

Together alone.

Advanced Housing Design Graduation Studio
M4H for modern households // Rotterdam

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Meet the solo-dwellers!



Sophia is a **functional adventurer**. She is 24 years old and recently started to work as a graphic designer in a studio in the city center of Rotterdam. Sophia's only means of transportation are her bike and public transportation. She prefers to take her bike to work every morning so she can stop at her favourite café for a quick breakfast sandwich to-go. Only when there is heavy rainfall does she prefer to take the bus. After work, Sophia loves to go out for dinner and a drink with her colleagues. She is trying to save some money so she tries to eat dinner at home most nights. After dinner she often joins her colleagues again for drinks. When she goes out she normally comes home at around eight o'clock. She immediately takes a shower and puts on her pyjamas. Before she goes to bed she normally puts on a movie or TV show. On the weekends Sophia loves to invite a friend over to join her for some homemade dinner. Sophia enjoys spending her free time going for walks, visiting museums, and art exhibitions. She does not need a lot of space in her dwelling because she spends most of her time outdoors. She is also not too picky about her dwelling as the most important thing for her is that it is close to her work. She does prefer some privacy and wants her own bathroom and a small kitchen in her apartment.



Noah is a **solid homebody**. He is 24 years old and prefers the suburban areas. He is quite introverted and loves to stay home. Noah works in IT and partially works from home. At the firm where he works he can choose to rotate between working from home and at the office. For this reason, he prefers to have an extra room in his dwelling that is completely dedicated to his job. Also, he loves to have his own outdoor space where he can sit and have his lunch. Because he works most days from home, Noah likes to cook dinner for himself. This is why he also prefers to have his own kitchen. In his free time he loves to play videogames and watch movies. Because Noah spends so much time alone, he often invites his best friend over to play videogames with him. On Friday and Saturday nights he goes out with his friends.



Alex is in a **LAT relationship** with his girlfriend Nora. Alex is 27 years old and works as a producer at a large film production company. He lives in the city center of Rotterdam and prefers to take the public transportation to avoid traffic. Alex has a bad habit of always running late. When he is running late he does not have enough time to wait for the bus. Instead, he uses an app that allows him to drive a shared e-scooter. Before he leaves in the morning, Alex opens the app and reserves the nearest e-scooter he can find. By taking the scooter Alex is way quicker and gets to work on time.

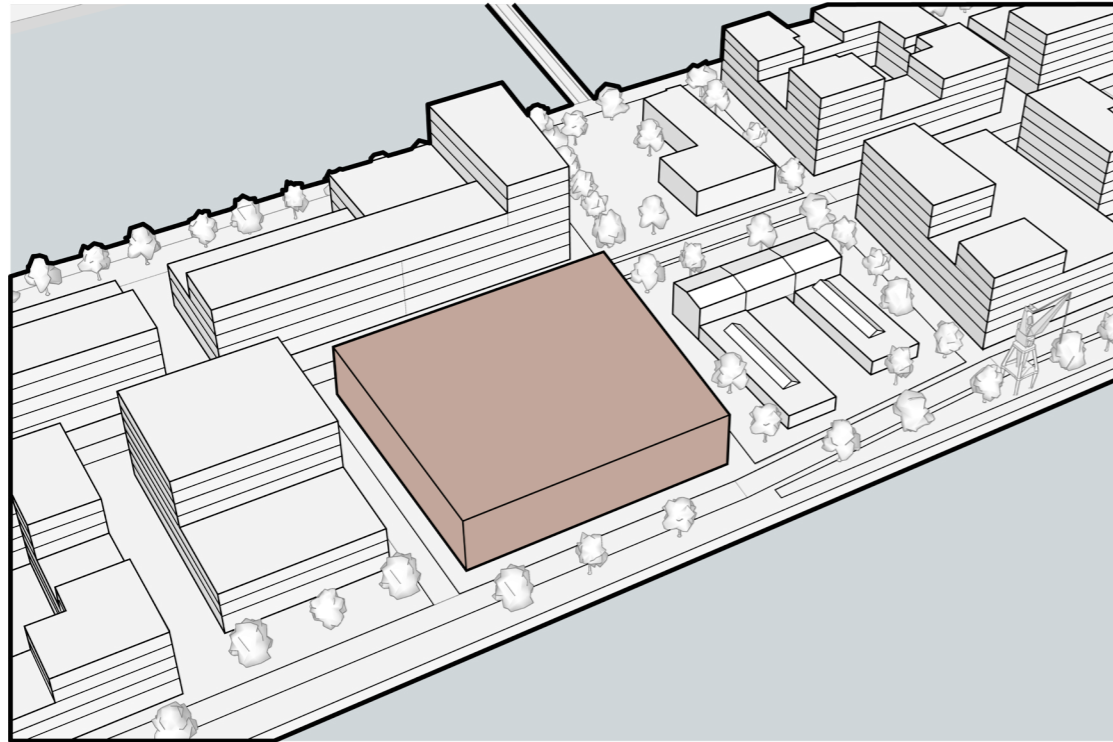
Before he met his current girlfriend, Nora, Alex was in a relationship that ended pretty badly. He was living with his ex-girlfriend and that did not go very well. After the breakup with his ex, he wanted to do things differently with Nora. Alex preferred to have his own place and not move in together too quickly. Instead he loves it when Nora comes over for the weekends. During the week Nora lives in a different city where she works, but in the weekend she sleeps over at Alex's place. Nora lives together with multiple roommates which is why they prefer to spend most of their time together at Alex's place to have more privacy.



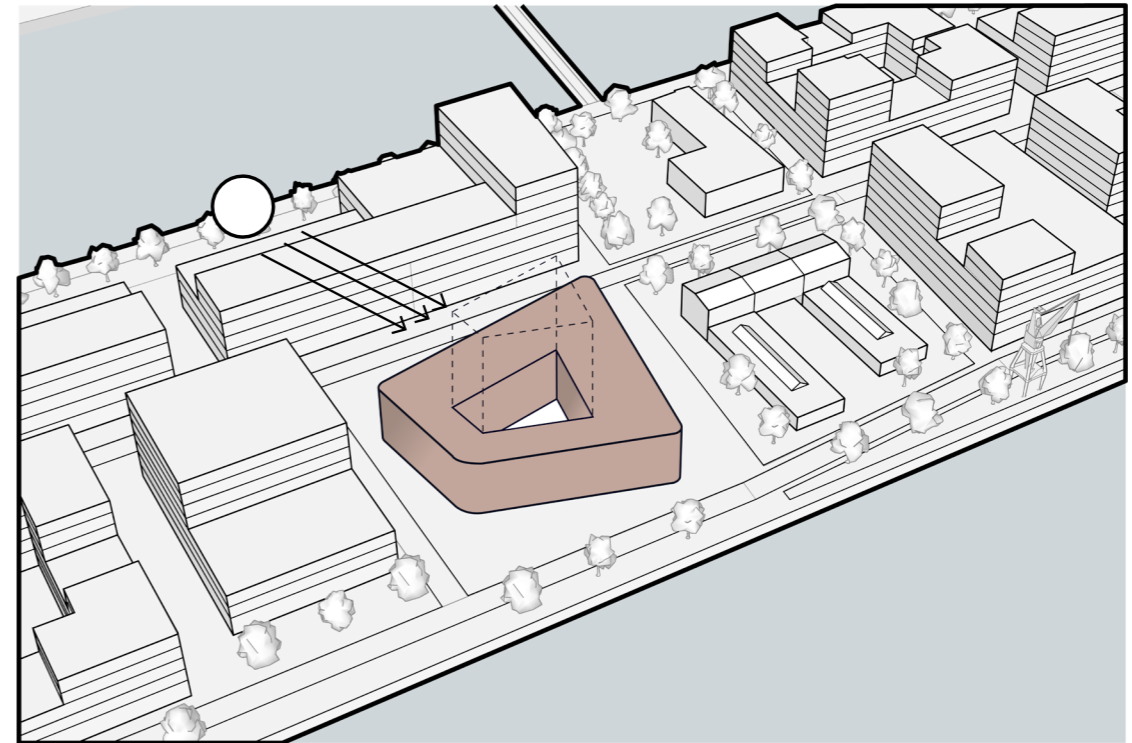
Zoë and Rosie are **friends** and roommates. They met during their time in university. They have since finished their education but decided to keep living together. They love to share the responsibilities of cooking, grocery shopping, and cleaning. Rosie is a morning person and loves to make her friend breakfast every morning. After snoozing her alarm for 30 minutes every morning, Zoë finally wakes up to the smell of eggs and tea. She makes her way to their balcony, where they eat their breakfast on sunny days. In exchange for her breakfast, Zoë always makes sure to clean the dishes. Every morning when the girls have to leave for work they walk to their bikes together and bike together for a little bit until they have to go their separate ways. Rosie works at an architecture firm and always has to work overtime. Because of this, Zoë is in charge of cooking dinner most days. When Rosie gets home there is still some food left for her. On the weekends the girls mostly spend time apart. Zoë is mostly at her boyfriend's place and Rosie enjoys their place by herself. She often invites her friends over or just enjoys some time alone.

Design concept

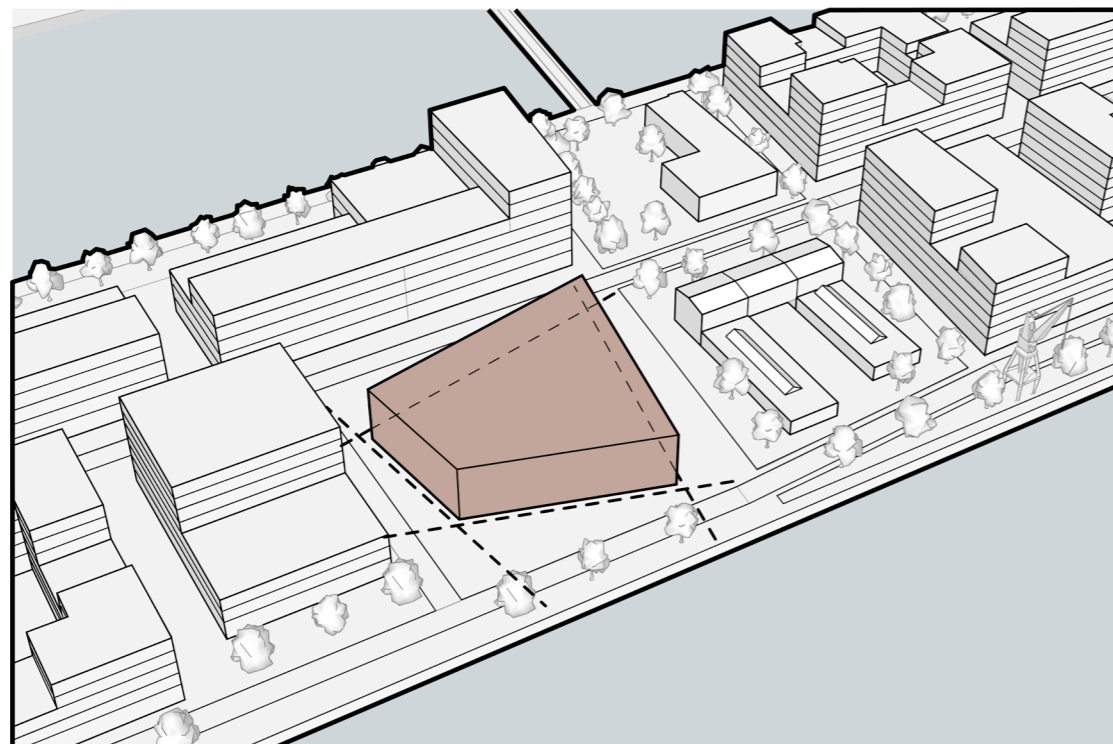
The volume of the building



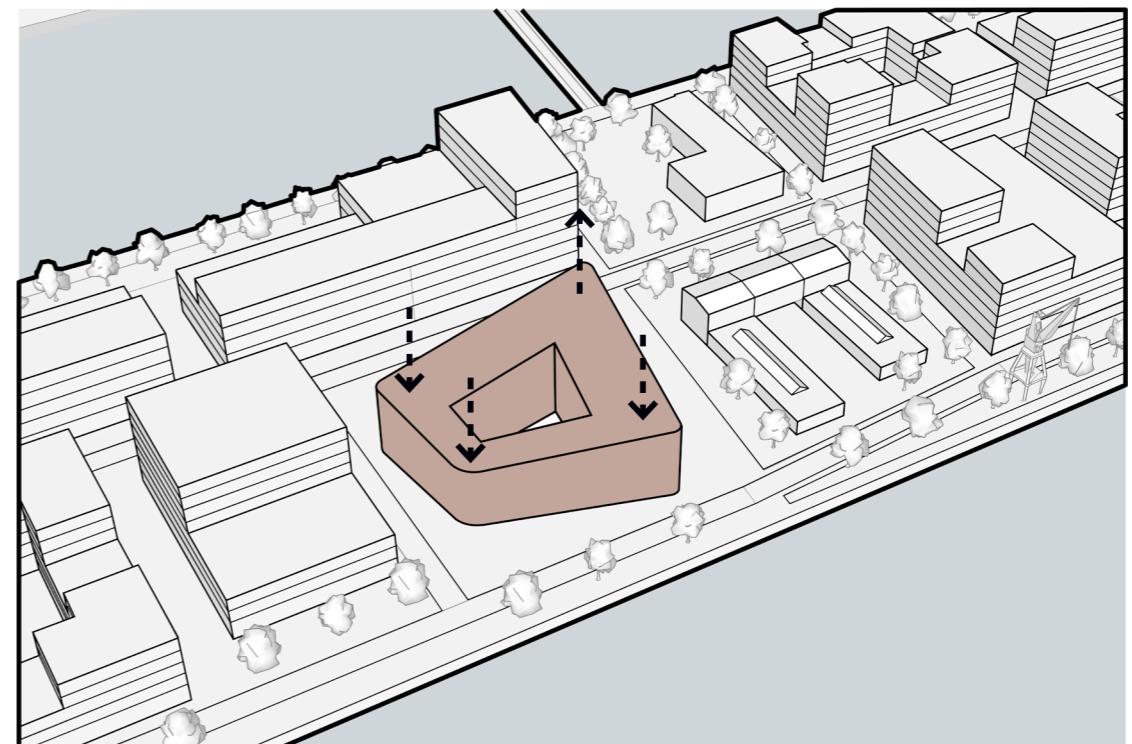
Plot



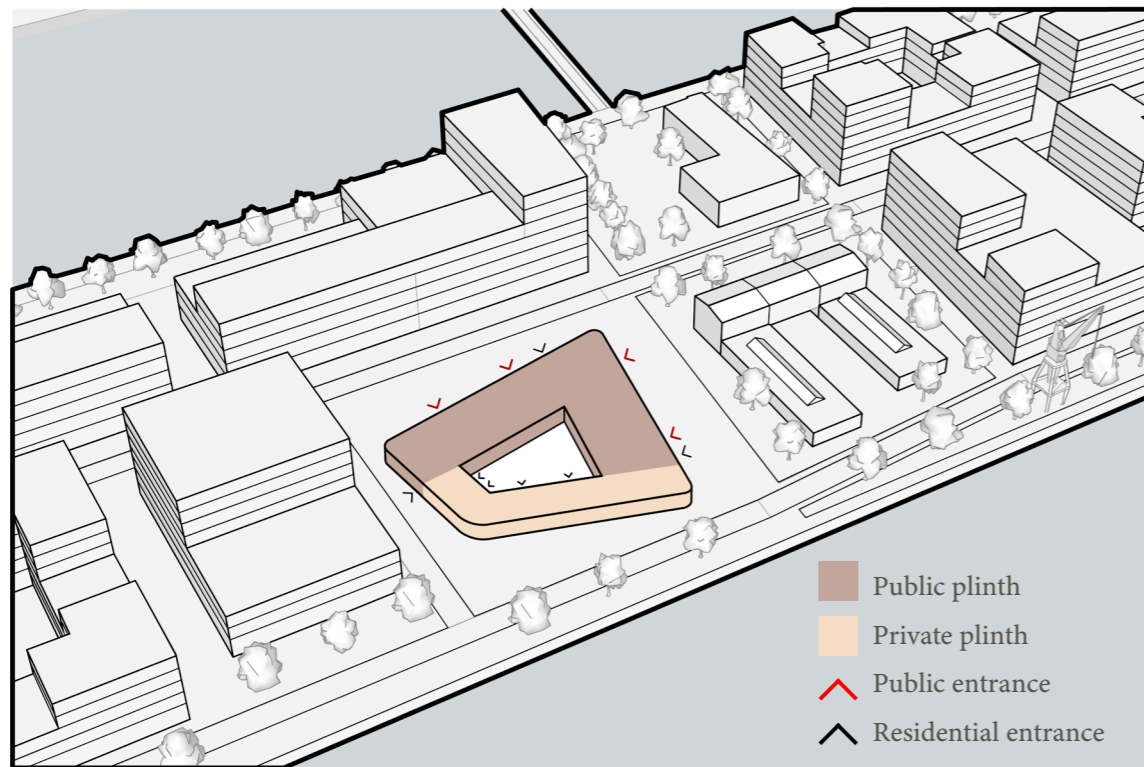
A courtyard is created to allow daylight to enter the dwellings.



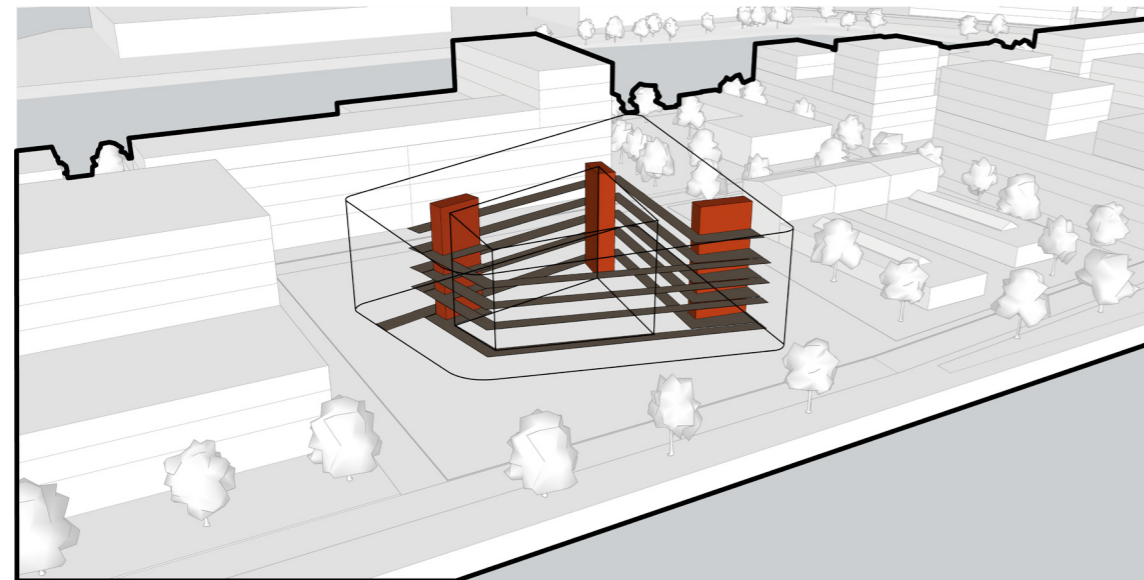
The sightlines are broadened to create a stronger visual connection between the main road and the quay.



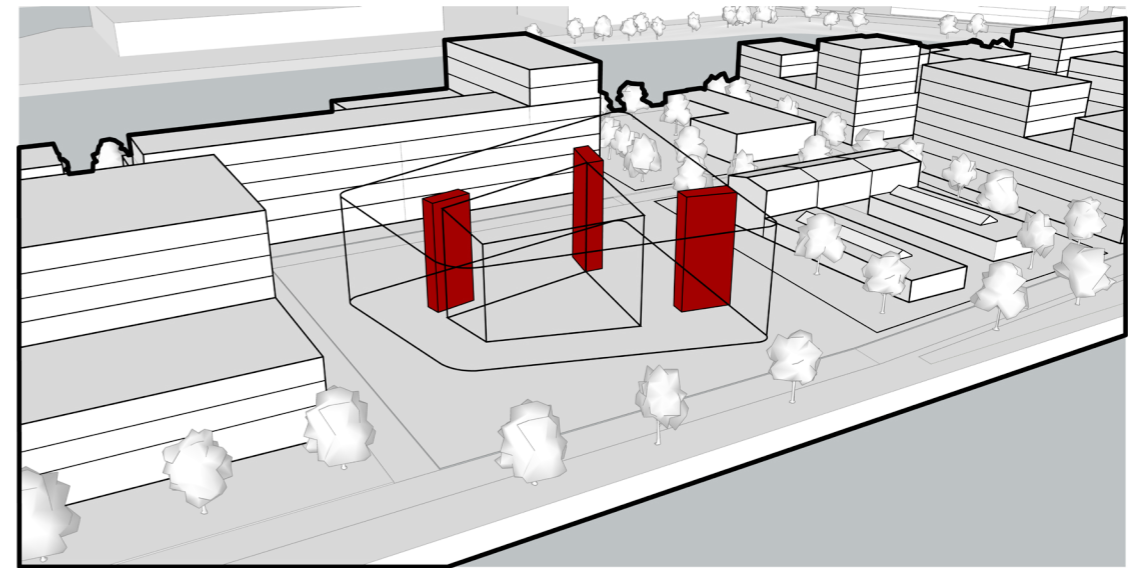
The roof is slanted to allow more daylight to enter.



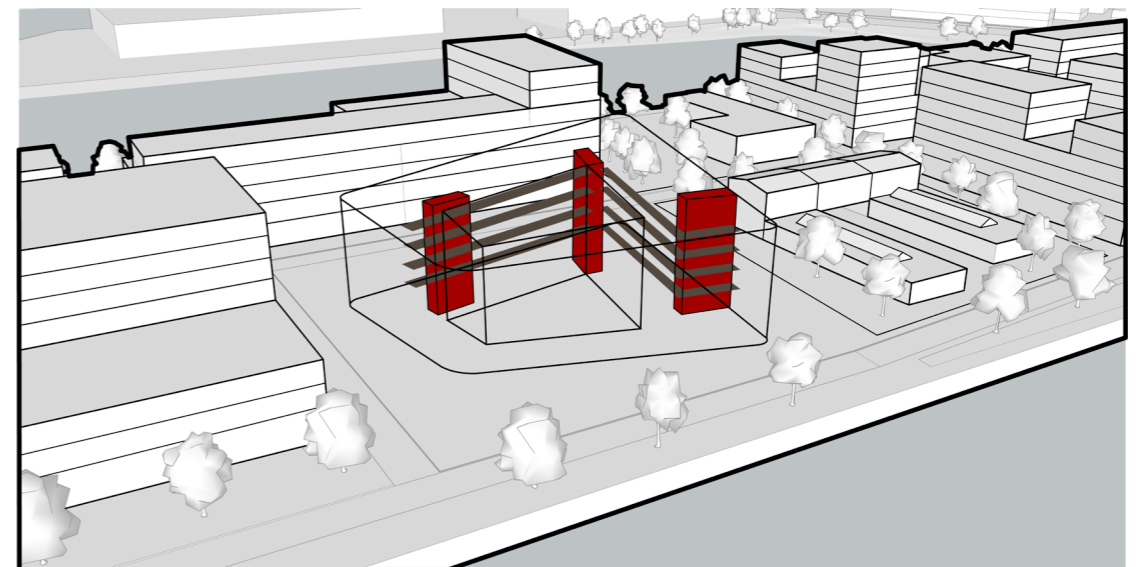
The ground floor has a public and private plinth.



