# P5 A new future for Maritime Heritage


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MSc3 Revitalising Heritage
16/01/2025

Collage - site visit
*personal work*

# P5 A new future for Maritime Heritage


Introduction
- problem statement
- research questions

Research

Design
- introduction
- analysis
- current situation
- new design

Reflection



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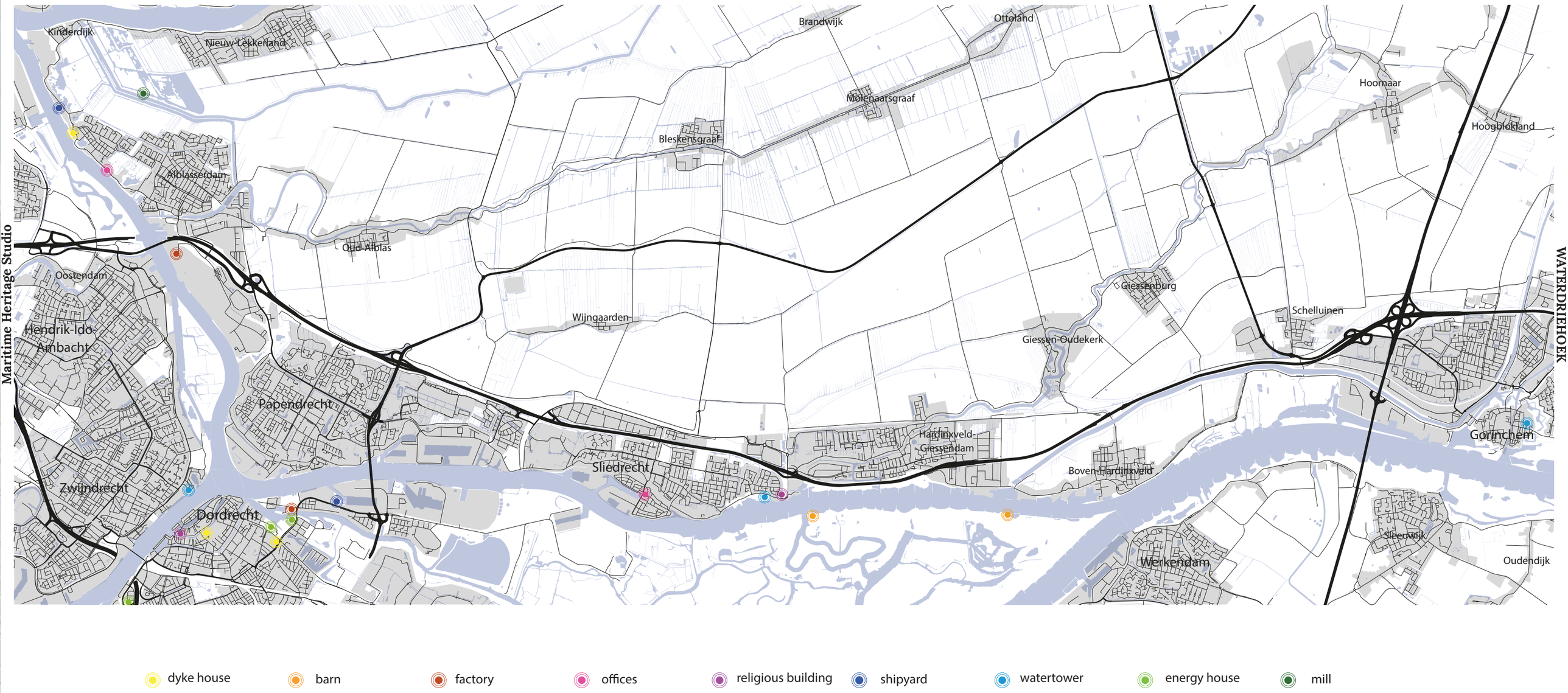
Collage - site visit
*personal work*

# Spatial building typology

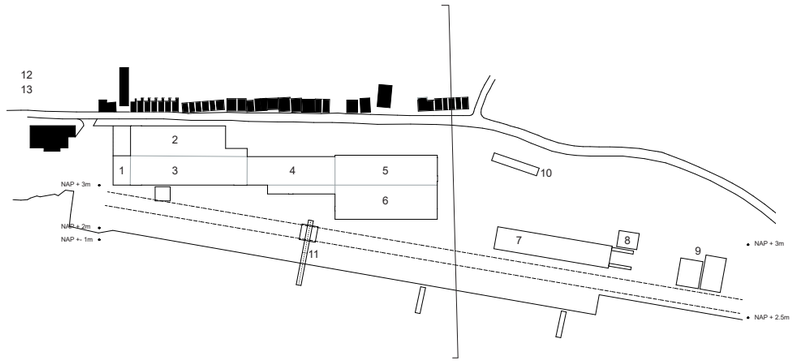
**AR3AH115 Graduation Studio Revitalising Heritage**

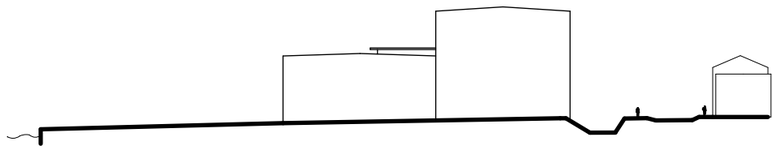
Maritime heritage studio, spring 2023-2024



# Spatial building typology

## Urban Conetext



## Section A

0 10 M

1. Factory office
2. Prefabricationshop I
3.Prefabricationshop II
4. Pre-assemblinghall
5. Assemblinghall I
6. Assemblinghall II
7. Shotblasting shop & Paintingshop
8. Store house
9. Romneyhalls
10. Canteen
11. Crane
12. Villa Kloos
13. Workshop Kloos

The Mercon-Kloos industrial area is defined by all these structures creating an interlinked cluster. The main building is positioned alongside the river De Noord and on opposite side follows the road along the dyke houses. The site entails a minimal slope towards the water and ends in a harsh quay.

[The Town Your Case Locates in]

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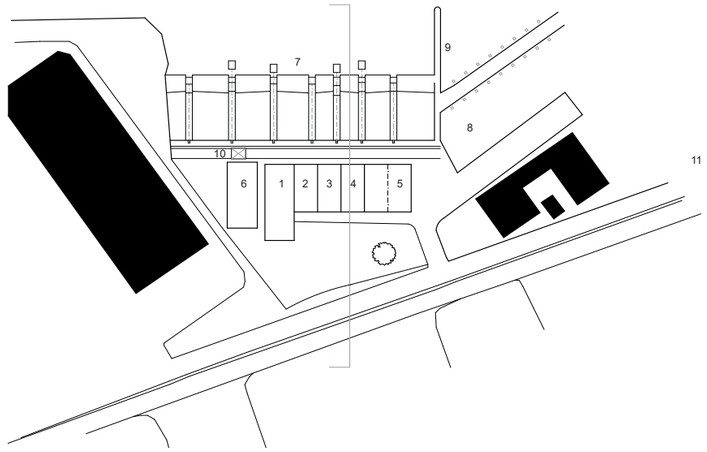
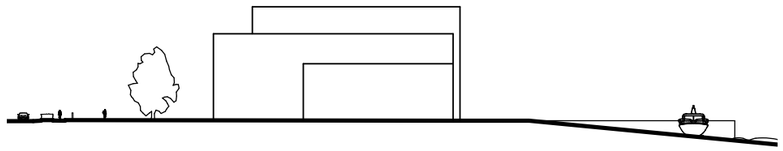
## Urban Conetext



## Section A

0 10 M

1. Assemblinghall I
2. Workshop I
3. Workshop II
4. Workshop III
5. Office
6. Assemblinghall II
7. Slope
8. Dock
9. Pier
10. Crane track
11. Office building Hoebee-Kooiman

The Hoebee Shipwarf is positioned along the first Merwedehaven. The building complex is orientated towards the water and looks over a big slope for repairments of ships. The site also allows ships to dock along the pier. Together with the building structure these elements work intricately together as one.

[The Town Your Case Locates in]

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# Problem statement

- Decrease in maritime industry in the Waterdriehoek since the 70's. (Kramer, 2008)

- Defining attributes are disapearing. (Arcadis, 2019)

- Lack of 'listed' protection. (Lier. M, 2023)

Research:

How do structural and operational attributes contribute to the functionality of shipyards in the Waterdriehoek, and what is their value as potential maritime heritage?

- How have historical events or technological advancements driven changes in the structural design, layout and operational capabilities of the shipyards?

- How can these structural and operational attributes be valued as Maritime Heritage?

How to value?

multiple charters:
‘Unesco’ - to preserve the outstanding value.
cultural identity and social memory relates to the socio-cultural interaction.
This influences our Architecture - ‘Rasoulli and others, 2019’

Questions like ‘why’ and what’ - ‘Havinga’ 2020

**ECOLOGICAL**
SPIRITUAL
ESSENTIAL
EXISTENTIAL
[COE,1975]

**SOCIAL**
SPIRITUAL
EMOTIONAL (IND.)
EMOTIONAL (COL.)
ALLEGORICAL
[SPAB,1877]

**ECONOMIC**
USE
NON-USE
ENTERTAINMENT
ALLEGORICAL
[COE,1966]

**AGE**
SPIRITUAL
ESSENTIAL
EXISTENTIAL
[SPAB,1877]

**VALUES**
OTHER
[1877-2005]

**POLITICAL**
EDUCATIONAL
MANAGEMENT
ENTERTAINMENT
SYMBOLIC
[ICOMOS,1967]

**SCIENTIFIC**
WORKMANSHIP
TECHNOLOGICAL
CONCEPTUAL
[RIBA,1904]

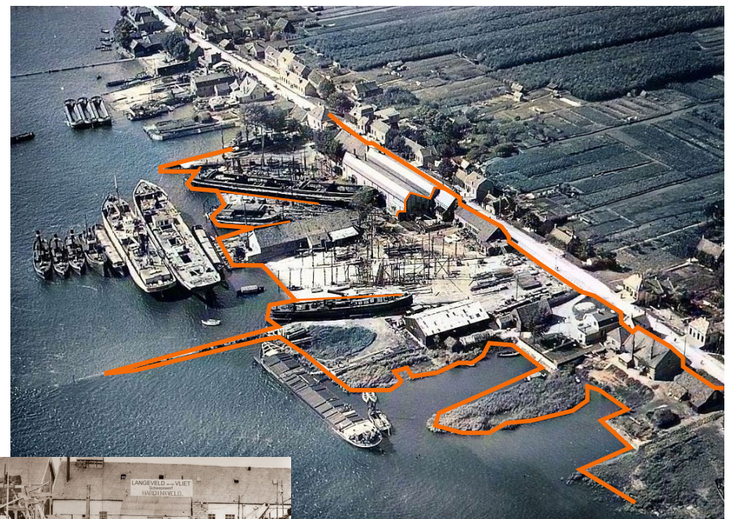
**AESTHETICAL**
ARTISTIC
NOTABLE
CONCEPTUAL
EVIDENTIAL
[SPAB,1877]

**HISTORIC**
EDUCATIONAL
HISTORIC-ARTISTIC
HISTORIC-CONCEPTUAL
SYMBOLIC
ARCHAEOLOGICAL
[SPAB,1877]

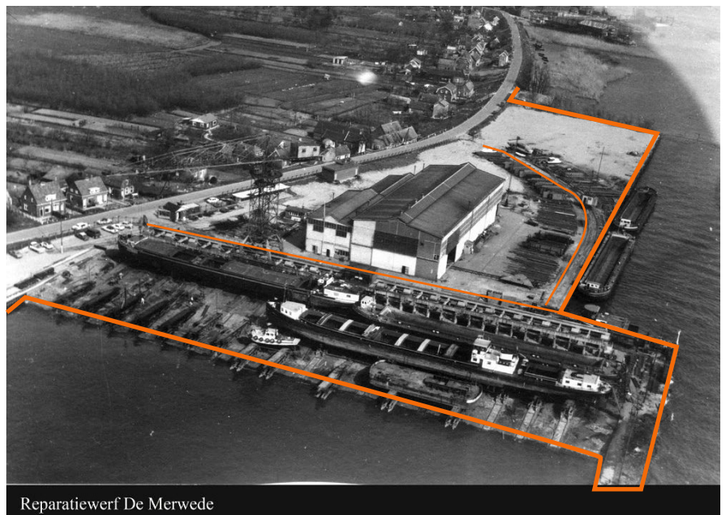
The Value Framework
(Pareira Roders, 2007)

# Results

Schipyard the Merwede -
One of the fisrt shipyards in the village



New slope




Repair warf

Neptune Marine - Neptune repair warf
New workhall


since 1870

Industrial revolution
resulted in:

- mechanization and rise of factories
- increase in water-transport, river becomes a busy axe
-villages were a place of residence

1903

Hardinxveld and Giessendam:
From fishermen and 'hoepmakers' to skippers and shipyards

1923

1957

Traditional ceremonies "tewaterlating" (launching) were celebrated with the entire town watching the launch of a new ship.

2010

Now IHC Merwede, is taken over by Neptune Marine.
Still active shipyard company with succesfull results, like the Award winning Canopée ship

2017

2023

# Results

Schipyard the Merwede -
One of the fisrt shipyards in the village



New slope




Repair warf

Neptune Marine - Neptune repair warf
New workhall






1923

**The origin of Shipyard 'Merwede'**

**The prosperity of Maritime industry in the Waterdriehoek**

2010

2023

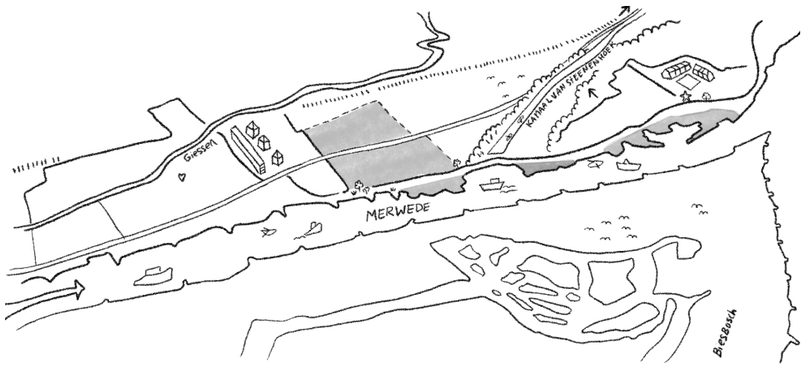
**New ownership**

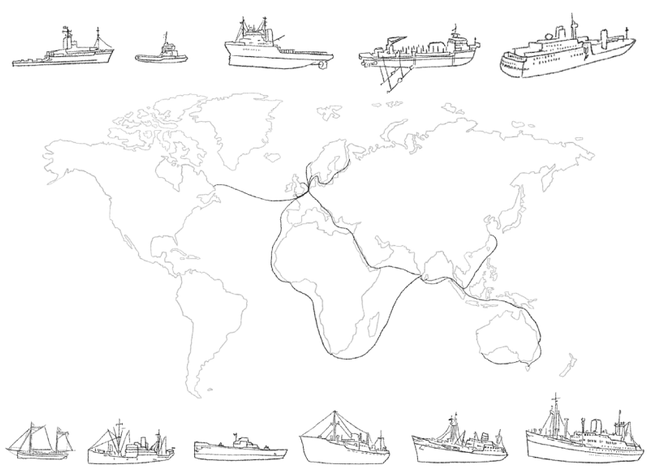
Ex. 1

Ex. 2

Ex. 3

# Ex. 1
# The origin of the Shipyard ‘Merwede’

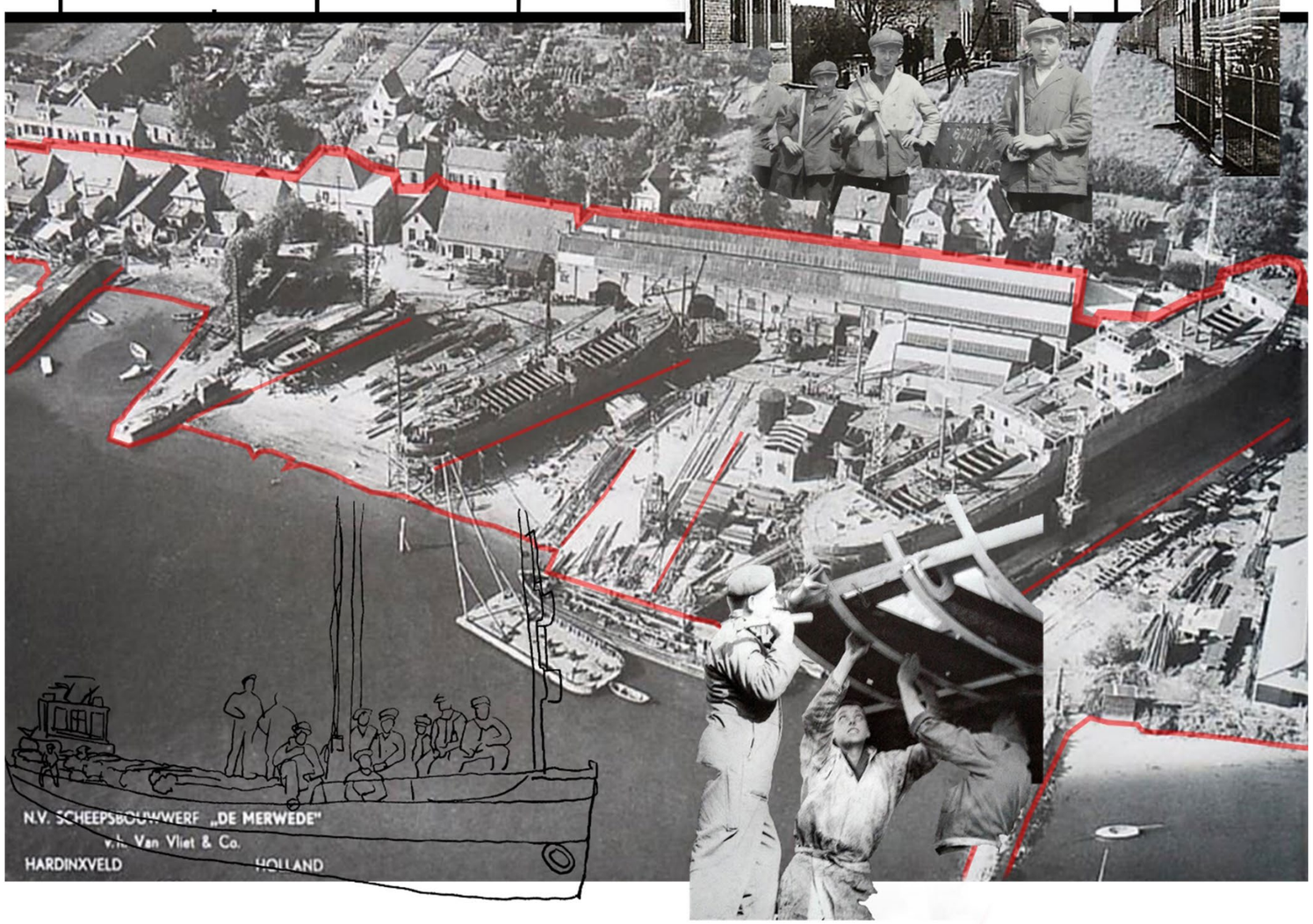



1870>
Start of the industrial revolution

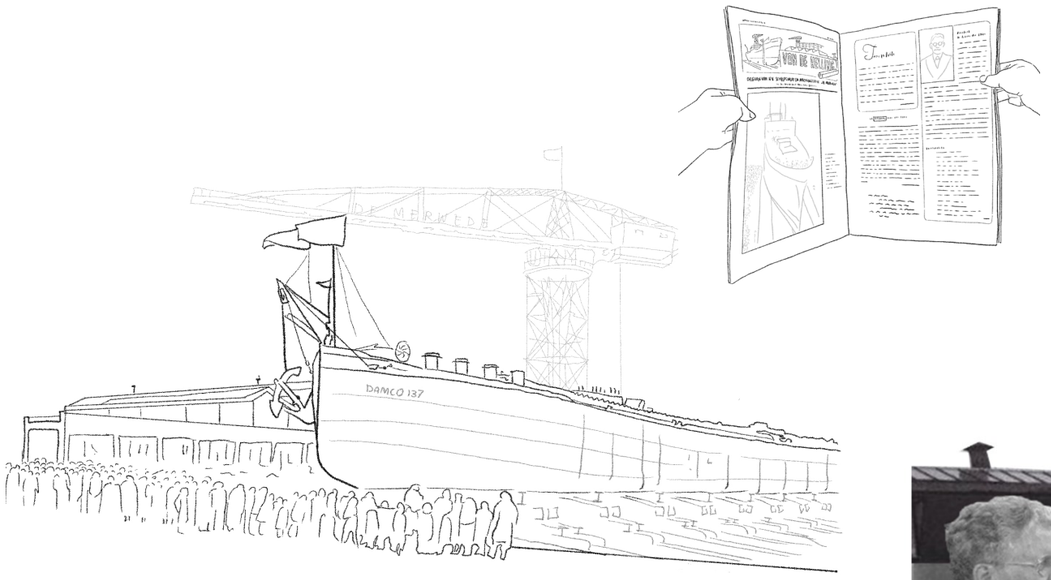
1890>
transition into the Bagger industry

