

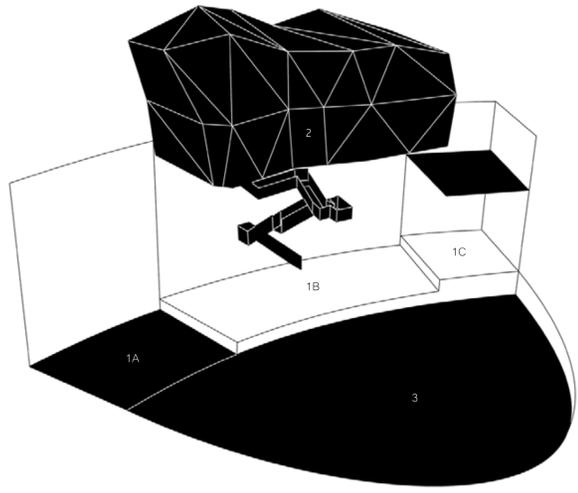
The Botanical Learning centre



The urban transformation of the gas station and old truckers cafeteria, finds itself at Maridalsveien 10 in Oslo. The existing building and its plot, is situated in between this road and Fredenborgsveien. The main North-facing facade looks onto a busy roundabout intersection, where these two roads together with the Mollerveien meet. The current building is built in 1938 in a functionalist style and designed by the architect: Frithjof Hjalmar Reppen. The thick wall gives a quietness and subtraction to the busy city outside. The neighbourhood of the project has many kindergartens, primary schools and nurseries. The high-density of these children schools and the increasing interest of the understanding of growing crops gives this site the opportunity to built a botanical learning centre for children. To encourage the parents to engage in the teaching of the child a cafe is placed on the ground floor.

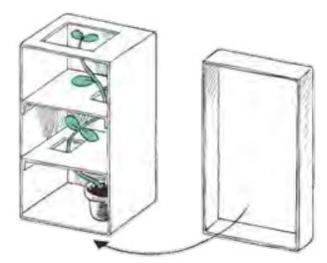
blackened parts, except from the staircase, show where plants are grown. The staircase (and the different bridges, which are not shown) is the object that binds the three different parts together. The stairs becomes a plant on its own that grows through the building. In certain places the railing of the stairs are lowered for the children to experience the different spaces. In the poster below these different parts are explained more thoroughly.

Roel Hofstra, 7th of December 2015



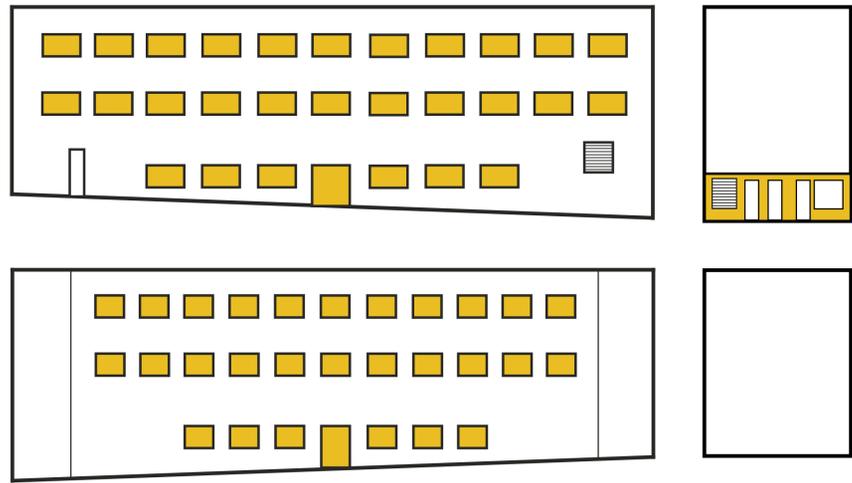
With the rezoning of the plot and transformation of the building, three main points were important. 1: The refurbishment should create a place of contrast to the business of the streets: a place of quietness. 2: The existing building is the most characteristic part of this streetscape area. In this case the view onto this prominent facade, mainly the North-facing facade should be kept as it is, as much as possible. 3: The last point is focused on the users of the building: the children. A child behaves and interacts different from a grown up. Besides this, the length of the children that will be using this botanical learning centre can go as low as eighty centimetres.

