FLUCTUATING GROUNDS

Adaptation through ambiguity in architecture

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Explorelab 32
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Christo / *Surrounded Islands* 1983

Ambiguity of land art



The Big Duck Building / Flanders, New York

Signification in architecture



Depot / Rotterdam

Crafting icons



Rotterdam / Katendrecht

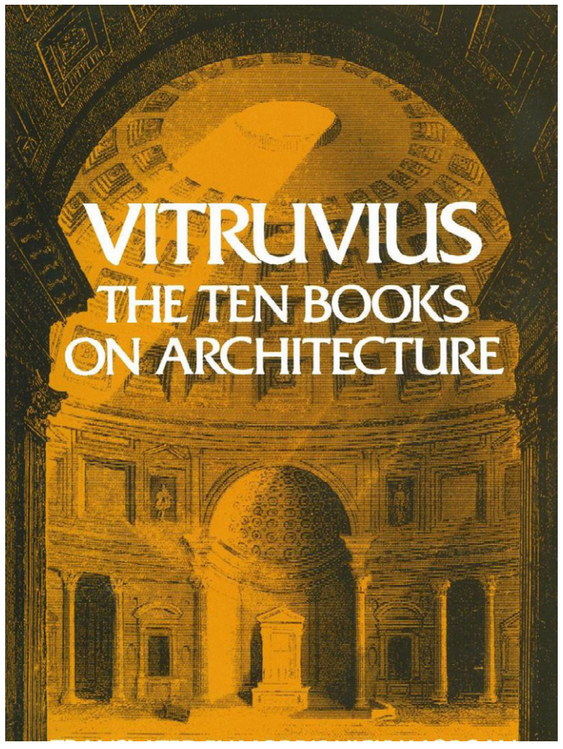
Revival of Rotterdam

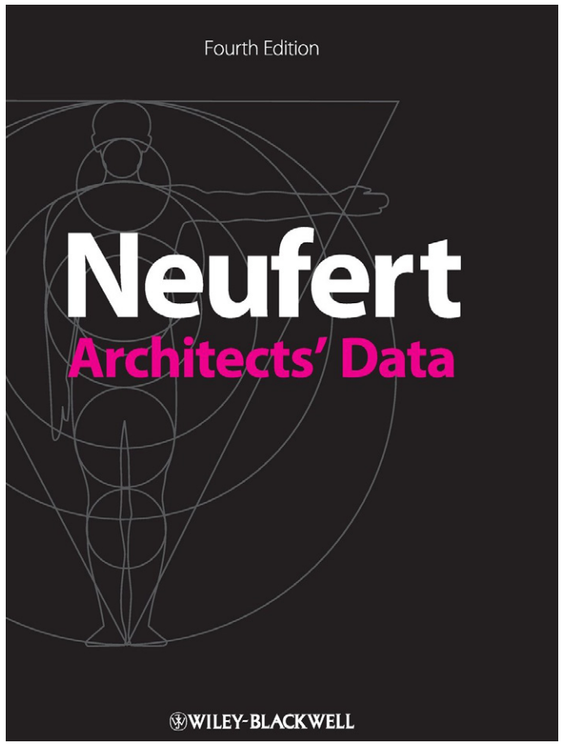
Brief

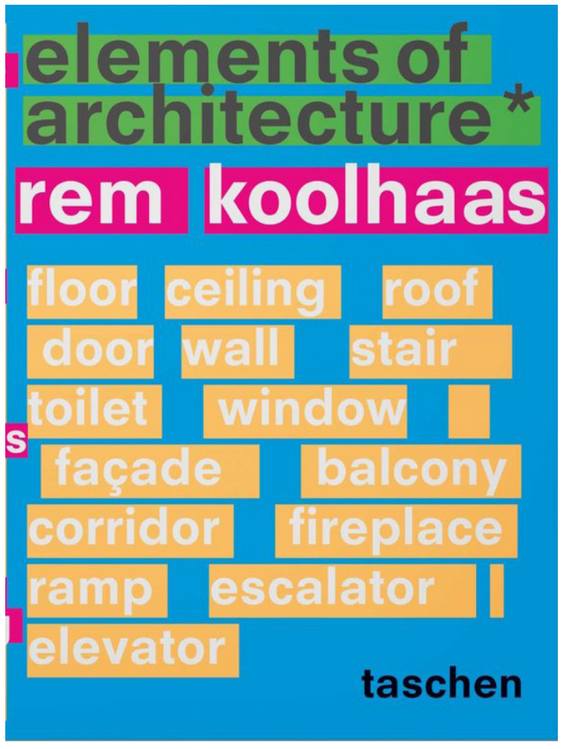
Specific

Miniscule

Small gestures of urban development







Architectural "standards"

Spatial Ambiguity

Overlapping of architecture and landscape: objects emerging as a third condition creating tension by not trying to negotiate with the context

Perception formulated by the context by carving the landscape: no facade or deep facade

In-between, leftover, voids, residual spaces, terrain vague

Connection to immediate and wider environments

Climatic filters to control energy flows

Spatial porosity, trading between interior and exterior space

Spatial composition of trans-spaces, intervals, cascades, thresholds

Synthesis of fragments creating edges

Non-conventional relationships in plan and section

Avoiding the hegemony of the box and central perspective: no vanishing points, no comfort zones - asking for physical attention

No hierarchy of space to create confusion of time and space, distance and depth

Absence and presence of materials, immaterial qualities

Passive material solutions, trans-materials

Light conditions: sun,moon, clouds, shadows

Ground conditions: soil, water, wetlands, landslides

Movements: air, celestial bodies, sound waves

Fragility and temporality of nature

Organic processes

Weather conditions: temperature, humidity, wind, precipitation

Water conditions: floods, tides, torrents, streams, canals

Water: movement, sound, quality, reflective surface

Subversive acts: composition, material choice, structural elements

Constraining oneself in a material language

Process over product: not imposing form upon matter

Space experienced each time differently

Temporary points of fixation and stability

Explicit objects with inexplicit capacities (effect over economy of means)

Curiosity over intentionality: lack of pre-defined effect

Kinesthetic experience influencing speed of movement and encouraging undirected navigation through visual perspectives

Spatial opportunities to be explorative: creating potentials to allow the users to negotiate their own presence

Field of unpredictable potentials where familiar and unfamiliar converge

Material effects: reflections, refractions, symmetry, etc

Ageing, decay, dematerialisation, deposing, dissolving

Independence of the project

Life spans: maintenance, logistics, management

Use cycles: inhabitation, re-appropriation, adaptatation

Creating moments and fragments of friction, tension, fragility, temporality, unpredictability, uncertainty

Inorganic processes

Water management (barriers, waterways, polders, wastewater treatment)

Accumulations, transformations

Infrastructural networks

Sensual Ambiguity

Favouring conflicting programs and situations that are never resolved but remain revised by each user

Subverting habits and allow them to get into their own habit of changing themselves

Excess allowing for different or even contradictory interpretations and uses

No prescribed narrative of use allowing for the indetermination of different courses of action

Synesthetic experience of space activating all the senses

Constant renegotiation of energy and information flows

Chance operations activated under certain conditions

Relational qualities over those of individual objects

Relationality of meaning, asygnifing signs

Contradictory sensations that active or even confuse senses and encourage creative engagement

Supporting and strengthening both mentally and physically: mental, bodily and physical stimulation (tactile, haptic, thermal)

Challenge cycles of sustenance, needs and desires, habitual behaviours

Semantic Ambiguity

Time

Rituals, celebrations, repetitions, routines, regimes, schedules

Daily, weekly, monthly, yearly, seasonal cycles

How to challenge **intentionality** in architecture
by employing **ambiguity** as a design resource?