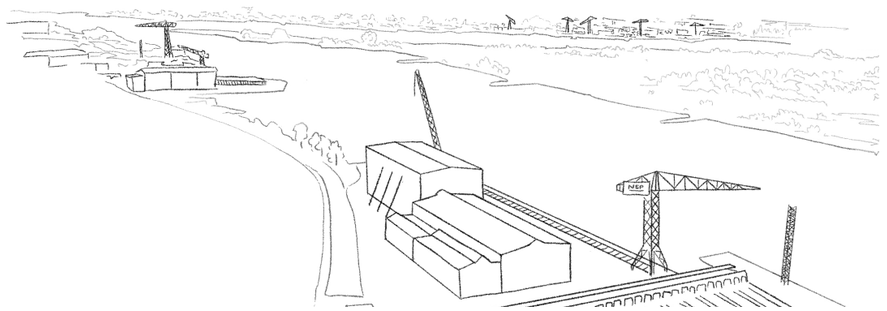
1902
‘De Merwede’

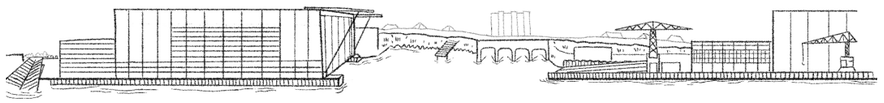
1930
Financial



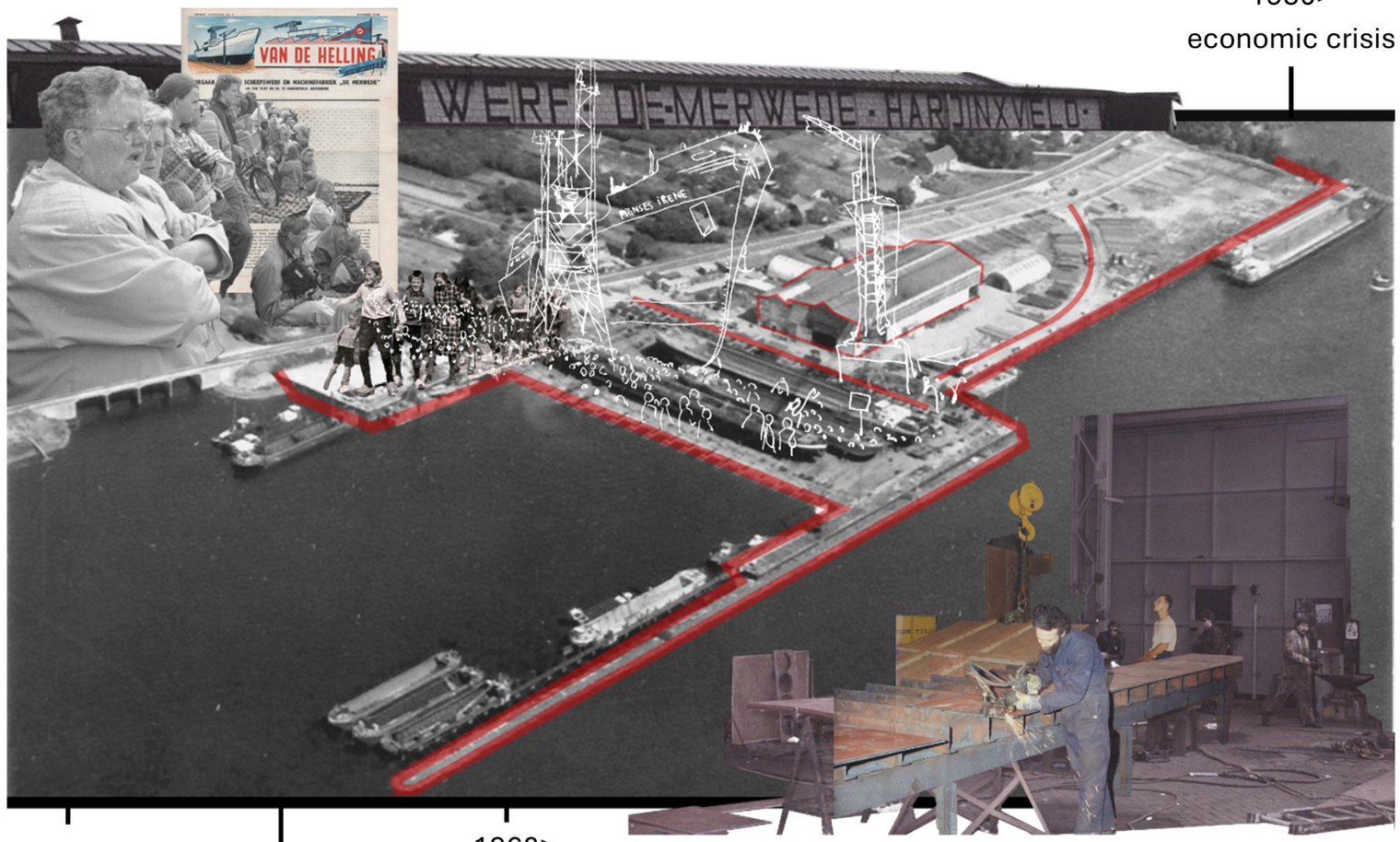
# Ex. 2
# The Prosperity of Maritime industry





1980>
economic crisis




1955>
scale intensity
and expansion

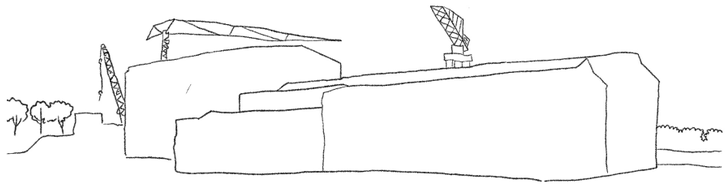
1957
New slope
New repair wharf

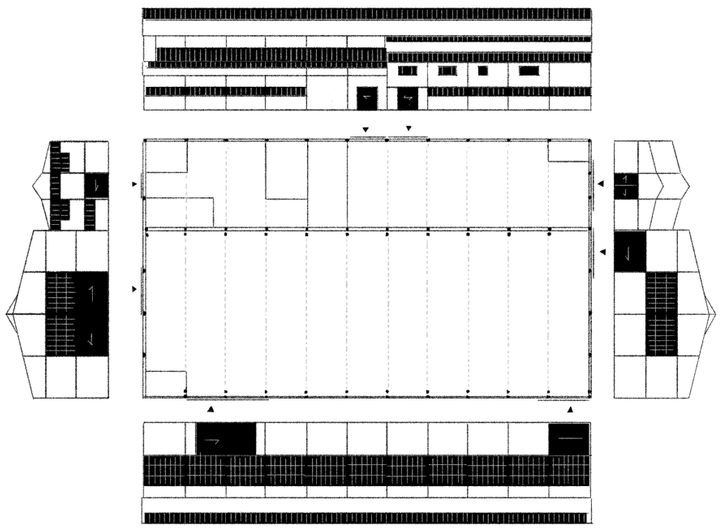
1960>
international orders for
Koninklijke Paketvaart

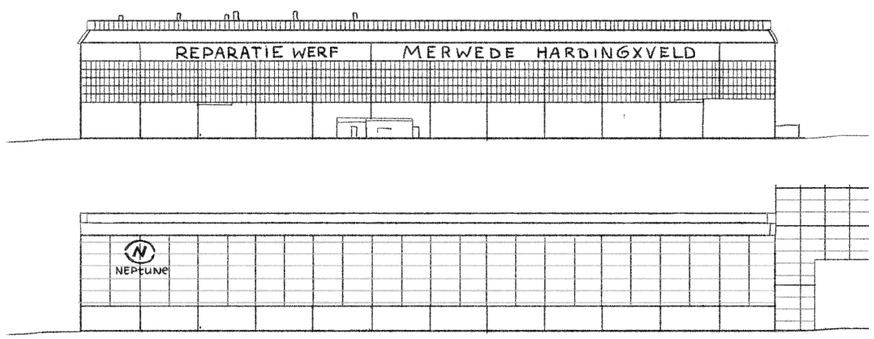
—

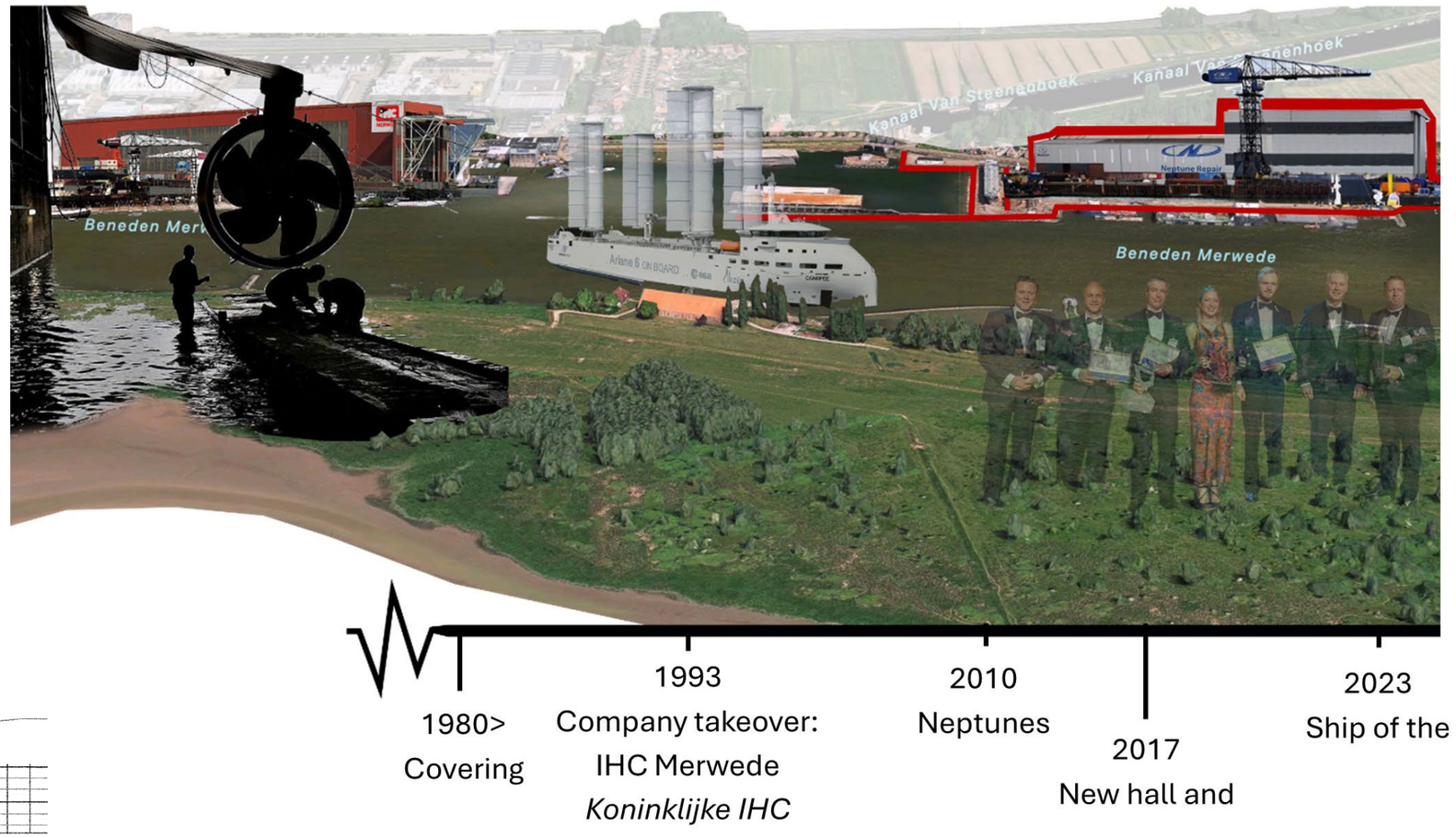
Succession celebrated with
the whole town,

# Ex. 3
# New ownership







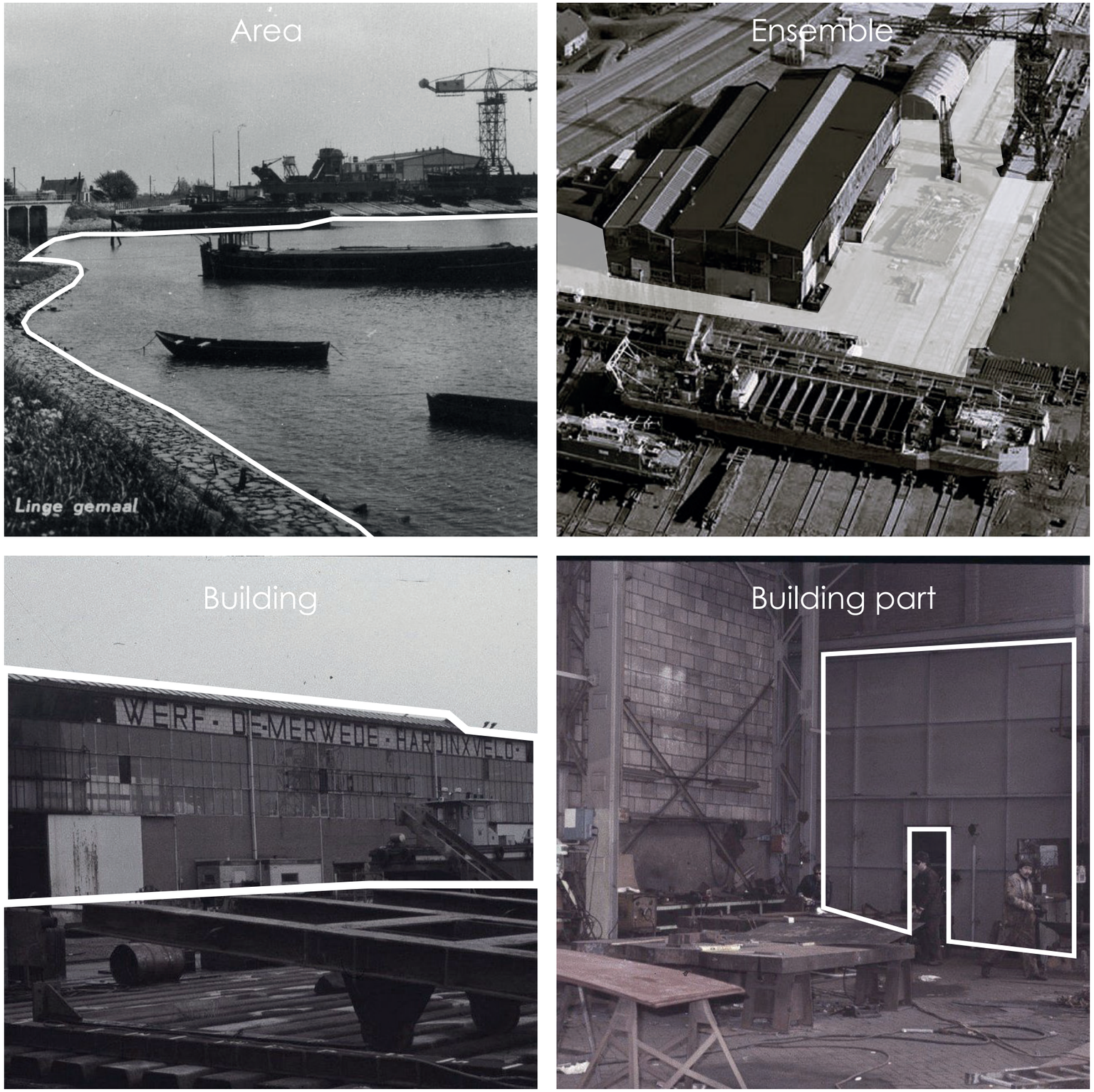

1980>
Covering

1993
Company takeover:
IHC Merwede
*Koninklijke IHC*

2010
Neptunes

2017
New hall and

2023
Ship of the




Scales - attributes
(Havinga et al., 2020)

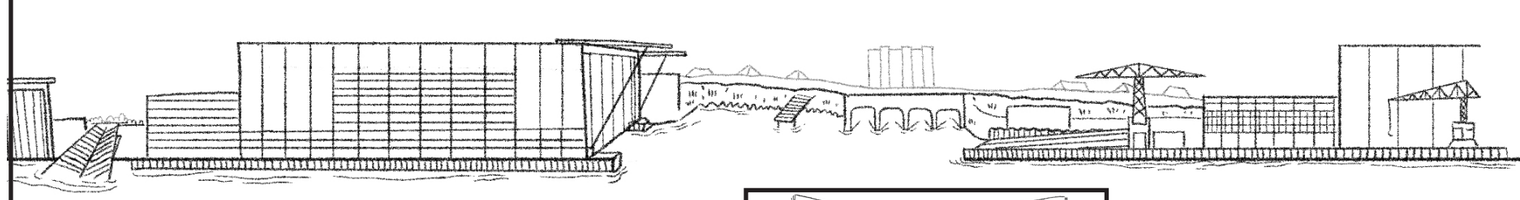
Value assessments – Area

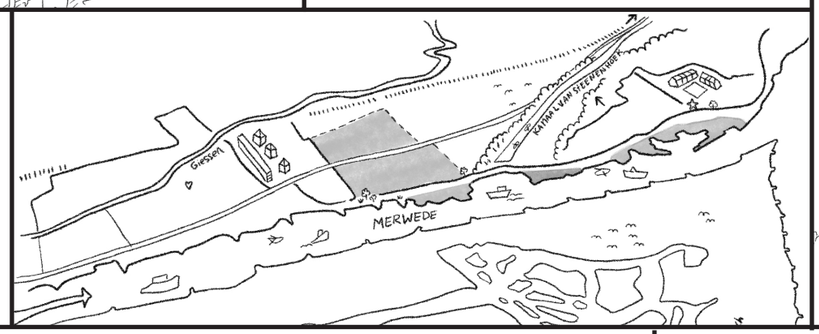
| | | | |
|---|---|---|---|
| shipyard de Merwede | Tangible | industrial maritime company | historical value |
| | | heritage and identity | Social, historical value |
| | Intangible | Workforce | Economic value |
| | | Community impact | Social, historical value |
| River Merwede | Tangible | transportational access | Economical, ecological value |
| | | man-made landscape | Economical, scientific historical value |
| | Intangible | heritage and identity | Social, historical value |
| | | connection | Economical, ecological |
| Spatial organization | Tangible | Industrial area | Economical value |
| | | Accessibility | Social, historical value |
| Greenery | Tangible | Diversity | Aesthetical, economical, ecological value |
| Ensemble | Intangible | Biodiversity | Ecological value |
| | | Tranquillity | Social value |
| Rails along the river | Tangible | Accessibility | Economic, scientific, social, aesthetic value |
| | | Material | Economic, aesthetical value |
| | | Connection | Economic, social, aesthetical, historical value |
| | Intangible | Operational efficiency | Economic, scientific value |
| | | Flexibility | Economic value |
| | | Adaptability | Age, economic, scientific value |