The transformation of the site and building takes place in three different areas, which are shown in the diagram to the left. The



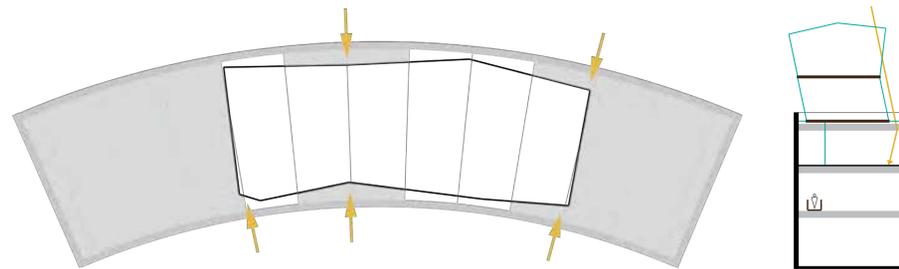
1. The existing building

The existing building is the base for the new function. Its robustness gives the opportunity to create a new building on top. The terrain of the plot makes that the floor height inside differs. The program in the existing building reacts to these different heights. The entrance to the botanical learning centre is found at the east side. A big window shows from the street the green inside. When moving inside, the atmosphere changes from a busy city to a quiet and green space, while still being in the outdoors. A slightly curved stairs leads you up to the second floor. In this second part only a few floors are removed to give the visitor a view of what happens in this building. Walls are kept as transparent as possible to enhance this feeling. The last elevation of the ground floor, houses the services and on top carries another outdoor green space.



2. The new building

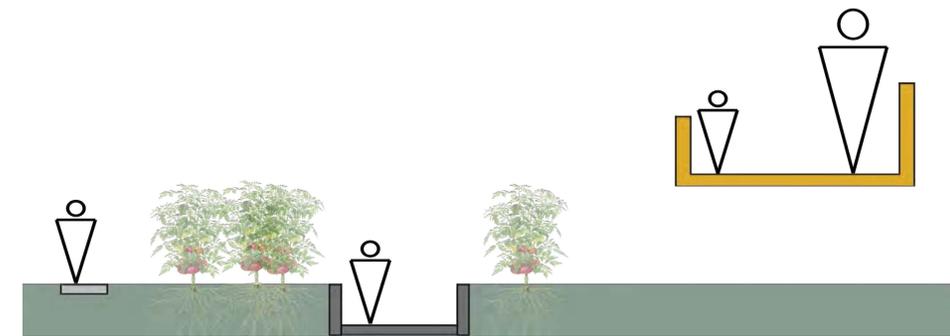
The new building is a wooden greenhouse. It is constructed out of glulam beams and columns. The floors are made of cross-laminated timber (CLT), which lay on top of the existing building. The triangle structure makes it possible to create many different shapes. Still the structure reacts to the building, it stands on and to its surrounding. The greenhouse is placed behind the parapet to make it grow out of the existing building. The floor plans are intertwined with the openings in the floor below as shown in the diagram below. The place where the concrete roof is cut away, the CLT floors move inwards to let light into the existing building. The second floor of the greenhouse shifts slightly from the first floor according to the sun. The roof is formed to the height of the surrounding buildings and the proportions of the existing building. This creates the change for a split-level floor, which is where “the stairs that grows through the buildin”, ends. The plants in the greenhouse are placed in freestanding planters.