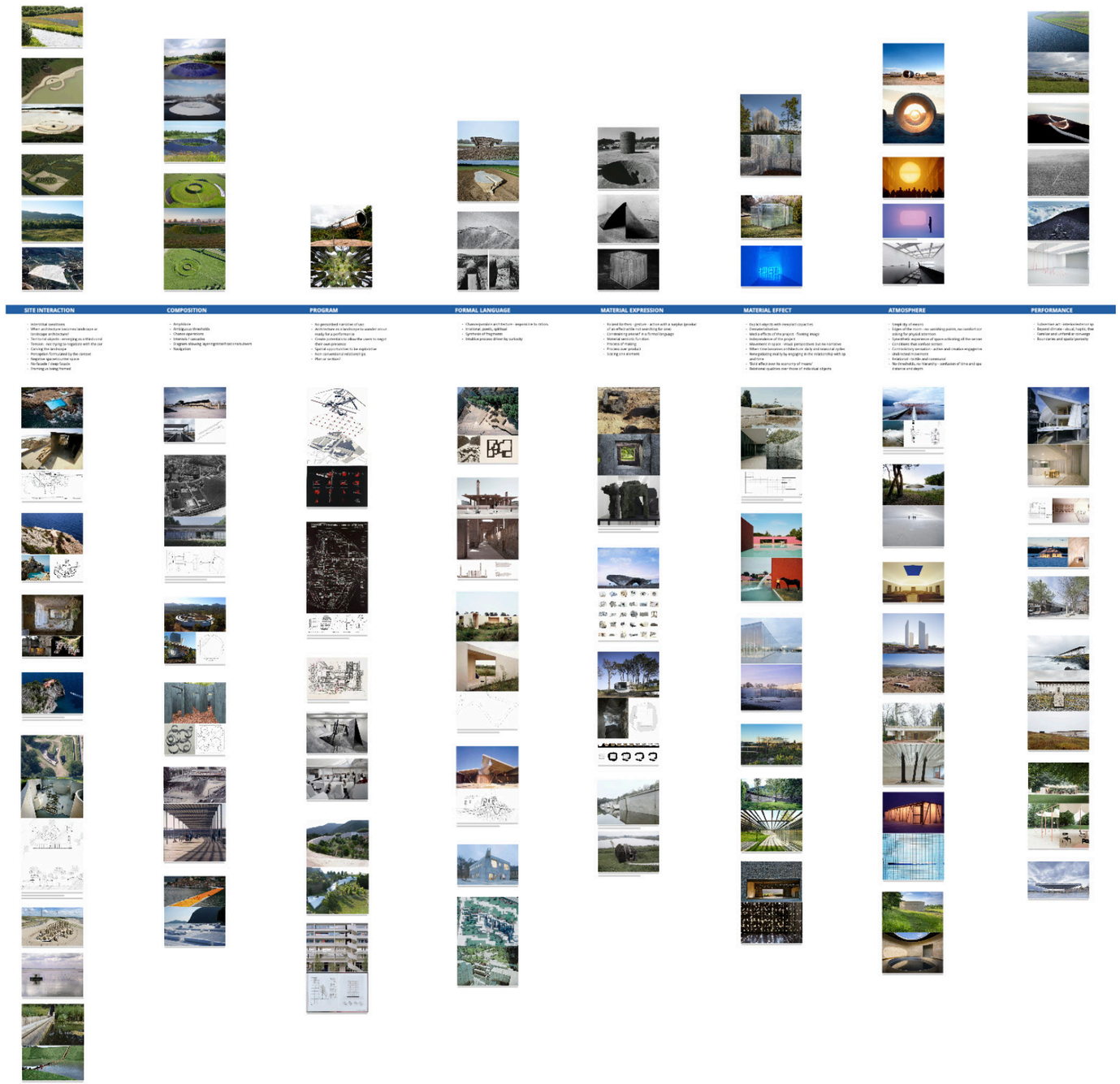
Research question

Interdisciplinary approach

More-than-human design

Anticipating change

Destabilisation



Ambiguity in architecture

Dynamic delta landscape

Site choice



Rhine–Meuse–Scheldt delta

Dynamic amphibious zone



Dutch dikes

Sealed system

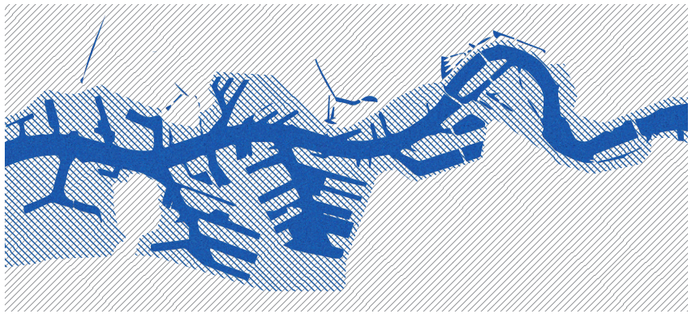


Katwijk / Dike in the dune

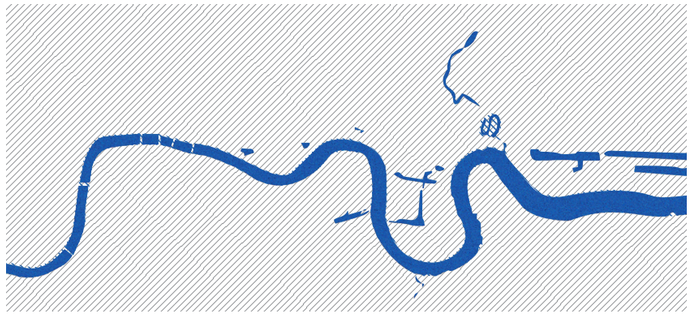
Multifunctional dike



Rotterdam and its delta



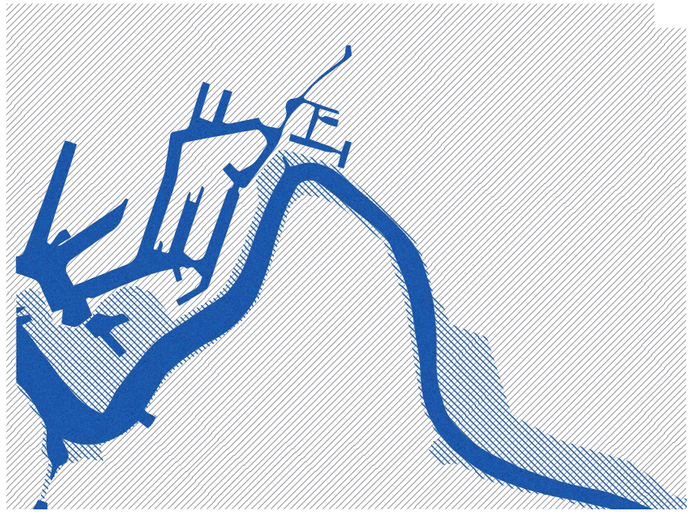
Rotterdam



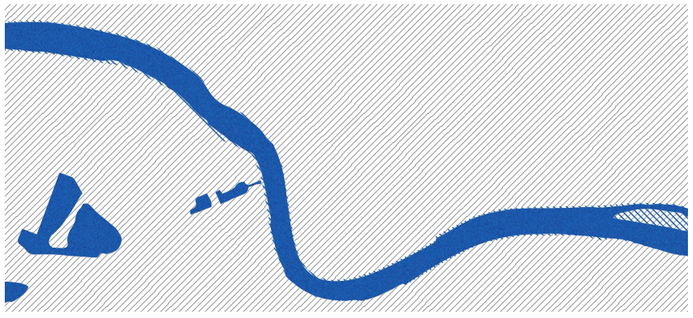
London



Hamburg

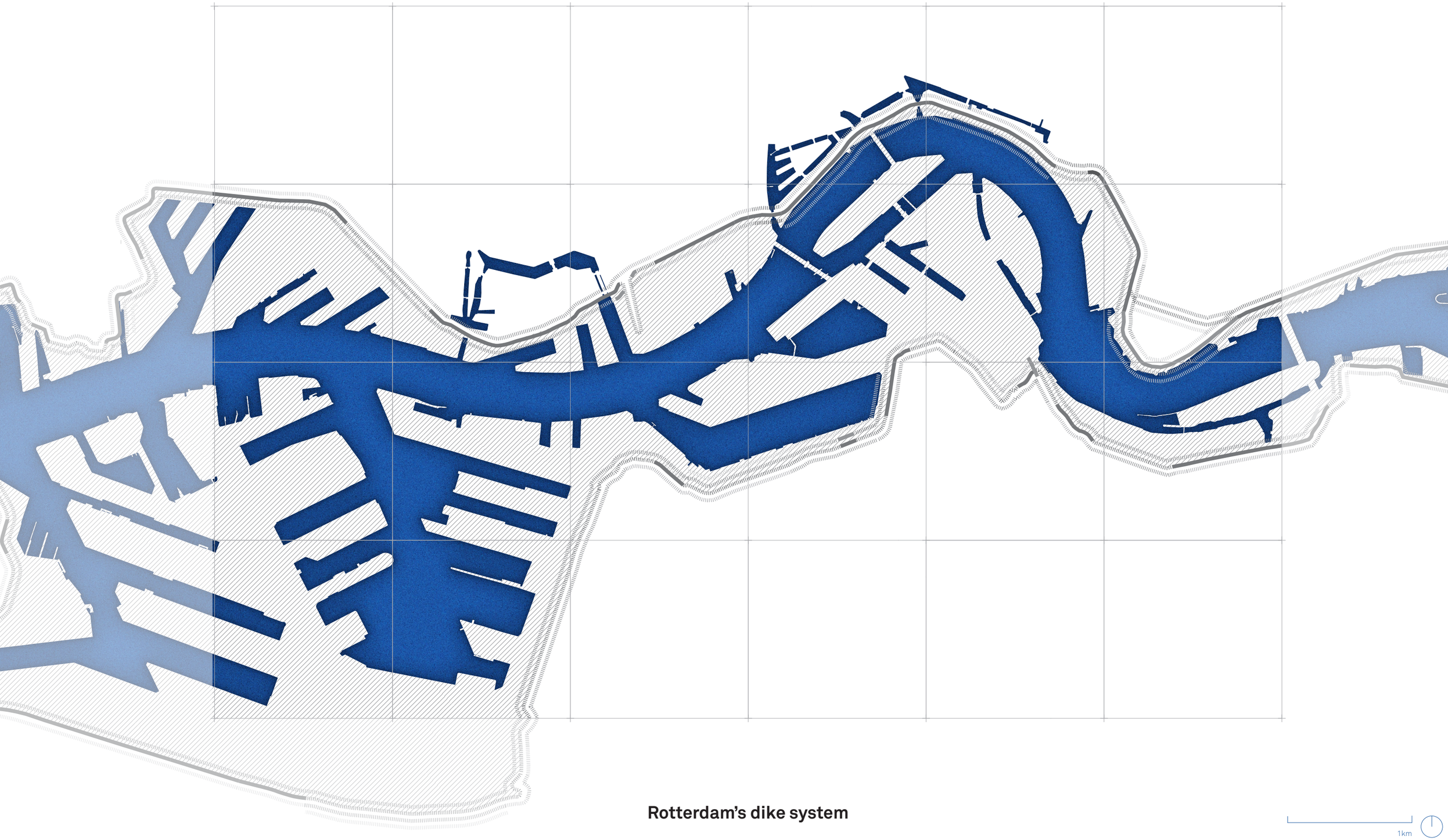


Antwerp



Bordeaux

Floodable areas outside the dike



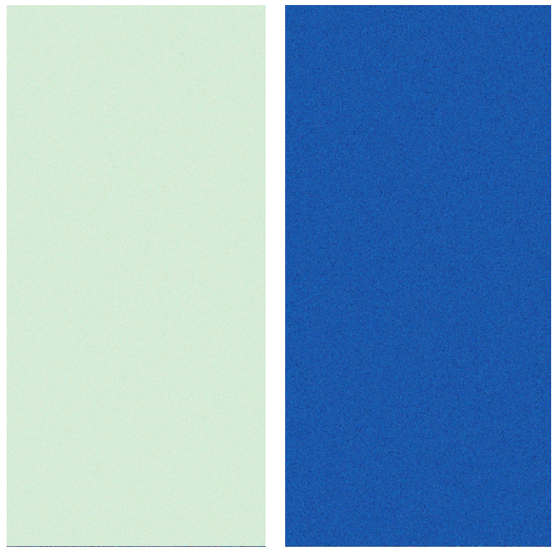
Rotterdam’s dike system

1km

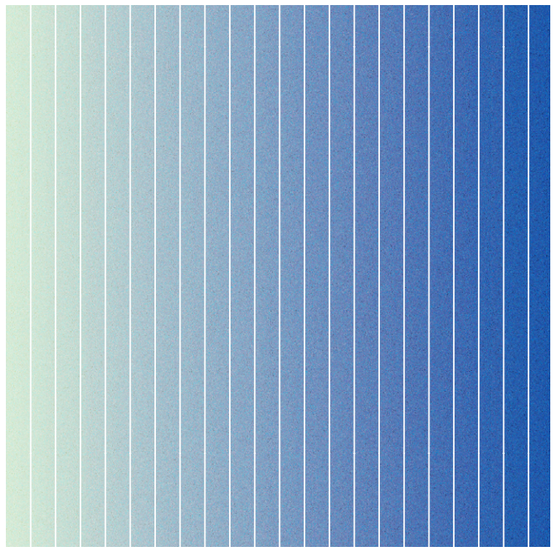


Rotterdam / Noordereiland

Outer-dike Rotterdam

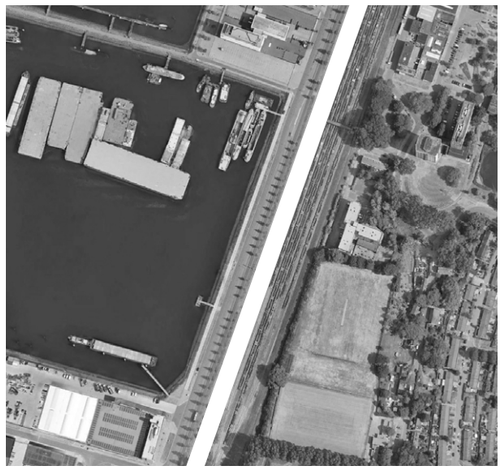


Excluding

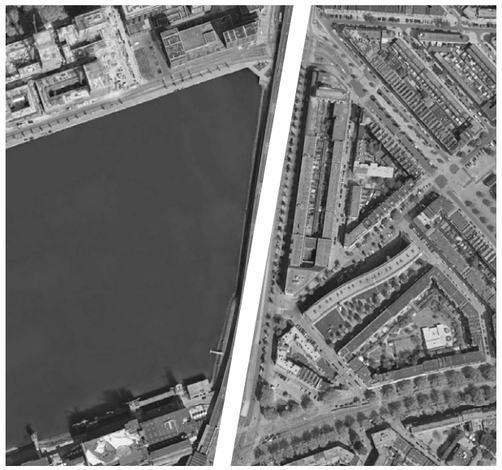


Negotiating

From line to buffer zone



Waalhaven



Maashaven



Rijnhaven



Maasboulevard



De Esch



Mallegatpark

Selected locations

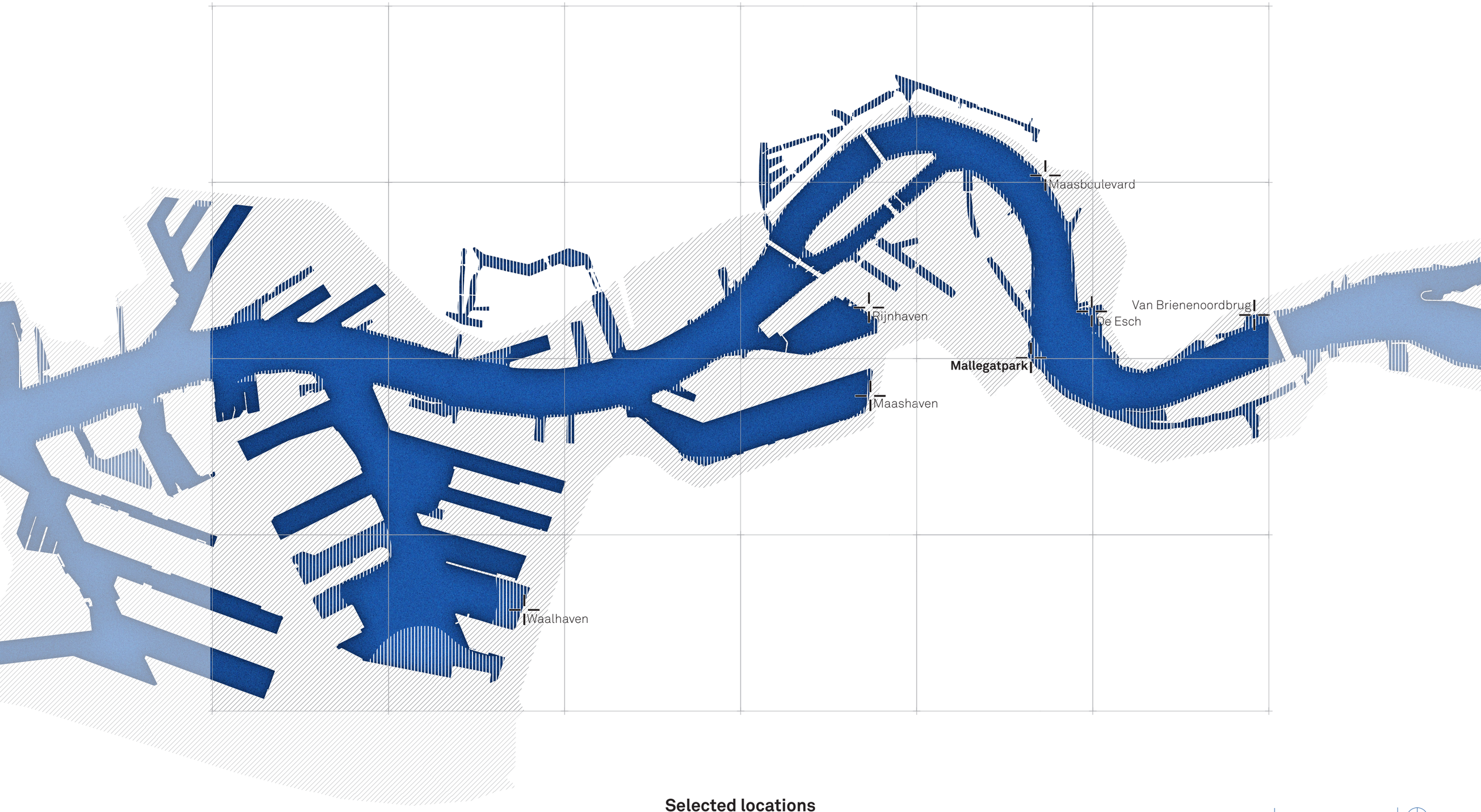
Intensification of conflicts

Outer-dike area

Land development

Climate change

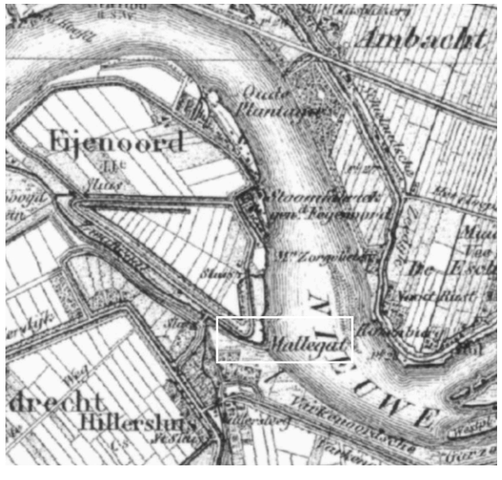
Mallegatpark

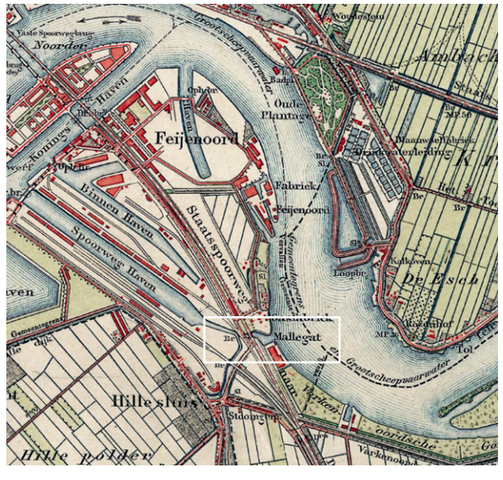


Selected locations

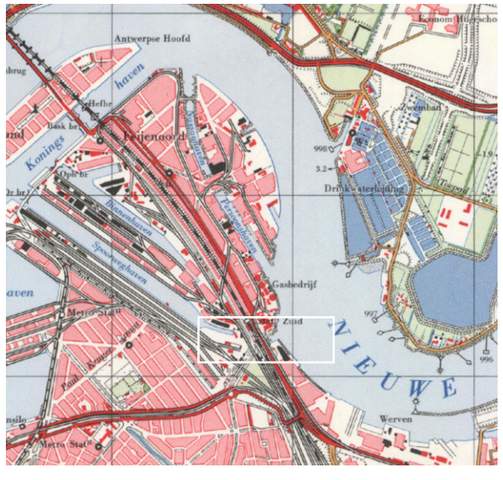
Mallegatpark

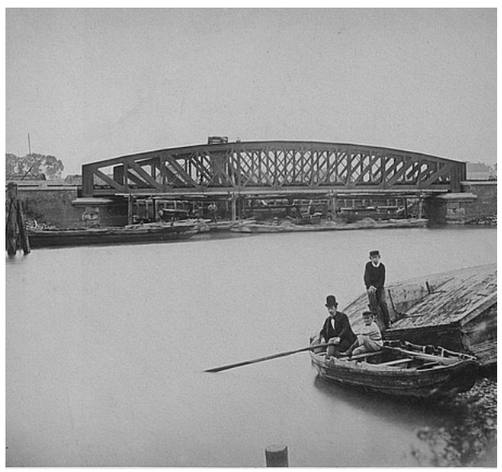
Reading of the status quo



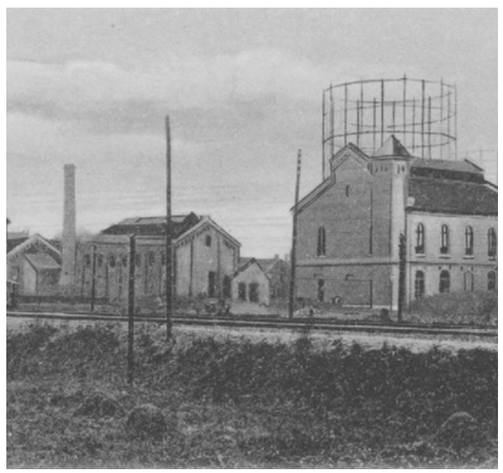








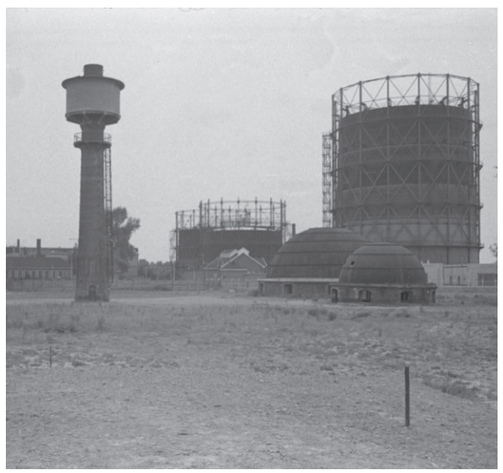
1877 / Bridge



1905 / Gasfabriek



1928 / Zwembad Mallegat



1962 / Gasfabriek closure

Timeline of Mallegat

Mallegatpark

Location

200m

Mallegatpark

Dike

200m

Kop van Zuid

Feijenoord

Afrikaanderwijk

Mallegatpark

Hillesluis

Oud
Ijsselmonde

Adjacent districts

200m


Mallegatpark
50m



16/10/21

Mallegatpark



Found objects



21/05/21



24/06/21

Gas domes and water tower



16/10/21



16/10/21

Gas factory facilities


Found objects
50m



21/05/21



21/05/21

Football field / Fishing pier

Rail

50m



16/10/21

Rotterdam Zuid station

Berth

50m



16/10/21

Berth

Traffic flow

50m



10/07/21

Traffic flow

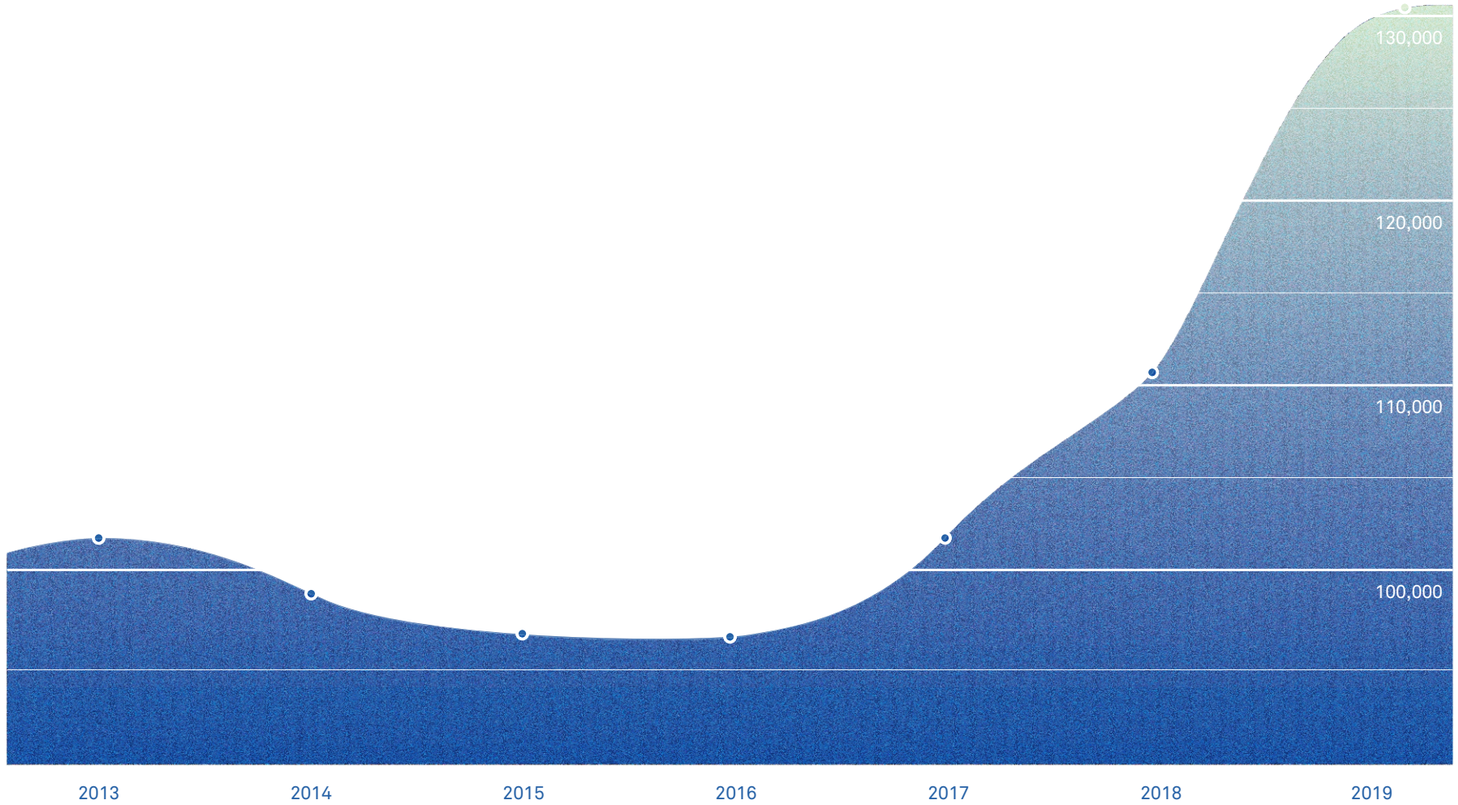
Storage and port facilities

50m


Albeda college
50m

Residential area

50m



Feijenoord population

Line of separation

50m



10/07/21

Line of separation



21/05/21



16/10/21

Line of separation



21/05/21



10/07/21

Line of separation

Design proposal