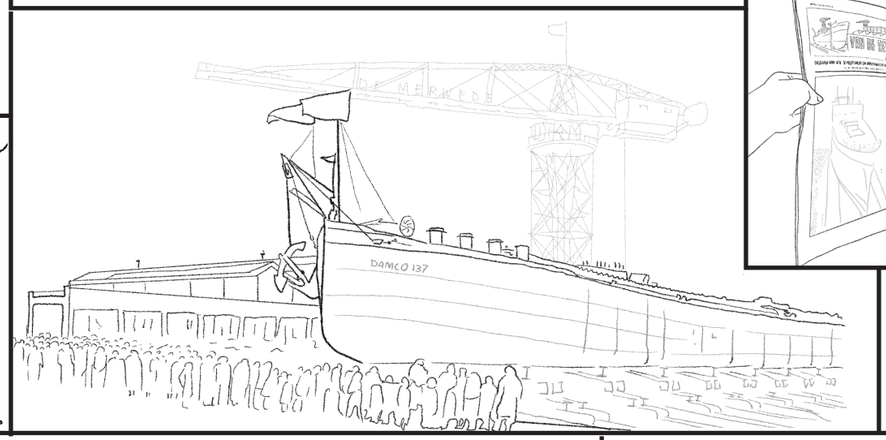
Building

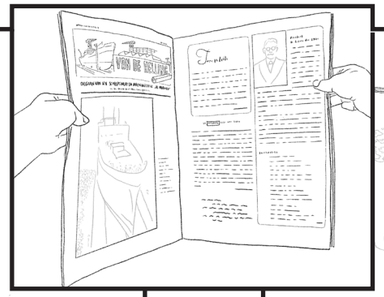
| | | | |
|---|---|---|---|
| facade | Tangible | Material | Aesthetical, historical value |
| | | Volume | Social, aesthetical value |
| | | Windows | Economic, aesthetical value |
| | | Openings | Economical, social value |
| | | Layout | Aesthetical value |
| | Intangible | Identity | Social, aesthetical, historical value |
| | | Cultural and historical | Historical value |
| Roof | Tangible | Shape | Aesthetical, historical value |
| | Intangible | Identity | Aesthetical value |
| Structure | Tangible | Material | aesthetical, historical value |
| | | Type | Scientific/age value |
| | | Functional capacity | Economic, social value |
| | | Visibility | Aesthetical value |
| | Intangible | Adaptability | Social, economical value |
| | | Identity | Aesthetical, historical value |
| Space plan | Tangible | Dimensions | Economic value |
| | | Accessibility | Economic, social value |
| | | Layout | Economic, social value |
| | Intangible | Flexibility | Social, historical value |
| Surface | Intangible | Operational efficiency | Economic value |
| | | Identity | Aesthetical, historical value |

