Preparing for home in the neighbourhood

About the gap between mental health care & society and how the built environment can promote reintegration into society for ex-mental health patients in supportive housing.

P4 presentation
MsC AR3AD110 Designing for Health & Care
TU Delft | June 21st, 2024

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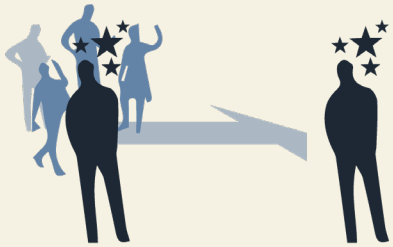
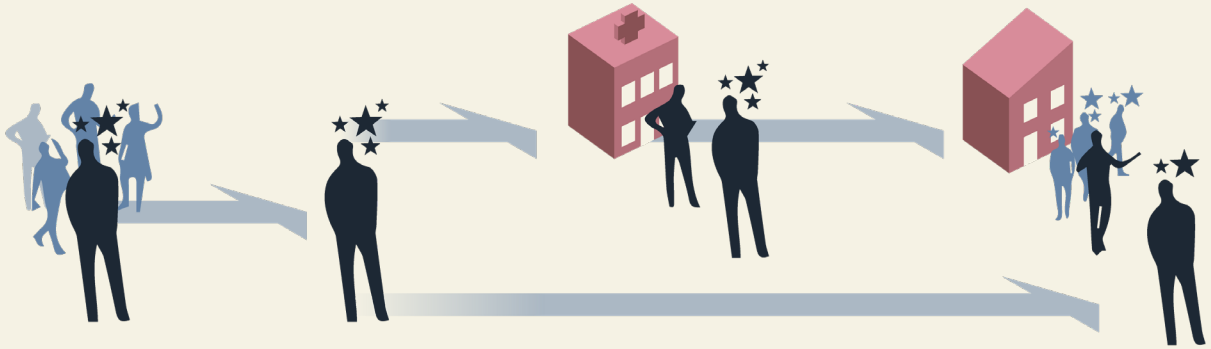
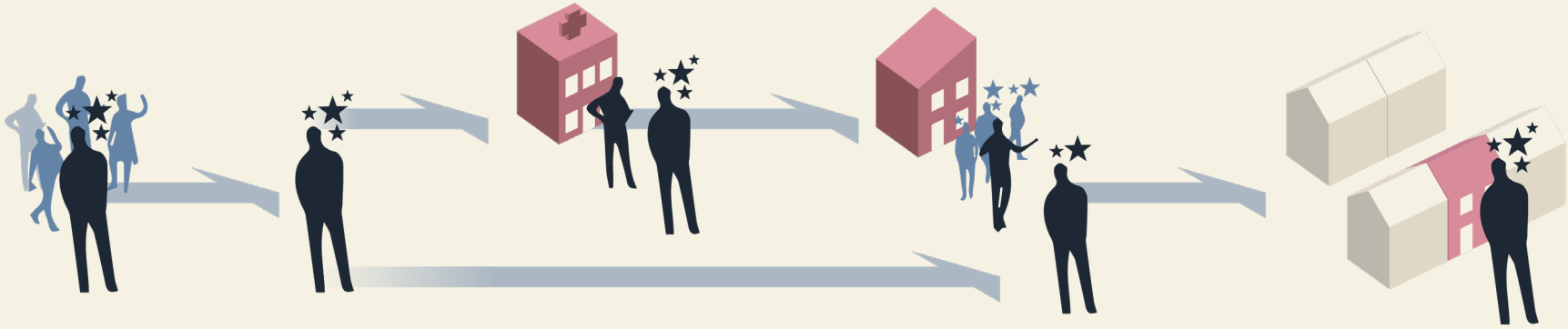
Teachers
Research: Leo Oorschot PhD
Architecture: Kobe Macco
Building technology: Maria Meizoso Aguilar

1 in 4 adults in the Netherlands has experienced psychiatric problems in the past **12** months

(Trimbos-instituut, 2023)



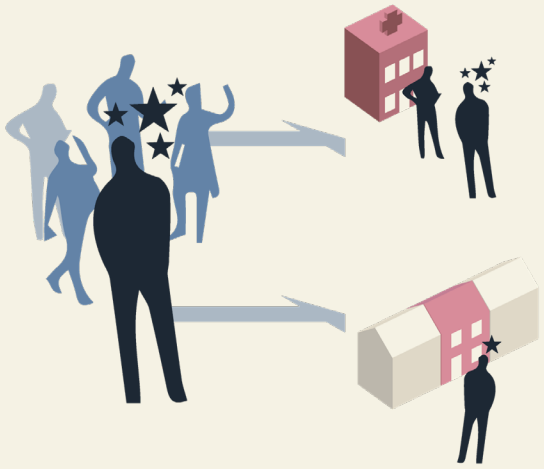


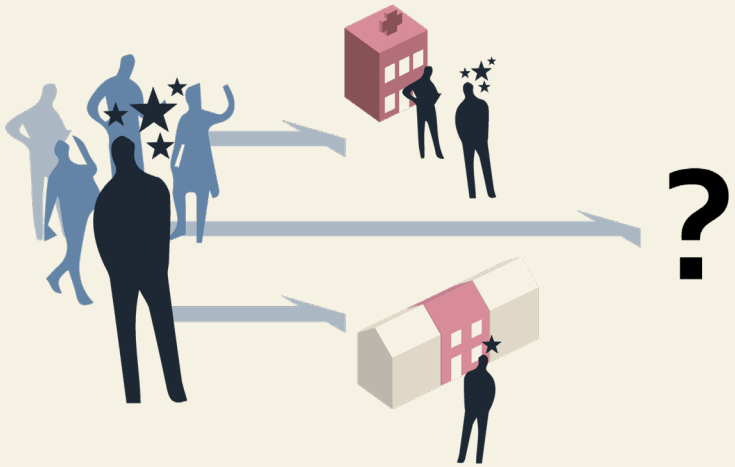


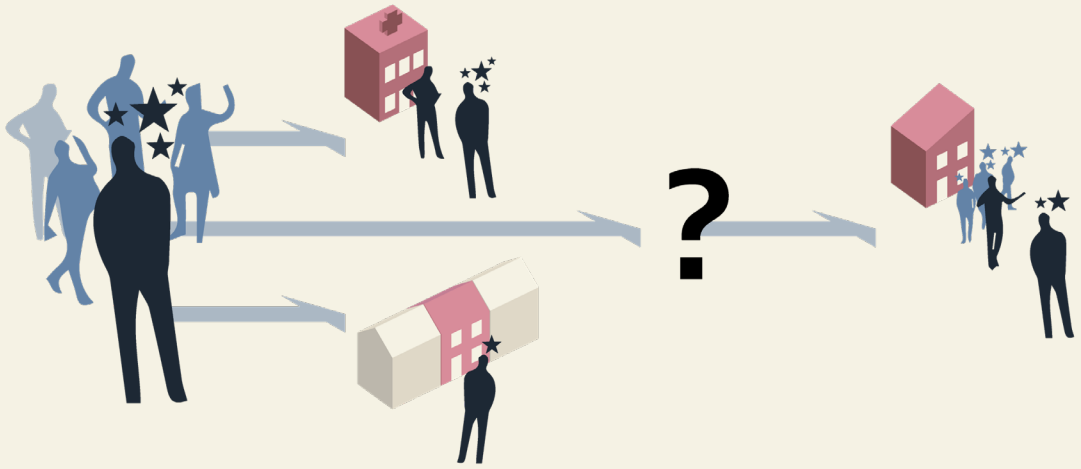
(Veplanke & Duyvendak, 2010)

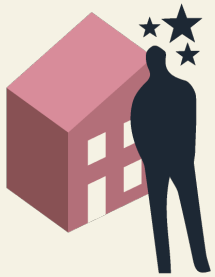
27.660 people in supportive housing in 2021, with introduction of the Wlz (CBS, 2021)

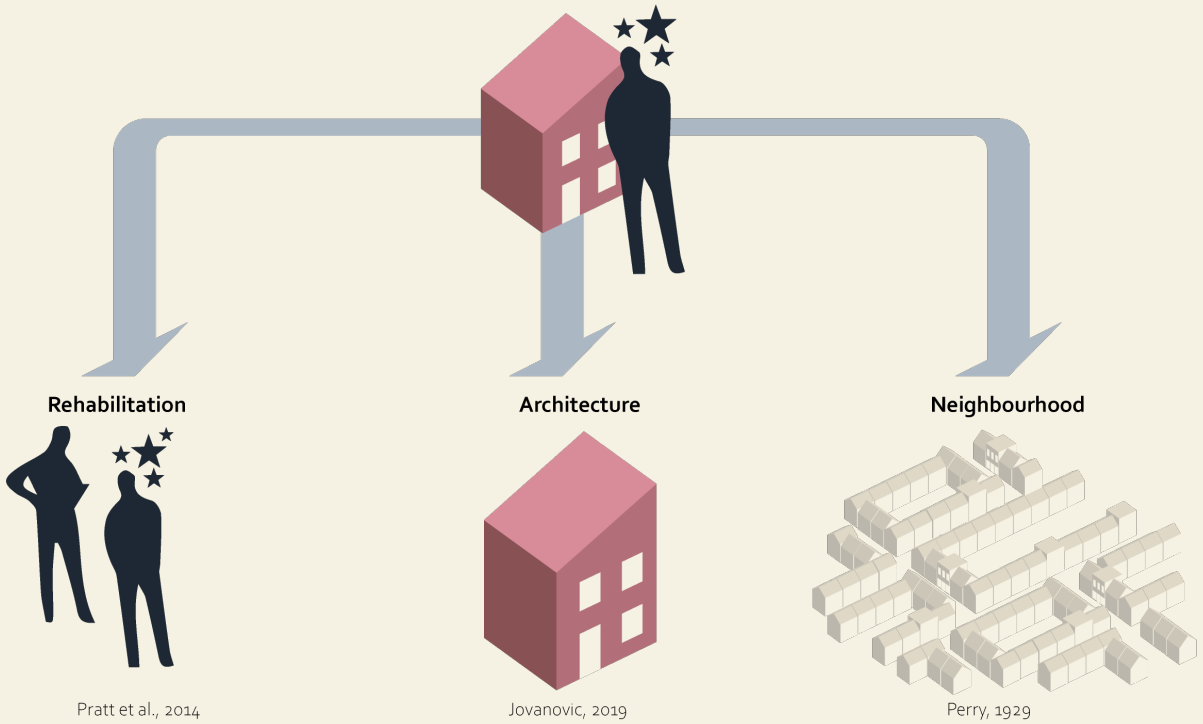
35 weeks of waiting time for supportive housing or ambulant care (KPMG, 2018)







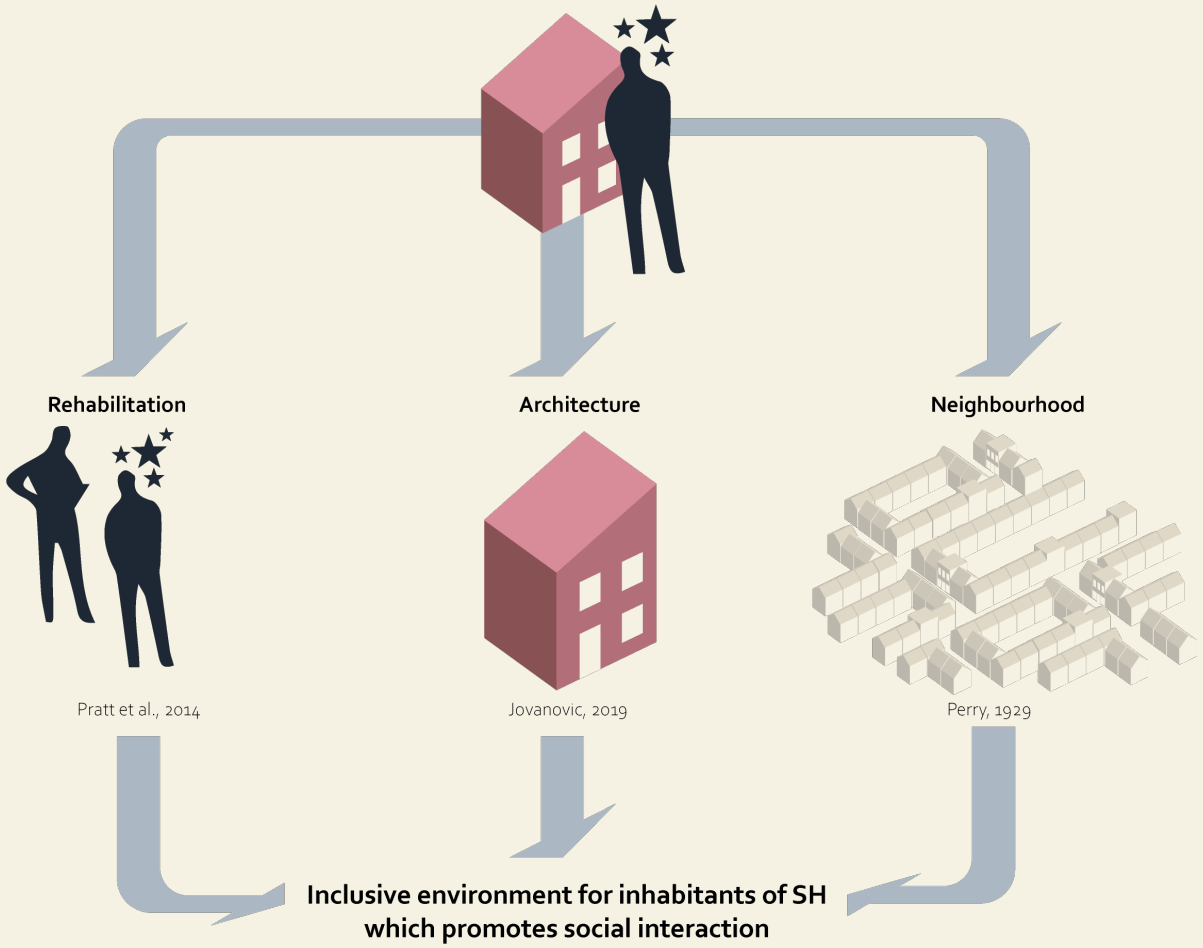




Pratt et al., 2014

Jovanovic, 2019

Perry, 1929


Rehabilitation
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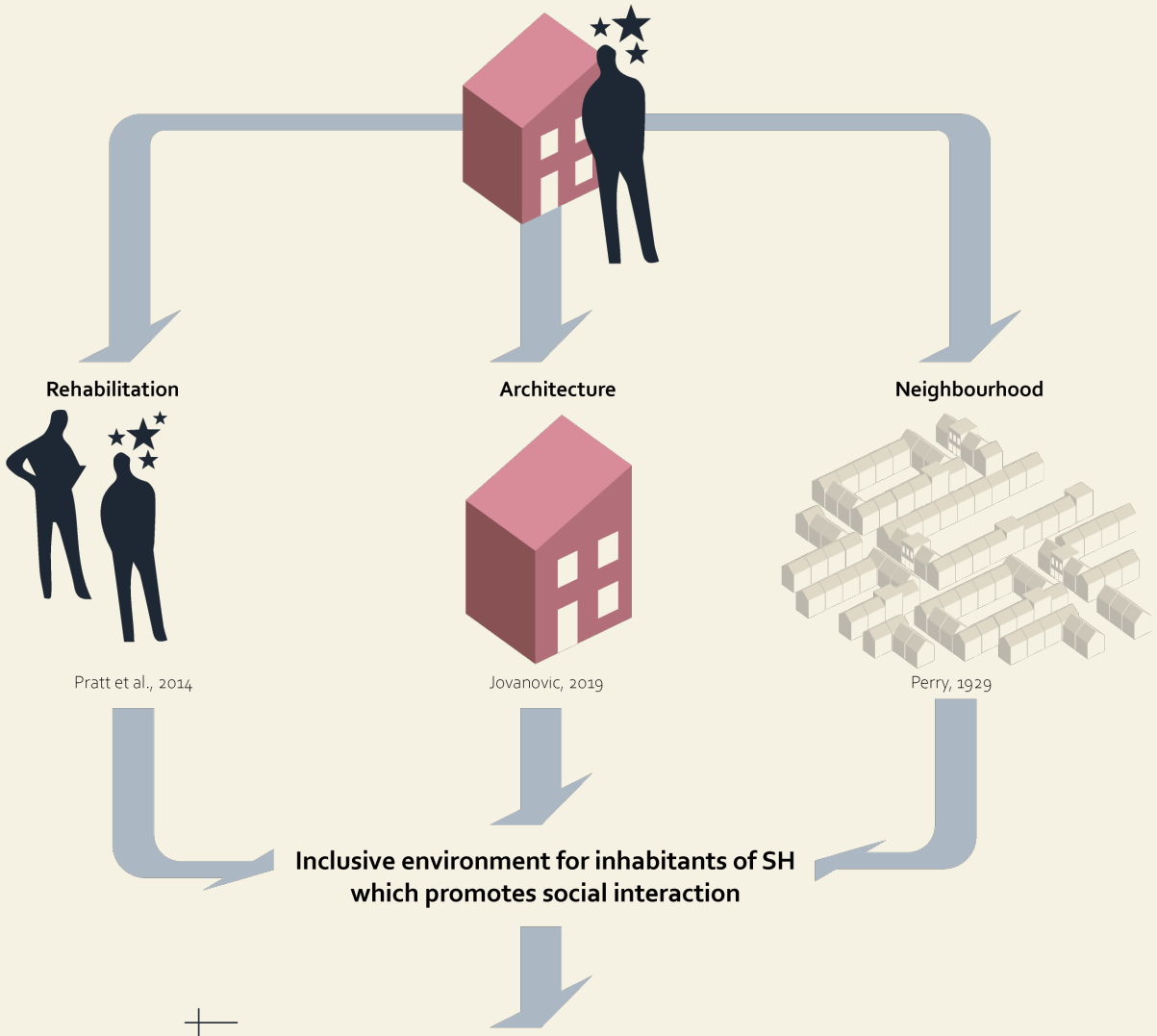
Perry, 1929
Inclusive environment for inhabitants of SH
which promotes social interaction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Inclusive environment for inhabitants of SH
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How can architecture & built environment features and location conditions promote the integration into the neighbourhood of inhabitants in Supportive Housing?

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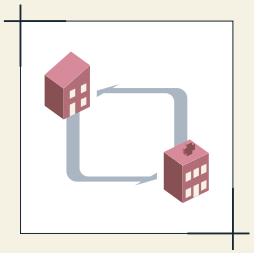
Methods

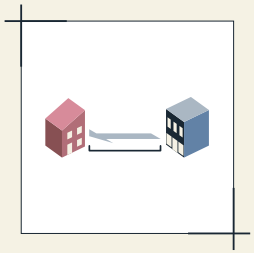
Literature research

Interviews: Architect, designer and policy makers

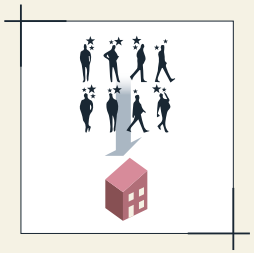
Field research: Interviews, observation and joining in activities



