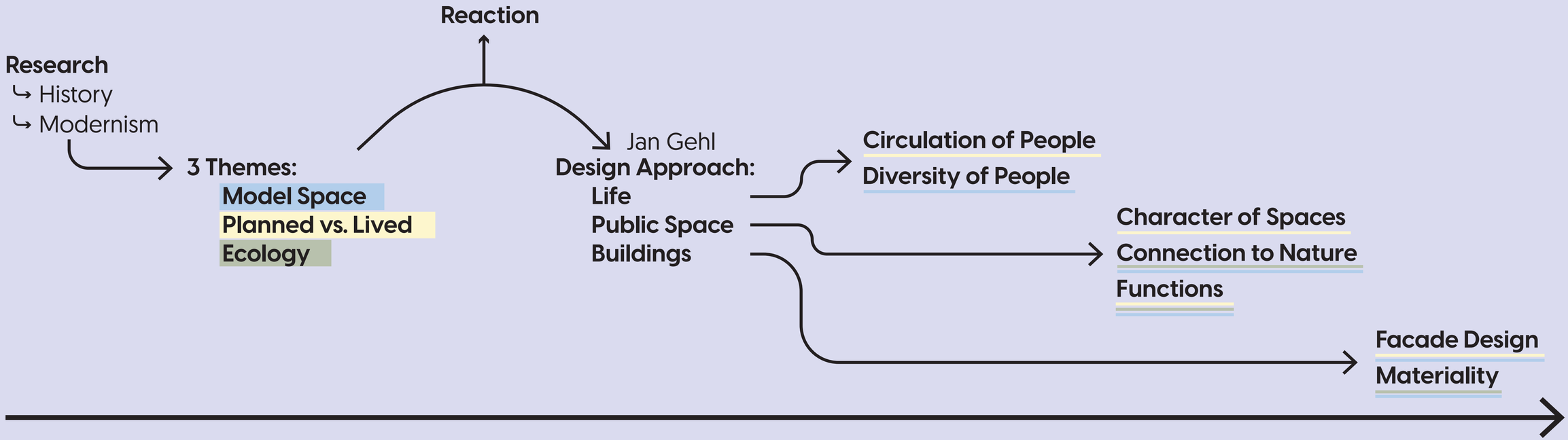
REQUALIFYING DROIXHE

Urban Architecture Graduation Studio




Reaction
Research
↳ History
↳ Modernism
3 Themes:
Model Space
Planned vs. Lived
Ecology
Jan Gehl
Design Approach:
Life
Public Space
Buildings
Circulation of People
Diversity of People
Character of Spaces
Connection to Nature
Functions
Facade Design
Materiality

Process

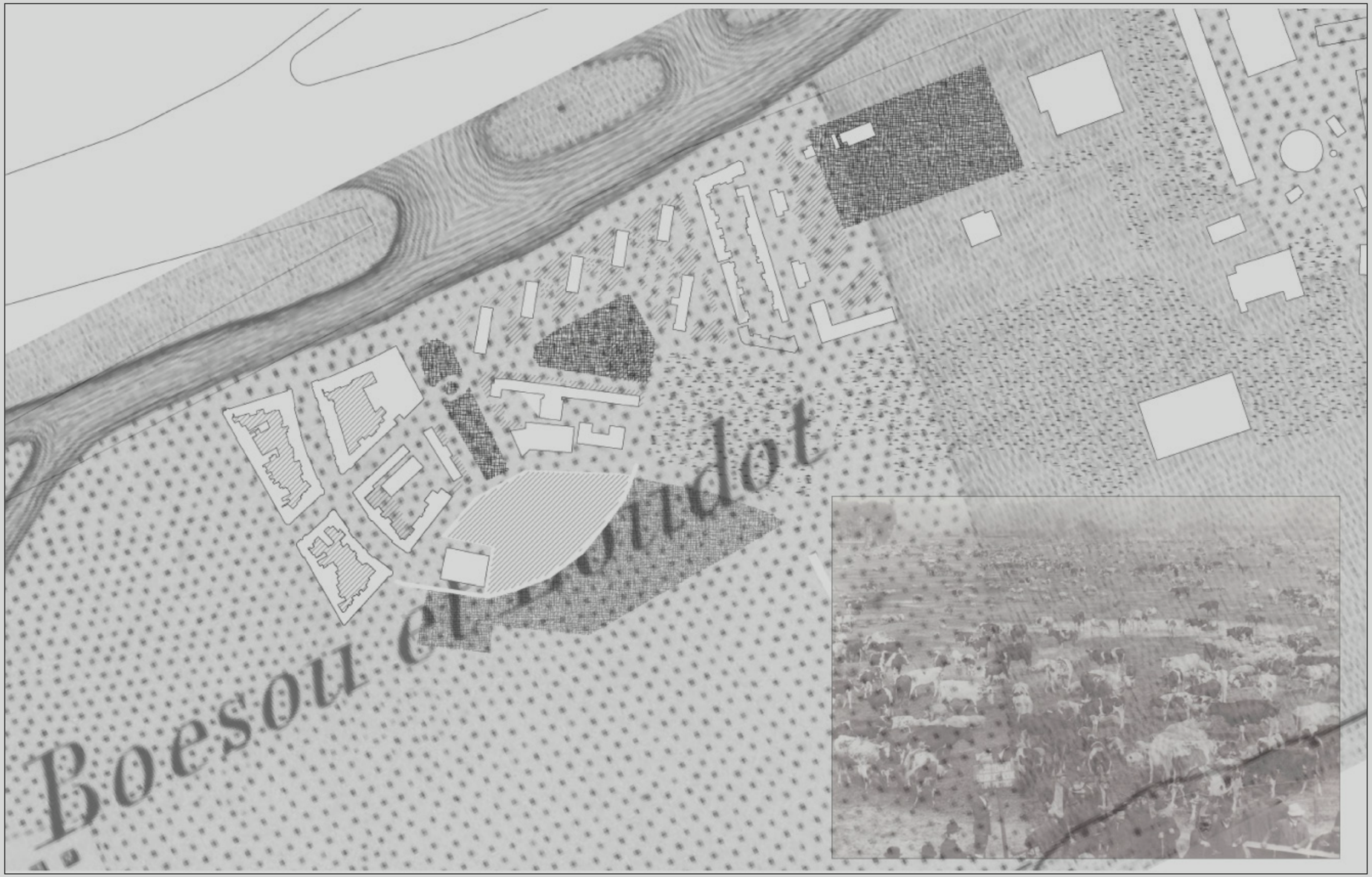
Historical Background

Expo’s in Droixhe: 1930, 1939

Modernist Landmark

EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan



1850

Farm Lands for Cattle

EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan



1930

International Exposition of Liège

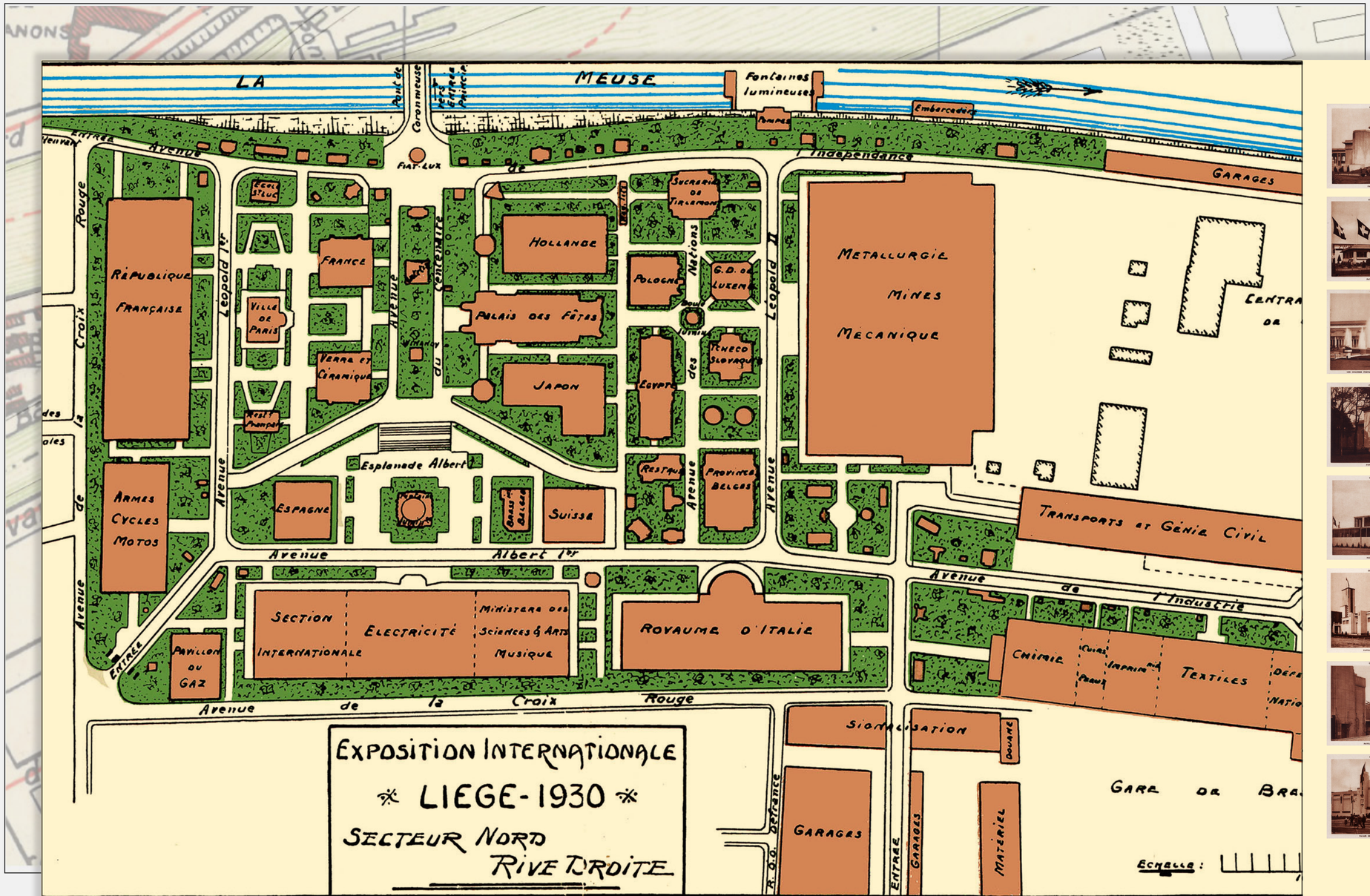
1939

International Water Exposition

EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan

1930

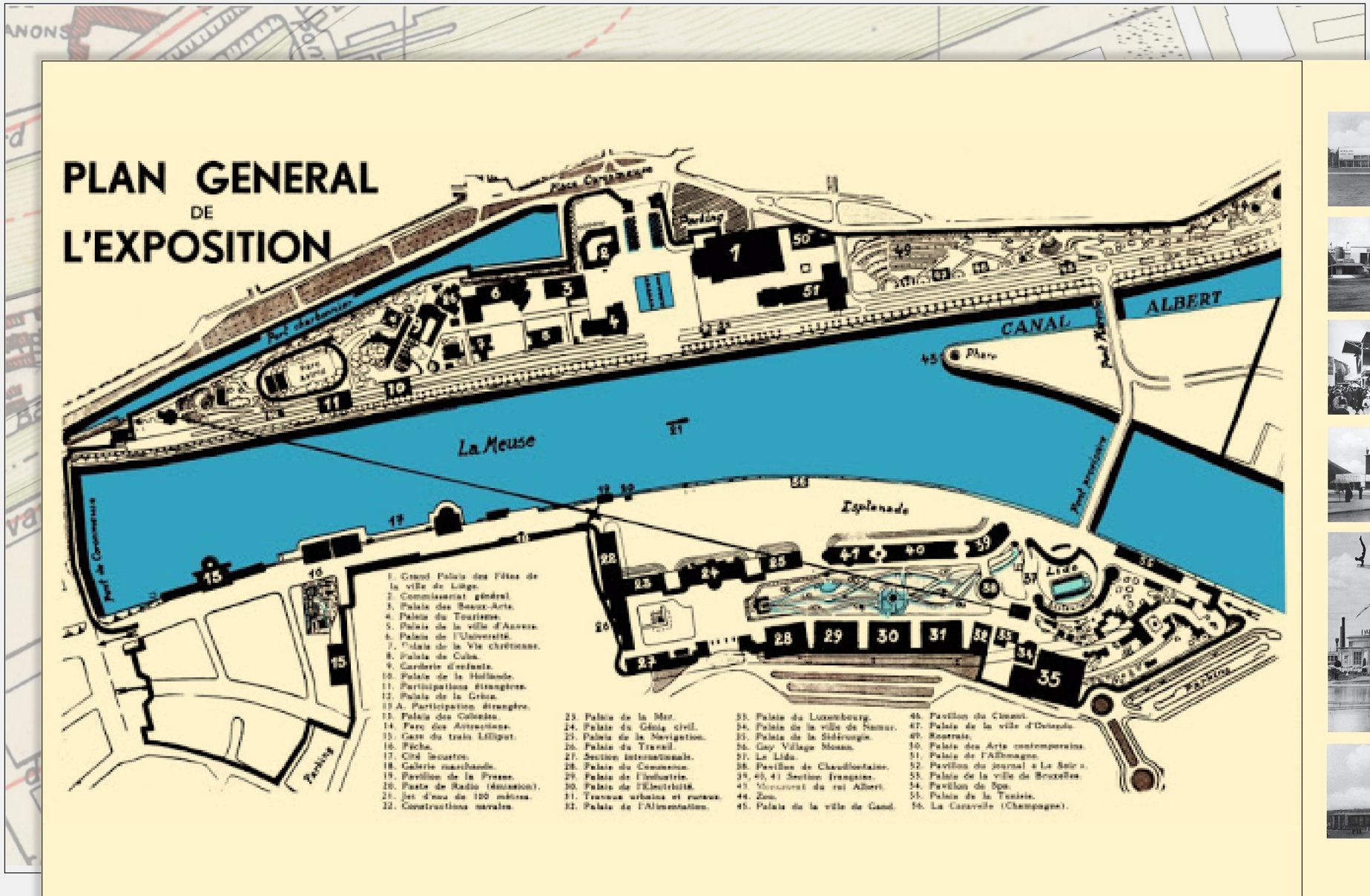


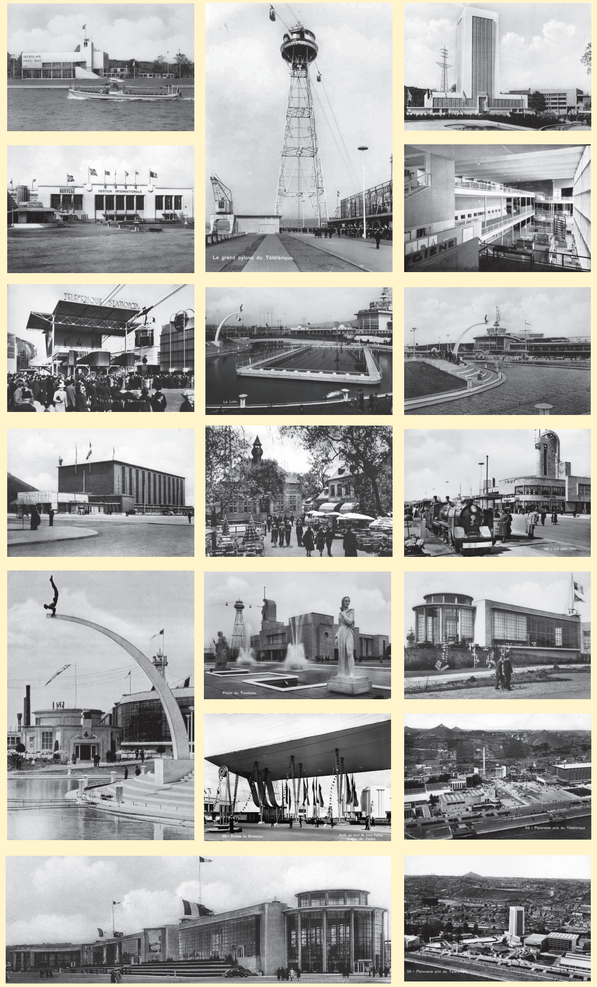


EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan

1930





EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan



1947

Beginning of Modernist Housing

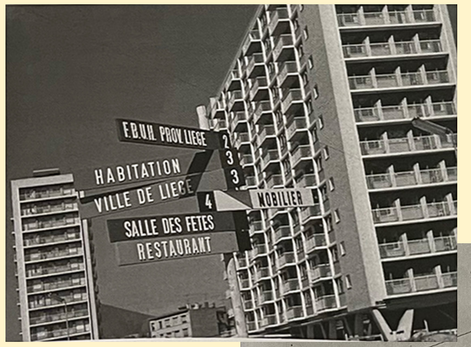
EVOLUTION OF THE SITE

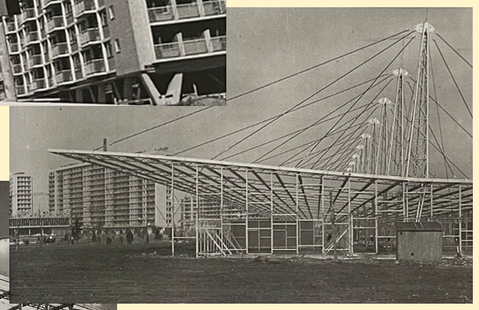
From Farm Lands to Modernist Masterplan

1947











DESIGN FOCUS

Safety
Hygiene
Comfort

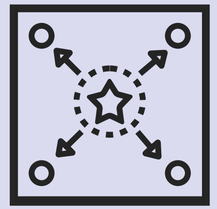
Great celebration (of course also marketing) for the upcoming district that was meant to be the architecture of the future. The correct way to do archtiecture.