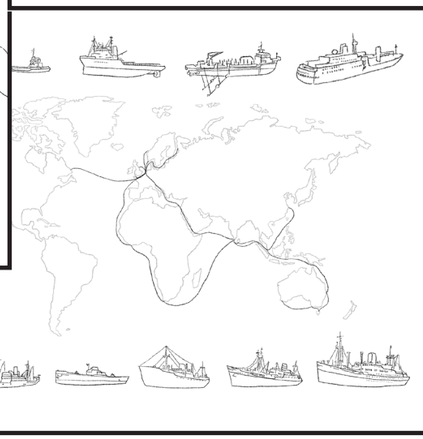

LANGEVELD en VLIET
Scheepswerf
HARDINXVELD

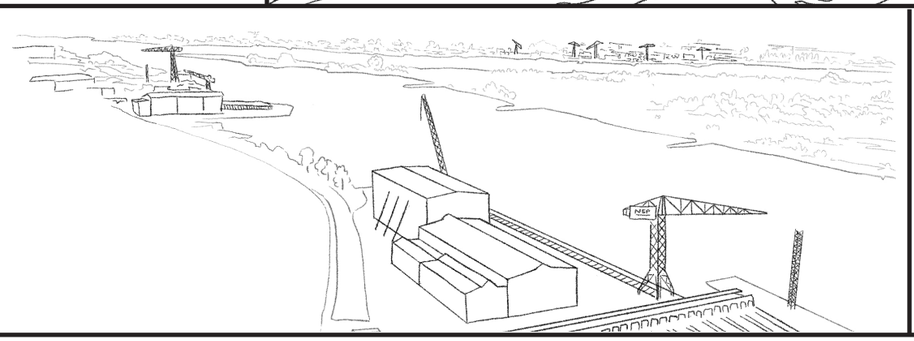


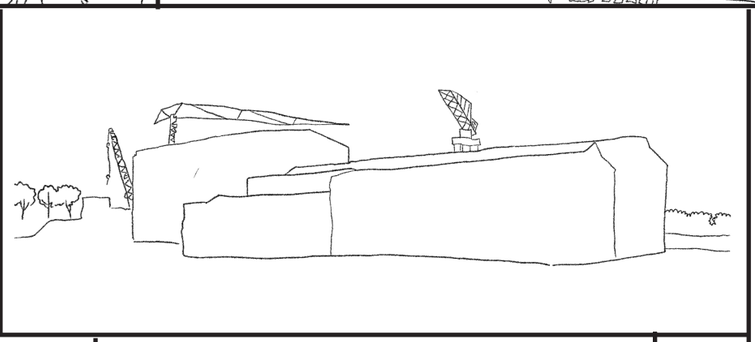

Giessen
MERWEDE
KATWIJK VAN SIZEWENDEF

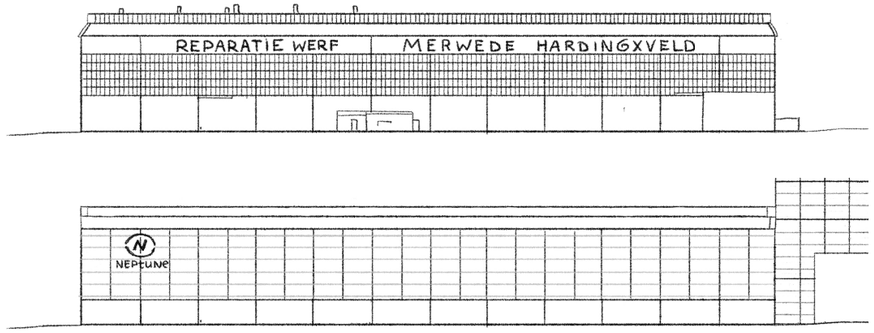

DE MERWEDE
DAMCO 137

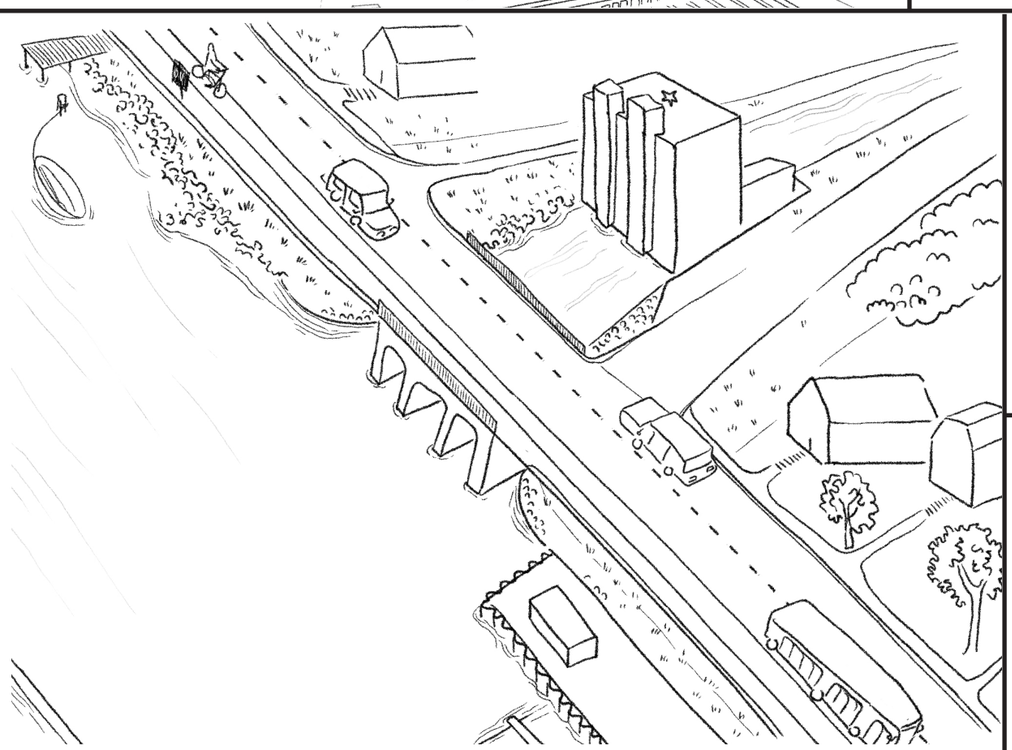


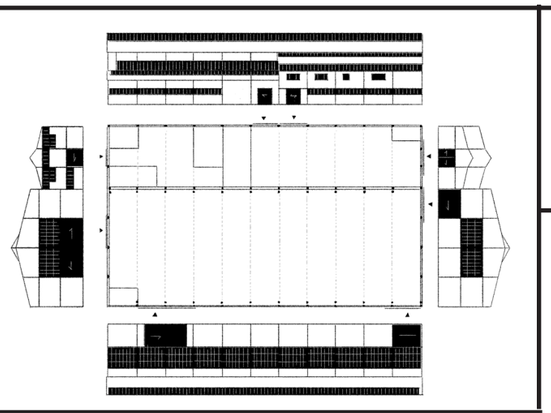


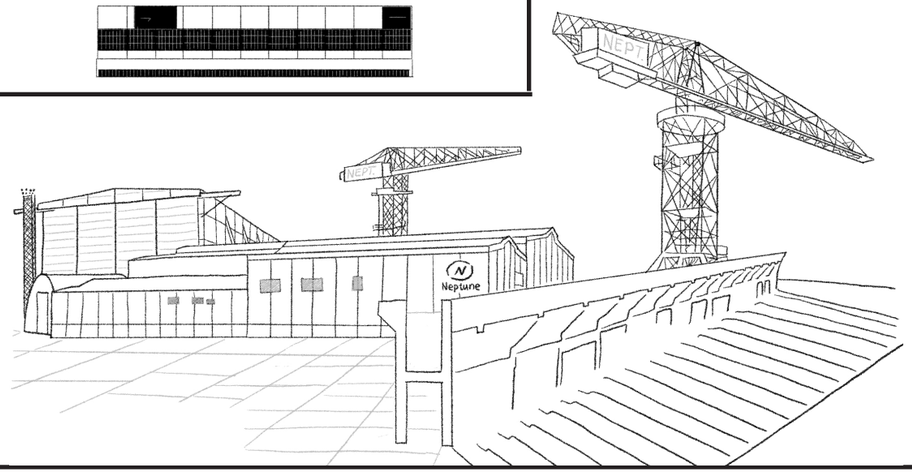

NEP

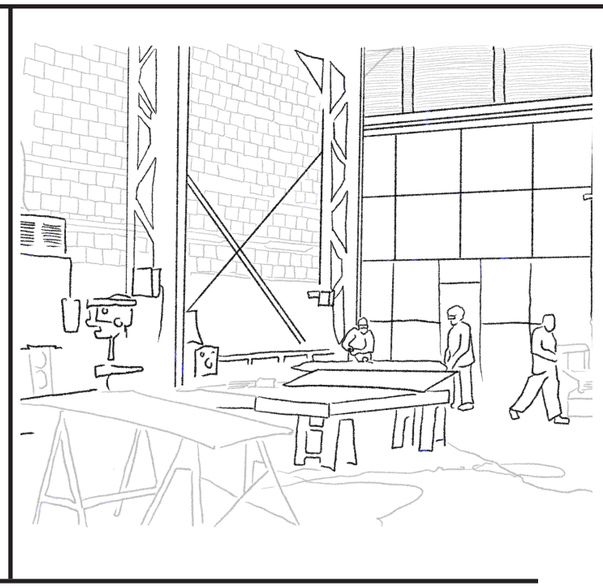



REPARATIE WERF
MERWEDE HARDINGXVELD
Neptune






NEPT
Neptune



Firt shipyard in Hardinxveld-Giessendam

# Historical value

*Maritime industrial heritage*

*From agriculture*

*towards industrial town*

**Social value**

Industry and neighbourhoods

Connection

Identity

Man-made landscape

**Economic value**

Access through river

***Economic value***

***Proud***

Industrial town

Community

Social value

**Historical value**

Shared stories

*Shipyards legacy*

Typology and craftsmanship

**Historical value**

***Archive***

*Water as connector*

*Tradition*

International waters

Production over the world

Shared with viallage

# Economic value

*Economic developments*

Part of the Waterdriehoek

***Maritime heritage connection***

Job opportunity

Dyke connection

***Aesthetical value***

3 Volumes

**Shape**

Human scale

Ensemble

Identity

Shipyard

Materiality

REPARATIE WERF MERWEDE HARDINGXVELD

**Orientation**

# aesthetical value

Dimentions

Èconomic value

Change

Identity name

***Adaptation***

Flexibility

Natural light

*River transport*

*land transport*

**Economical value**

Accessibility

*Crossroad for 'De Merwede' and 'Het kanaal van Steenenhoek'*

Man-made landscape in between the natural environment

*Biesbosch and agricultural land*

Openings

# Use value

Economic value``

open space plan

Dimentions

Accessibility

**Aesthetical value**

**Use value**

Defining attributes/structures

Ensemlbe

Crane Rails Space in between Workhalls Storage

**use value**

Defining character

Collaborating workspace

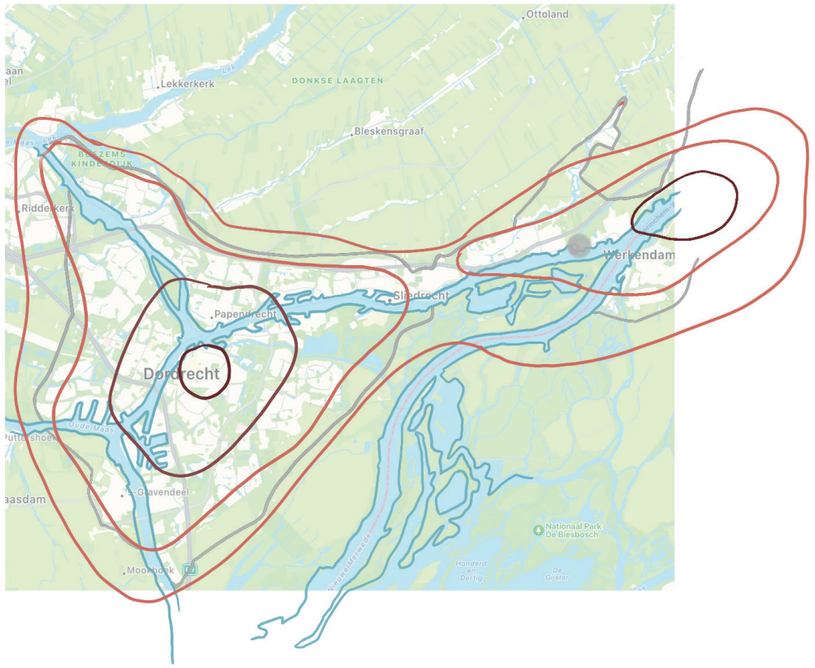
**social value**

Open workspace

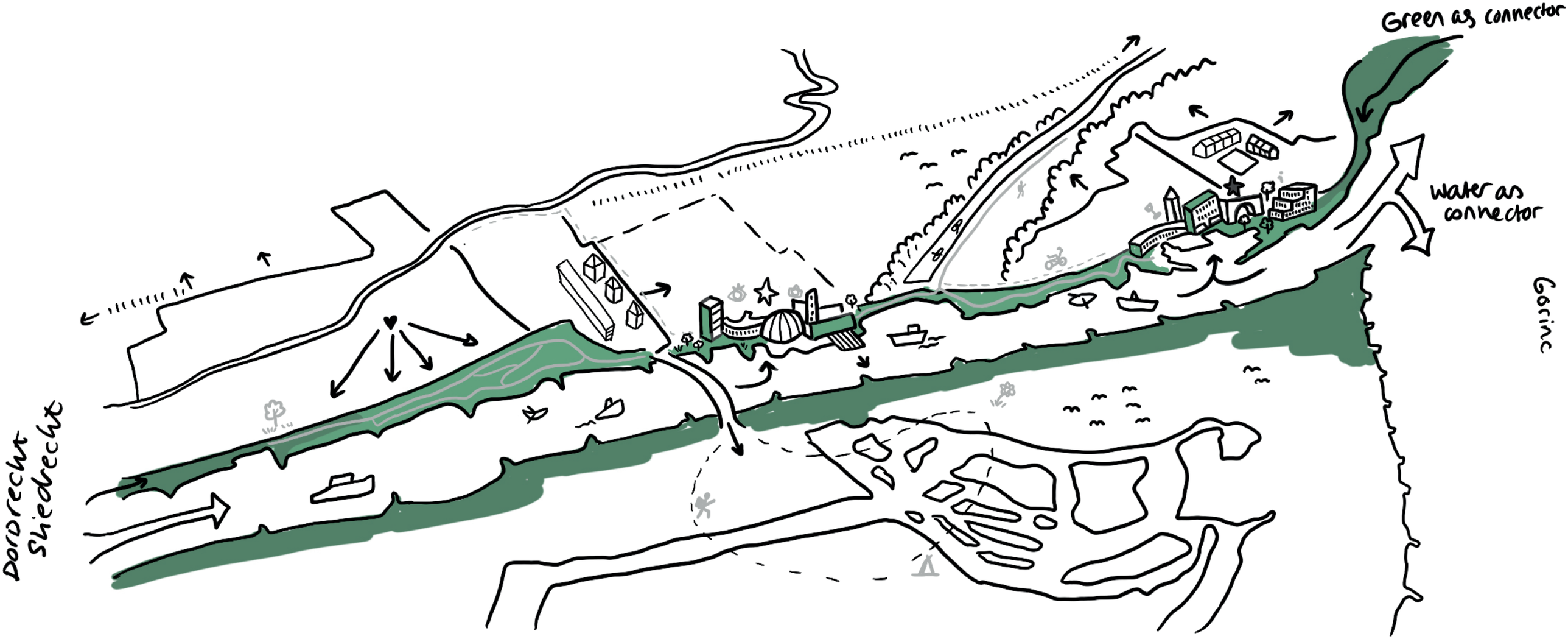
*community*

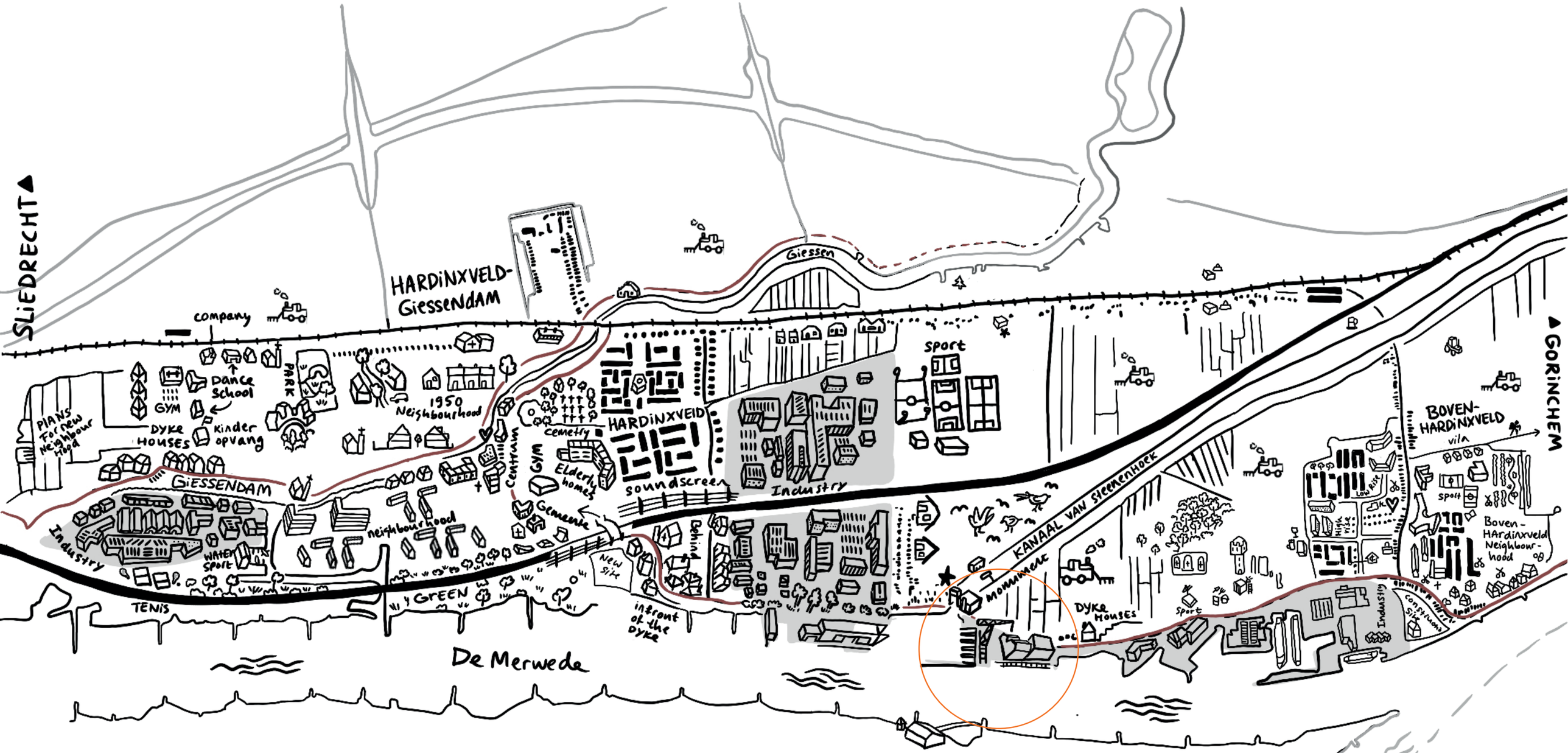
industrial interior

# Future scenario



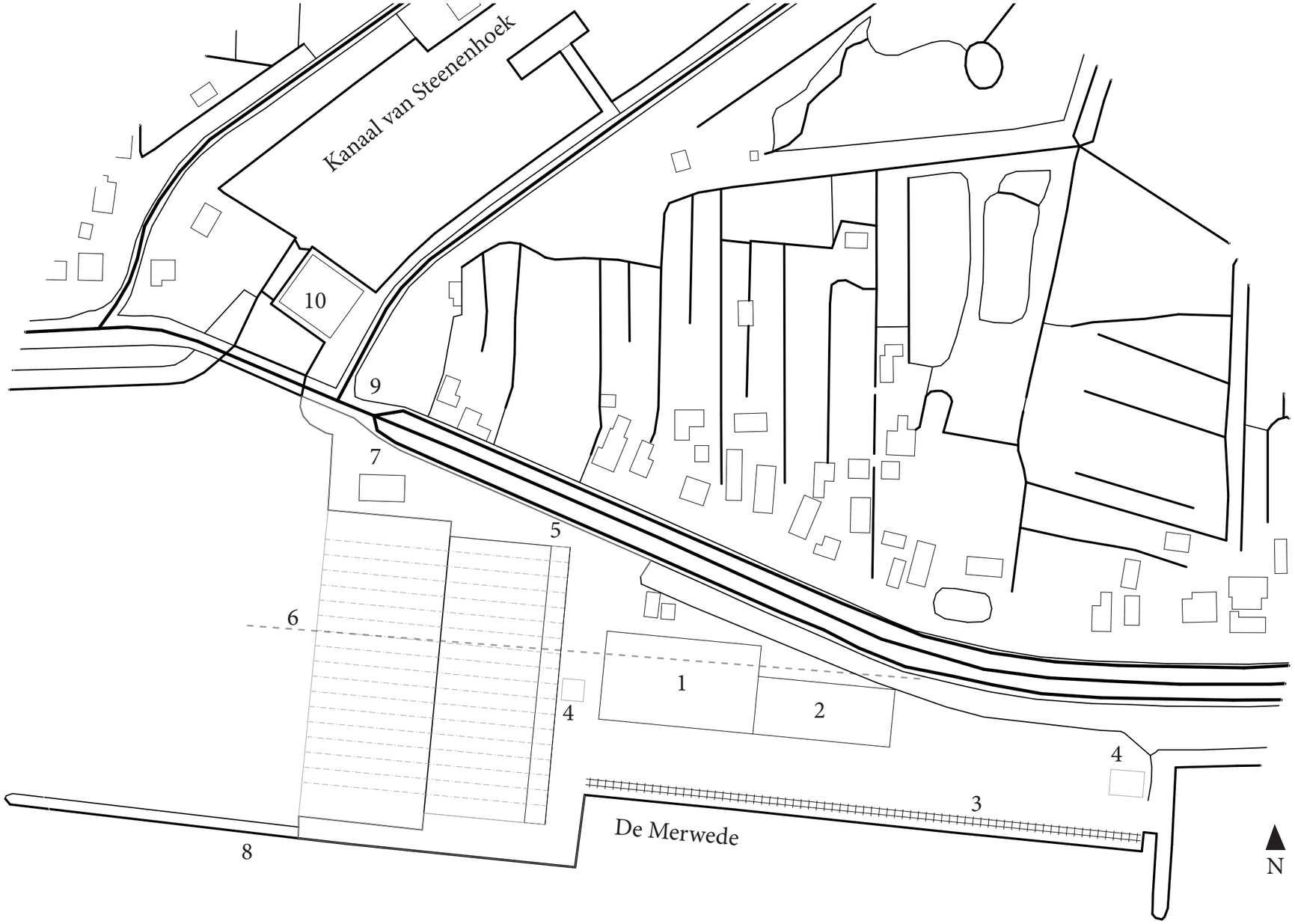
# Vision


Green as connector
water as connector
Gorinc
Dordrecht
Sliedrecht

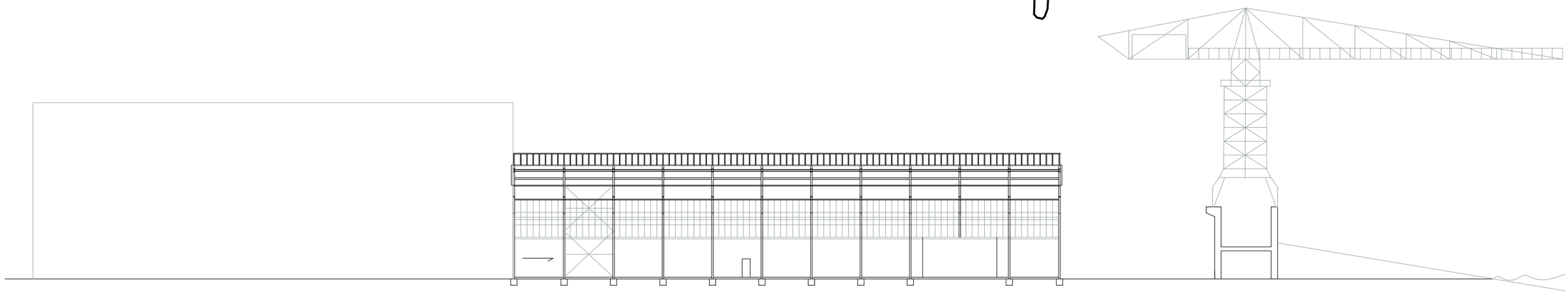



Dike

Industrial site

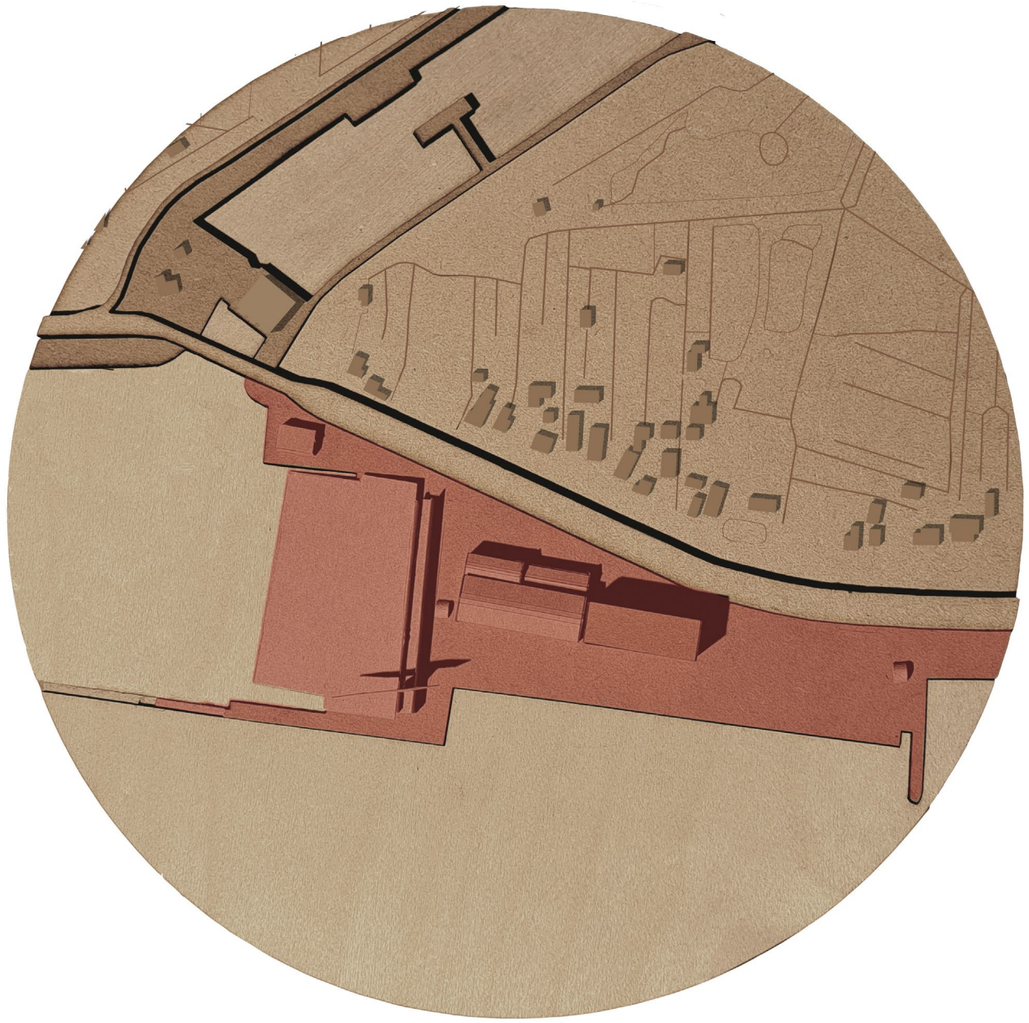



1. Welding Hall - 1952
2. Big hall - 2017
3. Railway -
4. Romneylood
5. Crane track
6. Slope
7. Office
8. Quay
9. Dike
10. Mr. Dr. G. Kolff Gemaal - *monument*



# Current situation

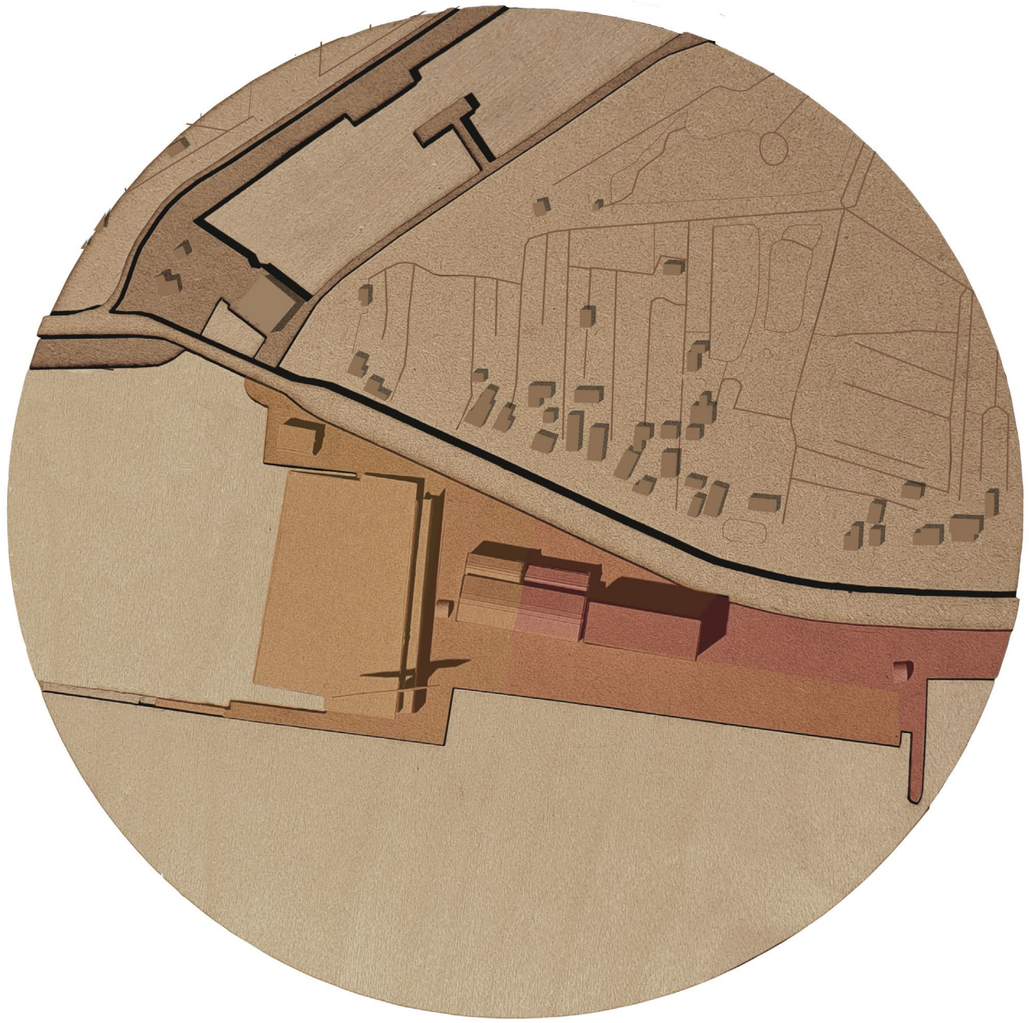

# New reisdential function?



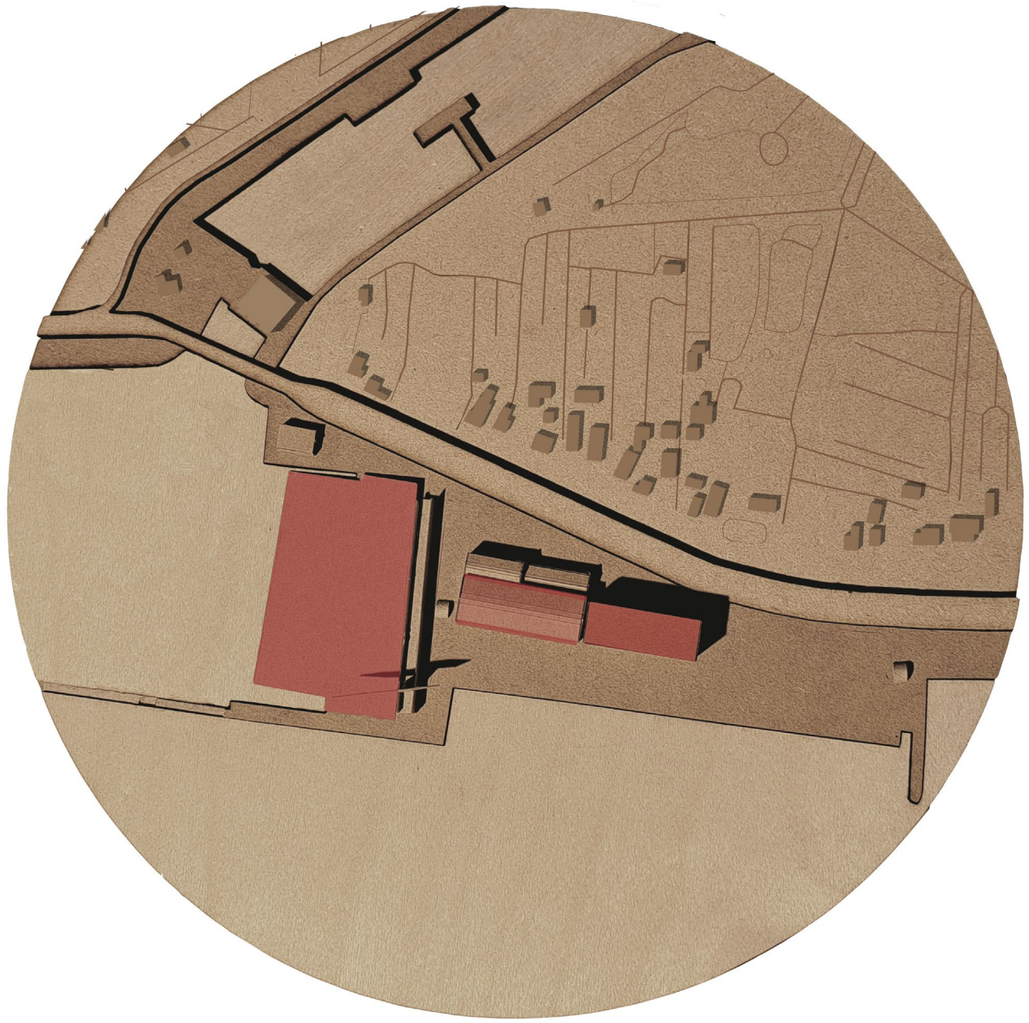
Municipal industrial site
Transformation

