

Multicomfort Saint-Gobain 2020/2021

Saint-Denis
Paris
France





Satbaev University

Team:

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Dabyrbek Daniyas

Advisor:

Tavashev A. B.

Kazakhstan

Site analysis



Seine

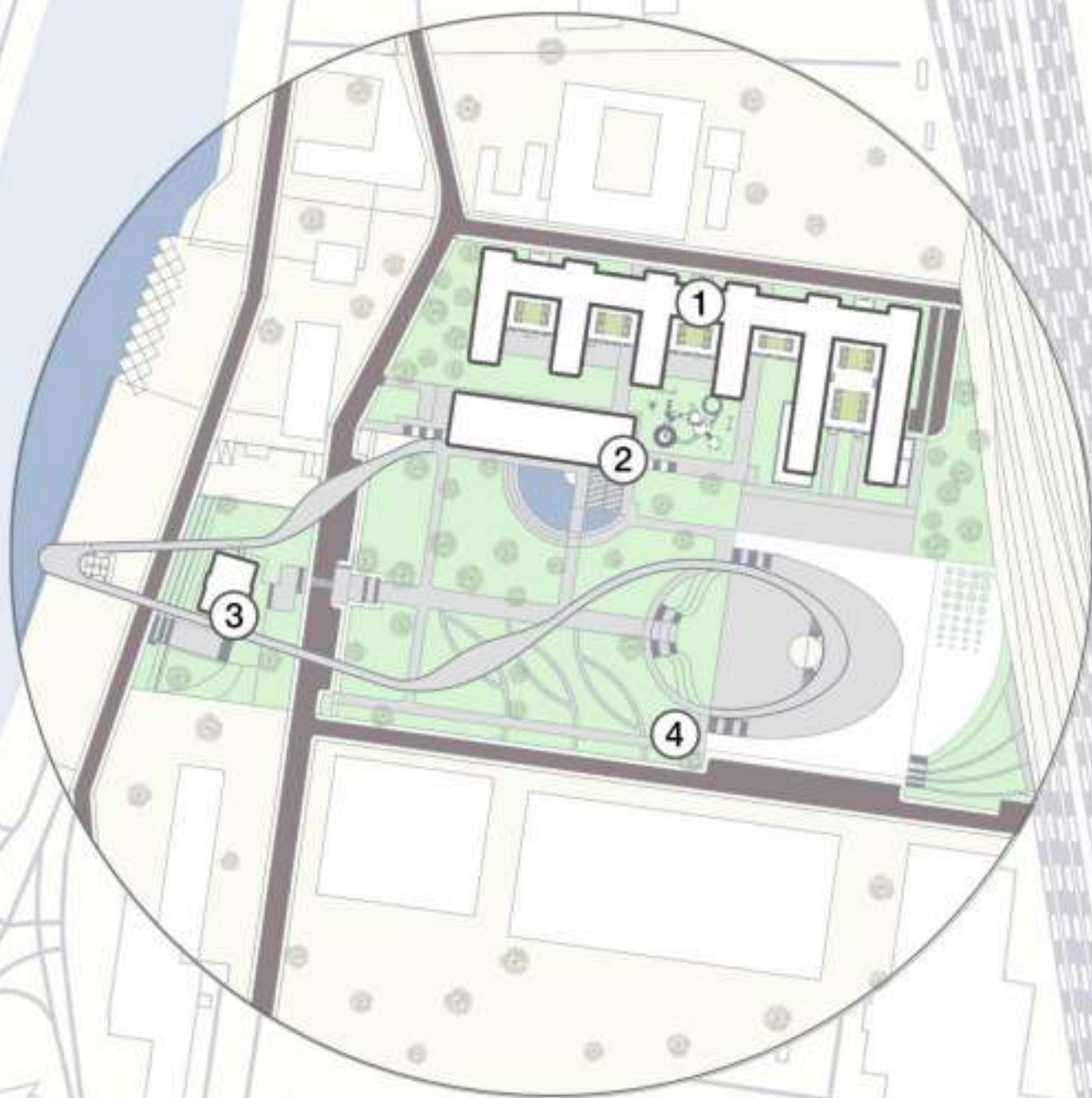