EVOLUTION OF THE SITE

From Farm Lands to Modernist Masterplan

MODEL SPACE

THEME 1



A place of great ambitions and examplary architecture















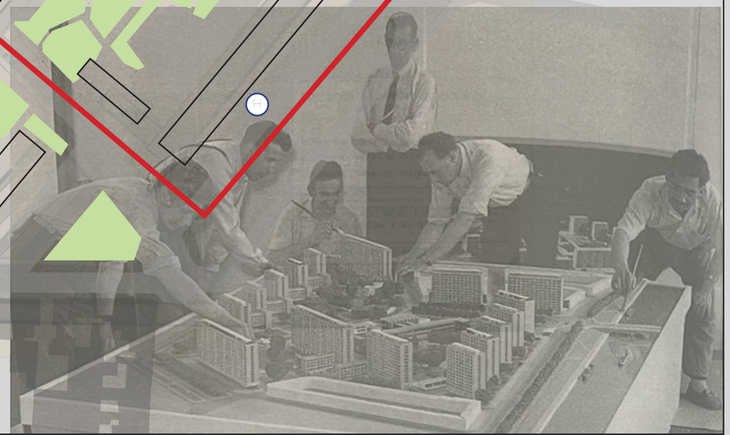
- image by Invisible Cities Team P1

Droixhe Masterplan
EGAU









Car Street
Existing Buildings
EGAU Building, existing
EGAU Building, demolished
Greenery

Social Centre:
A Police Station
B Primary School
C Library
D Event Space
E Day-care

Other Services:
F Le Parc Cinema
G Church
H Shops

I Parc de Droixhe

ECOLOGICAL THINKING

THEME 2



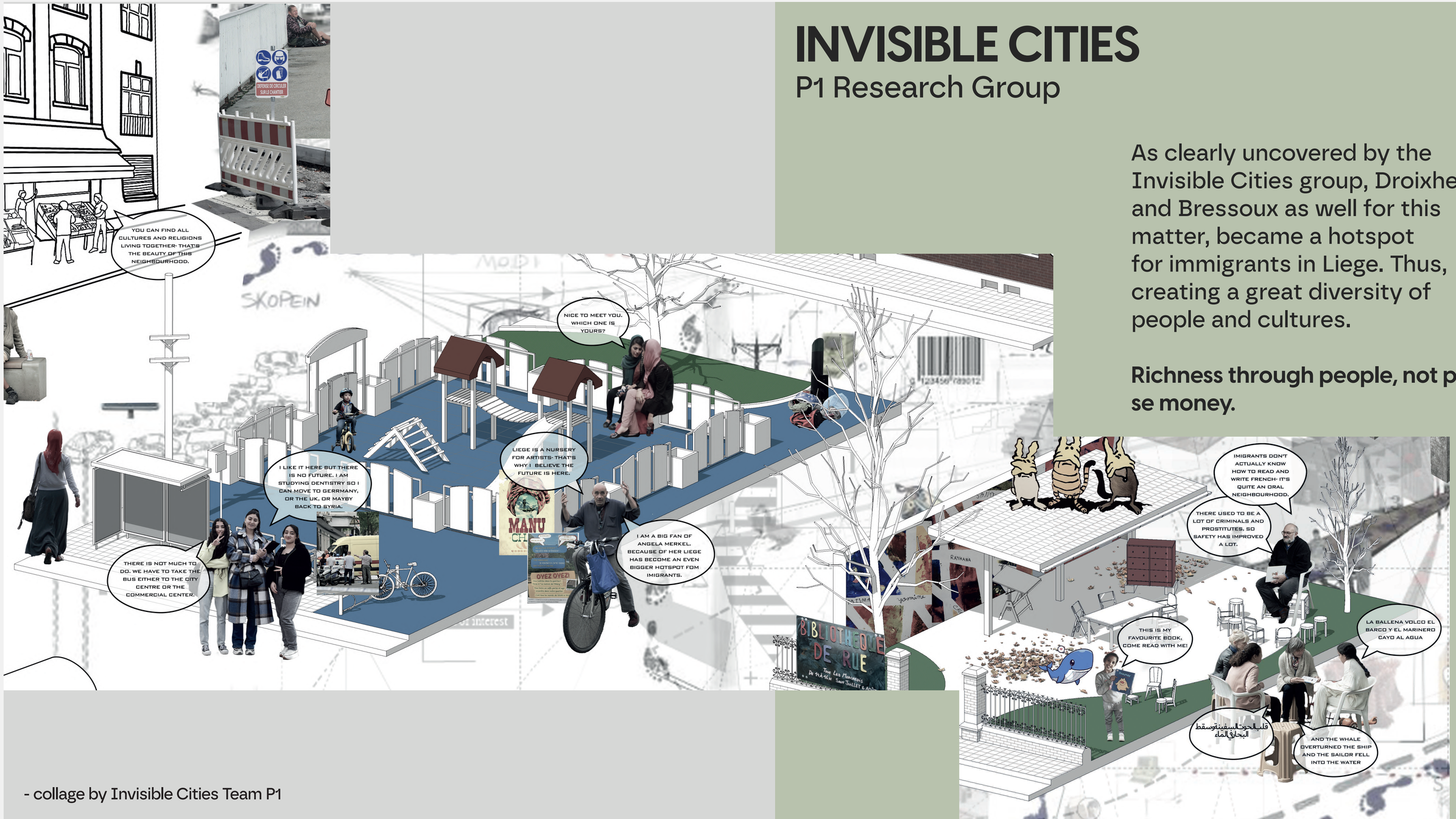
Designing examplary ecological architecture in a post-industrial city

INVISIBLE CITIES

P1 Research Group

As clearly uncovered by the Invisible Cities group, Droixhe, and Bressoux as well for this matter, became a hotspot for immigrants in Liege. Thus, creating a great diversity of people and cultures.

Richness through people, not per se money.



- collage by Invisible Cities Team P1



INVISIBLE CITIES

PLANNED VS LIVED

THEME 3



Conceived Space
Perceived Space
Lived Space

PRODUCTION OF SPACE - HENRI LEFEBVRE

RE-QUALIFICATION OF DROIXHE



Draw your future

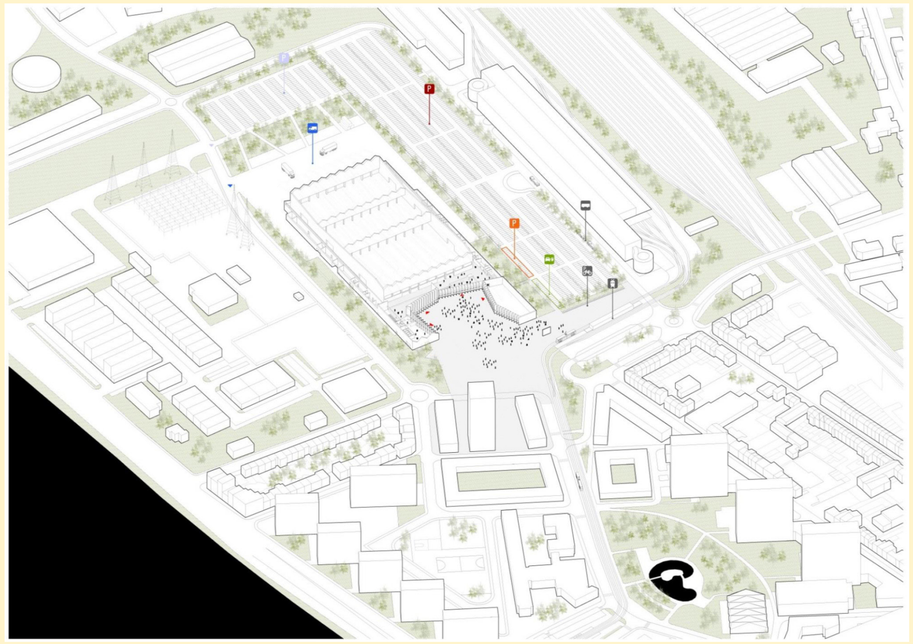
An urban district par excellence, Bressoux-Droixhe has been undergoing major renovation for several years.

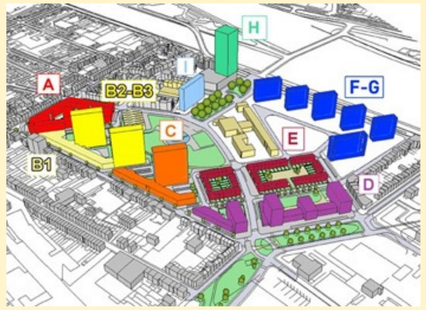
The plain of Droixhe, with its rich urban development, benefits from a complete requalification project.
This will ultimately have to take up the challenge of bringing together housing and socio-economic development while ensuring social diversity and quality of life. Projects as varied as a nursing home, quality housing, public spaces or shops will thus see the light of day.











Original Requalification plan
by Quadra & associes

The idea of the re-qualification of Droixhe was proposed in 1995 by French consultancy firm Projenor.

The term “re-qualification” called for a Social and Urban diagnosis of the district, encompassing not only physical renovation but also working on public spaces, associative life and the economic fabric.

“Re-qualify the neighborhoods image, for and by the inhabitants themselves who internalized the negative stereotypes conveyed by the media.” (Pierre Frankignoulle, 2009)

In 2006, the Quadra & associés office was appointed project manager within the framework of the urban consolidation (PRU) of the plain of Droixhe. In their social analysis of the neighborhood, they came to the same conclusions as the report of Projenor stating that the neighborhood lacked of a social mix and cohesion between its inhabitants. With regards to urban planning, the firm identified 3 weak points, namely the lack of differentiation of spaces, a poor quality layout of these and the excessive proximity between pedestrians and motorized traffic. (Delhez, 2022)

“the city has chosen to provide this infrastructure with a strong symbolism: the building, through its location, its architecture and its design should reflect the image of a City, which, through the reconversion of industrial wastelands and their servicing, gives a decisive impetus, a leverage effect to trigger investments and real estate development. The requalification of the Bressoux station will also serve the public real estate development project in the nearby Droixhe plain.
The Halle des Foires will be dedicated to hosting events, professional and consumer fairs, exhibitions, sporting events, seminars or congresses, parties, receptions and corporate events” (Liege2025.be)

MICE Sector:

Meetings
Incentives
Conferences
Exhibitions

More specifically:
The new halls will be able to accommodate any type of event: consumer fairs, professional fairs, exhibitions, sporting events, seminars, congresses, corporate events, parties, concerts, etc.



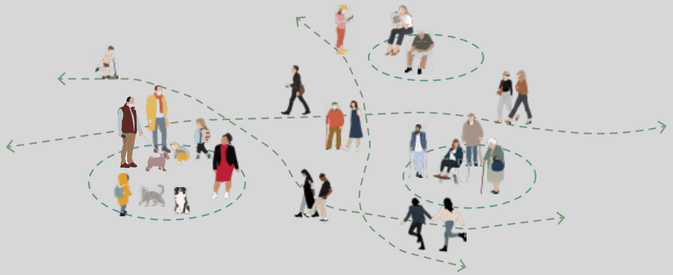
DESIGN APPROACH

LIFE BETWEEN BUILDINGS - JAN GEHL

Life

Space

Building







DESIGN APPROACH

LIFE BETWEEN BUILDINGS - JAN GEHL

Life

Who (what types of people) will inhabit each space?

How will they circulate?

Where do they bump into each other?

How will they connect? or not?



DESIGN APPROACH

LI

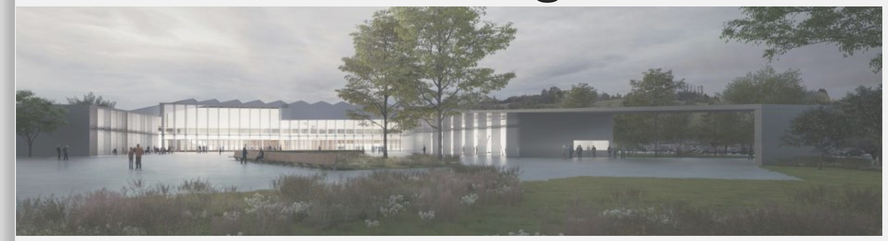
Target Groups

Children, Social Housing, School



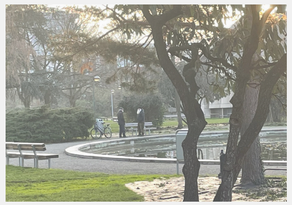


Business, Medium/High Class



Neighborhood







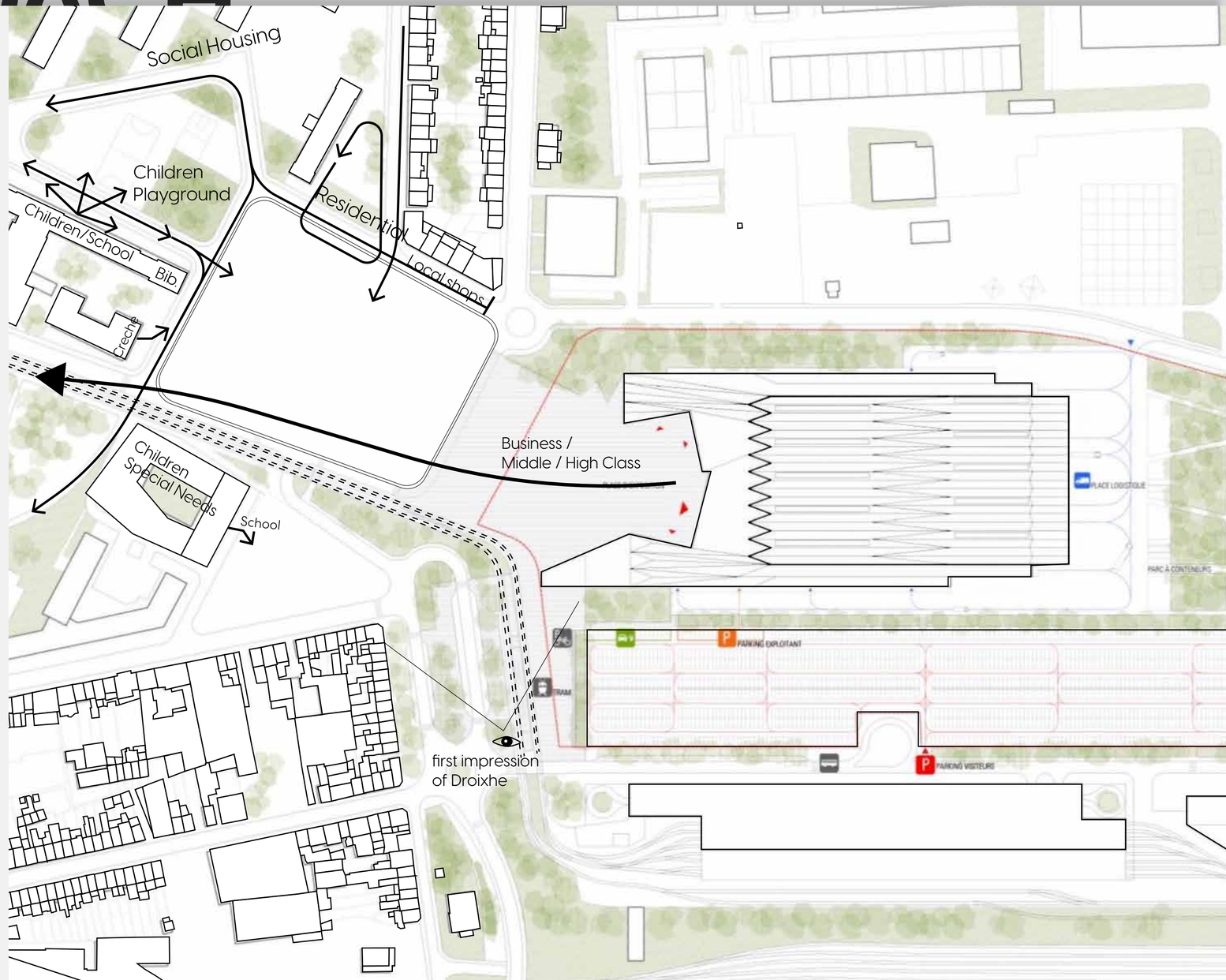

DESIGN APPROACH

L

Circulation

How will they circulate?

Where do they bump into each other?