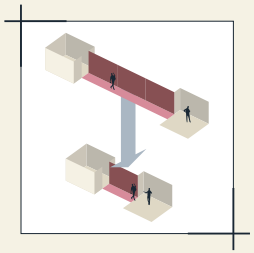
Flexible to changing policies



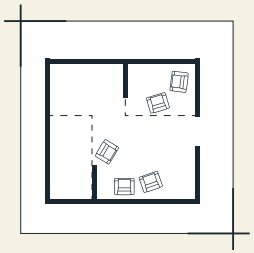
Nearby amenities



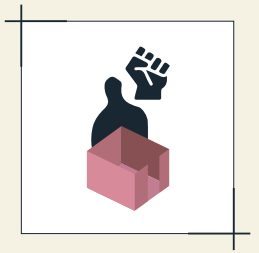
Clusters of max. 10 people



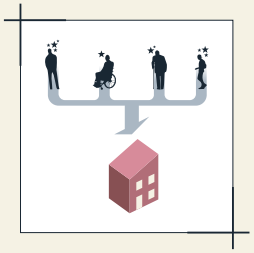
Short hallways



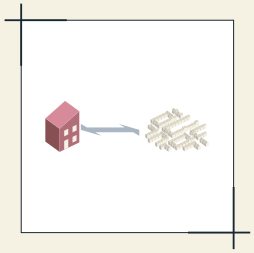
Open floor plan



In control of dwelling

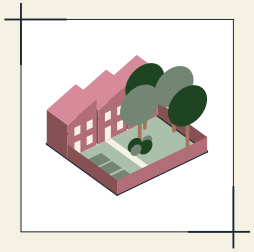


Fit the variety of users



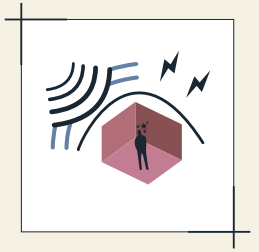
Interaction with the neighbourhood

Accommodations and access for family

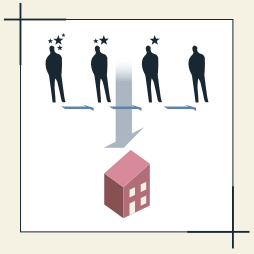


Shared private garden, with variety

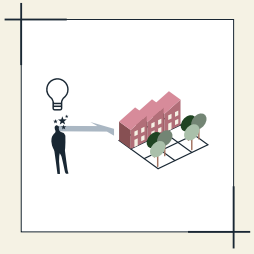
Availability of leisure



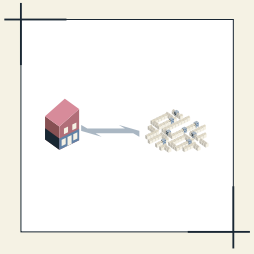
Low-stimuli in dwelling



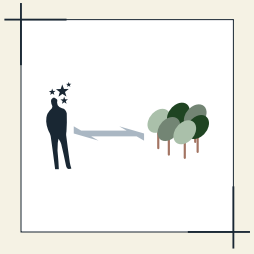
Fit the recovery process



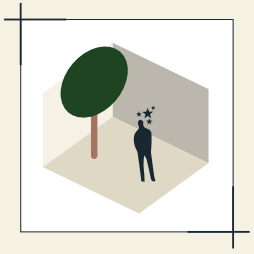
Clear layout



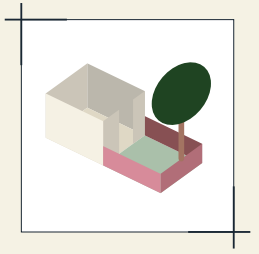
Amenities for the neighbourhood



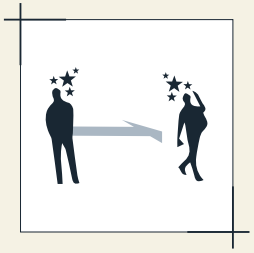
Connection to nature



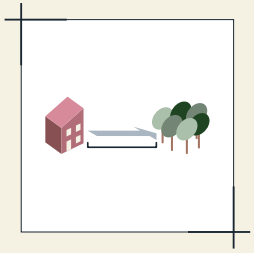
Indoor green



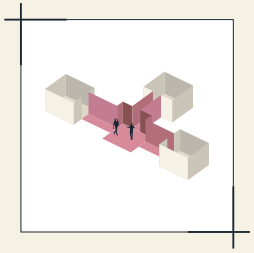
Private outside space



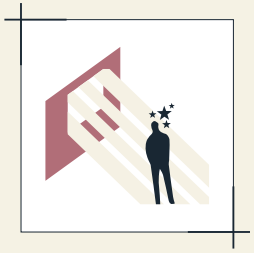
Activate users



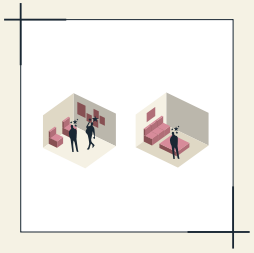
Availability of green



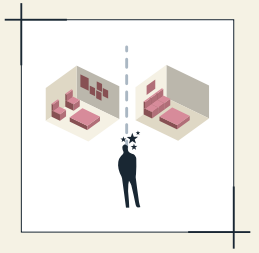
Shared, informal spaces for meeting



Access to daylight



Home-like where meeting or vulnerable



Customizable dwellings

1. Know the users of supportive housing

2. Location conditions

3. Building & program

4. Interior & dwelling

1. Know the users of supportive housing

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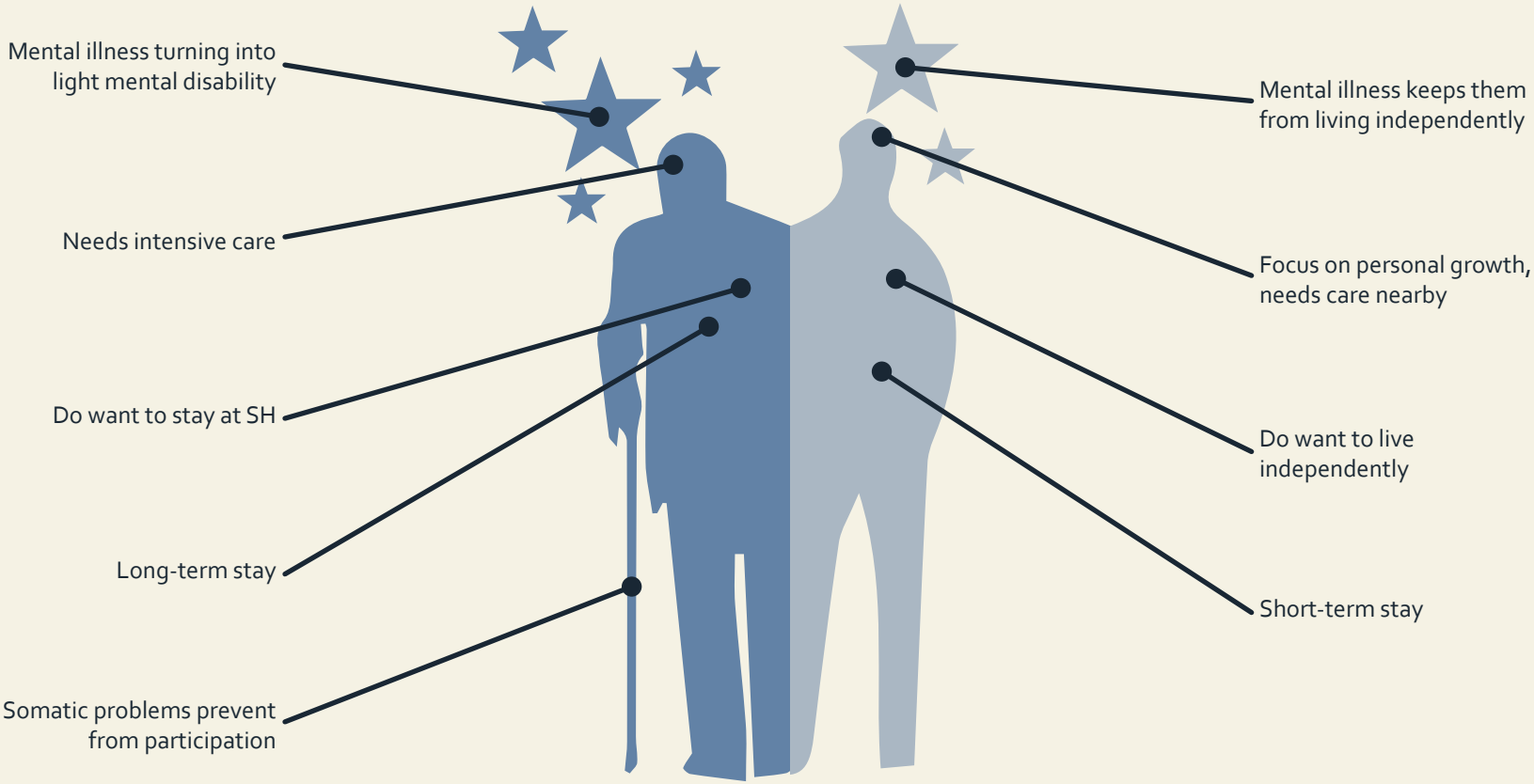
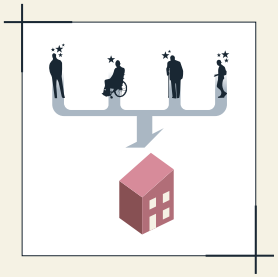
"Most inhabitants have a SMI, around 85% suffering from psychosis" (interview staff member, 2023)

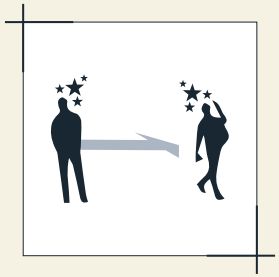


(Planeije et al., 2017)

1. Know the users of supportive housing



Fit the variety of users



Activate users

2. Location conditions

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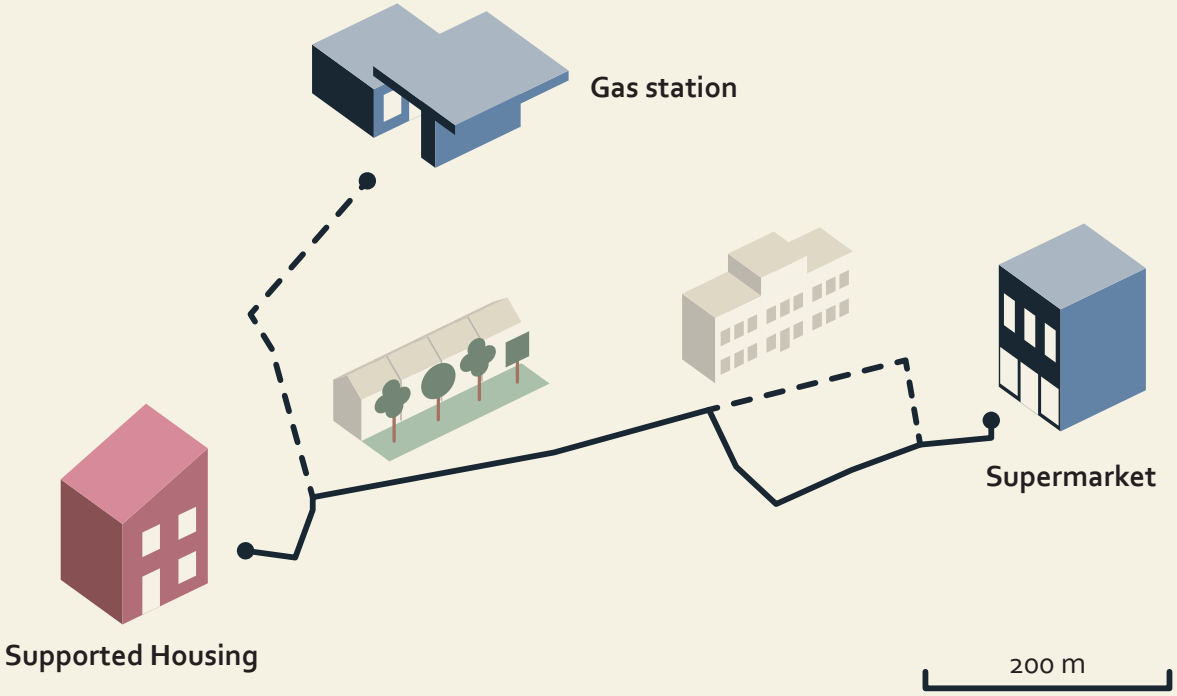

2. Location conditions

Walking to the supermarket with a volunteer and inhabitant

(Author., 2023)

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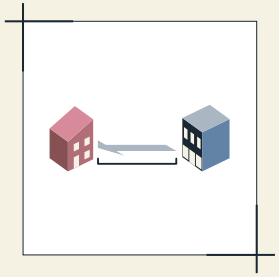
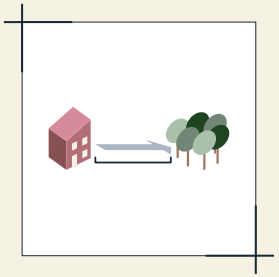


Nearby amenities



Availability of green

(Author., 2023)

3. Building & program

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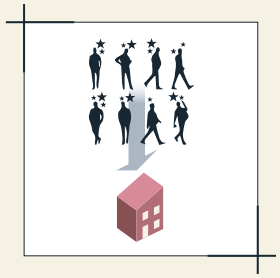
Main hall

Coffee room

(Author., 2023)

3. Building & program



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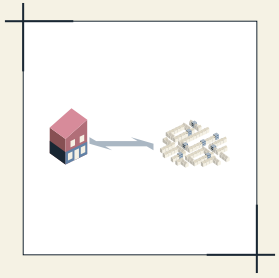

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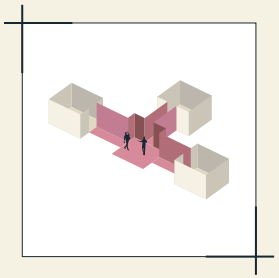

Shared, informal spaces for meeting

4. Interior & dwelling

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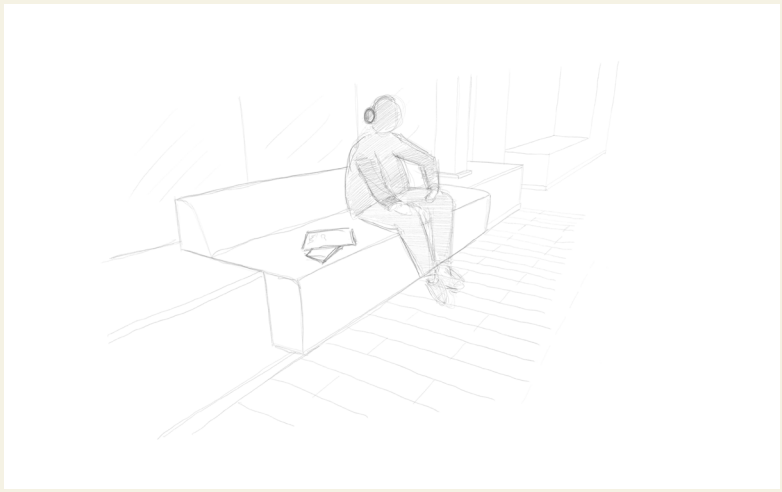
Main hall with loose furniture

Specialized furniture

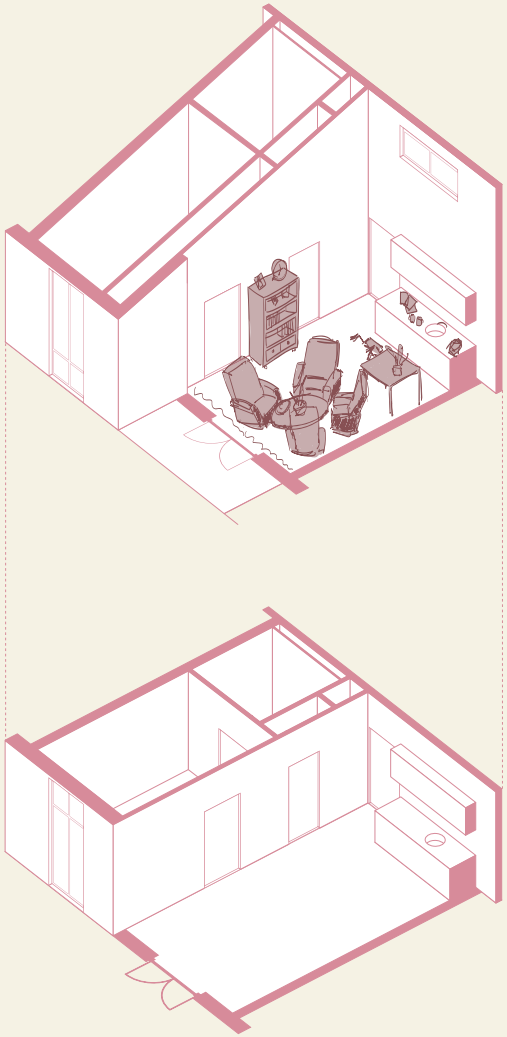
Dinner room



Incorporated furniture

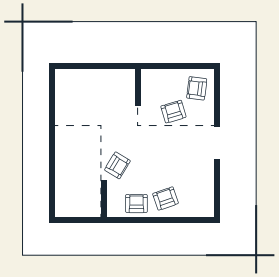
(Author., 2023)

4. Interior & dwelling



(Author., 2023)

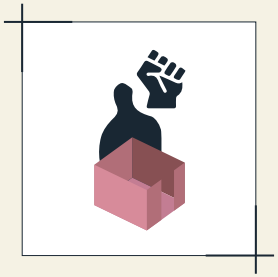
4. Interior & dwelling



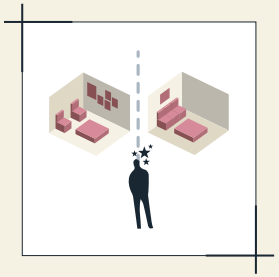
Open floor plan

Availability of leisure

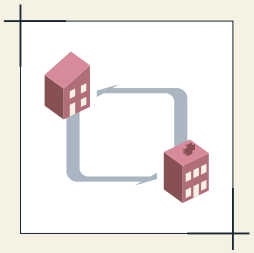
Low-stimuli in dwelling



In control of dwelling



Customizable dwellings



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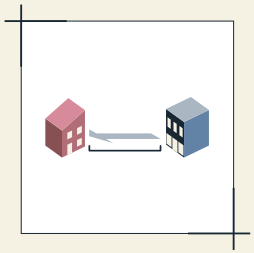

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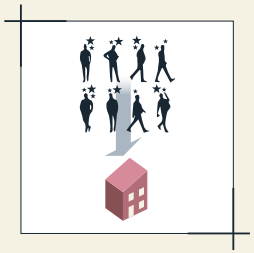

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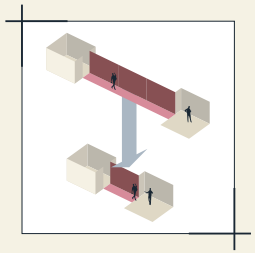

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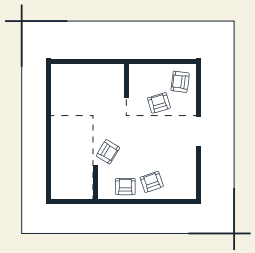
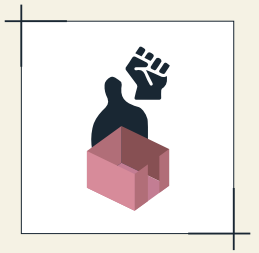
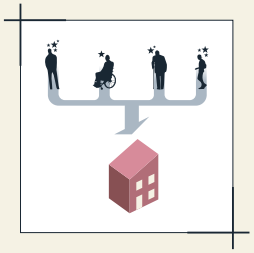


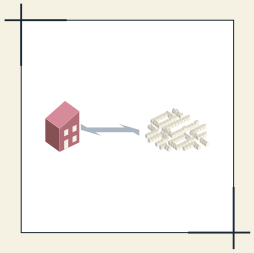
Open floor plan



In control of dwelling

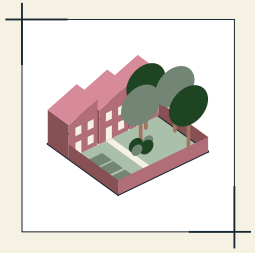


Fit the variety of users



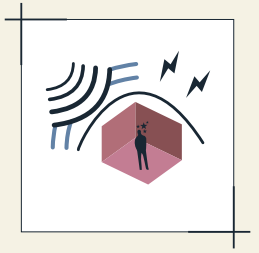
Interaction with the neighbourhood

Accommodations and access for family

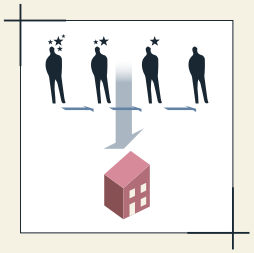


Shared private garden, with variety

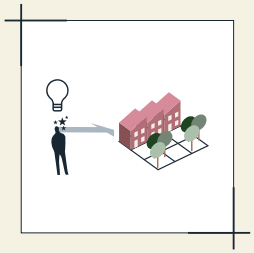
Availability of leisure



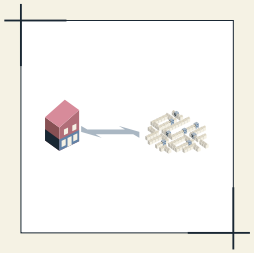
Low-stimuli in dwelling



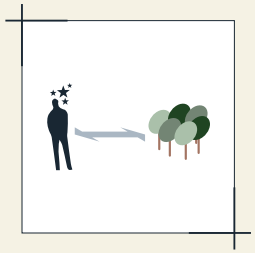
Fit the recovery process



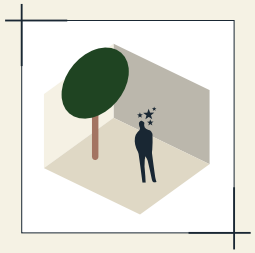
Clear layout



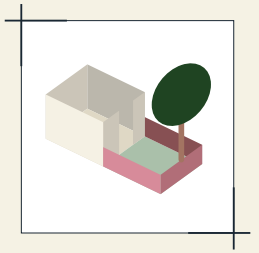
Amenities for the neighbourhood



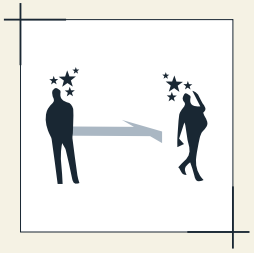
Connection to nature



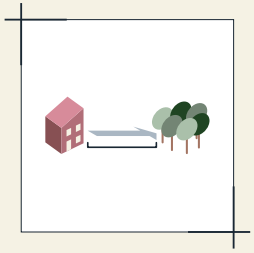
Indoor green



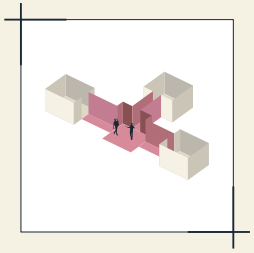
Private outside space



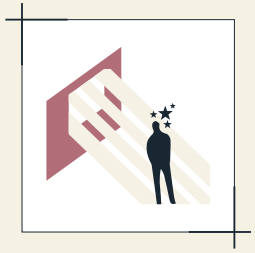
Activate users



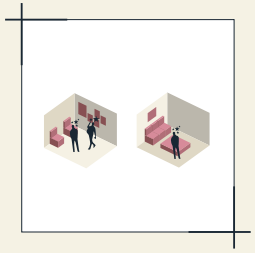
Availability of green



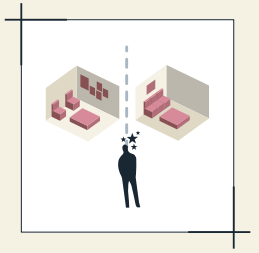
Shared, informal spaces for meeting



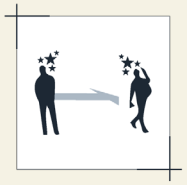
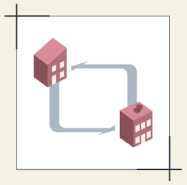
Access to daylight

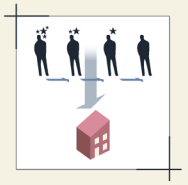
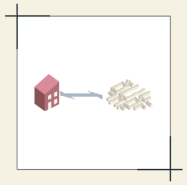
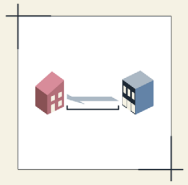


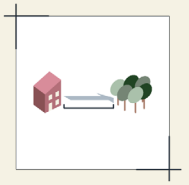
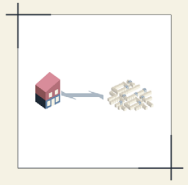
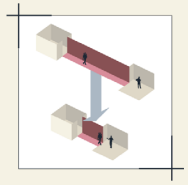
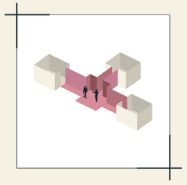
Home-like where meeting or vulnerable

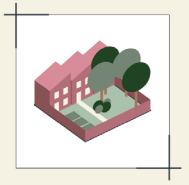
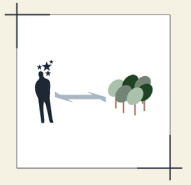
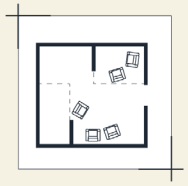


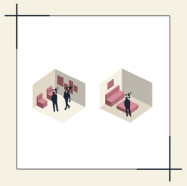
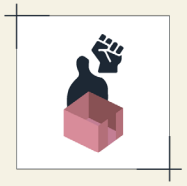
Customizable dwellings

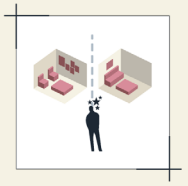
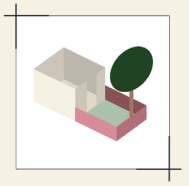



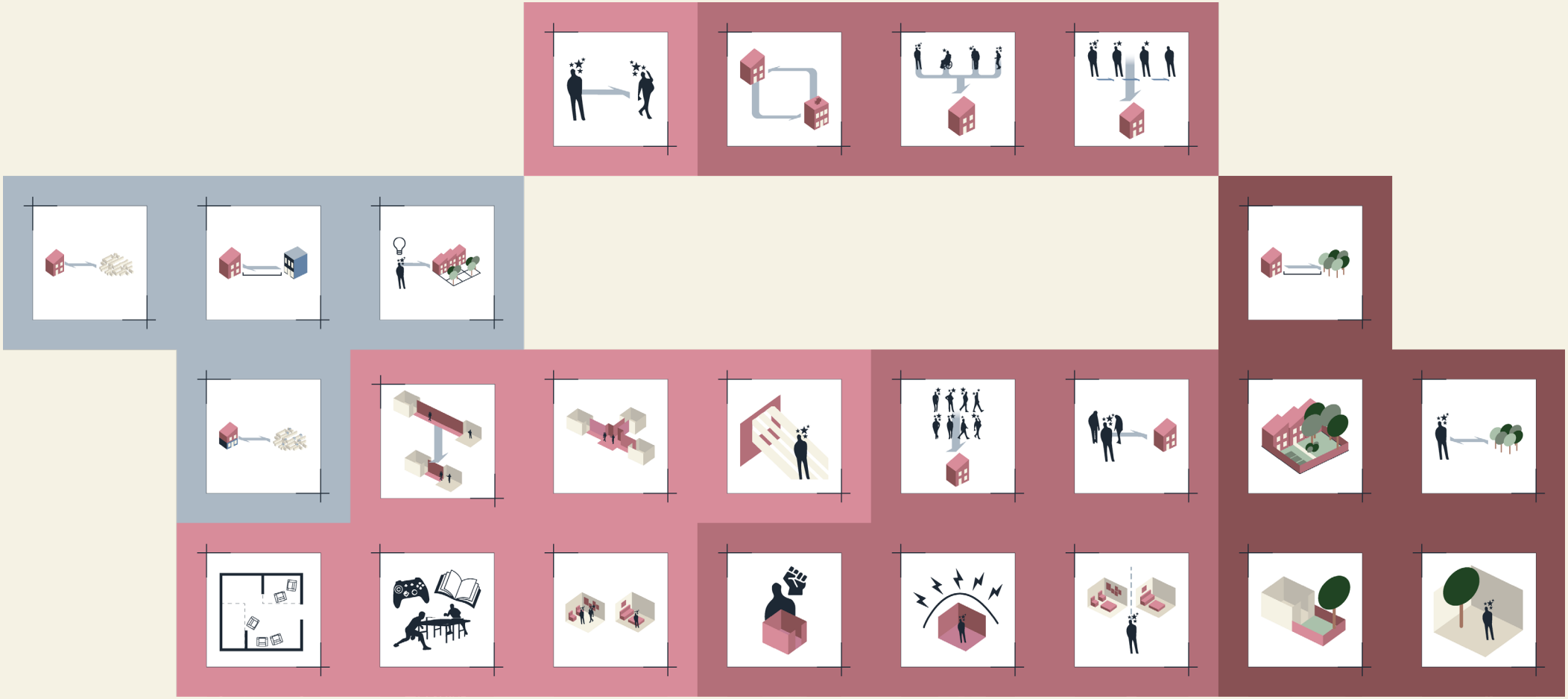




1. Connection to the neighbourhood

3. Needs of inhabitants



2. Activation of inhabitants

4. Connection to nature

1. Connection to the neighbourhood

3. Needs of inhabitants

2. Activation of inhabitants

4. Connection to nature

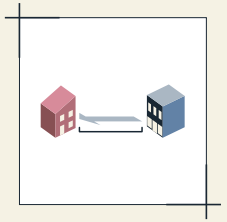
Where do people go **after** supportive housing?

