

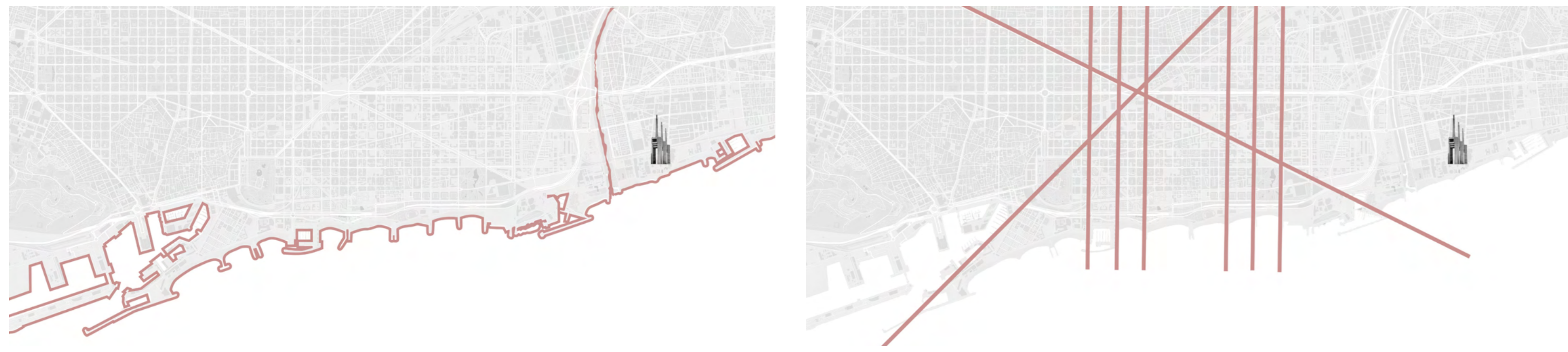
ANALYSIS

LANDSCAPE IDENTITY | Metropolitan Context

Landuse and Main Attractions



Dynamicity and Influence



Promenade Experience

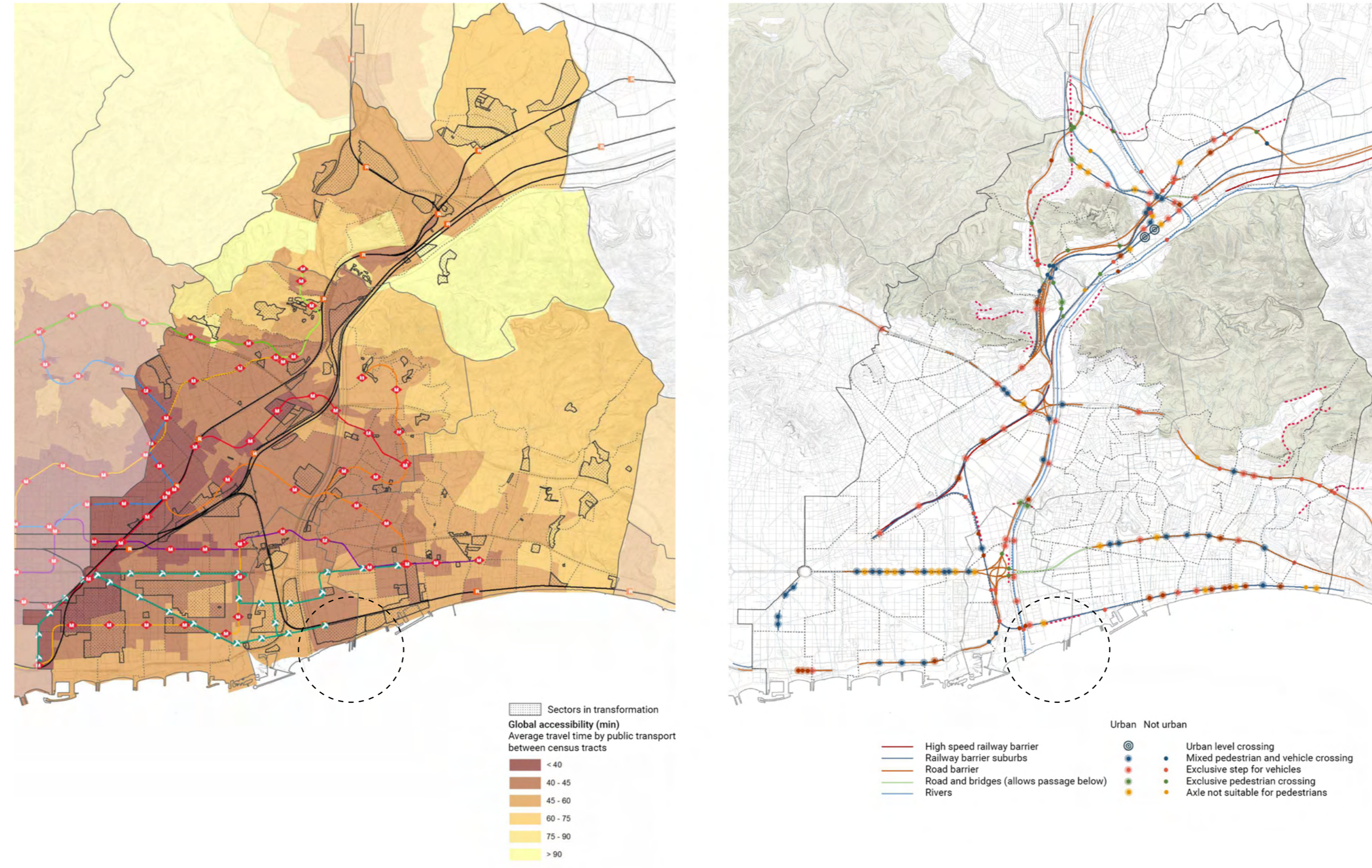


Scale

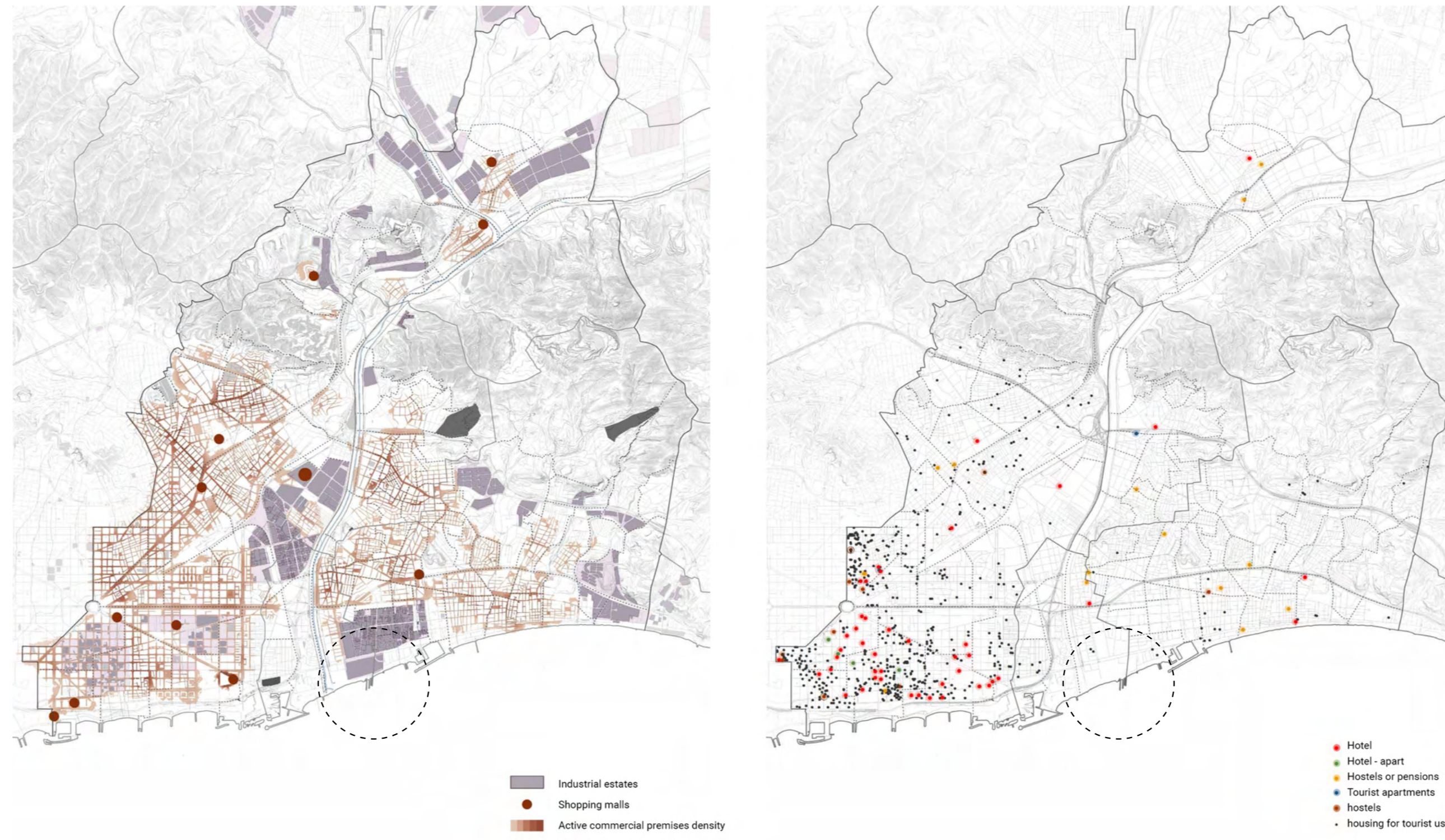


LANDSCAPE IDENTITY | Local Context

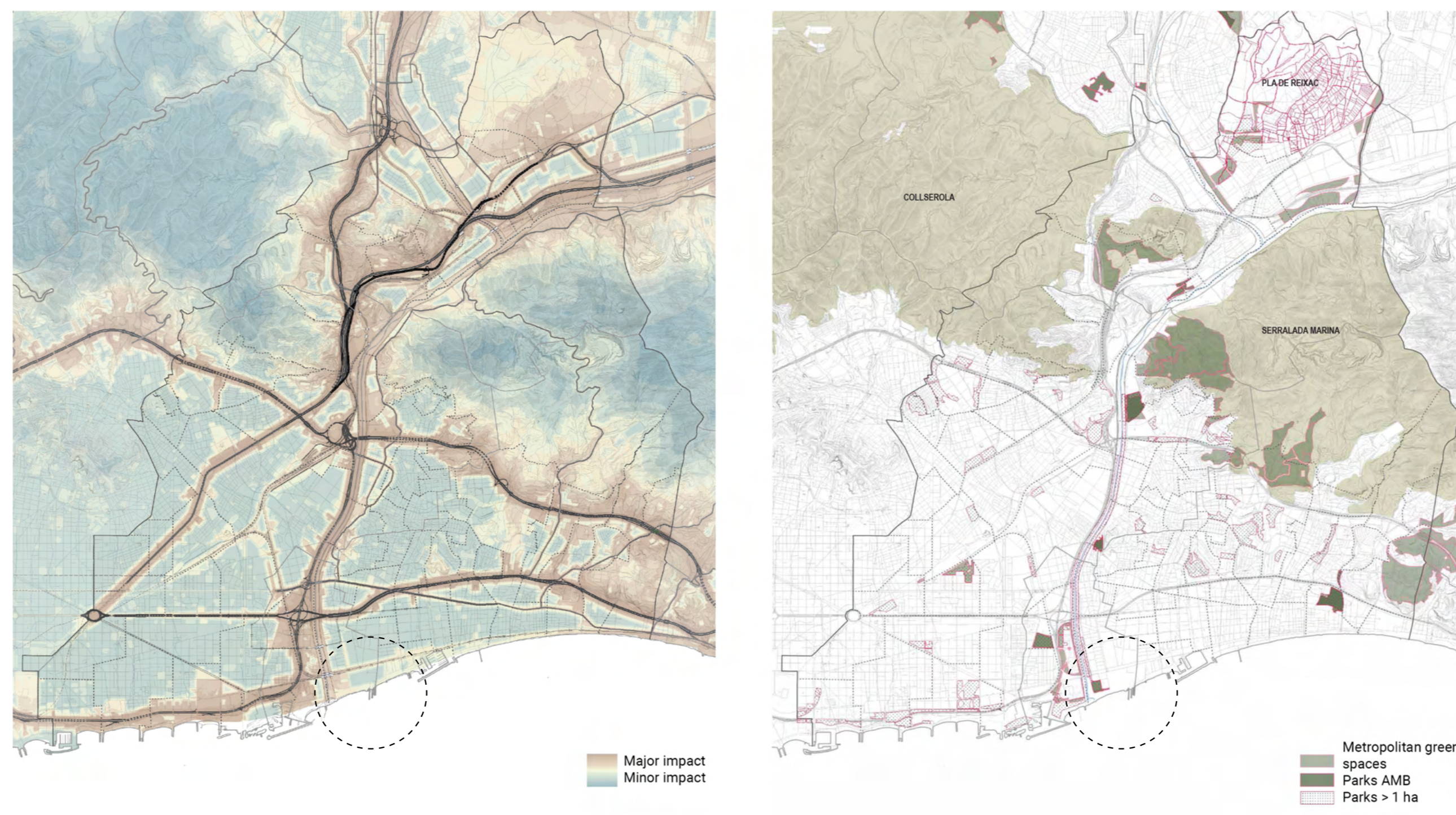
Accessibility and Connectivity



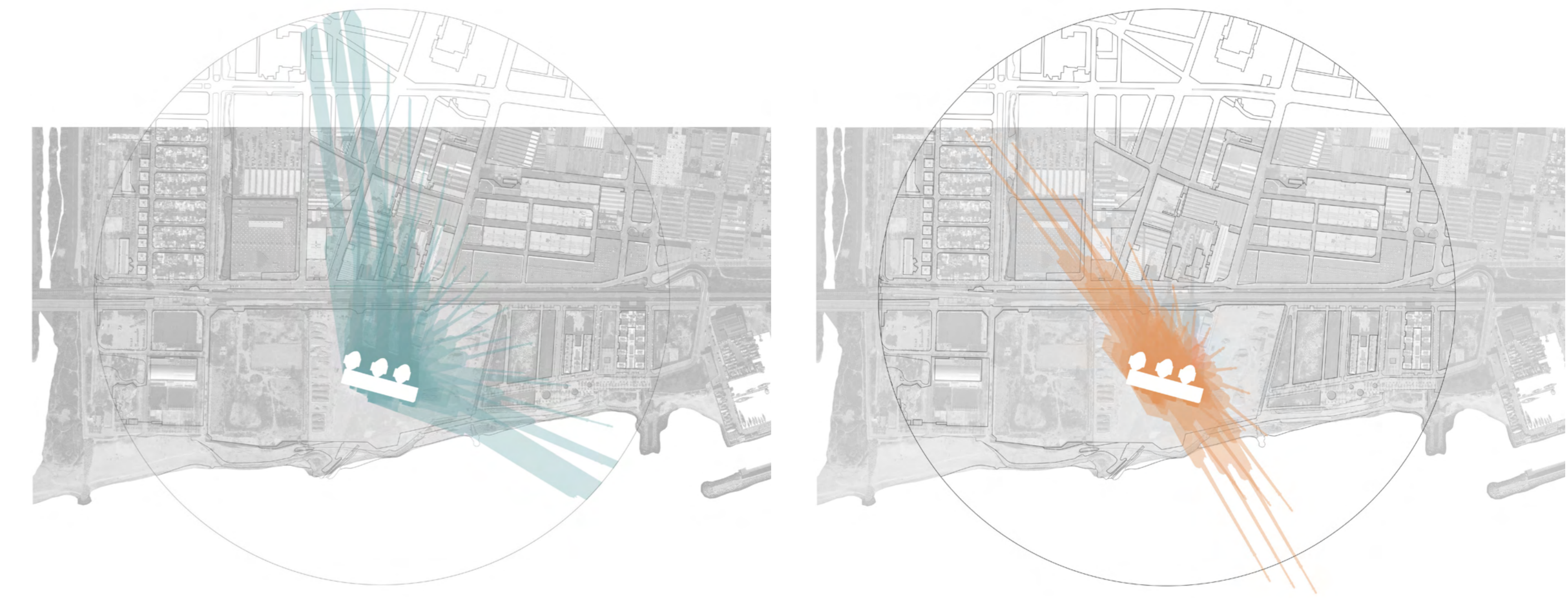
Productive Fabrics



Green Infrastructure



Shadow Study



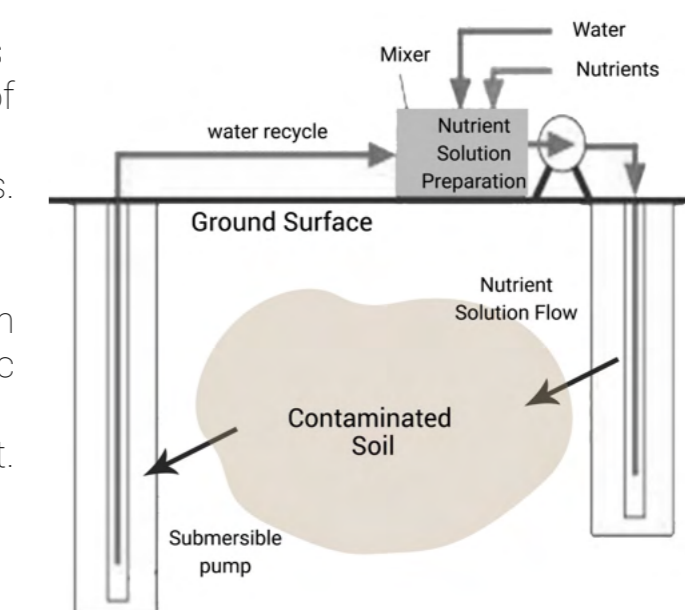
Sea Level Rise | Sea Contamination Risk



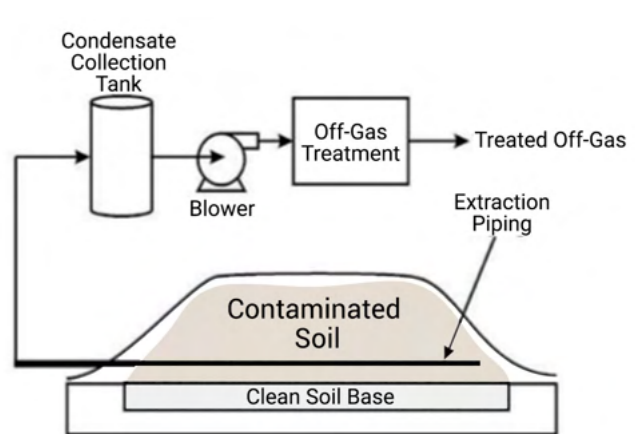
Soil Decontamination



In-situ bioremediation of soil: 1 to 4 years