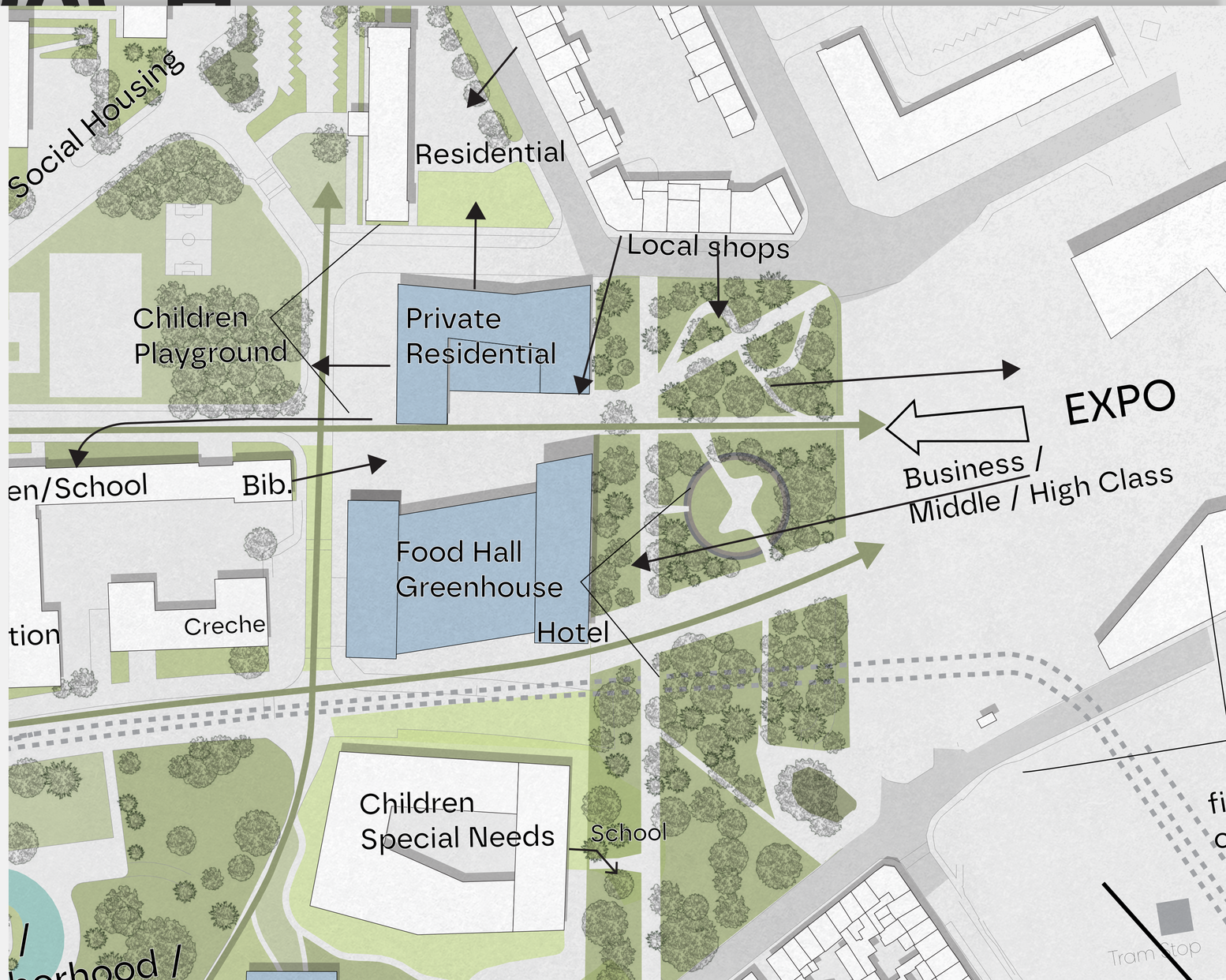
DESIGN APPROACH

L

Functions

What functions should be linked to the public space?

- Private Housing
- Hotel
- Food Hall
- Food Production
- Parking Lot



DESIGN APPROACH

LIFE BETWEEN BUILDINGS - JAN GEHL

Space

What are the characters of the space I want?

What are the qualities and issues of the current public space?

What functions should be linked to the public space?



DESIGN APPROACH

L

Masterplan



DESIGN APPROACH

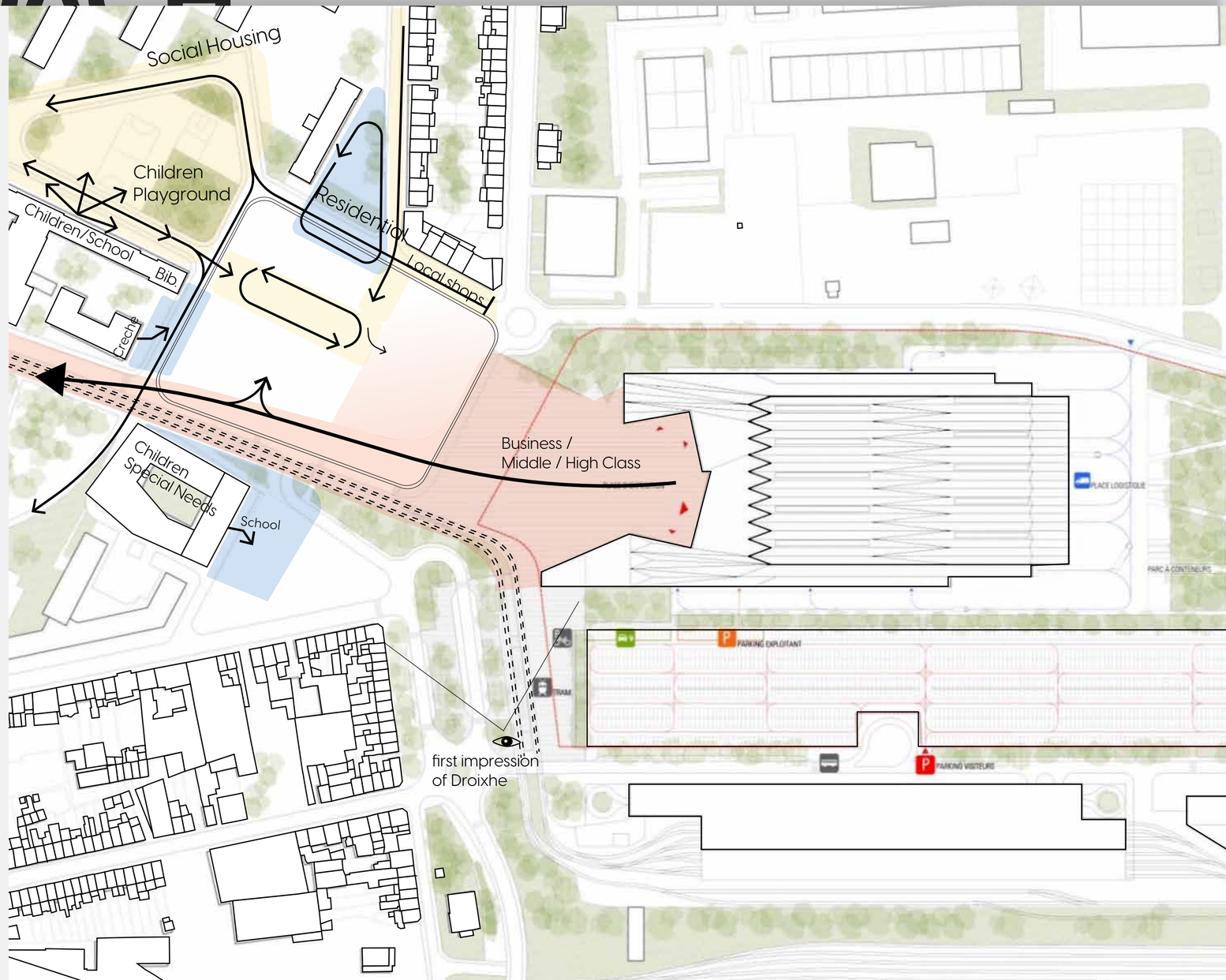
Peace
Rustle
Commotion

Zones types as described by the Guiding Principles Metromix of the Rijksadvieur can be applied to this location.

Commontion is for wide opening times and space for dynamics and social security. It connects neighborhood to the city's main infrastructure.

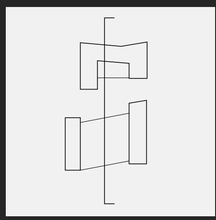
Rustle has to do with activity, logistics, space for noise and smells.

Peace asks for calmness, quiet.



SECTION 3 SPACES

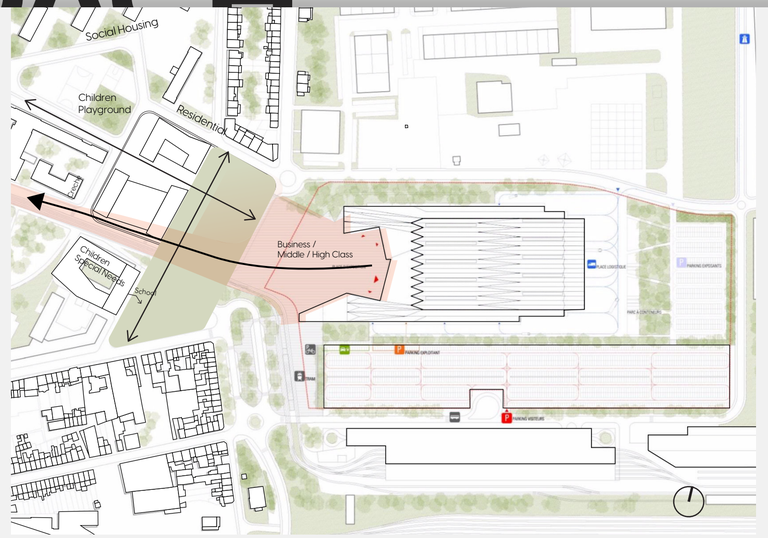




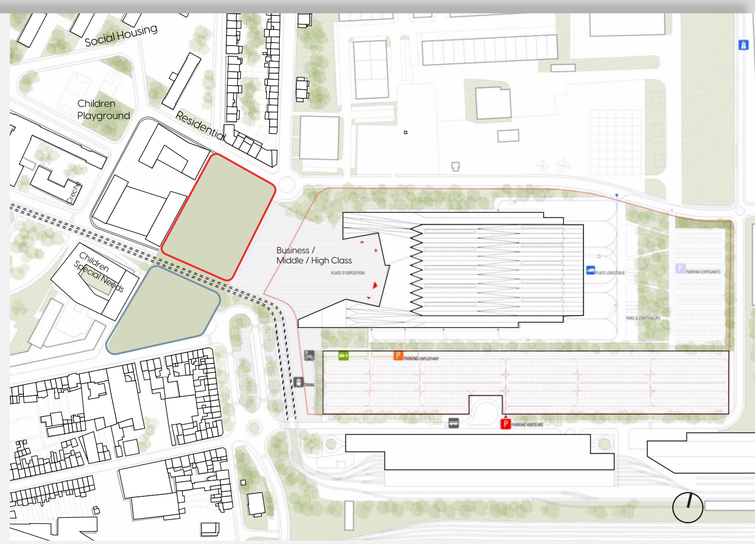
DESIGN APPROACH

Park Design

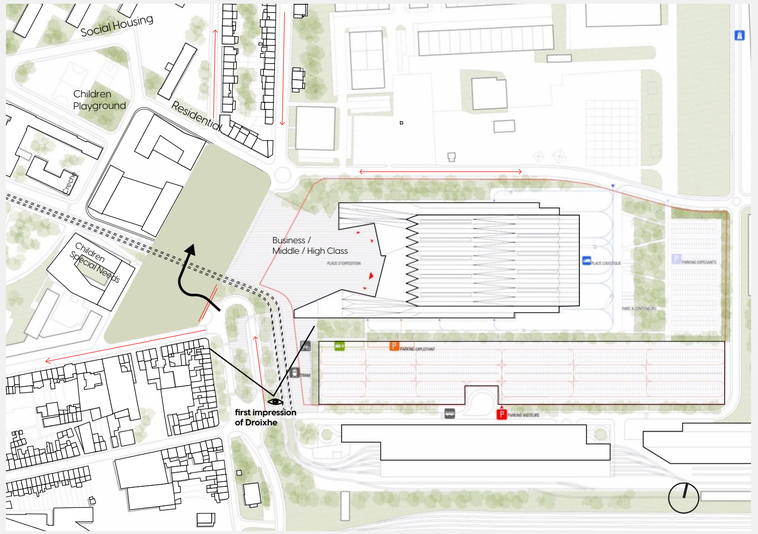




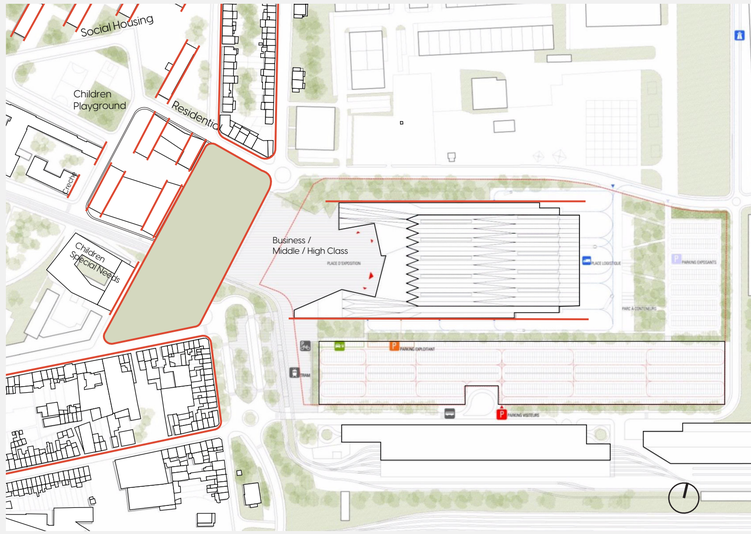
Expo Buffer, Current and Future Inhabitants



North vs South Differentiation



Car Flow



Formal Structure and First Impression

DESIGN APPROACH

LI

Park De





DESIGN APPROACH

LIFE BETWEEN BUILDINGS - JAN GEHL

Building

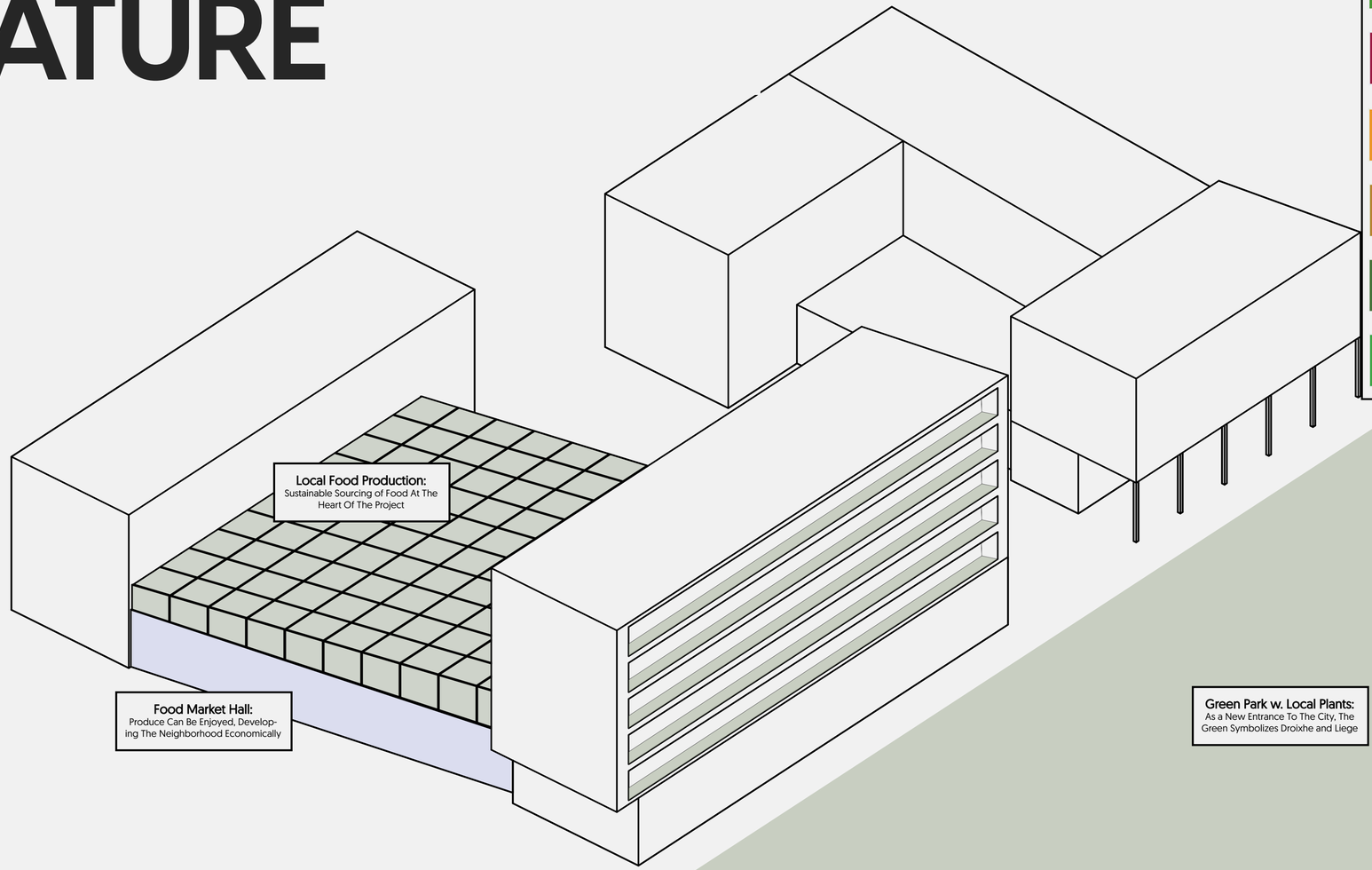
What formal design choices allow the designation of character of the space?