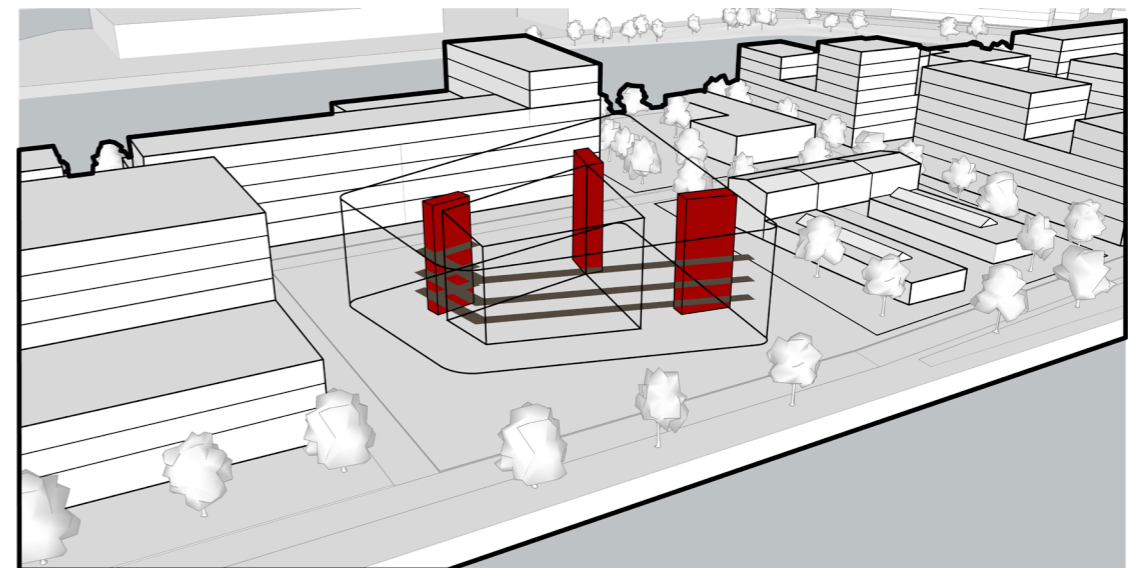
Circulation



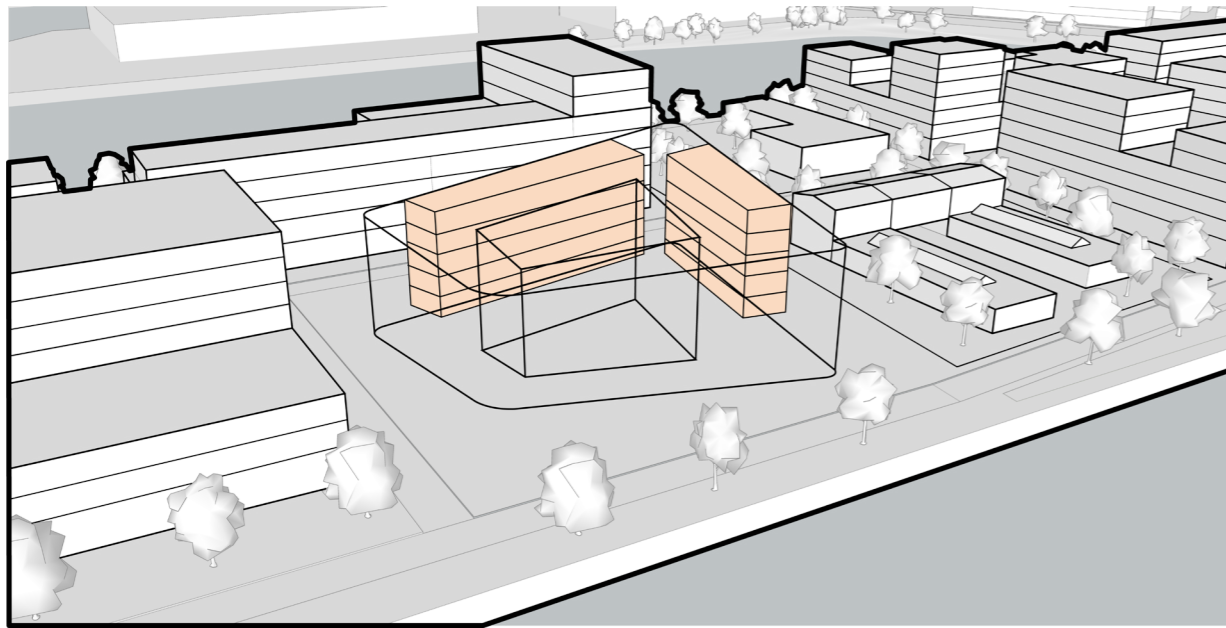
Staircase and elevators



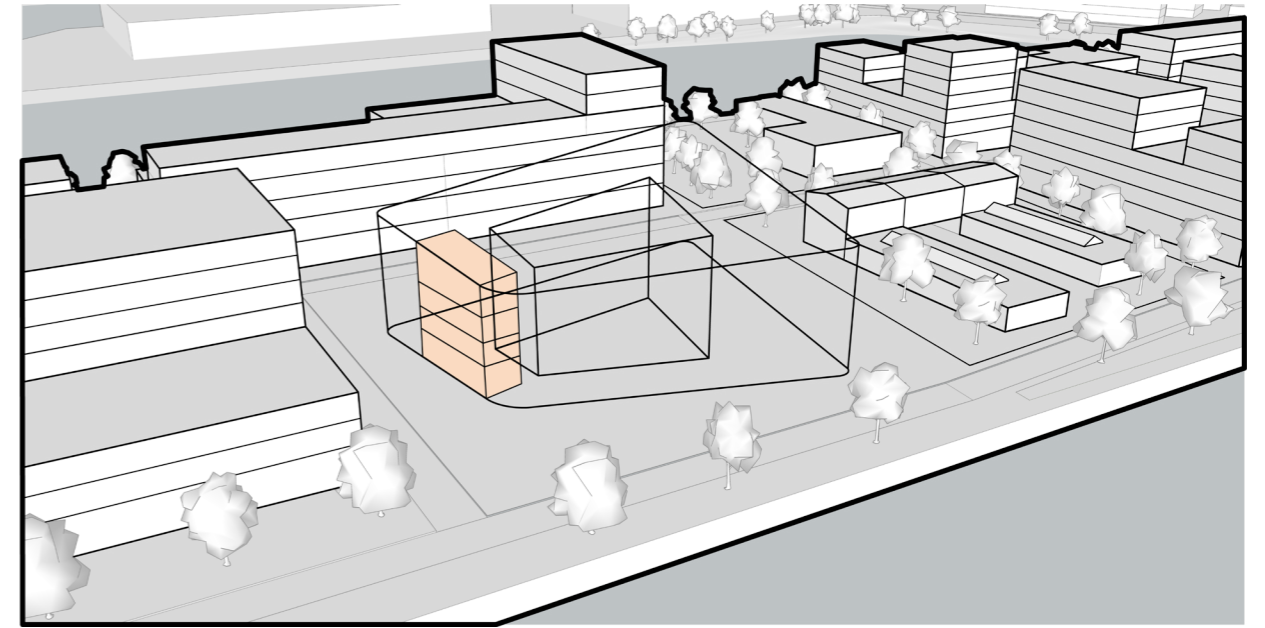
Corridor



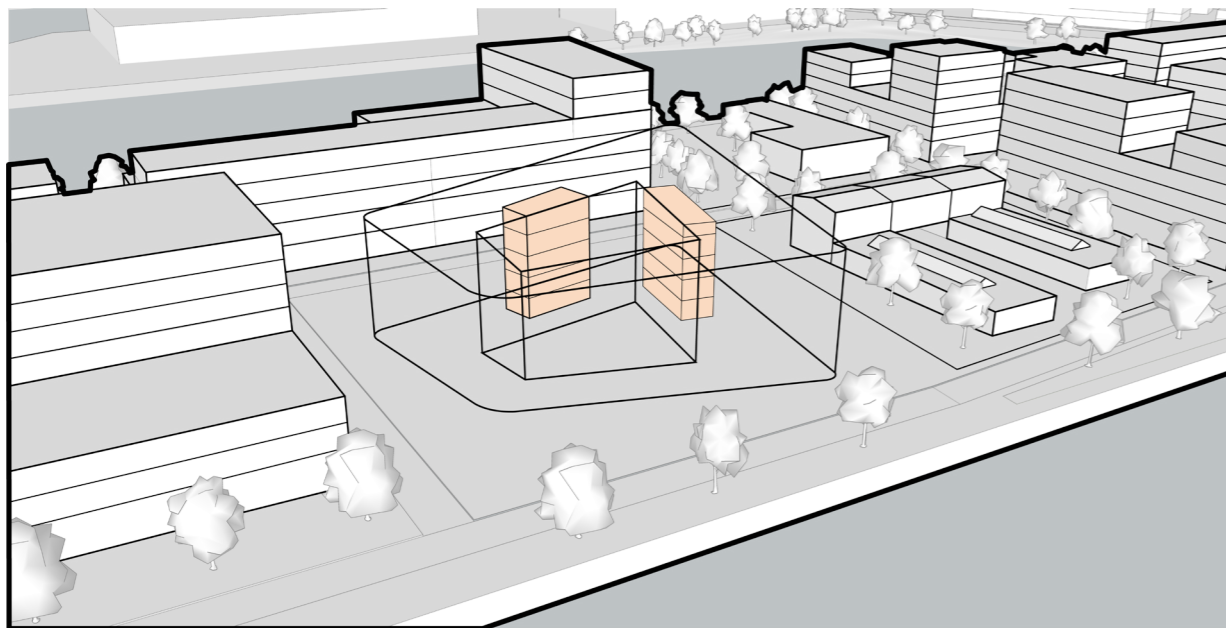
Indoor gallery



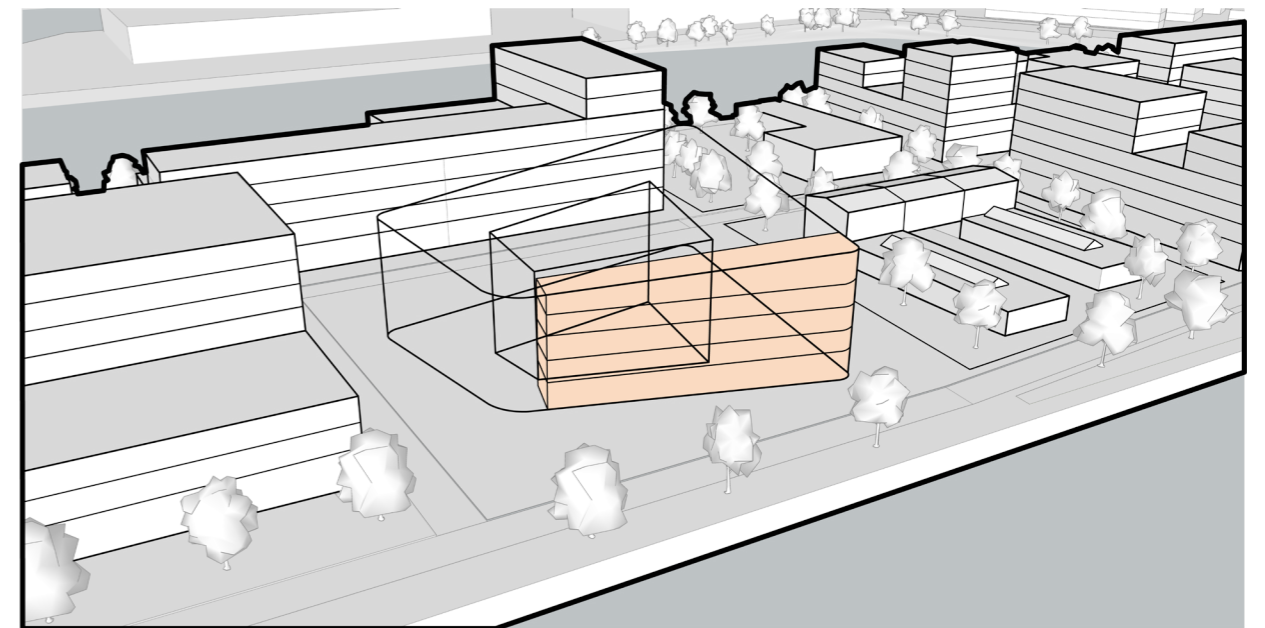
Functional adventurer



Solid homebody

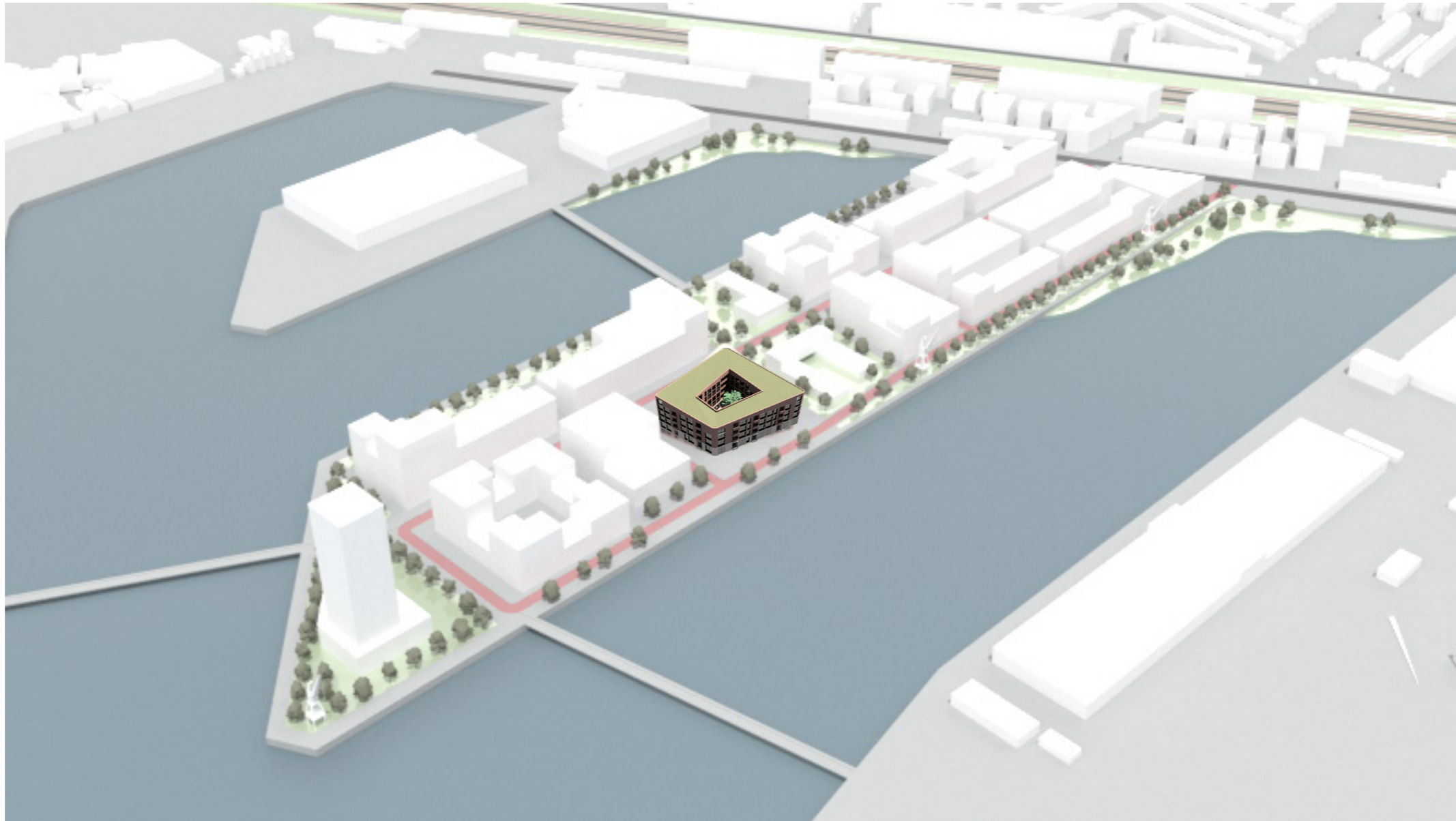


Letters

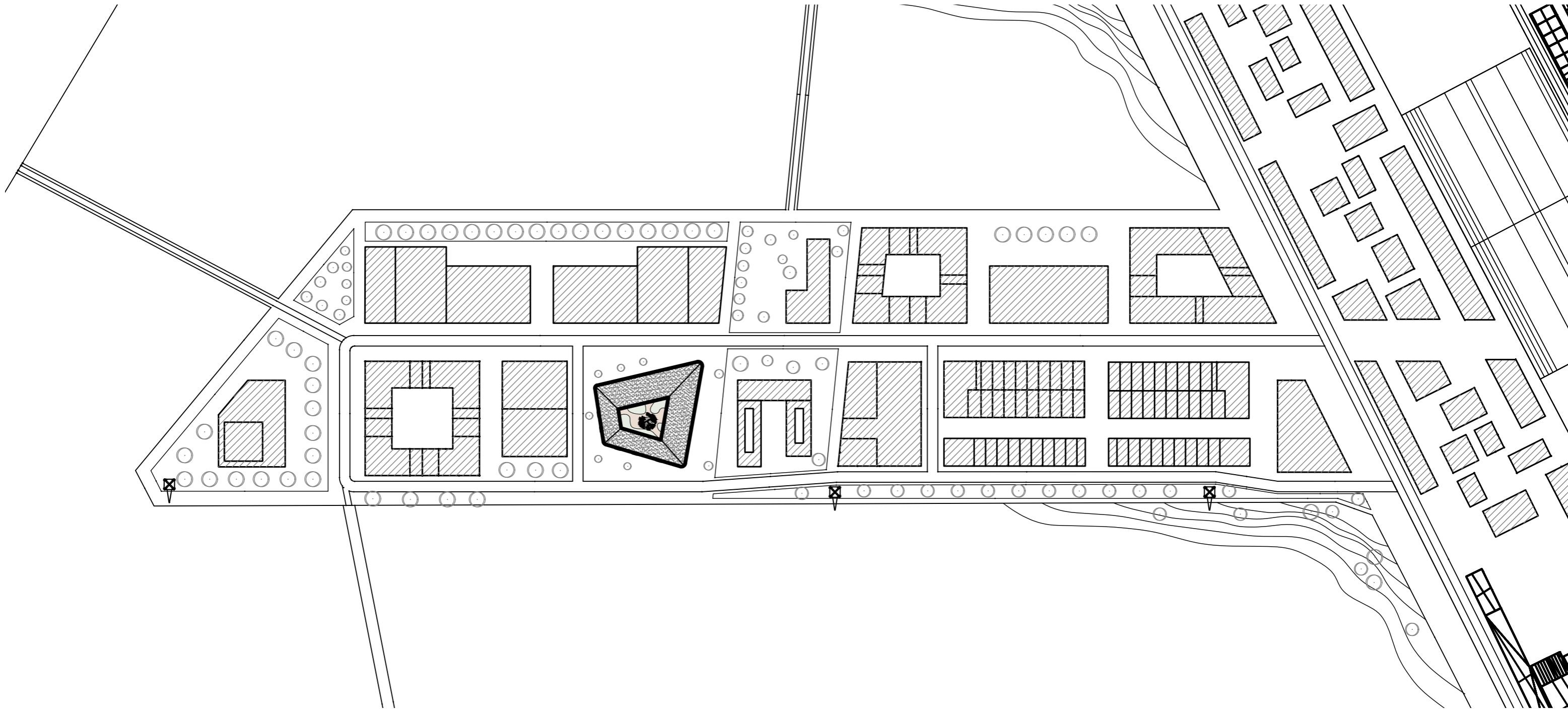


Friends

Context



Context



Context



Anchoring in the building

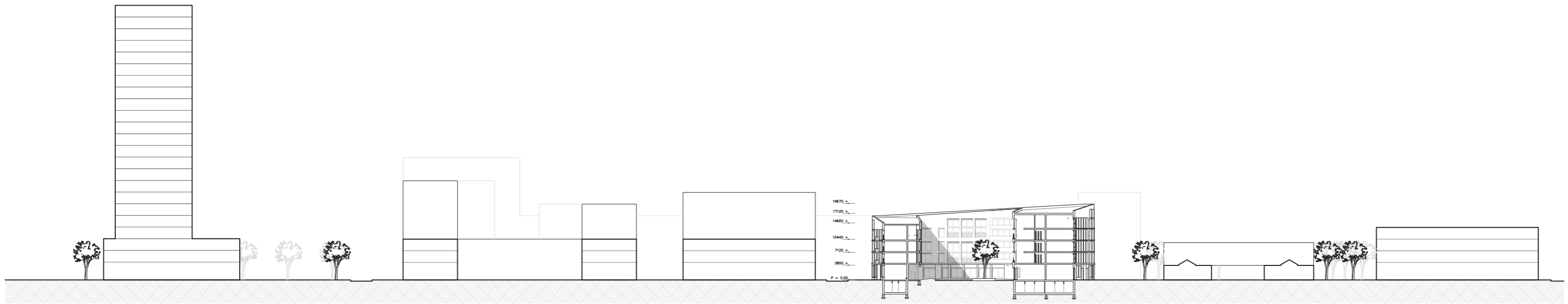
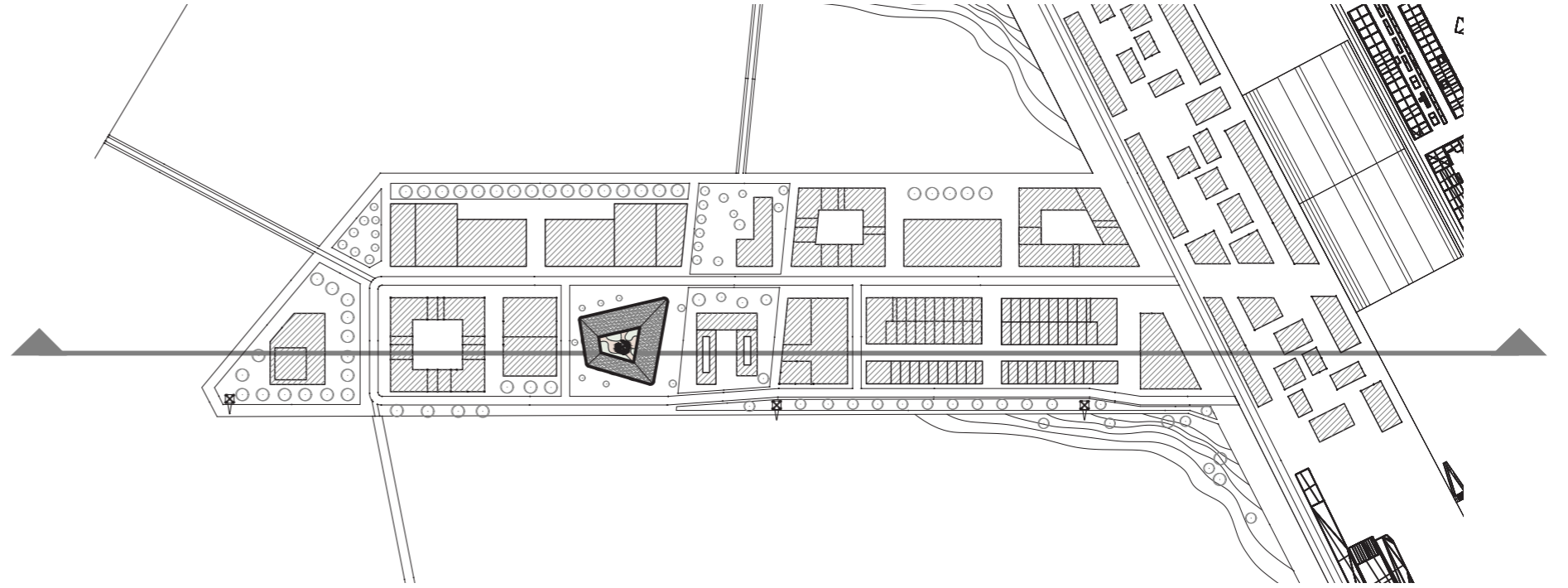