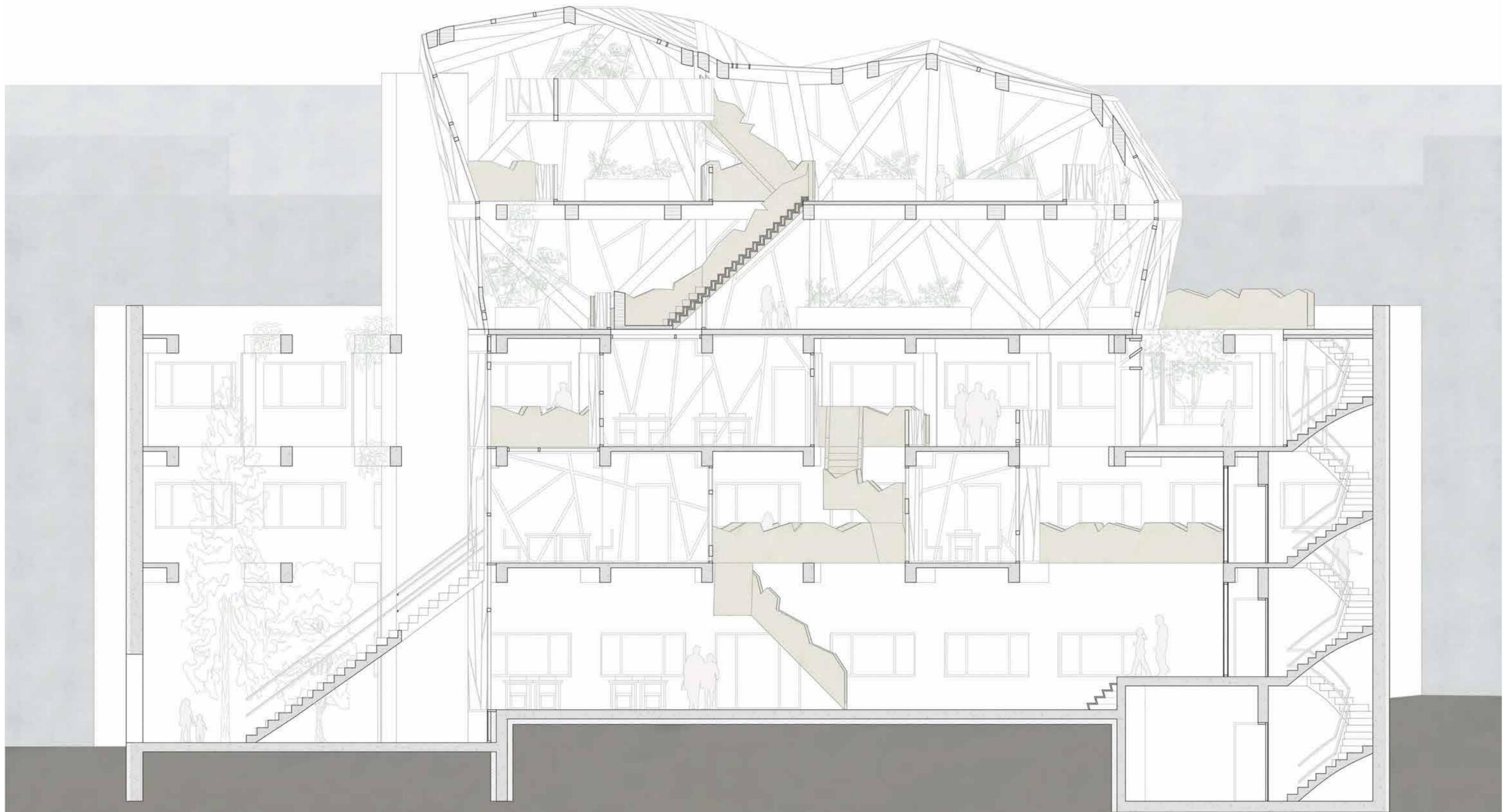
3. The garden

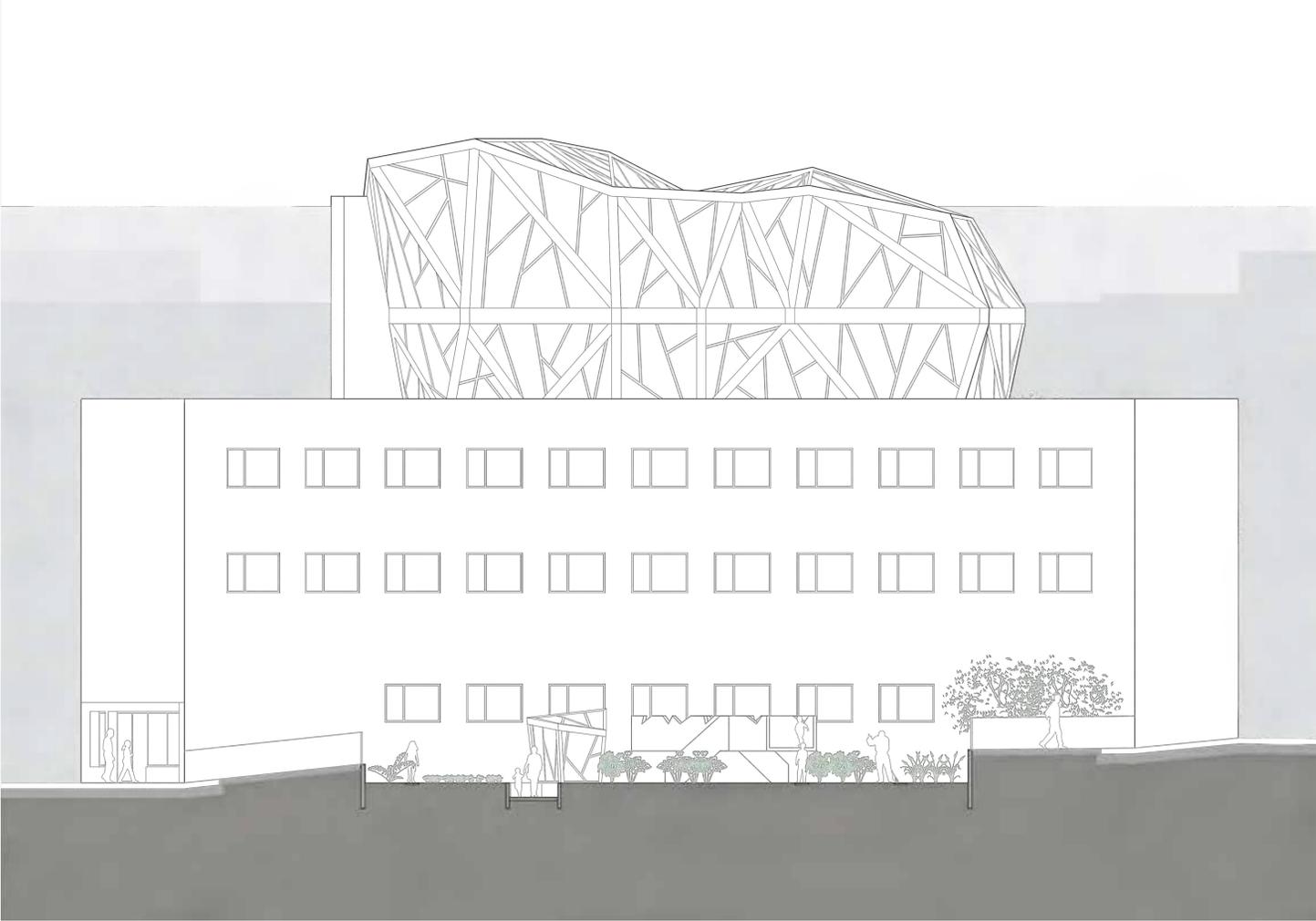
The garden in front of the existing building is lowered, thus creating a more enclosed space. A space where the children can walk around freely, in between the different kinds of plants. A transparent border/railing is placed in-between the small courtyard and the street. By lowering the site, the facade of the existing building stays intact. The only obstruction comes from the tool shed and the other end of the “stairs/bridges that grow through the building”. The small tool-building has the same idiom as the new building.

The garden has three different walk ways, to experience different sights of the plants. When moving out of the building you will find yourself on a bridge, which overlooks the plants from above. The second pathway digs forty-five centimetres into the soil. Thus creating the opportunity to view the plants more from the bottom close to the roots. The last walkway goes in-between the different plots. The way the paths are placed on the site responds to the new building.

