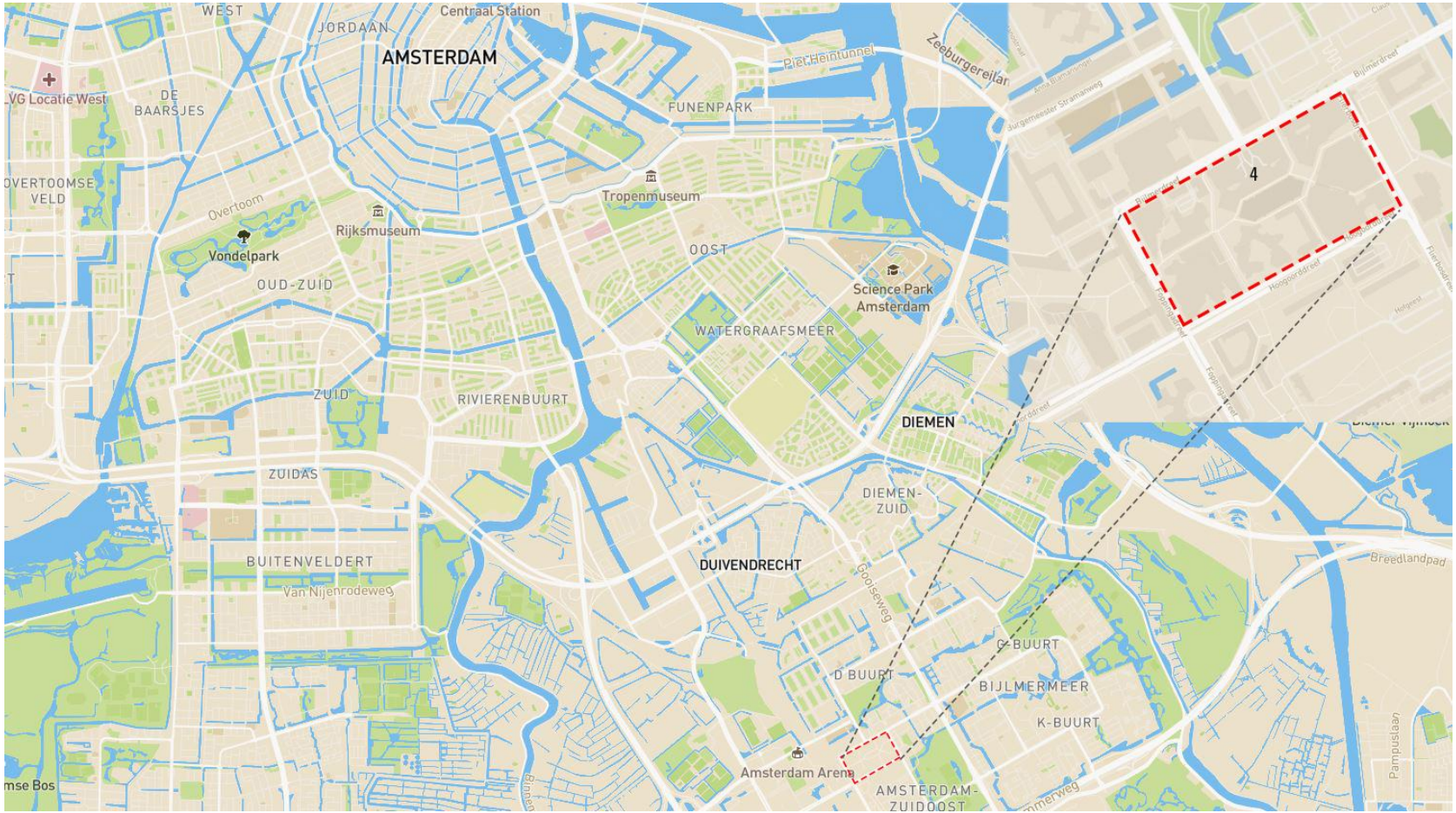
Juxtaposition of notions

Adaptable housing through circular transformation

New heritage Graduation studio
P5 Presentation

MSc Architecture, TU Delft
2021 07 01

LOCATION

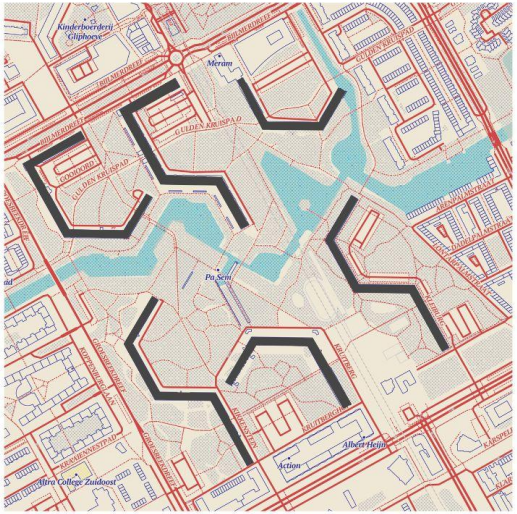

WEST
JORDAAN
Centraal Station
AMSTERDAM
Piet Heintunnel
Zeeburgereiland
DE BAARSJES
FUNENPARK
OVERTOOMSE VELD
Overtoom
Tropenmuseum
Rijksmuseum
Vondelpark
OOST
OUD-ZUID
Science Park Amsterdam
WATERGRAAFSMEER
ZUID
RIVIERENBUURT
DIEMEN
ZUIDAS
DIEMEN-ZUID
BUITENVELDERT
Van Nijenrodeweg
DUIVENDRECHT
Gooiseweg
Breedlandpad
C-BUURT
D BUURT
BIJLMERMEER
K-BUURT
Amsterdam Arena
AMSTERDAM-ZUIDOOST
Pampuslaan
4


BIJLMERPLEIN
The 1M Homes Initiative
HOPTILLE
HEESTERVELD

BIJLMERPLEIN - EXAMPLE OF SMALL SCALE URBANITY

URBAN CONTEXT OF THE NEIGHBOURHOOD

REACTION TO MODERNISM



MICROCOSMOS SPACES OF BIJLMER

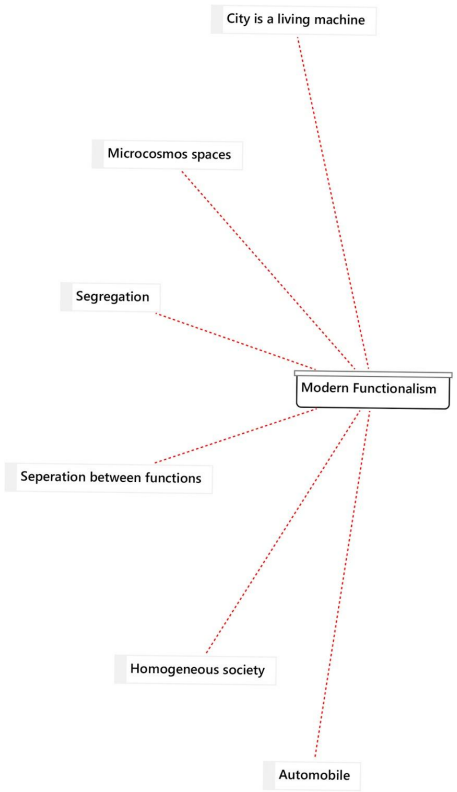
SMALL SCALE URBANITY OF BIJLMERPLEIN

1972 Aerial photo Bijlmer East Center

1987 Aerial photo Bijlmerplein

https://archief.amsterdam/beeldbank/?mode=gallery&view=horizontal&q=bijlmer&rows=25&page=7

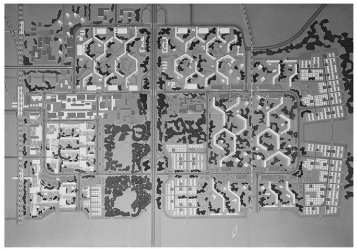
INTERPLAY BETWEEN NOTIONS



Interplay between notions

Bijlmer -utopian city

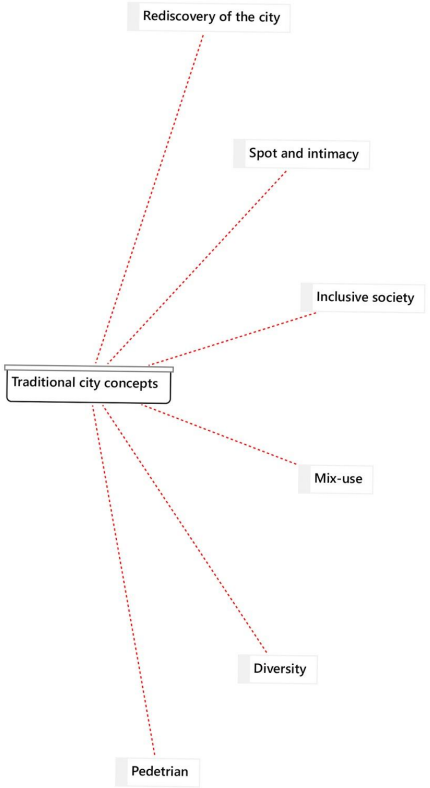
Failed - "The Drain of the Dutch Society"
Pi de Bruijn called it "an invasion" and "a ghetto."



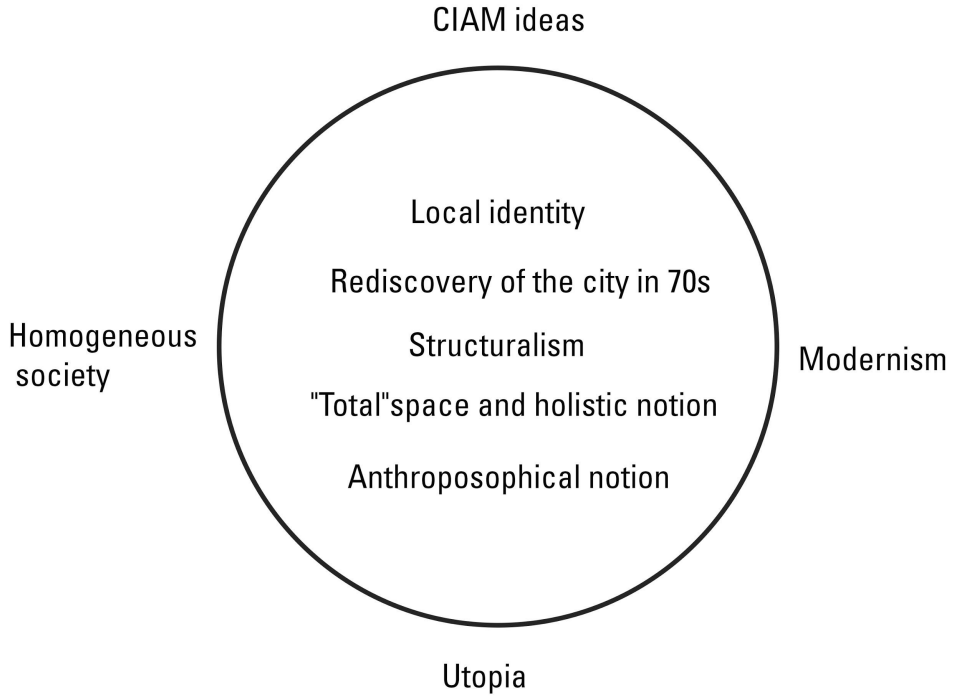
Manifest of openness of 70s

Failed to create a unified ideological alternative

"The rotten years" - (Arne van Herk)
"An age of confusion" - (Adri Duivesteijn)
"Pluriform period" - (John Habraken)

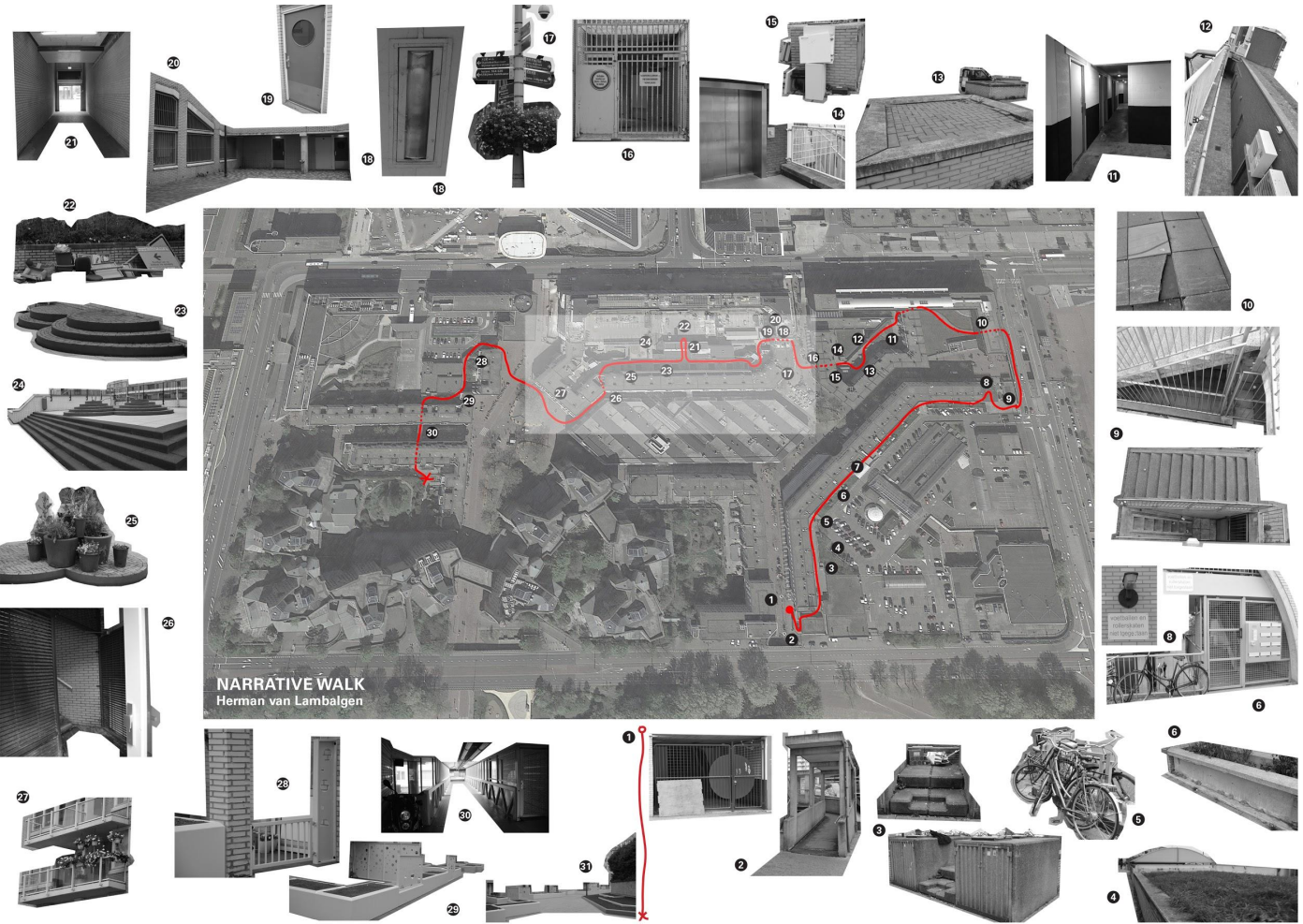


BIJLMERPLEIN - COLLAGE LIKE IMAGE



STAKEHOLDERS PERSPECTIVE

OWNERS PERSPECTIVE



Mobility of people with disabilities (complicated ramps, not maintained elevators.

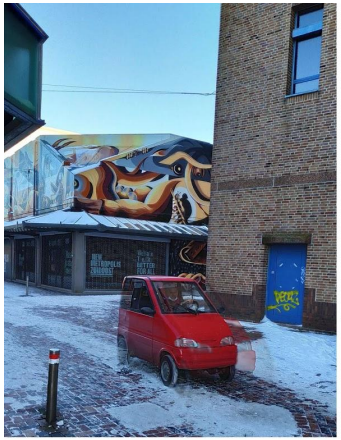
Homeless people come to the inner spaces and sleep there, cause on the ground floor there is public activities.

Hard surface and little of greenery.

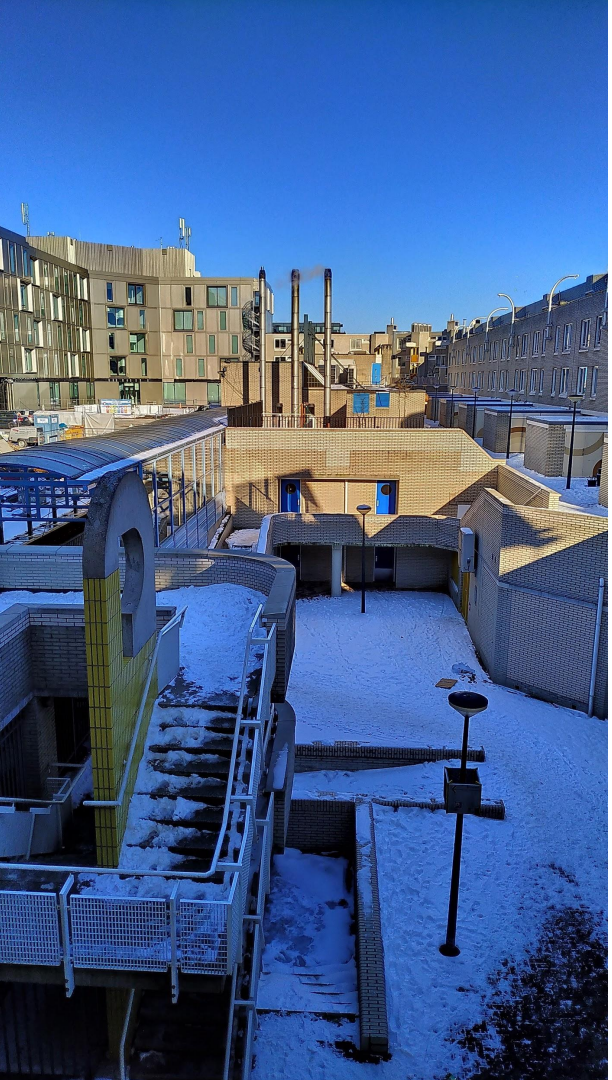
Courtyard is lacking of ownership.

Storage units on the first level are not desirable, it is hard to use them.

MOBILITY



The Canta is a two-seat microcar from the Netherlands specifically created for disabled drivers. It was developed in 1995 by Waaijenberg together with the Delft University of Technology. In addition to the standard petrol-engined production models, an electric Canta was designed for the German market but it has remained at the prototype stage. In the Netherlands, it is classified as a mobility aid because the width of the vehicle is only 1.10 metres, thus it may - unlike larger microcars - be used on cycle paths as well as sidewalks and footpaths; in addition a driver's license is not required.



OWNERS PERSPECTIVE

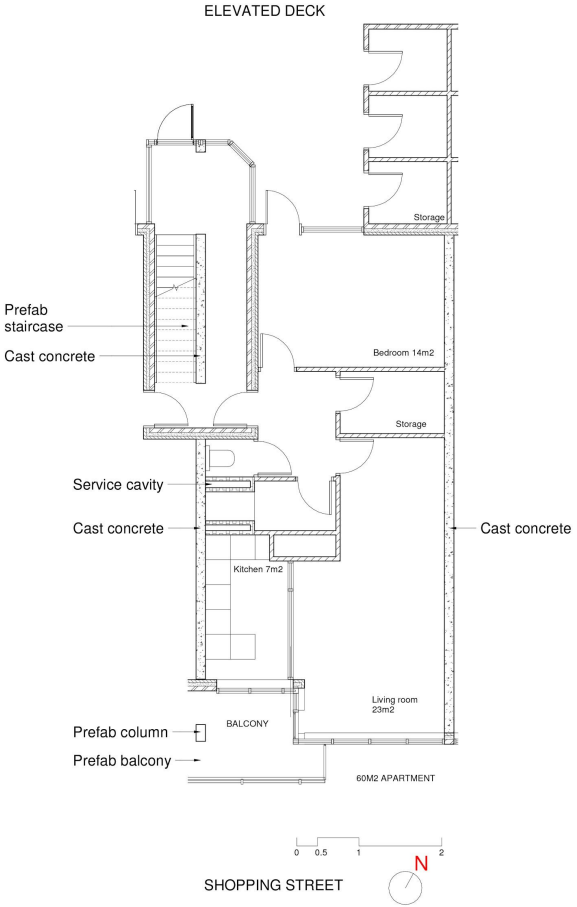
Inner space is without any connection with public domain and it is seperated.

The space itself is designed with one scenario so it lacks of flexibility in terms of residential use.

Complicated circulation system and maze like structure discourage social interaction.

