

# The Old Harbour:

## The Next Step in the Housing Career of Modern Elderly



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P5 presentation | Graduation studio: Advanced Housing Design

Tutors: Theo Kupers | Ferry Adema | Anne Kockelkorn | Pierijn van der Putt

Delegate: Laura Cipriani

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2. Research
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6. Facades
7. Construction and climate

# Studio assignment

- 1 million homes by 2030 due to housing shortage
- Modern households



Achtergrond

Miljoen woningen erbij voor 2030: Gaat dat wel goed?

25 augustus 2018 09:48

Laatste update: 28 augustus 2018 09:20

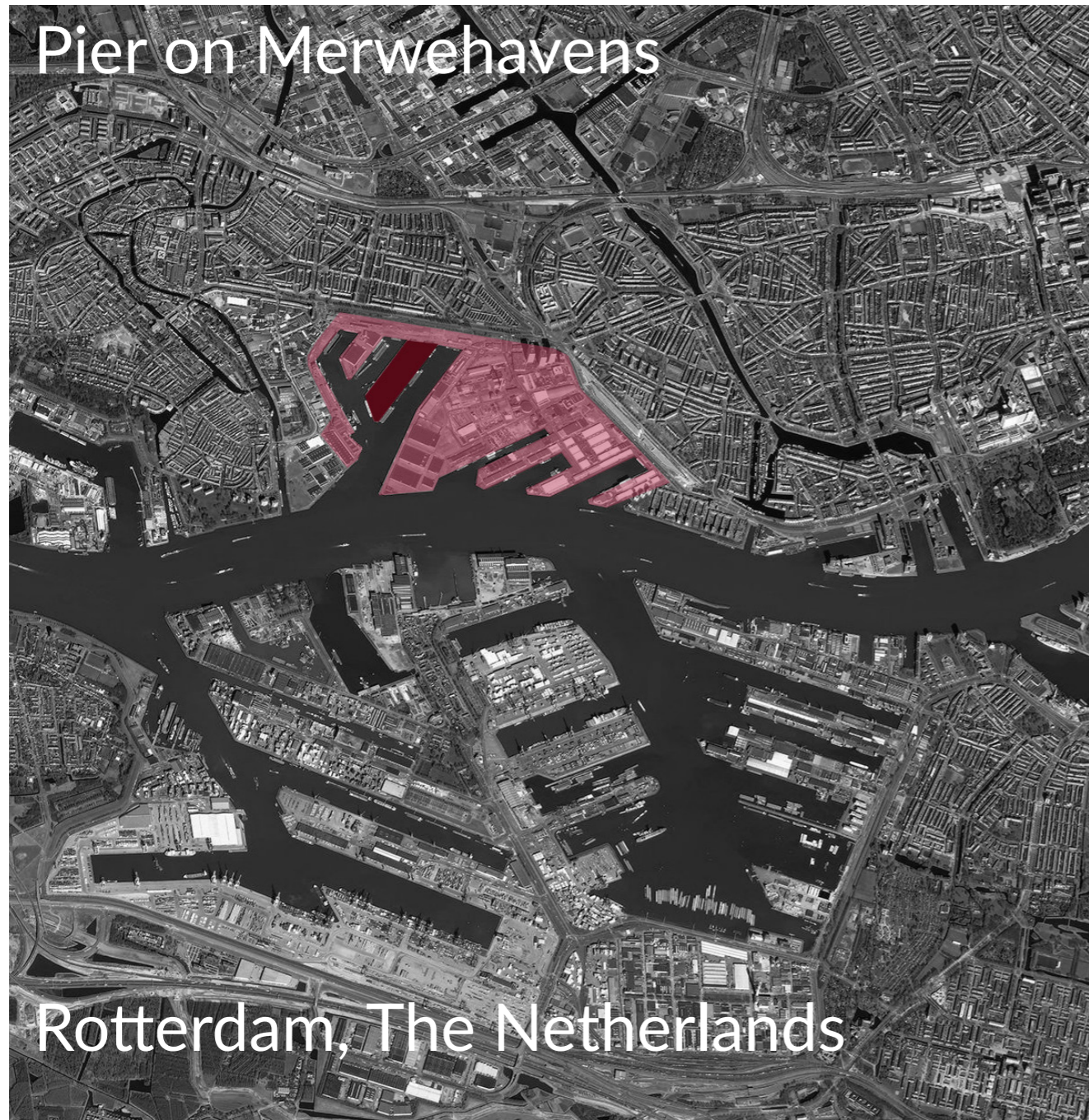
133 NUijj-reacties



In elf jaar tijd moeten er een miljoen extra woningen komen, stelde minister van Binnenlandse Zaken Kajsa Ollongren in mei dit jaar. Of dat gaat lukken is de vraag, want de grond raakt op, de overheid laat de bouw grotendeels aan gemeenten over en onze woonbehoefte is veranderd.

Source: <https://www.nu.nl/wonen/5427335/miljoen-woningen-erbij-2030-gaat-wel-goed.html>

# Location



Source: <https://www.rijnmond.nl/nieuws/194606/Geen-vuiltje-aan-de-lucht-satelliet-maakt-kraakheldere-foto-s-boven-Rijnmondgebied>



Source: <https://siebeswart.photoshelter.com/image/I00000o5IY8VrFYk>

# Elderly as my user group



▲ © AD

## Honkvaste ouderen houden woning bezet

Senioren blijven plakken in hun onaangepaste huis, zelfs als ouderdom en ziekte op de loer liggen. Dat blijkt uit onderzoek van de ANBO en woonorganisatie Woonz onder ruim 12.000 mensen. Veel ouderen vinden verhuizen een te grote stap, maar belemmeren zo de doorstroming.

Edwin van der Aa 01-04-15, 08:18 Laatste update: 11-01-16, 19:33

Source: <https://www.ad.nl/binnenland/honkvaste-ouderen-houden-woning-bezet~ac412238/>

Bevolkingscijfers

## Nederland in 2050: veel meer ouderen en eenpersoonshuishoudens, en dat heeft consequenties



Ouderen van een zorgcentrum in het Rotterdamse Crooswijk genieten van een ijsje. Beeld ANP, Jerry Lampen

Source: <https://www.trouw.nl/binnenland/nederland-in-2050-veel-meer-ouderen-en-eenpersoonshuishoudens-en-dat-heeft-consequenties>

## Tekort van 80 duizend woningen voor senioren, en dit cijfer stijgt alleen maar

04-05-2019 18:13 | Geld en werk

Auteur: Jan Ponsen



In het hele land is een groot tekort aan geschikte huizen voor ouderen. En dat tekort groeit de komende jaren snel. "Overheid en gemeenten weten dit al jaren maar doen hier nog te weinig aan: laks en onvoorstelbaar", zegt belangenvereniging ANBO.

Source: <https://eenvandaag.avrotros.nl/item/tekort-van-80-duizend-woningen-voor-senioren-en-dat-wordt-nog-veel-meer/>

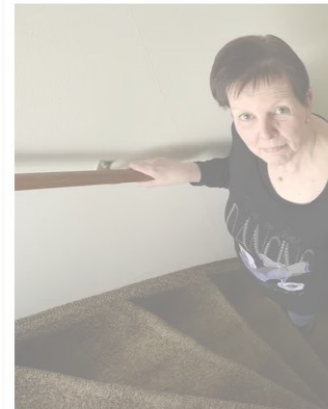
### 'Tekort aan seniorenwoningen'

## 'Zorg voor zelfstandige ouderen moet en kan beter: meer woningen rap nodig'

15 januari 2020 16:46

Aangepast: 15 januari 2020 17:00

# Elderly as my user group



▲ © AD

## Honkvaste oude bezet

Senioren blijven plakken in hun en ziekte op de loer liggen. Dat t woonorganisatie Woonz onder r verhuizen een te grote stap, ma

Edwin van der Aa 01-04-15, 08:18 L

Source: <https://www.ad.nl/binnenland/ing-bezet~ac412238/>

# NOS

## Gemeenten: gebrekkige doorstroming ouderen oorzaak van problemen woningmarkt

DO 30 DECEMBER, 06:00



Source: <https://nos.nl/artikel/2411305-gemeenten-gebrekkige-doorstroming-ouderen-oorzaak-van-problemen-woningmarkt>

Jerry Lampen

Aangepast: 15 januari 2020 17:00

n moet en  
nodig'



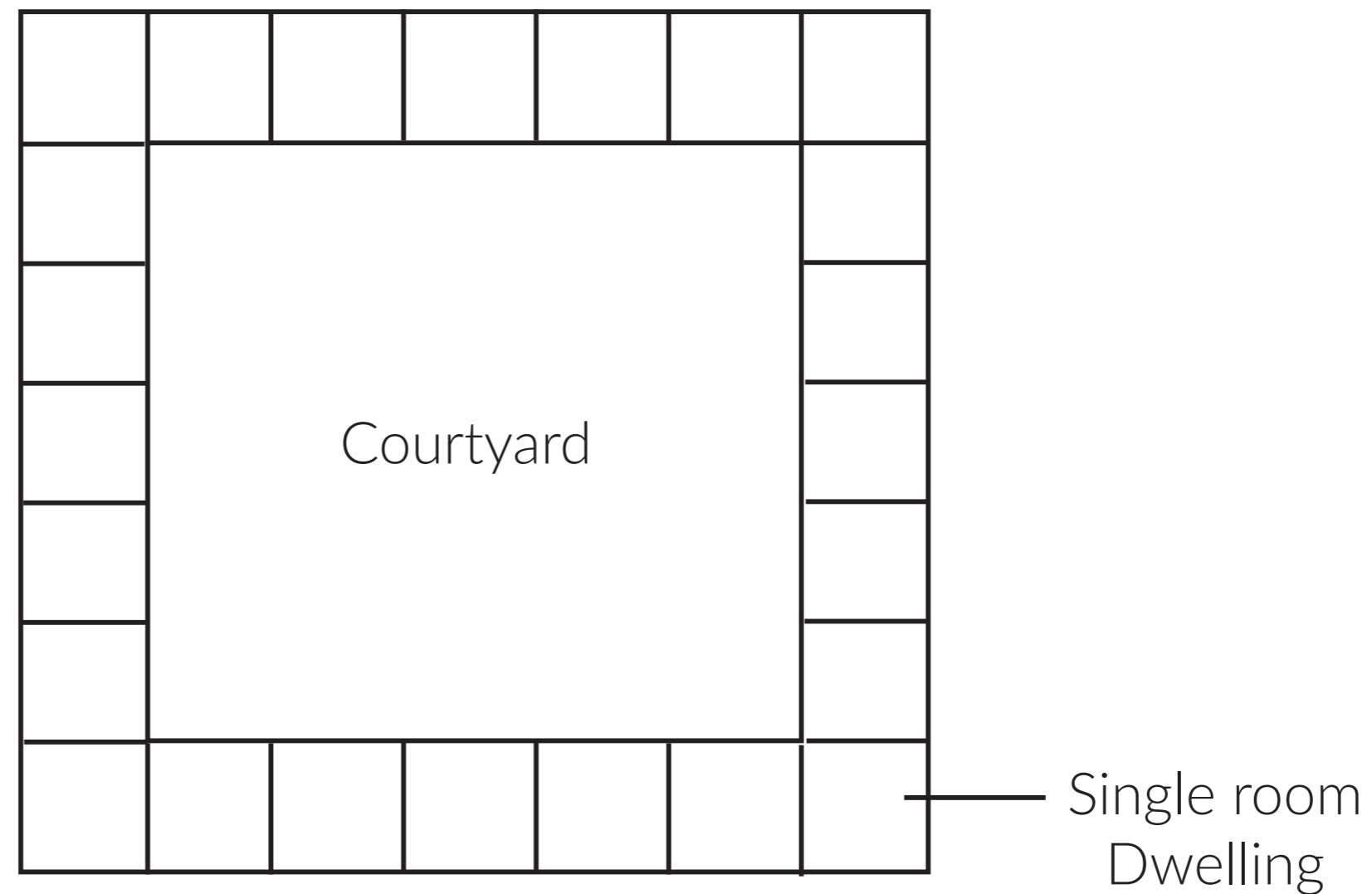
# Research

# Research question

**What are the functional needs of a building suitable for residents above the age of 55, whether they are healthy or physically impaired and considering that they come from different social and economic backgrounds?**

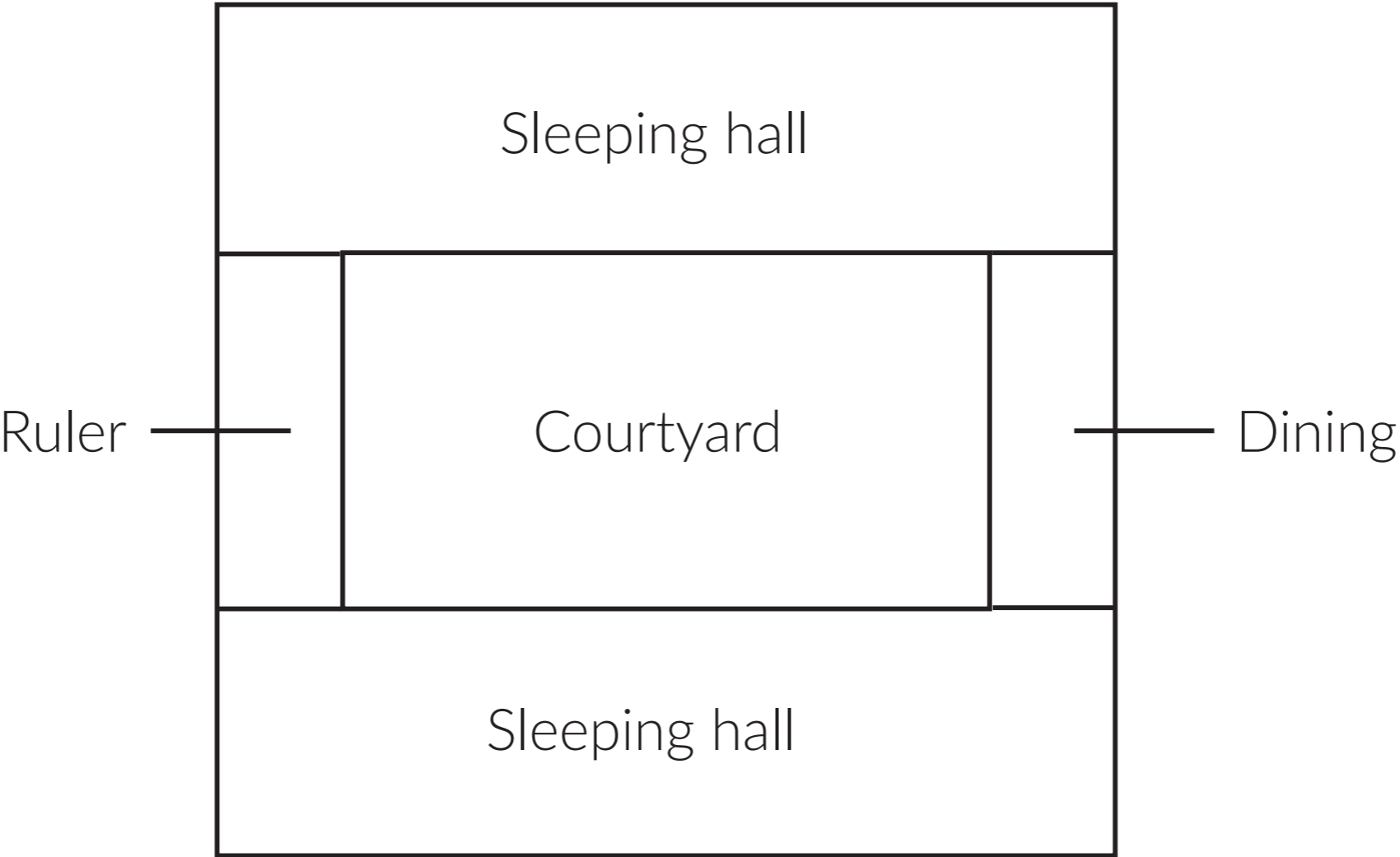
# Timeline Elderly housing in The Netherlands

**Hofjes and  
proveniershuizen**  
12th century - 1900



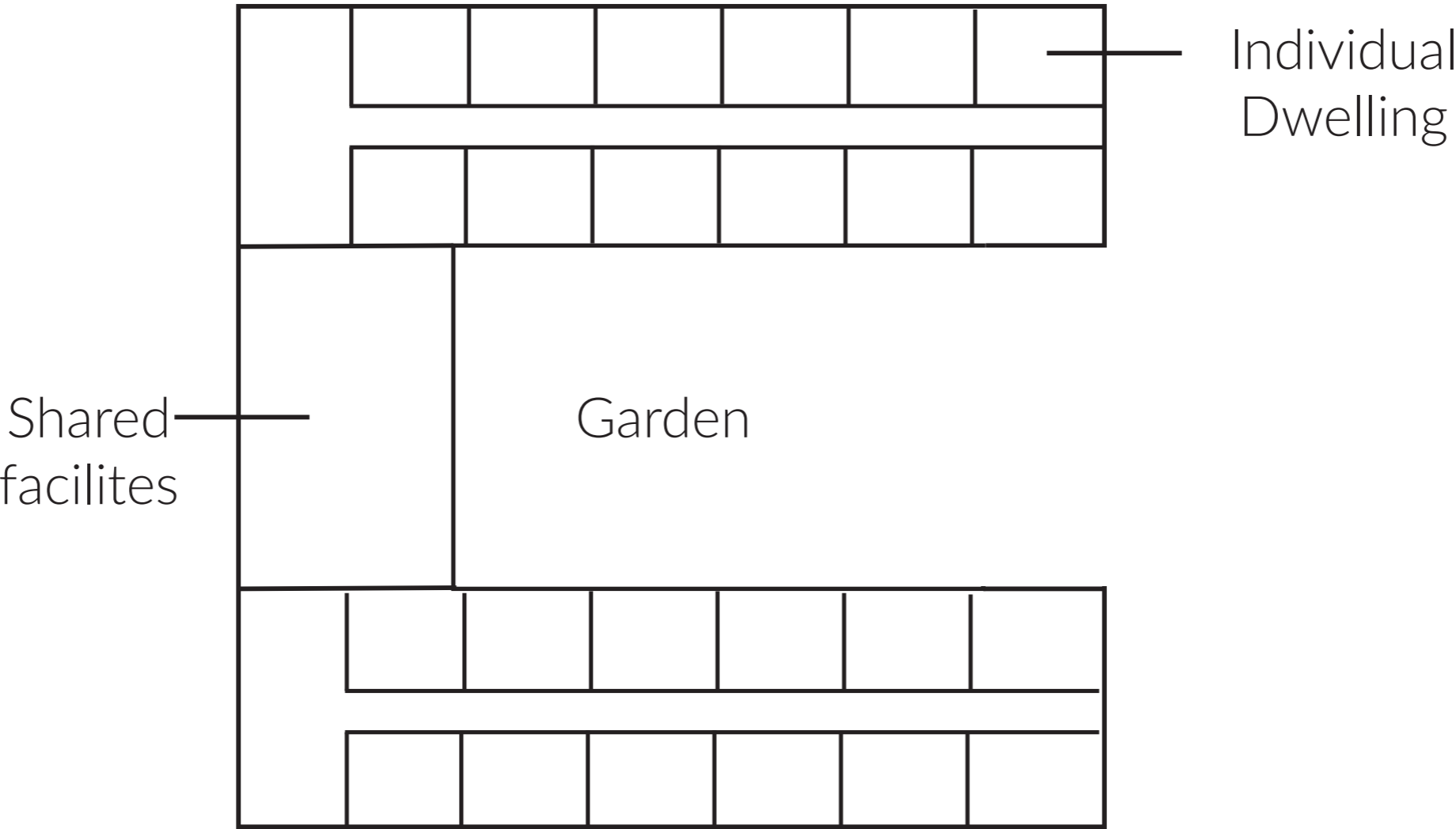
# Timeline Elderly housing in The Netherlands

Oudemannen- and  
Oudevrouwen  
huizen & Houses  
for the poor  
1700-1945



# Timeline Elderly housing in The Netherlands

Retirement homes  
1945- now



# Why did I start with the age 55?

Average age of having first child is 32

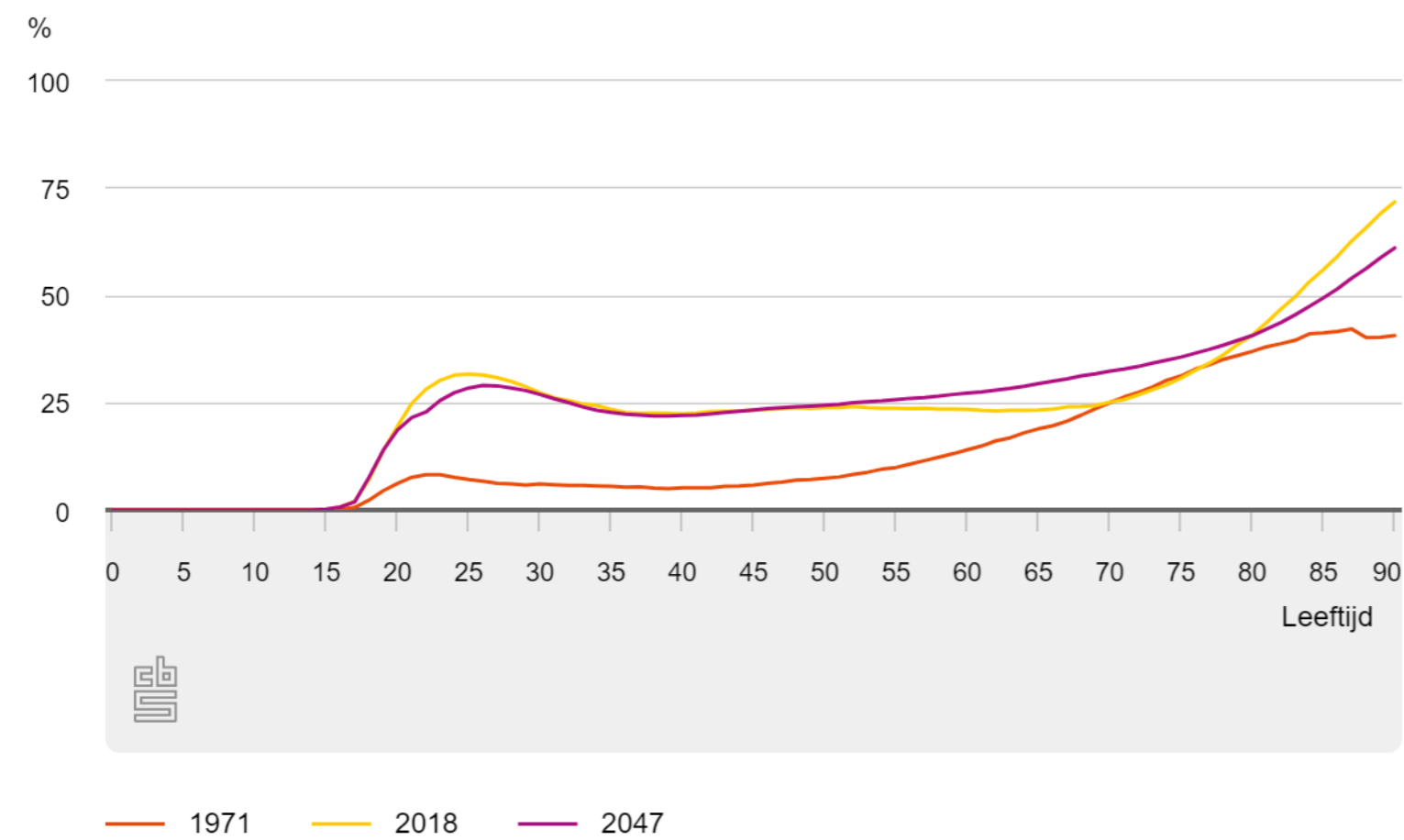
Average age of moving out is 23



Statista. (2020, August). Average age of mother at the birth of a child in the Netherlands in 2019, by number of children. Retrieved on May 20, 2021 from <https://www.statista.com/statistics/520840/average-age-mother-at-birth-in-the-netherlands-p>  
Eurostat. (2019). When are they ready to leave the nest? Retrieved on May 20, 2021, from <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20190514-1>

# Single person households

One person households according to age



**2018**

23-24% at age 55-67

>25% 68+

**2047**

25-35% at age 55-67

>35% 68+

<https://www.cbs.nl/nl-nl/achtergrond/2018/26/honderd-jaar-alleenstaanden> Translated by author

# Home occupation

**51% of the population above 55 in the Netherlands lives in a purchased large family home, i.e. a multi story row house**



Blije, B., Gopal, K., Steijvers, R., Stuart-Fox, M., Van Zoelen, S. (2021). Monitor Ouderenhuisvesting 2020. Delft: ABF Research.

# Willing to move

**26% want to move to specific elderly housing**



**55+**

**67% want to move to specific elderly housing**



**75+**

Blije, B., Gopal, K., Steijvers, R., Stuart-Fox, M., Van Zoelen, S. (2021). Monitor Ouderenhuisveting 2020. Delft: ABF Research.

# Mobility

## Mobility is good before retirement



55-67

## Mobility decreases after retirement

20% of the population at start of retirement  
80% after the age of 85



68->

Schoemaker, C. Van der Wilk, E. Van Wieren, S. Zanitnge, E. (2011).  
Gezond ouder worden in Nederland. RIVM.

# Main user groups

## 55-67 YEARS OLD

Most likely still working

Singles:  
23-24% Single  
25-30% Single  
(CBS, 2018)

or

Couples:  
76-77% (2018)  
70-75% (2047)



## 68 + YEARS OLD

Retired

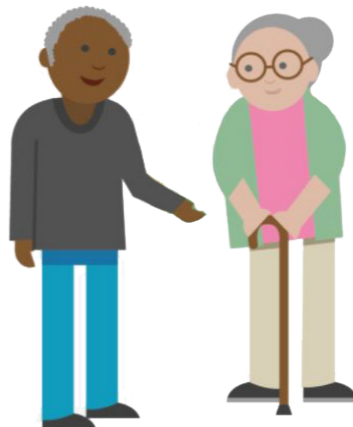
More home

Possibly grandchildren that want to visit

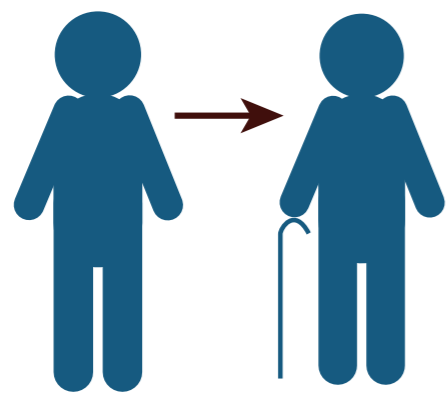
Singles:  
25-35%  
>40%  
(CBS, 2018)

or

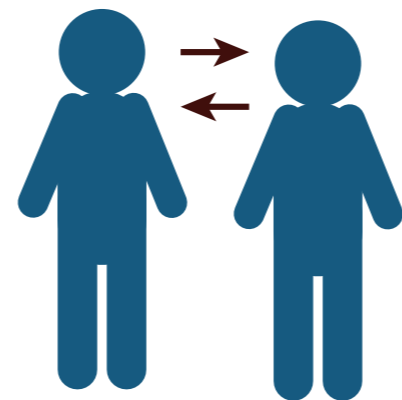
Couples:  
60-75% 68-80 (2018)  
<60% 80+ (2018)



# Conclusions for building



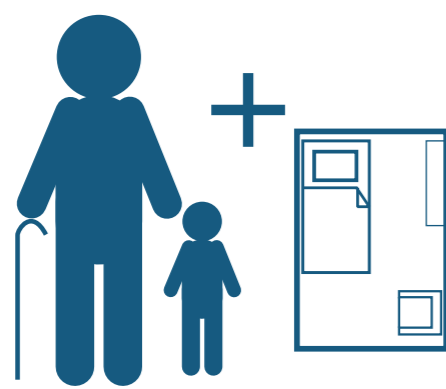
55 years old as starting point



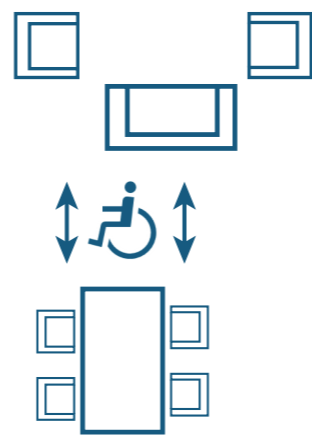
Places for interaction



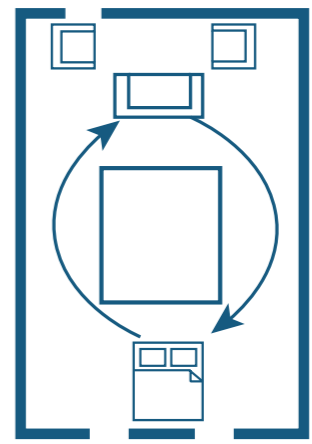
Possibility for care



Visiting (grand) children



Easy movement



Adaptability



# Urban plan




# Urban plan: Plots



- Existing buildings
- My building plot
- New building plots
- Surrounding buildings