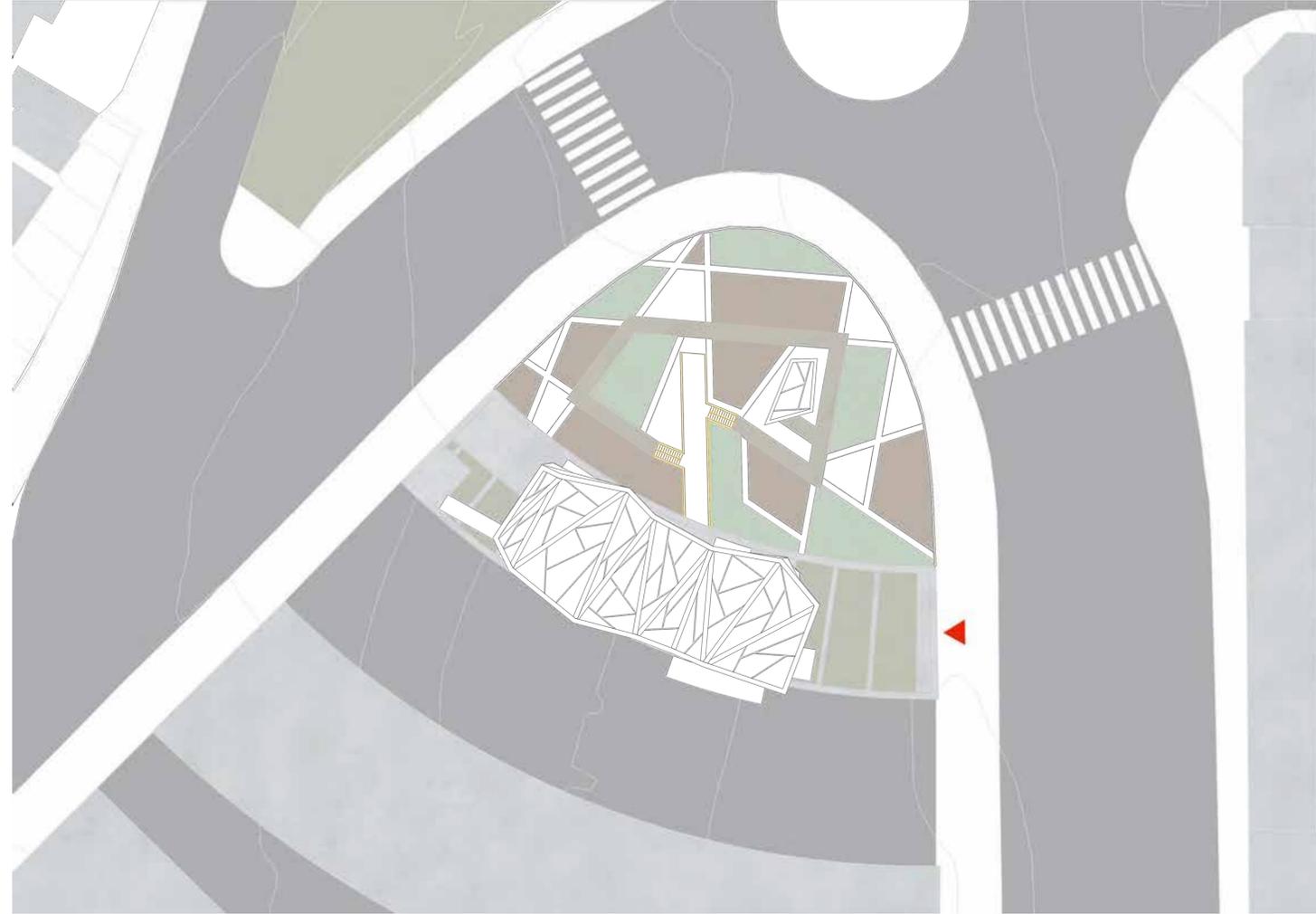




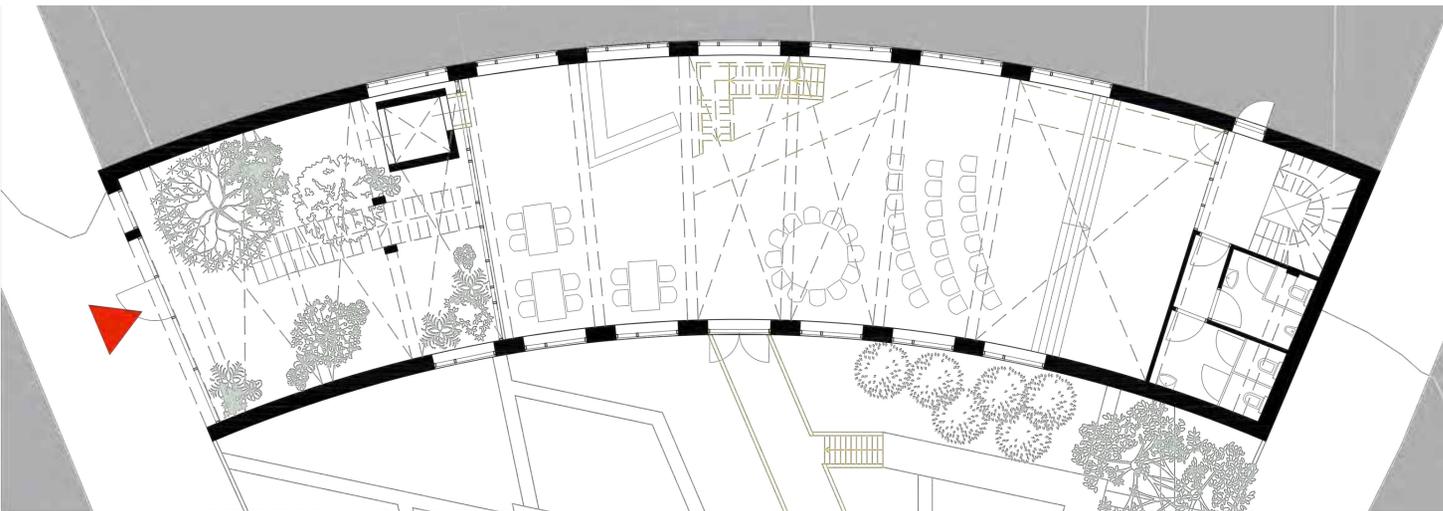




North facade 1:100



Site 1:200



- OUTDOOR GROWING
64M²
- CAFE
45M²
- MULTIFUNCTIONAL SPACE
105M²
- TOILET
15M²

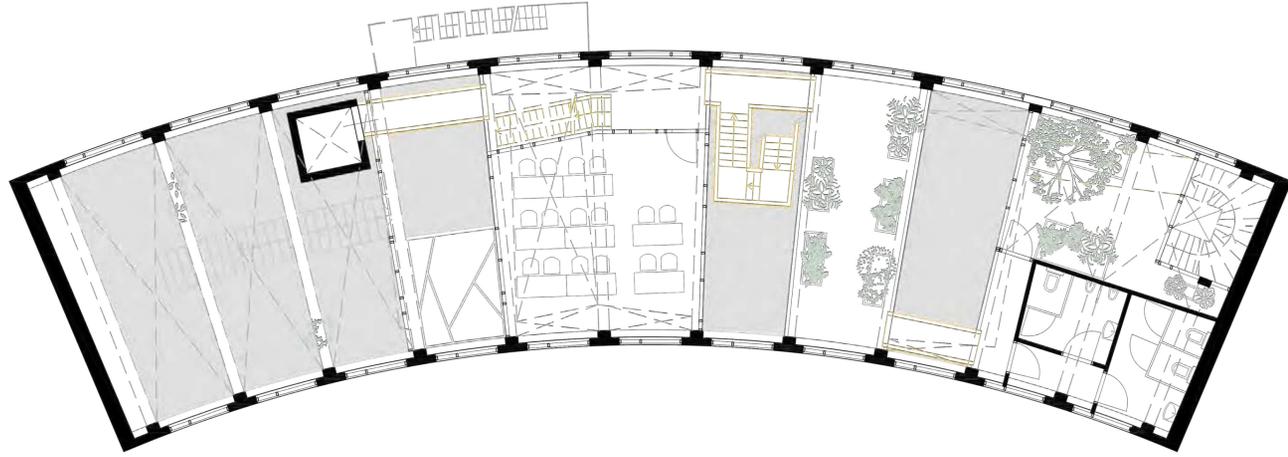
