



BETWEENNESS

TANGIBLE & INTANGIBLE BOUNDARIES

*For formulating a complex estate
landscape in Gelders Arcadie*

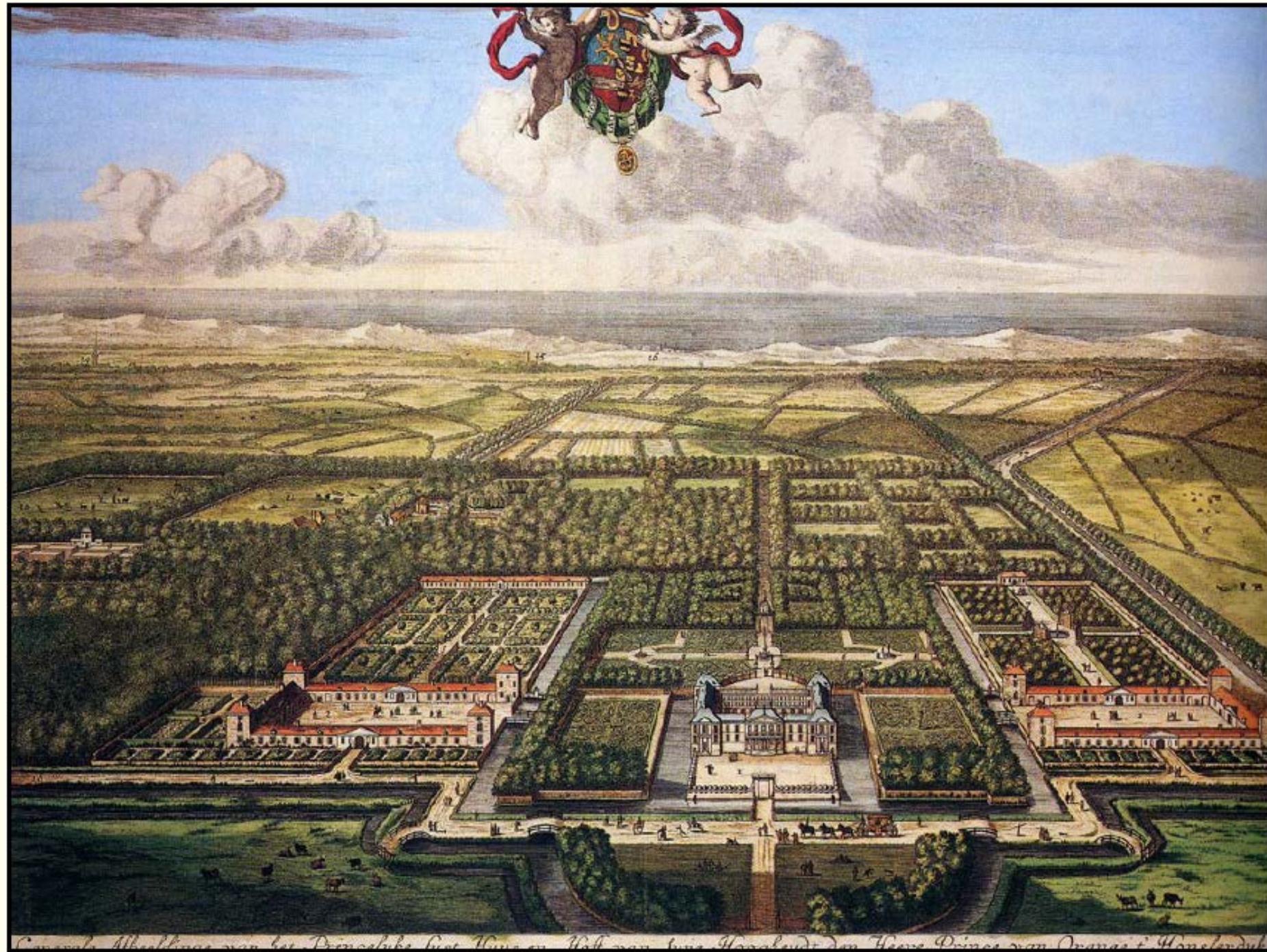
P5 Presentation

Yuyu Peng

Graduation Lab: Gelderland/ Flowscapes

Tutor: Saskia de Wit/ Marc Schoonderbeek

Target Context
Gelders Acadia- Power landscape

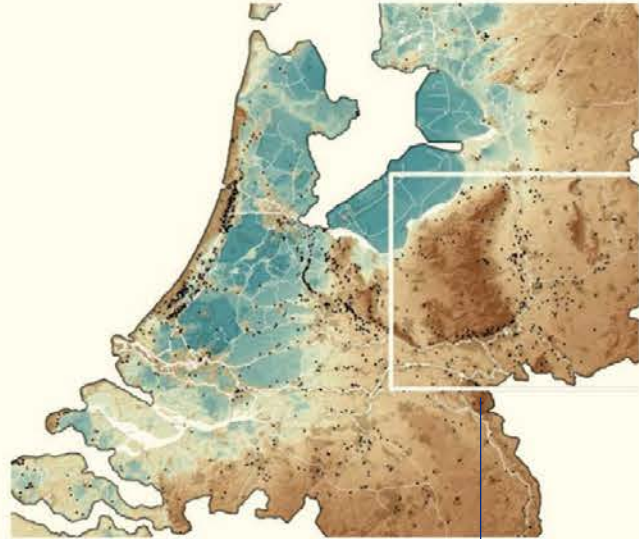


Estate Landscape is one framed landscape fenced by boundaries.

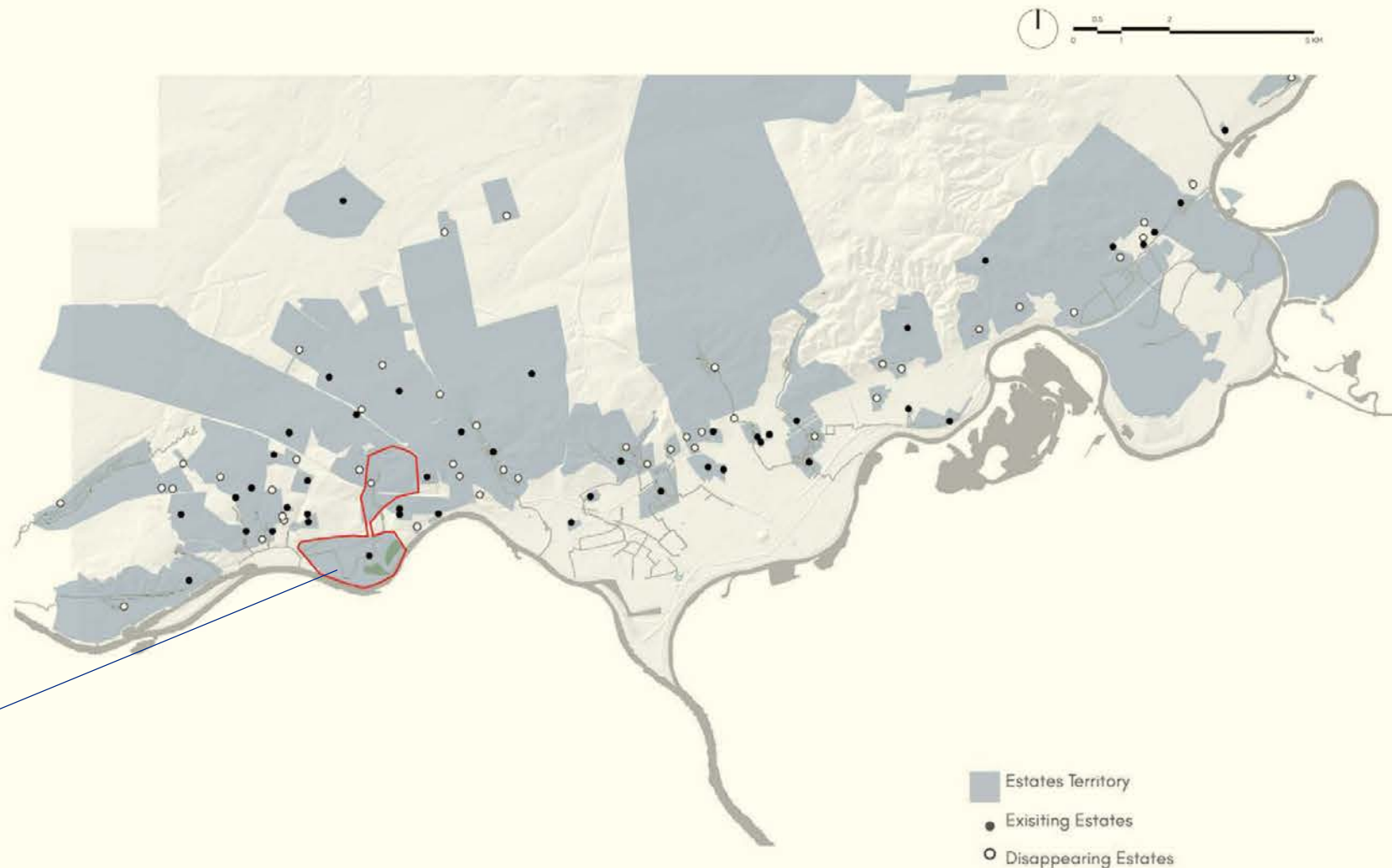
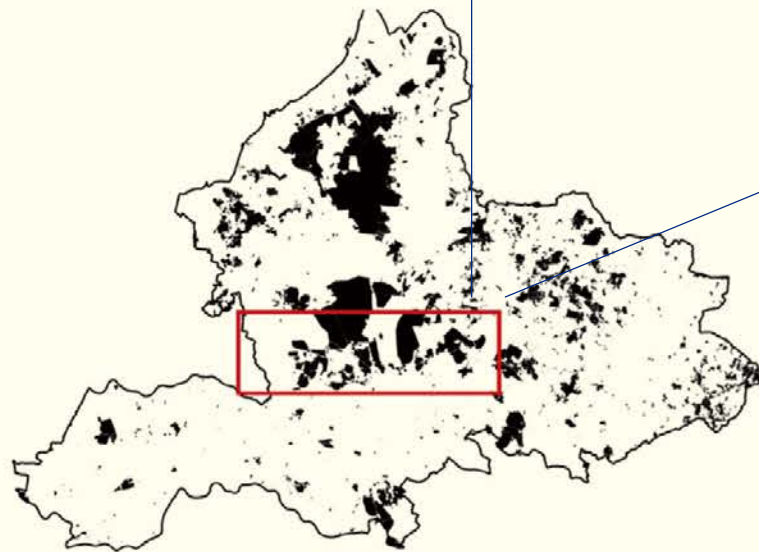
Target Context

Gelders Acadia- Power landscape

estate landscape in Netherlands (Source: S. Nijhuis, TU Delft)



Garden of Gelderland (Source: B. Catoor, TU Delft)



Historical Estate territory in Gelders Acadia

The estate landscape have remained a lot in the Gelderland, especially in the south of Veluwe.

Target Context

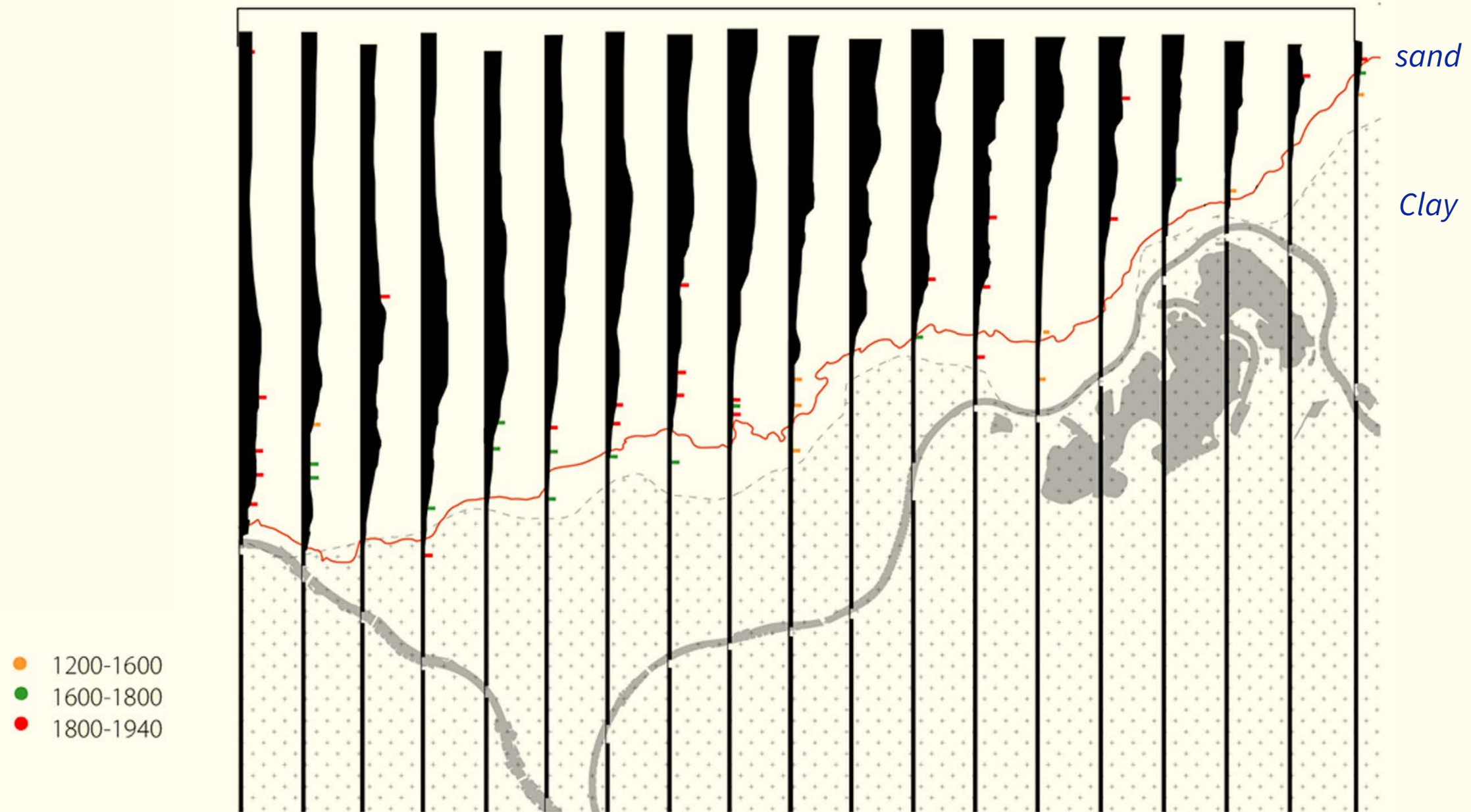
Gelders Acadia-Topography Boundaries



The glacial movement carves the current topography. The ice-pushed ridge has formed a natural differential topography boundary.