# Urban plan: Roads



-  Car road
-  Bike and pedestrian road
-  Parking

# Urban plan : Green

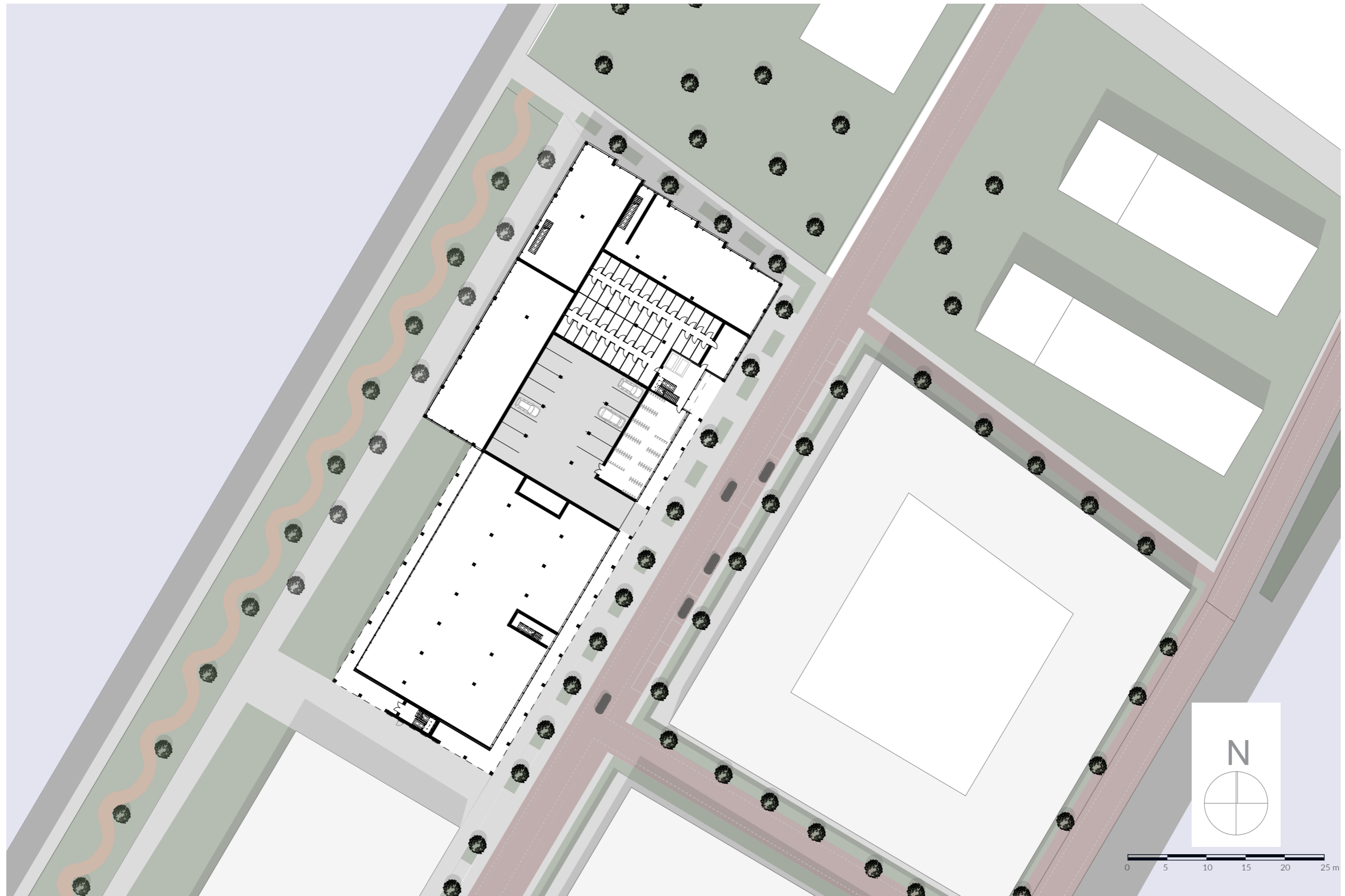


Green strip

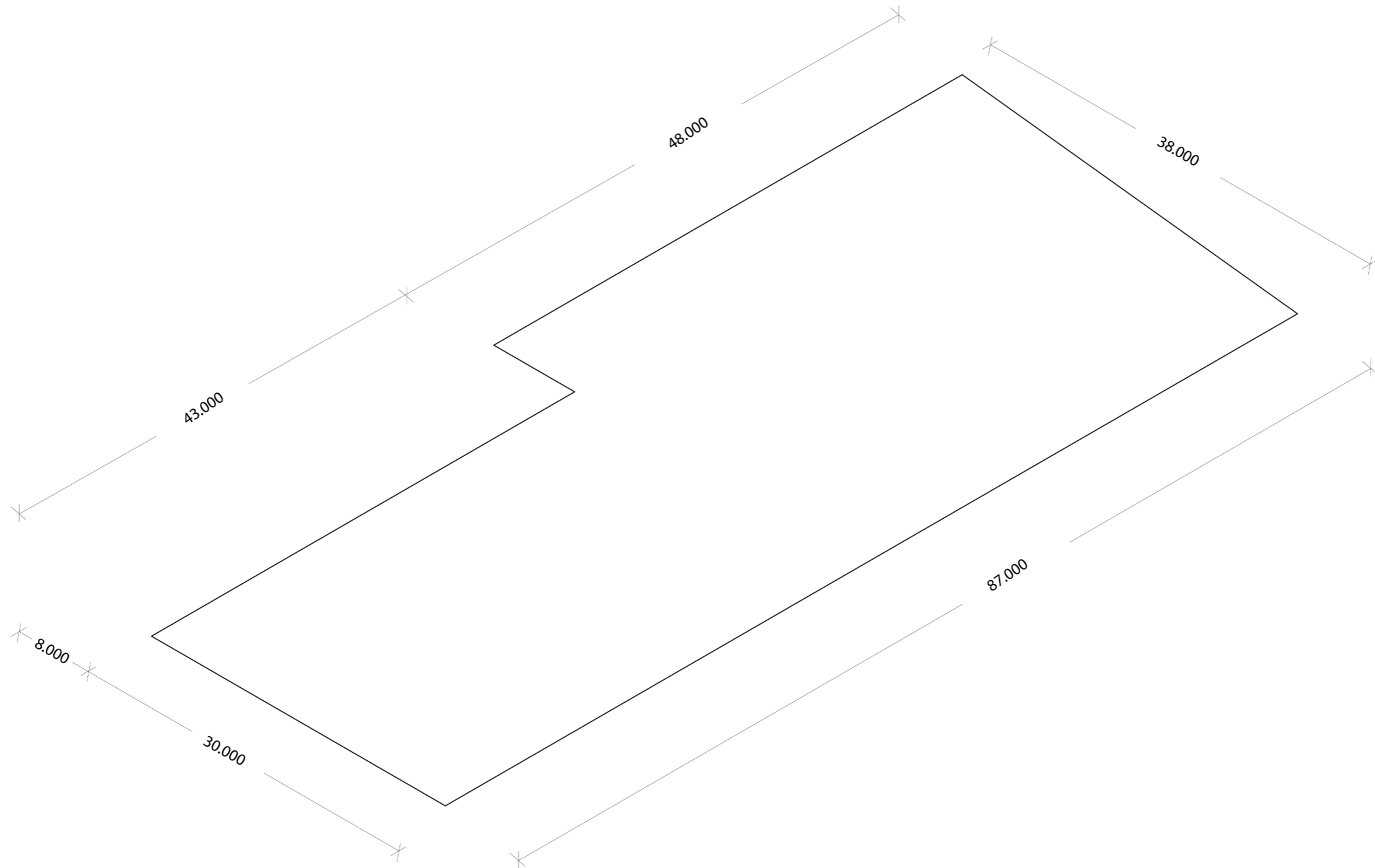


# Design

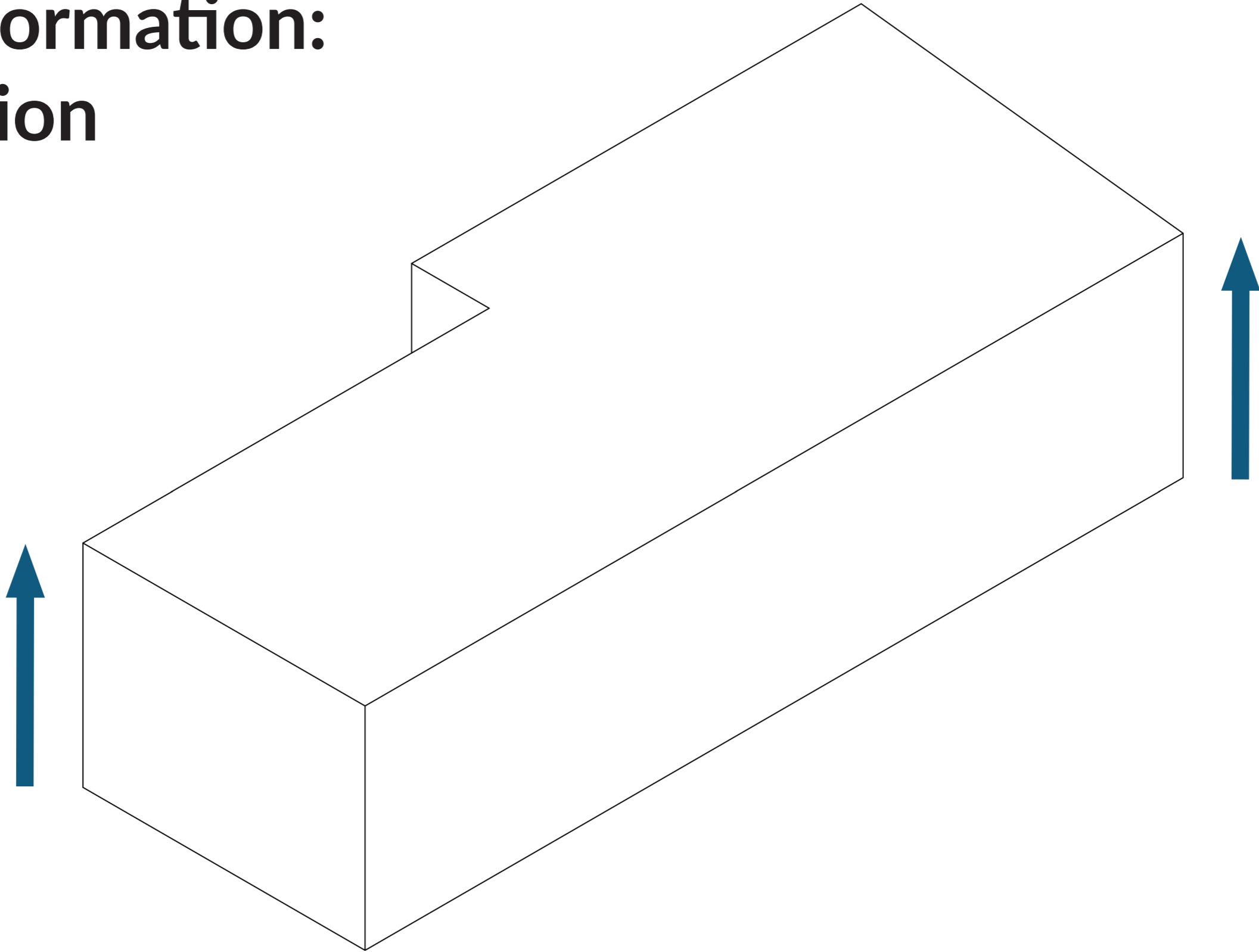
# Area 1:500



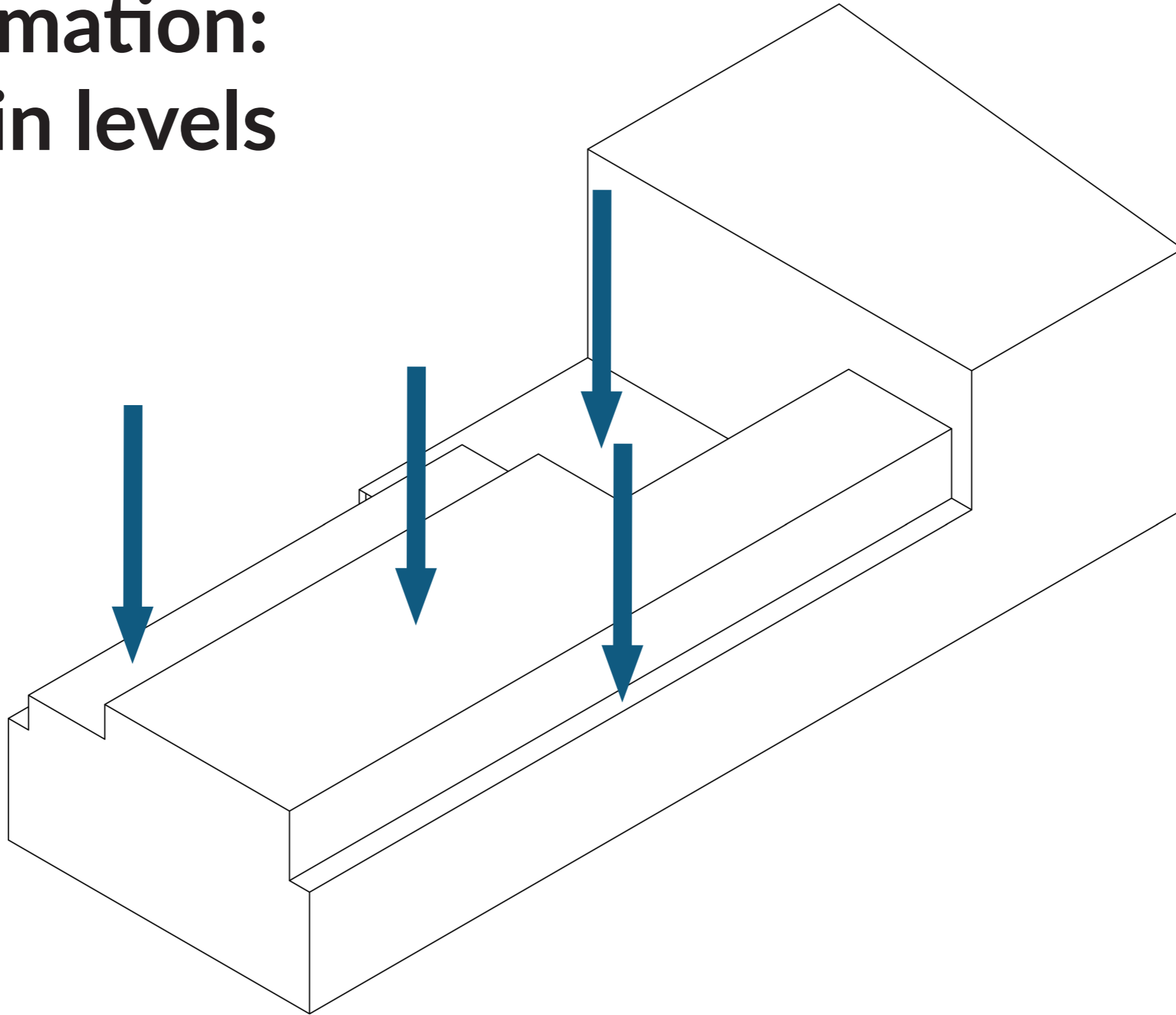
# Mass formation: Plot



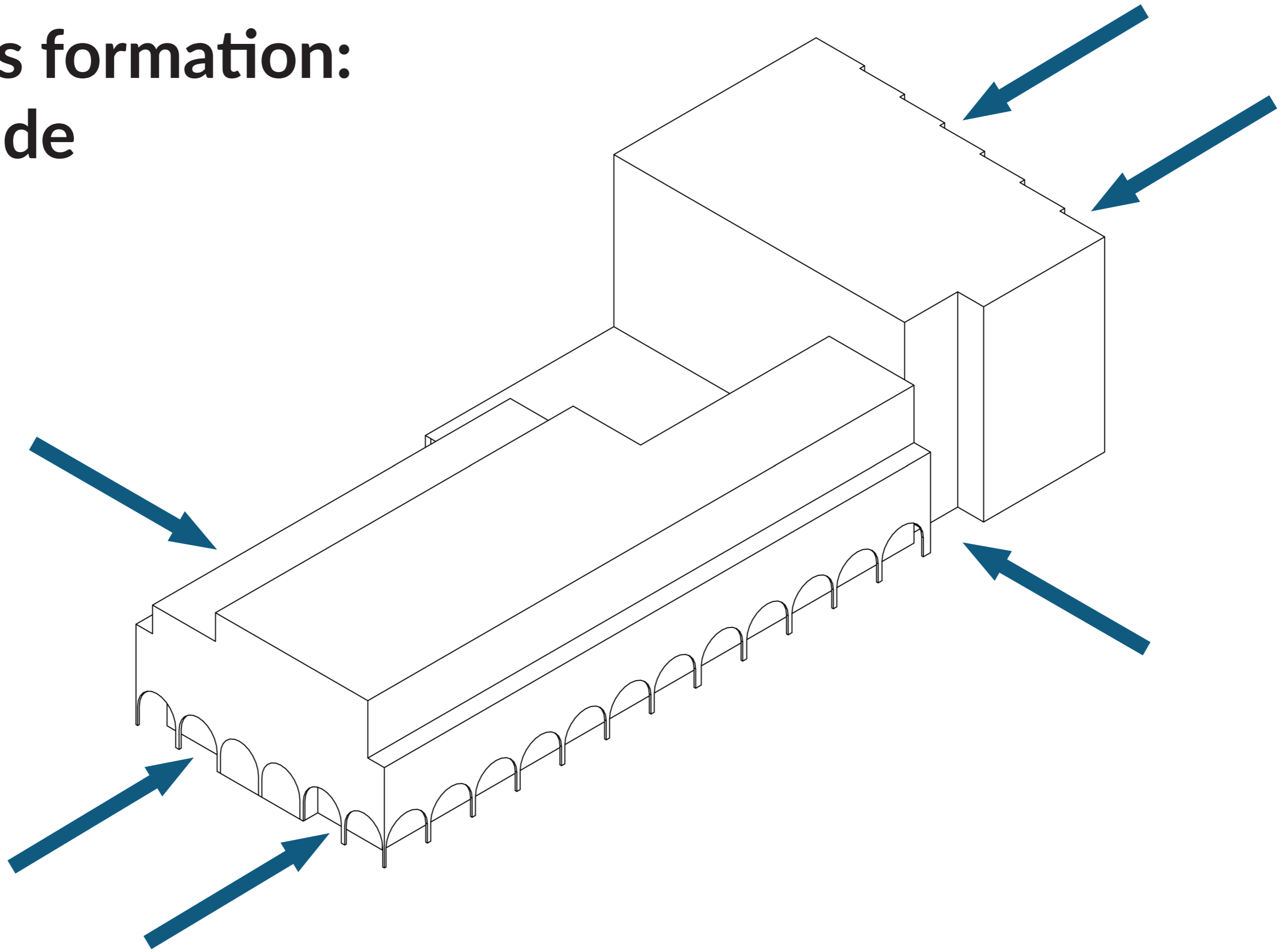
# Mass formation: Extrusion



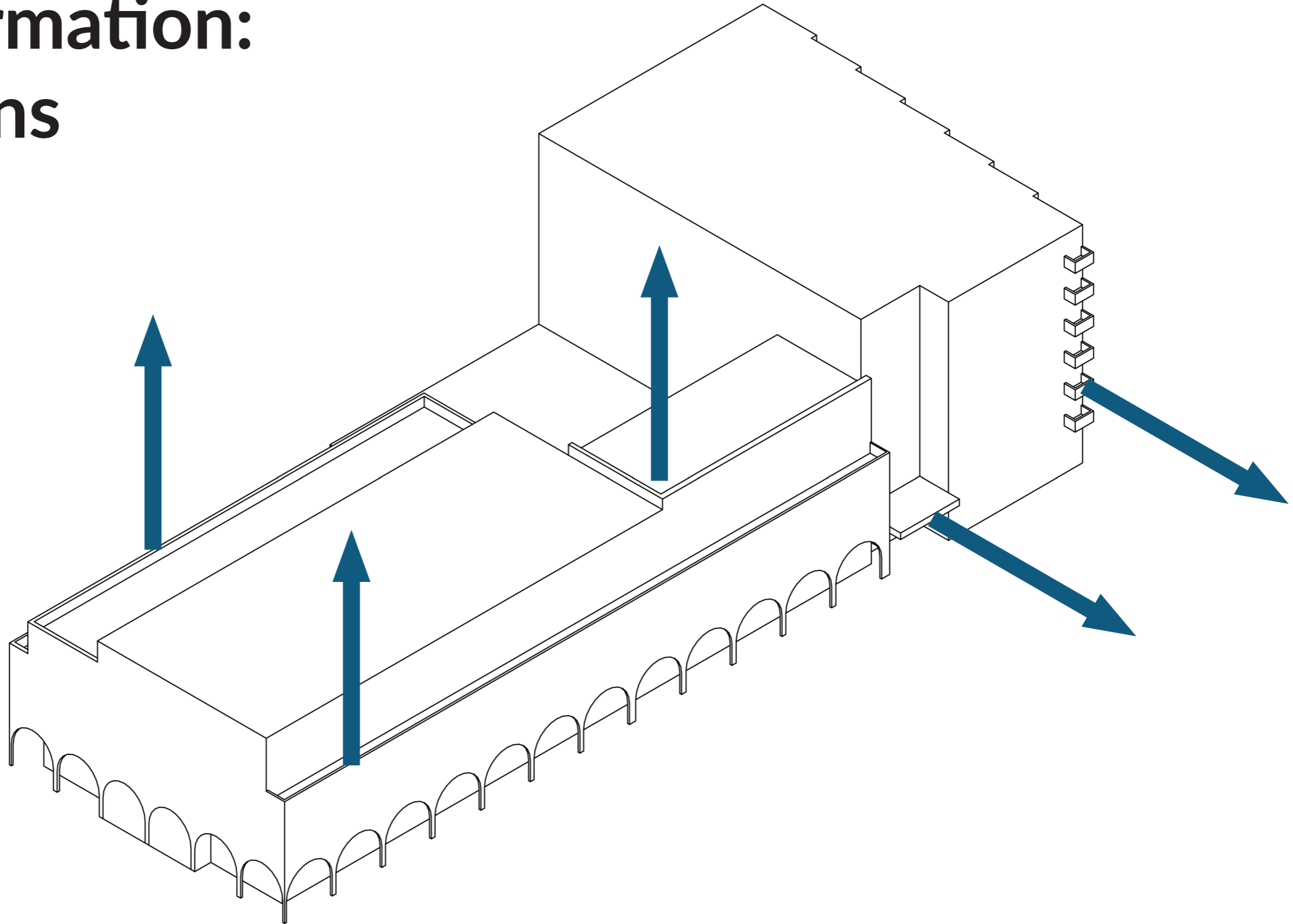
# Mass formation: Pushing in levels



# Mass formation: Facade

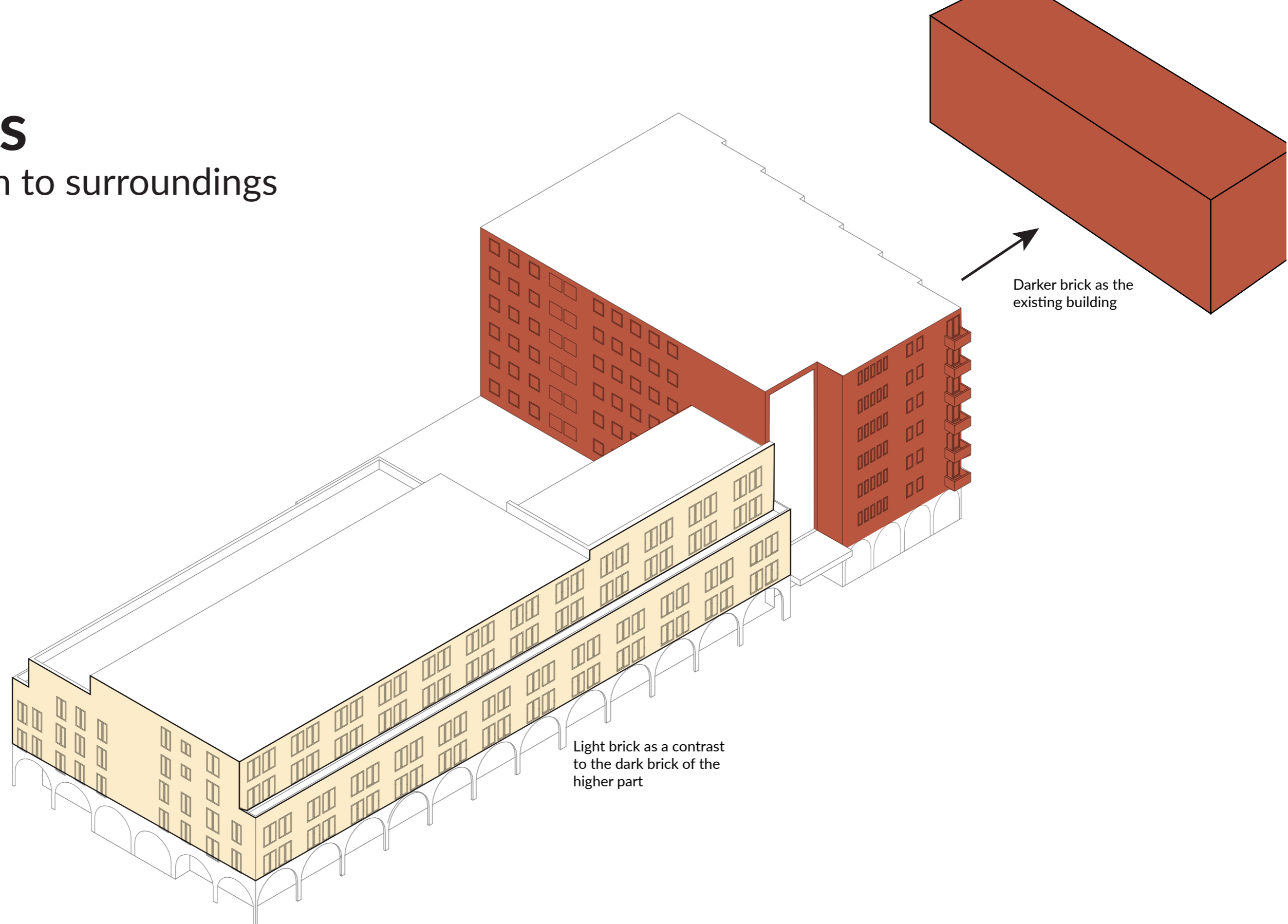


# Mass formation: extrusions



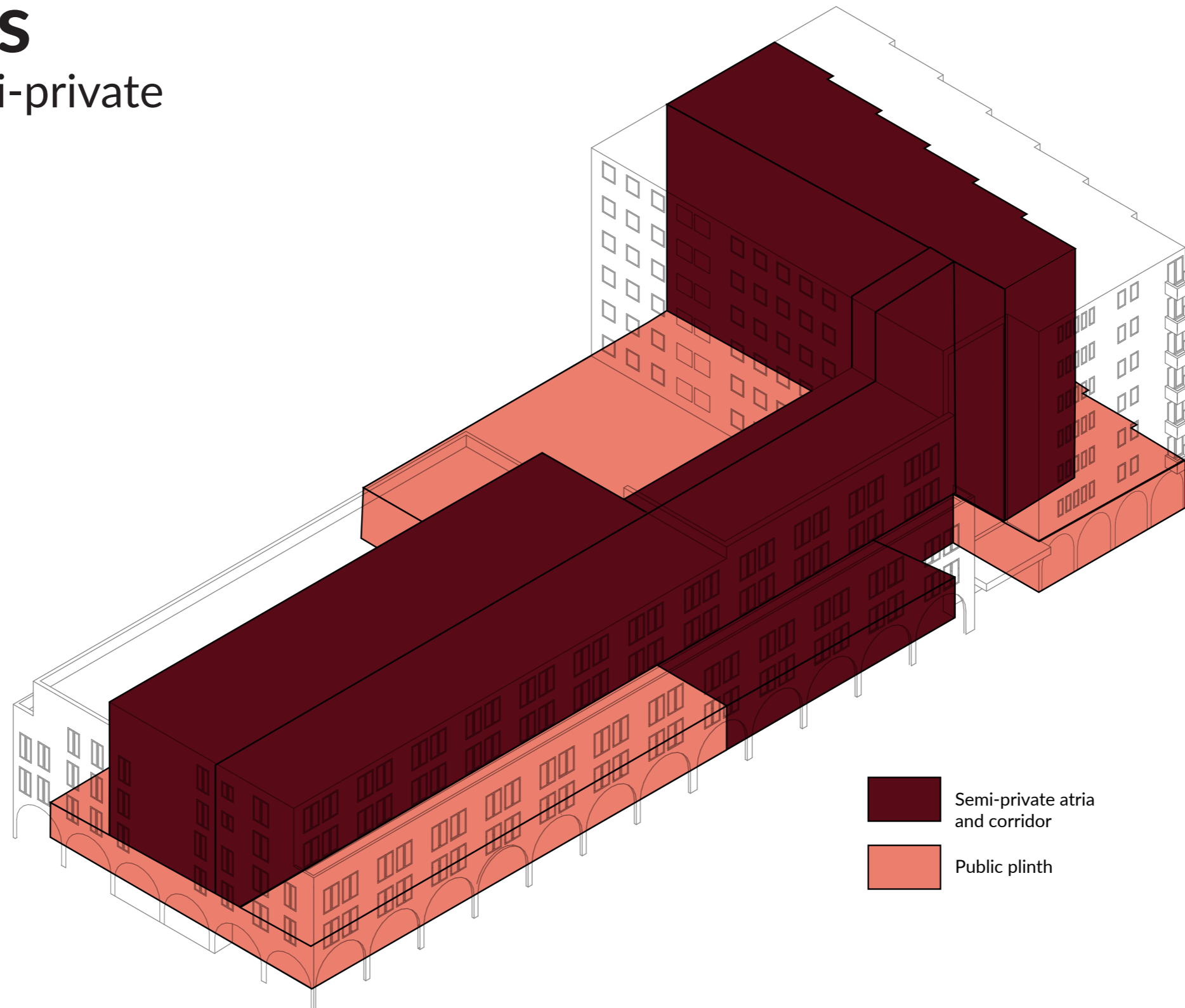
# Concepts

Facade reaction to surroundings



# Concepts

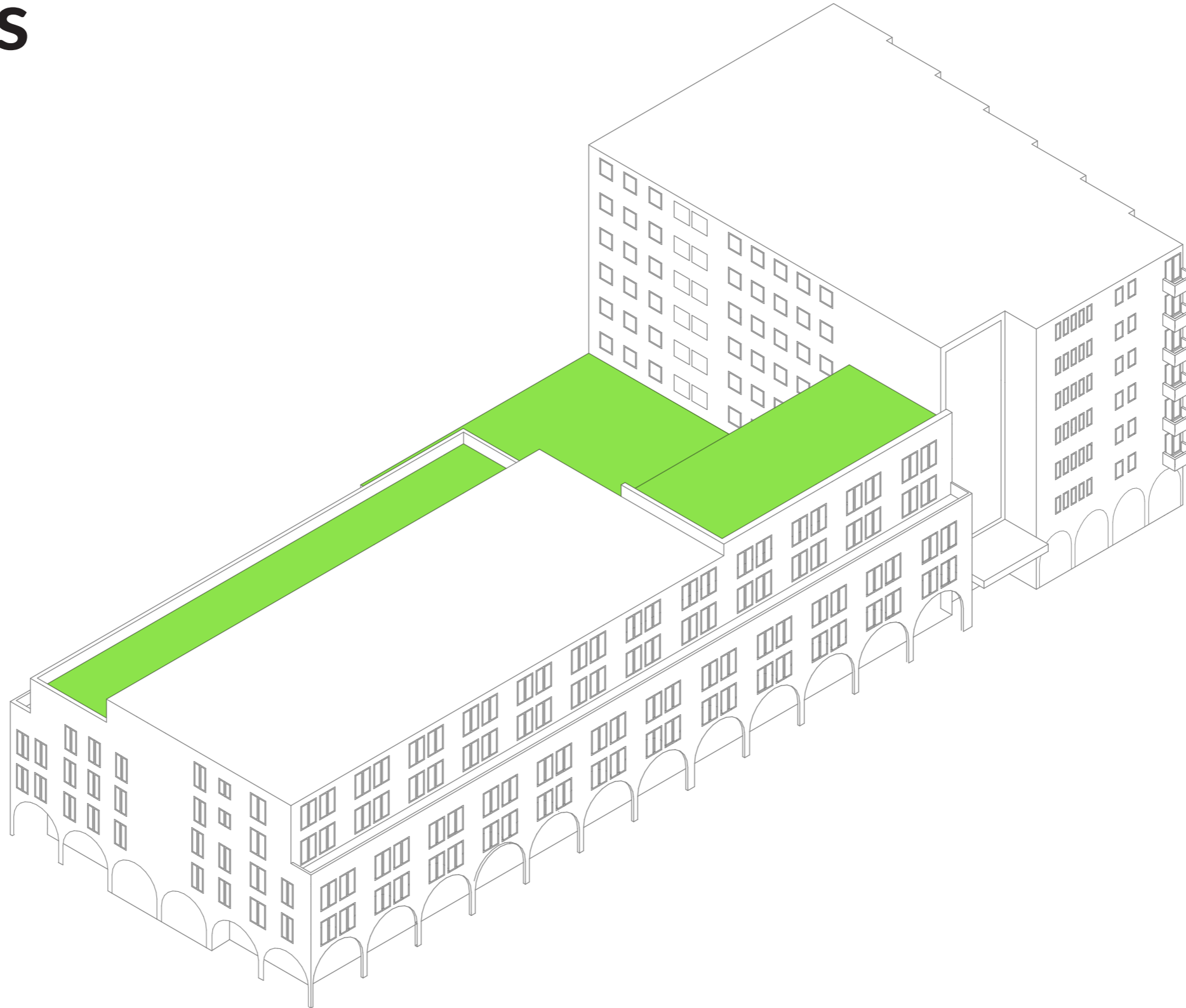