There is no space for residents gatherings

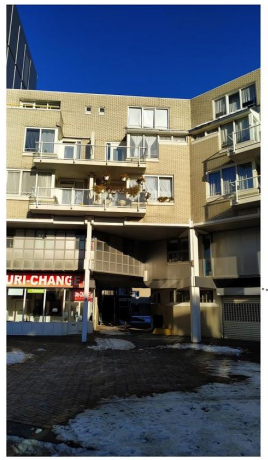
RESIDENTS' PERSPECTIVE

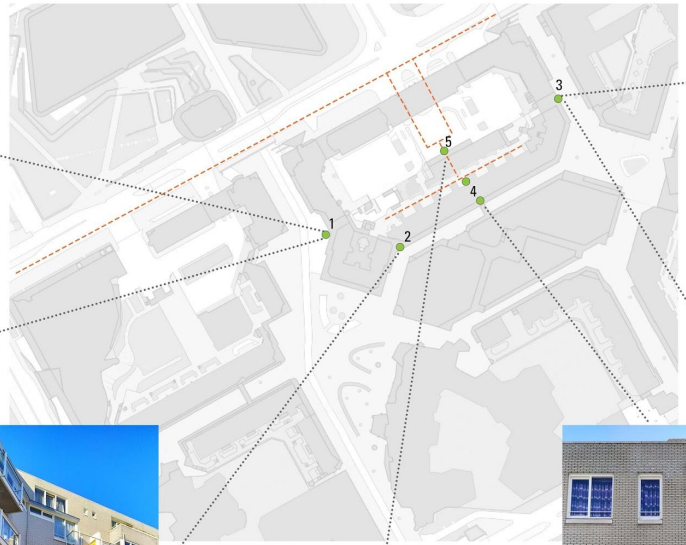


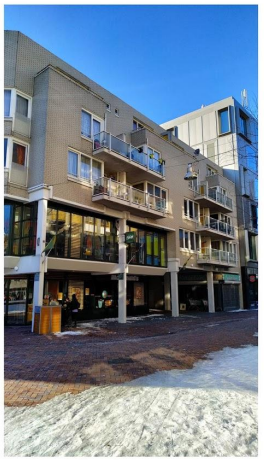
Highlighted qualities from some residents of their apartments:

Very spacious for one person
Two side orientation
Balcony connected with a kitchen
Enough storage space
Separation between bathroom and WC

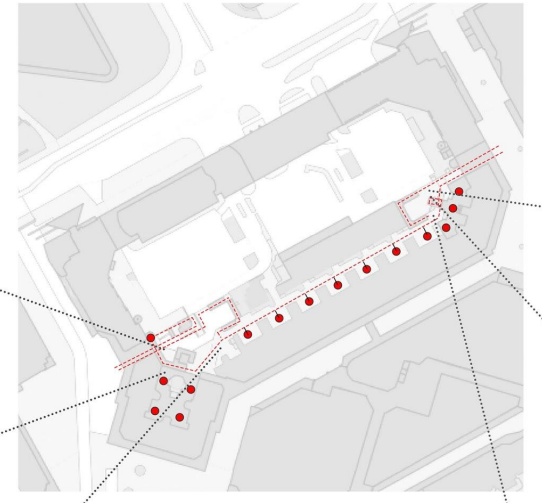
ENTRANCES TO RESIDENTIAL CLUSTERS

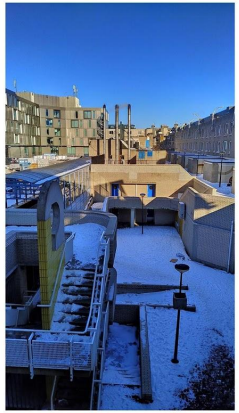


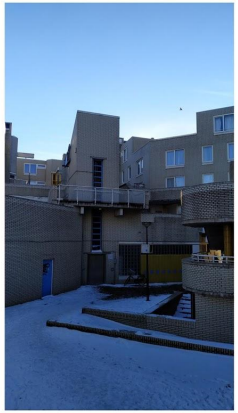


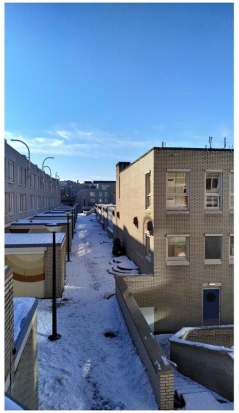


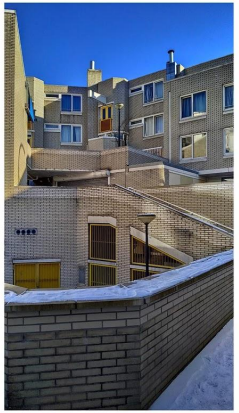
ENTRANCES TO THE DWELLINGS









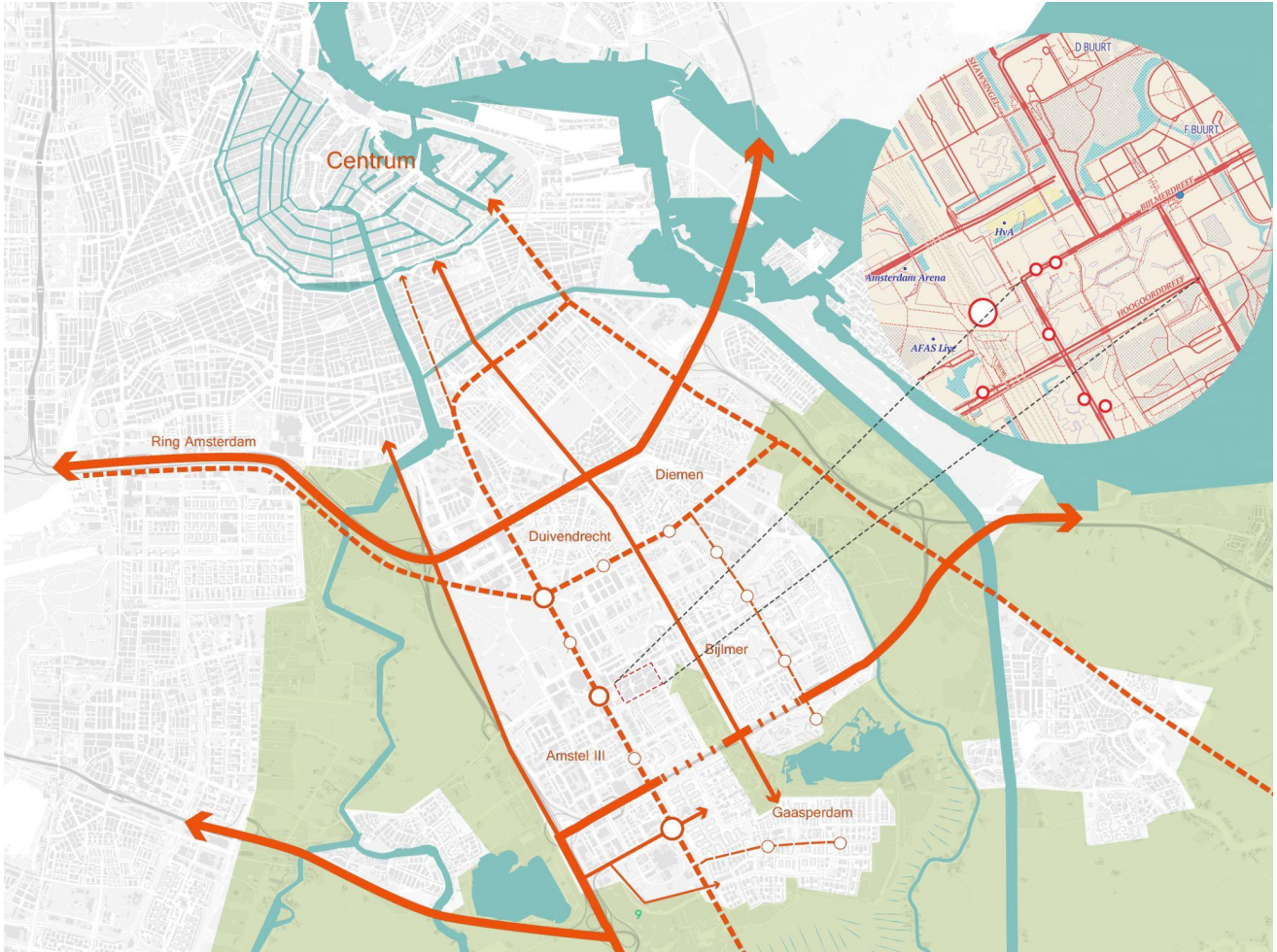


DEFINED ATTRIBUTES OF HISTORICAL VALUE

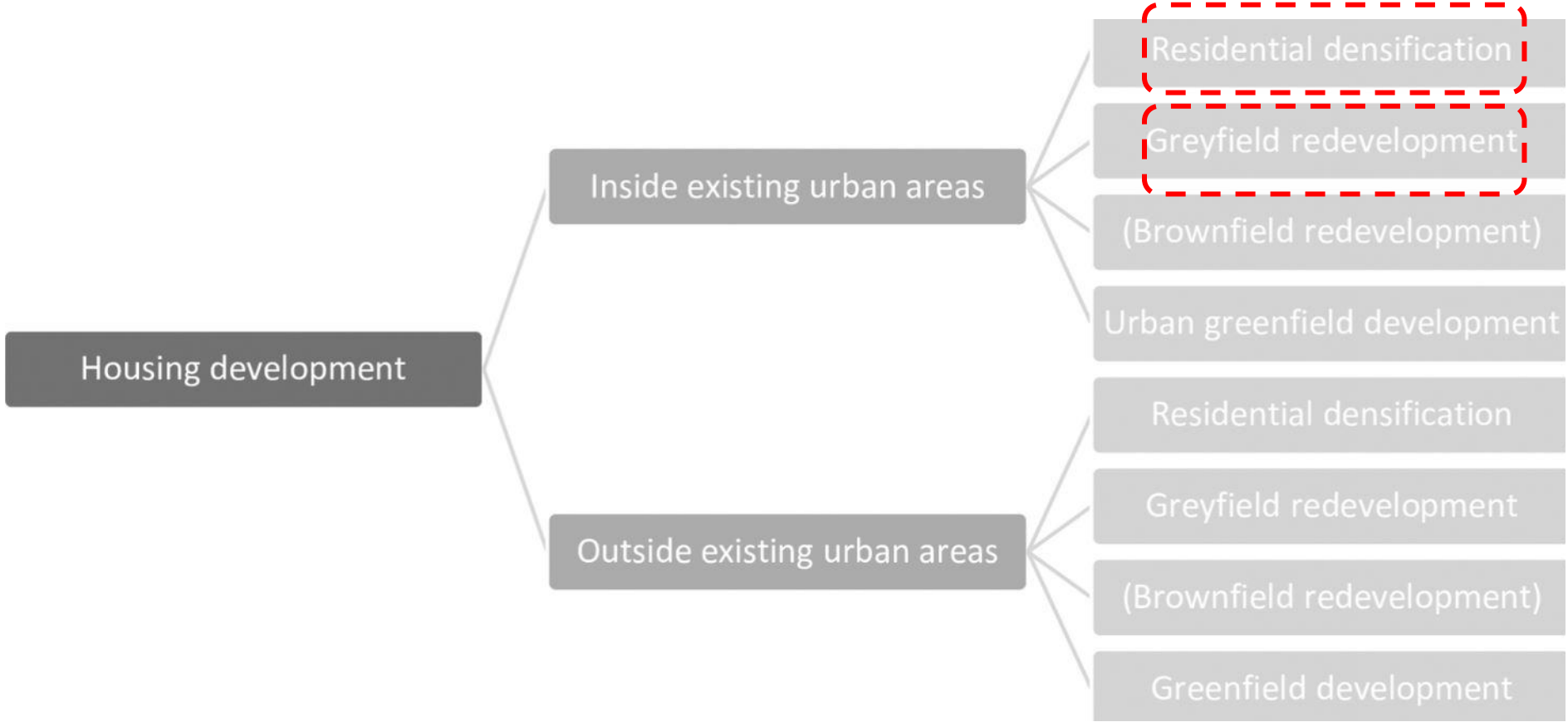
Modern Functionalism in 50s	70s back to traditional city concepts	Expectation in 70s/80s	Actual returns
Egalitarianism	Individualism	Safety	Segregated neighbourhood
Perfect blue print - pure encapsulation of CIAM ideas	'Improvised' planning and remediation	Responsive to neighbourhood problem	Heterodox neighbourhood
New cities - linear, open, and clean. reused of 'garden city' green	Traditional urban form - human scaled	Social interaction and cohesion	Low density urban structure Less public spaces
Four function: dwelling, work, transportation, and recreation - CIAM	Five spatially orienting elements: path, edge, node, district, landmarks	Space > function	1. Unevenly distributed program 2. Poor quality public space
Skyscrapers with great view, highrise	Single family house, lowrise	Matching housing demand, 'Normalise' living	Low density building Had progress in liveability
Cosmic spaces	Intimate spaces	Closer neighborhood	Poor communal space
Concrete	Brick	Dutch vibes	Hybrid materiality

Past ⟶ Present

URBAN SCALE MOBILITY - POTENTIAL FOR DENSIFICATION



URBAN PLANNING AND DENSIFICATION FROM GOVERNMENT PERSPECTIVE



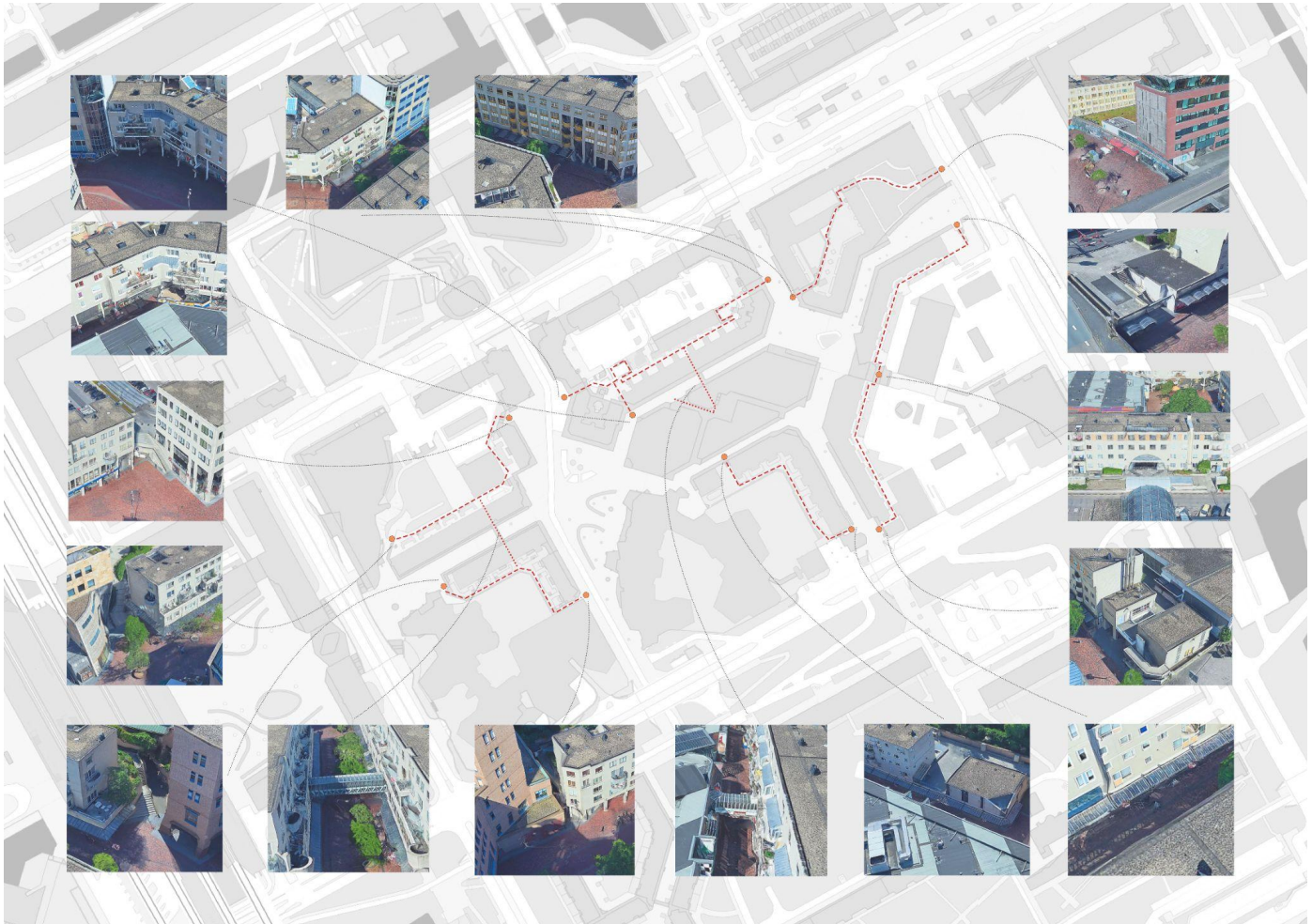
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0240738

SITE ANALYSIS

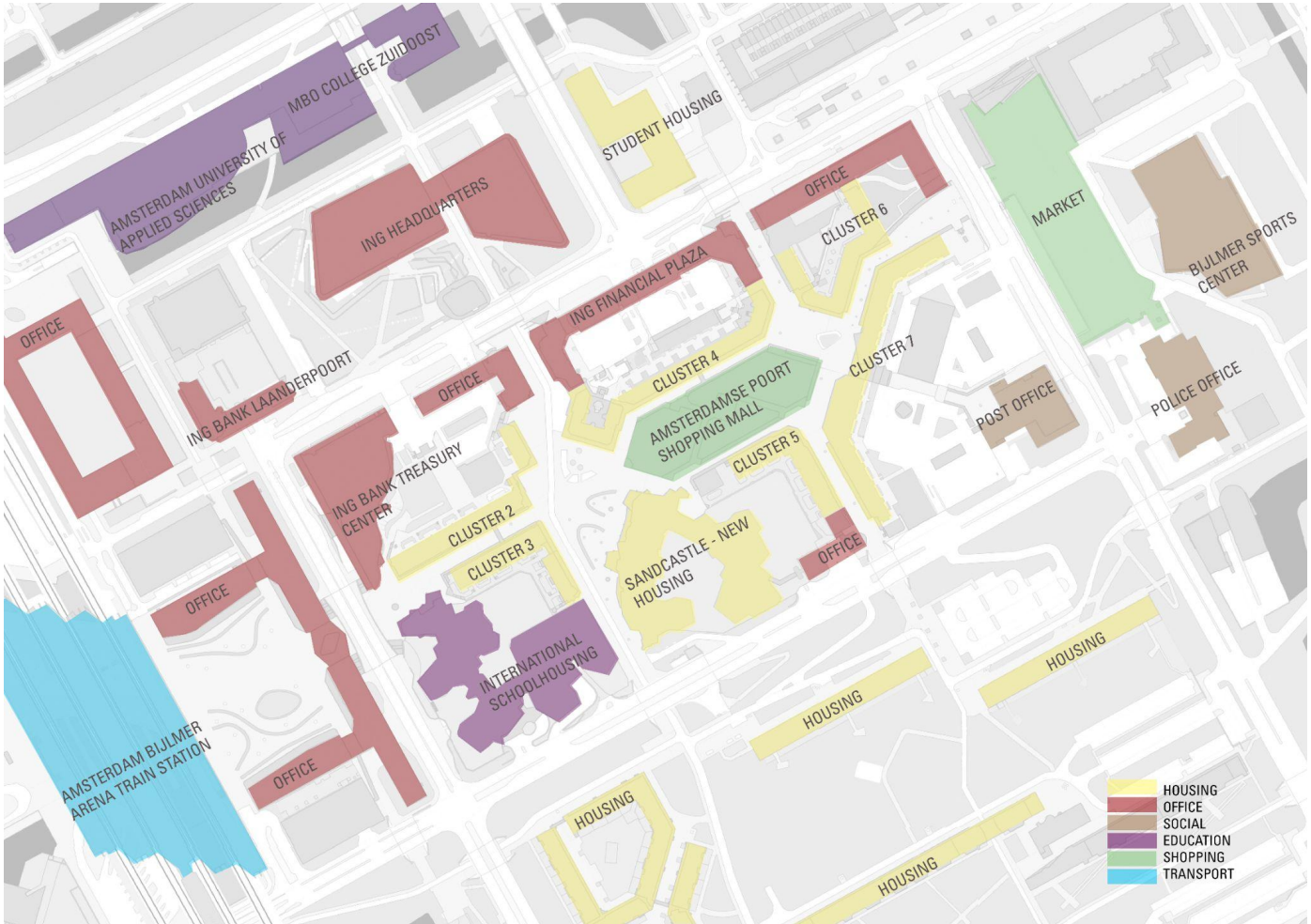
VEHICLE CIRCULATION

PEDESTRIAN CIRCULATION

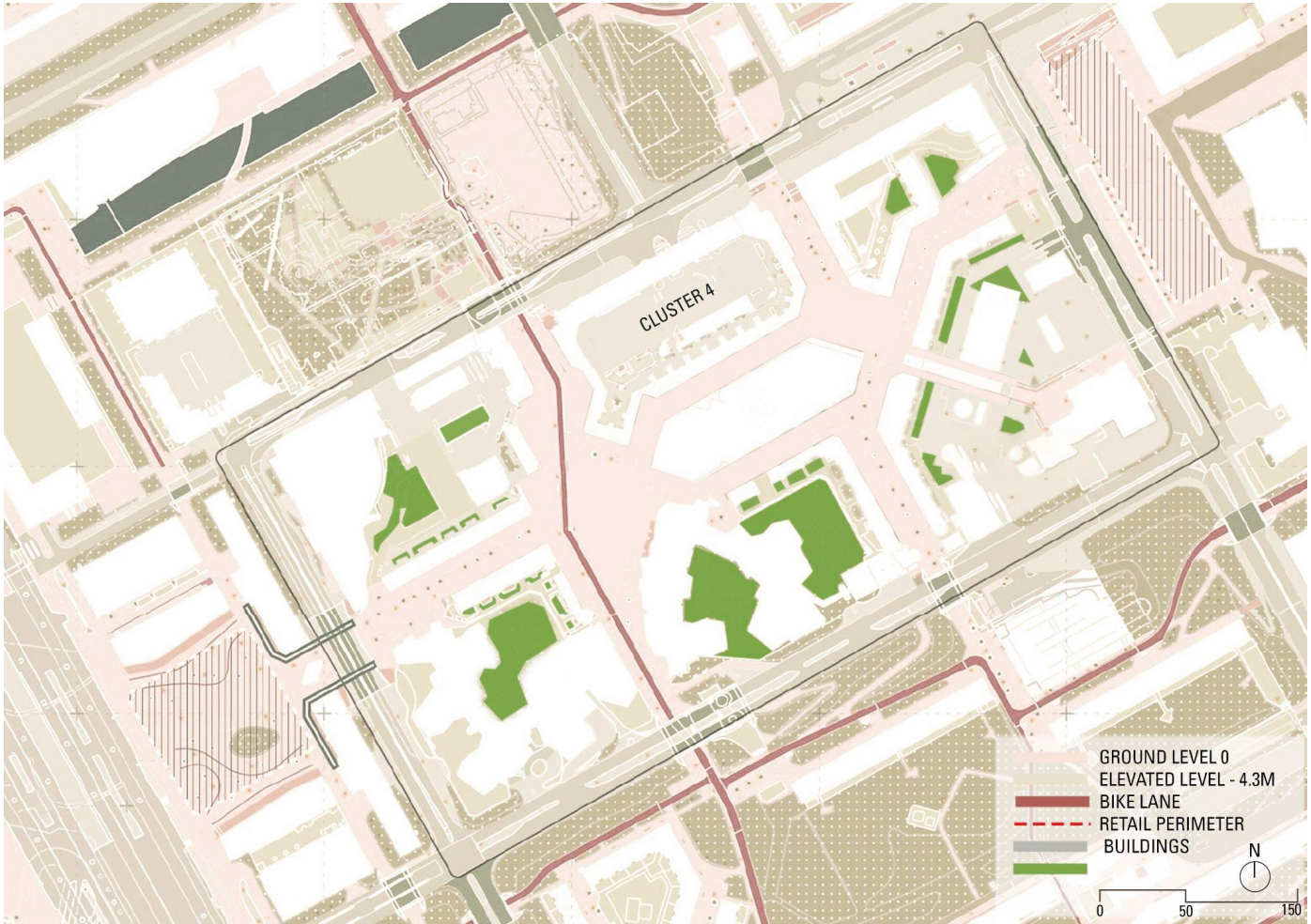
ENTRANCES TO THE RESIDENTIAL CLUSTERS



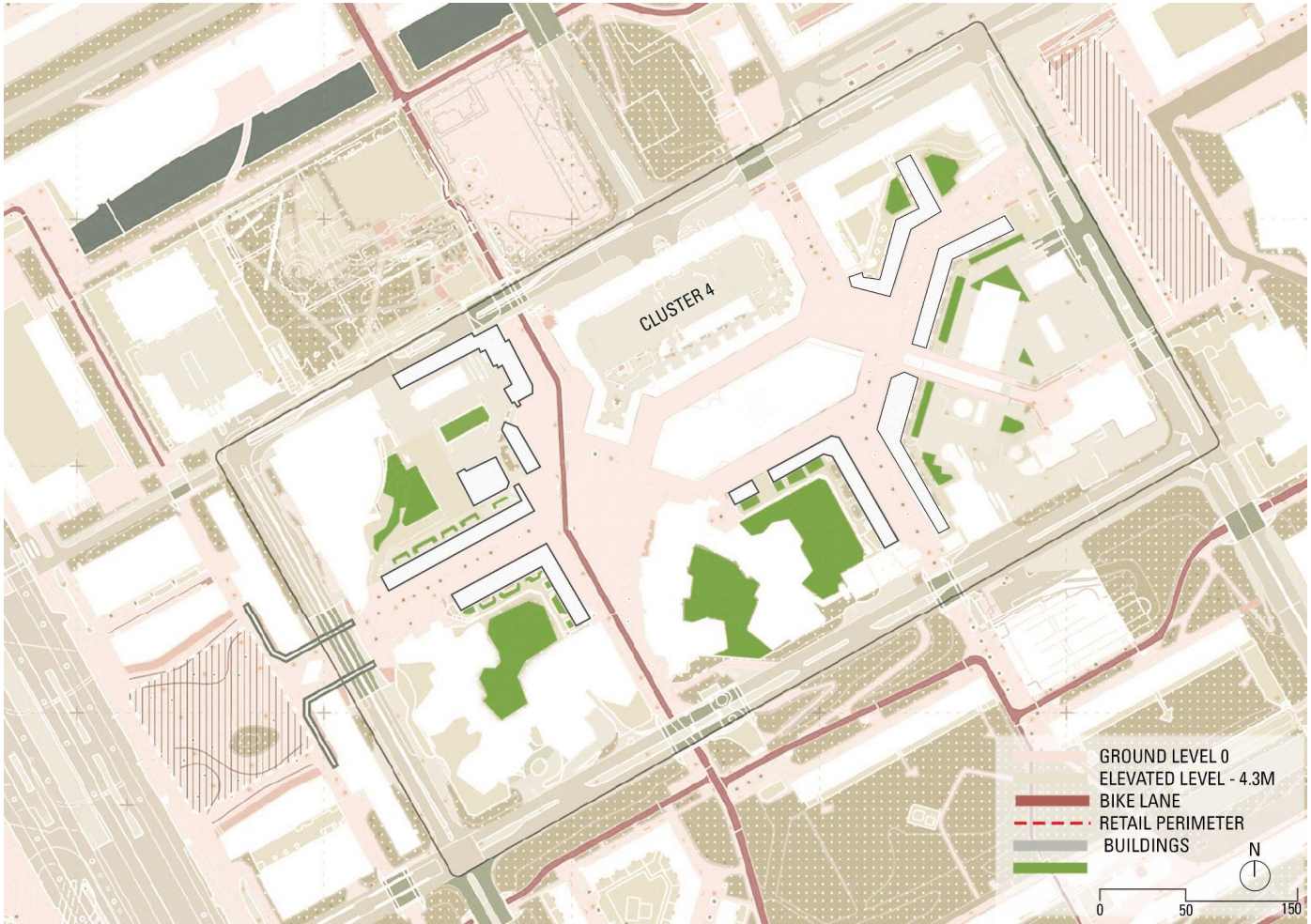
FUNCTIONS


MBO COLLEGE ZUIDOOST
AMSTERDAM UNIVERSITY OF APPLIED SCIENCES
STUDENT HOUSING
ING HEADQUARTERS
OFFICE
CLUSTER 6
MARKET
BIJLMER SPORTS CENTER
OFFICE
ING FINANCIAL PLAZA
ING BANK LAANDERPOORT
OFFICE
CLUSTER 4
AMSTERDAMSE POORT SHOPPING MALL
CLUSTER 7
POST OFFICE
POLICE OFFICE
ING BANK TREASURY CENTER
CLUSTER 5
CLUSTER 2
CLUSTER 3
SANDCASTLE - NEW HOUSING
OFFICE
OFFICE
INTERNATIONAL SCHOOLHOUSING
HOUSING
HOUSING
HOUSING
AMSTERDAM BIJLMER ARENA TRAIN STATION
OFFICE
HOUSING
HOUSING
HOUSING
OFFICE
SOCIAL
EDUCATION
SHOPPING
TRANSPORT

