



HEESTERVELD GONE GREEN

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01-07-2021

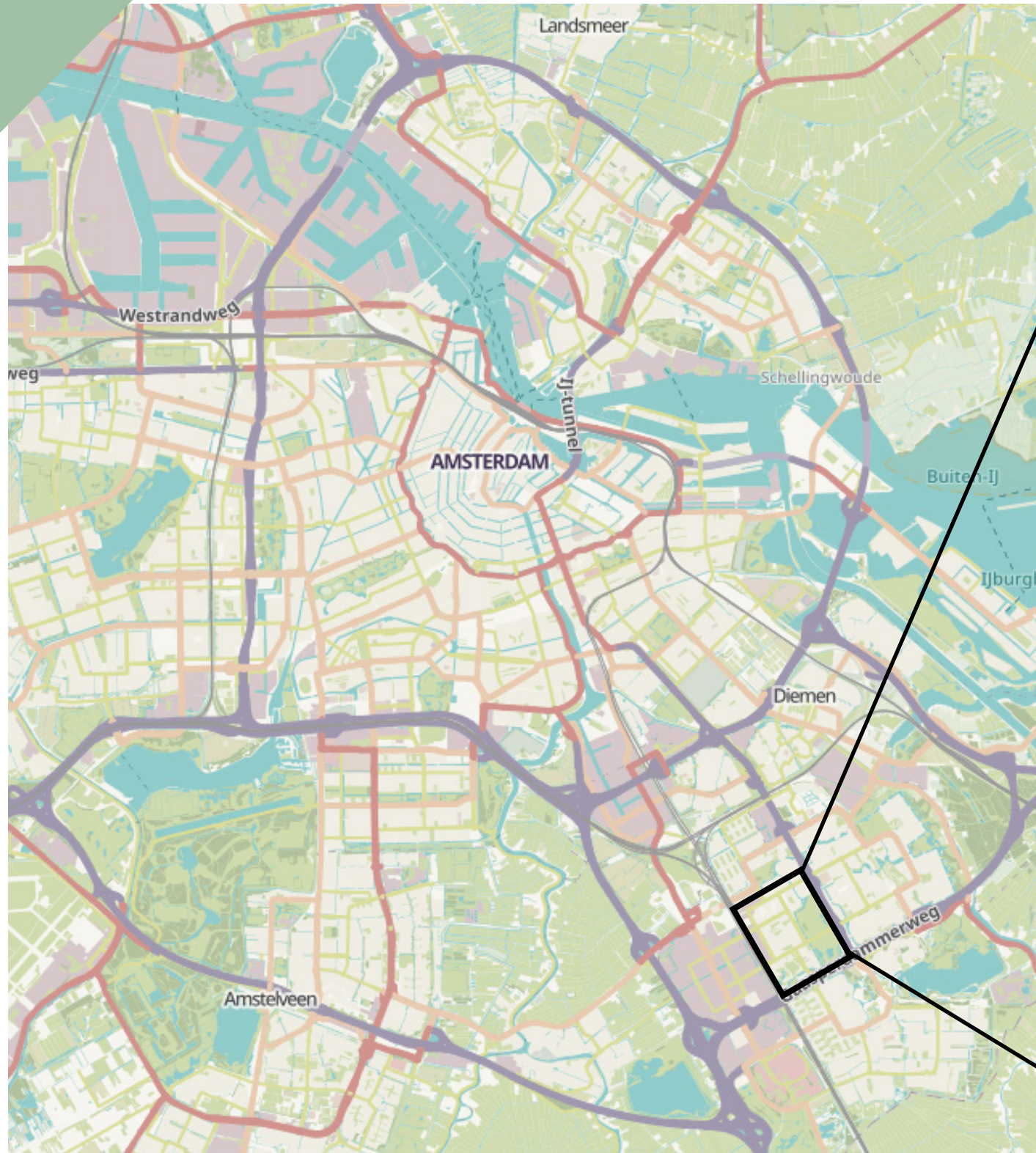


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# INTRODUCTION



Amsterdam



Heesterveld



# INTRODUCTION

Heesterveld

Owner: Ymere

Architect: Frans van Gool & Pi de Bruijn  
4 residential complexes with 317 dwellings





# HISTORY HEESTERVELD



1972



1974



1983



1983



1984



2013



2020



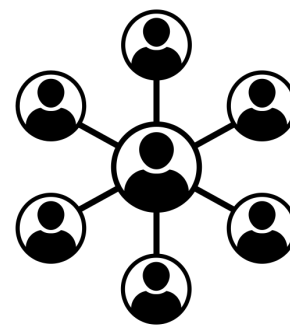
# HEESTERVELD





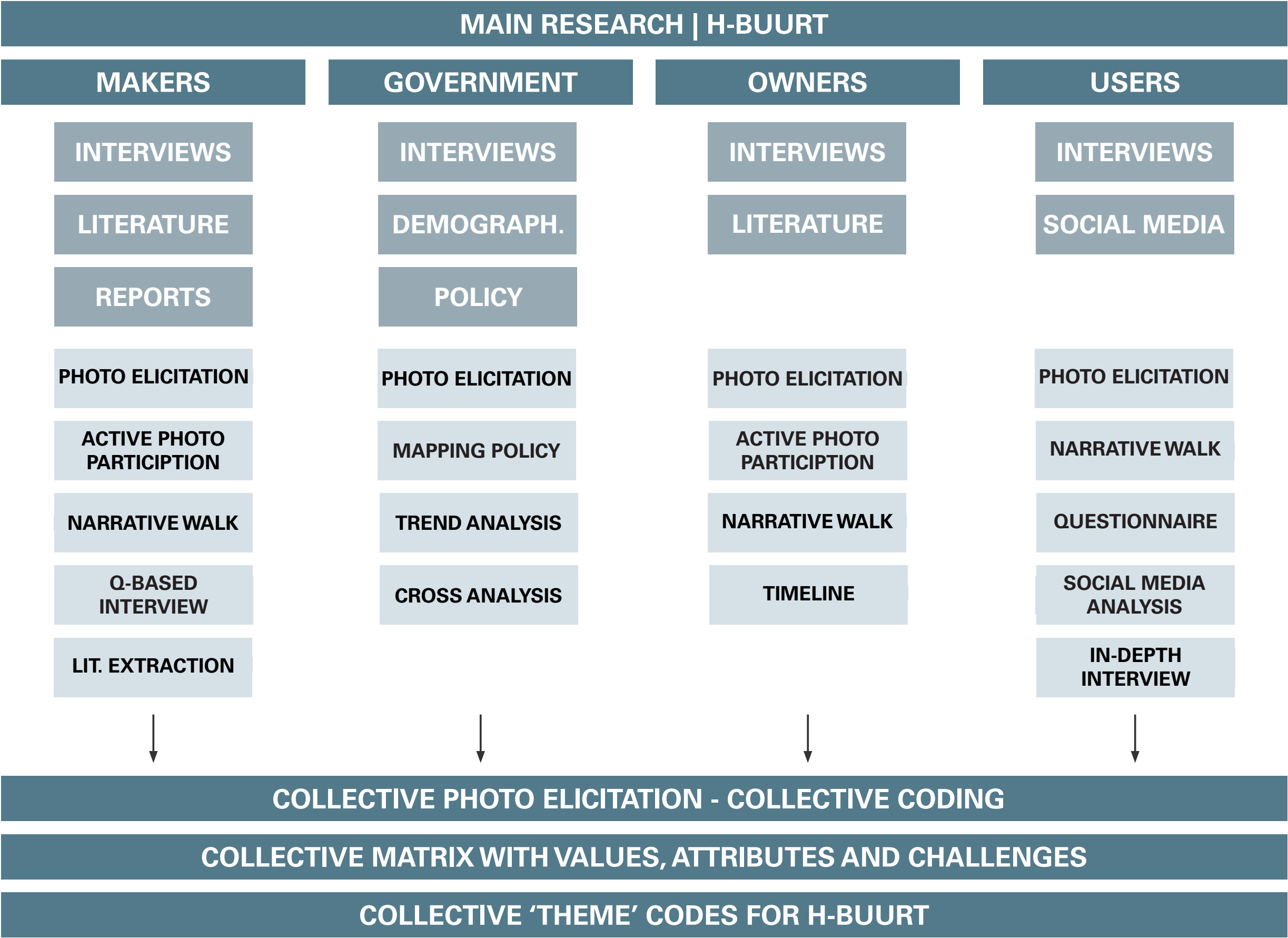
## GOAL OF RESEARCH

What are the ***values, attributes and challenges*** of the residential neighbourhood and buildings in Heesterveld, as perceived by its ***residents, the government, the makers and academics and the owners***?





METHOD

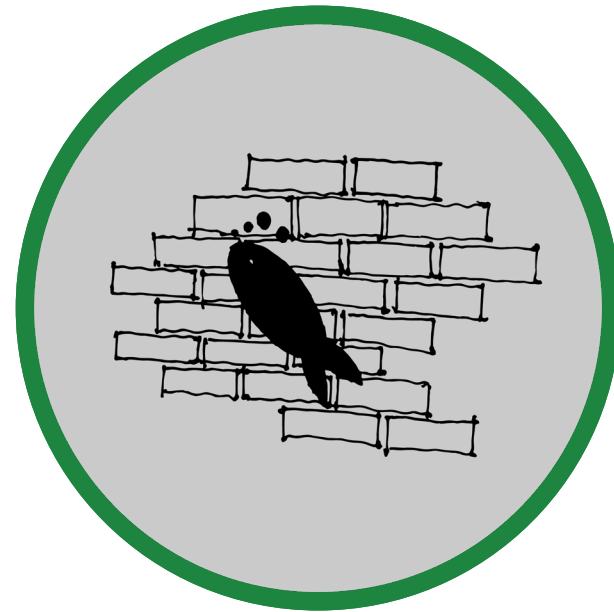




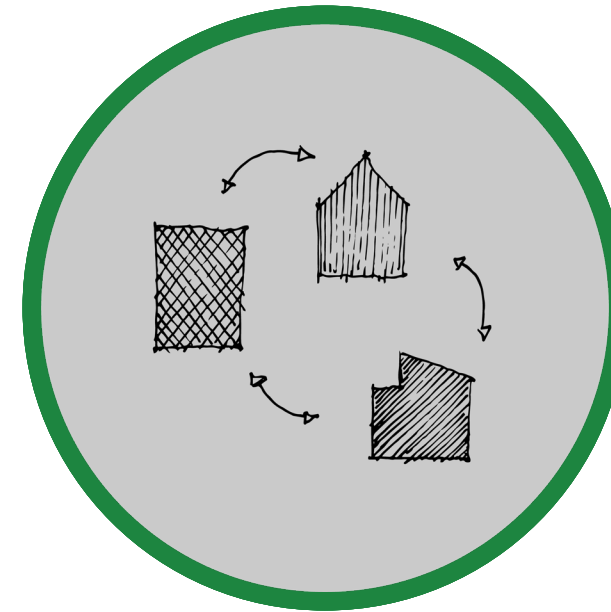
# COLLECTIVE RESEARCH



cultural diversity



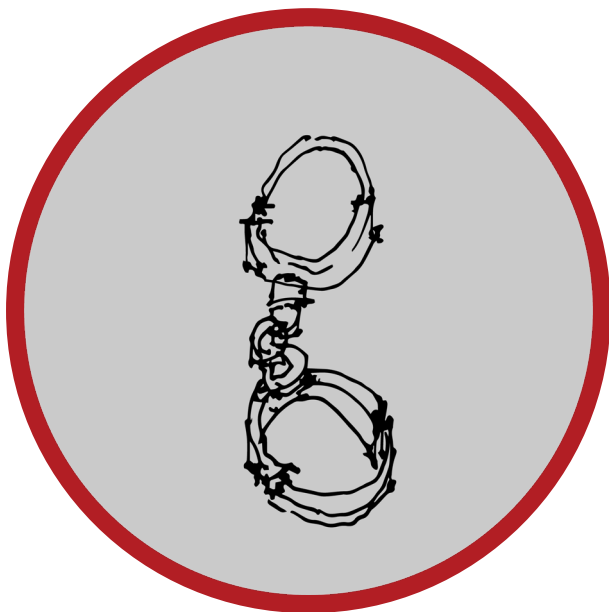
(street) art



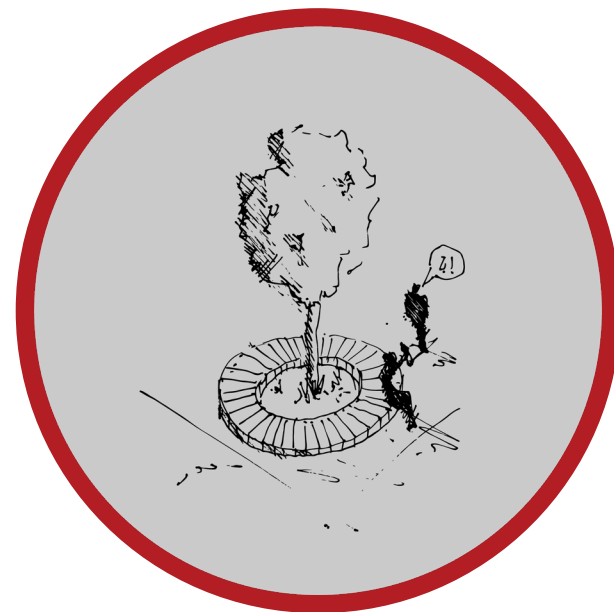
own identity



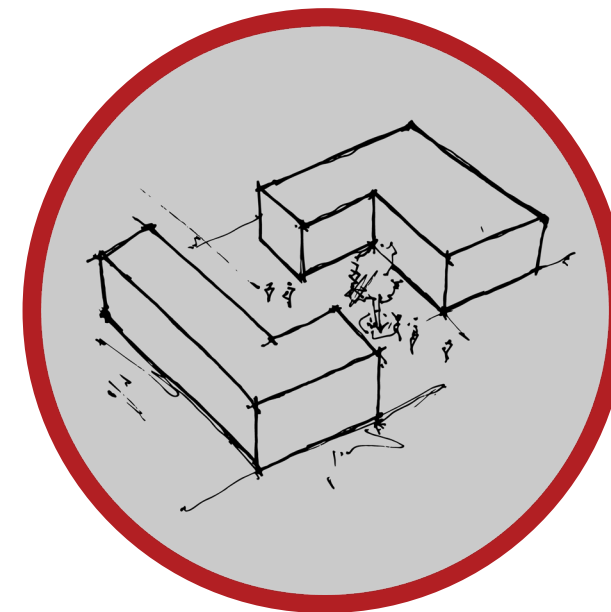
presence of greenery



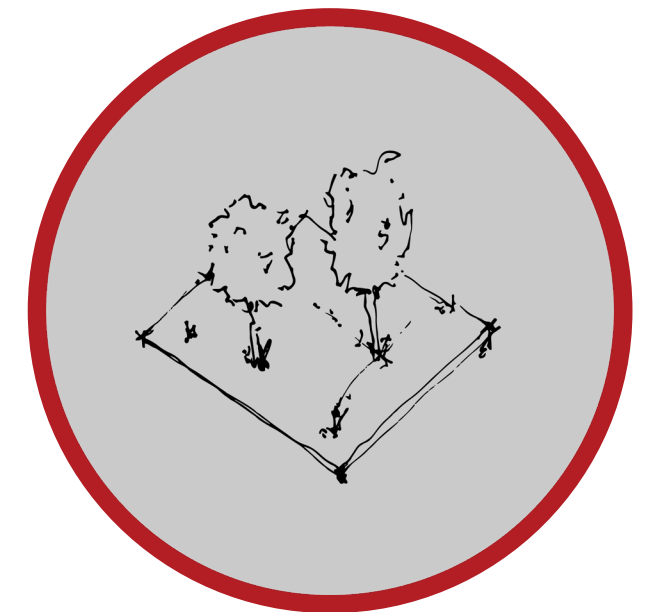
unsafe feeling



unintended use of public space



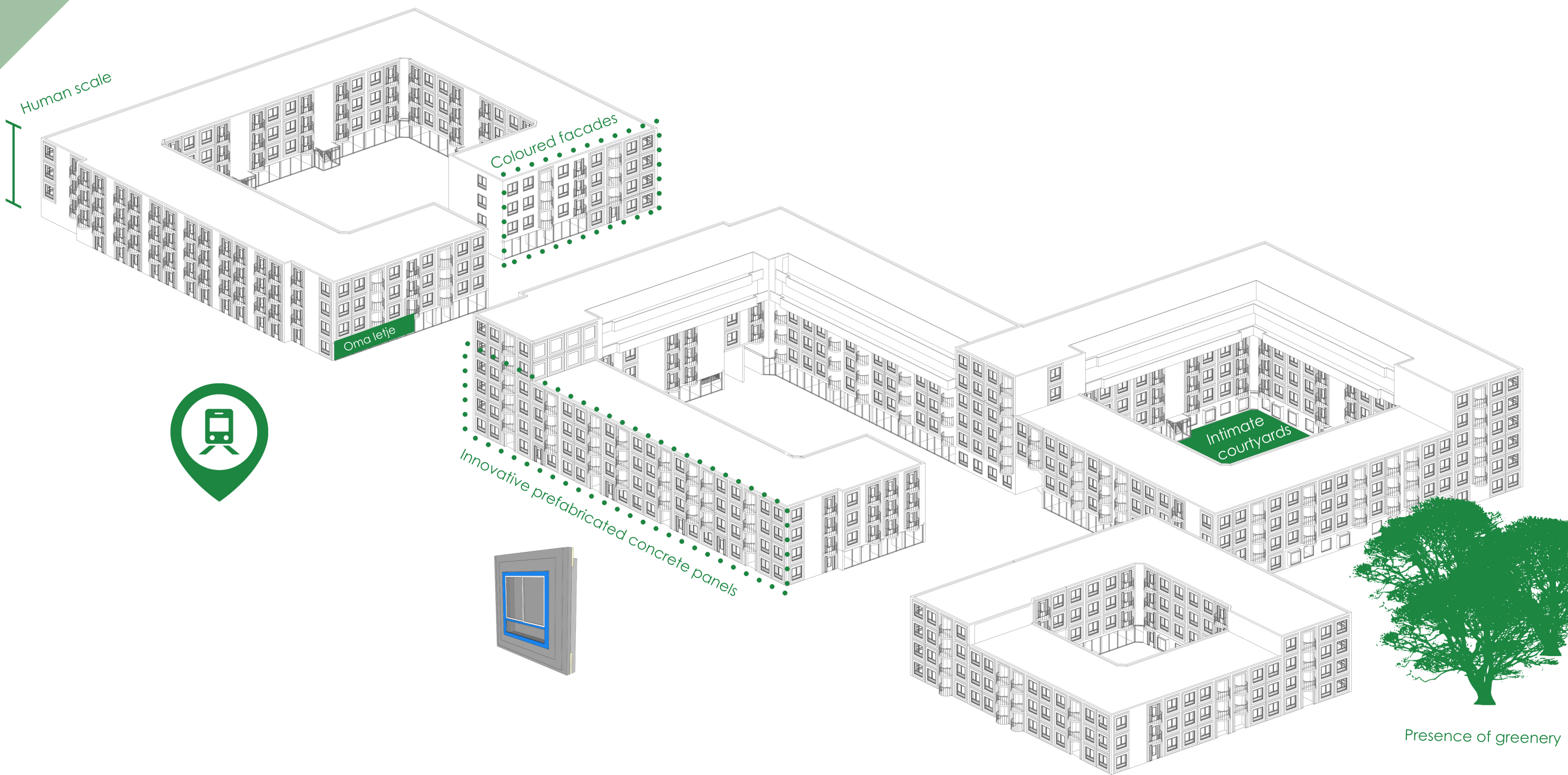
no diversity in  
public space/function



lack of qualitative greenery

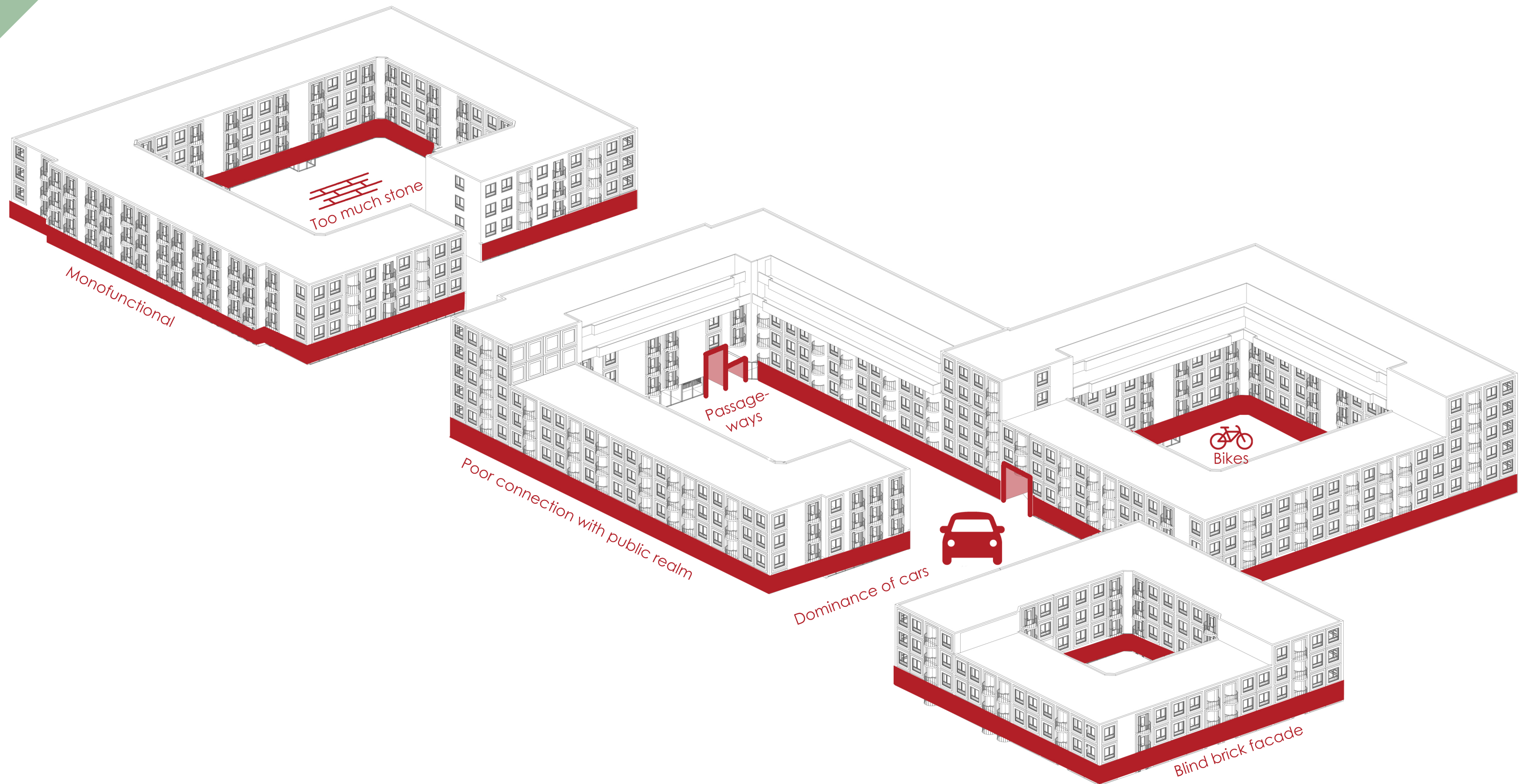


STRENGTHS





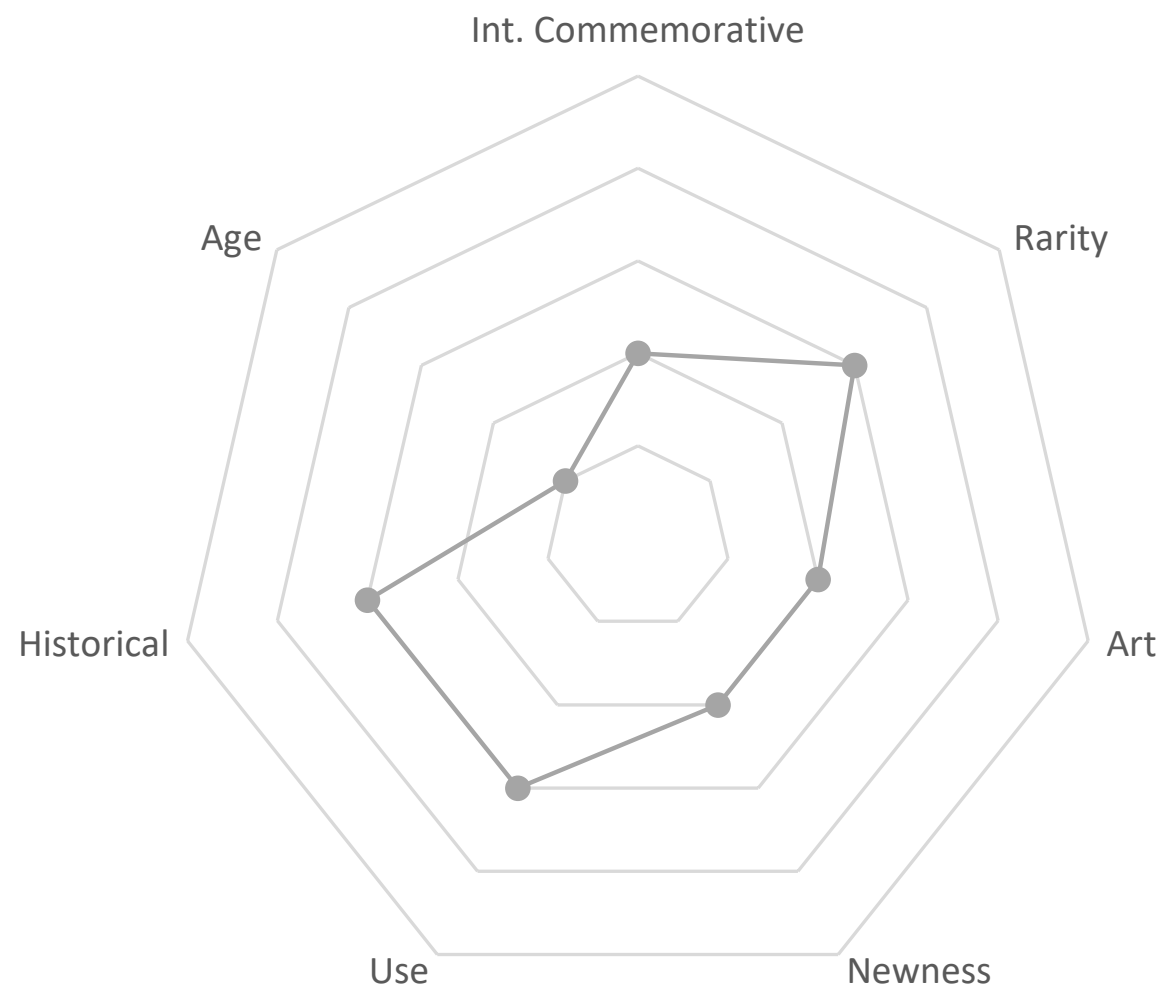
# WEAKNESSES





# VALUE ASSESSMENT

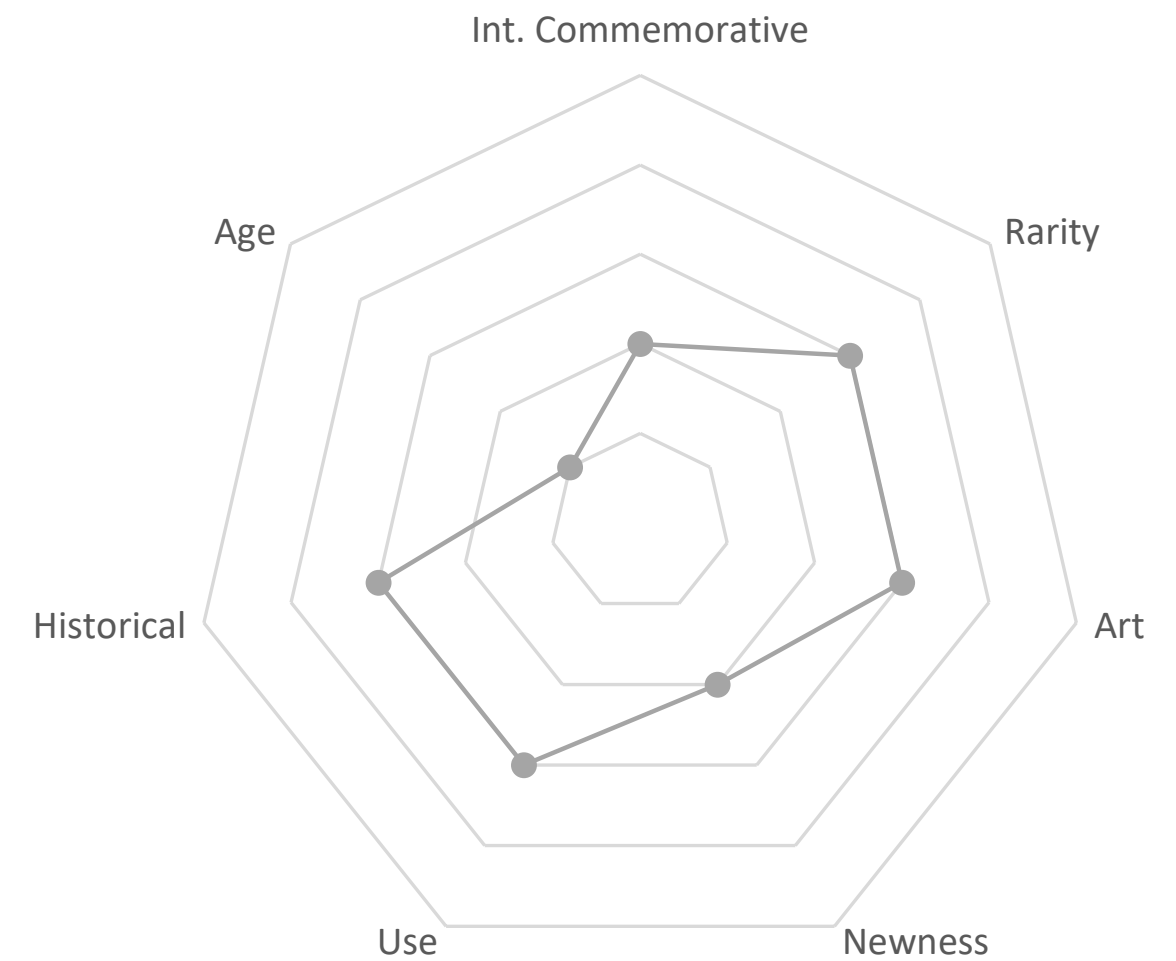
## URBAN



Urban:  
 - surroundings / setting  
 - site  
 - spirit of place

(Brand & Riegl)

## BUILDING



Building:  
 - skin  
 - structure  
 - space plan  
 - surfaces  
 - services  
 - stuff

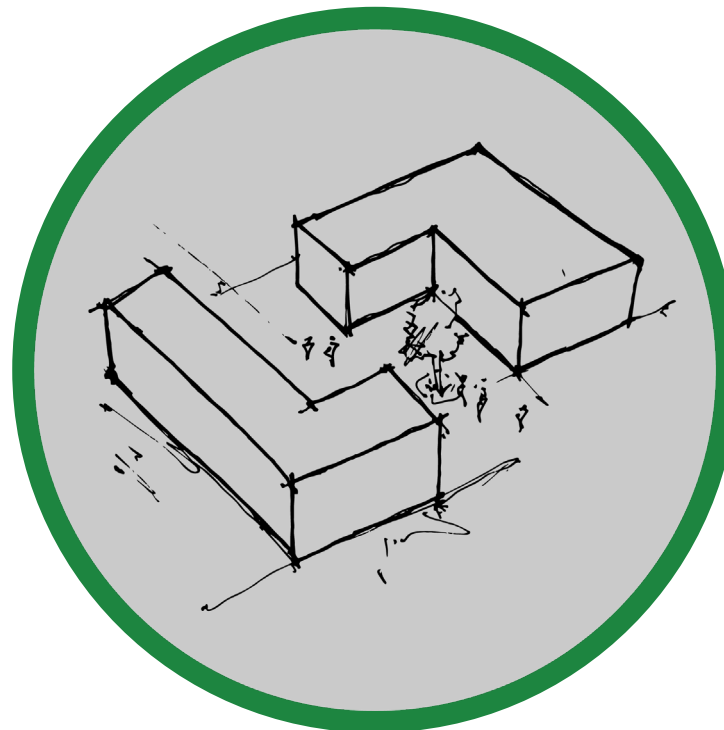
(Brand & Riegl)



## PROBLEM STATEMENT



problematic public space



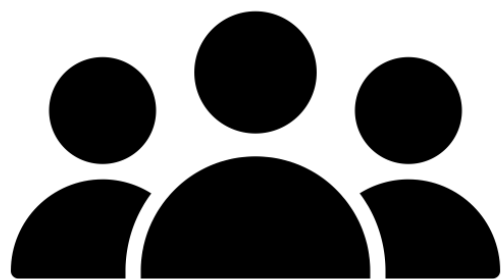
create diversity in public space and ground floor

SOCIAL



## PROBLEM STATEMENT

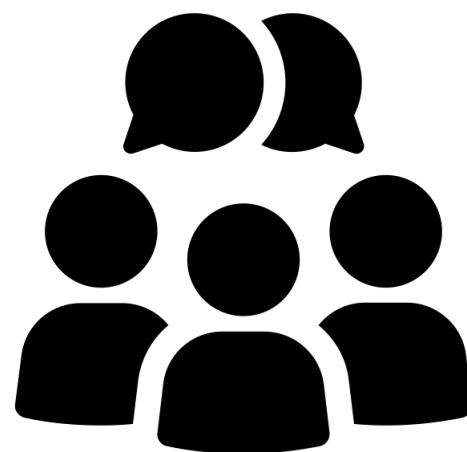
ECONOMIC



equal opportunities  
(age 0-32)



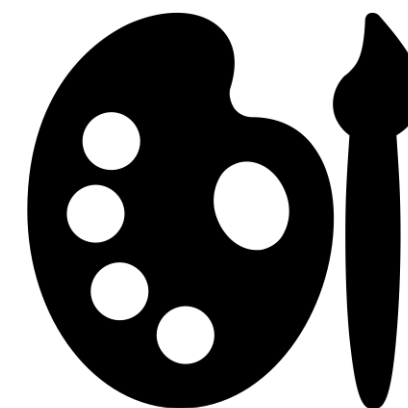
reduce  
juvenile crime



improve social  
accessibility



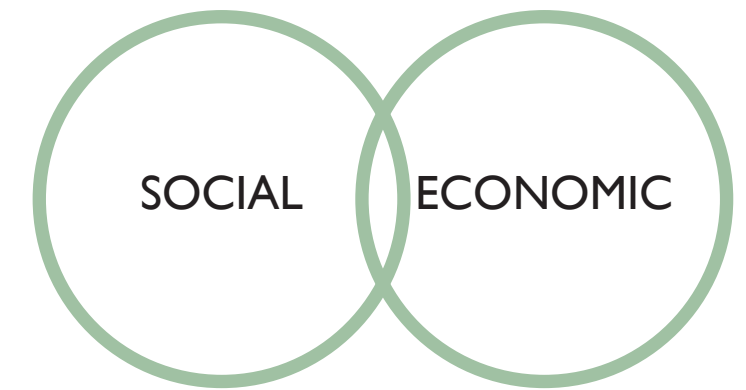
strengthen  
entrepreneurship



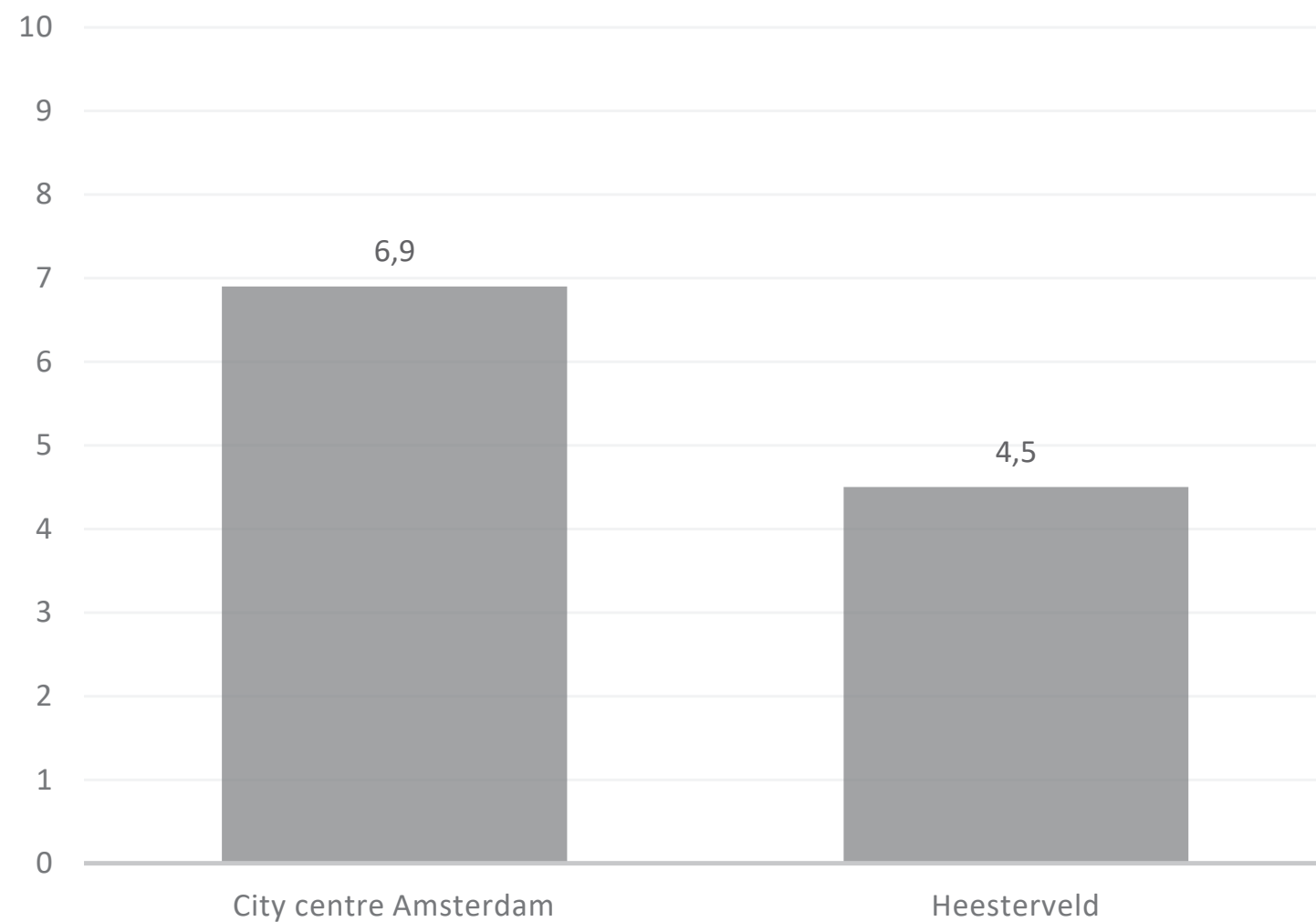
strengthen  
art and culture



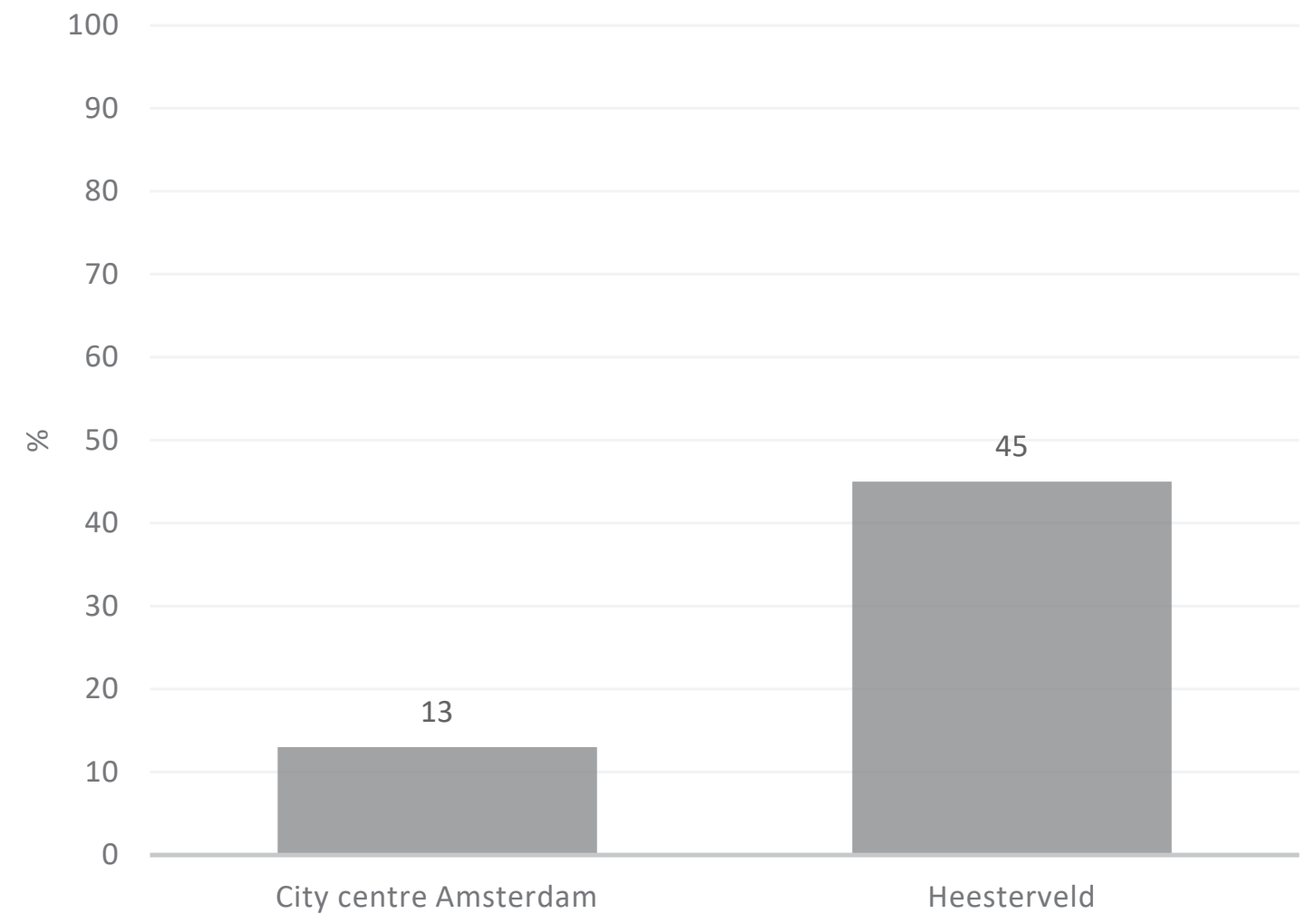
## PROBLEM STATEMENT



Average SES (socio-economic score)