Residential plinth

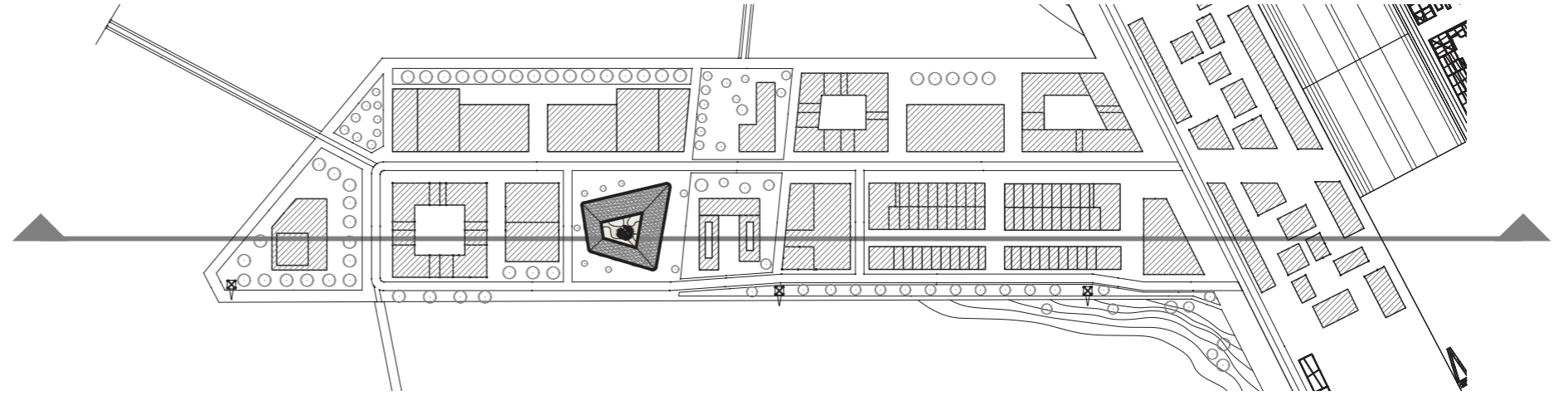


Public plinth

Context

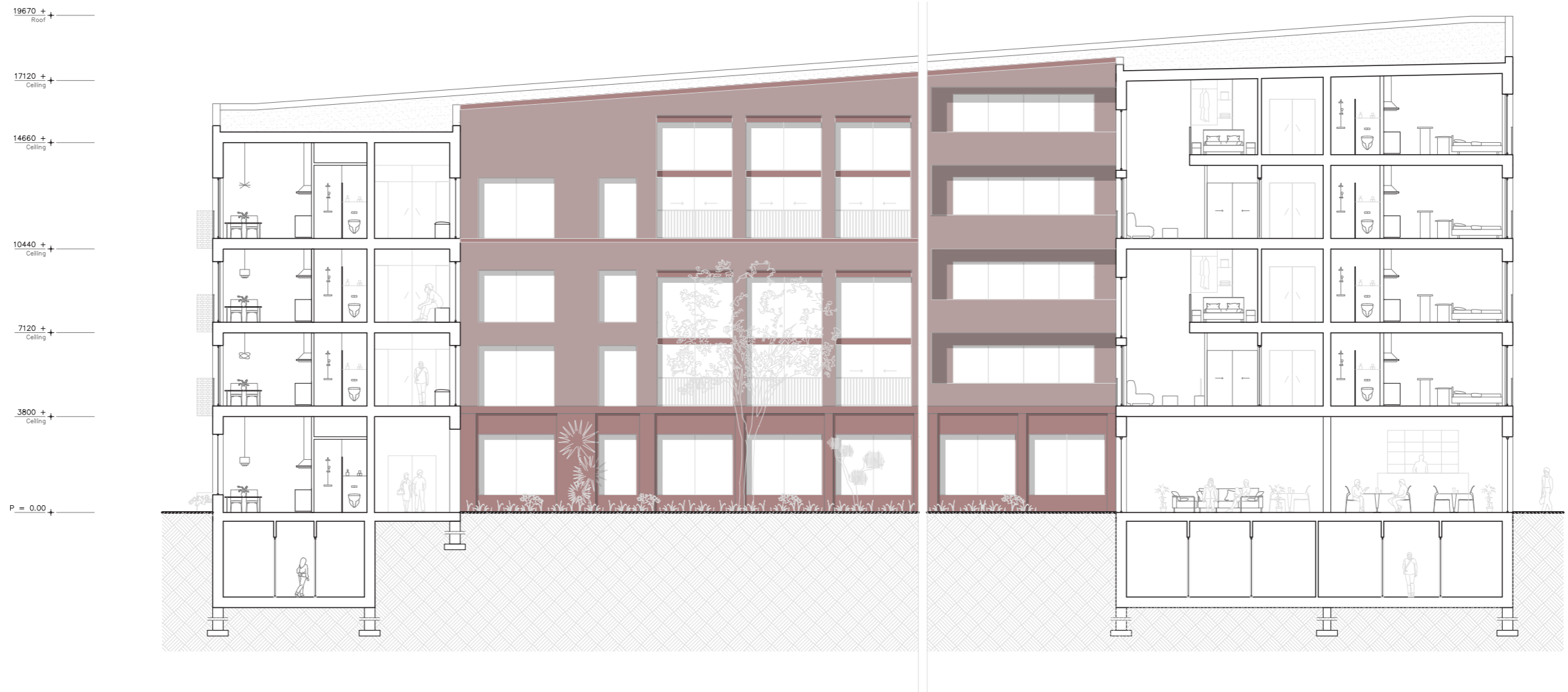


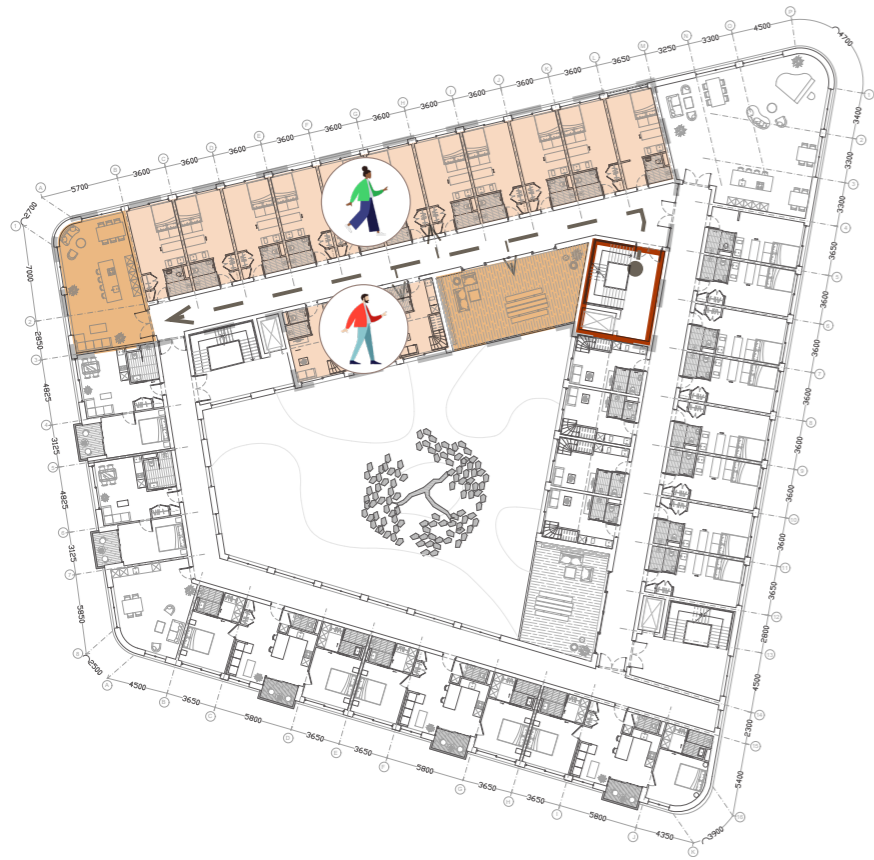
Context



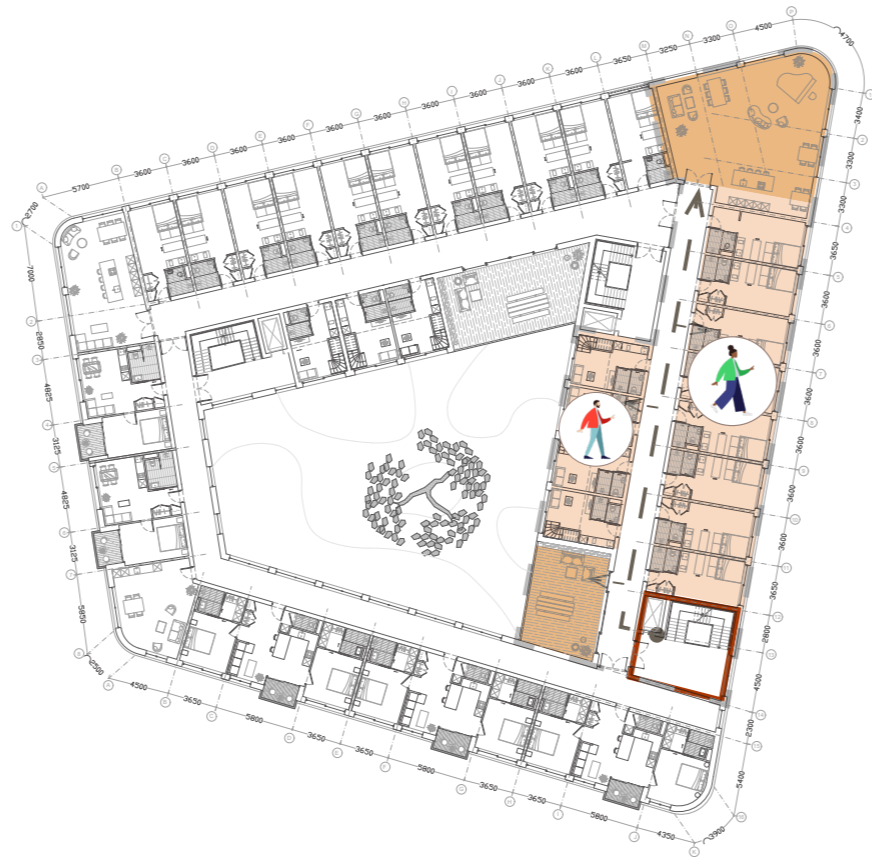
- Private dwelling
- Public function
- Circulation space
- Storage units

