



KABELFABRIEK 2.0

P i e n C a t h e l i j n e S o p h i e T o l

INTRODUCING

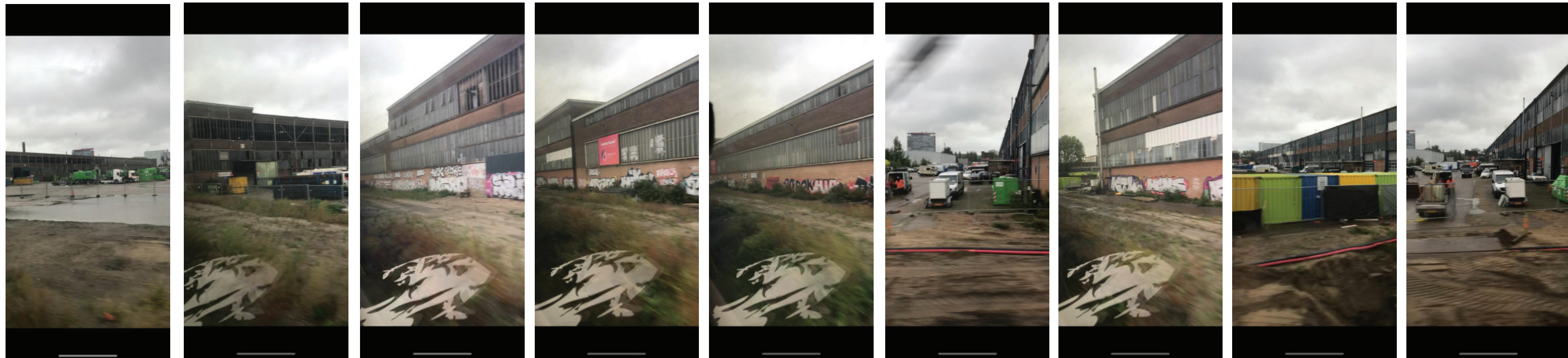


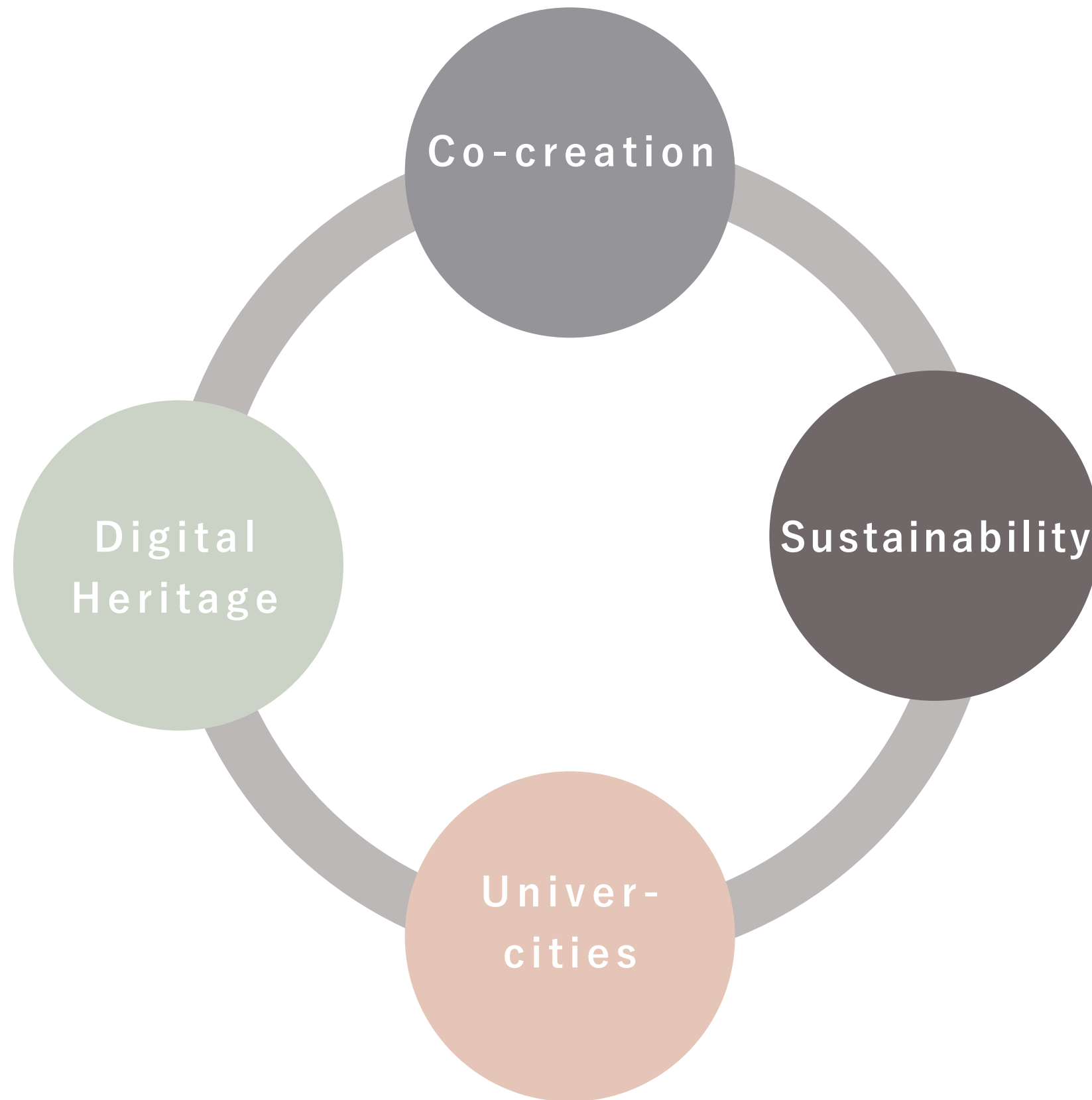
KABELFABRIEK 2 - SCHIEWEG DELFT



(Schut, T., 2018)

KABELFABRIEK 2 - SCHIEWEG DELFT





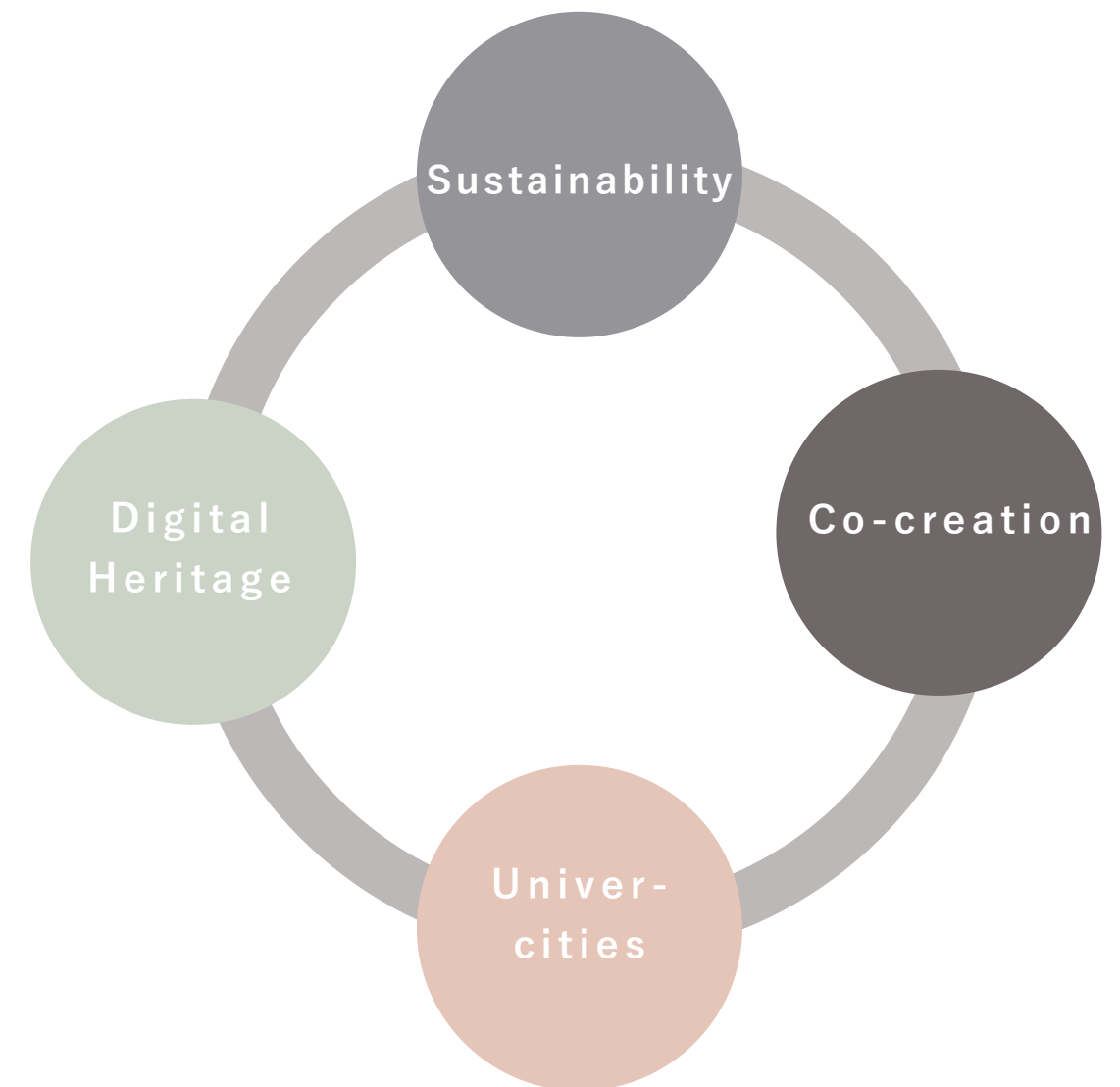
RESEARCH QUESTIONS

Main research question

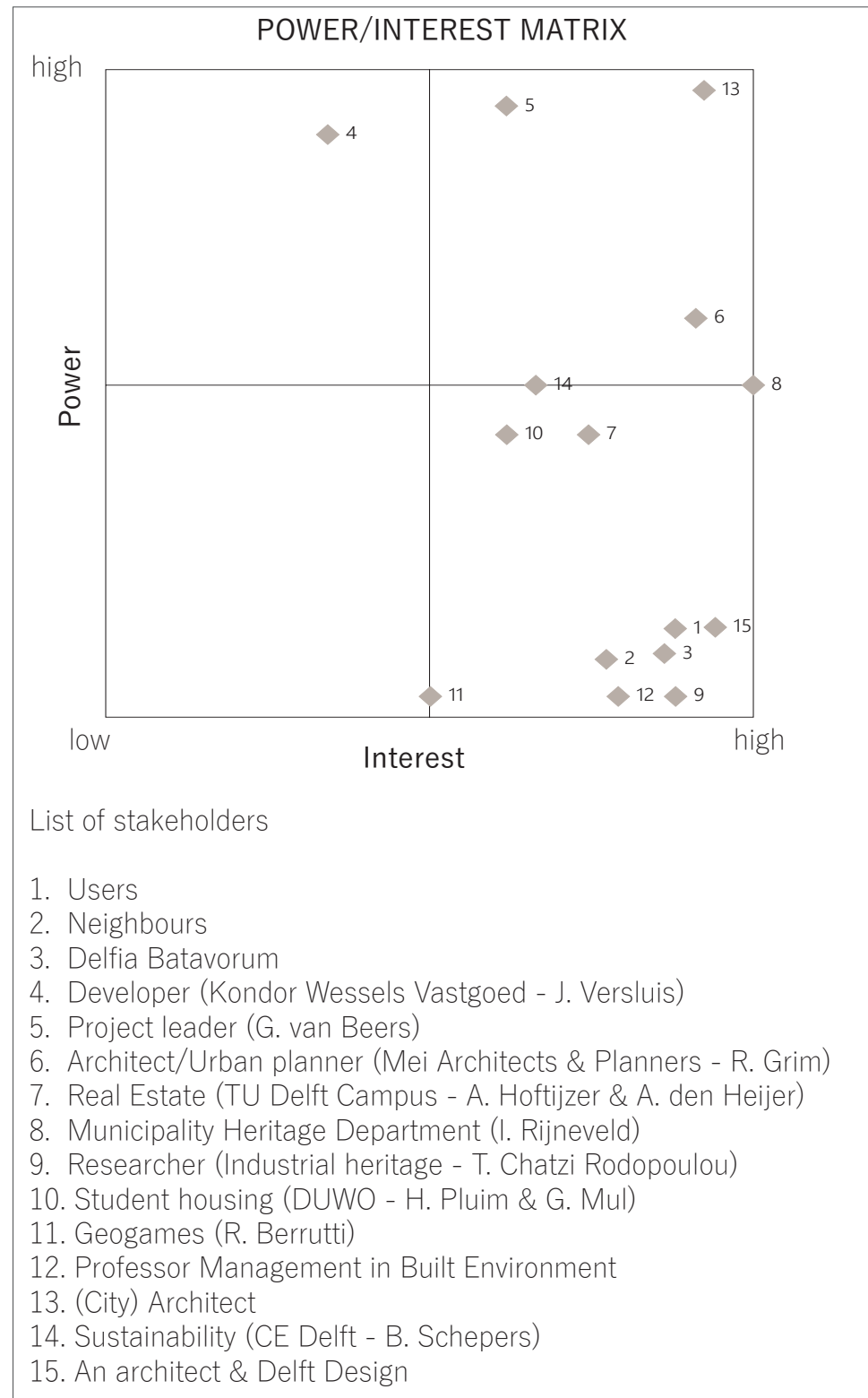
How can a co-creation approach be applied for redesigning 20th century Industrial Heritage factories for adaptive reuse together with stakeholders?

Sub questions

1. How can heritage games support the value assessment of stakeholders for the redesign of the Kabelfabriek II in Delft?
2. What design relation with the TU Delft Campus and the city of Delft could be supported by the Kabelfabriek II?
3. How to redesign Kabelfabriek II Delft on sustainable attributes while preserving cultural values?



STAKEHOLDERS



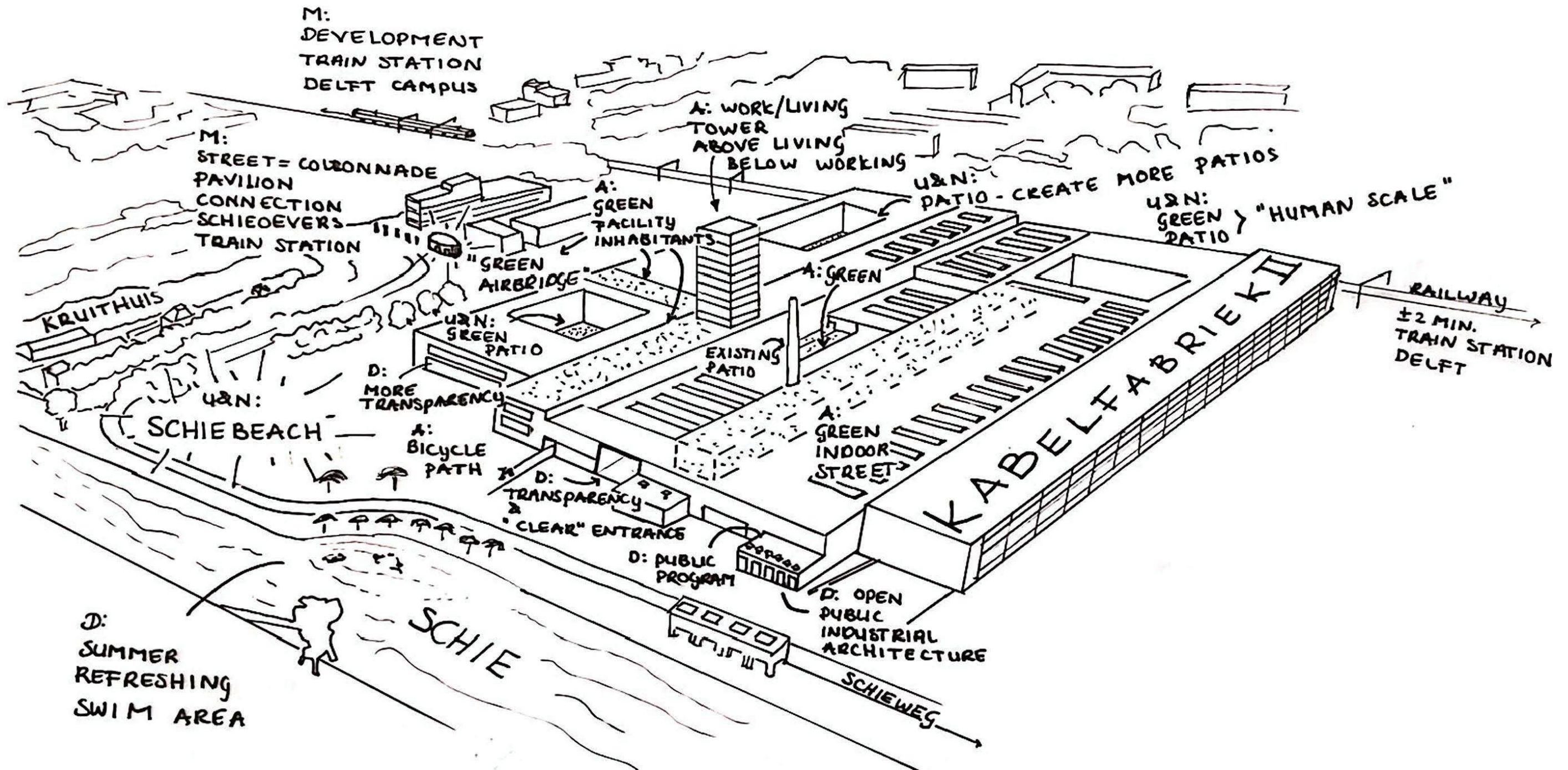
MINECRAFT WORKSHOP



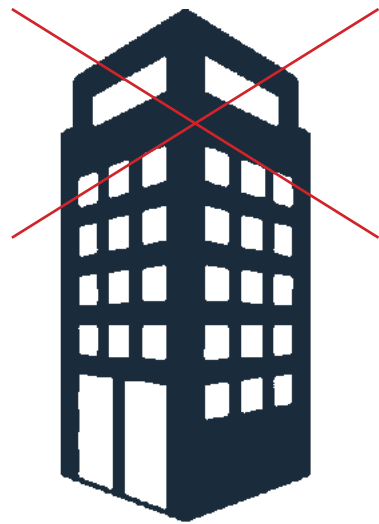
MINECRAFT



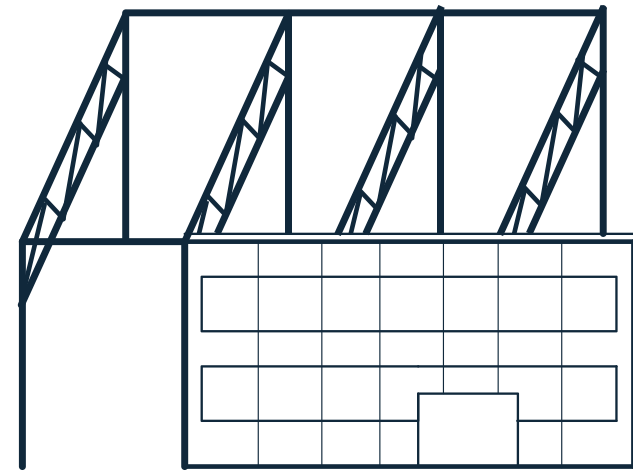
STAKEHOLDERS INVOLVEMENT



CONCLUSION STAKEHOLDERS INVOLVEMENT

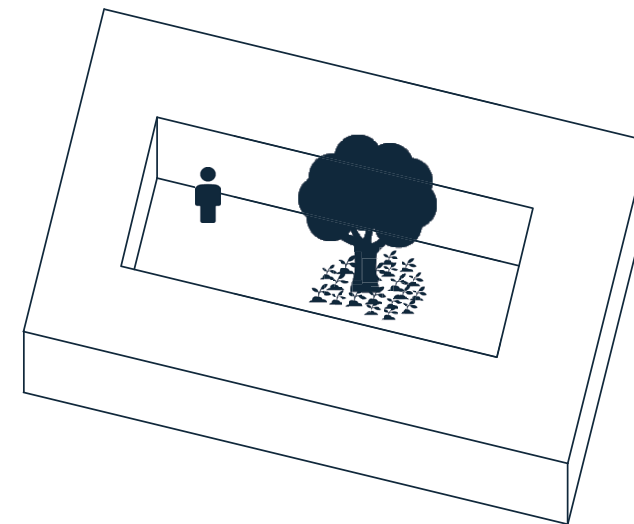


Less high rise



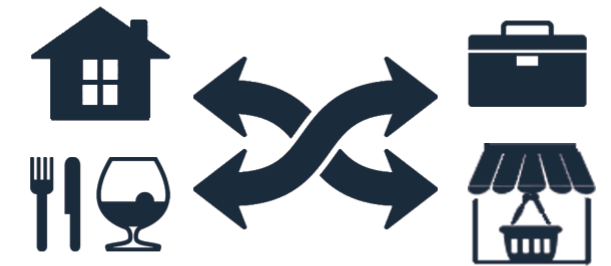
Preserve the construction and skin

The length and height of the skin should be preserved, as well as the orientation of the factory towards the canal Schie.



More patios with human scale and green

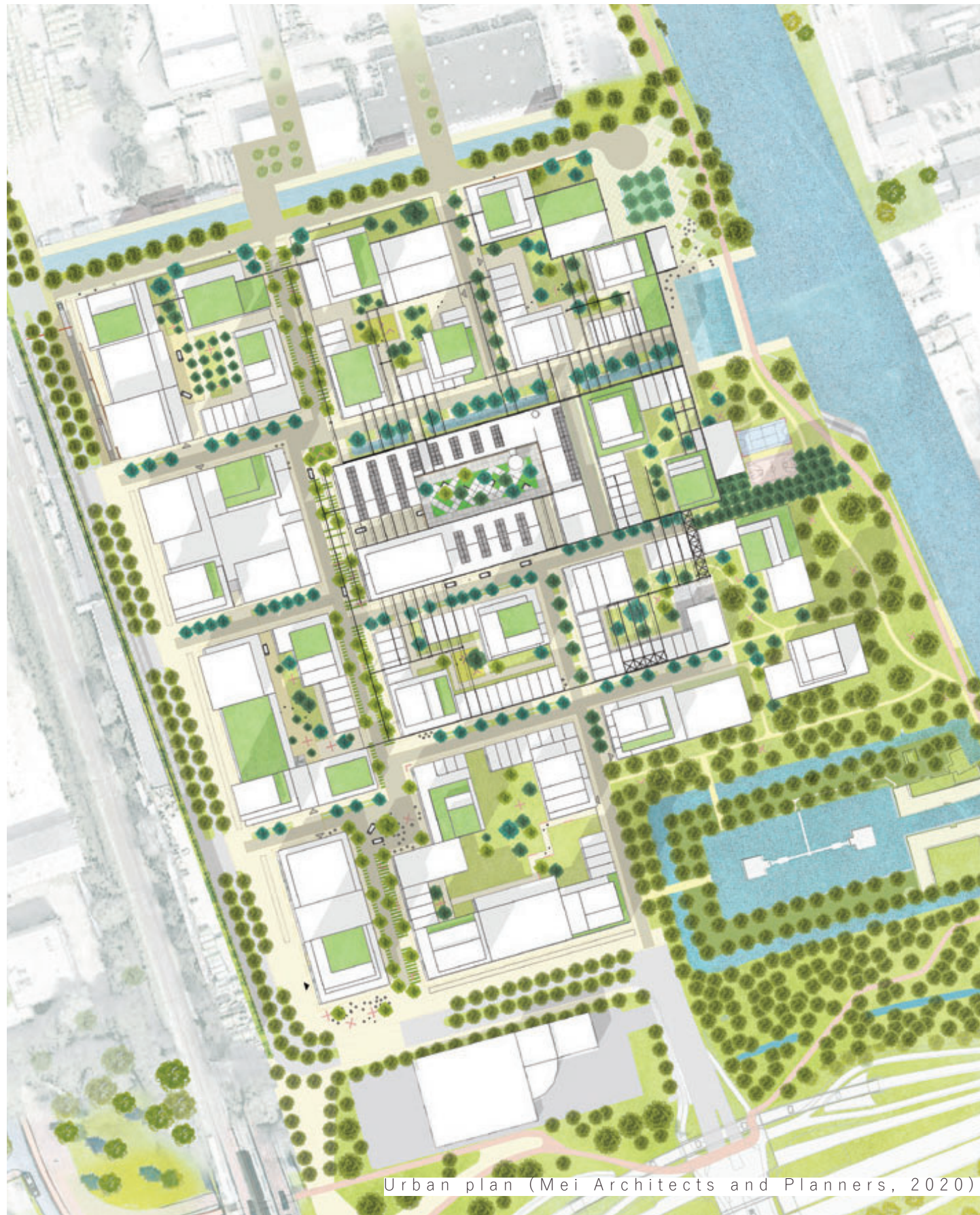
More patios should be added in order to feel the human scale in the factory, as in the original patio. Furthermore, the green of Schiepark should be taken into the factory.



A mixed use

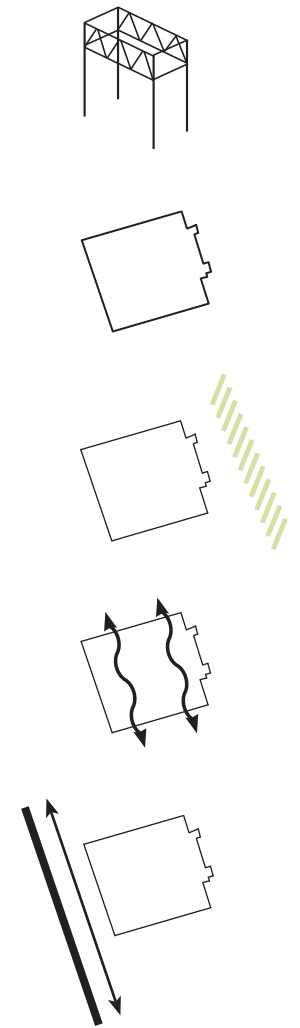
In the whole factory a mixed used; working, living, shops, horeca facilities.

