

# Living Side by Sight



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Introduction

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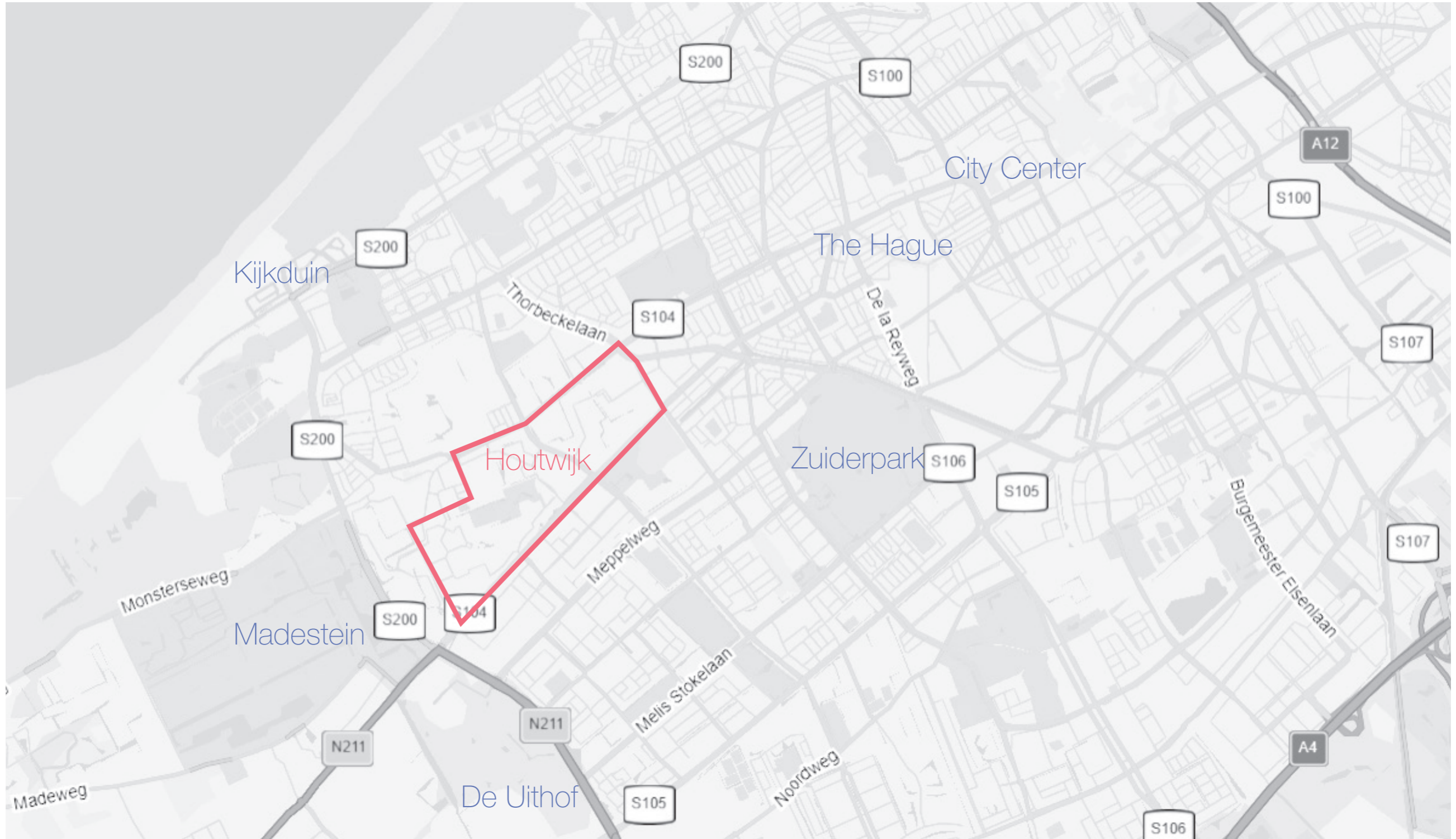
Design

Conclusion

*01*

# Introduction

# Houtwijk



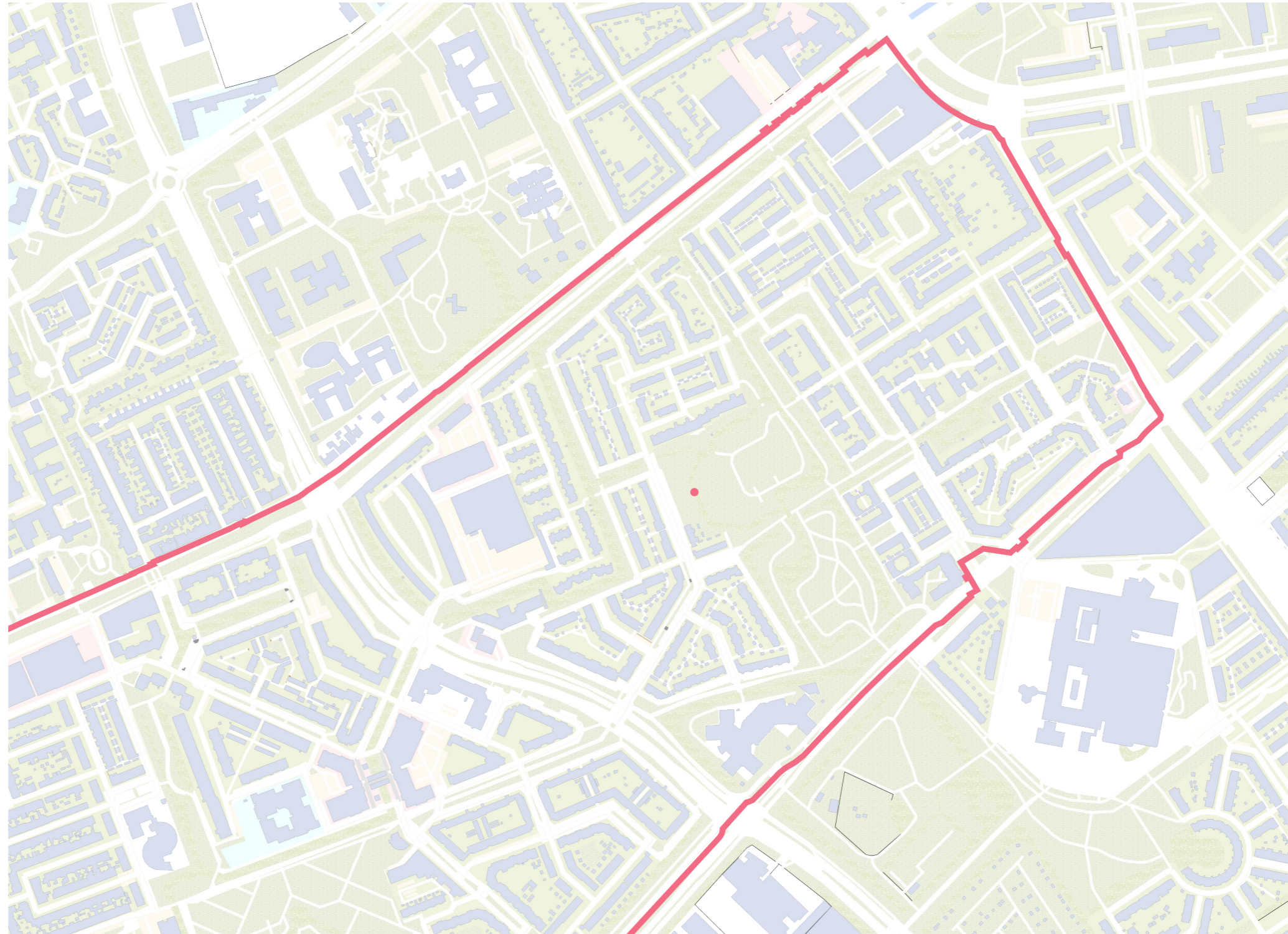
# Character



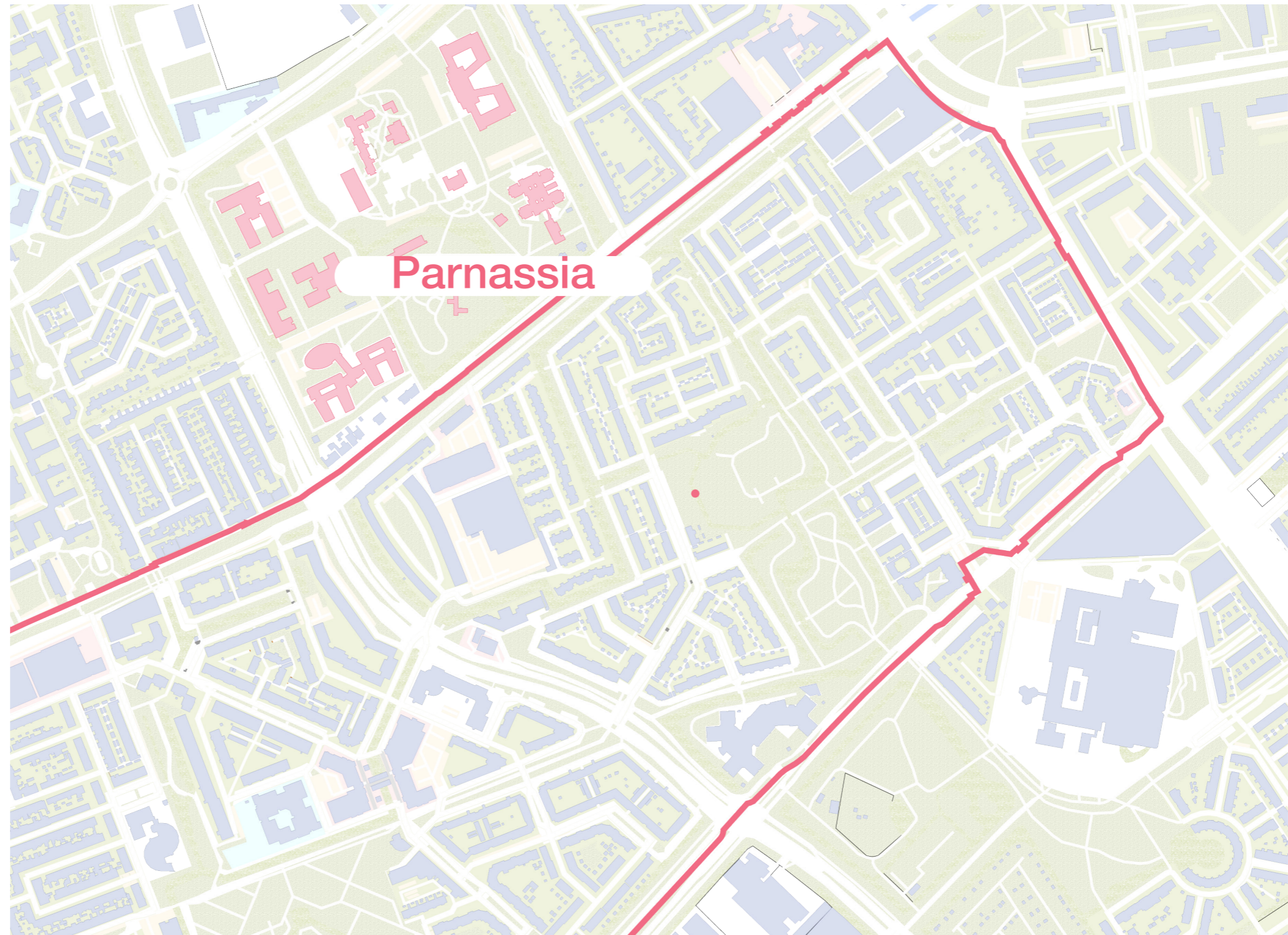
# Challenges



# Mental Health Houtwijk

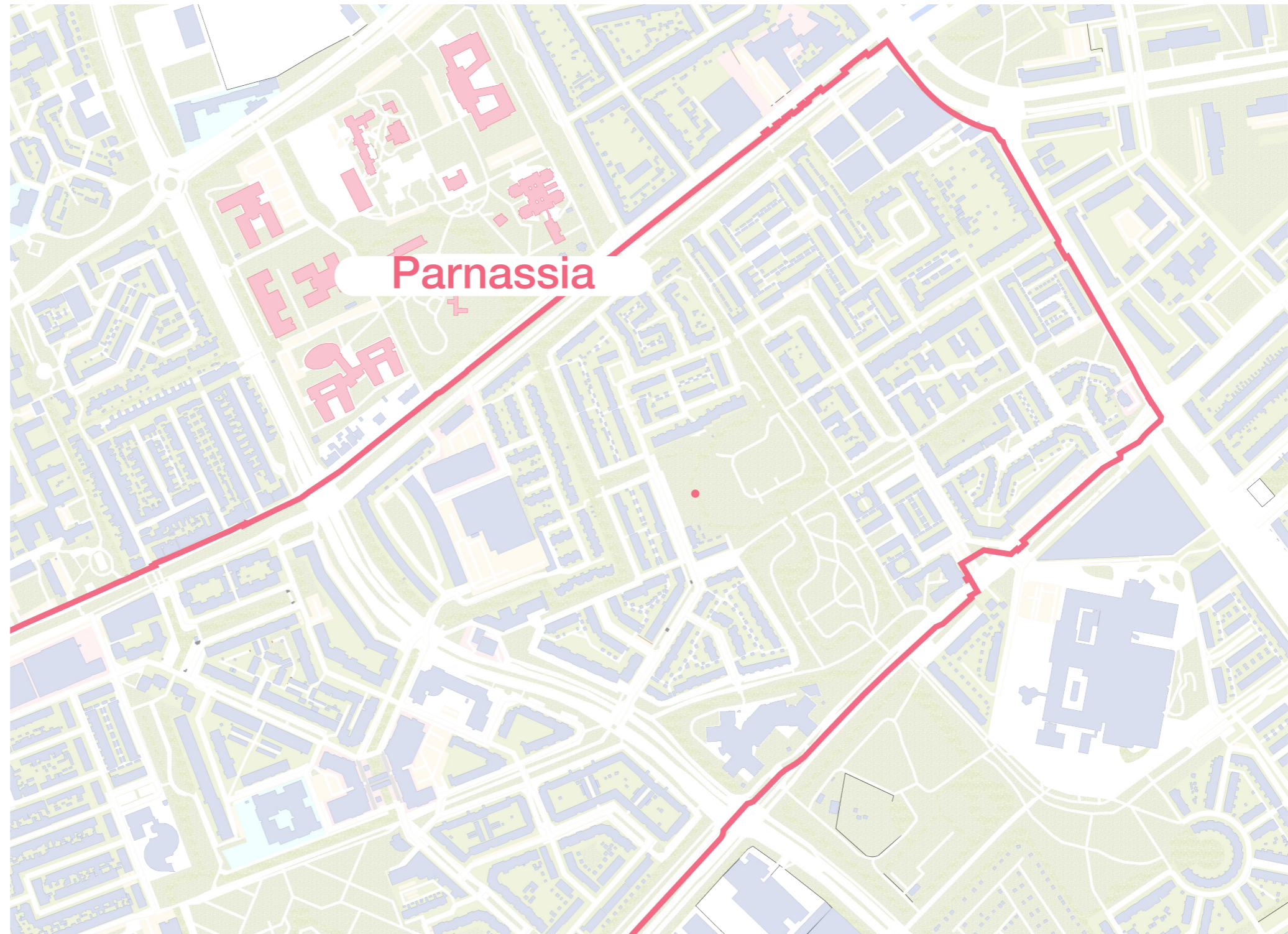


# Mental Health Parnassia



# Mental Health Parnassia

- Mental health institution
- 8 weeks intern
- Lack of social rental houses in The Hague
- Transition is a big step



*02*

# Research Question

# Research Question

How can housing design in Houtwijk support **a smoother transition** from assisted to independent living for former mental-health clients, **enhance social contact**, and **integrate sheltered housing** within a mixed-tenure apartment complex?

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How can housing design in Houtwijk support a smoother transition from **assisted to independent living** for former mental-health clients, enhance social contact, and integrate sheltered housing within a mixed-tenure apartment complex?

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How can housing design in Houtwijk support a smoother transition from assisted to independent living for former mental-health clients, enhance social contact, and integrate **sheltered housing** within a mixed-tenure apartment complex?

*03*

Results

# Main Results

# Main Results

**Loneliness**

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**Loneliness**

**Social Contact**

# Main Results

**Loneliness**

**Social Contact**

**Autonomy**

# Main Results

**Loneliness**

**Social Contact**

**Autonomy**

**Environment**

# Design Principles

## Apartment Complex

# Design Principles

## Apartment Complex

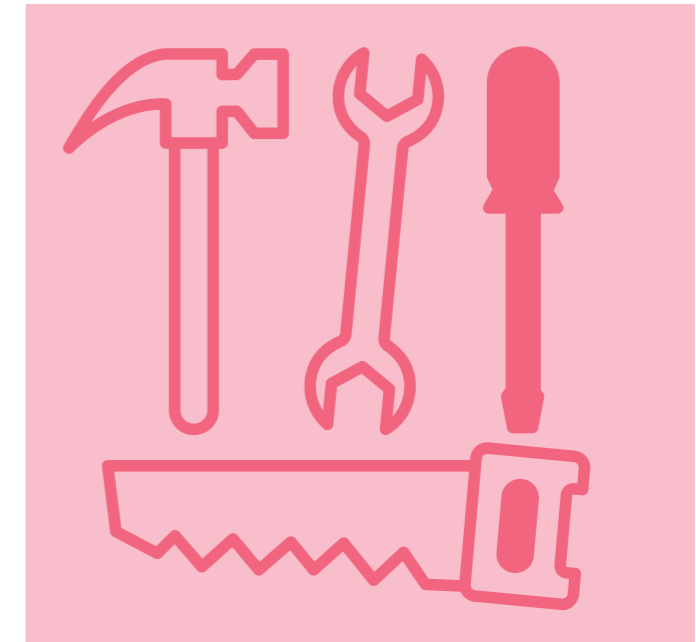
### Mixed Housing Typologies



### Ratio



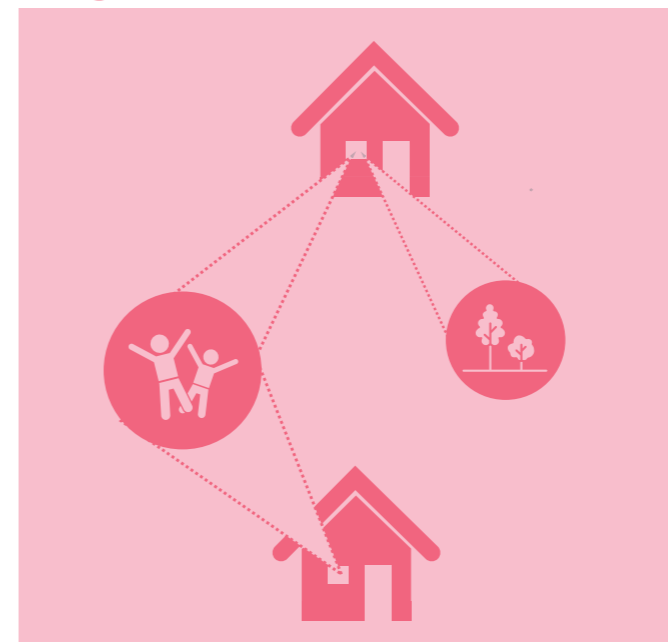
### Day Activities



### Distributed Through Building



### Sightlines



# Design Principles

## Apartment Complex

### Mixed Housing Typologies



### Ratio



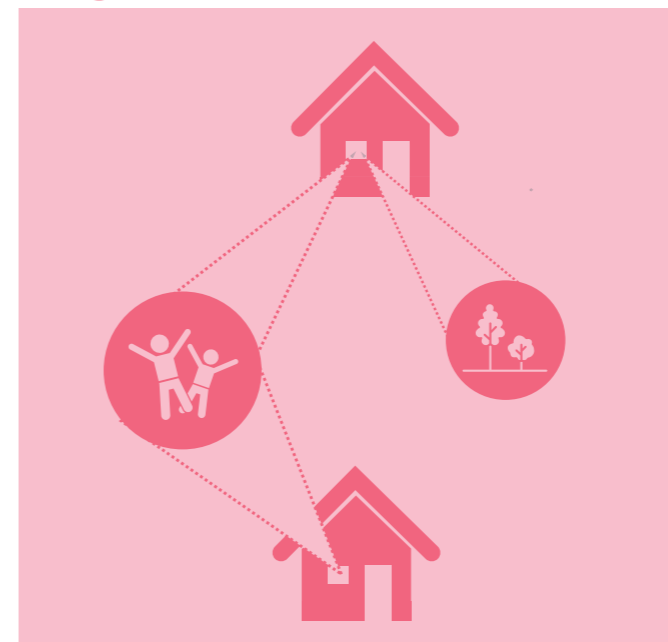
### Day Activities



### Distributed Through Building



### Sightlines



# Design Principles

**Houses**

**Social Interaction**

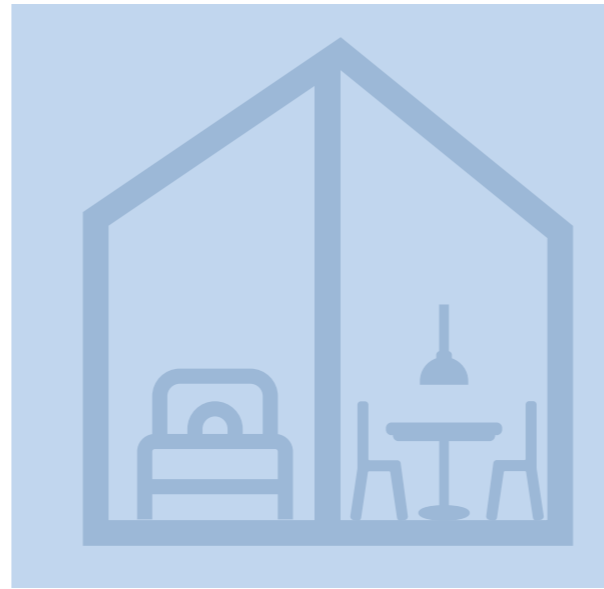
# Design Principles

## Houses

### Individual Units



### Structure



### Connection with everyday life



## Social Interaction



# Design Principles

## Houses

Individual Units



Structure



Connection with everyday life



## Social Interaction



# Program of Requirements



Target Group

**Regular**

**Ex-Clients**

**Sheltered Housing**

# Program of Requirements



Target Group

**Regular**

**Ex-Clients**

**Sheltered Housing**

# Program of Requirements



Target Group

**Regular**

**Ex-Clients**

**Sheltered Housing**

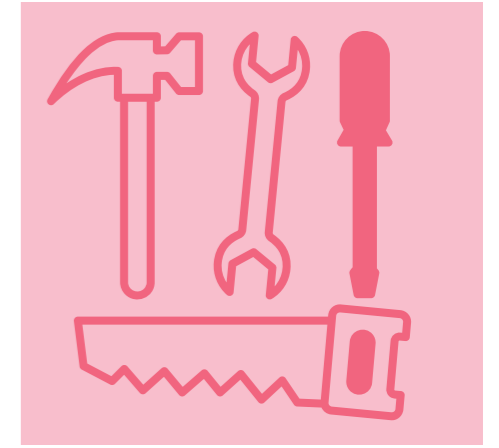


Sheltered Housing

**Office**

**Daily Activity**

# Program of Requirements



Target Group

**Regular**

**Ex-Clients**

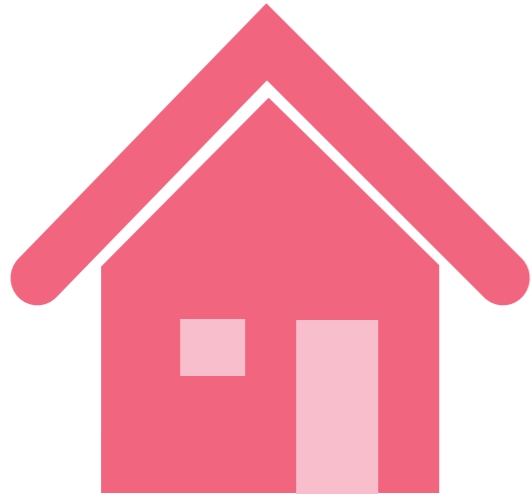
**Sheltered Housing**

Sheltered Housing

**Office**

**Daily Activity**

# Program of Requirements



## Target Group

**Regular**

**Ex-Clients**

**Sheltered Housing**

## Sheltered Housing

**Office**

**Daily Activity**

## Extra Facilities

**Shared Living Room**

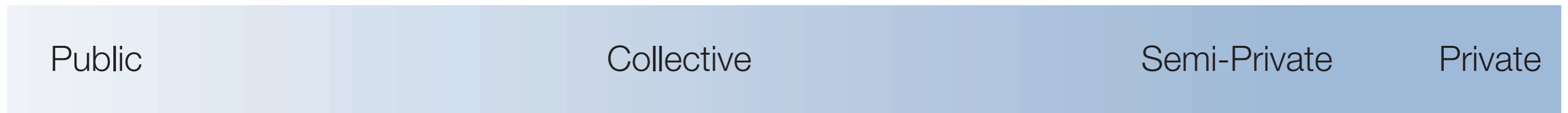
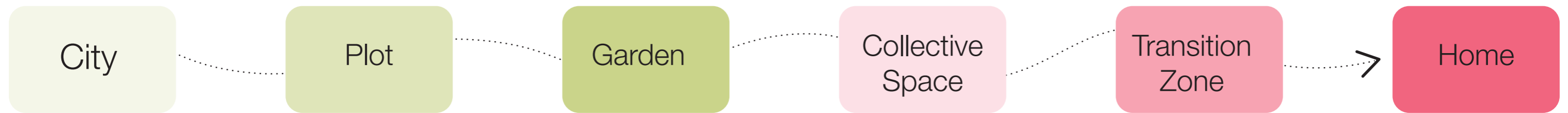
**Laundry Room**

**Collective Garden**

**Gym**

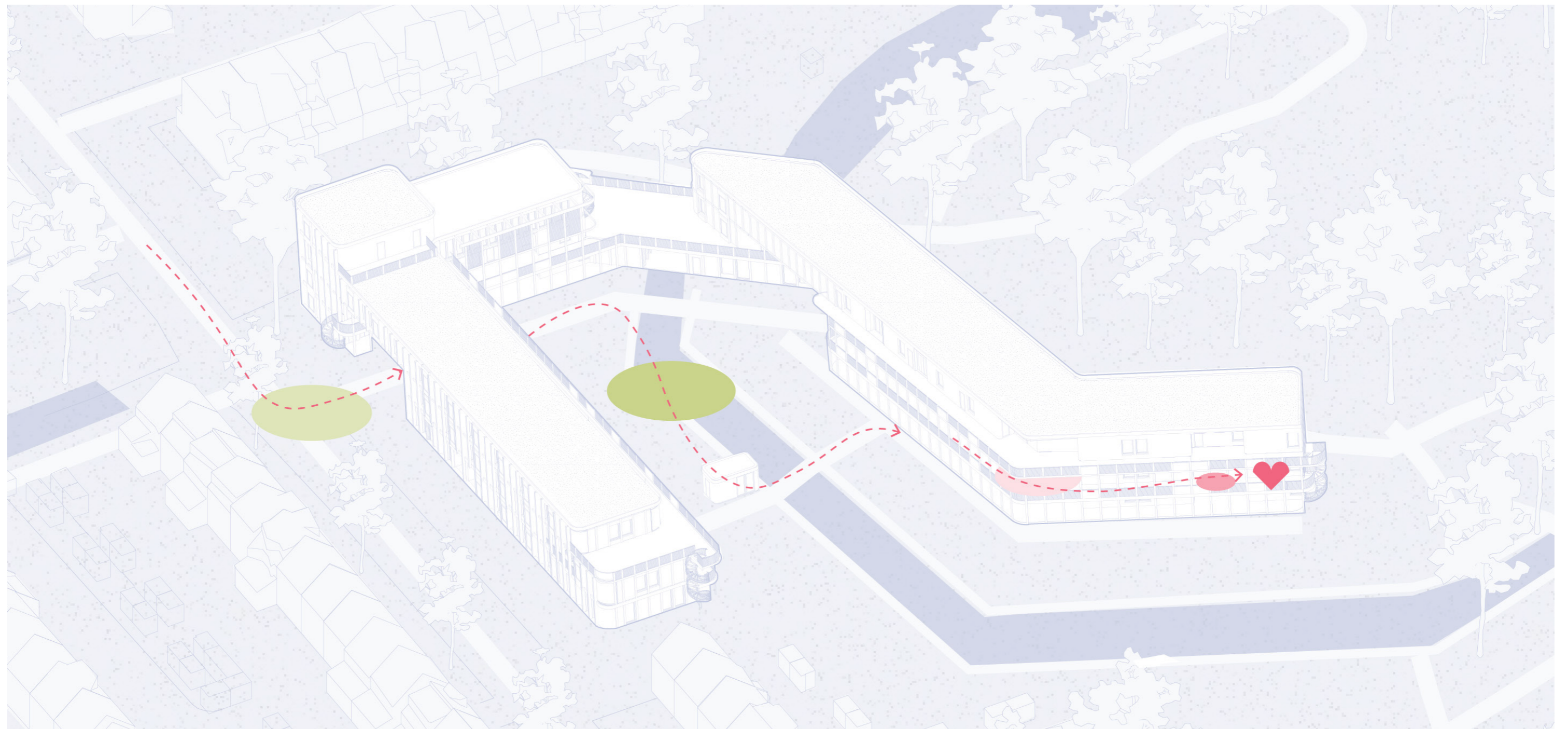
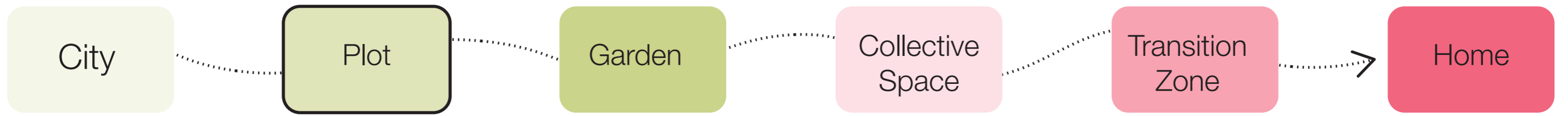
**Café**