 • Allows treatment of a large volume of soil at once.
 • Mostly effective at sites with sandy soils.
 Methods:
 * Bioventing
 * Injection of hydrogen peroxide or oxygen releasing compound (ORC) for aerobic treatment
 * Injection of HRC for anaerobic treatment.

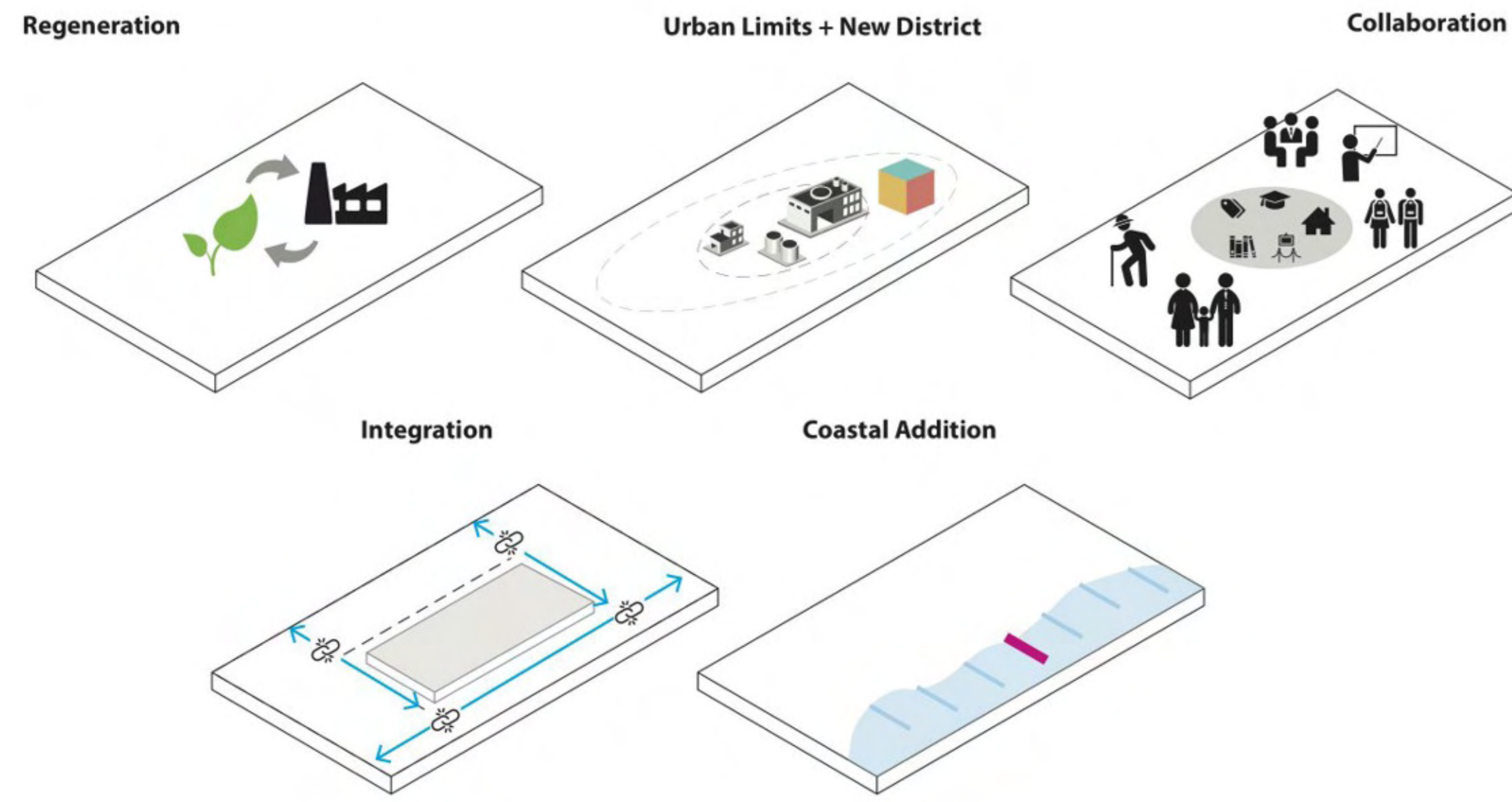


Ex-situ bioremediation of soil: 4 to 6 months
 • Involves excavation of the contaminated soil and treating in a treatment plant located on the site or away from the site.
 • This approach can be faster, easier to control, and used to treat a wide range of contaminants and soil types.
 Methods:
 * Slurry-phase bioremediation
 * Solid-phase bioremediation

