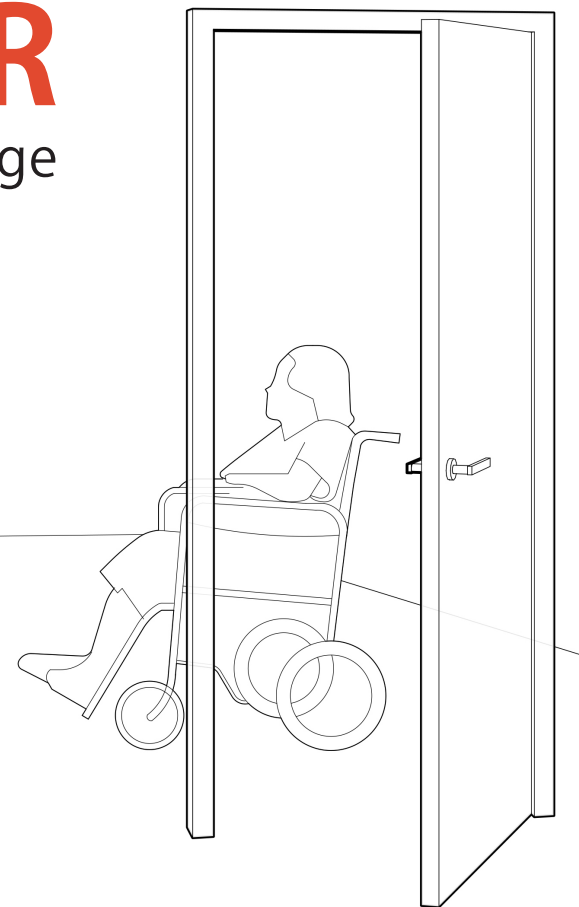


# O P E N     T H E     D O O R

Living Environment Design for Reconciling Social Loneliness in Old Age



Dwelling Graduation Studio: Designing for Care  
Jianing Liu 5290236

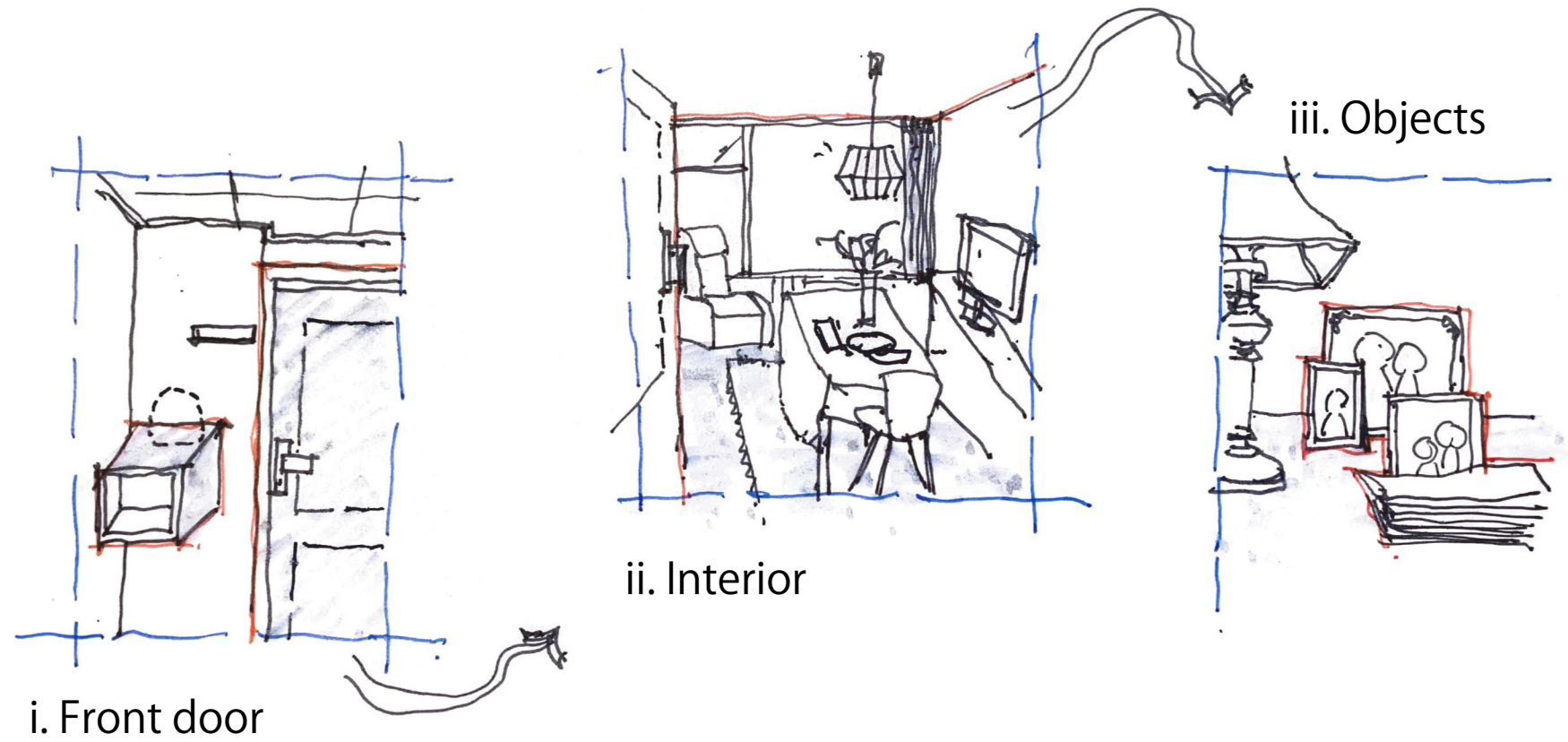
110-MORGEN P5

## Questionnaire

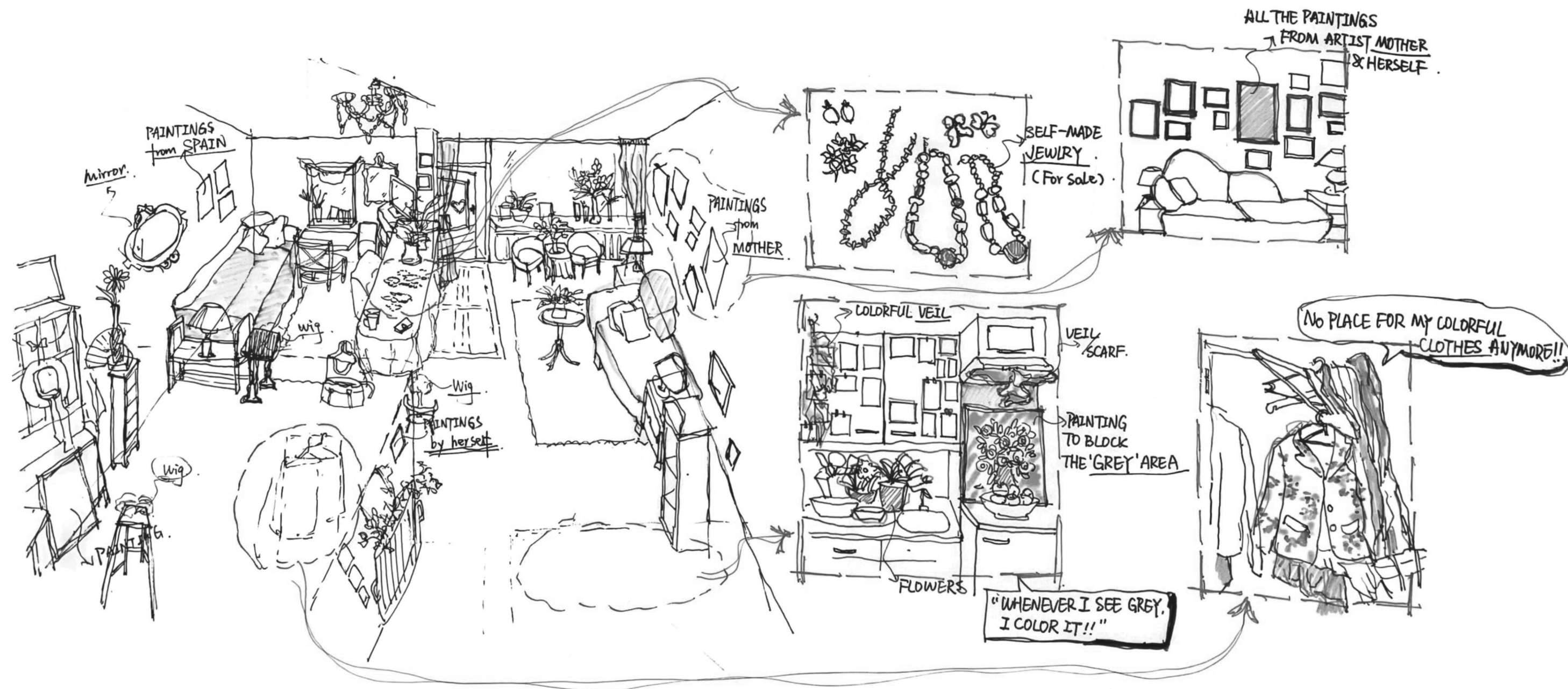
### White Board

Name: \_\_\_\_\_  
Age: \_\_\_\_\_  
When Moved Here: \_\_\_\_\_  
From Where: \_\_\_\_\_  
  
'The Thing' valued most: \_\_\_\_\_  
Advise for New Generation: \_\_\_\_\_

## Who Are You







Days in **Loenen**...





Days in **Loenen**...



# WHY?

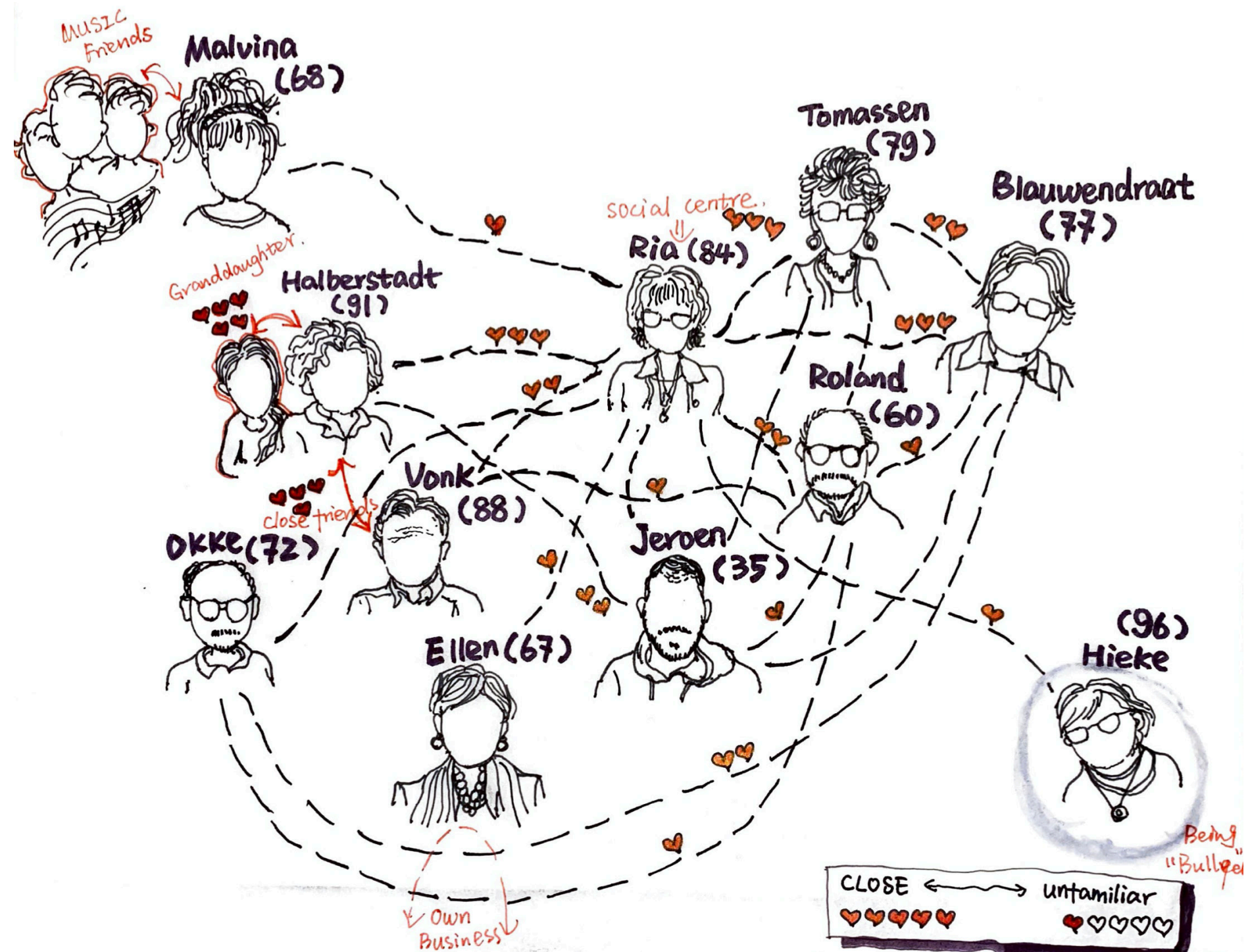
「Social Loneliness」

“Leave the Door Open, please!”



# WHY?

「Social Loneliness」



# HOW?

"Say hello to your **neighbours** - it makes a difference."

Content



0 Fieldwork

I Context review 02  
Main question | Research Conclusions

II 'Corridors' & Neighbours 05  
Basic concept | Design Strategies

III Site analysis 10  
Location | Challenge | New Vision

IV 110 Morgen 「2.0」 16  
Final design works

Part 1 'Corridors' outside Doors 22

Part 2 Living inside Doors 44

Part 3 Building technology 54

# Context Review

\*Based on *fieldwork* in Loenen

## Visual Anthropology\*

Problem statement

Research question

What are the **design strategies** in the living environment for **reconciling social loneliness** in old age?

### Sub-question 1

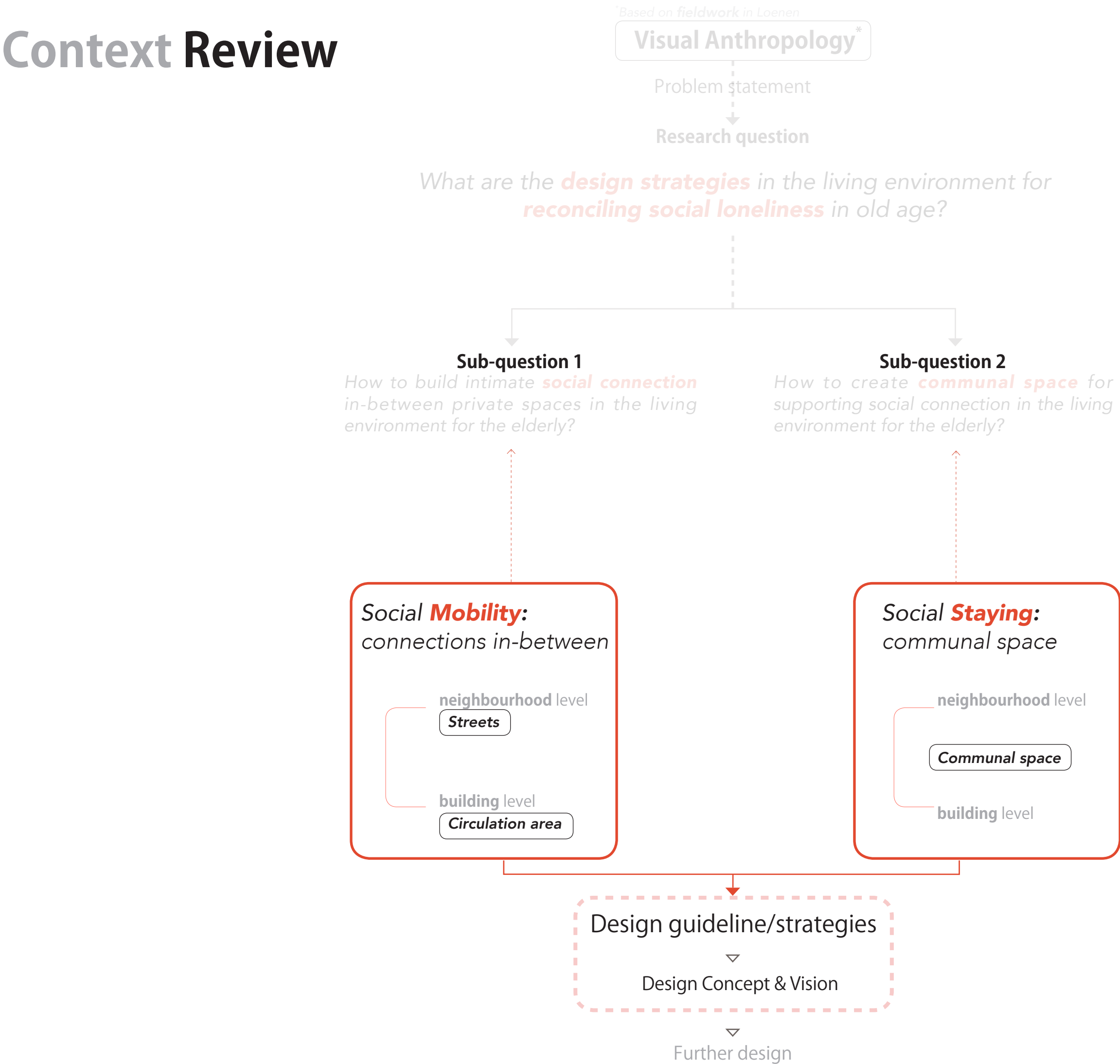
How to build intimate **social connection** in-between private spaces in the living environment for the elderly?

### Sub-question 2

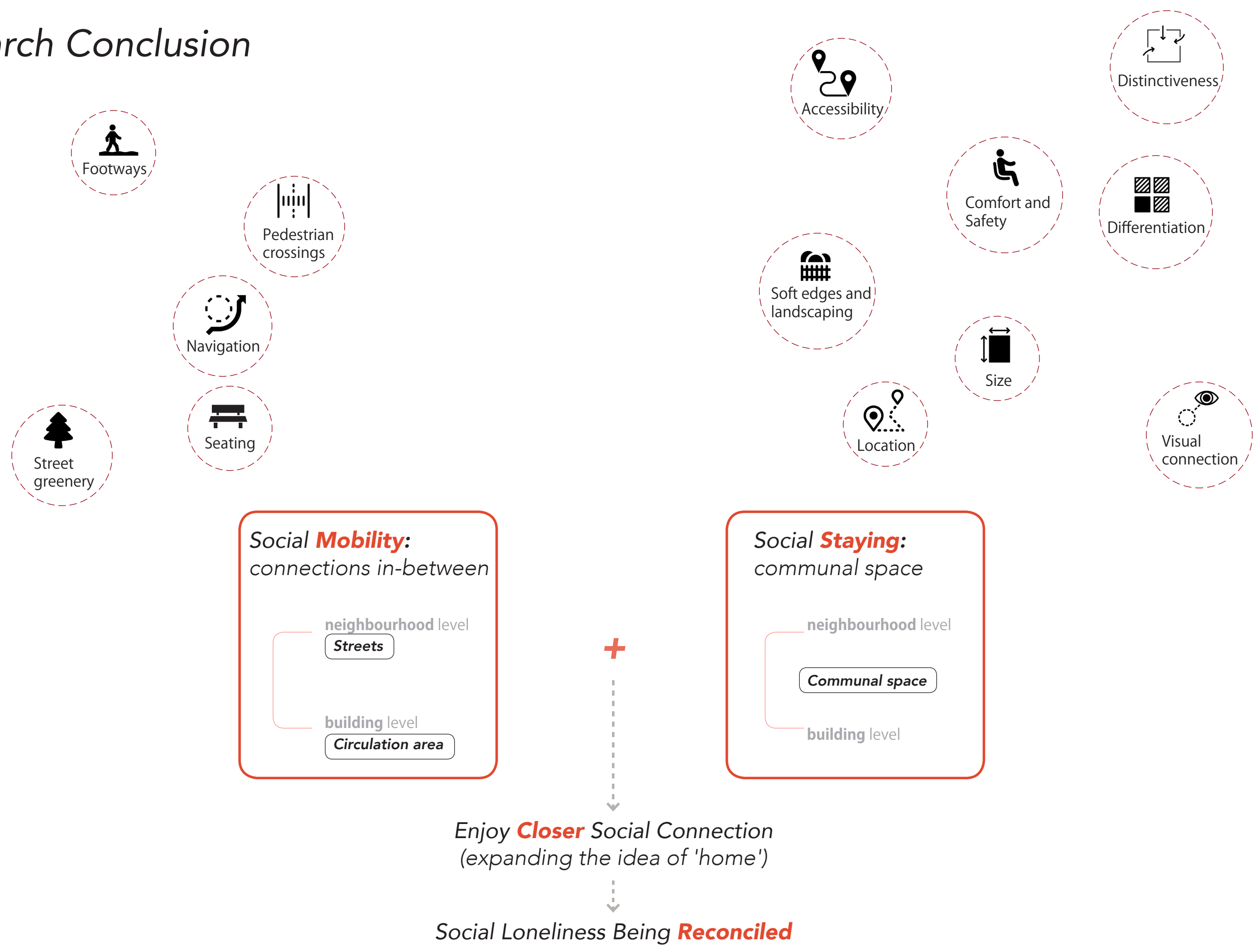
How to create **communal space** for supporting social connection in the living environment for the elderly?



# Context Review



# Research Conclusion



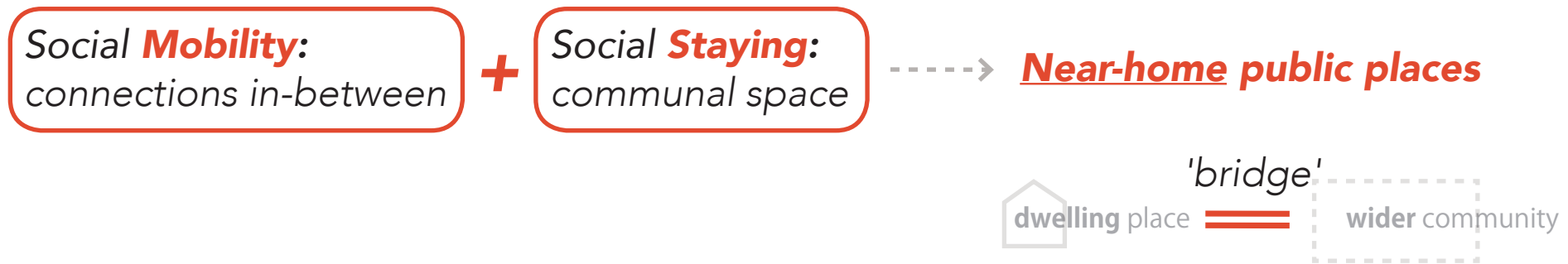
# 'Corridors' & Neighbours

*Basic concept*



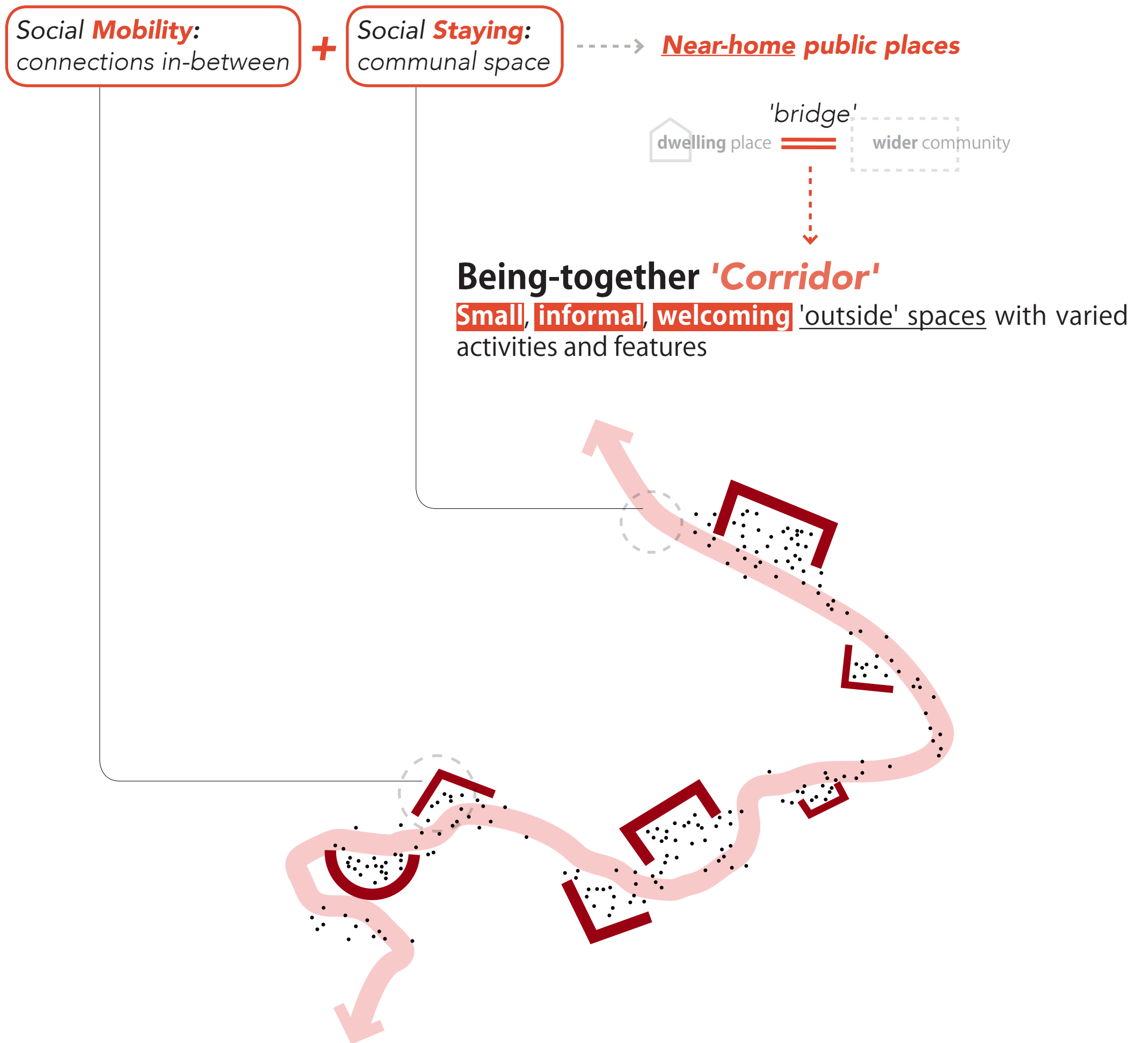
# 'Corridors' & Neighbours

## Basic concept



# 'Corridors' & Neighbours

## Basic concept



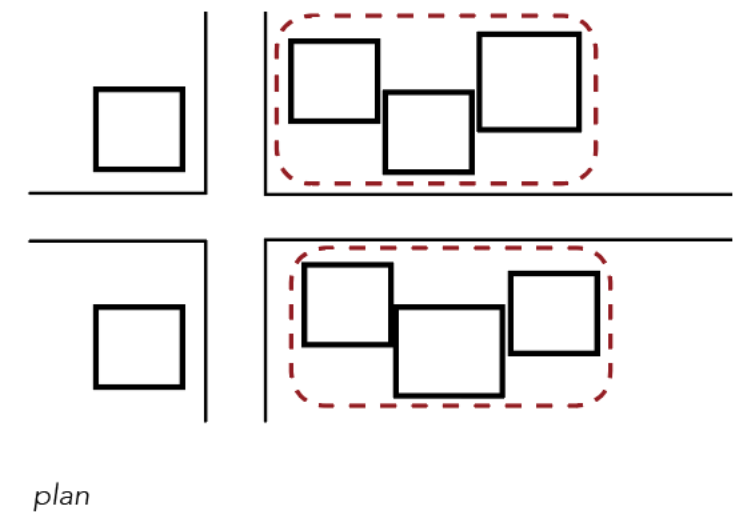
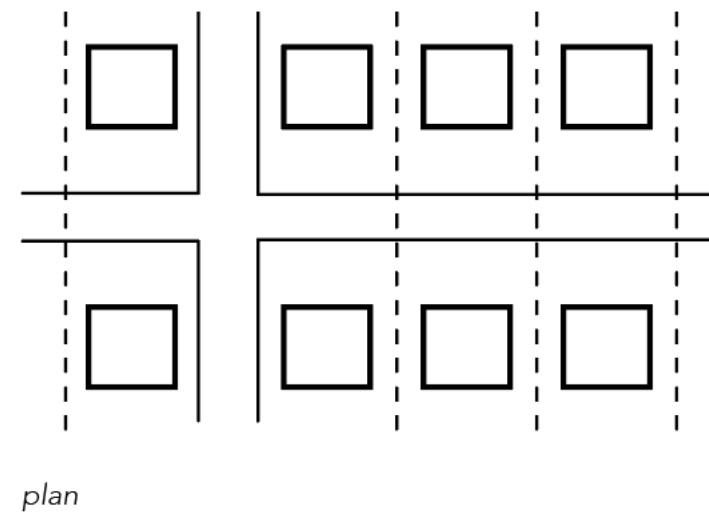
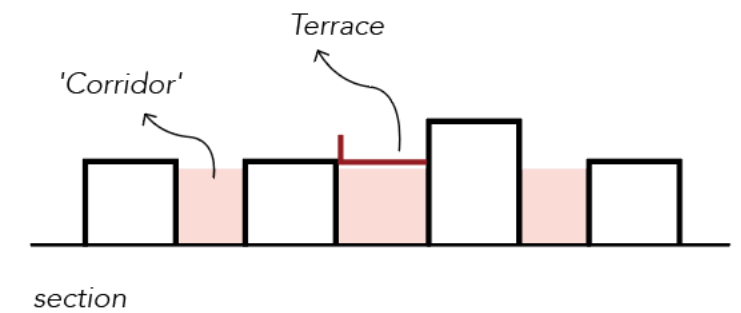
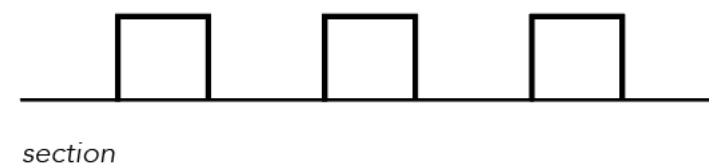
# Design strategies