Basilique Cathédrale de Saint-Denis



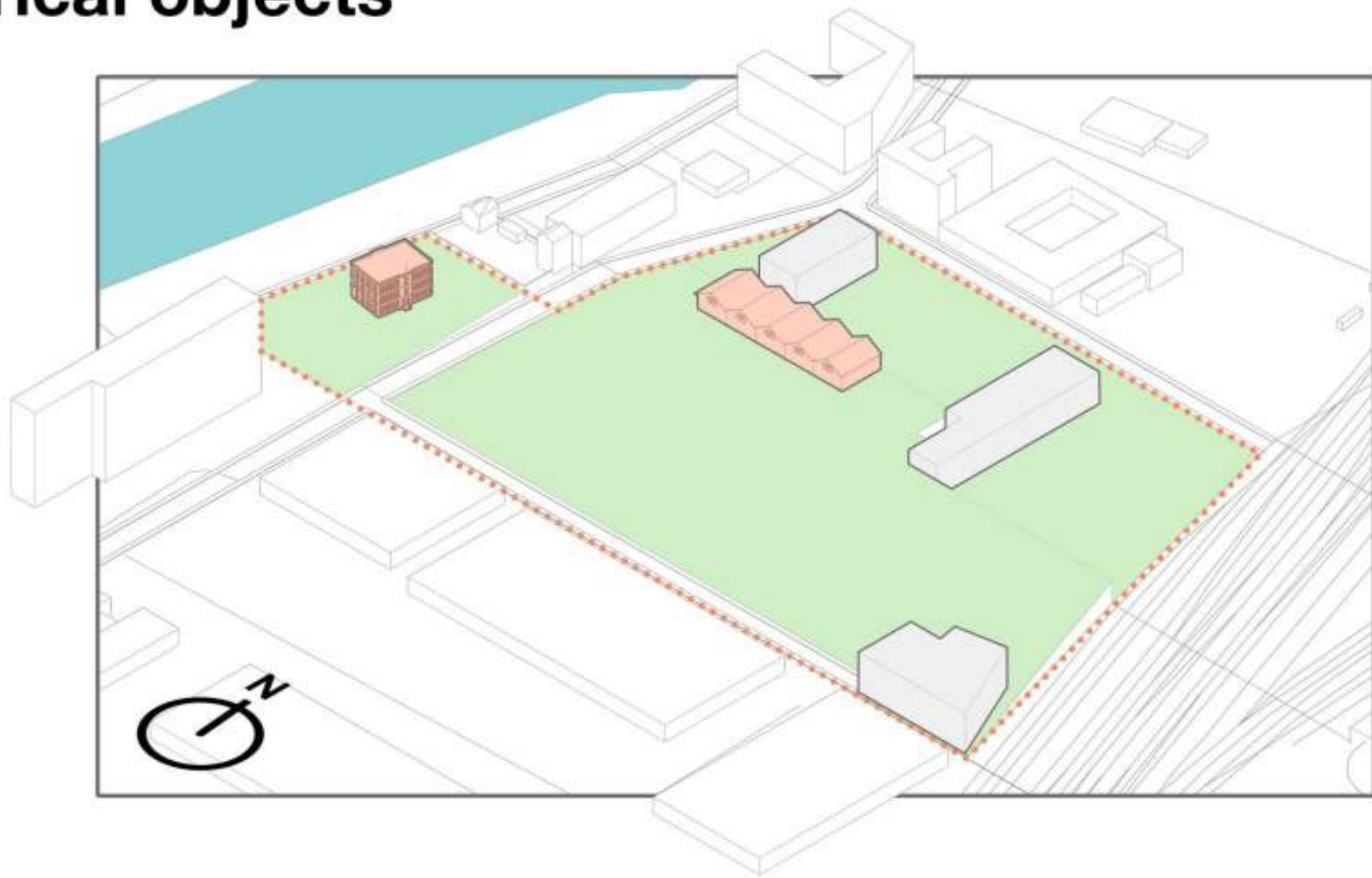
Square Pierre de Geyter

Masterplan

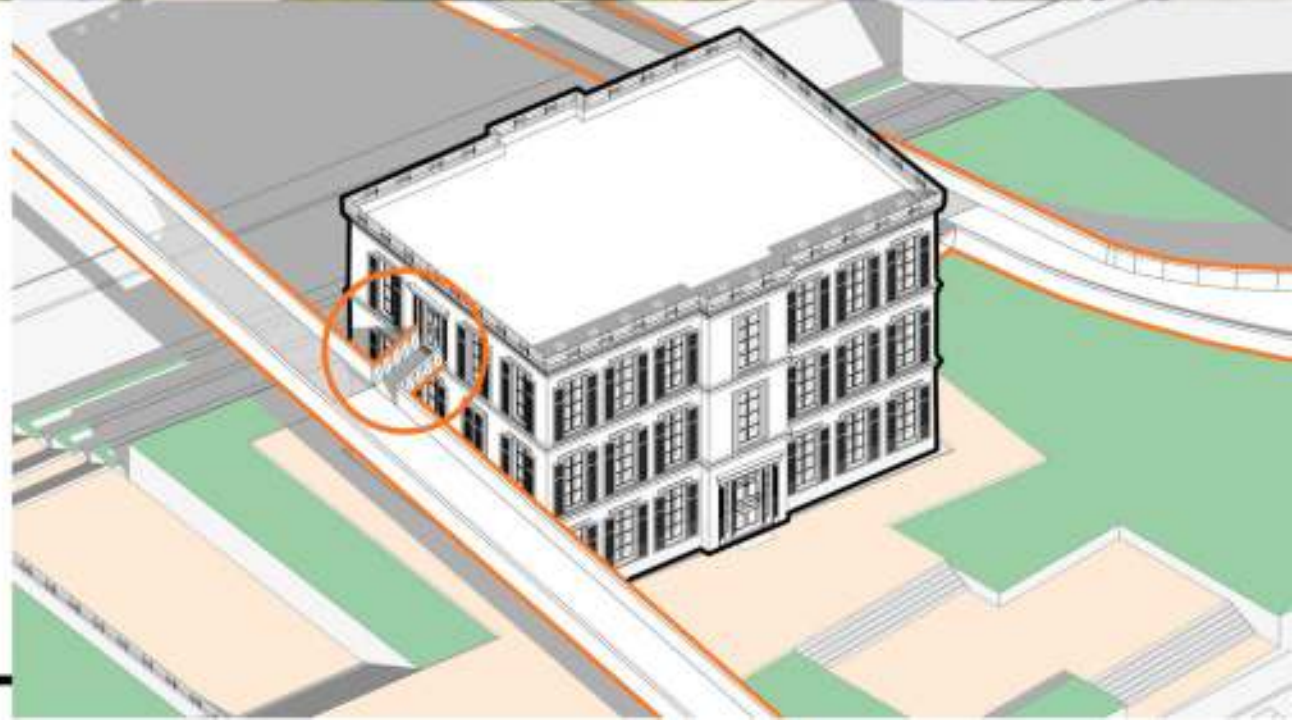


- 1 Housing and education
- 2 Warehouses
- 3 Maison Coignet
- 4 Urban park

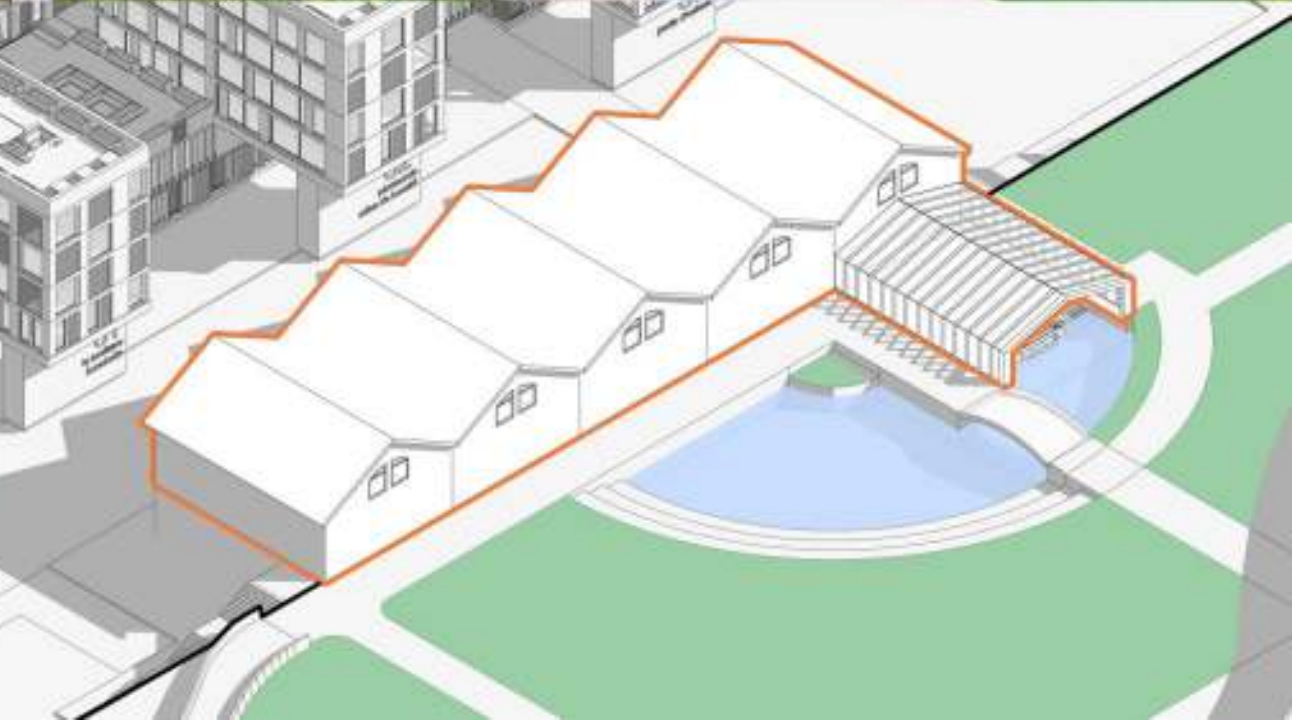
Historical objects