Inside the dyke

N

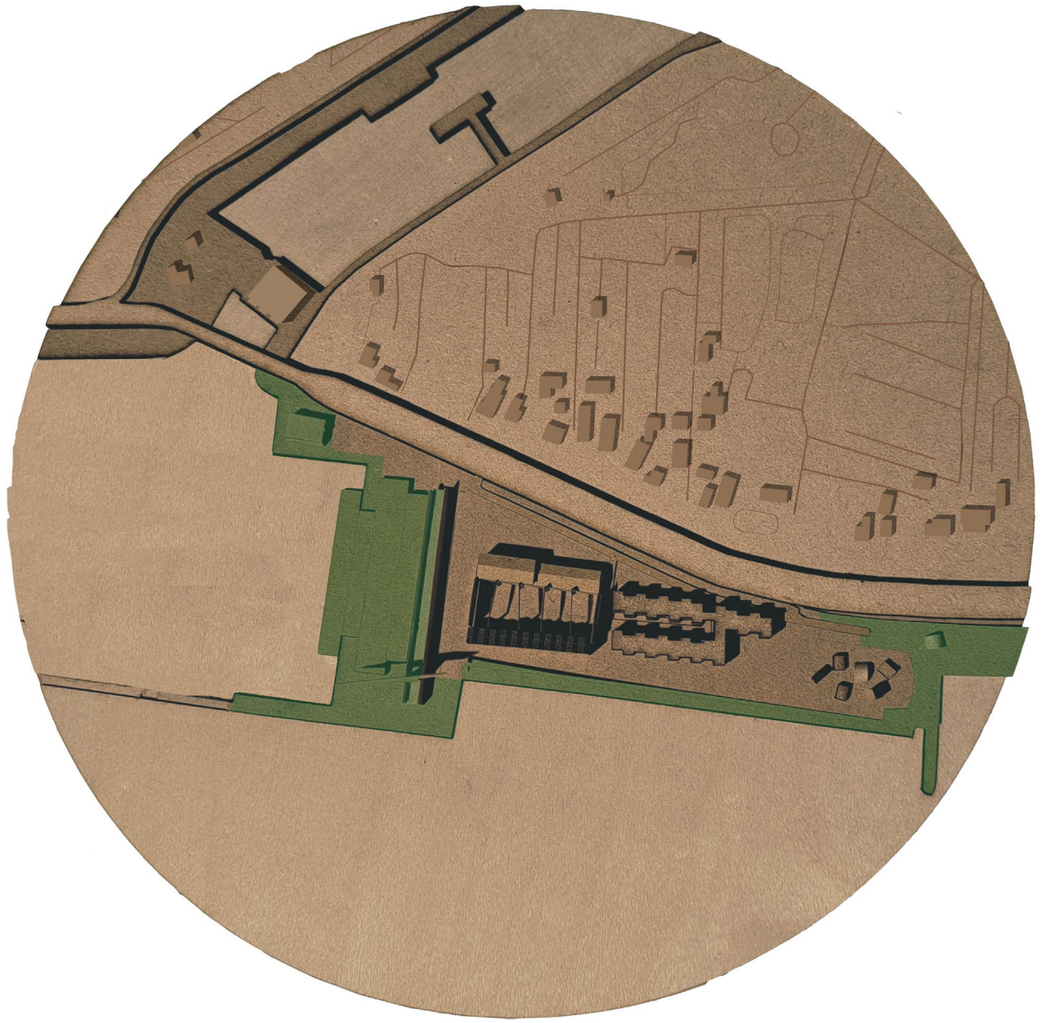


Zoning
transition from public to private

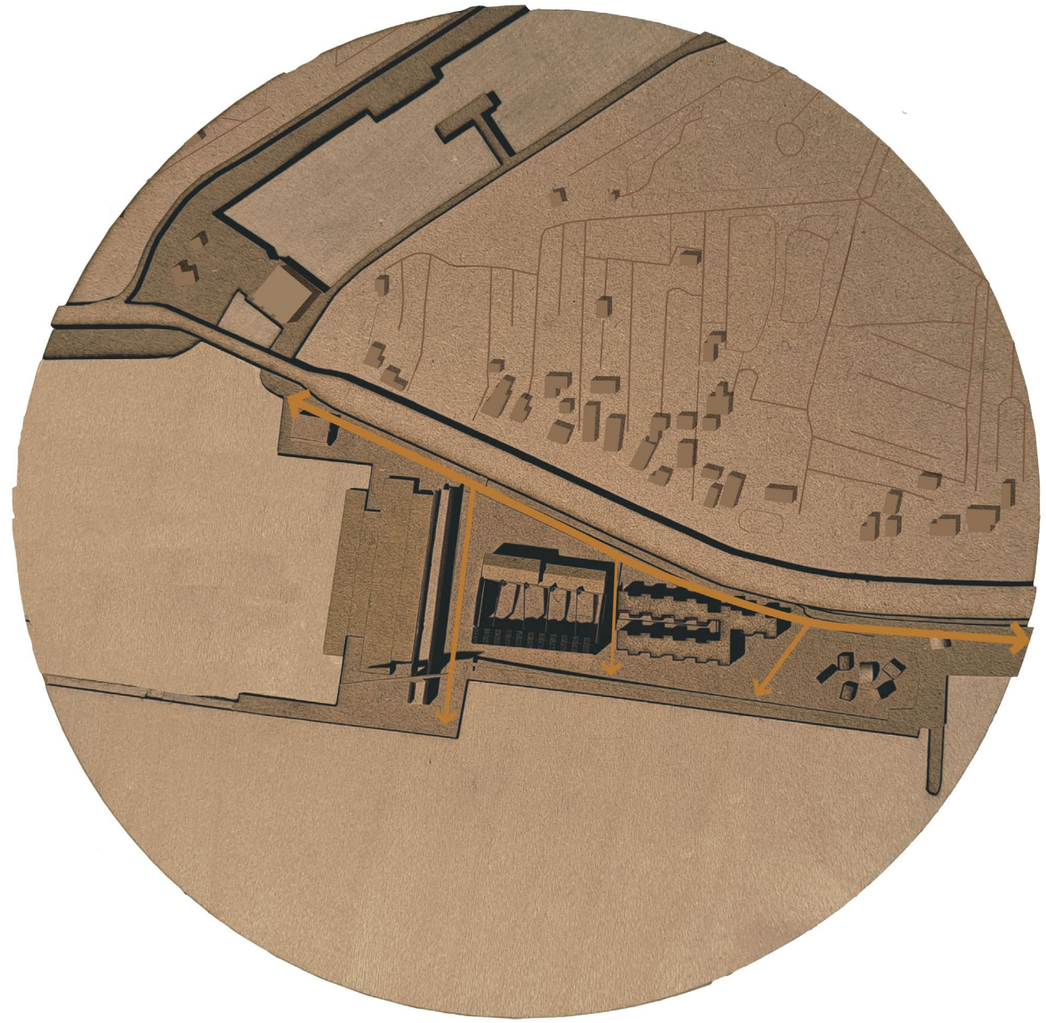


Demolition plan
Re-interpretation, re-use and remove

N



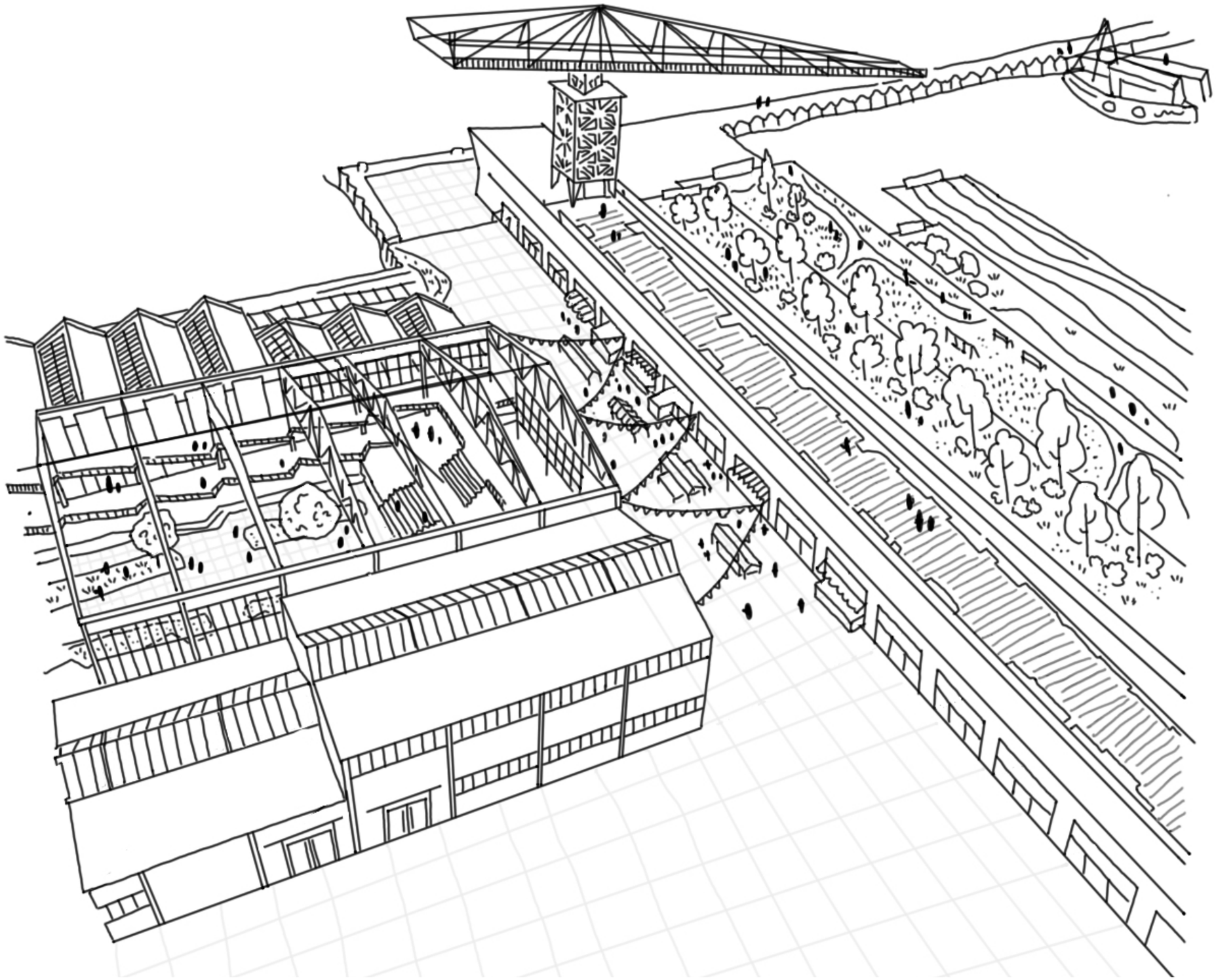
New buffer
as green connector along the river



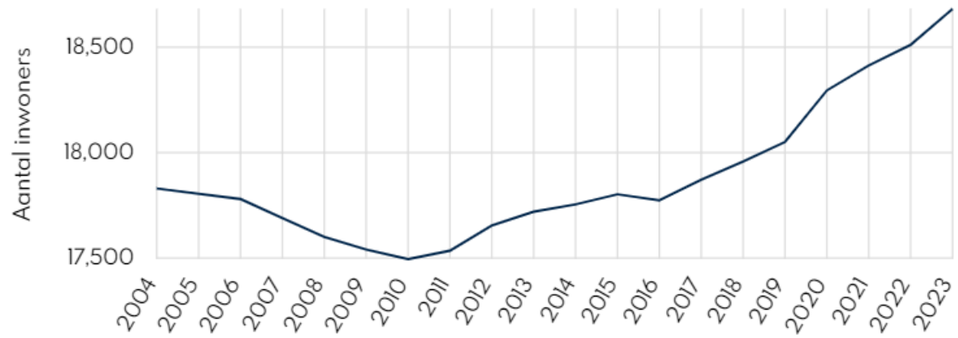
Connection of dyke with the water
and creating zones

