MERCADO DA RIBEIRA

Brief Manifesto - Plan

Clockwise from top right - Tripas a moda do Porto, Portuguese Fish Stew, Potato, Egg and Bean Salad, Feijoada, Francesinha, Bacalhau a Gomes de Sa, Ameijoas a Bulhao Pato and Grilled sardines

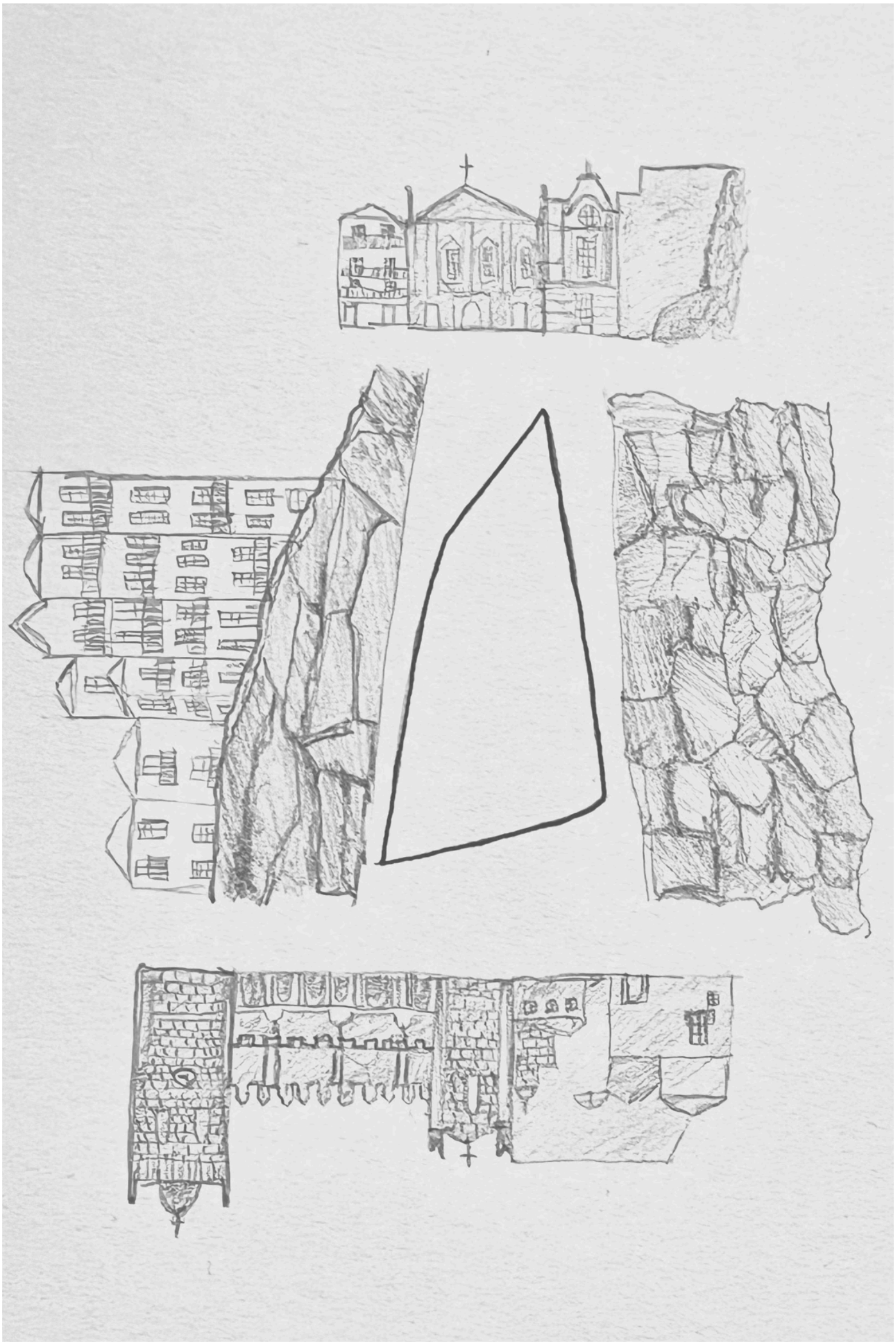
I have decided to design a permanent food market. The market will mainly target locals instead of tourists and help local street vendors to further build their businesses. They will be able to sell their produce and make traditional dishes with them.

The market will be a semi-closed one, with a dining area within the building and market stalls all throughout the site. It will be open to the public Monday, Wednesday - Sunday from 5-12pm. These hours were chosen due to the late time in which portuguese people tend to have dinnertime at. Meanwhile, the market building will serve 2 alternative puposes. With the market opening later during the day, it allows other events to occur during that period.

Some days of the week will be dedicated for workshops were people can pay to learn how to make local traditional dishes, and some other days of the week the market will be open solely to feed the homeless. The people who took part in the workshops and anyone could volunteer to cook for the homeless.

One of the main things I want to convey through my building is the sense of community. A place where strangers can come to eat or simply relax and meet other people doing the same. The market will not only be a market, but more of a communal space. That is why a big open plan dining room is essential. Instead of separate dining areas, I feel it necessary to add big sharing tables as well as small individual ones. For people who go because they want to meet other people and for those who simply want to be alone while still surrounded by people. I am using food as a drive to bring a community together.

Adjacent Land Use

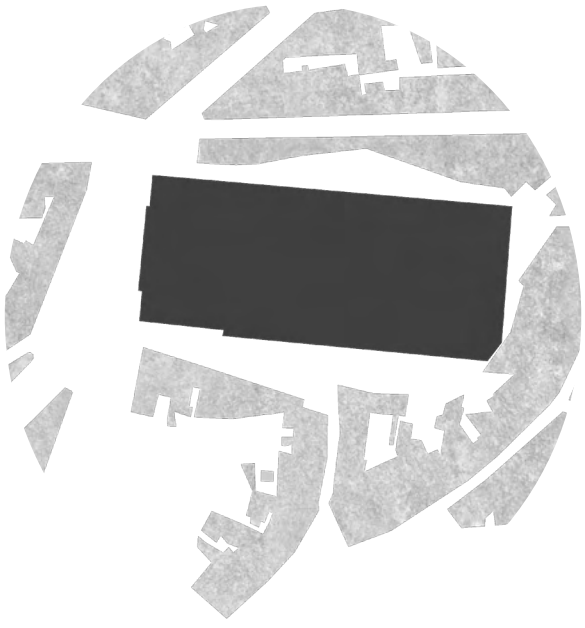


To the East of site there is a cliff of about 25 metres tall with trees and green area on it. To the South of site, the Porto Cathedral is in the line of site. To the West of site, there is another cliff but this one is approximately 10 metres tall. With a road and buildings on it. Ranging from hotels, to restaurants and private dwellings, the road can get congested both by pedestrians and vehicles. Finally, in the immediate North direction of site there is a railway station (Sao Bento), restaurants, tourists centres, hospitality buildings, banks and a church at the end of the road.
There is a metro entrance next to site and another on the other side of the road. Additionally, there is bus stop right next to site, with 8 buses with different routes.