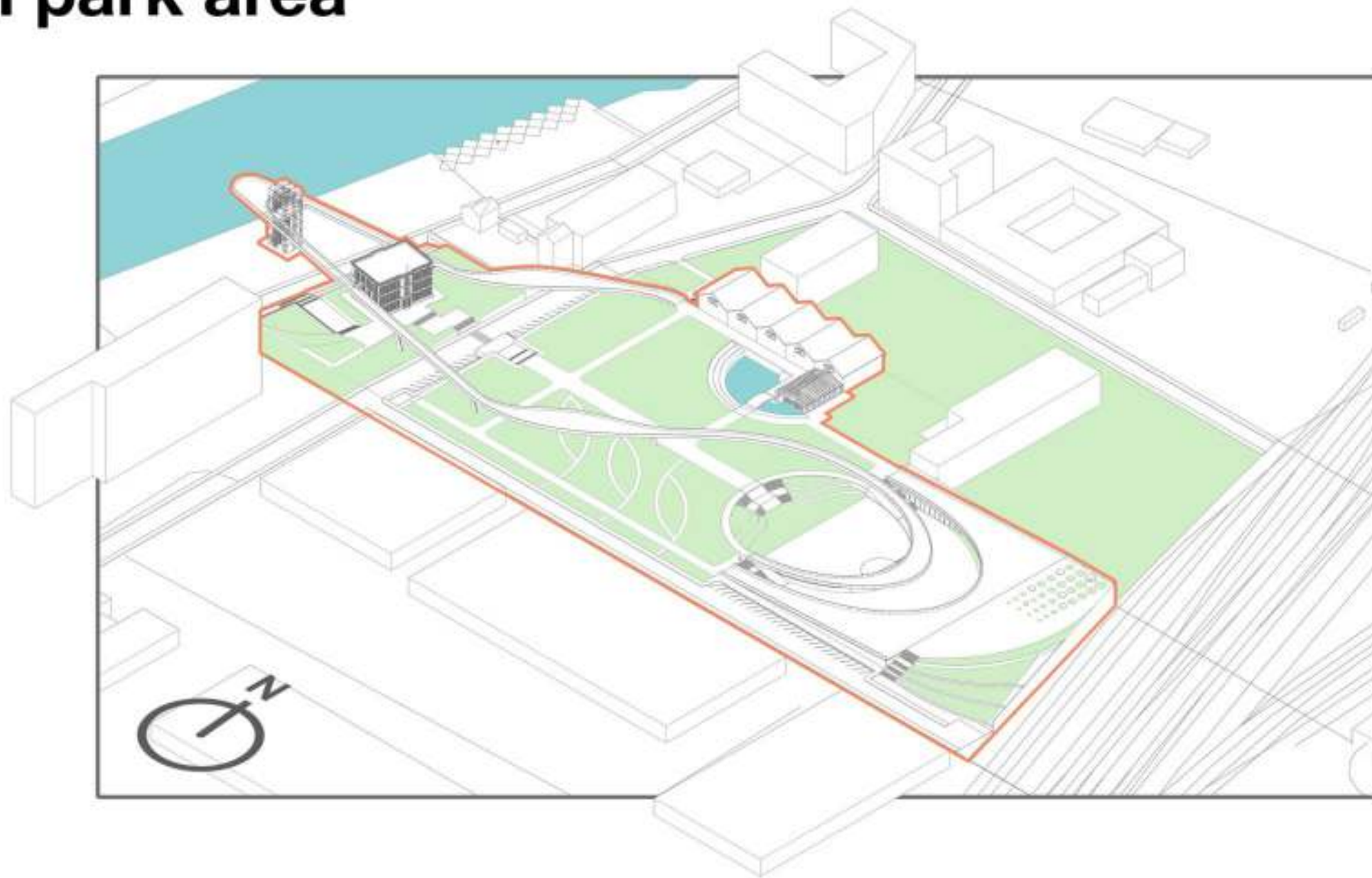
Maison Coignet



Warehouses



Urban park area

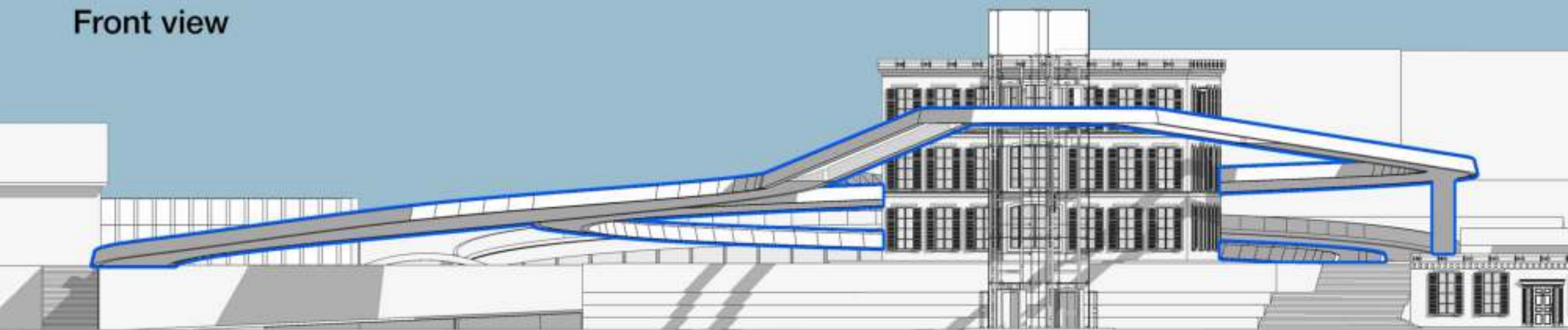


Bridge

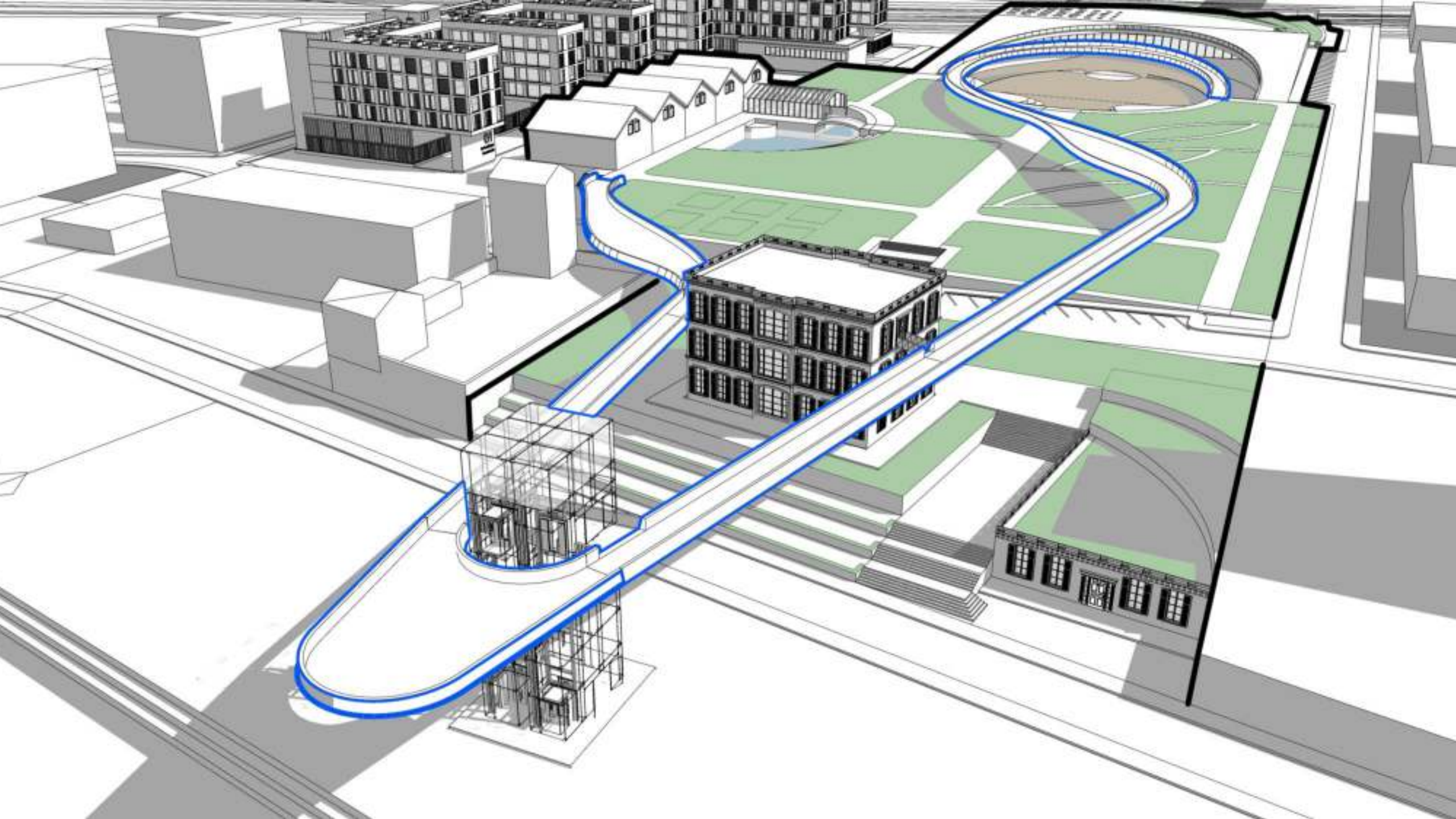
Side view



Front view



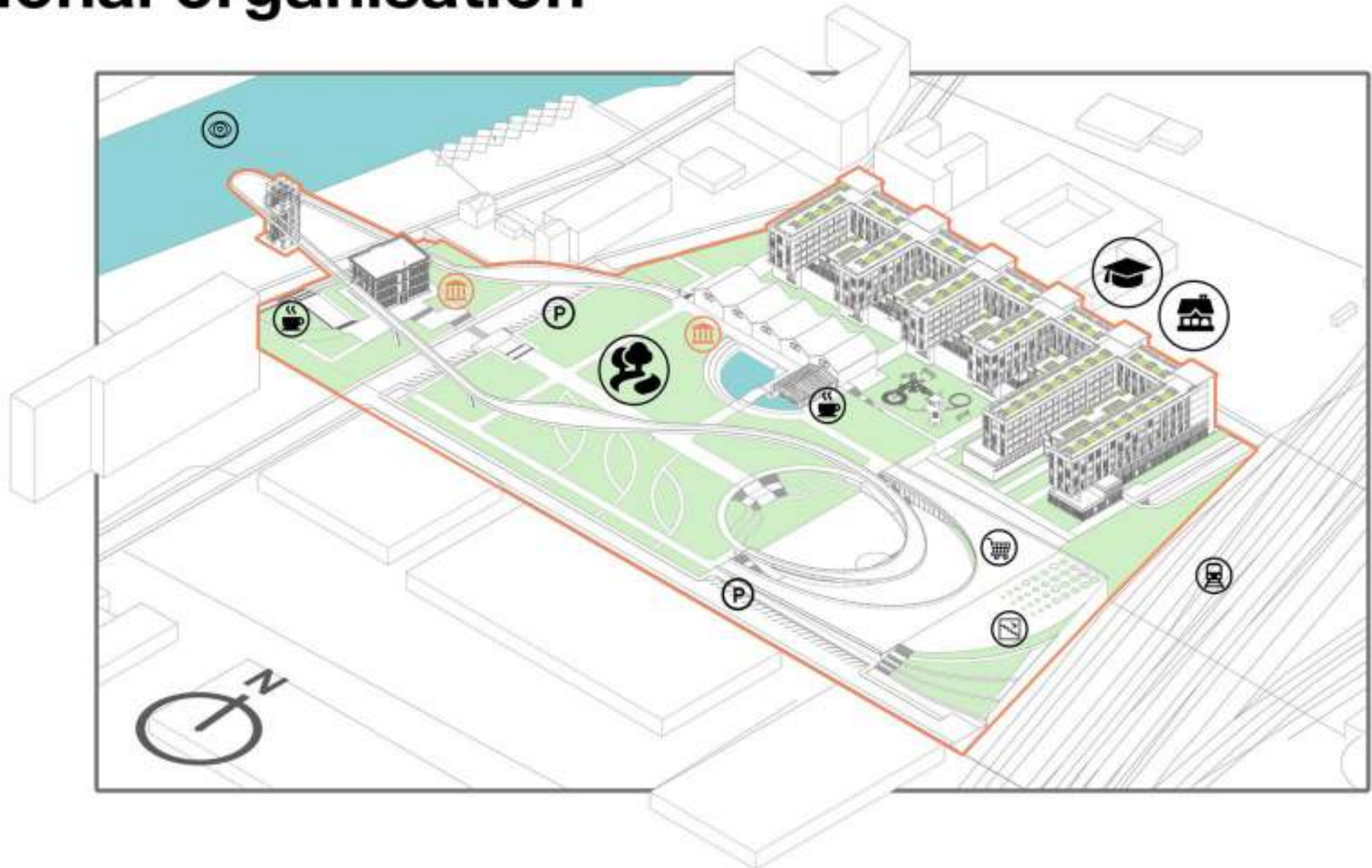




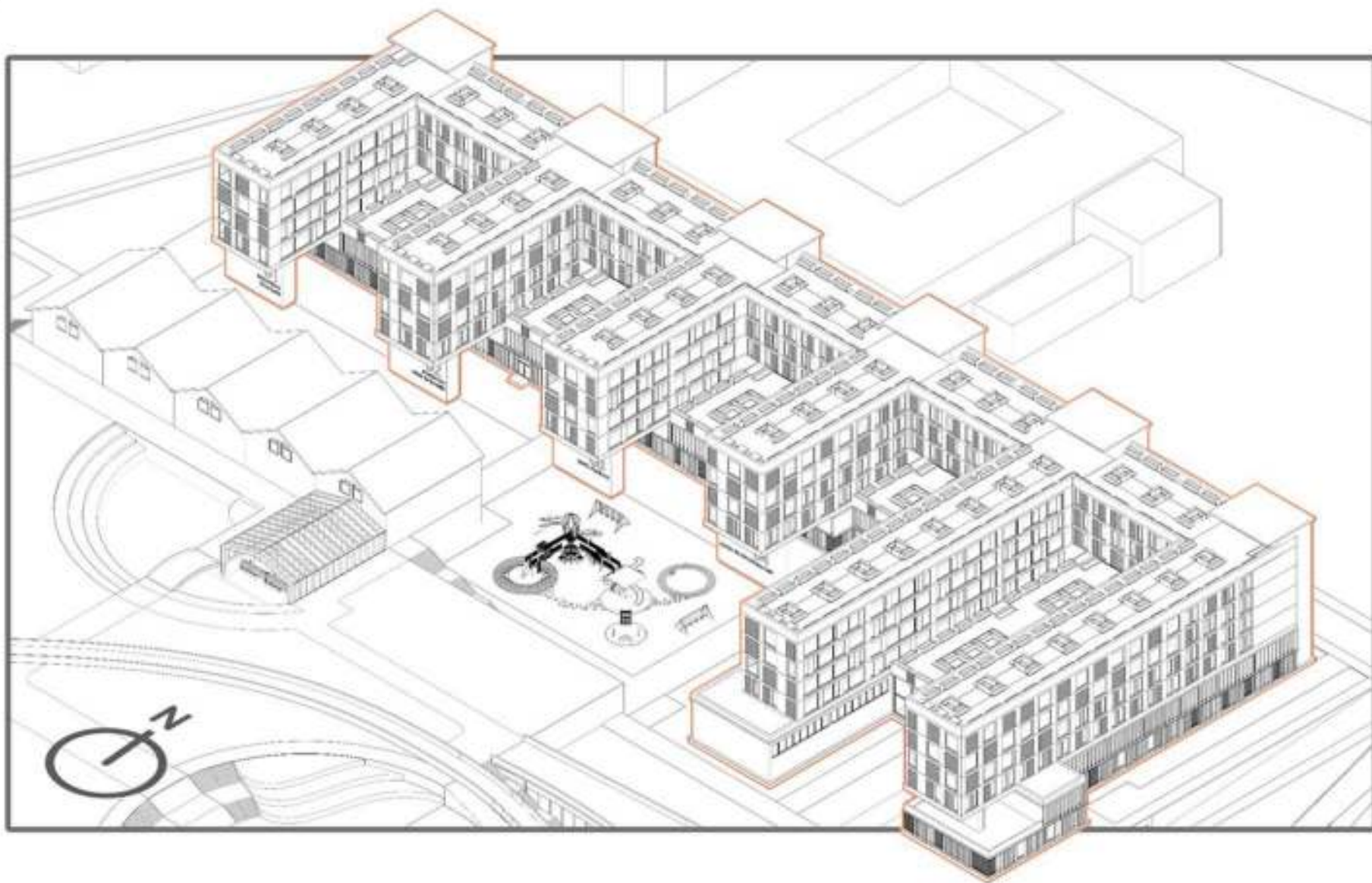