N

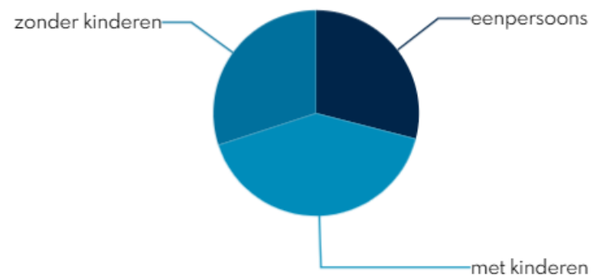

N



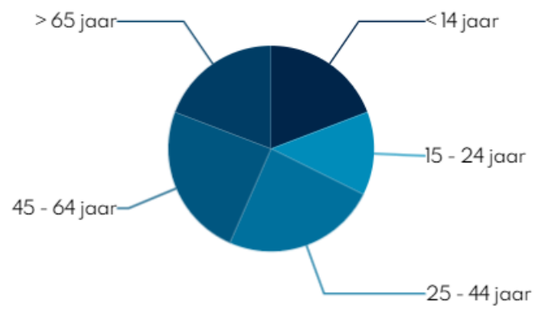

**Aantal inwoners**



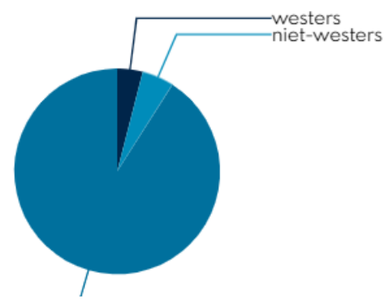

**Samenstelling huishoudens**

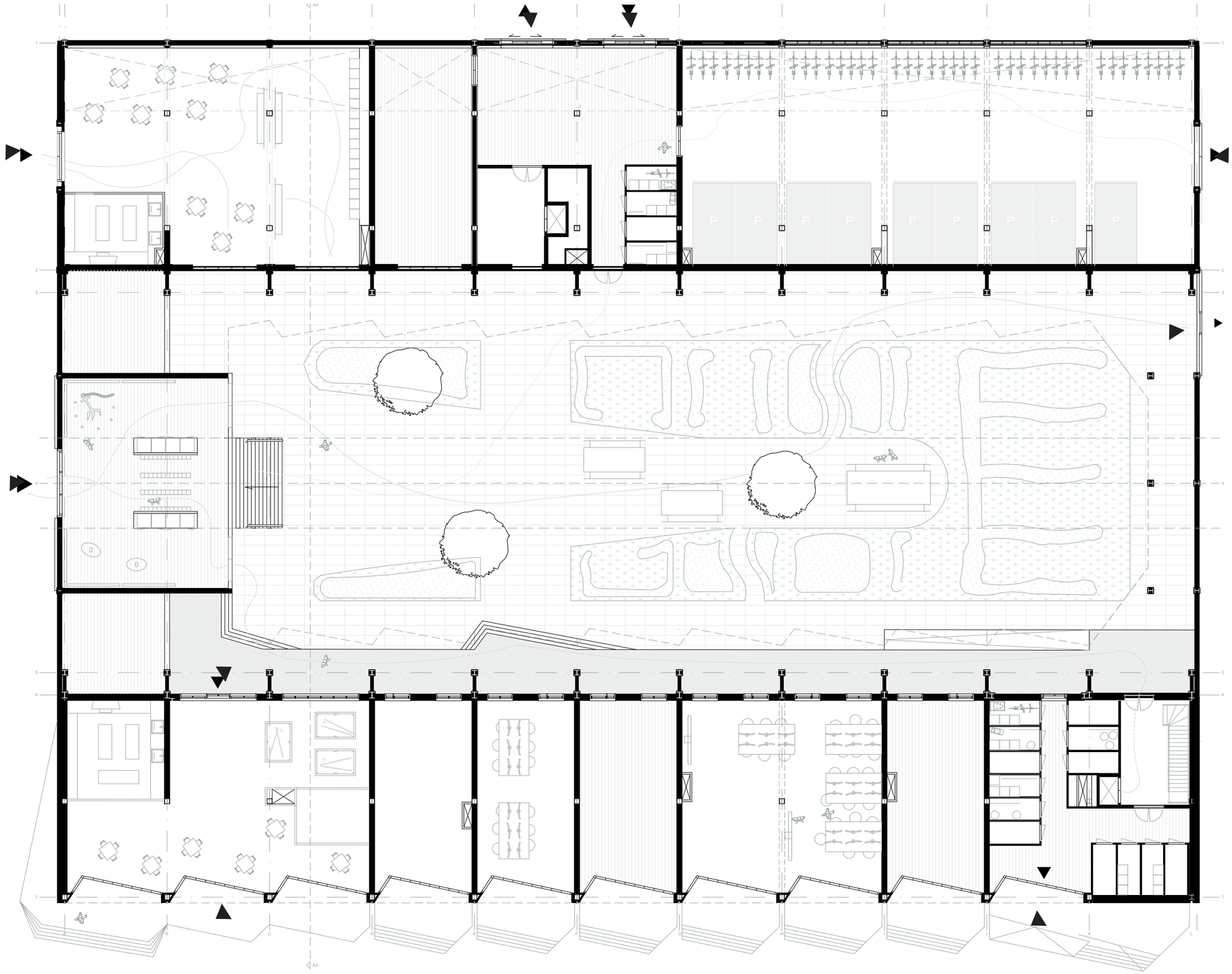



**Leeftijdsopbouw**

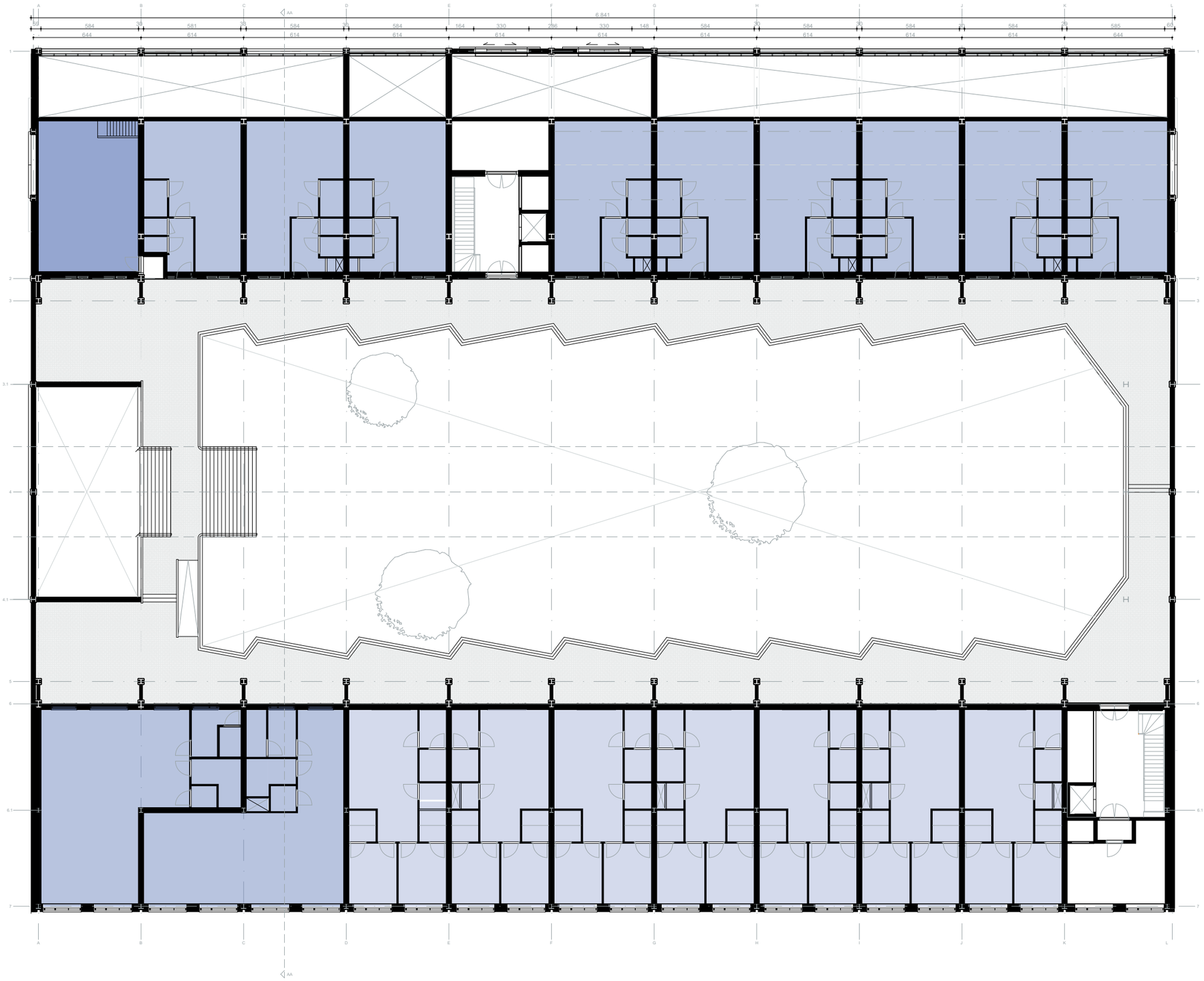



**Migratieachtergrond**

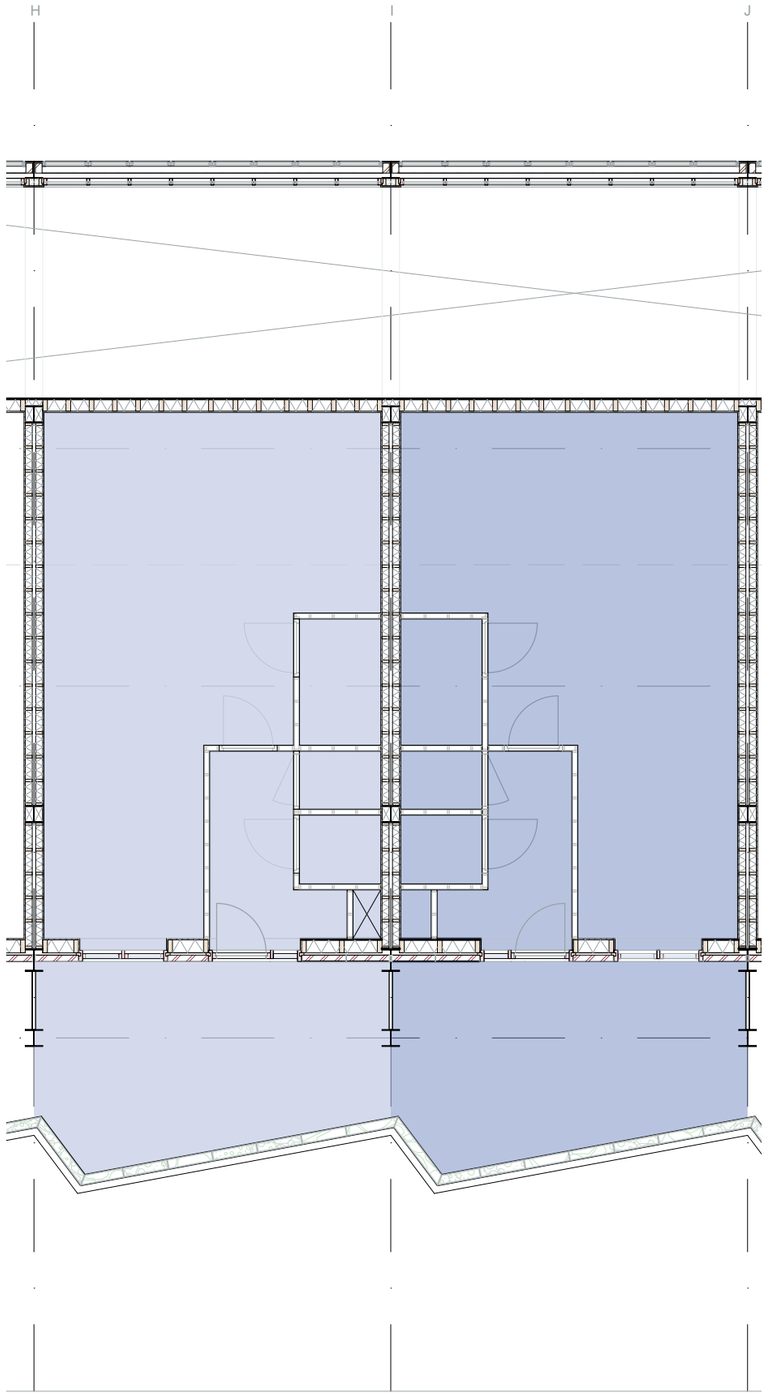




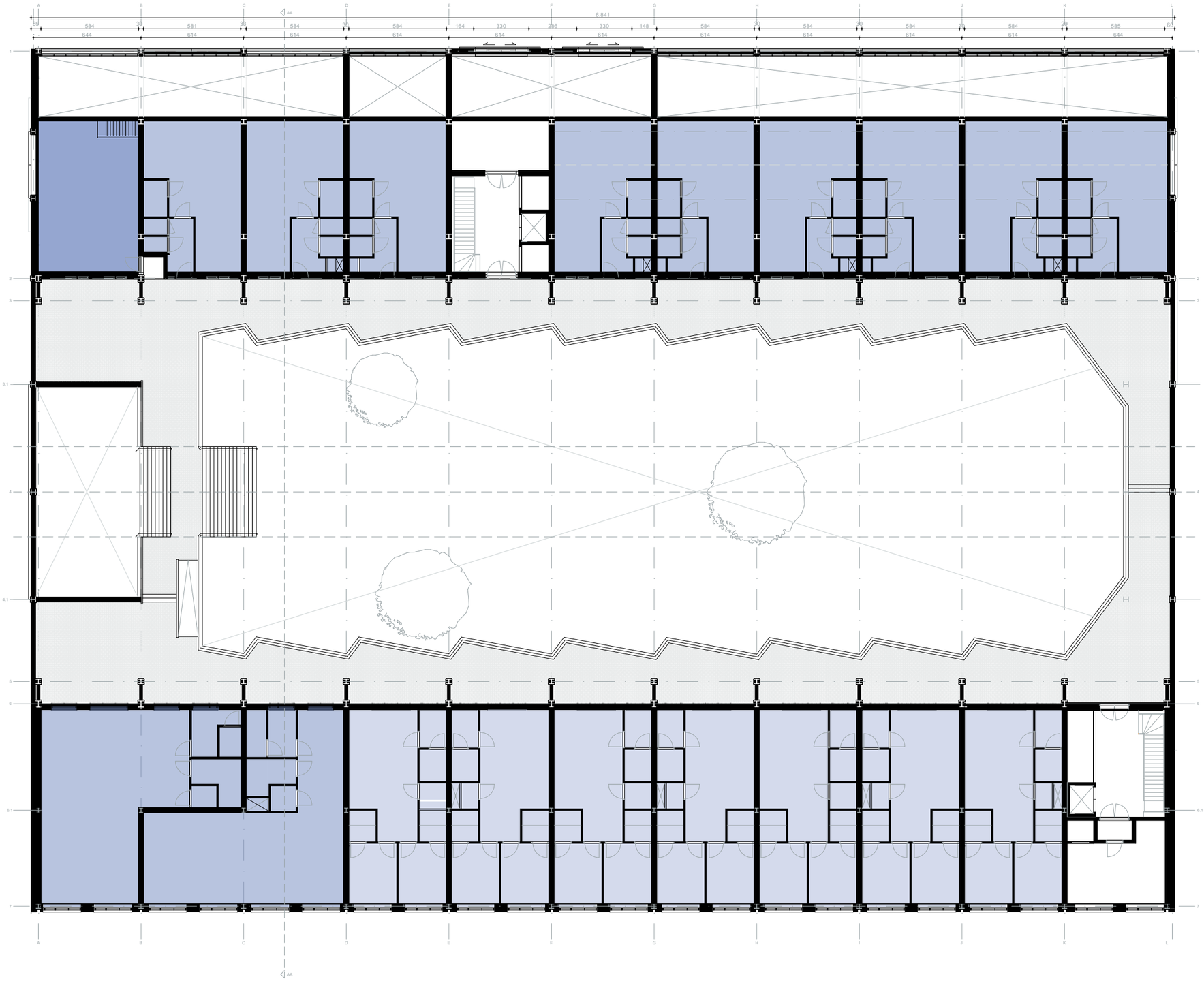
Ground floor
1:250



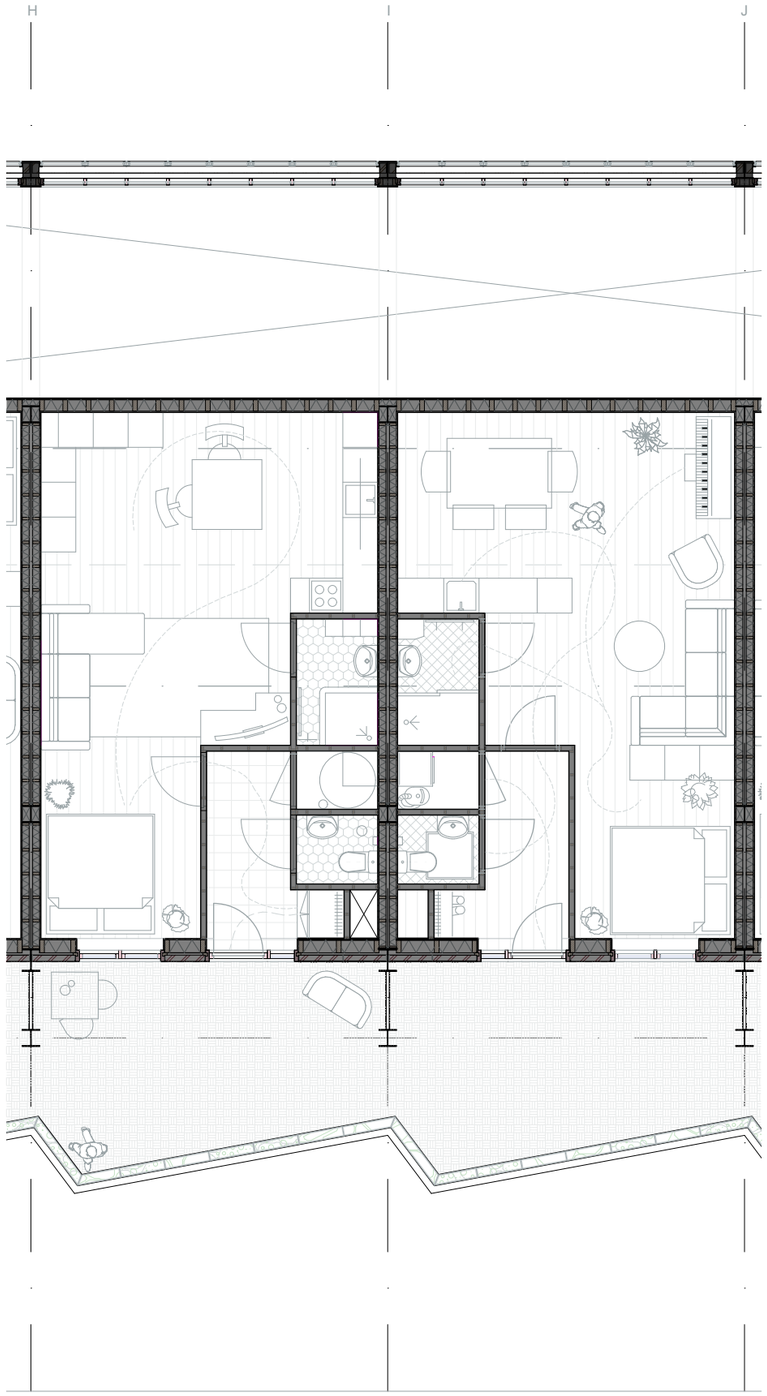
First floor
1:250



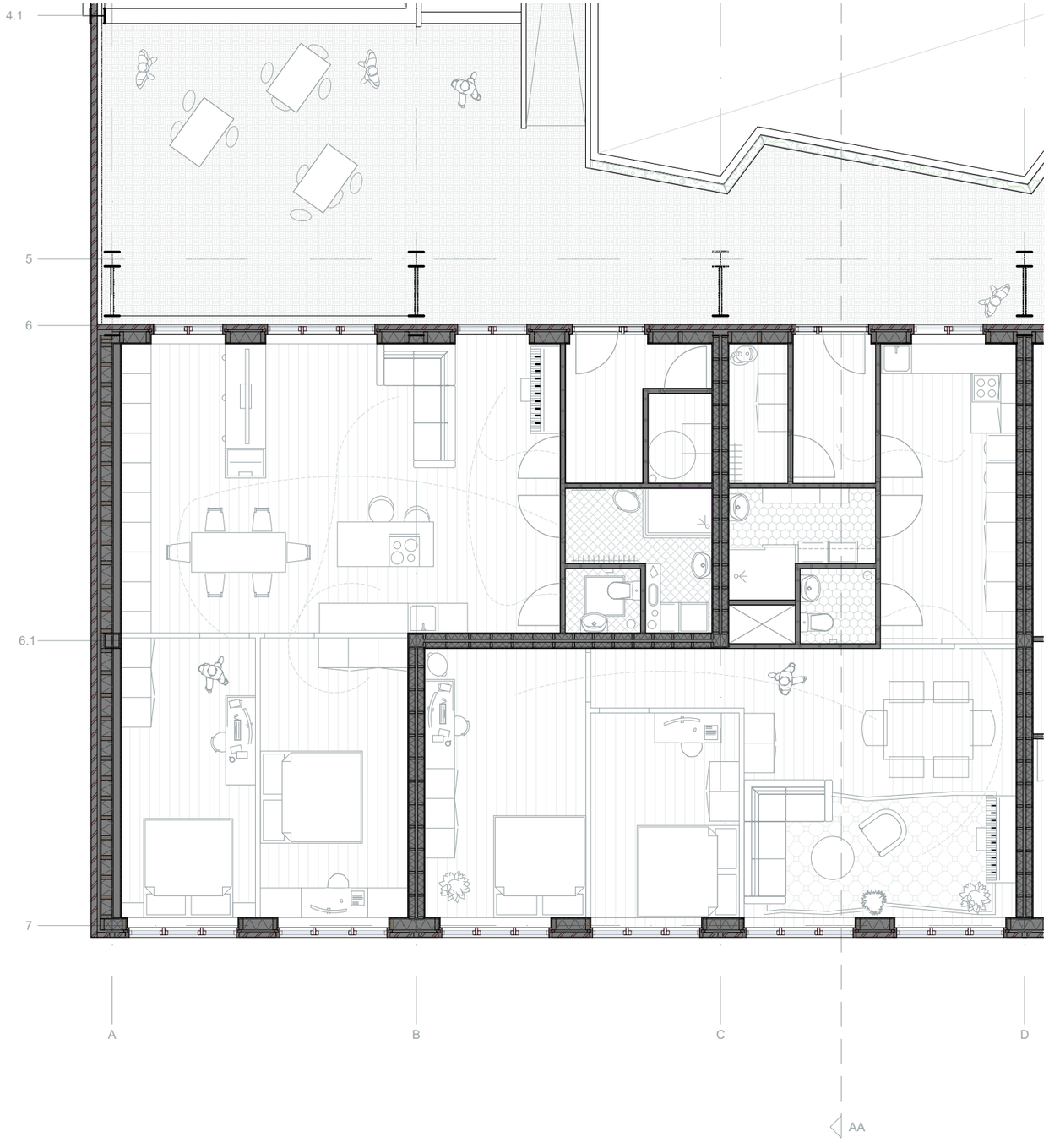
53 m2
1:100



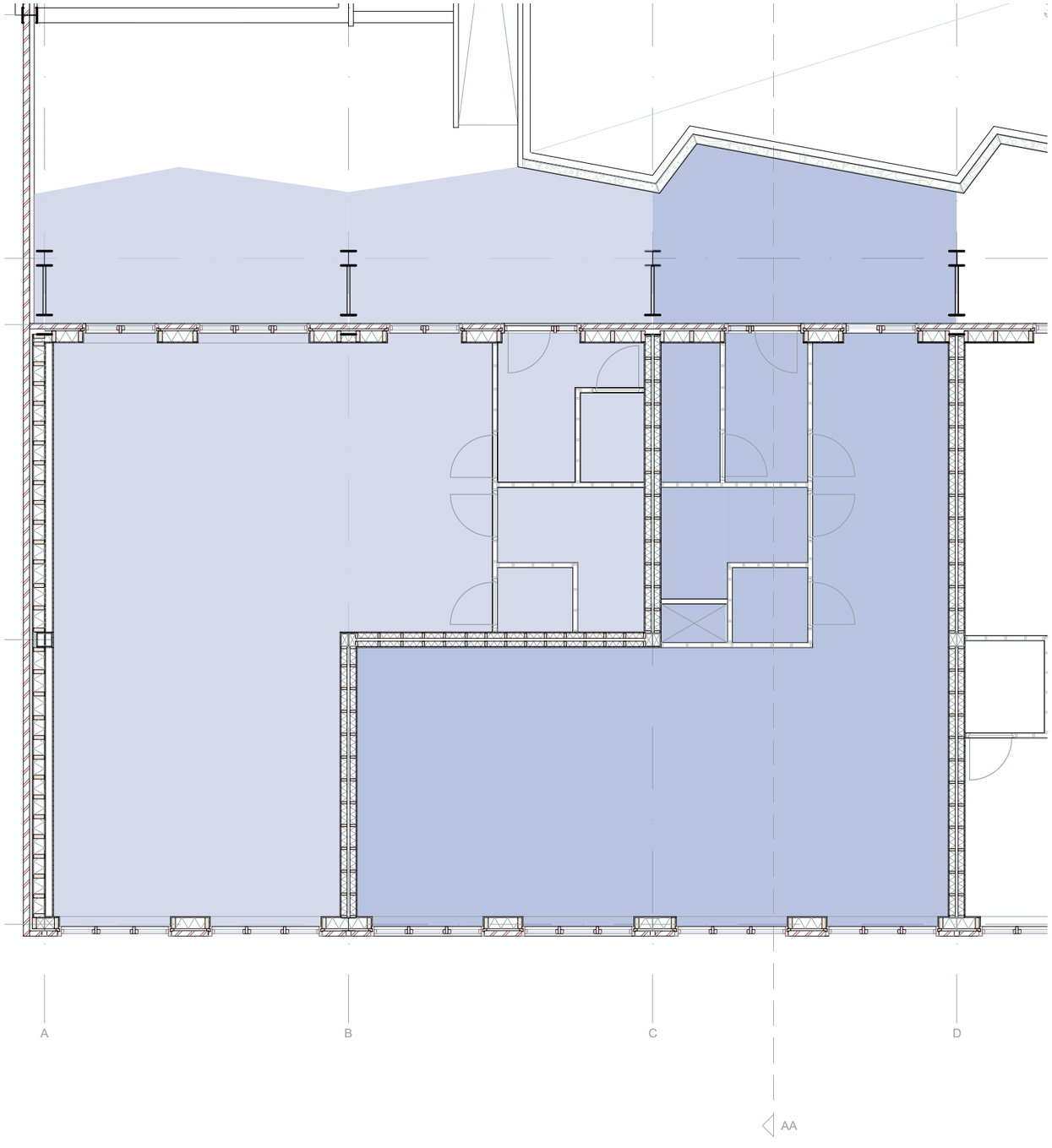
First floor
1:250



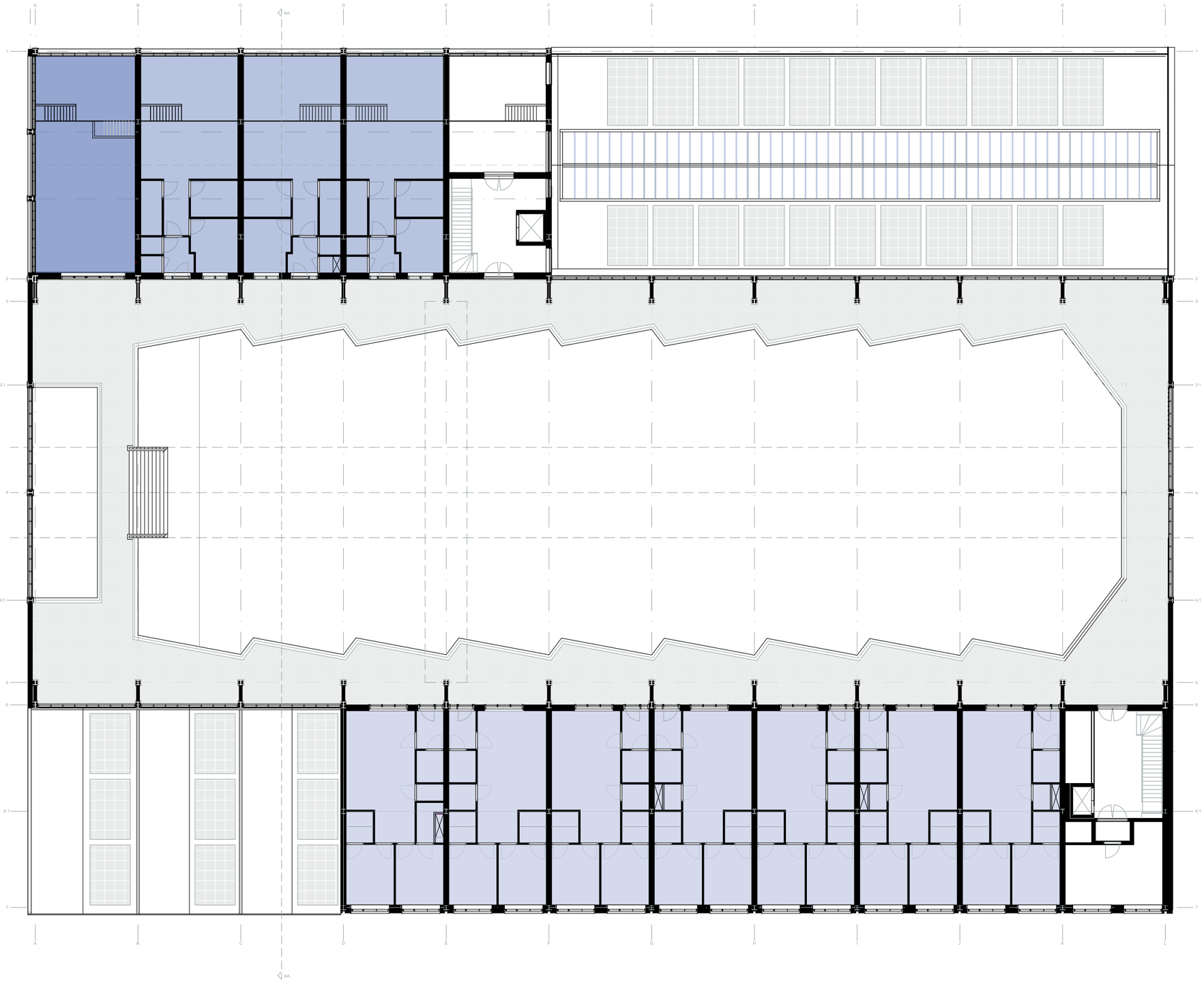
53 m2
1:100



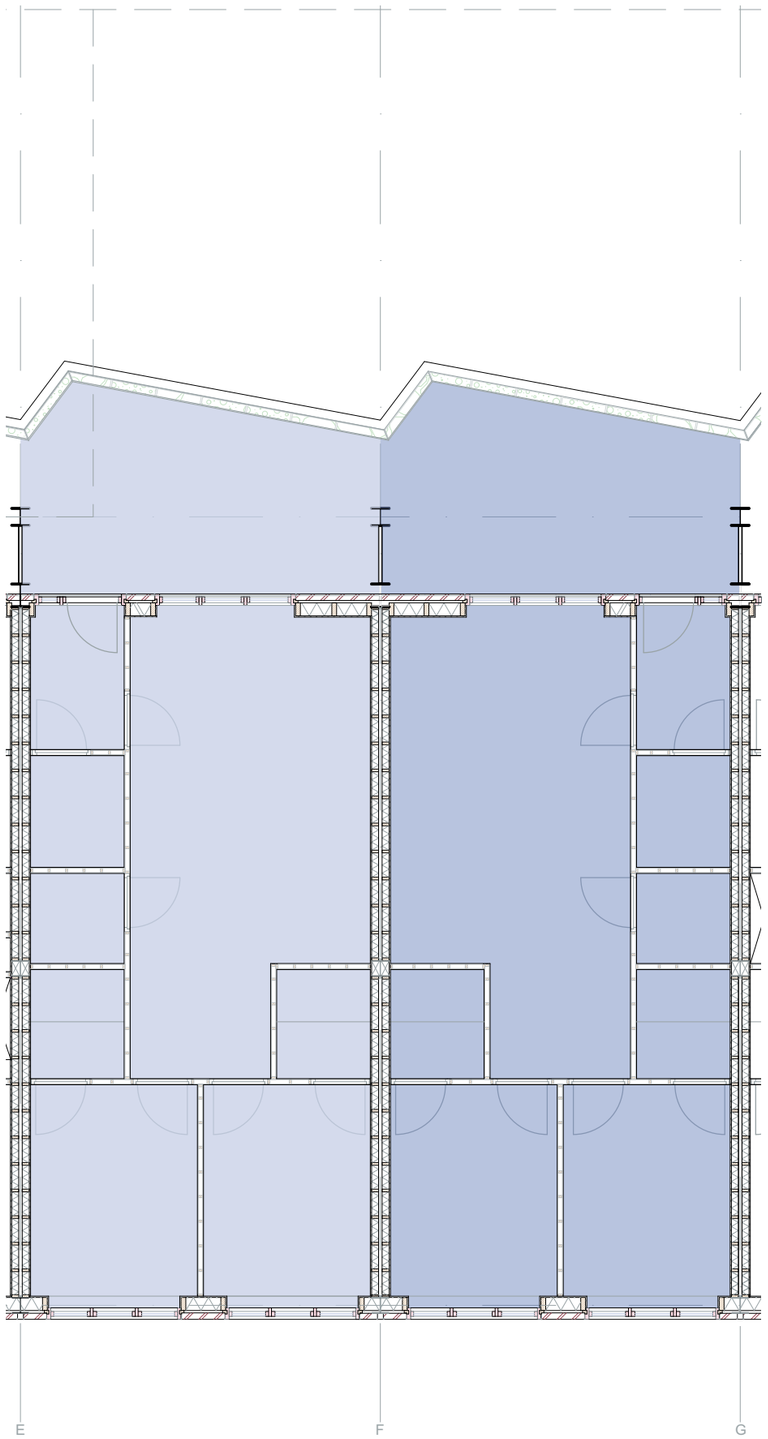

100 m2
1:100



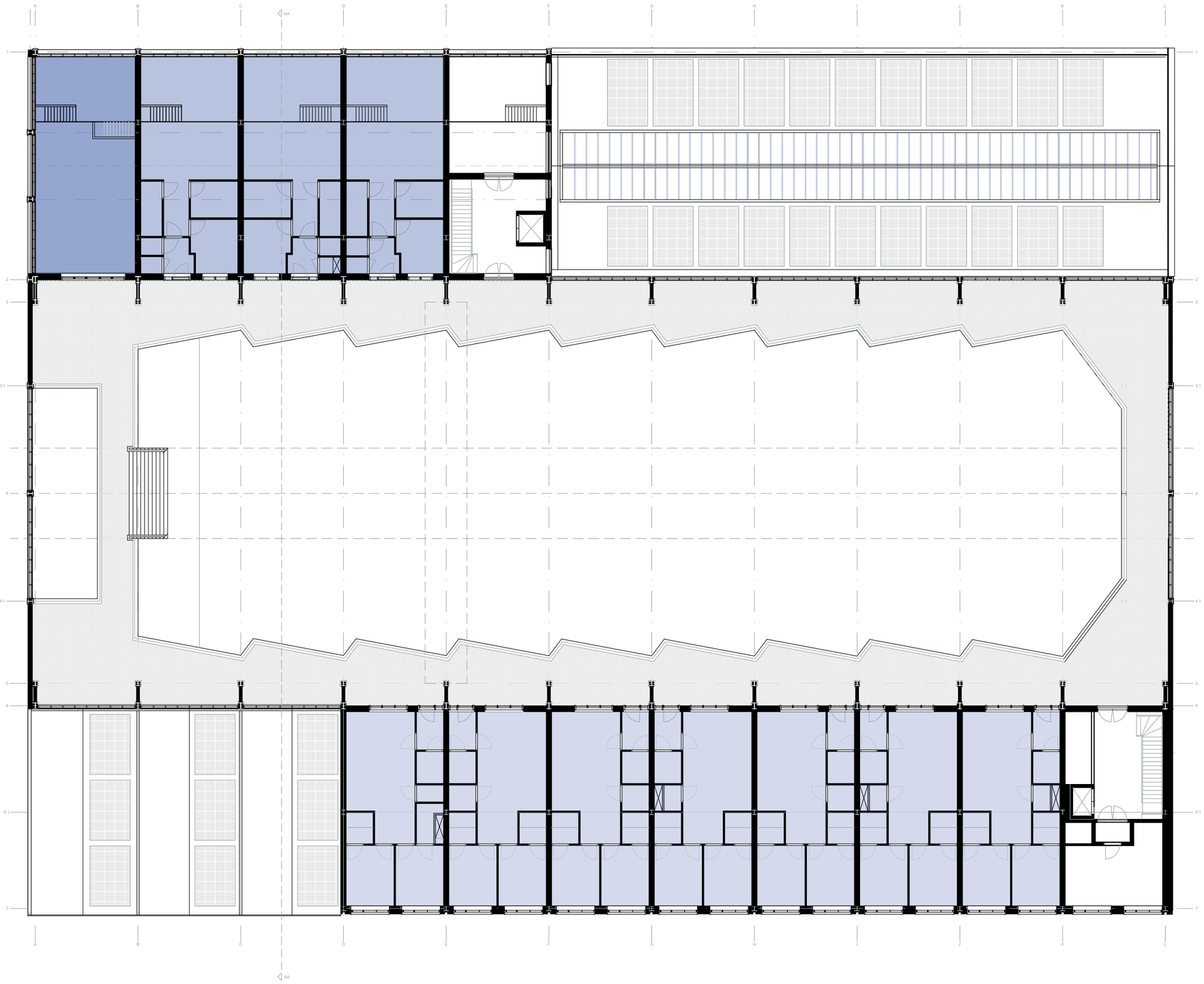

100 m2
1:100



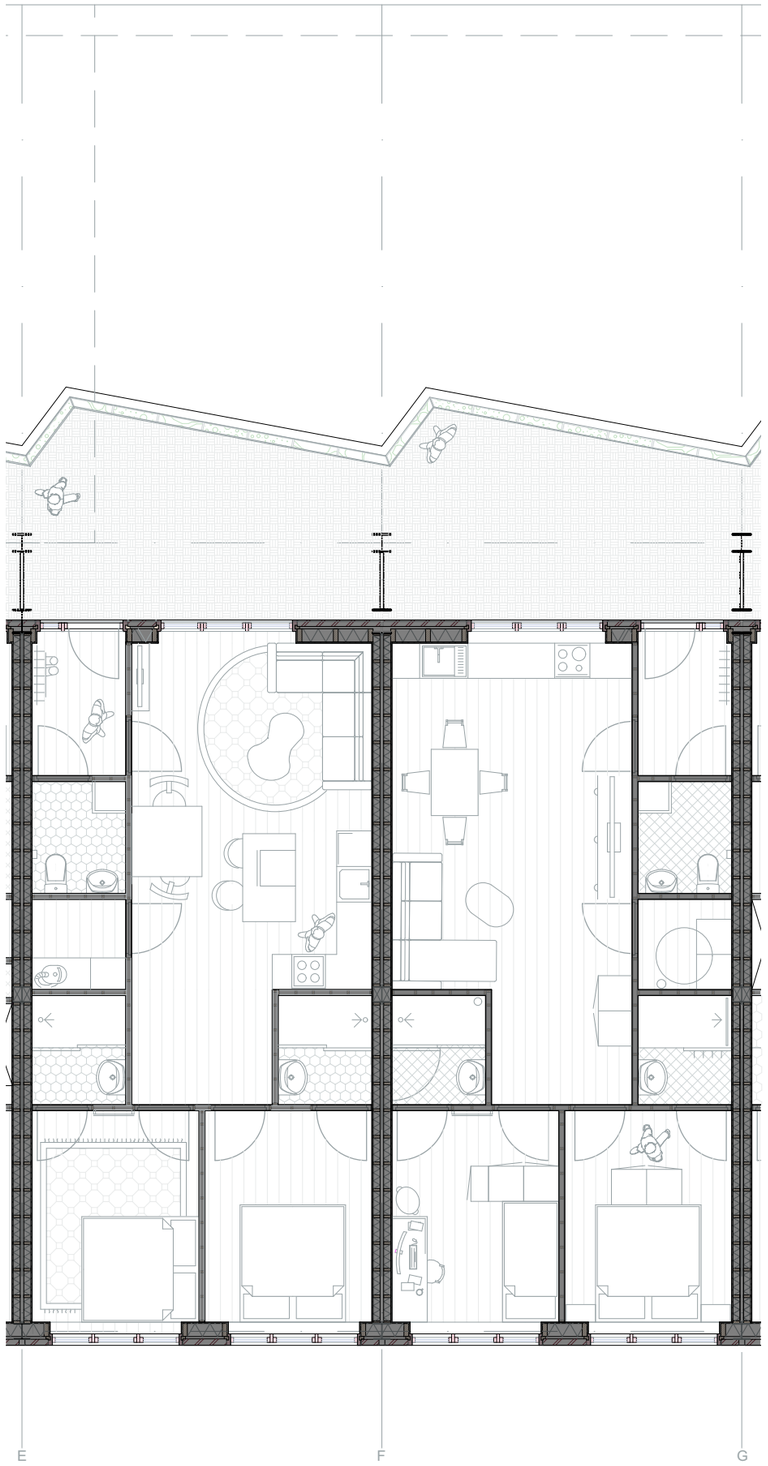
Second floor
1:250



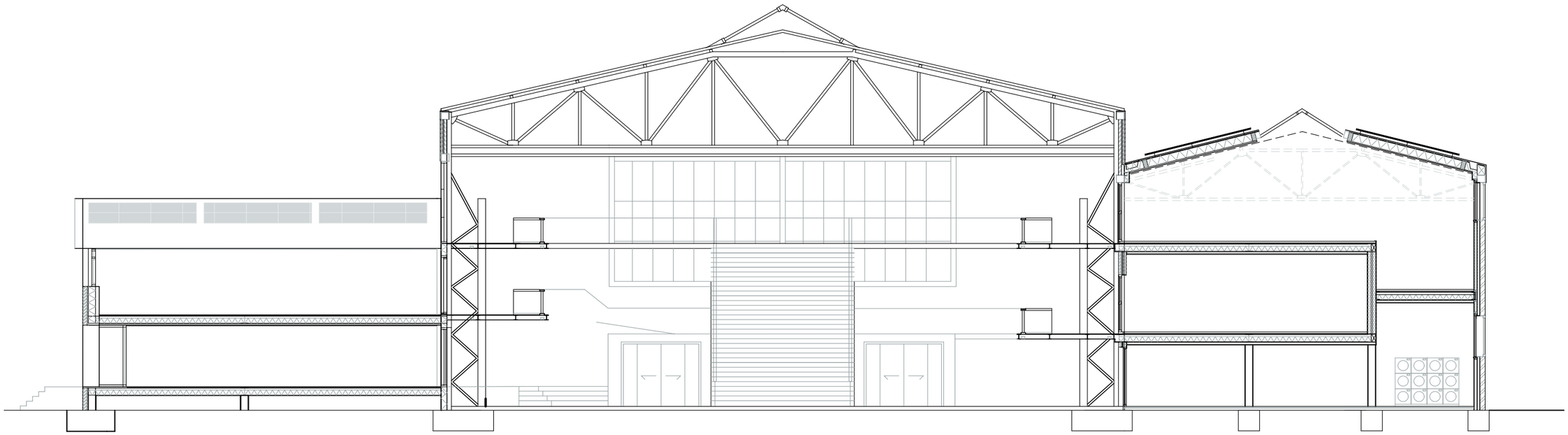

67 m2
1:100



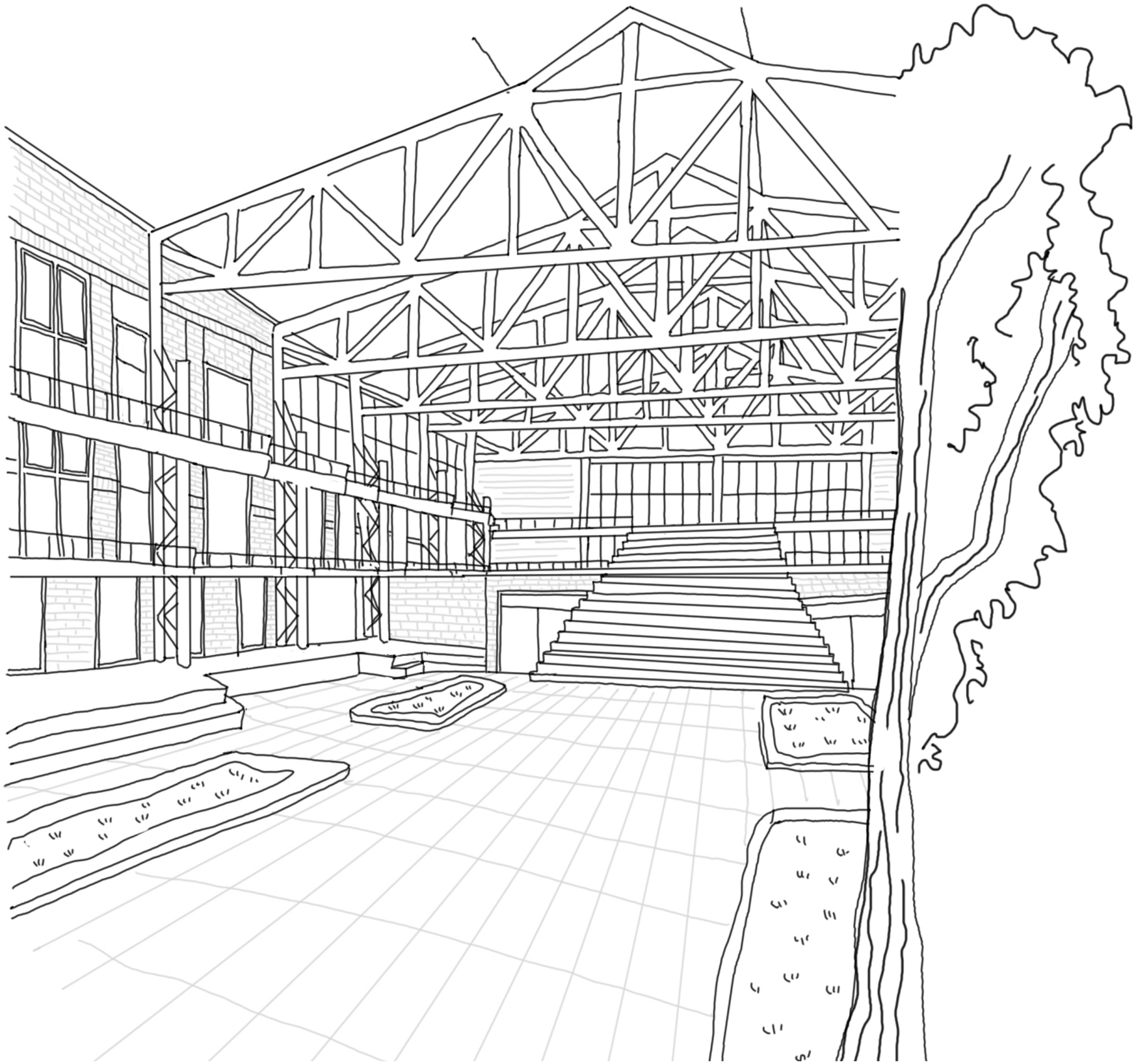
Second floor
1:250




67 m2
1:100



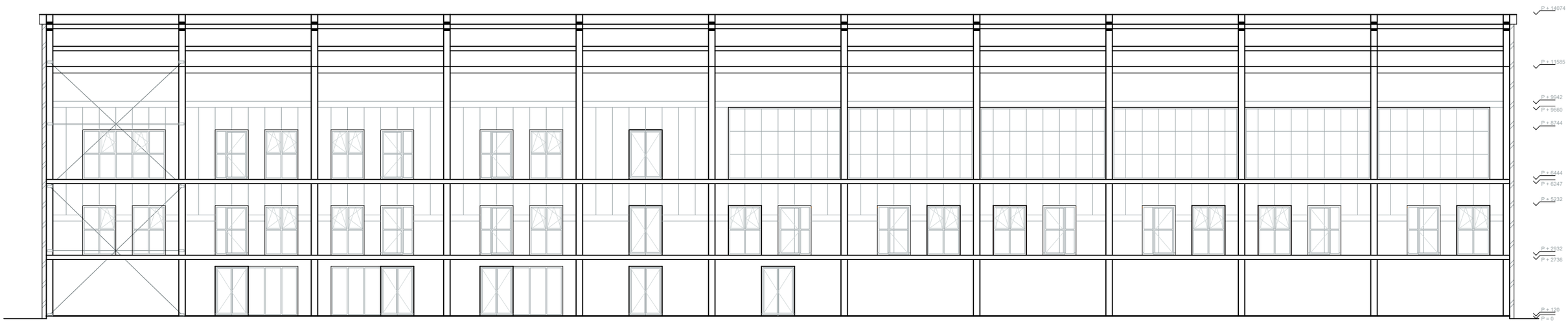
Section
1:100


N

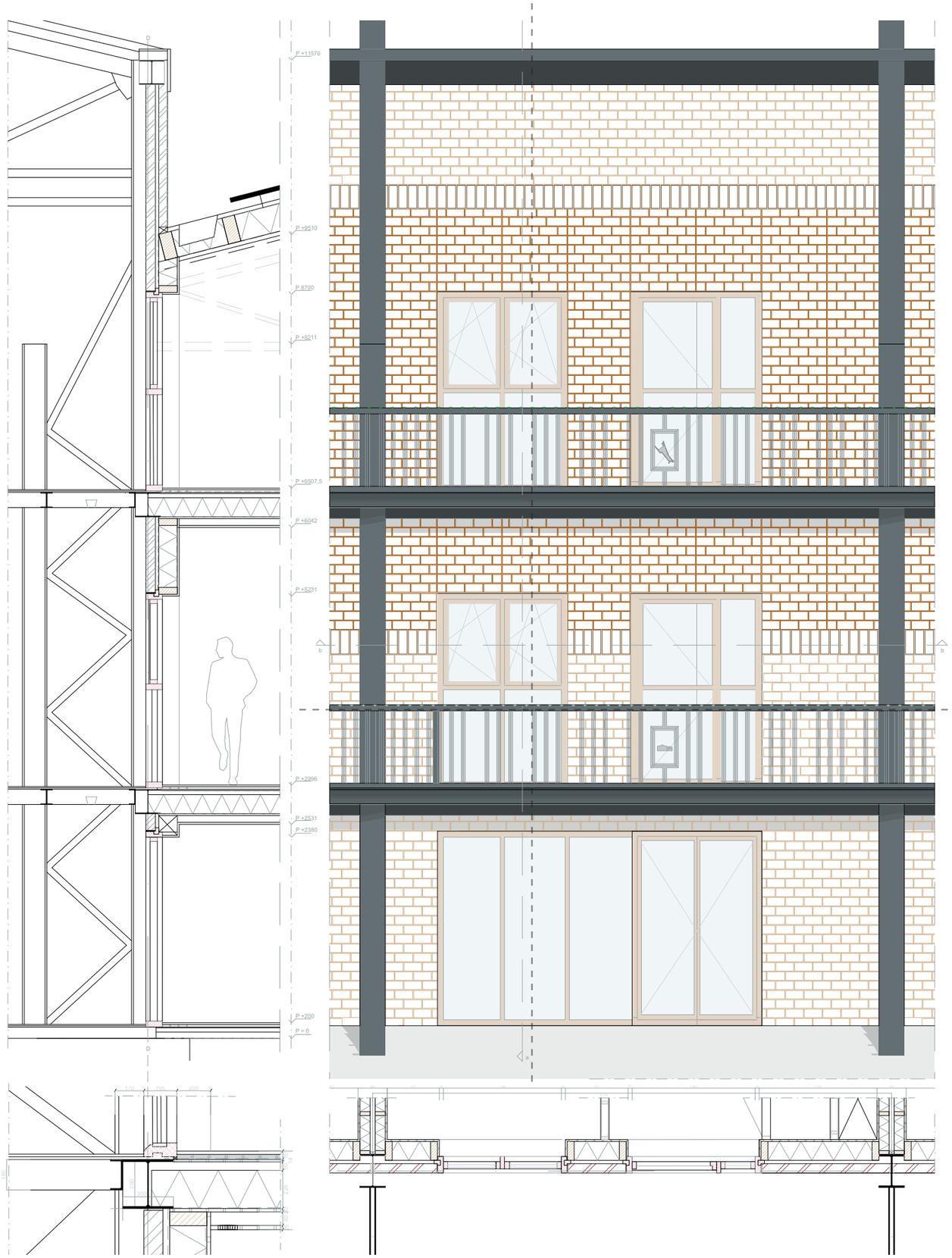

P + 14074
P + 11585
P + 9860
P + 9100
P + 7600
P + 6300
P + 4800
P + 3328
P + 847
P + 0


P + 14074
P + 11585
P + 10978
P + 8992
P + 7992
P + 7410
P + 5333
P + 3605
P + 2083
P + 0

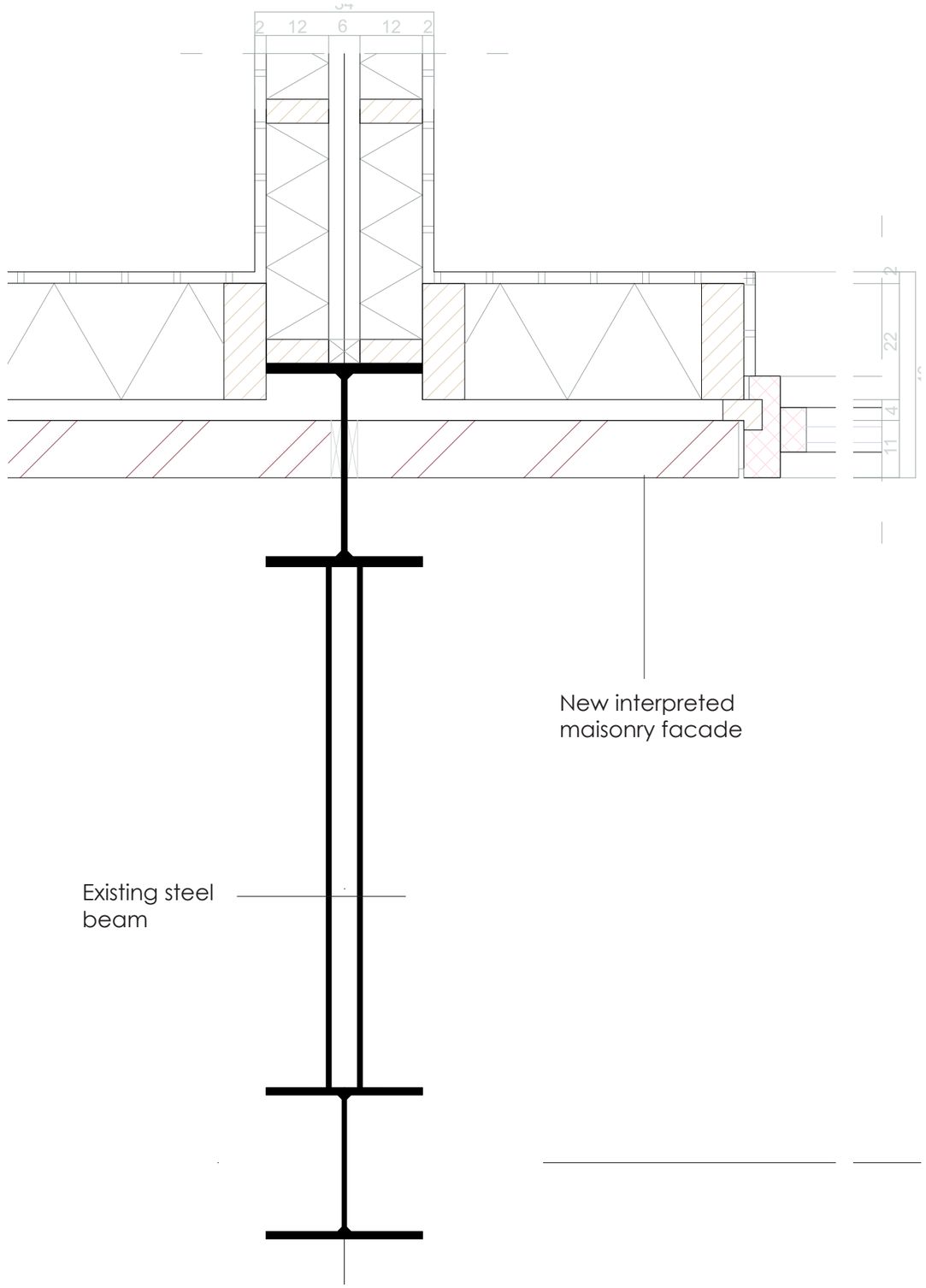
Facade
1:200

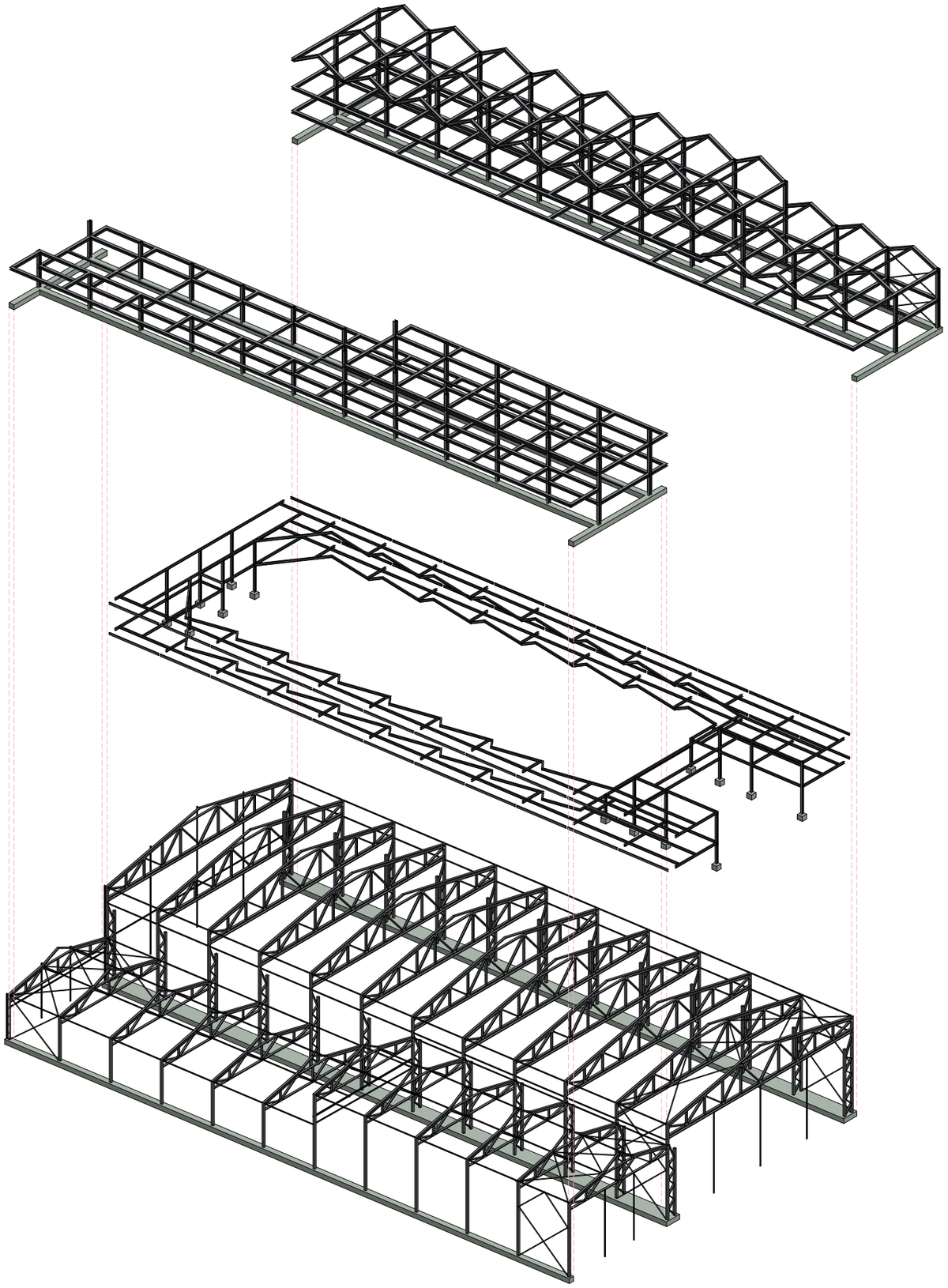




Courtyard facade
1:200

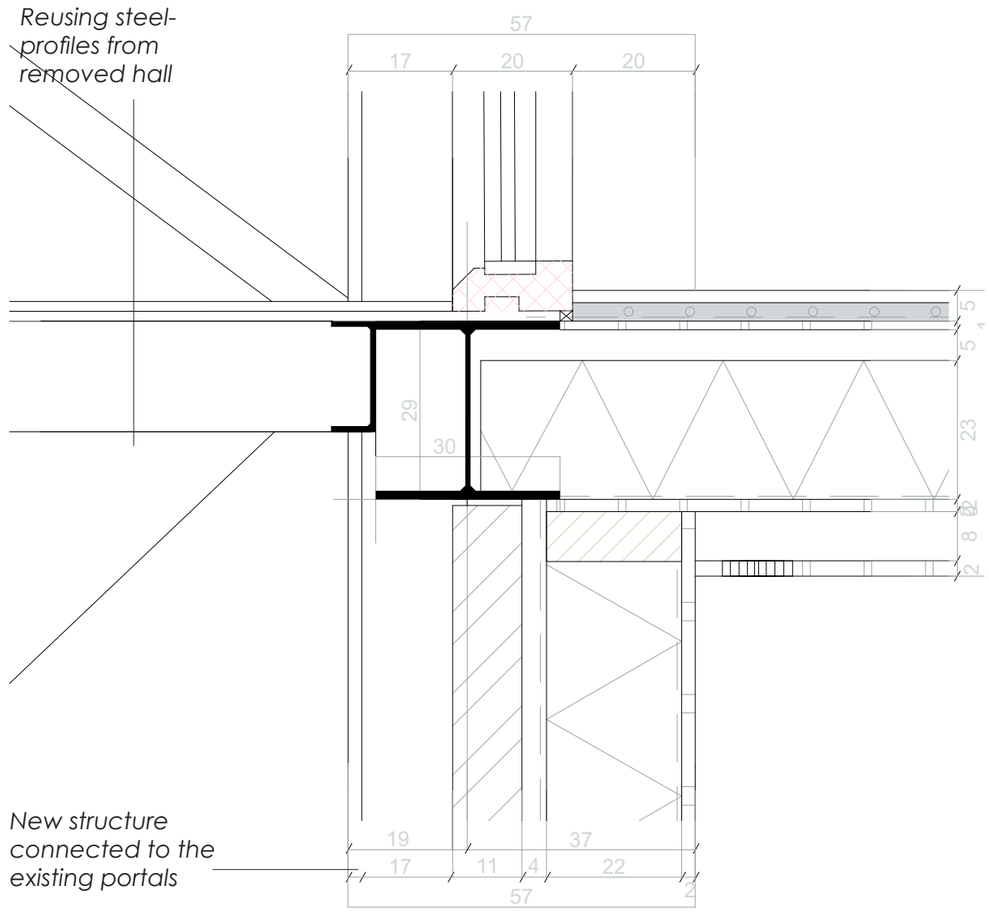


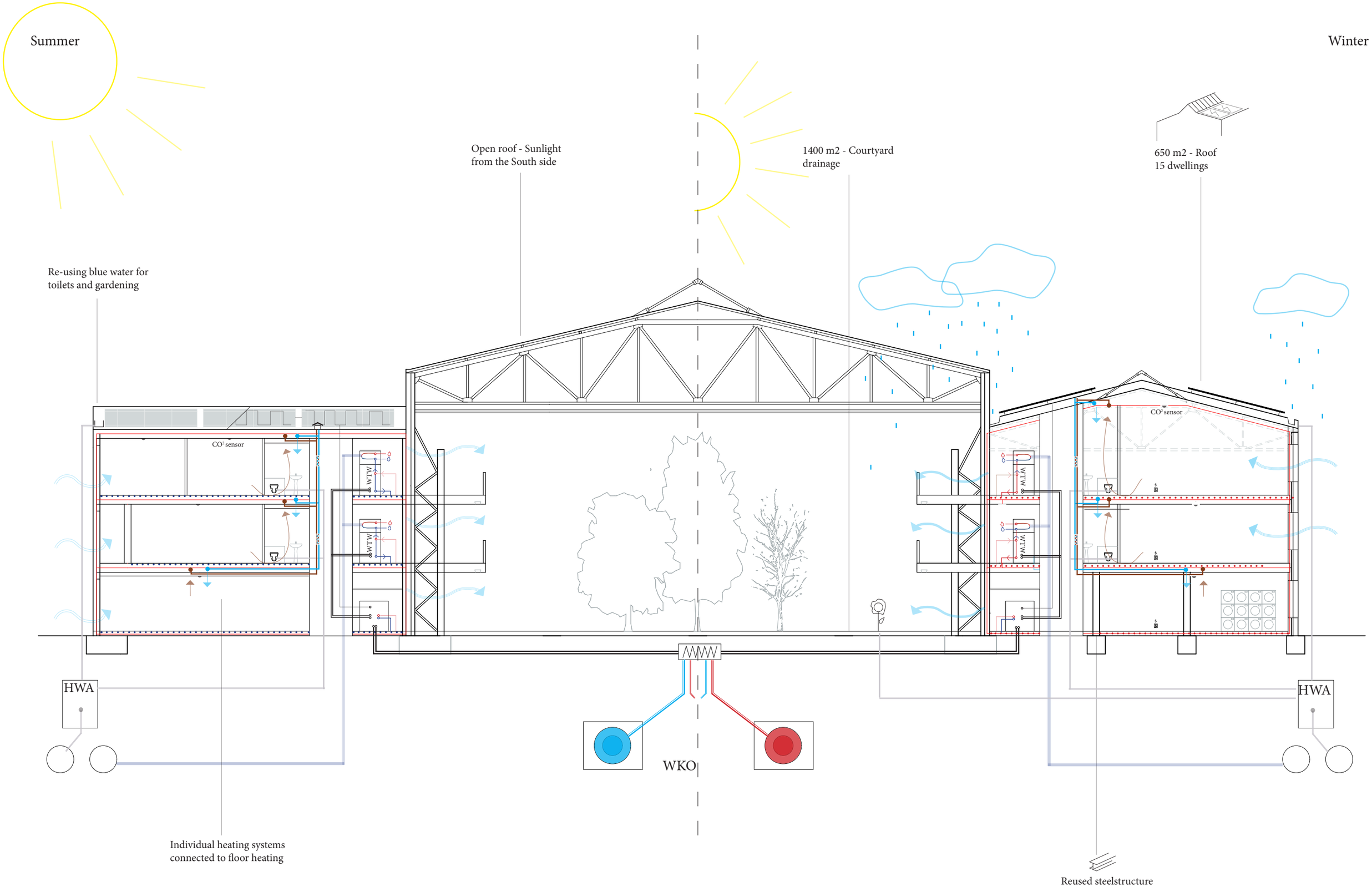
*Connection Courtyard with drwellings - horizontal 1:10*





*Connection Courtyard with drwellings - vertical*
*1:10*




Summer
Winter
Open roof - Sunlight
from the South side
1400 m2 - Courtyard
drainage
650 m2 - Roof
15 dwellings
Re-using blue water for
toilets and gardening
CO² sensor
CO² sensor
W.T.W.
W.T.W.
W.T.W.
W.T.W.
HWA
HWA
WKO
Individual heating systems
connected to floor heating
Reused steelstructure

Research

Erfgoedlijnen, Provincie Zuid-Holland (2019)

Merging companies
Urban developments lack of protection and financial support

Risk of loosing key-elements and maritime identity

Around the year 1900, there is establishment of industrial complexes around shipbuilding, dredging and metal-working industries in the Merwedezone. Shipbuilding became the primary source of livelihood for the growing population, with approximately 90 shipyards operating in the area by the early 20th century (Kramer, 2008).