Section

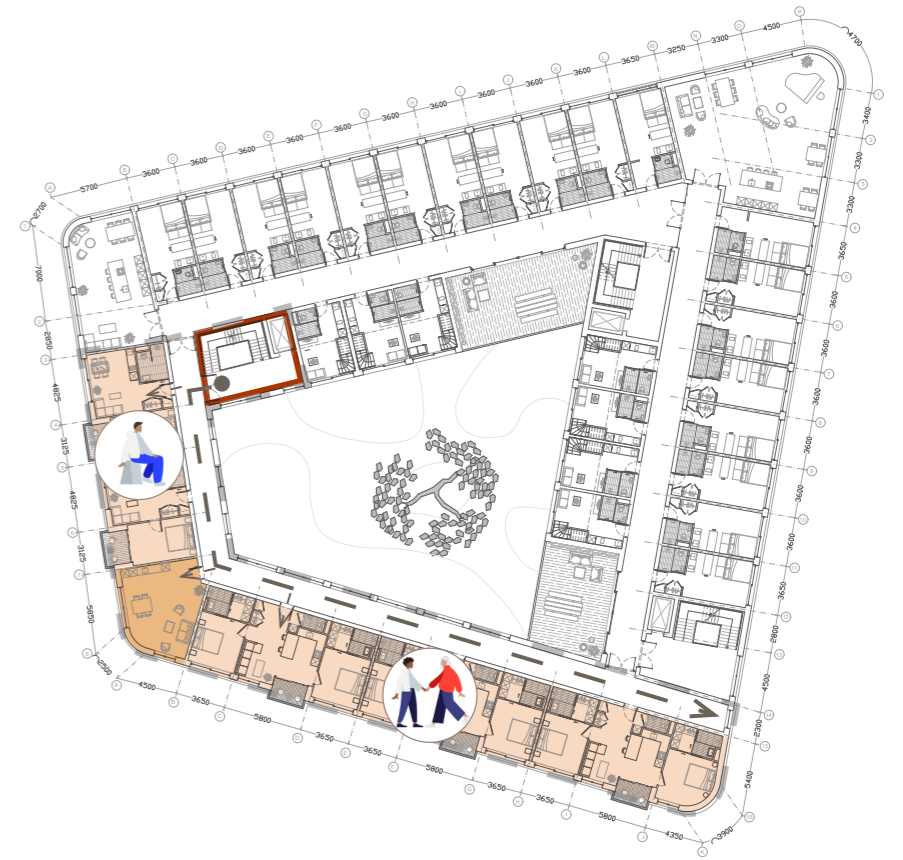




Cluster A



Cluster B



Cluster C

- Private dwelling
- Communal space for clusters
- Circulation space



The hallway



The corridor in cluster A and B



The indoor gallery in cluster C

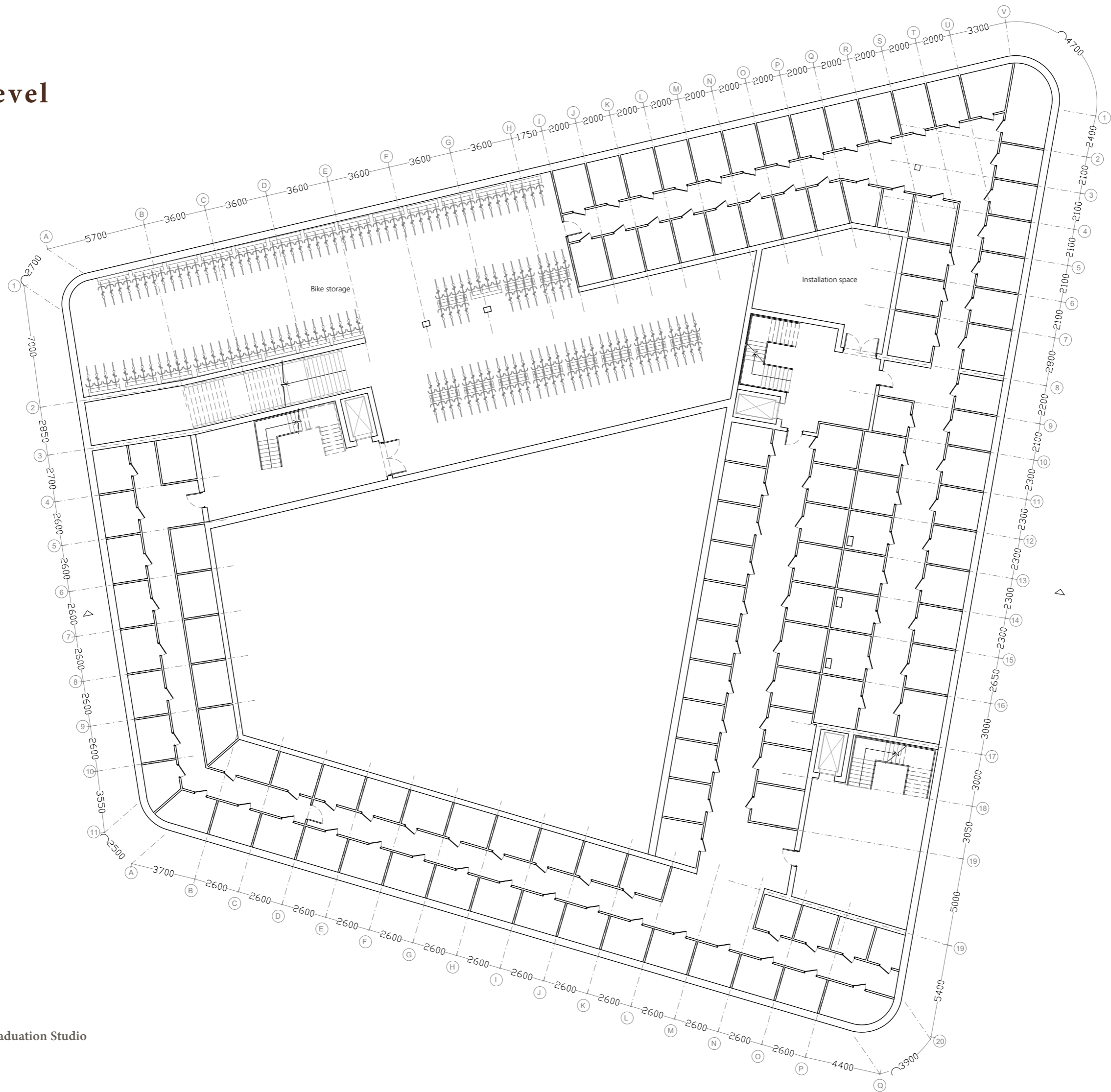
Residential entrance interior



Restaurant interior



Basement level



Ground floor



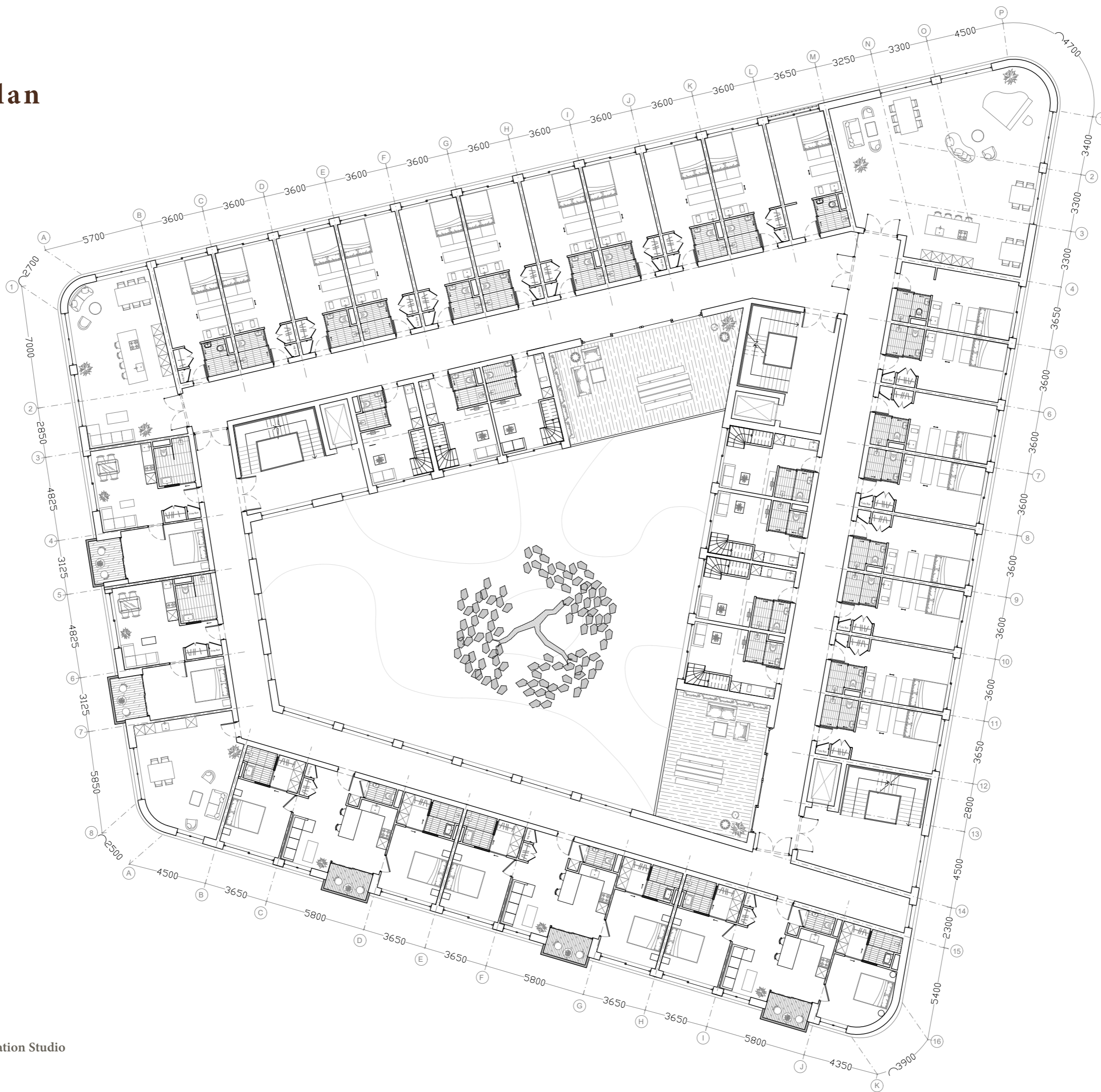
First floorplan



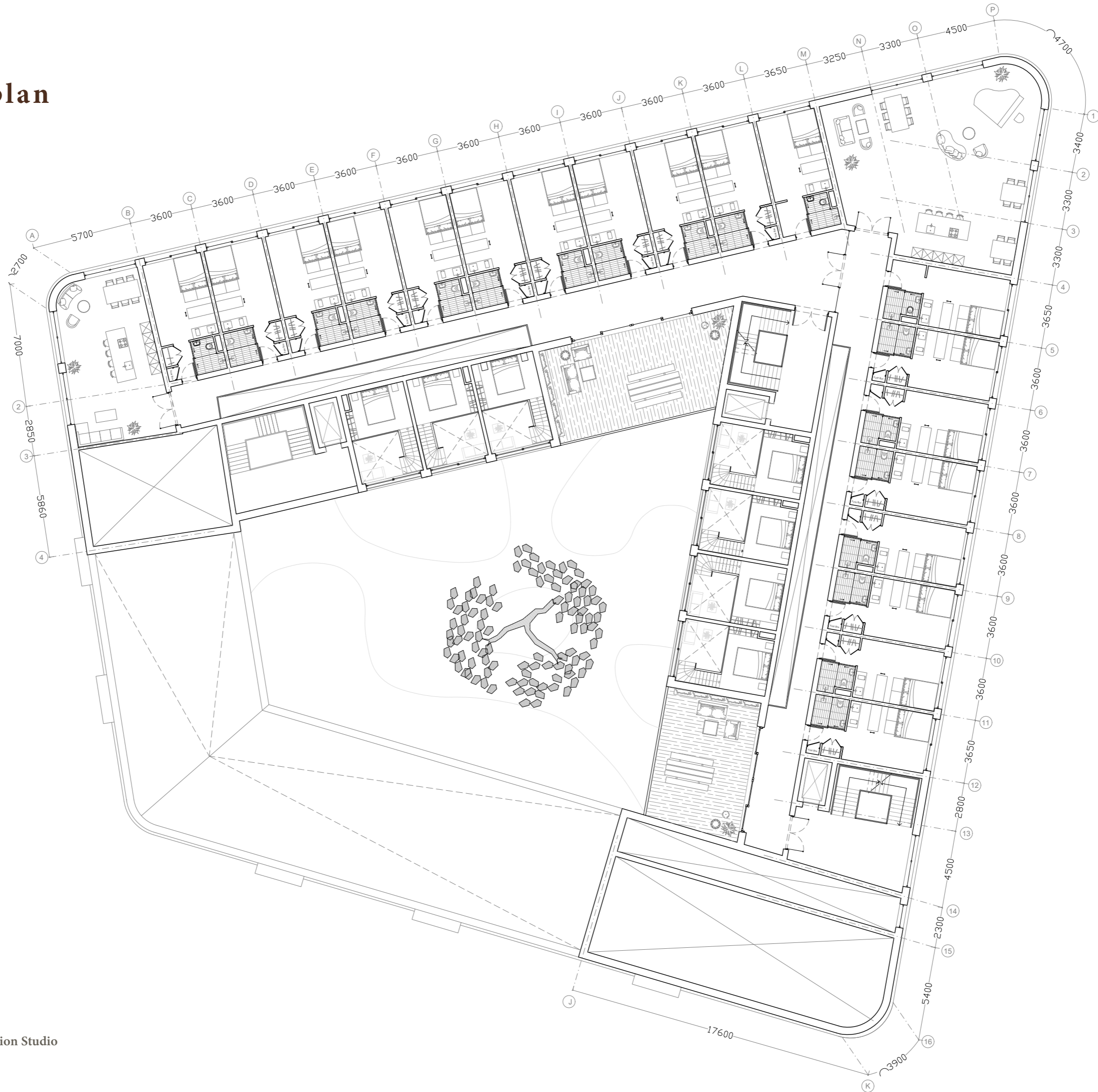
Second floorplan



Third floorplan



Fourth floorplan



The courtyard

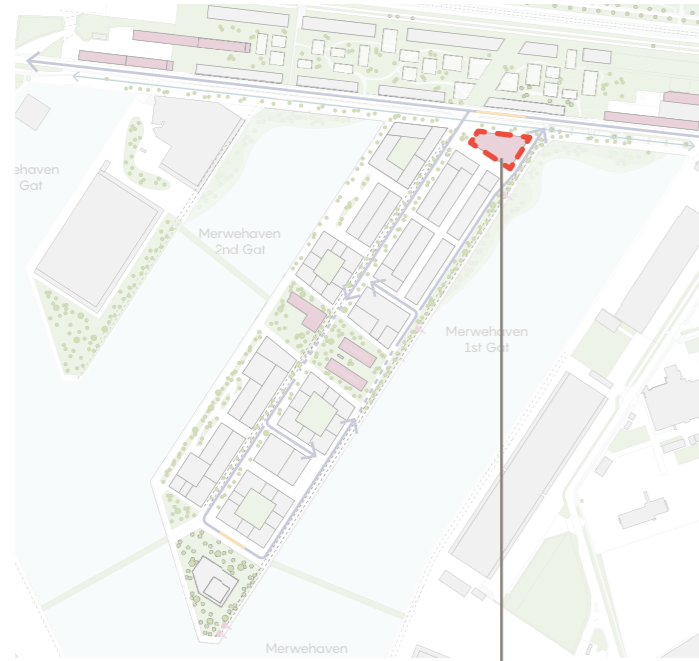


At night



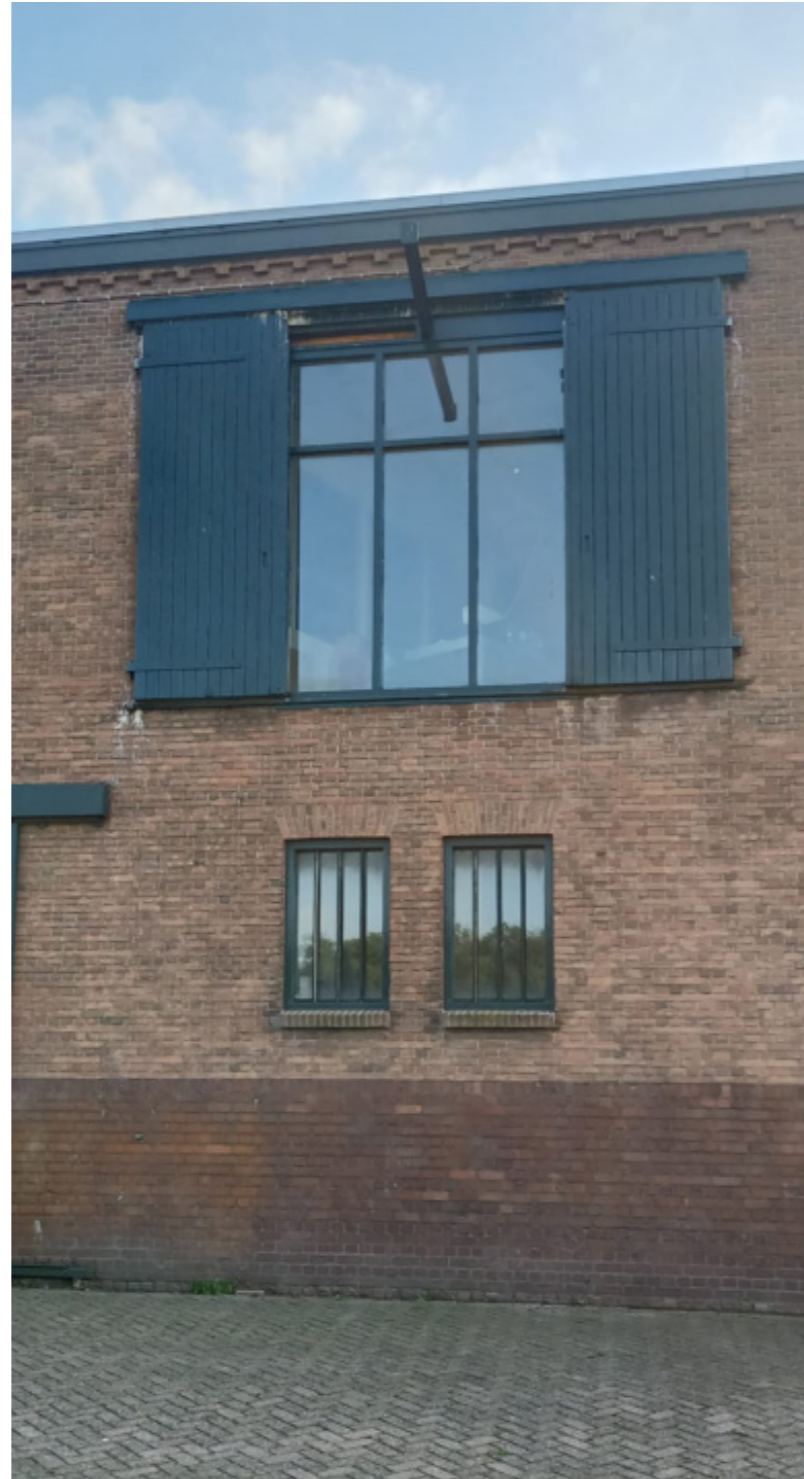
During the day

Materiality



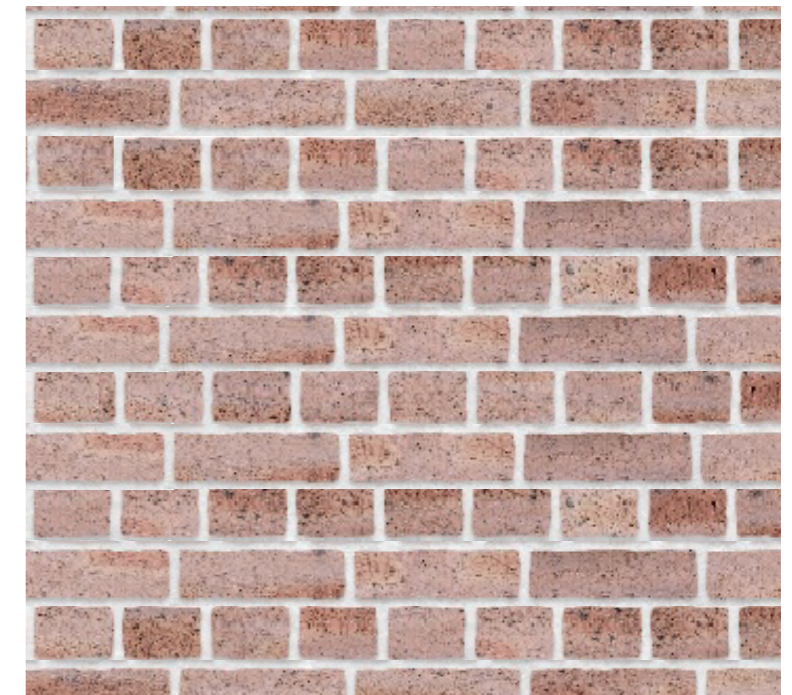
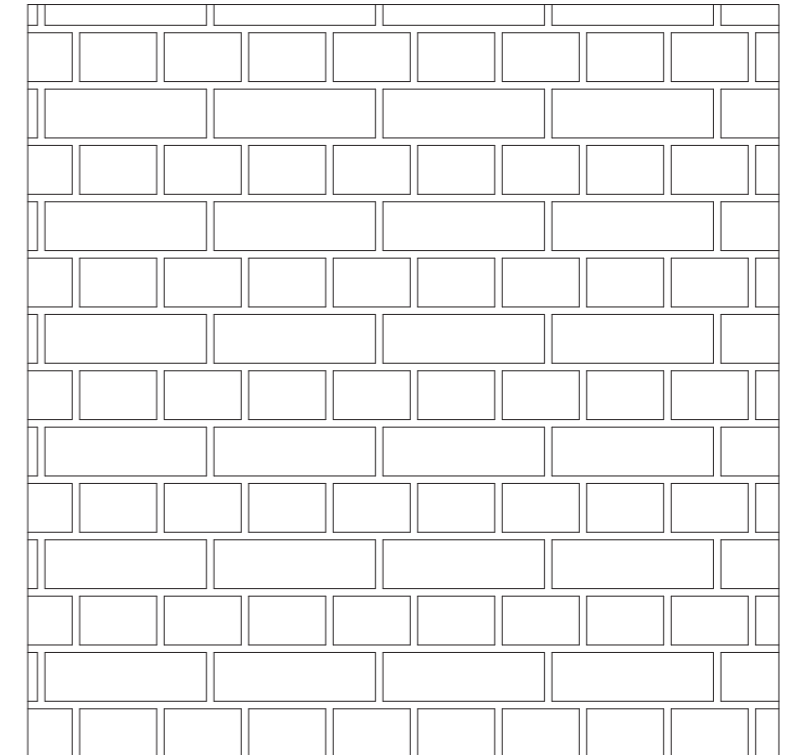
Merwevierhavens, Rotterdam

The iconic and characteristic buildings that remain in the masterplan are used as a references for the brick pattern.



Existing brick pattern

The existing building uses a Dutch bond (or English cross bond) in their brick pattern. This same brick pattern is used in the building to create a connection to the existing buildings.



Used brick pattern

This image shows the Dutch bond (or English cross bond) that is used in the building. The bricks have different shades to create a connection with the existing buildings. This is because the bricks on the existing buildings are old which is visible in the facade. By using bricks with different shades a similar effect can be created in the new building.



North Facade



East Facade



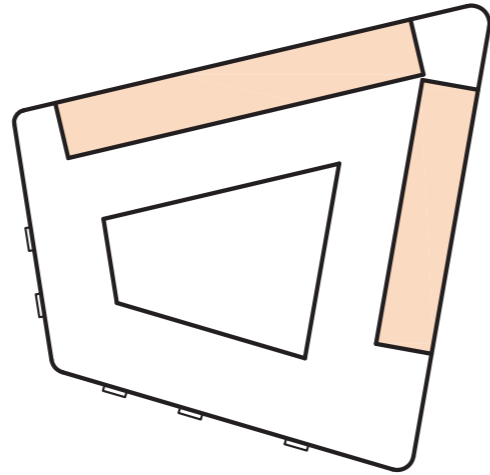
South Facade



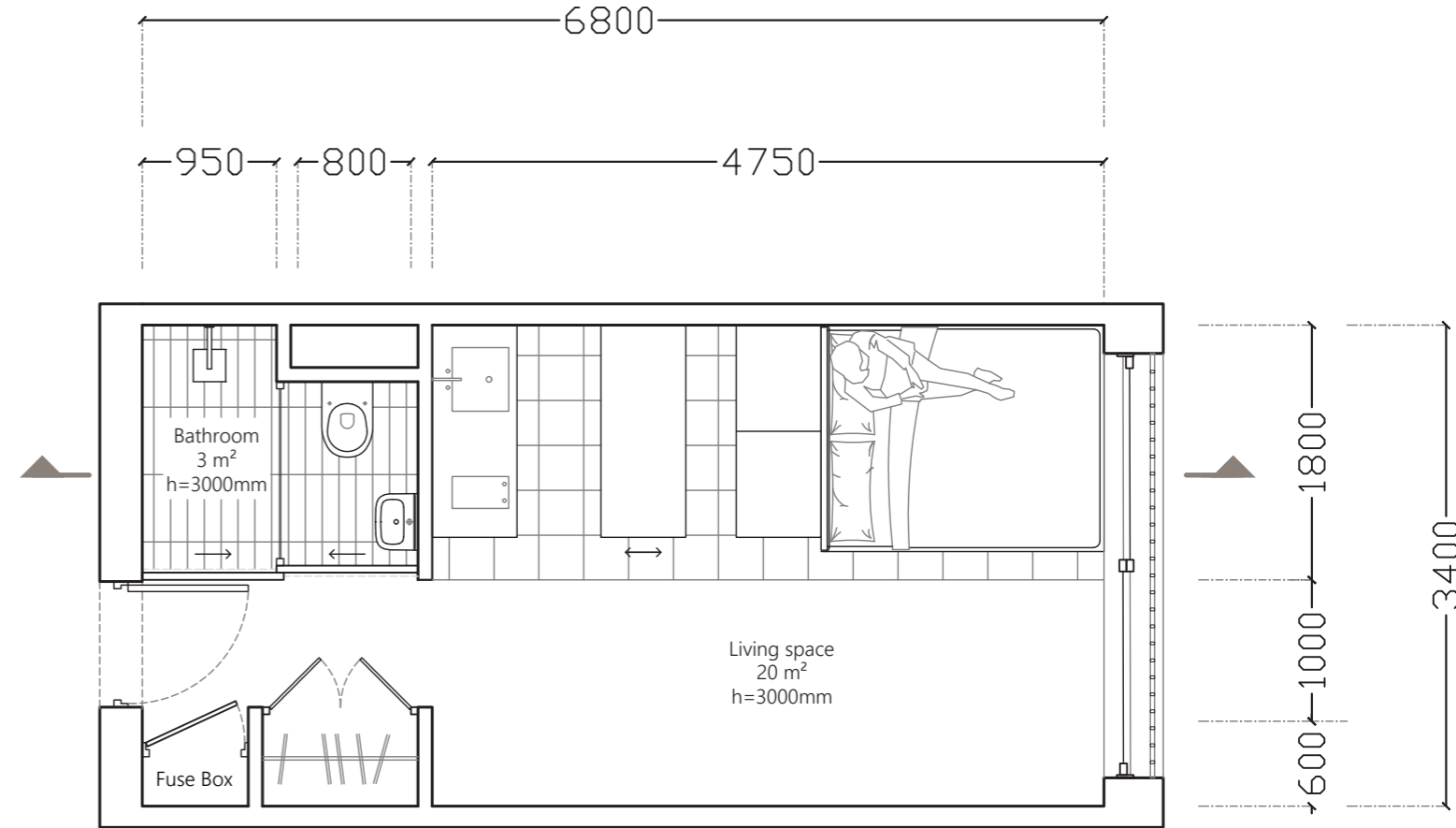
West Facade

Functional adventurer

23m²



Dwelling floorplan



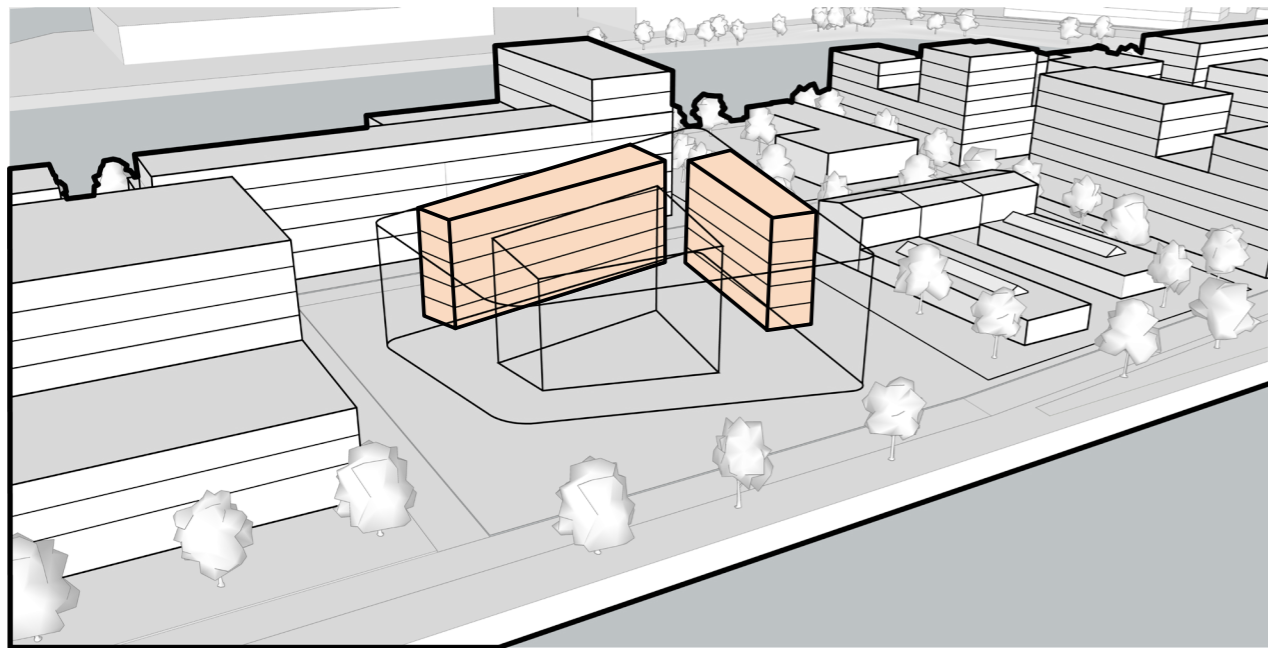
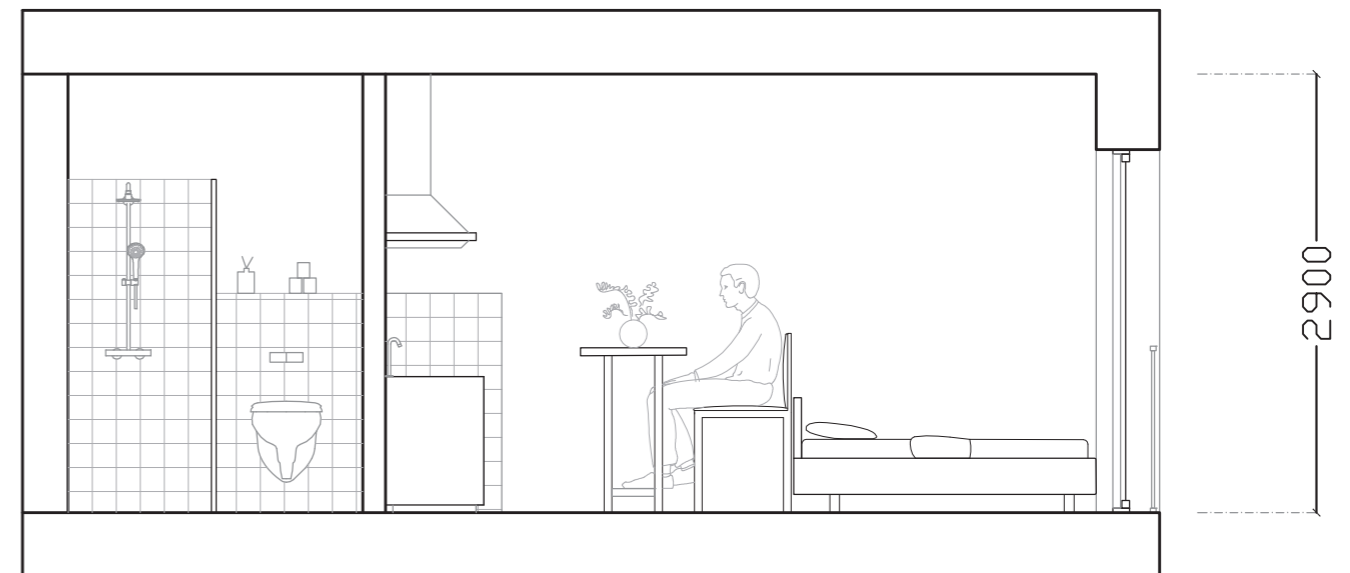
Sophia

- Spends most of her time outside
- Prefers the urban environment
- Close to the active center
- Budget-conscious individual with a limited capital
- Prefers to pay for specific experiences
- Smaller dwelling
- No demands on dwelling layout

Functional adventurer

- 23m²
- In total there are 76 dwellings of this type
- This type makes up 70% of the total dwellings in the building.

