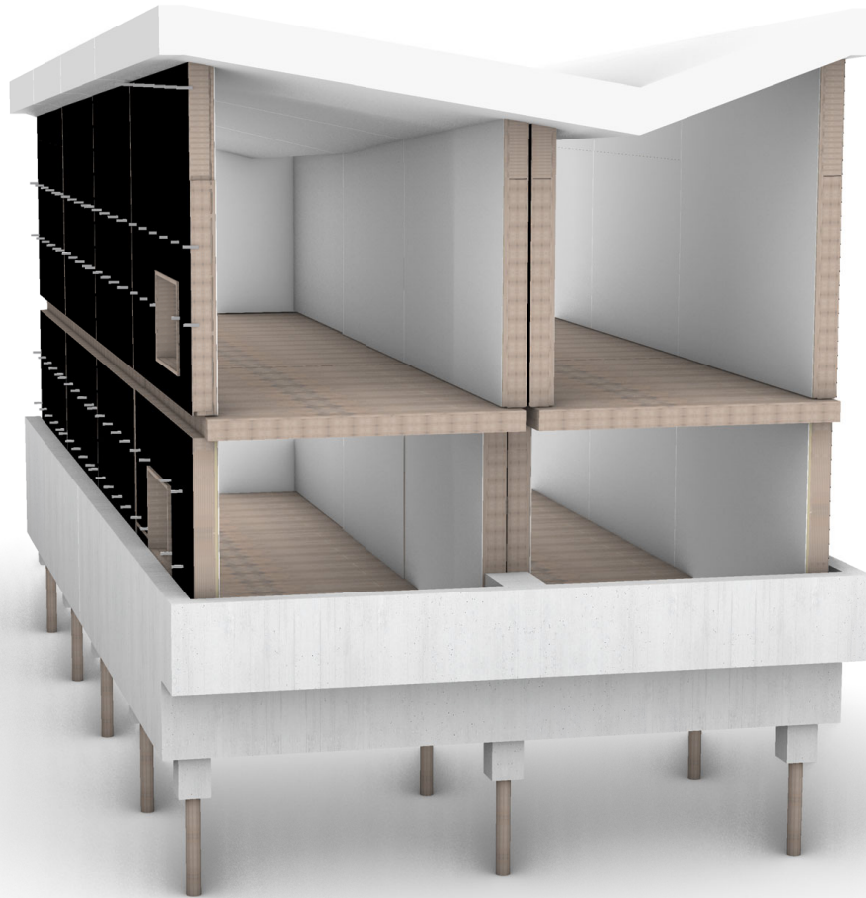
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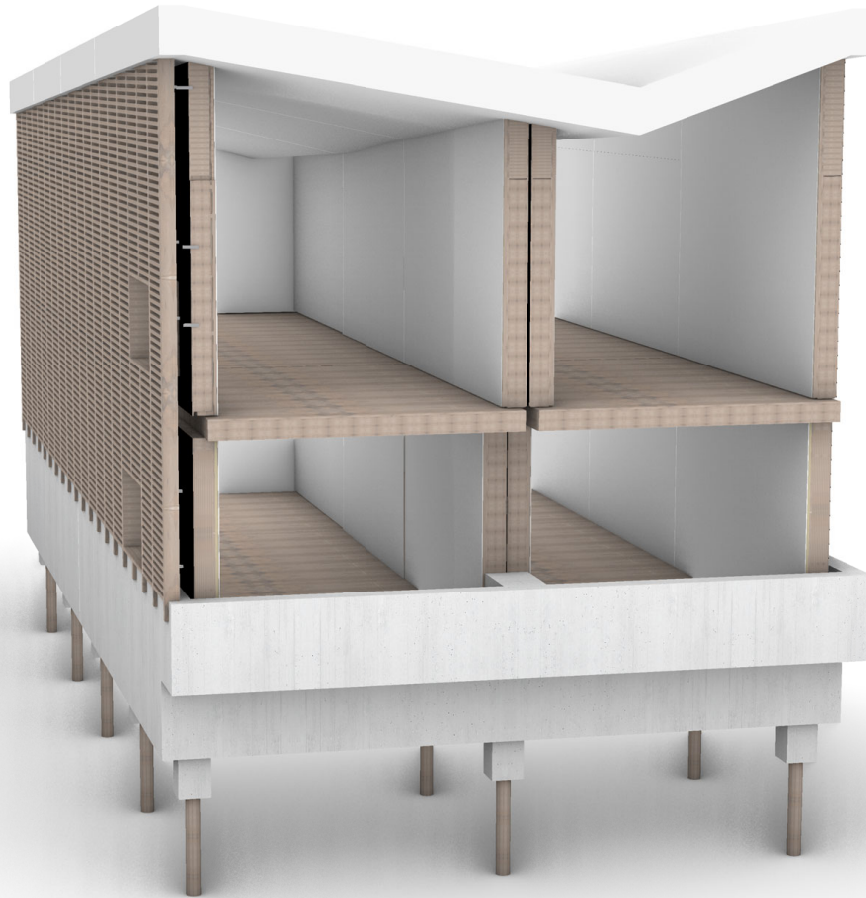