What are the current design language of buildings?
(north island vs modernist language)
(vs how i want to design)





FOOD PRODUCTION AND NATURE



United Nations 17 Goals for Sustainable Developments

- 3 GOOD HEALTH AND WELL-BEING
- 8 DECENT WORK AND ECONOMIC GROWTH
- 11 SUSTAINABLE CITIES AND COMMUNITIES
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION
- 15 LIFE ON LAND

DES

LIFE BET

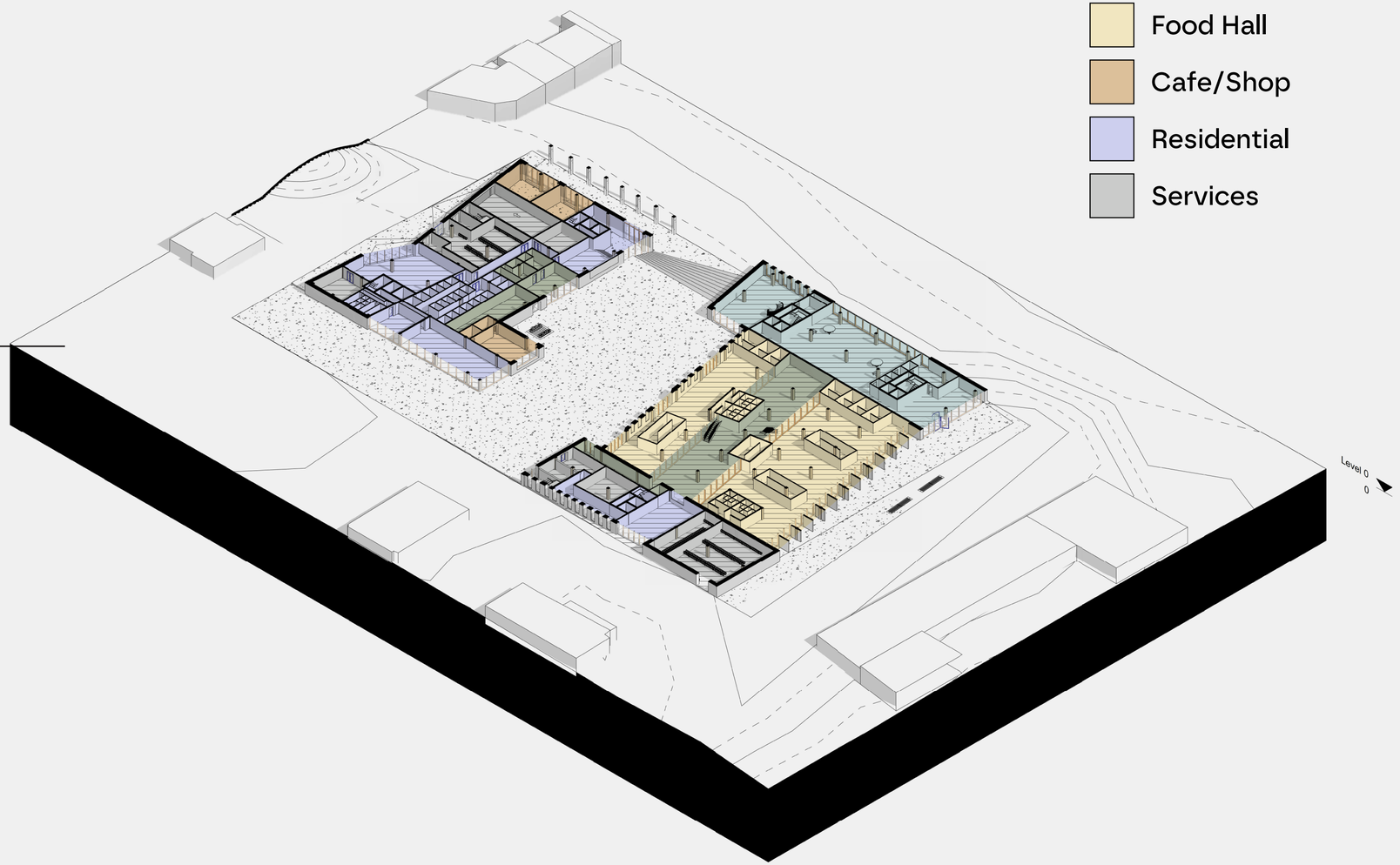

Residential
Children Playground
Creche
Special Needs School
Business / Middle / High Class
first impression of Droixhe
0 5 10 25 50 m

DESIGN APPROACH

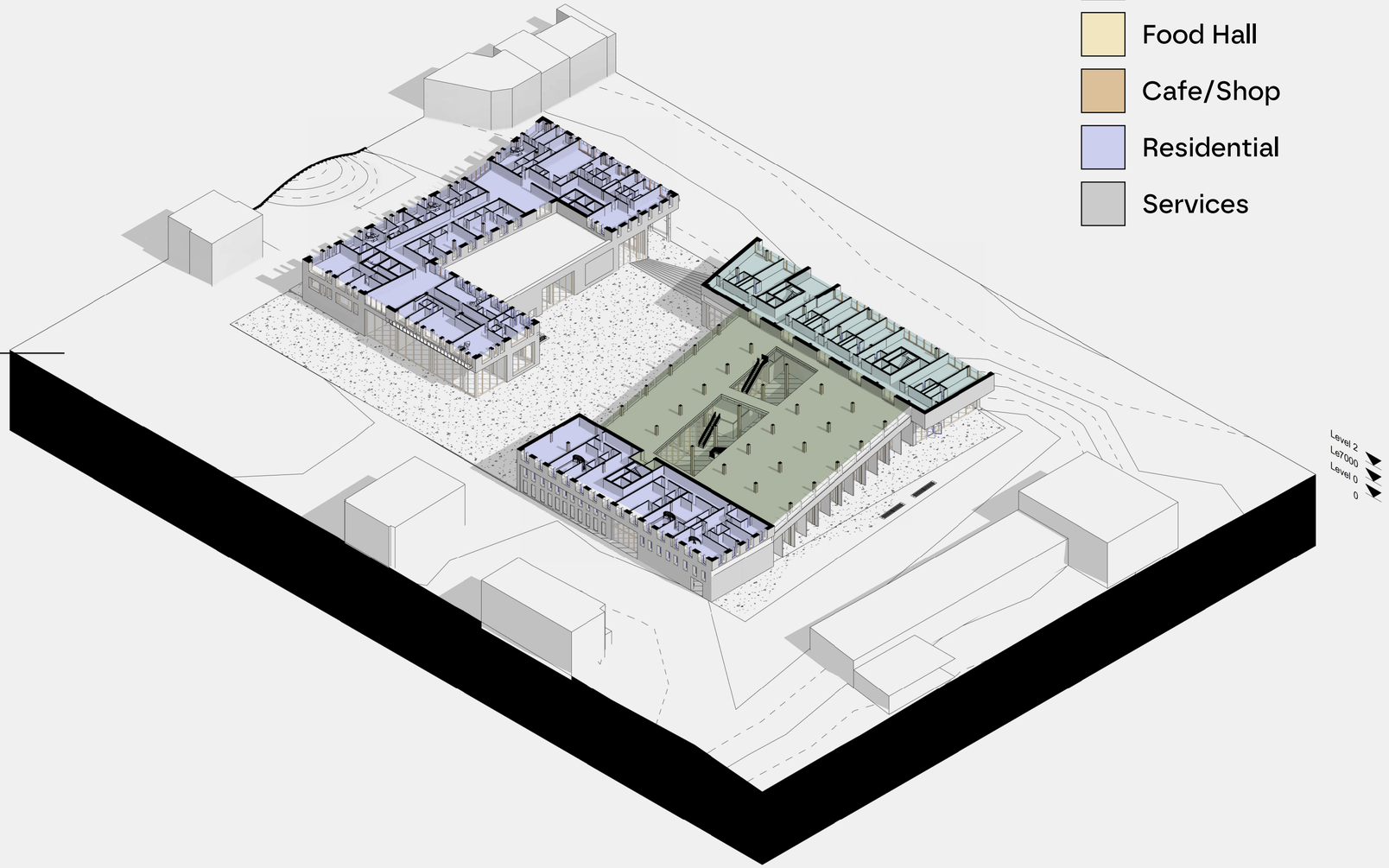
LI P



Ground Floor

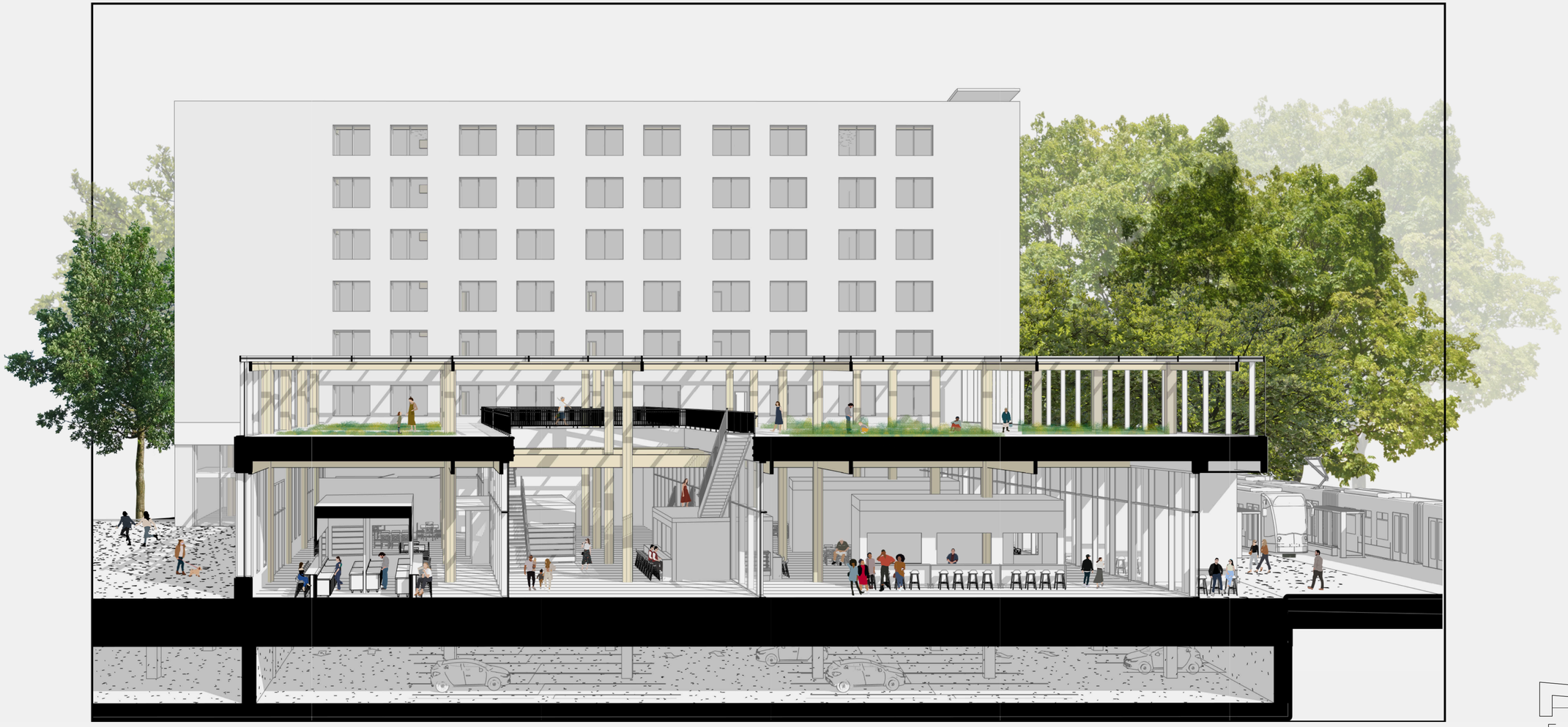


Level 2



- Hotel
- Food Production
- Food Hall
- Cafe/Shop
- Residential
- Services

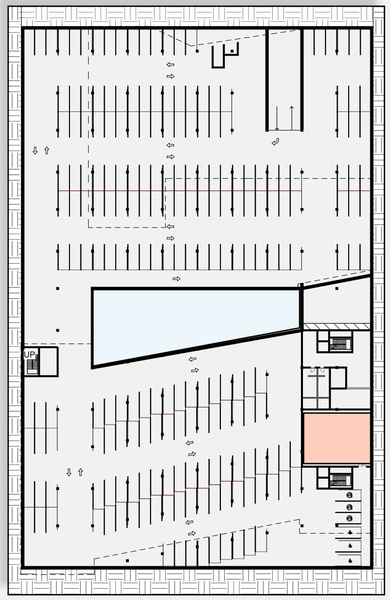
FOOD HALL AND PRODUCTION

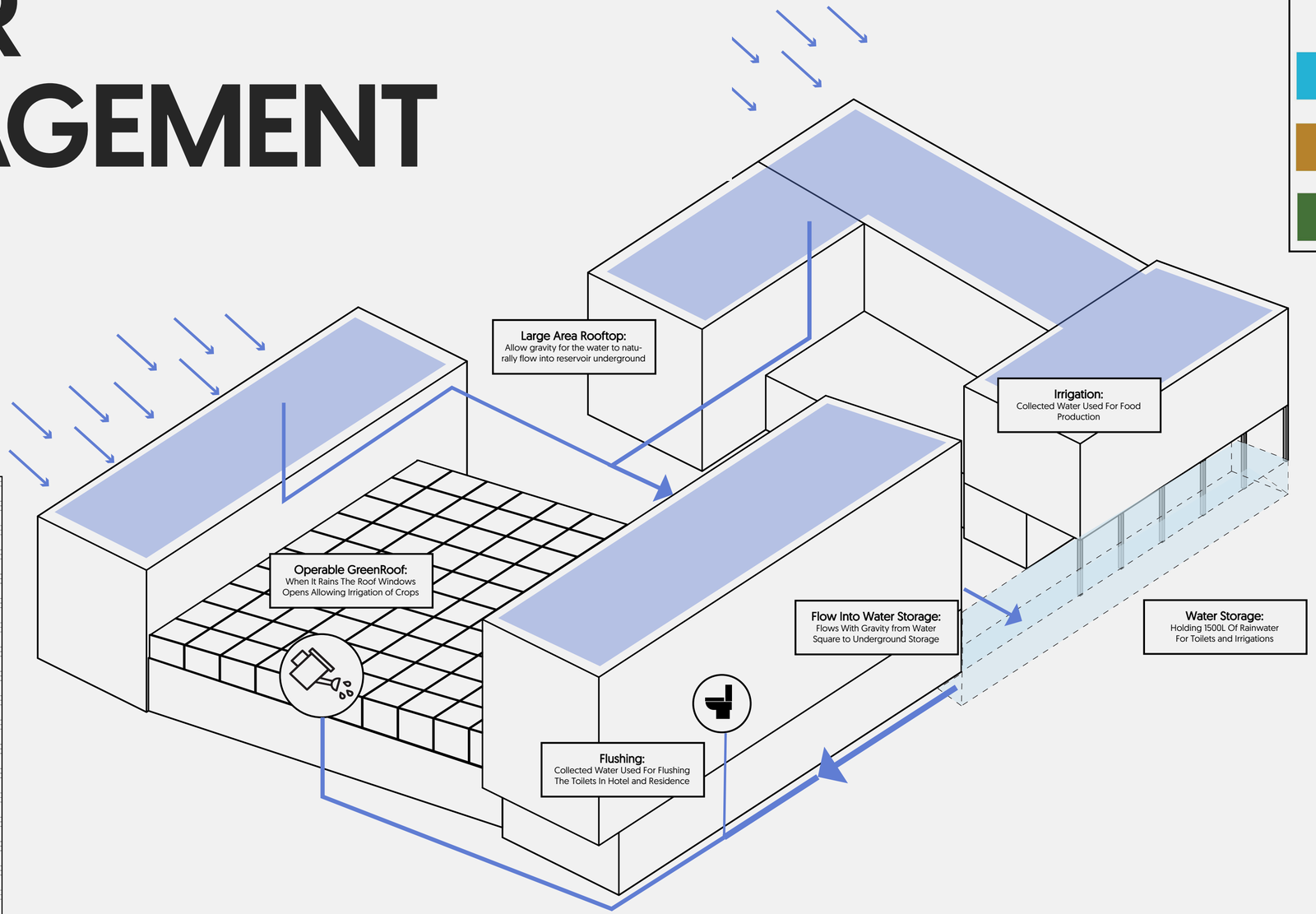


WATER MANAGEMENT

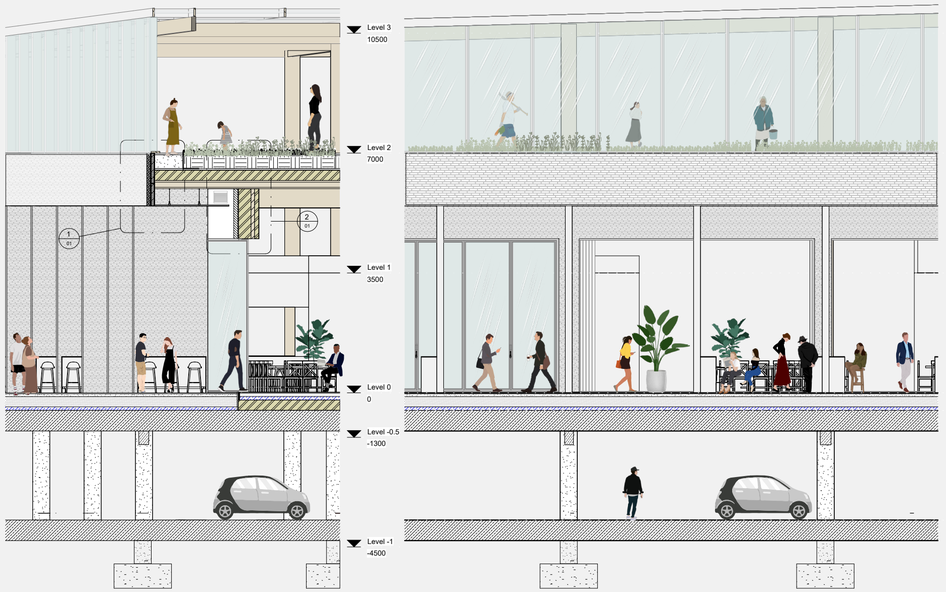
United Nations 17 Goals for Sustainable Developments