Ground floor 1:100



- ENTRANCE
27M²
- OFFICE
17M²
- MEETING ROOM
17M²
- TOILET
15M²

2nd Floor 1:100

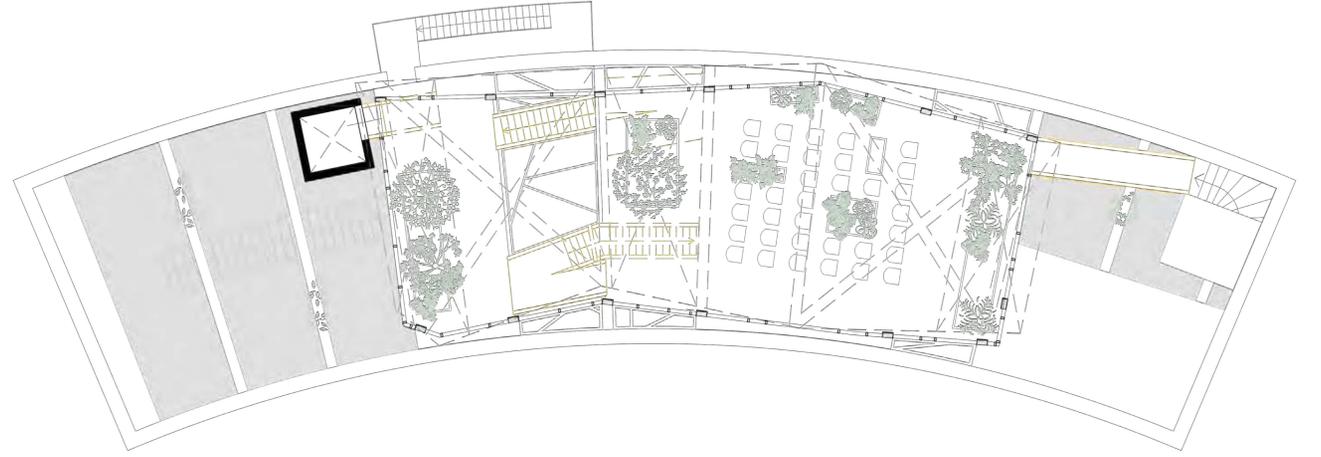
CLASSROOM
32M²
EXHIBITION
23M²
OUTDOOR GROWING
21M²
TOILET
17M²