Observation point



Functional organisation



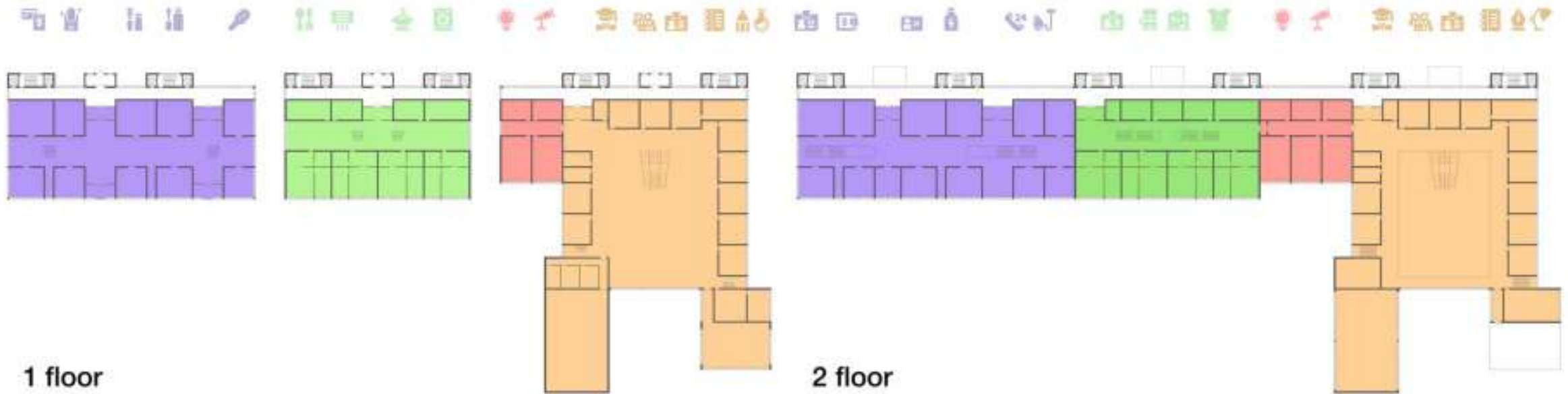
Housing and education





Residential

The floor plans



- Primary school
- Kindergarden
- Activity center
- Service and commercial part

The floor plans

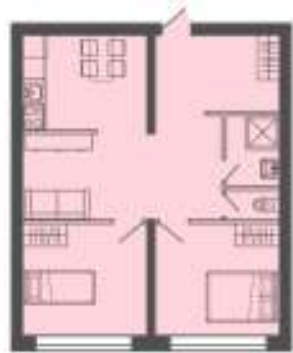