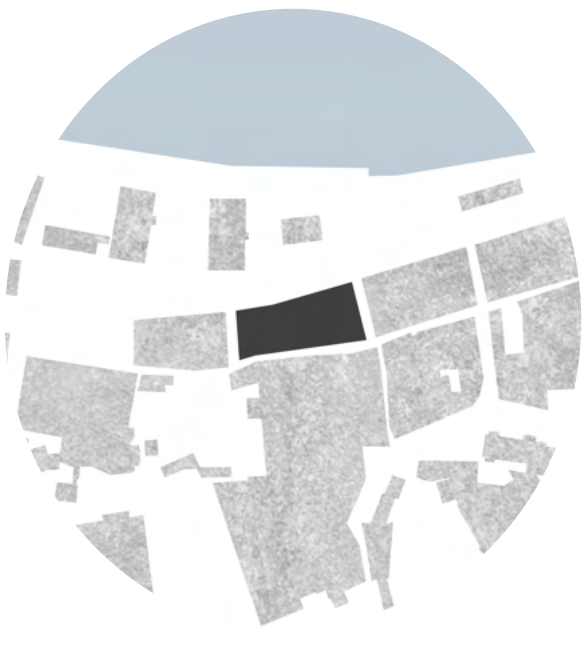
Existing Food Markets

1. Mercado Bom Sucesso

2. Mercado de Bolhao



3. Time Out Market

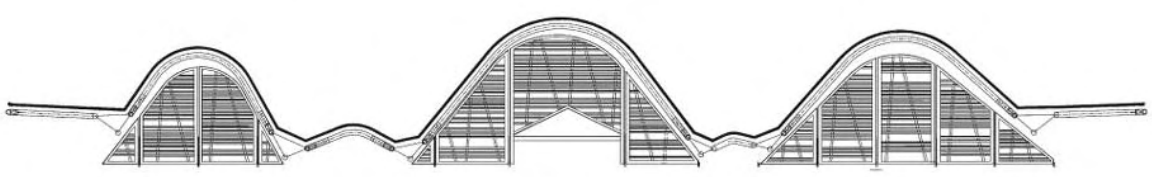


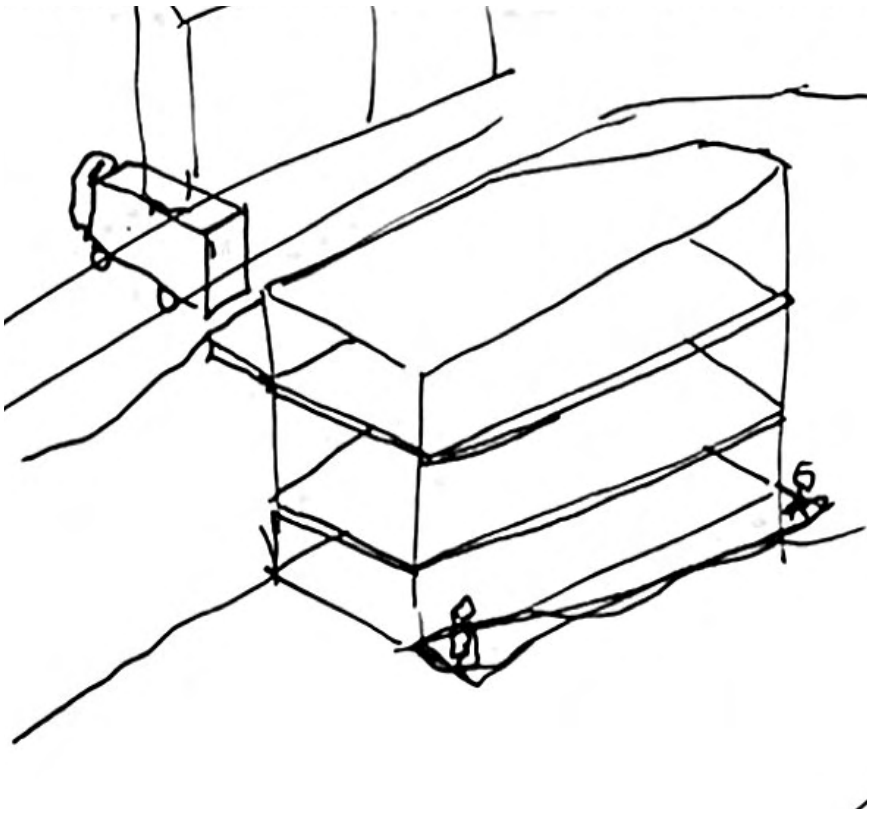
4. Mercado Beira-Rio

Santa Caterina Market, Barcelona

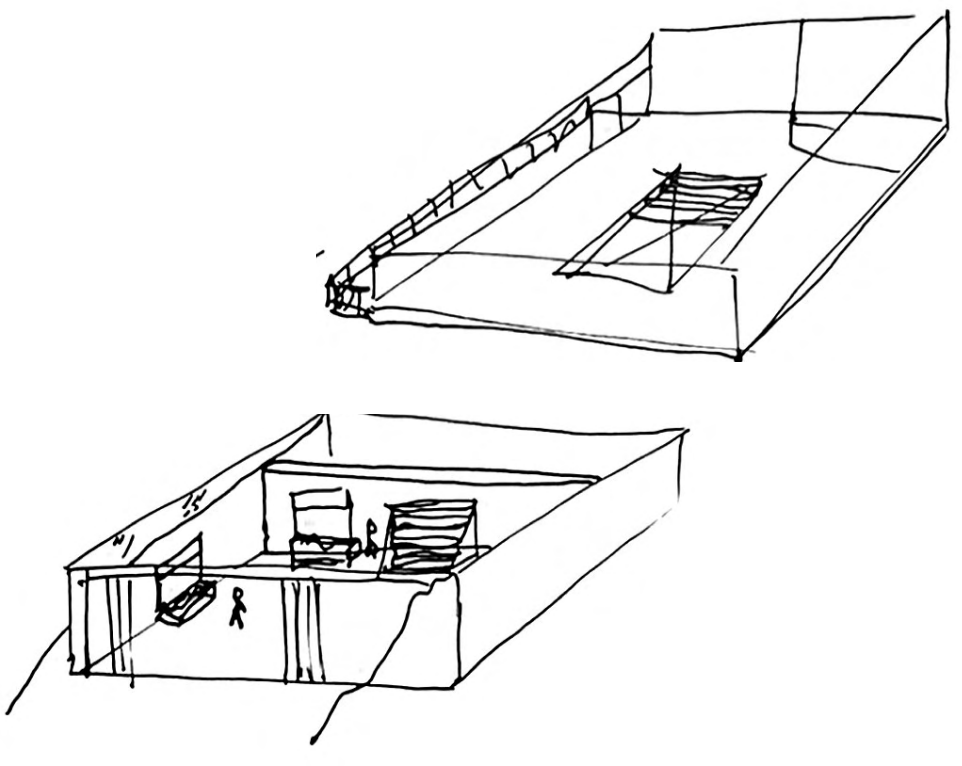
Miralles Tagliabue EMBT

1999-2005

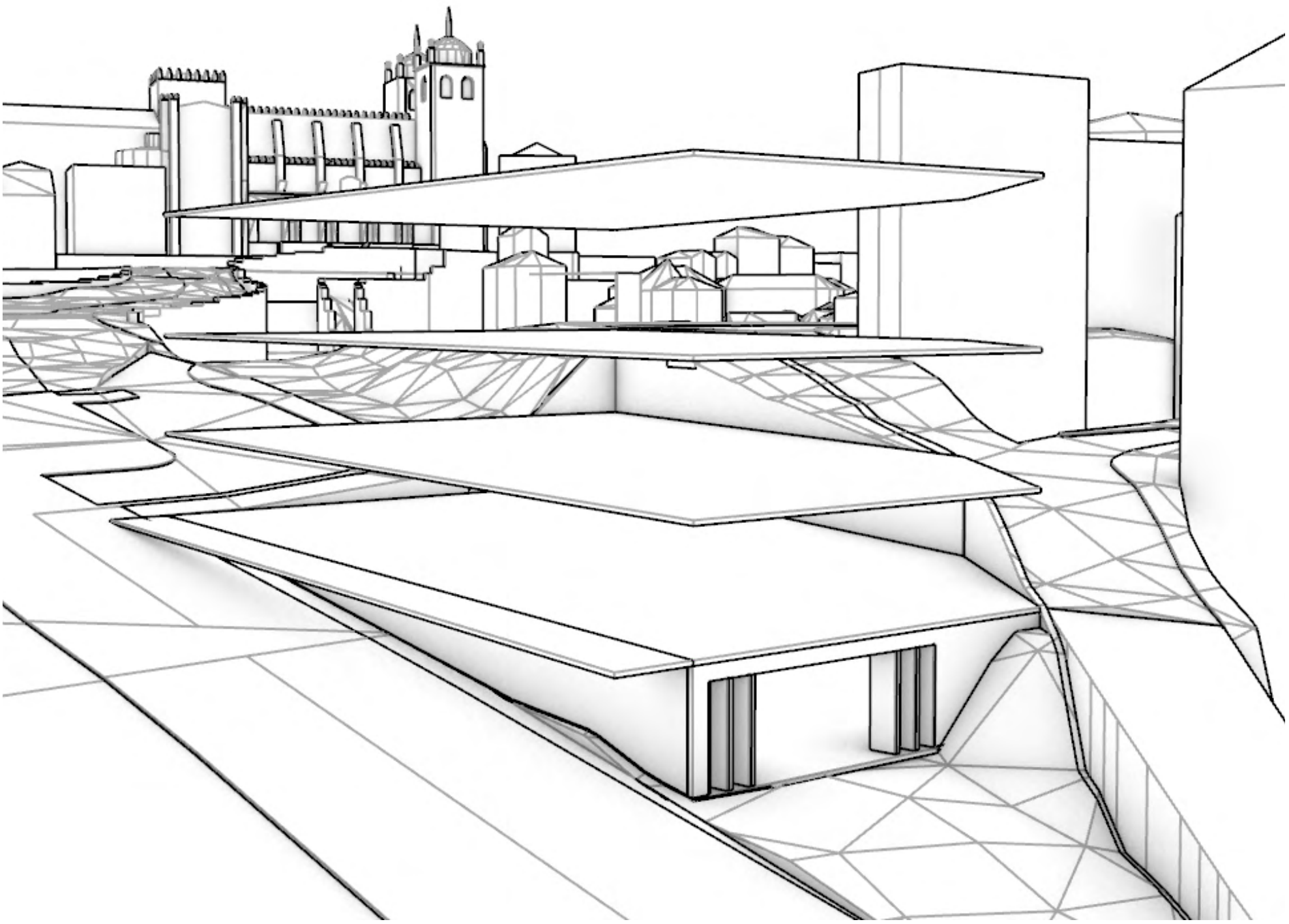




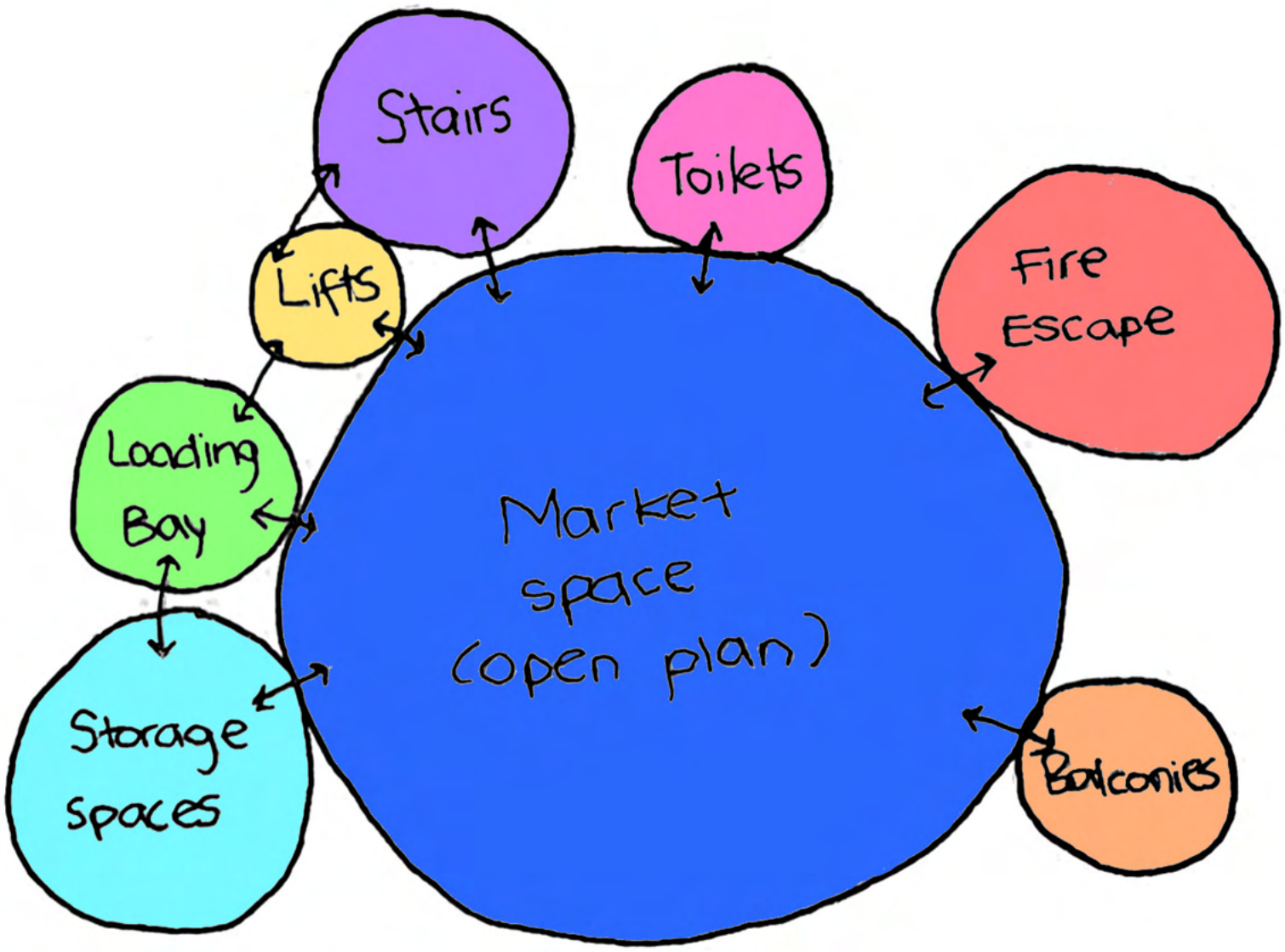
Initial design ideas illustrating the importance of the loading bay and how it had to meet the top of the rock formation as well as match the floors.