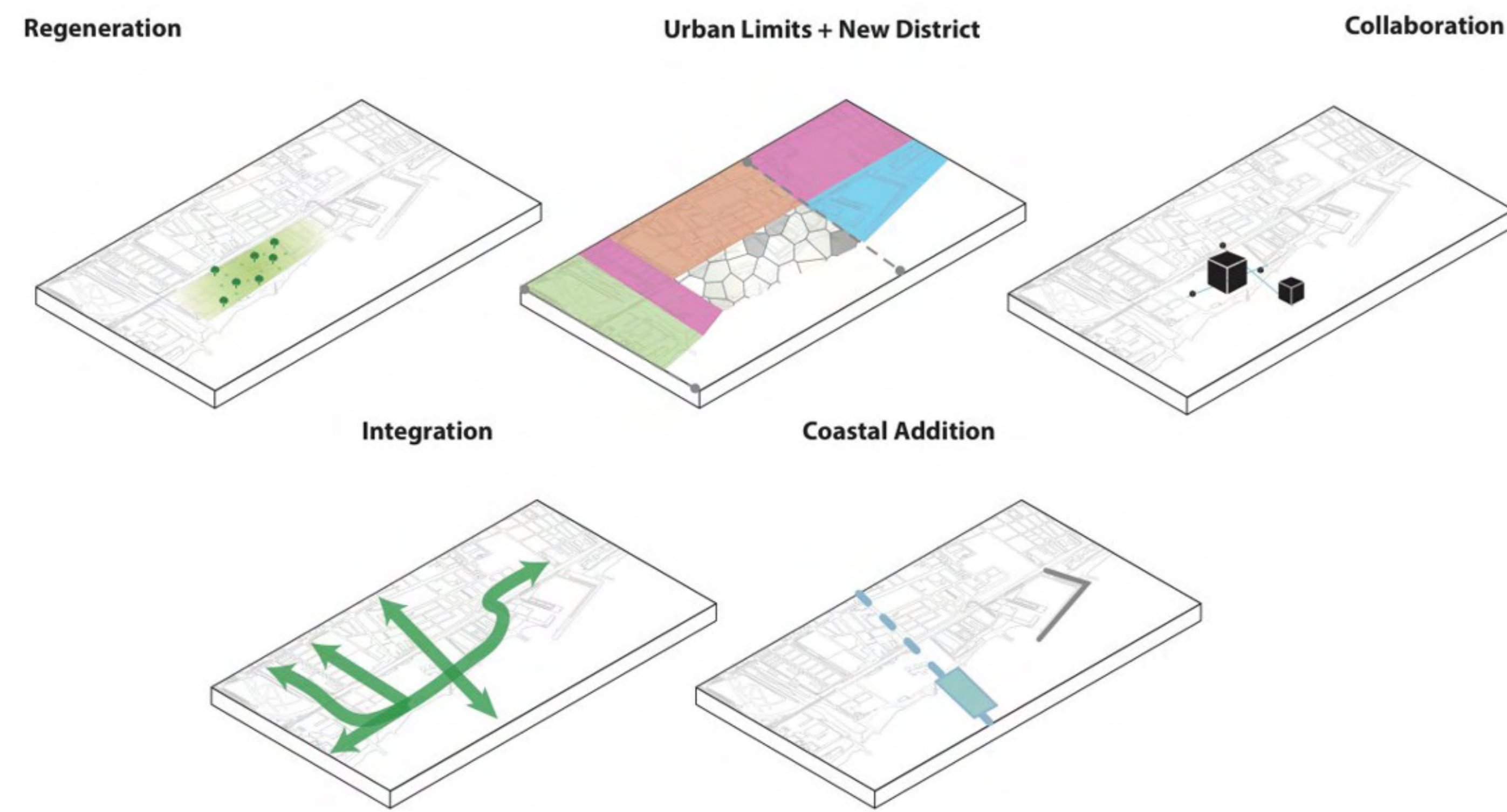


STRATEGY

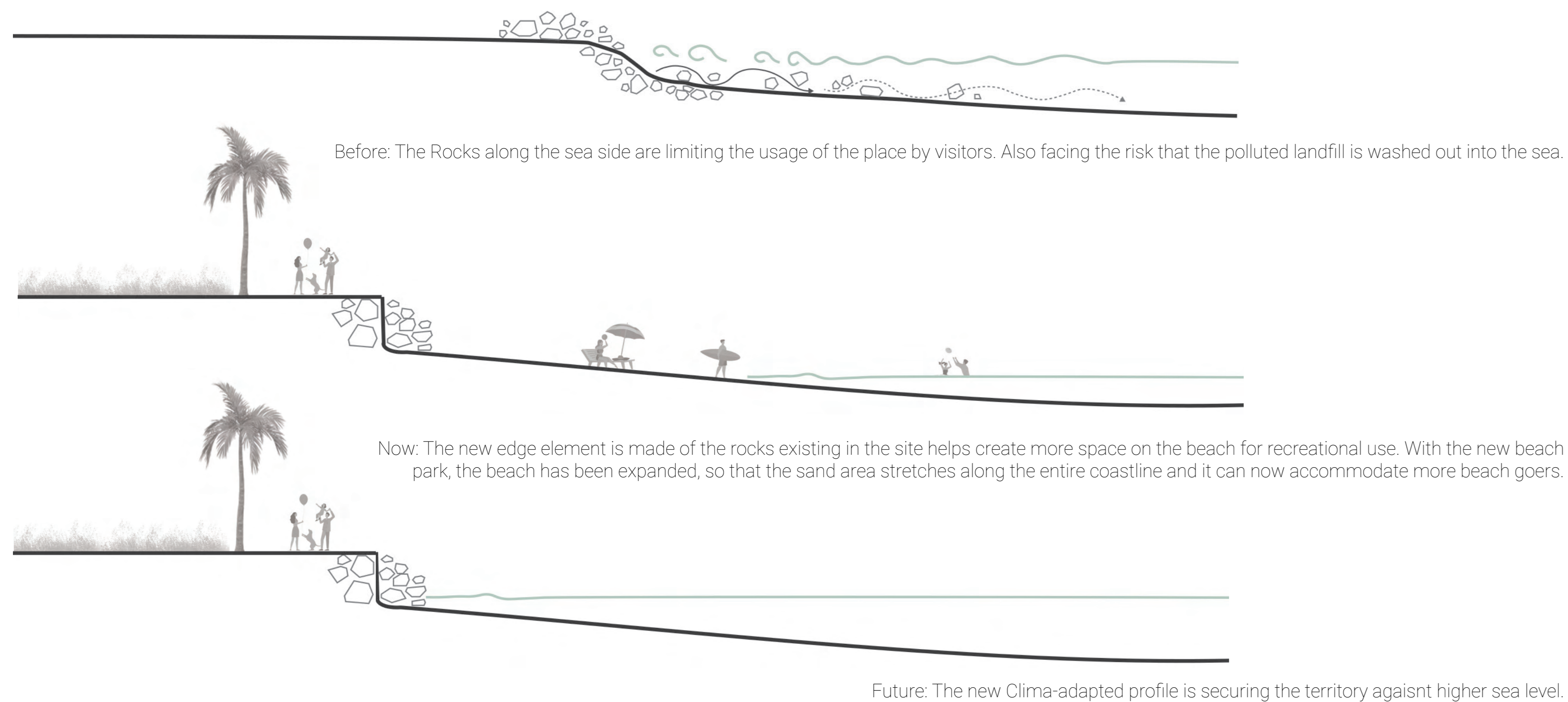
Theoretical Objectives



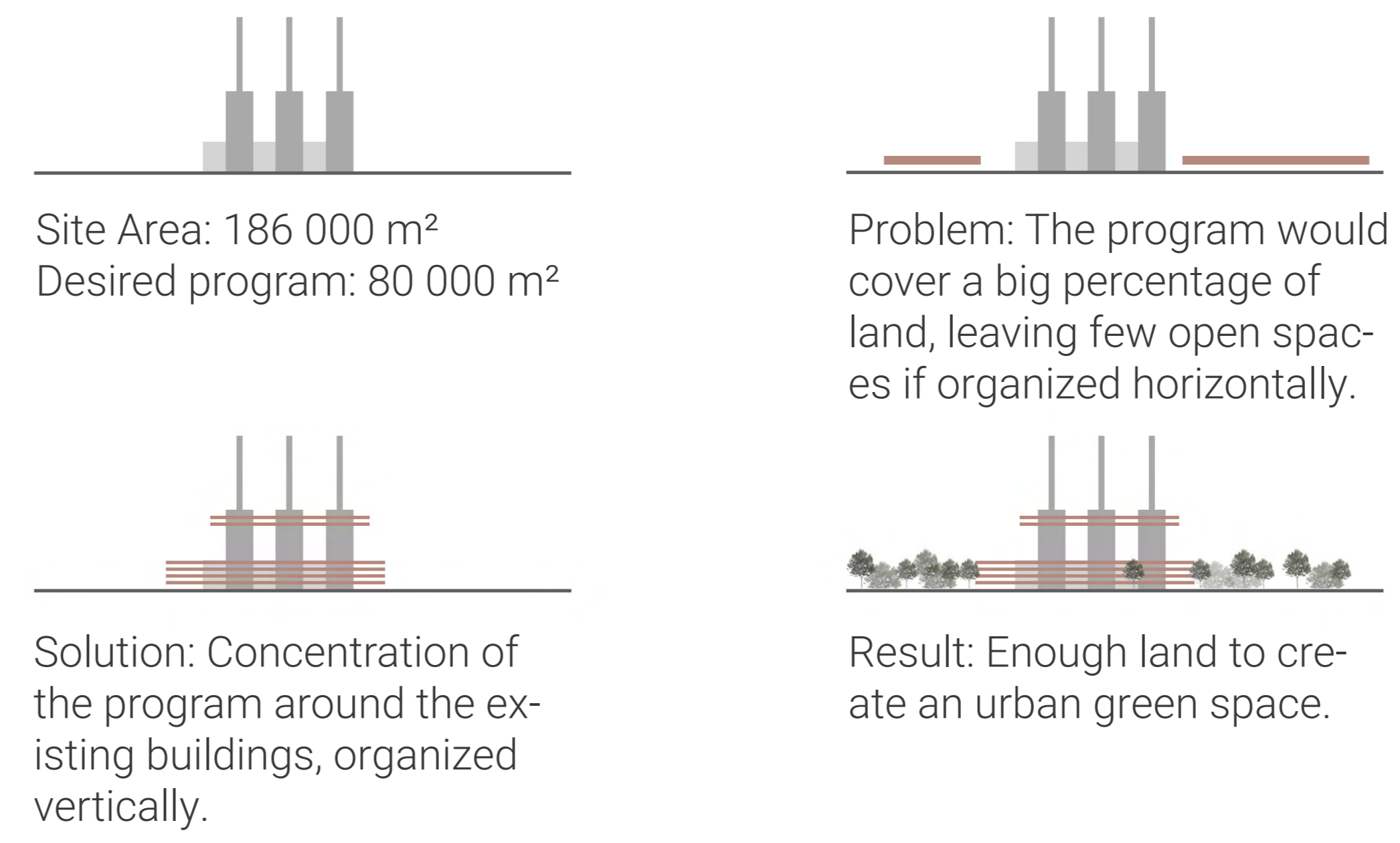
Design Manifestation



Section Concept



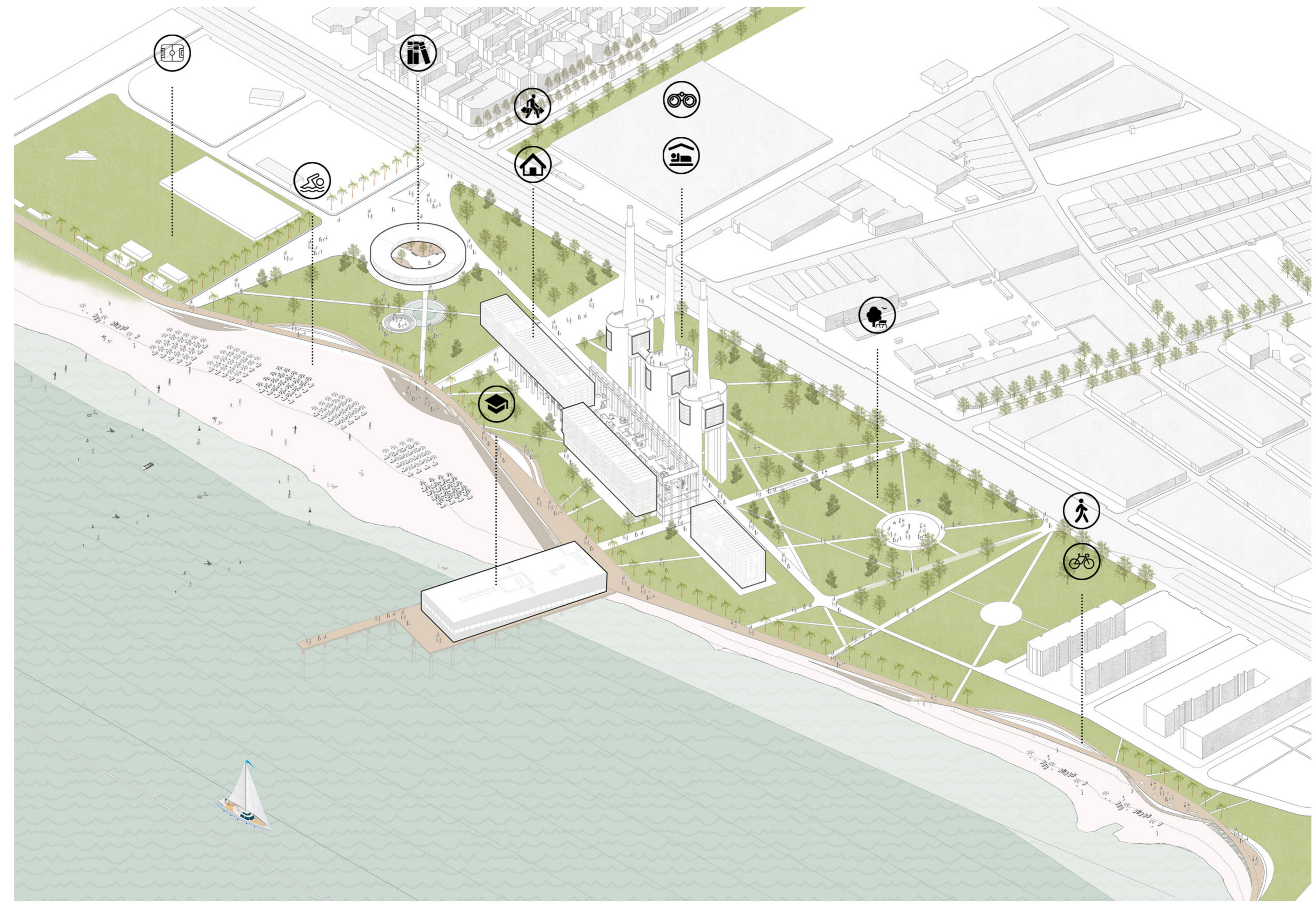
Design Concept



Strategy Plan



Program Distribution



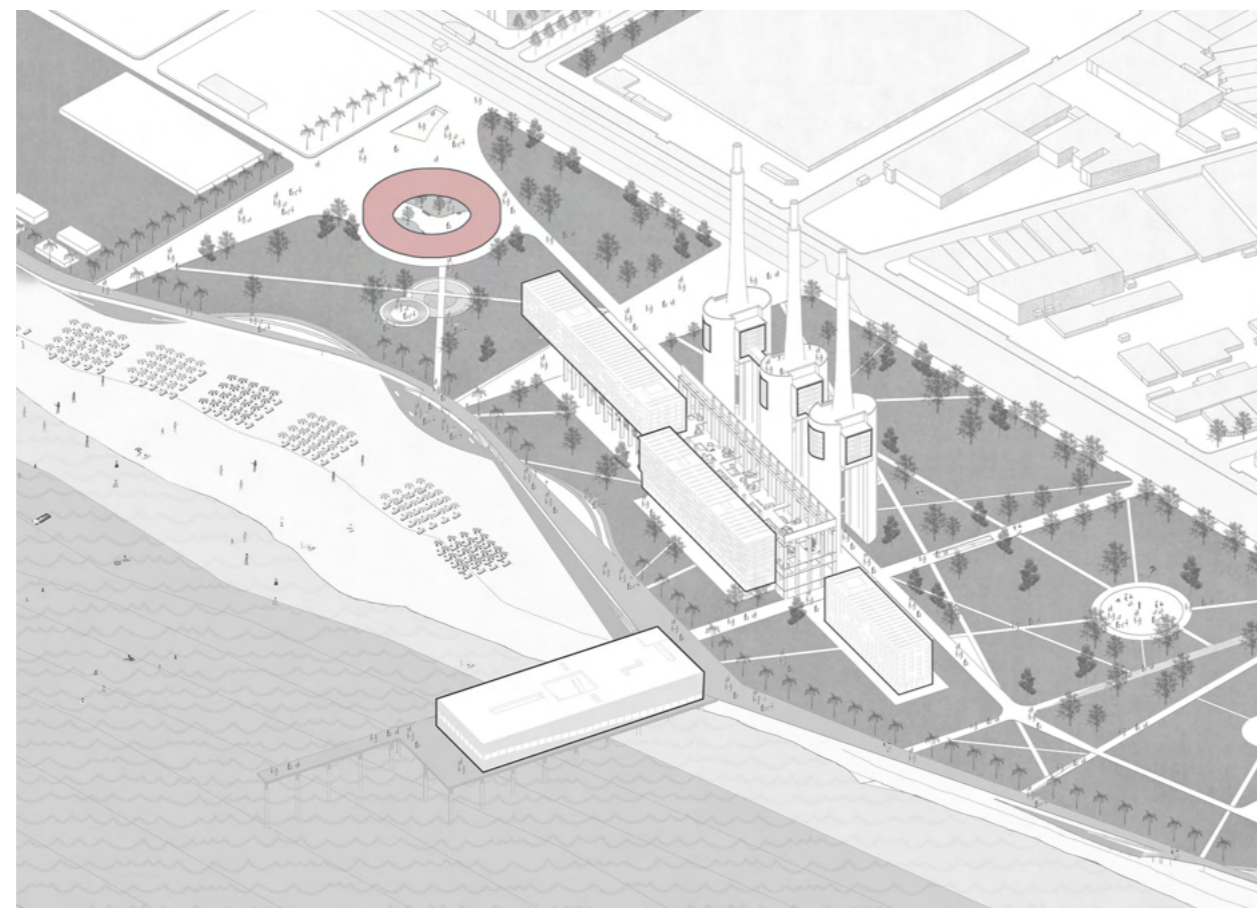
MASTER PLAN



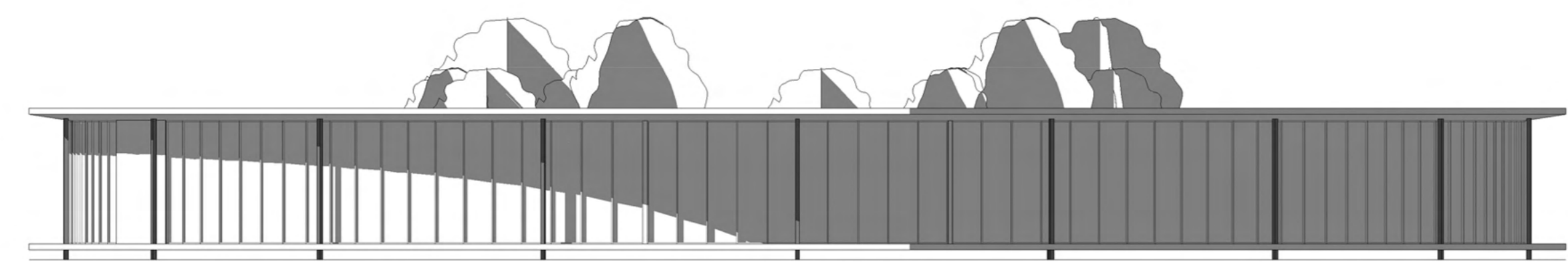
DESIGN

Library and Documentation Center (specialized in Nautical)

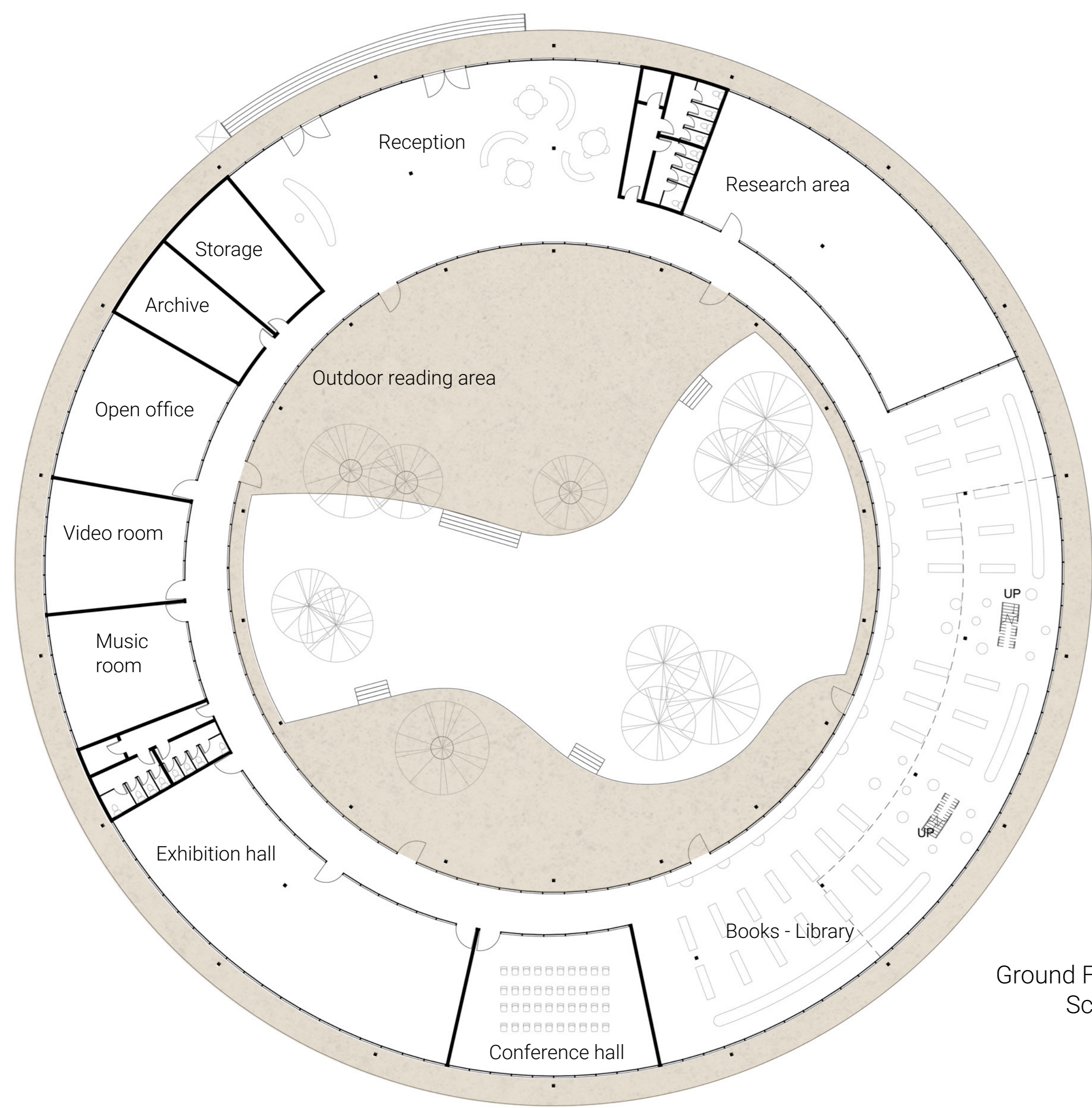
The library and documentation center specialized in nautical, sets on the main entrance of the project. Its circular form helps