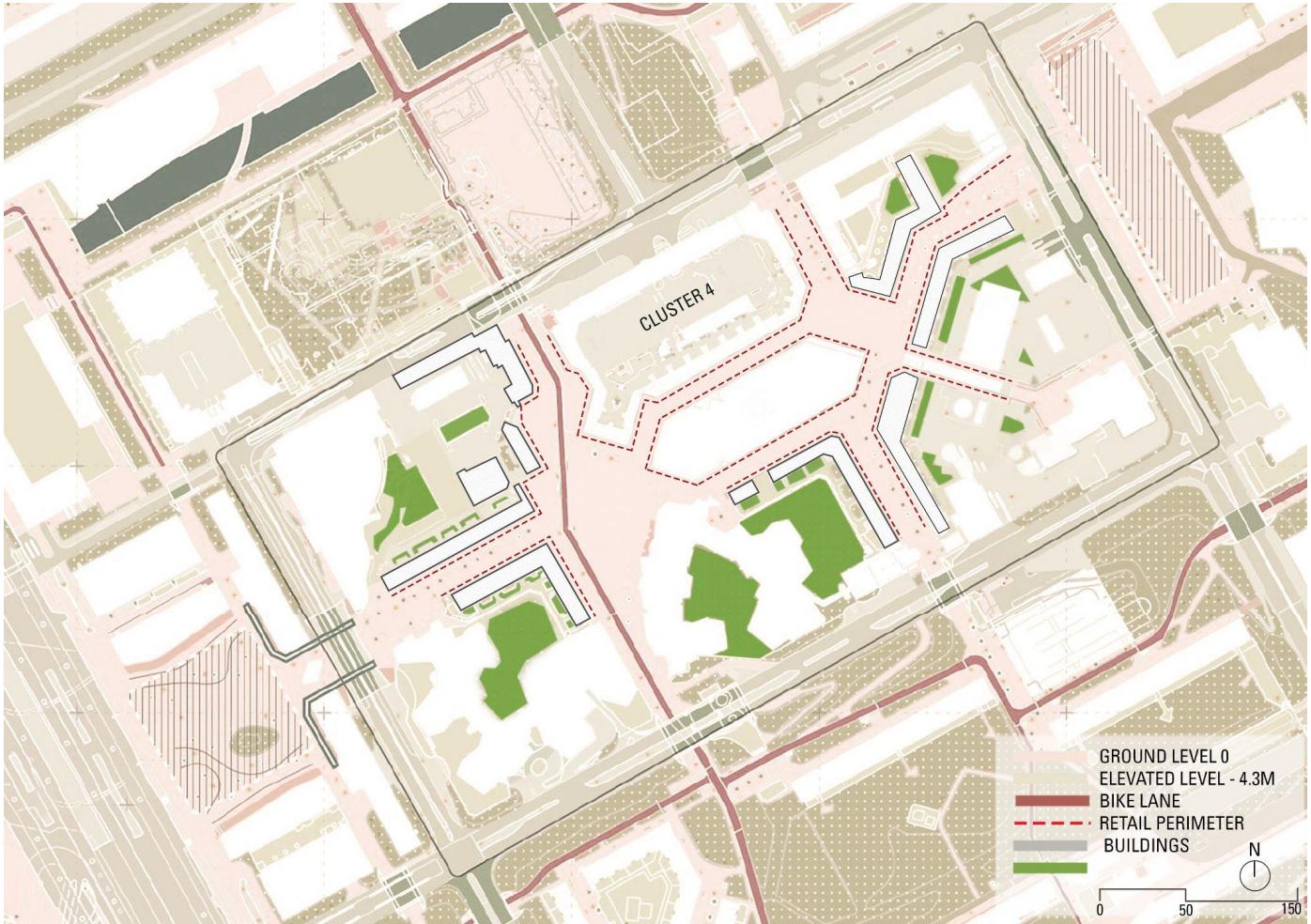
LACK OF GREENERY



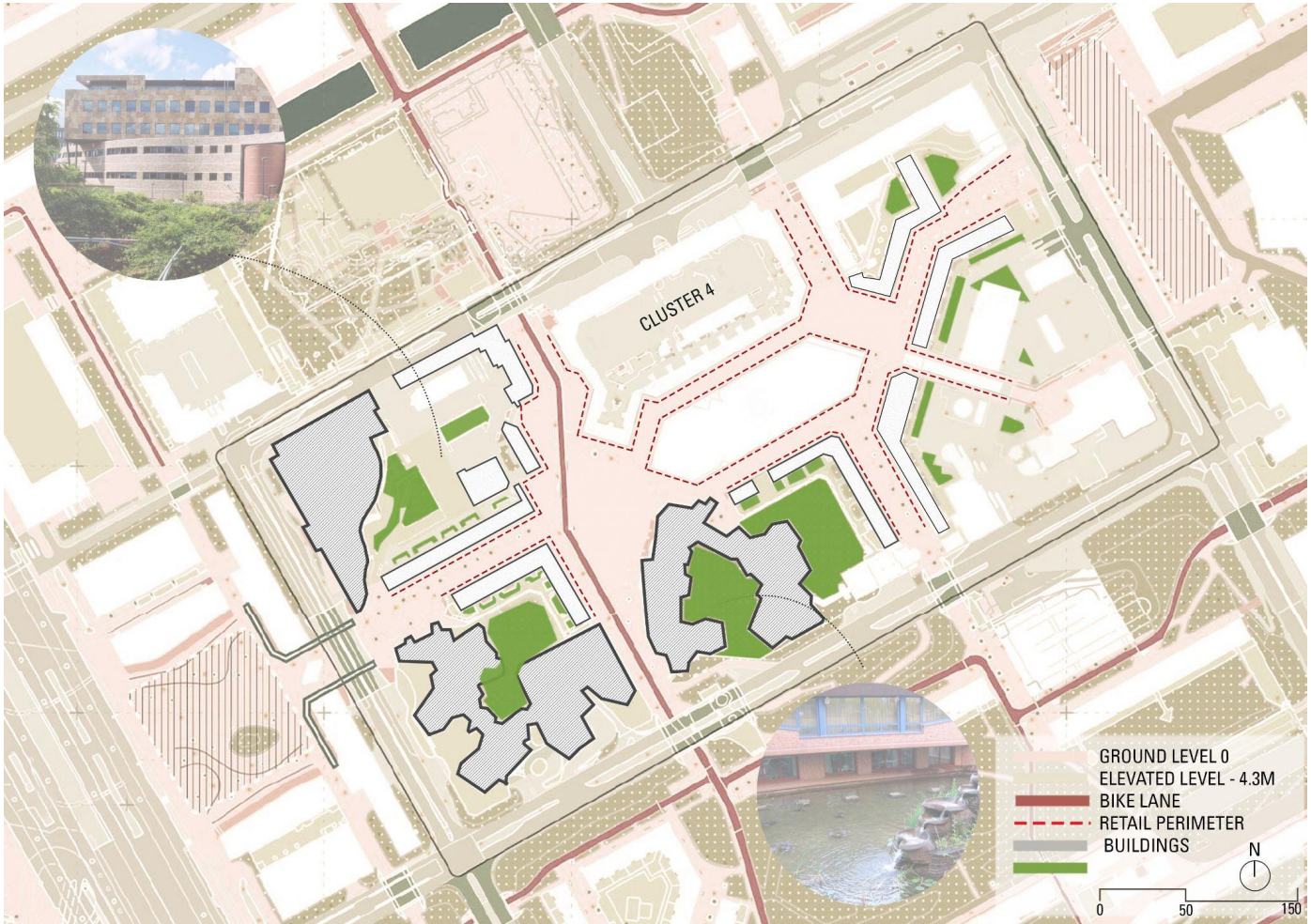
URBAN TISSUE COMPOSITION



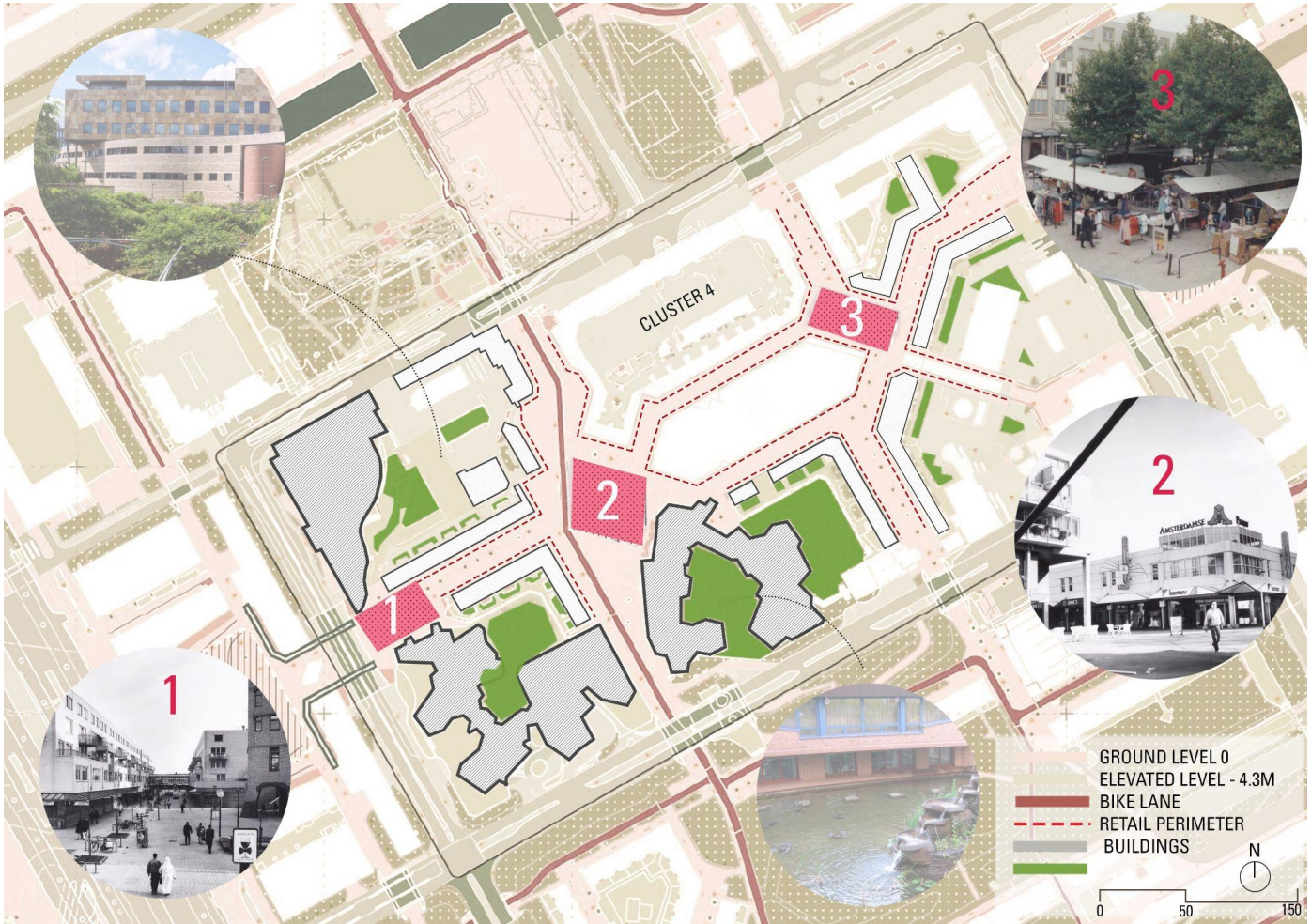
RETAIL PERIMETER



SOPHISTICATED INNER STRUCTURES



SEQUENCE OF PUBLIC SQUARES



HISTORICAL DRIVER - ARCHETYPES IN BIJLMERPLEIN


Great Colonnade, Apamea, Syria


The Tower of the Winds


The Lion Gate the entrance of the Bronze Age citadel


Curetes Street in Ephesus


The Bridge of Arta crosses the Arachthos river


Hadrian's Villa (Villa Adriana), Tivoli, Italy


Hadrian's Arch in Athens


COLONNADE


TOWER


GATE

STREET


BRIDGE


GARDEN-YARD


ARCH


1


2


3


4

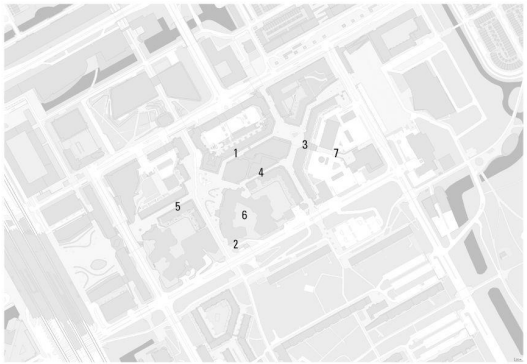

5


6


7

Archetype, Existential Expression, and Shared Experience

Set of archetypes which we can call the grammar of architecture. These archetypes may be understood as images which can be identified in relation to both architectural form, function and technology

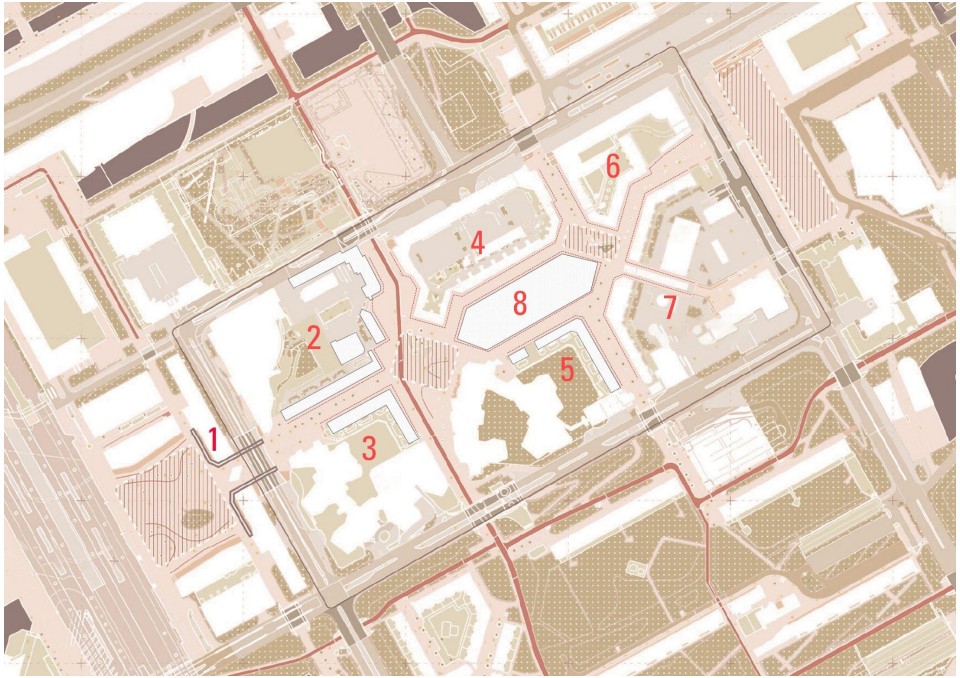


These basic forms can be referred to as the archetypes of architecture. The original Greek meaning of the word archetype is 'first form', or 'original model' as it exists as a basis for all later variations and combinations

CLUSTER 4 ANALYSIS

CLUSTER 4

CLUSTER 4



CLUSTER COMPOSITION OF BIJLMERPLEIN

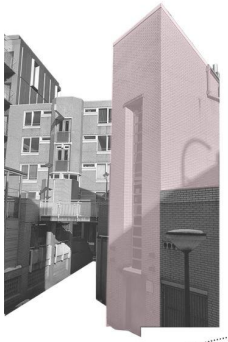
CLUSTER 4

Cluster 4

Architects:
Van den Broek en Bakema

Date of construction: 1983 -1985

ARCHETYPES IN CLUSTER 4

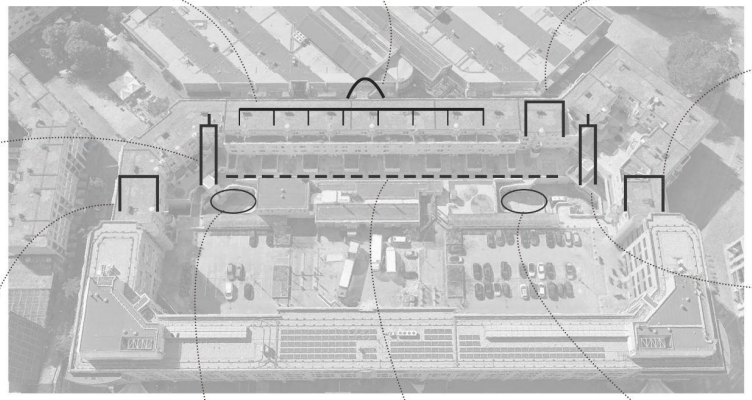


TOWER

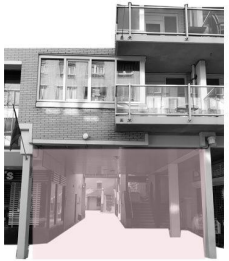
COLONNADE

BRIDGE

GATES



GATES



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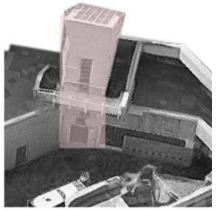
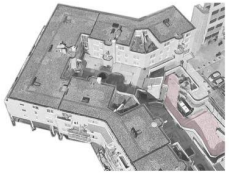


TOWER

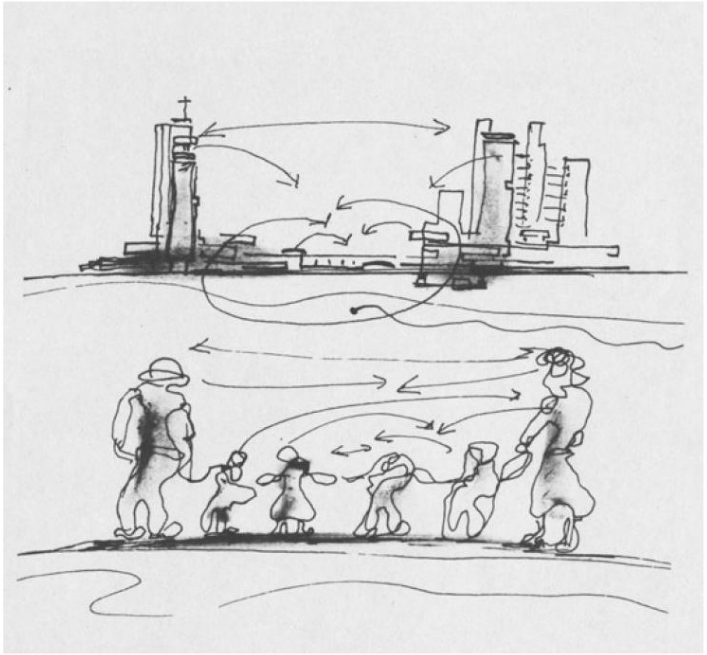
BACKYARD

STREET



BACKYARD

PRIMARY CONCEPTS OF BROEKBAKEMA



With the 'friendship diagram' Bakema demonstrates how architecture can be an expression of human behaviour,

Discontent with the post-war reconstruction machinery

PRIMARY CONCEPTS

SPACE FORM STRUCTURE MAN

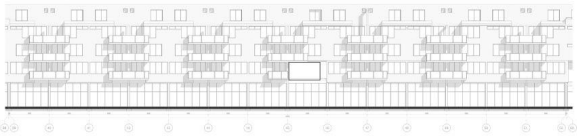
FUNCTIONAL CONCEPTS

HOME WORKPLACE CHURCH SCHOOL

https://journals.open.tudelft.nl/index.php/iphs/article/view/1339

HISTORICAL AND USE VALUES

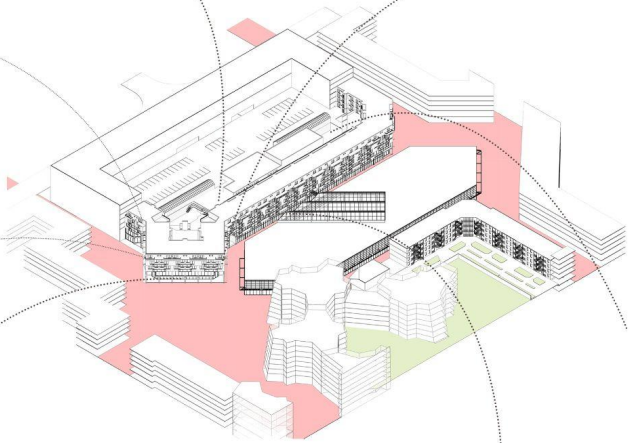
WHITE BETON BRICK

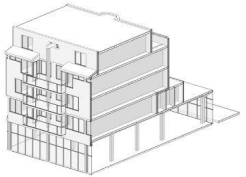


STRUCTURAL GRID AND ENCODED POSTMODERNIST LANGUAGE

FACADES ARE RELATED WITH PUBLIC REALM

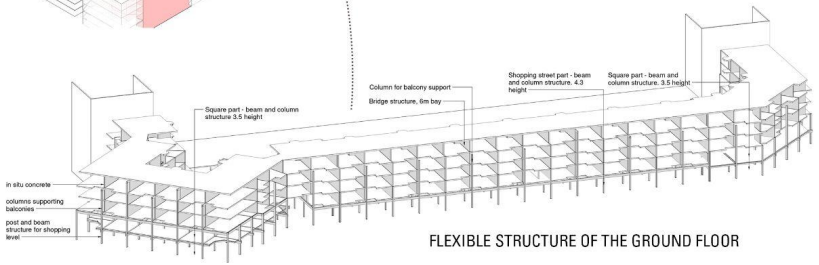
ORNAMENTATION OF THE CORNERS





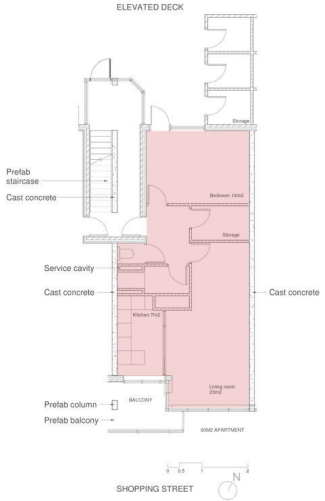
ELEVATED DECK WITH RESIDENTIAL FUNCTIONS