Dwelling section

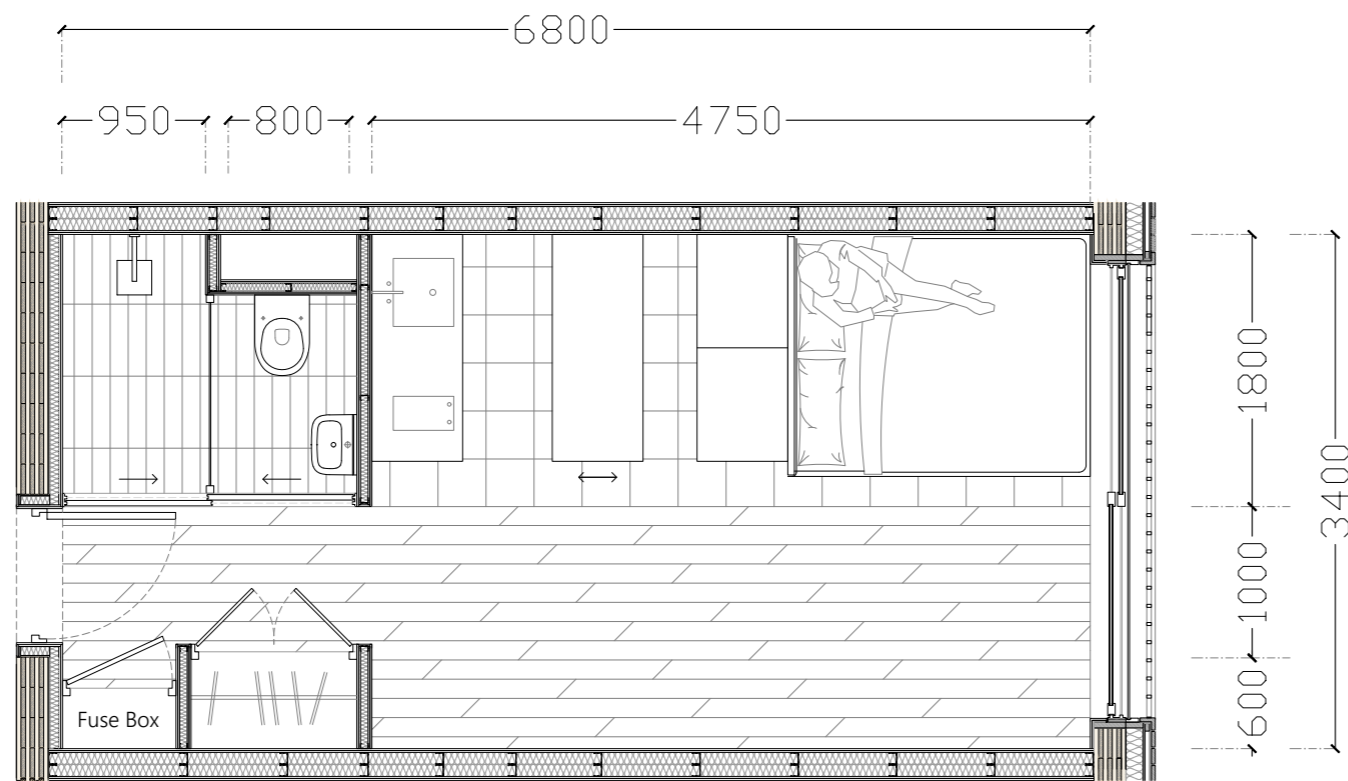
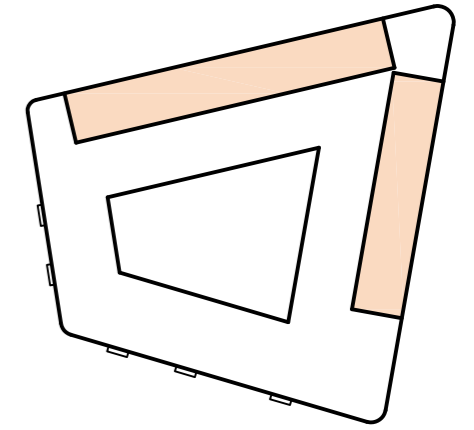


Functional adventurer



Functional adventurer

23m²



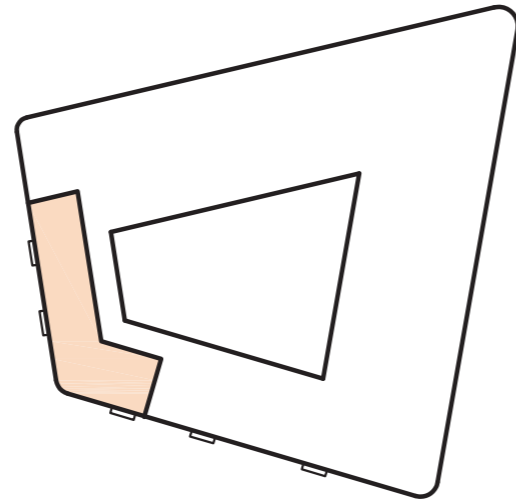
Solid homebody

44m²



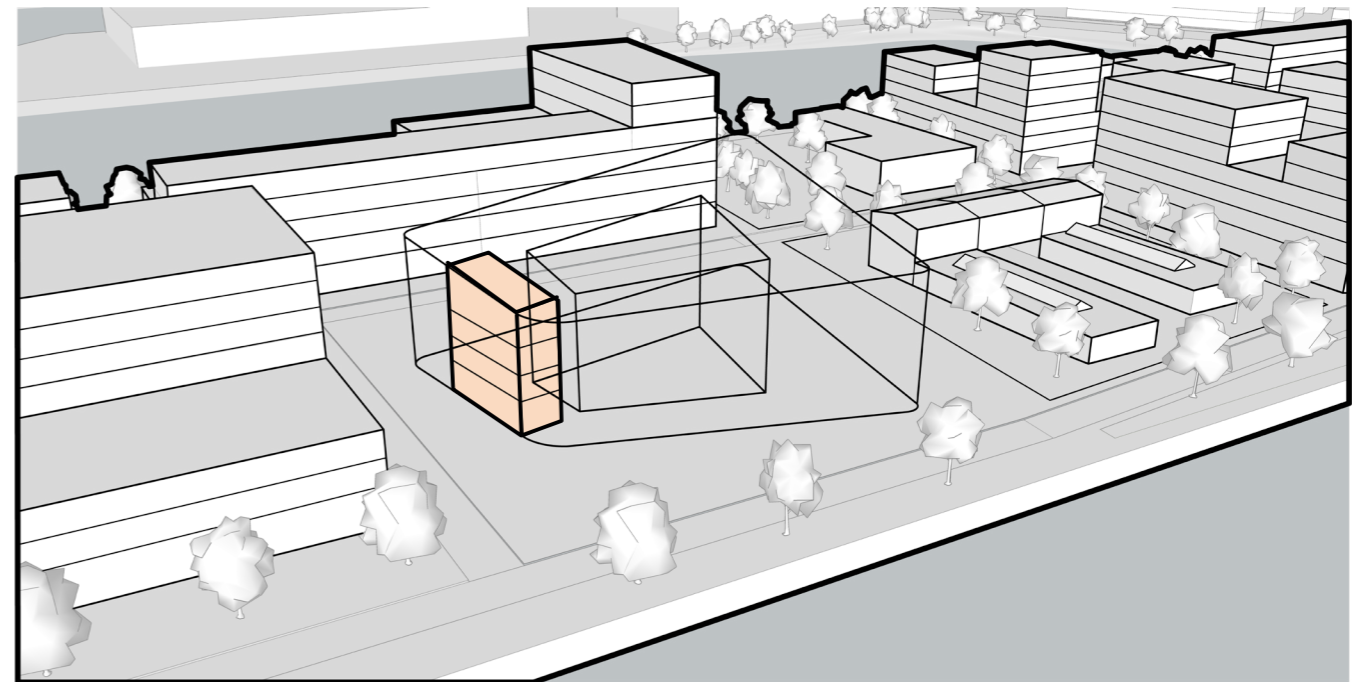
Noah

- Spends most of his time inside
- Prefers the suburban area
- Space for their stuff and guests
- Extra office space
- Larger dwelling
- Needs a private outdoor space



Functional adventurer

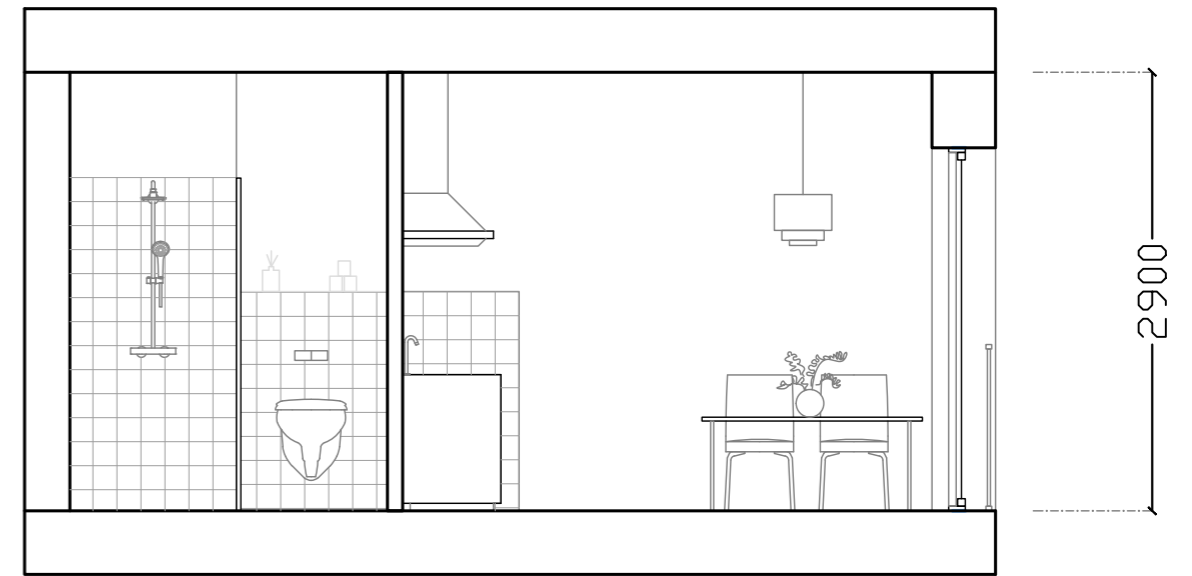
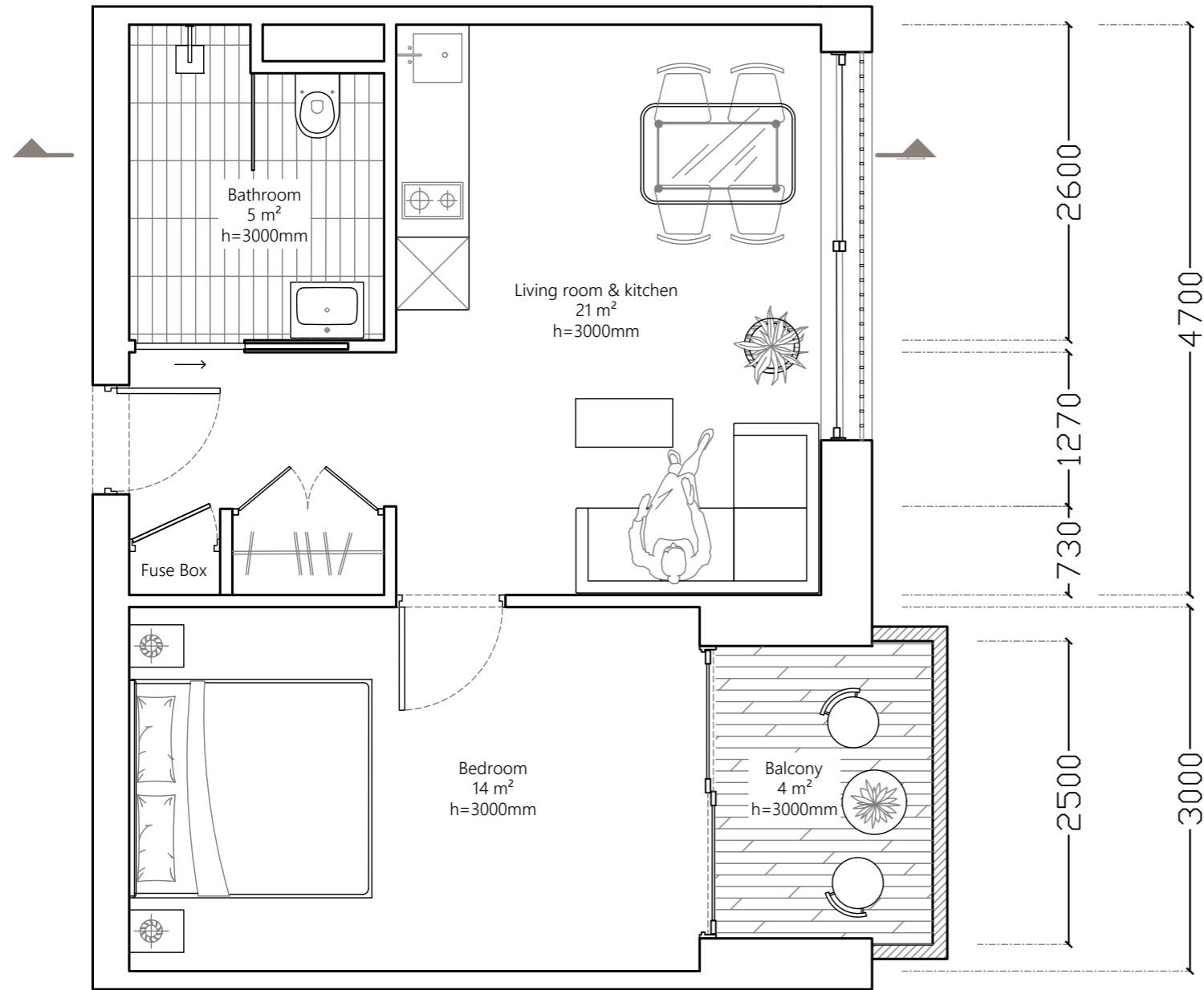
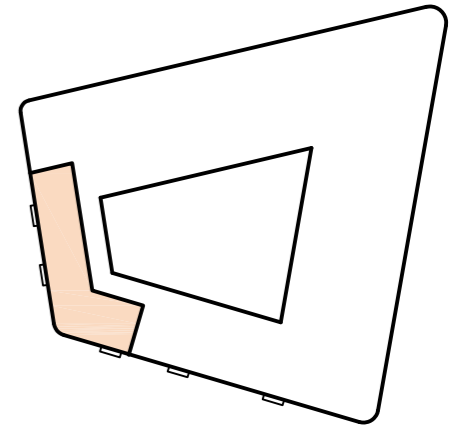
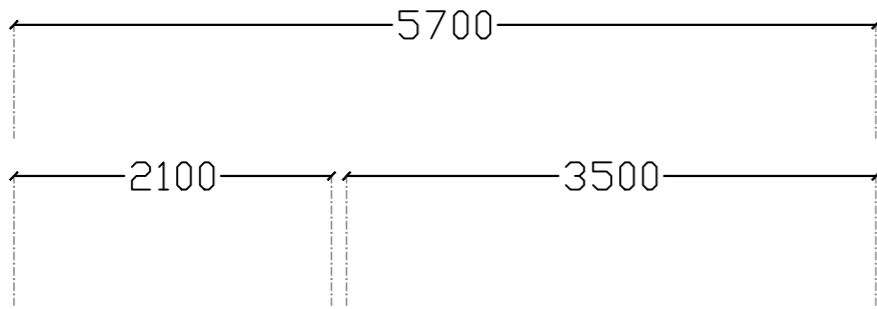
- 44m²
- In total there are 7 dwellings of this type
- This type makes up 6% of the total dwellings in the building.



Solid homebody

Solid homebody

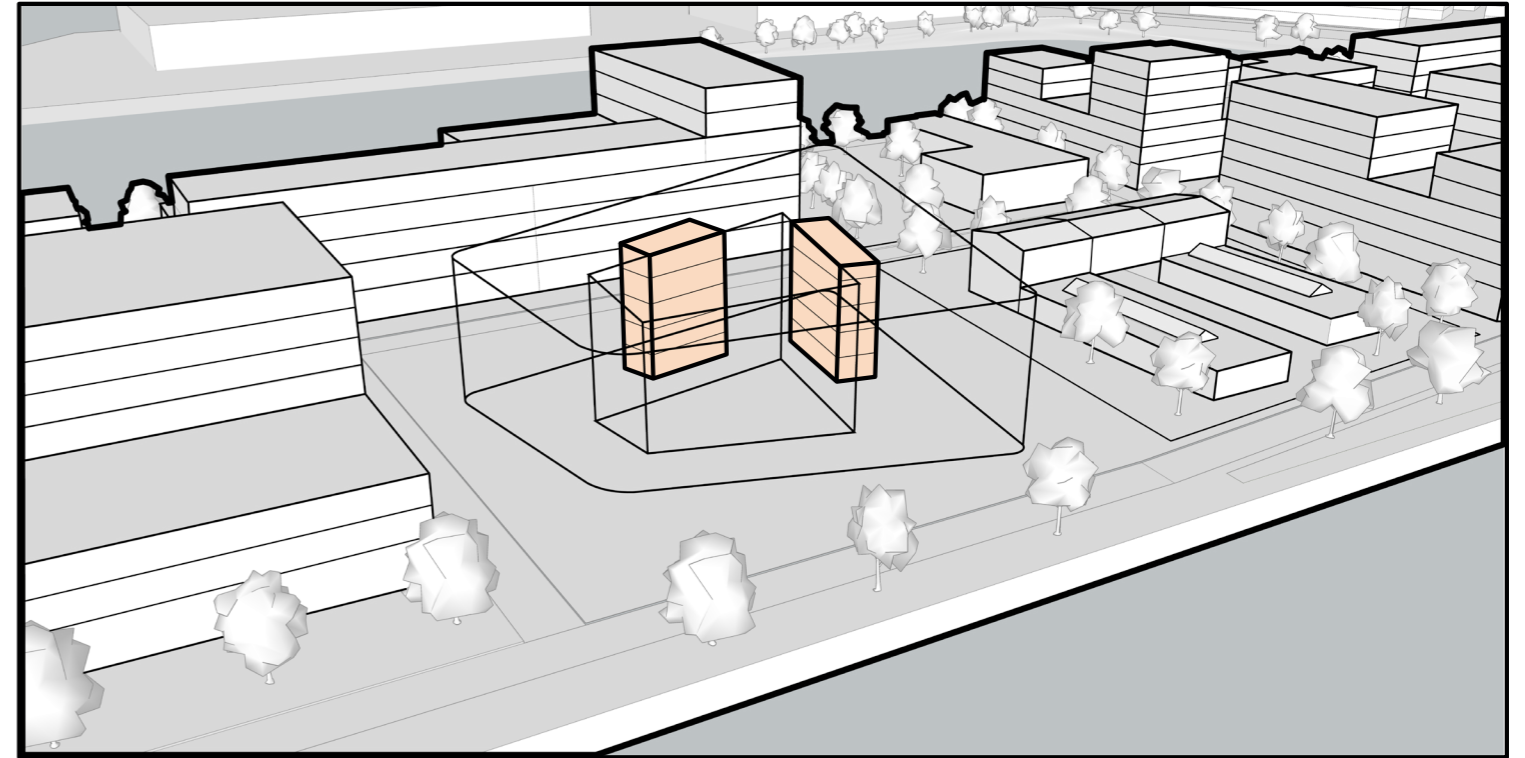
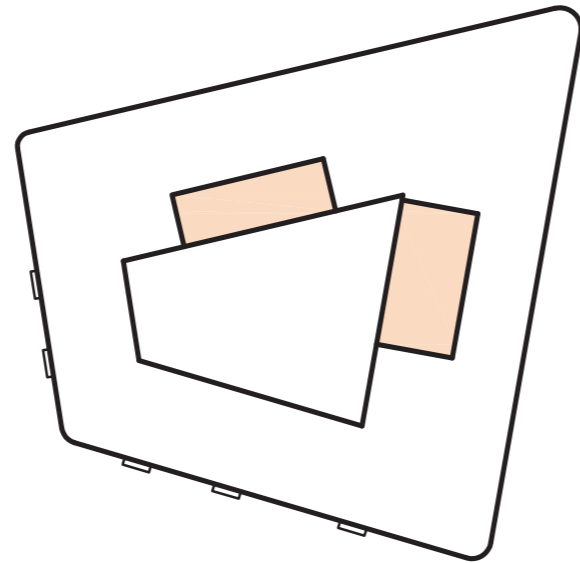
44m²



LAT relationship

26m²

Building - Dwelling



Alex

- Couples living apart together (LAT) have an intimate relationship but live at separate addresses
- Individual wants to keep their freedom and privacy
- May have a guest or be absent for a few days a week
- Needs extra space for a guest