Social **Mobility**:  
connections in-between

+

Social **Staying**:  
communal space

## 1 Closer neighbours created by soft edges





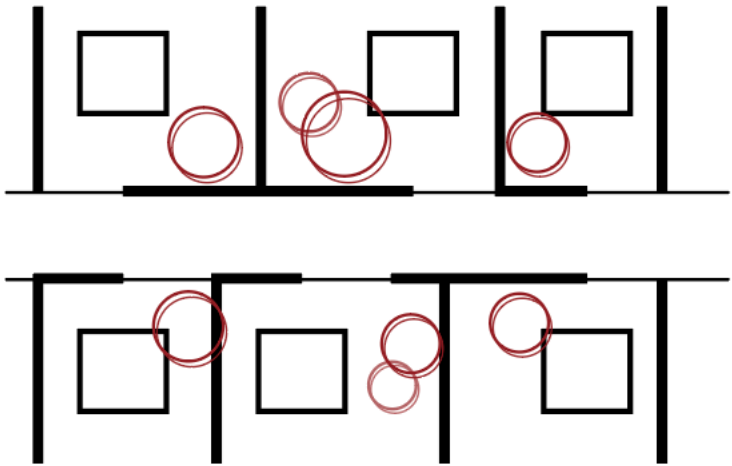
# Design strategies



1 Closer neighbours created by soft edges

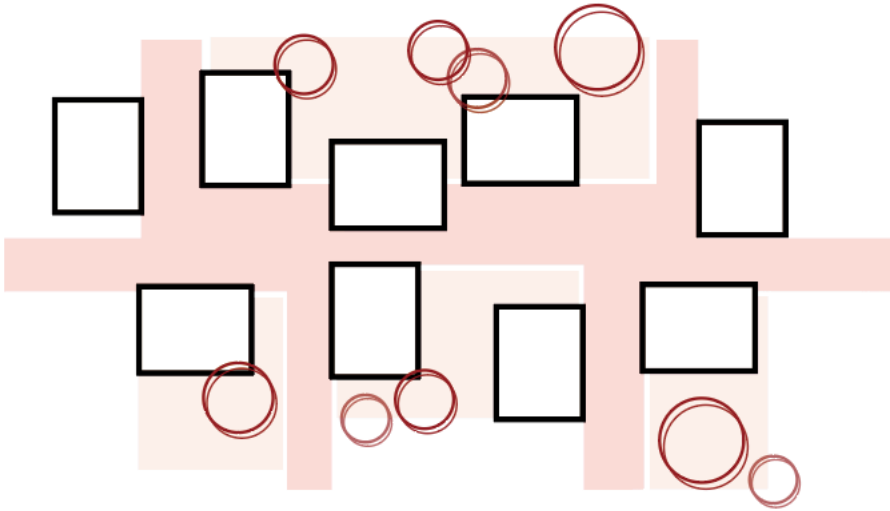
2 Open nature of communal spaces

house → porch → garden → wall



closed

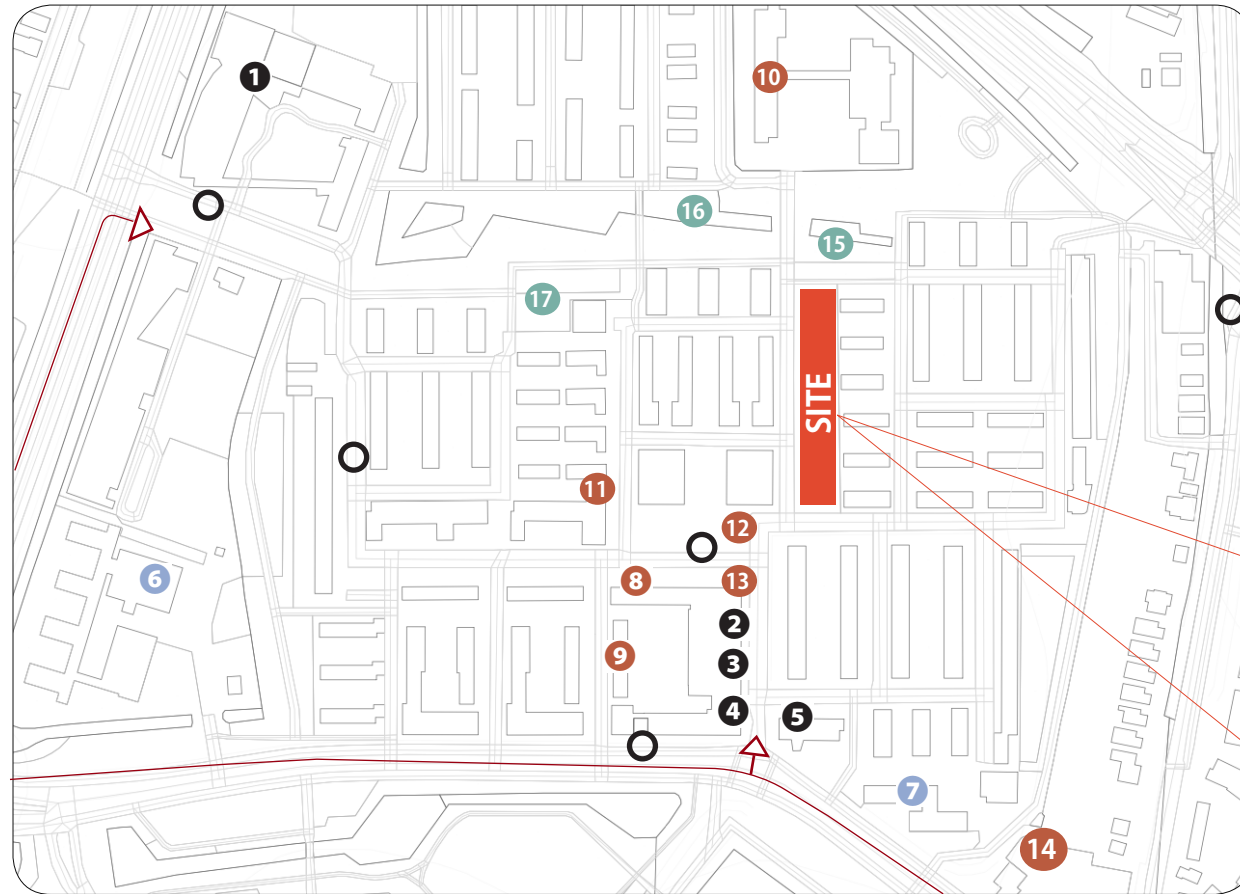
house → 'corridor' → garden → 'inner street'



open

# Site Analysis

## Location



▶ Entrance/exit

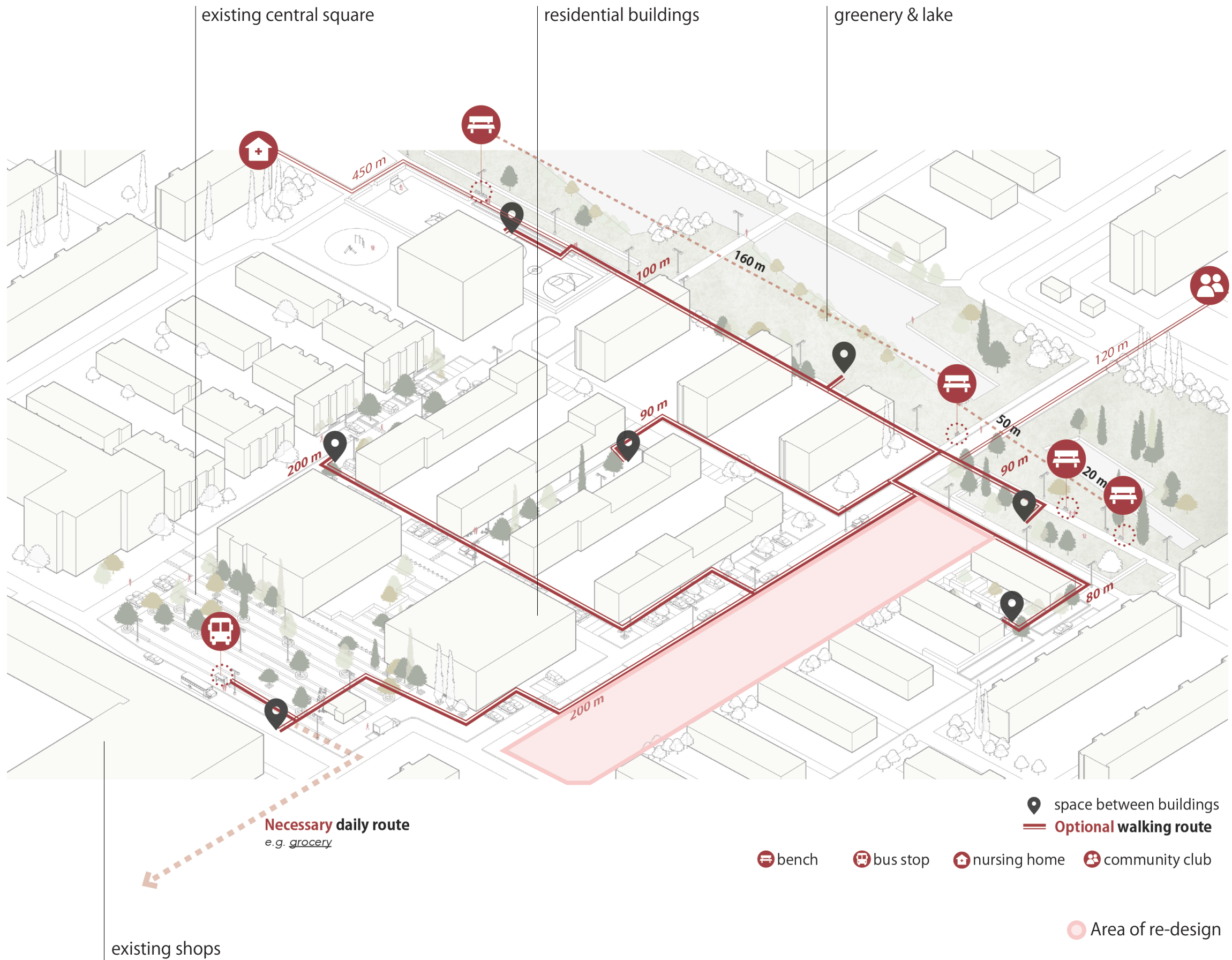
○ Bus stop  
line 174/35

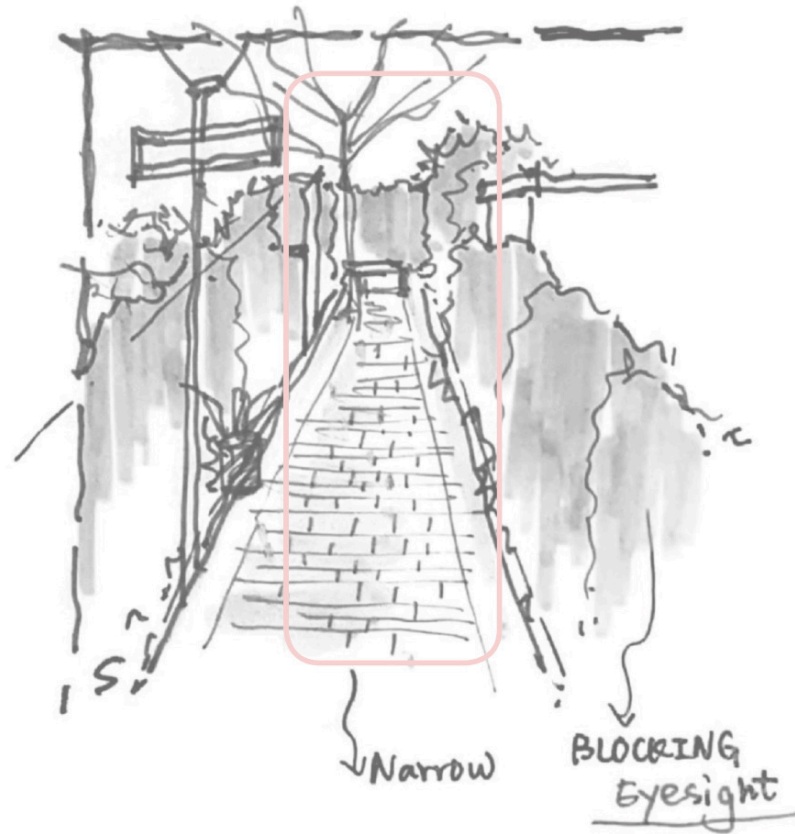
- |                |                     |              |
|----------------|---------------------|--------------|
| ① nursing home | ⑧ second-hand store | ⑮ park       |
| ② clinic       | ⑨ internet shop     | ⑯ lake       |
| ③ clinic       | ⑩ community club    | ⑰ playground |
| ④ dentist      | ⑪ mailing service   |              |
| ⑤ dentist      | ⑫ fast food         |              |
| ⑥ school       | ⑬ hair salon        |              |
| ⑦ college      | ⑭ supermarket       |              |

*Apollostraat 110 Morgen*  
Hillegersberg, Rotterdam



# Overview





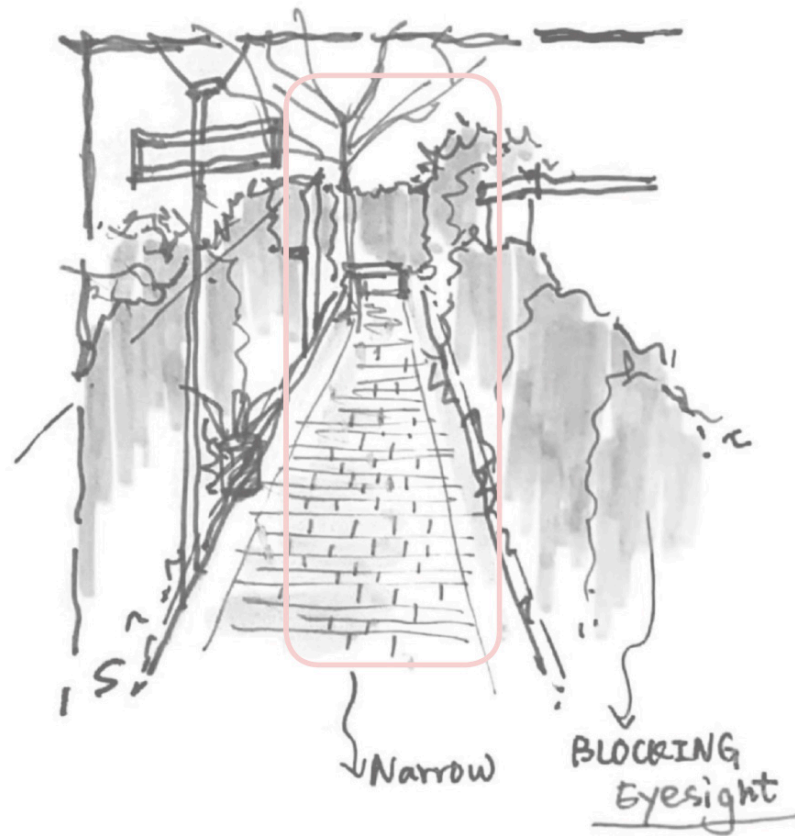
### Social mobility: 'Tiring' & Closed

- lacking resting points/stops
- hard-edged and dead-ended

### Challenges

lonely neighbourhood lacks proper spaces for  
***i n f o r m a l   c o n v e r s a t i o n s***





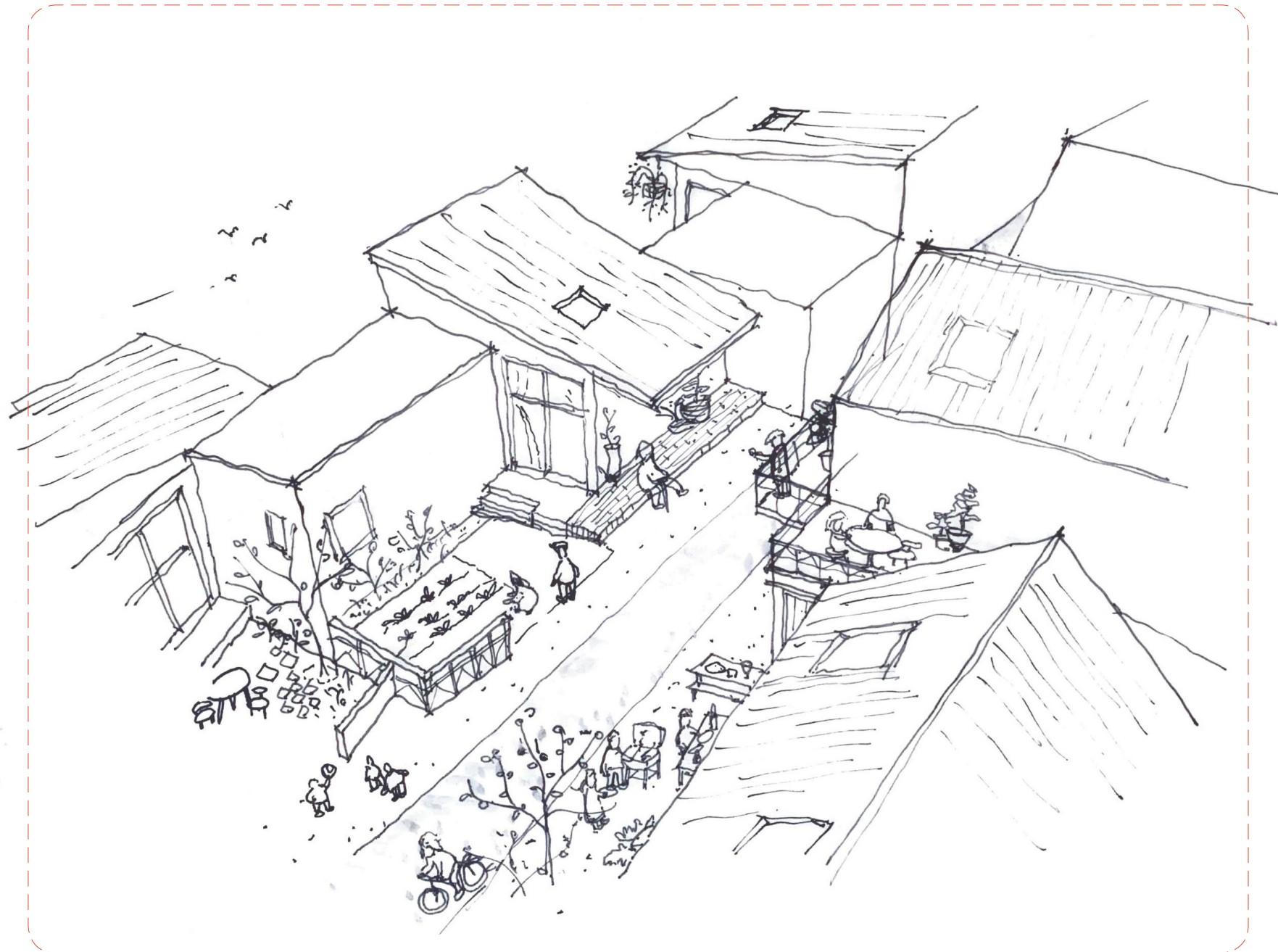
## Social mobility: 'Tiring' & Closed

- lacking resting points/stops
- hard-edged and dead-ended

## Challenges

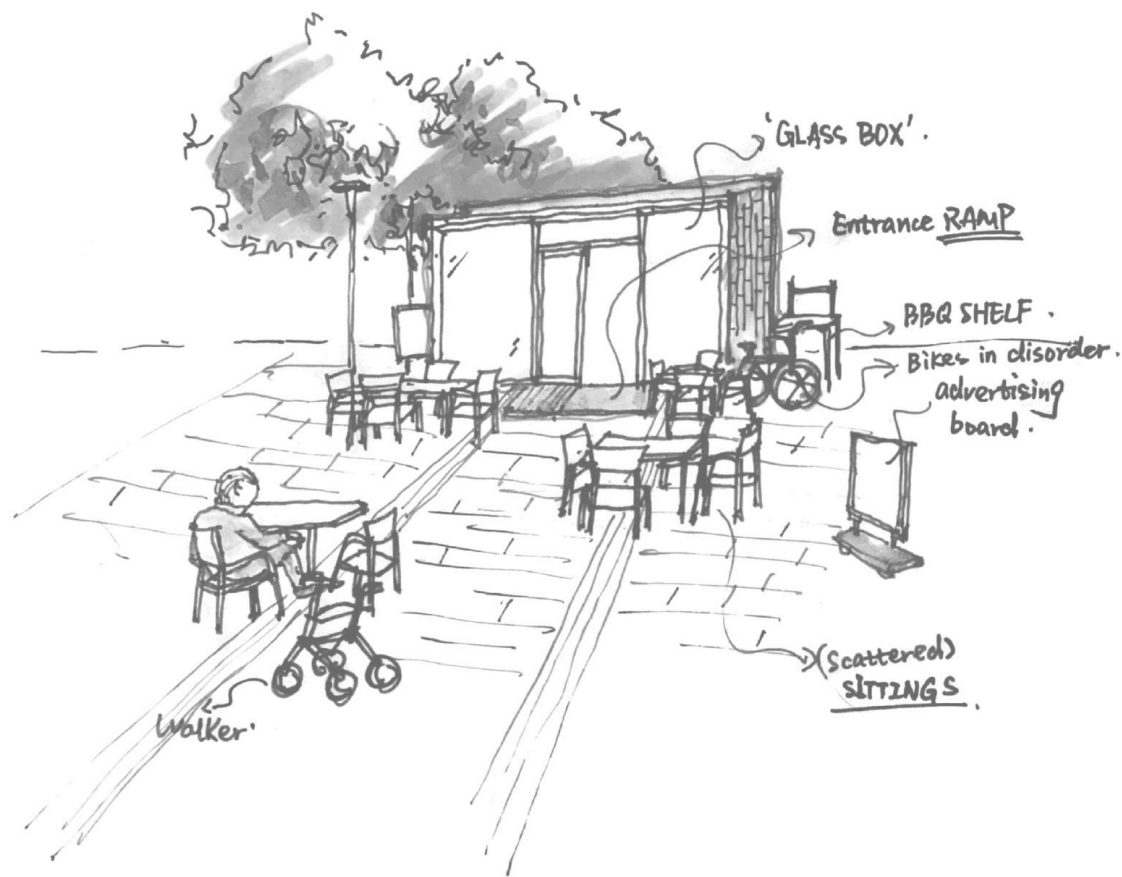
lonely neighbourhood lacks proper spaces for  
**informal conversations**

## SOLUTION



## New Visions

**intimate** neighbourhood that encourages  
**overflowing of internal life**



Social staying:

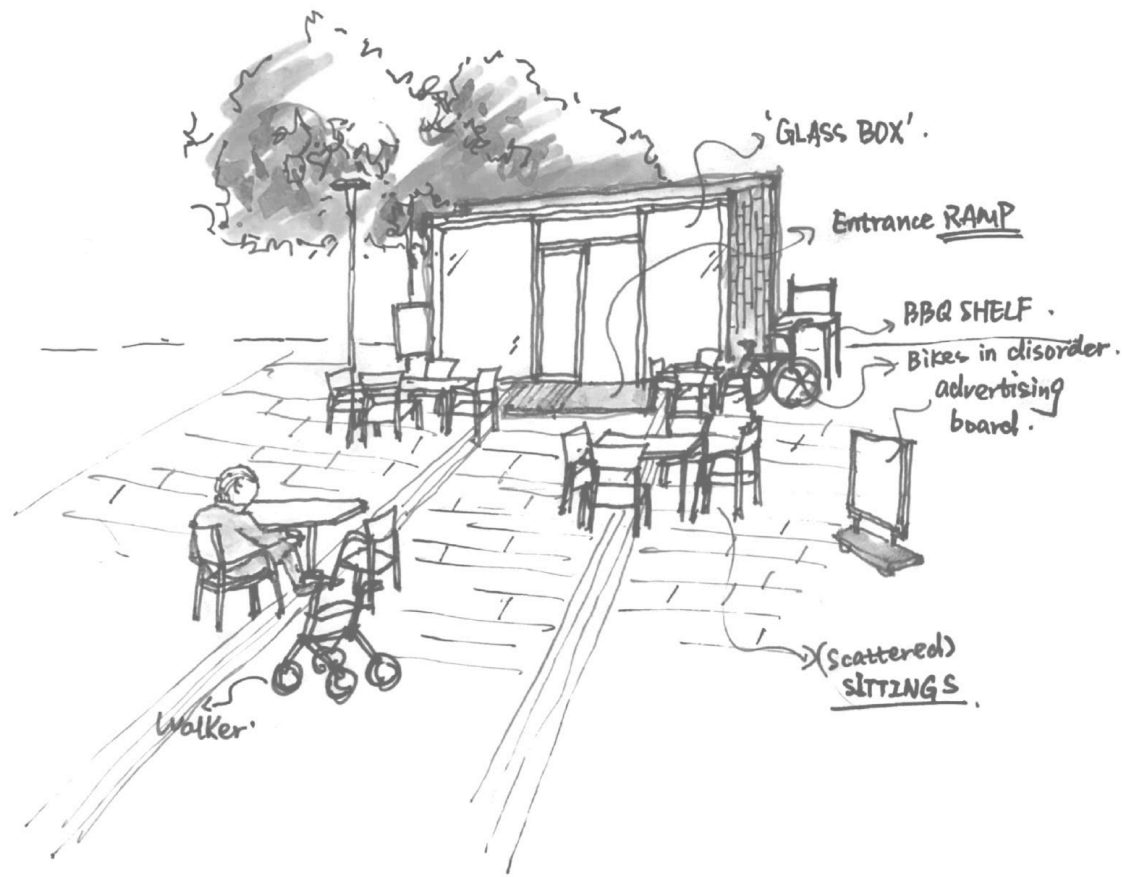
**'Empty'**

- uncomfortable dimension
- lacking 'something to do'
- hard edges

## Challenges

lonely neighbourhood lacks proper spaces for  
***i n f o r m a l   c o n v e r s a t i o n s***