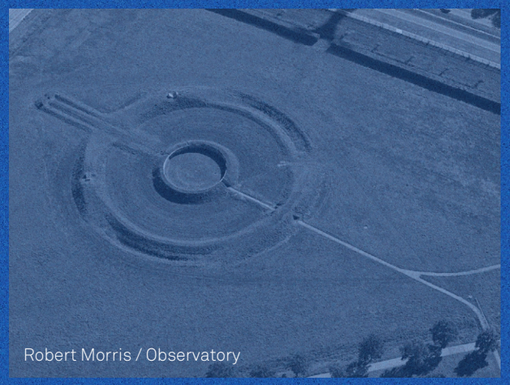
Buffer zone of thresholds

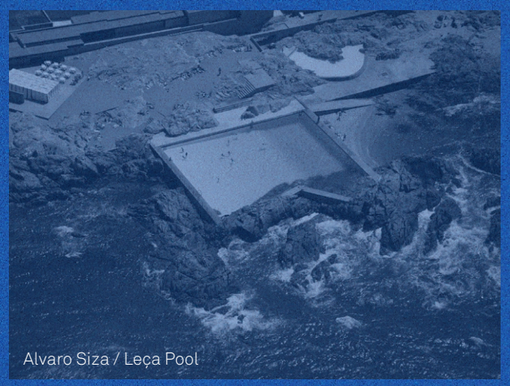
Line of separation

50m

Ground conditions

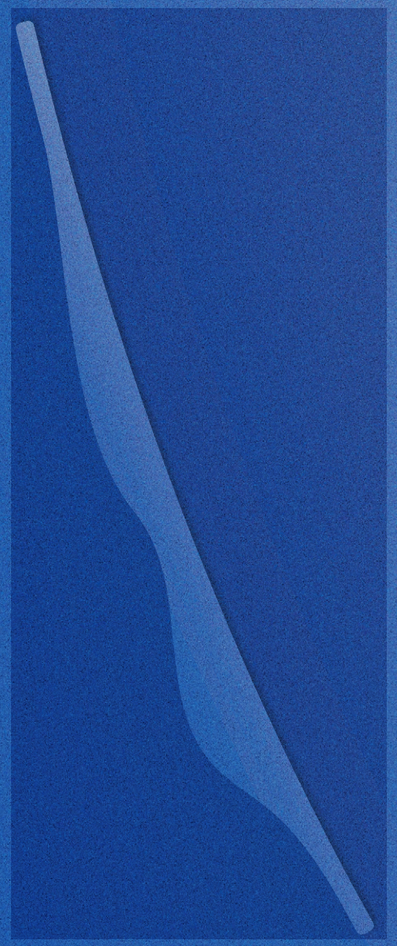
50m


Robert Morris / Observatory


Alvaro Siza / Leça Pool


Renaturation of the River Aire


Harmony Park Tidal Pool



Breakwater island

50m



Atelier Deshaus / Riverside Passage



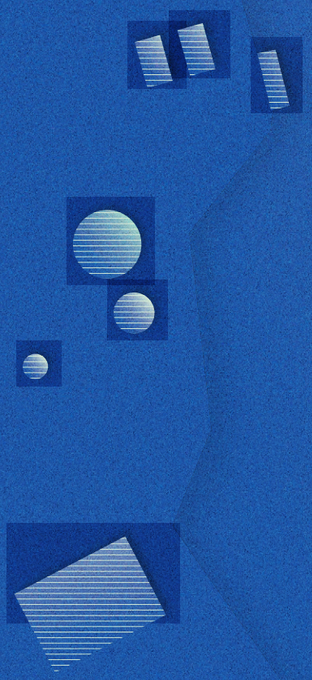
Gilles Clement / Tiers Paysage Garden

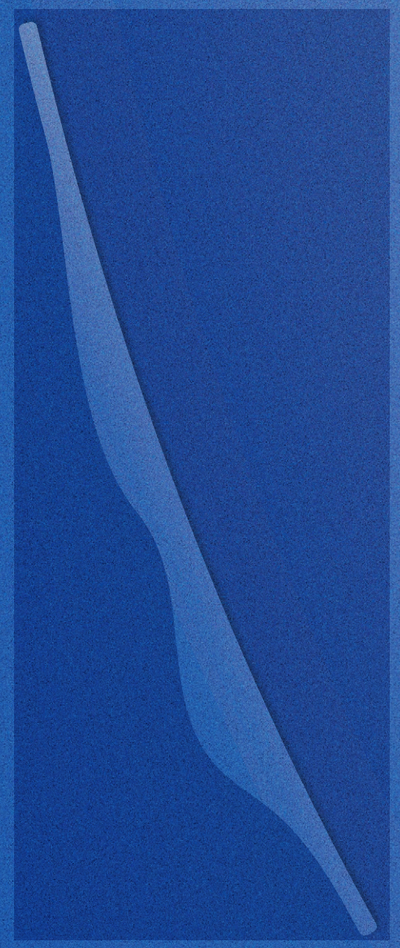


RAAAF / Bunker 599



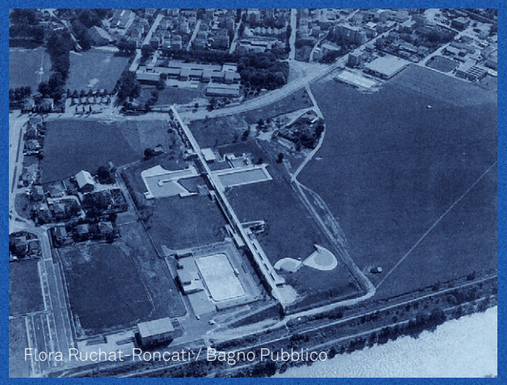
Tadao Ando / Pinault Collection

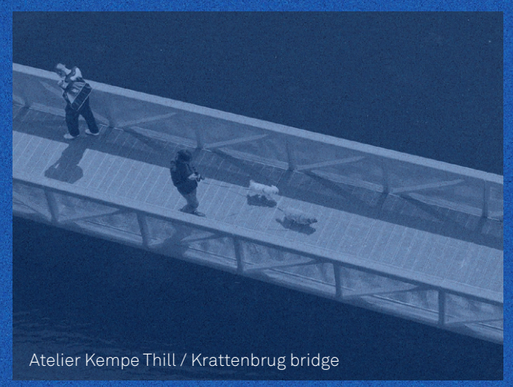


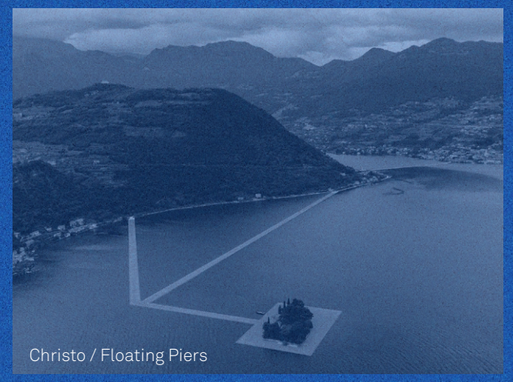


Found objects

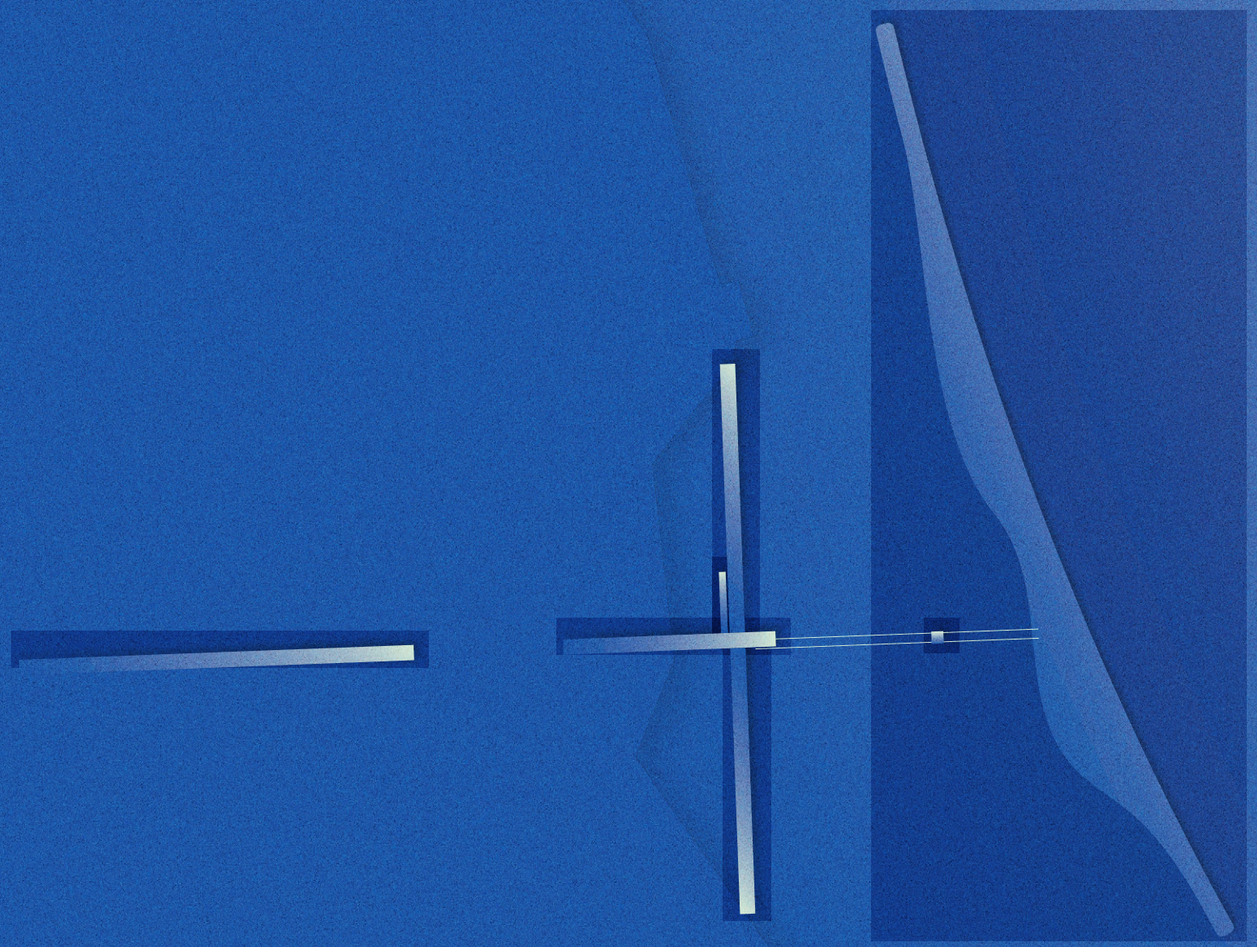
50m


Flora Ruchat-Roncati / Bagno Pubblico


Atelier Kempe Thill / Krattenbrug bridge


Christo / Floating Piers


RO&AD / Mozes Brug

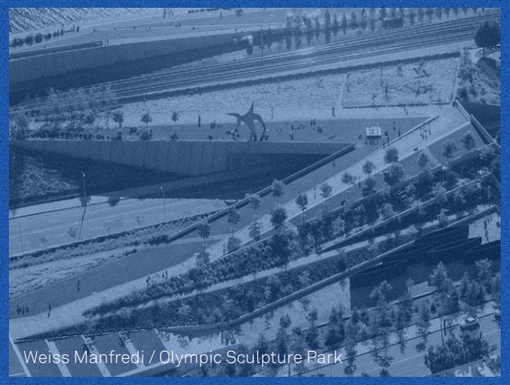


Connecting axis

50m


Kathryn Gustafson / Jardins de l'Imaginaire


Mayslits Kassif / Tel Aviv Port


Weiss Manfredi / Olympic Sculpture Park

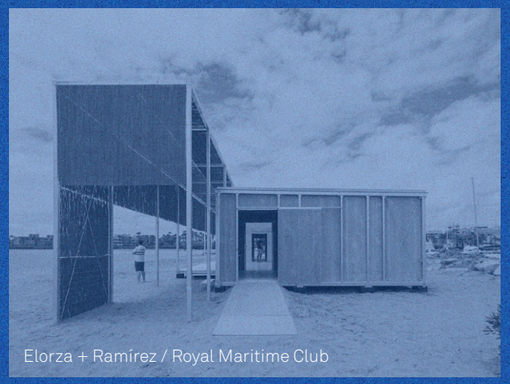

Alvaro Siza / Leça Pool



Activated surfaces

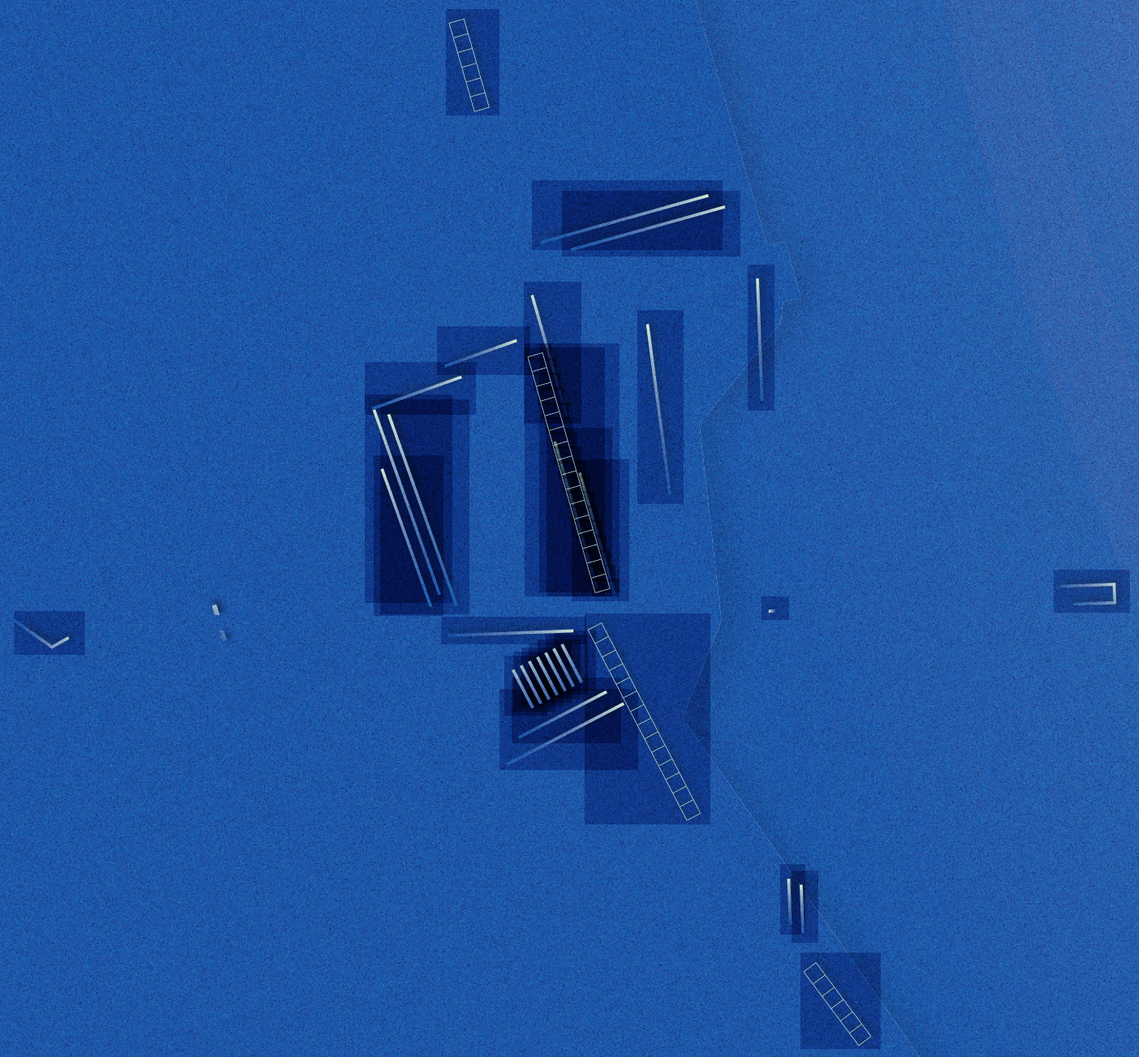
50m


Richard Serra / Sea Level


Elorza + Ramírez / Royal Maritime Club

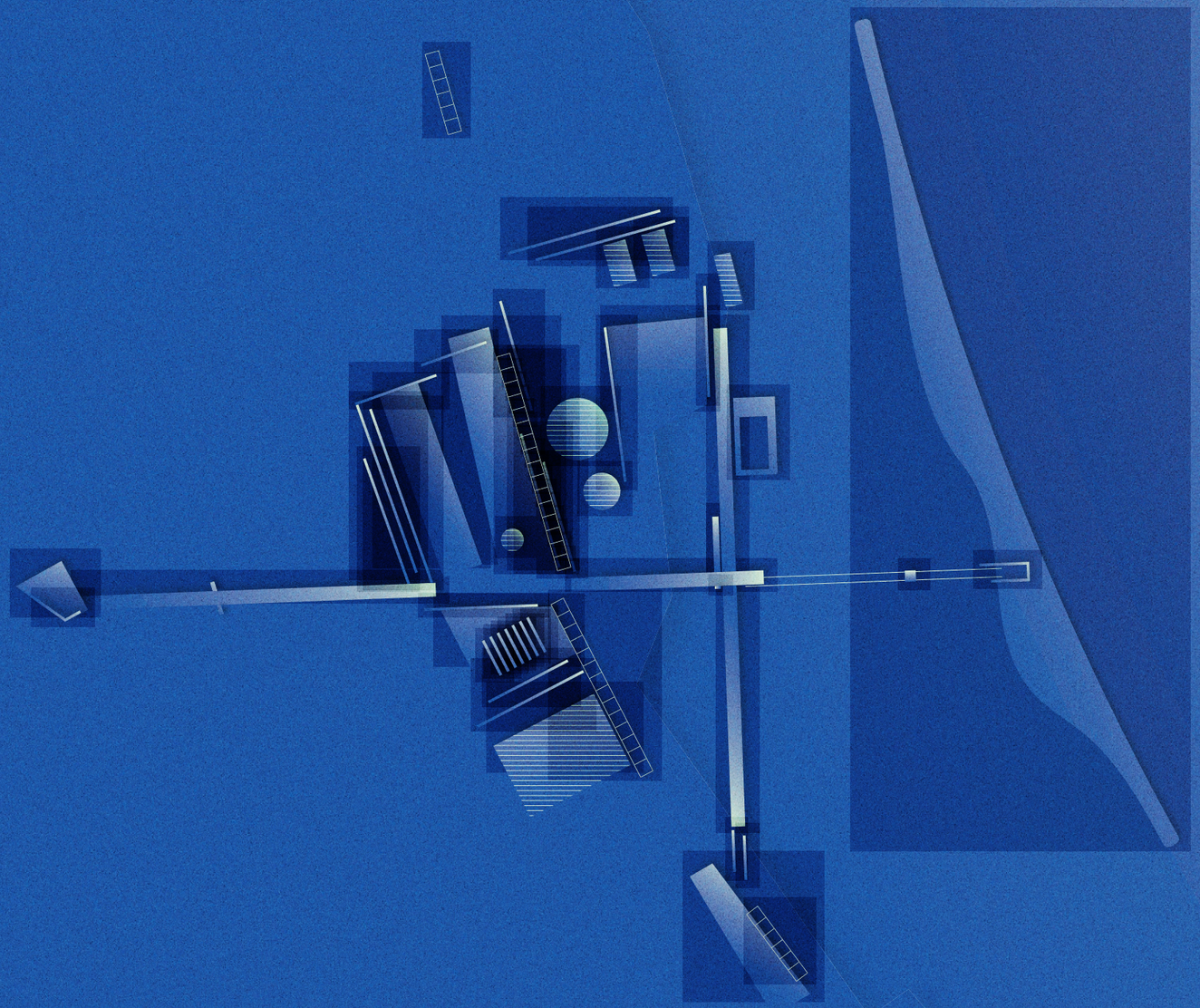

Peter Zumthor / Steilneset memorial


Edoardo Tresoldi / Simbiosi



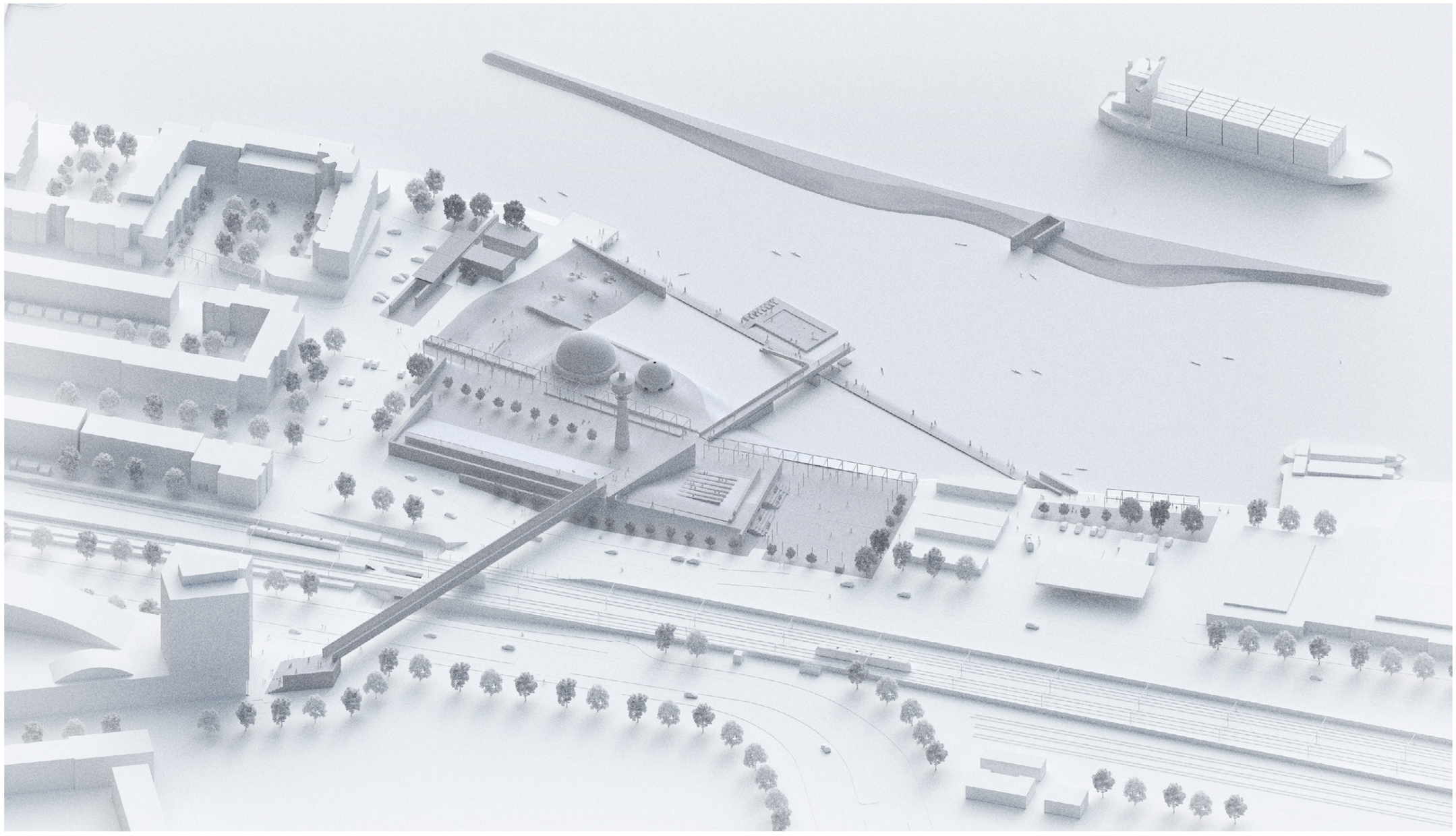
Formative structures

50m



New ground conditions

50m



Buffer zone of thresholds

East / West axis

Urban zone

Transit zone

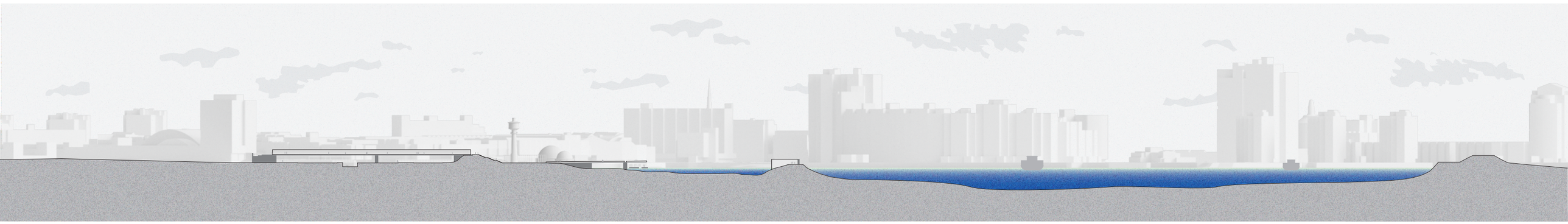
Recreation grounds

Tidal channel

Breakwater island

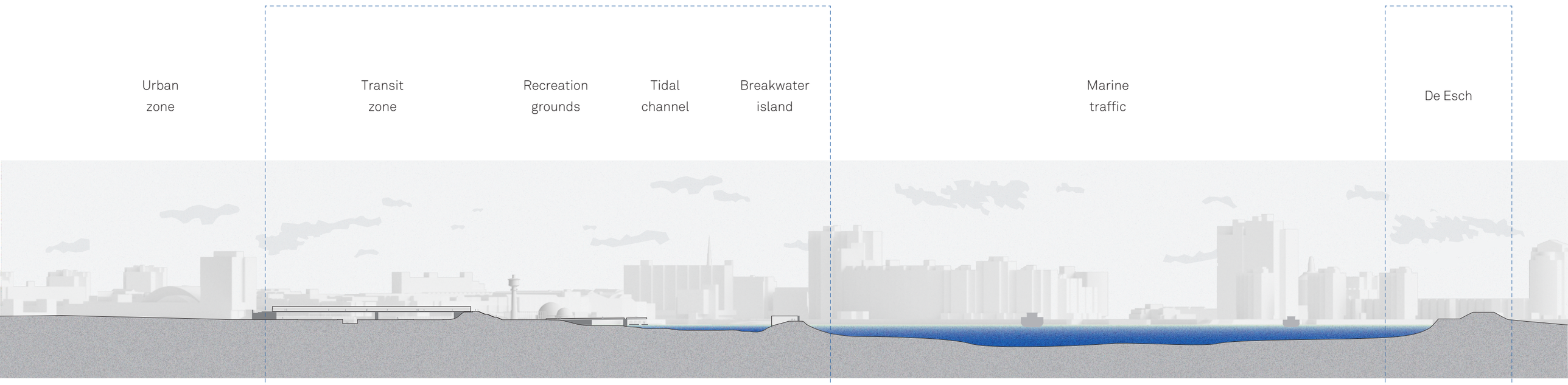
Marine traffic

De Esch



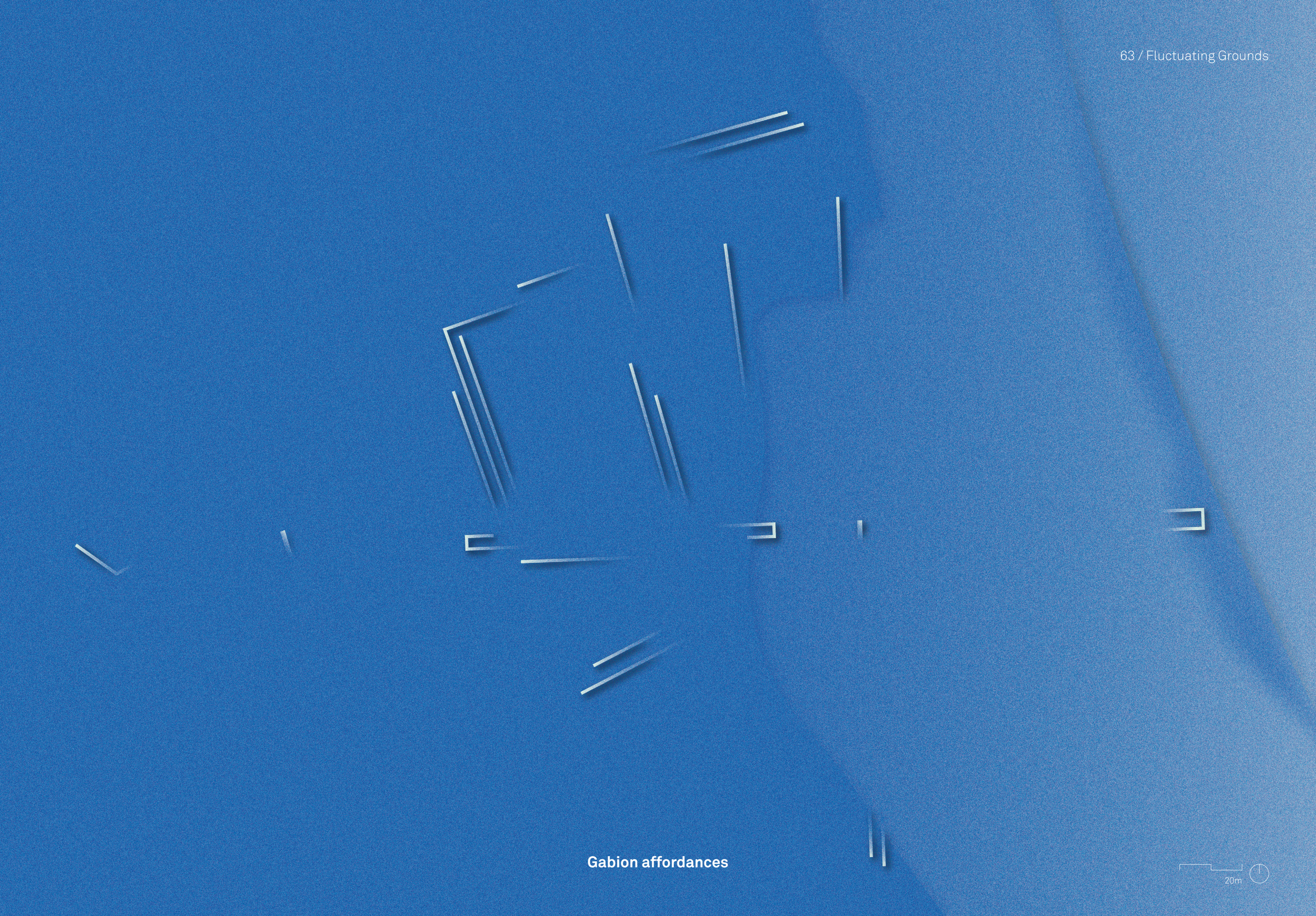
East / West axis

20m



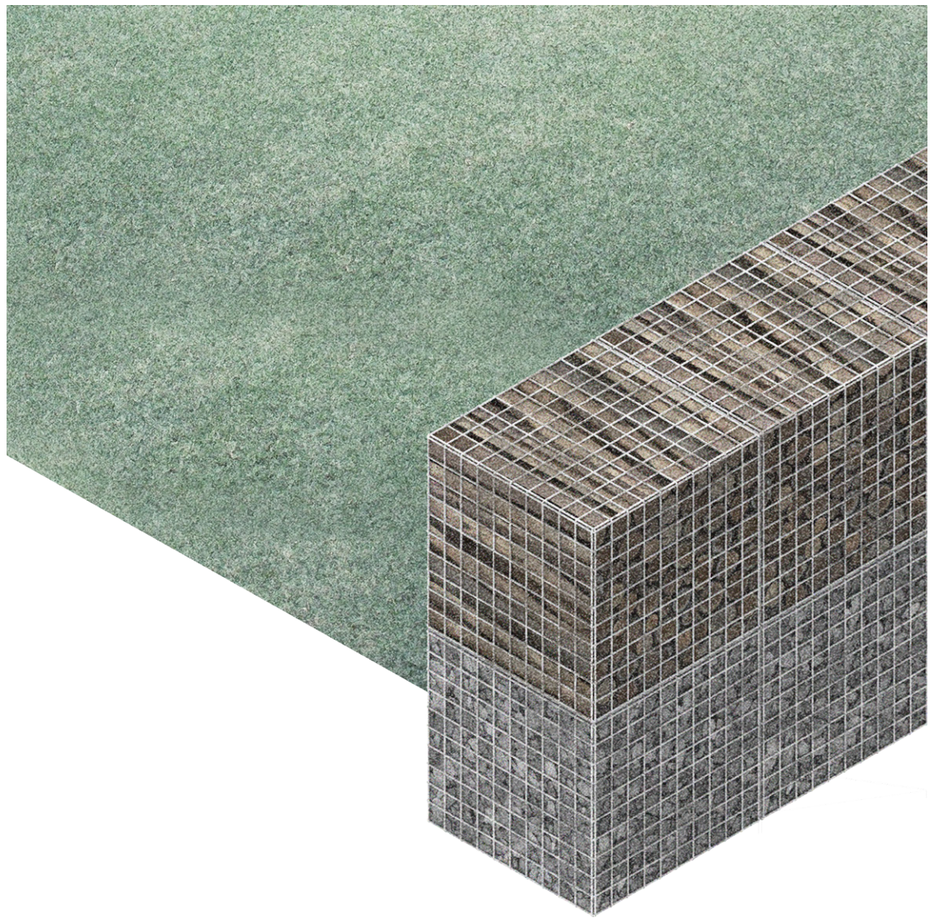
East / West axis

20m

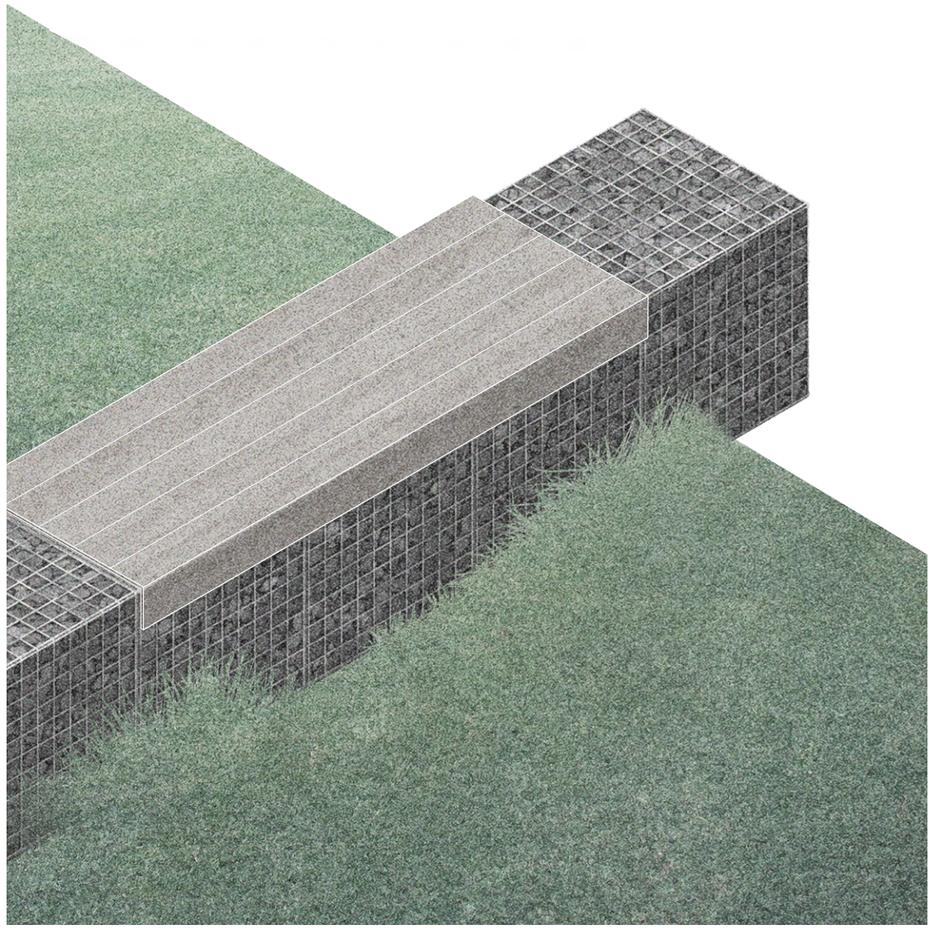


Gabion affordances

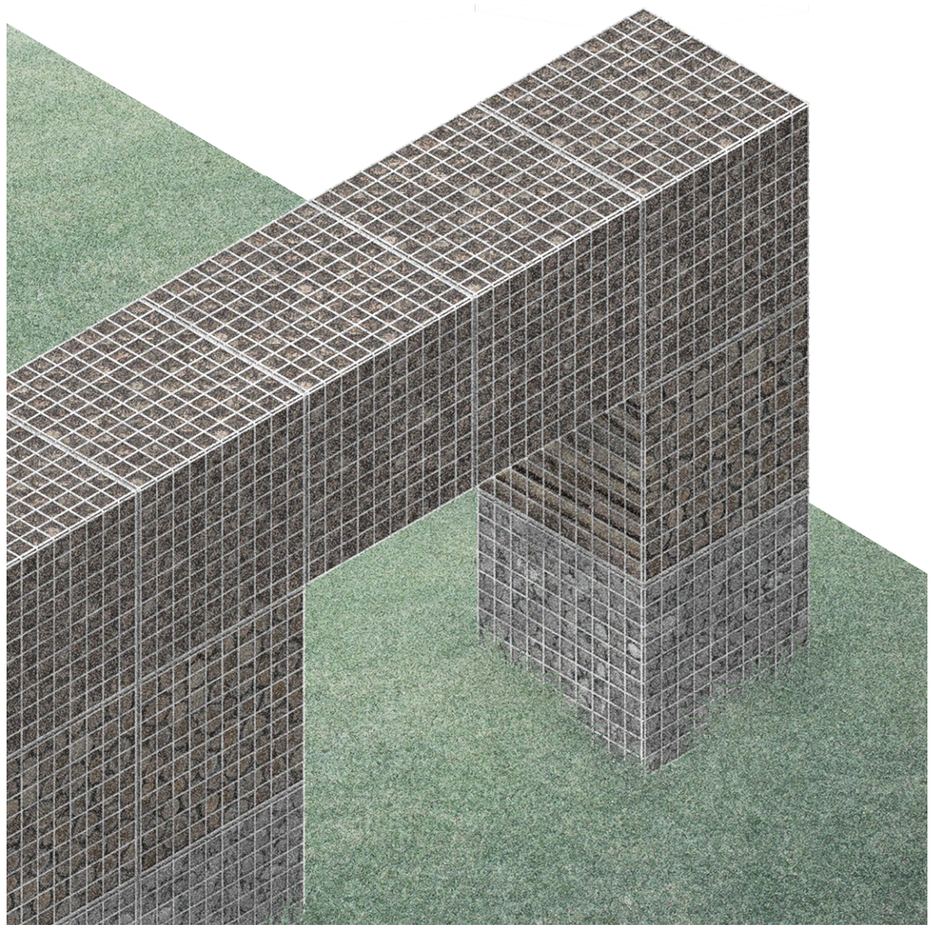
20m



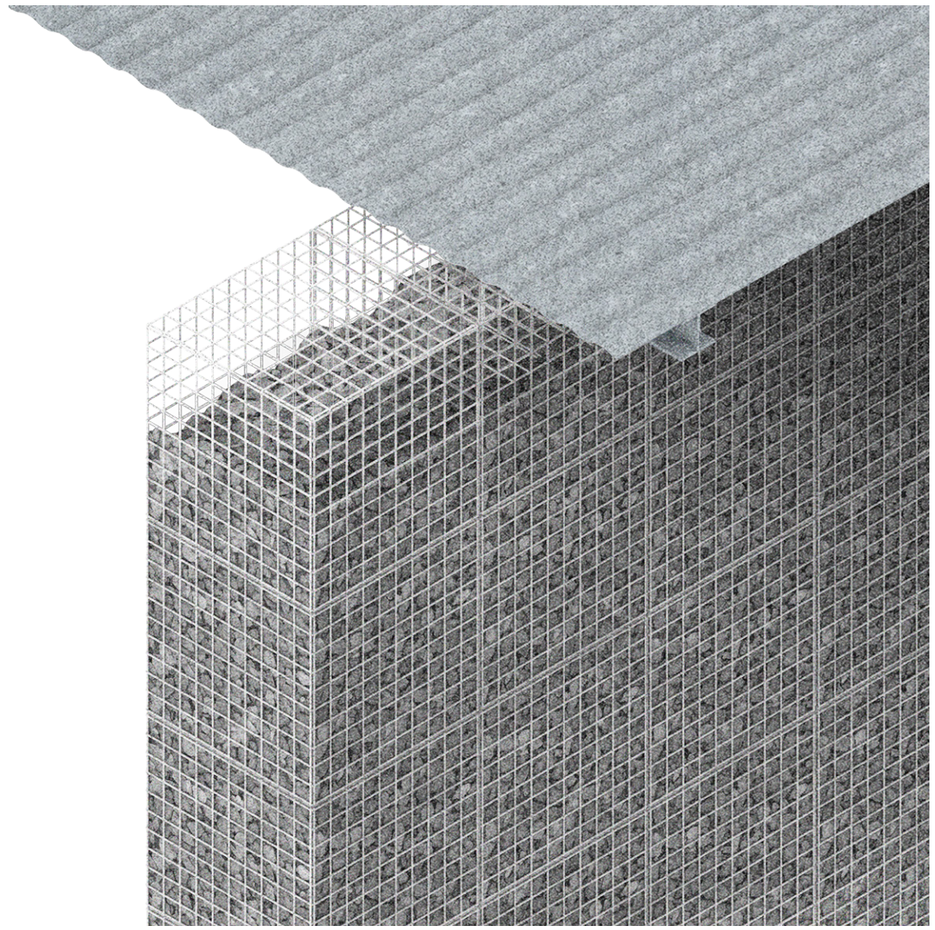
Retaining



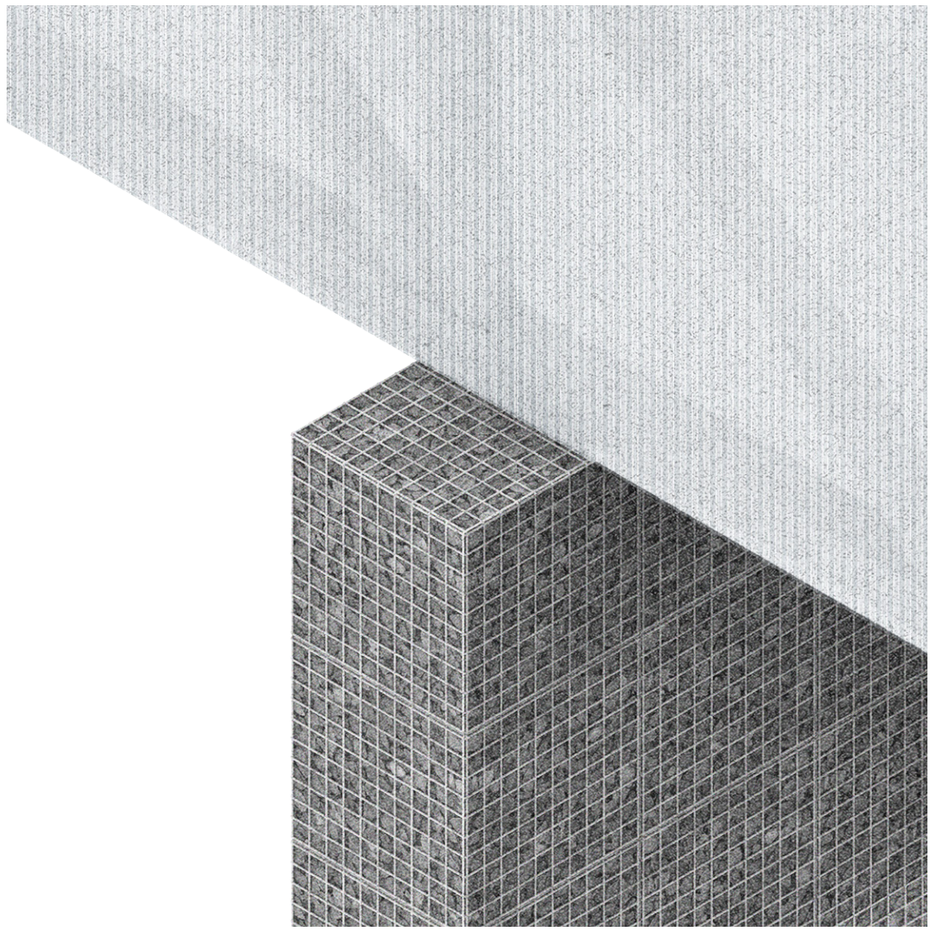
Seating



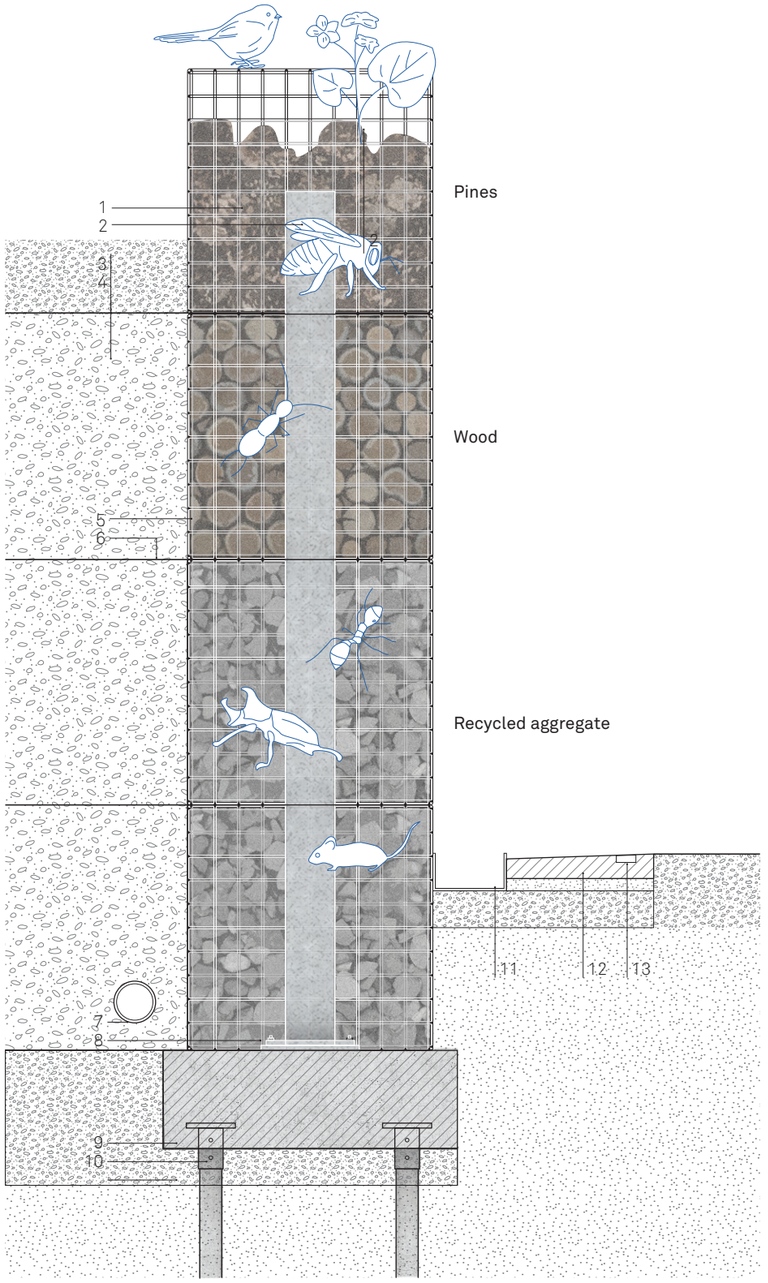
Framing / Separating

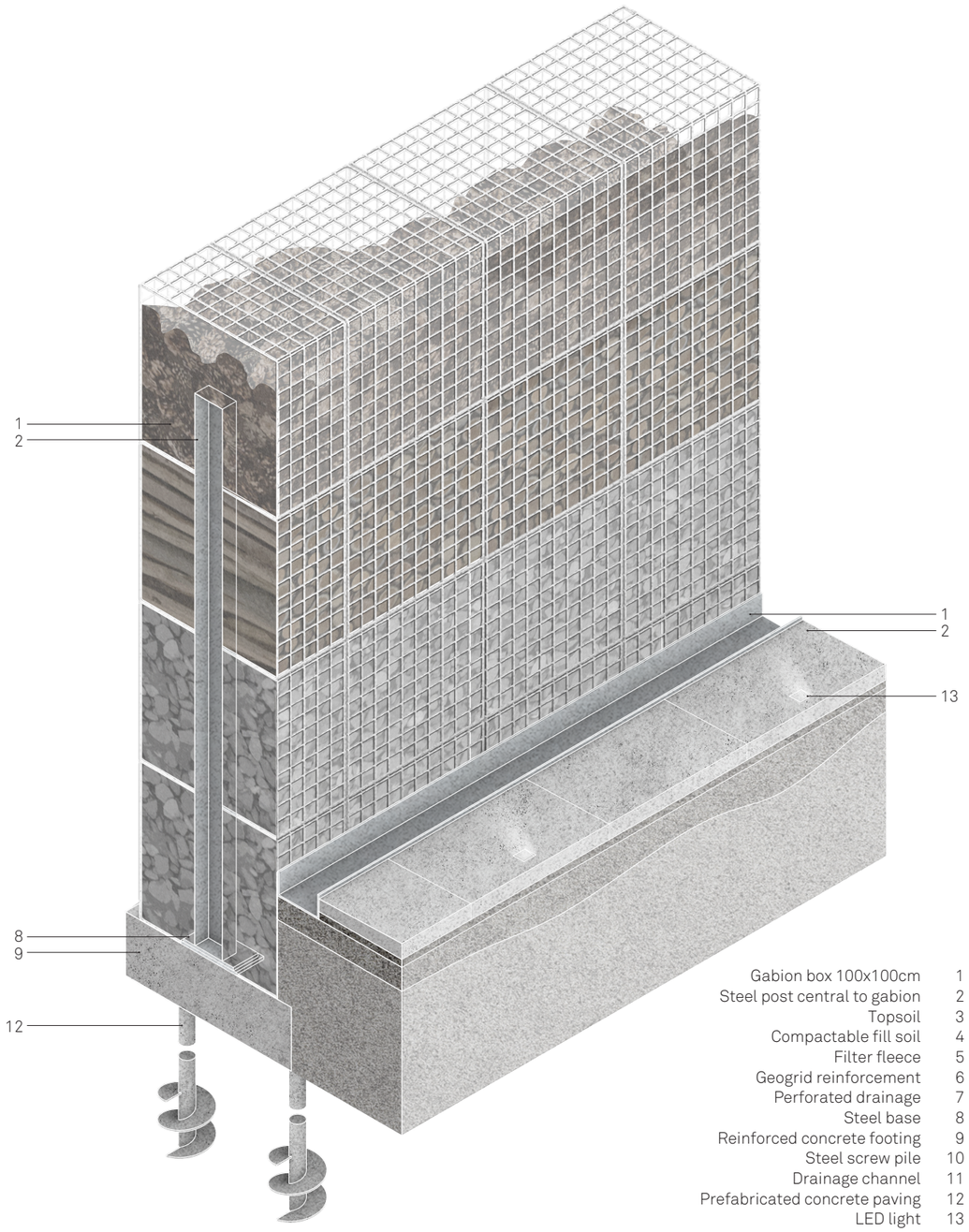


Protecting



Supporting





Gabion box 100x100cm	1
Steel post central to gabion	2
Topsoil	3
Compactable fill soil	4
Filter fleece	5
Geogrid reinforcement	6
Perforated drainage	7
Steel base	8
Reinforced concrete footing	9
Steel screw pile	10
Drainage channel	11
Prefabricated concrete paving	12
LED light	13

