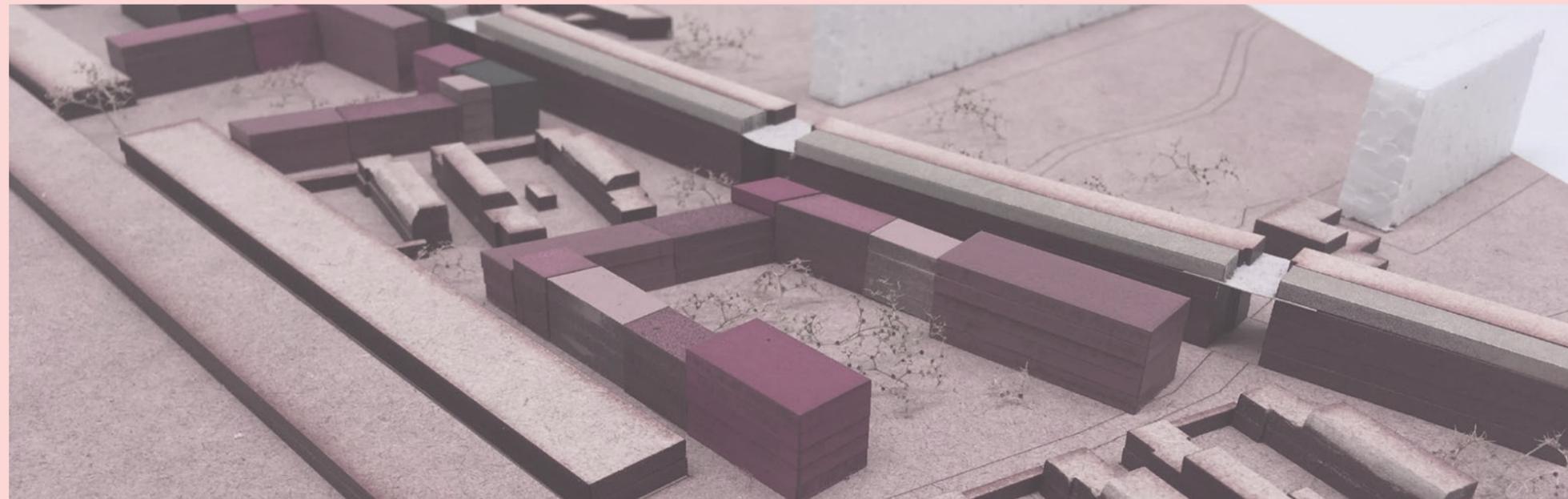


NEW HUMAN NATURE

A Plea for the Coherency of the DiverCity



Anneloes Tilman

4367537

06_07_2021

*New Heritage Graduation Studio:
P5 presentation*

*MSc AUBS (Architecture),
TU Delft*

*Committee: Uta Potgiesser, Ger
Warries, Lidwine Spoormans, and
Alexander Wandl*

TABLE OF CONTENTS

Introduction

Problem statement

Research question

Site

Environmental position

Concept

Design proposal

urban - low-rise - mid-rise - new

Conclusion

- introduction -

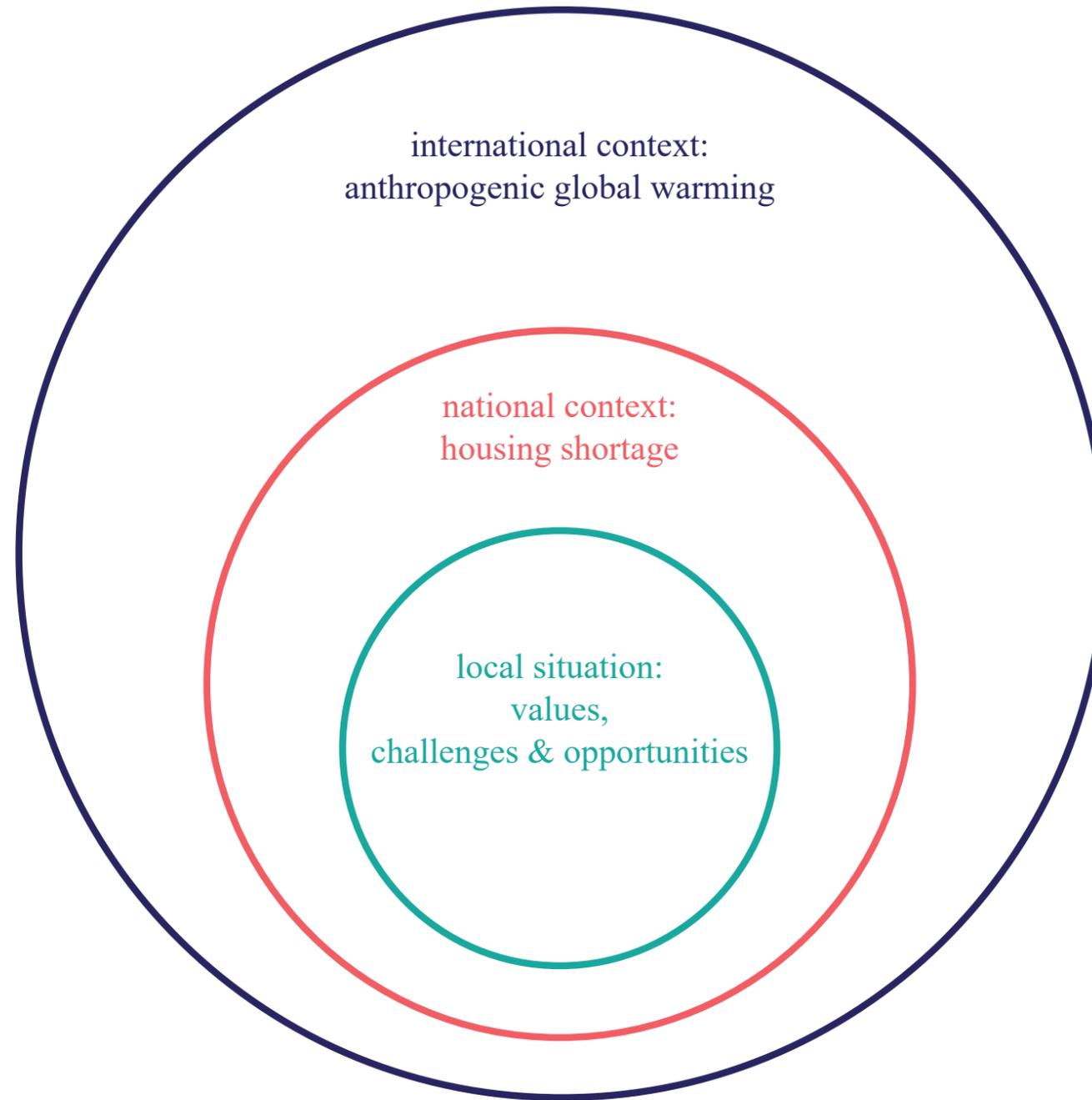
GRADUATION STUDIO NEW HERITAGE

“

How could renovation, replacement and/or densification
strengthen the qualities and help **solving current problems**
without compromising heritage values and identities, where these
exist?

”

SCALES



RESEARCH OBJECTIVE

“

The integration of **anthropogenic global warming** solutions and **densification** opportunities in order to revitalise **Dutch 80's neighbourhoods**.

”

DESIGN OBJECTIVE

“

The revitalisation of the neighbourhood Hoptille by the **diversification** of public space, housing types, and facades through the **addition of dwellings** while enhancing the **biodiversity**.

”

- problem statement -

INTERNATIONAL CONTEXT

international context:
anthropogenic global warming

INTERNATIONAL CONTEXT

Global greenhouse gas emissions and warming scenarios

Our World
in Data

- Each pathway comes with uncertainty, marked by the shading from low to high emissions under each scenario.
- Warming refers to the expected global temperature rise by 2100, relative to pre-industrial temperatures.

Annual global greenhouse gas emissions
in gigatonnes of carbon dioxide-equivalents

150 Gt

100 Gt

50 Gt

Greenhouse gas emissions
up to the present

0

1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100

No climate policies

4.1 – 4.8 °C

→ expected emissions in a baseline scenario if countries had not implemented climate reduction policies.

“ **2.8 - 3.2 degrees.** ”

Current policies

2.8 – 3.2 °C

→ emissions with current climate policies in place result in warming of 2.8 to 3.2°C by 2100.

Pledges & targets

2.5 – 2.8 °C

→ emissions if all countries delivered on reduction pledges result in warming of 2.5 to 2.8°C by 2100.

2°C pathways

1.5°C pathways

Ritchie & Roser (2017).

INTERNATIONAL CONTEXT



Ritchie & Roser (2020). (Image left: Getty Images/WangAnQi, n.d.; image right: Adobe Stock, n.d.)

NATIONAL CONTEXT

national context:
housing shortage

NATIONAL CONTEXT



“ **current shortage of 331.000 homes** ”

Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2020). (Image: Erasmus Magazine/Unit 20, n.d.)

NATIONAL CONTEXT



Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (2020). (Image: Getty Images/iStockphoto, n.d.)

- research question -

MAIN RESEARCH QUESTION

“

How can the Dutch 80's neighbourhood be **densified** in terms of **housing and nature** while enhancing and preserving in- and extrinsic **values** (if present) by taking the neighbourhood Hoptille as case study?

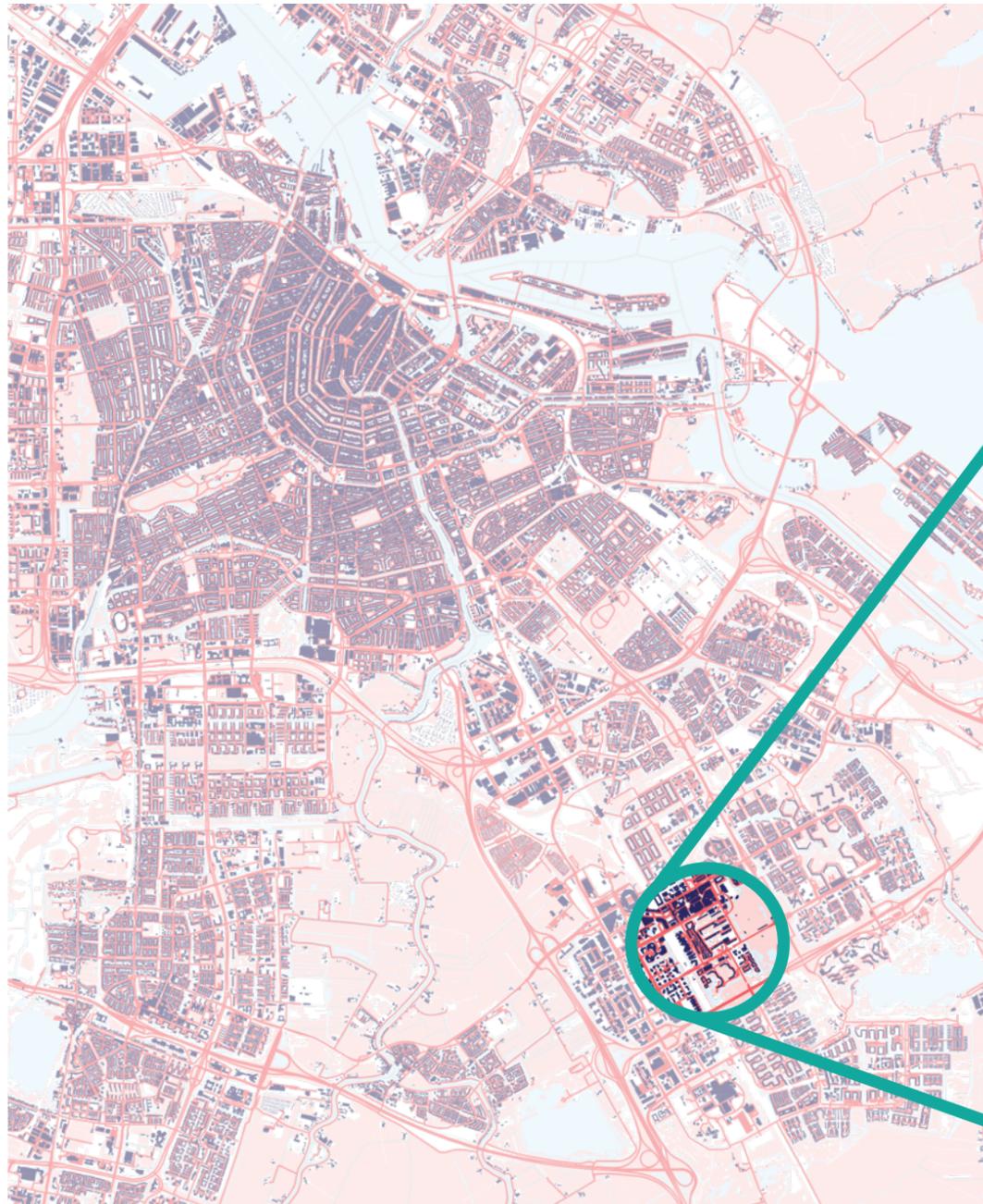
”

- site -

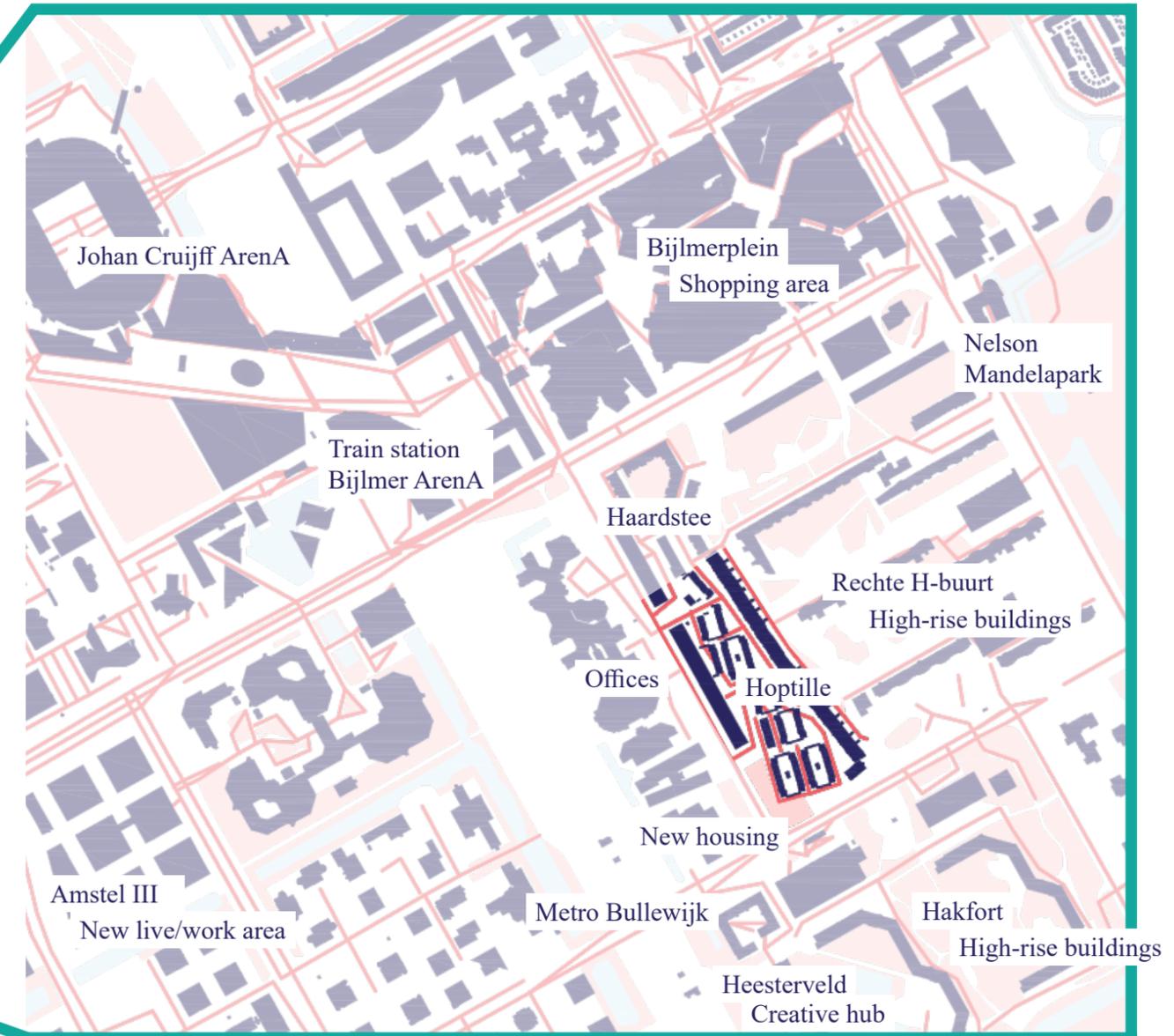
LOCAL SITUATION - SITE



SITE - H-BUURT IN AMSTERDAM ZUID-OOST



AMSTERDAM ZUID-OOST: H-BUURT (1:10.000)



HOPTILLE AND ITS SURROUNDINGS (1:2.000)



SITE - HOPTILLE

LOCATION: AMSTERDAM ZUID-OOST

**ARCHITECT: SJOERD SOETERS AND
KEES RIJNBOUTT**

YEAR: 1980

BUILDINGS:

MID-RISE (5 LEVELS)

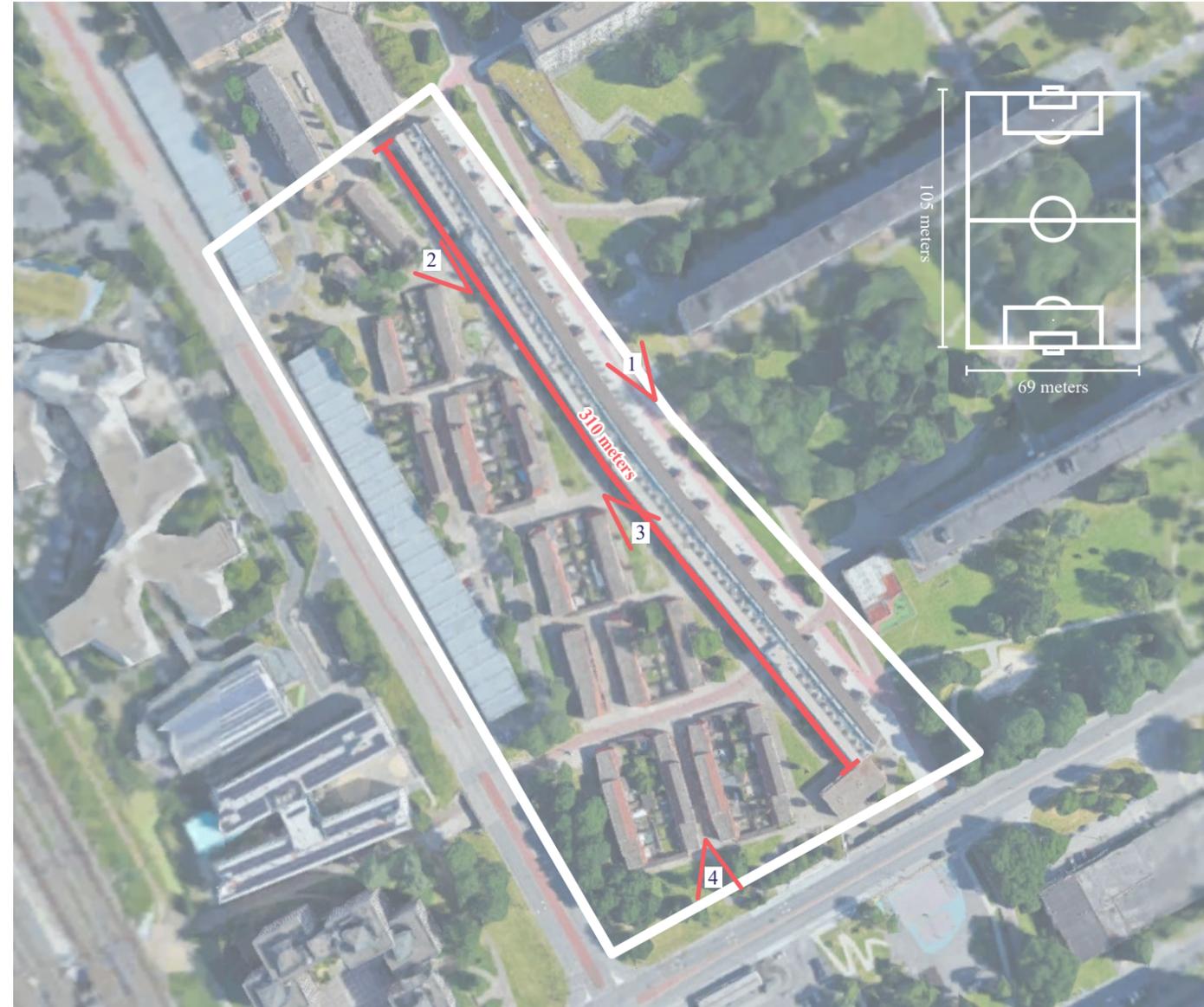
LOW-RISE HOUSING (2-3 LEVELS)

PARKING GARAGE (2 LEVELS)

**CONCEPT: REACTION AGAINST CIAM
IDEALS (HIGH-RISE FLATS)**



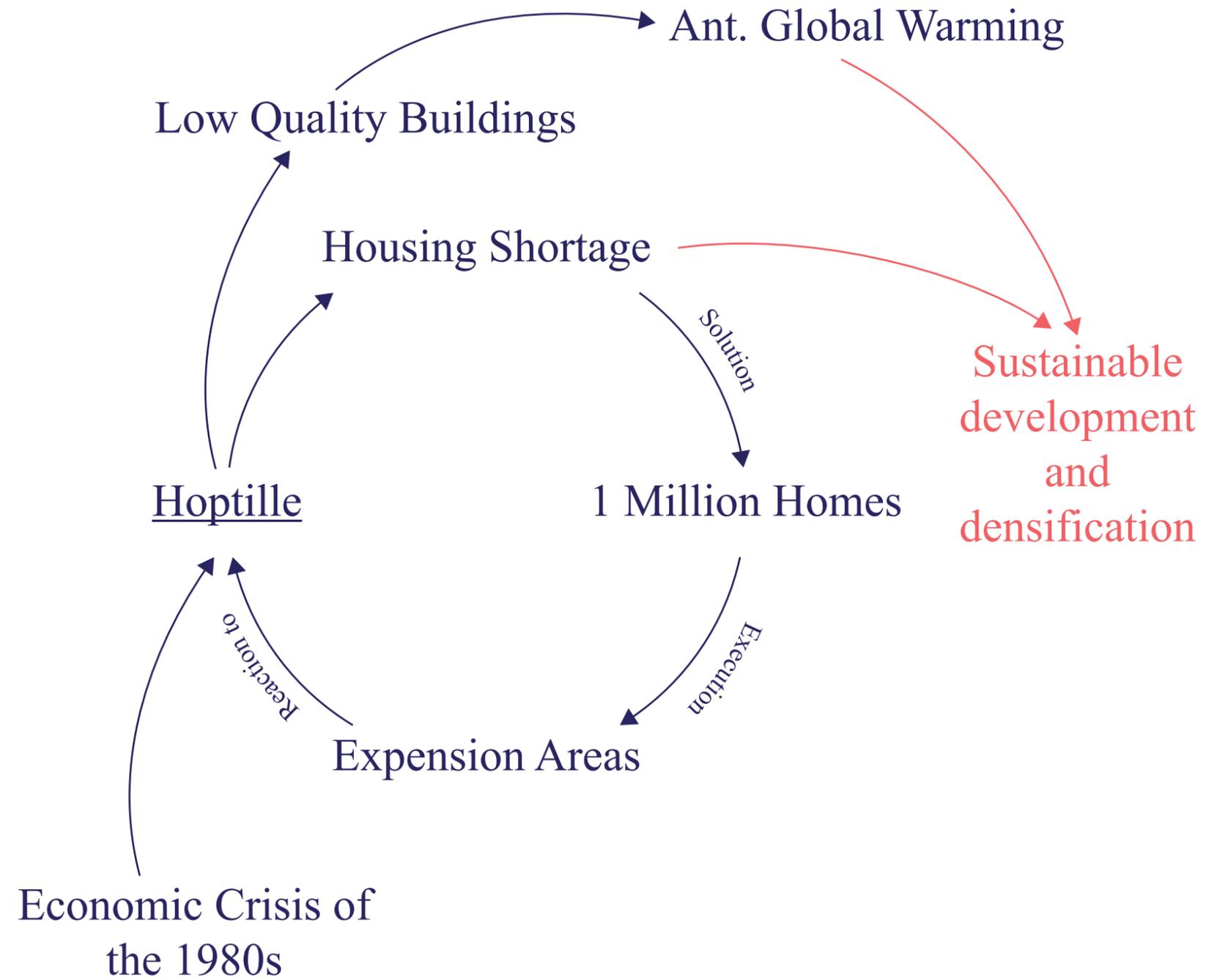
SITE - HOPTILLE



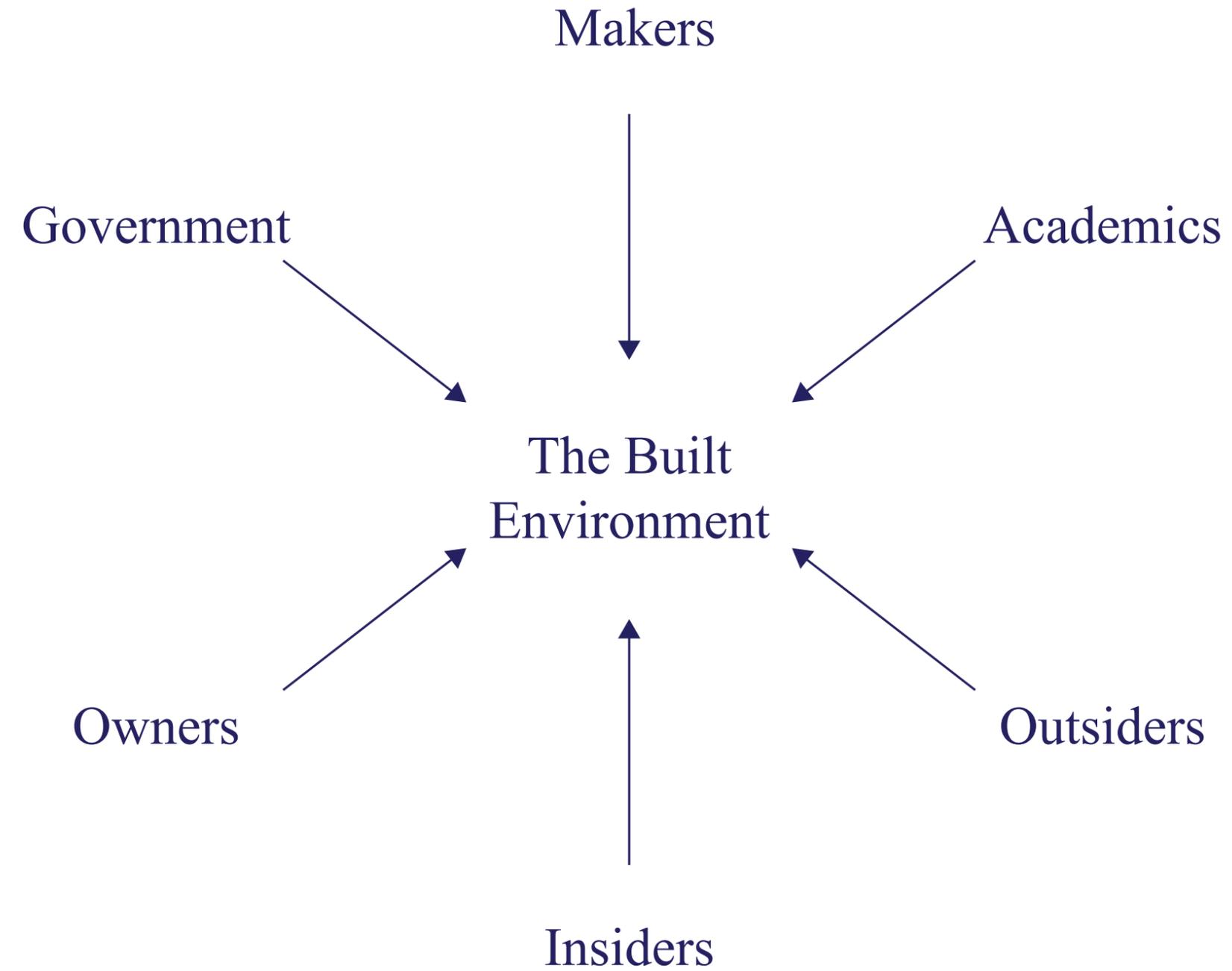
Google Afbeeldingen (2021); Aerodata International Surveys, Maxar Technologies, Kaargegevens (2021)
Soccer field for scale, according to KNVB measurements

tN

WHY HOPTILLE



STAKEHOLDER RESEARCH



Author's image, based on: Howard (2003).

STAKEHOLDER RESEARCH



VALUE MATRIX PHOTO 3: CURRENT FRONT MID-RISE HOPTILLE + ANALYSIS

Photo 3
Current front hoptille

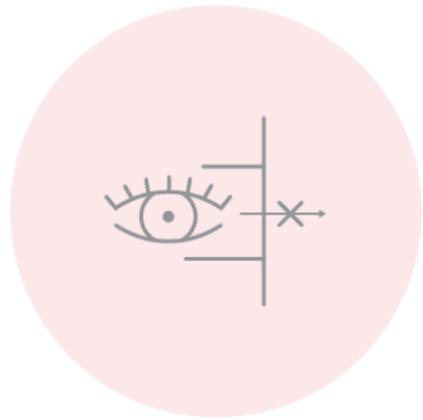
	ECOLOGICAL	SOCIAL	ECONOMIC	AESTHETICAL	HISTORICAL	POLITICAL	OTHER VALUES
SITE	M O	M O	M O	M O	M O	M O	white walls / open transparencies / clean maintenance
SURROUNDINGS	M O	M O	M O	M O	M O	M O	greenery / lots / both in distance & / within the / vicinity / on street / program / 20% / 60% / / front / back
STUFF	M O	M O	M O	M O	M O	M O	white / grey / black materials
SURFACE	M O	M O	M O	M O	M O	M O	smooth / accessible / small / medium / large / / materials / red / brown / / black / white / grey
AMENITIES	M O	M O	M O	M O	M O	M O	accessibility / white & / concrete
SCALE	M O	M O	M O	M O	M O	M O	white human scale - / medium
TYOLOGY	M O	M O	M O	M O	M O	M O	modern / urban / sleek / / culture / specific / / program / massive / building / simple / modern / white
SPACE	M O	M O	M O	M O	M O	M O	open / spacious / / well used - white / / to light / yellow / grey / / clean / modern
STORY	M O	M O	M O	M O	M O	M O	relocated / change / global / subtle / dramatic
SOCIAL	M O	M O	M O	M O	M O	M O	no social context / / # mentioned / no context / / # / two worlds
SERVICES	M O	M O	M O	M O	M O	M O	26 52
VISION	M O	M O	M O	M O	M O	M O	mid-rise improvements
ATMOSPHERE	M O	M O	M O	M O	M O	M O	uninspiring / small / / calm / day-night
PAST/PRESENT/FUTURE	M O	M O	M O	M O	M O	M O	-

VALUE MATRIX PHOTO 4: CURRENT BACK MID-RISE HOPTILLE + ANALYSIS

Photo 4
Current back hoptille

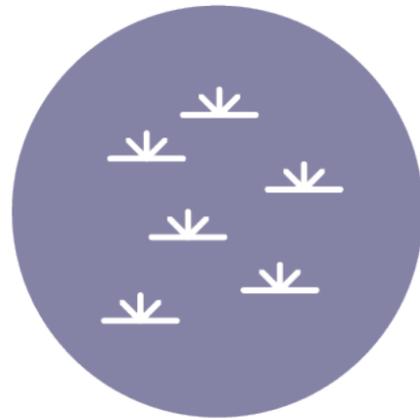
	ECOLOGICAL	SOCIAL	ECONOMIC	AESTHETICAL	HISTORICAL	POLITICAL	OTHER VALUES
SITE	M O	M O	M O	M O	M O	M O	greenery / balconies / social housing / community / 60%
SURROUNDINGS	M O	M O	M O	M O	M O	M O	red walls / blue / walls / balconies / / materials / concrete / / apr. steel / glass
STUFF	M O	M O	M O	M O	M O	M O	non-functional / green / seating / mostly / green / openings
SURFACE	M O	M O	M O	M O	M O	M O	small windows / balconies / / balconies / walls / / balconies / balconies / / balconies
AMENITIES	M O	M O	M O	M O	M O	M O	quality / looking for / walls / cycle - shifting / strategy
SCALE	M O	M O	M O	M O	M O	M O	human scale / open / / one level / 20% / 80% / / not used / no more open / like open
TYOLOGY	M O	M O	M O	M O	M O	M O	modern / sleek / simple / materials / balconies / / balconies / balconies / / balconies / balconies / / balconies / balconies
SPACE	M O	M O	M O	M O	M O	M O	well maintained / clean / white space / so light / balconies / balconies / / balconies
STORY	M O	M O	M O	M O	M O	M O	very simple / balconies / balconies / balconies / / balconies / balconies / / balconies / balconies
SOCIAL	M O	M O	M O	M O	M O	M O	social context / balconies / / balconies / balconies / / balconies / balconies / / balconies / balconies
SERVICES	M O	M O	M O	M O	M O	M O	use of materials
VISION	M O	M O	M O	M O	M O	M O	visually improvements #
ATMOSPHERE	M O	M O	M O	M O	M O	M O	visually improvements #
PAST/PRESENT/FUTURE	M O	M O	M O	M O	M O	M O	23

CHALLENGES & OPPORTUNITIES HOPTILLE



LACK SOCIAL CONTROL

Unsafe feelings, crime, differences day and night, no active plinth



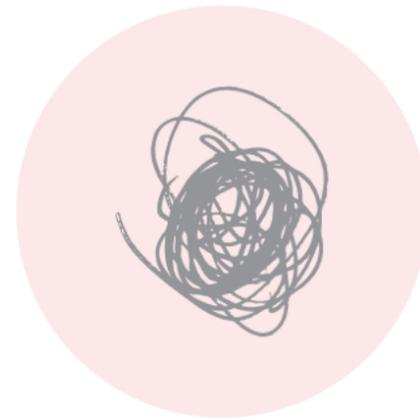
LACK OF QUALITATIVE GREENERY

Lots of greenery, but it lacks quality, maintenance and activities



BORING

Only housing in the area, no activities



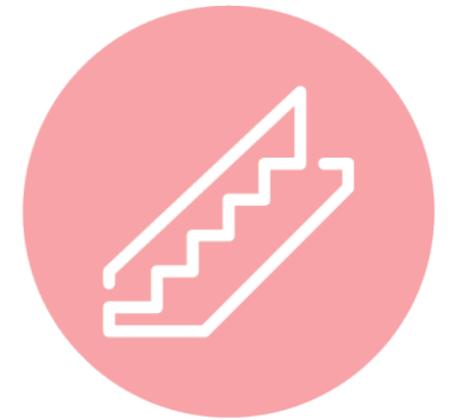
AESTHETICAL INCOHERENCE

Brick, concrete, 'ornaments', lack of maintenance



MID-RISE IN BAD TECHNICAL STATE

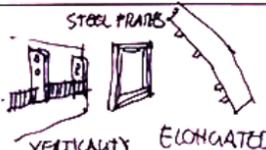
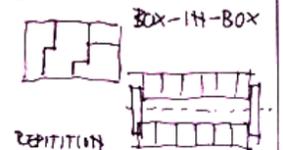
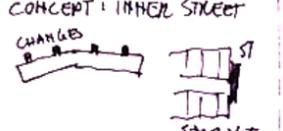
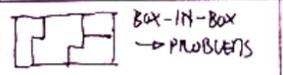
Lack of maintenance, complicated lay-out of the mid-rise, 80's architecture made in cheaply due to economic crisis

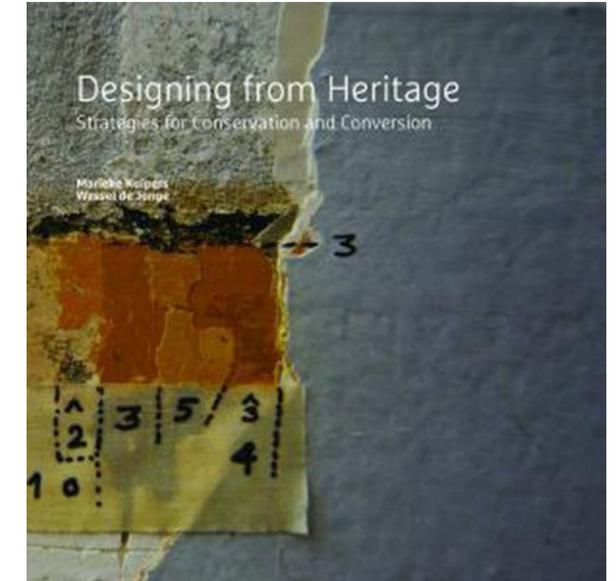


ACCESS

Change of access system (inner street) to stairwells on other side, later addition of extra staircases and gallery, blurs the views, creates small corners, therefore unsafe feelings and crime

CULTURAL HISTORIC VALUES Value Matrix

	AGE	HISTORICAL	USE	NEWNESS	(REL.) ART	RARITY	OTHER
SETTING		 <p>REACTION TO HIGH-RISE</p>					
SKIN (EXT)		 <p>STEEL FRAMES VERTICALLY ELONGATED</p>	 <p>PRIVACY FLAT ROOF DIFFERENT WINDOW SIZES MURALS</p>		 <p>SYMBOL FOR TECHNIQUE CHANGE OF MAIN FACADE</p>		
STRUCTURE			 <p>BOX-IN-BOX REPETITION</p>				
SPACE PLAN		 <p>MEZANINE HAVING LEVELS SINGLE FAMILY HOUSING</p>	 <p>CONCEPT: INNER STREET CHANGES ST STORAGE</p>			 <p>ELONGATED BUILDING</p>	
SERVICES			 <p>BOX-IN-BOX PROBLEMS</p>				
SURFACE (INT)							
STUFF							
SPIRIT OF PLACE		<p>80'S ARCHITECTURE → ECONOMICAL CRISIS</p>					<p>DESIGNED FROM BIRDS EYE VIEW, NOT EYE LEVEL</p>

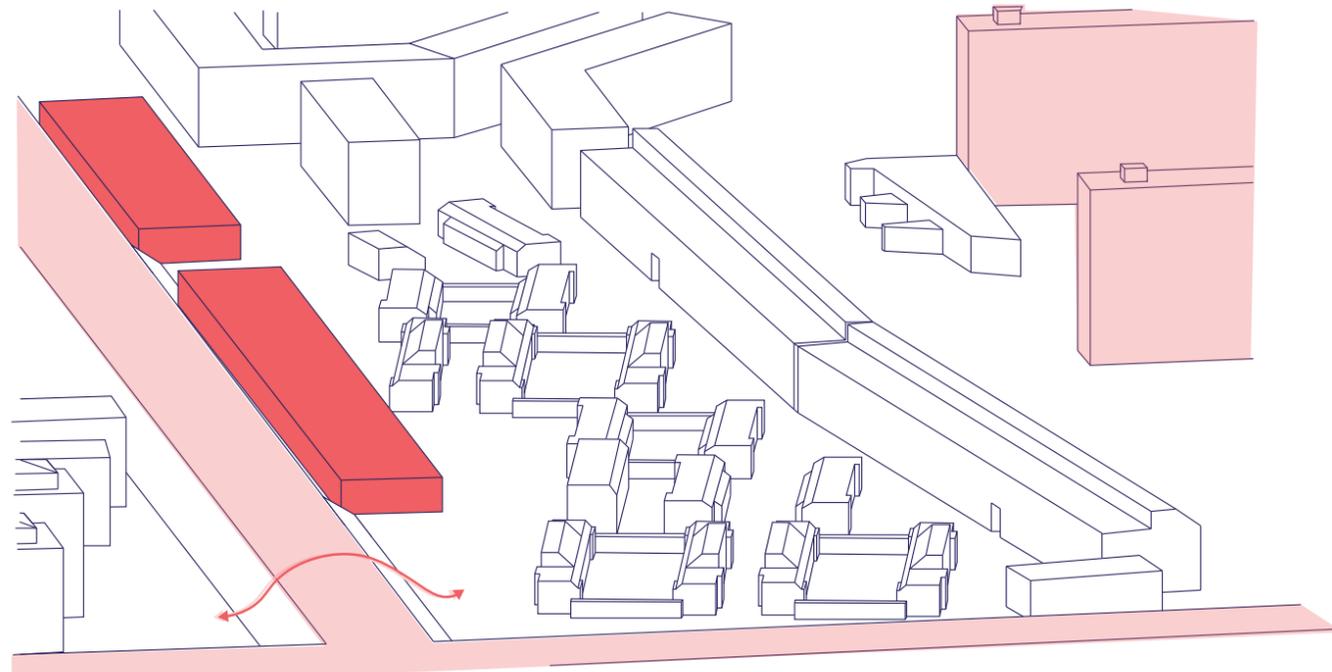


Value Matrix based on Kuipers, M., & De Jonge, W. (2017). *Designing from Heritage*. Delft: TU Delft, p33-63.

Clarke, Kuipers & Stroux (2019).
Tarrafa Silva & Pereira Roders (2012).