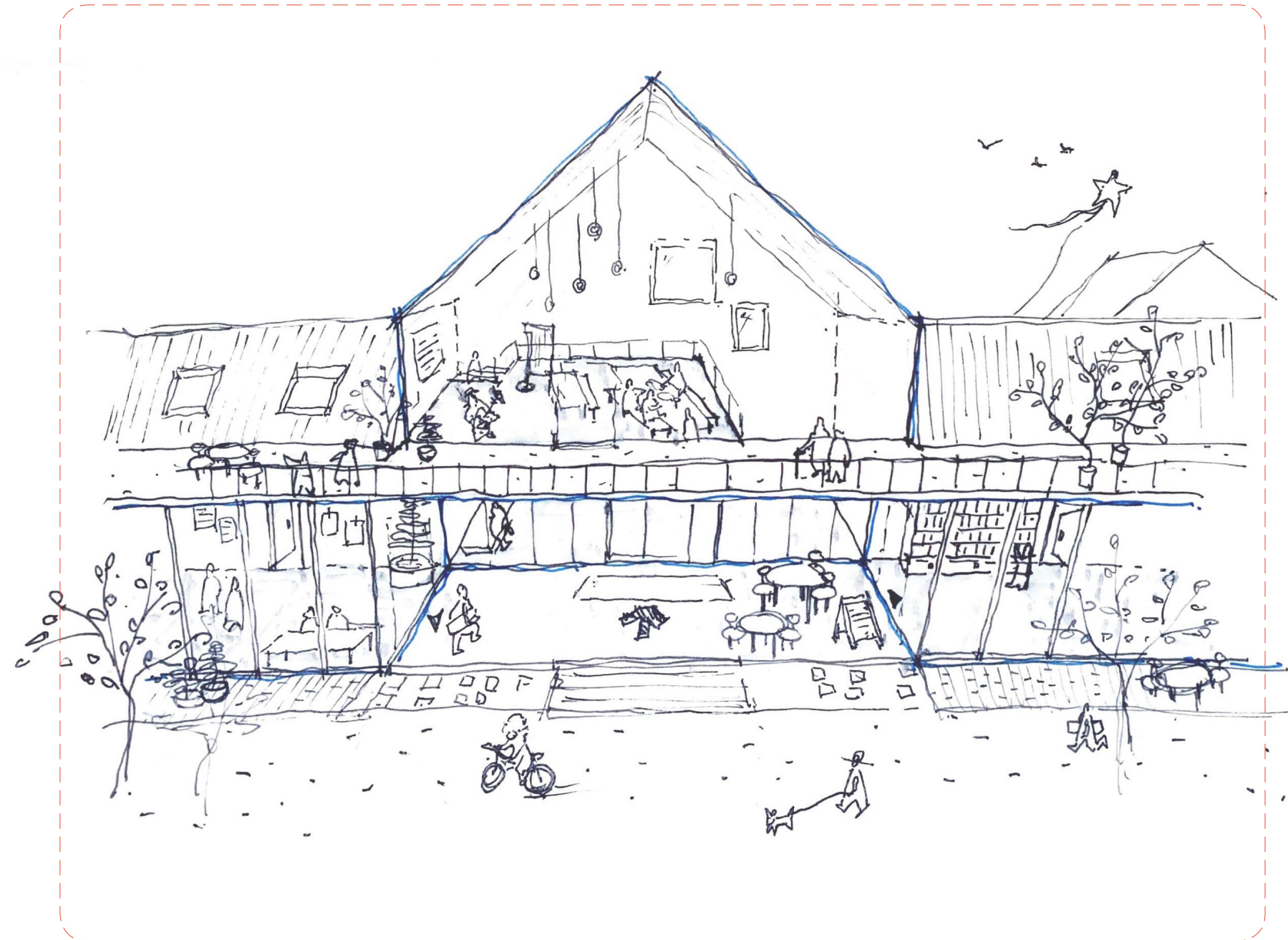


## Social staying: 'Empty'

- uncomfortable dimension
- lacking 'something to do'
- hard edges

## Challenges

lonely neighbourhood lacks proper spaces for  
**informal conversations**



## SOLUTION

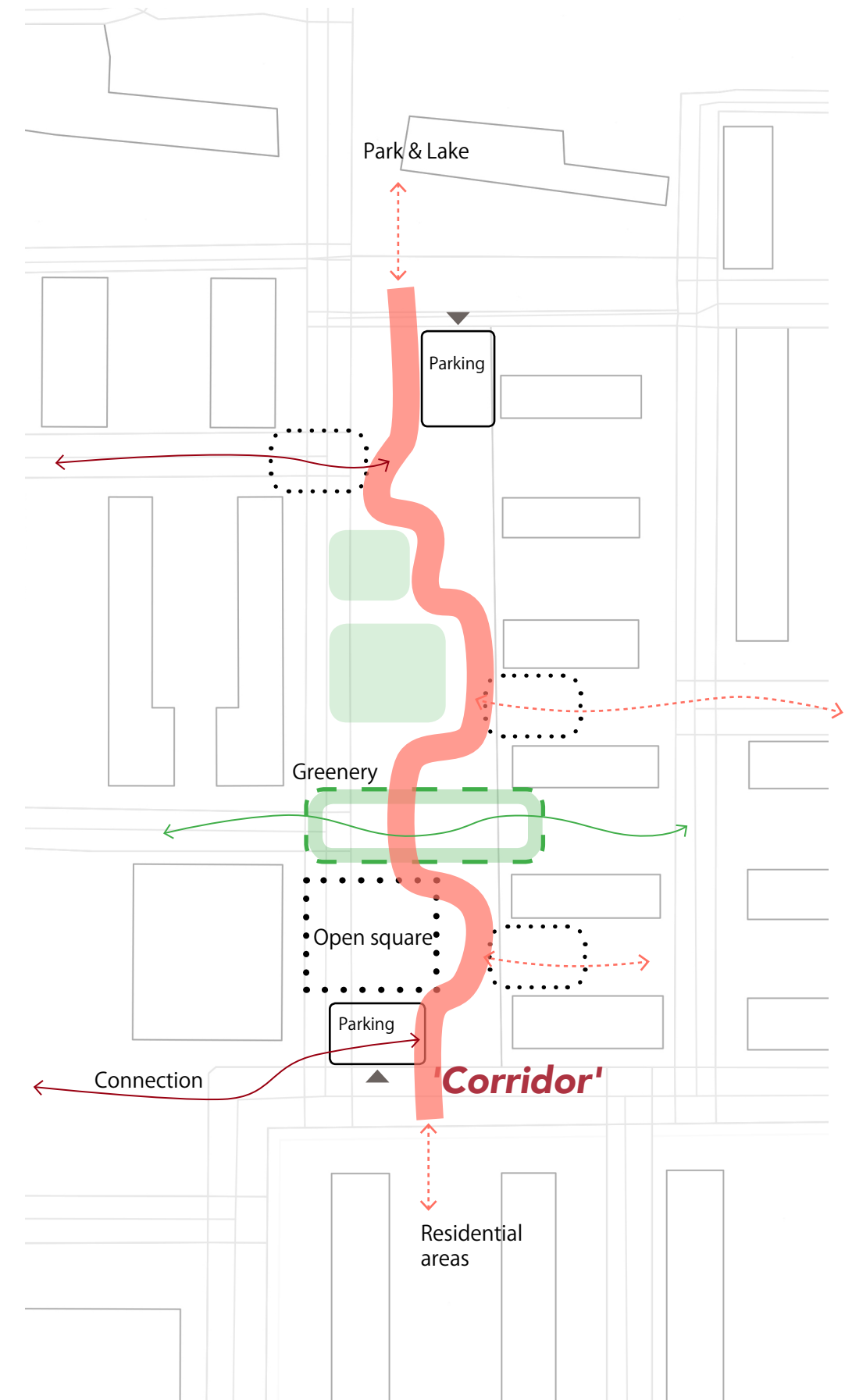
## New Visions

**intimate** neighbourhood that encourages  
**overflowing of internal life**

## 'Corridor' for Site Design

**1** Facilitate relationships with their neighbourhoods

**2** Free the layout of streets

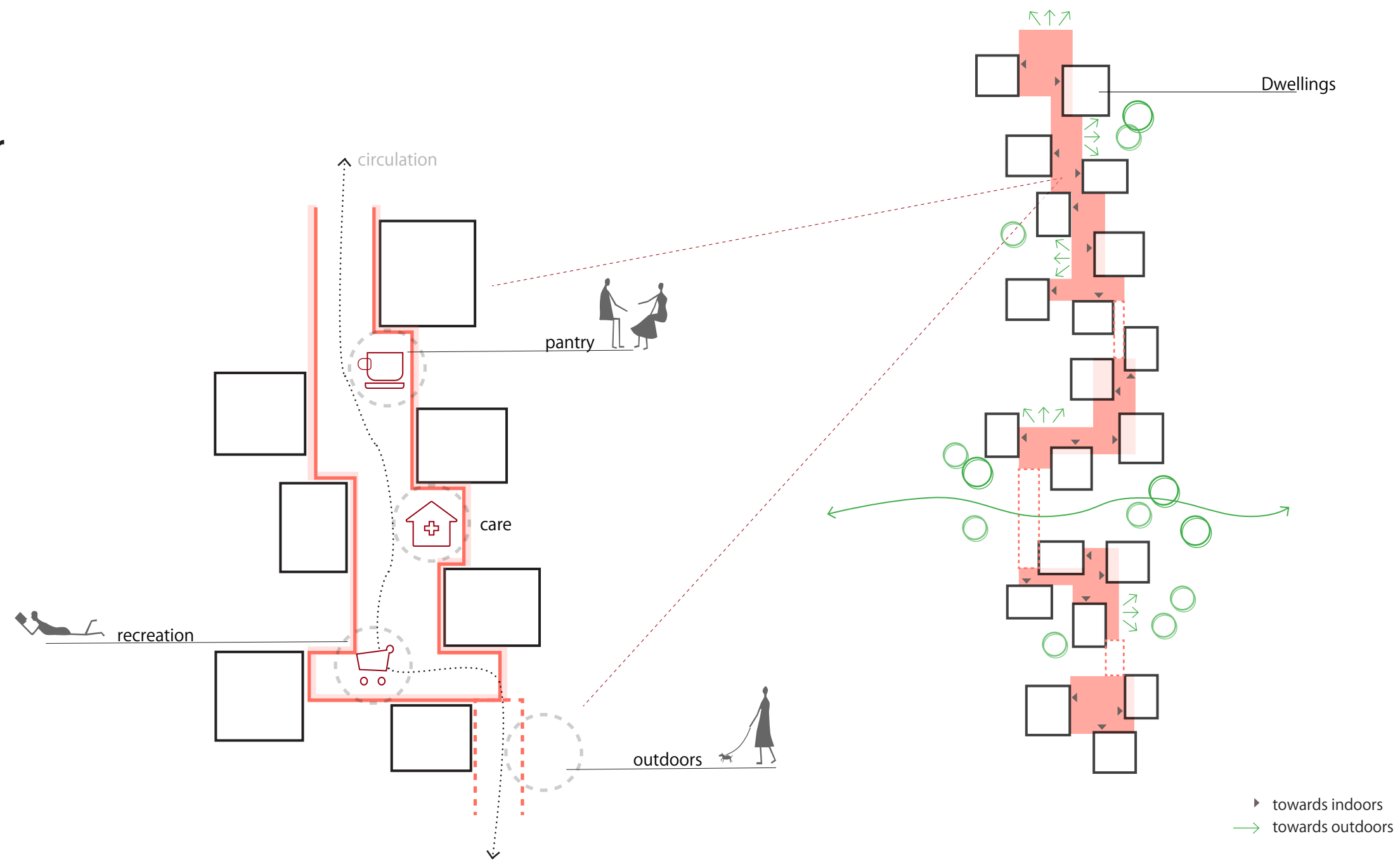


# 'Corridor' for Site Design

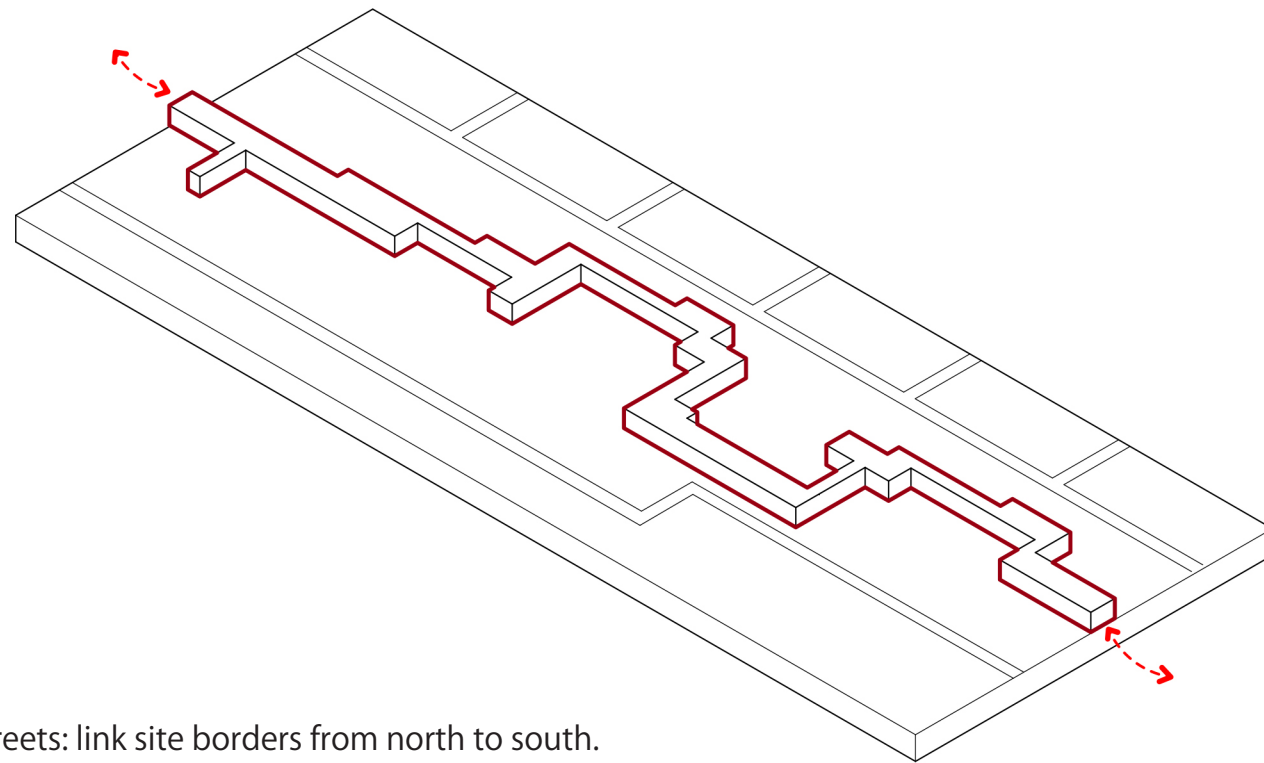
1 Facilitate relationships with their neighbourhoods

2 Free the layout of streets

3 Make daily activities easier



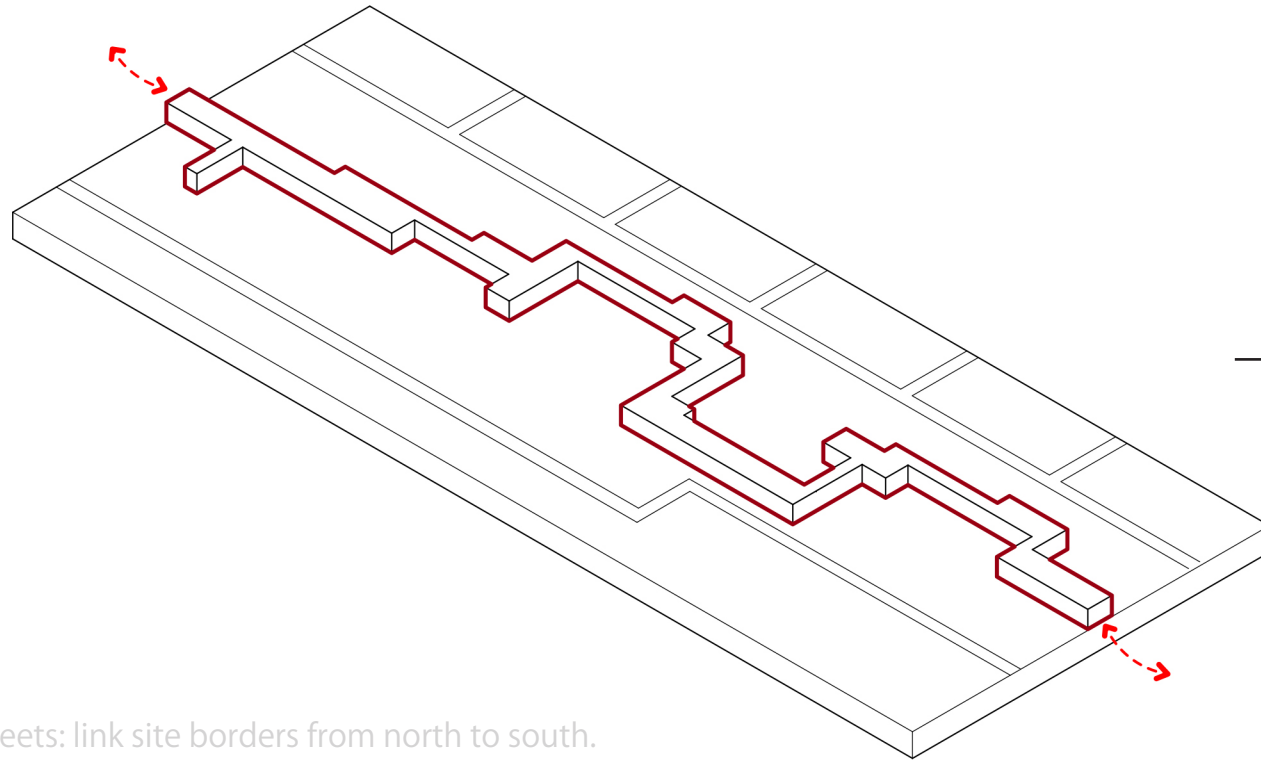
# Process of masterplan



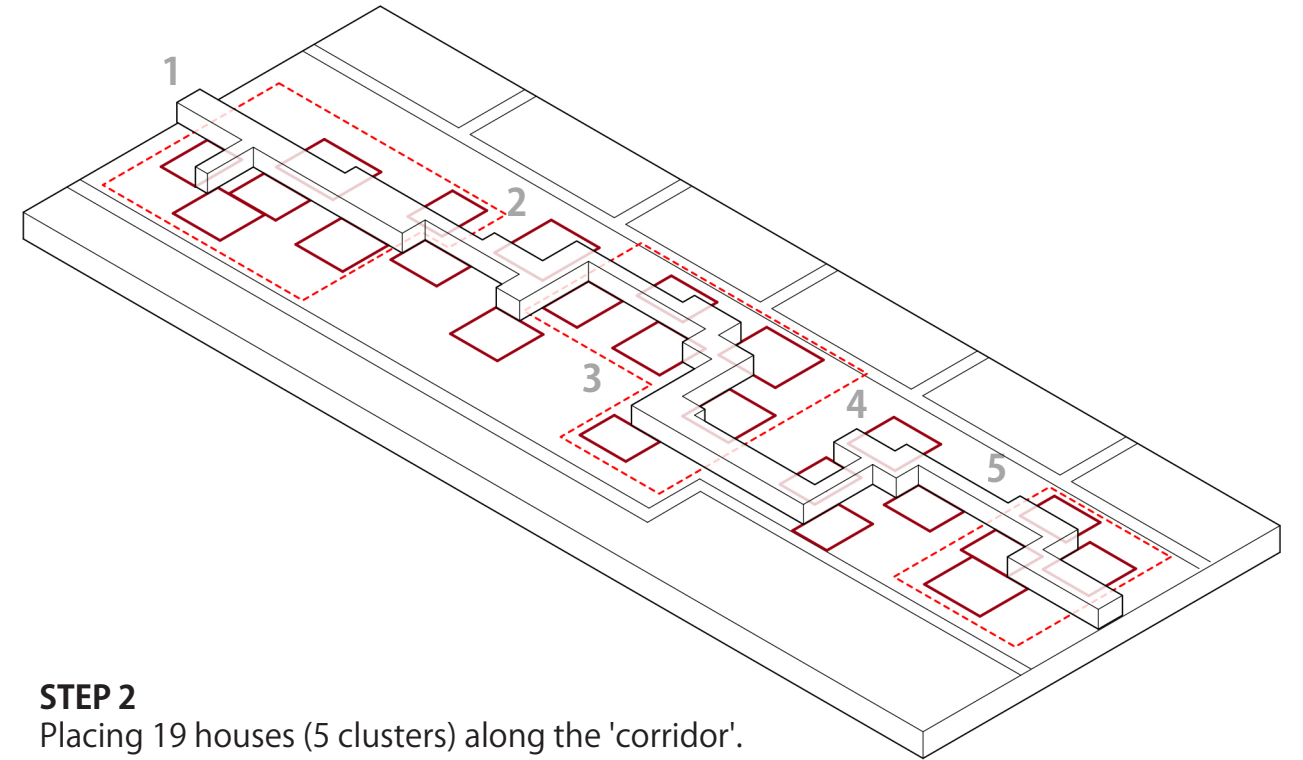
## STEP 1

Connecting streets: link site borders from north to south.

# Process of masterplan



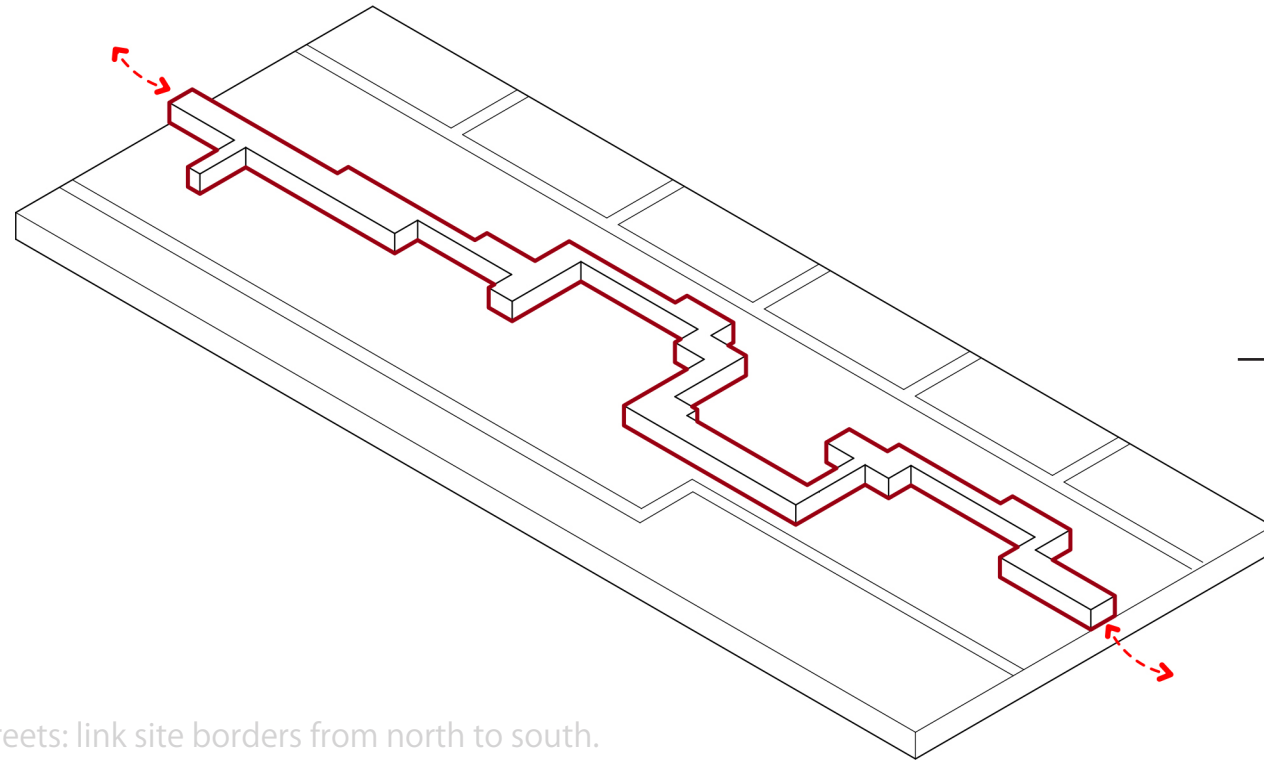
**STEP 1**  
Connecting streets: link site borders from north to south.



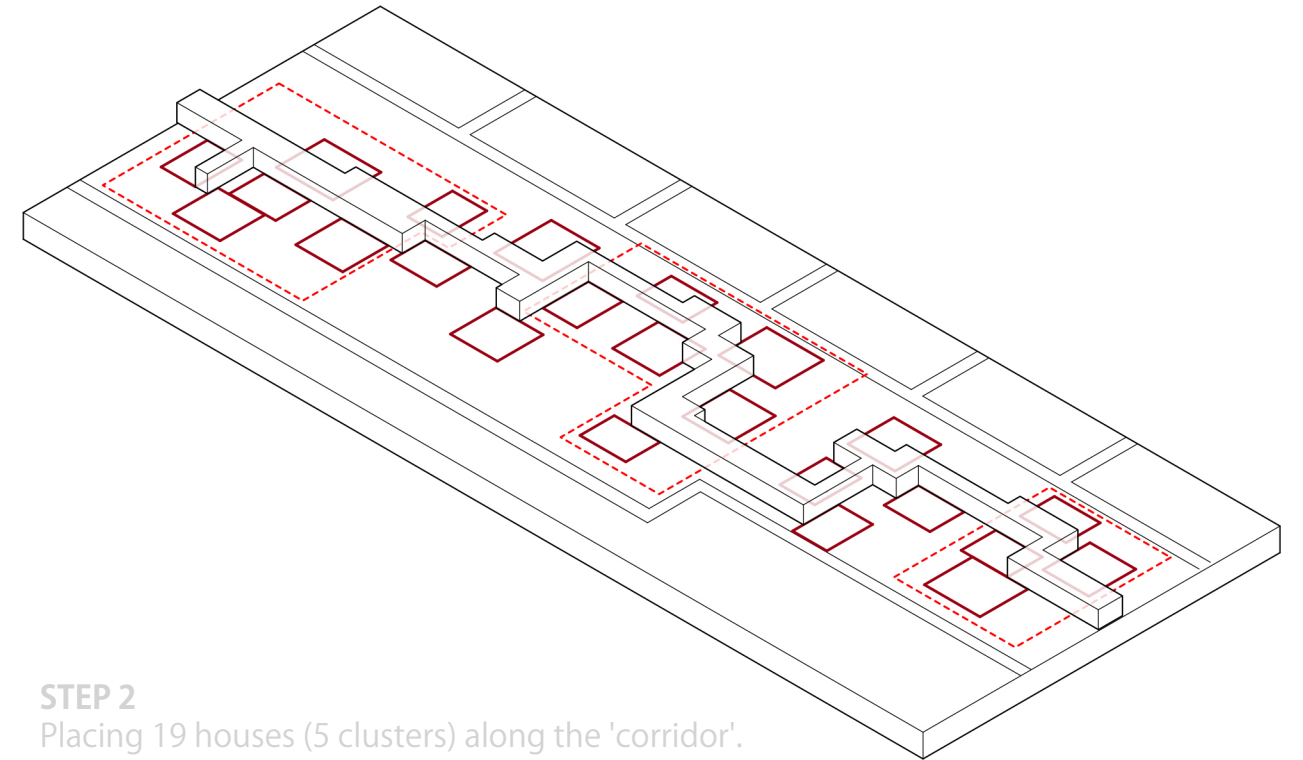
**STEP 2**  
Placing 19 houses (5 clusters) along the 'corridor'.



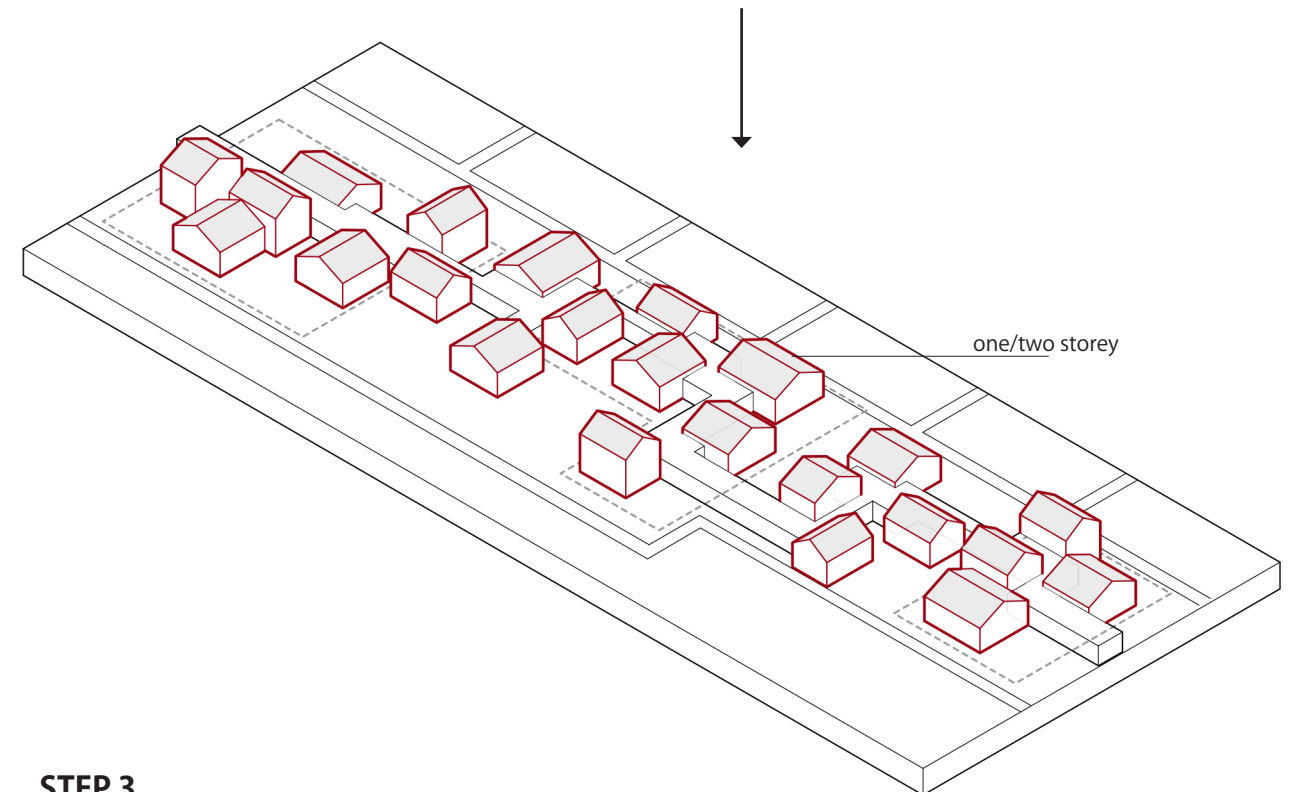
# Process of masterplan



**STEP 1**  
Connecting streets: link site borders from north to south.



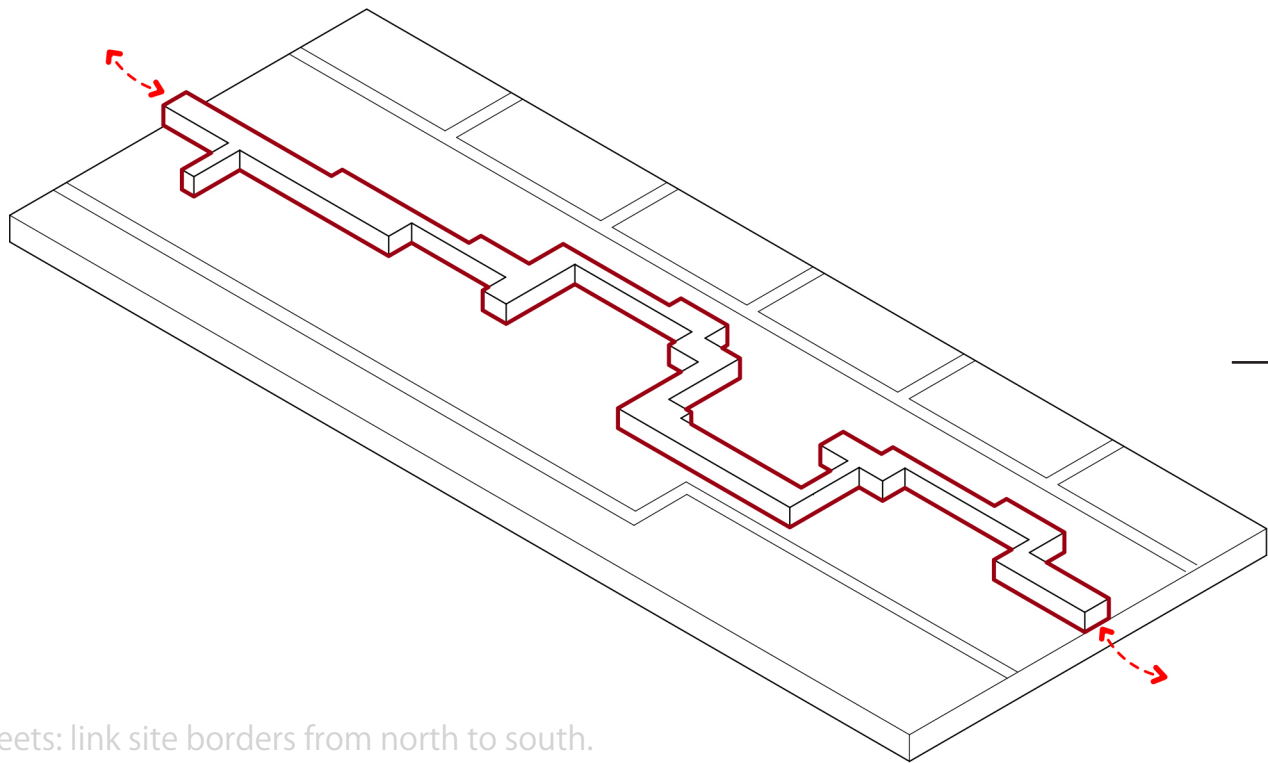
**STEP 2**  
Placing 19 houses (5 clusters) along the 'corridor'.



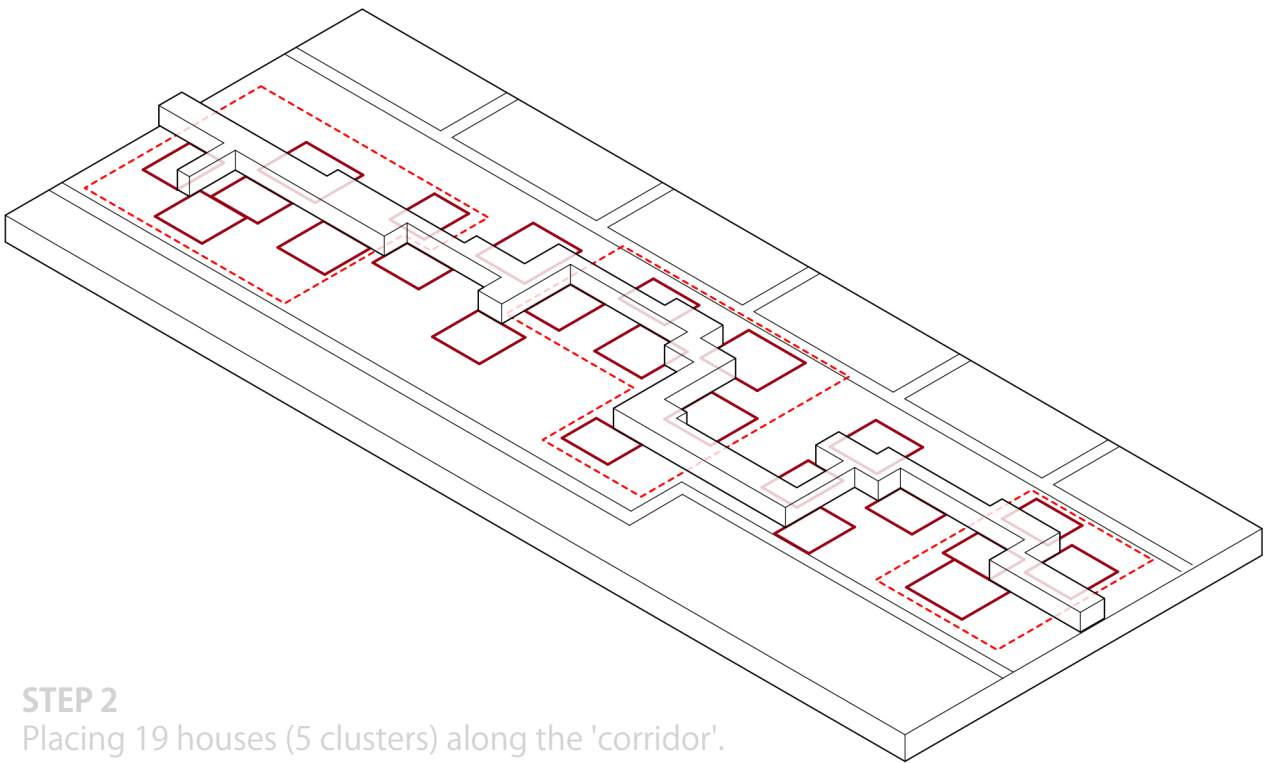
**STEP 3**  
Keeping volumes closer to the ground level, while fits in the 'skyline' of existing neighbourhoods.



