

Walls that teach

The city, the memory, the youth center

P5 Presentation
Urban Architecture Spolia 2019-2020

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Klostergarten Lehel/ Hild und K

Spolia refers to the leftovers of a building which are re-integrated in a new structure, but also to infrastructural elements, fragments of urban space, or non-material things, such as stories and memories.

Spolia

Urban

Architecture

Materialization

Spolia

Urban

Architecture

Materialization

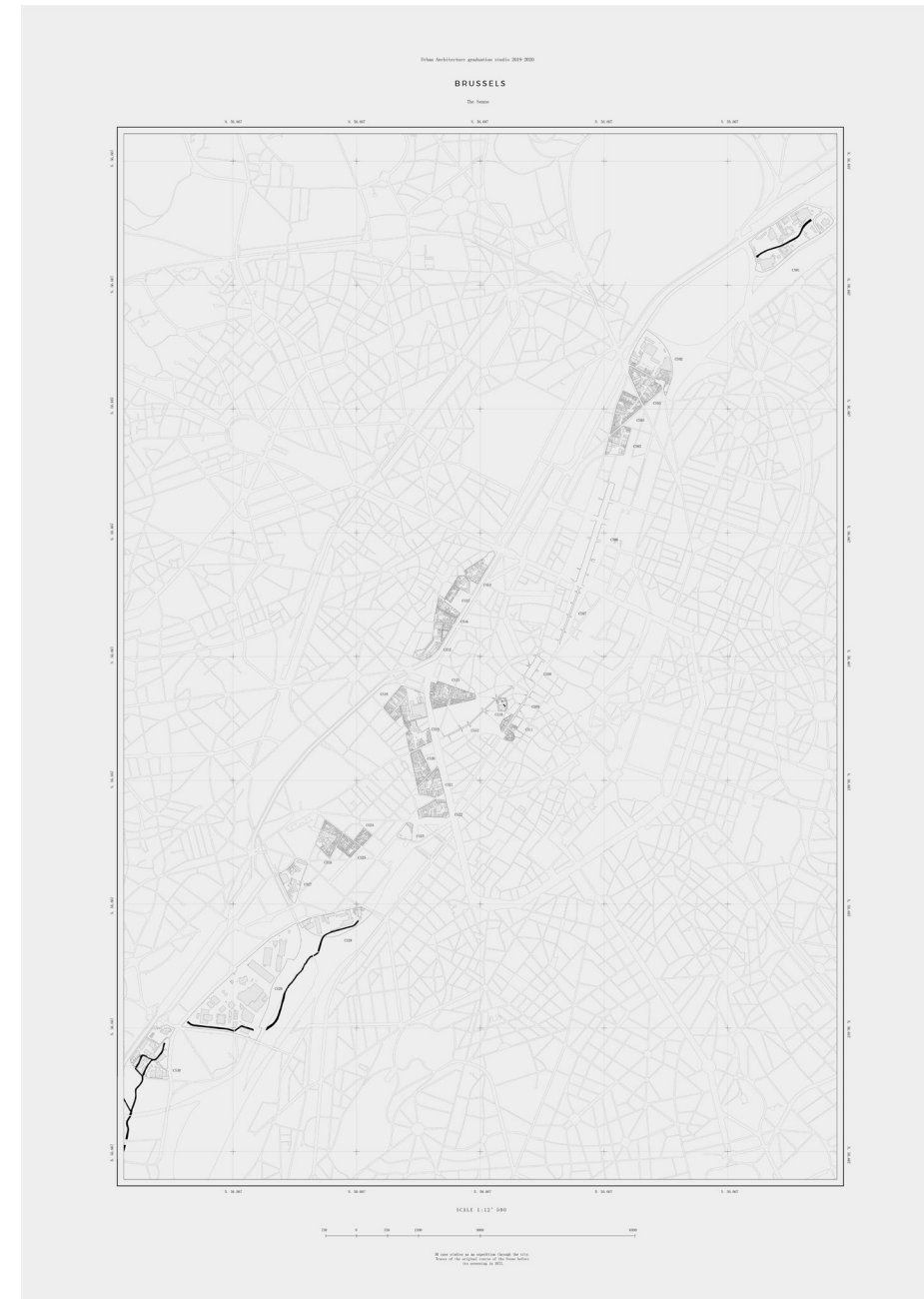
Spolia



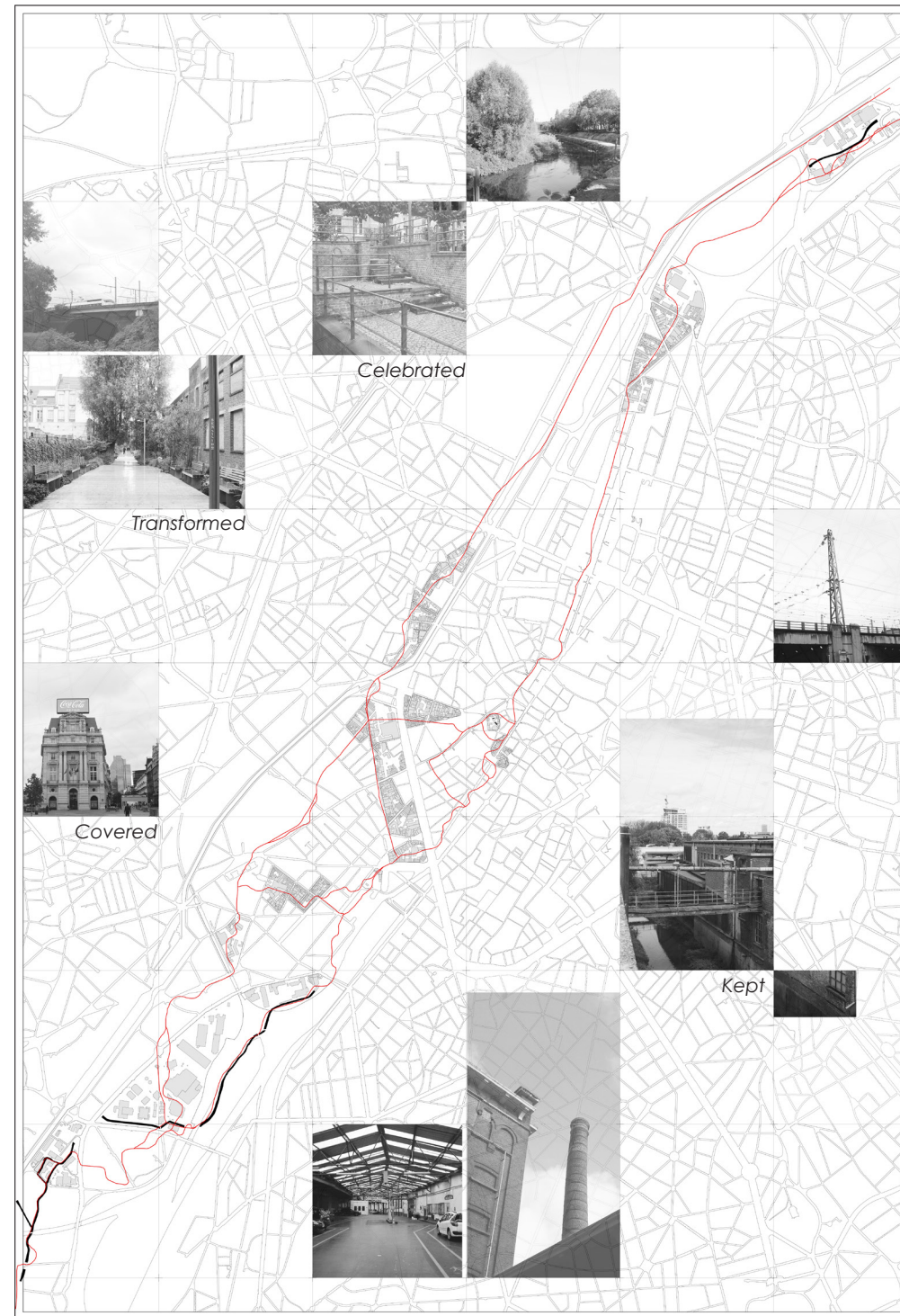
The city



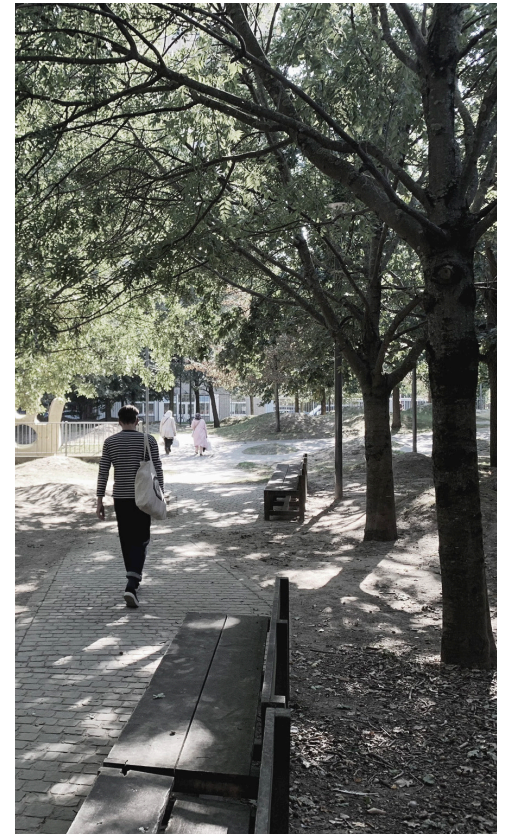
The invisible city



Make invisible visible



Make invisible visible

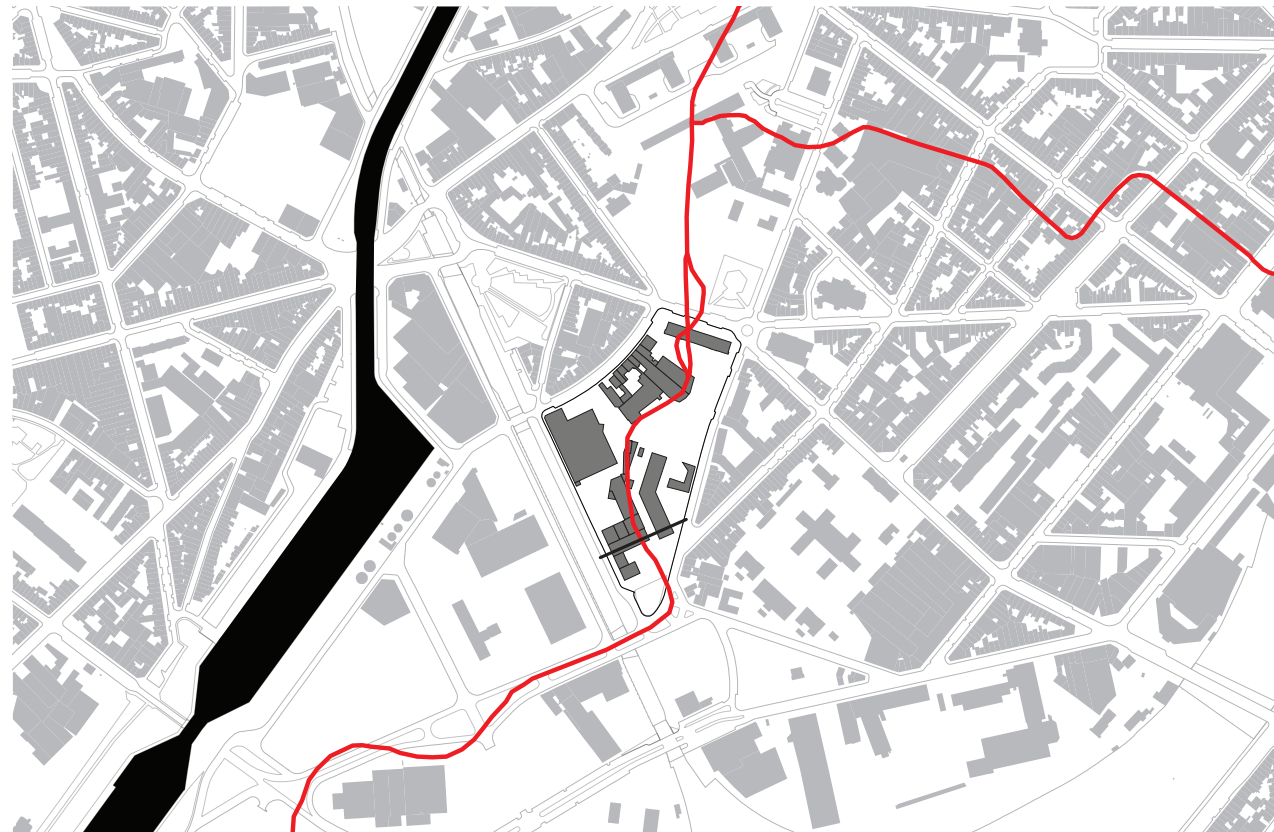


Transformed, celebrated

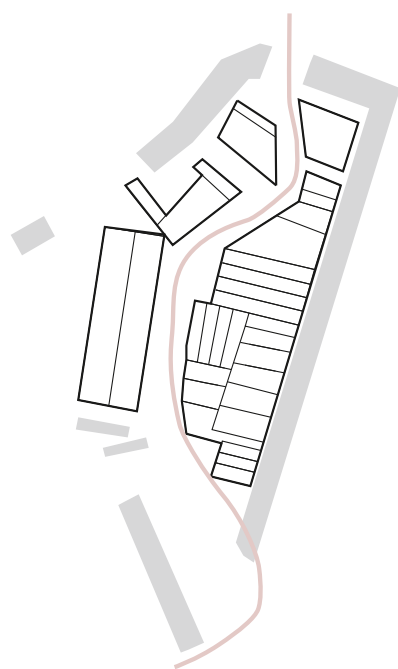
covered



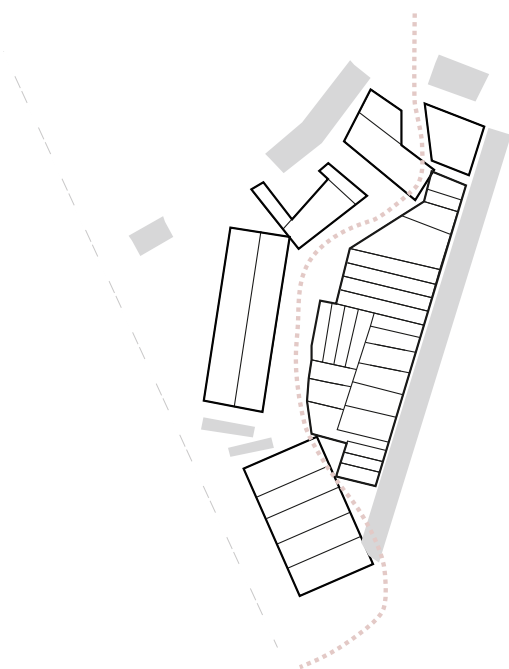
Spolia as a tool to re-read the city of Brussels



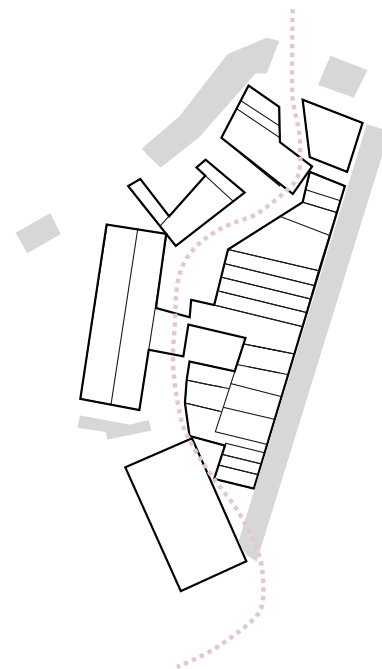
Re-read the neighborhood



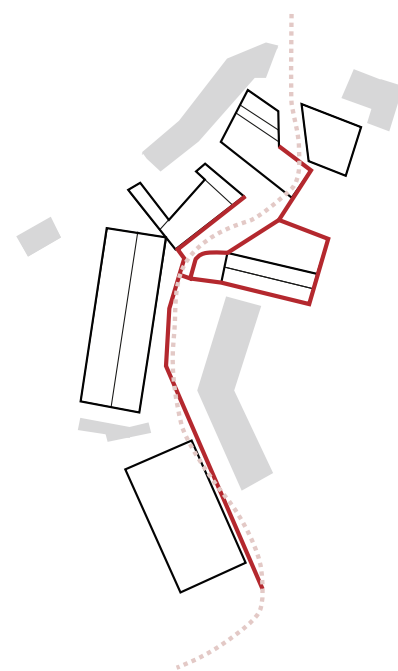
1930



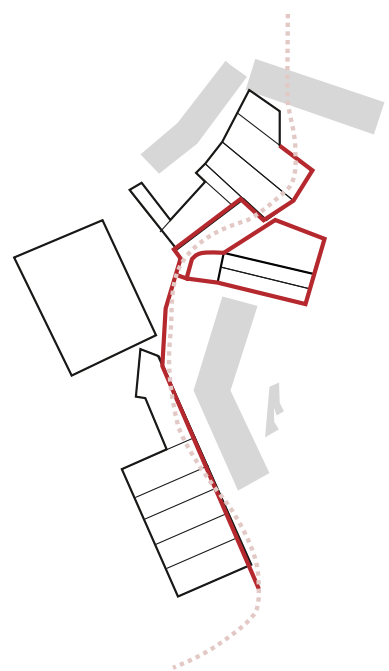
1961



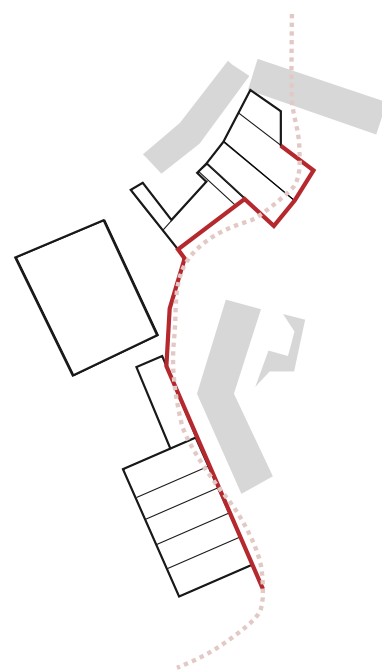
1971



1987

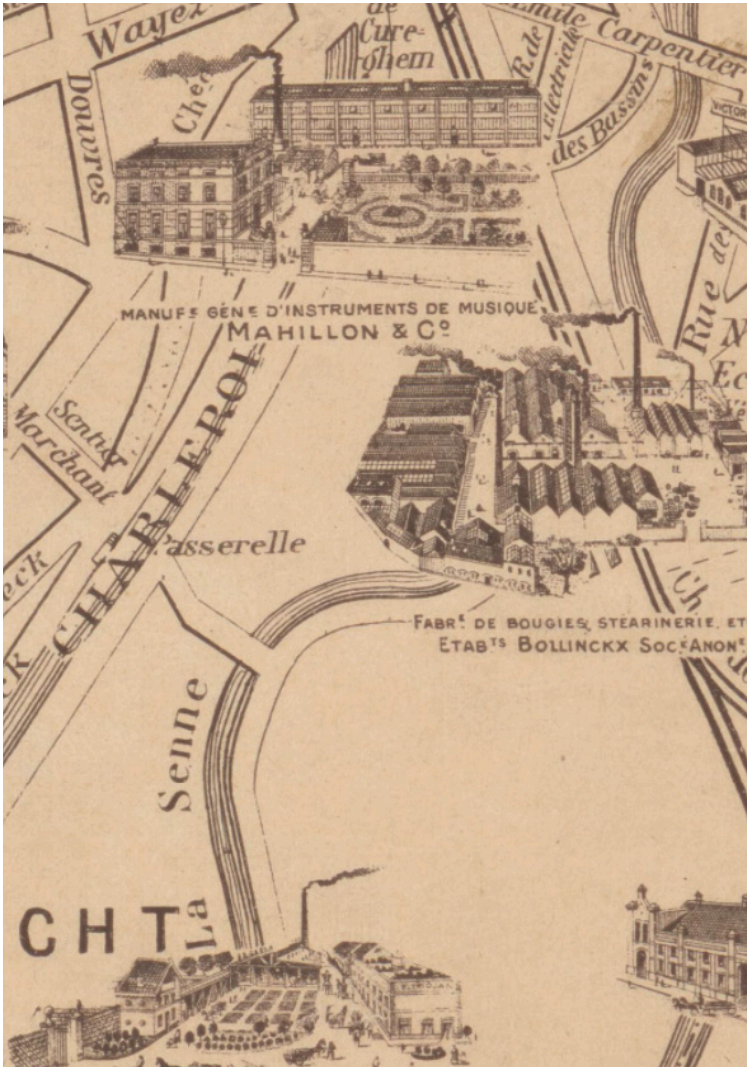


1990



2010

The transformed "line"



Industry map, 1910



1990



2019



Front facades

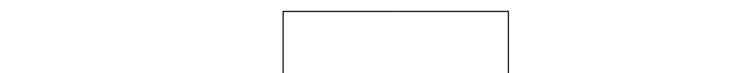
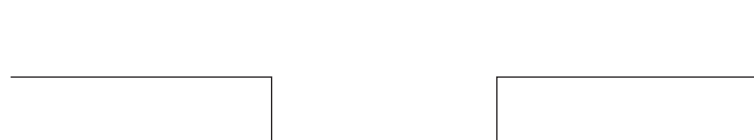
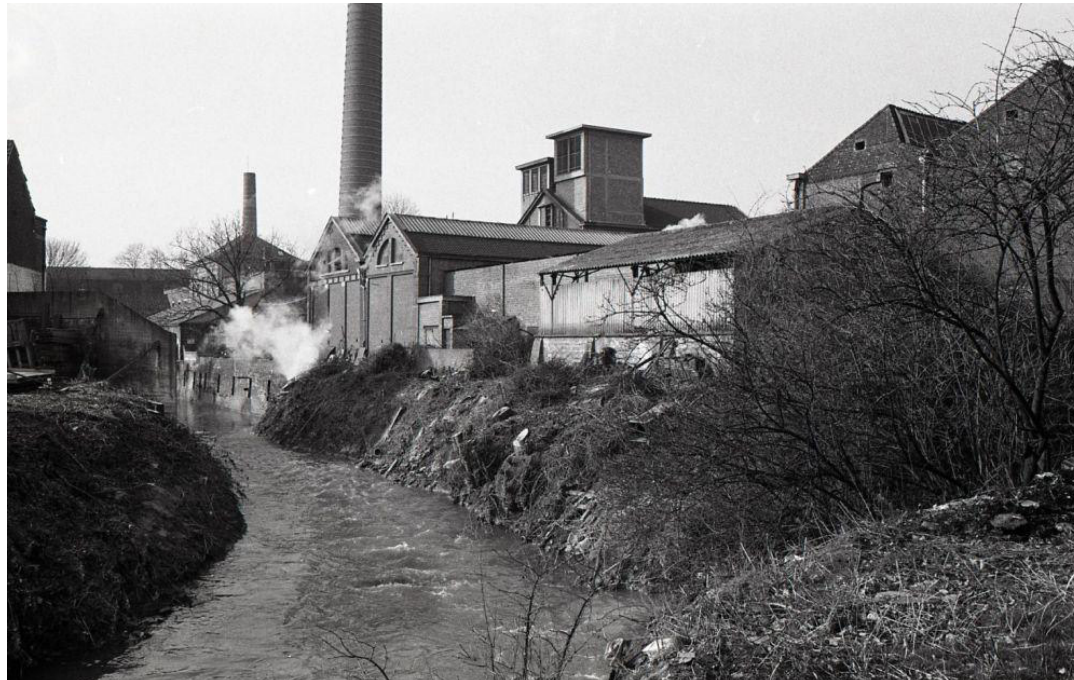


Back facades

The gone lifestyle



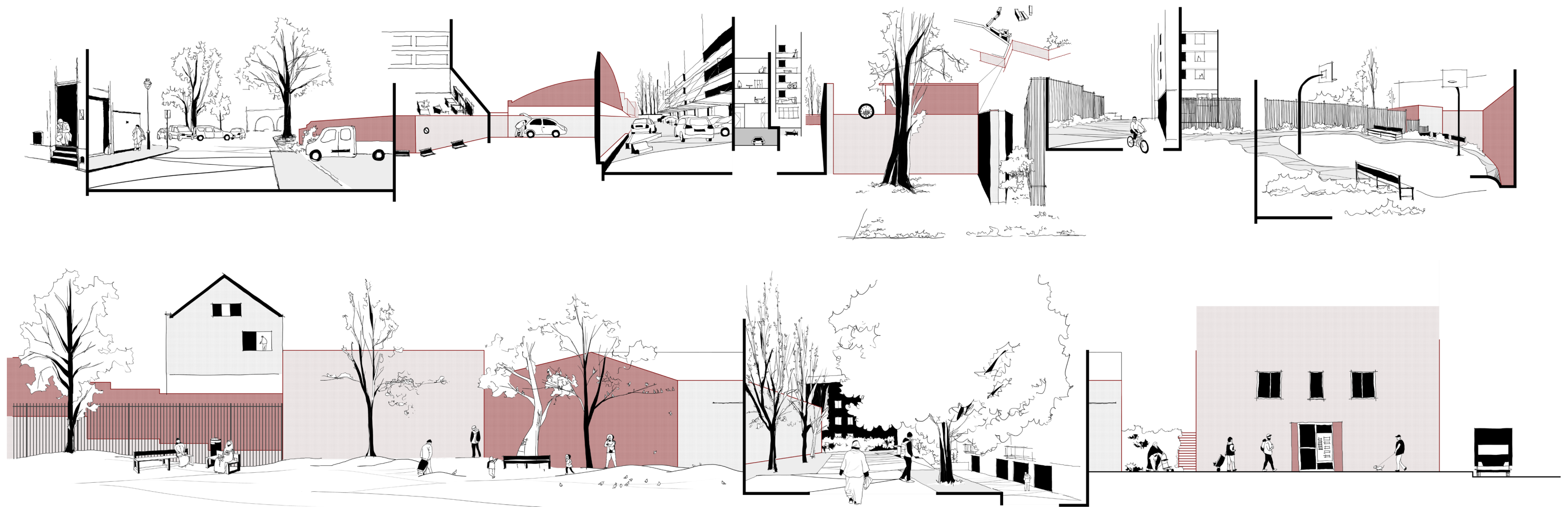
Remnant of the buried river, Character of the site



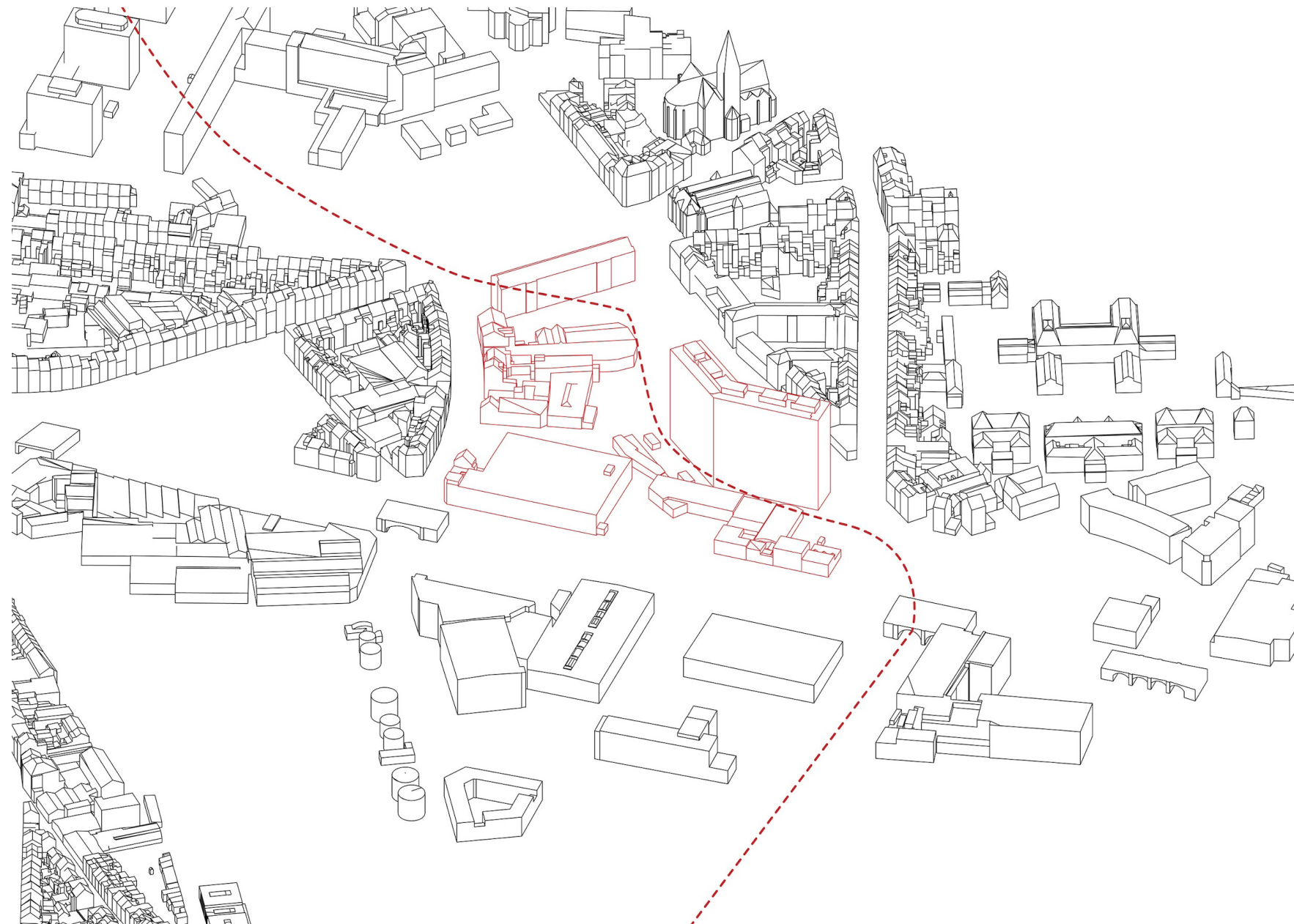
“Solid” ghost of Senne



Invisible story hidden behind the wall



The wall as backdrop acting on the stage of people's life

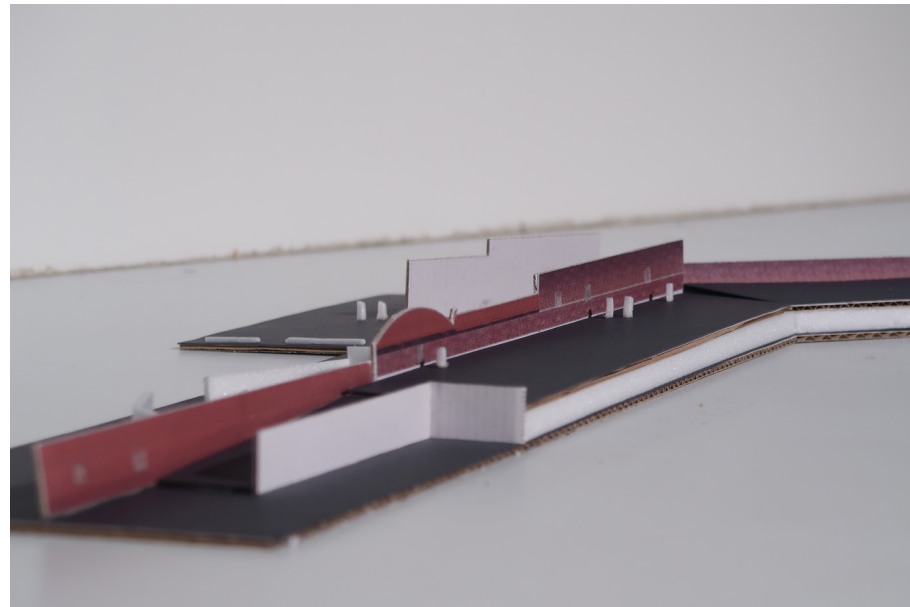
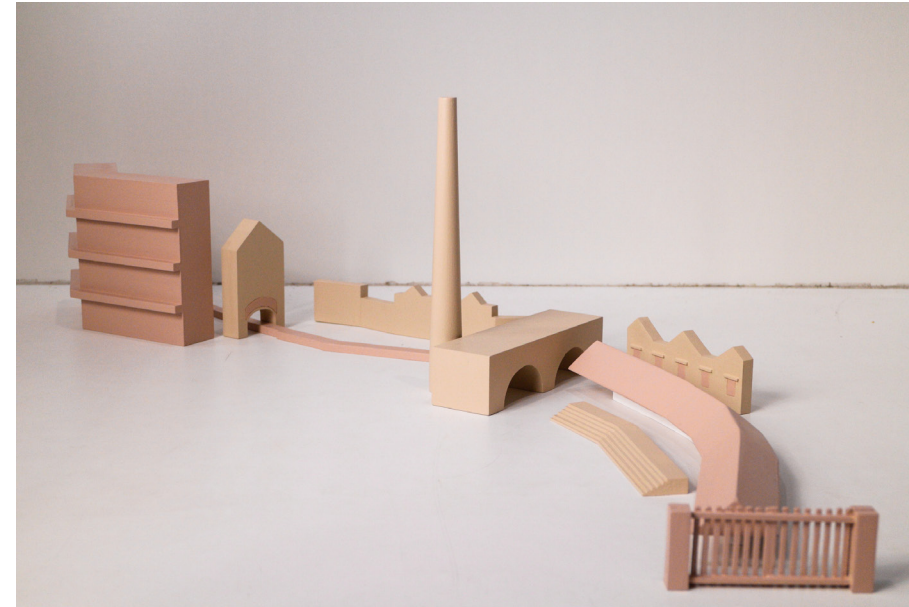
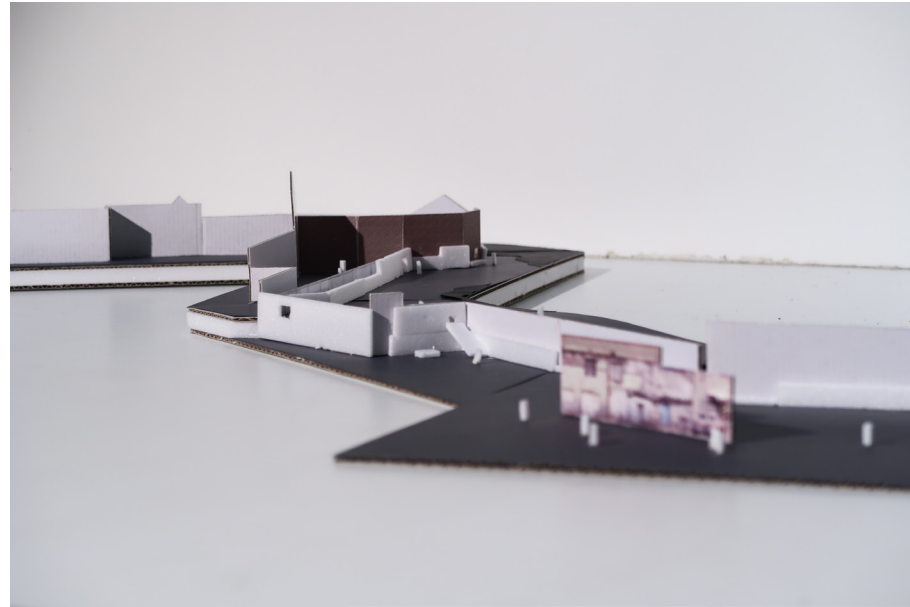