Gabion habitat

Urban podium

Sky bridge

Central stair

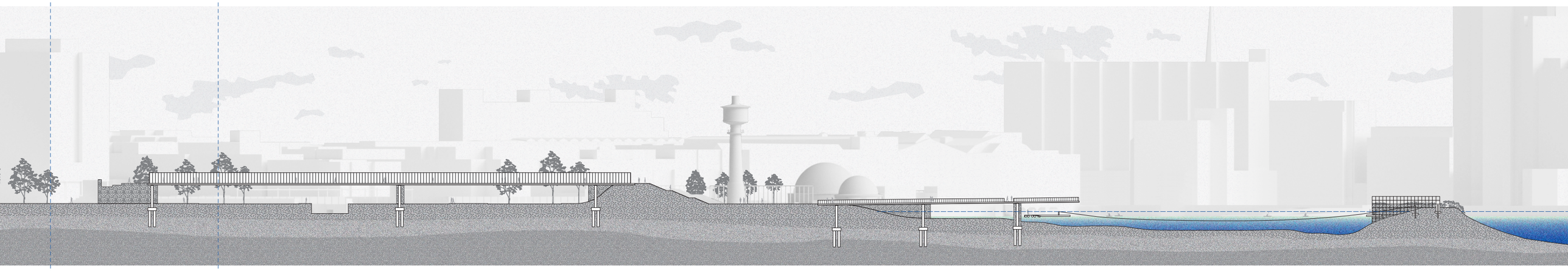
Factory artefacts

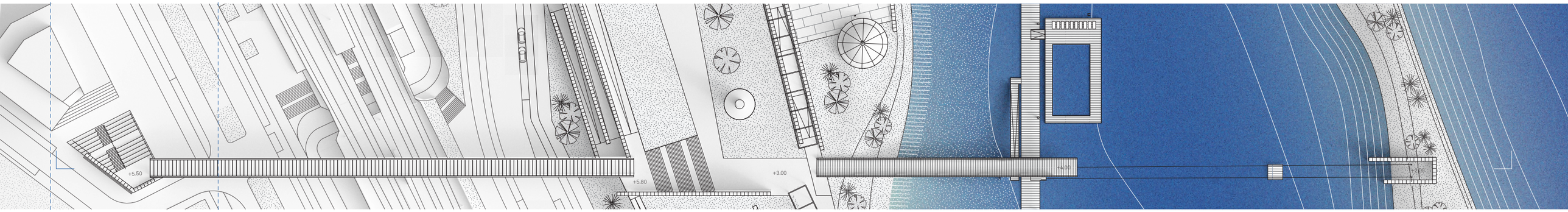
Sheltering jetty

Floating deck

Island raft

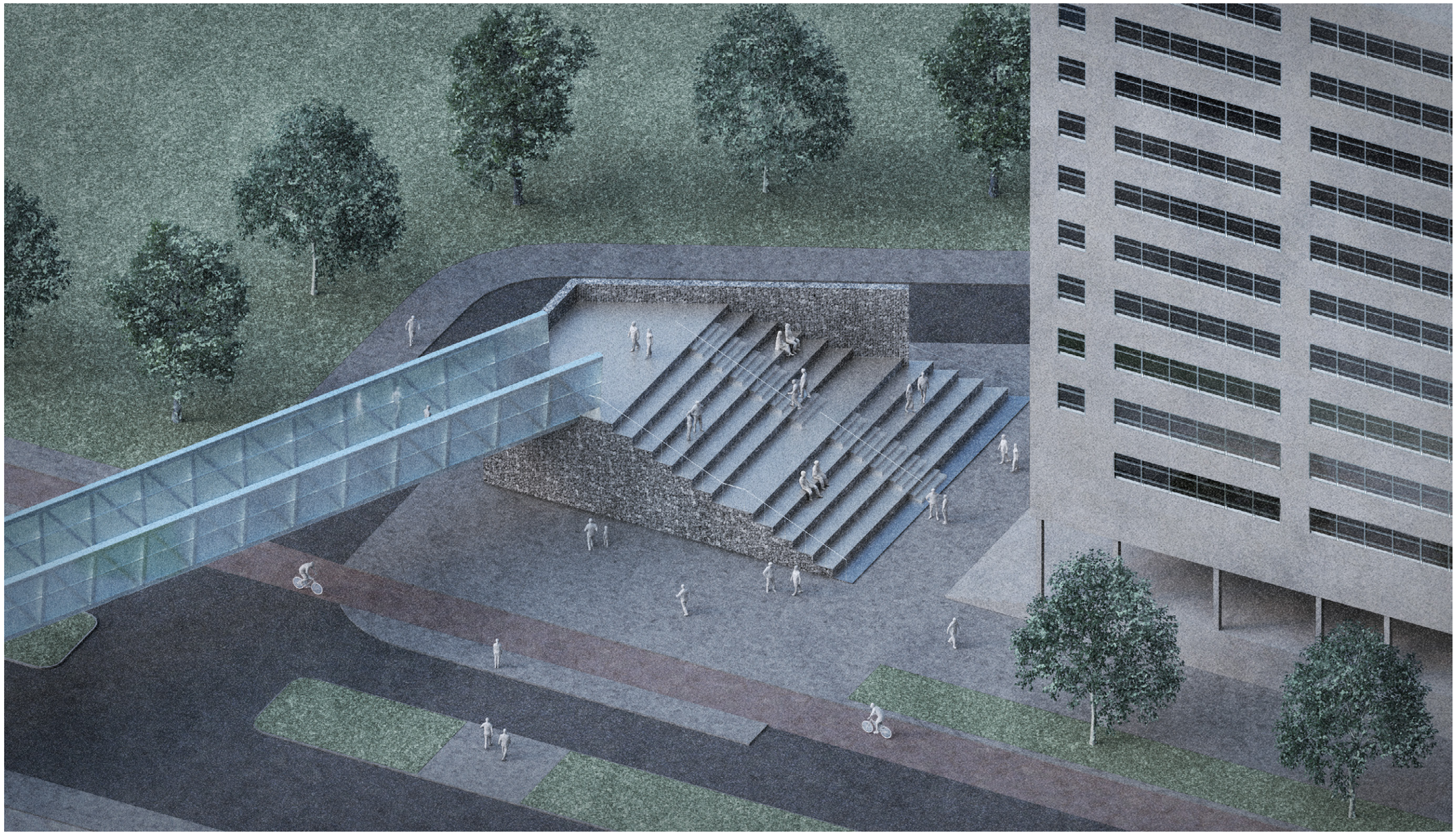
Breakwater island



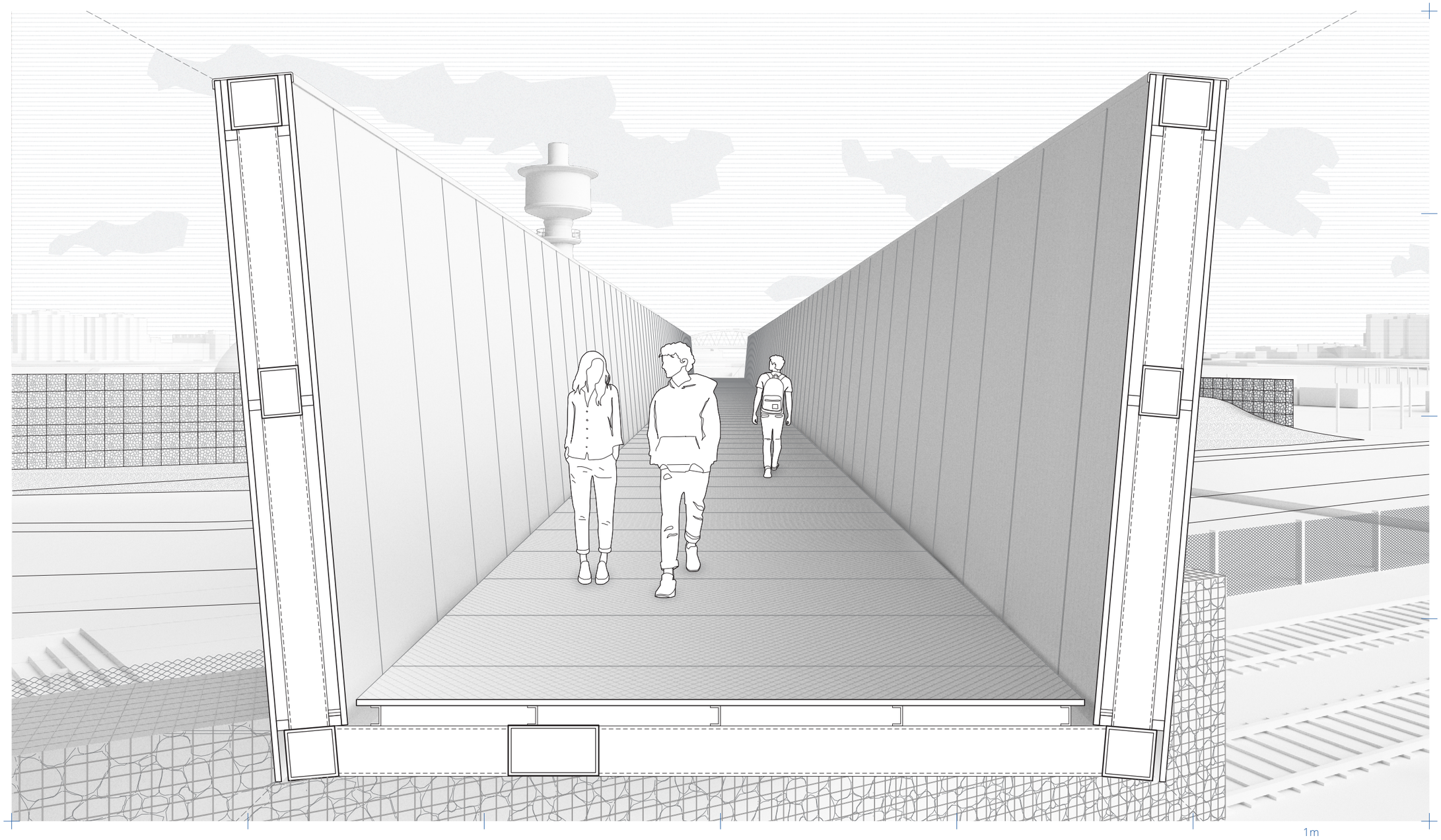


East / West axis

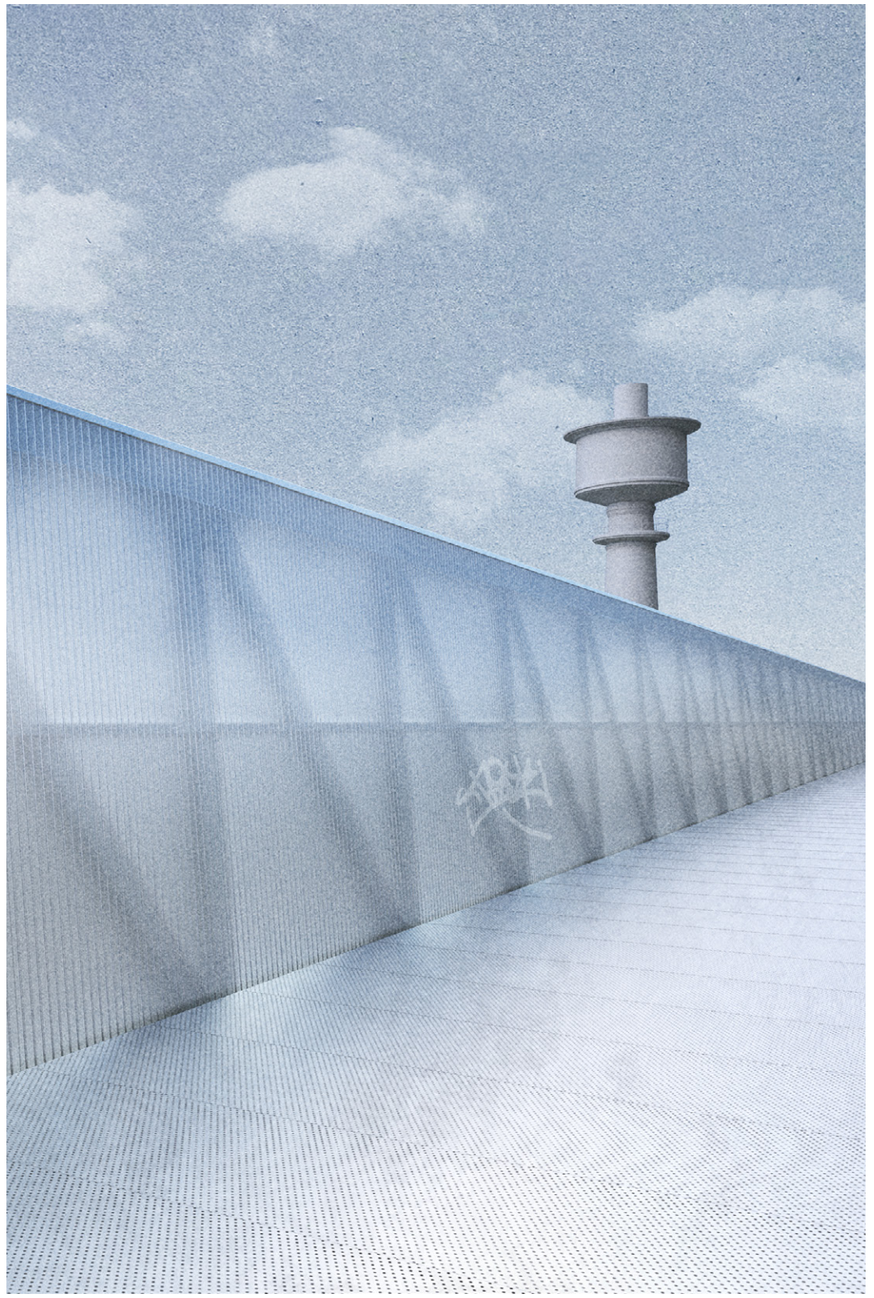
20m



Urban podium



Sky bridge



November, 2-8pm

Sky bridge

Urban podium

Sky bridge

Central stair

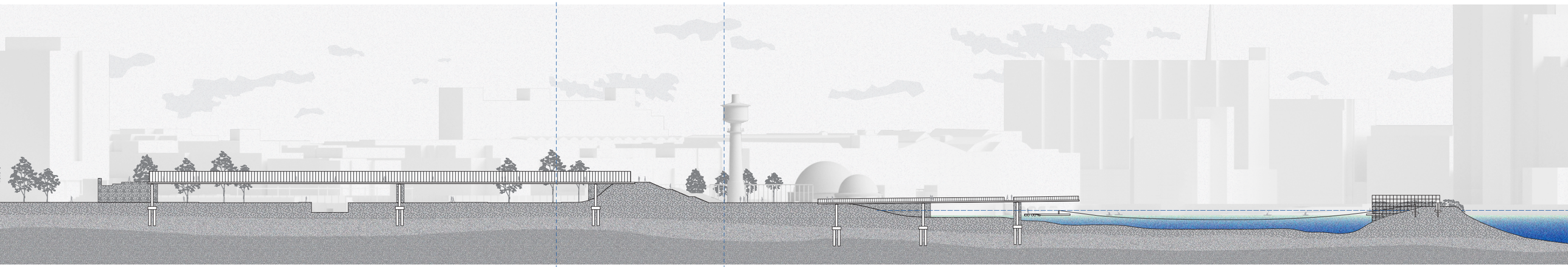
Factory artefacts

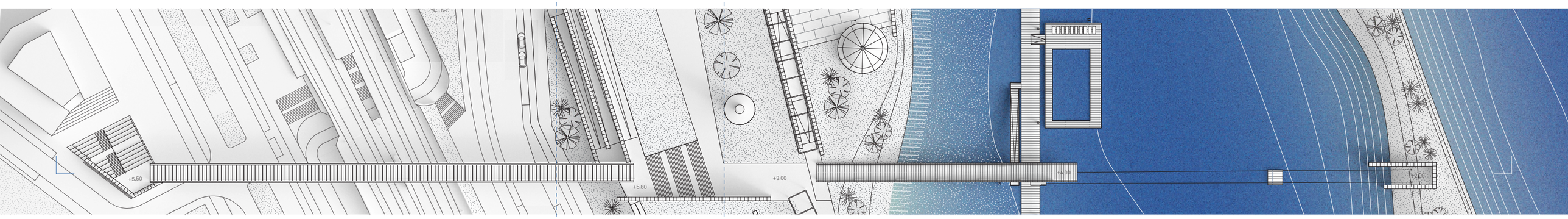
Sheltering jetty

Floating deck

Island raft

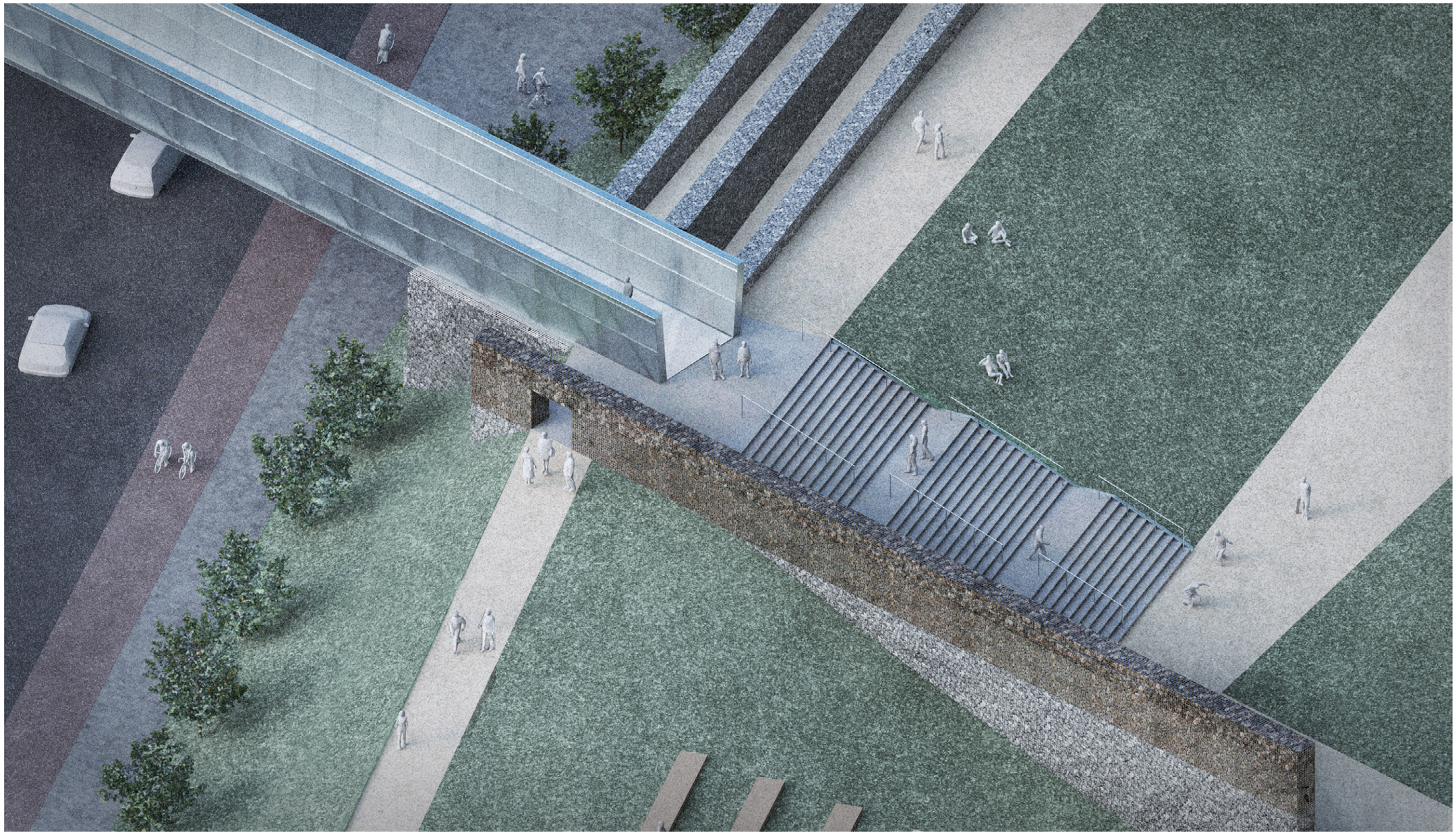
Breakwater island



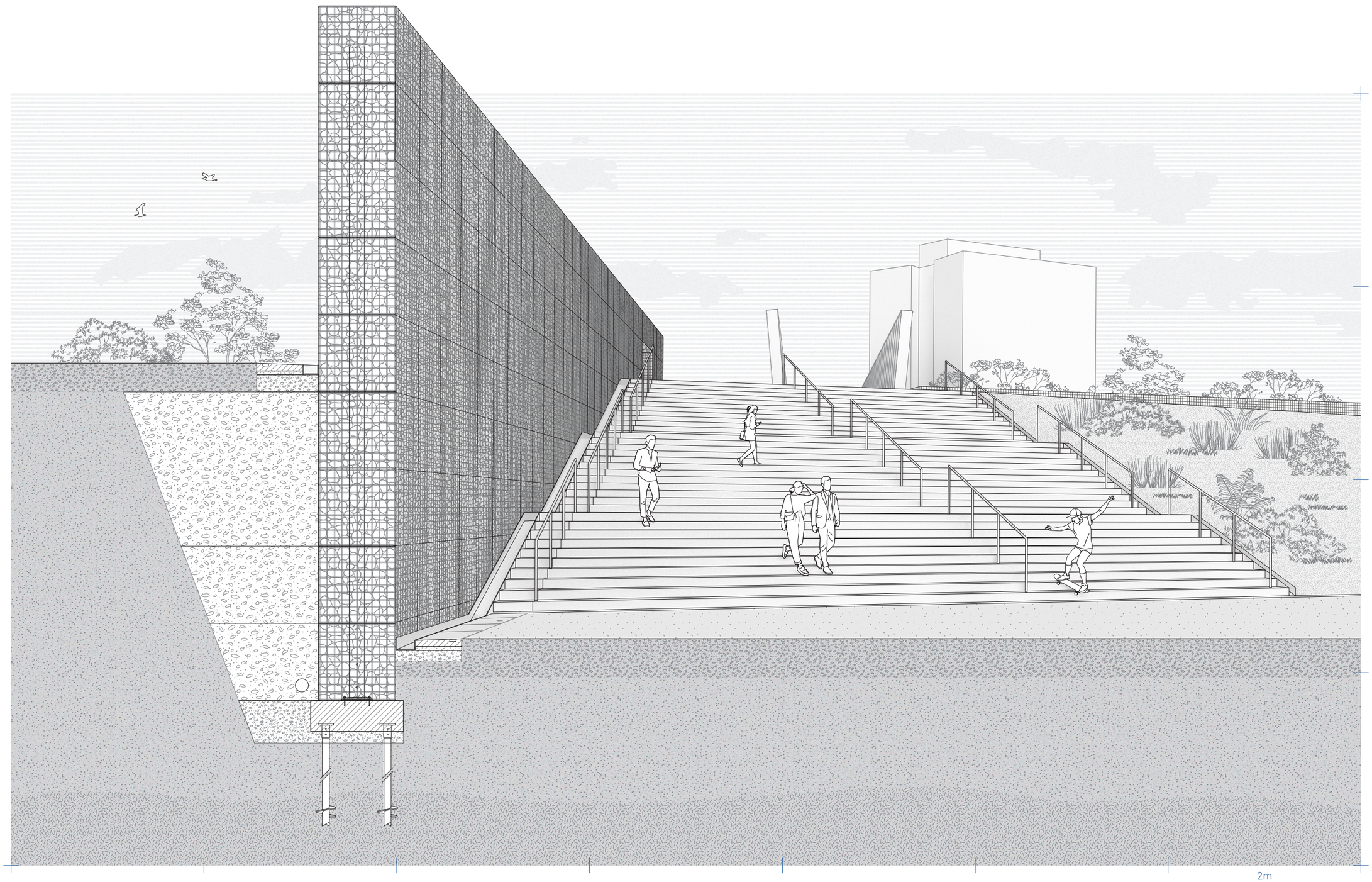


East / West axis

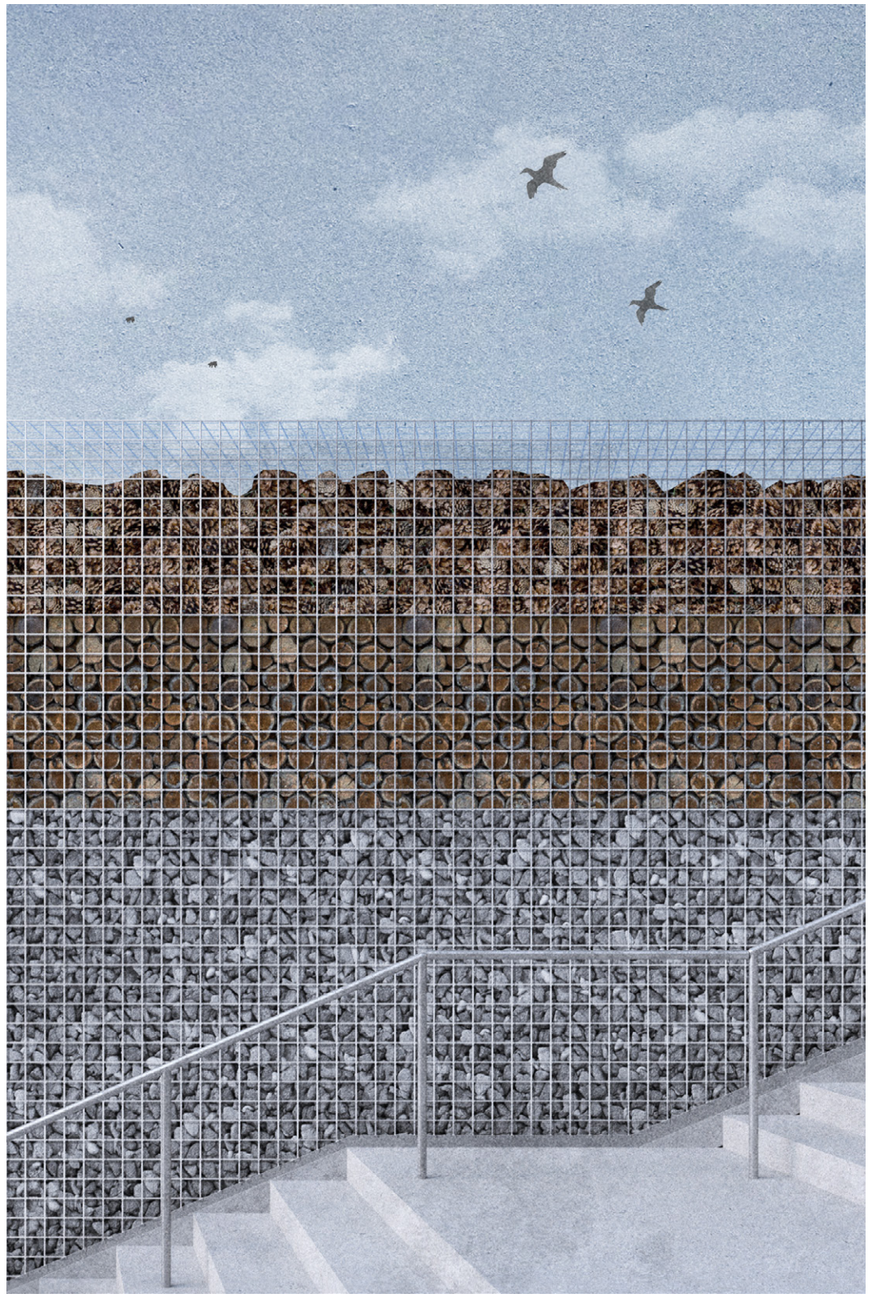
20m



Gabion partition



Gabion support



May, 8am

Gabion support

Urban podium

Sky bridge

Central stair

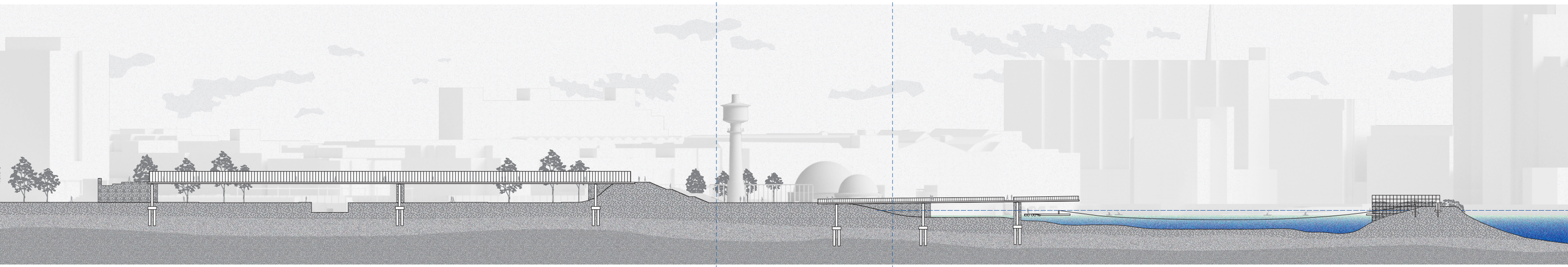
Factory artefacts

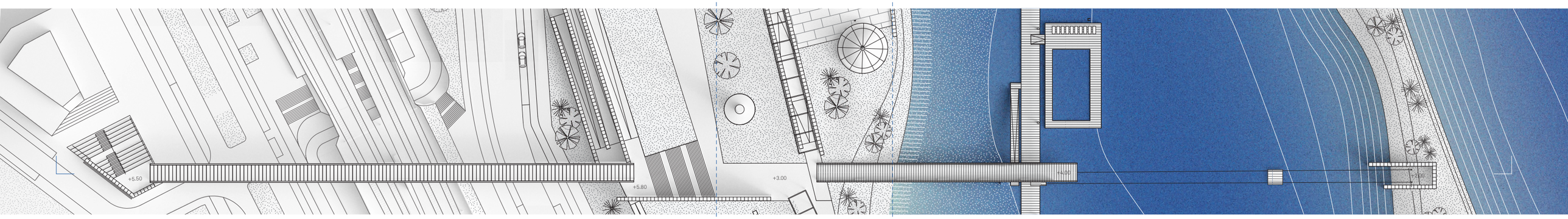
Sheltering jetty

Floating deck

Island raft

Breakwater island



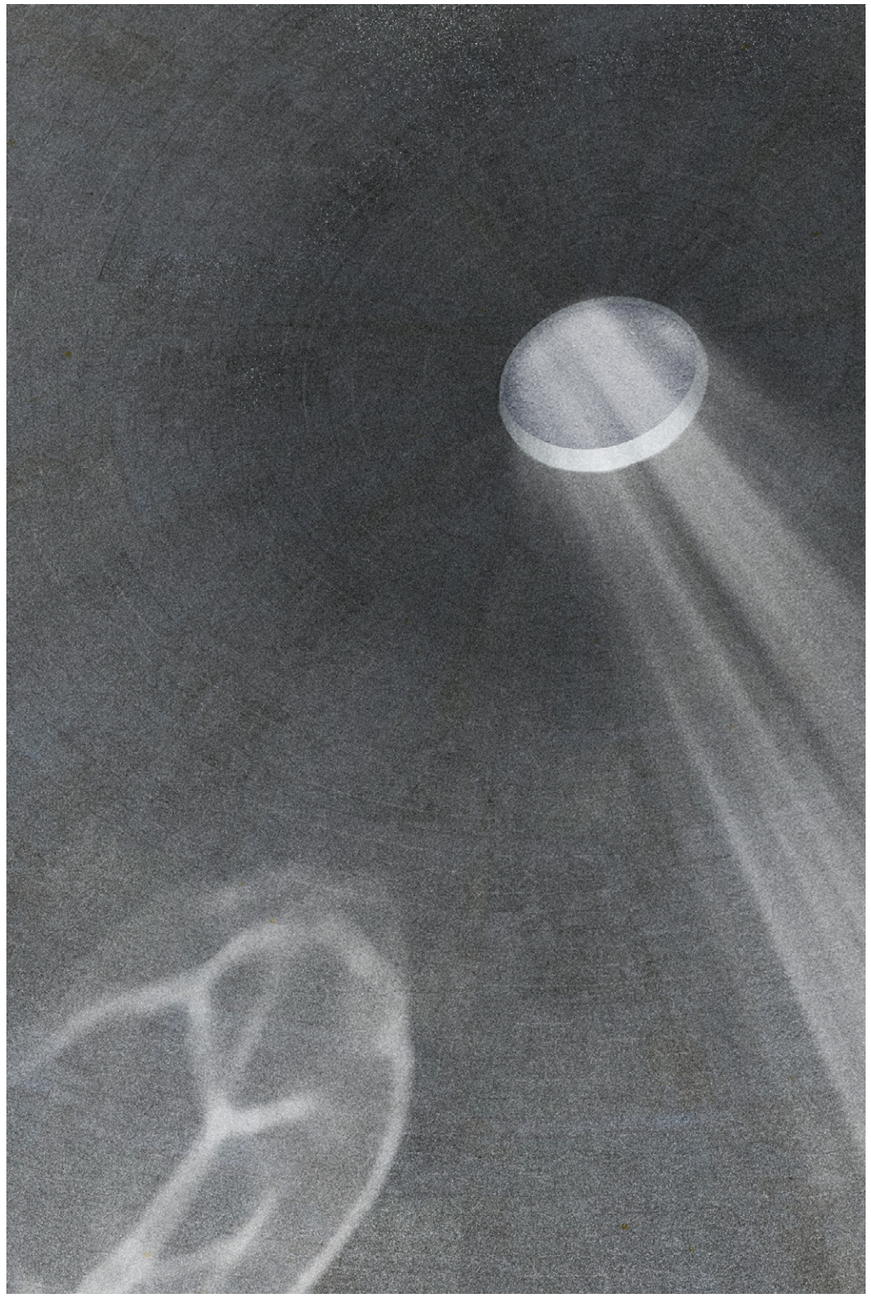


East / West axis

20m

Domes

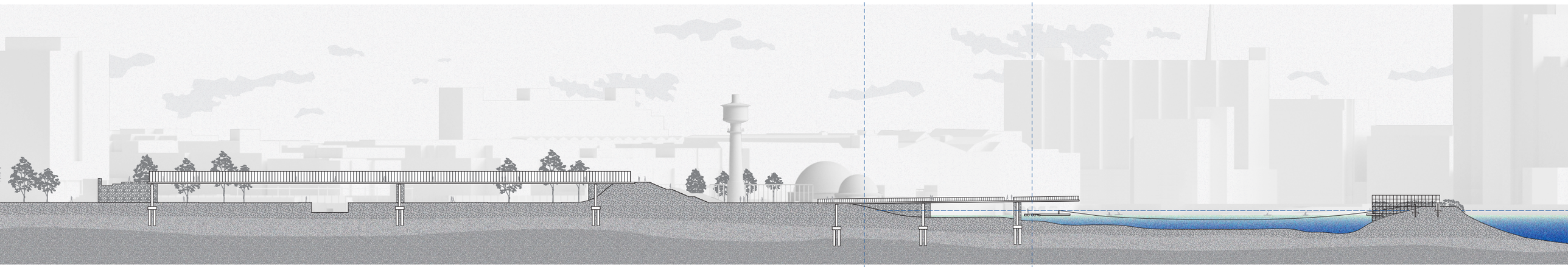
10m

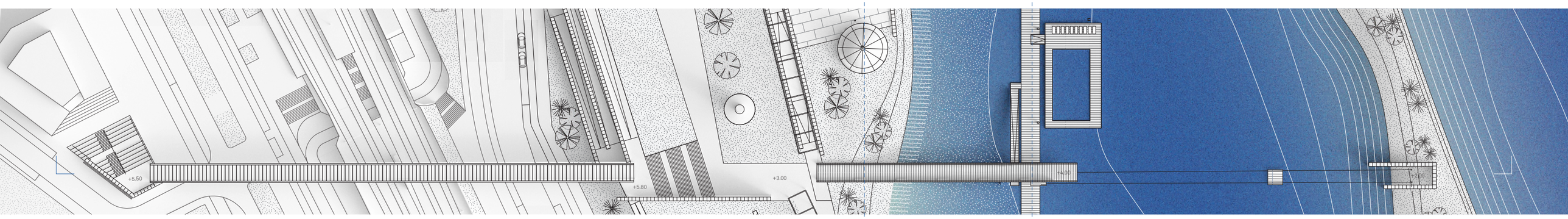