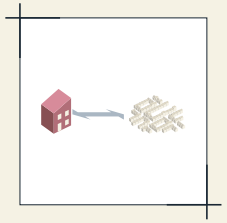
- Supported housing is often the goal

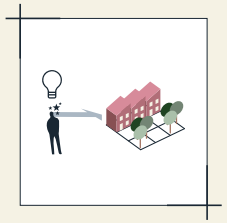
- Social and policy problem | Local solutions

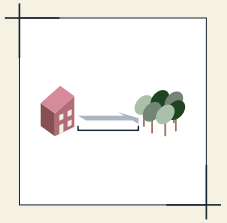
Design

Location

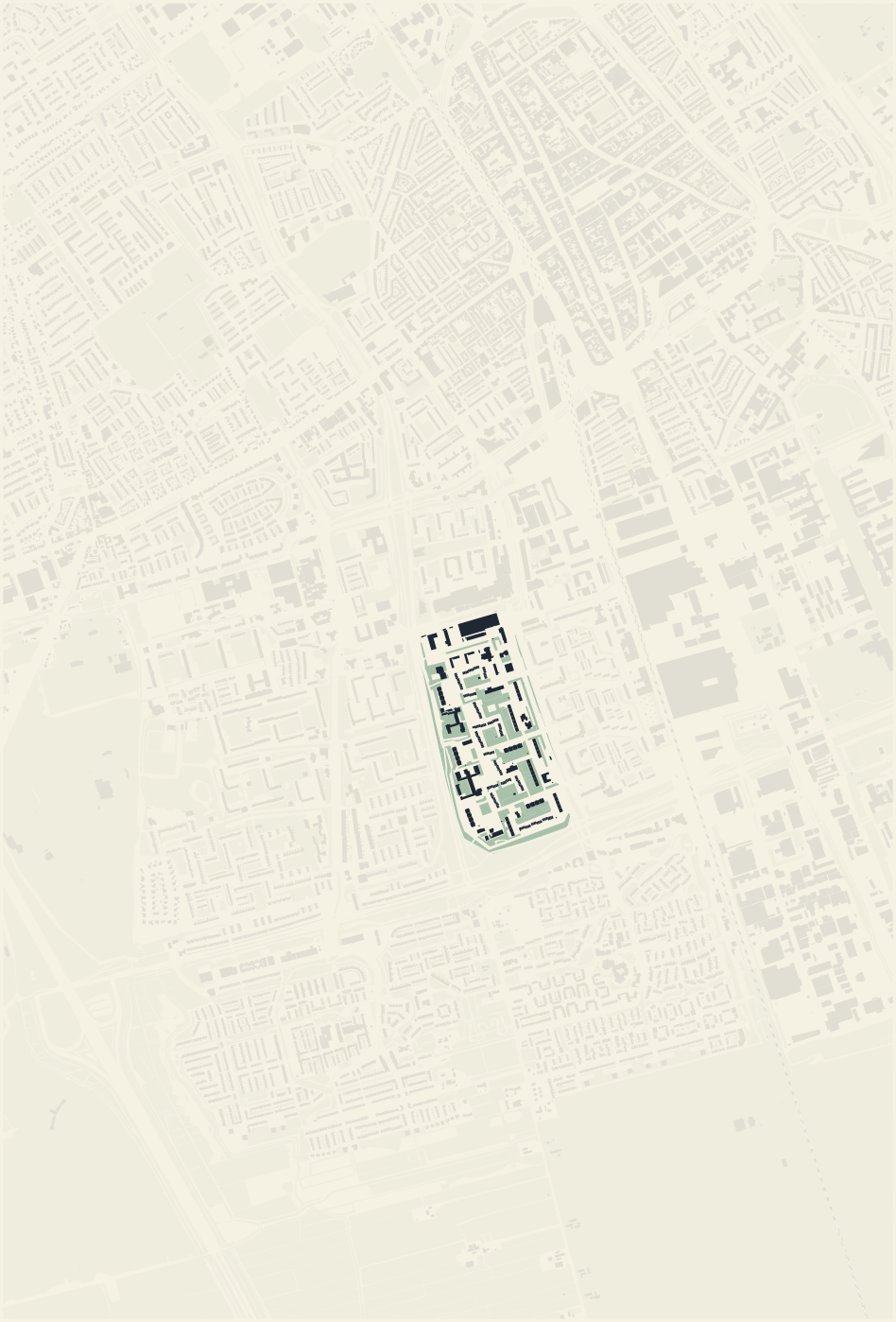




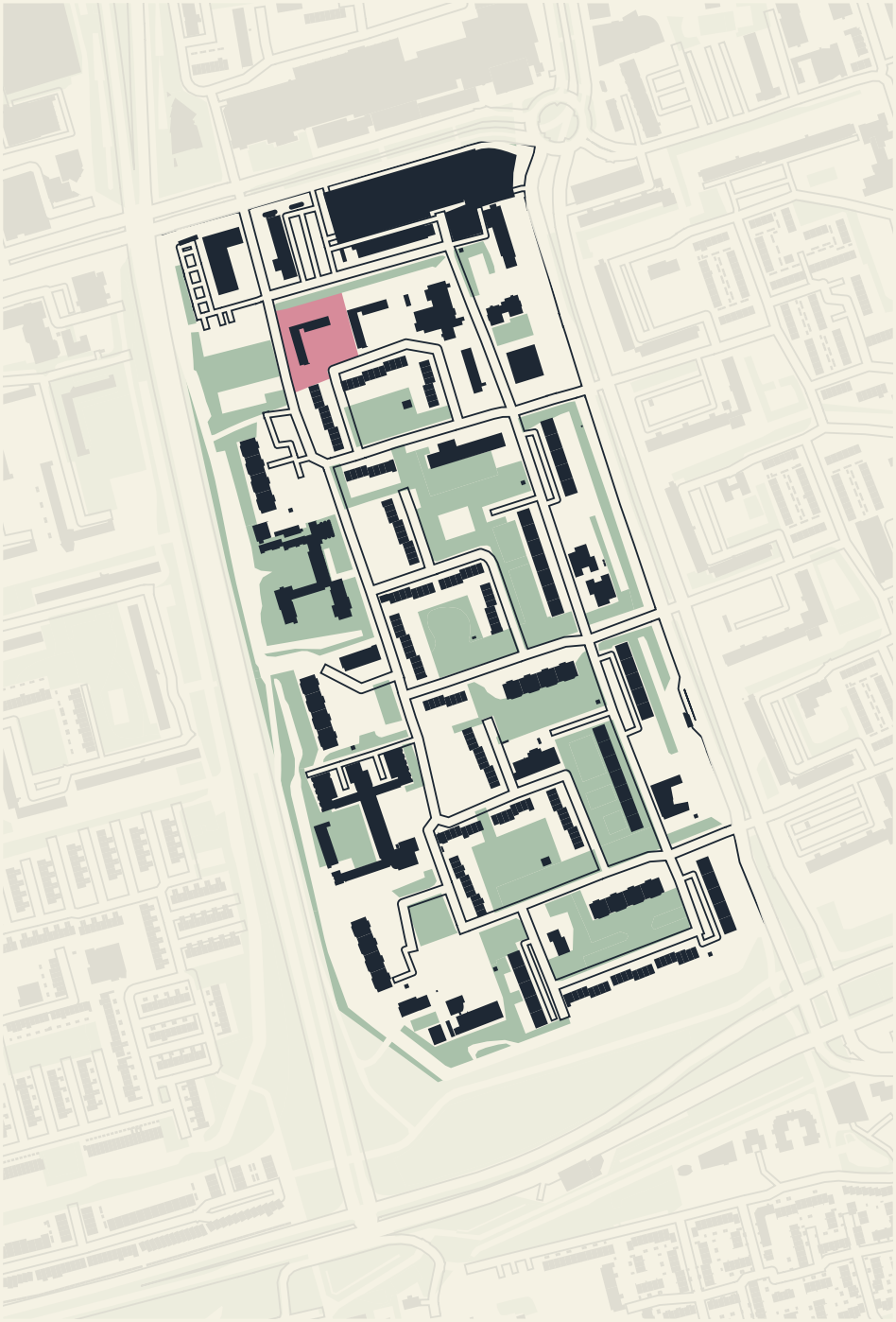


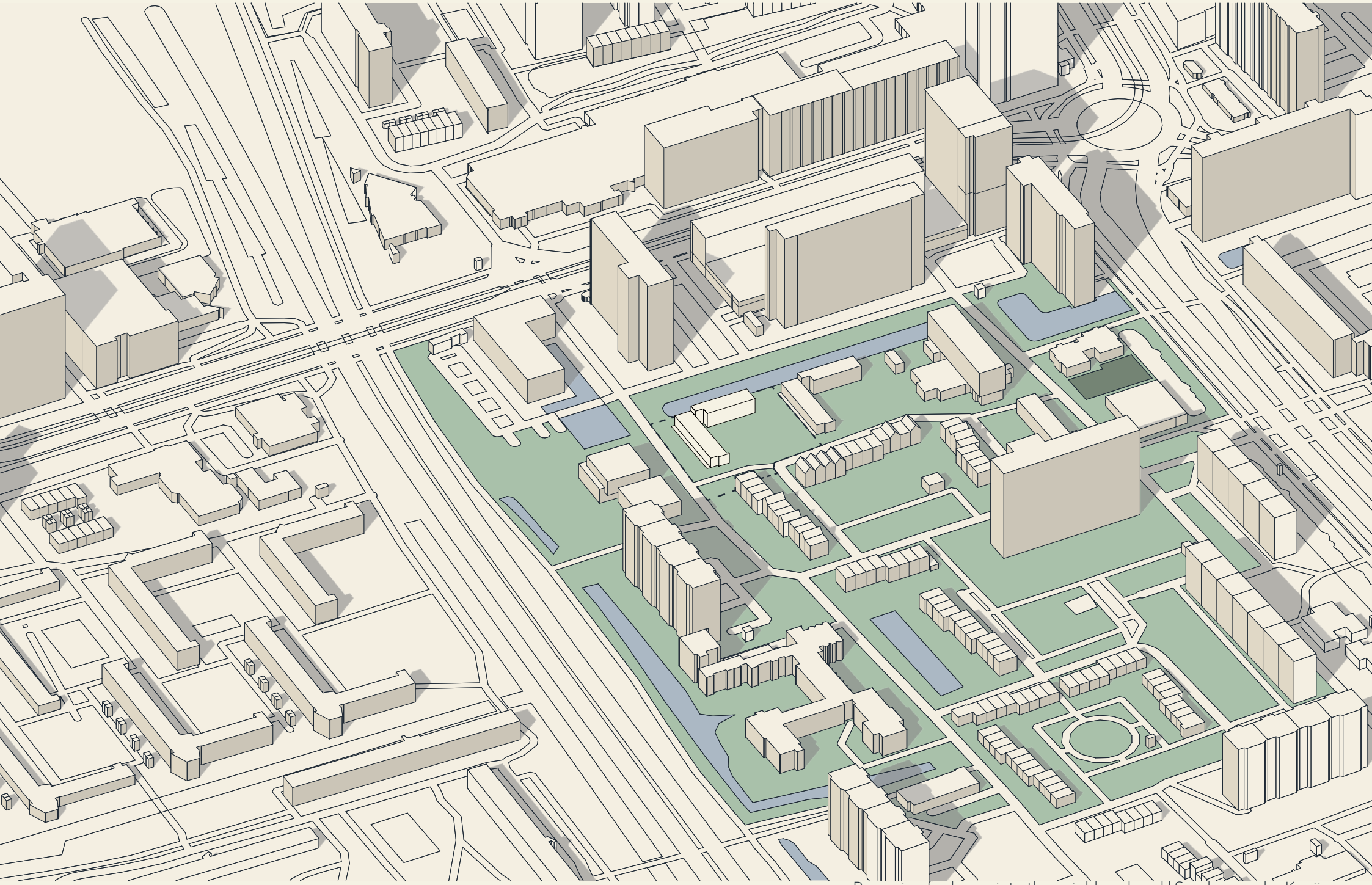


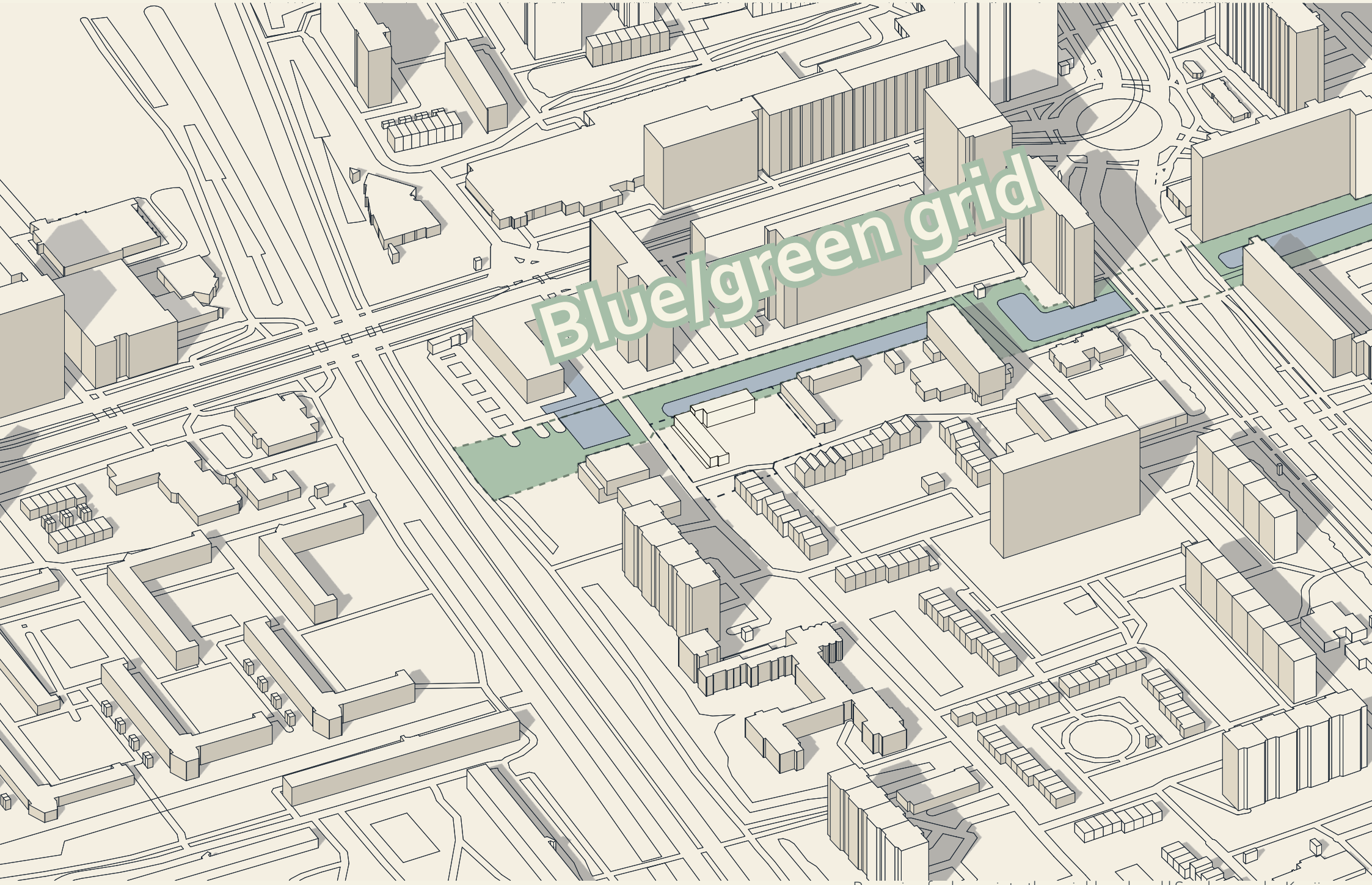
Location

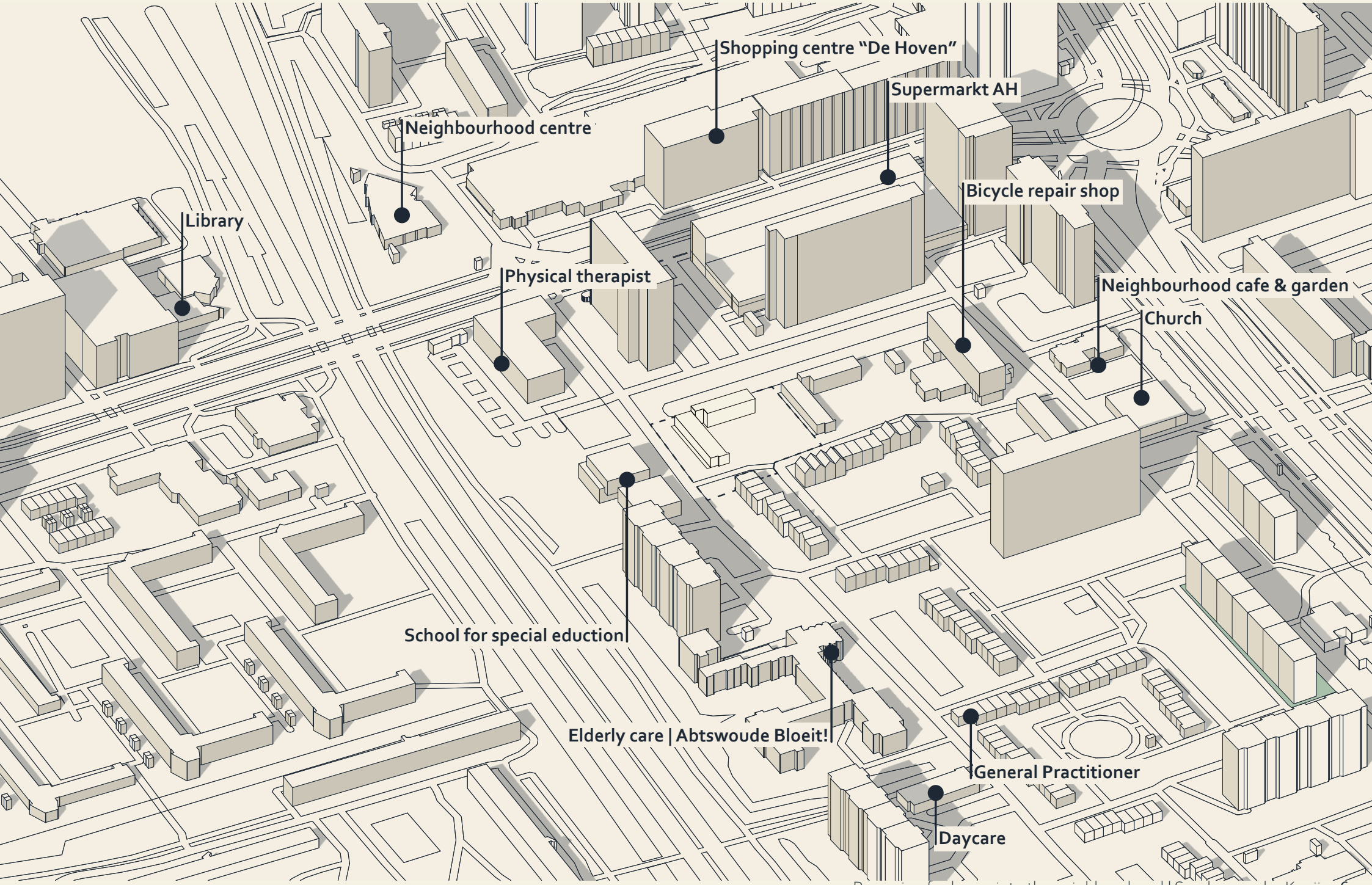


Location



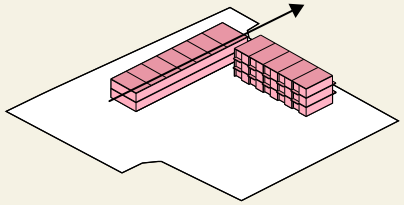



Blue/green grid

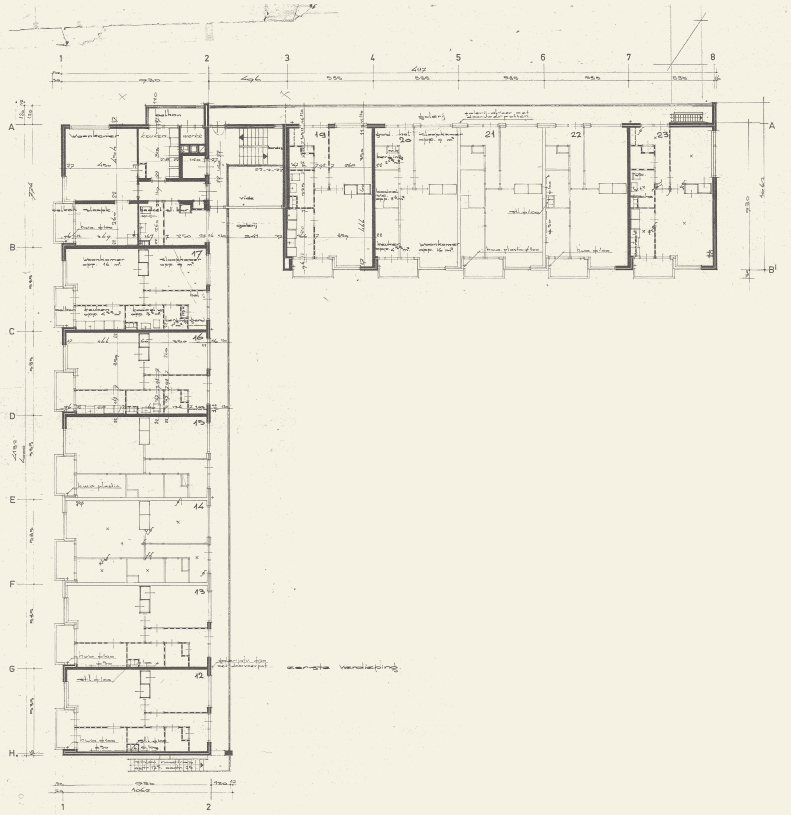

Shopping centre "De Hoven"
Supermarkt AH
Neighbourhood centre
Bicycle repair shop
Library
Physical therapist
Neighbourhood cafe & garden
Church
School for special eduction
Elderly care | Abtswoude Bloeit!
General Practitioner
Daycare