# Living Side by Sight



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Design

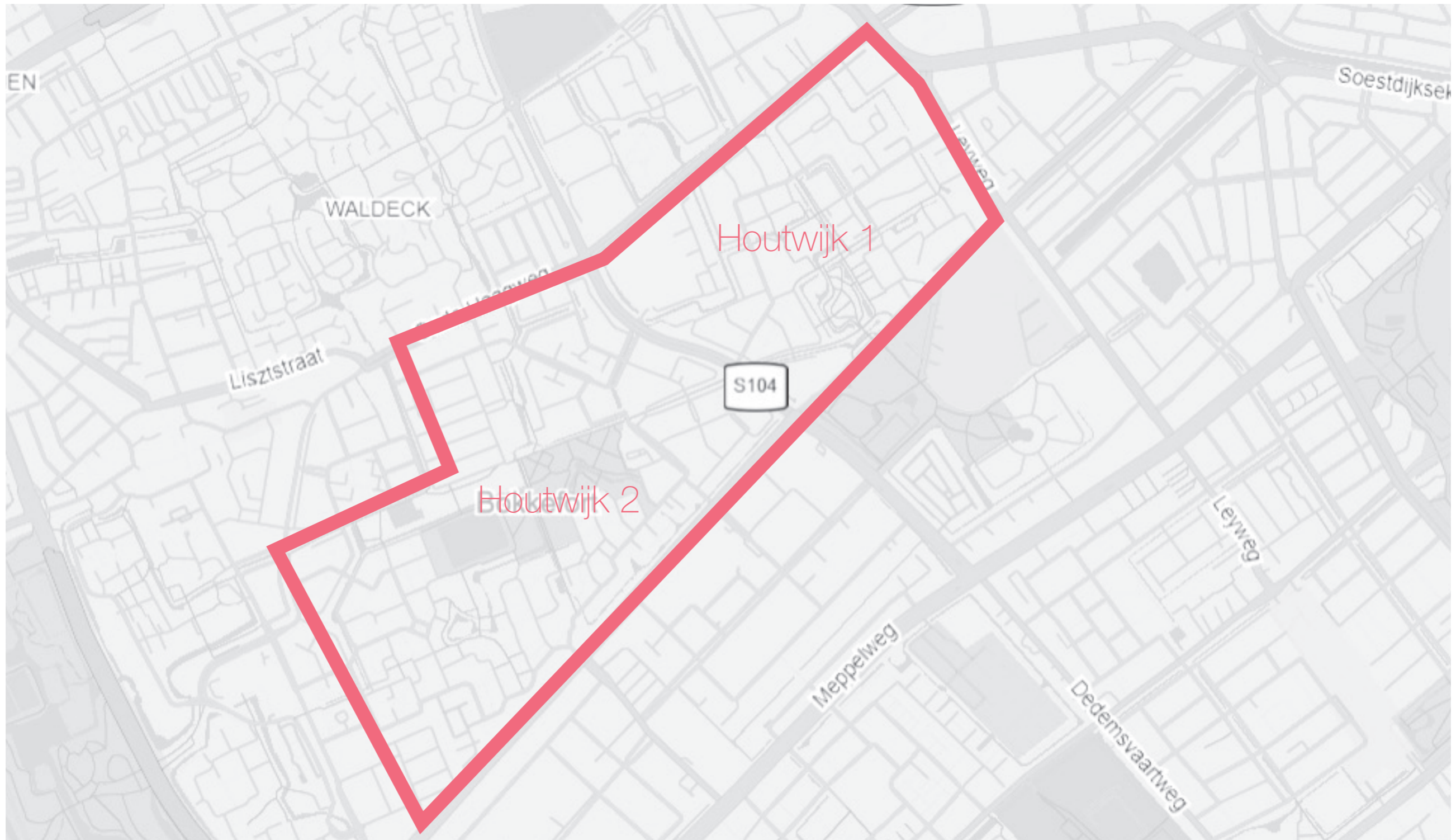


# Main Design Principles

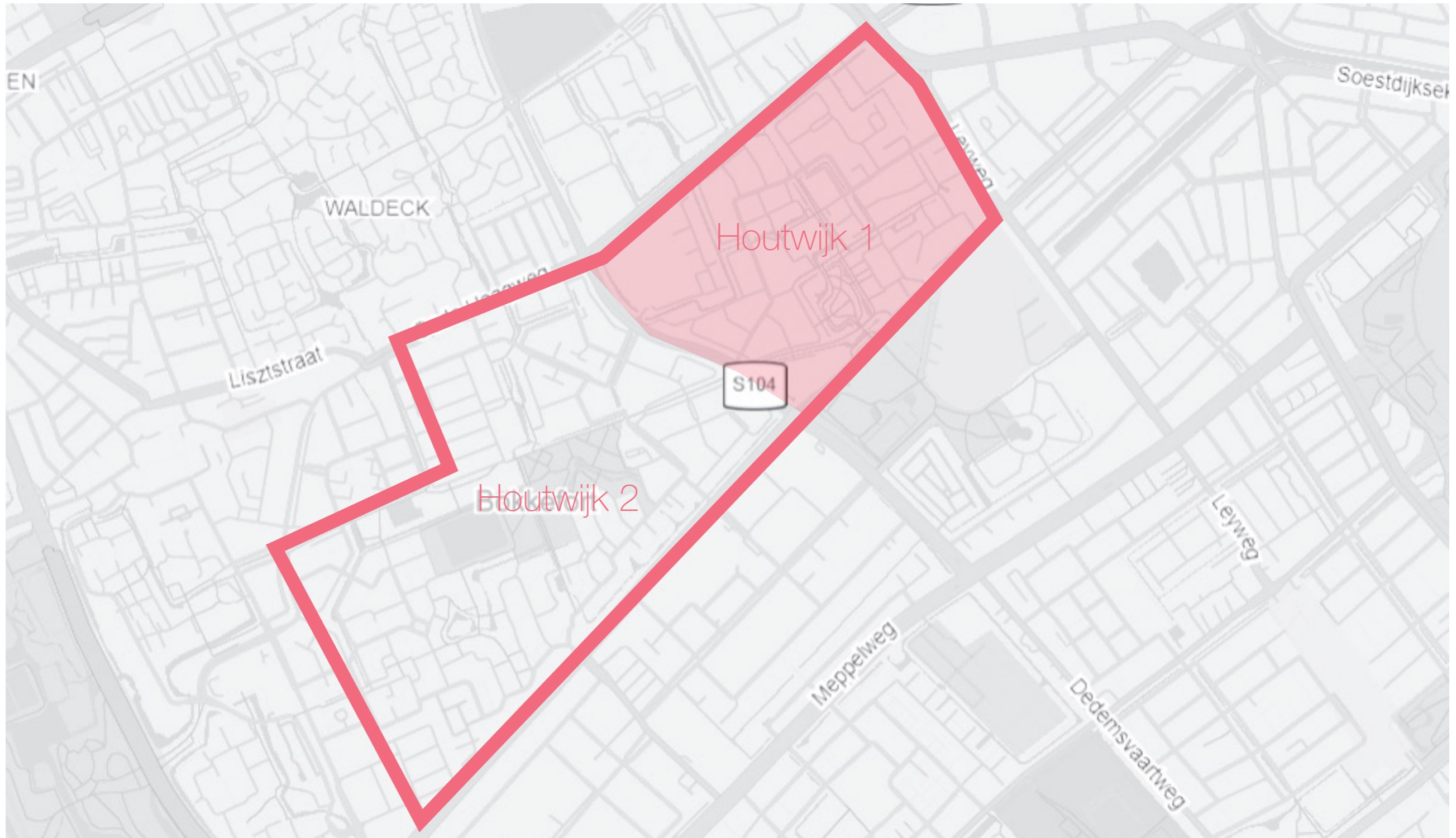
## Connection with everyday life



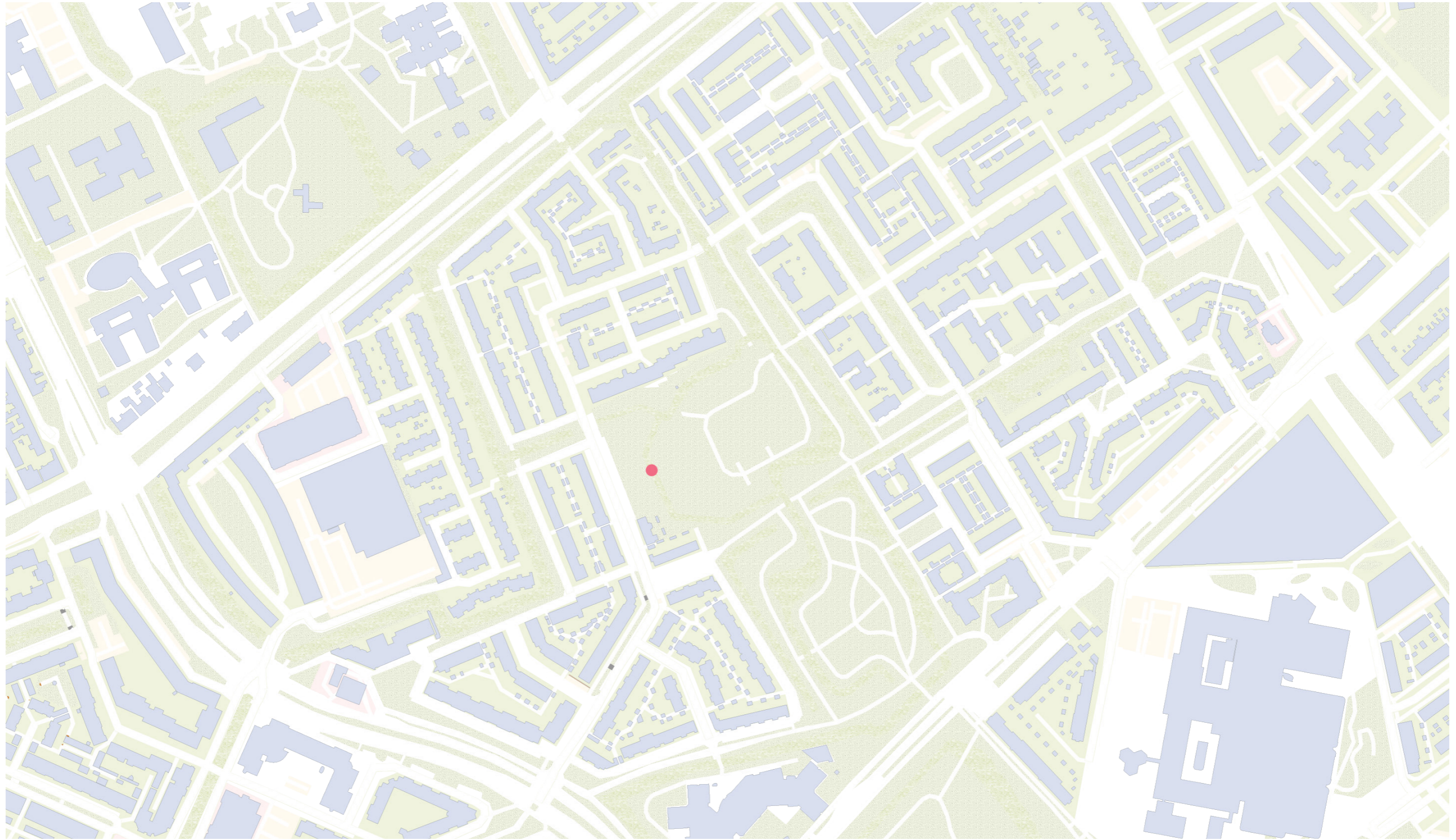
# Chosen Plot



# Chosen Plot



# Chosen Plot



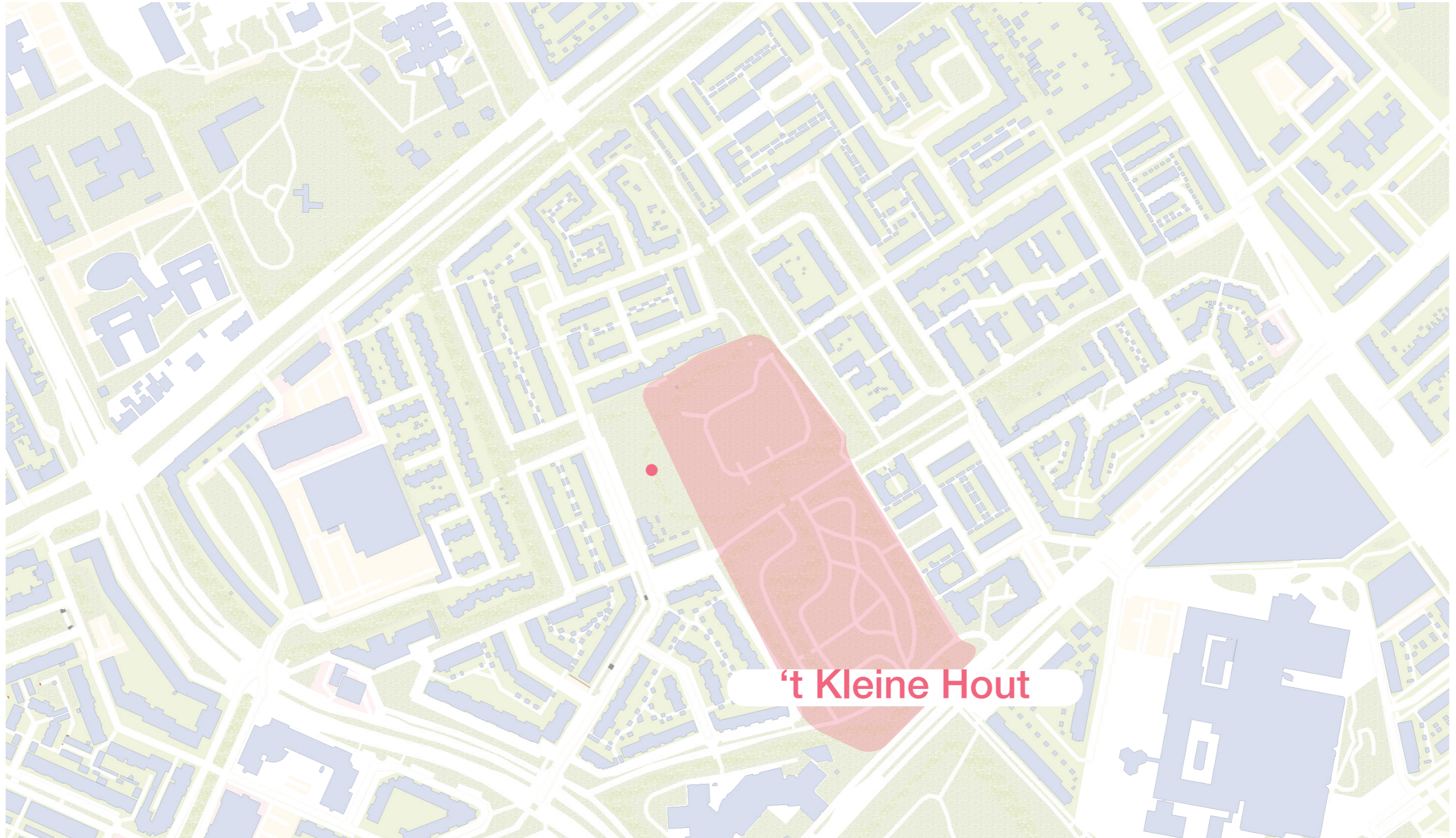
# Chosen Plot



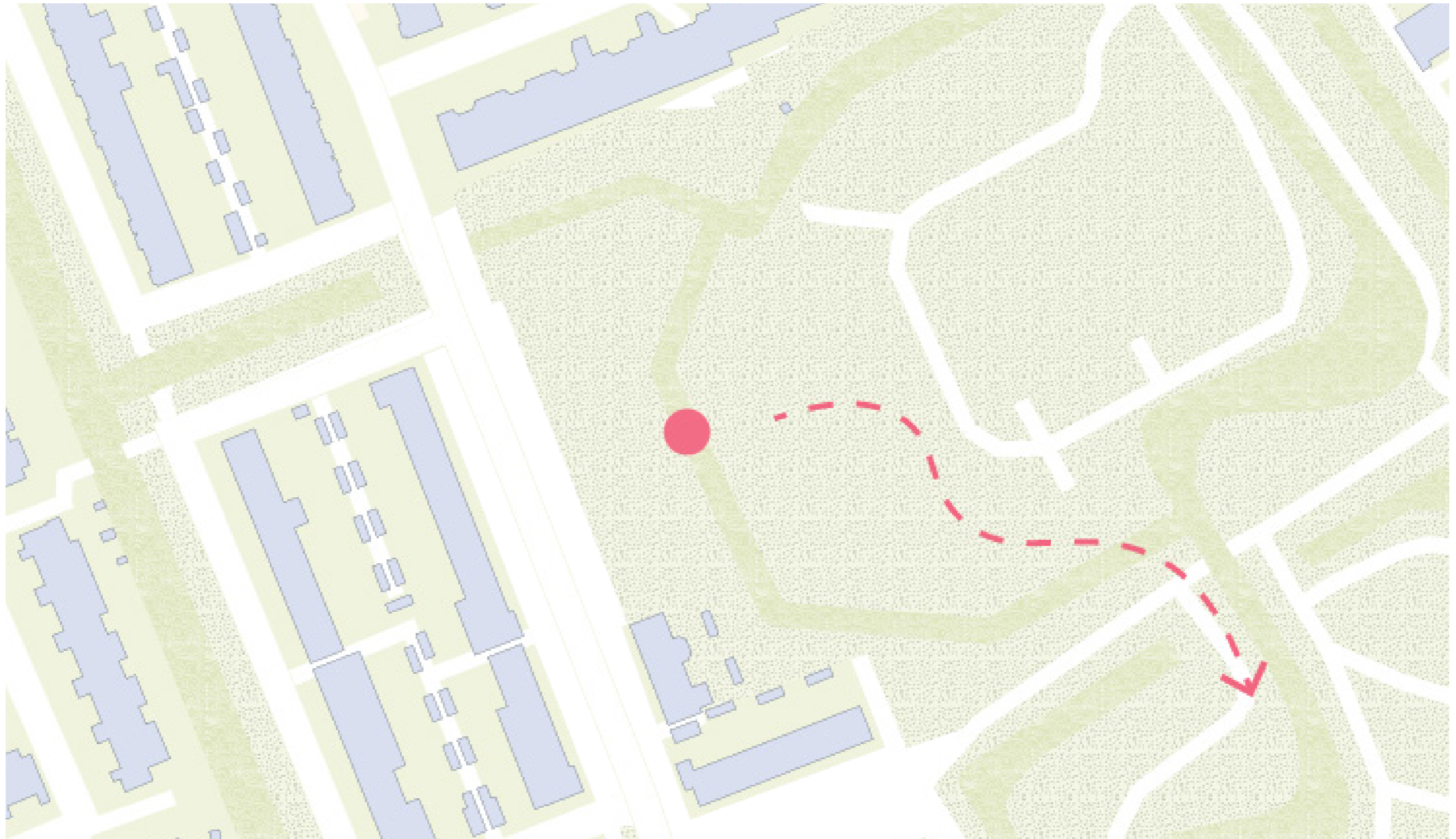
# Chosen Plot



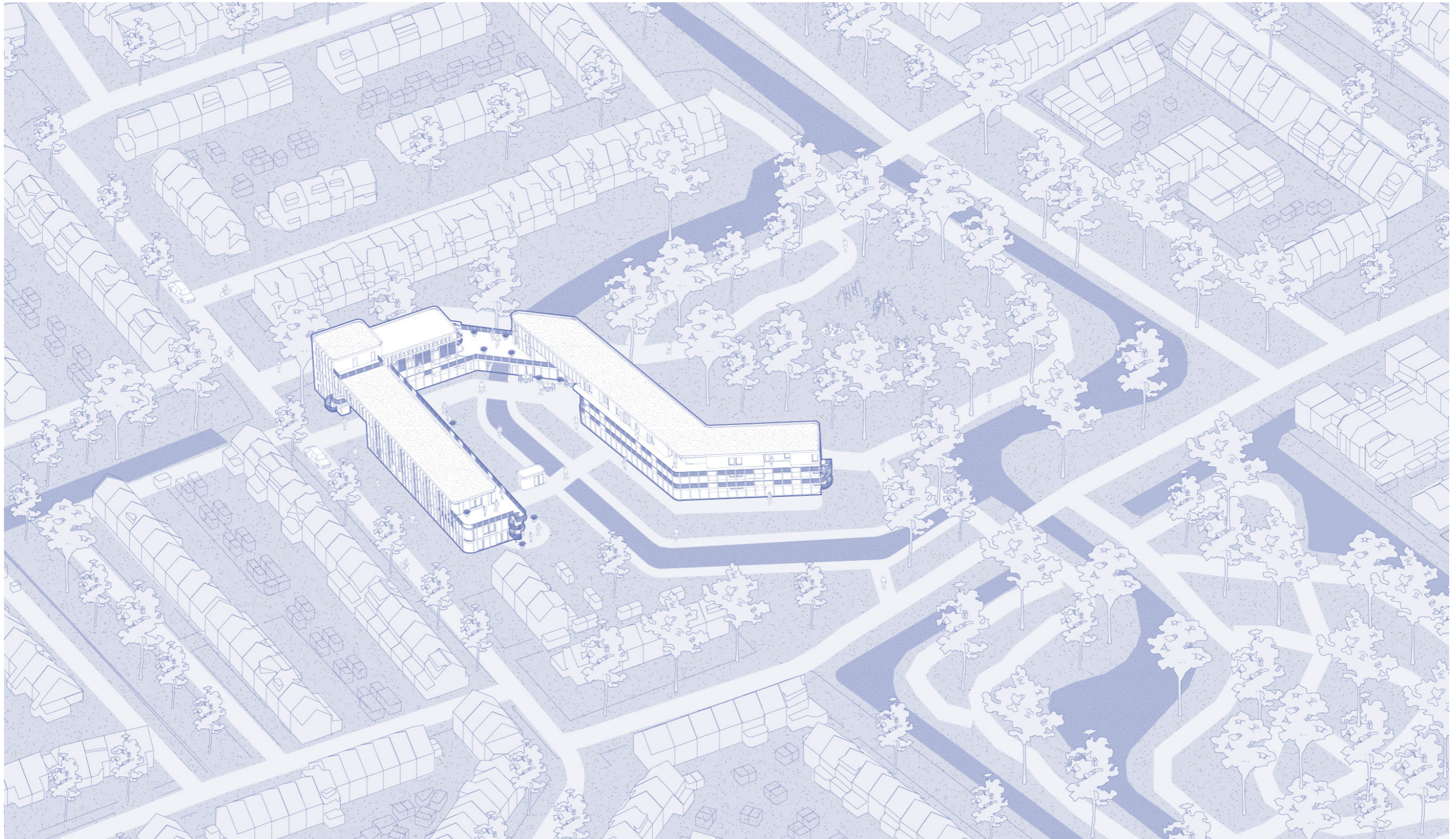
# Chosen Plot



# Chosen Plot

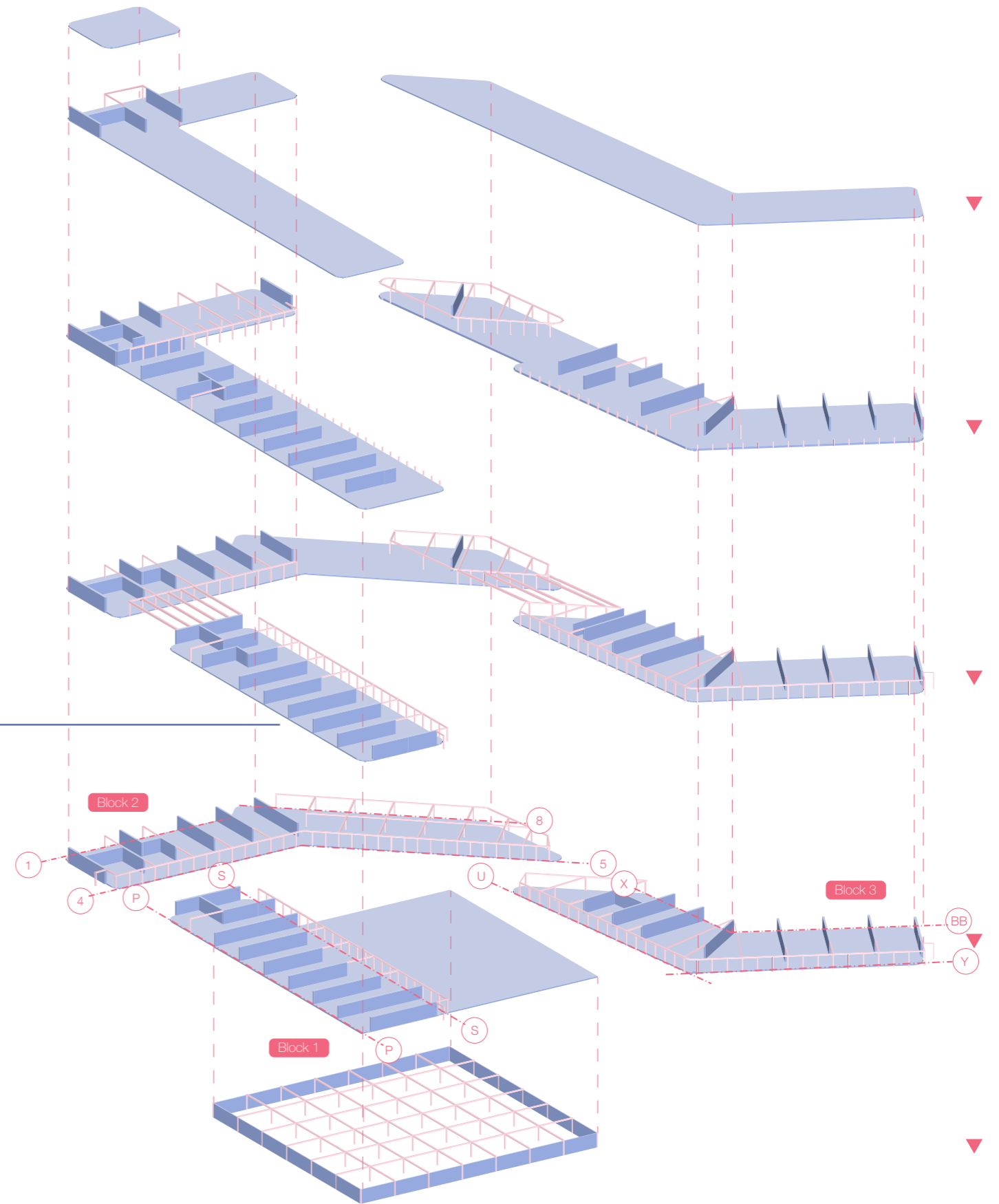


# Overview

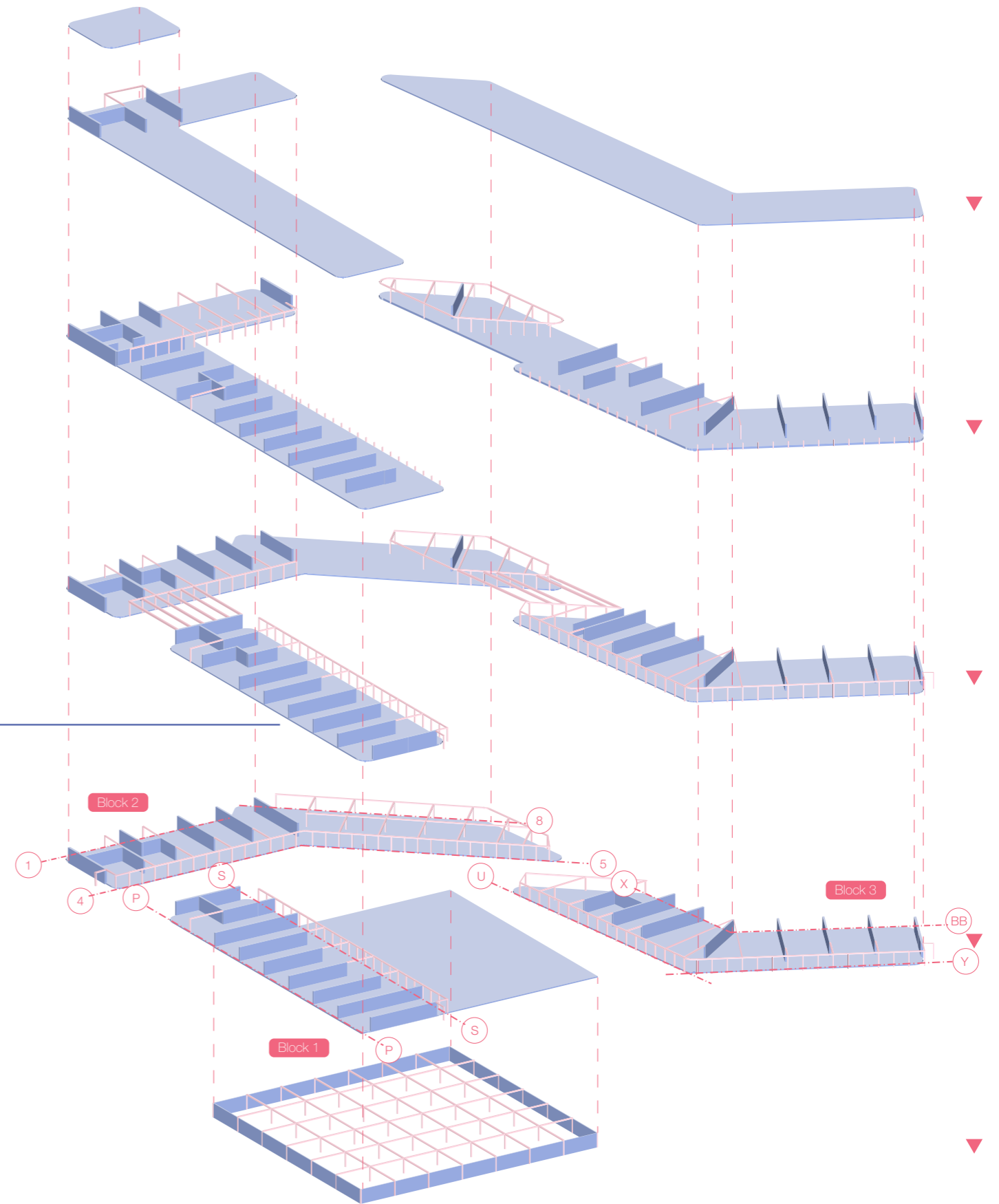


# Construction

CLT walls



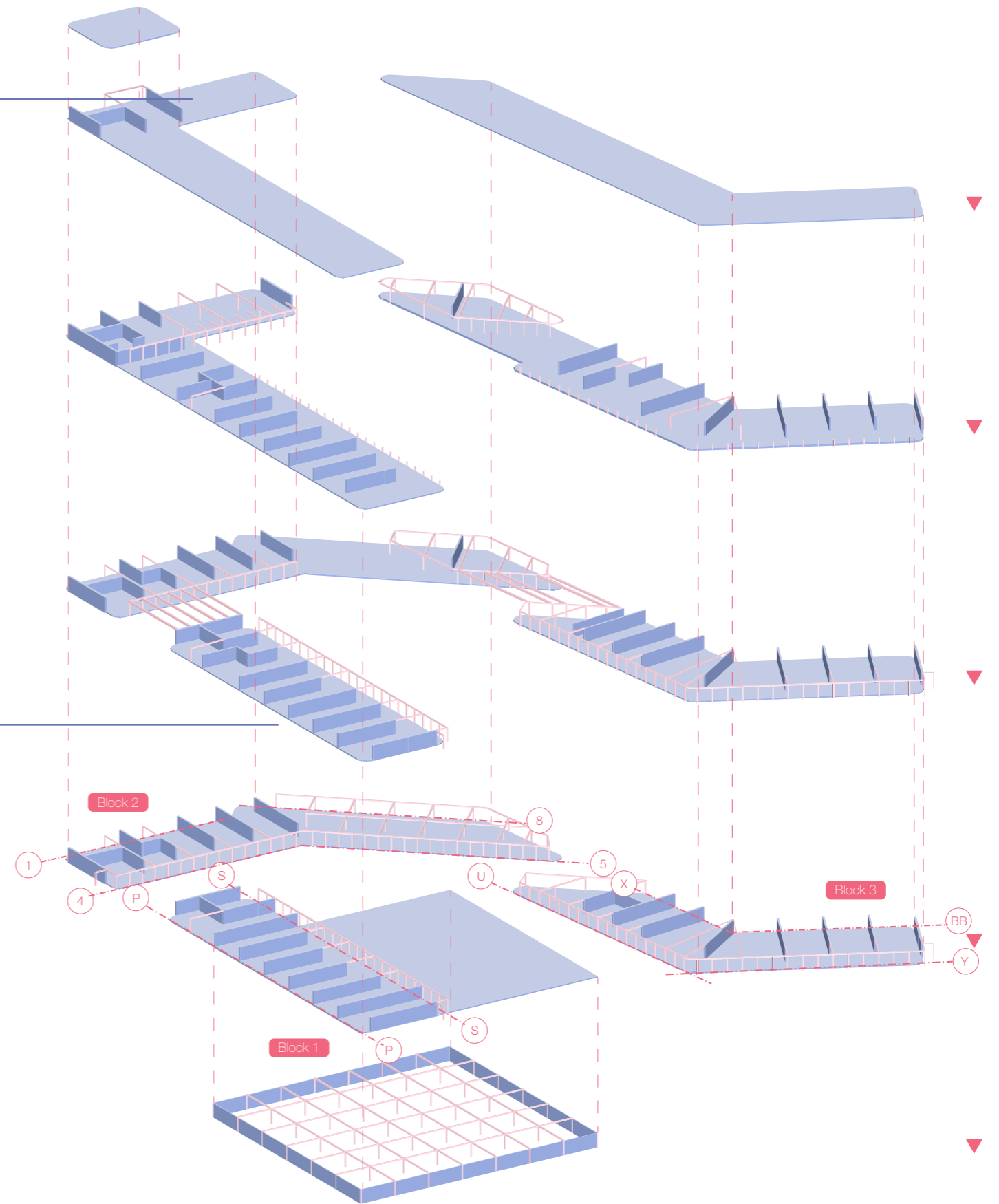
# Construction



# Construction

Kerto-Ripa floor

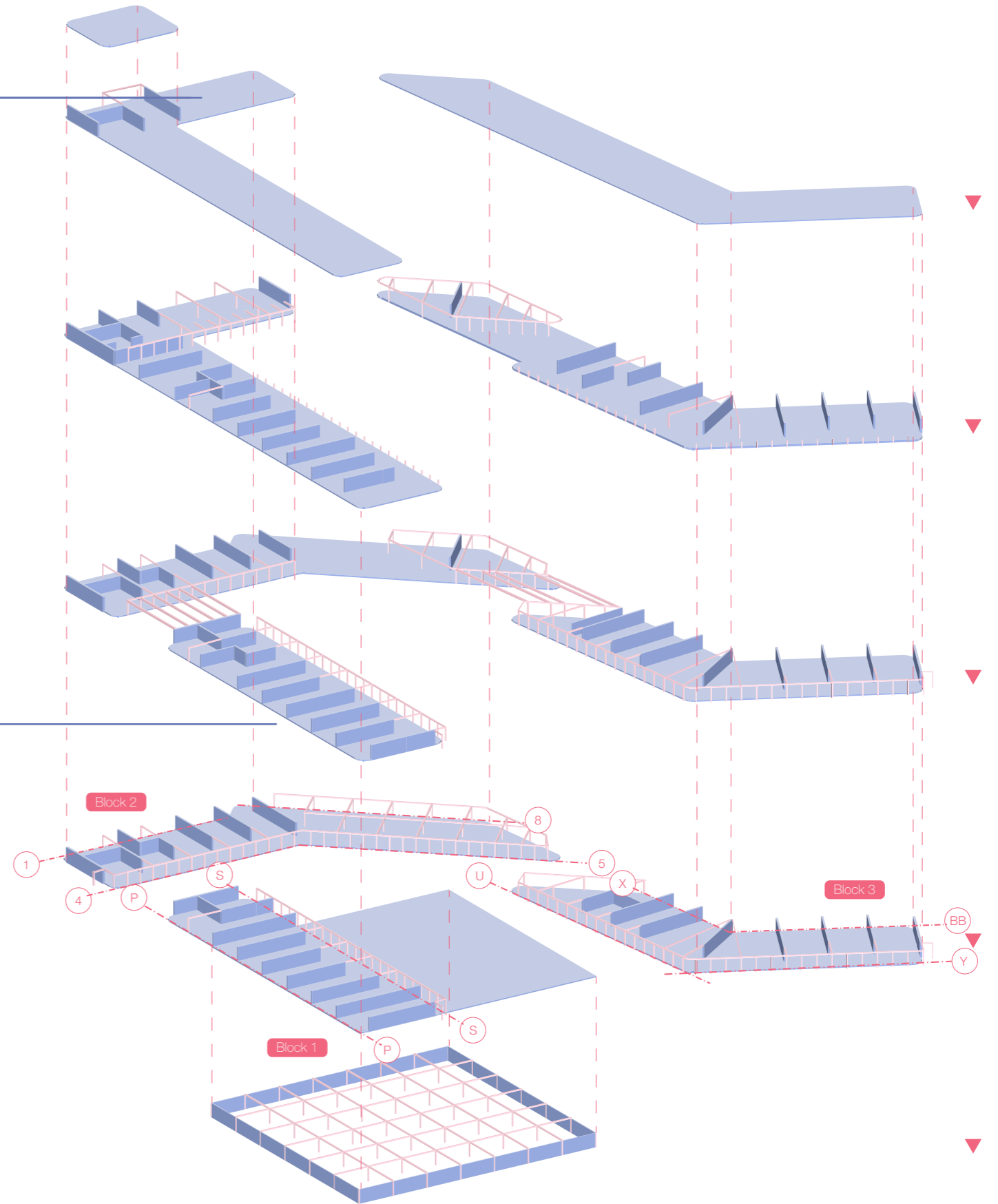
CLT walls



# Construction



## CLT walls

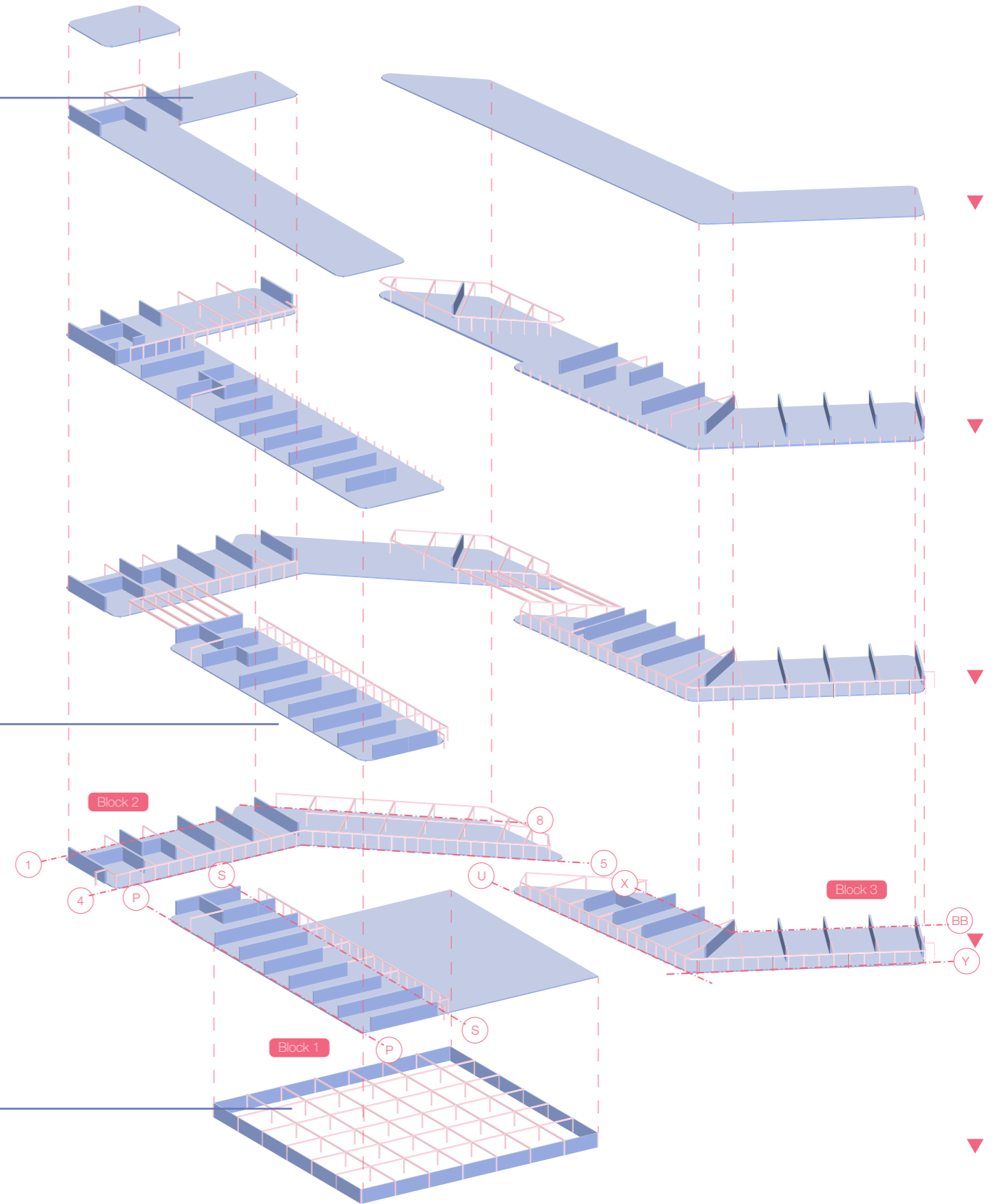


# Construction

Kerto-Ripa floor

CLT walls

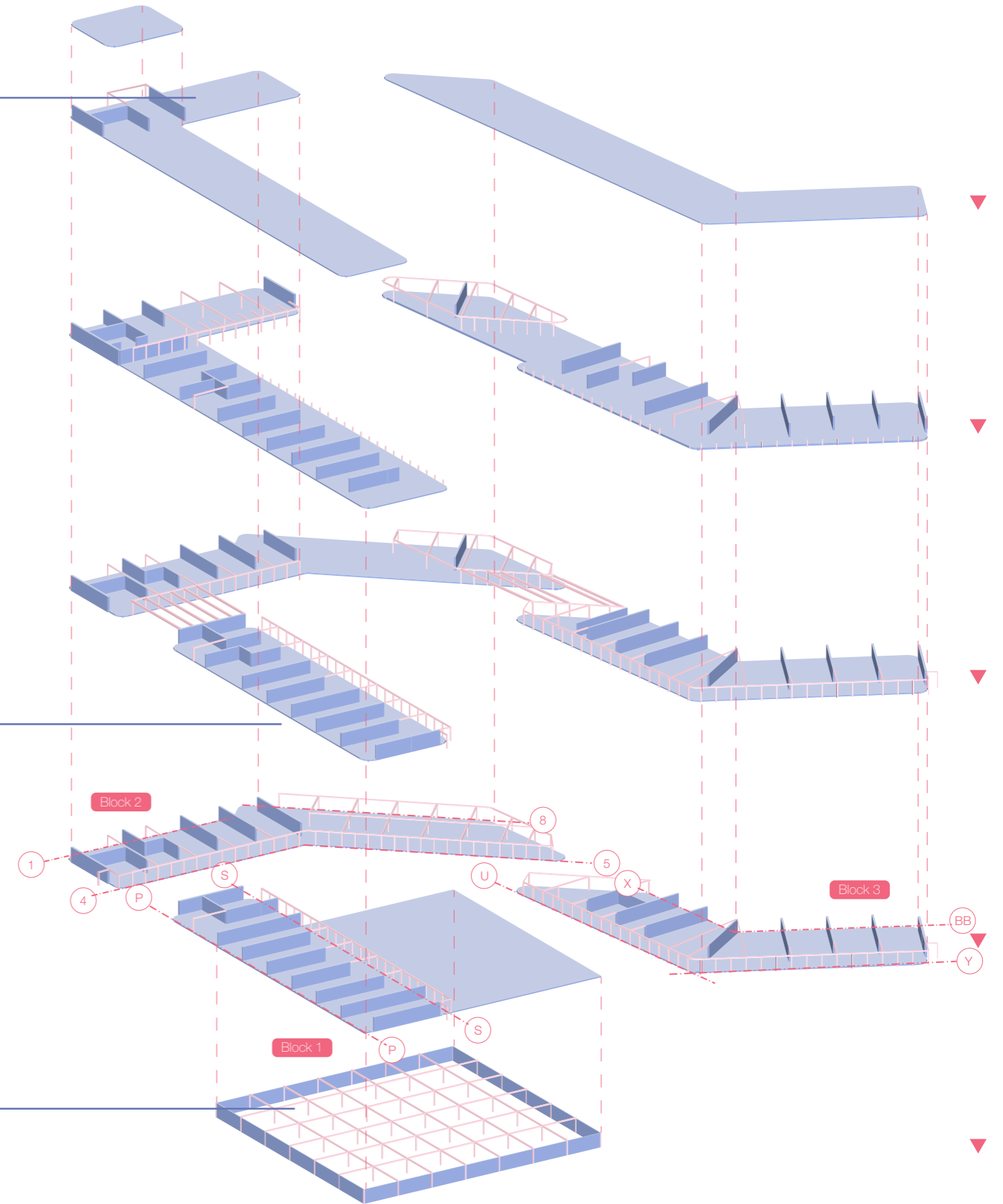
glulam columns



# Construction

Kerto-Ripa floor

CLT walls



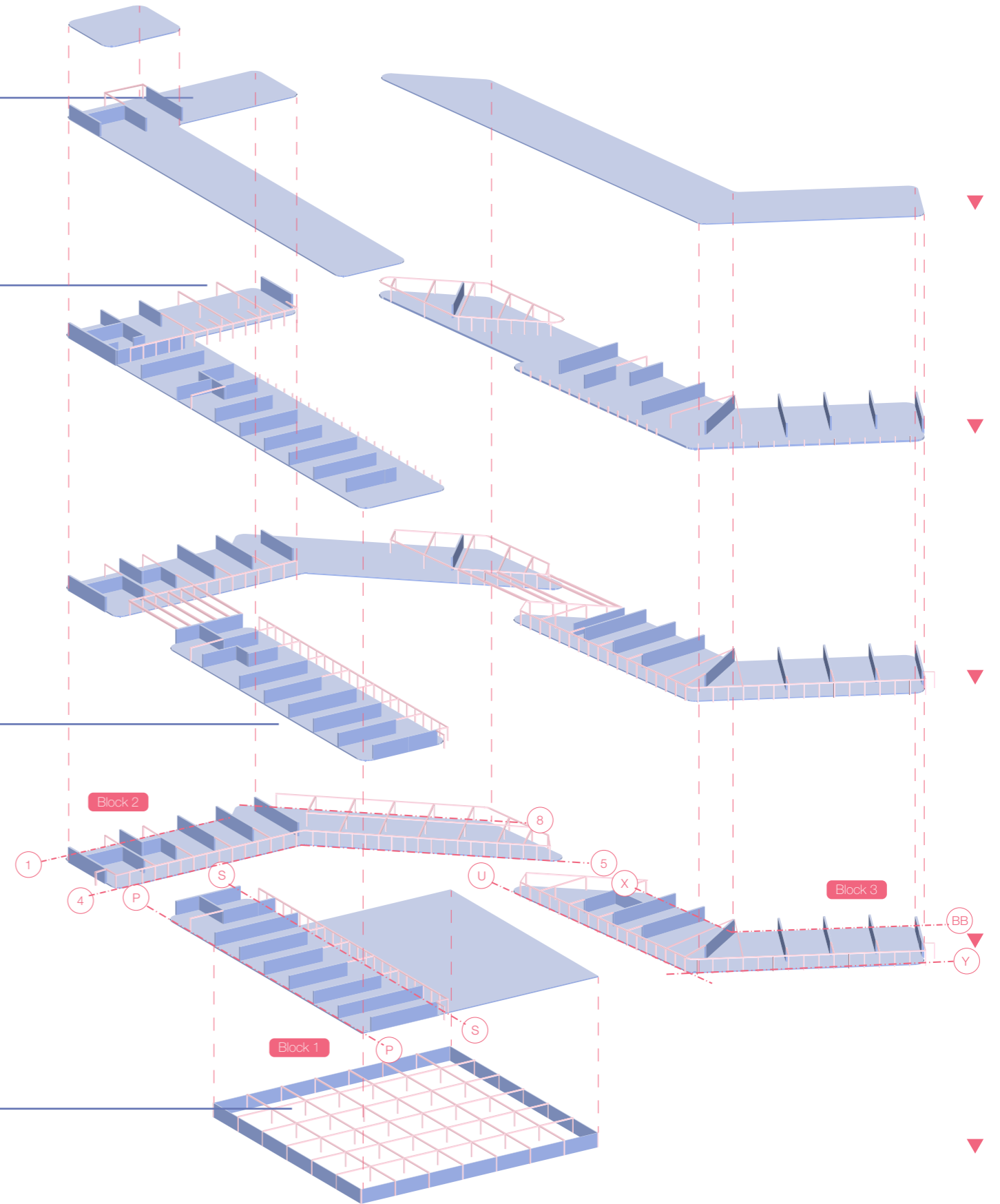
# Construction

Kerto-Ripa floor

glulam beams

CLT walls

glulam columns



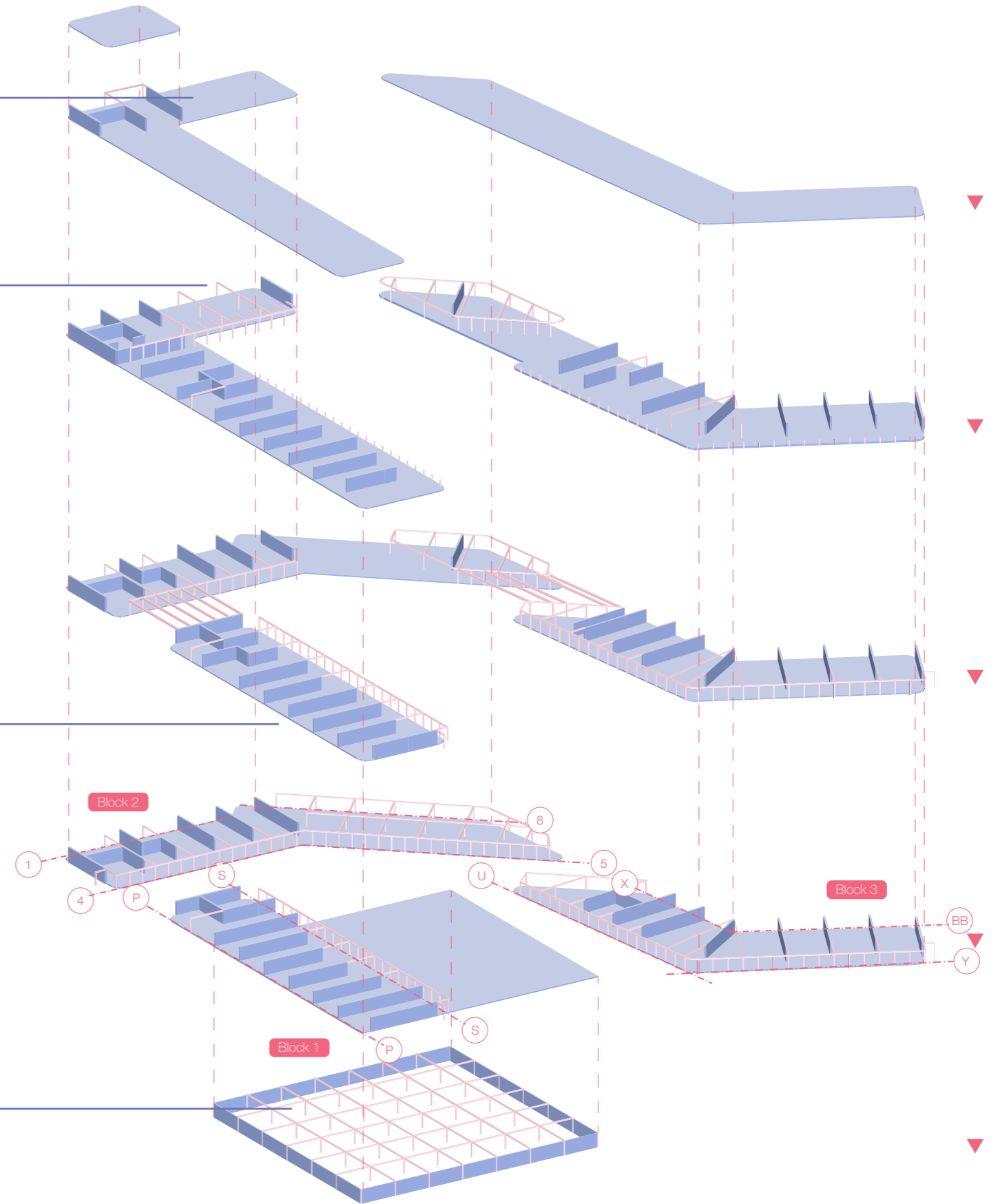
# Construction

Kerto-Ripa floor



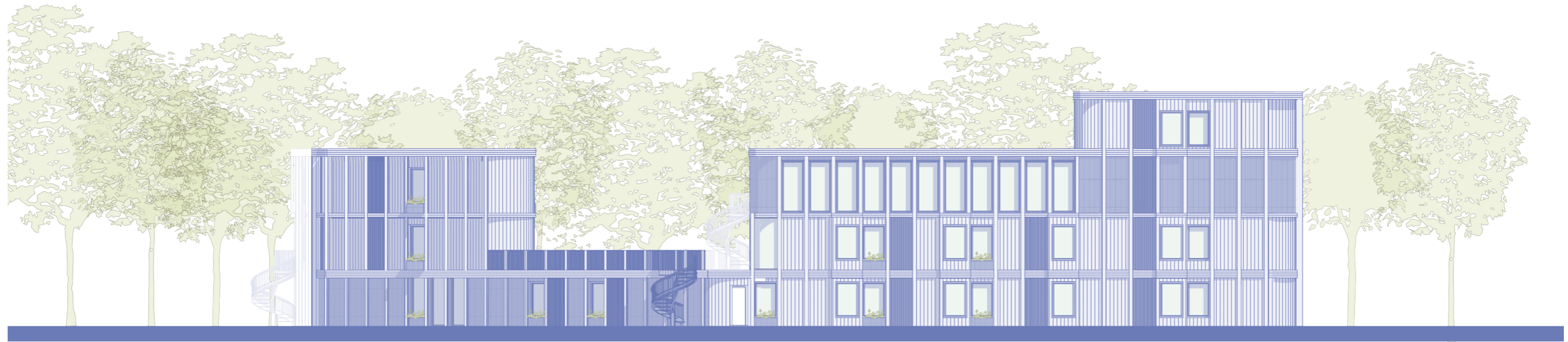
CLT walls

glulam columns



# Elevations

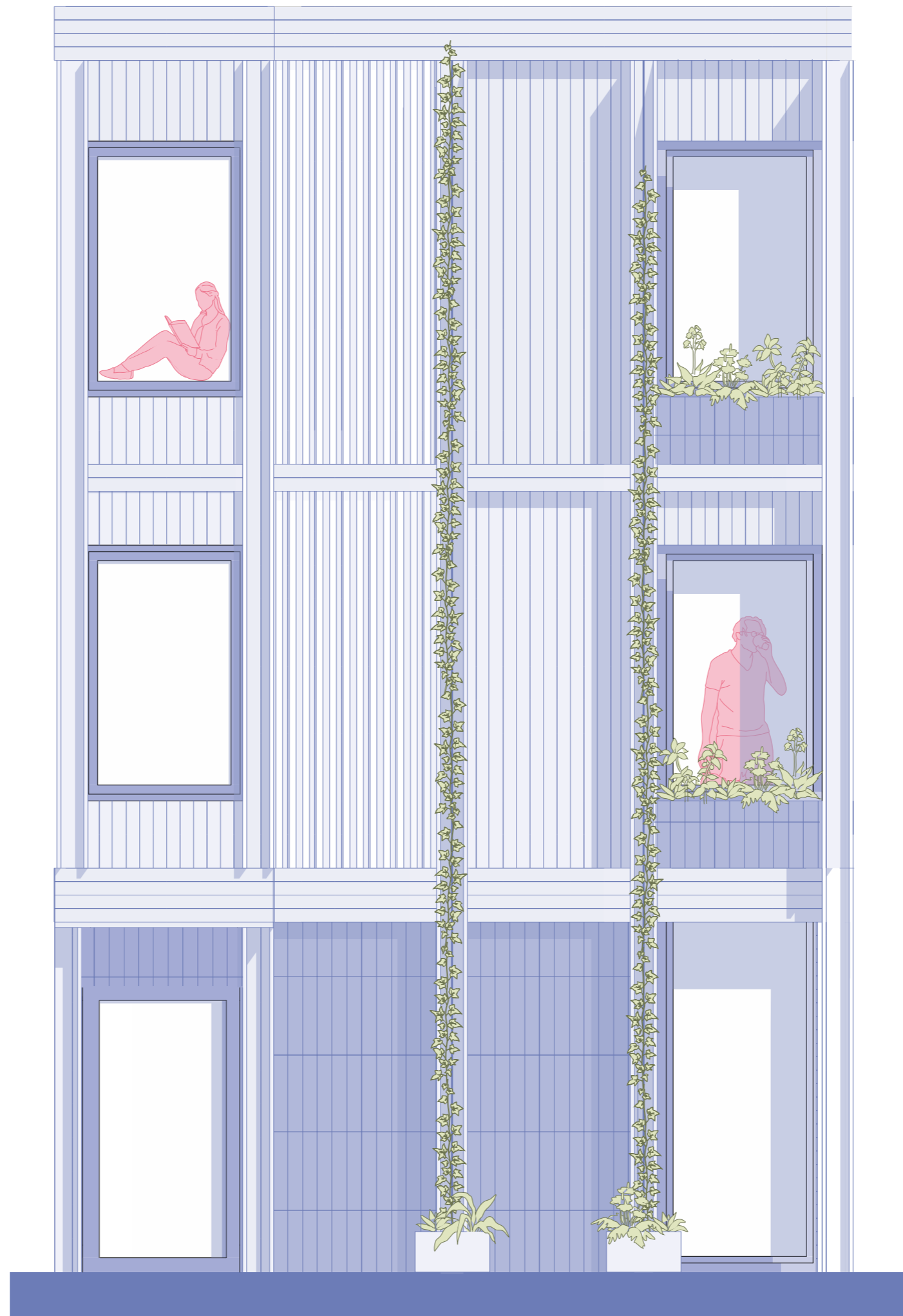
## North



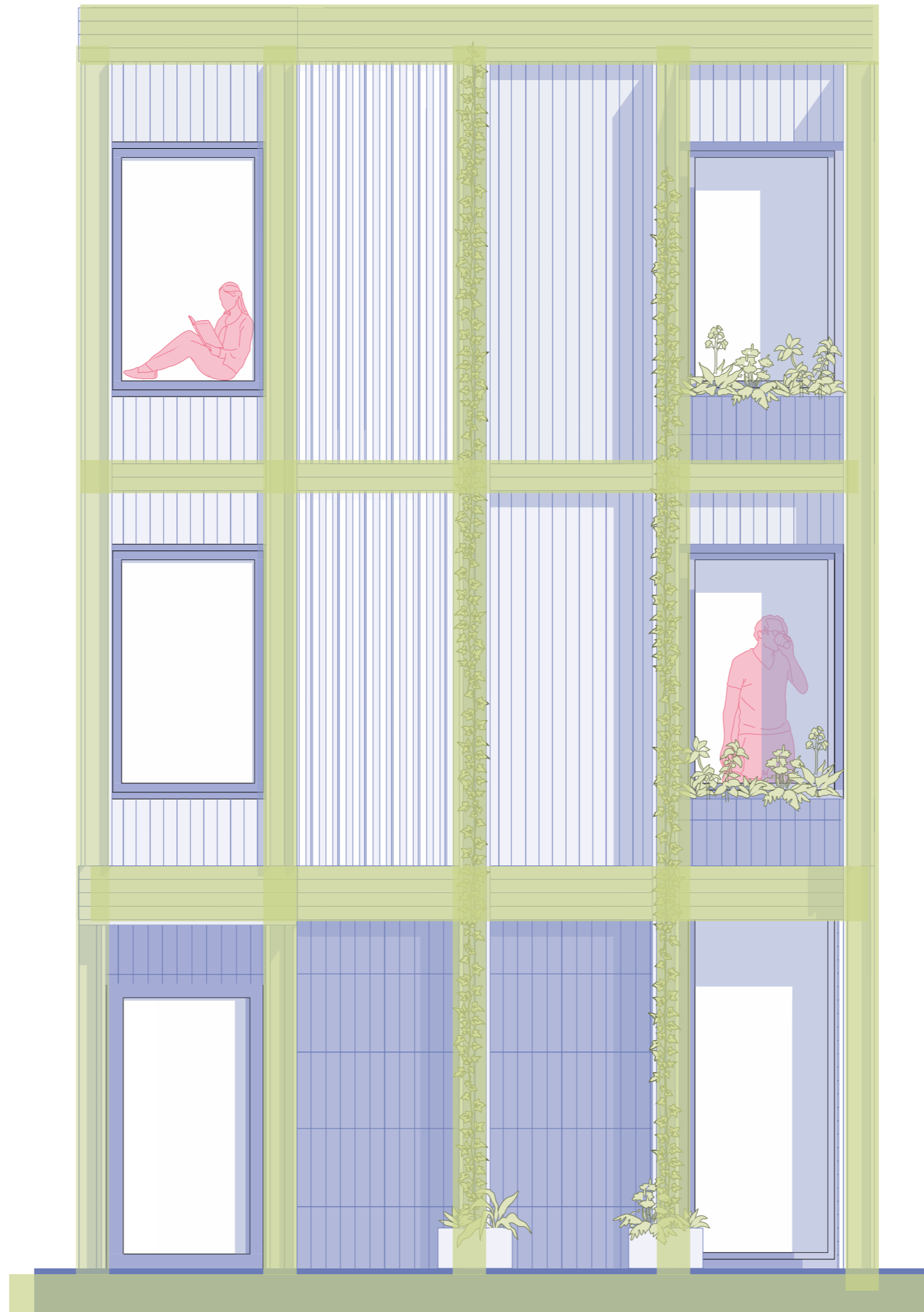
## West



# Elevations

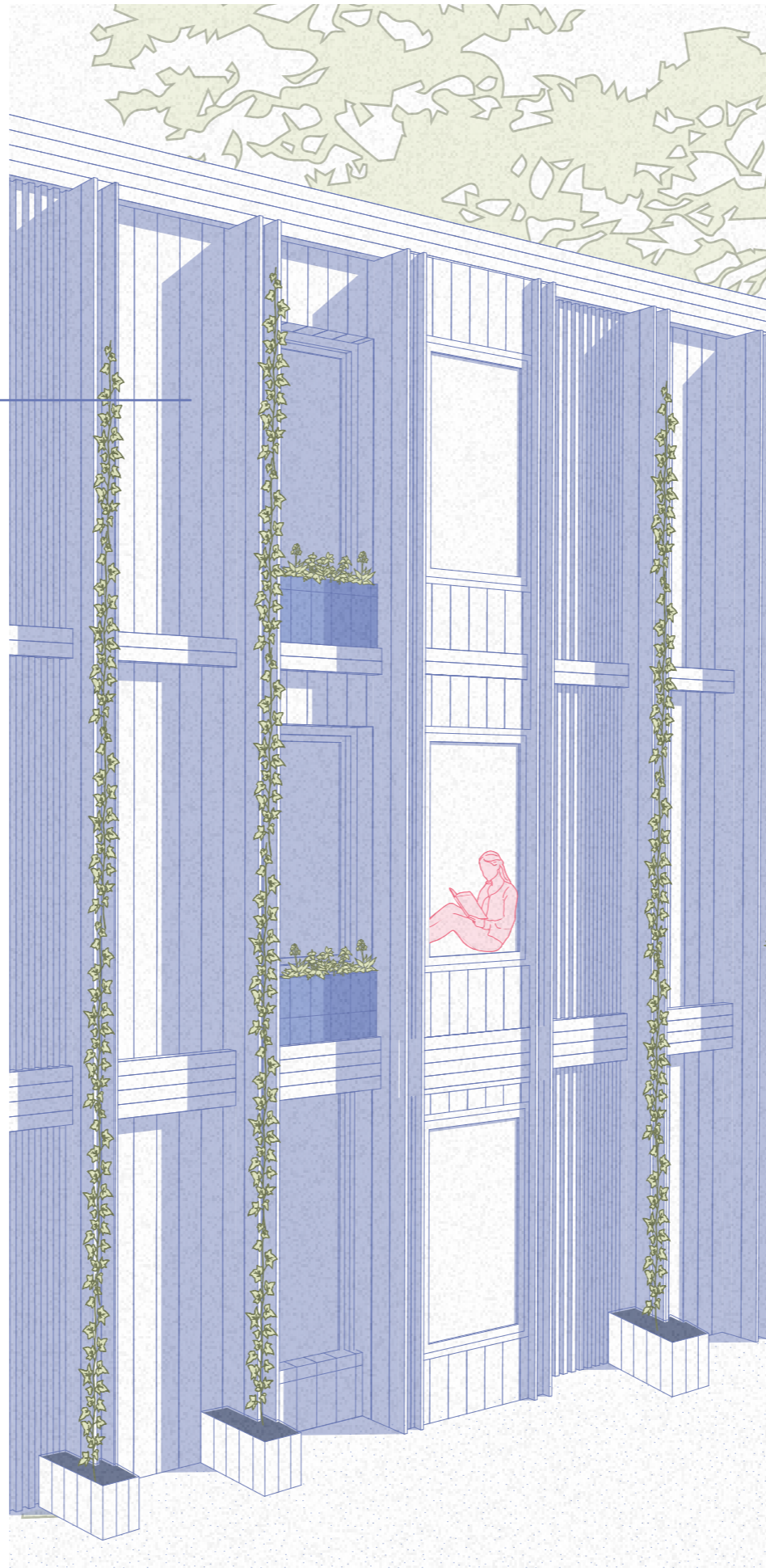


# Elevations



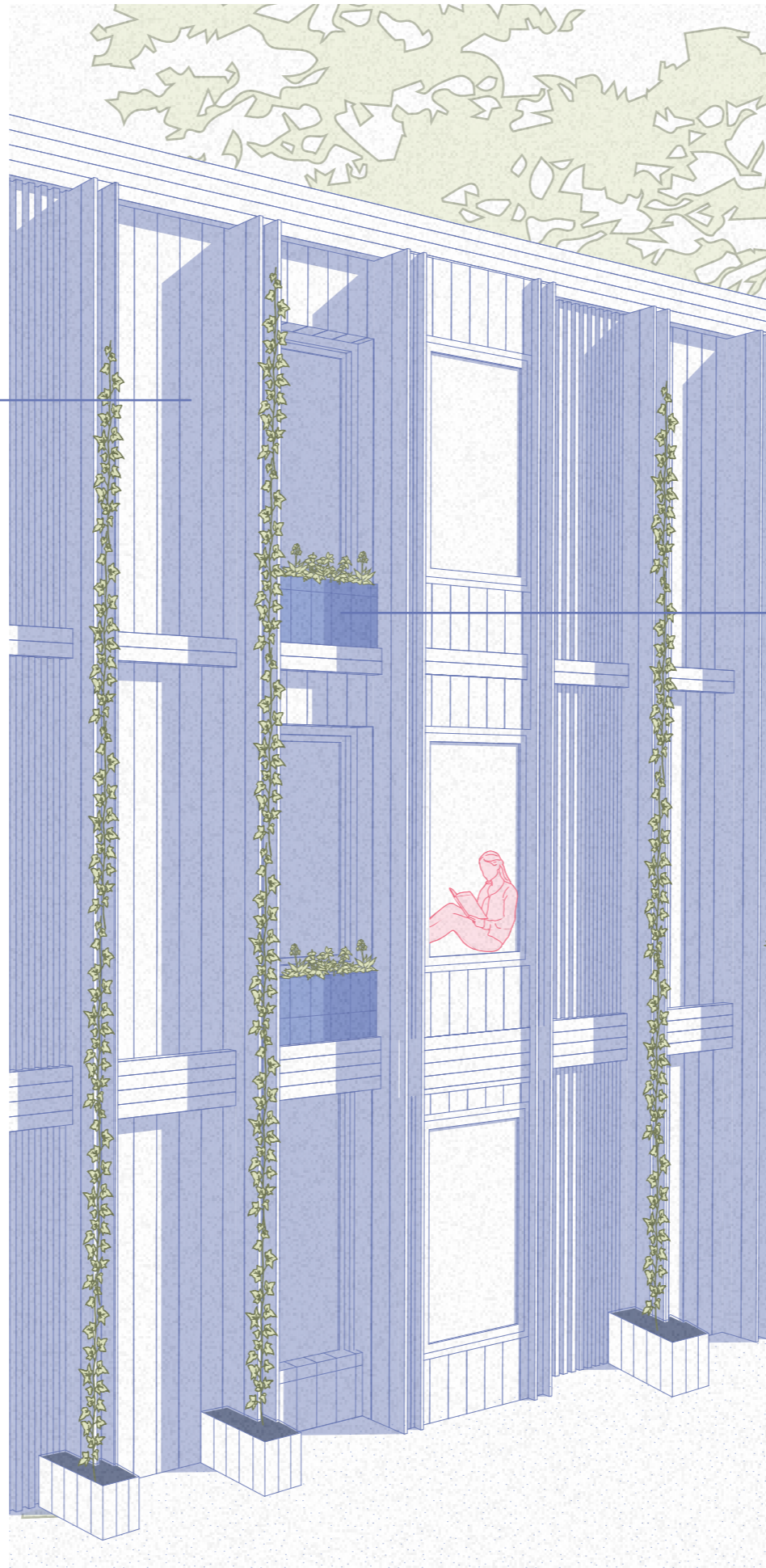
# Elements

Empty Panel



# Elements

Empty Panel

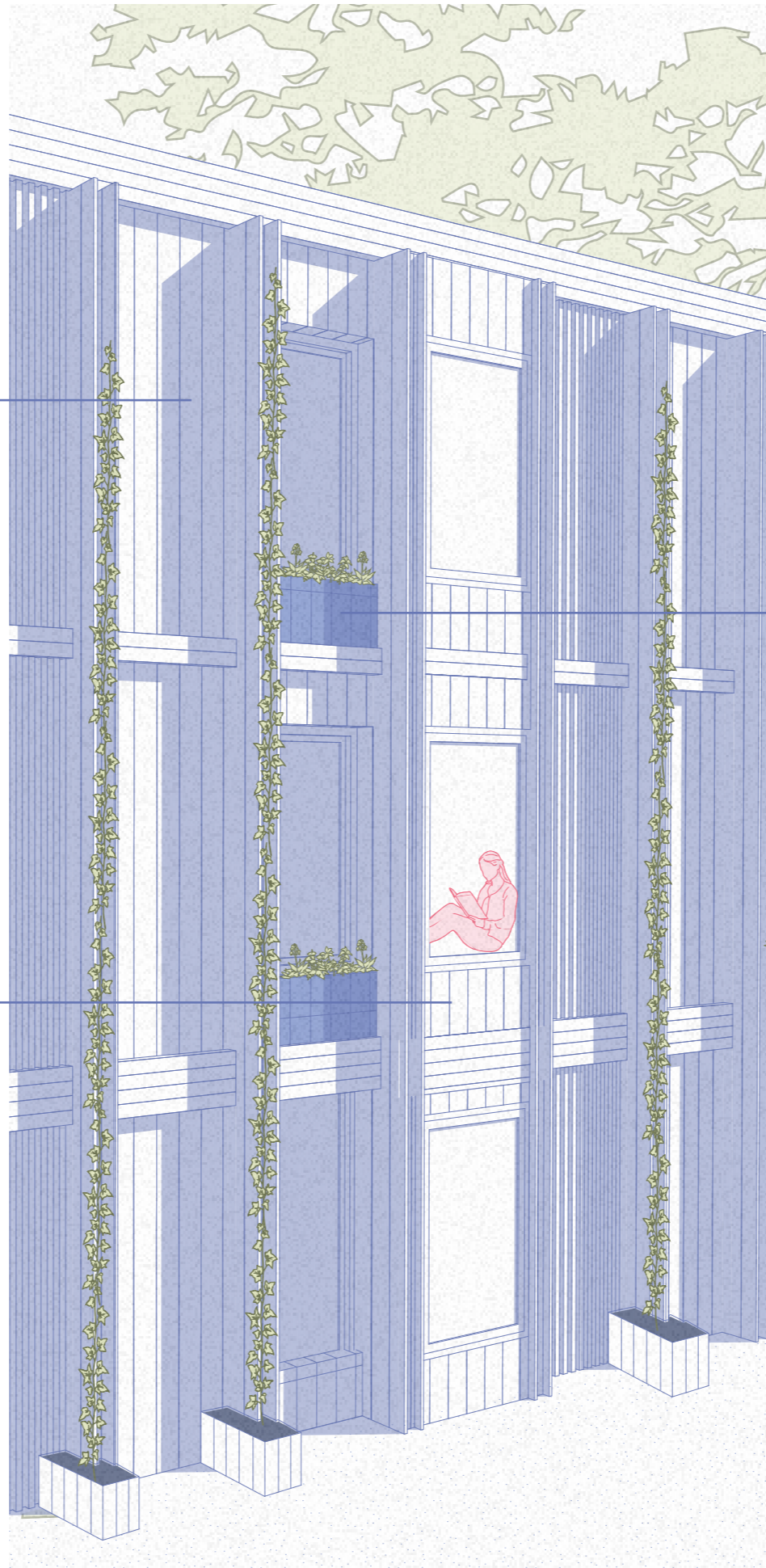


French Balcony with integrated planter

# Elements

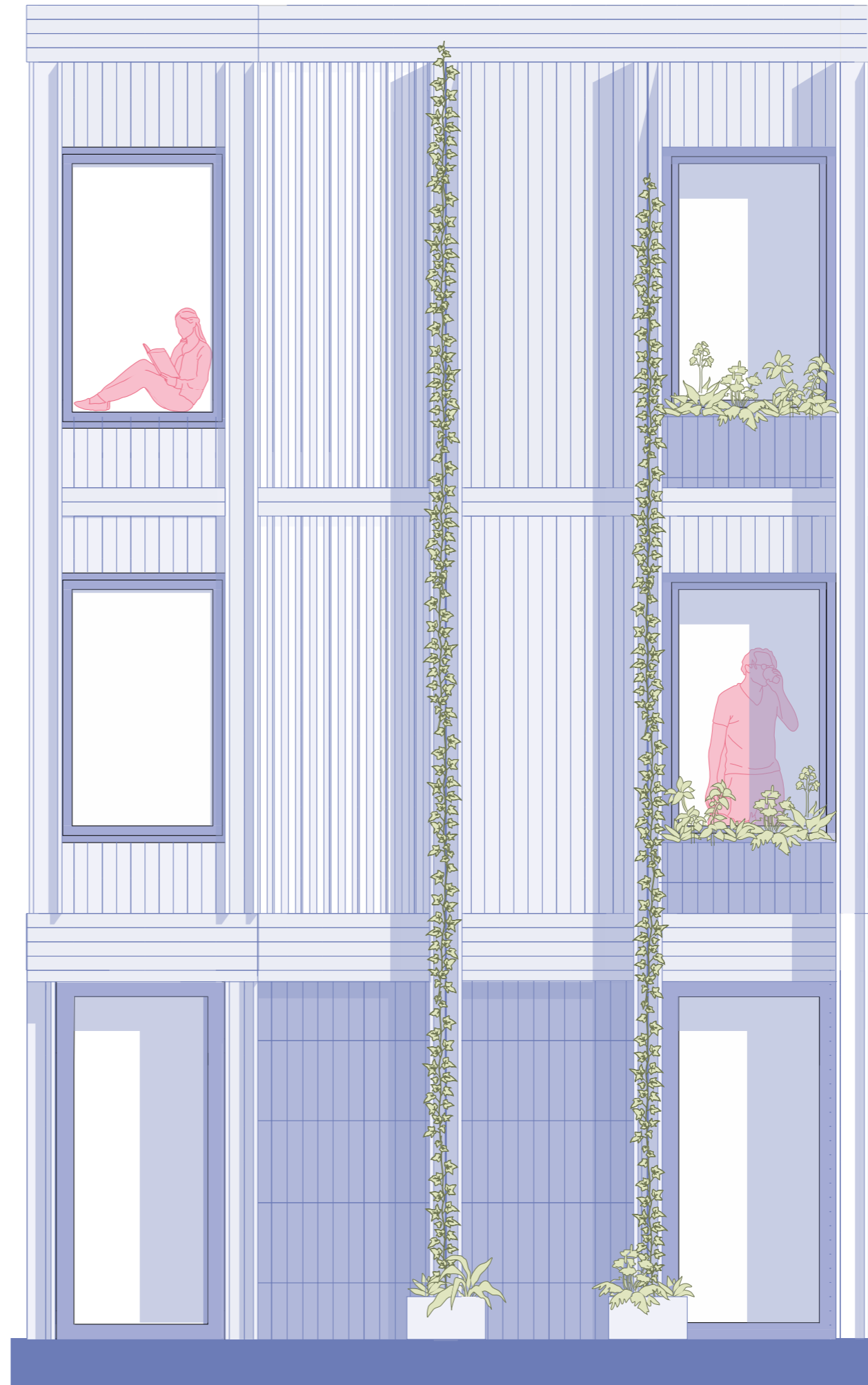
Empty Panel

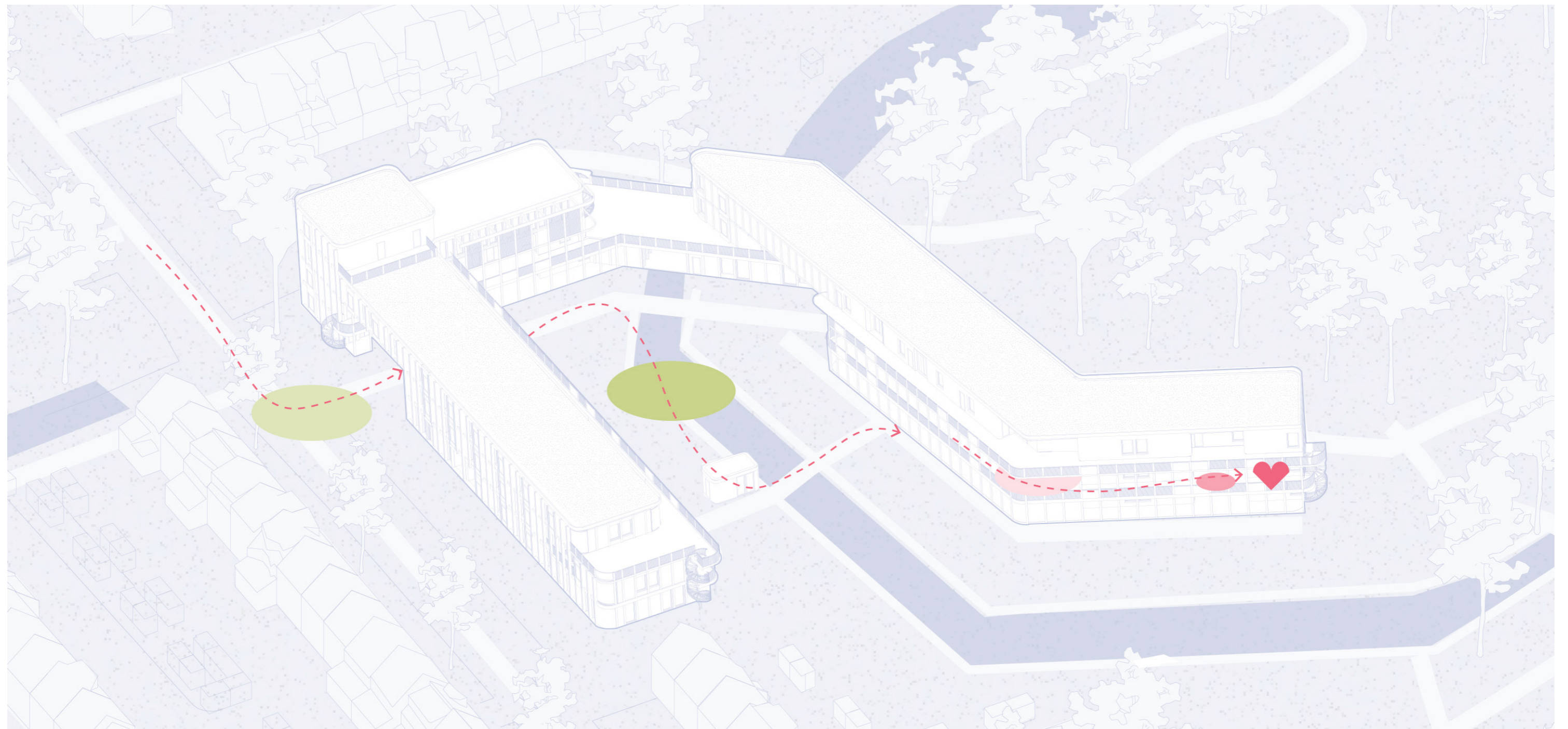
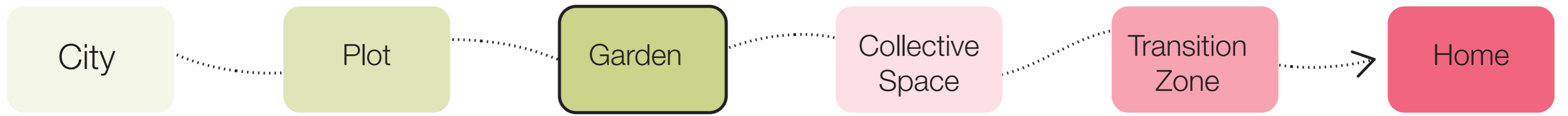
Bay Window