Target Context

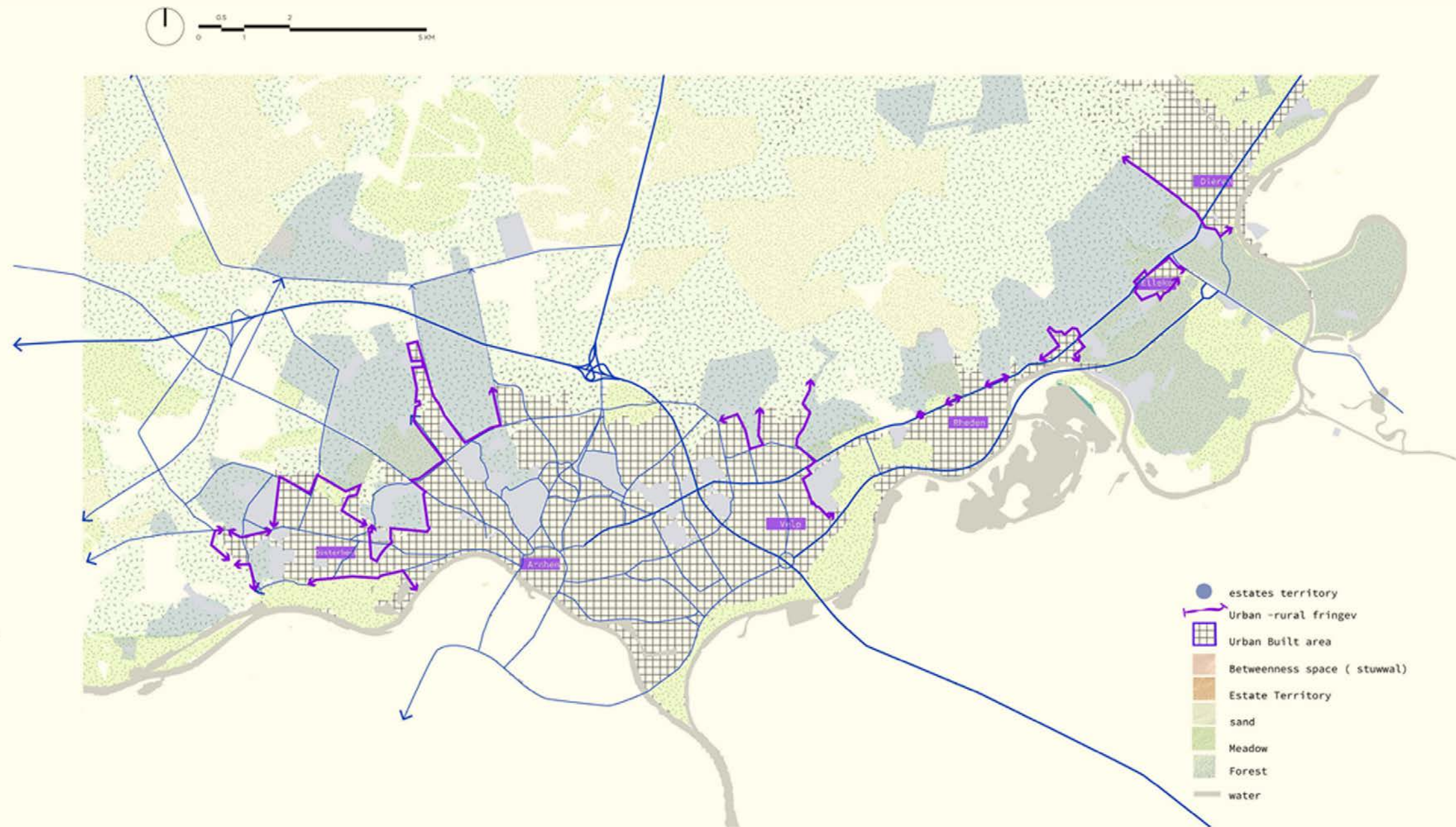
Gelders Acadia – Topography Boundaries



The topography boundary influenced the soil division between sand and clay, and also the location of estates.

Target Context

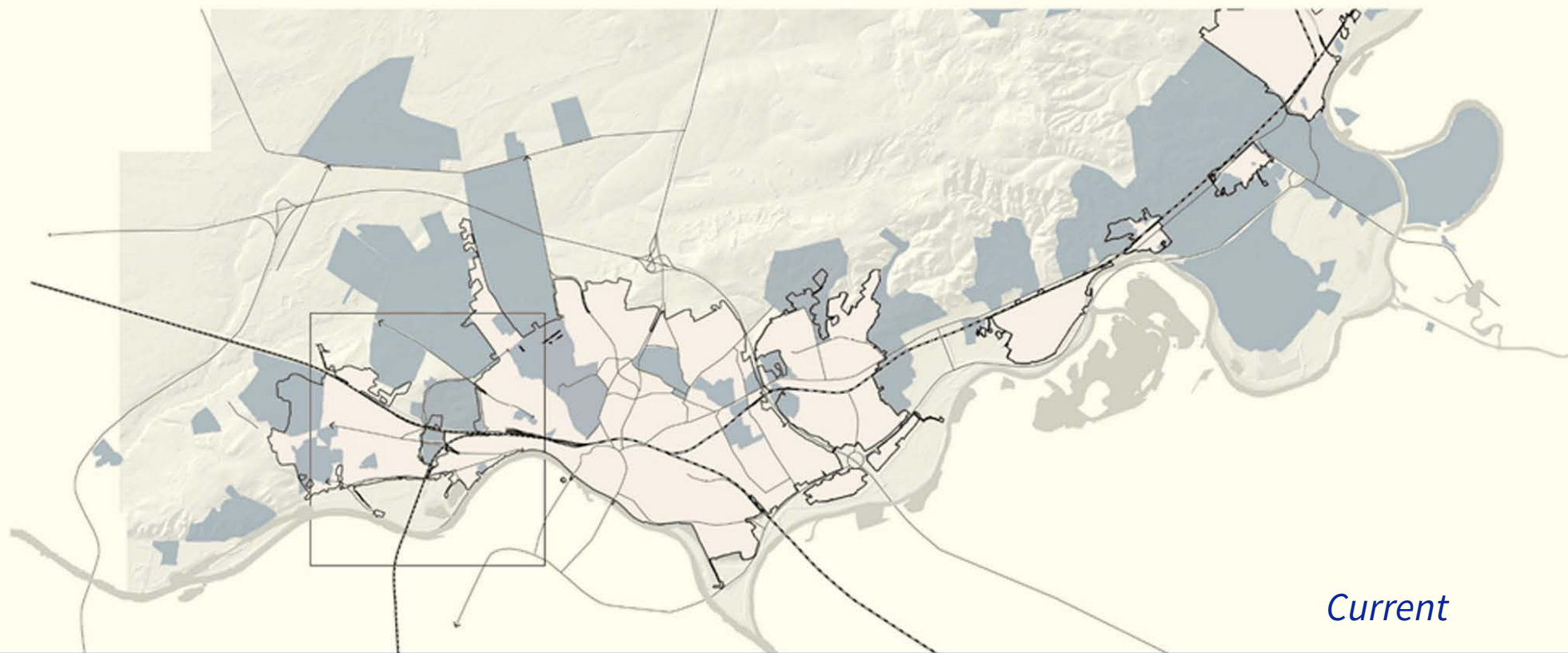
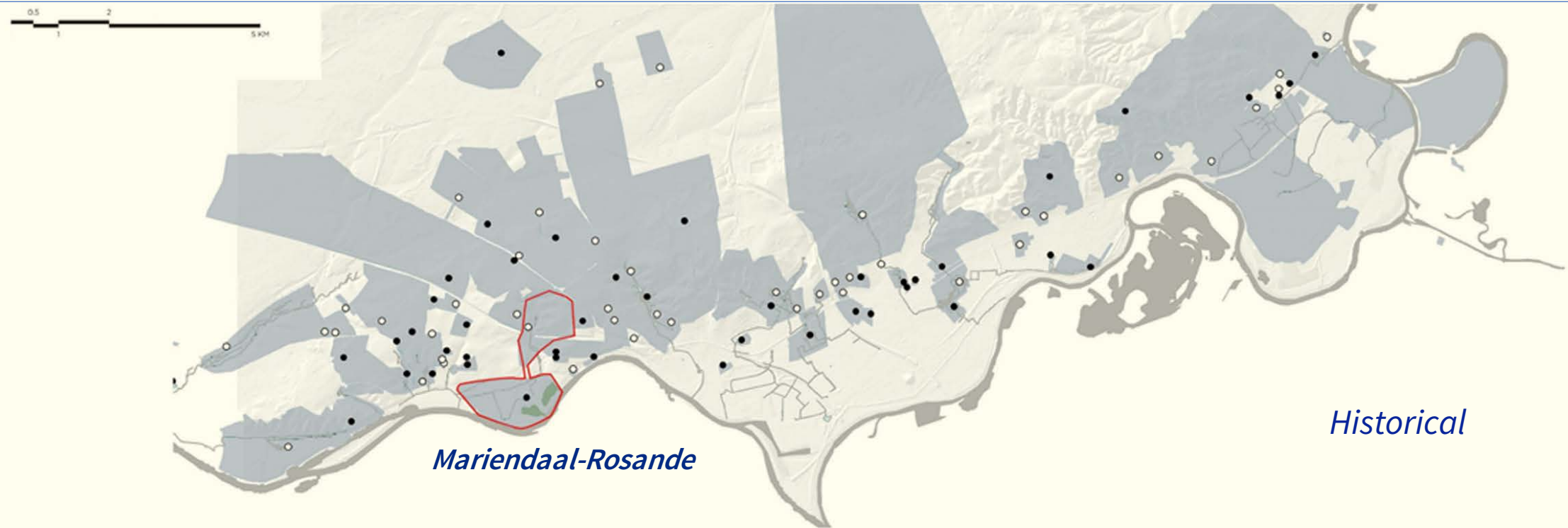
Relational Boundaries – Urban/Rural Fringe



*The urbanization process speeds up the physical connection from urban area to estates landscape.
Estates territory has become the urban-rural fringe. .*

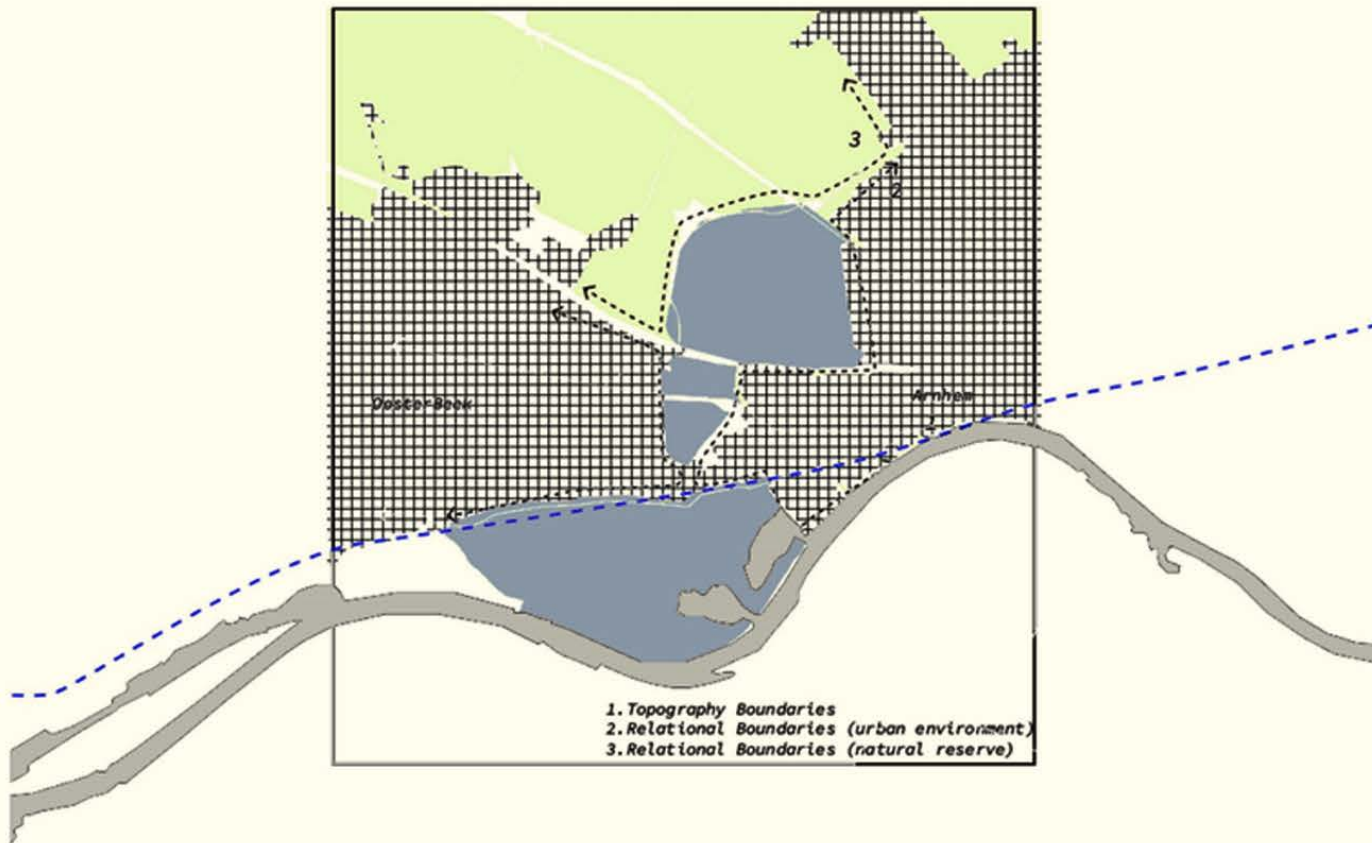
Target Context

Relational Boundaries – Urban/Rural Fringe

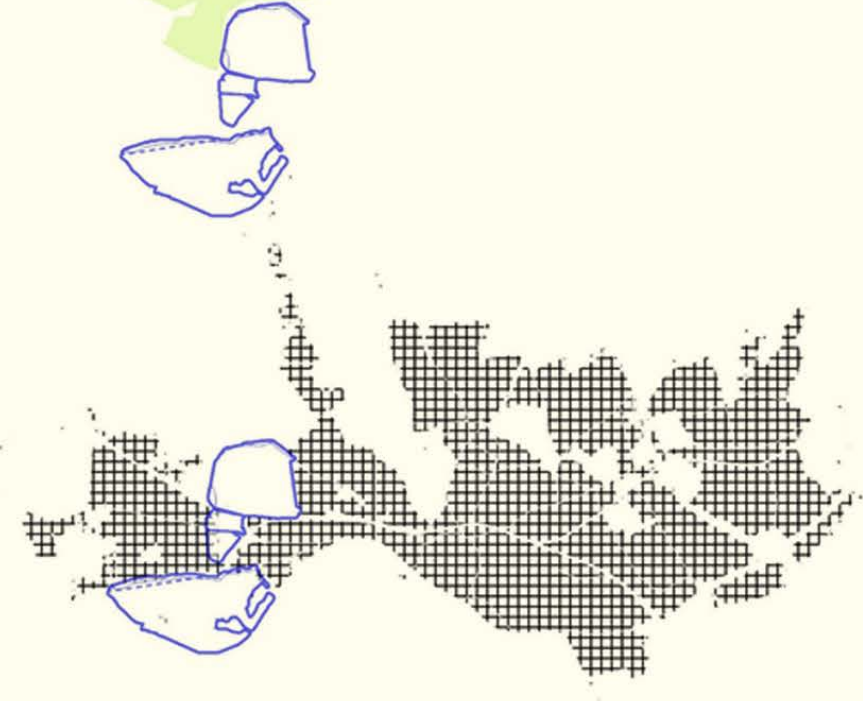


.As for the fast-urban sprawl with dense grey infrastructure, The natural topography boundary has becoming less visible and recognized.