CULTURAL HISTORIC VALUES

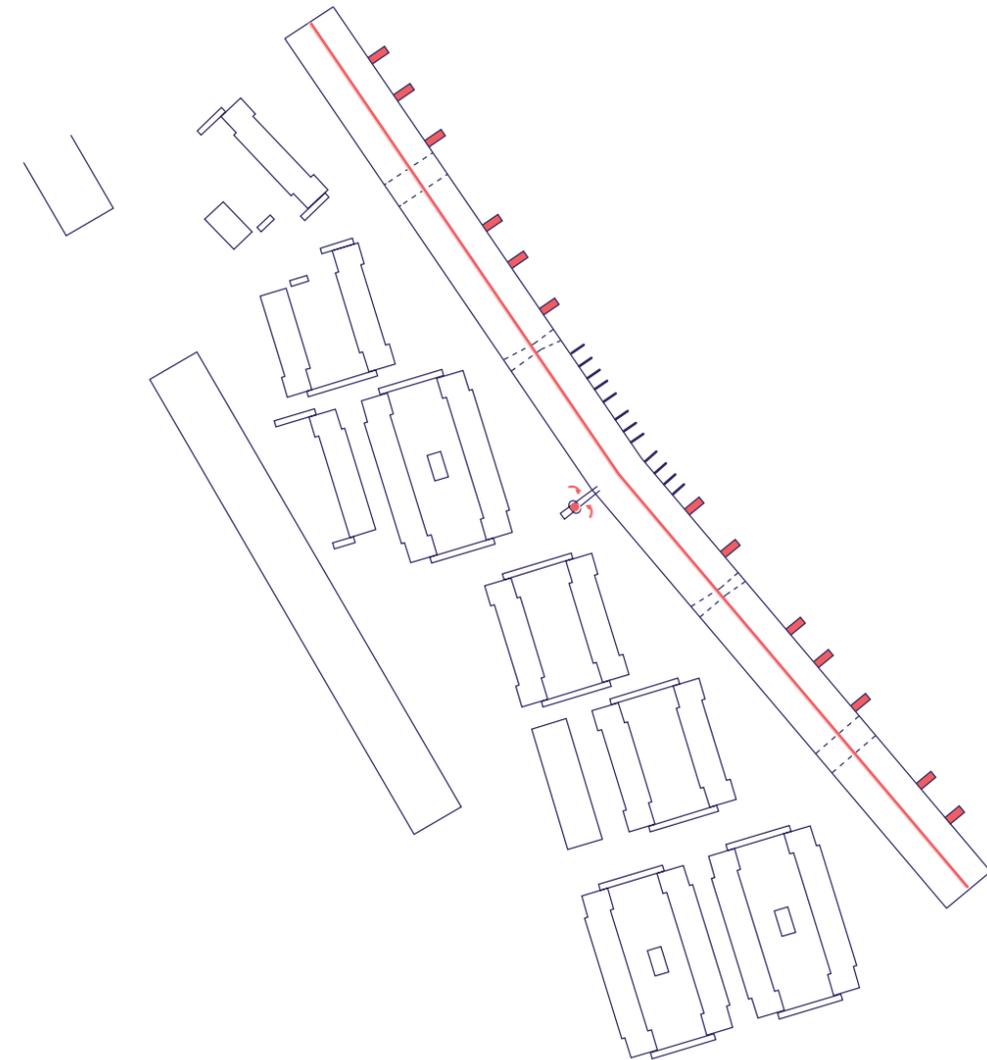
Lessons to learn



REACTION AGAINST BIJLMER IDEALS: HIGH-RISE, PARKING GARAGES, AND ELEVATED ROADS



RELATION LOW-, MID-, AND HIGH-RISE



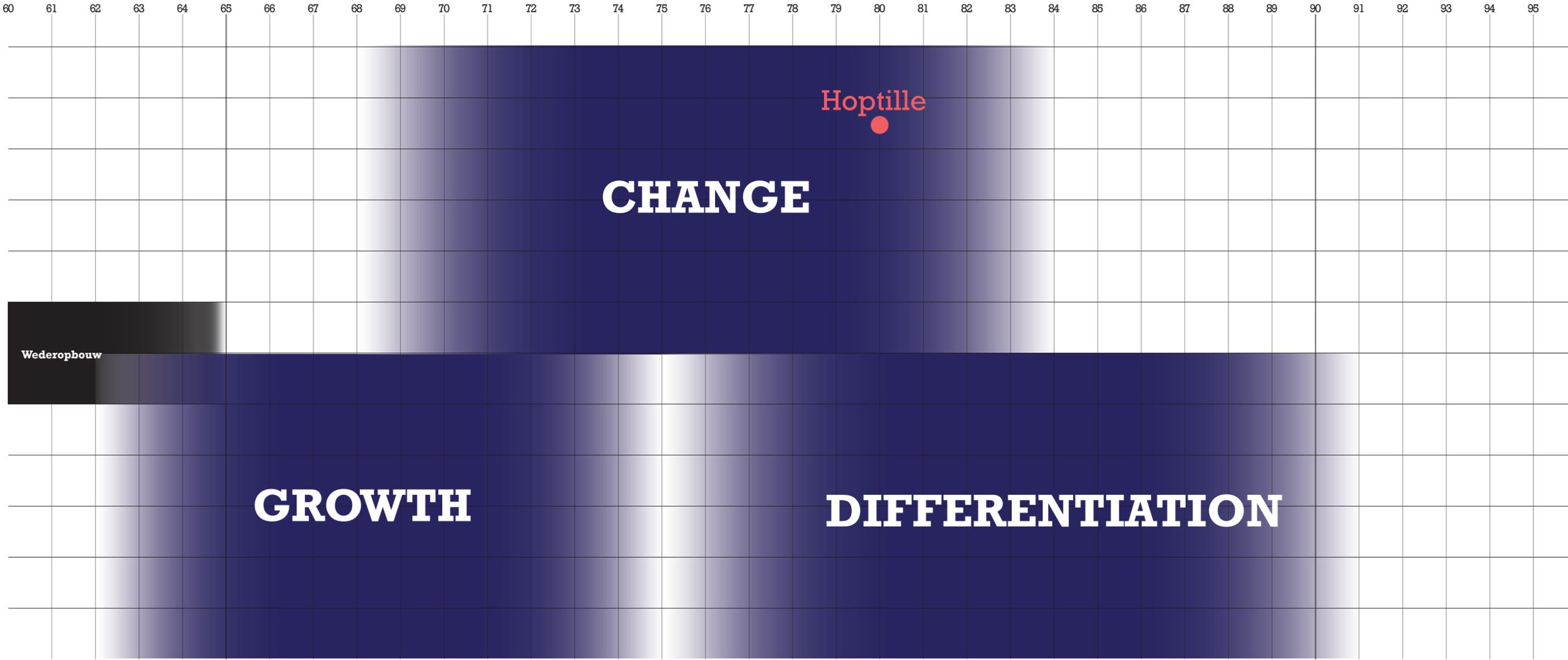
CHANGES IN ACCESS SYSTEM

70's/80's NEIGHBOURHOODS



Barzilay, Ferwerda & Blom (2018) and Somers (2020).

70's/80's NEIGHBOURHOODS: HISTORICAL CONTEXT



Based on:
Barzilay, Ferwerda, & Blom (2018).
Somers (2020).

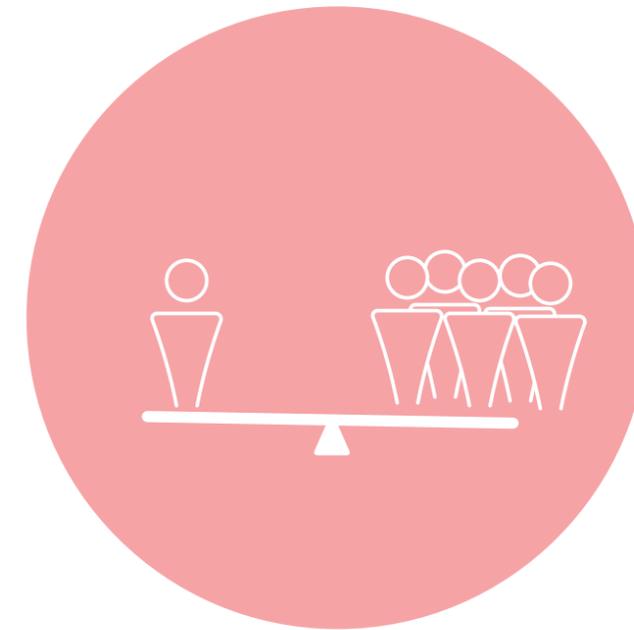
VALUES 70's/80's NEIGHBOURHOODS



**KID FRIENDLY /
CAR FREE**



**NEW TARGET GROUPS /
DIFFERENTIATION DWELLING
TYPES**

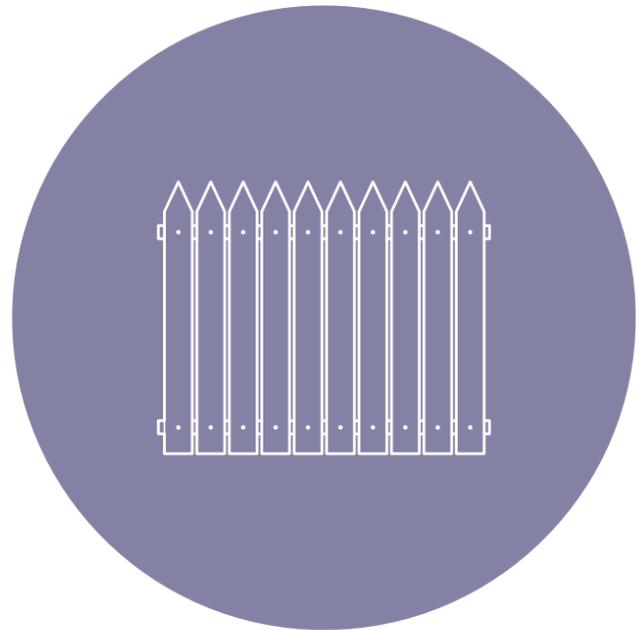


**BALANCE BETWEEN PRIVATE
AND COLLECTIVE/PUBLIC**

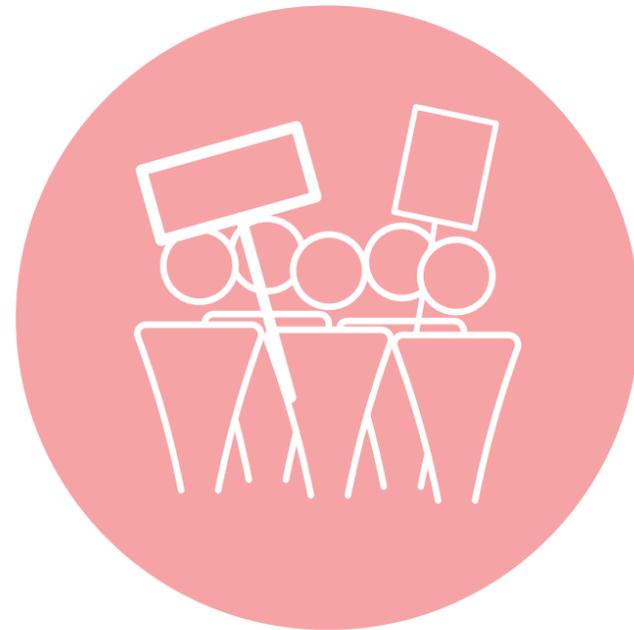


**EXPERIMENTAL DWELLING
CONFIGURATIONS**

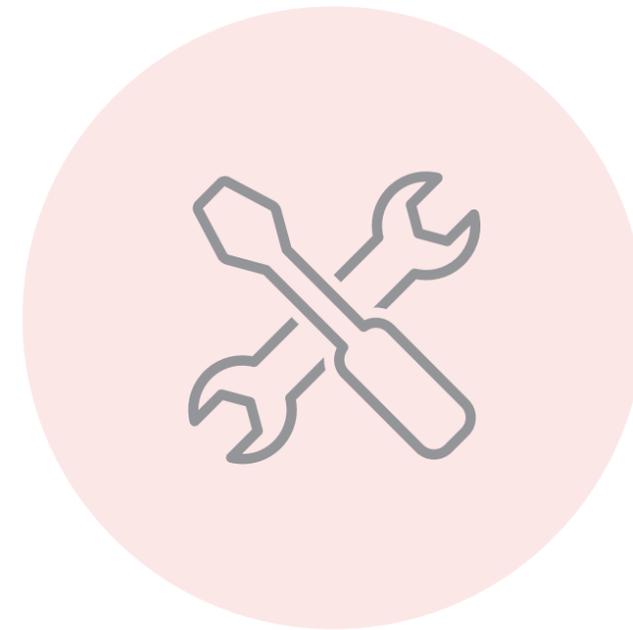
CHALLENGES 70's/80's NEIGHBOURHOODS



**FRAGMENTATION OF GREENERY
/ CREATION OF FENCES**



UNPROUD RESIDENTS



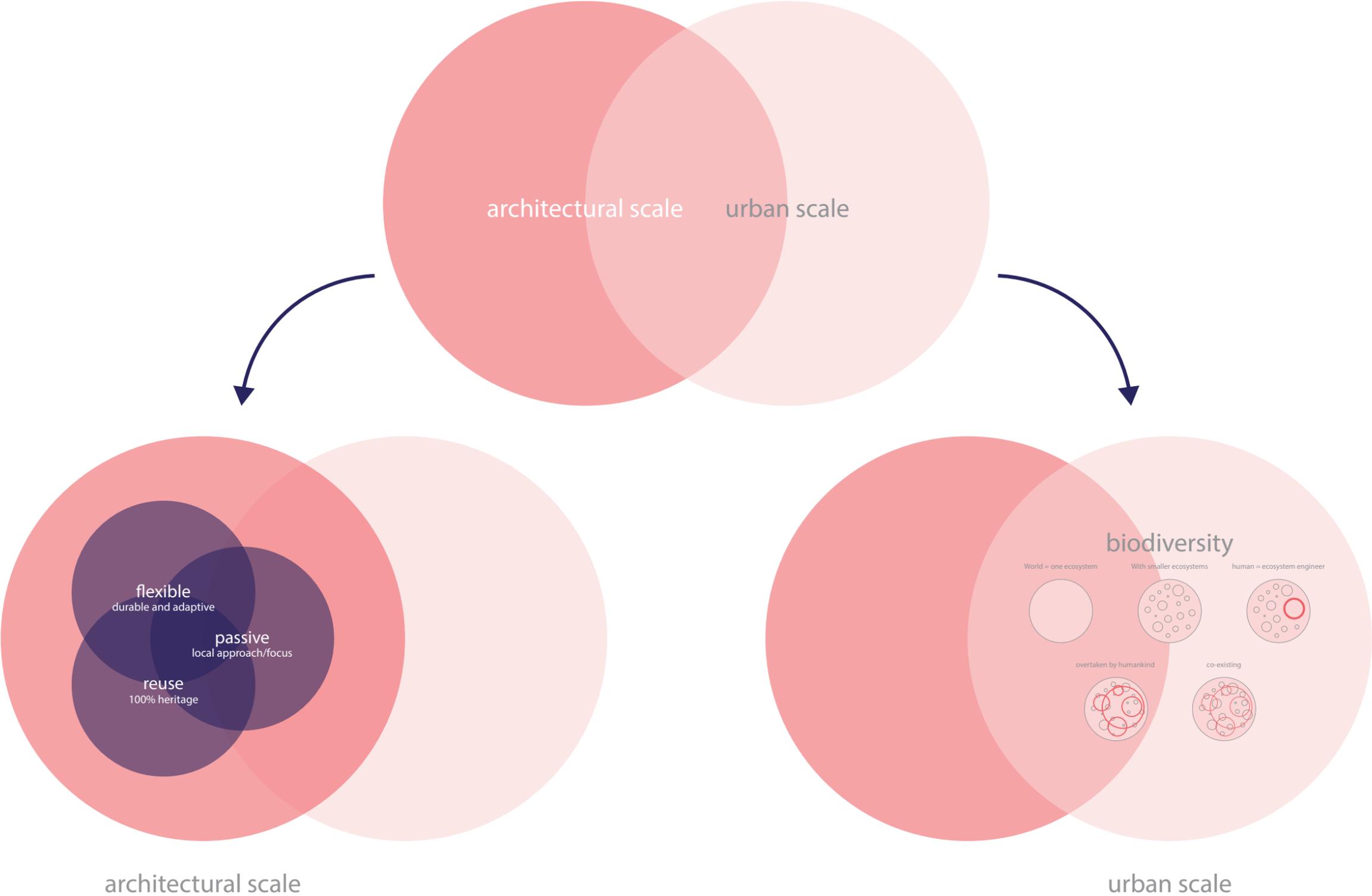
**DETERIORATION OF PUBLIC
SPACE / LACK OF MAINTENANCE**



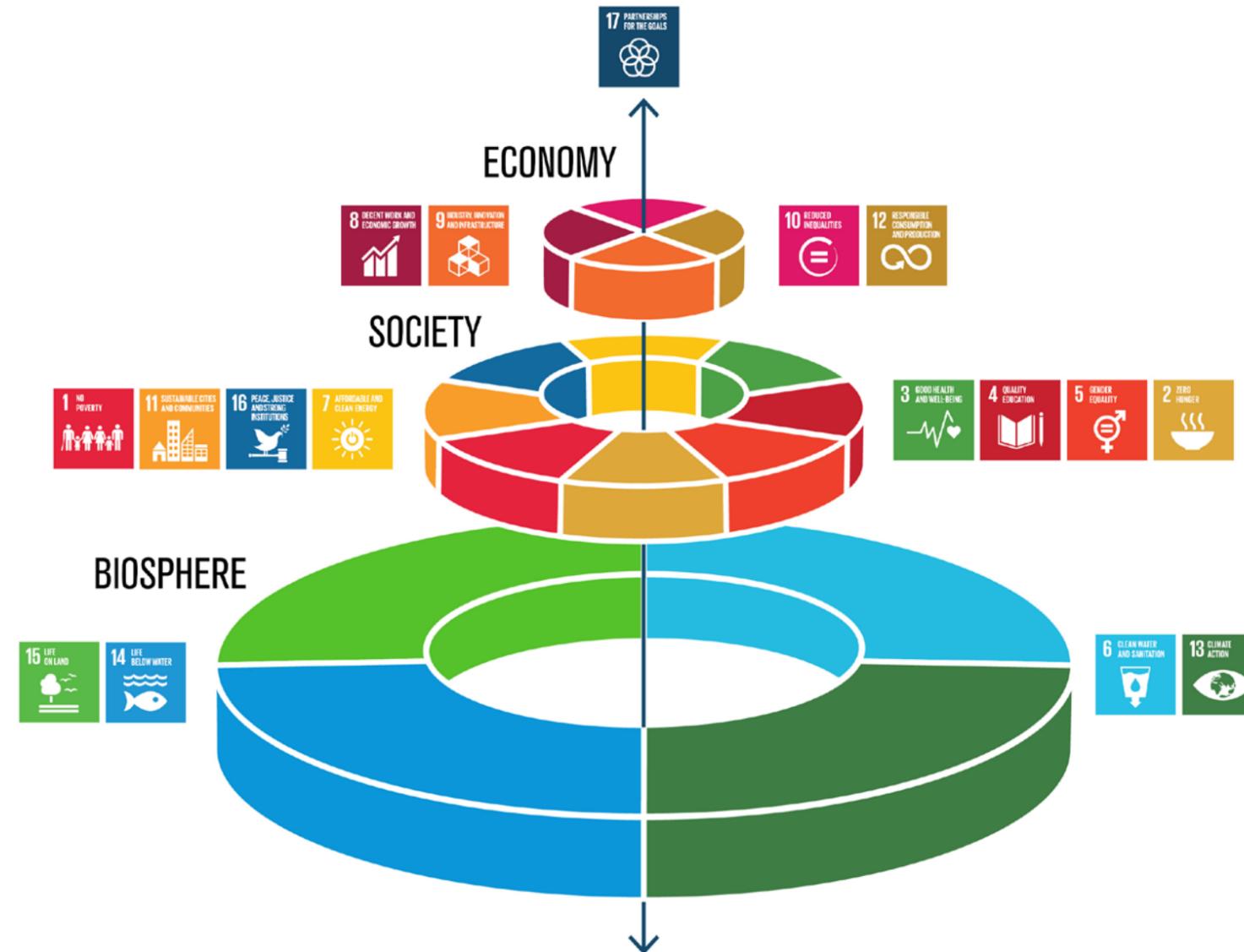
**PRIVATE OWNED HOMES
OPPORTUNITY HOPTILLE: STILL
SOCIAL HOUSING**

- environmental position -

ENVIRONMENTAL POSITION OVERVIEW

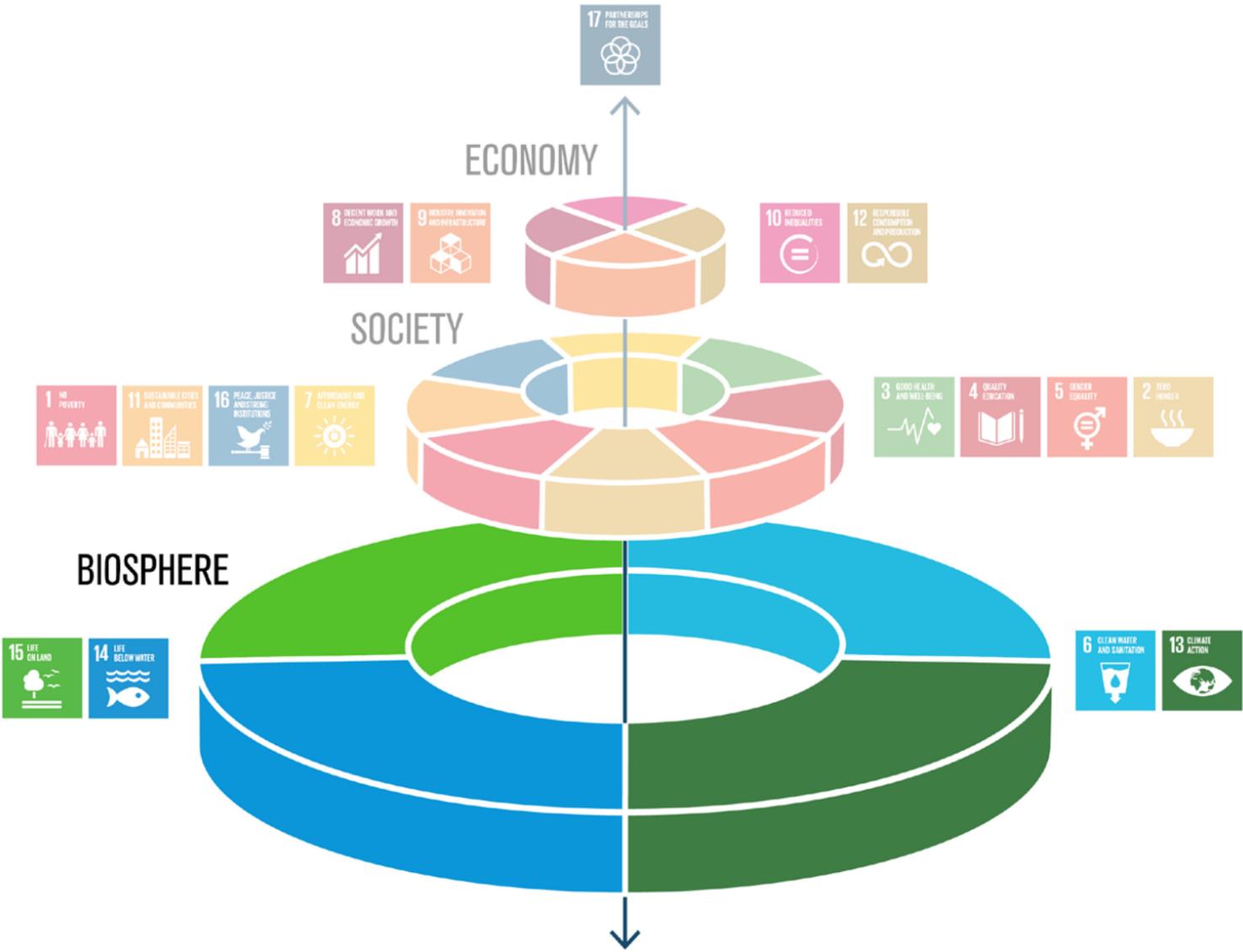


SUSTAINABLE DEVELOPMENT GOALS [SDG'S] SCHEME



Sustainable Development Goals Scheme (Azote for Stockholm Resilience Centre Stockholm University, 2016)

SDG'S: PRIORITY TO BIOSPHERE

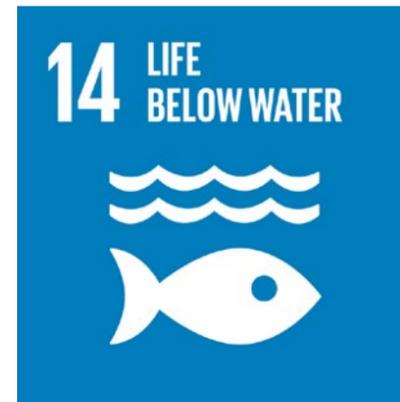


Sustainable Development Goals Scheme (Azote for Stockholm Resilience Centre Stockholm University, 2016)

BIOSPHERE SDG'S



BIOSPHERE SDG'S:
Translation to built environment



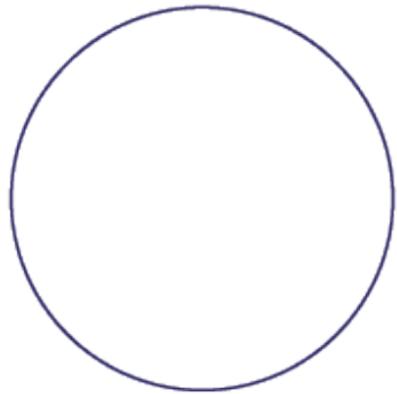
BIOSPHERE SDG'S:
Leading goal



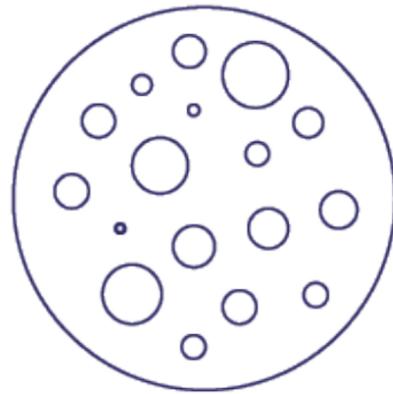
ENVIRONMENTAL POSITION:

Humans as part of the worldwide ecosystem; creating co-existing & responsibility as engineers

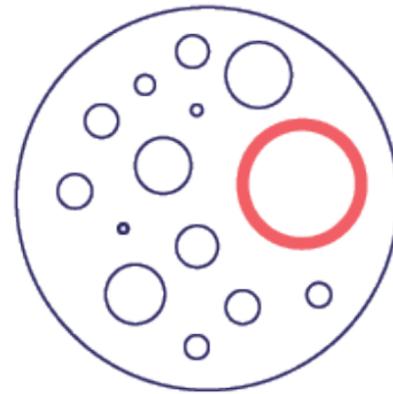
World = one ecosystem



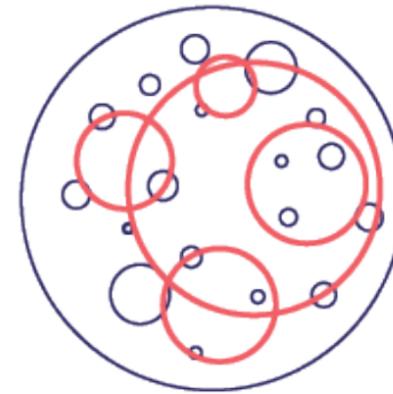
With smaller ecosystems



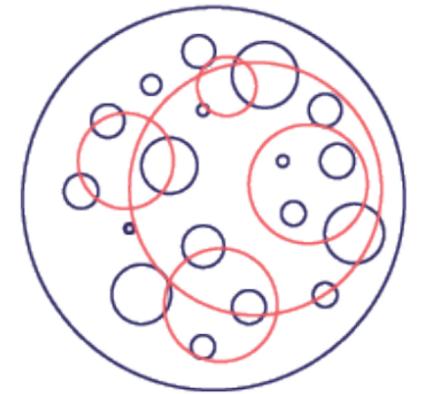
human = ecosystem engineer



overtaken by humankind

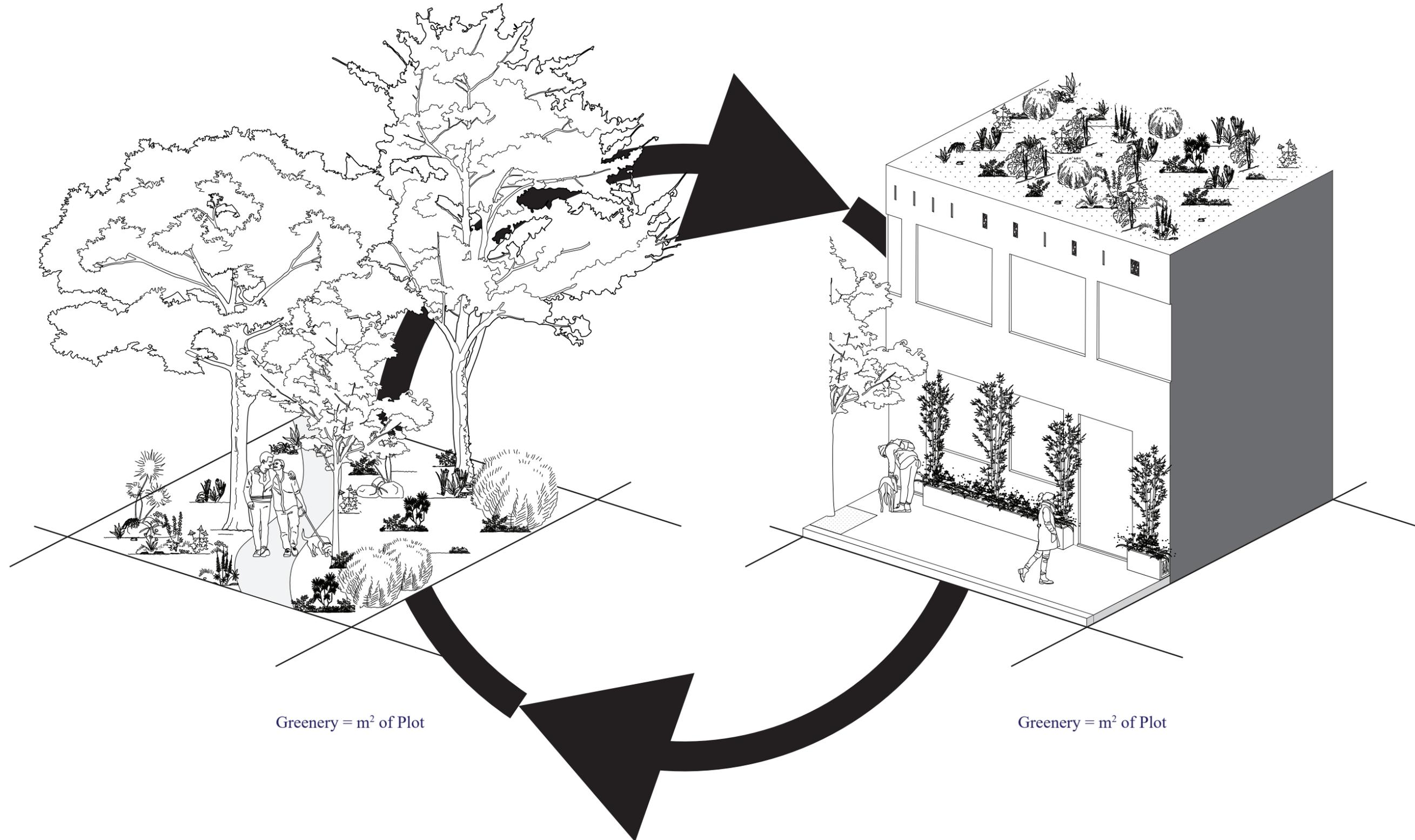


co-existing



STRATEGY: EXCHANGE

Greenery = Plot x 1 = Building Envelope x 1/5 = m² of Plot



STRATEGY: EXCHANGE

“

Cities need green sizes

S, M, L, & XL

otherwise the ecosystem is incomplete

”

ALL SCALES: FROM SMALL TO EXTRA LARGE

Beehives and highways

Bees are essential to a healthy ecosystem. 40% of the planet's food production requires bees for pollination as part of the food chain. Well managed colonies of bees distributed across cities help support all green infrastructure around them as well as offering a tasty, locally produced delicacy. A 'bee highway', a network of rooftop pollination and habitation spaces, can provide rest and feeding spaces for bees.



Integrated habitat creation

Buildings produce great habitats for supporting wildlife with lots of nooks and crannies for sheltering birds and bats. Insect hotels and bird and bat boxes can easily be incorporated in the architectural design, often without visible signs from the exterior, except to the discerning visitor...



Modular plant walls

Modular plant walls can provide instant greenwall solutions where trays can be grown off-site or installed in situ ready-planted. Robust plant choices and less manicured walls are essential to minimise maintenance. They provide instant beneficial effects and also help provide habitat for insects and wildlife.



Tree façade

Trees provide enormous capacity to absorb CO₂ and fine particles and provide cities with lungs. Façades of buildings can be covered in trees by placing planters across the façade. Careful selection of tree type can maximise effect with minimal root requirements and therefore support.



Wet roofs

Wet roofs can reduce temperatures in office buildings, helping to cut the cooling loads which are the highest energy load in many of them. They can also slow the effects of rainfall by providing temporary storage. The water can be released more slowly into city drainage systems or stored and used elsewhere on buildings, e.g. in toilet flushing or vegetation irrigation.



Wildlife roofs

These are perfect spaces that can offer views of Nature for people who overlook them as well as spaces for insects and birds to utilise as part of green corridors. These can either be under and around rooftop plants or on non-accessible ledges. They can also help reduce temperatures around PV units.



Green roof

As cities become denser, access to green space will become more competitive. Alternative spaces for workers and residents to interact foster a sense of community by creating new meeting places. They also offer recreational space and the potential for 'alternative' meeting rooms.



Green wall - top down

Hanging climbers can be grown in balcony boxes / planters and allowed to drape covering walls below. These plants help produce attractive wall coverings at low cost, with the planter also being able to be used for vegetation at balcony level.



S: ELEMENTS

M: SURFACES/BUILDINGS

Green wall - ground up

Climbers placed on optimal orientations can grow fast, covering walls with the help of stainless steel or other meshes that provide support and help train the plants. This is a low-cost alternative with climbing plants growing in the ground or in planters at the base of walls.



Seeded living walls

Greenwall systems can be provided that are grown in situ directly from seed. This provides robust greenwalls that are less manicured, but perfect for seed mixes such as wildflowers. They provide a perfect habitat for insects and wildlife and are cheaper than mature plant systems.



Flood resilience

City aquifers are becoming depleted and city drainage systems are reaching their limits, resulting in regular flood events. Rather than building larger sewers, a cheaper solution would be to stop concreting over cities. Use façades, roofs, pocket parks, urban water features and floodable spaces to manage extreme weather events locally.



Bio-remediation

Ponds with reed beds can be used to clean grey water coming off new developments at both ground and roof level. Not only reducing the burden on existing city services, they can also help to store and slow water as part of a sustainable urban drainage system.



Urban vegetation

During the masterplanning of new developments the integration of trees as part of the setting of a building can provide significant micro-climatic improvements including shade and cooling for occupants and visitors. Vegetated buffers not only provide attractive backdrops to new developments but also help absorb stormwater.



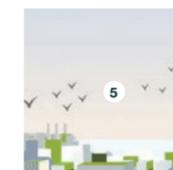
City gardens

New park and recreation spaces for people are difficult to create in our already hyper-dense cities. A distributed network of city gardens utilising roof space and obsolete infrastructure can provide local recreational spaces for city inhabitants, as well as spaces that provide biodiverse habitats, making our cities far richer in their composition.



Wildlife corridors

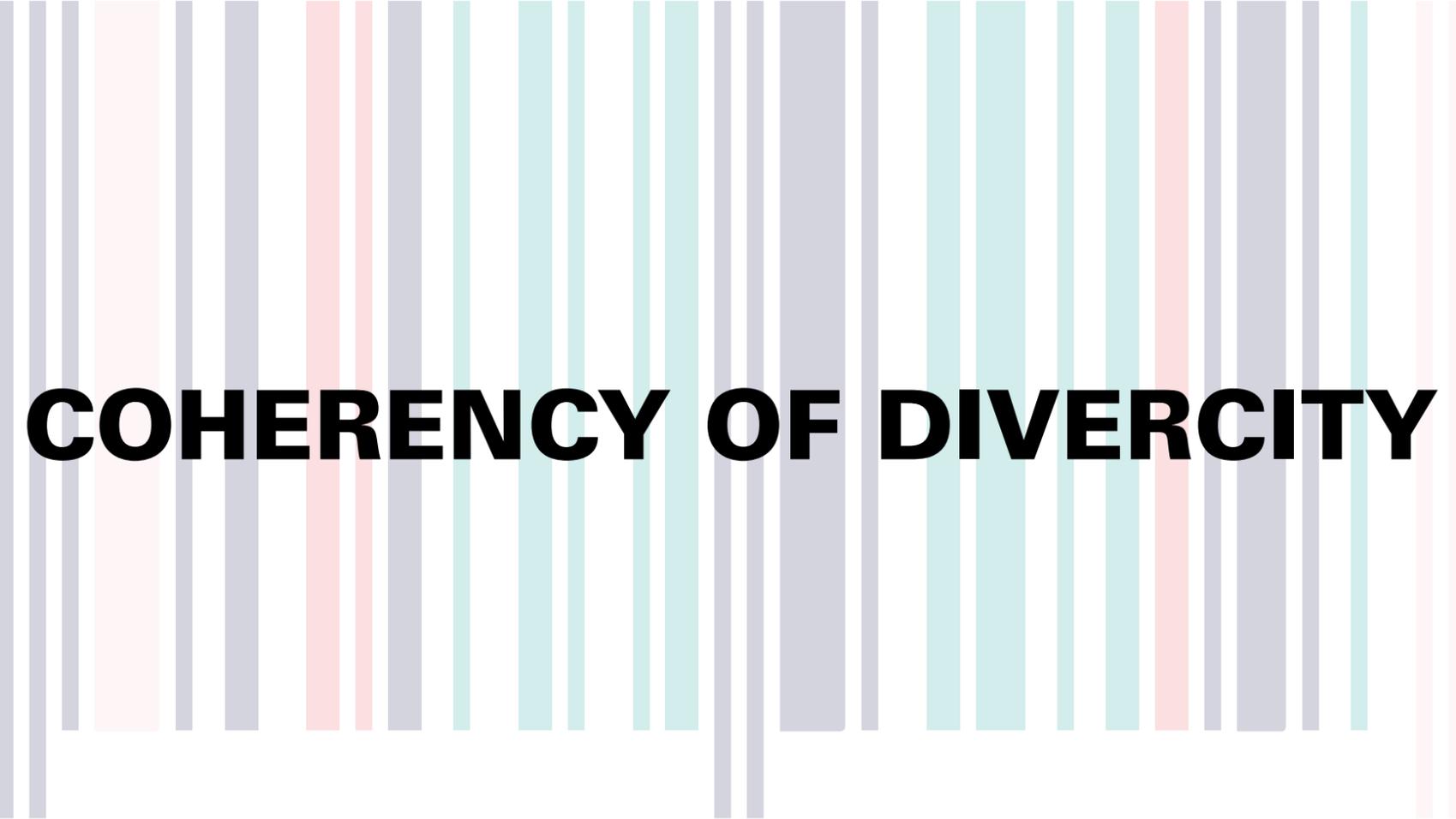
Historically, cities have had a wealth of wildlife, helping to support natural ecosystems and enriching city life. Strategic green corridors can be developed by green roofs or façades that connect parks and green spaces across cities by prioritising green infrastructure along these routes.