Public and semi-private





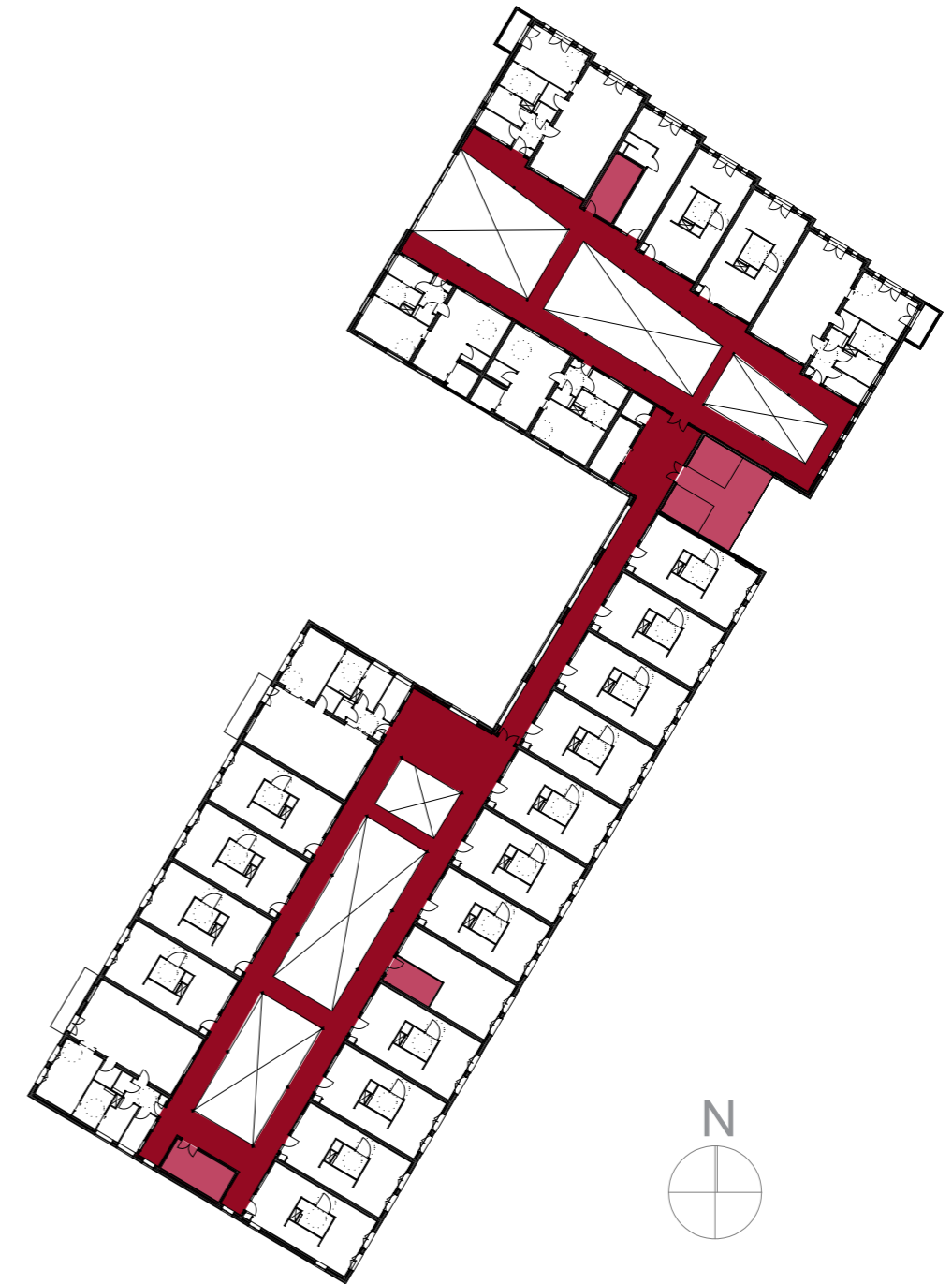
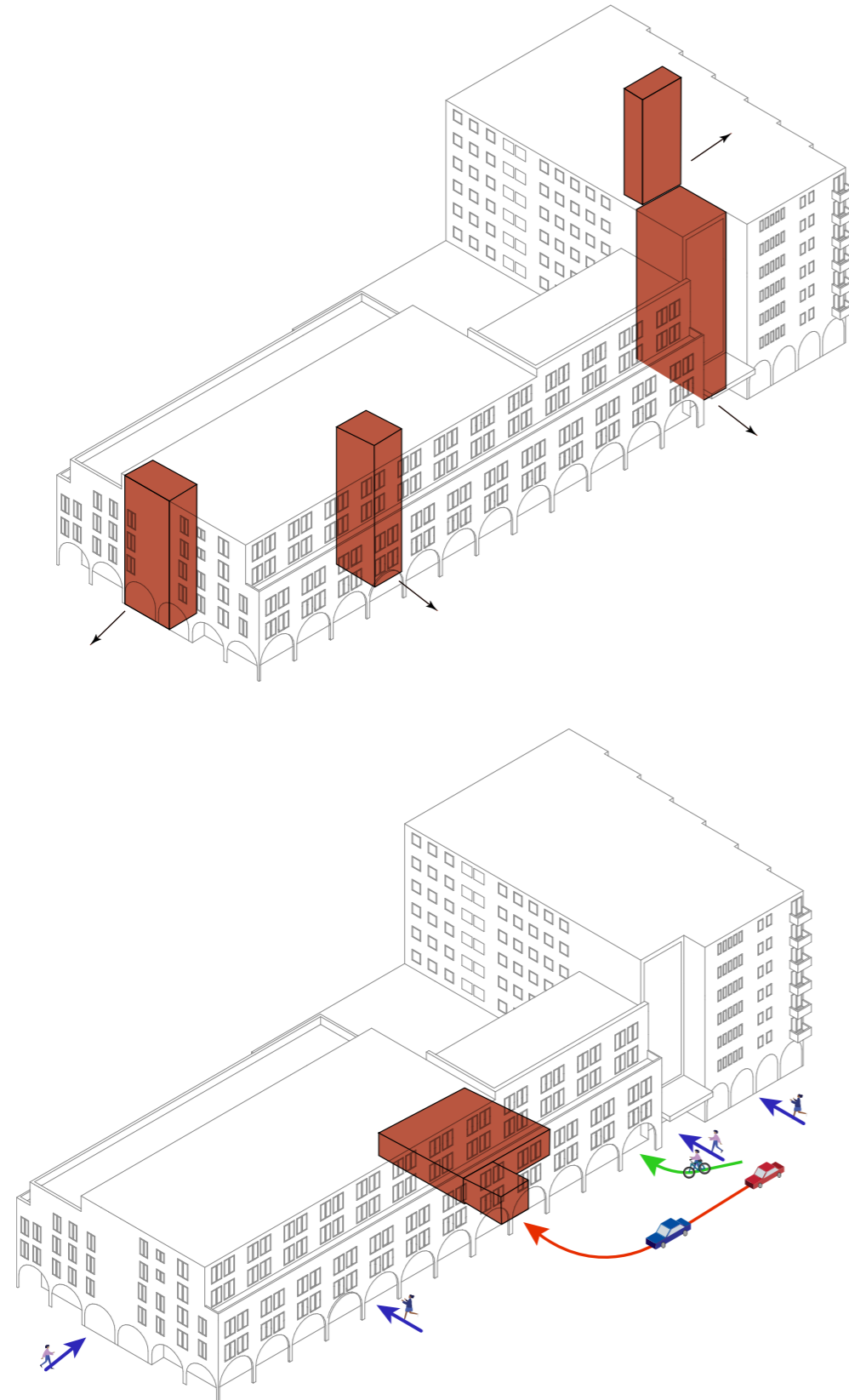
# Concepts

## Roof terraces

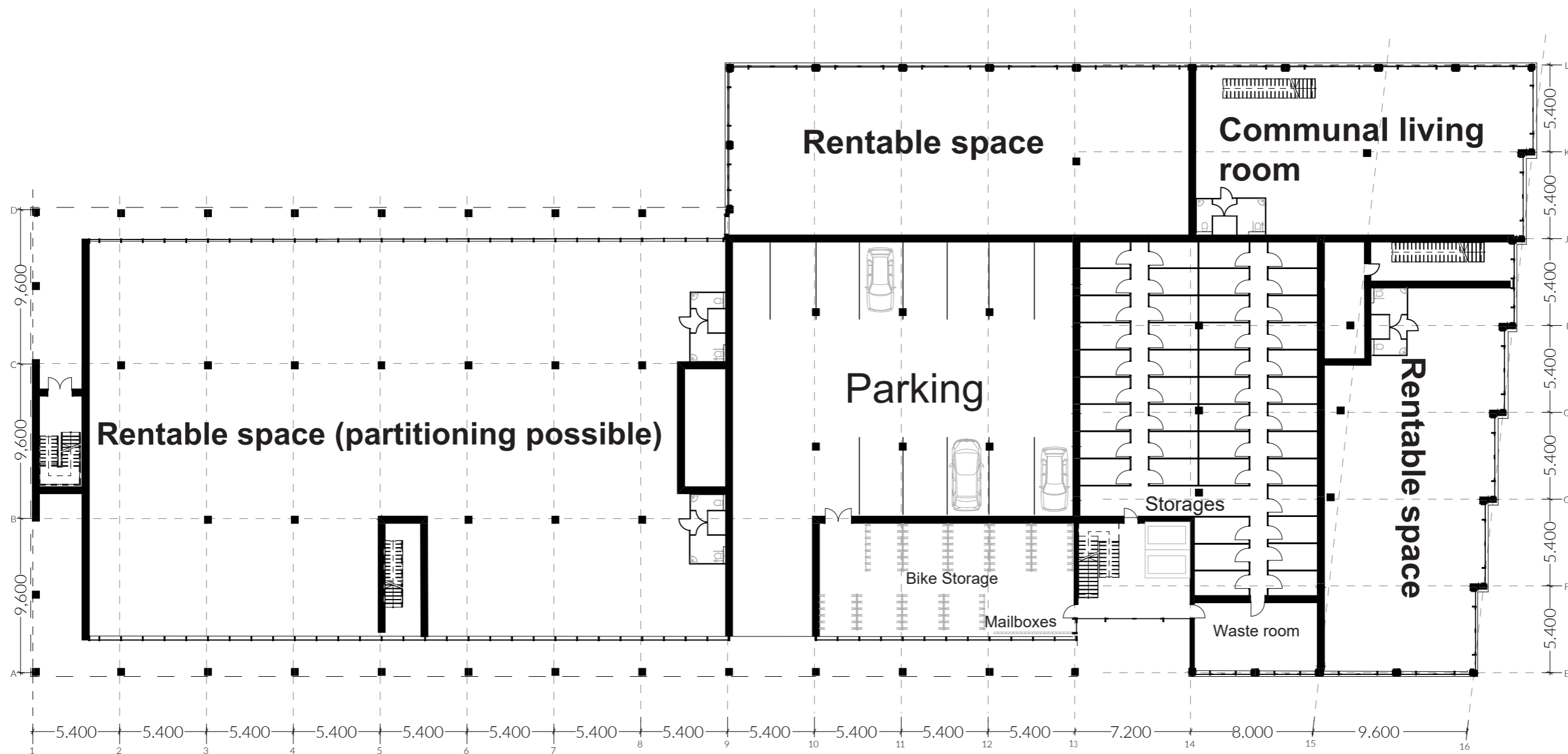




# Circulation



# Ground floor

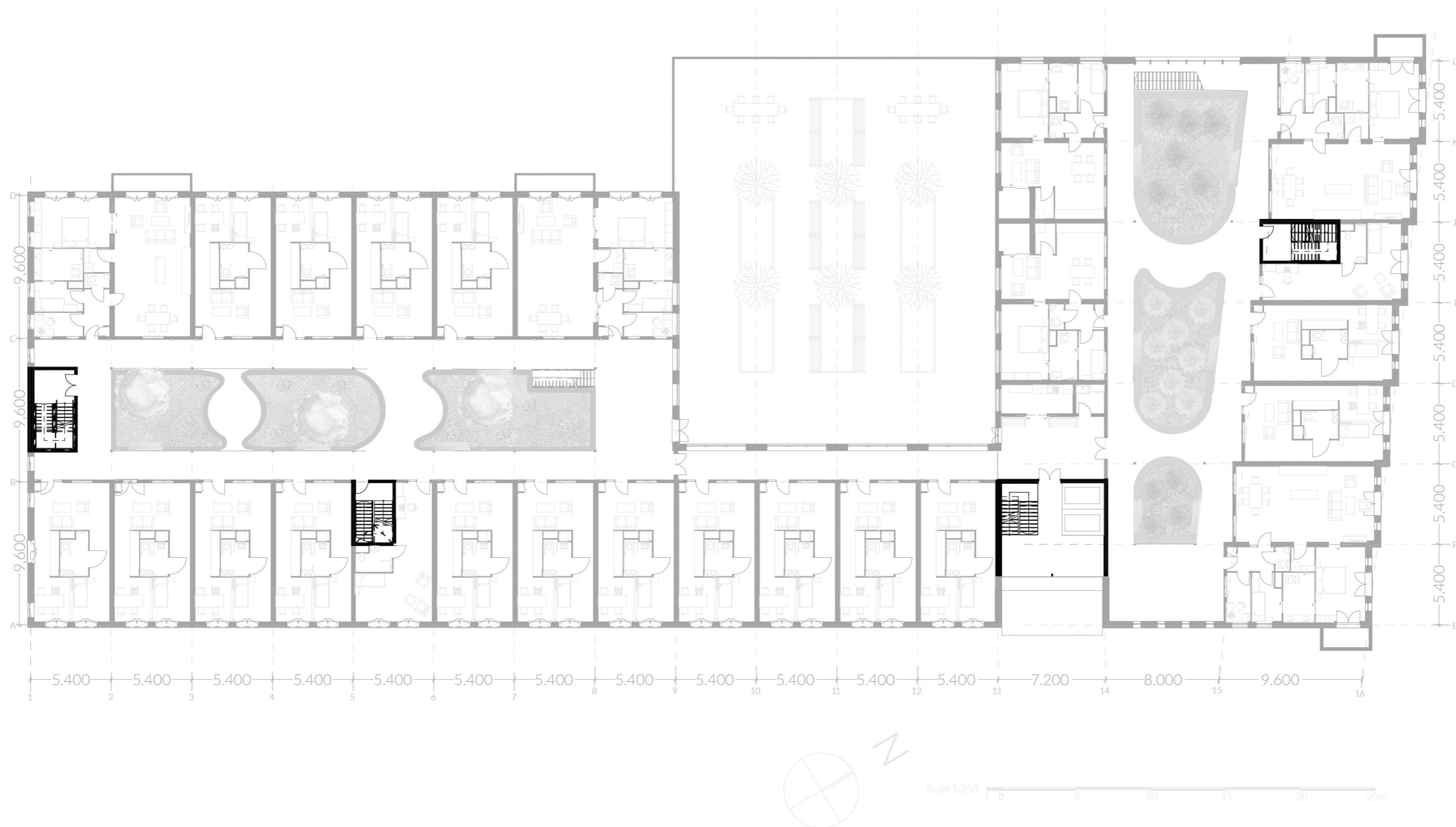


# First floor



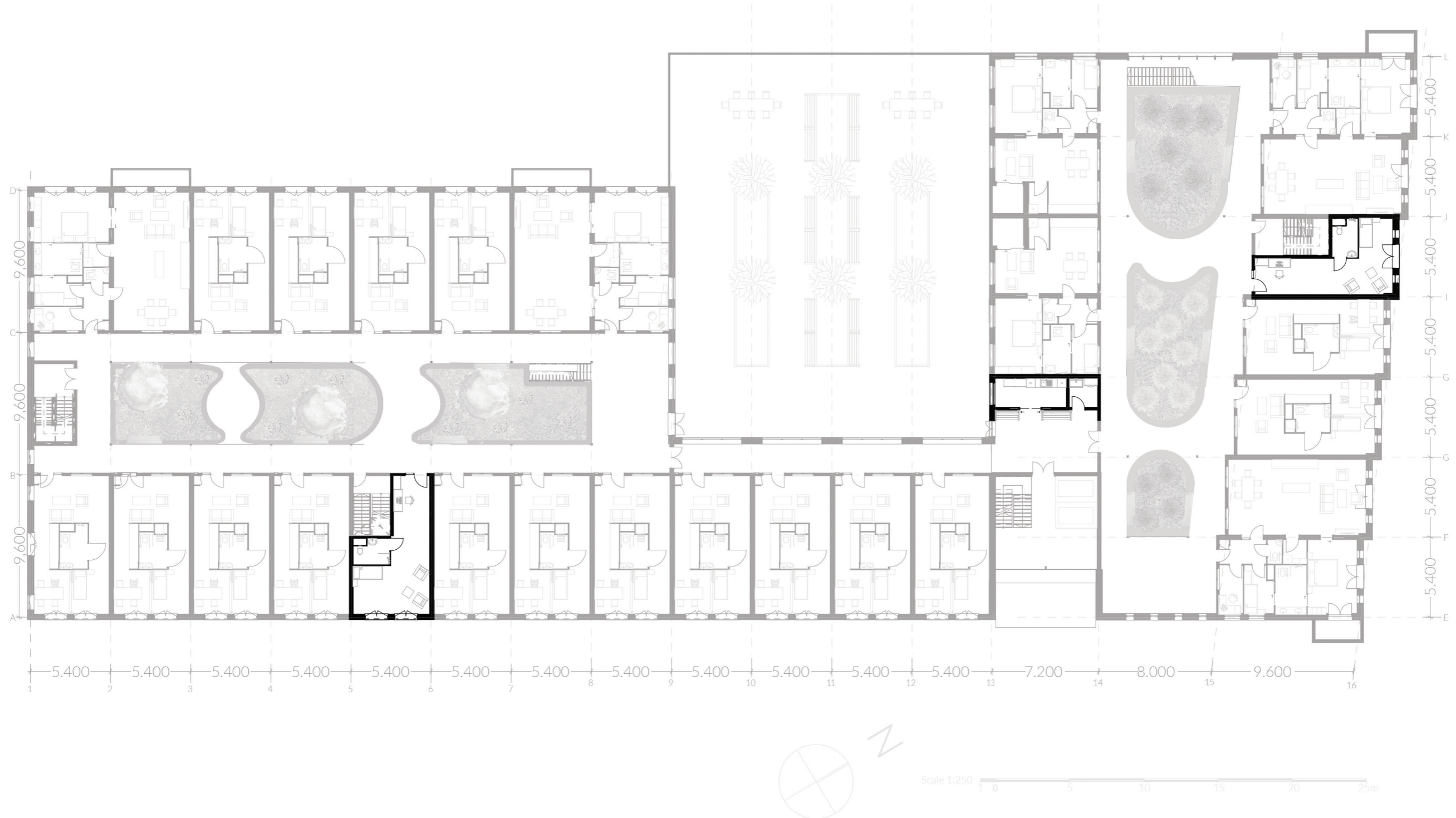
# First floor

vertical circulation points

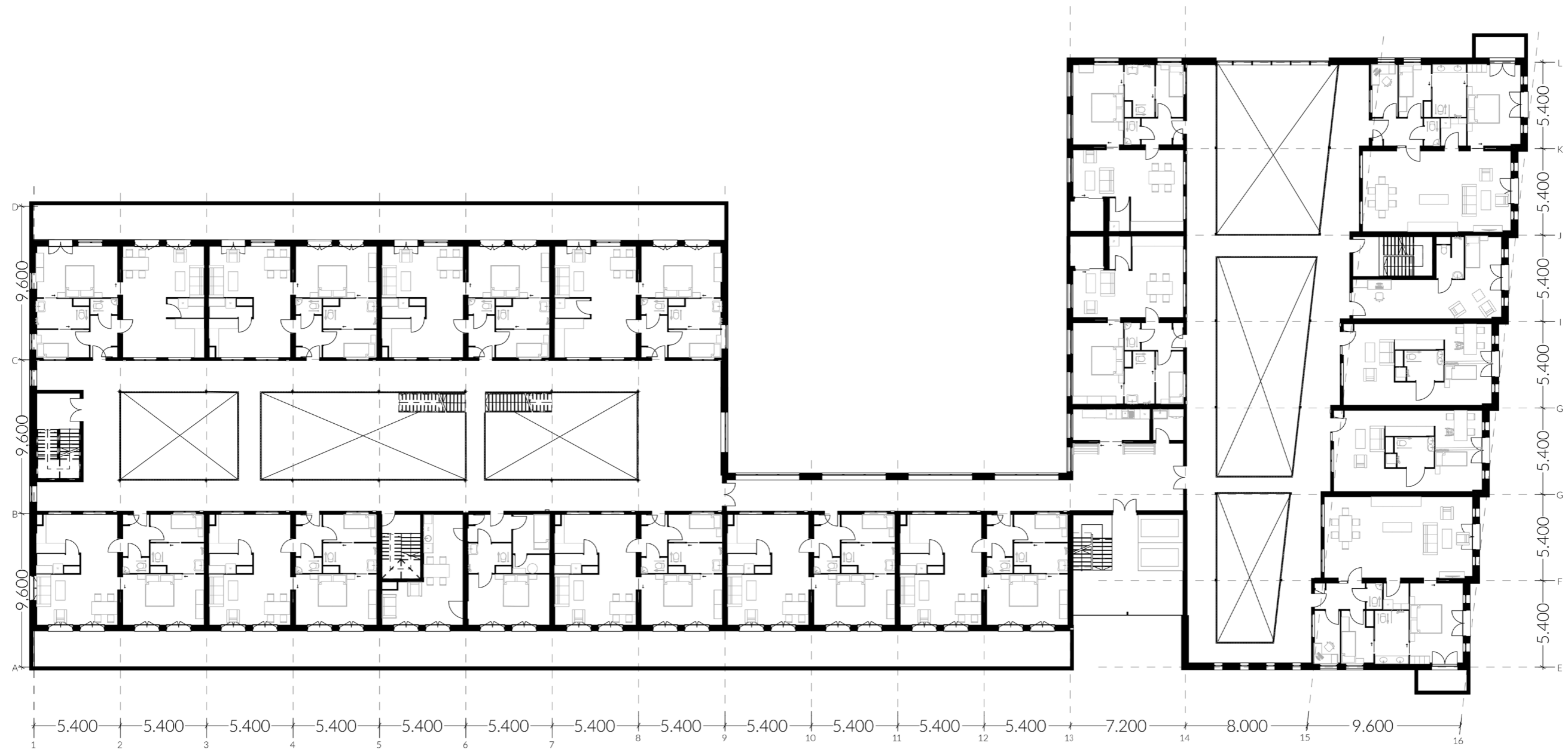


# First floor

## Additional functions

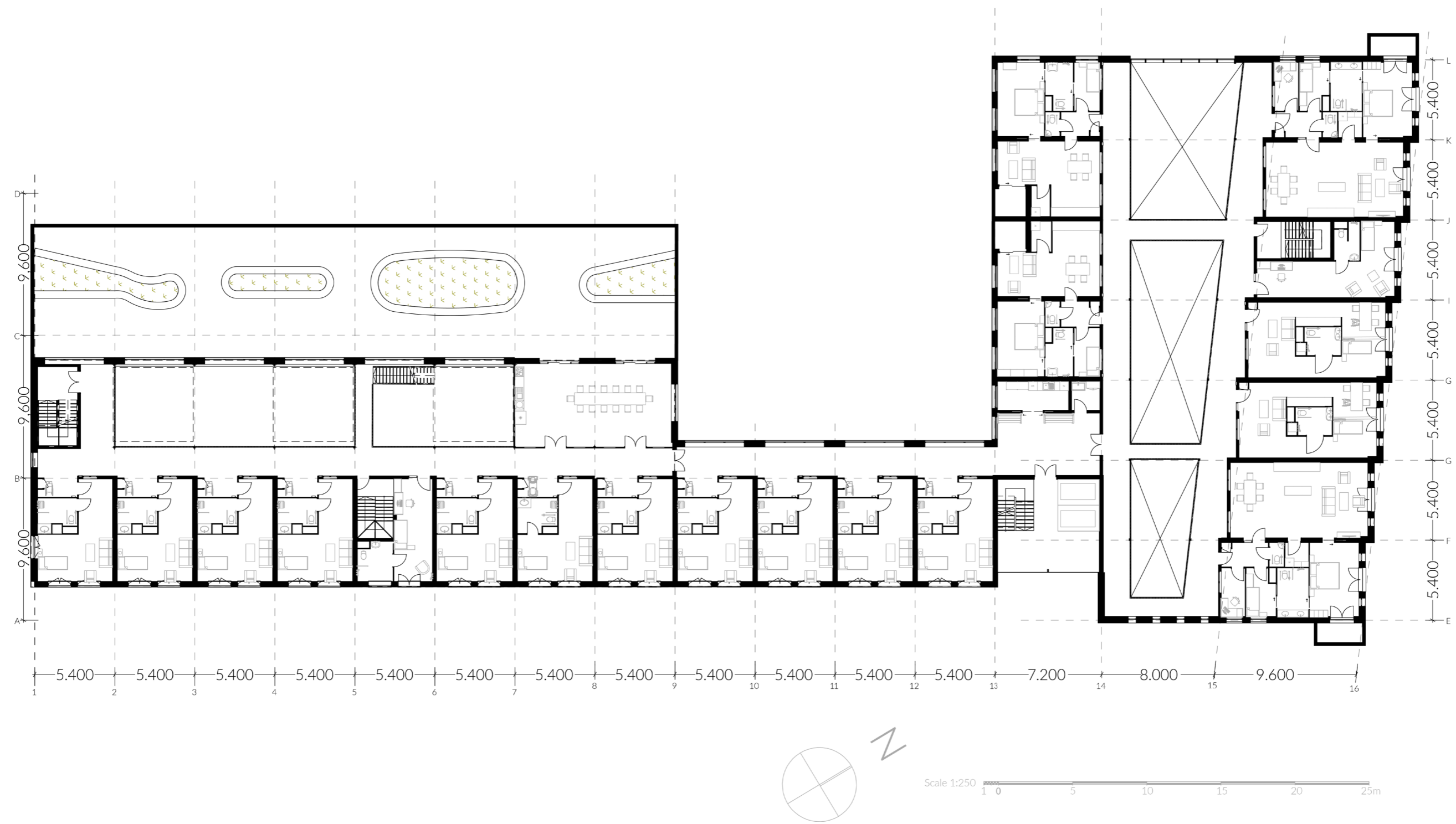


# Third floor

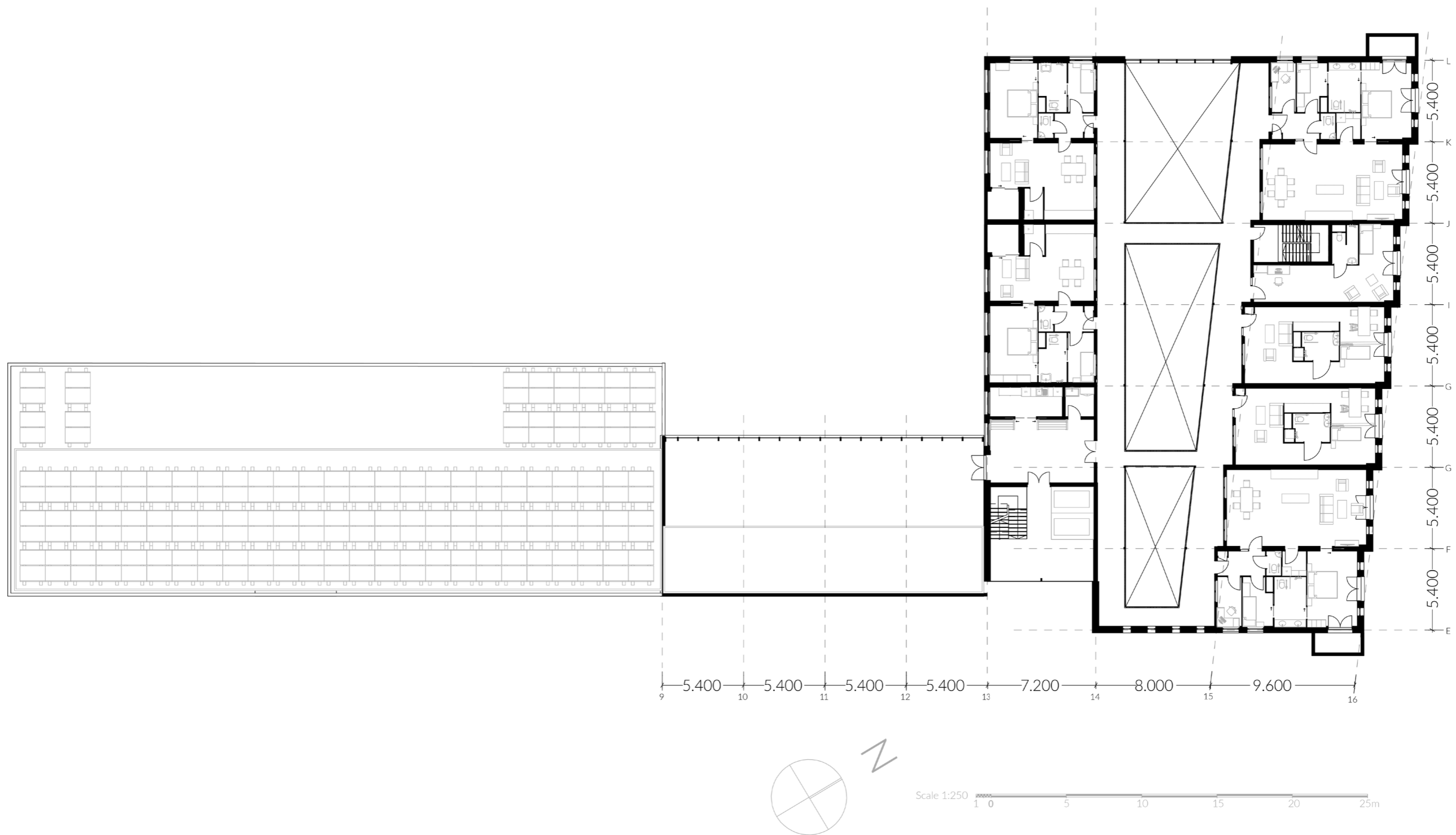


Scale 1:250  
1 0 5 10 15 20 25m

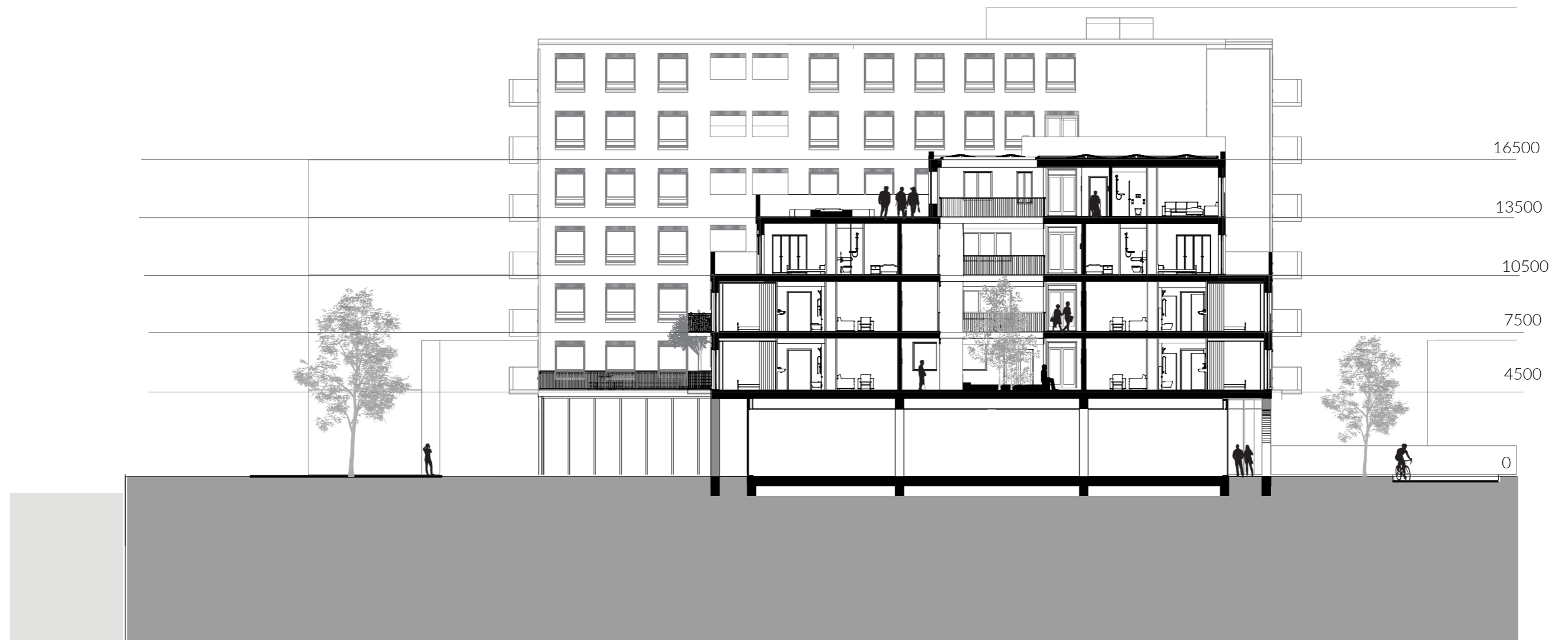
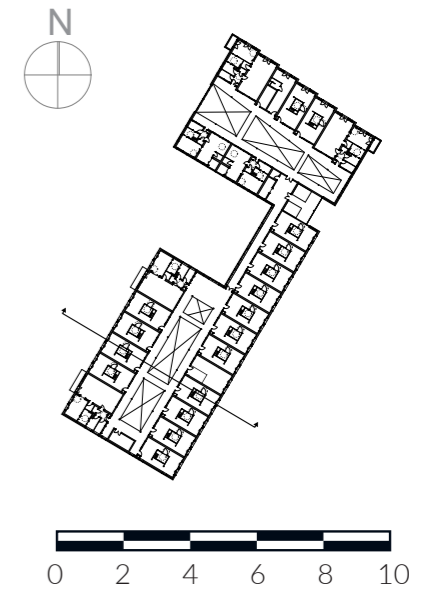
# Fourth floor