Low-educated people (15-75 years)



A person's position on the social ladder based on the level of income and education



## PROBLEM STATEMENT

ENVIRONMENTAL

### CLIMATE CHANGE

#### HEALTH IMPACT

BAD AIR  
QUALITY

MORE  
HOT DAYS

HEALTH  
climate change  
harms people's  
health

MORE DISEASES

#### ECONOMIC IMPACT

FOOD  
crops can be  
damaged by heat,  
drought and  
insects

ECONOMY  
climate change  
will cost more  
money and  
impact jobs

floods can  
damage homes,  
neighbourhoods  
and businesses

extreme  
weather can  
damage homes,  
neighbourhoods  
and businesses

#### ENVIRONMENTAL IMPACT

MORE  
HEAVY RAIN

RISING SEA  
LEVELS

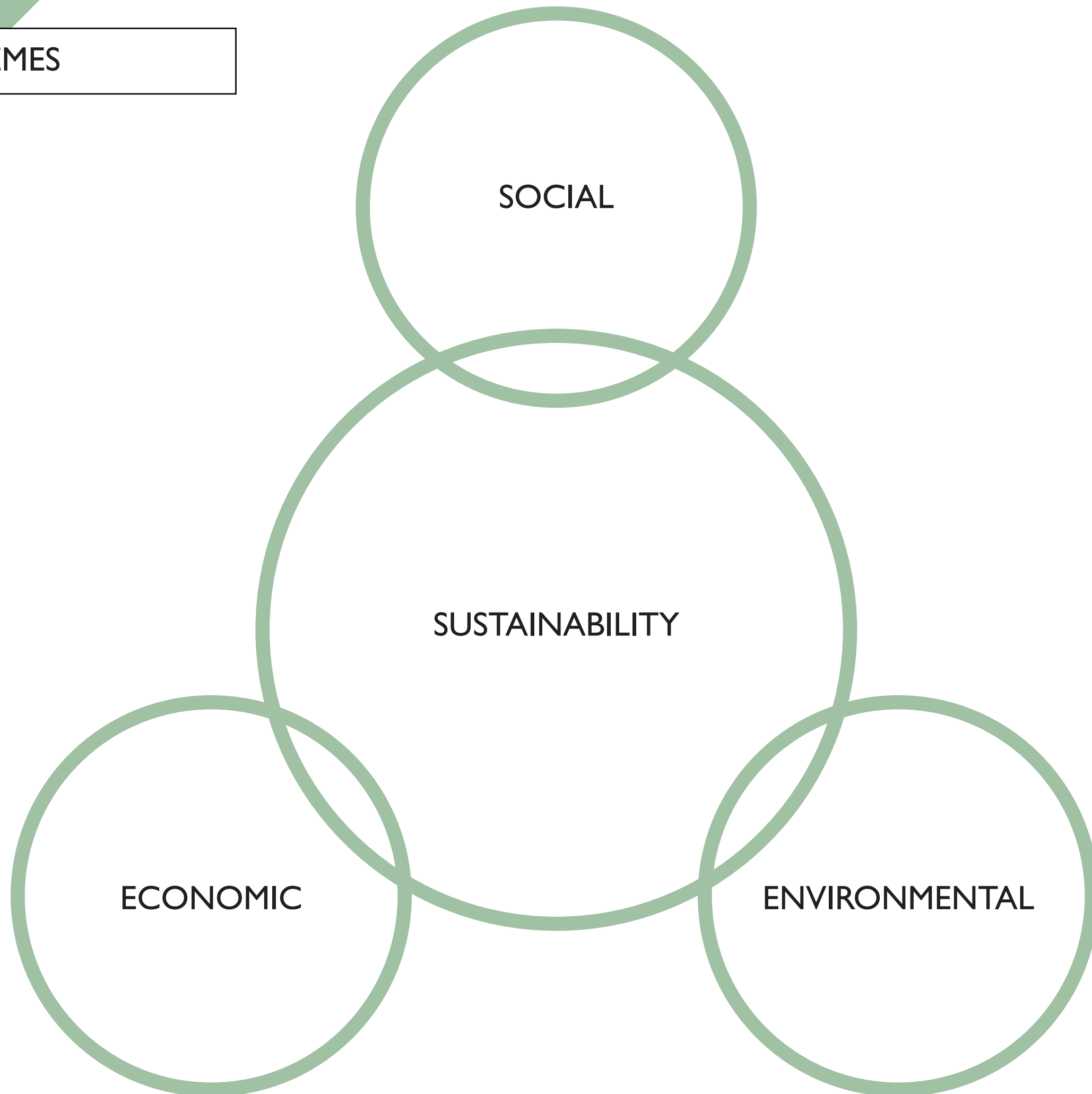
MORE RIVER  
FLOODING

EXTREME  
WEATHER

HOTTER  
AND DRIER  
SUMMERS



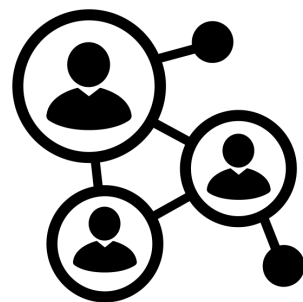
## THEMES





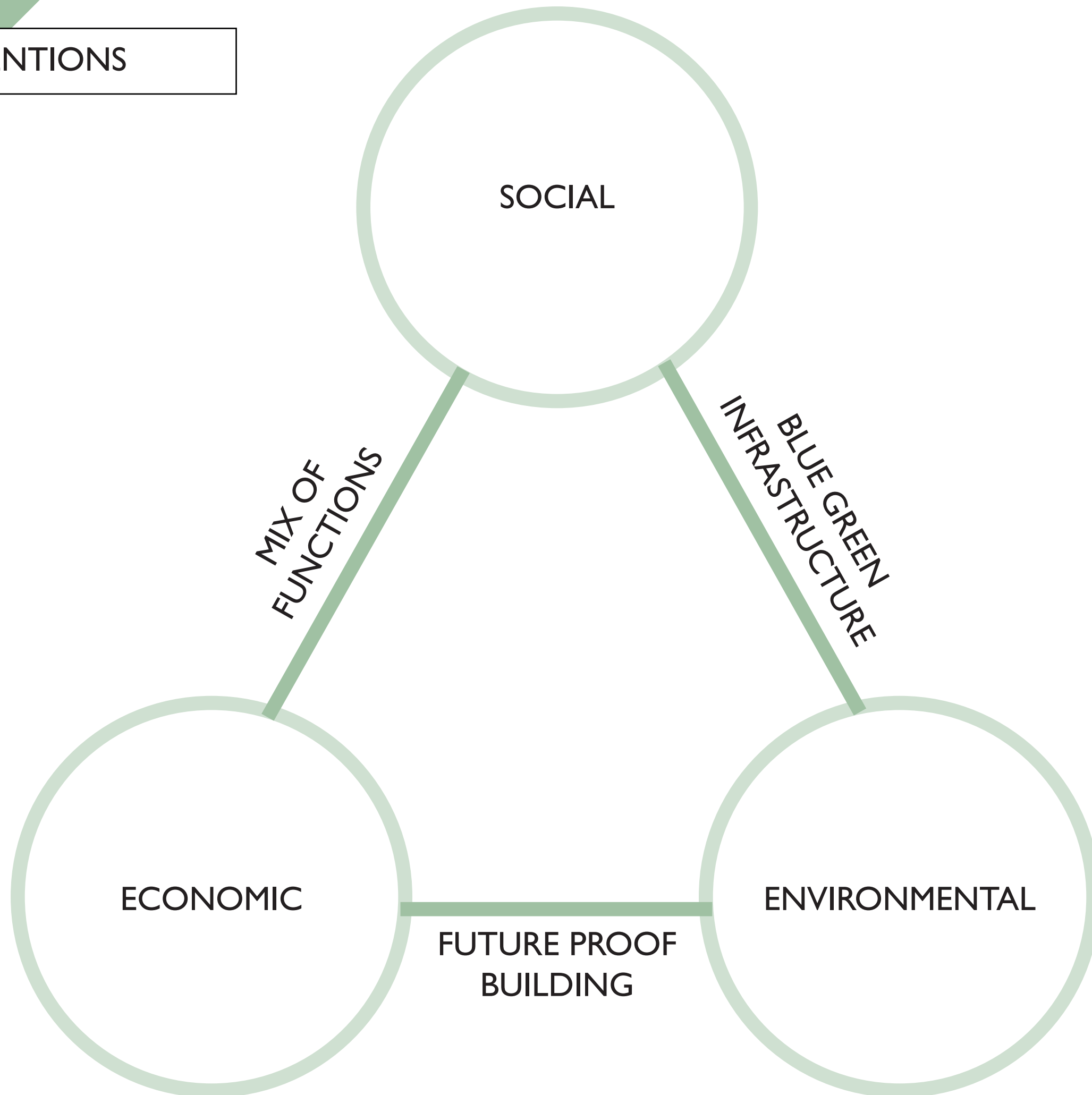
## GOAL OF DESIGN

How can Heesterveld be made ***future-proof***, by solving the ***social, economic and environmental issues*** present in the neighbourhood, while preserving the ***current values and identity***?





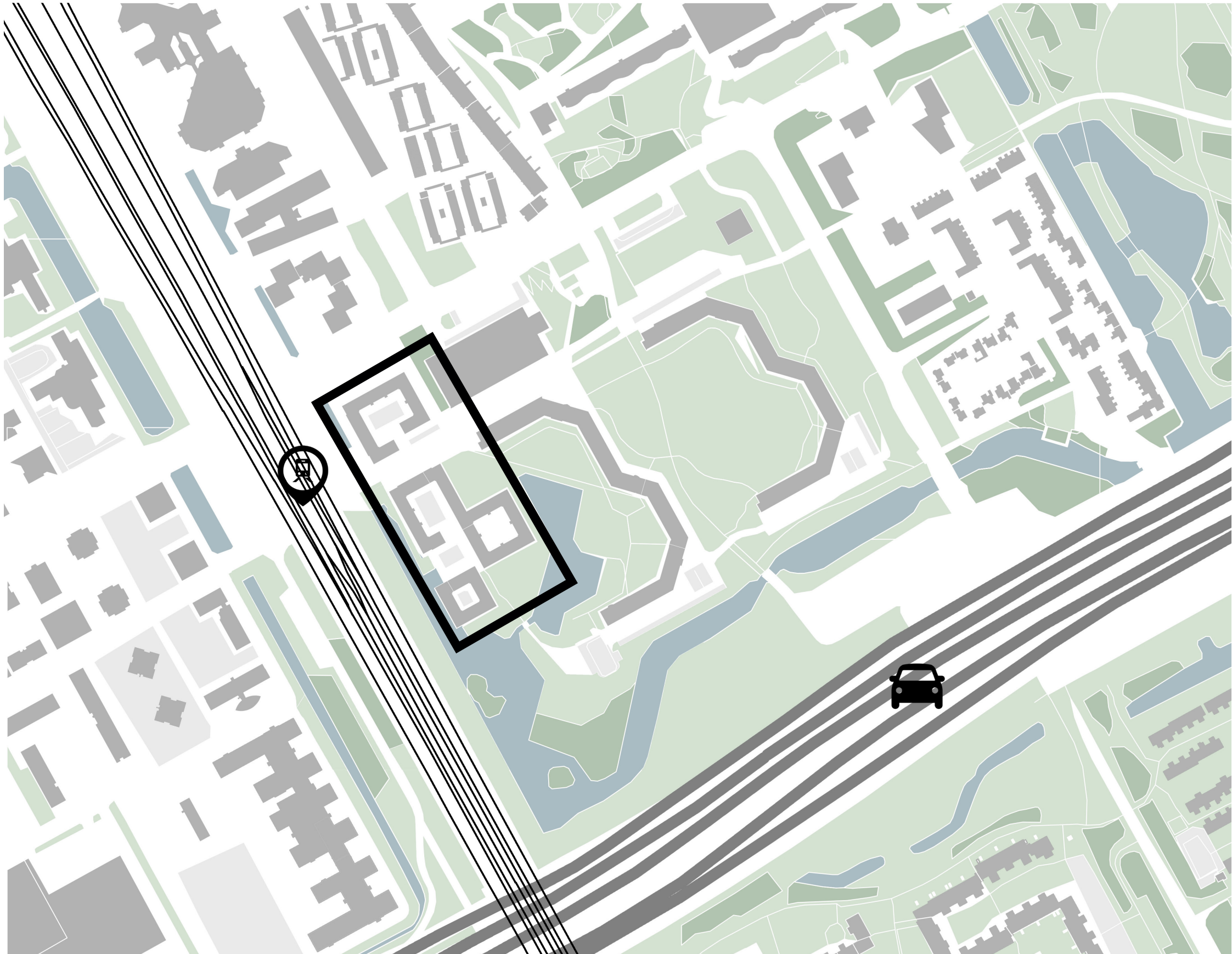
## INTERVENTIONS



DESIGN  
-  
URBAN SCALE

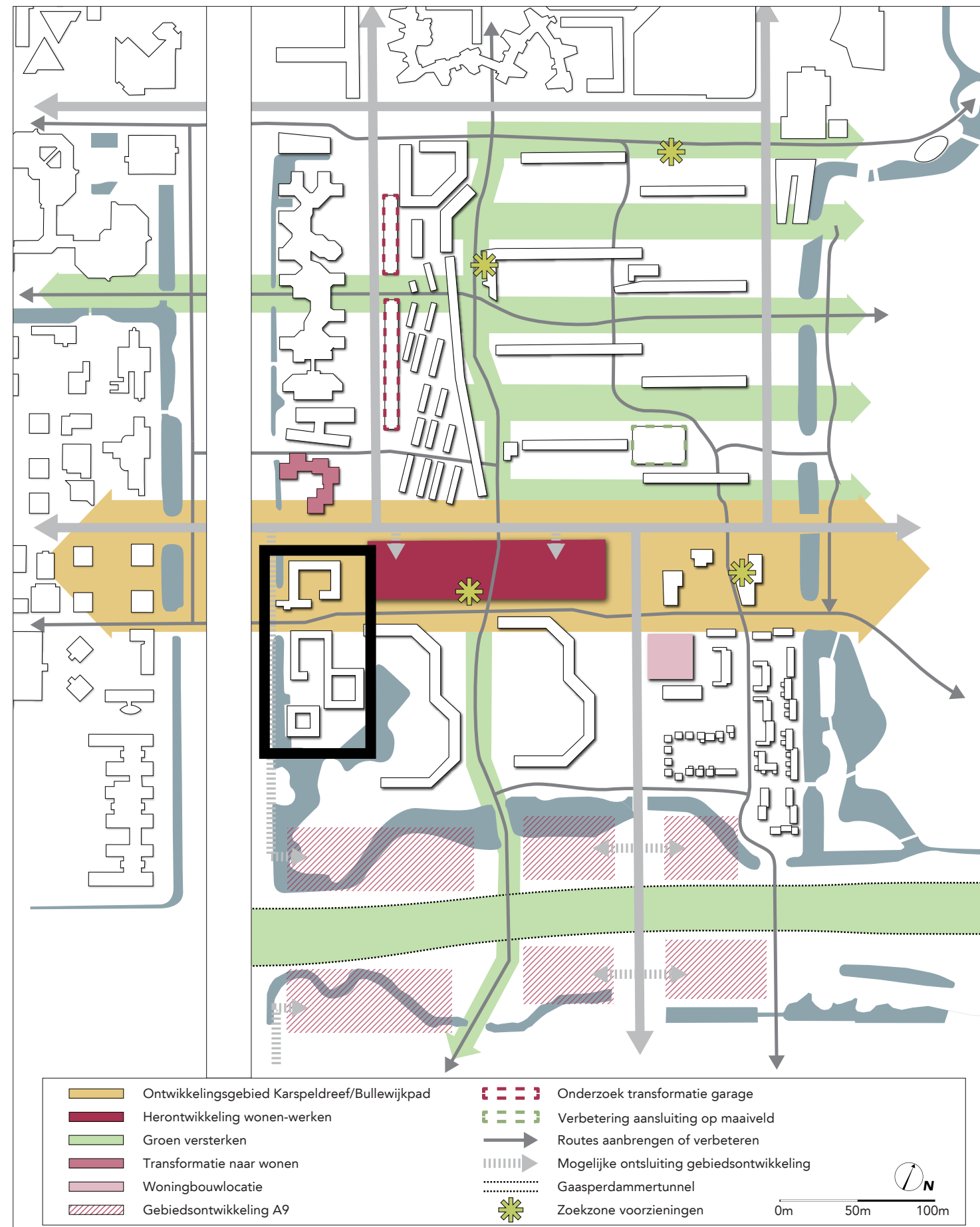


## BORDERS



# VISION MUNICIPALITY

## Ruimtelijke ambitiekaart

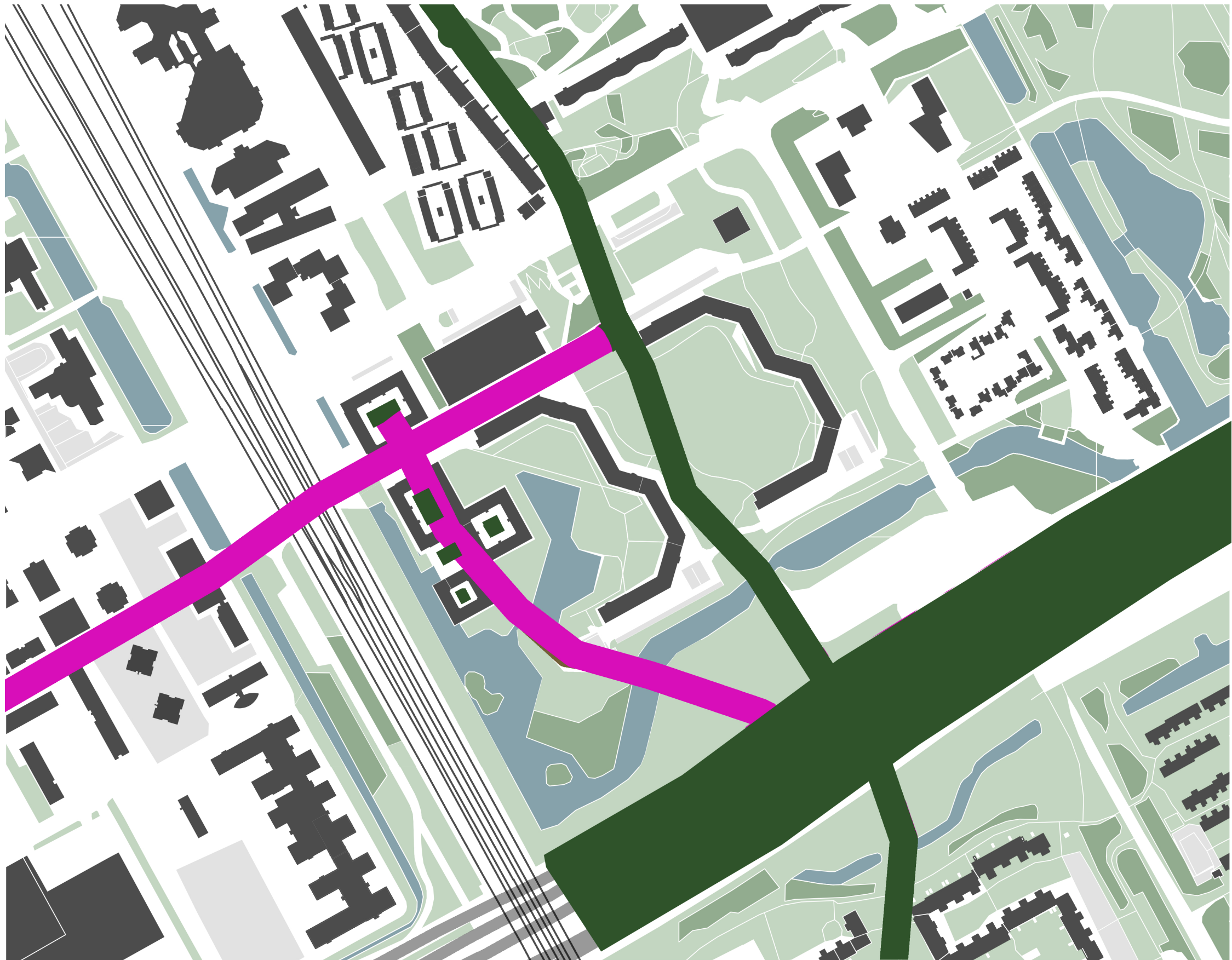


Afbeelding 26: Ruimtelijke ambitiekaart

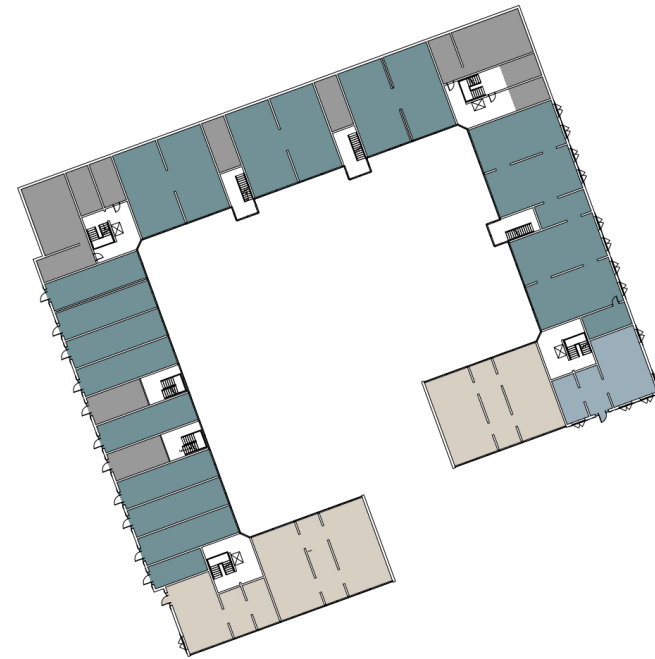
(Gemeente Amsterdam, 2019)



# URBAN PLAN



# FUNCTIONS GROUND FLOOR



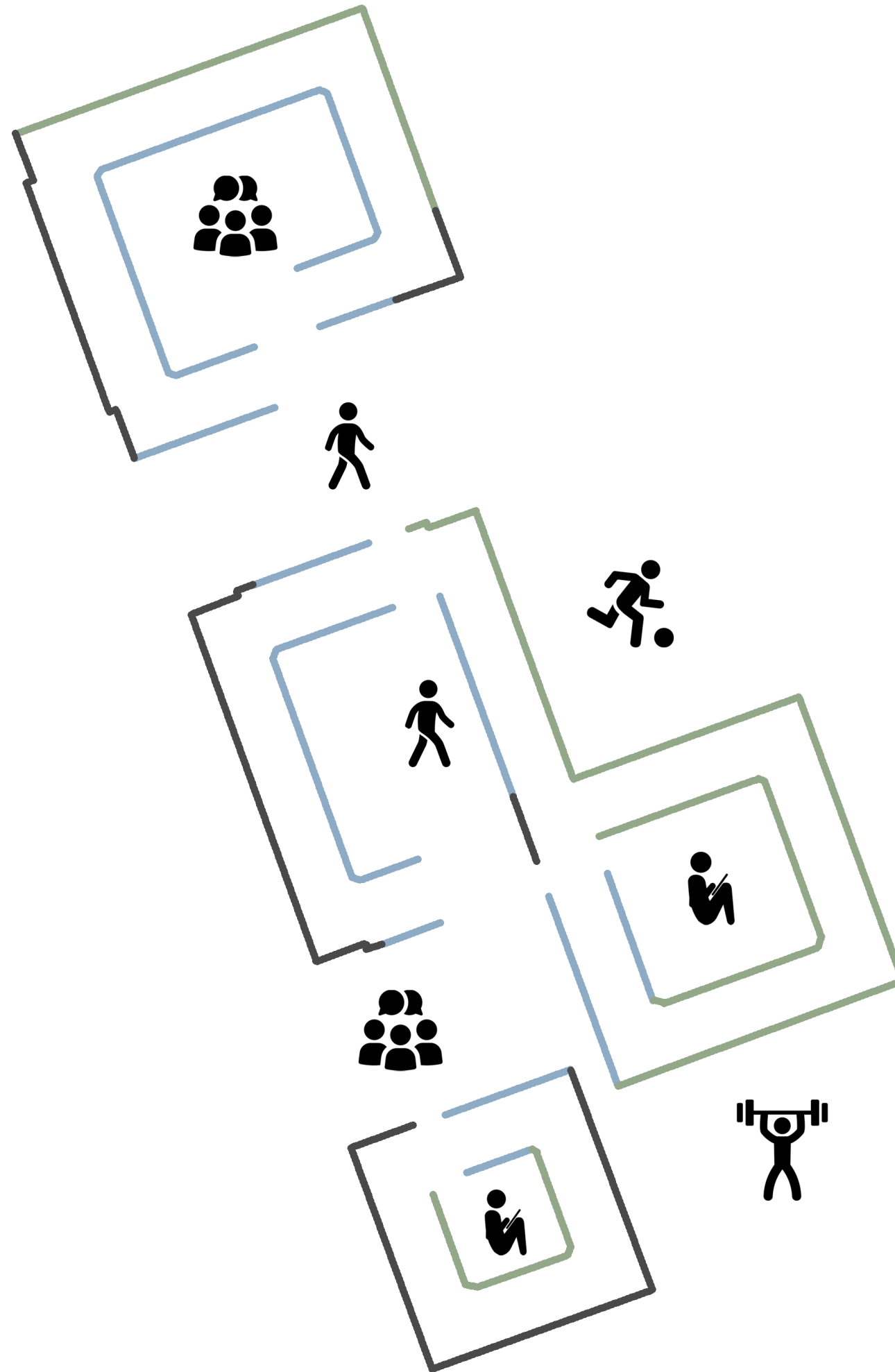
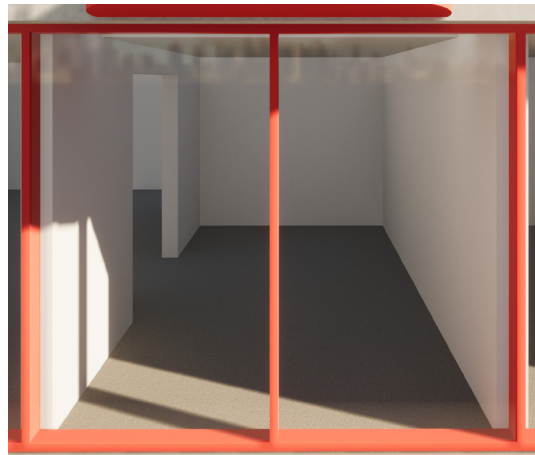
-  Creative hub
-  Offices
-  Study centre
-  Restaurant
-  Shops
-  Storage spaces



1:1000



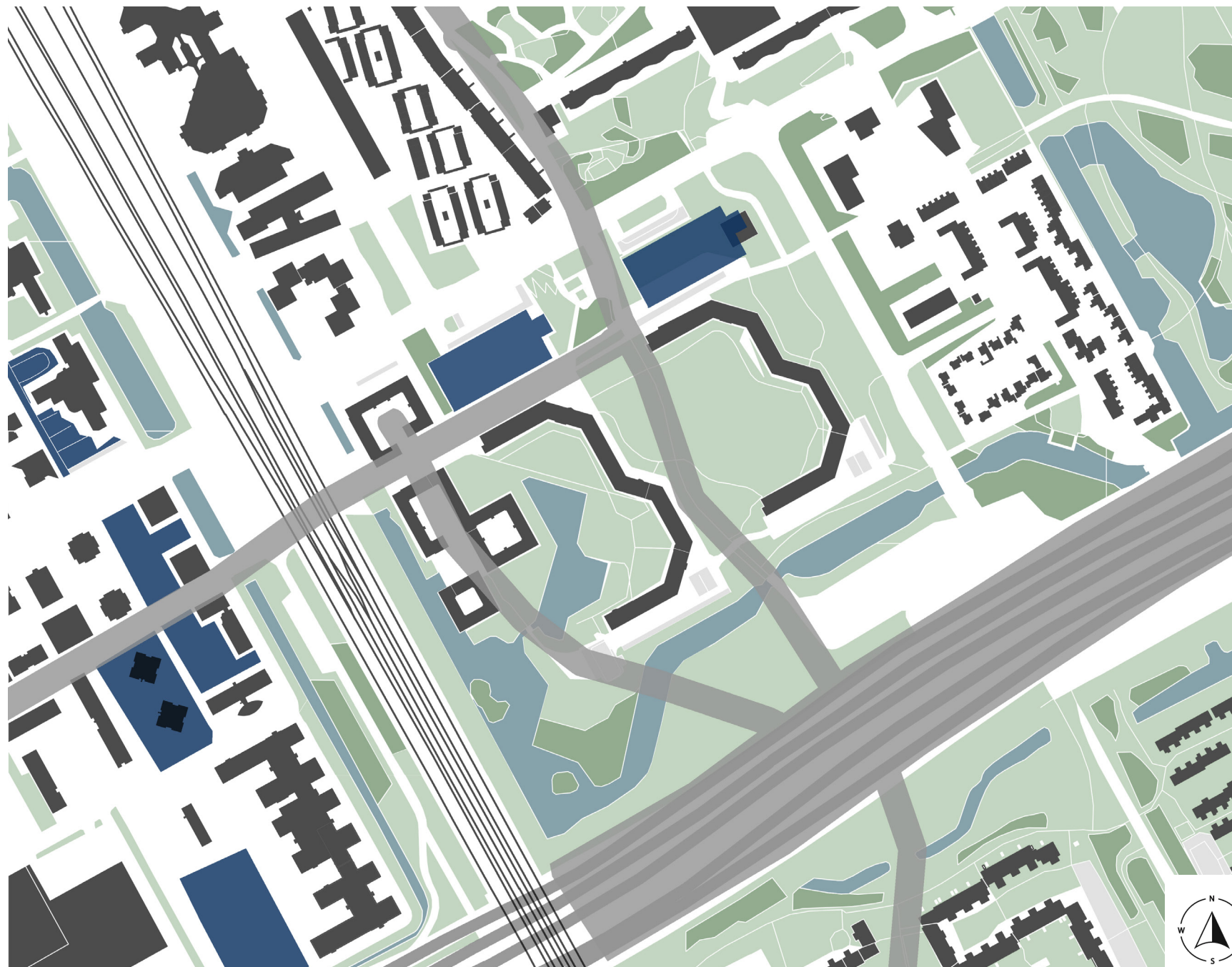
# FACADES GROUND FLOOR





# PARKING

■ parking



new



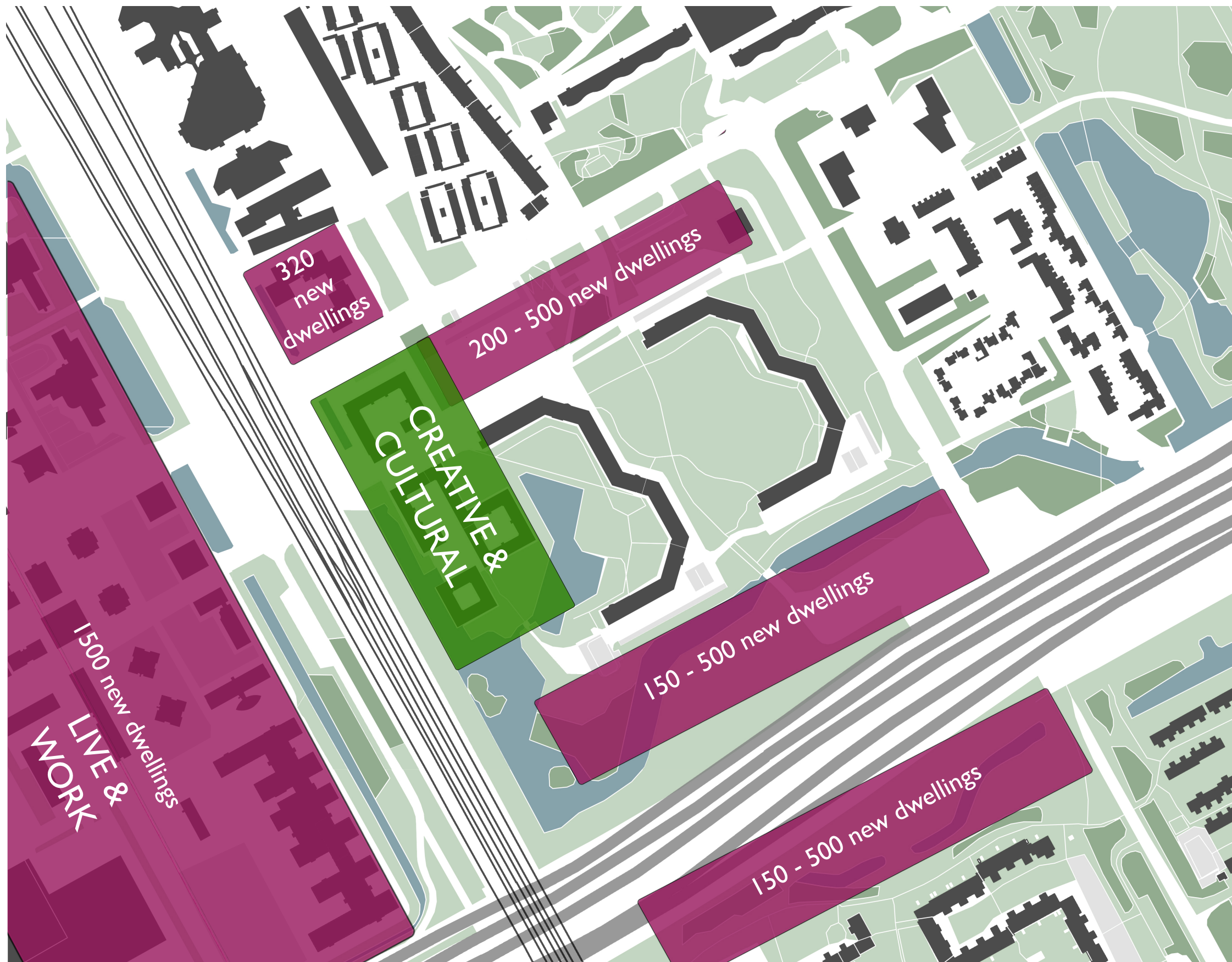
existing



## NEW DWELLINGS



## NEW DWELLINGS





## BLUE GREEN

SOCIAL  
INTERACTION  
attractive accessible  
green spaces  
increase social  
interaction

STRESS  
REDUCTION  
viewing or  
experiencing green  
spaces reduce stress

PHYSICAL ACTIVITY  
green spaces  
designed on the  
citizen's needs for  
physical activity

### SOCIAL IMPACT

## GREEN DESIGN PRINCIPLES ON STREET LEVEL

### ENVIRONMENTAL IMPACT

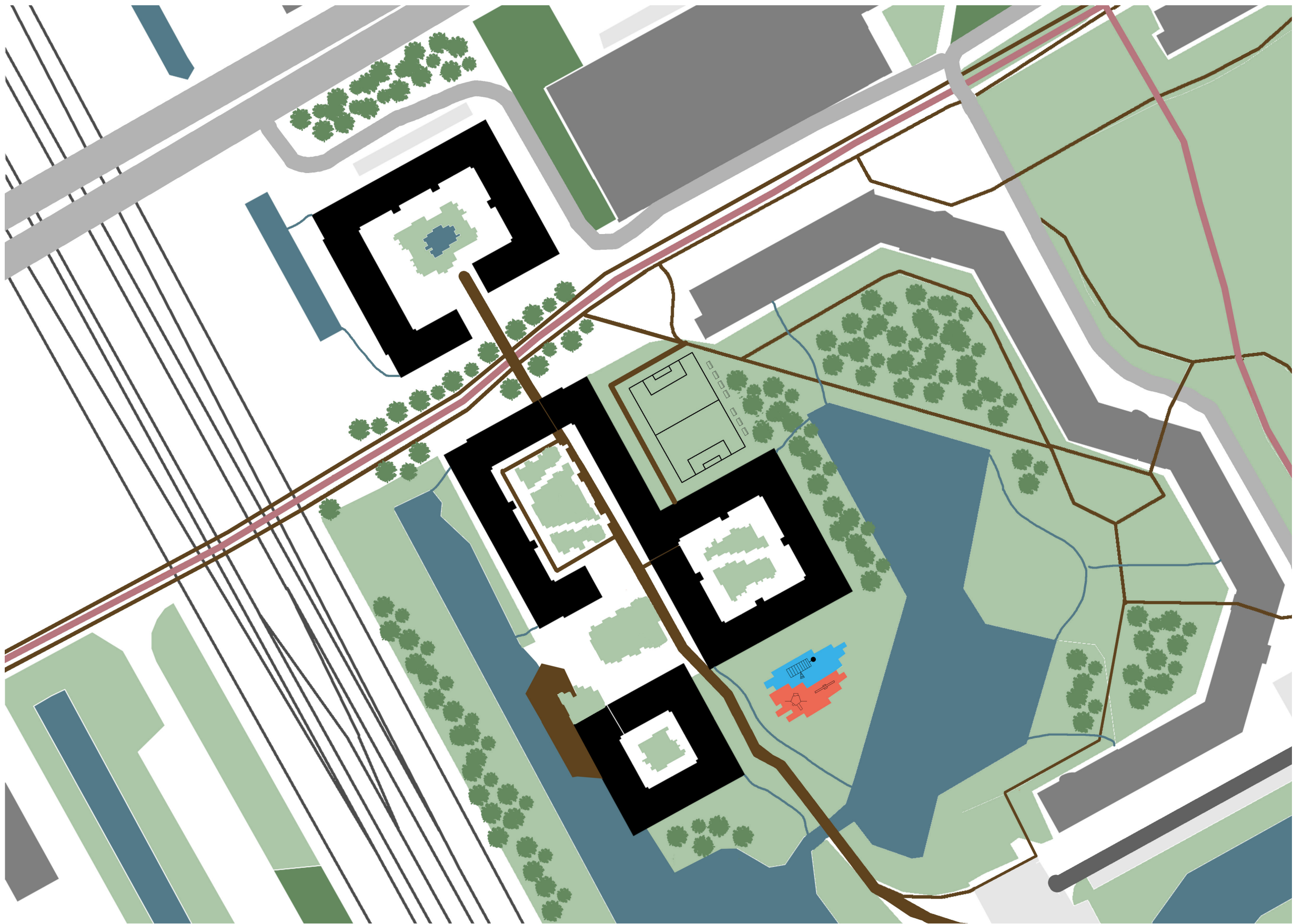
NOISE REDUCTION  
dense vegetation  
close to the source  
maximizes noise  
reduction