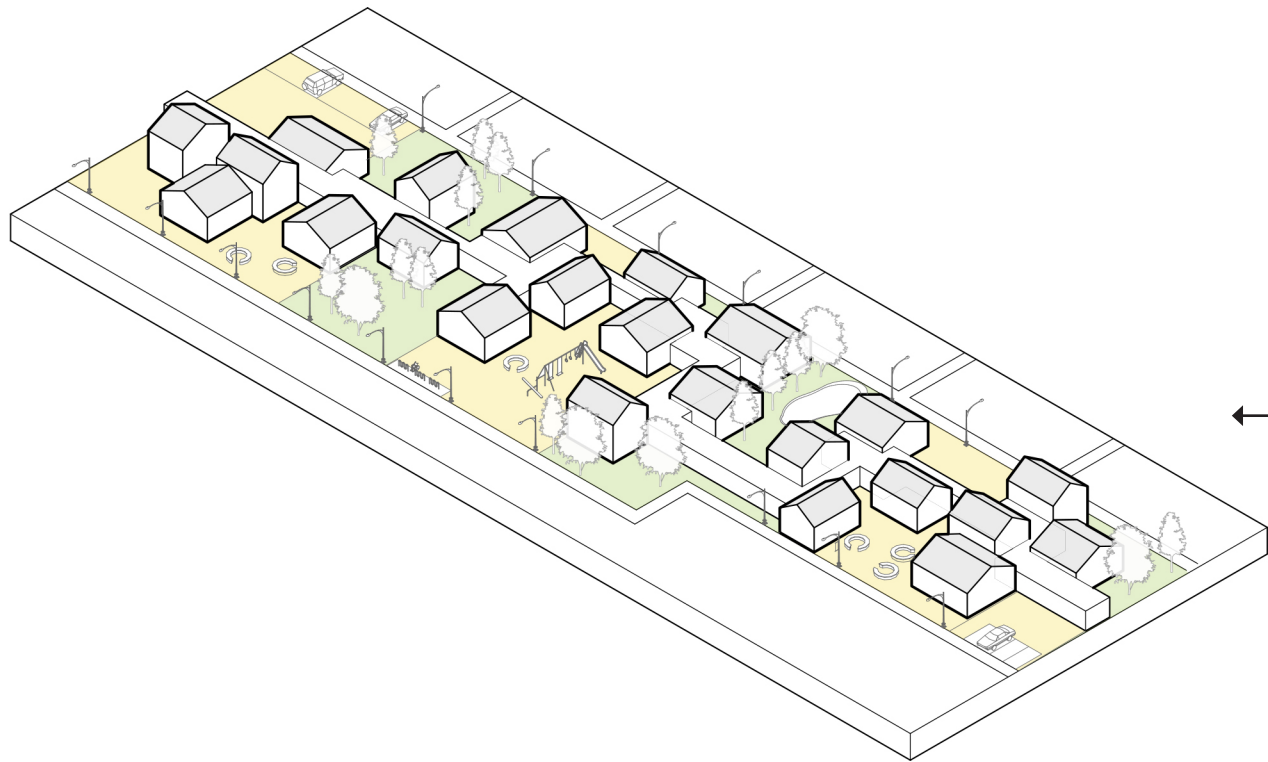
# Process of masterplan



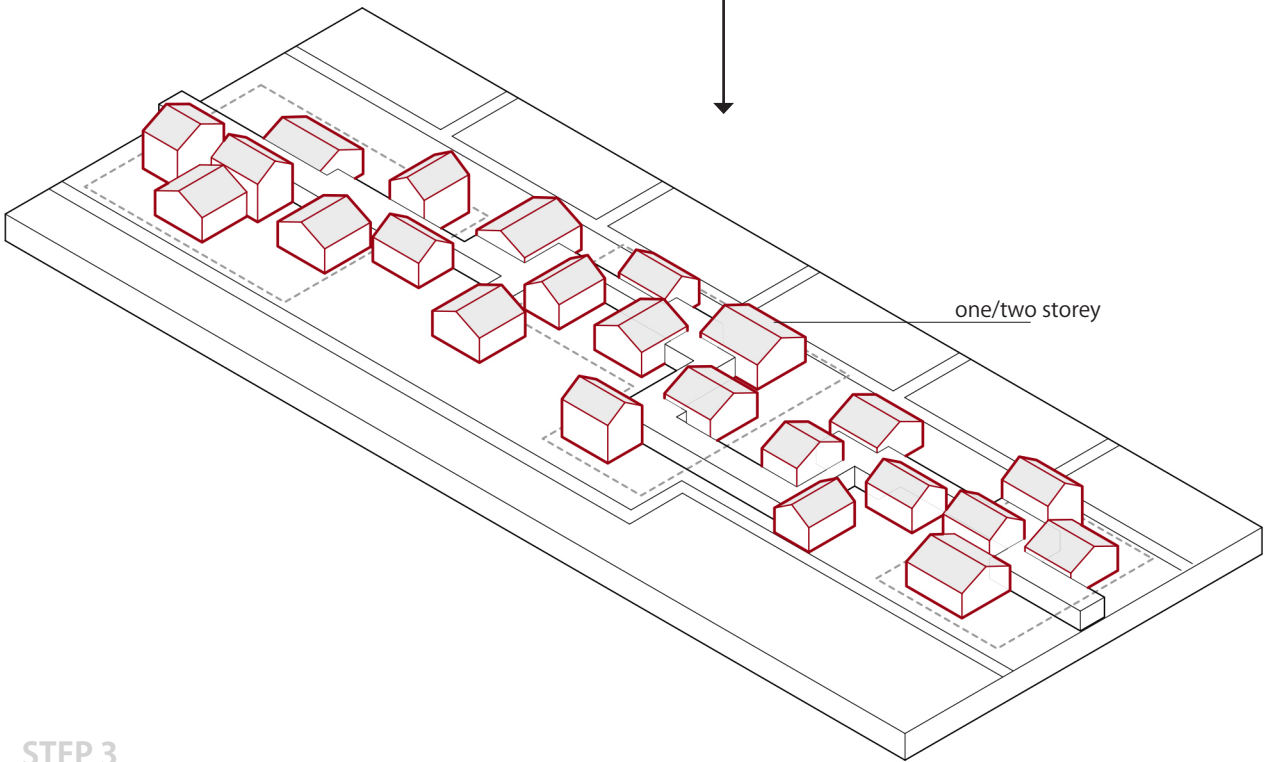
**STEP 1**  
Connecting streets: link site borders from north to south.



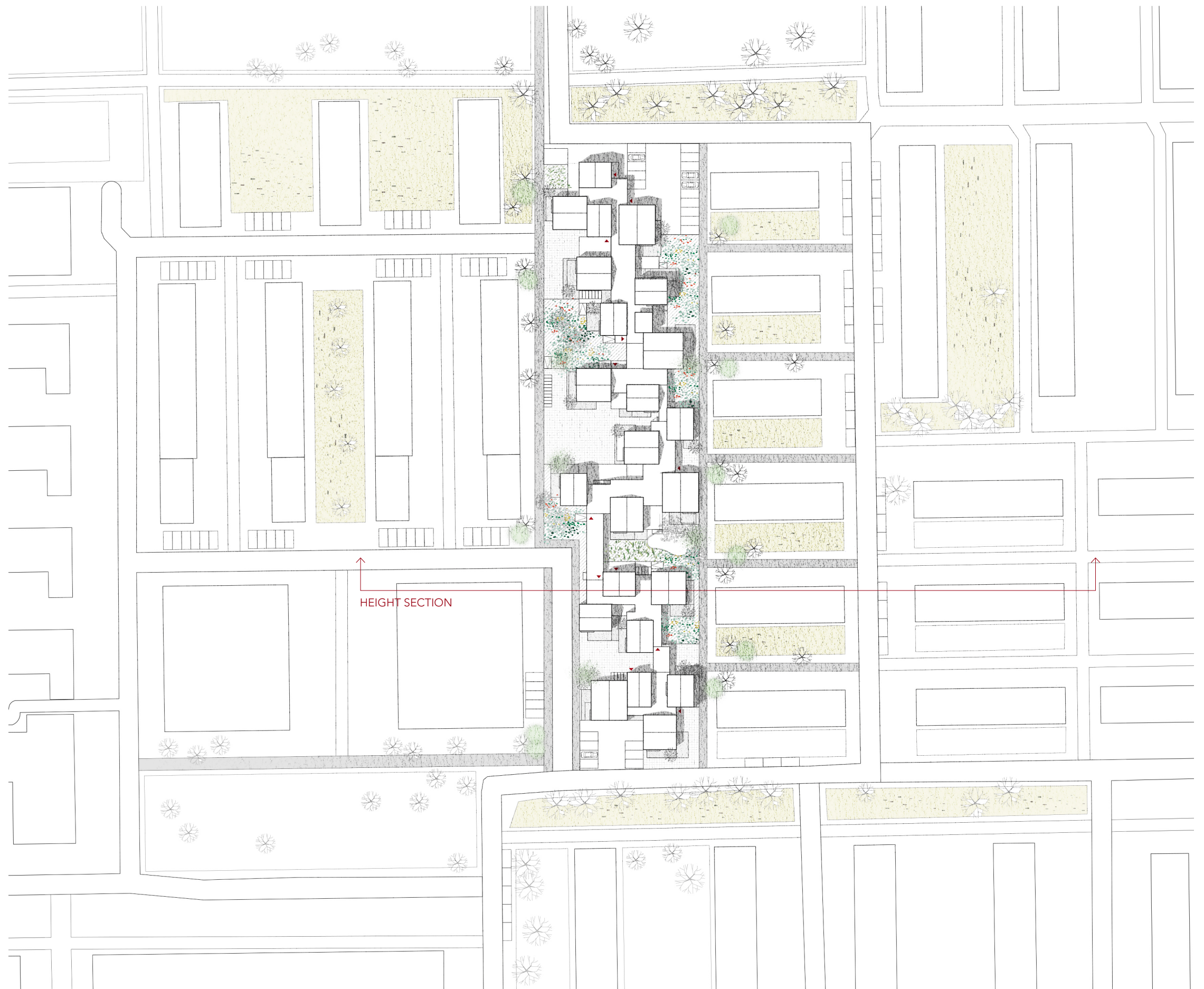
**STEP 2**  
Placing 19 houses (5 clusters) along the 'corridor'.



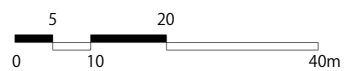
**STEP 4**  
Public spaces in-between: an intimate elderly home open to the neighbourhoods is born.



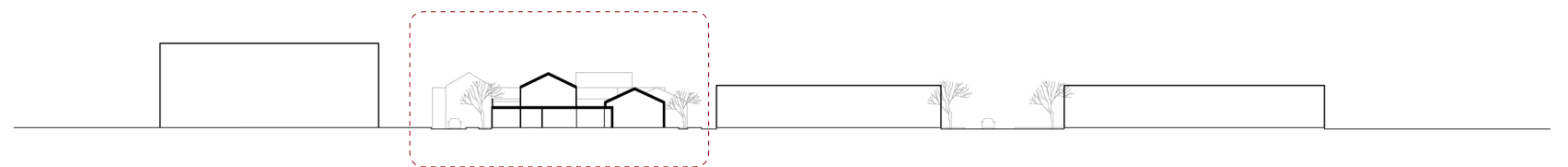
**STEP 3**  
Keeping volumes closer to the ground level, while fits in the 'skyline' of existing neighbourhoods.



**SITE PLAN**  
scale 1:1000



**HEIGHT SECTION**  
scale 1:1000

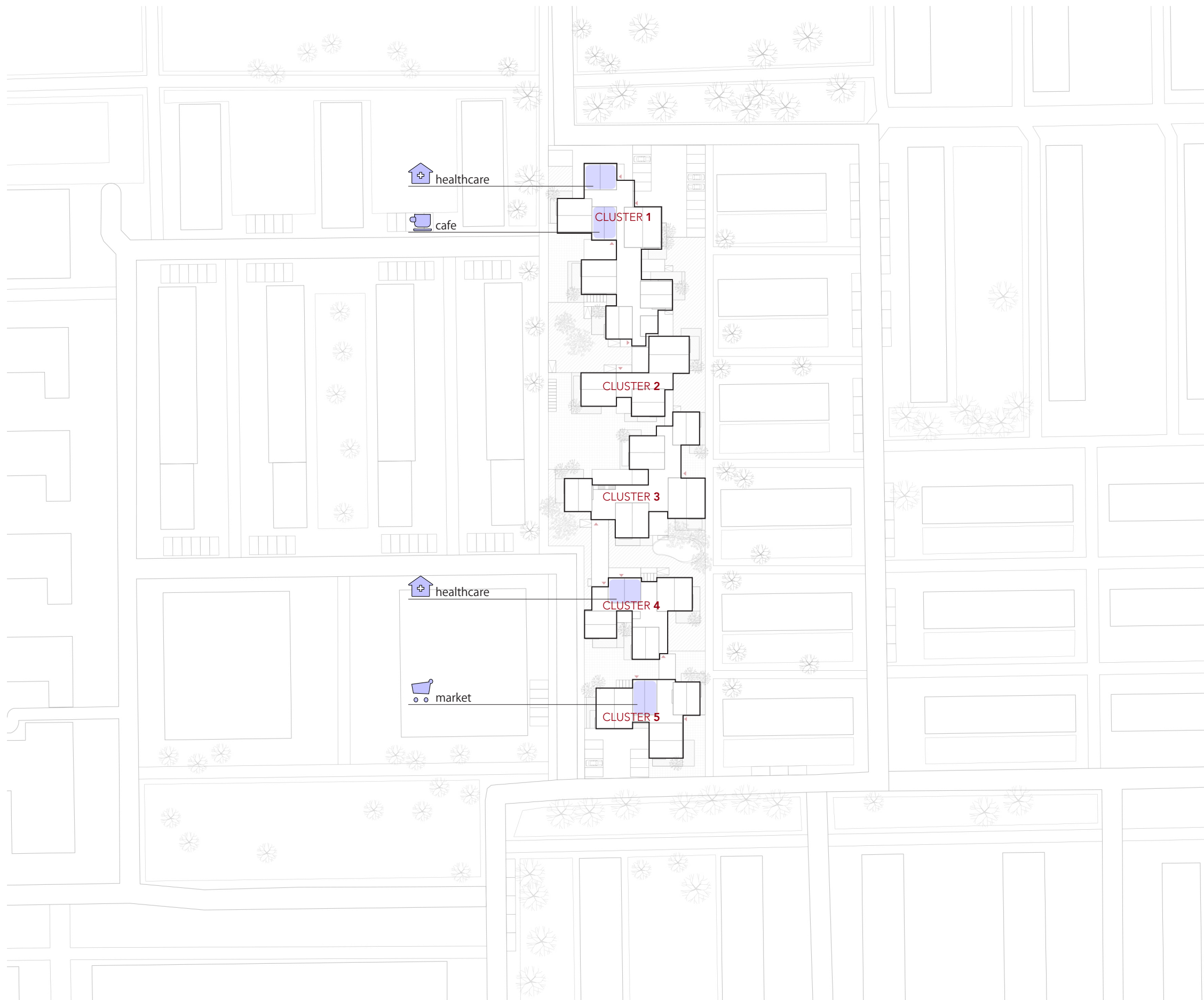
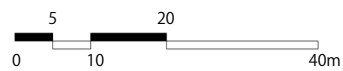




- public 'landmark'
- residential cluster



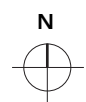
ACCESSIBILITY & CIRCULATION  
scale 1:1000





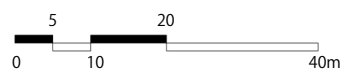
public 'landmark'  
residential cluster

motorized road  
entrance for vehicle



## ACCESSIBILITY & CIRCULATION

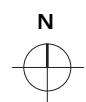
scale 1:1000







- public 'landmark'
- residential cluster
- motorized road
- entrance for vehicle
- pedestrian route
- main entrance into cluster



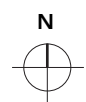
## ACCESSIBILITY & CIRCULATION

scale 1:1000



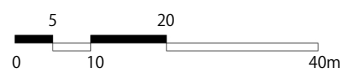


- public 'landmark'
- residential cluster
- motorized road
- entrance for vehicle
- pedestrian route
- main entrance into cluster
- 'corridors'
- 'doors'



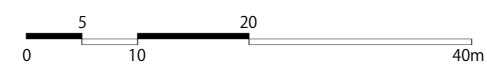
## ACCESSIBILITY & CIRCULATION

scale 1:1000



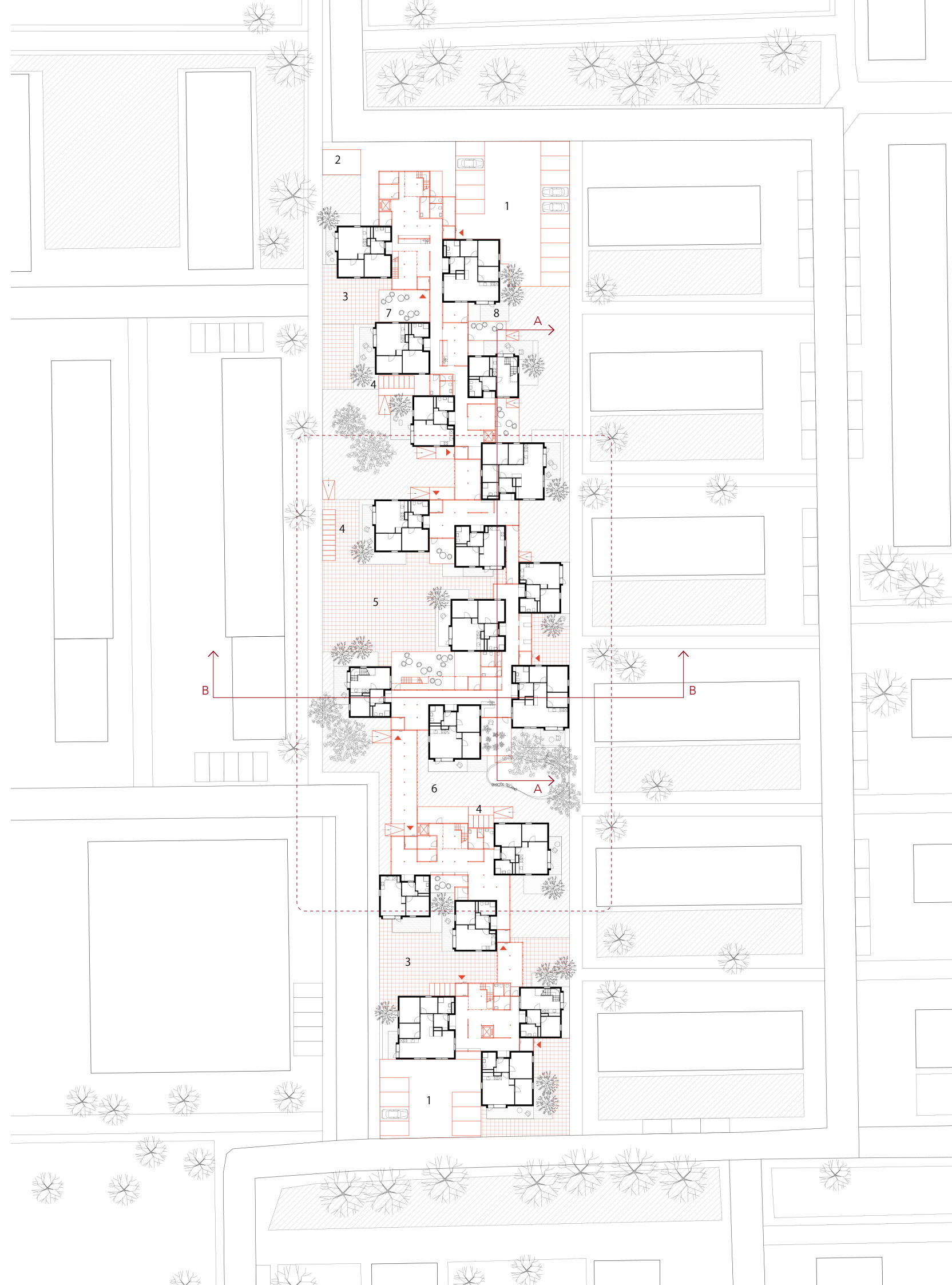
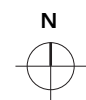
- 1 car parking
- 2 truck parking
- 3 square
- 4 bike parking
- 5 playground
- 6 central park

- 7 public outdoor area
- 8 private outdoor area

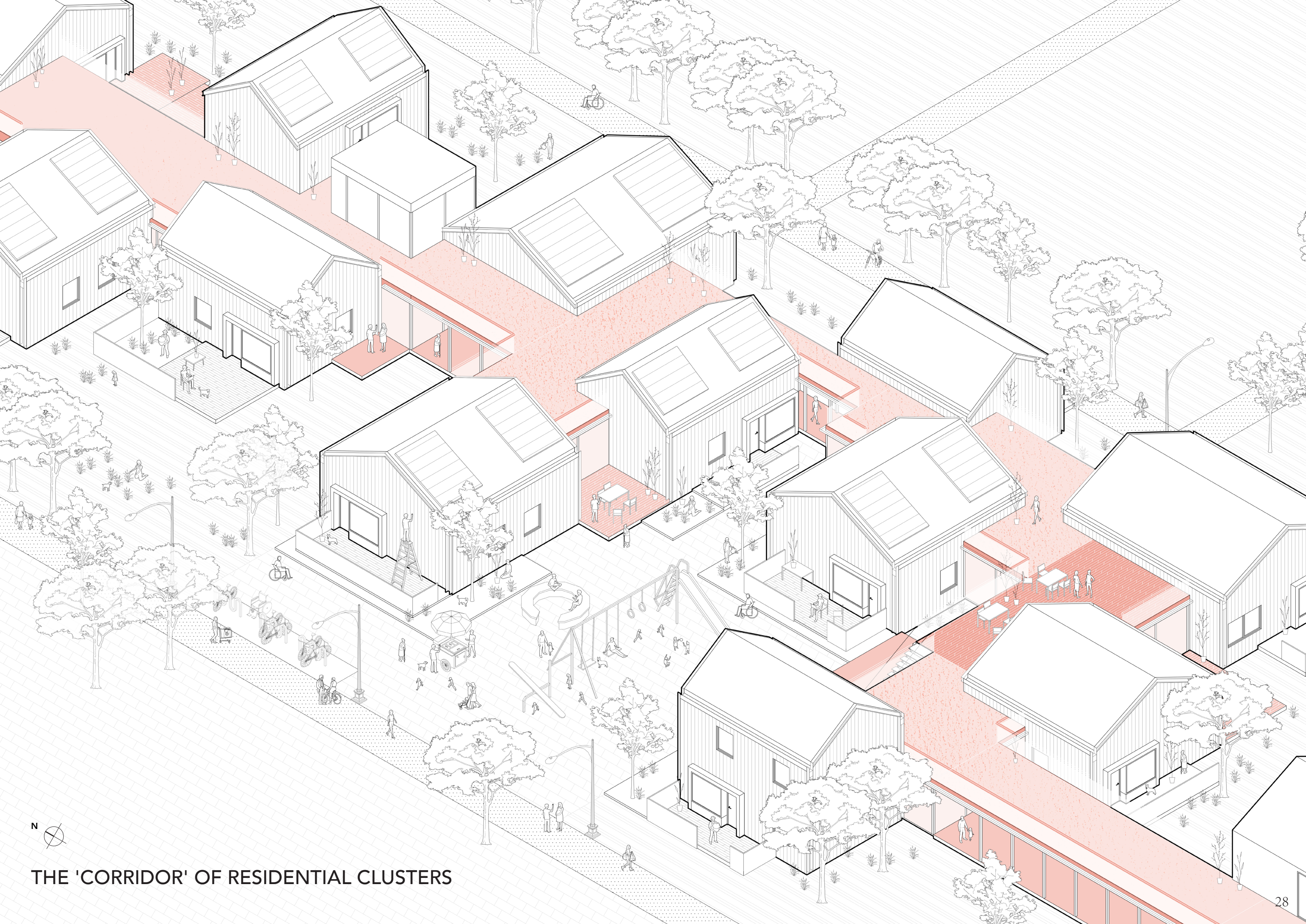


# GROUND LEVEL

scale 1:500

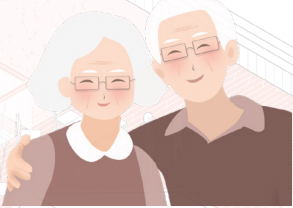
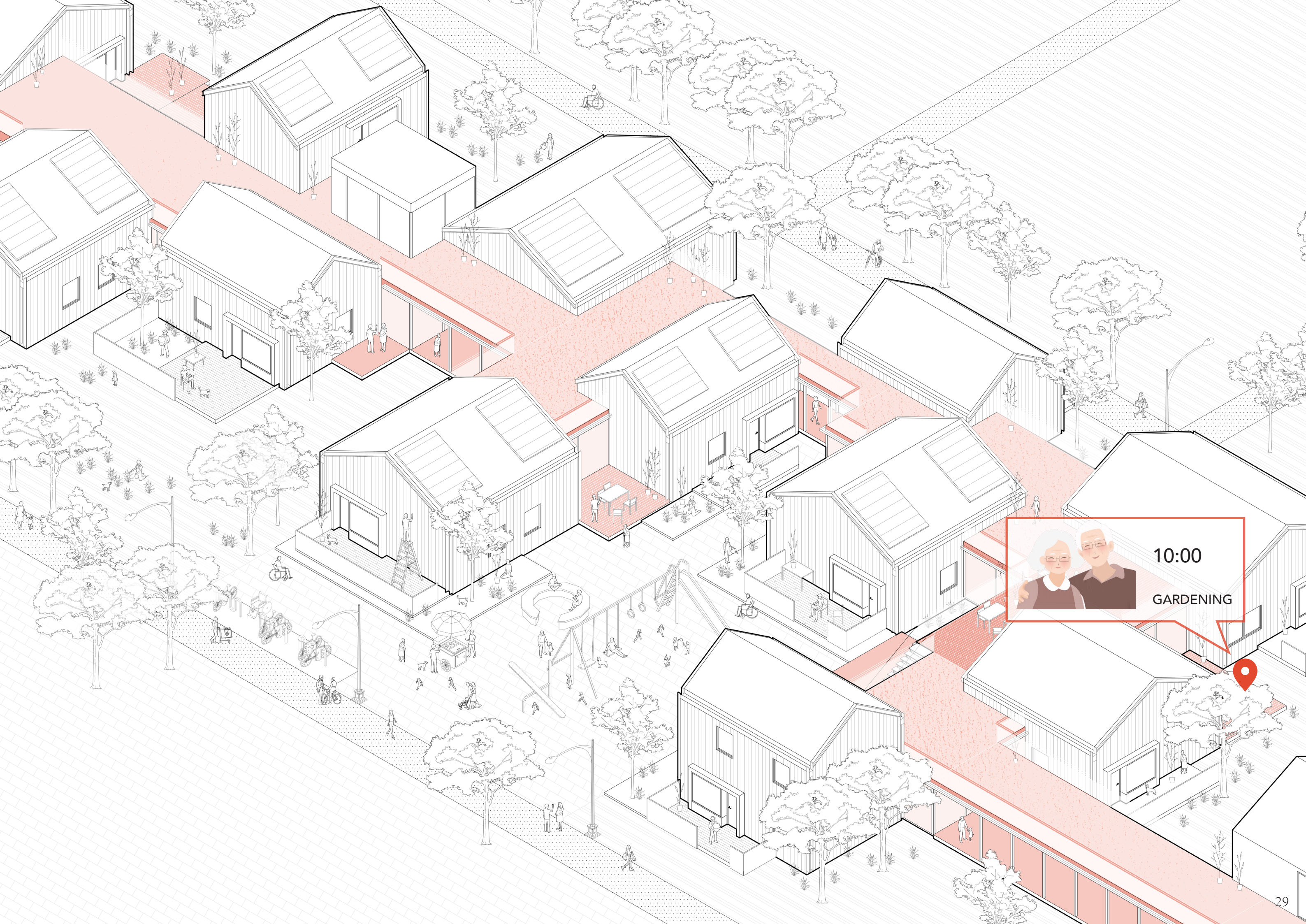