# Fifth and sixth floor

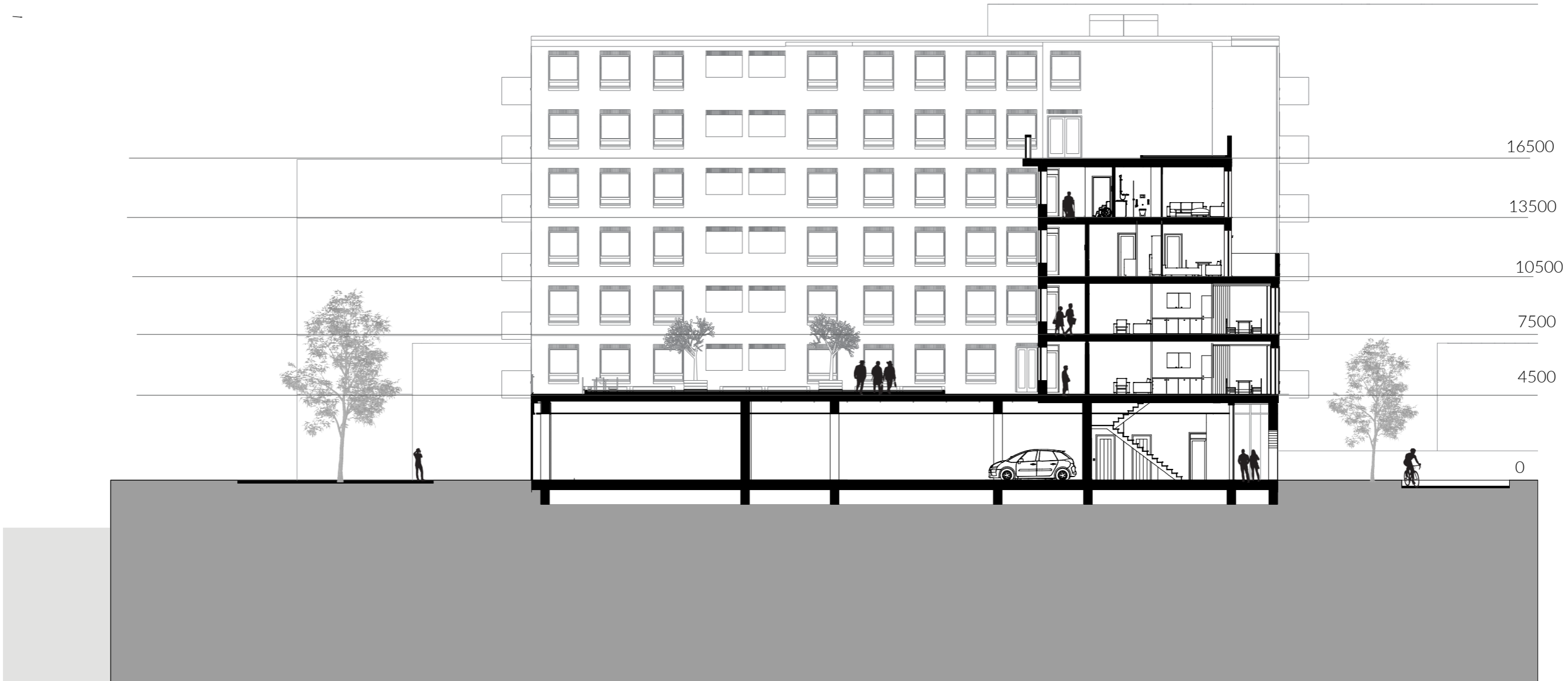
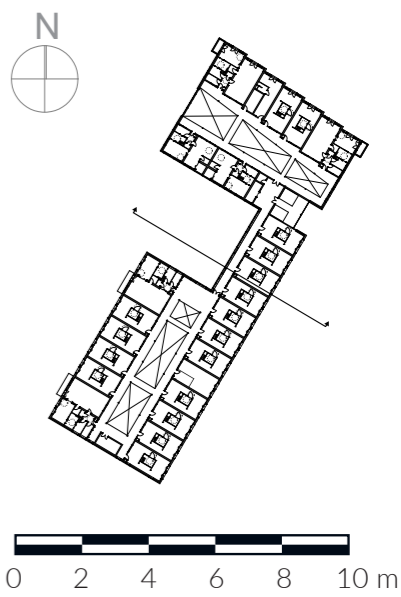


# Section A 1:200



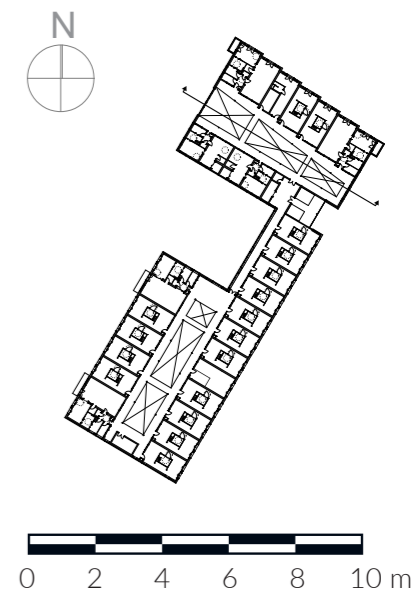


# Section B 1:200





# Section C 1:200



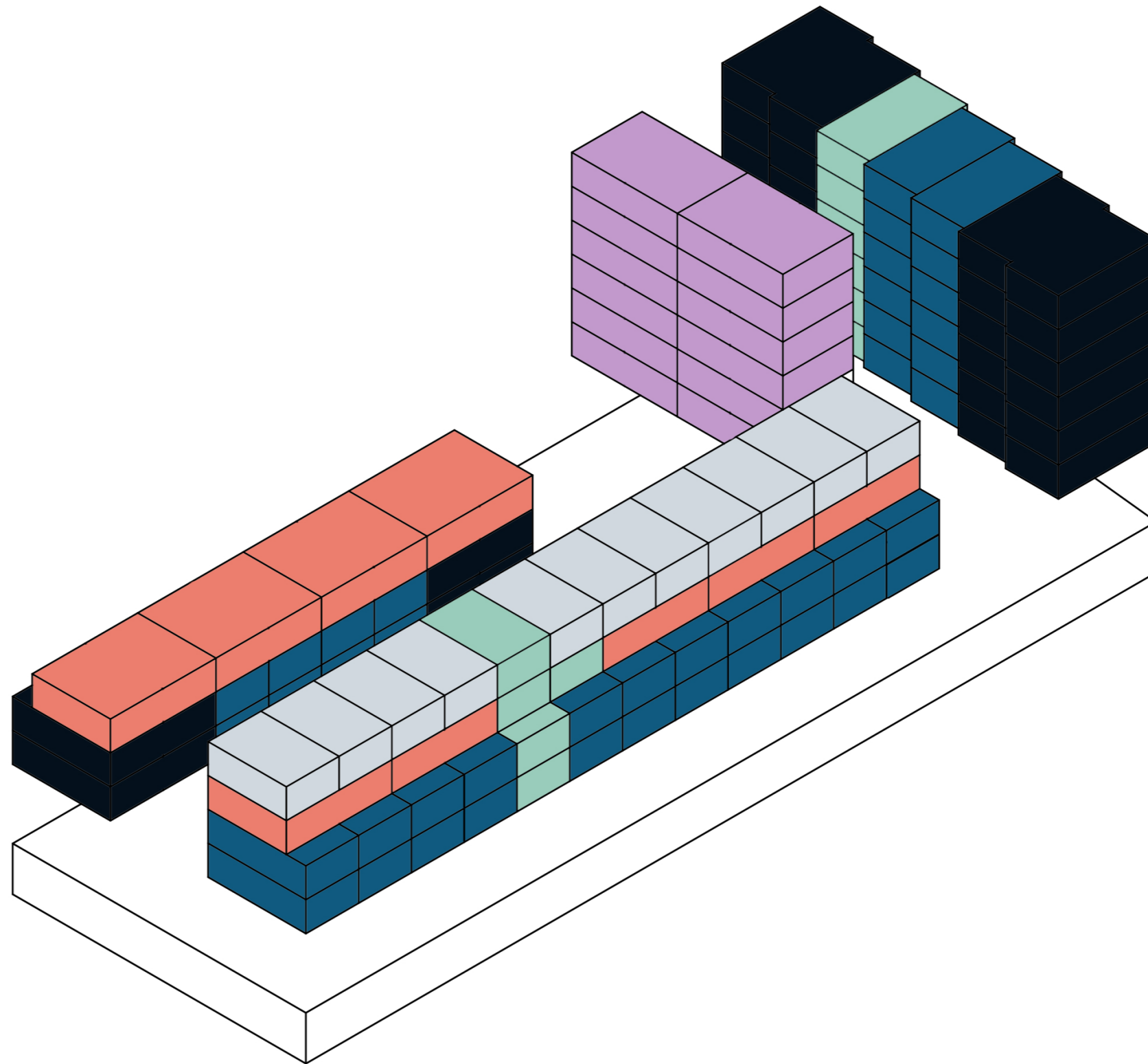


# Dwelling types



# Dwelling types

- Dwelling type A (47 m<sup>2</sup>)
- Dwelling type B (94 m<sup>2</sup>)
- Dwelling type C (70 m<sup>2</sup>)
- Dwelling type D (65 m<sup>2</sup>)
- Dwelling type E (25 m<sup>2</sup>)
- Exception