Heritage is inherently tied to significance and encompasses (in)tangible dimensions, shaping cultural identity and fostering social connections through daily practices, socio-cultural interactions and historical narratives. This dynamic interplay between physical structures and intangible attributes highlights the evolving nature of heritage, emphasizing inclusive management approaches that integrate cultural, economic considerations to ensure the preservation and relevance of heritage for future generations.

Research question:
How do structural and operational attributes contribute to the functionality of shipyards in the Waterdriehoek, and what is their value as potential maritime heritage?

How have historical events or technological advancements driven changes in the structural design, layout and operational capabilities of the shipyards?

How can these structural and operational attributes be valued as Maritime Heritage?

05 feb 2024

Design

Location visit: Waterdriehoek

Lecture, Landscape coars (Verschuure, 2024)

Groupwork

Typology research

Essense model

Mercon Kloos, Alblasserdam

Biesboschhal, Dordrecht

Koiman Hoebee, Dordrecht

Case-studies

P1 Graduation plan

Neptune Marine Repair Wharf

Value assessment

Existing situation

Neptune Marine Repair Wharf - case-study

Historical evolution

Archive Dordrecht

Online archive

Value-based Framework (Havinga et al., 2020)

Research

Tangible/intangible attributes

Multifacet values

Area scale
Ensemble scale
Building scale

Starting points

The design phase, informed by a detailed value assessment, prioritizes accessibility, adaptability, and an industrial-inspired aesthetic, preserving the site's original materiality, height, and structures while integrating the natural environment. By fostering communal spaces and reflecting local identity, the design aims to balance heritage preservation with creating a vibrant, inclusive setting for social interaction and connection.

The case of Shipyard 'De Merwede' demonstrates that the design, layout, and operation of shipyards are not static, but rather dynamic elements that adapt in response to changing economic pressures, technological capabilities, and societal values.

Together, all attributes reveal the multidimensional value of the shipyard, especially in its economic, social, and historical contributions, these values emerge as particular prominent, underscoring the shipyard's continued relevance to both its industry and community.