French Balcony with integrated planter

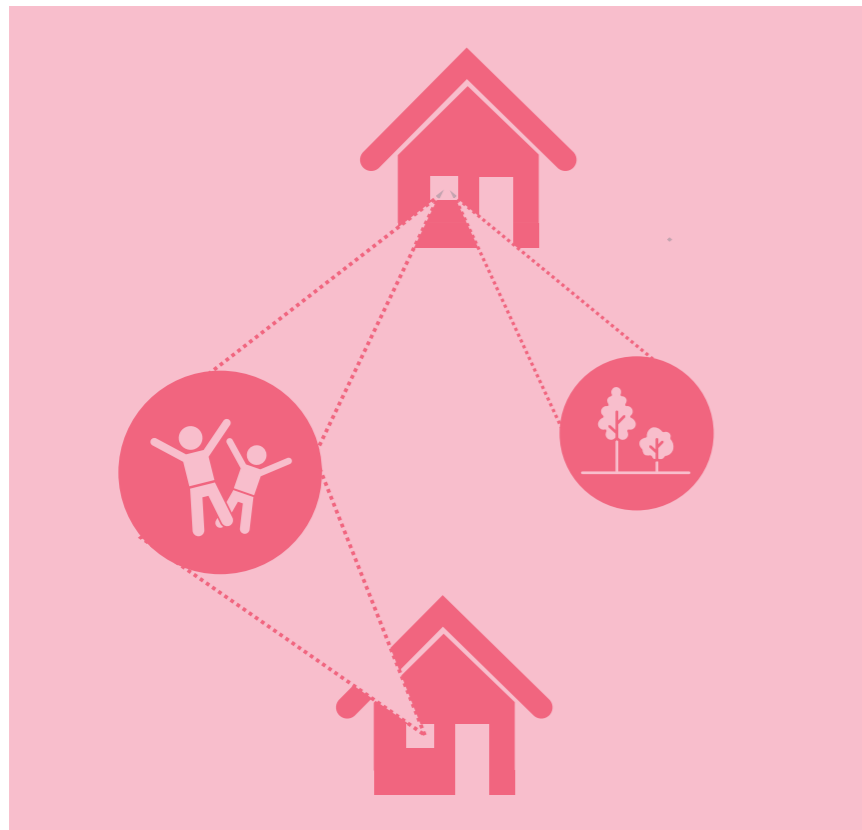
# Materials





# Main Design Principles

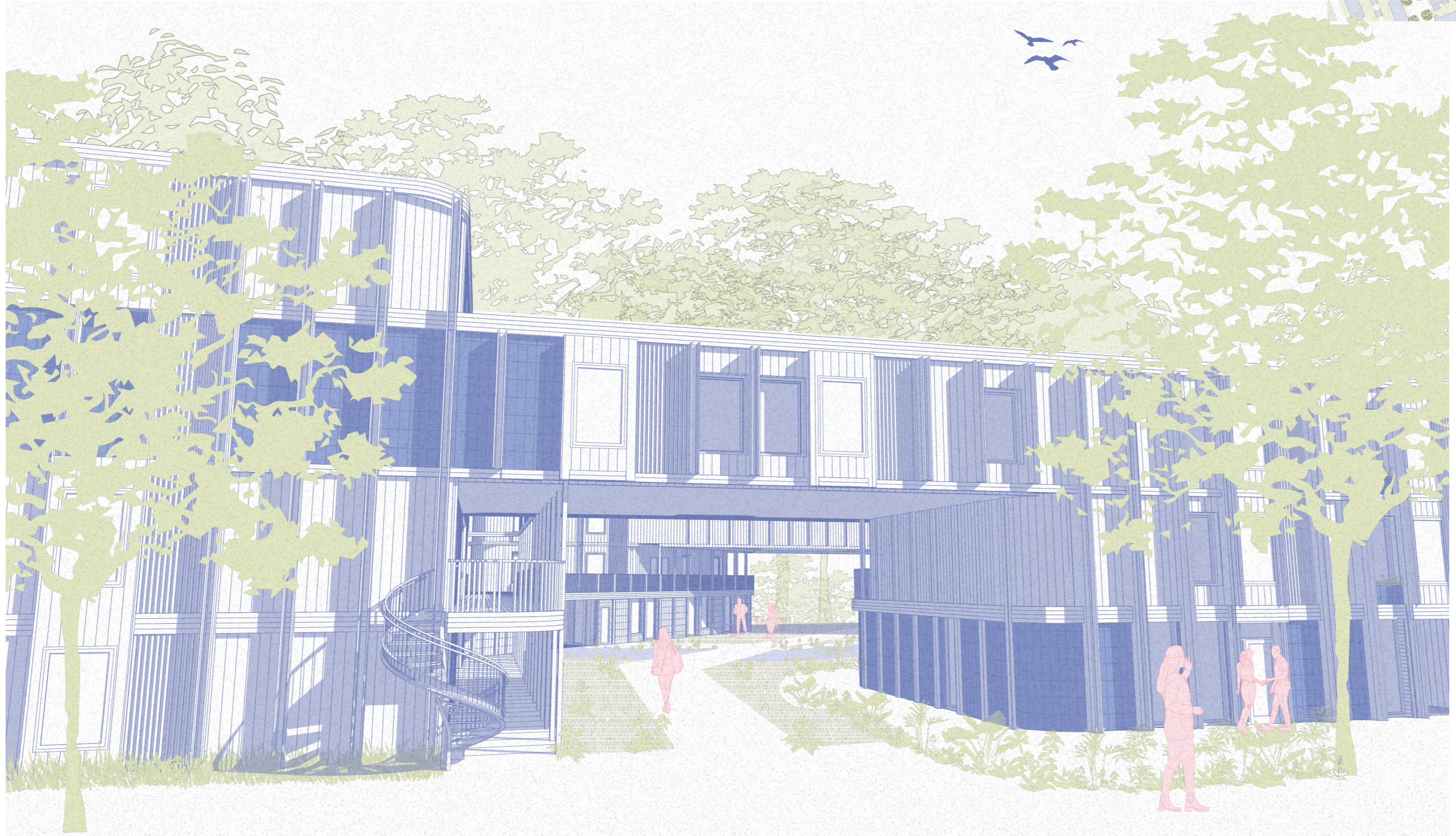
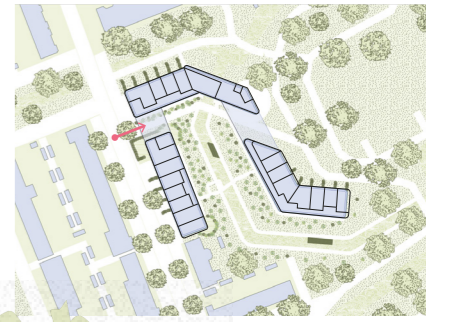
## Sightlines



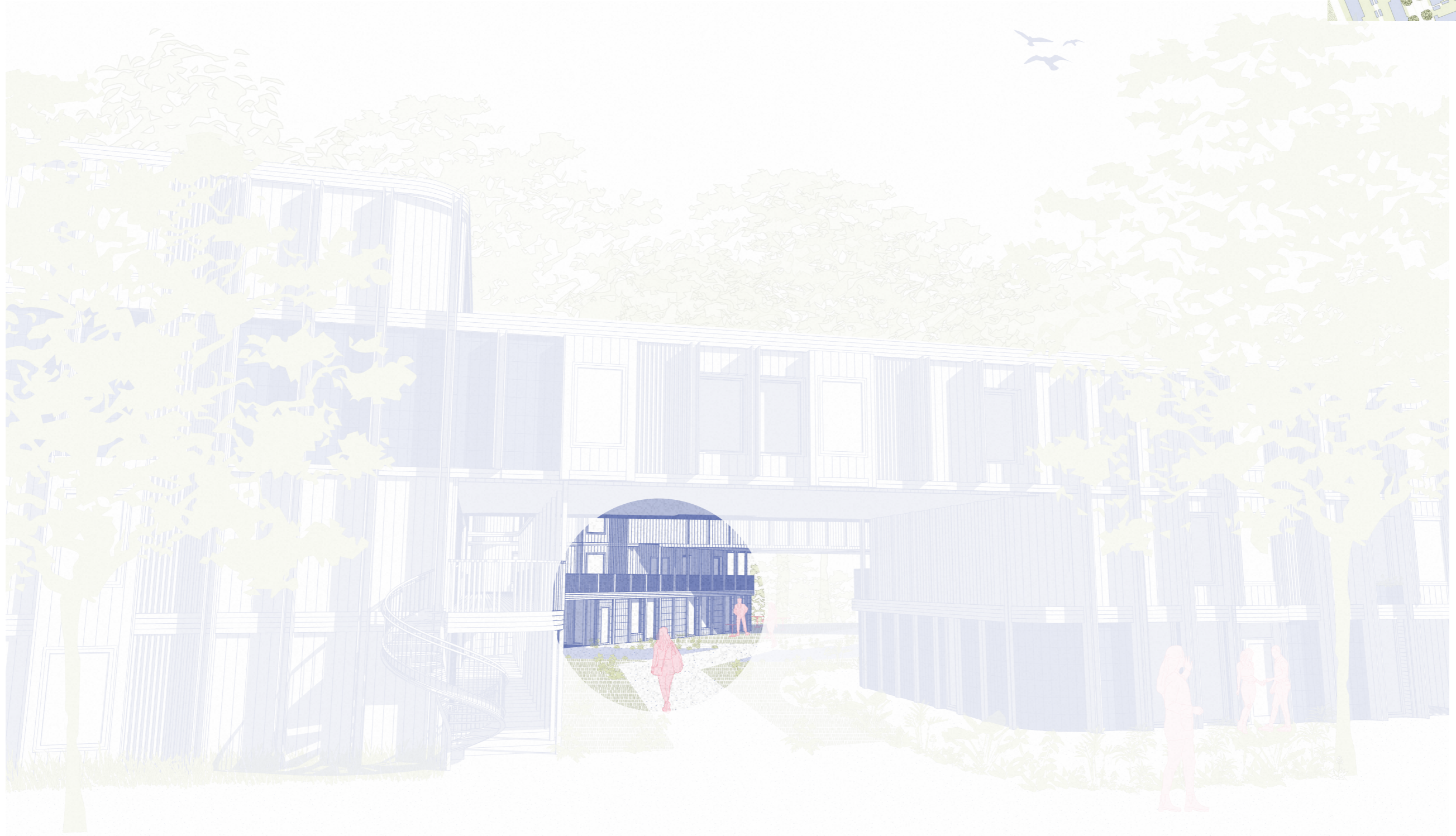
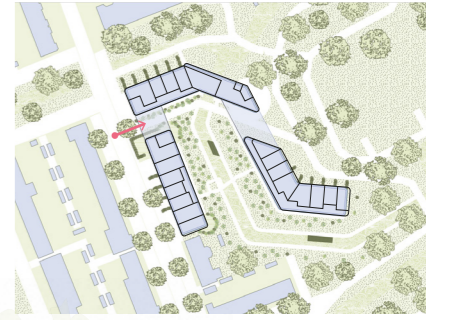
## Connection with everyday life



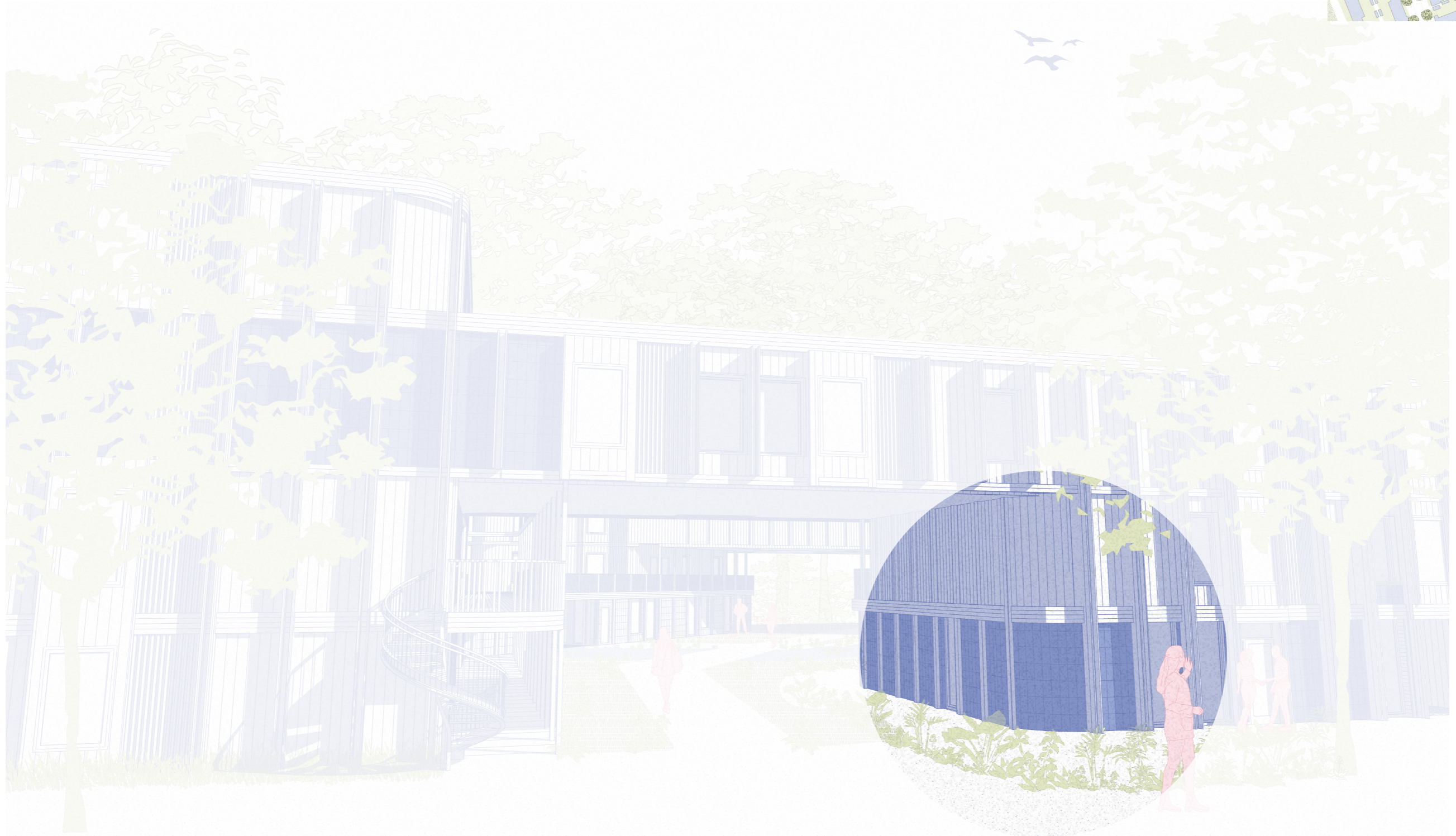
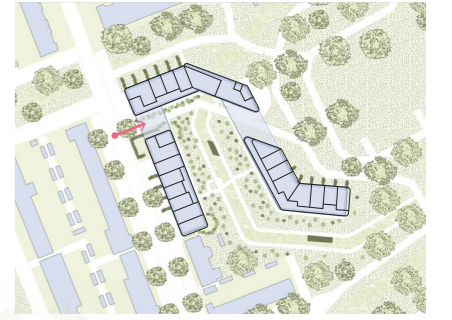
# View from the entrance



# View from the entrance



# View from the entrance



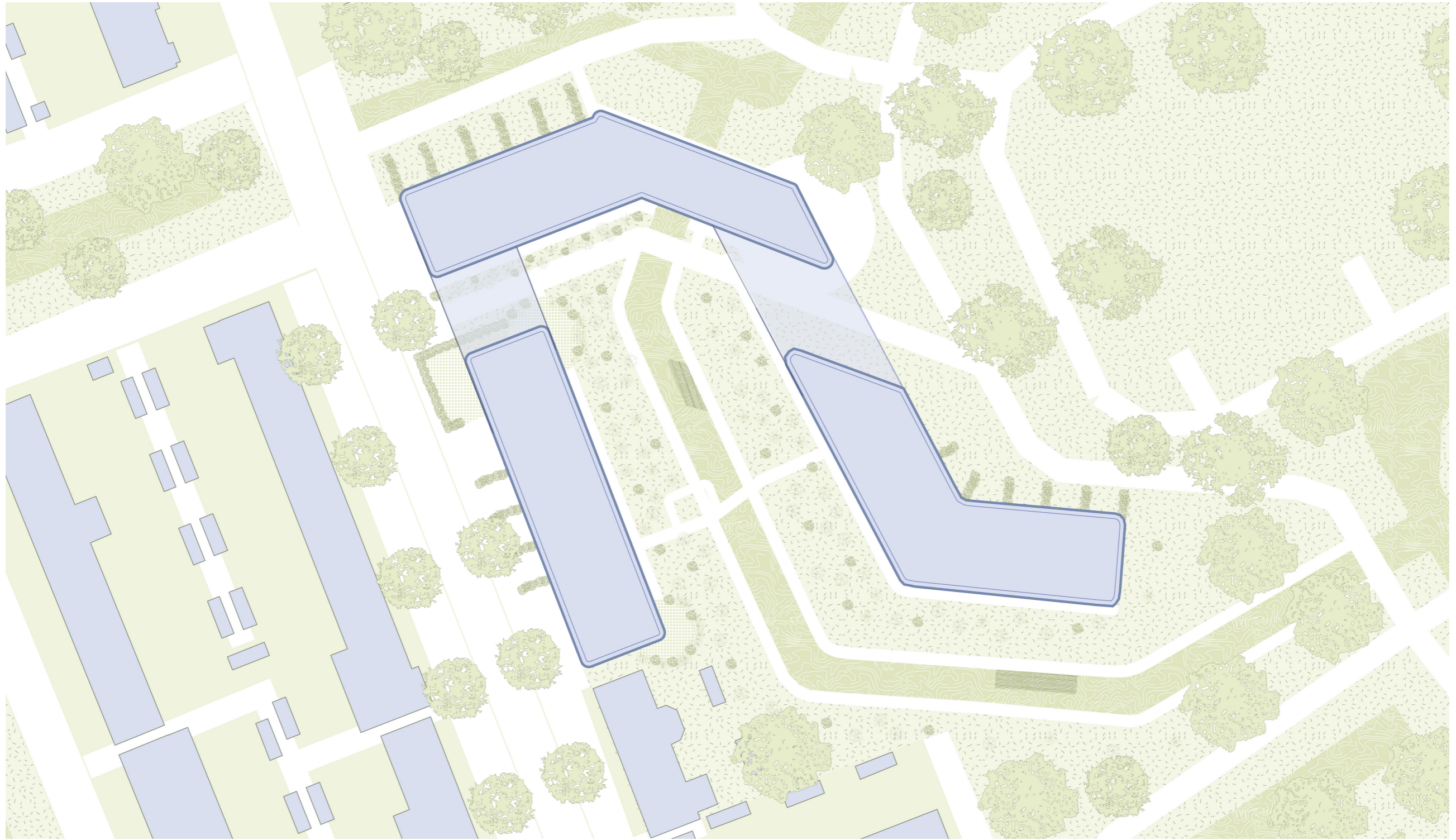
# Impression of Coffeehouse

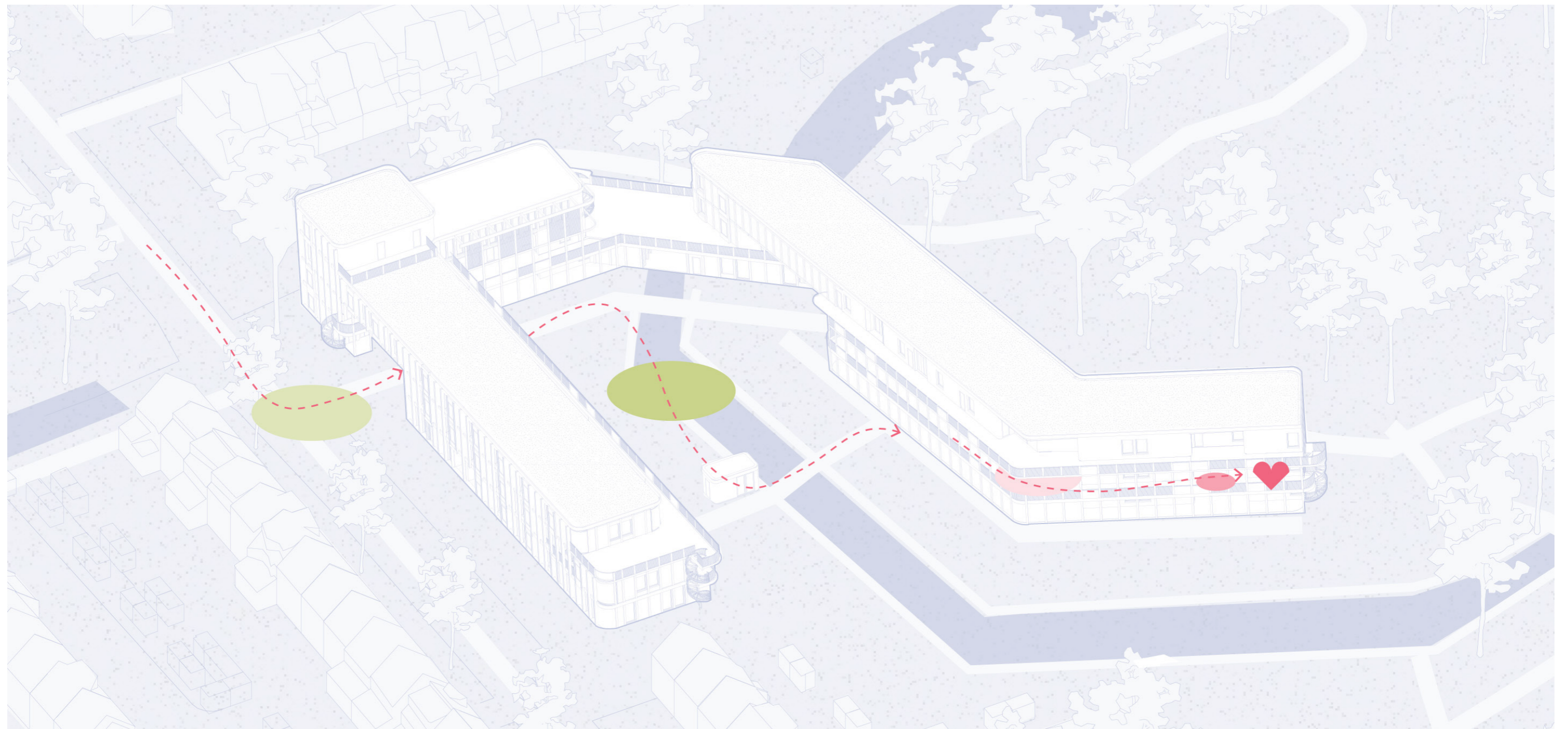
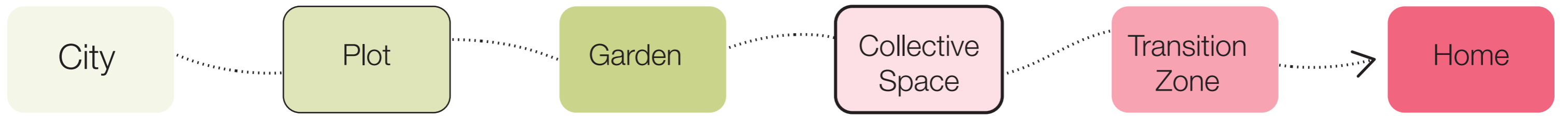


# Impression of Shared Living Room



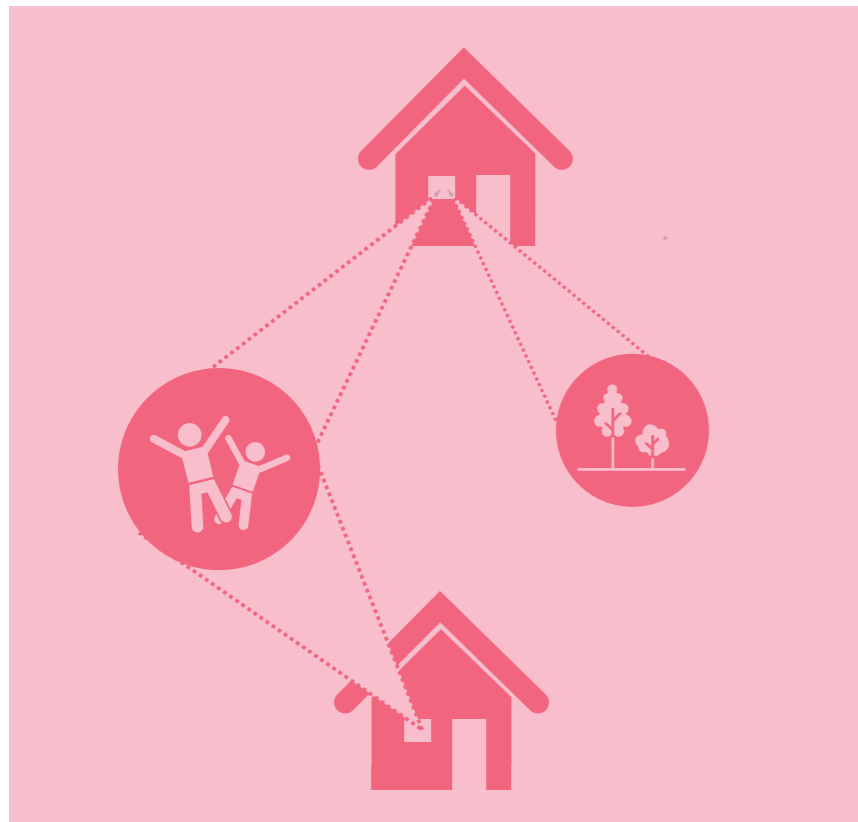
# Garden





# Main Design Principles

## Sightlines



## Social Interaction



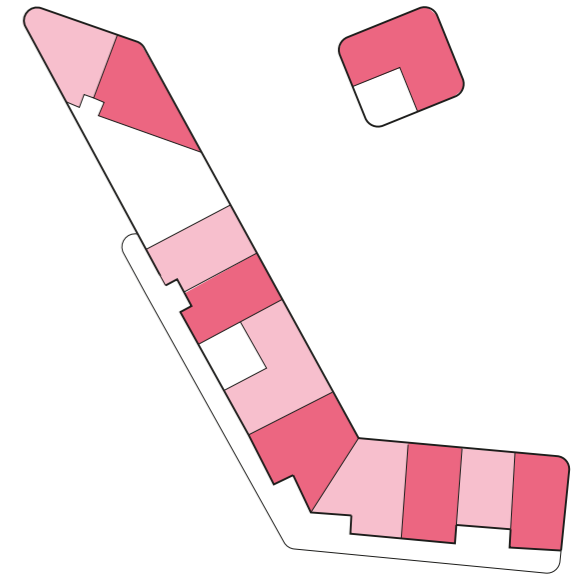
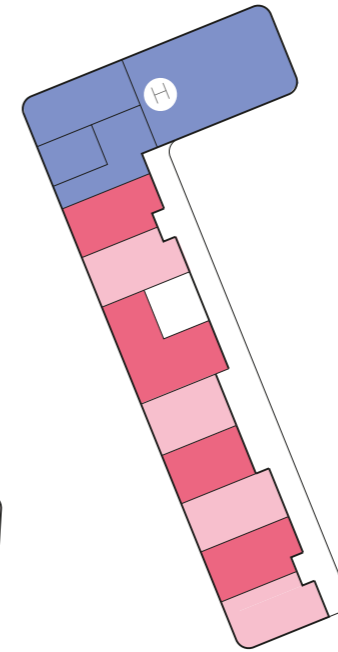
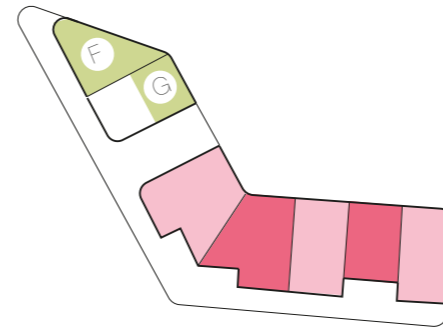
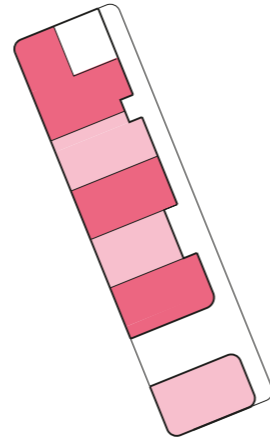
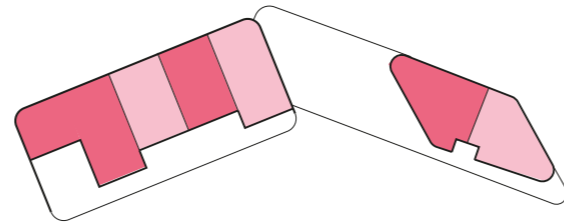
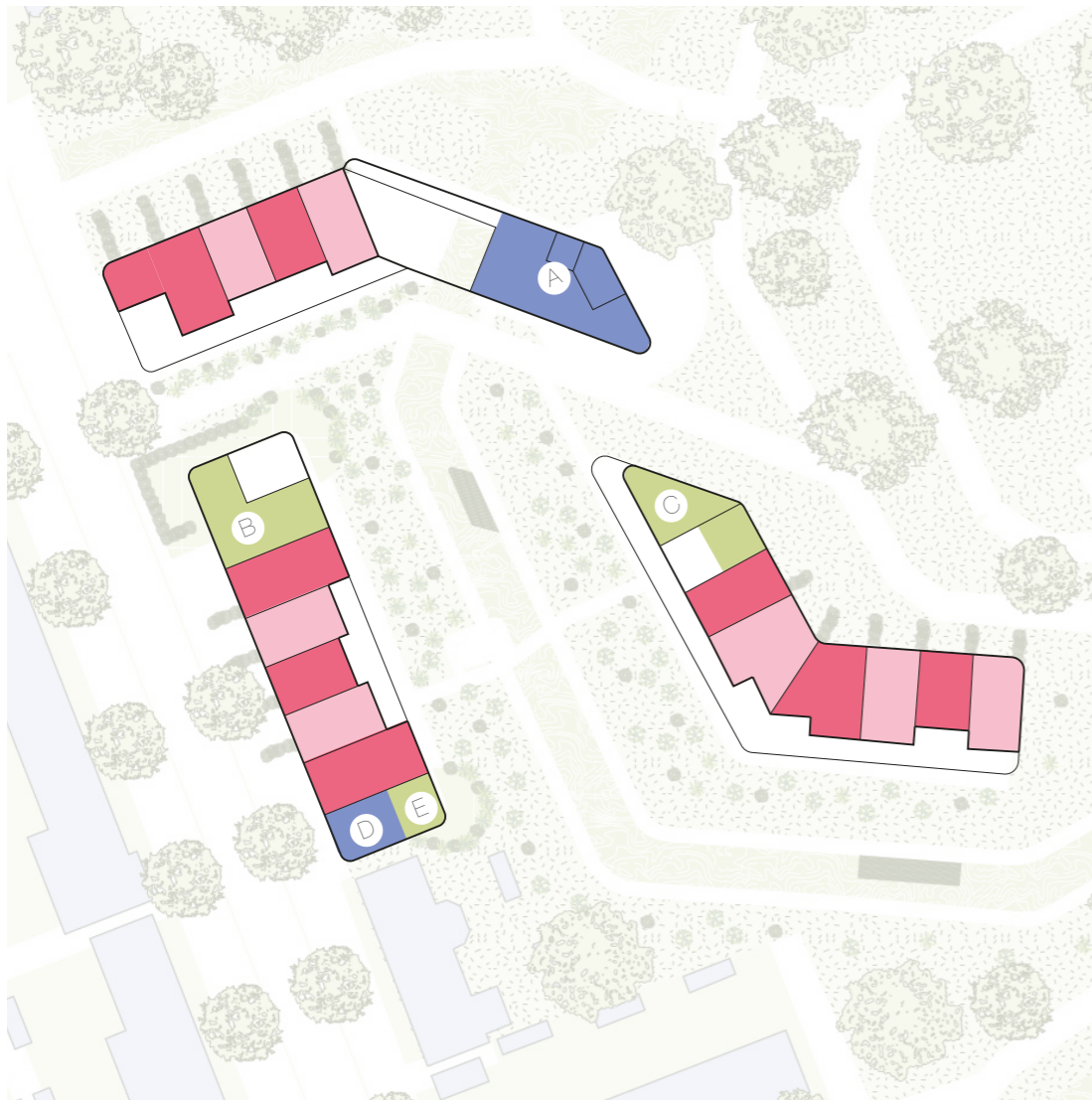
# Functions