L: NEIGHBOURHOOD

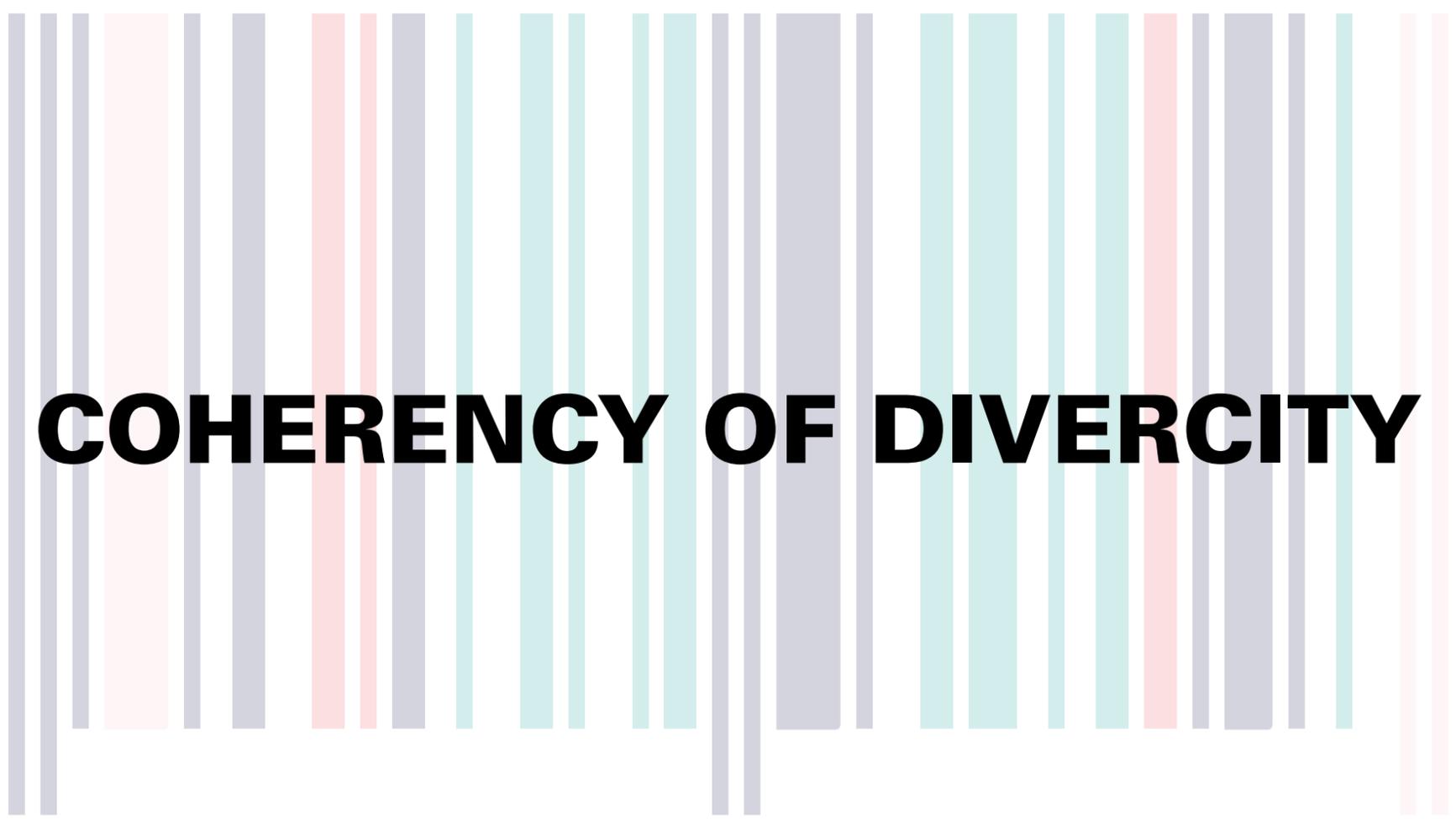
XL: CITY

- concept -



COHERENCY OF DIVERCITY

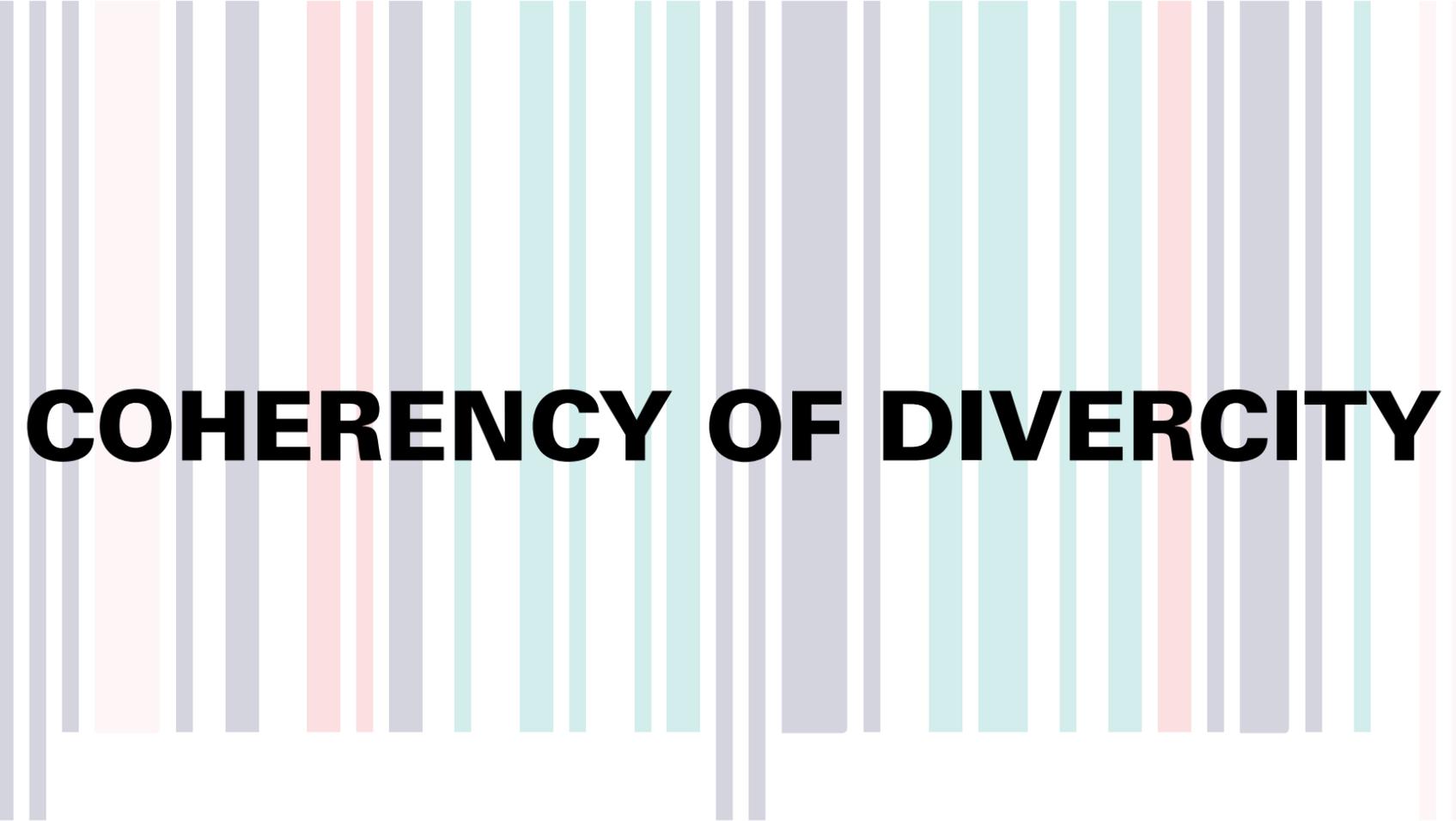
OVERALL CONCEPT: DEFINITION



COHERENCY OF DIVERCITY

To combine the practice of **embracing the variance**

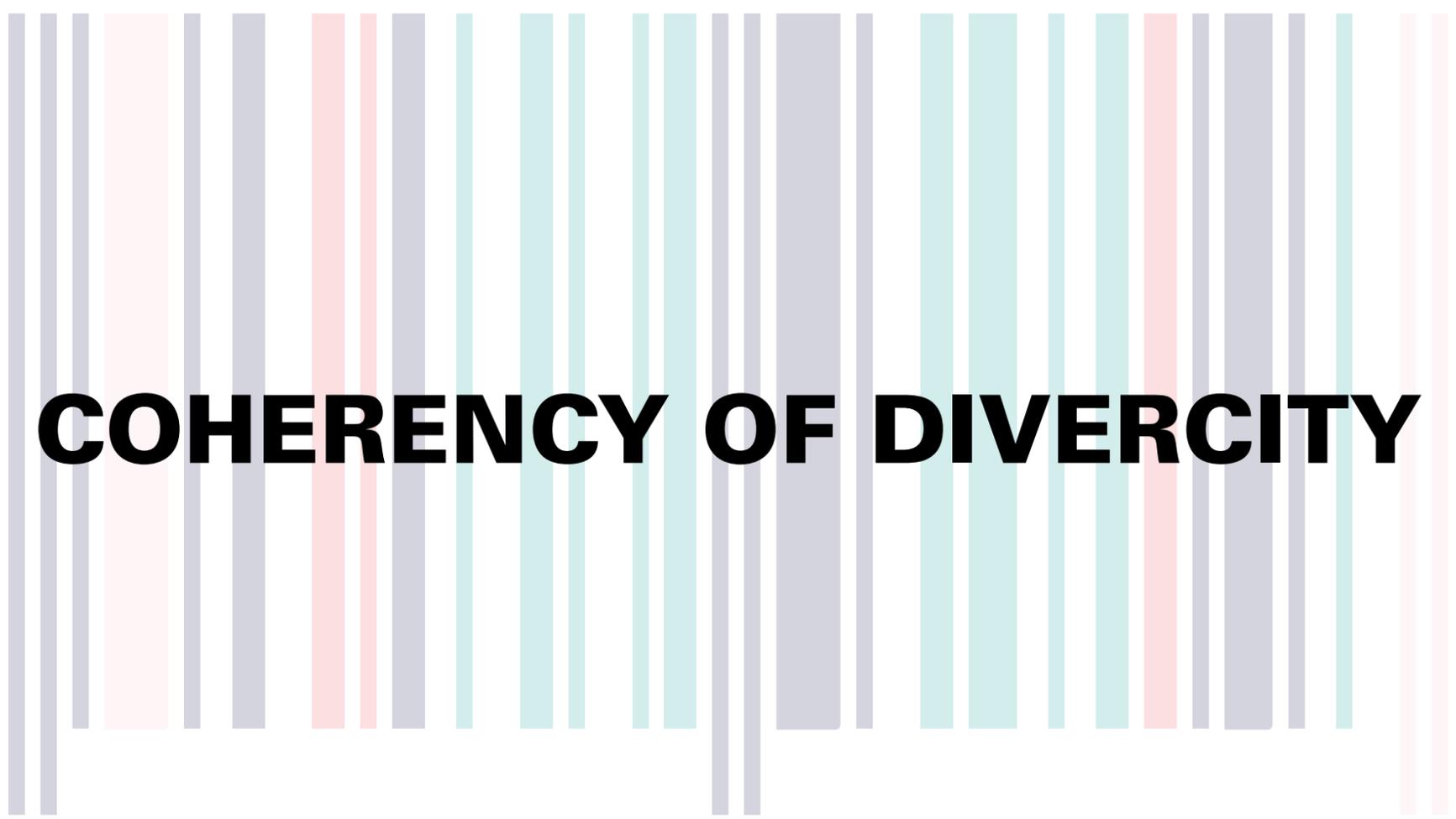
OVERALL CONCEPT: DEFINITION



COHERENCY OF DIVERCITY

To combine the practice of **embracing the variance**
and **the soundness of forming a unified whole**

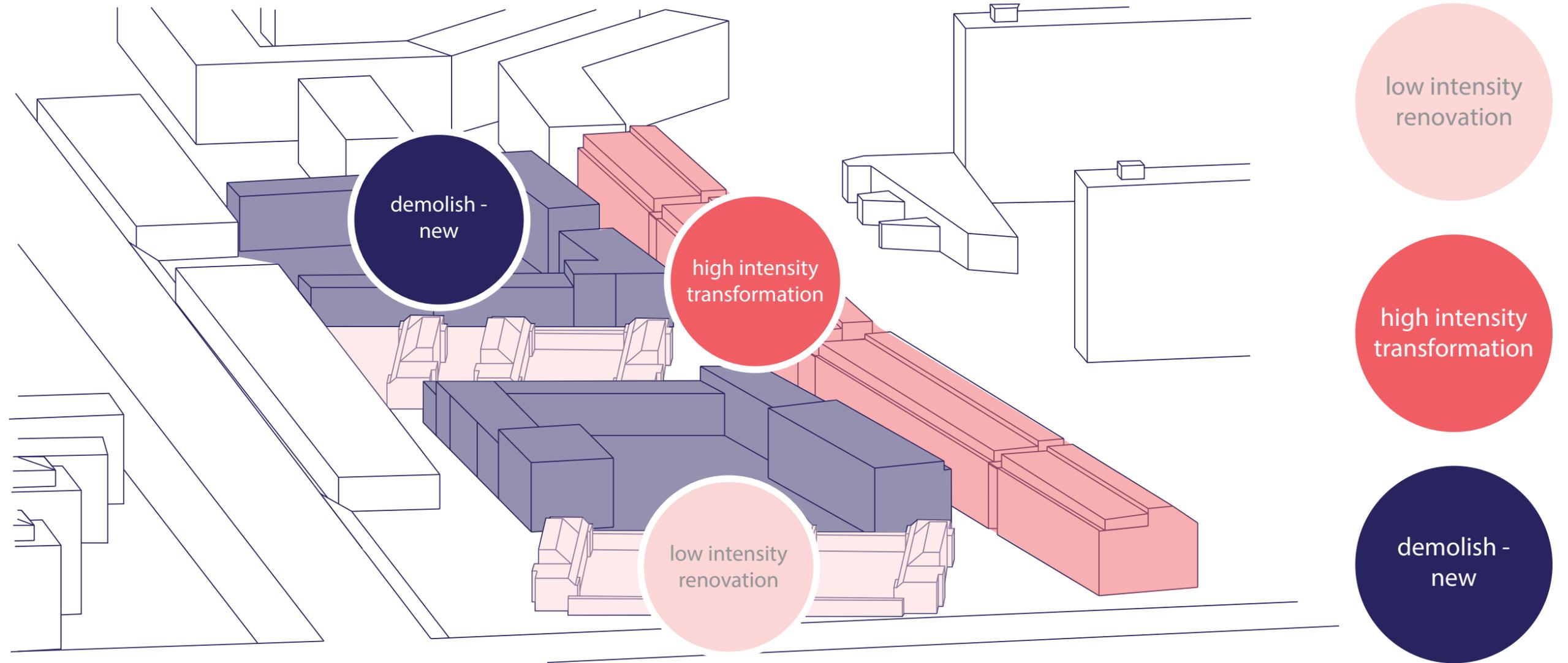
OVERALL CONCEPT: DEFINITION



COHERENCY OF DIVERCITY

To combine the practice of **embracing the variance**
and **the soundness of** forming a **unified whole**
in order to create a
sustainable/safe/comfortable/accessible/exciting/inclusive/happy/... city

THREEFOLD APPROACH



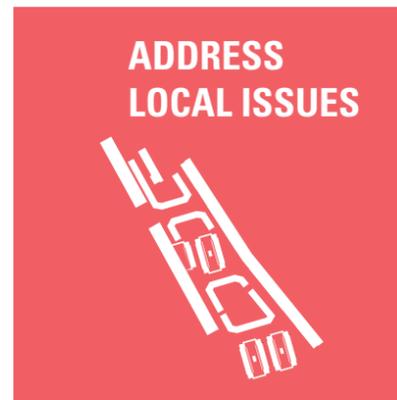
GOALS & PROGRAM



1. DWELLINGS

Type: walk-ups (ground bound homes and same level apartments); mostly 60-100 m², several 40-60 m²; social housing & low segment free rent

Increase: 50% extra



2. LOCAL ISSUES

Addition of social and commercial amenities, cutting mid-rise building in four pieces, change access system of mid-rise building, address and improve technical state of buildings, transform and renovate the facades



3. WATER MANAGEMENT

Rain water collection; reuse of grey water; water as cooling element in public space



4. PASSIVE HOUSING

Insulate buildings, outer blinds/curtains, natural ventilation, energy label A/B, use of lower impact materials (wood in stead of concrete), reuse existing materials



5. BIODIVERSITY

Enhancement of biodiversity through Green Pockets and collective gardens, use of green roofs and facades on parking garages and cuts in mid-rise building

m² greenery of plot used = m² greenery on buildings

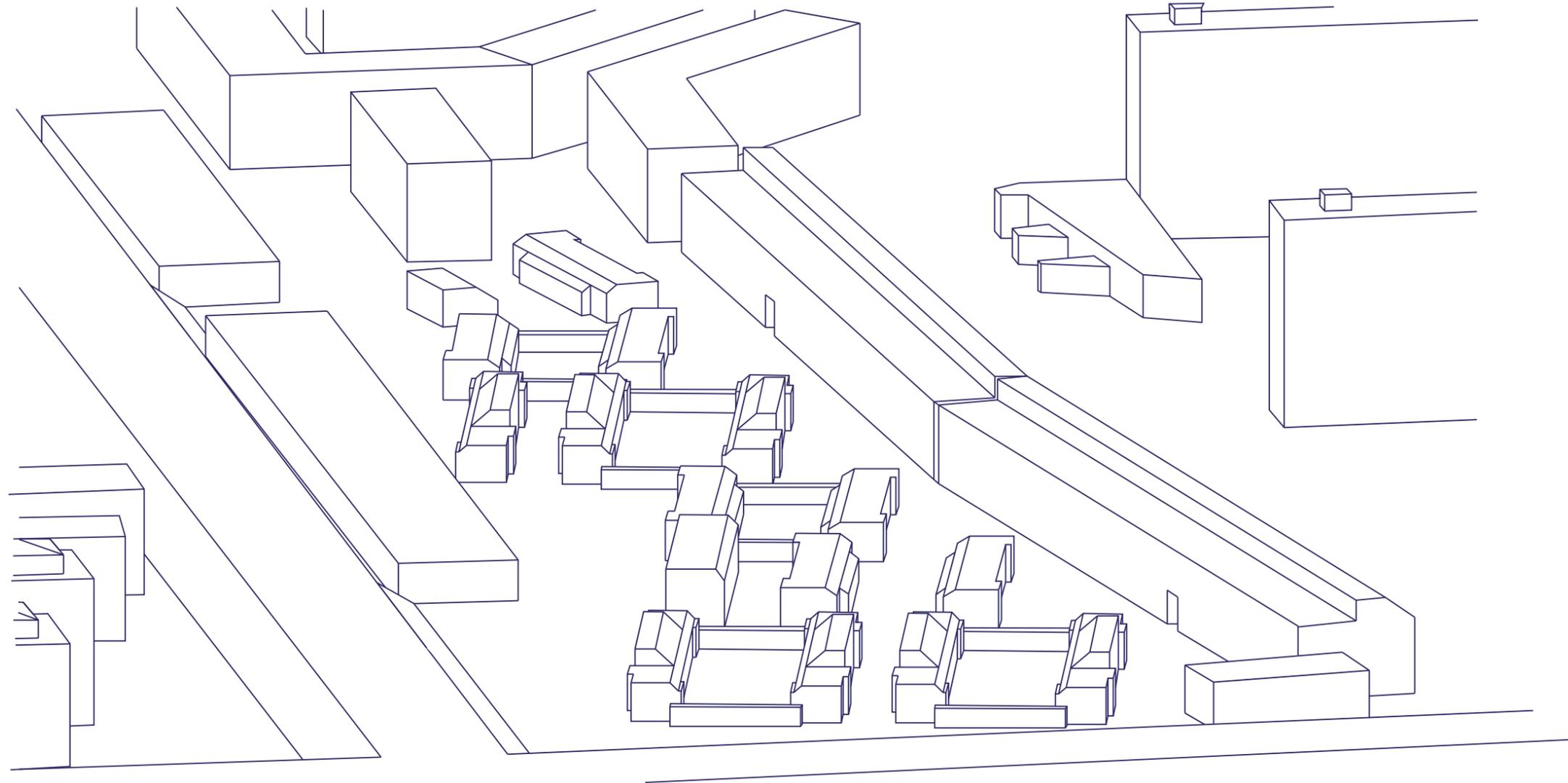


6. OUTDOOR SPACES

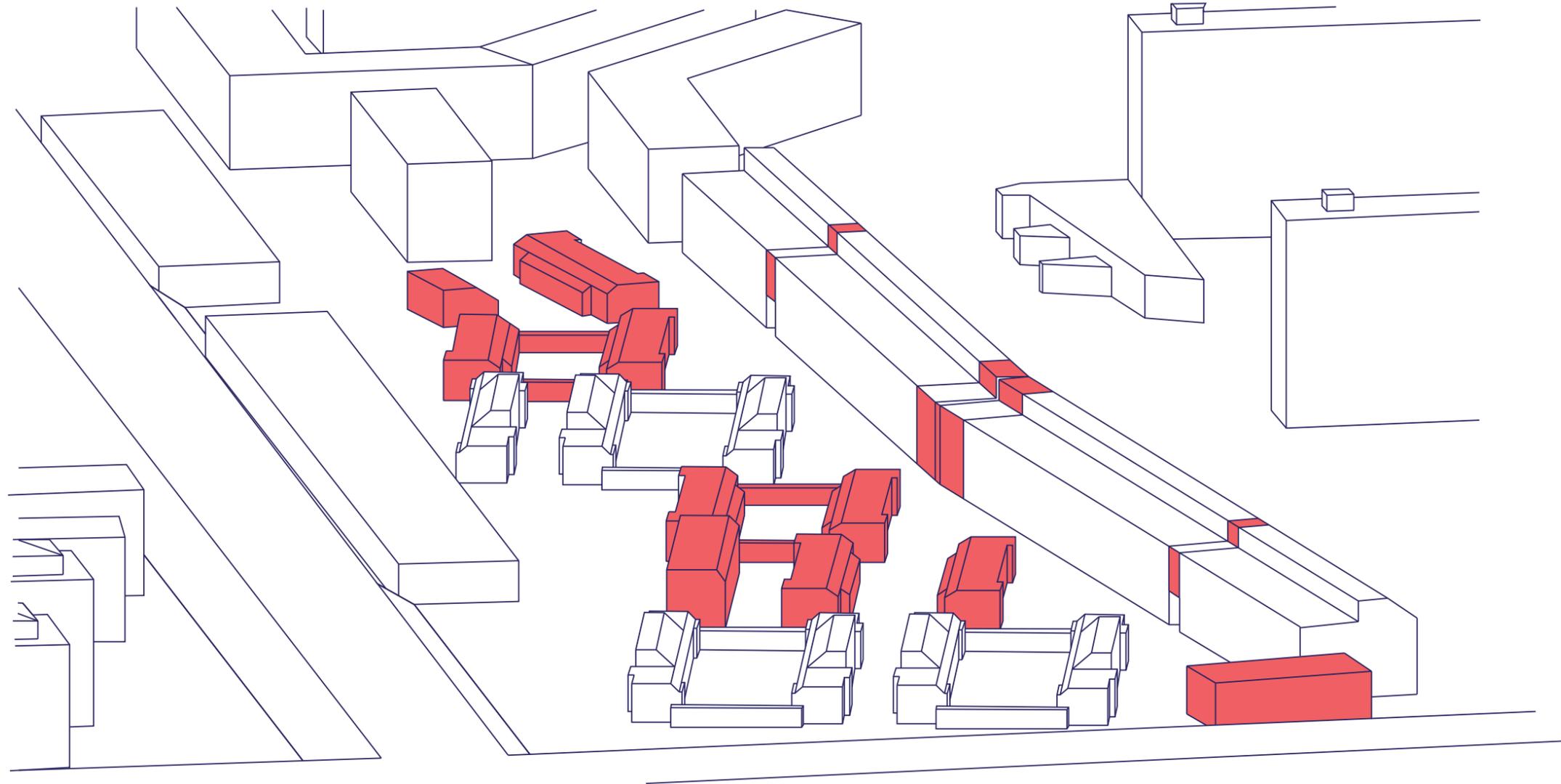
Private semi-enclosed outdoor spaces for each dwelling; all count for point system (at least 2 by 2 meters); wintergardens, balconies, and collective gardens

- design proposal -
urban scale

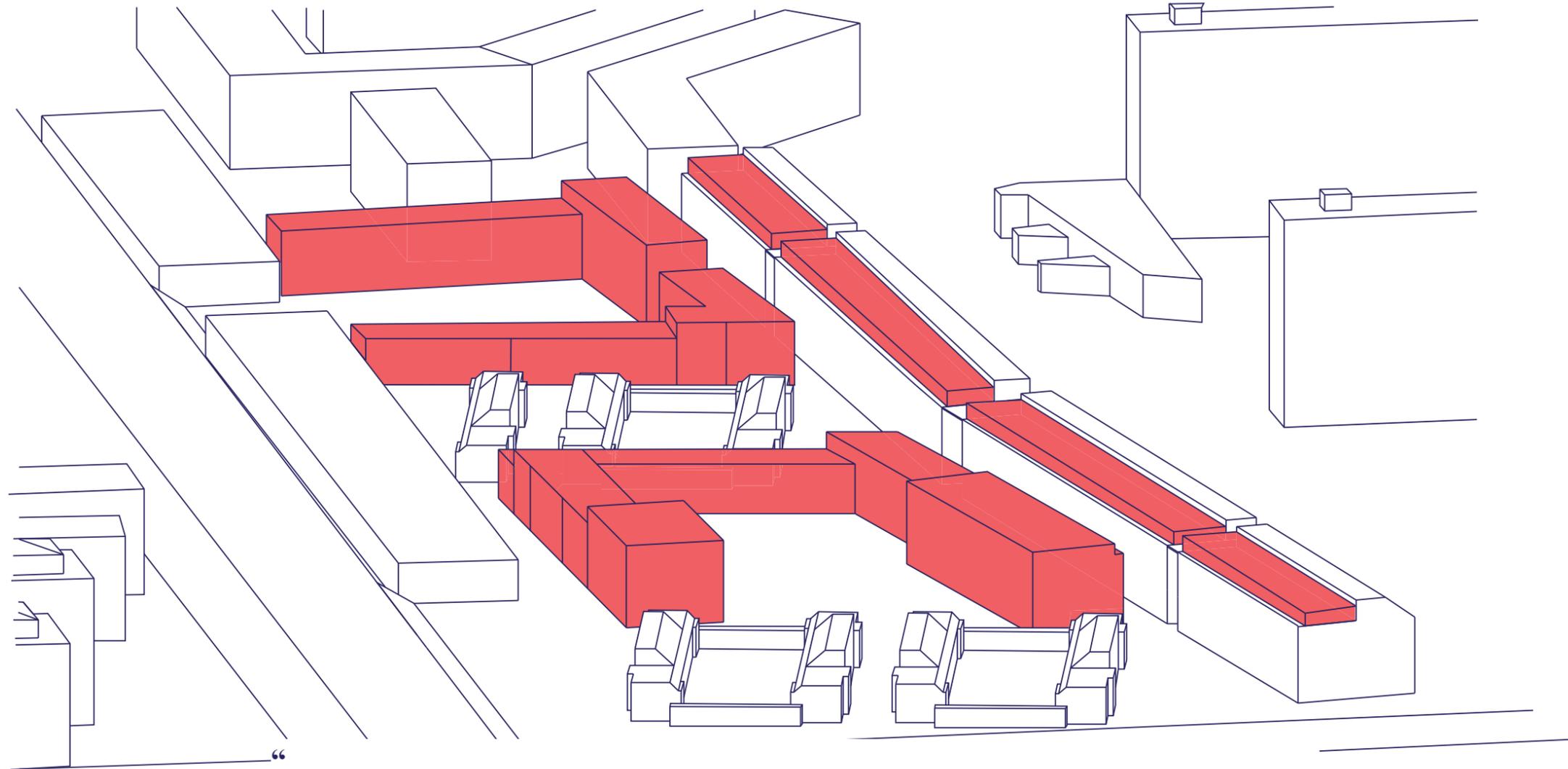
CURRENT SITUATION



TO DEMOLISH



TO ADD



Current number of dwellings: 274
New number of dwellings: 453
Percental increase: 65.3%

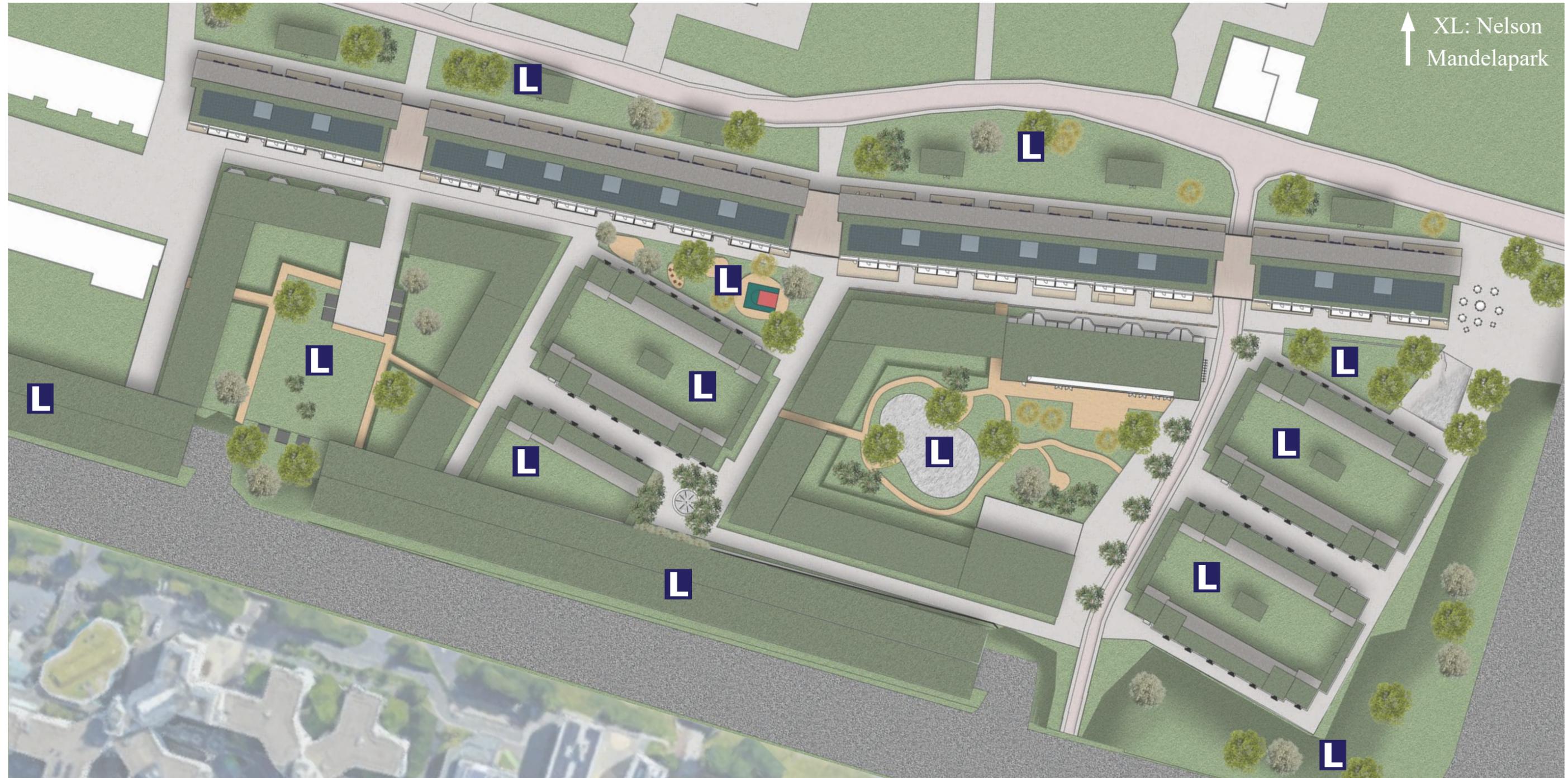
”

URBAN PLAN

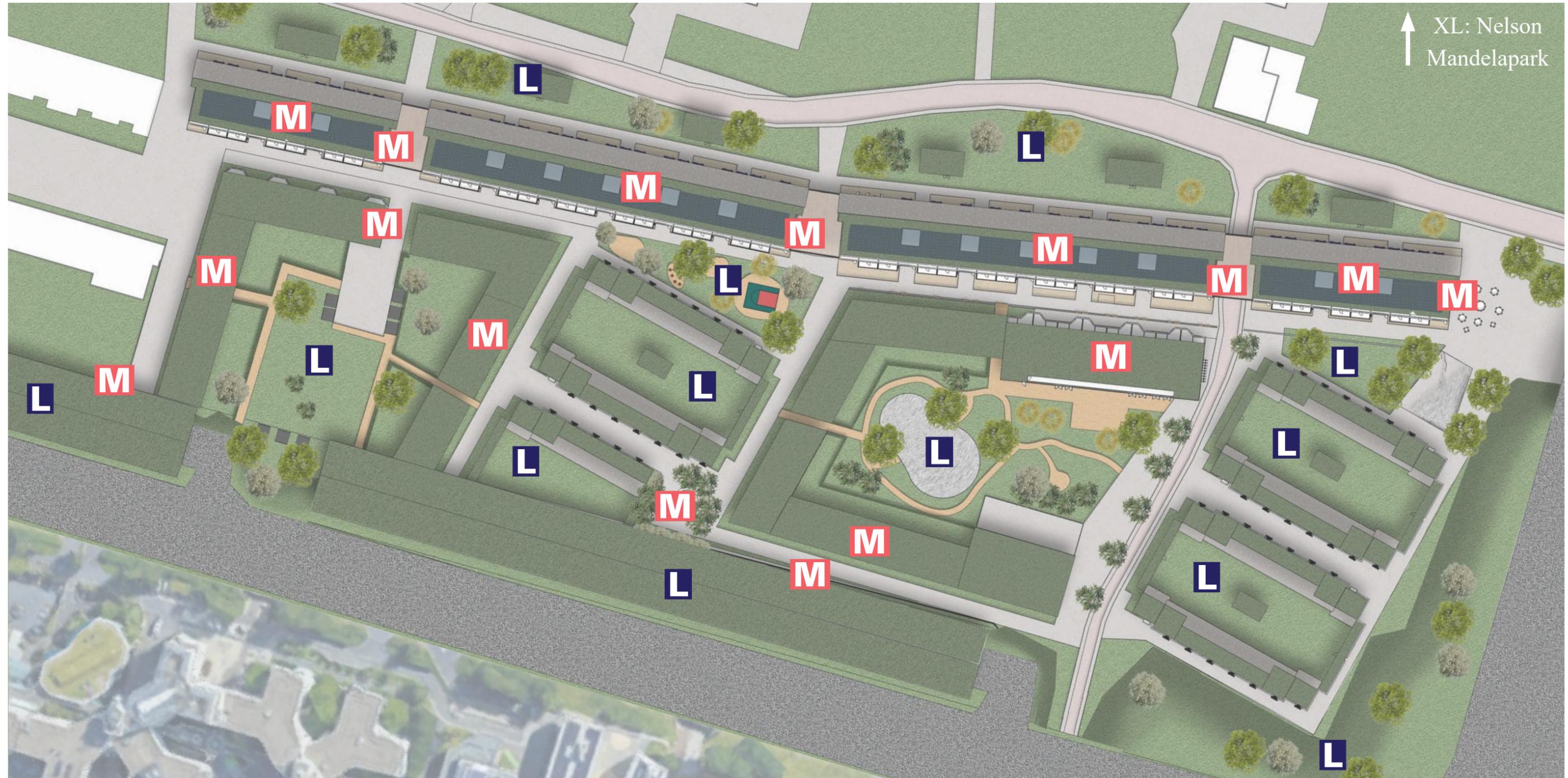


↑ XL: Nelson
Mandelapark

URBAN PLAN: FROM LARGE

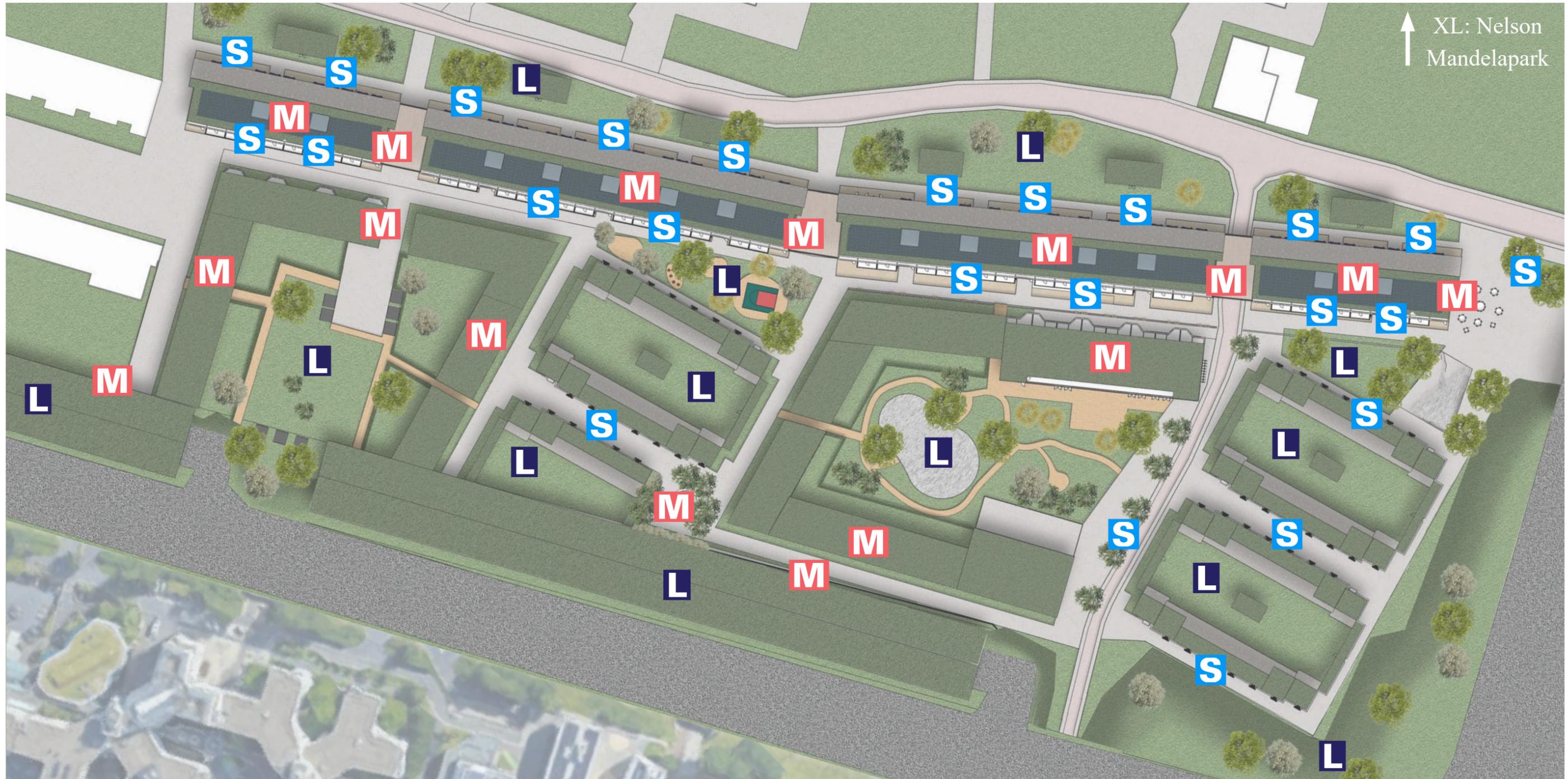


URBAN PLAN: TO MEDIUM

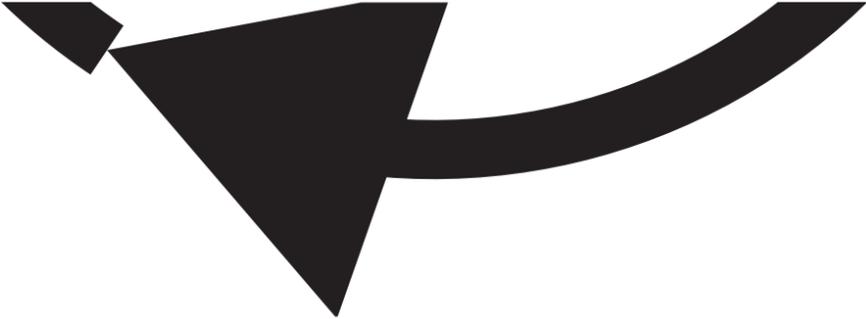
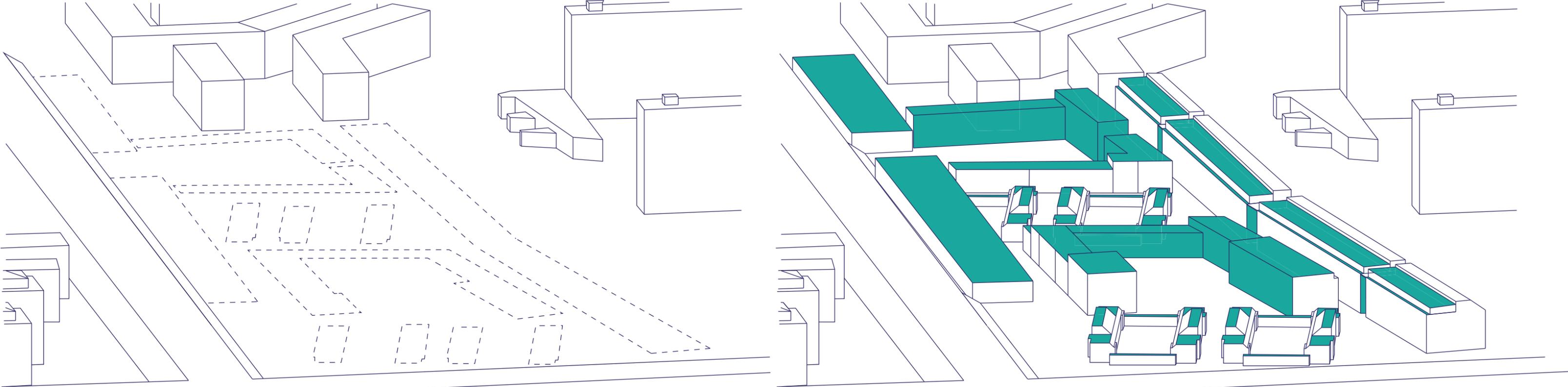
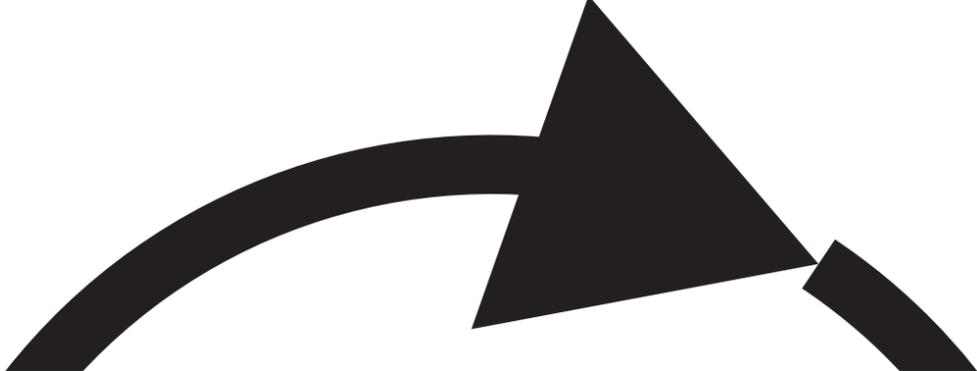