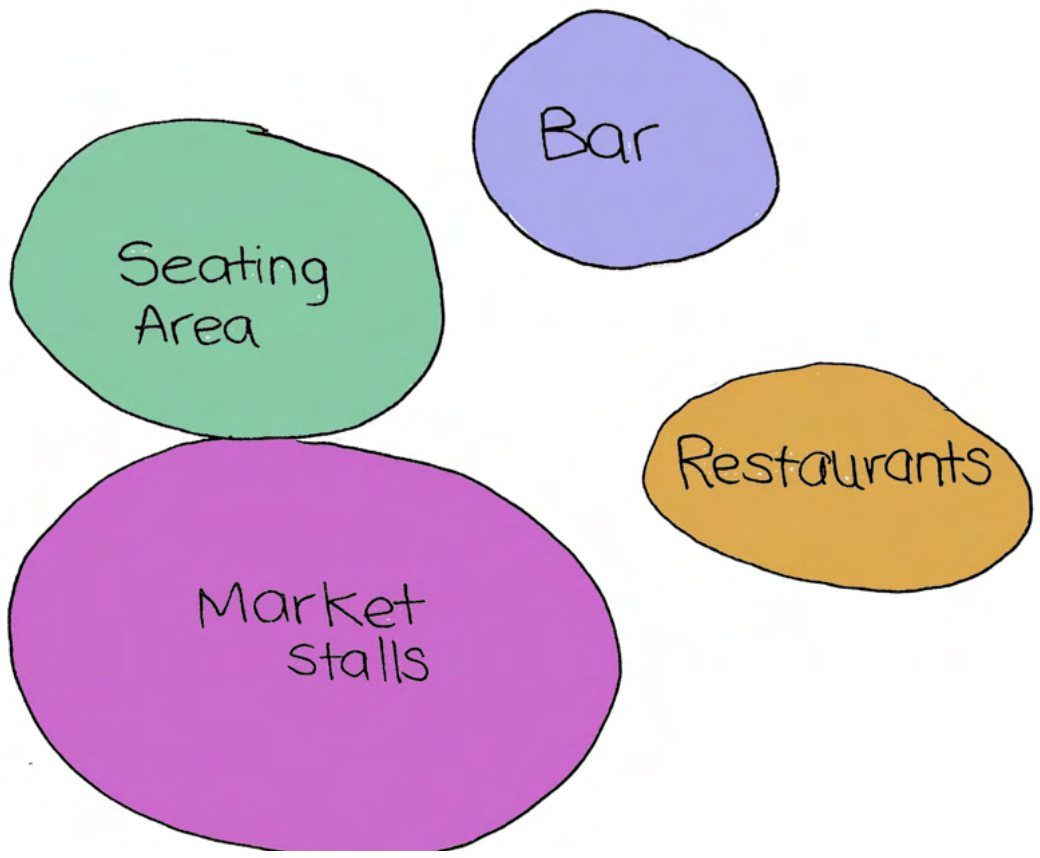
Quick sketch of an axo to try and see how the centre of the building was going to work per floor.



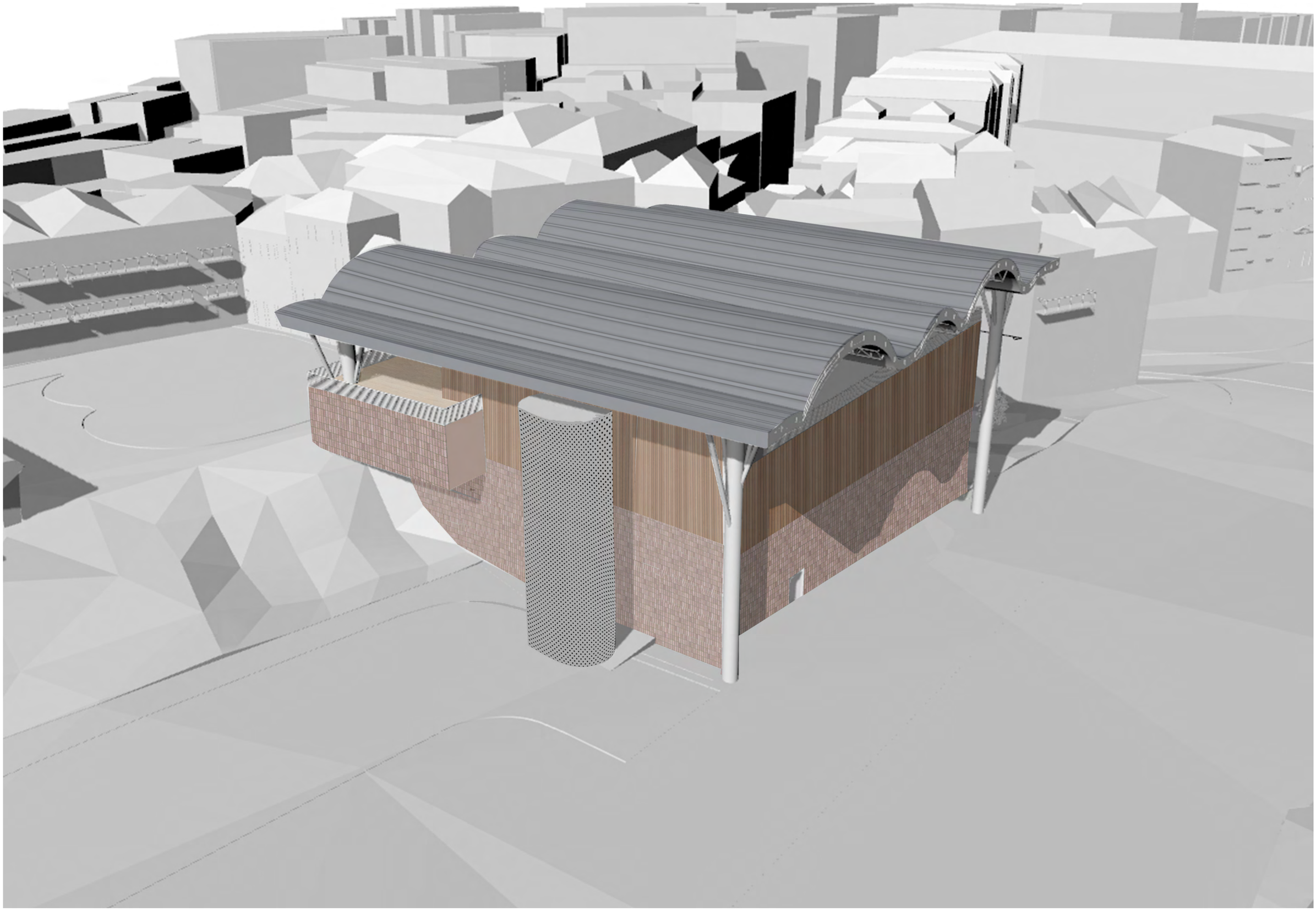
Distance between each floor modelled and a rough idea as to how much the building was being built into the ground. It was also a test to see how many floors could fit between the ground and the top of the rock formation.



Key spaces within the building.



Breakdwon of important spaces within the market areas

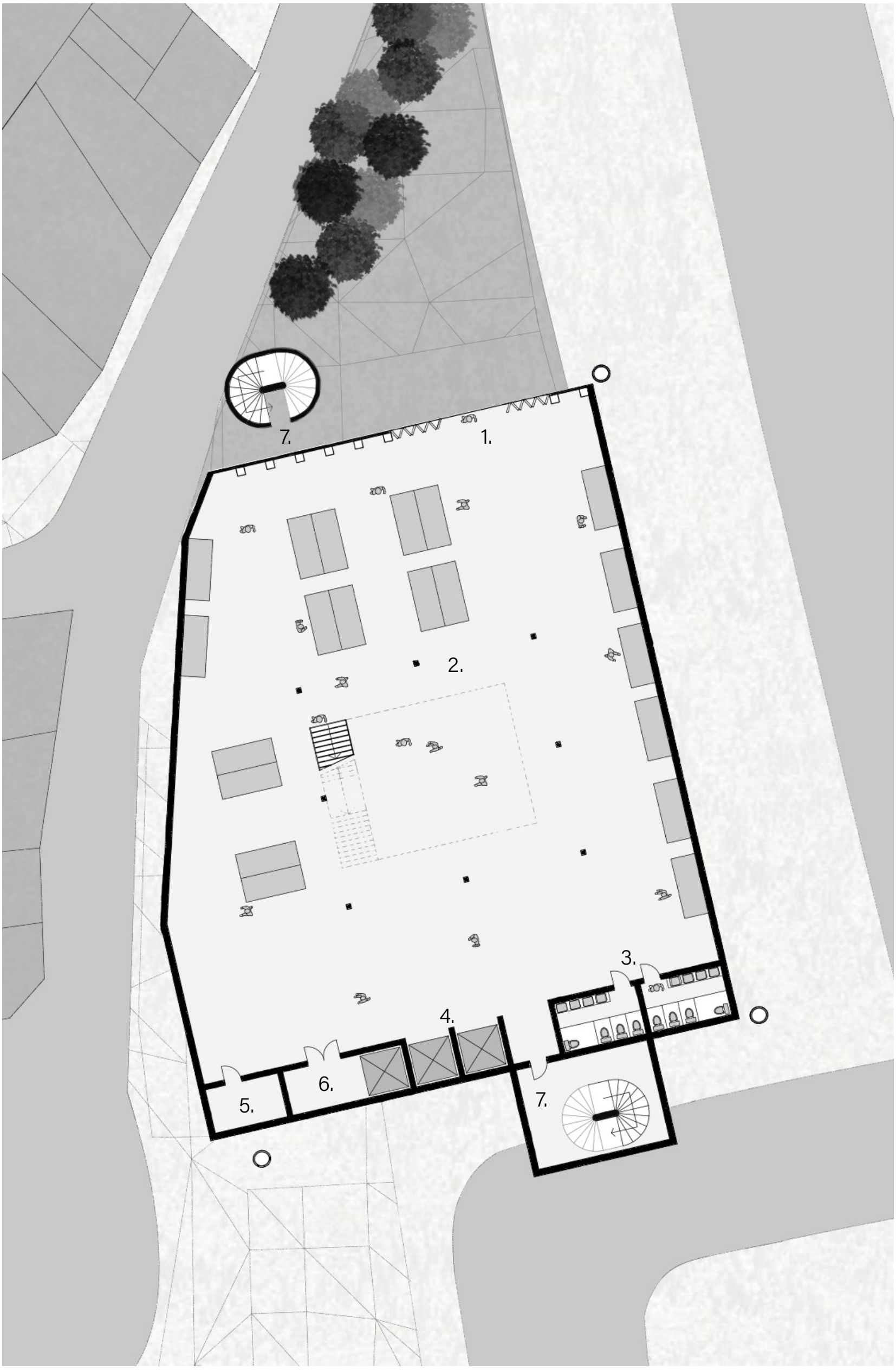


0 5 10m

Ground Floor

KEY:

1. Main Entrance
2. Market Hall
3. W/C
4. Lifts
5. Storage Space
6. Private Lift
7. Fire Escape

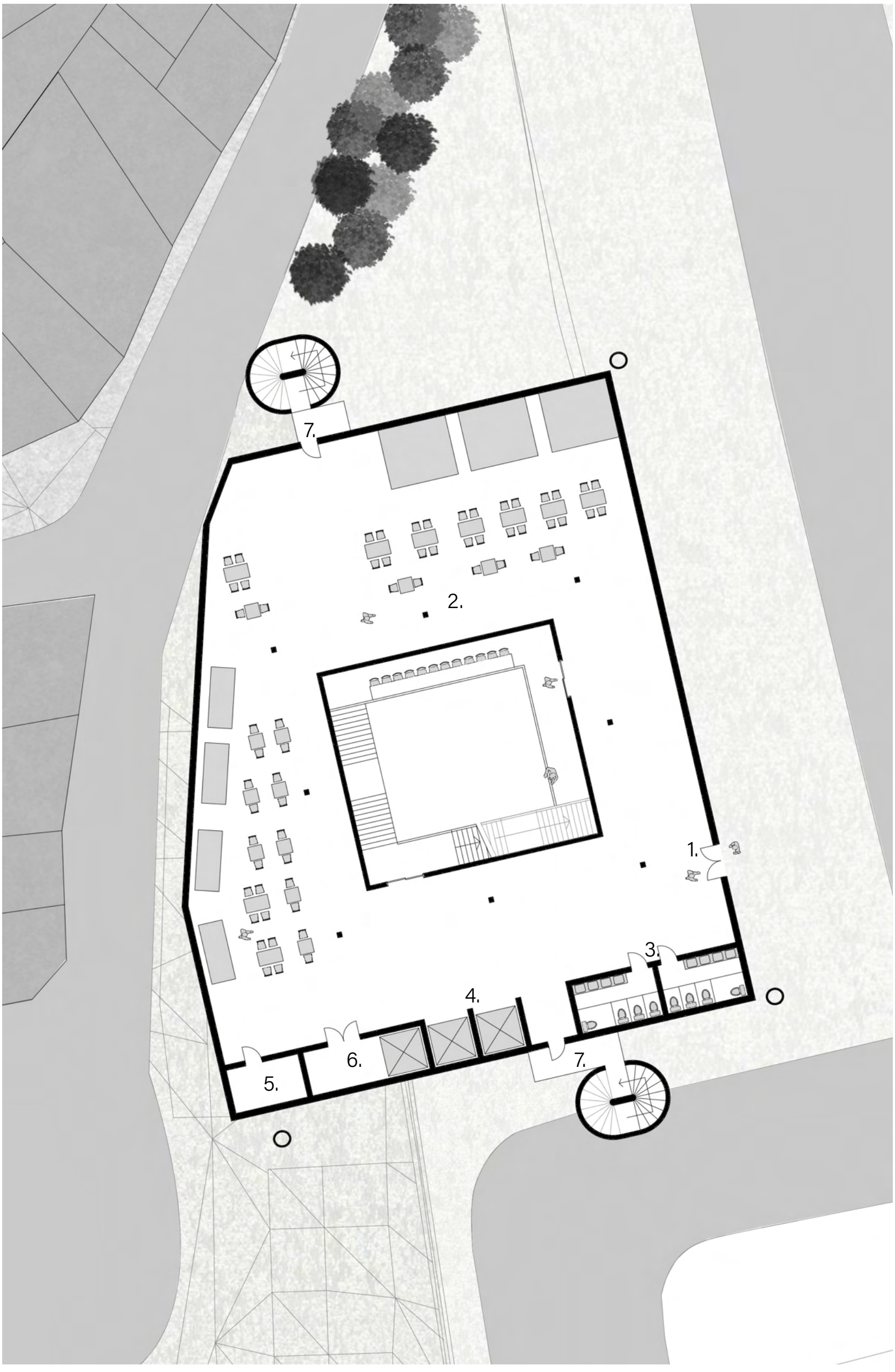


0 5 10 15 20m

First Floor

KEY:

1. First Floor Main Entrance
2. Market Hall
3. W/C
4. Lifts
5. Storage Space
6. Private Lift
7. Fire Escape



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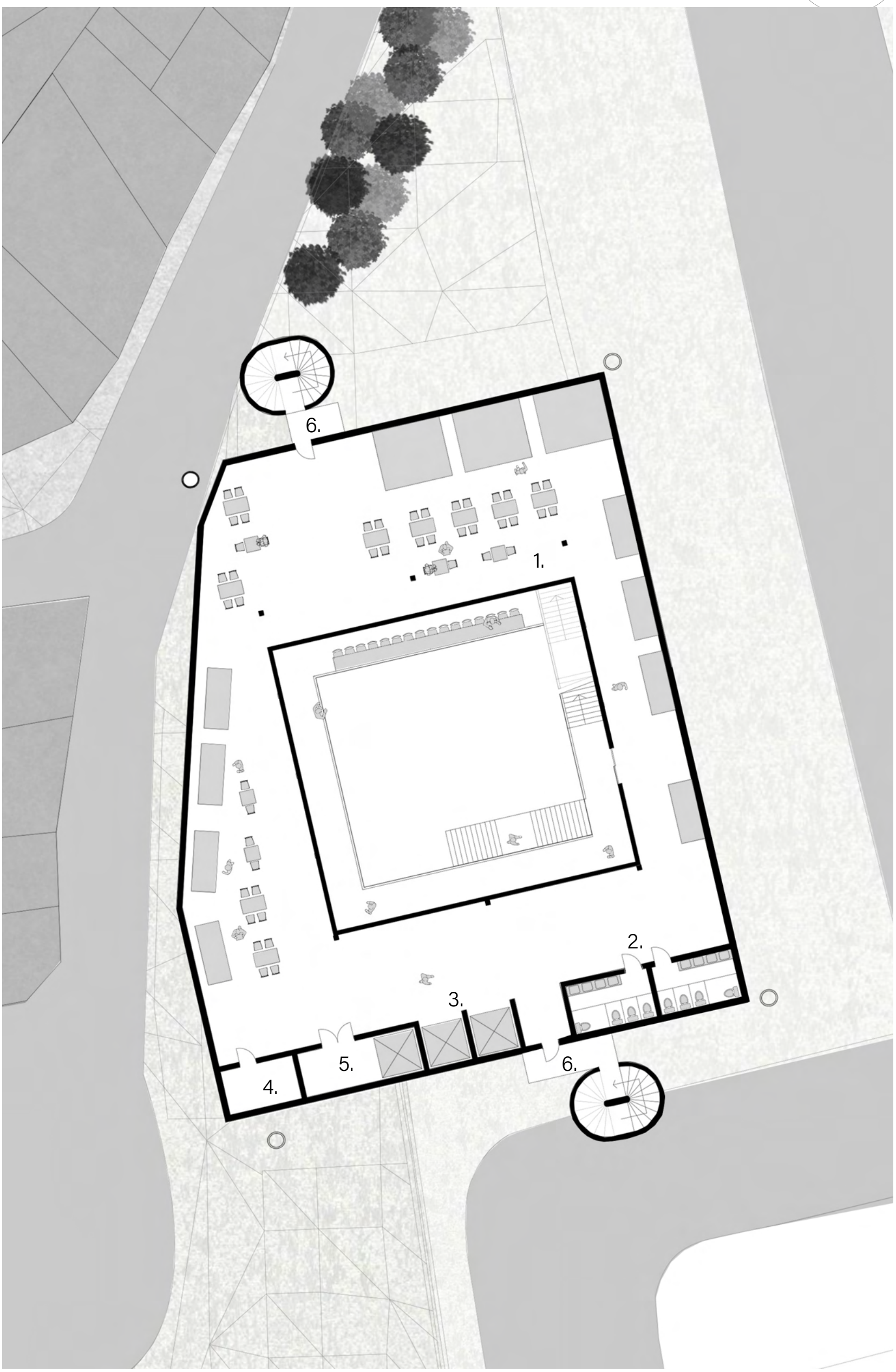
Second Floor

KEY:

1. Market Hall
2. W/C
3. Lifts
4. Storage Space
5. Private Lift
6. Fire Escape



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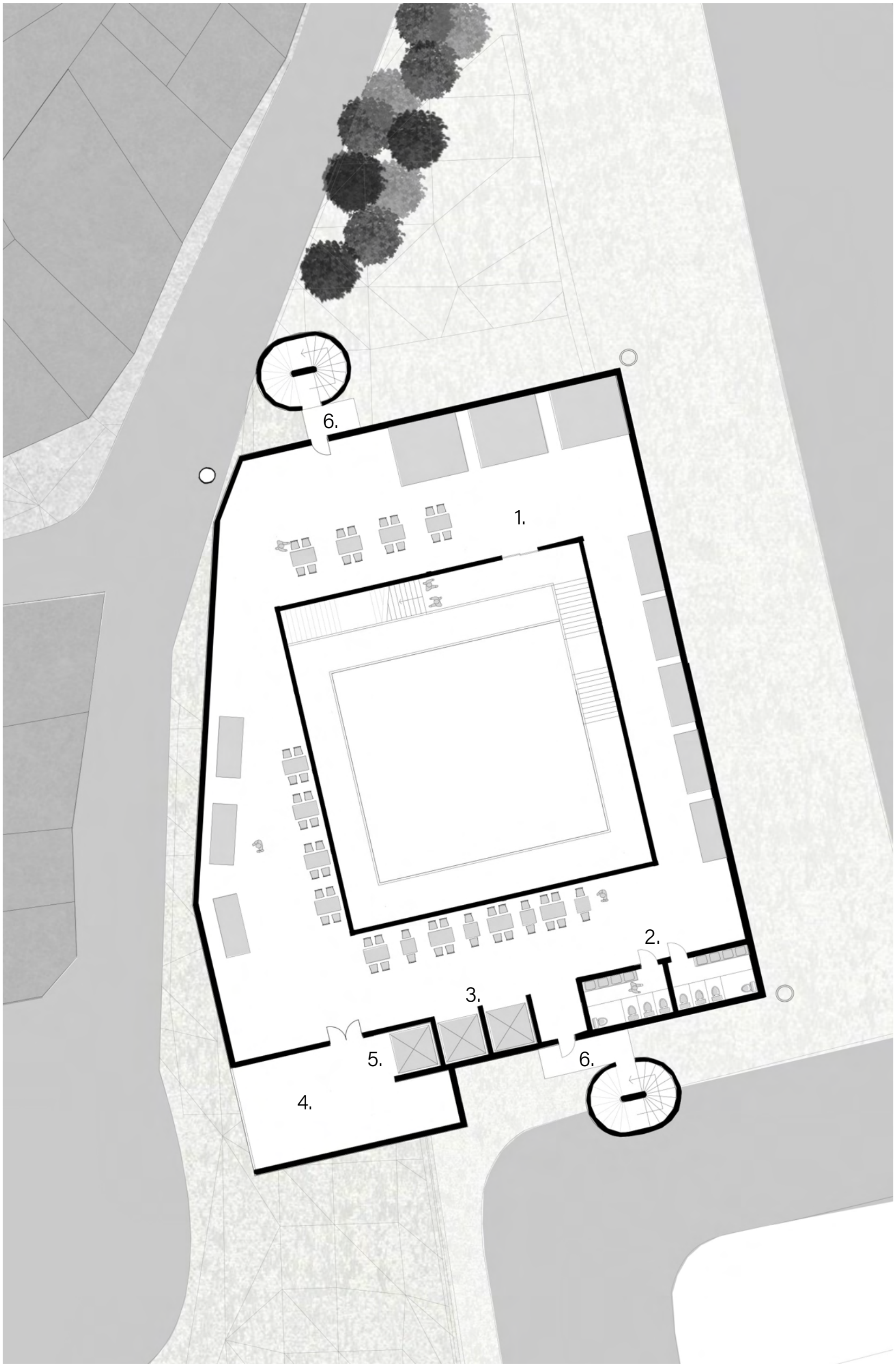
Third Floor