Design Site – Mariendaal-Rosande *Outer Environment*



North : Green Fabric - Veluwe



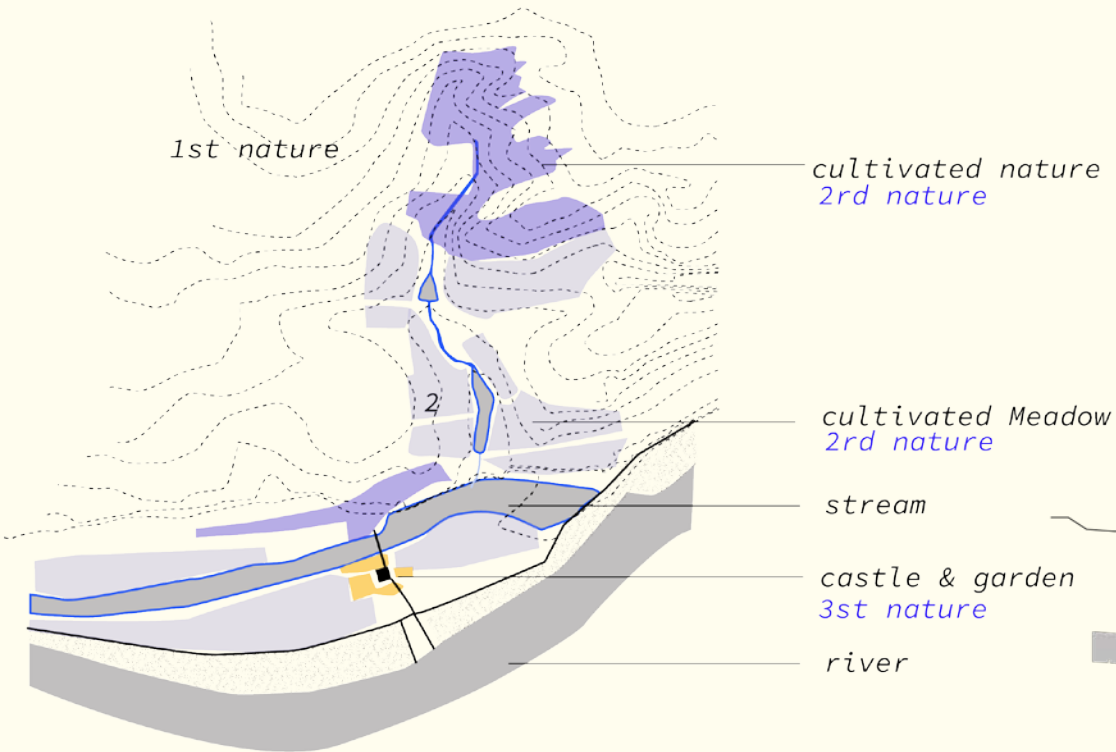
Middle : Urban Fabric -Arnhem



South: Water Fabric: Flooded Plain

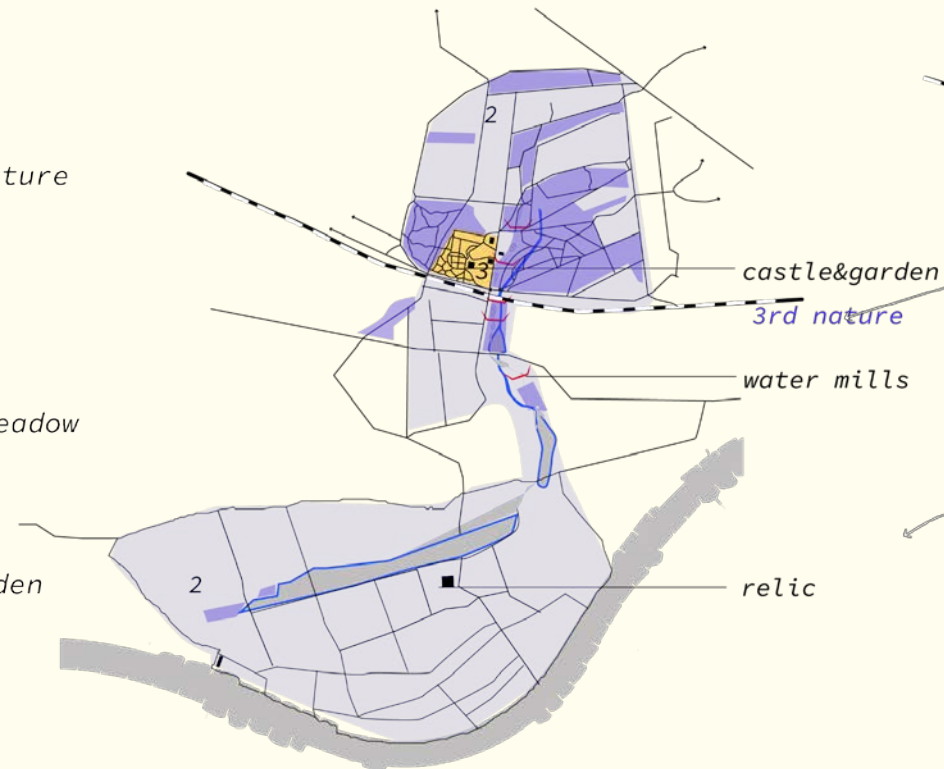
Mariendaal- Rosande : Palimpsest

From continues to fragmented



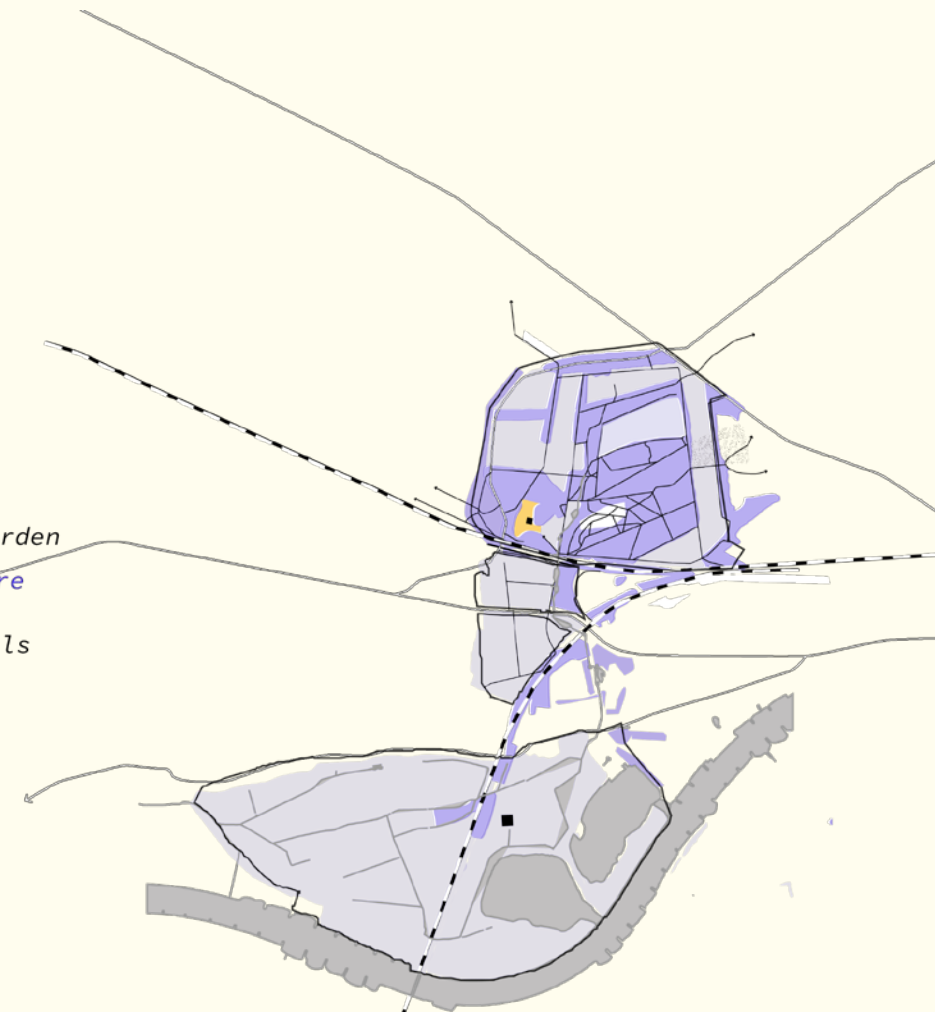
13th-14th, Continuous territory

The Rosandaal castle was built in the flooded plain, and the stream has connected the moraine and flooded plain. The flow of downstream echoed to the river curve.



14th-18th, start to divide territory

The stream has utilized by water mills for the brick industry along the river. The downstream landscape reveals on robust nature and the Rosandaal castle only left limited relic on the land



18th-now, fragmented condition

The development of transportation has divided the complete estates landscape into several parts and has been composed the current boundaries, which left problem of fragmentation.

Mariendaal- Rosande

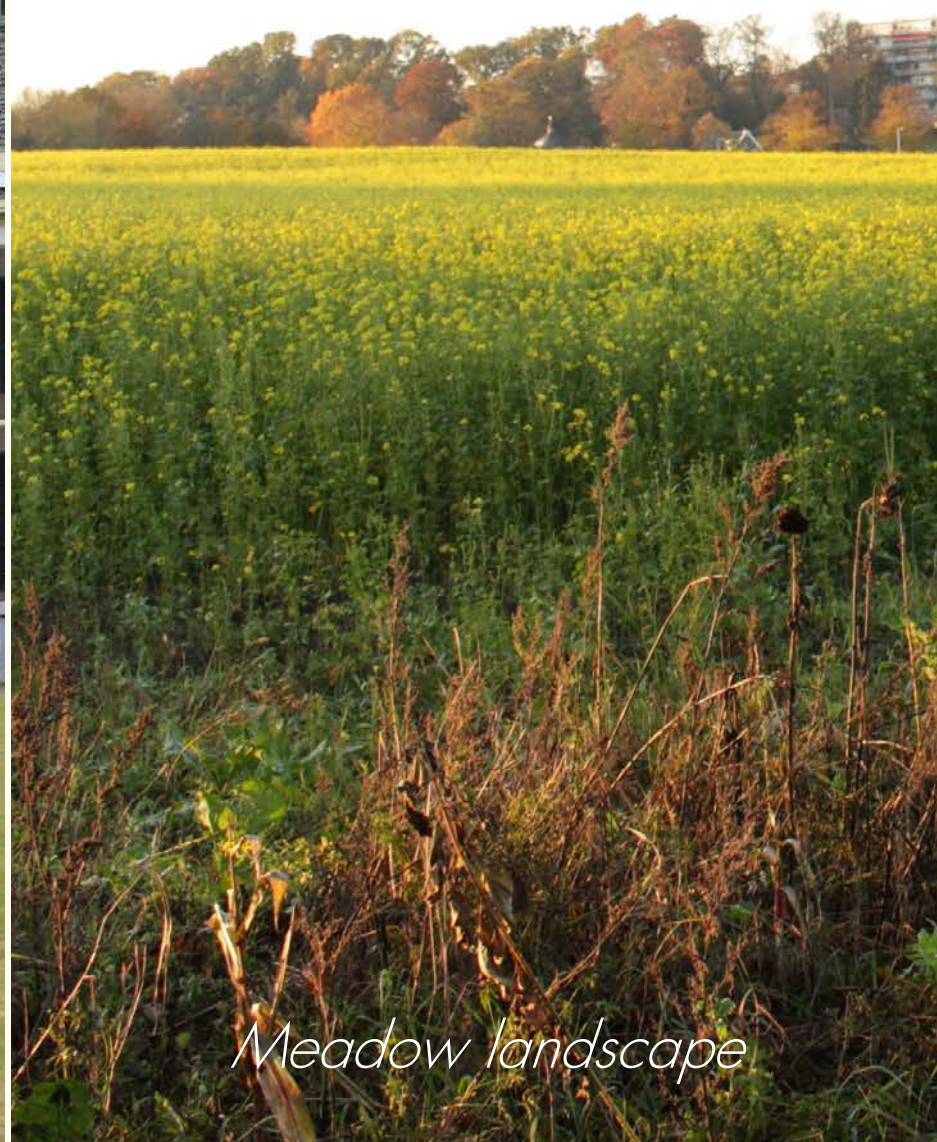
From coherent production ensemble to fragmented tourist spots



Design Site – Mariendaal-Rosande
Inner Environment



Garden landscape



Meadow landscape



Polder Landscape

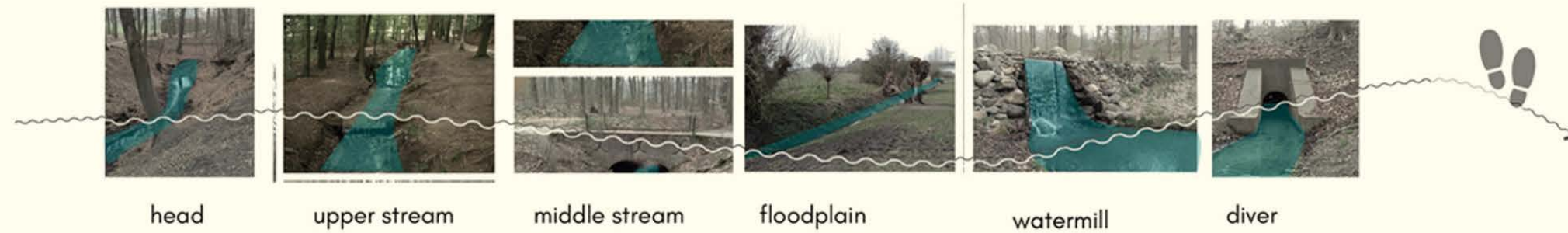
Mariendaal- Rosande

Monotonous Outer Boundaries Vs. Complicated Outer Environment



The outer boundaries of Rosande-Mariendaal was composed mainly by roads and dense forests. And these boundaries have low porosity and accessibility, which caused obstacle for transition.