BASIS LAYER



+ POSITIVE POINTS

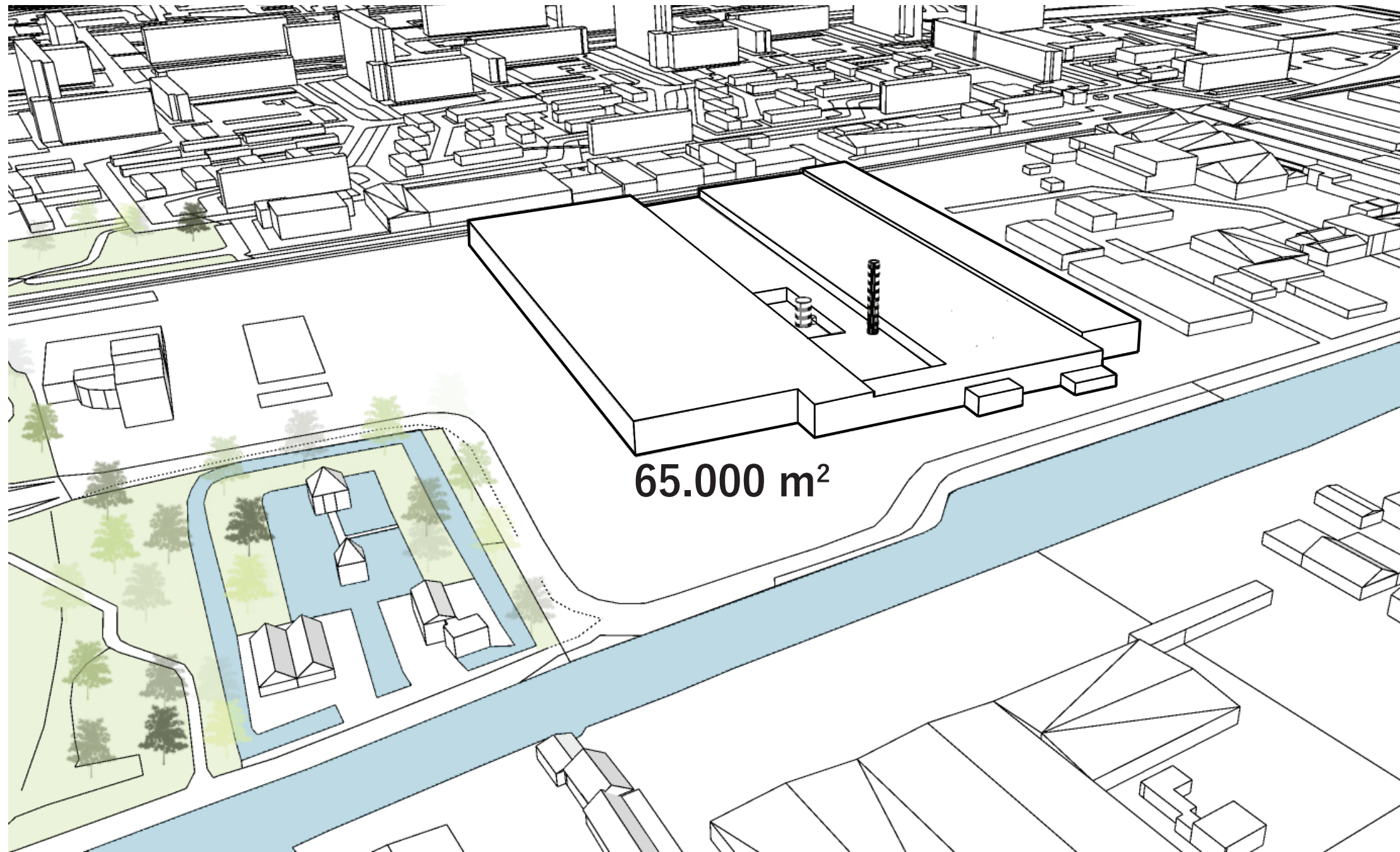
- o Preservation of the structure
- o Preservation of the skin
- o Schieweg turning into a green park
- o Street pattern North - South
- o Schieweg moved to the West side of the Kabelfabriek II



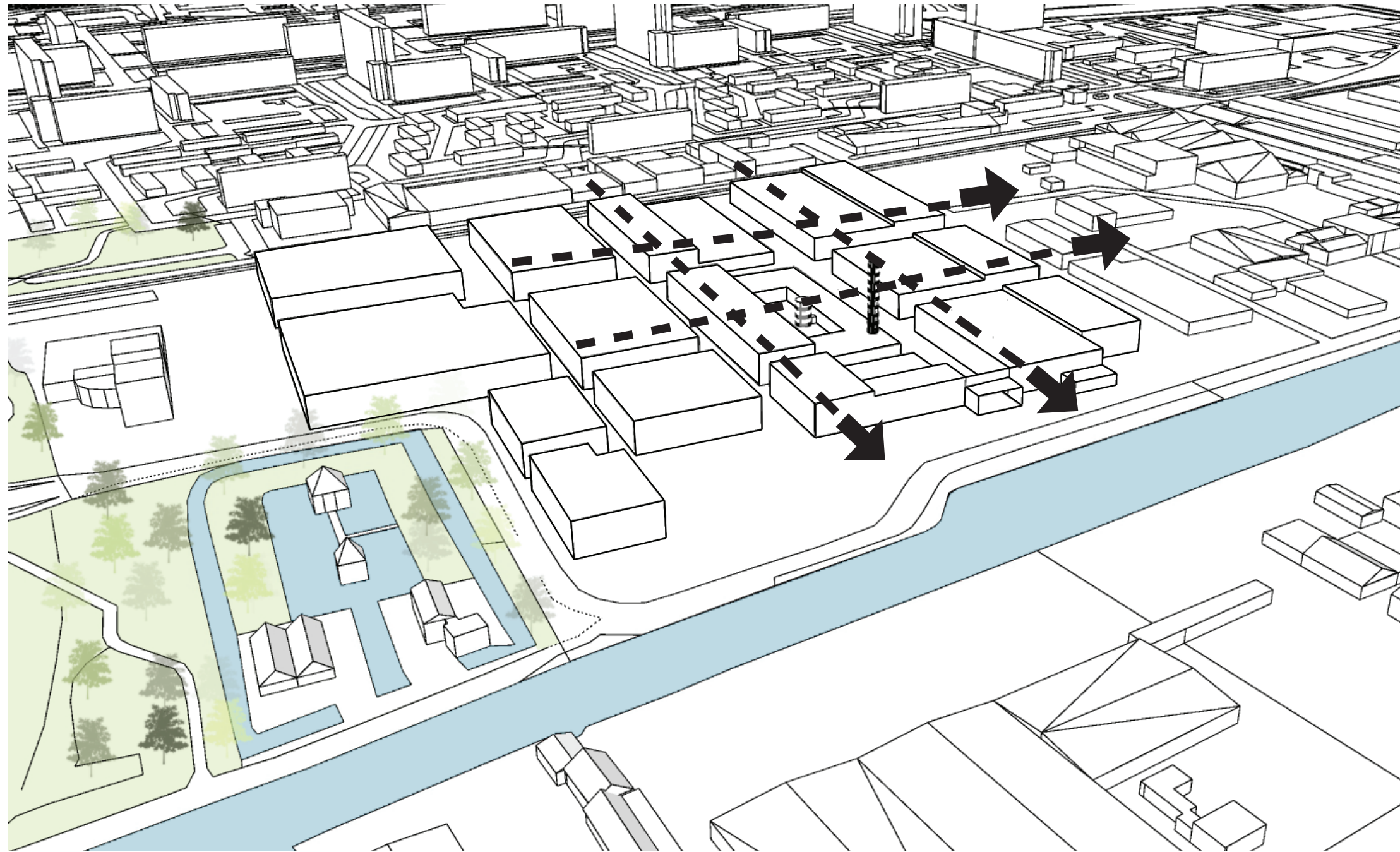
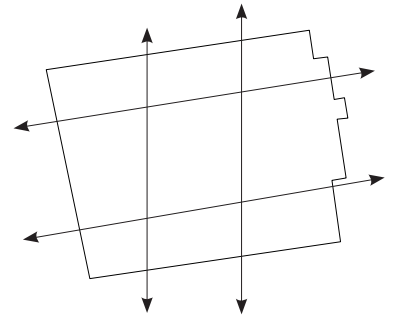
- POINTS TO IMPROVE

- o Visible length of the Kabelfabriek II
- o Positioning of the high rise, Kabelfabriek II patio "pit" not tangible/visible
- o Too much high rise and too high

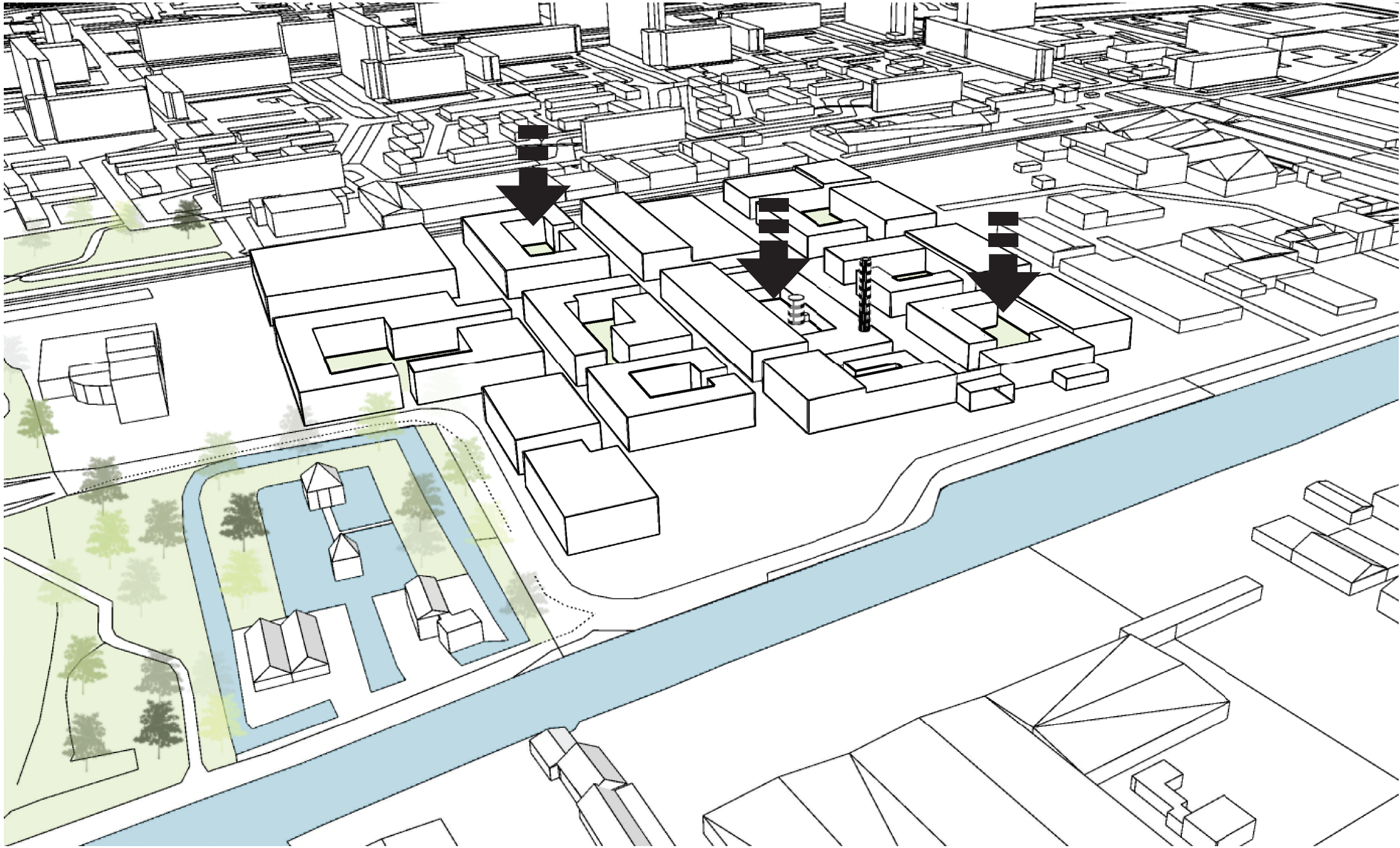
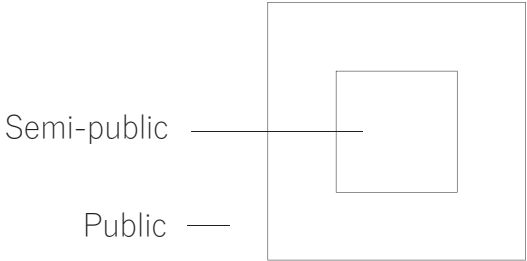
EXISTING



STREET PATTERN WITH VISIBLE SIGHT LINES



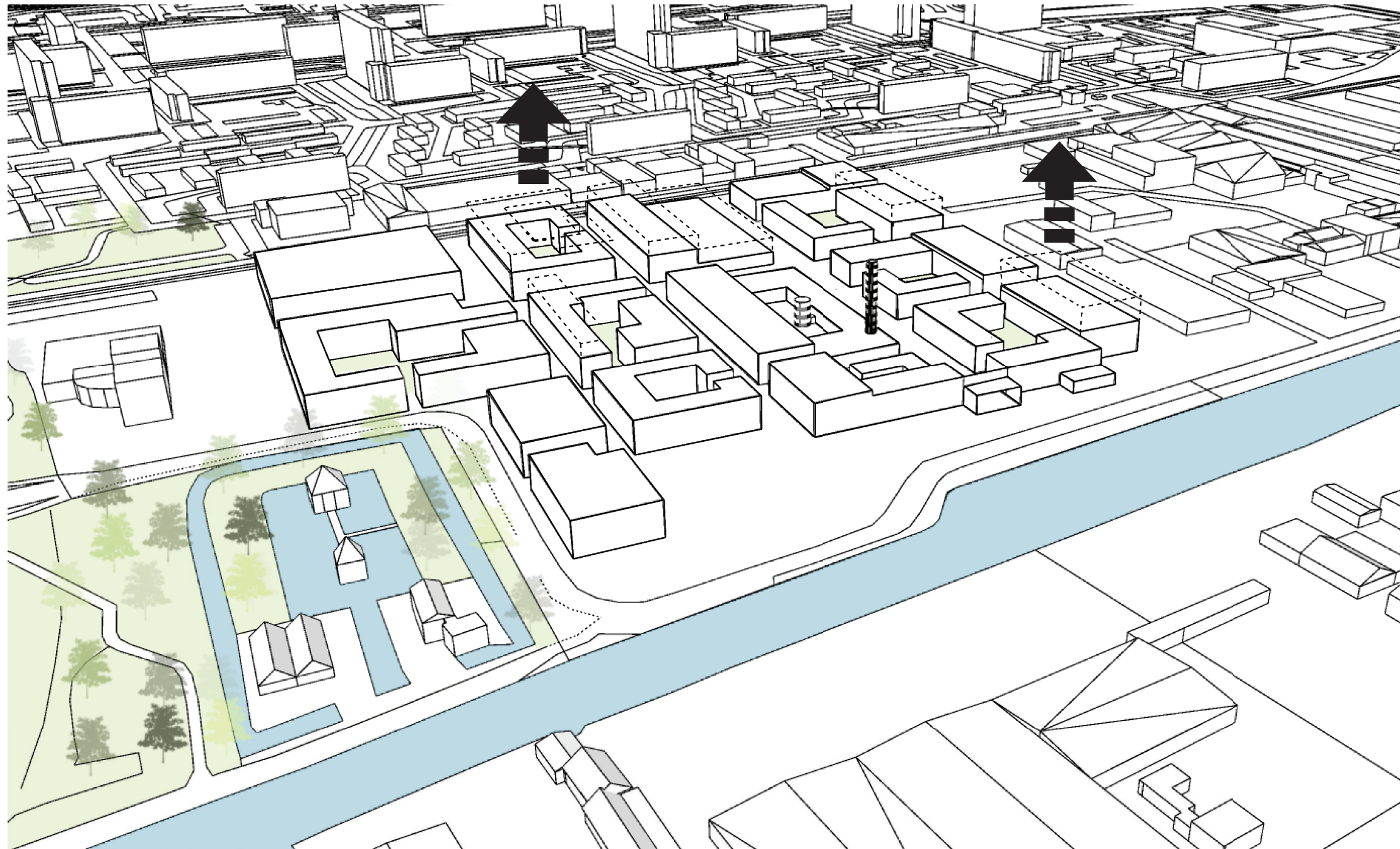
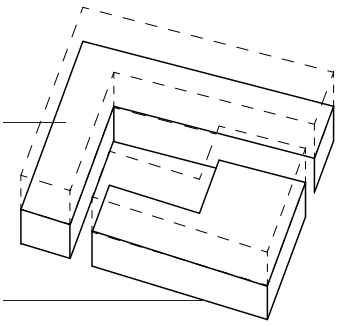
PATIOS AND URBAN BLOCK



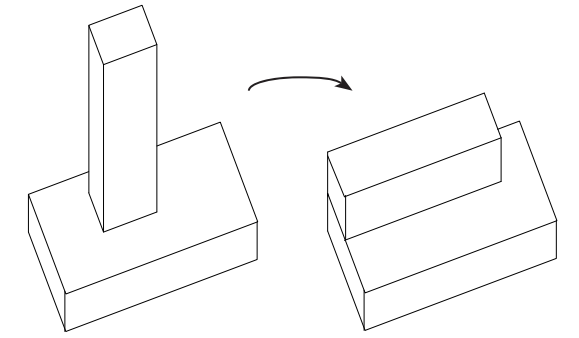
LIVING VERSUS 'ACTIVE' PLINTH

Living

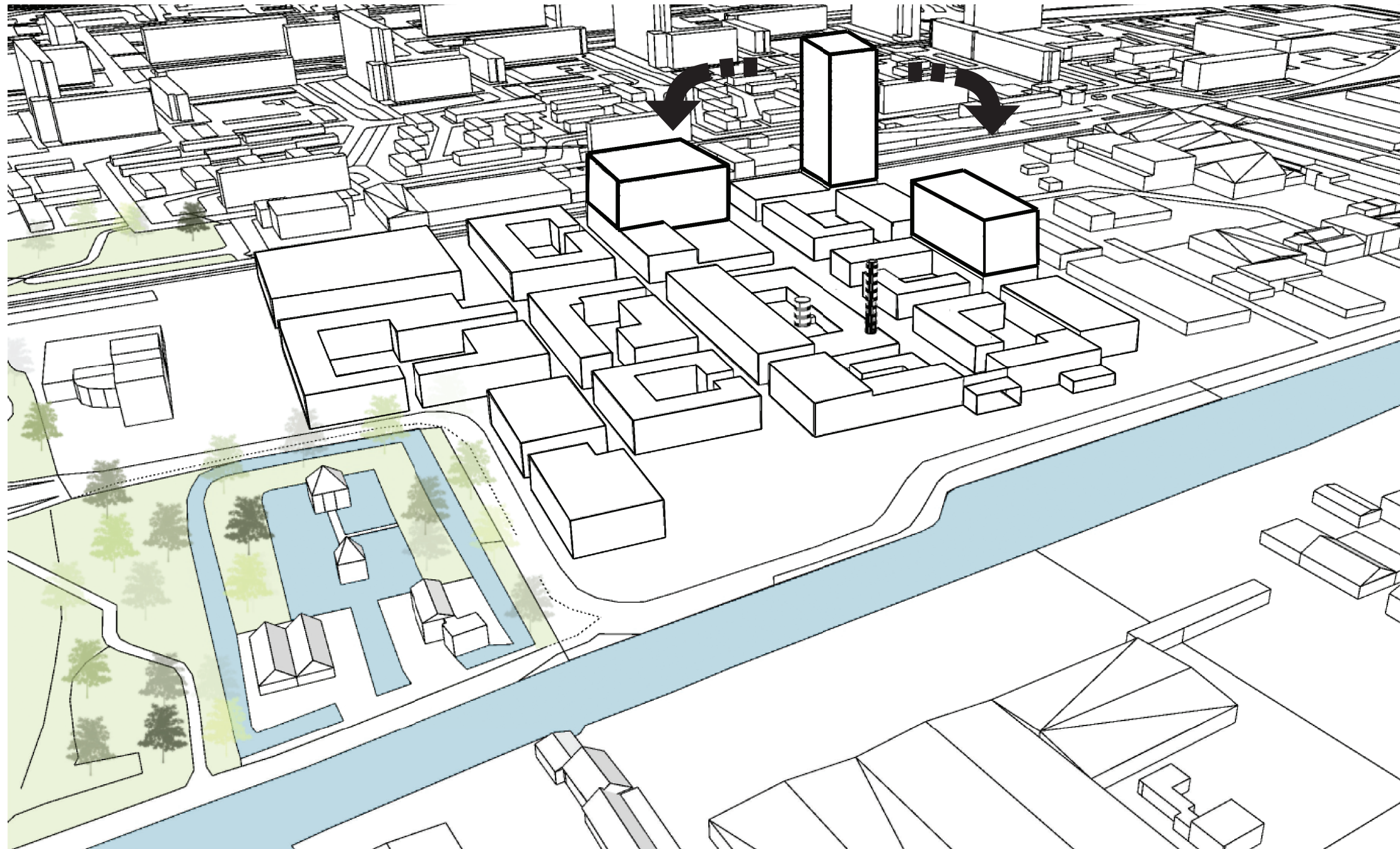
Public/'active' plinth



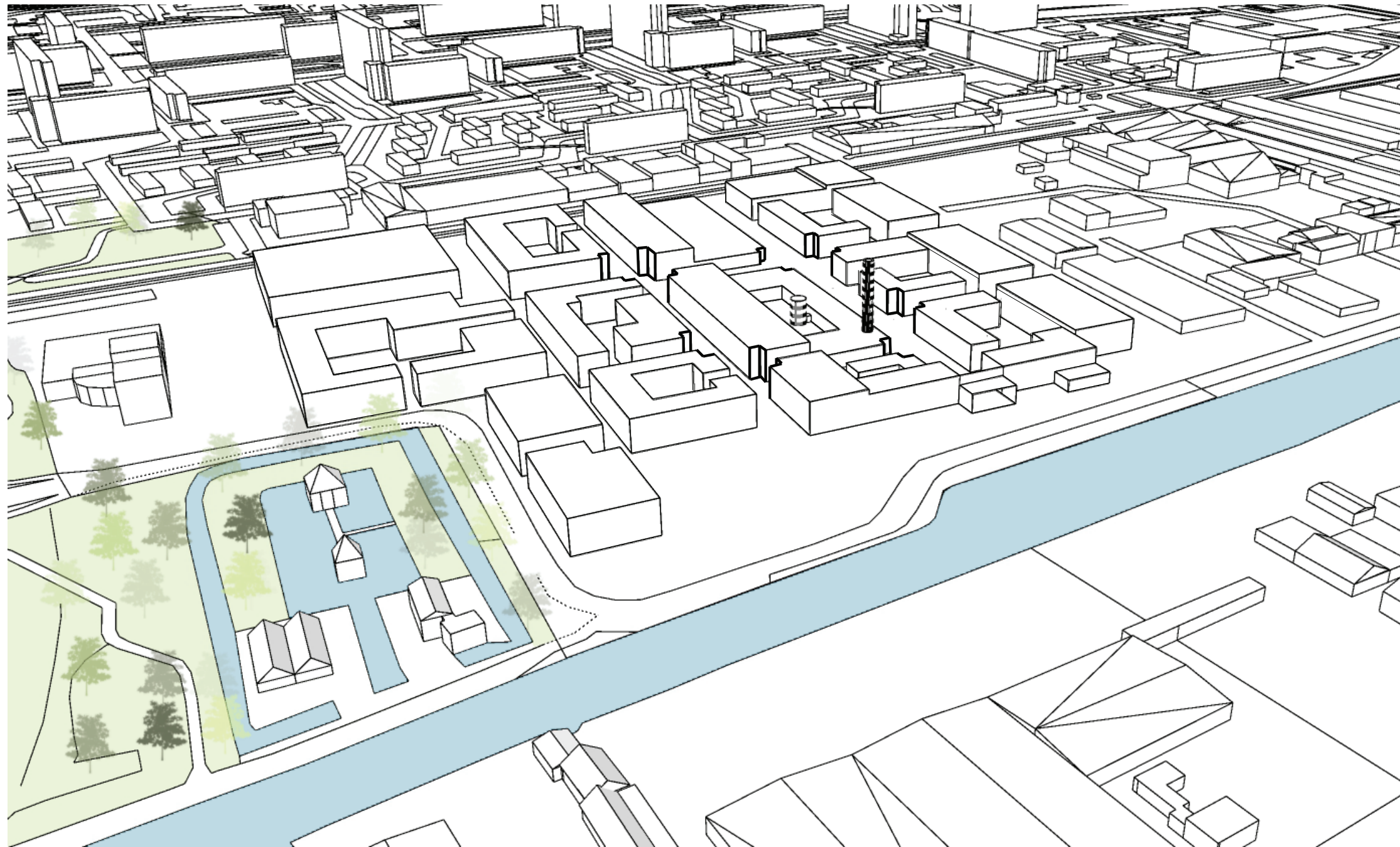
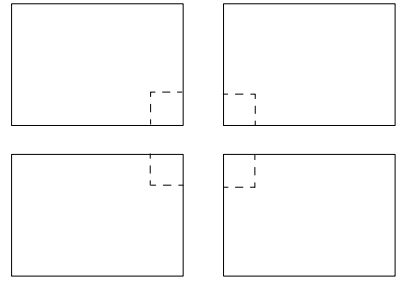
LESS HIGH RISE



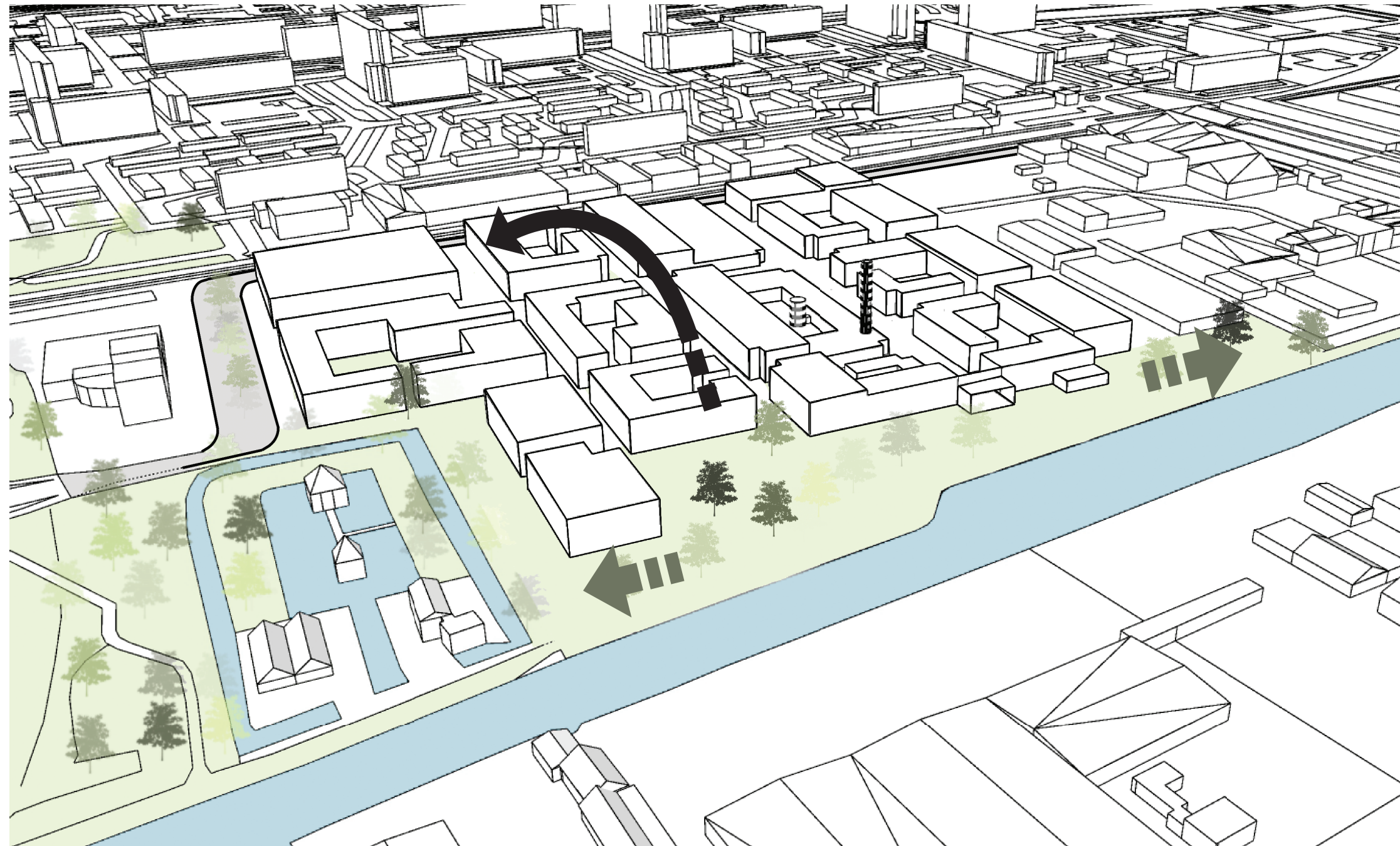
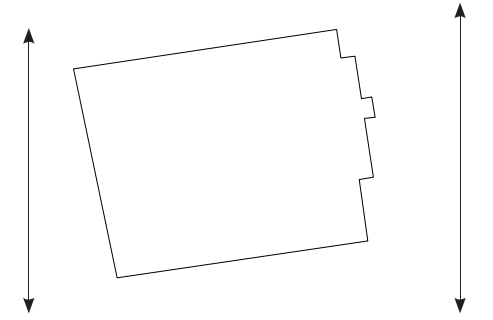
Flip the high rise to medium rise.