August, 12-5pm

Water pavilion

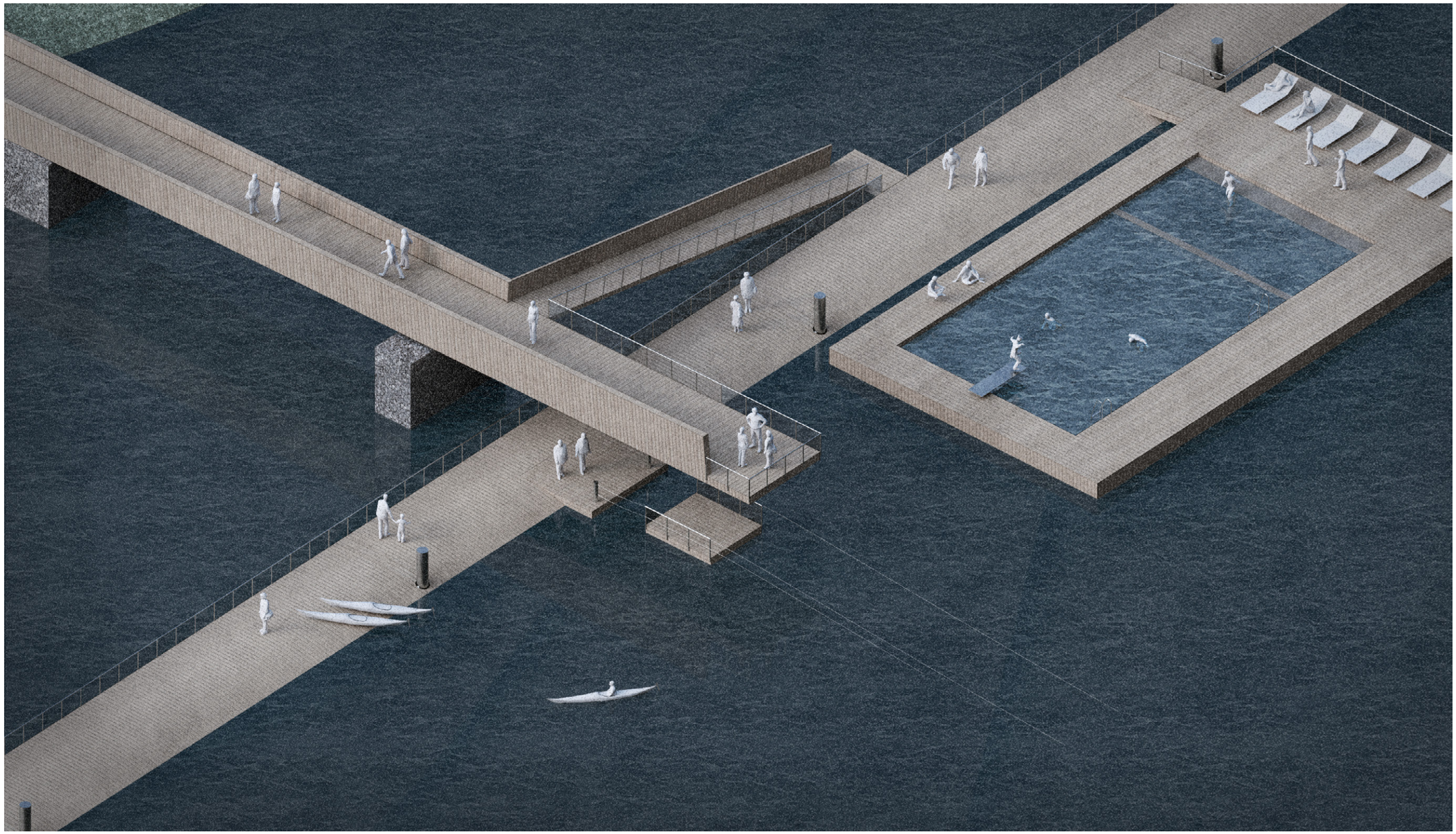
Urban podium | Sky bridge | Central stair | Factory artefacts | Sheltering jetty | Floating deck | Island raft | Breakwater island



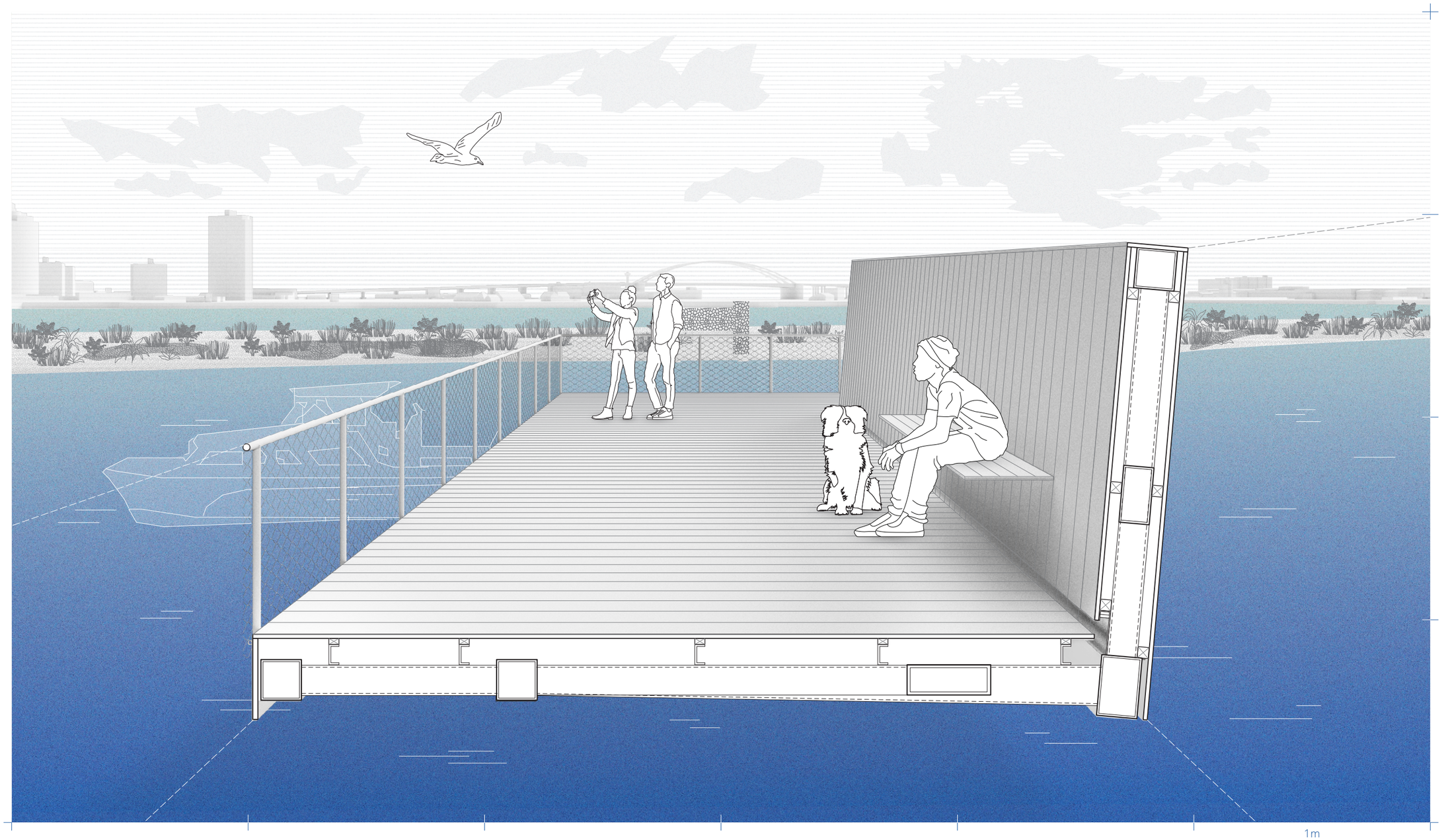


East / West axis

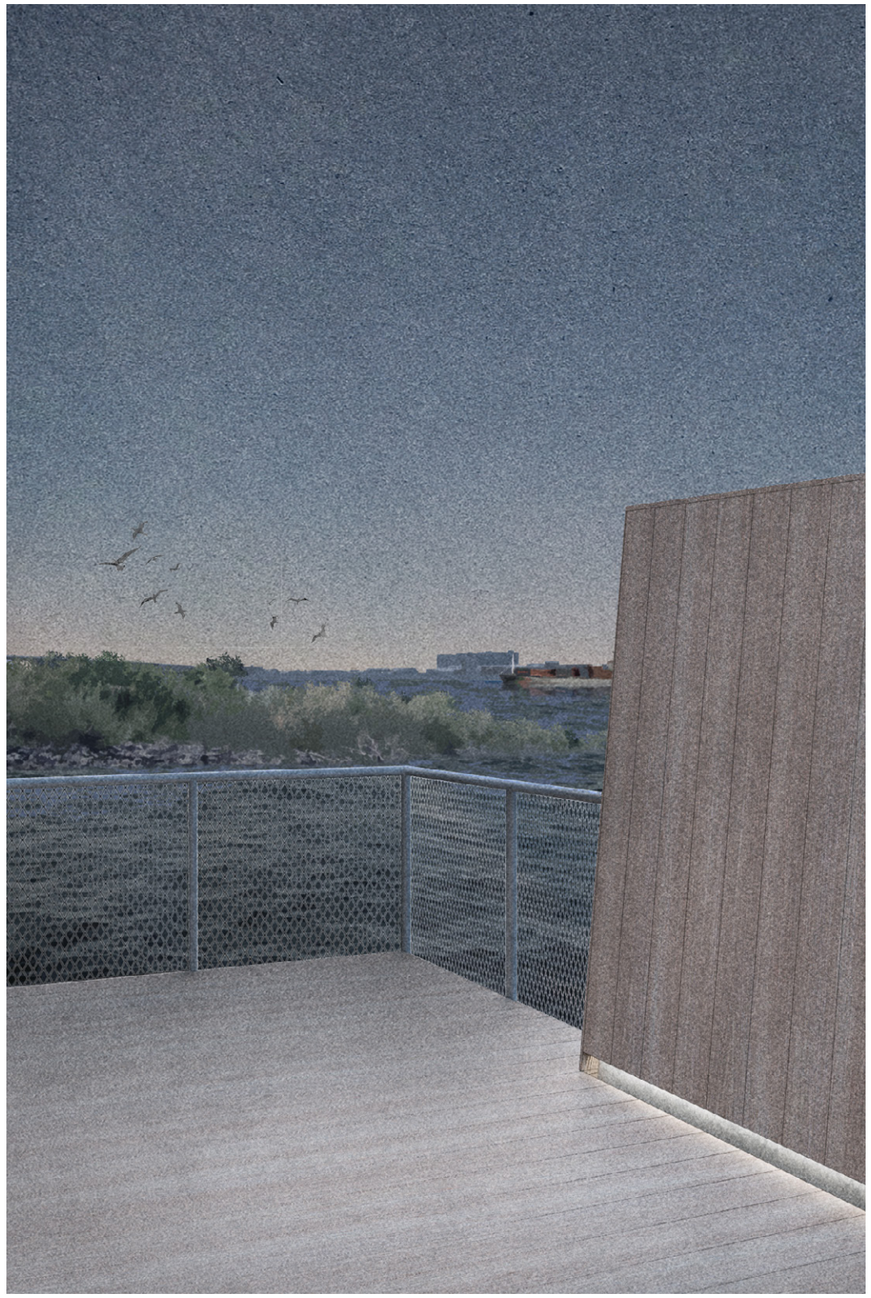
20m



Sheltering jetty

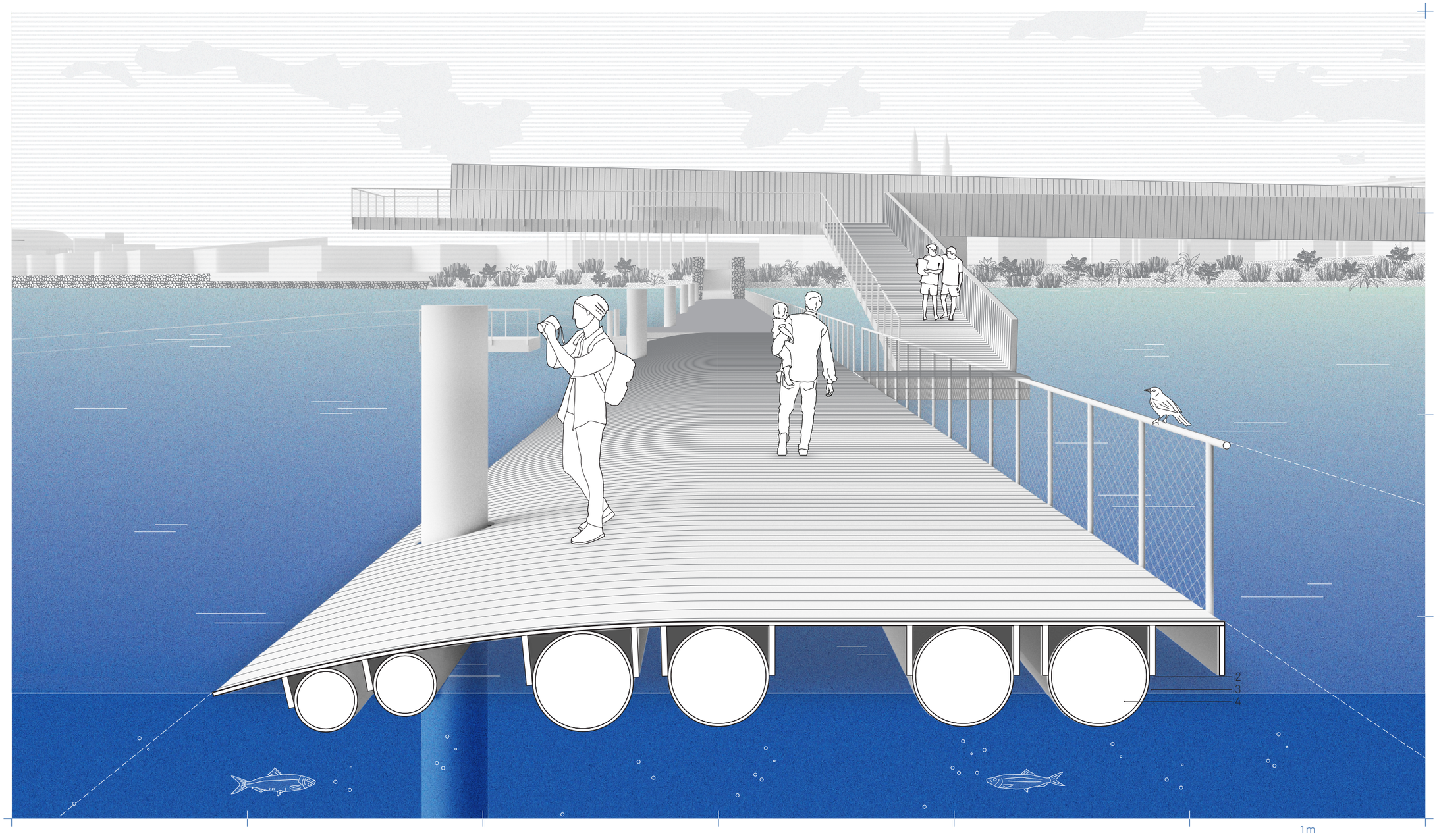


Sheltering jetty



September, 7pm

Sheltering jetty



Floating deck

Urban podium

Sky bridge

Central stair

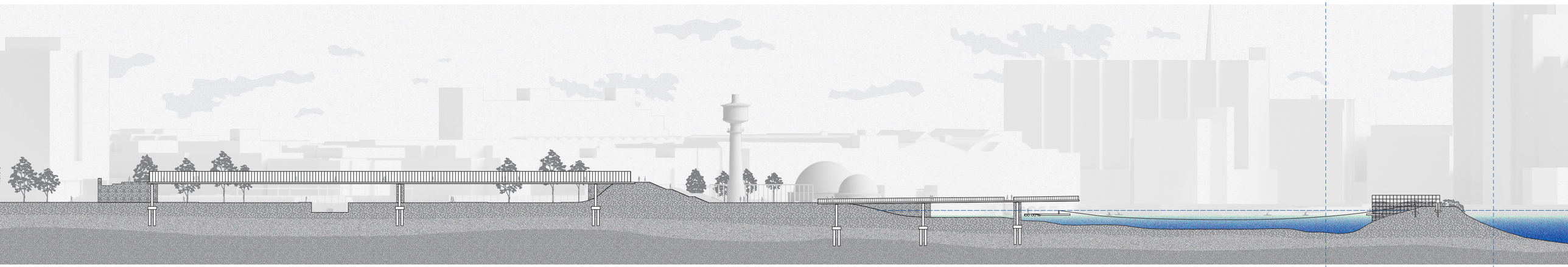
Factory artefacts

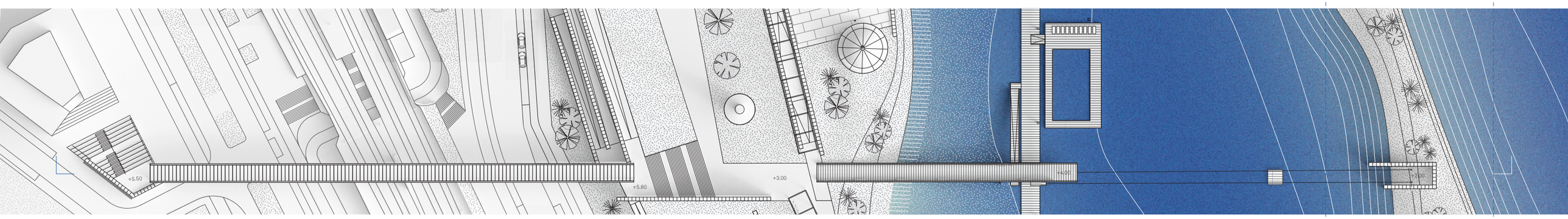
Sheltering jetty

Floating deck

Island raft

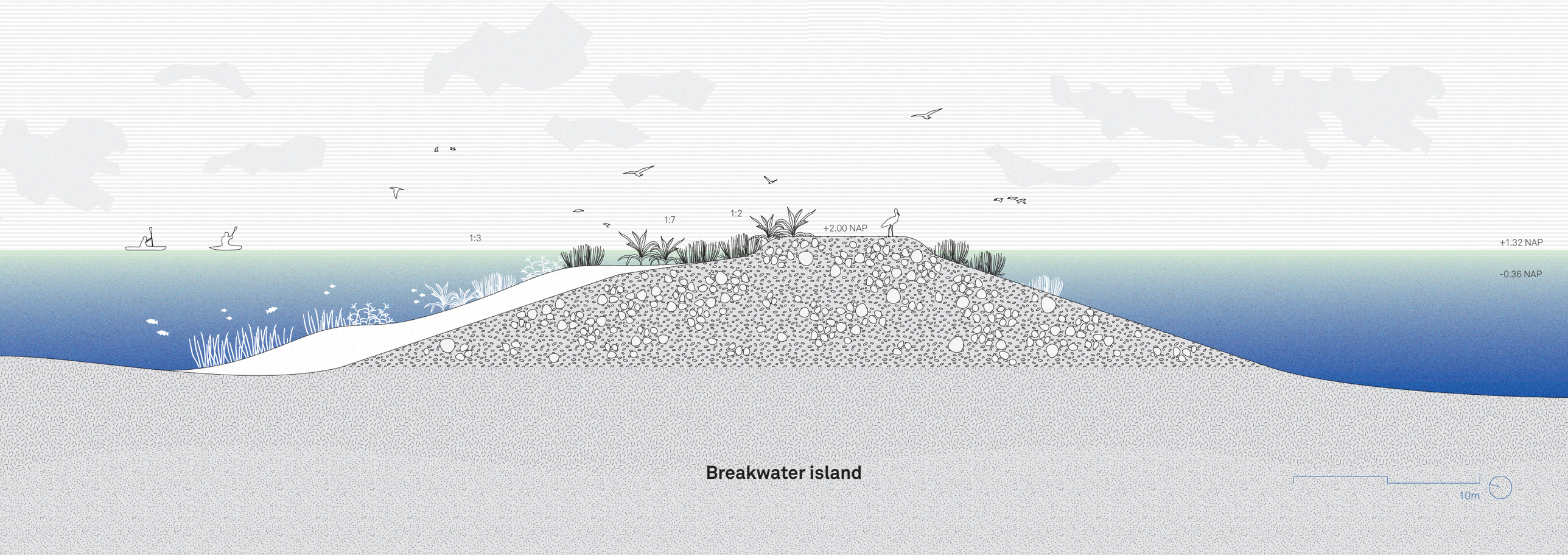
Breakwater island



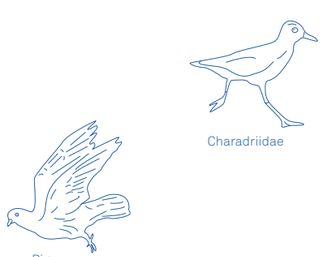


East / West axis

20m



Breakwater island


Pigeon

Charadriidae


Crow


Magpie


Rook


Common blackbird


Eurasian bittern

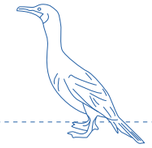

Eagle

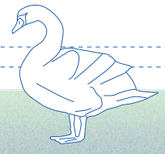

Bearded reedling

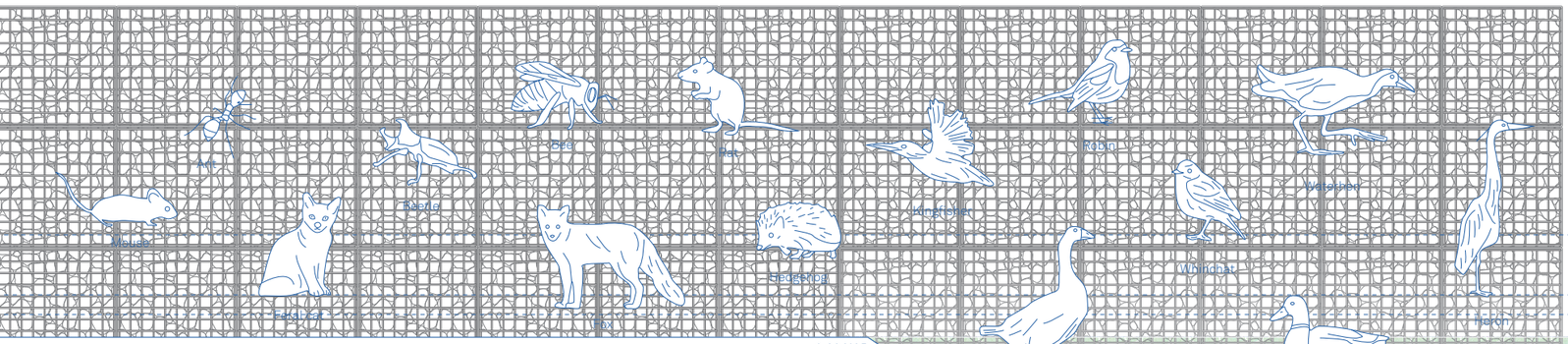

Great egret


Gull


White stork


Great cormorant


Swan



+3.00 NAP

Flooding (1x in 100.000 years)

+3.50 NAP Flooding (1x in 1.000 years)

+3.20 NAP Flooding (1x in 100 years)

+3.10 NAP Flooding (1x in 10 years)