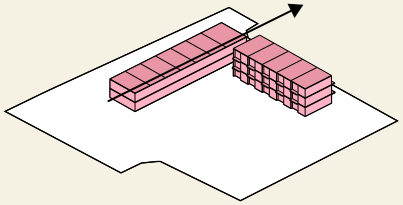
Concept

Existing building



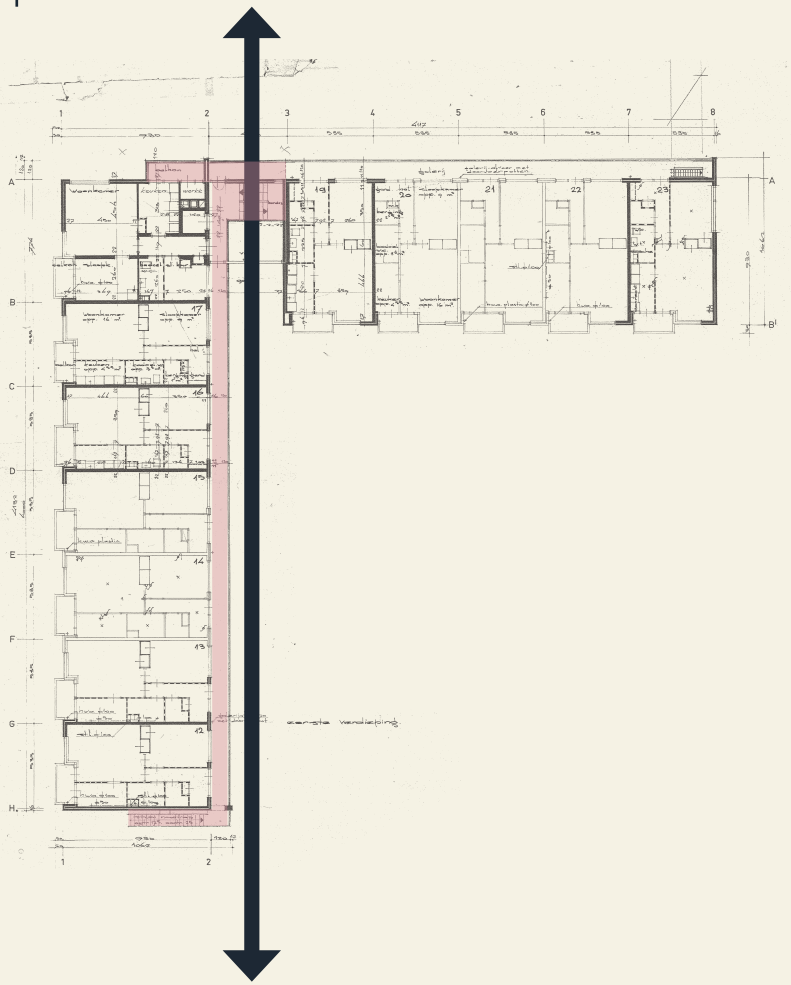
Existing structure

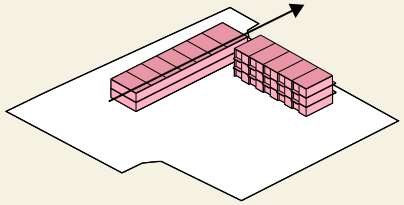




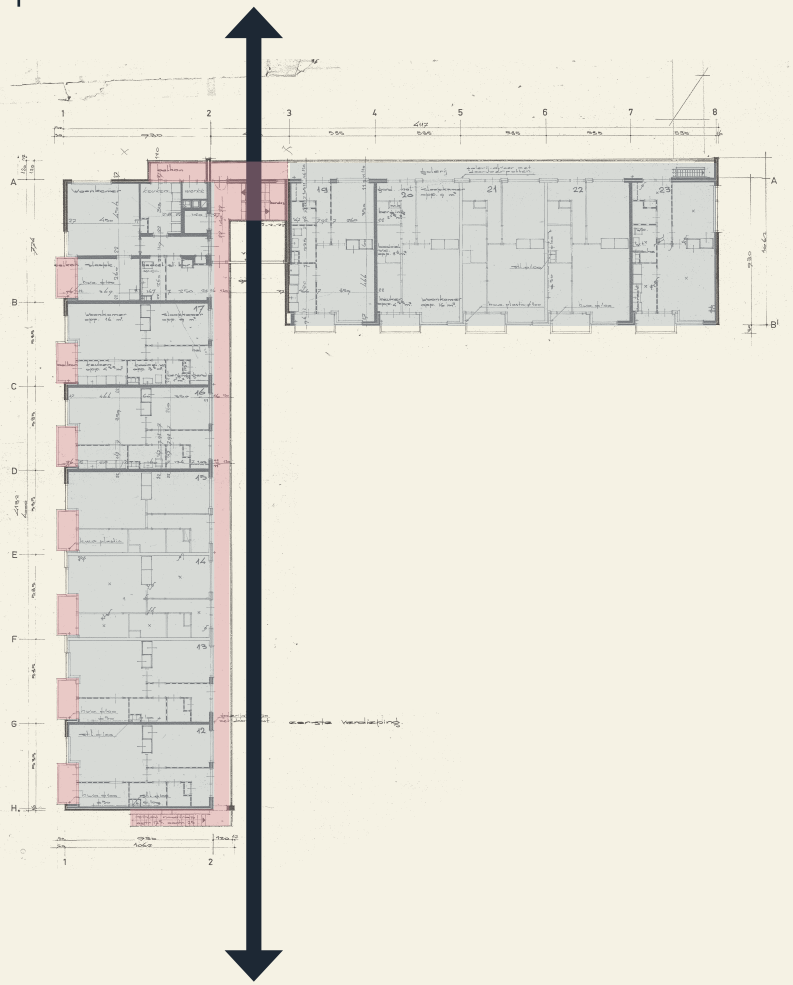
How can we use as much as possible?

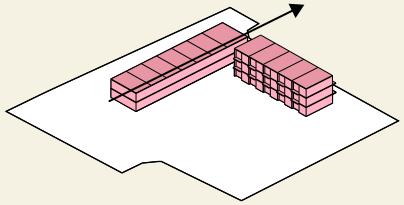
Existing structure



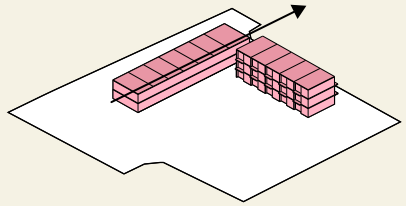


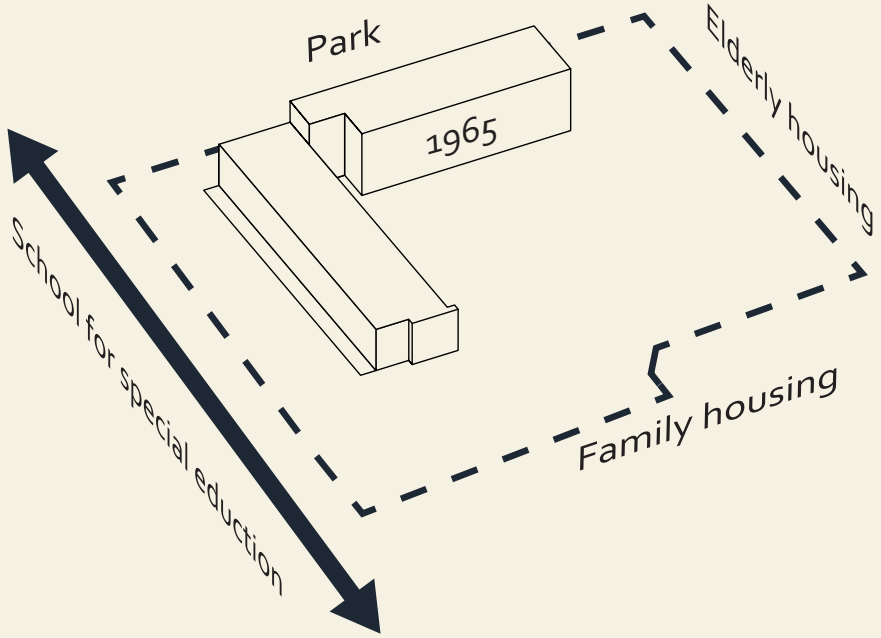
Existing structure





Existing structure

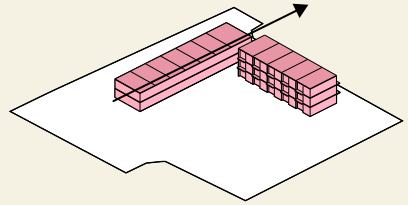


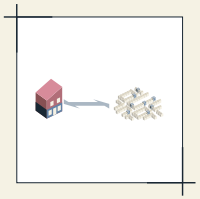


4.000 m²

Concept

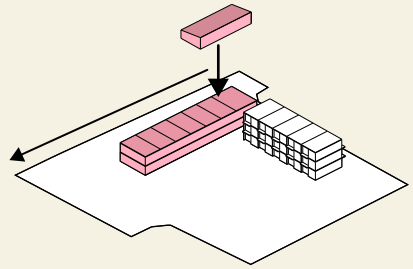
Existing building





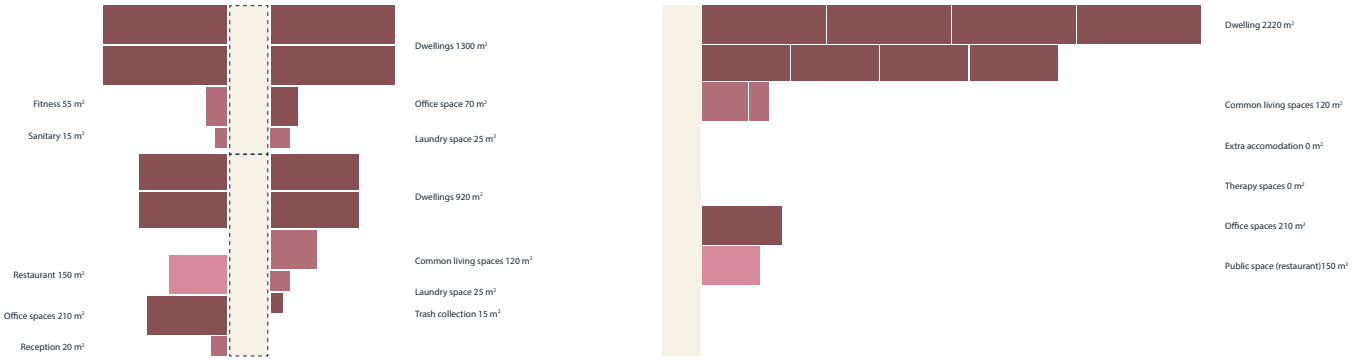
Amenities for the neighbourhood

→ Adding public and shared functions

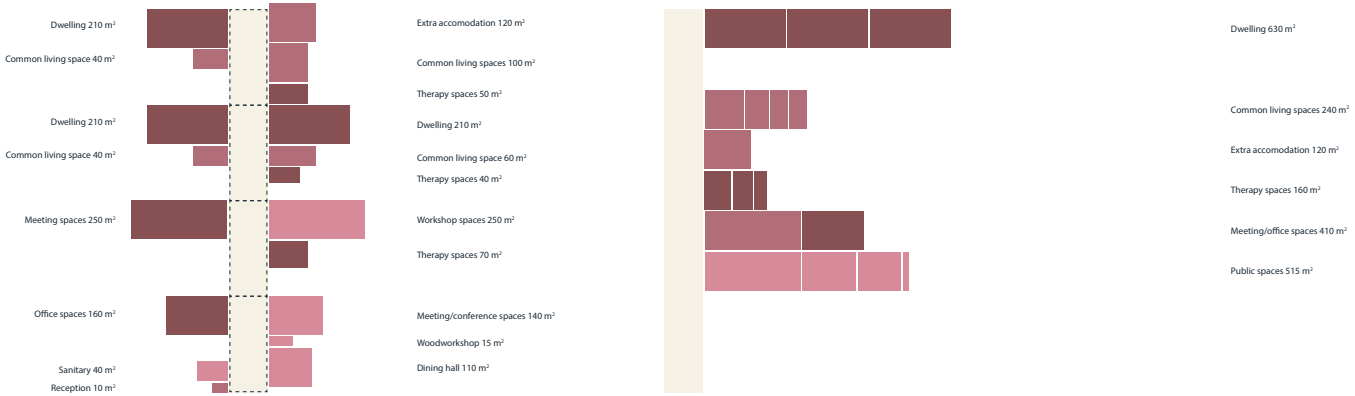


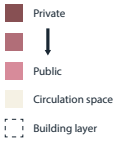
Program

Field research location



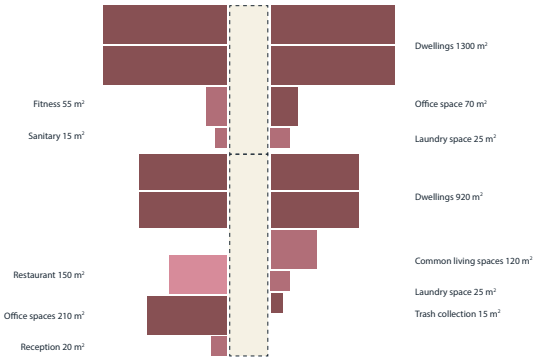
Rehabilitation Centre Bolzano | MoDus architects