The decay industry

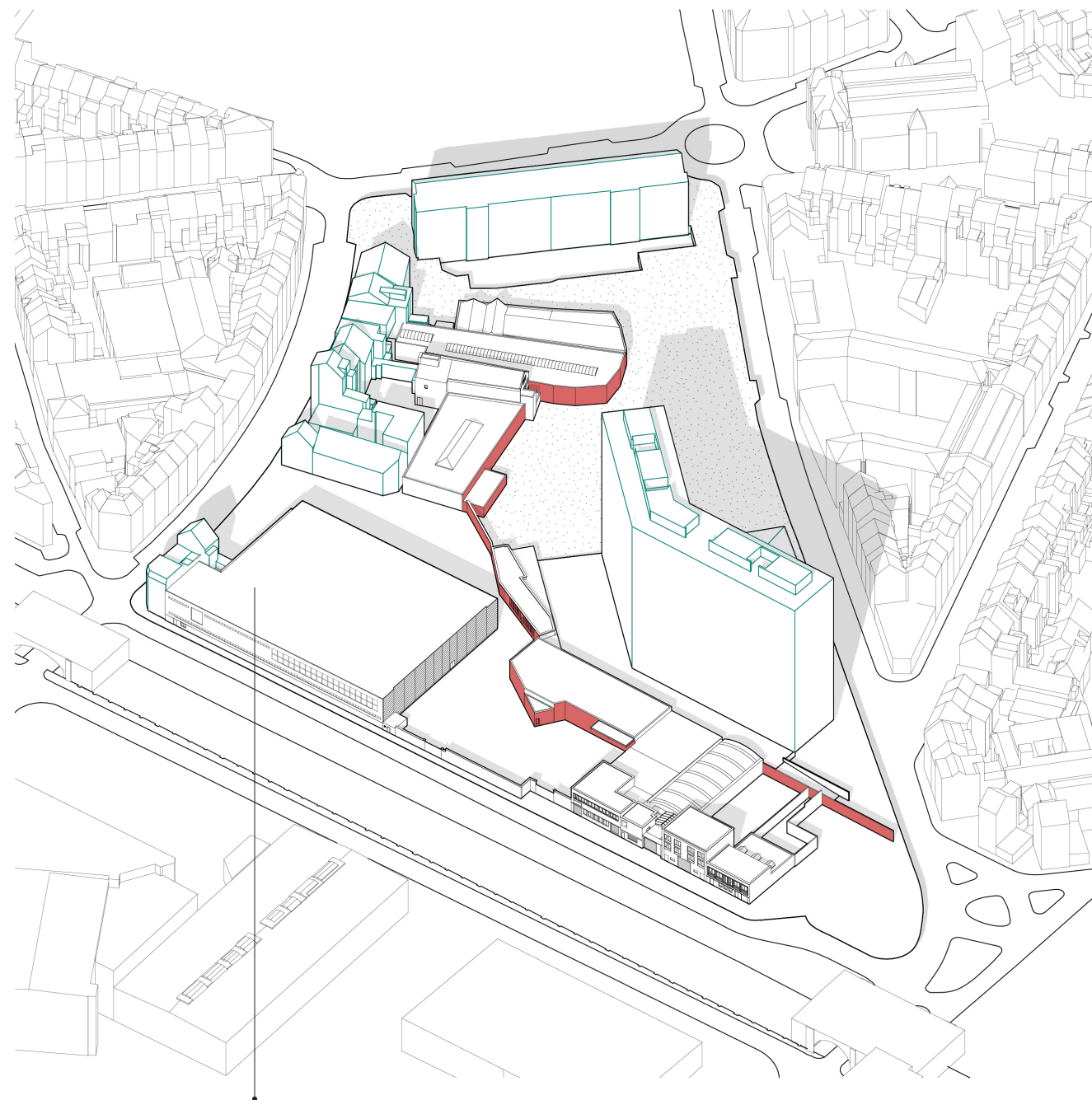
The lost river

The social housing

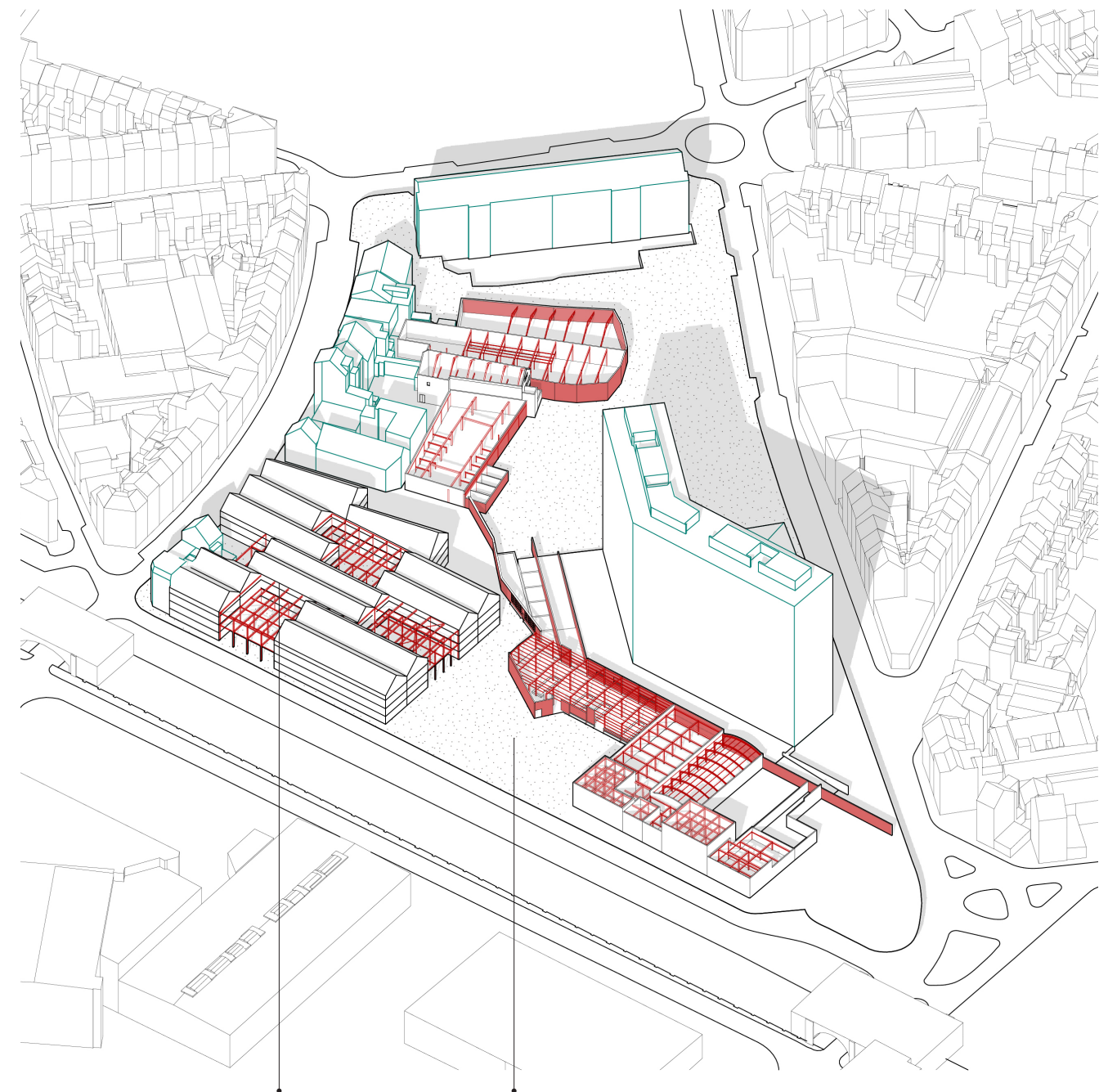
The site, the fragmentations



The site, the fragmentations



Rotor

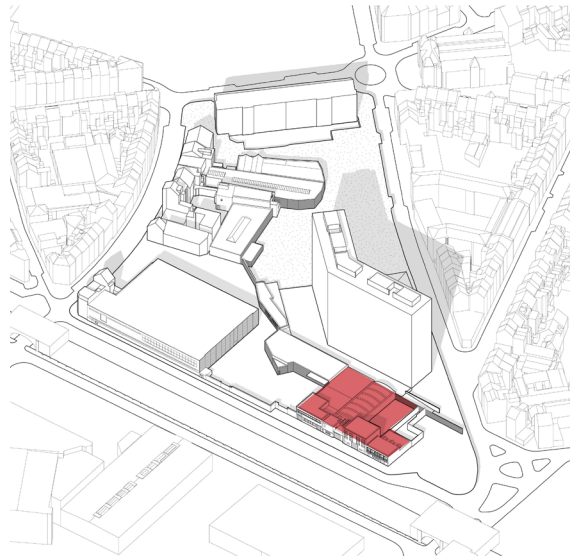


Rotor Housing

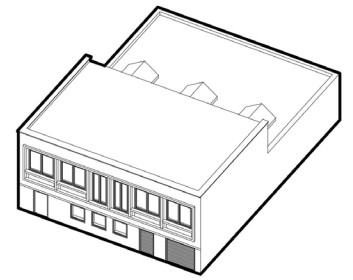
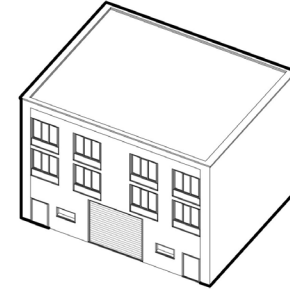
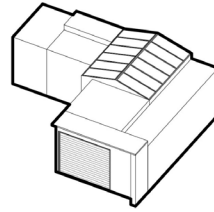
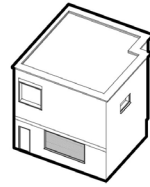
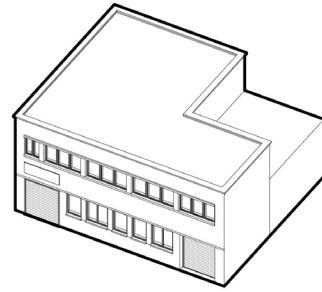
Pocket Park

- The walls/ the reuse potential
- The kept housing
- The greenery

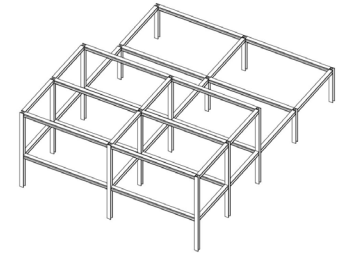
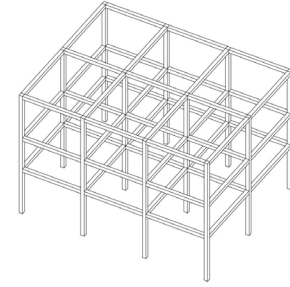
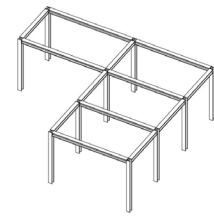
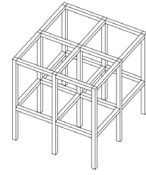
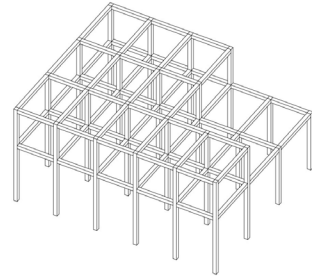
Antidote for better housing neighborhood



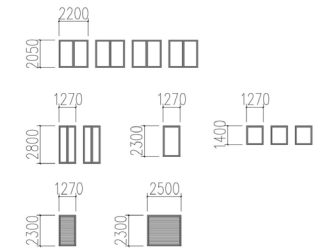
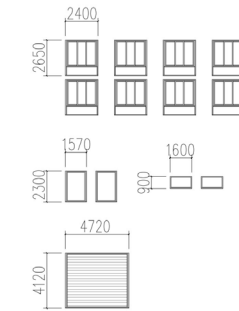
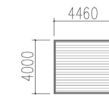
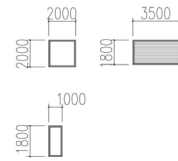
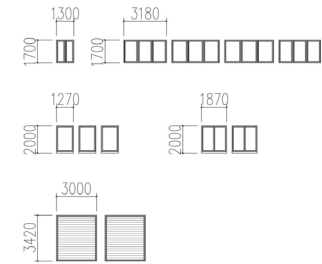
building



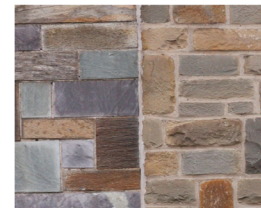
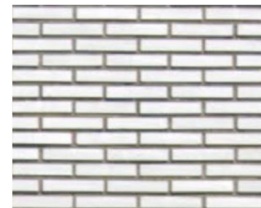
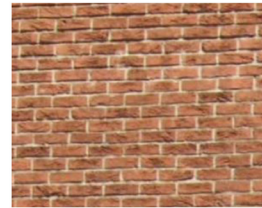
structure



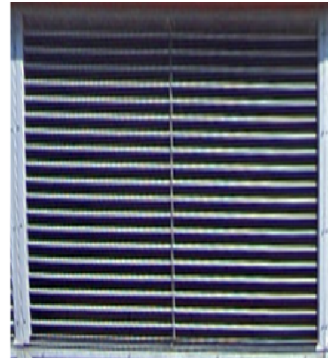
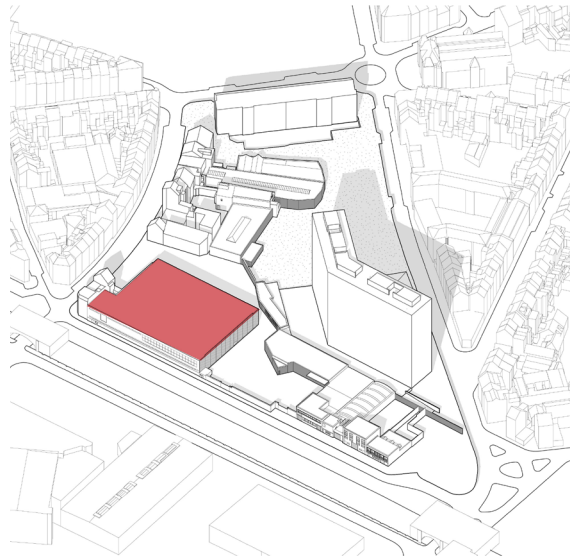
frame



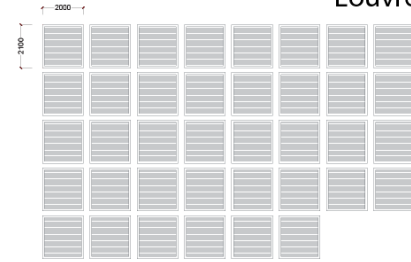
material



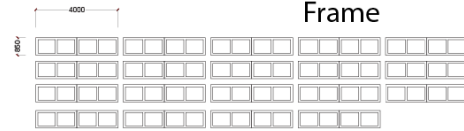
Potential of reuse



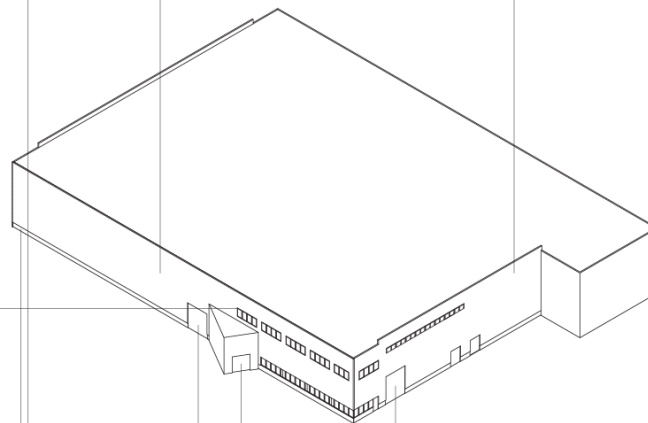
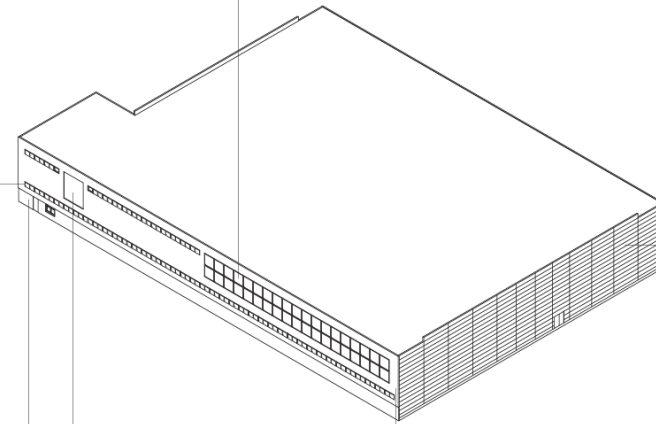
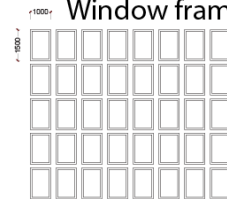
Louvre



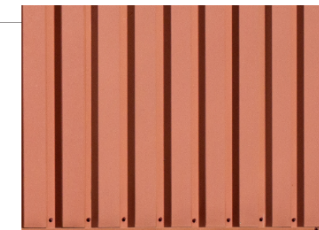
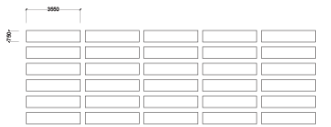
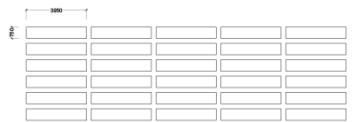
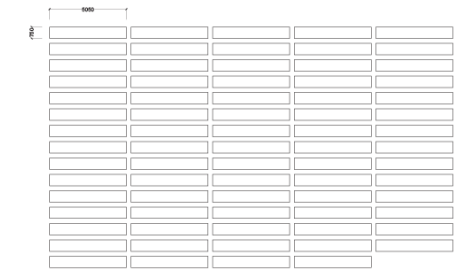
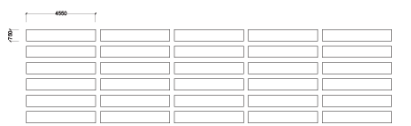
Frame



Window frame



Sandwich panel



Corrugated sheet

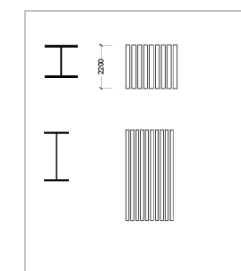
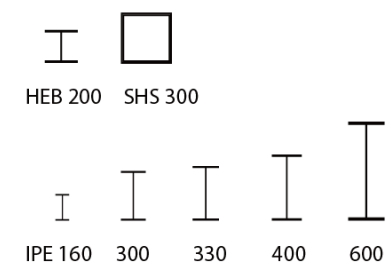
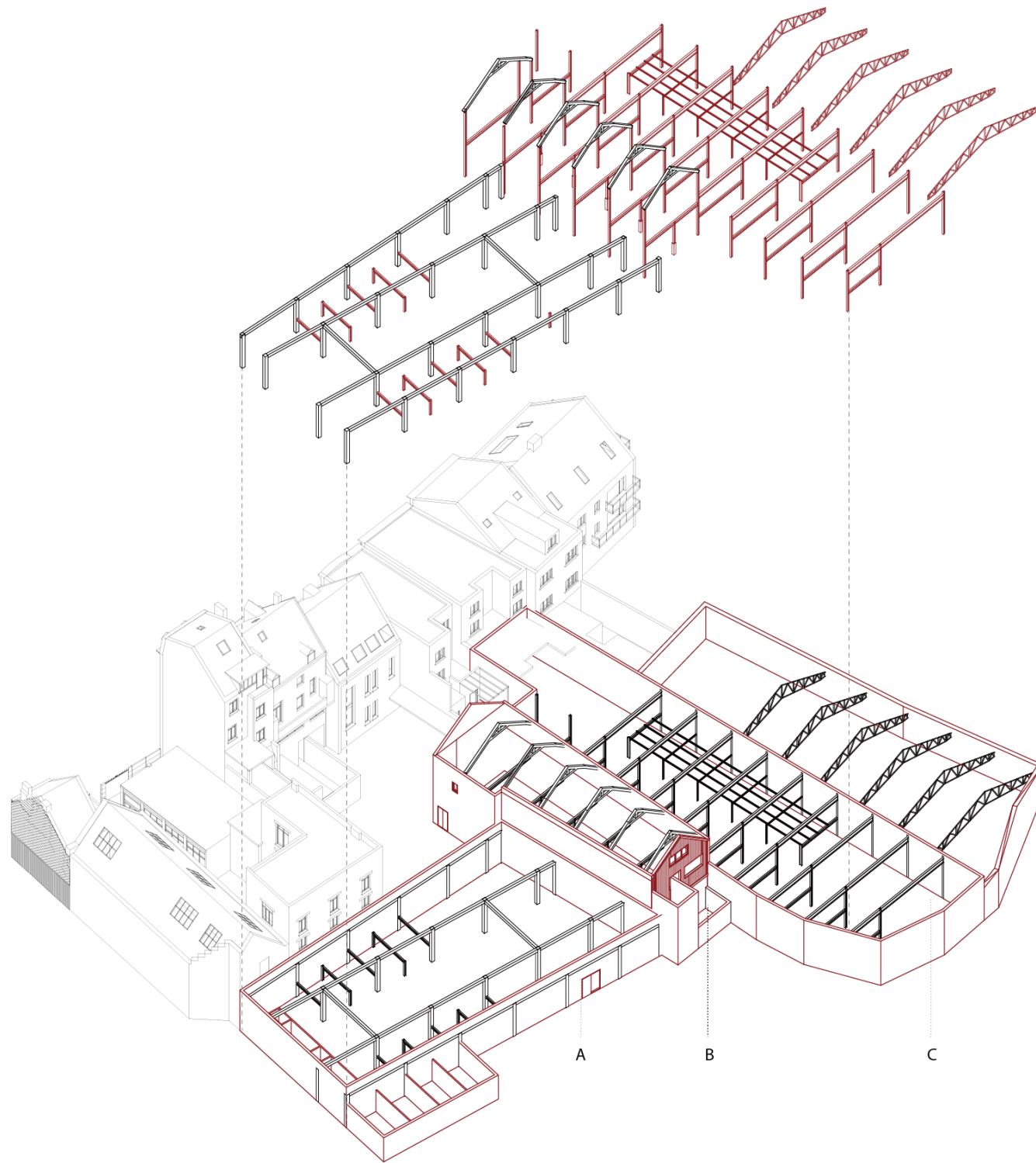
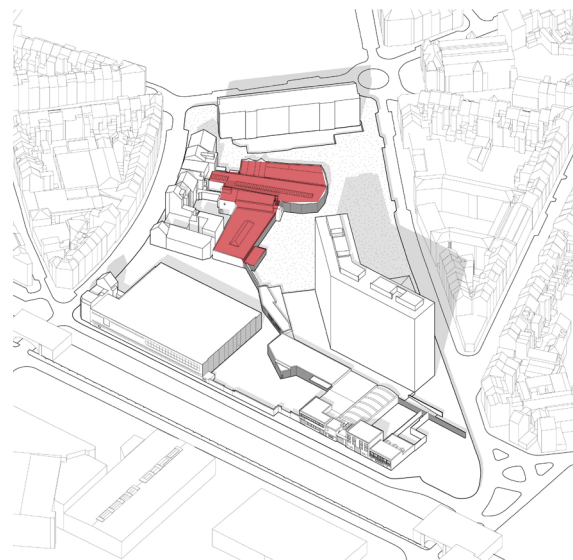


Corrugated sheet

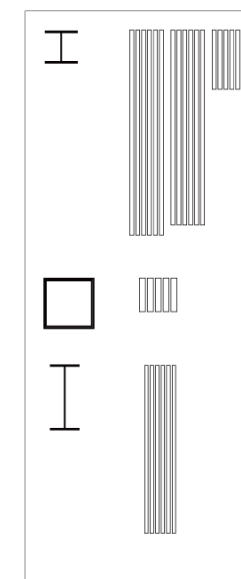


Brick

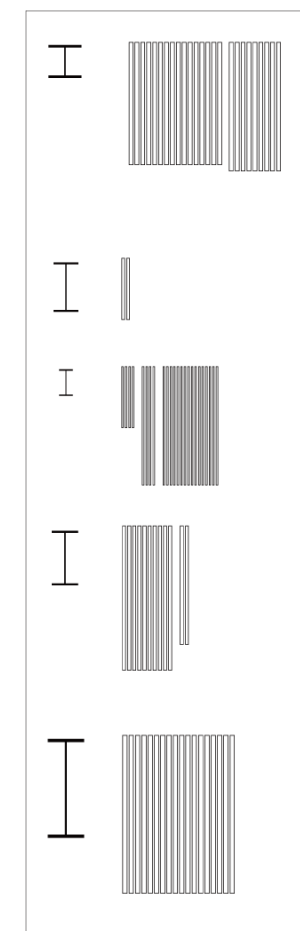
Potential of reuse



A

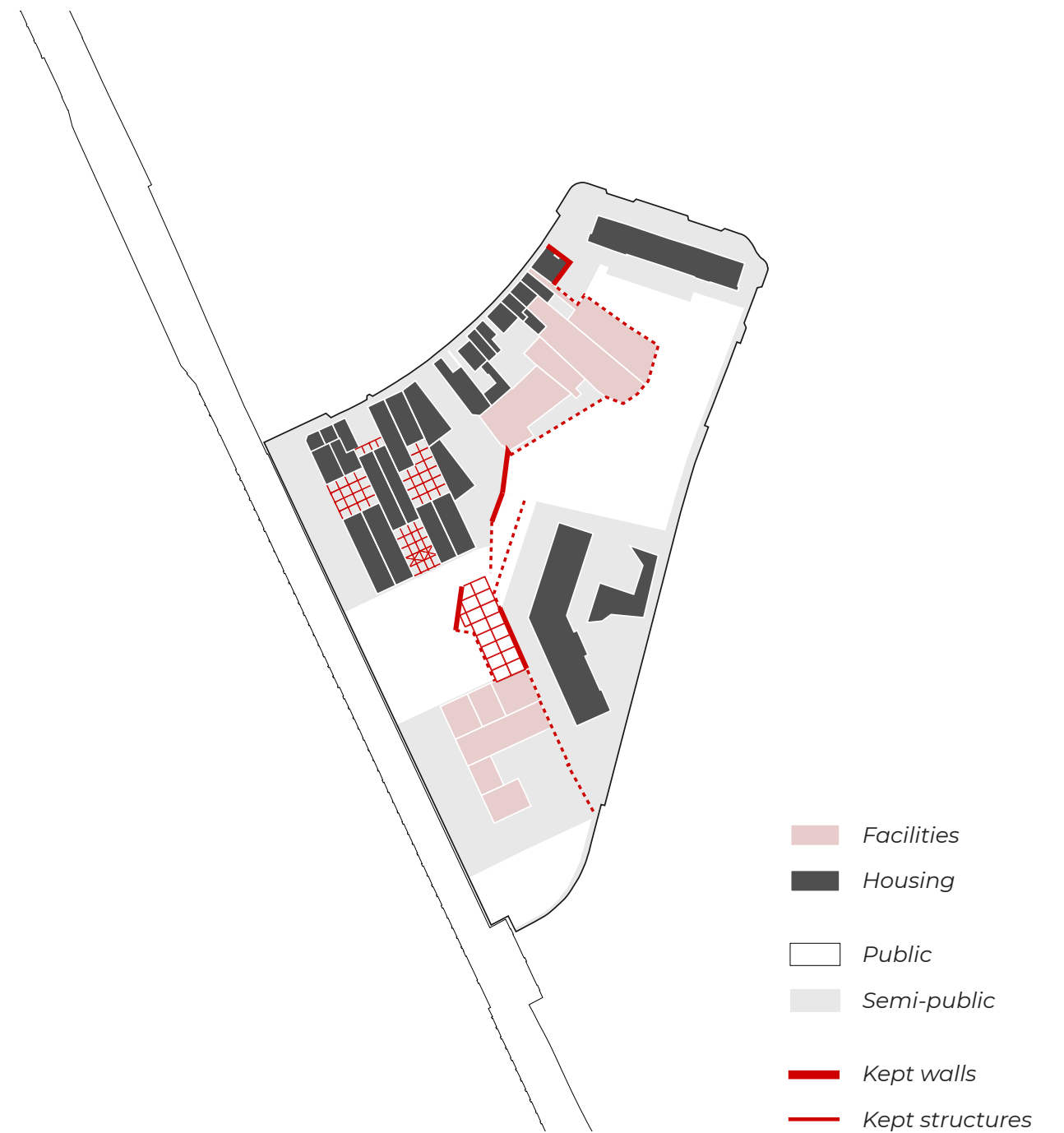
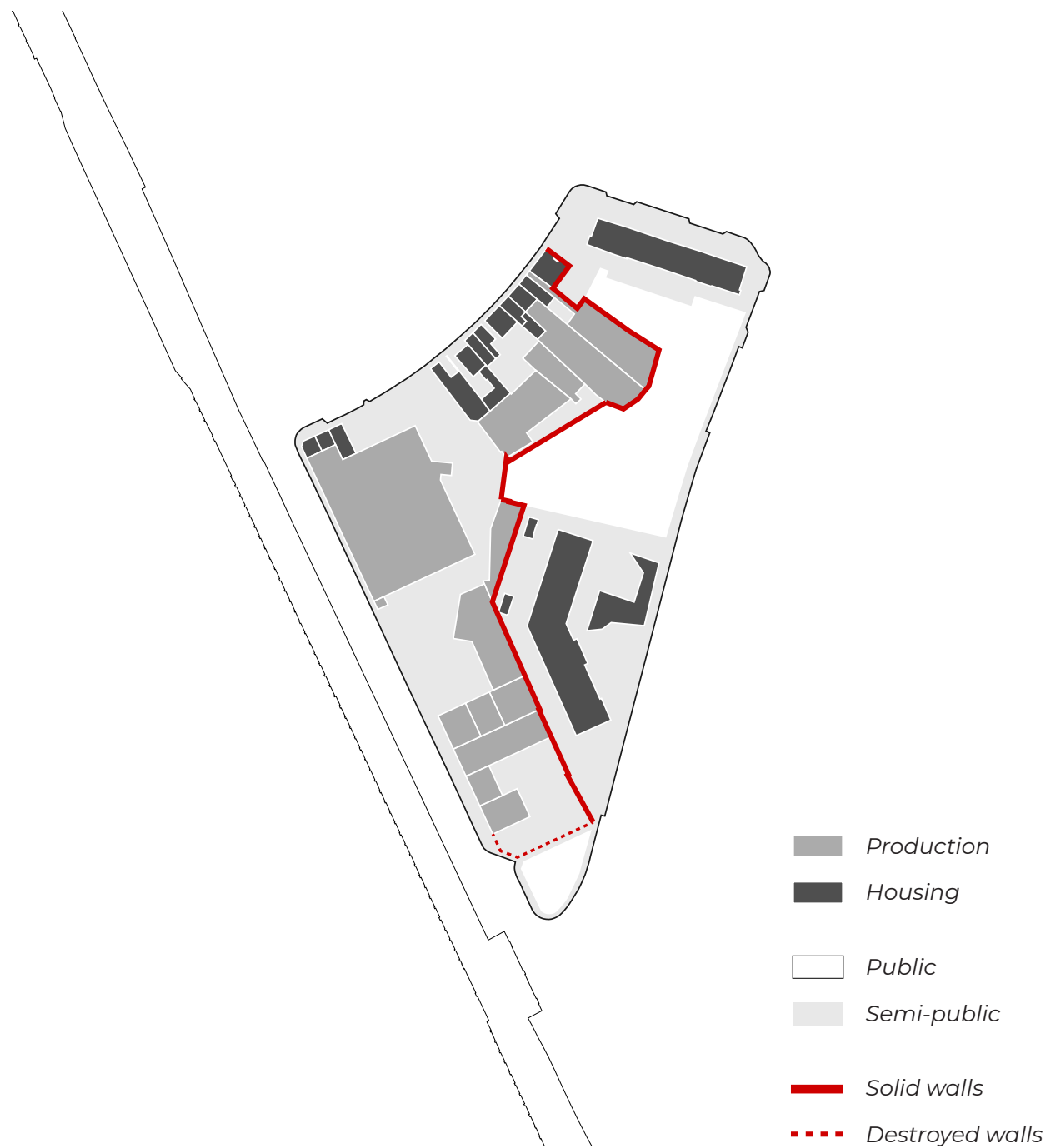