+1.48 NAP **Spring tide**

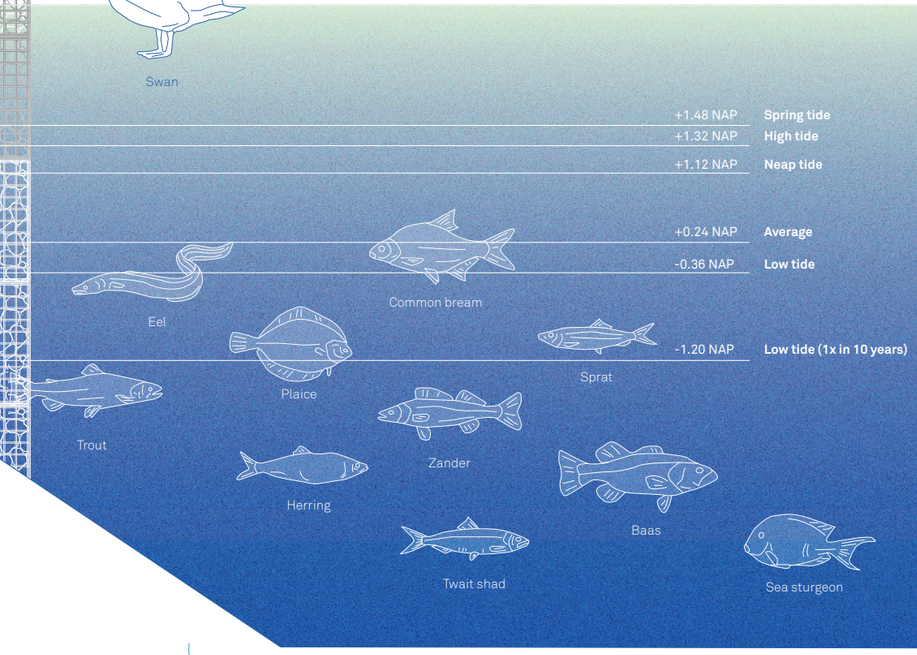
+1.32 NAP **High tide**

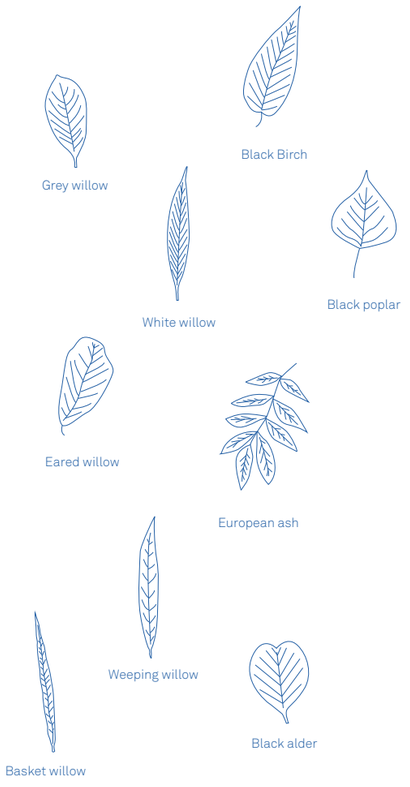
+1.12 NAP **Neap tide**

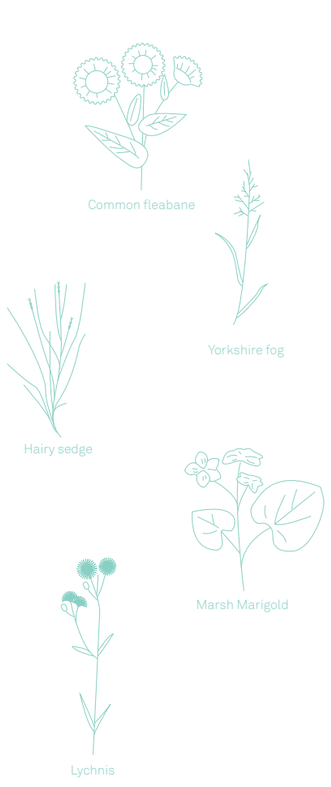
+0.24 NAP **Average**

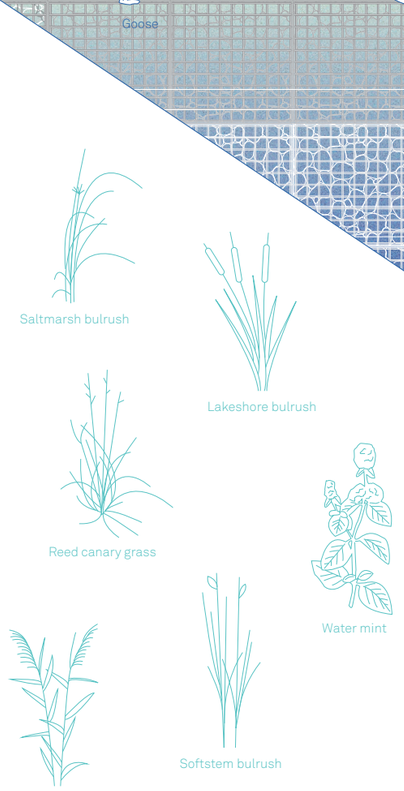
-0.36 NAP **Low tide**

-1.20 NAP **Low tide (1x in 10 years)**





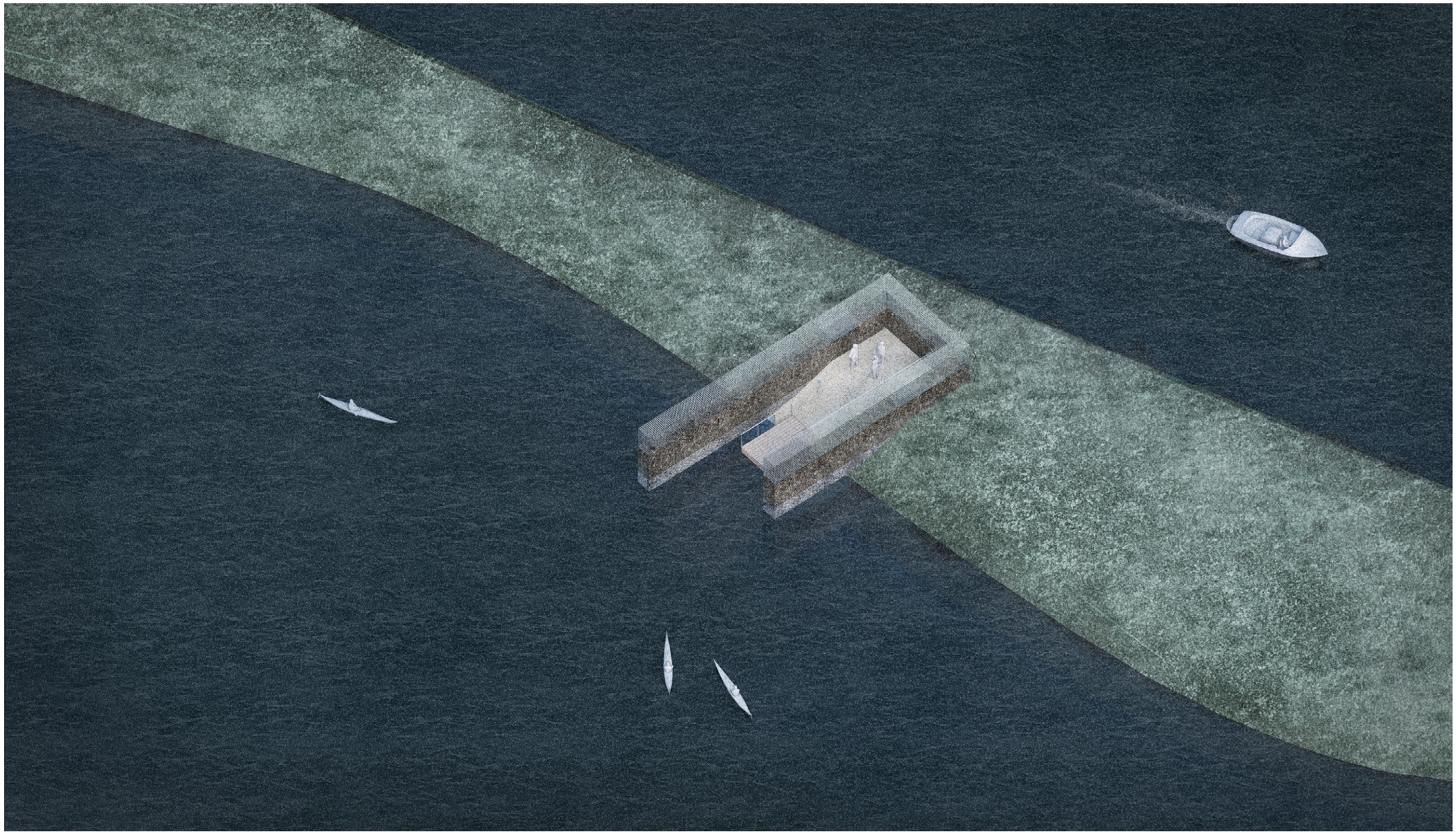






Terrestial plants | **Shoreline plants** | **High marsh** | **Low marsh** | **Aquatic plants** | **Deep water**

Tidal zone



Birdwatching pavilion



July, 5pm

Birdwatching pavilion

+3.00

+5.80

+5.50

+3.00

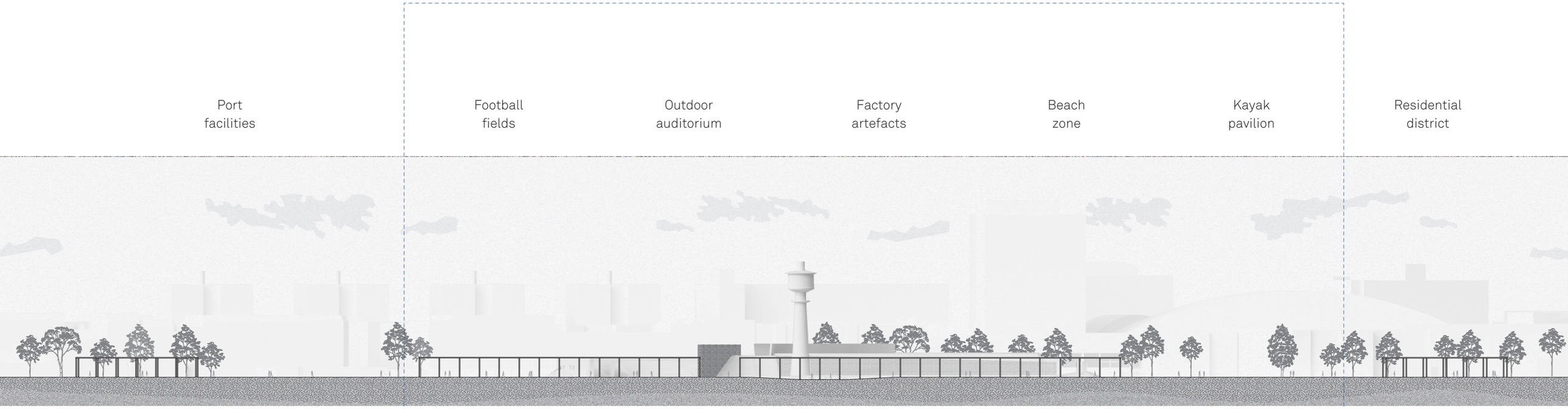
+3.00

+3.00

20m

Ground conditions

North / South axis

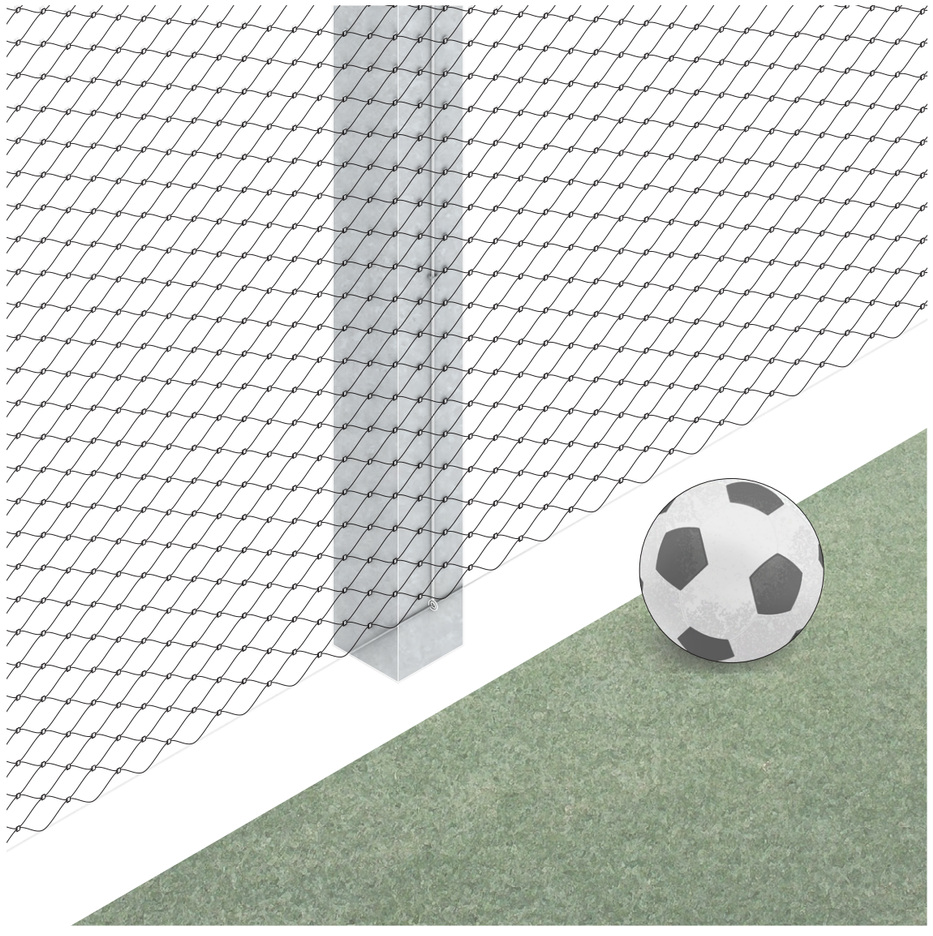


North / South axis

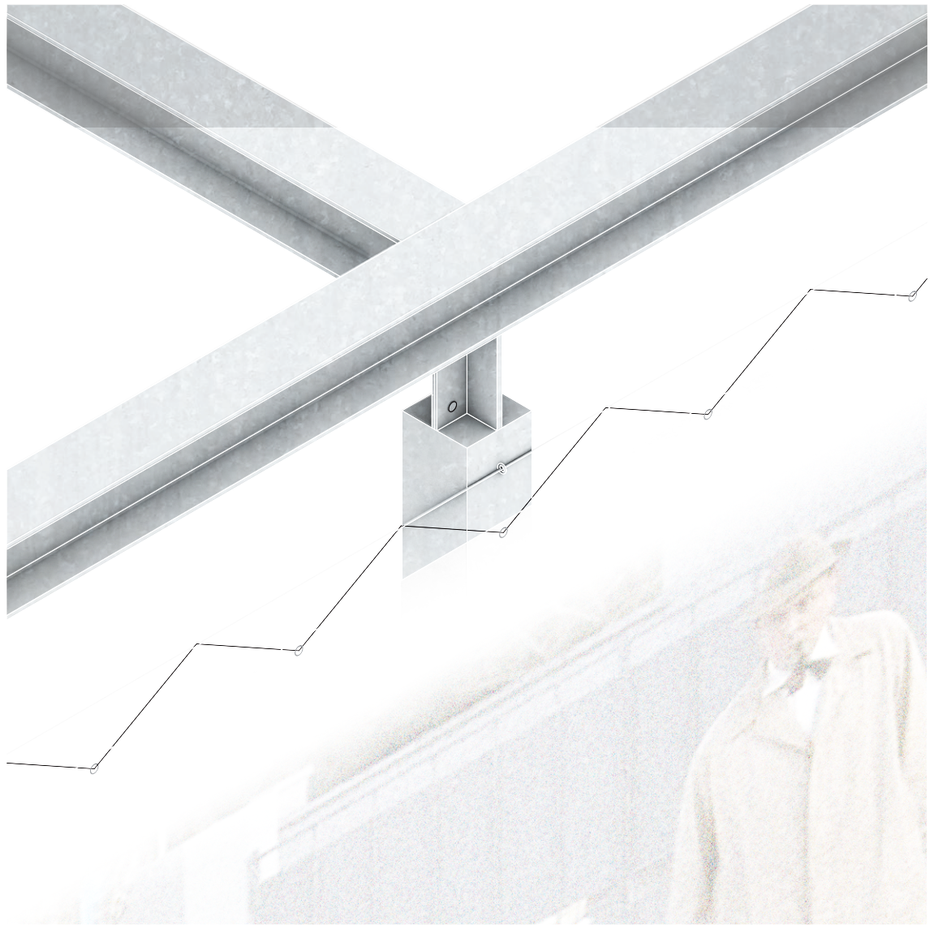
20m

Performative frame

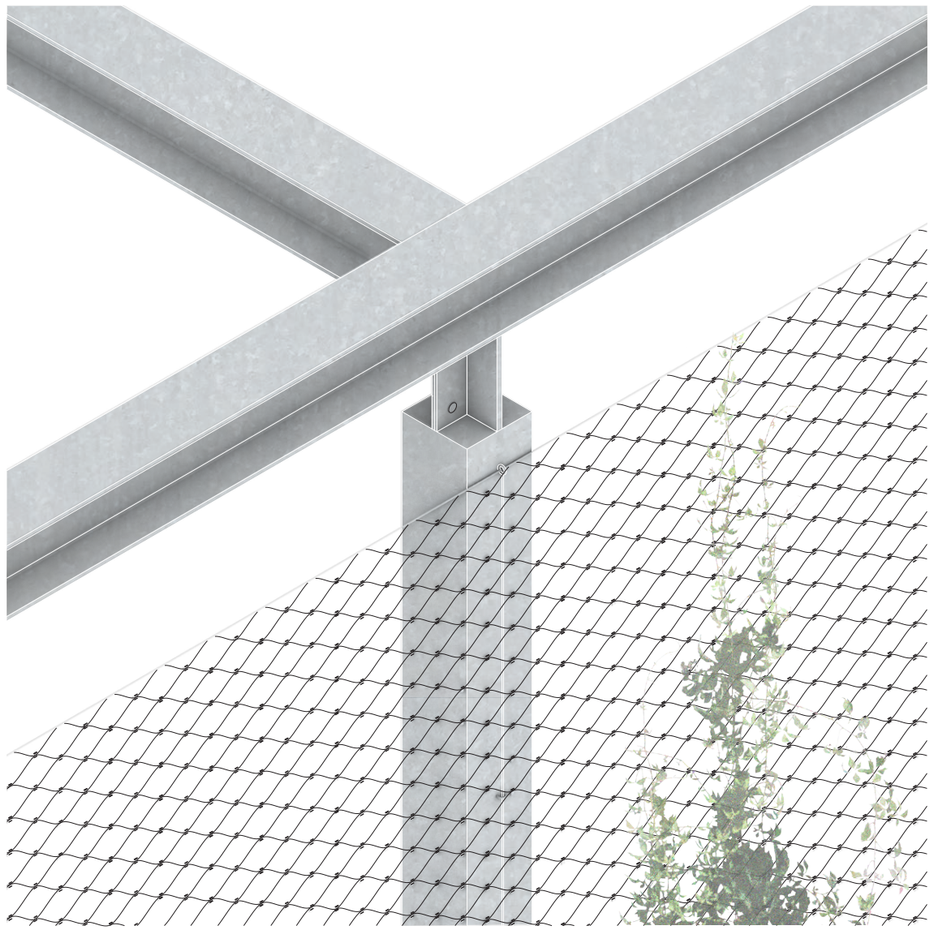
20m



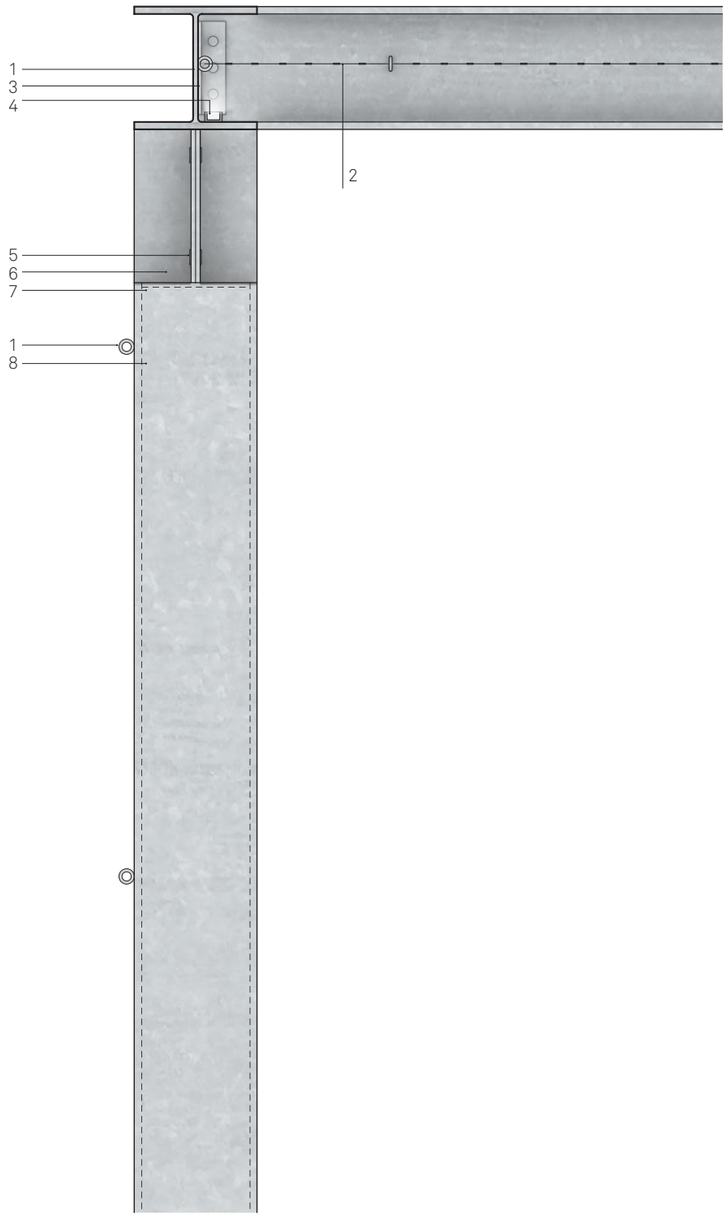
Fencing

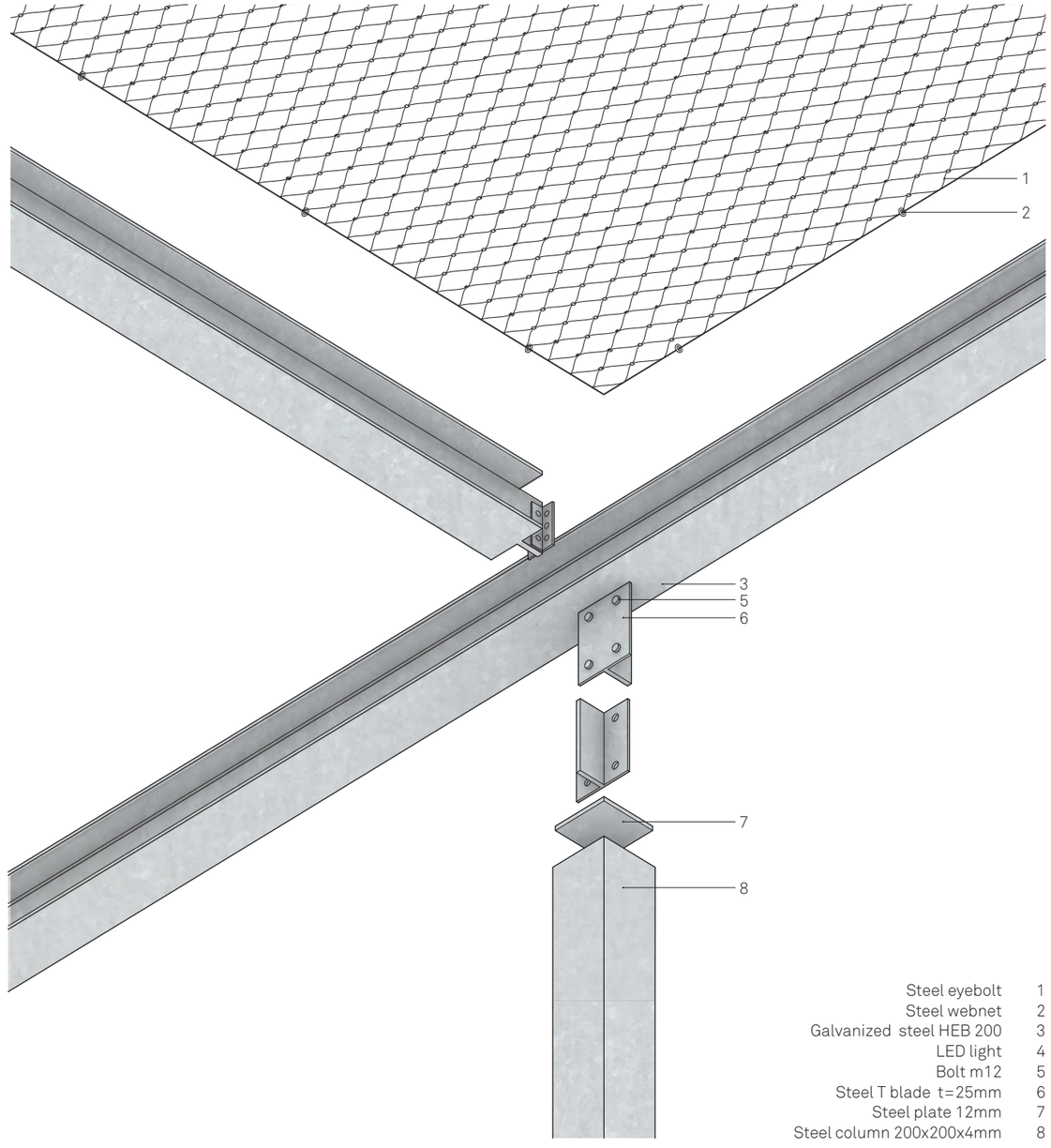


Supporting



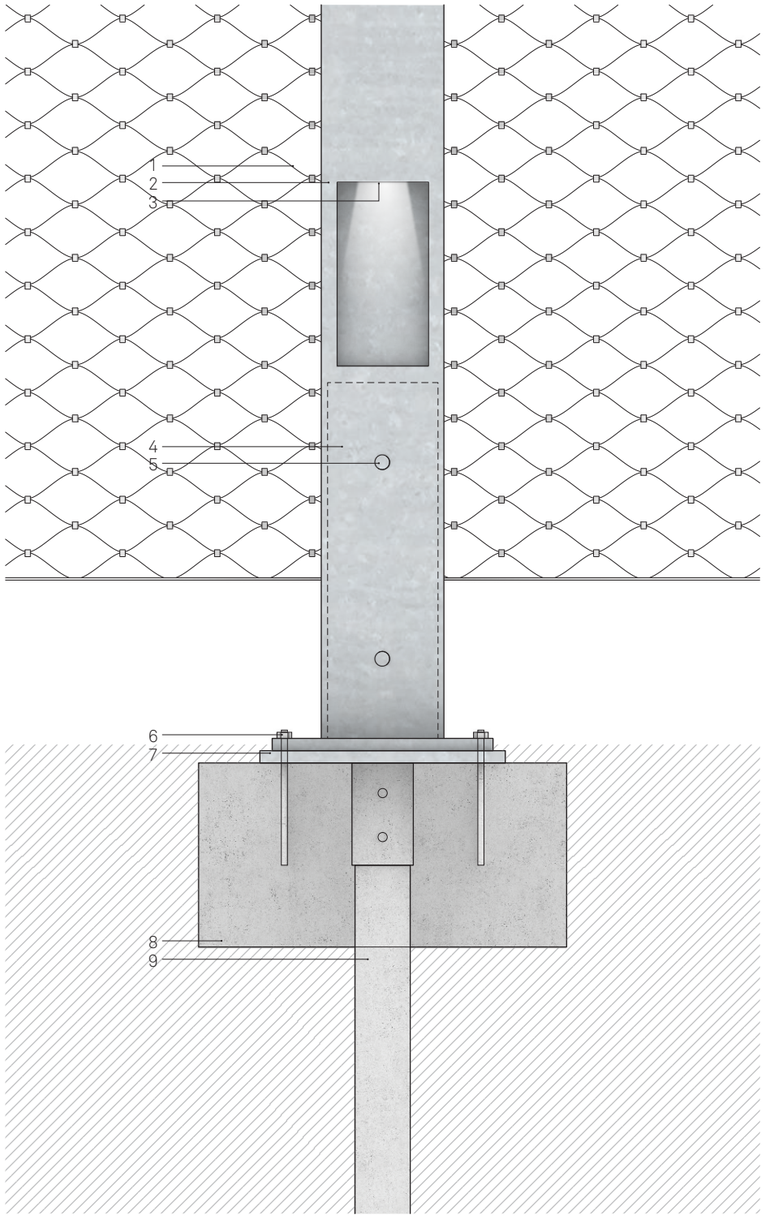
Cultivating

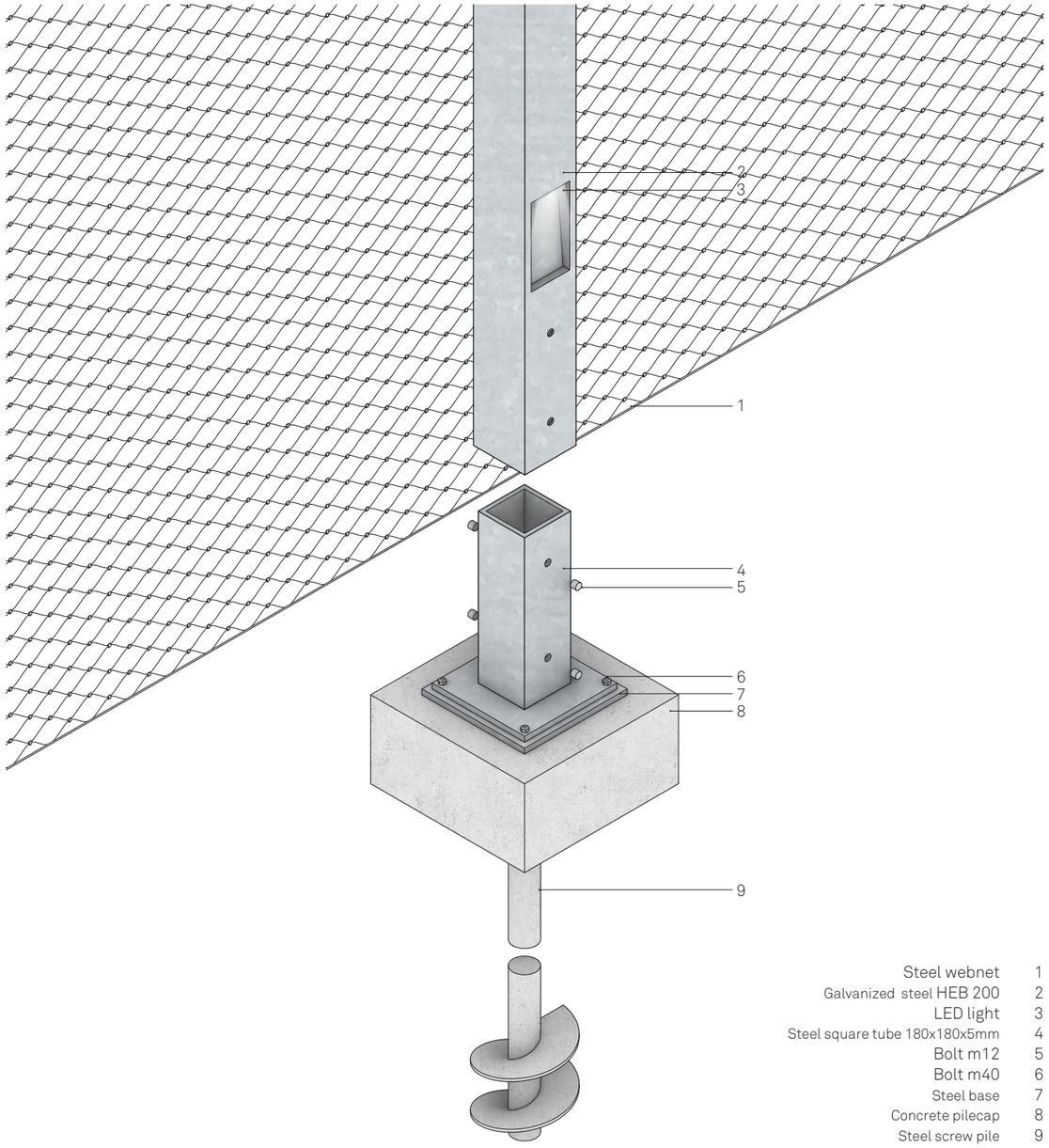




Steel eyebolt	1
Steel webnet	2
Galvanized steel HEB 200	3
LED light	4
Bolt m12	5
Steel T blade t=25mm	6
Steel plate 12mm	7
Steel column 200x200x4mm	8