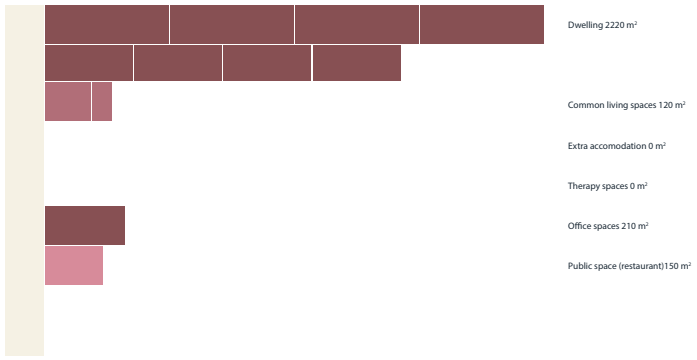




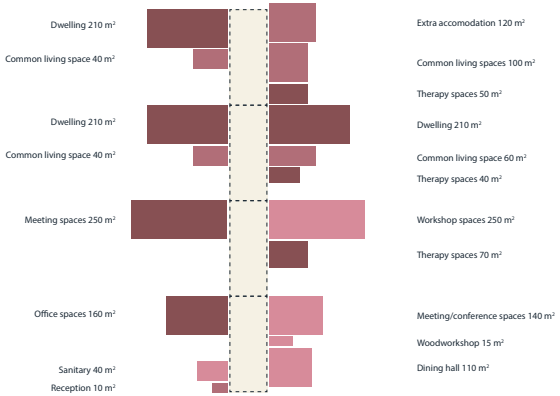
Program

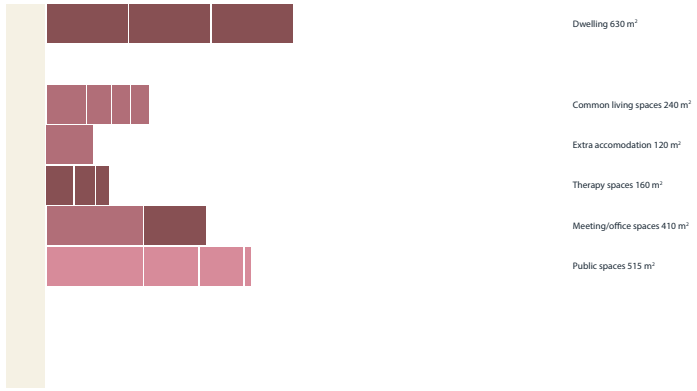
Field research location

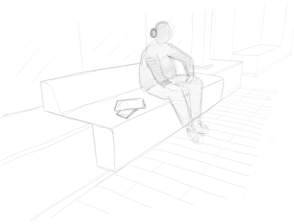


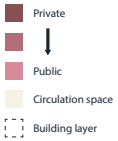


Rehabilitation Centre Bolzano | MoDus architects

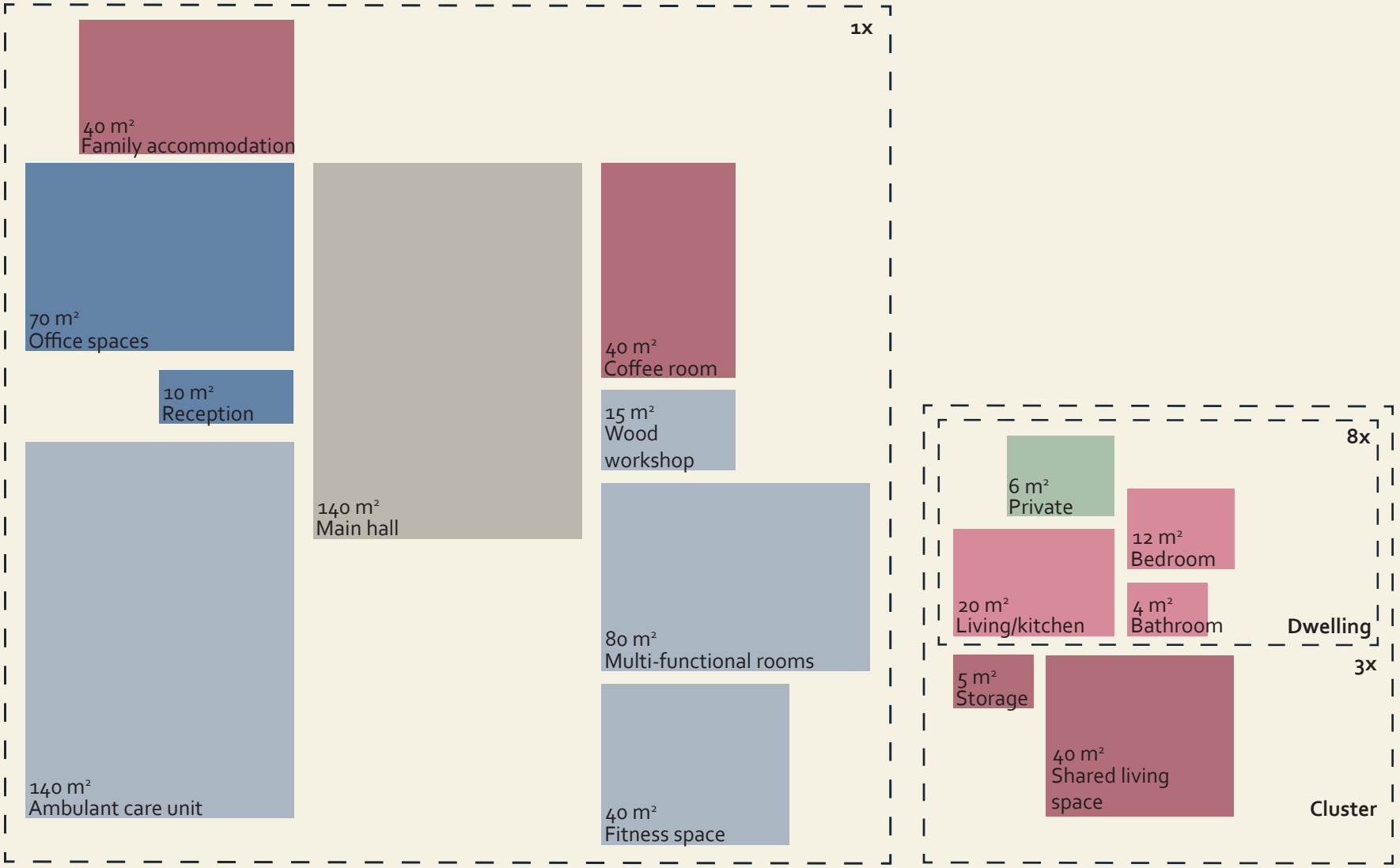




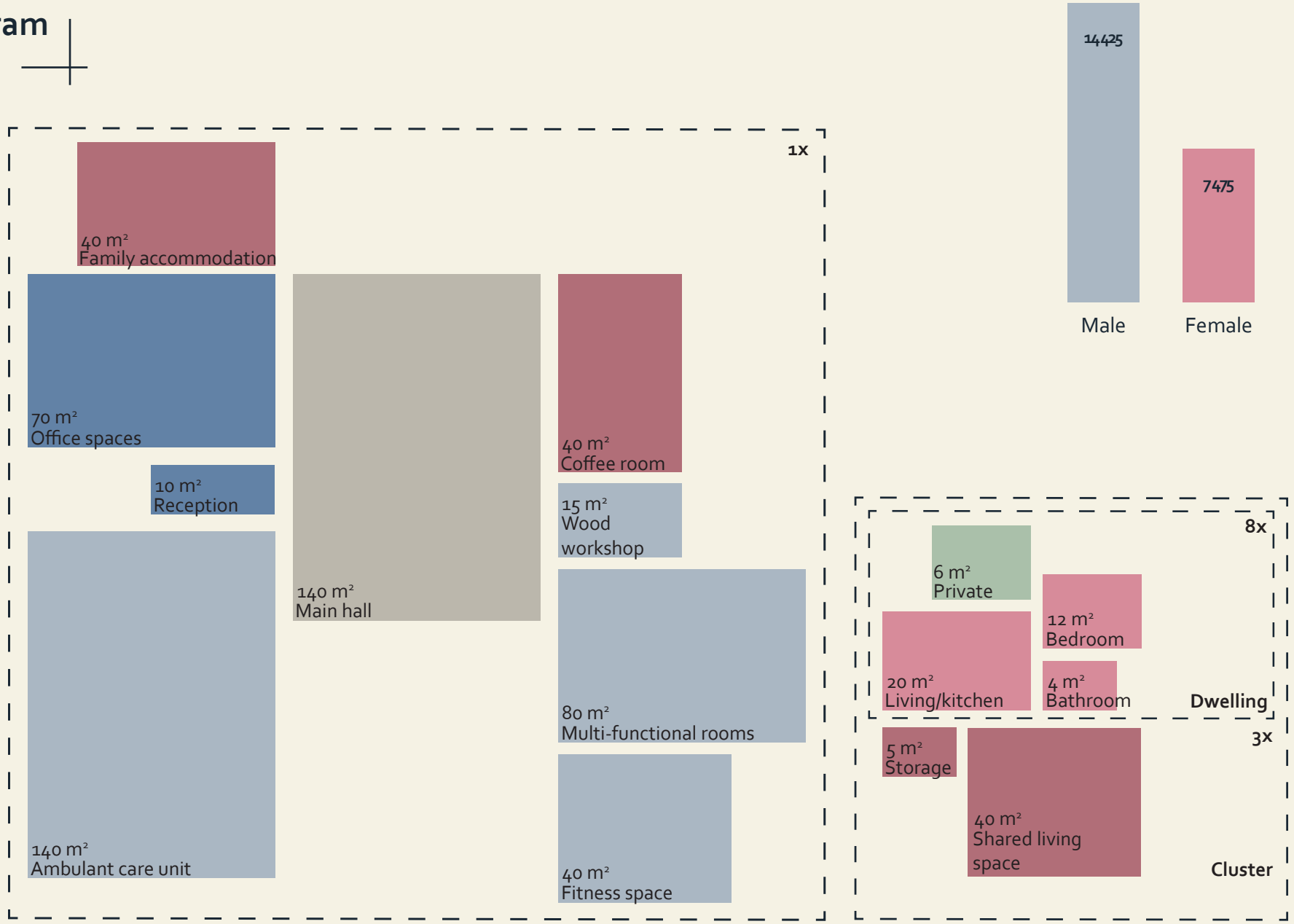




Program

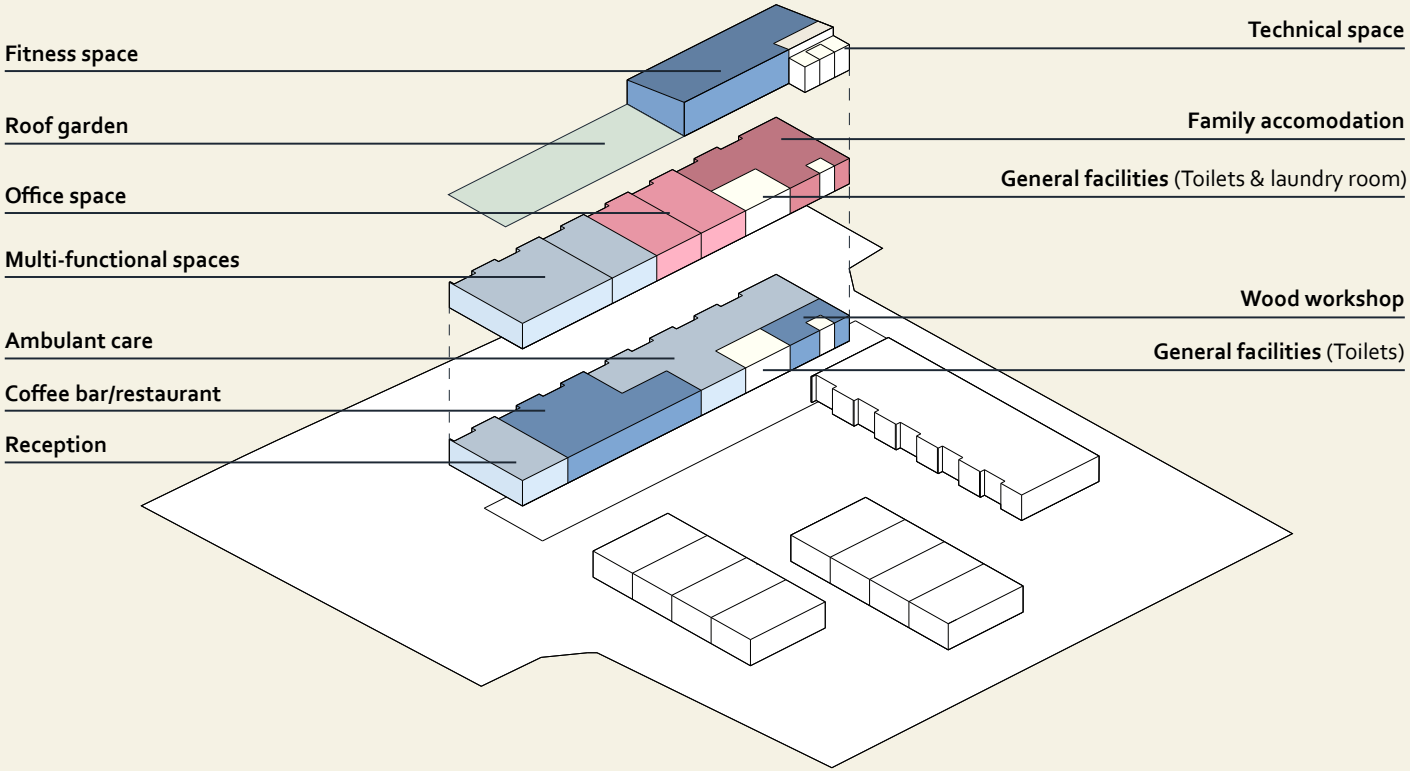

1x
40 m²
Family accommodation
70 m²
Office spaces
10 m²
Reception
140 m²
Ambulant care unit
140 m²
Main hall
40 m²
Coffee room
15 m²
Wood
workshop
80 m²
Multi-functional rooms
40 m²
Fitness space
8x
6 m²
Private
12 m²
Bedroom
20 m²
Living/kitchen
4 m²
Bathroom
Dwelling
3x
5 m²
Storage
40 m²
Shared living
space
Cluster

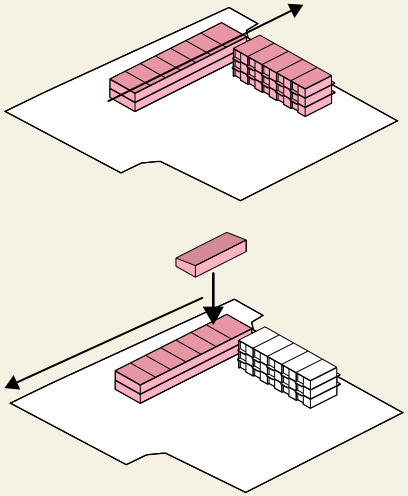
Program



(CBS, 2023)

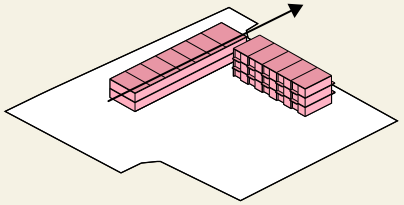
Program

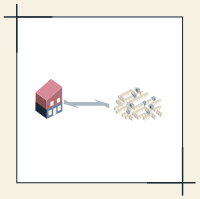

Fitness space
Roof garden
Office space
Multi-functional spaces
Ambulant care
Coffee bar/restaurant
Reception
Technical space
Family accomodation
General facilities (Toilets & laundry room)
Wood workshop
General facilities (Toilets)



Concept

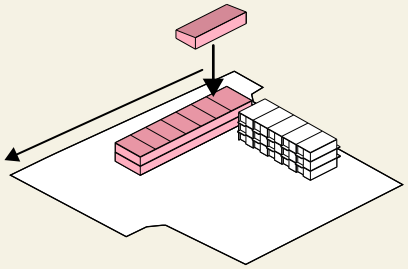
Existing building

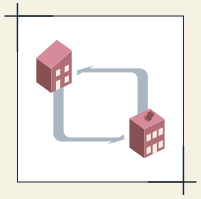




Amenities for the neighbourhood

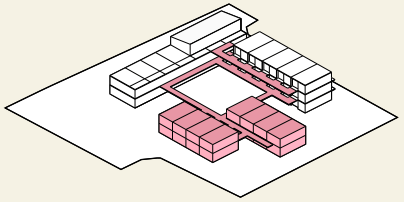
→ Adding public and shared functions



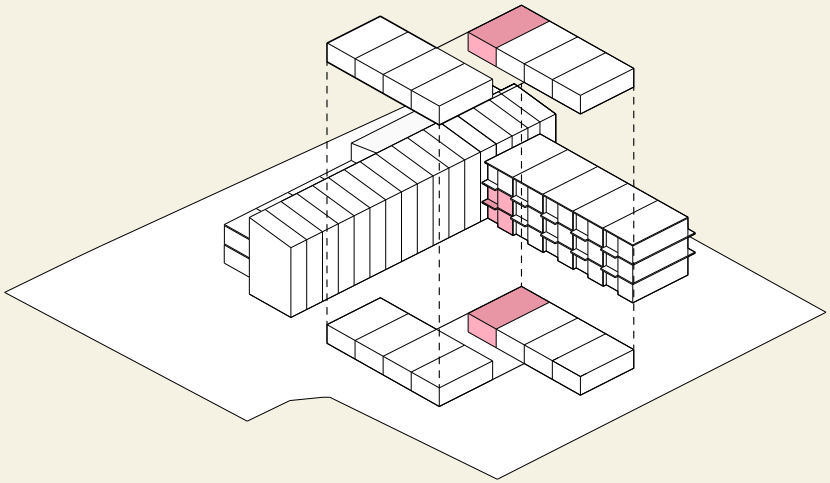


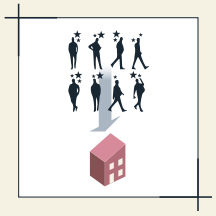
Flexible to changing policies

→ Adding dwellings with modular construction

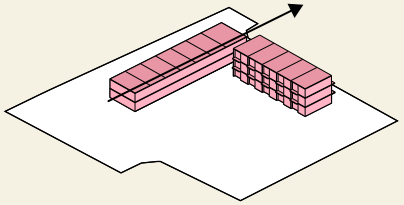


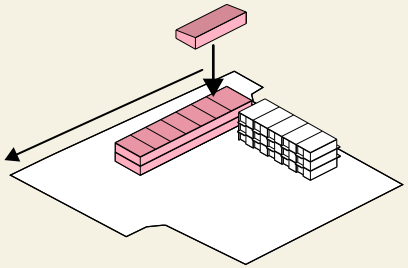
Clusters

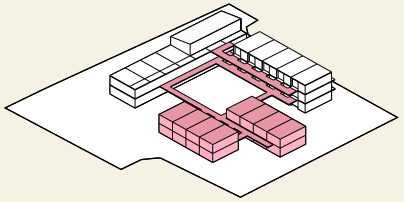




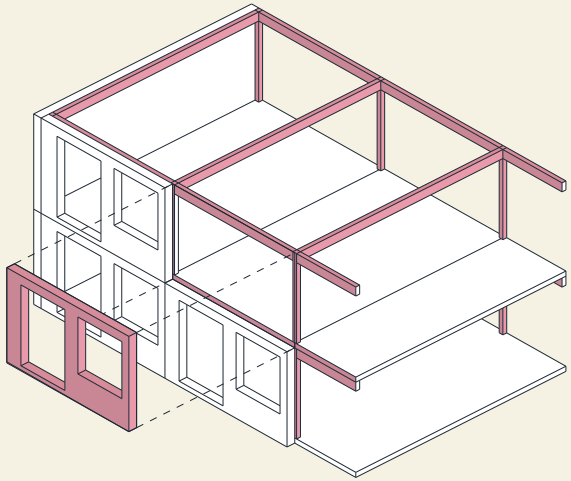
Small-scale clusters

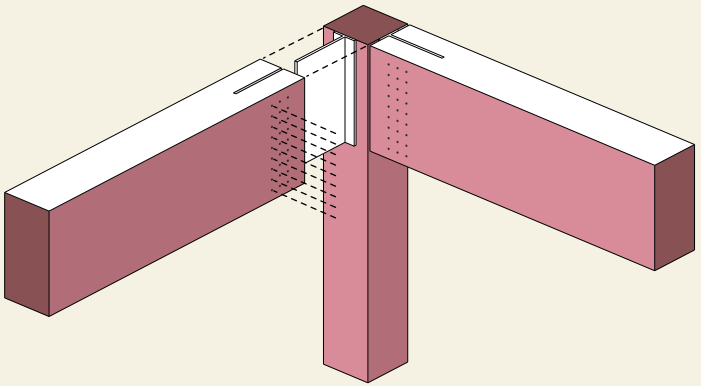


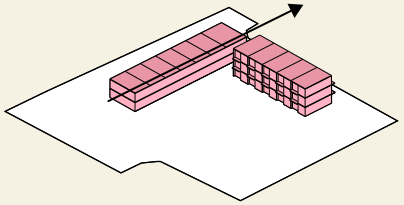


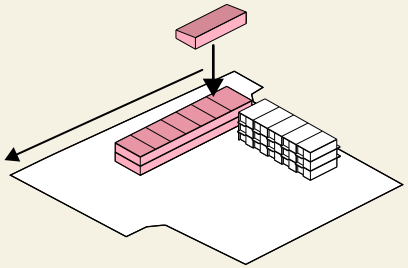


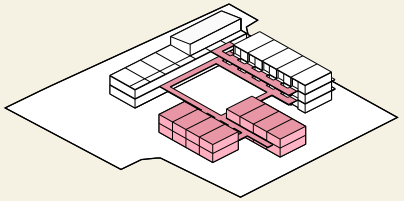
Modular housing



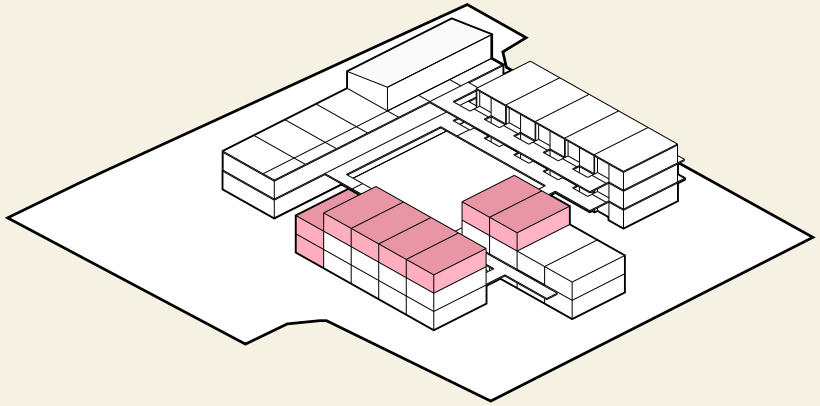


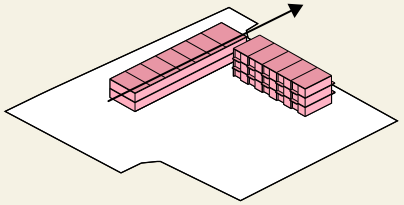


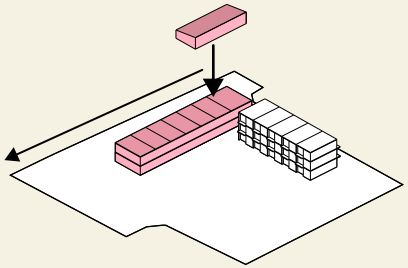


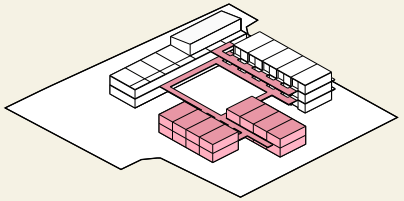


Modular housing



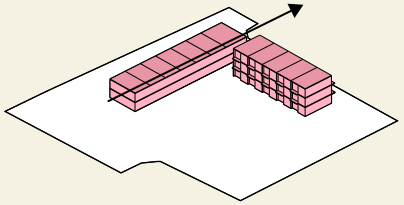


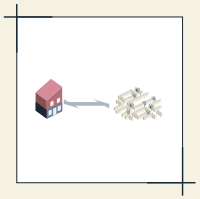




Concept

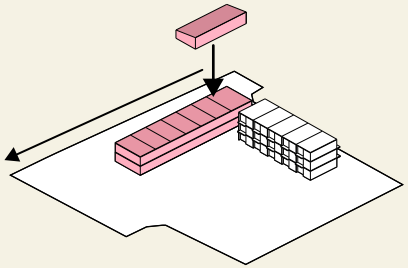
Existing building

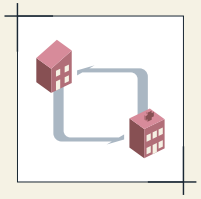




Amenities for the neighbourhood

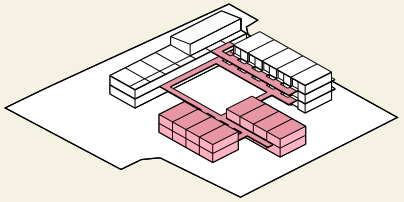
→ Adding public and shared functions

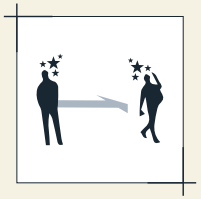




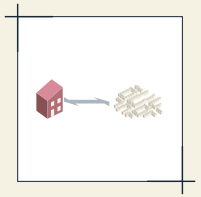
Flexible to changing policies

→ Adding dwellings with modular construction



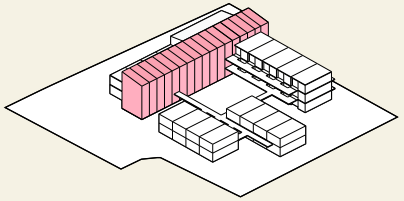


Activate users

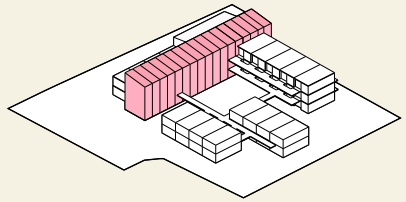


Interaction with the neighbourhood

→ Adding glass house connecting public and private

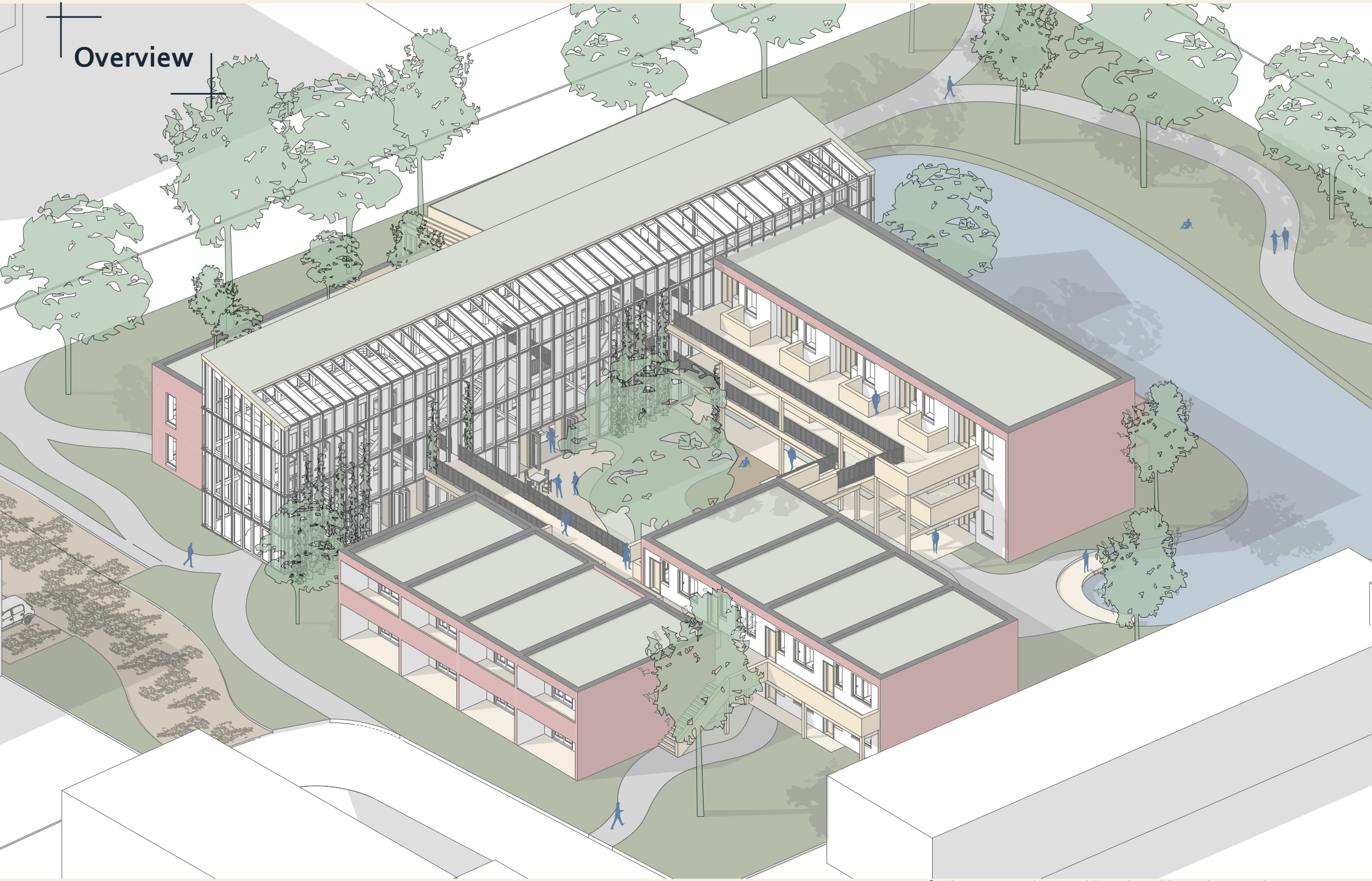


Concept

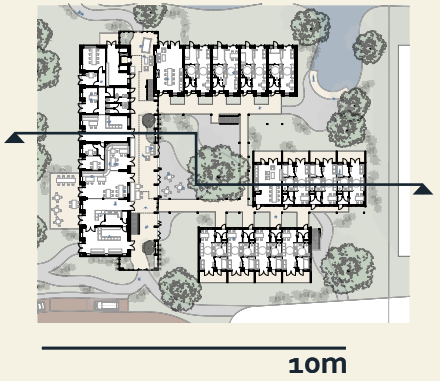


Situation

Overview

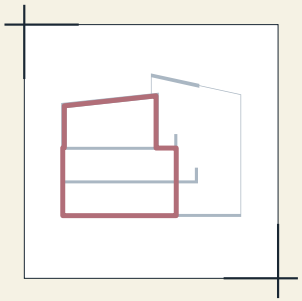


Section

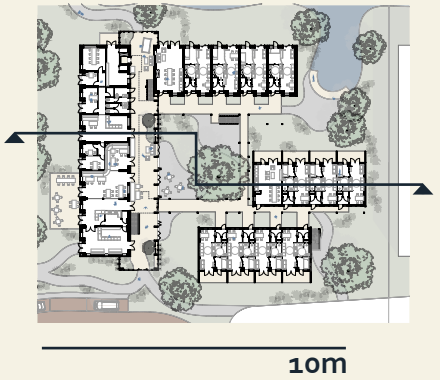


10m

Section

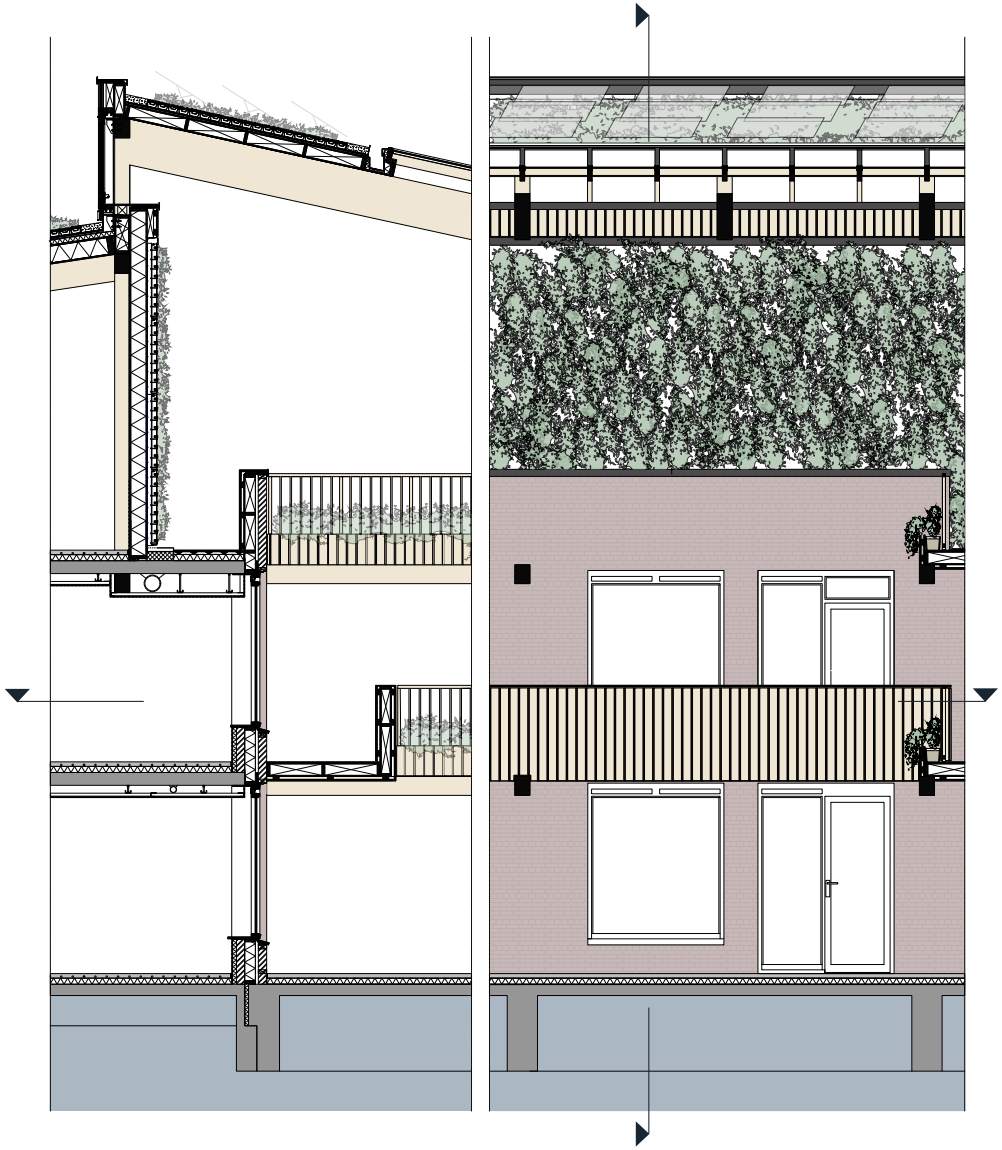


Refuse | Heating the glass house, decreasing the need for more material and energy