1 person 26 m²



2 people 37 m²

2 people 40 m²

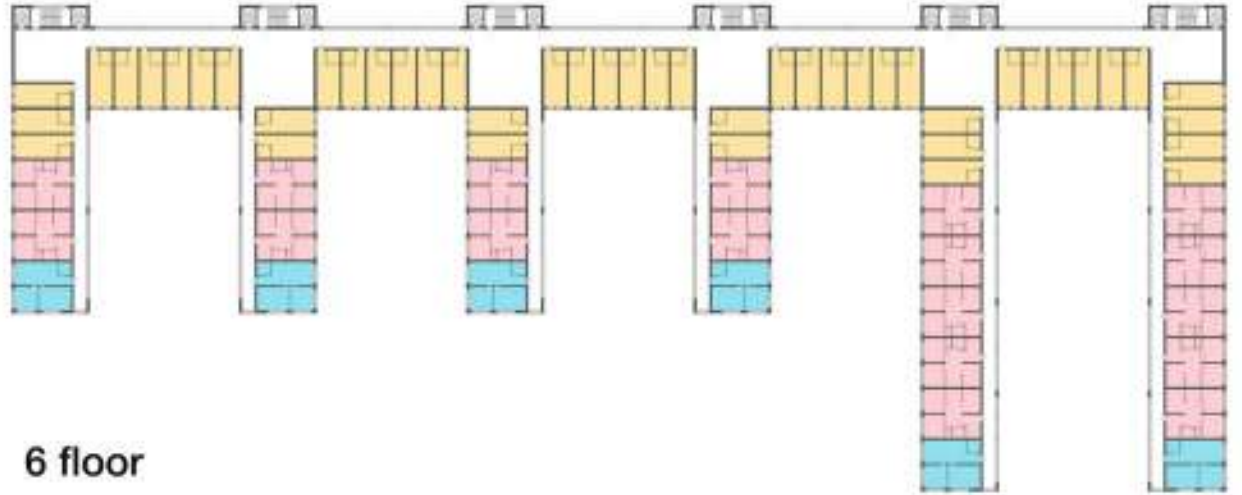


2 people 55 m²

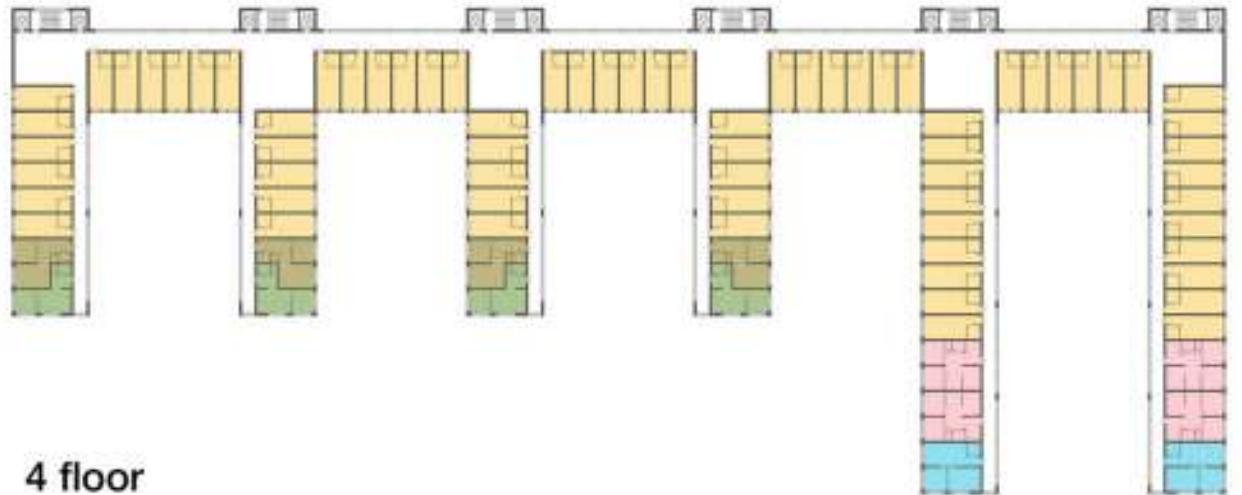


3 people 55 m²

Every floor plan is different variability is possible



6 floor



4 floor

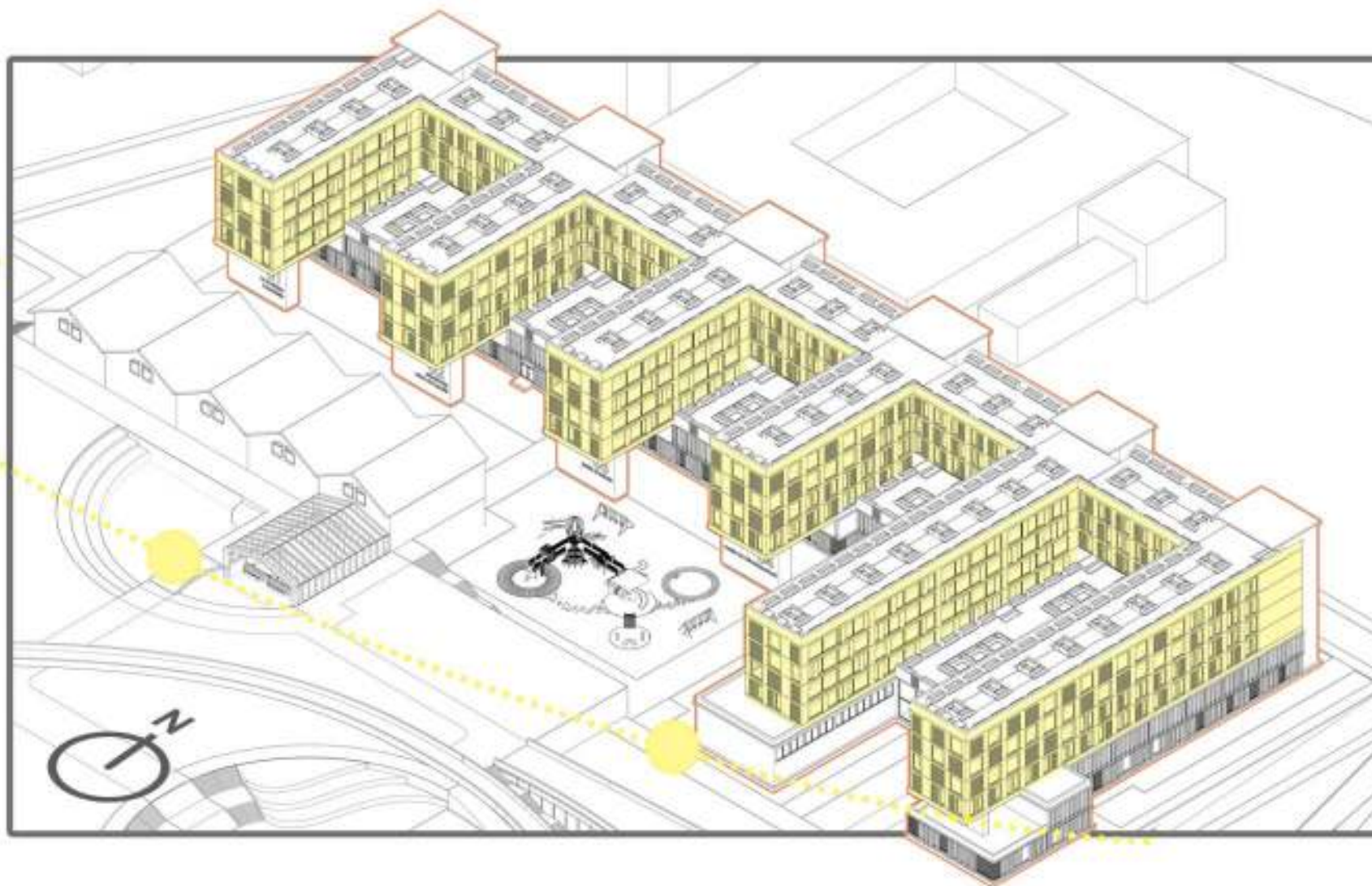