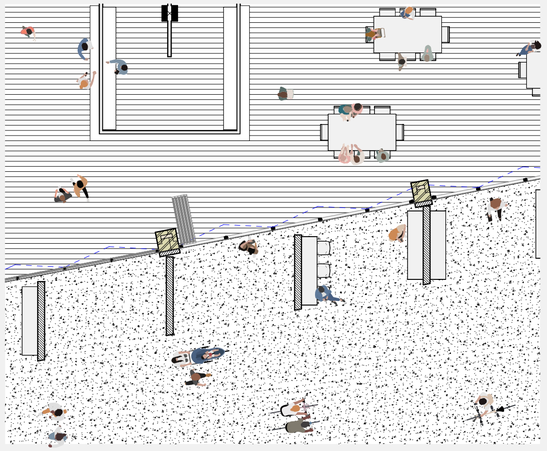
- 6 CLEAN WATER AND SANITATION
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 13 CLIMATE ACTION





D PRODUCTION

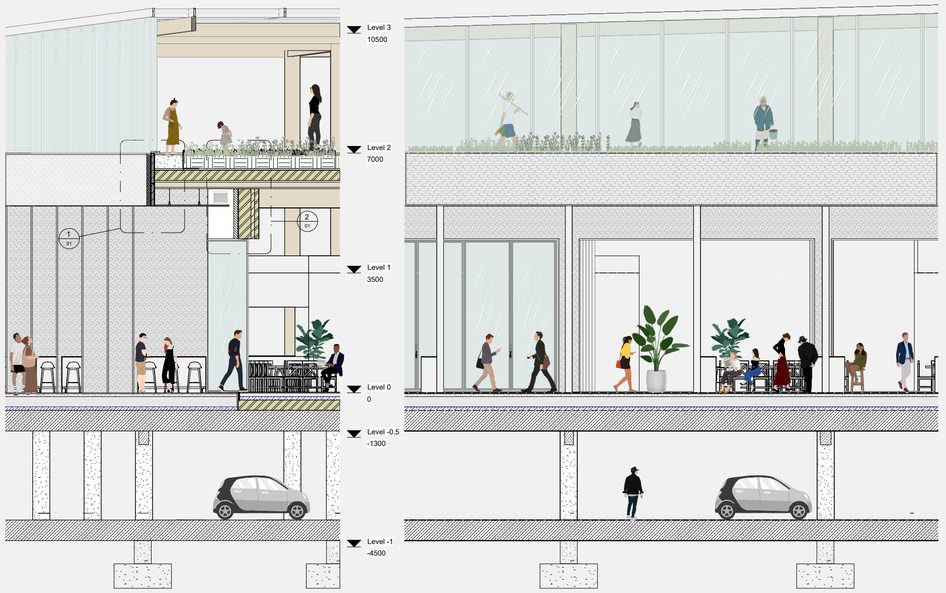


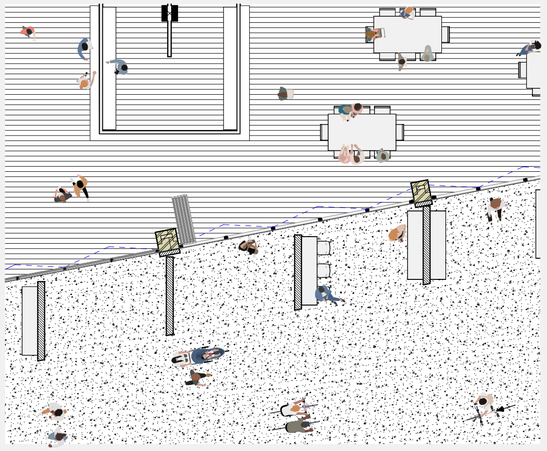


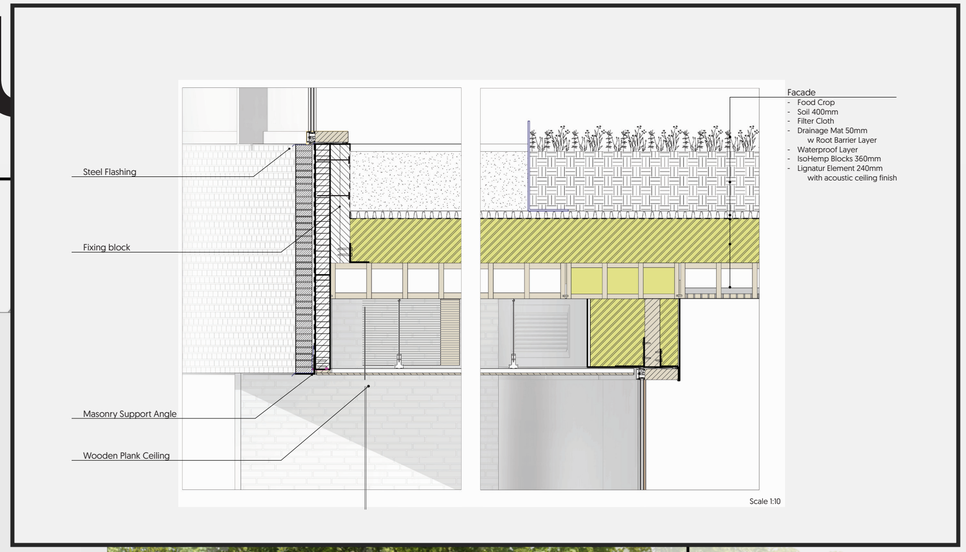


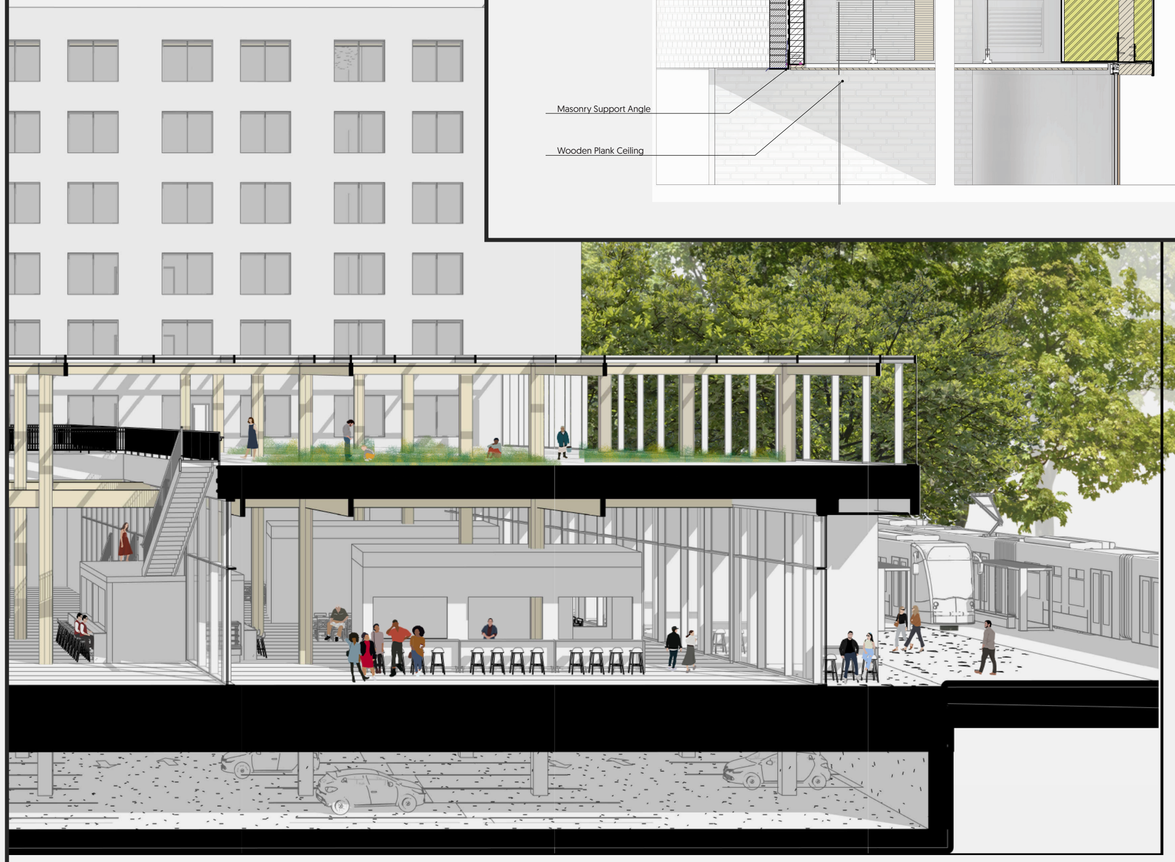


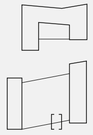
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Level 3
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Level 2
7000
Level 1
3500
Level 0
0
Level -0.5
-1300
Level -1
-4500

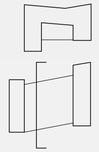



Steel Flashing
Fixing block
Masonry Support Angle
Wooden Plank Ceiling
Facade
- Food Crop
- Soil 400mm
- Filter Cloth
- Drainage Mat 50mm
w Root Barrier Layer
- Waterproof Layer
- IsoHemp Blocks 360mm
- Lignatur Element 240mm
with acoustic ceiling finish
Scale 1:10