Ground Floor

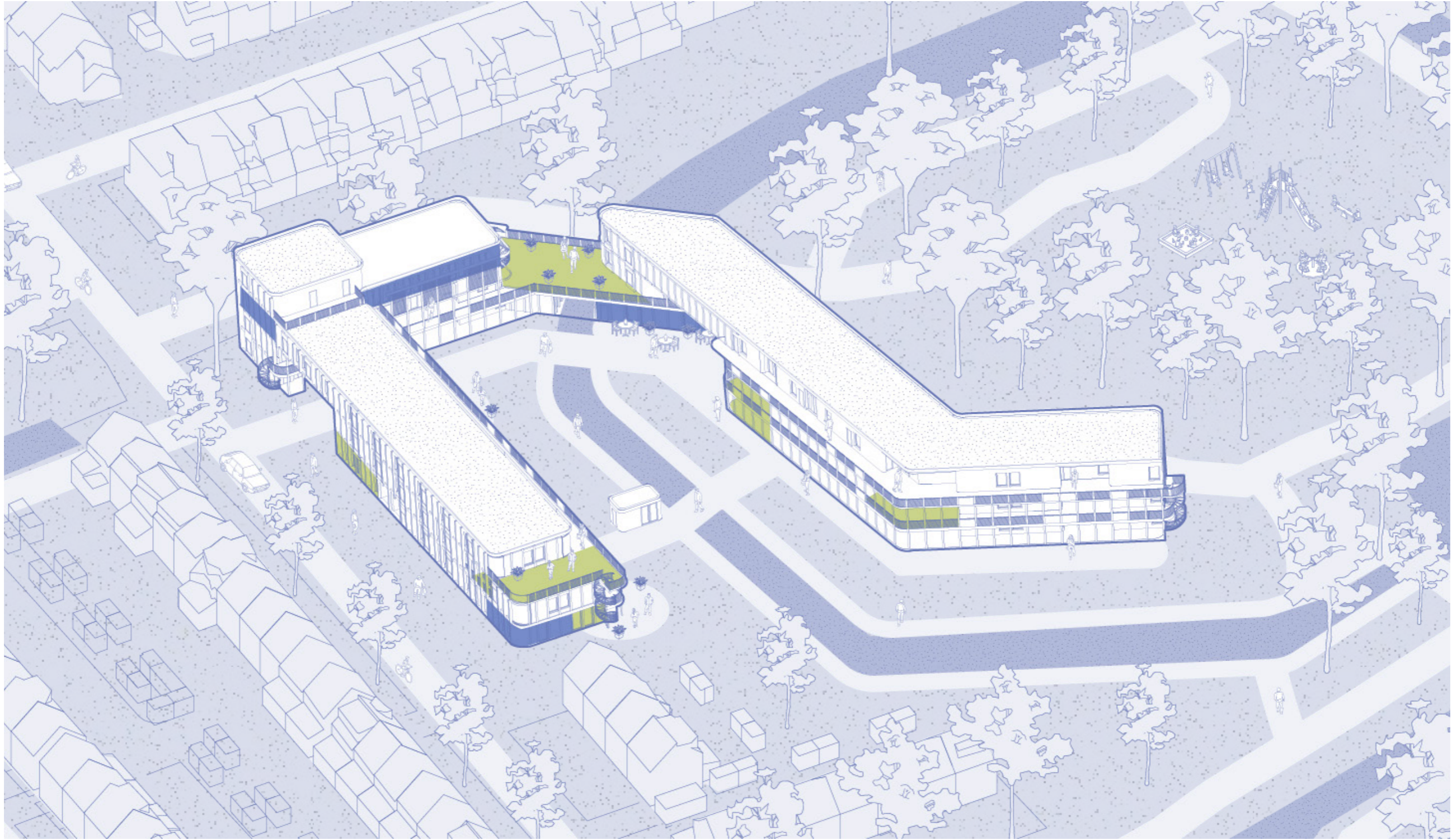
First Floor

Second Floor

Third Floor

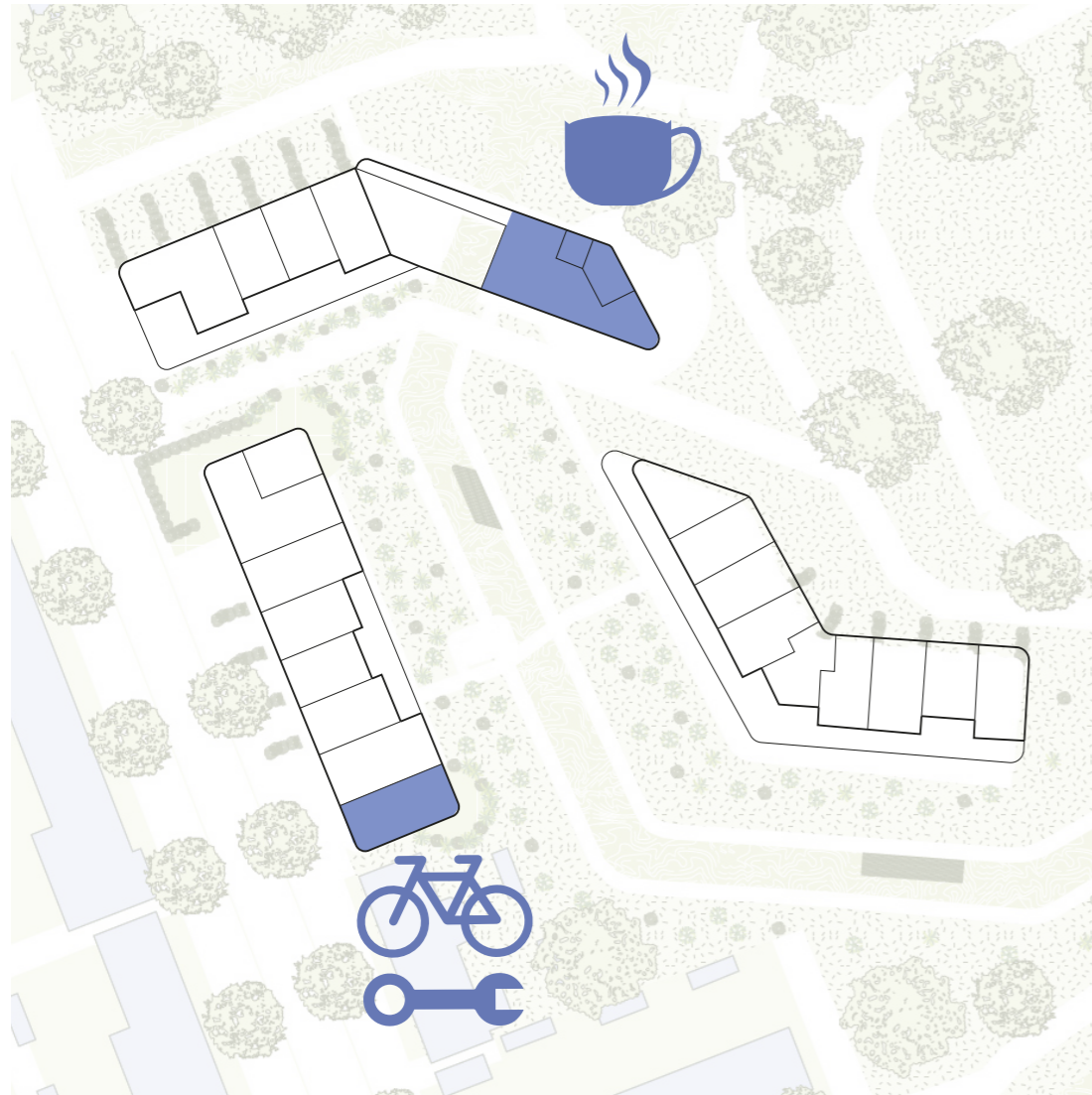


# Functions in axo

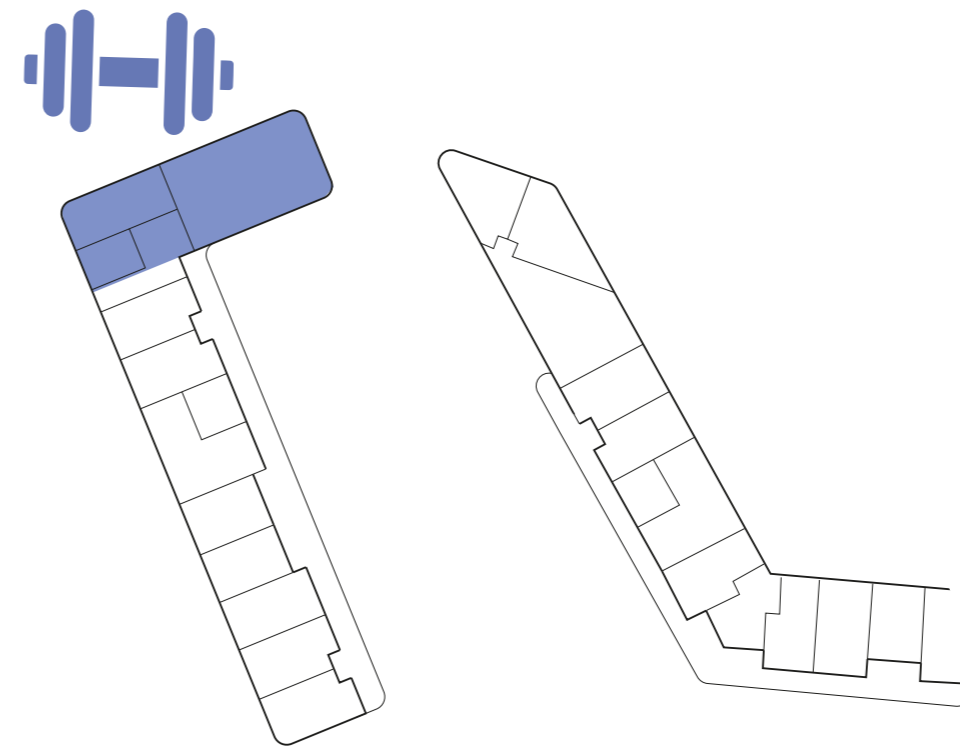


# Public spaces for the neighbourhood

## Ground Floor



## Second Floor



# Coffeehouse



# Coffeehouse



# Impression of the Coffeehouse



# Impression of the Coffeehouse



# Impression of the Coffeehouse

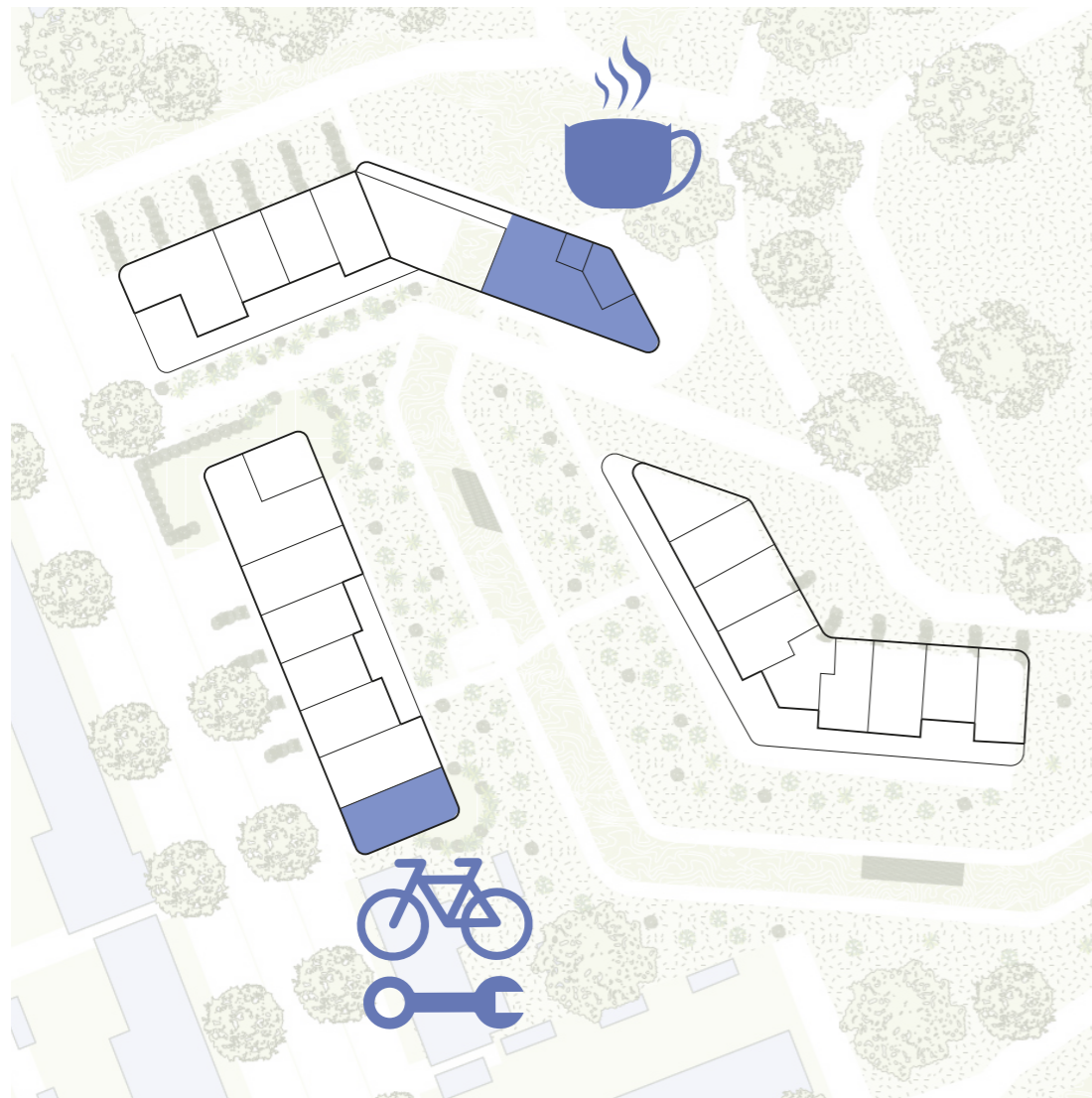


# Public spaces for the neighbourhood

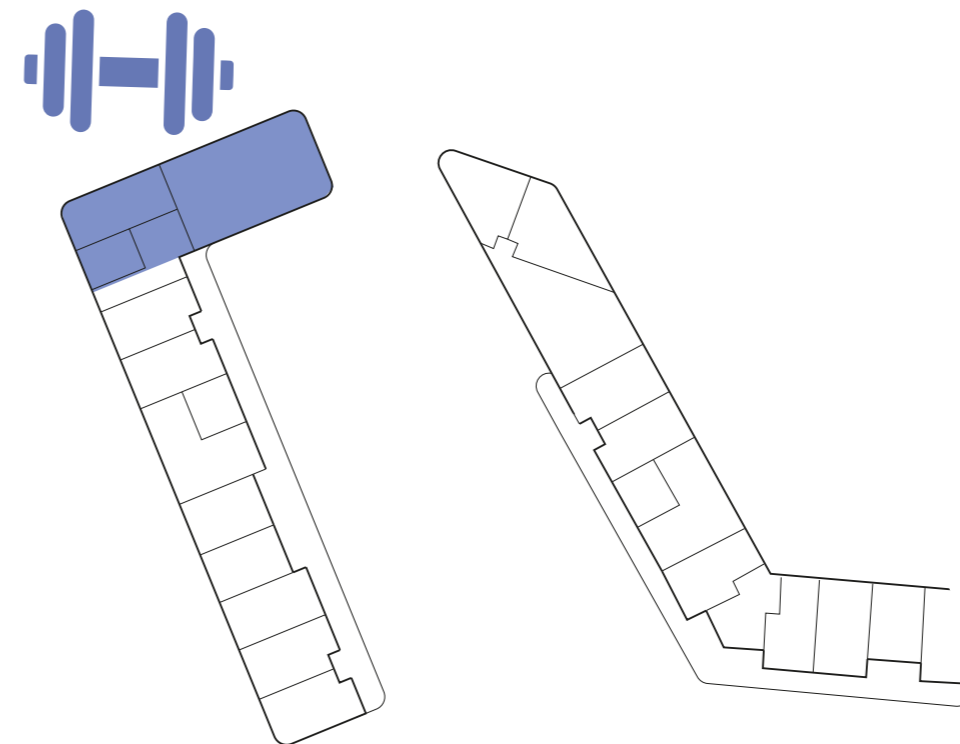
Day Activities



## Ground Floor



## Second Floor



# Bicycle Repair Shop



# Bicycle Repair Shop

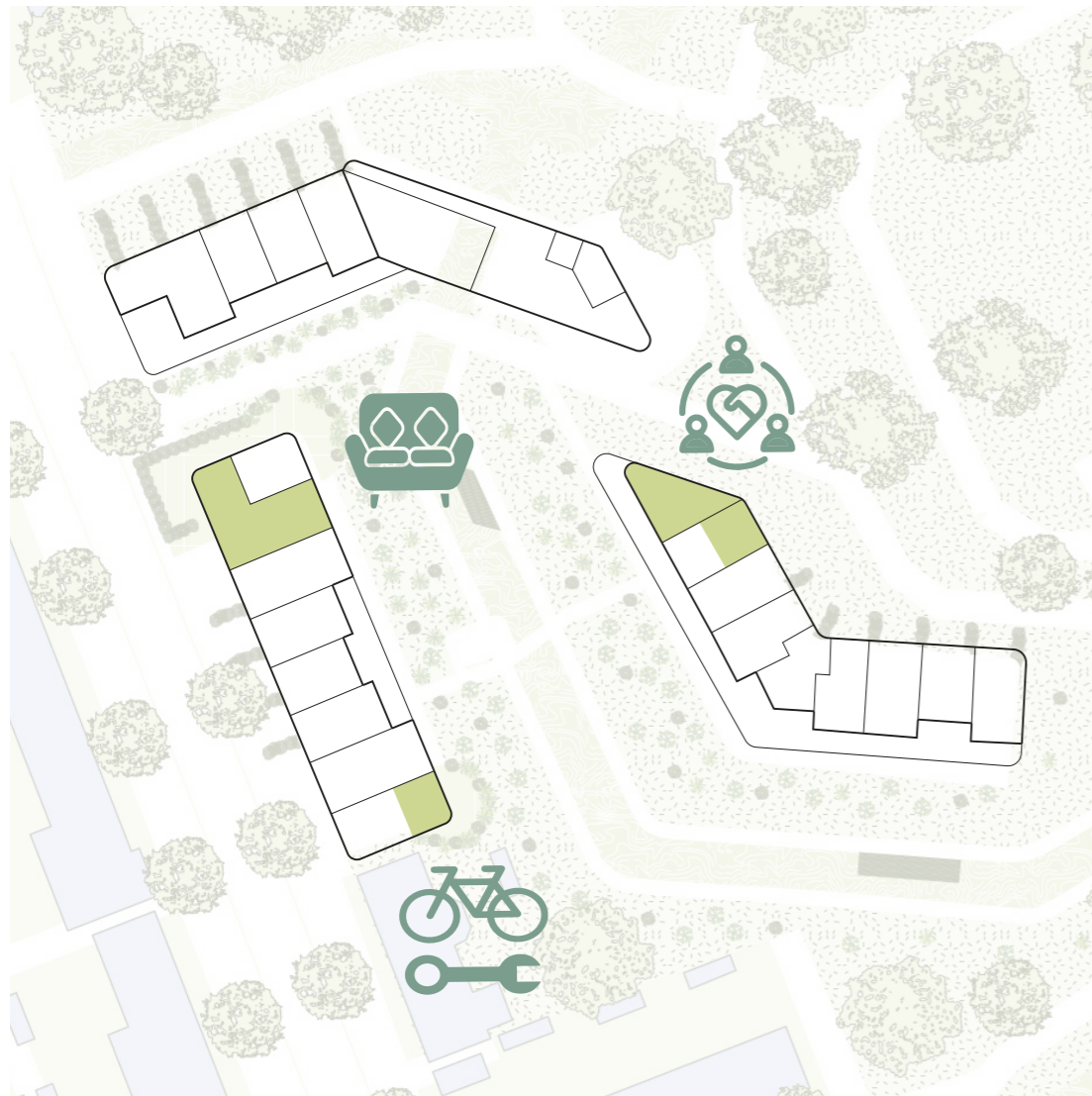


# Impression of Bicycle Repair shop

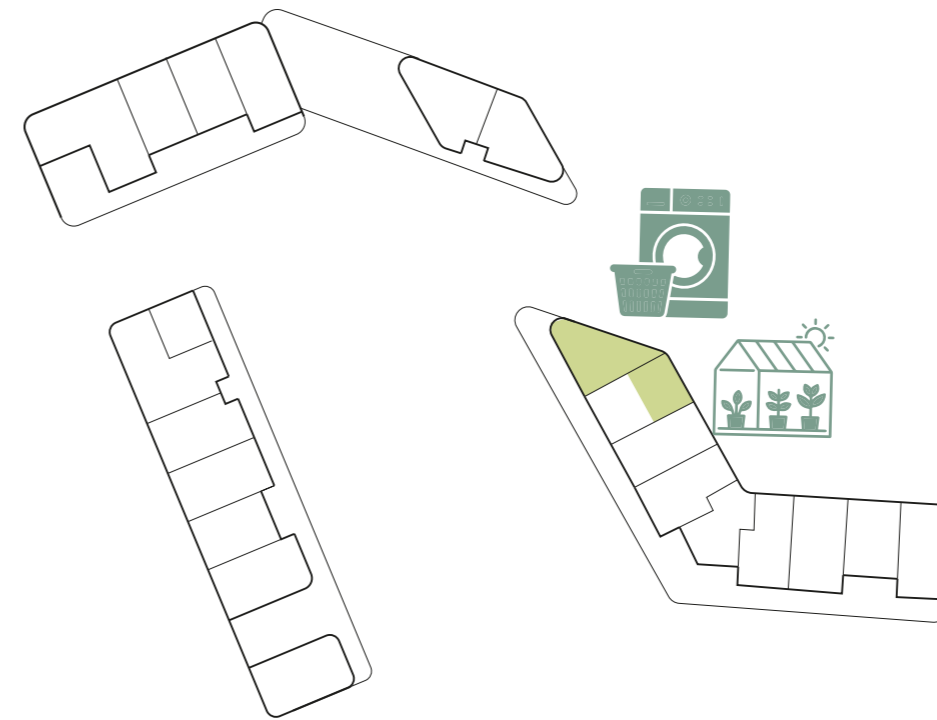


# Collective spaces for the residents

## Ground Floor



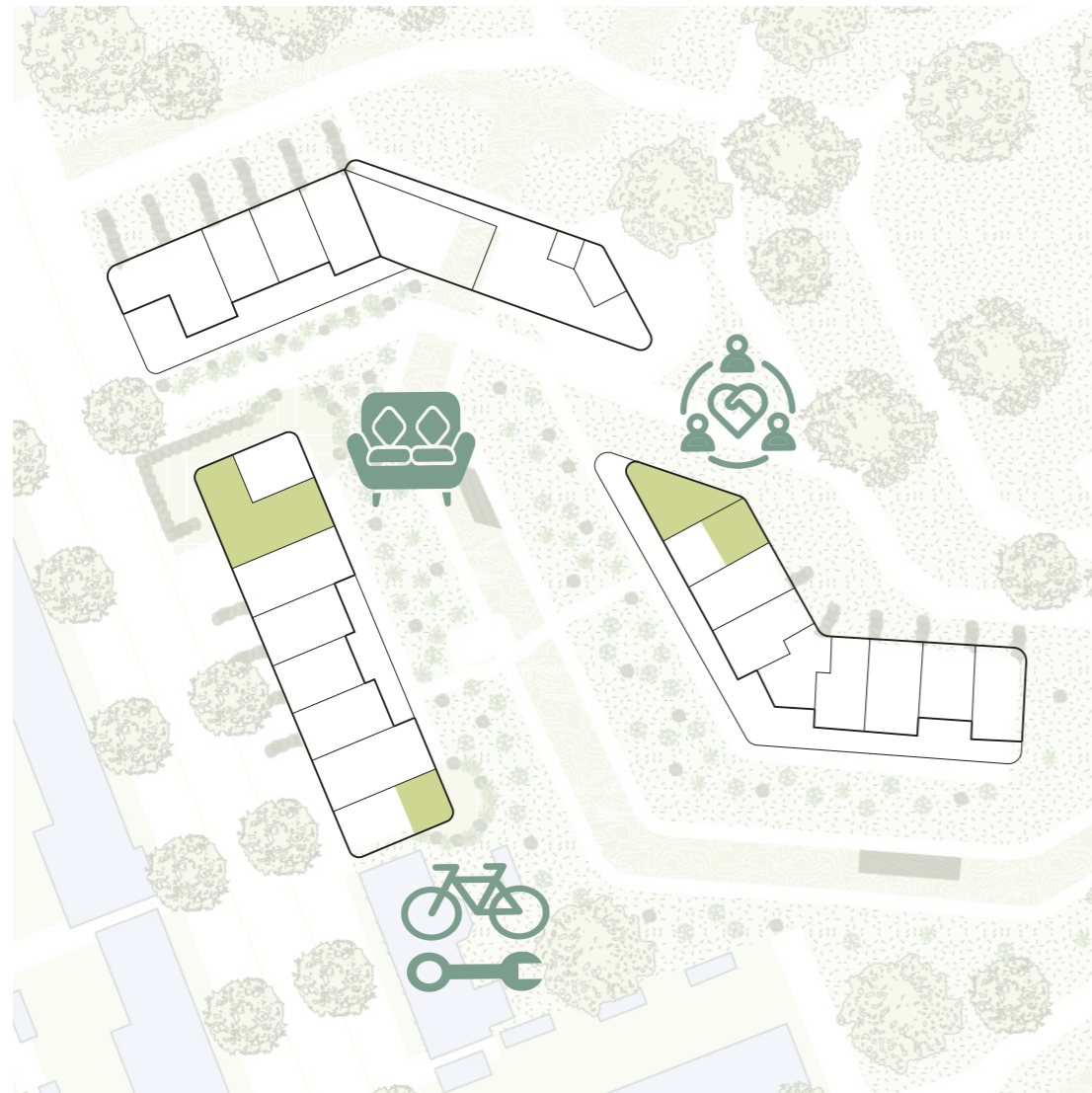
## First Floor



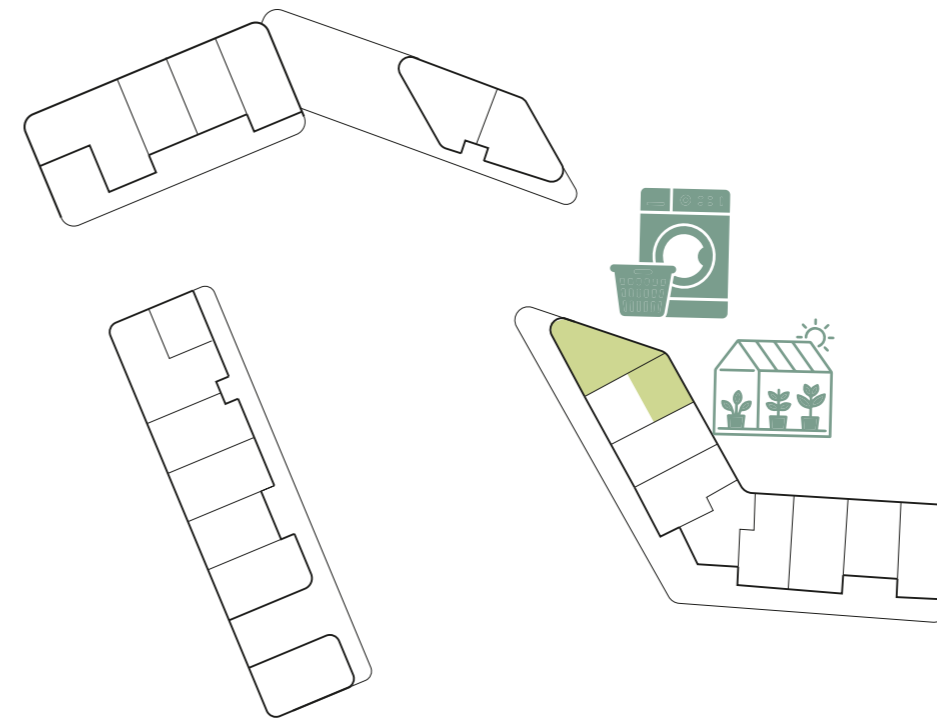
# Collective spaces for the residents



## Ground Floor



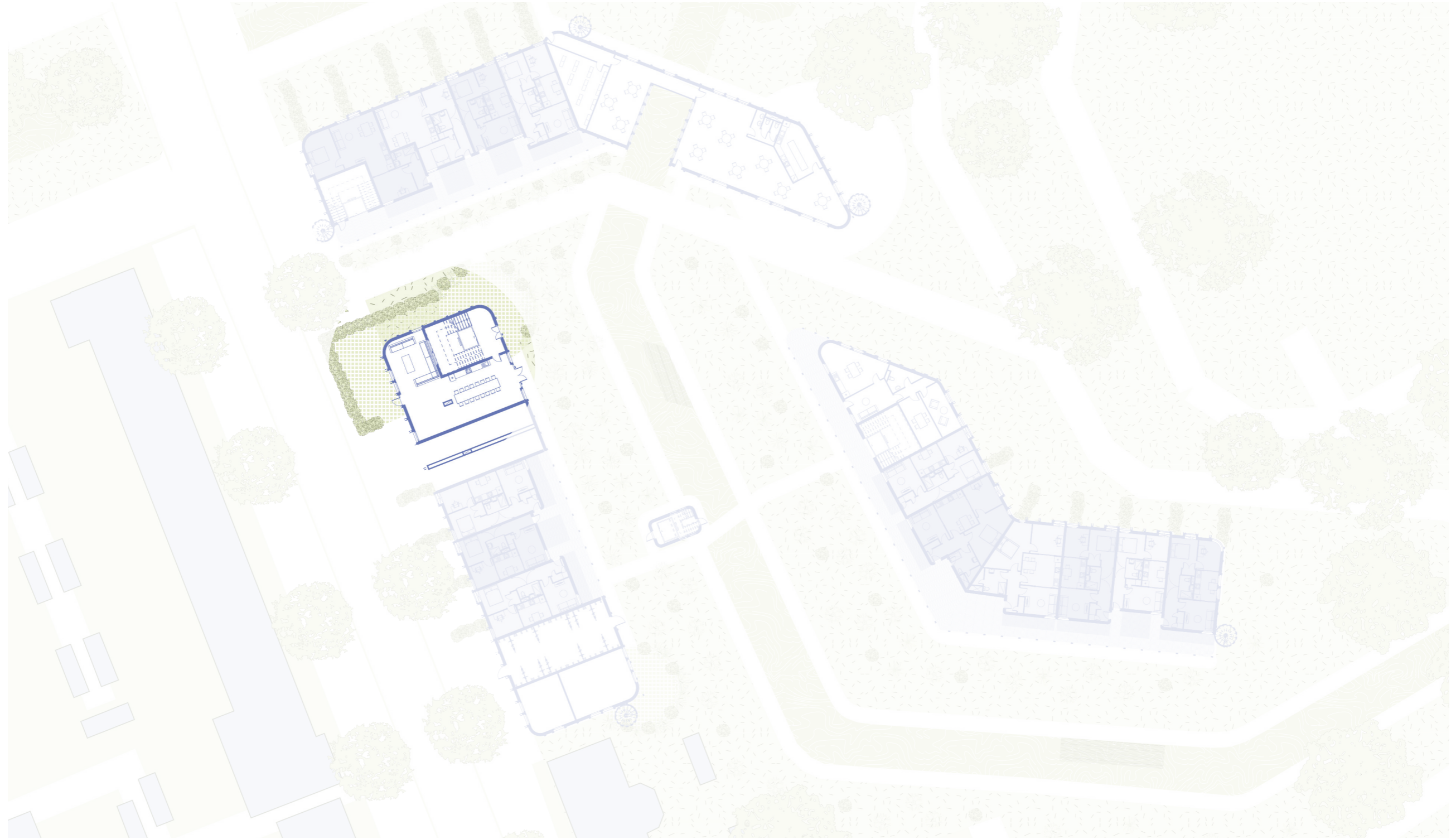
## First Floor



# Shared Living Room



# Shared Living Room



# Impression of Shared Living Room



# Impression of Shared Living Room



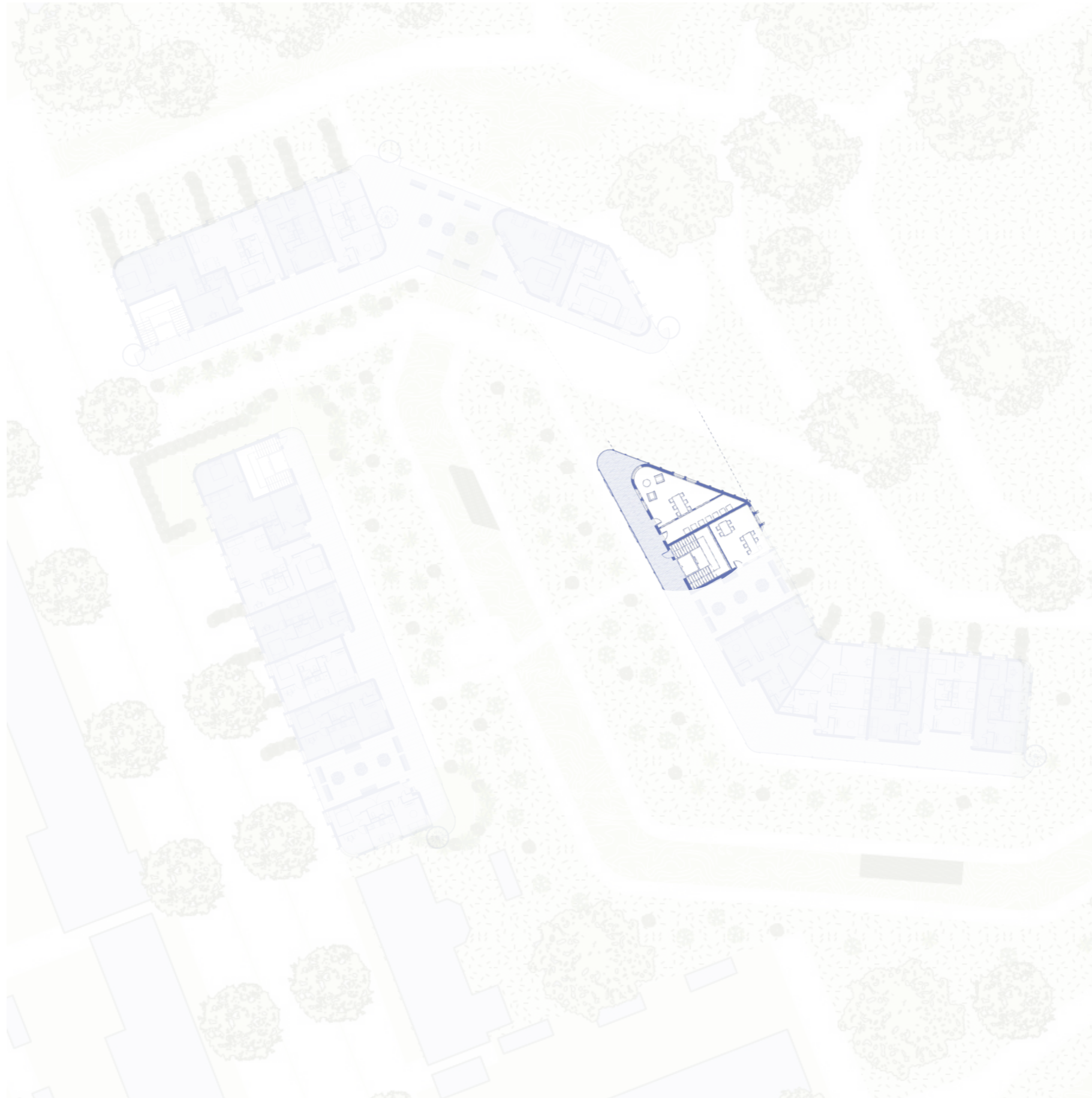
# Impression of Shared Living Room



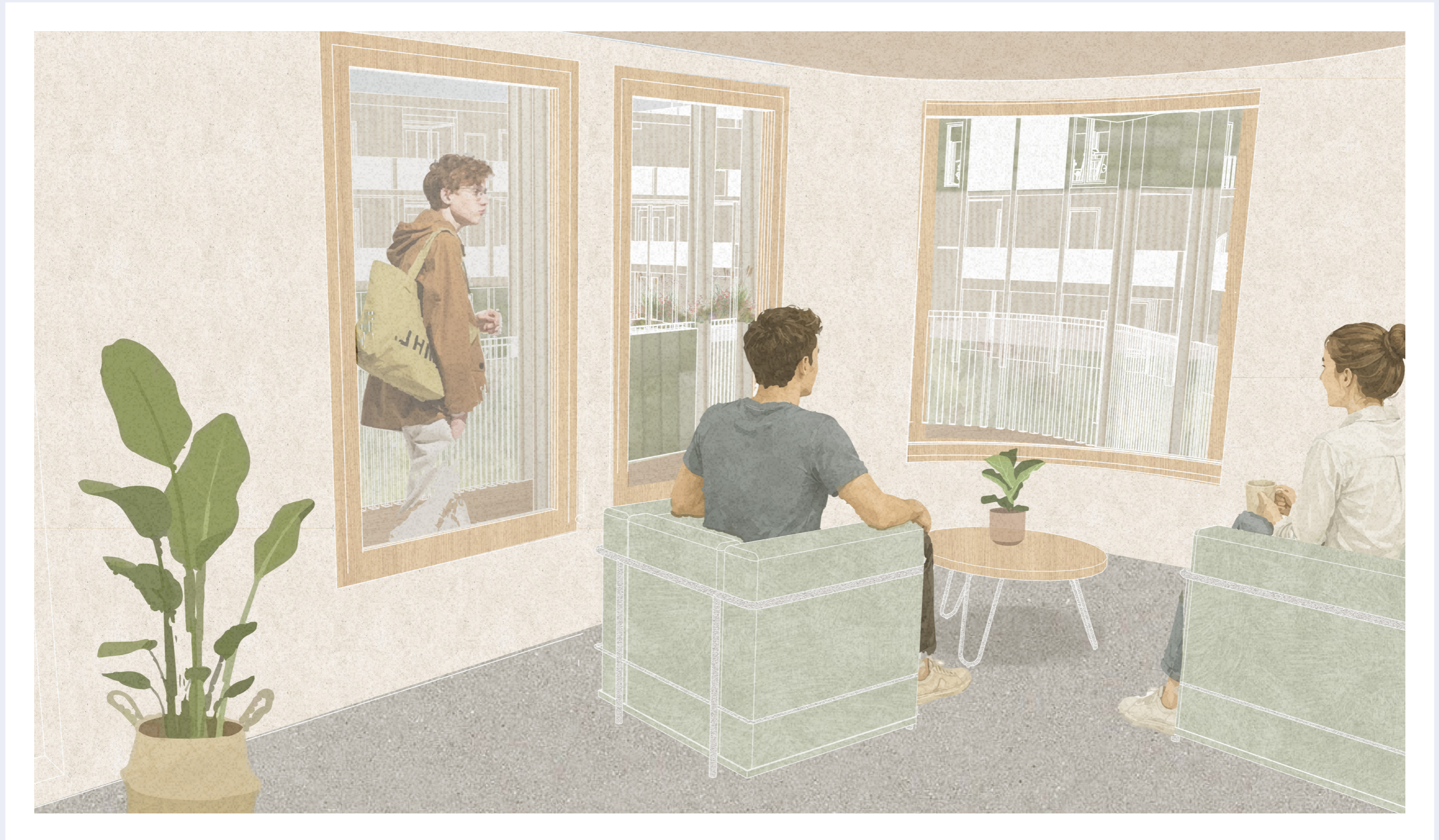
# Shared Laundry Room



# Shared Laundry Room



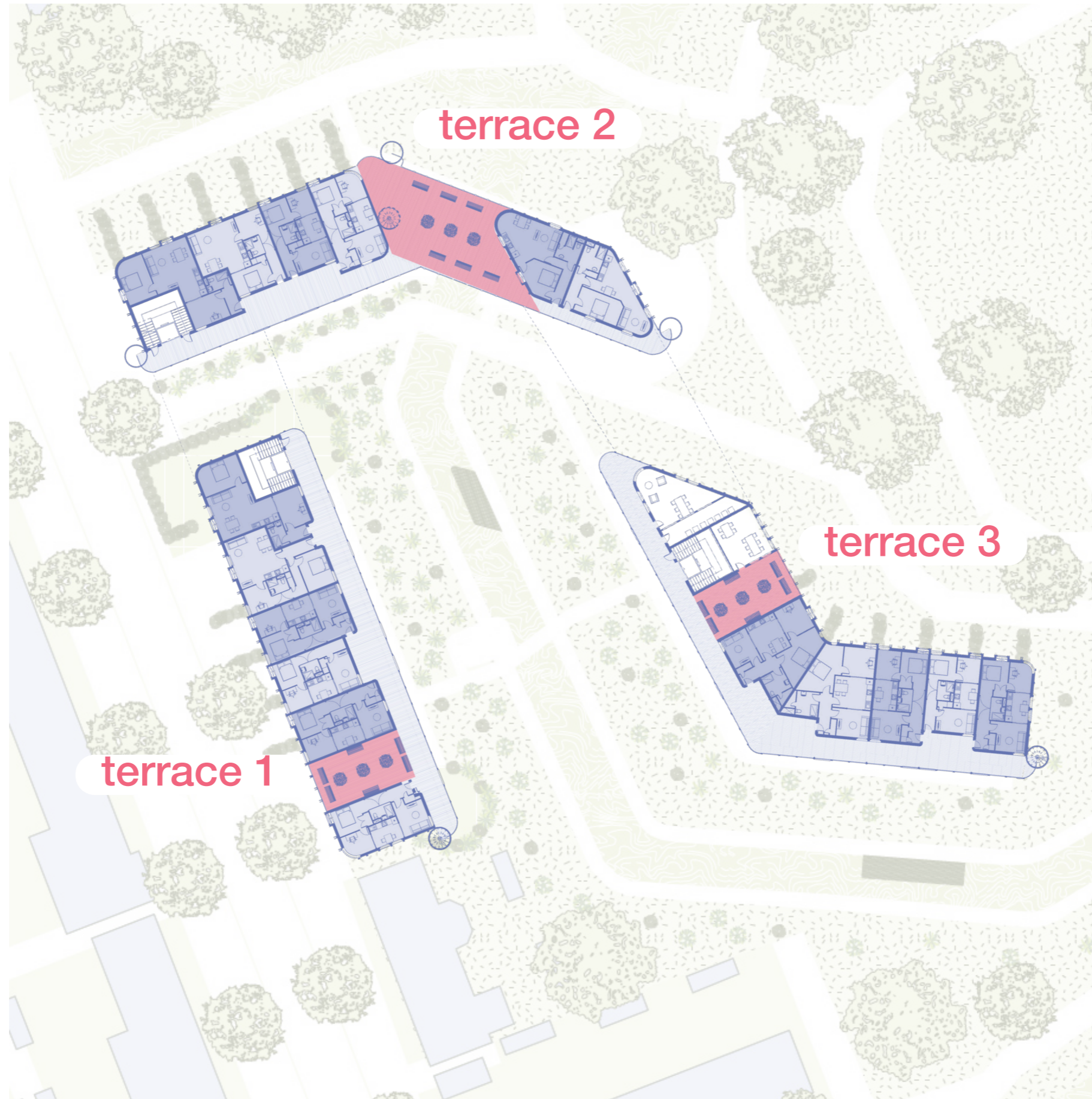
# Impression of Laundry Room



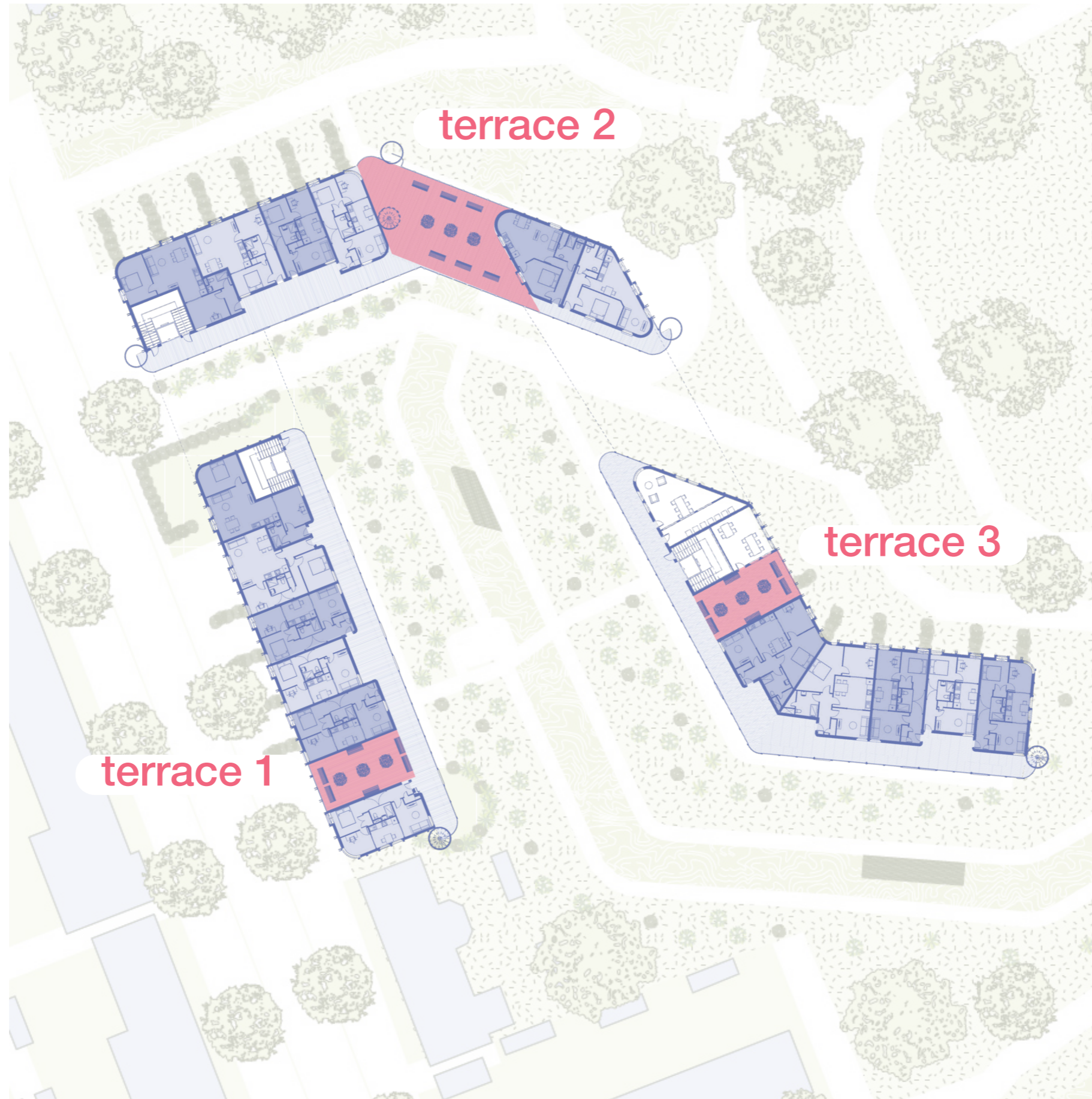
# Terraces



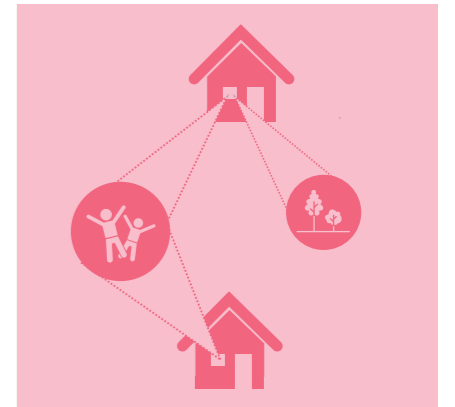
# Terraces



# Terraces



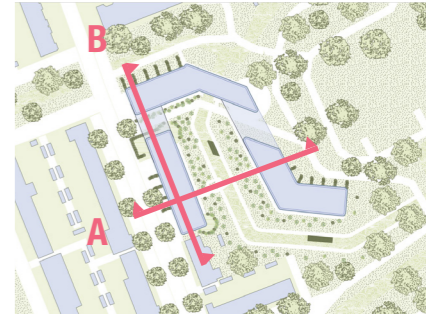
## Sightlines



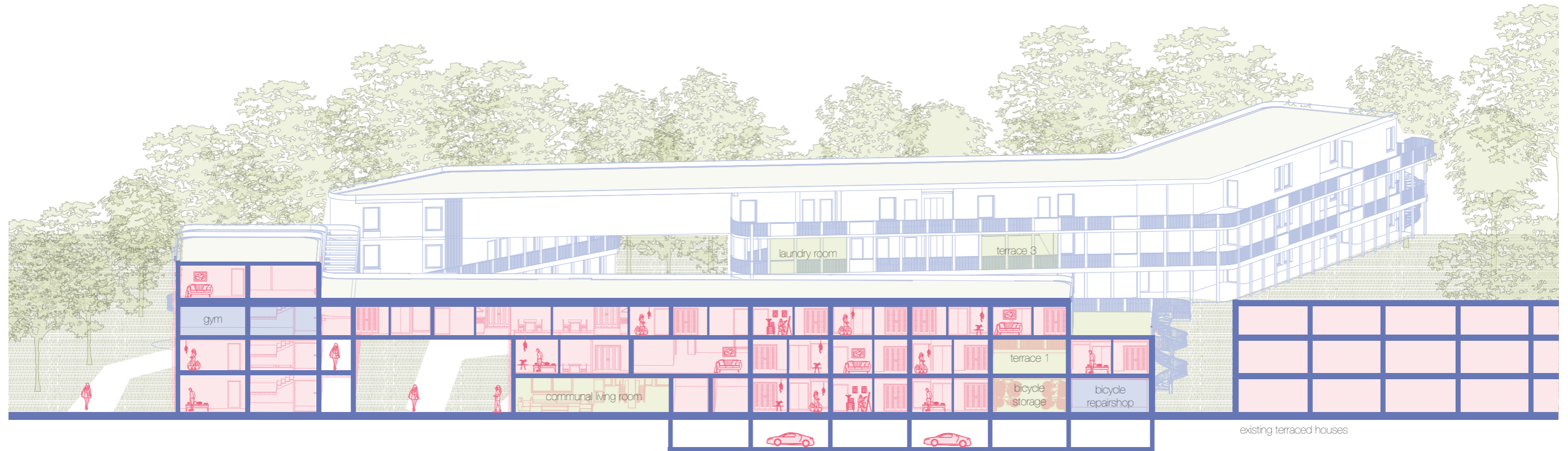
Connection with everyday life



# Terraces

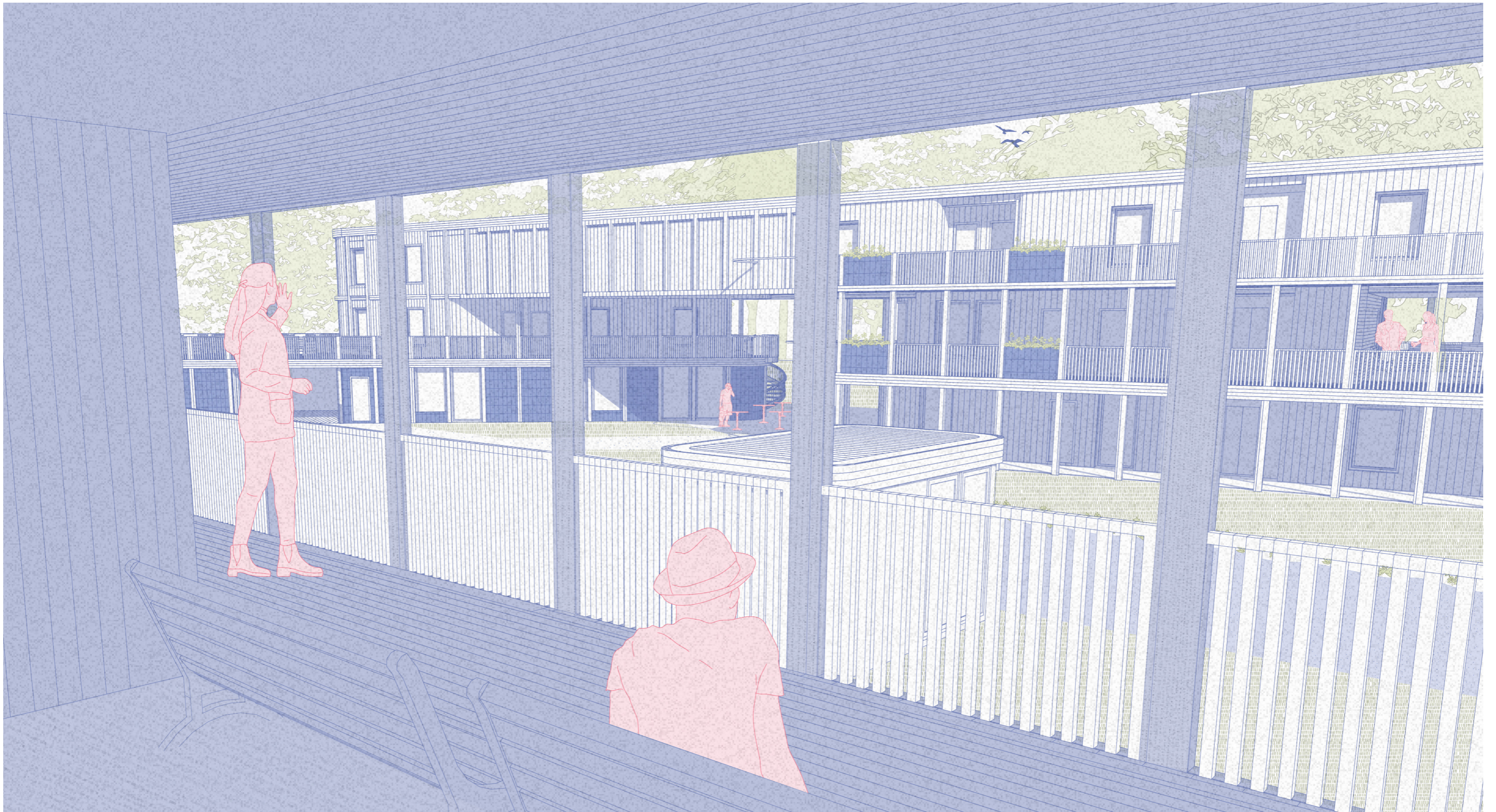
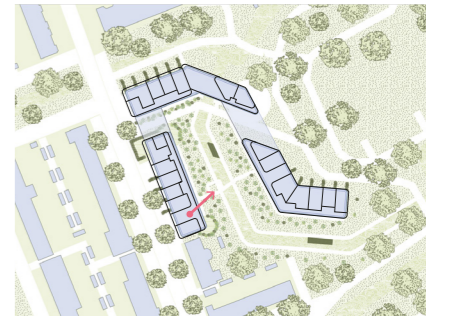


B

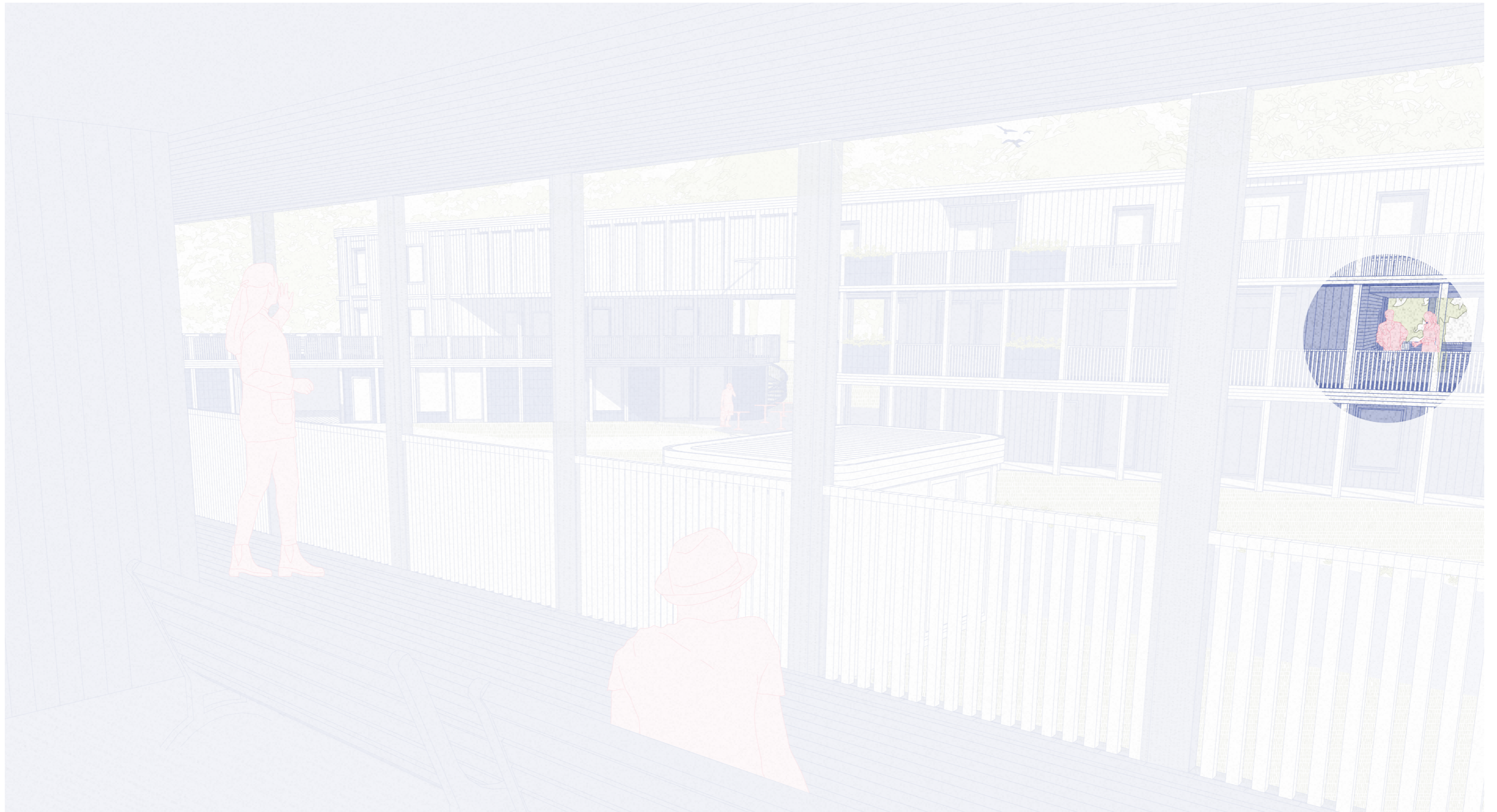
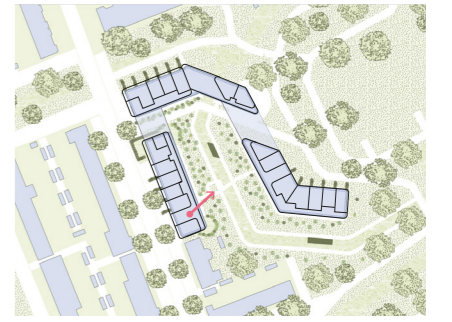


existing terraced houses

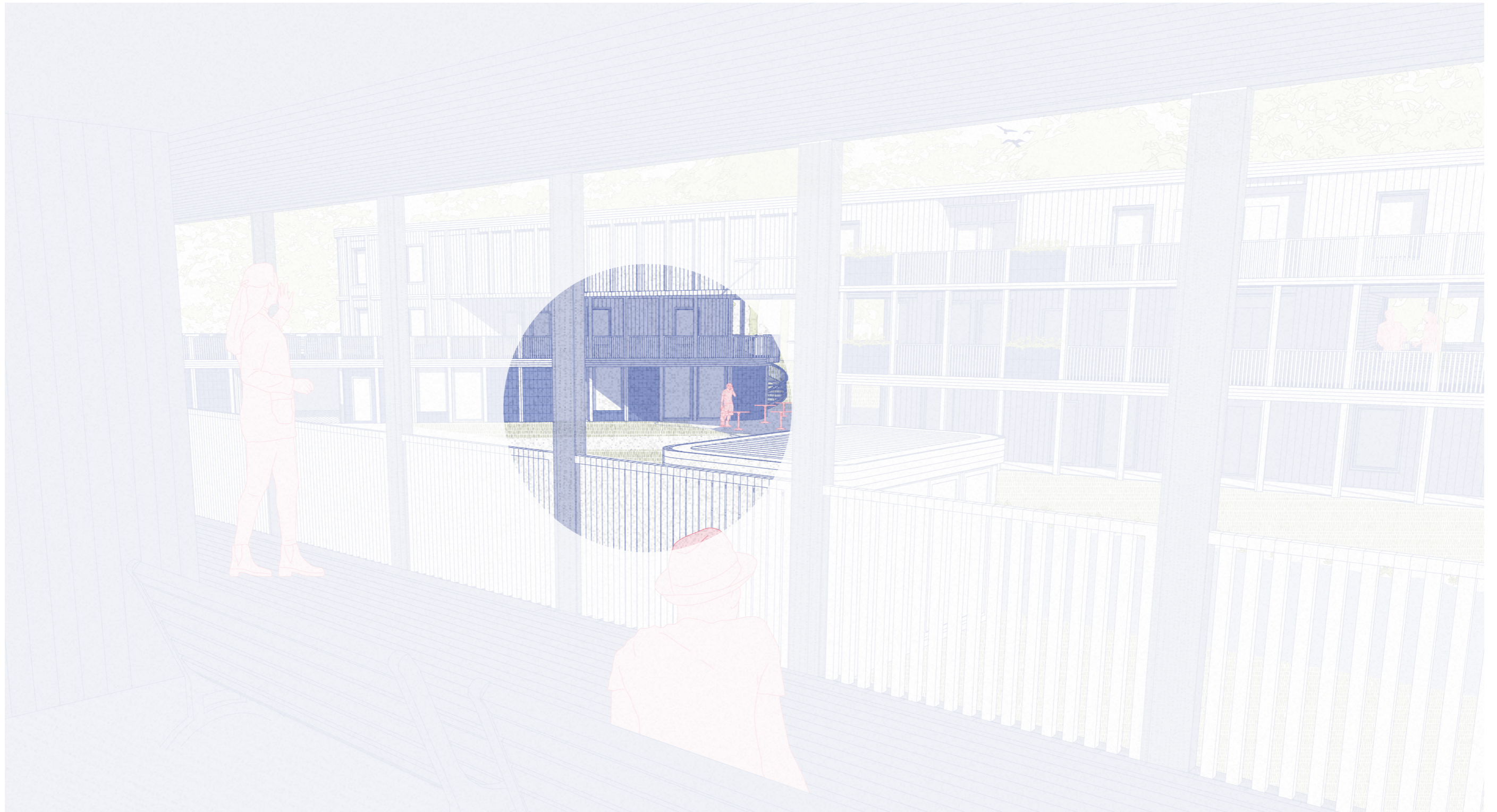
# View from terrace 1



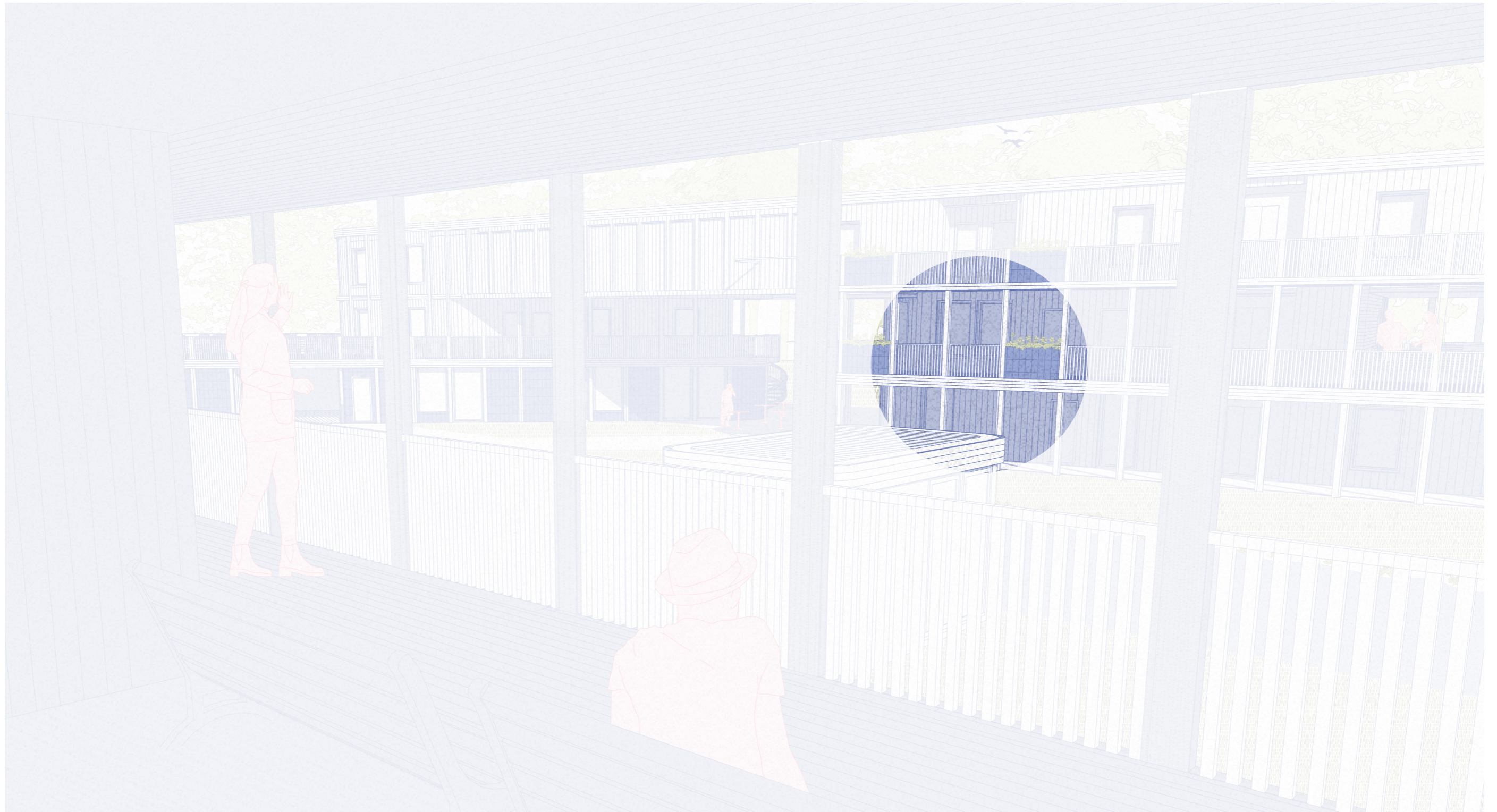
# View from terrace 1



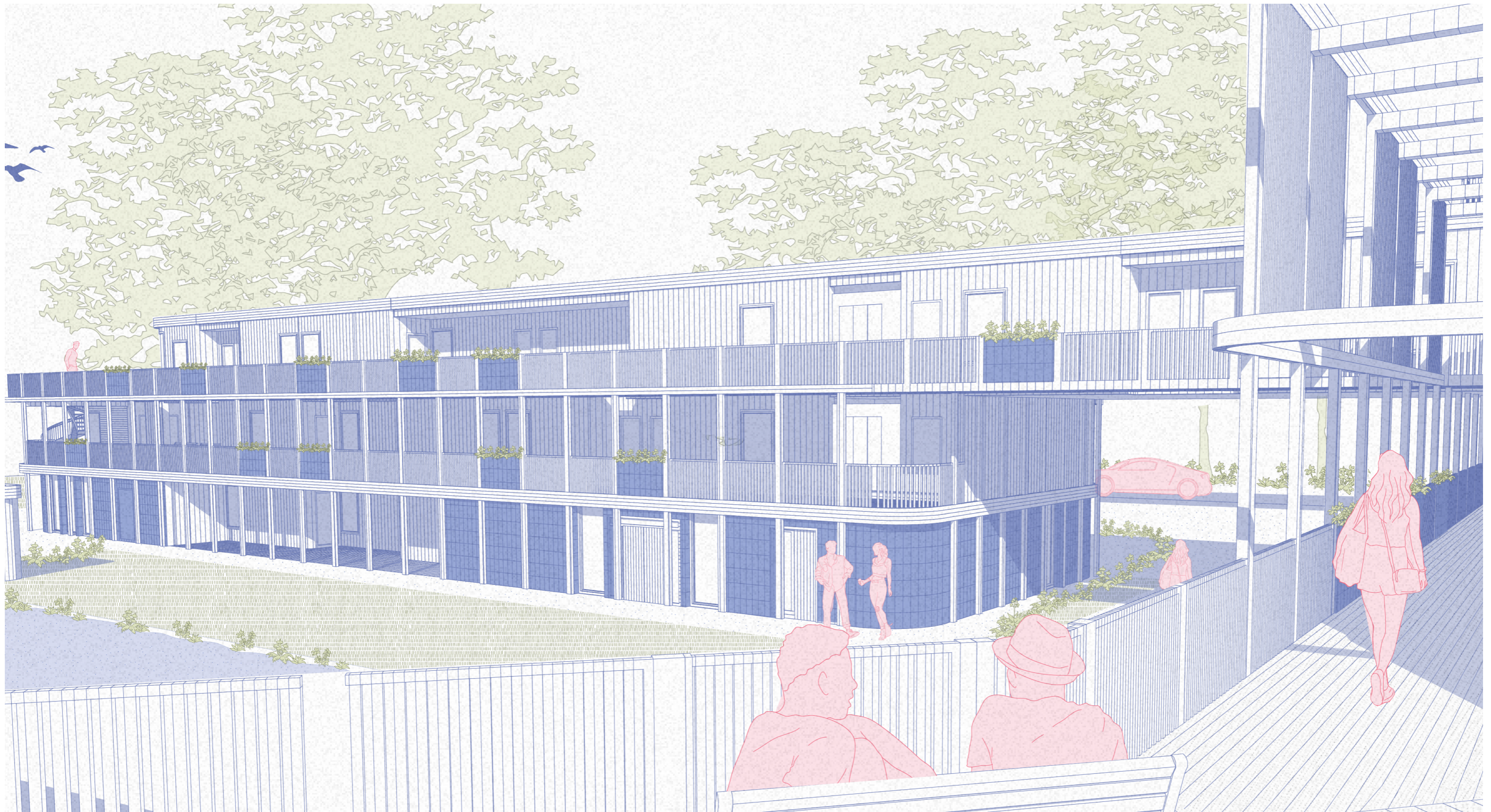
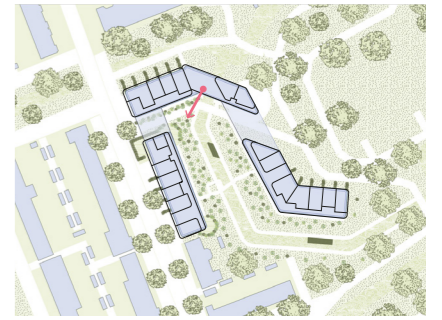
# View from terrace 1



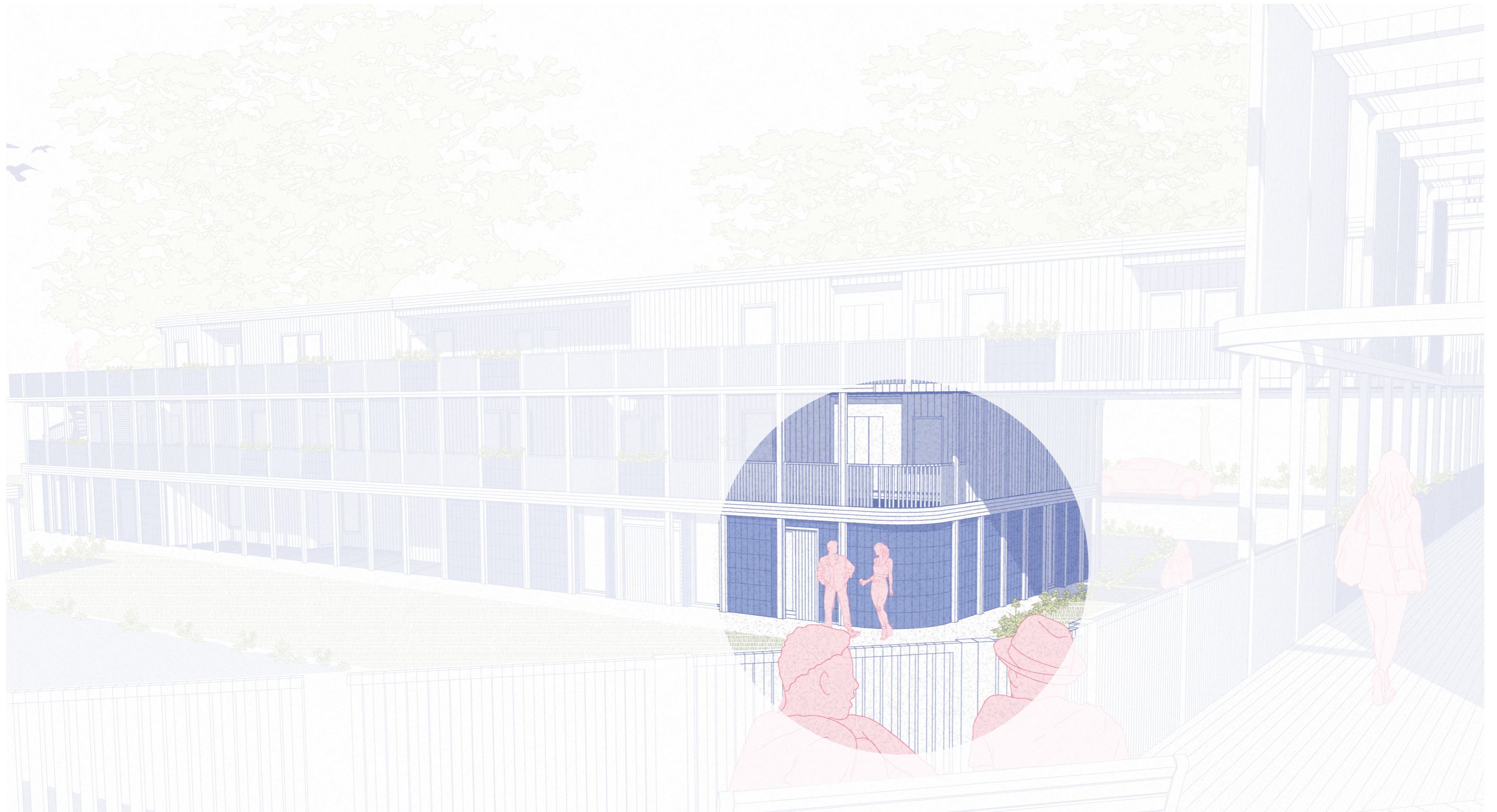
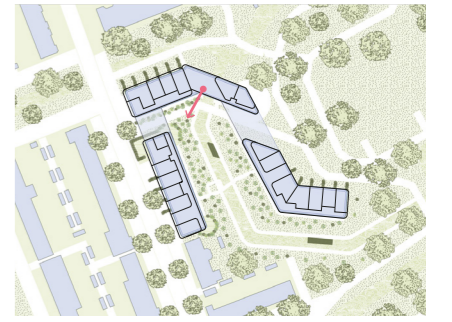
# View from terrace 1