THE 'CORRIDOR' OF RESIDENTIAL CLUSTERS





10:00  
GARDENING

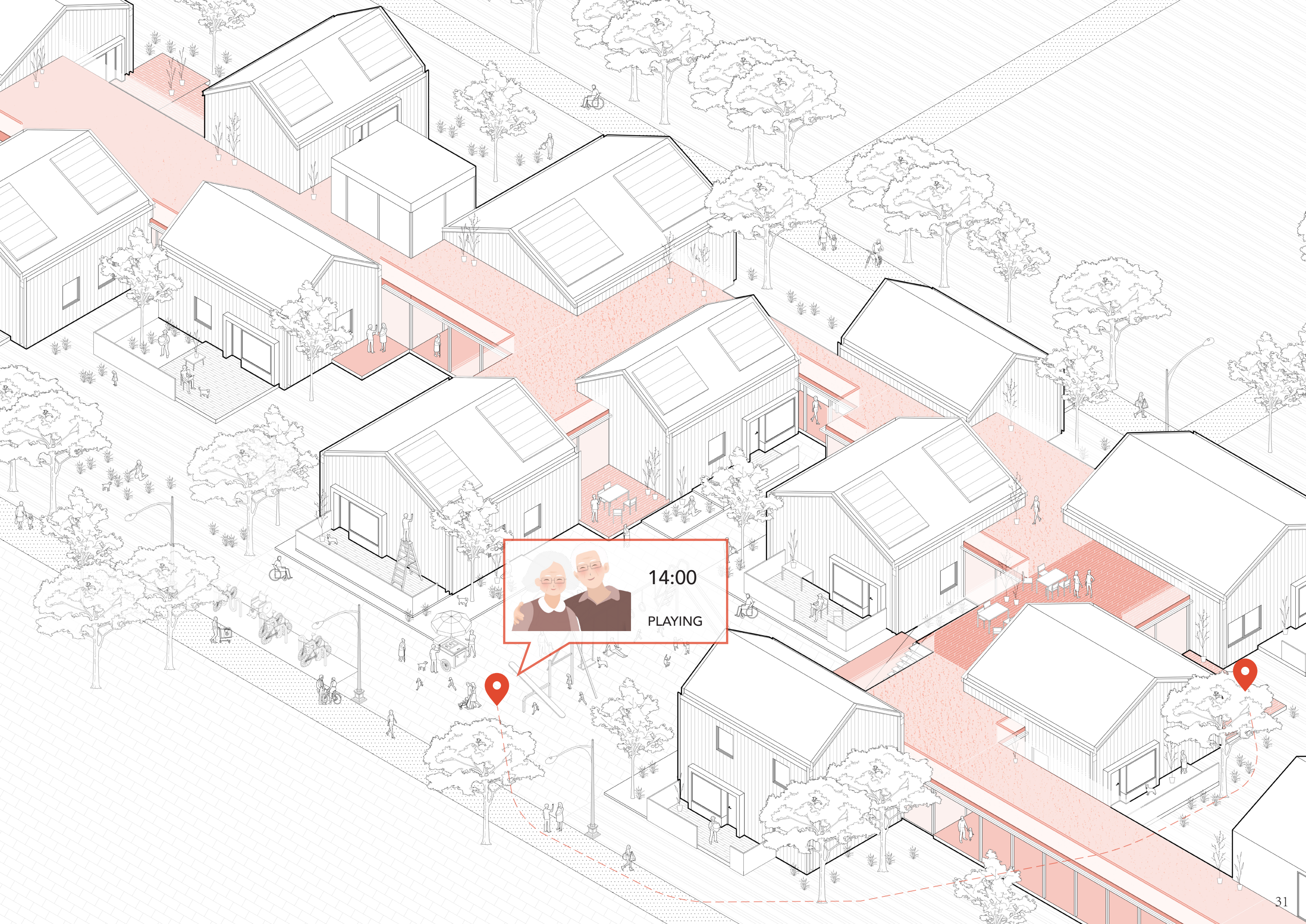







COMMUNAL GARDEN





 14:00  
PLAYING





PLAYGROUND & PARK



RESIDENTIAL CLUSTER 2

RESIDENTIAL CLUSTER 3

RESIDENTIAL CLUSTER 4

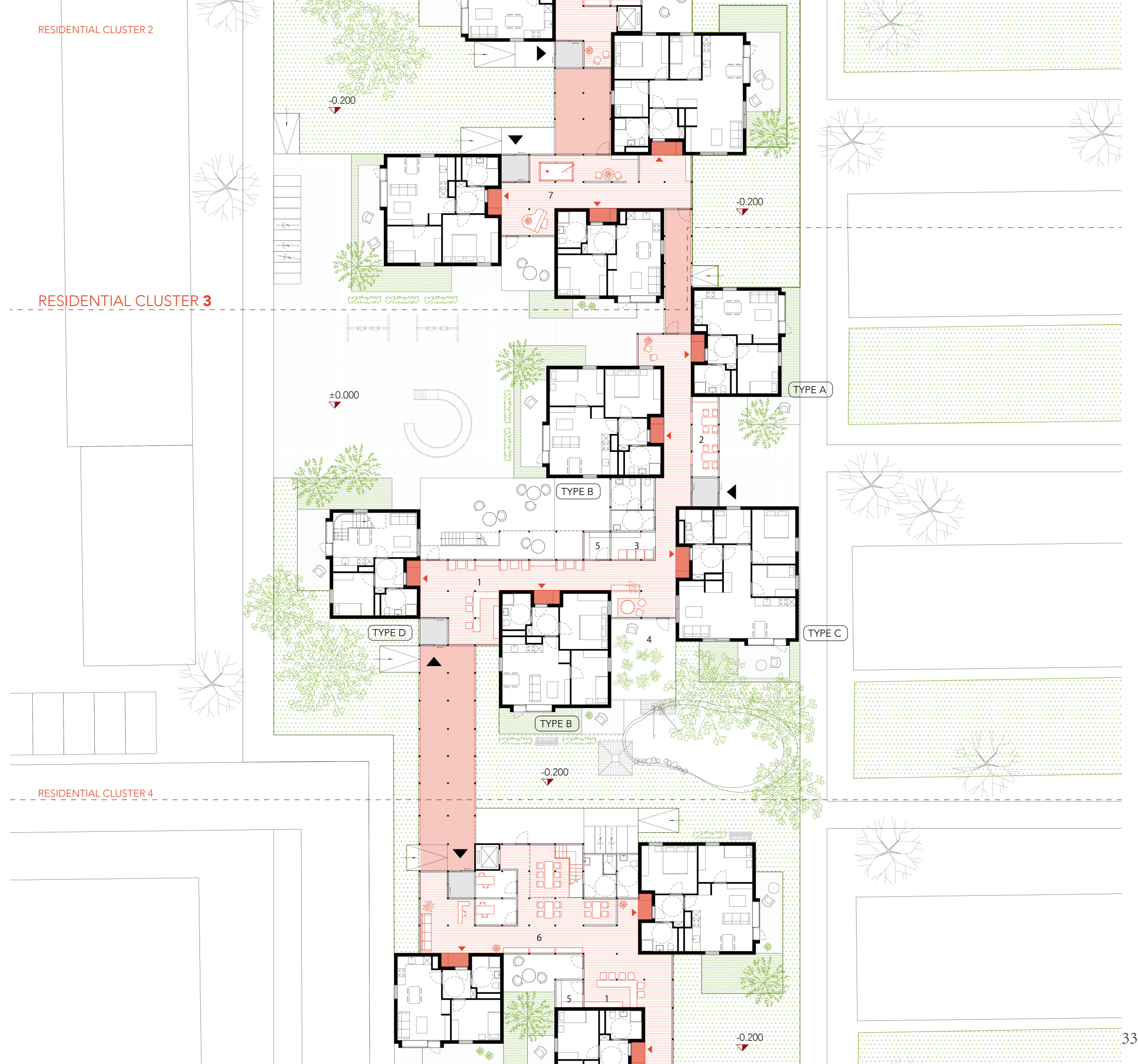
- 1 pantry
- 2 craft room
- 3 laundry
- 4 communal garden
- 5 storage
- 6 healthcare
- 7 lounge
- 8 terrace

1 5m  
0 2

## GROUND FLOOR

Cluster 2,3,4

scale 1:200



RESIDENTIAL CLUSTER 2

RESIDENTIAL CLUSTER 3

RESIDENTIAL CLUSTER 4

- 1 pantry
- 2 craft room
- 3 laundry
- 4 communal garden
- 5 storage
- 6 healthcare
- 7 lounge
- 8 terrace