B



C

Potential of reuse



Permeable wall as a frame, from segregation to **integration**

Community facility

Transformed *Rotor* to residential

Pocket Park

Sports and library

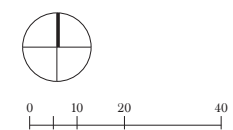
Kept slab housing

Kept traditional housing

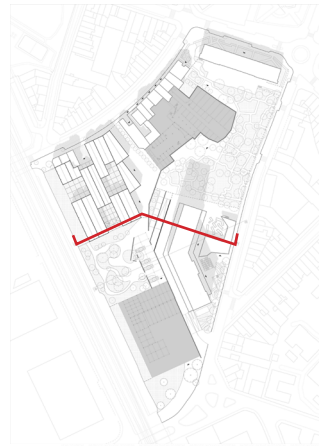
Kept park

Kept Les goujons and restaurant

- Walls
- Kept
- Project sites



Urban Position



Railway

ROTOR

Warehouse

Restaurant

Existing Section A-A

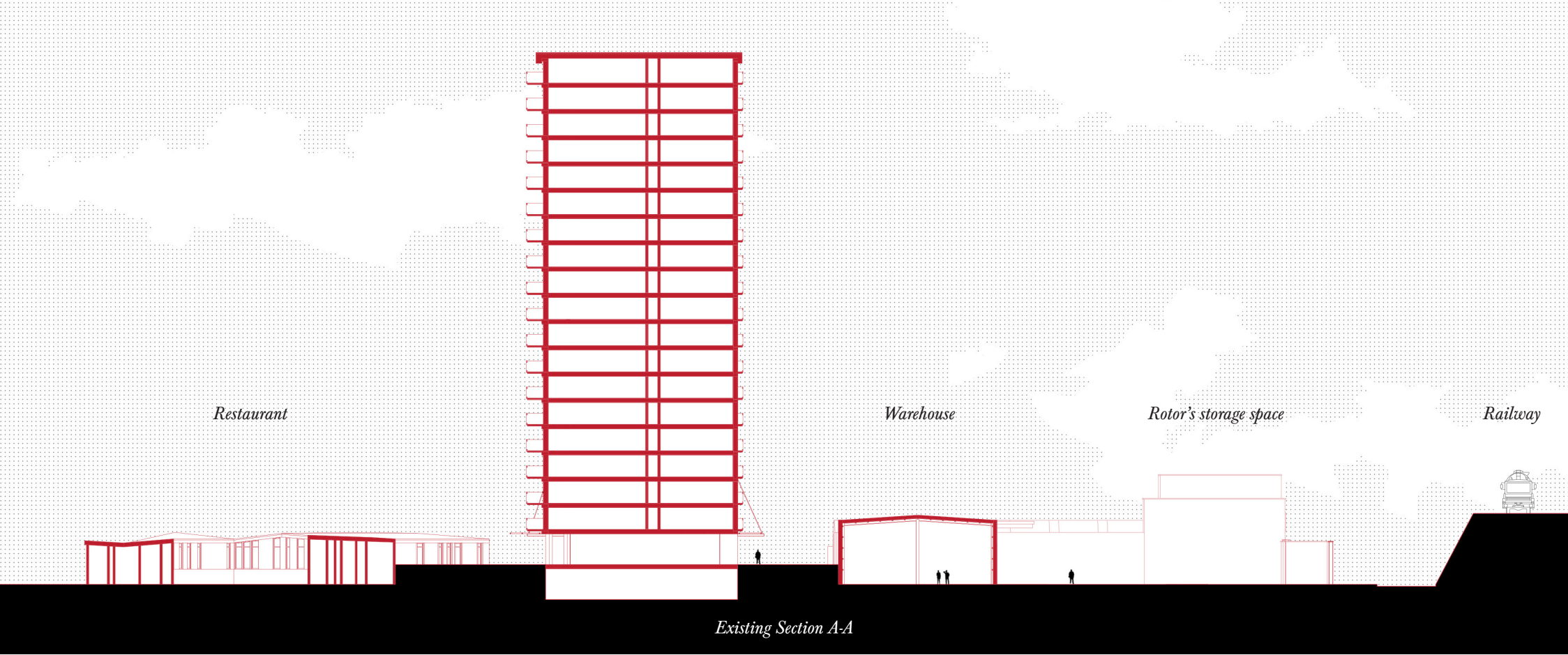
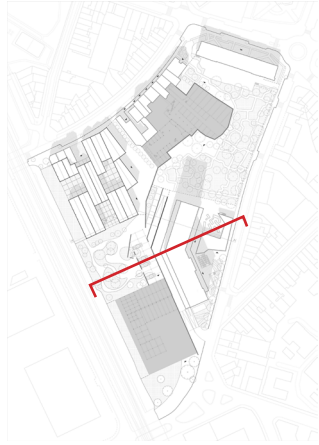
Railway

“ROTOR” housing

Pocket park

Restaurant

Proposed Section A-A





The permeable wall, the better neighborhood

Urban

Architecture

Materialization

Spolia




Who are they? What they need?




Credit to Bjarne van der Drift

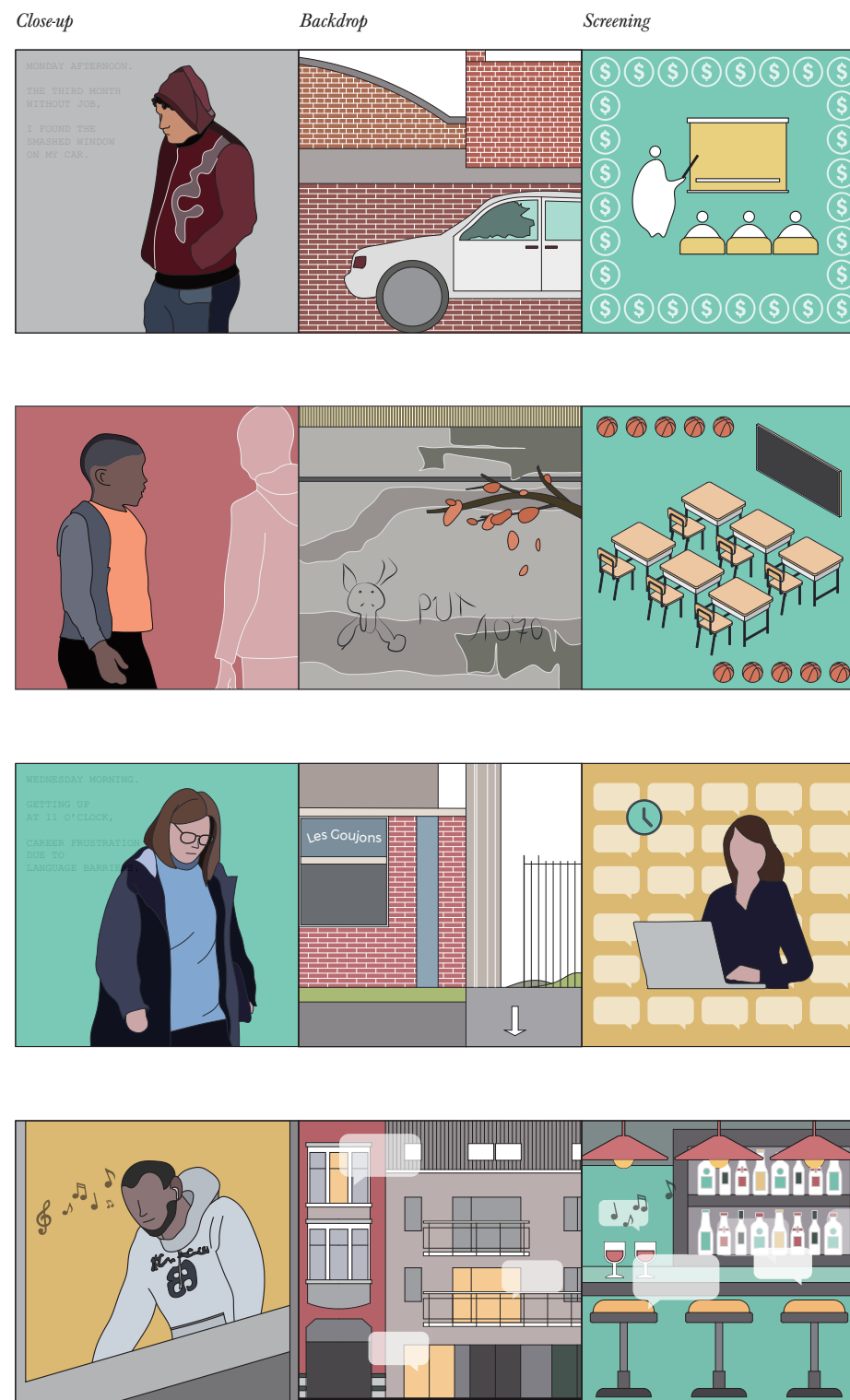


Credit to Mariona Maeso

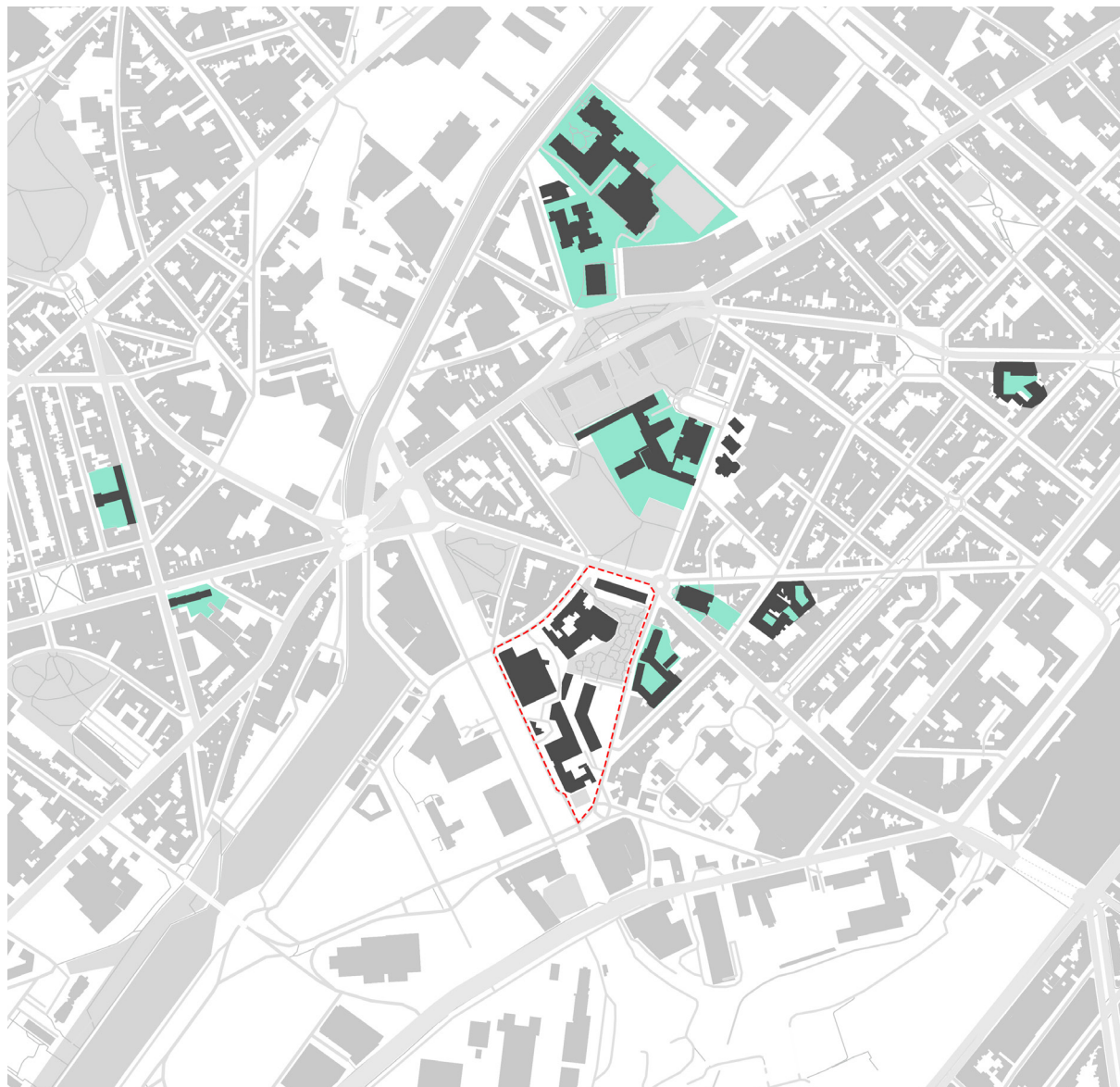
48.5% youth unemployment rate. 

42% inhabitants under 25. 

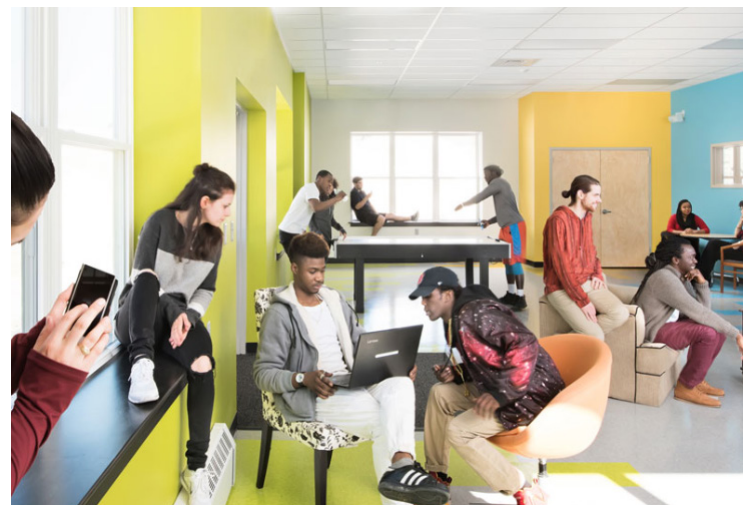
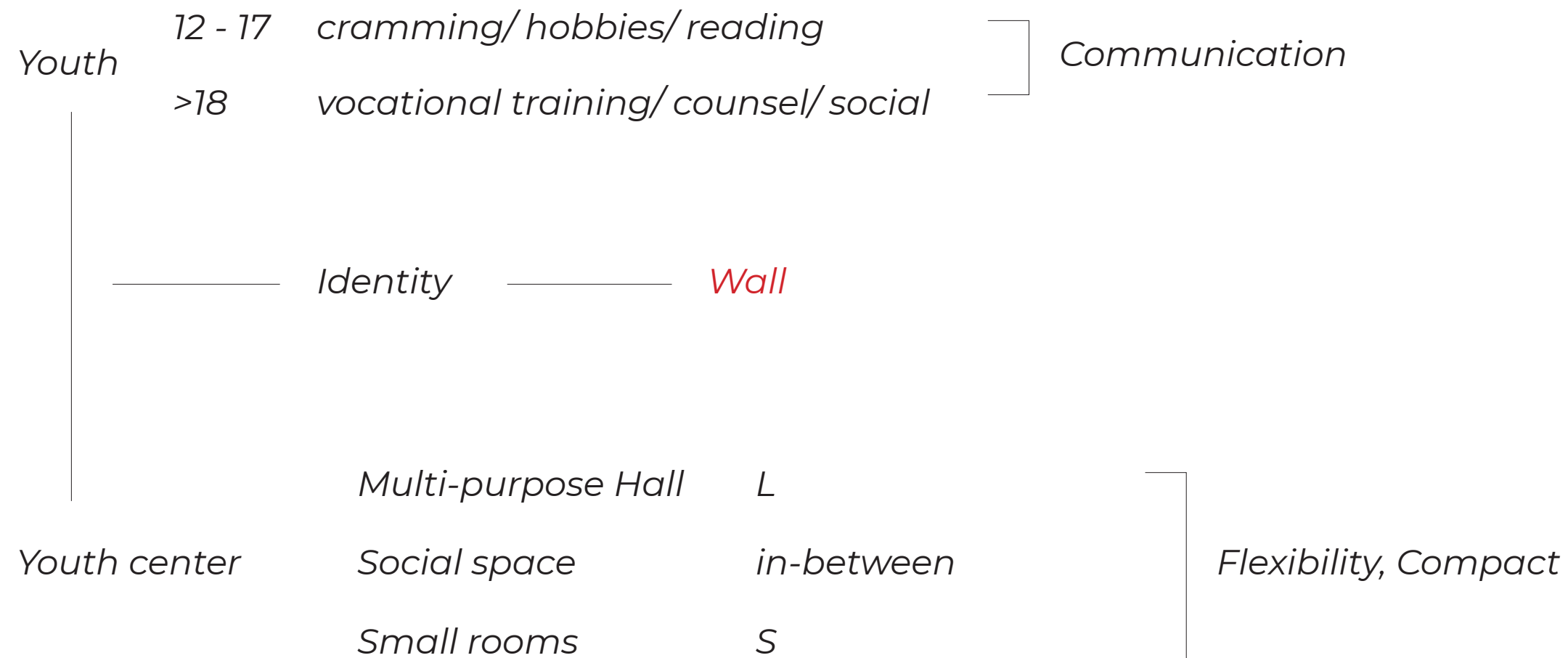
Loitering. Youngest, Poorest.



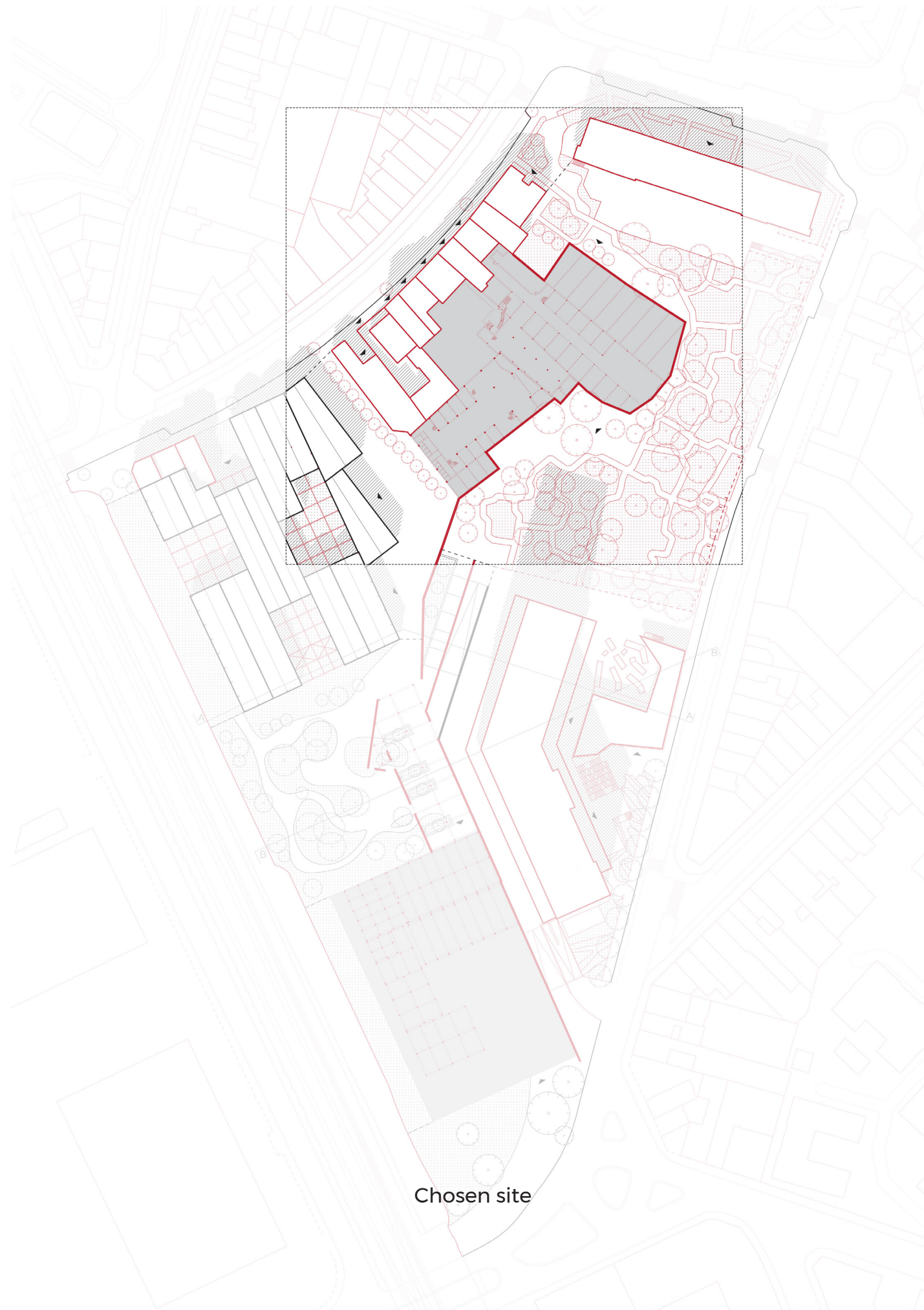
Stigmatization, unemployment, immobility... the **mental wall** on their life stage



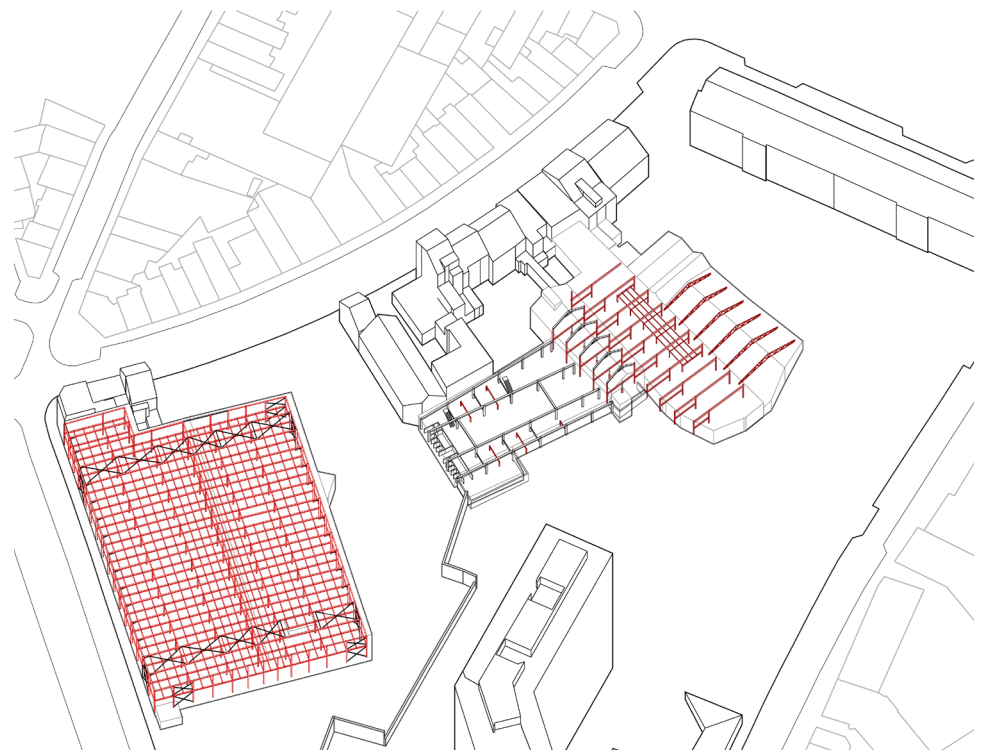
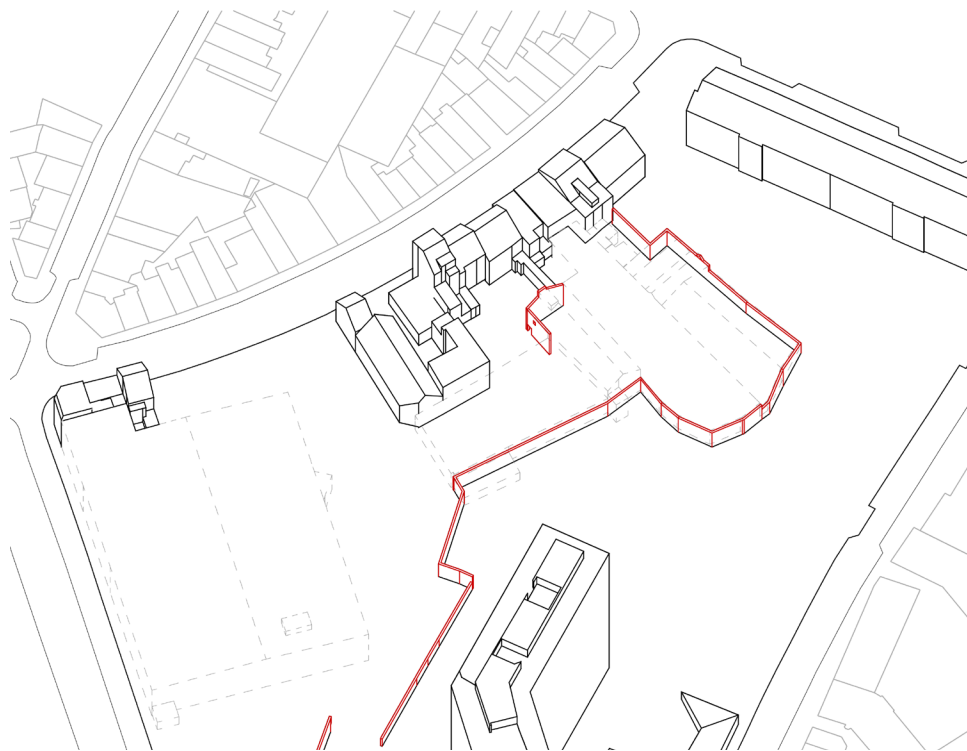
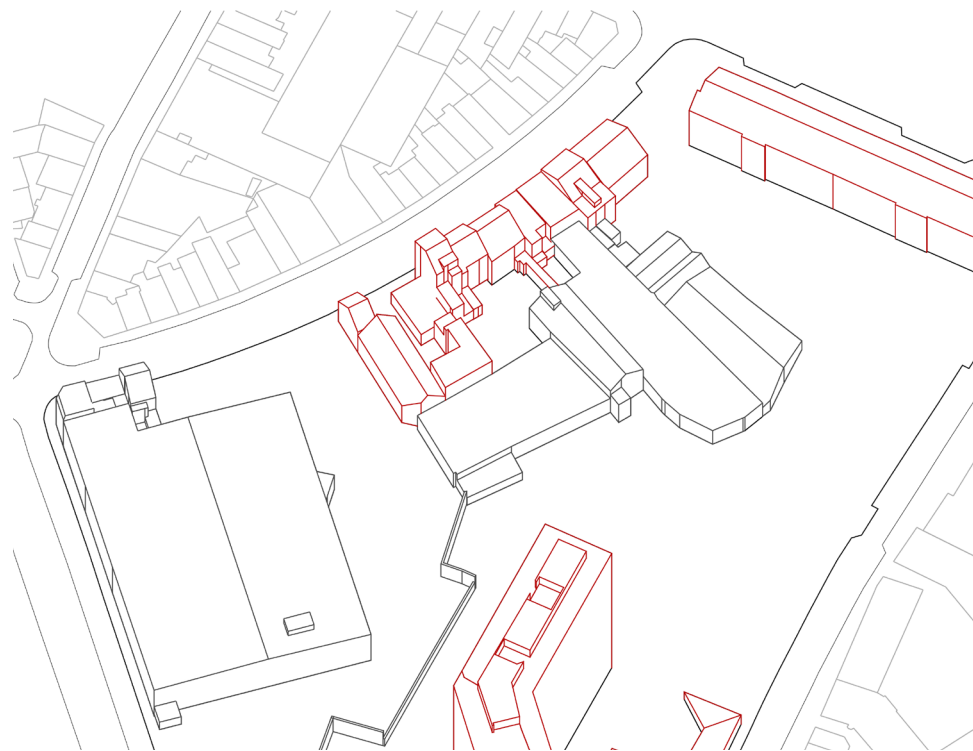
Existing facilities



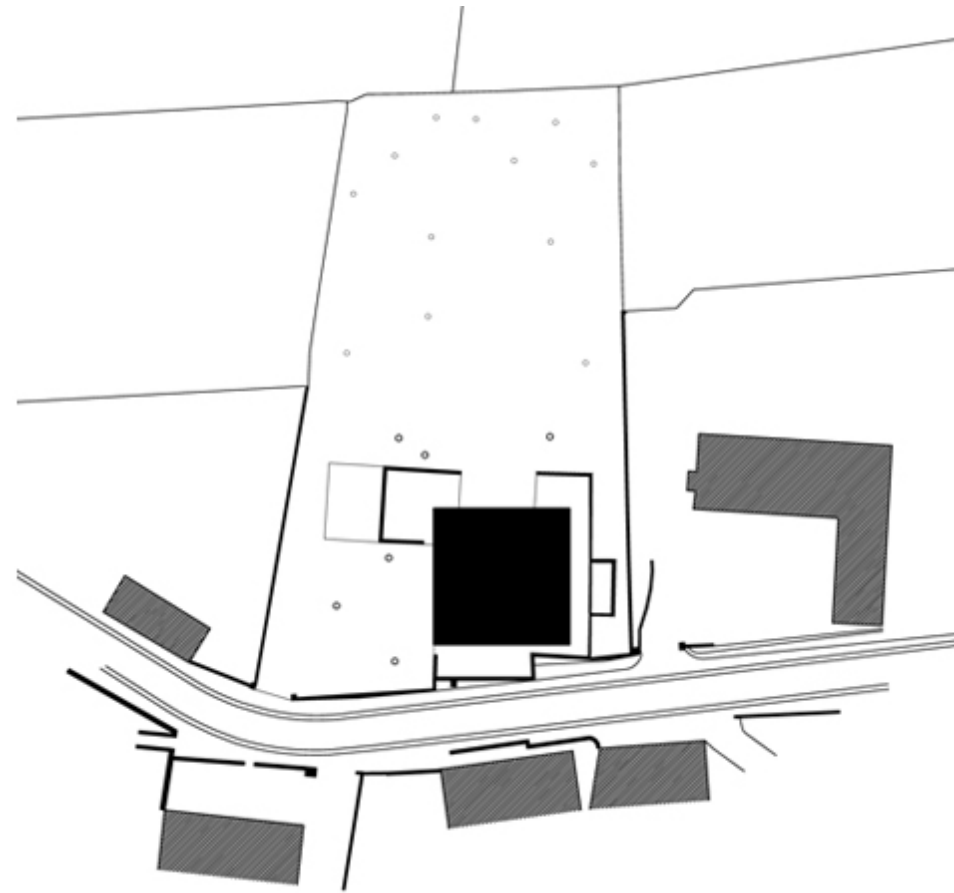
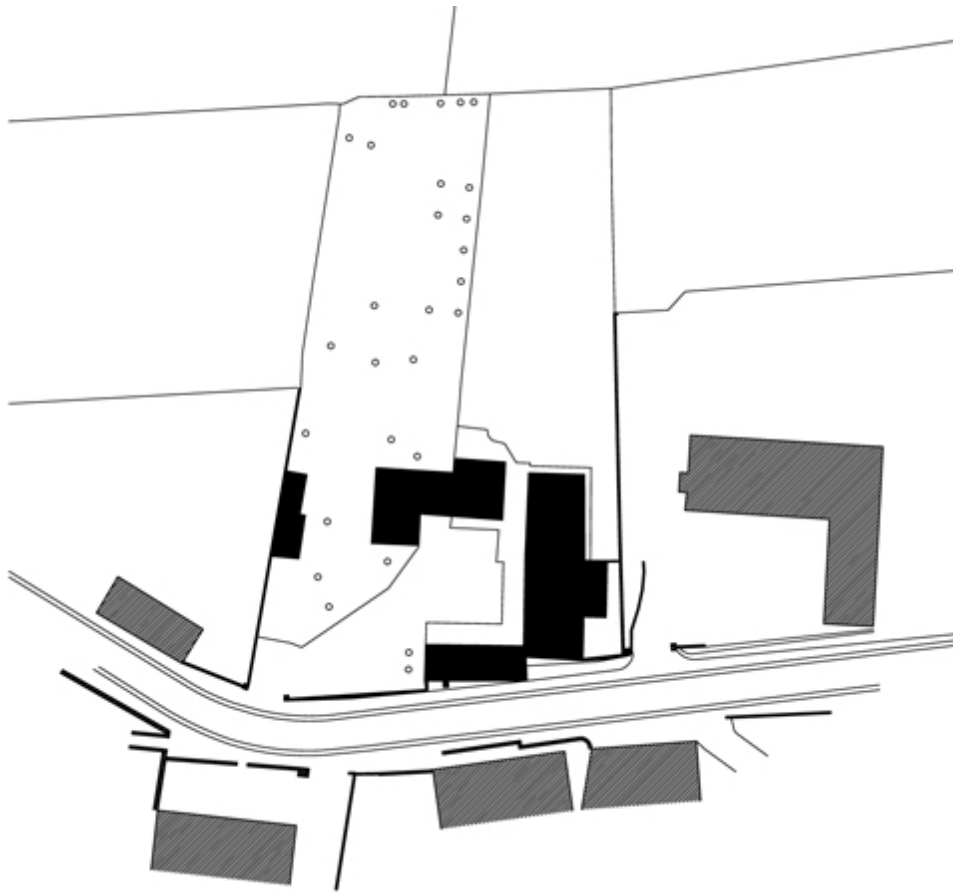
YOUTH CENTER as Pedagogical space, break the “wall”