EXPOSED STRUCTURE



FLEXIBLE STRUCTURE OF THE GROUND FLOOR

SOCIAL VALUES

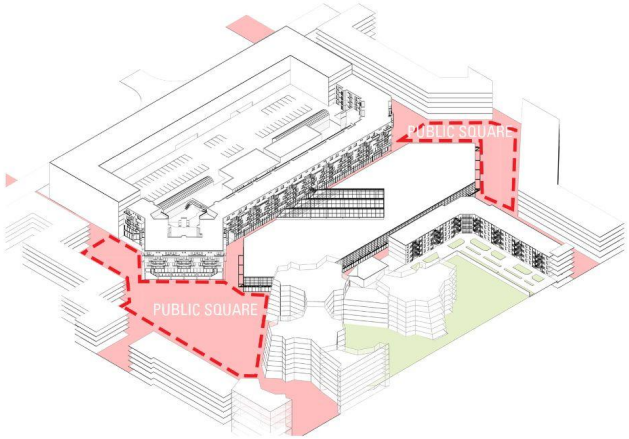


QUALITY OF DWELLINGS

FESTIVALS

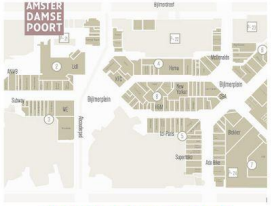
LOCAL BUSINESS

COMMUNITY EVENTS



MARKET

SHOPPING



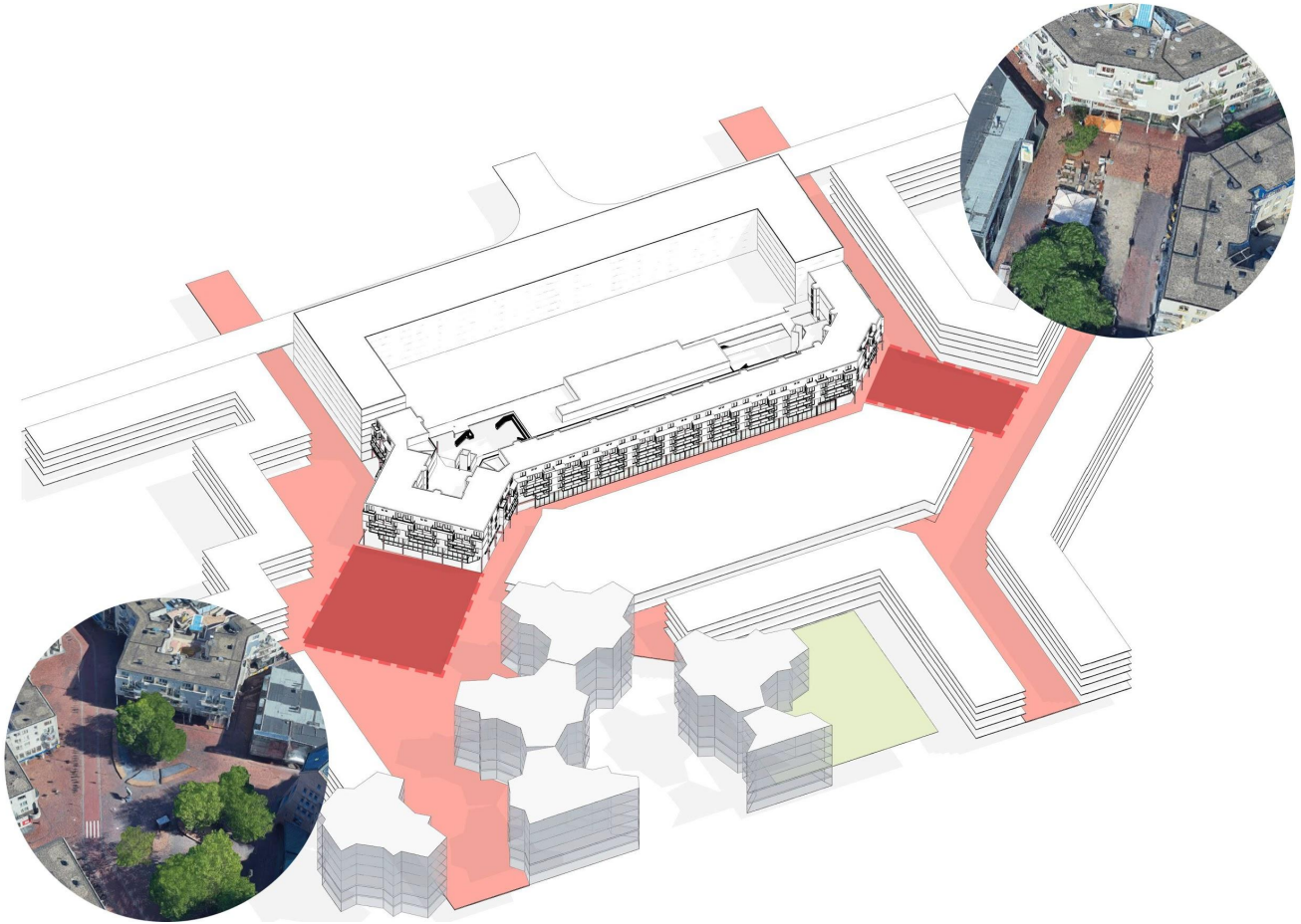
COMMERCIAL NOTION

CULTURAL&ARTS

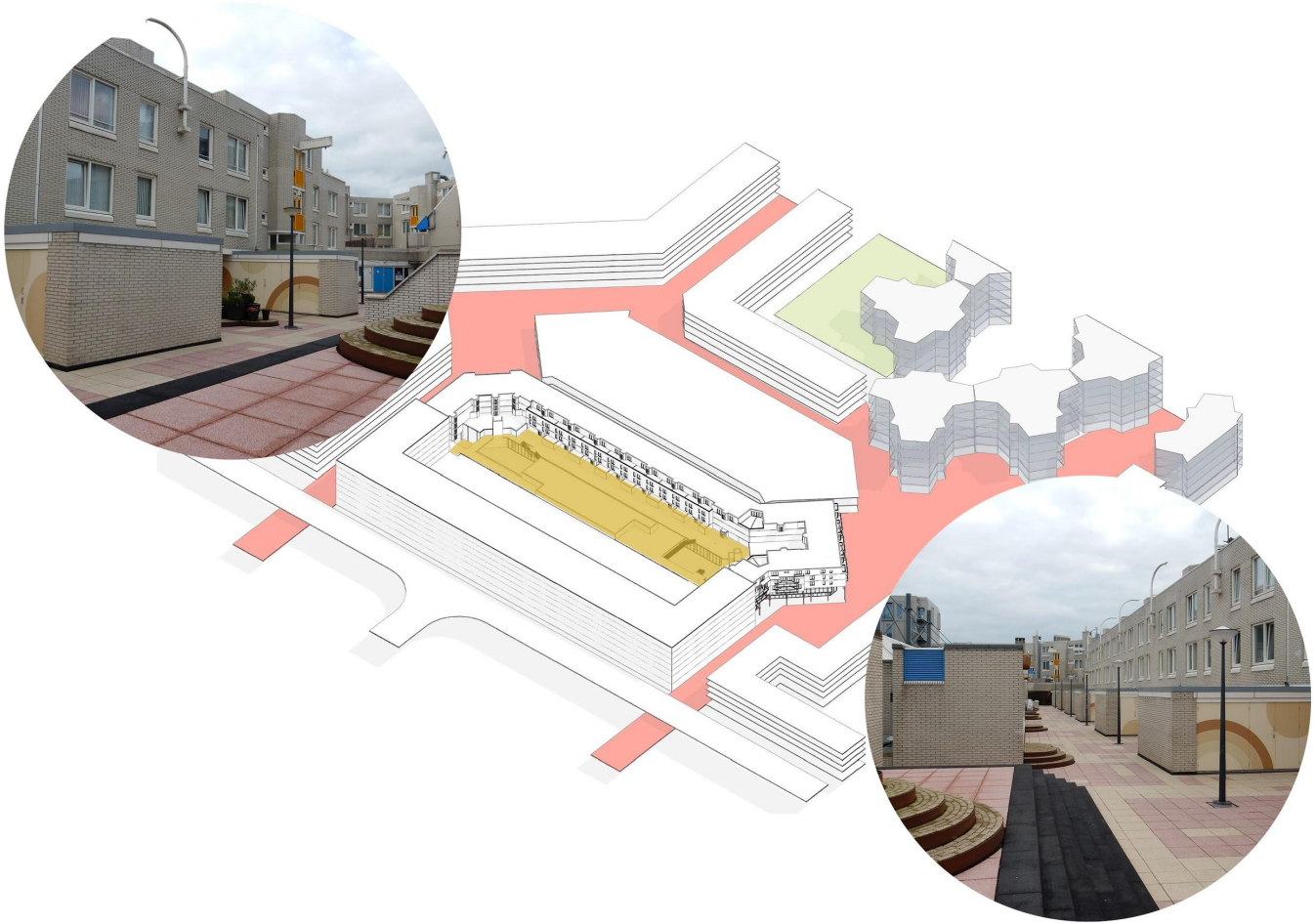
LOCAL FOOD

MULTICULTURAL DIVERCITY

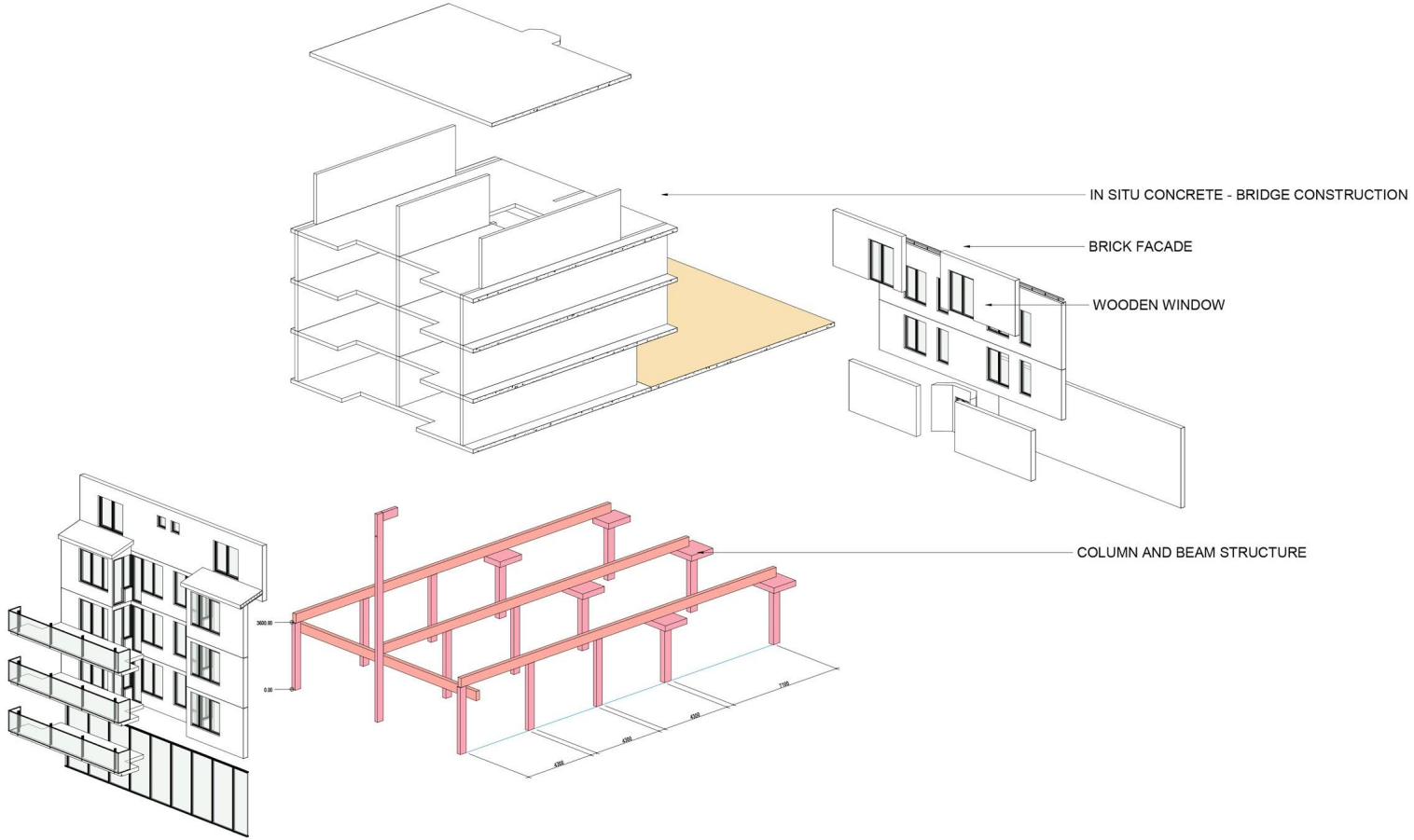
RELATIONSHIP BETWEEN THE CLUSTER AND PUBLIC SQUARES



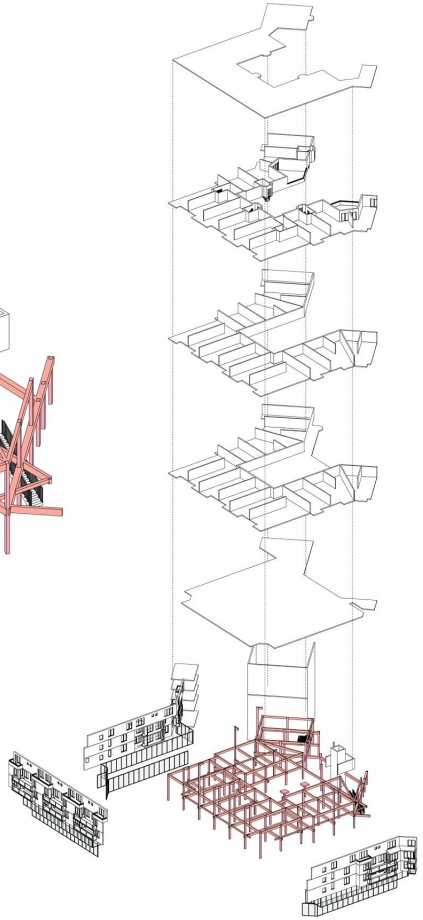
INNER SPACE

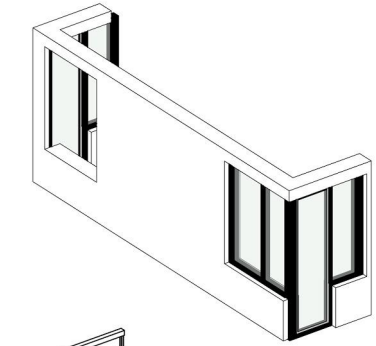


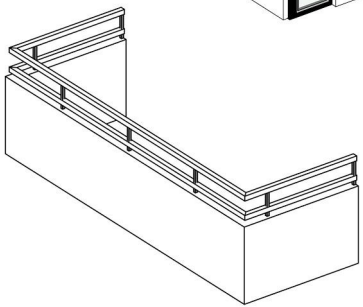
ELONGATED PART TOWARDS SHOPPING STREET

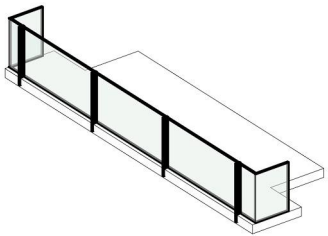


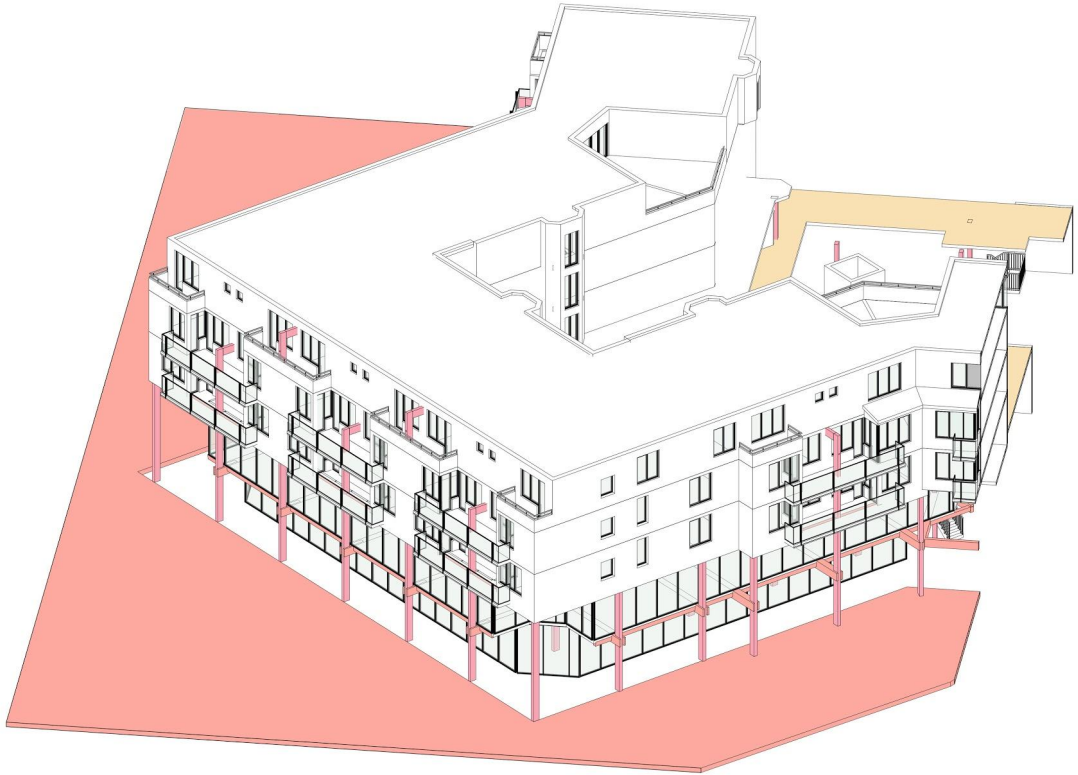
CORNER WING TOWARDS PUBLIC SQUARE







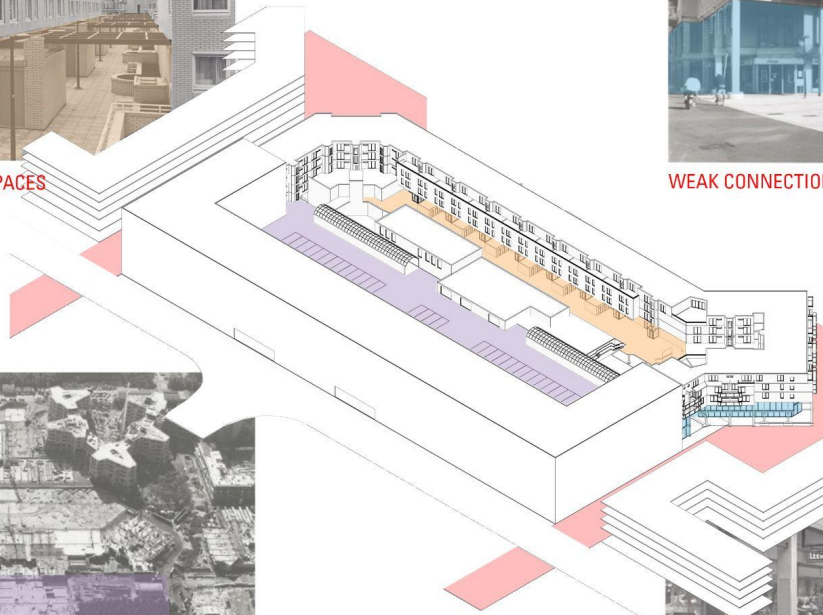




ENCODED CHALLENGES

LACK OF COMMUNAL SPACES

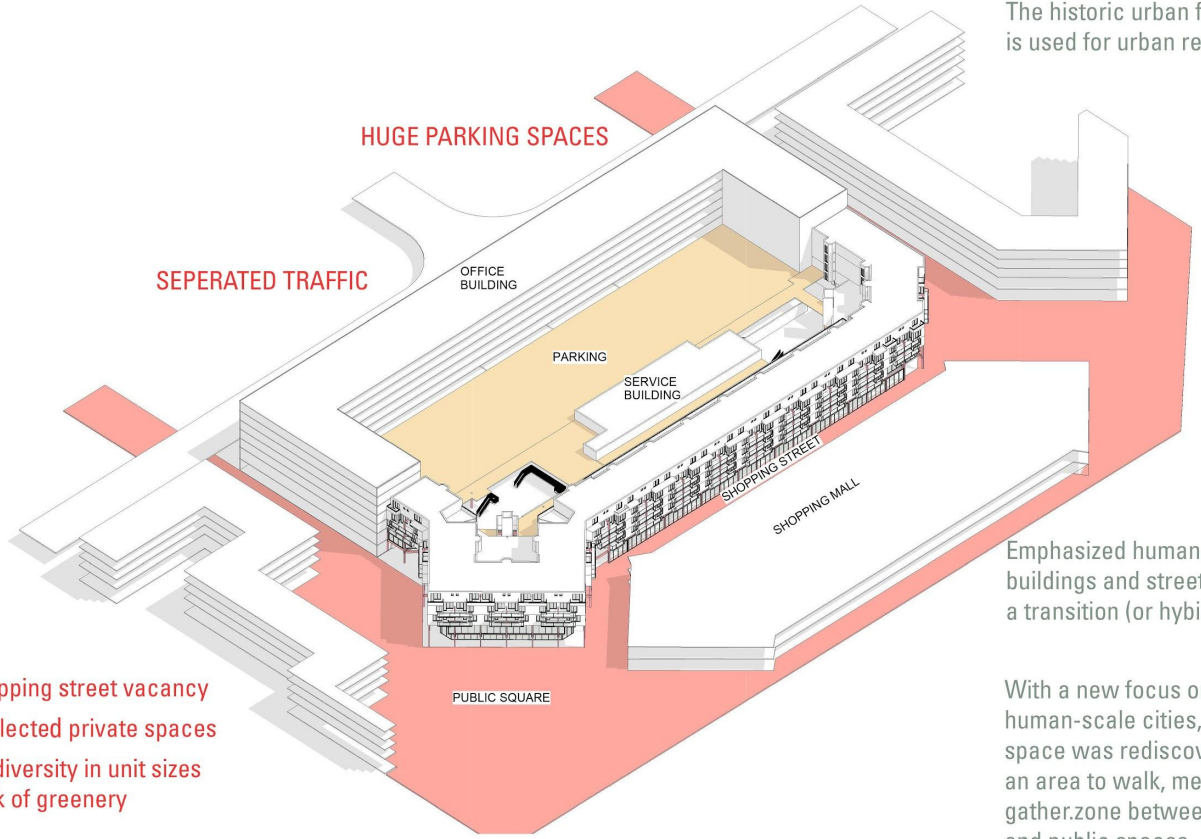
WEAK CONNECTION WITH PUBLIC REALM



VEHICLE MOBILITY

NEGLECTED PUBLIC SPACES

CHALLENGES AND POSSIBILITIES



The historic urban fabric is used for urban renewal

Emphasized human-scale buildings and streets, and a transition (or hybird)

With a new focus on human-scale cities, public space was rediscovered as an area to walk, meet and gather.zone between private and public spaces.