0 1 2 5m

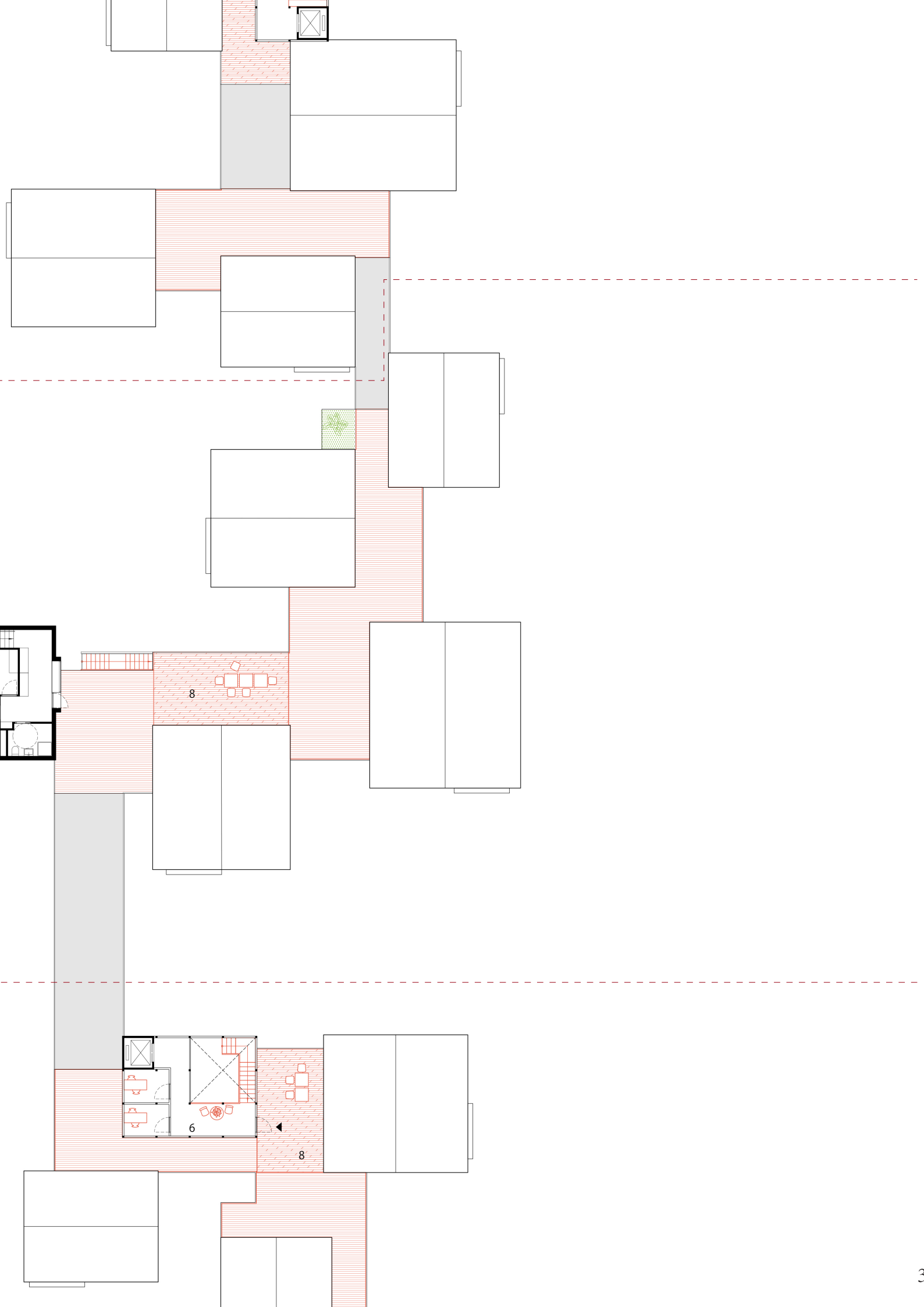
## FIRST FLOOR

Cluster 2,3,4

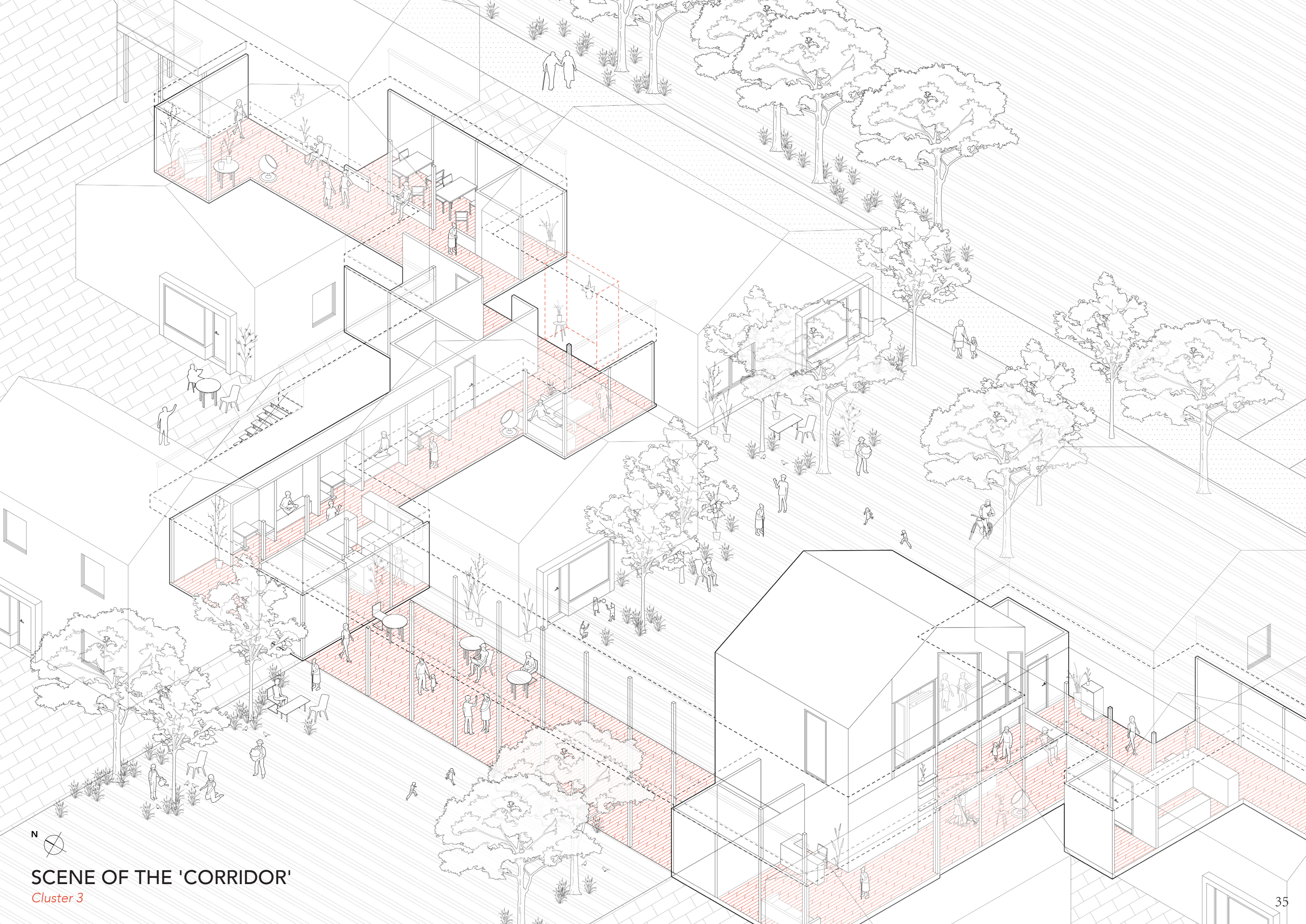
scale 1:200



TYPE D







# SCENE OF THE 'CORRIDOR'

Cluster 3





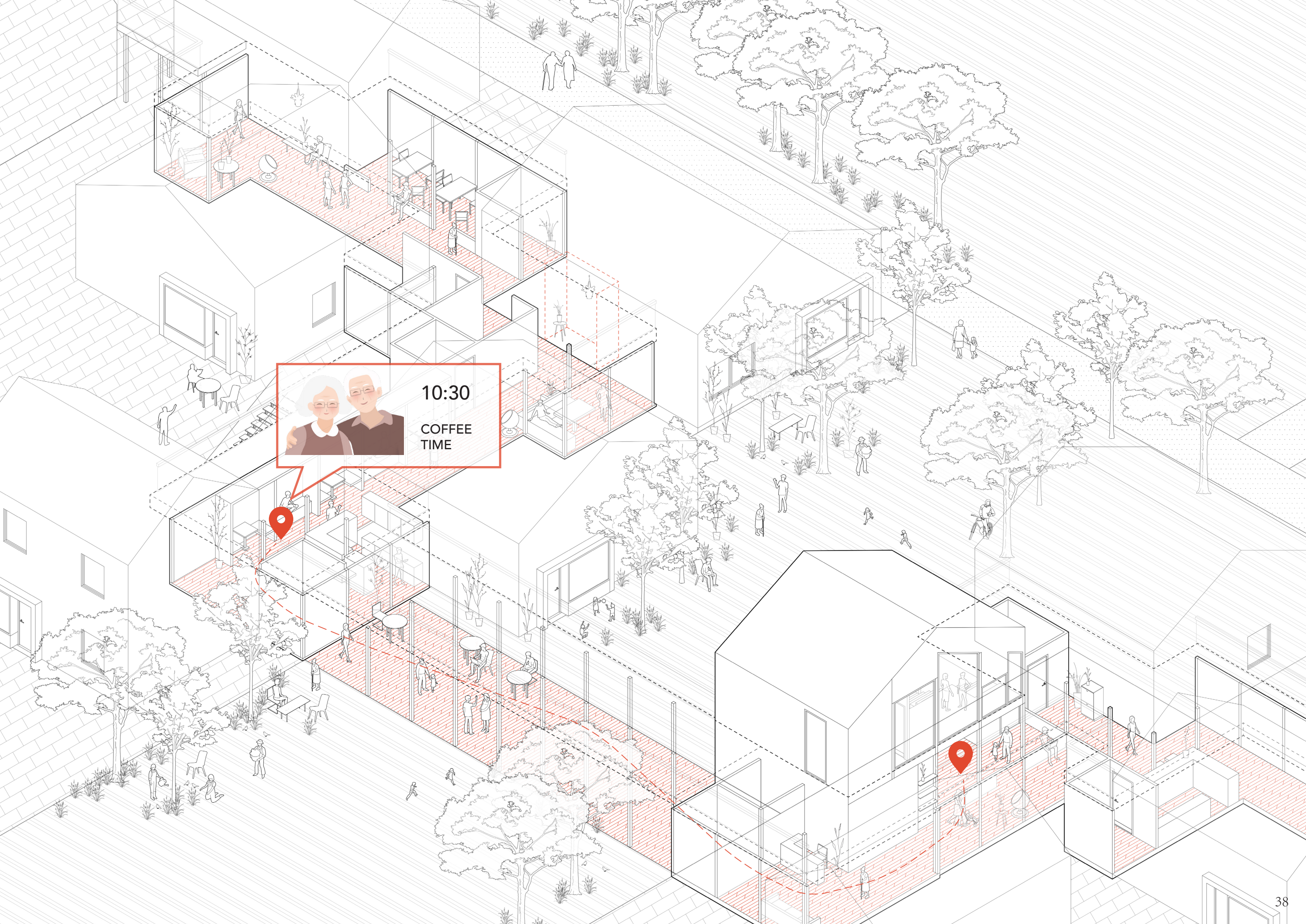
9:00  
HEALTH  
CHECKING





CENTRAL ENTRANCE HALL





10:30  
COFFEE  
TIME



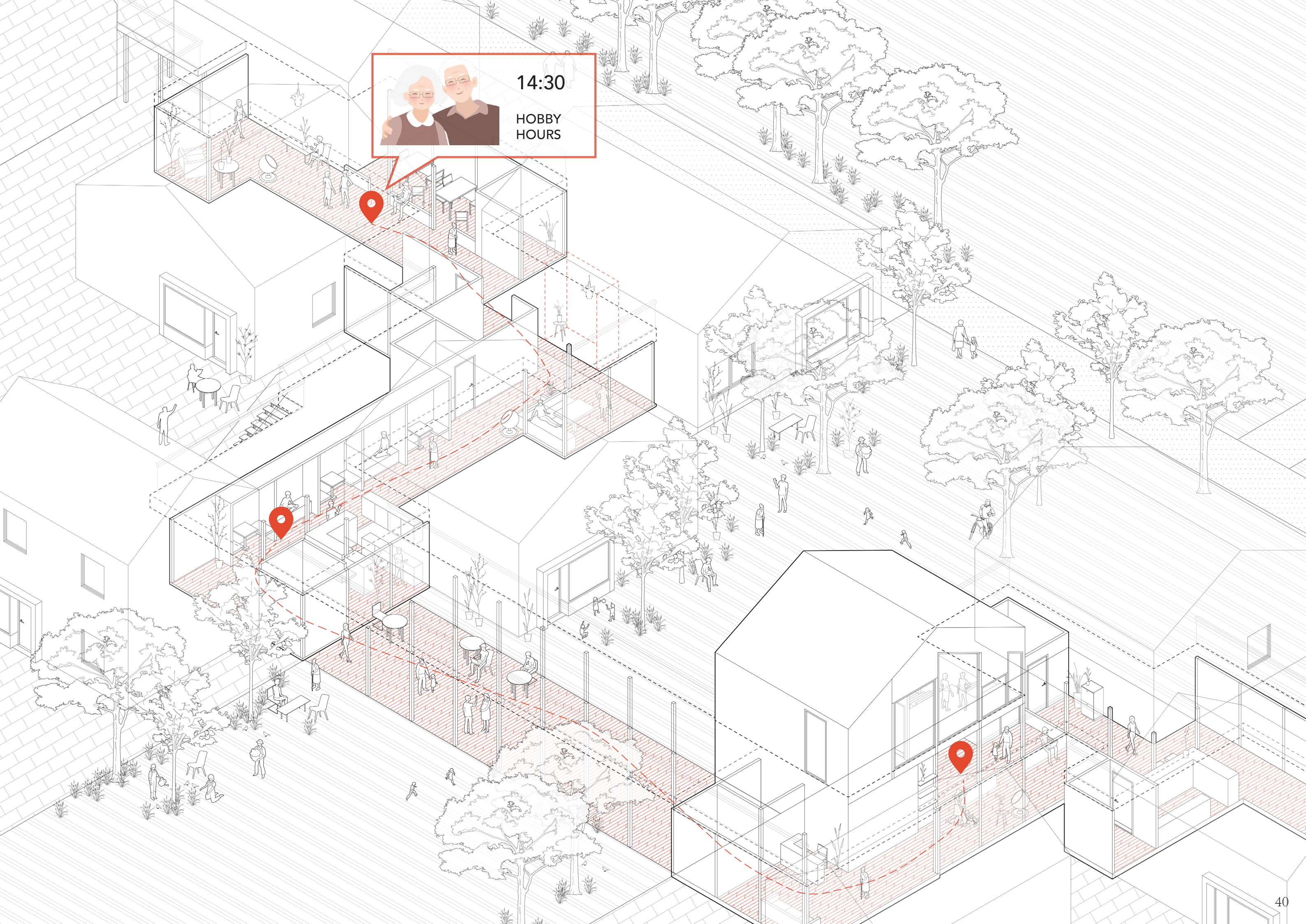


CAFE CORNER





14:30  
HOBBY  
HOURS

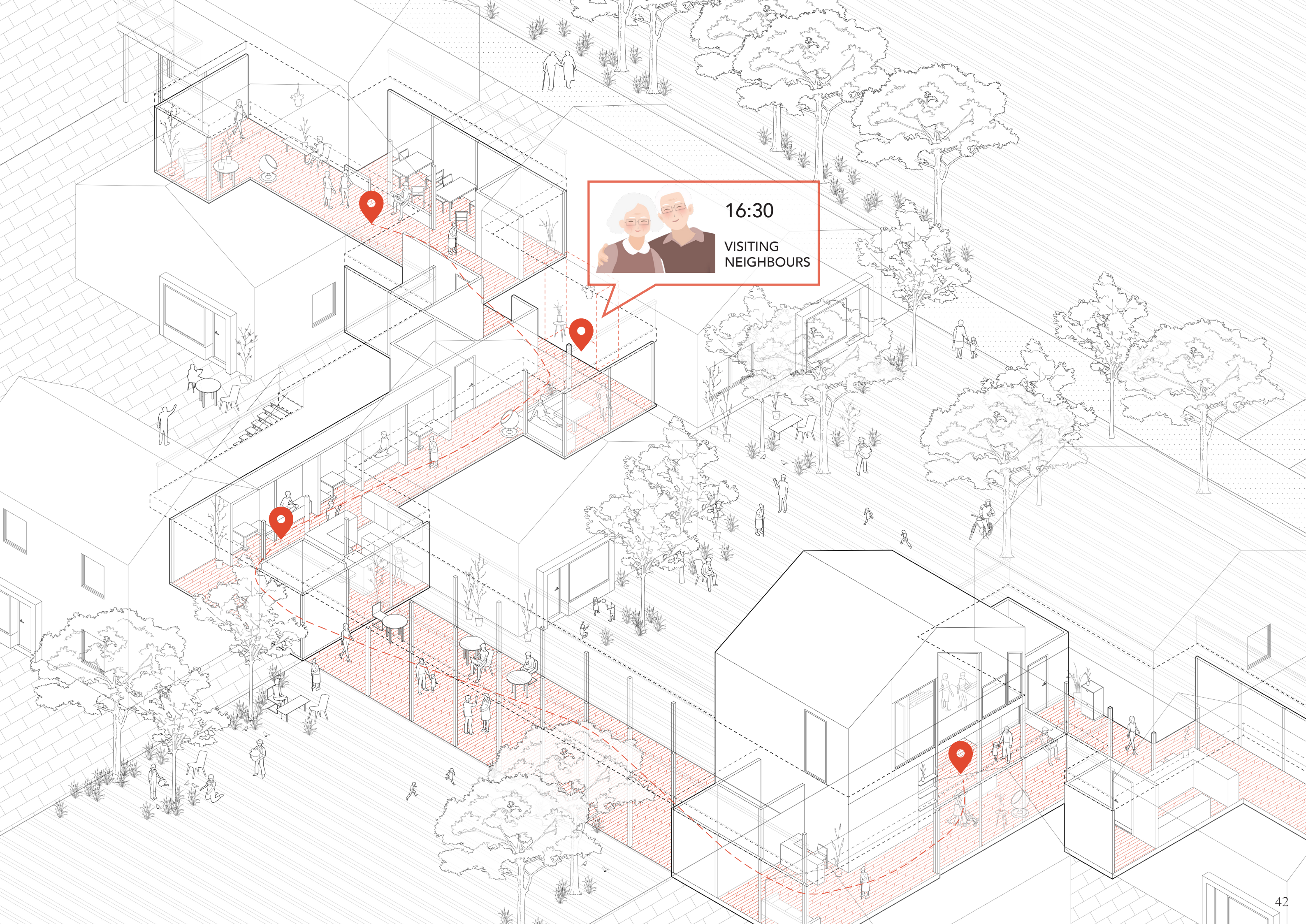






PLAY CORNER





 16:30  
VISITING  
NEIGHBOURS





PRIVATE DOOR & ENTRANCE

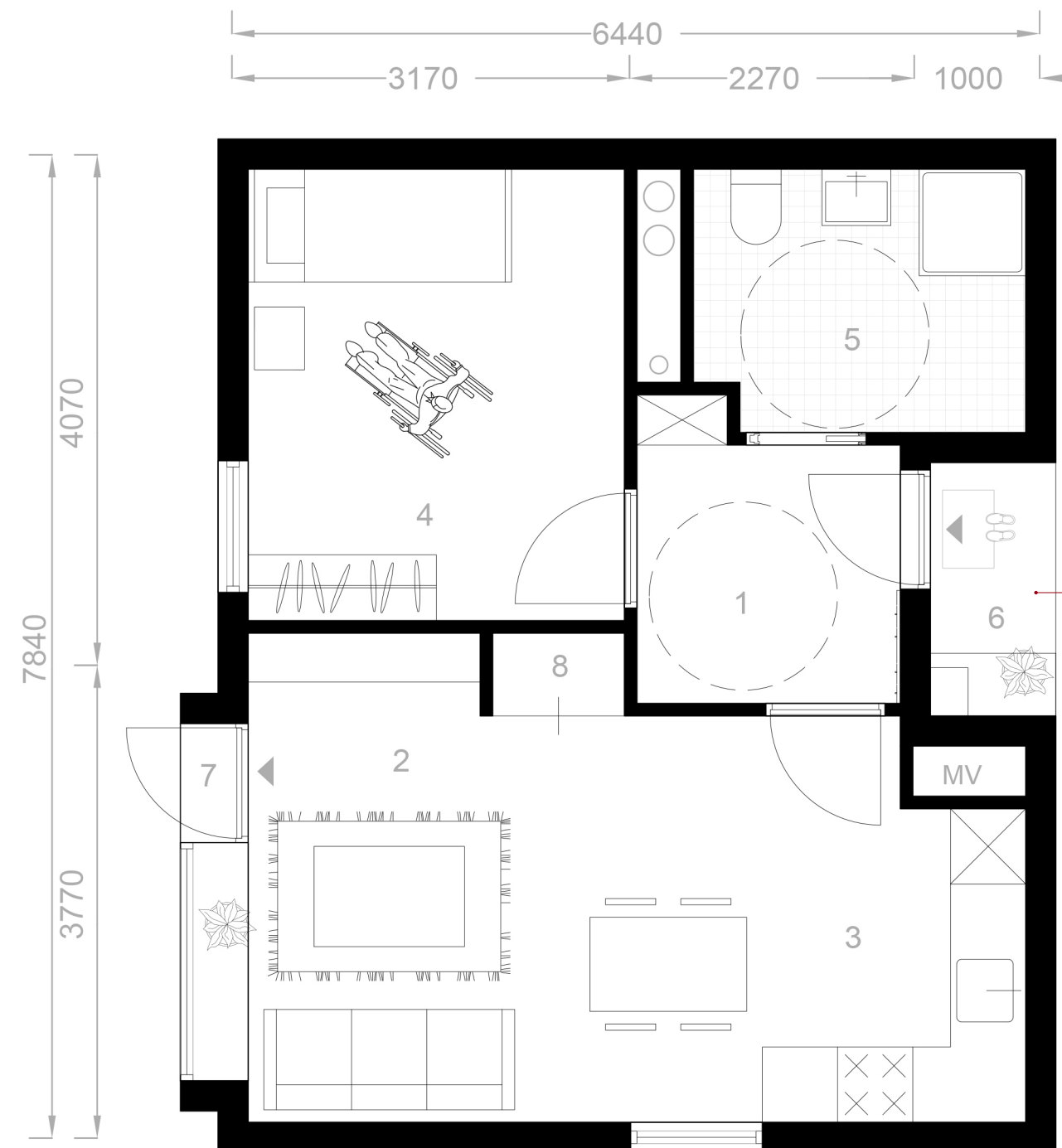




## TYPE A

total area: 44.6m<sup>2</sup>

SINGLE ELDERLY

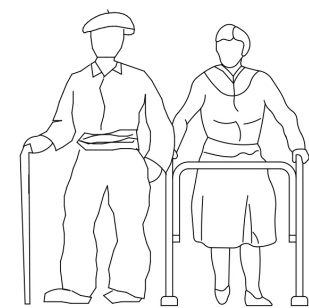


RECESSED ENTRANCE  
'Buffer' for the private territory

- 1 entrance
- 2 living room
- 3 kitchen & dining area
- 4 bedroom
- 5 bathroom

- 6 connection to indoor corridor
- 7 connection to courtyard
- 8 storage

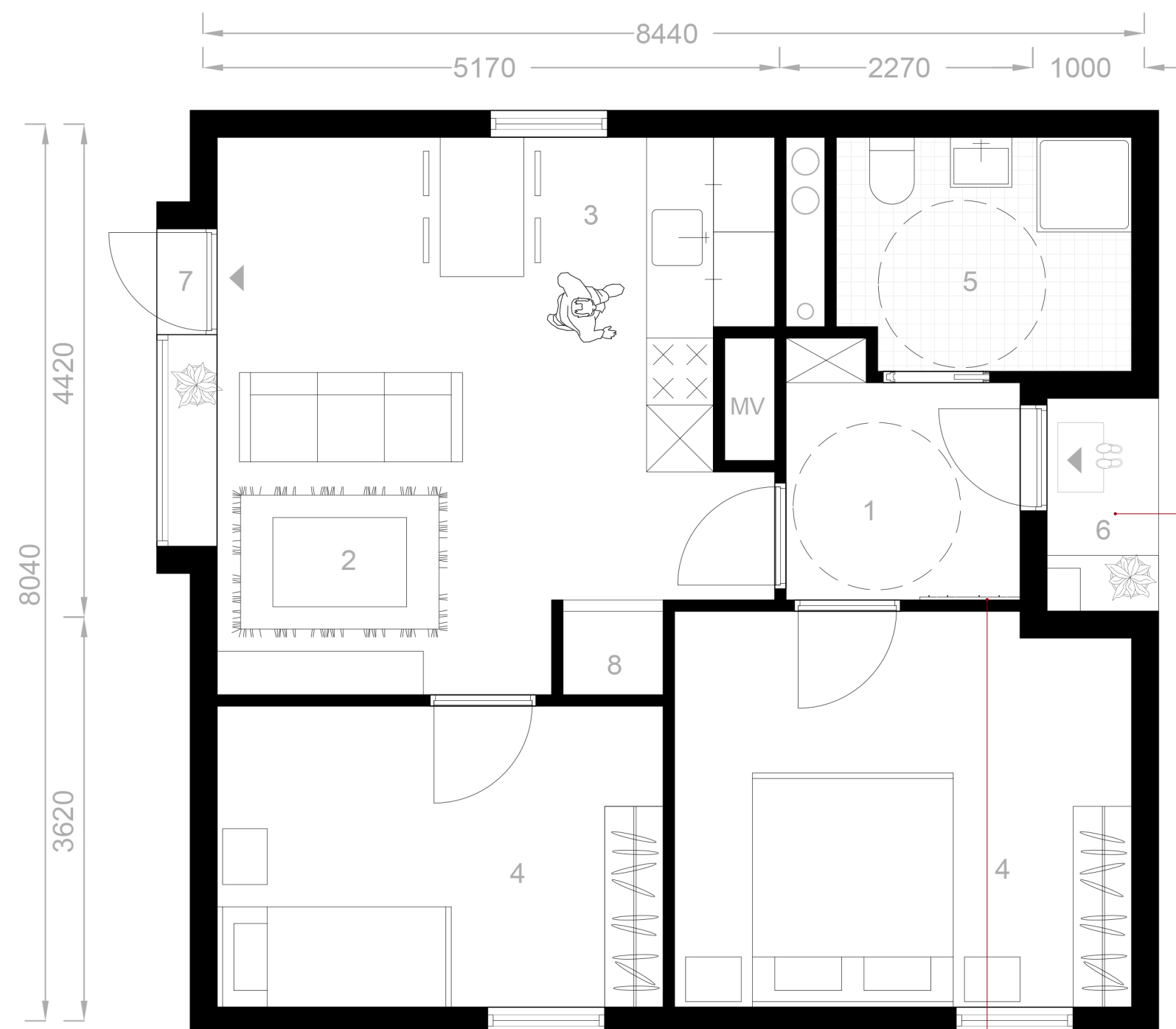
DWELLING UNIT  
scale 1:50



# TYPE B

total area: 61.6m<sup>2</sup>

ELDERLY COUPLE



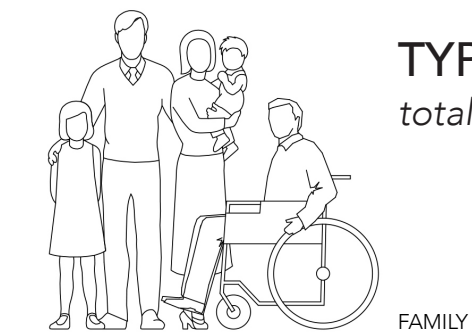
RECESSED ENTRANCE  
'Buffer' for the private territory

- 1 entrance
- 2 living room
- 3 kitchen & dining area
- 4 bedroom
- 5 bathroom
- 6 connection to indoor corridor
- 7 connection to courtyard
- 8 storage

## DWELLING UNIT

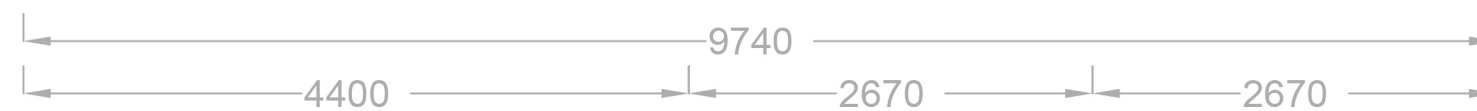
scale 1:50

DOORWAY  
area for clothes rack etc.



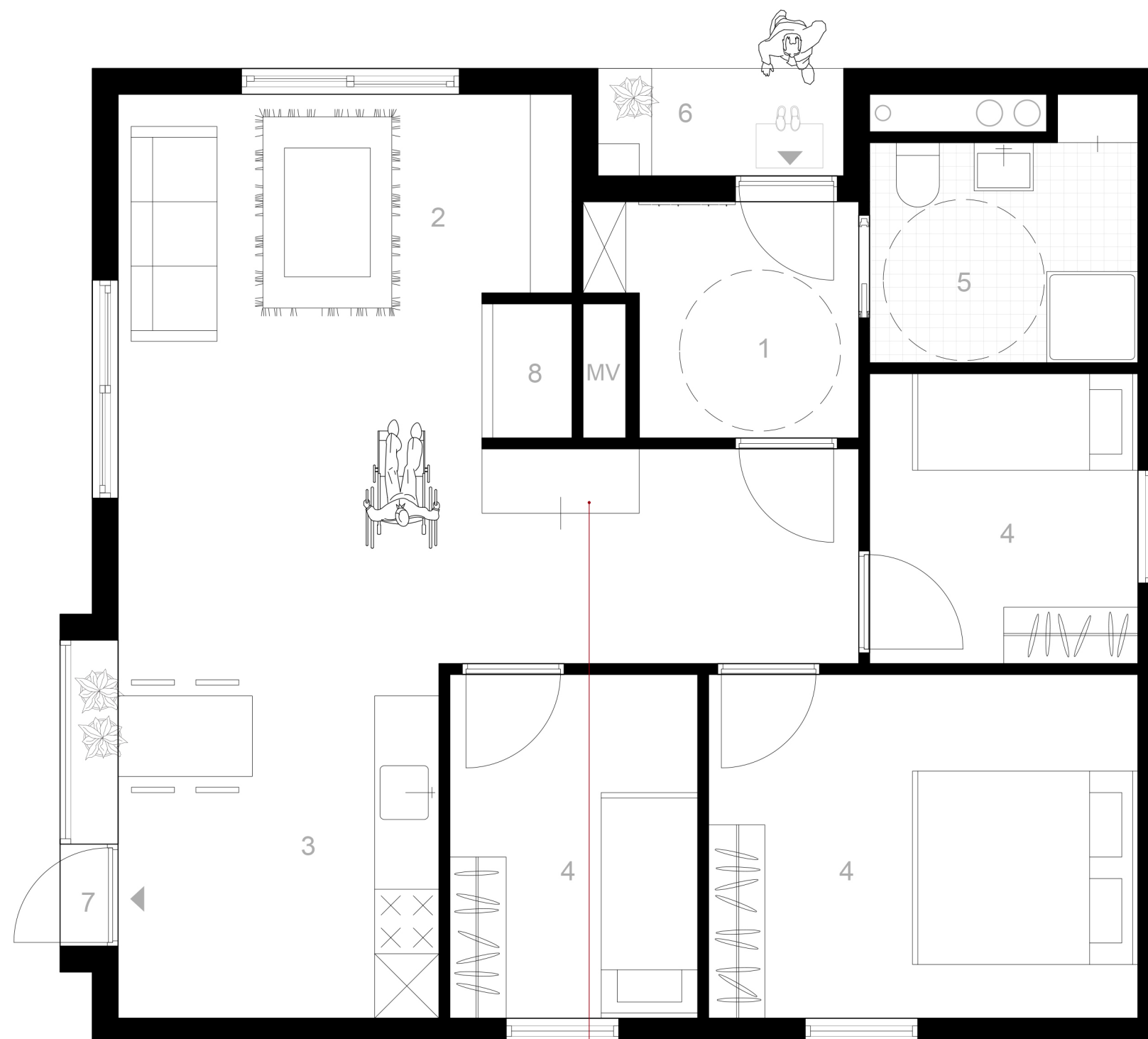
## TYPE C

total area: 78.9m<sup>2</sup>



- 1 entrance
- 2 living room
- 3 kitchen & dining area
- 4 bedroom
- 5 bathroom

- 6 connection to indoor corridor
- 7 connection to courtyard
- 8 storage



**EXTRA STORAGE**  
(optional for walkers/wheelchairs etc.)

## DWELLING UNIT

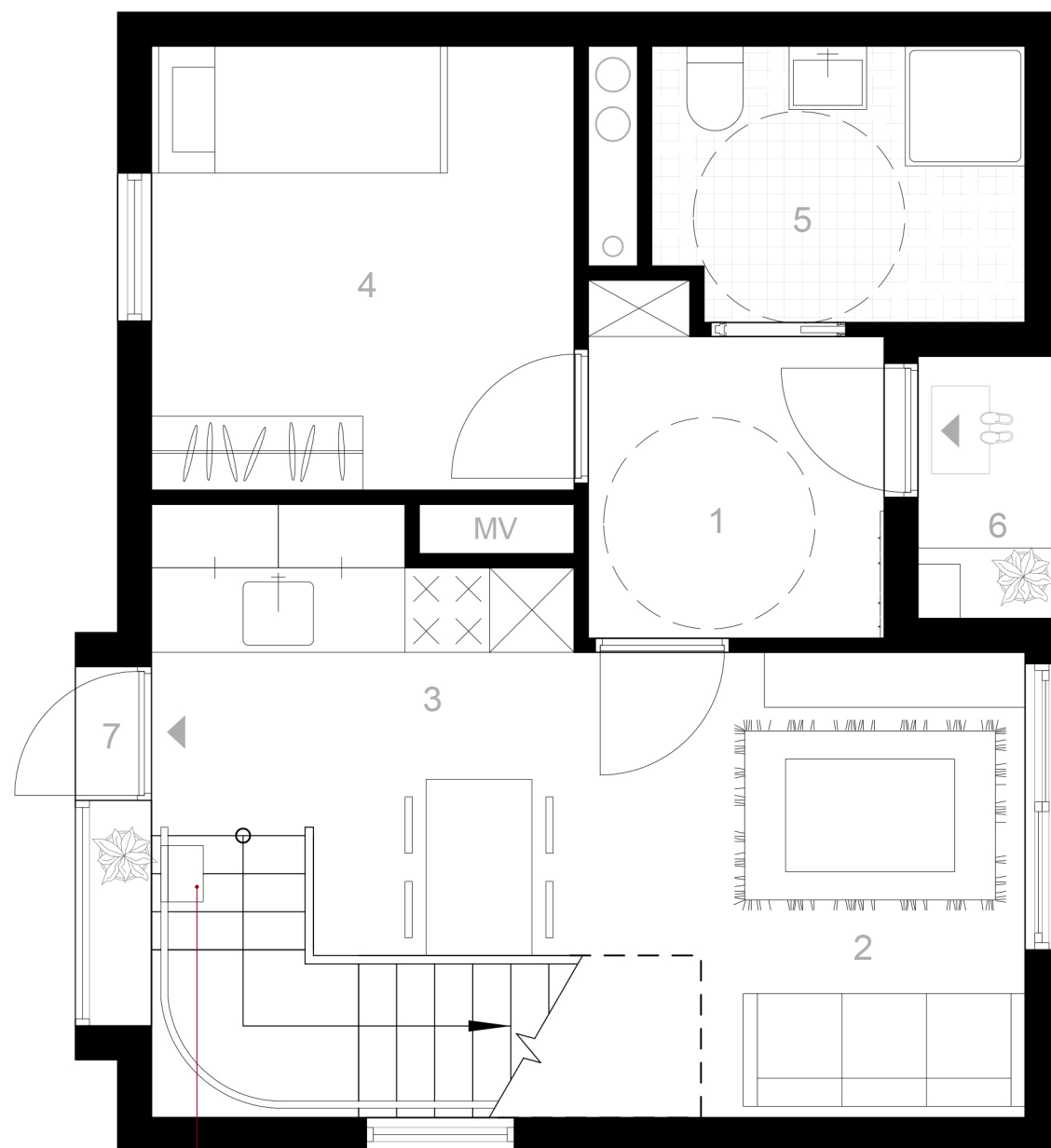
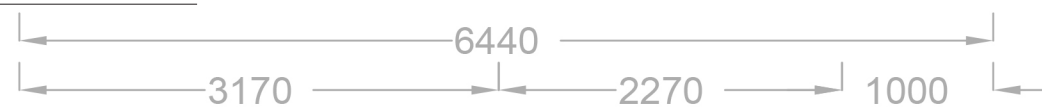
scale 1:50



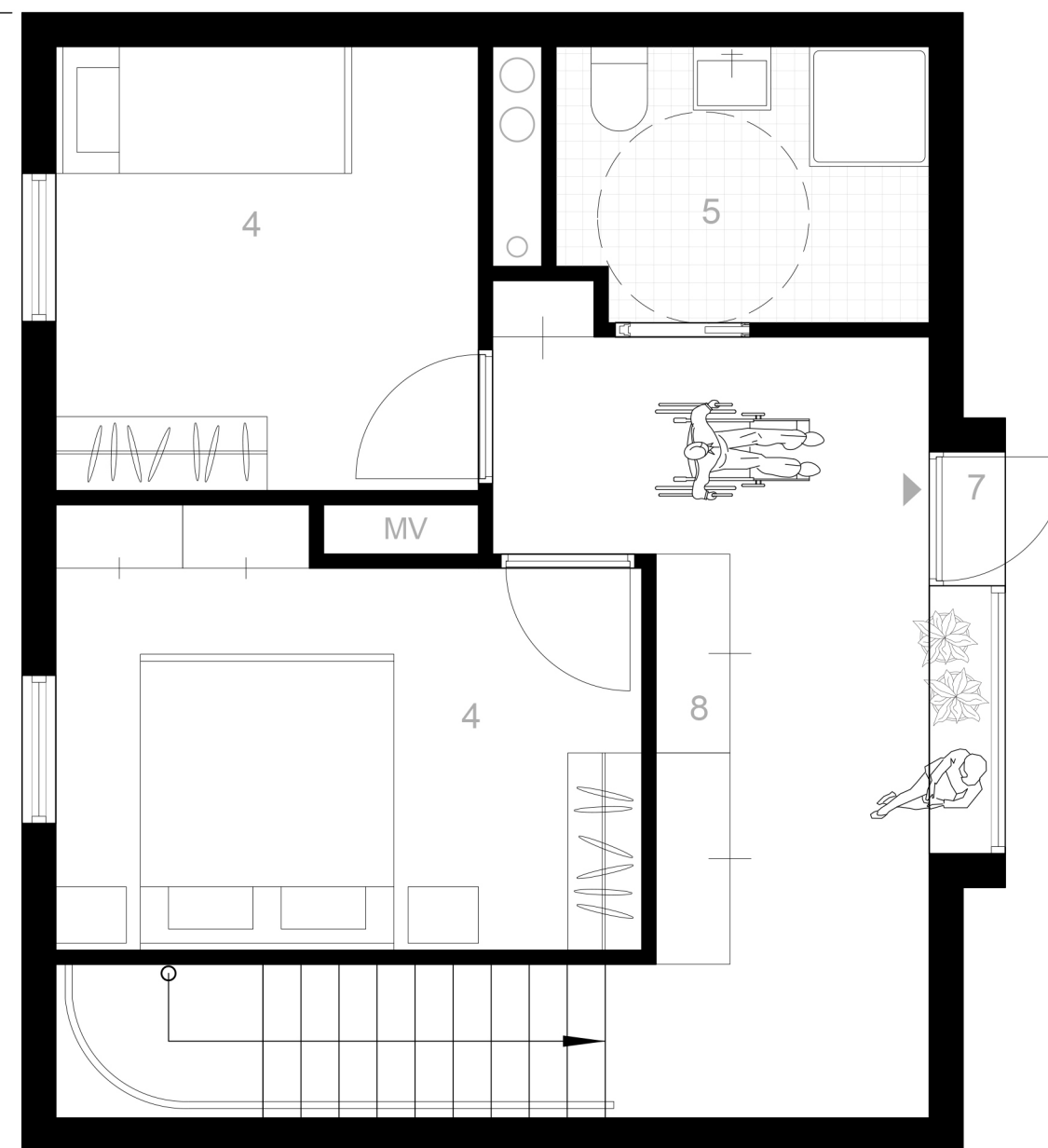


# TYPE D

total area: 89.6m<sup>2</sup>



GROUND FLOOR



FIRST FLOOR

STAIRLIFT FOR WHEELCHAIR  
(optional if needed)

## DWELLING UNIT

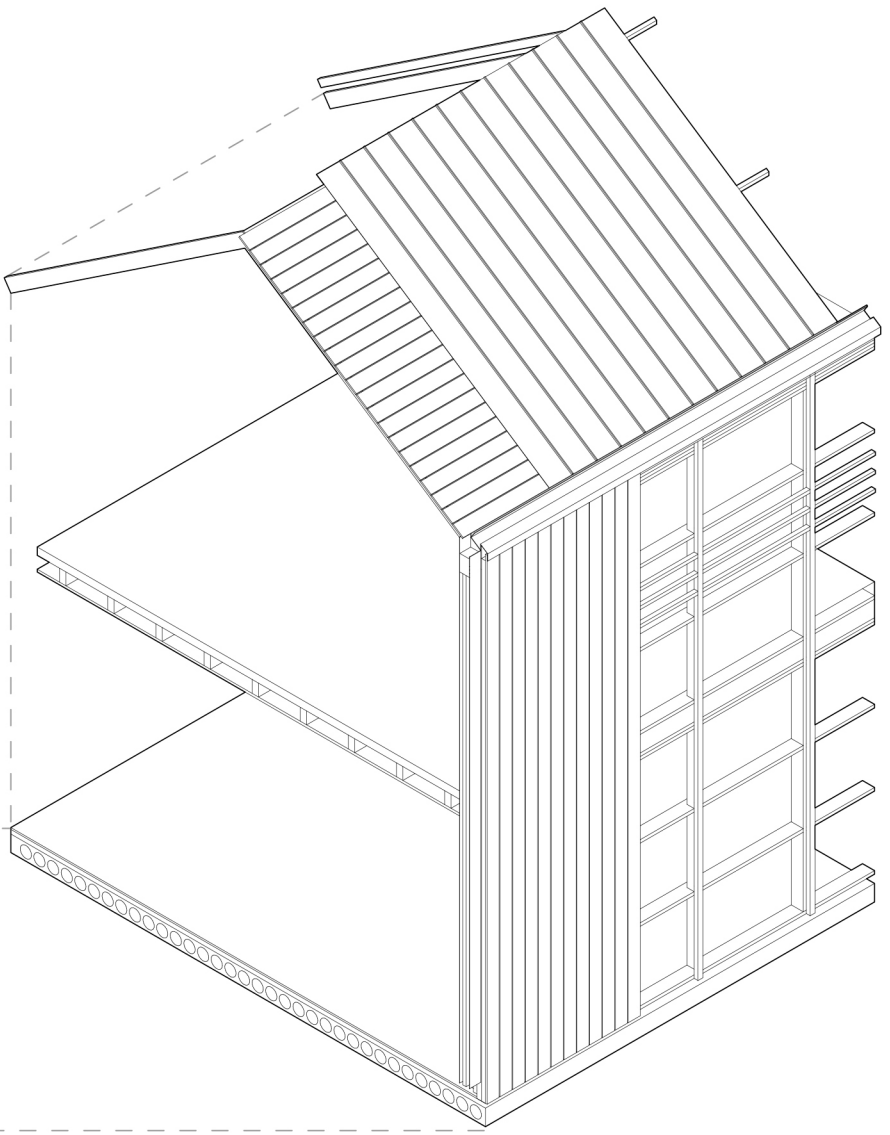
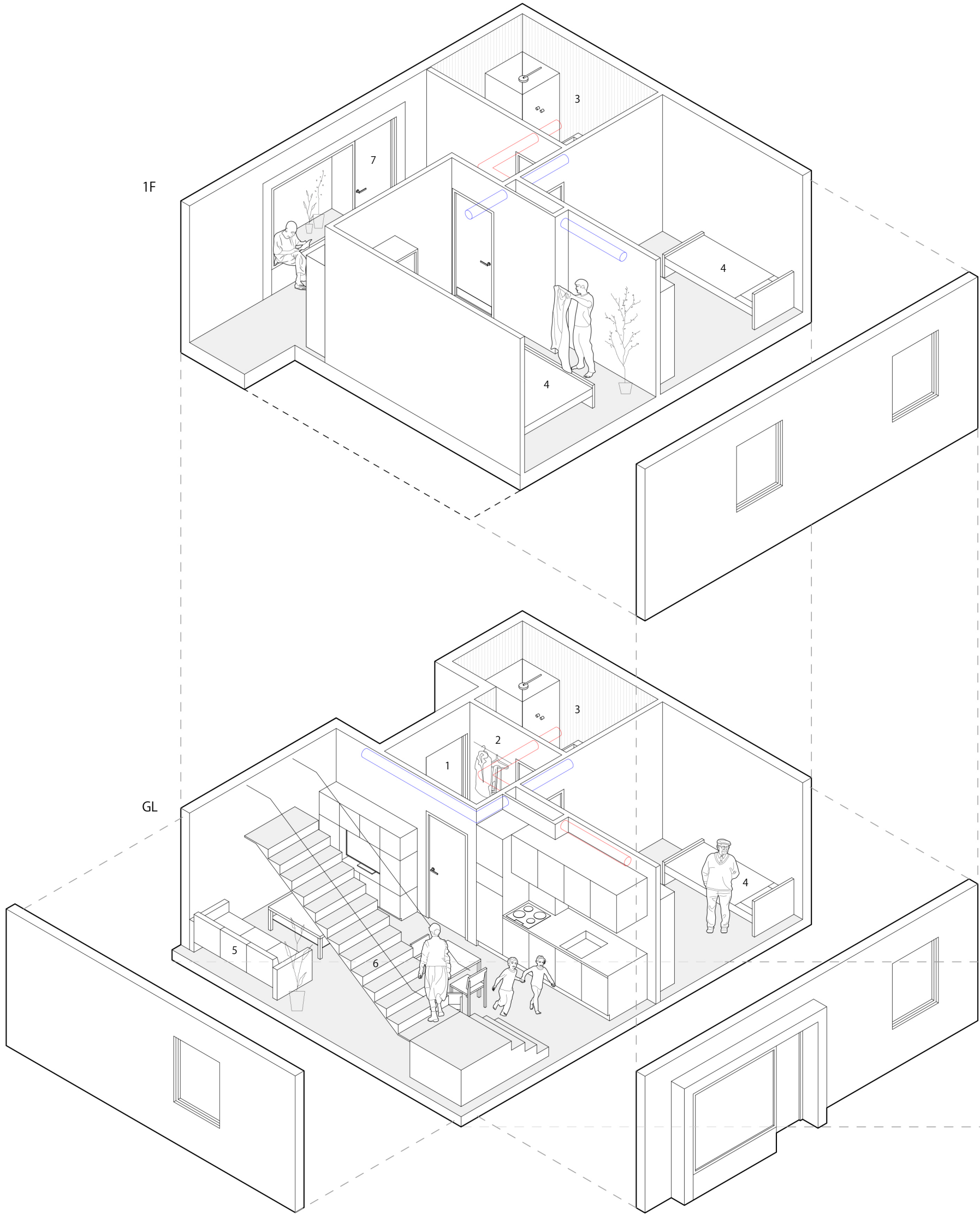
scale 1:50

- 1 entrance
- 2 living room
- 3 kitchen & dining area
- 4 bedroom
- 5 bathroom
- 6 connection to indoor corridor
- 7 connection to courtyard
- 8 storage

UNIT DETAILS & STRUCTURE

TYPE D

- 1 entrance door
- 2 entrance hall
- 3 bathroom
- 4 bed
- 5 sofa
- 6 stairs
- 7 access to terrace







DWELLING INTERIOR





## WEST ELEVATION

Cluster 1,2,3

scale 1:200



## WEST ELEVATION

Cluster 4,5

scale 1:200

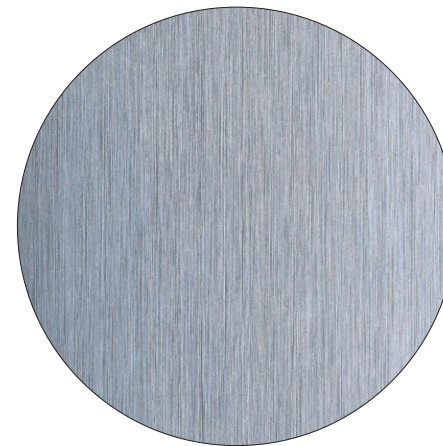


## MATERIAL CHOICE

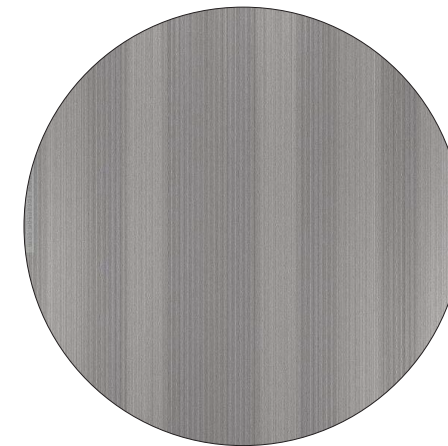
*Dwelling* & Public space



**MAIN FACADE**  
Scottish larch timber



**ROOFING**  
zink



**PUBLIC SPACE**  
metal cladding



**City Cabin**, by Olson Kundig  
Seattle, United States



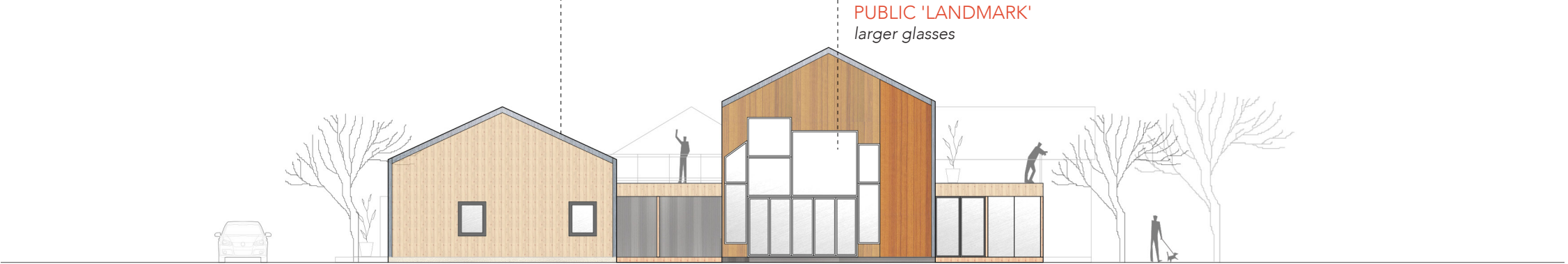
**Imagine Montessori School**, by Gradolí & Sanz  
Paterna, Spain



**NORTH ELEVATION**

Cluster 4

scale 1:200





**ROOF**  
zink cladding

**GUTTER & PIPE**  
zink

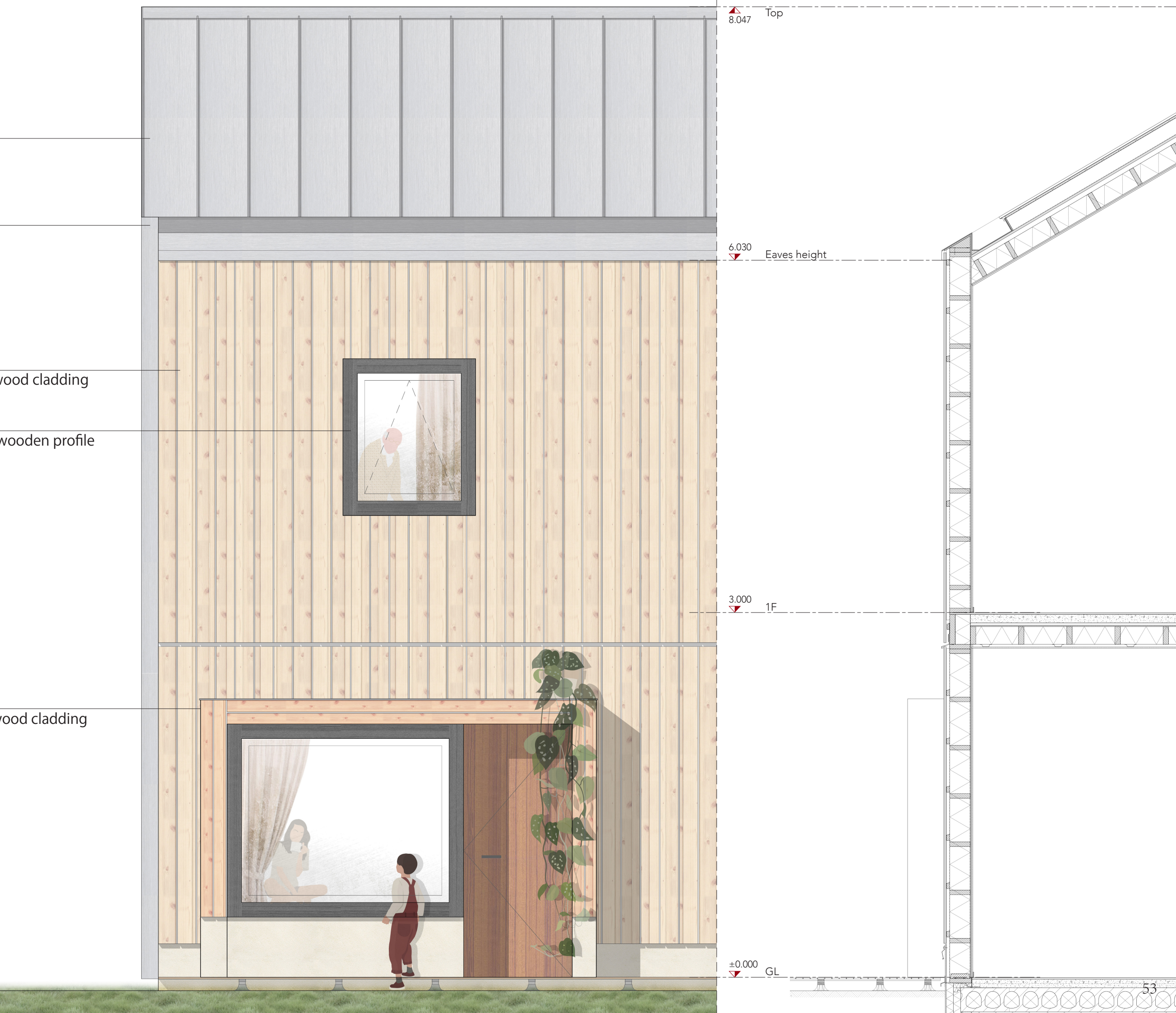
**WALL**  
(light-colored) Scottish wood cladding