Chosen site



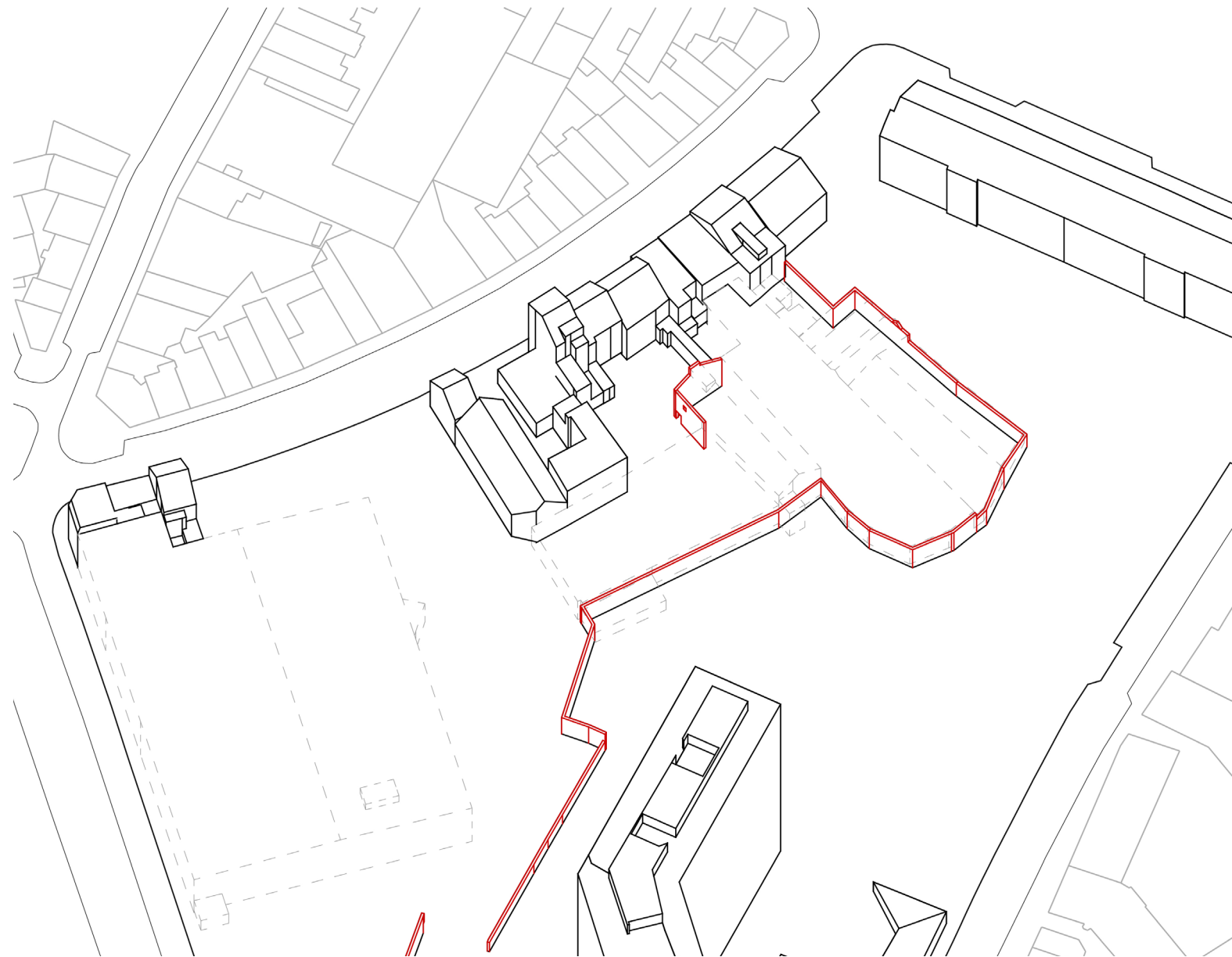
What to keep on the architecture level?



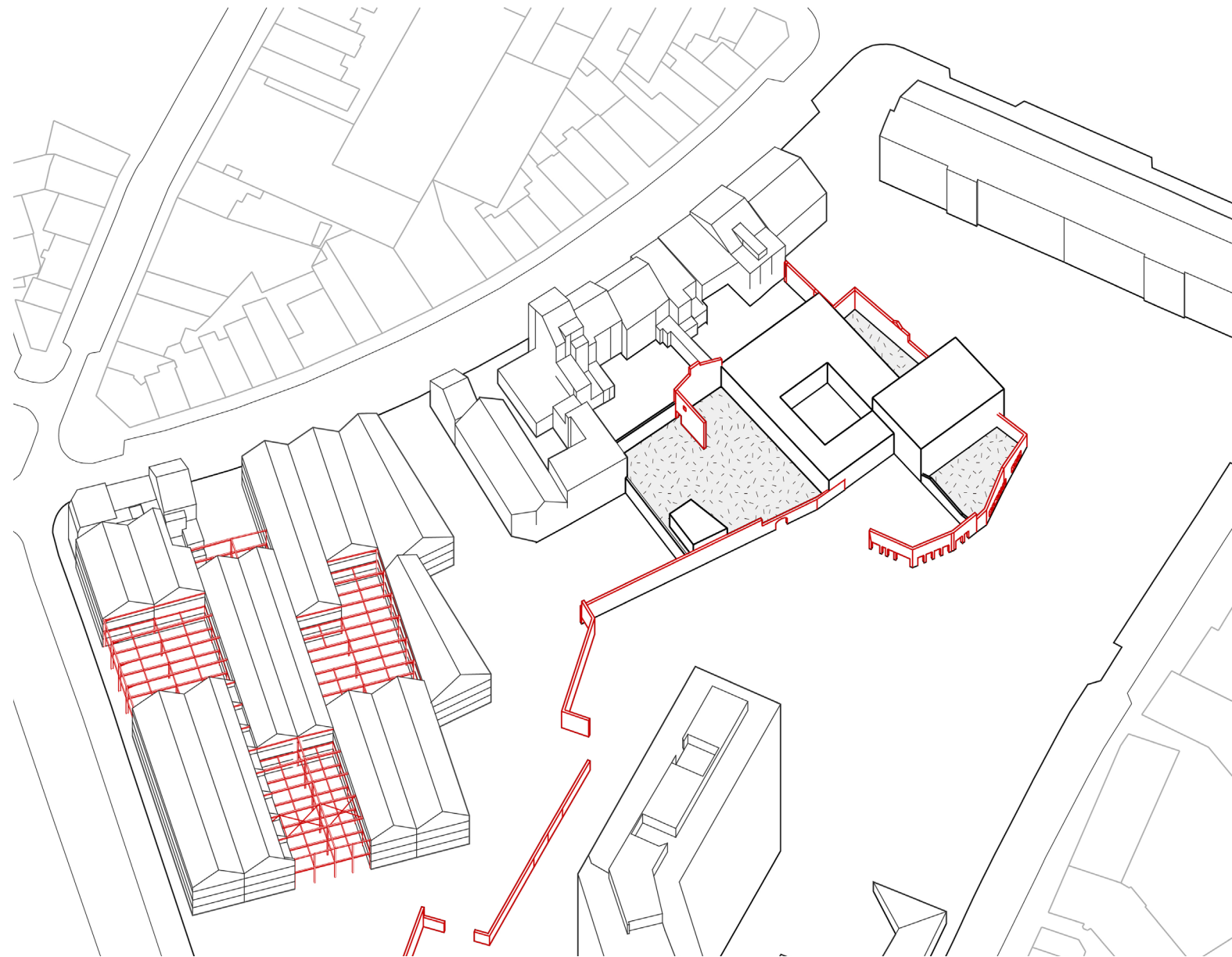
Reference: House BS by architecten de vylder vinck taillieu



The things **good enough**/ the things not good enough



Highlight what need to be seen



In-between old and new

Youth centre

Transformed *Rotor* to residential

Pocket Park

Sports and library

Kept slab housing

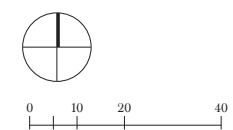
Kept traditional housing

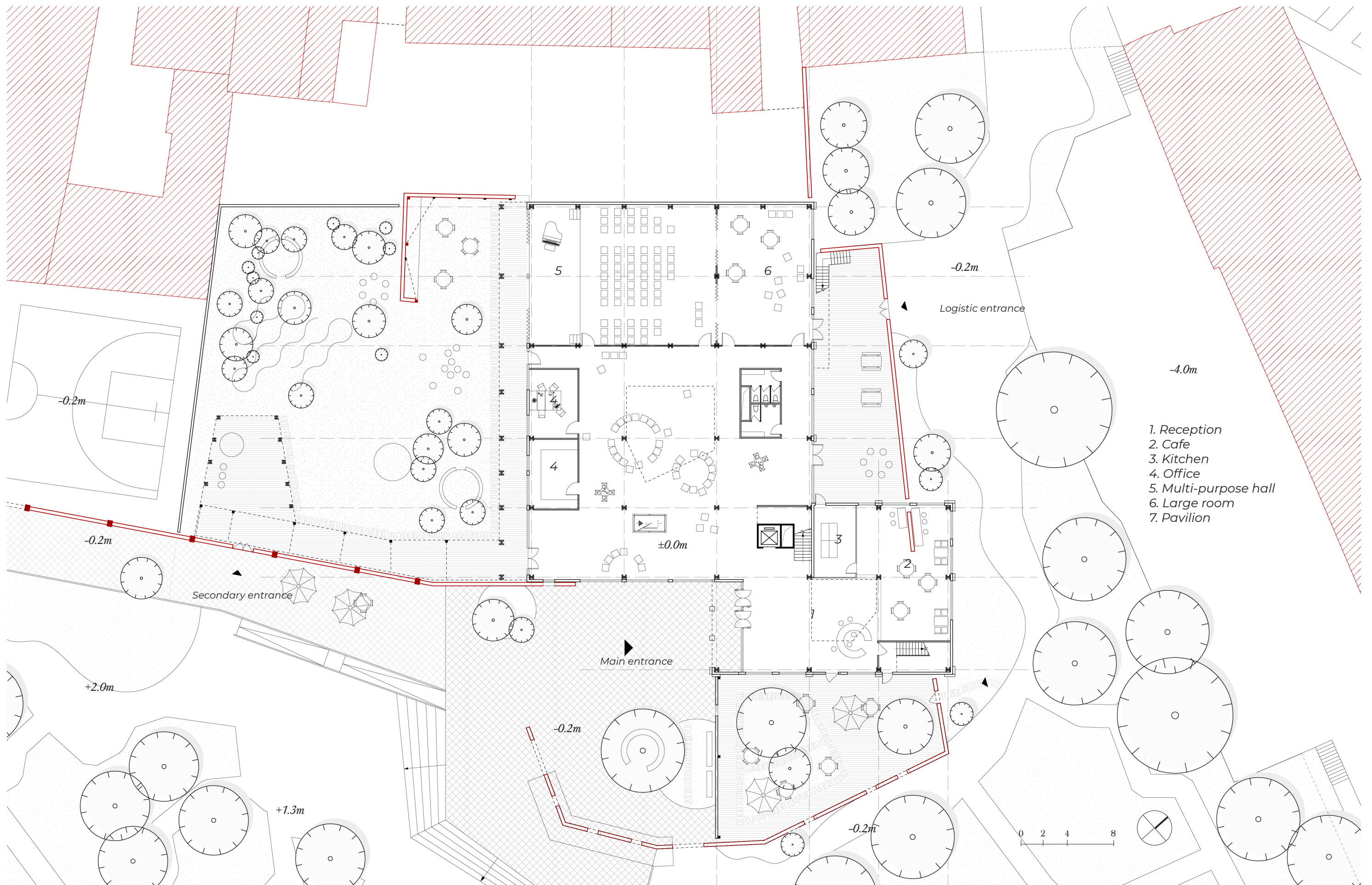
Kept park

Kept Les goujons and restaurant

- Walls
- Kept
- Project sites

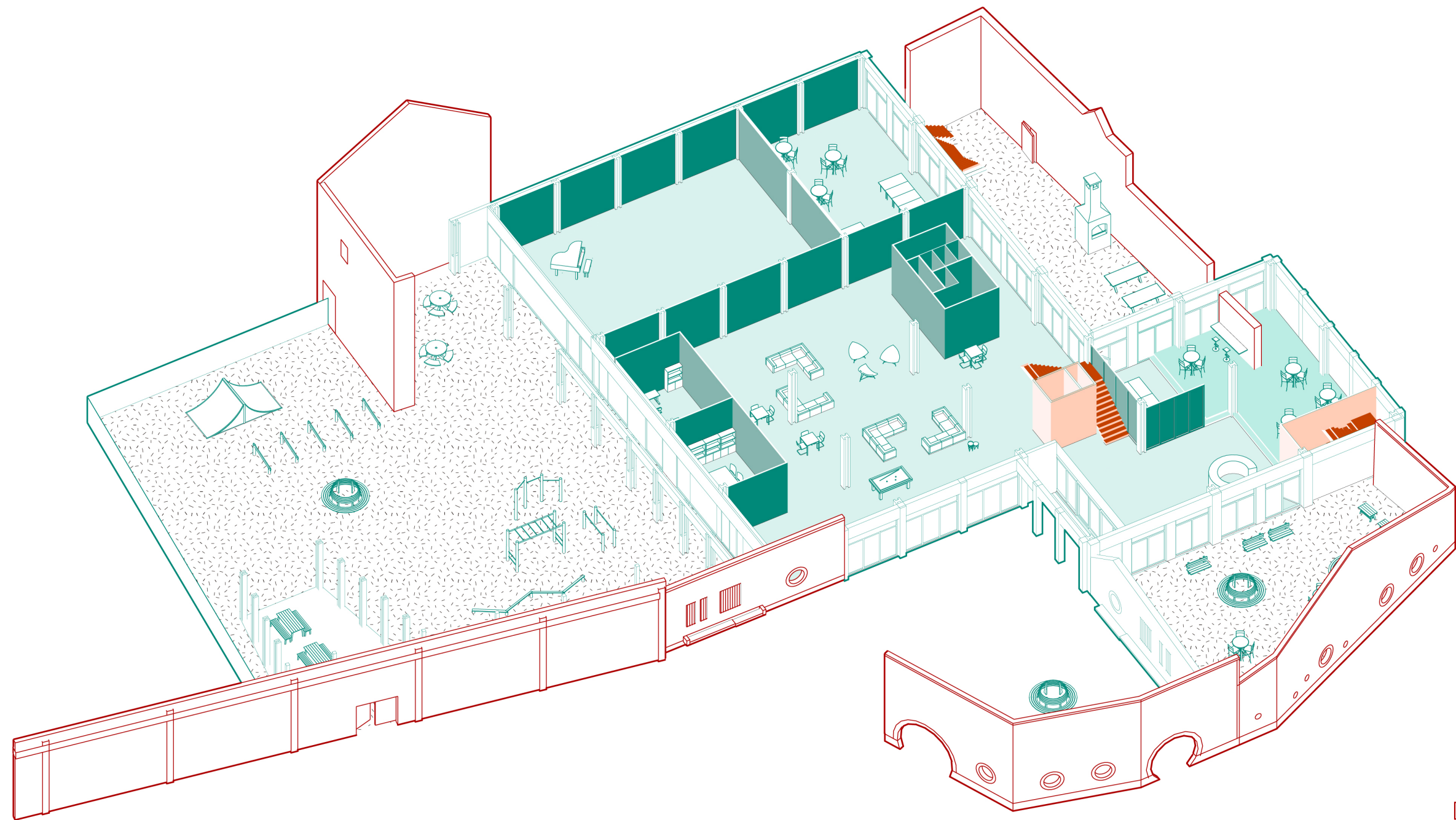
Master plan







Ground floor plan



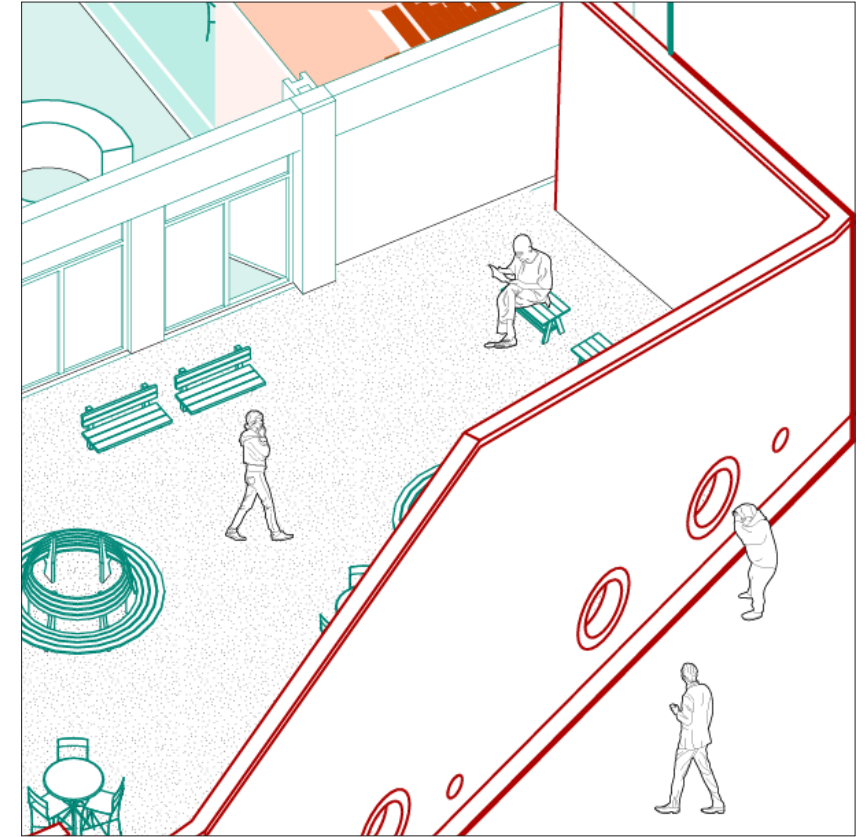
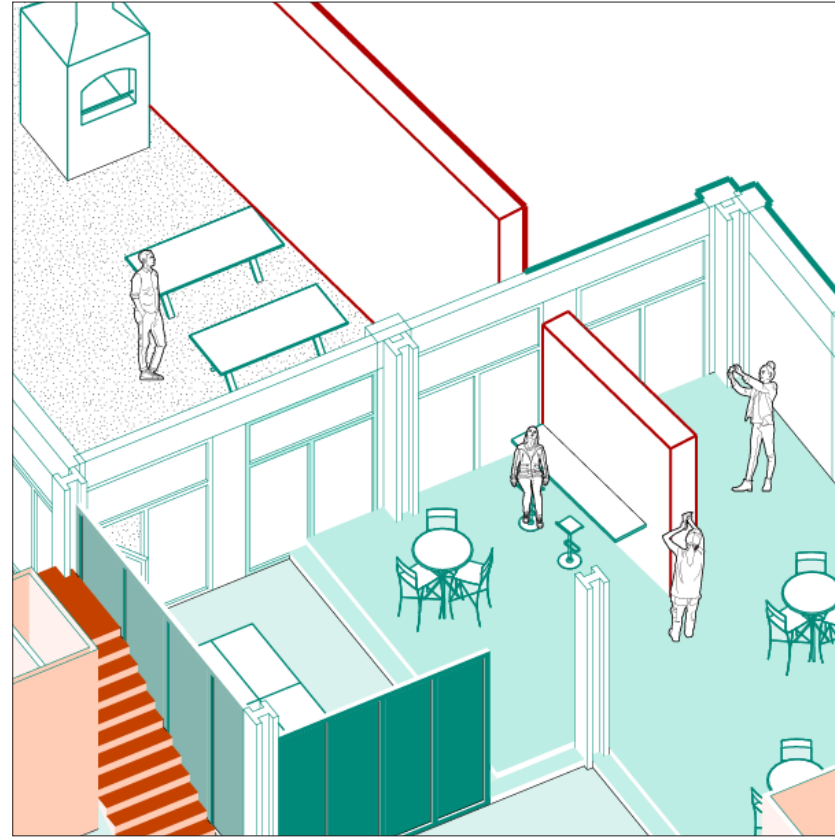
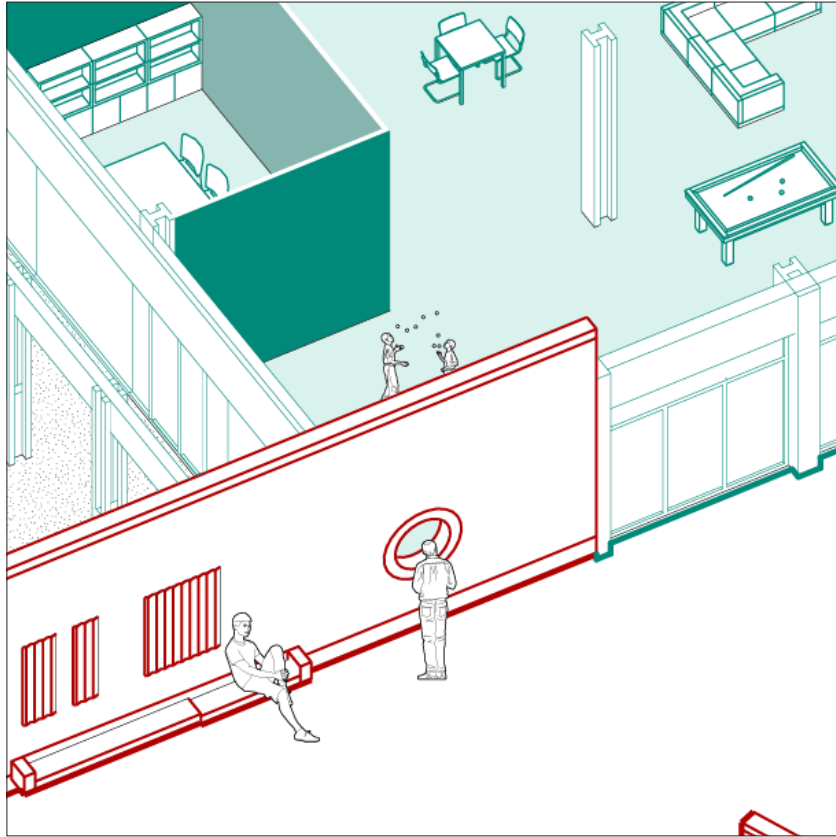


-  Kept wall
-  Vertical Circulation

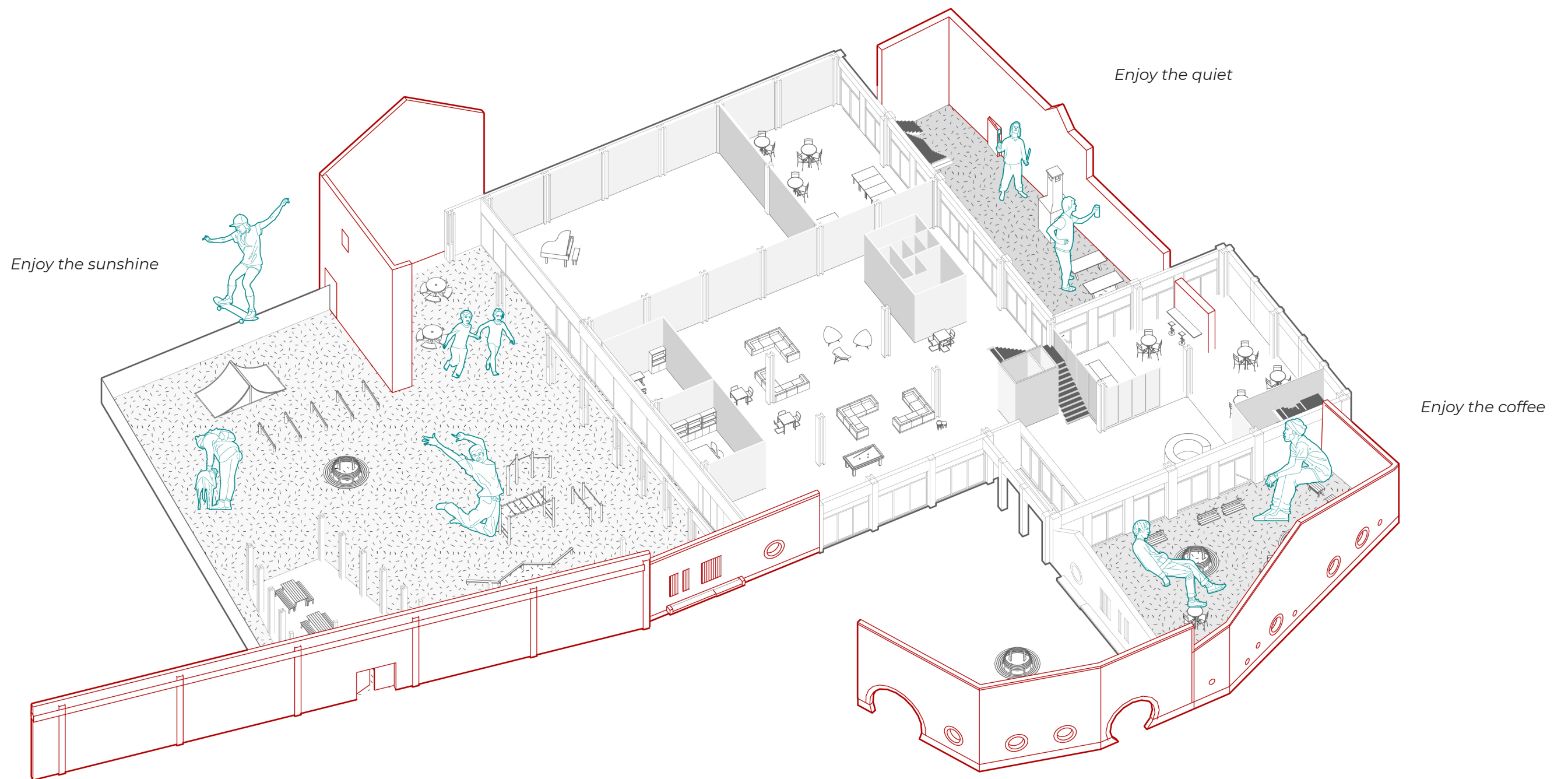
Meet the people, meet the wall







Embrace, integrate, distance



Characters of three courtyards





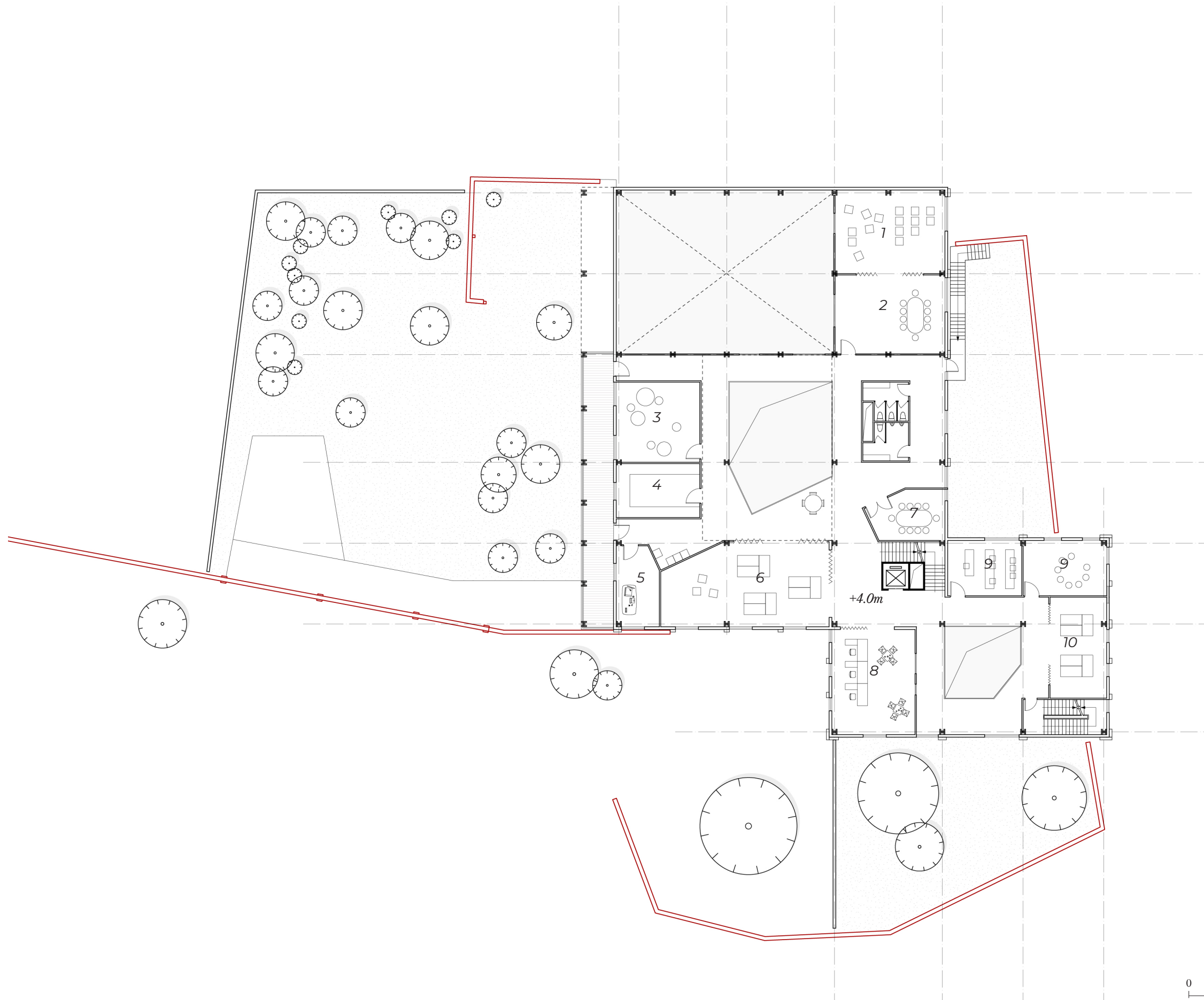




Front yard



Front yard



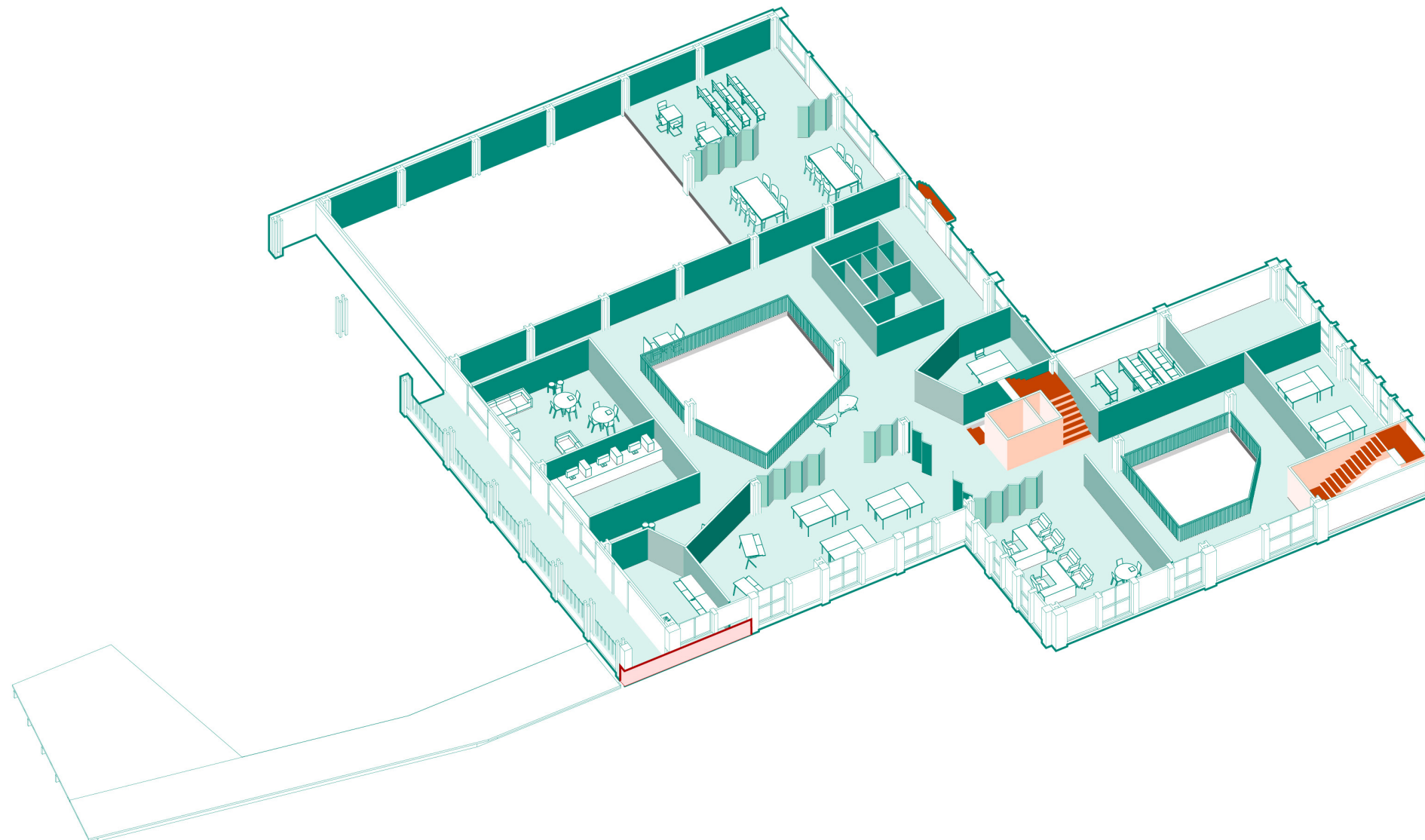
1. Projection
2. Lecture room
3. Group room
4. Computer room
5. Photograph lab
6. Vocational workshop
7. Meeting room
8. Counsel room
9. Classroom
10. Homework room