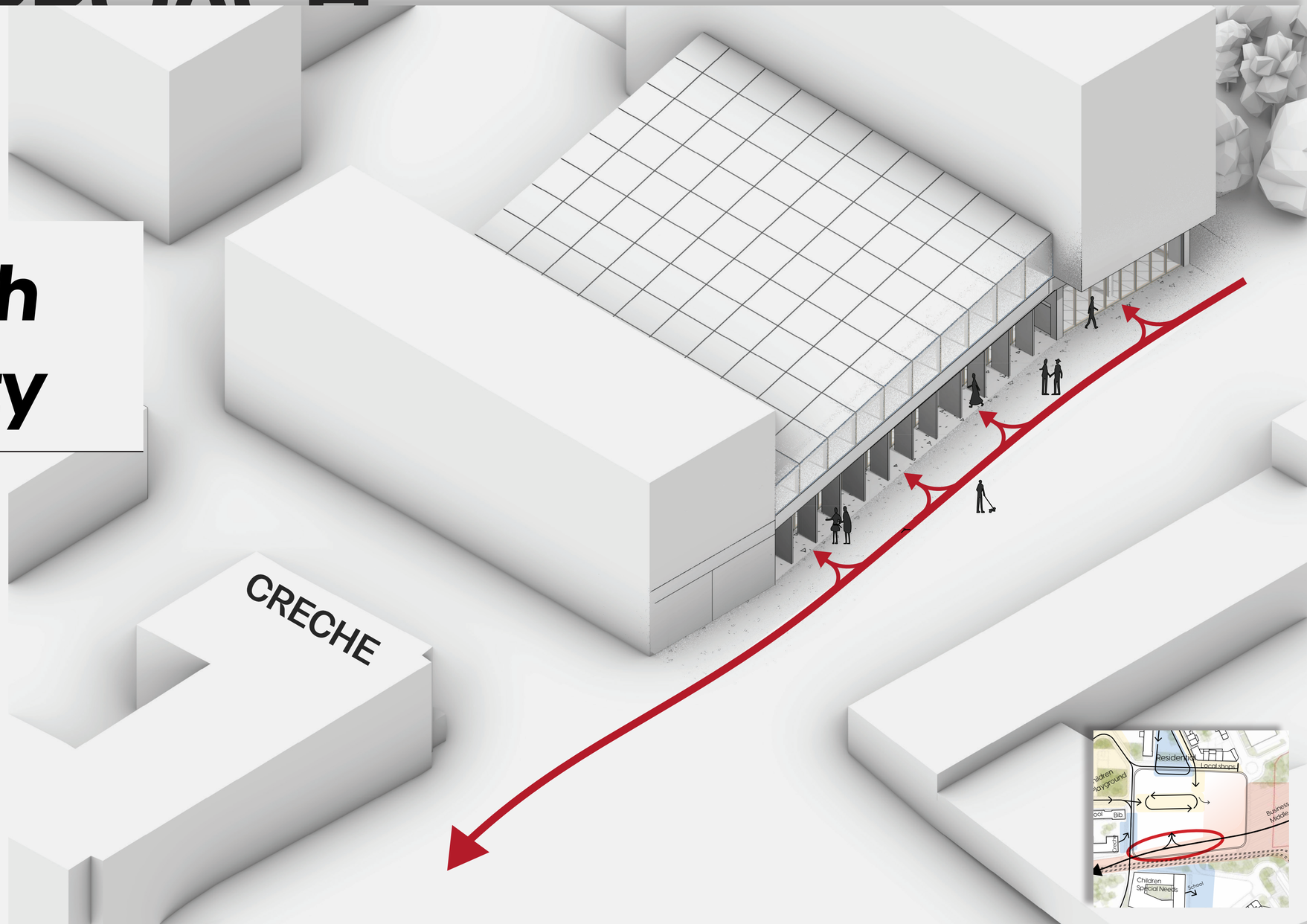

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DESIGN APPROACH

L

Playing with Permeability



DESIGN APPROACH

L

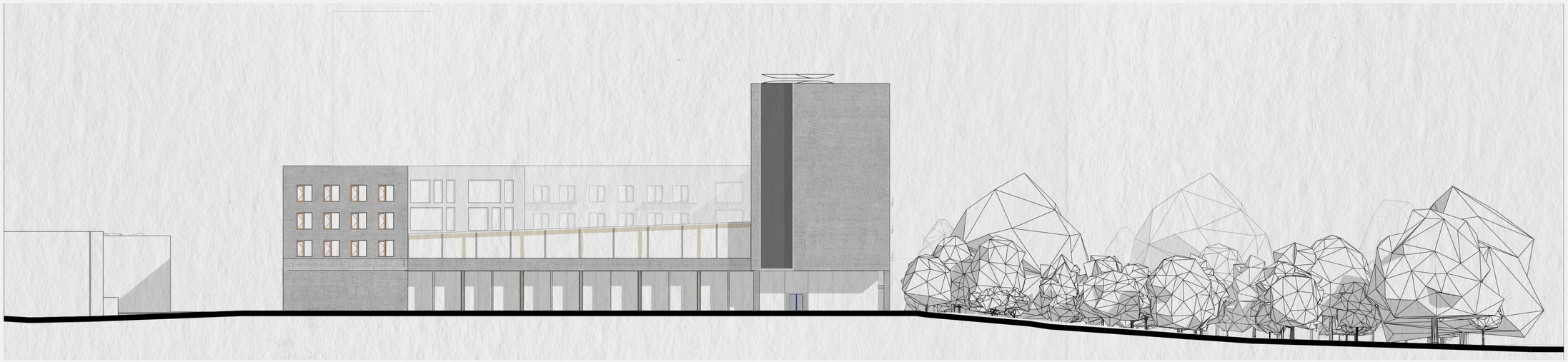
Playing
Permeo



DESIGN APPROACH

L

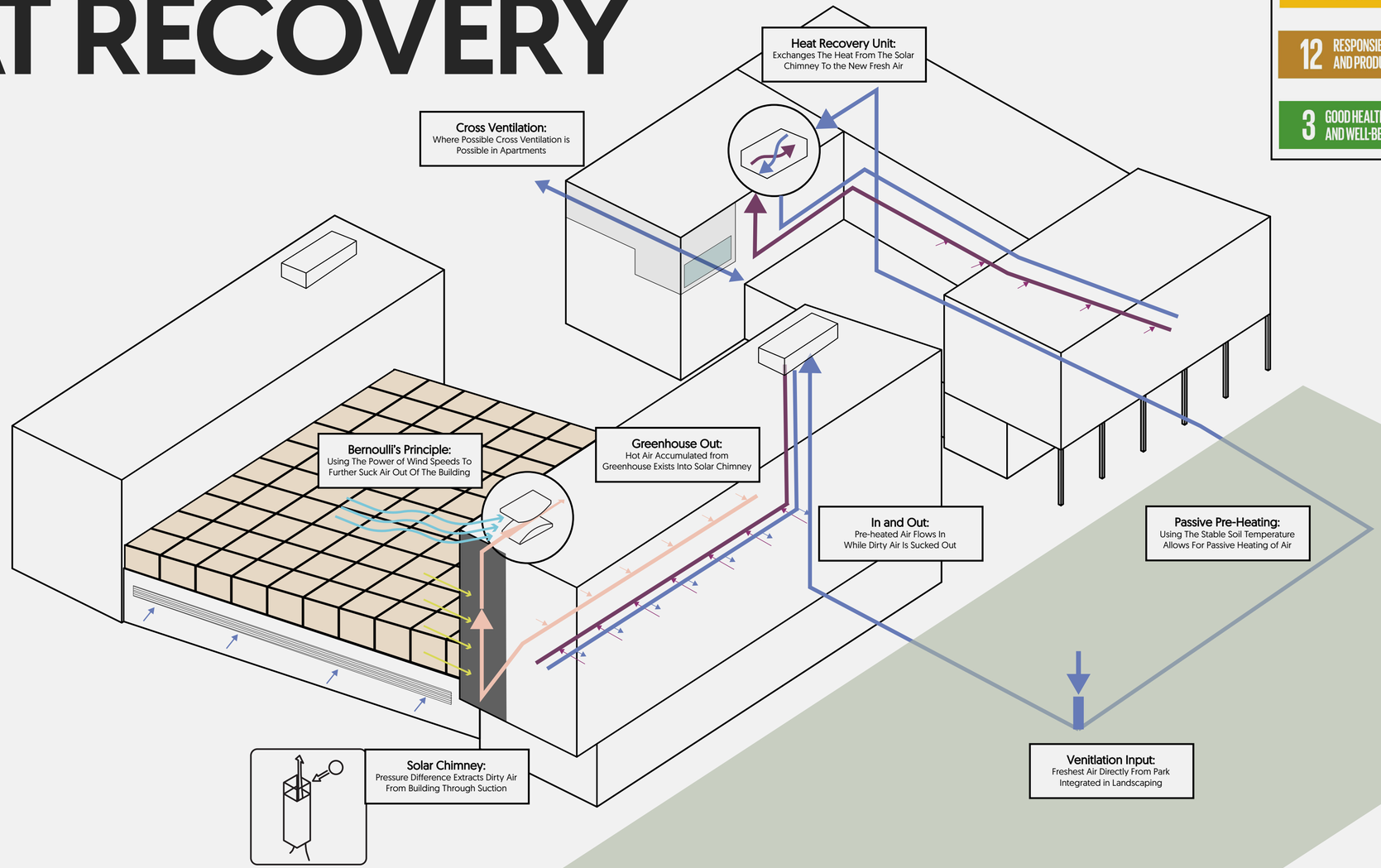
Playing with Permeability



HYBRID VENTILATION W. HEAT RECOVERY

United Nations 17 Goals for Sustainable Developments

- 7 AFFORDABLE AND CLEAN ENERGY
- 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
- 3 GOOD HEALTH AND WELL-BEING



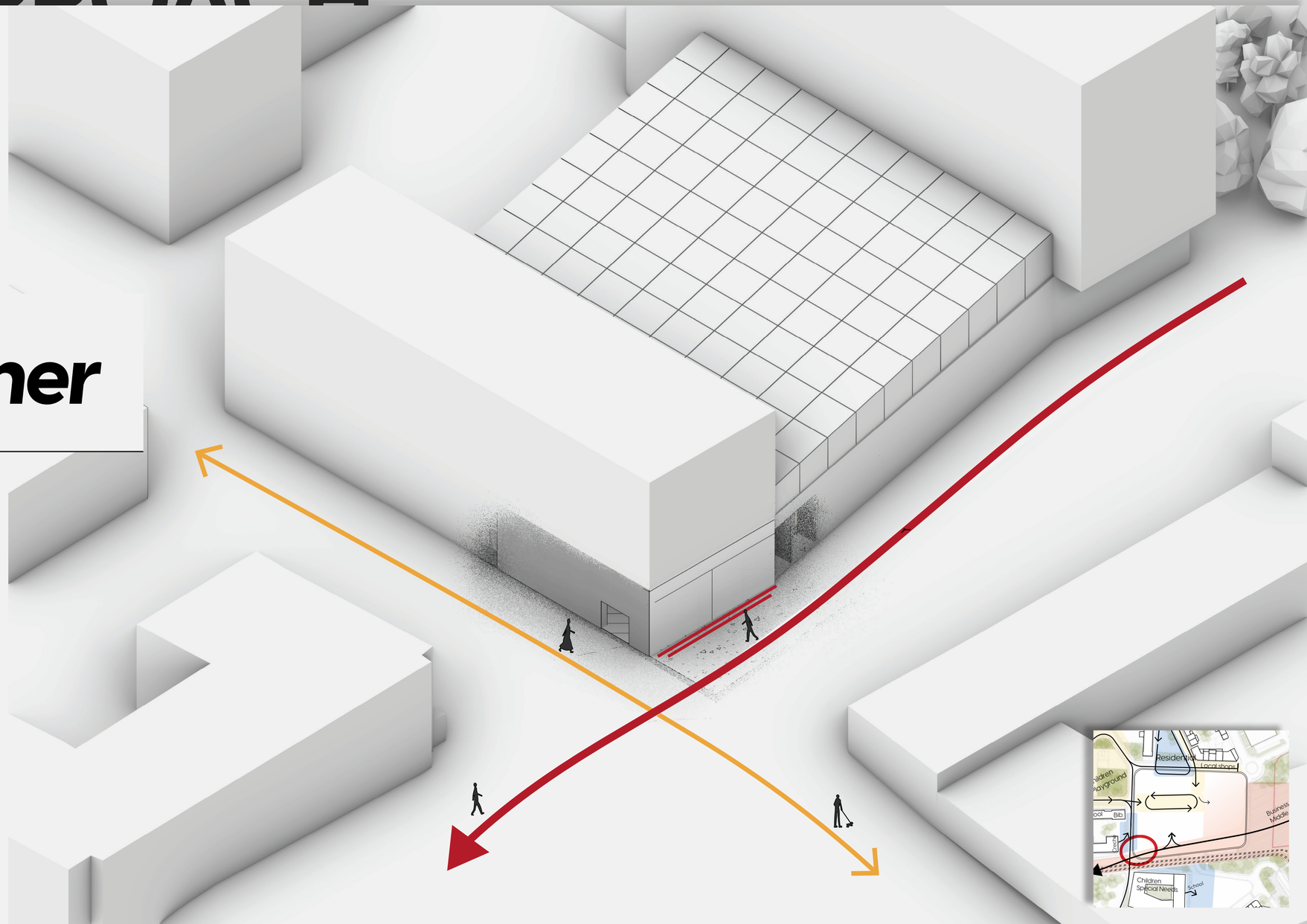
HYBRID W. HEAT



DESIGN APPROACH

L

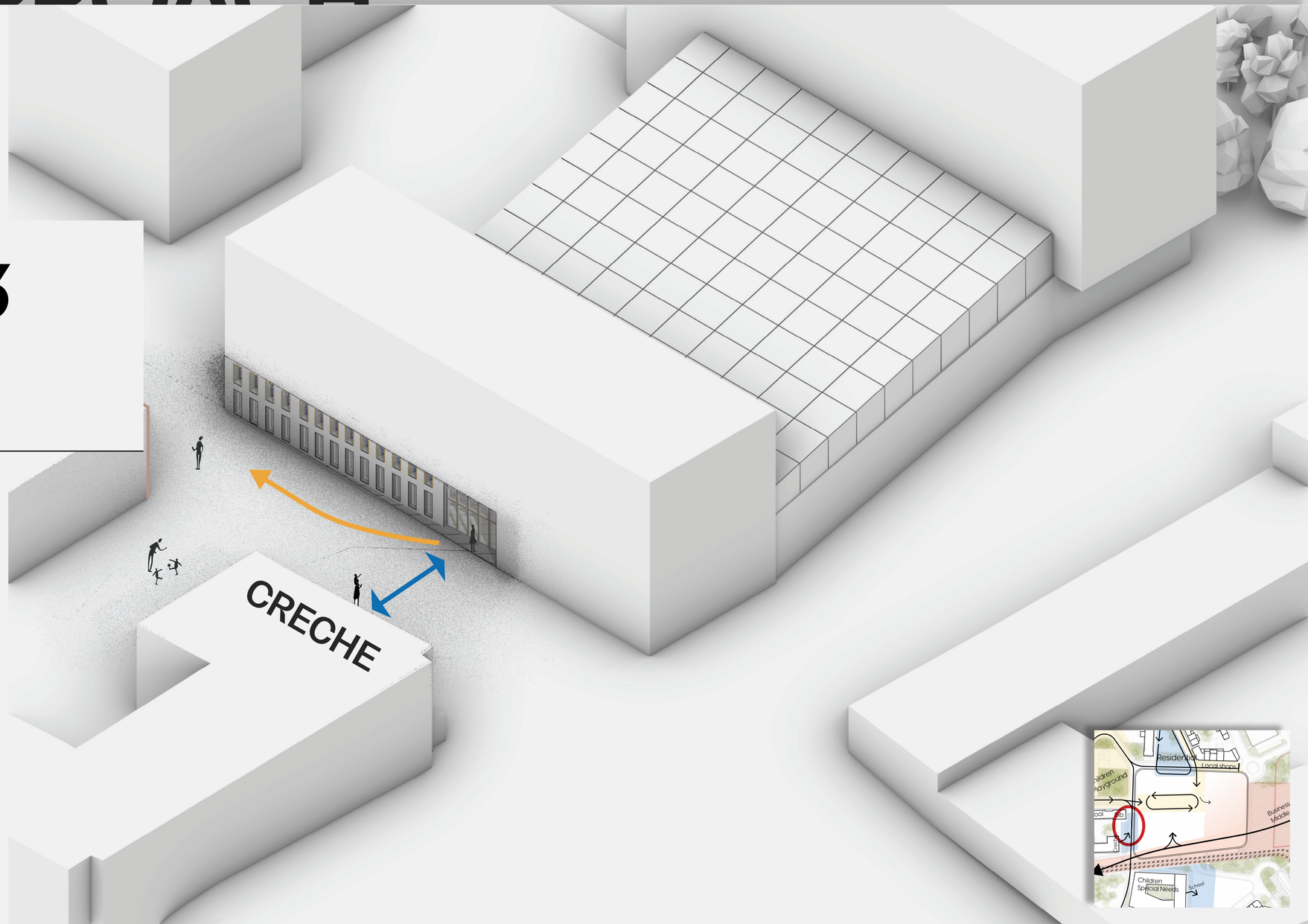
Closed Corner



DESIGN APPROACH

L

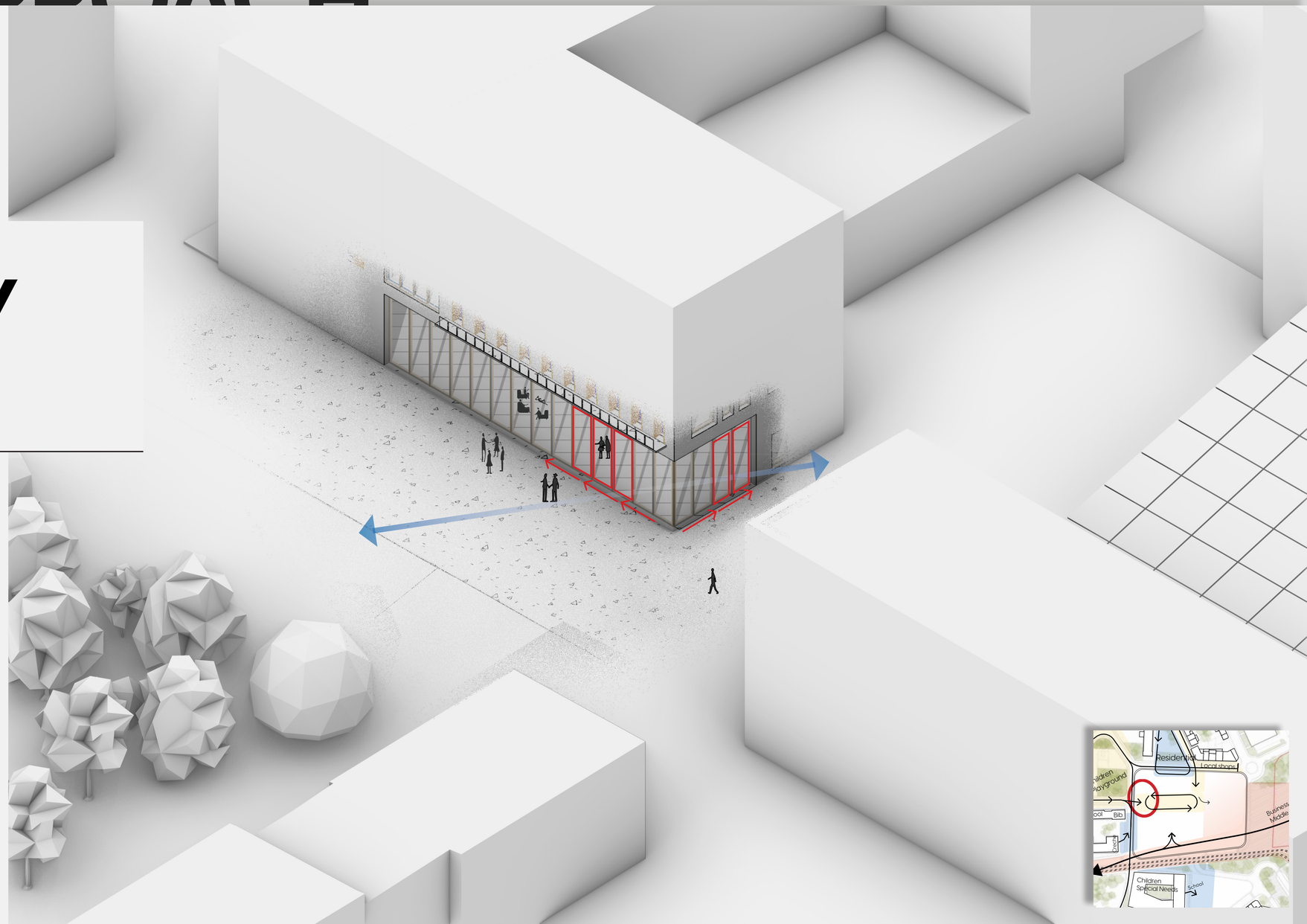
Residence 3 Entrance



DESIGN APPROACH

L

Community Space



DESIGN APPROACH

LI

Community Space

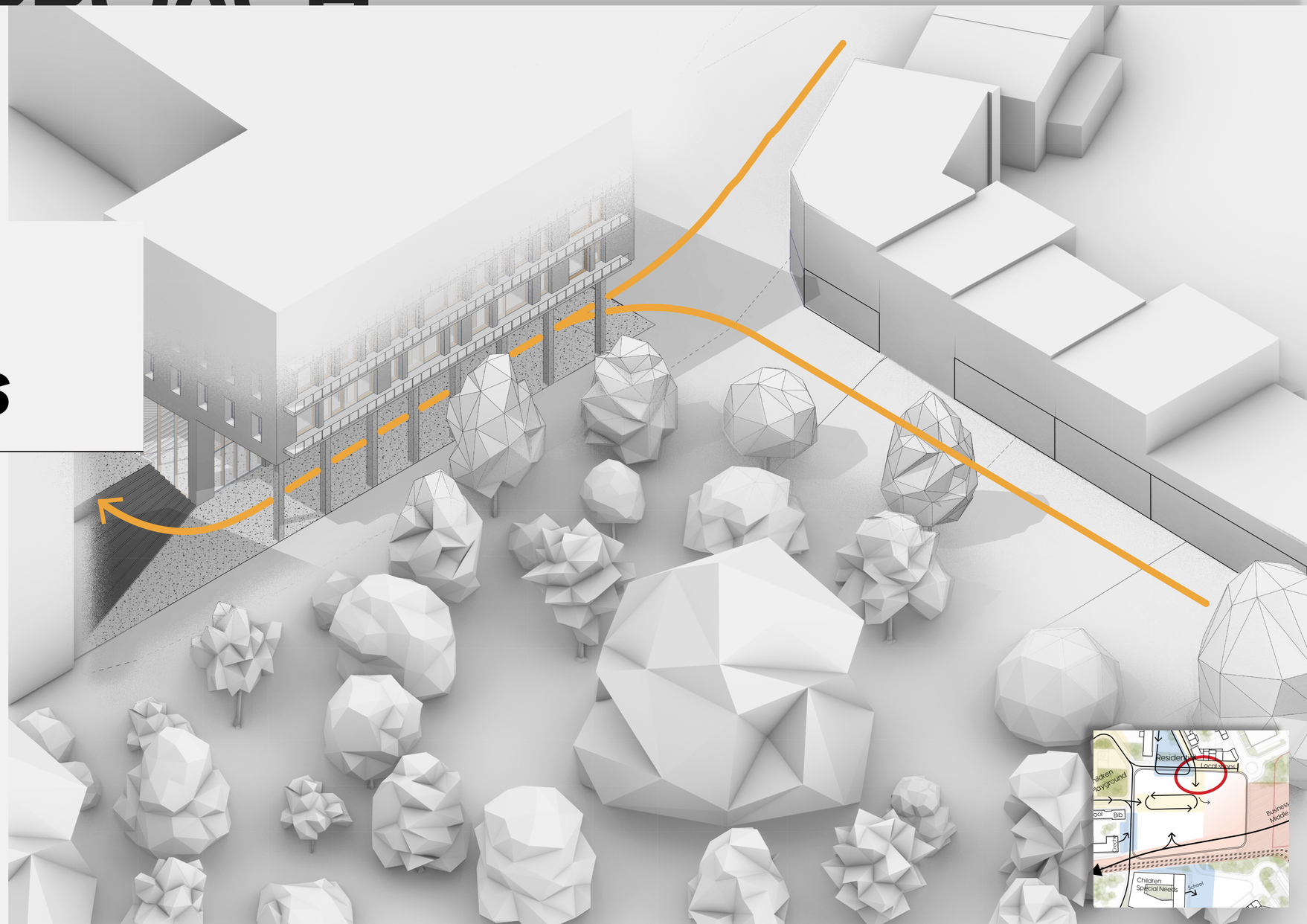




DESIGN APPROACH

L

Colonade
Local Shops



DESIGN APPROACH

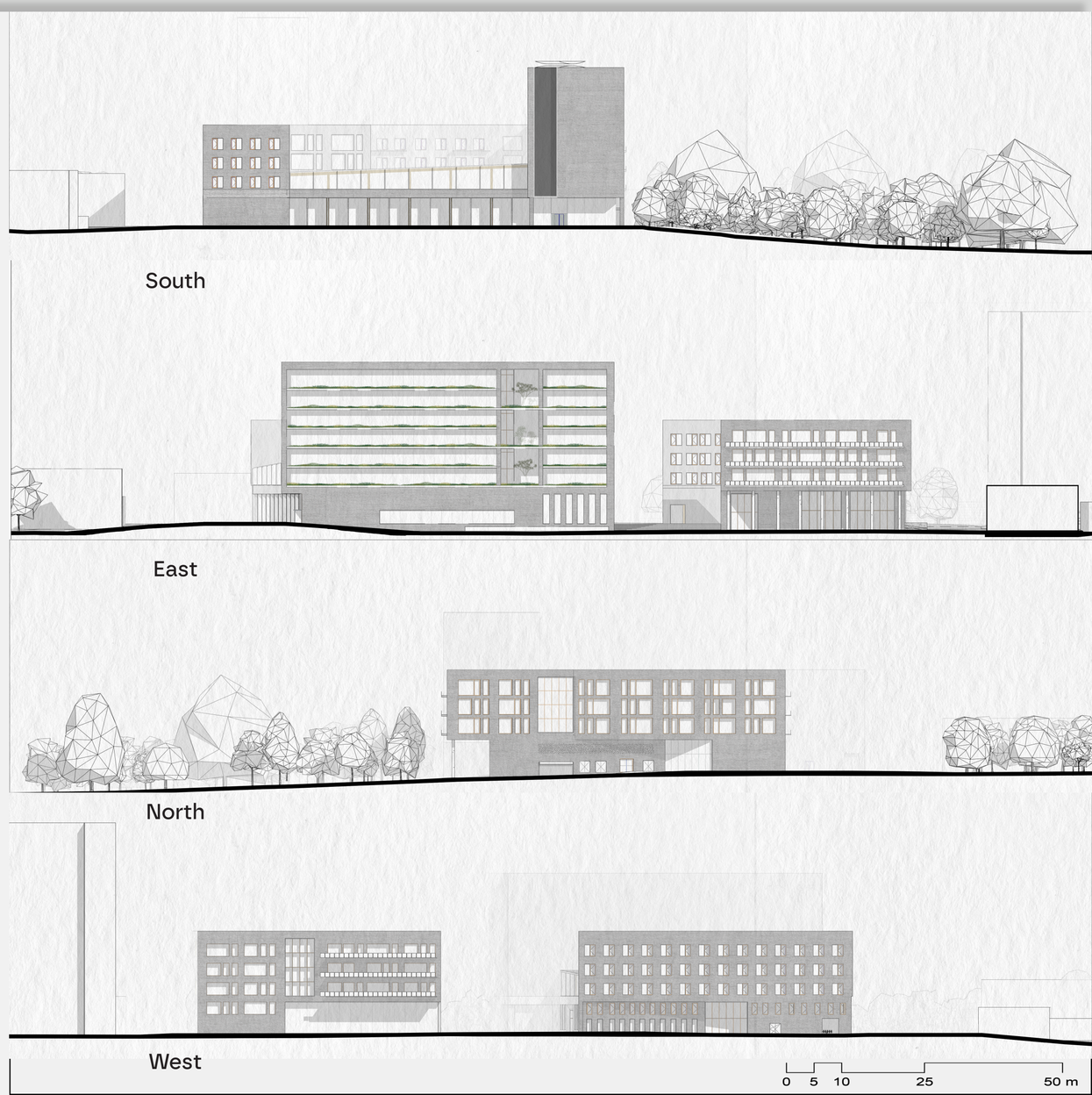
L



Materialization

What formal design choices allow the designation of character of the space?

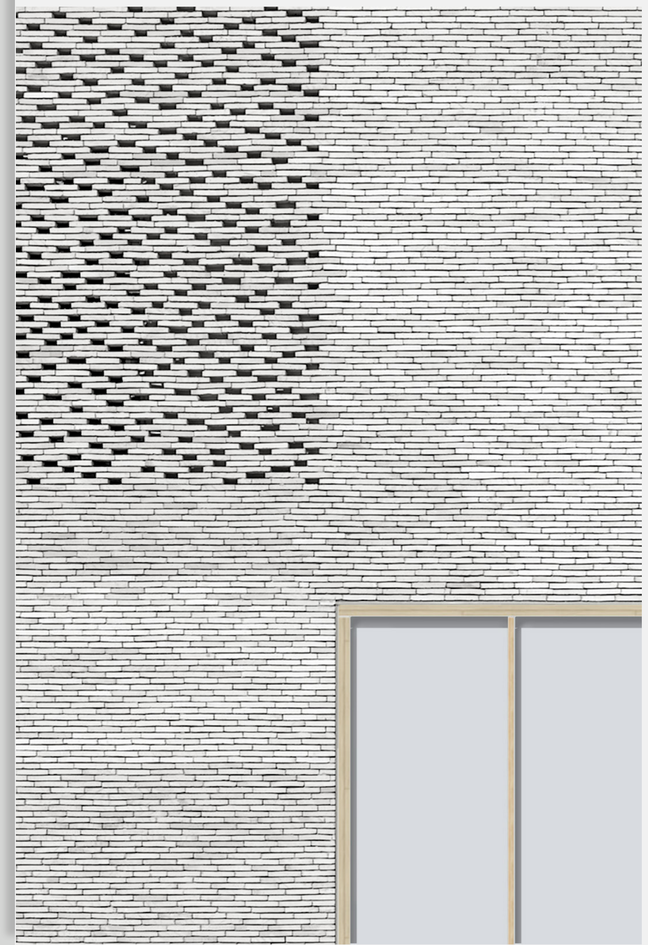
What are the current design language of buildings?
(north island vs modernist language)
(vs how i want to design)