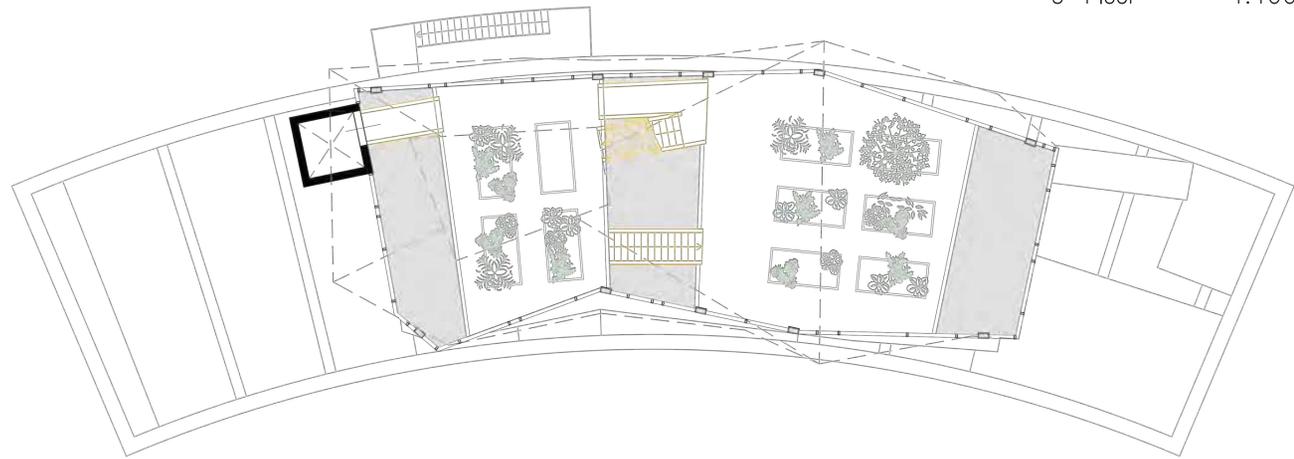
3rd Floor 1:100



GREENHOUSE
20M²
GREENHOUSE CLASSROOM
74M²



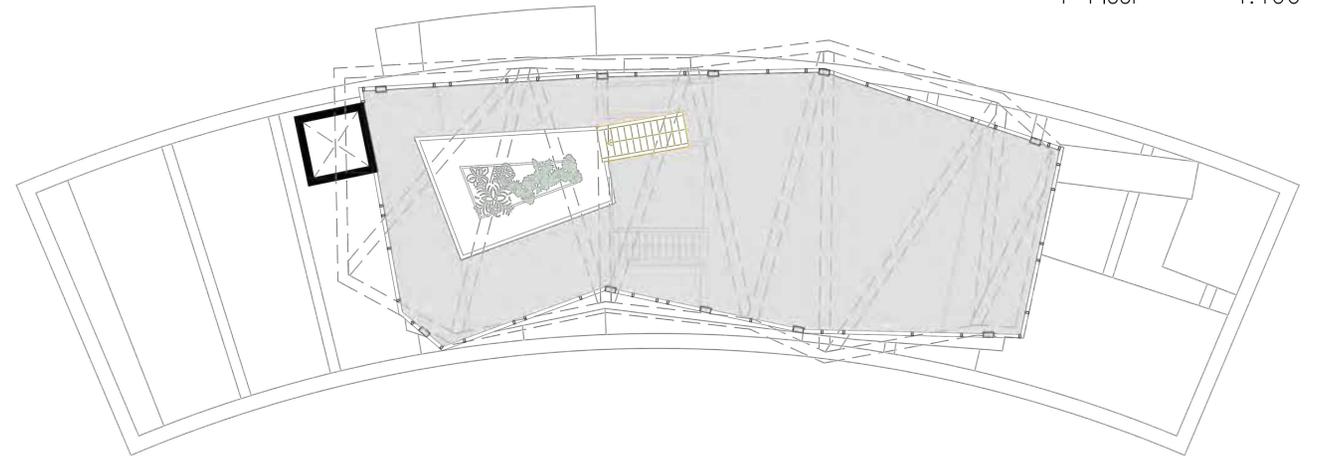
4th Floor 1:100



5th Floor 1:100



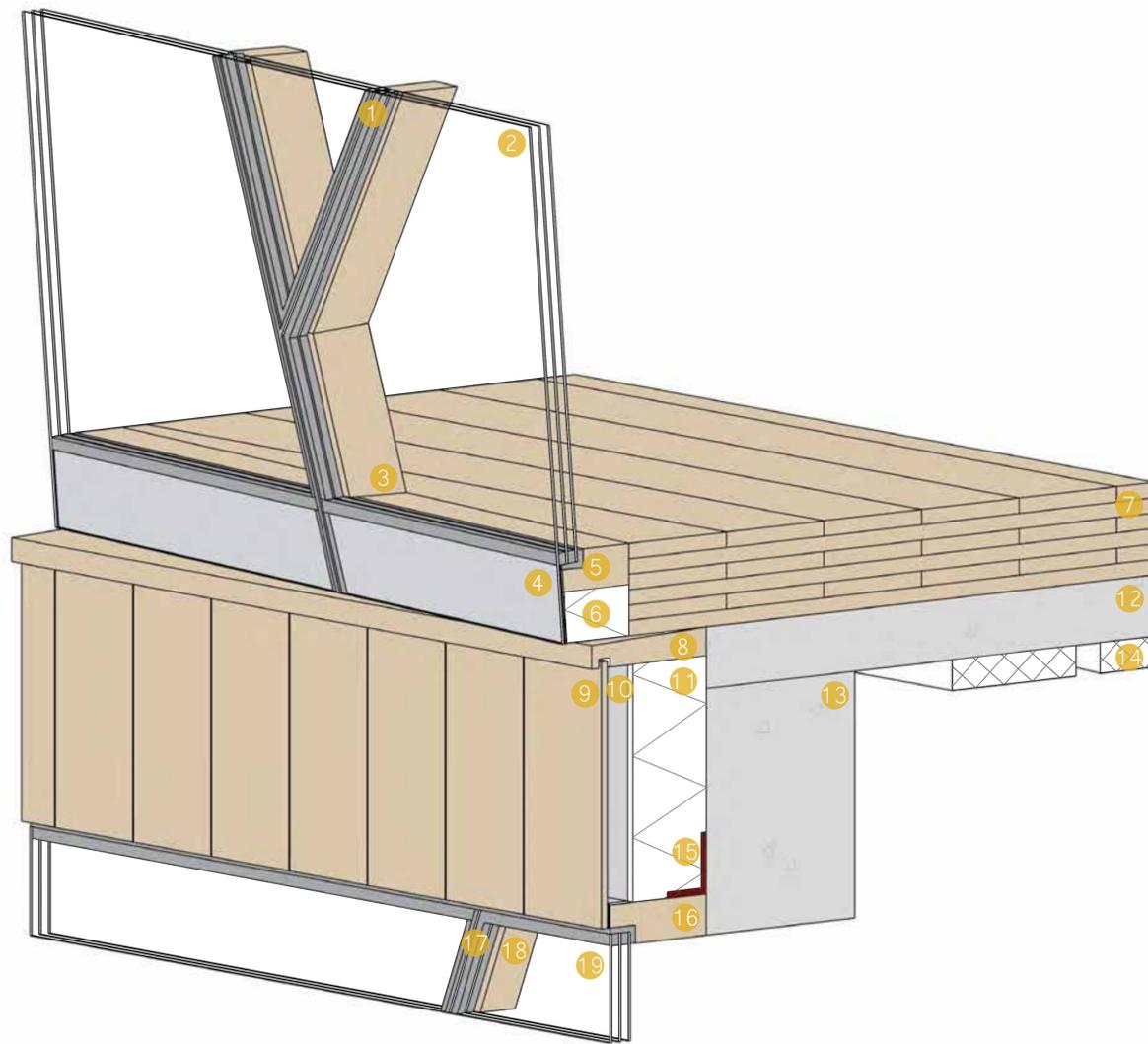
GREENHOUSE
29M²
GREENHOUSE
62M²



6th Floor 1:100



GREENHOUSE
30M²



- 1 Transparent lute
- 2 Three layered insulation glass
- 3 Window frame, 114x67 mm
- 4 Waterproof layer
- 5 Window frame, 114x67 mm
- 6 Pressure resistant insulation, 114 mm
- 7 Cross laminated timber floor, 150 mm
- 8 Frame, 244x67mm
- 9 Plank, 200x12mm
- 10 Waterproof layer
- 11 Pressure resistant insulation, 150 mm
- 12 Concrete slab (existing)
- 13 Concrete beam (existing)
- 14 Soundproofing cork, 50 mm
- 15 Angle steel, 100x65x9 mm
- 16 Window frame, 194x67 mm
- 17 Transparent lute
- 18 Window frame, 114x67 mm
- 19 Three layered insulation glass