guide the sense of orientation. It is located between the campus and the neighbouring residential area which makes the project more inviting. The circular library have 360 degrees view with main facilities oriented towards the chimneys and get indirect sun for a more comfortable reading embnice. Lifted from the ground to keep the space for the soil to breath, therefore it has minor impact on the landscape. To help reduce the carbon footprint, the structure is wooden with glass all around creating a private outdoor central space.



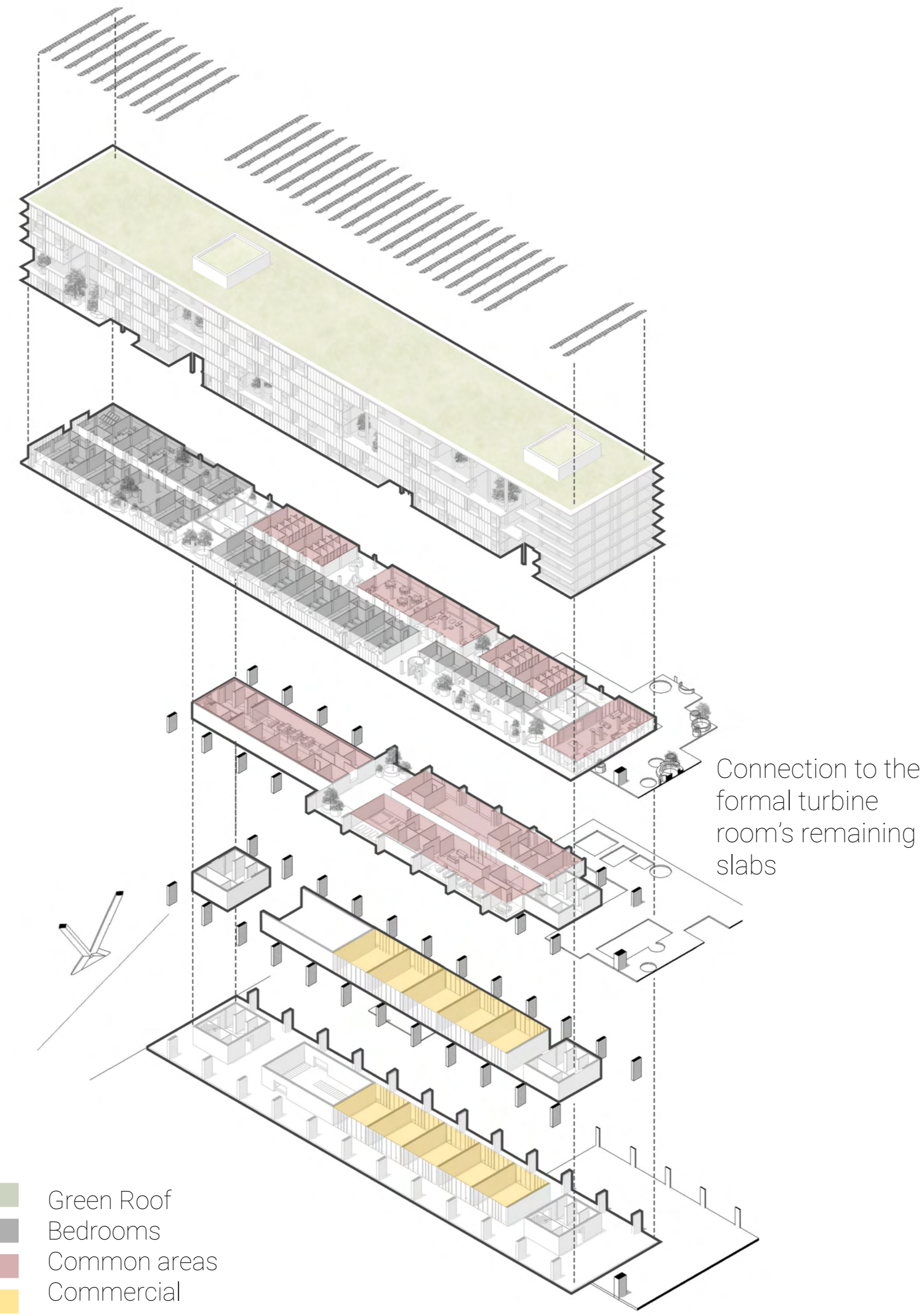
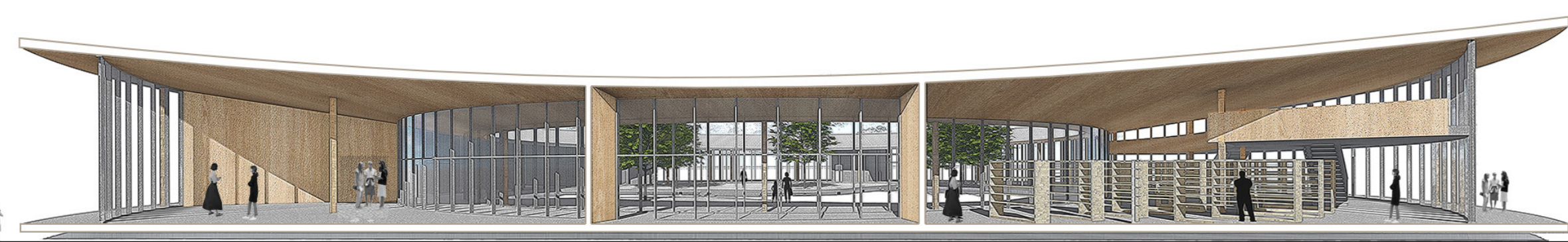
Section
Scale 1:250