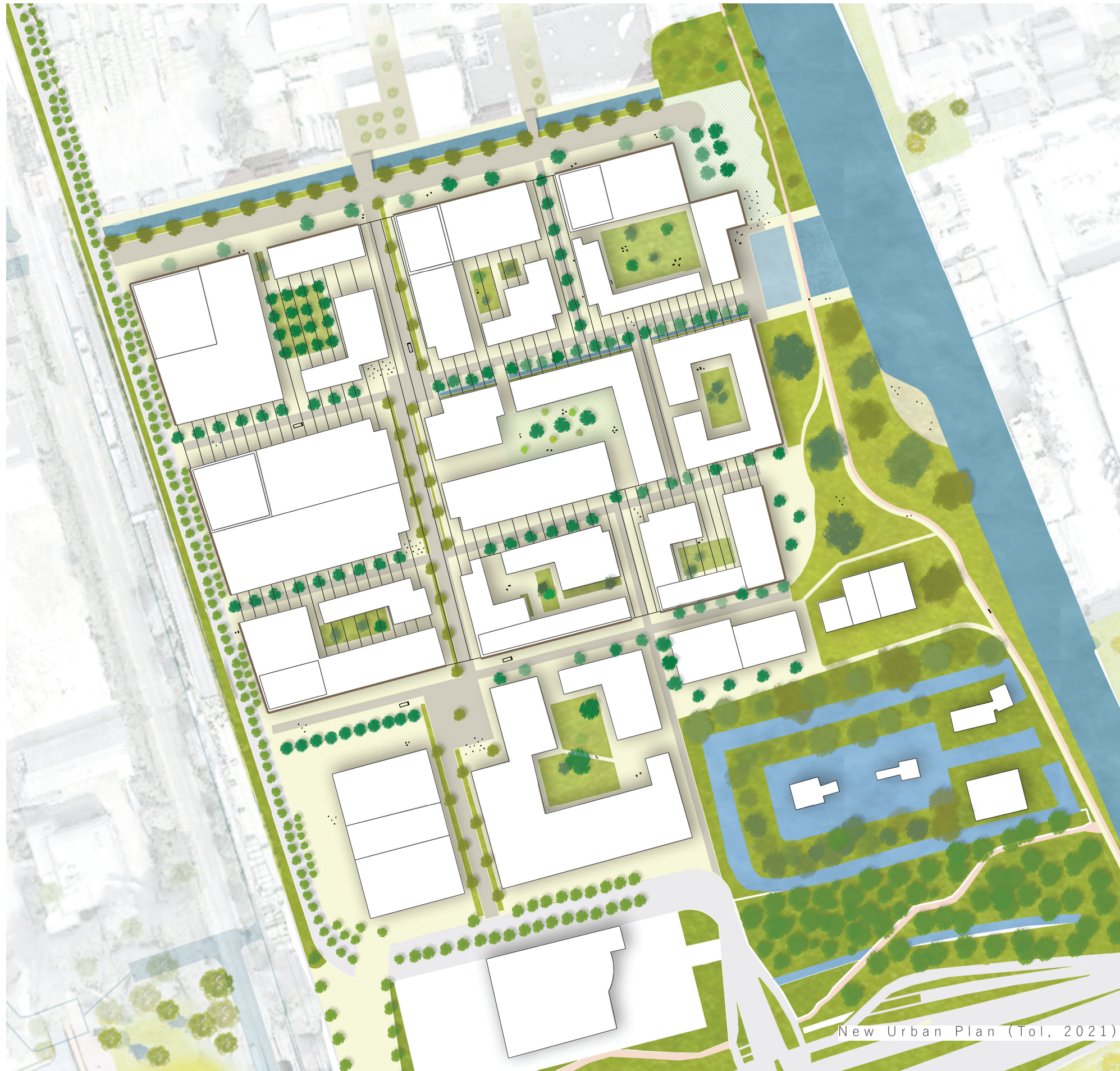
CREATING OPENNESS, SQUARES, LIGHT AND AIR



SCHIEPARK AND SCHIEWEG



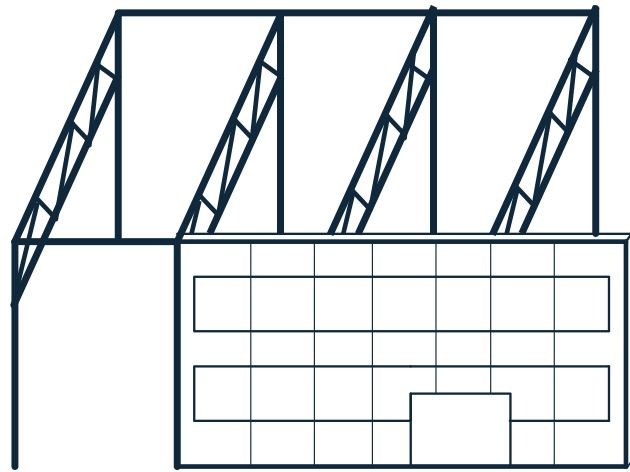
NEW URBAN PLAN



NORTH EAST CORNER

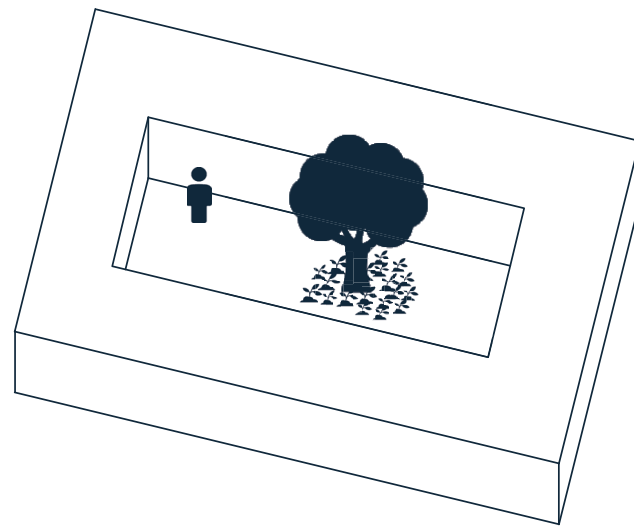


STARTING POINTS



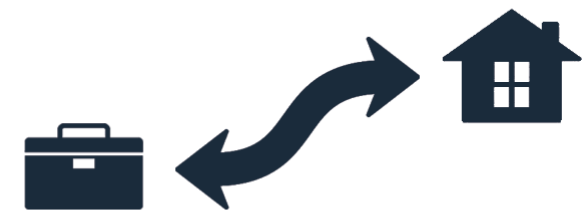
Preserve the construction and skin

The length and height of the skin should be preserved, as well as the orientation of the factory towards the canal Schie. The east, front facade should be kept 'free'.



Greenery and connections

The green of the Schiepark should be taken into the factory and a connection with the park and the Schie should be made.



A mixed use of working and living

An active plinth with working facilities and living above.

FOLLOWING EXISTING



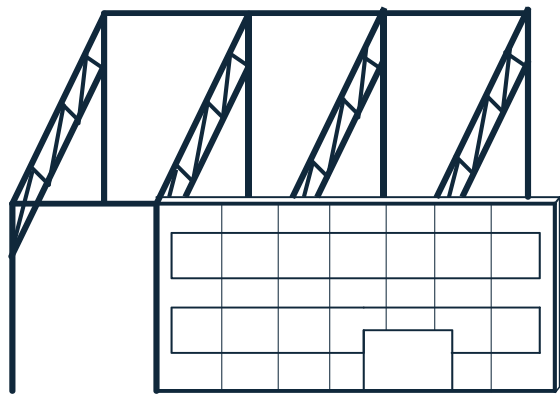
● Existing

“VLEKKENPLAN”



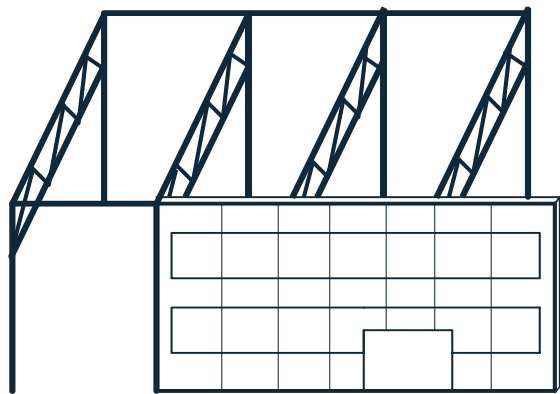
- Dwellings
- Working
- Horeca facility

DESIGN BY RESEARCH



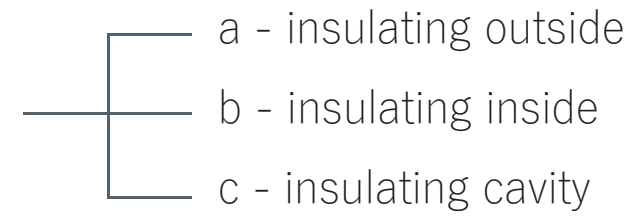
1. Using the facade/construction
2. Not touching the facade/construction
3. Removing the facade/construction

HOW TO PRESERVE HERITAGE WHILST ADDING NEW FUNCTIONS?



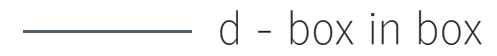
1.

Using the facade



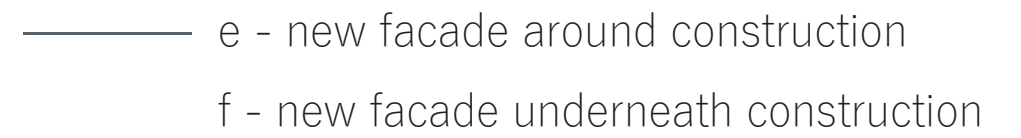
2.

Not touching the facade

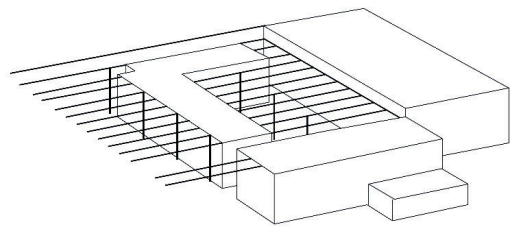


3.

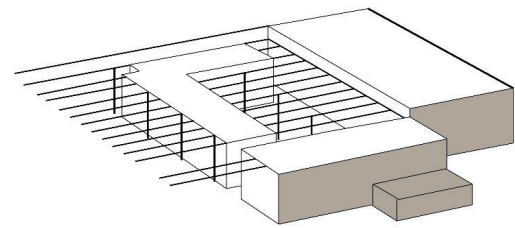
Removing the facade



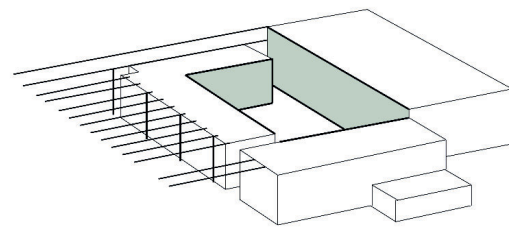
CONCEPT



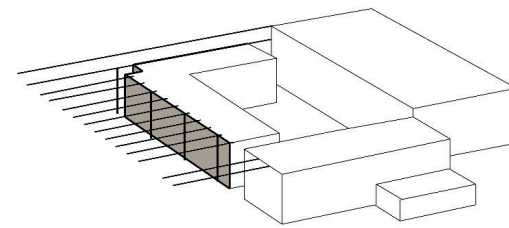
Starting situation in new urban plan
form follows existing.



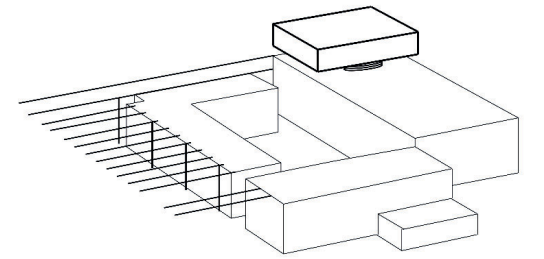
Preservation of the skin
Adaptations to the façades will maintain the same rhythm.



Preservation of the construction
The construction is preserved in the public factory streets and factory halls. A new patio is created whilst the existing construction is removed.

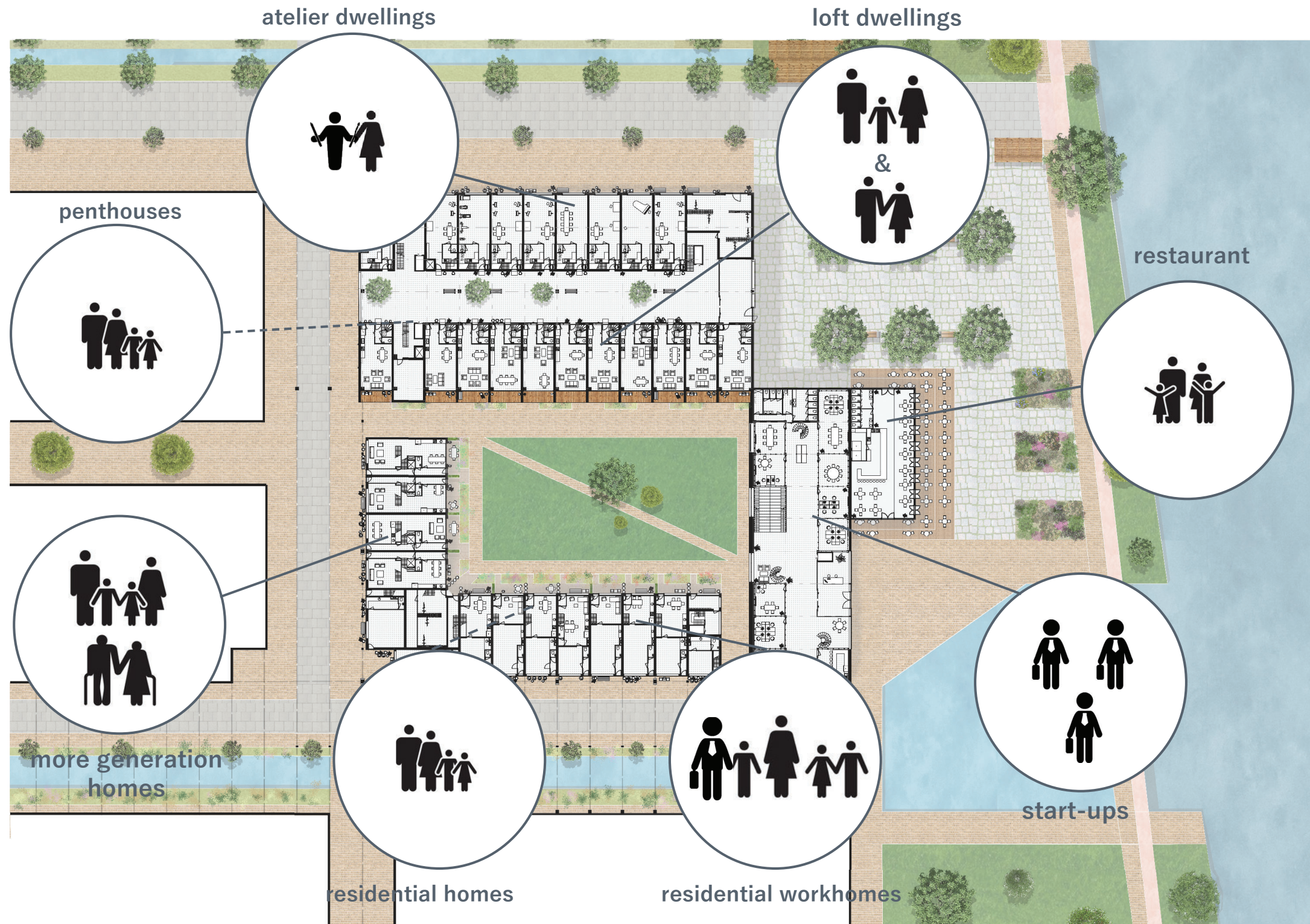


Fusion
The new façades speak the same language of the existing façades. The new volumes blend in the existing architecture.

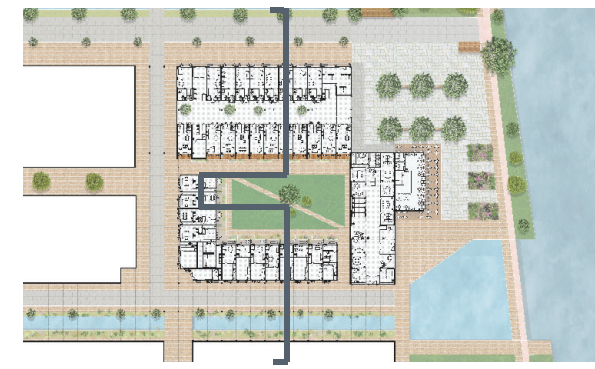


Metaphor & reference
The newly added topping is a metaphor to the large number of cable spools present. The upper part refers to the valued construction. The lower part refers to the cables of the cable spools.

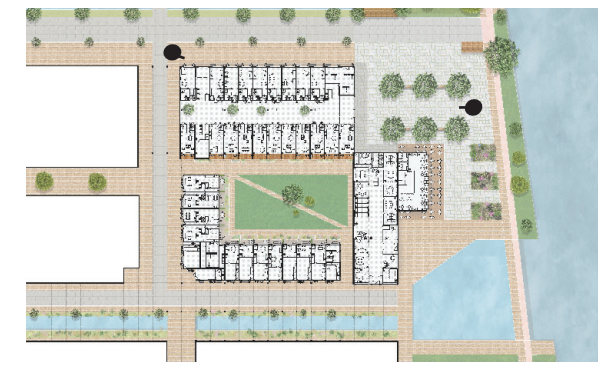
FUNCTIONS URBAN BLOCK



SECTION NORTH SOUTH URBAN BLOCK



EXISTING SITUATION VOLUME 01

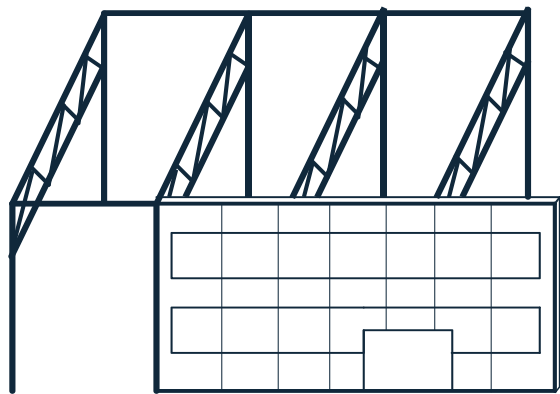


Present front and east facade



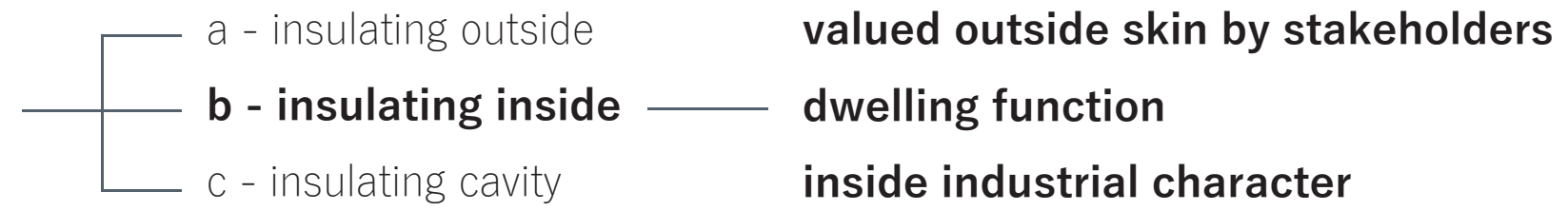
Present, north facade

STRATEGY



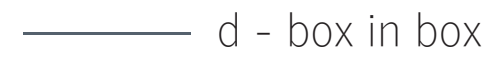
1.

Using the facade



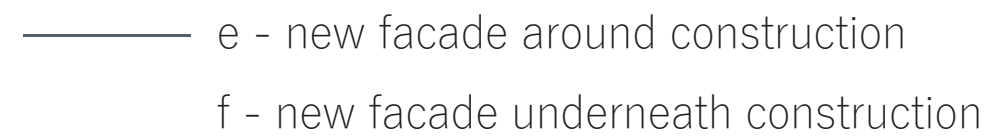
2.

Not touching the facade

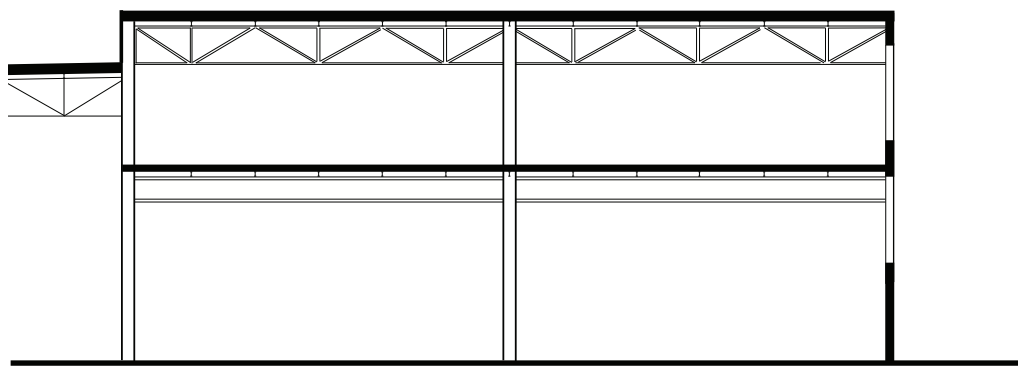
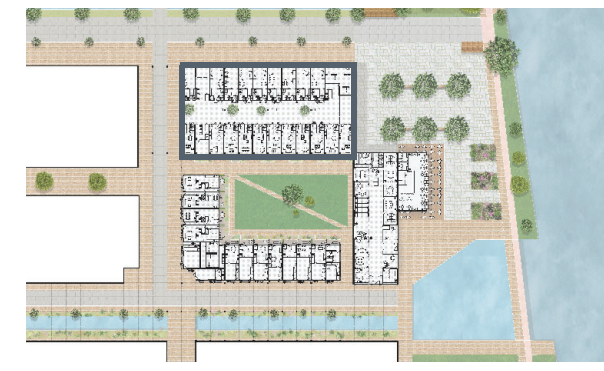


3.