KEY:

1. Market Hall
2. W/C
3. Lifts
4. Loading Bay
5. Private Lift
6. Fire Escape



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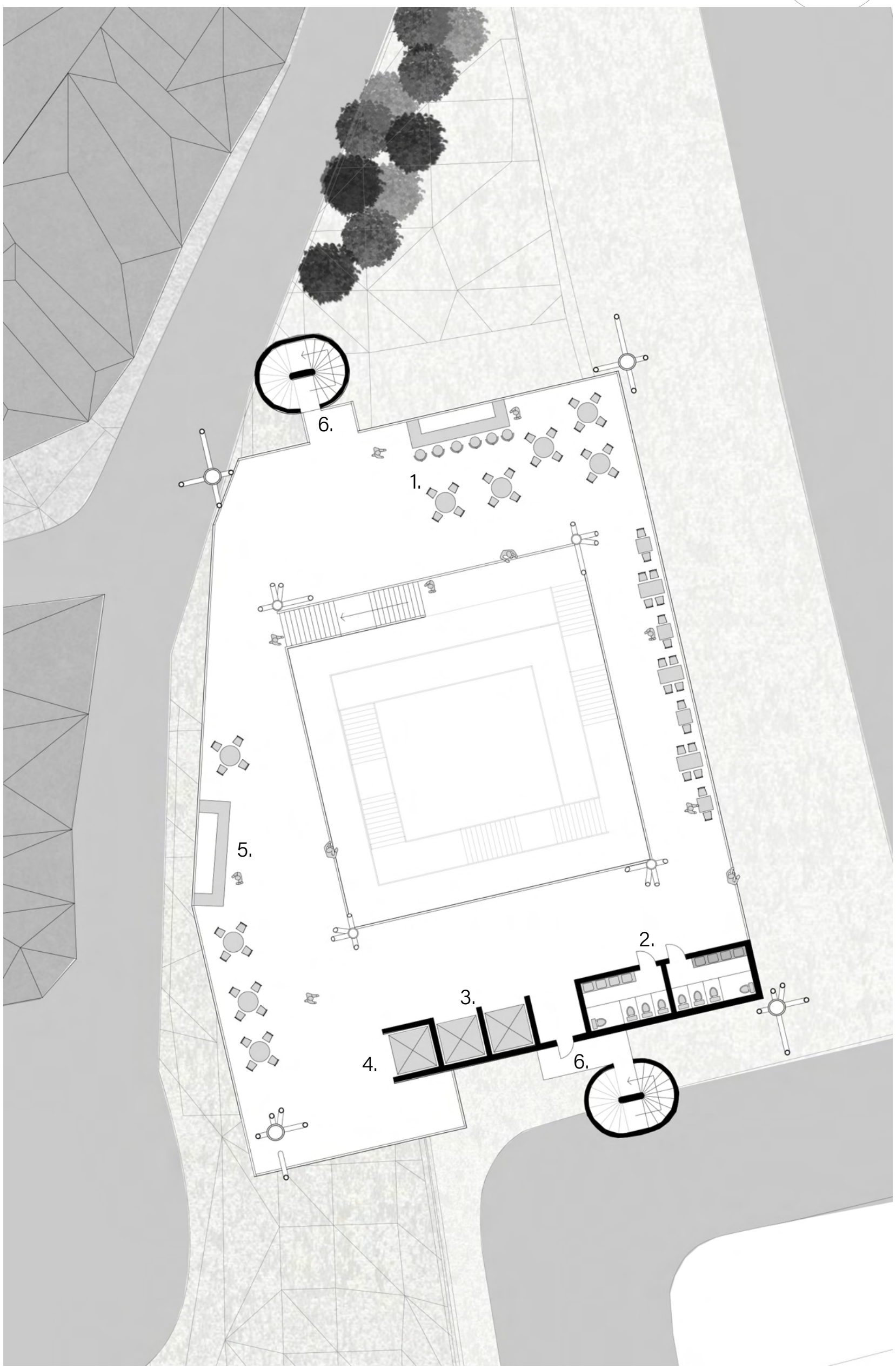
Terrace Floor

KEY:

1. Bar and Seating Area
2. W/C
3. Lifts
4. Private Lift
5. Bar
6. Fire Escape



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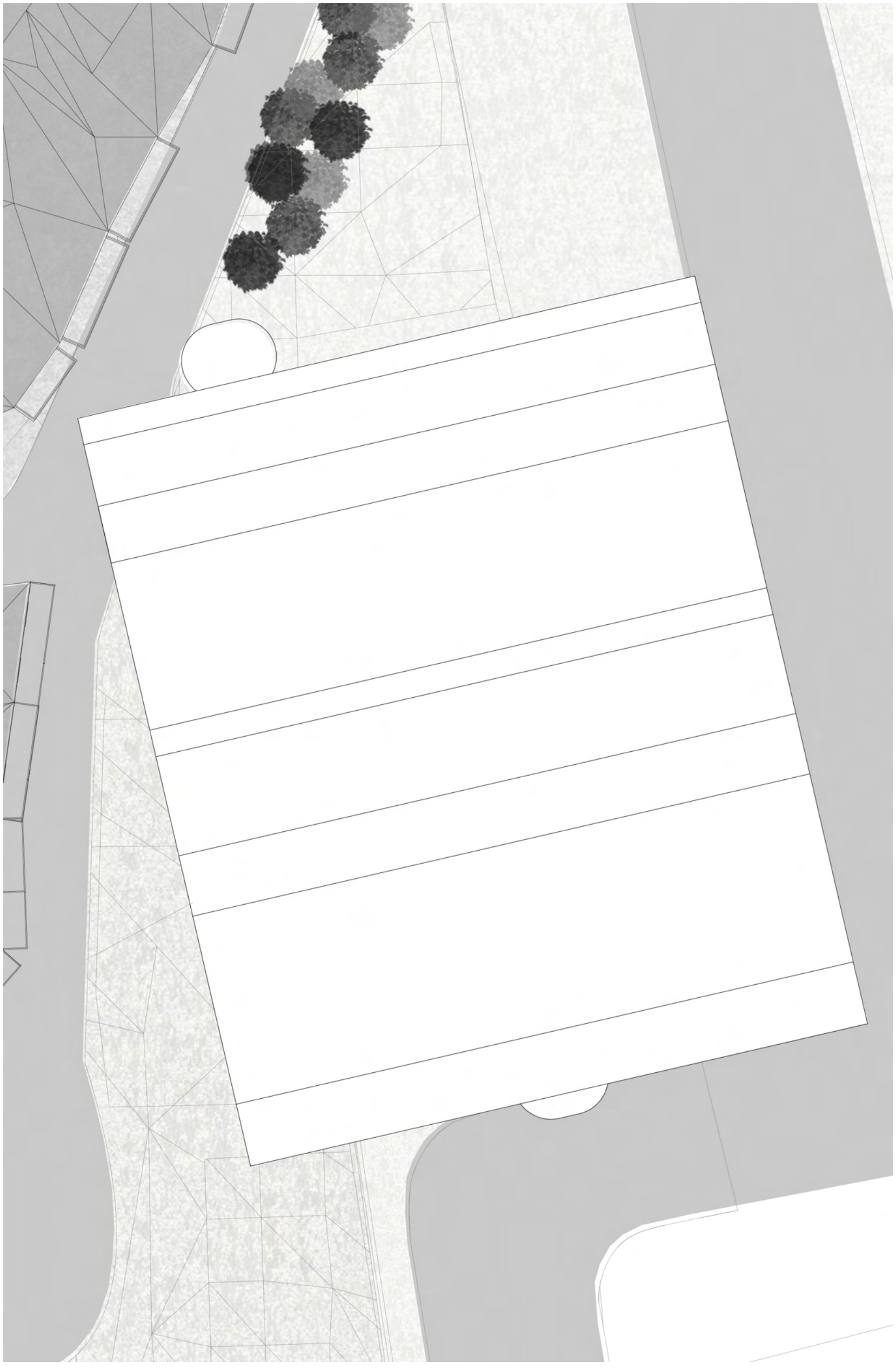
Roof Plan