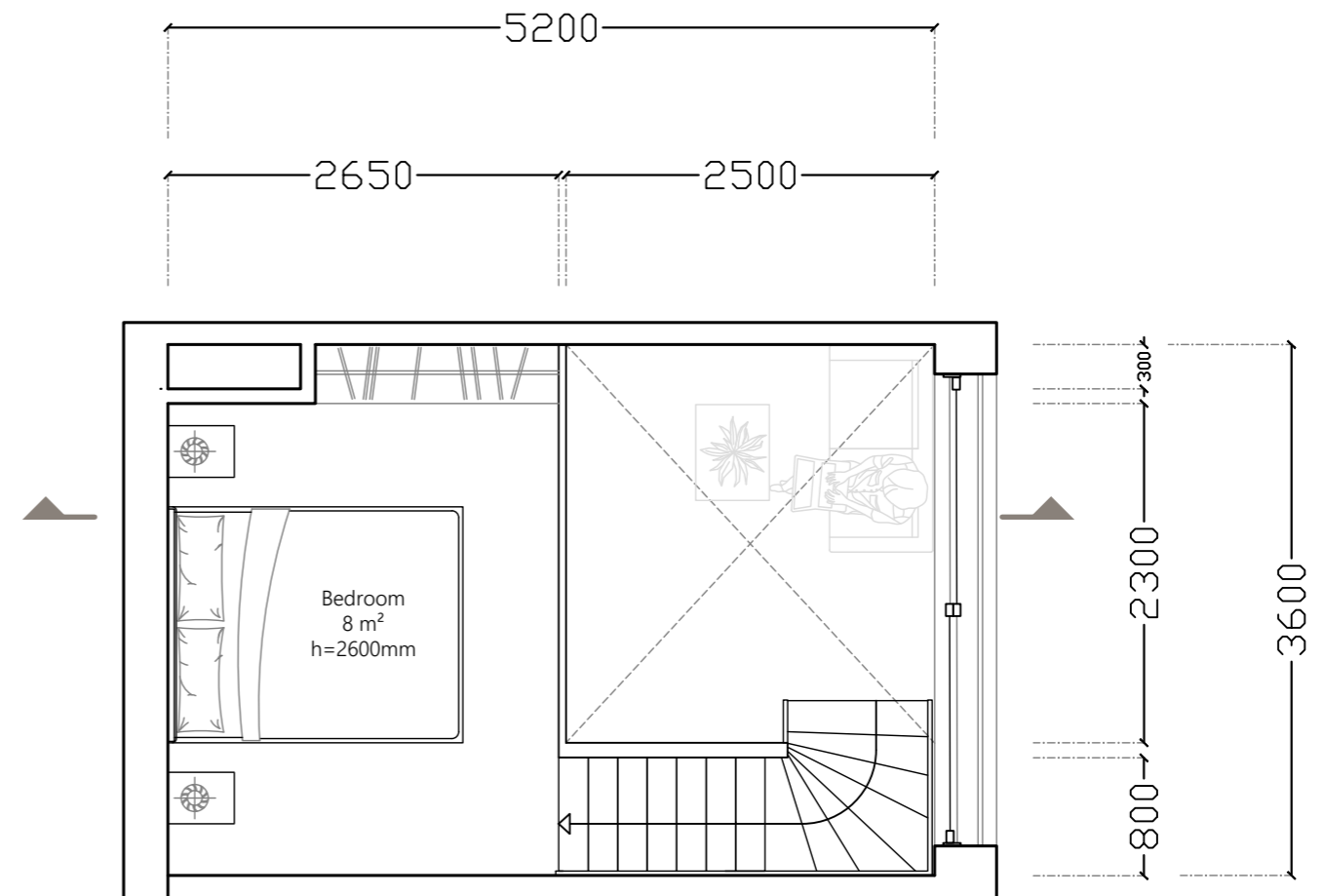
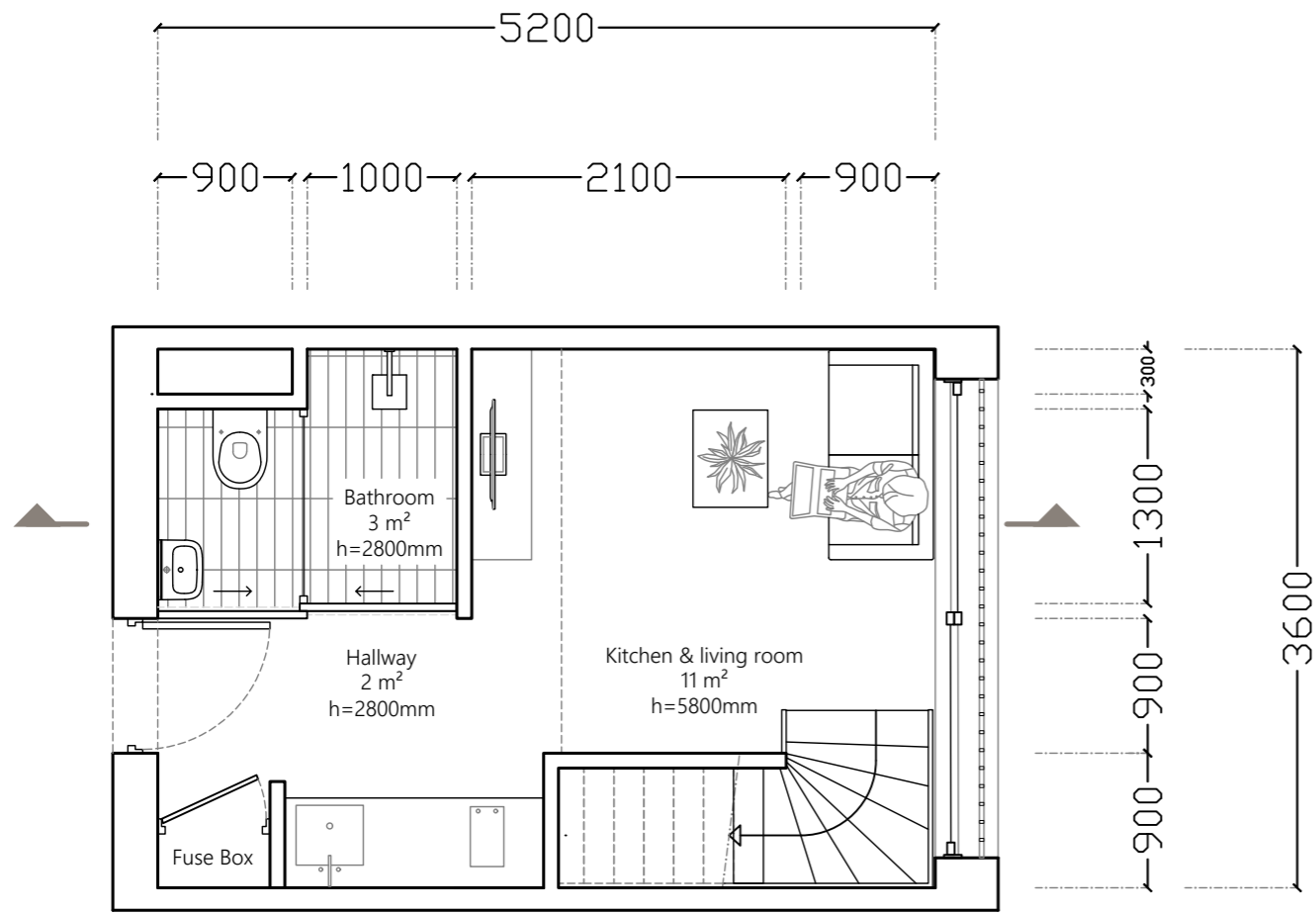
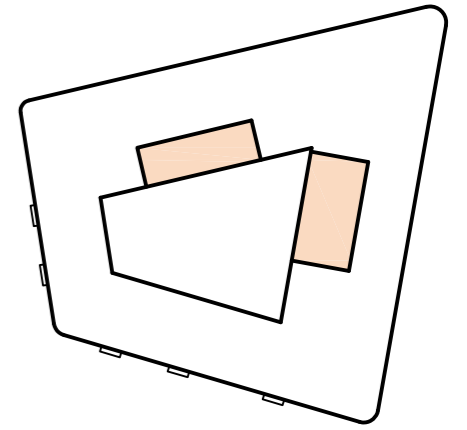
LAT relationship

- 26m²
- In total there are 14 dwellings of this type
- This type makes up 13% of the total dwellings in the building.

LAT relationship

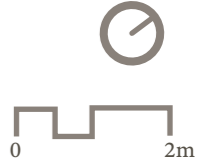
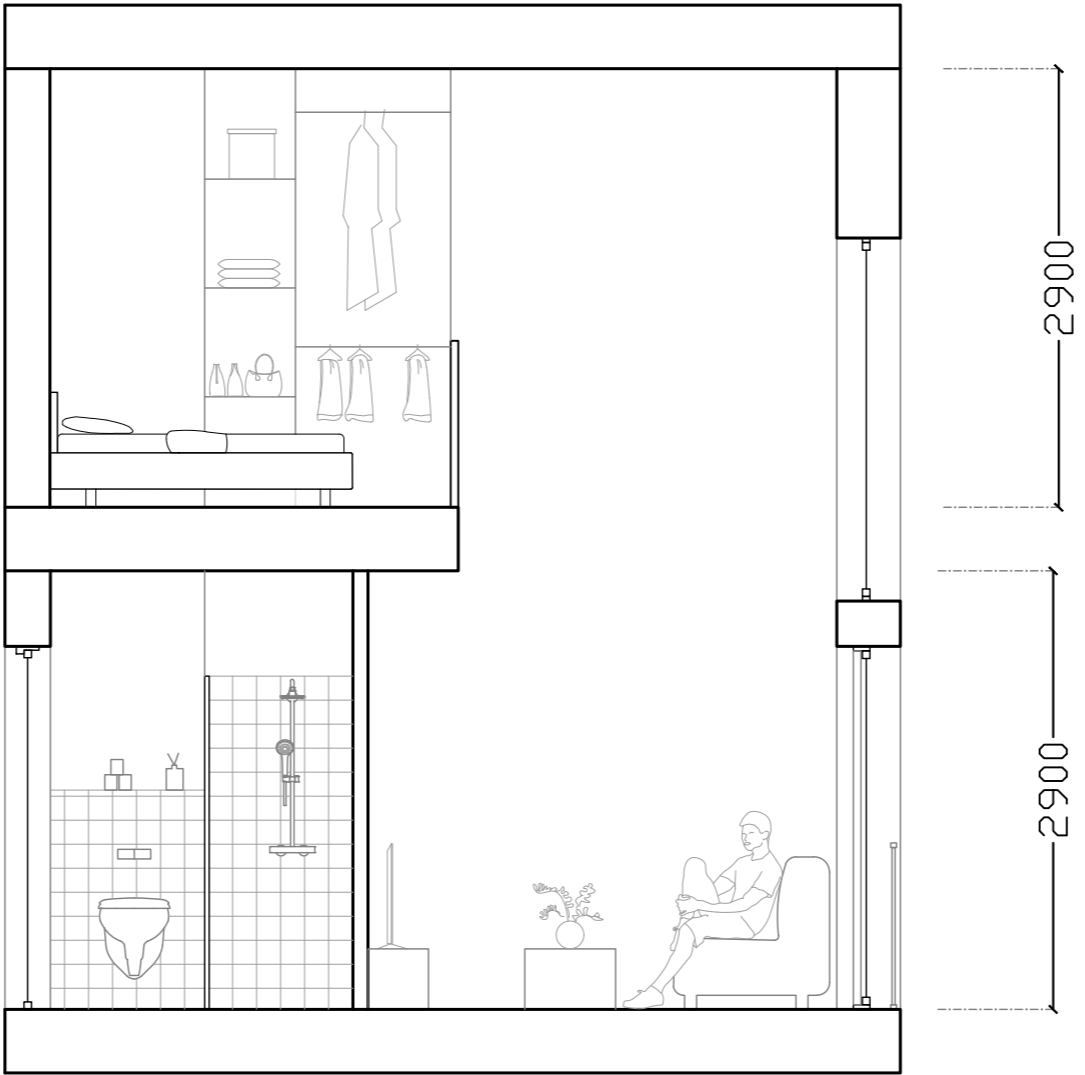
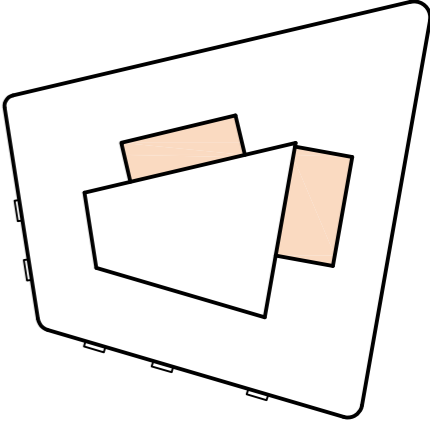
LAT relationship

26m²



LAT relationship

26m²



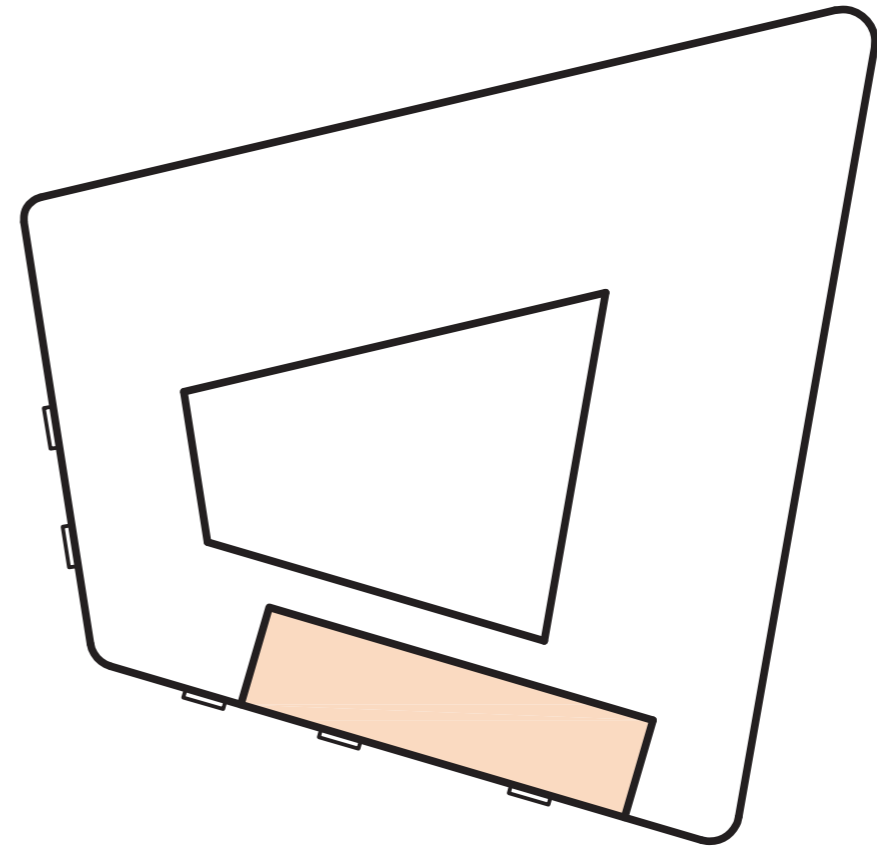
Friends

70m²



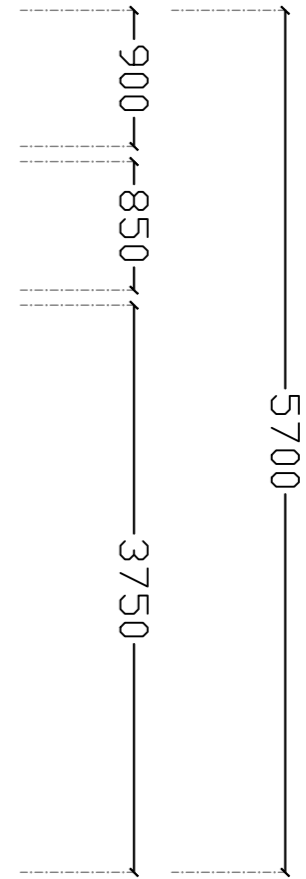
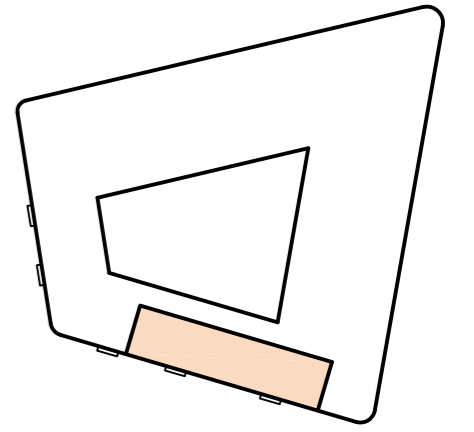
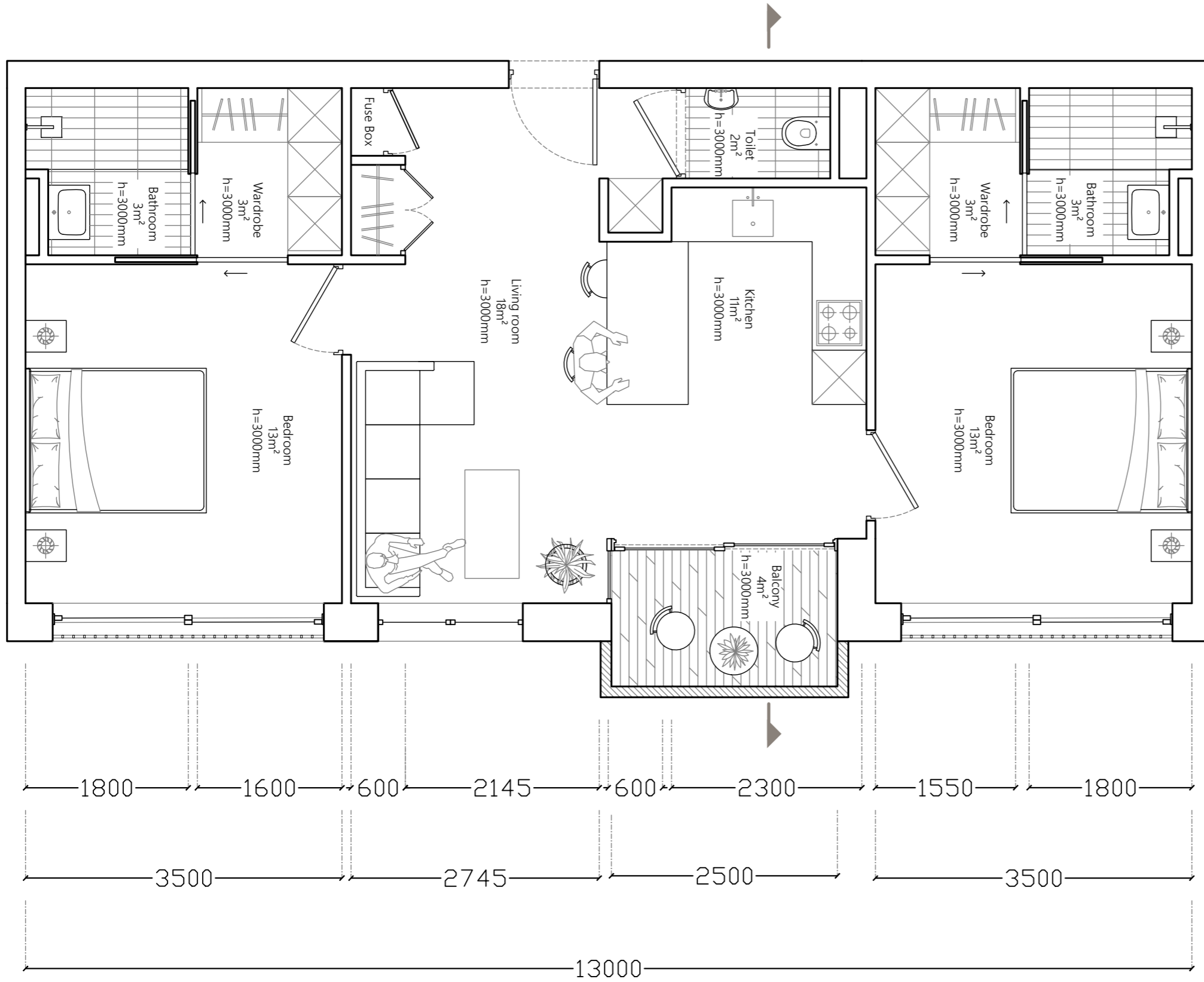
Zoë & Rosie

- Two-income household
- Two separate bedrooms
- Shares tasks and responsibilities
- Needs a shared outdoor space
- Dwelling should allow communal activities as well as assure individual privacy.



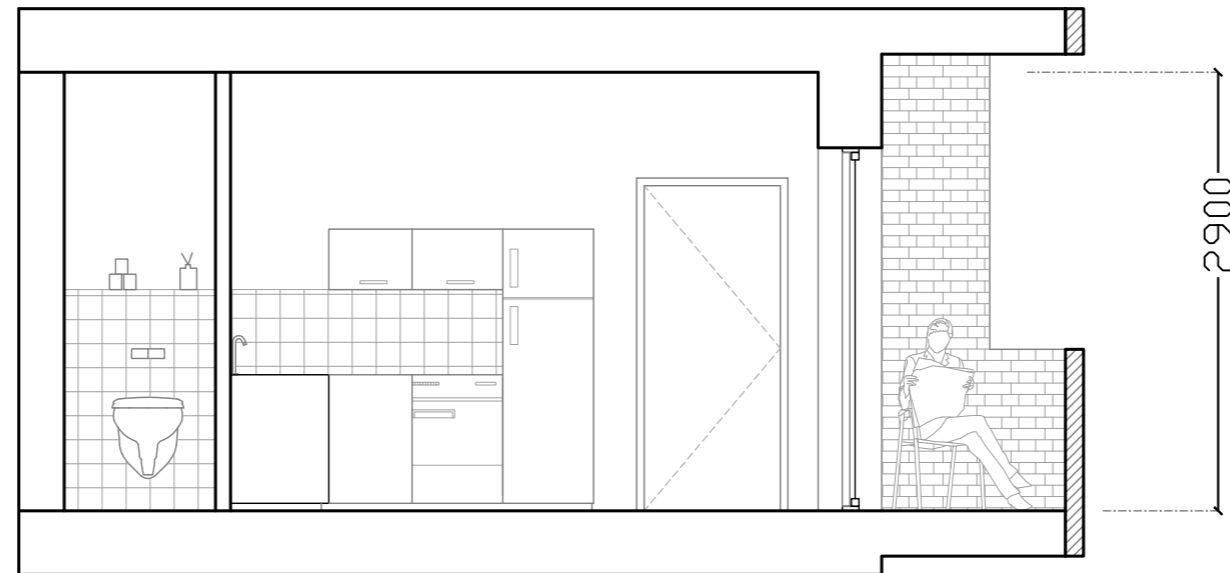
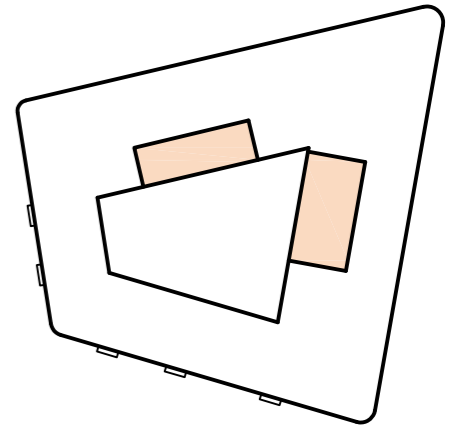
Friends