Shopping street vacancy

Neglected private spaces

No diversity in unit sizes

Lack of greenery

RESEARCH BY DESIGN

“By the end of the 1960s, most urban planners and civil engineers realised **that the future was difficult to predict.** This led to a less biased standpoint regarding the “make-ability” of society in the sense of social engineering, and a greater doubt about the guiding role of urban planning”

THE RESEARCH QUESTION

How Bijlmerplein can be densified using flexible design drivers by creating harmony with existing notions (juxtaposition)?

IMPROVE RESIDENTIAL QUALITIES

First of all residential qualities in the cluster 4 were vague and neglected: no communal meeting space, poor circulation, dark and shady nooks were perfect place for drug dealers and homeless people, there was no playground for children.

INTRODUCE URBAN GREENERY

The cluster 4 had no greenery, the entire elevated deck and the ground floor was taken by car park, which is the notion of 1970s car mobility and consequence of Bijlmer urban planning with elevated roads and separation of functions. The project aims to introduce greenery and incorporate it into new urban landscape.

CAREFUL DENSIFICATION WITH PUBLIC PARTICIPATION

The project aims to densify the area. House shortage in the Netherlands is evident issue and by 2030 Dutch government aims to build 1 million new homes. Bijlmerplein is excellent example for new housing as it has metro station and other public transport nearby. Bijlmerplein is the hub for shopping which can also be enhanced by bringing more residents. Also, vacant parking garages also are potential for new housing.

POST MODERN ARCHETYPES

From the heritage perspective, archetypes are purified and introduced into the design. They were given more importance and opened for residents use.

ENVIRONMENTAL POSITION

Take urgent action to combat climate change and its impacts. Soil can play a positive role in reducing the impacts of climate change, by sequestering CO_2, sustainably managing the resource and restoring degraded soils.

'Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.'

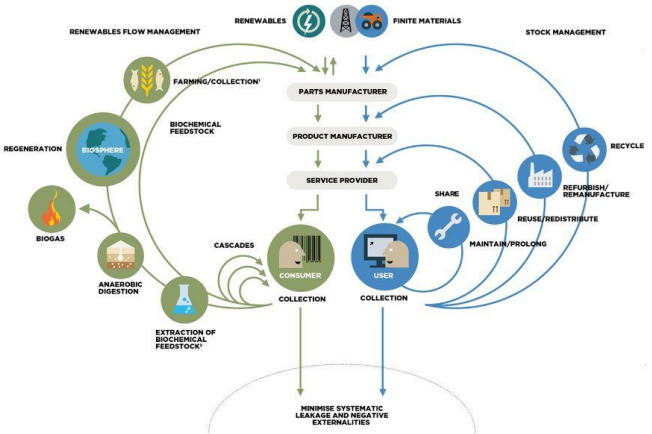
Improving the quality of land and soil to 'end hunger, achieve food security and improved nutrition and promote sustainable agriculture.'

'Ensure healthy lives and promote well-being for all at all ages' by preventing dangerous chemicals, air and water pollution from contaminating land and soil. Additionally, reducing soil degradation can help to increase food production.

'Ensure sustainable consumption and production patterns,' through making sure chemicals and waste does not make its way into the air, water and soil, which can have adverse impacts on our health and environment. That is why it is important to sustainably manage and efficiently use soil resources.

'Make cities and human settlements inclusive, safe, resilient and sustainable,' by ensuring land and soils are protected as they safeguard our cultural and natural heritage.

'Ensure availability and sustainable management of water and sanitation for all,' by preserving soil quality because of the role it plays in helping to provide clean water for drinking and agriculture.



RESOURCE EFFICIENCY

SOURCE
Ellen MacArthur Foundation.
Circular economy systems diagram (February 2019)
www.ellenmacarthurfoundation.org
Drawing based on Braungart & McDonough,
Cradle to Cradle (C2C)

URBAN PROPOSAL

DENSIFICATION BY 40%

ENHANCED CIRCULATION

ENHANCED PUBLIC REALM

MAXIMUM VIEWS

IMPROVED RESIDENTIAL QUALITIES

ADDED GREENERY

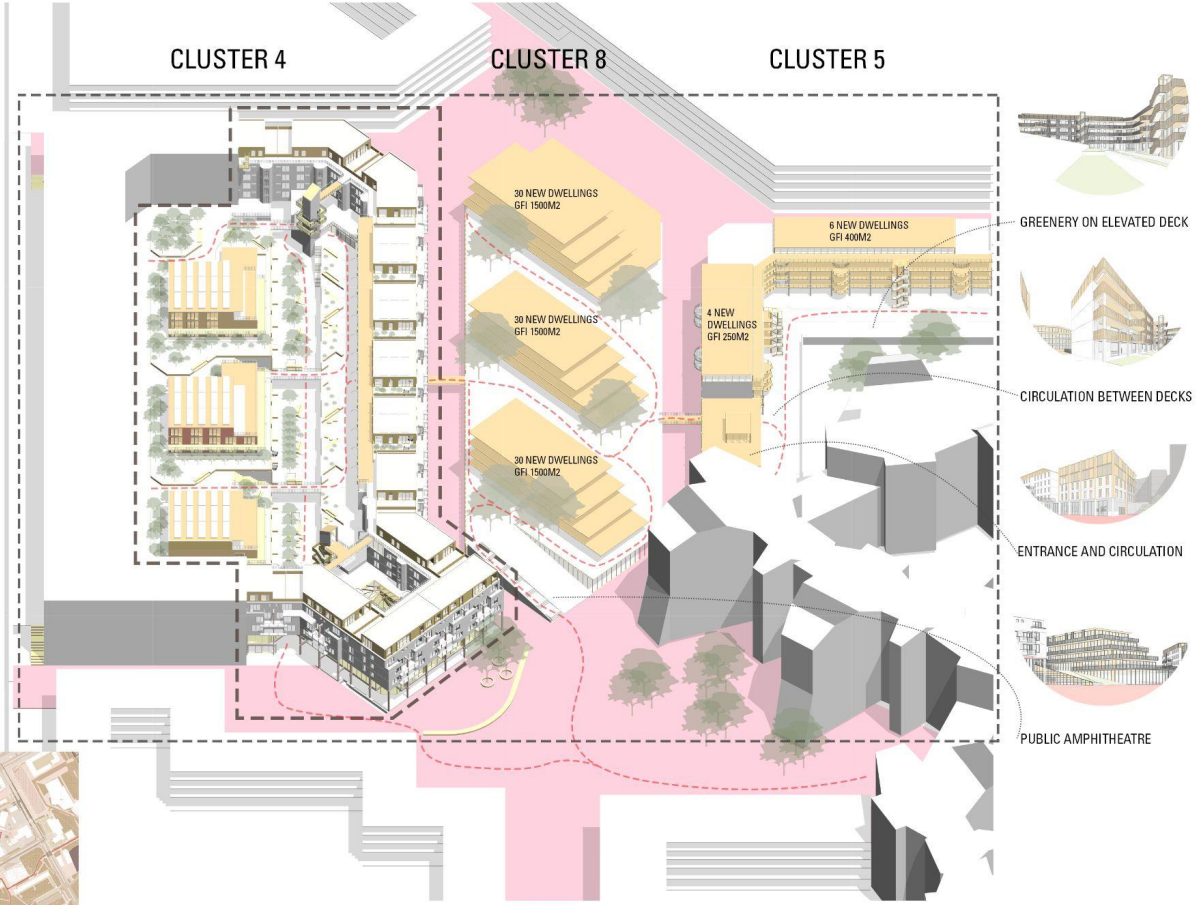
CONNECTION BETWEEN RESIDENTIAL AND COMMERCIAL FUNCTIONS

CONNECTION BETWEEN RESIDENTIAL AND COMMERCIAL FUNCTIONS

EAST WEST ORIENTATION

MAXIMUM VIEWS

CONNECTION BETWEEN INNER YARD AND PUBLIC SQUARE

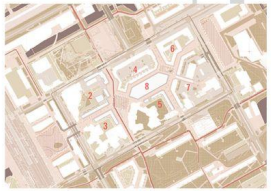


GREENERY ON ELEVATED DECK

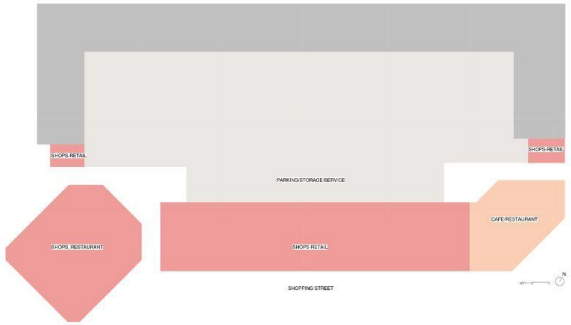
CIRCULATION BETWEEN DECKS

ENTRANCE AND CIRCULATION

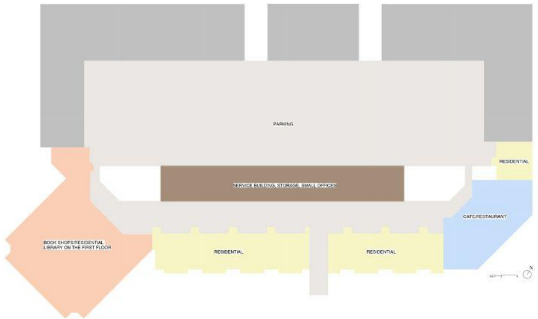
PUBLIC AMPHITHEATRE



EXISTING SITUATION

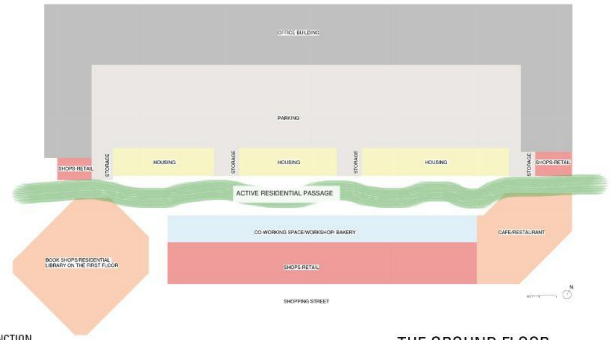


THE GROUND FLOOR



THE FIRST FLOOR

PROPOSED SITUATION

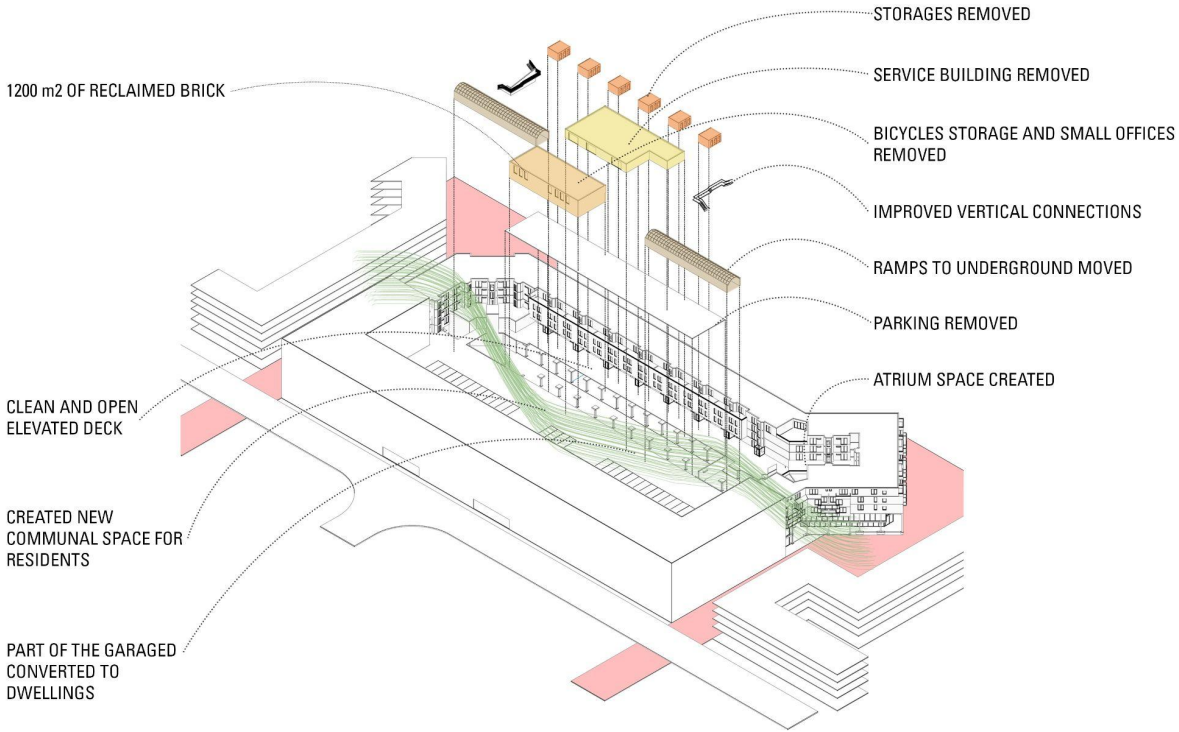


THE GROUND FLOOR

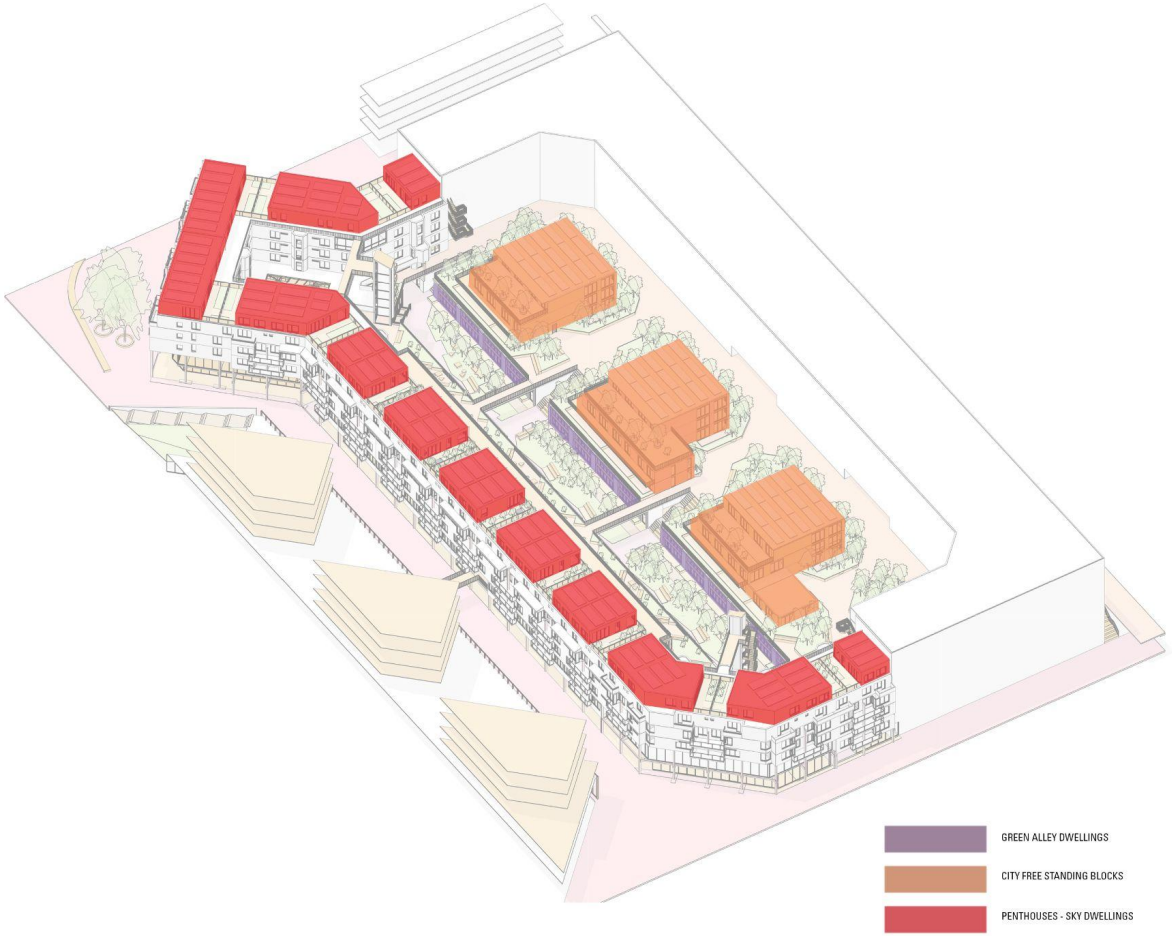
- SHOPPING FUNCTION
- RESIDENTIAL FUNCTION
- PUBLIC FUNCTION
- CO-WORKING
- STORAGE FUNCTION
- CATERING

THE FIRST FLOOR

SCHEME OF INTERVENTIONS - REMOVED PARTS



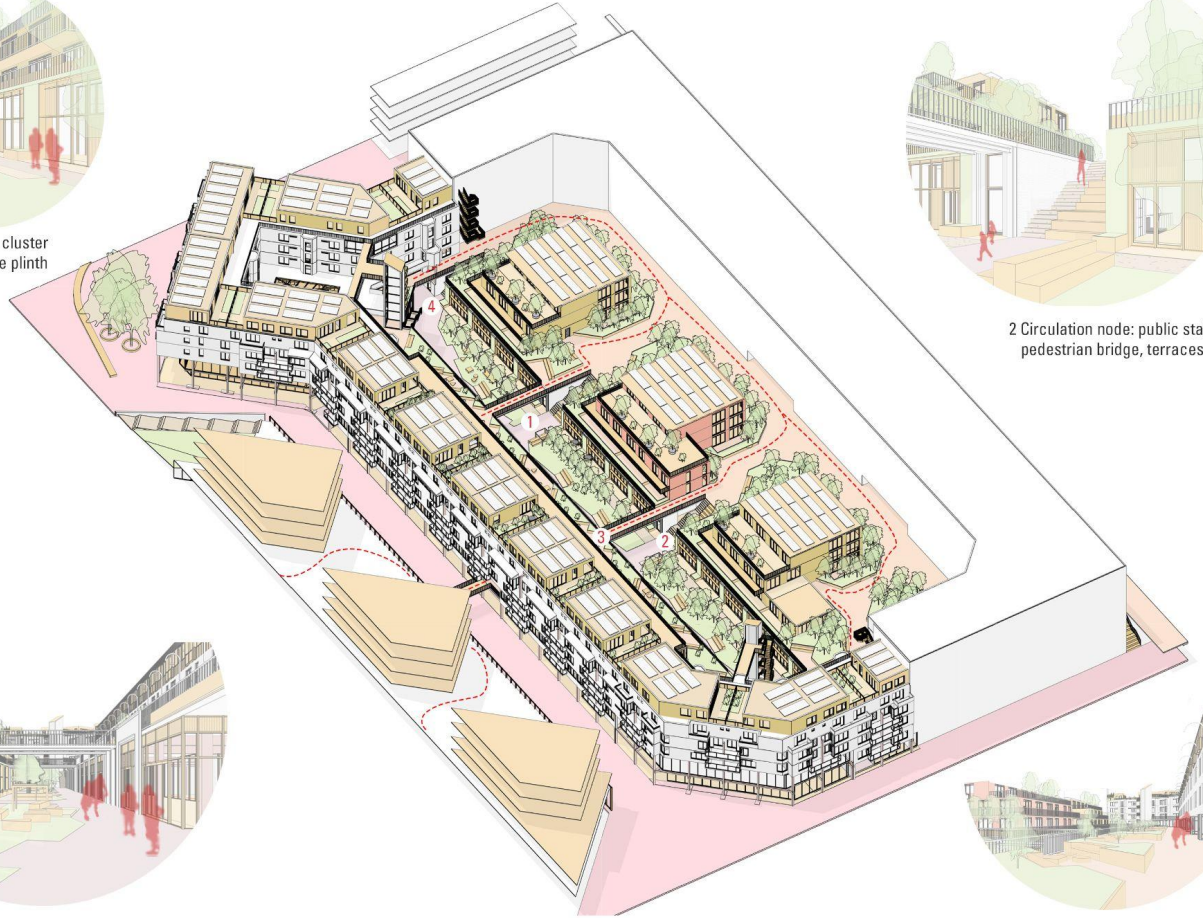
SCHEME OF INTERVENTIONS - INTRODUCED PARTS



SAFE, OPEN AND PLEASANT INNER RESIDENTIAL SPACE

1 Residential cluster with an active plinth

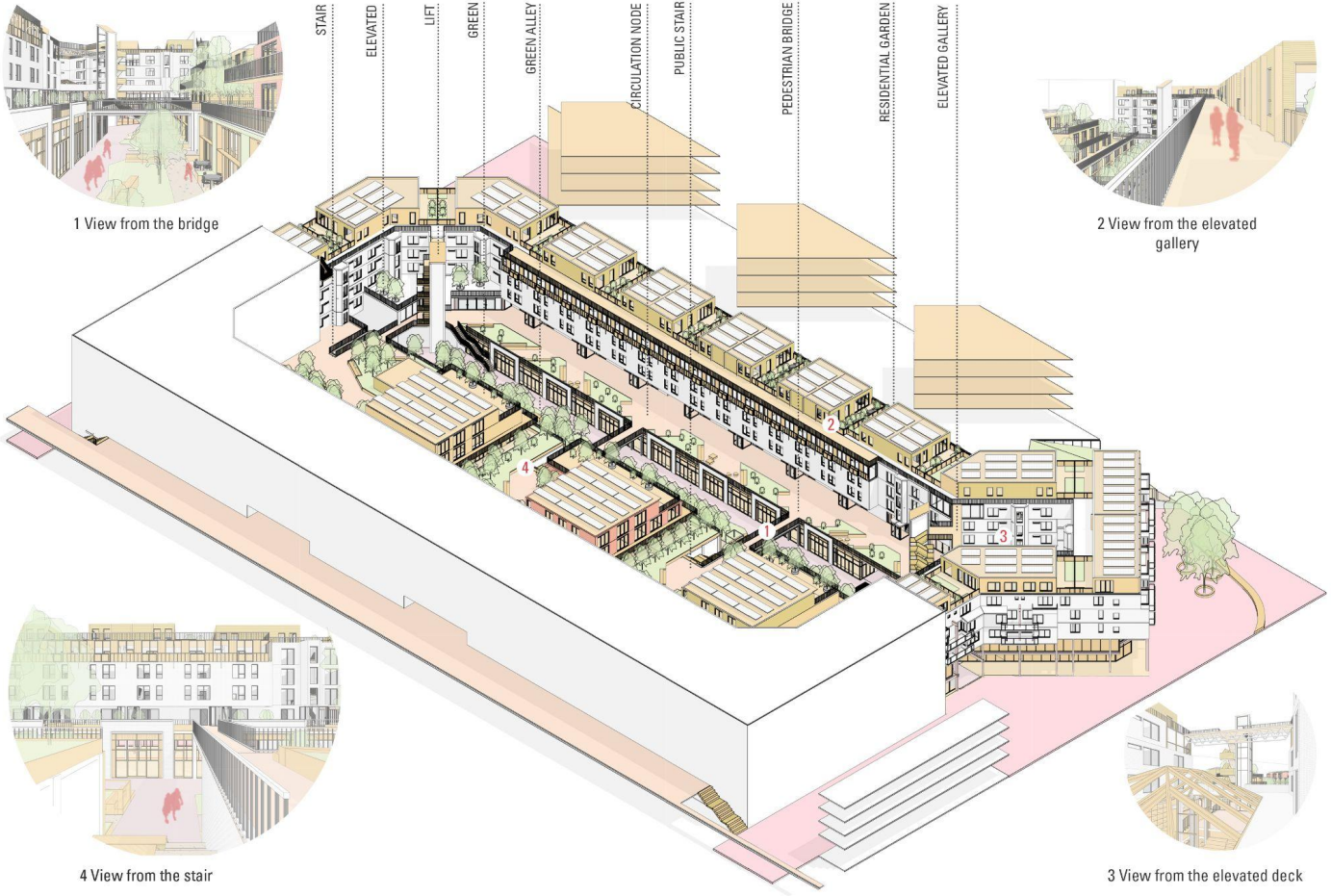
2 Circulation node: public stair, pedestrian bridge, terraces