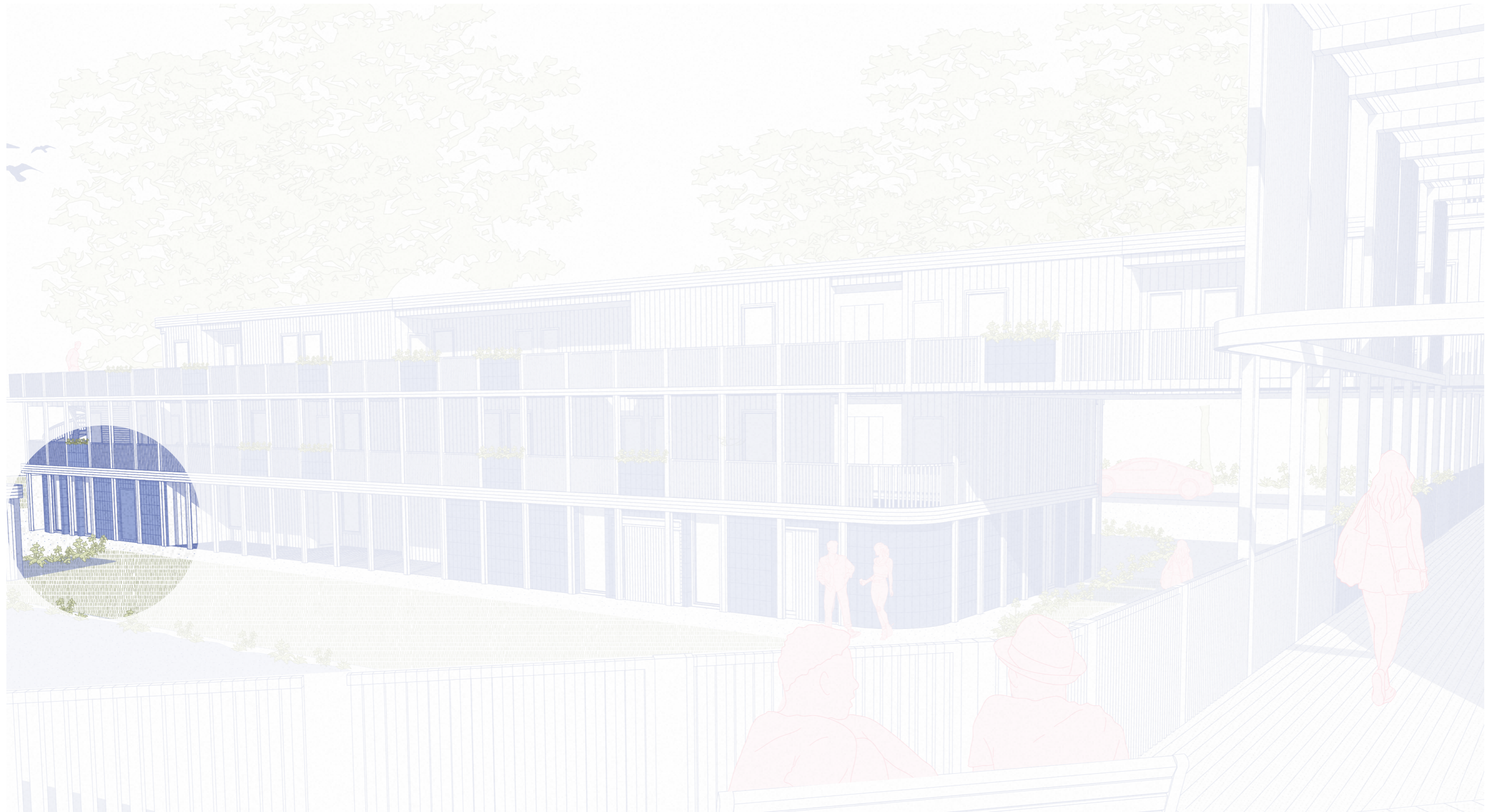
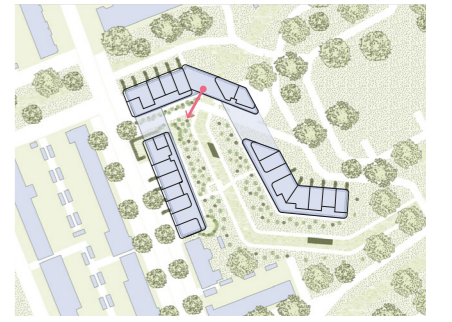
# View from terrace 2



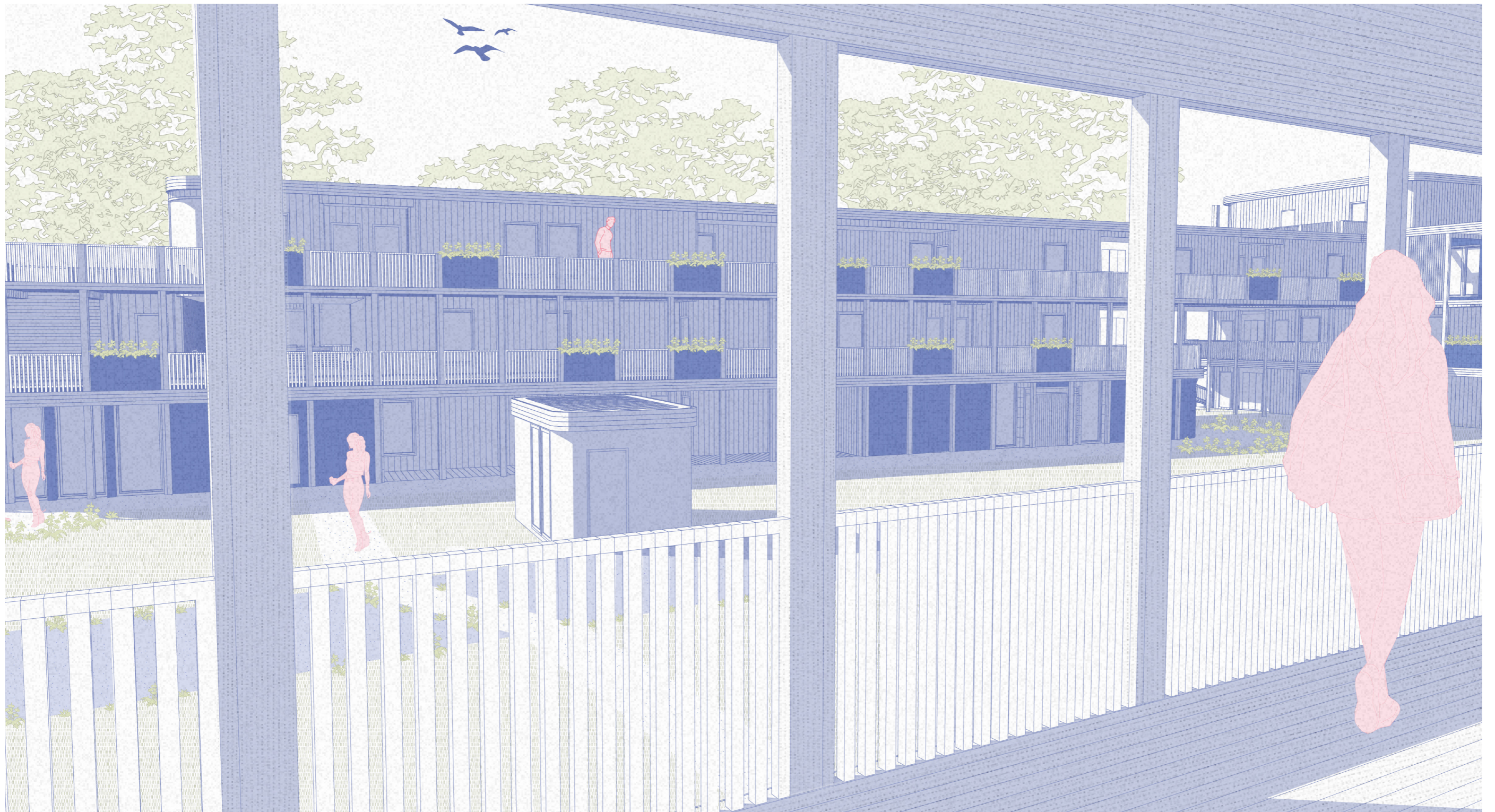
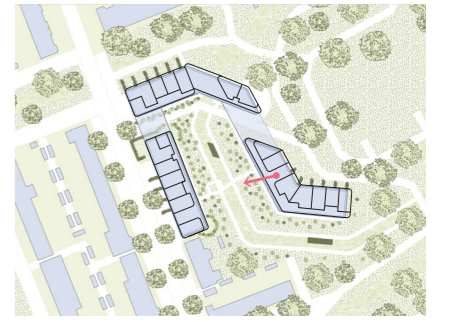
# View from terrace 2



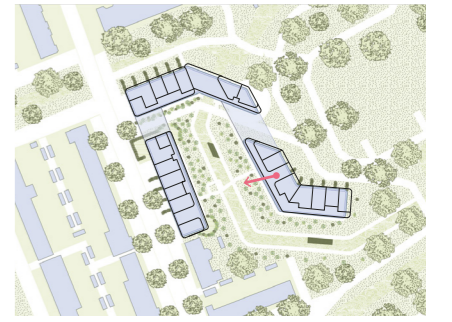
# View from terrace 2



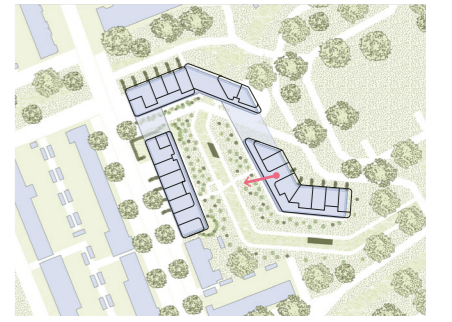
# View from terrace 3



# View from terrace 3

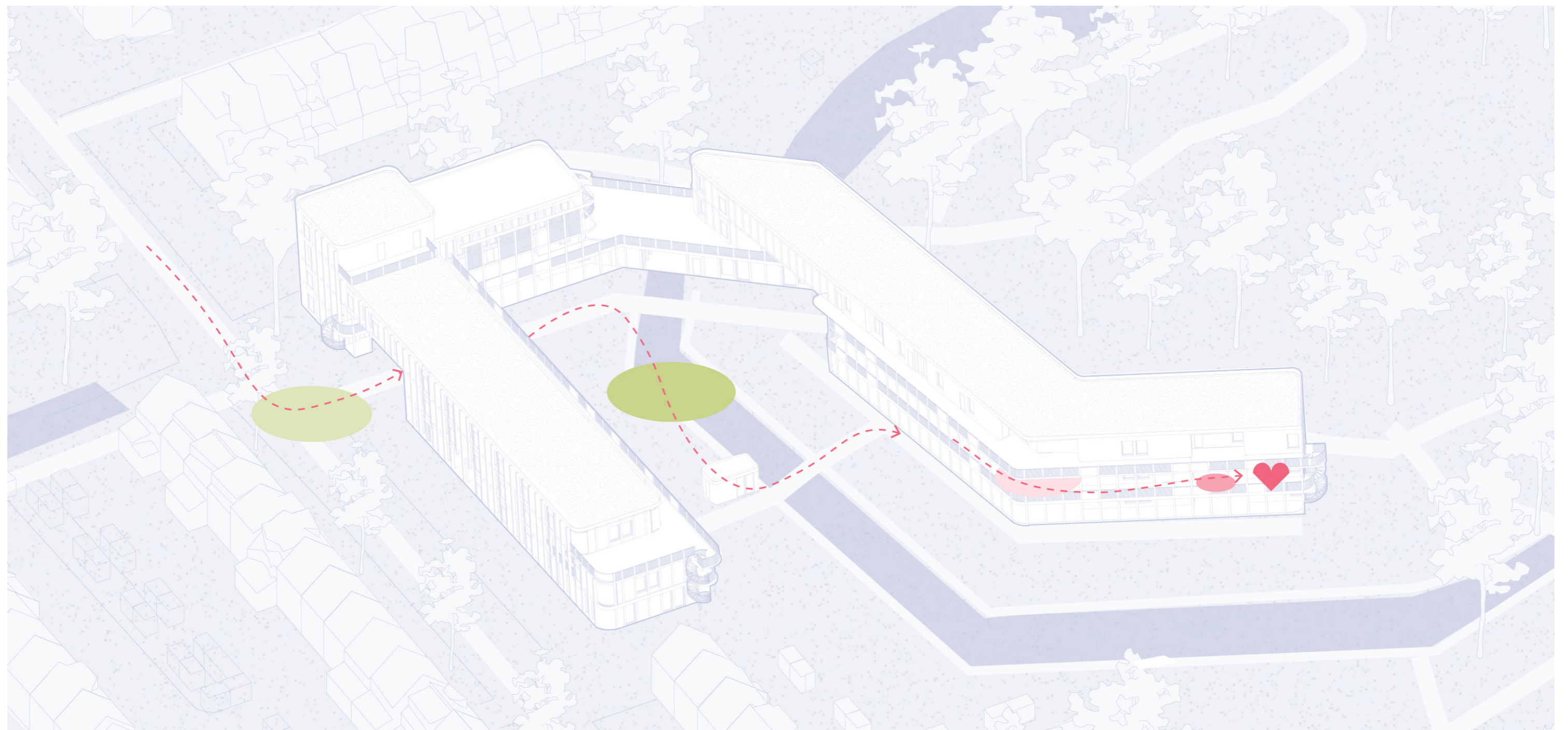
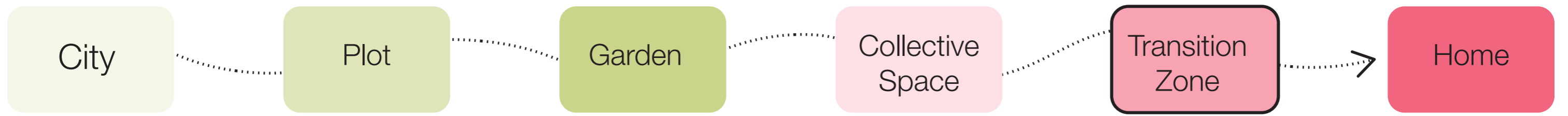


# View from terrace 3



# Impression of Terrace





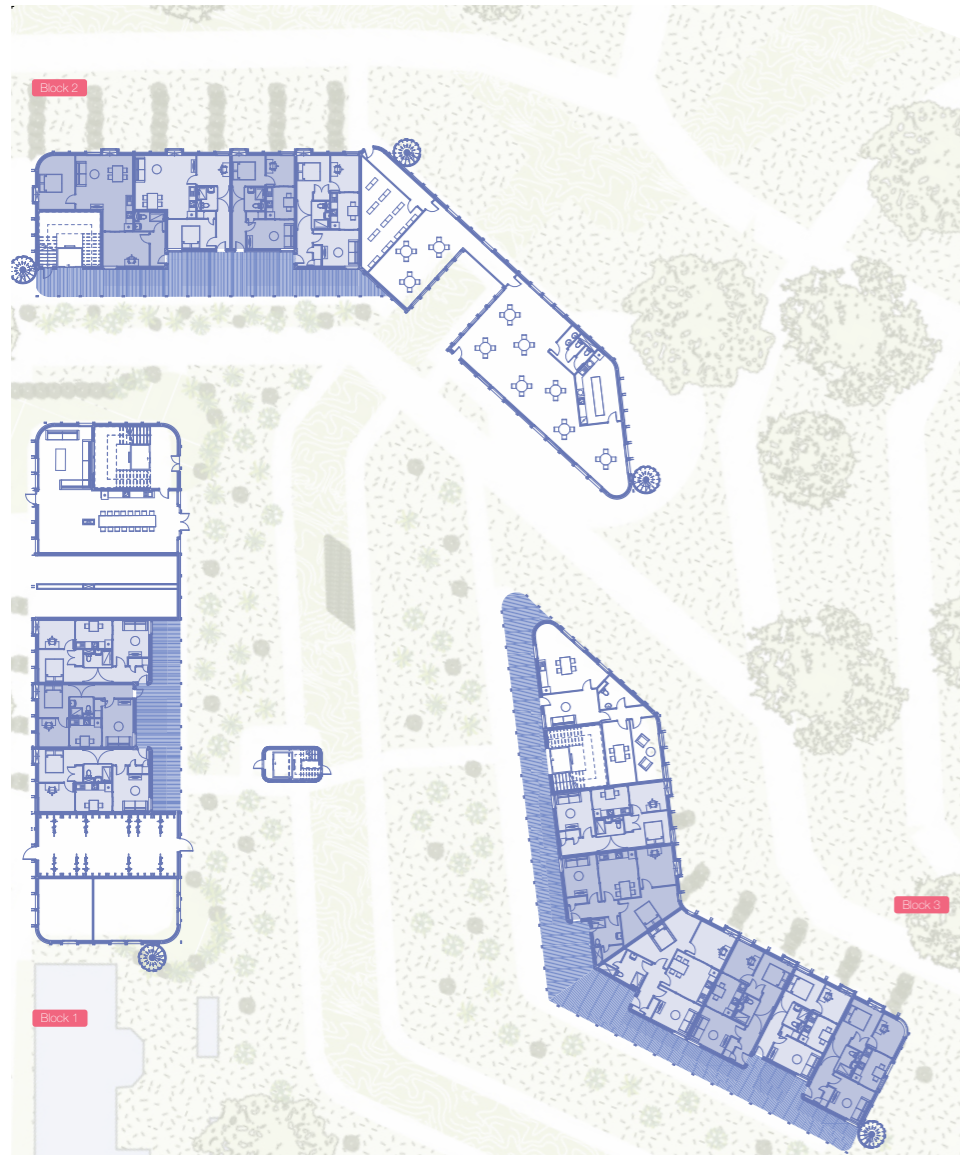
# Main Design Principle

## Social Interaction

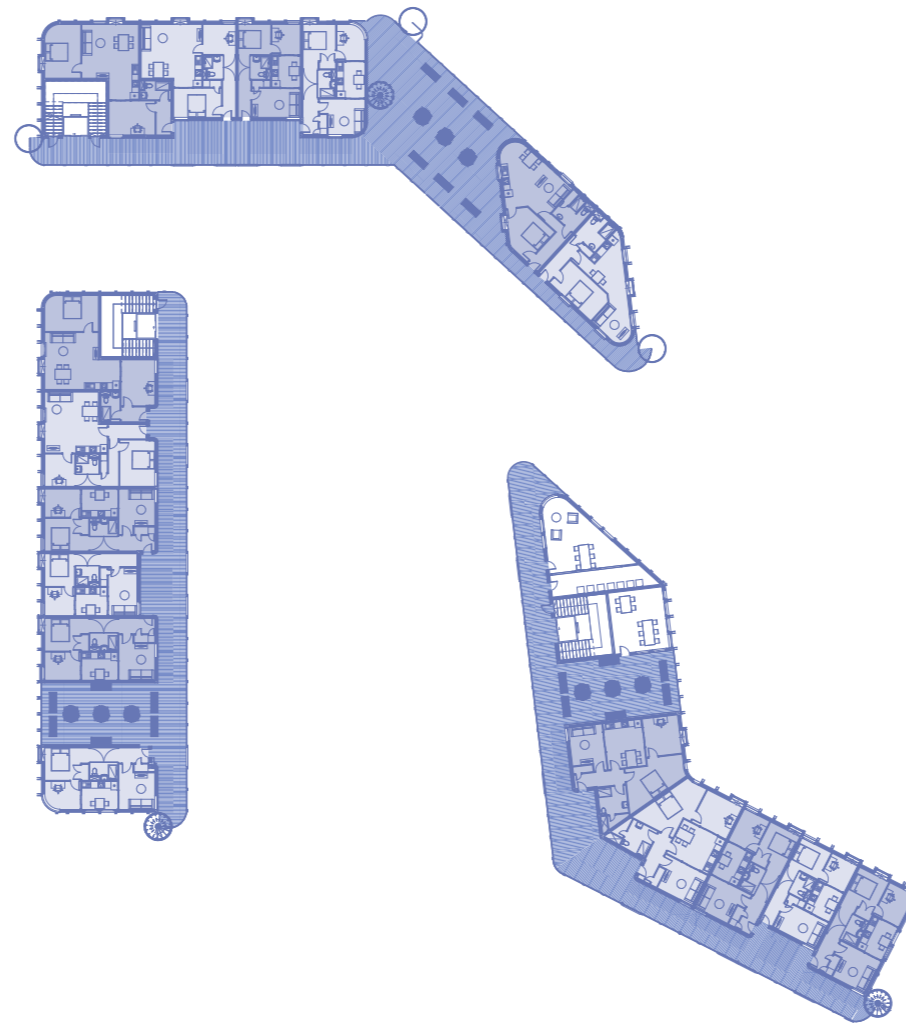


# Transition Zone

## Ground Floor



## First Floor



## Second Floor



# Transition Zone

## Ground Floor



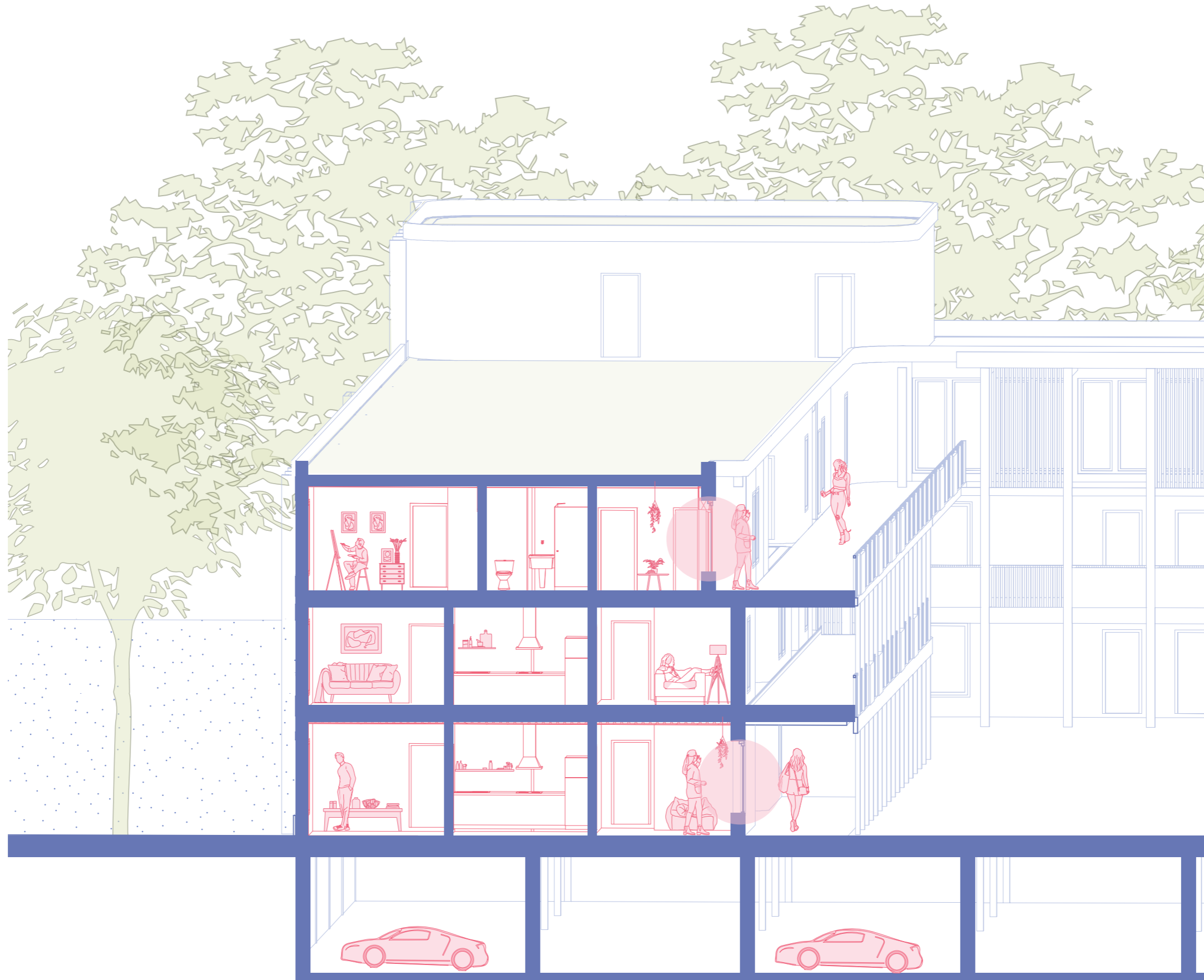
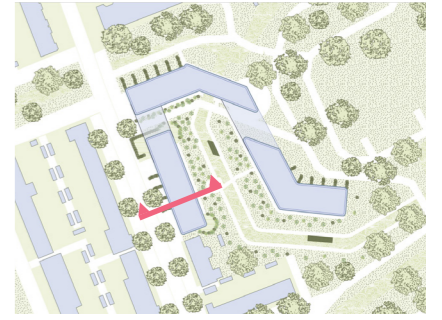
## First Floor



## Second Floor



# Transition Zone

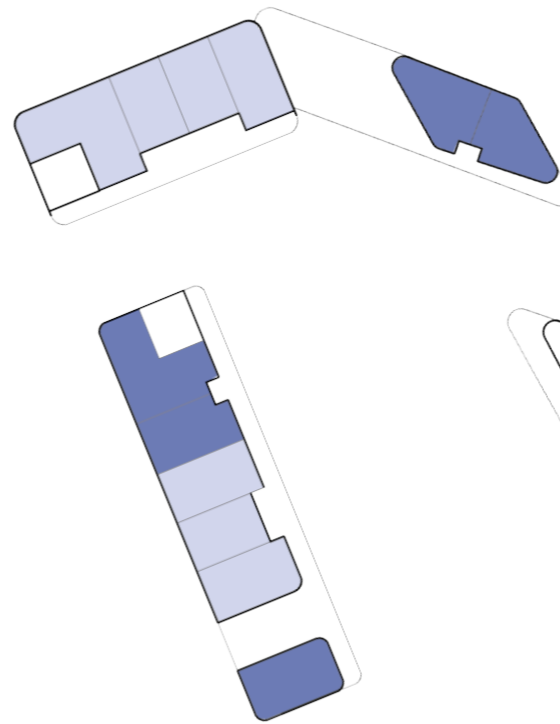


# Clusters

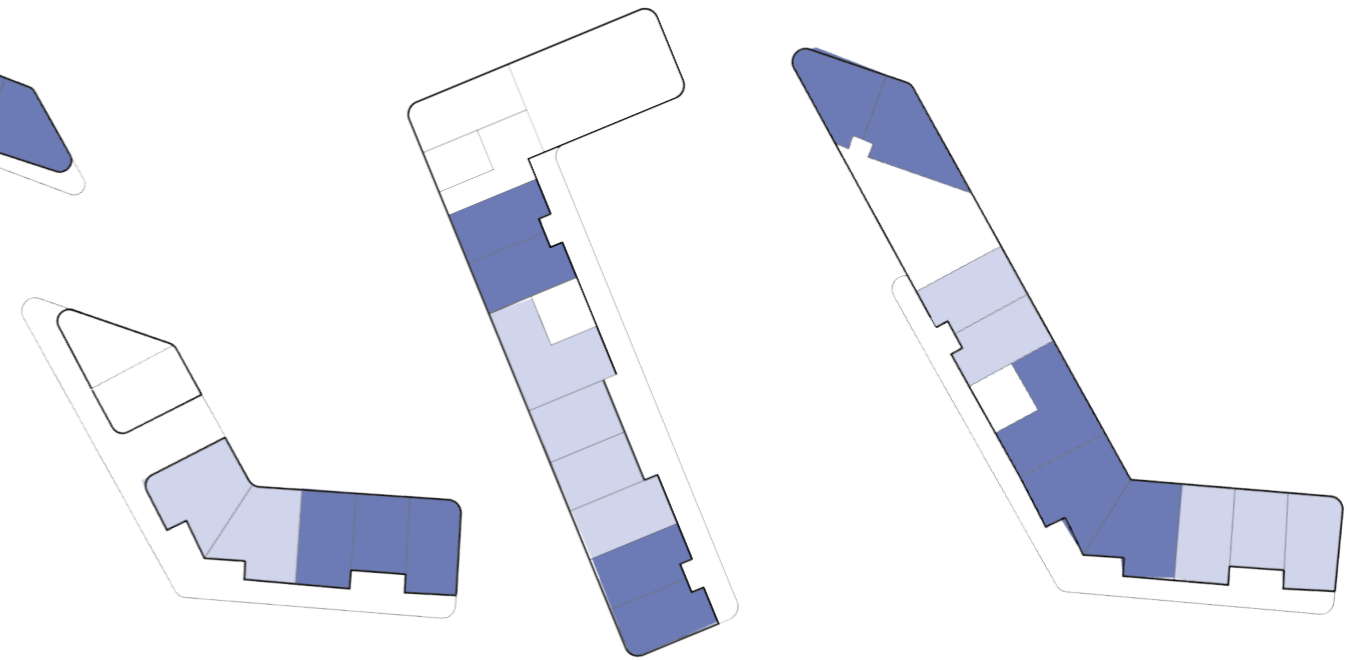
## Ground Floor



## First Floor



## Second Floor



## Third Floor



# Clusters

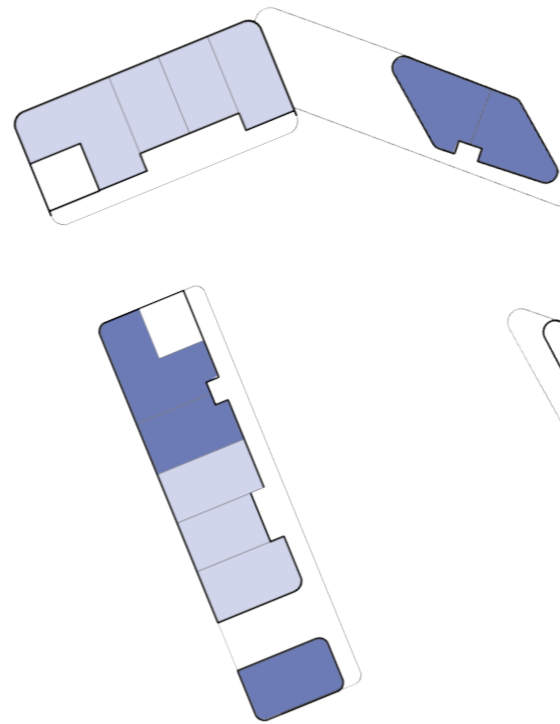
Distributed Through Building



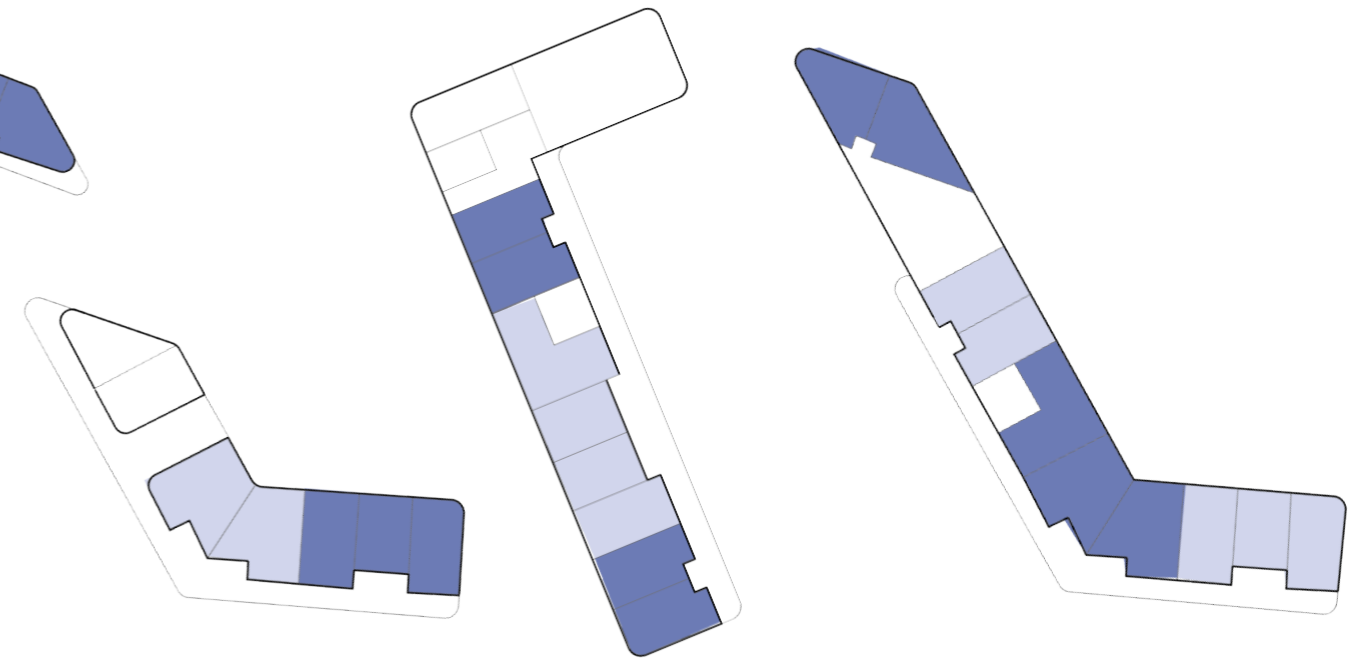
## Ground Floor



## First Floor



## Second Floor



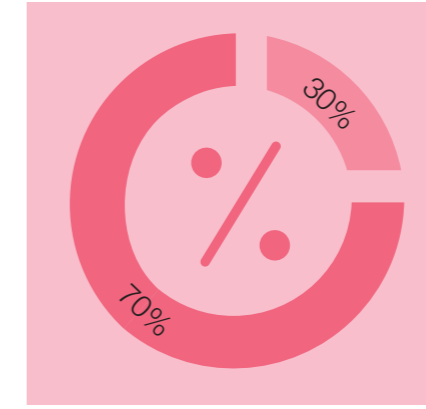
## Third Floor



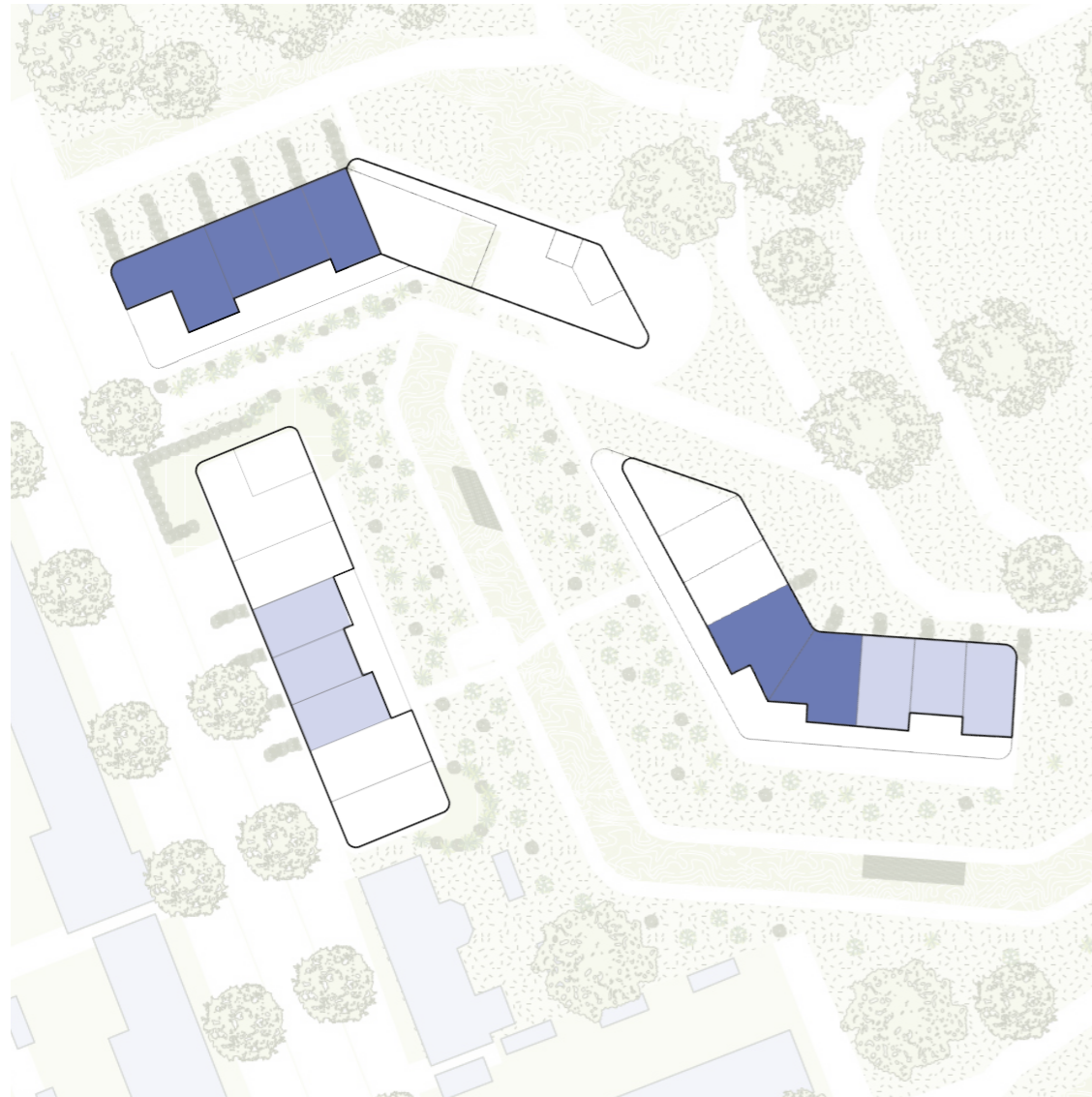
# Clusters

Ratio

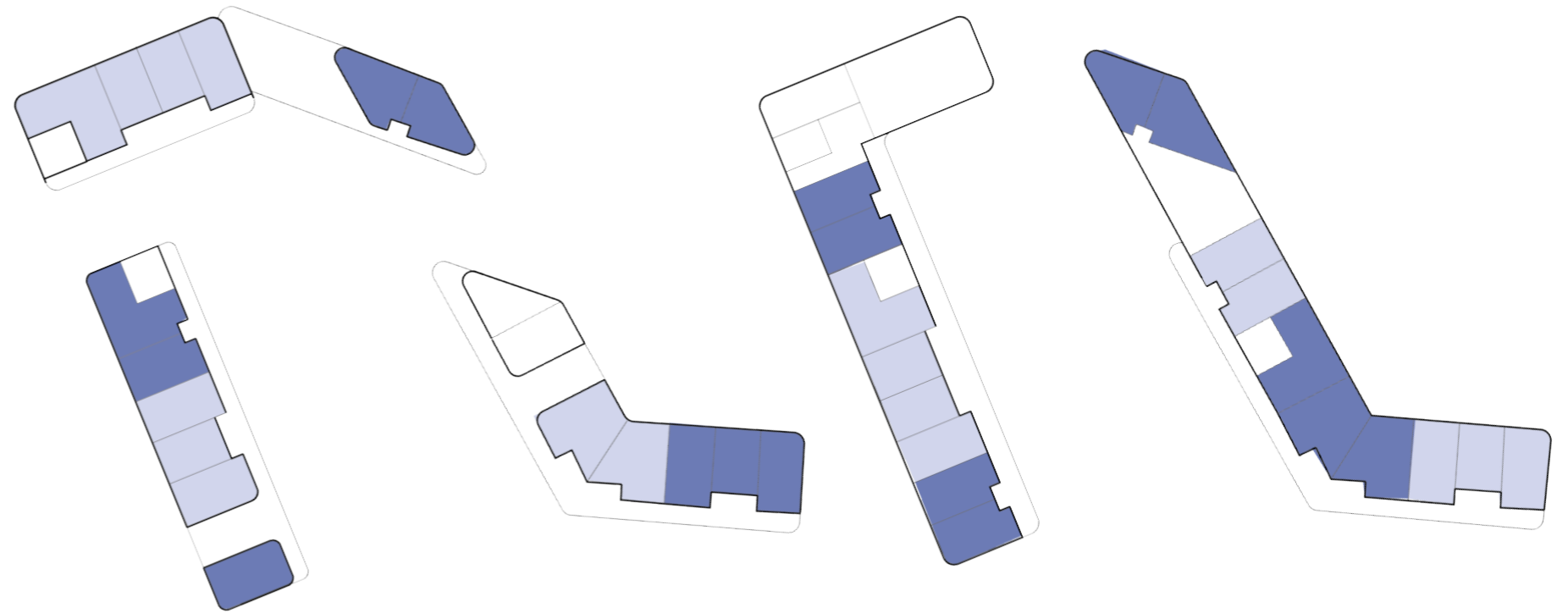
Distributed Through Building



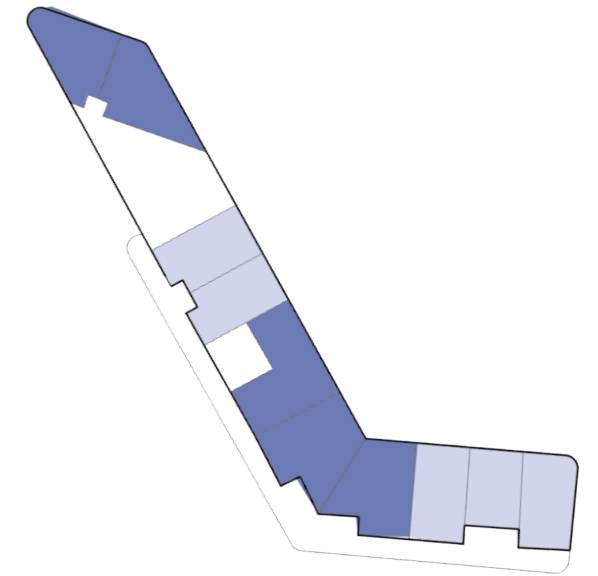
## Ground Floor



## First Floor



## Second Floor



## Third Floor

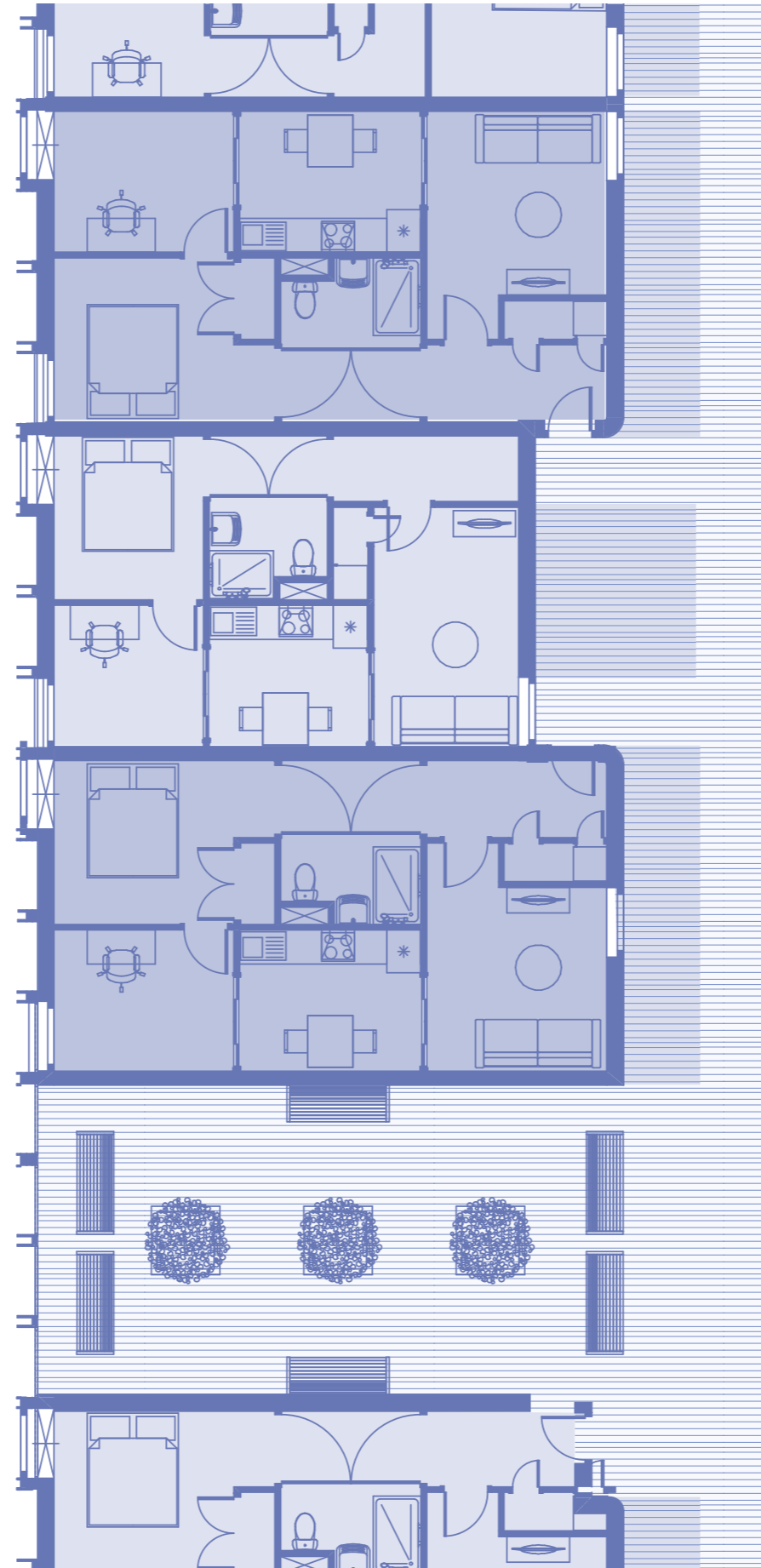


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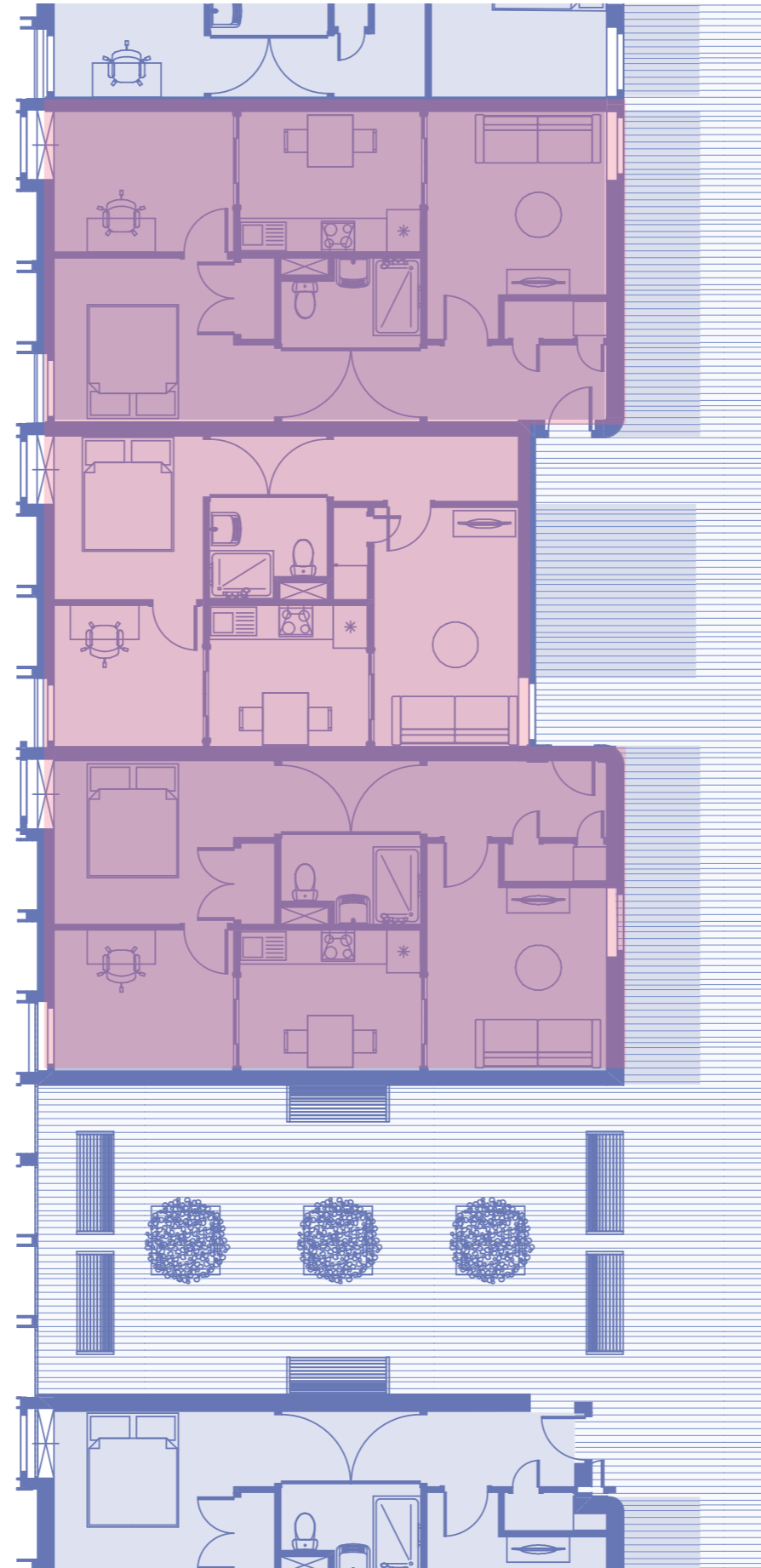


113

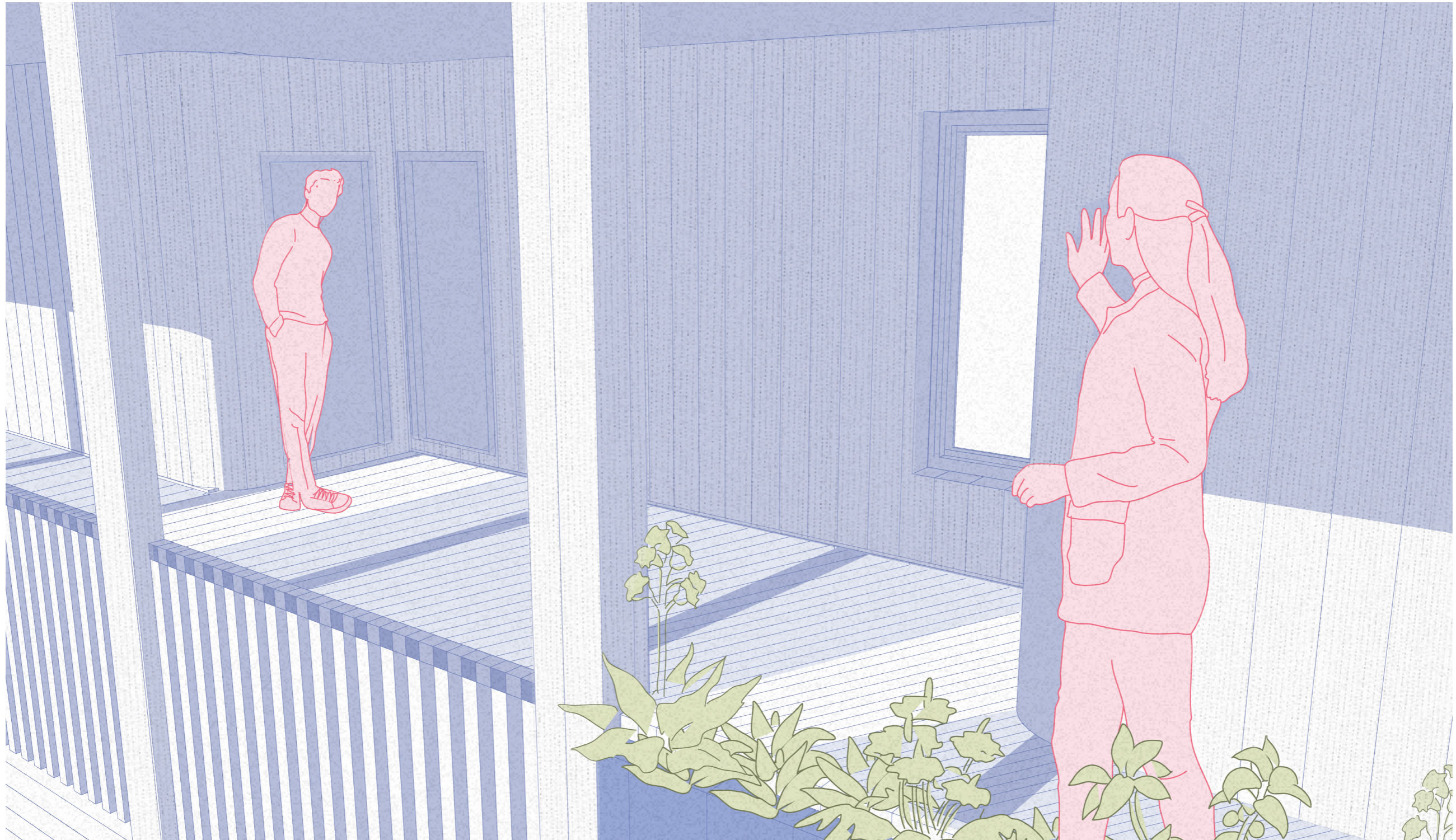
# Clusters



# Clusters

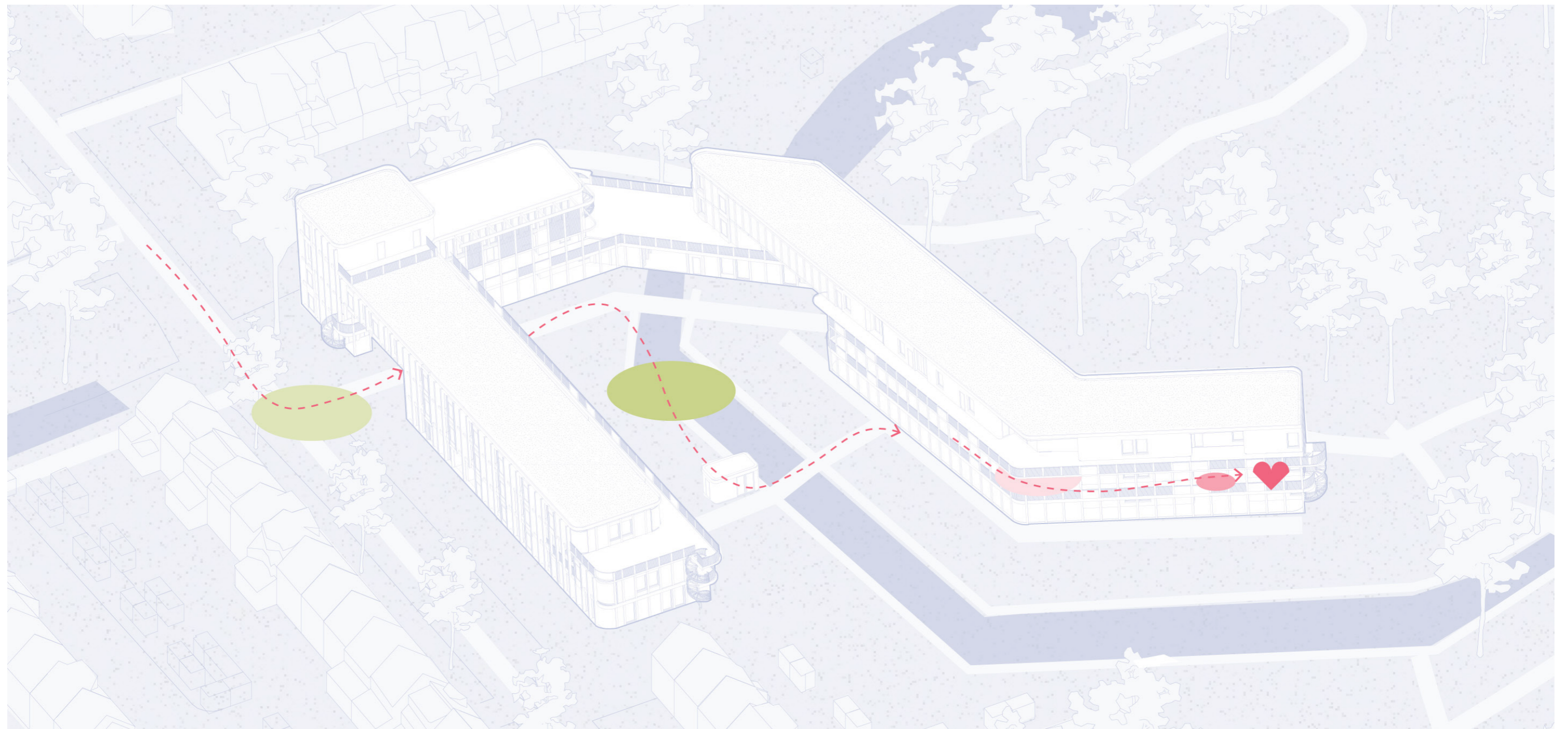
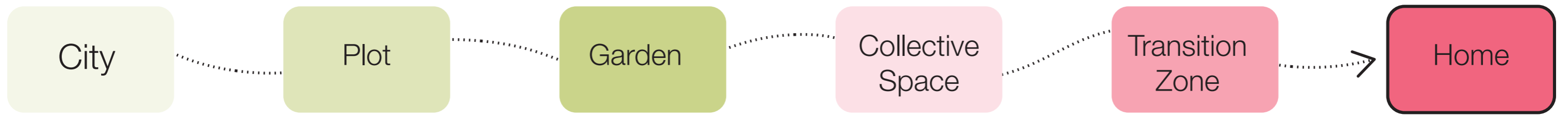