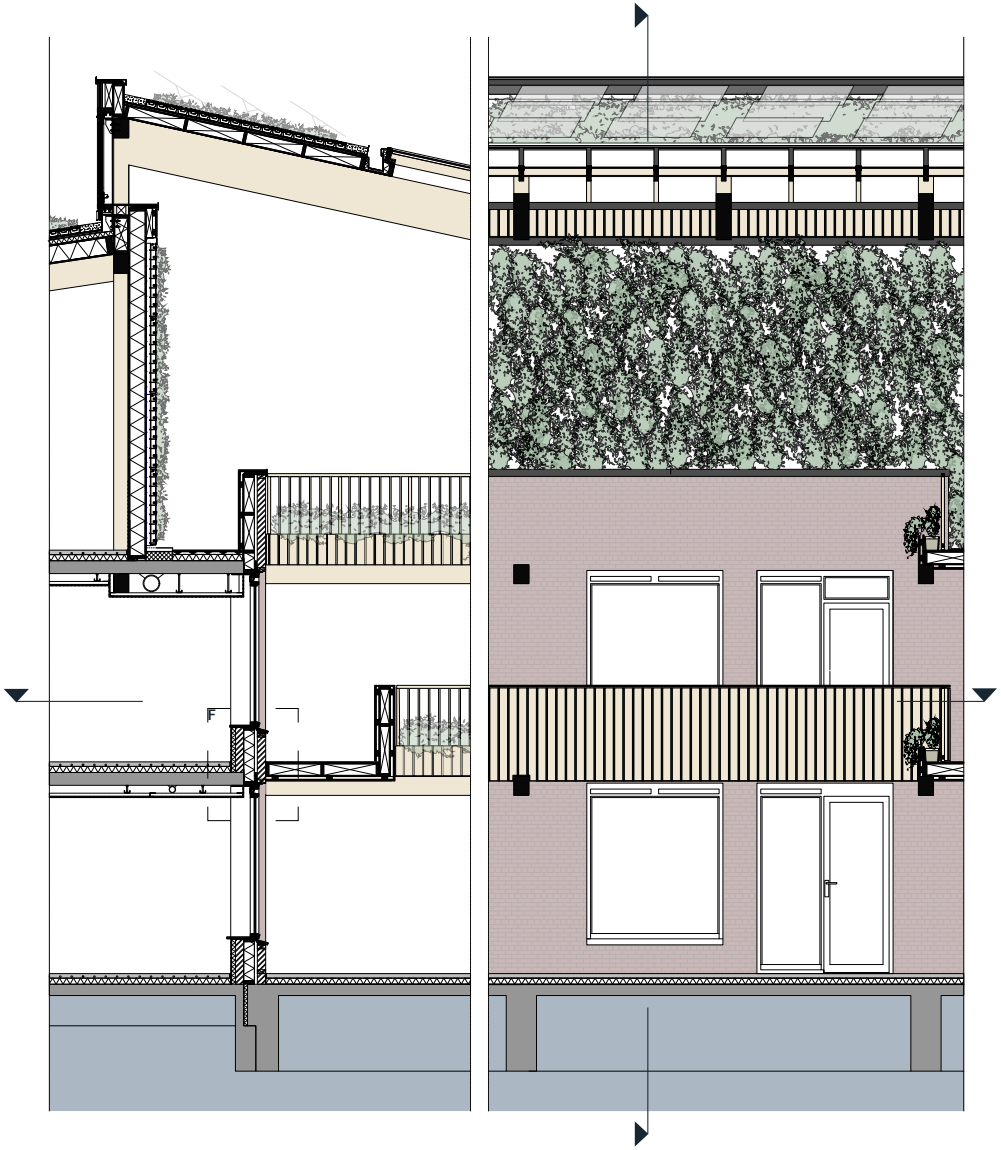


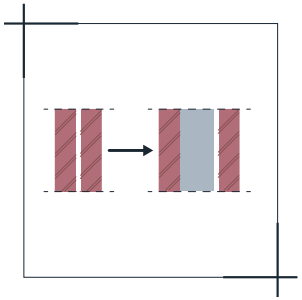
10m

Section | Details



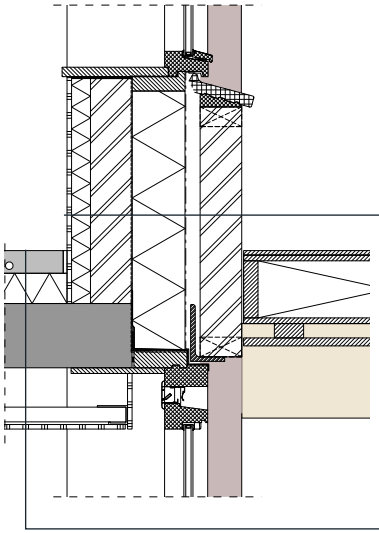
Section | Details





Reuse | Transformation of the existing complex and reusing facade material

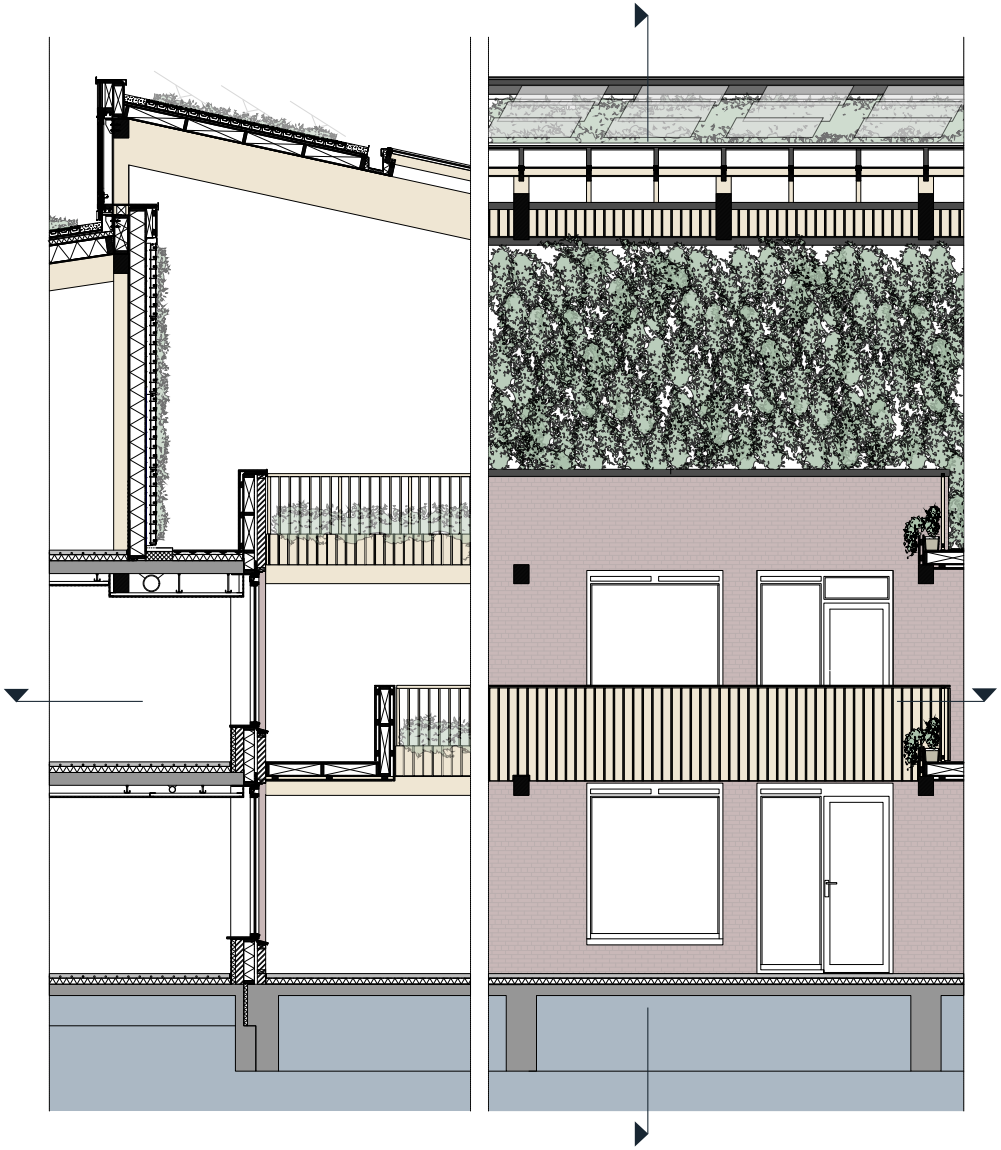
F

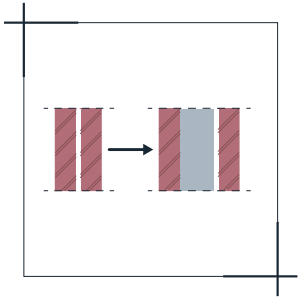


Brick facade existing | R_c-value	7 m²K/W
Plasterboard	12
Front wall, mineral wool	50
Brick (Structural)	110
Vapor barrier membrane	2
Hemp insulation	220
Waterproof membrane	2
Cavity	40
Bricks	110

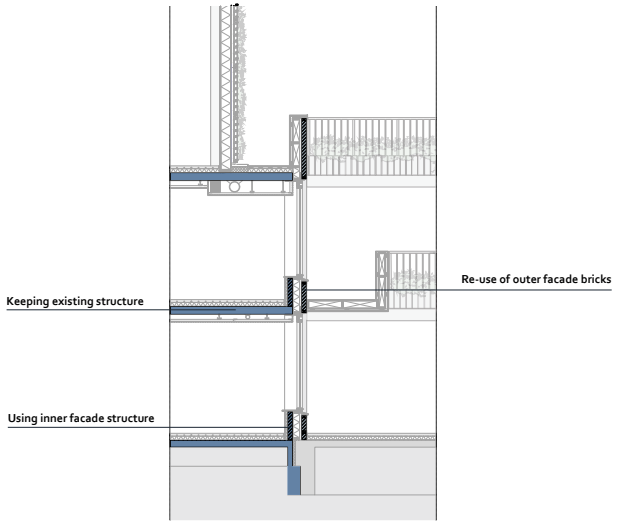
Floor	
Screed	60
Kingspan K3 Insulation (includes membranes)	*80*
Concrete (includes floor heating)	170
Cavity	100
Lowered ceiling	50
Plasterboard	12

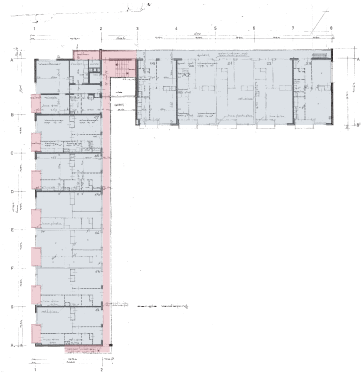
Section | Details



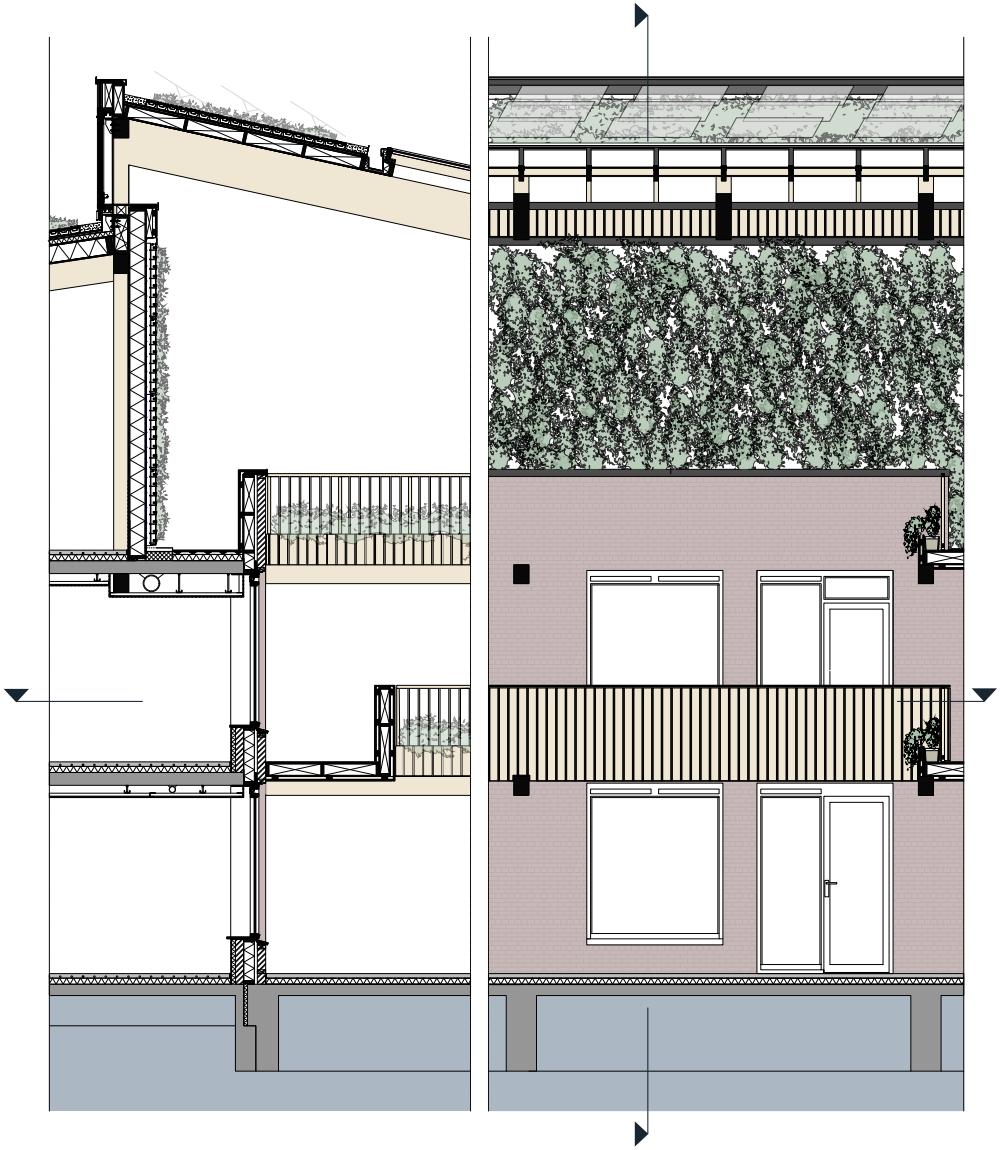


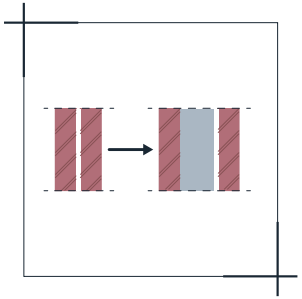
Reuse | Transformation of the existing complex and reusing facade material



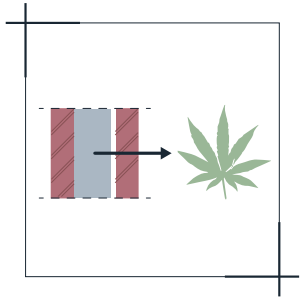


Section | Details

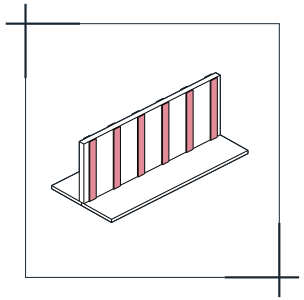




Reuse | Transformation of the existing complex and reusing facade material

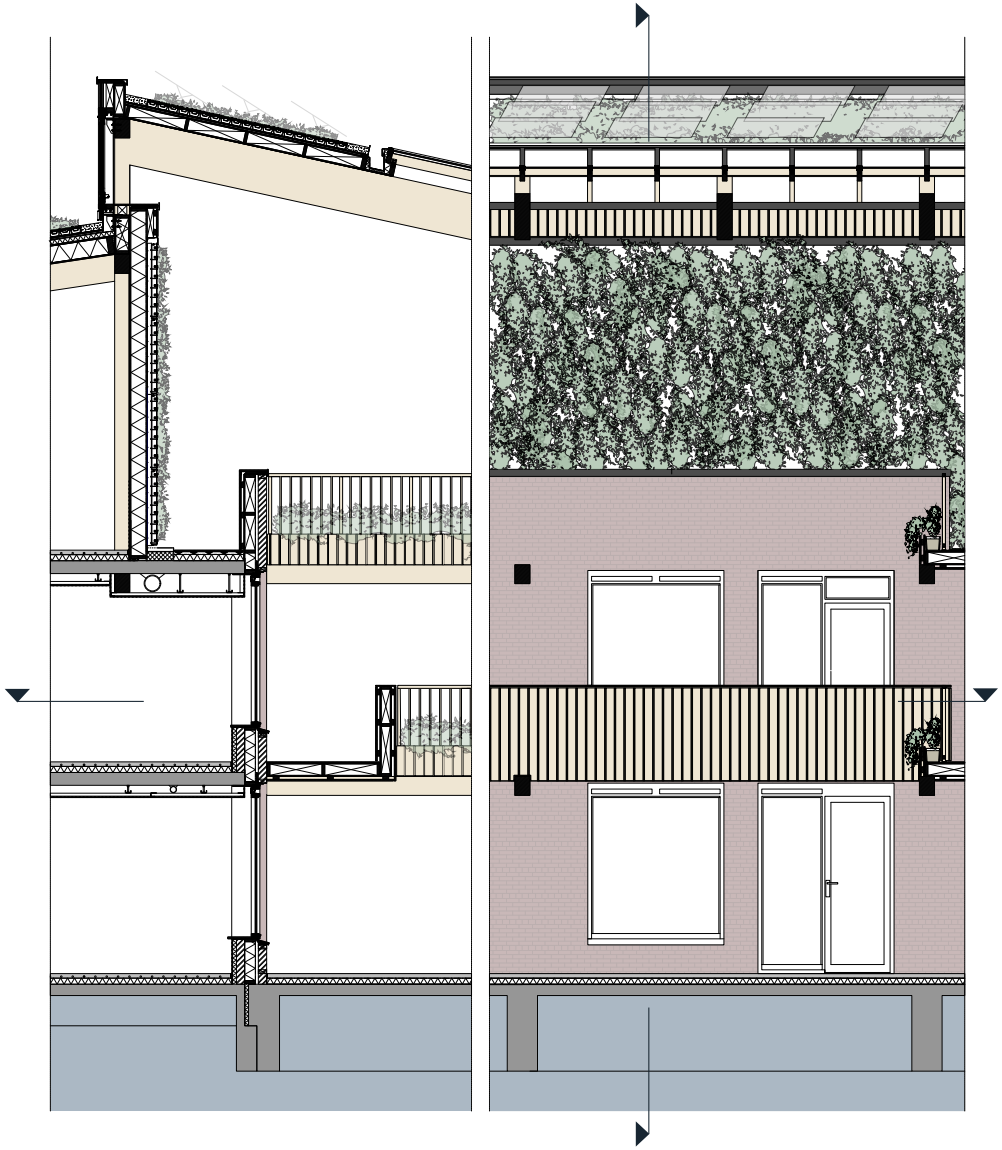


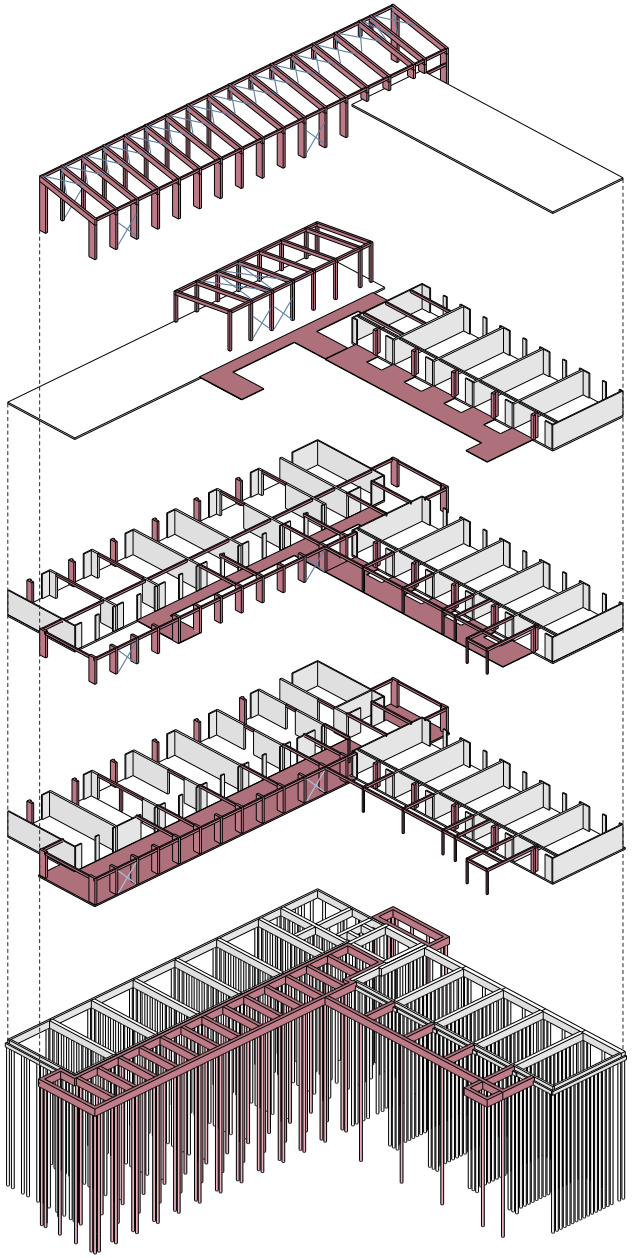
Reduce | Increasing the use of renewable sources. Using more sustainable materials like hemp