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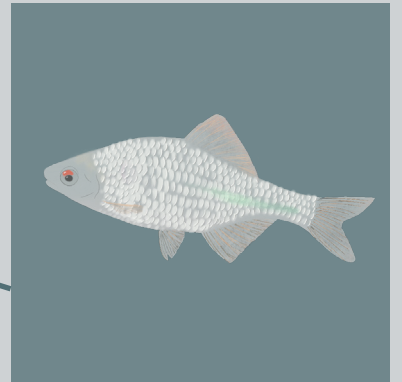
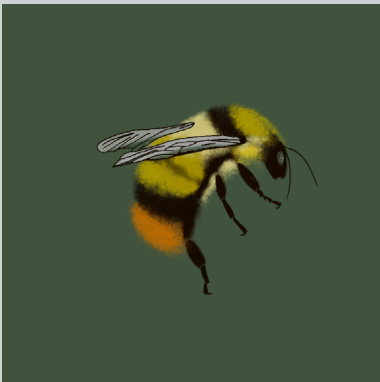
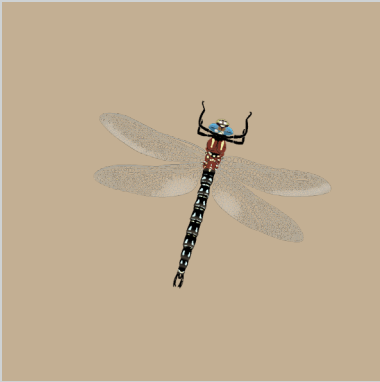
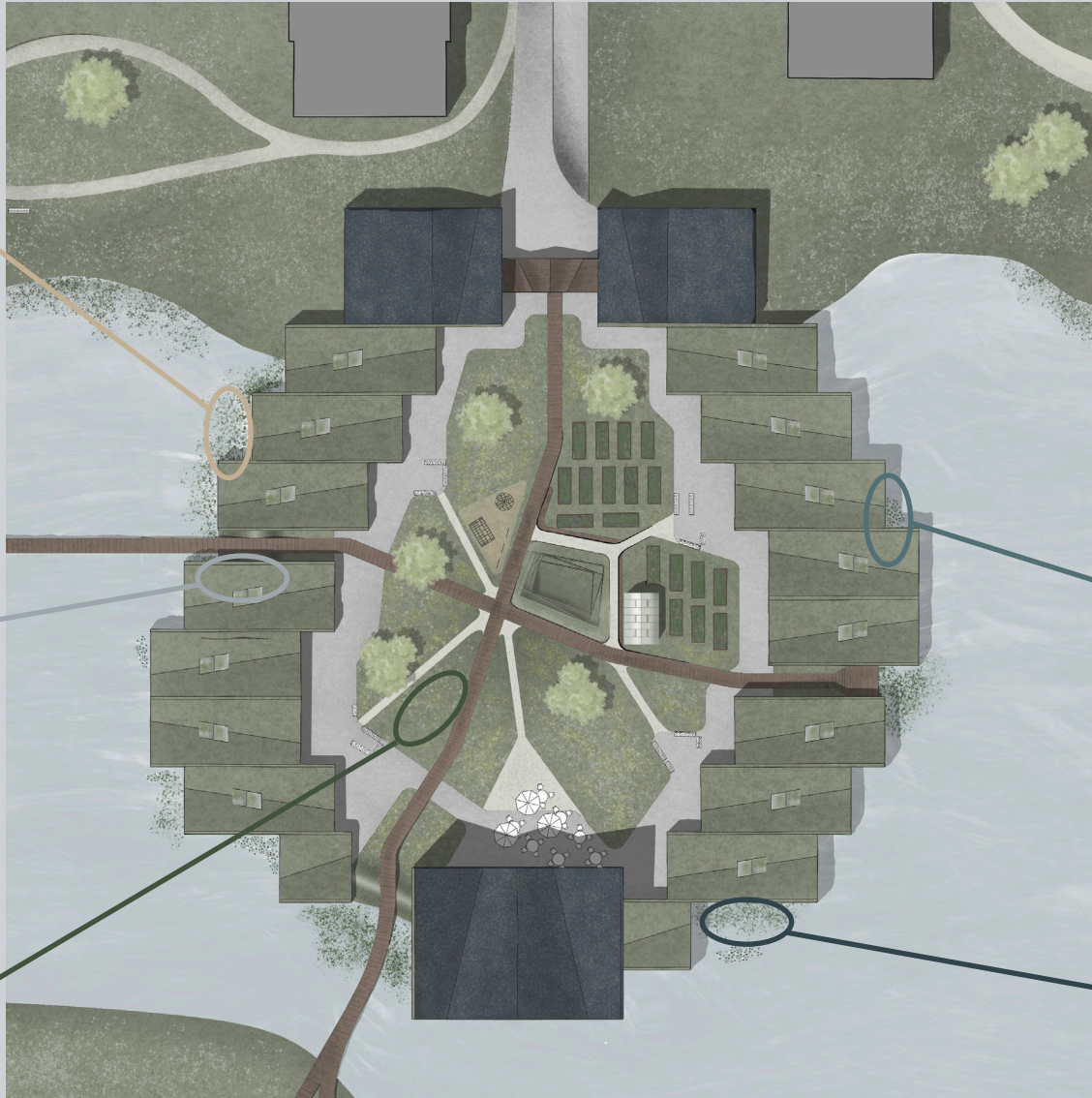
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TECHNICAL DESIGN