# Impression of Transition zone



# Impression of Transition zone





# Main Design Principles

## Individual Units



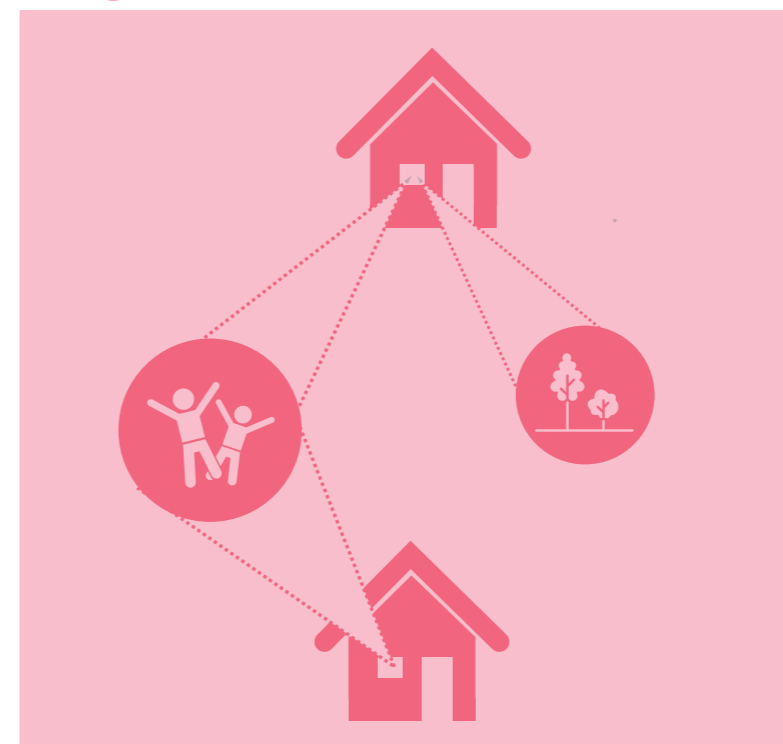
## Connection with everyday life

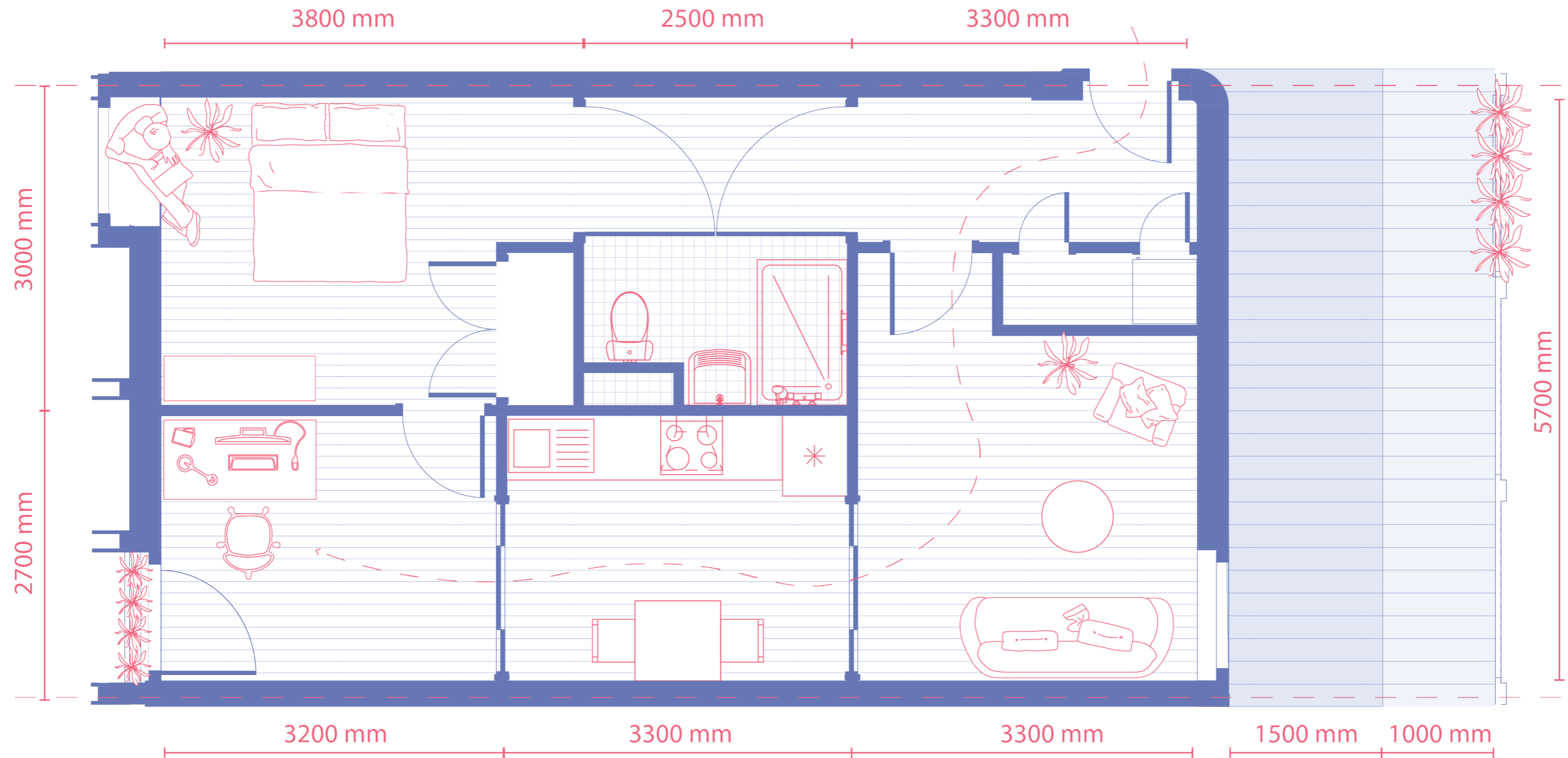


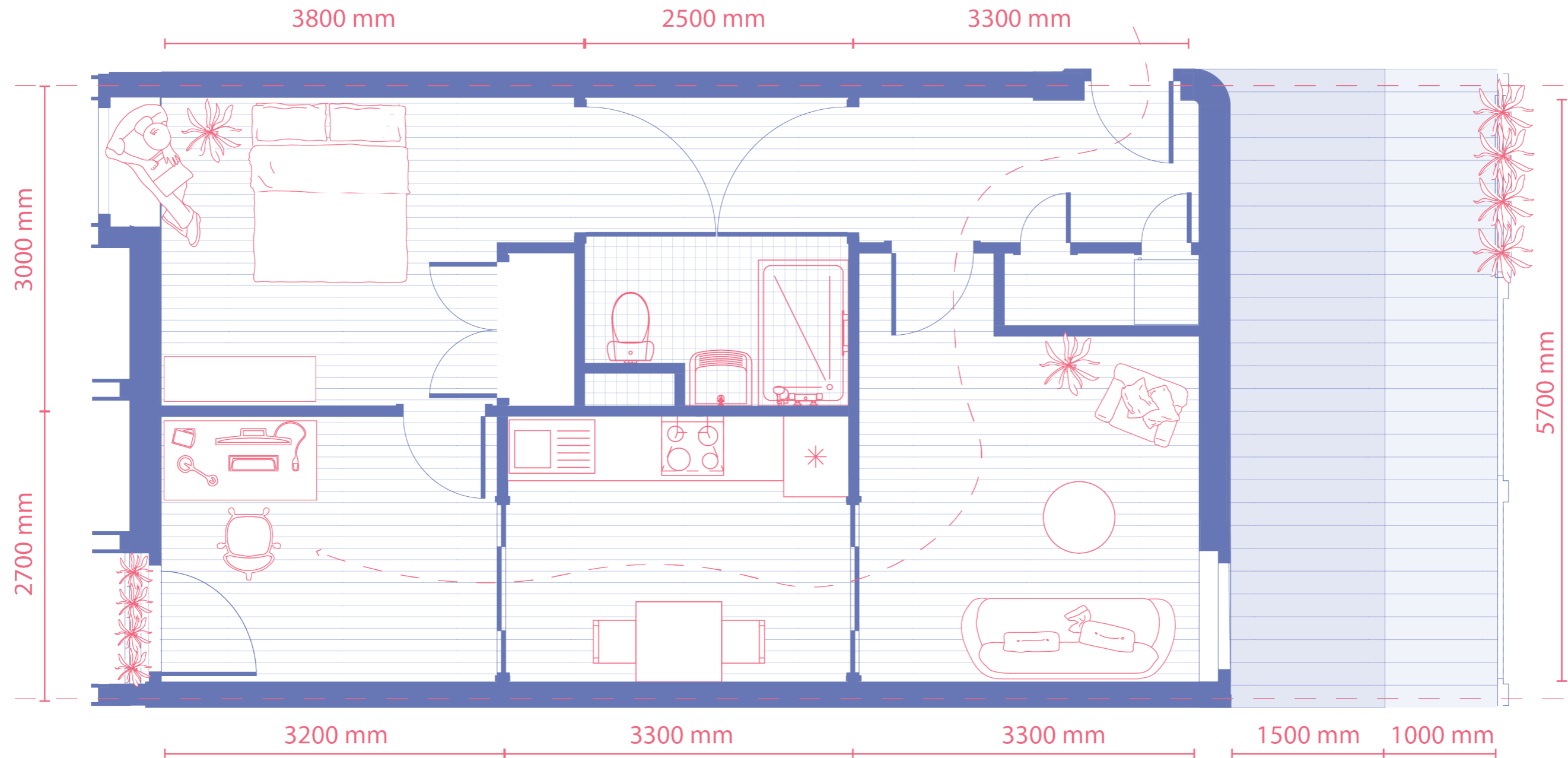
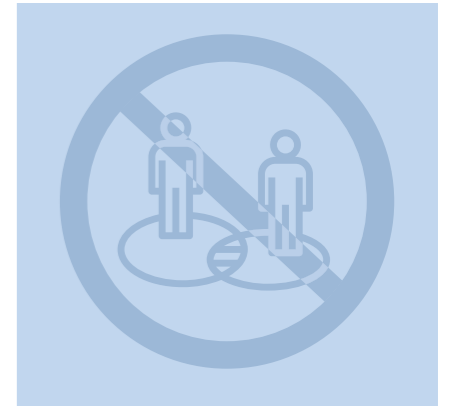
## Structure



## Sightlines





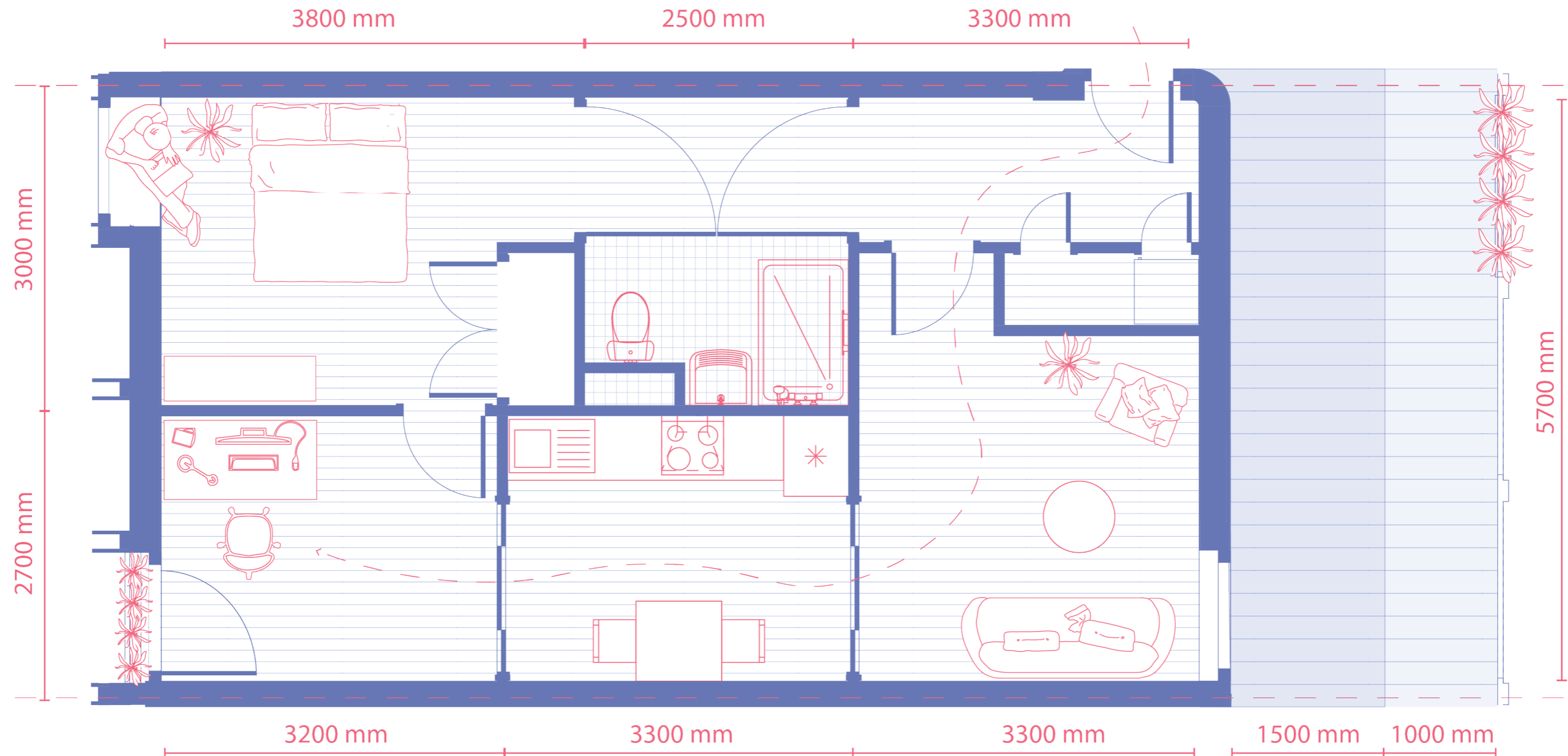


# Home

Structure



Individual Units

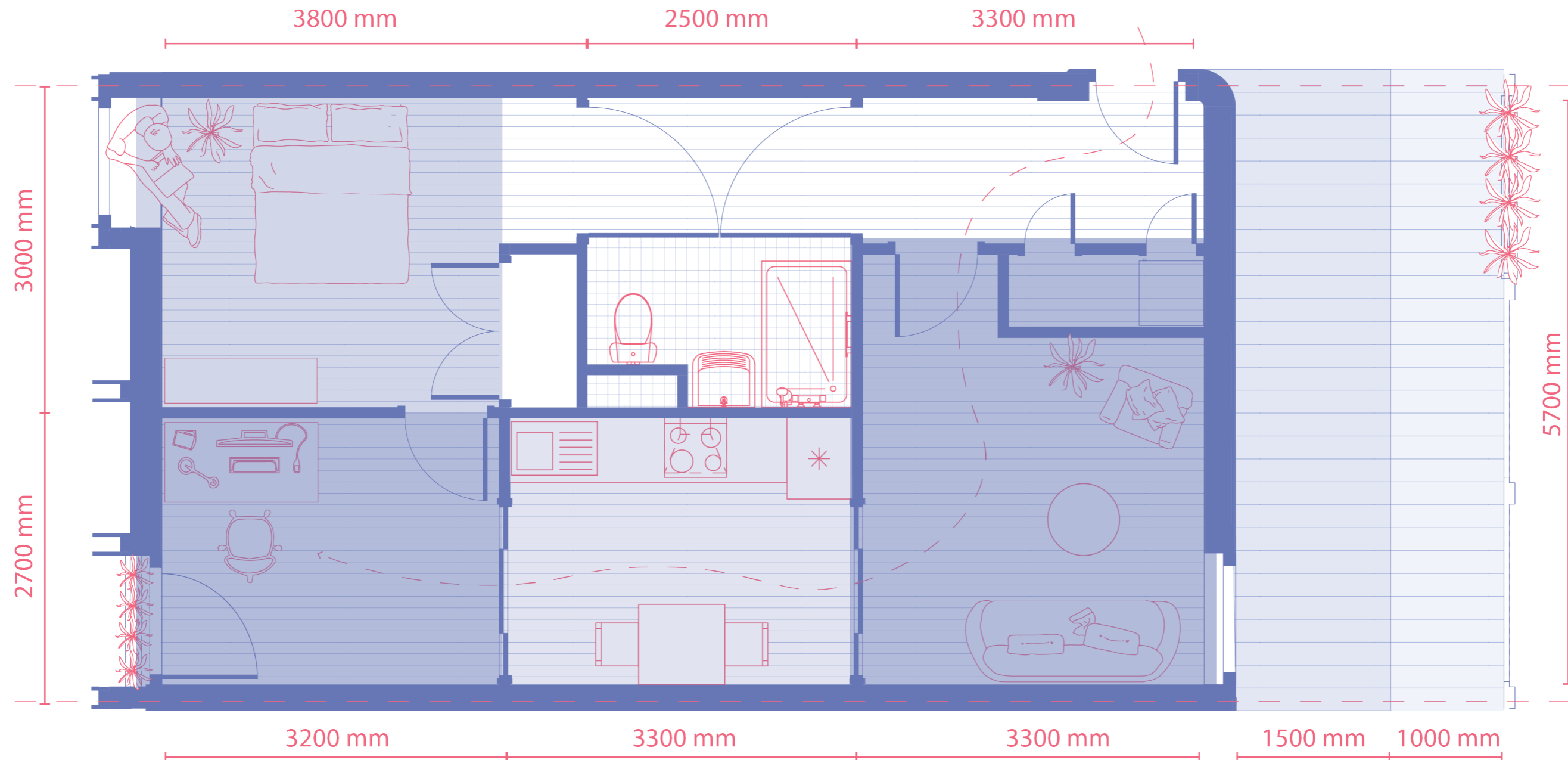


# Home

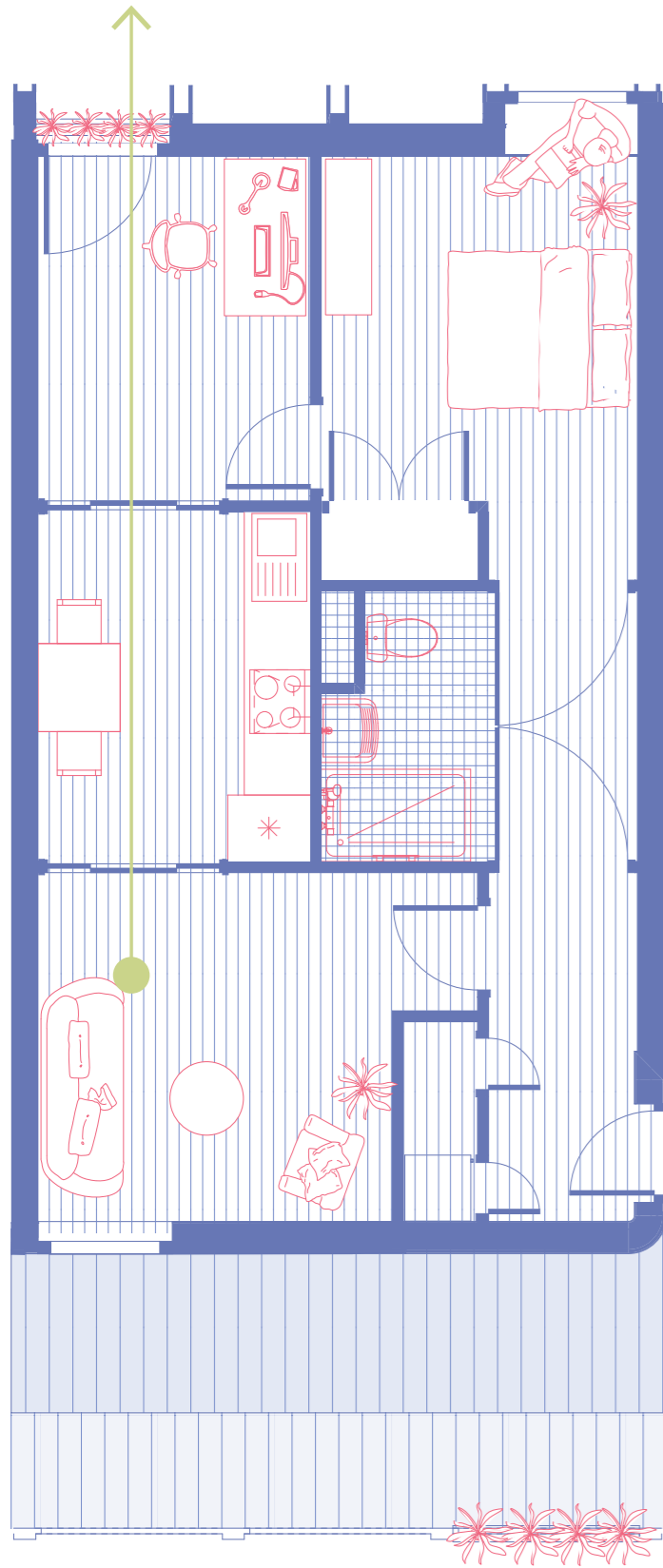
Structure



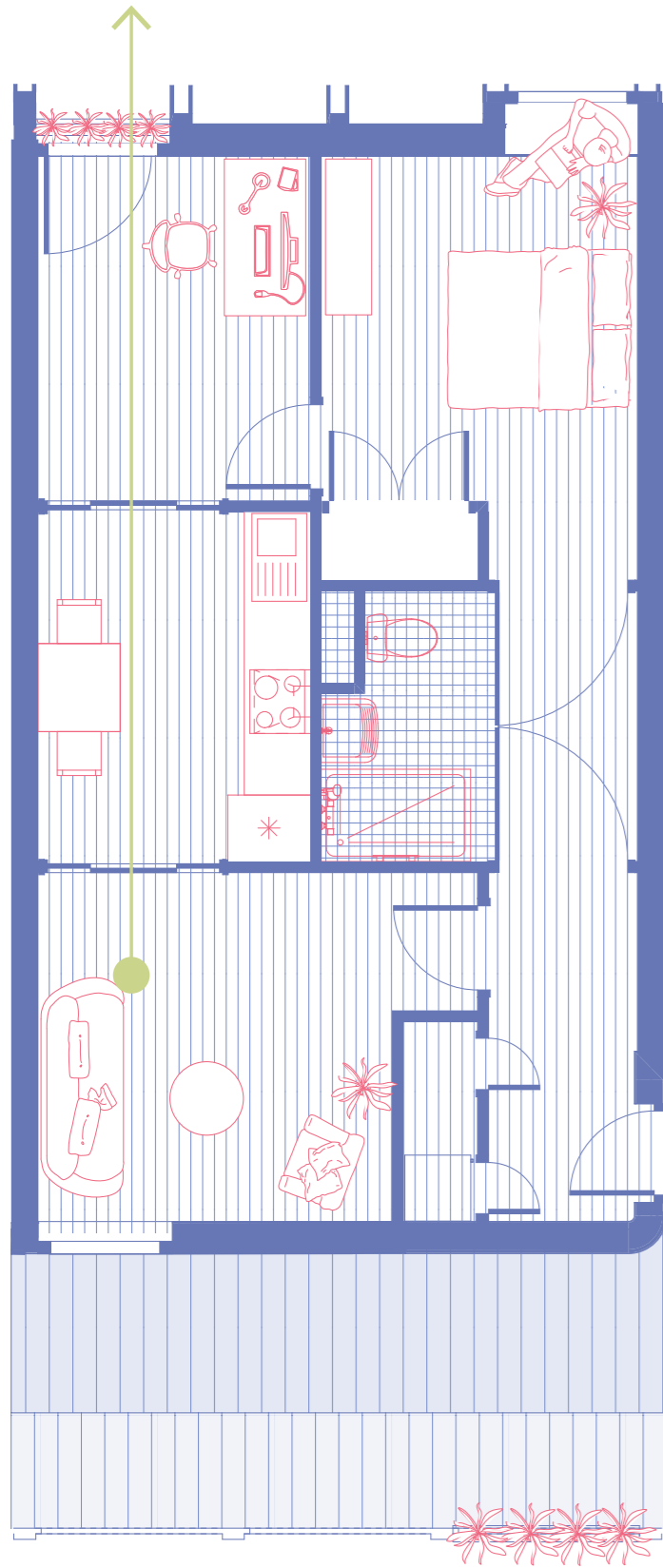
Individual Units



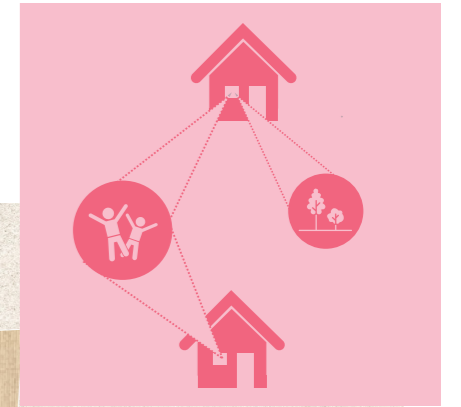
# Home



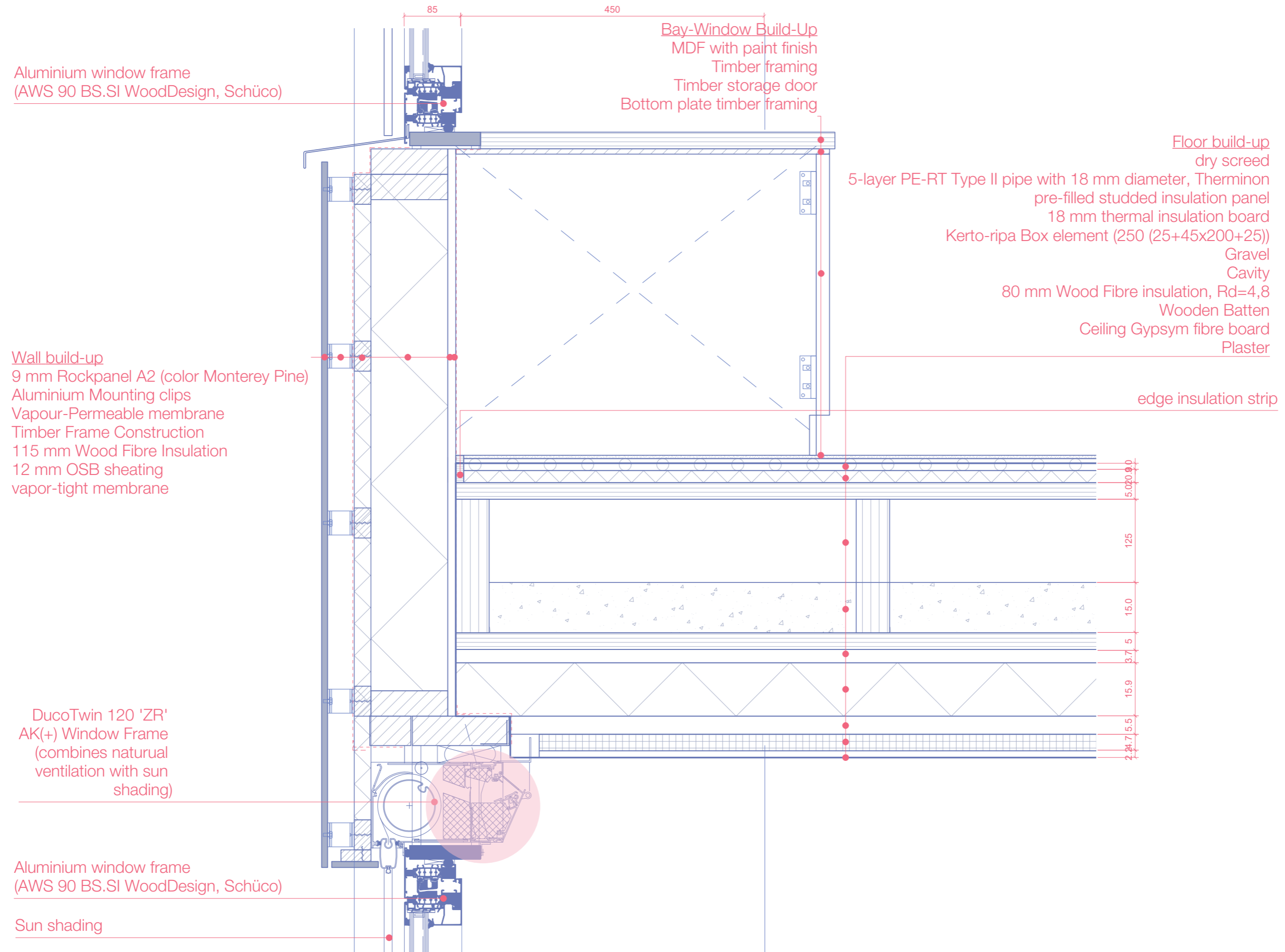
# Home



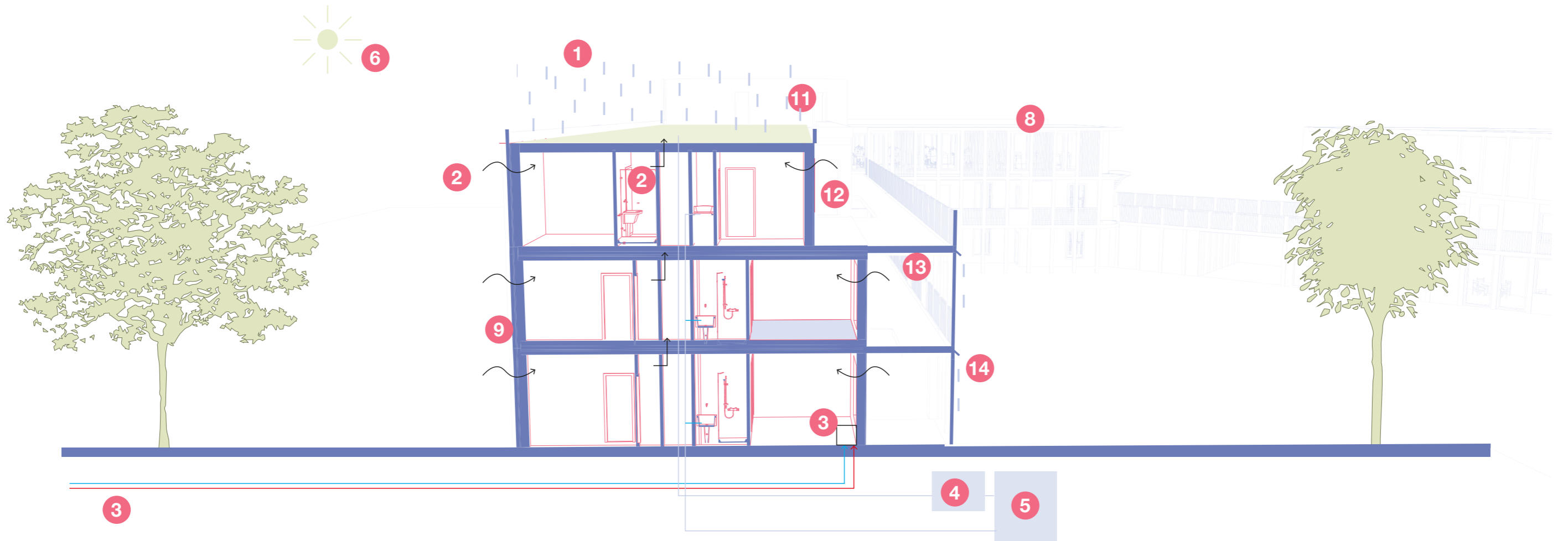
## Sightlines



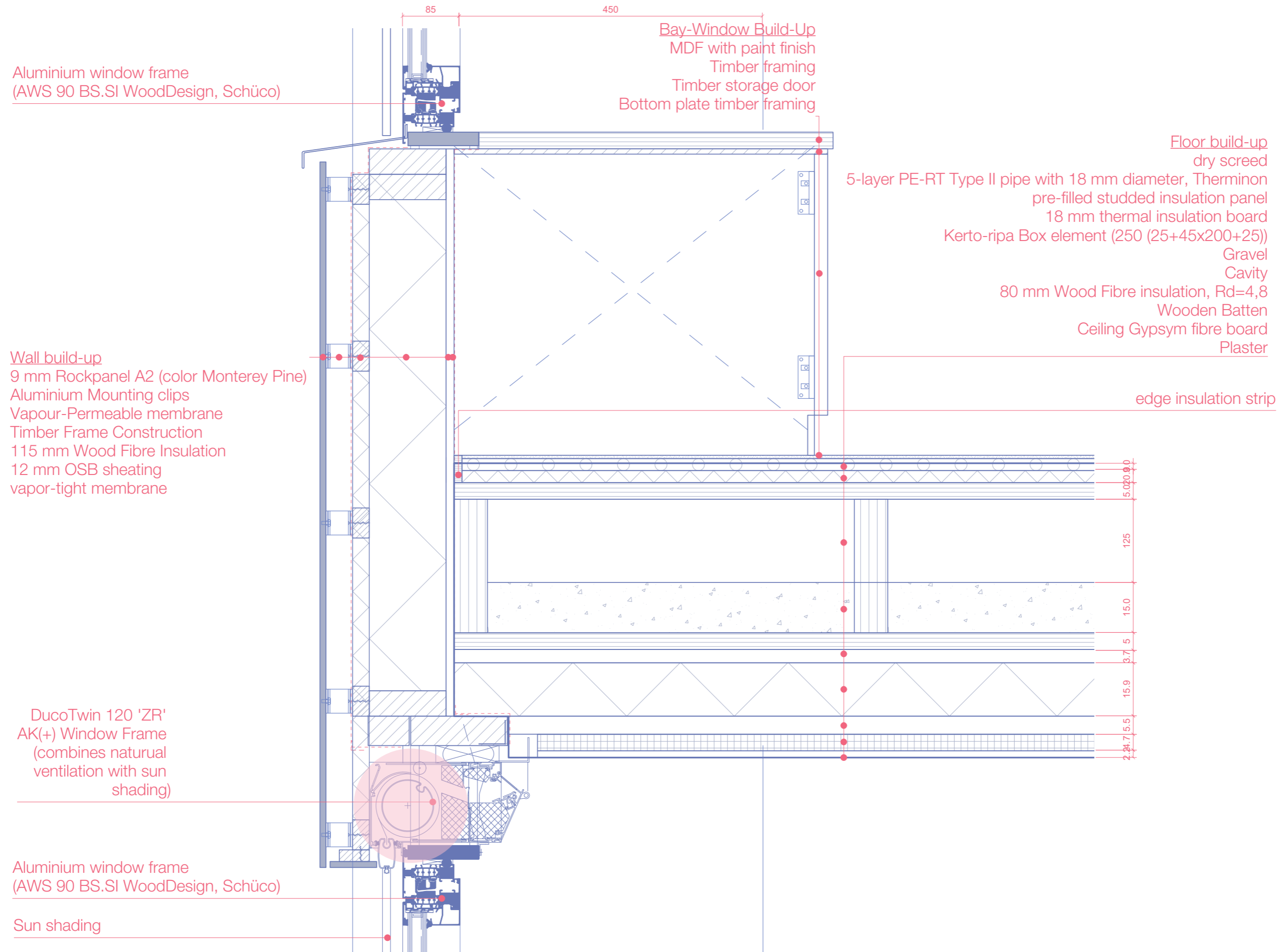
# Detail



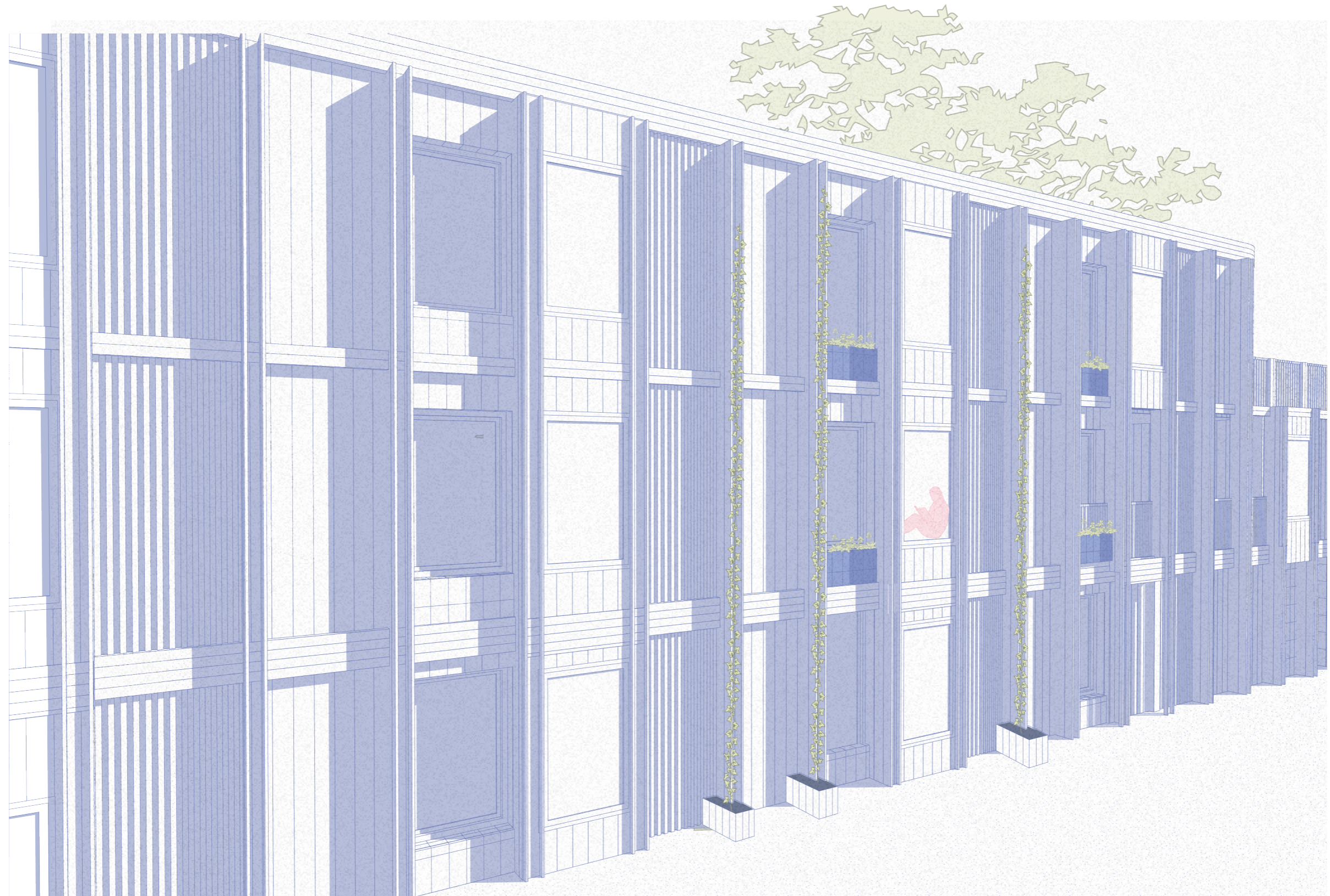
# Climate



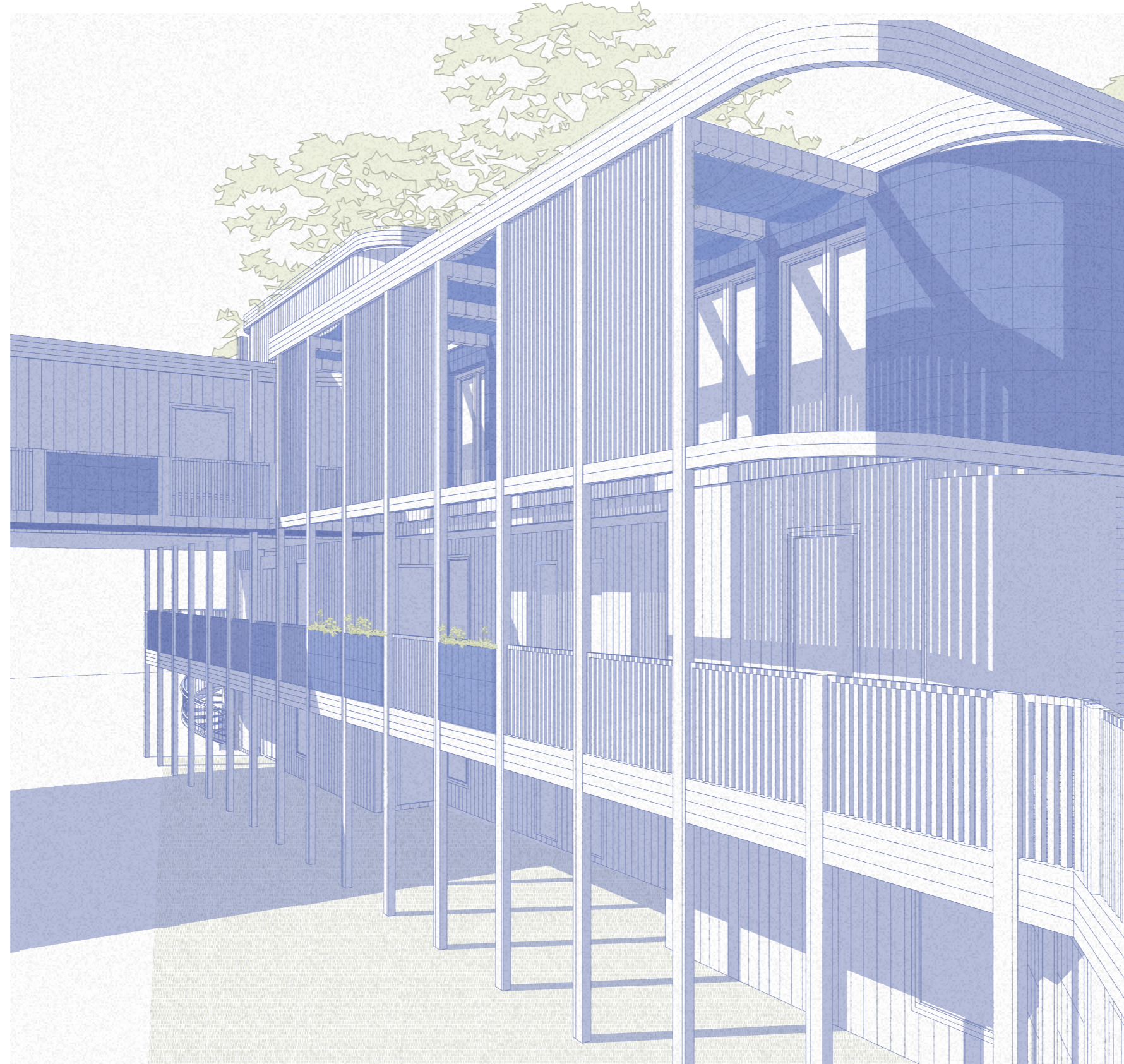
# Climate



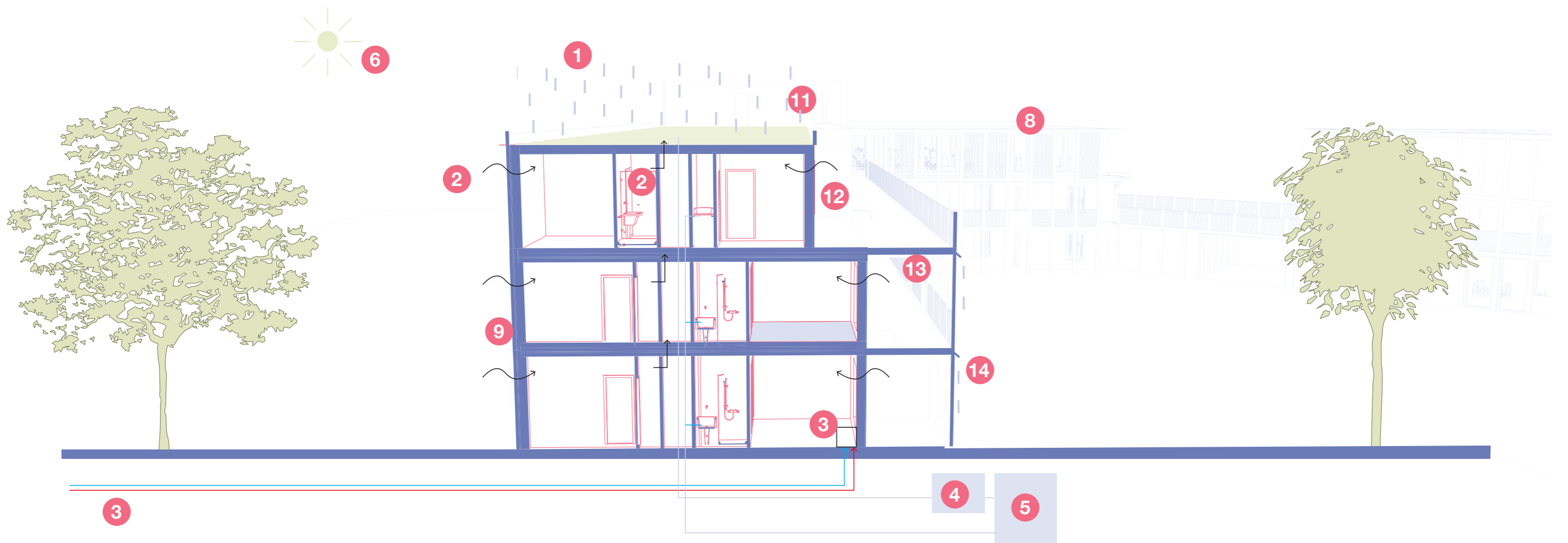
# Vertical Solar Shading



# Horizontal Solar Shading



# Climate



# Climate

## Parapet

9 mm Rockpanel A2 (color Monterey Pine)  
 Aluminium Mounting clips  
 Vapor-Permeable membrane  
 Timber Frame construction  
 115 mm Wood Fibre Insulation  
 12 mm Moisture-resistant MDF board  
 Vapor-tight membrane  
 Slip layer AlkorPlus 81014

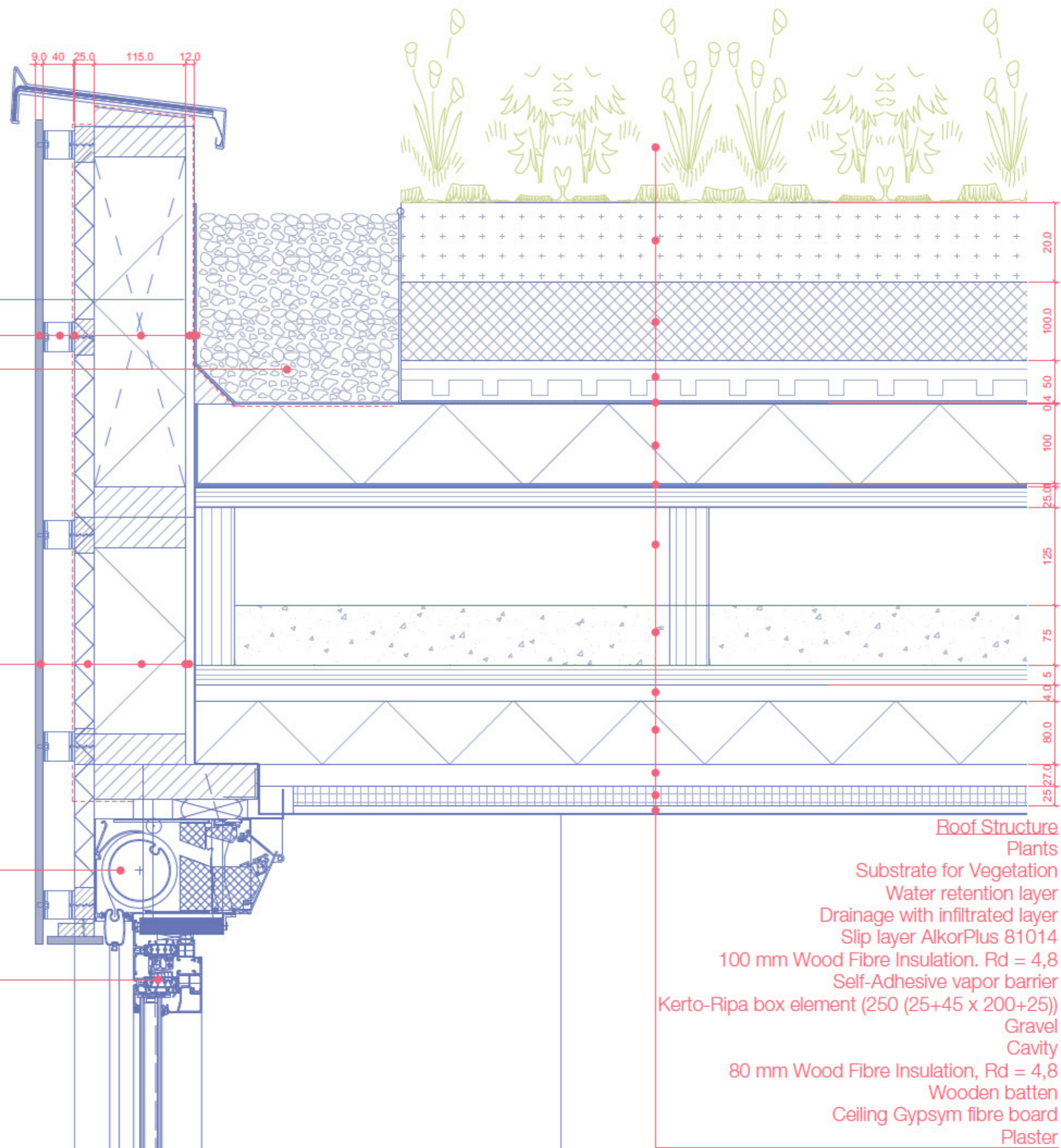
25 mm Gravel border

## Wall build-up

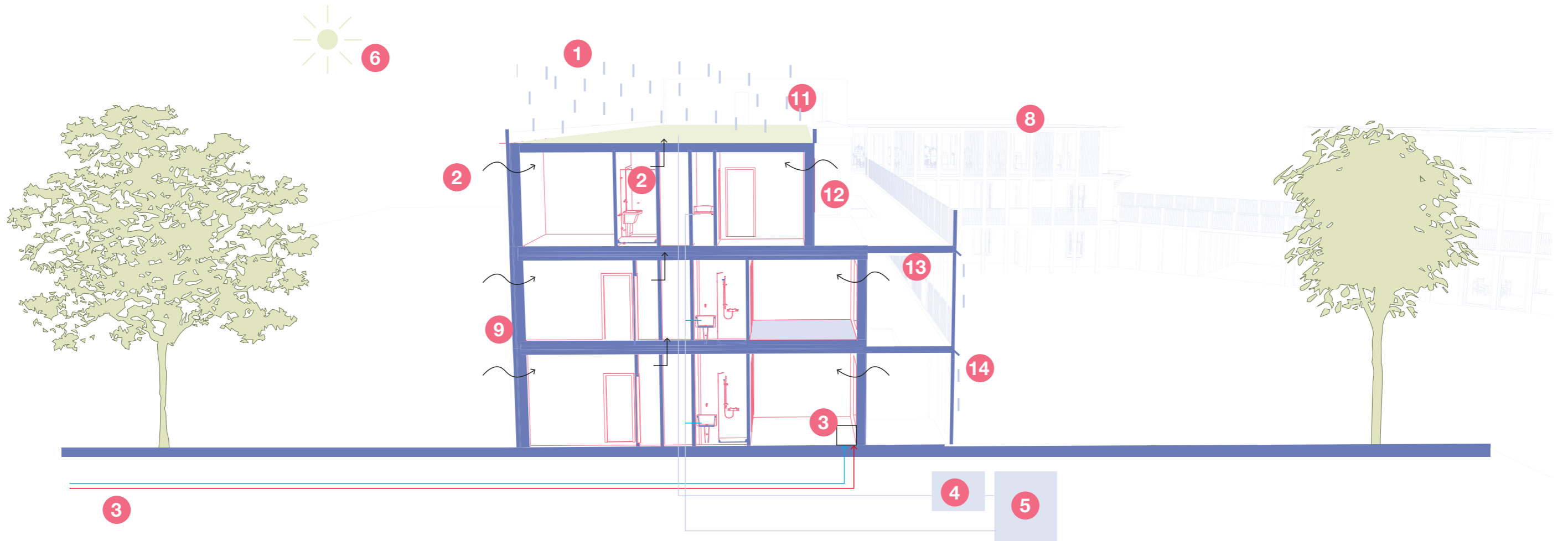
9 mm Rockpanel A2 (color Monterey Pine)  
 Aluminium Mounting clips  
 Vapor-Permeable Mounting Clips  
 Timber Frame Construction  
 115 mm Wood Fibre Insulation  
 12 mm OSB sheathing

DucoTwin 120 'ZR'  
 AK(+) Window Frame  
 (combines natural  
 ventilation with sun  
 shading)