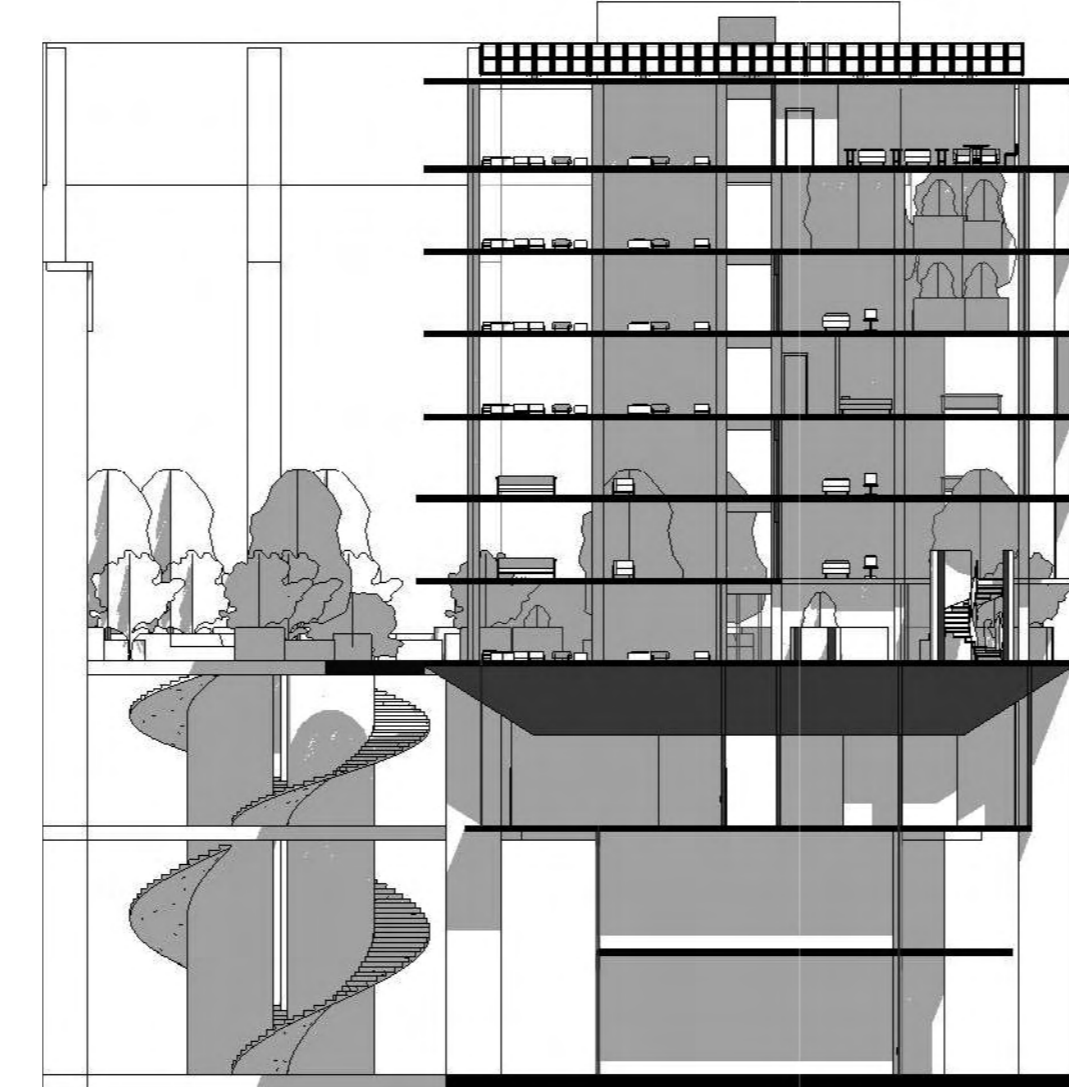
Elevation
Scale 1:250



Ground Floor Plan
Scale 1:250



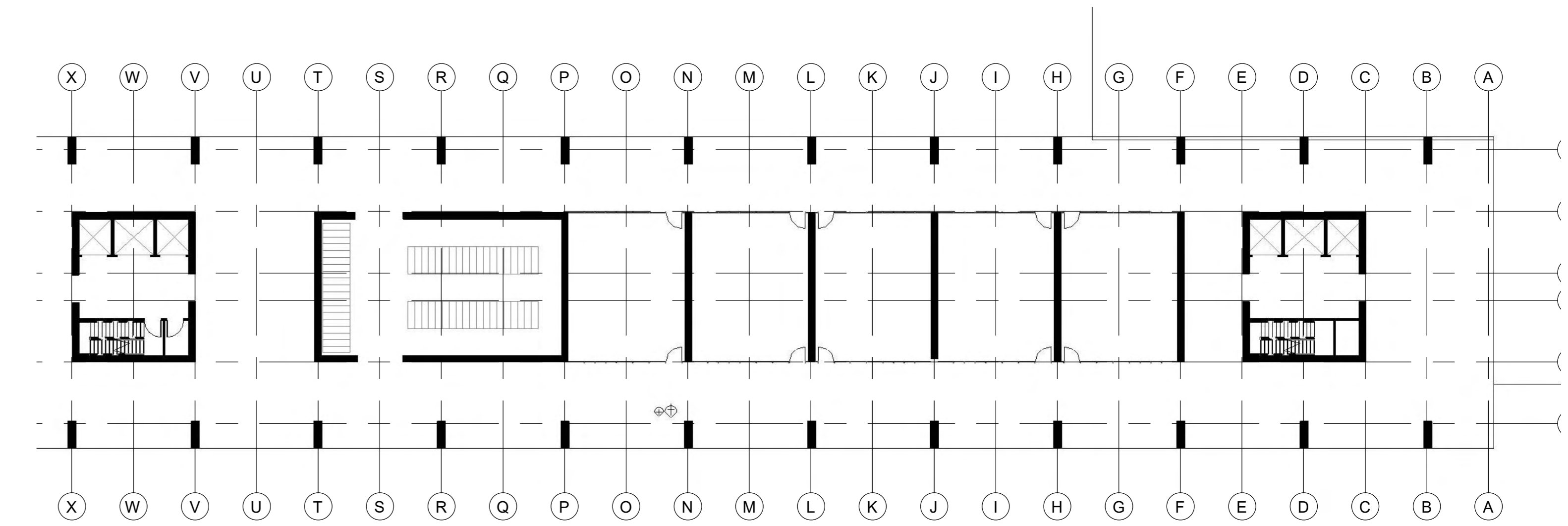
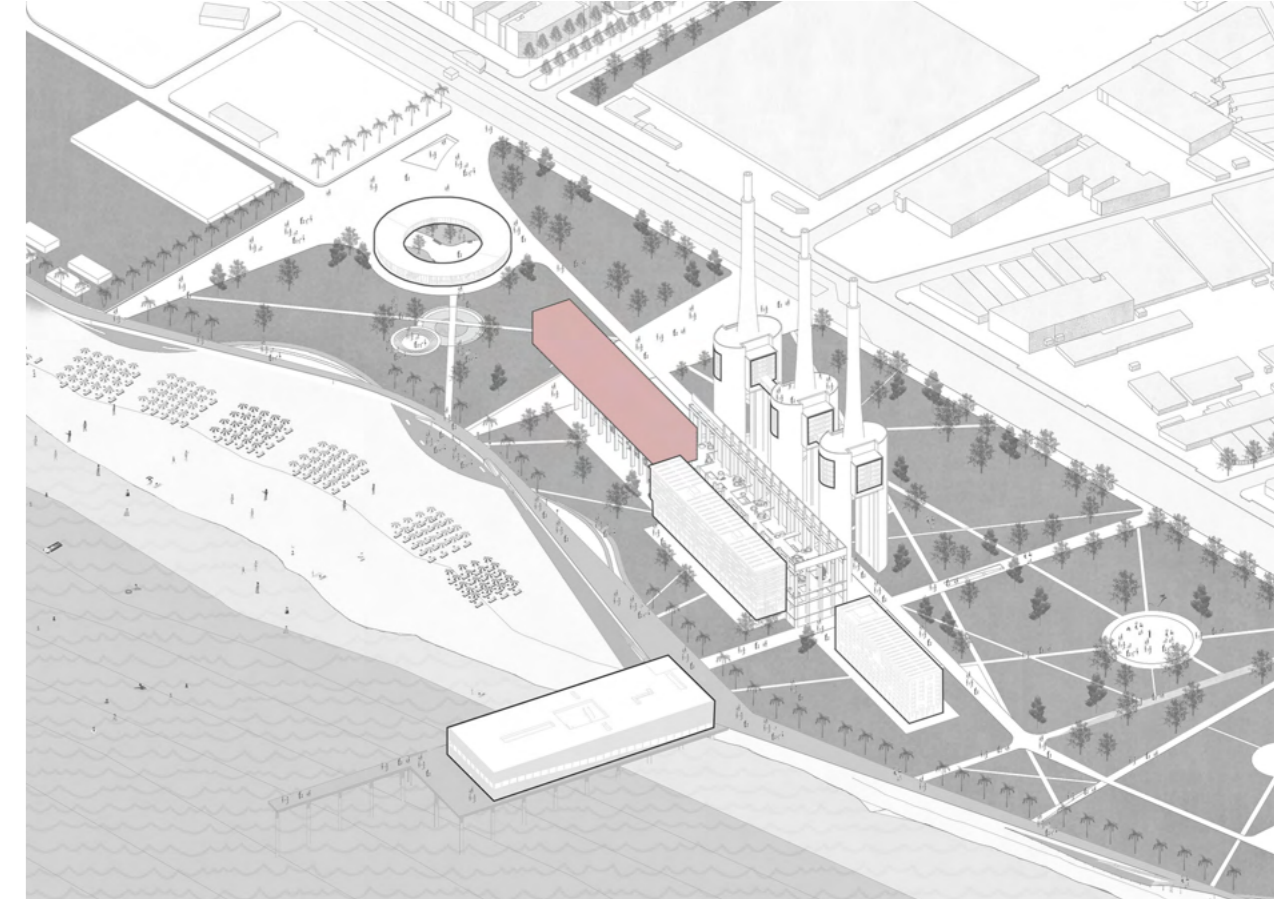
- Green Roof
- Bedrooms
- Common areas
- Commercial



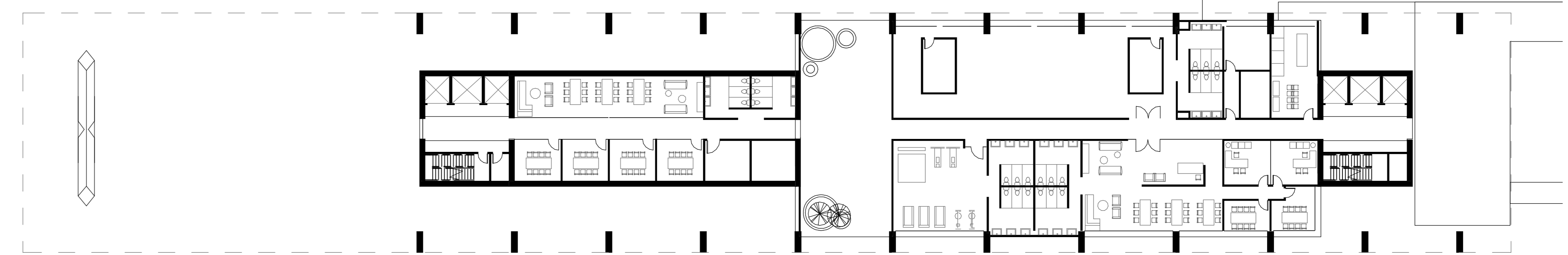
Transversal Section
Scale: 1/250

Students Residence

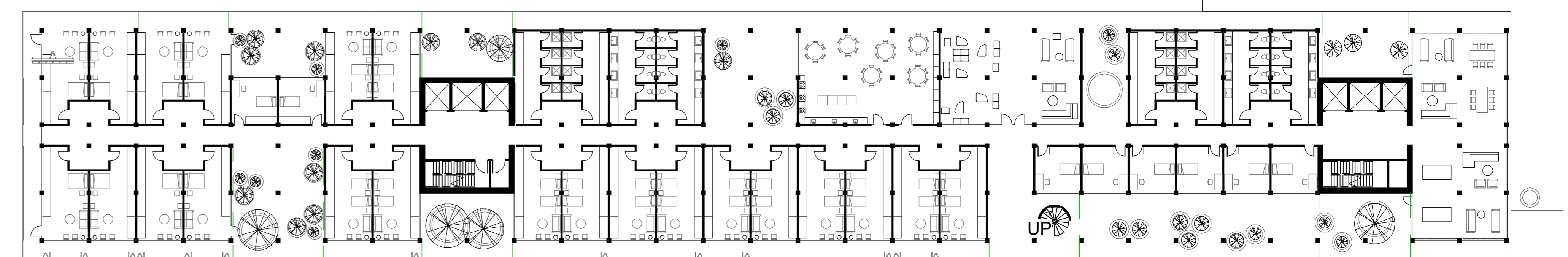
The students residence building takes advantage of the existing turbine room as an extension for the common spaces. The Building has commercial stores in the first two floors for an easier and a more sustainable lifestyle for students. The long side of the building is facing the beach, slightly rotated to match the site's orientation. On the long side are the rooms to get the best of the view and sunlight. On the northern part are the common rooms and services. The building has two vertical connections of elevators and emergency escapes. To help reduce the carbon footprint, the building is covered with a green roof and an area of 3000 m² of solar panels. The structure is wooden and modular for a more flexible and sustainable future.