Performative frame





Steel webnet	1
Galvanized steel HEB 200	2
LED light	3
Steel square tube 180x180x5mm	4
Bolt m12	5
Bolt m40	6
Steel base	7
Concrete pilecap	8
Steel screw pile	9

Performative frame

Port facilities

Football fields

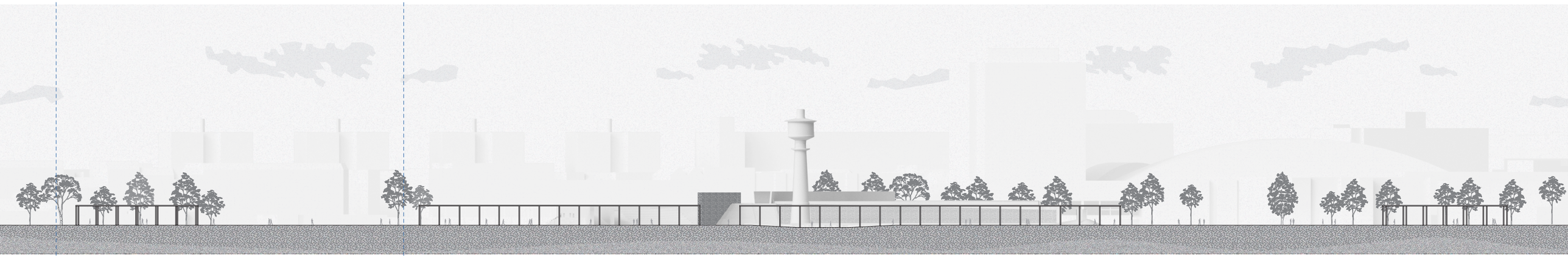
Outdoor auditorium

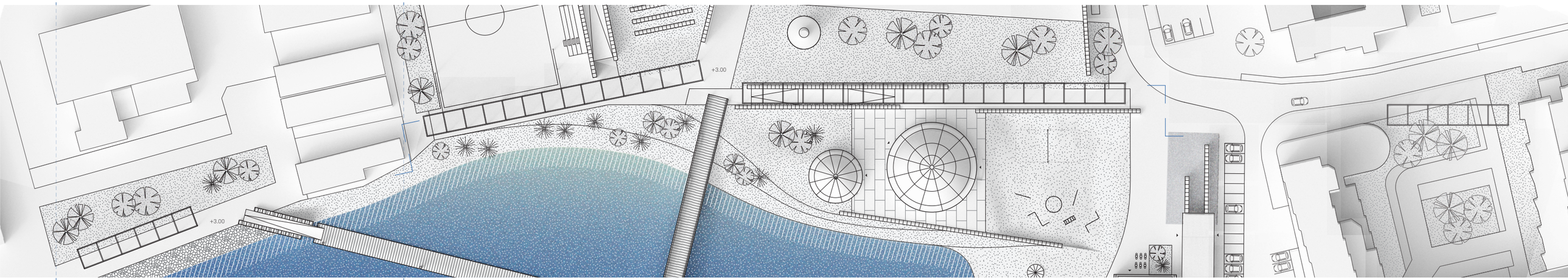
Factory artefacts

Beach zone

Kayak pavilion

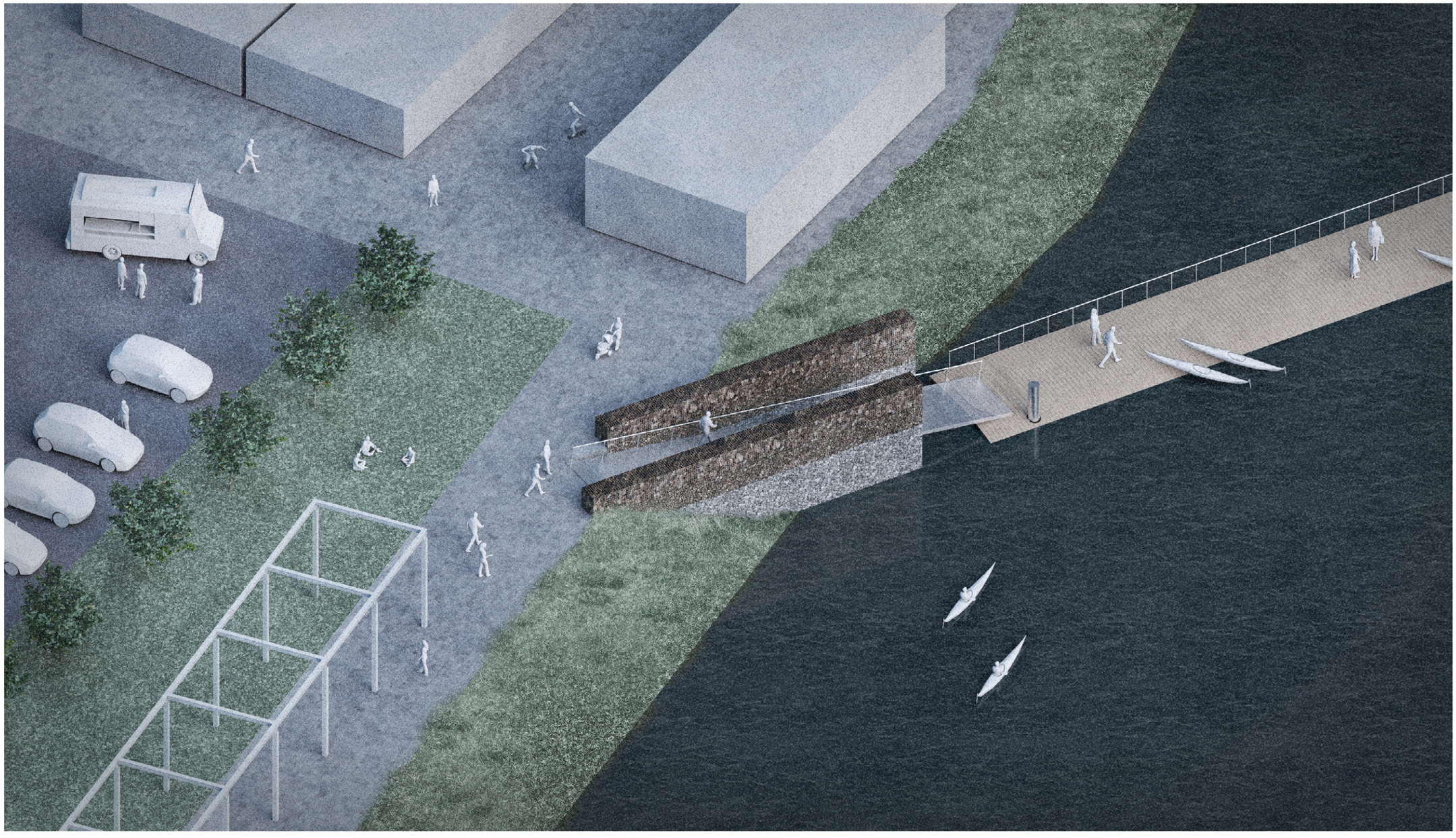
Residential district





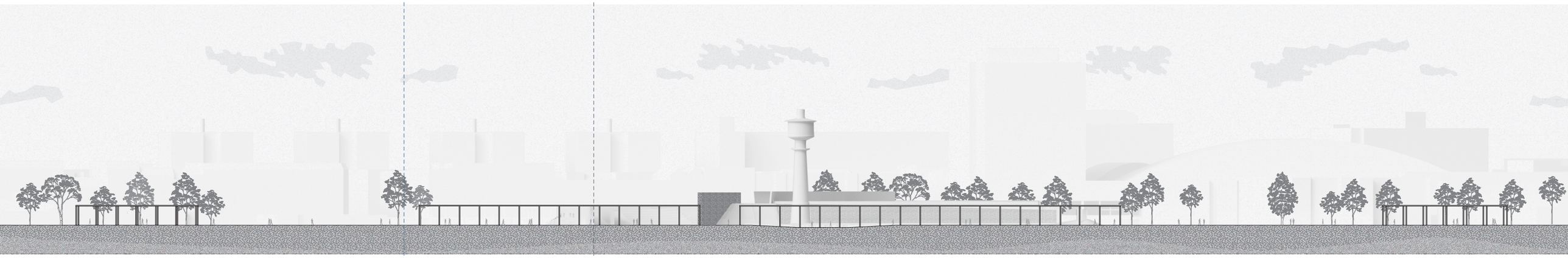
North / South axis

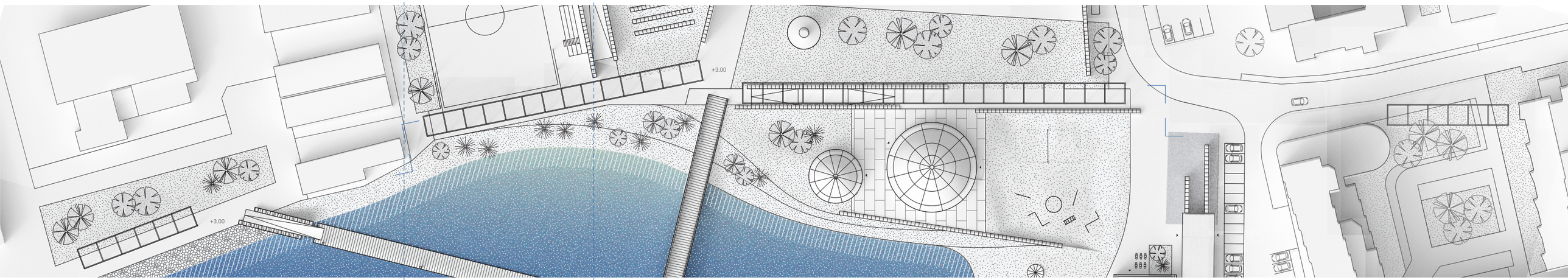
20m



Port facilities

Port facilities | Football fields | Outdoor auditorium | Factory artefacts | Beach zone | Kayak pavilion | Residential district