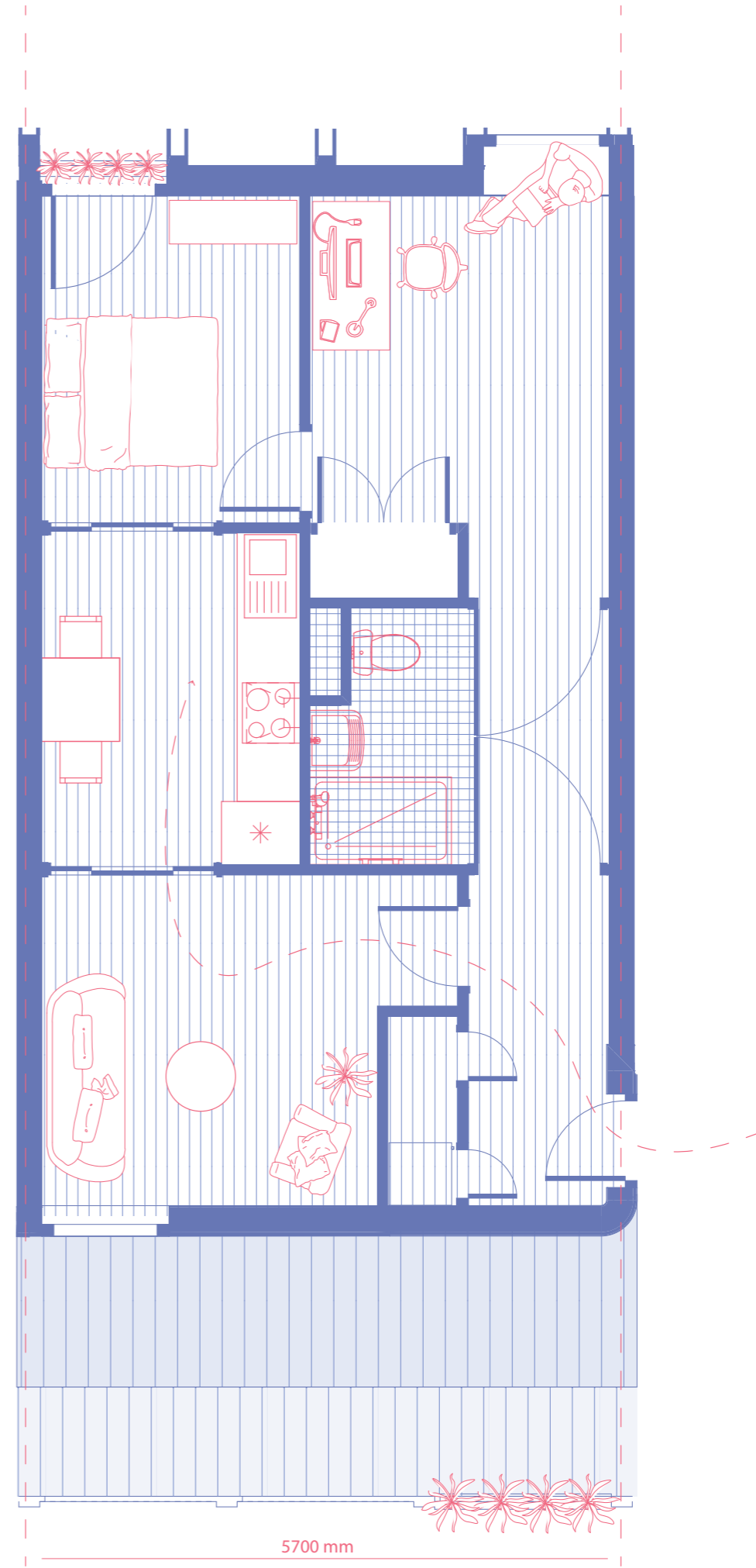
Aluminium window frame (AWS 90 BS.SI  
 WoodDesign, Schüco)



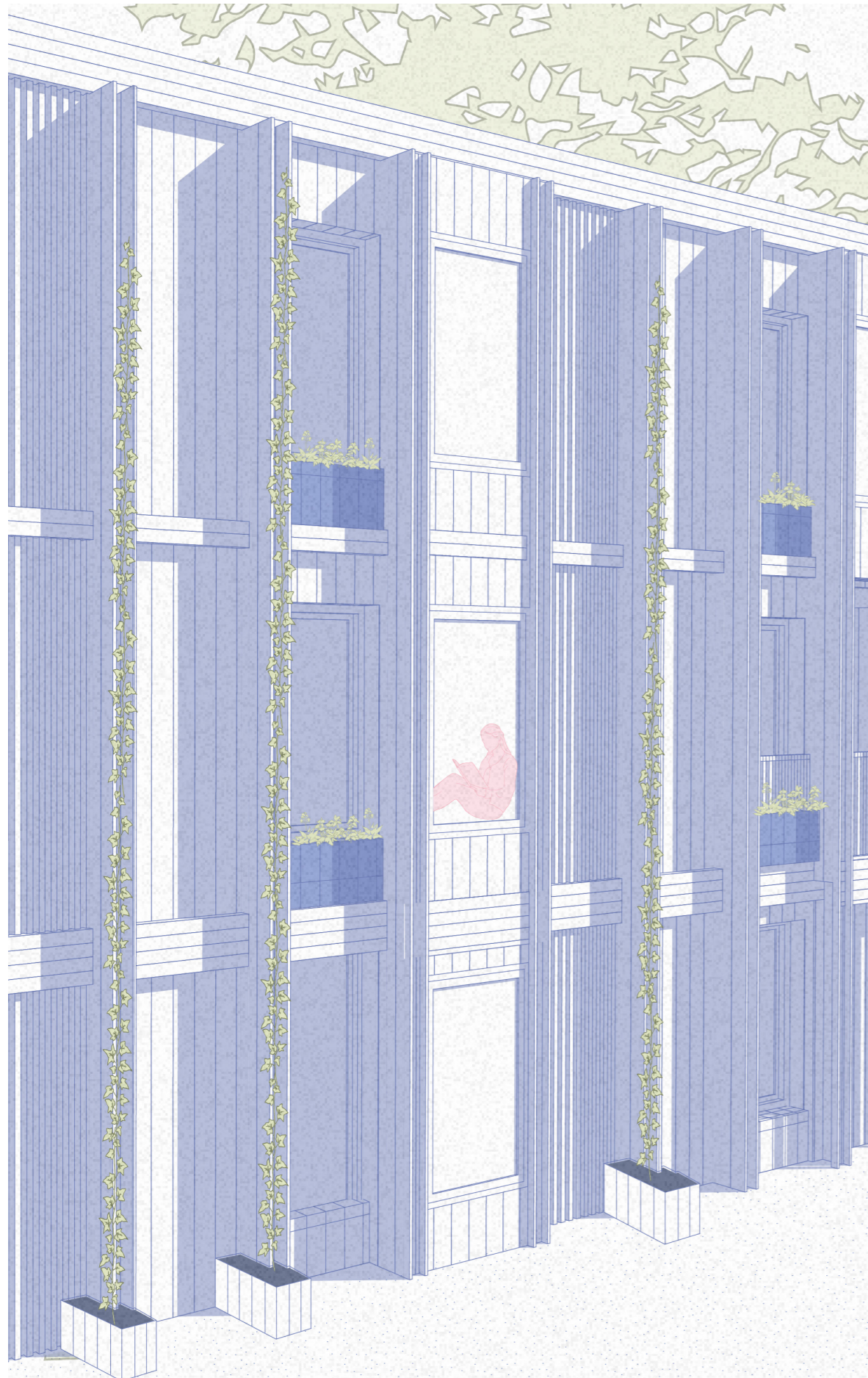
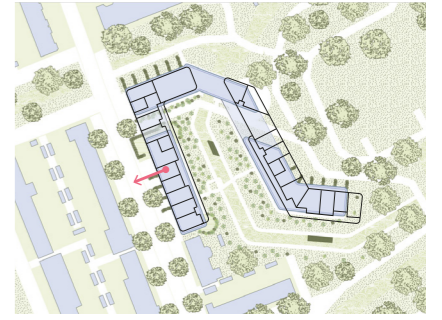
# Climate



# Flexible Lay-Out

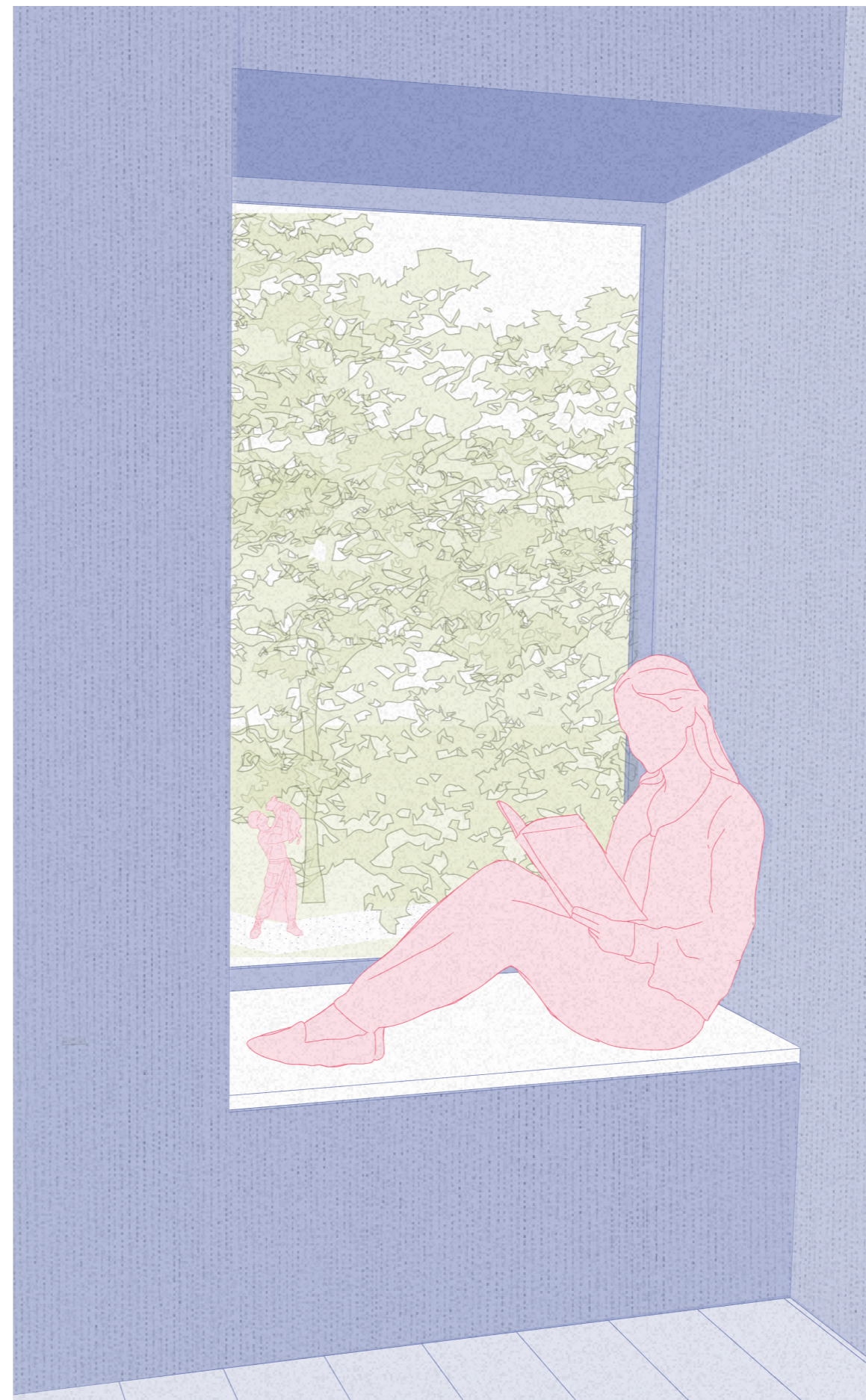
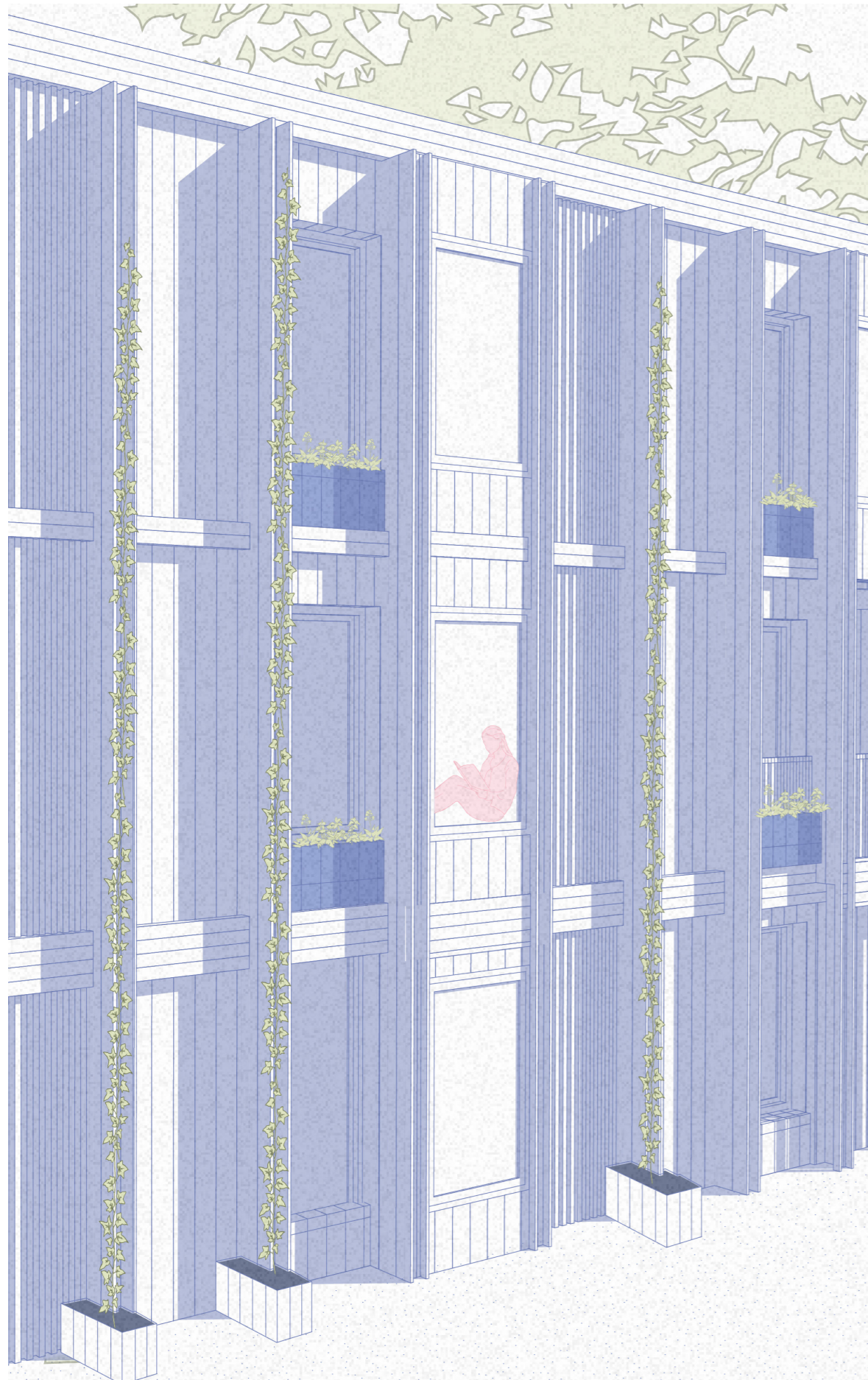


# Bay-Window

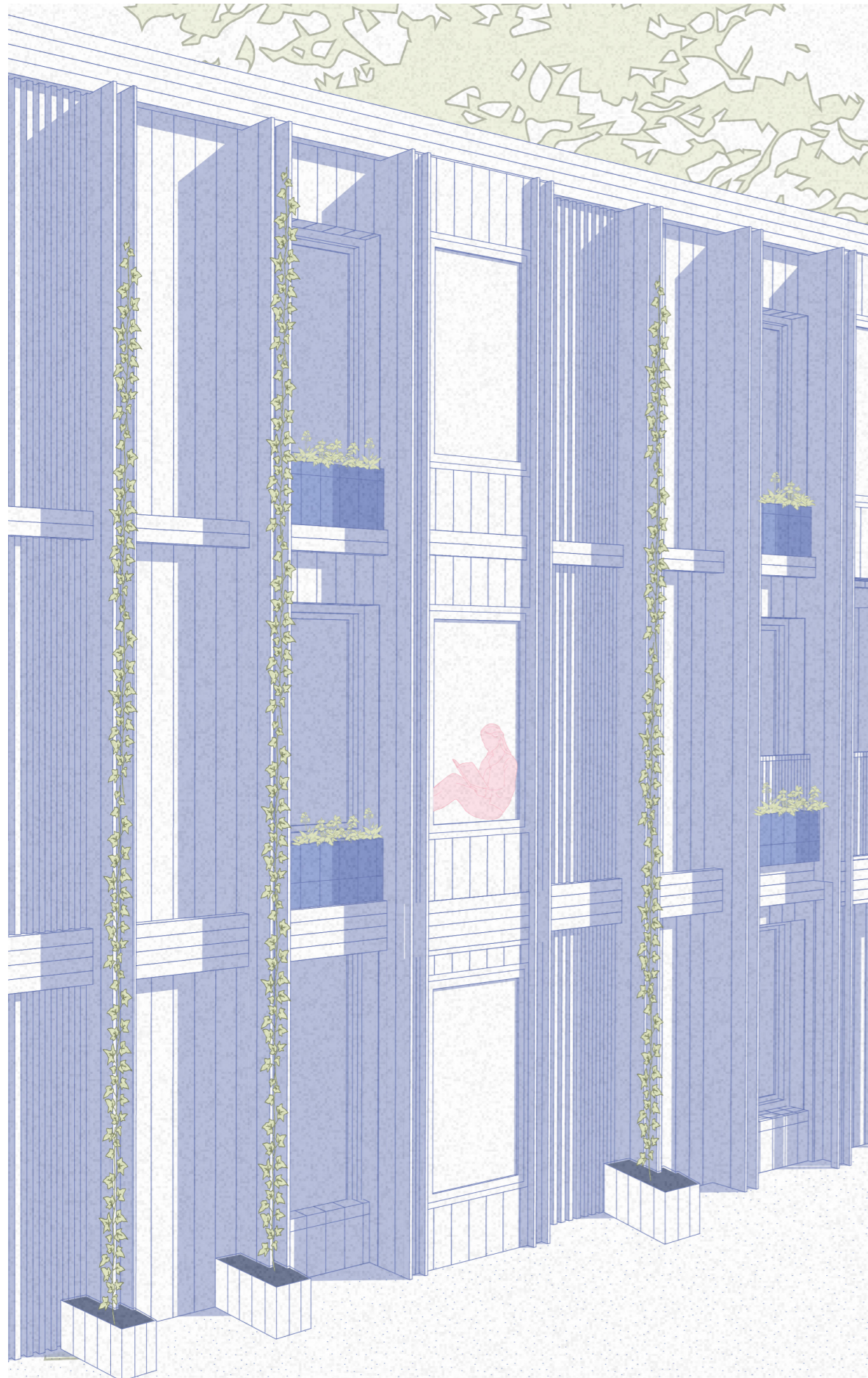


# Bay-Window

Connection with everyday life



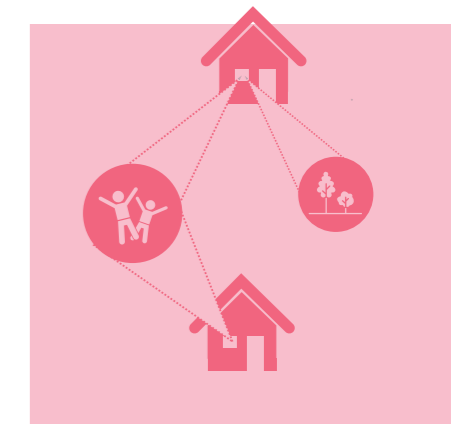
# Bay-Window



Connection with everyday life



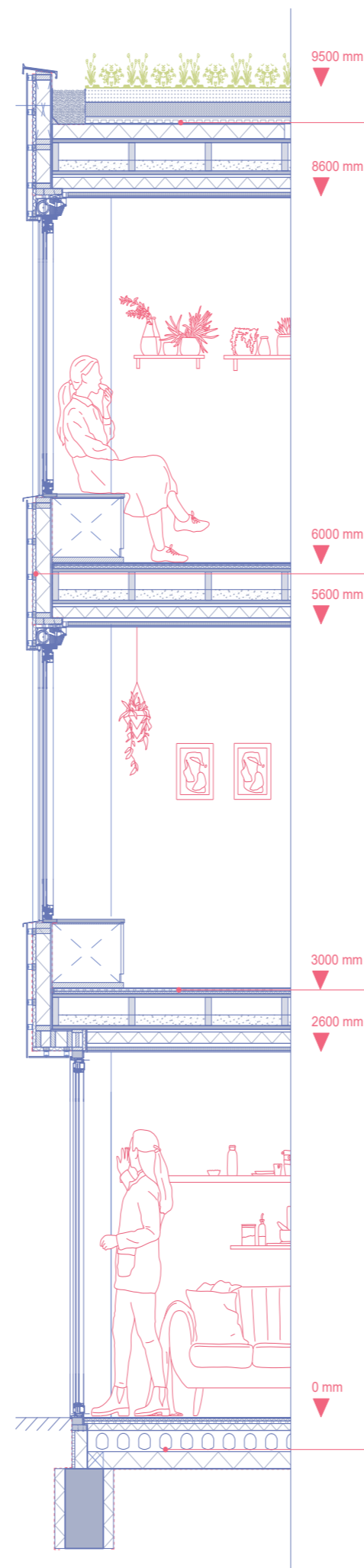
Sightlines



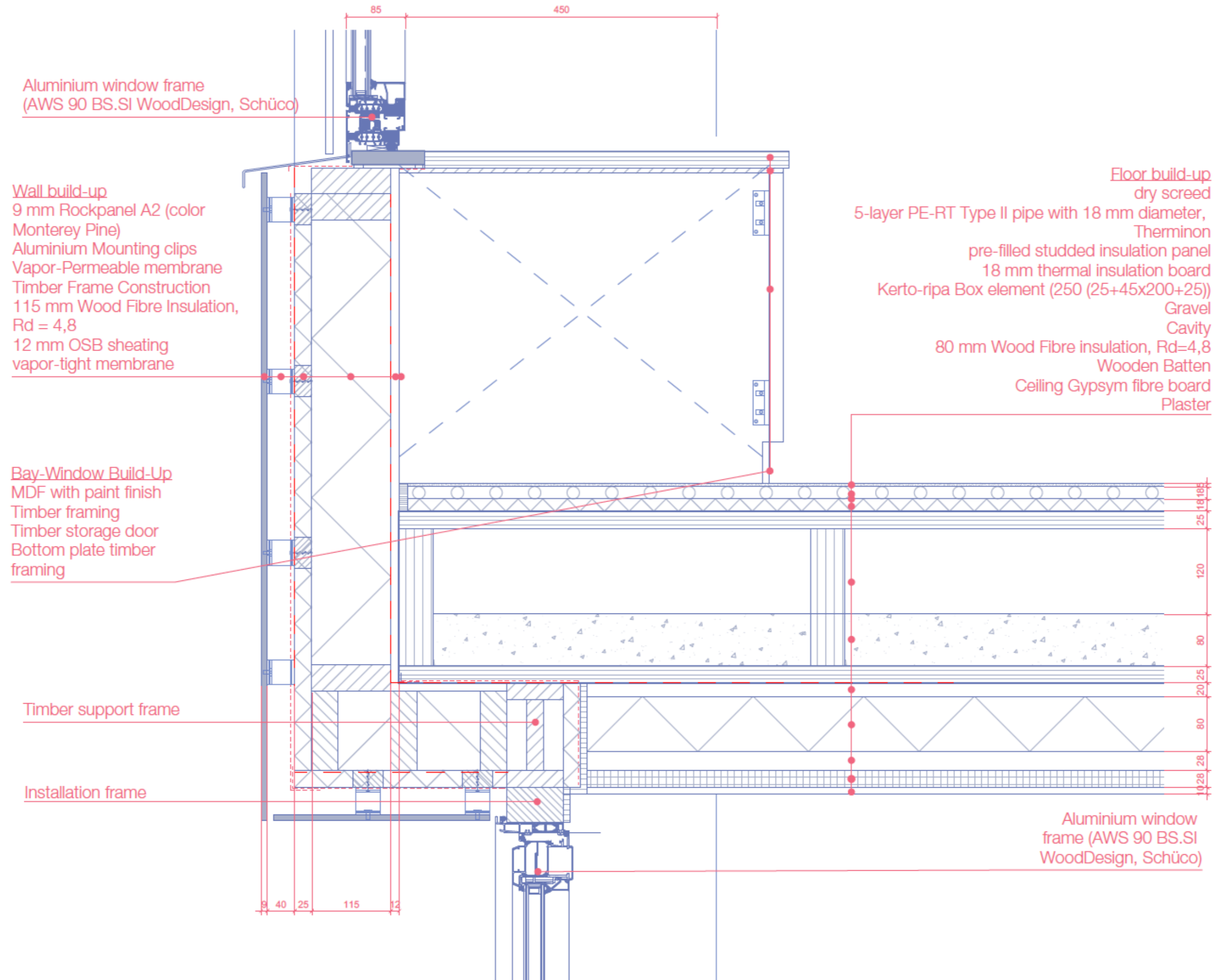
# Impression of Bay Window



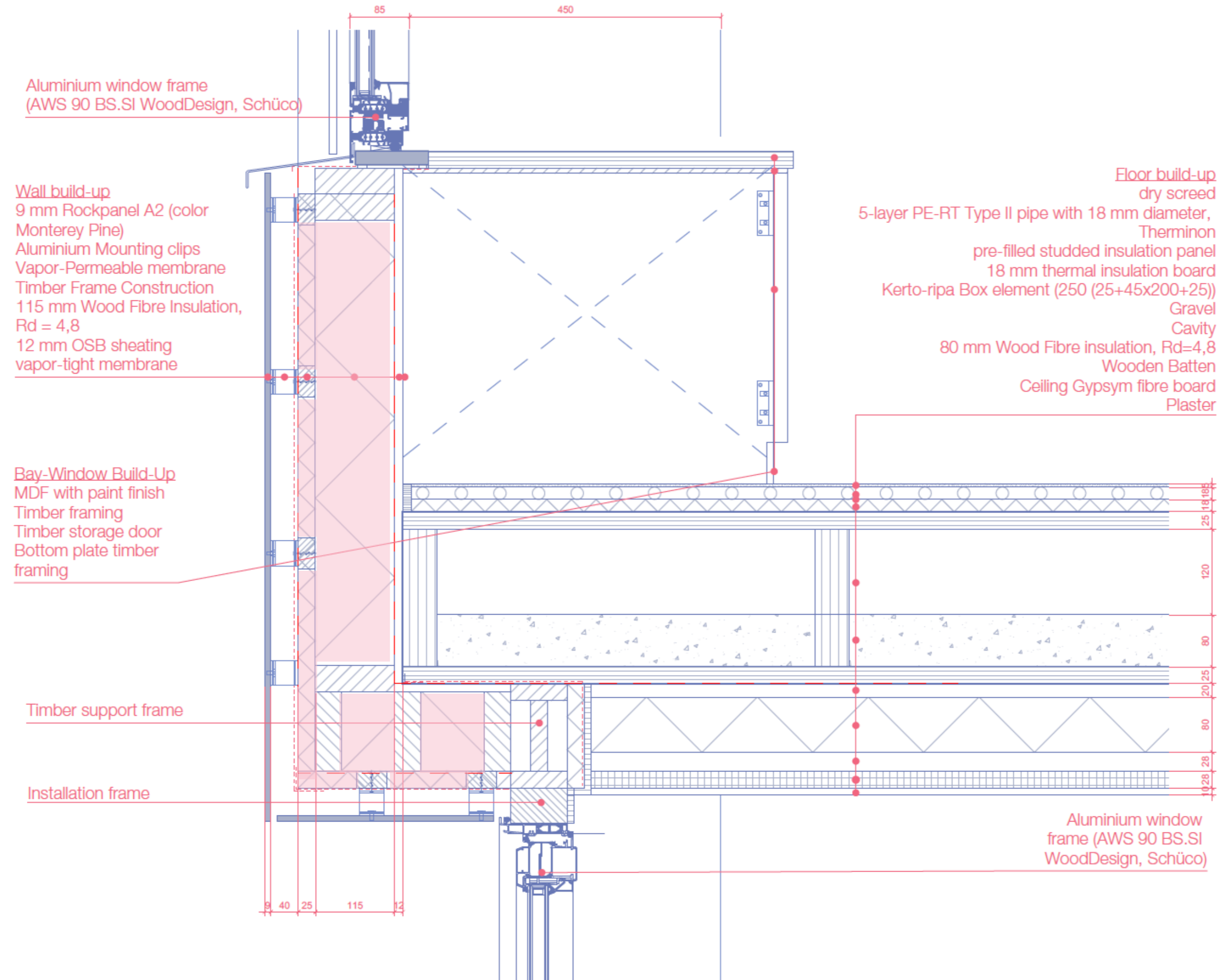
# Facade Fragment

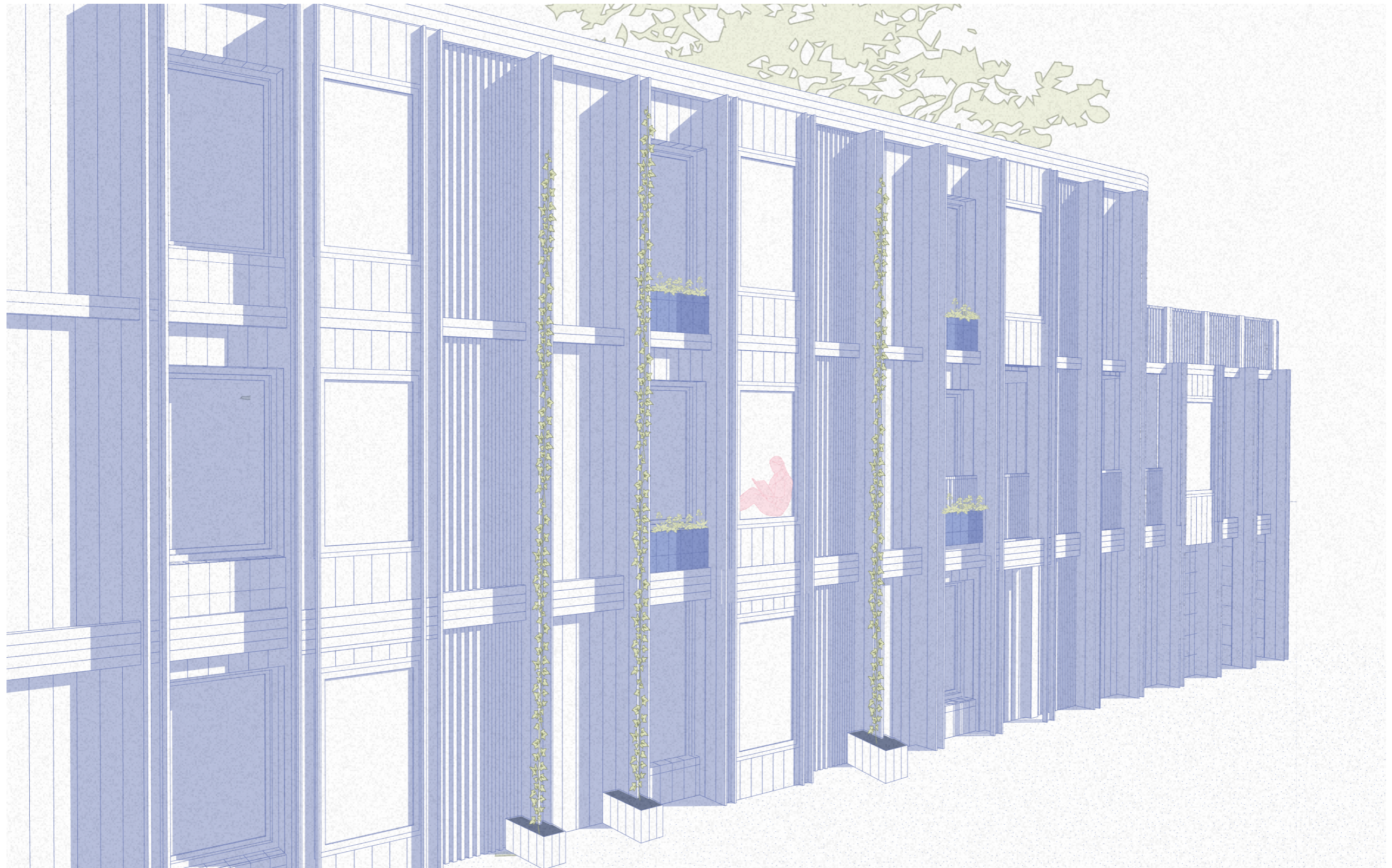


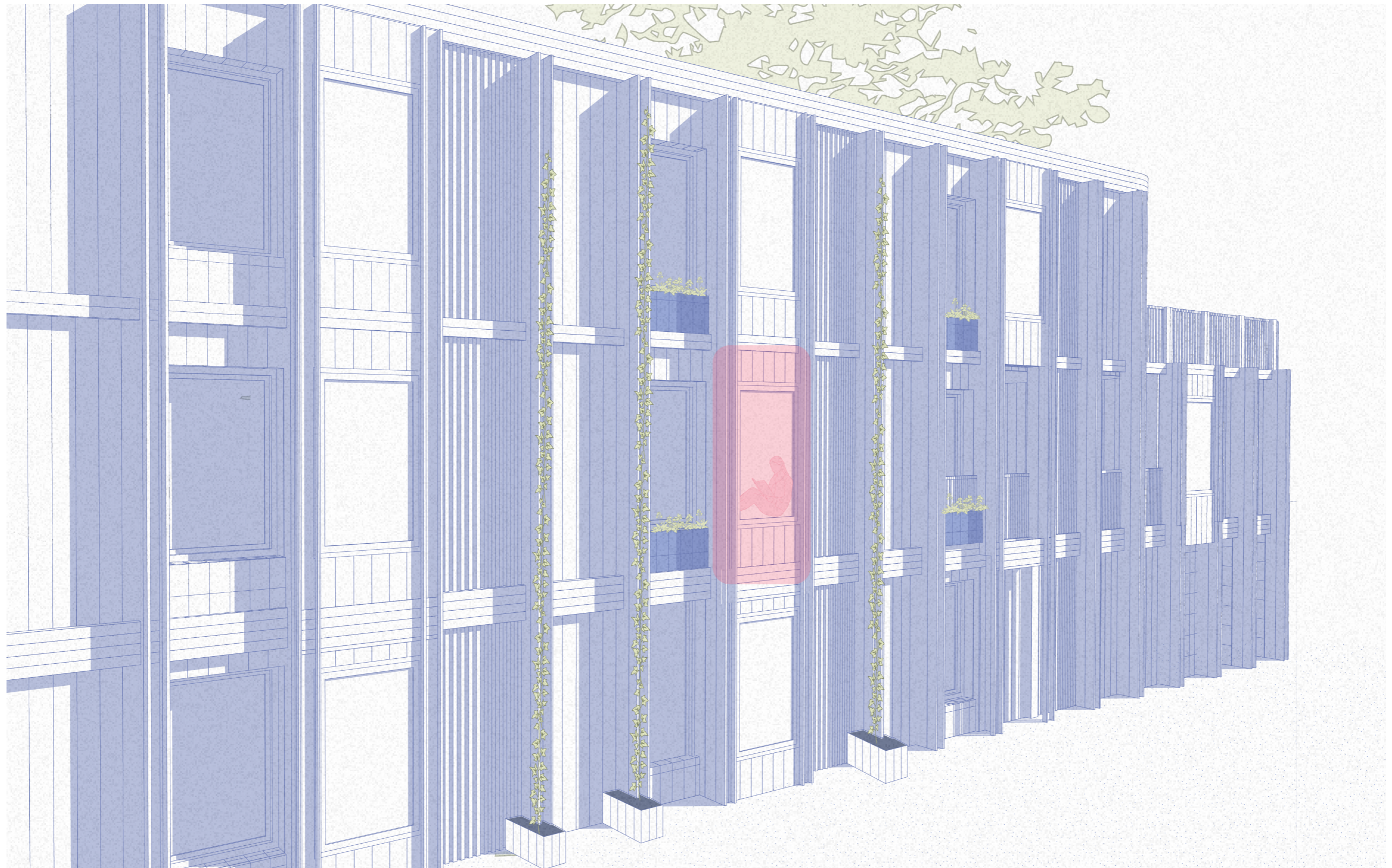
# Detail

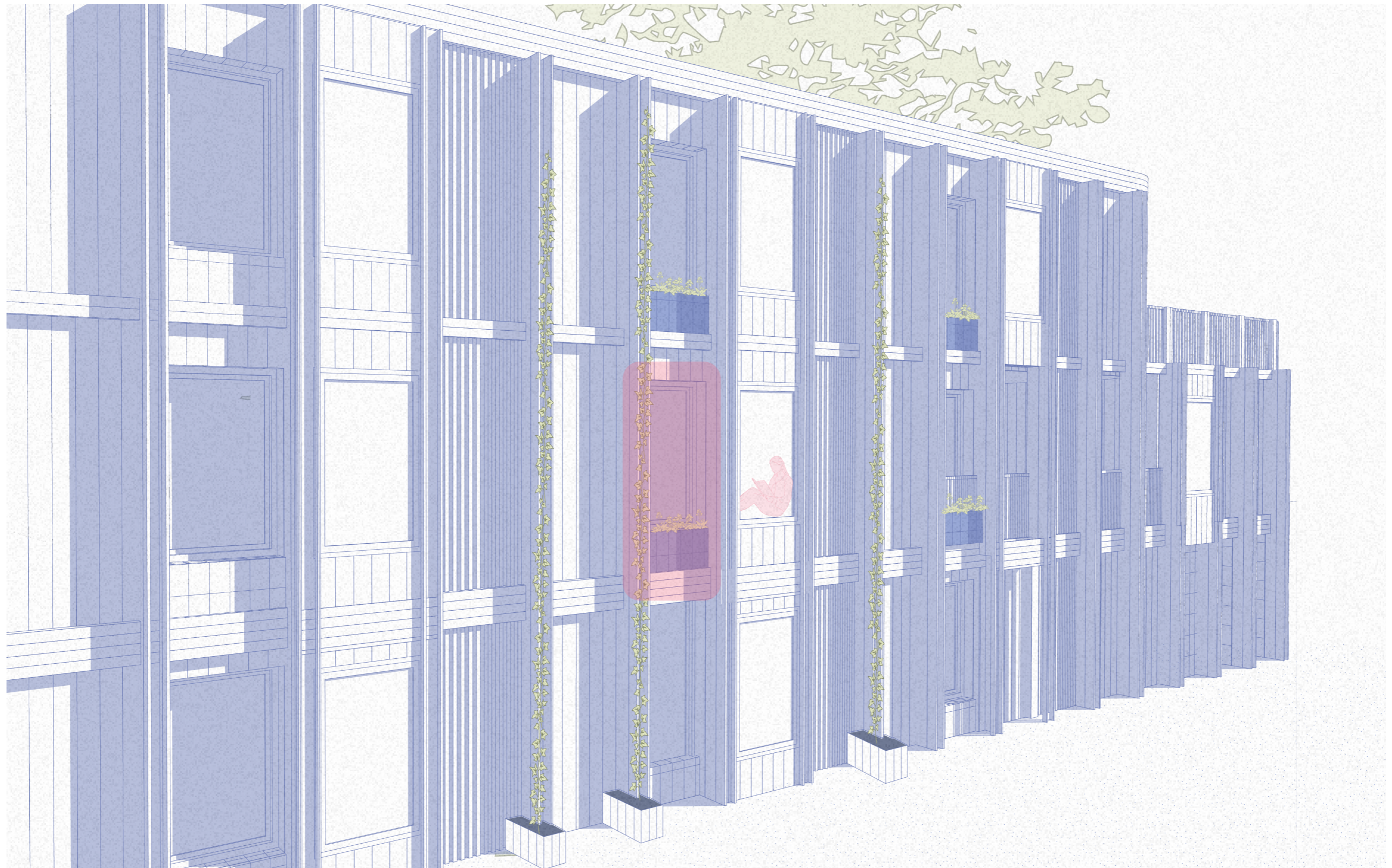


# Detail

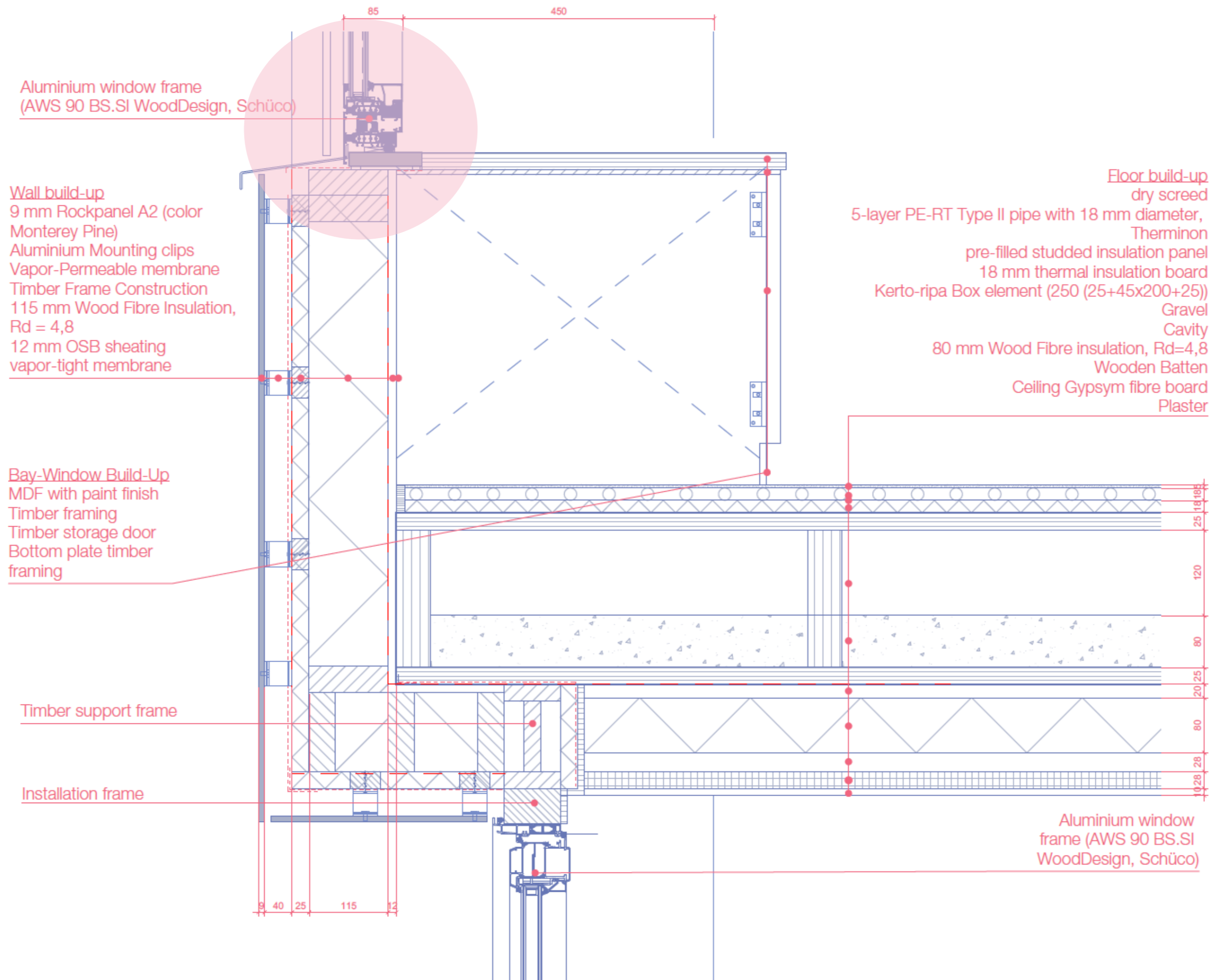


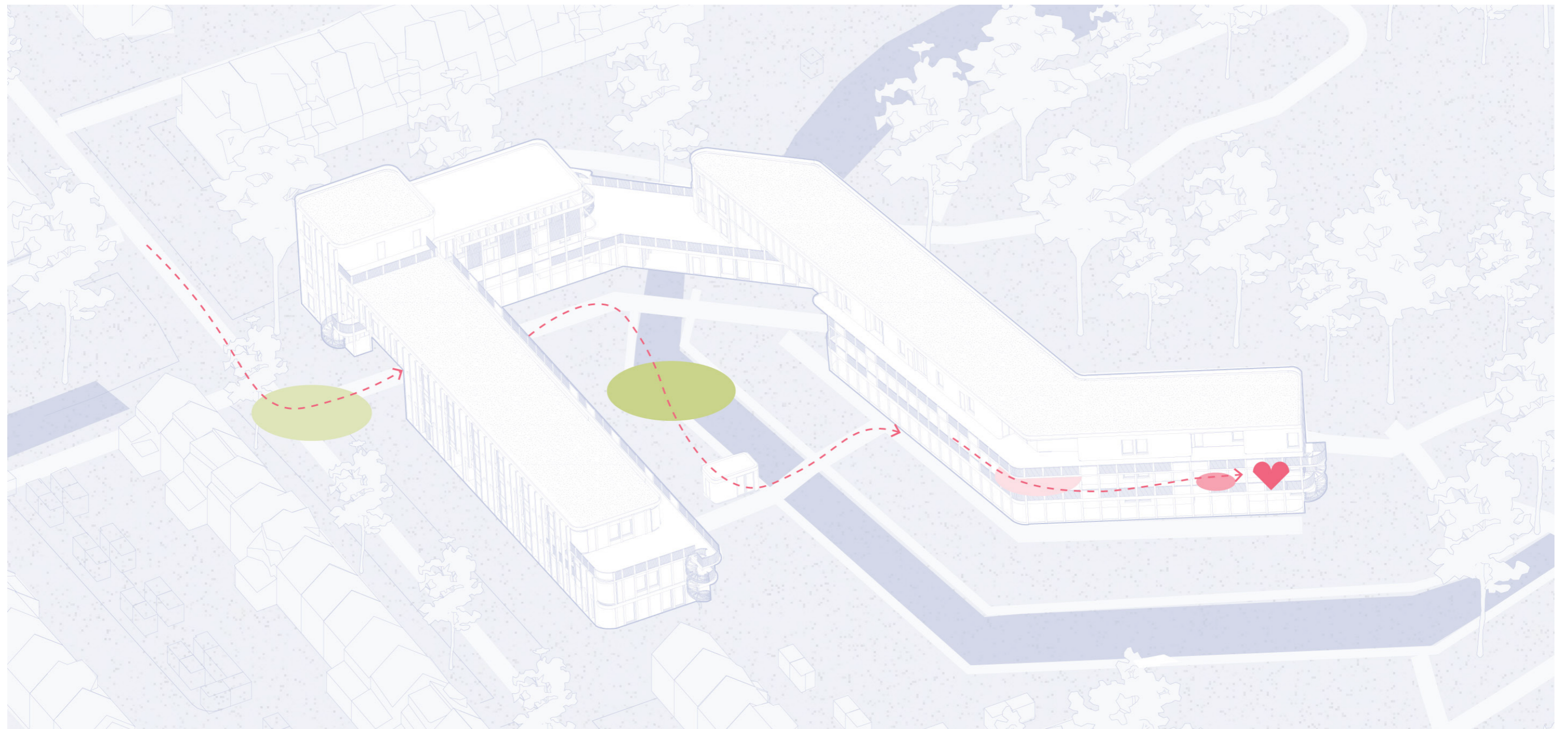
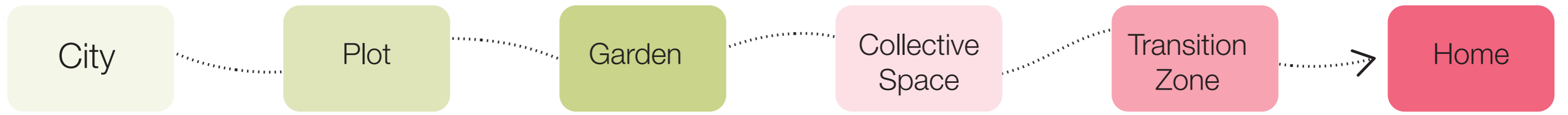






# Detail





*06*

Conclusion

# Conclusion

How can housing design in Houtwijk support a smoother transition from assisted to independent living for former mental-health clients, enhance social contact, and integrate sheltered housing within a mixed-tenure apartment complex?

# Conclusion

How can housing design in Houtwijk support a smoother transition from assisted to independent living for former mental-health clients, **enhance social contact**, and integrate sheltered housing within a mixed-tenure apartment complex?

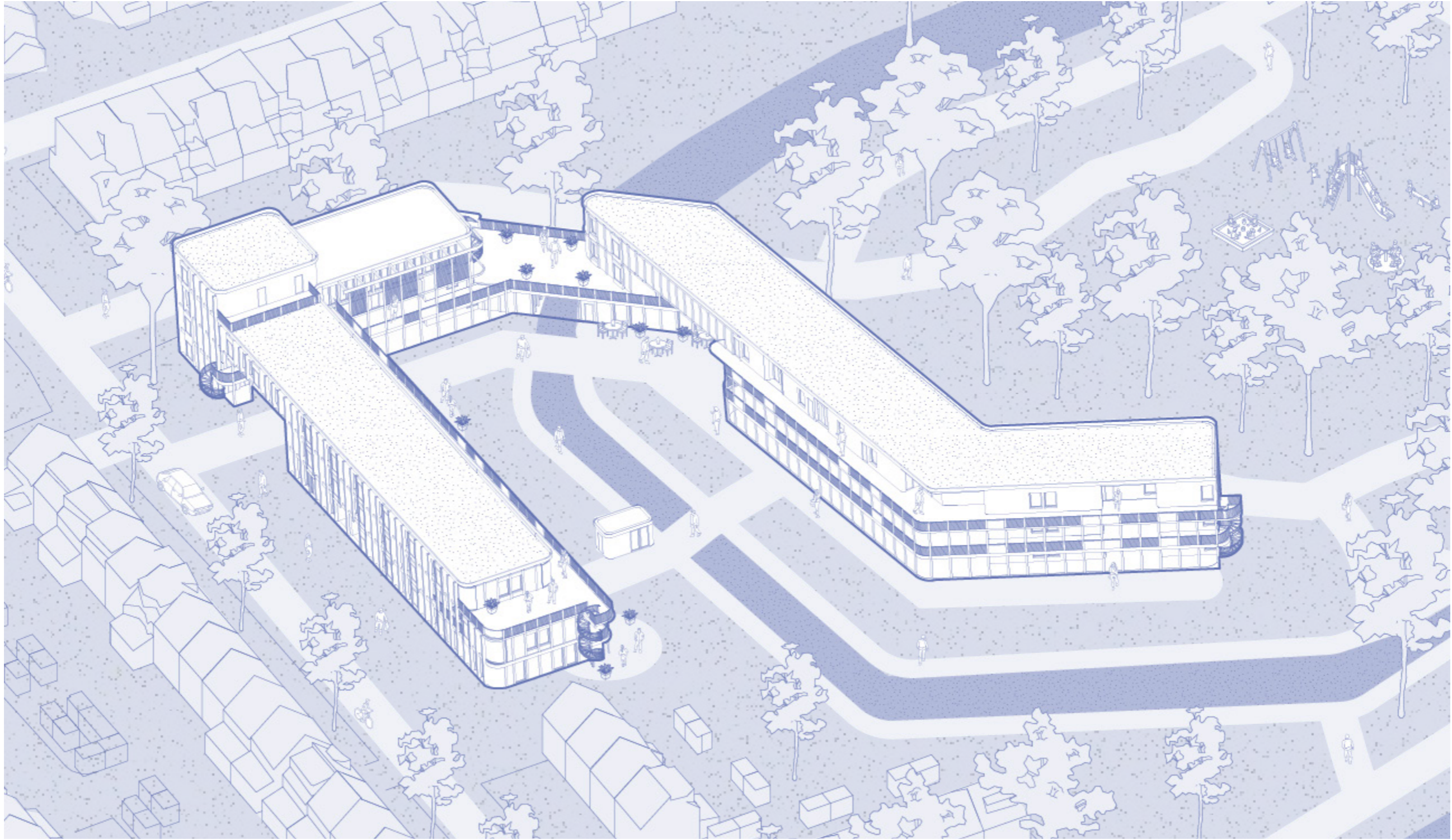
# Conclusion

How can housing design in Houtwijk support a smoother transition from assisted to independent living for former mental-health clients, enhance social contact, and **integrate sheltered housing** within a mixed-tenure apartment complex?

# Conclusion

How can housing design in Houtwijk support a **smoother transition** from assisted to independent living for former mental-health clients, enhance social contact, and integrate sheltered housing within a mixed-tenure apartment complex?

# Conclusion



06

# Acknowledgements

*07*

Extra Slides

# Sub-Questions

*What are the main spatial, social and psychological challenges former mental-health clients experience when transitioning from assisted to independent living?*

*How can sheltered housing be integrated within an apartment complex shared with regular tenants?*

*How can the design of shared and public spaces within a housing complex foster positive interaction and social cohesion between former mental-health clients and existing residents in Houtwijk?*

# Theoretical Framework

Wolf & Jonker (2020)

Social Quality Approach

Participating  
Belonging  
Mattering  
Being Yourself

Antonovsky (1979)

Sense of Coherence

Comprehensibility  
Manageability  
Meaningfulness

Qi, Mazumdar & Vasconcelos, 2024)

Social Cohesion  
Inside a Building

Proximity and Accessibility  
Collective Spaces  
Transition Zones  
Privacy and Balance  
Size and Composition of the Resident Group  
Safety and Comfort

Ir. Kim Hamers, Dr. Nienke Moor, and Prof. Dr. Ir. Madi Mohammadi (2024)

Social Cohesion  
Outside a Building

Accessibility  
Streets and Public Spaces  
Symbolism and Identity  
Informal and Flexible Spaces  
Mixed-Use Functions  
Integration of Public and Private Spaces  
Safety and Comfort  
Scale and Spatial Configuration  
Spontaneous Use and Adaptation

# Main Challenges



# Biggest Challenges when transitioning

## Challenges

**Rest & Safety**

**Social contact**

**Loneliness**

**Transition**

**Daily activities**

**Neighbourhood & stigma**

**Autonomy**

**Environment**

# Integrating Sheltered Housing within a housing complex

Challenges

**Mixing Tenants**

**Good Atmosphere**

**Support and Guidance**

**Autonomy**

# Biggest Challenges when transitioning

*“It was mainly meaningful daytime activities that gave her life purpose again”*

*“And although he has always been a loner and does not easily feel lonely, he would still like to be more among other people”*

*“I want a home with separate spaces, where I have everything to myself and do not have to share anything with others.”*

*“Her recovery was hindered by her living environment, where she was surrounded by people with the same problems as herself.”*

# Integrating Sheltered Housing within a housing complex

Social Quality Approach	Challenge	Recurring Finding	Architecture
<b>Being Yourself</b>	<b>Mixing tenants</b>	<b>This balance must be carefully managed for the comfort of both groups, but it offers opportunities for community integration.</b>	<b>Distribute the different target groups in a mixed manner throughout the building, while ensuring shared spaces that encourage interaction.</b>
<b>Participating &amp; Belonging</b>	<b>Good atmosphere</b>	<b>To maintain a good atmosphere, group activities and shared spaces are important.</b>	<b>Design communal areas that are inviting and accessible to encourage interaction and social participation.</b>
<b>Mattering</b>	<b>Support and Guidance</b>	<b>Clients should be able to live more independently, with support available when needed.</b>	<b>Incorporate spaces for professional support into the design, such as offices, while maintaining privacy for the residents.</b>
<b>Mattering</b>	<b>Autonomy</b>	<b>Clients need individual rooms for privacy, especially in later recovery phases.</b>	<b>Design individual, fully self-contained apartments with private bathrooms and kitchens to promote autonomy, while providing opportunities for personal space and quiet.</b>

# Design Principles

## Apartment Complex

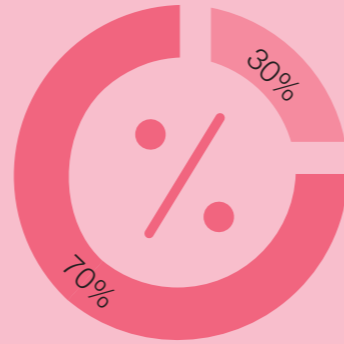
### Mixed Housing Typologies



#### Being Yourself

The complex should combine sheltered and independent housing, allowing residents to move between care levels while remaining in the same neighbourhood.