**WINDOW**  
(dark-colored) oak solid wooden profile

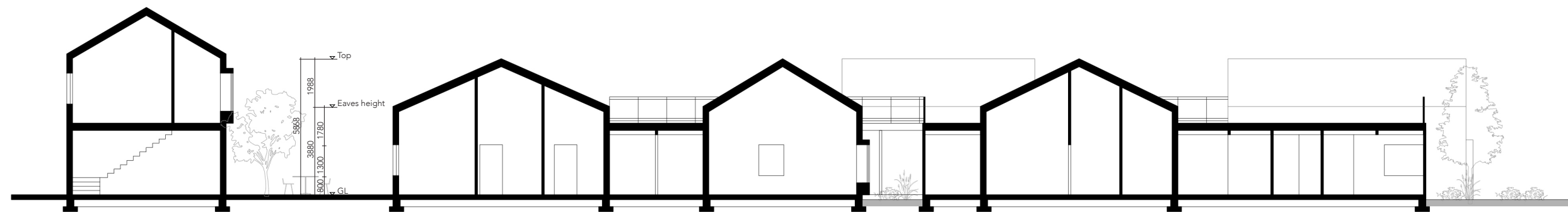
**FRAMED-WINDOW**  
(dark-colored) Scottish wood cladding  
wooden profile  
wooden door

**FACADE DETAIL**  
*TYPE D*

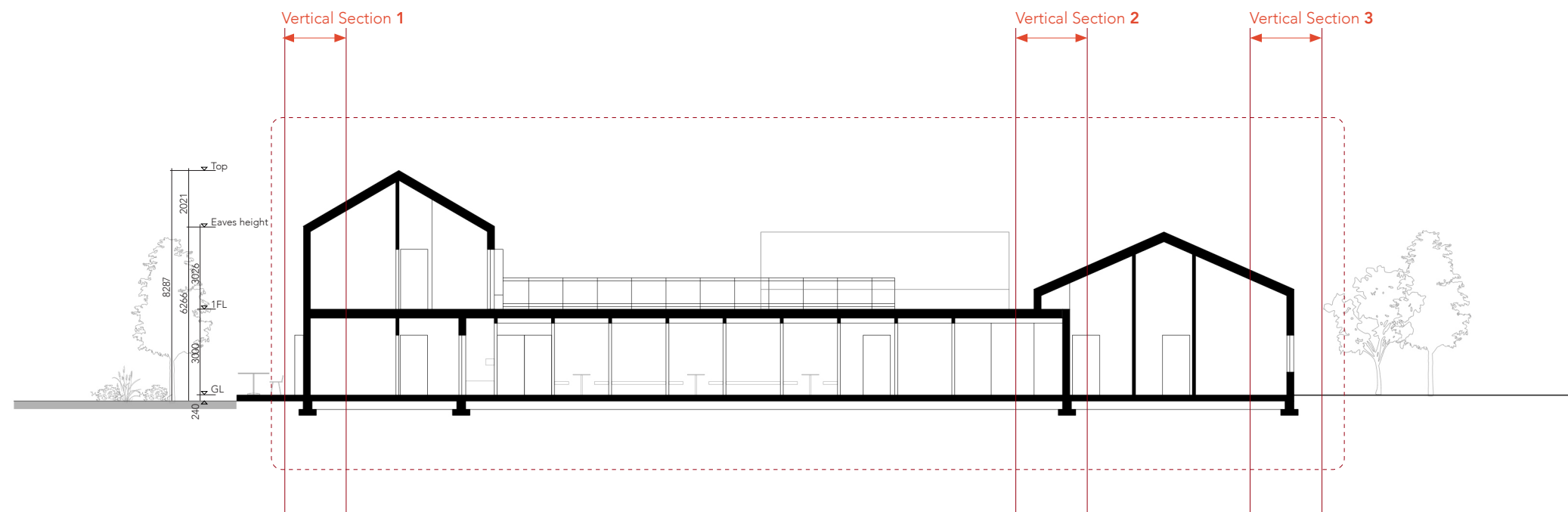
scale 1:20







**SECTION A-A**  
scale 1:200



**SECTION B-B**  
scale 1:200



### EXTERNAL WALL

20x150mm Scottish wood cladding  
30x60mm batten  
30mm ventilation gap  
170mm thermal insulation  
10mm compressed board  
10mm plywood

### FLOOR

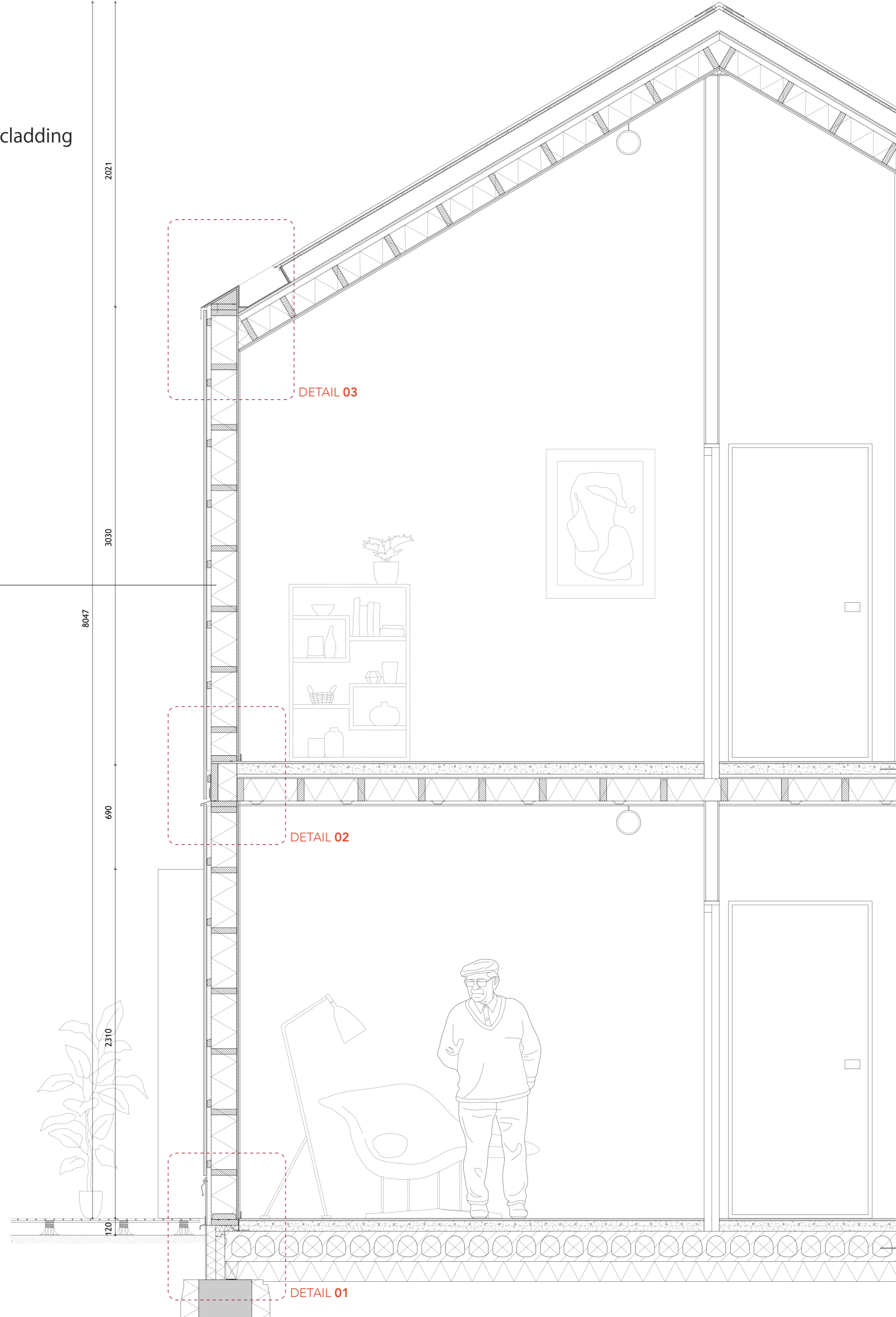
15mm parquet  
70mm screed (floor heating)  
20mm impact sound-proof insulation  
10mm plywood  
150mm thermal insulation  
20mm metal sprung support rail  
10mm plaster board

### FOUNDATION

15mm parquet  
70mm screed  
200mm hollow-core slab floor  
insulated concrete foundation beam

## VERTICAL SECTION 1

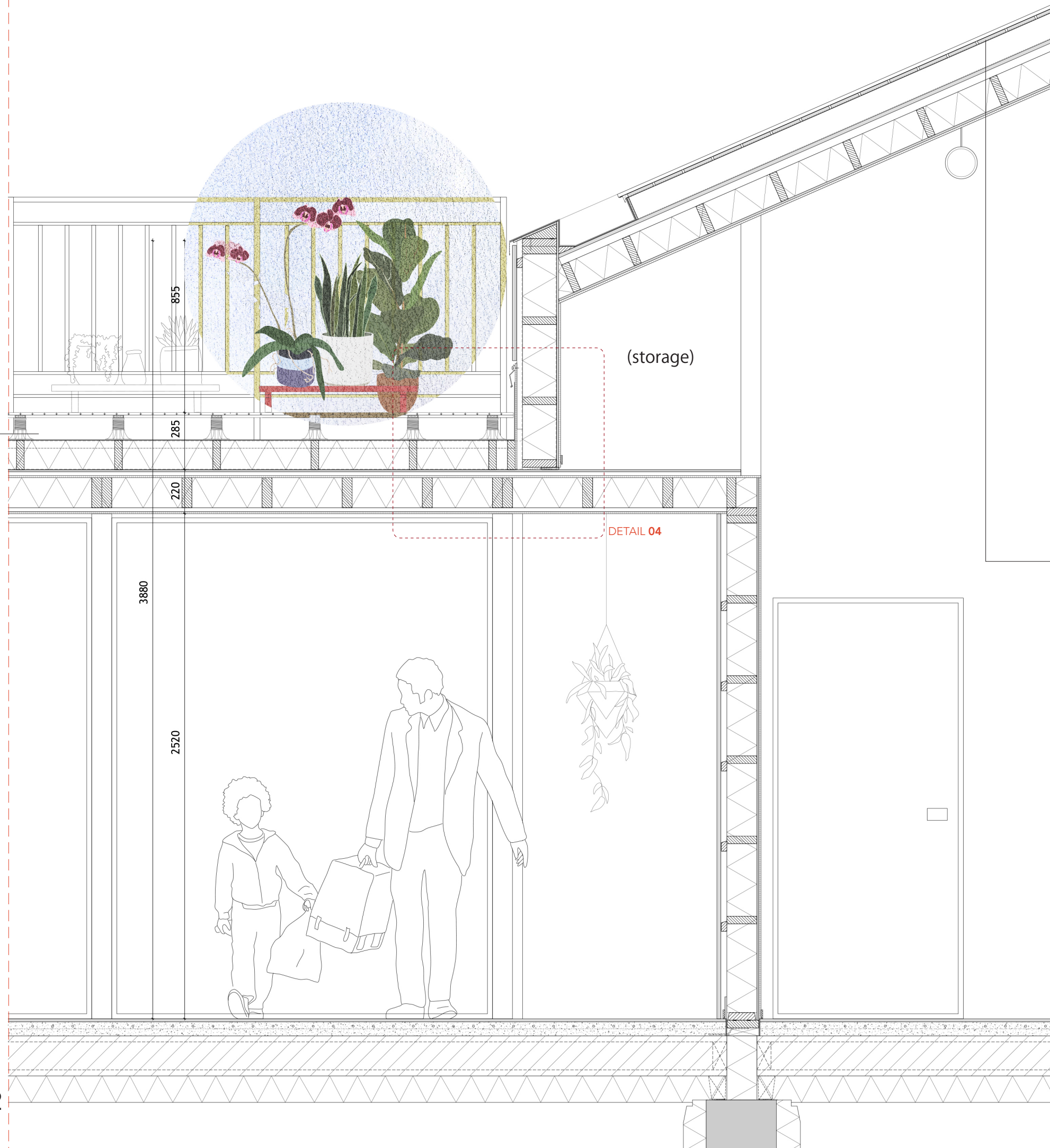
scale 1:20





## TERRACE

wood decking  
adjustable pedestals  
roofing  
130mm thermal insulation  
vapour barrier  
compensation layer



## ROOF

zink cladding  
plywood support deck  
120mm ventilated air space  
18mm chipboard  
38mm laminated timber truss  
150mm thermal insulation between ribs  
10mm compressed board  
10mm interior finish (birch plywood)

## VERTICAL SECTION 2

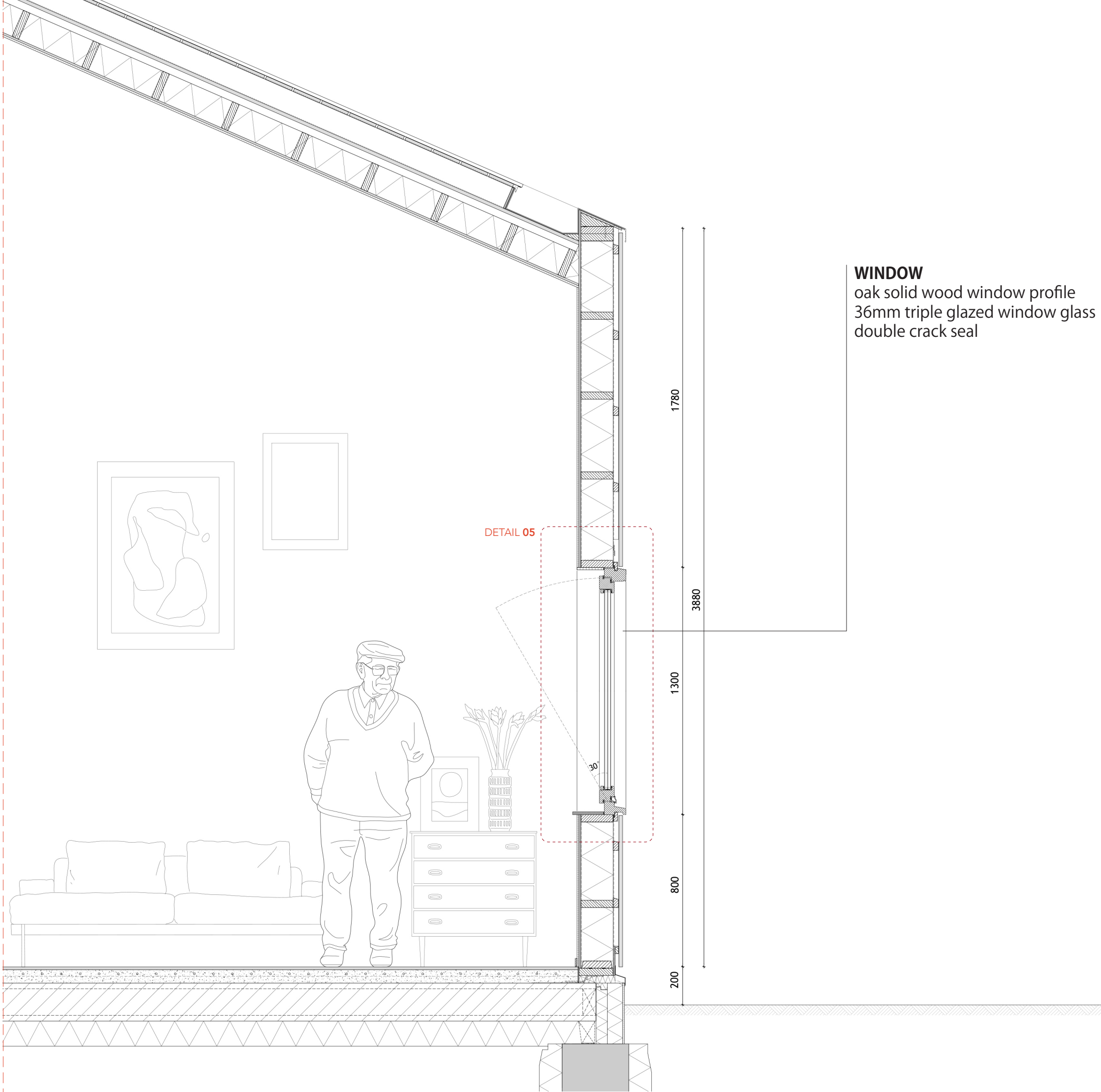
scale 1:20







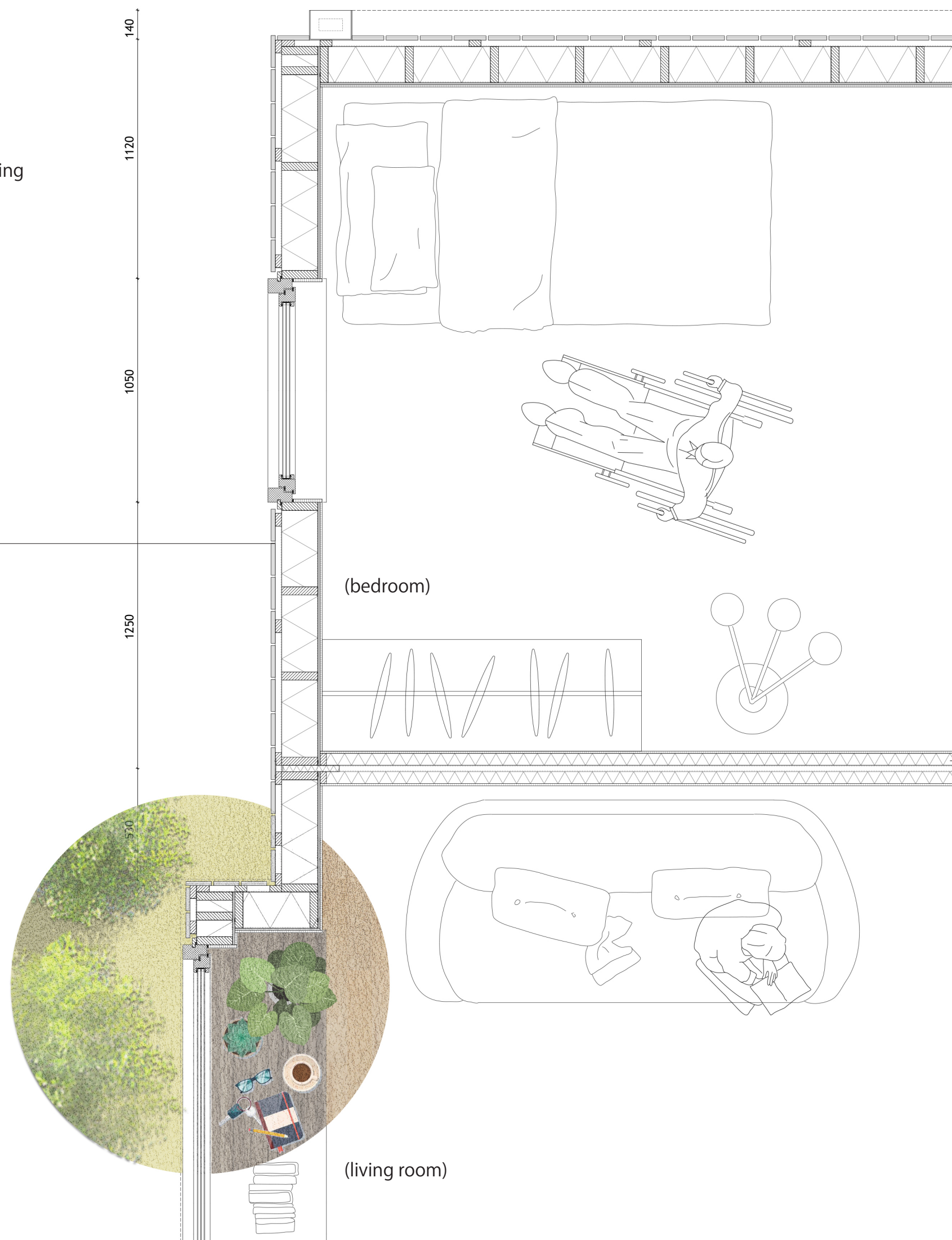
VERTICAL SECTION 3  
scale 1:20



**WINDOW**  
oak solid wood window profile  
36mm triple glazed window glass  
double crack seal



**FACADE**  
 20x150mm Scottish wood cladding  
 30x60mm batten  
 30mm ventilation gap  
 170mm thermal insulation  
 10mm compressed board  
 10mm plywood



**INTERNAL WALL**  
 10mm plywood  
 56mm thermal insulation  
 30x56mm baten  
 30mm cavity  
 56mm thermal insulation  
 10mm plywood

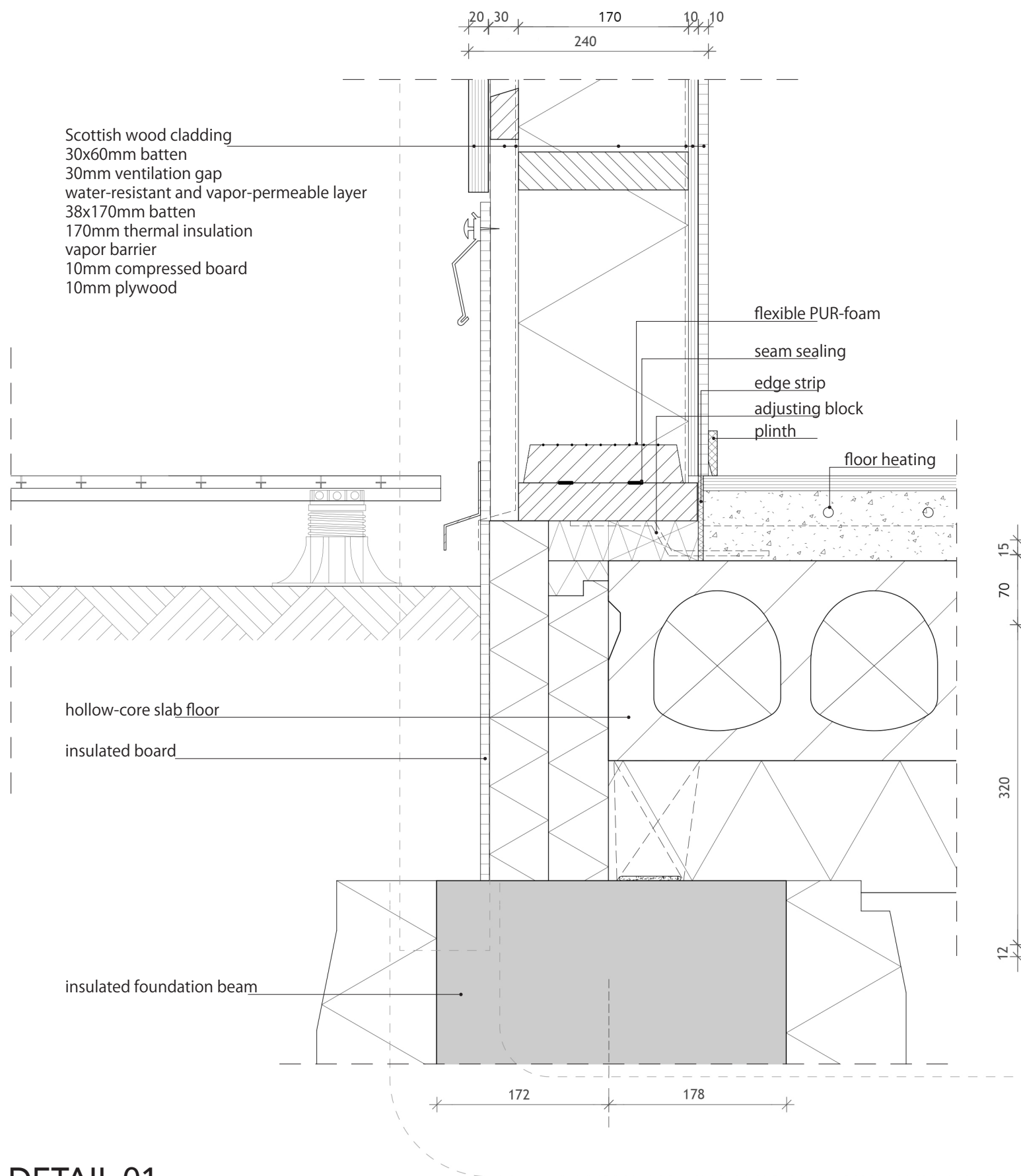
**HORIZONTAL SECTION**  
 scale 1:20





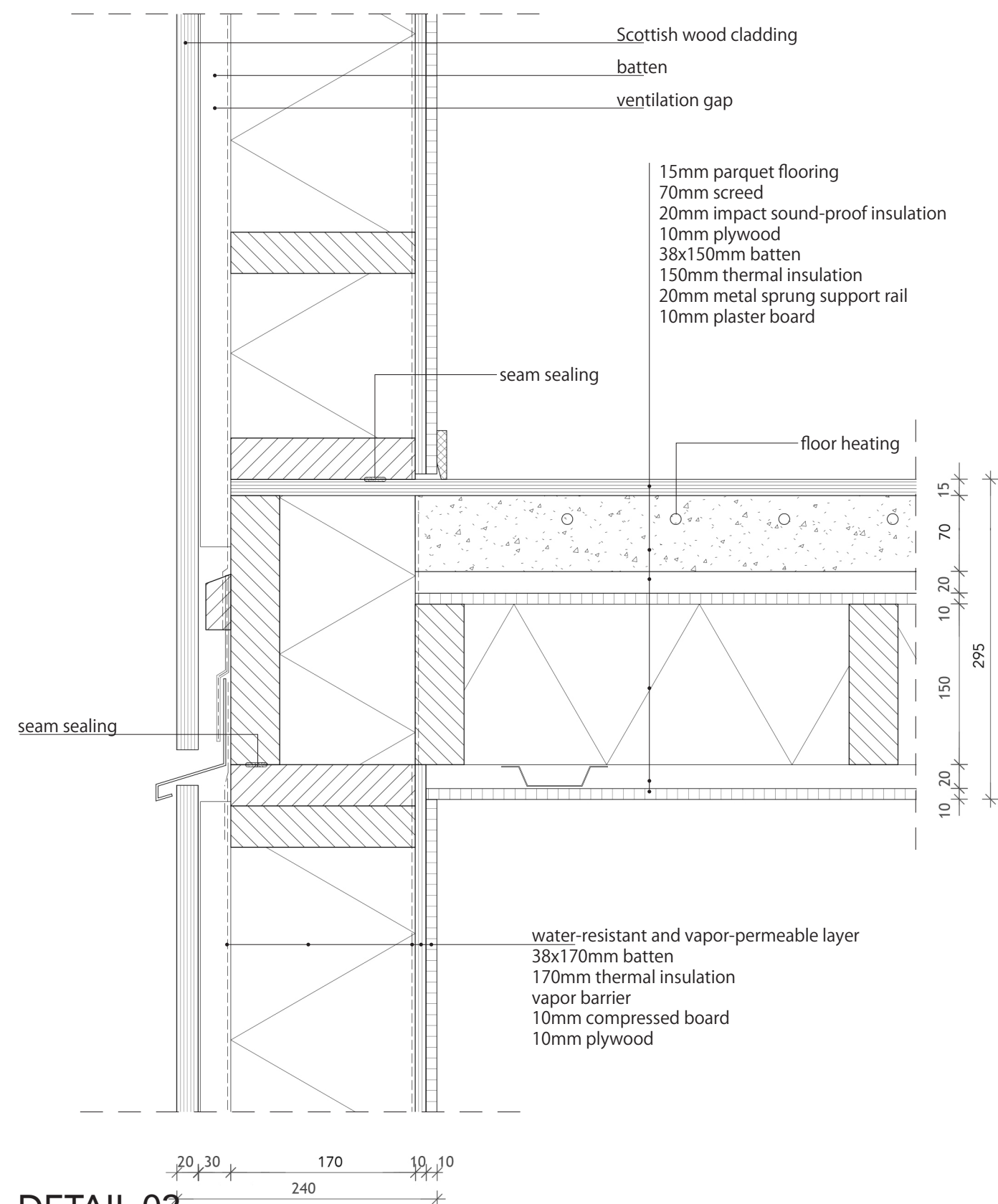
FRAMED WINDOW





**DETAIL 01**

scale 1:5



**DETAIL 02**

scale 1:5



zink cladding  
plywood support deck  
water-resistant and vapor-permeable layer  
120mm ventilated air space  
aluminum foil  
18mm chipboard  
38mm laminated timber truss  
150mm thermal insulation between ribs  
10mm compressed board  
10mm interior finish (birch plywood)

zink hidden gutter

Scottish wood cladding  
30x60mm batten  
30mm ventilation gap  
water-resistant and vapor-permeable layer  
38x170mm batten  
170mm thermal insulation  
vapor barrier  
10mm compressed board  
10mm plywood