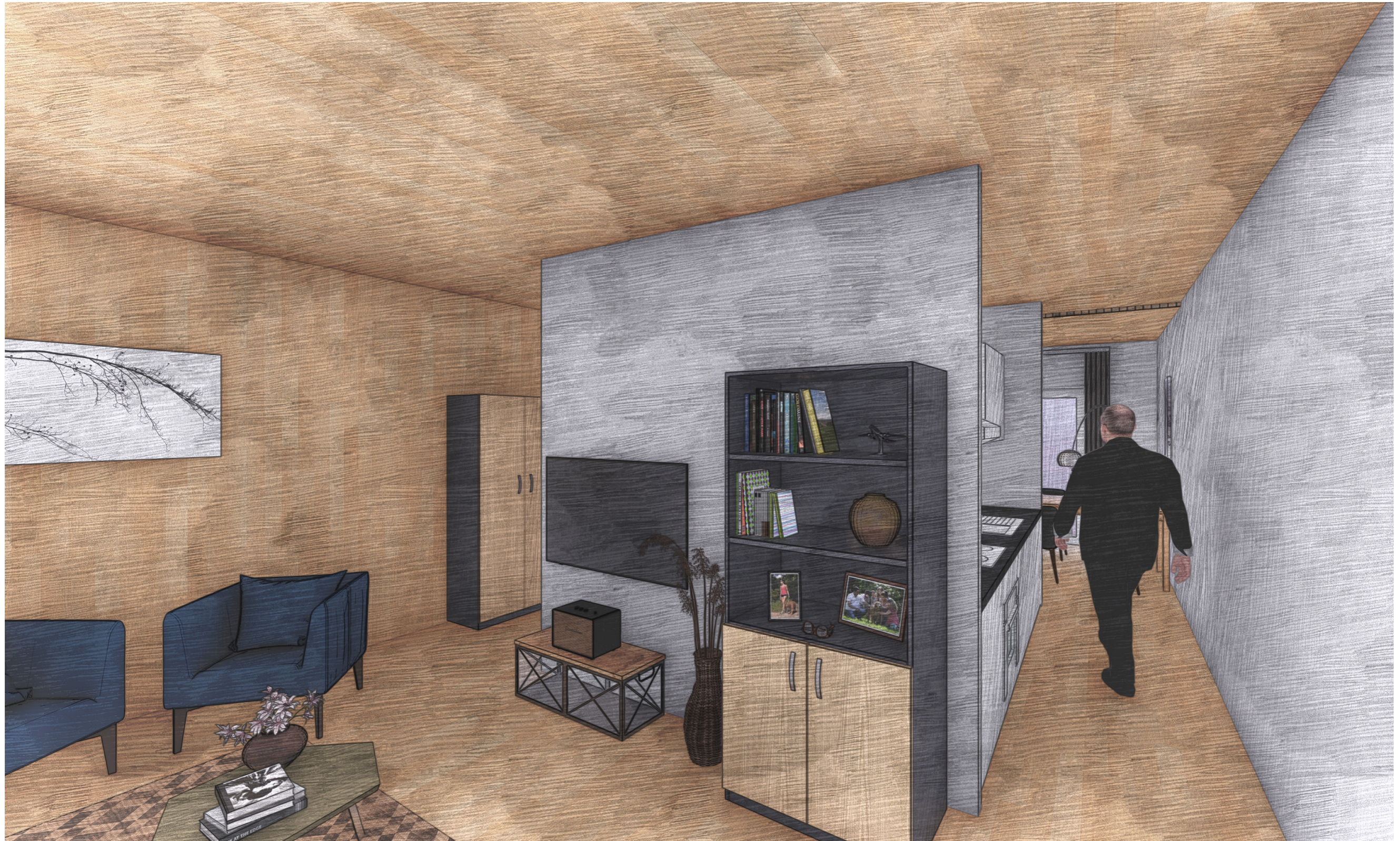
# Entering the building



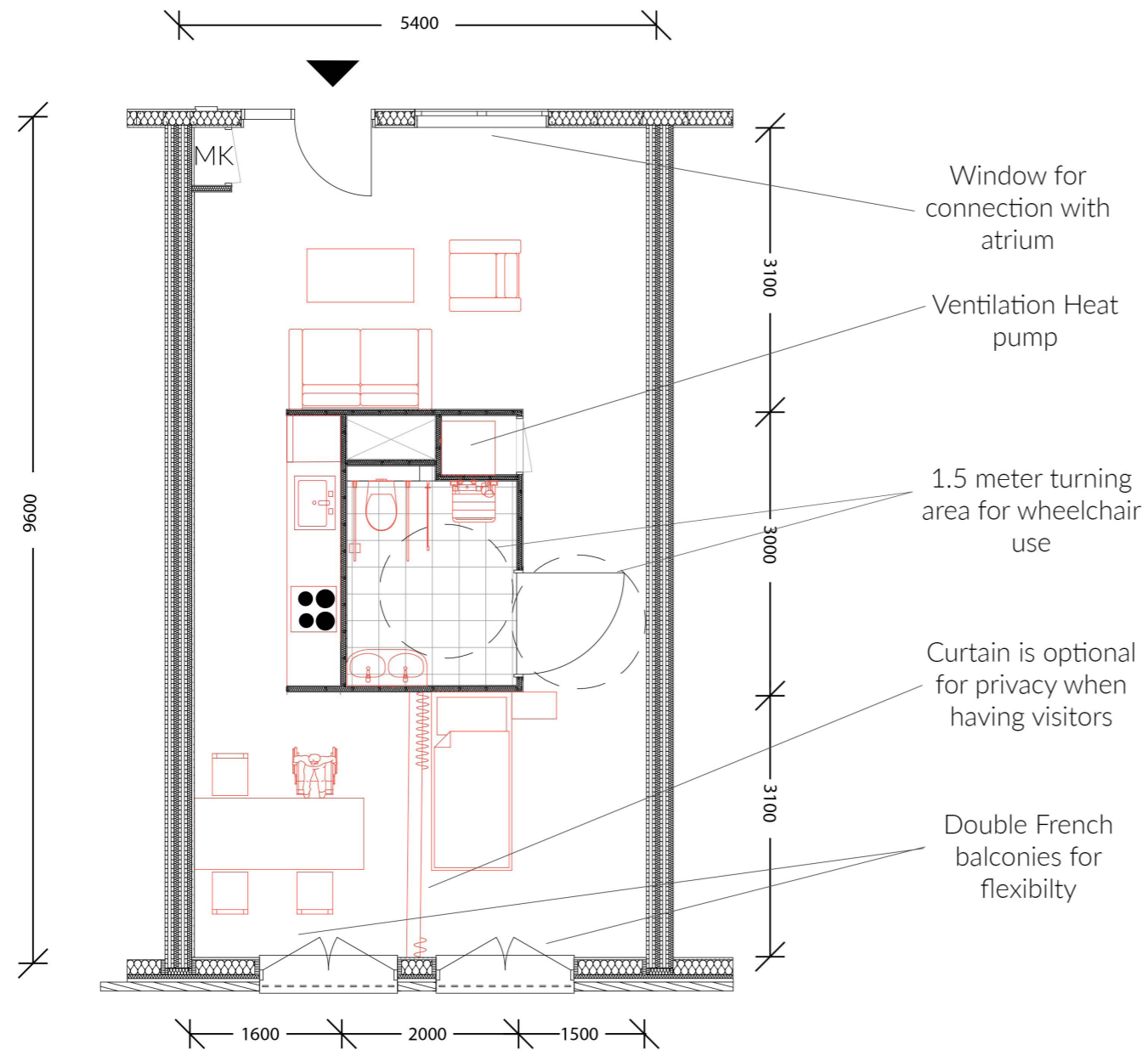
# In front of the Dwelling A



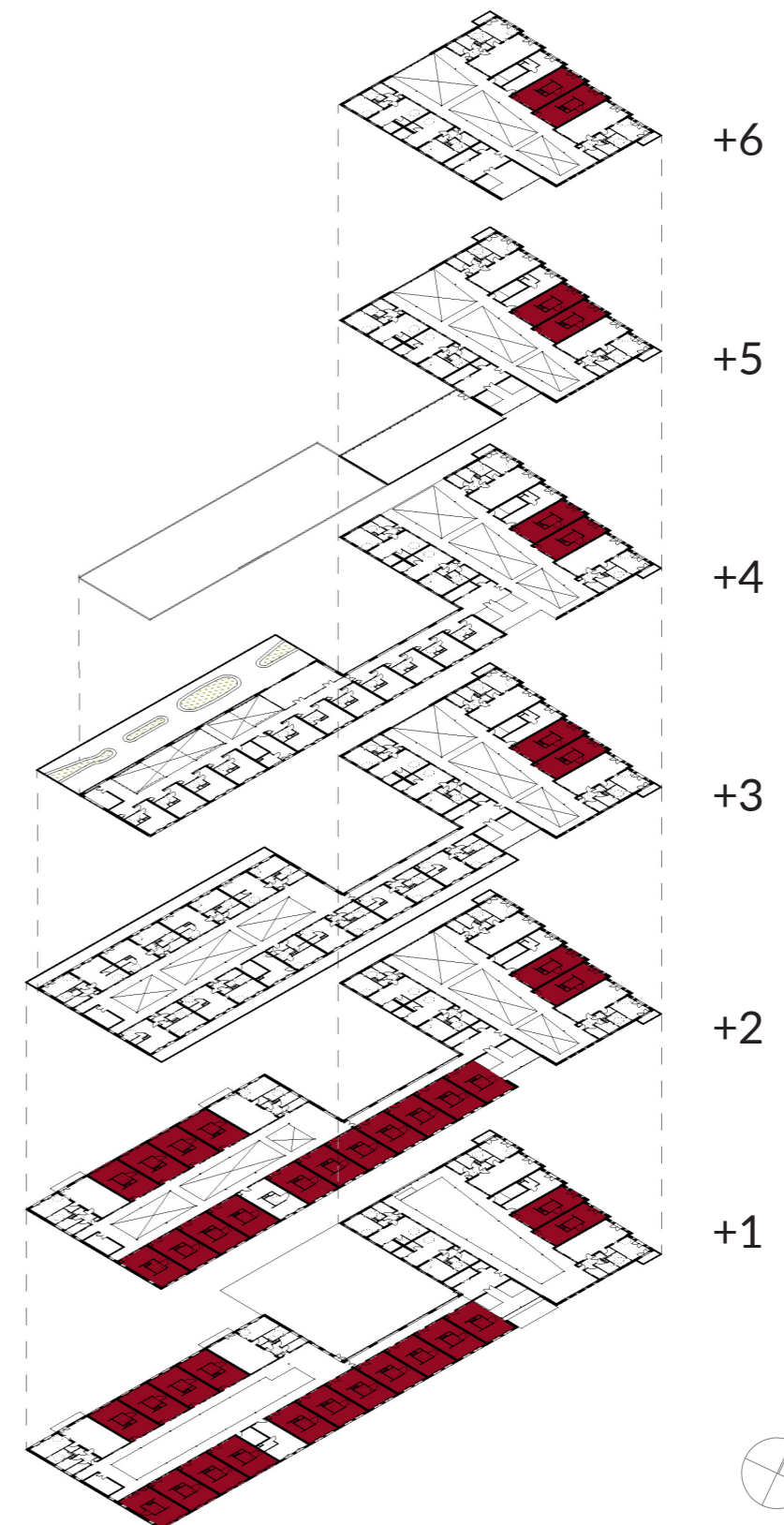
# Inside Dwelling A



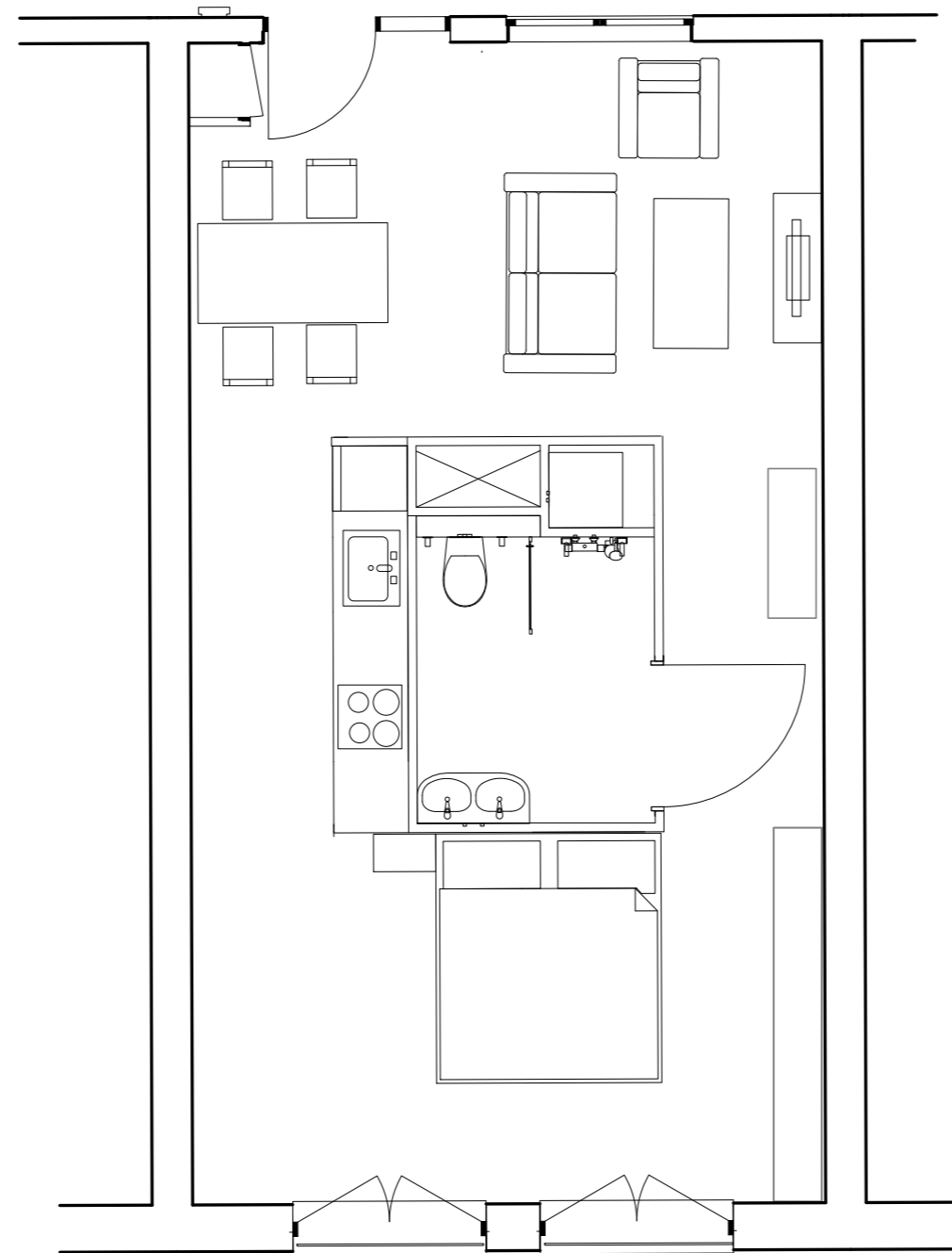
# Dwelling A



Dwelling type A (47 m2)  
 Marked in Red  
 Number of dwellings: 42

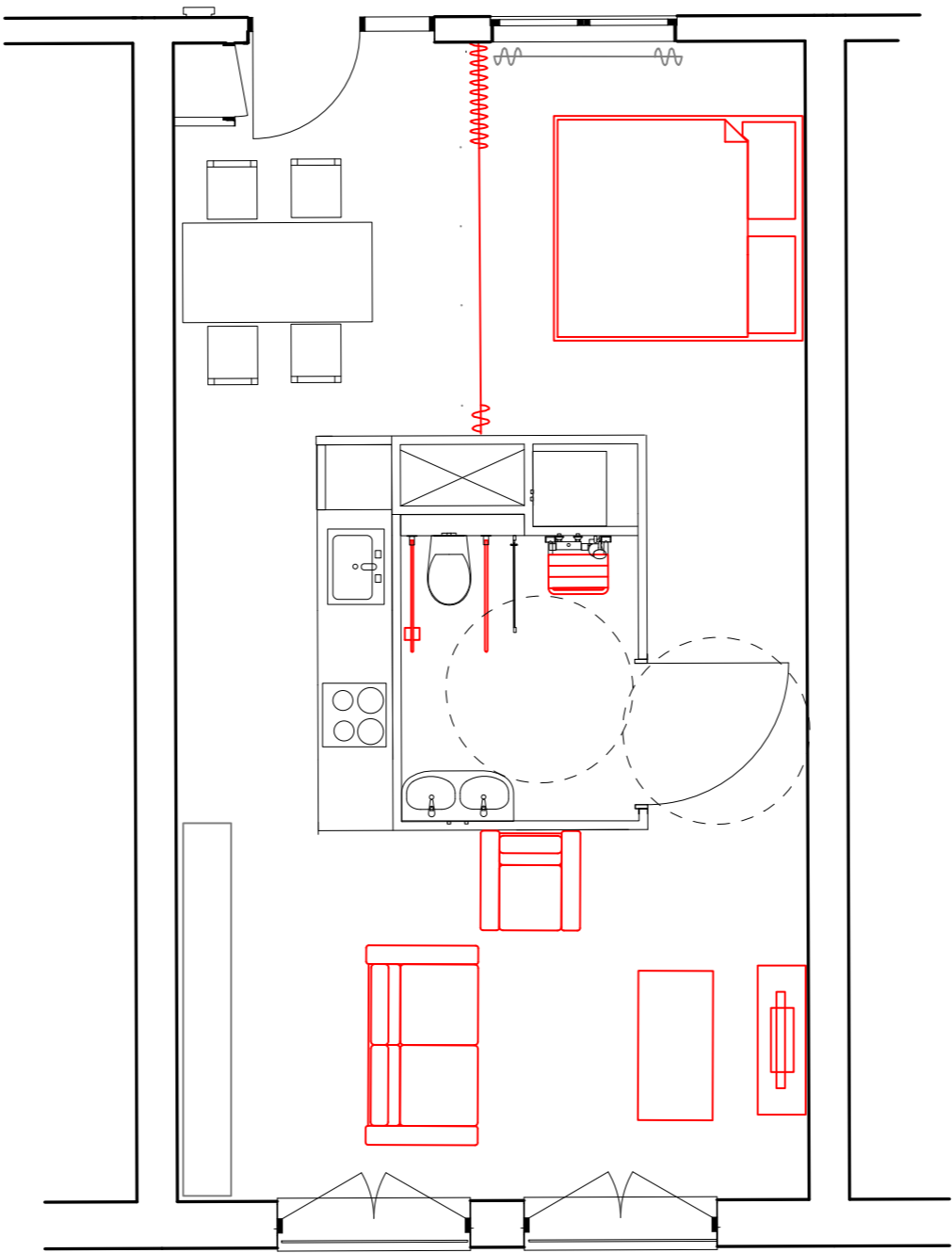


# Floorplan Dwelling A



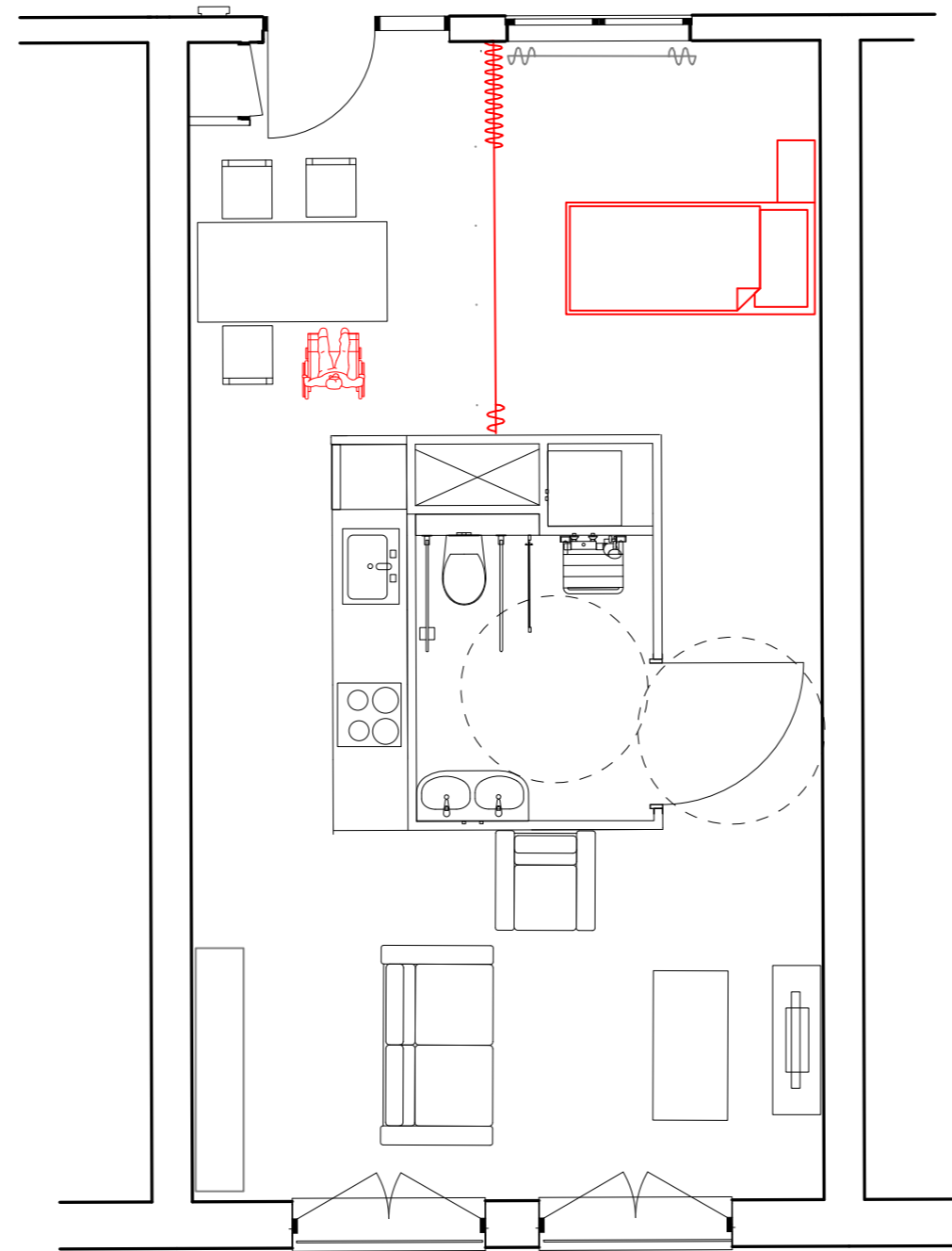
55 years old

# Floorplan Dwelling A



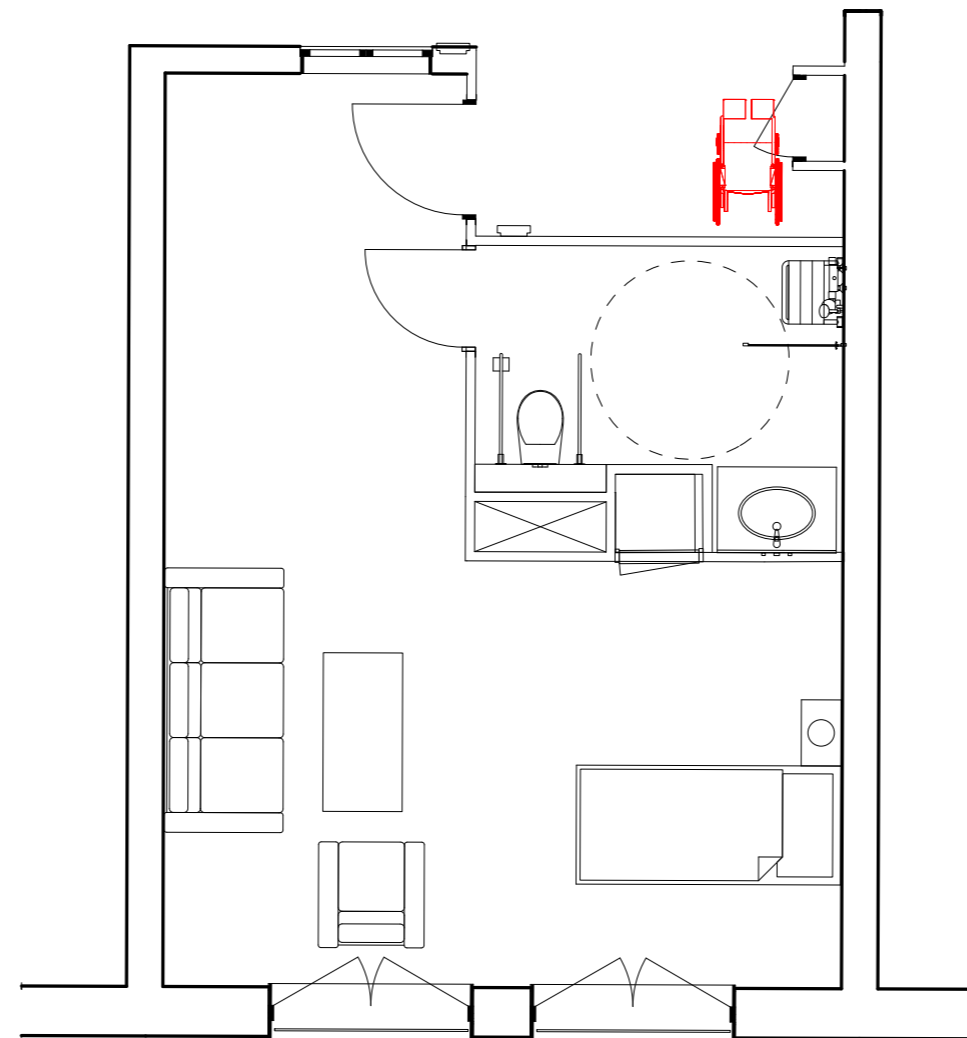
65 years old

# Floorplan Dwelling A



75 years old

# Move from dwelling A to Care unit (E)

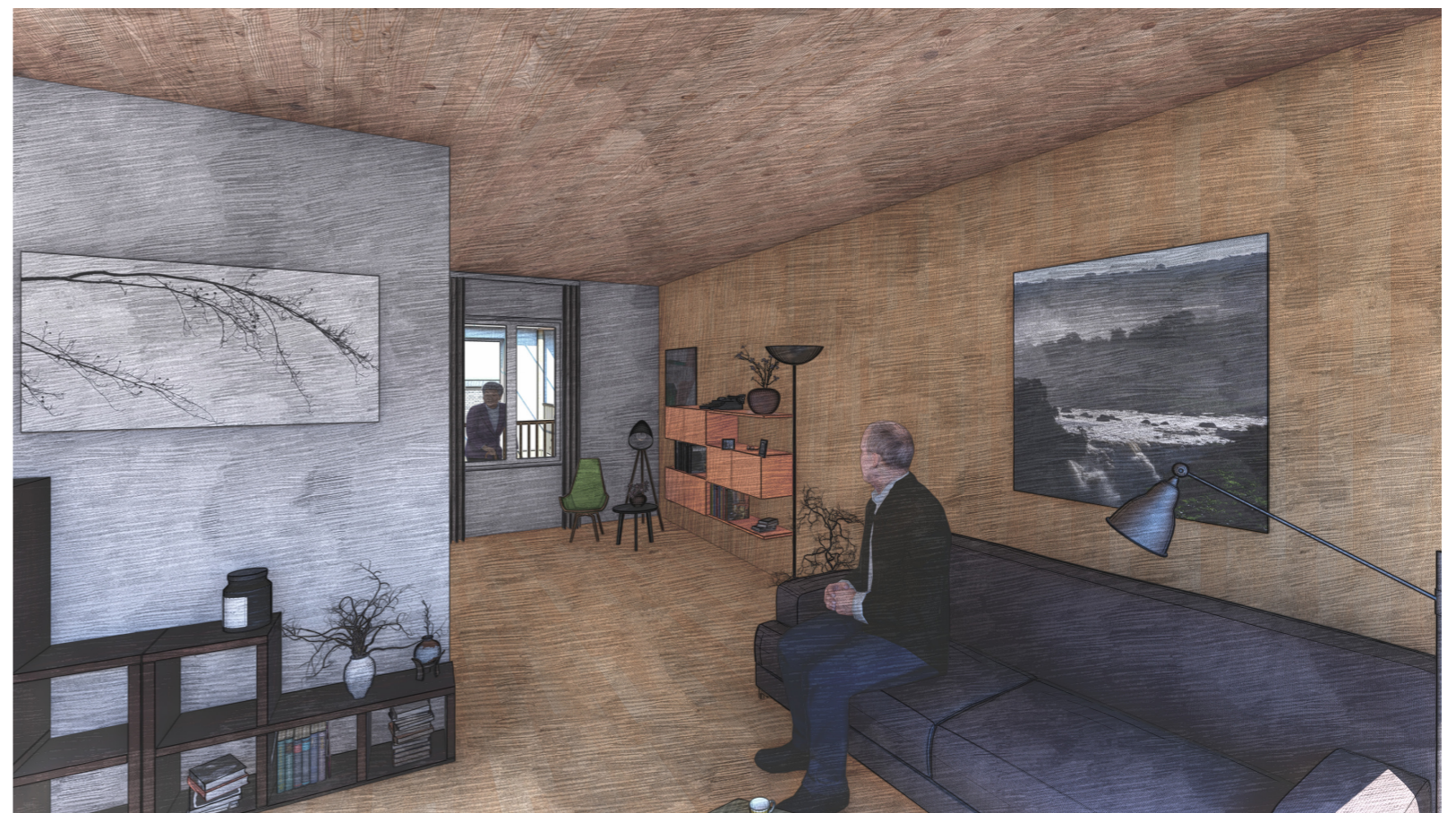


85 years old

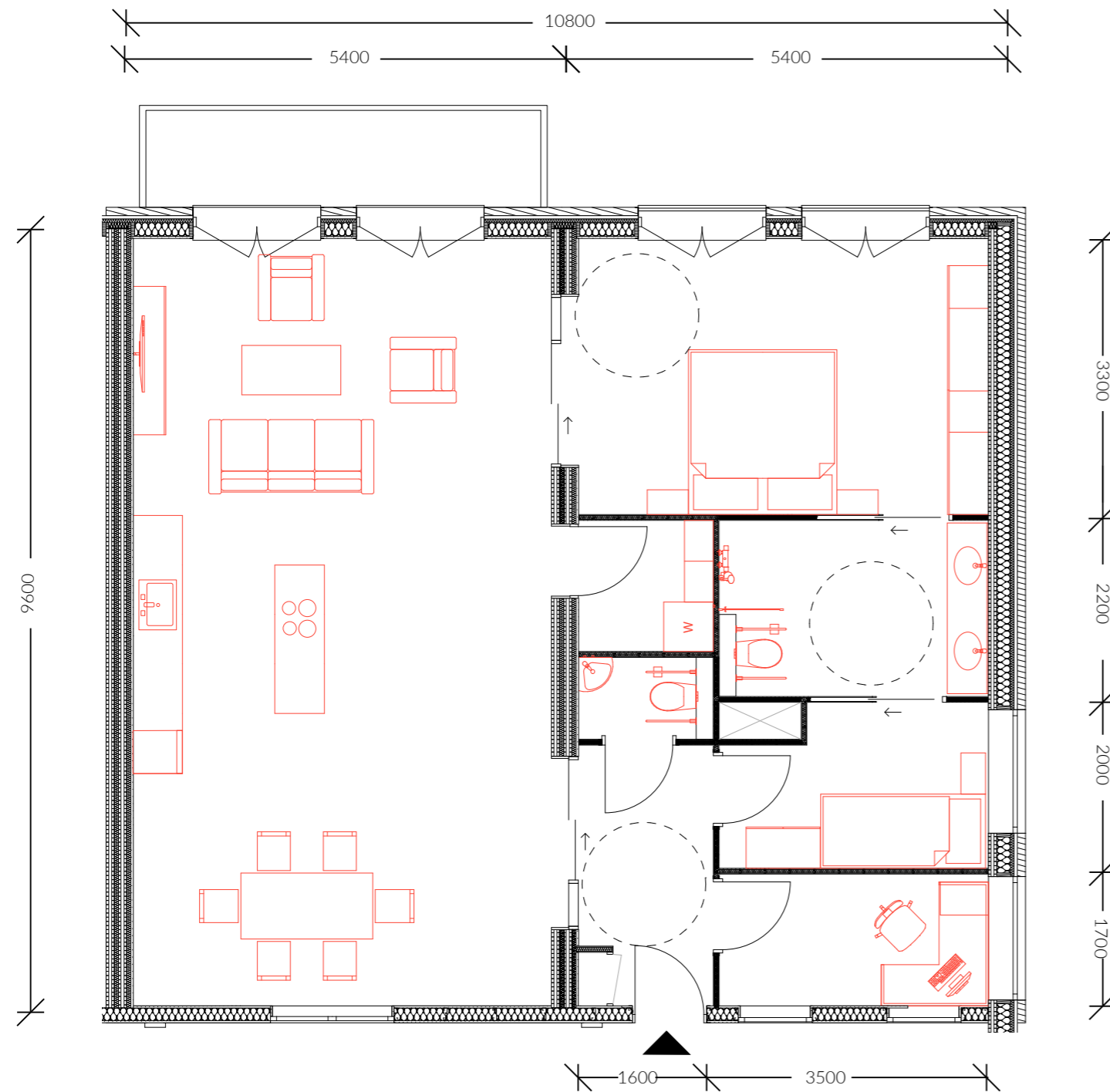


Outside the care unit

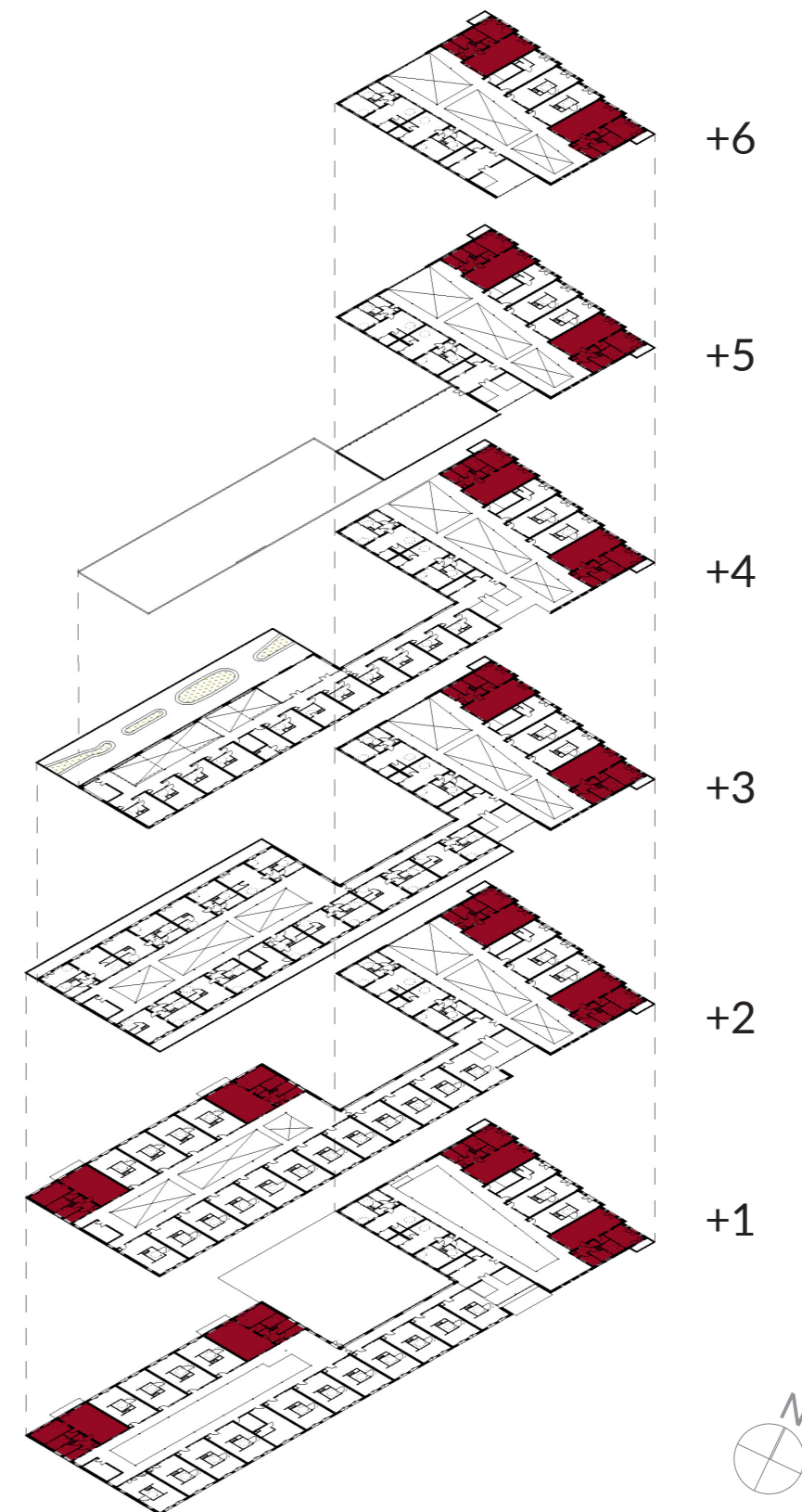
Inside the care unit



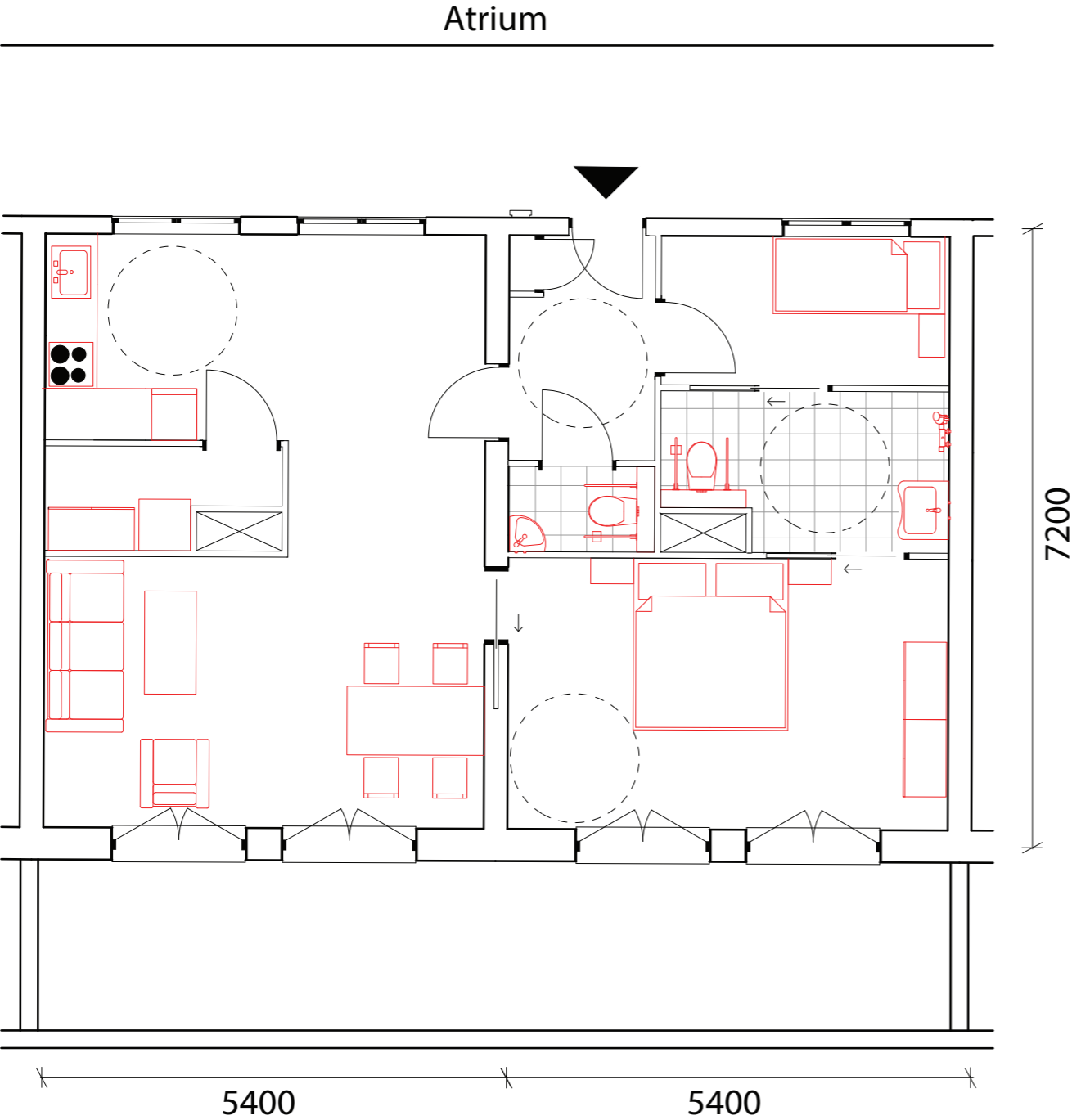
# Dwelling B



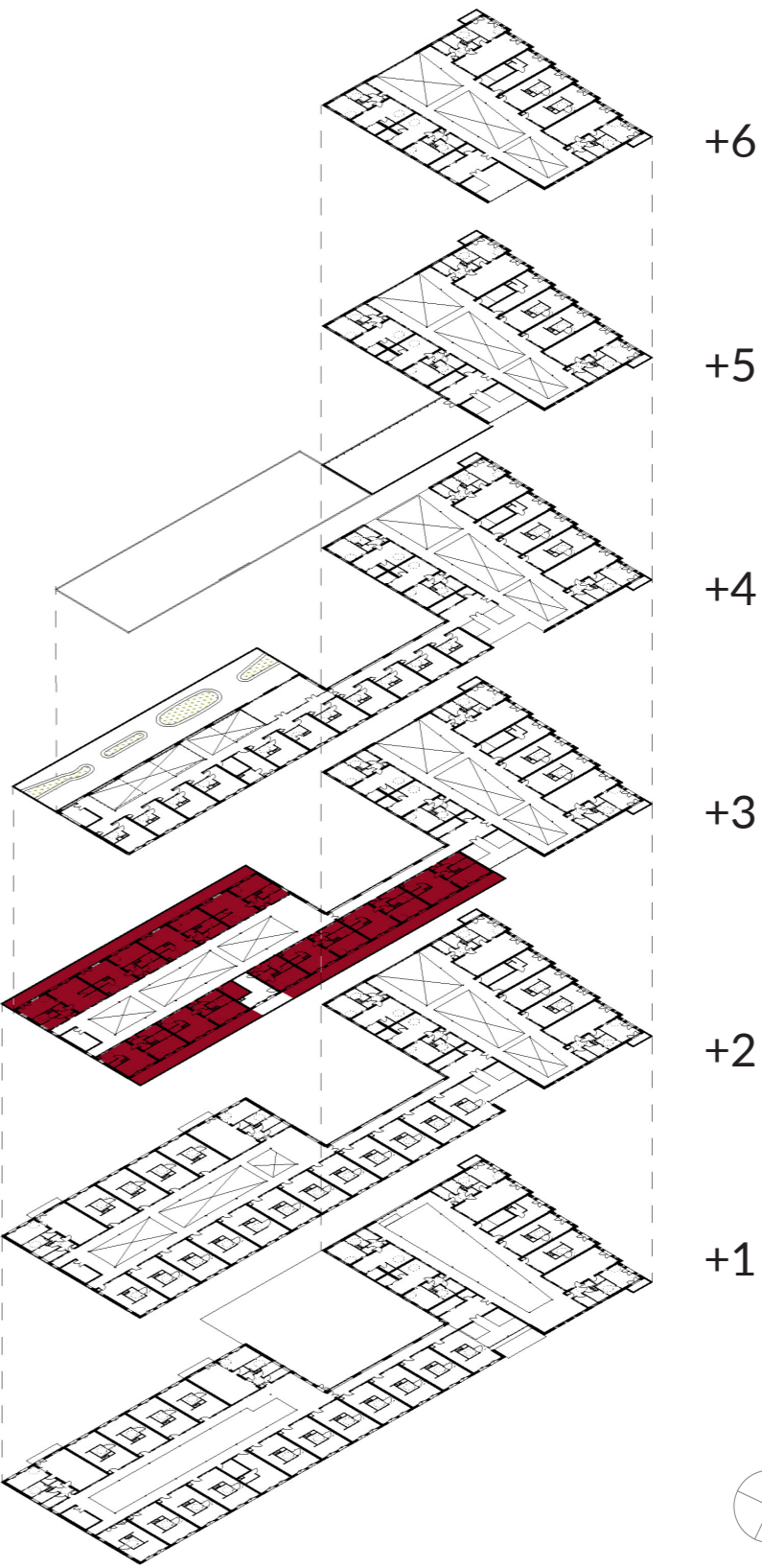
The Large dwellings (94 m<sup>2</sup>)  
 Marked in **Red**  
 Number of dwellings: 16



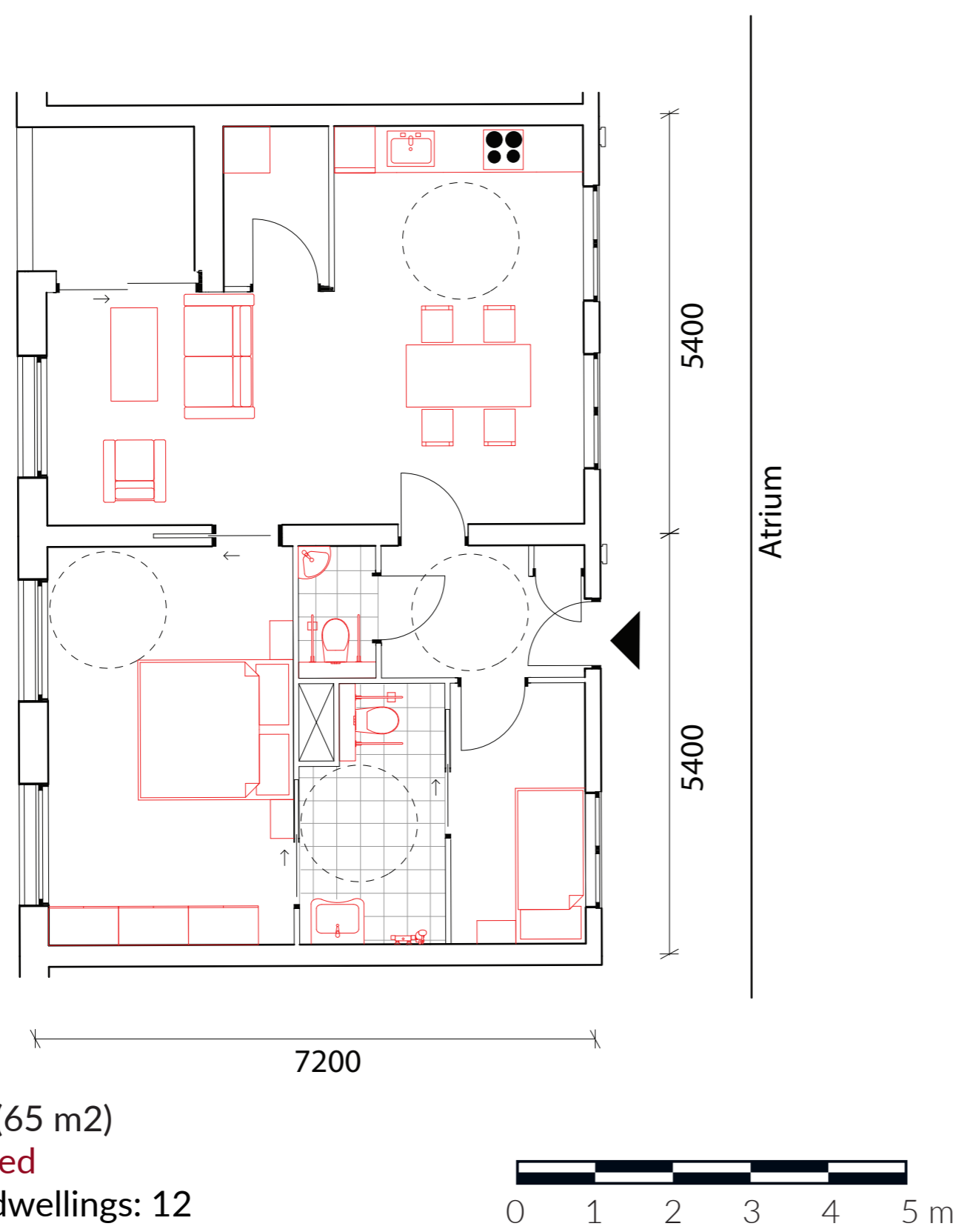
# Dwelling C



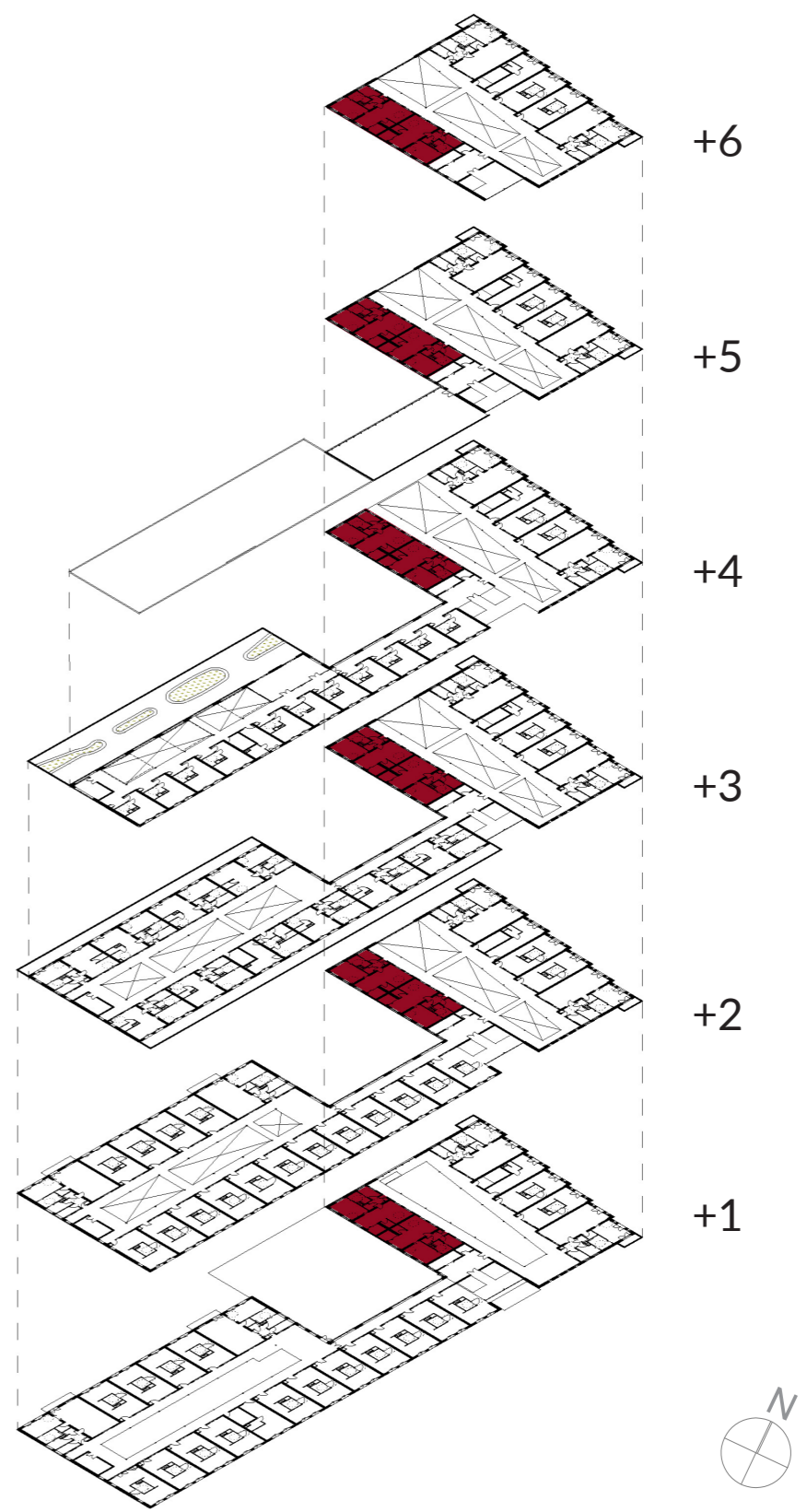
Dwelling C (70 m2)  
Marked in **Red**  
Number of dwellings: 12