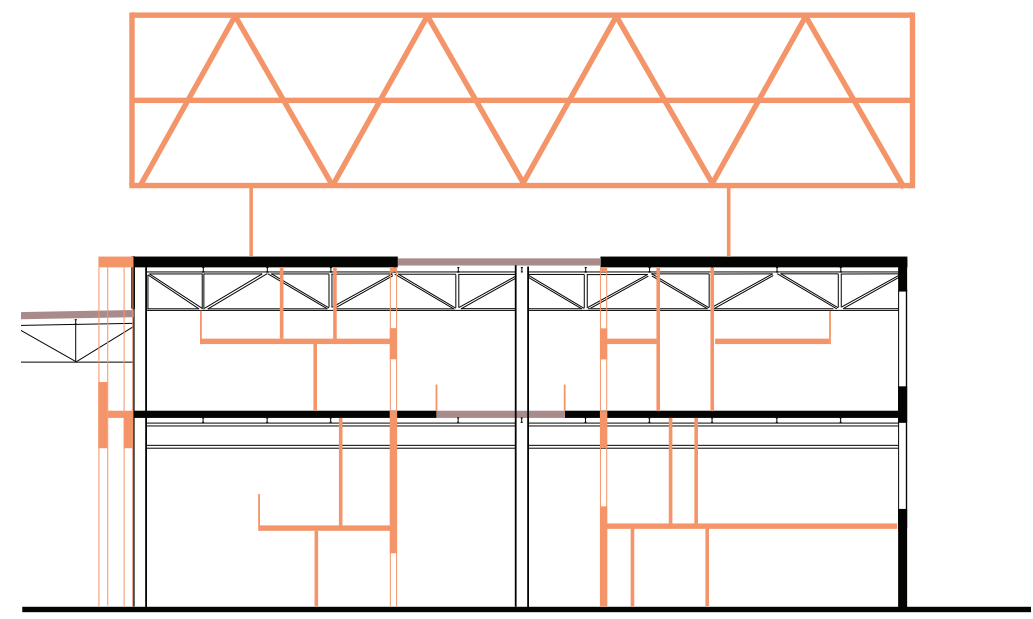
Removing the facade



VOLUME 01



Existing situation

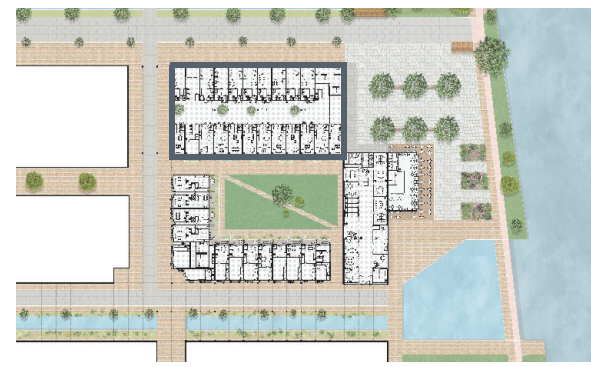
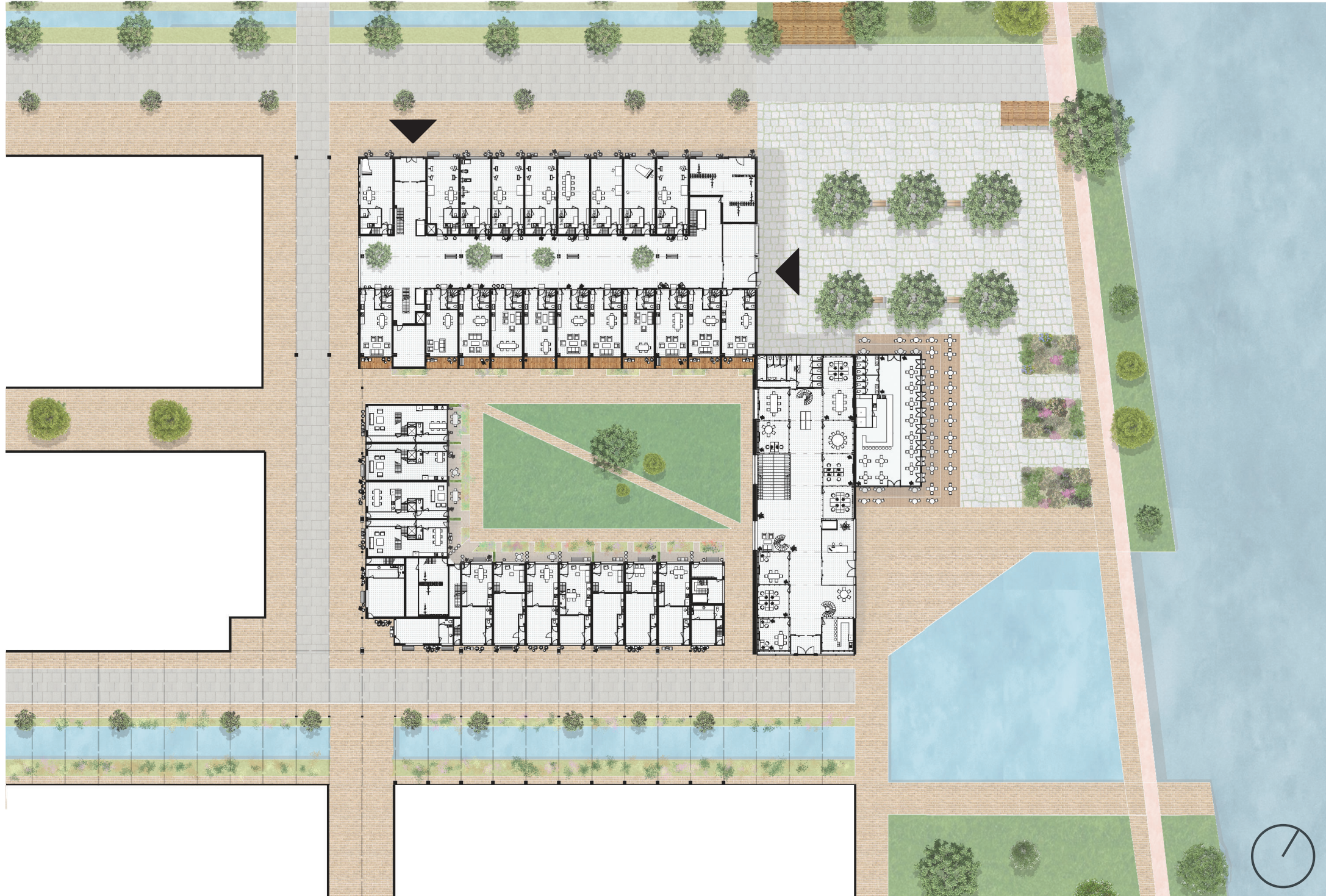


Adaptations

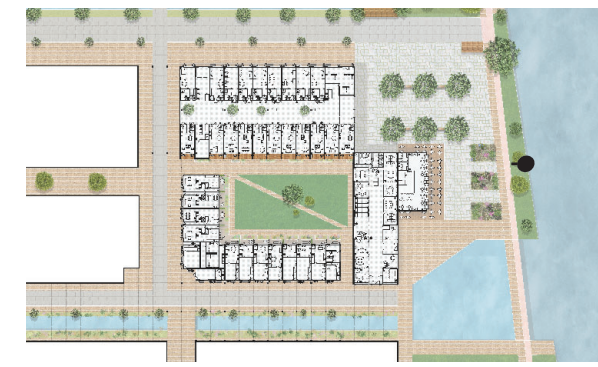


New situation

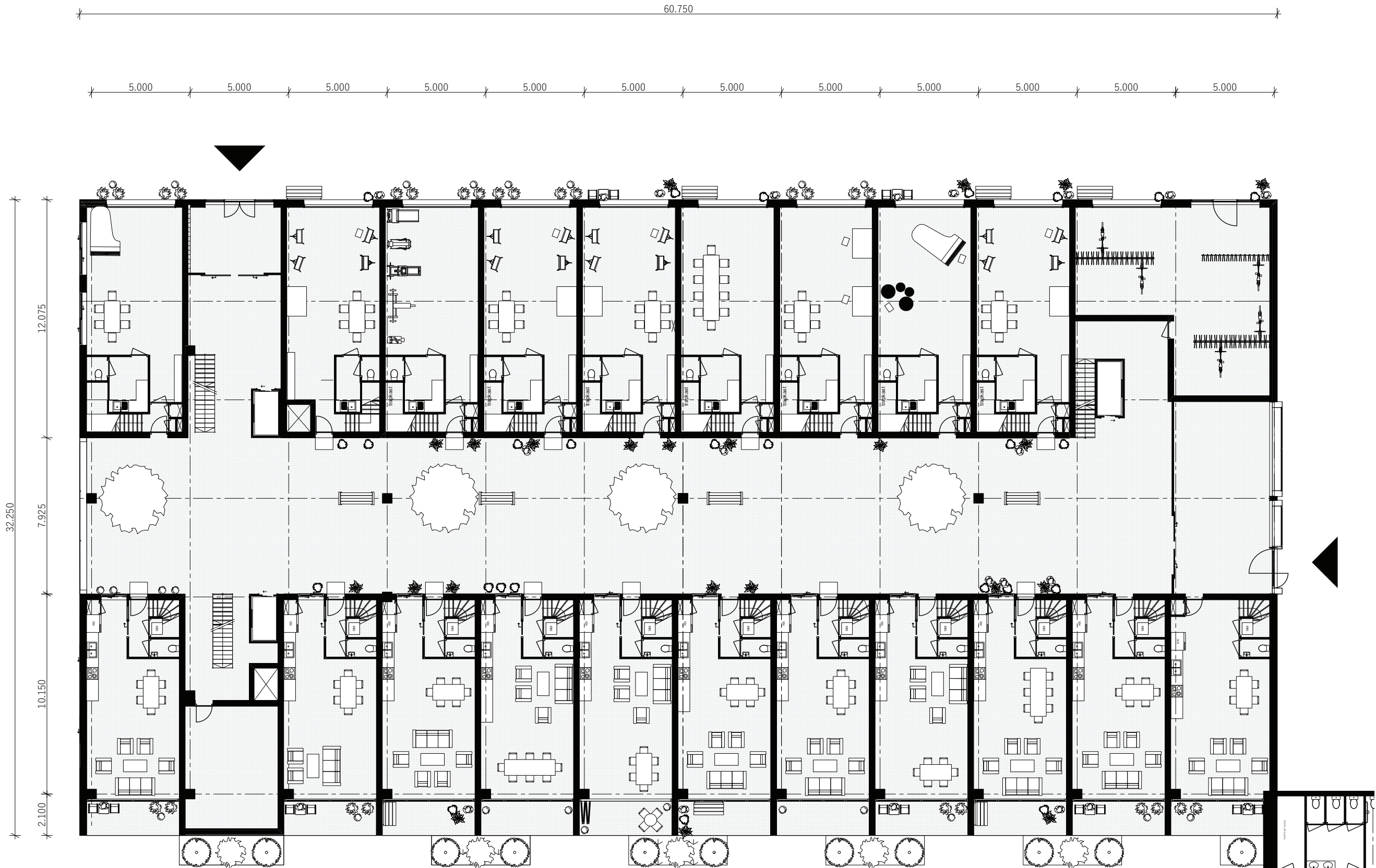
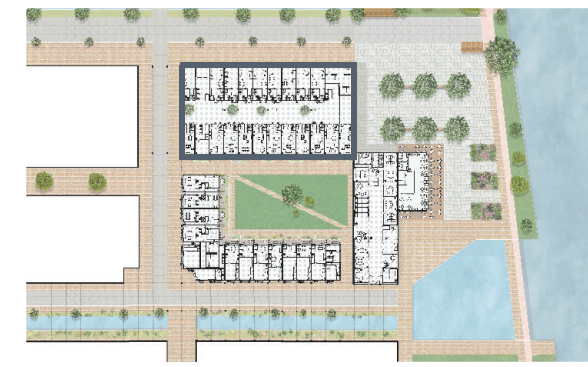
URBAN BLOCK



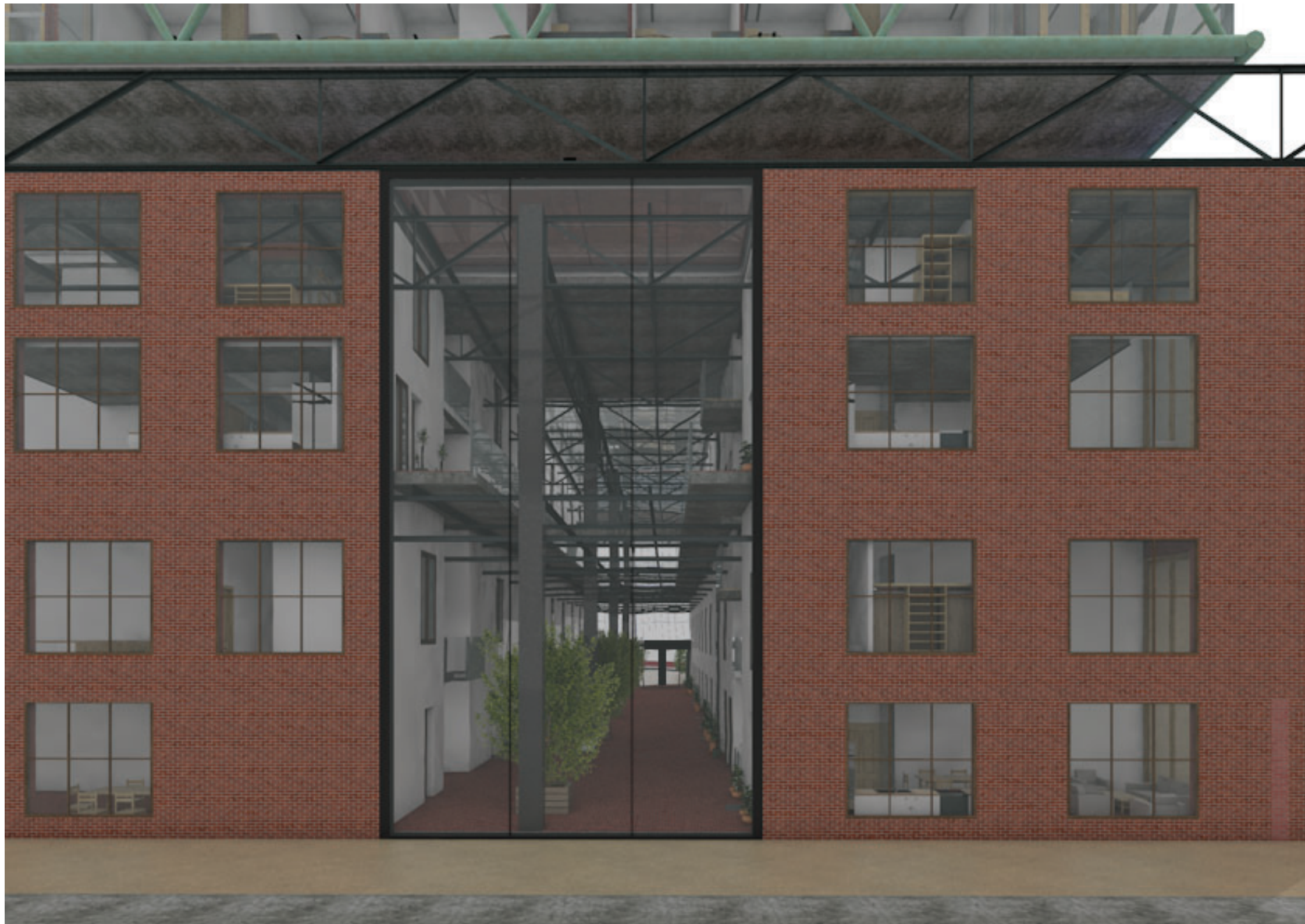
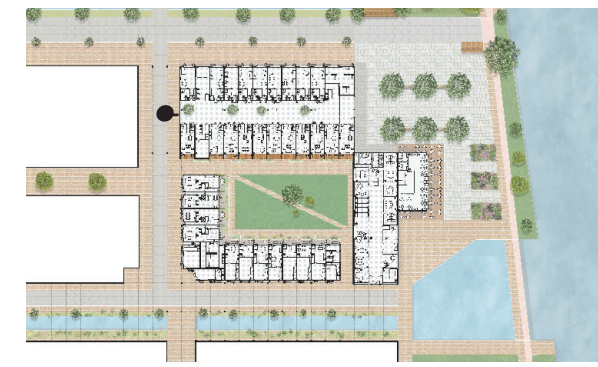
FRONT & EAST FACADE



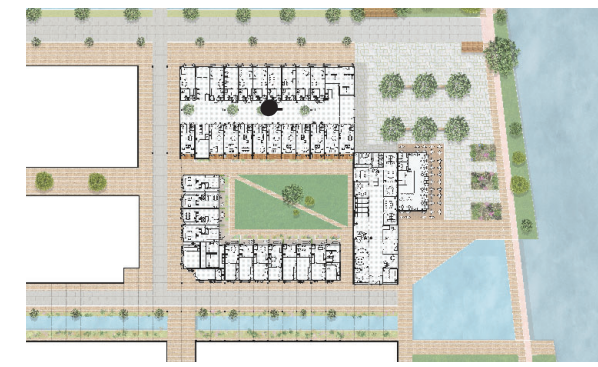
VOLUME 01



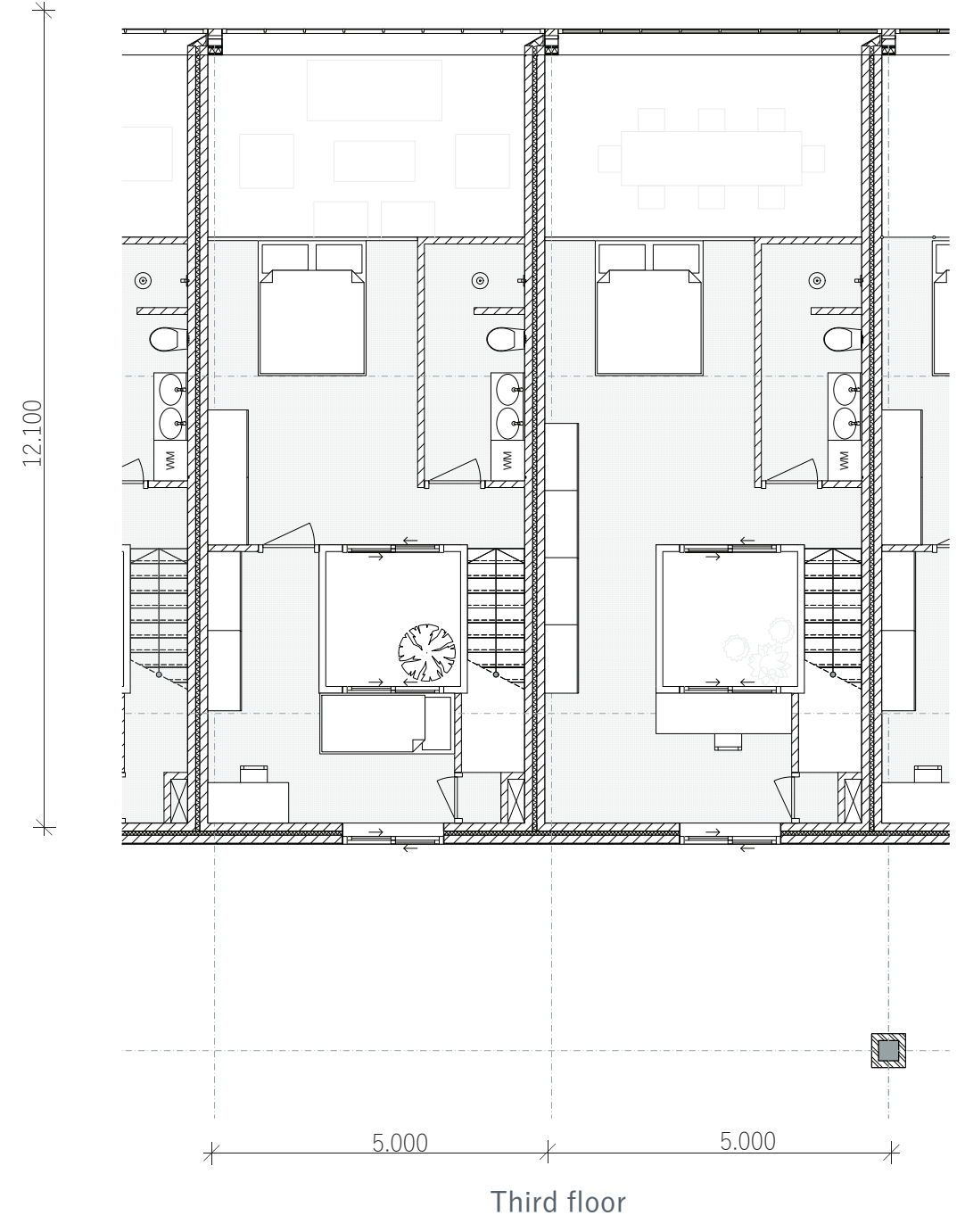
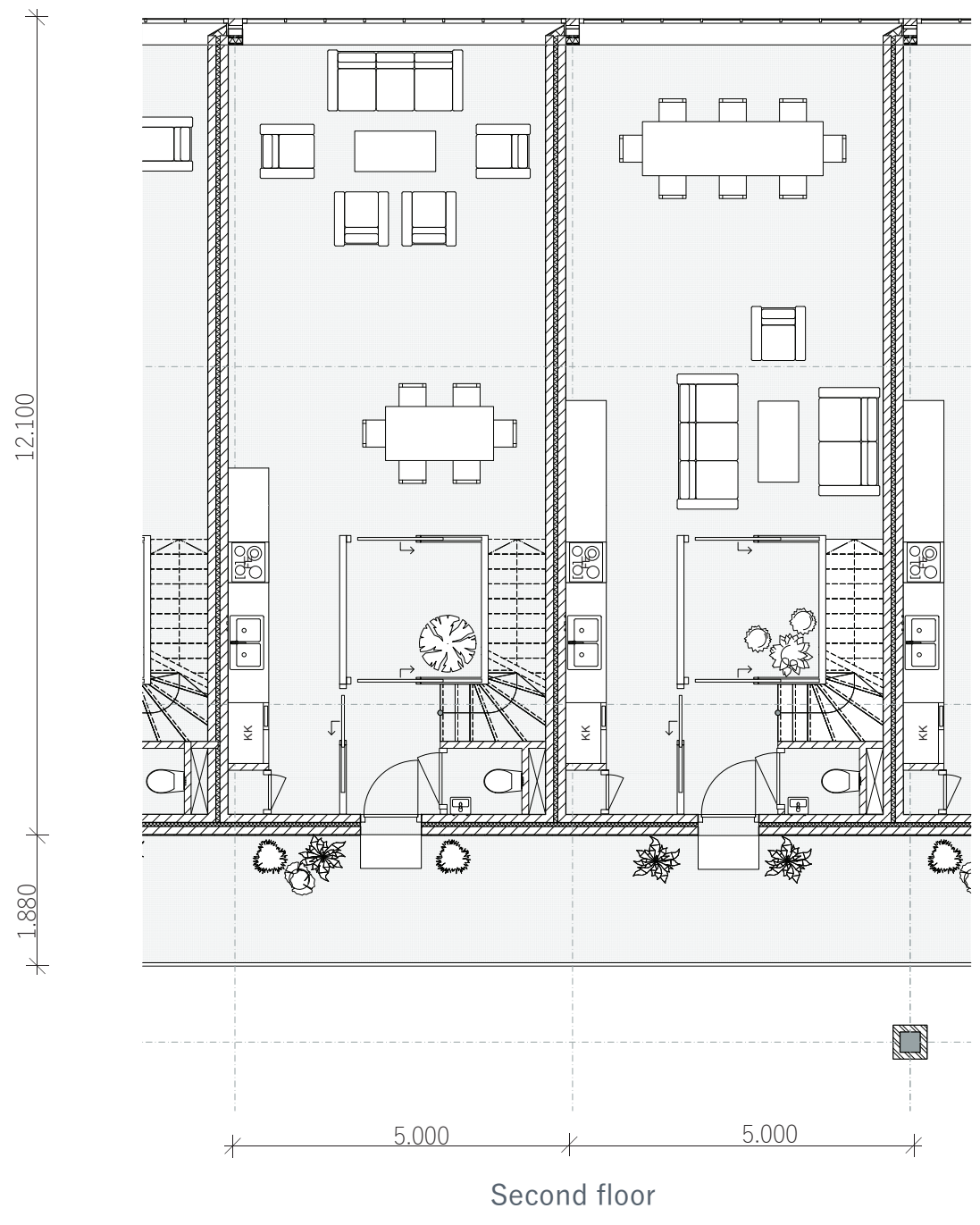
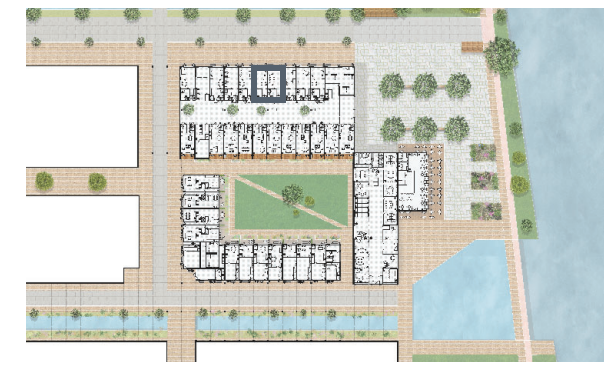
CORRIDOR



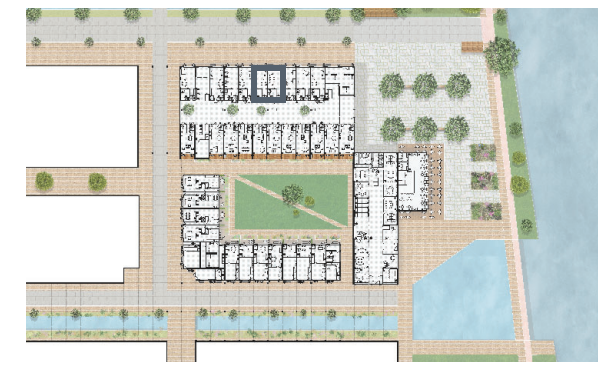
ATRIUM



LOFT DWELLING

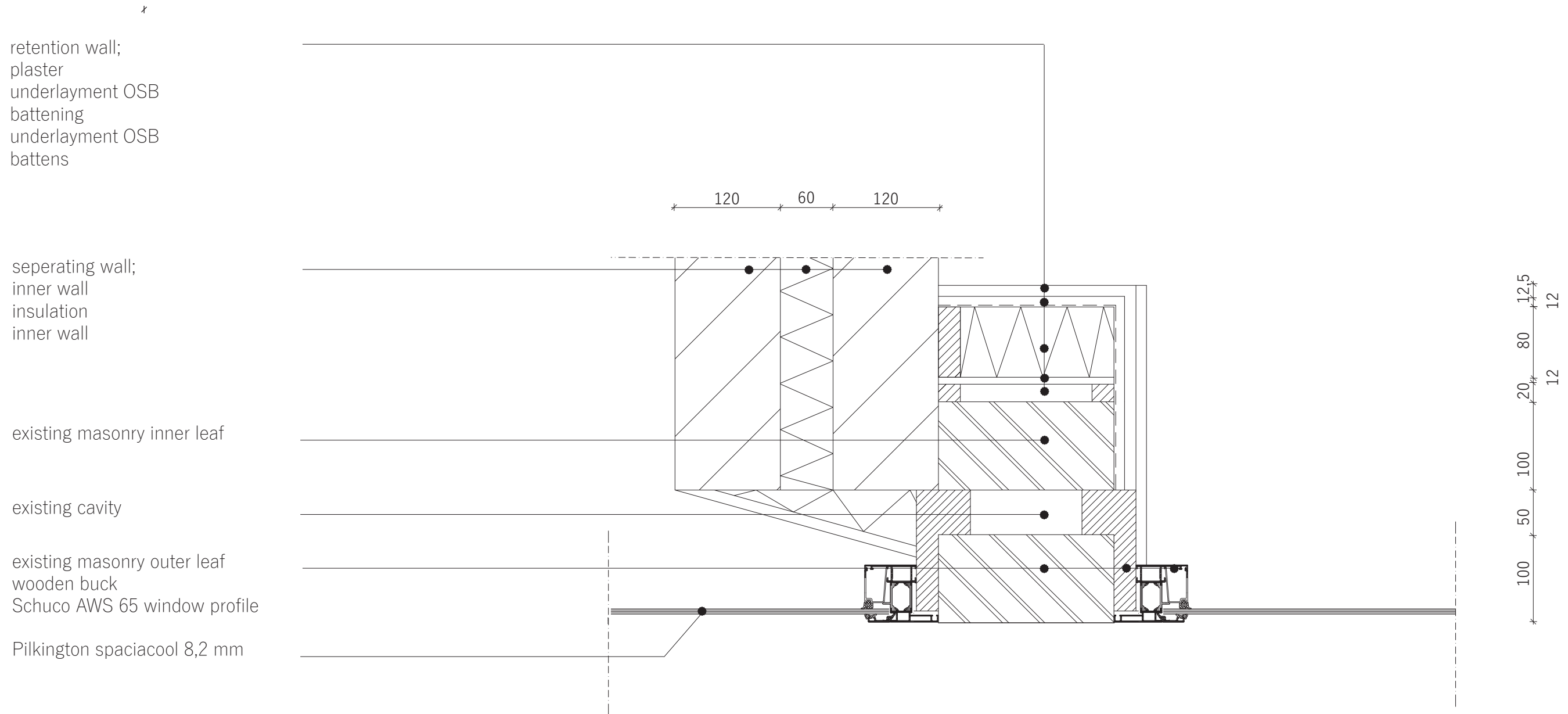


LOFT DWELLING

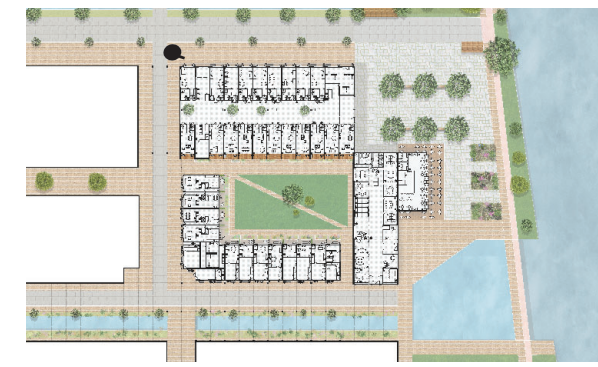


DETAIL OF THE SEPERATING WALL AND WINDOWS

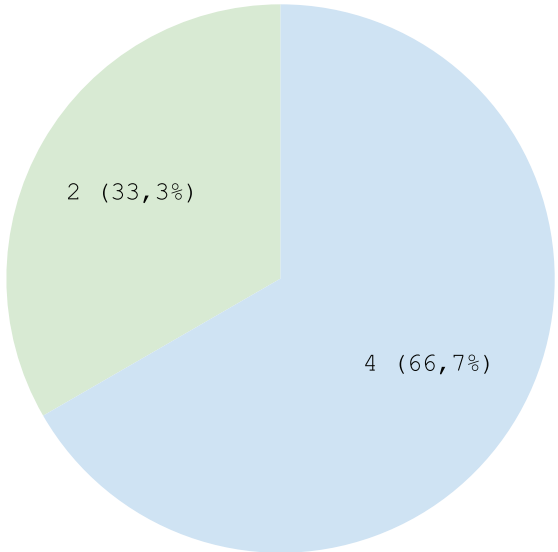
- as thin as possible profile
- no outer sill
- same width and height to preserve rhythm
- existing blue colour