Refurbish | Reinforcing the existing structure

Section | Details





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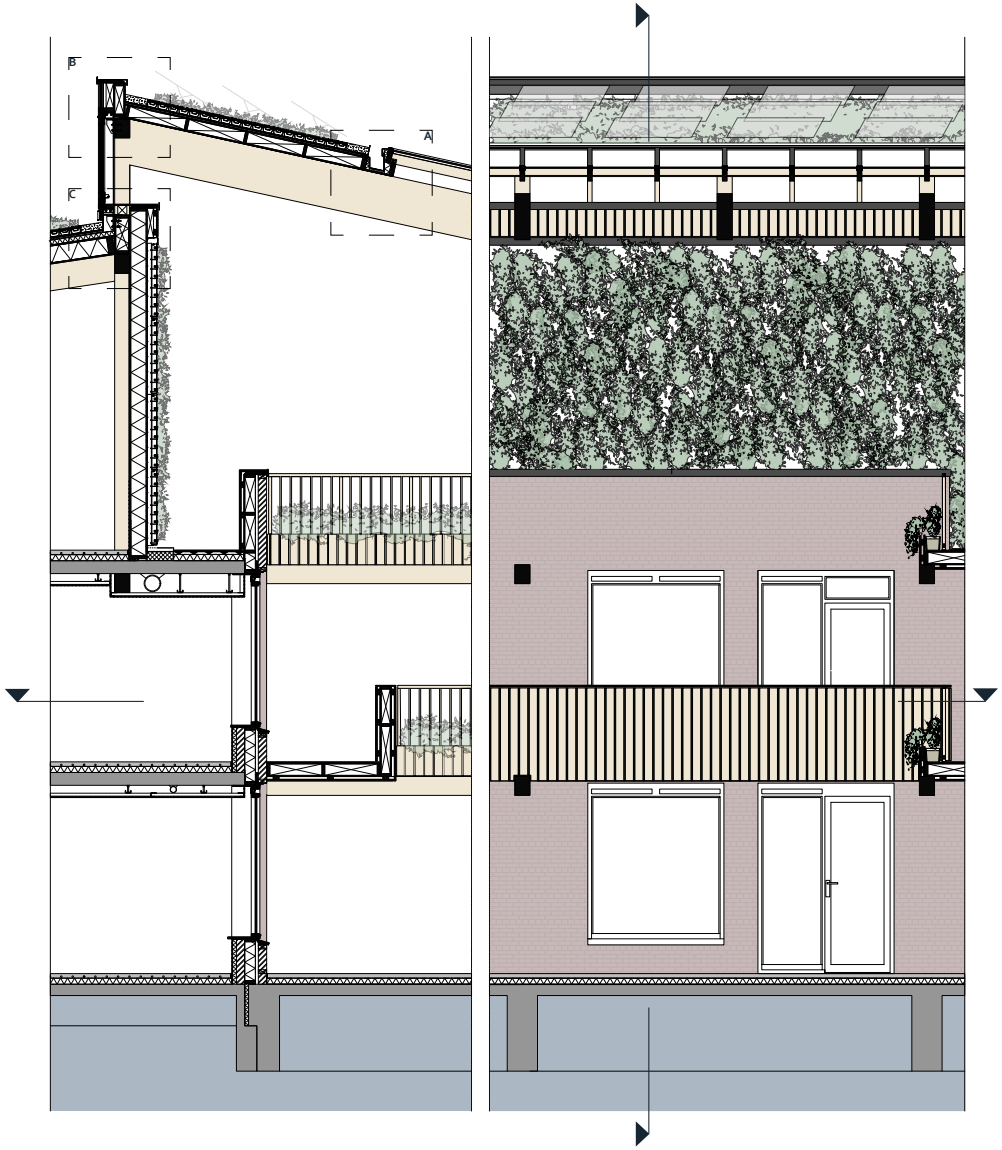

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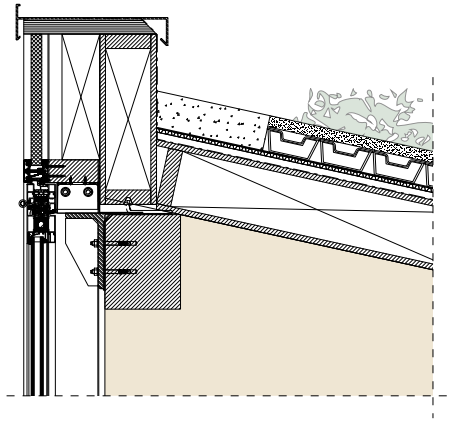

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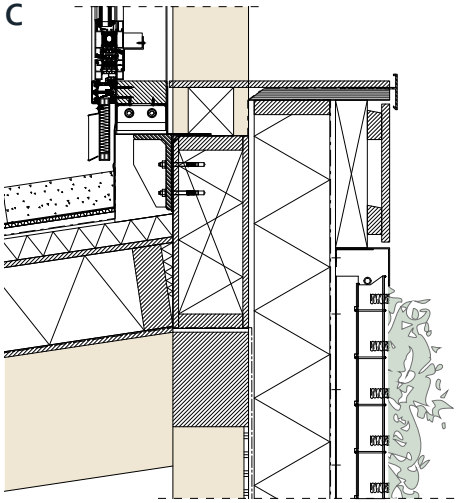
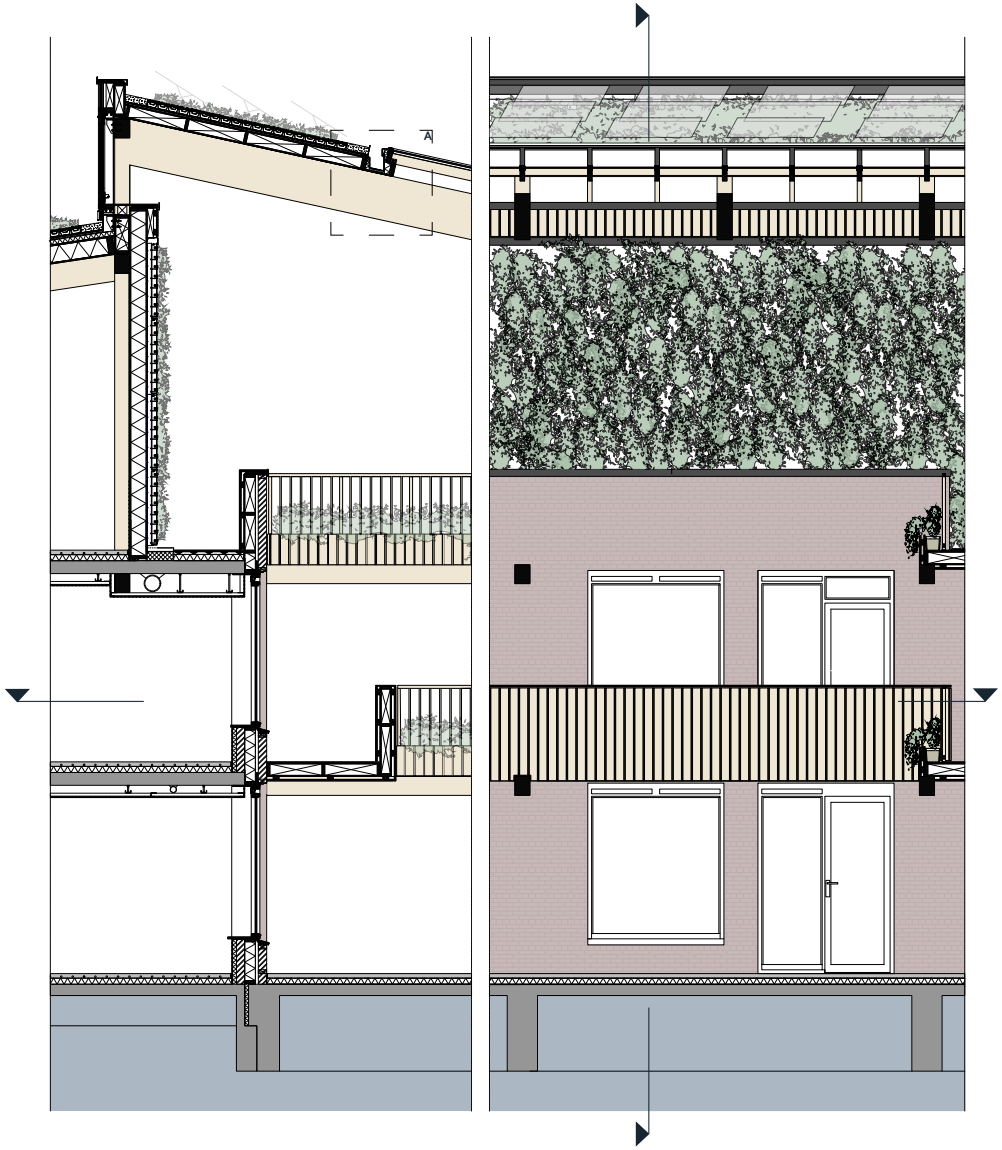
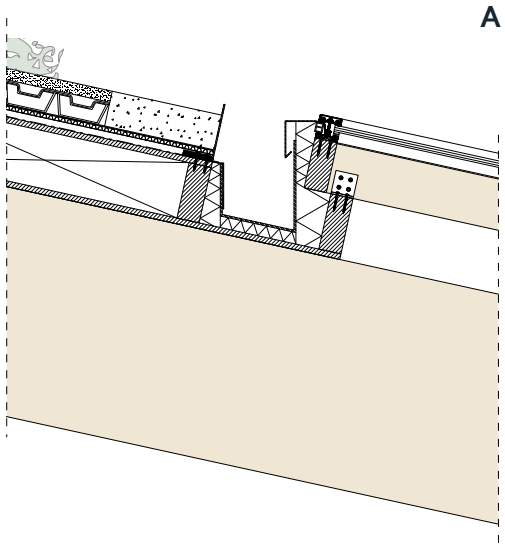
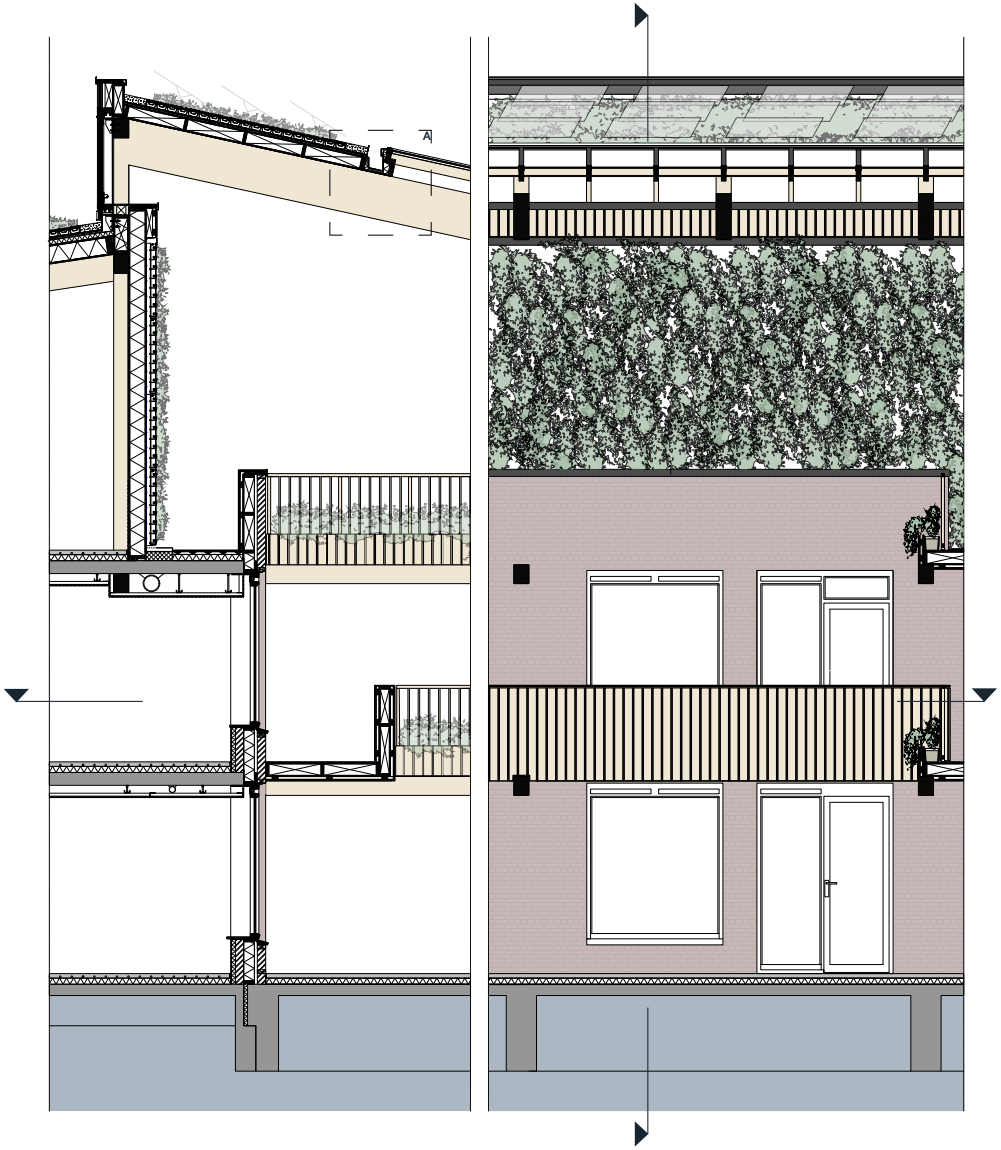