Residential

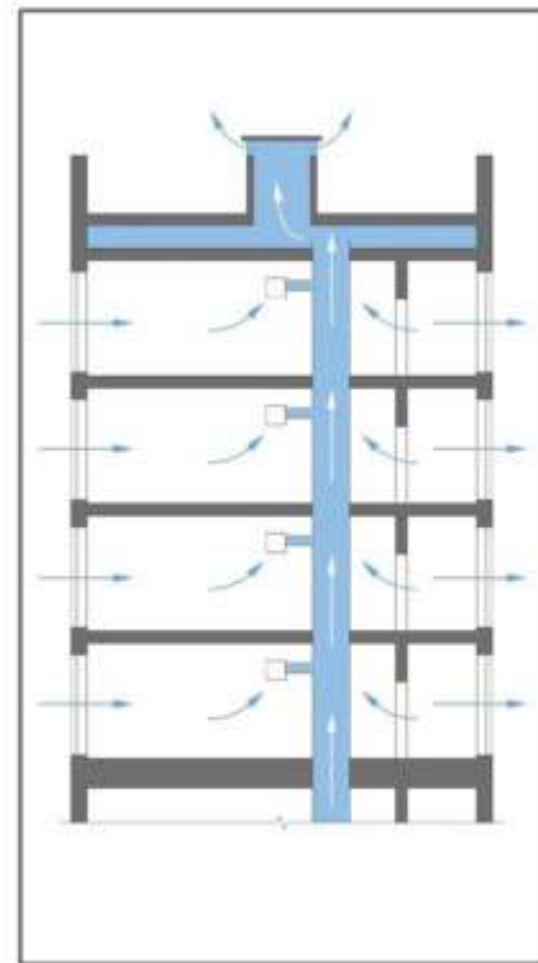
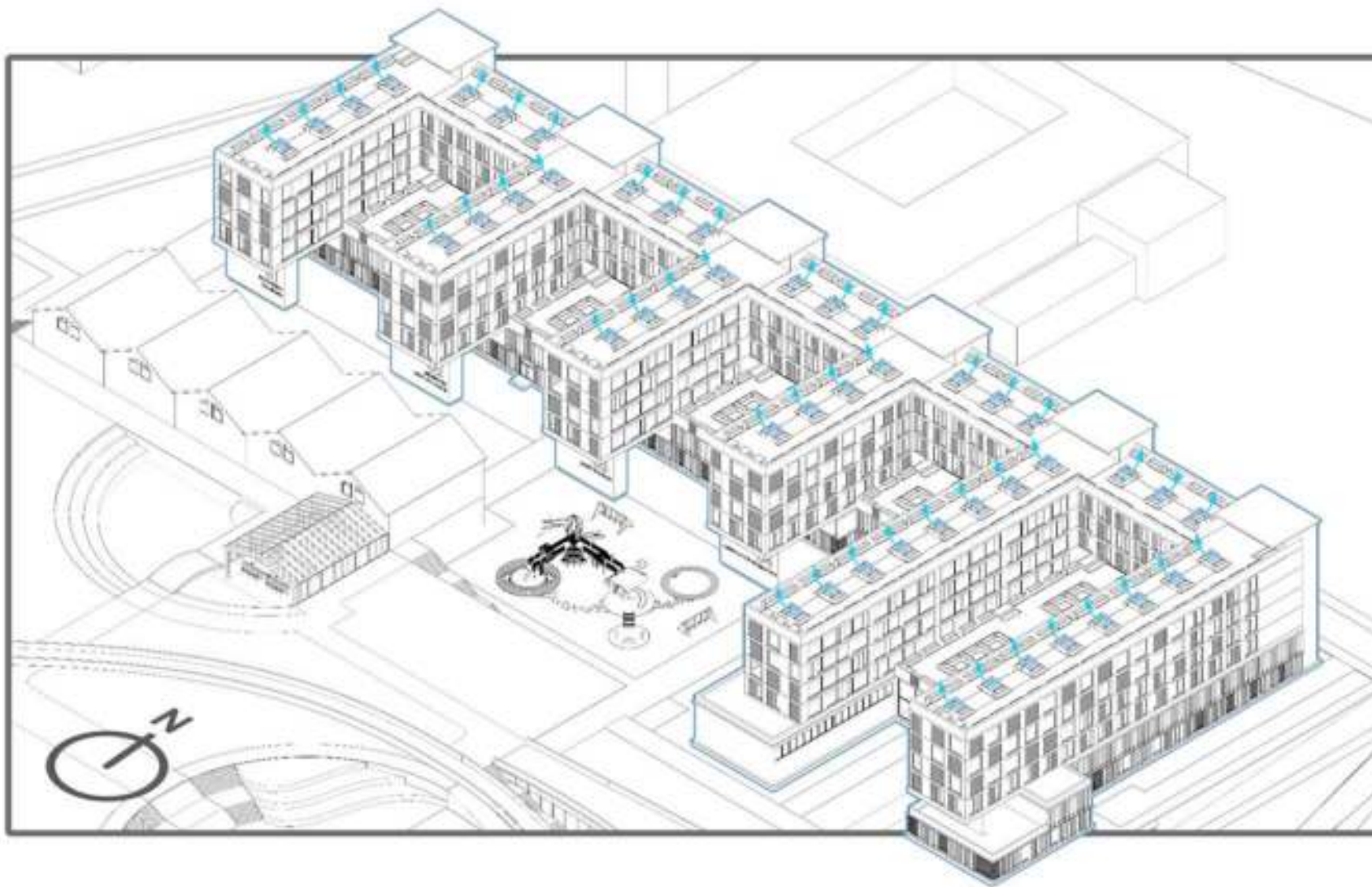


Residential

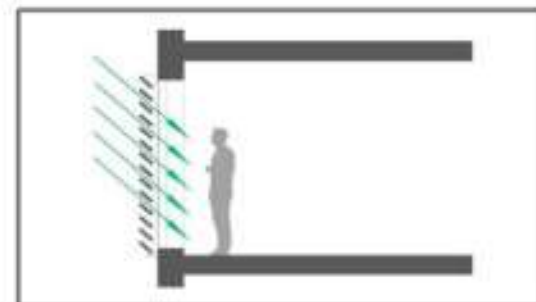
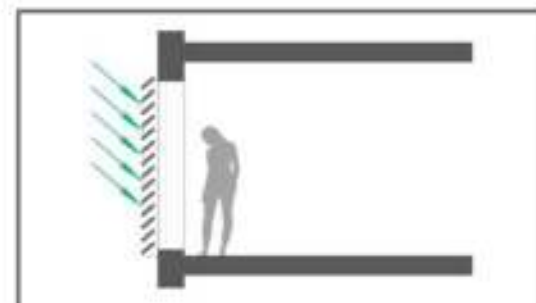
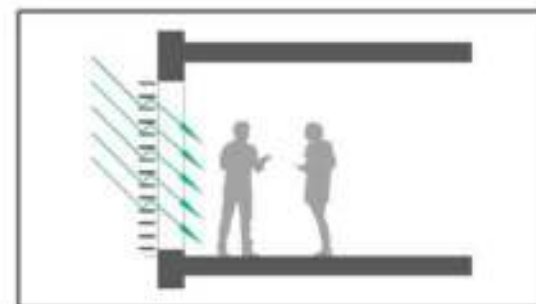
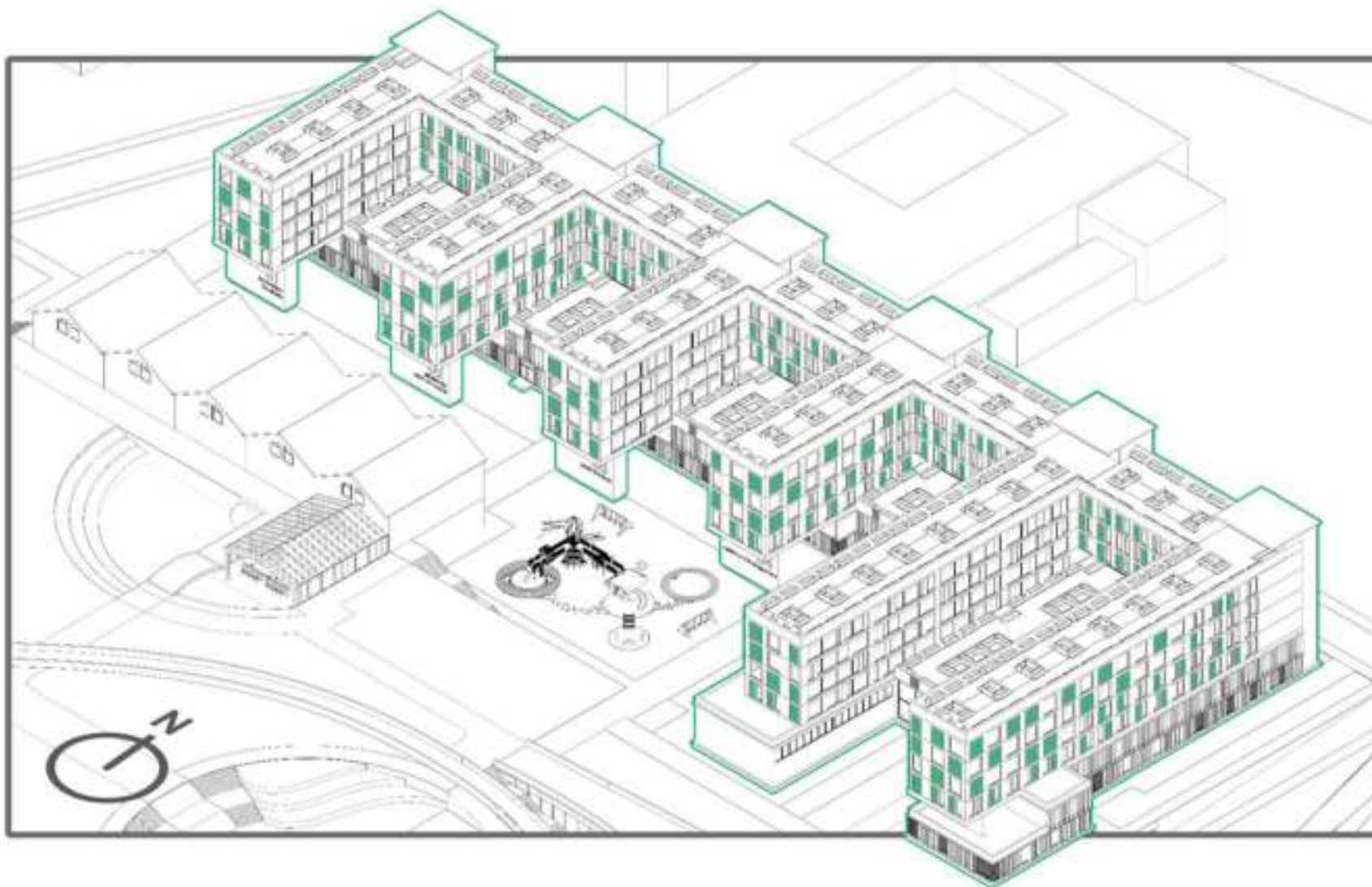
Thermal comfort