AIR QUALITY  
REGULATION  
green infrastructure  
promotes air  
circulation

MITIGATING  
HEAT STRESS  
trees improve  
thermal comfort

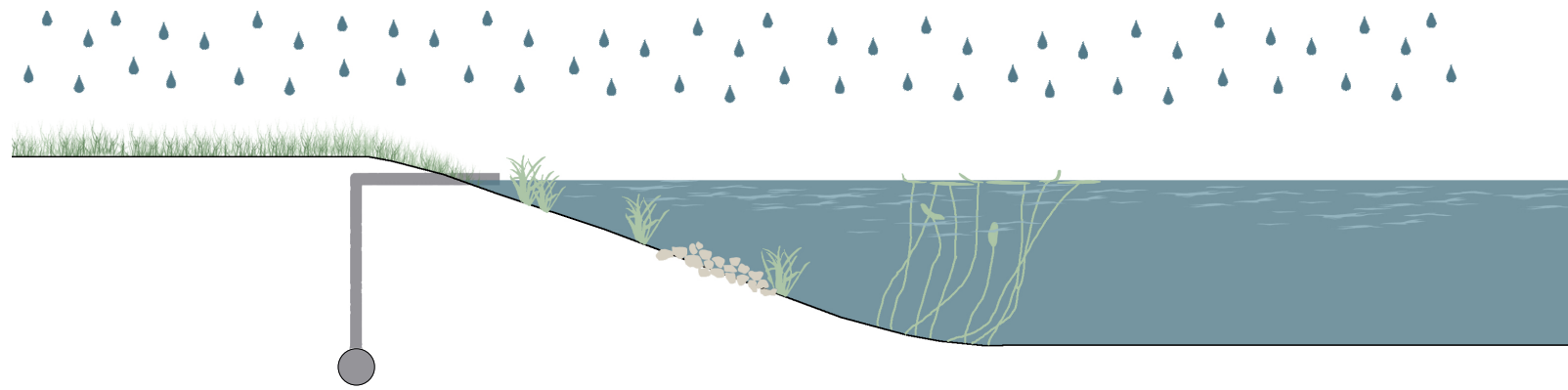
WATER QUANTITY  
REGULATION  
more open soil  
surface increases  
infiltration capacity

URBAN PLAN

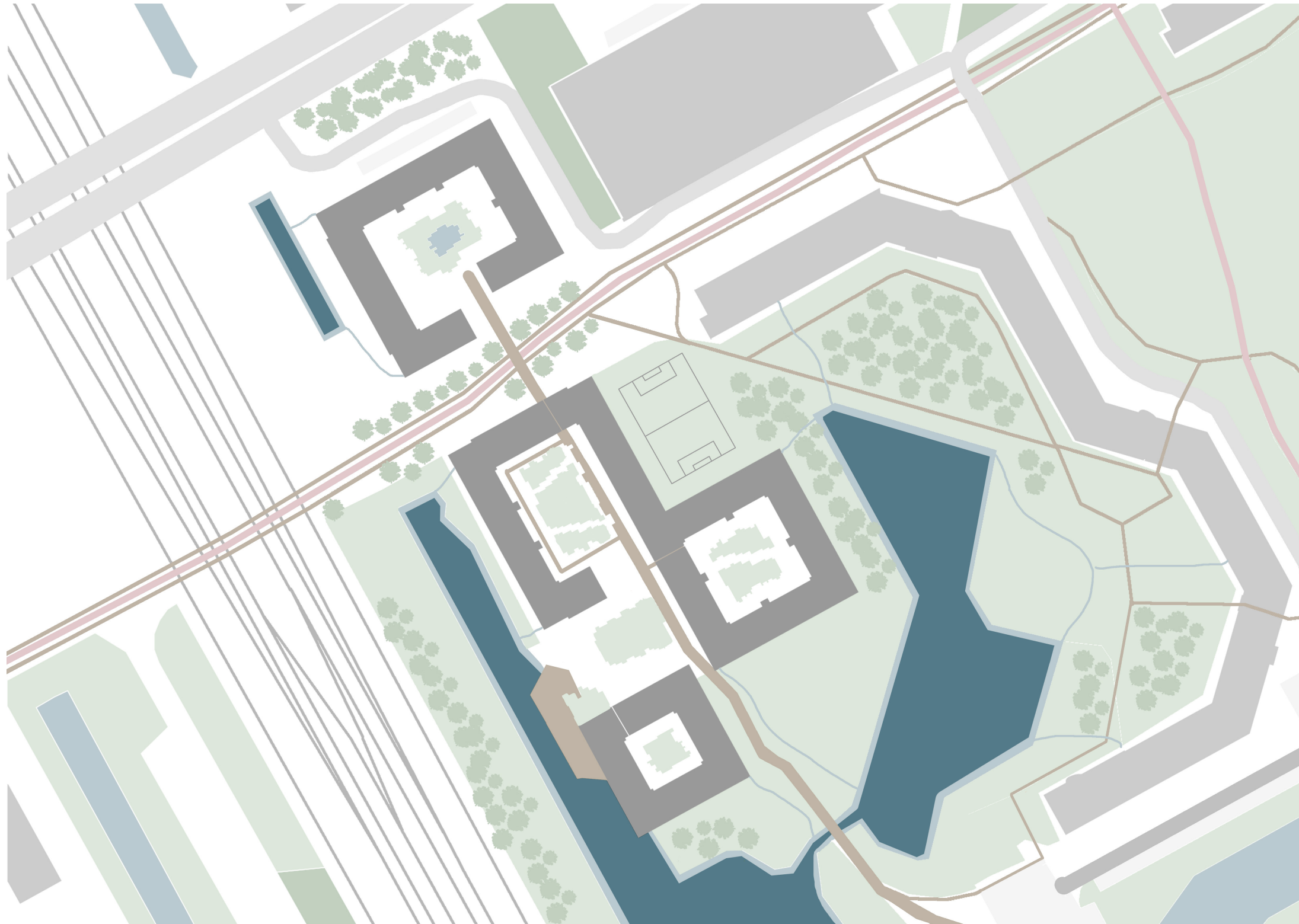
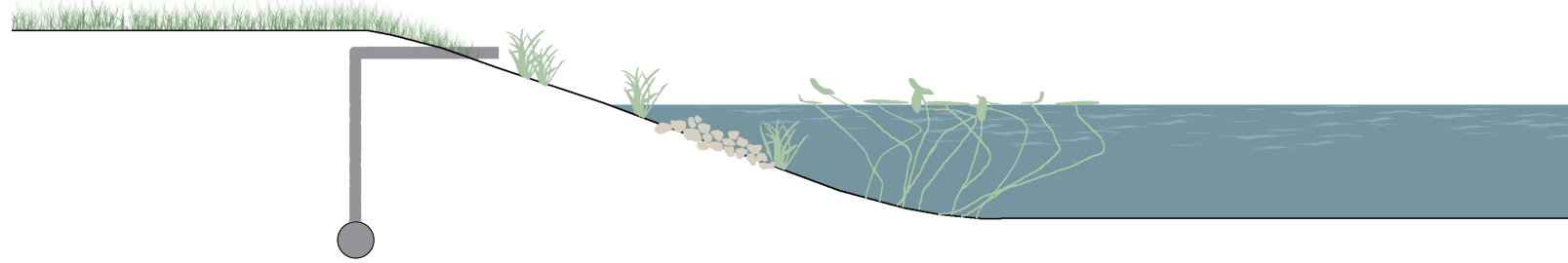




## RAINWATER PONDS

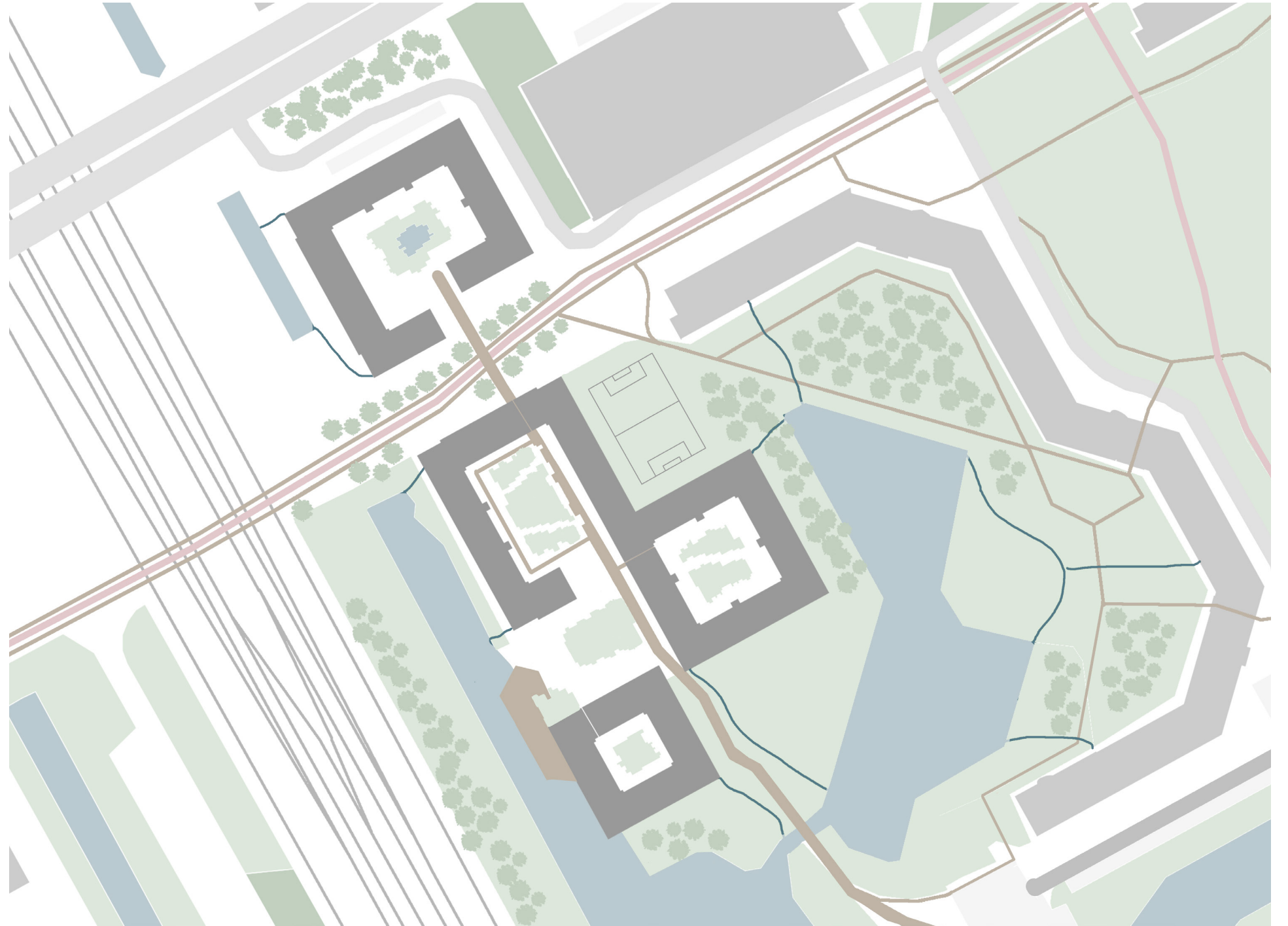
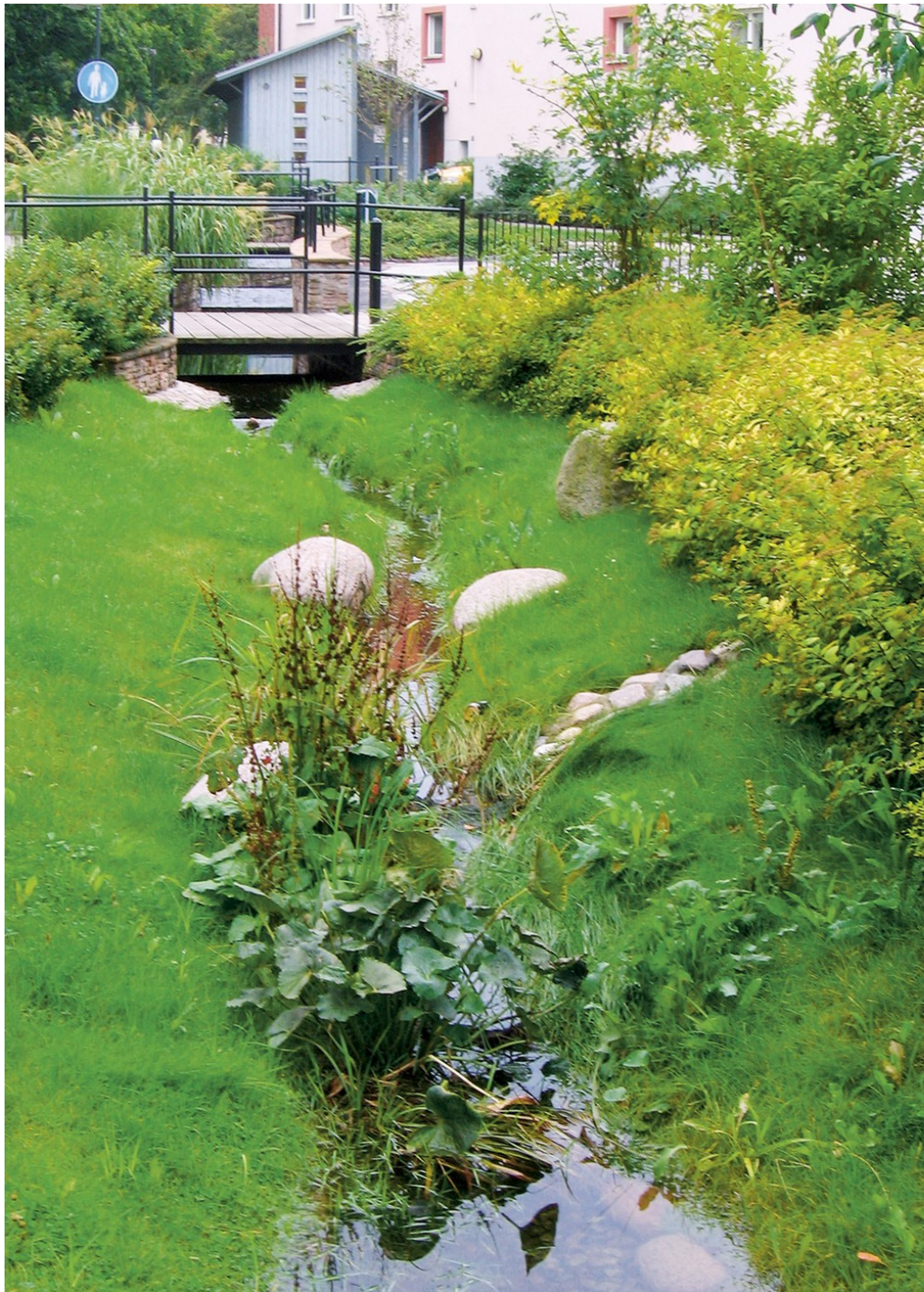


## RAINWATER PONDS



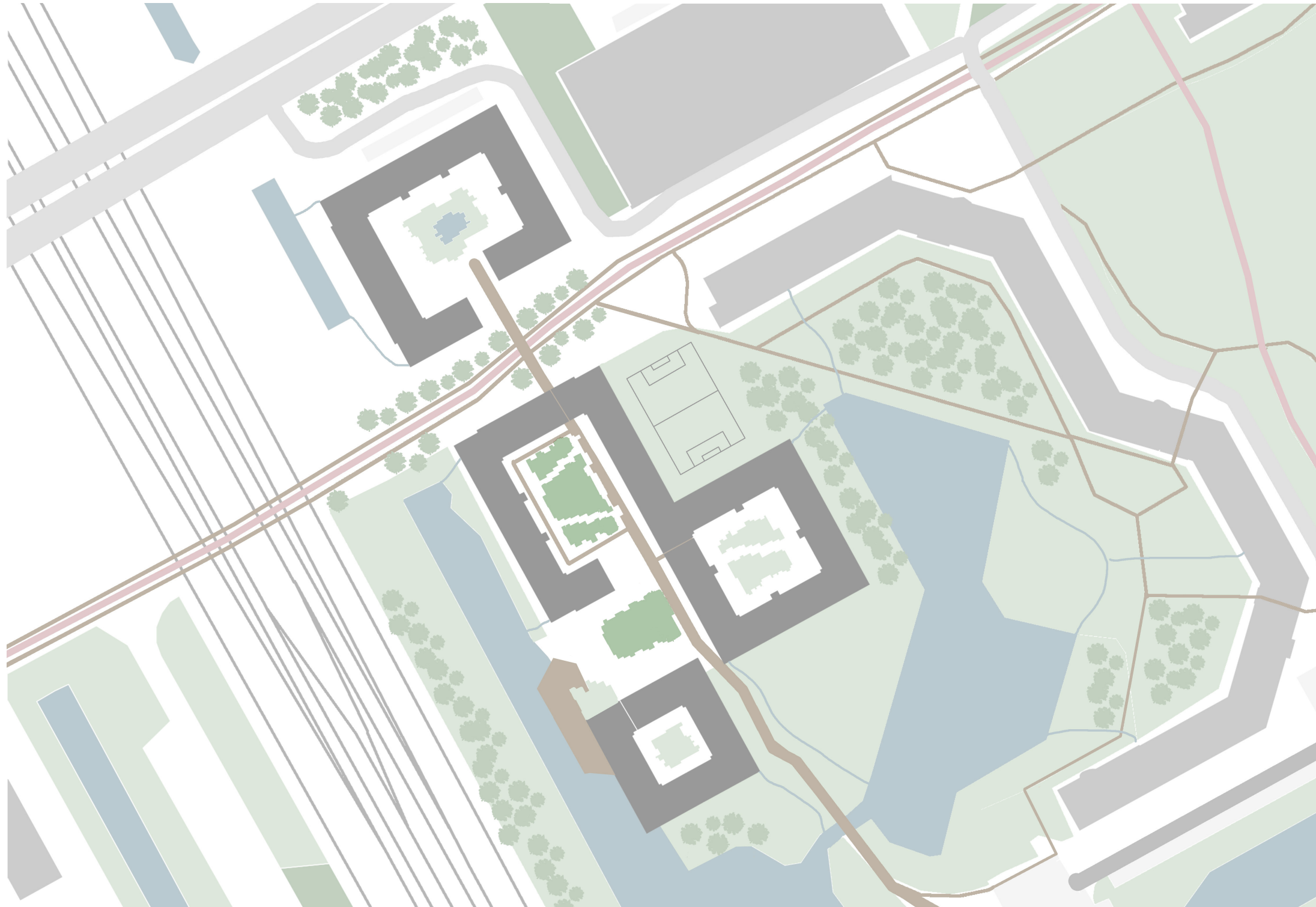
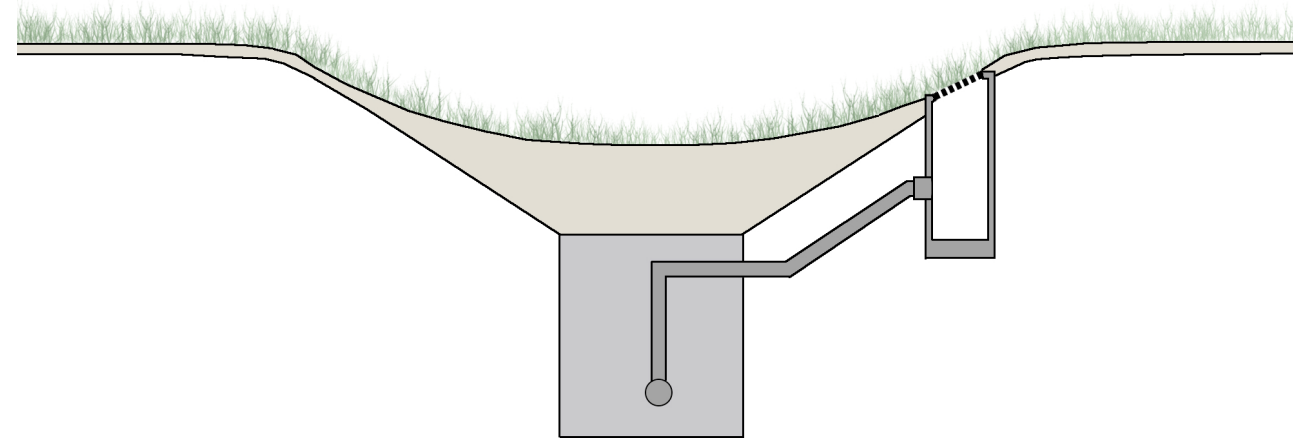


## DRAINAGE DITCH



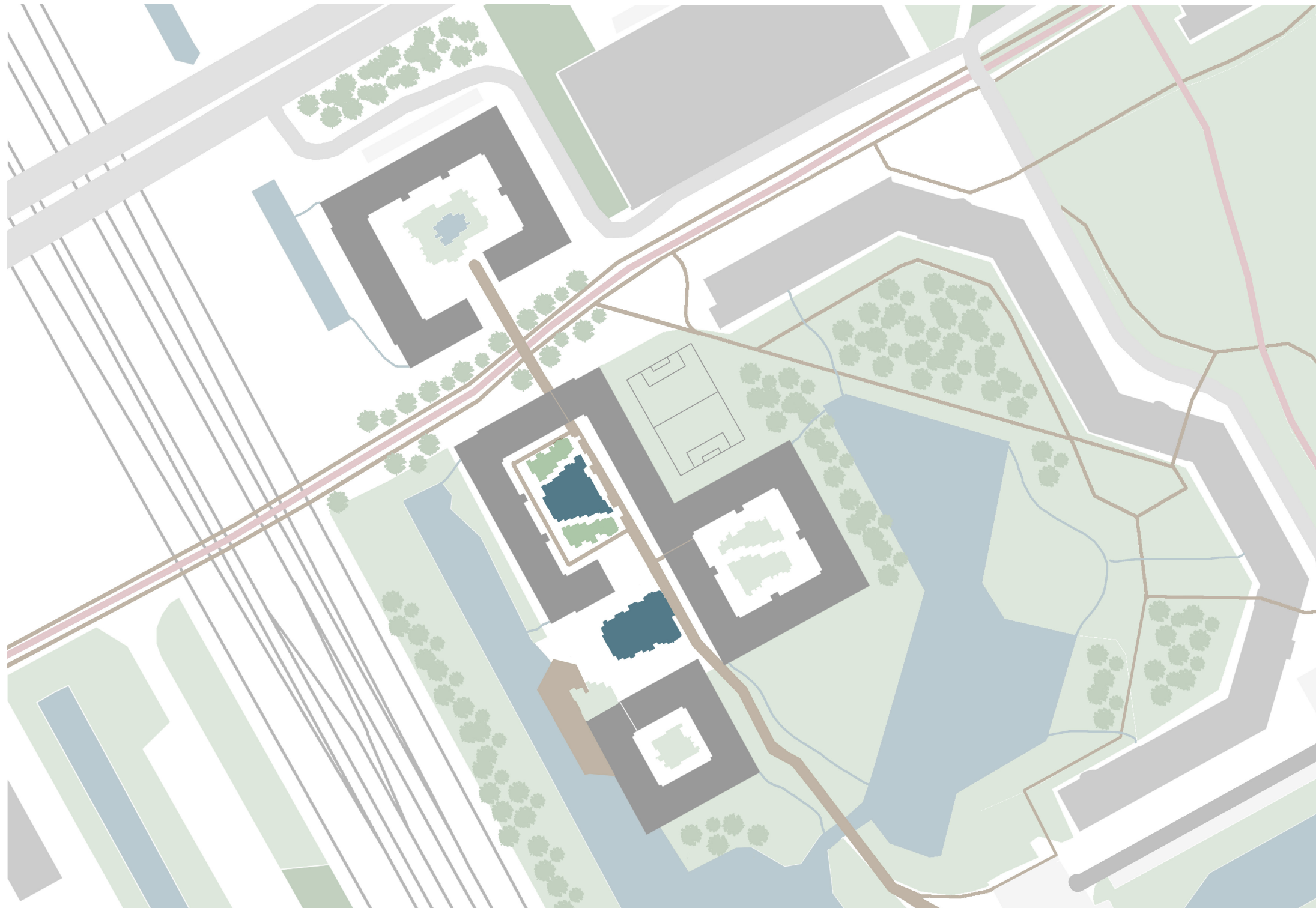
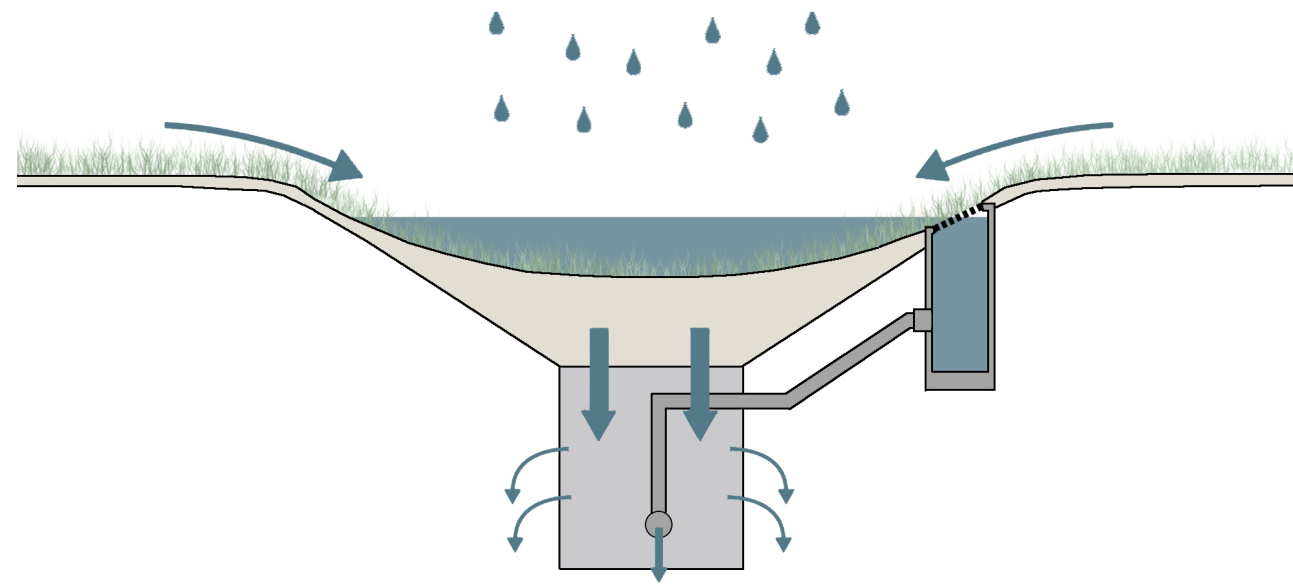


WADI

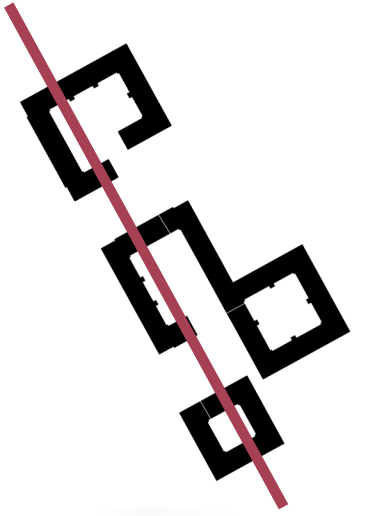




WADI

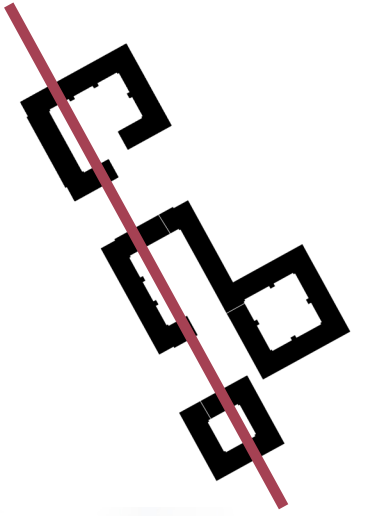


# BIODIVERSITY

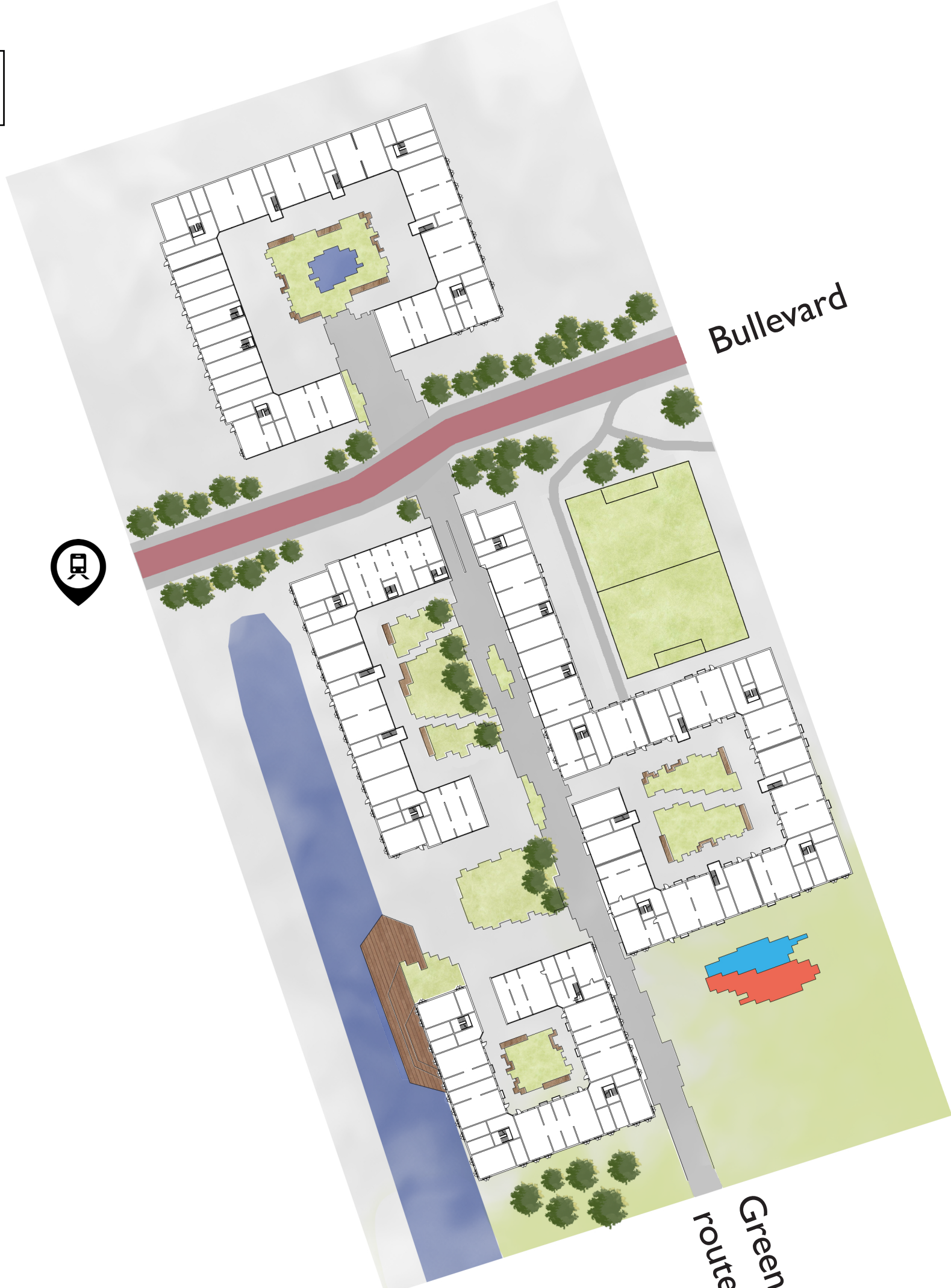




# WELL BEING



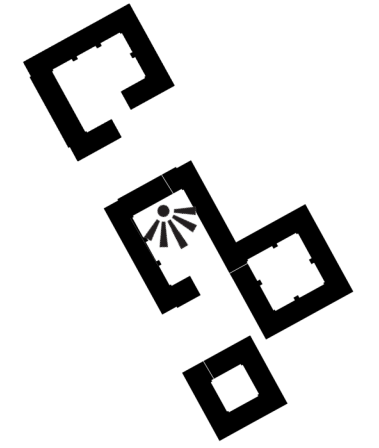
GREEN ROUTE



1:1000

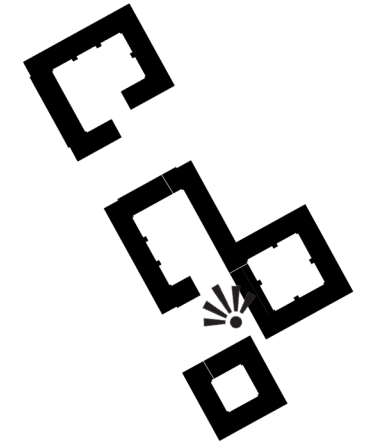


## GREEN ROUTE





## GREEN ROUTE





## REFERENCES



high line - New York  
James Corner Field Operations, Diller  
Scofidio + Renfro, and Piet Oudolf



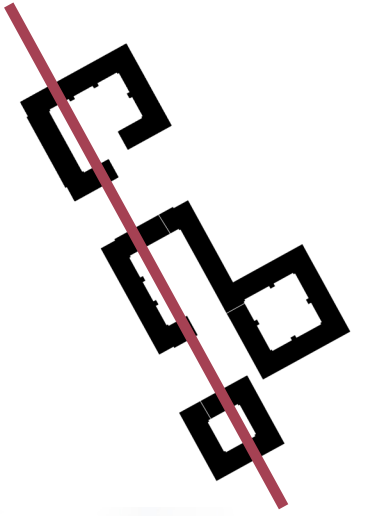
rivermark- California  
Fletcher Studio



housing complex- Bat Yam  
TeMA

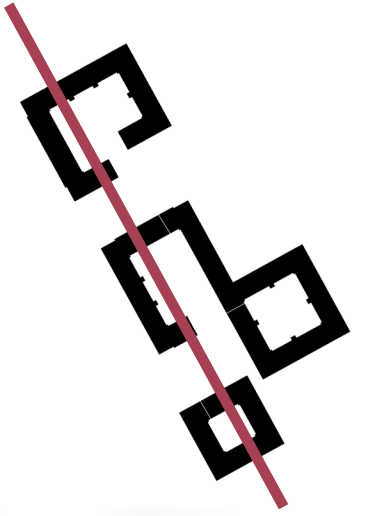


# SOCIO-SPATIAL RELATION





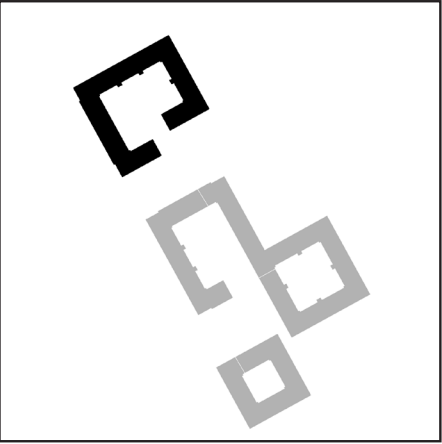
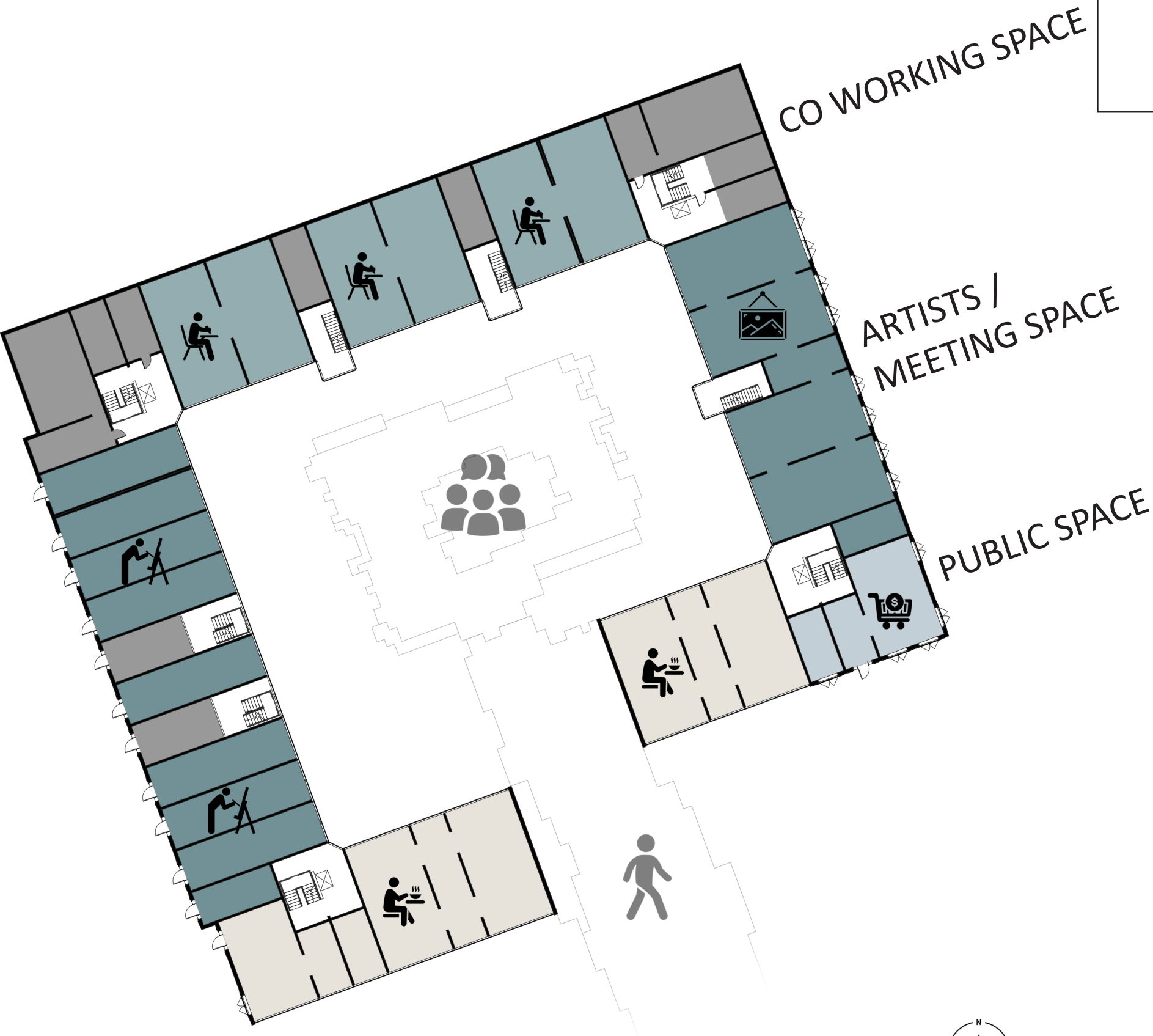
# SOCIO-ECONOMIC