20 30 170 10 10  
240

### DETAIL 03

scale 1:5

Scottish wood cladding  
30x60mm batten  
30mm ventilation gap  
water-resistant and vapor-permeable layer  
38x170mm batten  
170mm thermal insulation  
vapor barrier  
10mm compressed board  
10mm plywood

wood decking  
adjustable pedestals  
roofing  
waterproof membrane  
140mm thermal insulation  
vapour barrier  
10mm compensation layer  
20mm impact sound-proof insulation  
10mm plywood  
150mm thermal insulation between ribs  
20mm metal sprung support rail  
10mm plaster board

parapet flashing

adjusting block  
seal

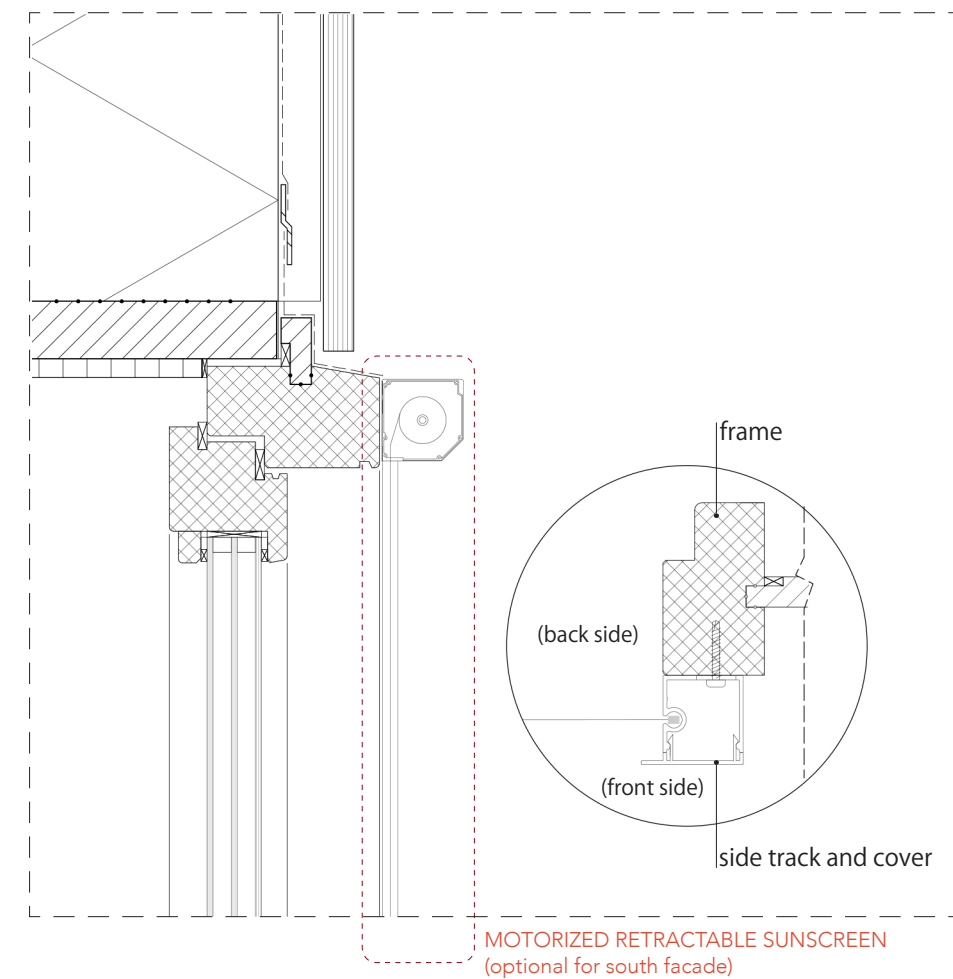
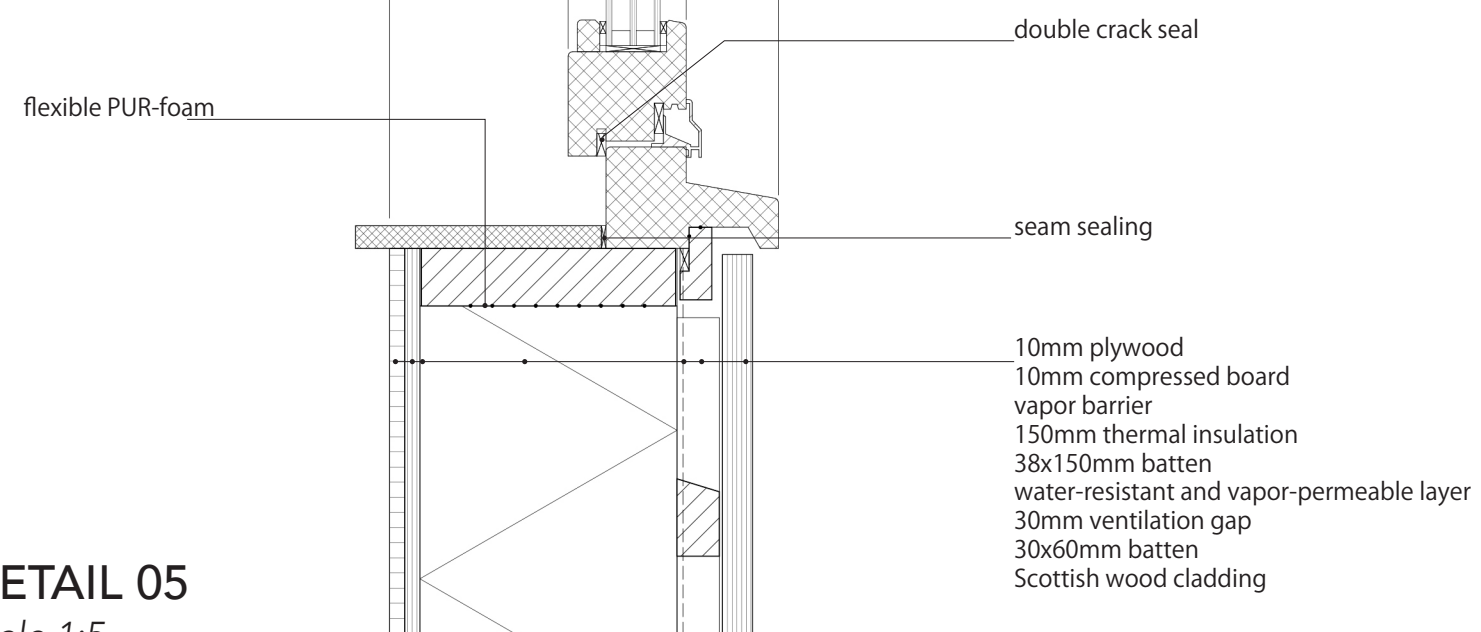
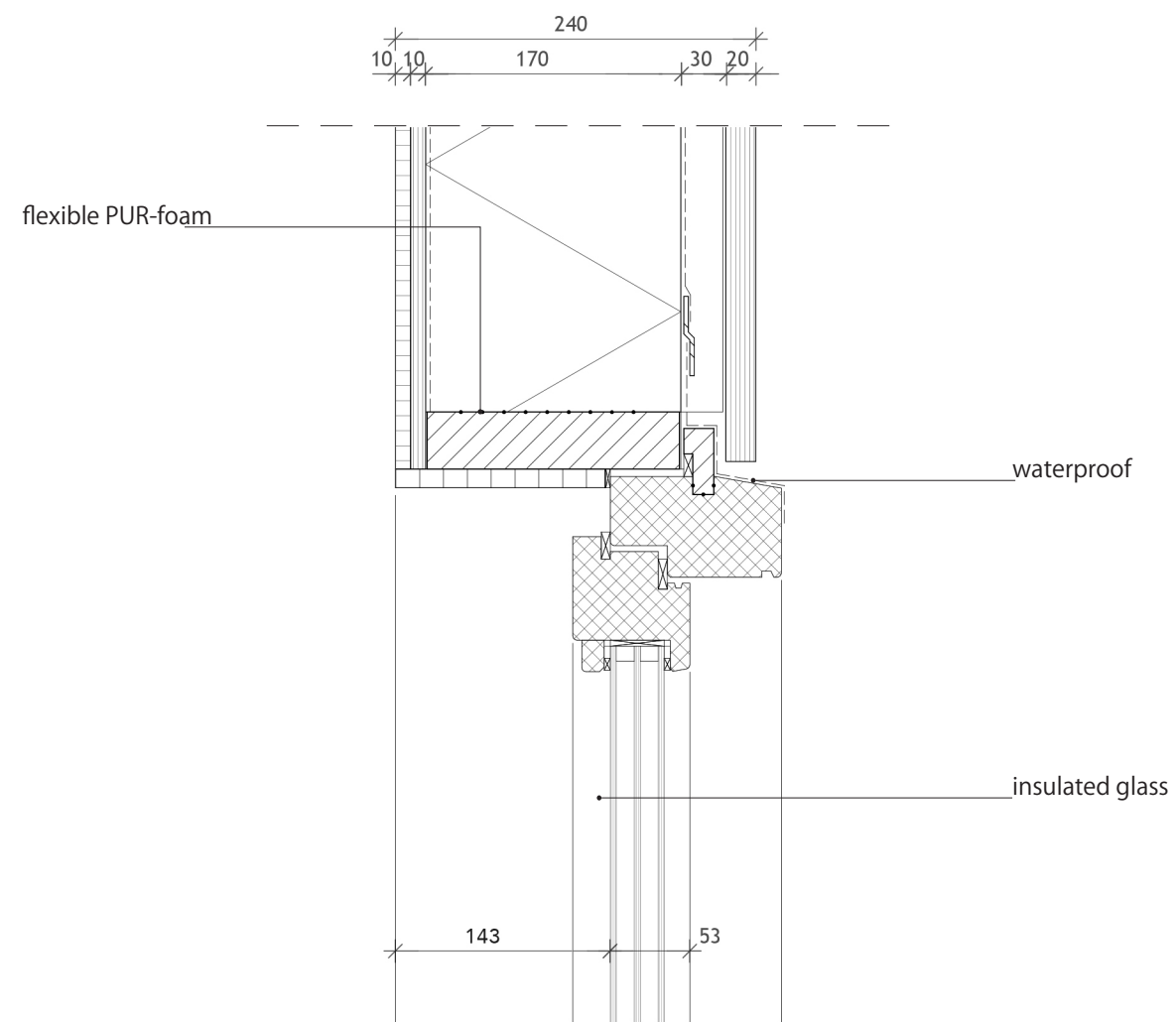
plinth

10 20 10  
150  
10 20

### DETAIL 04

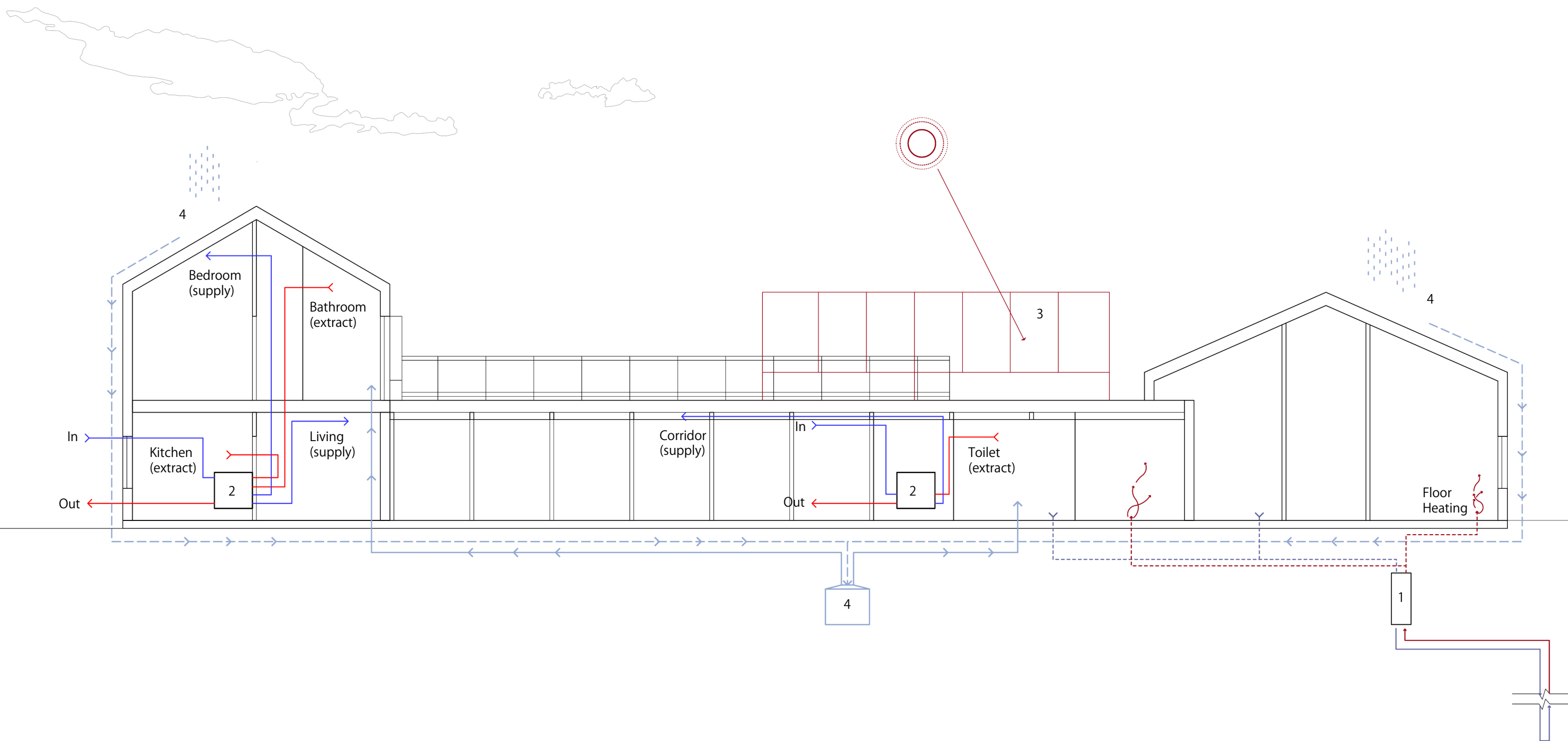
scale 1:5





**DETAIL 05**  
scale 1:5





## CLIMATE CONTROL DIAGRAM

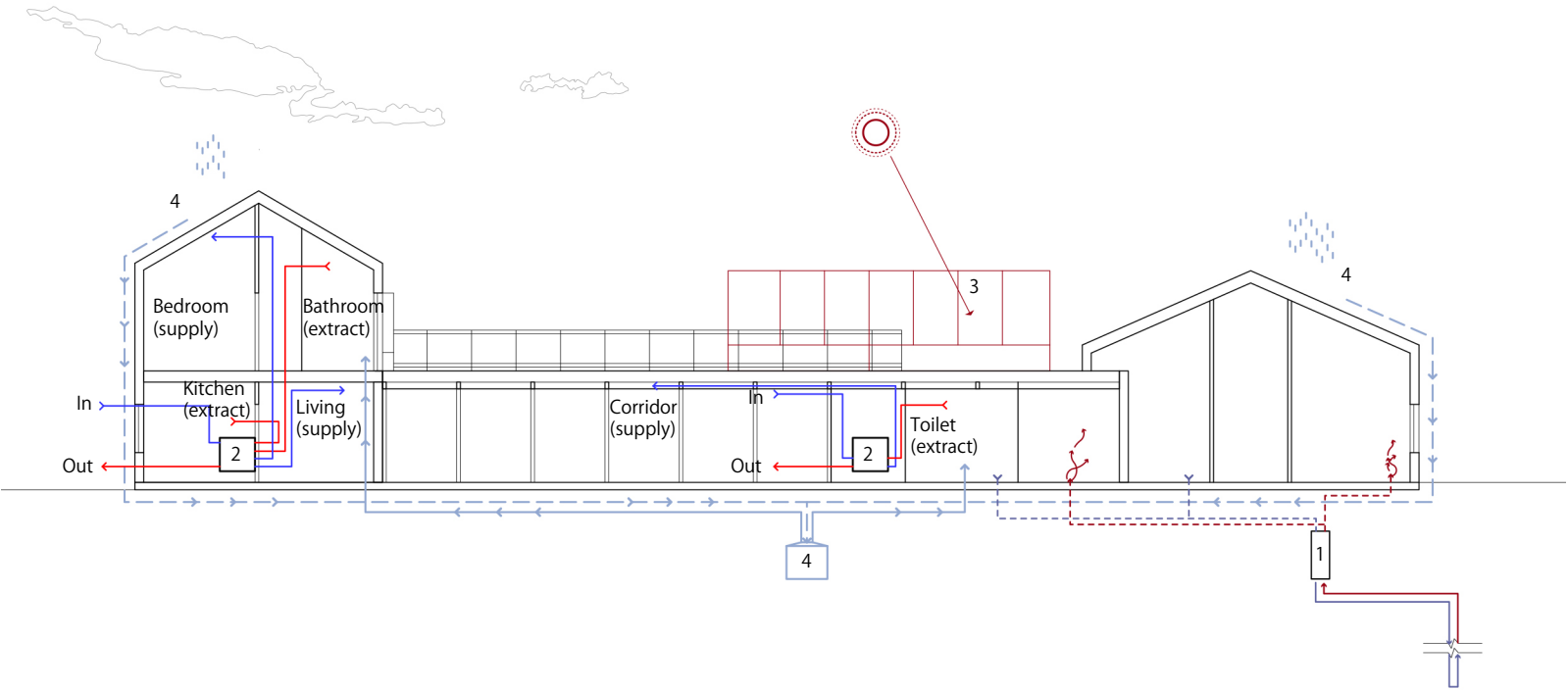
Blue solid line with arrow: air supply  
 Red solid line with arrow: air extract  
 Blue dashed line with arrow: water collection  
 Blue solid line with arrow: water supply  
 Red dashed line with arrow: floor heating



# CLIMATE CONTROL DIAGRAM

scale 1:200

- air supply
- air extract
- water collection
- water supply
- floor heating



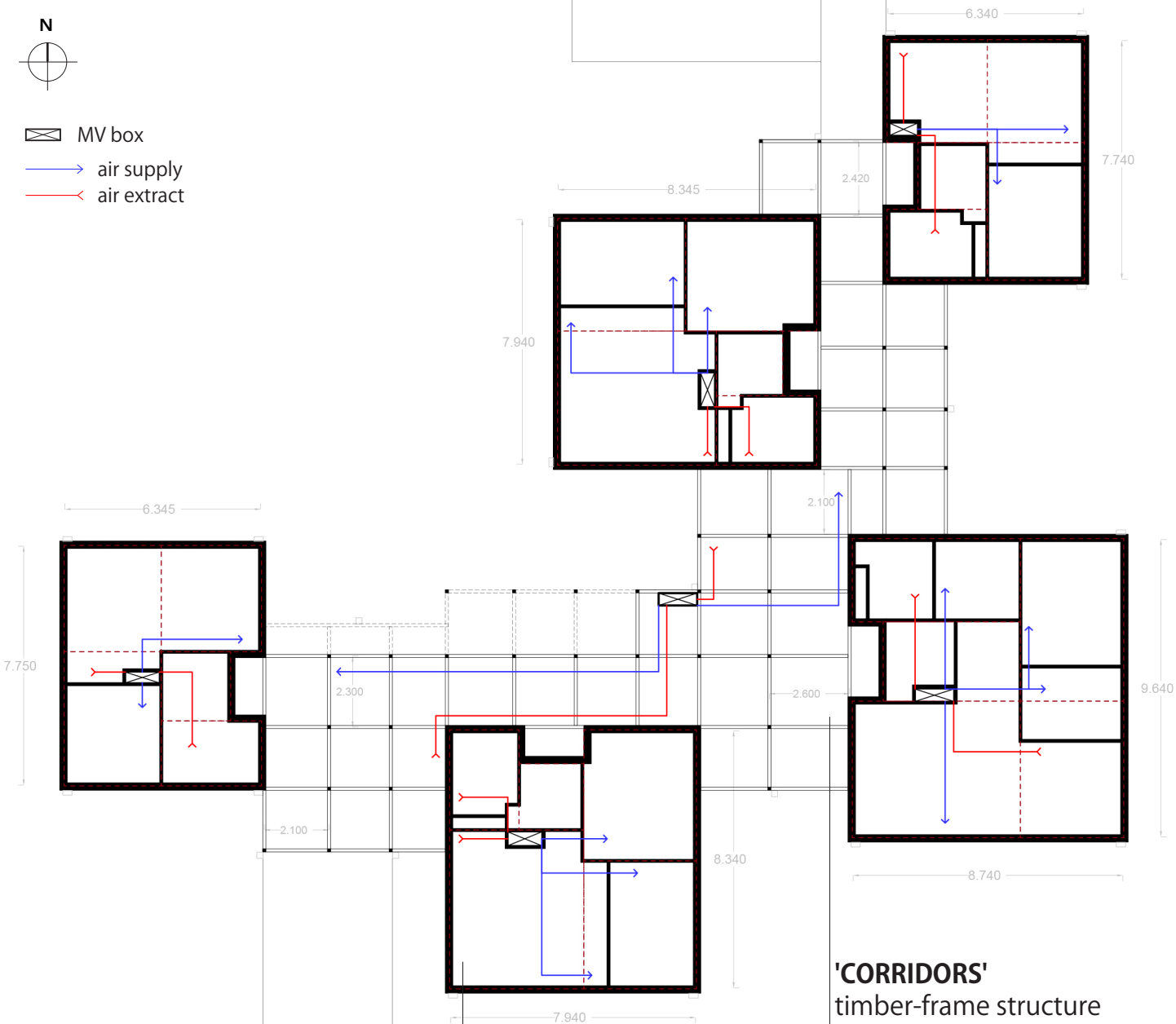
# LOAD-BEARING STRUCTURE & CLIMATE CONTROL

Cluster 3

scale 1:200



- MV box
- air supply
- air extract



**DWELLING UNIT**  
wooden load-bearing walls

**'CORRIDORS'**  
timber-frame structure

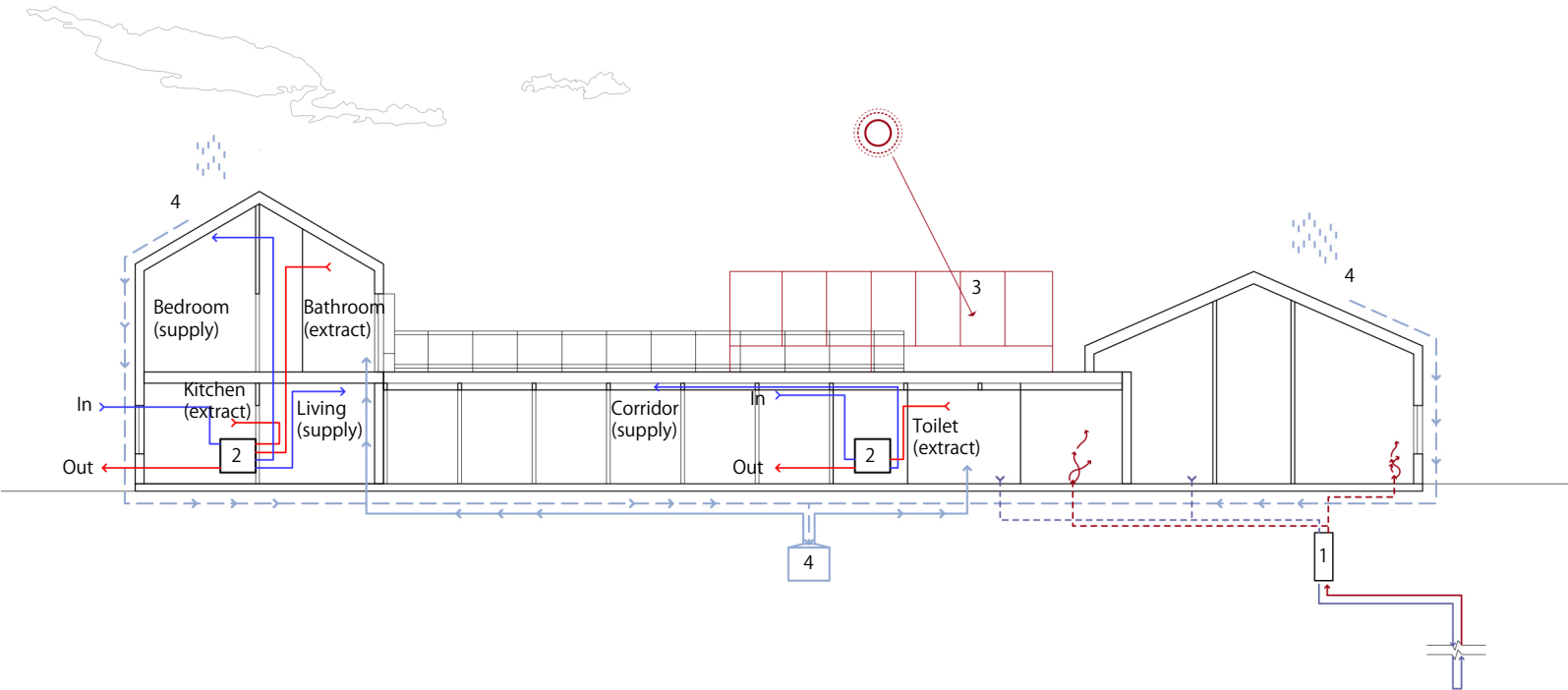


CLIMATE CONTROL DIAGRAM

scale 1:200

- air supply
- water collection
- floor heating
- ←

air extract
- water supply



ROOF PLAN & CLIMATE CONTROL

Cluster 3

scale 1:200

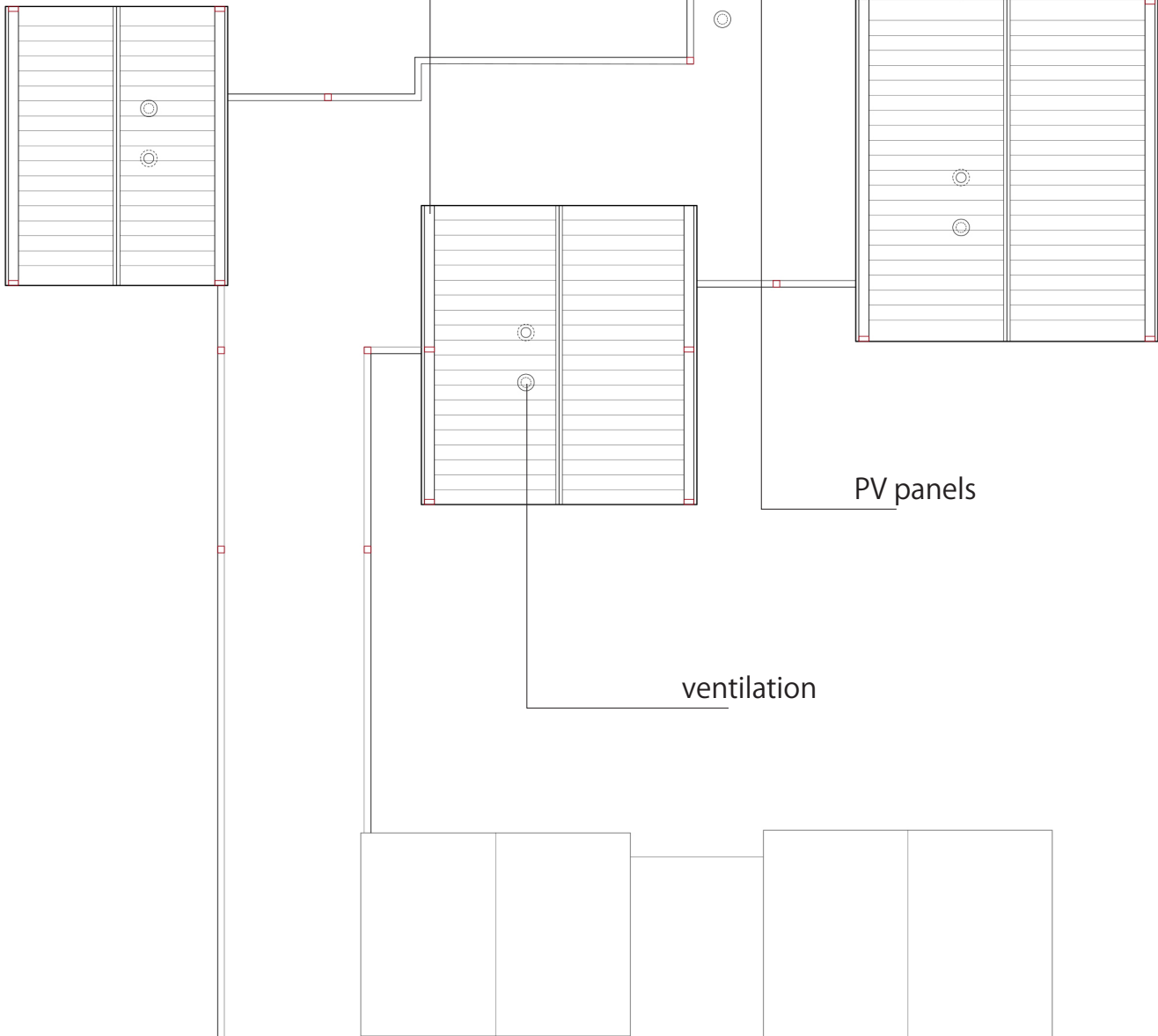


- rain pipe
- gutter

ZINK ROOFING  
with air inlet at the base and ridge

rain pipes

gutters







A place to *enjoy*.  
A place to *be together*.





A place to *enjoy*.

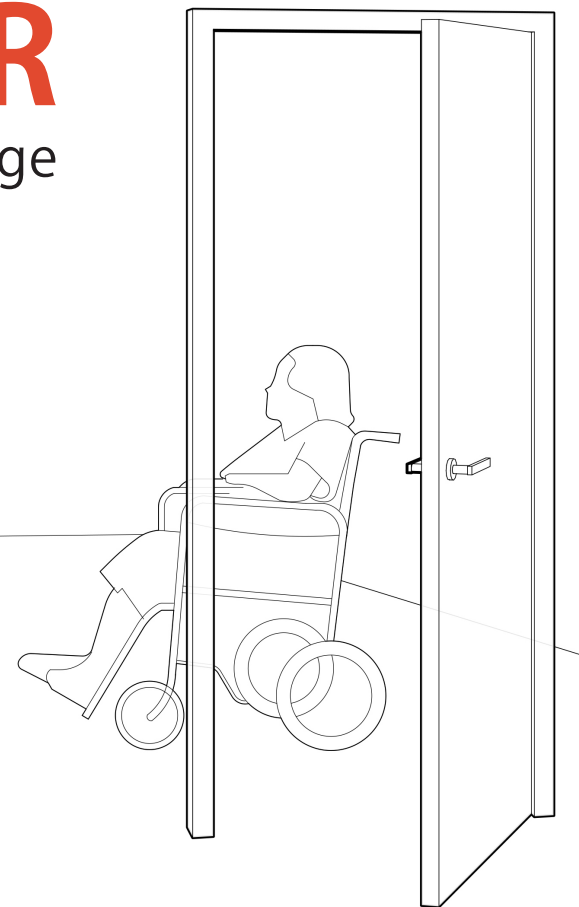
A place to *be together*.

A place to love your life, *your neighbours*.



# O P E N     T H E     D O O R

Living Environment Design for Reconciling Social Loneliness in Old Age



Dwelling Graduation Studio: Designing for Care  
Jianing Liu 5290236

THANKS P5