Mariendaal- Rosande *Incoherent Experience*



Disconnected water stream - Slipbeek

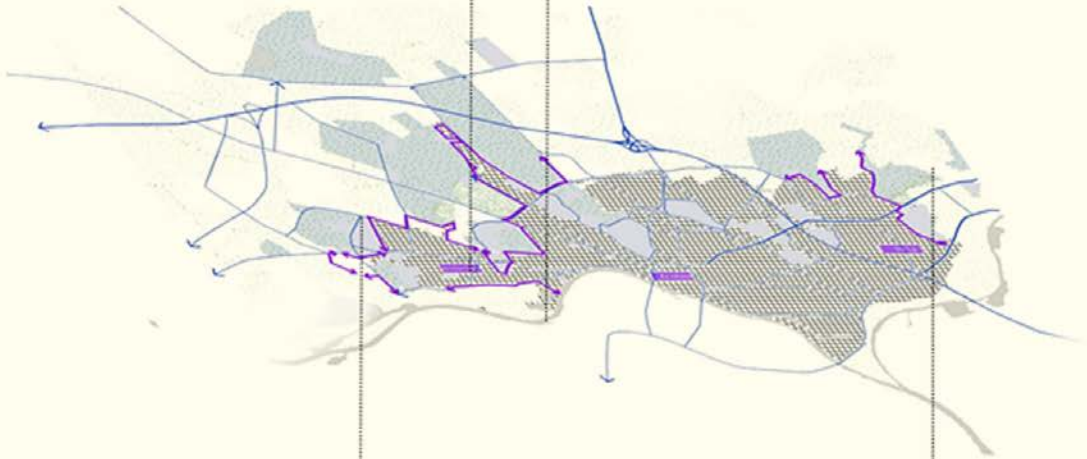


Disconnected spatial experience

Problem Statement



Estate ensemble --Disconnected estate territory

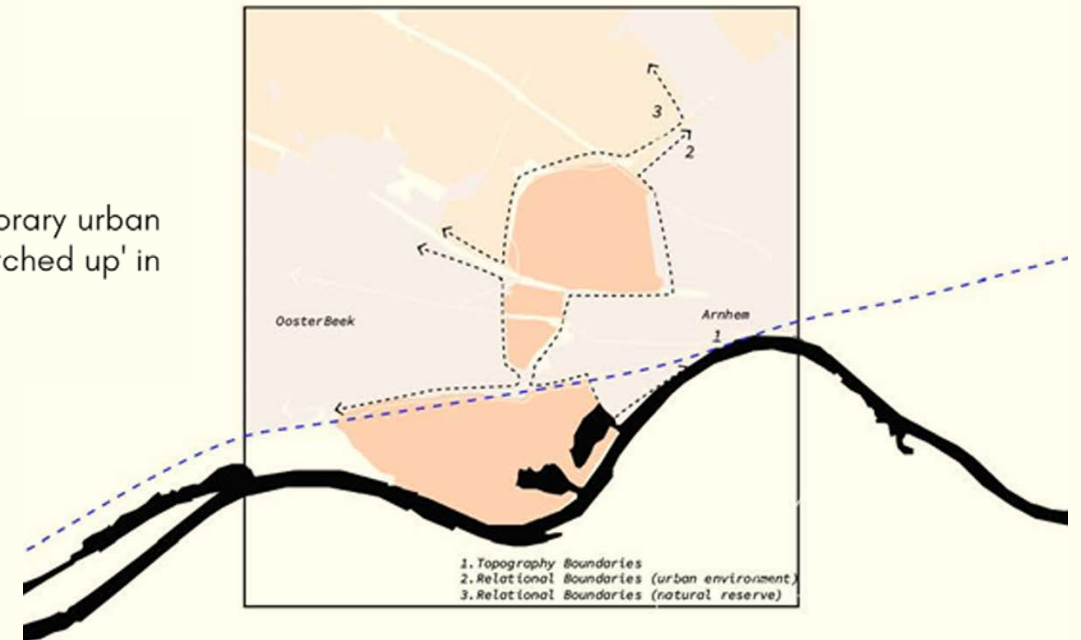


Urban scale – lack of transitional urban-rural space



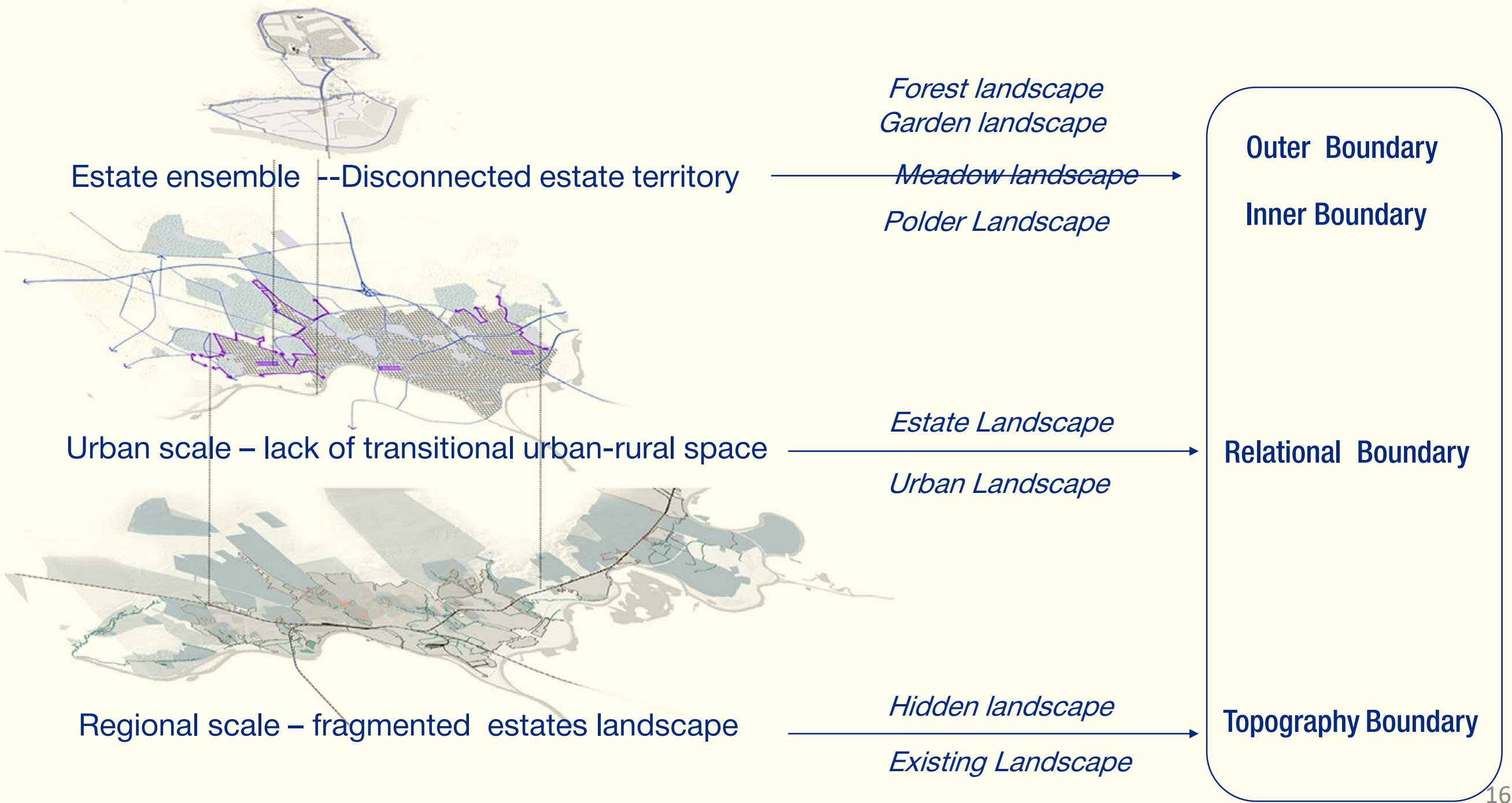
Regional scale – fragmented estates landscape

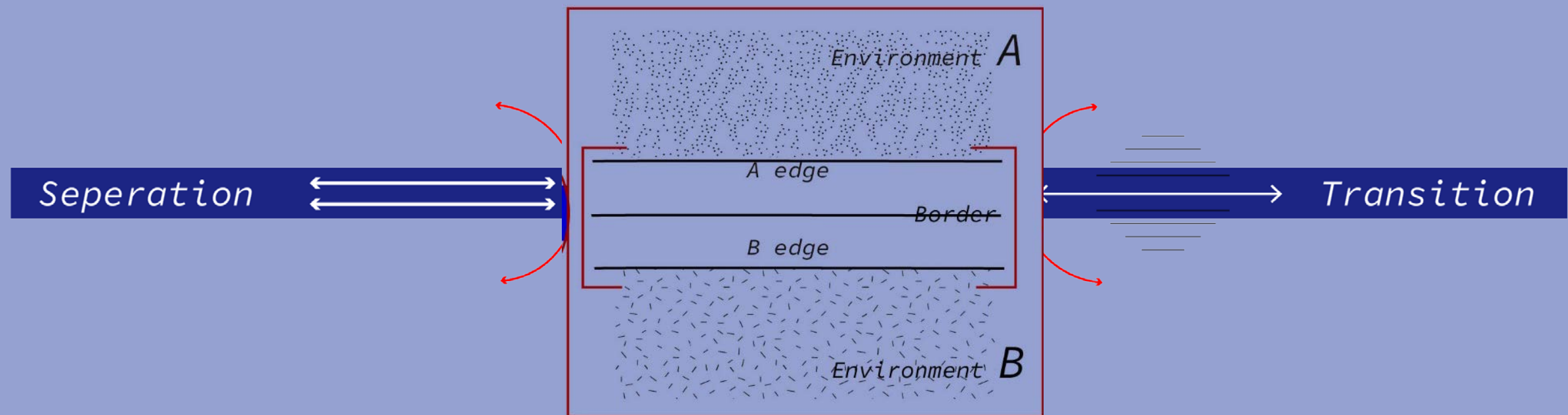
- II With the paradigms of **connectivity** and 'contextualism' dominating contemporary urban discourse, edge-spaces are often treated as thin anomalies to be 'smoothed over' or 'stitched up' in order to mitigate the disjunction.
- Kullmann, K



Mysterious Power Landscape Vs. Open Modern Landscape

Conflict bone: Boundary



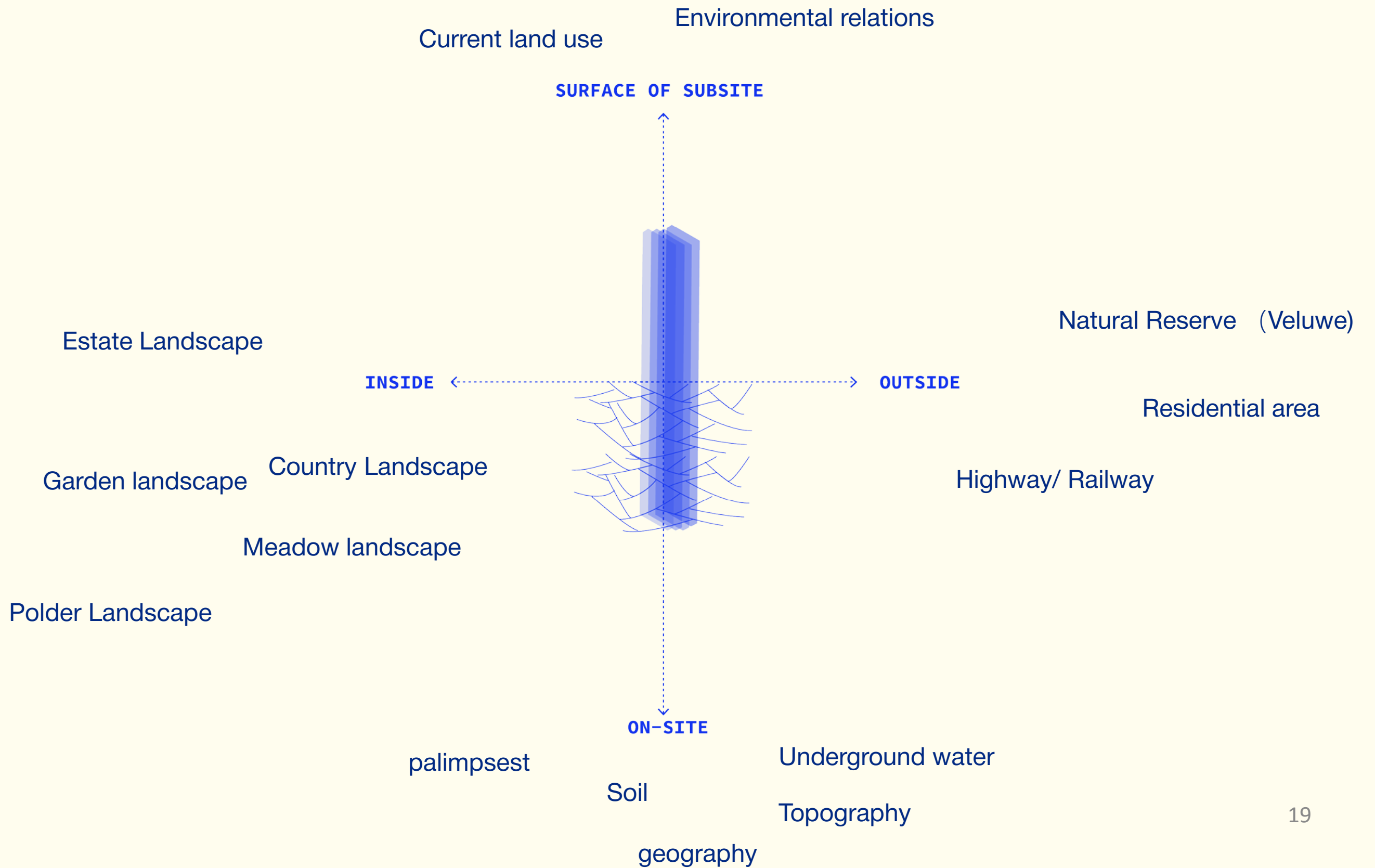


Redefine the boundaries

To meditate the confliction between estate landscape and the urban environment , forming an integrated relation between ecology, urban and landscape.

How can a well-designed **boundary approaches** address the contradiction between the *isolation* that is characteristic of the estate landscape and the *connectivity* that is a requirement of a well-functioning urban landscape?

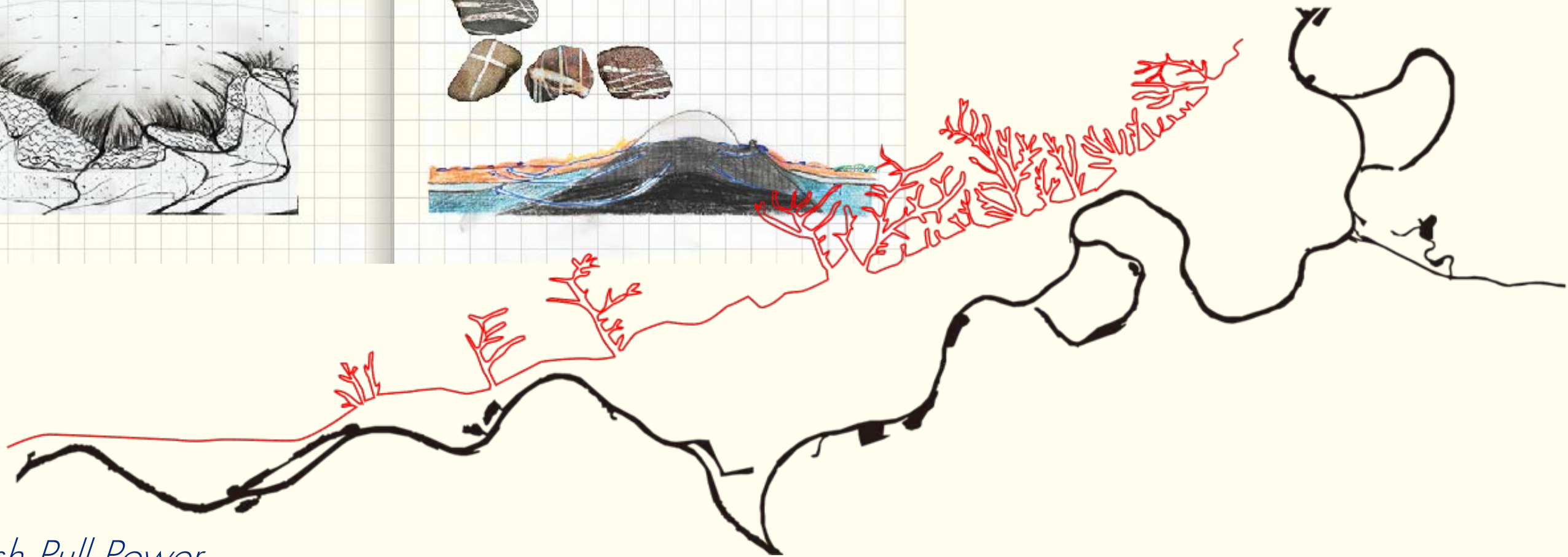
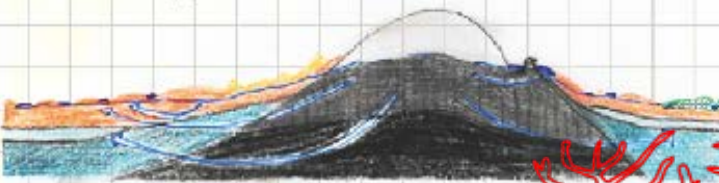
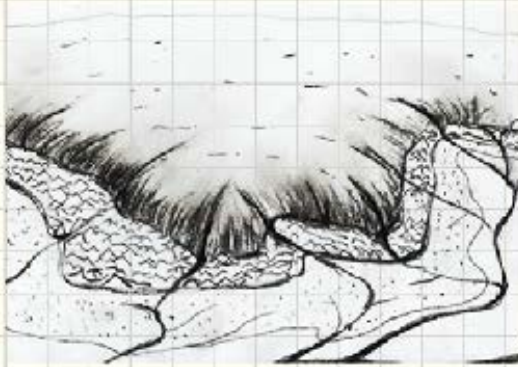
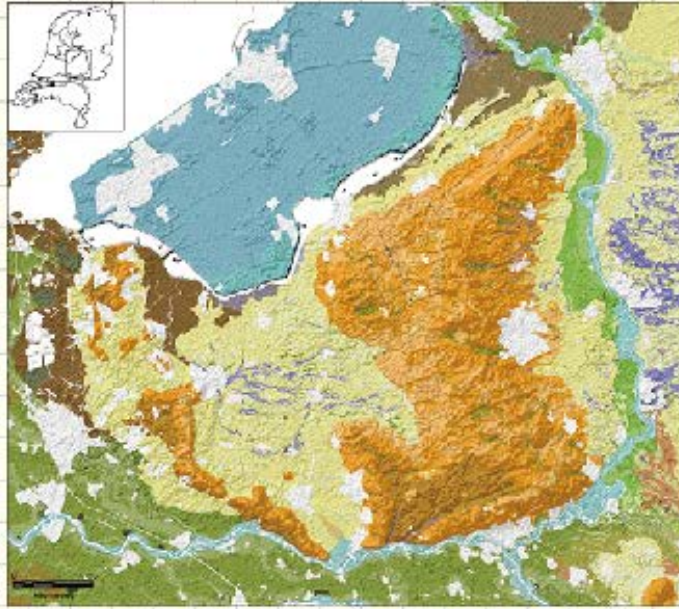
- *What types of boundaries can be understood, on several scales?*
- *How to apply boundaries approaches in different estates landscape achieving coherence and differentiation?*
- *What it is the uniqueness and adaptability of this research?*