1:1000 ↖N

URBAN PLAN: TO SMALL



EXCHANGE: M² OF PLOT AS GREENERY



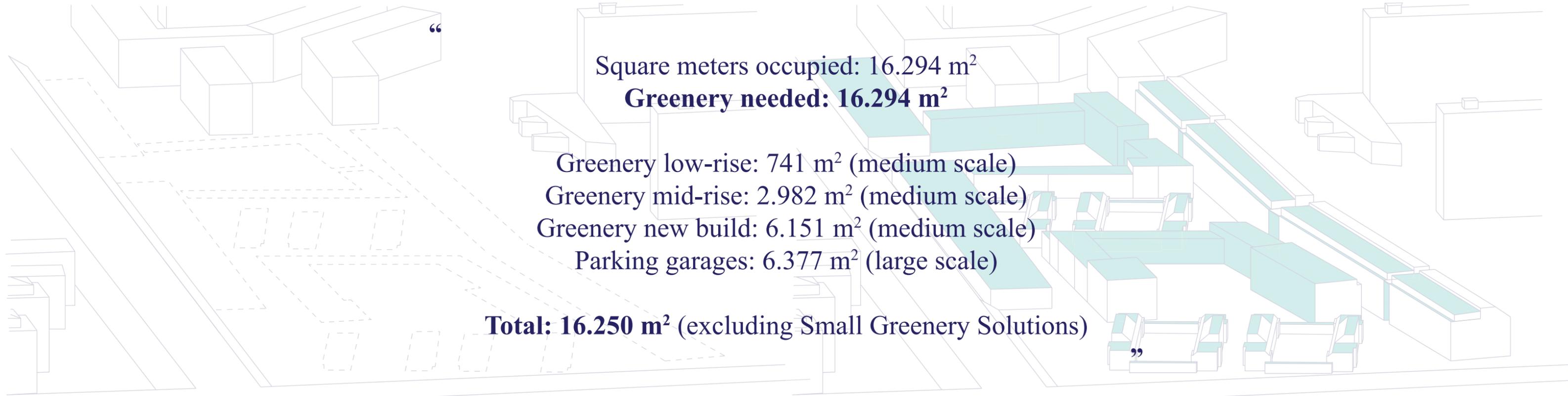
EXCHANGE: M² OF PLOT AS GREENERY



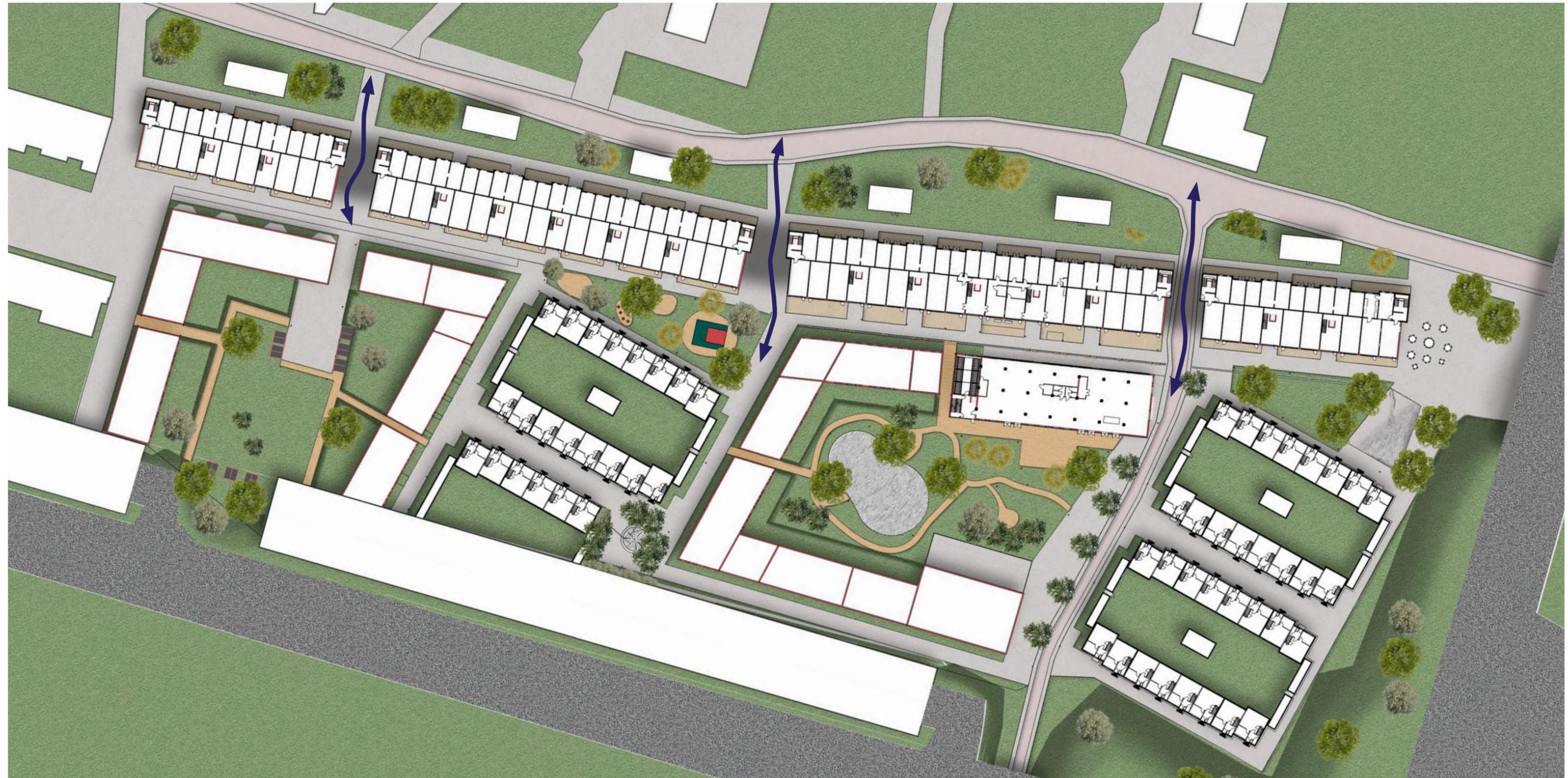
Square meters occupied: 16.294 m²
Greenery needed: 16.294 m²

- Greenery low-rise: 741 m² (medium scale)
- Greenery mid-rise: 2.982 m² (medium scale)
- Greenery new build: 6.151 m² (medium scale)
- Parking garages: 6.377 m² (large scale)

Total: 16.250 m² (excluding Small Greenery Solutions)



GROUND LEVEL FLOOR PLAN



GROUND LEVEL FLOOR PLAN

Elderly Centre

Bike storage +
garbage disposal

Health care centre

Flexible spaces

Access dwellings

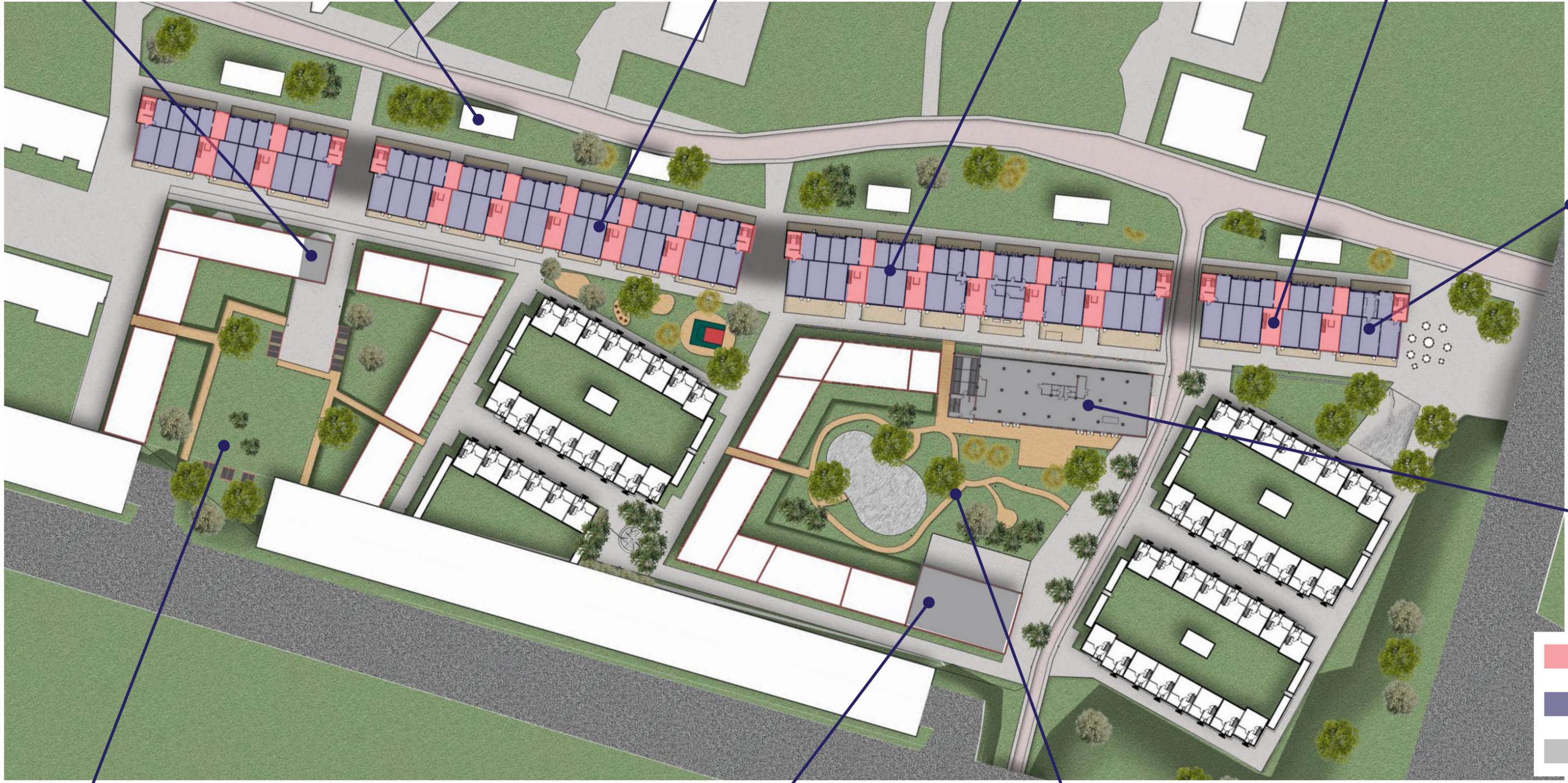
Food Service
Industry

Community
Centre

Community Garden

Daycare

Main Park

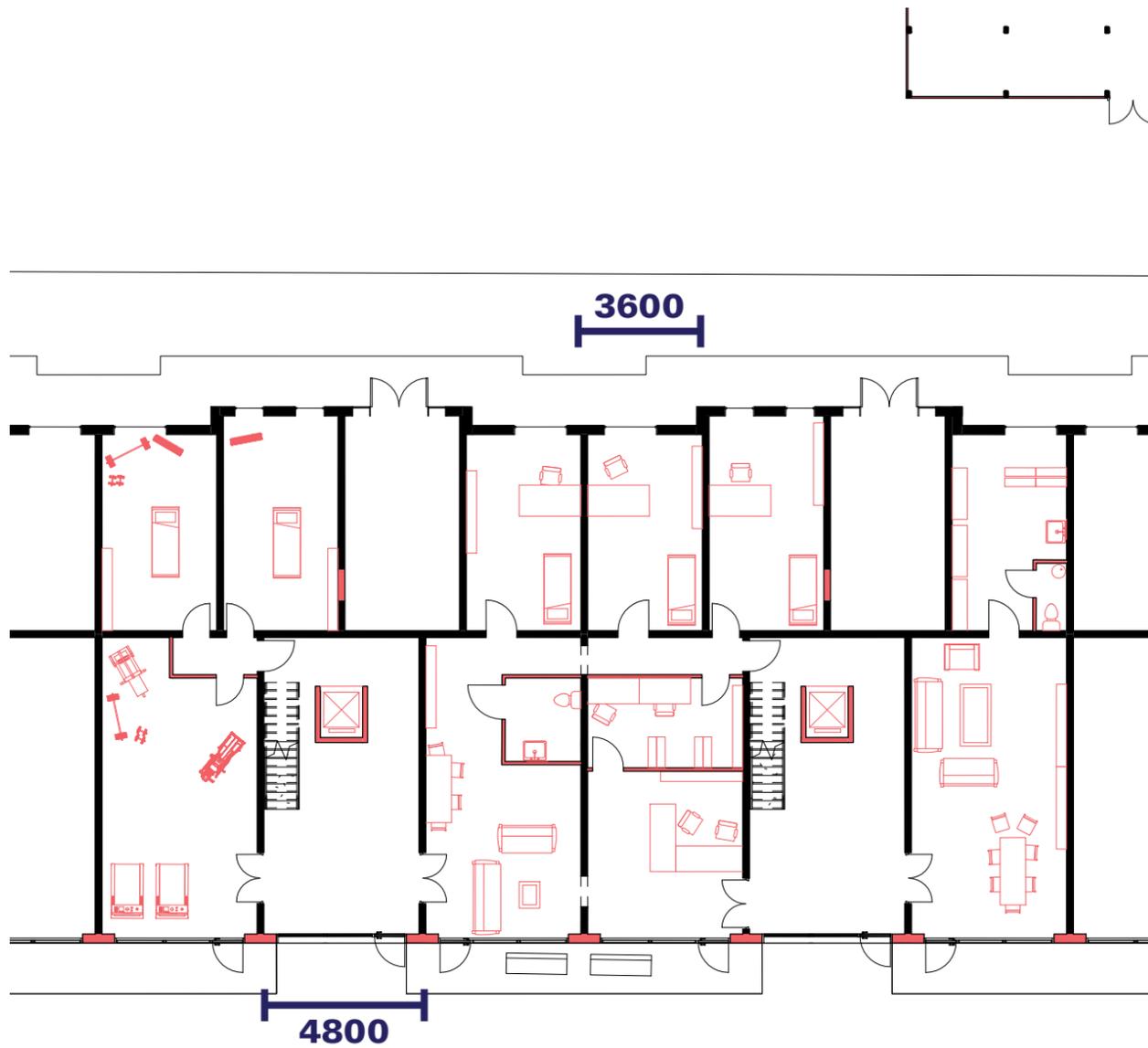


- Passage
- Flexible
- New functions

1:1000 ↖N

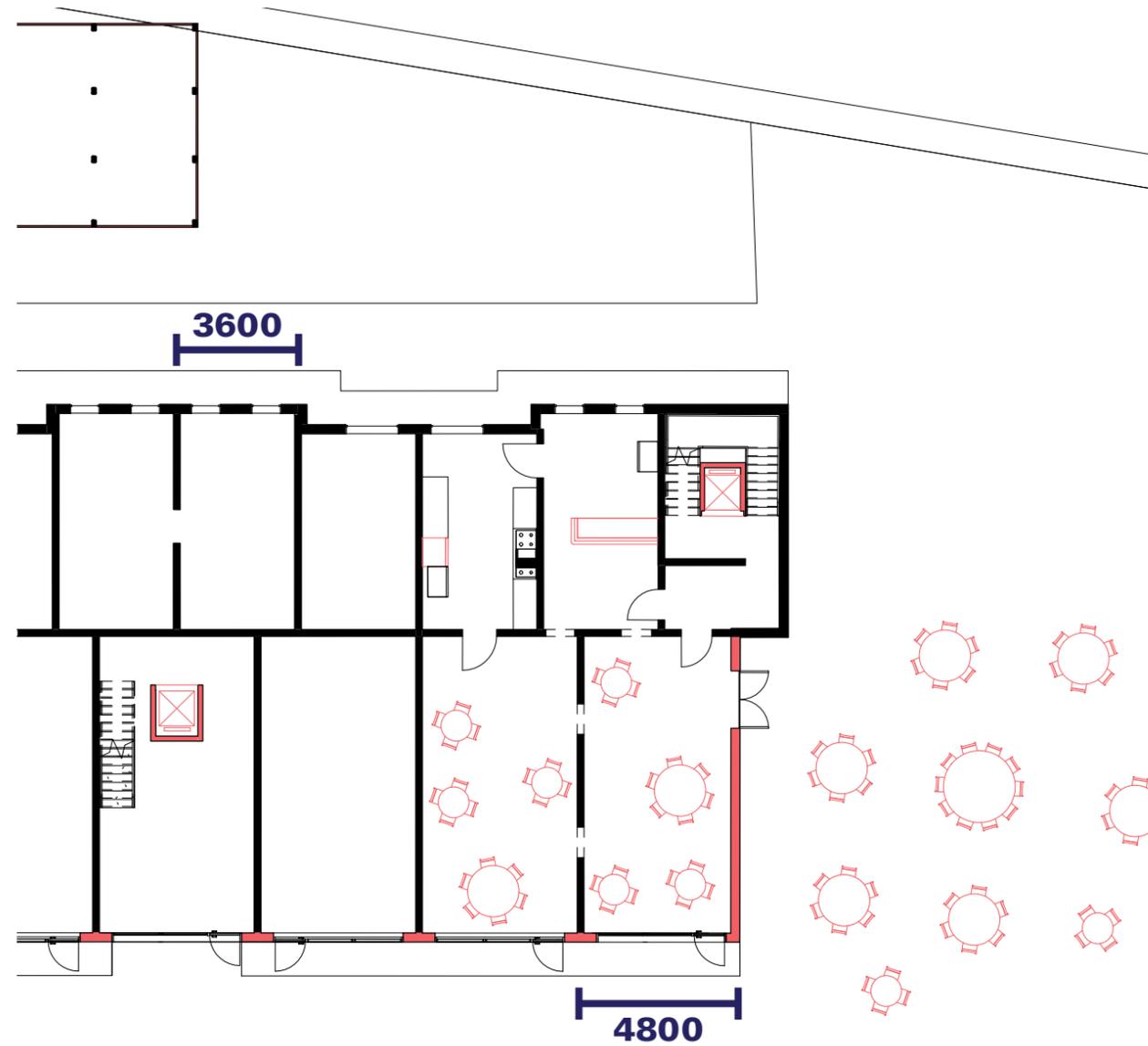
Gemeente Amsterdam (2020).

PLANS GROUND LEVEL



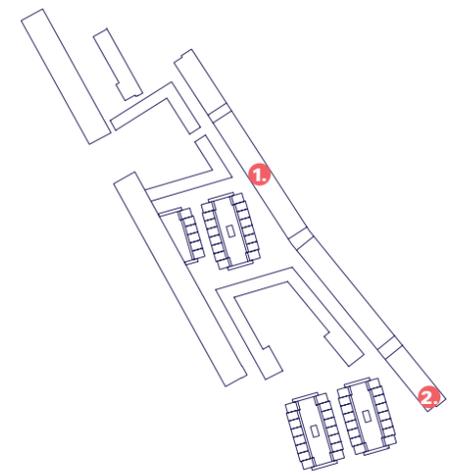
1. HEALTH CARE CENTRE

GENERAL PRACTITIONER, NURSES STATION, & PHYSICAL THERAPY



2. FOOD SERVICES INDUSTRY

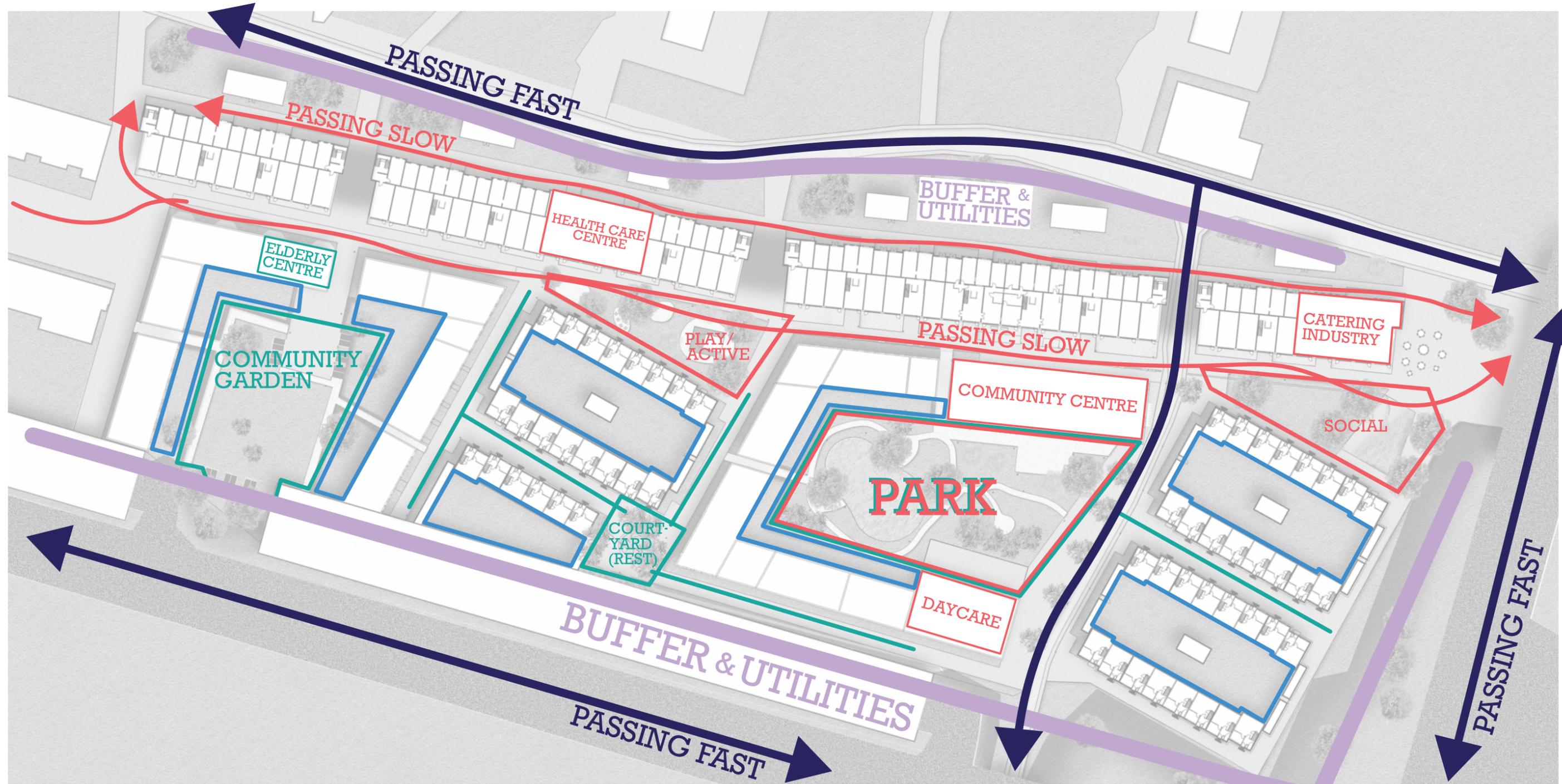
EXAMPLE: SMALL LUNCHROOM WITH BAR



existing
new

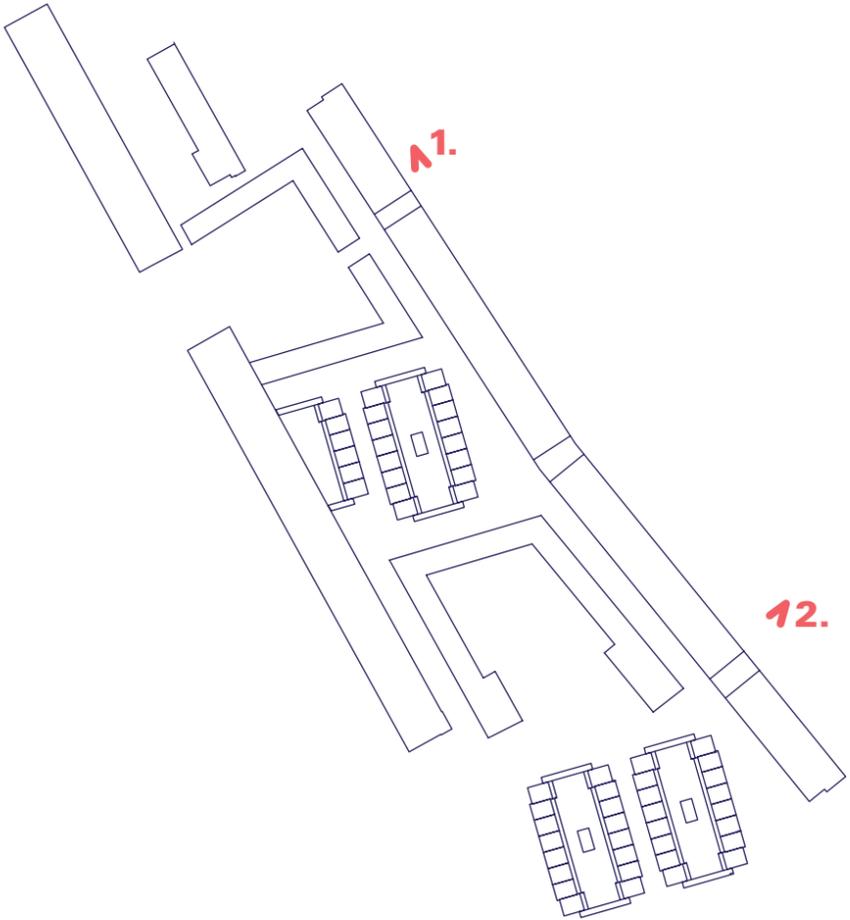
1:200 ↖N

ZONES IN URBAN PLAN

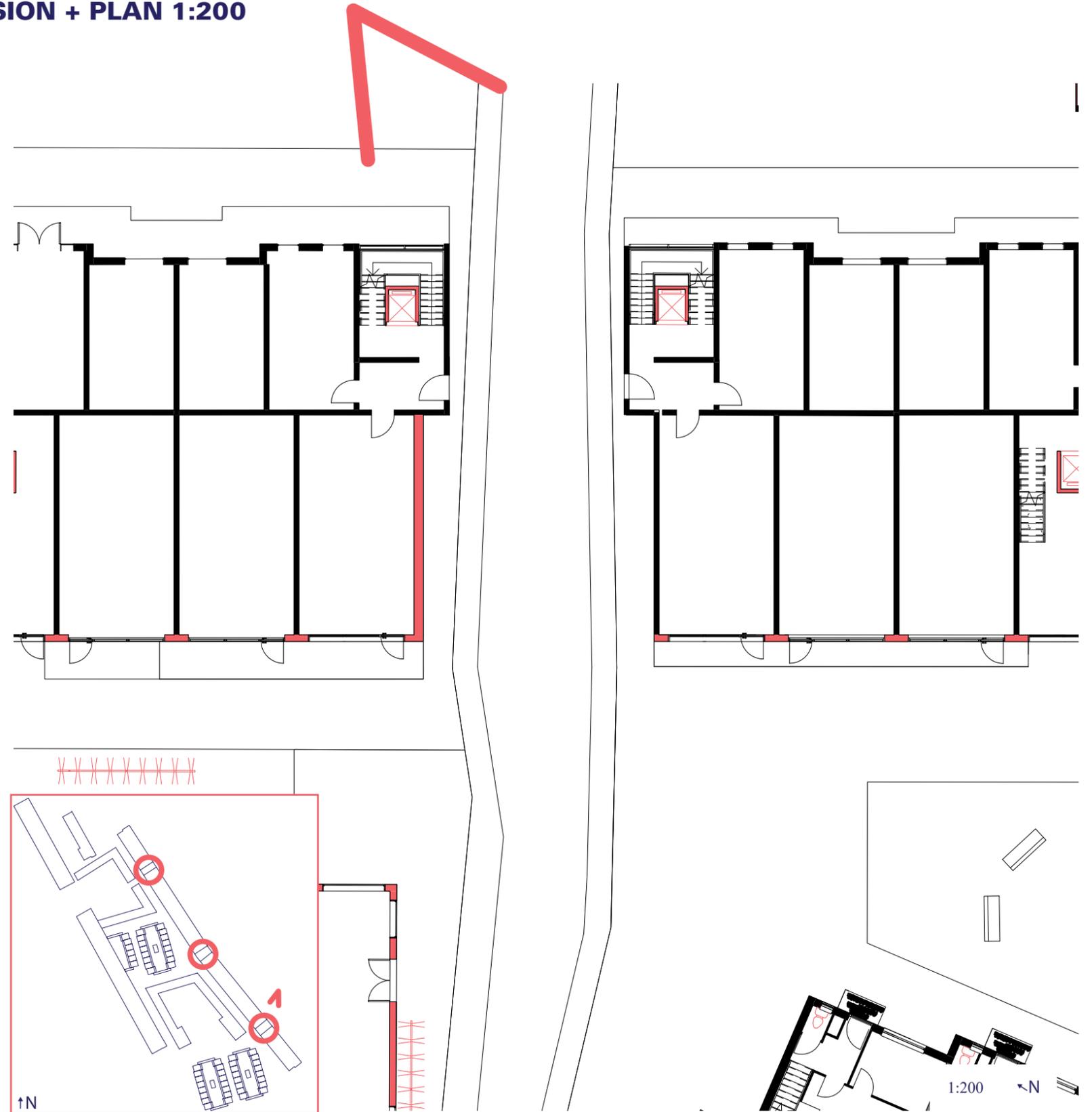


1:1000 ↖N

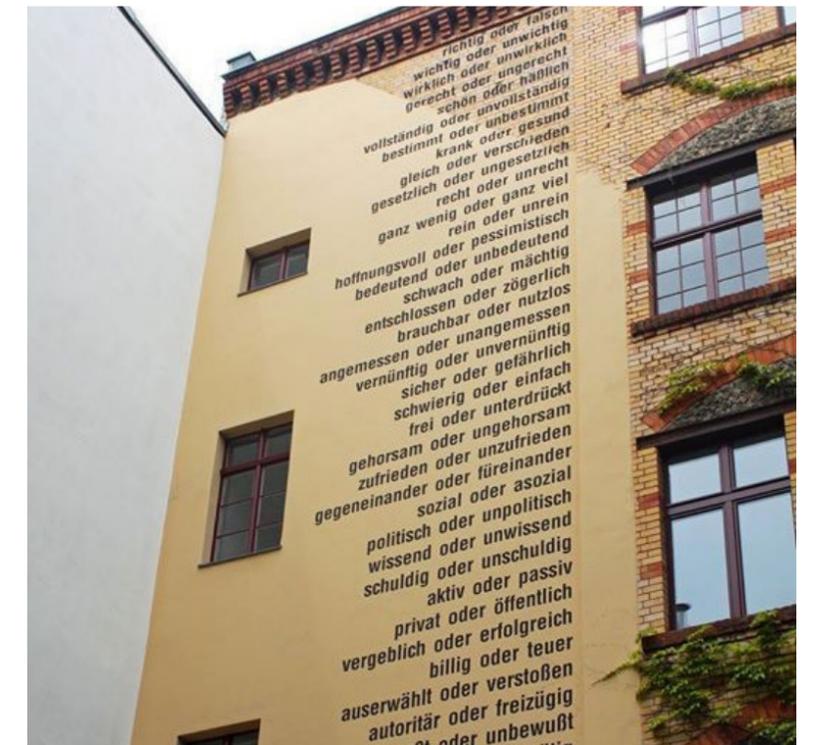
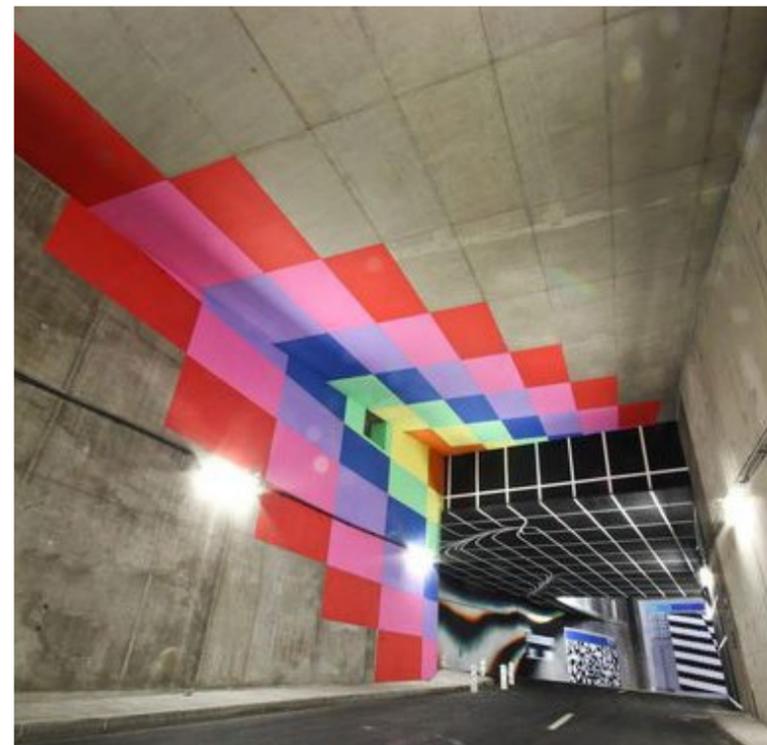
DIFFERENTIATION IN ATMOSPHERES: BUFFER ZONES



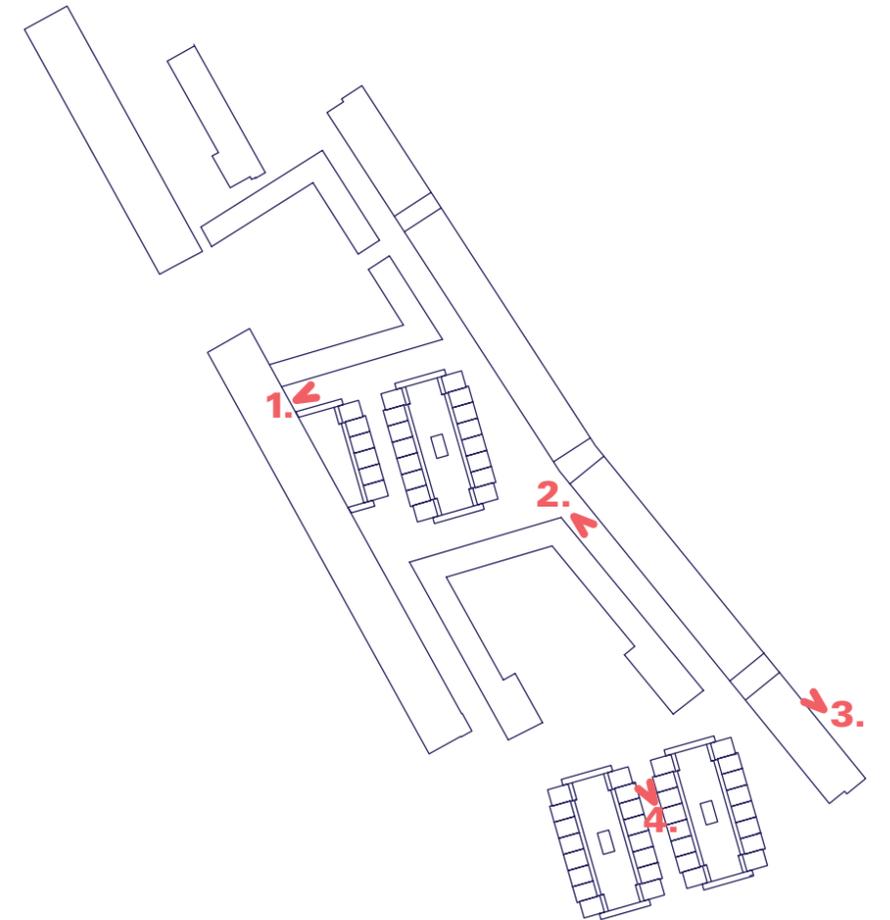
GATES: IMPRESSION + PLAN 1:200



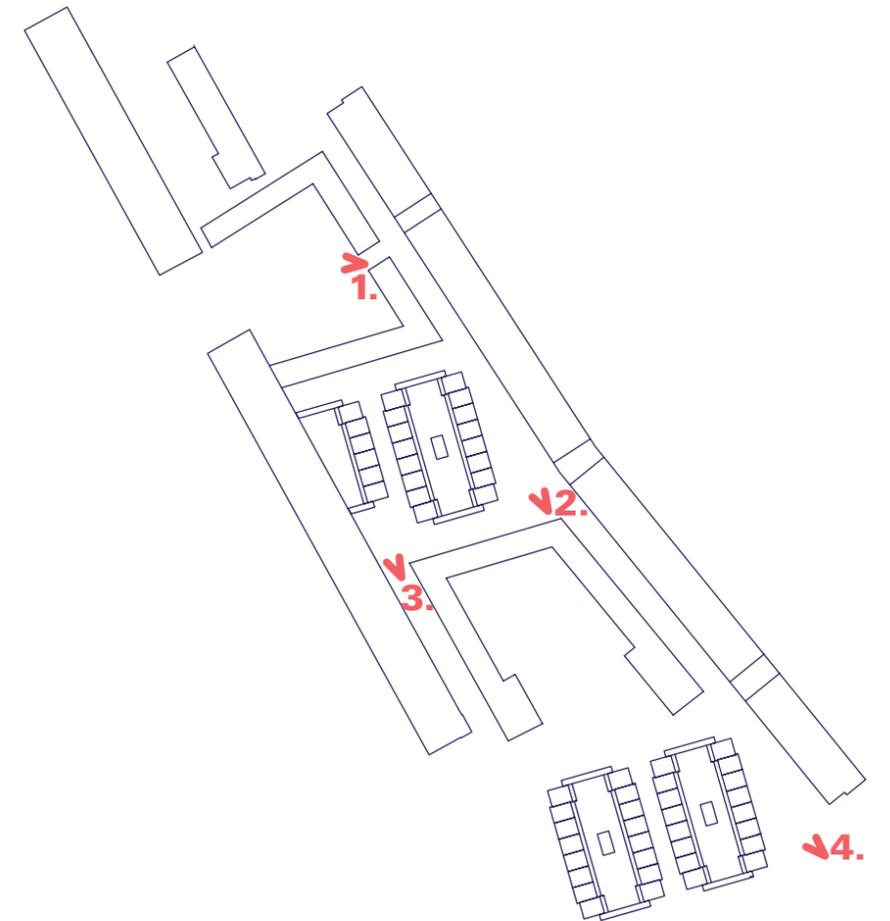
GATES: PARTICIPATORY, LOCAL ART OPPORTUNITY



DIFFERENTIATION IN ATMOSPHERES: STREETS



DIFFERENTIATION IN ATMOSPHERES: POCKETS



- design proposal -
low-rise

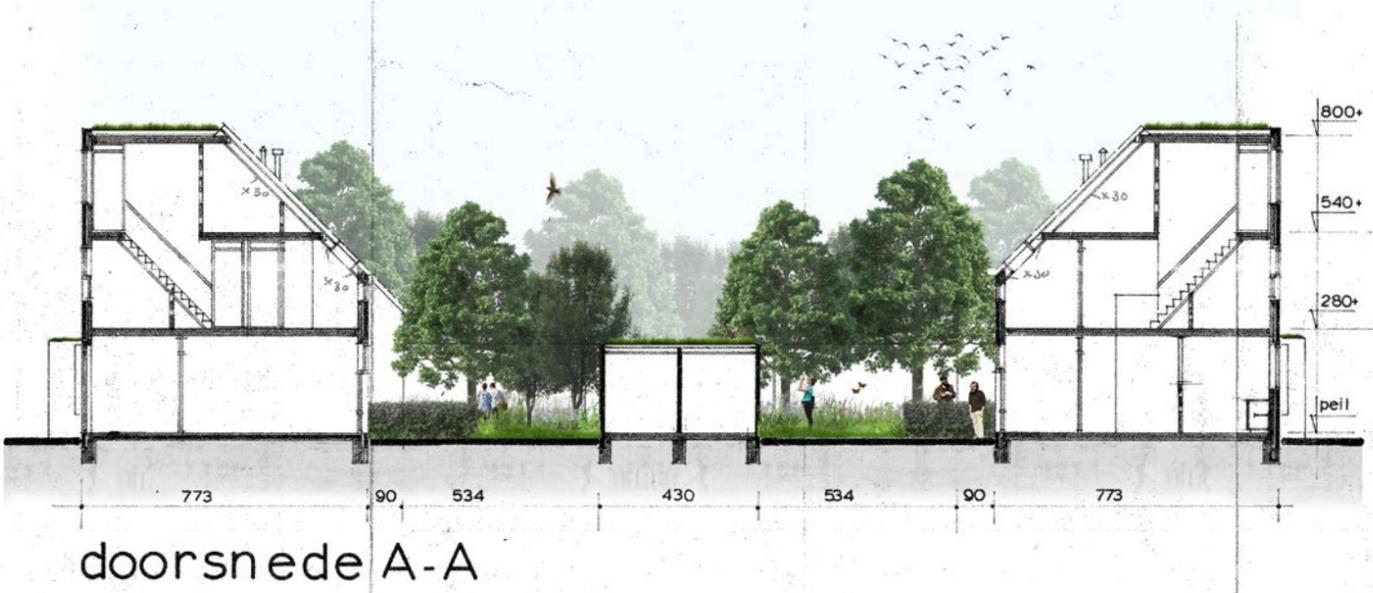
GARDENS: PRIVATE TO COLLECTIVE



Gardens upon delivery (Stadsarchief Amsterdam, n.d.)



Hoptille and surroundings (Google Afbeeldingen, 2021; Aerodata International Surveys, Maxar Technologies, Kaargegevens, 2021)



Proposed vision

FACADE CHANGES



Stadsarchief Amsterdams / L.R.R. (n.d.)