0 2 4 8



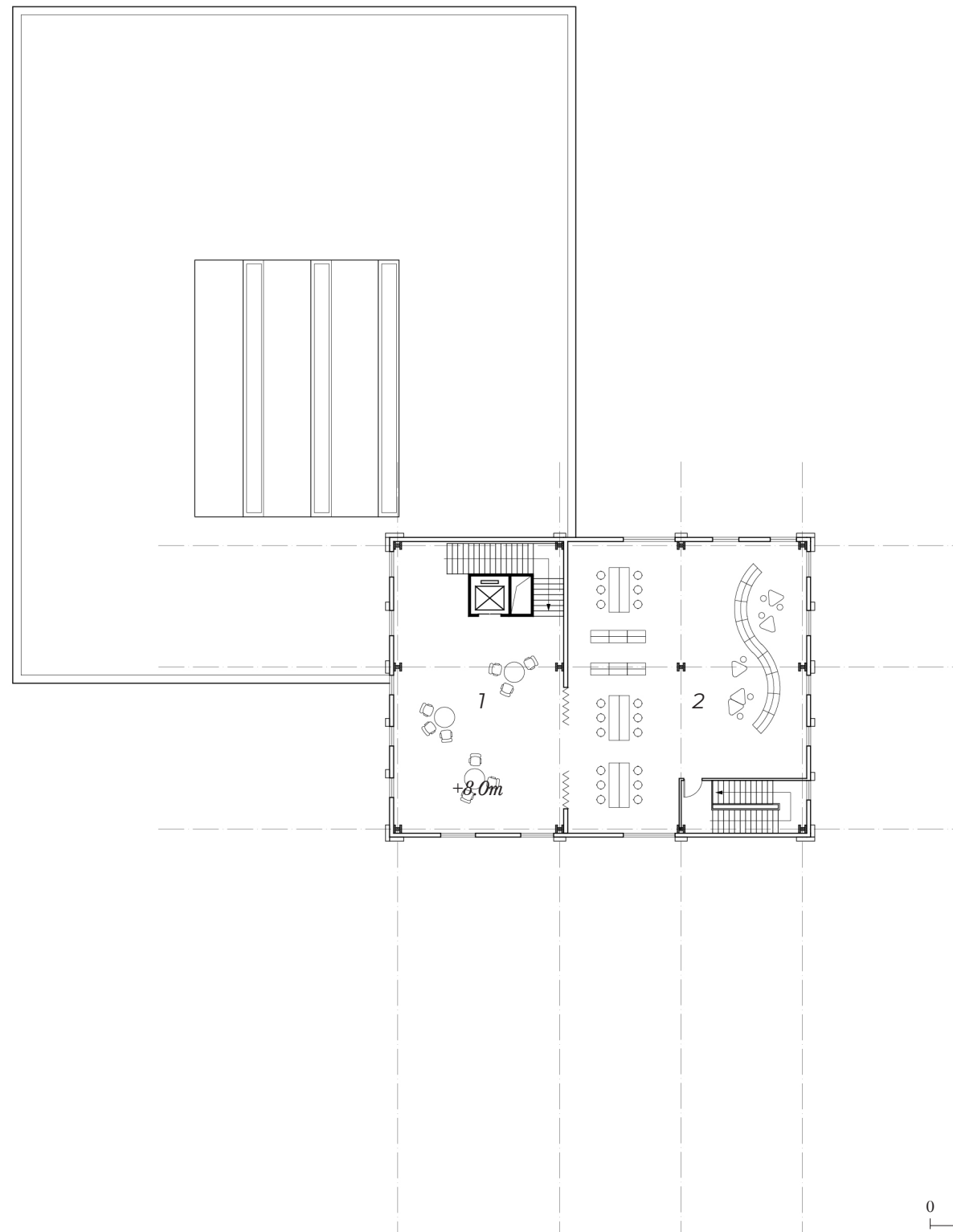
First floor plan



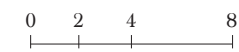


-  Kept wall
-  Vertical Circulation

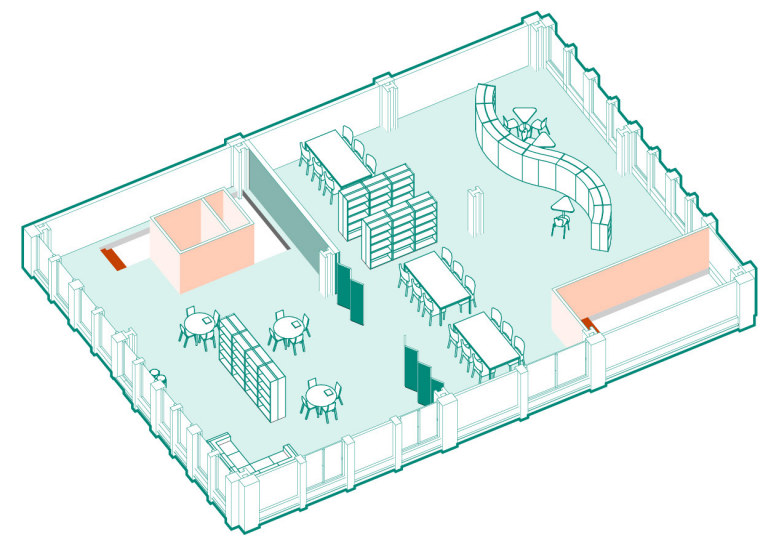
Keep group work, keep the flexibility



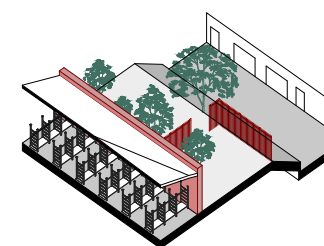
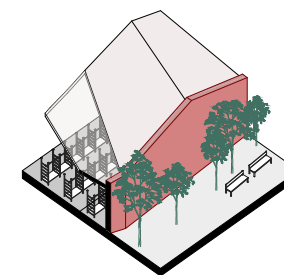
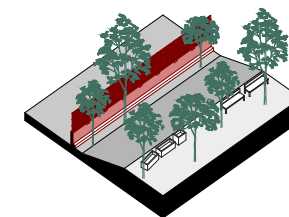
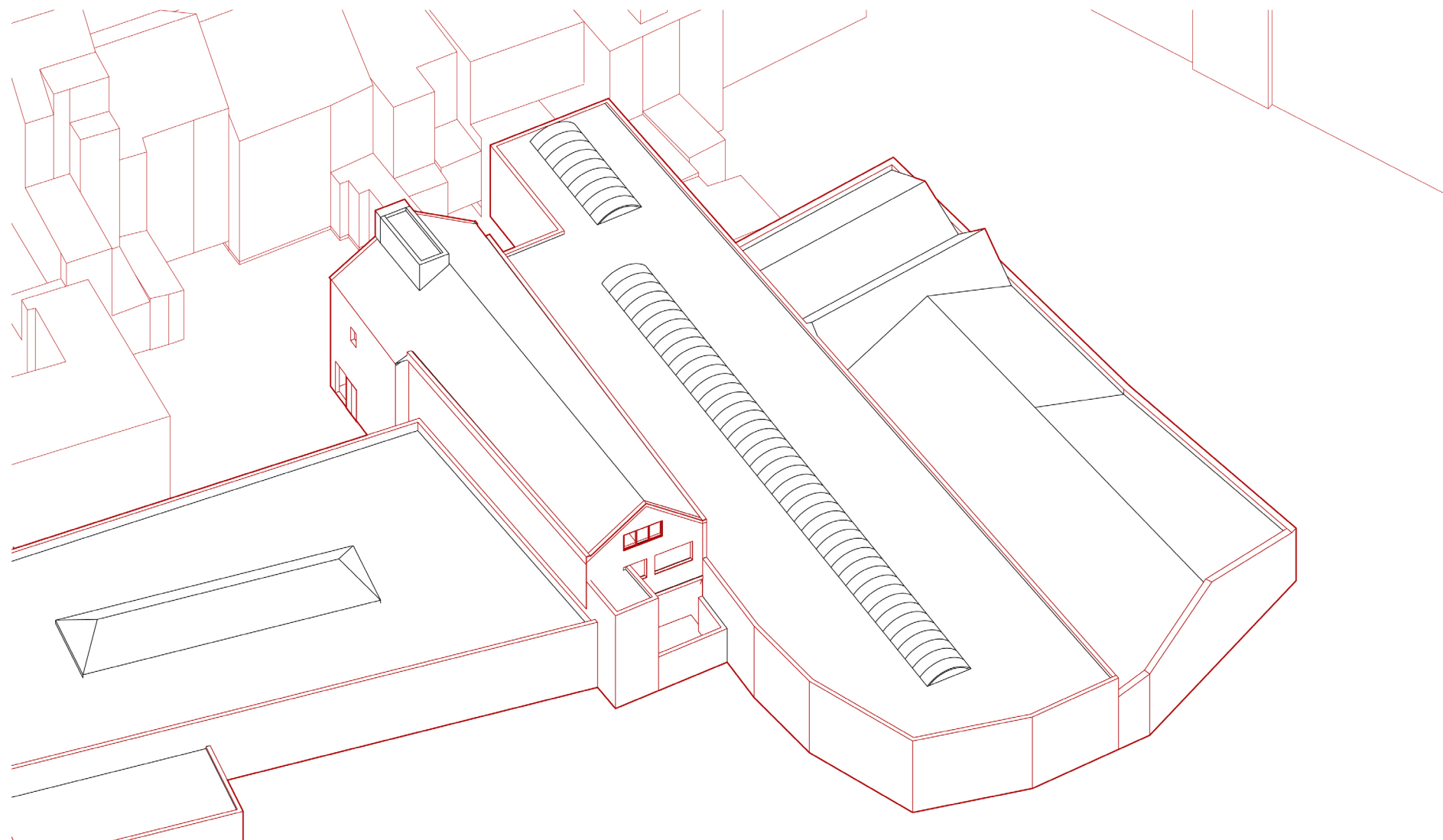
- 1. Discussion space
- 2. Reading space



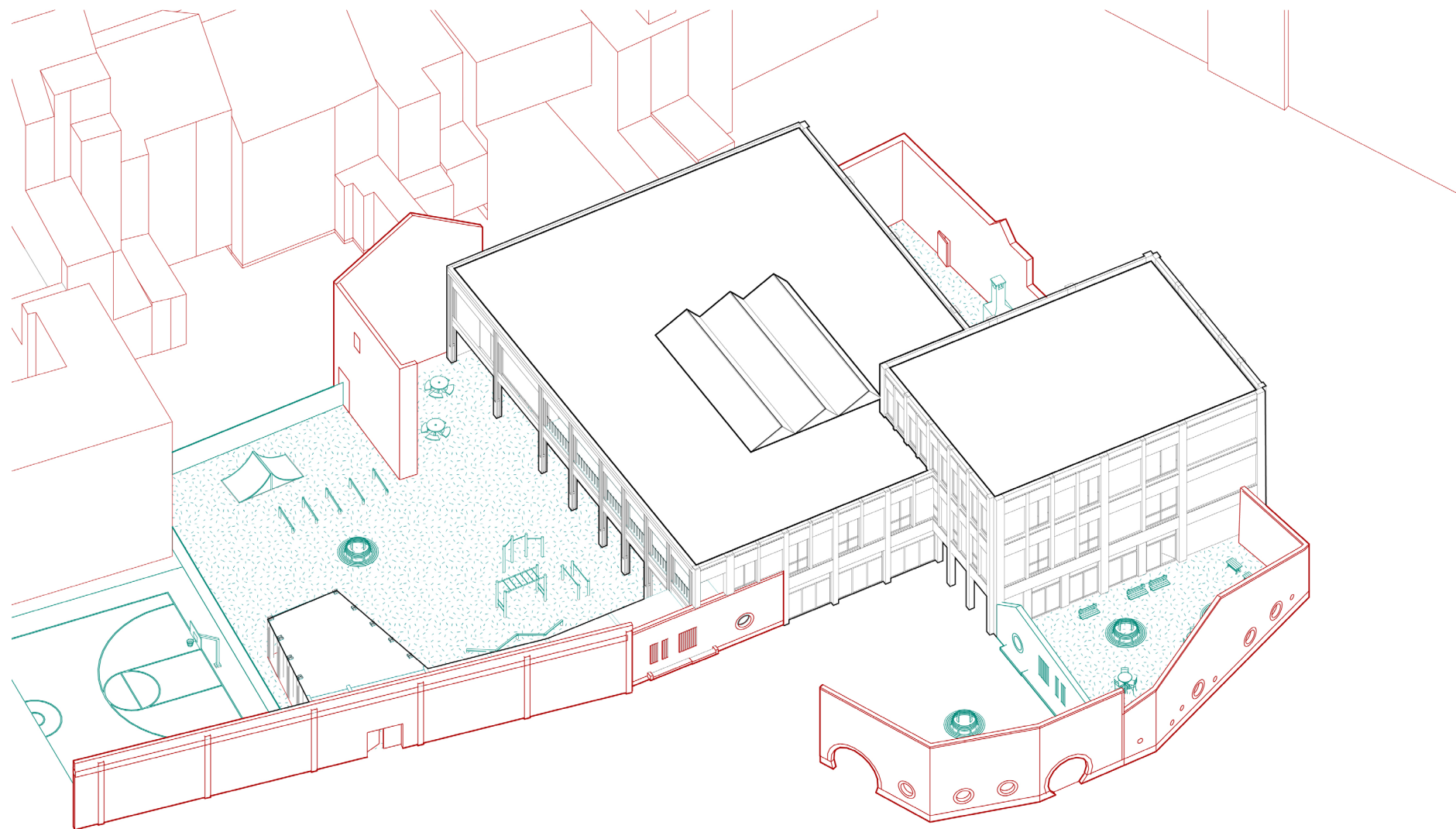
Second floor plan



Stay hungry, stay foolish



existing fragments



Once existing fragments collide with new ones, the process of **Bricolage** comes up



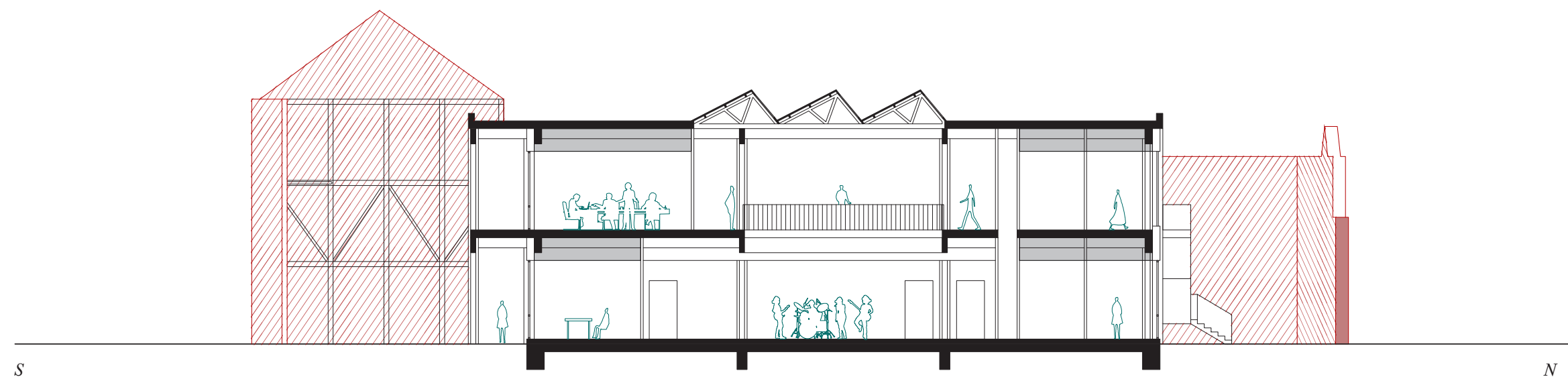


Front facades

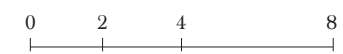
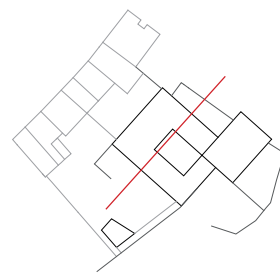




Back facades

Front and rear, the **revitalized** space and memory

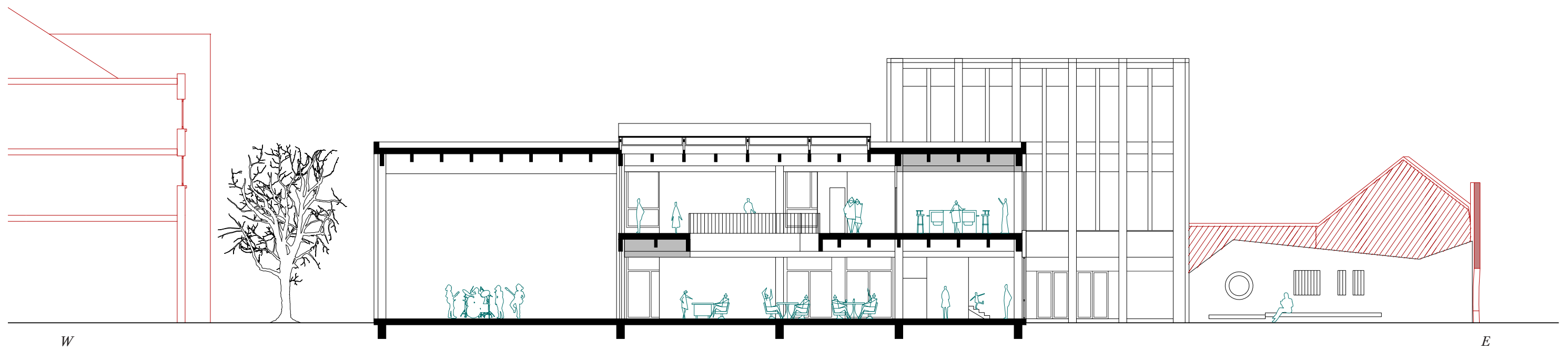


Section A-A

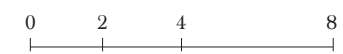
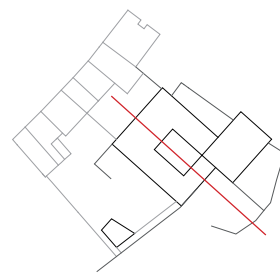


-  Kept wall
-  Suspended ceiling

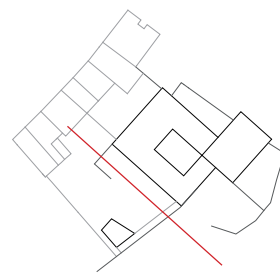




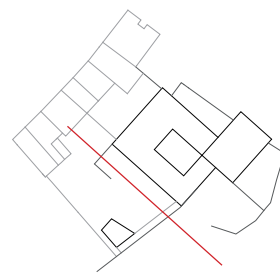
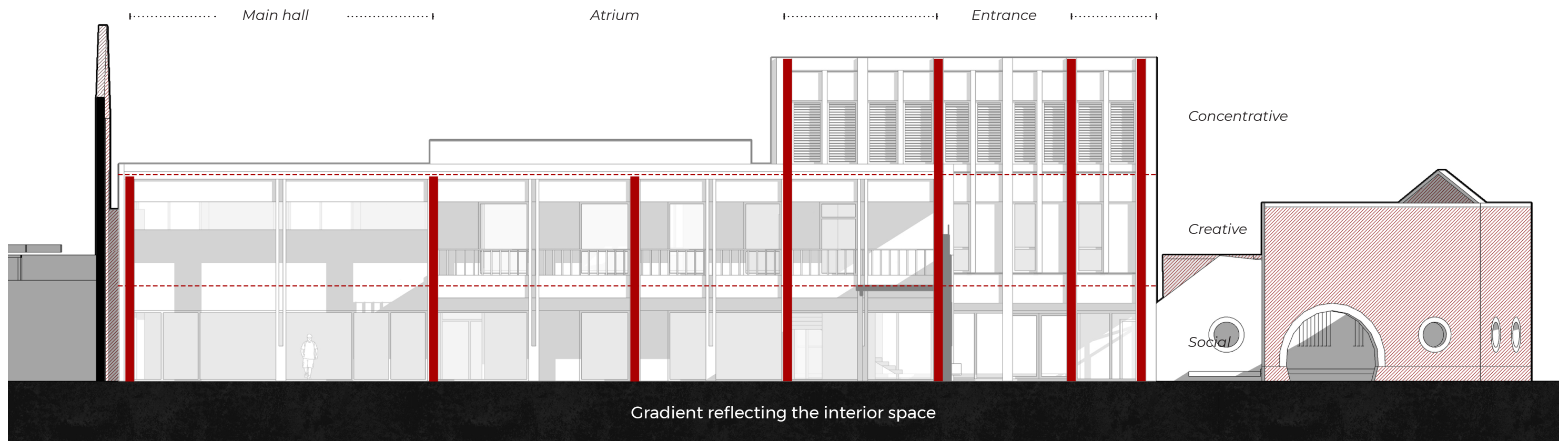
Section B-B

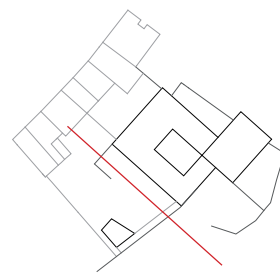


- Kept wall
- Suspended ceiling



Kept wall







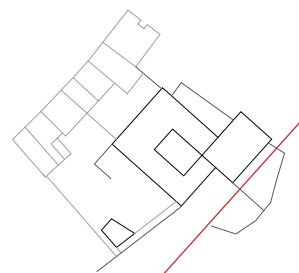
Facade

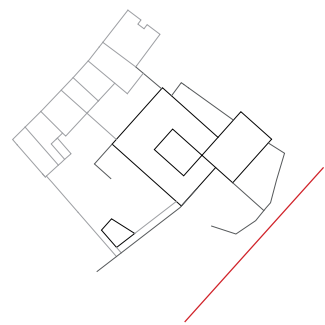
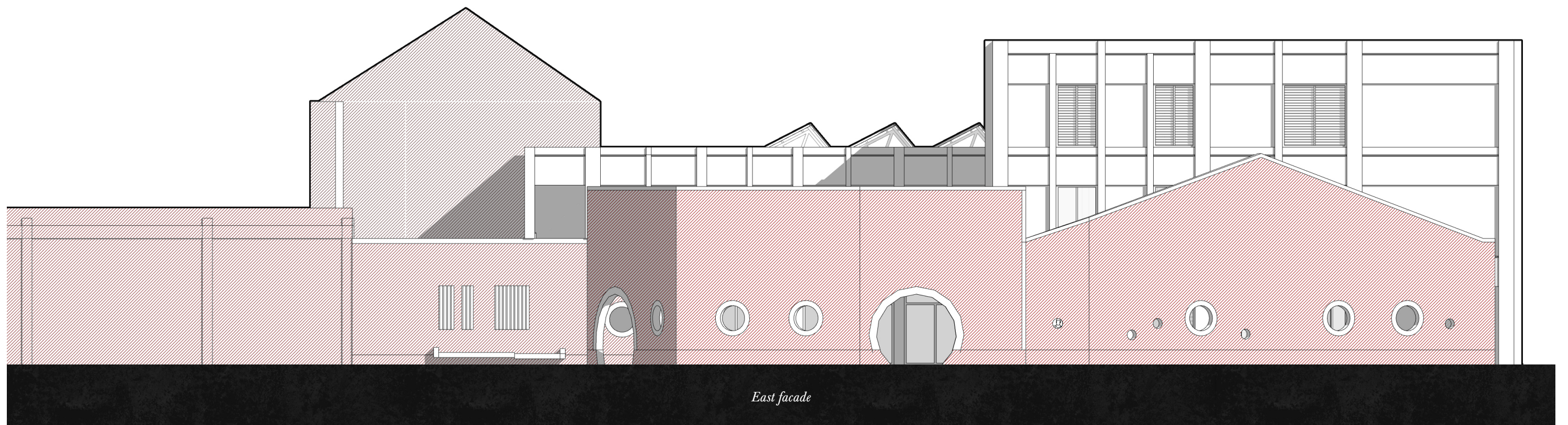


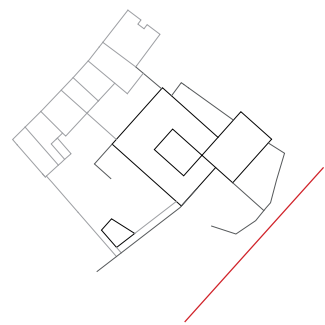
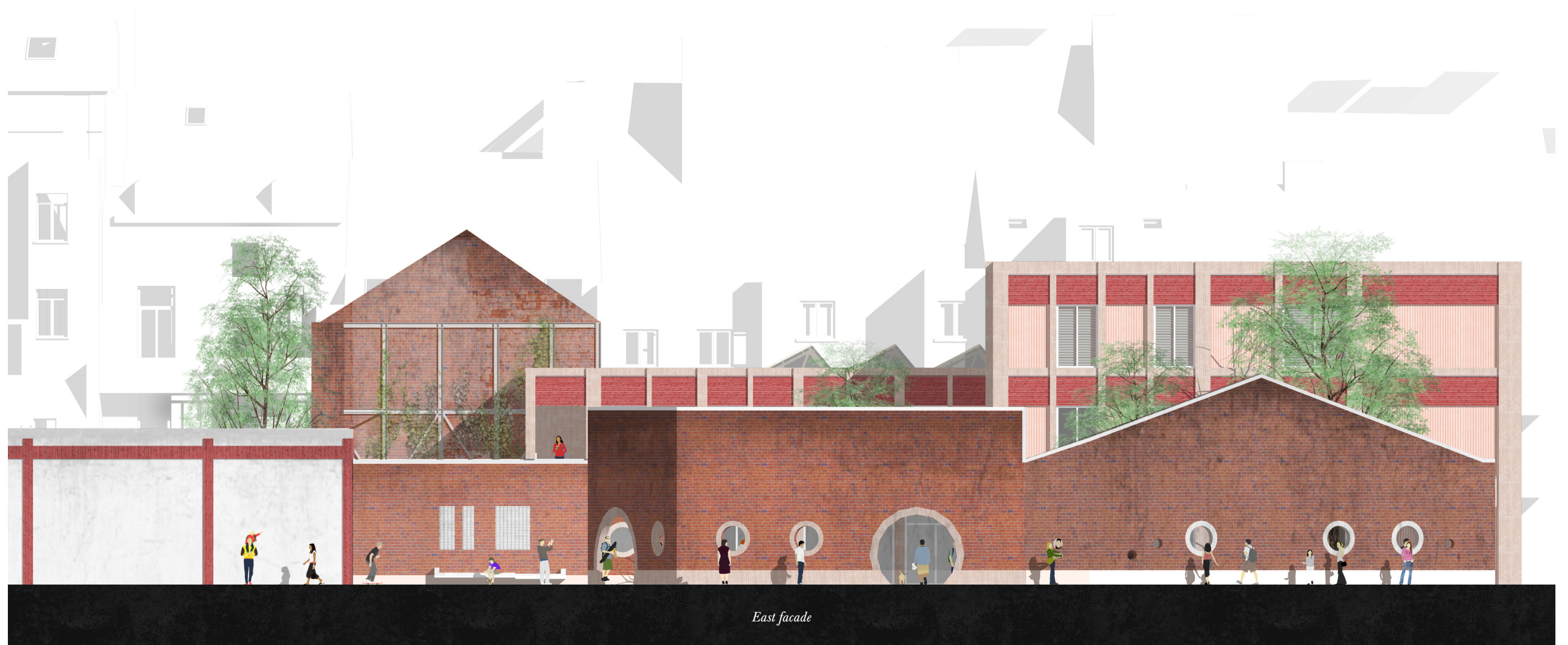
Round and linear