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Push Pull Power



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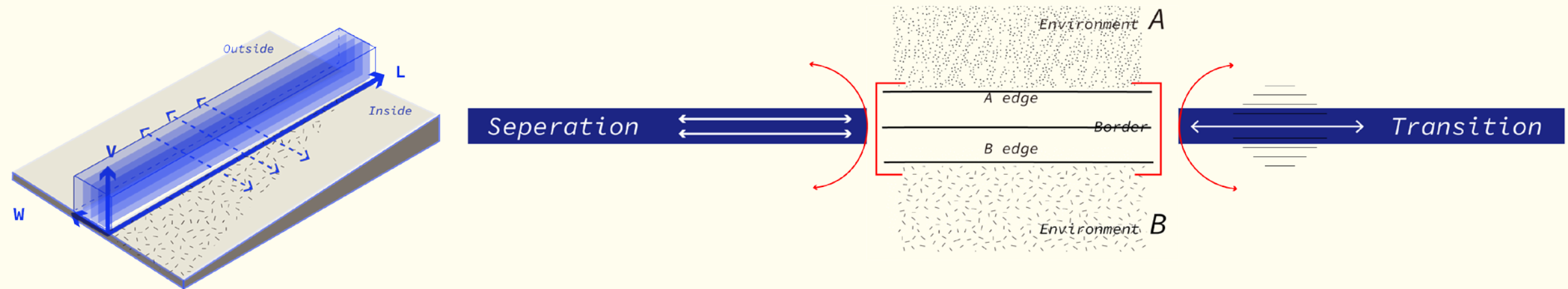
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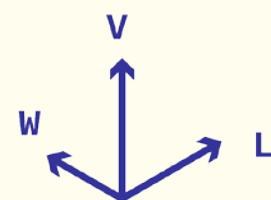
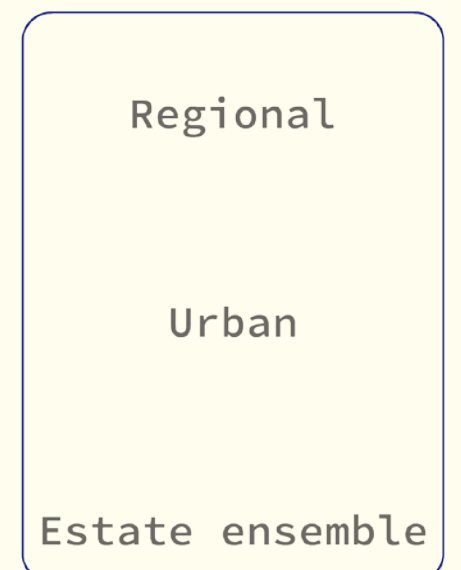
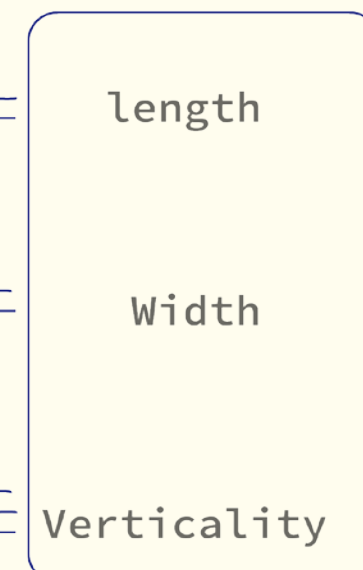
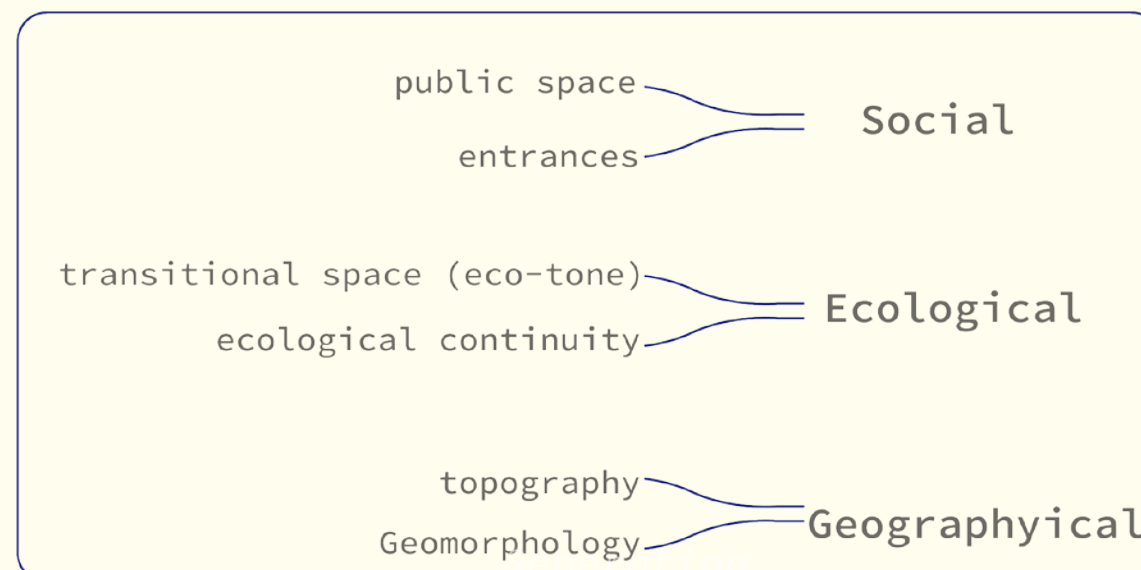
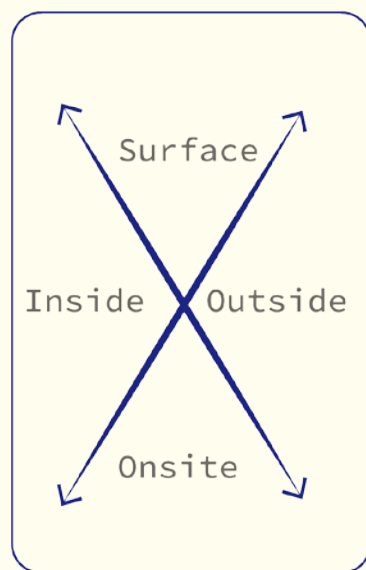


Relations

Discourse

Dimension

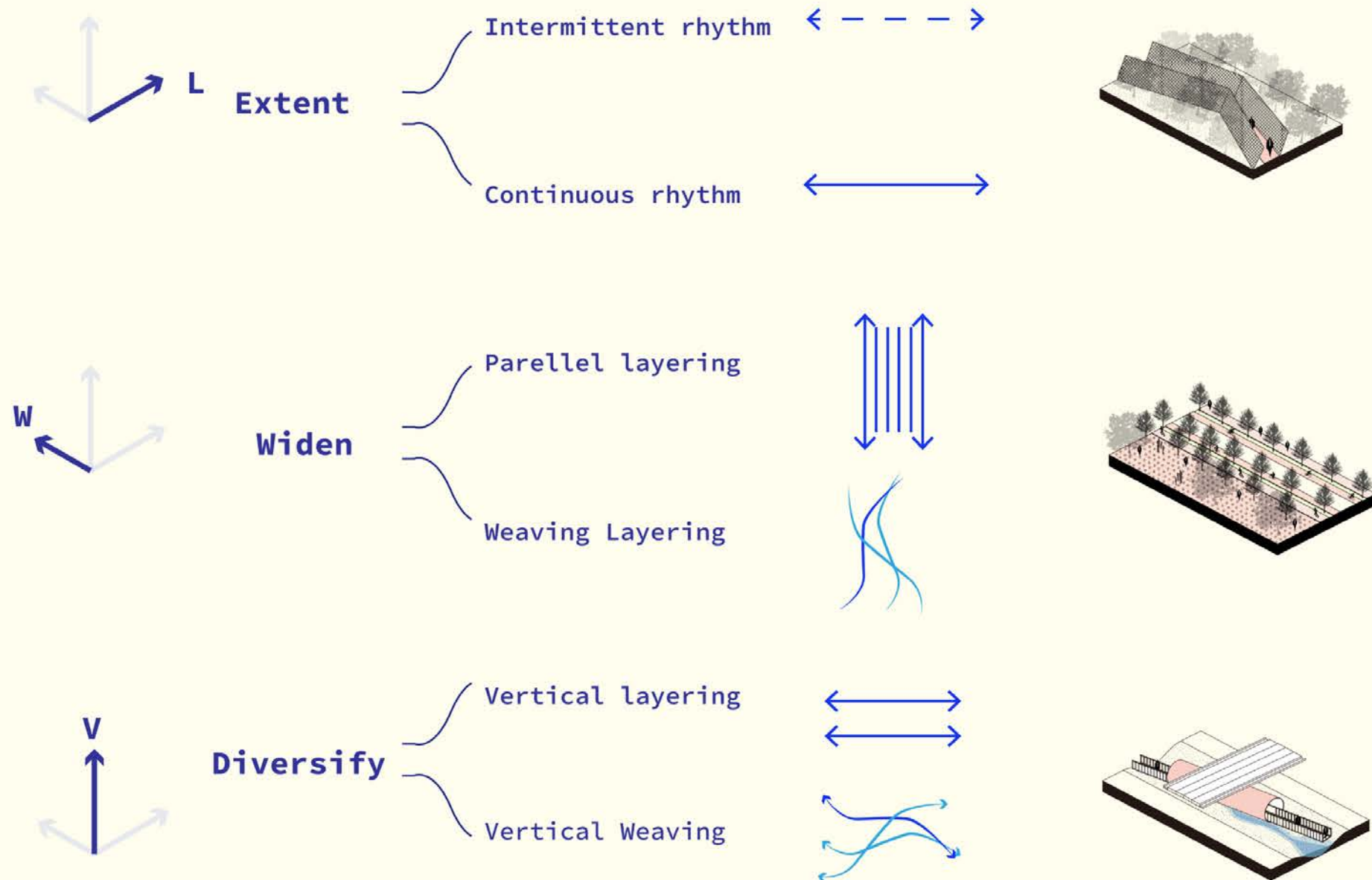
Scale



Betweenness | Boundary Manuel

Spatial Approaches [s]

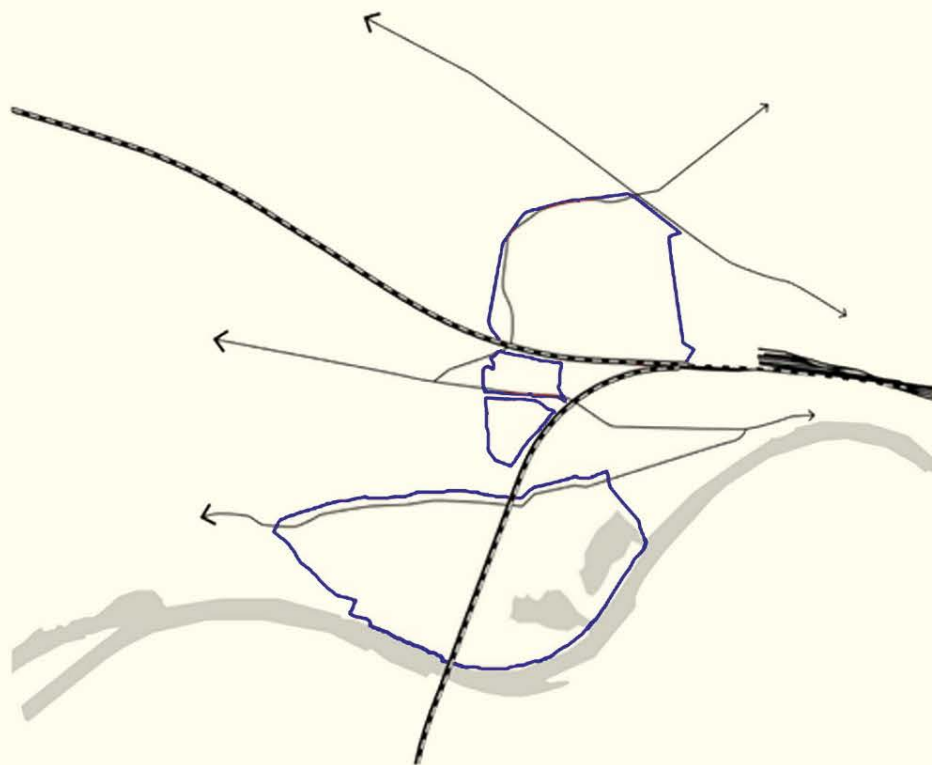
Boundaries thinking [M/l]