Anneloes Tilman (2020)

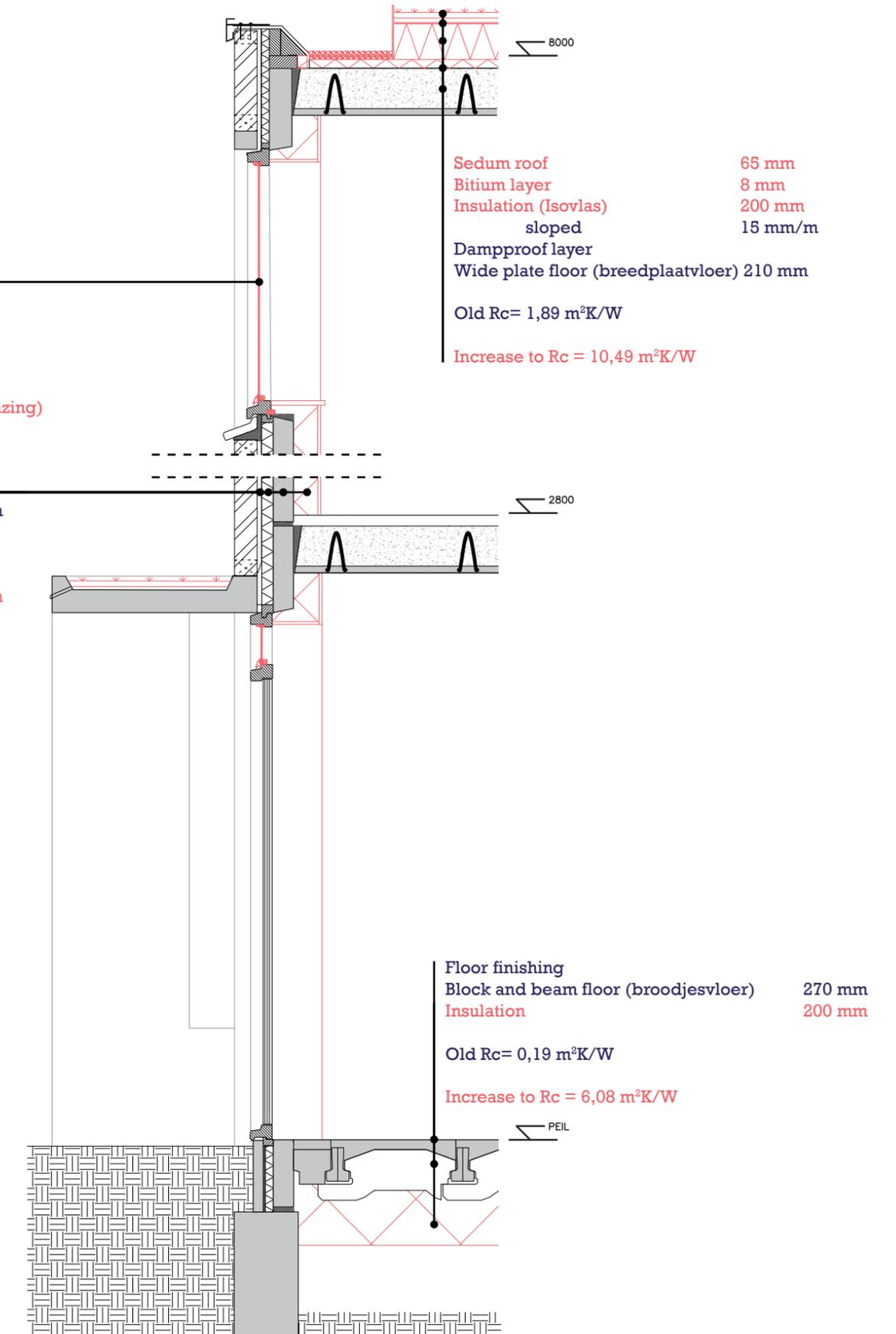
Wooden frames
Dubbel glazed window
4 - 4 - 4 mm
 $U = 2,8 \text{ W/m}^2\text{K}$

Increase to $U = 0,4-0,7 \text{ W/m}^2\text{K}$ (vacuum glazing)

Brick wall 100 mm
Cavity 20 mm
Insulation (glass wool) 50 mm
Concrete 90 mm
Insulation (Isovlas) 115 mm

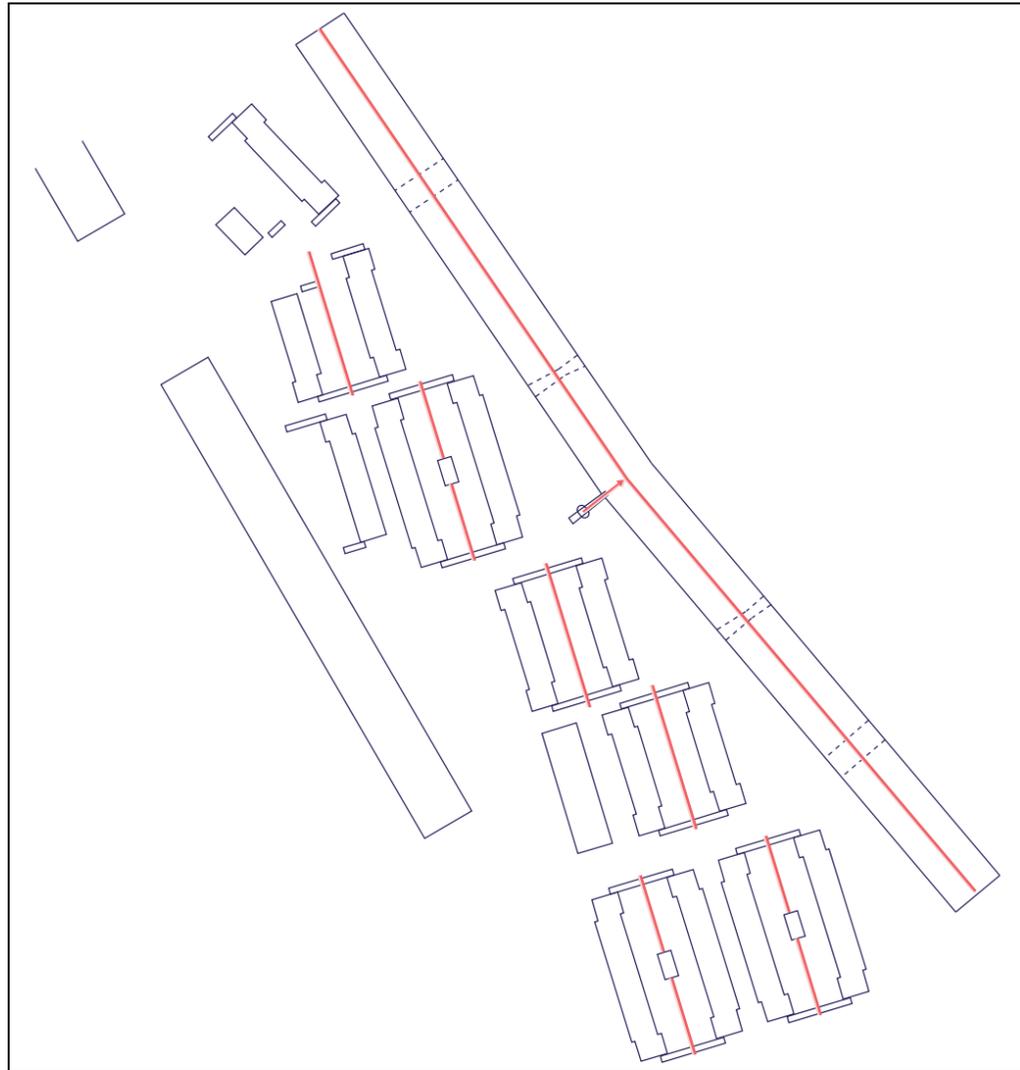
Old $R_c = 2,45 \text{ m}^2\text{K/W}$

Increase to $R_c = 8,22 \text{ m}^2\text{K/W}$

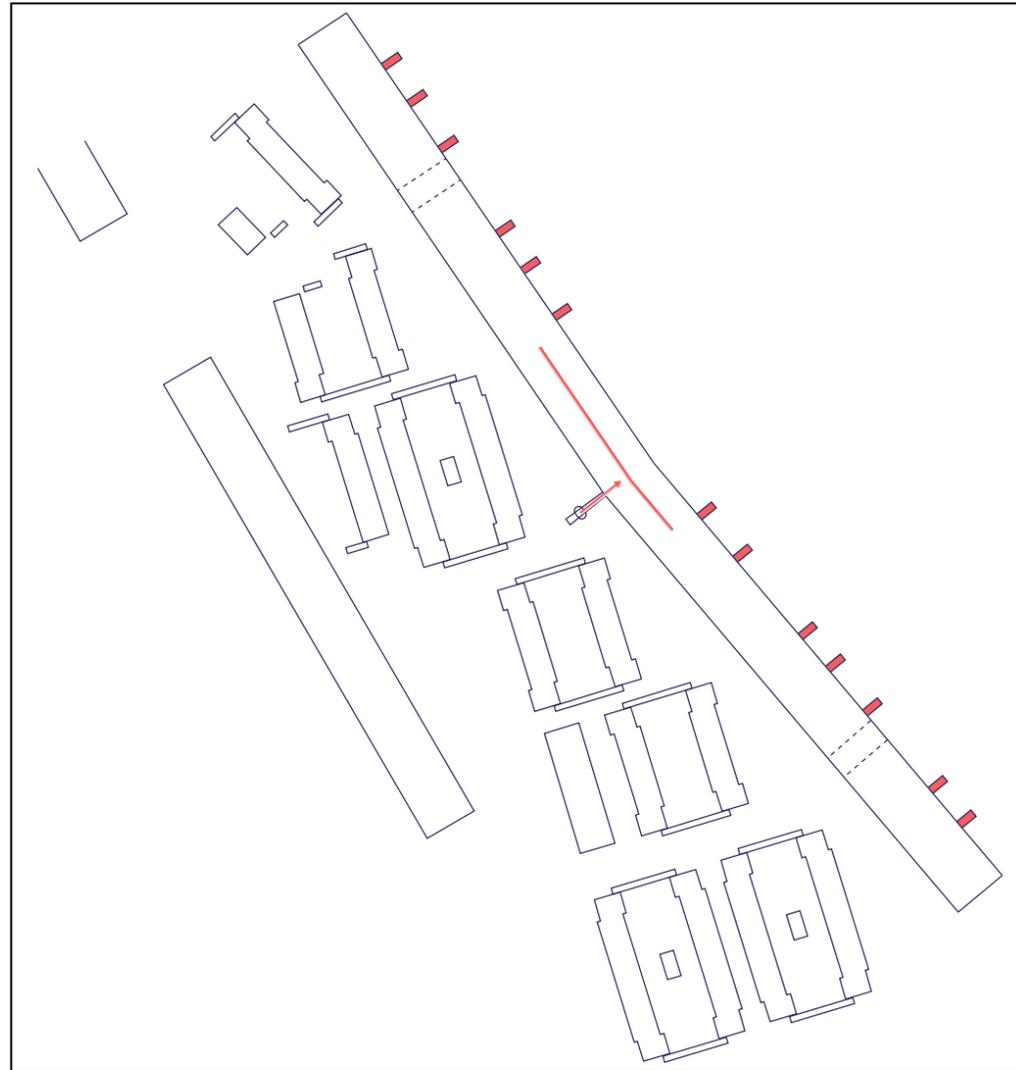


- design proposal -
mid-rise

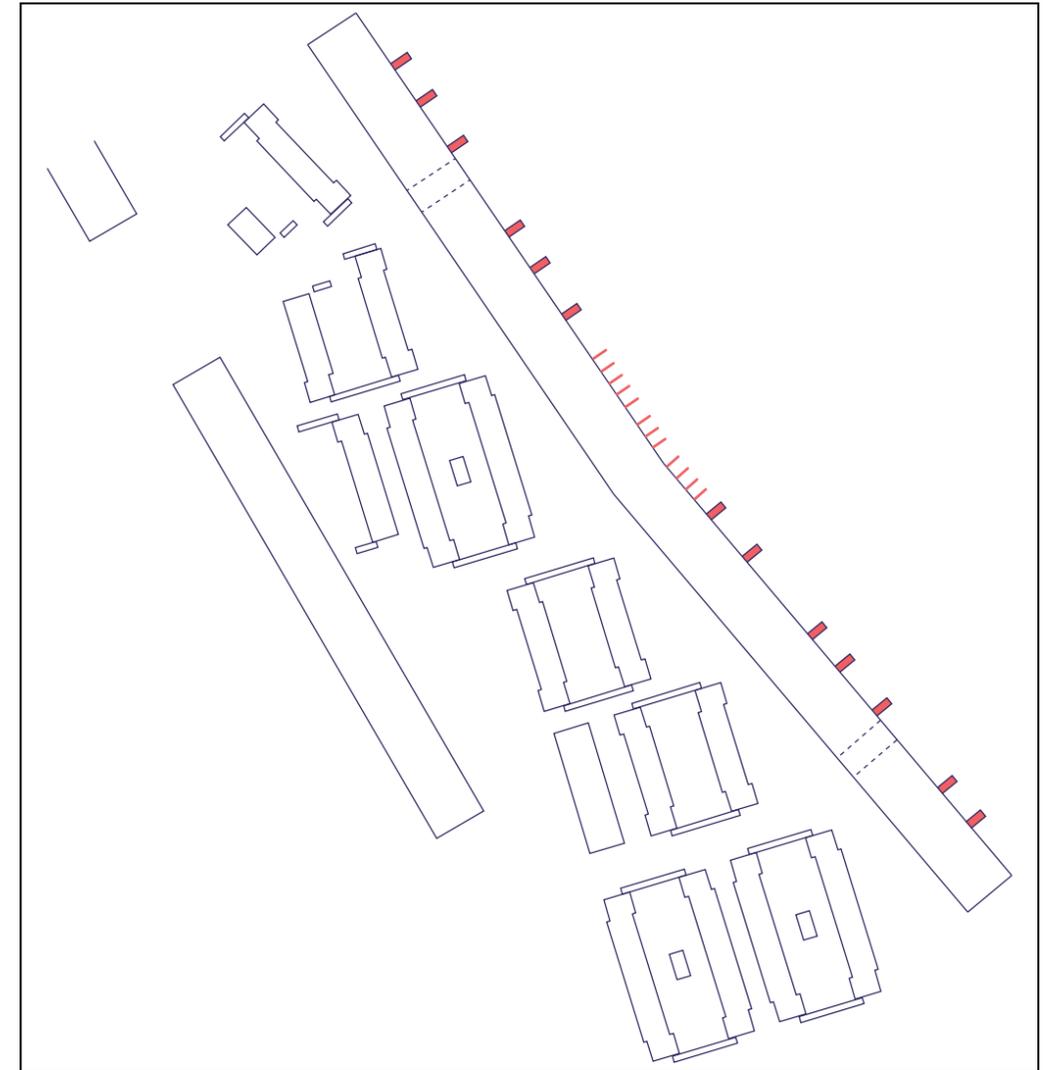
CHANGES IN ACCESS SYSTEM



1980 - Inner corridor

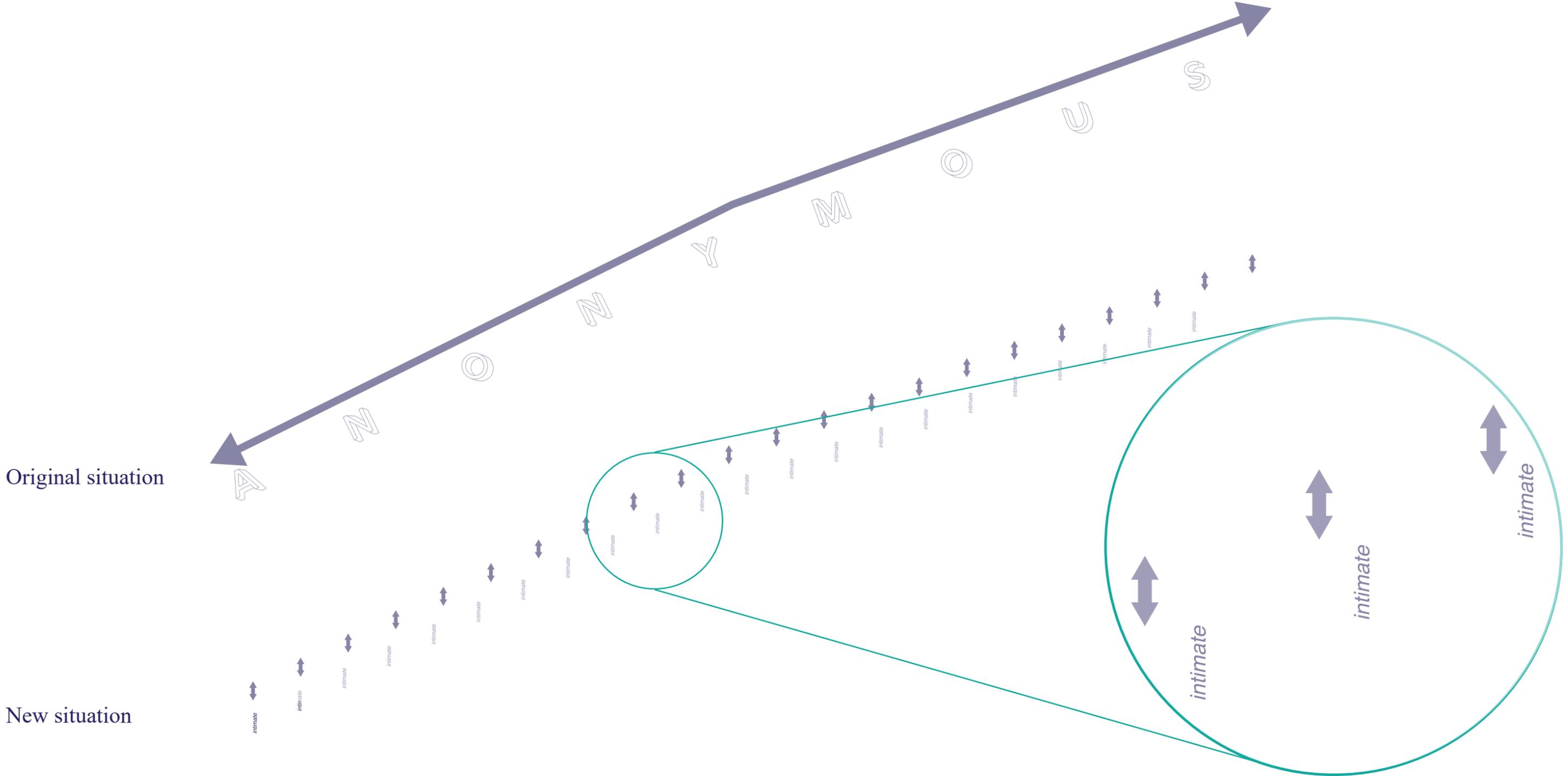


1984 - Outer stairwells

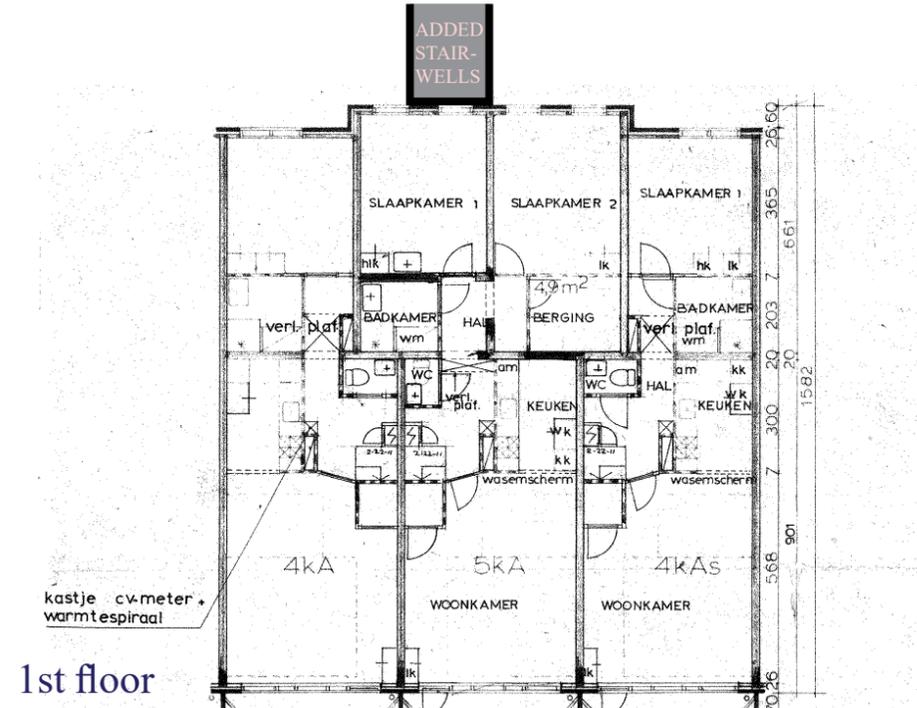


1993 - Outer staircases and stairwells

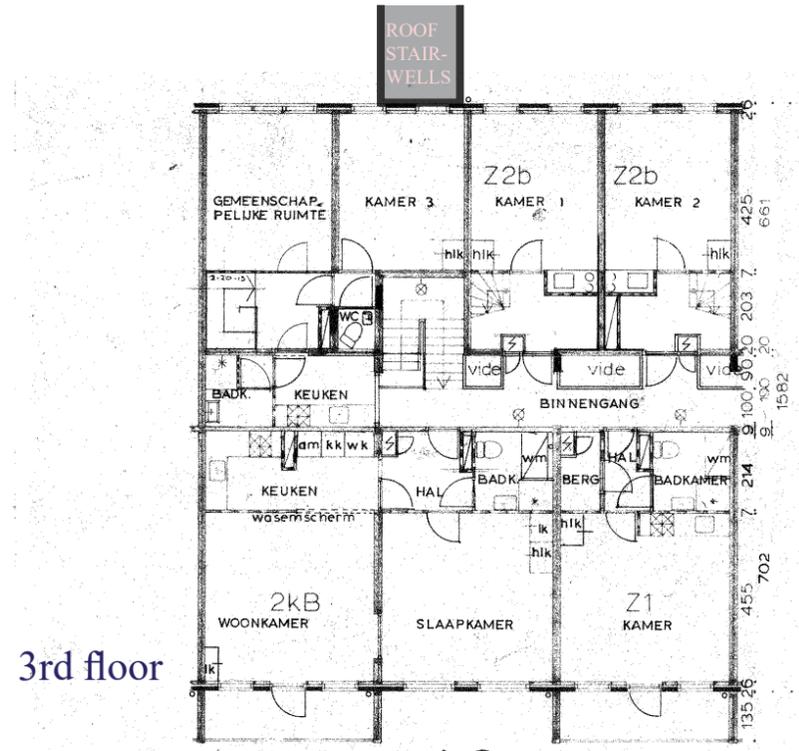
ADAPTING CURRENT ACCESS SYSTEM: ROTATE
From horizontal to vertical shared traffic spaces: smaller communities



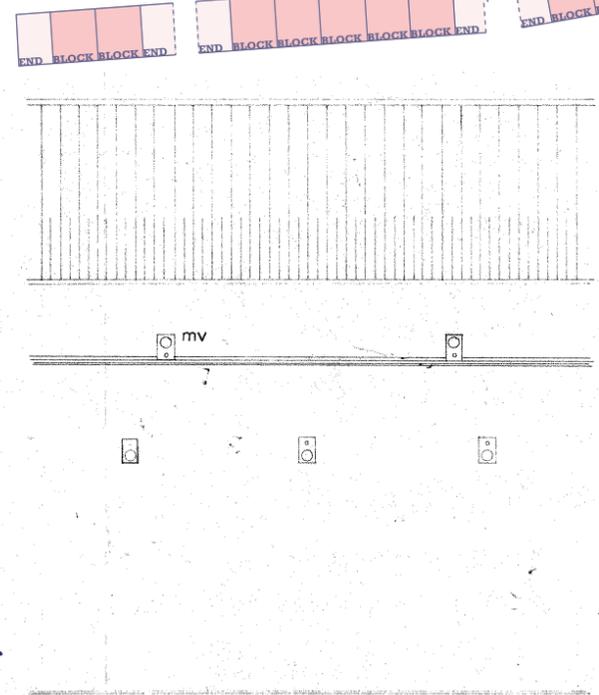
EXISTING PLANS (PER BLOCK)



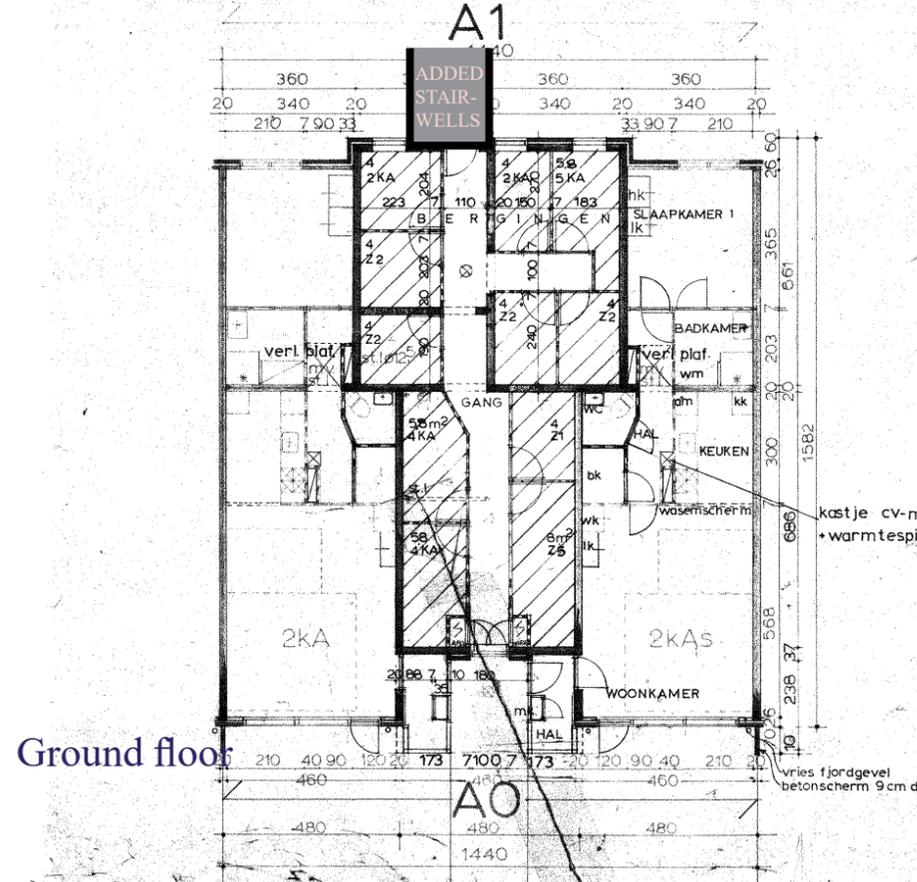
1st floor



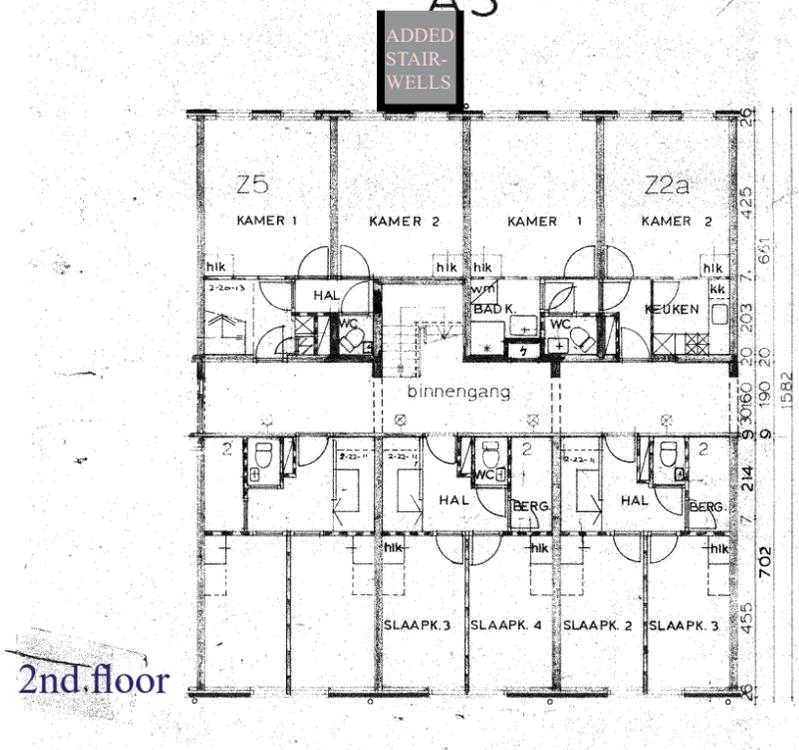
3rd floor



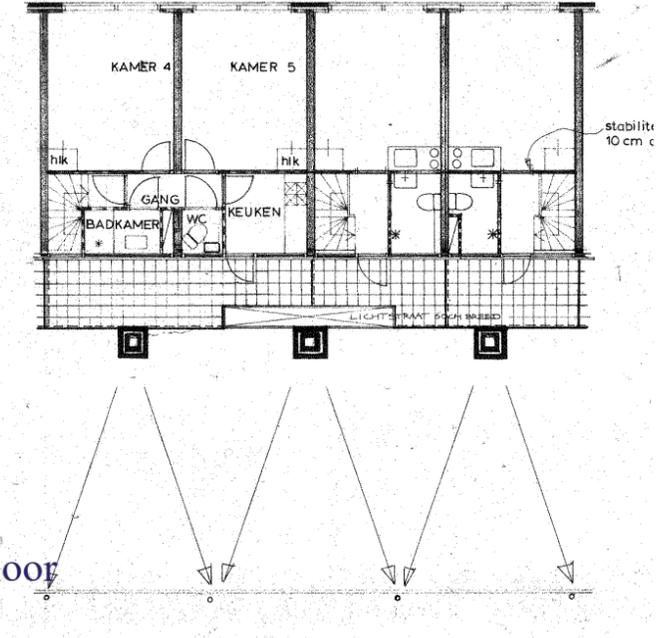
Roof



Ground floor

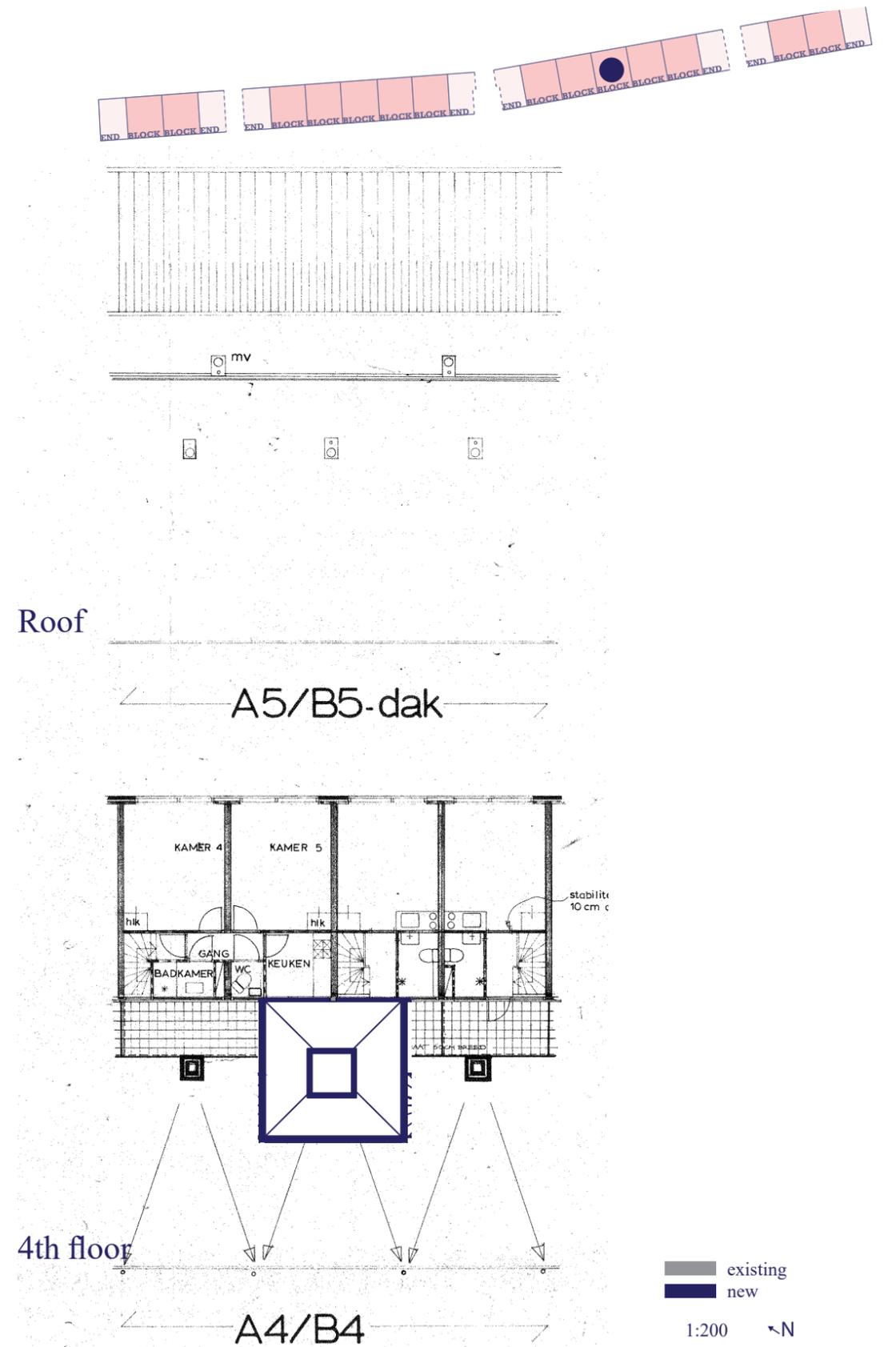
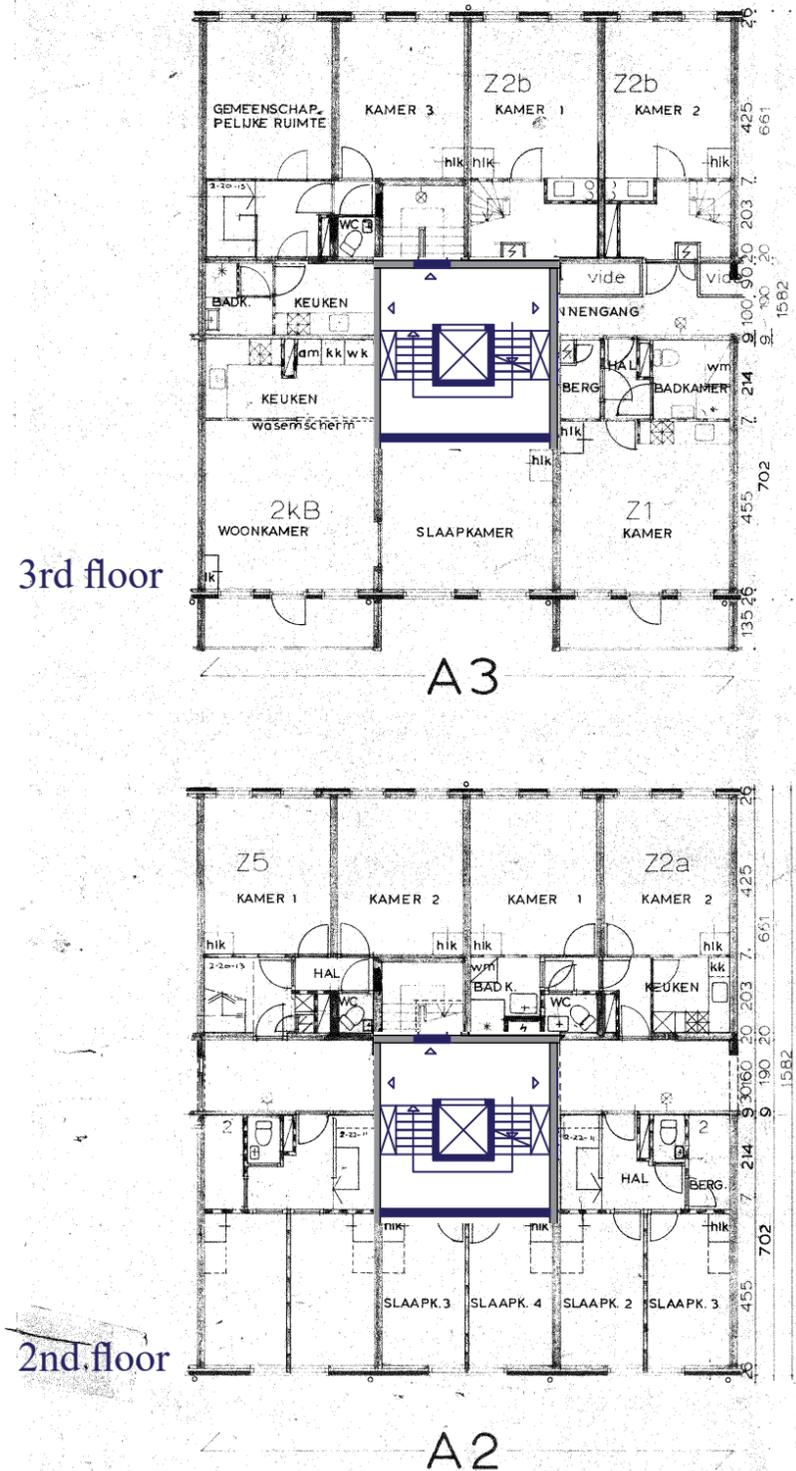
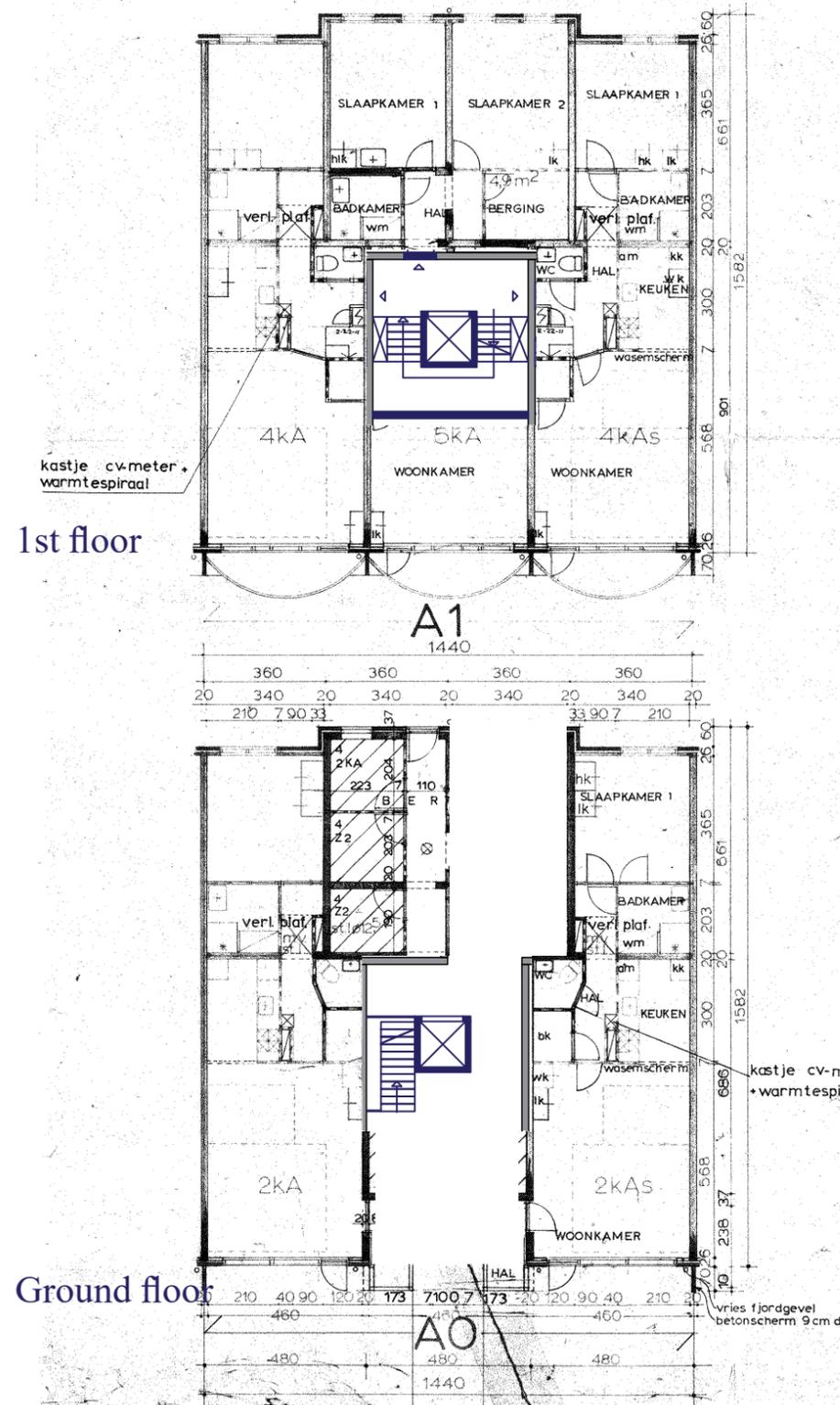