DESIGN  
-  
BUILDING SCALE



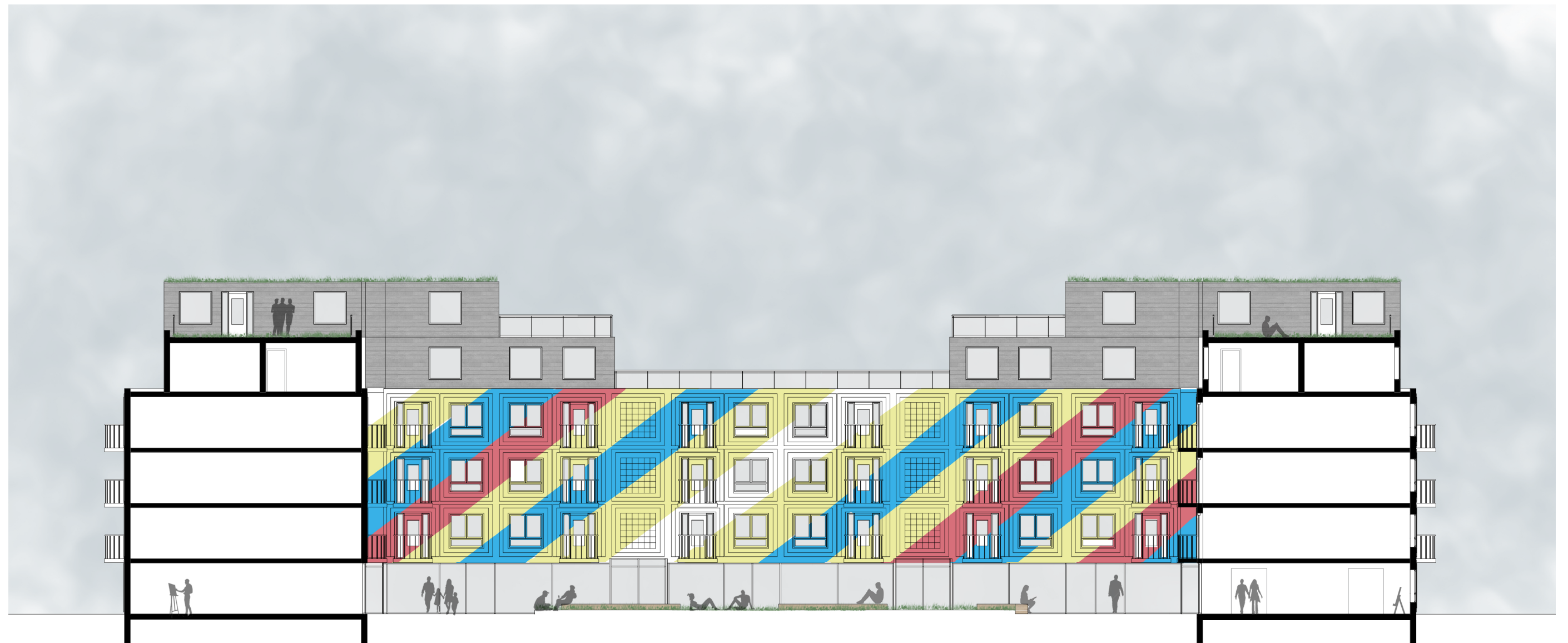
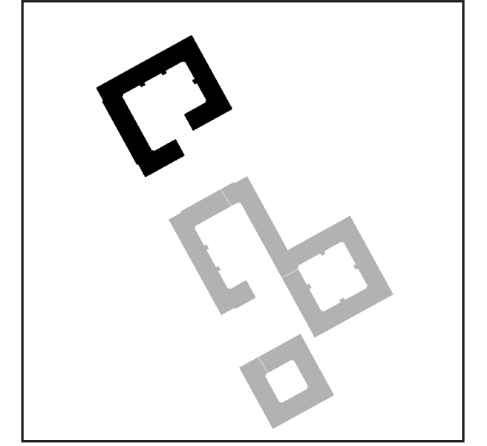
PLAN GROUND FLOOR



-  Ateliers
-  Workshops
-  Restaurant / cafe
-  Gallery
-  Shop
-  Urban meeting spot
-  Pedestrian area

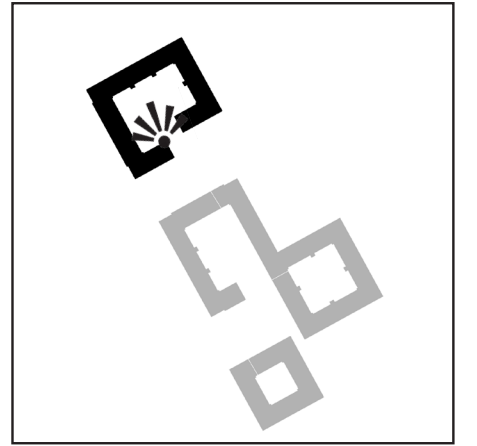


# SECTION





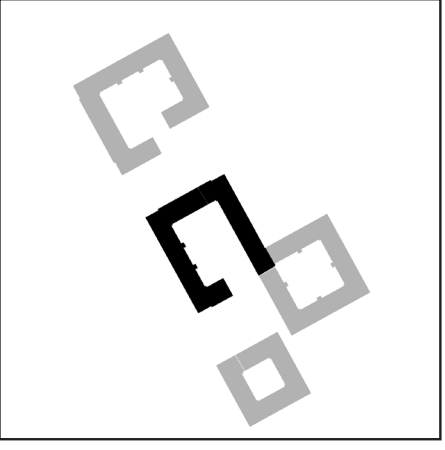
# PERSPECTIVE





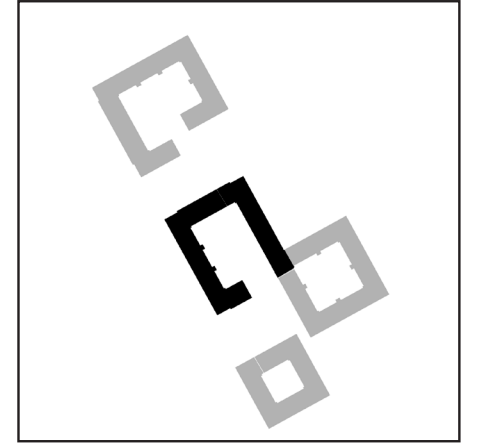
PLAN GROUND FLOOR

-  Offices
-  Restaurant / cafe
-  Community centre
-  Relaxing area
-  Pedestrian area



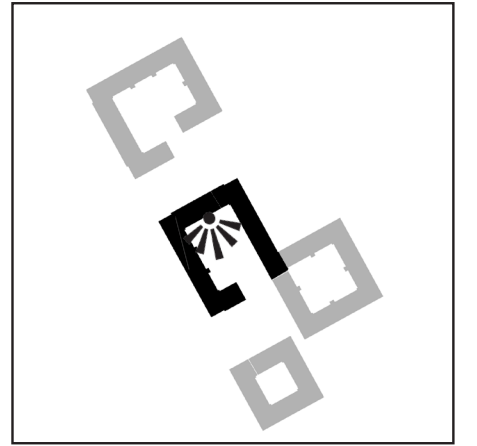


# SECTION



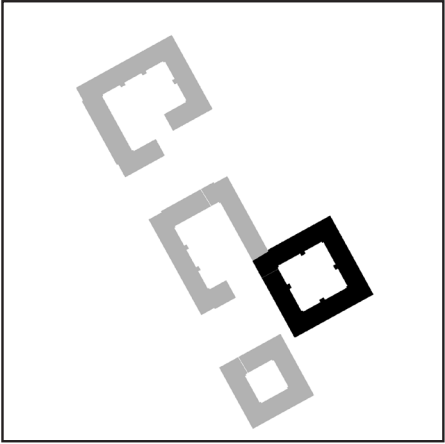


# PERSPECTIVE





PLAN GROUND FLOOR



Study spaces



Shops



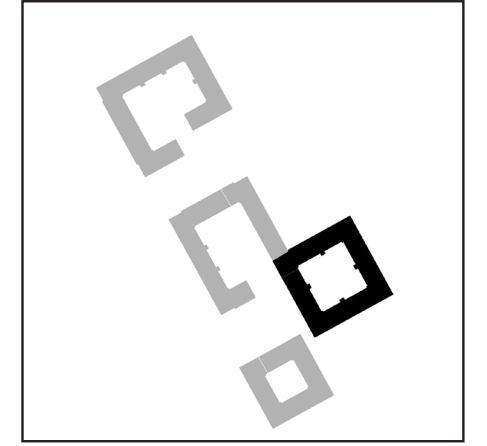
Ouder/kind teams



Relaxing area

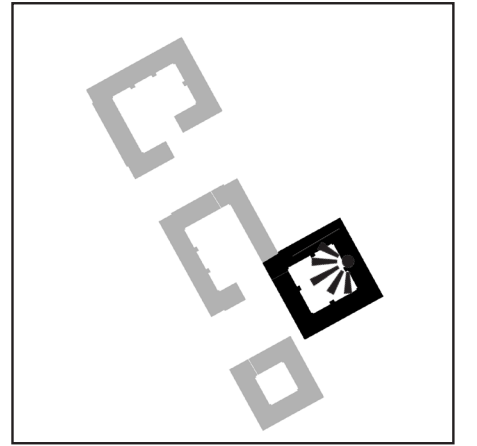


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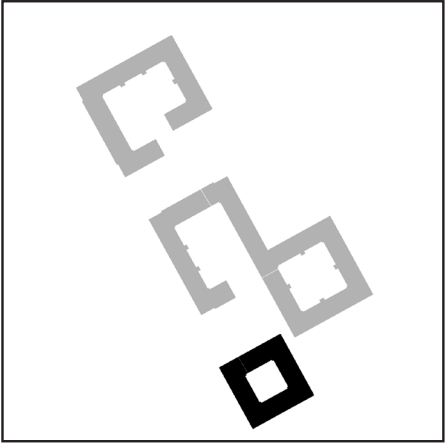


# PERSPECTIVE





PLAN GROUND FLOOR



Study spaces



Shops



Urban meeting spot

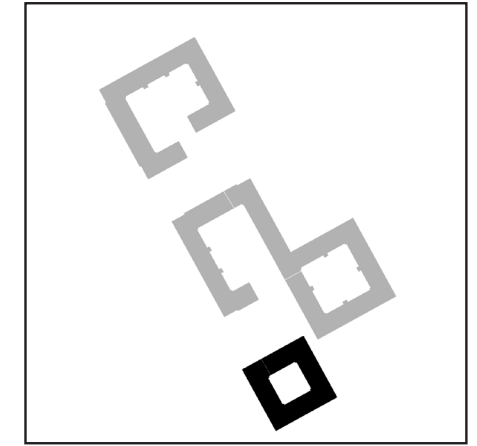
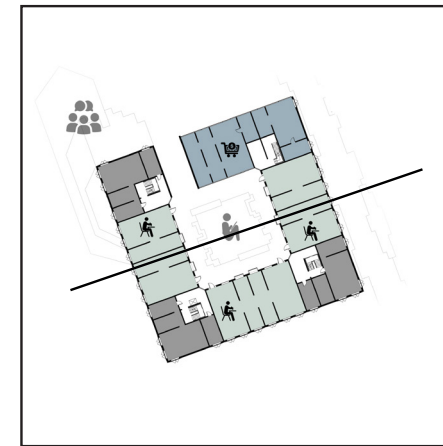


Relaxing area



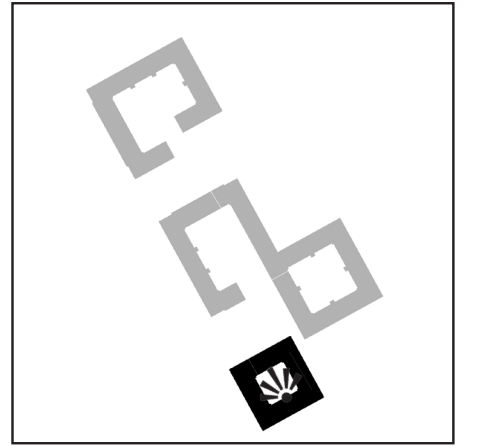


# SECTION



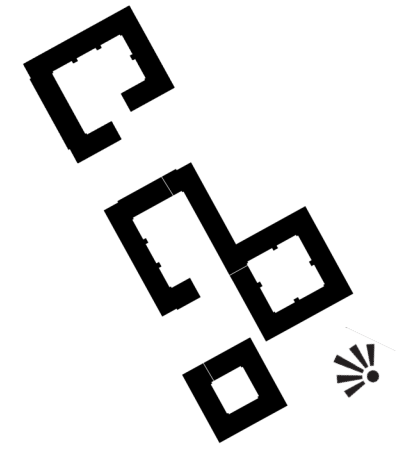


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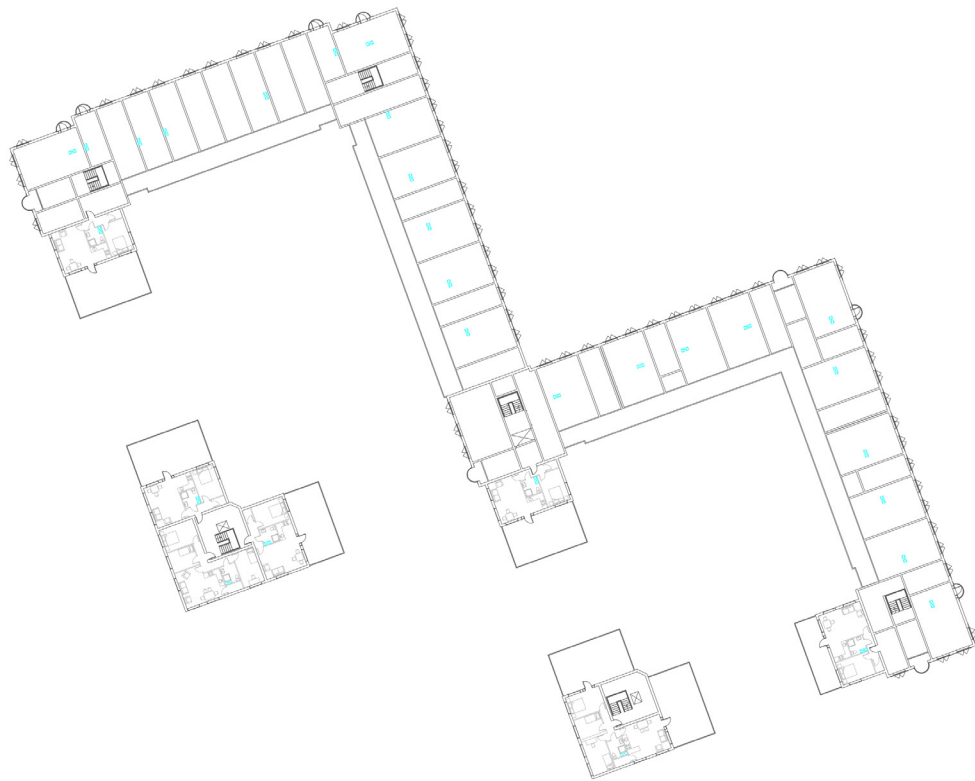