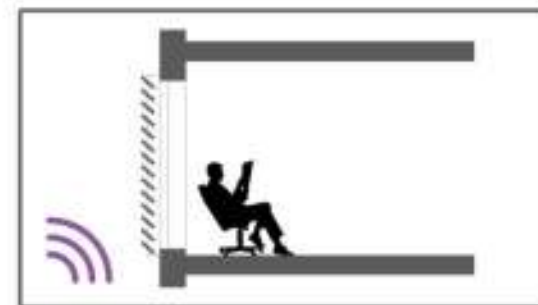
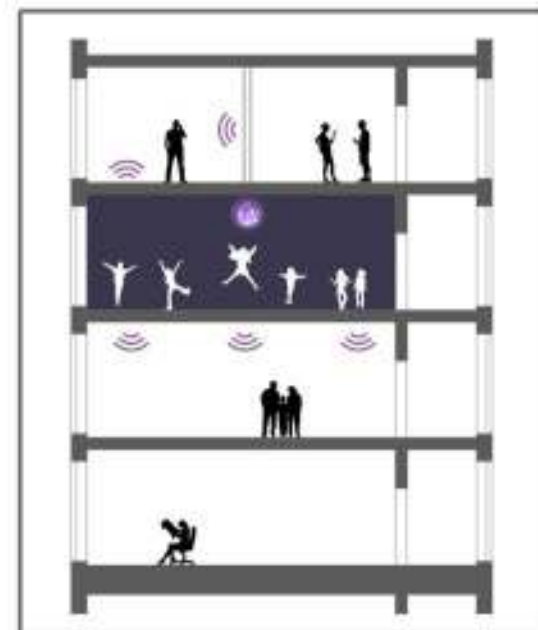
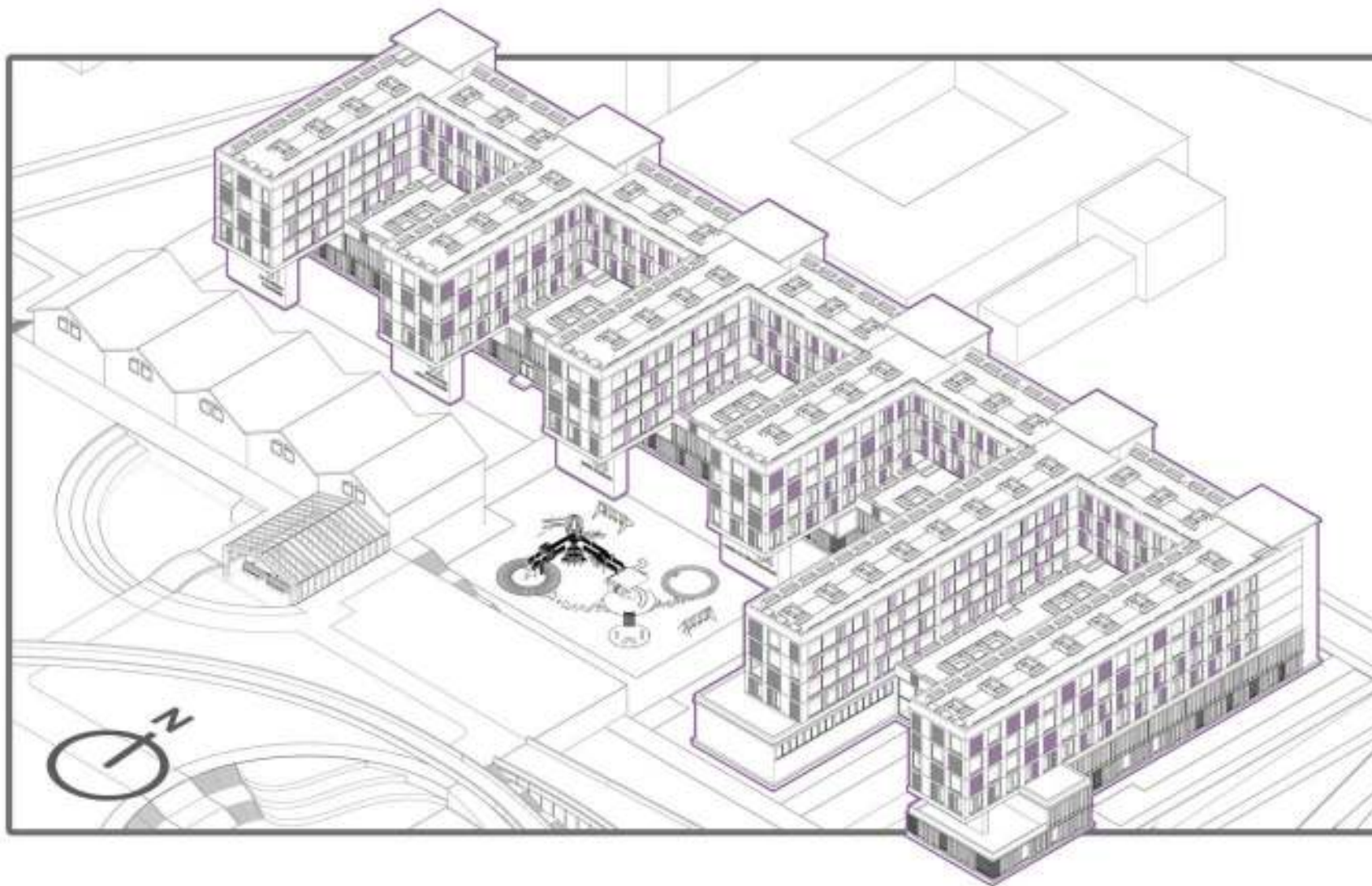
Indoor air quality