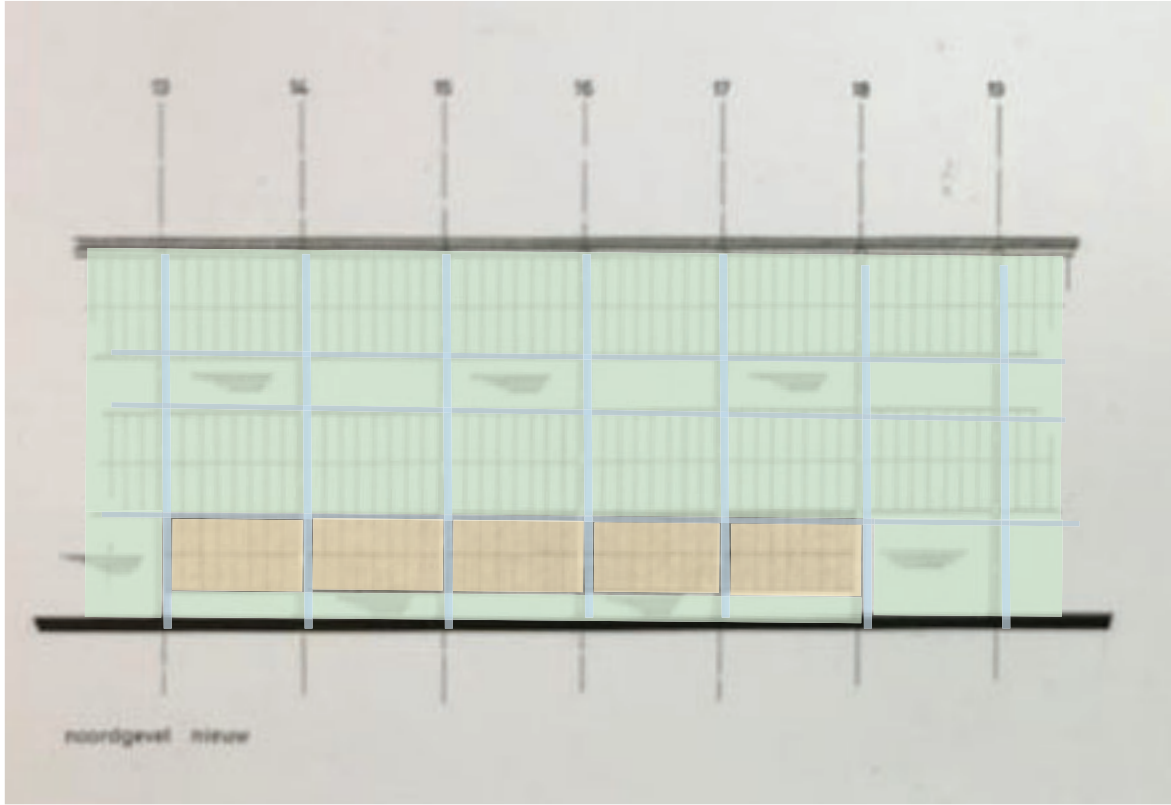
NORTH FACADE



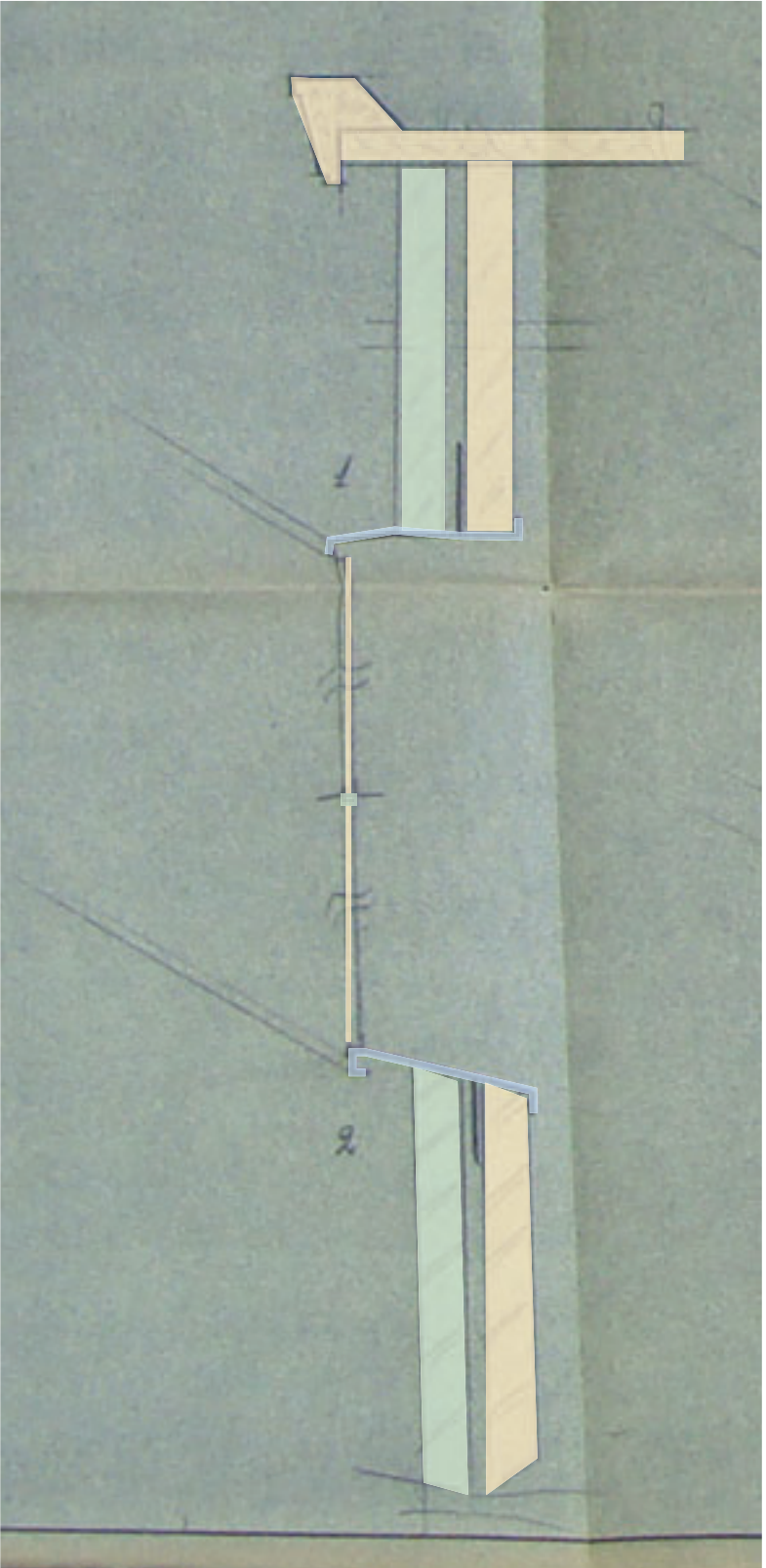
VALUES AND ATTRIBUTES ASSESSMENT



The brick façades



'New' north facade (Stadsarchief Delft, 2020)

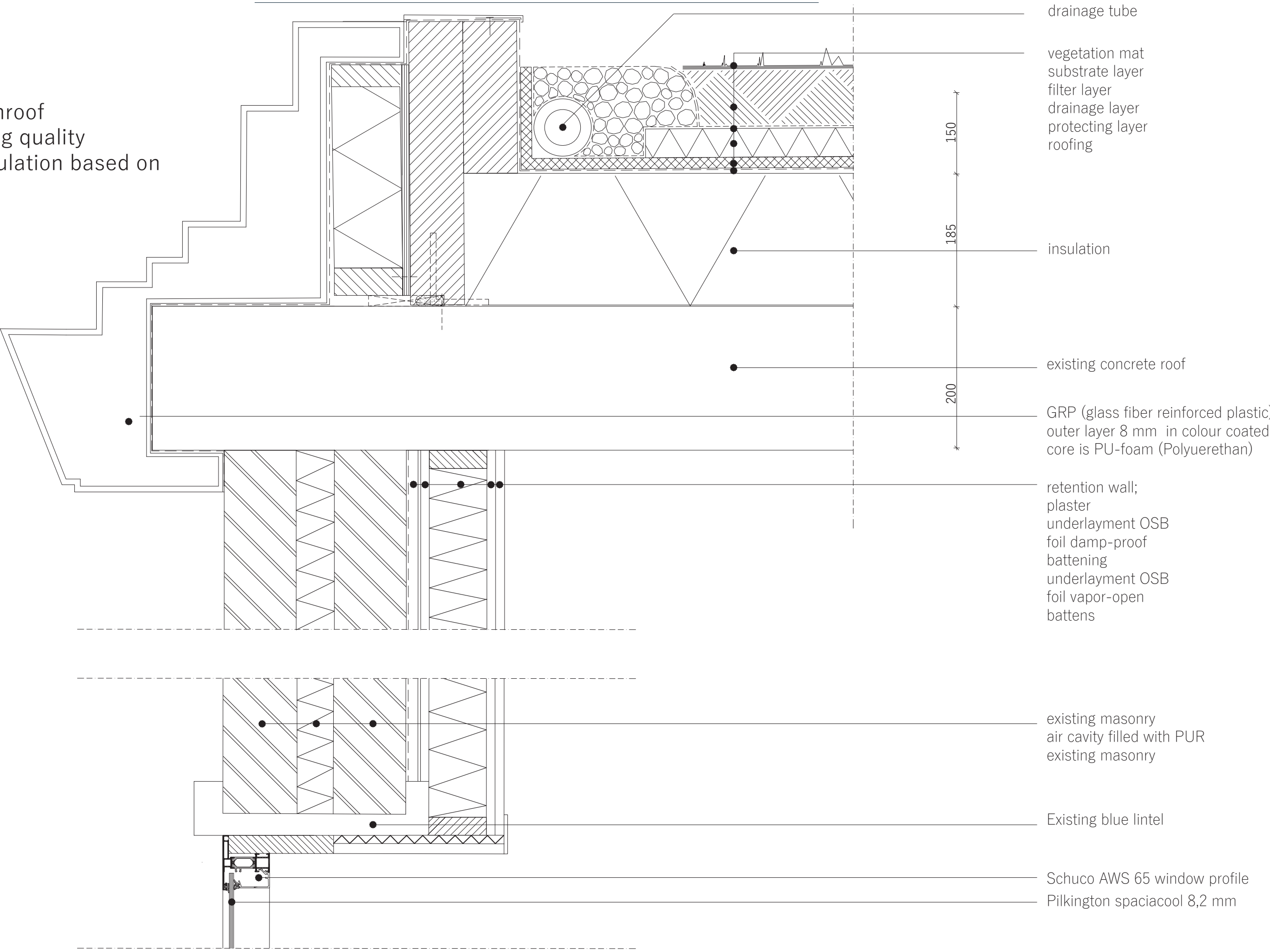


Section facade (Stadsarchief Delft, 2020)

- High value
- Average value
- Low value

DETAIL ROOF

- same roofline
- hide new sedumroof
- insulate for living quality
- hierarchy of insulation based on heritage values



drainage tube
 vegetation mat
 substrate layer
 filter layer
 drainage layer
 protecting layer
 roofing

150
 185

insulation
 existing concrete roof

200

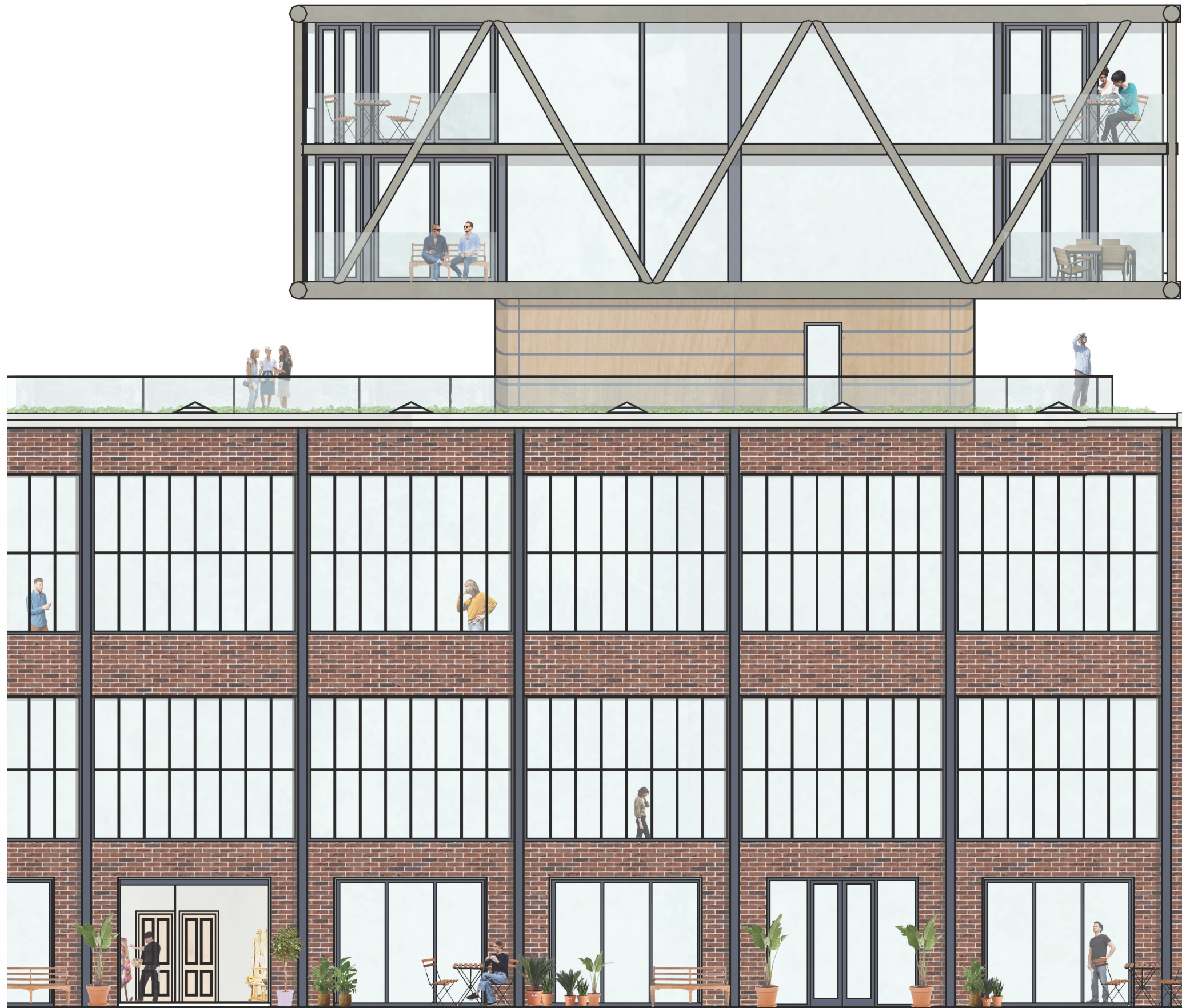
GRP (glass fiber reinforced plastic)
 outer layer 8 mm in colour coated
 core is PU-foam (Polyurethan)
 retention wall;
 plaster
 underlayment OSB
 foil damp-proof
 battening
 underlayment OSB
 foil vapor-open
 battens

existing masonry
 air cavity filled with PUR
 existing masonry

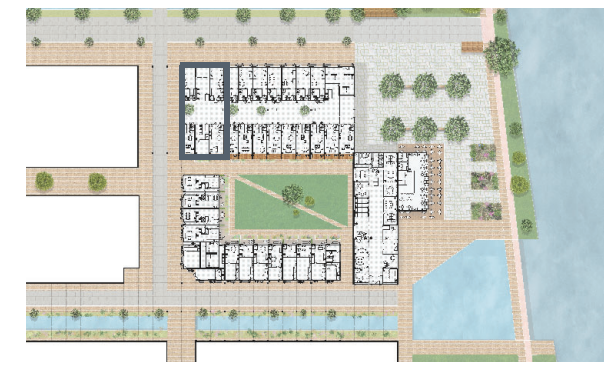
Existing blue lintel

Schuco AWS 65 window profile
 Pilkington spaciacool 8,2 mm

NORTH FACADE WITH TOPPING



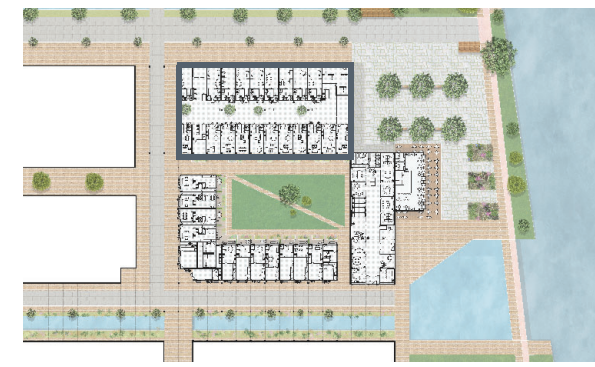
FLOOR PLAN FIFTH FLOOR



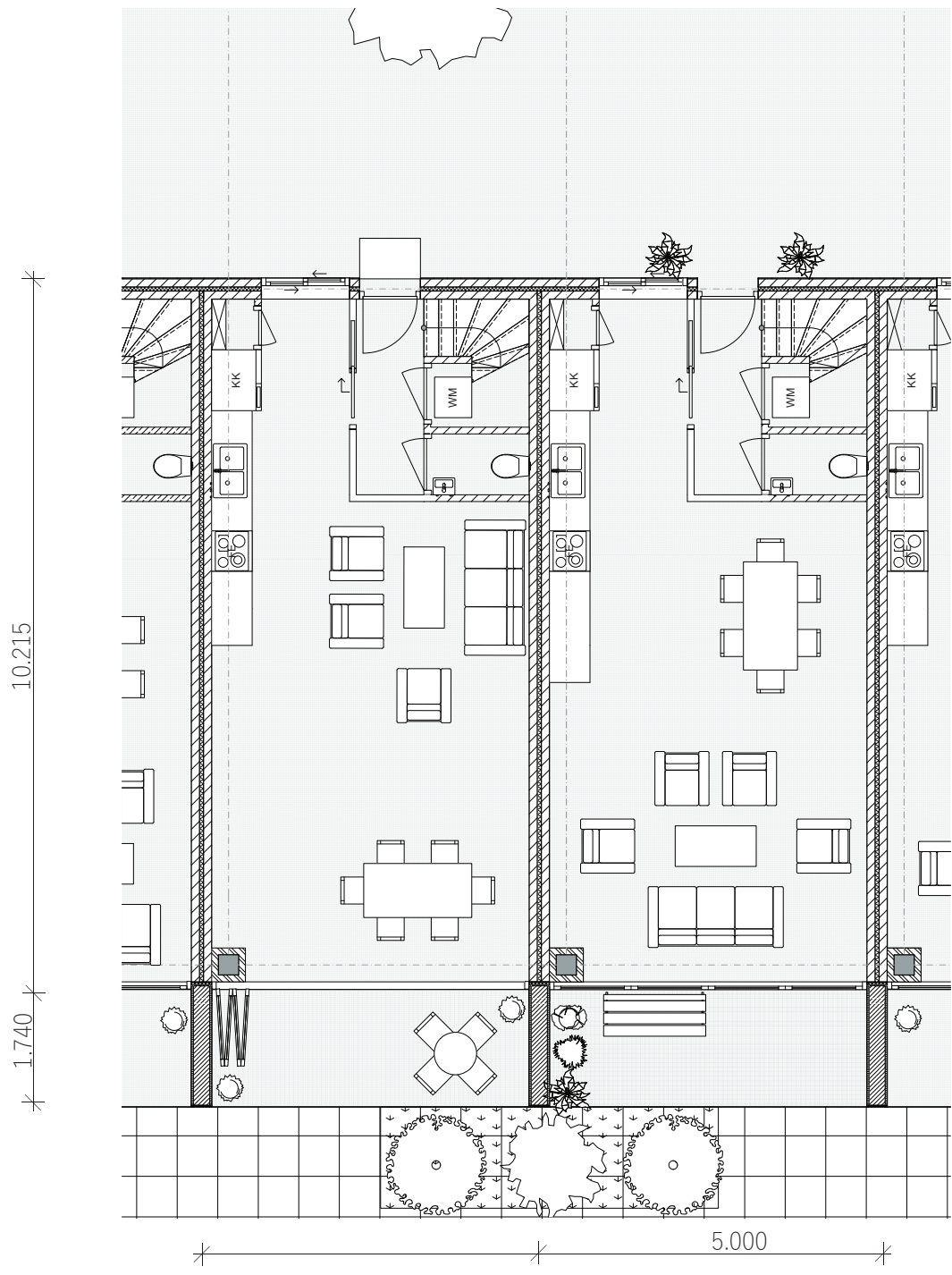
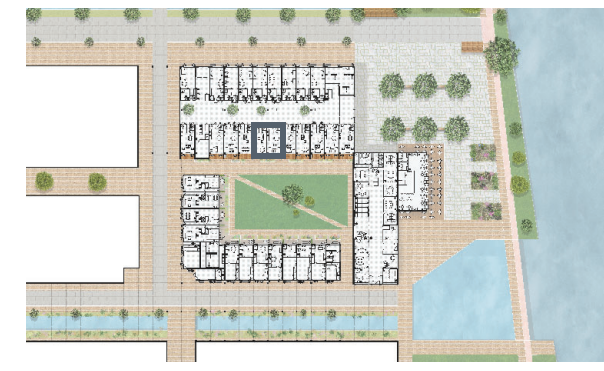
30.265