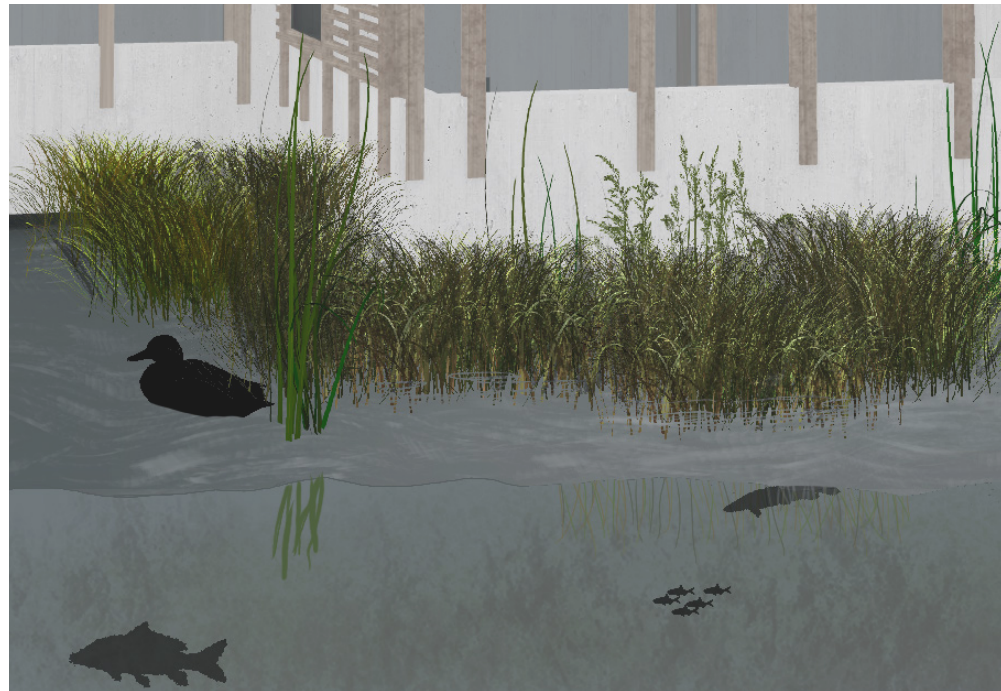
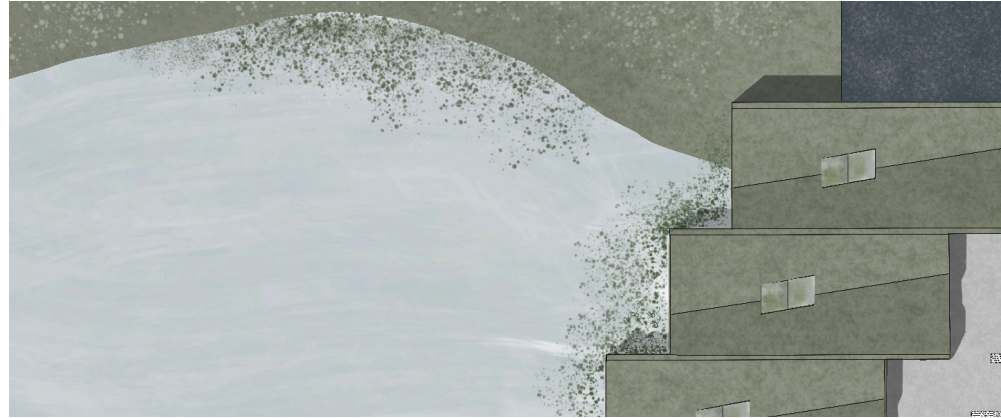