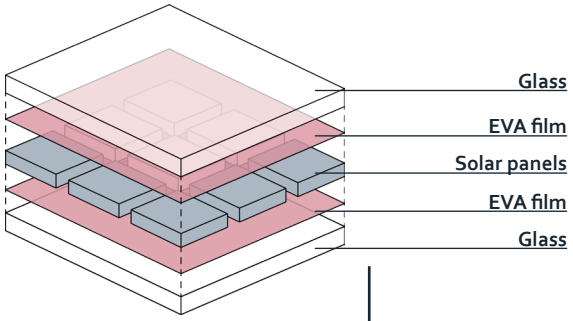
Section | Details

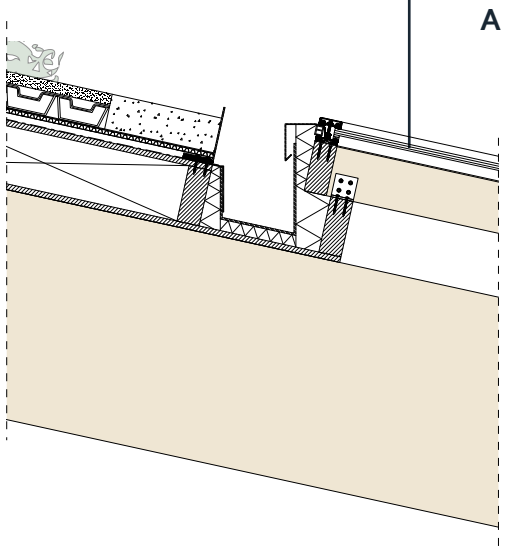




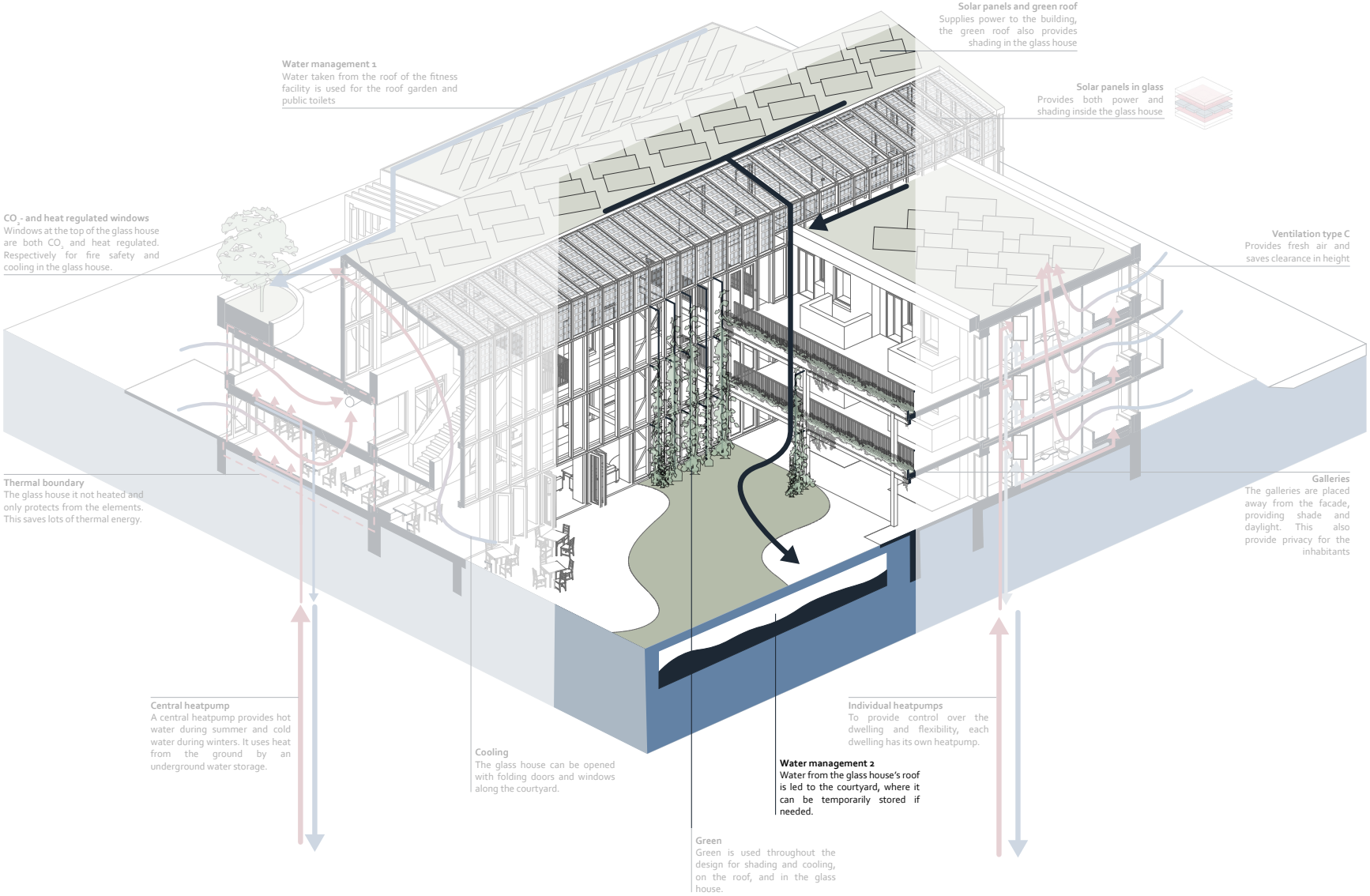
Section | Details



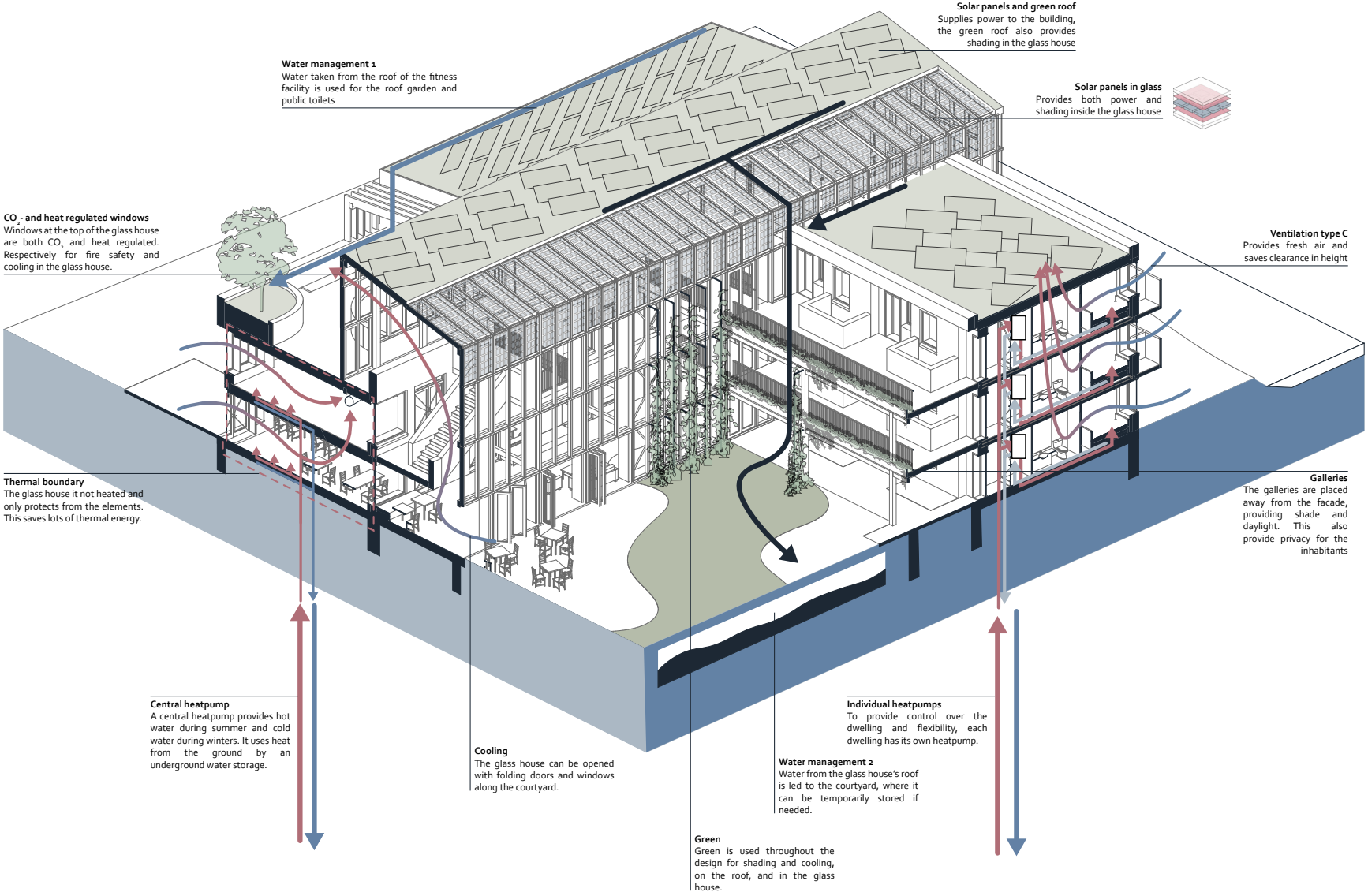




Climate design



Climate design



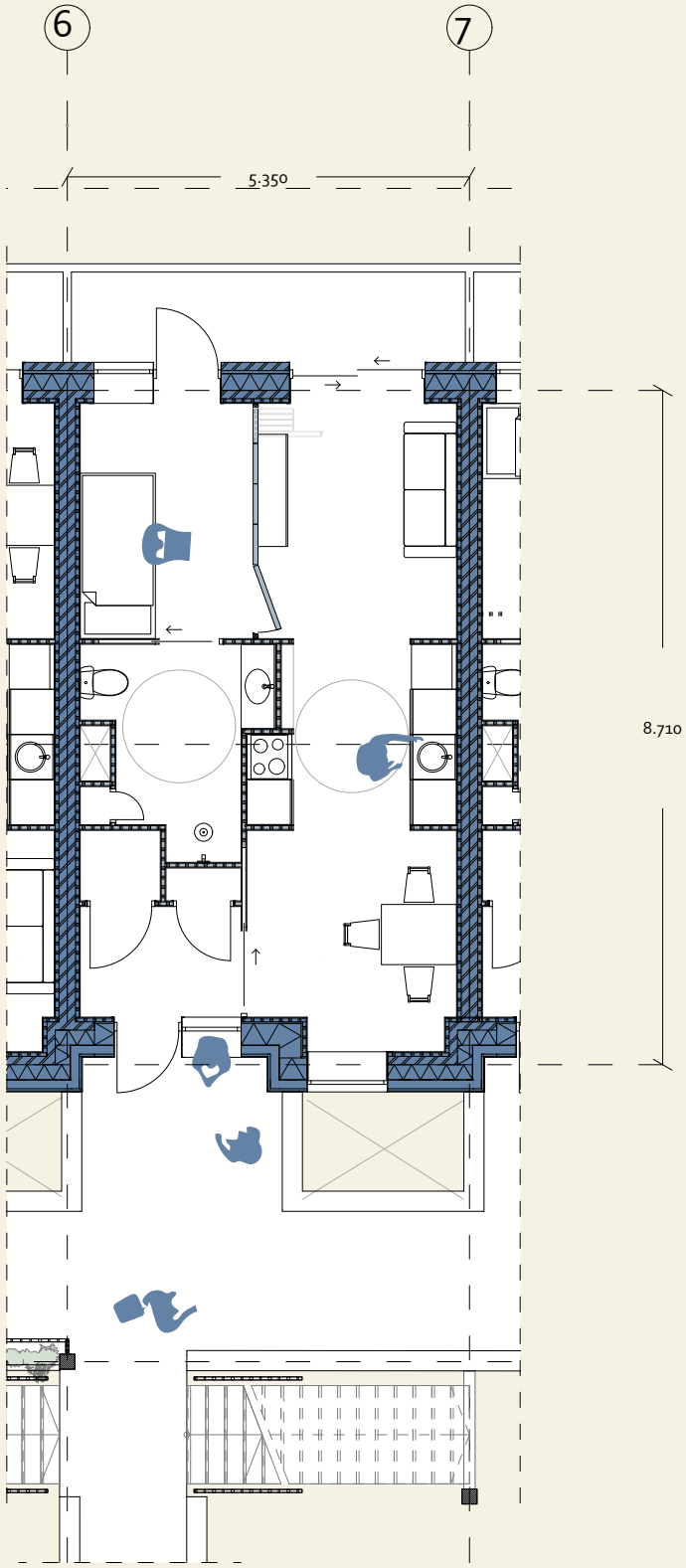
Ground floor

2nd Floor

10m

N

Dwelling

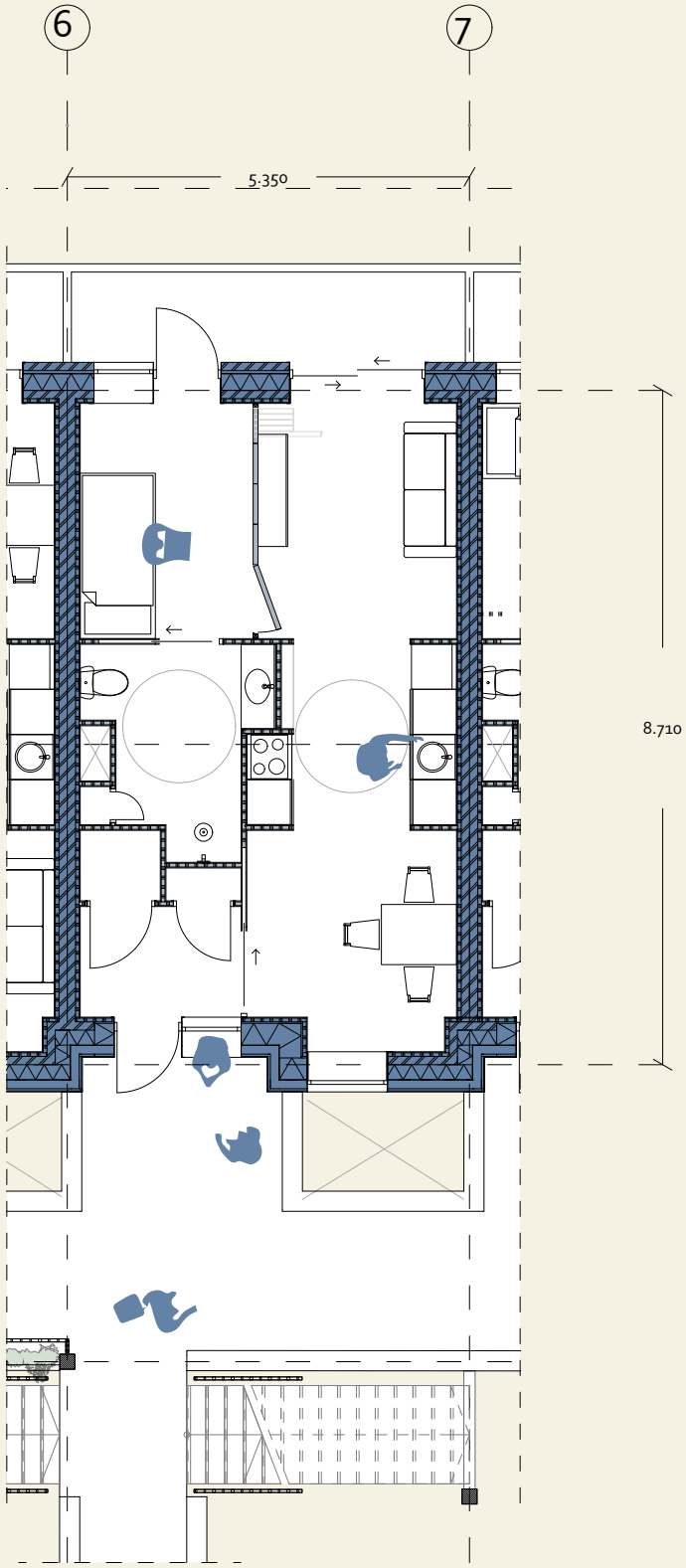


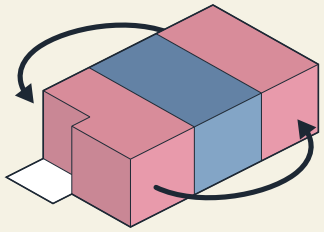
Low-stimuli in dwelling

2m

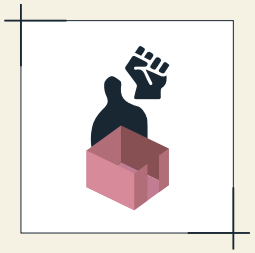
N

Dwelling

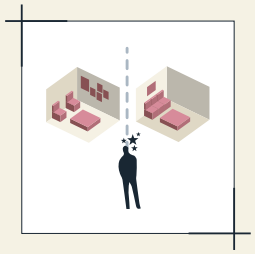




Low-stimuli in dwelling



In control of dwelling

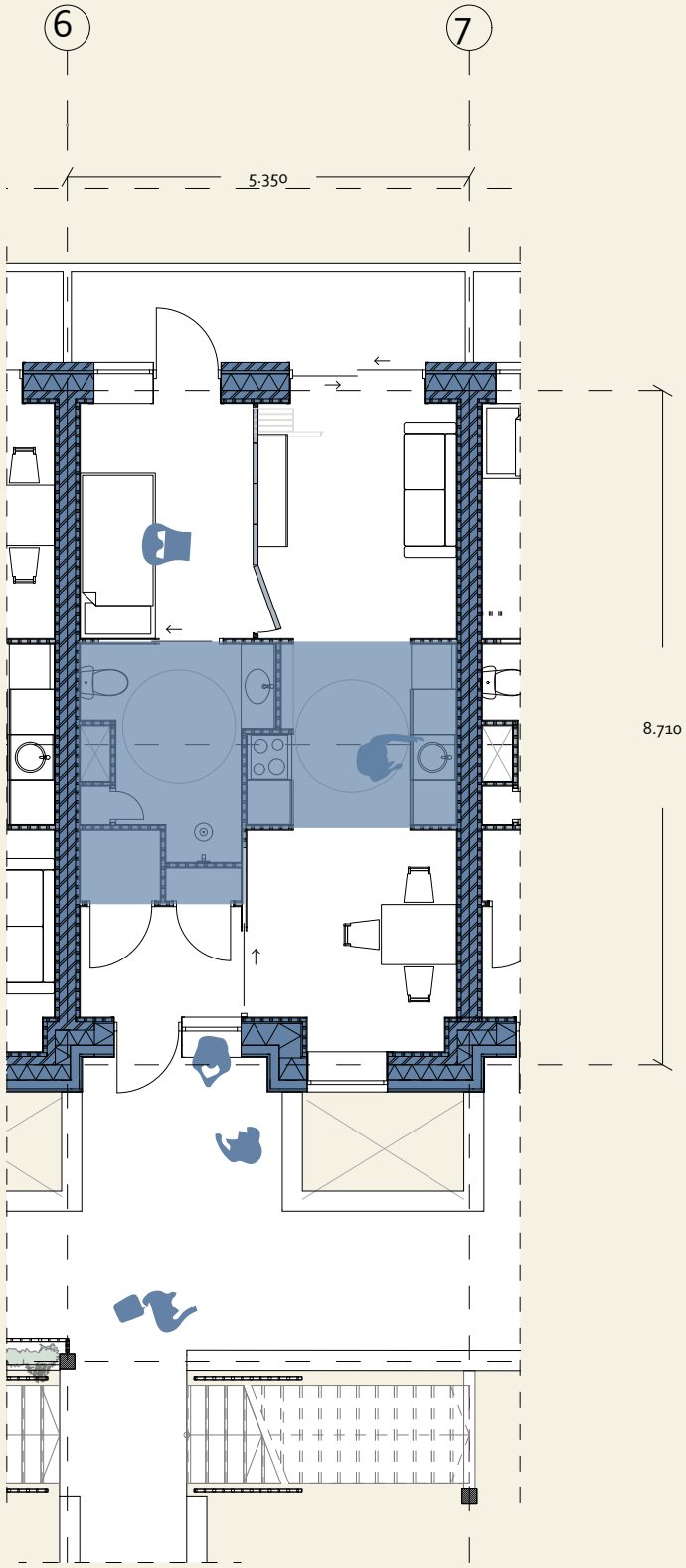


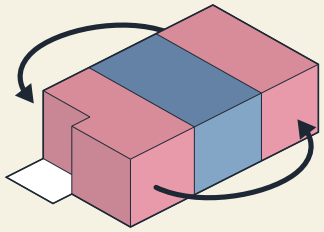
Customizable dwellings

2m

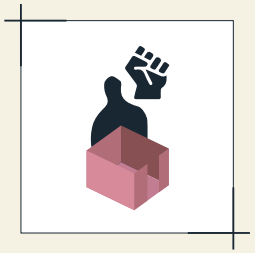
N

Dwelling

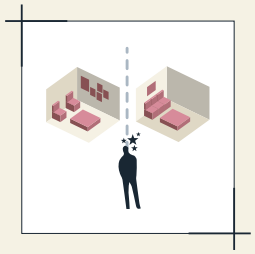




Low-stimuli in dwelling



In control of dwelling

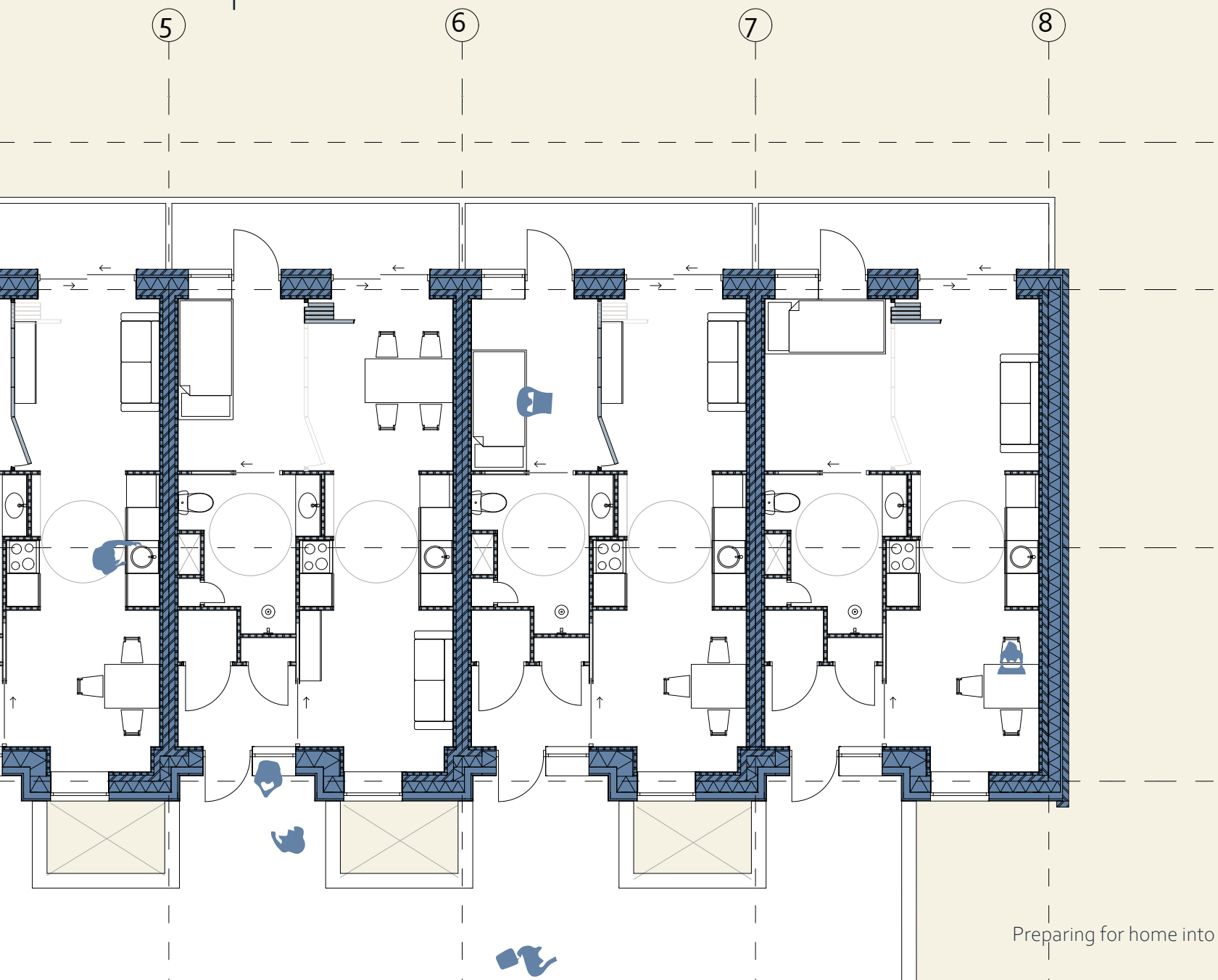


Customizable dwellings

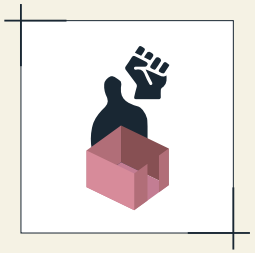
2m

N

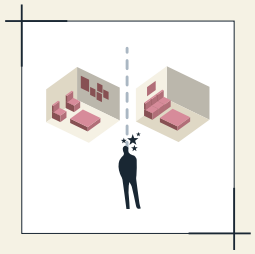
Dwelling



Low-stimuli in dwelling



In control of dwelling



Customizable dwellings

4m

N

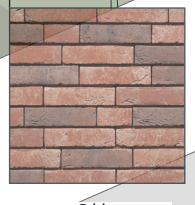
Materials

Thermowood cladding

Sempergreen wall

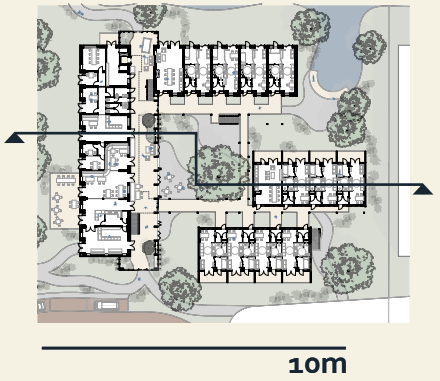
White stucco

Wood curtain wall



Bricks
(Re-use and ClickBricks)

Section



10m

Elevations

Elevation | West

Elevation | North

3rd Floor

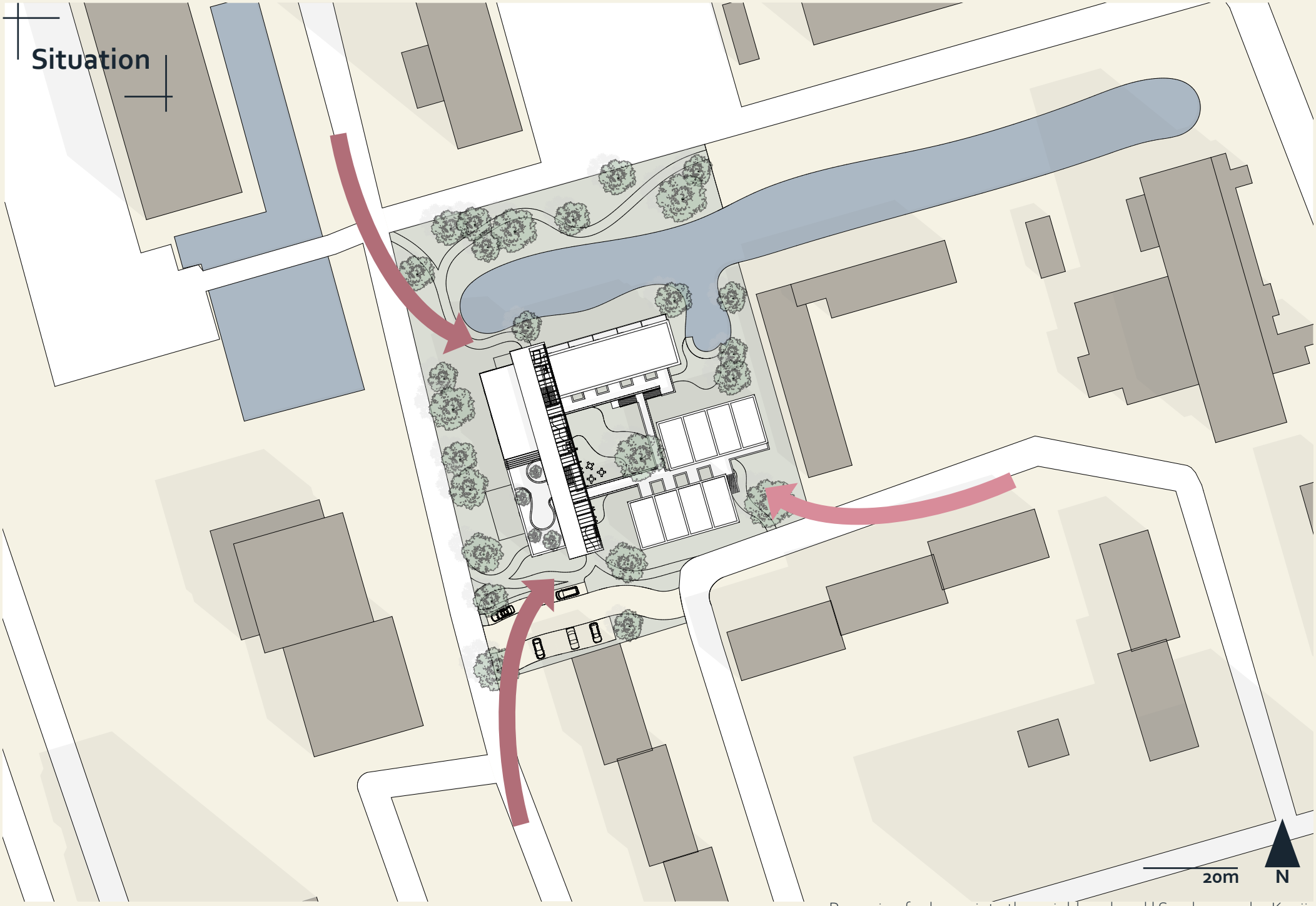
10m N

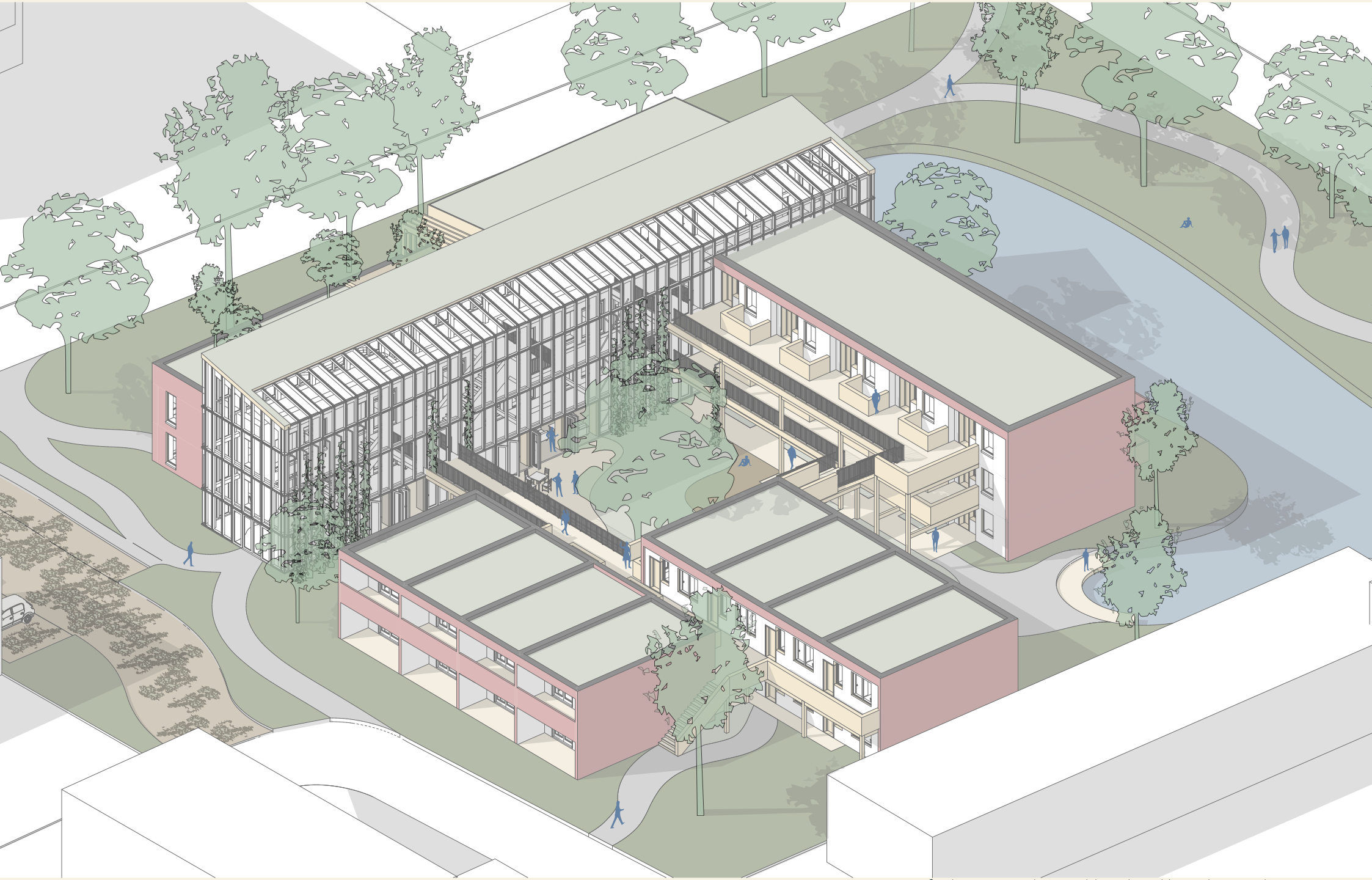
Elevations

Elevation | West

Elevation | North

Situation





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