4 Green pedestrian alley

3 Elevated deck with “green pockets”

OBSERVABLE AND SAFE SPACE

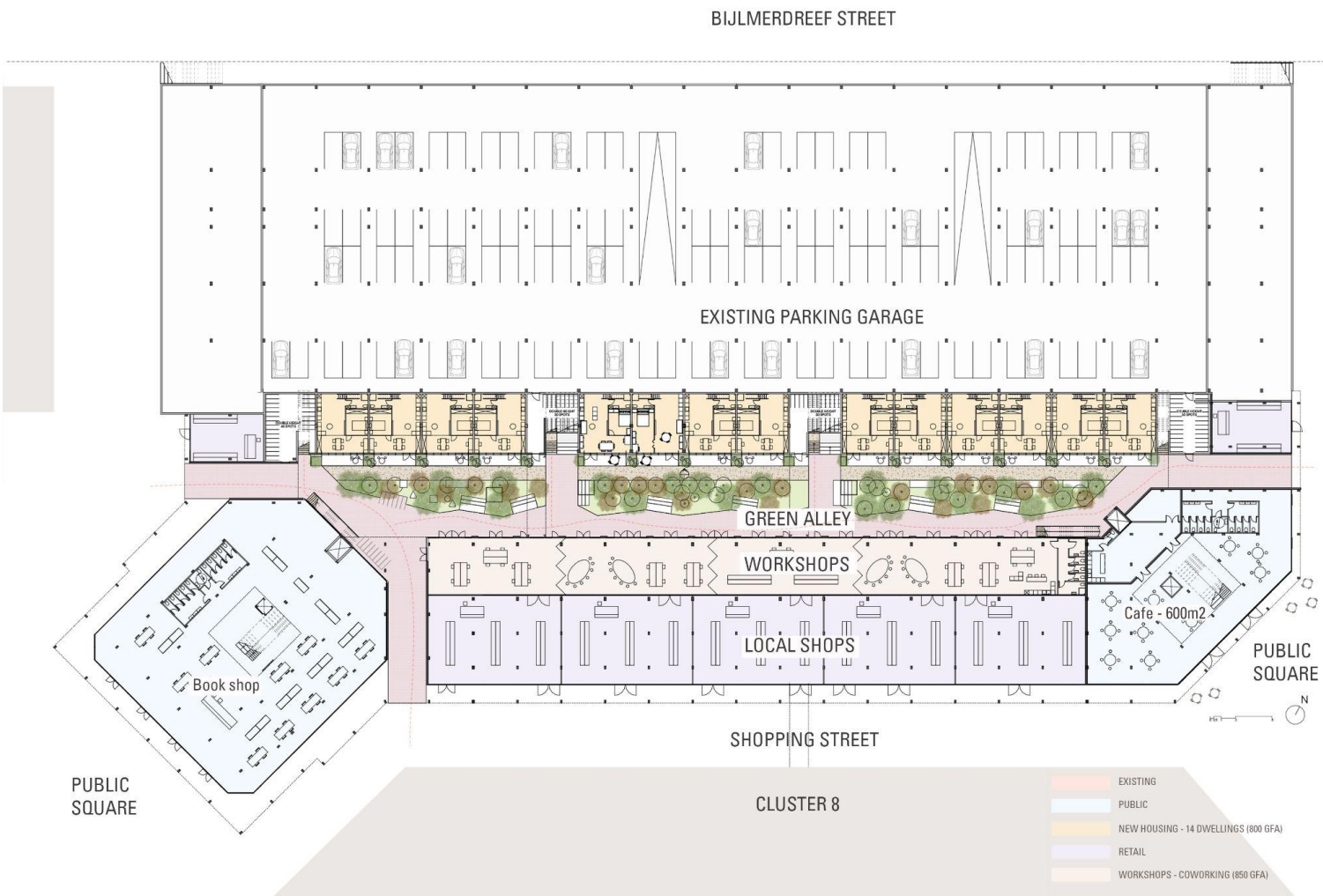


1 View from the bridge

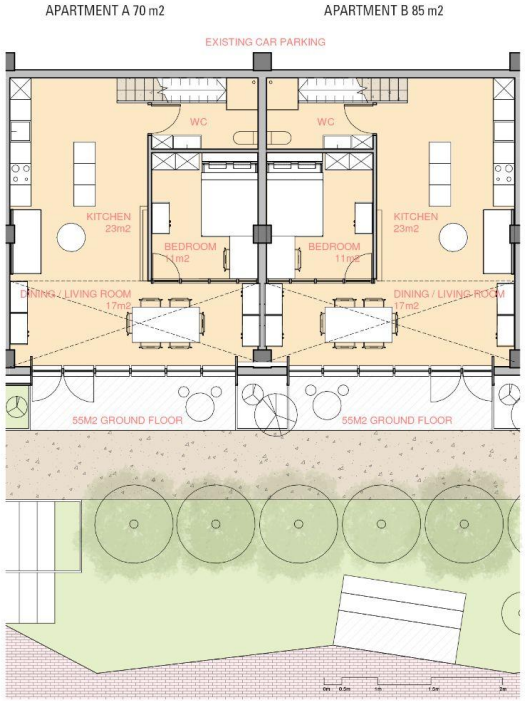
2 View from the elevated gallery

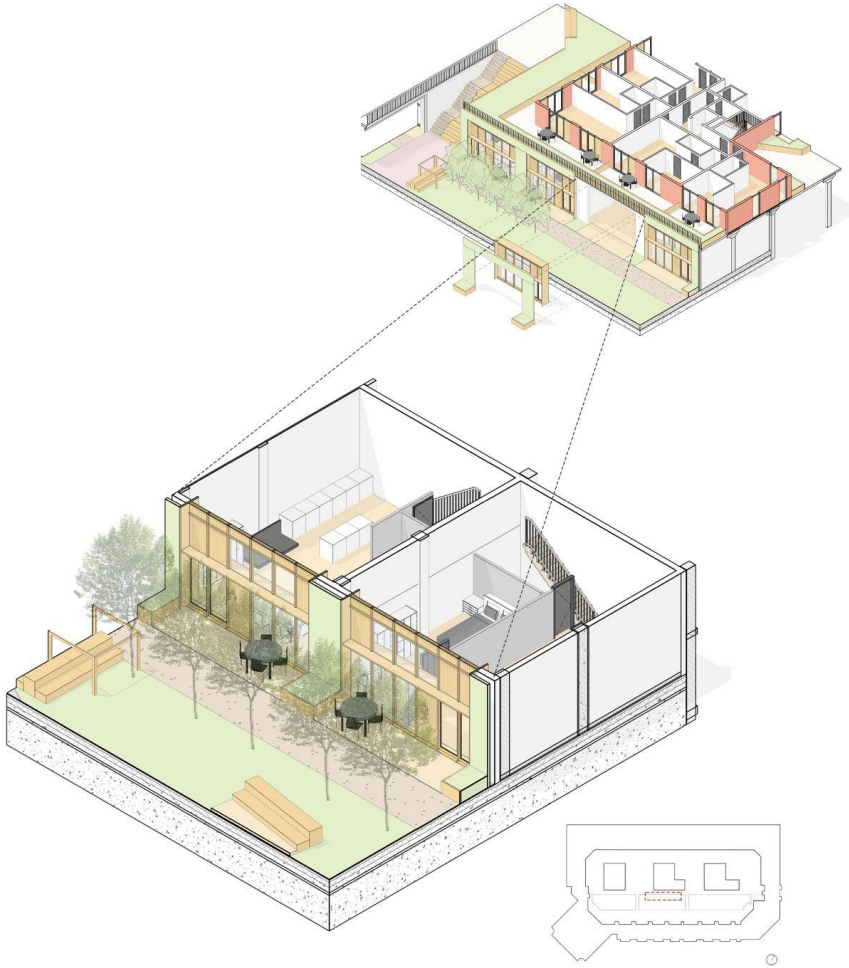
4 View from the stair

3 View from the elevated deck

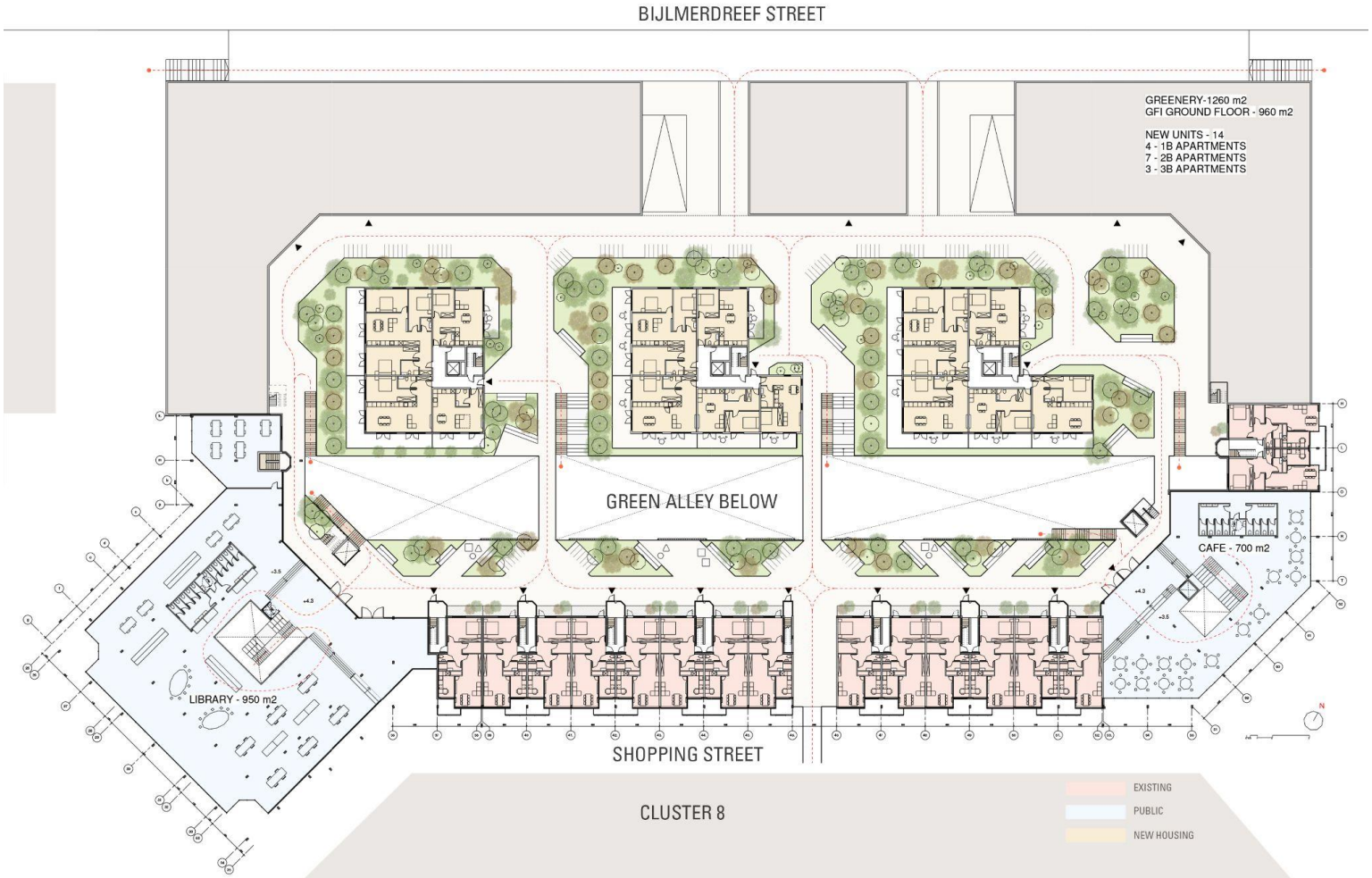

BIJLMERDREEF STREET
EXISTING PARKING GARAGE
GREEN ALLEY
WORKSHOPS
LOCAL SHOPS
Cafe - 600m2
PUBLIC SQUARE
Book shop
PUBLIC SQUARE
SHOPPING STREET
CLUSTER 8
N
EXISTING
PUBLIC
NEW HOUSING - 14 DWELLINGS (800 GFA)
RETAIL
WORKSHOPS - COWORKING (850 GFA)

GREEN ALLEY DWELLINGS





FACADE OF THE GREEN ALLEY


BIJLMERDREEF STREET
GREENERY-1260 m2
GFI GROUND FLOOR - 960 m2
NEW UNITS - 14
4 - 1B APARTMENTS
7 - 2B APARTMENTS
3 - 3B APARTMENTS
GREEN ALLEY BELOW
CAFE - 700 m2
LIBRARY - 950 m2
SHOPPING STREET
CLUSTER 8
EXISTING
PUBLIC
NEW HOUSING

FACADE OF THE NORTH SIDE (COURTYARD SPACE)

DIMENSIONAL STABILITY
Lowered equilibrium moisture content of Thermowood makes it dimensionally stable and the material retains its shape far better than untreated wood. Therefore Lunawood is highly suitable for facades and other exterior applications.

ALL CLIMATES
Thermowood does not react to changes in temperature or humidy as drastically as untreated wood. Material is proven to work well in different climates.

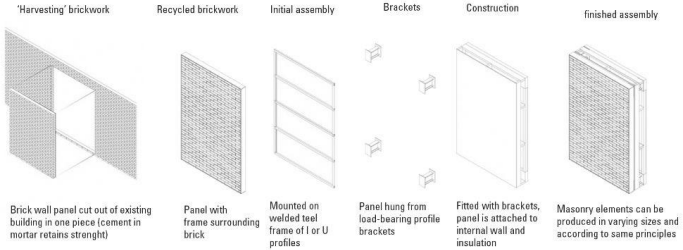
WEATHER ENDURANCE
As result of thermal modification, Finnish types of woods are transformed into durable, weather endurance building material. LunaThermo D has decay resistance class 2.

NON TOXIC
Thermowood is produced using only natural methods, heat and steam. Lunawood products are completely natural and free from chemical additives

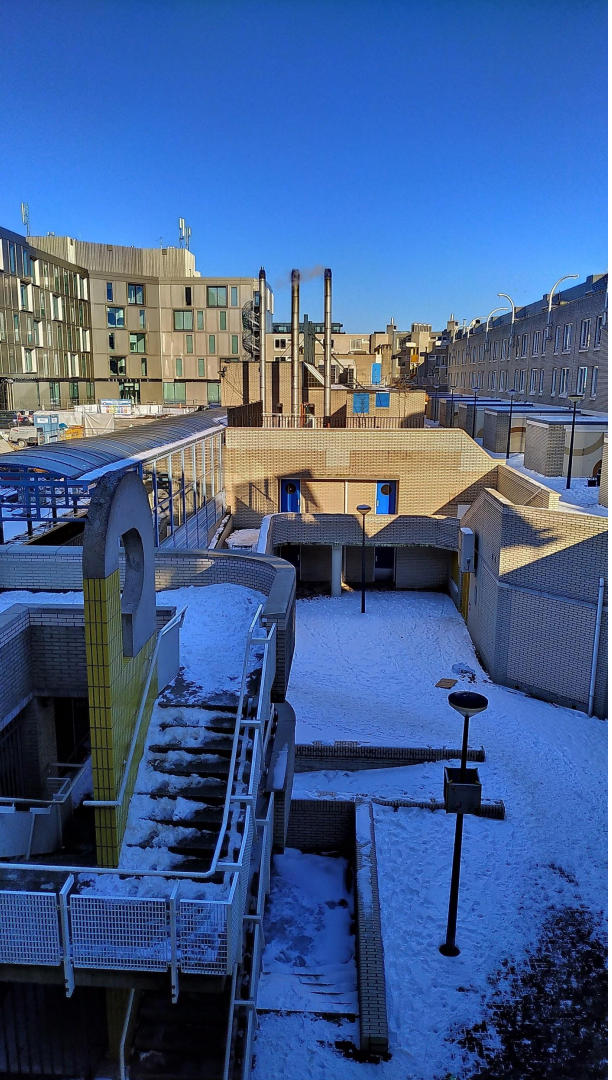
RESIN FREE
Resin is removed from the wood during the thermal modification process. As result, the wood does not secrete resin even high temperatures.

THERMAL INSULATION
Tests have shown that the thermal conductivity of Thermowood is reduced by around 20-25% compared to untreated coniferous wood.

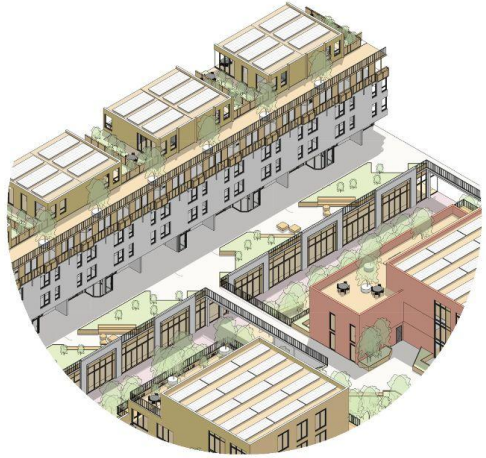
WOOD



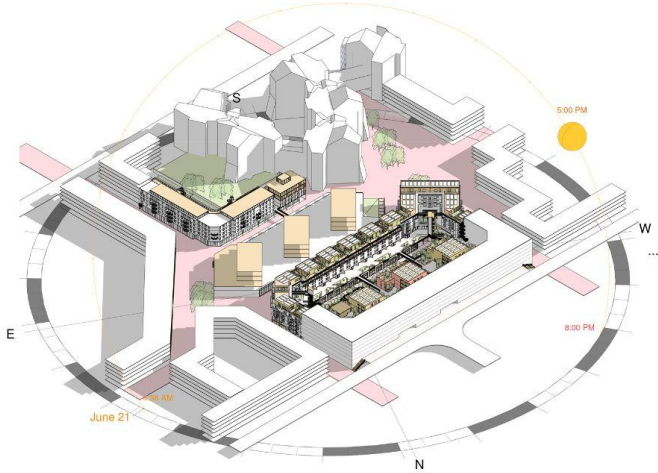
RECYCLED BRICK

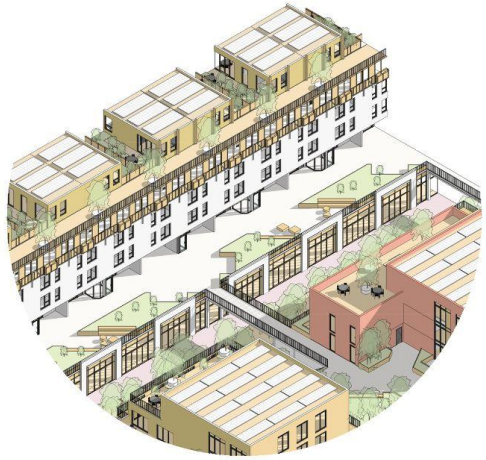


SHADOW STUDY



June Solstice - 1PM





June Solstice - 5PM

“SKY DWELLINGS”

Wall elements

Massive wood panels are ordered with ready cut-outs and edge formings.

The panels are equipped with insulation, sheetings, frame structures, etc.

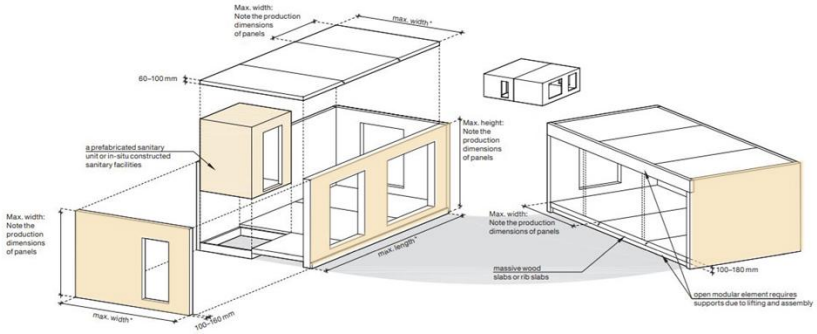
The slab and wall elements are ready to be connected to each other.

Modular elements

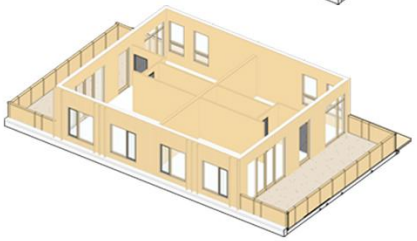
The wall and slab elements are connected to form a modular element.

Building services equipment, interior surfaces and fixtures are installed into the module.

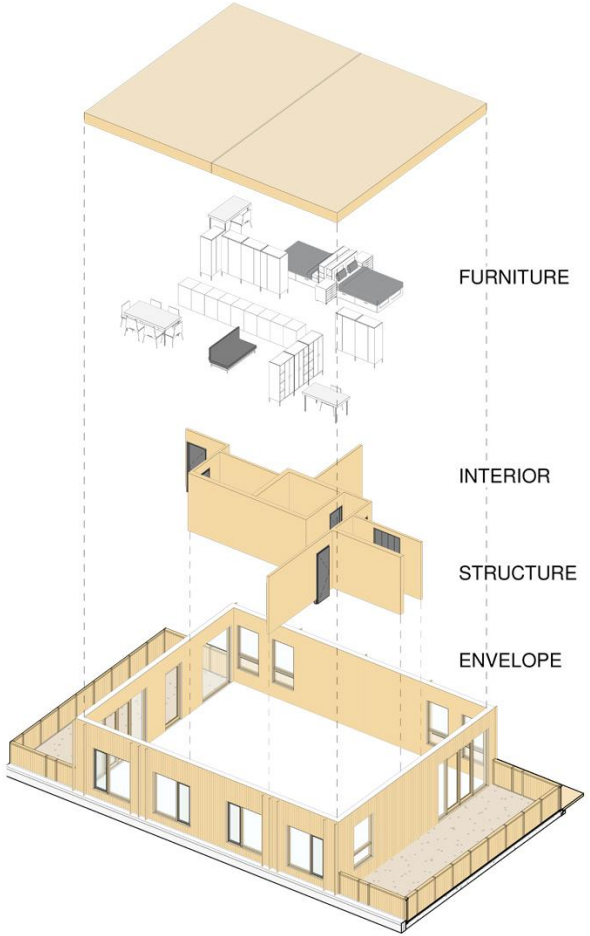
Once it is ready, the modular element is wrapped and transported to the site.