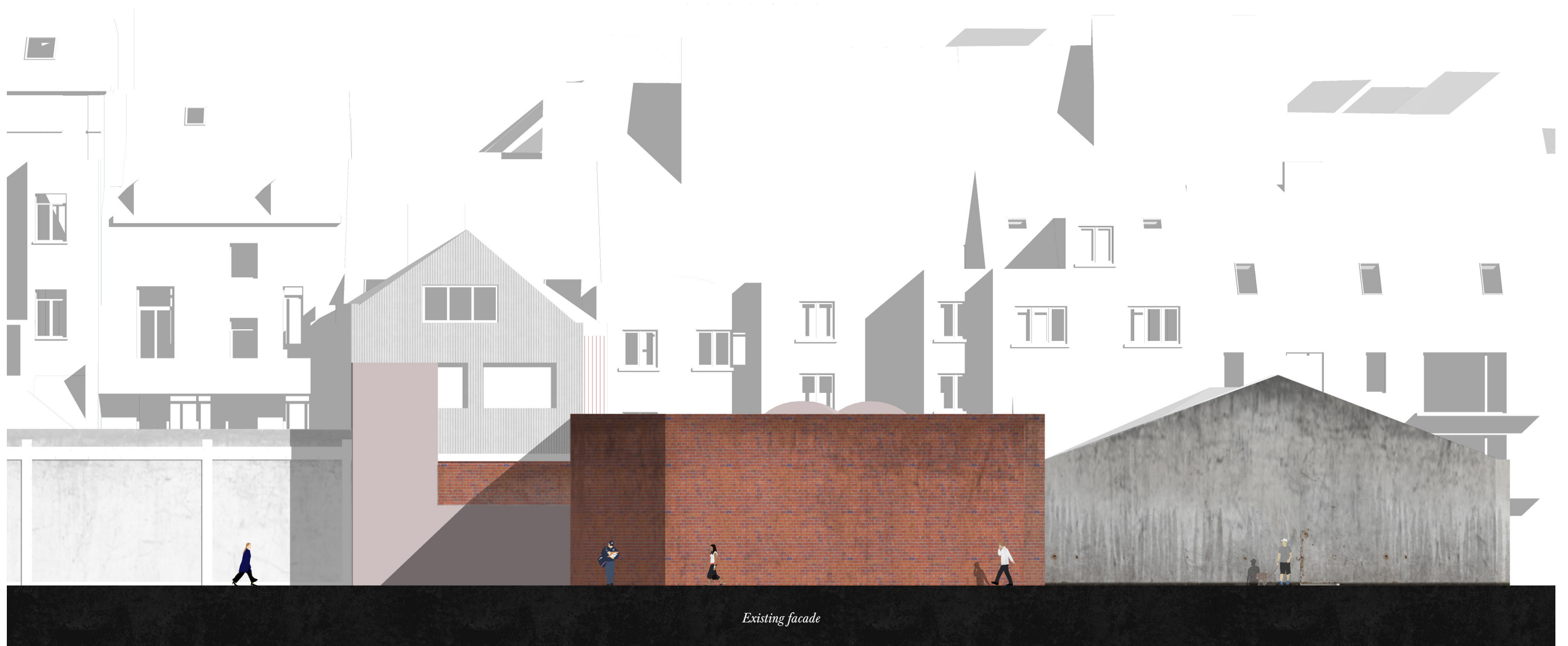


Frame and encounter









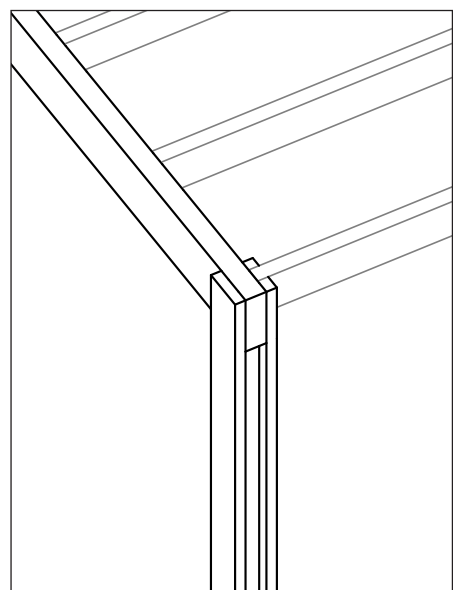


Precedents dealing with existing walls

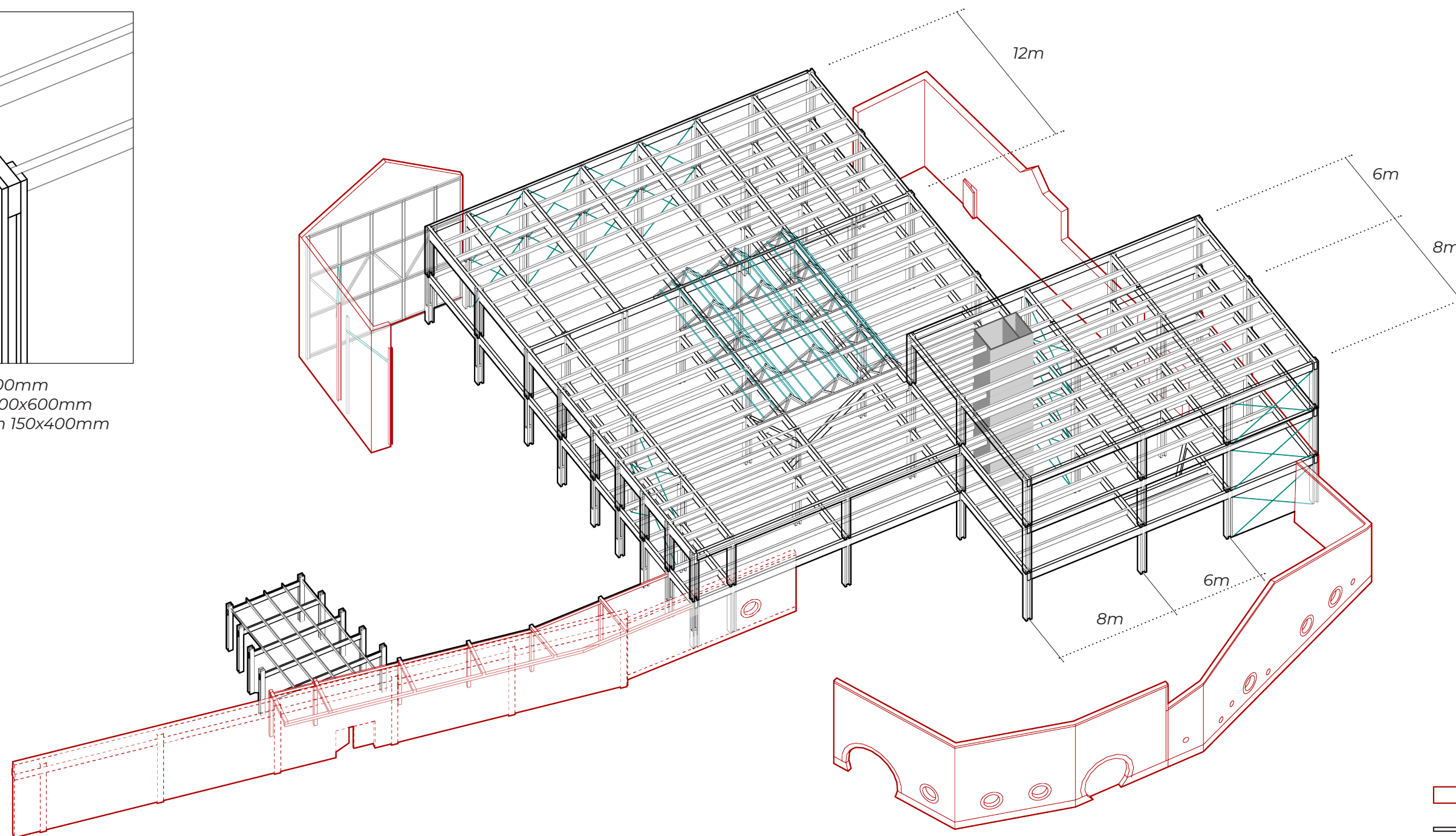
Building technology

Materialization

Spolia



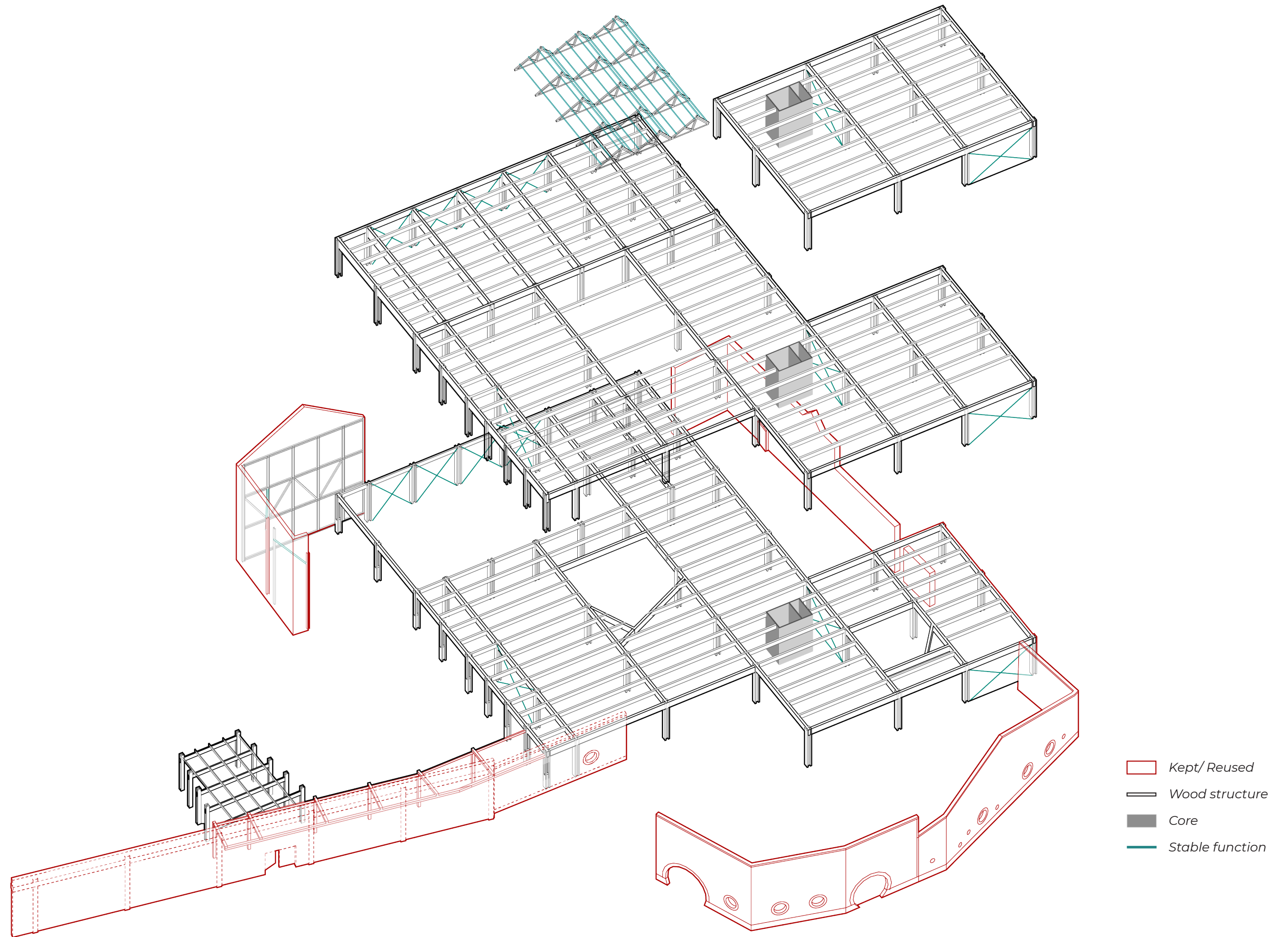
Columns 400x400mm
Primary beam 200x600mm
Secondary beam 150x400mm



- Kept/ Reused
- Wood structure
- Core
- Stable function

Structure

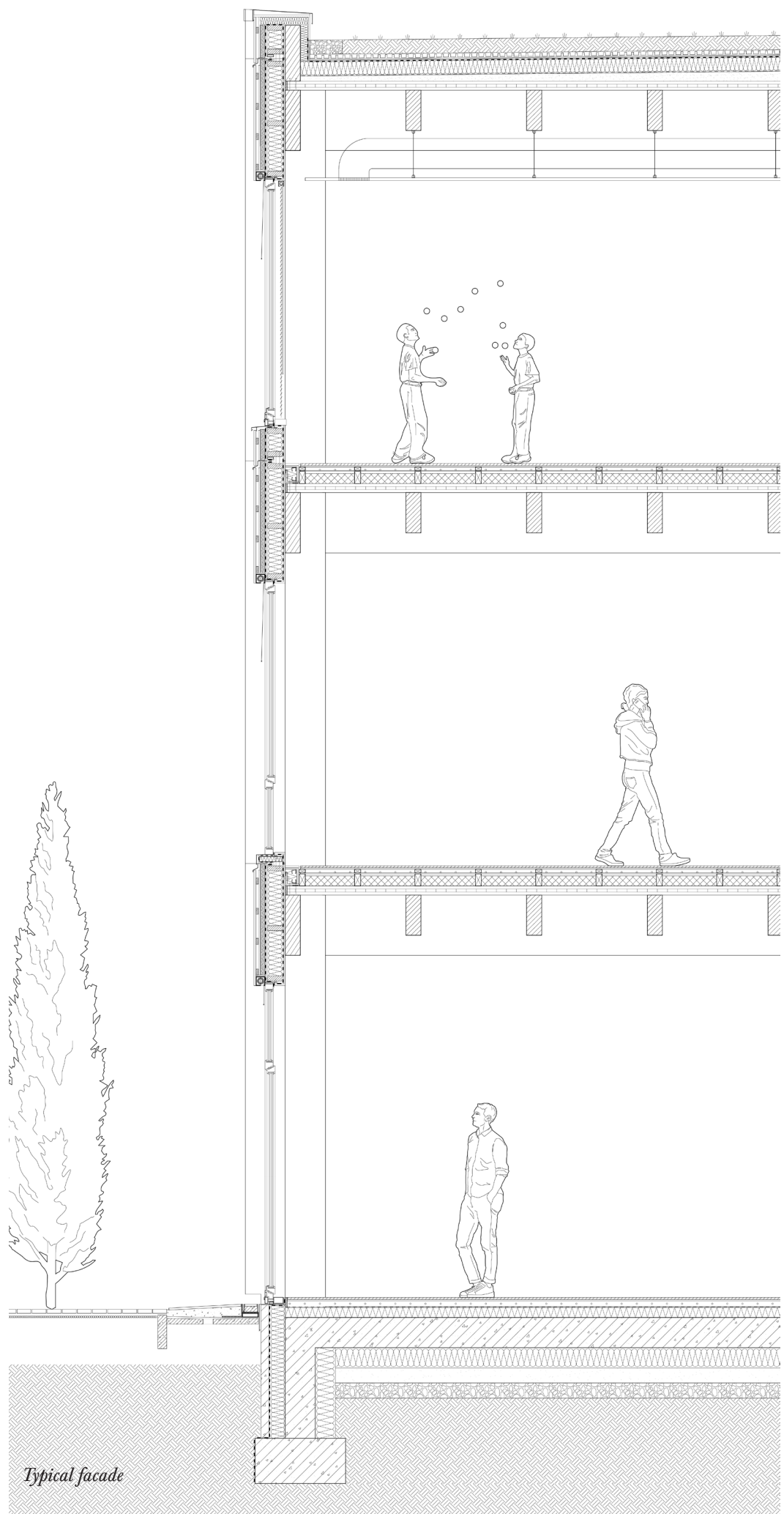
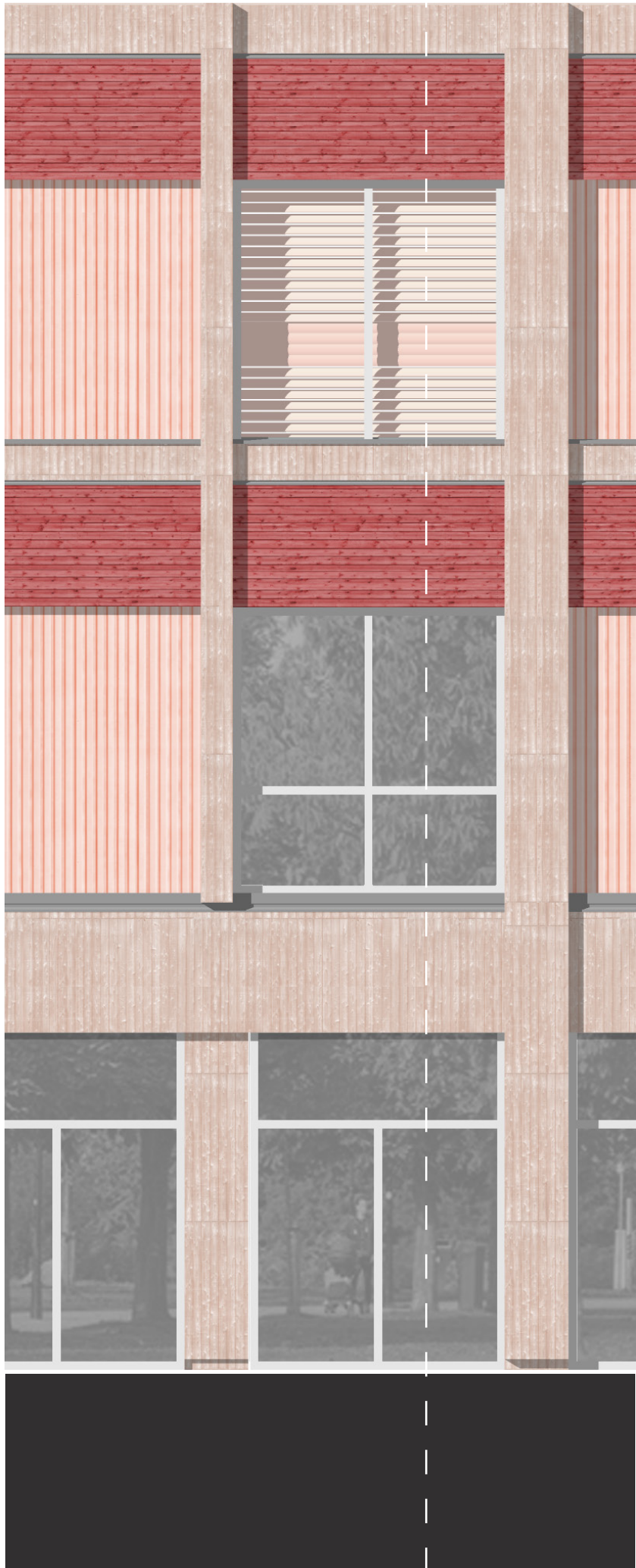


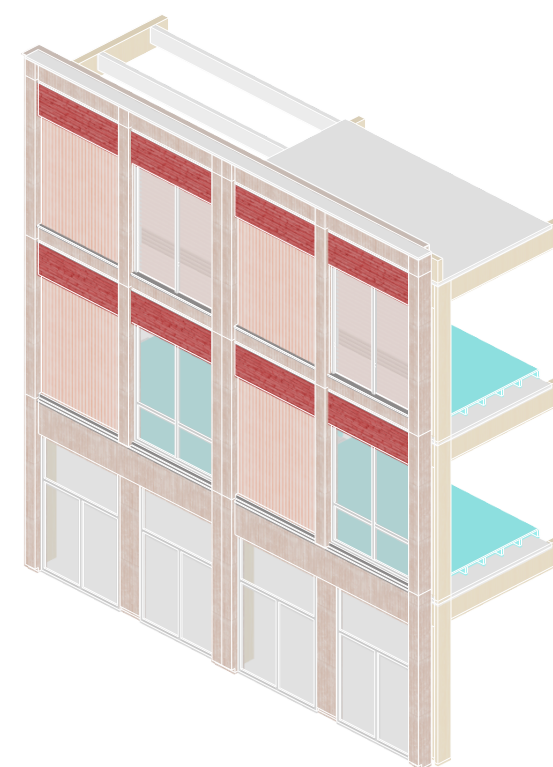
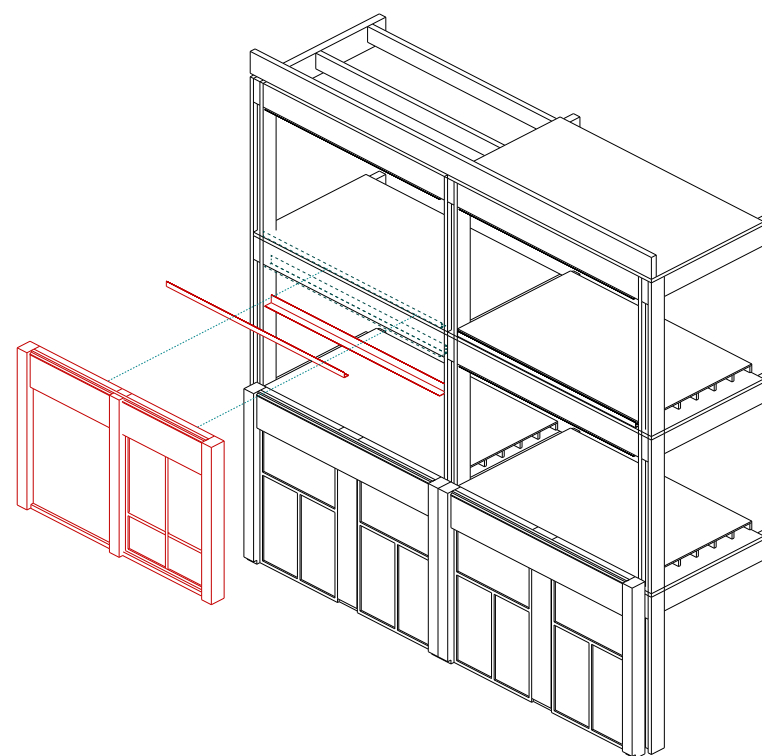
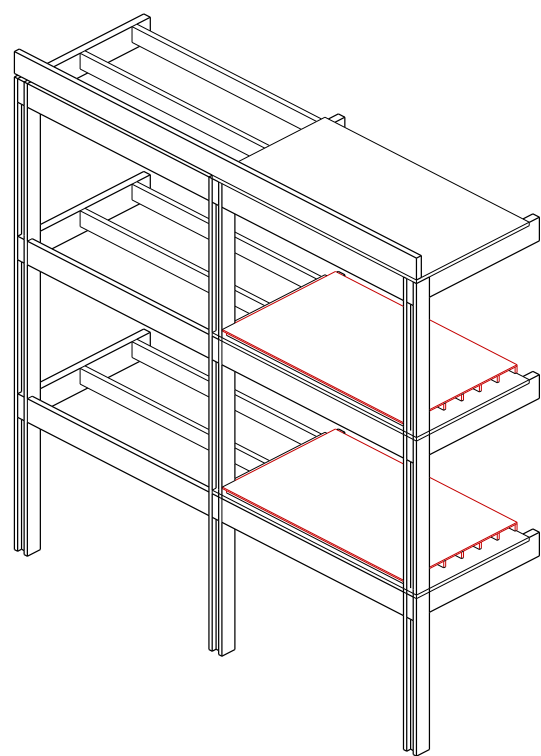
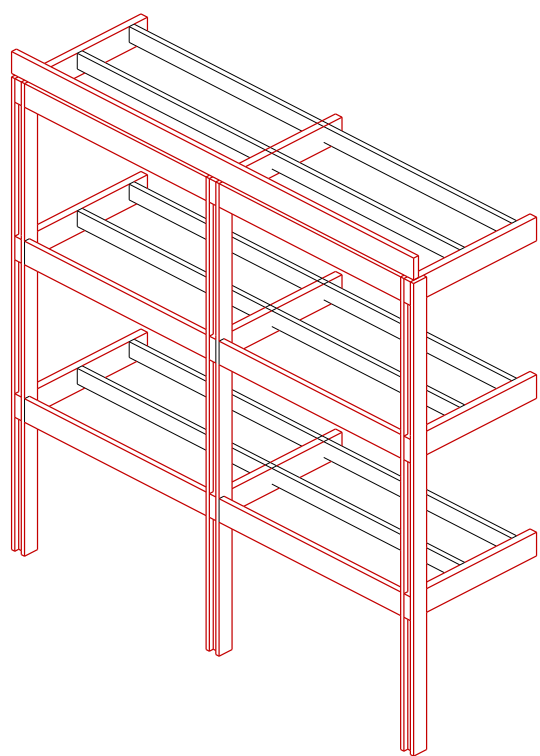


Structure

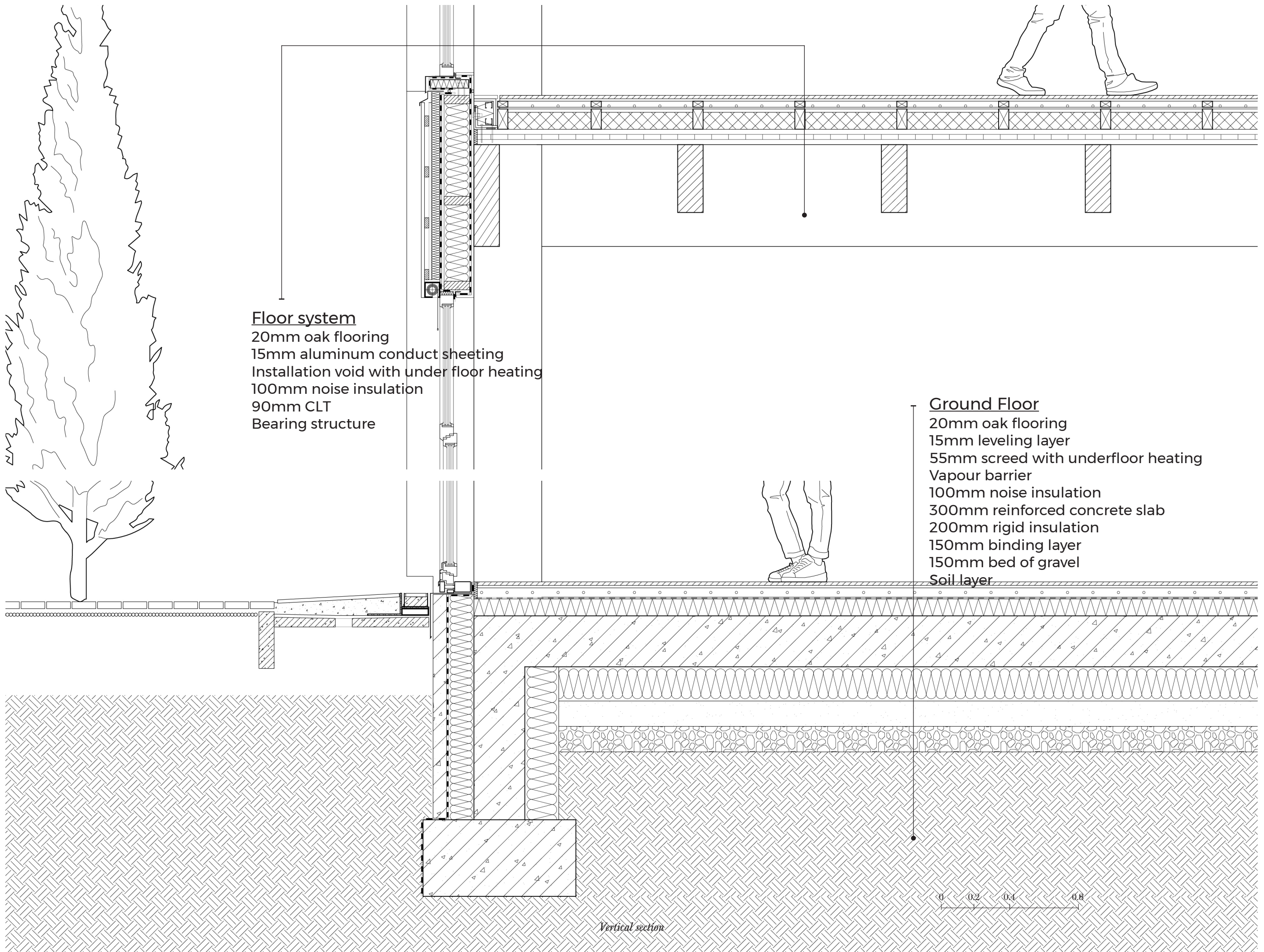








Prefabricated assemblage



Floor system
20mm oak flooring
15mm aluminum conduct sheeting
Installation void with under floor heating
100mm noise insulation
90mm CLT
Bearing structure

Ground Floor
20mm oak flooring
15mm leveling layer
55mm screed with underfloor heating
Vapour barrier
100mm noise insulation
300mm reinforced concrete slab
200mm rigid insulation
150mm binding layer
150mm bed of gravel
Soil layer

0 0.2 0.4 0.8

Vertical section

Green roof

- Vegetation
- 140mm substrate (and room for water storage)
- Filter
- 50mm drainage
- Root barrier and mechanical protection (Geotextile)
- Waterproof membrane
- 150mm thermal insulation
- Vapour barrier
- 60mm Sloping layer
- 90mm CLT
- Bearing structure

Prefabricated facade

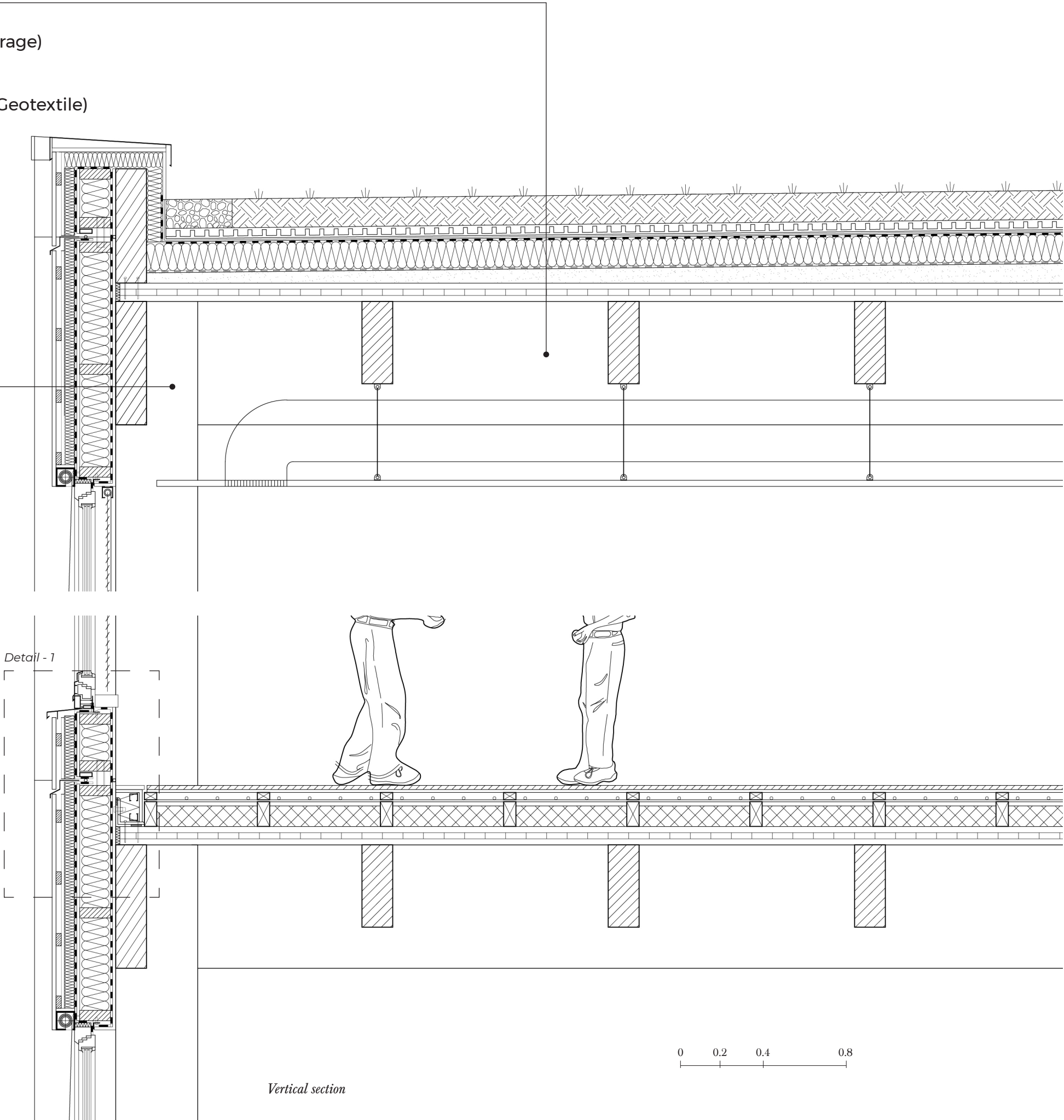
- Painted larch 20 mm
- 25x60 mm horizontal battens
- 13x60 mm vertical battens
- 50 mm Thermal insulation
- Waterproof layer
- 15 mm Plasterboard
- 150 mm rigid insulation

- *Added on site:
- Vapour barrier
 - 15 mm Plasterboard
 - Interior paint

Detail - 1

0 0.2 0.4 0.8

Vertical section



Connector for facade elements

Prefabricated facade

Painted larch 20 mm
25x60 mm horizontal battens
13x60 mm vertical battens
50 mm Thermal insulation
Waterproof layer
15 mm Plasterboard
150 mm rigid insulation

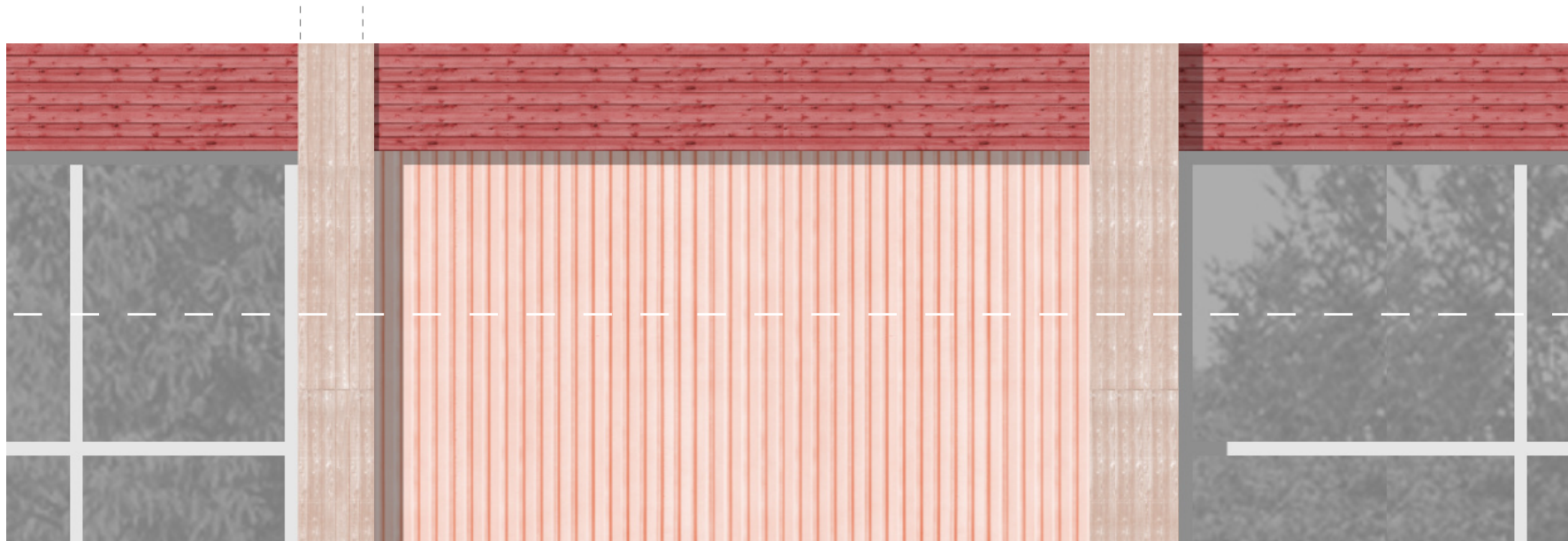
*Installed after panel erection:

Vapour barrier
15 mm Plasterboard
Interior paint

Gypsum wall board curb filled with mineral wool
(installed after panel erection)

Steel angle bracket
(installed before panel erection)

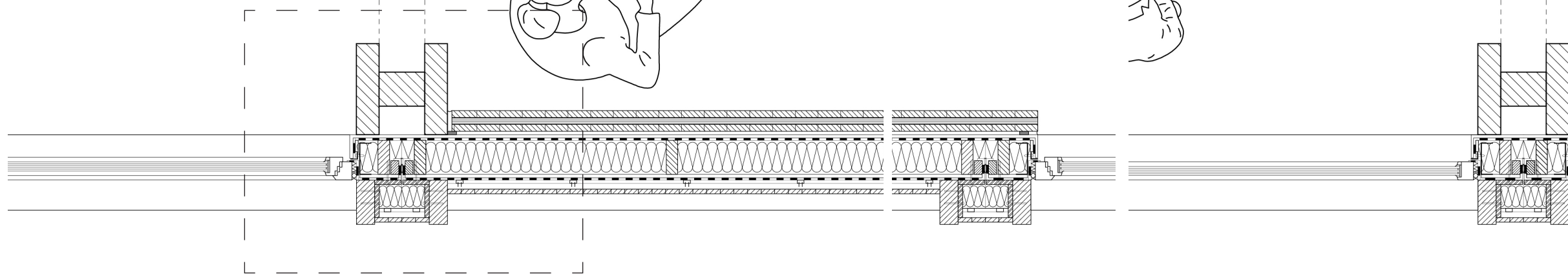
Detail - 1



INTERIOR

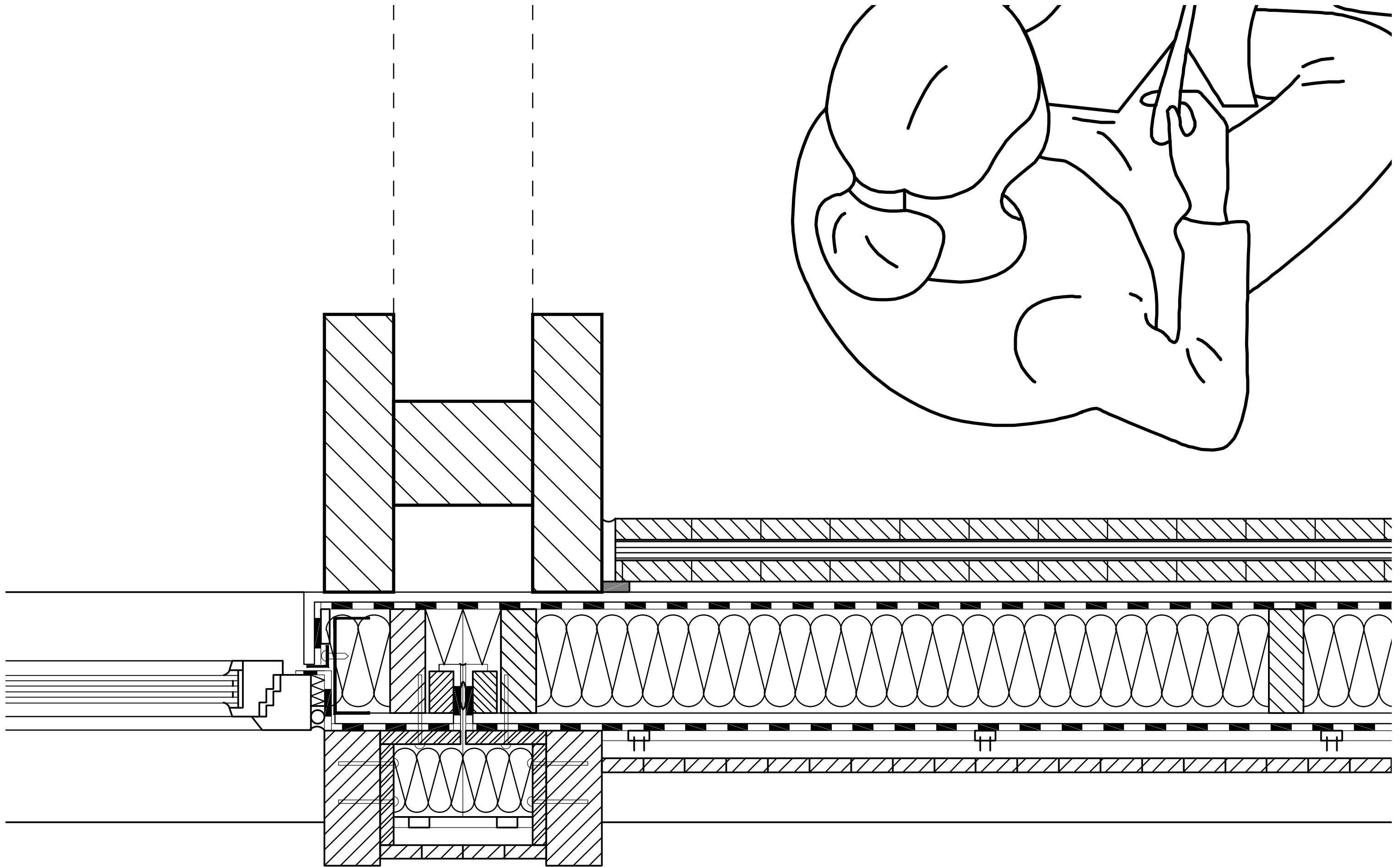


Detail - 2

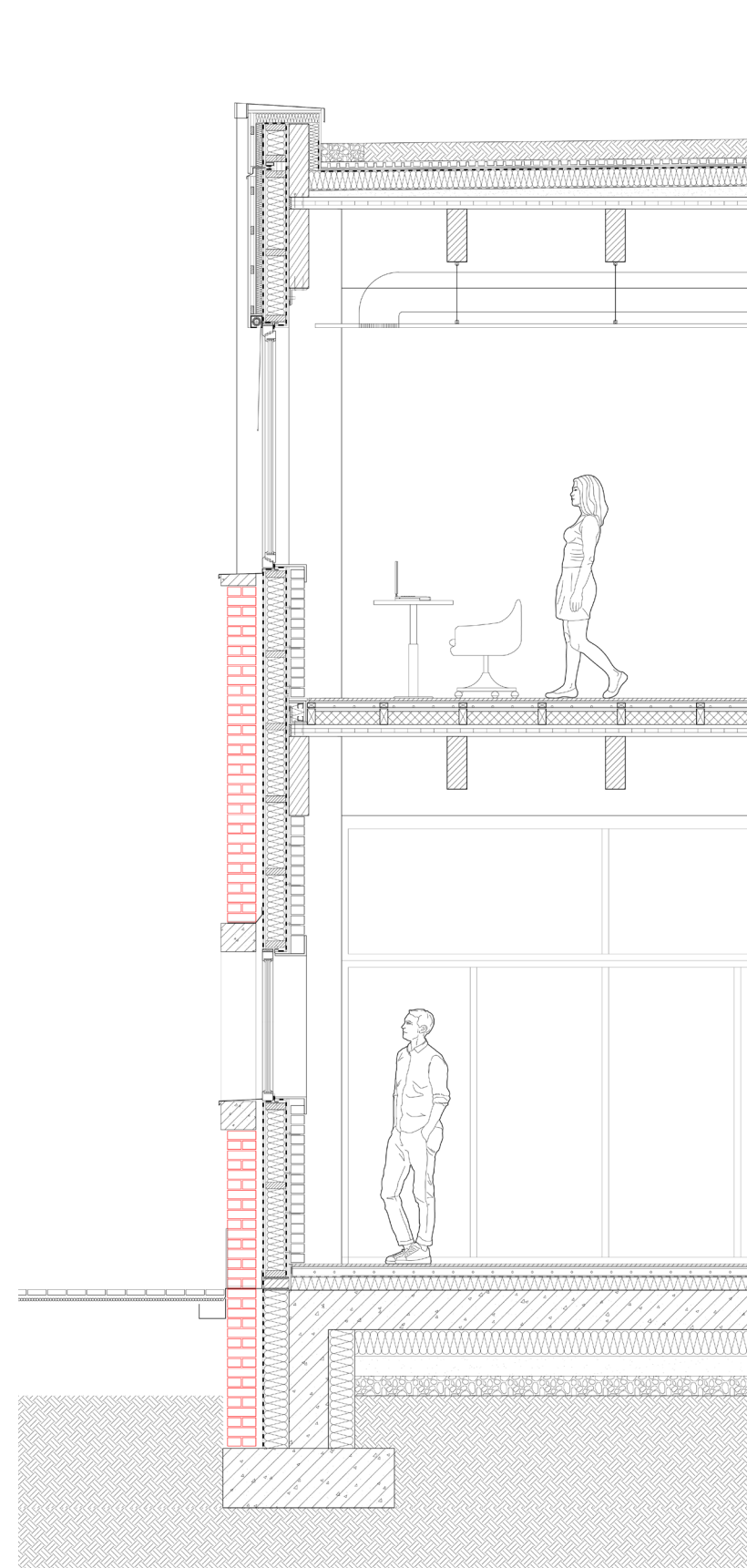
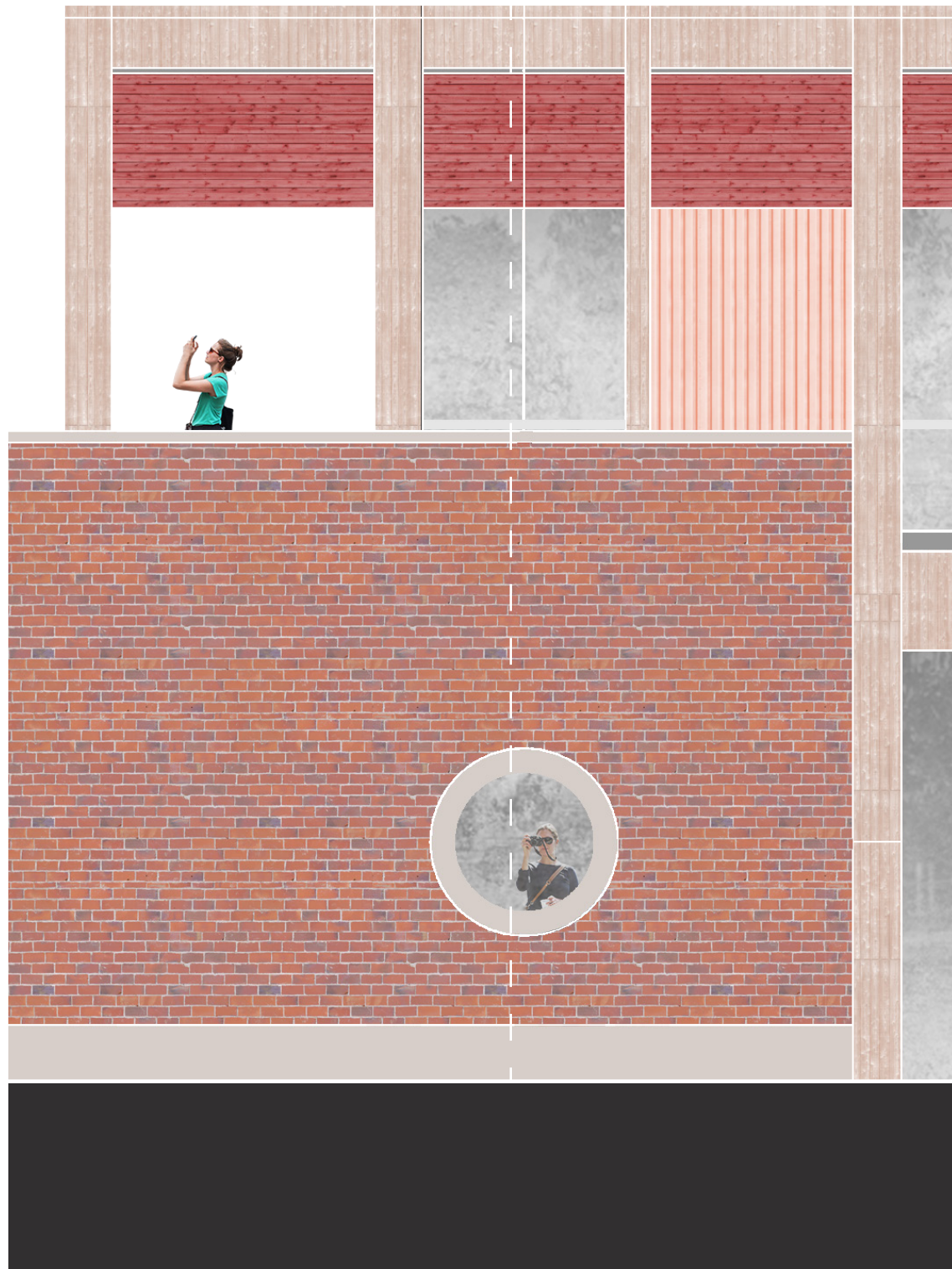


EXTERIOR

Horizontal section



Detail - 2



Rebuilt wall attached

Wall

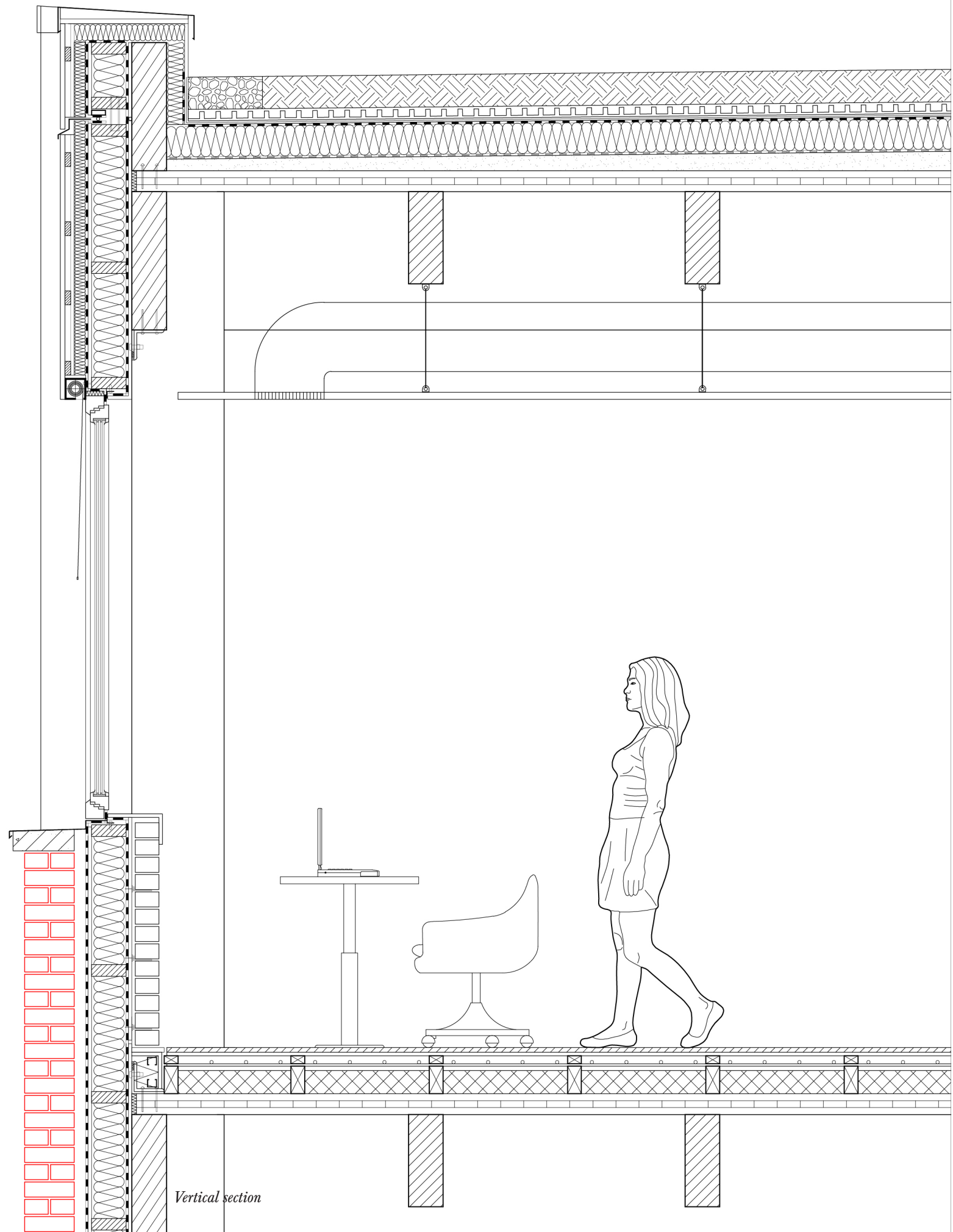
Rebuilt 215x102.5x65mm brick wall, English bond
50mm cavity layer
Waterproof layer
15mm Plasterboard
150mm insulation
Vapour barrier
15mm Plasterboard
Brick tie
Reclaimed 215x102.5x65mm brick
400x400mm Timber column

Detail - 3

Ground Floor

20mm oak flooring
15mm leveling layer
55mm screed with underfloor heating
Vapour barrier
100mm noise insulation
300mm reinforced concrete slab
200mm rigid insulation
150mm binding layer
150mm bed of gravel
Soil layer

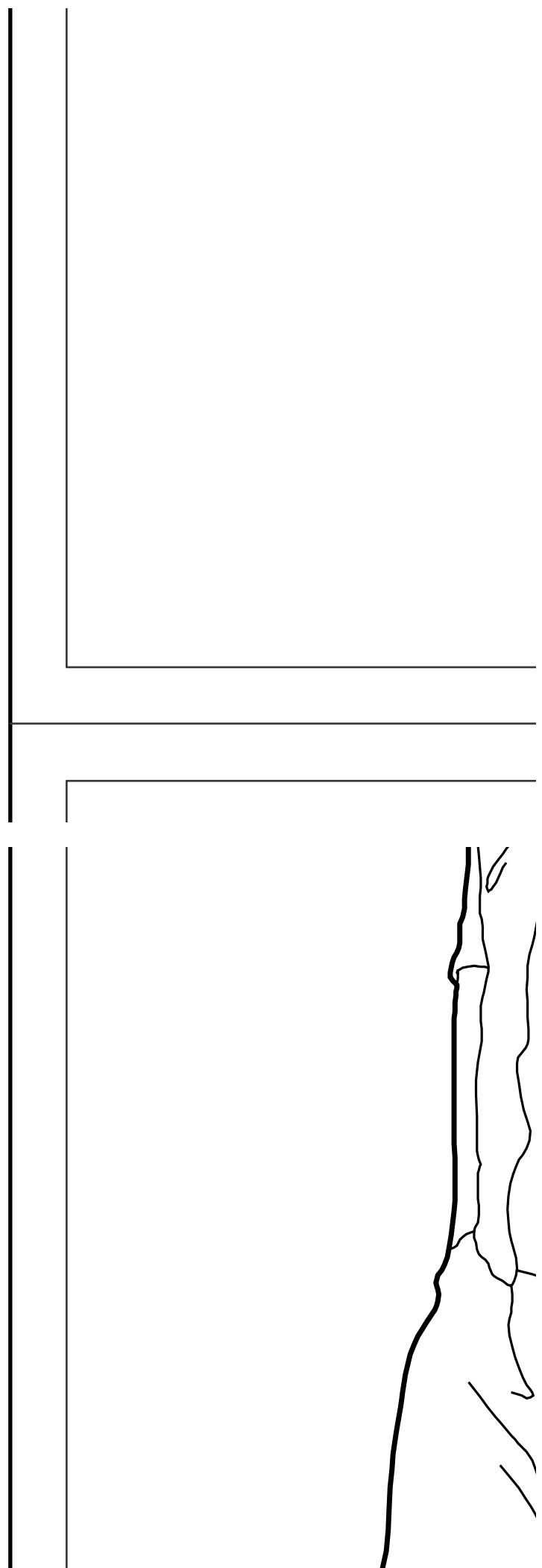
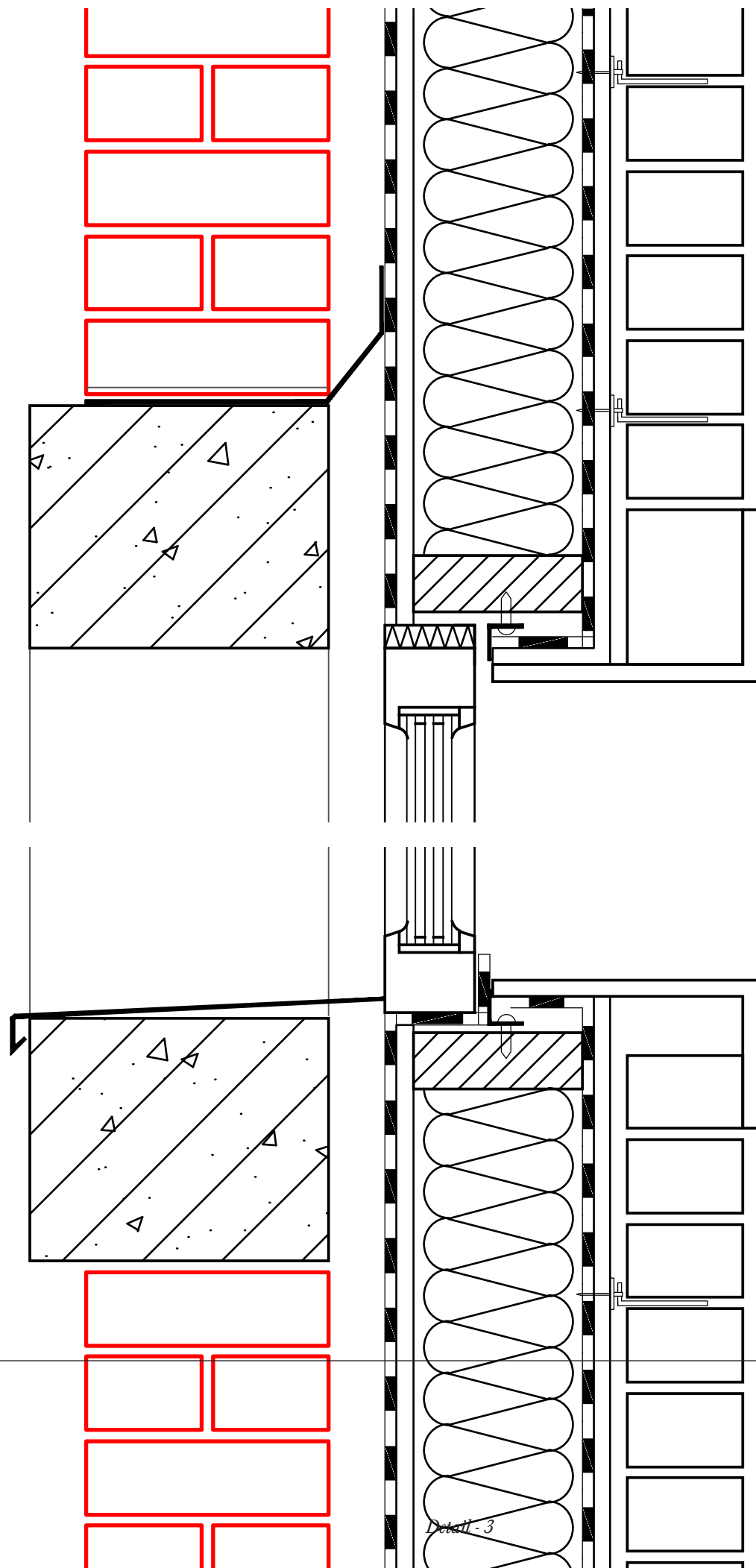
Vertical section



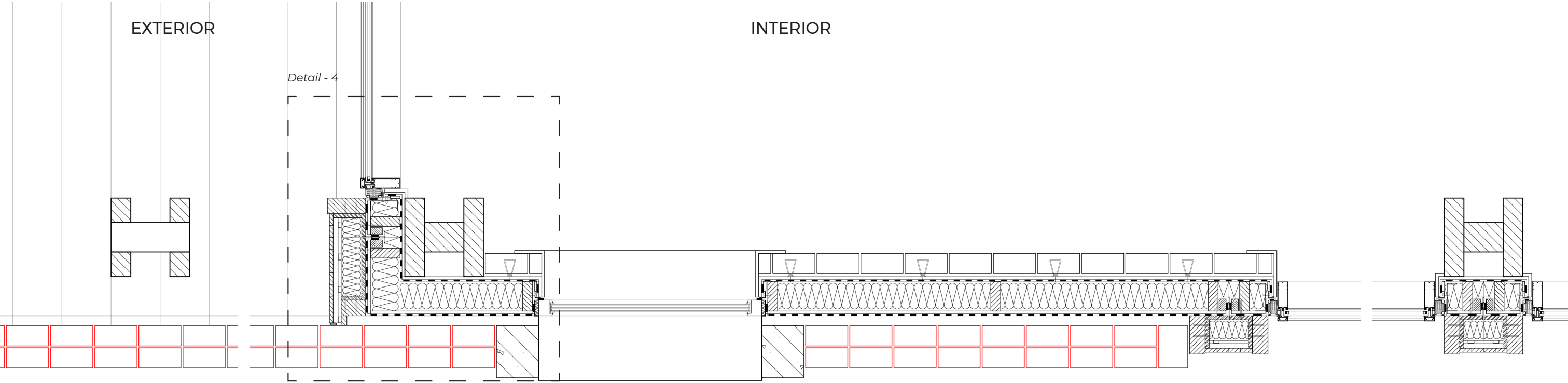
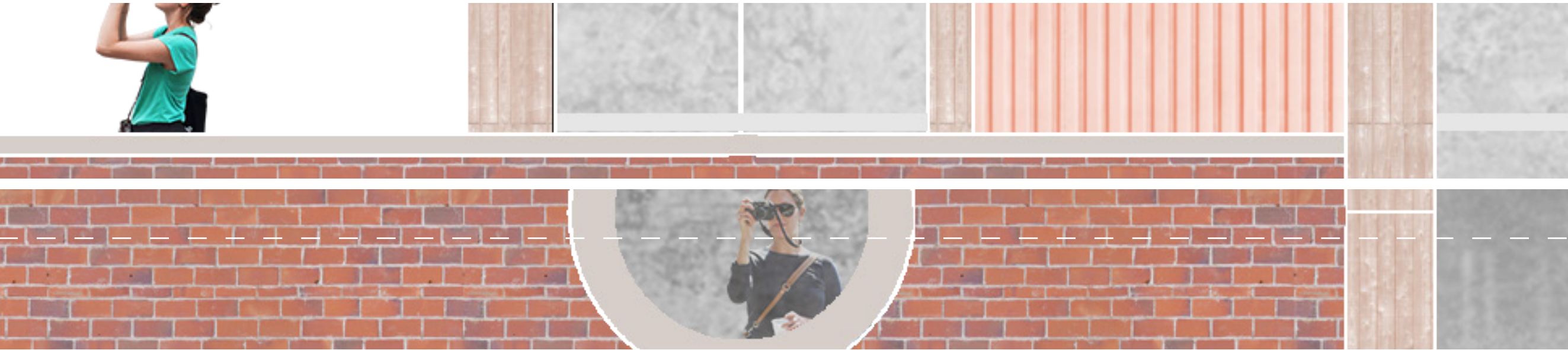
Vertical section

Wall

Rebuilt 215x102.5x65mm brick wall, English bond
50mm cavity layer
Waterproof layer
15mm Plasterboard
150mm insulation
Vapour barrier
15mm Plasterboard
Brick tie
Reclaimed 215x102.5x65mm brick
400x400mm Timber column