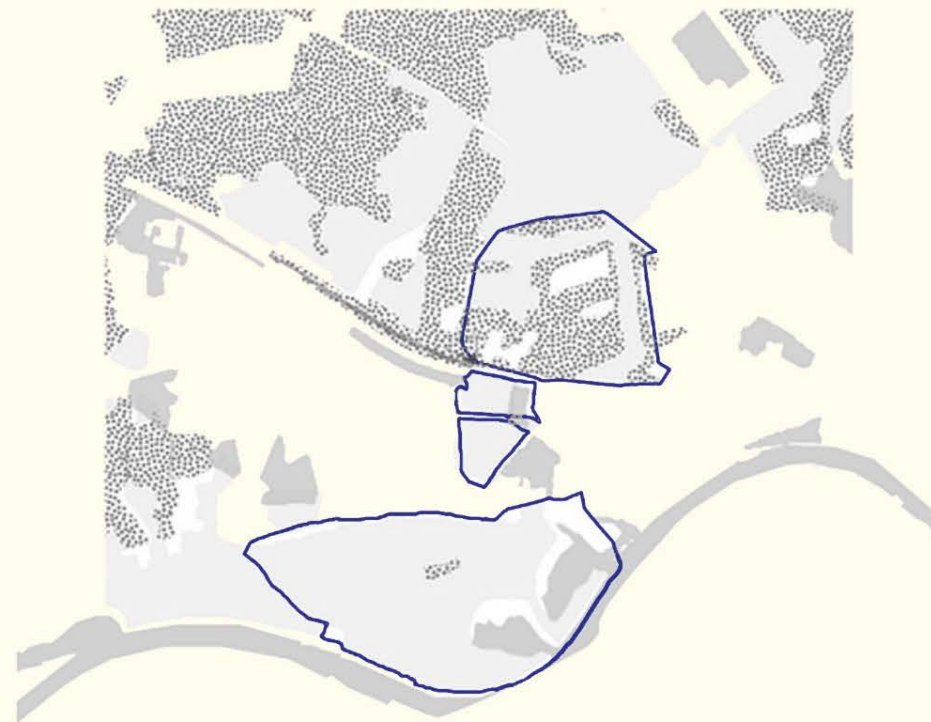
Urban Void space

Whole Estate landscape as
urban-rural boundary

Linear Infrastructure



landscape Patch



Traces of Estates



Connecting Potentials

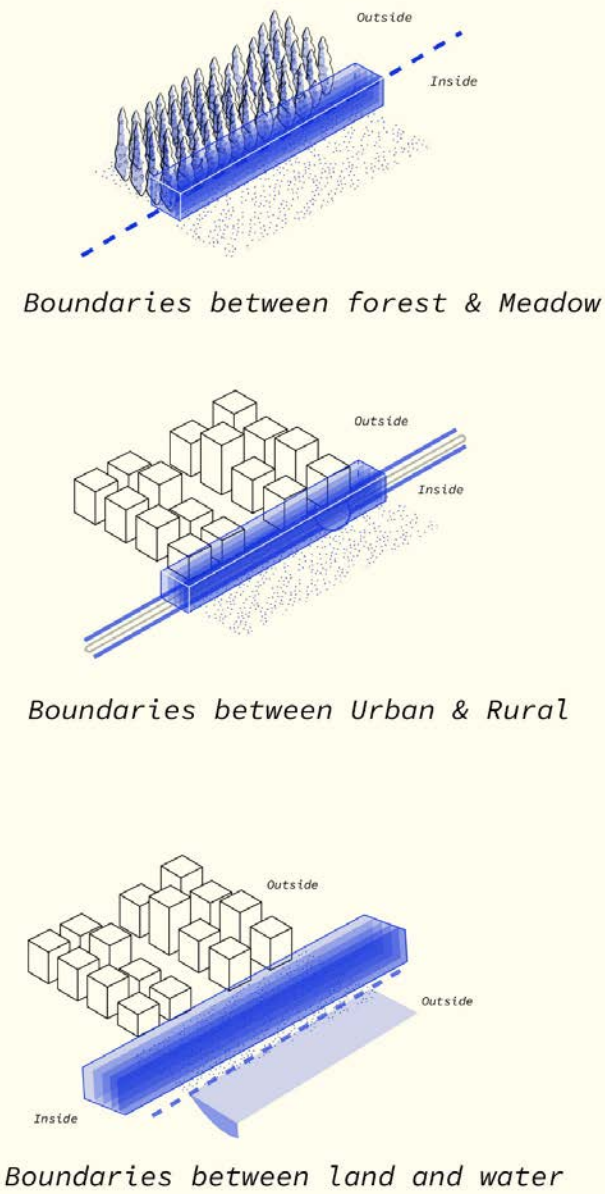


Outside Environment

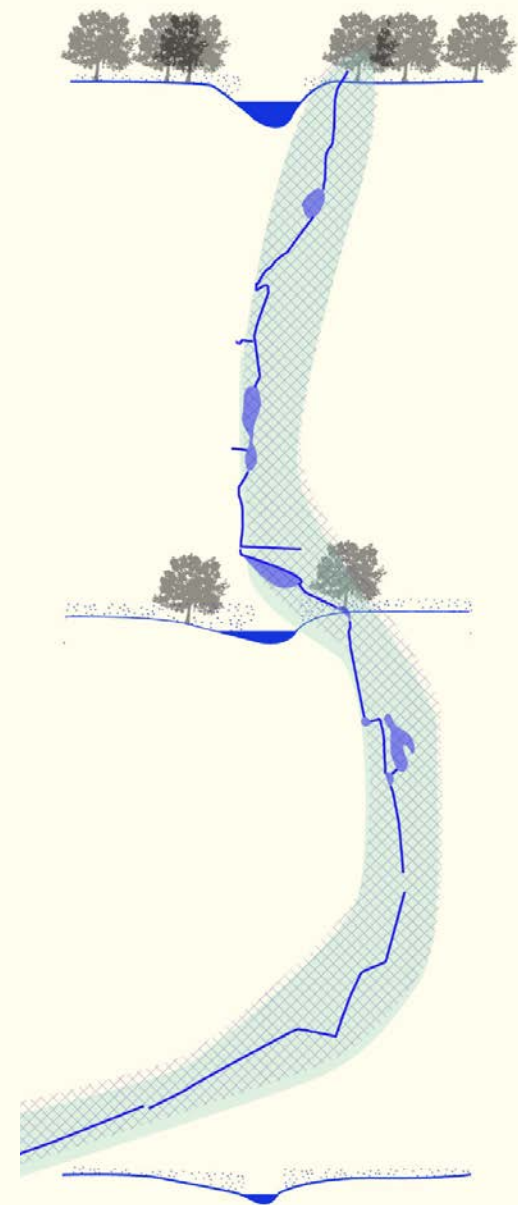


Differentiation

Boundaries



Inside Environment(Slipbeek)

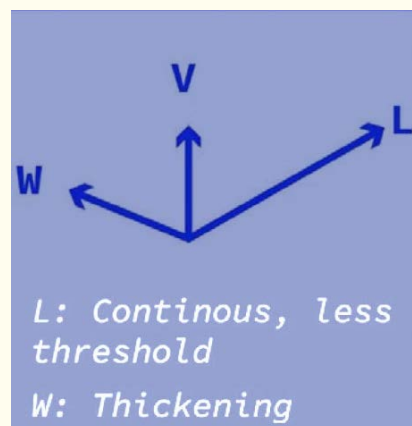


Characterized Boundaries Strategies

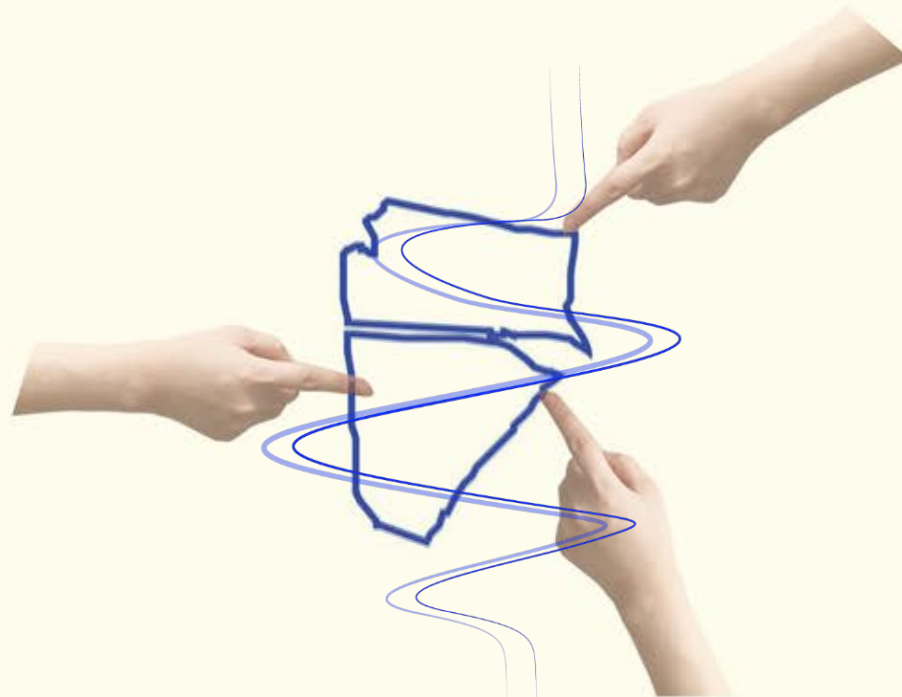
Mysterious Boundaries



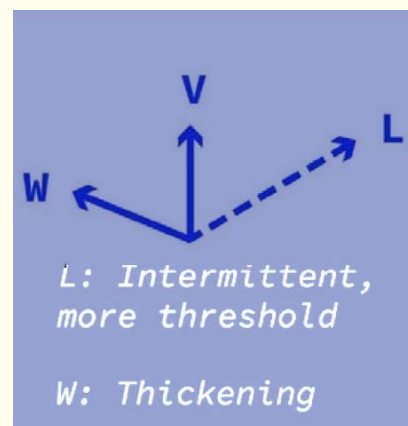
Slight Curve



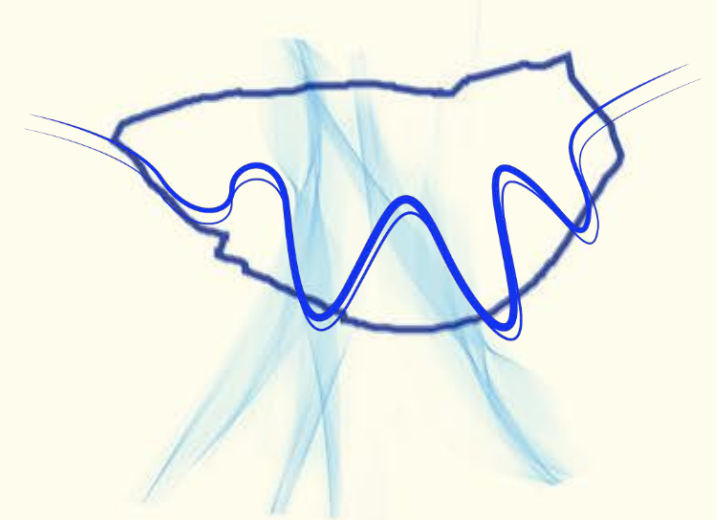
Permeable Boundaries



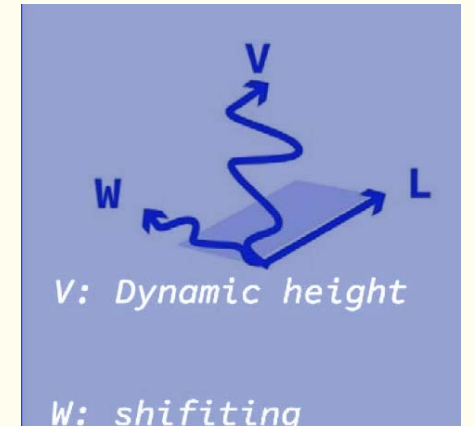
Strong Curve



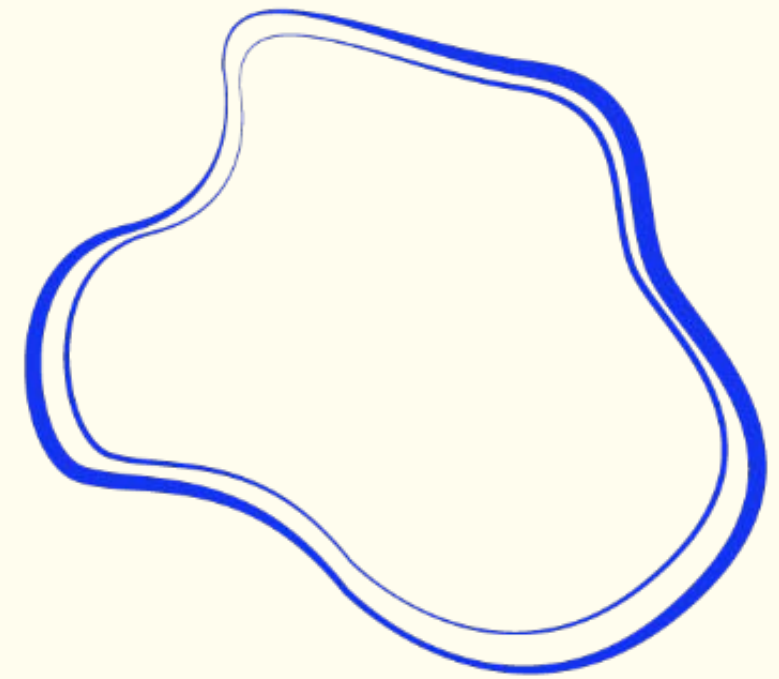
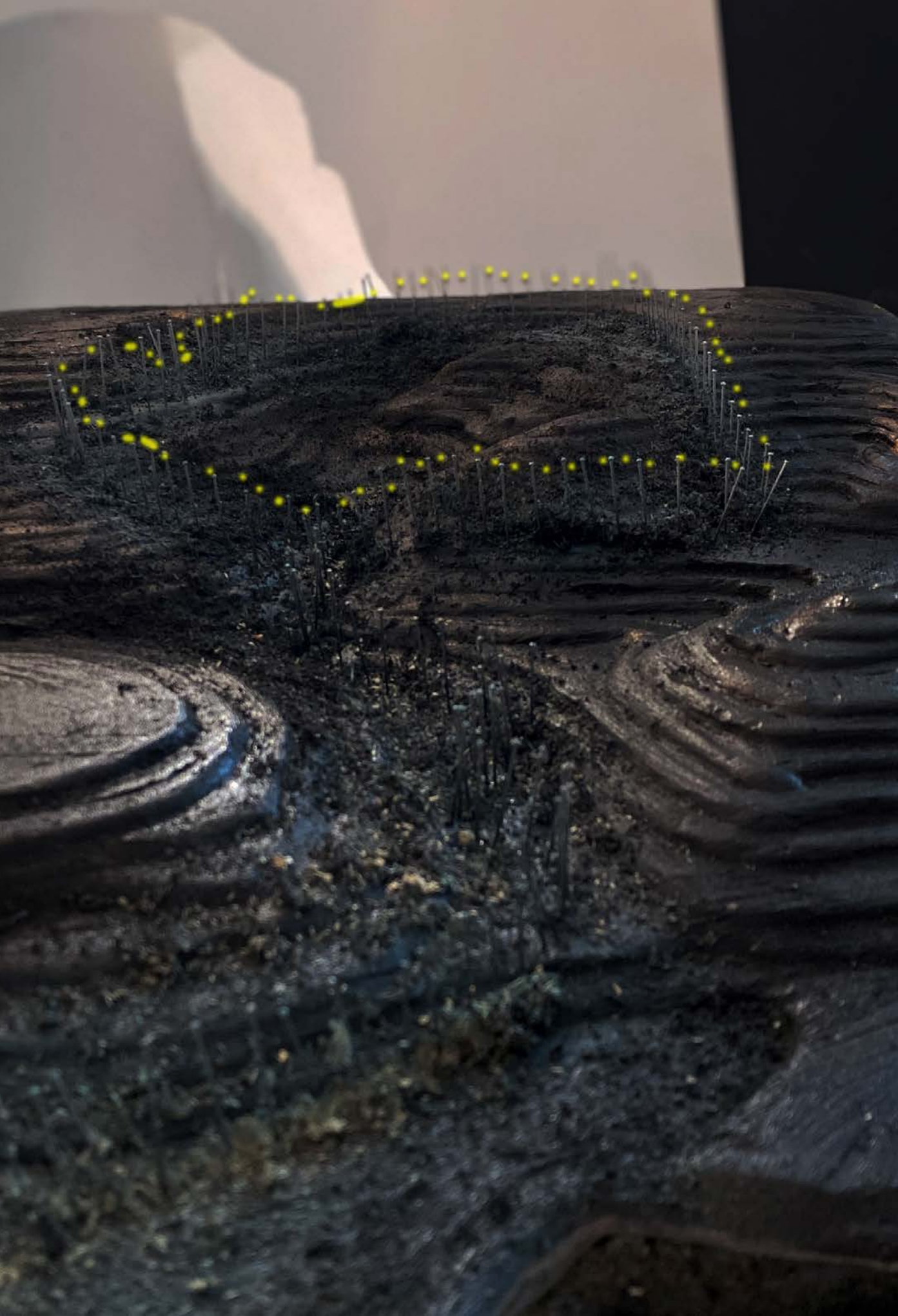
Shifting Boundaries