How is the current social cohesion of the inhabitants?

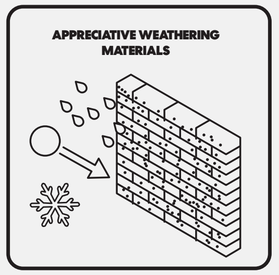


DESIGN APPROACH

LI

Materialization

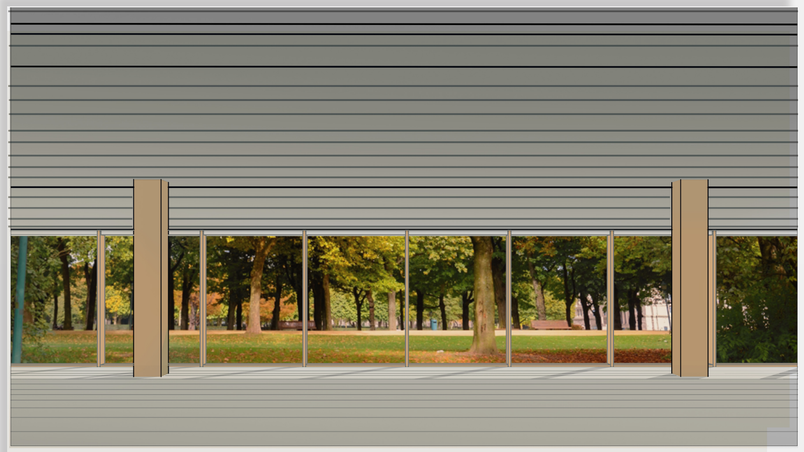


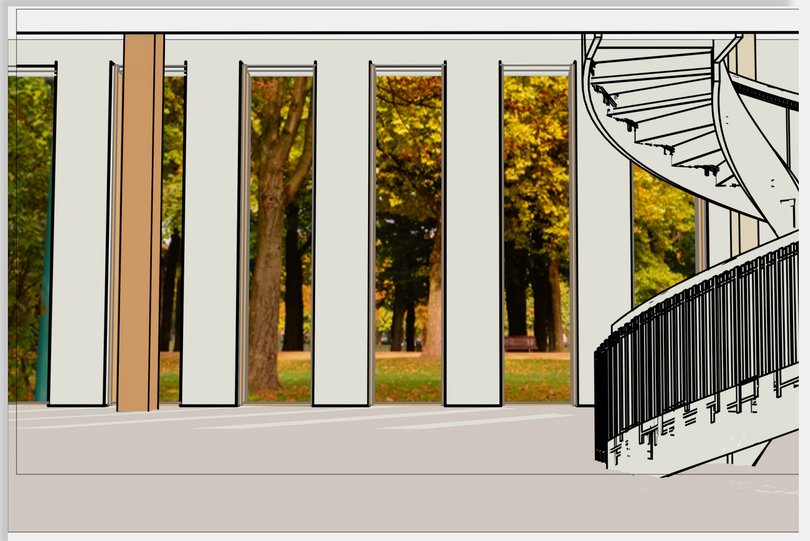


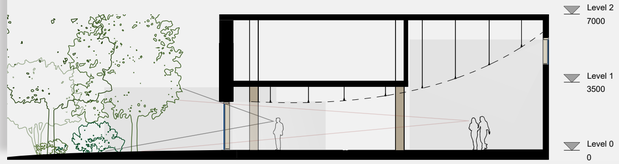




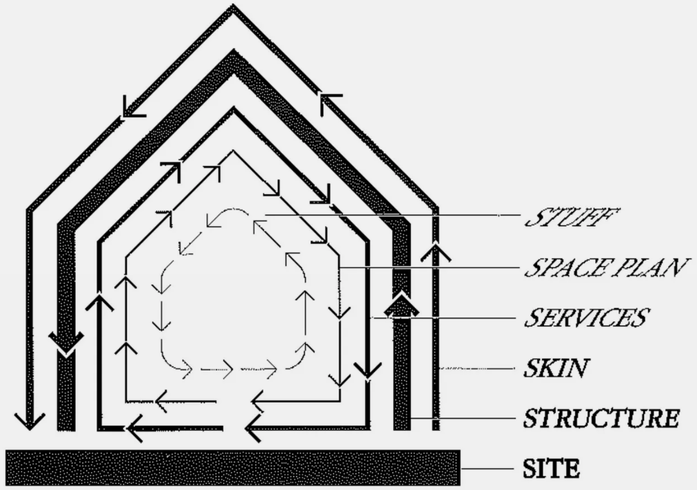




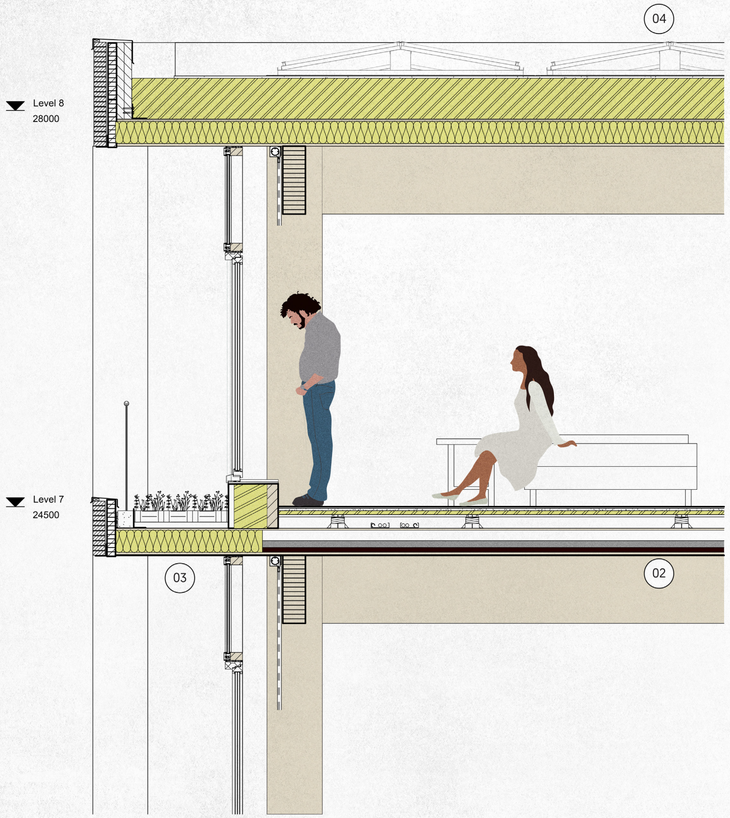


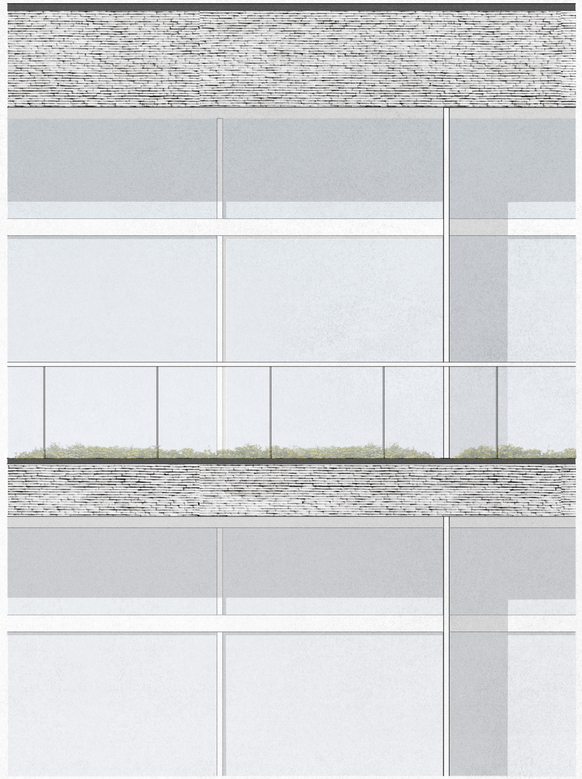

Level 2
7000
Level 1
3500
Level 0
0











01 | Partition Wall

- Gypsum Wall Board 2x6mm
- HSB with Mineral Wool 98mm
- Air Gap 50mm
- HSB with Mineral Wool 98mm
- Gypsum Wall Board 2x6mm

02 | Parition Floor

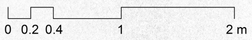
- Hardwood Finish 20mm
- Dry Screed Board 20mm
- Rigid Insulation 35mm
- w. underfloor heating
- Underfloor Boards 20mm
- Lignatur Element 240mm
  w. Silent 12
  w. REI 90 fire safety

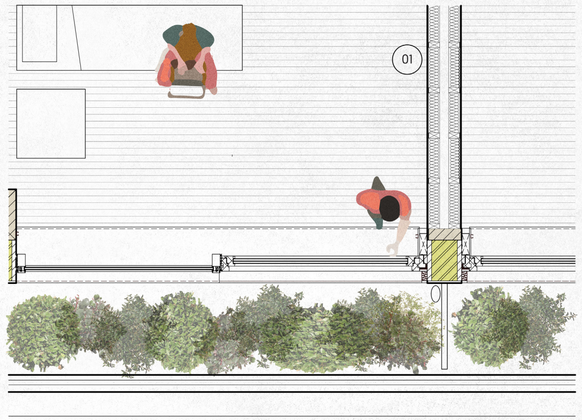
03 | Green Floor Balcony

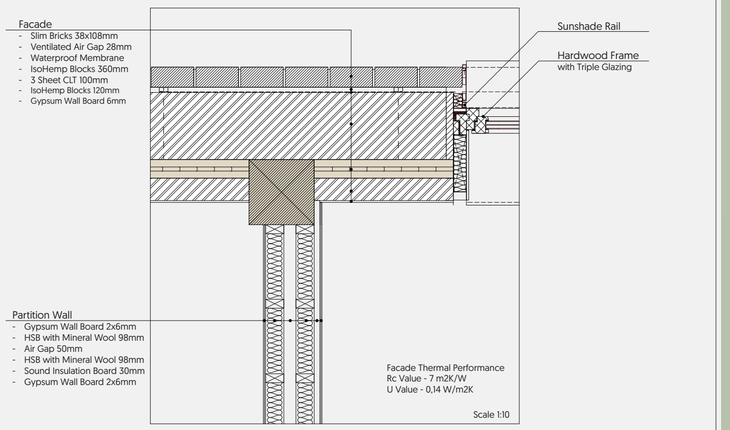
- Grass / Bushes
- Soil 150mm
- Filter Cloth
- Drainage Mat 50mm
- w. Root Barrier Layer
- Waterproof Layer
- Lignatur Element 240mm
  w. insulation filling

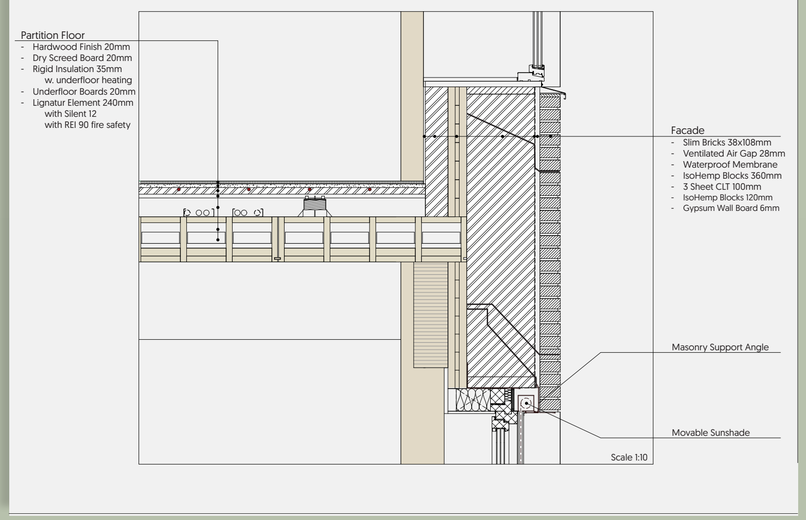
04 | Roof

- Solar Panels
- Gravel 20mm
- EPDM Membrane
- IsoHemp Blocks 360mm
- Lignatur Element 240mm
  w. insulation filling