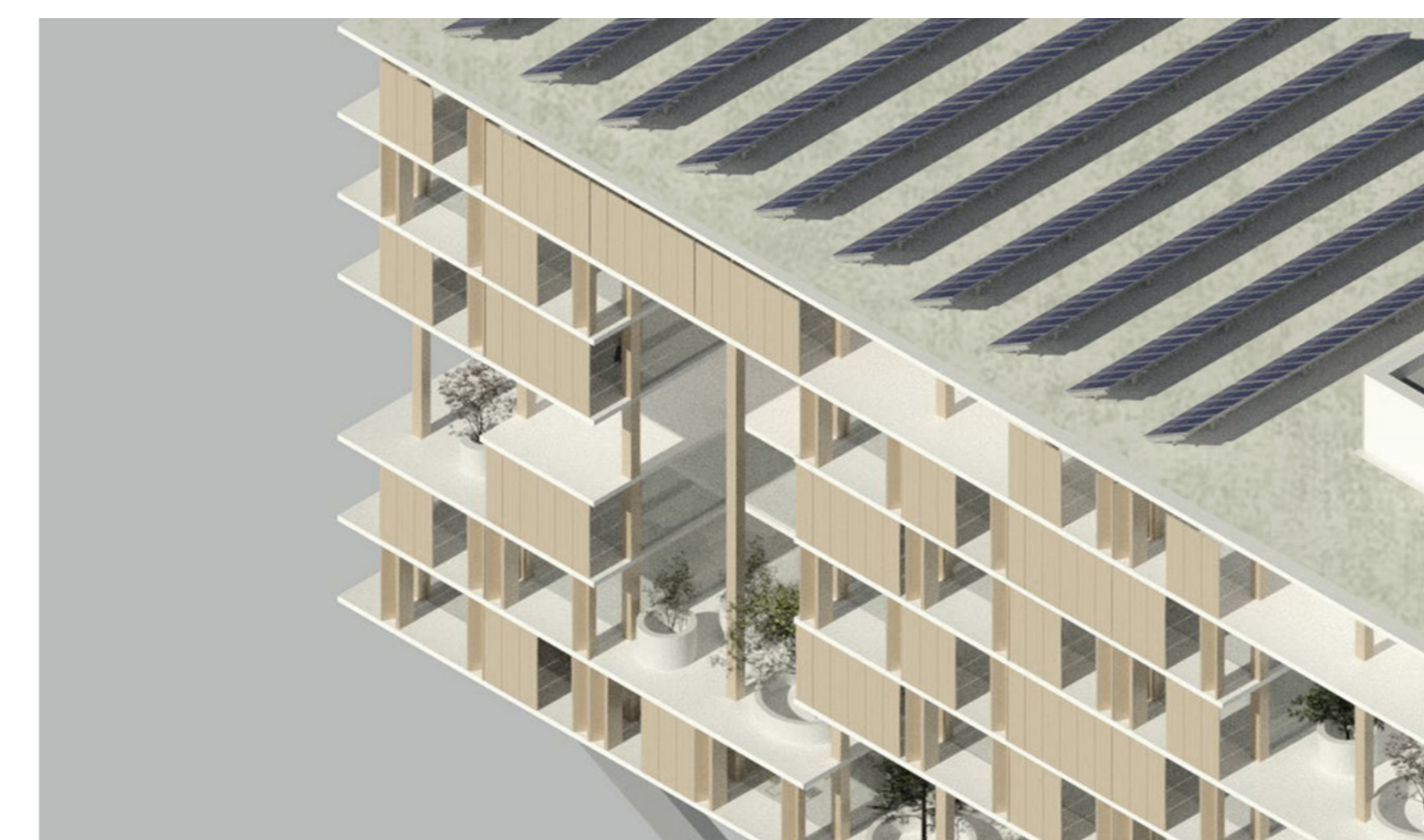
Ground Floor Plan
Scale: 1/250



Second Floor Plan
Scale: 1/250

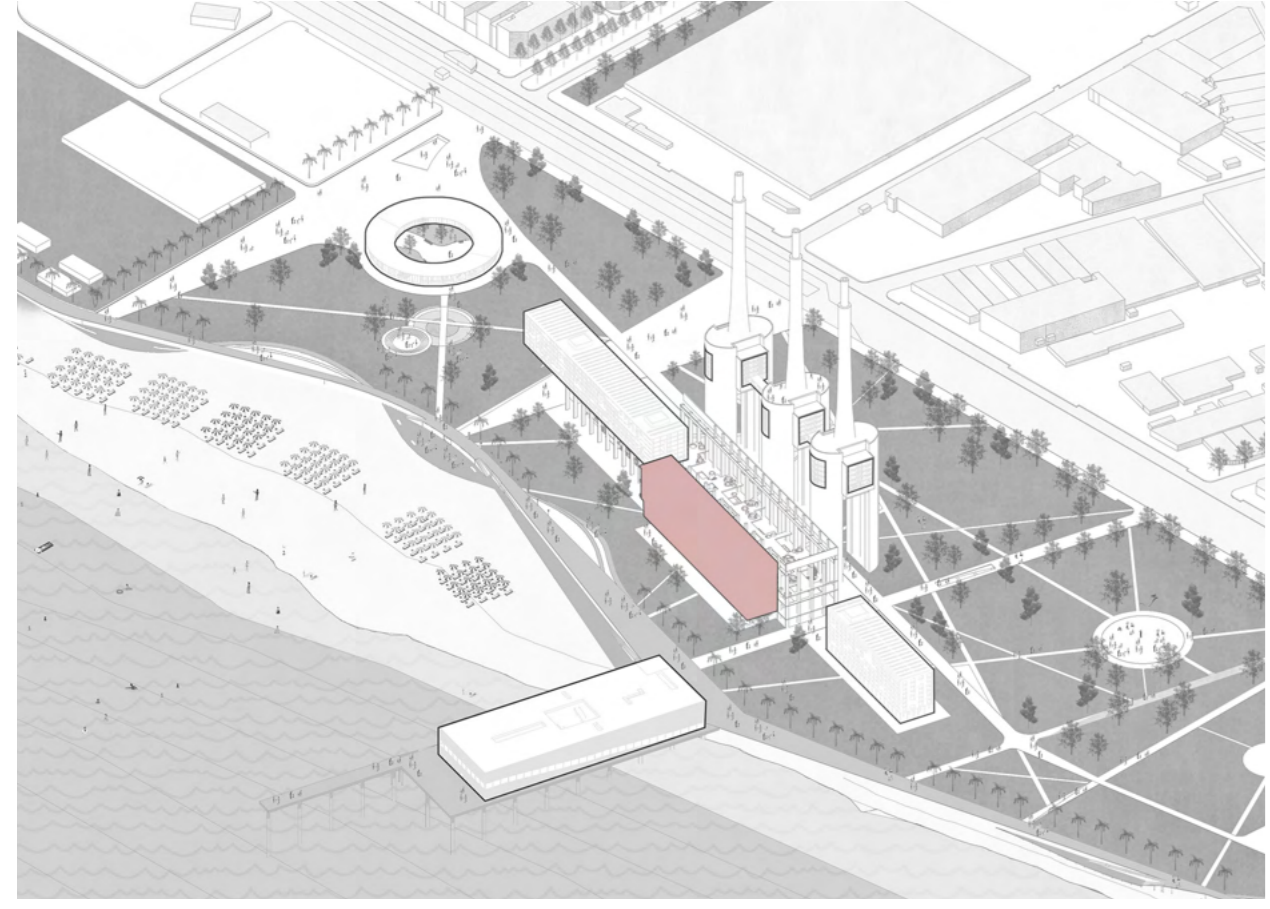


Typical Floor Plan
Scale: 1/250

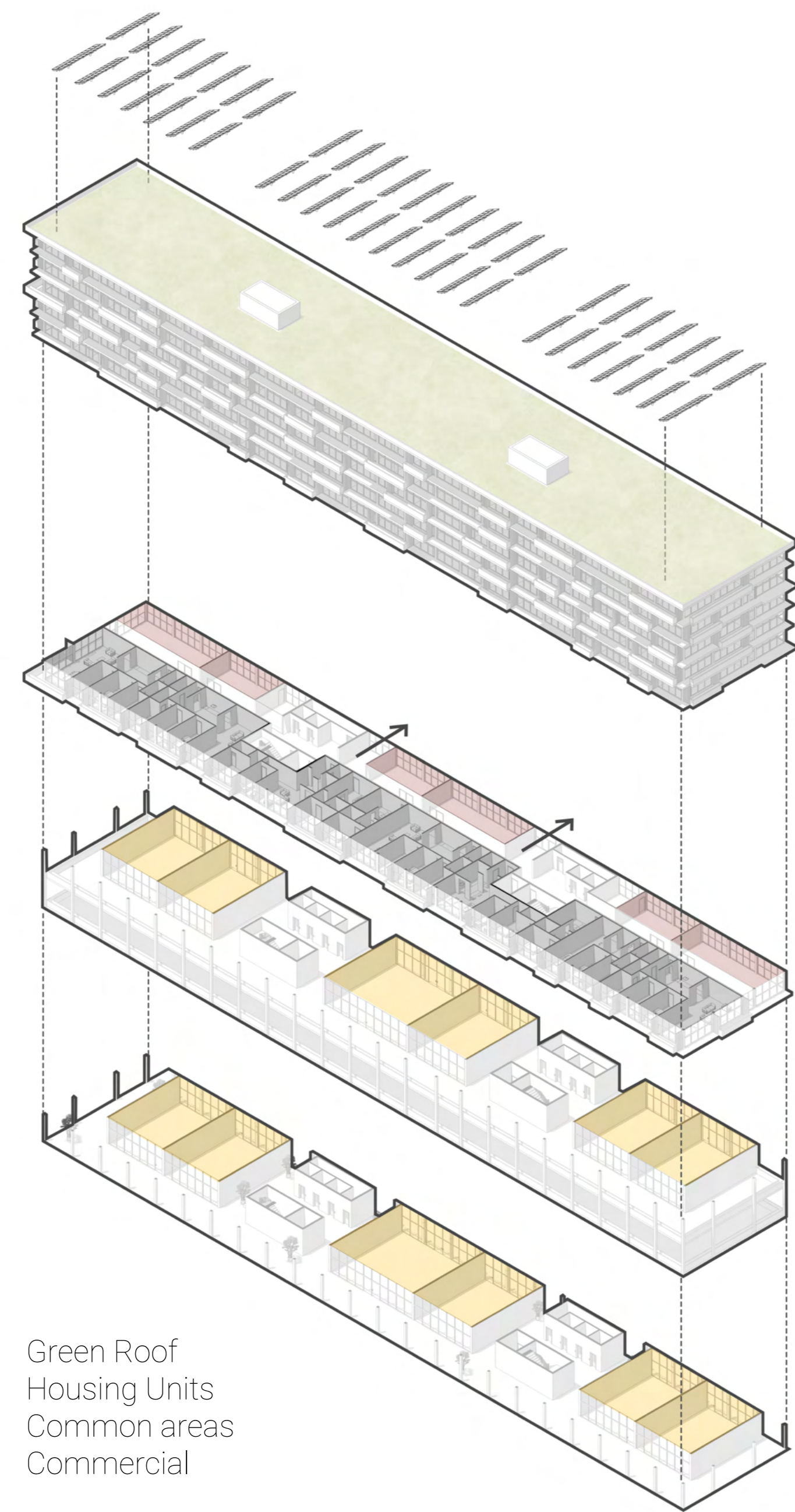


DESIGN

Social Housing

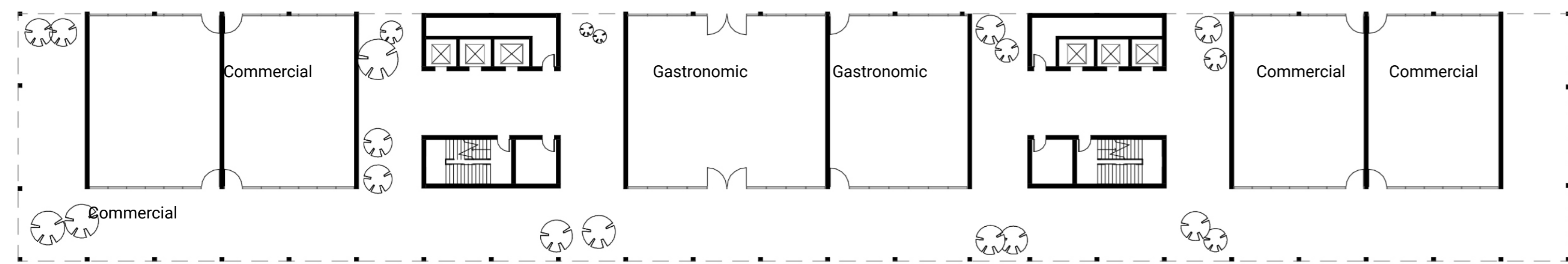


Its permeable ground floor grants an easy cross-through movements of visitors and also it reduces the impact on the soil. The building acts as a second skin for the existing turbine room, having the houses on the beach side and the shared rooms on the opposite side that extend to reach the platforms from the 3rd floor. The green roof has 2000 m² of solar panels to generate the most of the energy consumption of the building. The residential area benefits from the beautiful view on the beach and the park. For the shading, the facade is partially covered by the planters where the added plantation will cover even more areas. The slabs extend to the outside, creating a shading element in addition to the wooden vertical shades that protects from the south western side.