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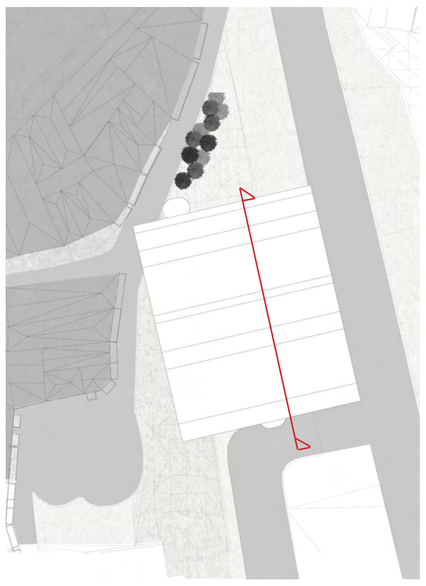
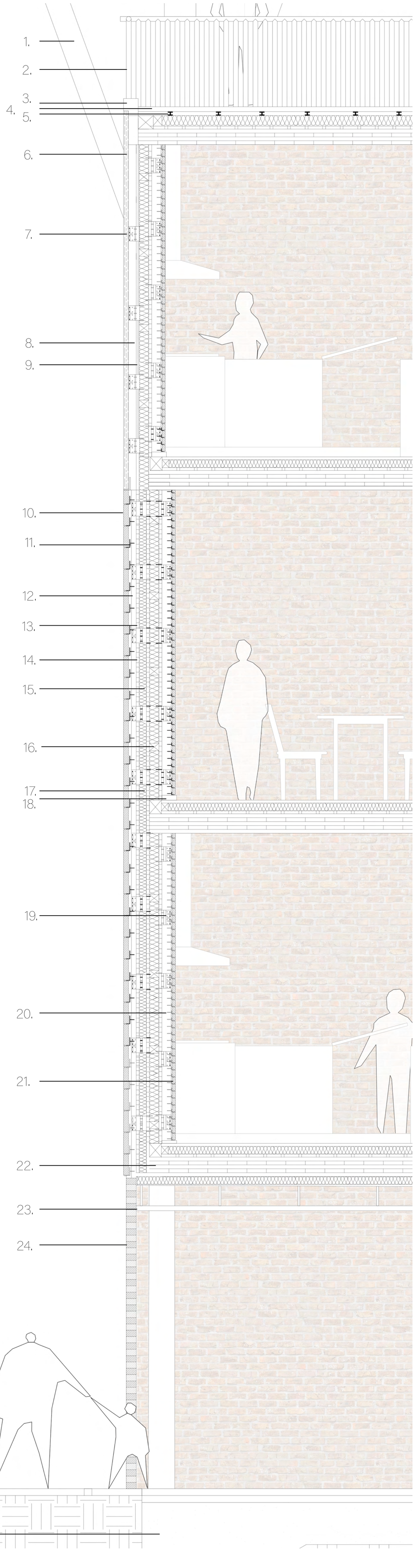
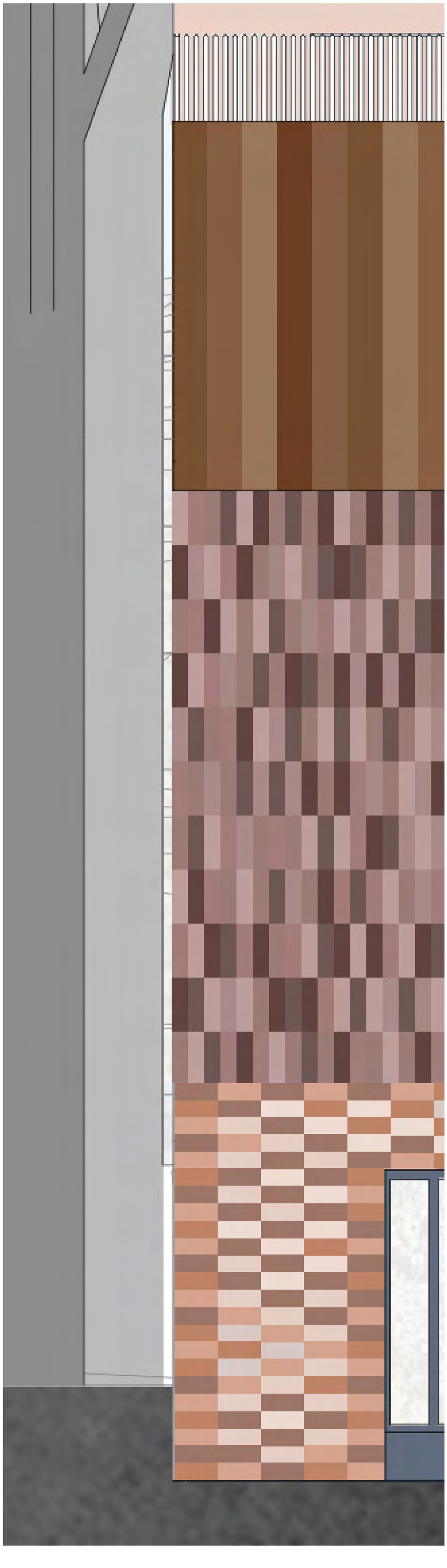
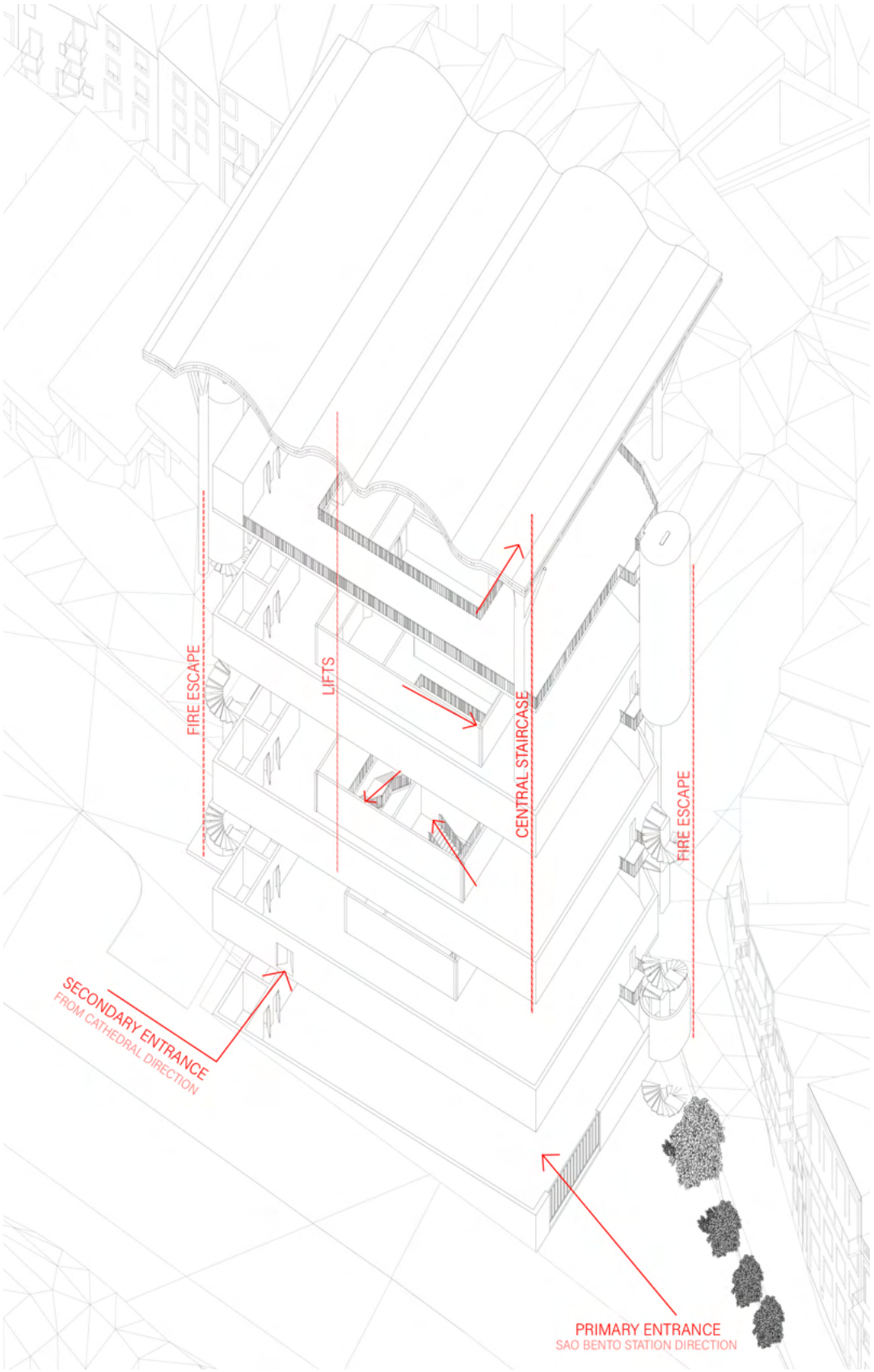


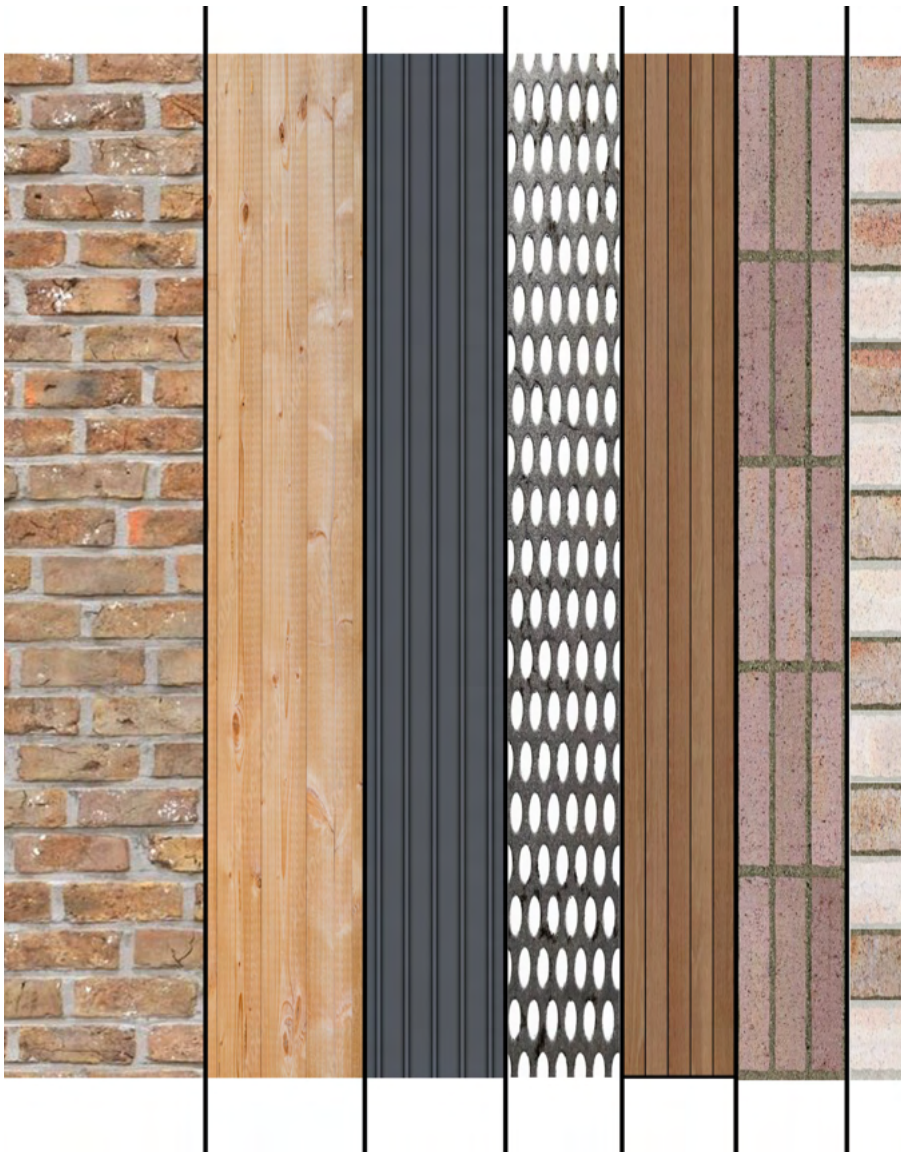
1. Stainless Steel Roof Columns
2. Stainless Steel Balustrades
3. Timber
4. Screed
5. Polypropylene pedestals
6. Vertical Fire Treated Timber
7. Metal Bracket for Timber Cladding
8. Air Cavity
9. DPM
10. Vertical Brick Slips
11. Shelf Angles
12. Air Cavity for Railing System
13. Plasterboard
14. First Layer of Insulation with Railing System for Brick Slips
15. Plasterboard
16. Glulam Beams
17. Interior Air Cavity
18. Timber Skirting Board
19. Fixed Metal Bracket for Interior Brick Slips
20. Horizontal Shelf Angles
21. Horizontal Brick Slips
22. CLT Floor
23. Hanging Timber Panel for Services
24. Perforated Horizontal Bricks
25. Paving Stones
26. Slab Concrete Foundation