# PLAYGROUND



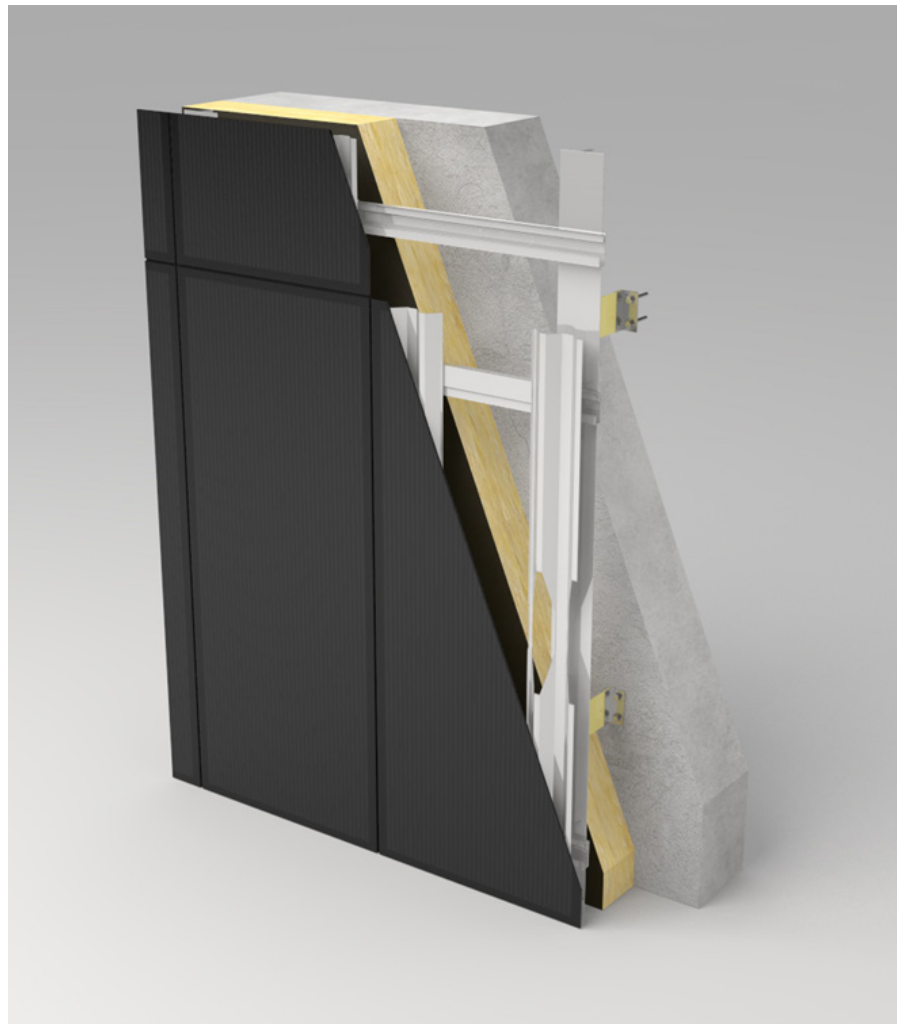


LEVEL 4 AND 5

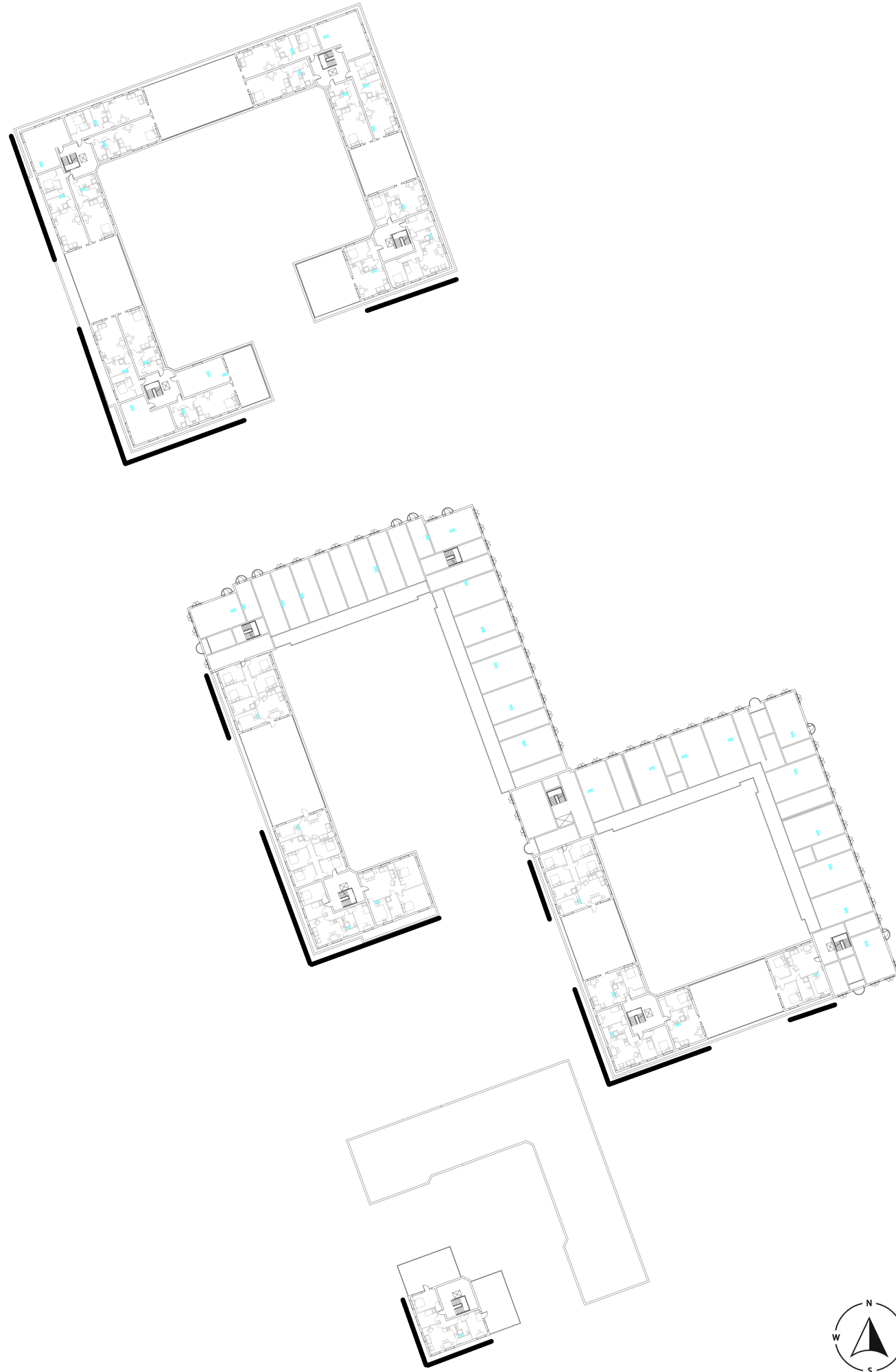




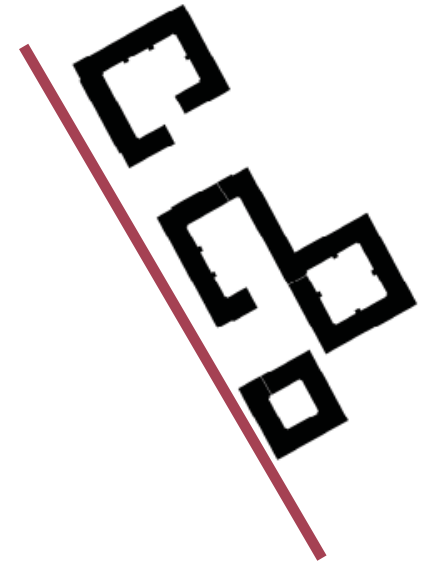
# FACADES



ENERGYFAÇADE by saint-gobain-solutions



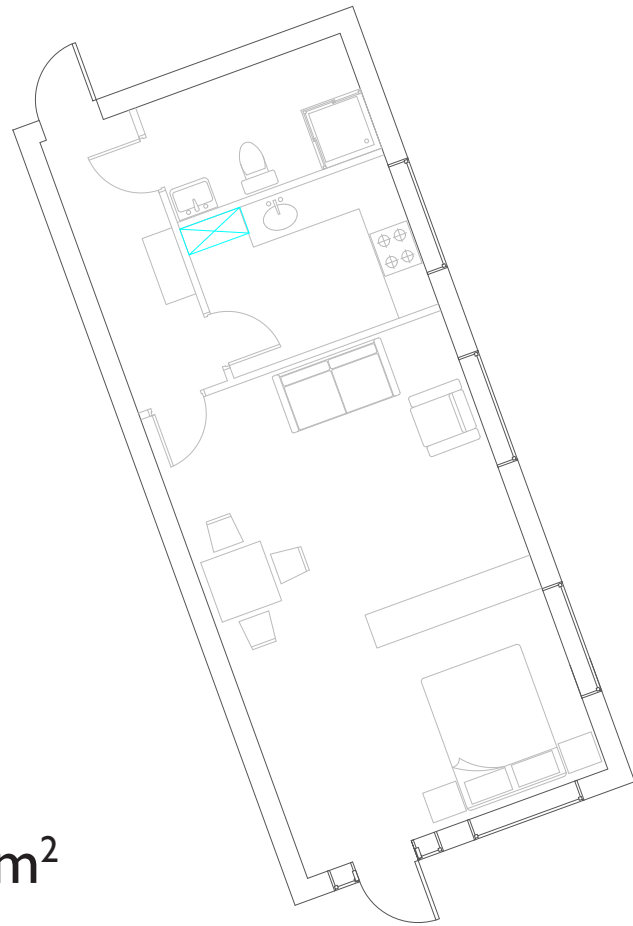
# FACADES



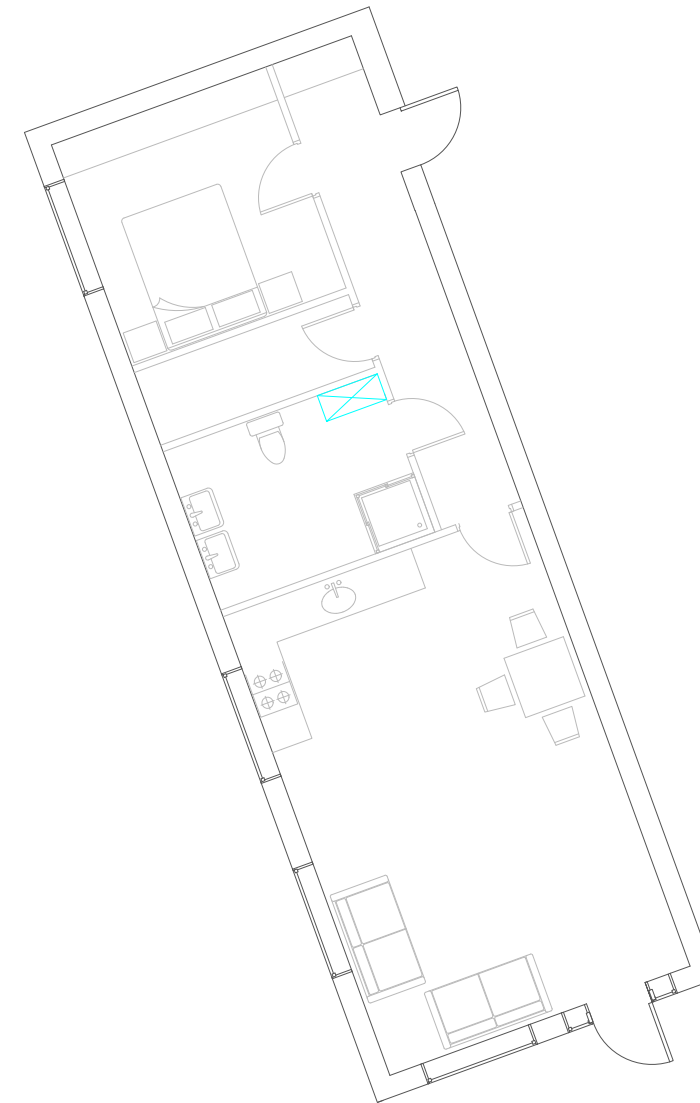


# APARTMENTS

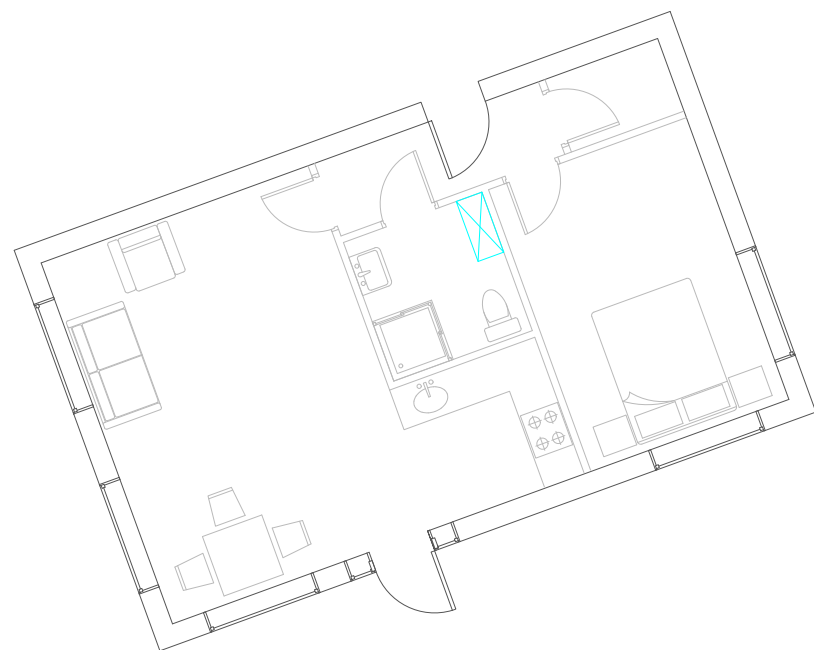
50 m<sup>2</sup>



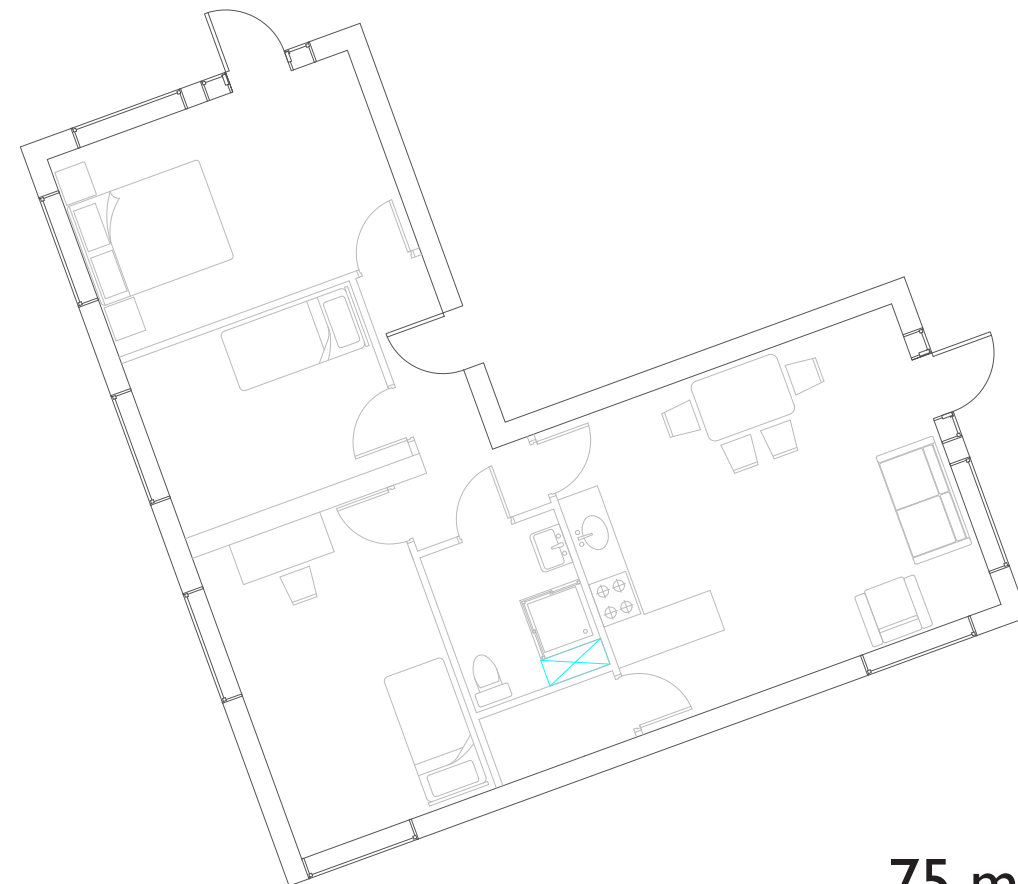
65 m<sup>2</sup>



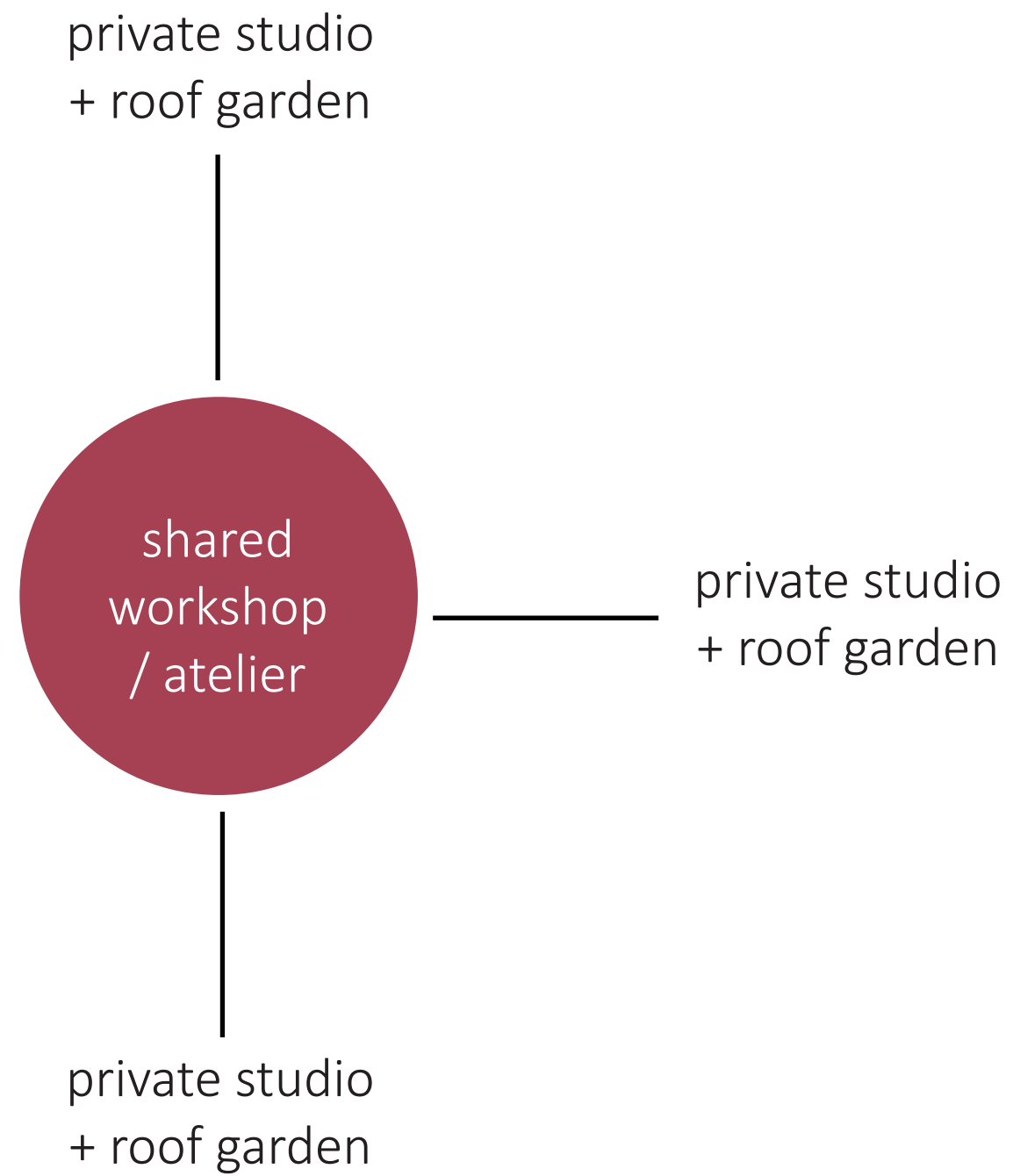
50 m<sup>2</sup>



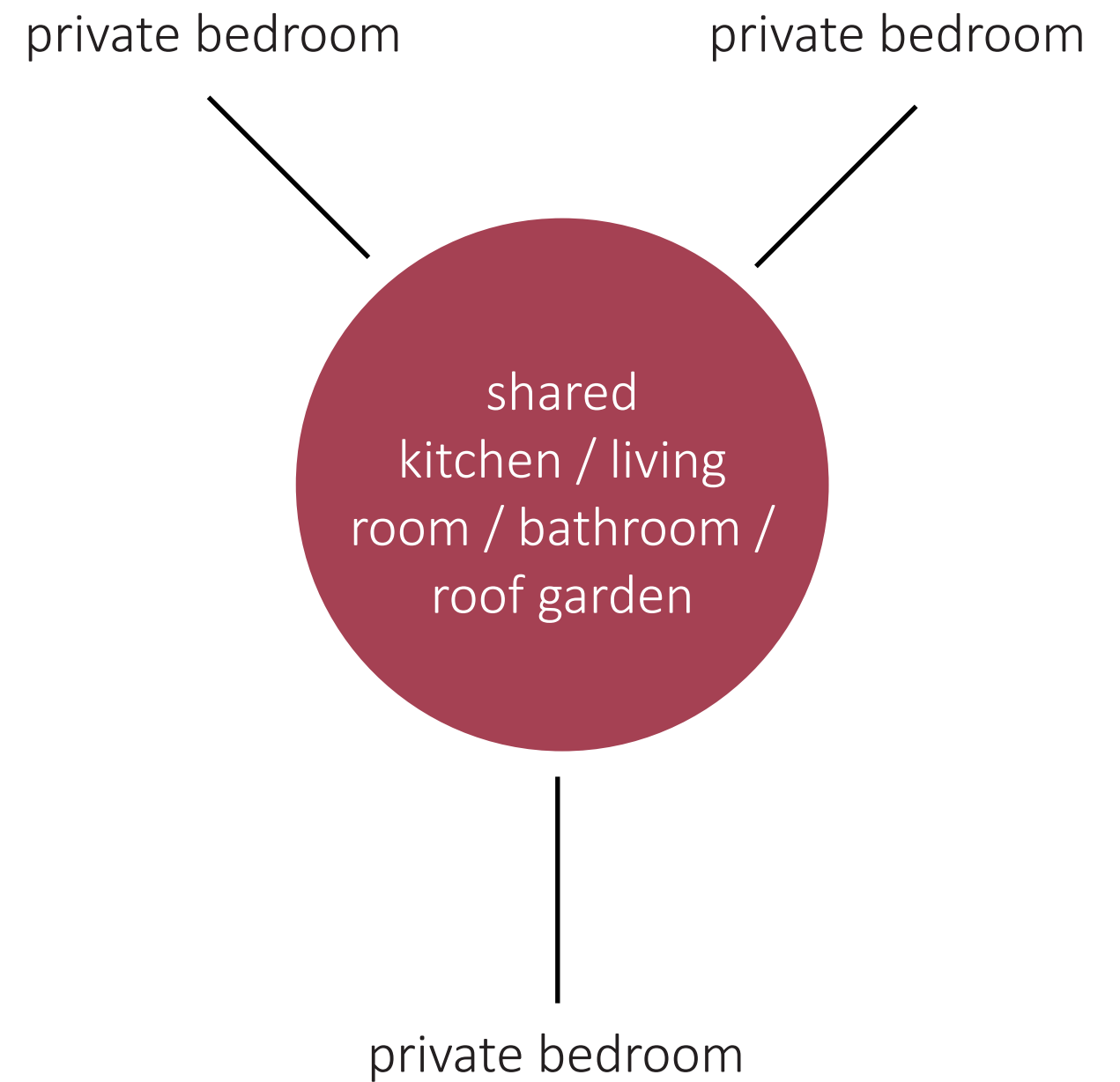
75 m<sup>2</sup>



## APARTMENTS



artists HCC



students

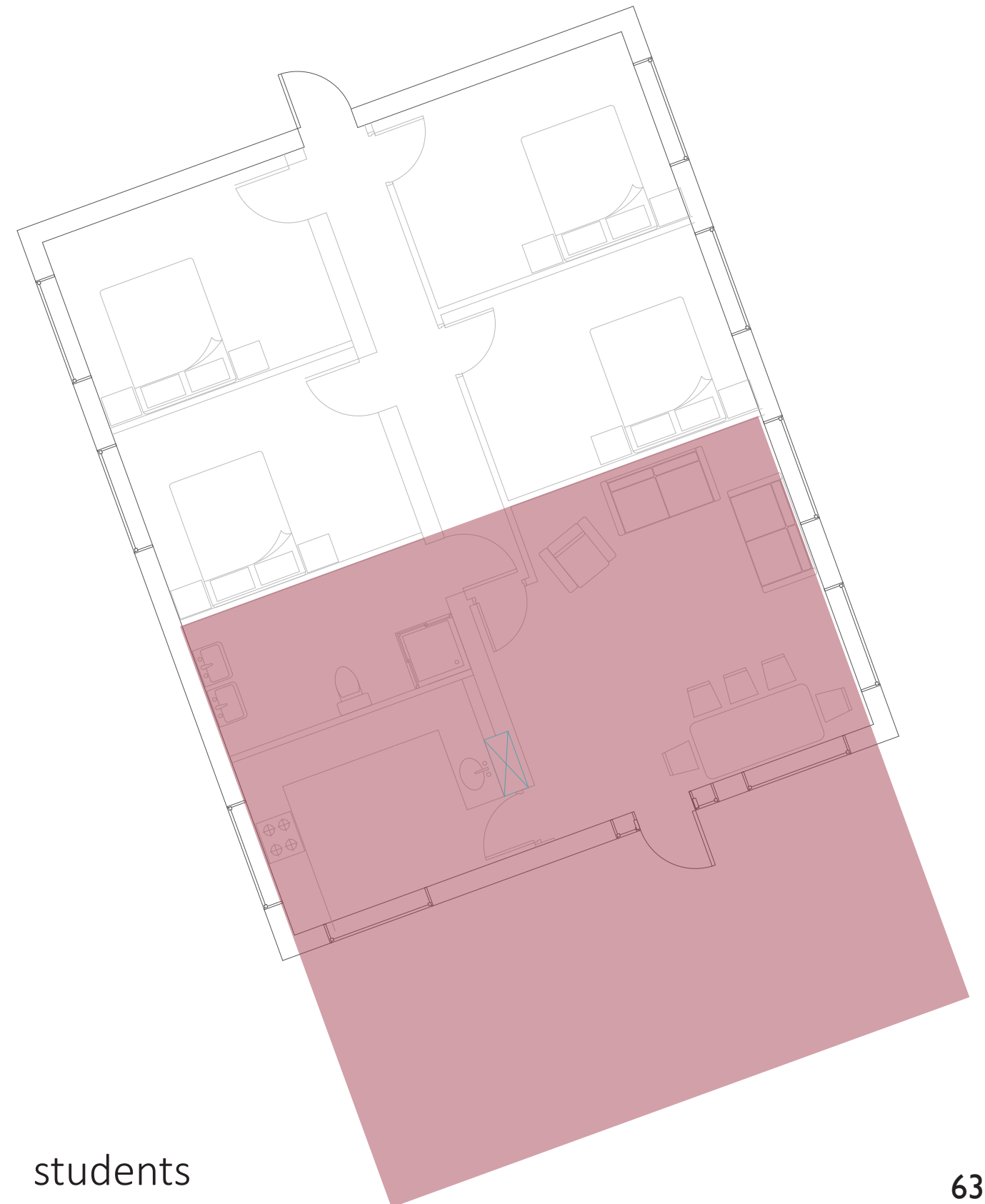


# APARTMENTS

Shared area

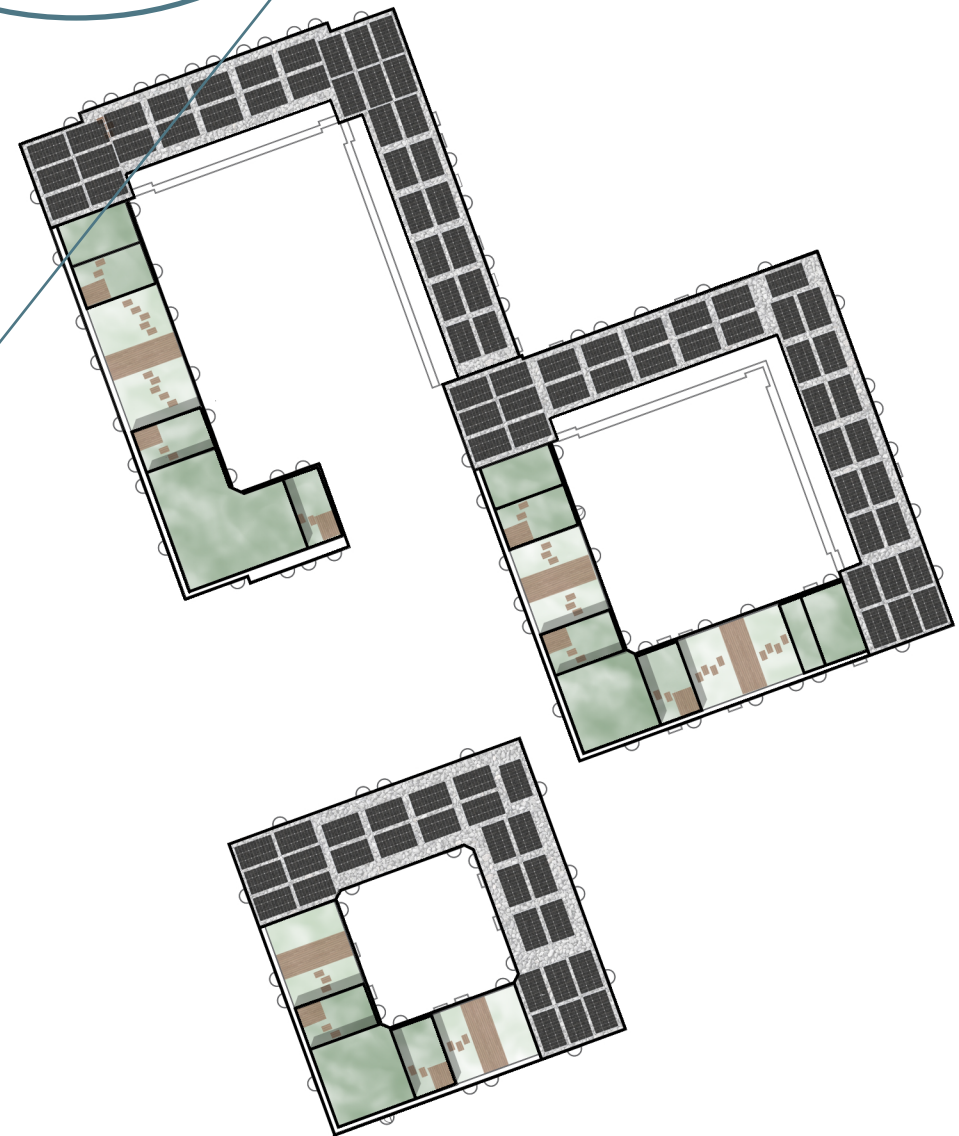
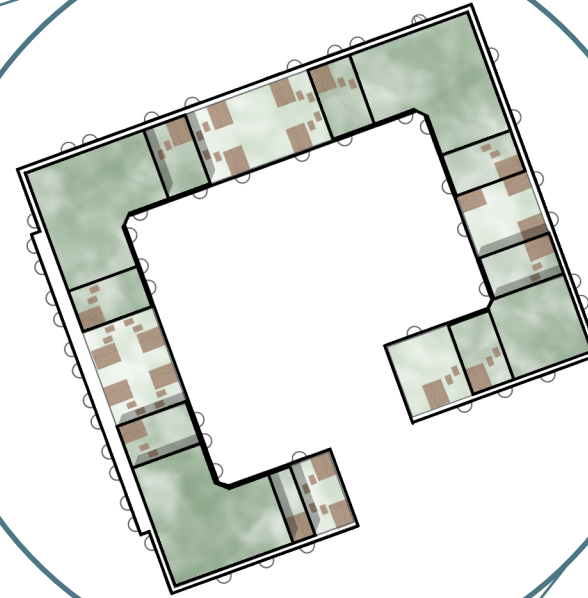
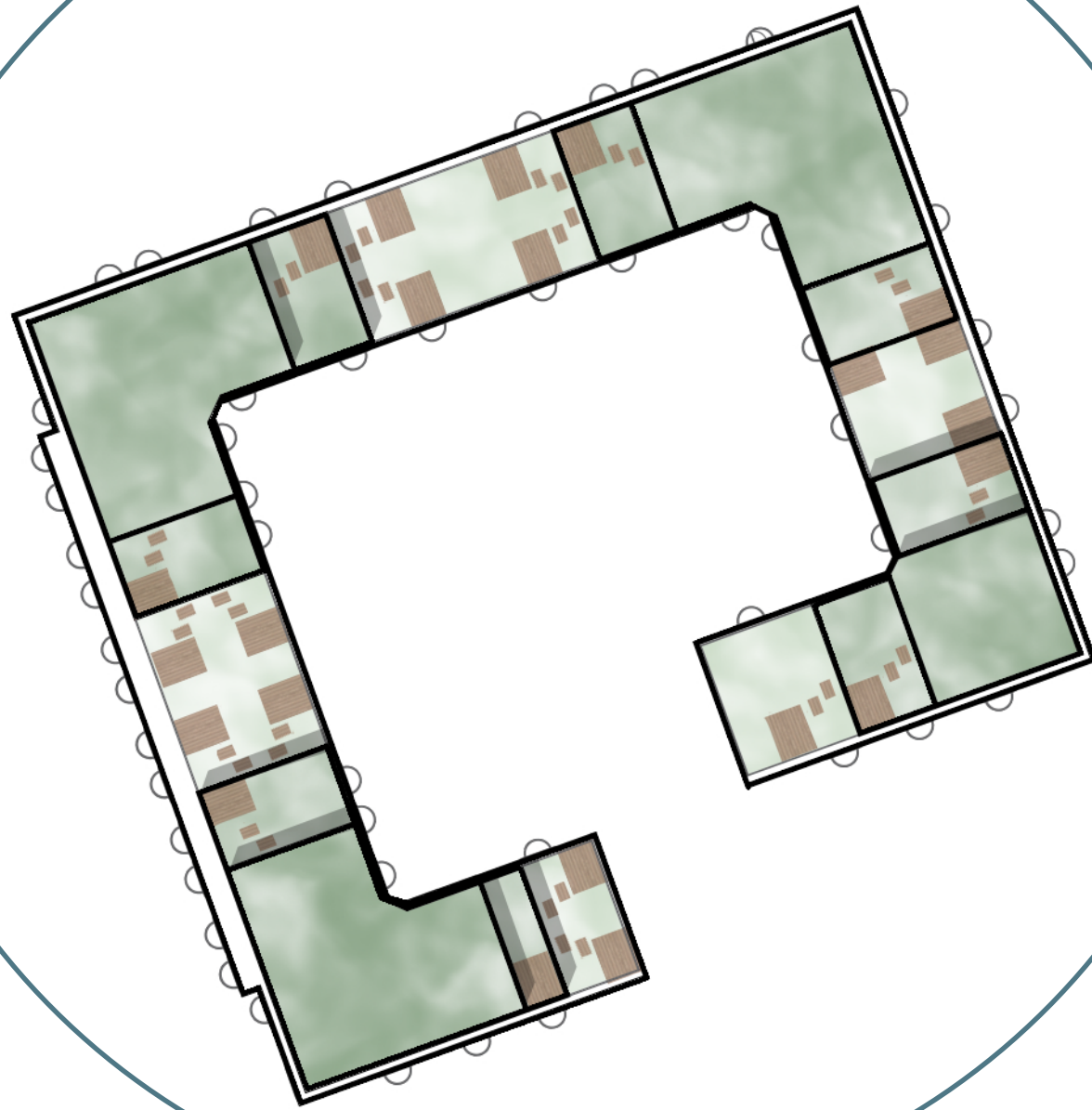