# Dwelling D



Dwelling D (65 m2)  
Marked in Red  
Number of dwellings: 12





# Facades

# North-Eastern elevation



# South-Western elevation



# North-Western elevation



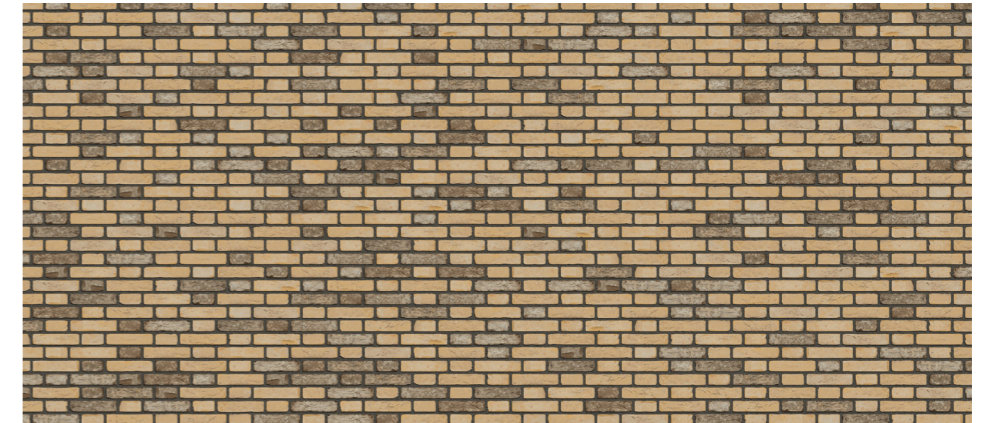
# South-Eastern elevation



# South-Eastern elevation



# Facade zoomed in



Light brick in Flemish bond



Markisolette sunscreens

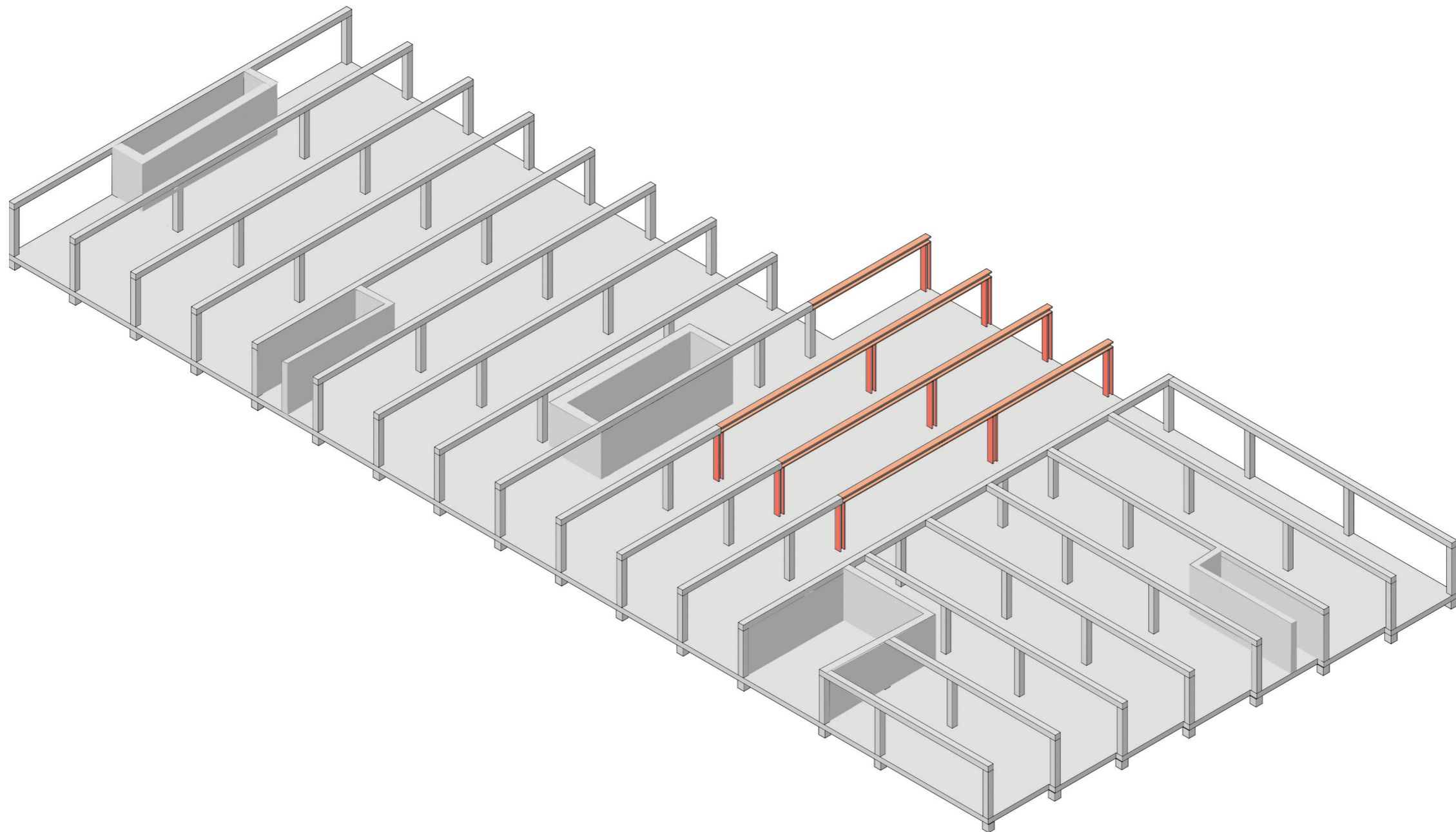


Wood textured concrete

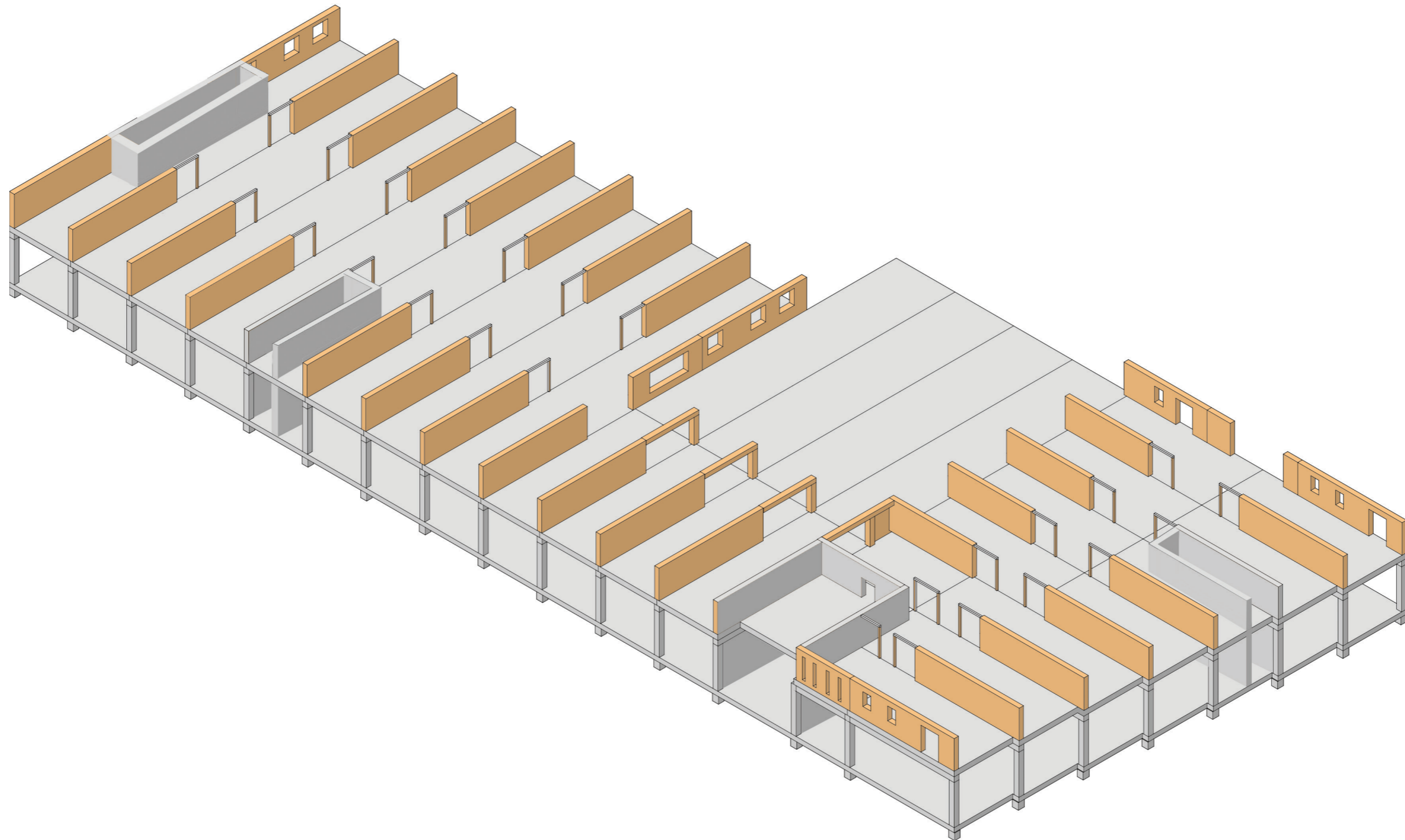
# Construction and Climate



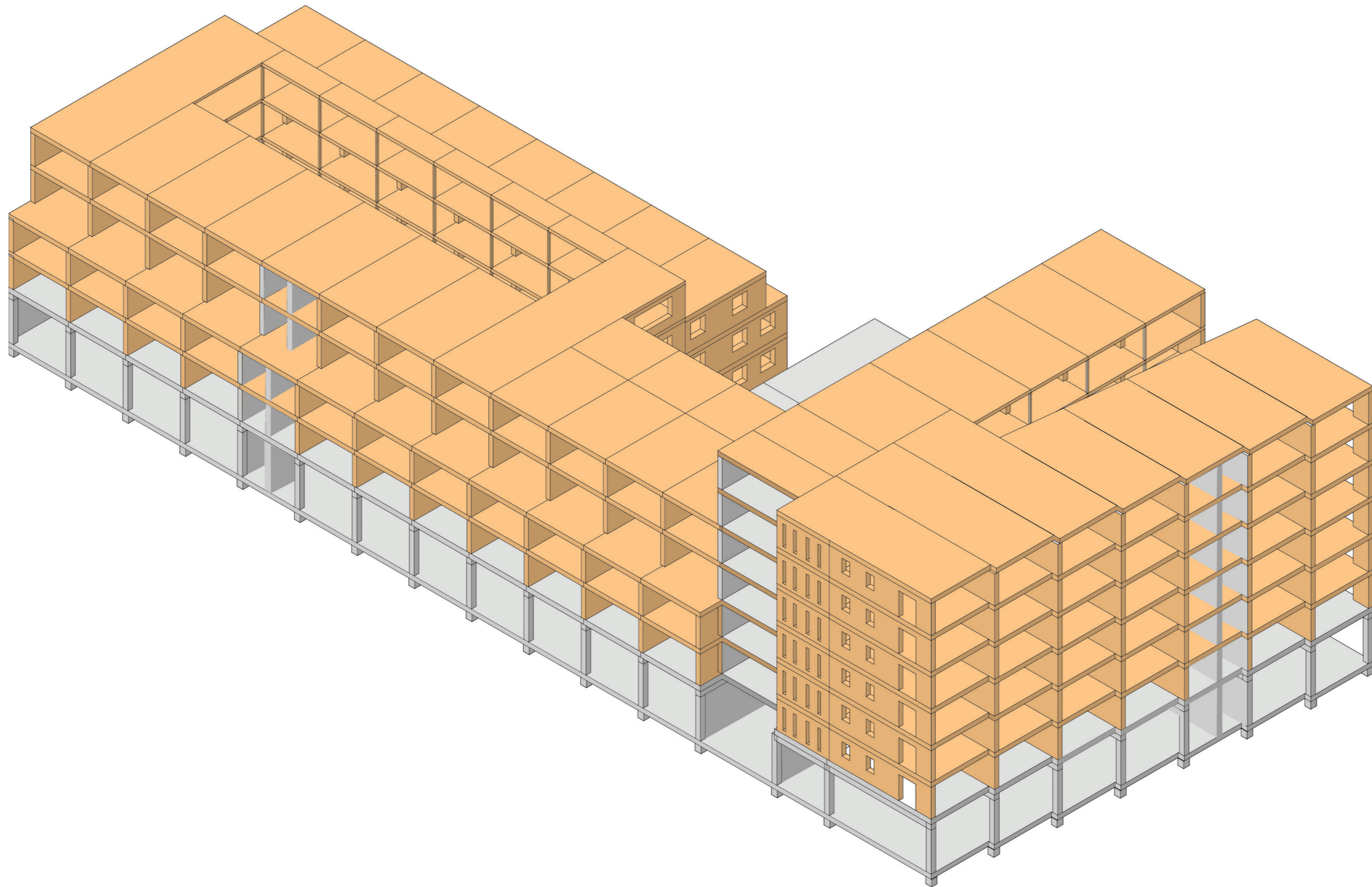
# Ground floor assembly



# Second floor assembly



# Additional floors assembly

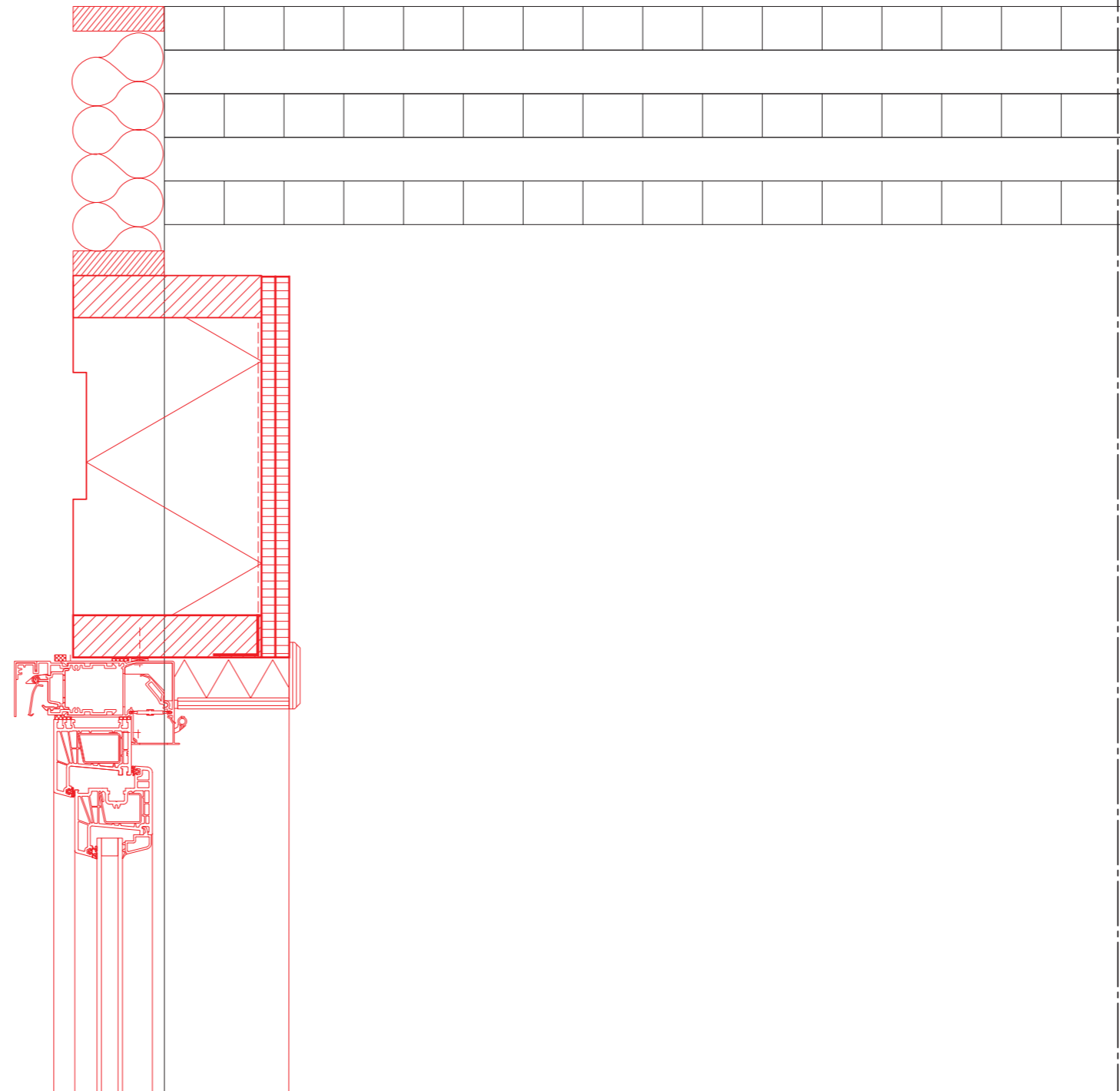


# Assembly

1

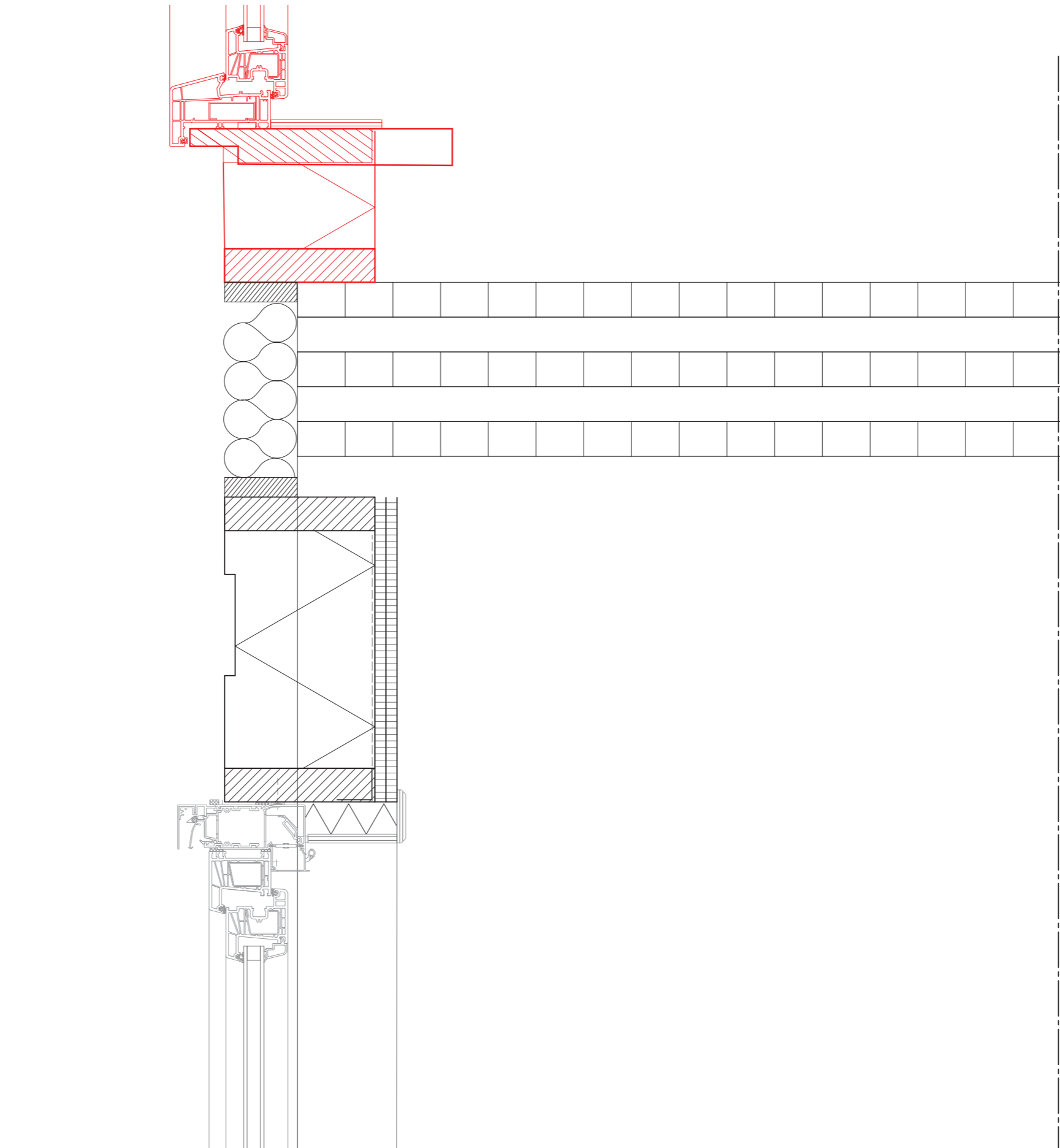

# Assembly

2



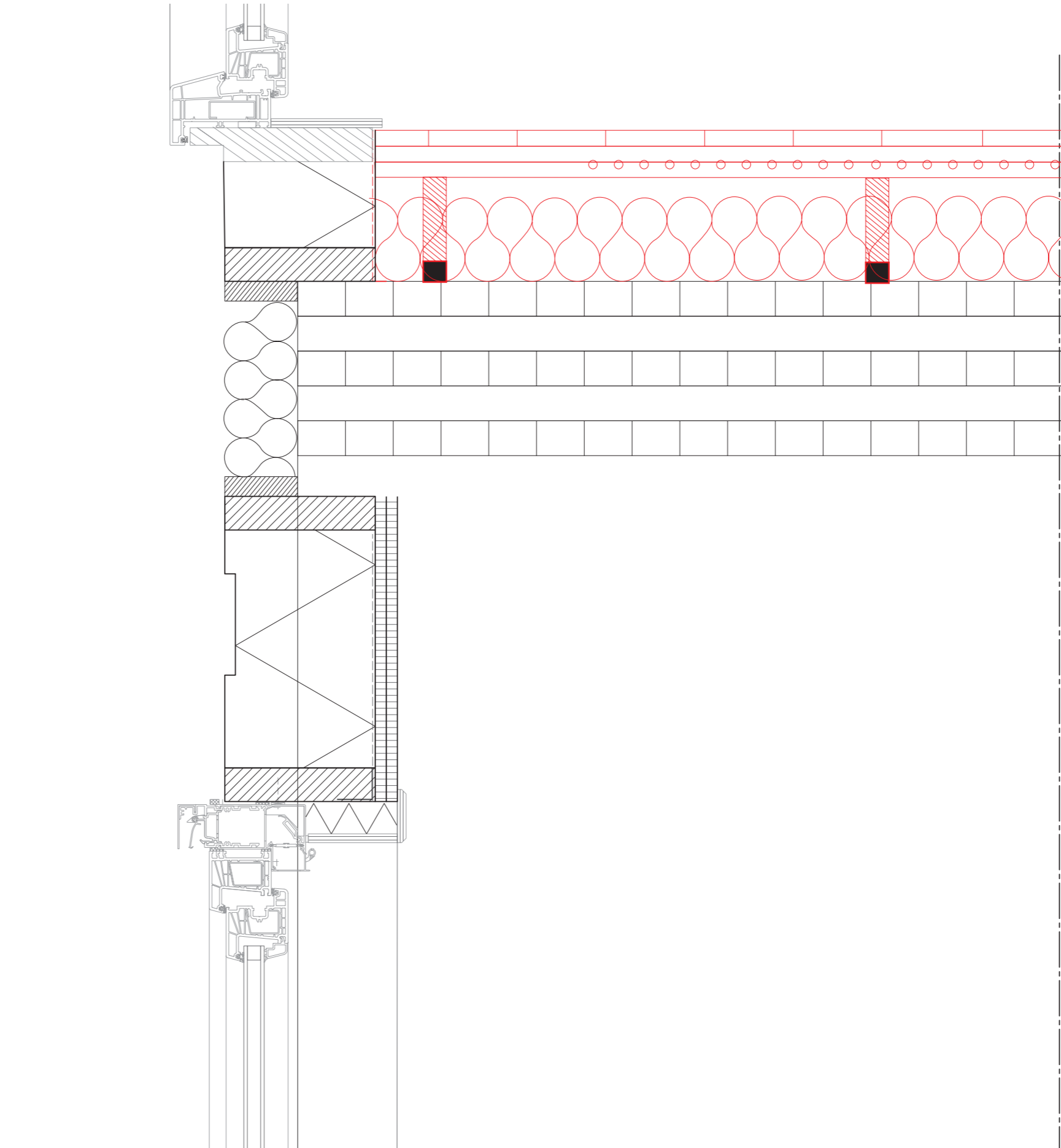
# Assembly

3



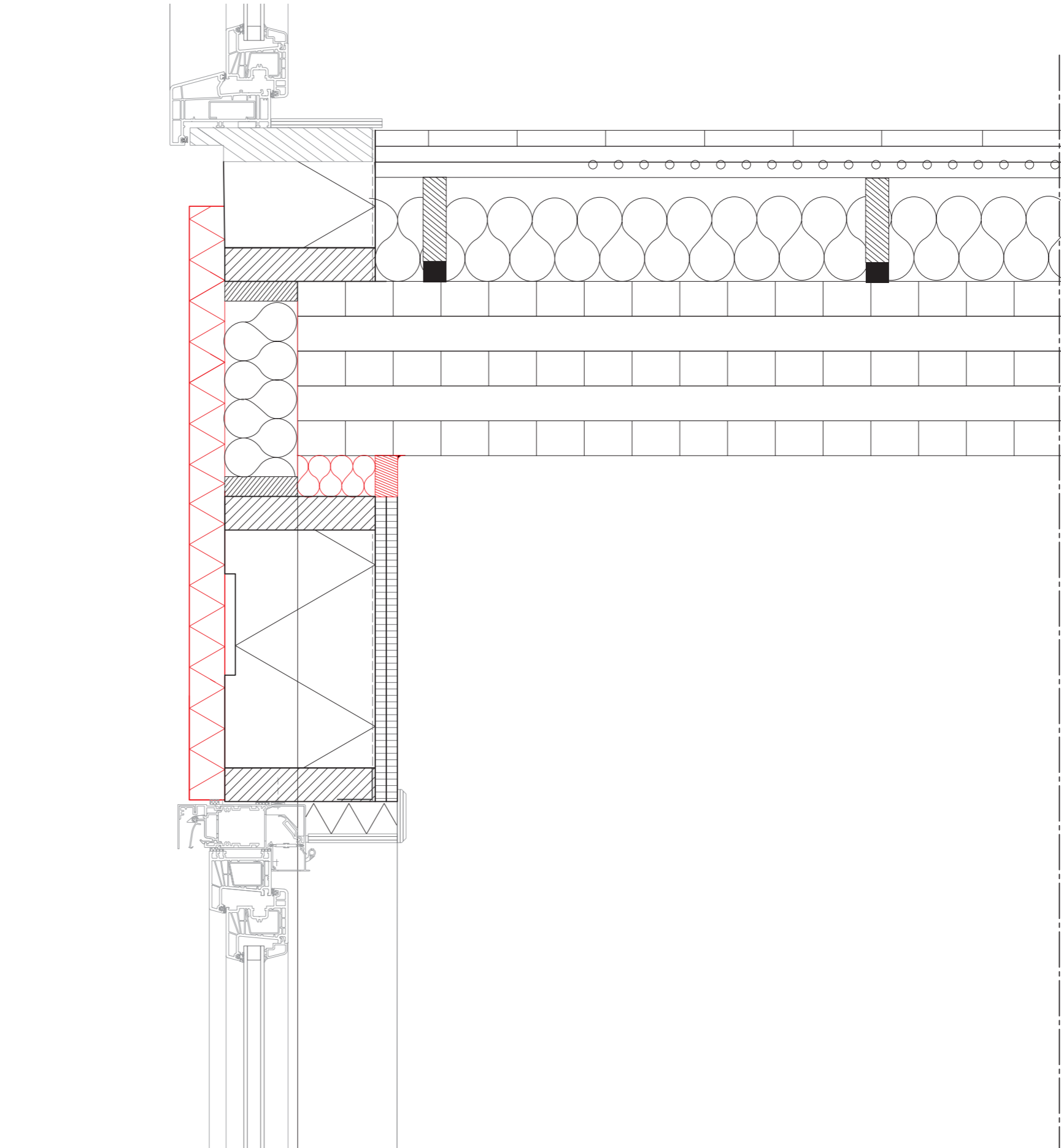