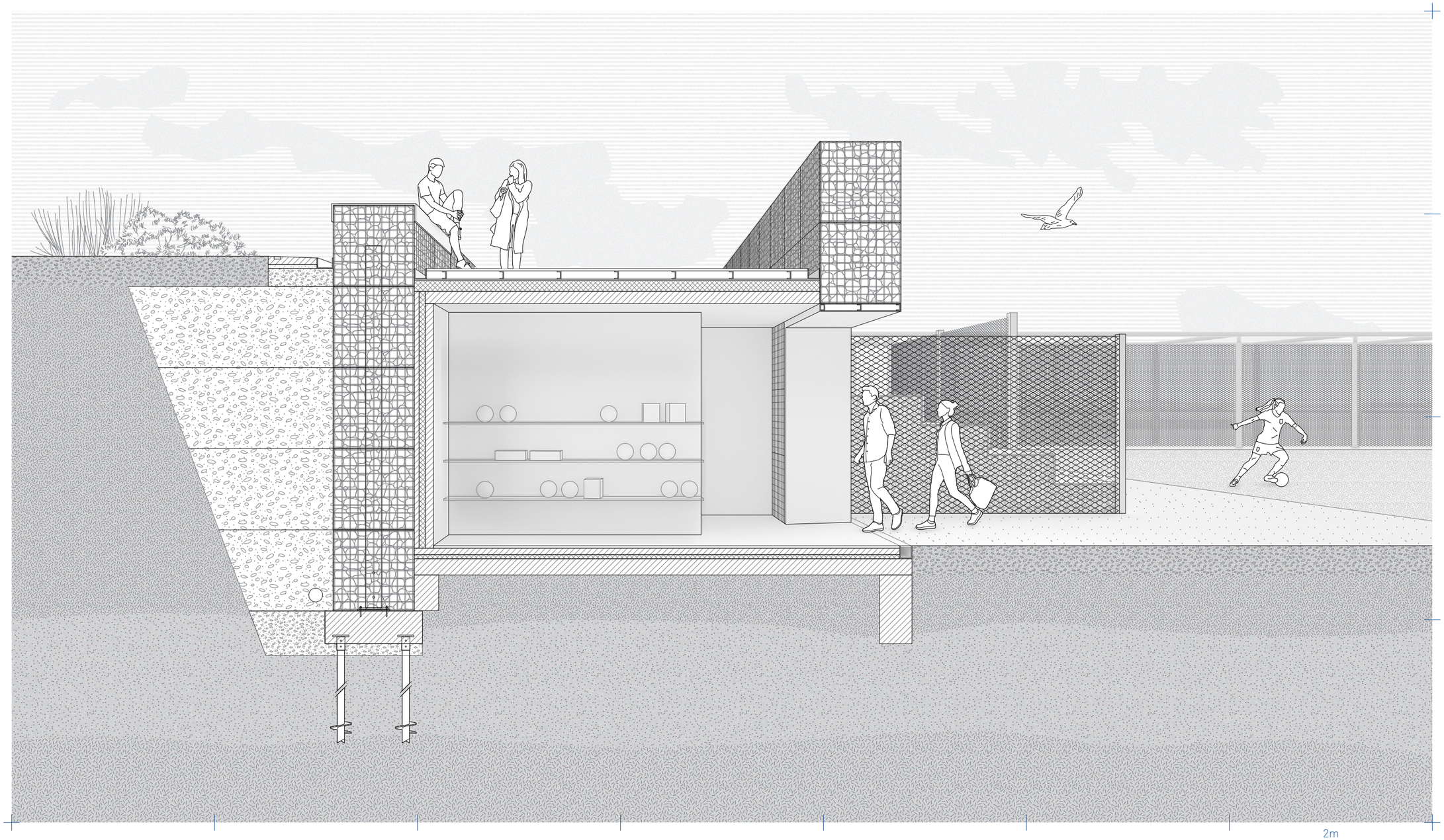




North / South axis

20m

Football pavilion



Football pavilion

Port facilities

Football fields

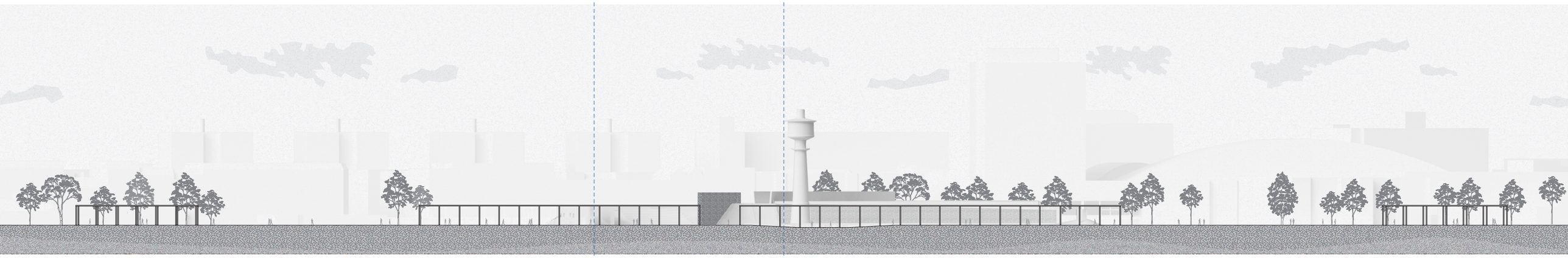
Outdoor auditorium

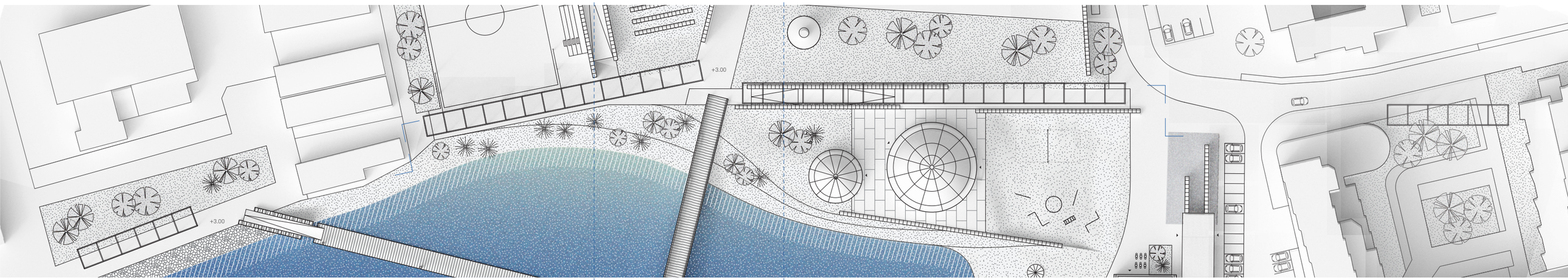
Factory artefacts

Beach zone

Kayak pavilion

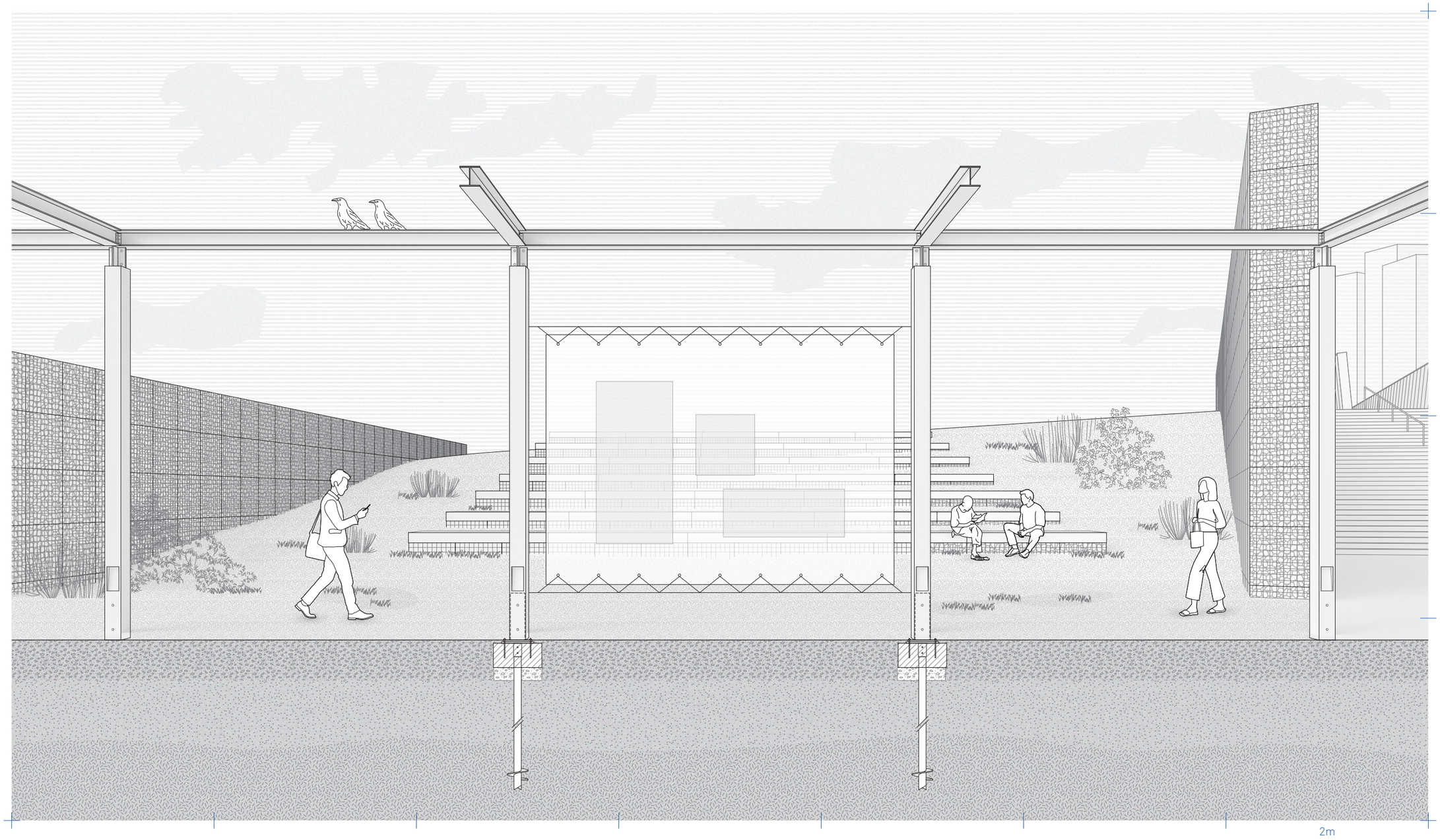
Residential district





North / South axis

20m



Outdoor auditorium

Port facilities

Football fields

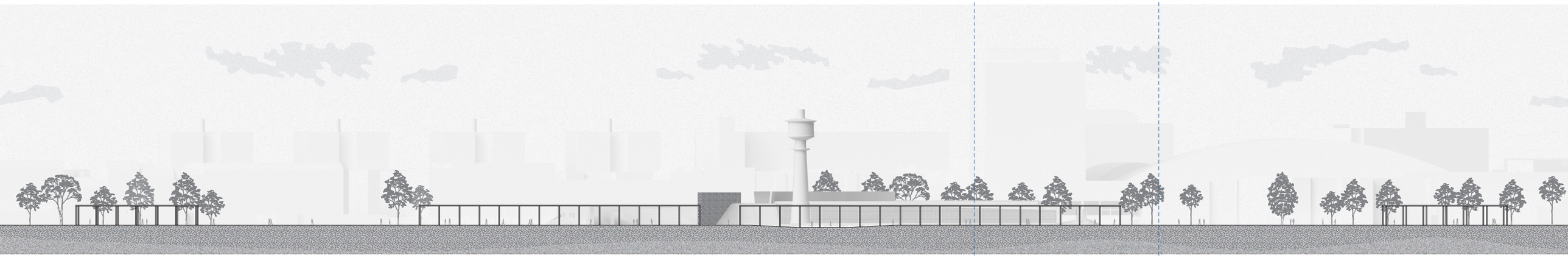
Outdoor auditorium

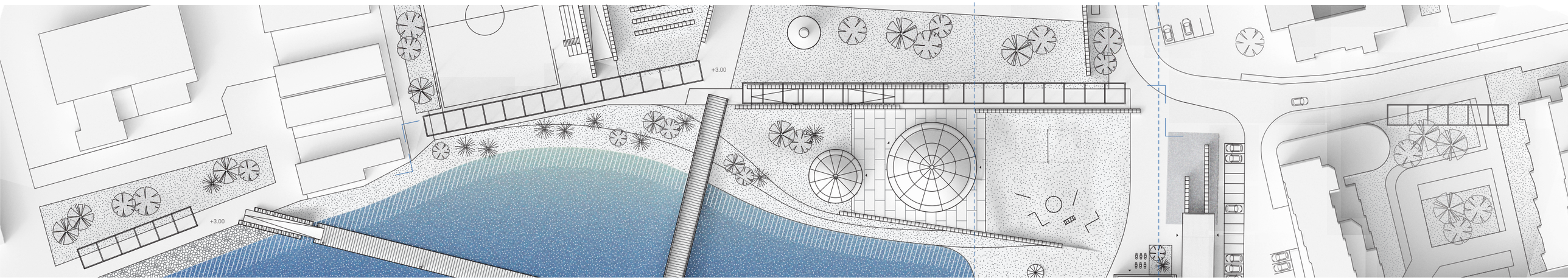
Factory artefacts

Beach zone

Kayak pavilion

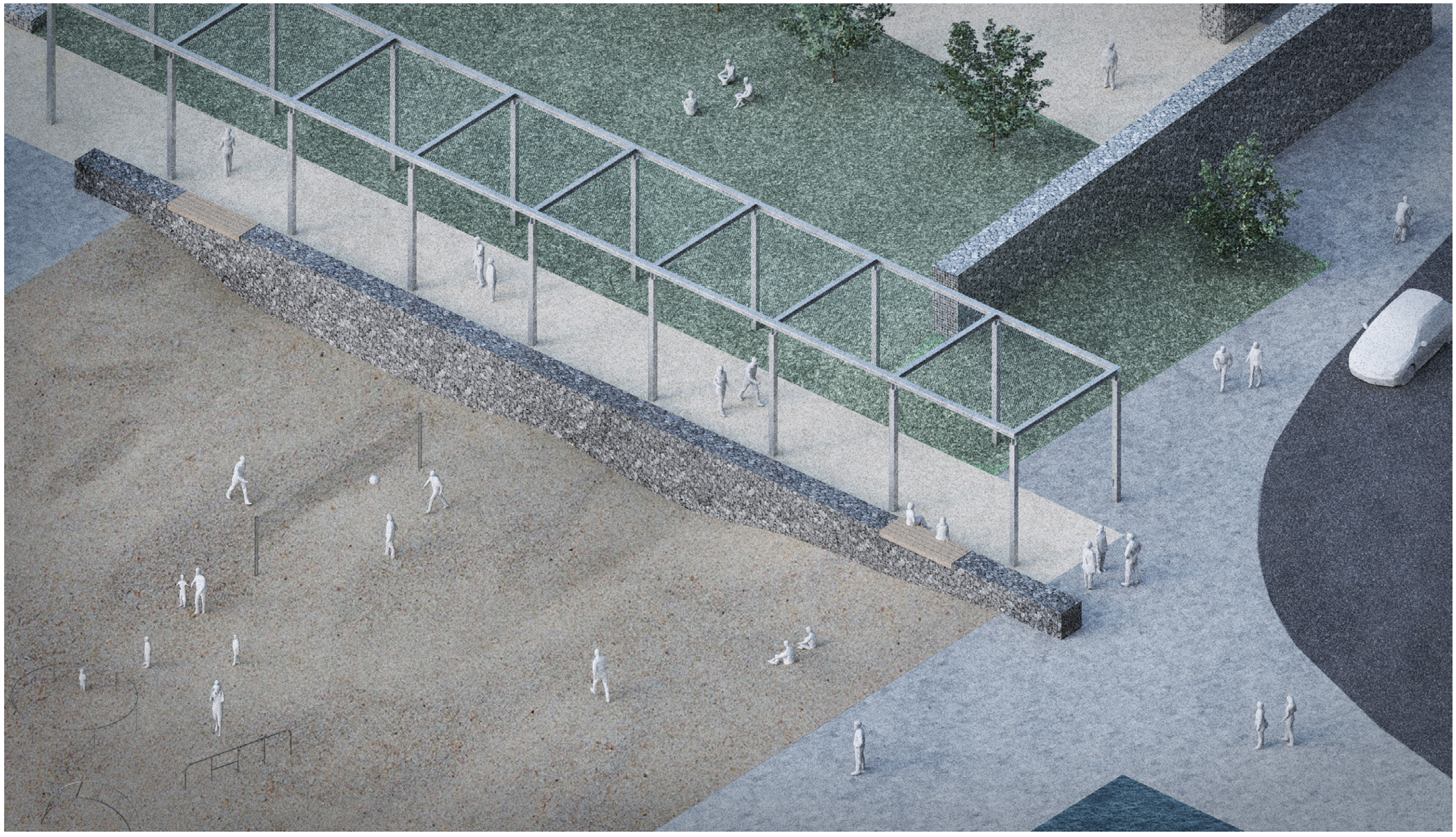
Residential district



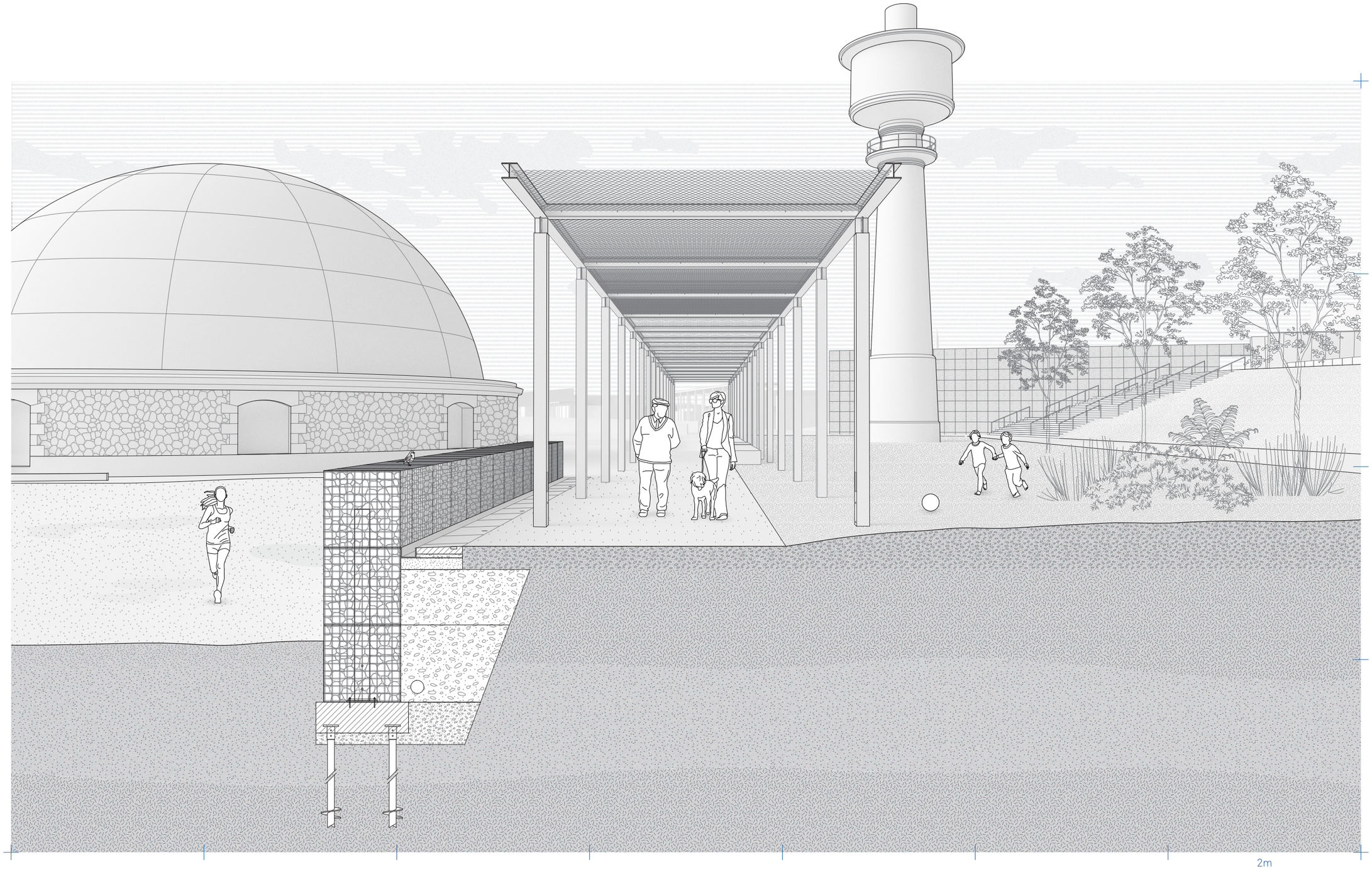


North / South axis

20m



Performative frame



Performative frame

Port facilities

Football fields

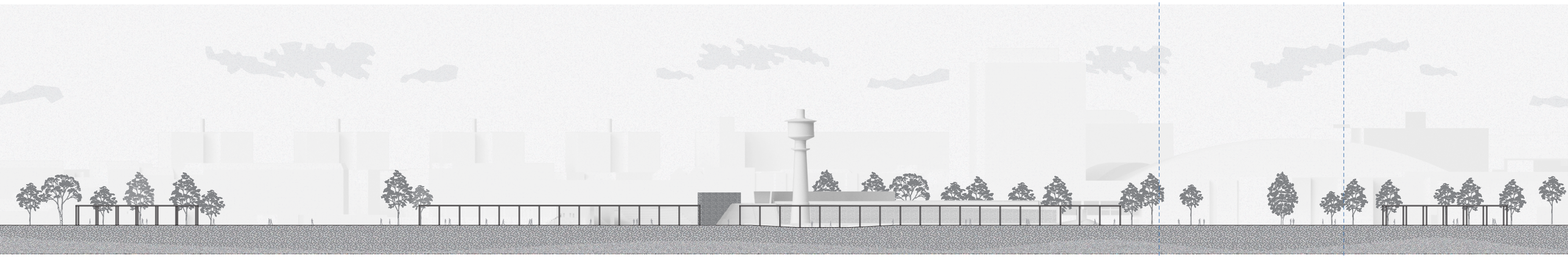
Outdoor auditorium

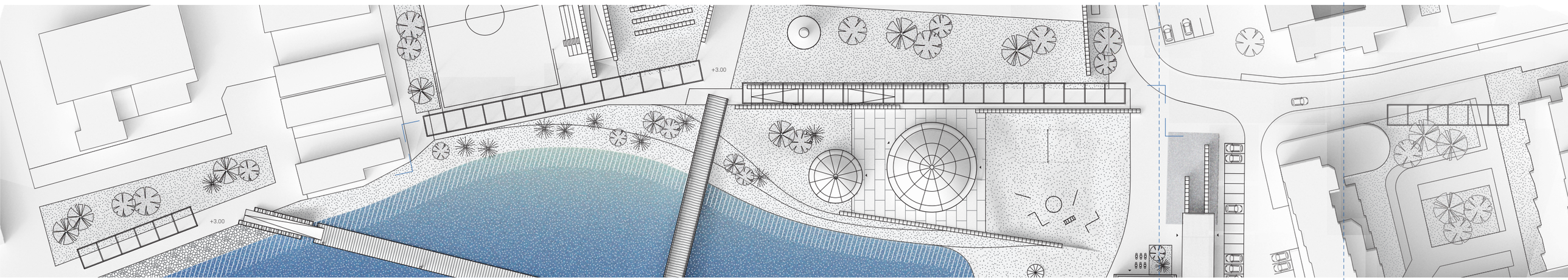
Factory artefacts

Beach zone

Kayak pavilion

Residential district



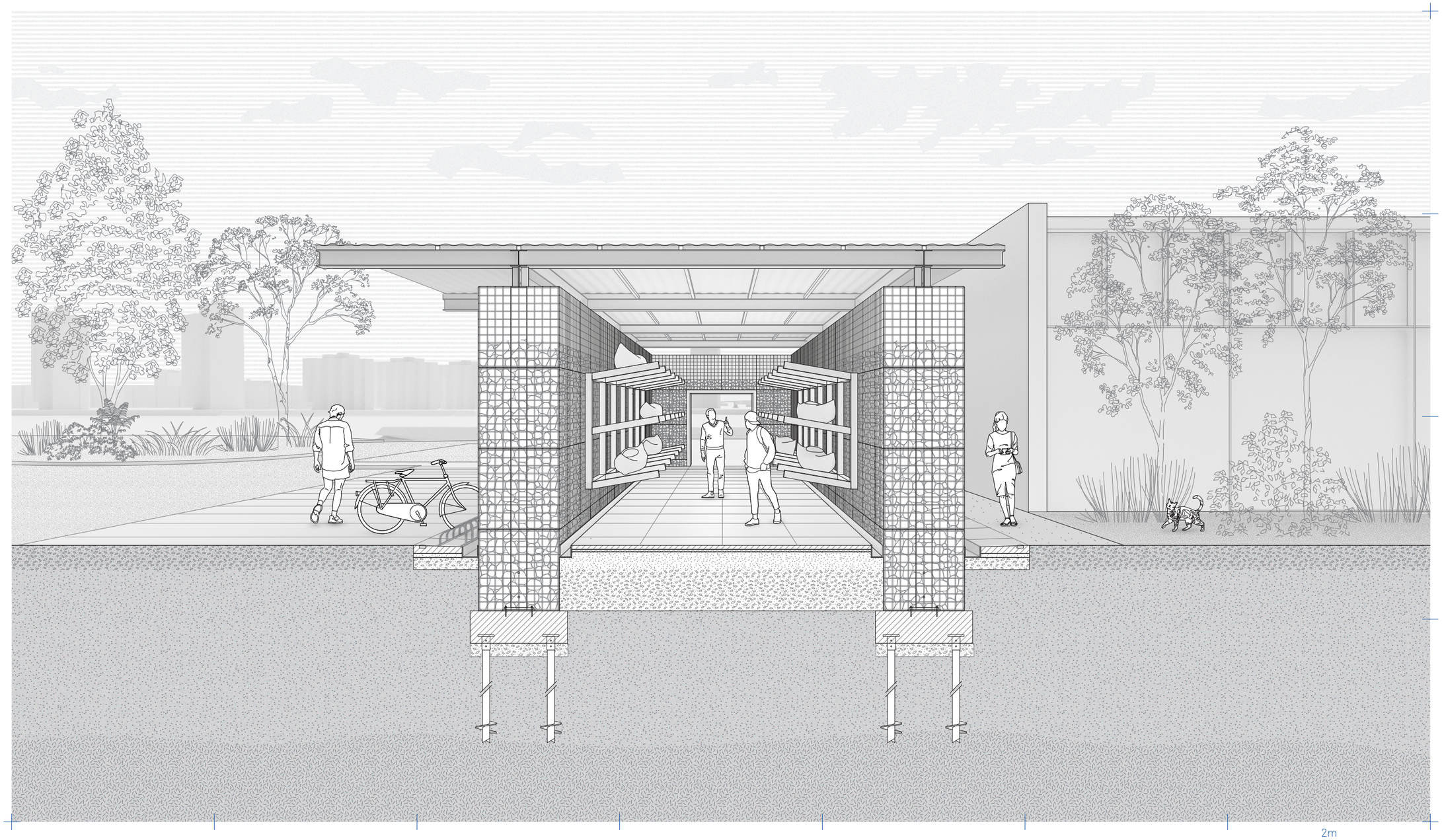


North / South axis

20m

Beach pavilions

10m



Kayak pavilion



Floating deck

Port facilities

Football fields

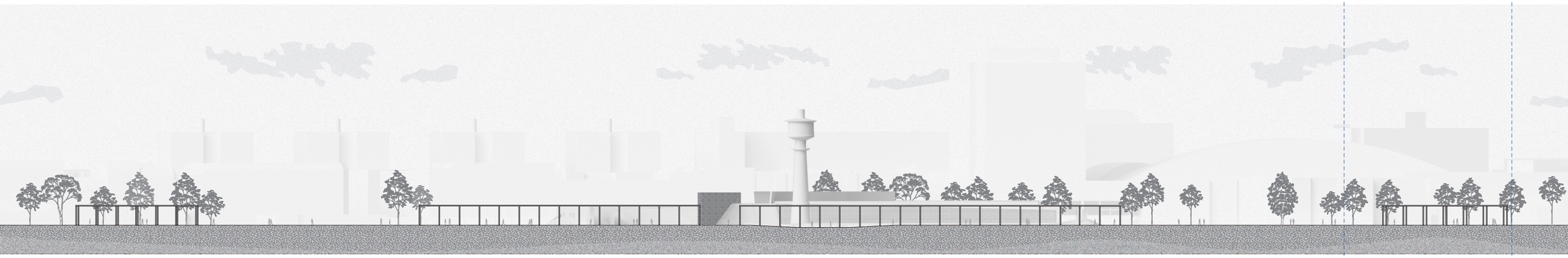
Outdoor auditorium

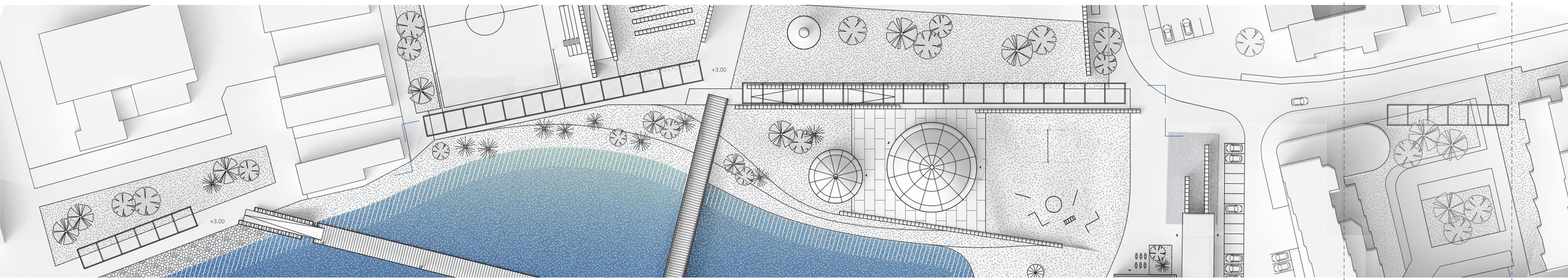
Factory artefacts

Beach zone

Kayak pavilion

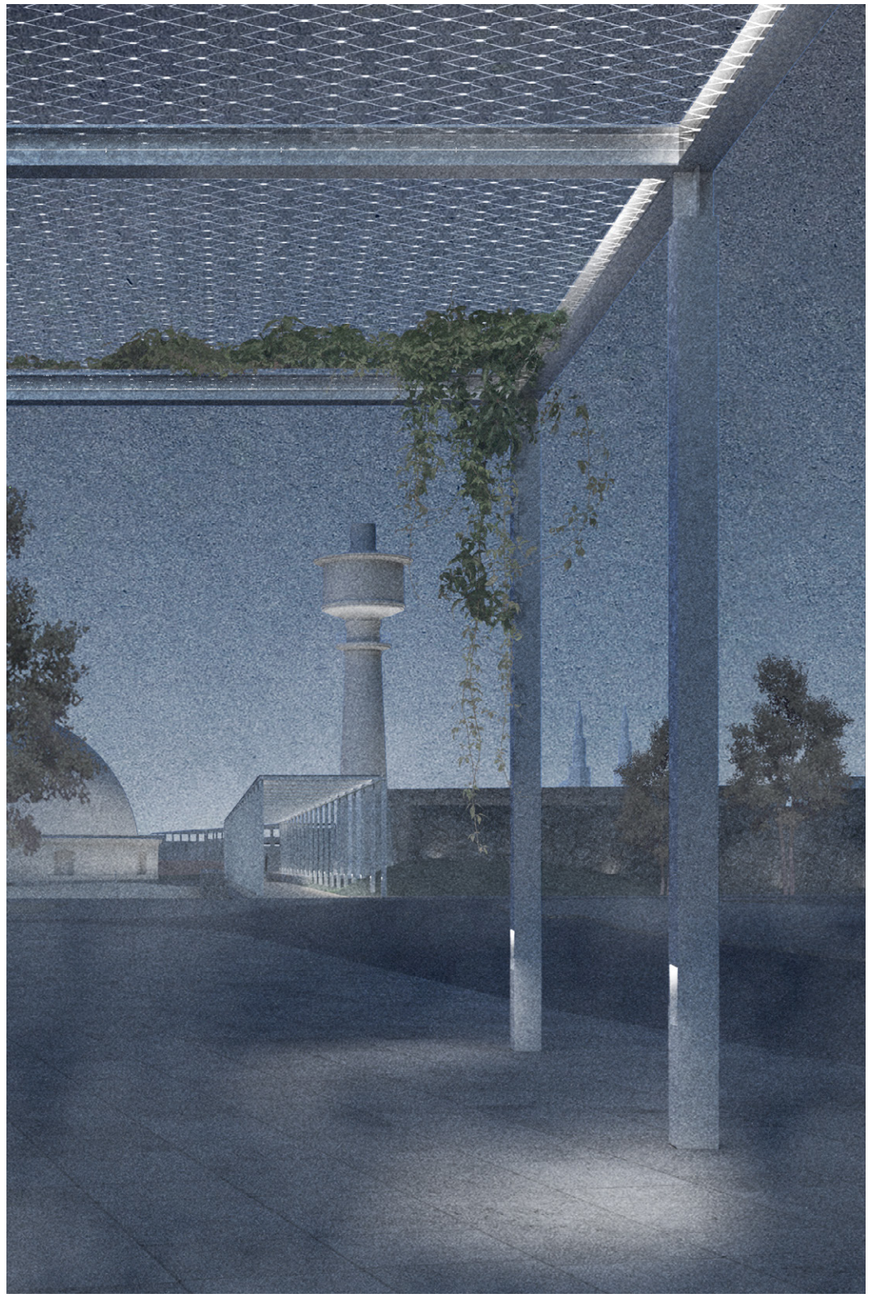
Residential district





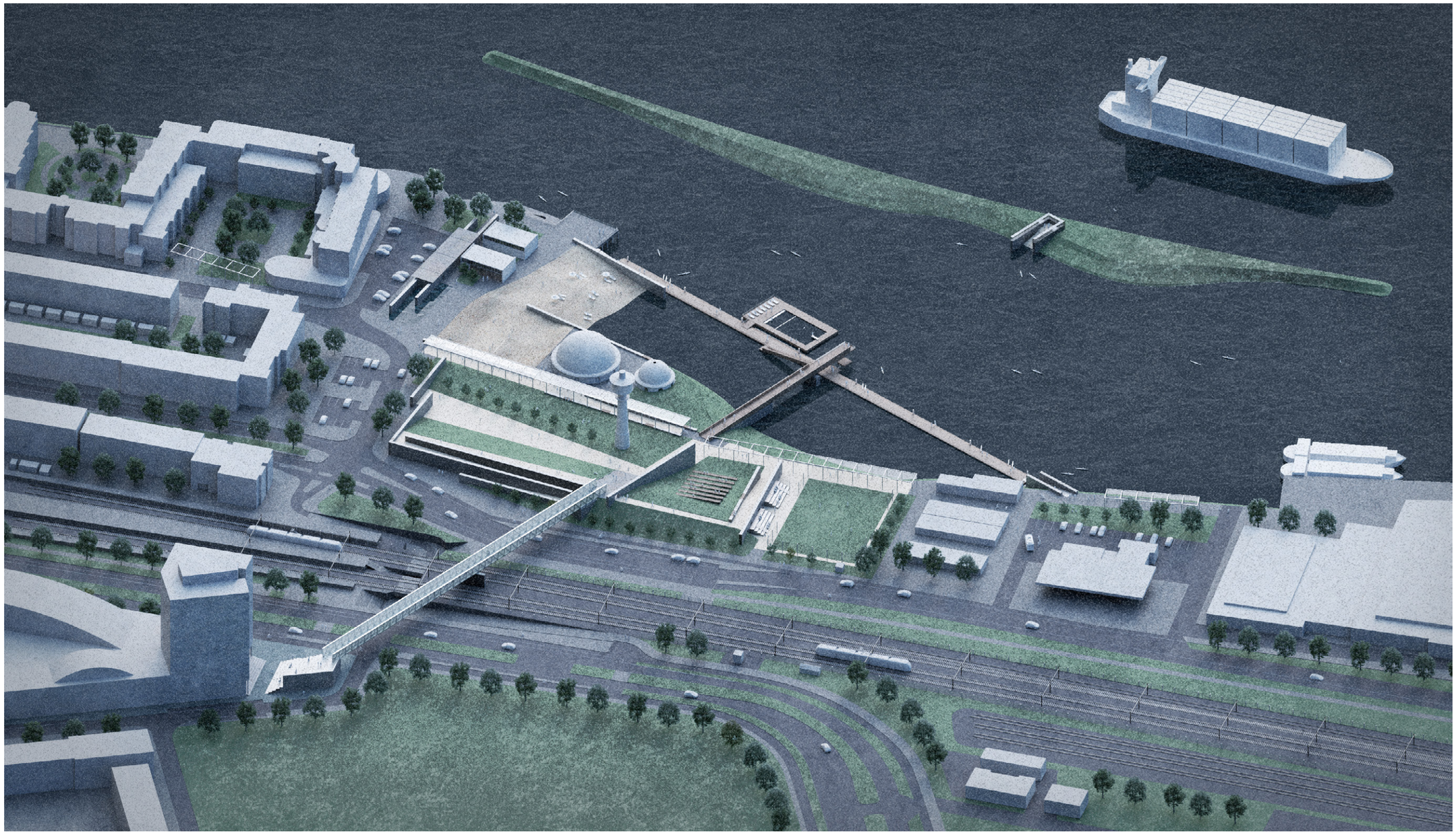
North / South axis

20m



April, 3-8pm

Performative frame



Buffer zone of thresholds



Reverse

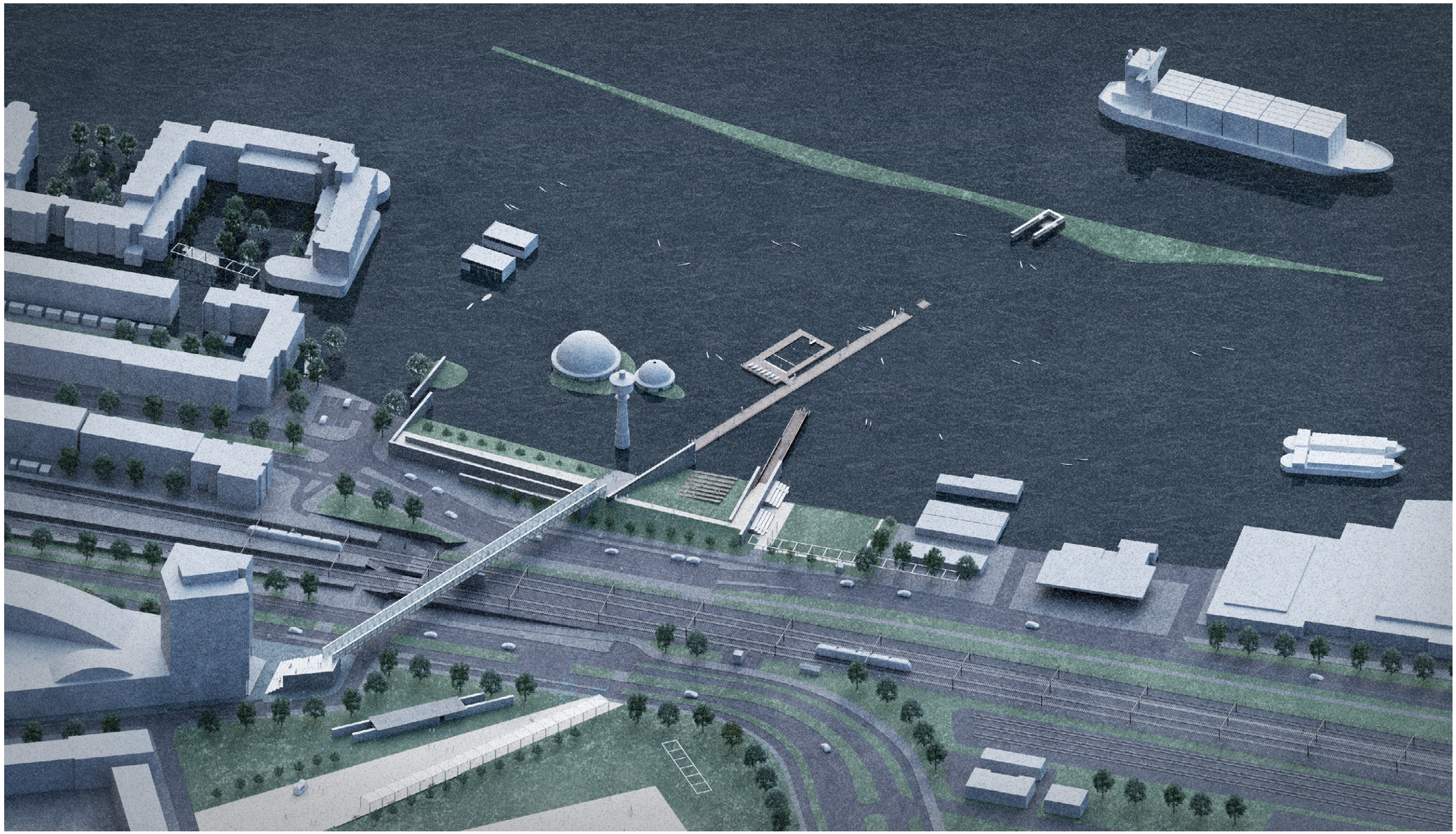


Adapt

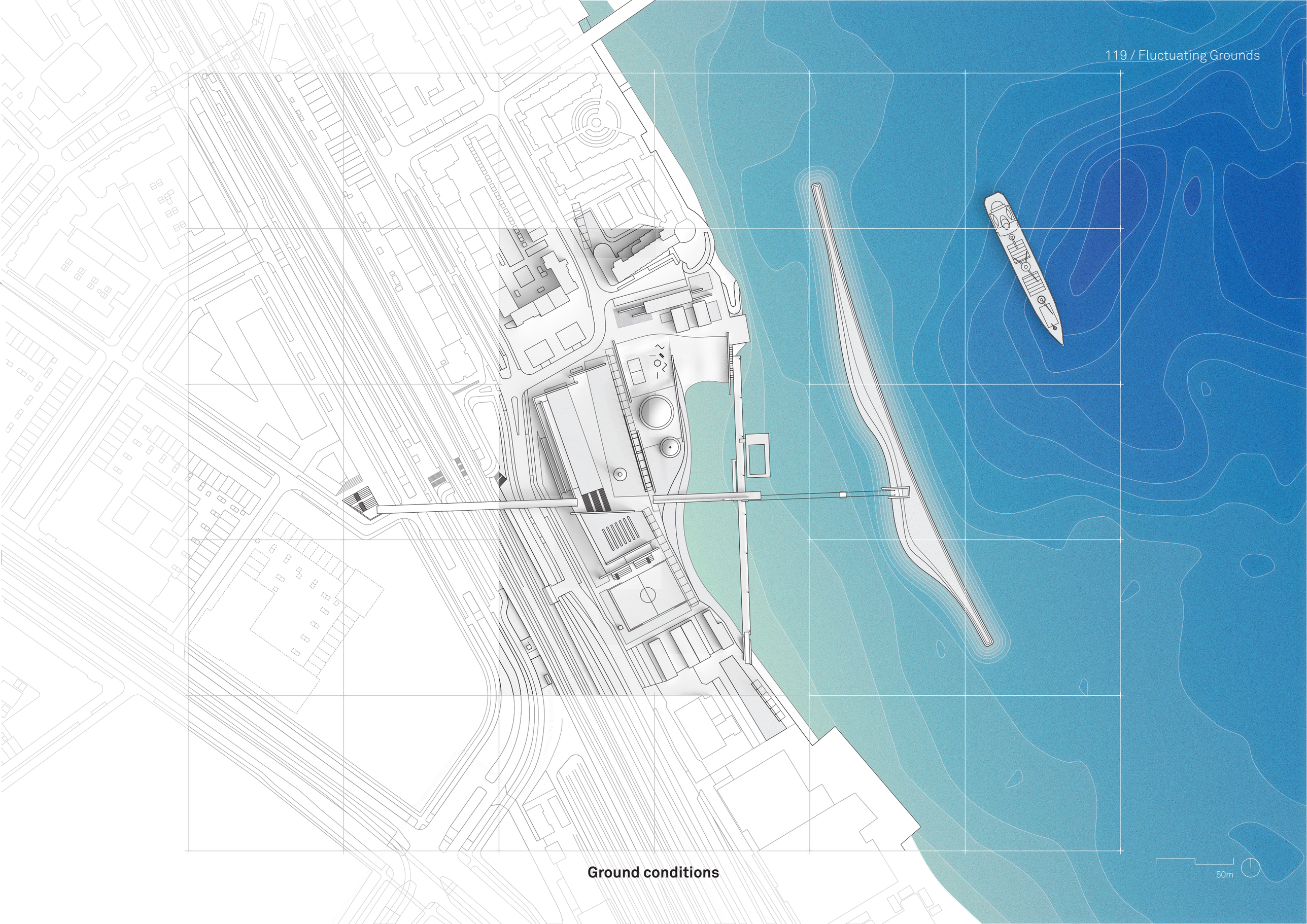


Surrender

Resiliency



Waters rising



Ground conditions

Thank you