artists HCC



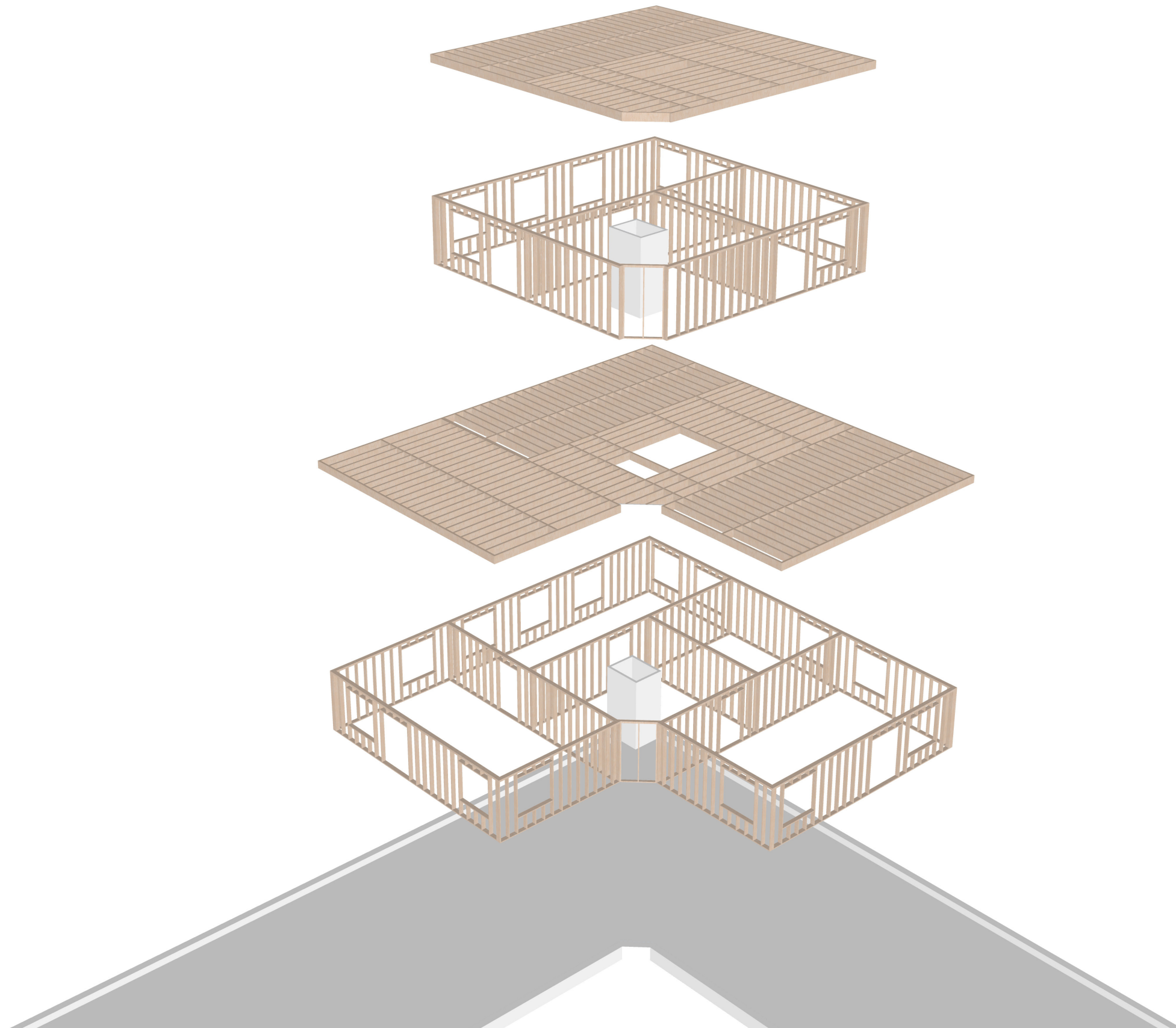
students

# ROOF TERRACES





## 3D CONSTRUCTION



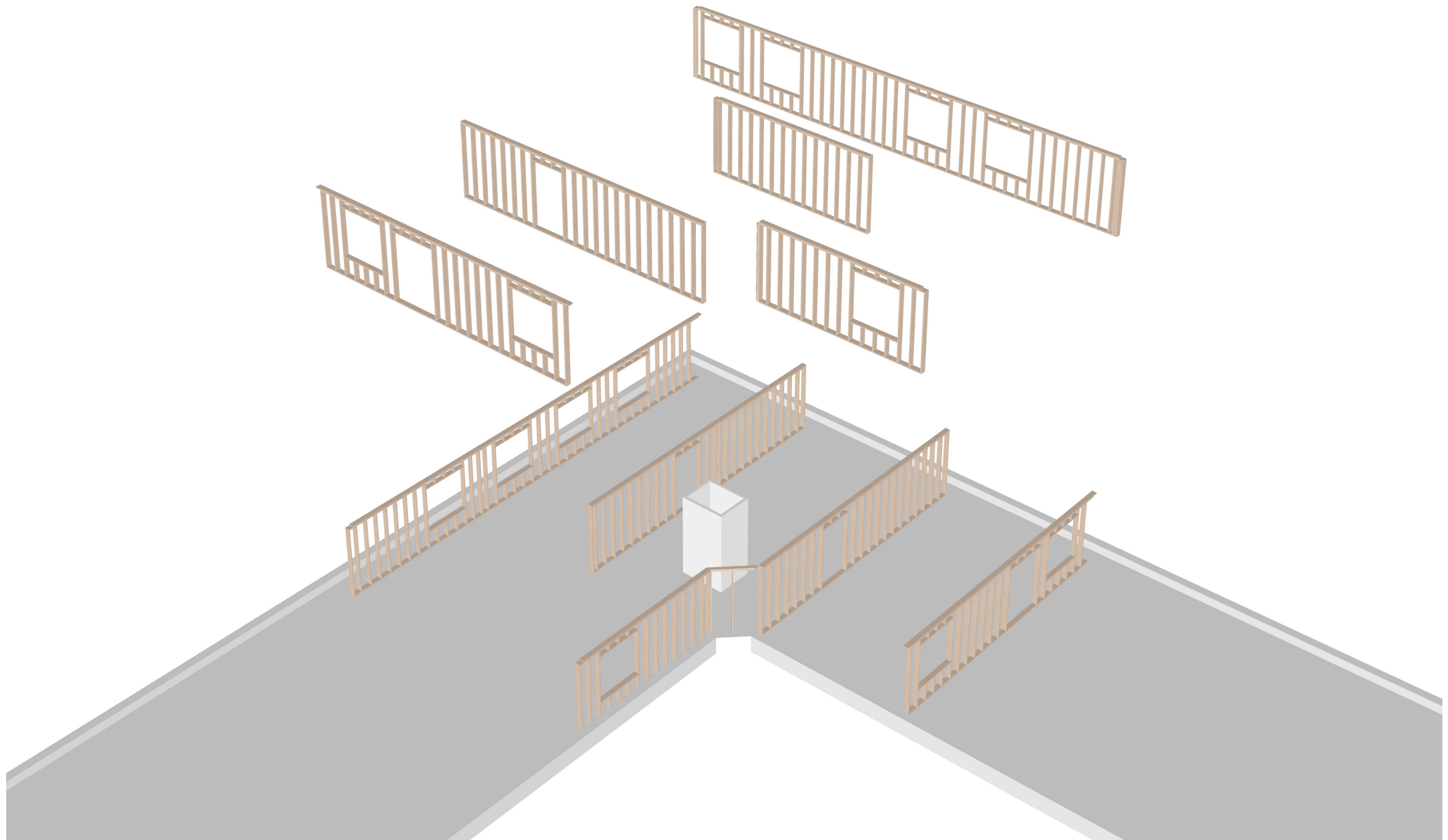
## CONSTRUCTION PROCESS



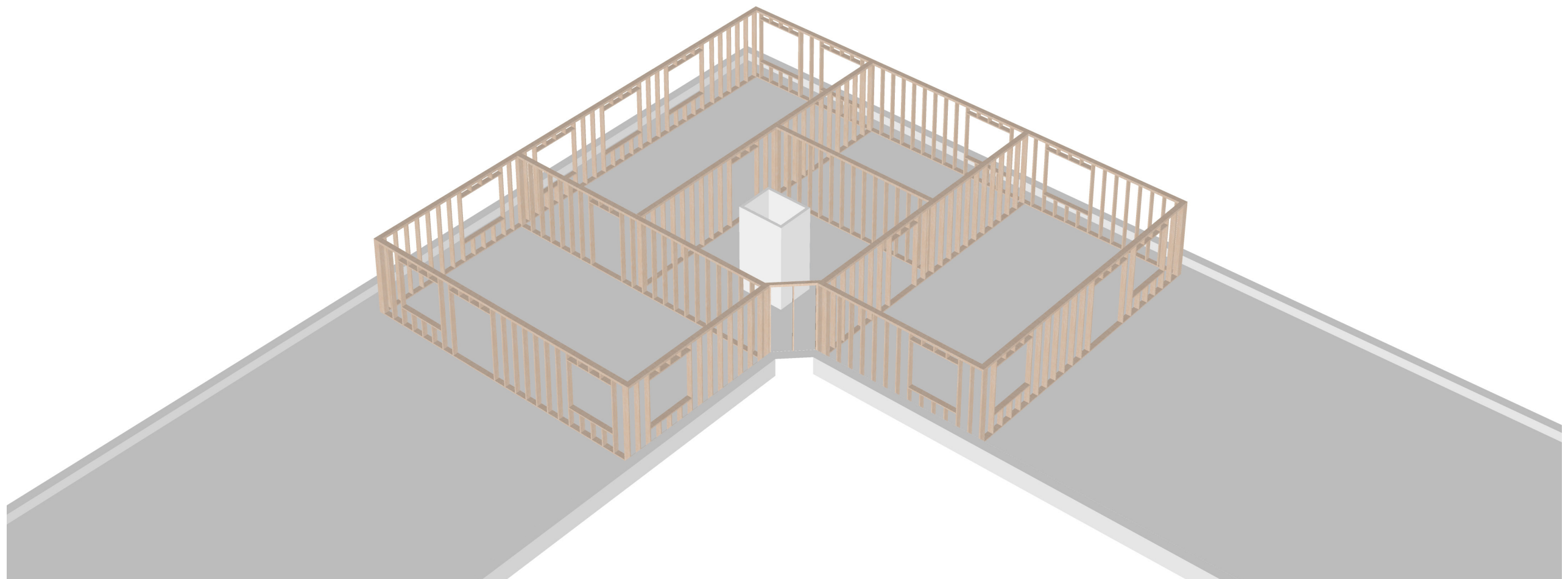
De Kroon prefab



# CONSTRUCTION PROCESS

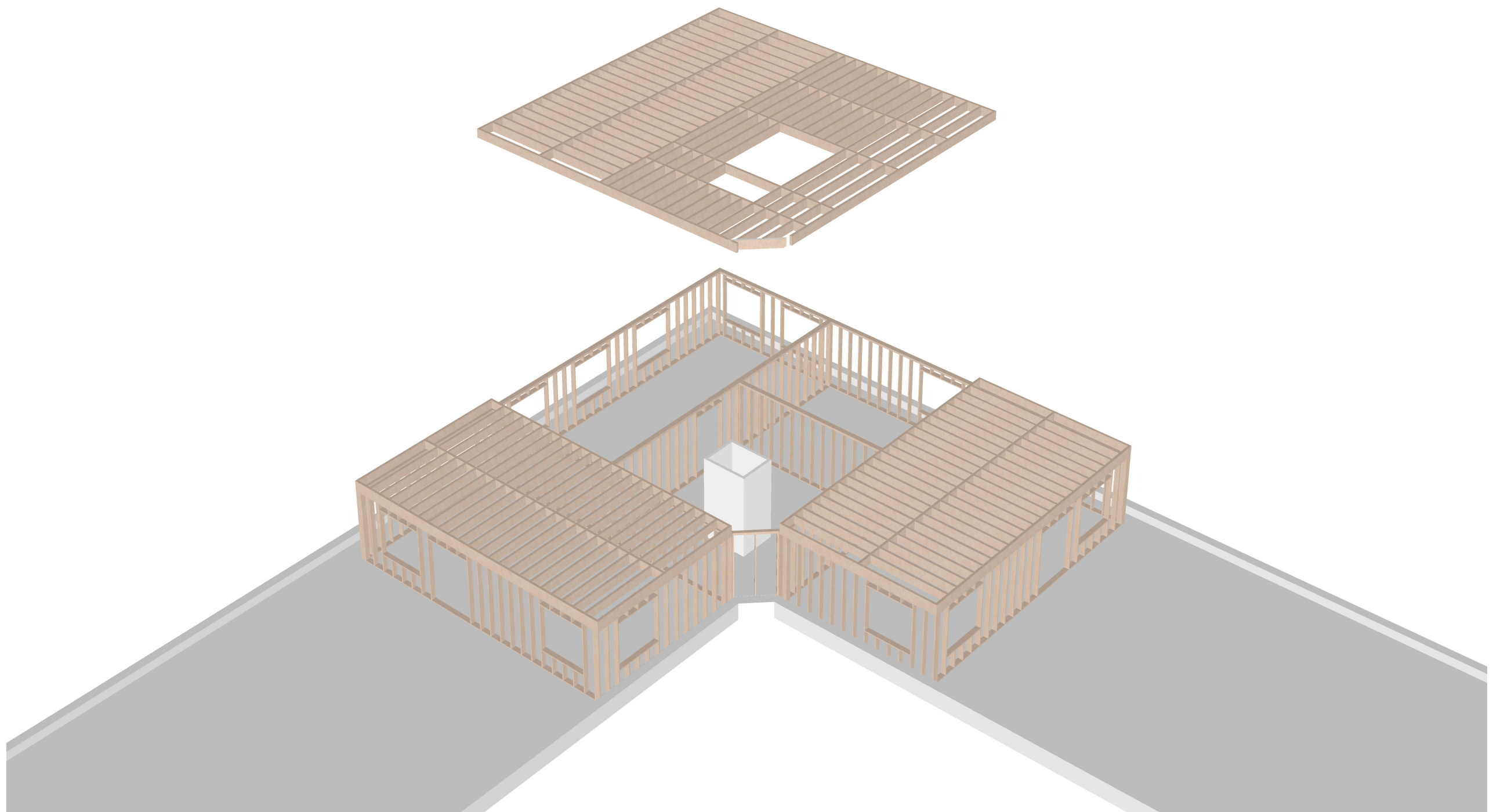


# CONSTRUCTION PROCESS

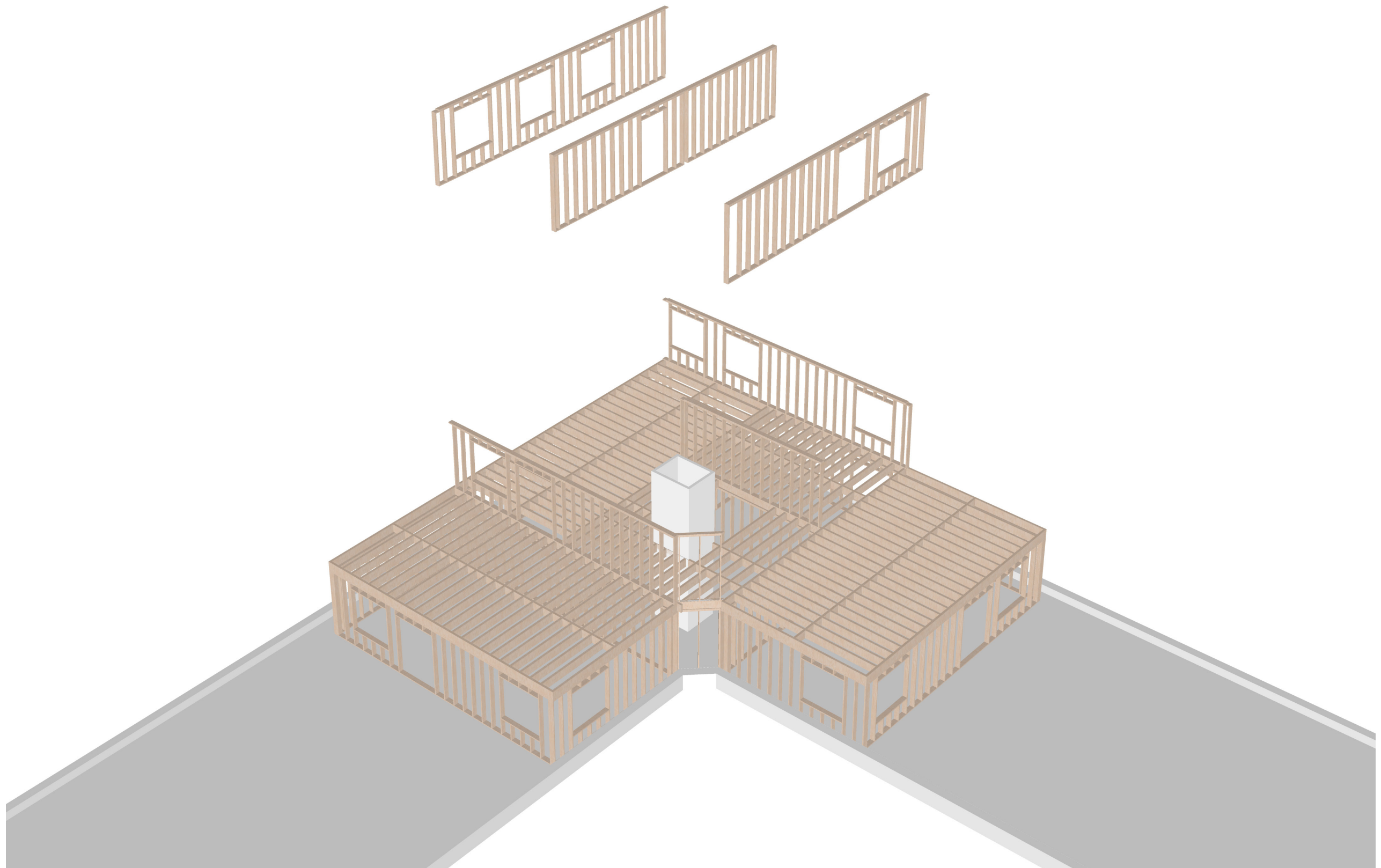




# CONSTRUCTION PROCESS

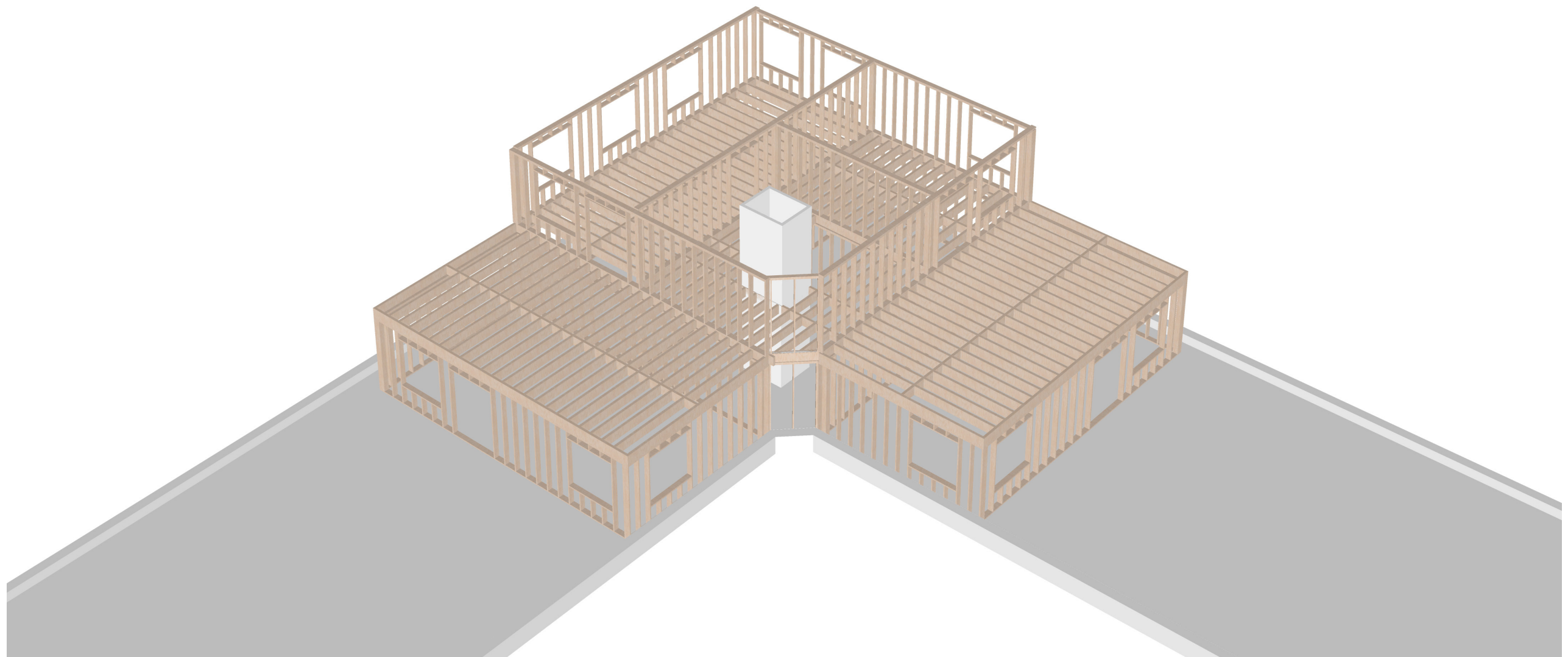


# CONSTRUCTION PROCESS

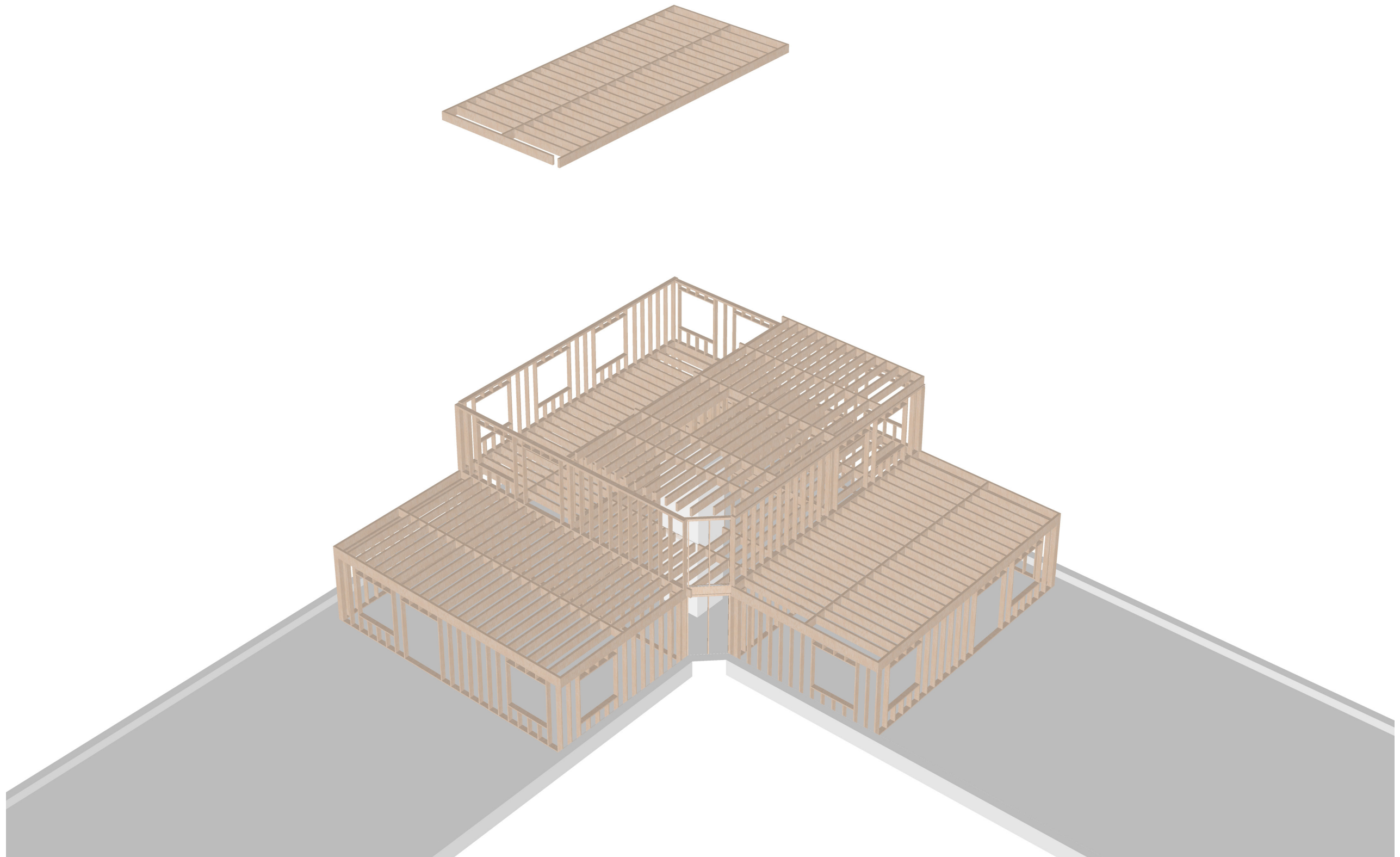




# CONSTRUCTION PROCESS

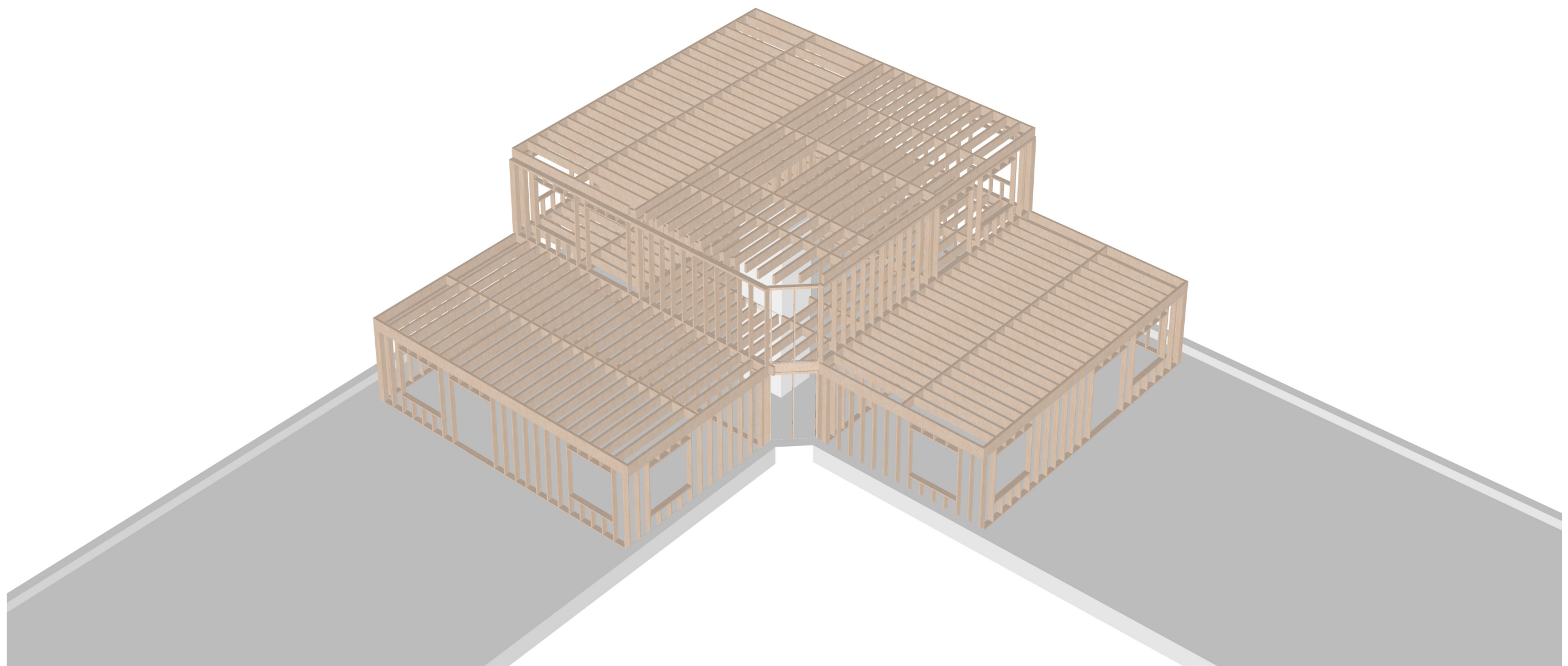


# CONSTRUCTION PROCESS

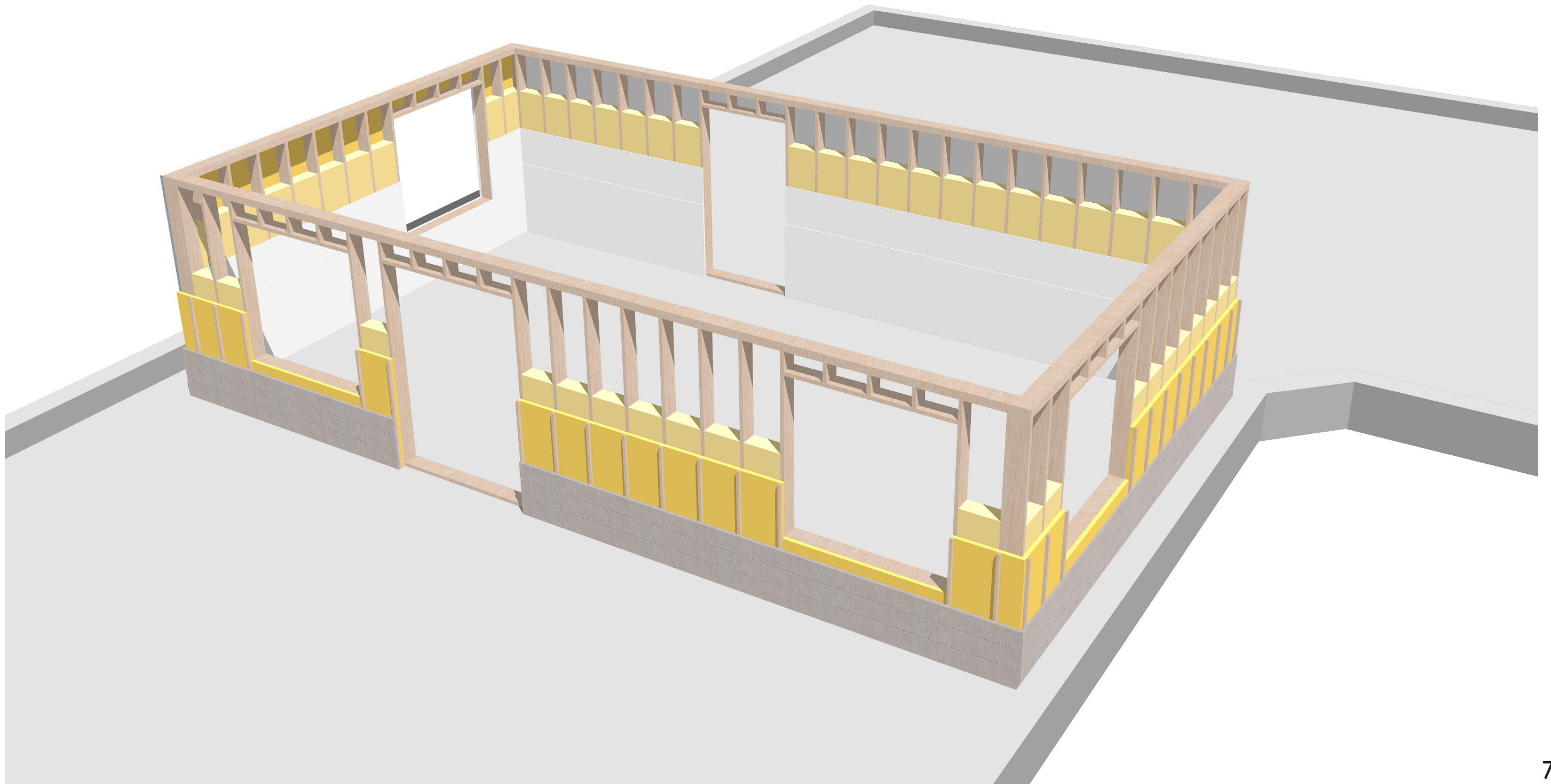




# CONSTRUCTION PROCESS

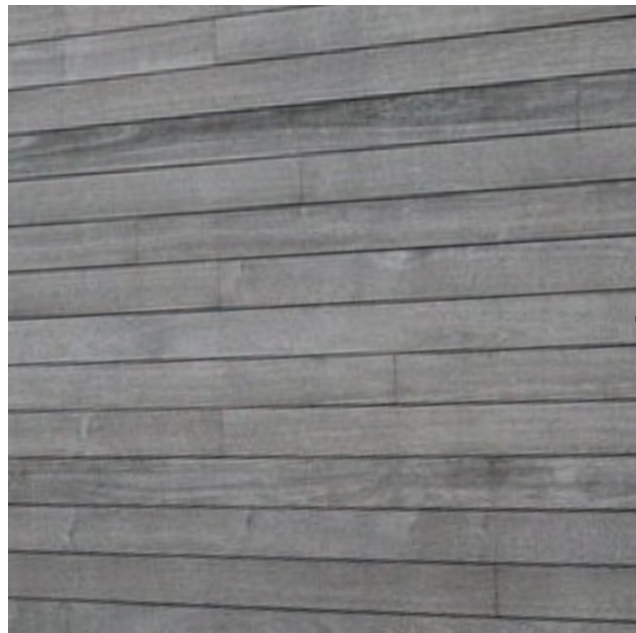


## 3D CONSTRUCTION

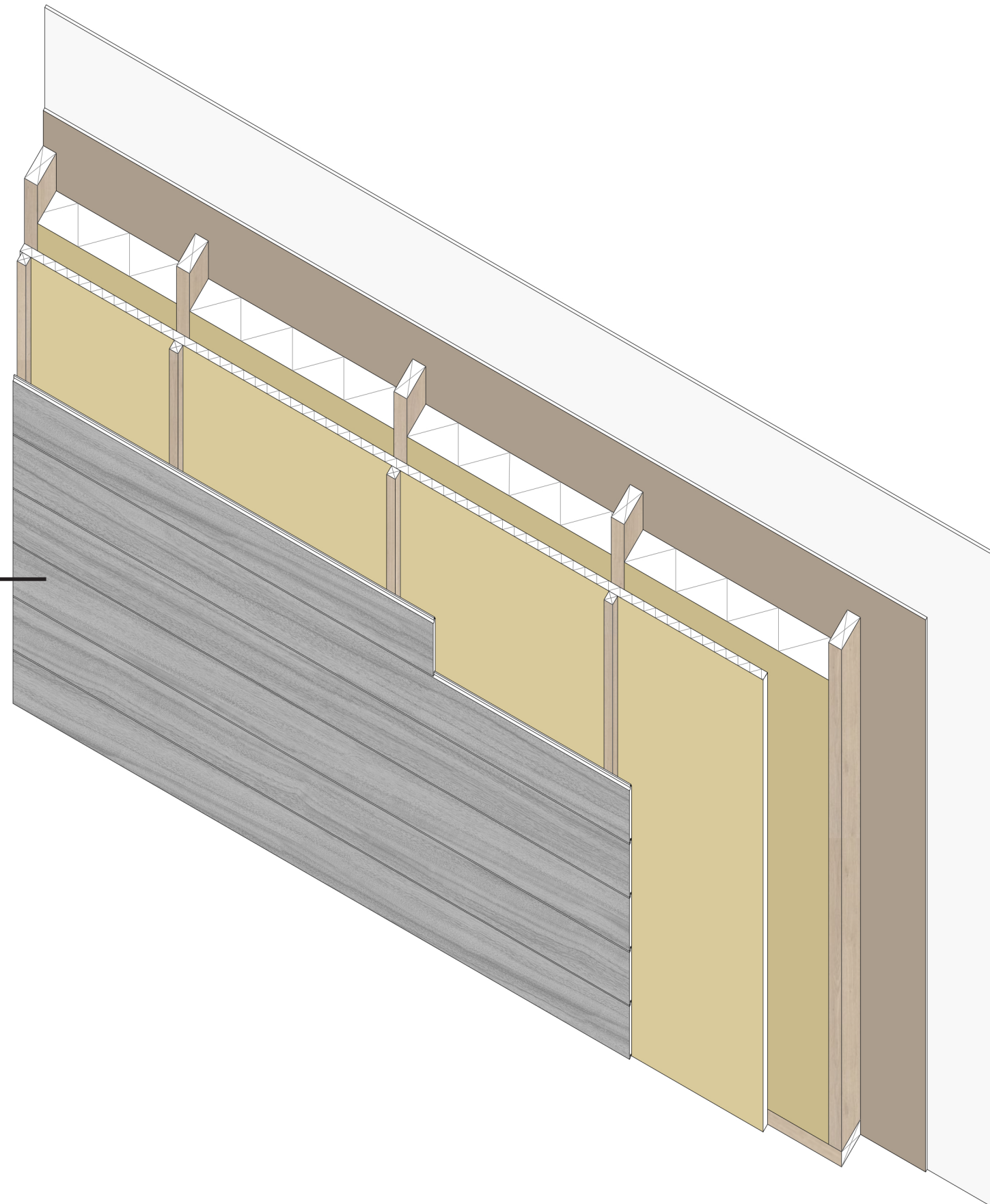


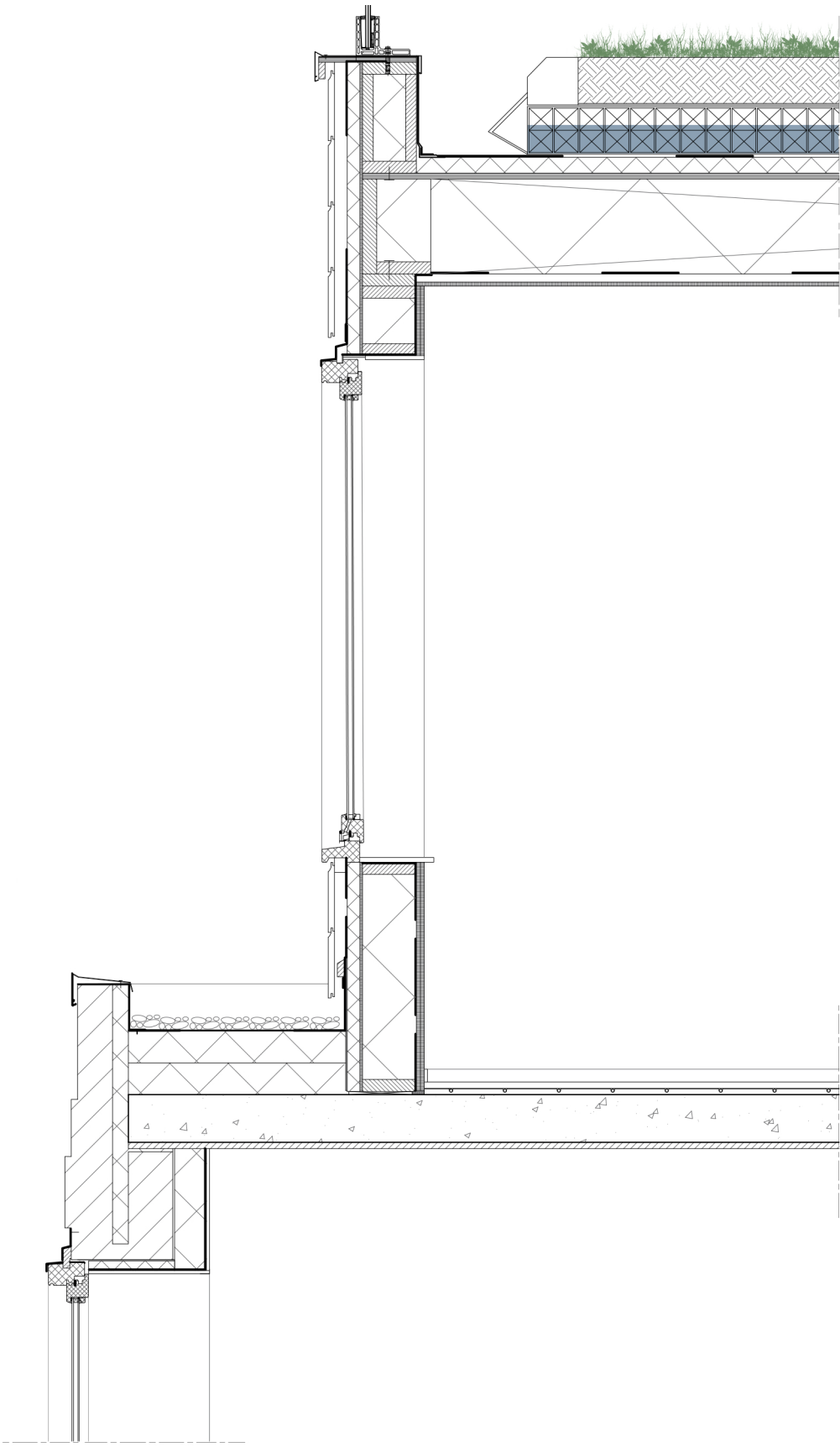
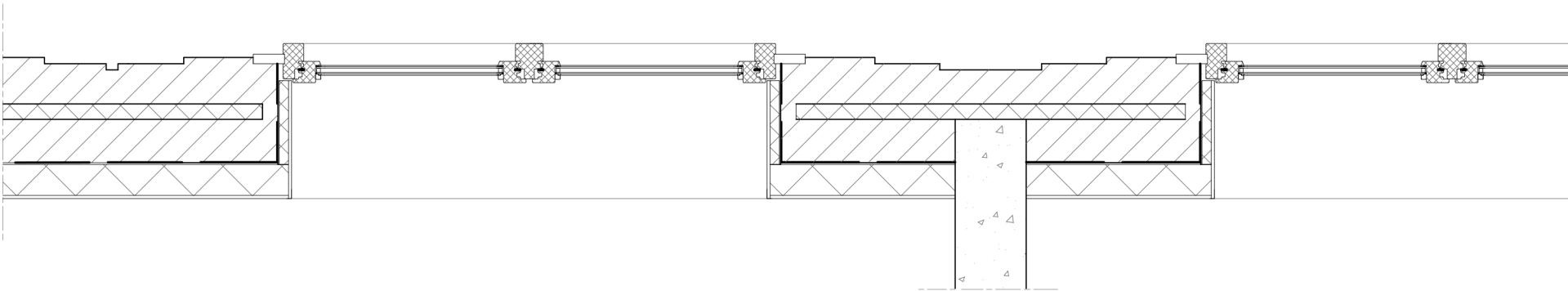


# FACADES



Platowood Fraké

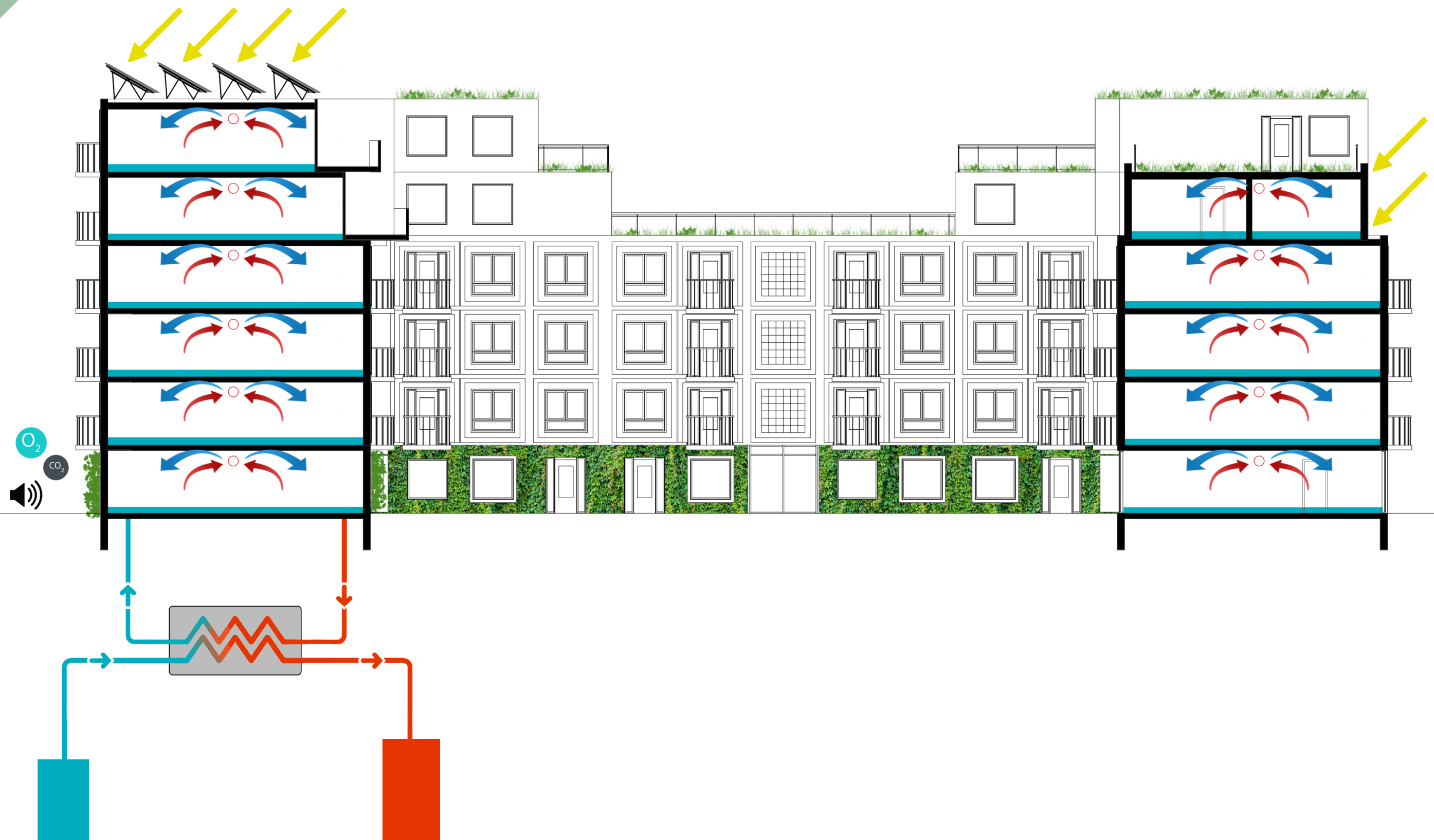
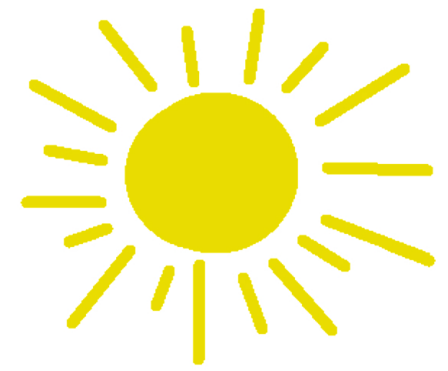