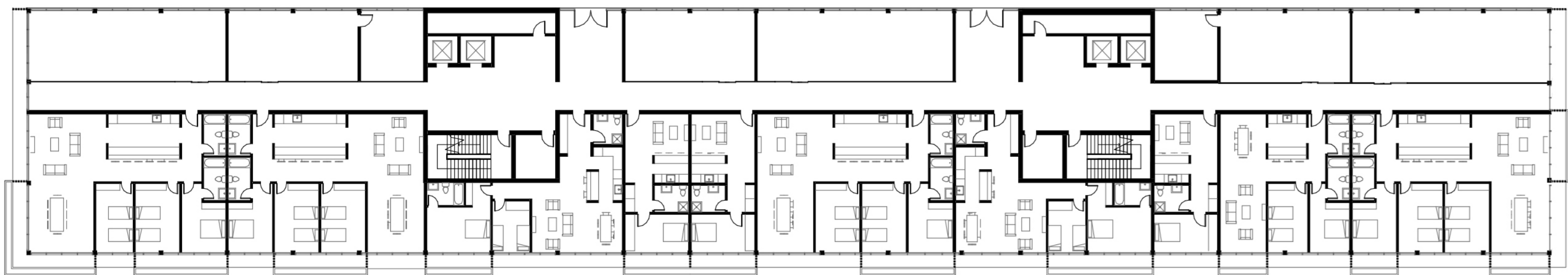


Connection to the formal turbine room

- Green Roof
- Housing Units
- Common areas
- Commercial



Ground Floor Plan
Scale: 1/250



Typical Floor Plan
Scale: 1/250



South Elevation
Scale: 1/250



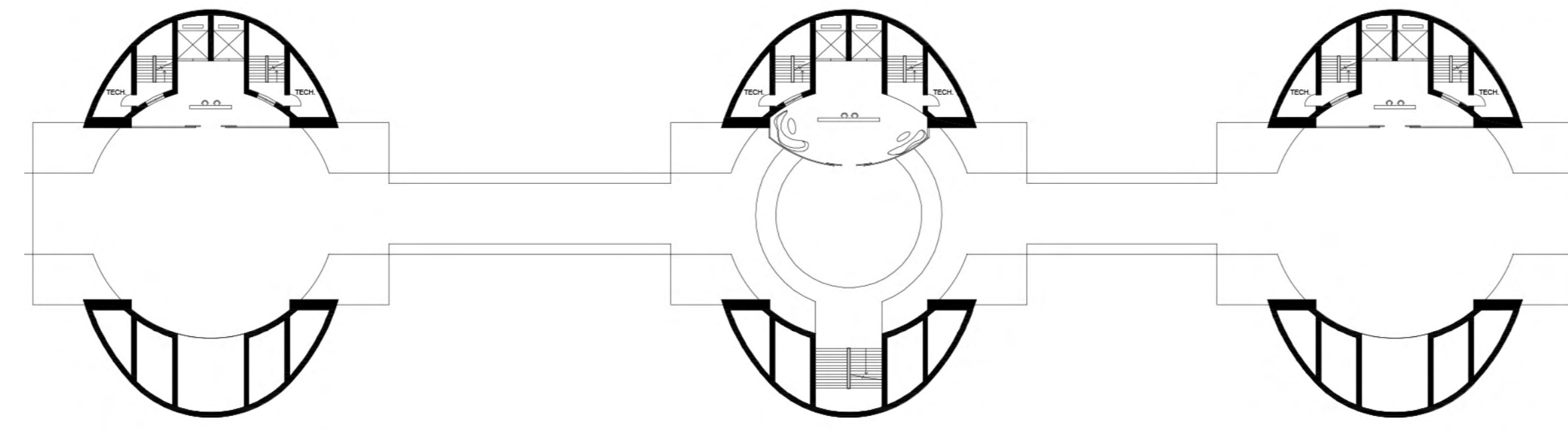
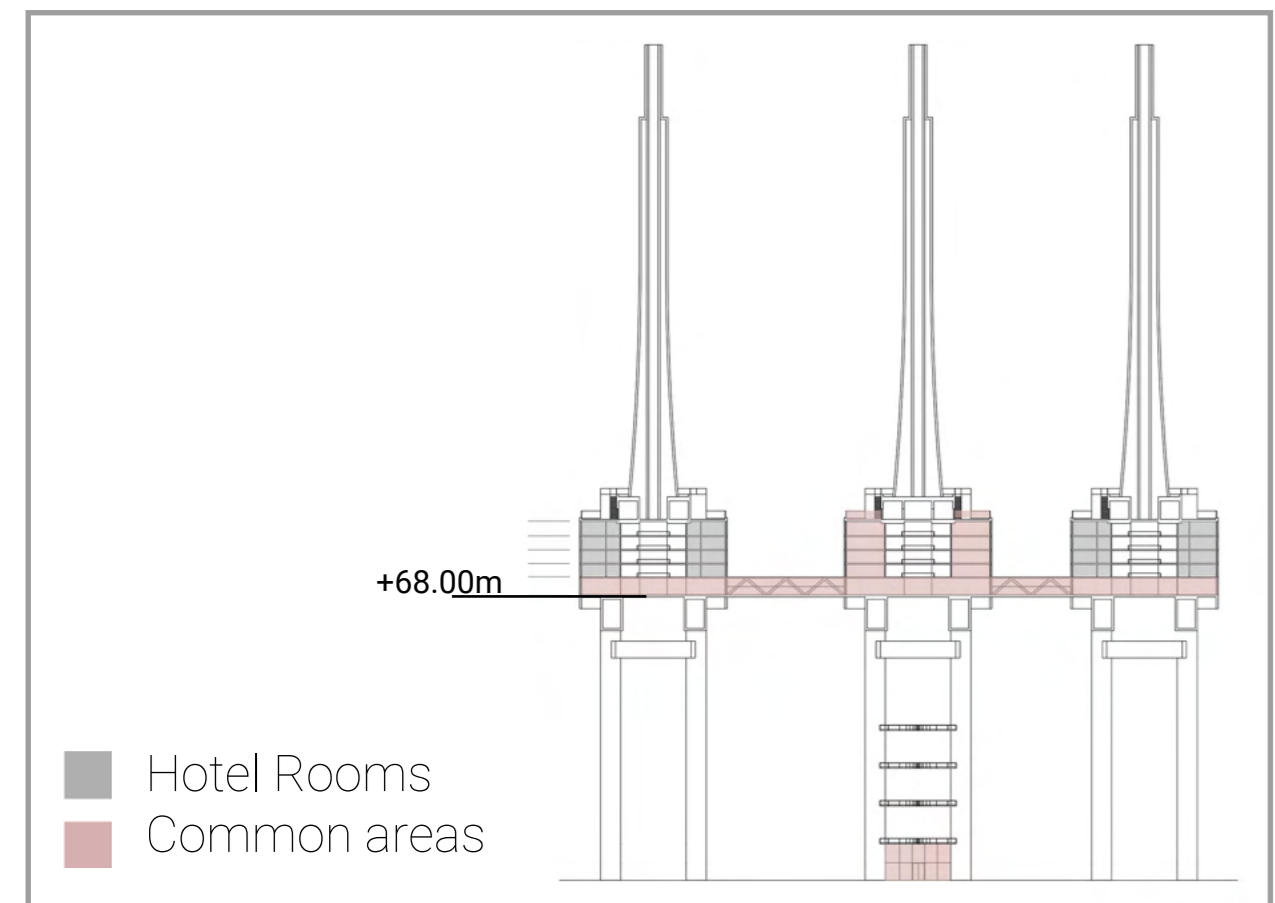
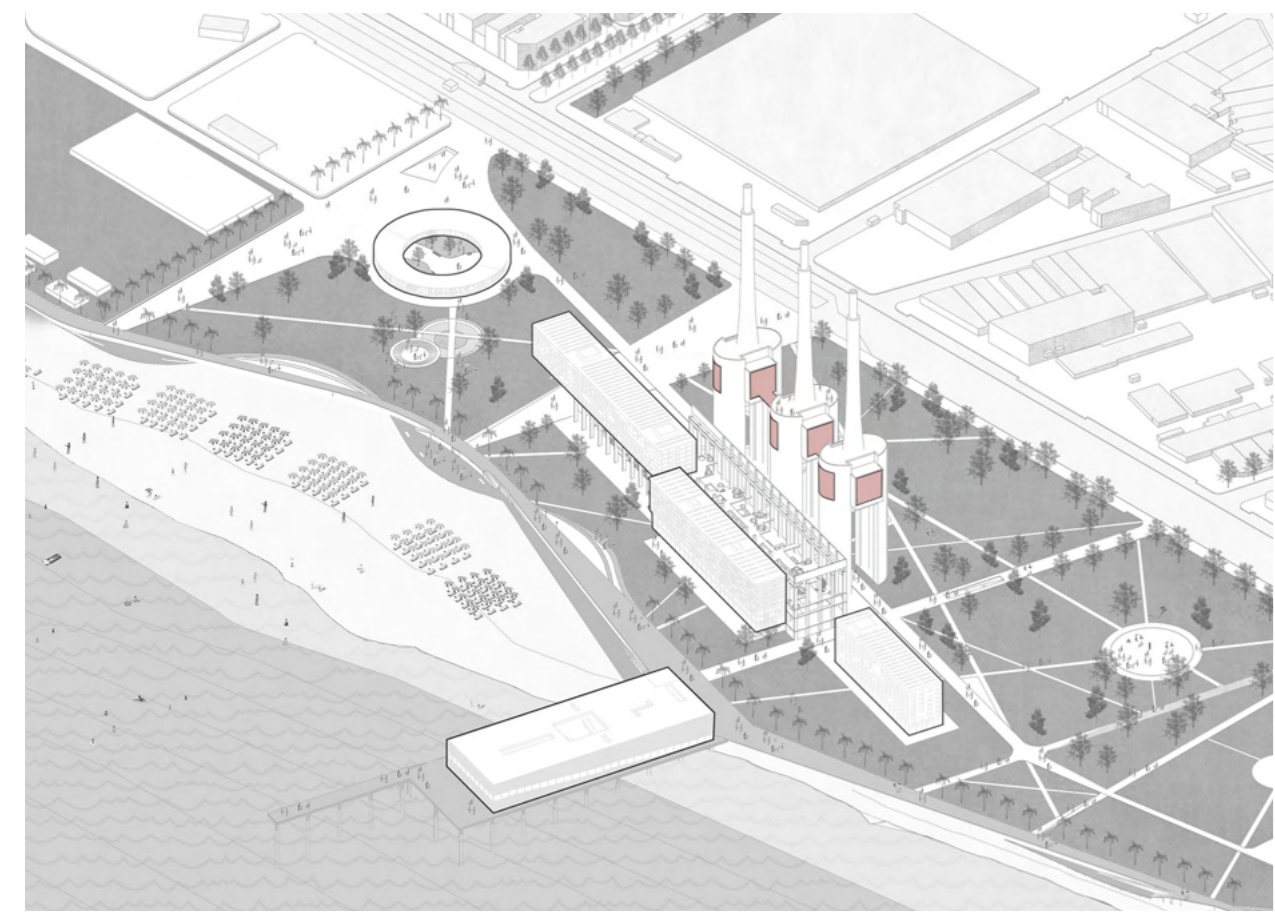
DESIGN

Hotel

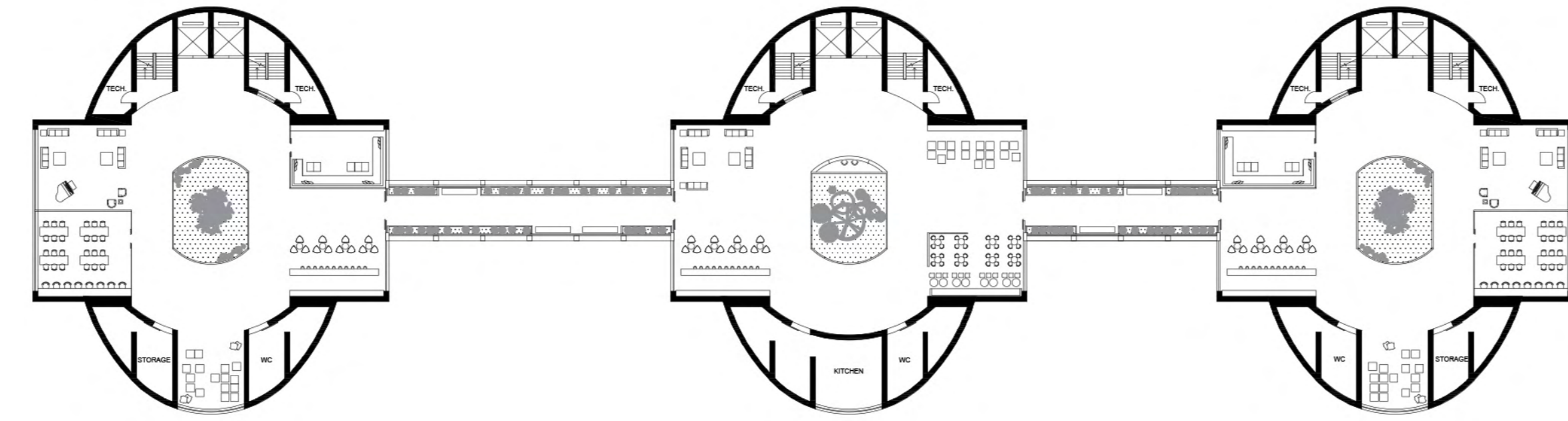
About 70% of Barcelona's economy directly or indirectly is based upon tourism. But this sector is weak in Sant Adrià de Besòs due to the lack of attractions and the important presence of industrial activities. People have already a nostalgic feeling when it comes to the chimneys, so why not bringing people up there for an experience.

People of Barcelona and tourists seek for the best views of Barcelona from the top of the surrounding peaks to watch the sunset and the beautiful urban design that Barcelona has.

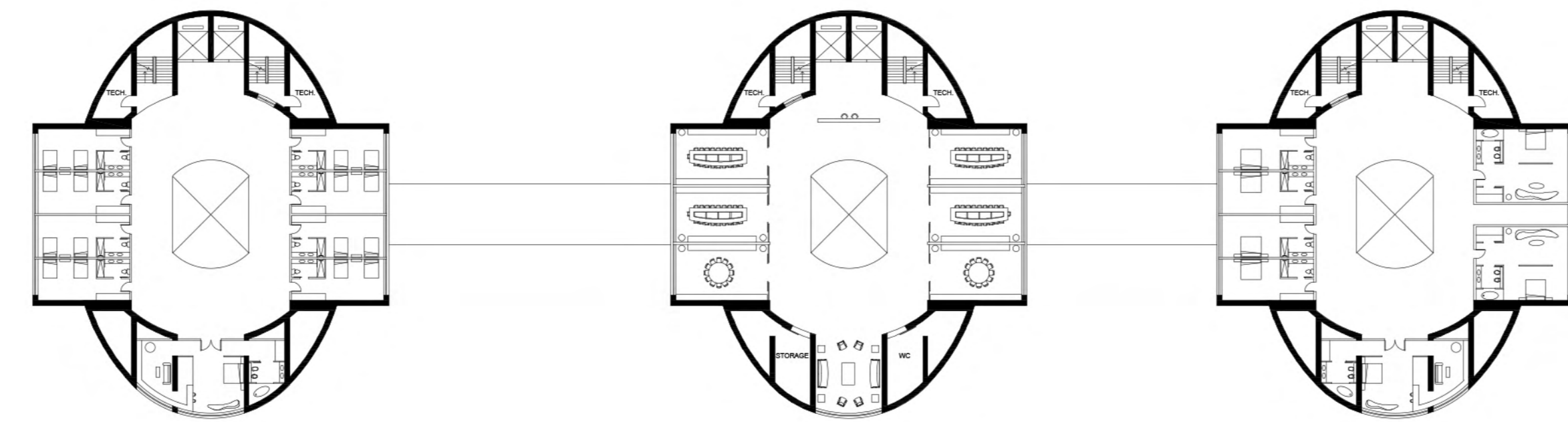
The thesis project proposes a hotel in the upper part of the chimneys, where they can enjoy the view, dine and spend a night looking over Barcelona and the beach.