2nd floor

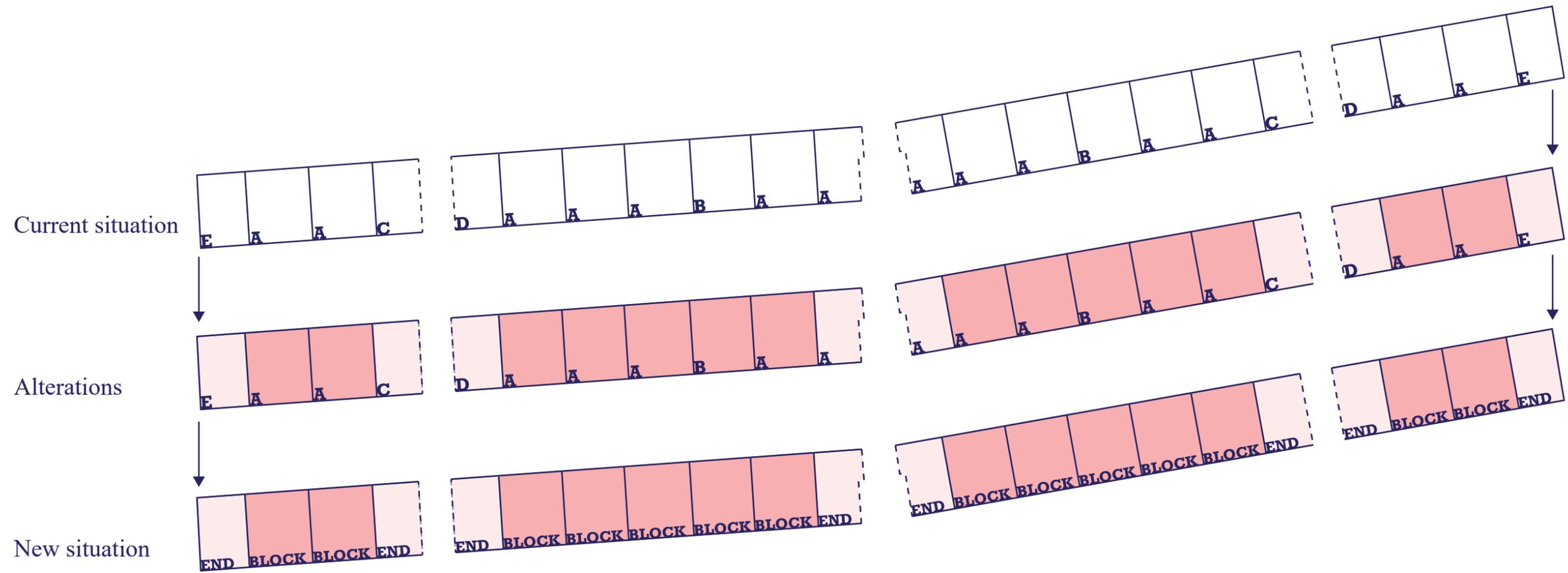


4th floor

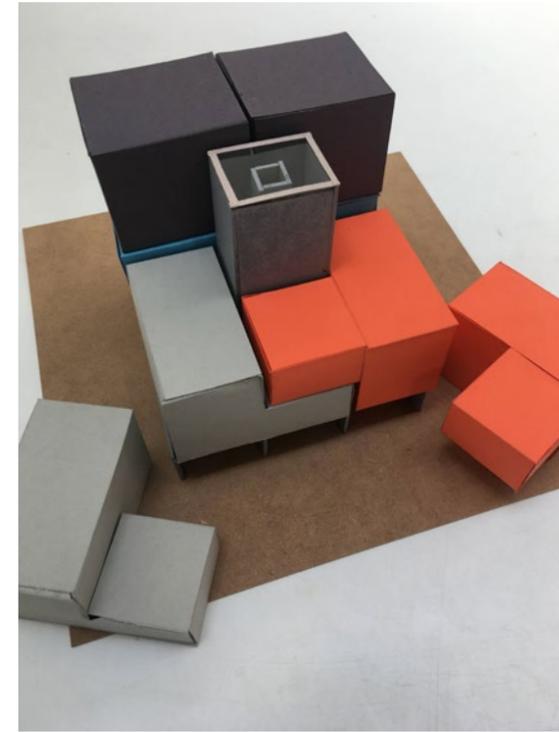
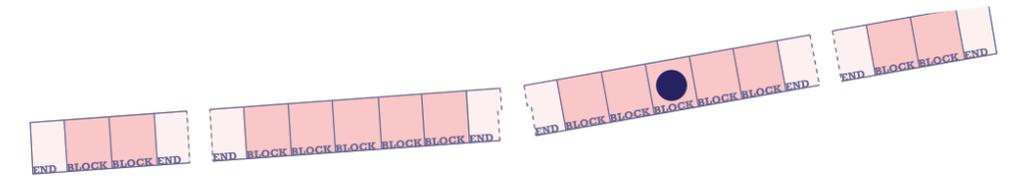
EXISTING PLANS: ADAPTATIONS



NEW LAY-OUT



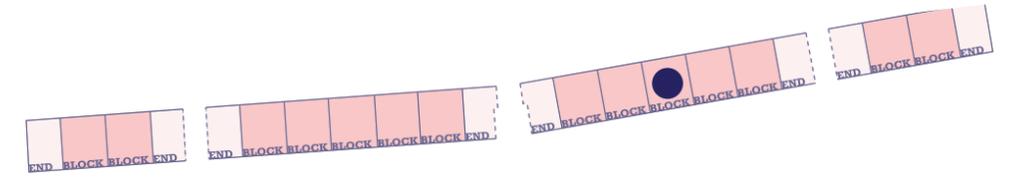
NEW DWELLING CONFIGURATION - MODEL 1:100



LEGEND

- TYPE 1**
 East: Same level 2 bedroom 84 m²
- TYPE 2**
 East: Two storey 2 bedroom 84 m²
- TYPE 3**
 West: Two storey 2 bedroom 98 m²
- TYPE 4**
 West: Two storey 3 bedroom 98 m²

NEW DWELLING CONFIGURATION - PLANS ONE BLOCK 1:200



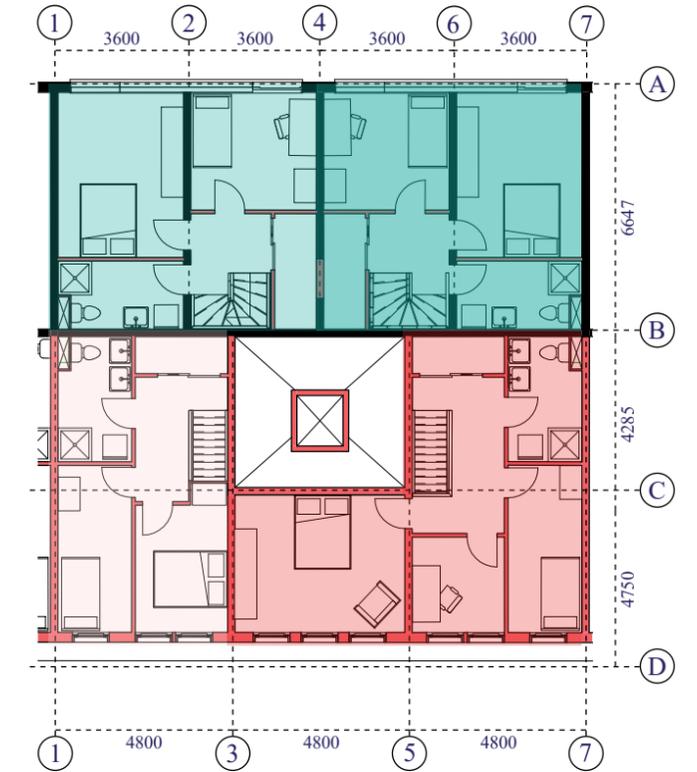
LEVEL 1



LEVEL 2



LEVEL 3



LEVEL 4

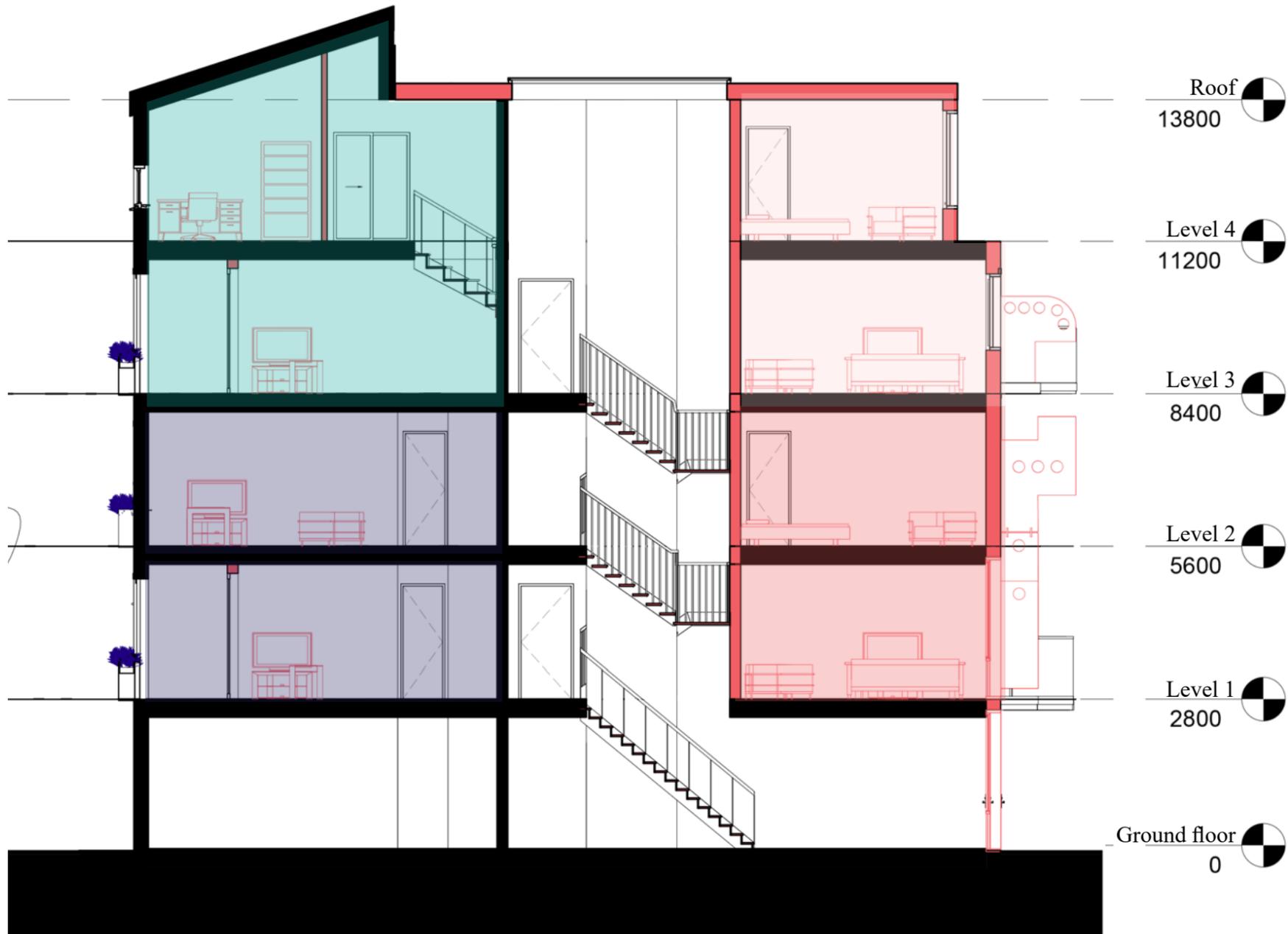
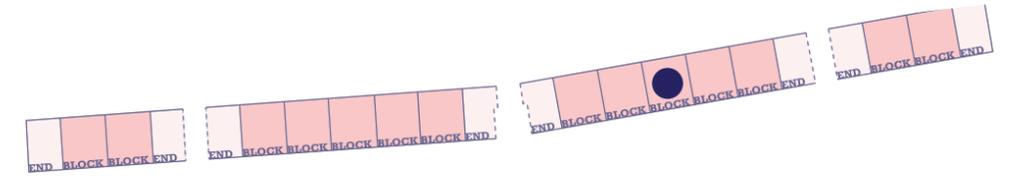
- Same level 2 bedroom
84 m² - East
- Two storey 2 bedroom
98 m² - West

- Two storey 2 bedroom
84 m² - East
- Two storey 3 bedroom
98 m² - West

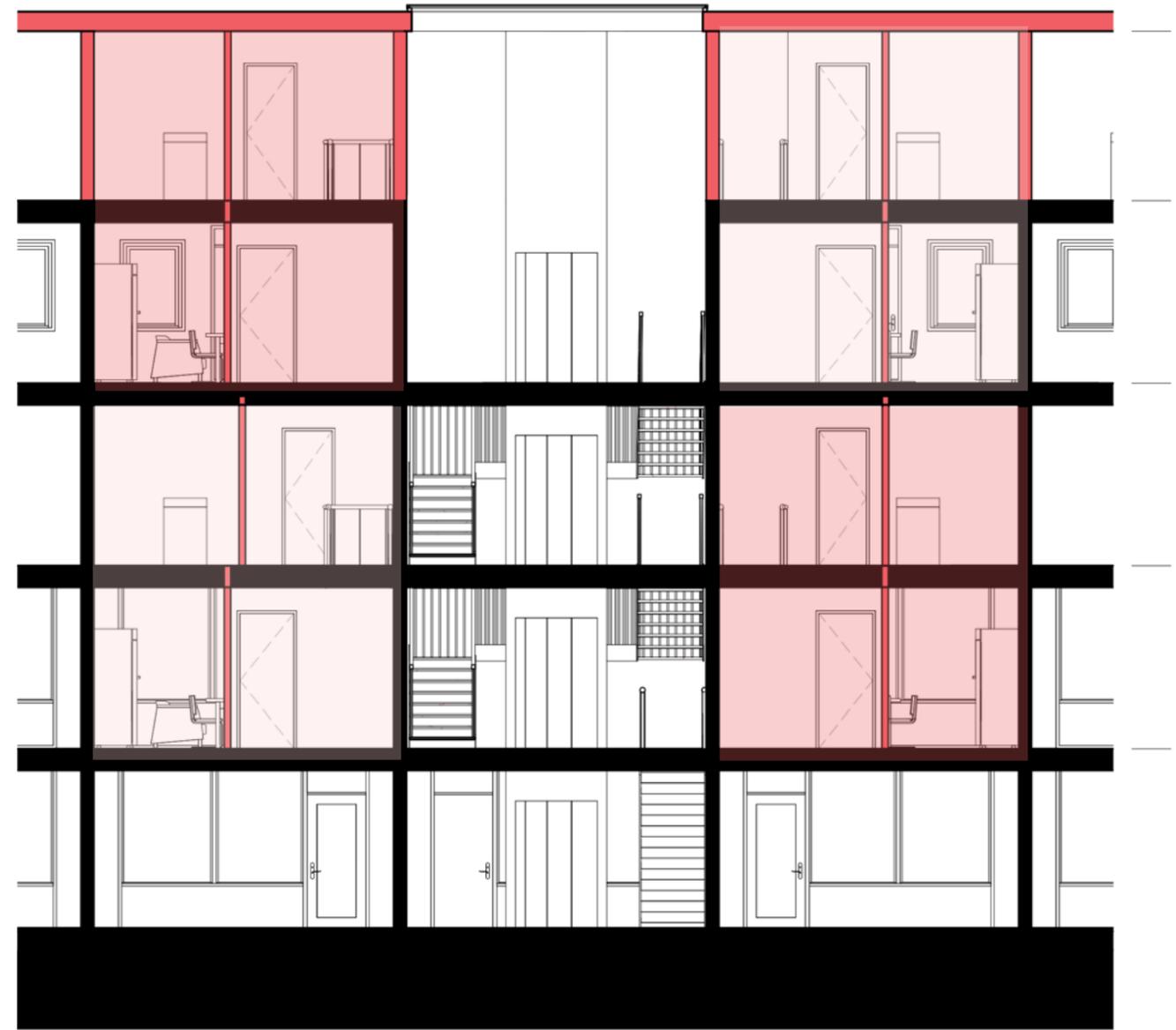
existing
 new

1:200 ↖ N

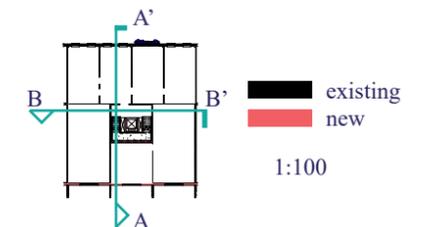
NEW DWELLING CONFIGURATION - SECTIONS THROUGH STAIRWELL (1:200)



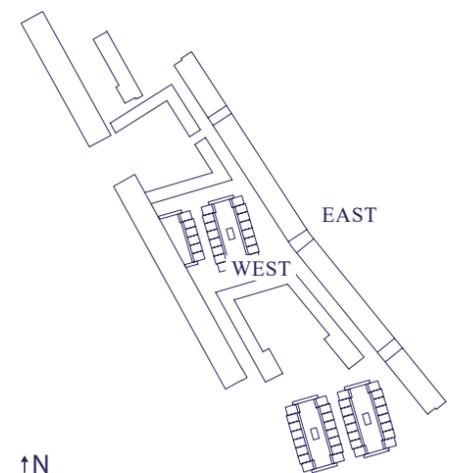
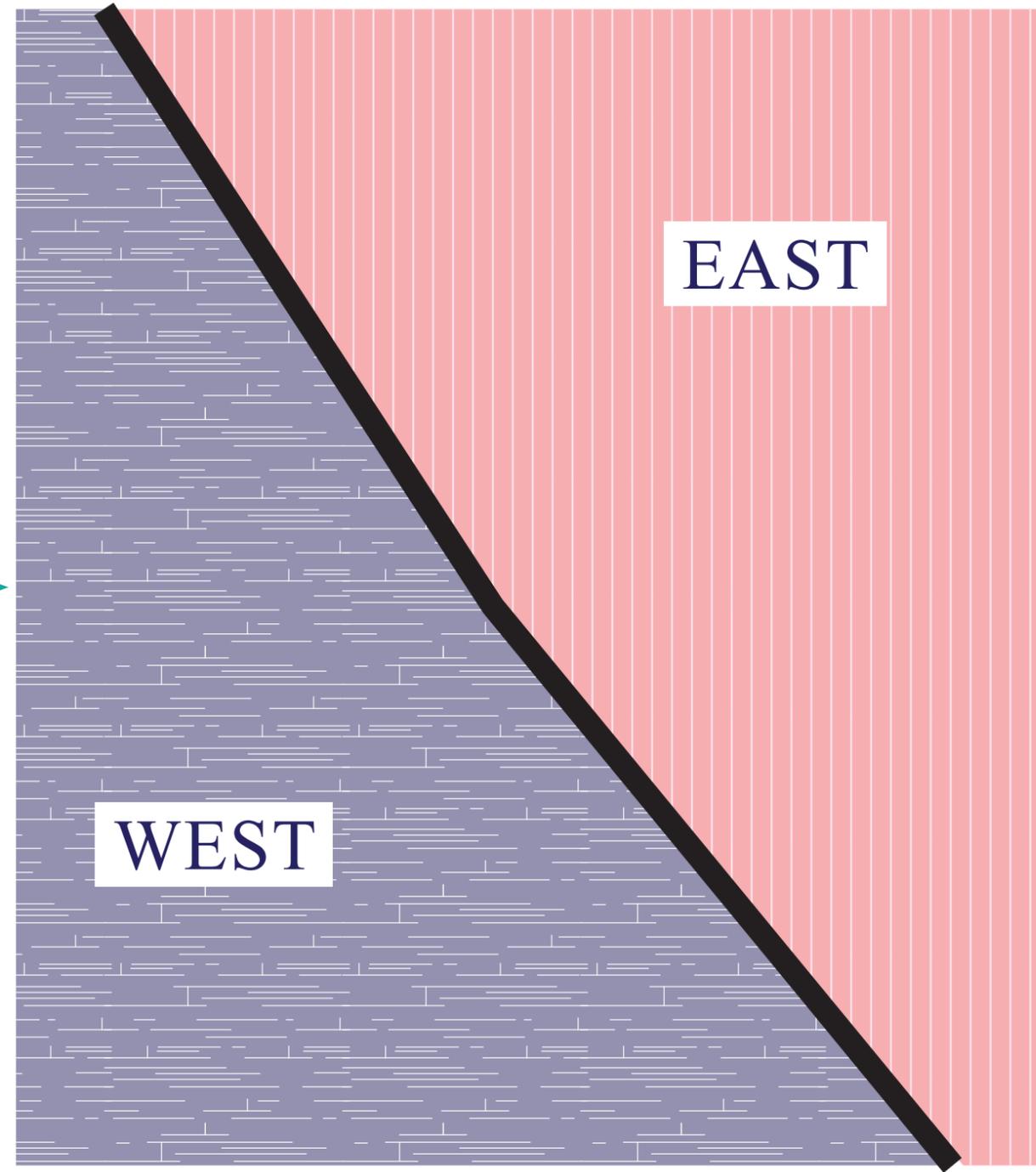
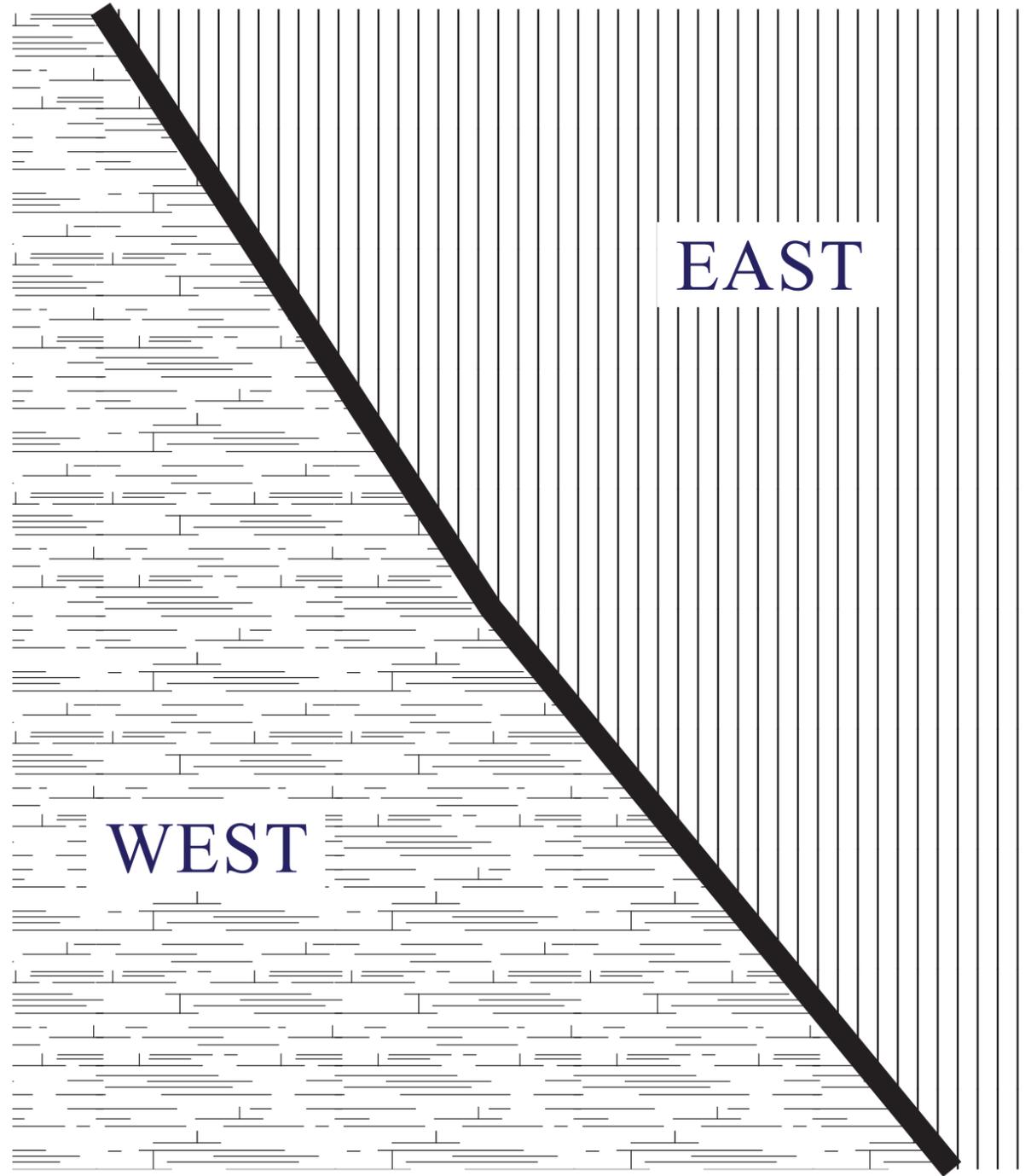
SECTION AA'



SECTION BB'



MID-RISE FACADES: REINVENT



↑N

EAST FACADE: HISTORIC OVERVIEW



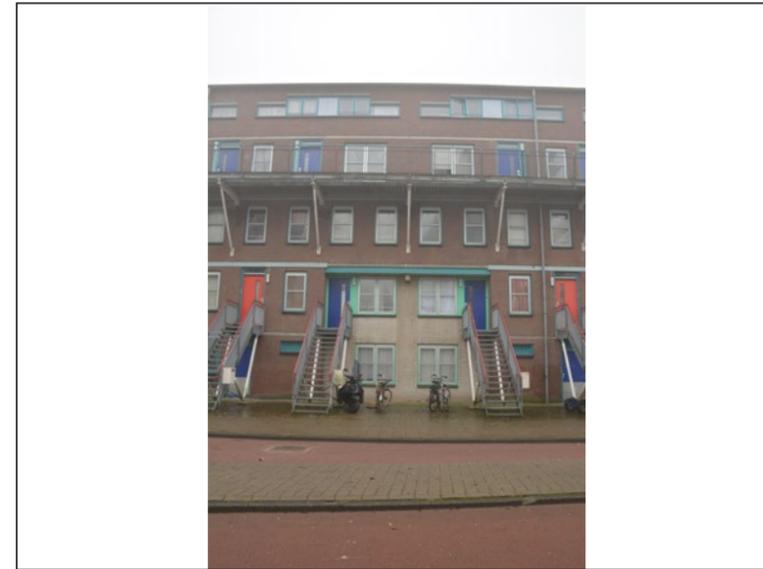
1980

Randal Scobie (1982)



1984

Stadsarchief Amsterdam / L.R.R. (n.d.)



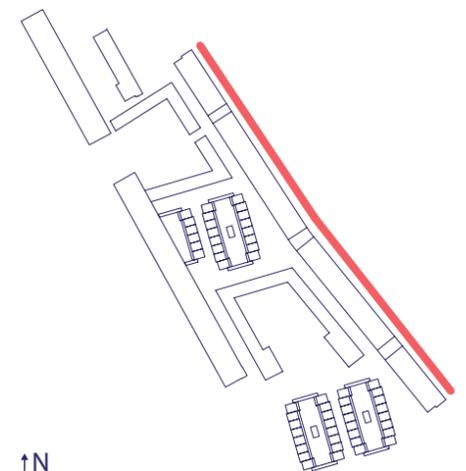
1993

Anneloes Tilman (2021)



2021

Anneloes Tilman (2020)



↑N

EAST FACADE: DESIGN CHANGES



REFERENCE:

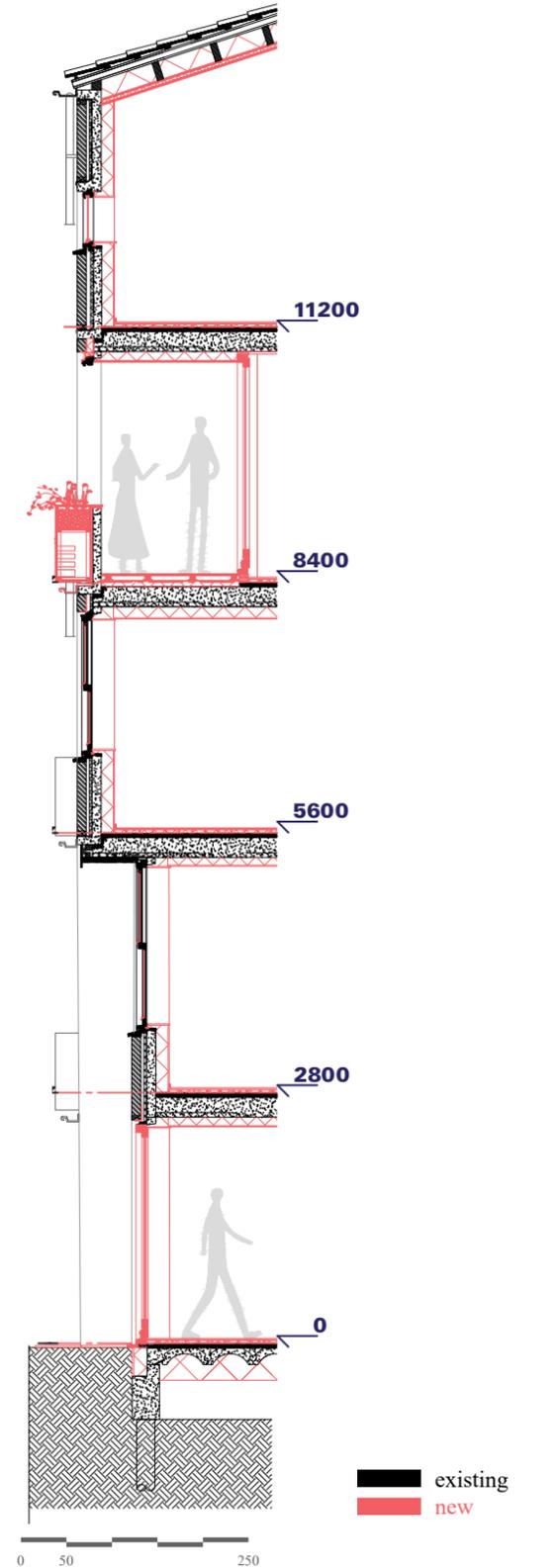
Gouda Cheese Warehouse
Mei Architects and Planners (2017)



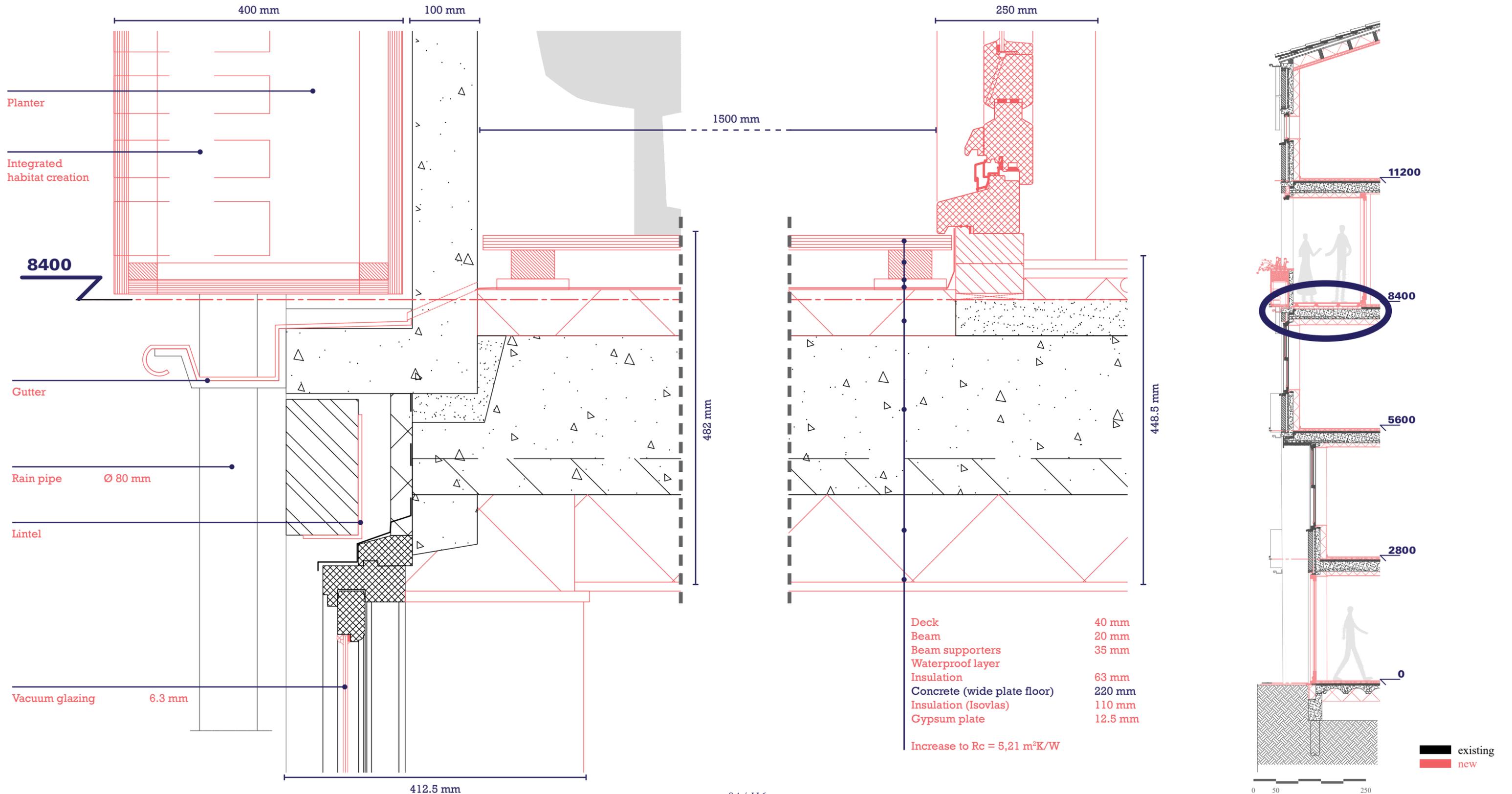
CURRENT SITUATION (2021)



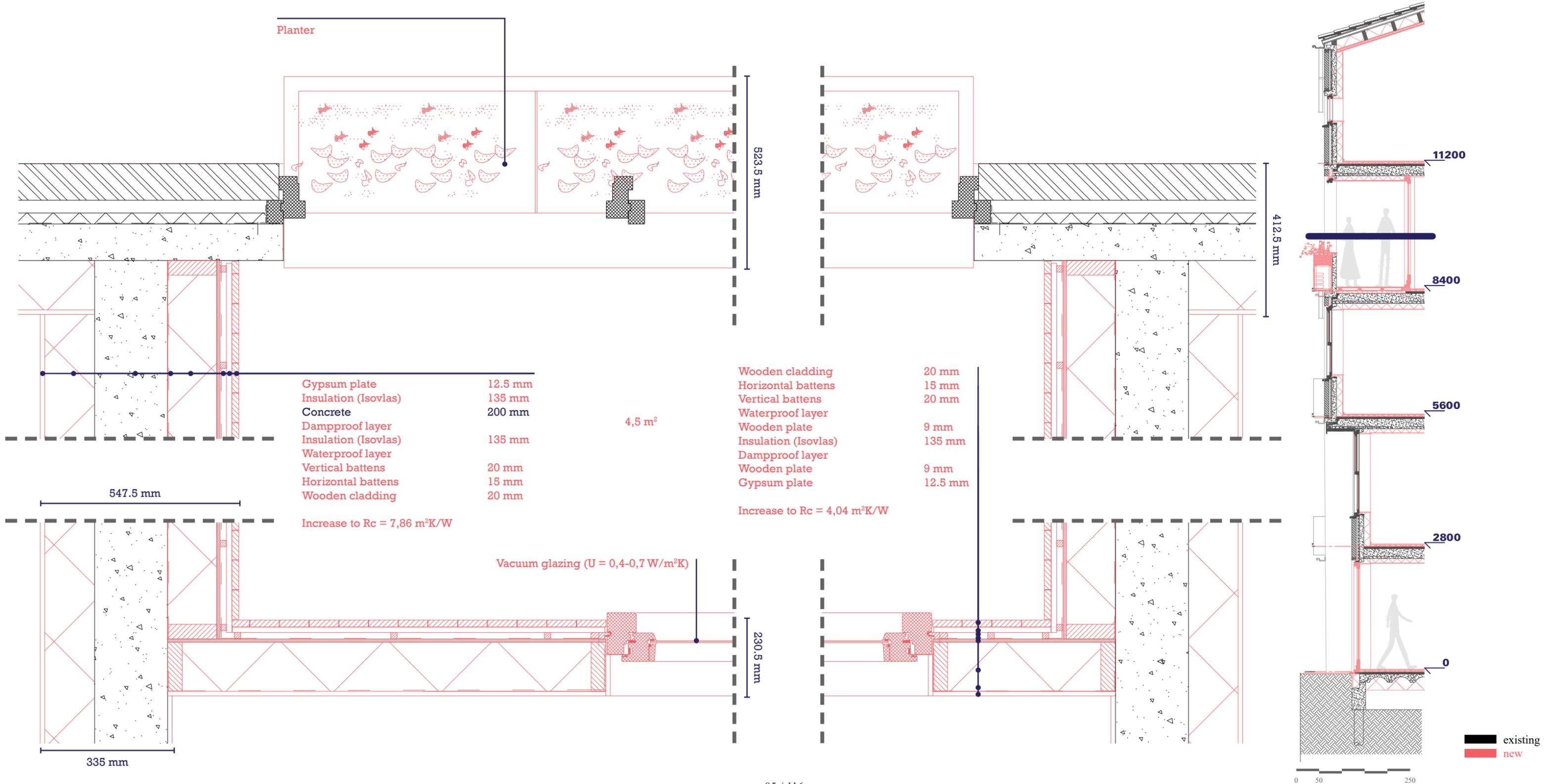
FACADE SECTION



EAST FACADE: VERTICAL DETAILS (1:5)



EAST FACADE: HORIZONTAL DETAILS (1:10)



WEST FACADE: HISTORIC OVERVIEW



1980

Stadsarchief Amsterdams (1991)

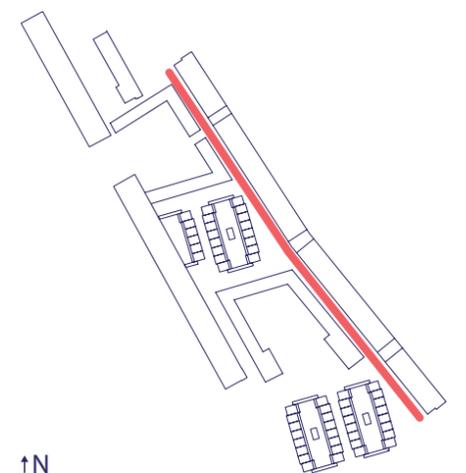


Stadsarchief Amsterdams (n.d.)