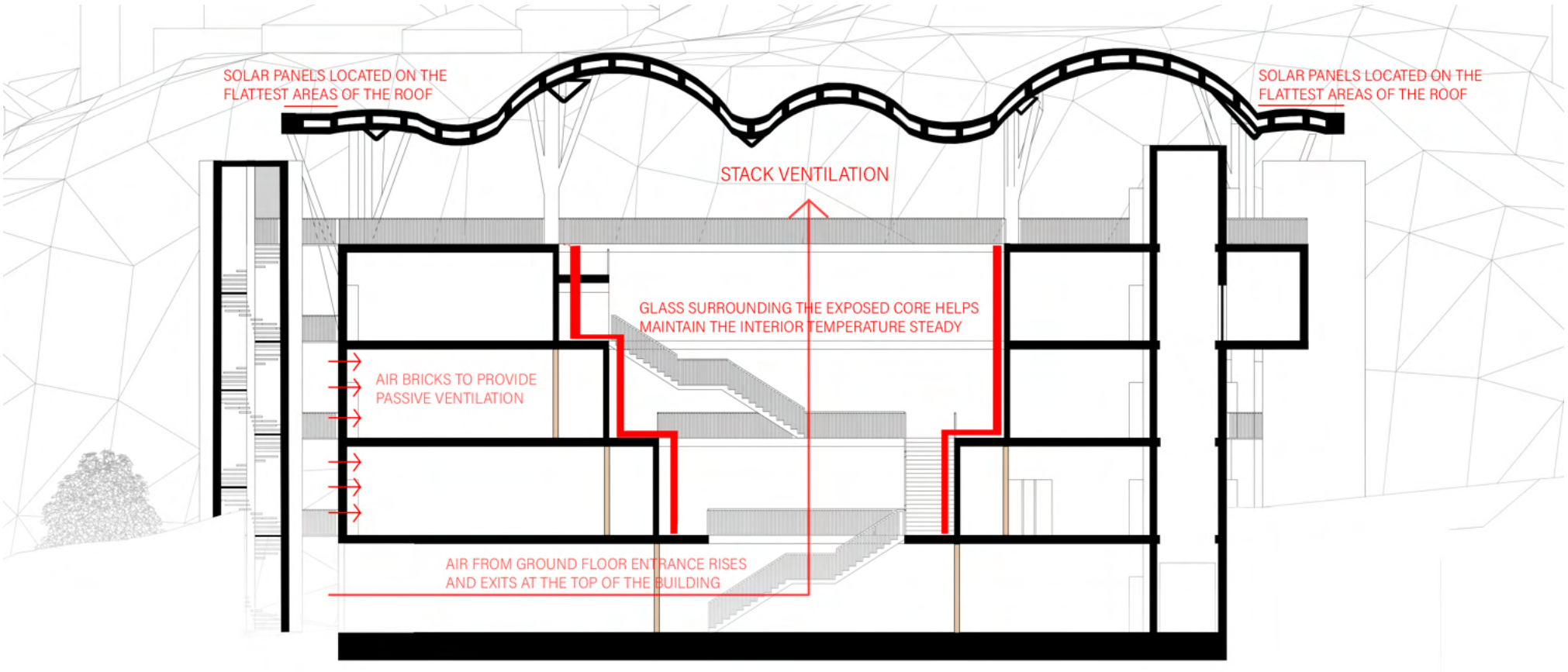




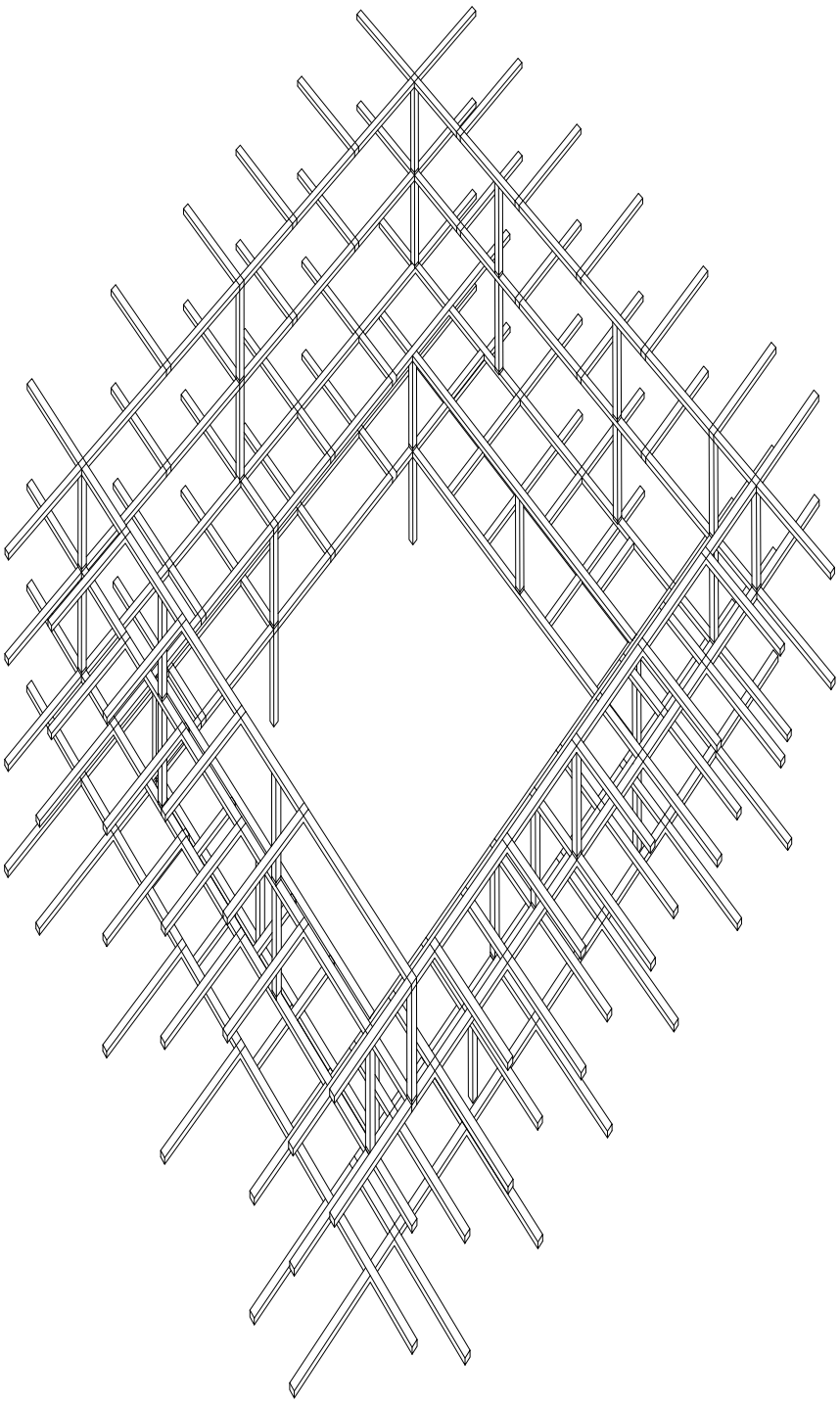
Axonometric drawing representing access to and within the building.



Red brick slips will be used for the interior walls of the building. CLT panels will cover the ceiling and floors of each floor. Glulam will be used for the columns in the core of the building. Zinc will be used on the top part of the roof. Perforated metal will wrap around the fire escape staircases located in the north and south of the building. Fire-treated timber will be used for cladding the exterior of the building. Vertical light red brick slips will clad the building. Perforated brick slips will only be located on the northern entrance of the building.



Longitudinal section drawing focusing on the environmental strategy of the building. This includes the ventilation system chosen, on-site generation in the form of solar panels and enclosing the exposed core with glass to maintain a steady temperature.



Embodied Carbon Calculations

Concrete columns (unreinforced)

495 KgCO2e/m3 x 35 m3 =
17,325 KgCO2e/m3

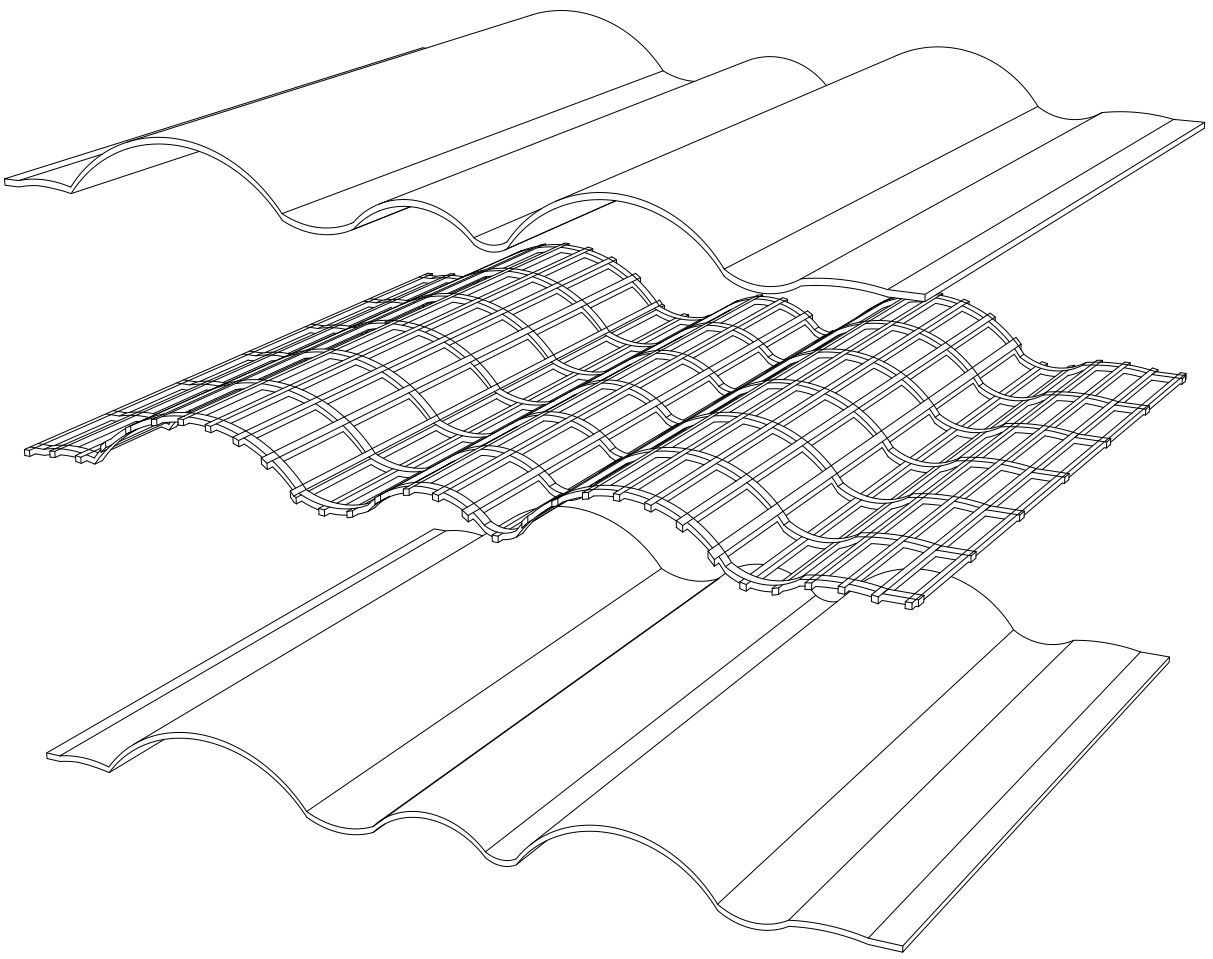
Glulam columns (with sequestration)

256 KgCO2e/m3 x 35 m3 =
8,960 KgCO2e/m3

Glulam columns (without sequestration)

-450 KgCO2e/m3 x 35 m3 =
-15,750 KgCO2e/m3

The diagram above shoes the structure of the core of the building. As the core gets bigger the higher it goes, the structure has been designed to accomodate the changes while making sure the building is stable. The whole structure is made out of glulam.