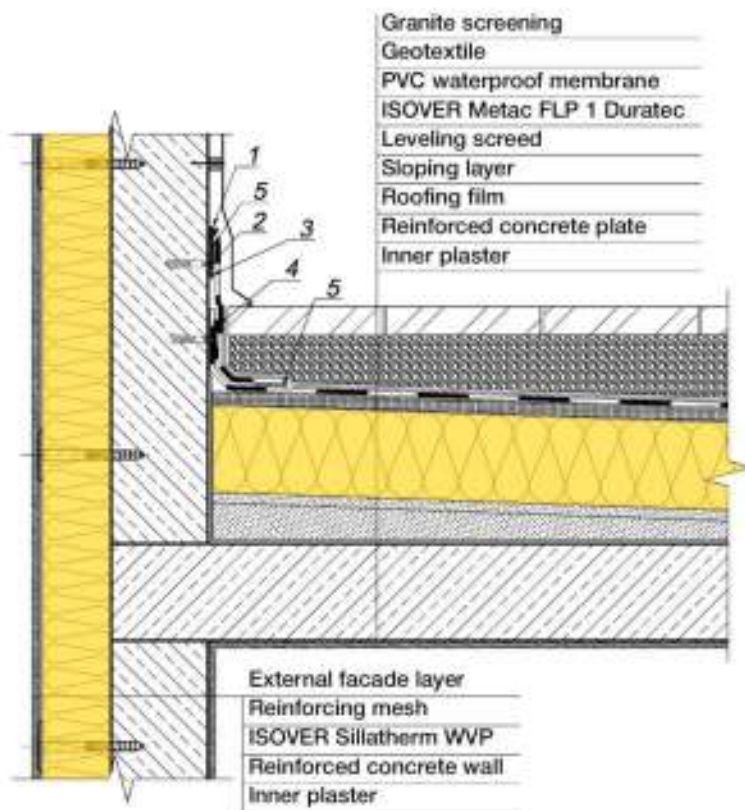
Visual comfort



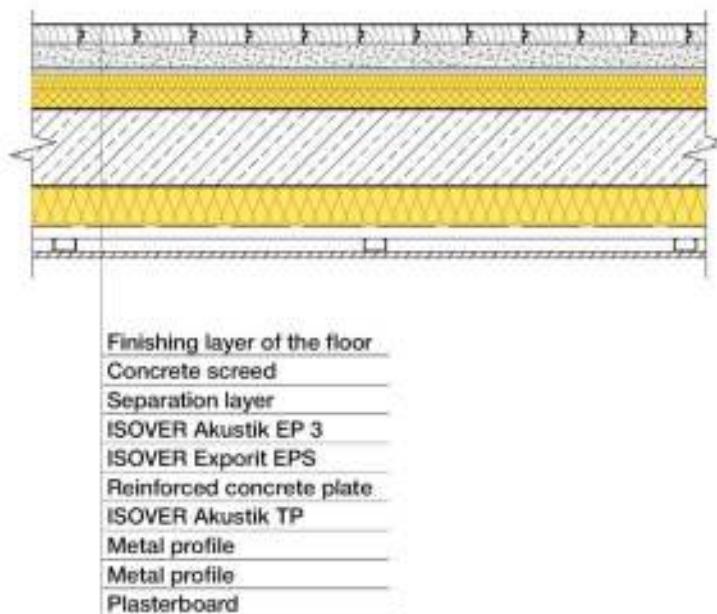
Acoustic comfort



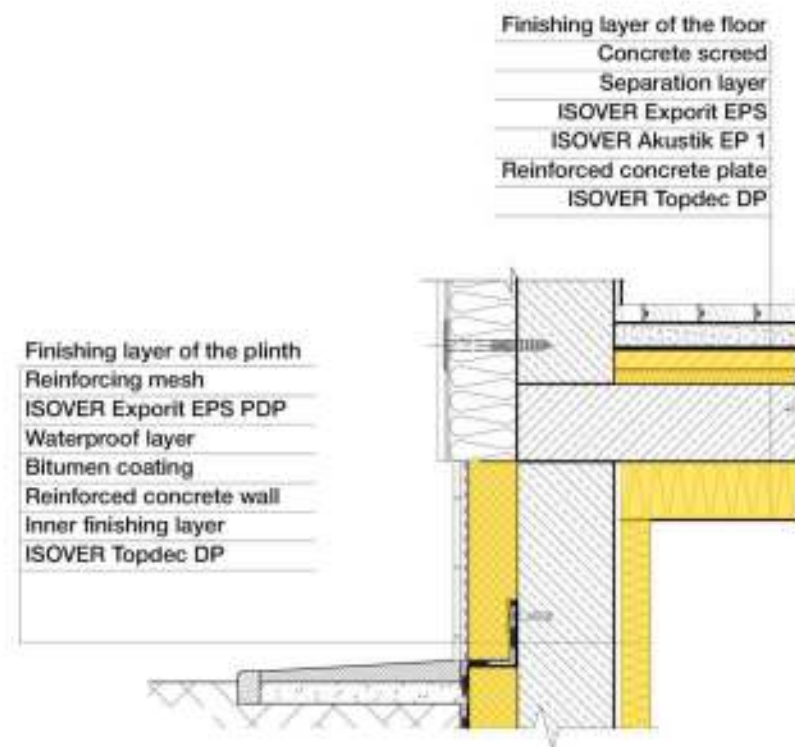
Details



Flat roof detail



Ceiling detail



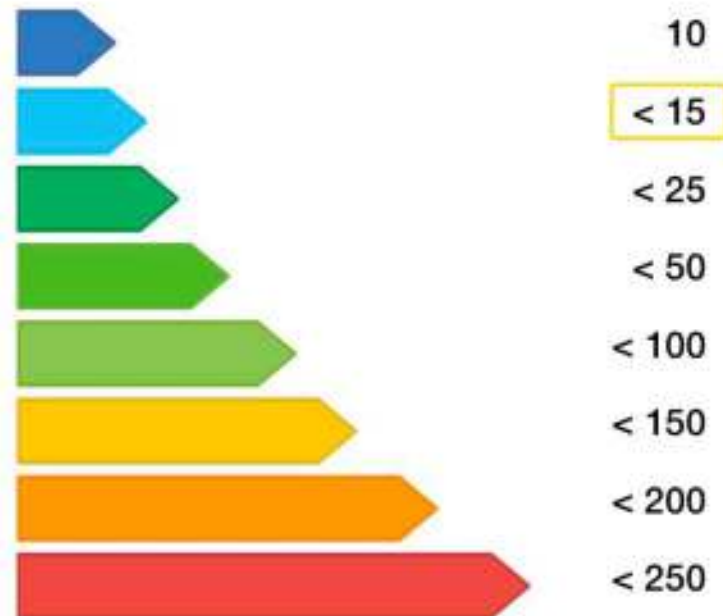
External wall detail

Calculations

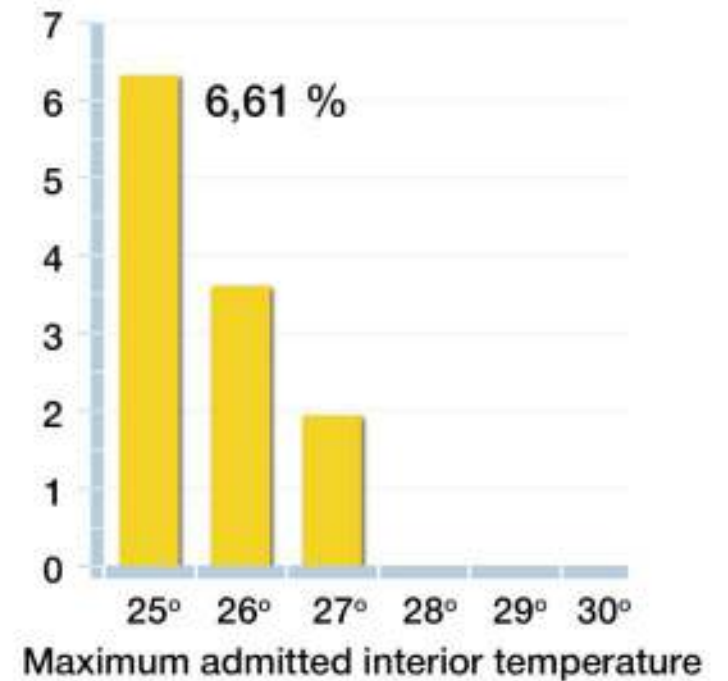
Specific Heat Demand

Transmission heat losses	24105.36 kWh/a
Ventilation heat losses	3261.53 kWh/a
Total heat losses	27366.89 kWh/a
Internal heat gains	8092.68 kWh/a
Solar heat gains	10297.90 kWh/a
Total heat gains	17480.09 kWh/a
Annual heat demand	9886.80 kWh/a
Specific heat demand	12.25 kWh/(m ² a)

Energy Efficiency Class



Frequency of overheating



Specific heat demand 12.25 kWh/(m²a)
Specific annual cooling demand 13.12 kWh/(m²a)

A man in a light blue shirt and white pants is lifting a woman in a black dress into the air. They are standing on a wide, light-colored paved area. In the background, there is a large, modern building with a curved, white, circular structure that frames the scene. The building has a wooden slat ceiling. The sky is bright and blue with some clouds. The overall atmosphere is romantic and celebratory.

Rakhmet*
for your attention

*thank you