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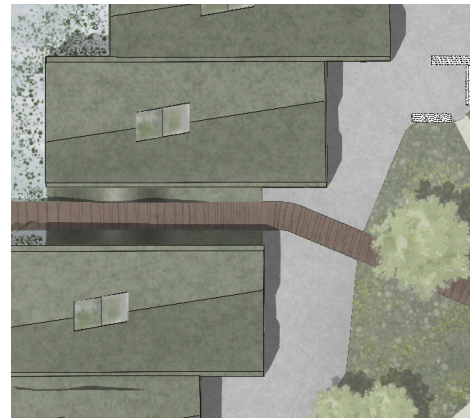
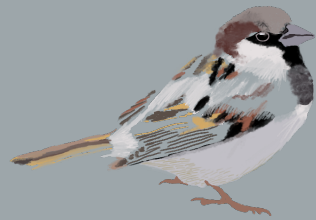
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Hairy
Dragonfly



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Sparrow



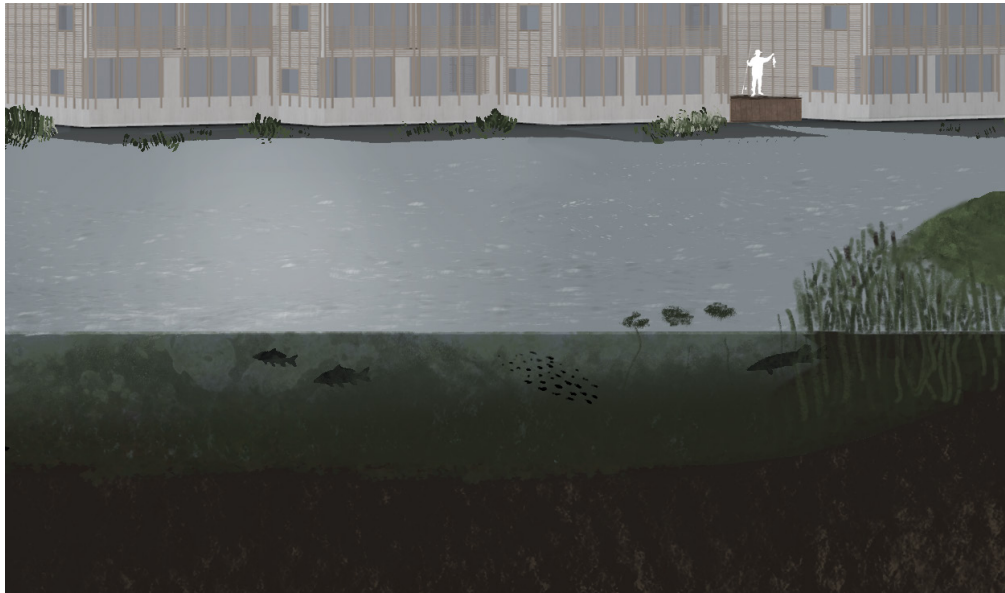
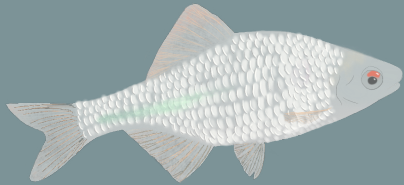
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Early Bumblebee



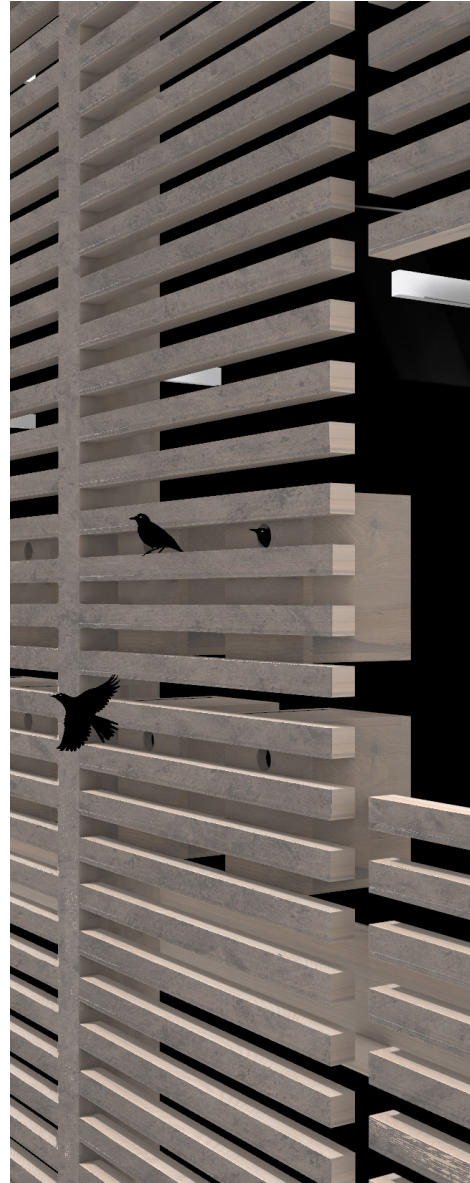
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Bitterling



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Starling



THE COMMUNITY LOOP



Water-sensitive, waterproof, and nature inclusive neighborhood



Initiate residential mobility and transform Tanthof into an age-inclusive neighborhood



Social inclusive and suitable housing within the neighborhood to grow old in

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- slide 23-24  ZUS Office, 2022. Redesigning Delta. National Productive Park Delfland
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THANK YOU