ONE DWELLING

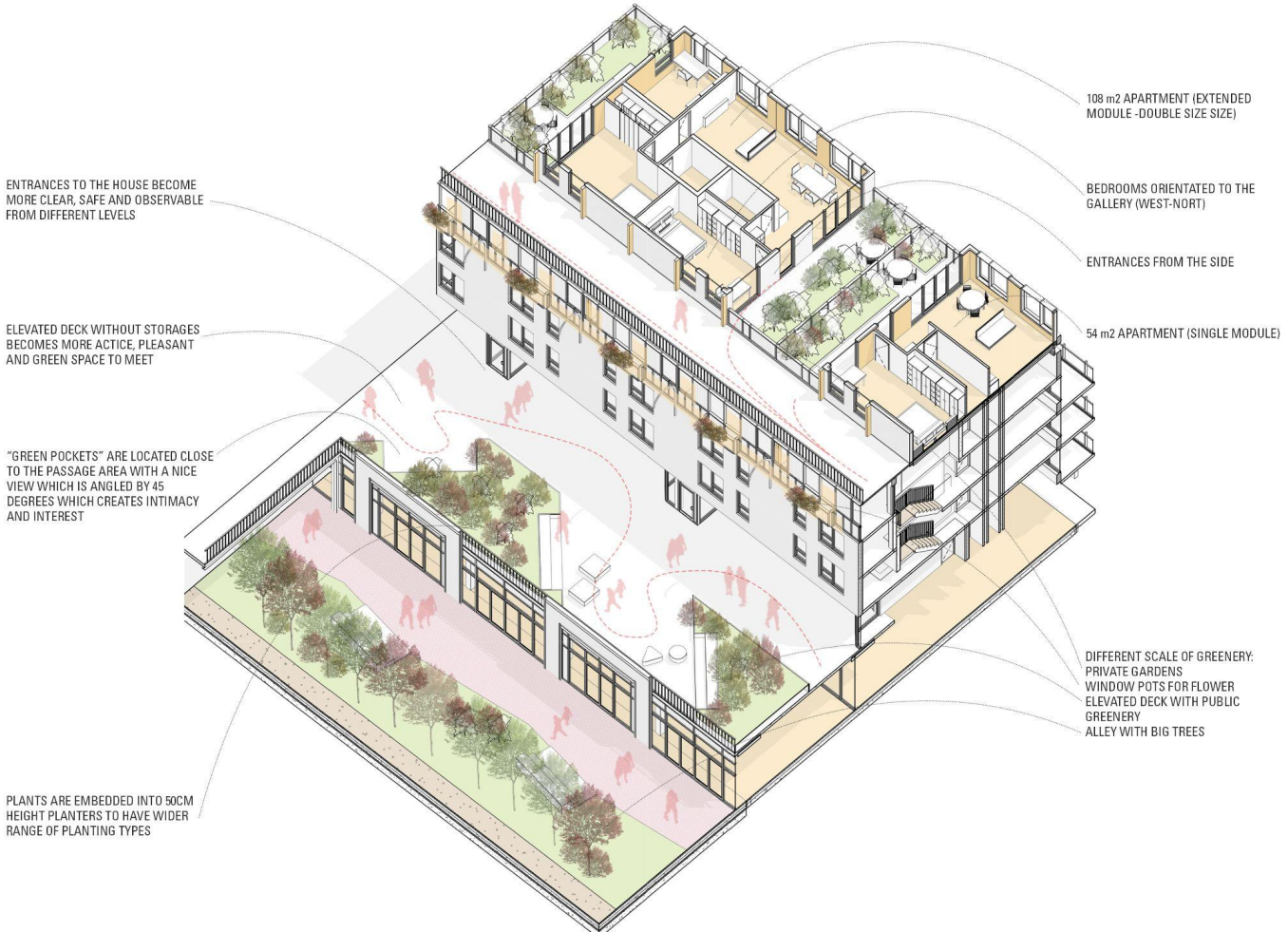


TWO DWELLINGS



The apartment usually consists of one or two modular elements. The technical module includes the sanitary facilities and most of the building services equipment of the apartment. To form bigger apartments with more bedrooms and living space, the apartment can be enlarged with a room module.

DIFFERENT SCALE OF GREENERY AND CIRCULATION SPACES



STRUCTURAL CONCEPT

Exterior wall
CLT (Exposed inside) 120 mm
Wood Fiber Board (WFB) 200 mm
WFB T&G 100 mm
Strapping 40 mm
Wood Siding T&G 25 mm
U-value = 0.119 W/(m2K)

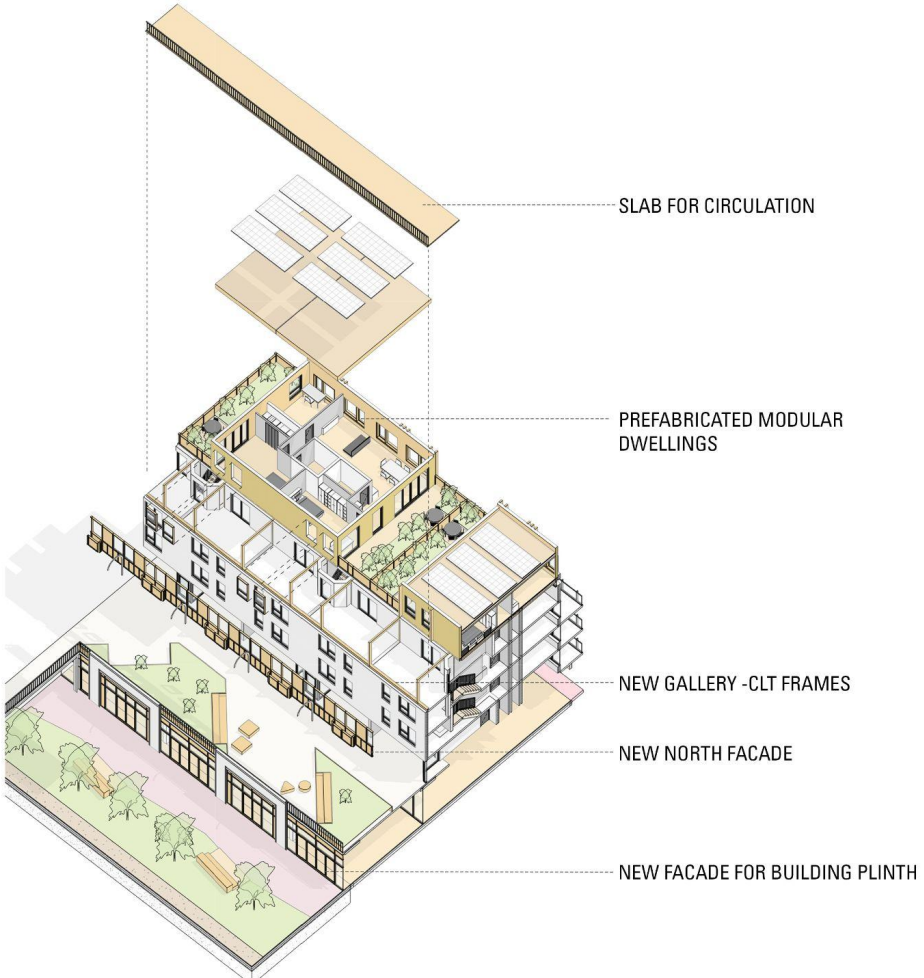
Roof
CLT (exposed inside) 140 mm
WFB 240 mm
WFB T&G 120 mm
DO 180 membrane
Strapping 38 mm
Cross Strapping 38 mm
Metal Roofing
U-value = 0.101 W/(m2K)

Windows/ Frame
Wood Aluminum Clad windows with motorized exterior venetian blinds
U w-value = 0.63 W/(m2K)

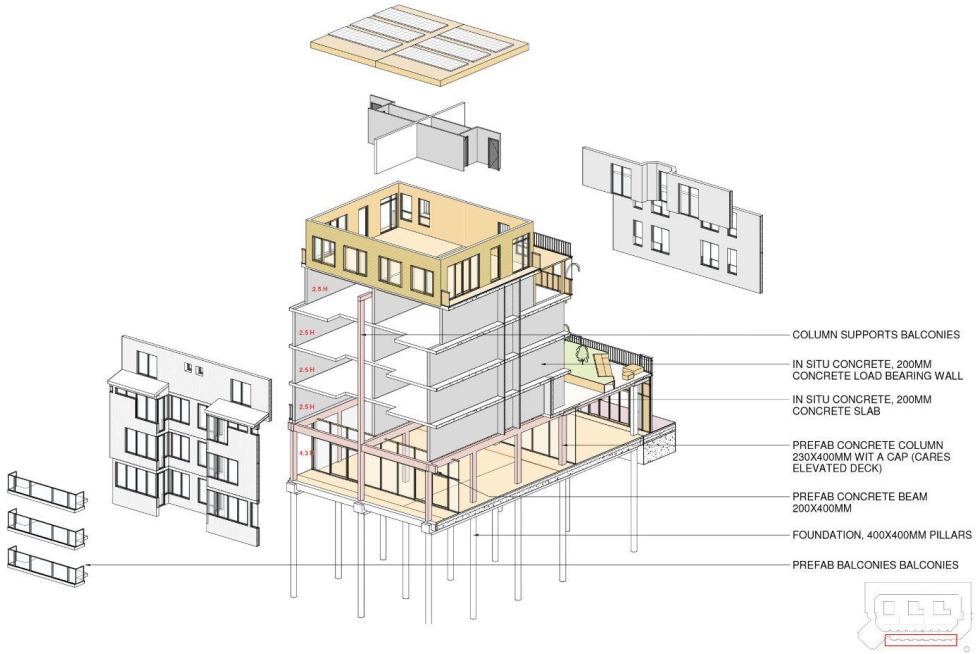
Basement floor / floor slab

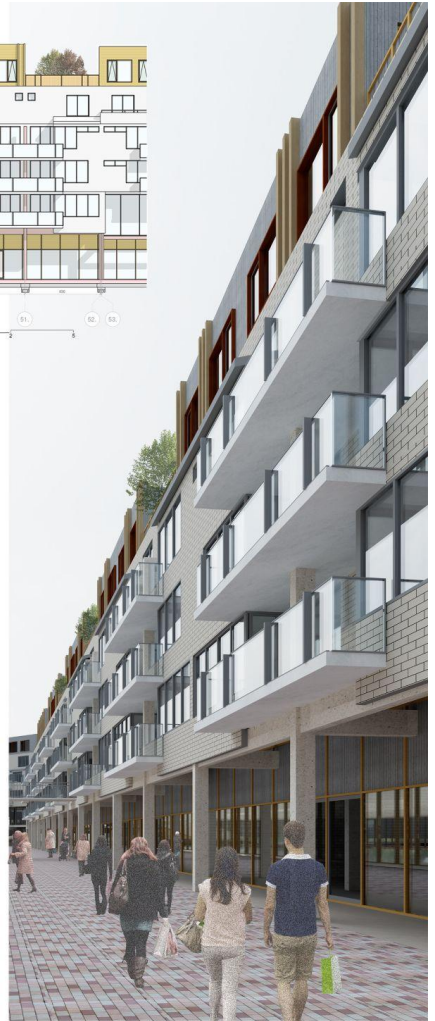
Oak Flooring 19 mm
WFB 13 mm
Plywood 19 mm
Strapping 45 mm
Concrete (reinforced) 152 mm
6 mil Poly 0.6 mm
EPS 152 mm

Gravel Compacted 100 mm
U-value = 0.097 W/(m2K)

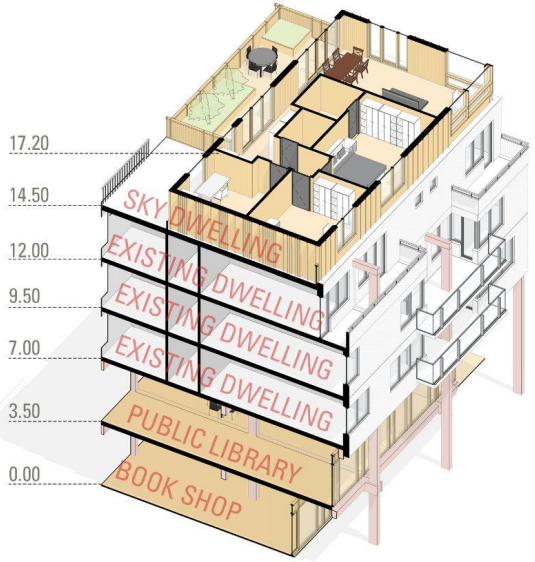


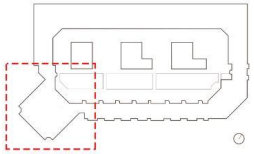
SHOPPING STREET FACADE



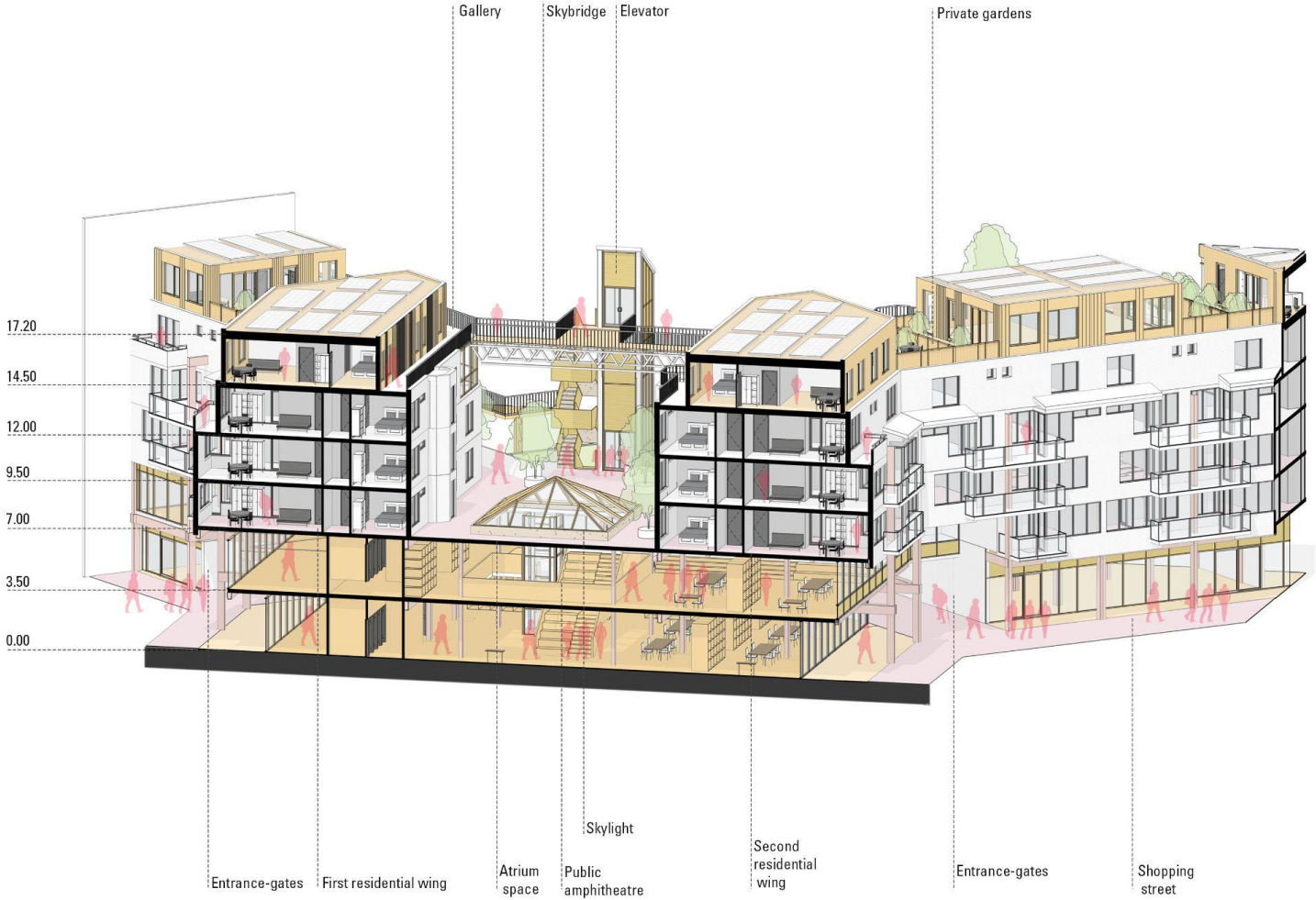


CORNER WING COMPOSITION

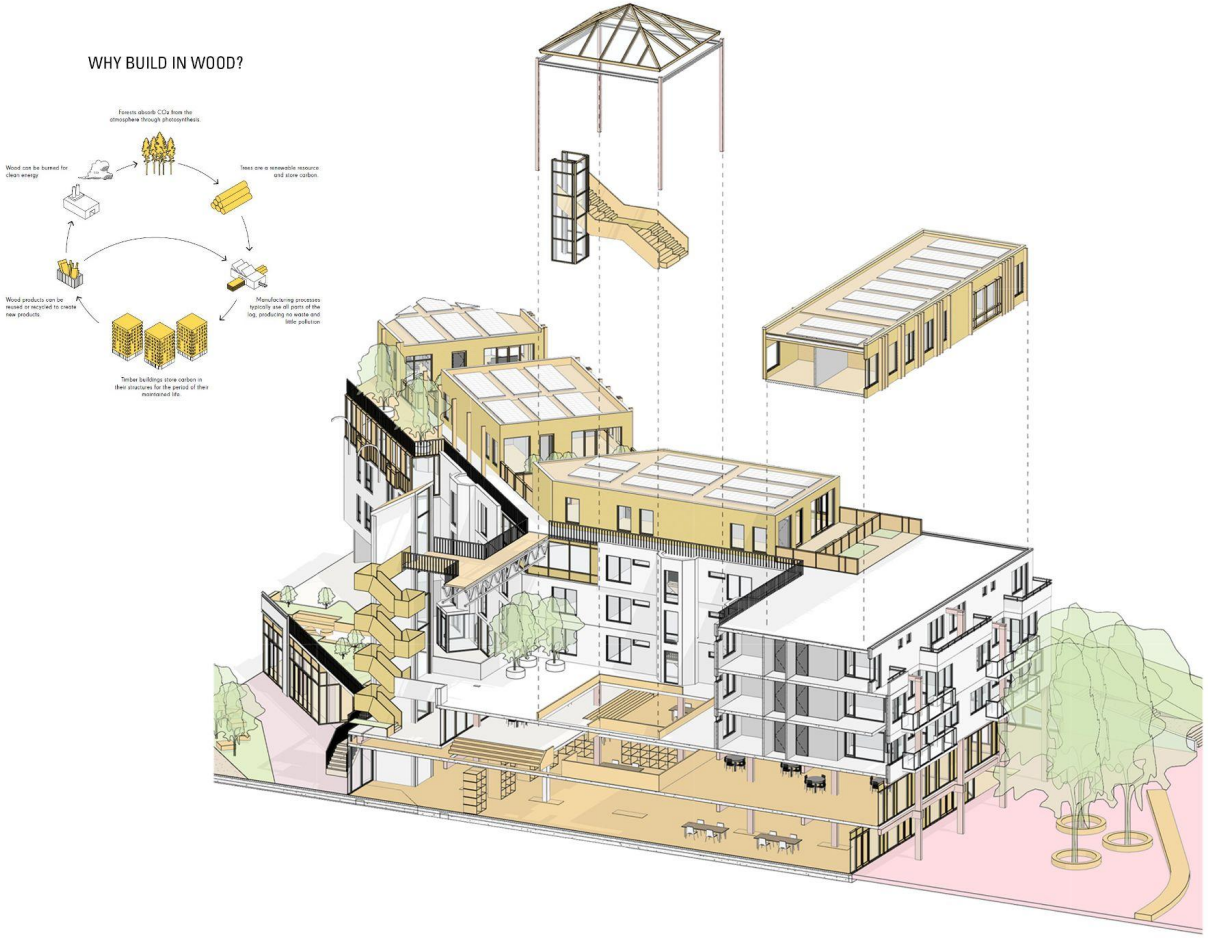




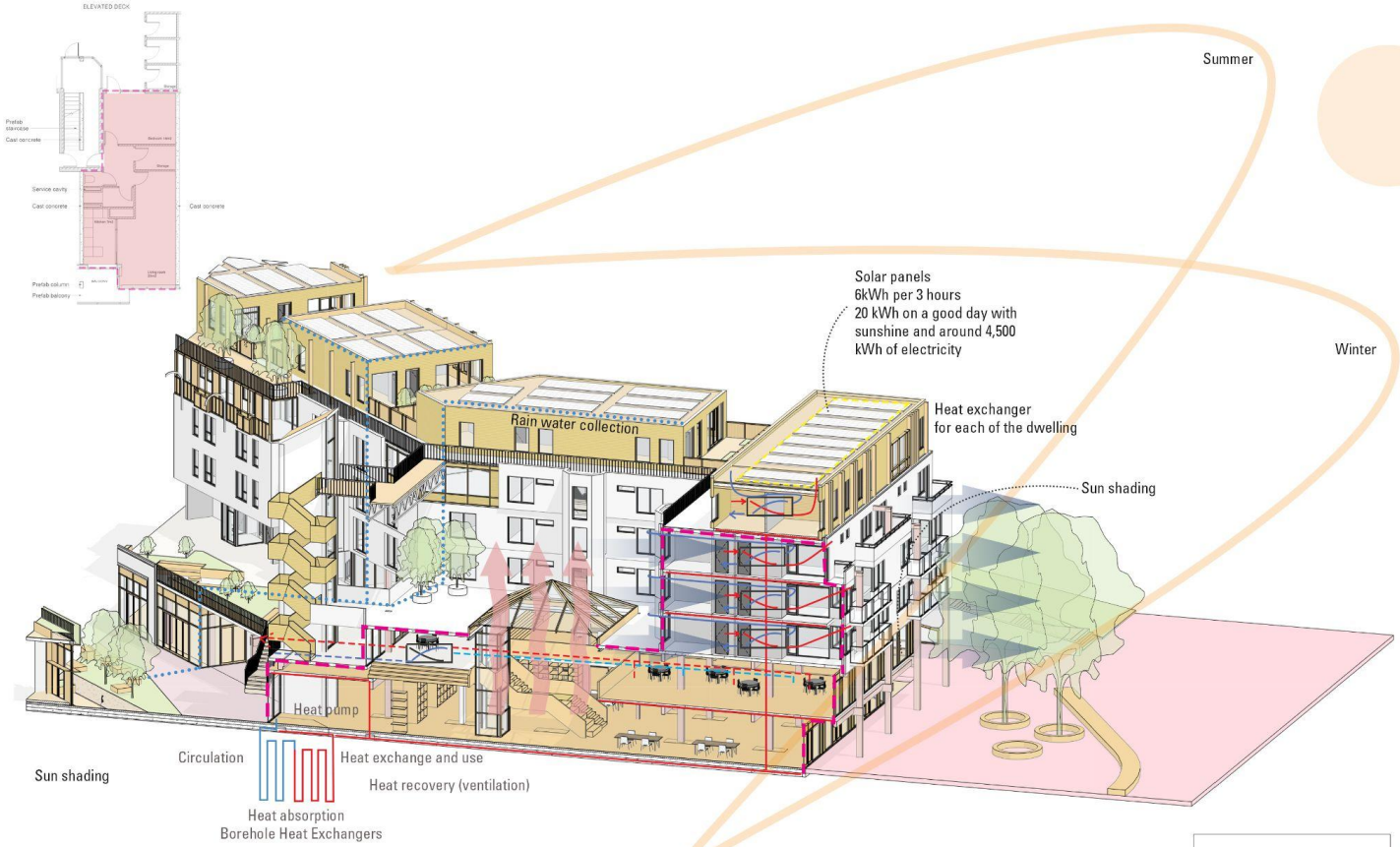
CORNER WINGS' TRANSPARENCY AND CONNECTIONS



THE MAJOR INTERVENTIONS OF THE CORE



CLIMATE SCHEME



Borehole Heat Exchangers (BHE)

are being increasingly utilized for heat purposes in public as well as communal infrastructure at depths ranging from 100 to 400 m. BHE technology allows for heat exchange between an underground rock mass and heat carrier, circulating in the closed-loop system between the surface and the reservoir. BHE systems are able to provide heat in winter seasons and cooling in summer months.