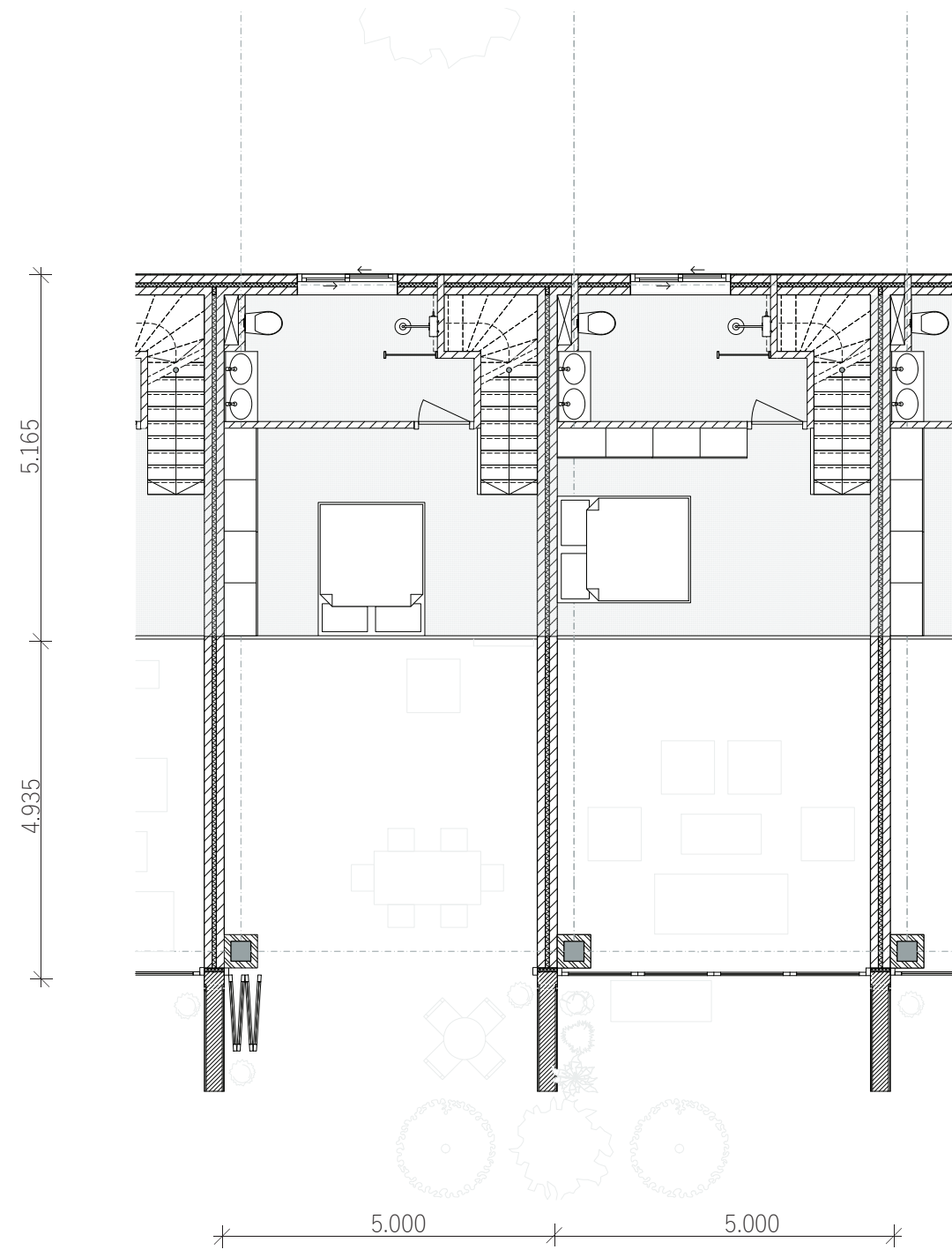
VOLUME 01



LOFT DWELLING



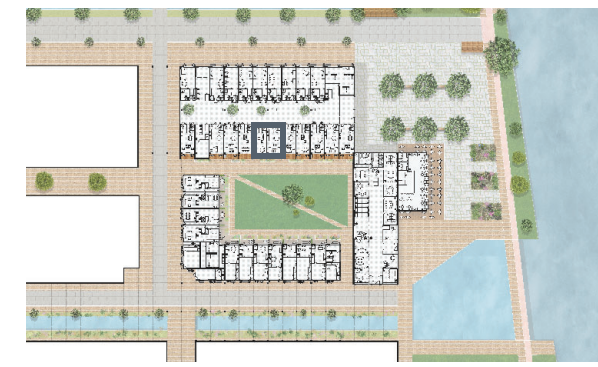
Ground floor



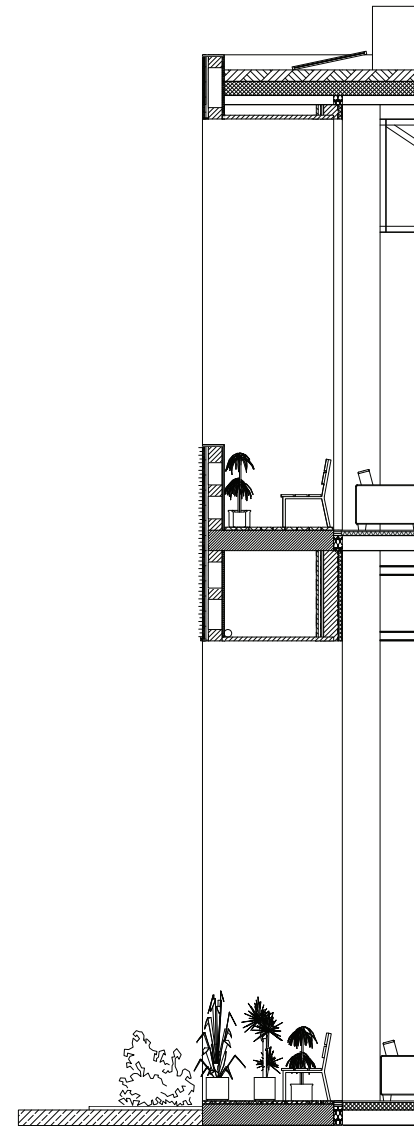
First floor



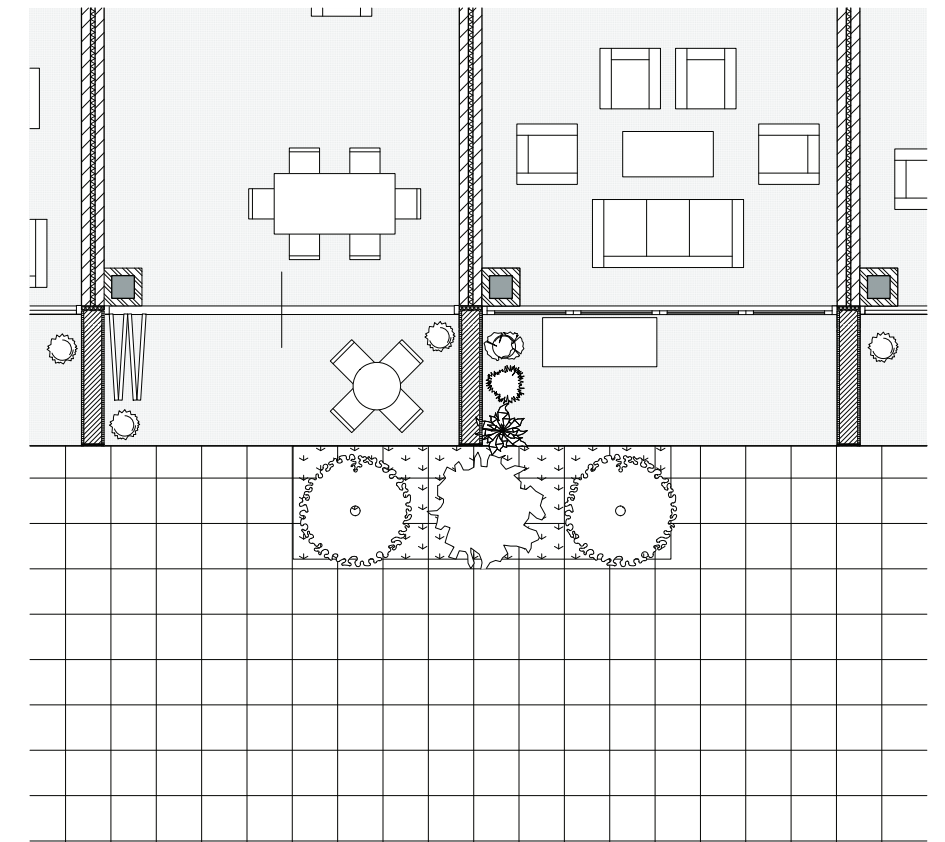
LOFT DWELLING AT PATIO



South facade

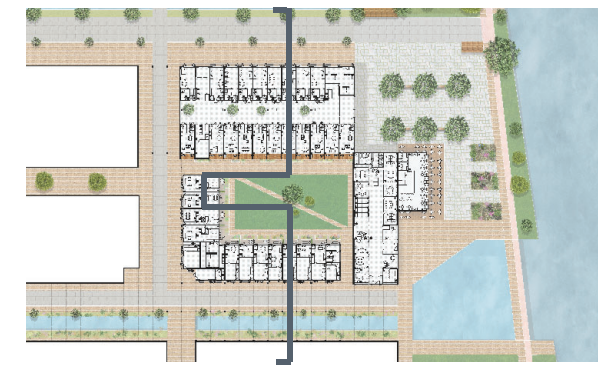


Vertical cross-cut south facade

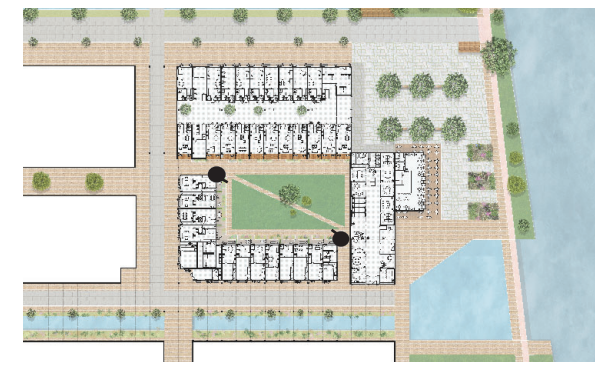


Horizontal cross-cut of ground floor

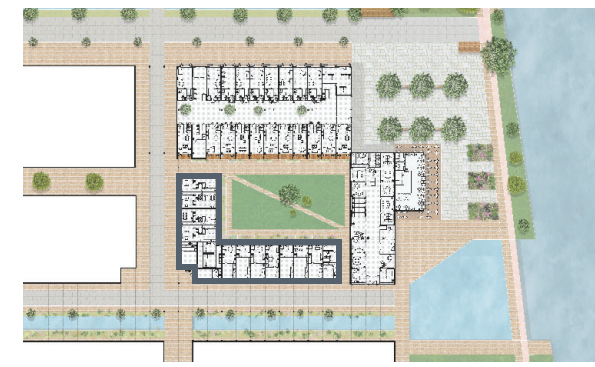
SECTION NORTH SOUTH URBAN BLOCK



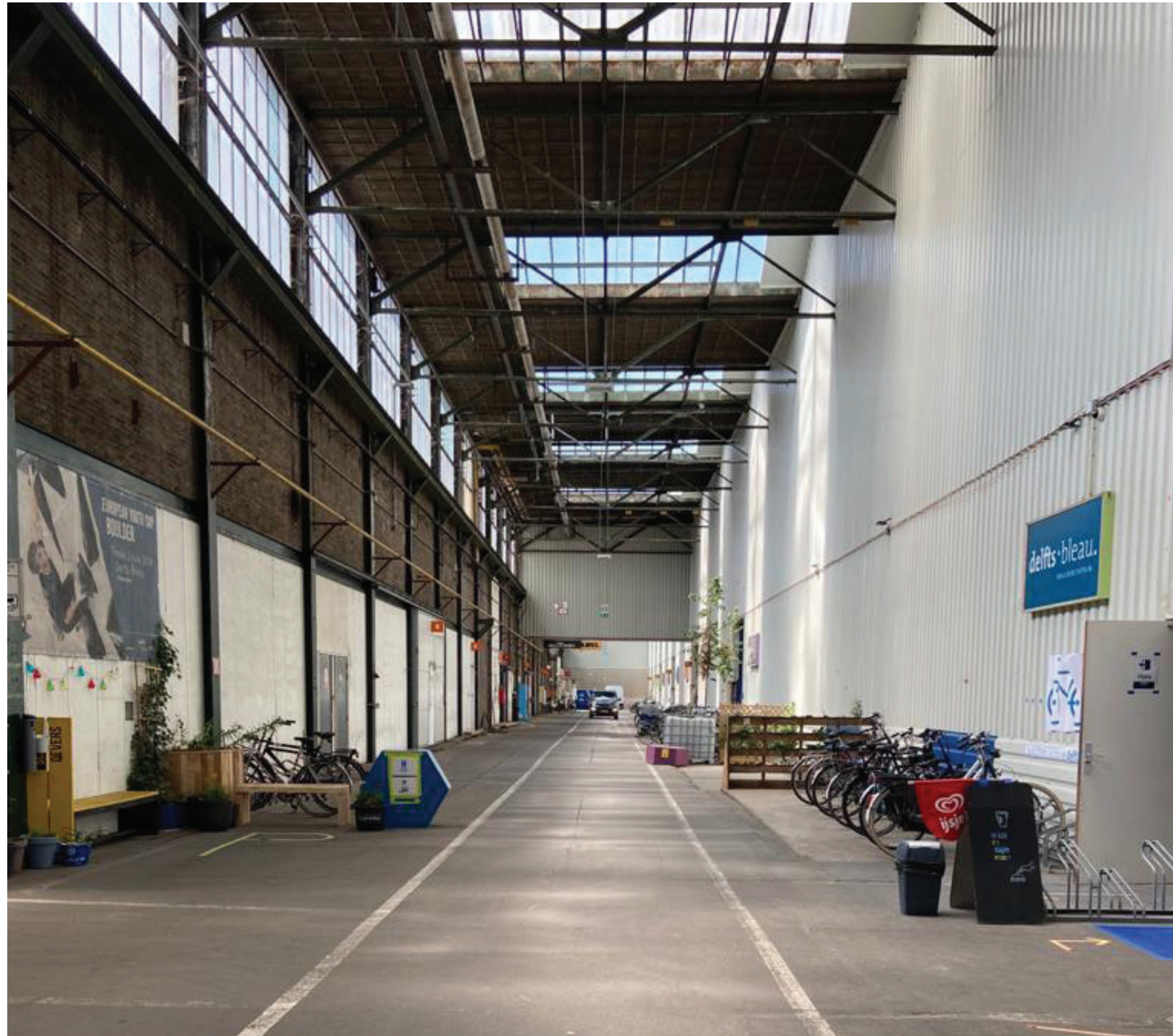
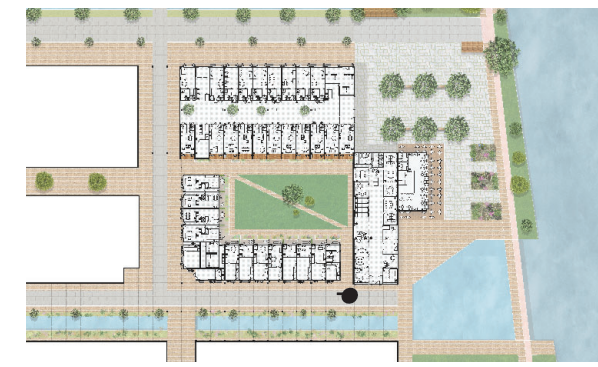
GREEN OASIS



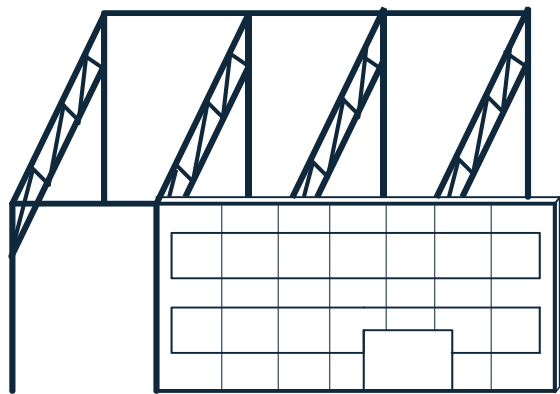
VOLUME 02



EXISTING SITUATION VOLUME 02



STRATEGY



1.

Using the construction

— a - new facade insulating construction
— **b - new facade underneath**

**outside valued more
factory street vs. patio
no floors, more dwellings**

2.

Not touching the construction

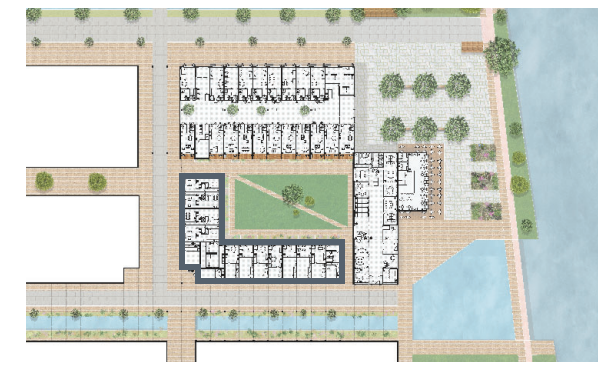
— c - attaching box

3.

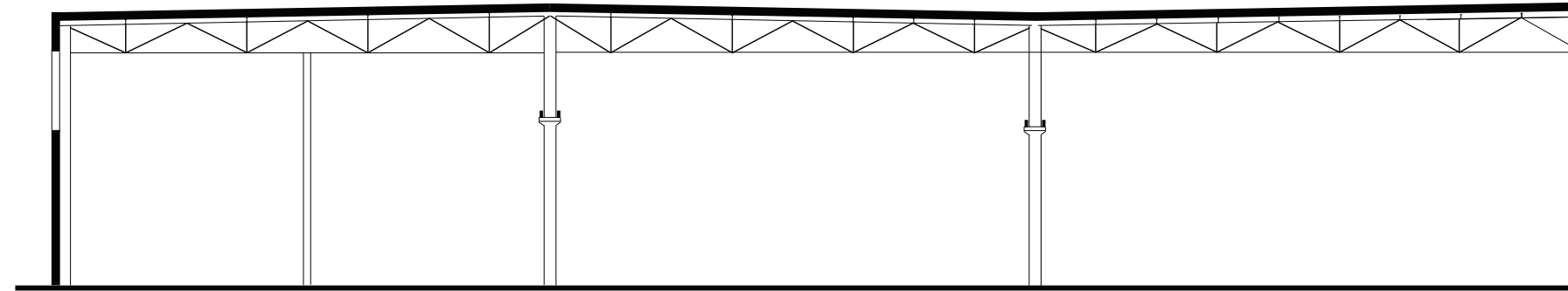
Removing the construction

— d - tabula rasa (no heritage)

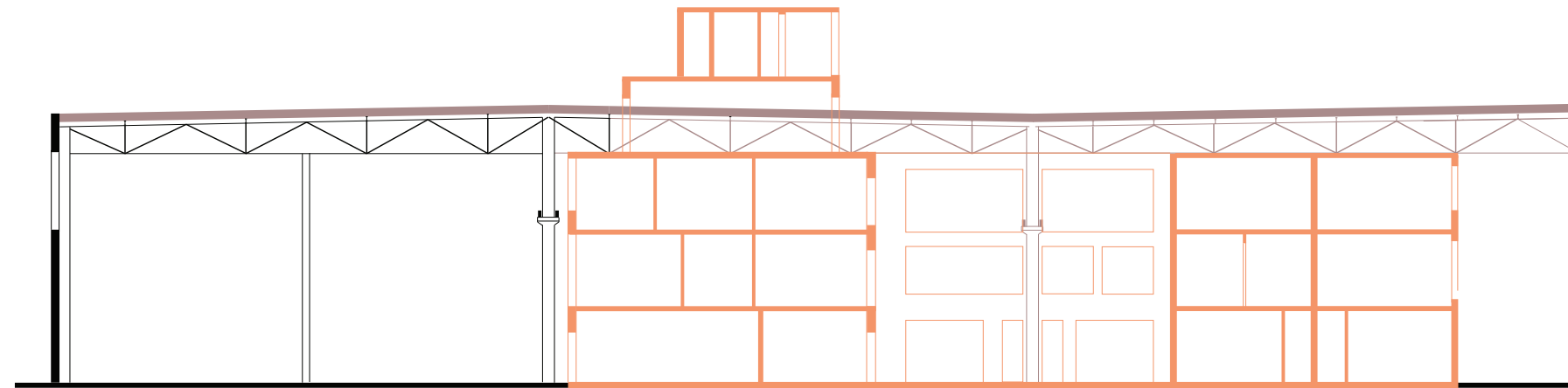
VOLUME 02



Existing situation



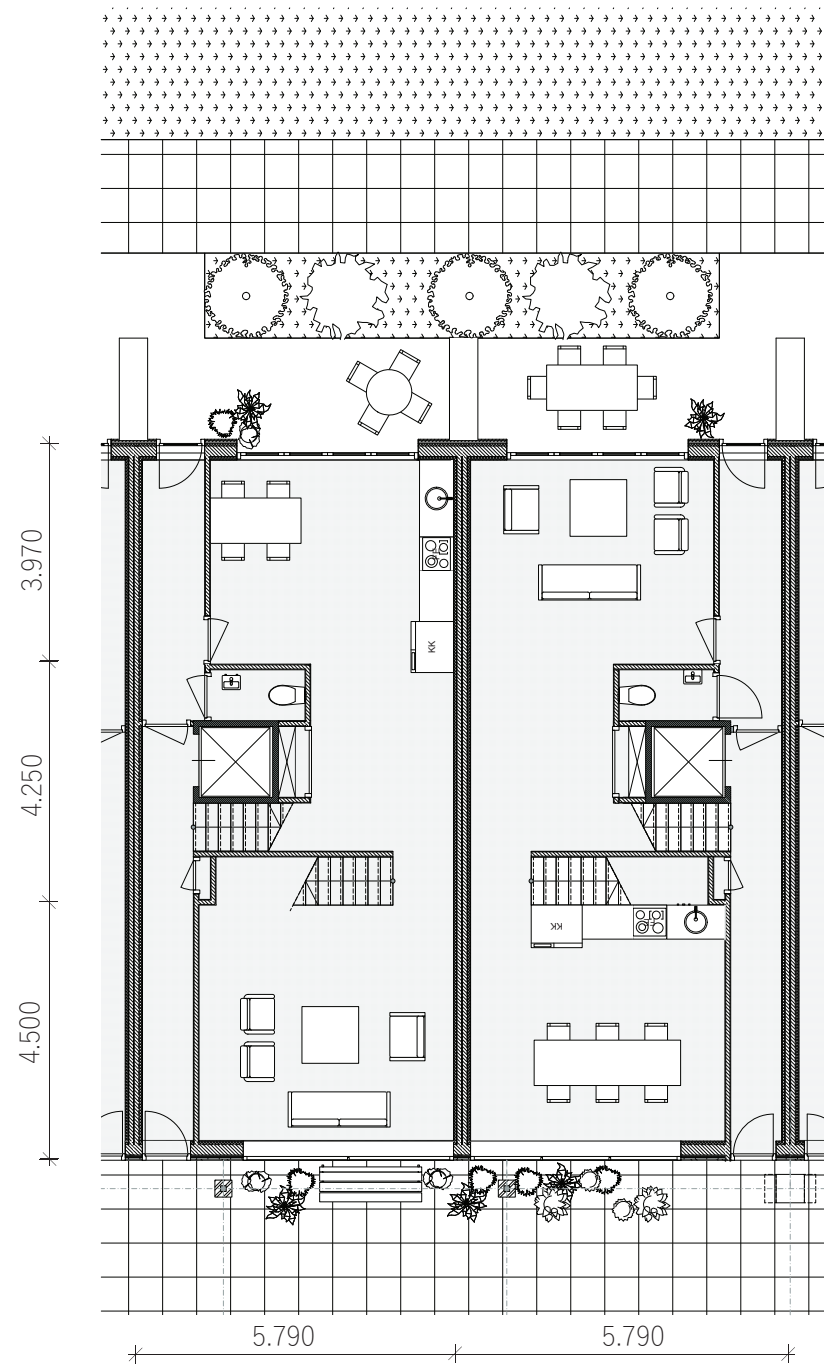
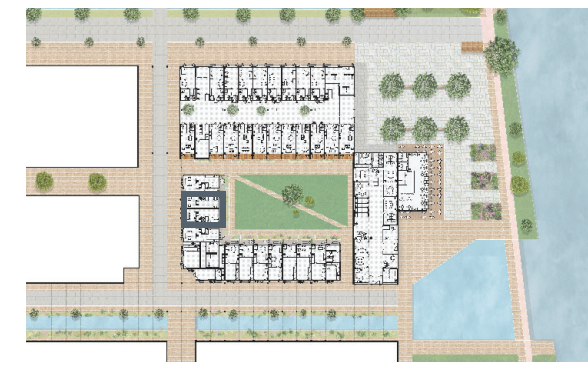
Adaptations



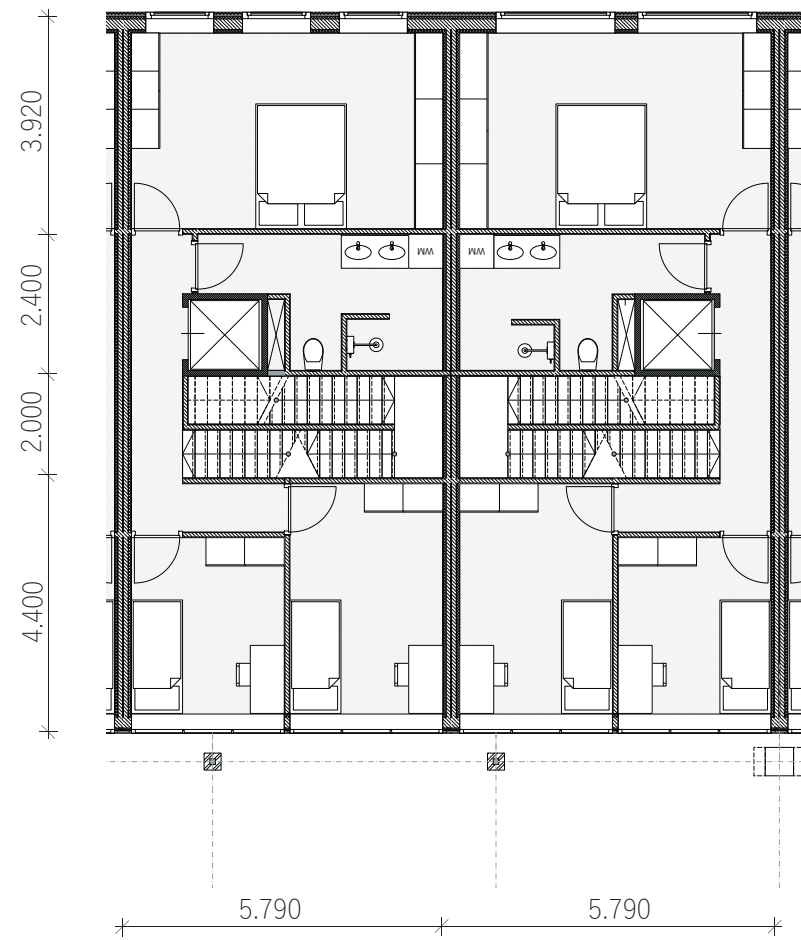
New situation



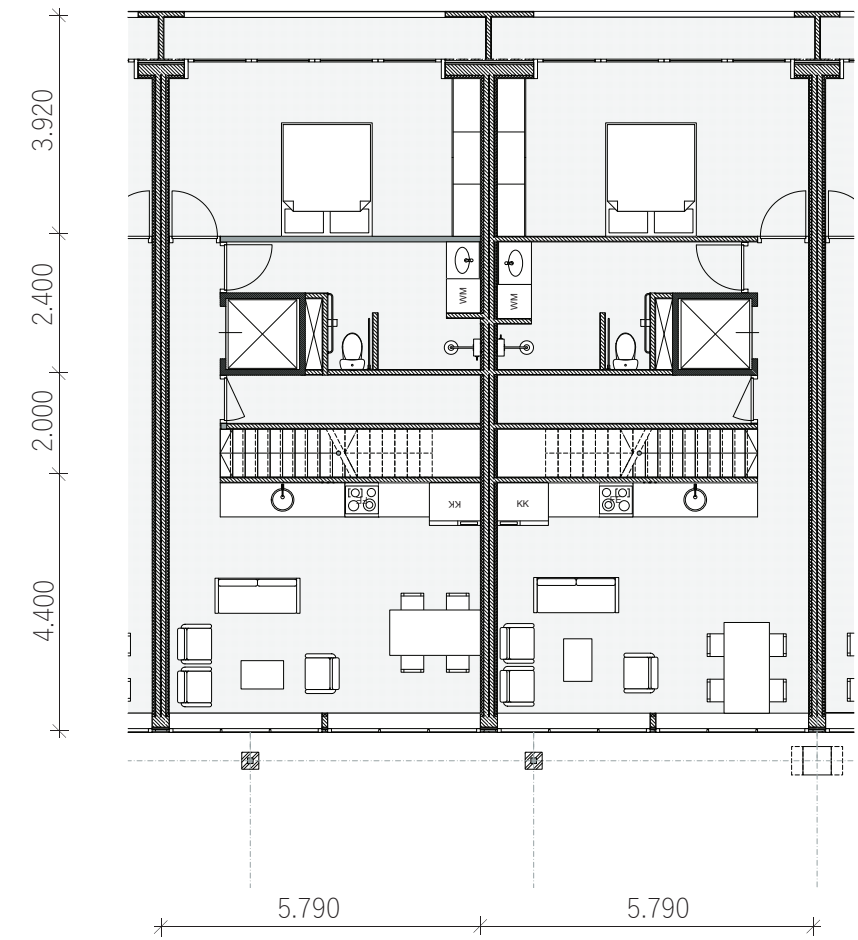
“MORE-GENERATION-HOMES”