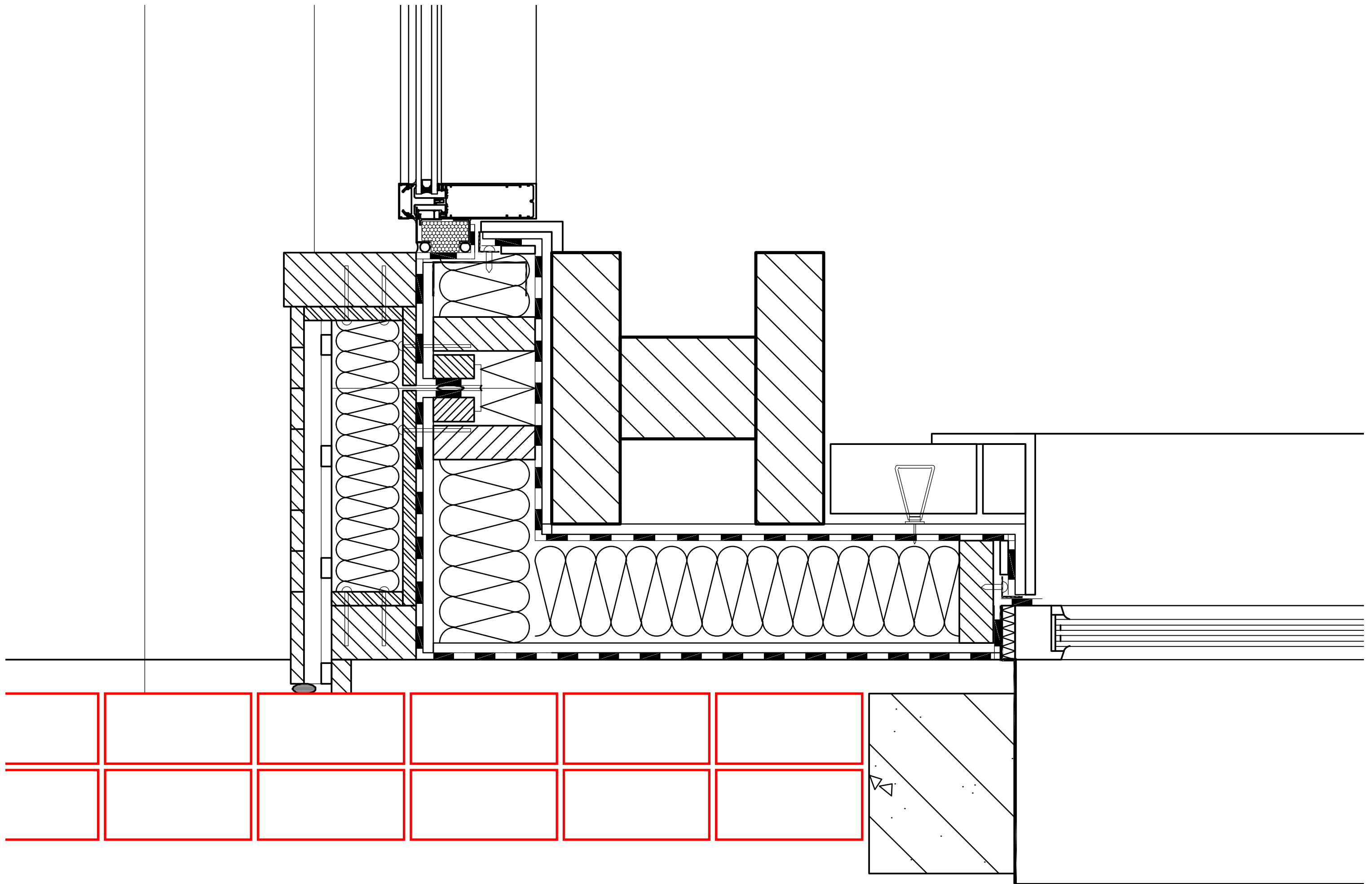




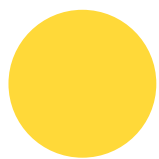


EXTERIOR

Horizontal section



Detail - 4

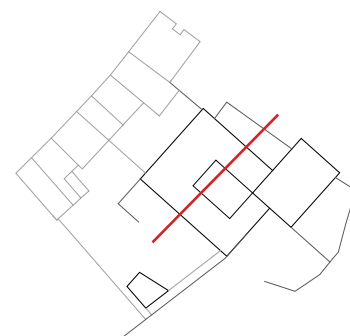


S

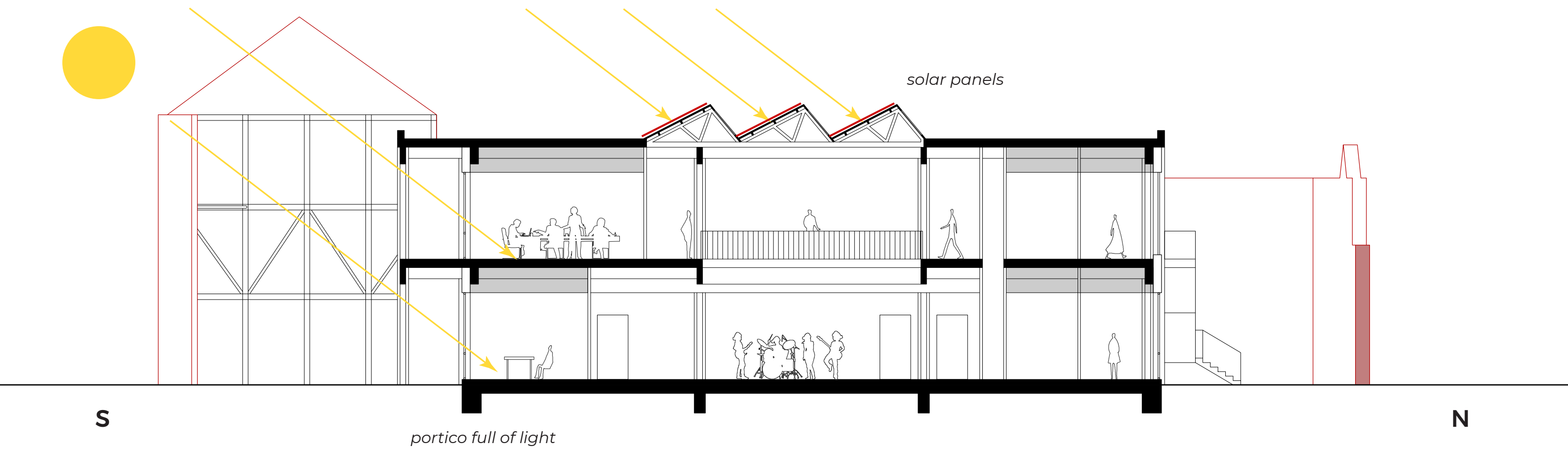
N

portico as shed

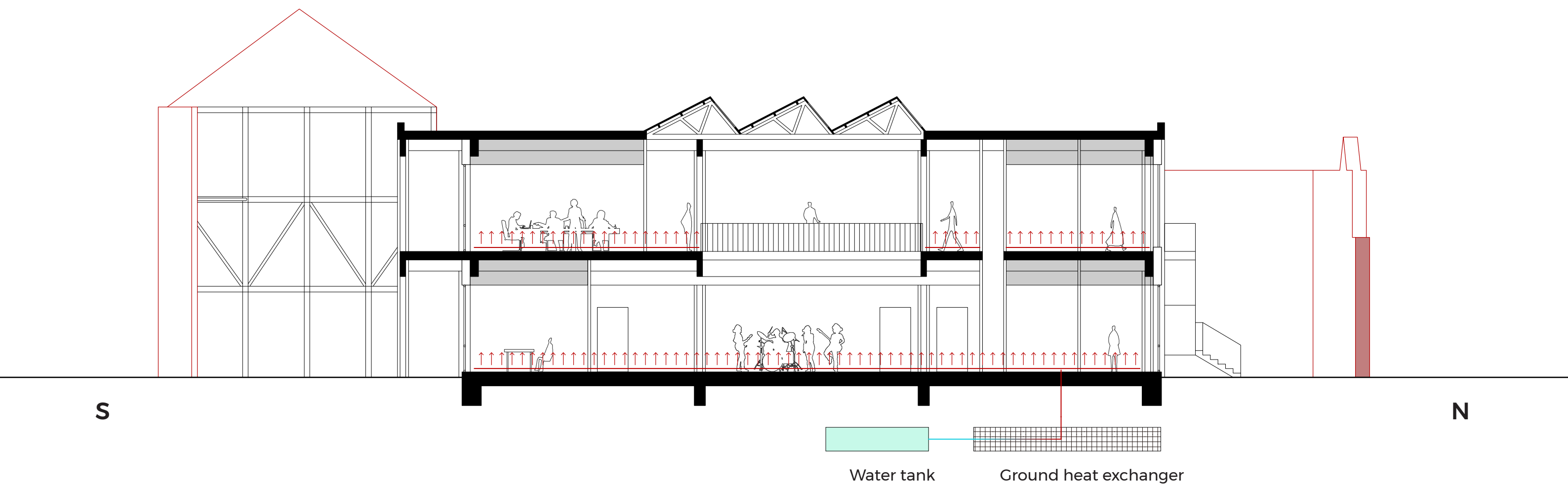
solar panels



Sunlight in summer

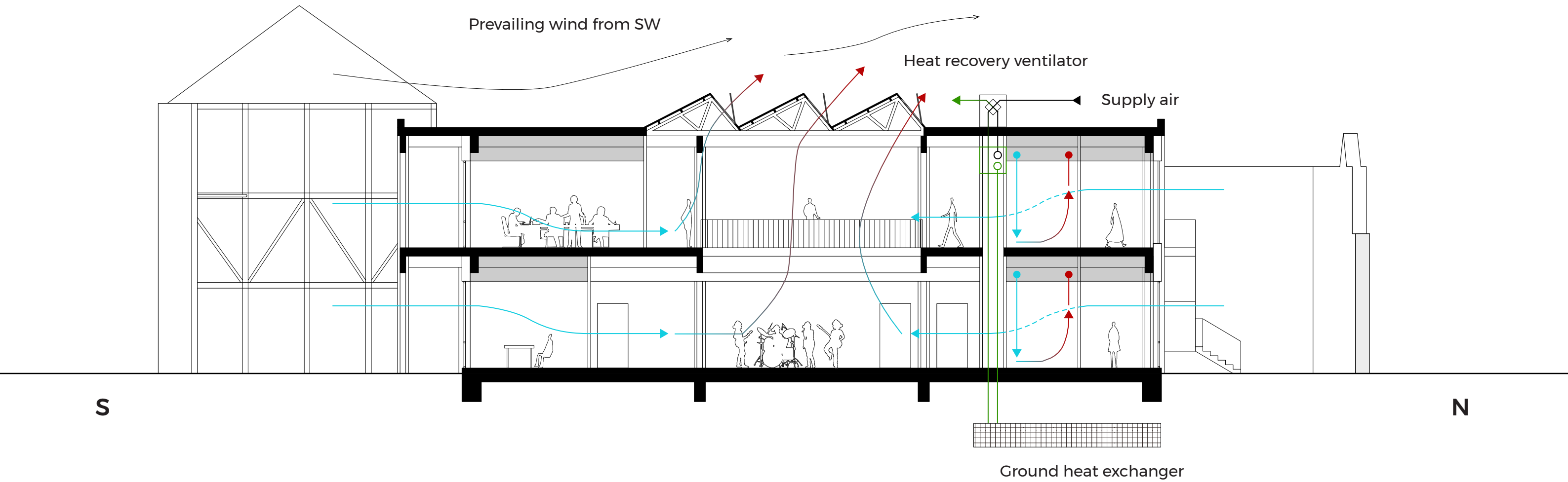


Sunlight in winter



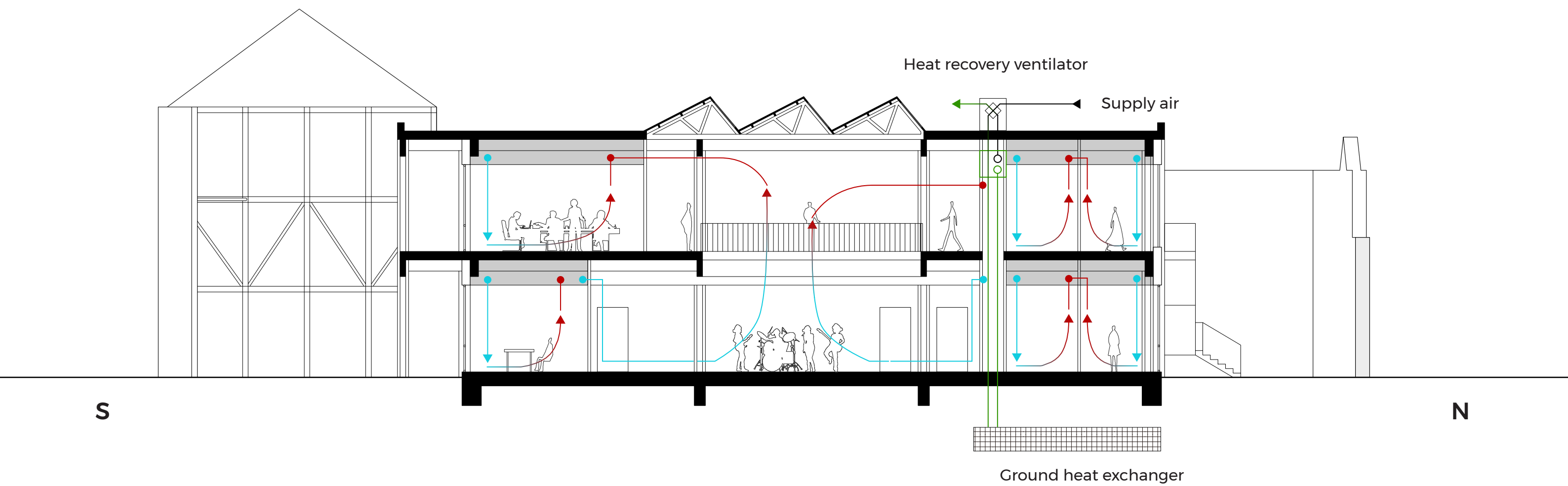
Underfloor heating

Summer
Open the windows & skylight
Mainly natural ventilation (stack effect in the atrium) + mechanical ventilation (logistic space)



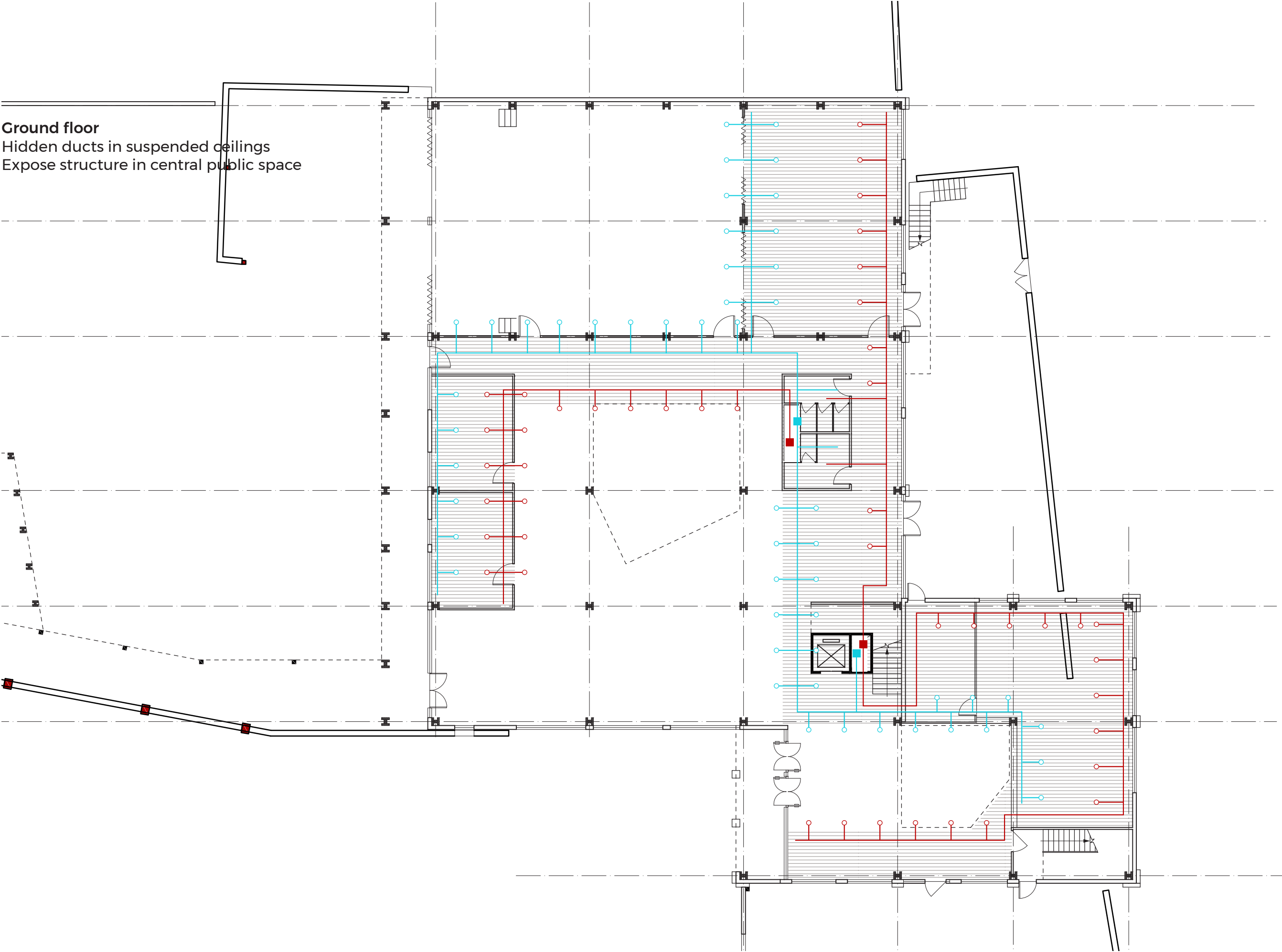
Ventilation

Winter
Close the windows & skylight
Mechanical ventilation



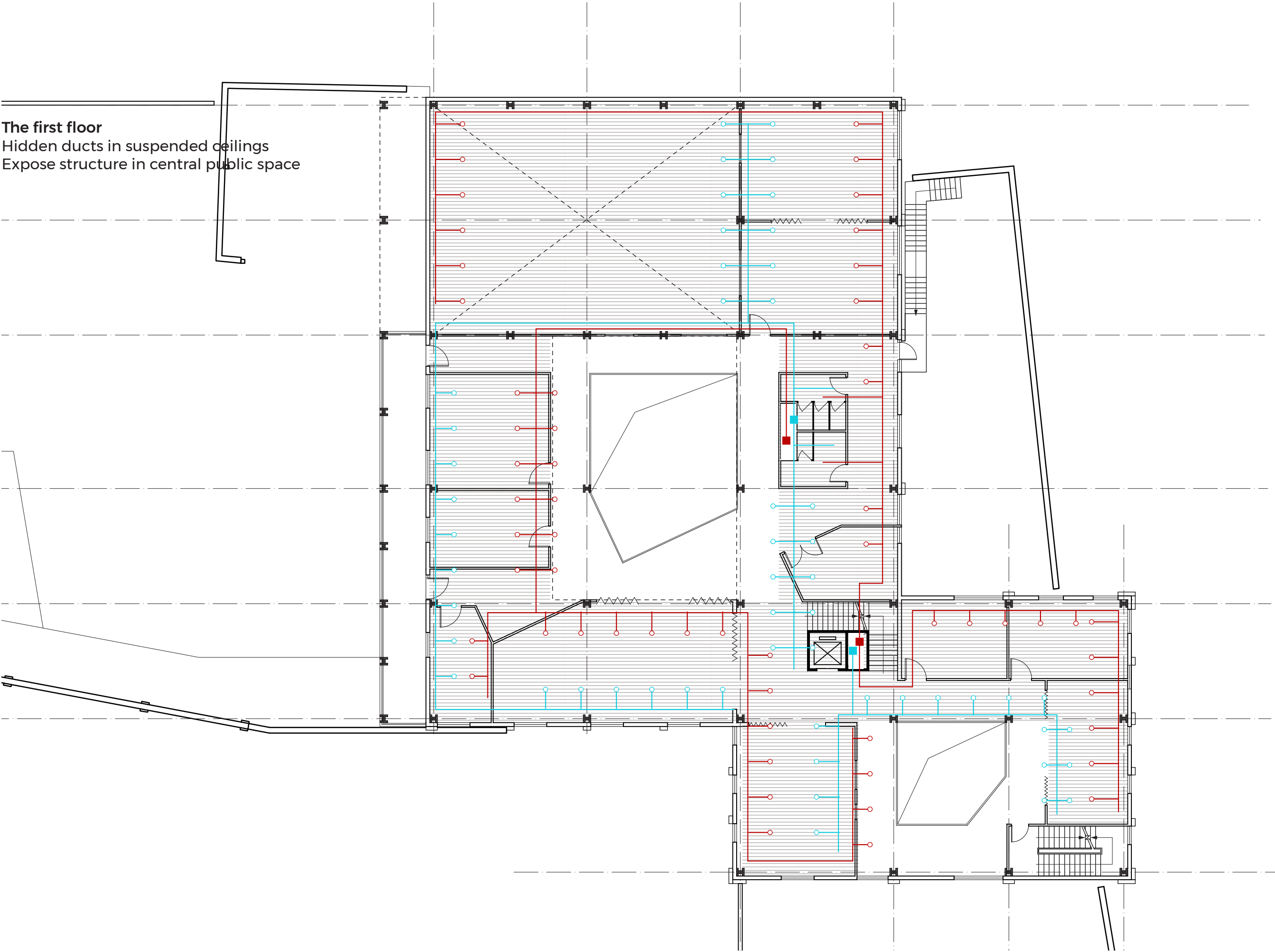
Ventilation

Ground floor
Hidden ducts in suspended ceilings
Expose structure in central public space



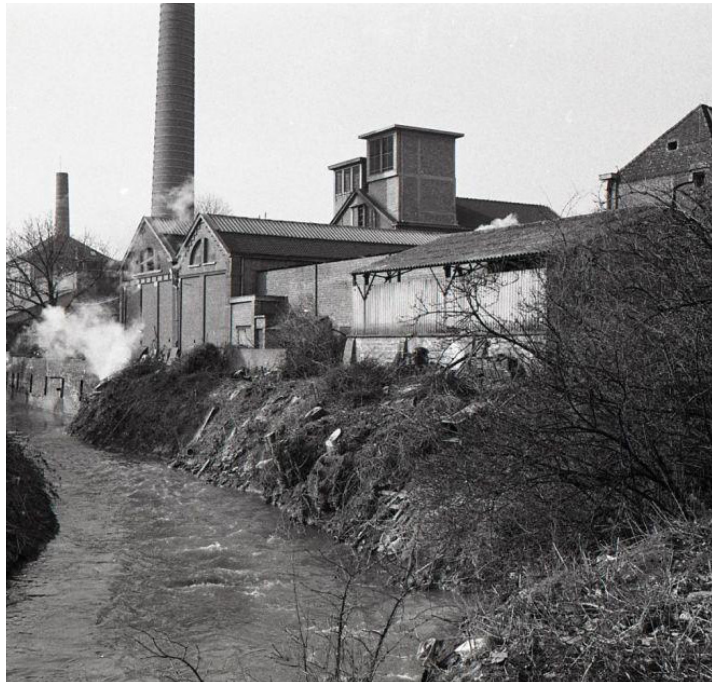
Mechanical Ventilation

The first floor
Hidden ducts in suspended ceilings
Expose structure in central public space



Mechanical Ventilation

Morphology



City

SPOLIA

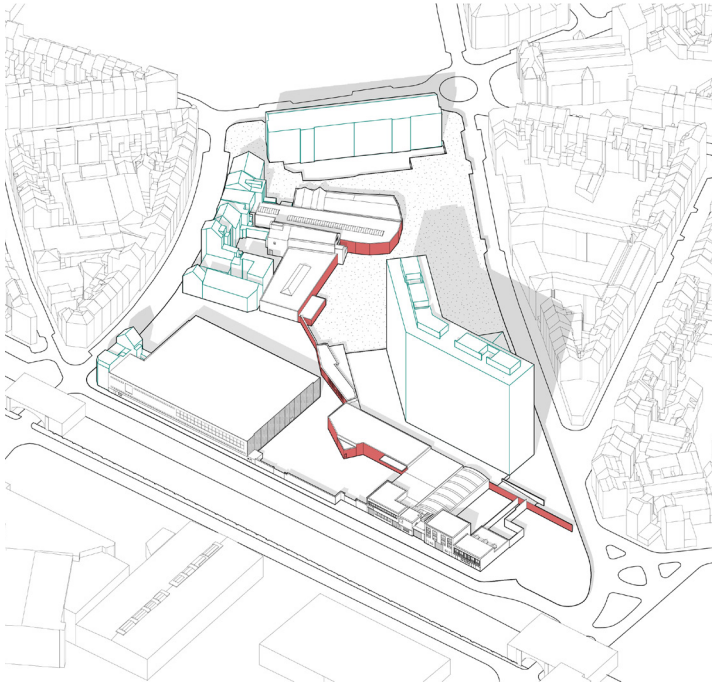
Site

Materials
Layers



Memory

Segregation



SPOLIA

Site

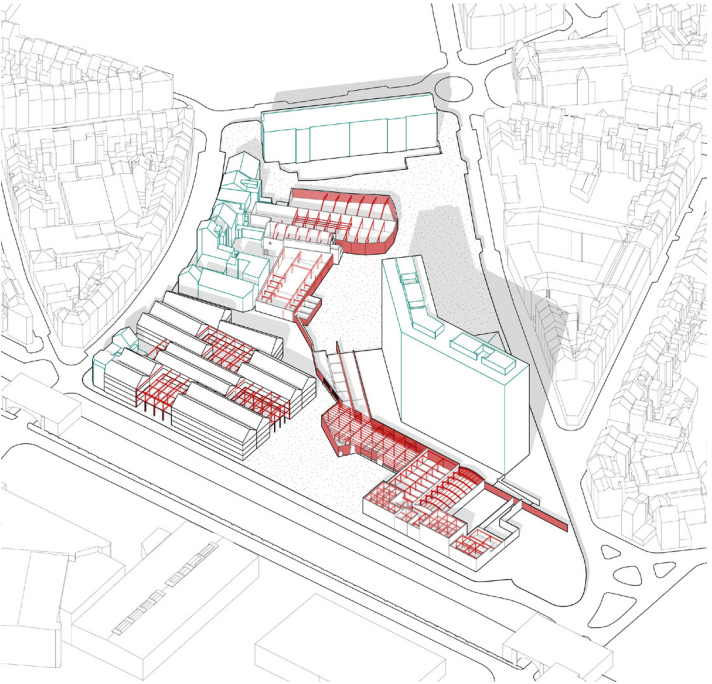
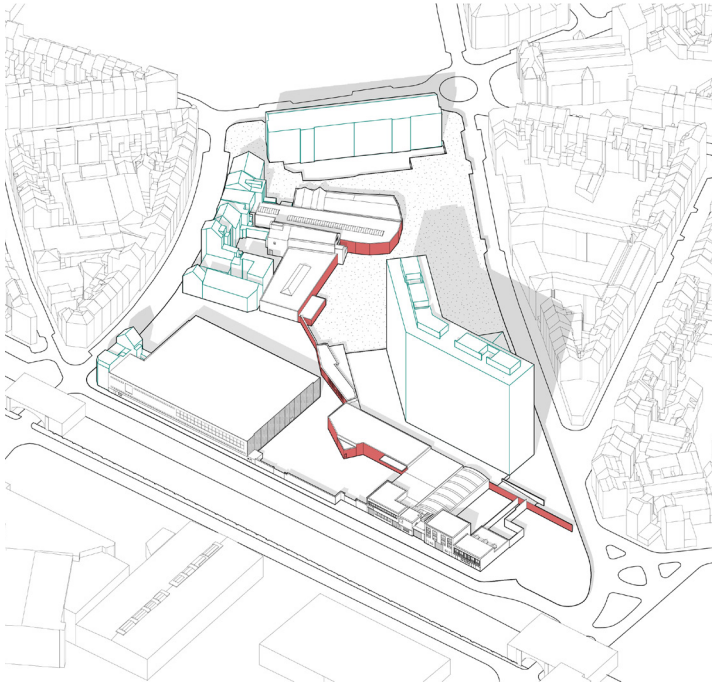
Materials
Layers



Memory



Integration



SPOLIA

Site

Materials
Layers

Memory

Integration

Mental wall

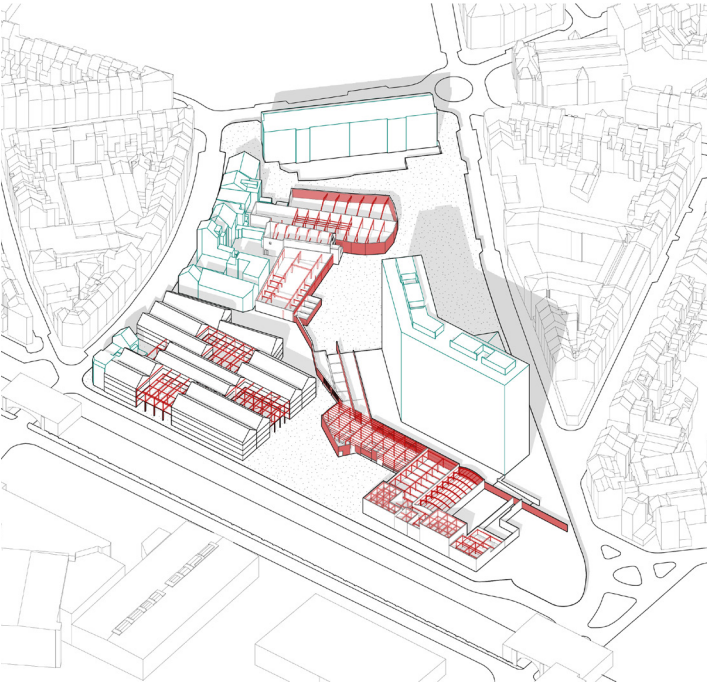


Youth Center

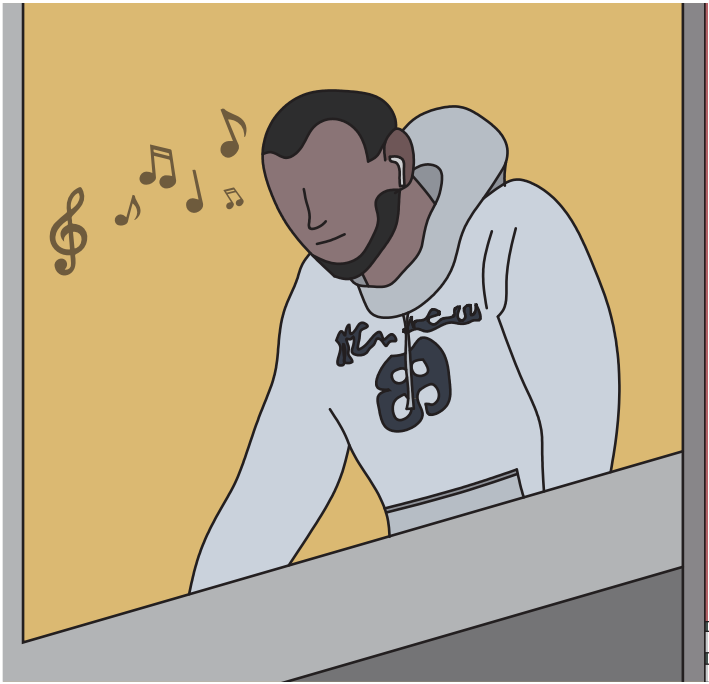
SPOLIA

Site

Materials
Layers



Memory



Integration



Mental wall/ they are the “wall”

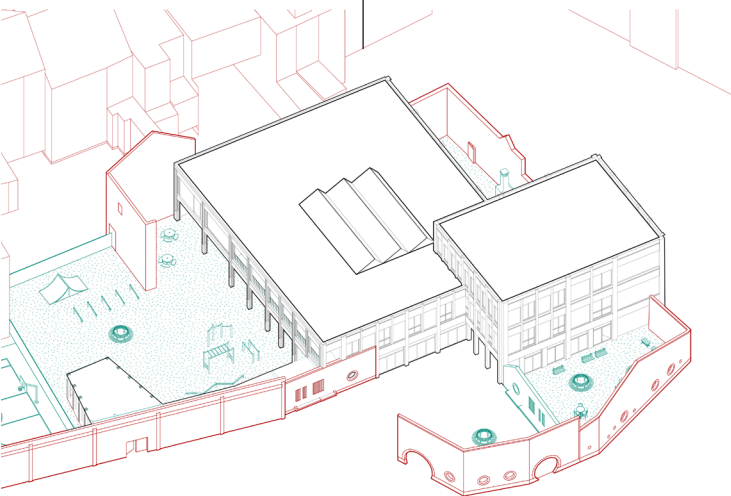
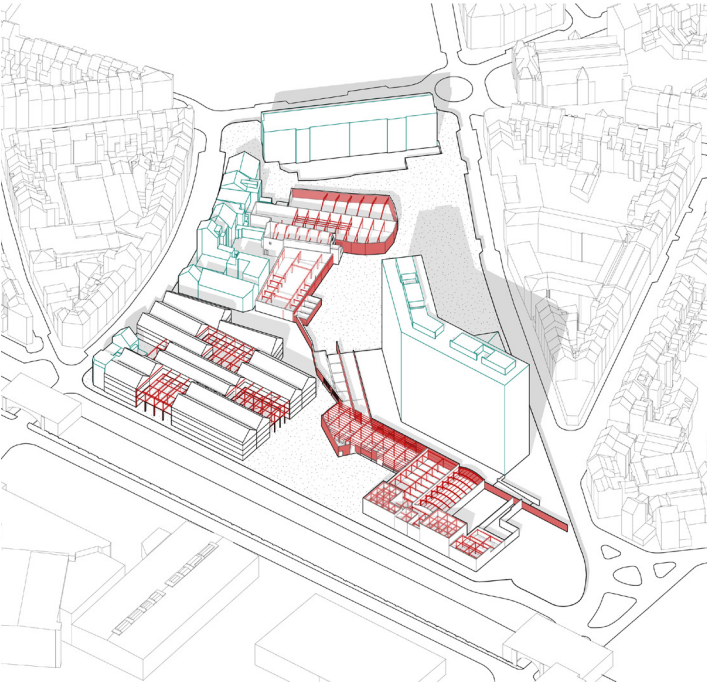
Youth Center

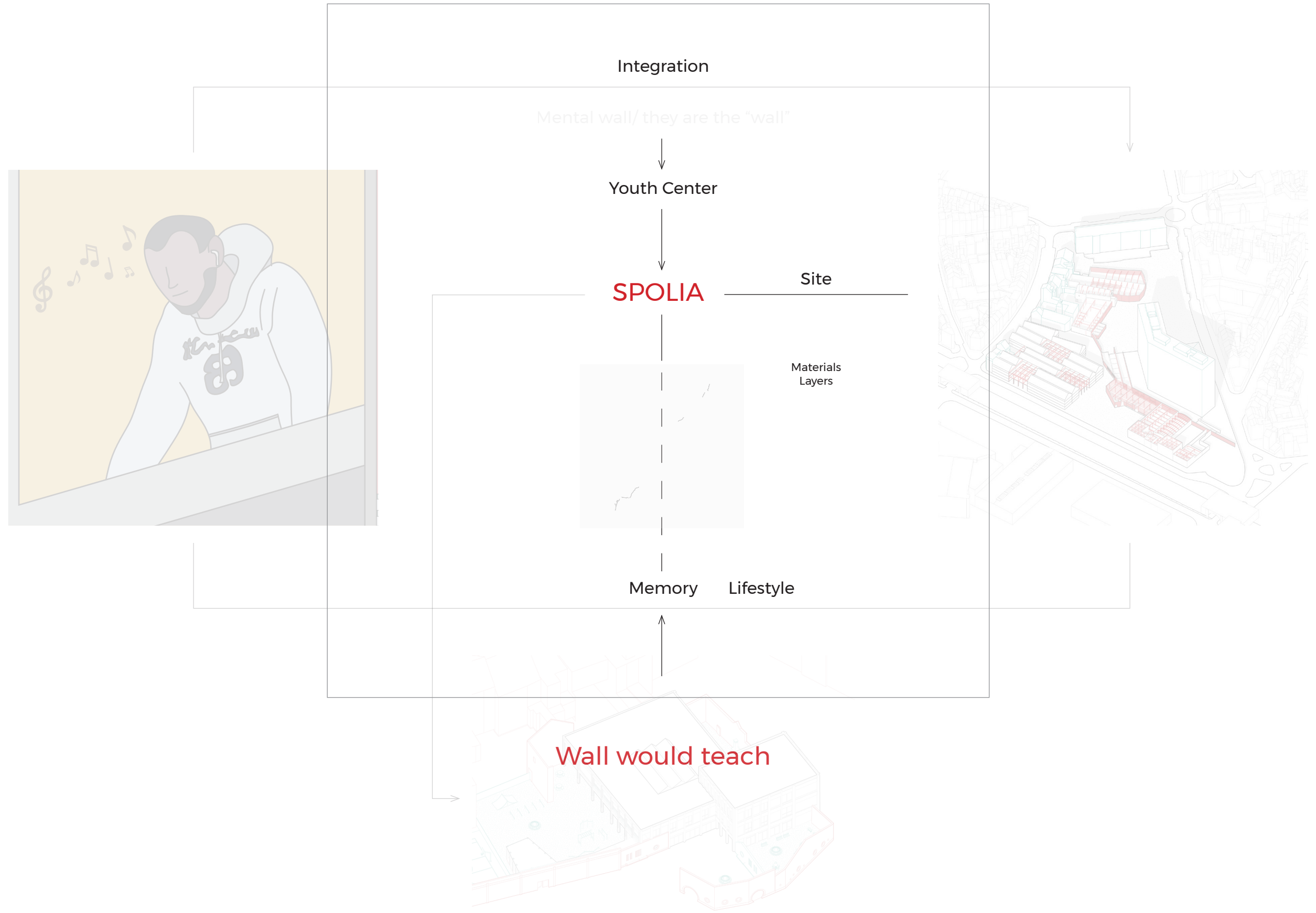
SPOLIA

Site

Materials
Layers

Memory Lifestyle





Thank you!