# Assembly

4



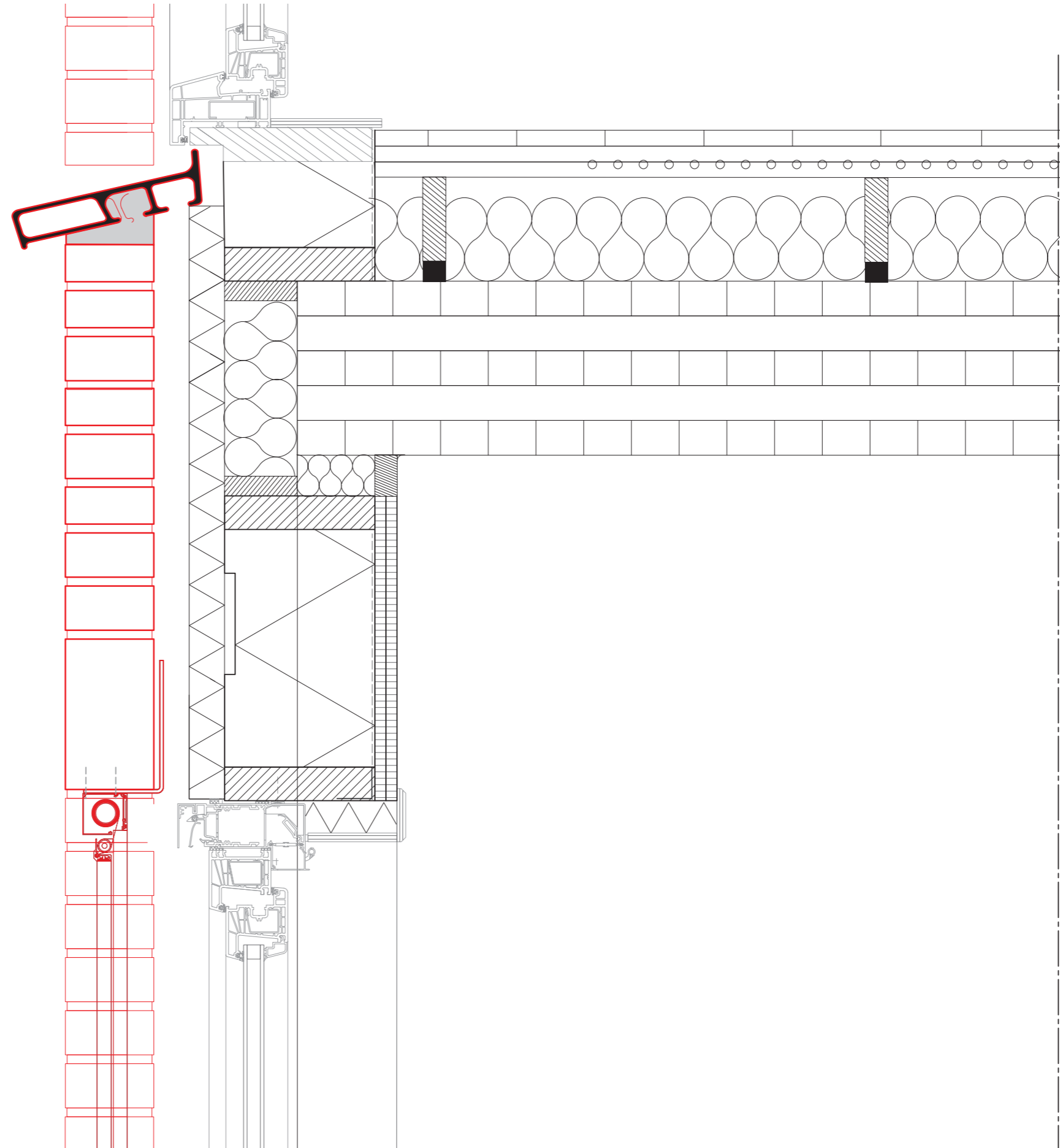
# Assembly

5

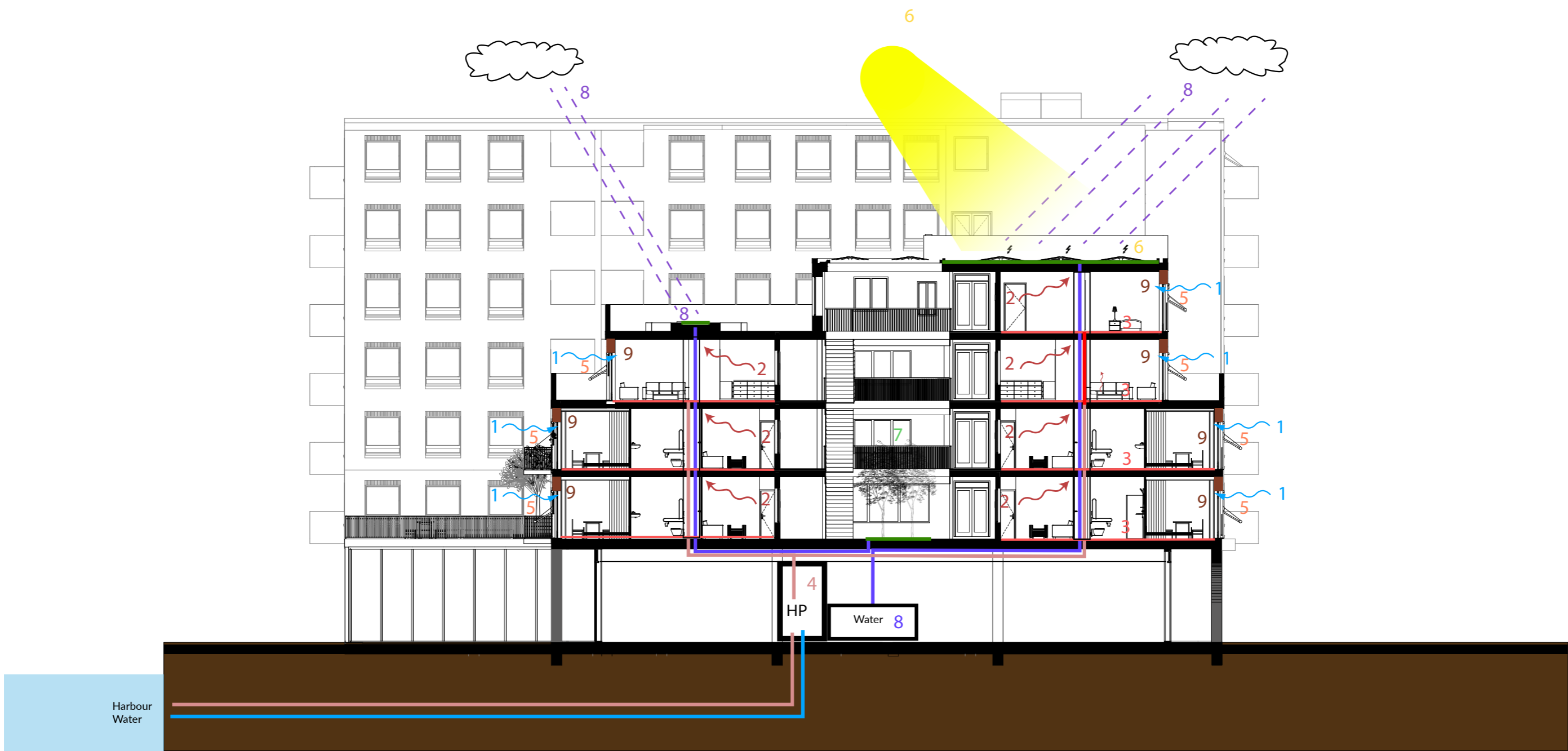


# Assembly

6



# Climate and sustainability concept







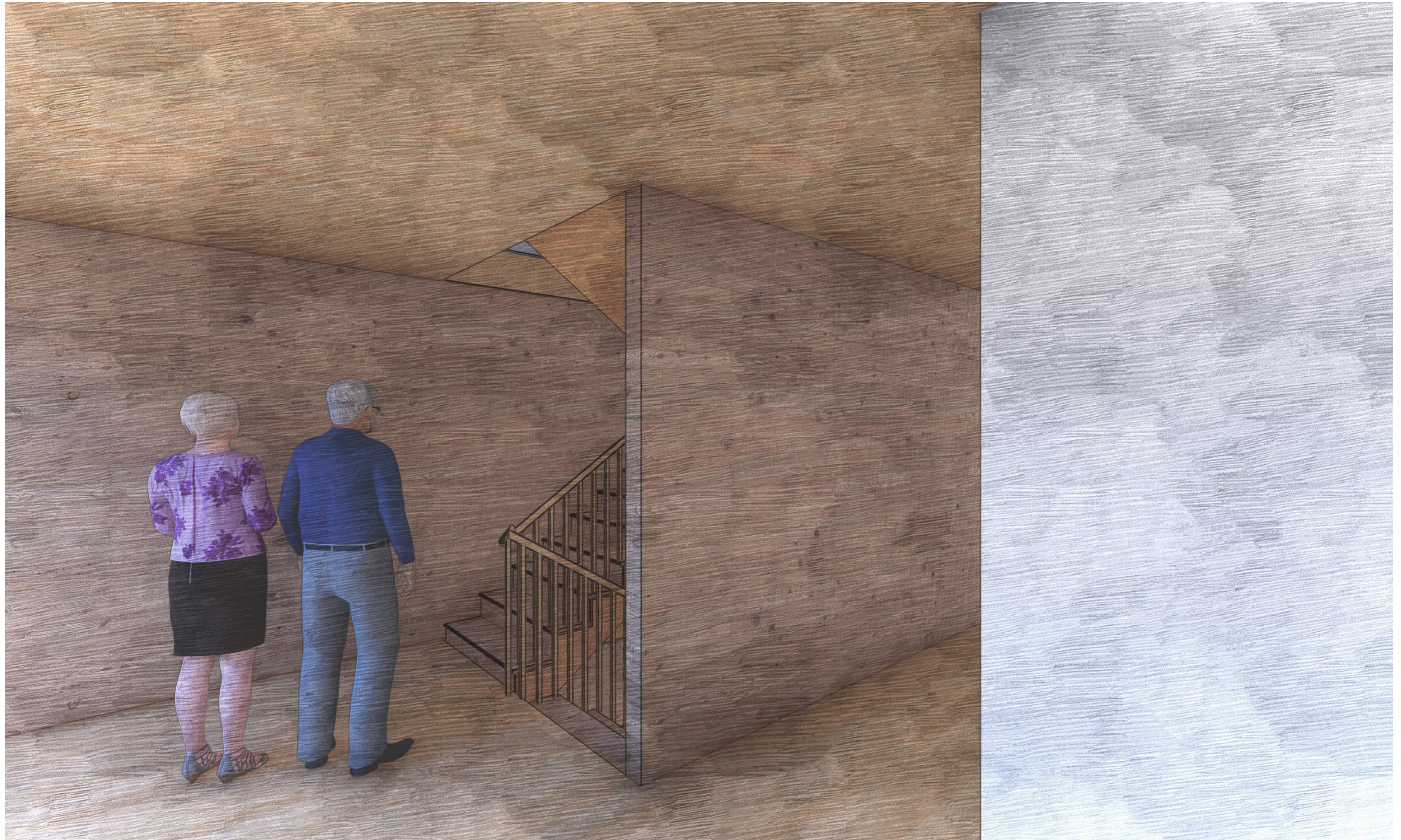
**Thank you for listening**

**Are there any questions?**

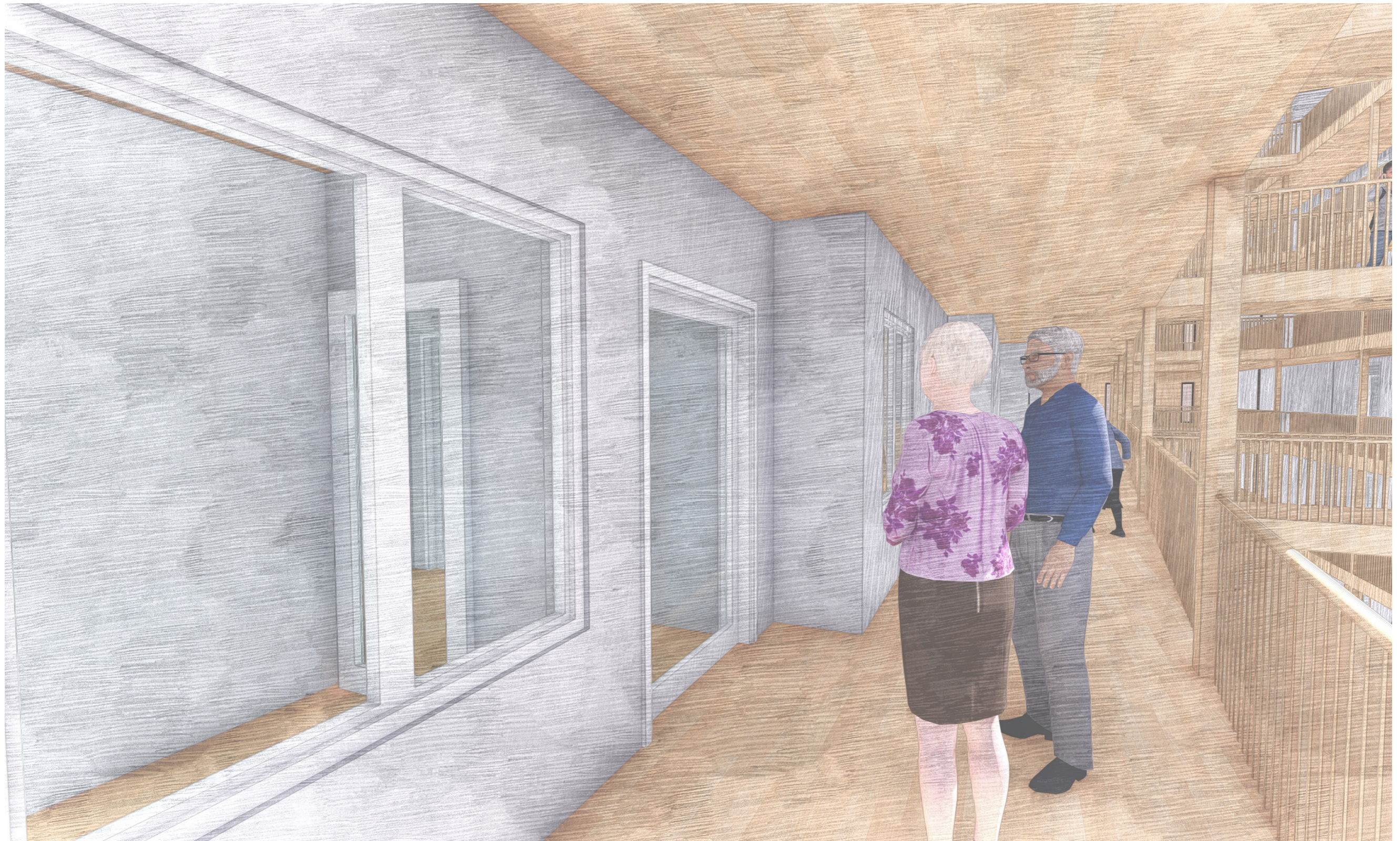
# Inside Dwelling B



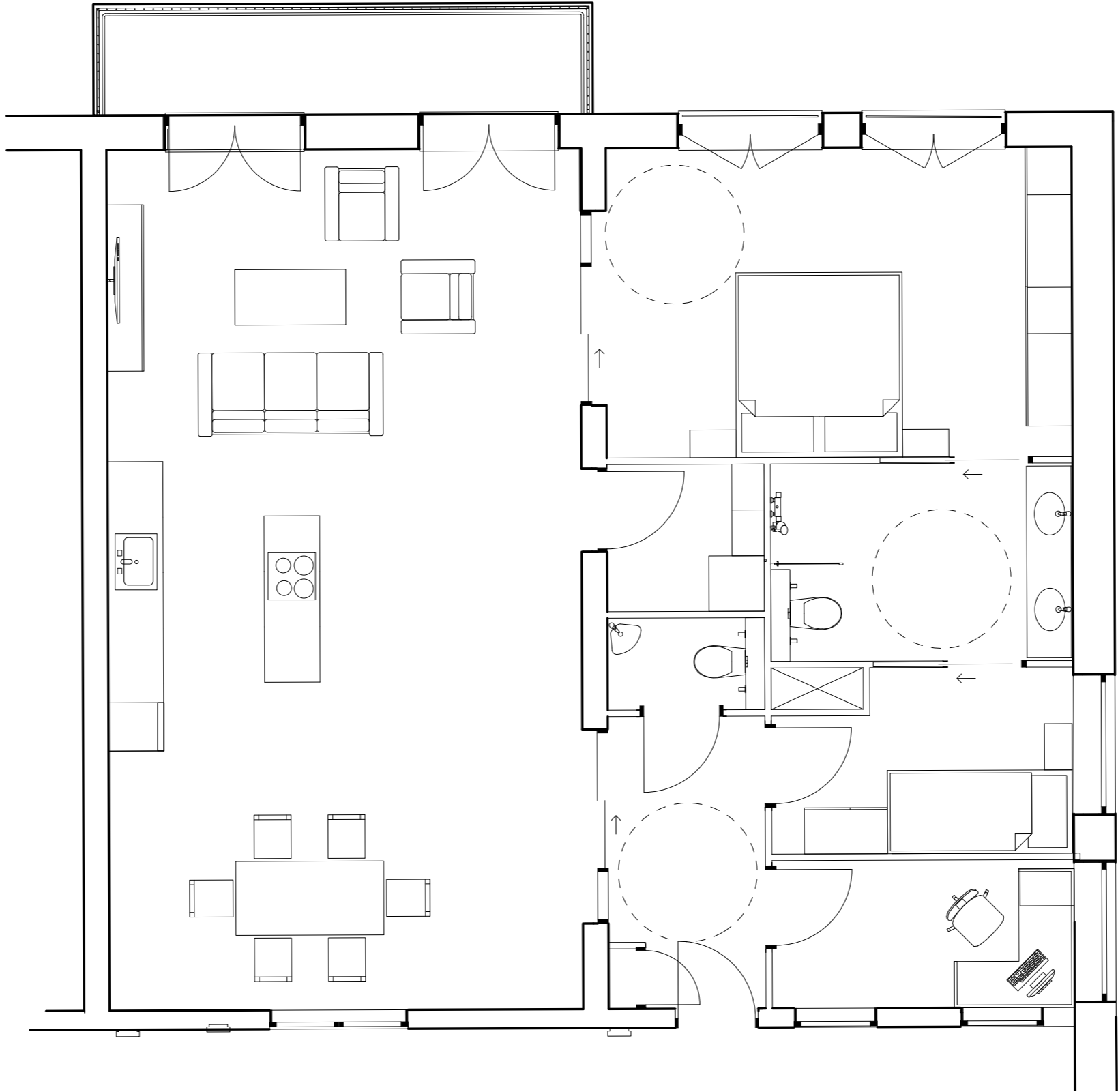
In the stairway towards Dwelling B



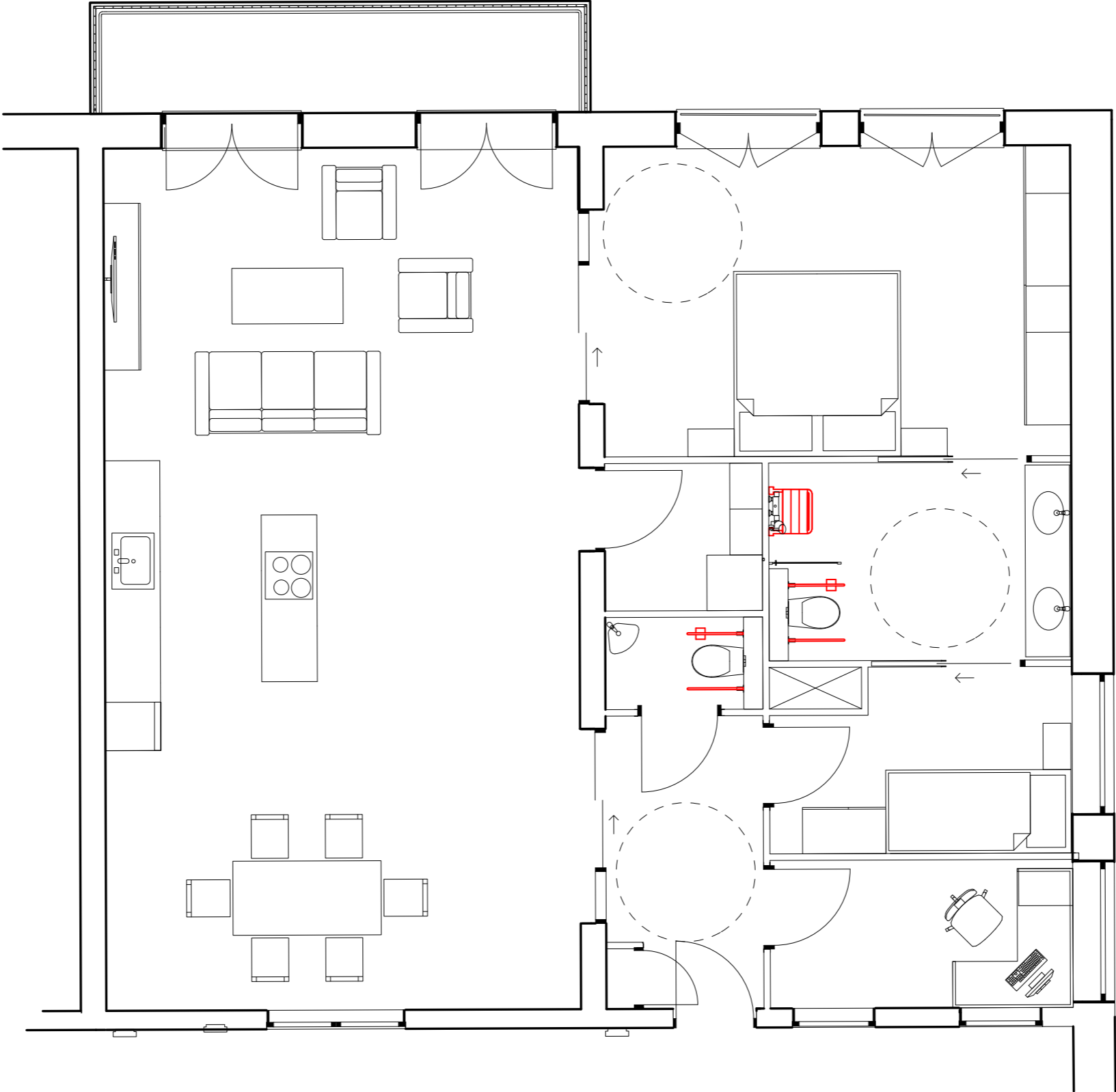
In front of Dwelling B



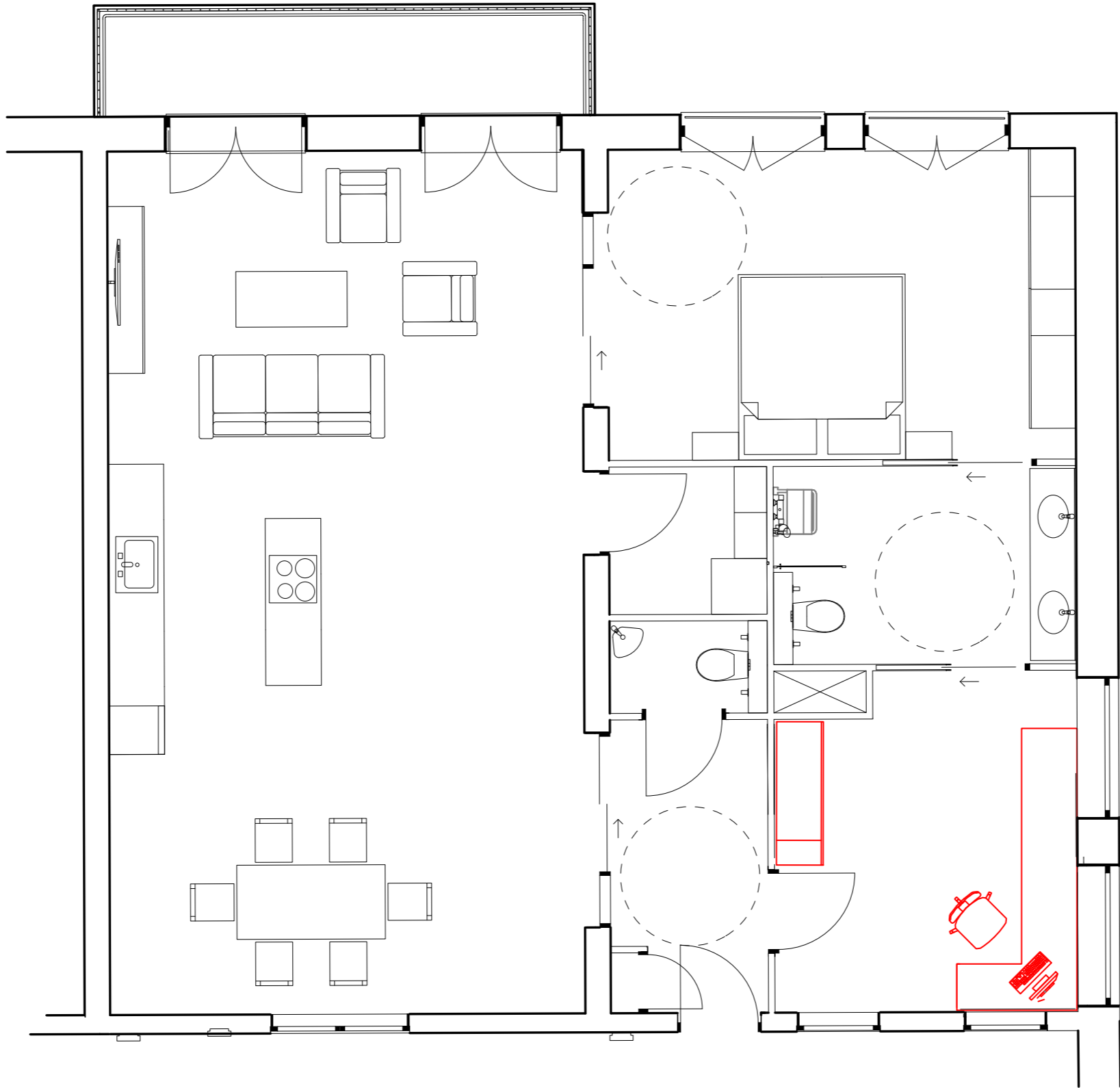
Floorplan Dwelling B at 55 years old



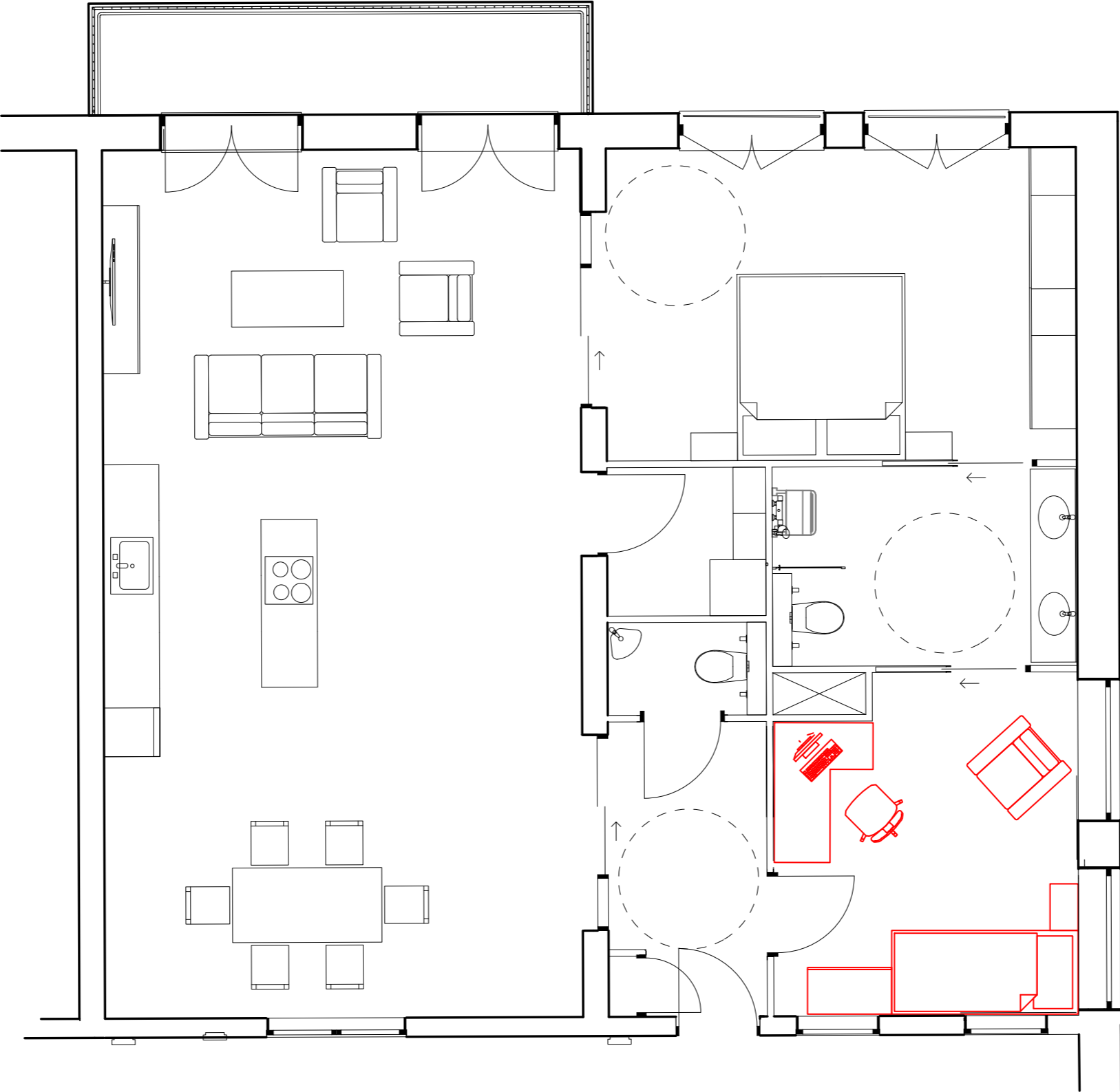
Floorplan Dwelling B at 65 years old



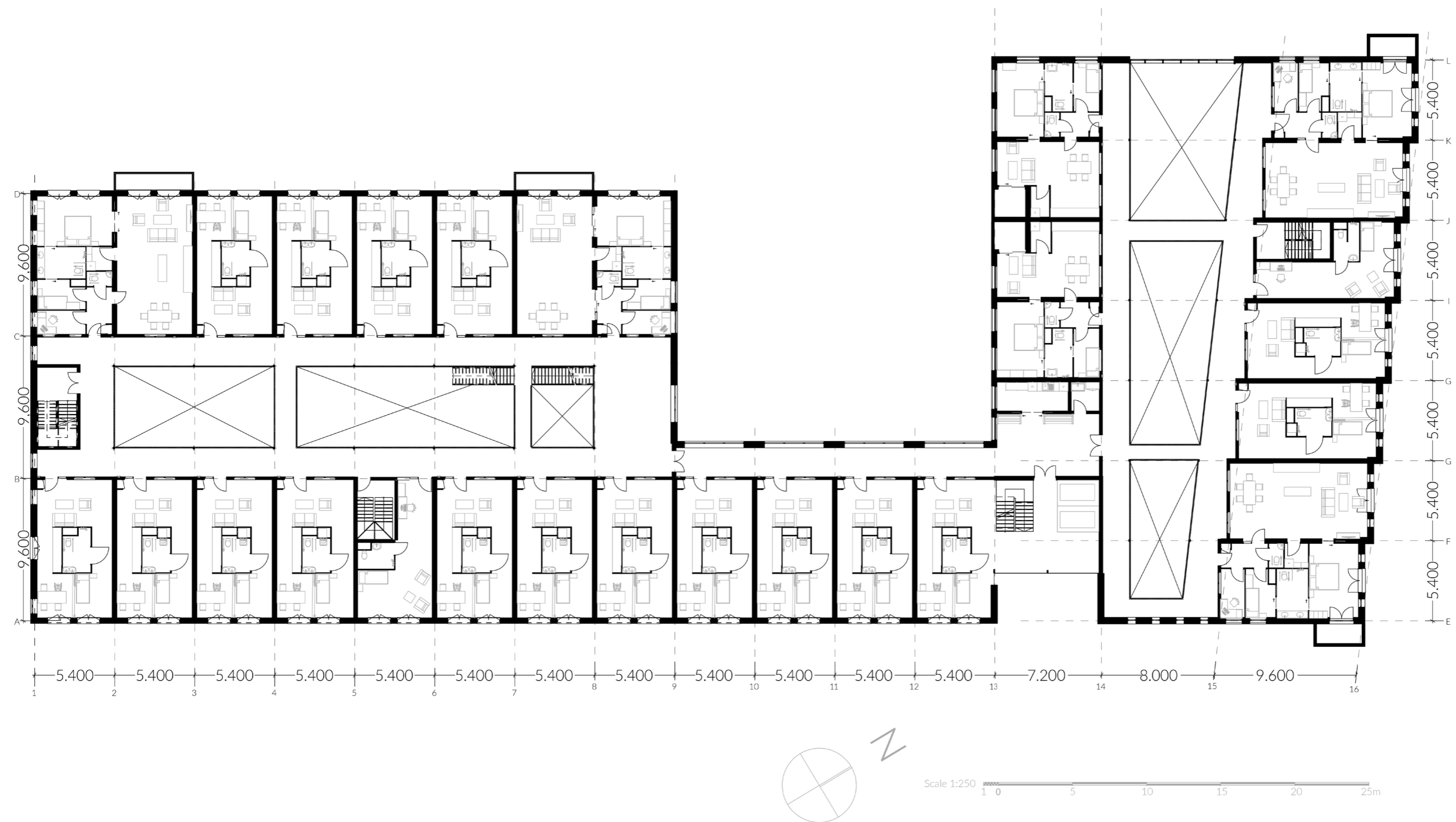
Floorplan Dwelling B at 75 years old



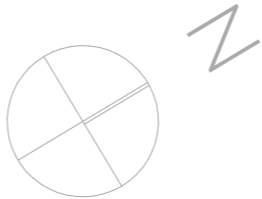
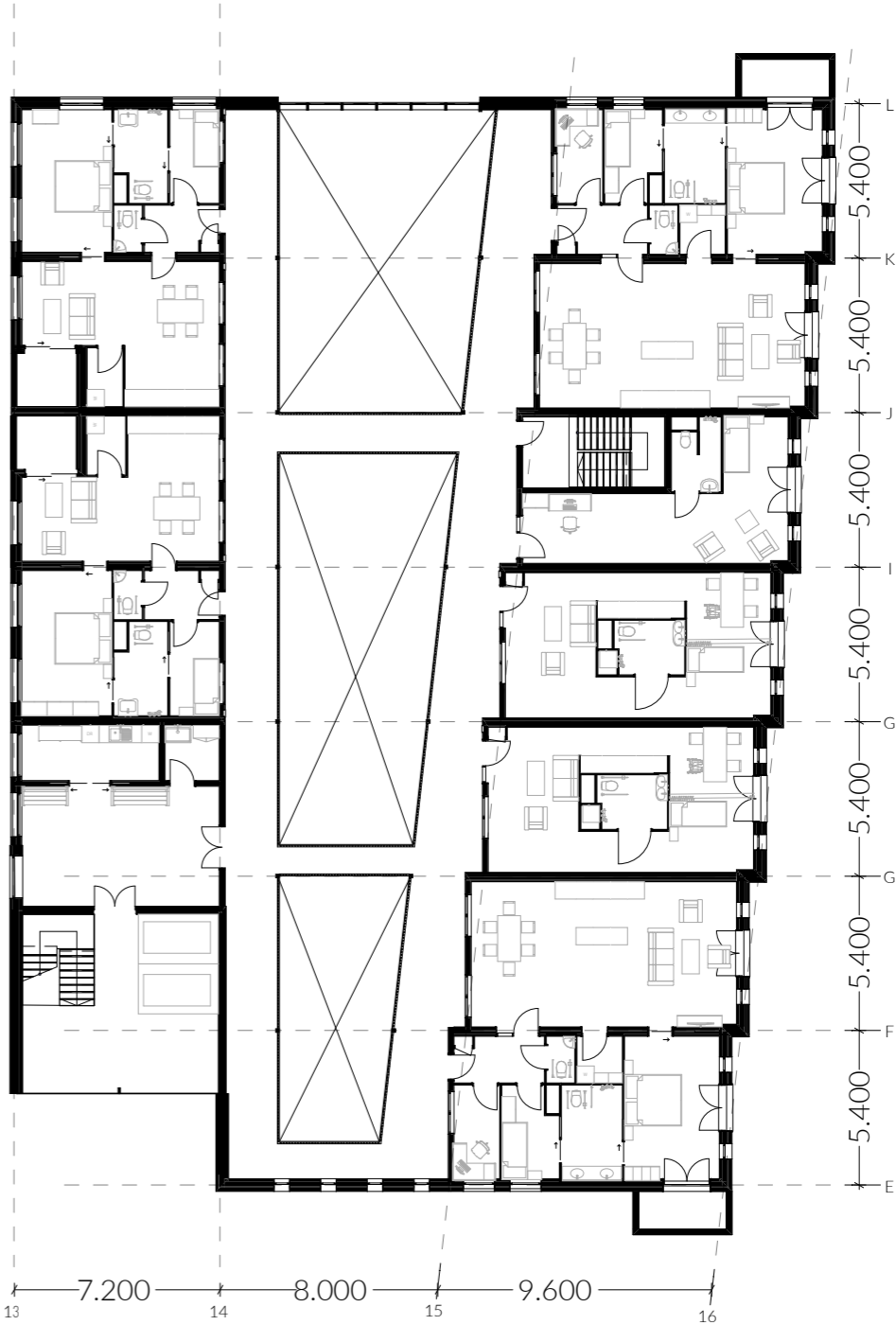
Floorplan Dwelling B at 85 years old