70m²

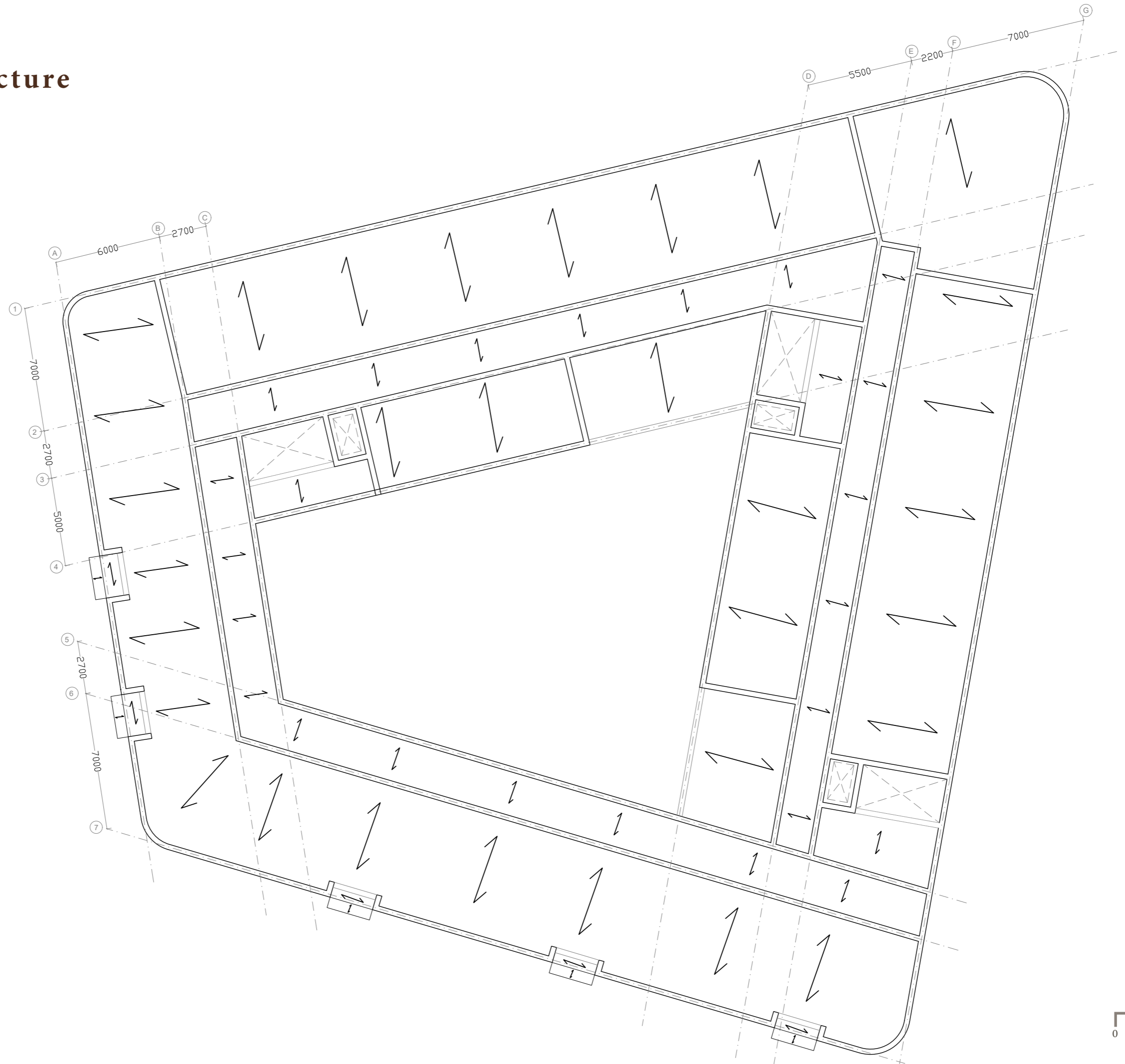


Friends

70m²



Load-bearing structure



Wall thickness

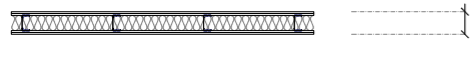
Load bearing outer wall



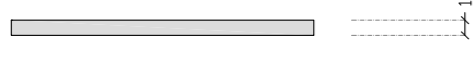
Load bearing inner wall



Metal stud partition wall



Metal stud interior wall



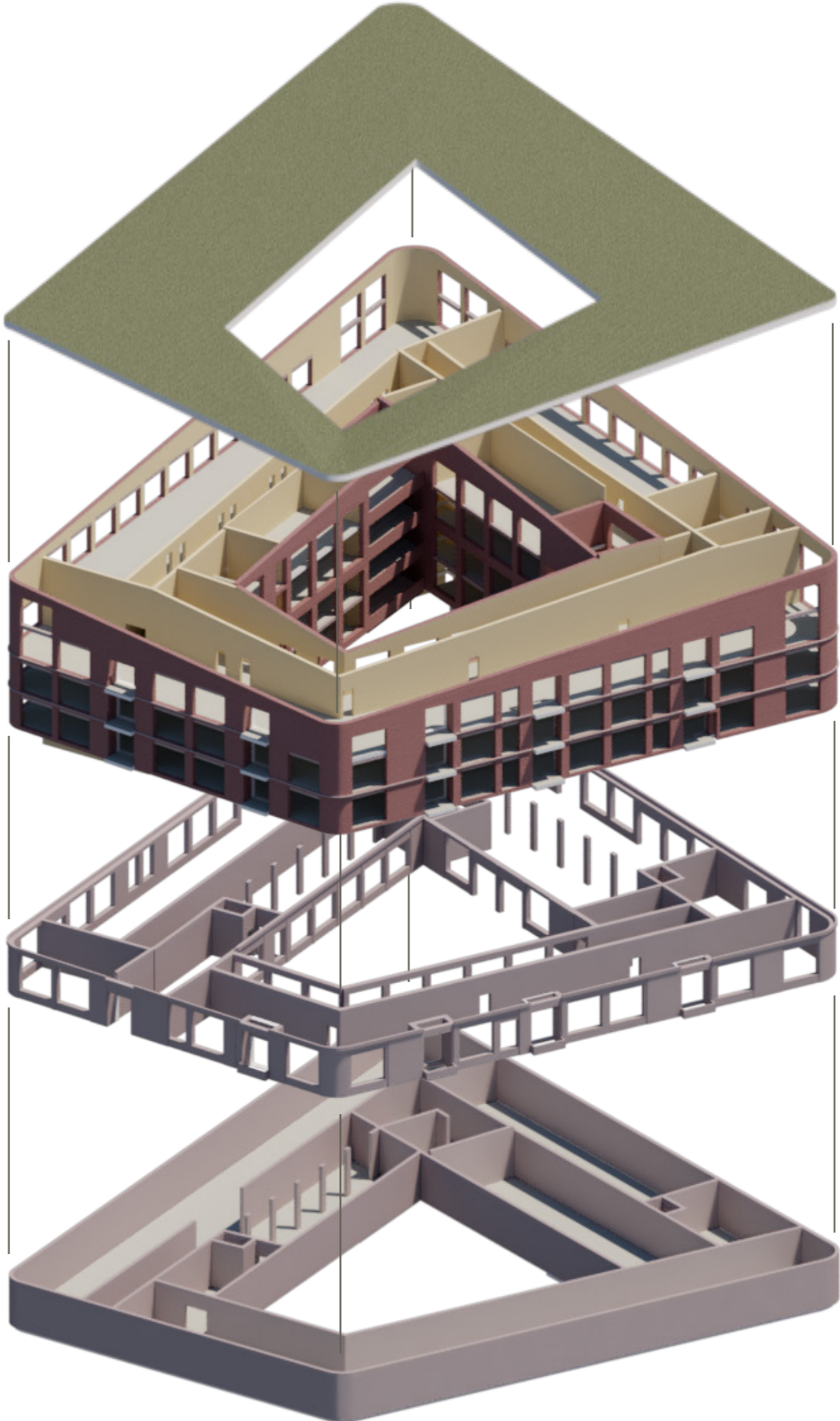
Load-bearing structure

_____ CLT roof

_____ CLT walls and floors

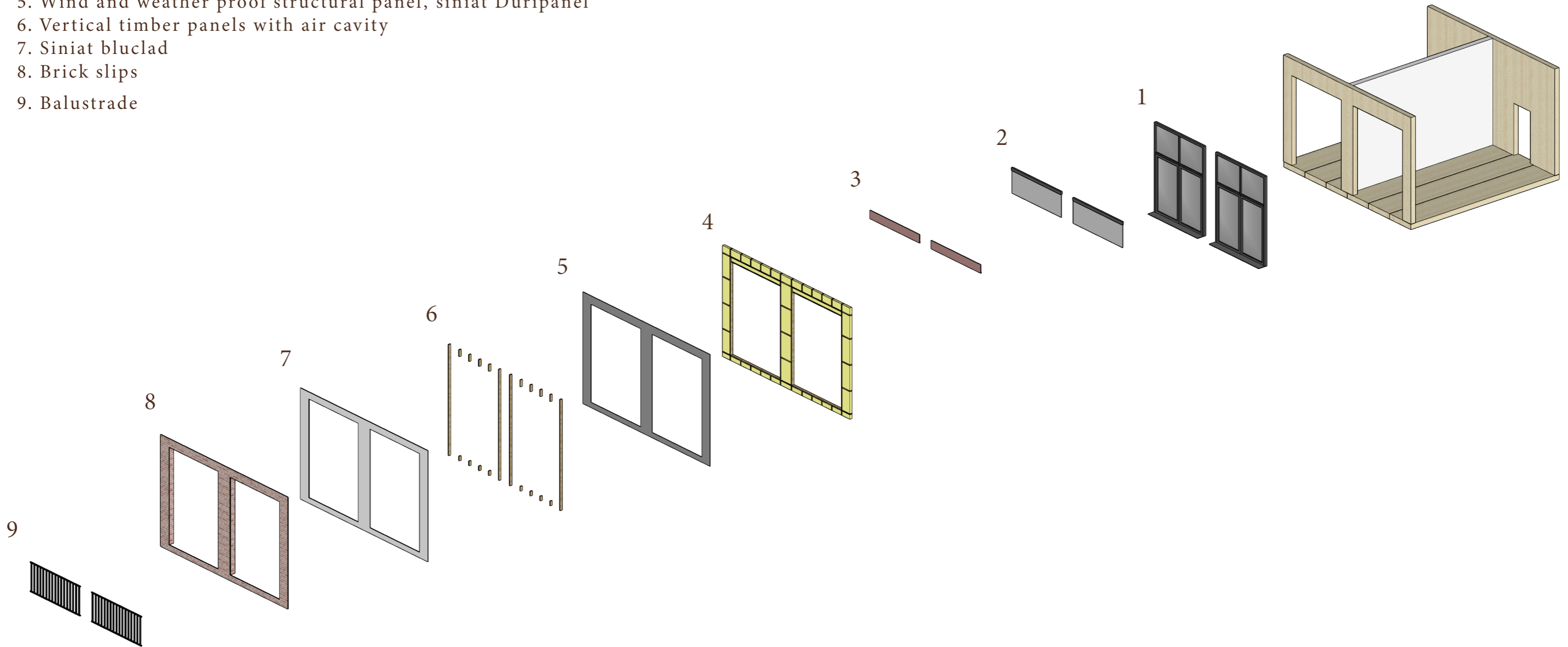
_____ Concrete ground floor

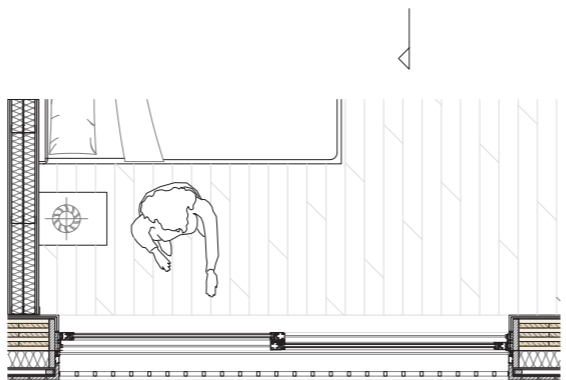
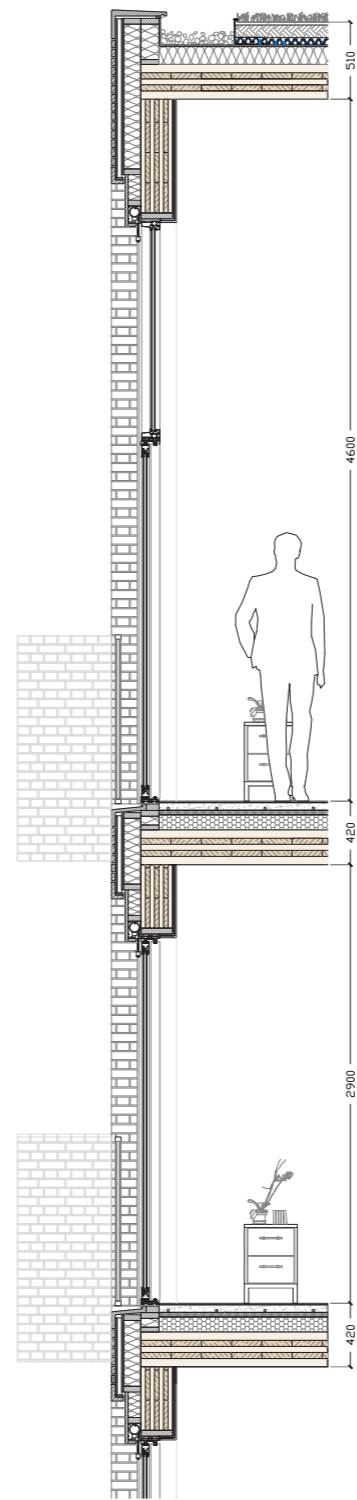
_____ Concrete basement level



Assembly facade

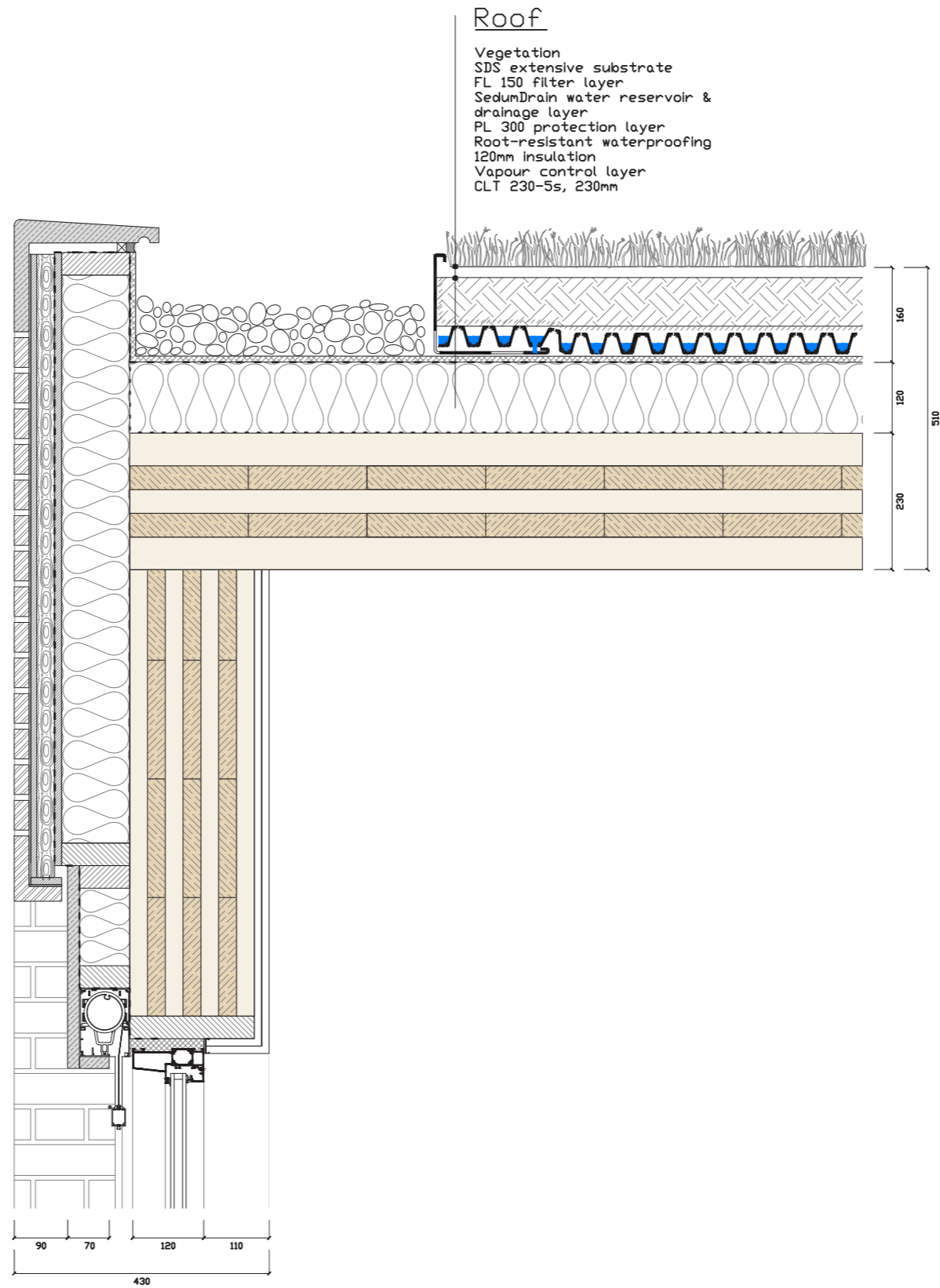
1. Window
2. Screen
3. Holonite sill
4. Insulation
5. Wind and weather proof structural panel, siniat Duripanel
6. Vertical timber panels with air cavity
7. Siniat bluclad
8. Brick slips
9. Balustrade



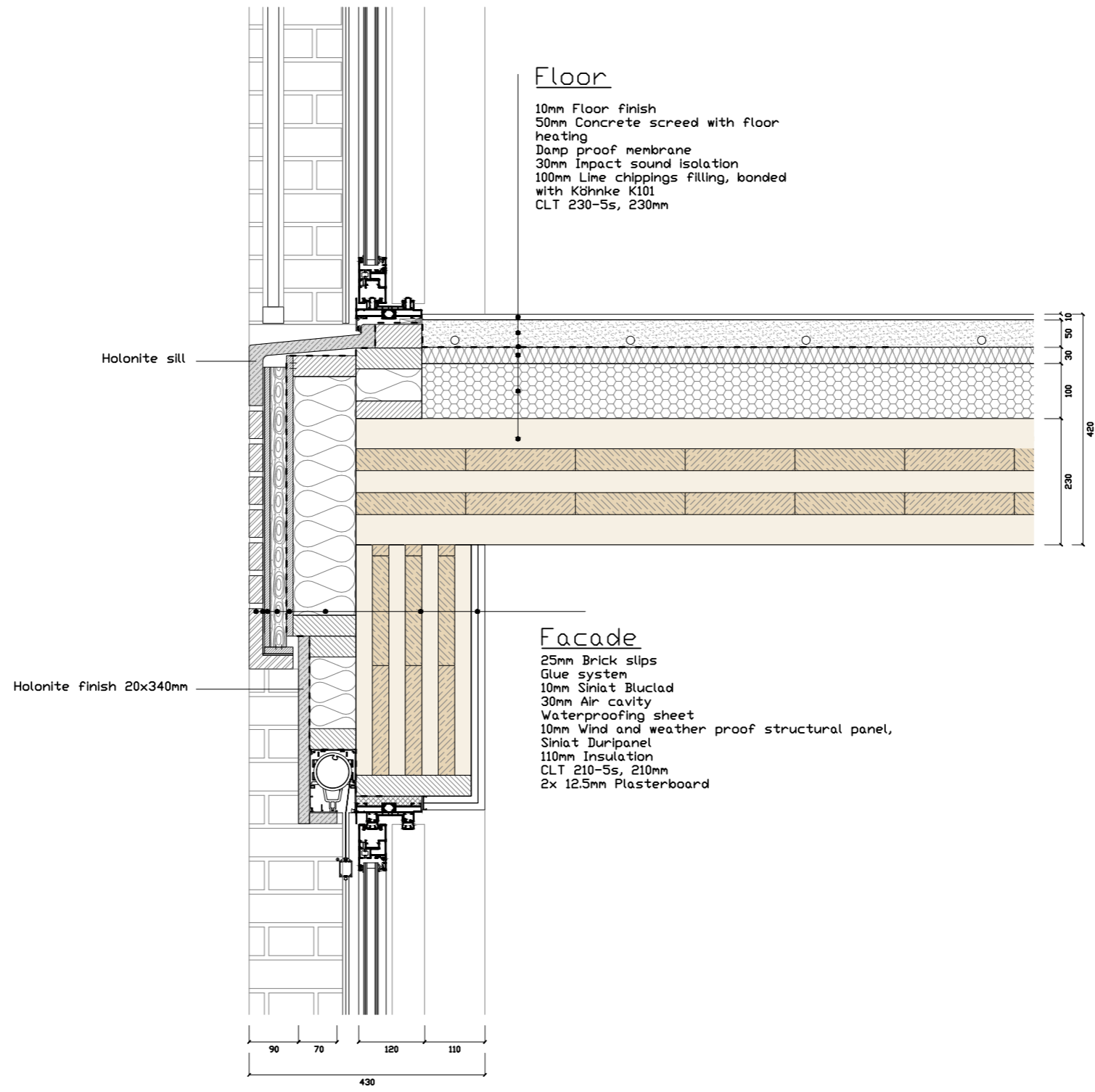


Facade fragment 1:50

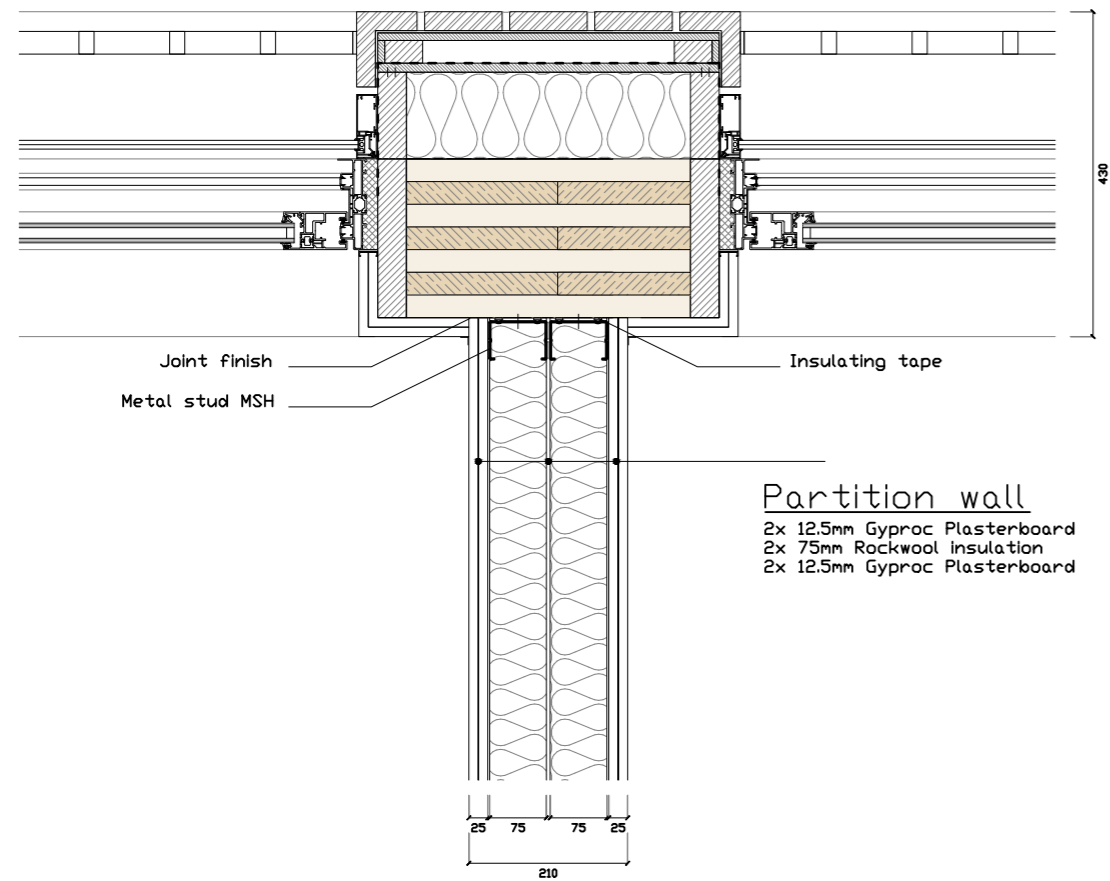
Advanced Housing Design Graduation Studio
 Chahrazad el Otmani - 4567005