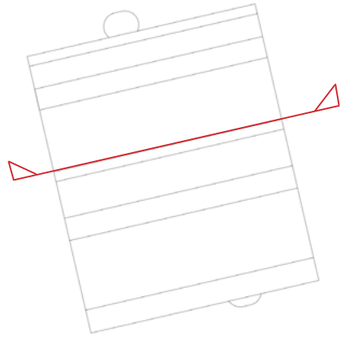
Zinc

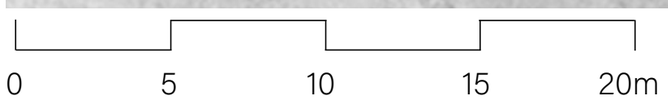
Timber beams

Timber cladding

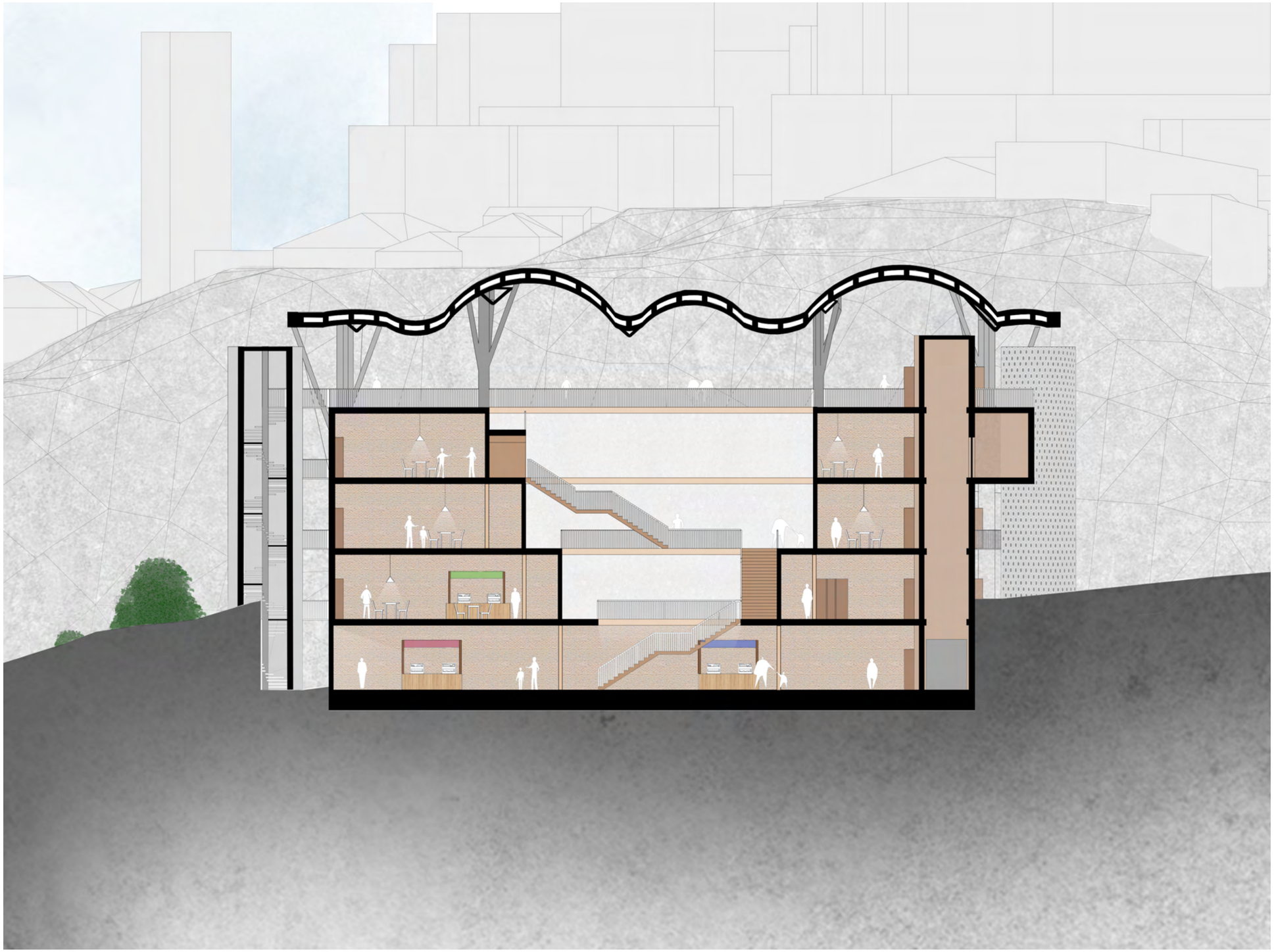
Exploded diagram of the roof. Made up of timber for the structure and to maintain its wavy shape. Corrugated zinc will be used for the top of the roof to protect the timber while maintaining the shape of the roof. A timber cladding will be applied to the bottom of the roof as an aesthetic finish.

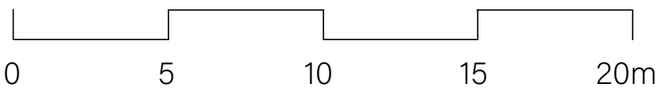
Transverse Section

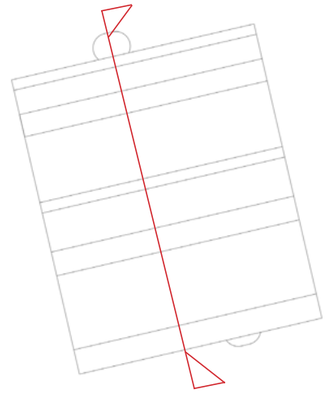




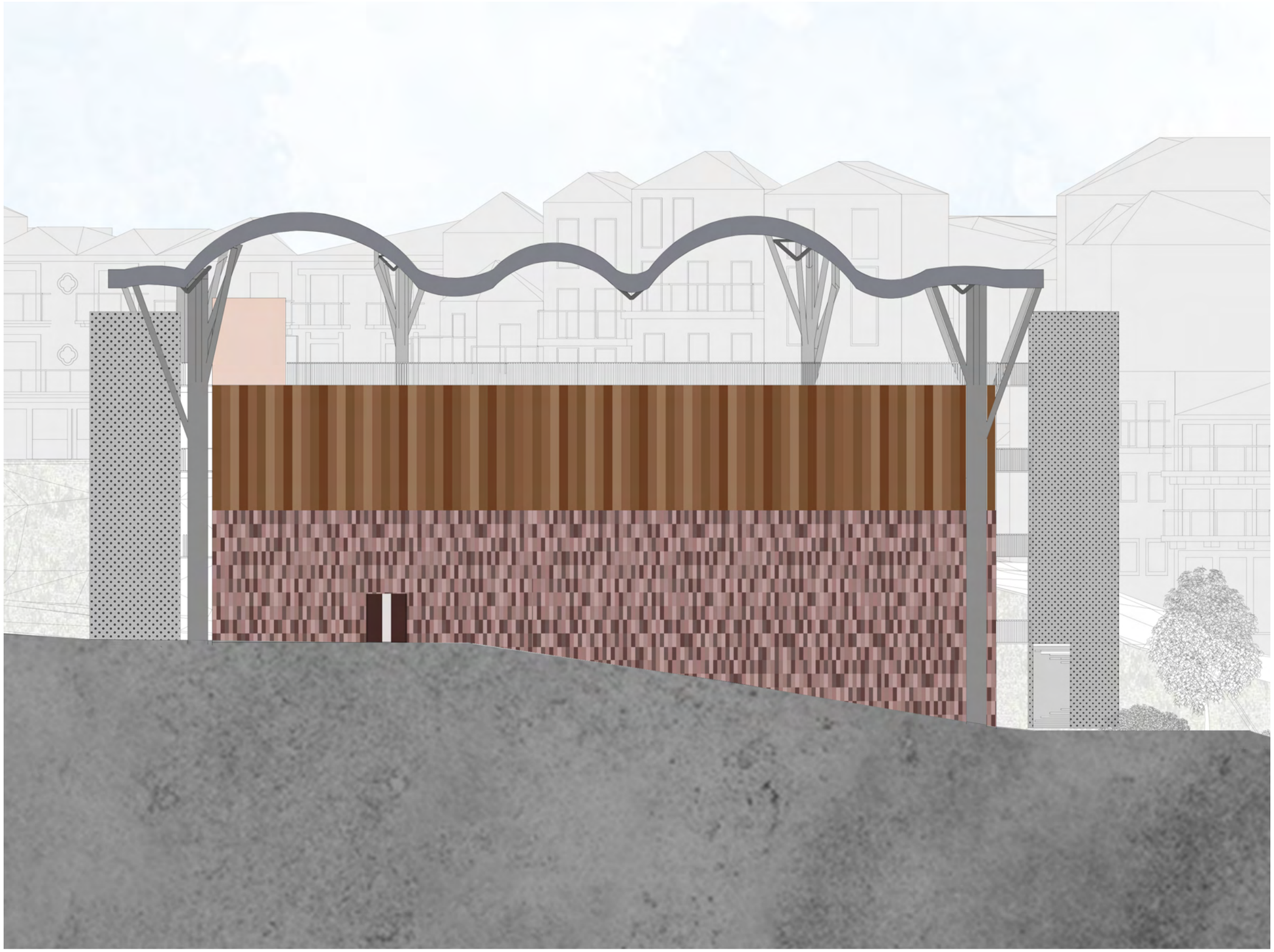
Longitudinal Section







Eastern Facade



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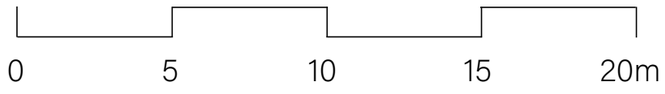
Northern Facade




H FRUIT & VEGETABLES