# Second floor

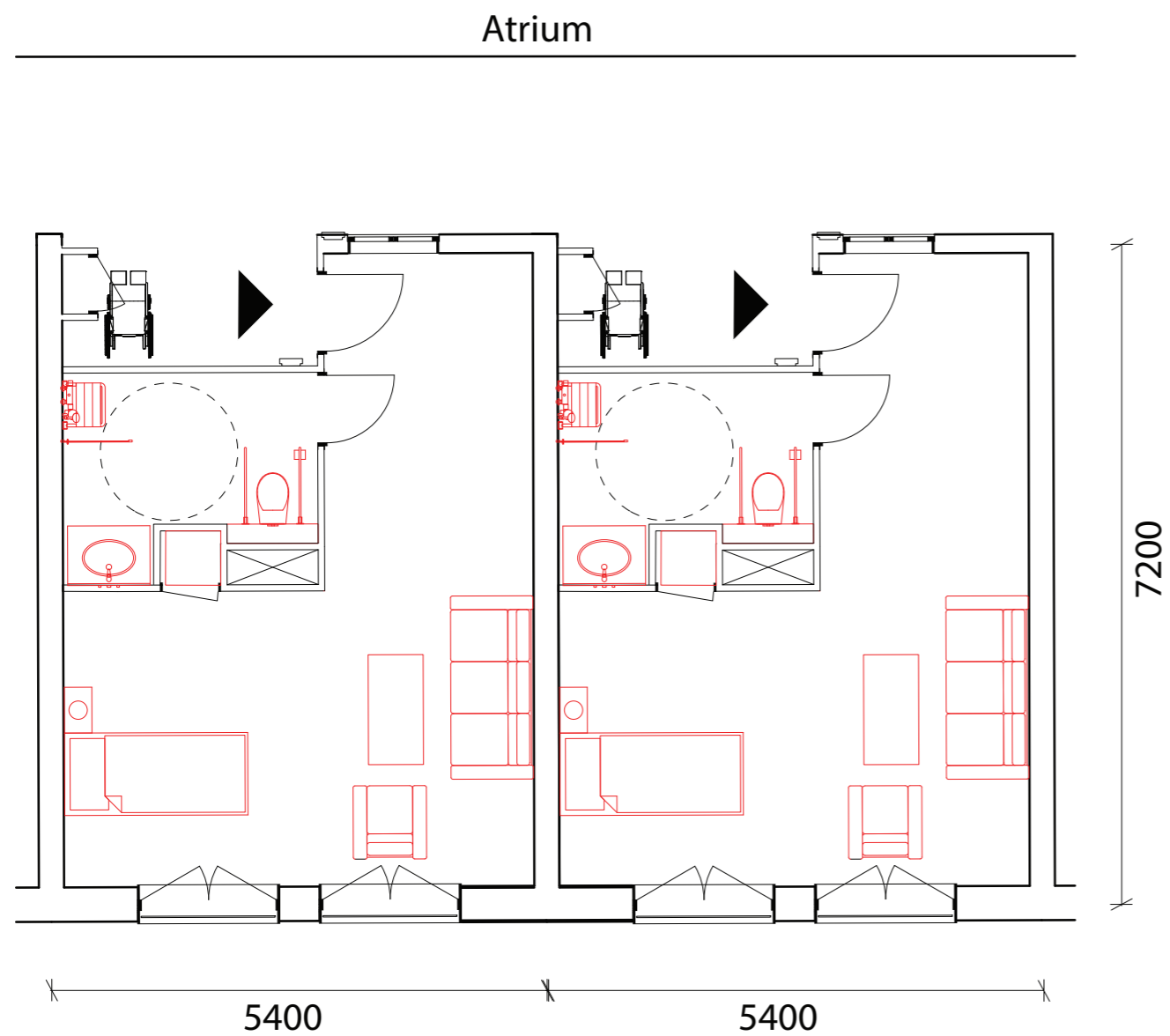


# Sixth floor 1:250

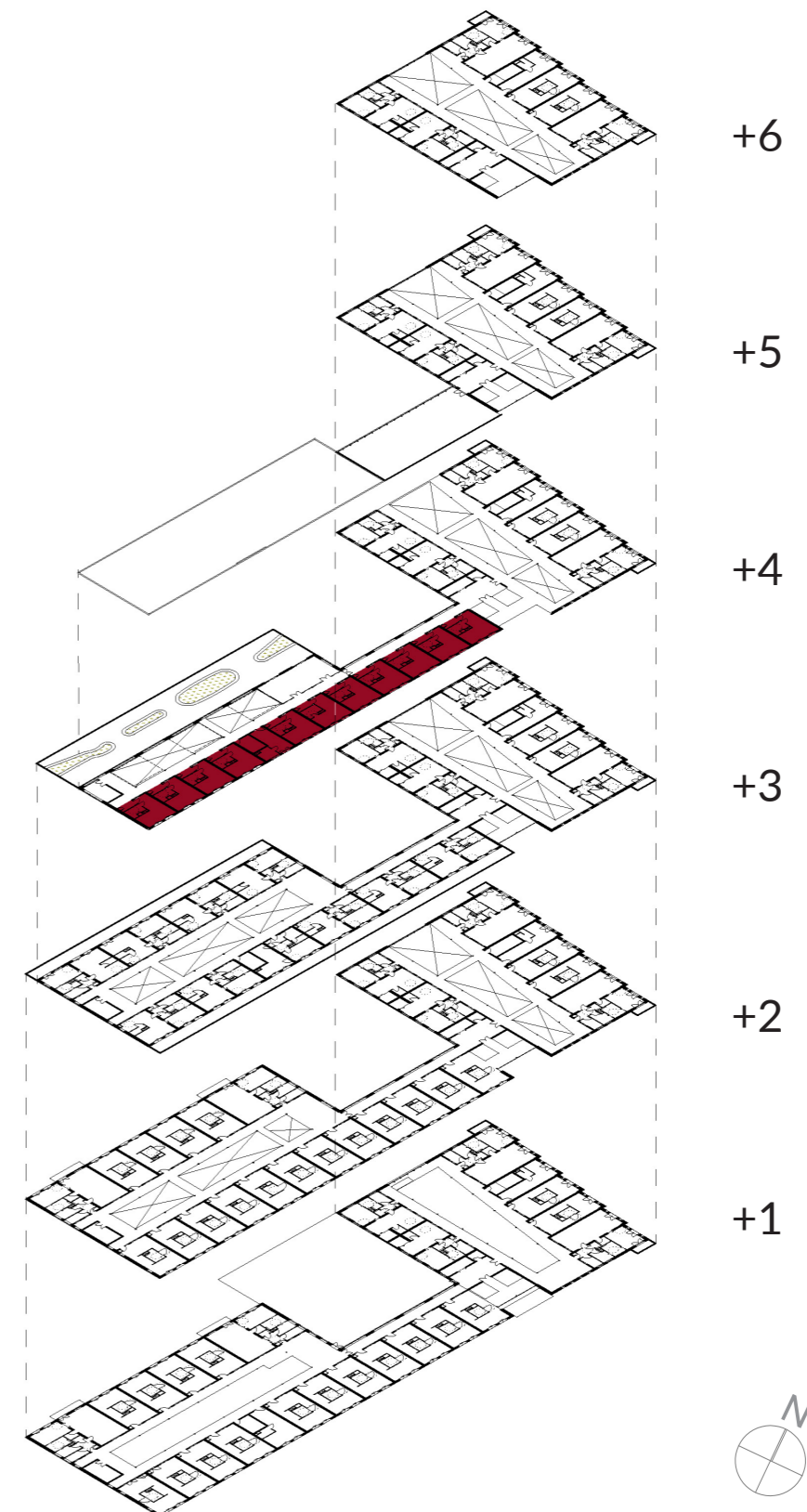


Scale 1:250 1 0 5 10 15 20 25m

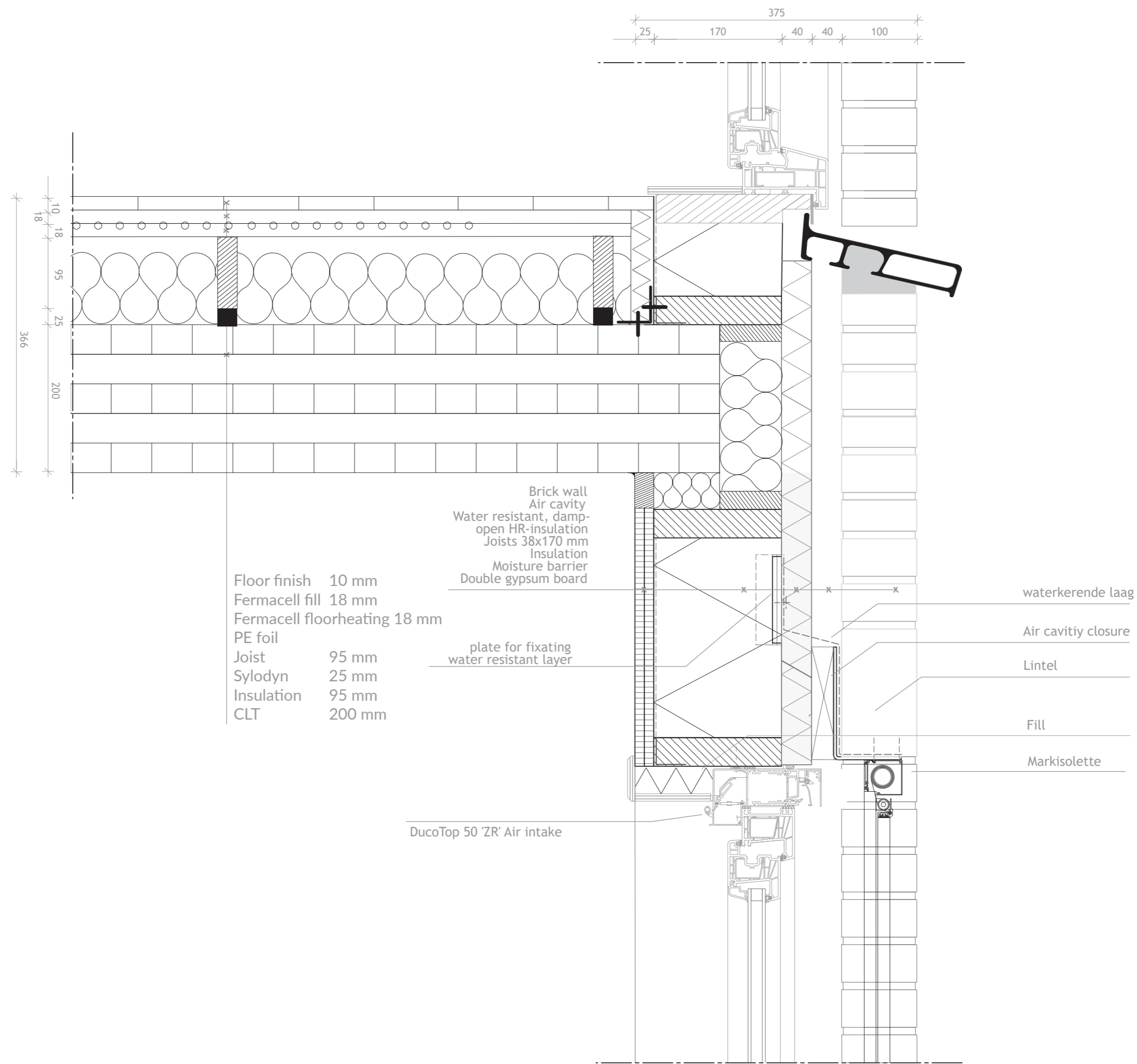
# Dwelling E



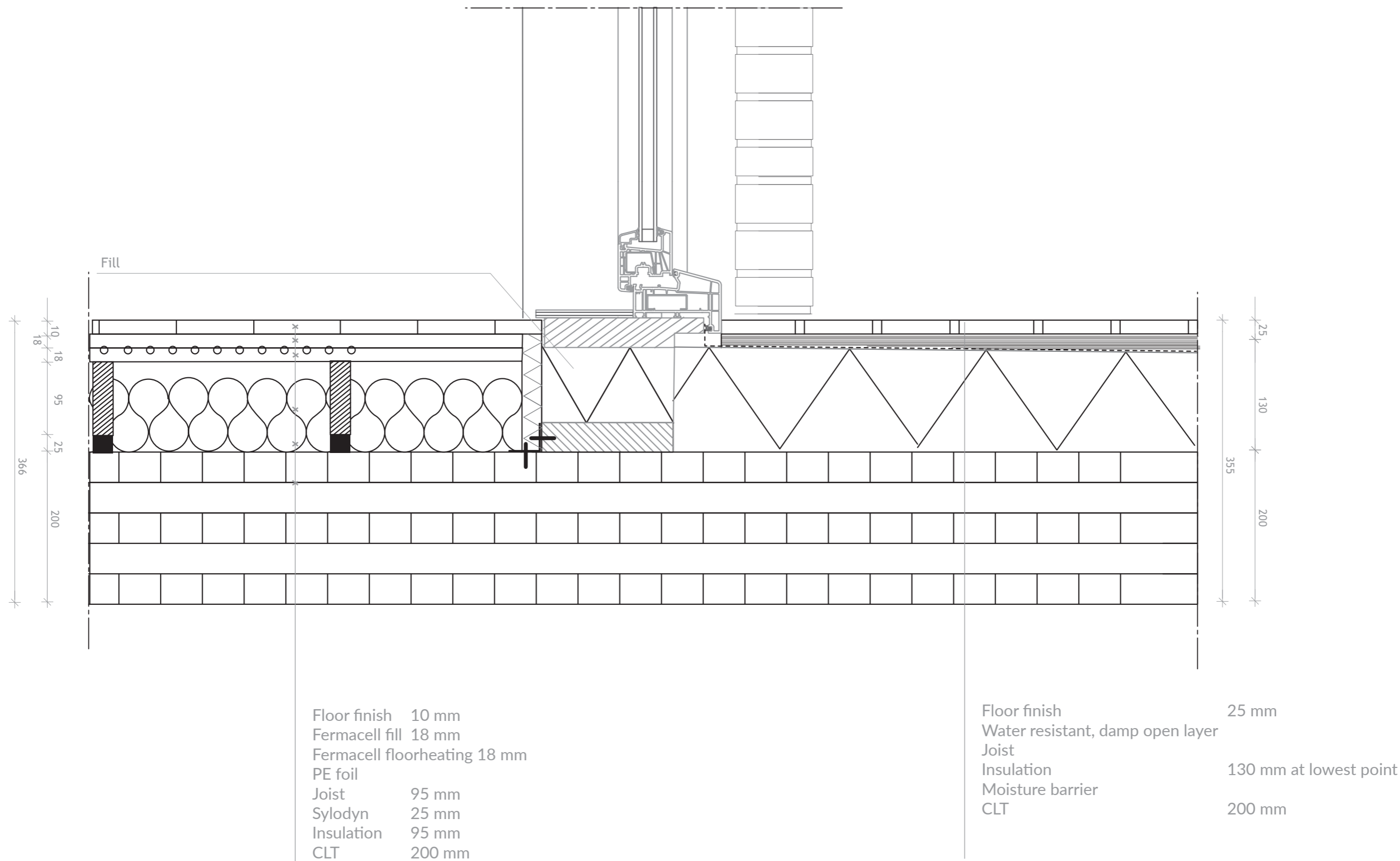
The Care units (25 m<sup>2</sup>)  
 Marked in **Red**  
 Number of dwellings: 11



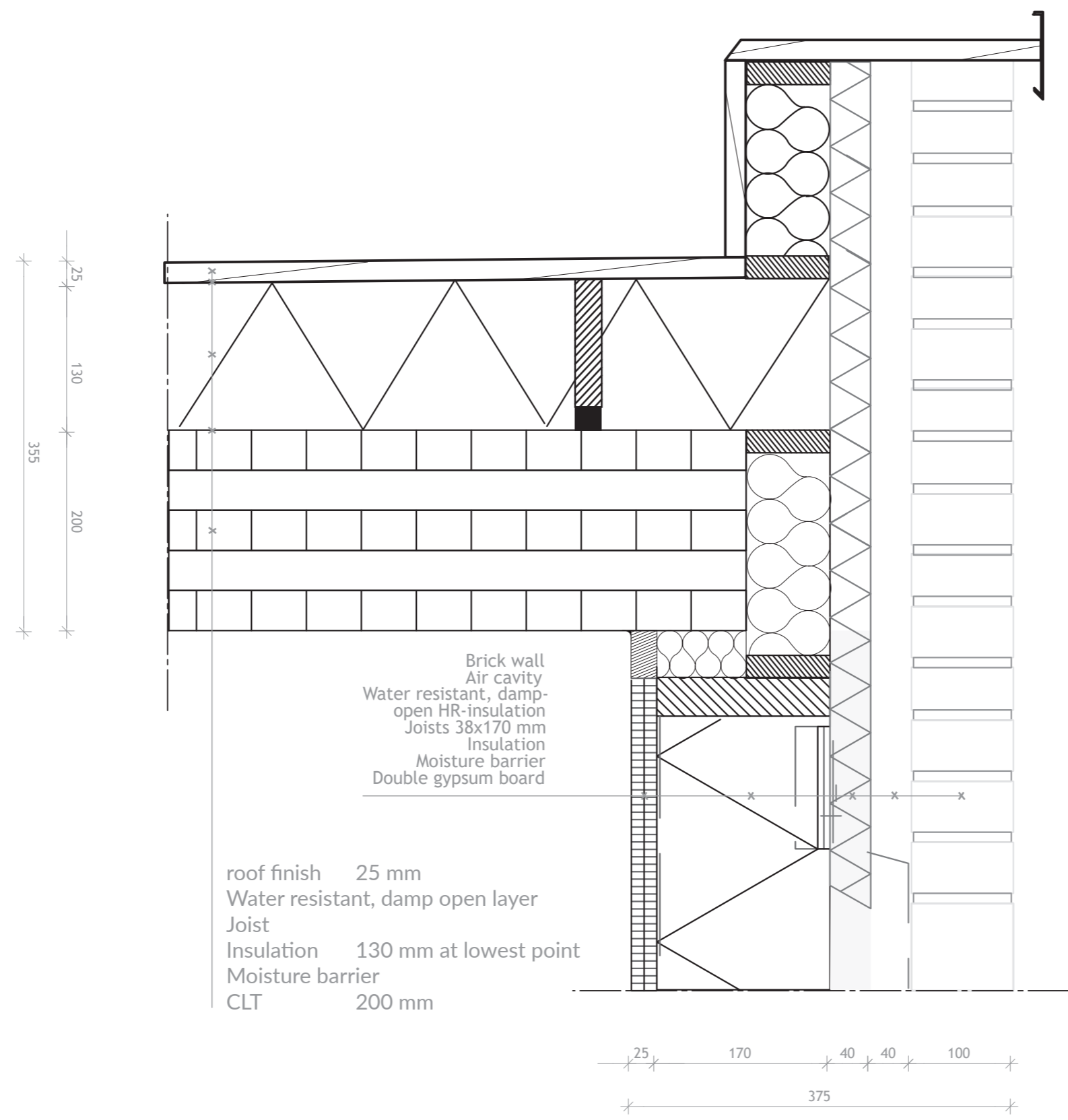
1:5 A



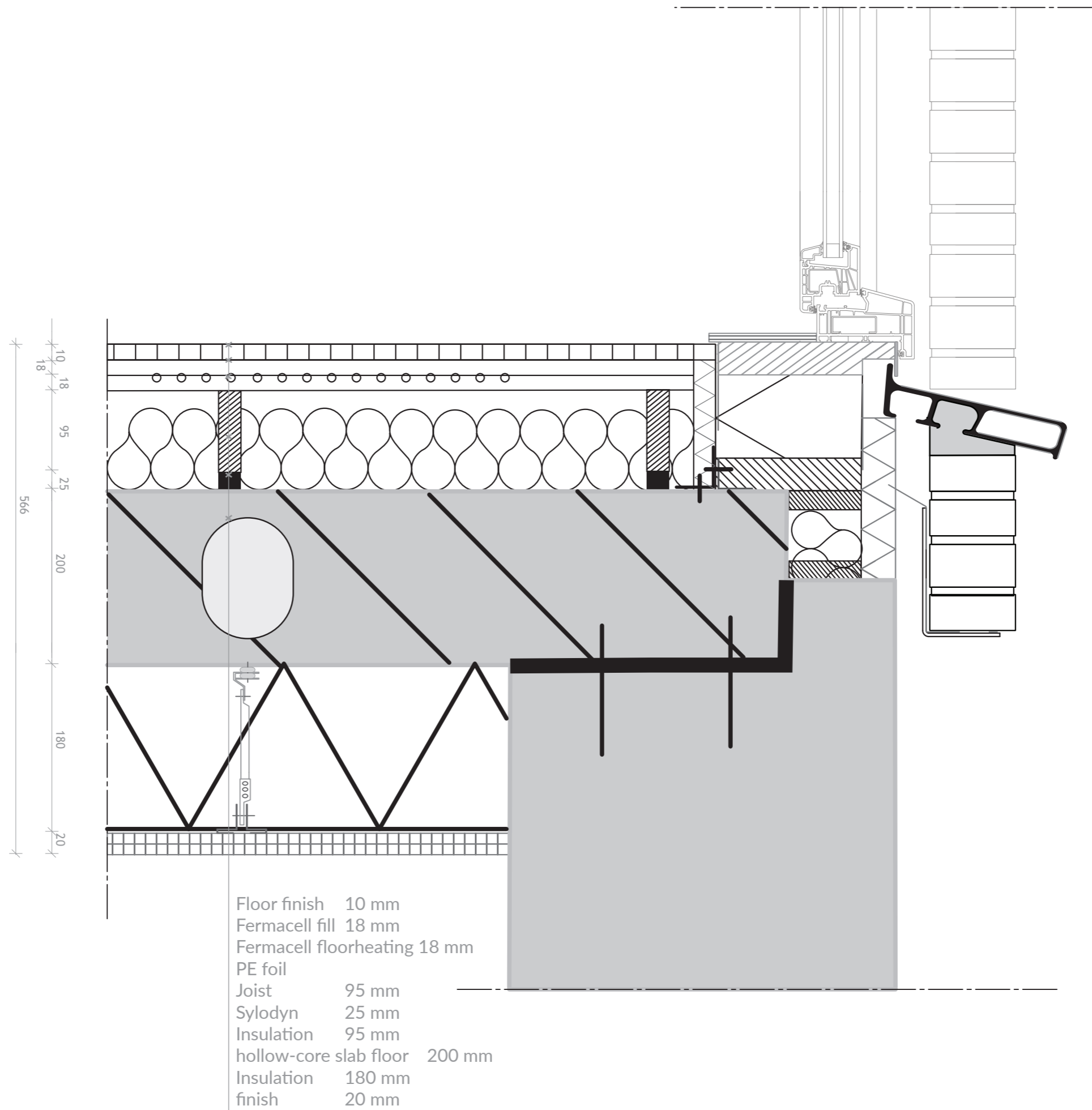
# 1:5 B



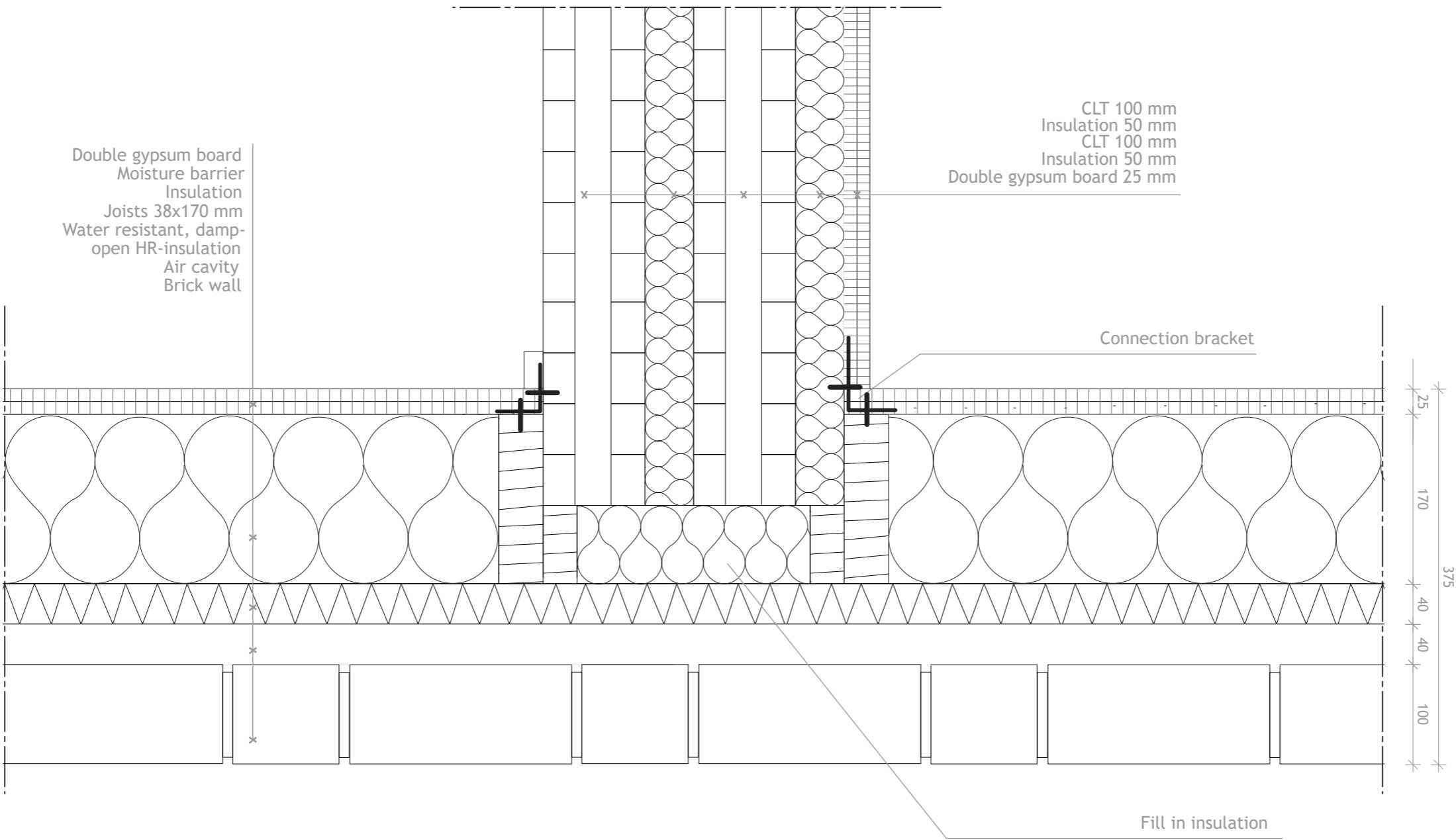
1:5 C



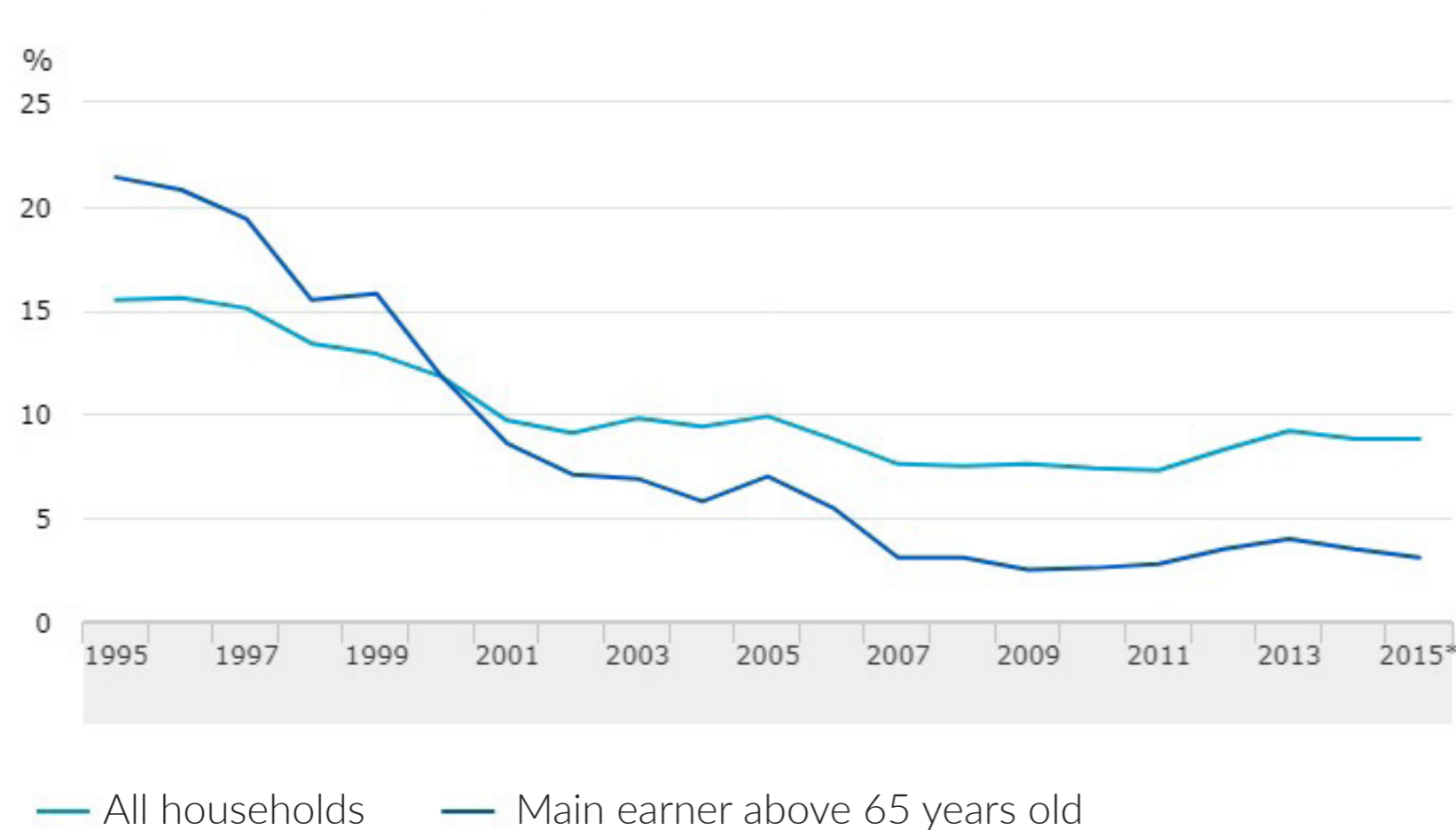
1:5 D



1:5 E



# Percentage of households with a low income



<https://www.cbs.nl/nl-nl/nieuws/2017/10/ontwikkeling-inkomen-en-vermogen-65-plussers-na-95> Translated by author