2021

Anneloes Tilman (2021/2020)



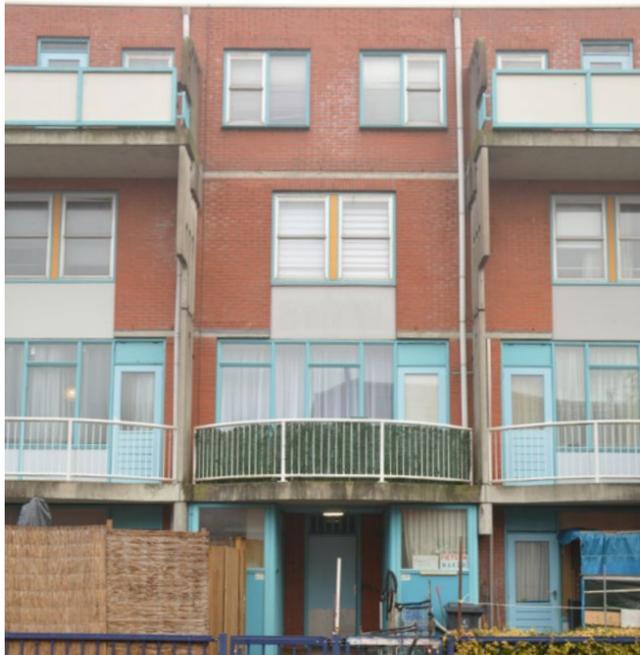
↑N

WEST FACADE: DESIGN CHANGES



REFERENCE:

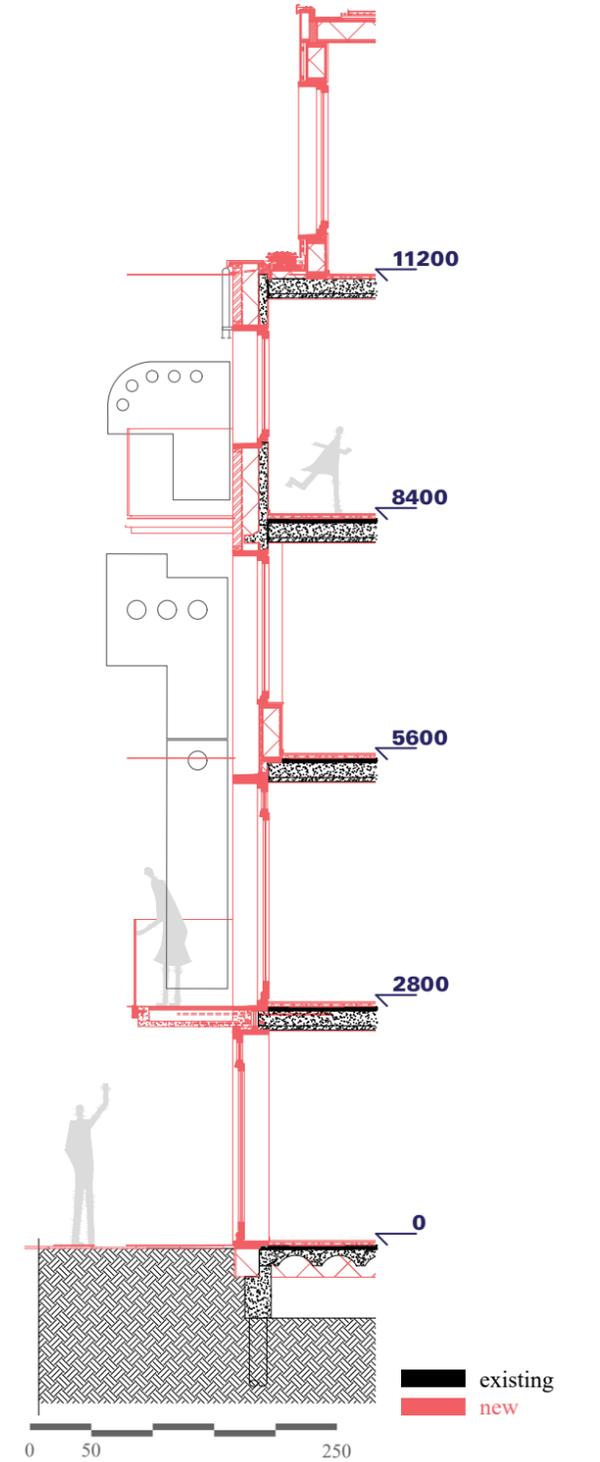
BIGyard
Zanderroth Architekten (2010)



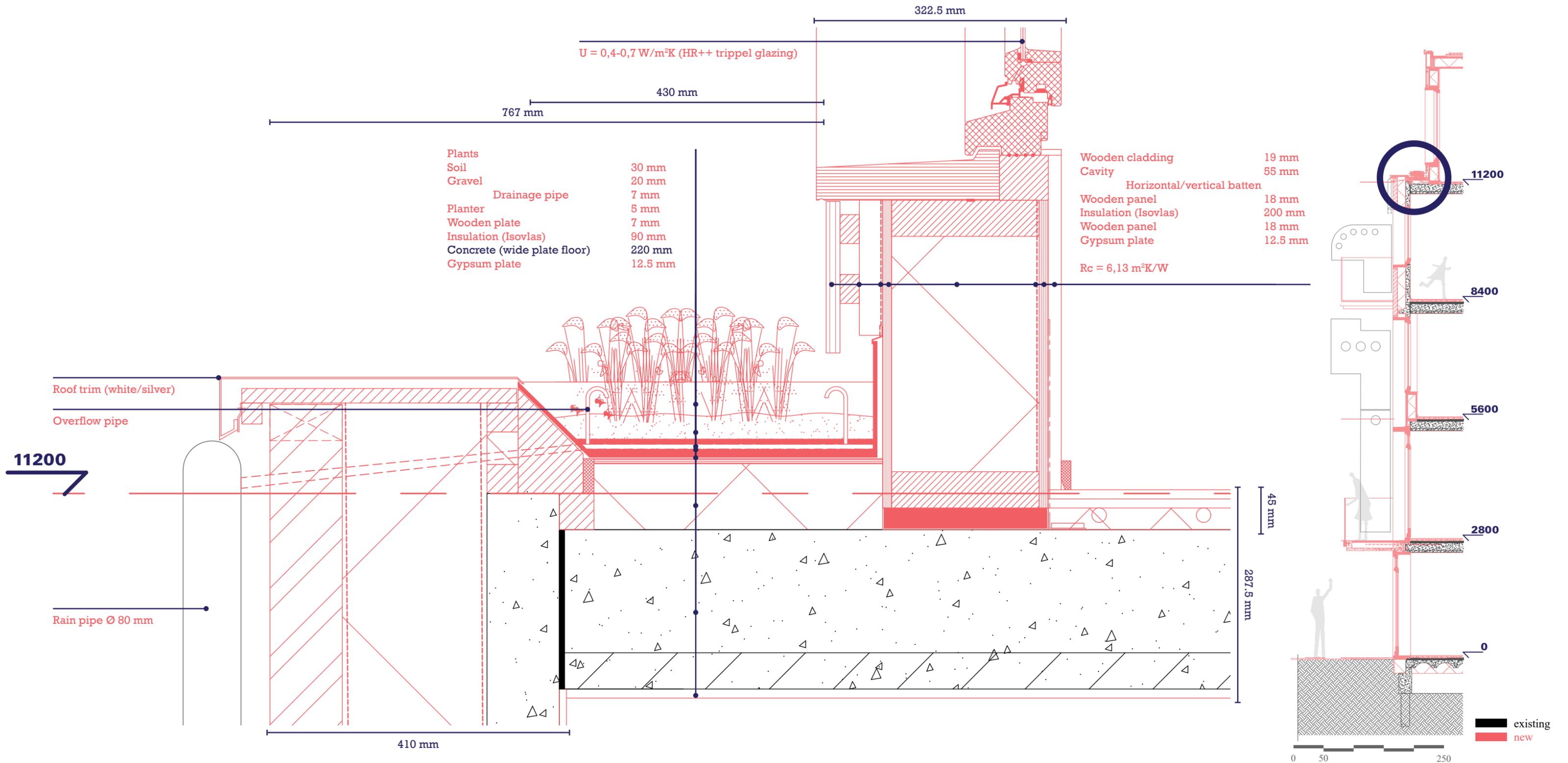
CURRENT SITUATION (2021)



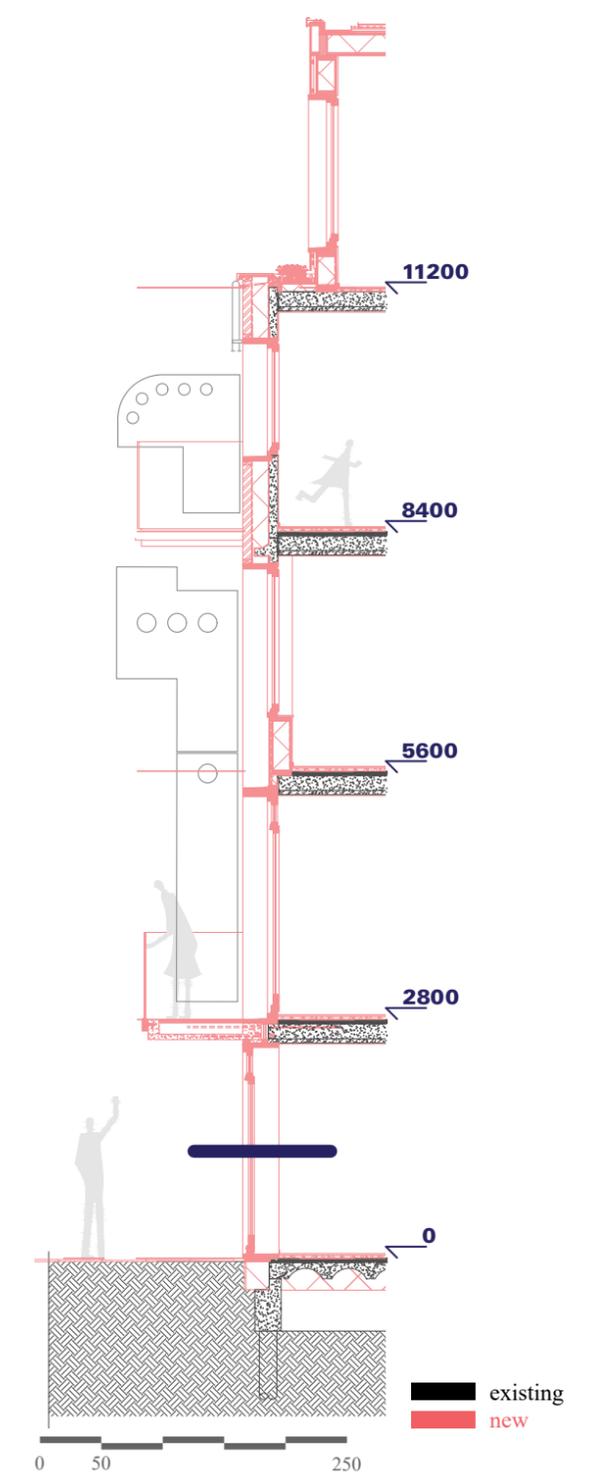
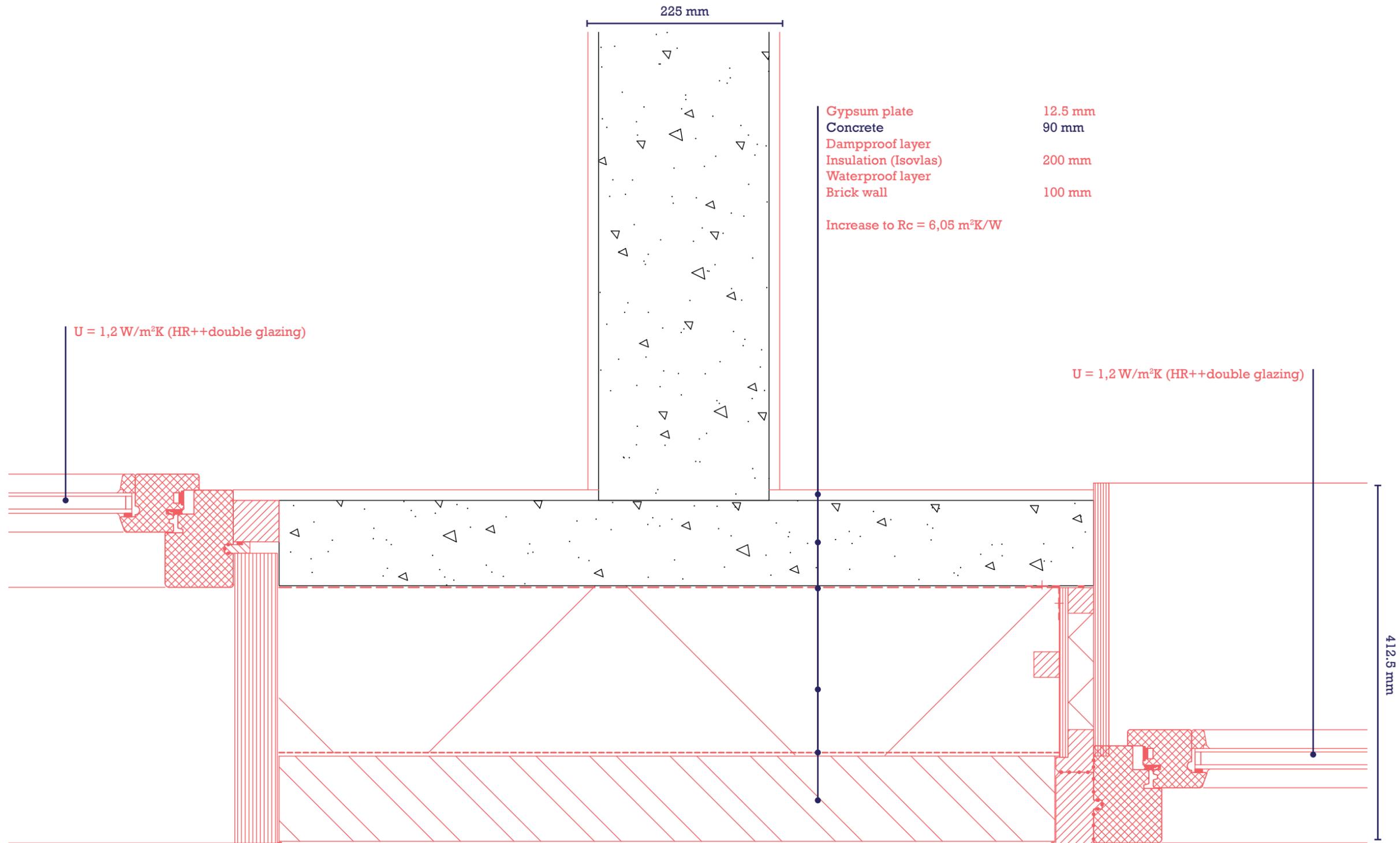
FACADE SECTION



WEST FACADE: VERTICAL DETAIL 1 (1:5)



WEST FACADE: HORIZONTAL DETAIL 1 (1:5)

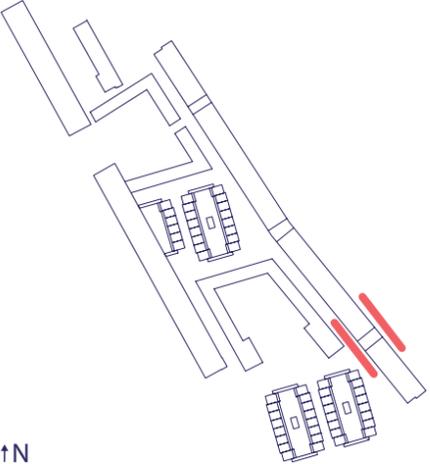
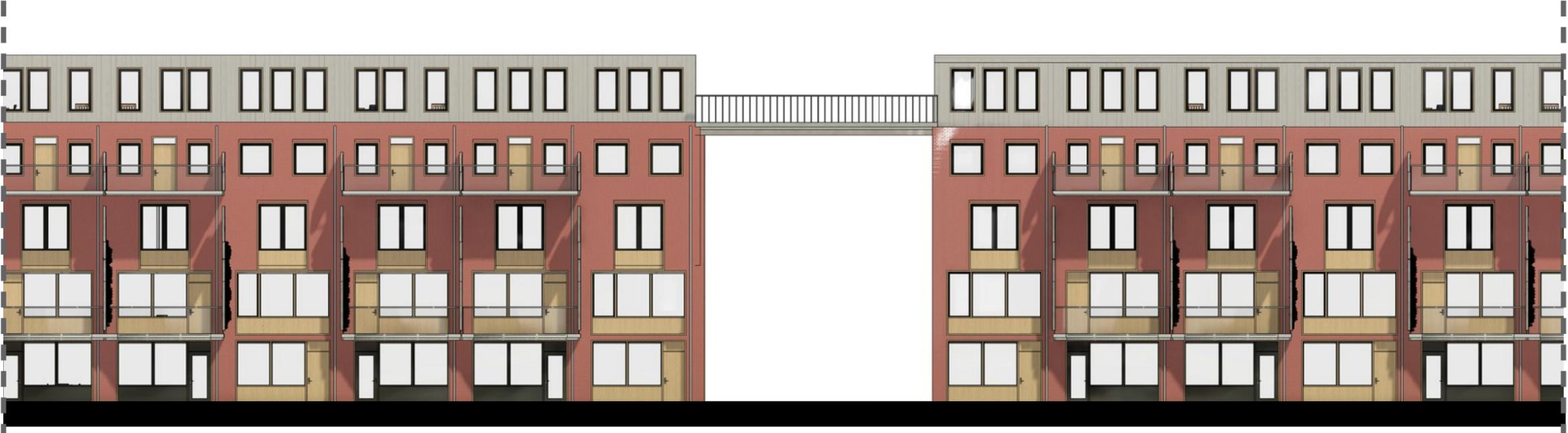


ELEVATIONS 1:200

EAST



WEST



↑N

INTERIOR ROUTING: THE FRONT DOOR



WEST



EAST

INTERIOR ROUTING: ENTERING THE BUILDING



**LIGHTTESTING
(MODEL 1:100)**

INTERIOR ROUTING: THE STAIRWELL



VIEW TO ROOF WINDOW



HALLWAY

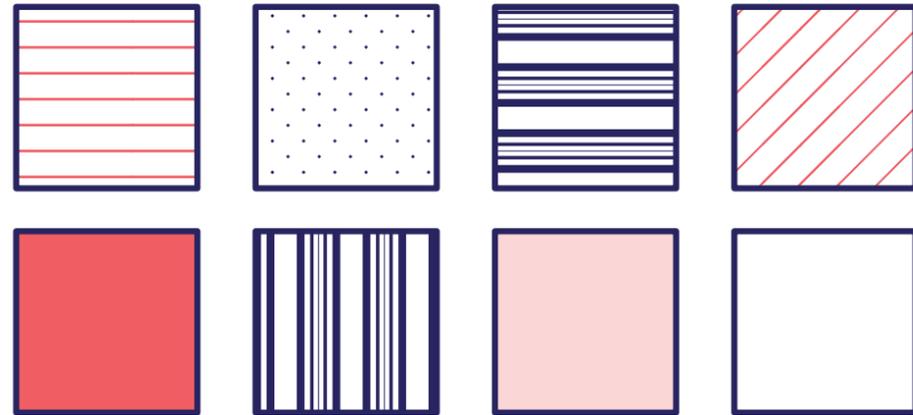
INTERIOR ROUTING: ENTERING THE HOME (TYPE 1)



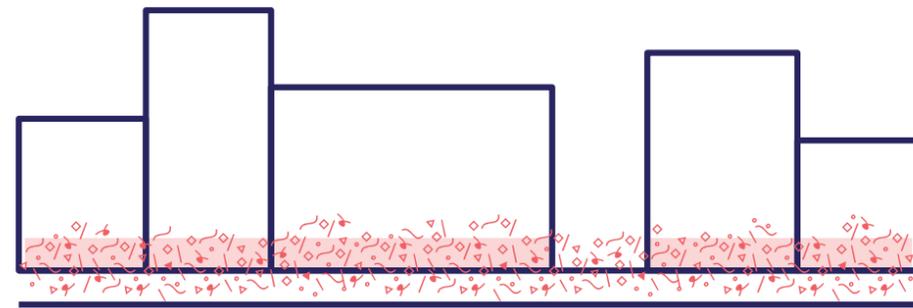
- design proposal -
new build

LESSONS HISTORIC CITIES

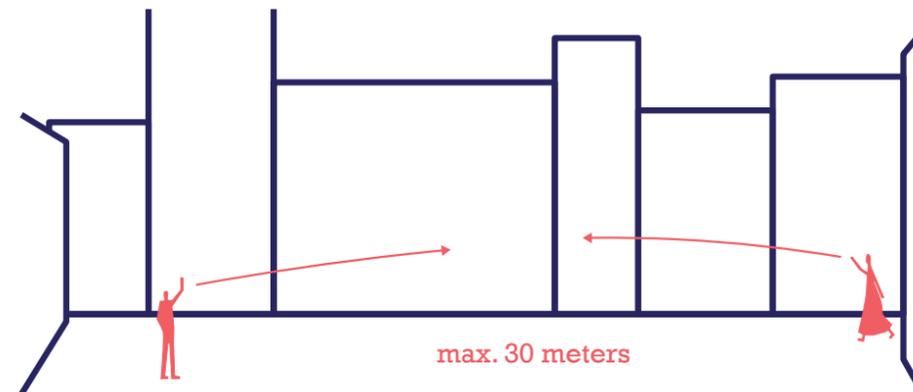
1. Balance order & chaos



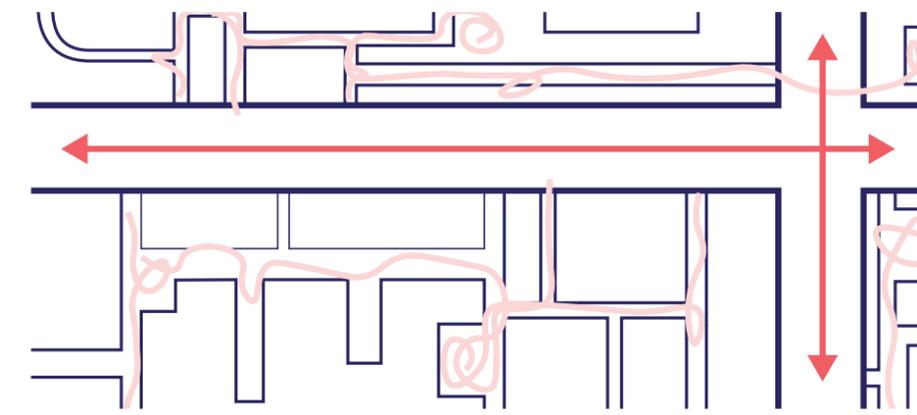
2. Visable life



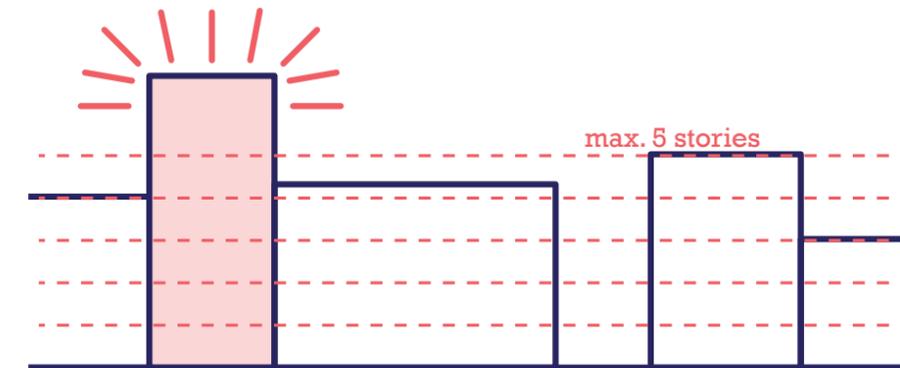
3. Compact city



4. Orientation & mystery



5. Scale

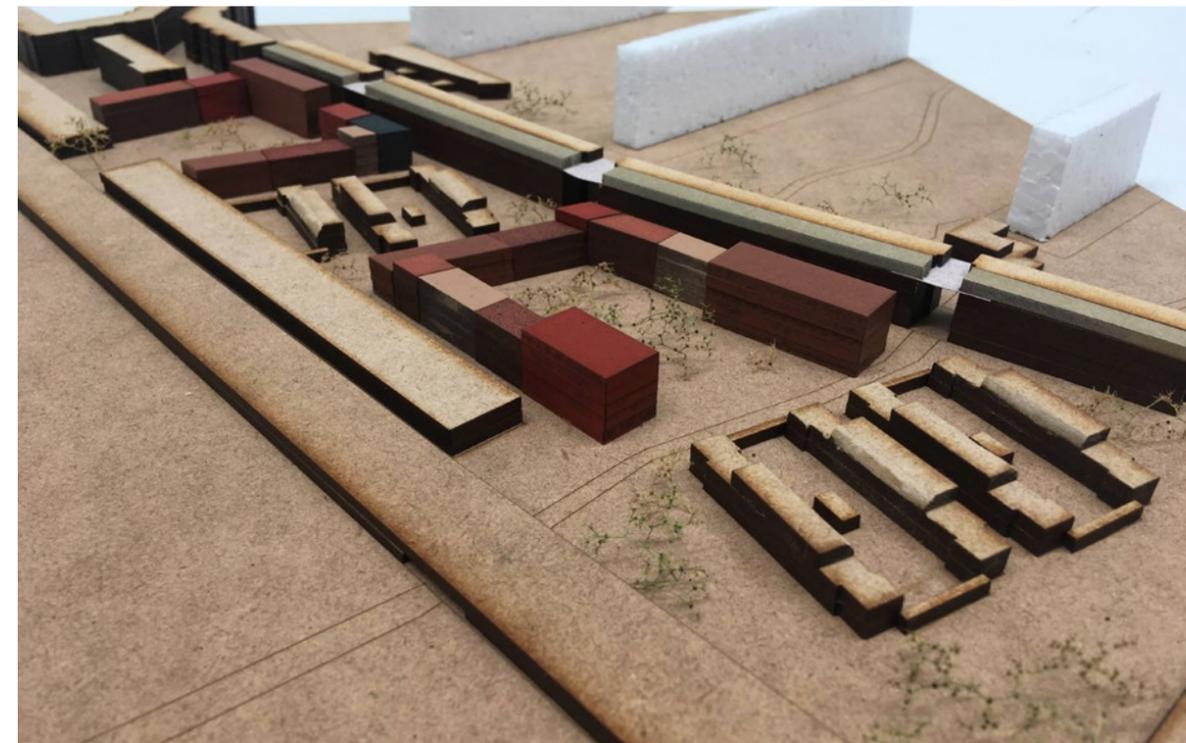
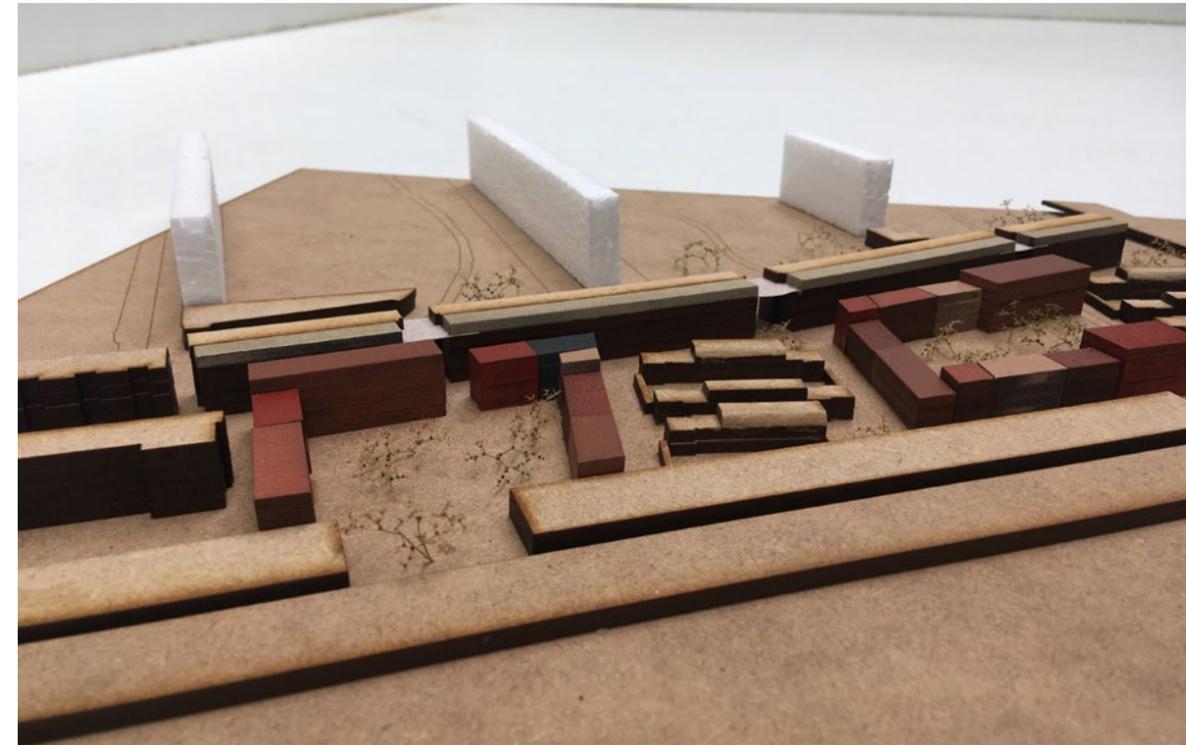


6. Make it local



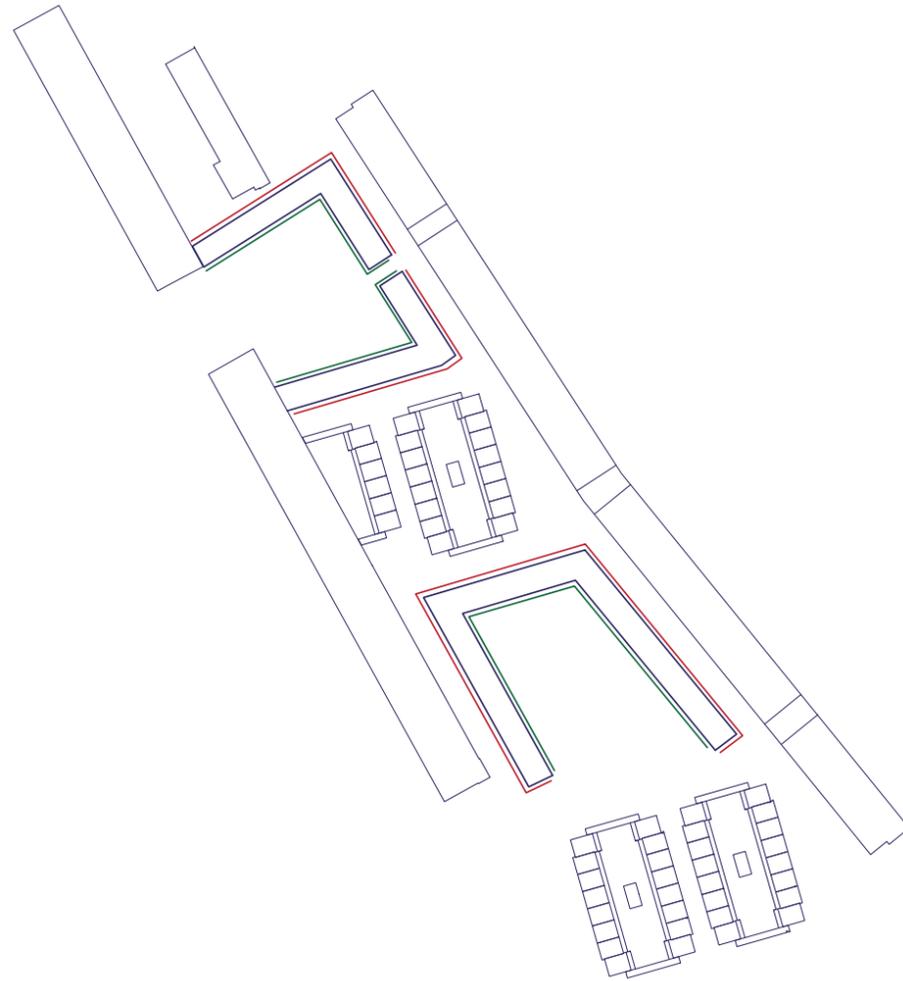
Based on:
Gibbons, 2016.
The School of Life, 2015.

URBAN PLAN: 1:1000 MODEL

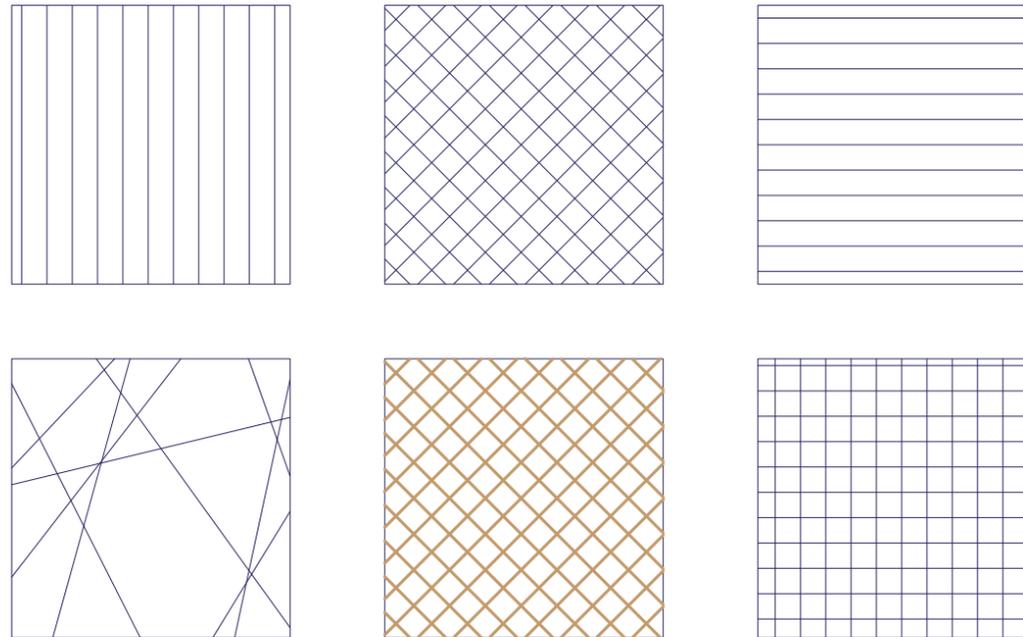


THREE PRINCIPLES

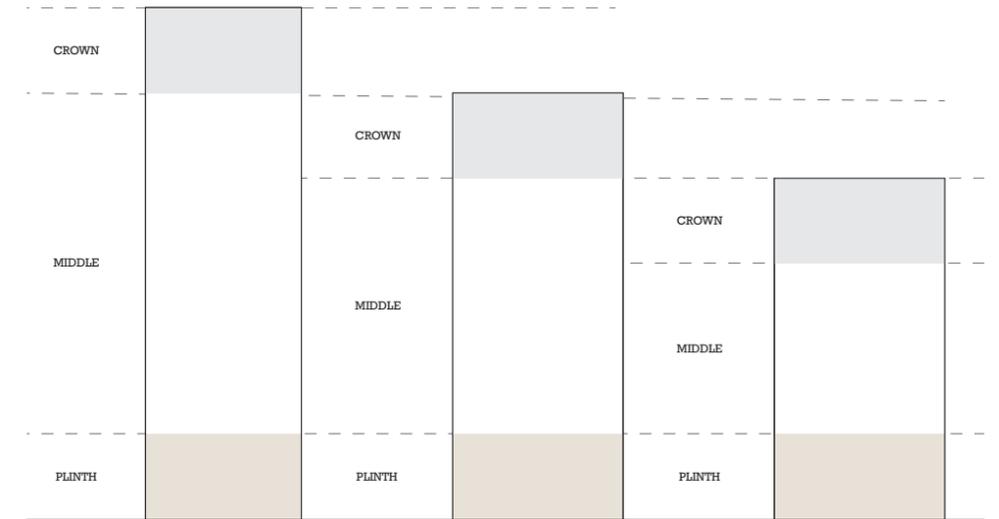
PRINCIPLE 1: INNER V.S. OUTER FACADES



PRINCIPLE 2: NETWORK FOR GROWING PLANTING ON INNER FACADES



PRINCIPLE 3: CROWN - MIDDLE - PLINTH



Theodora House in Copenhagen, Denmark by ADEPT
Photos: Rasmus Hjortshøj - COAST

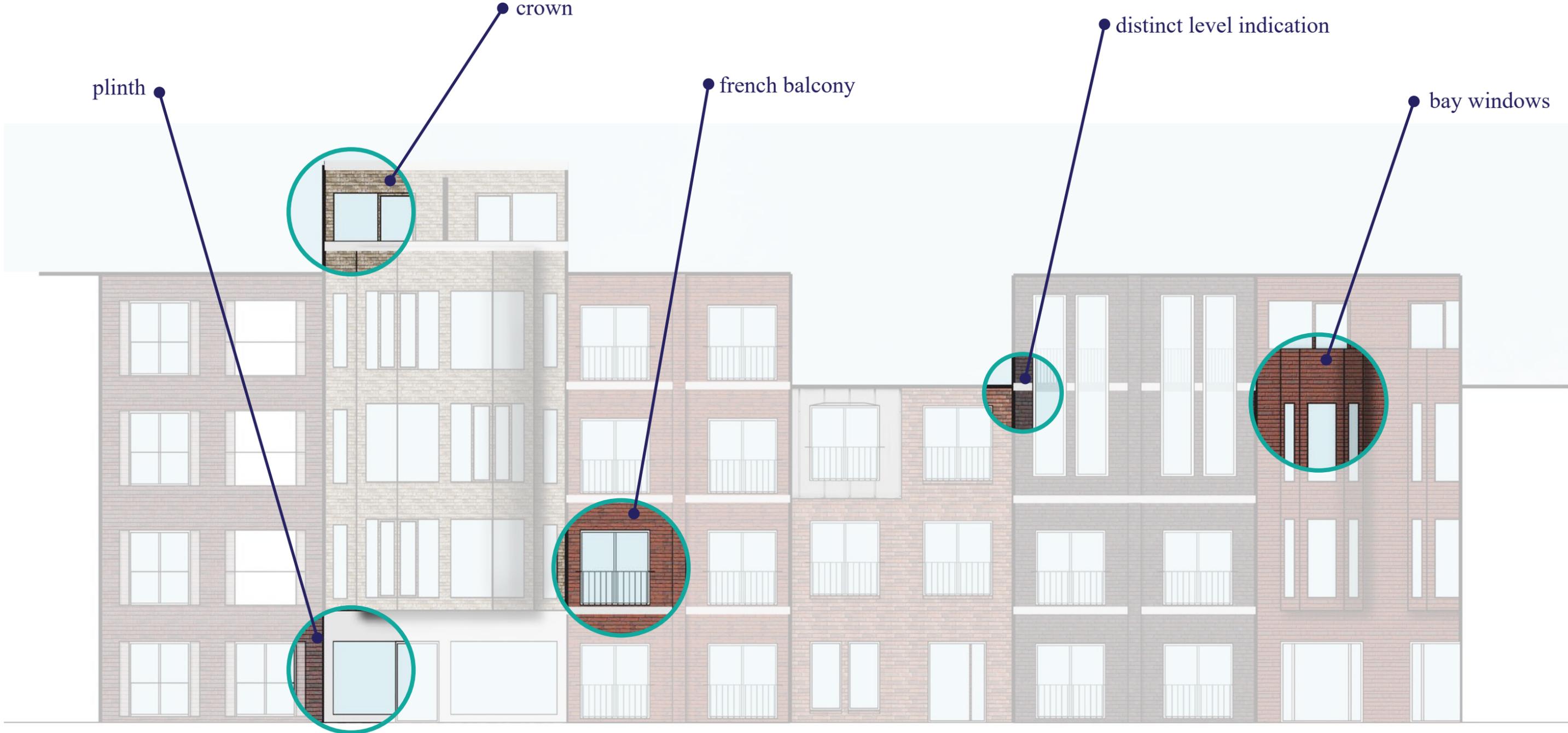
References

Cadix (social housing + daycare), Happel
Cornelisse Verhoeven Architects, Antwerp (BE)