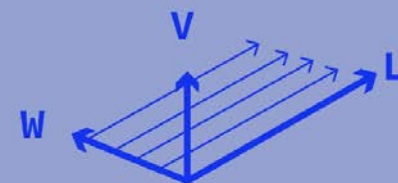
Nature Manipulation (Water)





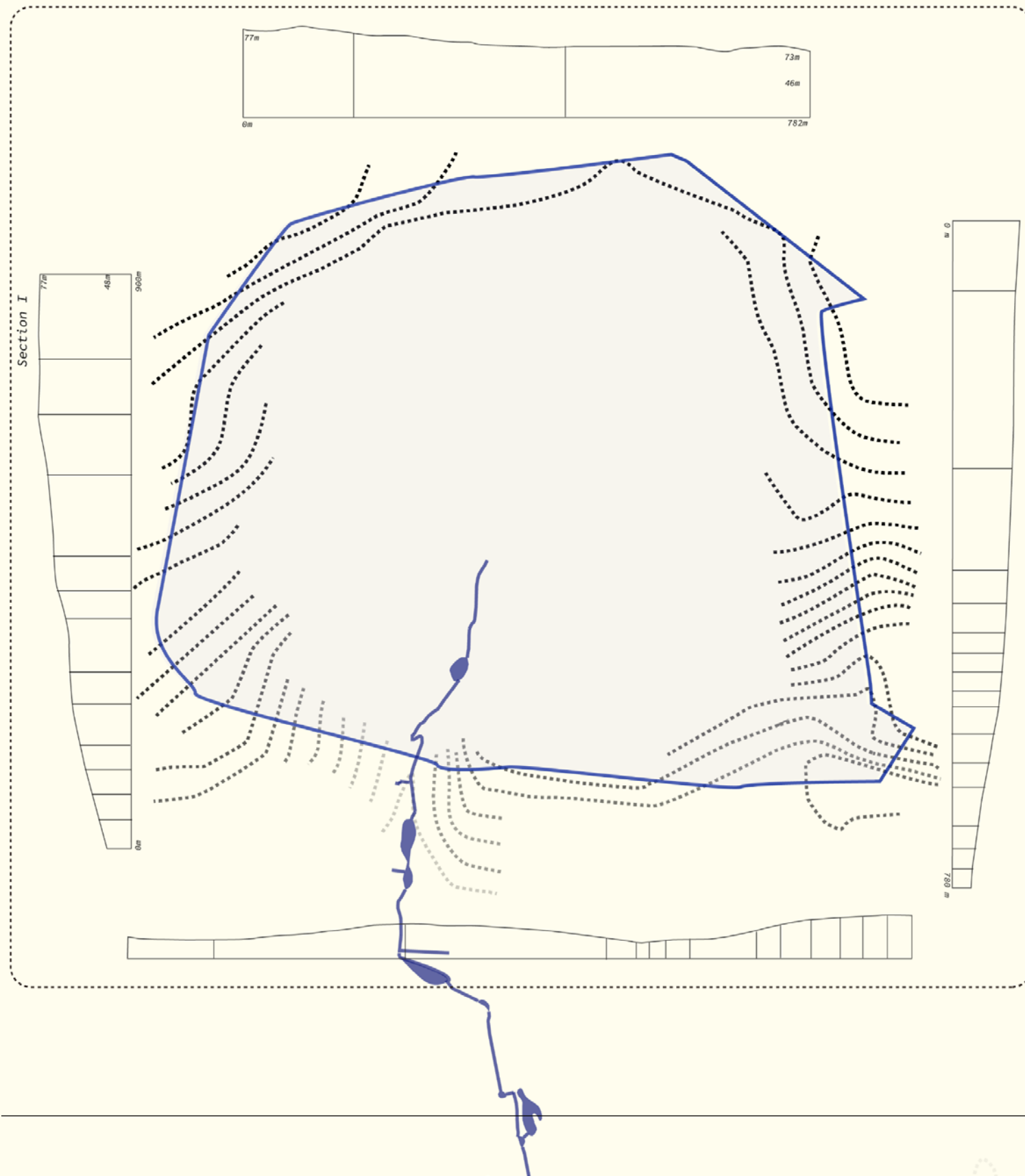


MYSTERIOUS BOUNDARIES



Width Transitional forest boundary

Length Continuous boundary length



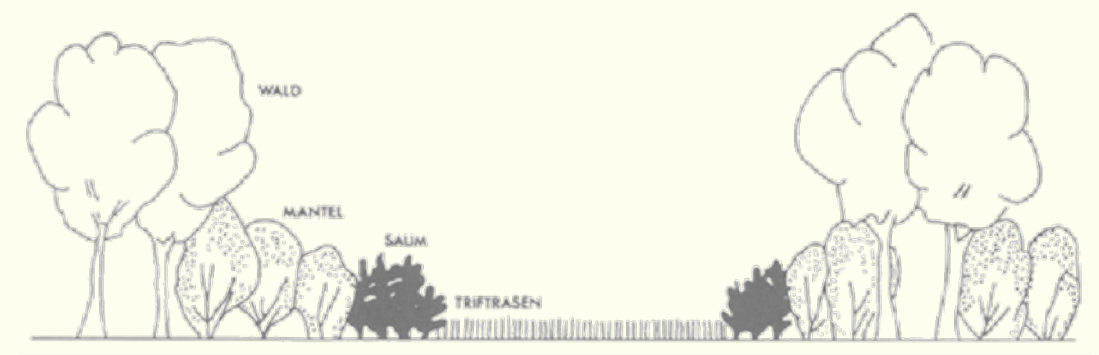
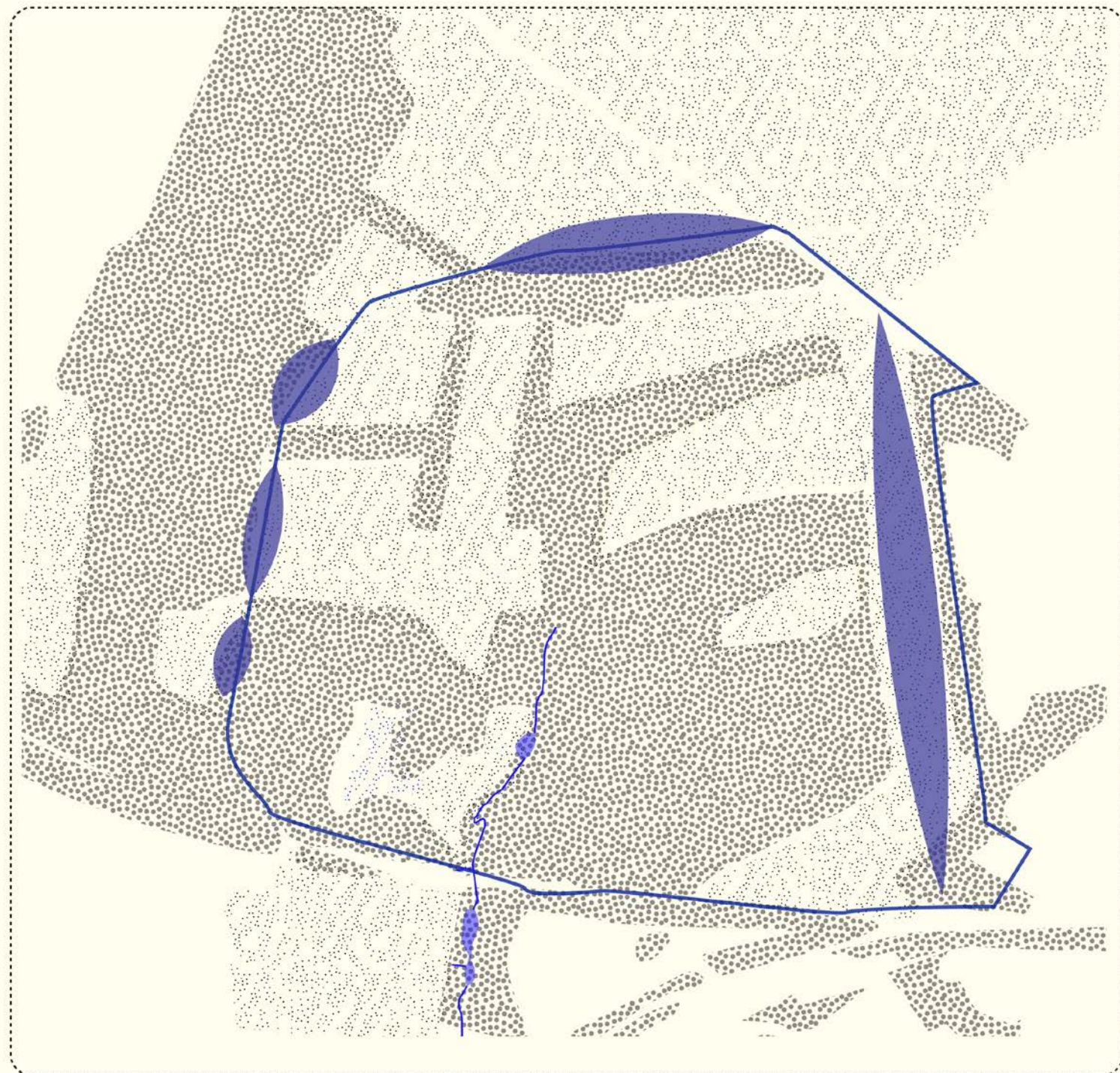
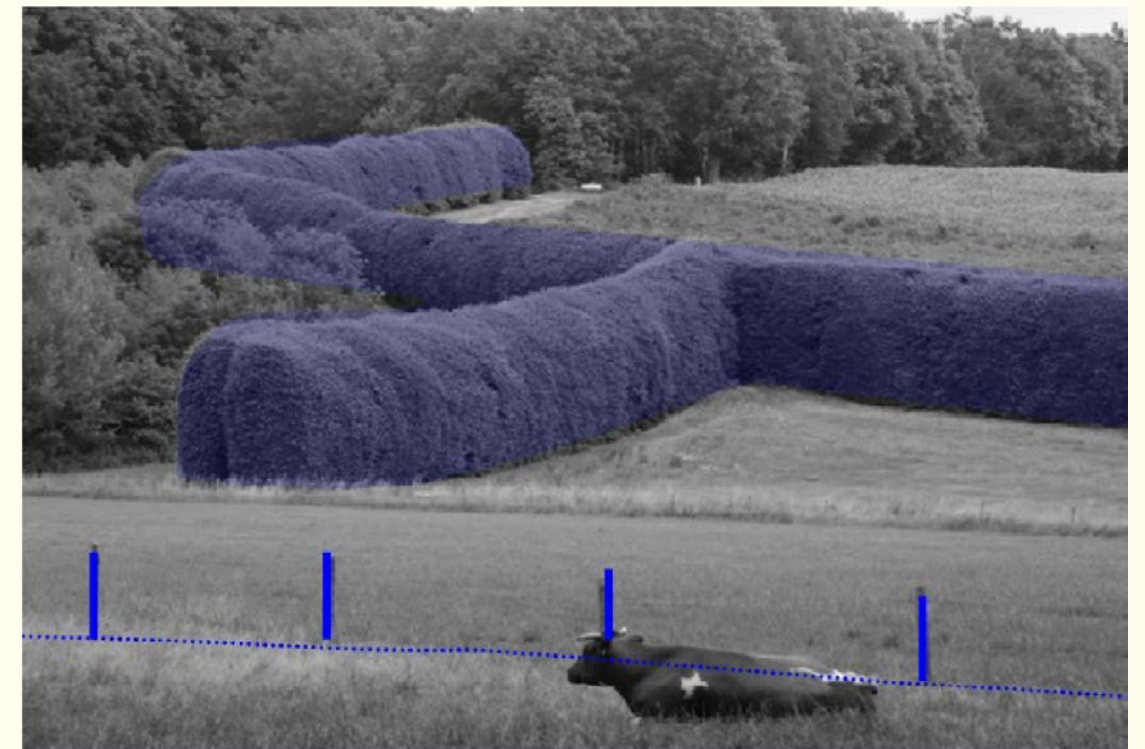
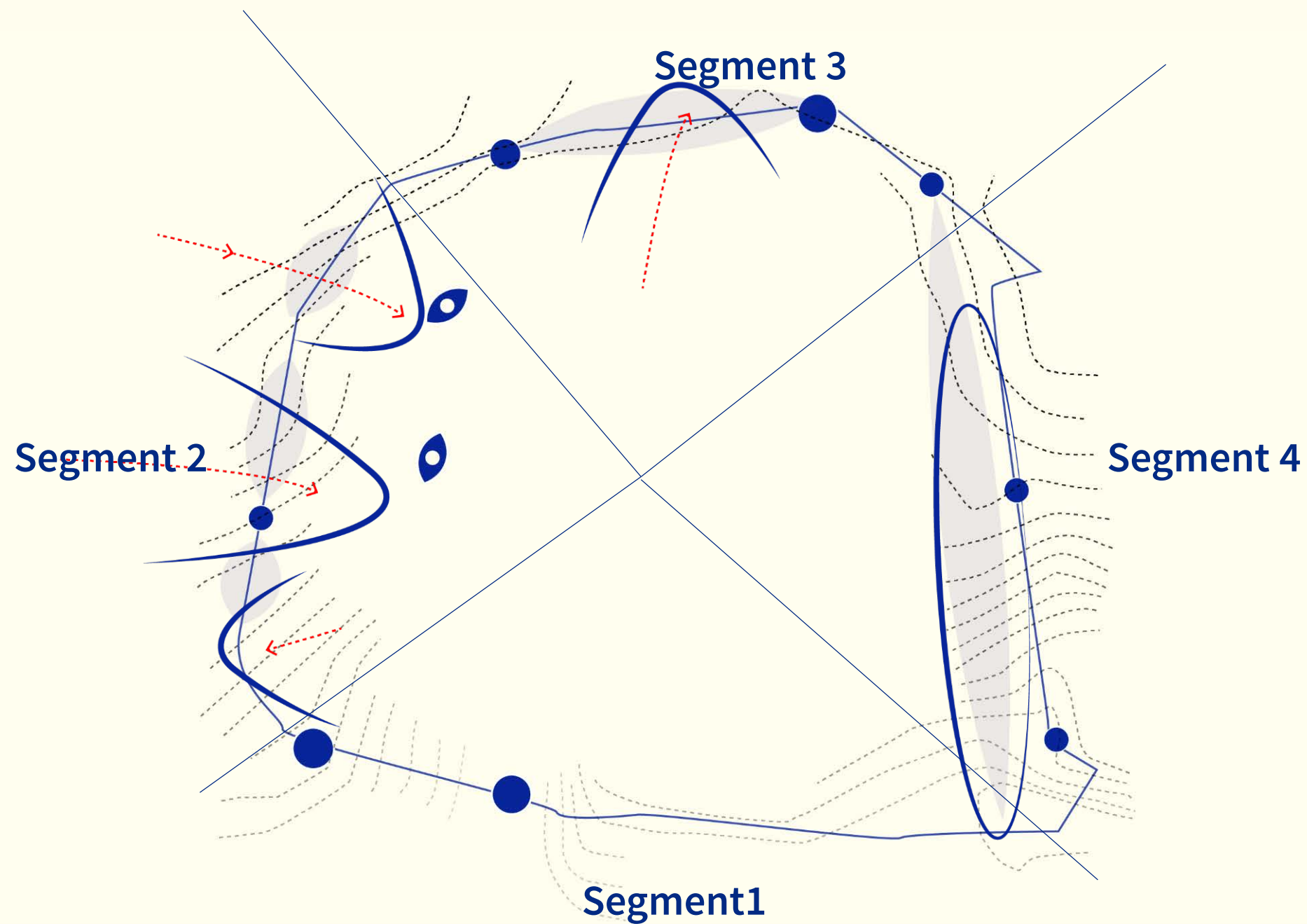
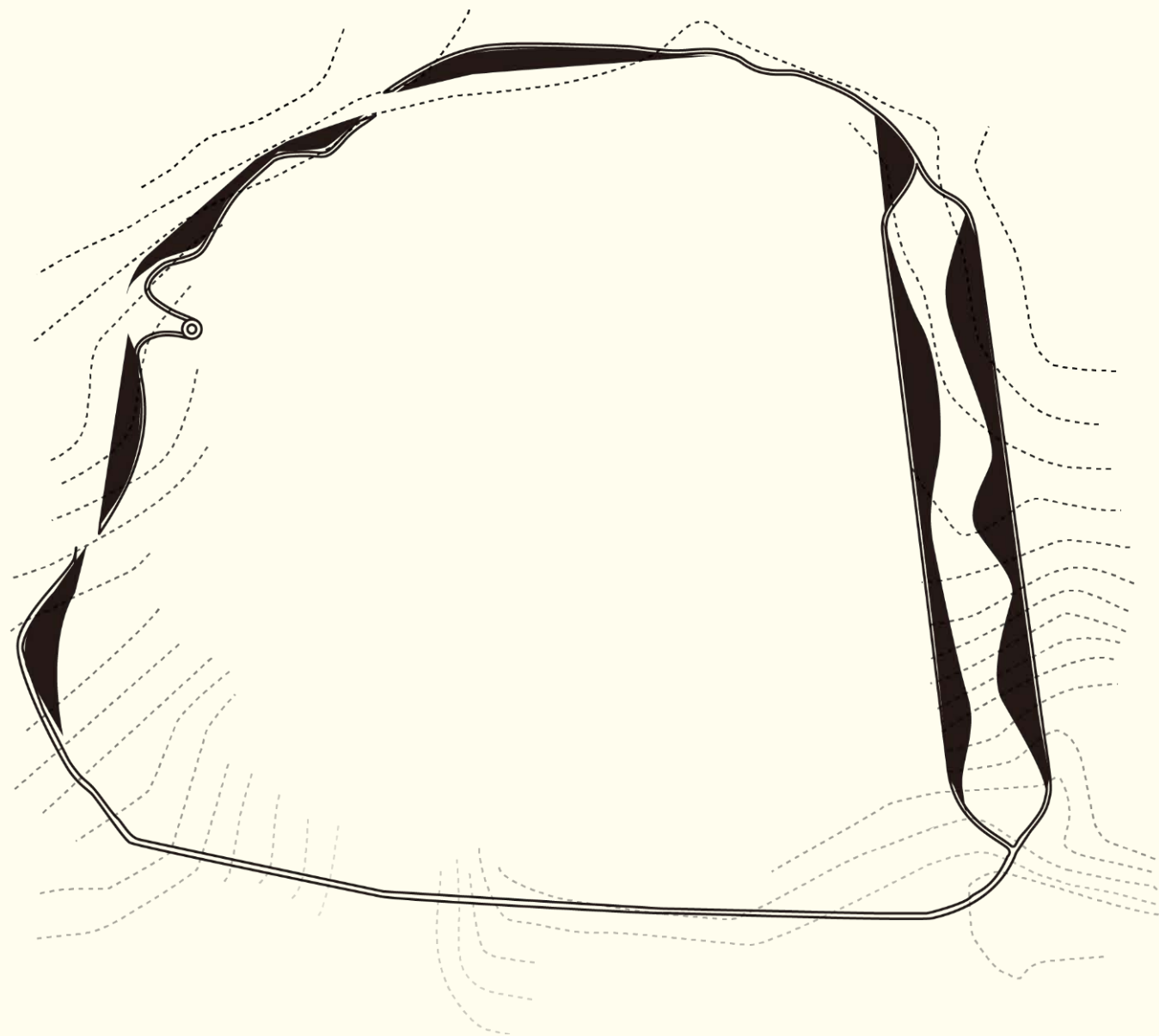