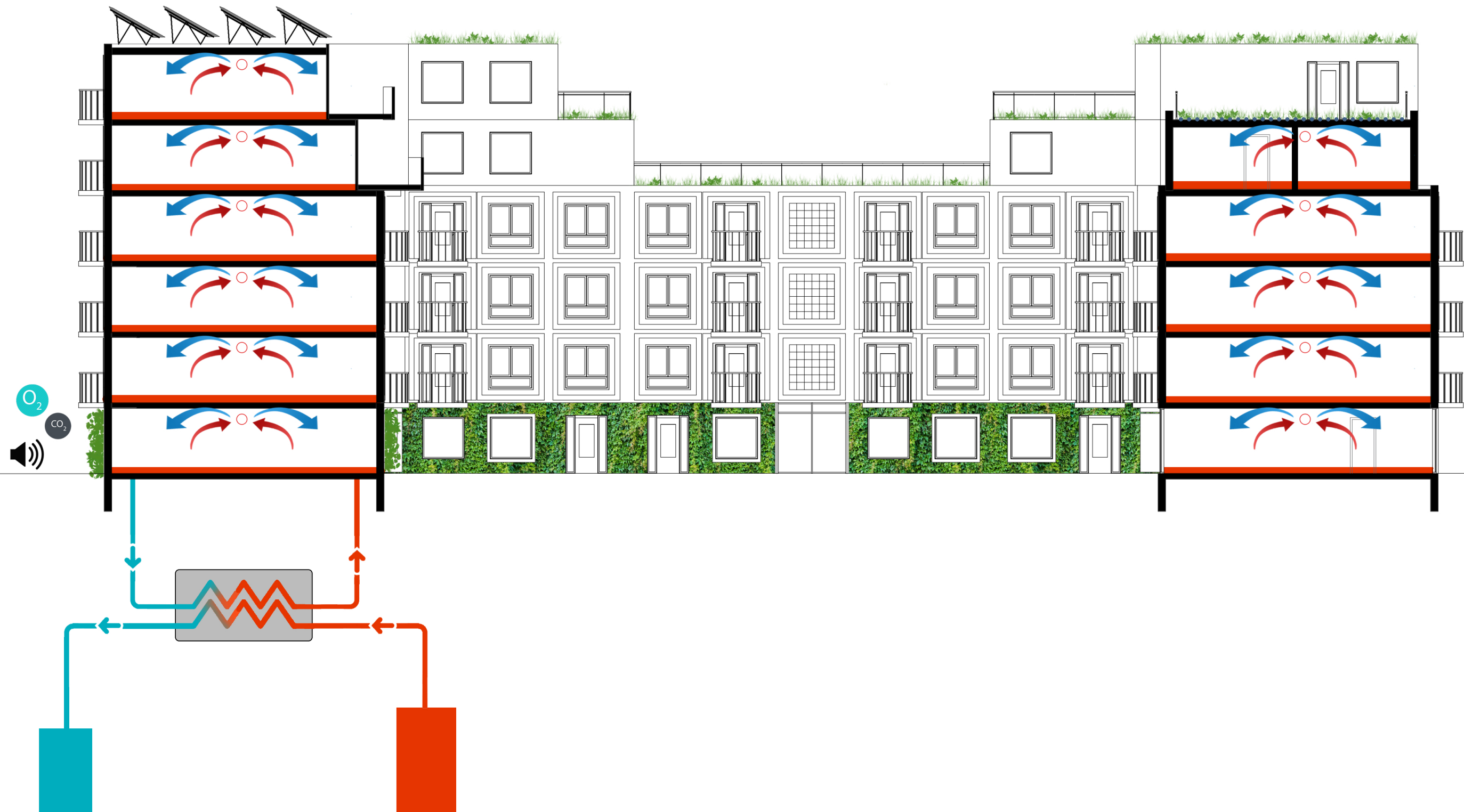
facade fragment 1:20



# CLIMATE CONCEPT



# CLIMATE CONCEPT



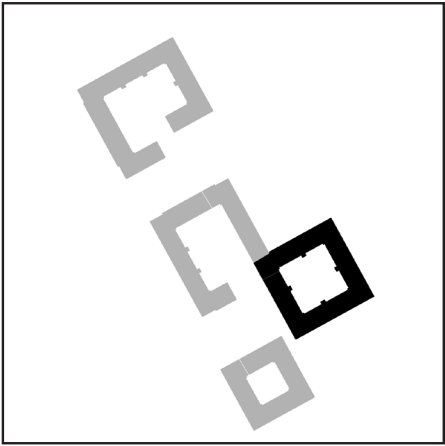


DESIGN

-

DETAIL SCALE

## STUDY BLOCK



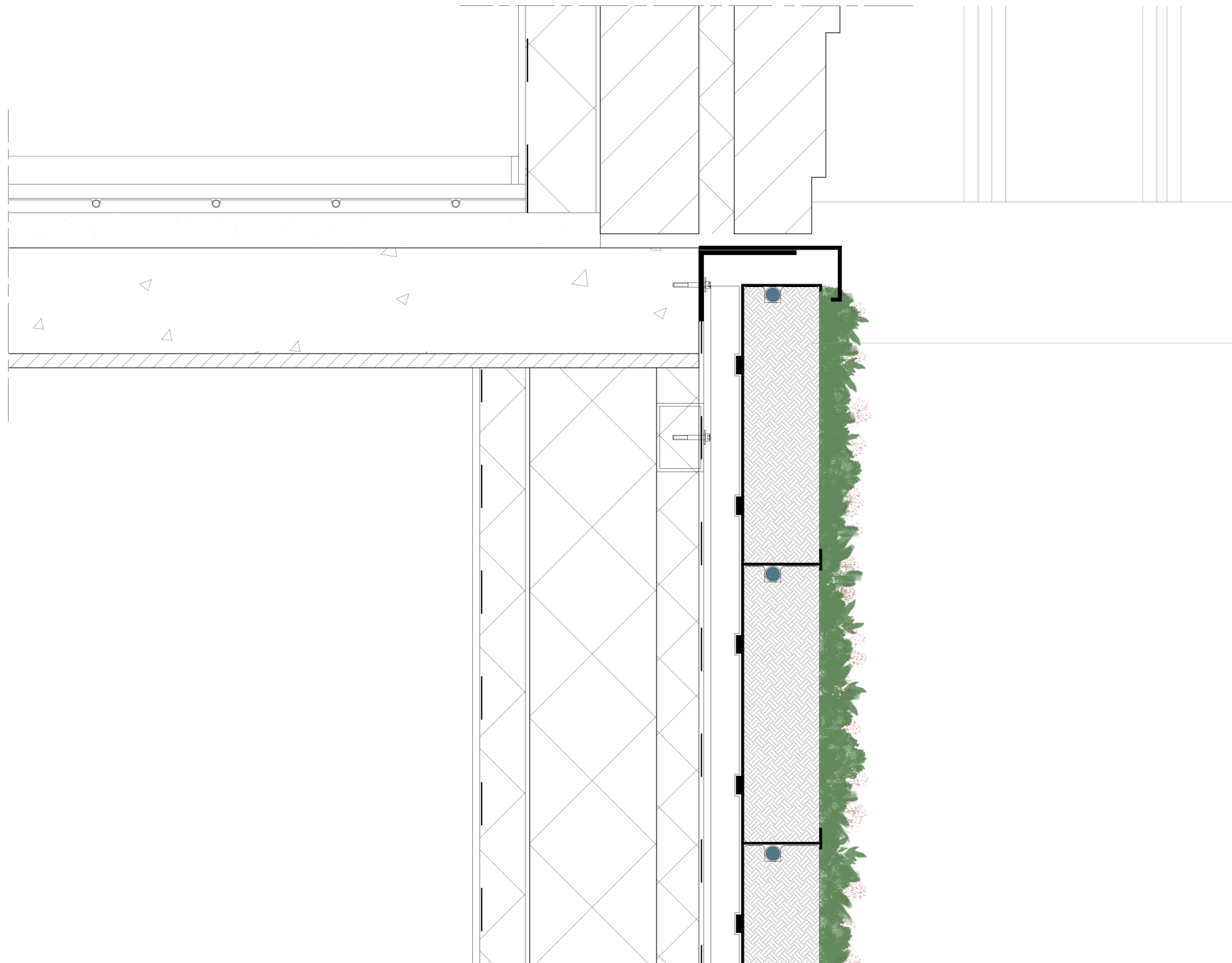


STUDY SPACES





## D08 GREEN FACADE



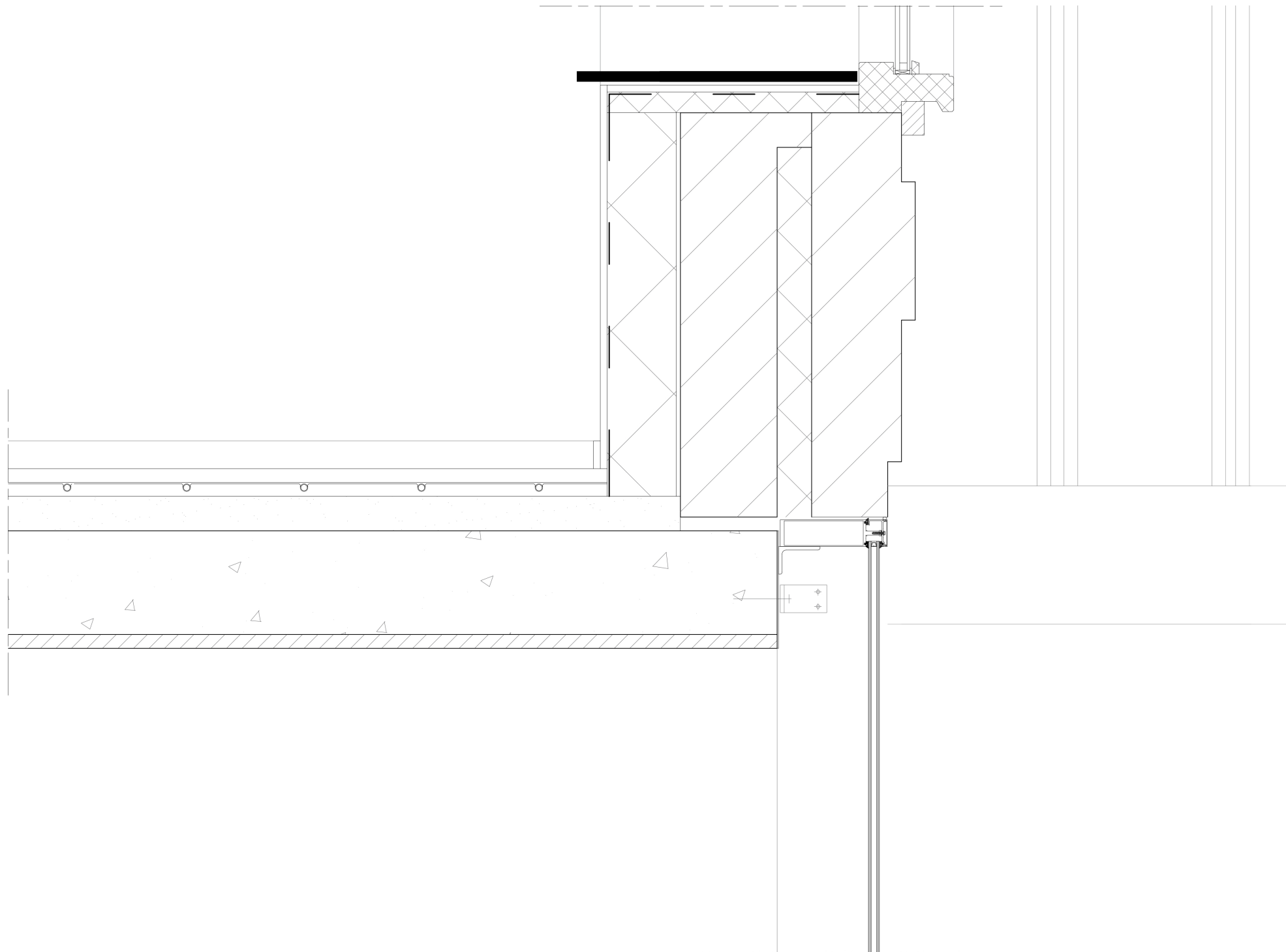


## SHOPS





## D03 CURTAIN WALL





## ROOF TERRACES





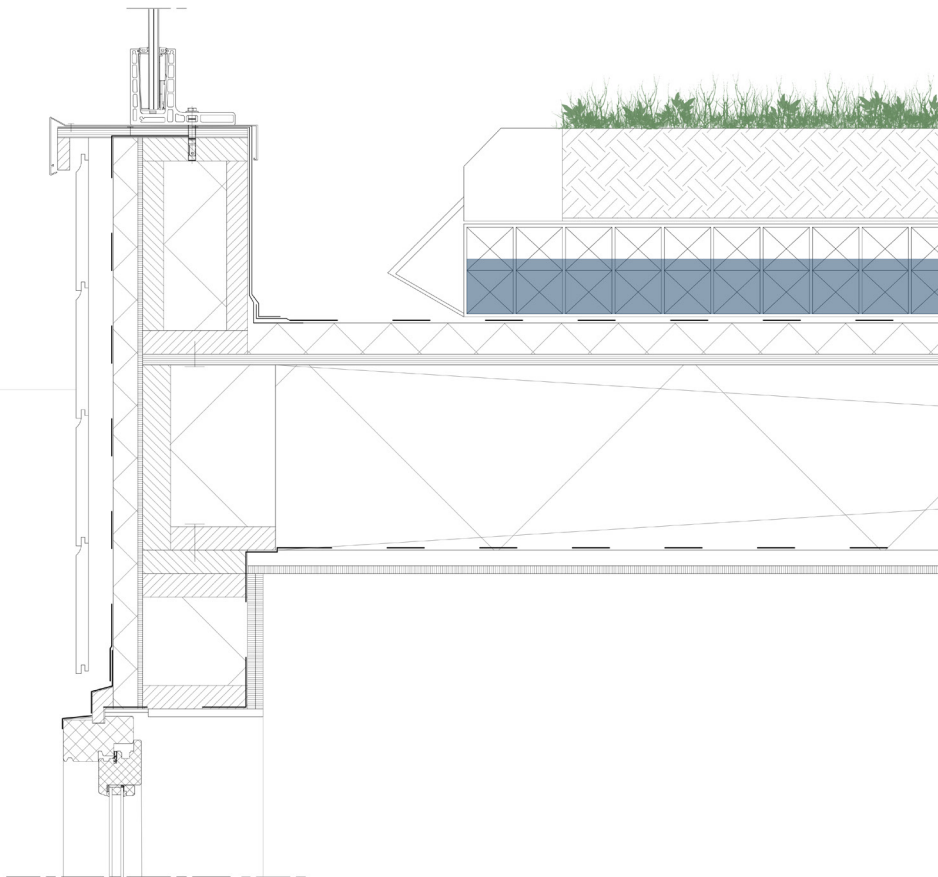
## NEW DWELLINGS



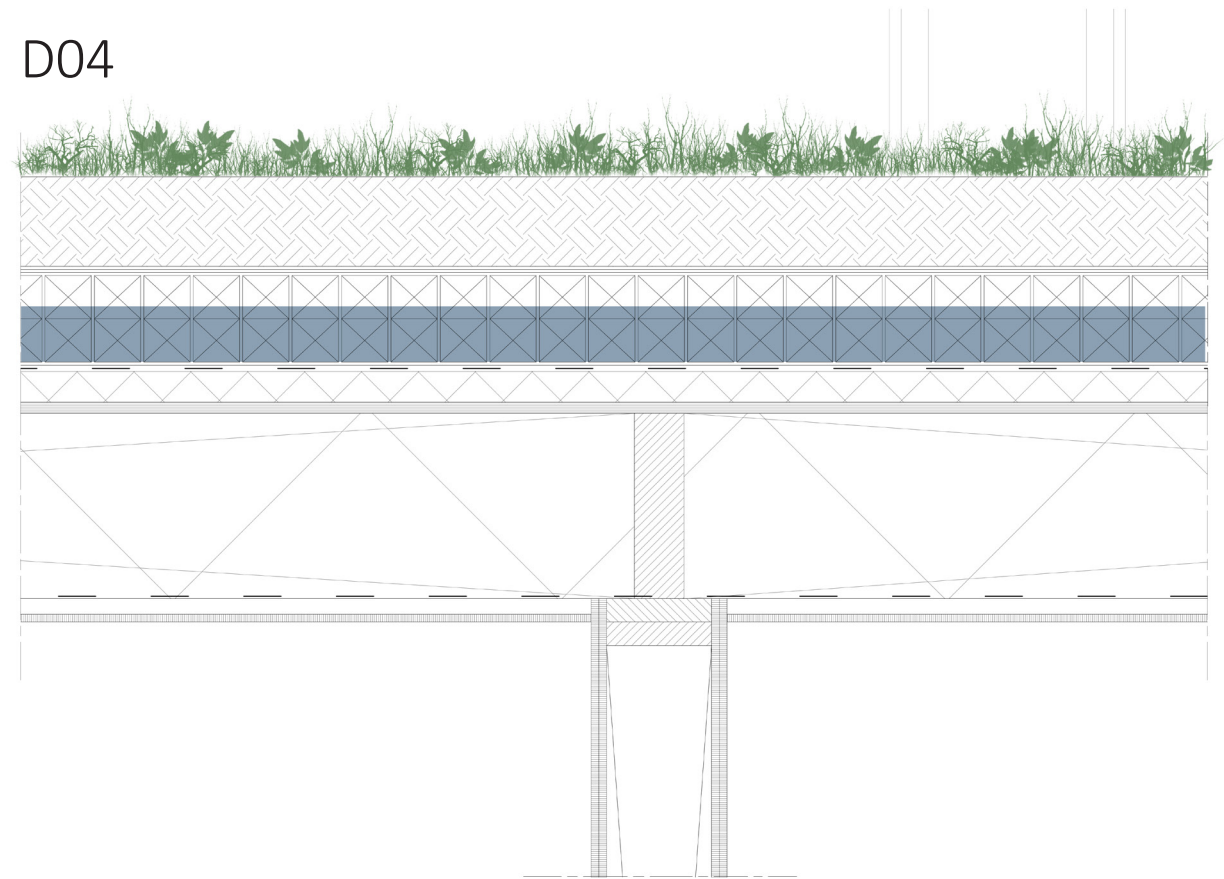


# NEW DWELLING

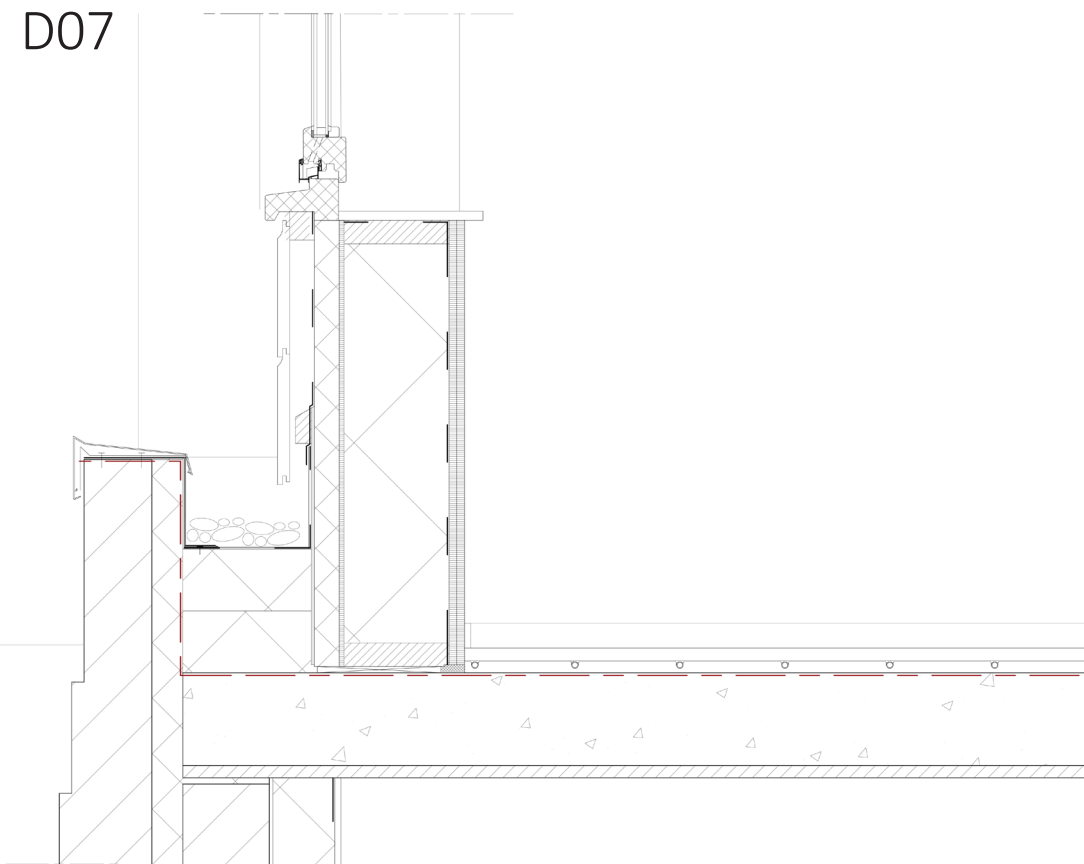
D06



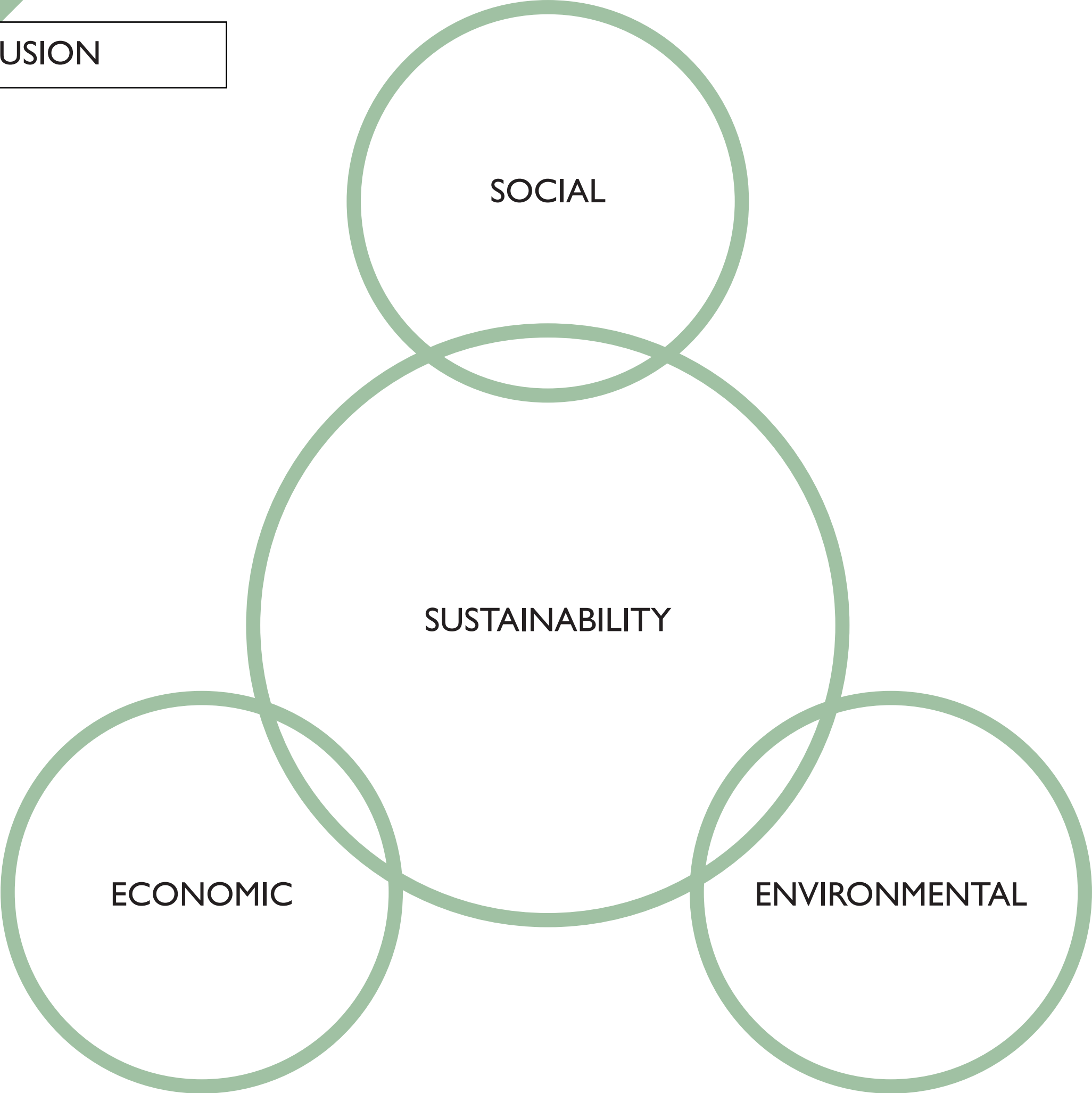
D04



D07

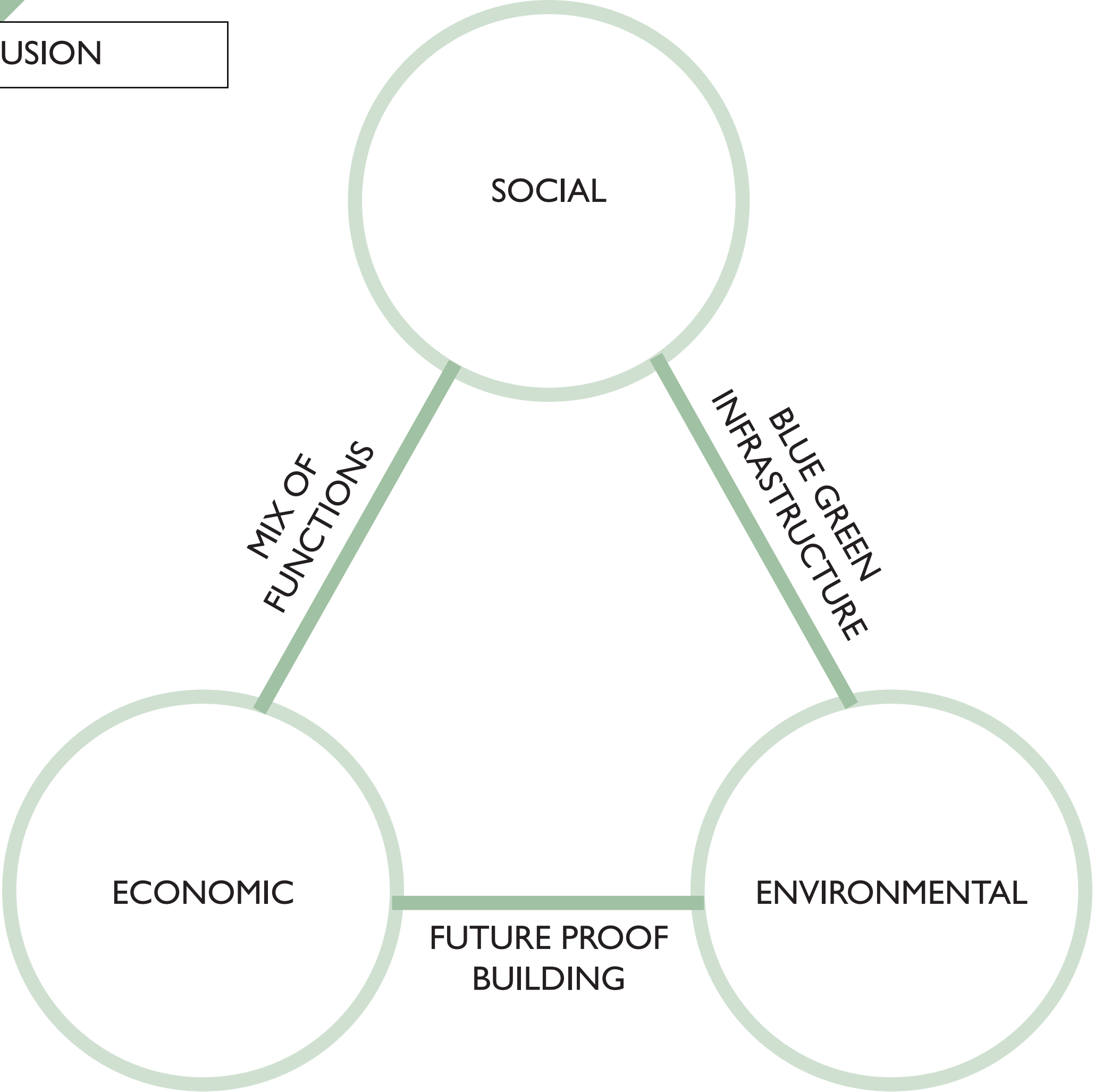


CONCLUSION

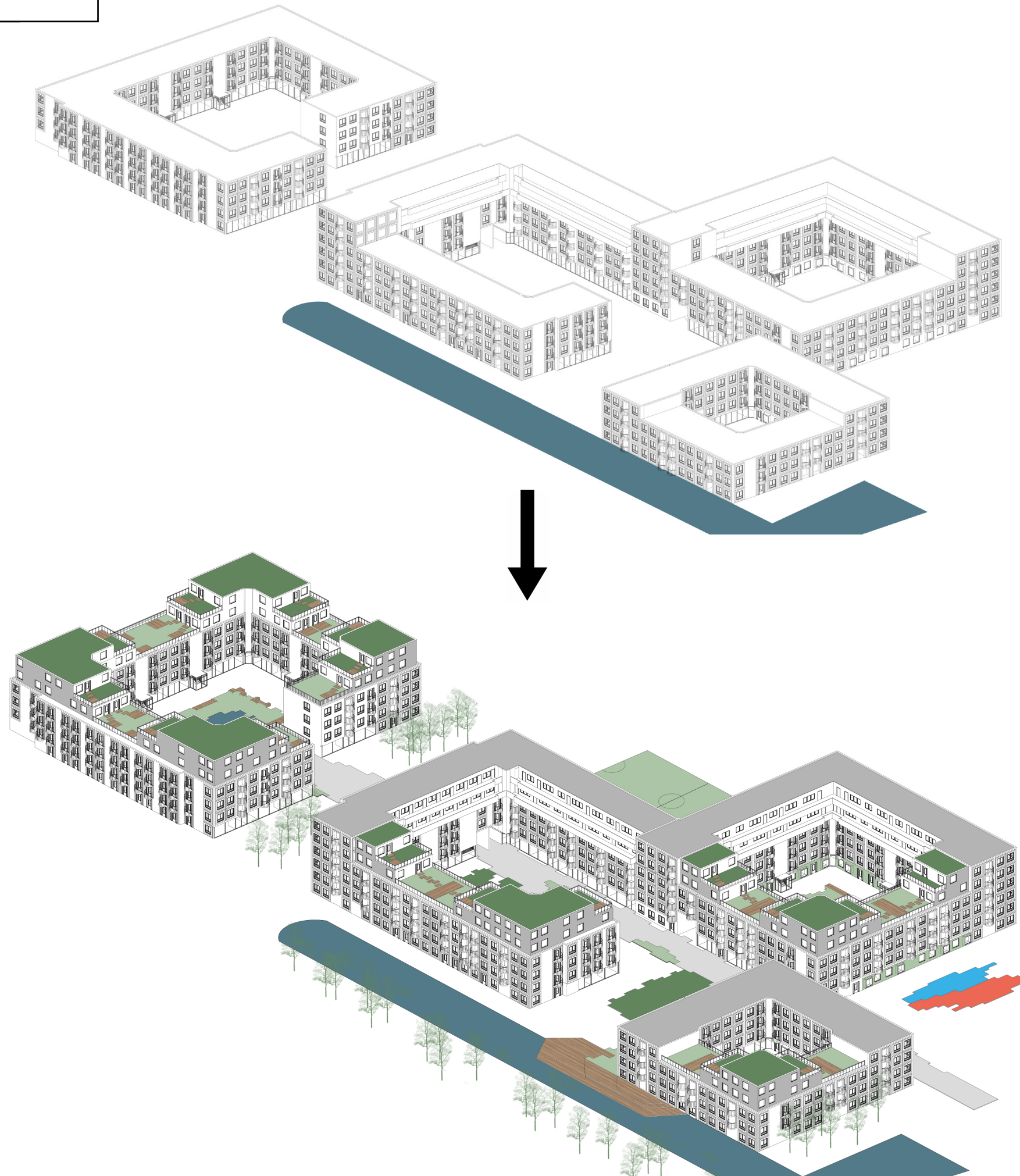




CONCLUSION

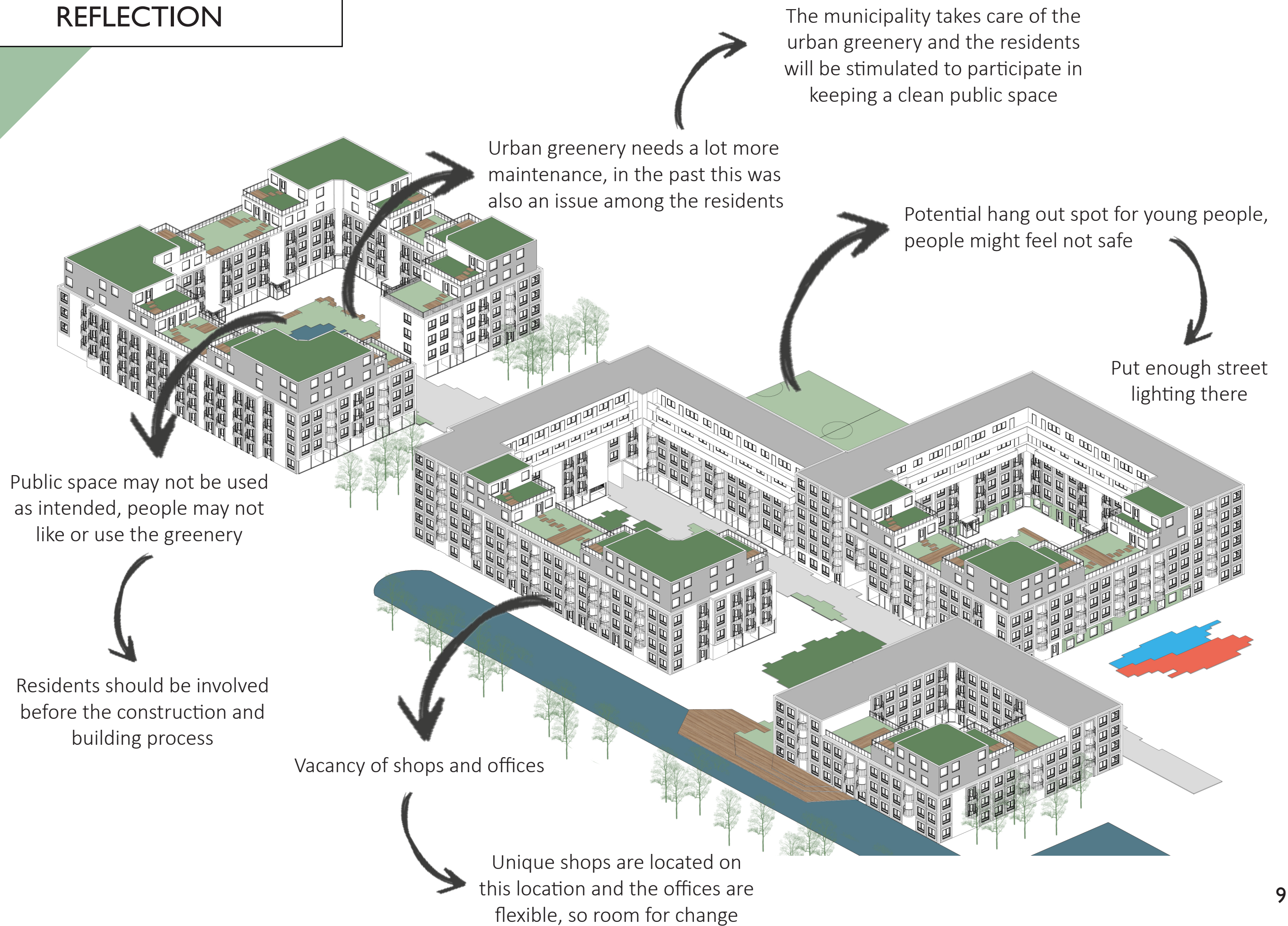


# CONCLUSION





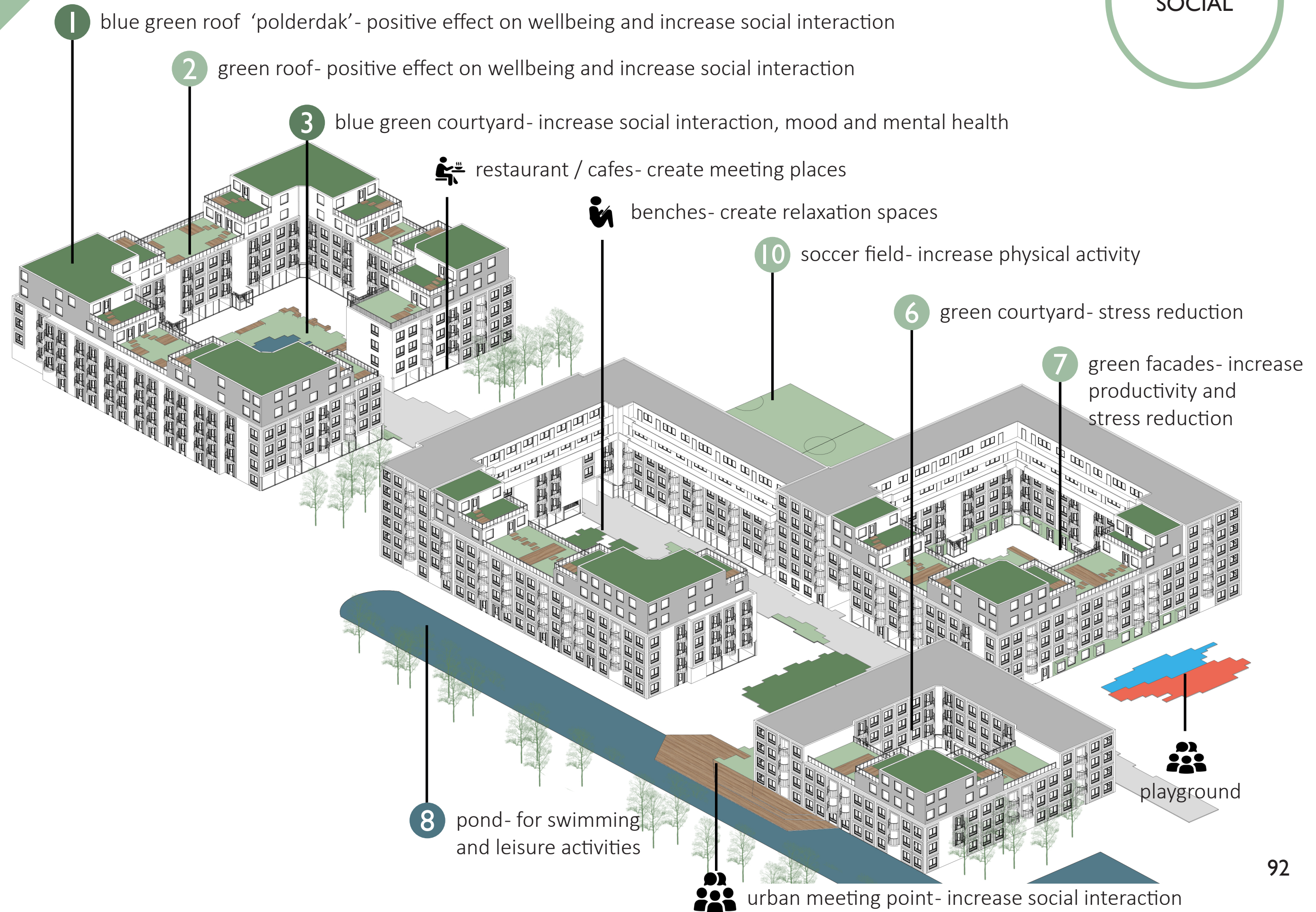
## REFLECTION





## BENEFITS - QUALITATIVE

### SOCIAL





## STRATEGY

## SOCIAL



entrepreneurs



artists HCC



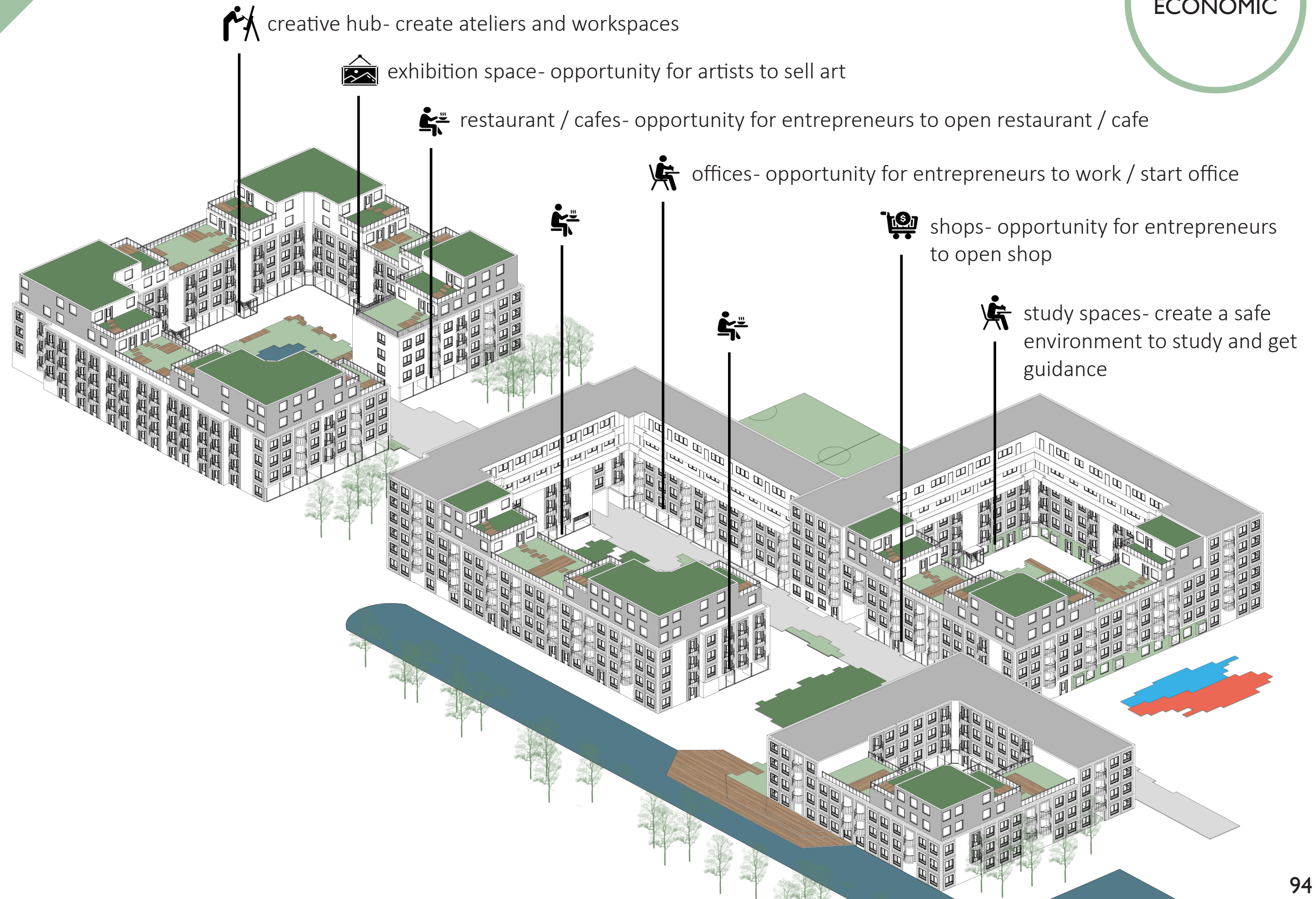
students



visitors

## BENEFITS - QUALITATIVE


## ECONOMIC





## BENEFITS - QUANTITATIVE

ECONOMIC

  
study spaces

1480 m<sup>2</sup>

  
creative hub

1190 m<sup>2</sup>

  
shops

680 m<sup>2</sup>

  
restaurants  
/ cafes

670 m<sup>2</sup>

  
offices

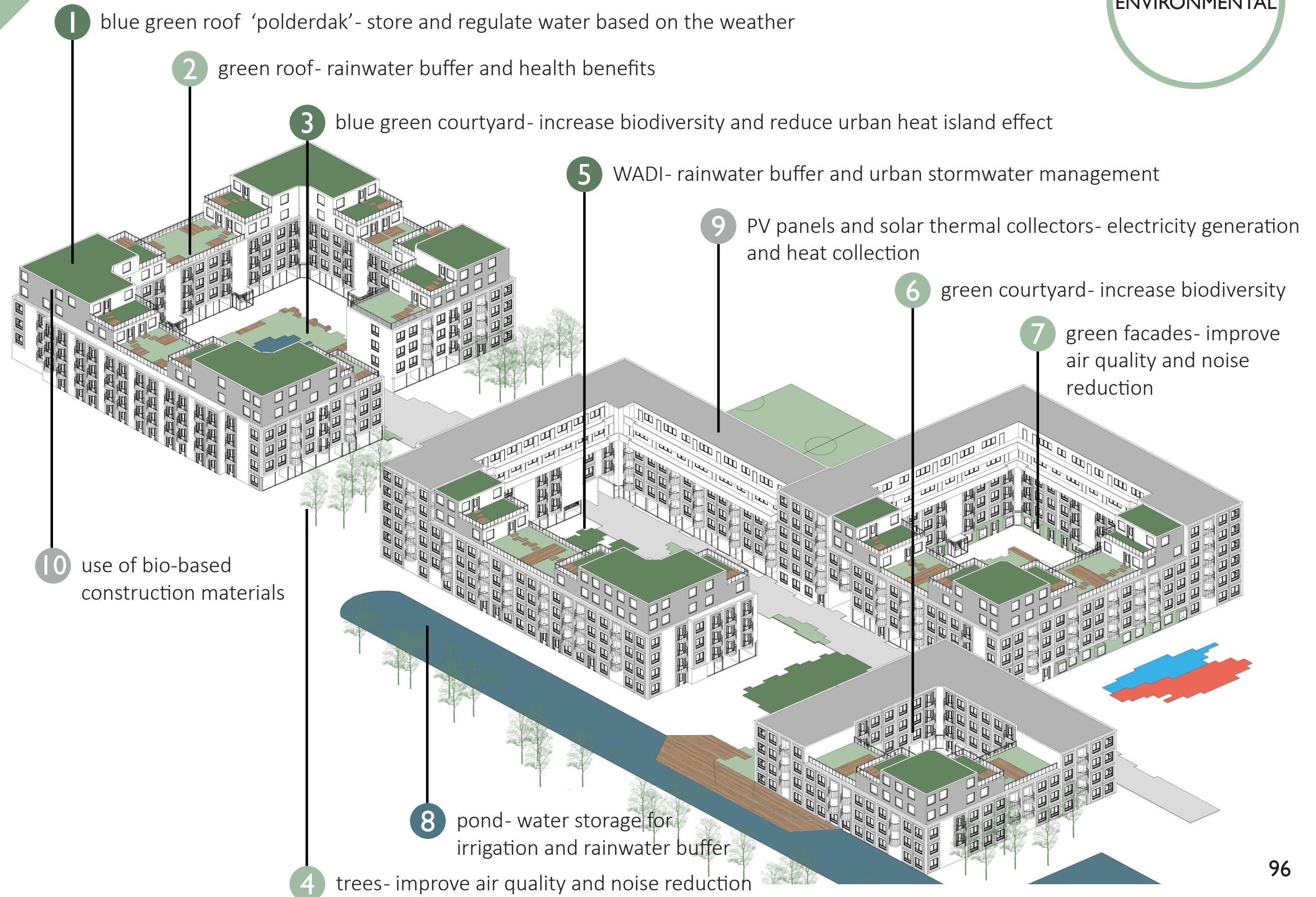
540 m<sup>2</sup>

Too little offices and a lot of study spaces

Create flexible coworking spaces

## BENEFITS - QUALITATIVE

ENVIRONMENTAL





BENEFITS - QUANTITATIVE



blue green roof



2250 m²

urban greenery



1775 m²

green facade



1230 m²

green roof



1180 m²

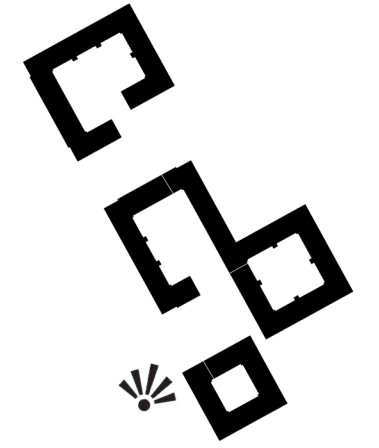




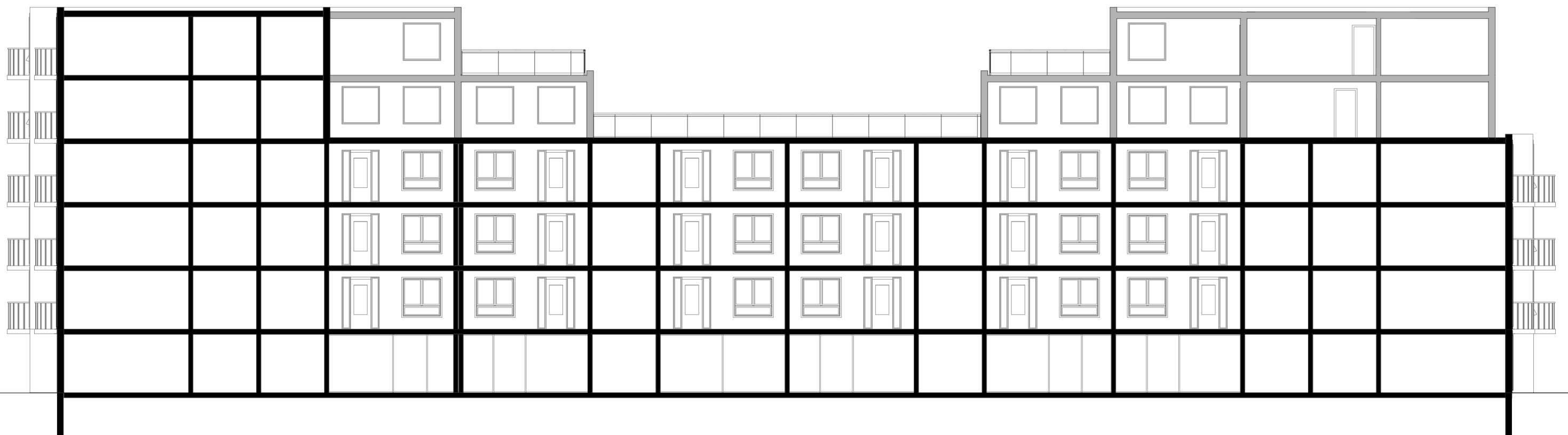
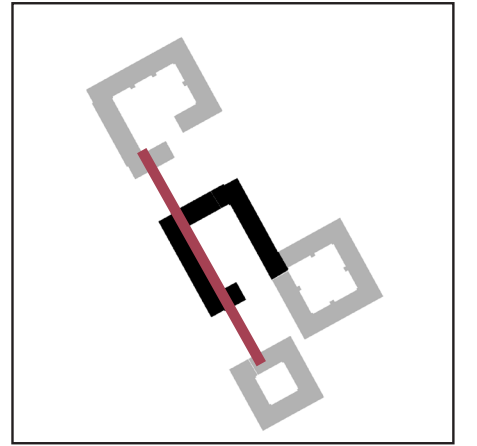
HEESTERVELD GONE GREEN



## URBAN MEETING SPOT

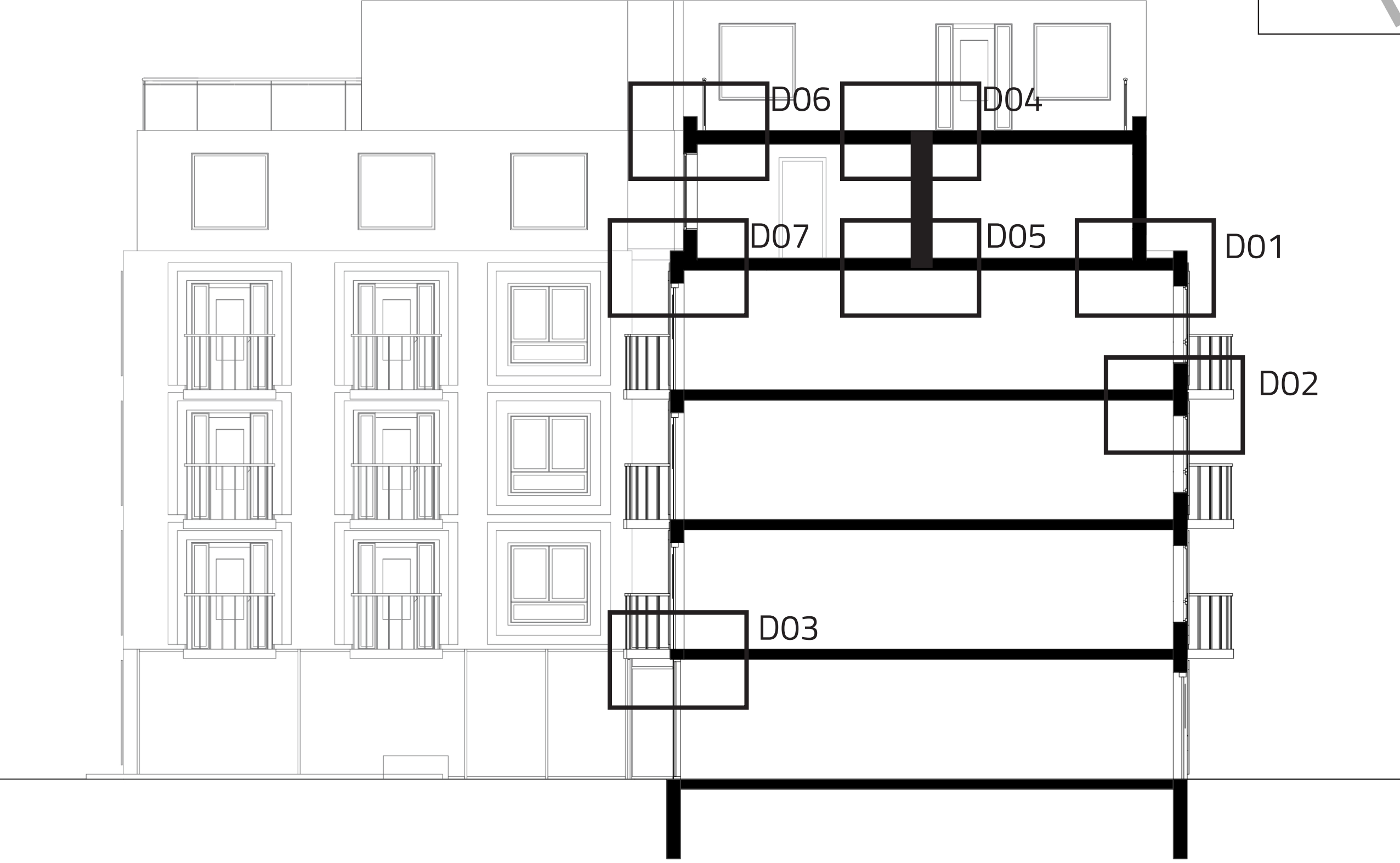
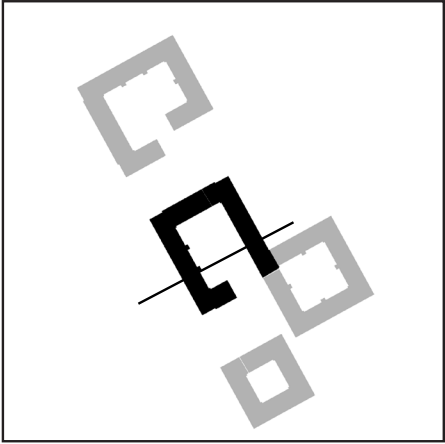


# LOAD BEARING WALLS





SECTION



D0I

Rc value: 5,6 m² K / W

From left to right:  
Gypsum board 12,5 mm  
Multiplex 12,5 mm  
Vapor barrier  
Wooden beams with GUTEX Thermoflex 170 mm  
Multiplex 8 mm  
Wood fibre insulation board 40 mm  
Waterproofing membrane  
ENERGY FACADE (solar panels)

From top to bottom:  
Gravel ballast layer  
Bitumen waterproofing membrane  
GUTEX Thermoroom 100 mm with slope  
GUTEX Thermoroom 100 mm  
Wide slab concrete floor 170 mm

Rc value: 6,1 m² K / W

From top to bottom:  
Covering floor 20 mm  
VASCO floor heating system 25 mm  
Wide slab concrete floor 170 mm

From left to right:  
Stucco  
Vapor barrier  
GUTEX Thermoroom 100 mm  
GUTEX mortar  
Prefab concrete panel 130 mm  
Insulation 40 mm  
Prefab concrete panel 130 mm

Rc value: 4,7 m² K / W



D02

From top to bottom:  
Covering floor 20 mm  
VASCO floor heating system 25 mm  
Covering floor 50 mm  
Wide slab concrete floor 170 mm

20  
25  
50  
150  
20

Rc value: 4,7 m² K / W

From left to right:  
Stucco  
Vapor barrier  
GUTEX Thermoroom 100 mm  
GUTEX mortar  
Prefab concrete panel 130 mm  
Insulation 40 mm  
Prefab concrete panel 130 mm

W'all-in-One Basic insulation

Existing wooden window frame

New wooden window frame

1:5

D03

1:5

Curtain wall mullion

Mounting profile

Vacuum glass

W'all-in-One Basic insulation

Rc value: 4,7 m² K / W

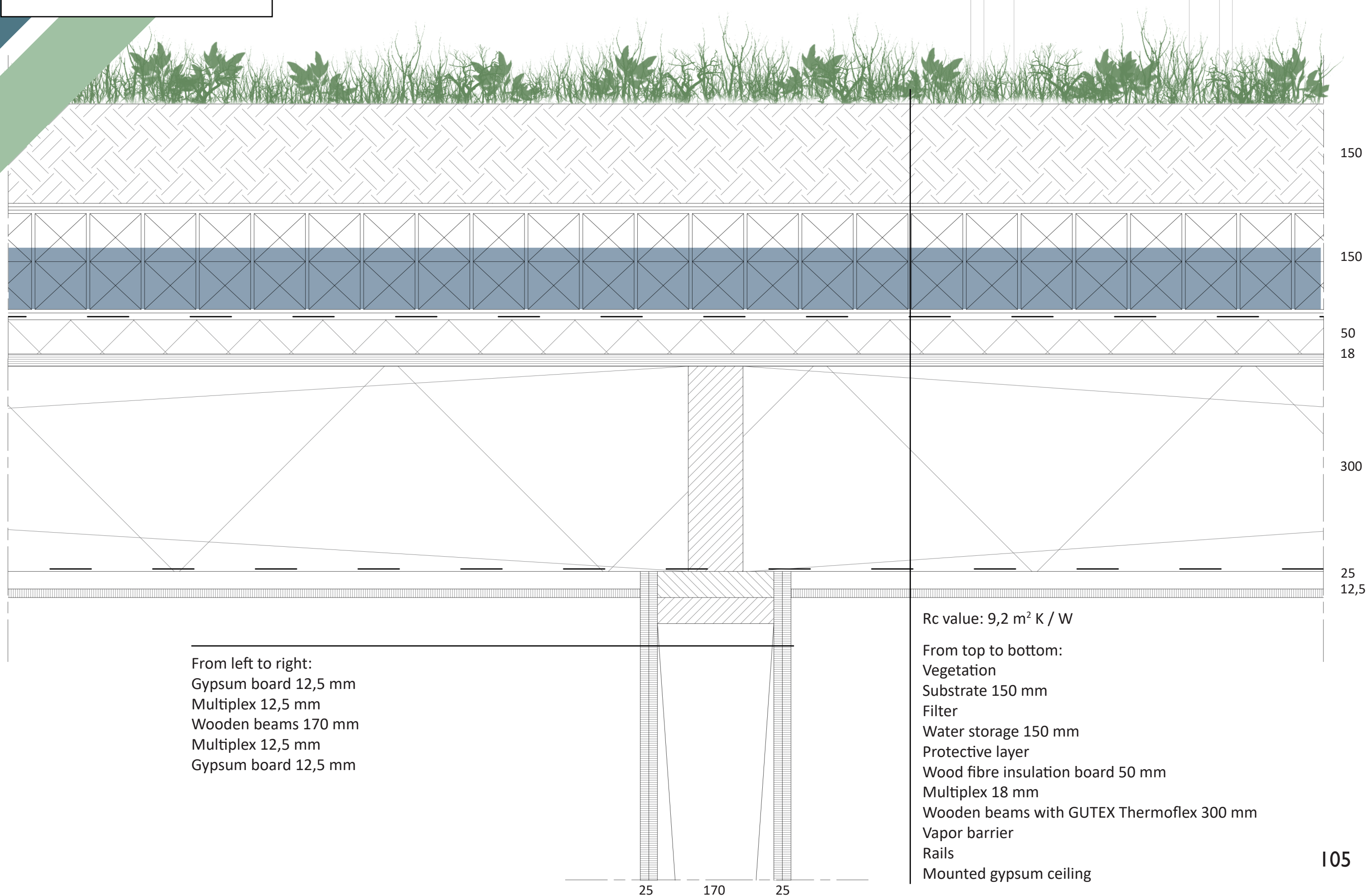
From left to right:  
Prefab concrete panel 130 mm  
Insulation 40 mm  
Prefab concrete panel 130 mm  
GUTEX mortar  
GUTEX Thermoroom 100 mm  
Vapor barrier  
Stucco

20  
25  
50  
150  
20



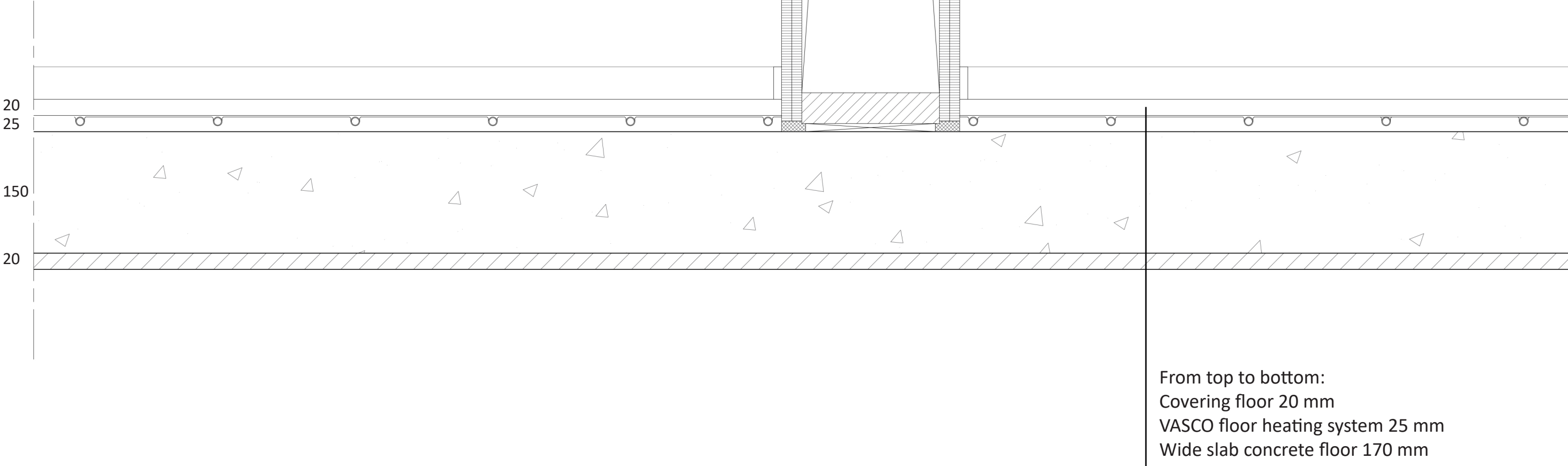
D04

1:5



D05

1:5





D06

1:5

Wooden frame parapet

Smart Flow Control

Rc value: 5,6 m<sup>2</sup> K / W

From left to right:  
Wooden facade (platowood)  
Air cavity with battens 38 mm  
Waterproofing membrane  
Wood fibre insulation board 40 mm  
Multiplex 8 mm  
Wooden beams with GUTEX Thermoflex 170 mm  
Vapor barrier  
Multiplex 12,5 mm  
Gypsum board 12,5 mm

Rc value: 9,2 m<sup>2</sup> K / W

From top to bottom:  
Vegetation  
Substrate 150 mm  
Filter  
Water storage 150 mm  
Protective layer  
Wood fibre insulation board 50 mm  
Multiplex 18 mm  
Wooden beams with GUTEX  
Thermoflex 300 mm  
Vapor barrier  
Rails  
Mounted gypsum ceiling

150

150

50

18

300

25

12,5

D07

1:5

Rc value: 5,6 m<sup>2</sup> K / W

From left to right:

Wooden facade (platowood)

Air cavity with battens 38 mm

Waterproofing membrane

Wood fibre insulation board 40 mm

Multiplex 8 mm

Wooden beams with GUTEX Thermoflex 170 mm

Vapor barrier

Multiplex 12,5 mm

Gypsum board 12,5 mm

From top to bottom:

Covering floor 20 mm

VASCO floor heating system 25 mm

Wide slab concrete floor 170 mm

20

25

150

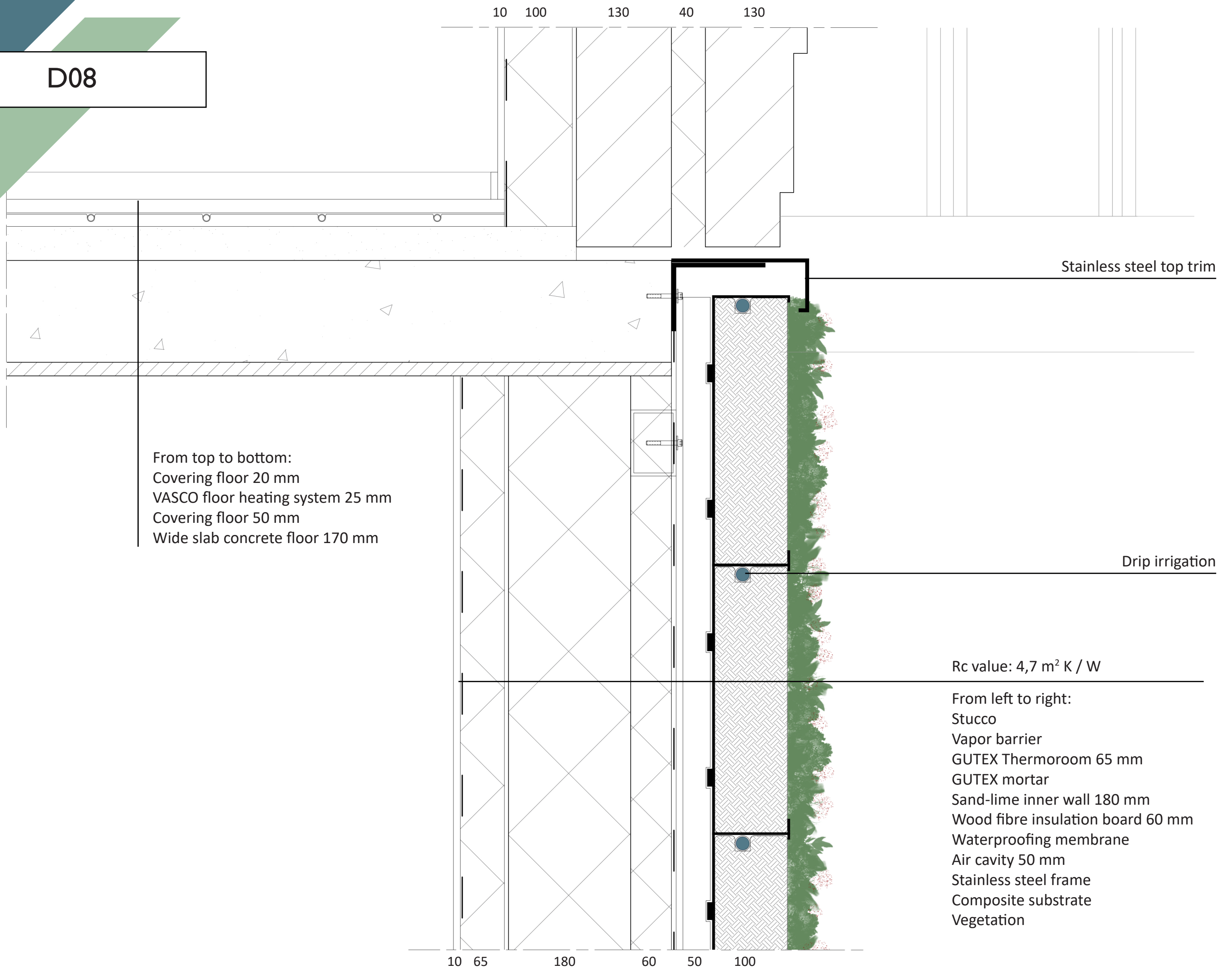
20

108



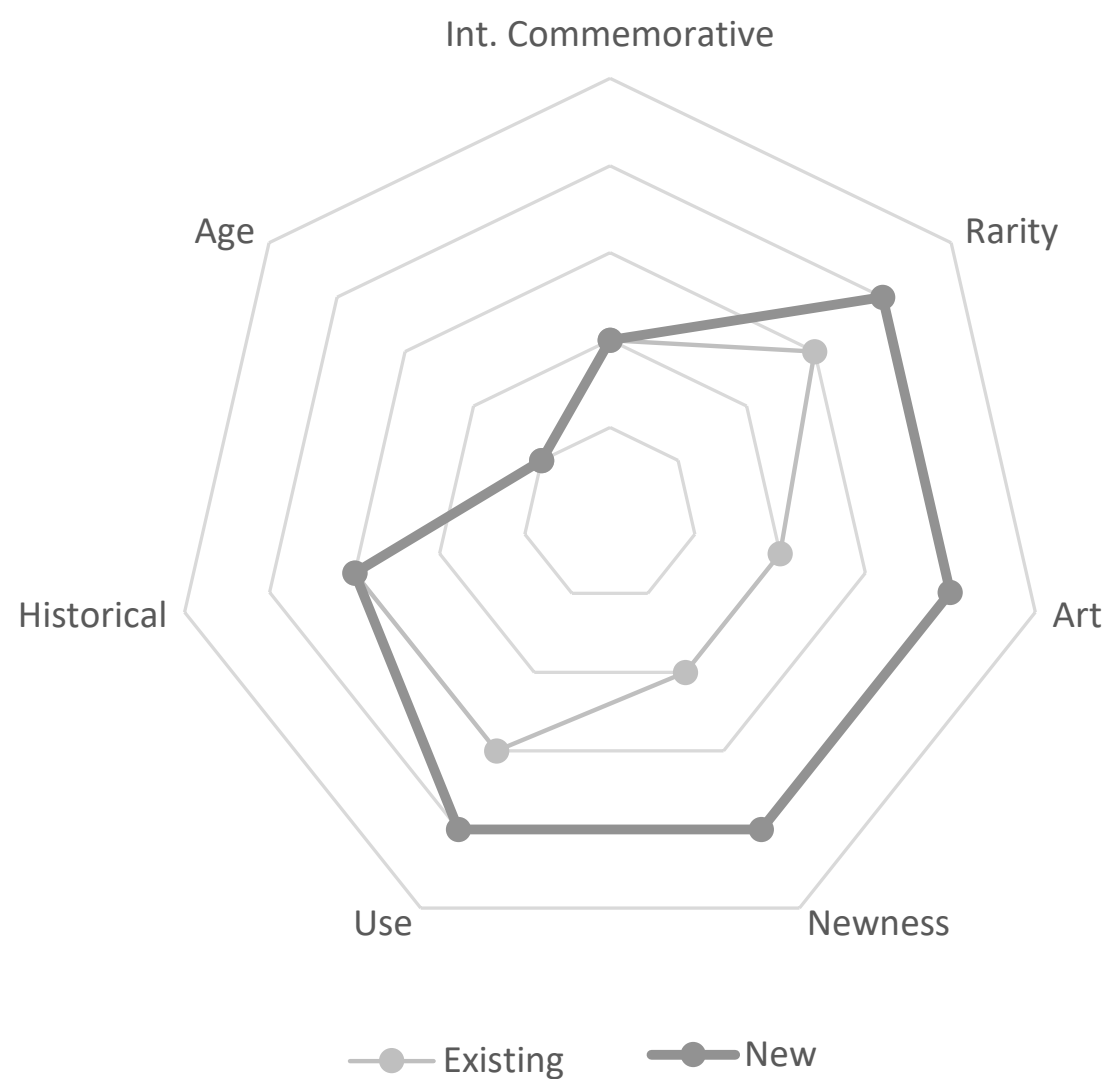
D08

1:5



# VALUE ASSESSMENT

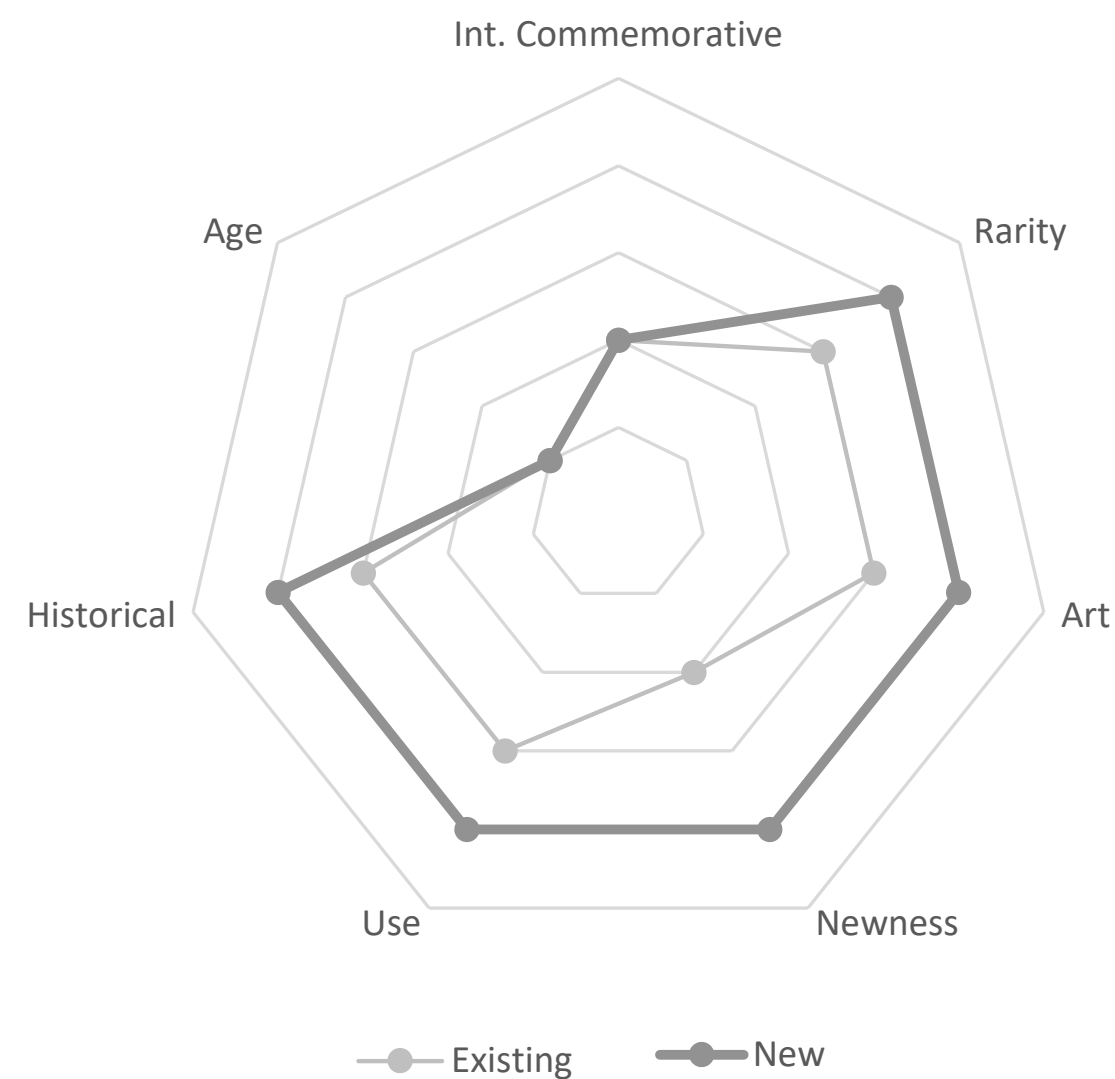
## URBAN



Urban:  
 - surroundings / setting  
 - site  
 - spirit of place

(Brand & Riegl)

## BUILDING














Building:  
 - skin  
 - structure  
 - space plan  
 - surfaces  
 - services  
 - stuff

(Brand & Riegl)

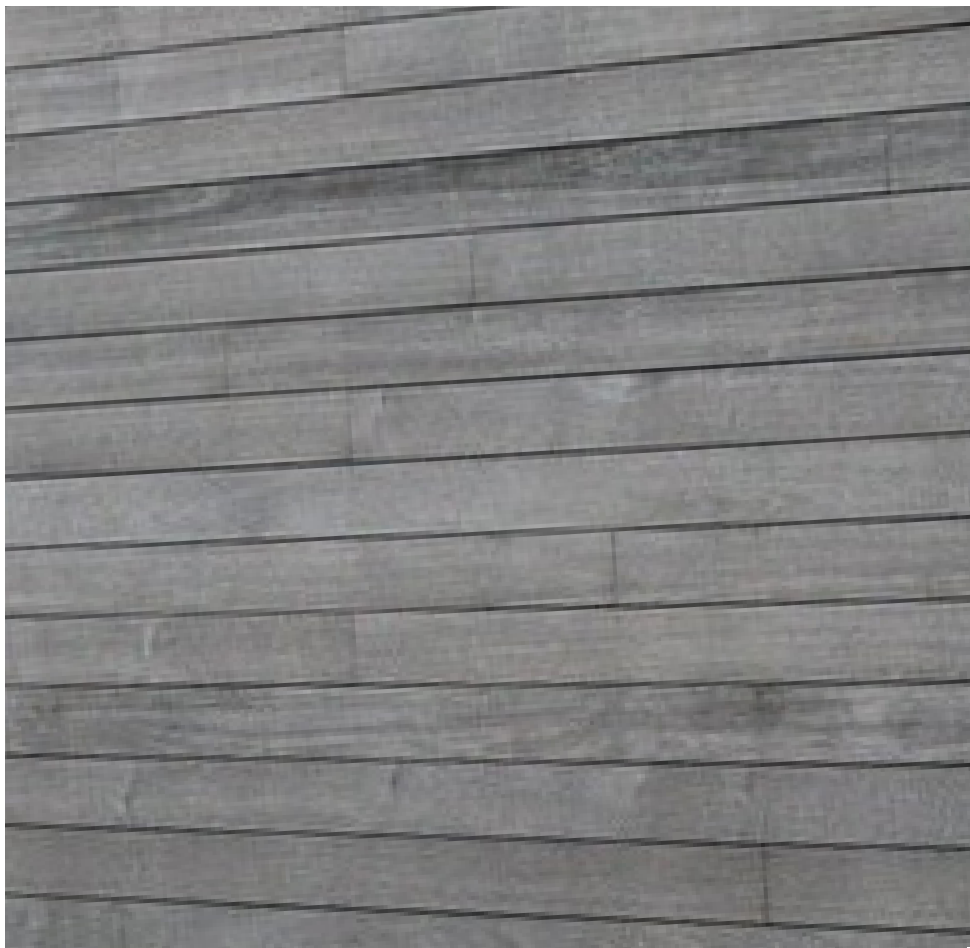


VALUE ASSESSMENT

	AGE	HISTORICAL	INTENTINAL COMME- MORATIVE	NON INTENDED COMME- MORATIVE	USE	NEWNESS	ART	RARITY
SURROUNDINGS / SETTING		anti bijlmer 			parks 			
SITE					courtyards 	contrast circular and rectangular shapes		
SKIN (EXTERIOR)		80s architecture: - rhythm facade - open / closed - prefab concrete	human scale because of the 4/5 storeys			tectonics windows 	street-art 	coloured facades 
STRUCTURE		80s architecture: - prefab concrete						
SPACE PLAN					diversity floorplans			
SERVICES								
STUFF		windows + doors  						balconies 
SPIRIT OF PLACE			signs HCC 				HCC 	creative and cultural identity



## REFERENCES



Platowood Fraké



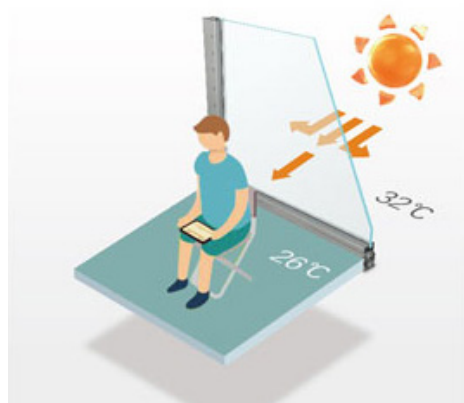
Gutex Thermoflex



De Kroon prefab HSB elements



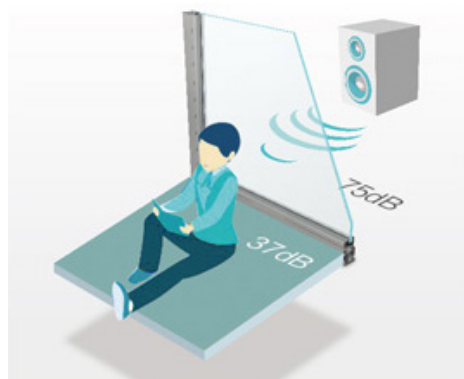
## REFERENCES



Vacuum Glass  $0.44W/(m^2 \cdot K)$



Isolatieglas  $1.2W/(m^2 \cdot K)$

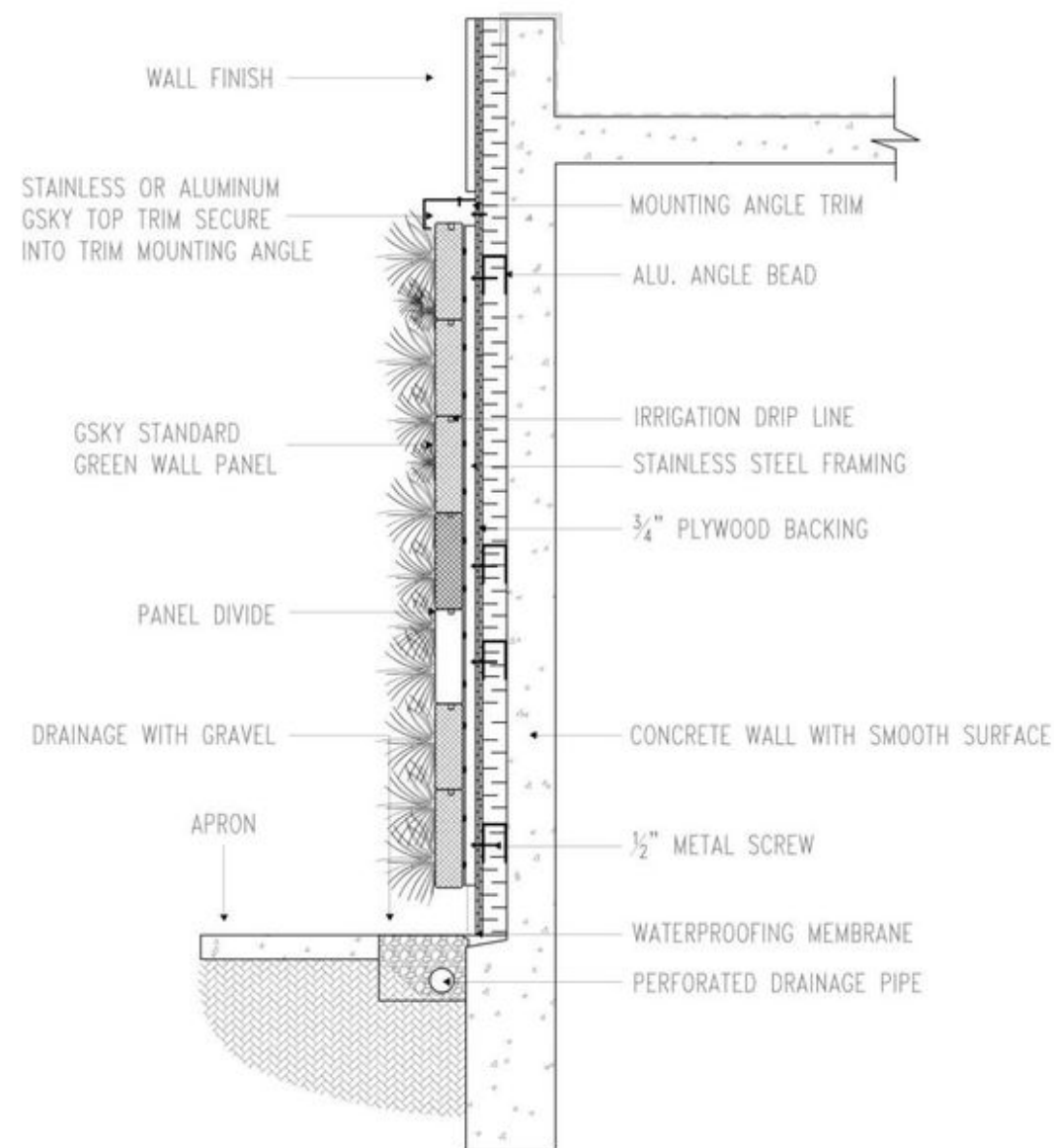


Vacuum Glass  $RW > 36dB$

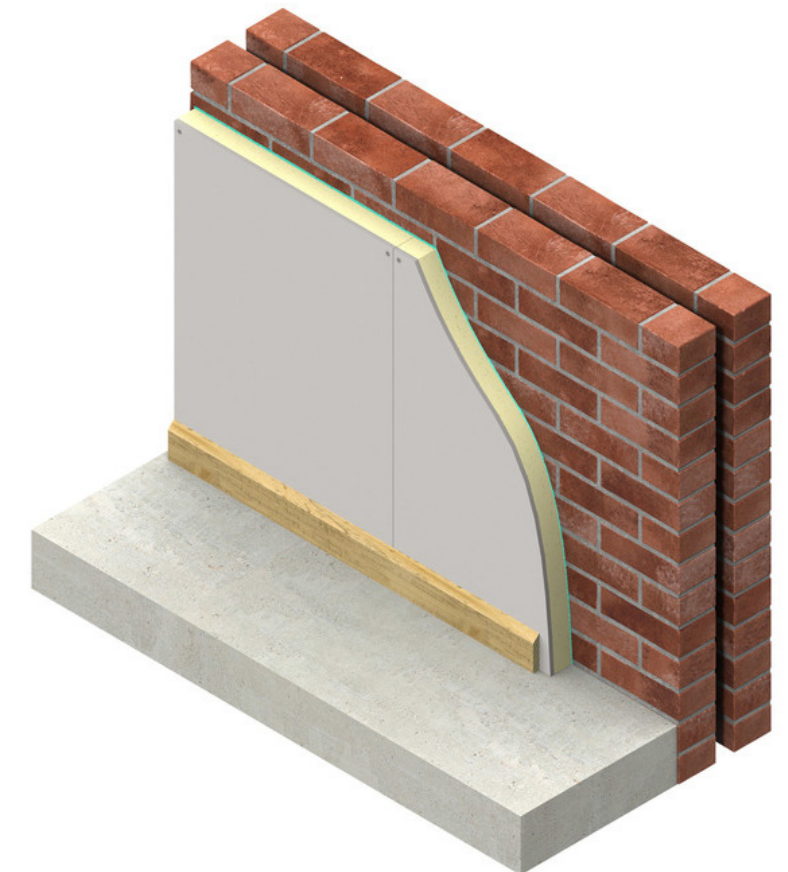


Isolatieglas  $Rw > 29dB$

BENGglass (vacuum glass)

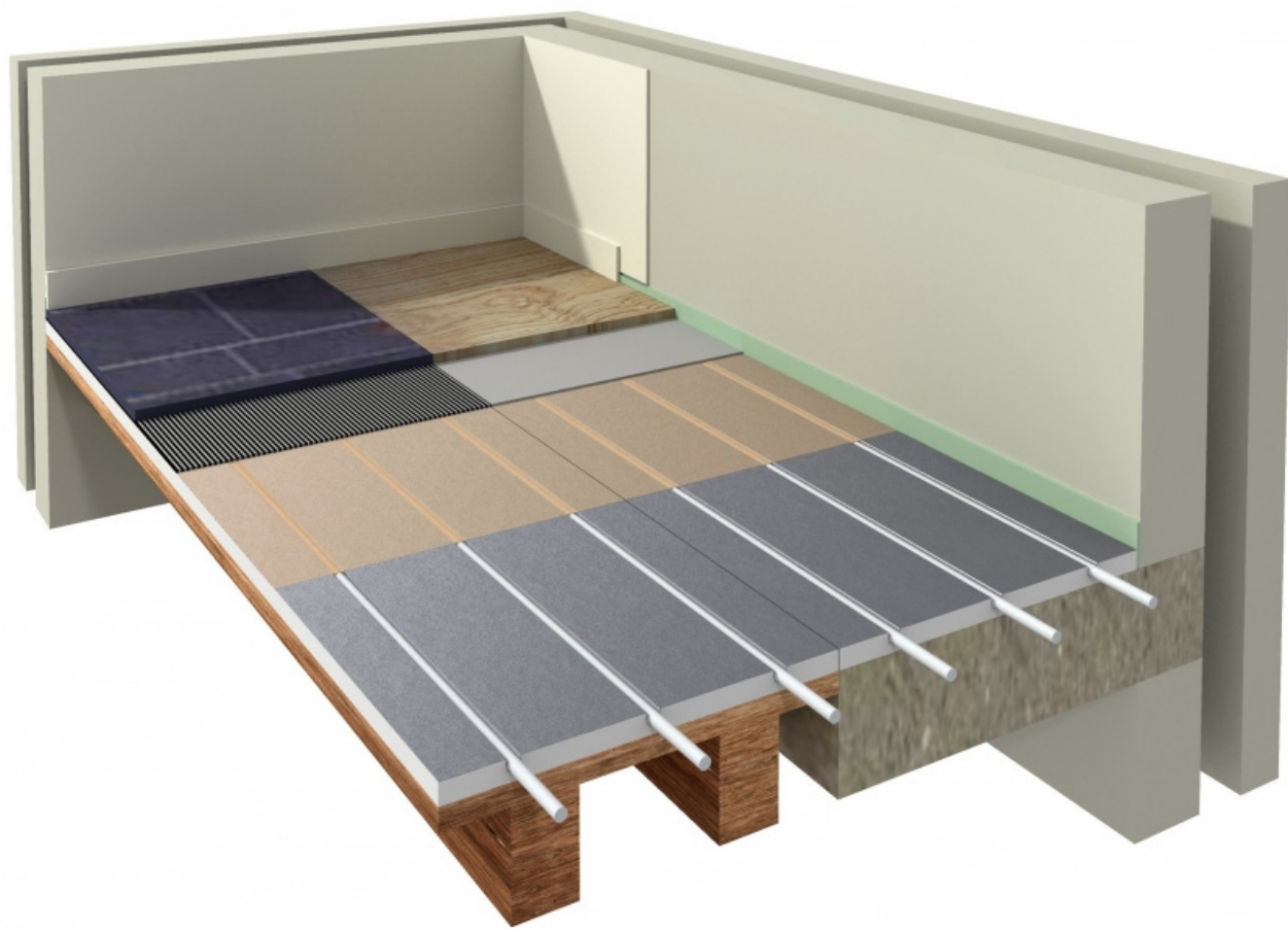


green wall

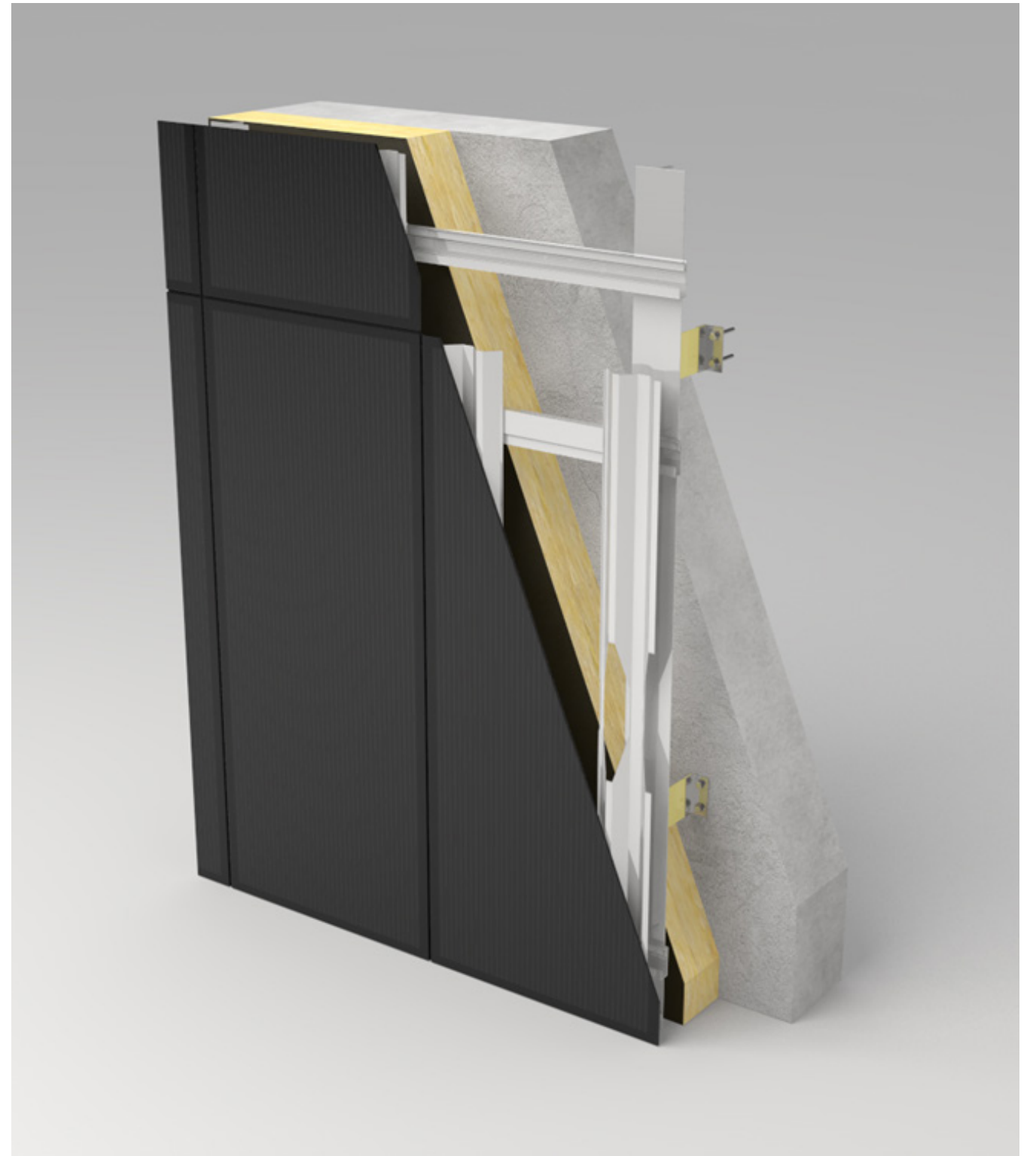


W'all in one element by Kingspan

## REFERENCES



VASCO floor heating system

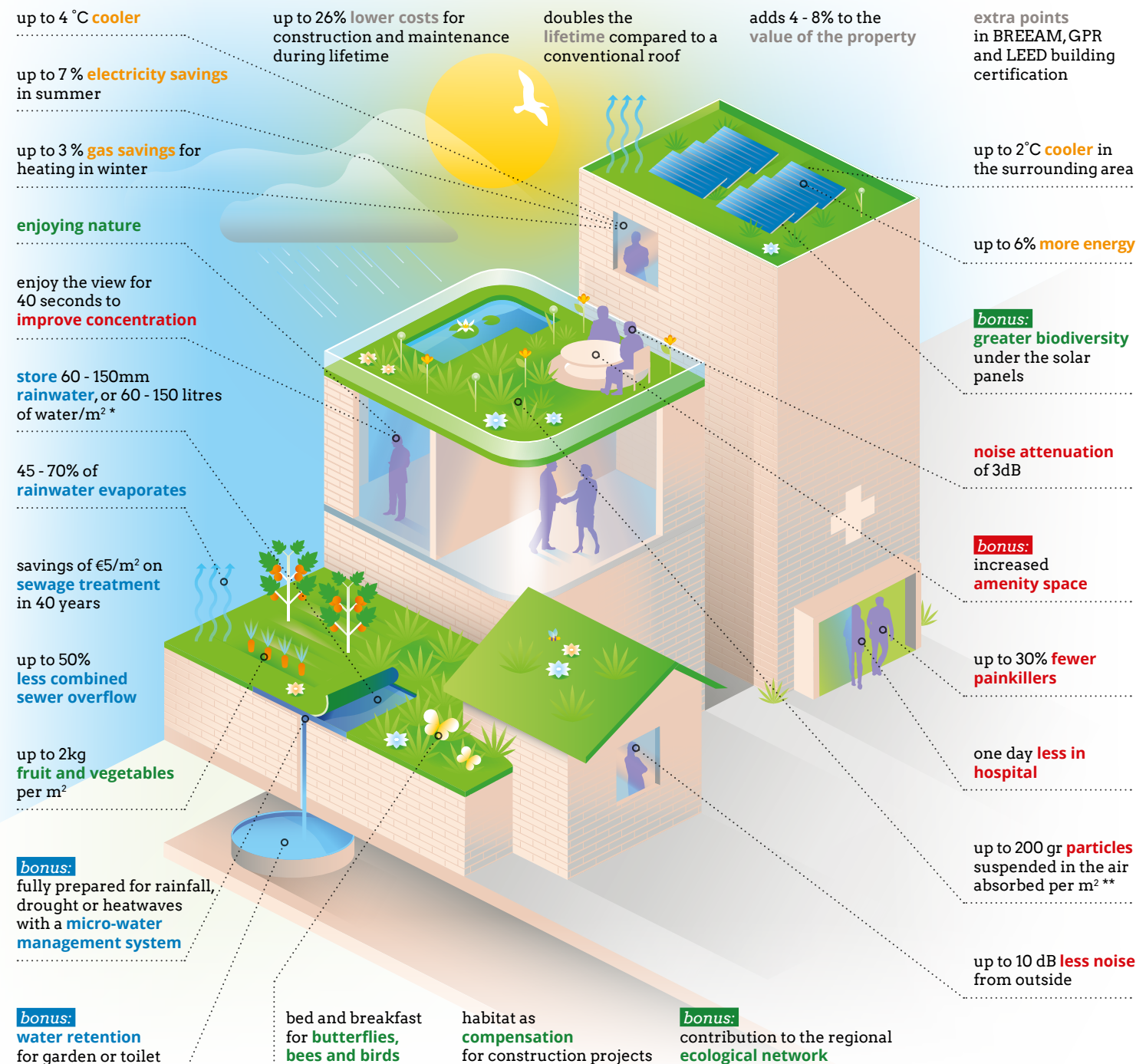


ENERGYFAÇADE by saint-gobain-solutions



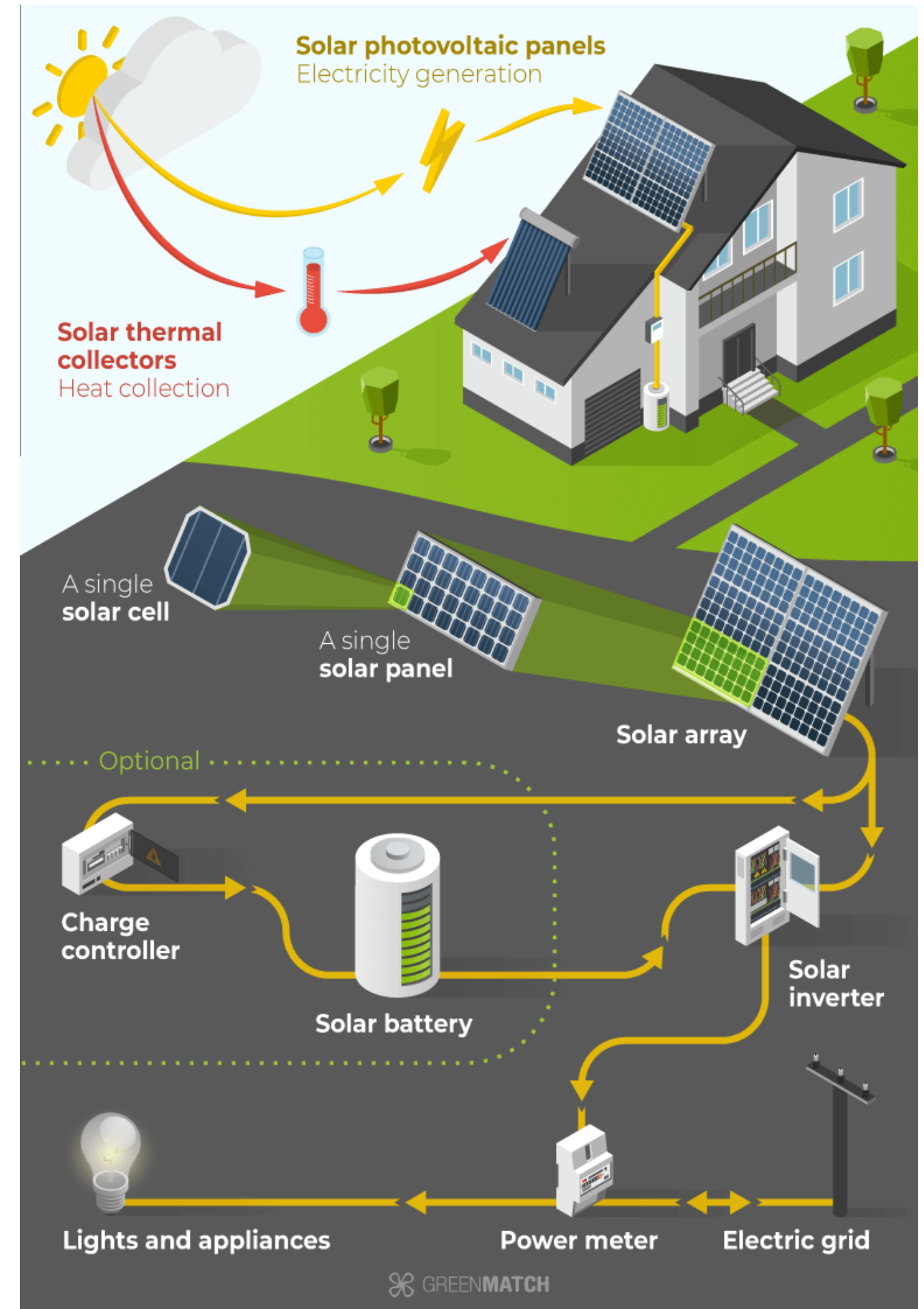
# REFERENCES

Technical and financial Water Biodiversity Health Energy



\* for existing buildings, a maximum of 100mm or 100 litres/m<sup>2</sup>  
 \*\* with a natural roof or grass roof

[www.greendealgroenedaken.nl/en-facts-values](http://www.greendealgroenedaken.nl/en-facts-values)





## TERRACES





# INTERIOR

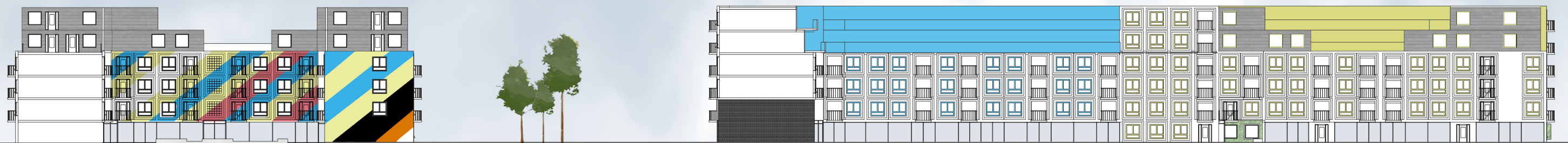
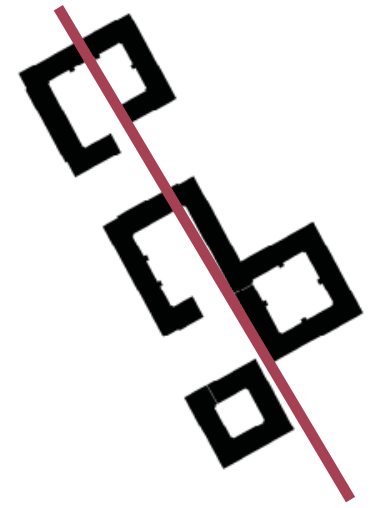


# INTERIOR





## GREEN ROUTE



## RESIDENTS

Tabel 3.4 Bevolking H-buurt naar huishoudentype, 1 januari 2007

straat	paar					totaal	bewoonde adressen
	alleen staand	zonder kind	paar met kind	eenoudergezin	overig		
Hoogoord	182	41	56	60	7	346	276
Hofgeest	173	46	51	120	7	397	328
Haag en Veld	209	49	51	112	4	425	333
Hogevecht	141	37	49	96	4	327	276
Haardstee	140	33	38	45	5	261	227
Hoptille	138	36	60	98	8	340	292
Huigenbos	235	47	60	103	11	456	365
Hakfort	238	55	82	89	11	475	402
Heesterveld	187	40	49	95	3	374	304
Huntum	21	32	23	4	0	80	73
<b>totaal</b>	<b>1664</b>	<b>416</b>	<b>519</b>	<b>822</b>	<b>60</b>	<b>3481</b>	<b>2876</b>

Bron: O+S