Ground floor



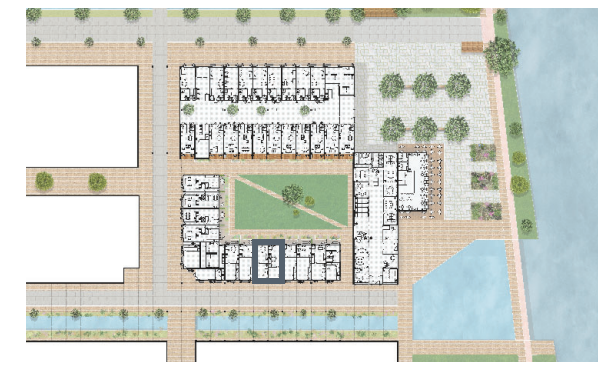
First floor



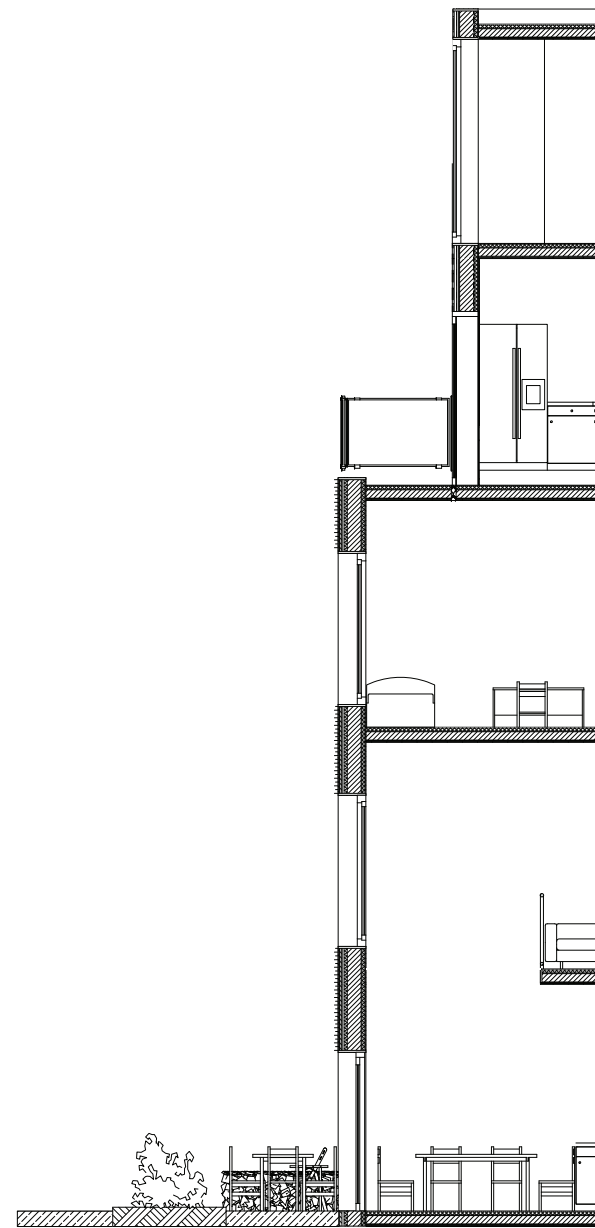
Second floor



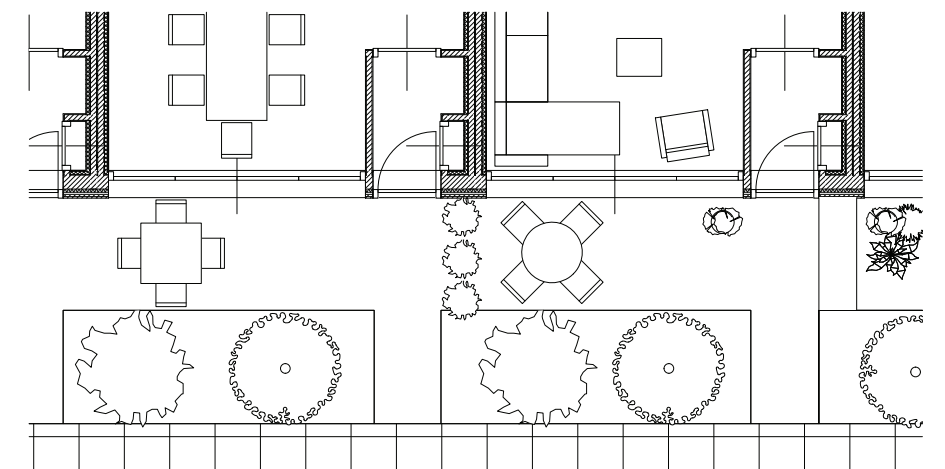
RESIDENTIAL (WORK)HOME AT PATIO



North facade

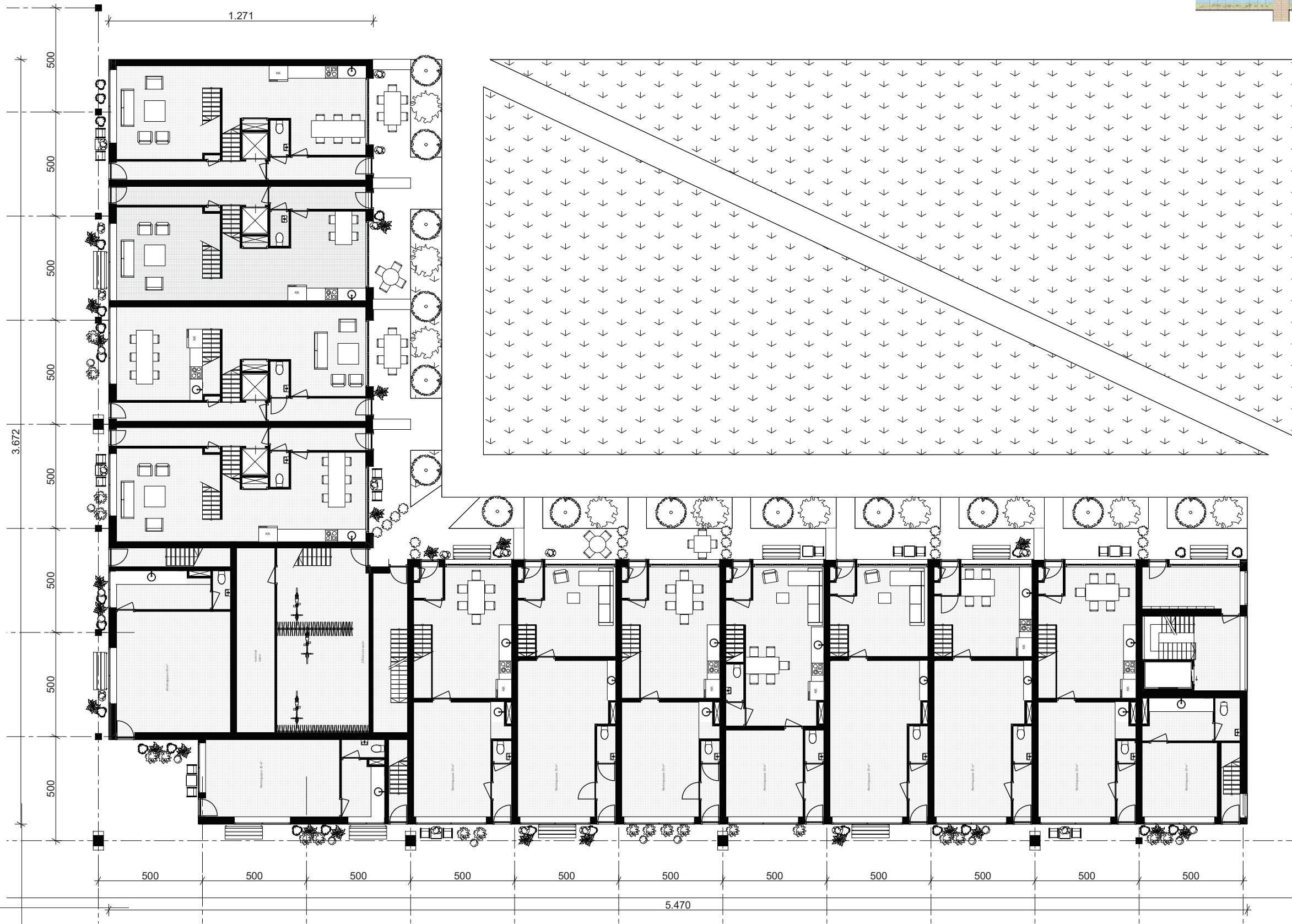
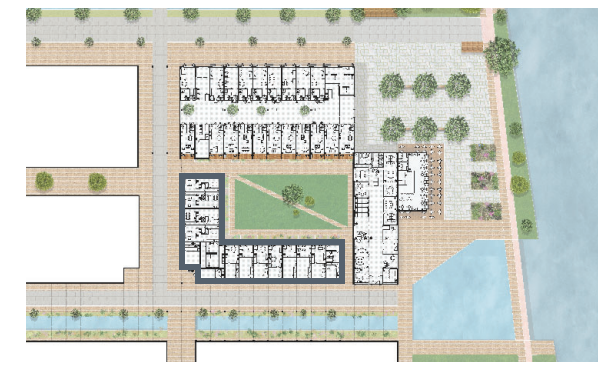


Vertical cross-cut north facade

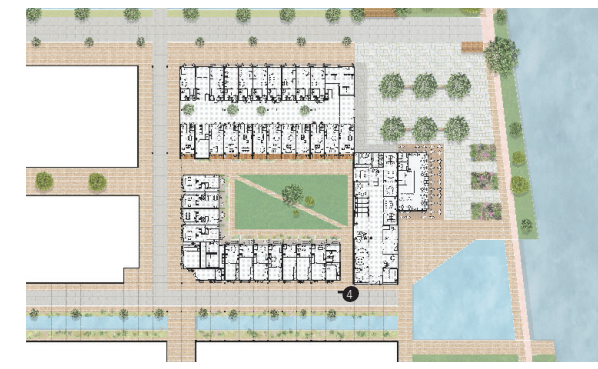


Horizontal cross-cut of ground floor

RESIDENTIAL WORKHOMES AT GROUND LEVEL



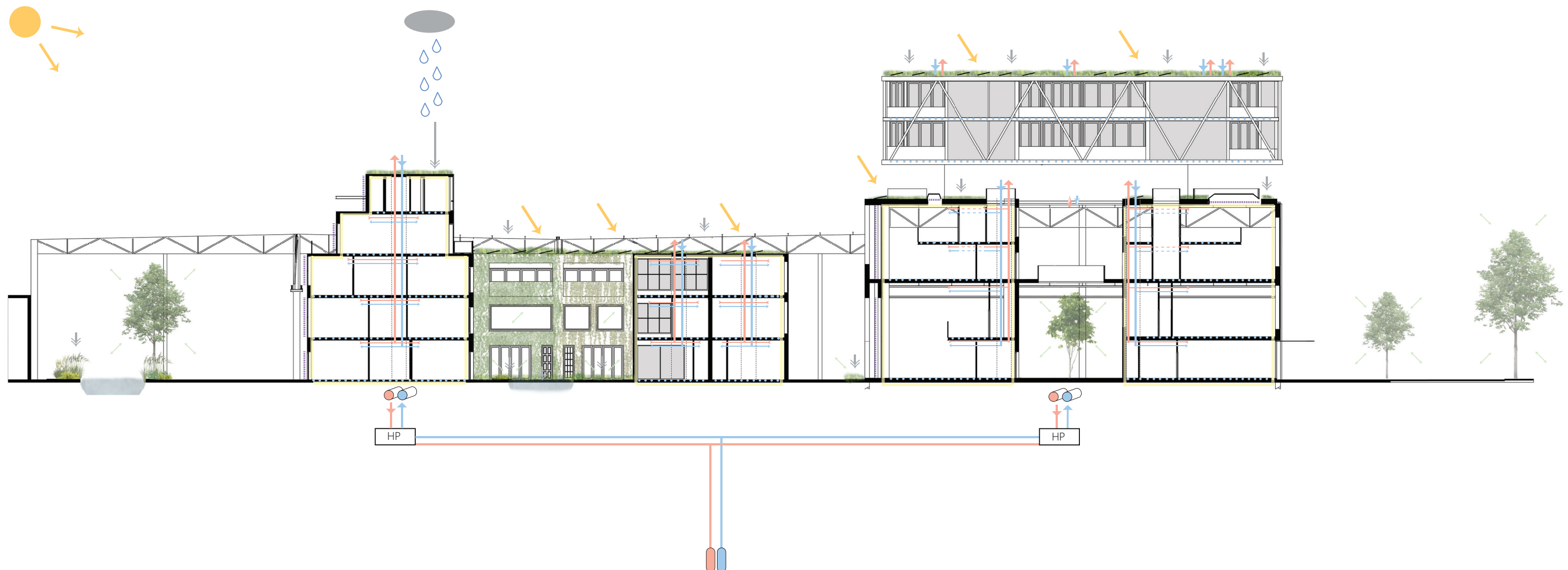
SOUTH FACADE AT FACTORY STREET



CLIMATE CONCEPT OF URBAN BLOCK

- Solar panel
- ↘ Sun energy
- ↓ Collecting rainwater for grey-water system, placed in a central technical space, and to discharge the sewage system
- ↕ Balanced mechanical ventilation with a heat recovery unit and an automatic CO regulation system.
Blue: fresh cool air in. Red: warm air
- ↕ Natural ventilation; night cooling
- ⋮ Sunshades
- ▬ Insulation
- ↘ Cooling and refreshing air
- ⊞ Heat pump in technical space
- ⊞ Aquifer thermal energy storage

Summer

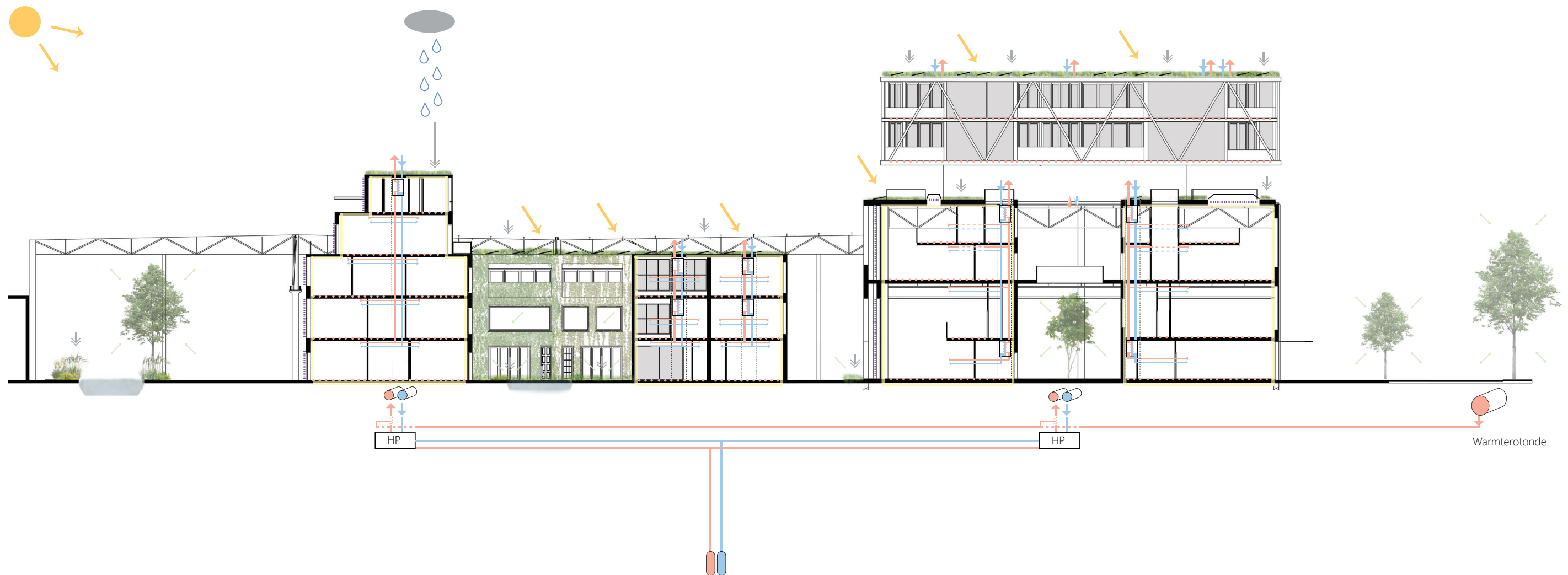


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- ⊞ Heat pump in technical space
- ⋮ Aquifer thermal energy storage
- ⊞ Heat from the 'Warmterotonde'

Winter



PARKING SOLUTION



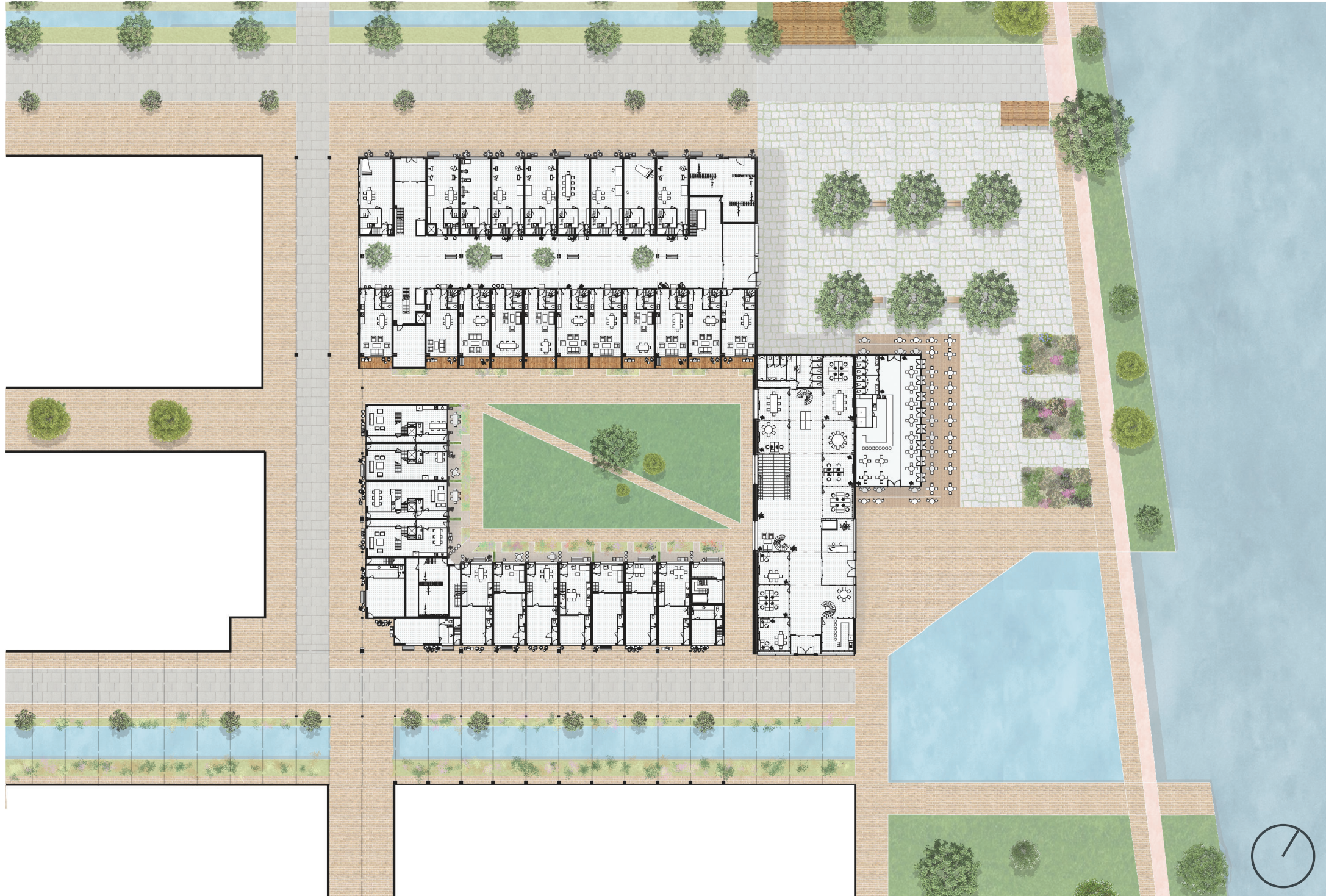
※画像はイメージです

(GIKEN LTD, 2021)

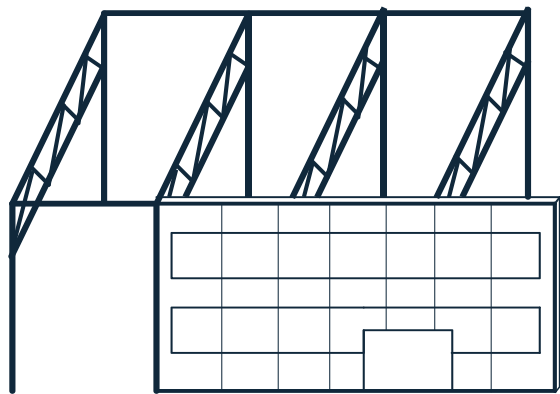


(GIKEN LTD, 2021)

URBAN BLOCK



STRATEGY



1.

Using the facade

- a - insulating outside
- b - insulating inside
- c - insulating cavity

industry hall vs patio

valued outside, front facade by stakeholders

2.

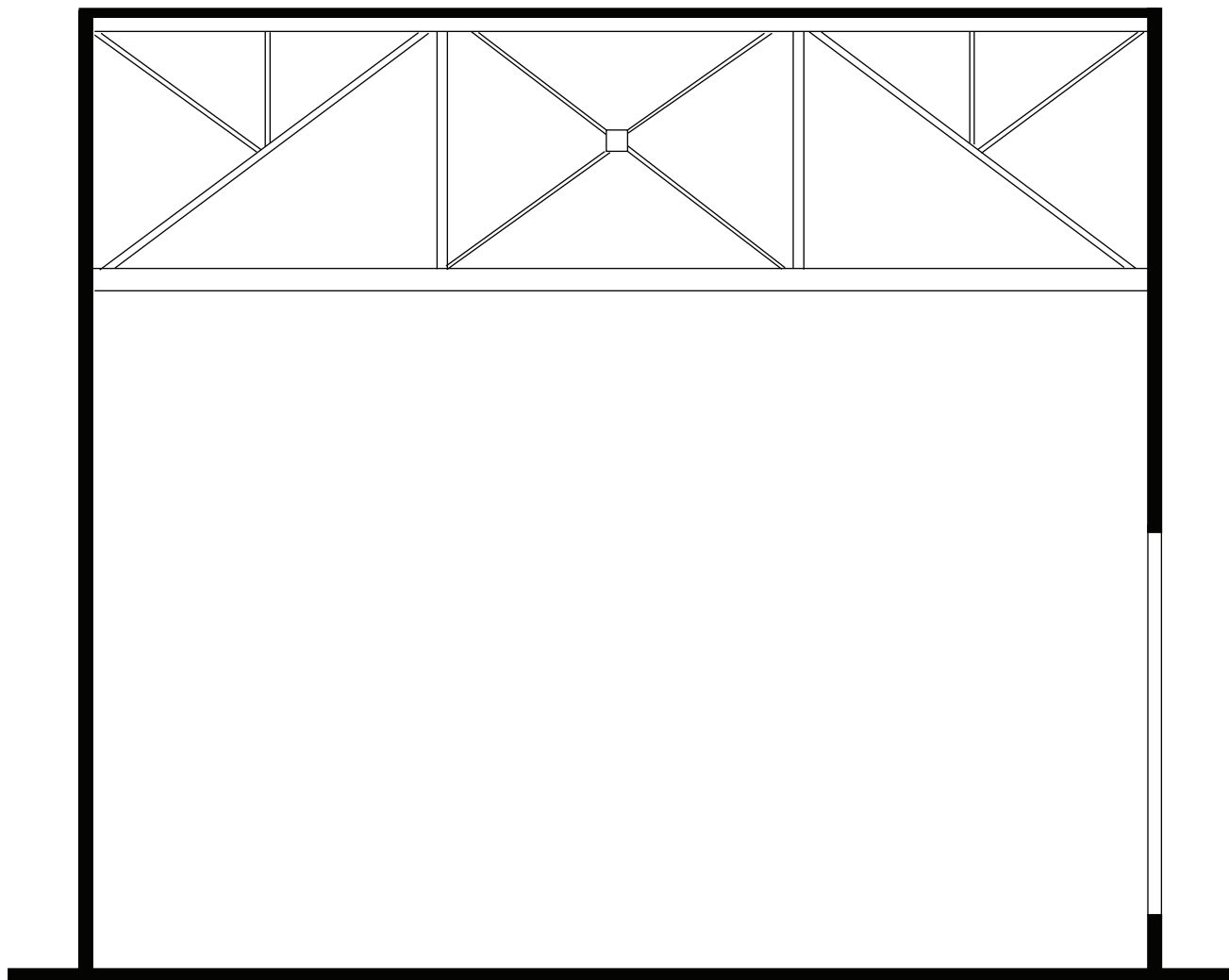
Not touching the facade

d - box in box

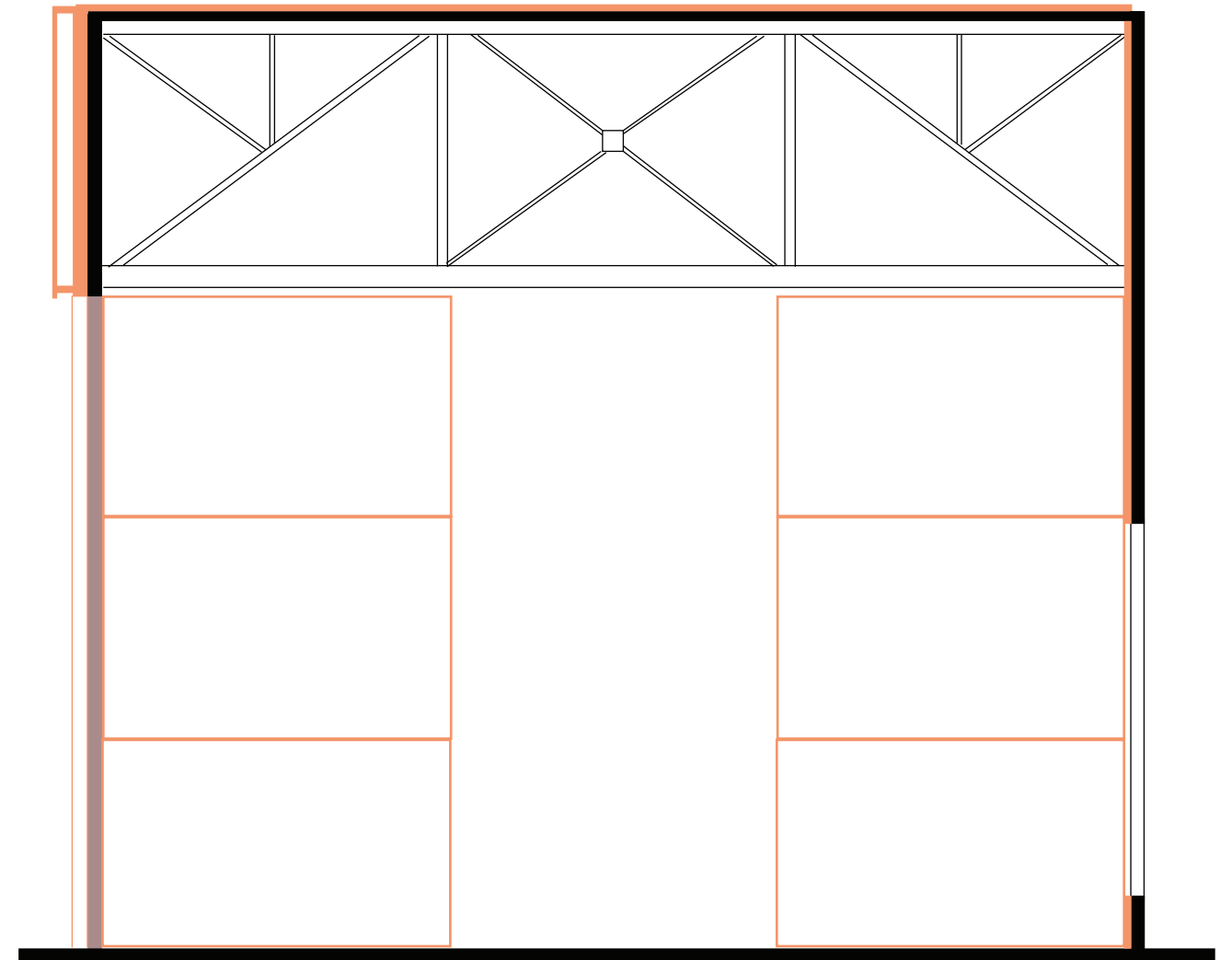
3.