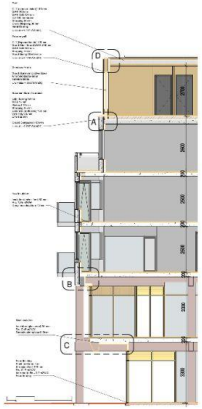
Pros of Passive Cooling:

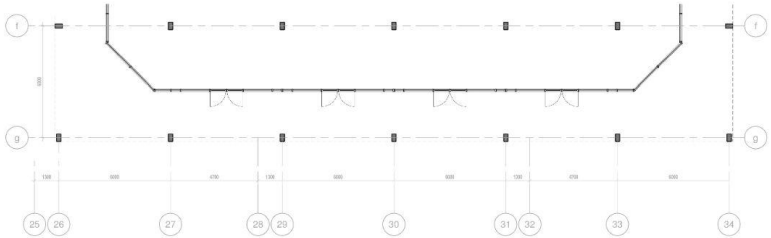
Can be installed as part of your heat pump system saving time, money and space.
Low cost to run – only uses energy to circulate the brine through the system.
100% carbon free if used with renewable electricity suppliers such as Octopus Energy.
Moves the warm energy from the building and charges the ground with it throughout the summer ready to be extracted in winter months, increasing efficiency.
Increased comfort levels
Eligible for the Renewable Heat Incentive financial benefit

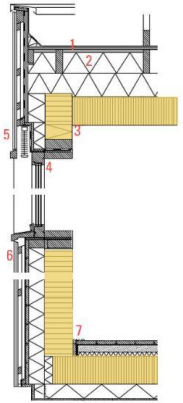
PV panels

Photovoltaic Panels or solar modules are made up of multiple cells which are cascaded together in series and encapsulated in an environmentally friendly casing producing a single solar module with a higher voltage output than with just one single PV cell as shown.

THE MAIN FACADE







DETAIL A - D
1 Two-layer bituminous seal;

2 27 mm softwood boarding

3 500 mm timber supporting structure/ventilating layer
polythene sheeting;

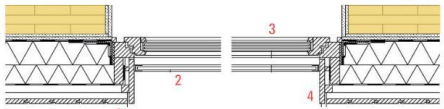
4 27 mm softwood boarding
40 - 220 mm timbers to fills/wood-fibre insulation
100/180 mm softwood beams/wood-fibre insulation
100/220 mm softwood beams/wood-fibre insulation

5 27 mm softwood boarding;
polythene vapour-retarding
layer;

6 110 mm services layer; 30 mm sheeps'
wool acoustic insulation;

7 Black mat as moisture protection;
36/40 mm silver fir strips, untreated
2 30/50 - 120 mm sawn silver fir strip cladding
30/50 mm softwood battens painted black

1:20



DETAIL A - HORIZONTAL SECTION

1 14 21 mm larch tongue-and-groove boarding; 25/38 mm battens
38/38 mm counter-battens
sealing layer; 180 mm mineral-wool thermal insulation
convection barrier
2 × 12.5 mm plasterboard
120 mm CLT wall
2 × 12.5 mm plasterboard

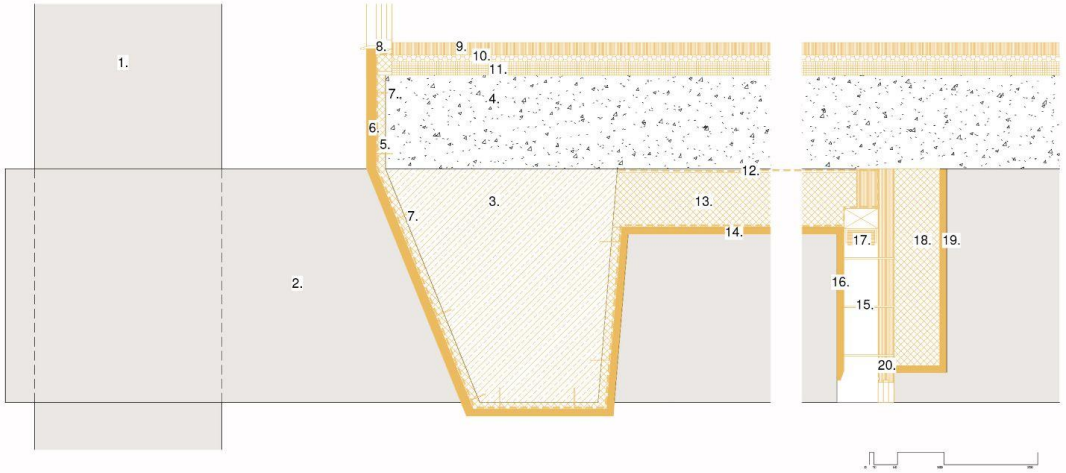
2 15 10 mm laminated safety glass in

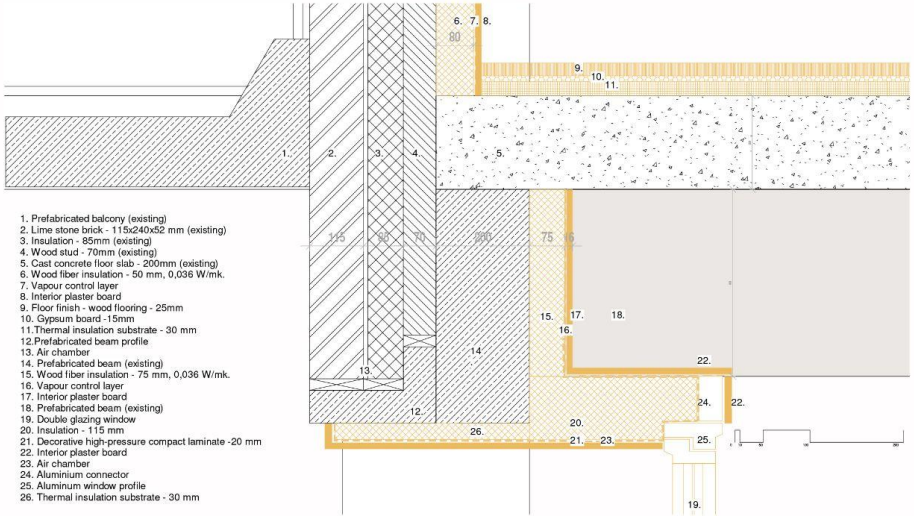
3 30/30 mm aluminium channel frame

4 16 triple glazing in wood frame

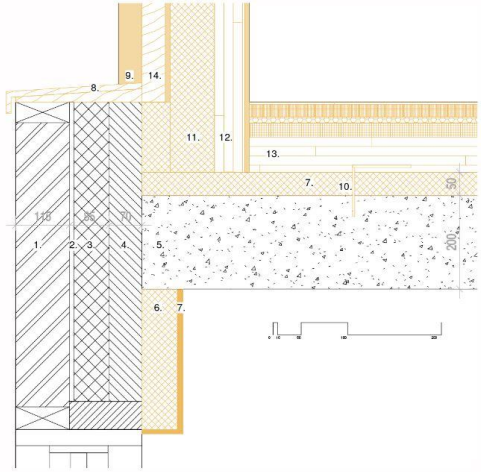
1:20

1. Prefabricated column - 400mm (existing)
2. Prefabricated beam - 400mm (existing)
3. Prefabricated beam - 300mm (existing)
4. Cast concrete floor slab - 200mm (existing)
5. Extruded polystyrene (XPS) insulation -20 mm
6. Decorative high-pressure compact laminate -20 mm
7. Aluminum connectors
8. Aluminum window profile
9. Floor finish - wood flooring - 25mm
10. Gypsum board -15mm
11.Thermal insulation substrate - 30 mm
12.Vapour control layer
13. Wood fiber insulation - 50 mm, 0,036 W/mk.
14. Decorative high-pressure compact laminate -20 mm
15. Aluminum connectors
16. Decorative high-pressure compact laminate -20 mm
17. Automatic sun shadings
18. Wood fiber insulation - 50 mm, 0,036 W/mk.
19. Interior plaster board
20. Window profile

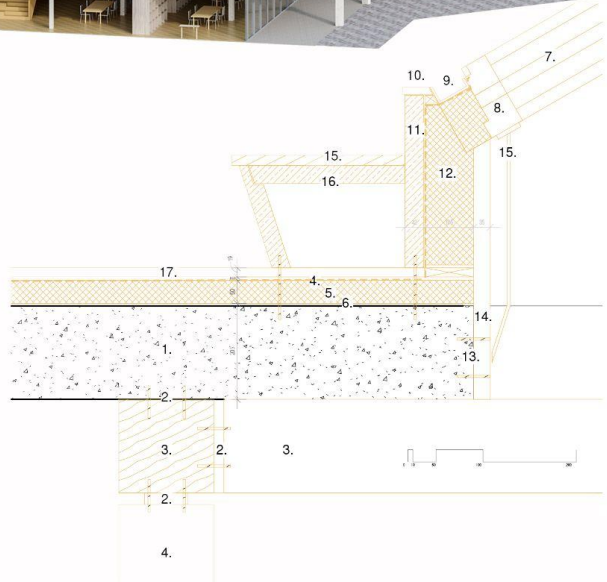



1. Prefabricated balcony (existing)
2. Lime stone brick - 115x240x52 mm (existing)
3. Insulation - 85mm (existing)
4. Wood stud - 70mm (existing)
5. Cast concrete floor slab - 200mm (existing)
6. Wood fiber insulation - 50 mm, 0,036 W/mk.
7. Vapour control layer
8. Interior plaster board
9. Floor finish - wood flooring - 25mm
10. Gypsum board -15mm
11.Thermal insulation substrate - 30 mm
12.Prefabricated beam profile
13. Air chamber
14. Prefabricated beam (existing)
15. Wood fiber insulation - 75 mm, 0,036 W/mk.
16. Vapour control layer
17. Interior plaster board
18. Prefabricated beam (existing)
19. Double glazing window
20. Insulation - 115 mm
21. Decorative high-pressure compact laminate -20 mm
22. Interior plaster board
23. Air chamber
24. Aluminium connector
25. Aluminium window profile
26. Thermal insulation substrate - 30 mm

1.Lime stone brick - 115x240x52 mm (existing)
2.Air chamber
3. Insulation - 85mm (existing)
4. Wood stud - 70mm (existing)
5.Cast concrete floor slab - 200mm (existing)
6.Wood fiber insulation - 75 mm, 0,036 W/mk.
7. Wood fiber sound insulatio - 80 mm
8. stainless-steel eaves trim as lightning conductor on 20/20 mm alum. SHS
9. Thermal wooden slats
10. Steel connectors
11. Wood fiber insulation - 150 mm, 0,036 W/mk.
12. CLT structure 110mm
13. CLT structure floor - 110mm
14. Thermal wood cladding 50 mm



1. Existing concrete slab - 205 mm
2. Steel connector
3. Glulam timber beam - 200x200 mm
4. Glulam column - 200m
5. Wood fiber insulation - 50 mm, 0,036 W/mk.
6. Vapour control layer
7. Sky light - laminated glass, 8 mm
8. Aluminum profile of skylight
9. Aluminum drainage profile
10. Prefab concrete cap
11. Prefab concrete wall element
12. Wood fiber insulation - 105 mm, 0,036 W/mk.
13. Steel connector
14. Aluminum support
15. Thermal wood plate
16. Prefabricated concrete bench element
17. Sand stole tiles
18. Automatic opening system



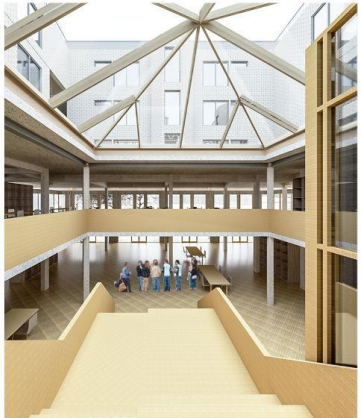
ATMOSPHERE OF PENTHOUSES

THE LINK BETWEEN THE GREEN ALLEY AND PUBLIC SQUARE

UPPER DECK WITH SKYLIGHT

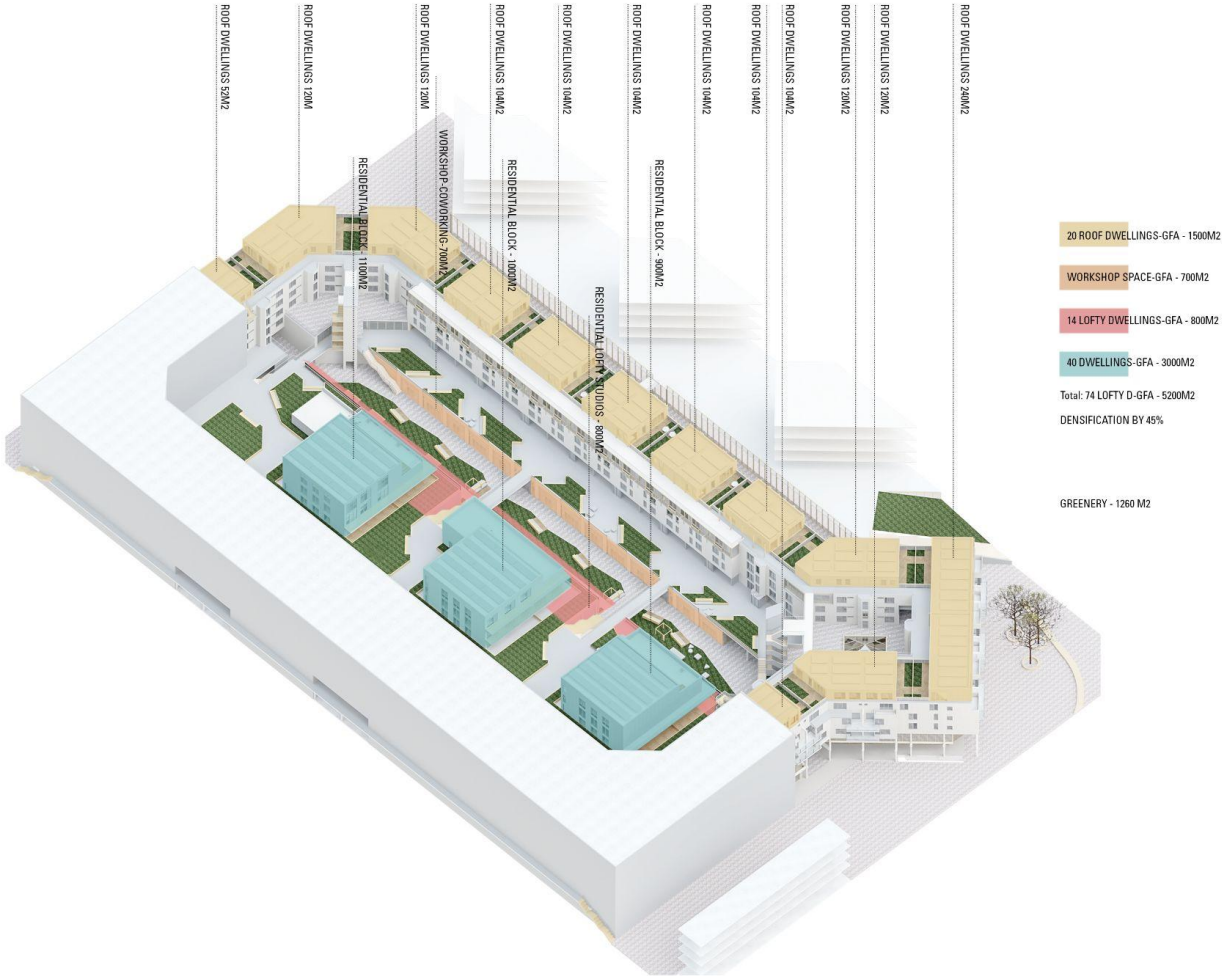
ATRIUM SPACE

GROUND FLOOR OF THE LIBRARY



CONCLUSIONS

IMPROVEMENTS OF THE BLOCK REGARDING GOVERNMENT POSITION



IMPROVEMENTS REGARDING USERS (RESIDENTS) POSITION

GREEN POCKETS - COMMUNAL SPACES

GALLERY OF THE SKY DWELLINGS

GREEN ALLEY - TERRACES, PLAYGROUNDS

PUBLIC AMPHITHEATRE - OUTSIDE CINEMA

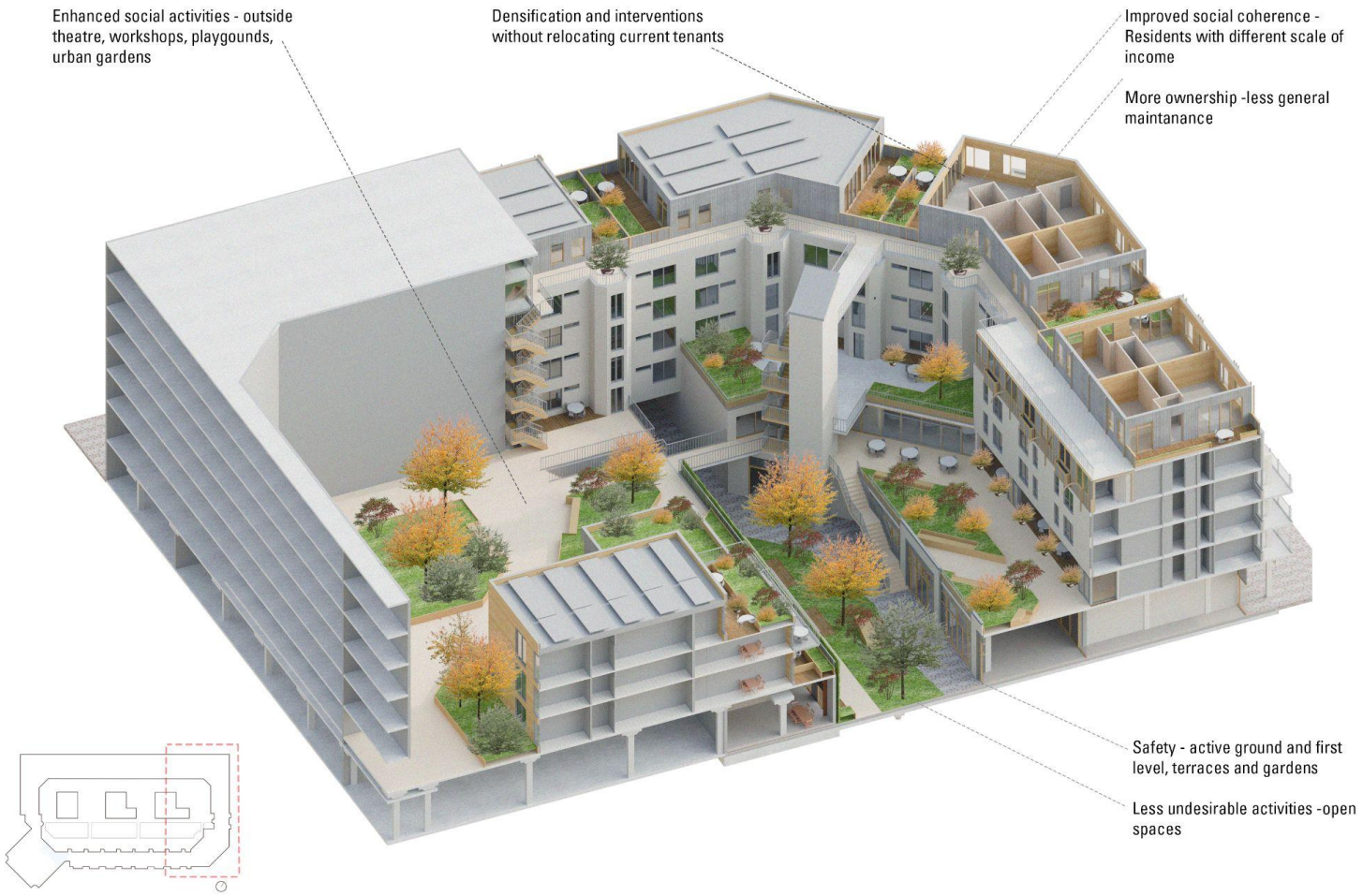
TERRACES, COMMUNAL SPACES

UPPER COURTYARD - MEETING SPACE

ELEVATED STREET - MEETING SPACE

PEDESTRIAN BRIDGES - INTERSECTIONS

IMPROVEMENTS REGARDING OWNERS POSITION



IMPROVEMENTS REGARDING “MAKERS” POSITION

GATES

EXISTING

ISSUES

INNER SPACE IS NOT PLEASANT
DARK ENTRANCE
NO LIGHTING
NEGLECTED PLINTH

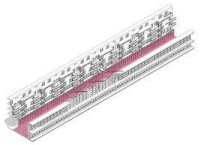
PROPOSED

IMPROVEMENTS

INNER SPACE BIG, LIGHT, ATTRACTIVE
LIGHTING
ACTIVE PLINTH

COLONNADE

EXISTING

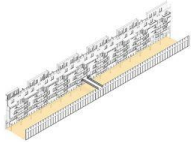


ISSUES

COLLONADE PUCHED TO THE ESGE OF THE FACED, NEGLECTED THE IMAGE OF THE BUILDING

NEGLECTED PLINTH

PROPOSED



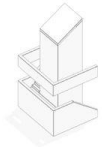
IMPROVEMENTS

COLLONADE IS RECREATED BY PUSHING BACK THE FACADE

CLUSTER 8 IS DESIGNED AS ONE STOREY PLINTH, SO IT LETS TO GET MORE SPACE AT THE SHOPPING STREET

TOWER

EXISTING



ISSUES

ELEVATOR TOWER IS NOT IN USE
NEGLECTED

PROPOSED

IMPROVEMENTS

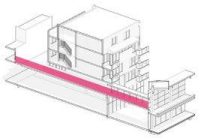
EXTRA 25 APARTMENTS ON TOP WILL ADD MORE NEED OF USING ELEVATOR

ELEVATOR TOWER CONNECTS GROUND FLOOR, LIBRARY, UPER DECK AND SKY UNITS

PROVIDES VIEW POINT OVER THE “GREEN ALLEY”

BRIDGE

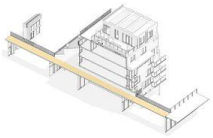
EXISTING



ISSUES

BRIDGE IS NEGLECTED
COVERED IN GLASS
UNPLEASANT
THERE IS NO CONTINUOUS FLOW

PROPOSED

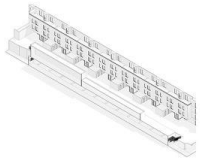


IMPROVEMENTS

OPEN DESIGN
THERE WAS CREATED A FLOW BETWEEN CLUSTERS

STREET

EXISTING



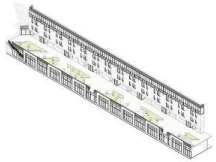
ISSUES

CLOSED, NARROW, CRAMPED WITH STORAGES

NO COMMUNAL SPACE

NO GREENERY

PROPOSED



IMPROVEMENTS

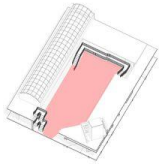
OPEN FOR RESIDENTIAL ACTIVITIES

PLAYGROUNDS, BENCHES, SPOTS FOR PLANTINGS, TERRACES

GREEN POCKETS

COURTYARD

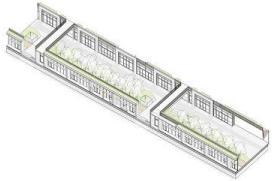
EXISTING



ISSUES

NEGLECTED
DESOLATED
NO GREENERY
PASSIVE PLINTH

PROPOSED



IMPROVEMENTS

ACTIVATED
ACTIVE PLINTH
OPEN
ADDED GREENERY
INCLUDED SMALL ARCHITECTURE FEATURES