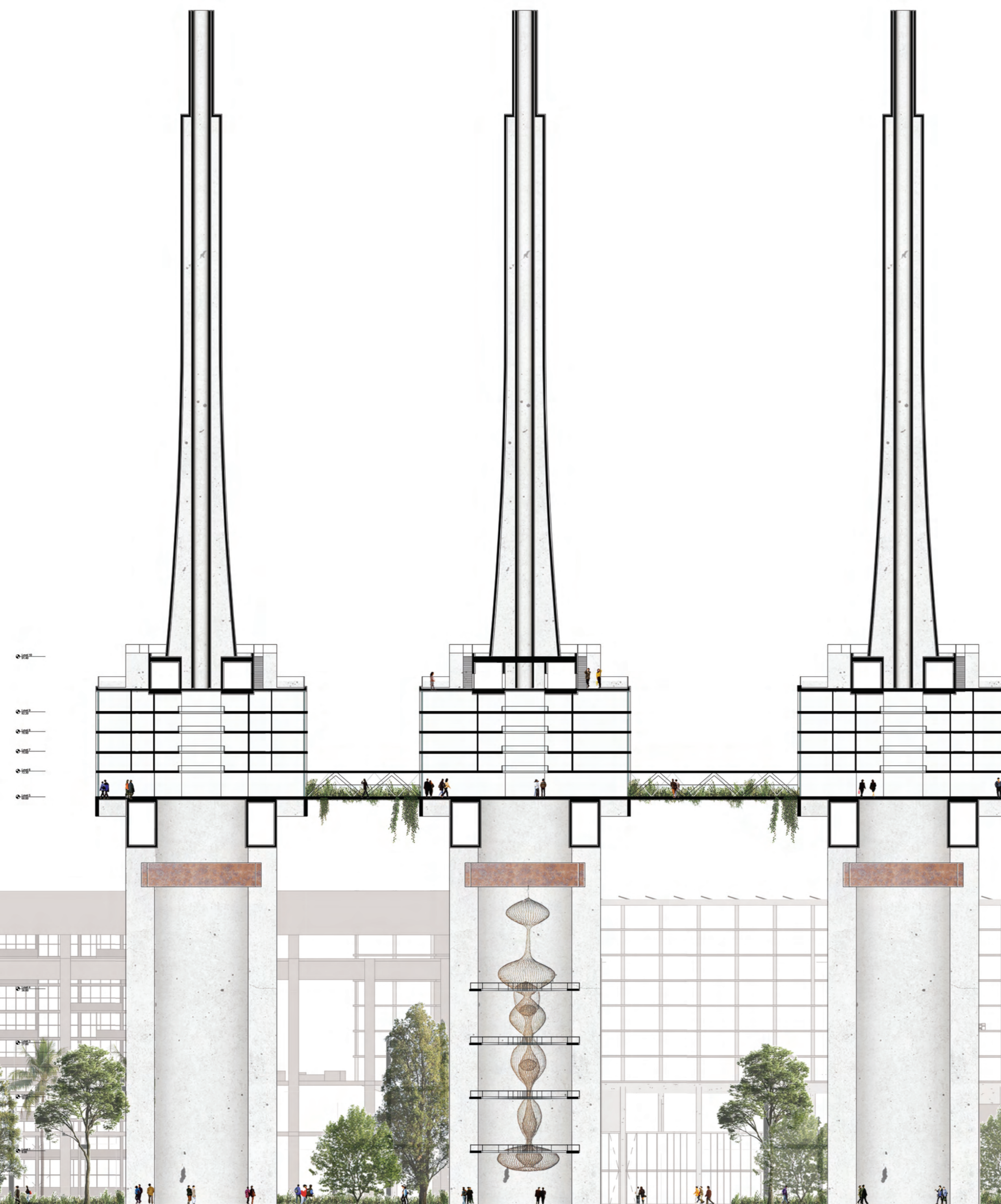
Ground Floor Plan
Scale: 1/500



Common Floor
Scale: 1/500



Common Floor
Scale: 1/500



Hotel Section
Scale: 1/250



DESIGN

Site Section



One of the issues that the site has is the accessibility. As a solution for the main axis entering the site, a crossing underground path is proposed where people can enjoy an exhibition/museum about the formal power plant, that gives a double function for the path. A ceiling with openings brings the light in for a safer feeling and permit people to perceive the chimneys even before reaching the site. After crossing underground, people walk besides the monumental chimneys and enjoy the park until they reach the pier. The dynamicity of the experience is rich in all dimensions.

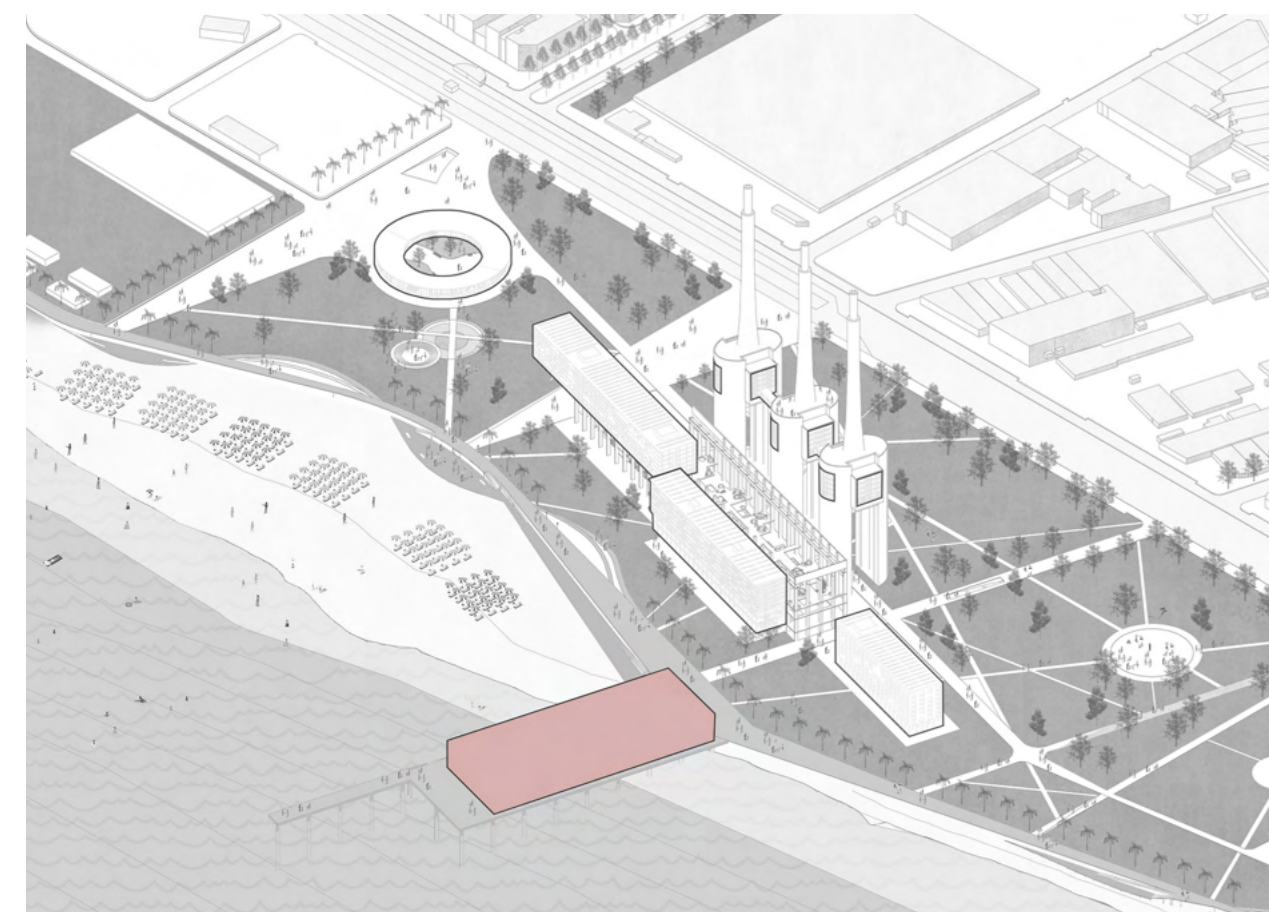
The street section is improved in a way that gives every user its own space and leave a line for parking spaces around the site to avoid a big surface of land for cars.



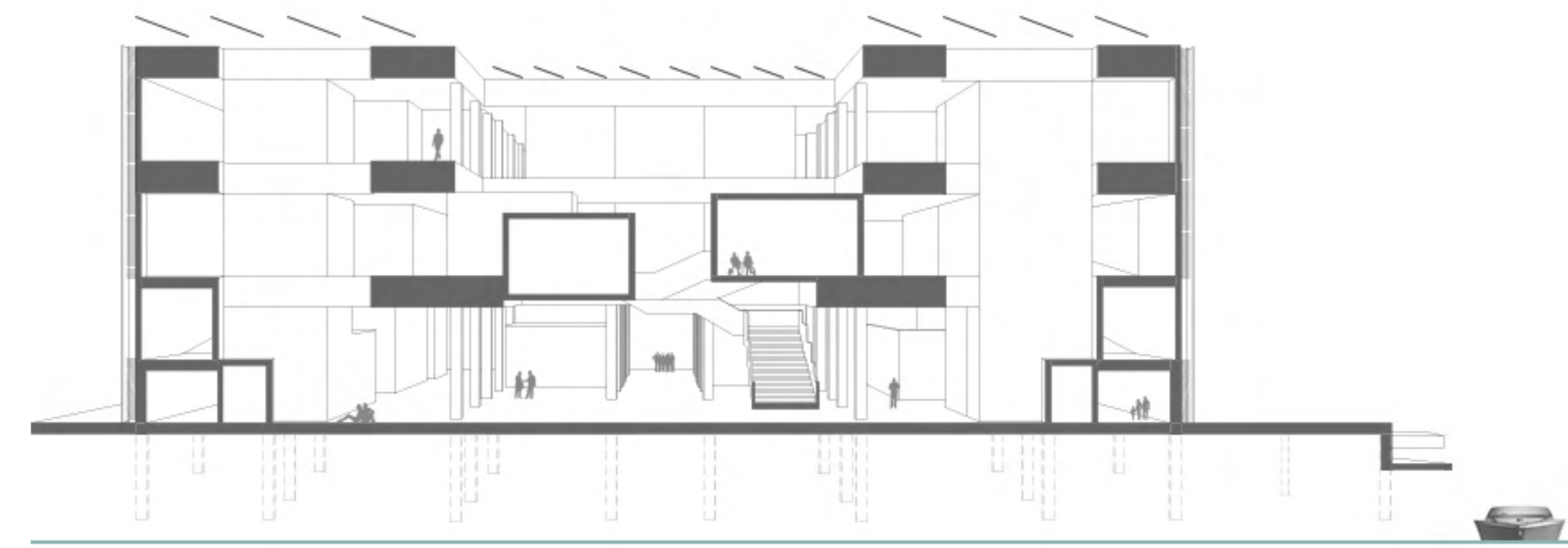
Underground Path/Museum Plan
Scale: 1/750

Transversal Section
Scale: 1/250

Sea-Related Education Facility



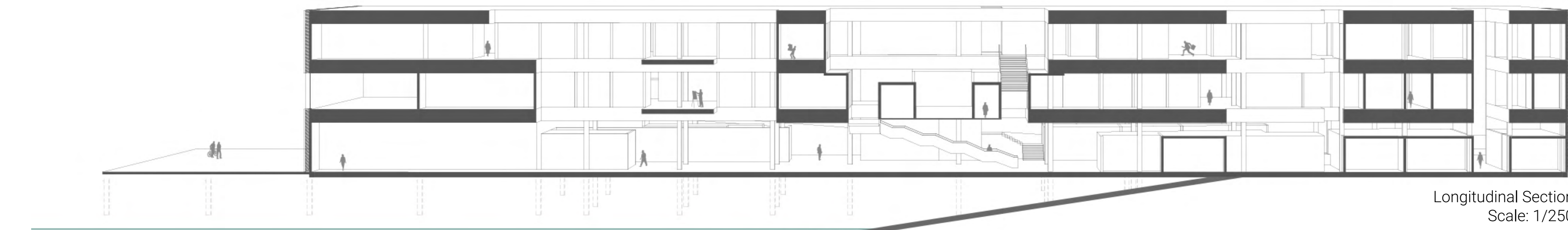
This educational building shares some commercial and recreational spaces with the other buildings. Built on water, the university extends its platform to create a public pier accessible to all users. As a sustainable approach, the roof is covered with solar panels to generate the maximum green energy possible. In addition, the facades are wrapped up with a mesh layer that permits the filtered light to get inside from all sides which reduces the energy consumption.



Transversal Section
Scale: 1/250



Plans
Scale: 1/500



Longitudinal Section
Scale: 1/250