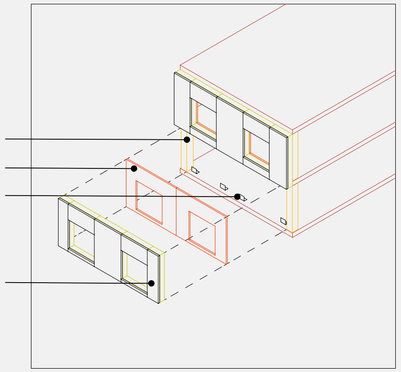


Prefabricated

Glulam Timber Post & Beam Structure
Cross Laminated Timber 100mm
Steel Corner Fasteners

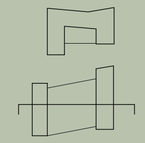
Built On Site

Facade Insulation and Cladding

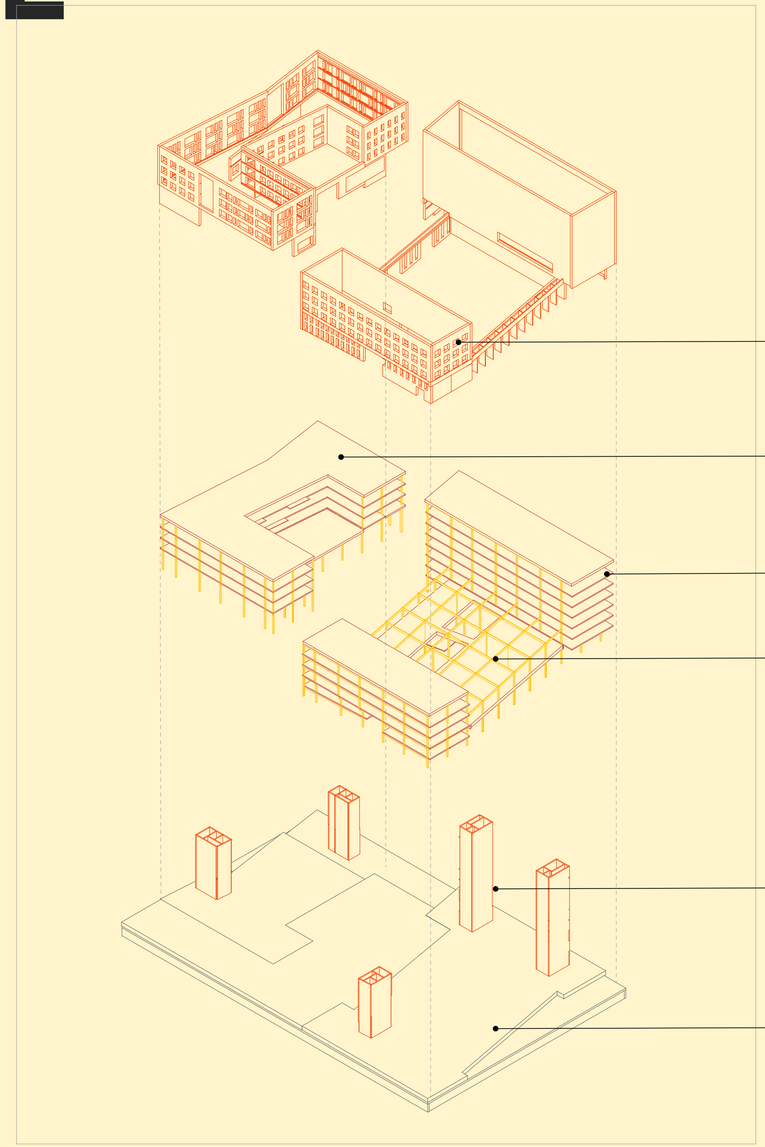


The exterior wall elements themselves are not load-bearing, i.e. they support only their own weight and wind loads on each storey. This makes it easier to subsequently replace them if an upgrade is required to improve energy use, or if there is an extension added or an architectural re - design.

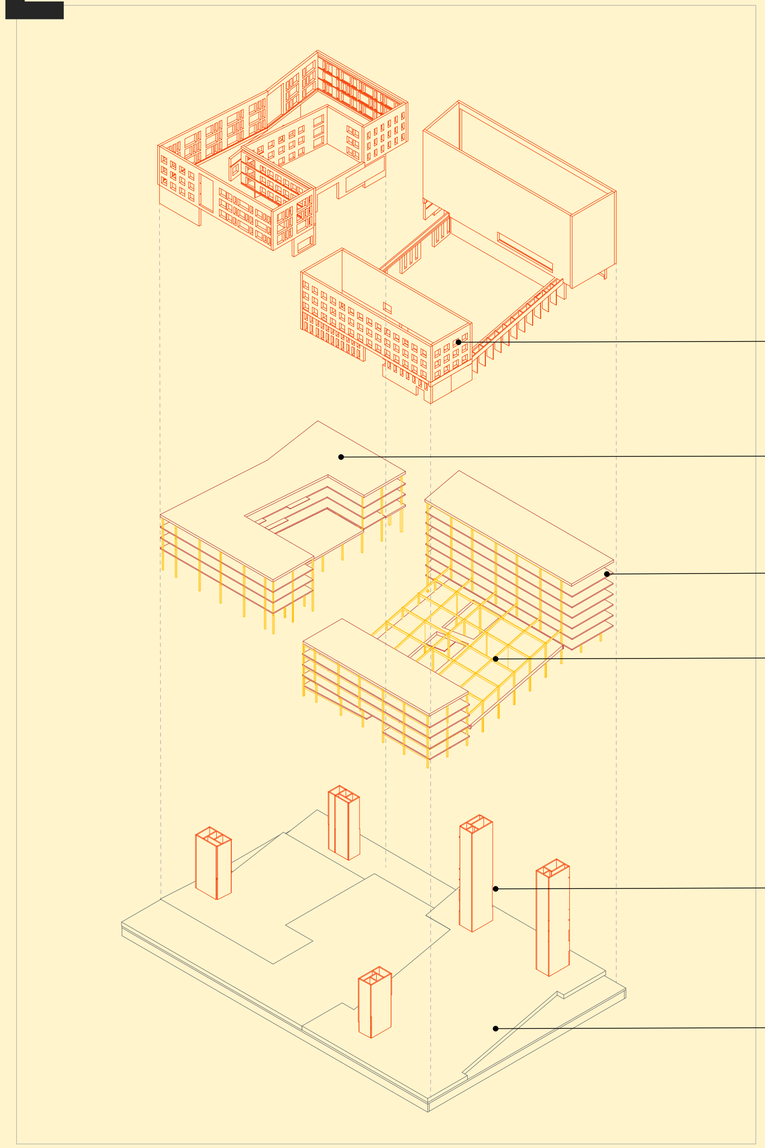




STRUCTURAL DESIGN



STRUCTURAL DESIGN



Cross Laminated Timber 100mm
Shear Resistant Facade With
Slim Concrete Brick Cladding

Lignatur 240mm
Floor Structure

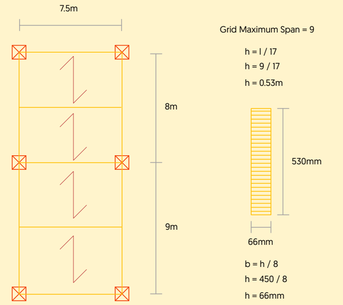
Lignatur 480mm
Cantilevered Floor

Glulam Timber
Post & Beam Structure

Cross Laminated Timber
Shear Wall Cores

Concrete Foundation

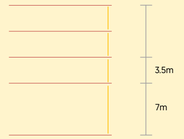
Dimensioning



Grid Maximum Span = 9

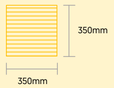
h = l / 17
h = 9 / 17
h = 0.53m

b = h / 8
h = 450 / 8
h = 66mm

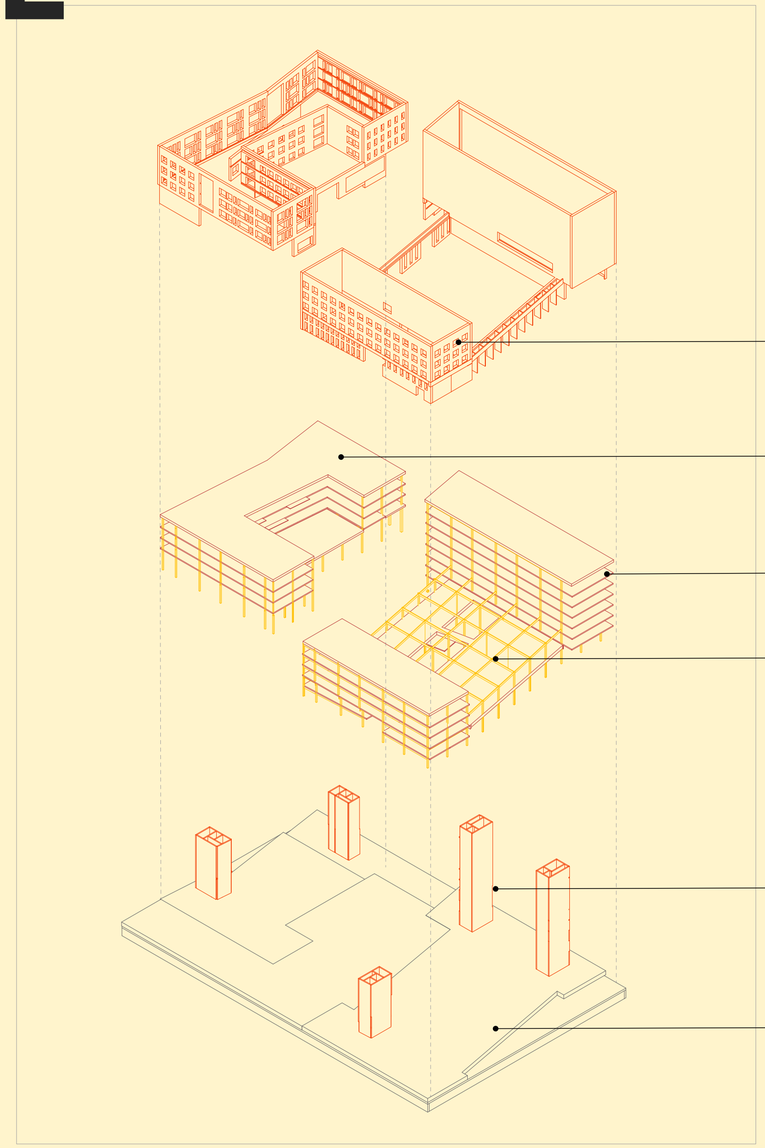


Ground Floor Height = 7

b = l / 20
h = 7 / 20
h = 0.35m



STRUCTURAL DESIGN



Cross Laminated Timber 100mm
Shear Resistant Facade With
Slim Concrete Brick Cladding

Lignatur 240mm
Floor Structure

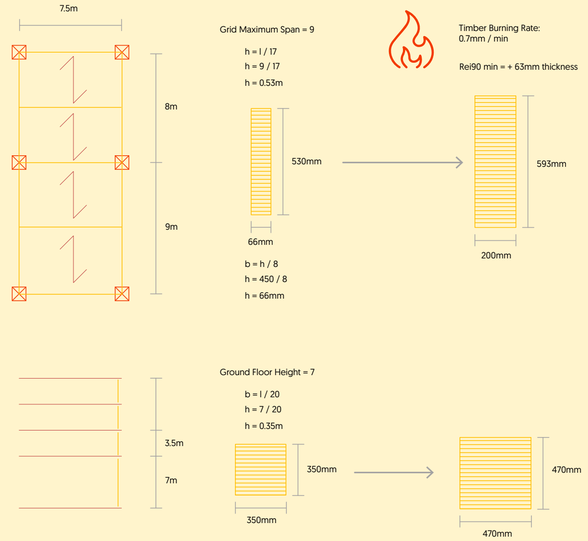
Lignatur 480mm
Cantilevered Floor

Glulam Timber
Post & Beam Structure

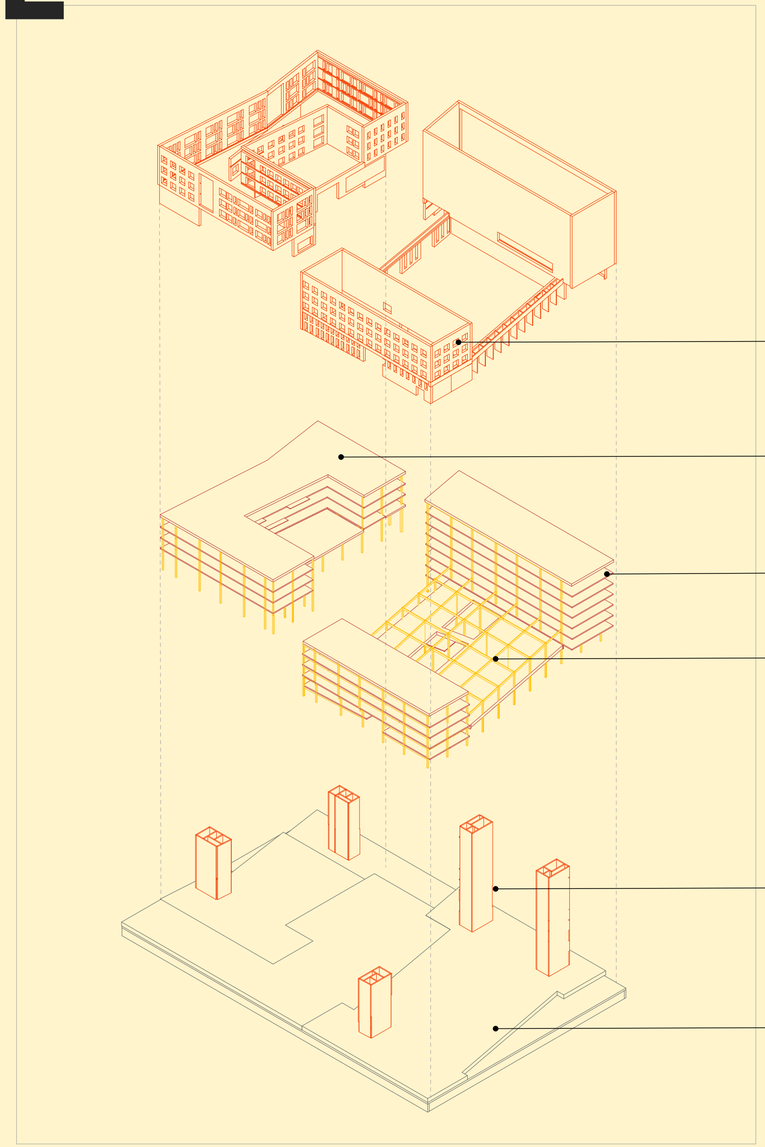
Cross Laminated Timber
Shear Wall Cores

Concrete Foundation

Dimensioning

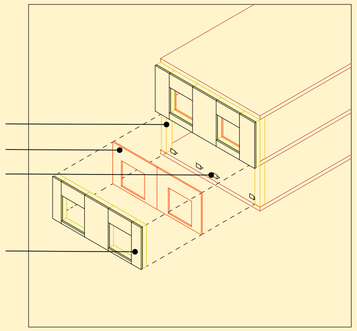


STRUCTURAL DESIGN

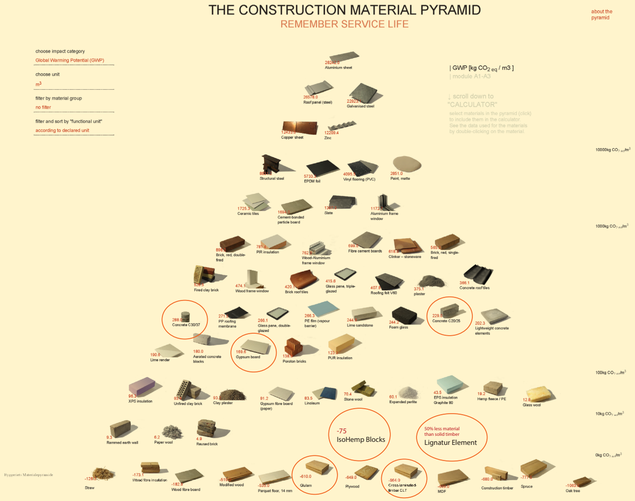


Prefabricated
- Glulam Timber Post & Beam Structure
- Cross Laminated Timber 100mm
- Steel Corner Fasteners

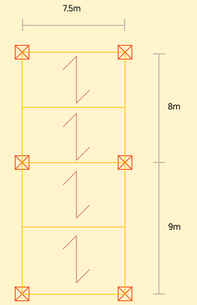
Built On Site
- Facade Insulation and Cladding

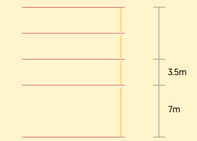


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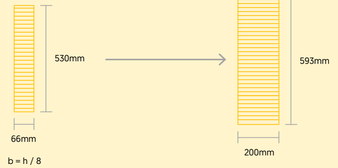
Dimensioning





Grid Maximum Span = 9

h = l / 17
h = 9 / 17
h = 0.53m



b = h / 8
h = 450 / 8
h = 66mm

Timber Burning Rate:
0.7mm / min

Rei90 min = + 63mm thickness

Ground Floor Height = 7

b = l / 20
h = 7 / 20
h = 0.35m