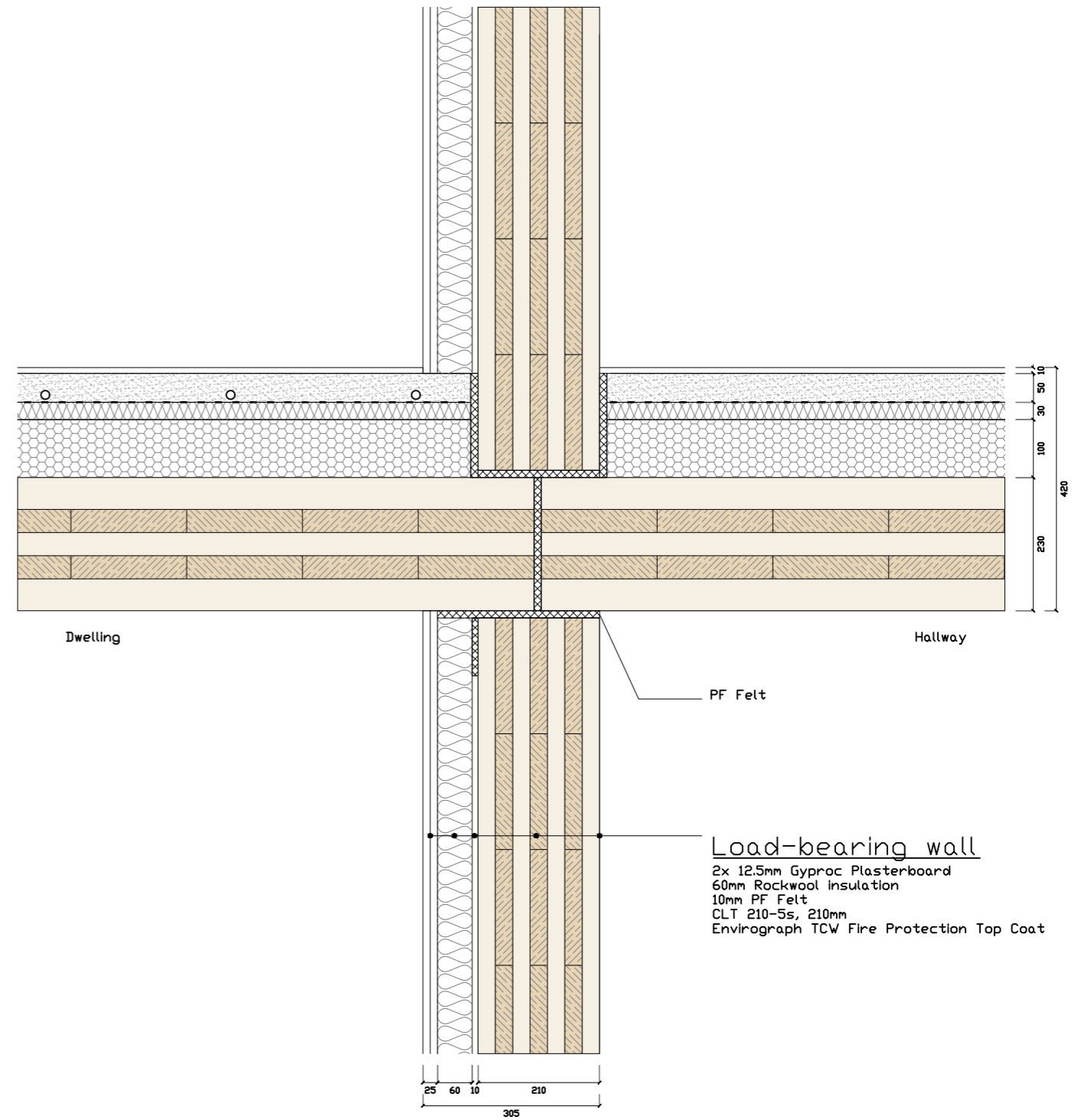
Roof detail 1:10



Floor detail 1:10

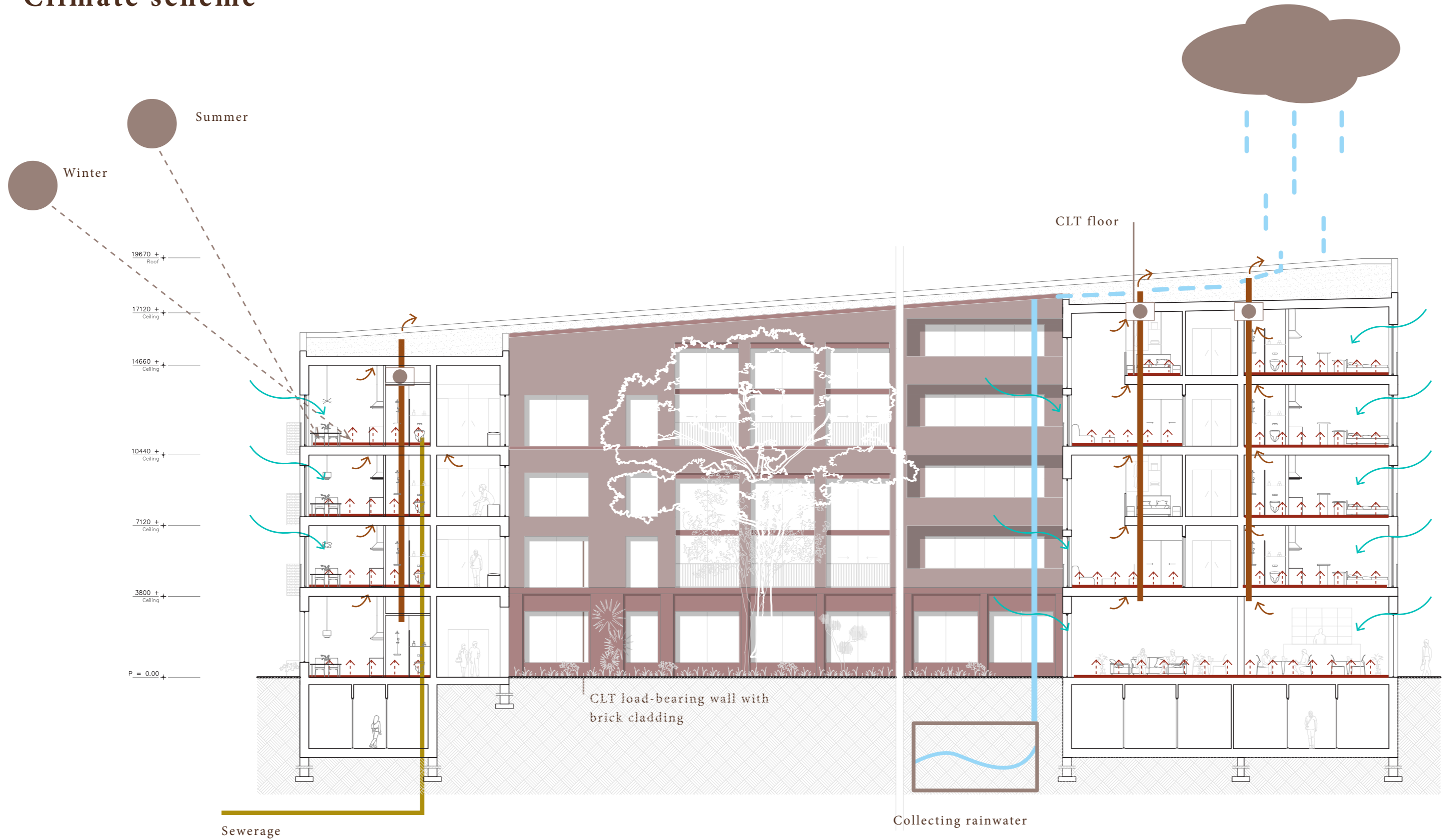


Horizontal window detail 1:10

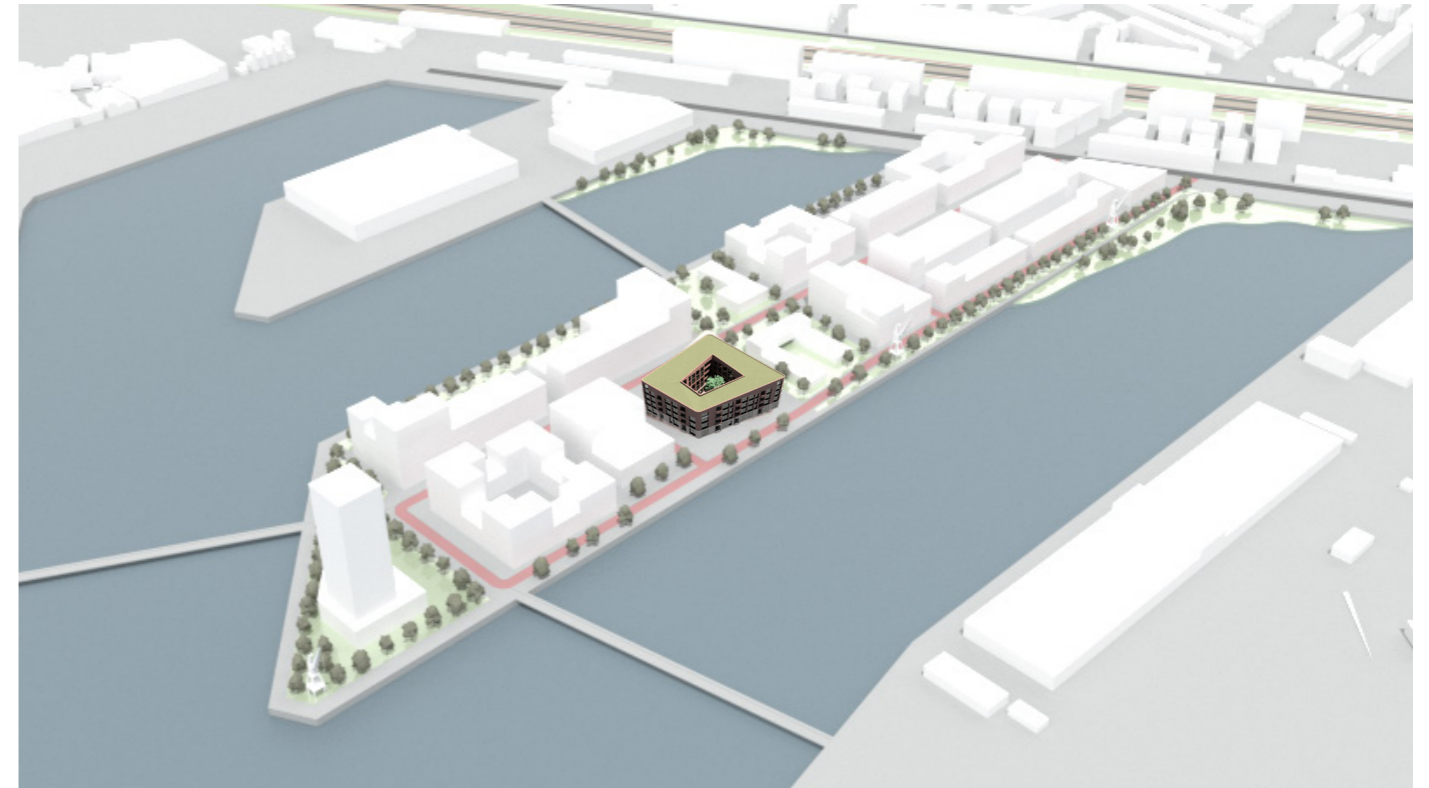


Load-bearing wall detail 1:10

Climate scheme

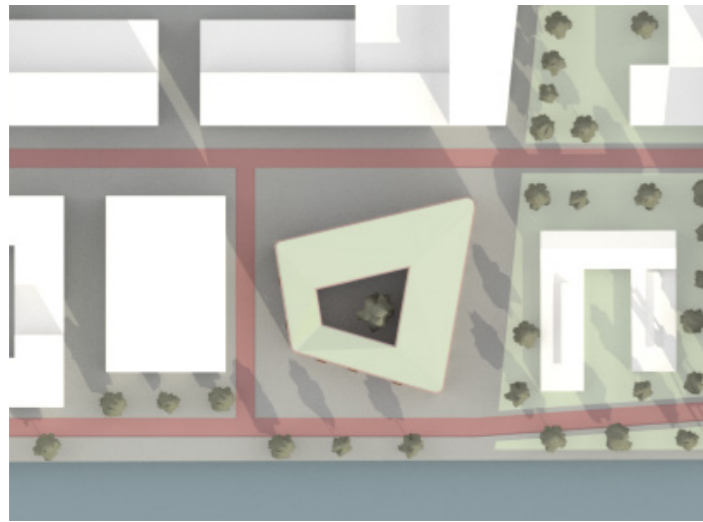


Green route

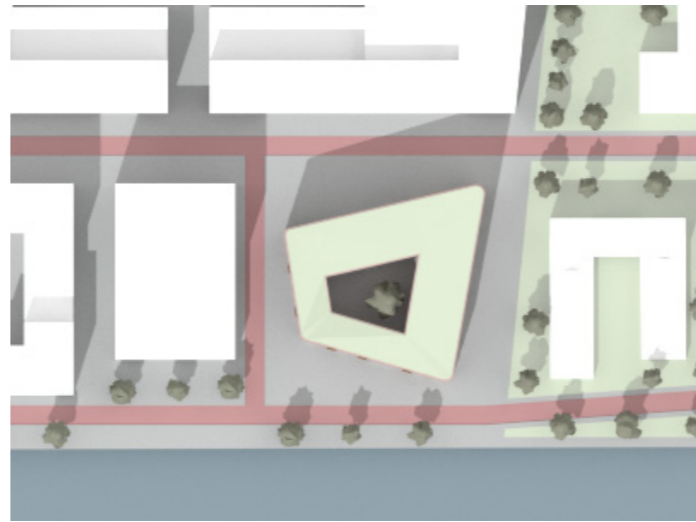


Solar study

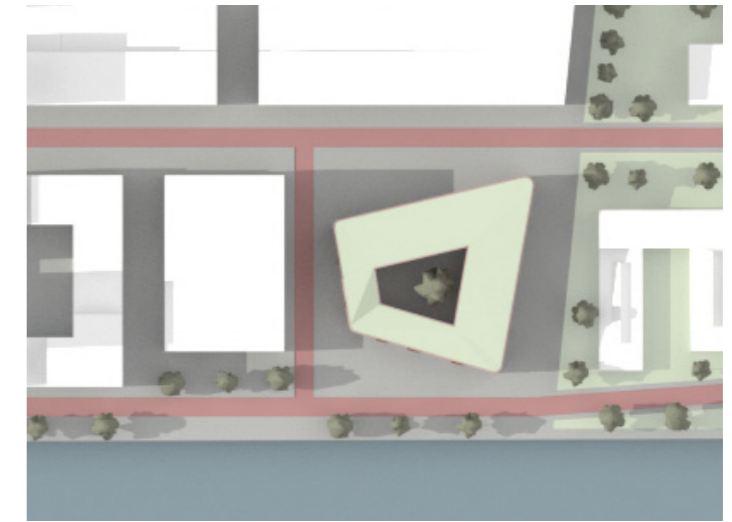
March 21st



9:00

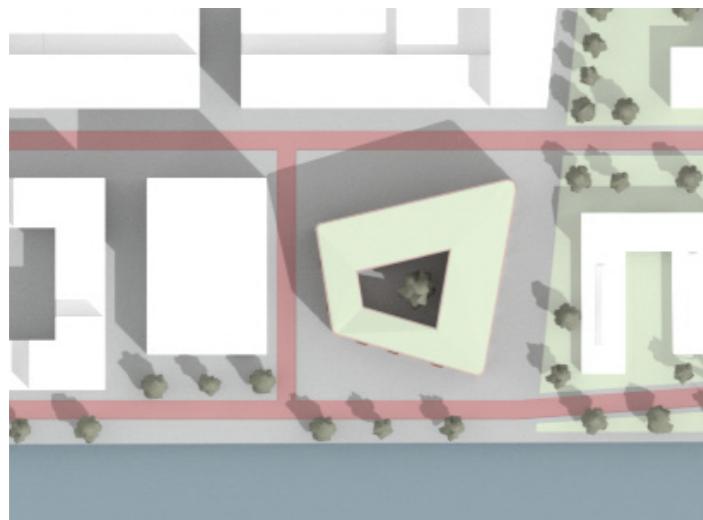


12:00

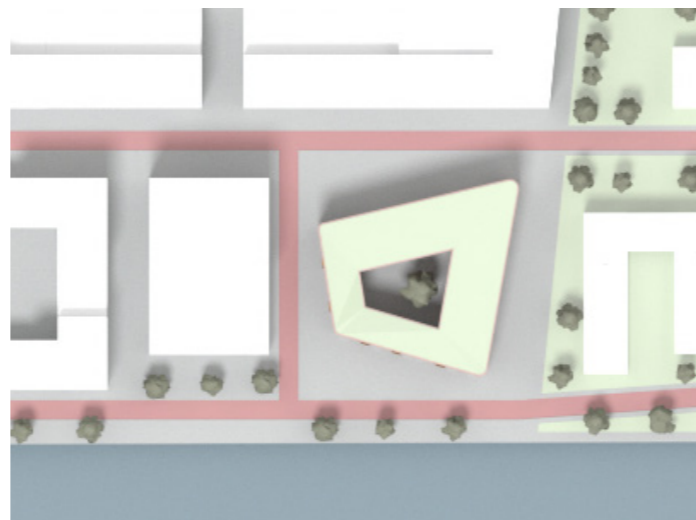


16:00

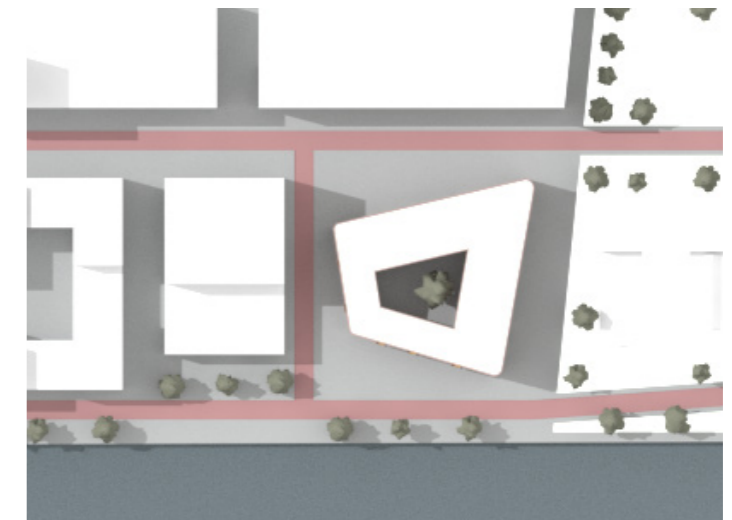
June 21st



9:00

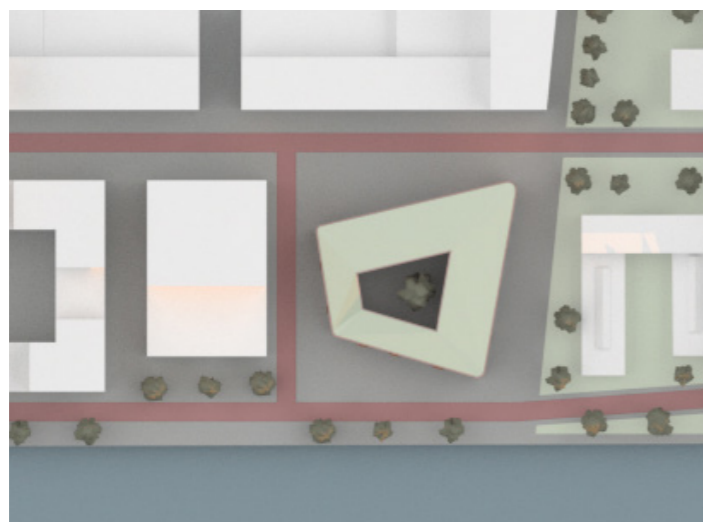


12:00

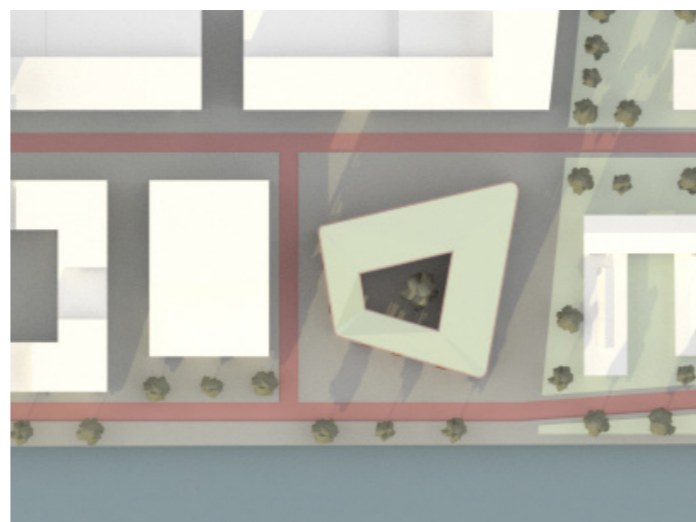


16:00

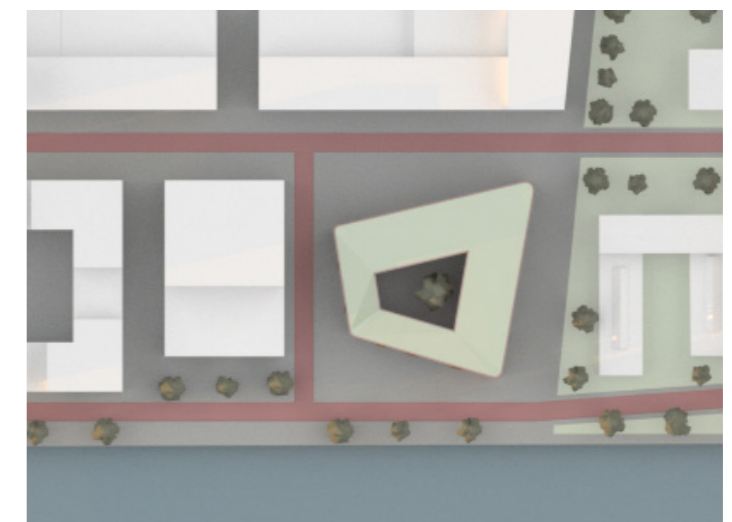
December 21st



9:00



12:00



16:00