Removing the facade

- e - new facade around construction
- f - new facade underneath construction

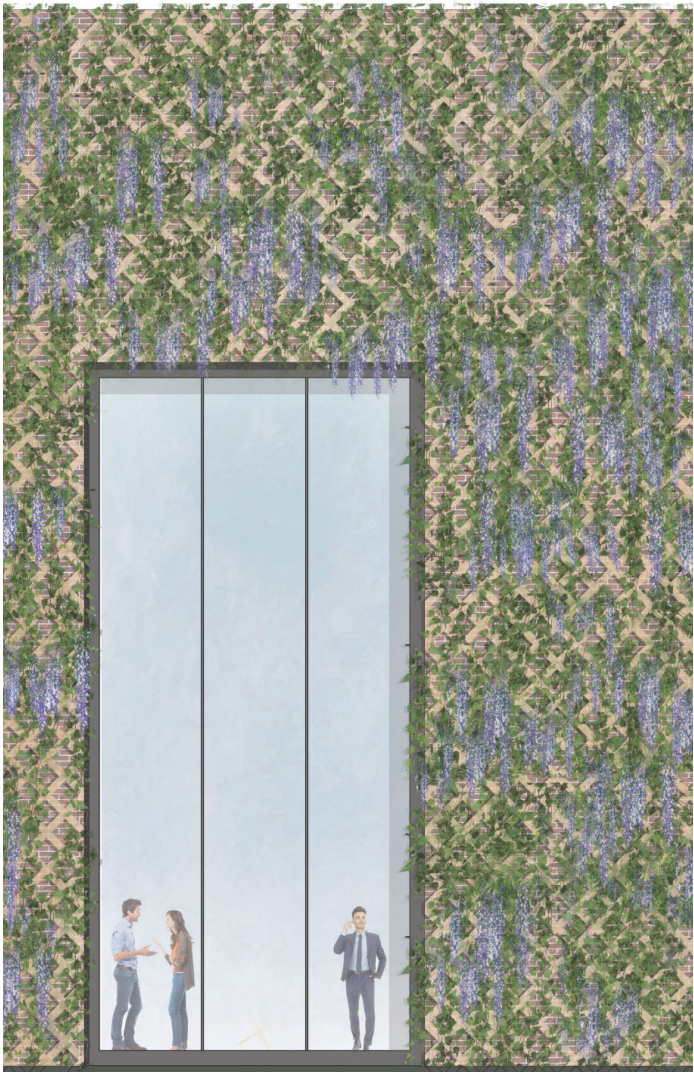


Existing situation

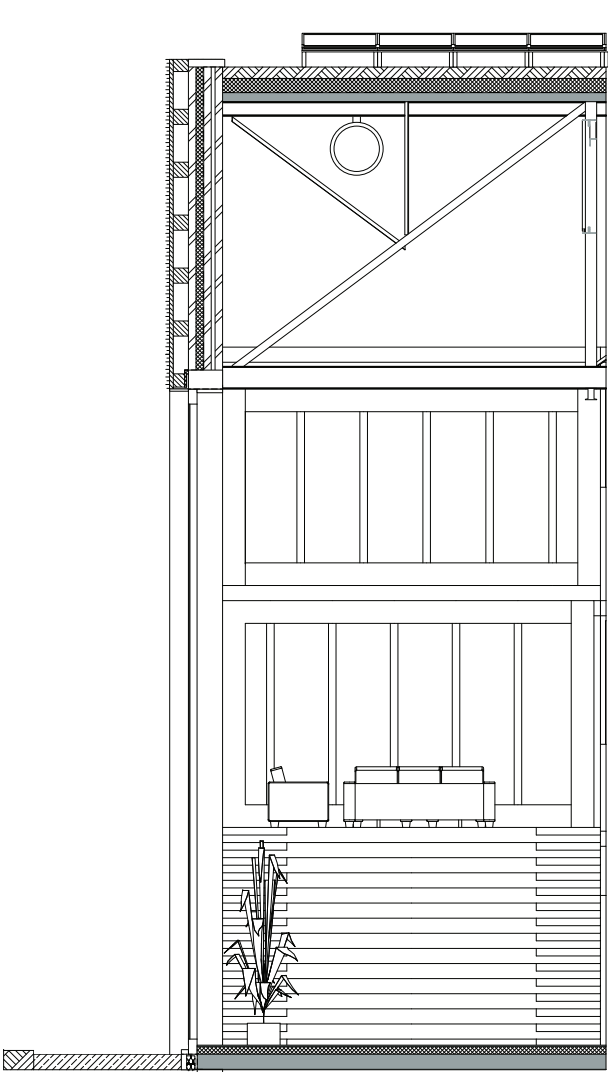


Adaptations

WEST FACADE AT PATIO



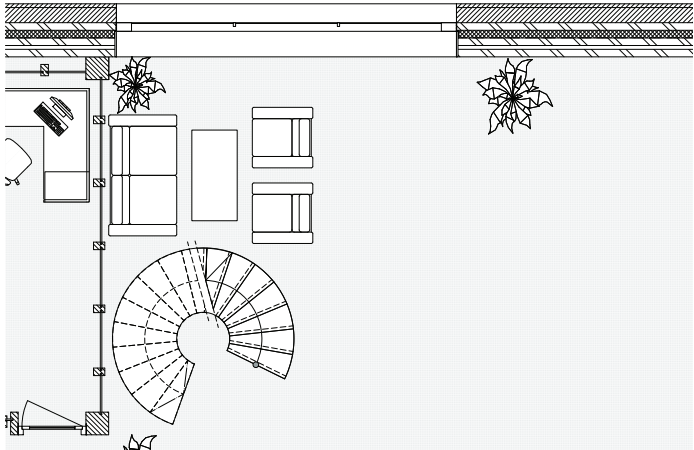
West facade - summer situation



Vertical cross-cut west facade

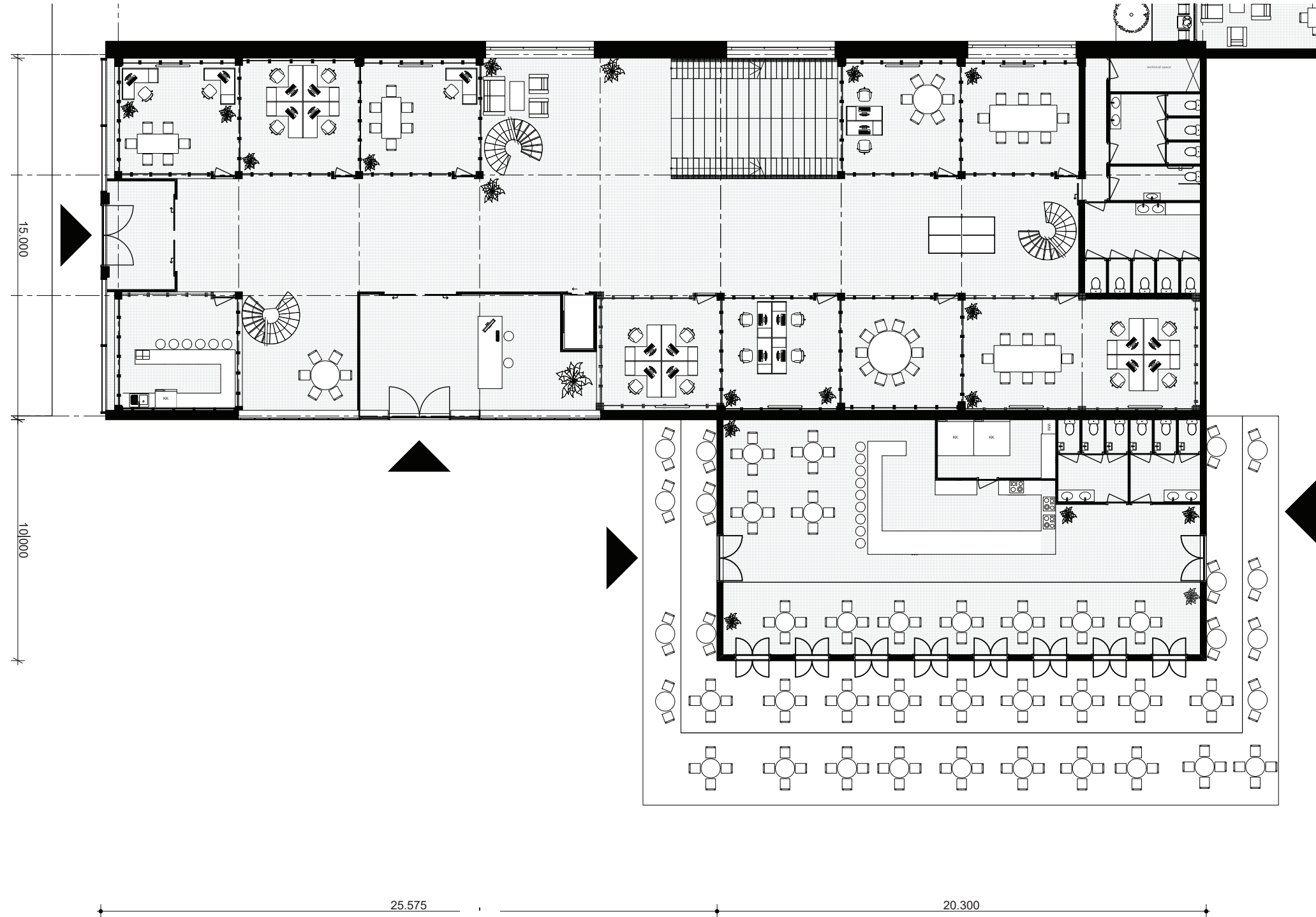


West facade - winter situation

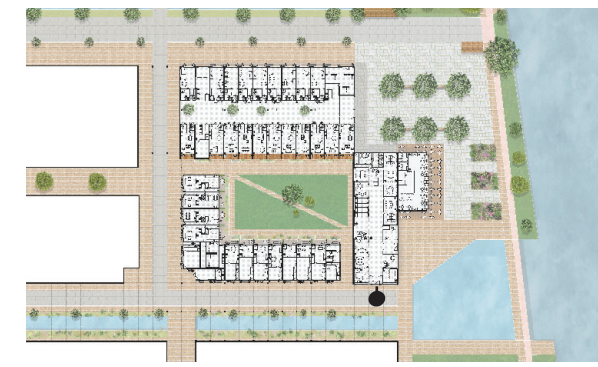


Horizontal cross-cut of ground floor

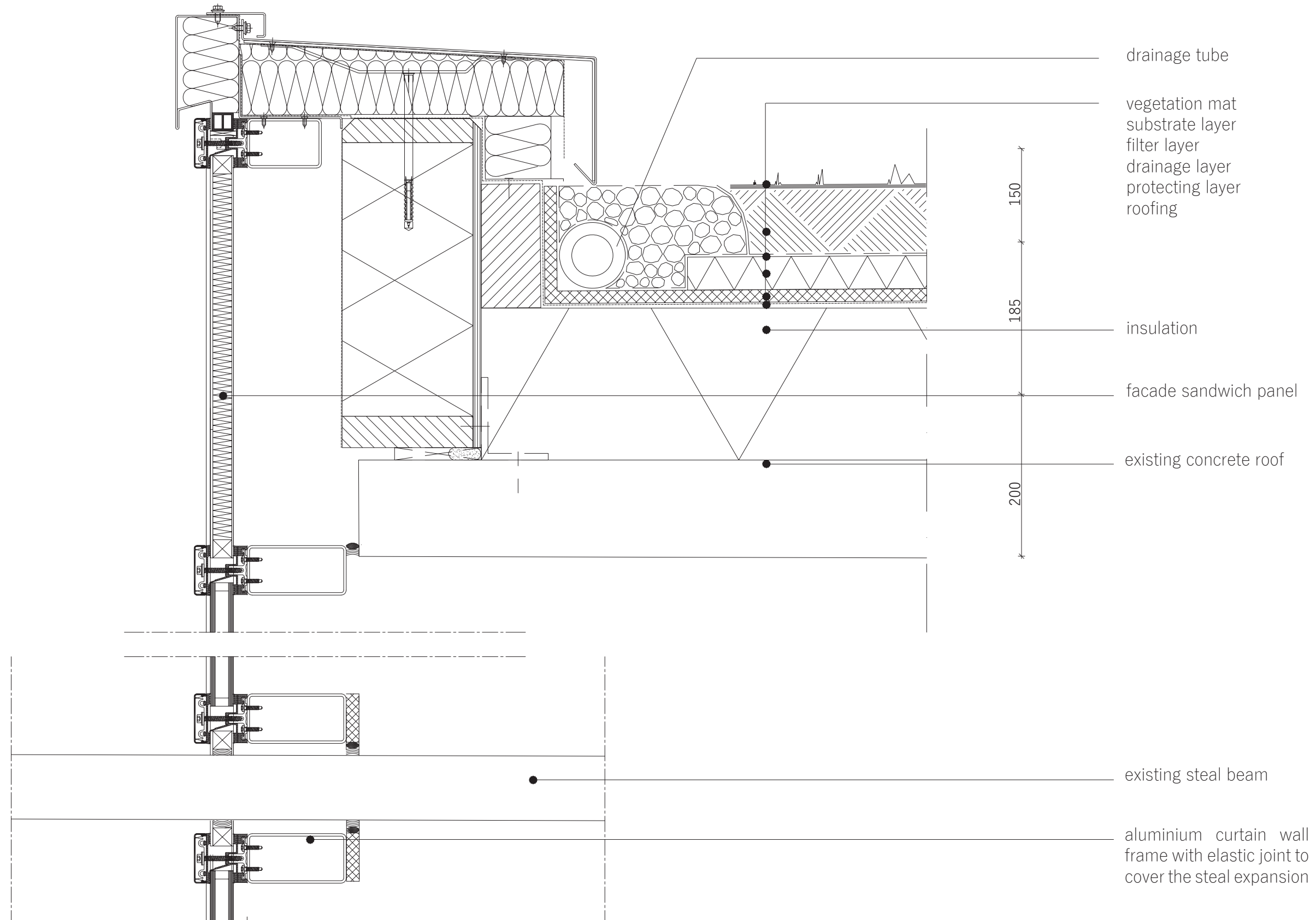
GROUND FLOOR VOLUME 03



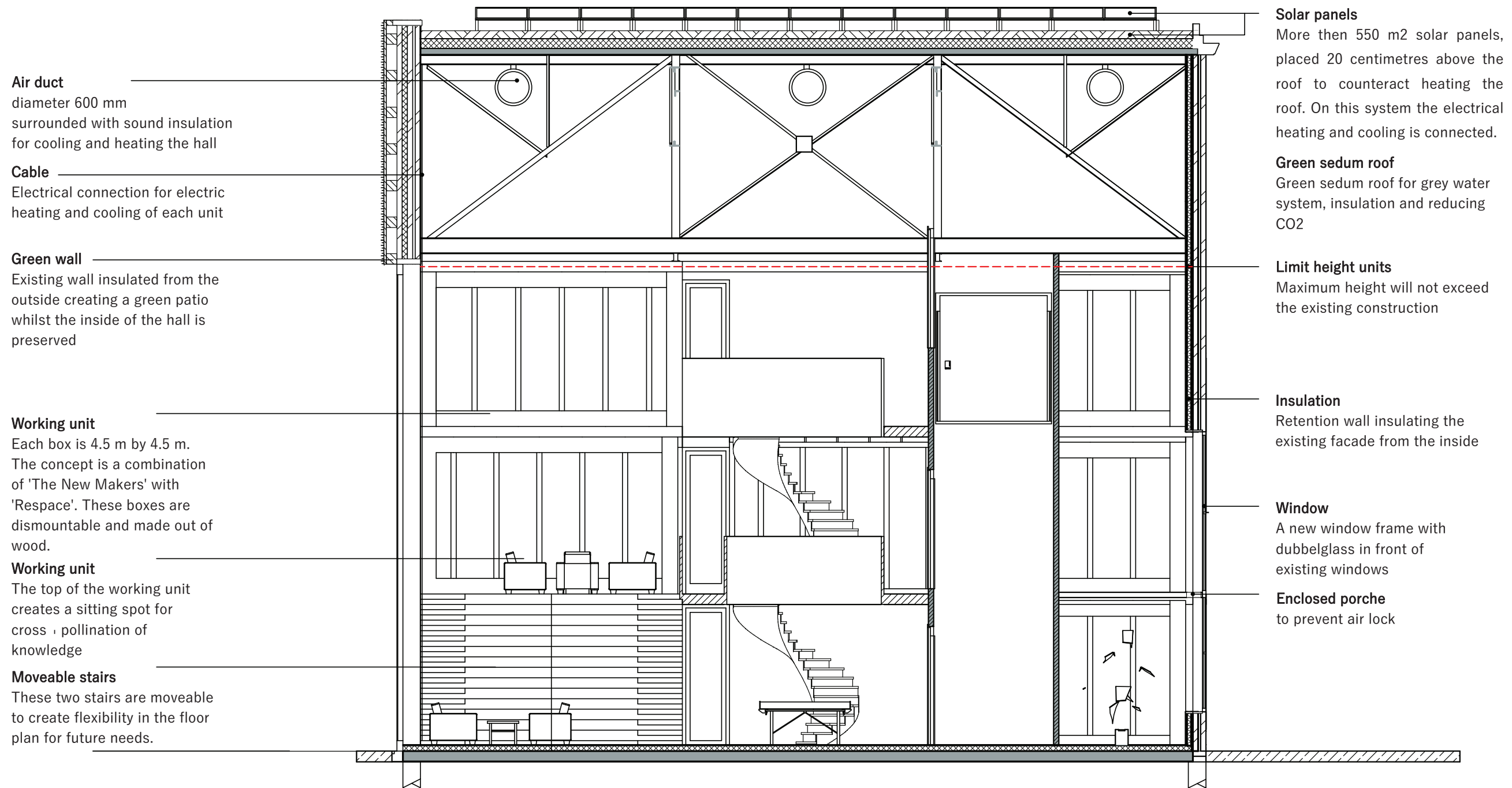
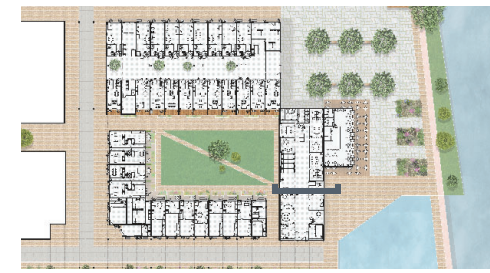
SIGHT LINE SOUTH FACADE



DETAIL CURTAIN WALL



SECTION EAST WEST



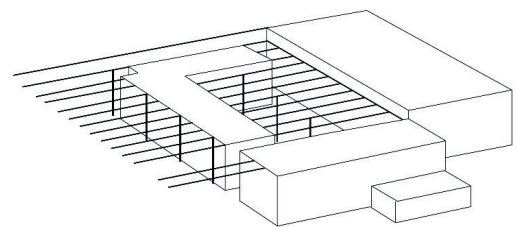
START-UPS



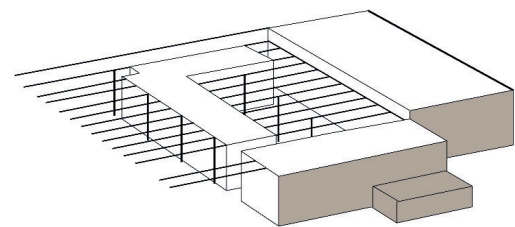
FRONT, EAST FACADE



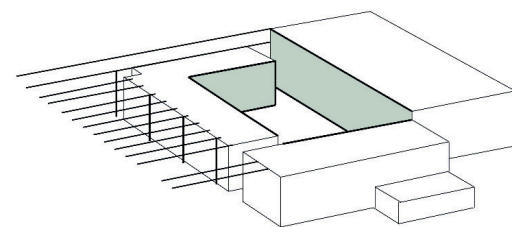
CONCEPT



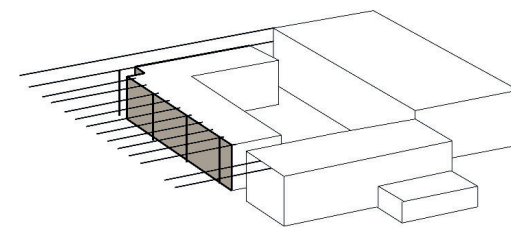
Starting situation in new urban plan
form follows existing.



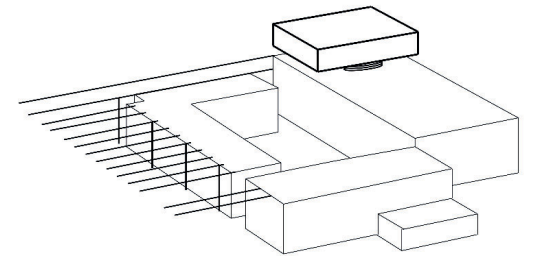
Preservation of the skin
Adaptations to the façades will maintain the same rhythm.



Preservation of the construction
The construction is preserved in the public factory streets and factory halls. A new patio is created whilst the existing construction is removed.



Fusion
The new façades speak the same language of the existing façades. The new volumes blend in the existing architecture.



Metaphor & reference
The newly added topping is a metaphor to the large number of cable spools present. The upper part refers to the valued construction. The lower part refers to the cables of the cable spools.

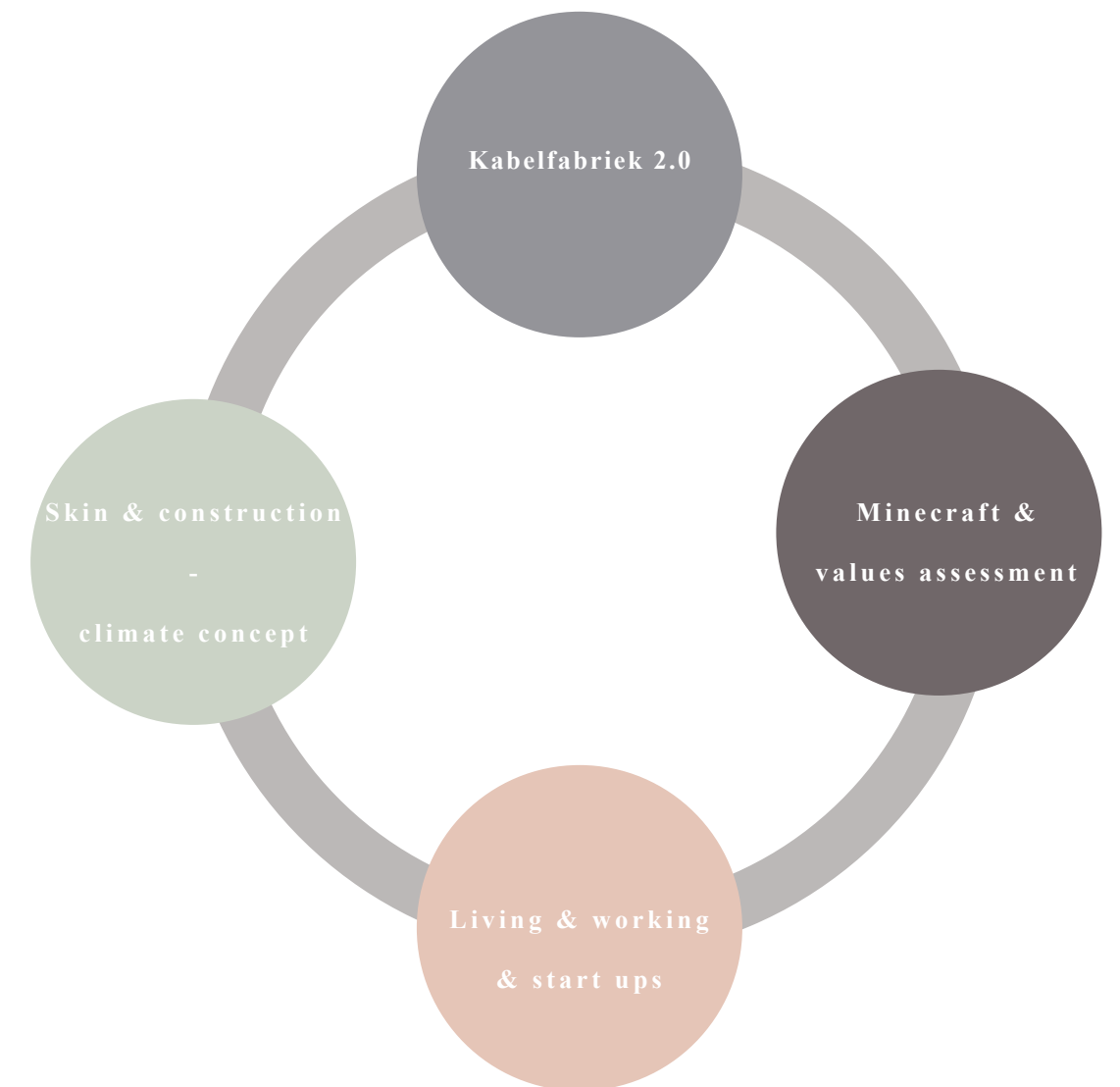
RESEARCH & REFLECTION

Main research question

How can a co-creation approach be applied for redesigning 20th century Industrial Heritage for adaptive reuse together with stakeholders?

Sub questions

1. How can heritage games support the value assessment of stakeholders for the redesign of the Kabelfabriek II in Delft?
2. What design relation with the TU Delft Campus and the city of Delft could be supported by the Kabelfabriek II?
3. How to redesign Kabelfabriek II Delft on sustainable attributes while preserving cultural values?





KABELFABRIEK 2.0

Working and living cabled in the factory

VOLUME 01