### Ratio



#### Being Yourself

While combining sheltered and independent housing, around 20–30% of the apartments should be designated as sheltered housing.

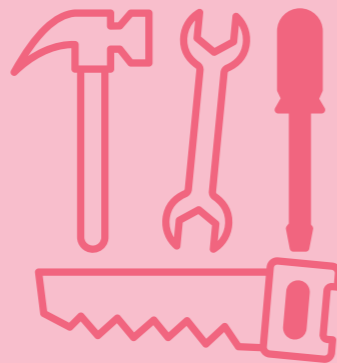
### Distributed Through Building



#### Being Yourself

Sheltered housing residents will be distributed throughout the building to promote normalization and encourage interaction.

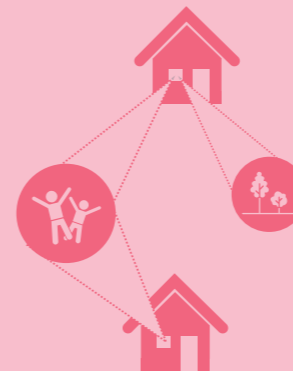
### Day Activities



#### Participating

Day activities are available in the building for residents with a specific indication.

### Sightlines



#### Belonging

Sightlines allow residents to see lively functions from different locations, enabling voluntary social interaction without pressure.

# Design Principles

## Houses

### Individual Units



#### Mattering

**Privacy is essential for recovery; private bathrooms and kitchens are preferred, as shared bathrooms create tension.**

### Structure



#### Mattering

**A lack of daily structure increases relapse risk. Separate sleeping and living areas are therefore essential, with no bed in the living space.**

### Connection with everyday life



#### Participating

**Views of the street, children, and greenery help normalize daily life. Homes should avoid isolation and make residents feel part of the neighborhood.**

## Social Interaction

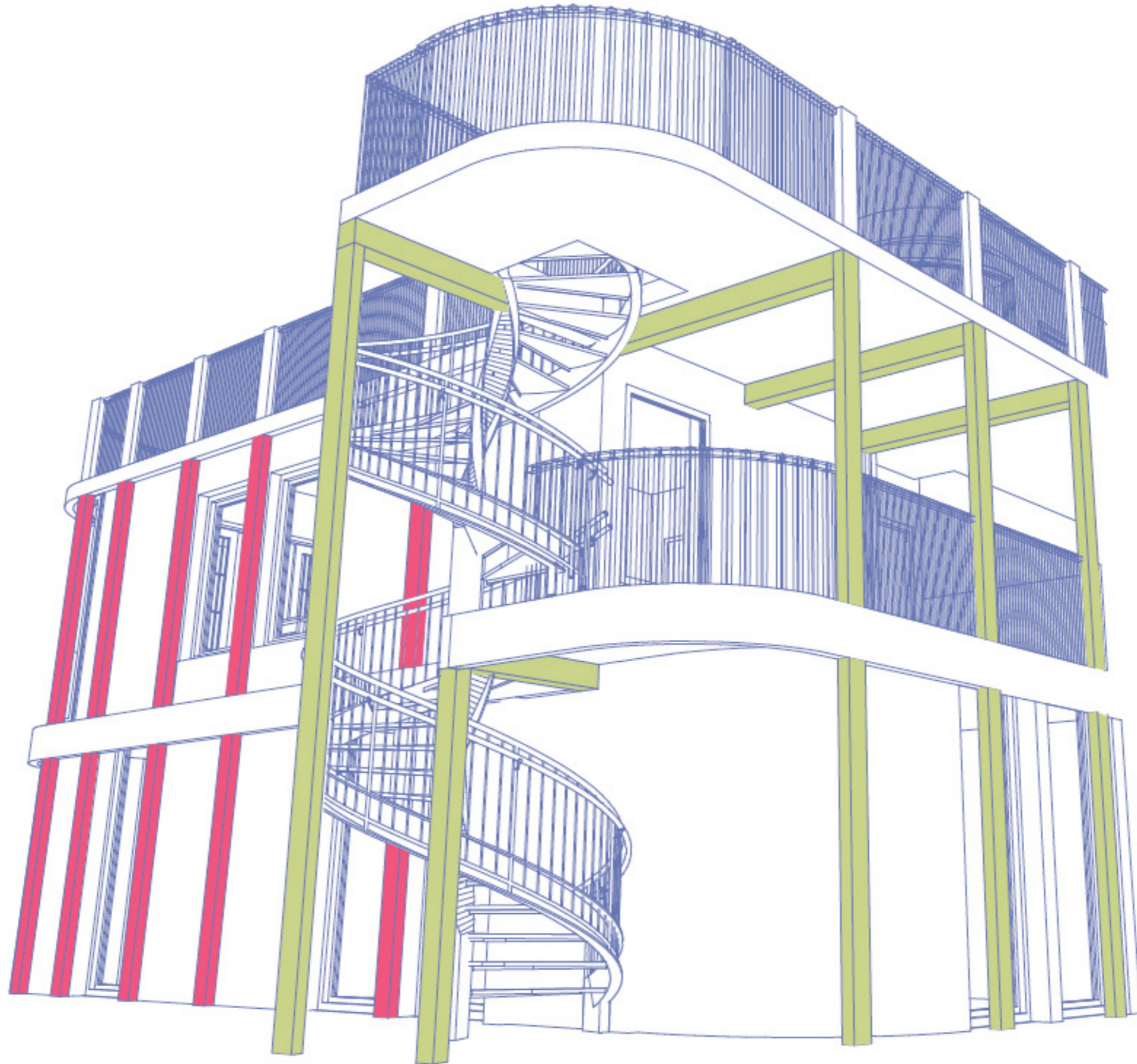
### Social Interaction



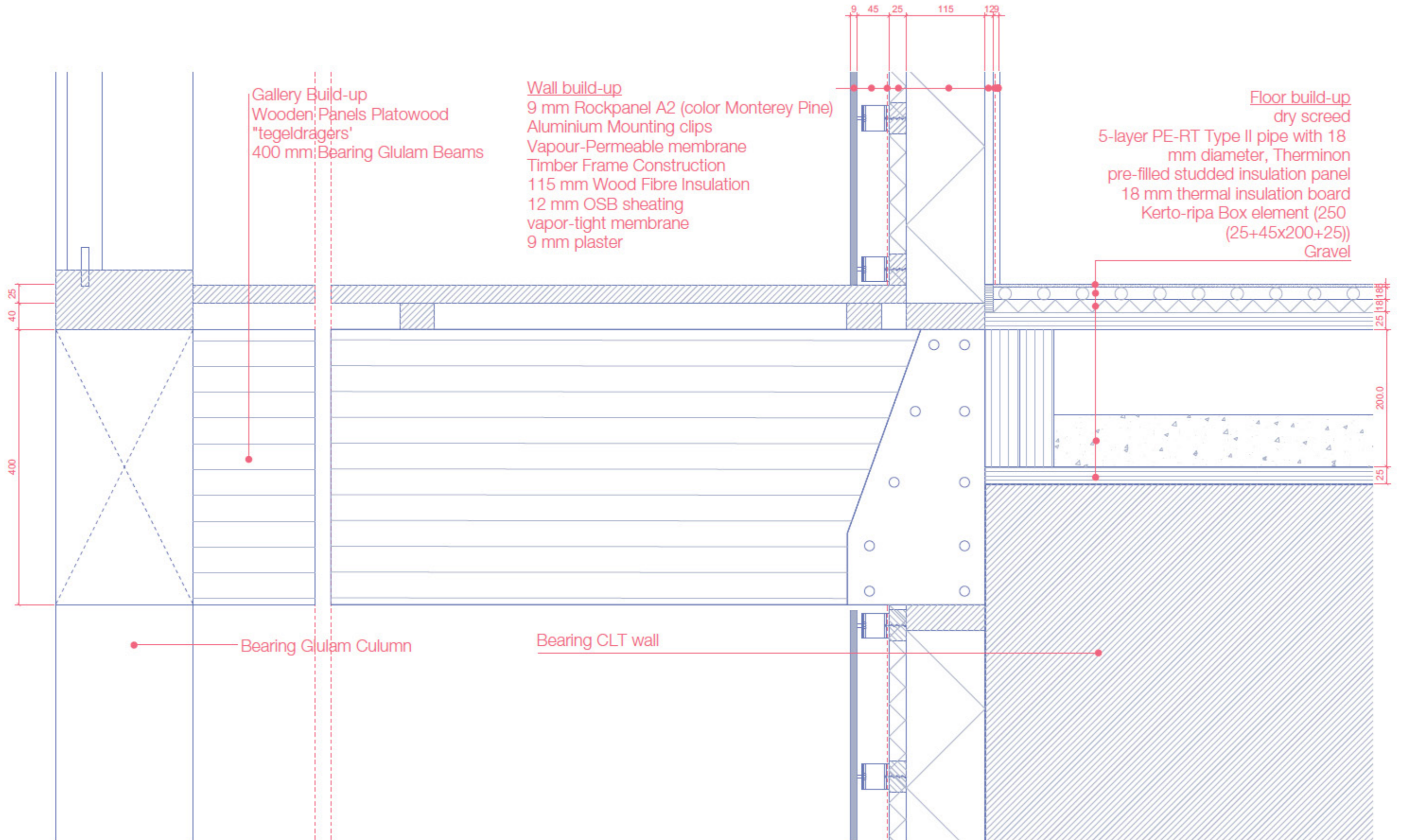
#### Belonging

**Contact helps combat loneliness but should remain voluntary. Shared spaces along daily routes encourage natural interaction, such as a laundry room, courtyard, entrance seating, and gallery.**

# 3D view of Transition grid to construction



# 1:5 gallery



# 1:5 top of bay window

Aluminium window frame  
(AWS 90 BS.SI WoodDesign, Schüco)

Bay-Window Build-Up  
MDF with paint finish  
Timber framing  
Timber storage door  
Bottom plate timber framing

Floor build-up  
dry screed

5-layer PE-RT Type II pipe with 18 mm diameter, Therminon  
pre-filled studded insulation panel  
18 mm thermal insulation board  
Kerto-riipa Box element (250 (25+45x200+25))  
Gravel  
Cavity  
80 mm Wood Fibre insulation, Rd=4,8  
Wooden Batten  
Ceiling Gypsum fibre board  
Plaster

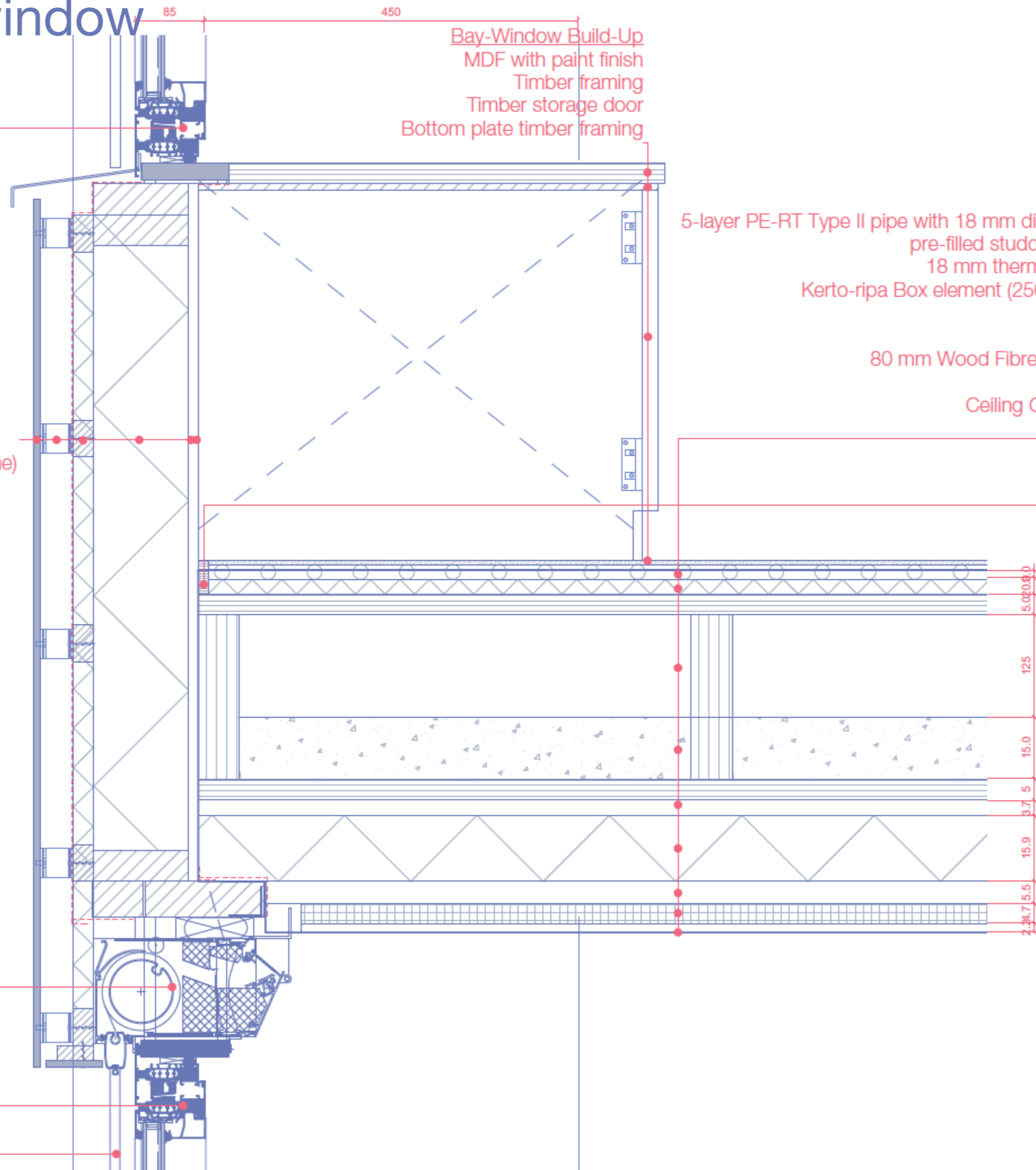
Wall build-up  
9 mm Rockpanel A2 (color Monterey Pine)  
Aluminium Mounting clips  
Vapour-Permeable membrane  
Timber Frame Construction  
115 mm Wood Fibre Insulation  
12 mm OSB sheathing  
vapor-tight membrane

edge insulation strip

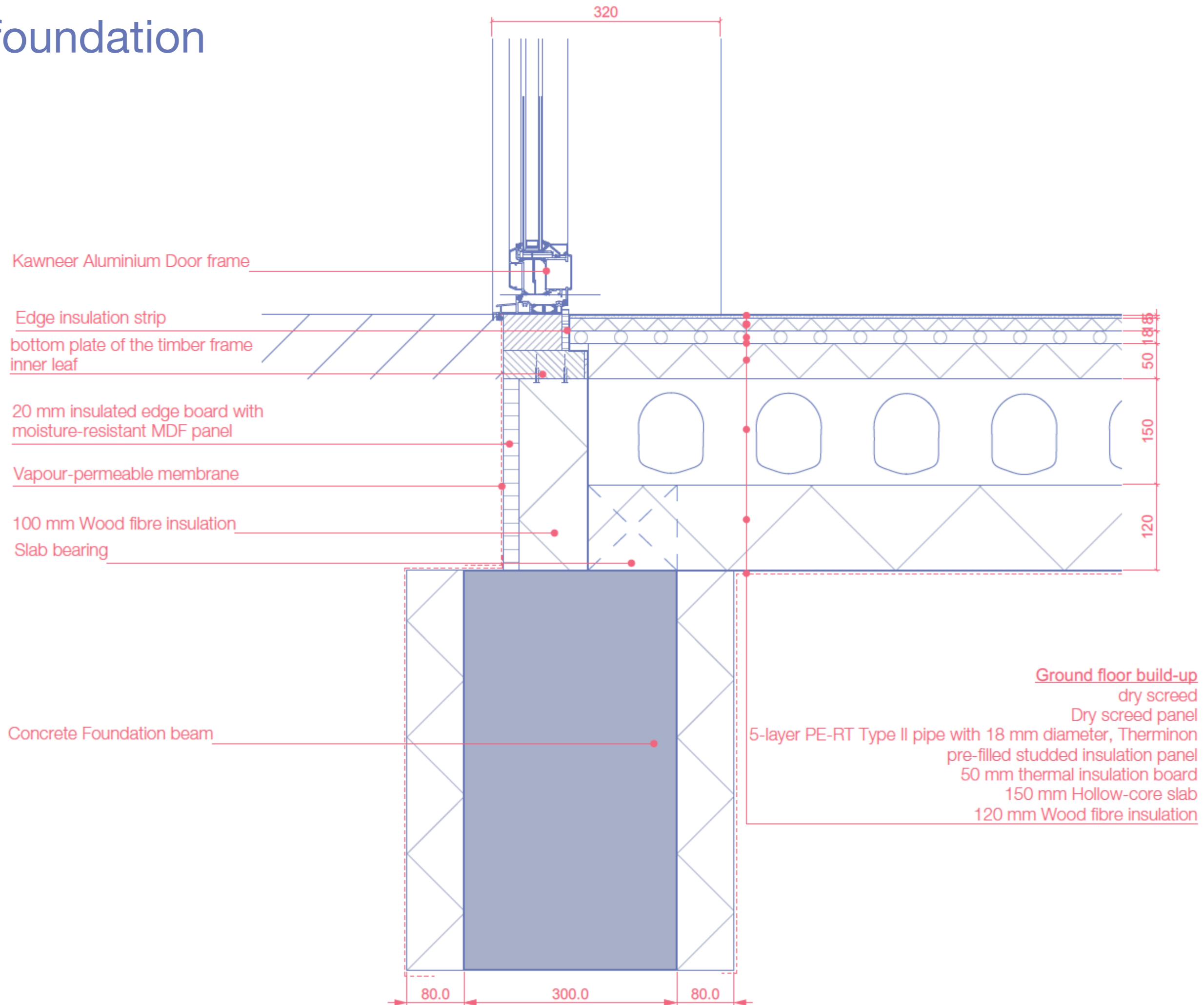
DucoTwin 120 'ZR'  
AK(+) Window Frame  
(combines natural  
ventilation with sun  
shading)

Aluminium window frame  
(AWS 90 BS.SI WoodDesign, Schüco)

Sun shading

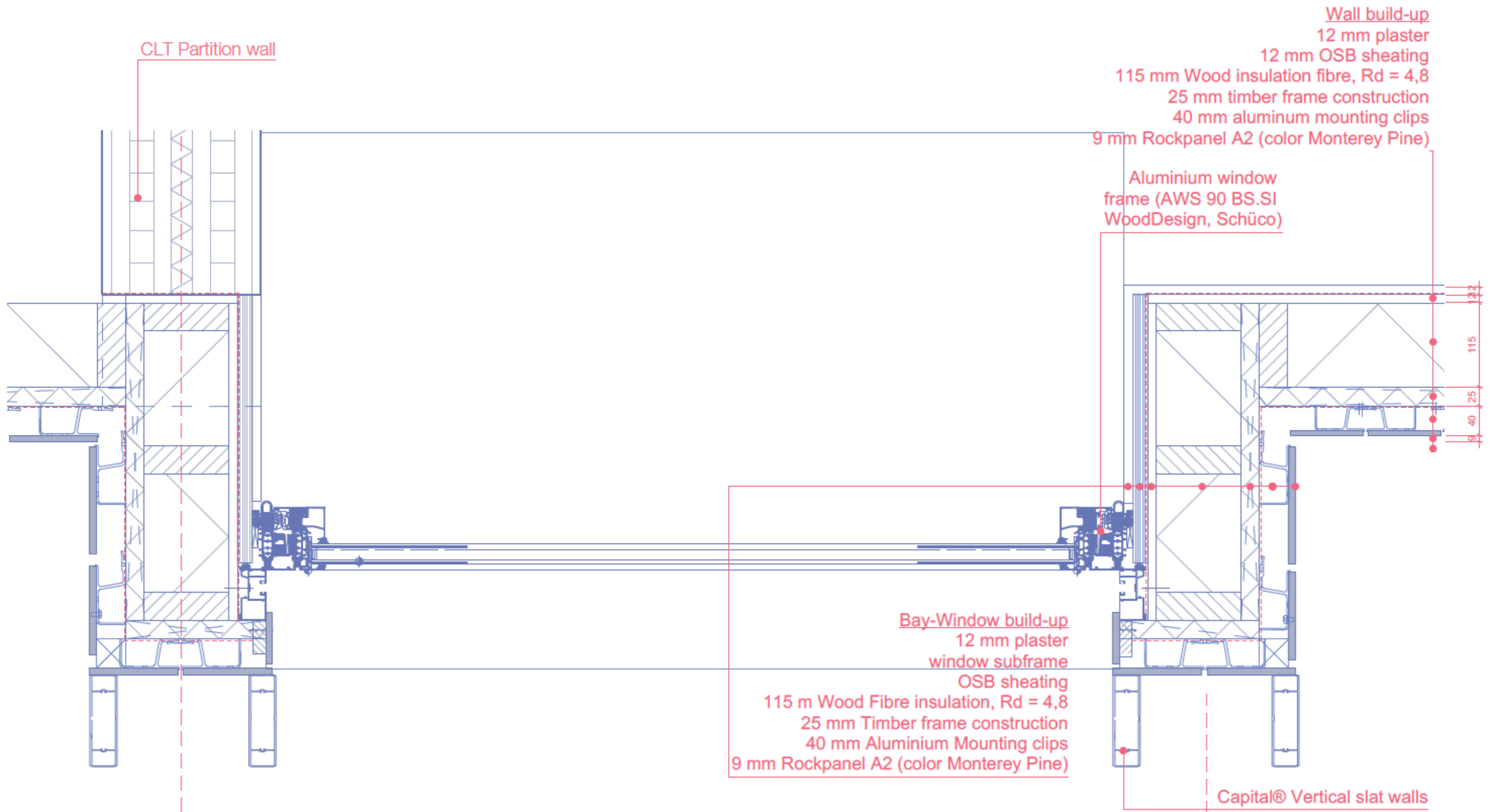


# 1:5 foundation



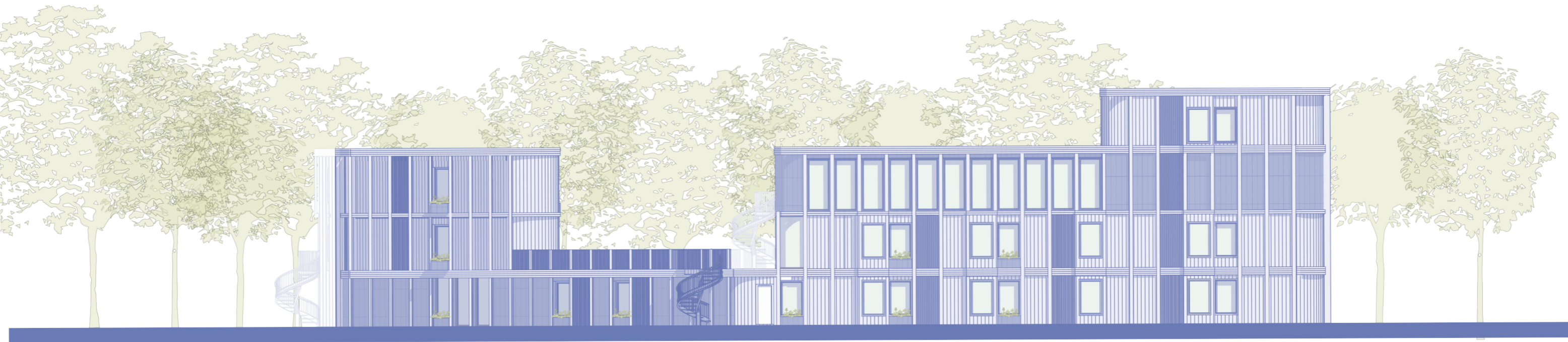


# 1:5 horizontal bay window





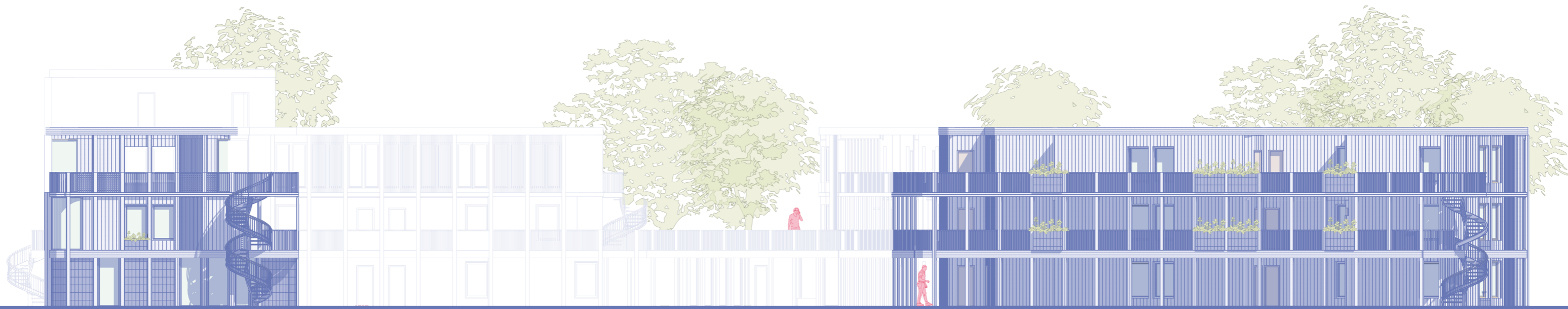
# north elevation



# east elevation



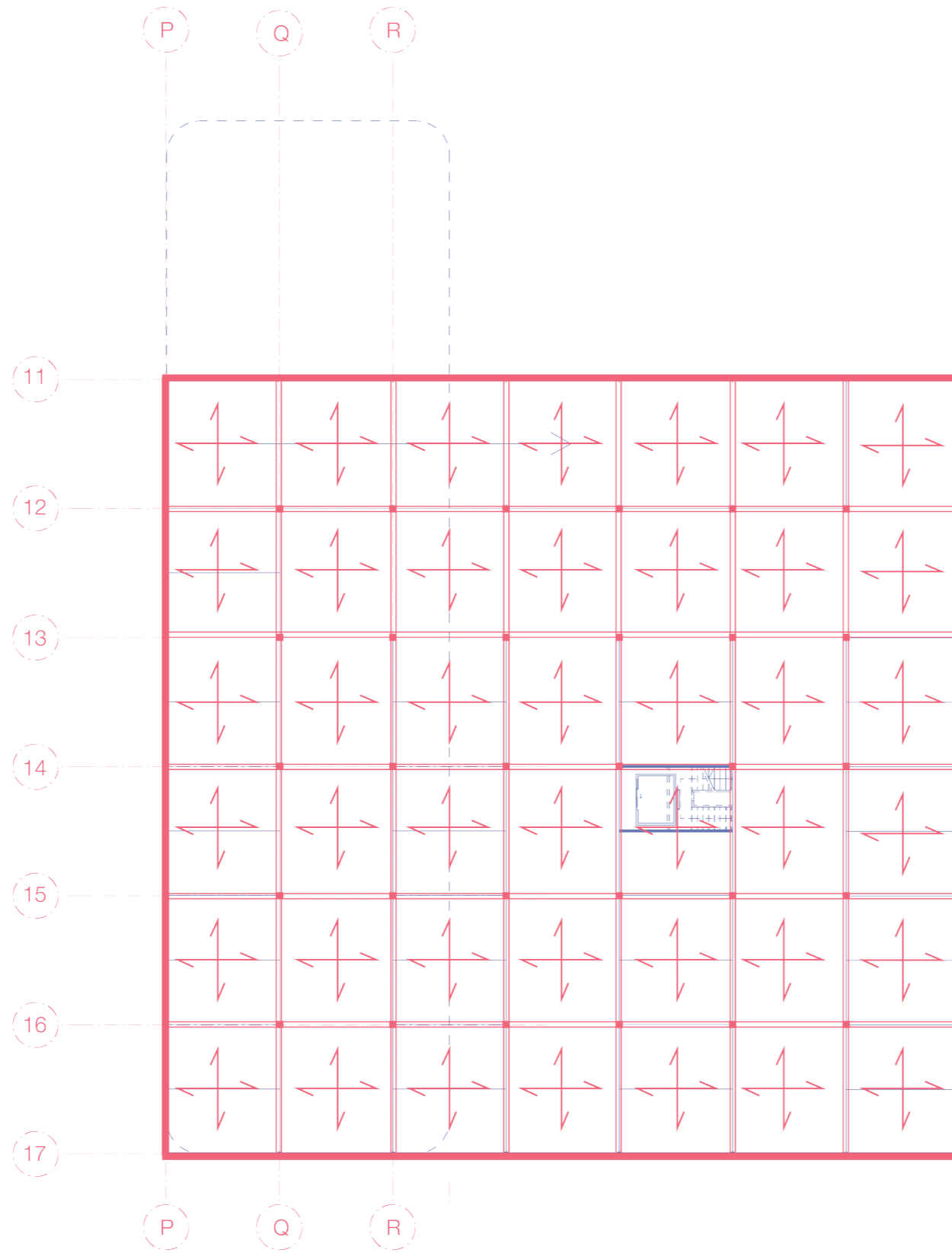
# south elevation



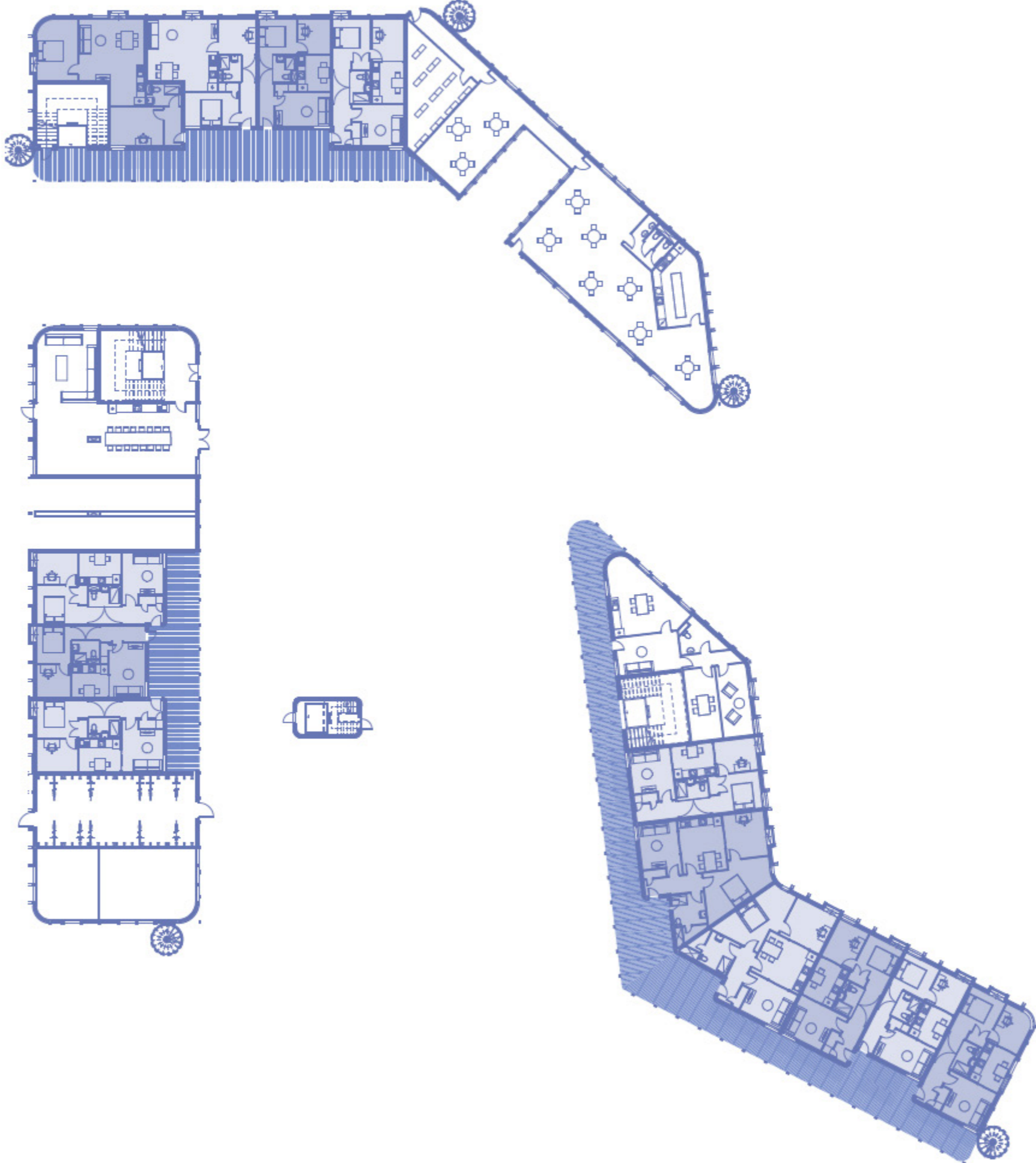
# west elevation



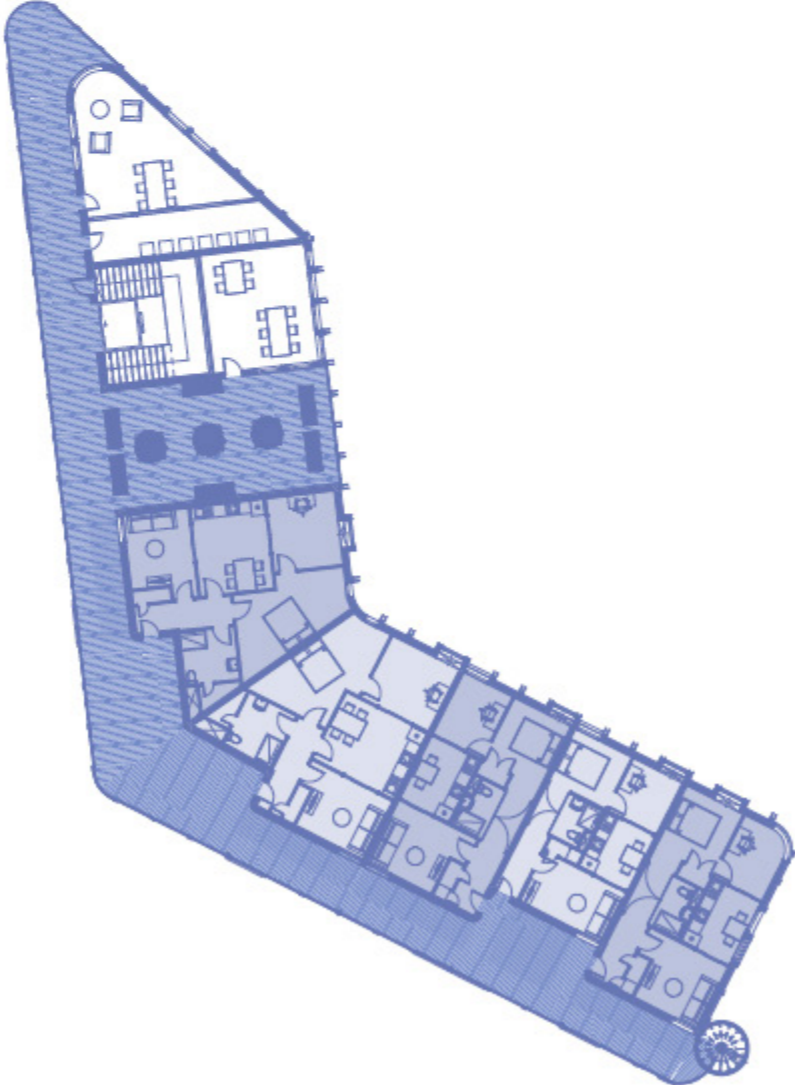
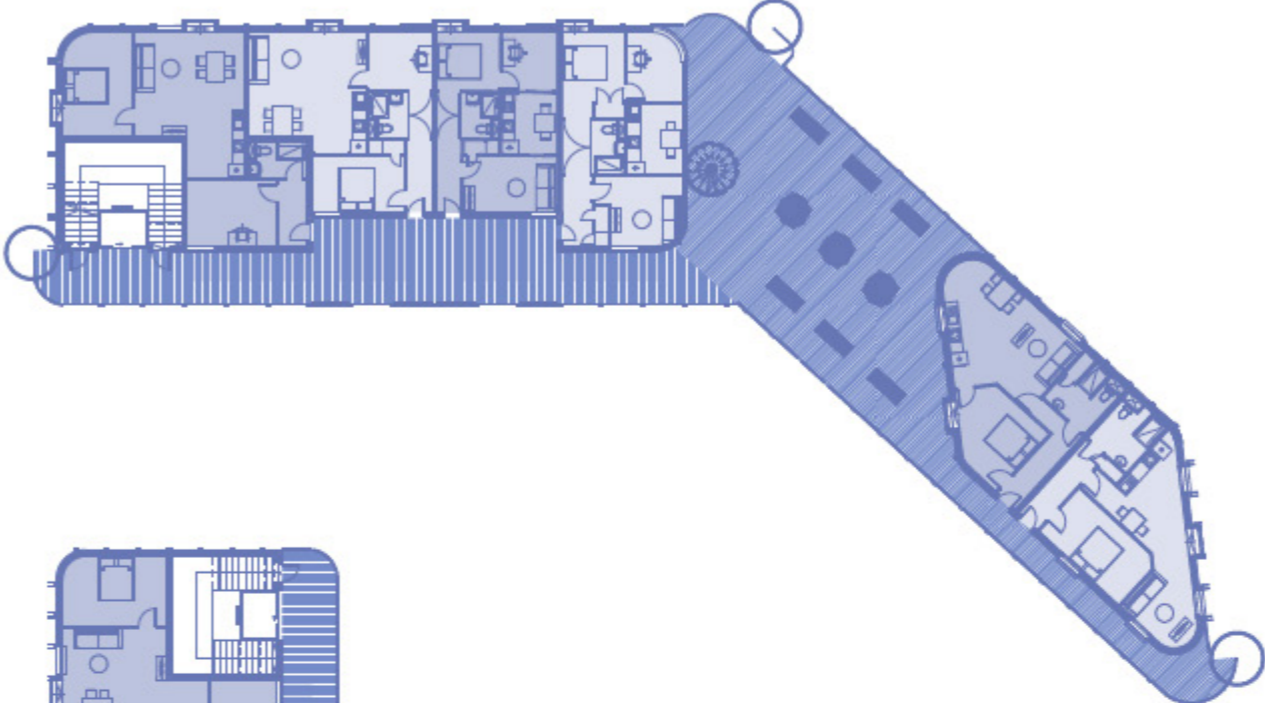
# -1 parking garage



ground floor



first floor



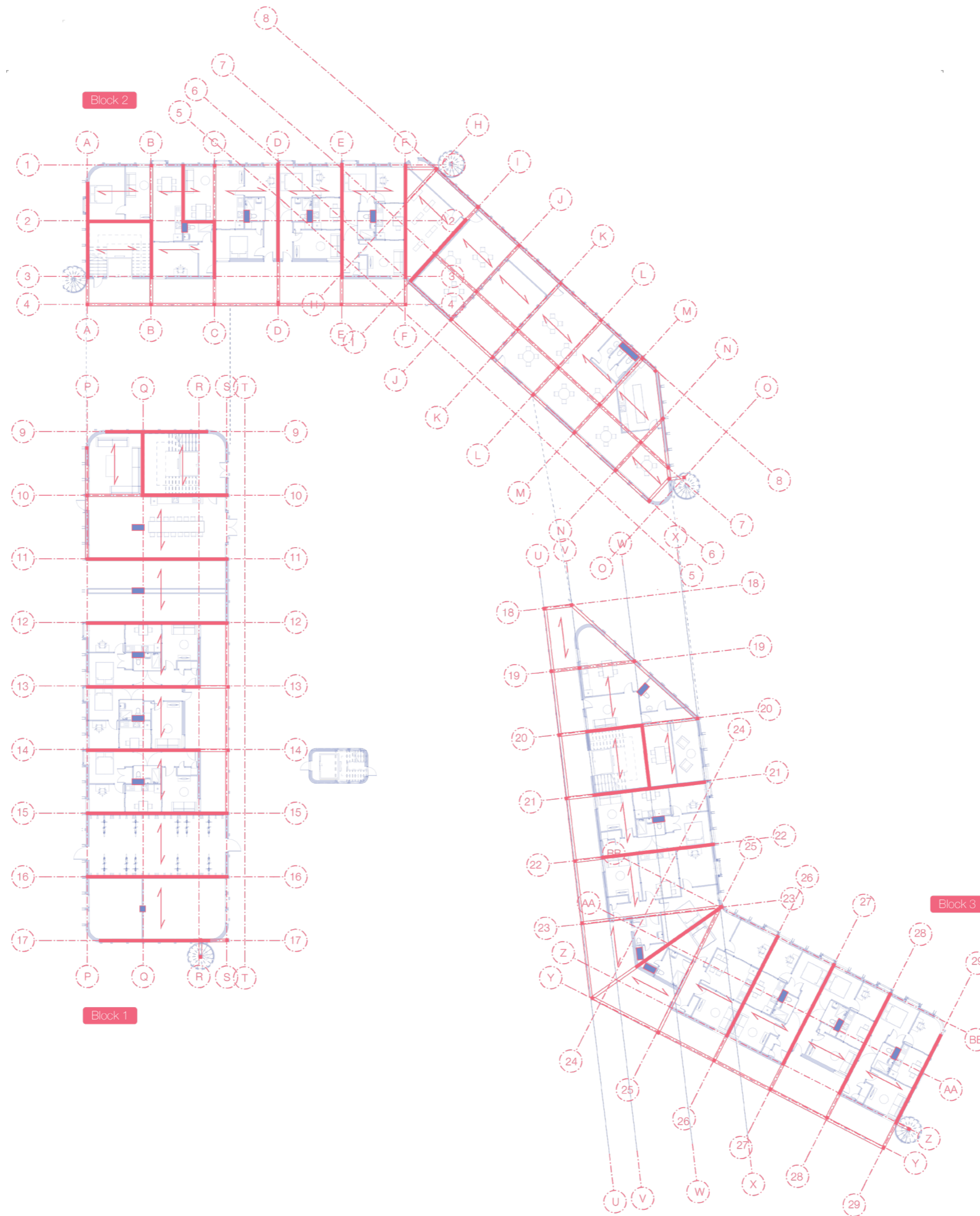
second floor



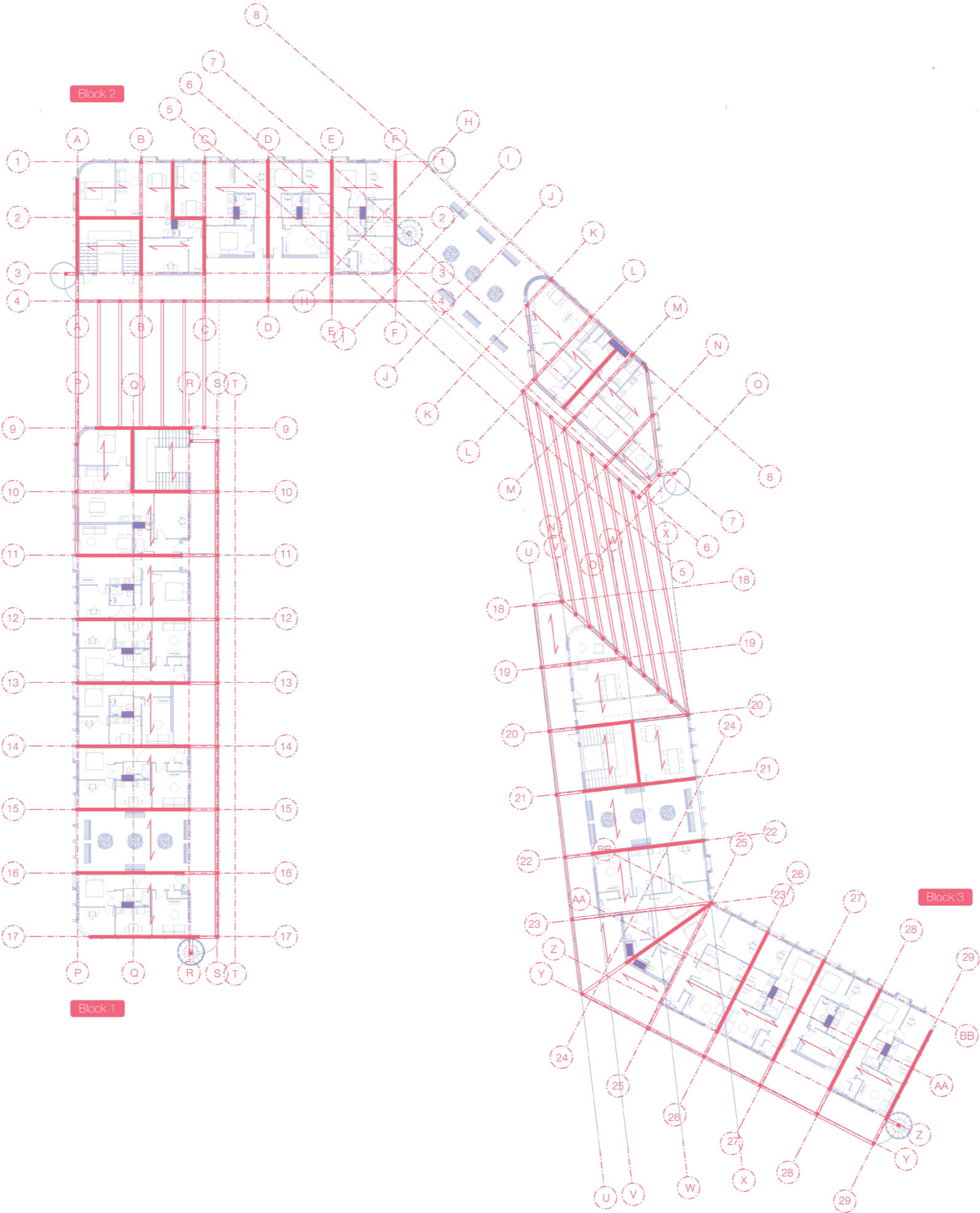
third floor



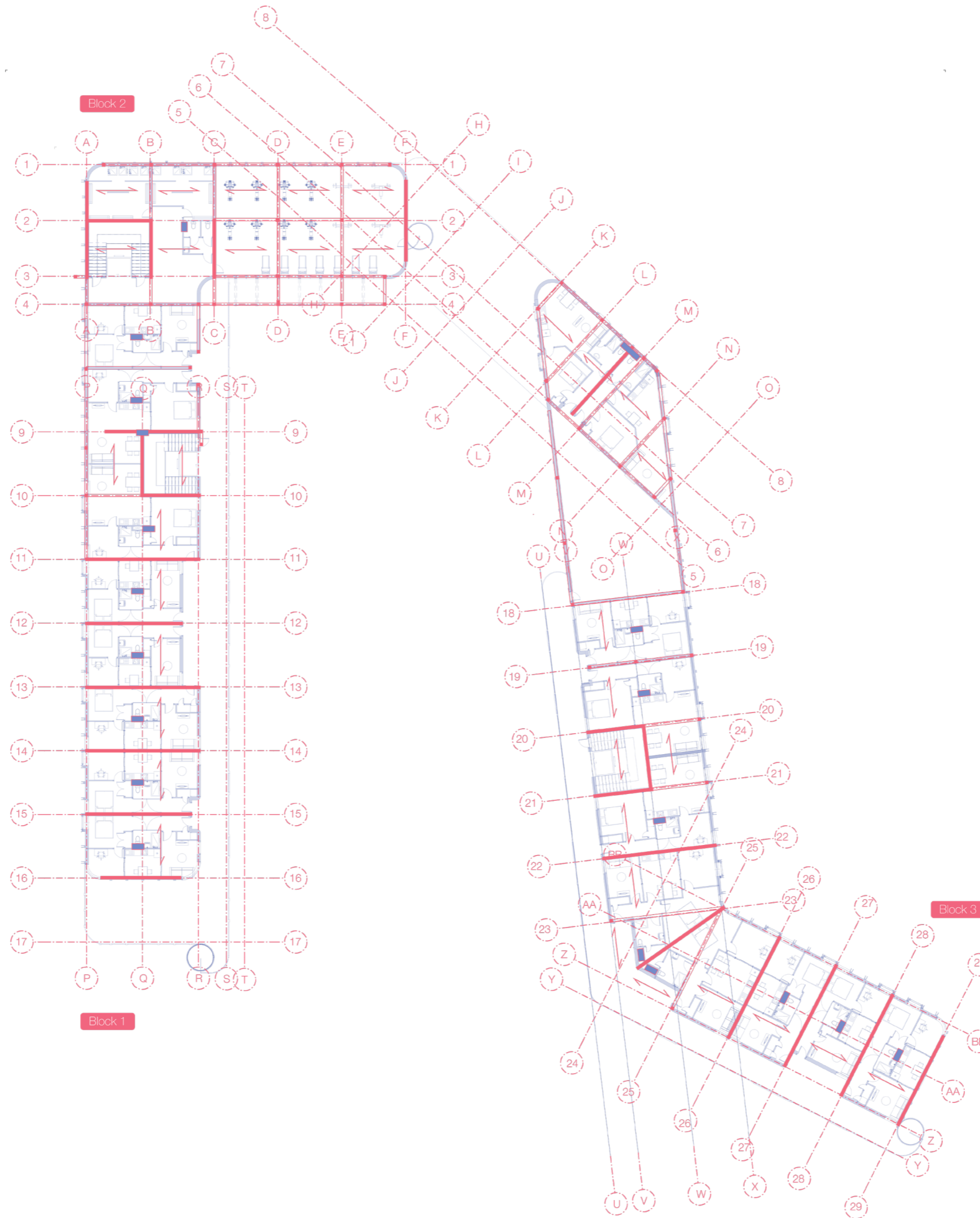
# ground floor



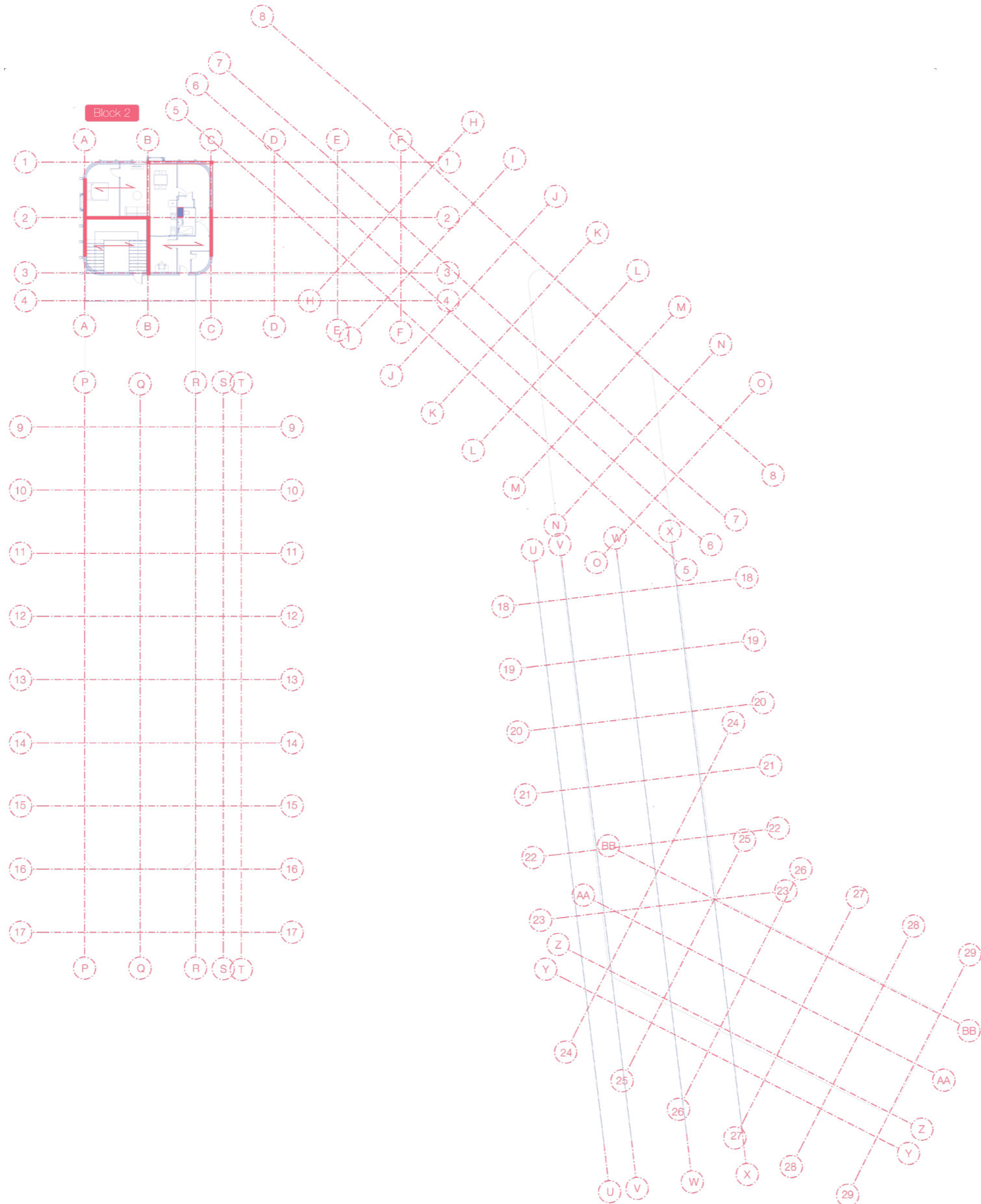
# first floor



# second floor



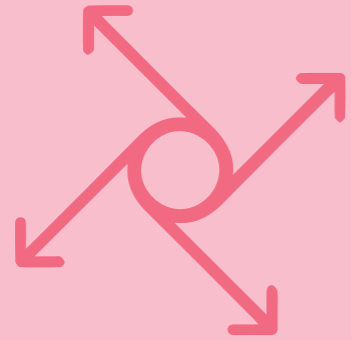
# third floor



# Sustainability Goal

## Economic

Flexible Lay-Out



Long Lifespan



## Ecologic

Biobased Materials



Low-maintenance materials



Water collection



Natural Ventilation



## Social

Encourage Social Interaction



Stimulate Shared Rooms



# Functions