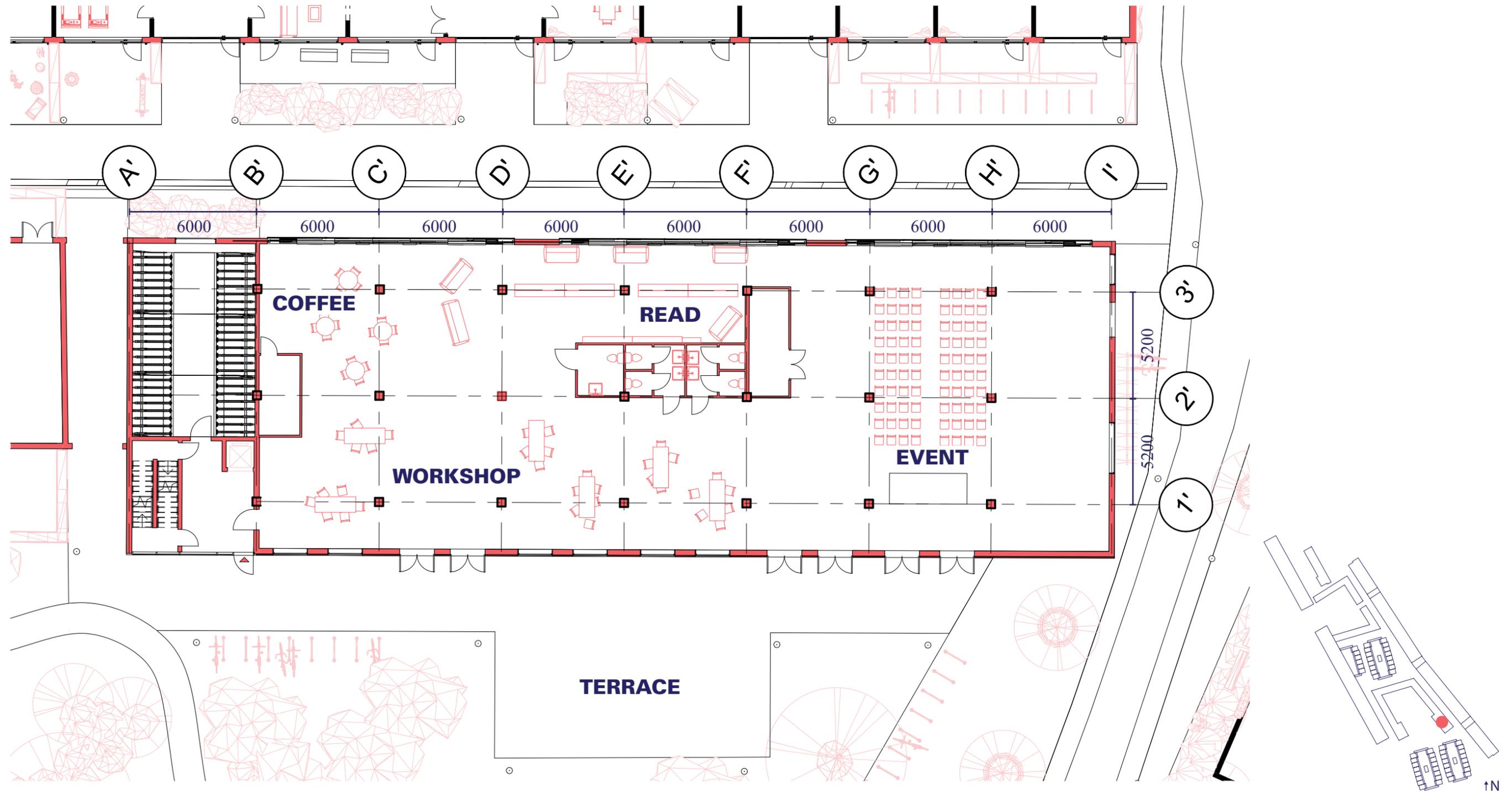
ADDITIONAL ARCHITECTURAL PRINCIPLES



ADDITIONAL ARCHITECTURAL PRINCIPLES

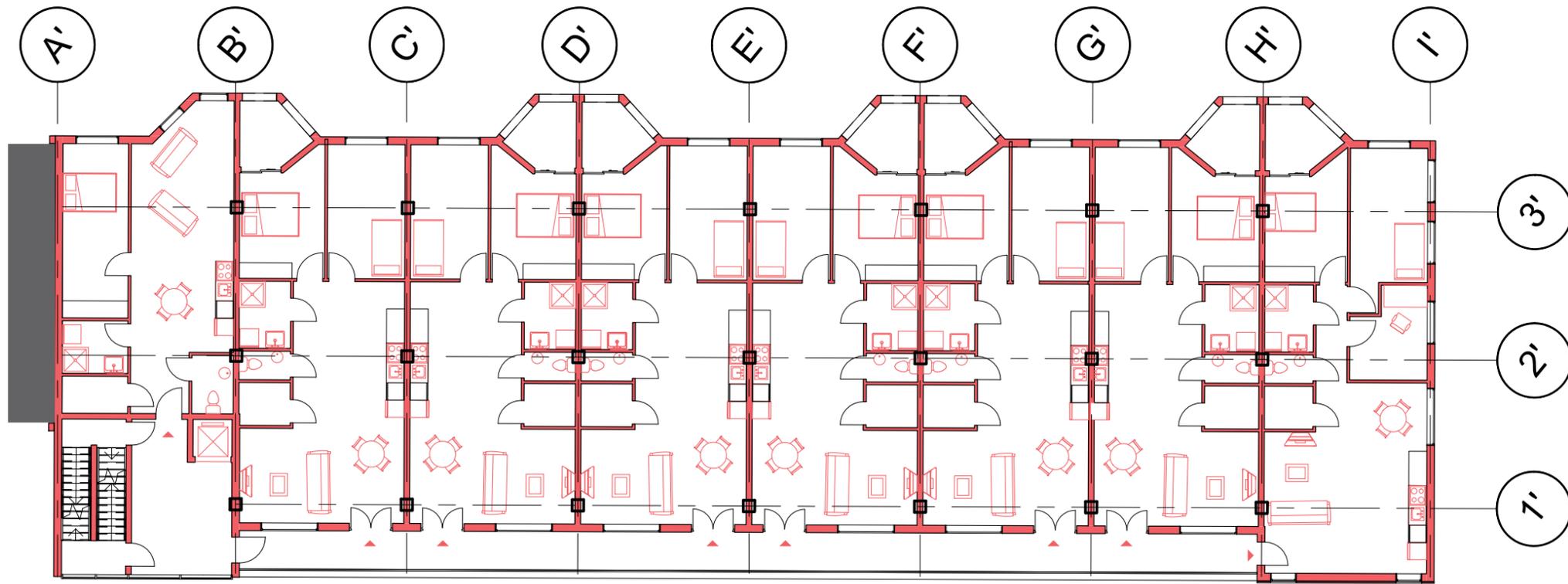


COMMUNITY CENTRE: GROUND FLOOR 1:200

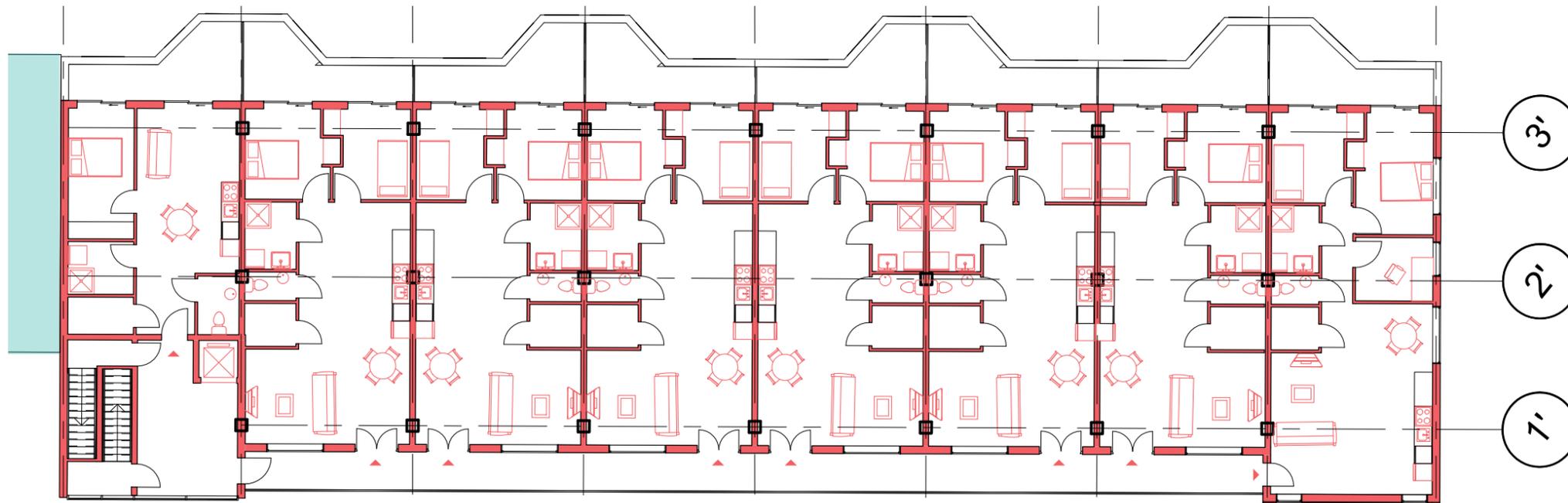


1:200 ↖N

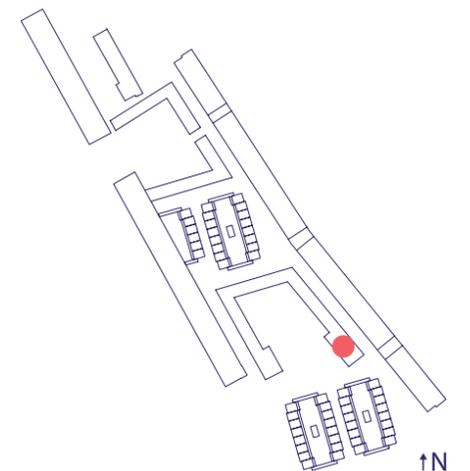
DWELLINGS: PLAN 1:200



LEVEL 1 TO 3



LEVEL 4



1:200 ↖N

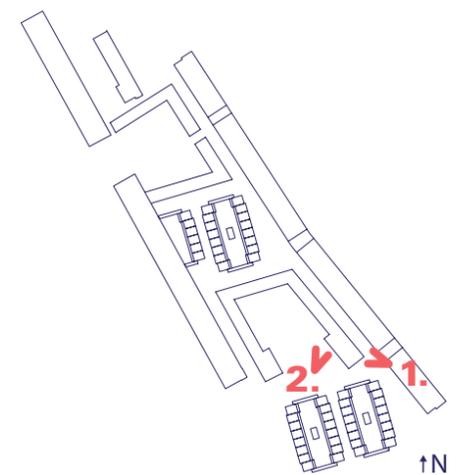
IMPRESSION COMMUNITY CENTE



STREET SIDE

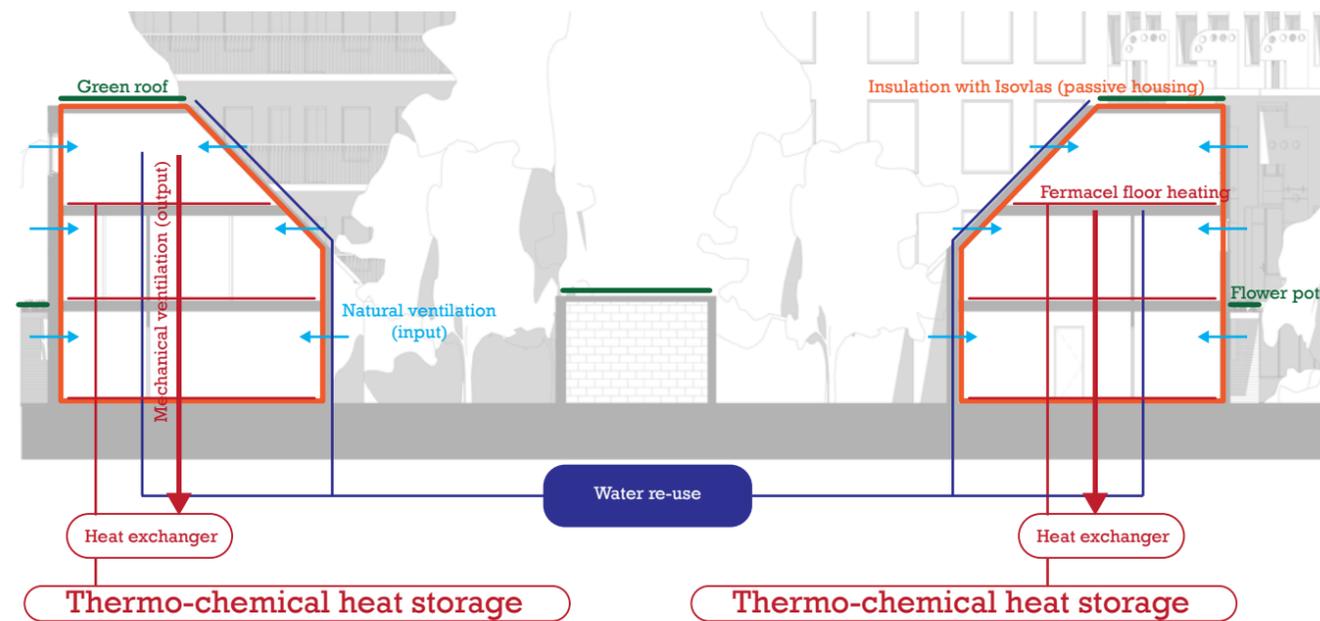
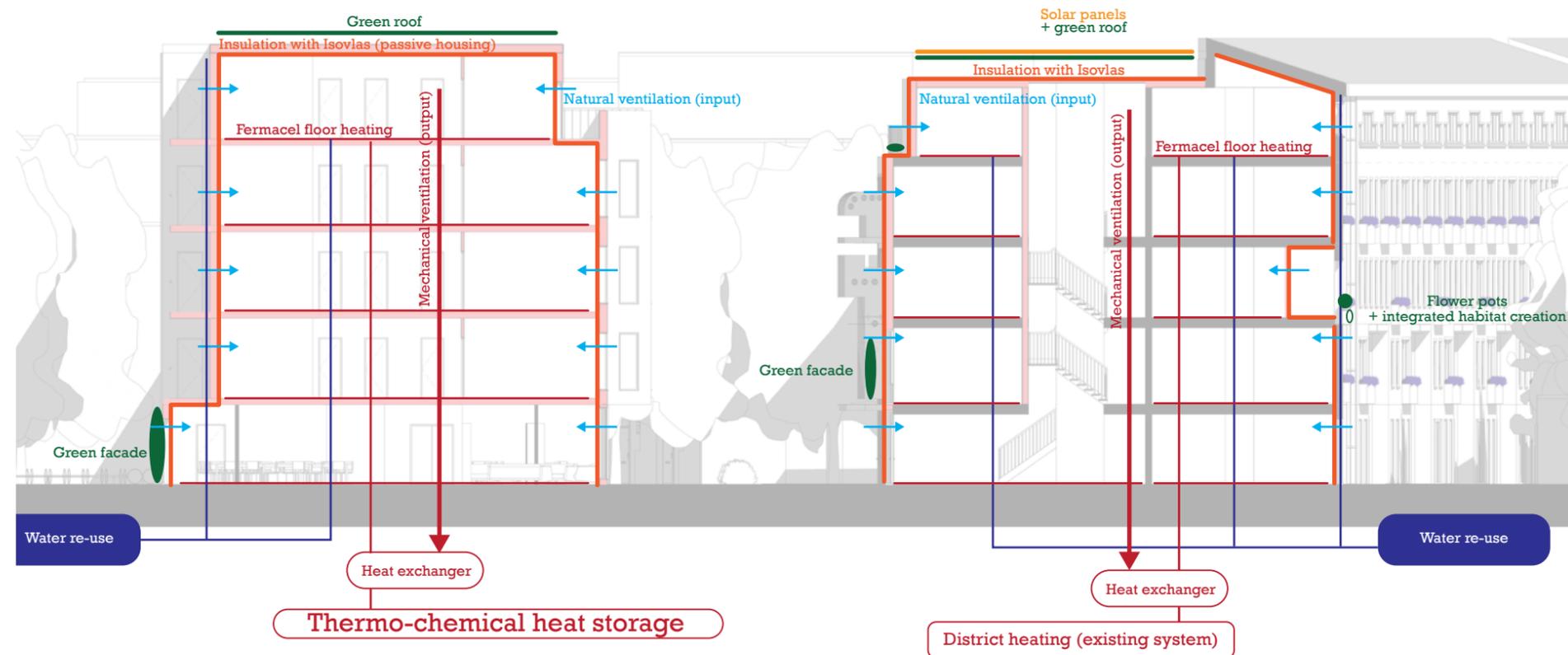


PARK SIDE



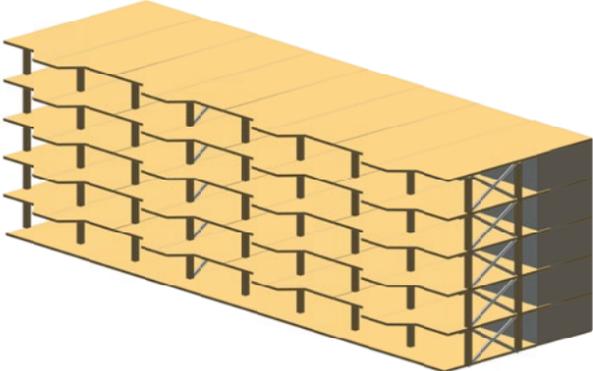
- design proposal -
materialisation

CLIMATE DESIGN



MATERIALS USED: BIOBASED + CRADLE TO CRADLE

TIMBER



ISOVLAS



CLICK-BRICK PURE



**DEMOLISHMENT OF LOW-RISE HOUSING AND
MID-RISE FACADE: MAIN MATERIALS**

CONCRETE



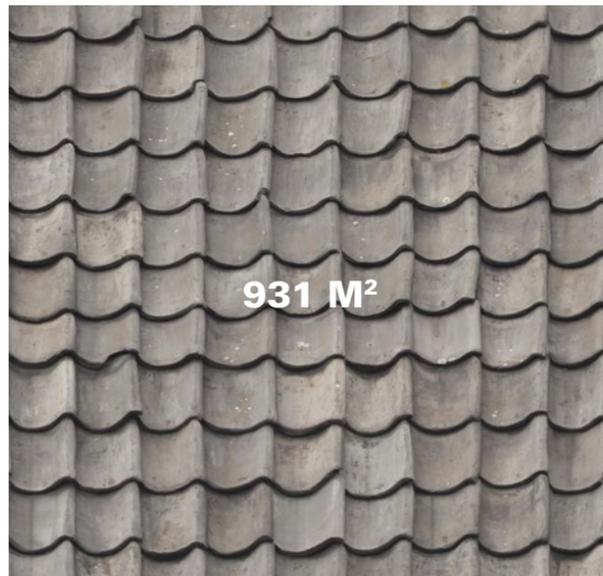
GLASS



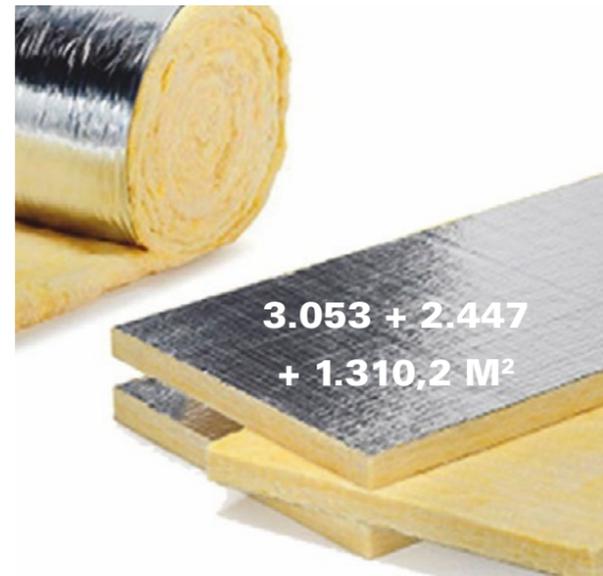
BRICK



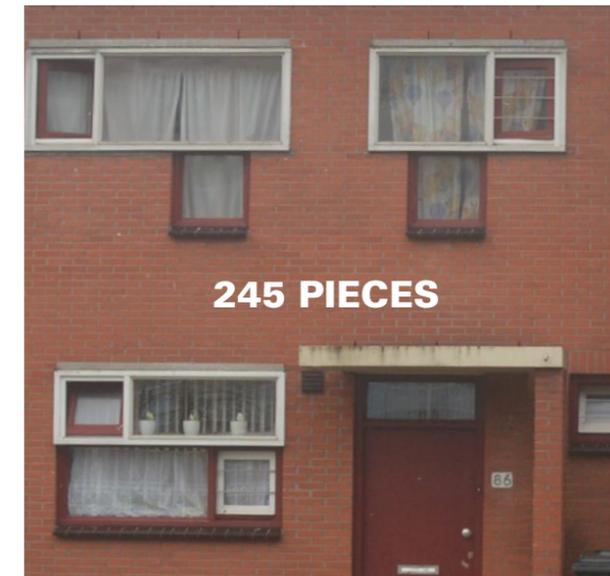
ROOF TILES



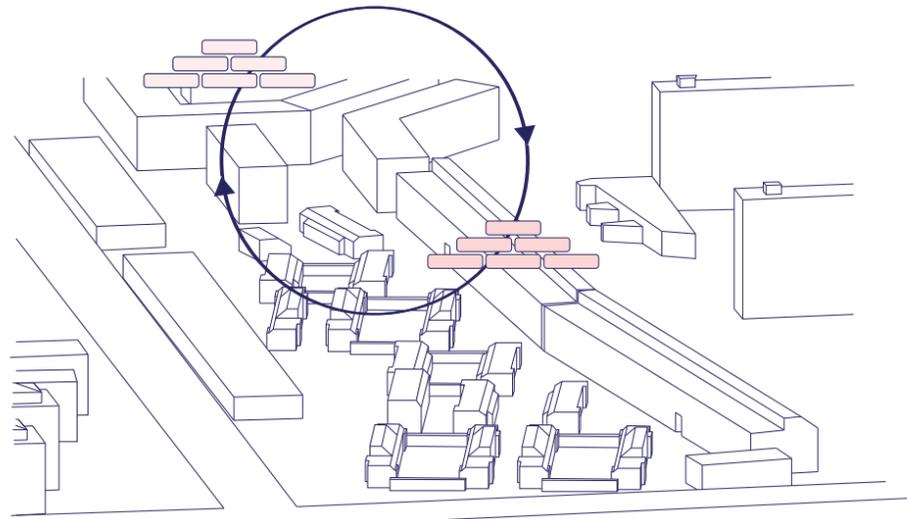
GLASS WOOL



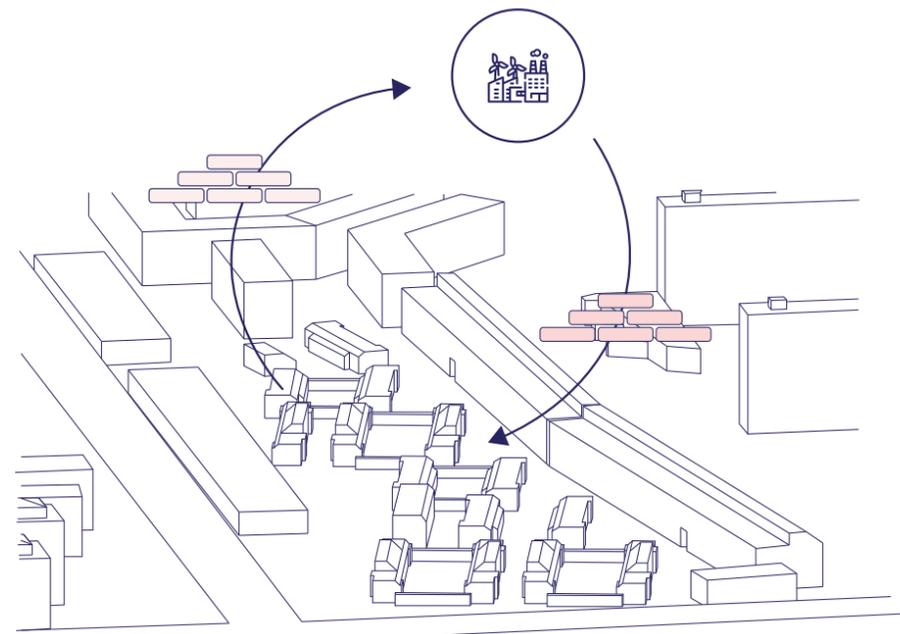
WINDOW FRAMES



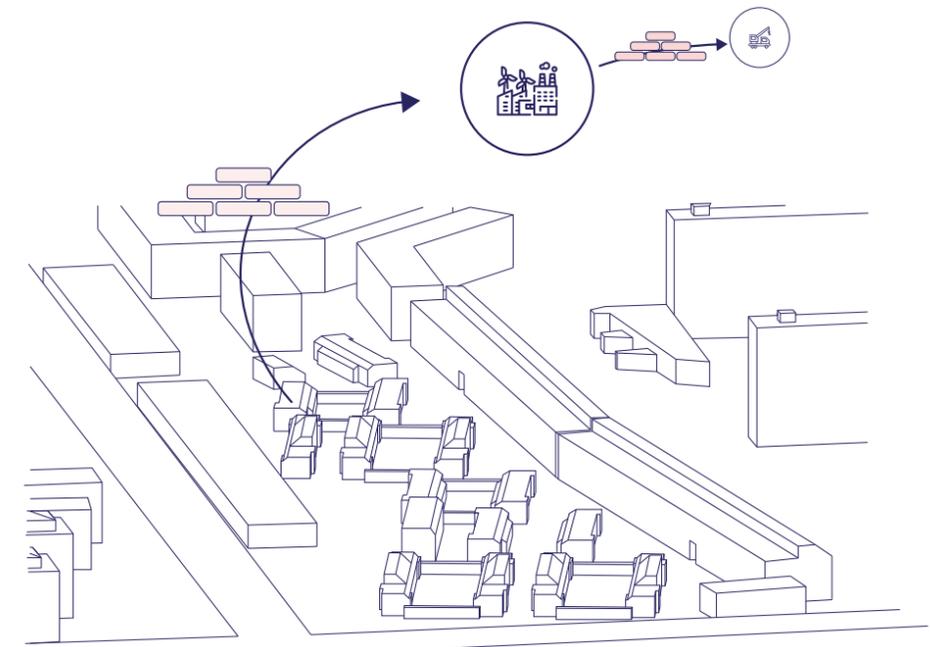
REUSE AND RECYCLE: THREE STRATEGIES



1. REUSE ON SITE



2. ALTERATIONS OFF SITE, THEN BACK TO HOPTILLE



3. ALTERATIONS OFF SITE, USE IN OTHER LOCATION

EXAMPLE: REUSE OF WINDOW FRAMES

Strategy 1



POSITIVE ASPECTS OF REUSE:

DIRECT REUSE OF MATERIAL: NO LOSS OF MATERIAL IN ALTERATIONS OR IN VALUE

IDENTITY KEPT THROUGH THE ATTRIBUTES: GENIUS LOCI

NO NEED FOR TRANSPORT OF MATERIALS: EMBODIED ENERGY STAYS ON SITE

MORE EFFORT TO REMOVE: ADDITIONAL COSTS (WITHOUT ENVIRONMENTAL IMPACT)

ADDITIONAL MATERIAL NEEDED TO ACHIEVE ESSENTIAL REQUIREMENTS (WATERTIGHT ETC.)

NEGATIVE ASPECTS OF REUSE:

- conclusion -

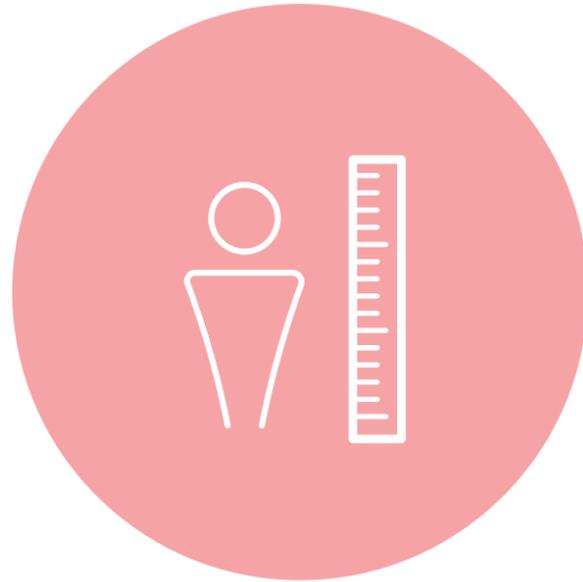
MAIN RESEARCH QUESTION

“

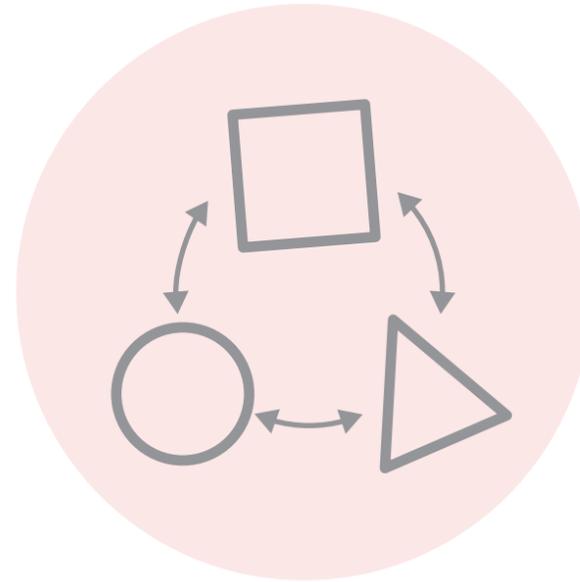
How can the Dutch 80's neighbourhood be **densified** in terms of **housing and nature** while enhancing and preserving in- and extrinsic **values** (if present) by taking the neighbourhood Hoptille as case study?

”

MAIN CONCLUSIONS



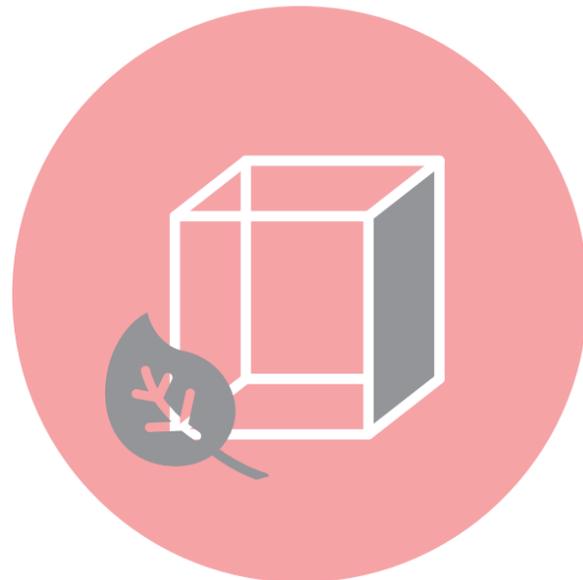
HUMAN SCALE



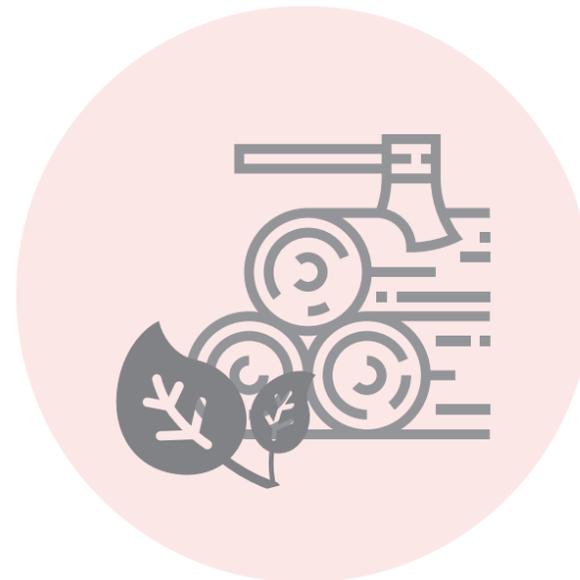
**FLEXIBLE SPACES AND
STRUCTURE**



ACTIVE PLINTH



PLOT M2 = M2 GREENERY



**TIMBER + BIOBASED
MATERIALS**

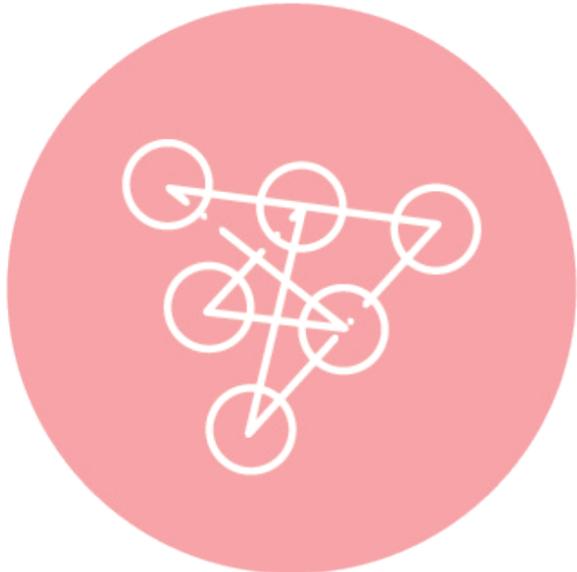


**DIVERSITY IN SPACE,
MATERIALS, FUNCTIONS,
& DWELLINGS**

CONSEQUENCES DESIGN



**URBAN
MAINTENANCE**



**ELABORATE
INTERVENTIONS**

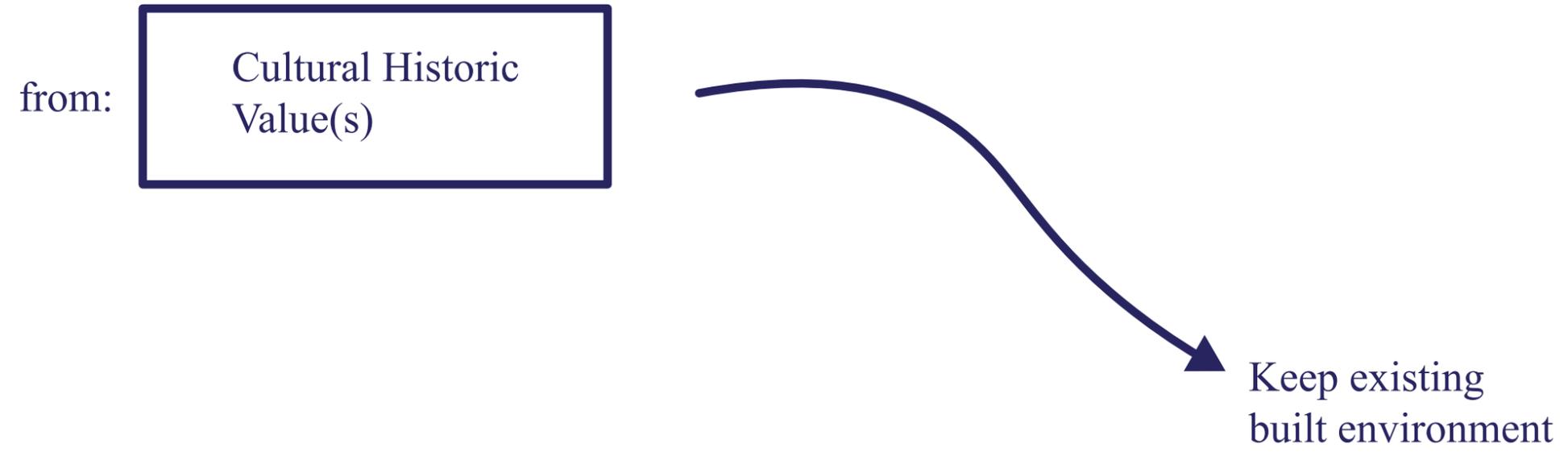


**MORE AND NEW
RESIDENTS**

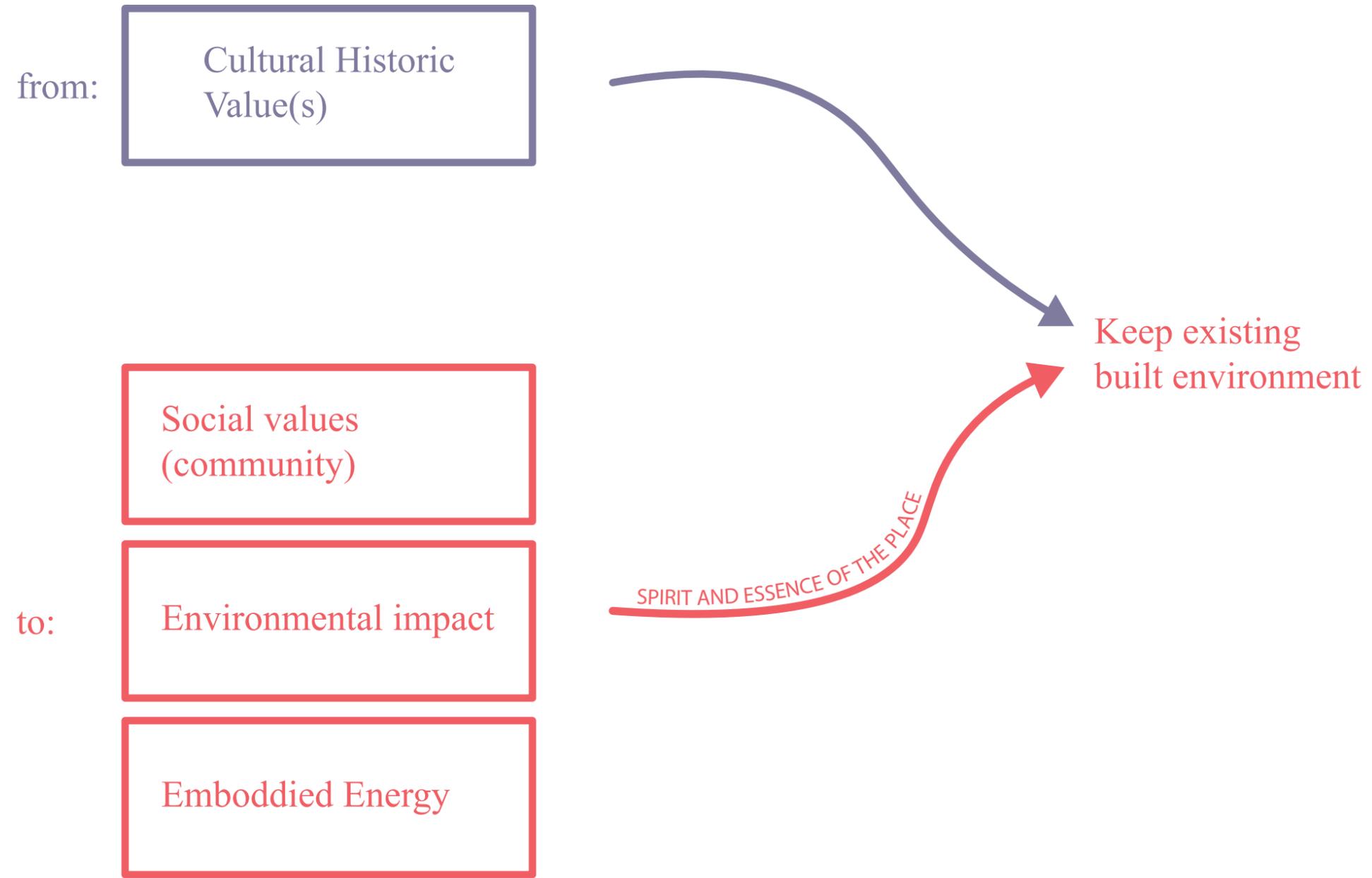


SOCIAL HOUSING

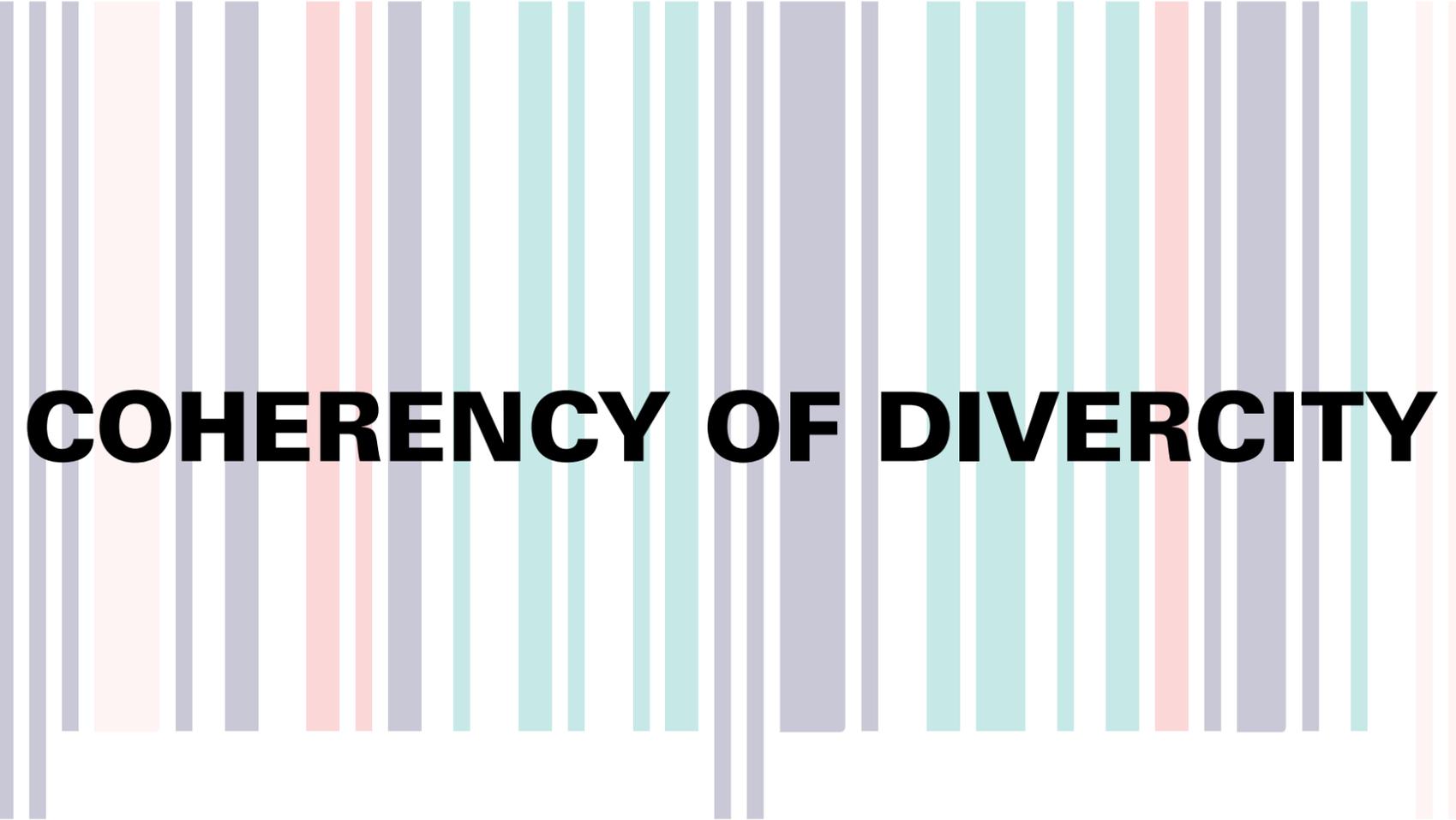
HERITAGE?



HERITAGE: GENIUS LOCI



MAIN MESSAGE



COHERENCY OF DIVERCITY

- thank you for your attention -

BIBLIOGRAPHY

1. Arup. (2016). *Cities Alive: Green Building Envelope*.
2. Barzilay, M., Ferwerda, R., & Blom, A. (2018). *Predicaat experimentele woningbouw 1968-1980: verkenning Post 65*. Rijksdienst voor het Cultureel Erfgoed.
3. Clarke, N., Kuipers, M., & Stroux, S. (2019). *Embedding built heritage values in architectural design education*. International Journal of Technology and Design Education, 30(5), 867-883.
4. Gemeente Amsterdam. (2020). *H-buurt Midden: wensen en ideeën*. <https://www.amsterdam.nl/projecten/h-buurt-midden/hbuurt-midden-wensen-ideeen/>.
5. Gibbons, A. (2016, October 4). *Camillo Sitte: The Art of Building Cities*. Andrea Gibbons. <http://www.writingcities.com/2016/10/01/camillo-sitte-art-building-cities/>.
6. Harper, D. (2002). *Talking about pictures: A case for photo elicitation*. Visual studies, 17(1), 13-26.
7. Howard, P. (2003). Selling Heritage. In *Heritage: management, interpretation, identity* (p. 102-146). Continuum.
8. Ritchie, H., & Roser, M. (2017, May 11). *CO₂ and Greenhouse Gas Emissions*. Our World in Data. <https://ourworldindata.org/co2-and-other-greenhouse-gas-emissions>.
9. Ritchie, H., & Roser, M. (2020). *Emissions by sector*. Our World in Data. <https://ourworldindata.org/emissions-by-sector>.
10. Ministerie van Binnenlandse Zaken en Koninkrijksrelaties. (2020, June 15). *Staat van de woningmarkt 2020*. <https://www.rijksoverheid.nl/actueel/nieuws/2020/06/15/staat-van-de-woningmarkt-2020>.
11. Schilthuizen, M. (2019). *Darwin in de stad: evolutie in de urban jungle*. Uitgeverij Atlas Contact.
12. Somers, K. (2020). *Groei, verandering, differentiatie. Architectuur in Nederland 1965-1990*. Rijksdienst voor het Cultureel Erfgoed.
13. Tarrafa Silva, A. and Pereira Roders, A. (2012). *Cultural heritage management and heritage (impact) assessments*. Joint CIB W070, W092 & TG72 International Conference on Facilities Management, Procurement Systems and Public Private, Partnership, Cape Town, South Africa.
14. The School of Life. (2015) *How to make an attractive city*.
15. United Nations. (2020). *The Sustainable Development Agenda*. United Nations. <https://www.un.org/sustainabledevelopment/development-agenda/>.

Interviews with Sjoerd Soeters (13-10-2020) and Pi de Bruijn (14-10-2020).

Icons taken and adapted from The Noun Project.com:

1. Balcony: tezar tantular
2. Biodiversity: Nithinan Tatah
3. Bored face: Vicons Design
4. Leakages: Ben Davis
5. Aesthetical Incoherence: ochre7
6. Staircase: Afra Khautsar
7. Passive housing: Tomas Knopp
8. Water management: Symbolon
9. Confetti: Cak Badrun
10. Pha That Luang by József Balázs-Hegedüs
11. Le Ministère des mines by József Balázs-Hegedüs
12. De Gooyer Windmill by József Balázs-Hegedüs
13. Metropolitan Cathedral by József Balázs-Hegedüs
14. Umayyad Mosque by József Balázs-Hegedüs
15. Axe by Eucalyp
16. Barcode by Tom Tom

If not listed, made by author.

Images are made by the author unless stated otherwise during the presentation.

Cover image: 1:1000 model.

Images page 67:

Top left: Olga Rafeeva, n.d. Top right: Park Plaza Wallstreet Berlin Mitte, 2010. Bottom left: Thomas Chen, 2015. Bottom right: Nicolas Gzeley, n.d.

Images page 100:

Left: Adam Mørk. Middle: Zooey Braun. Right: Mario Cucinella Architects.

Images page 109:

Middle: Faay Scheidingswanden, n.d. Right: Wienerberger, 2019.

Images page 110:

Top left: Textures.com, n.d. Bottom left: Textures.com, n.d. Bottom middle: Isolmec, n.d.