Demographic

Hardinxveld-Giessendam

Site analysis

Design question: How can a new neighbourhood be designed on an industrial site to foster a communal atmosphere that reflects the local identity and encourages social interaction while preserving (in)tangible attributes?

EX 1. The origin

EX 2. The prosperity

EX. 3 New ownership

P2

Research paper

Design testing

New communal neighbourhood

Programme of requirements

Location visit 2: Neptune

What does it mean to live within an existing industrial heritage site?

Housing

Refrence case - DRU industriepark

P3

Design variation

Typology analysis

Reality check

Community housing

Friends-Appartment

Kangaroo-housing

Various sizes

Multifunctional

Climate consultation CliniC

Design process

This research highlights the importance of developing a flexible framework for maritime heritage assessment, recognizing the limitations of single case studies like Shipyard 'Neptune Repair.' Future research should focus on comparative analyses across diverse shipyards to explore how evolving stakeholder interpretations and adaptive reuse practices shape the fluid and dynamic values of maritime heritage.

Materials

Antwerp - excusion

Climate consultation CliniC

Handboek Staalframebouw

Connecting the old with the new

Reflection

P4

Final design: Masterplan, demolition plan, floorplans, sections, elevations, fragment, details, structural plan, climate design

Modelmaking

Refining drawings

- Demonstrated the transformative potential of adaptive reuse in maritime heritage.
- Evolved from a broader scale to smaller scale, intertwining research and design.
- New solutions necessary for introducing new housing function in maritime industrial heritage

Reflection question:

1. How transferable are the insights and methodologies developed in this project to other shipyards within the Waterdriehoek, considering the unique socio-economic and cultural contexts of each site?
2. What new or adapted values are introduced while transforming a maritime heritage site into a communal neighbourhood? And what existing values loose their significance or become less present/important?

Future focus: inclusion of other stakeholders

P5

16 jan 2025

Final Products: Posters, presentation, models, thesis, reflection, process booklet

*Connection existing outerwall with floor 1:10*