Figure II. Schematic depiction of the community structure in the pasture-woodland vegetation complex "Borkener Paradies" (taken from Polt & Hölpe 1001)

poerline

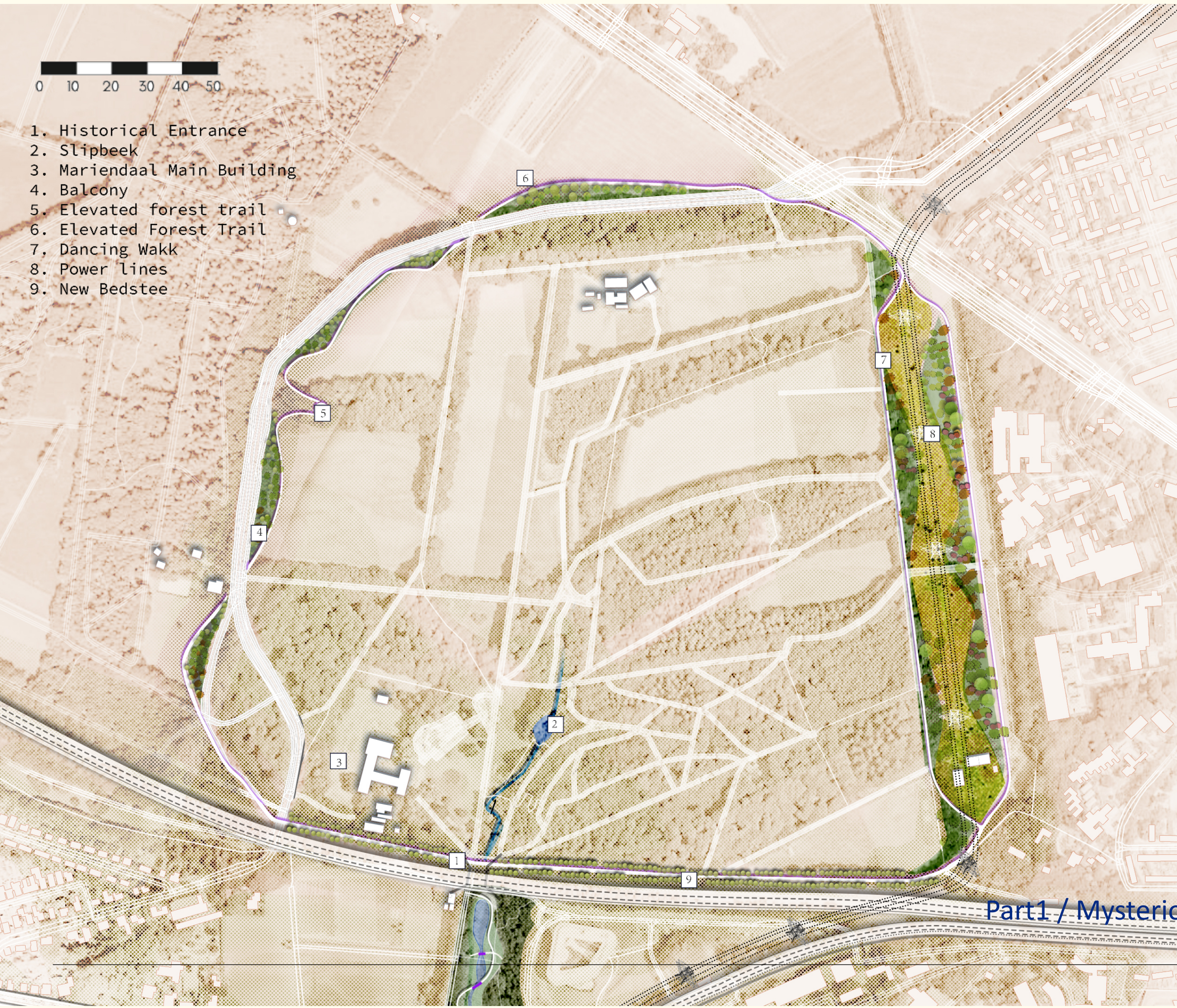


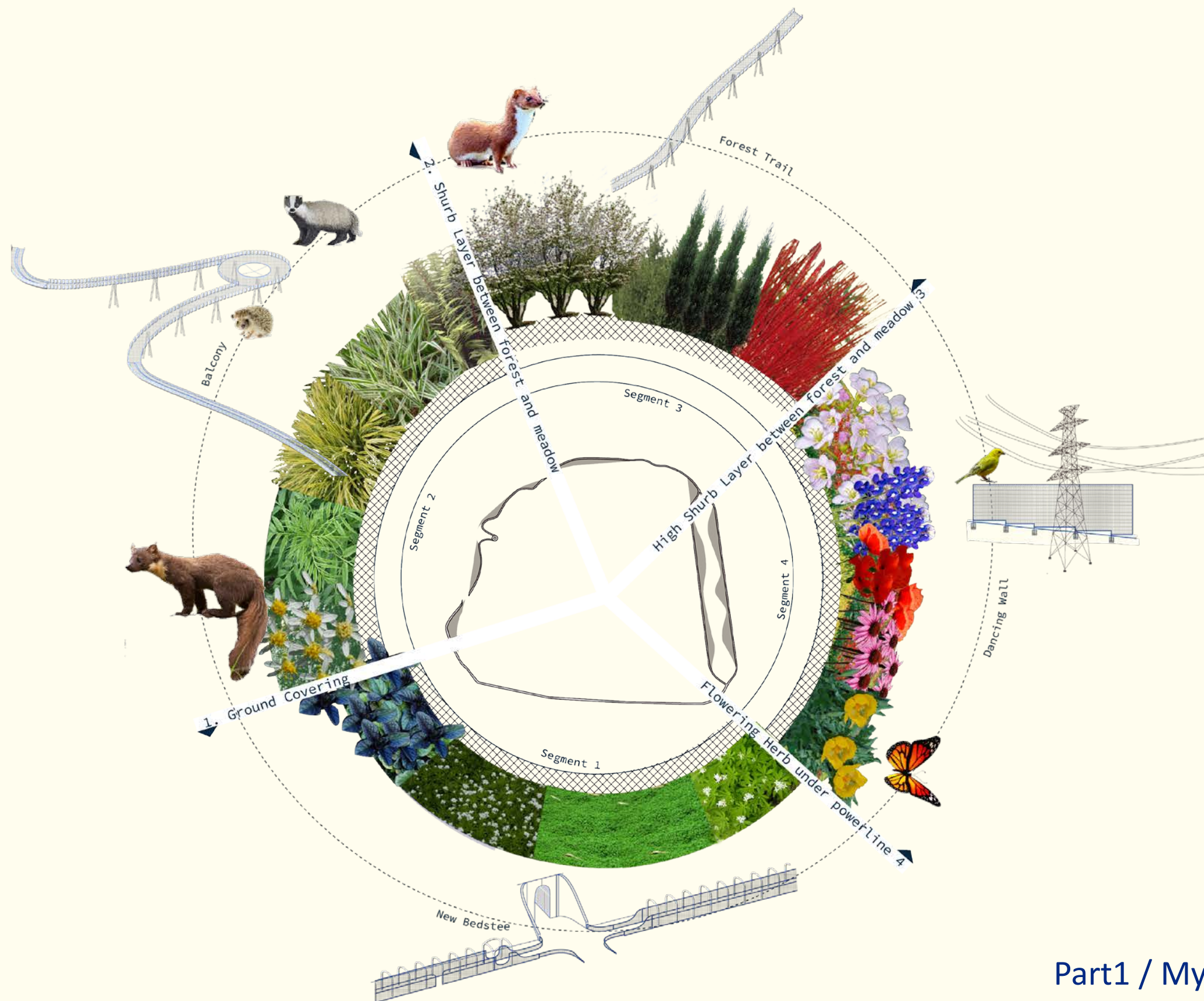


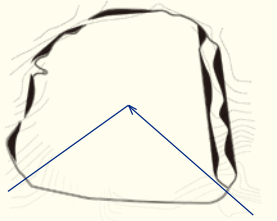
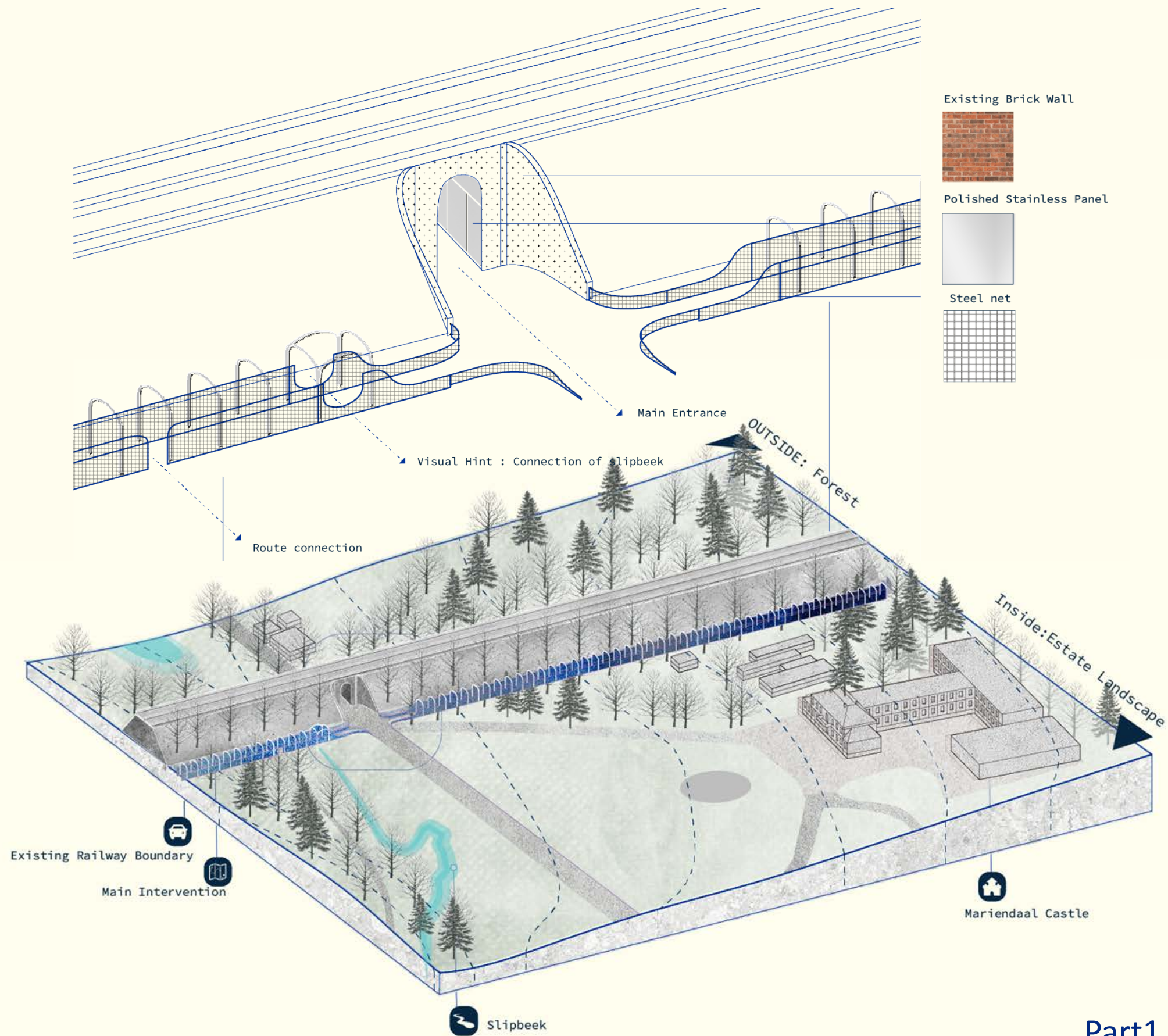


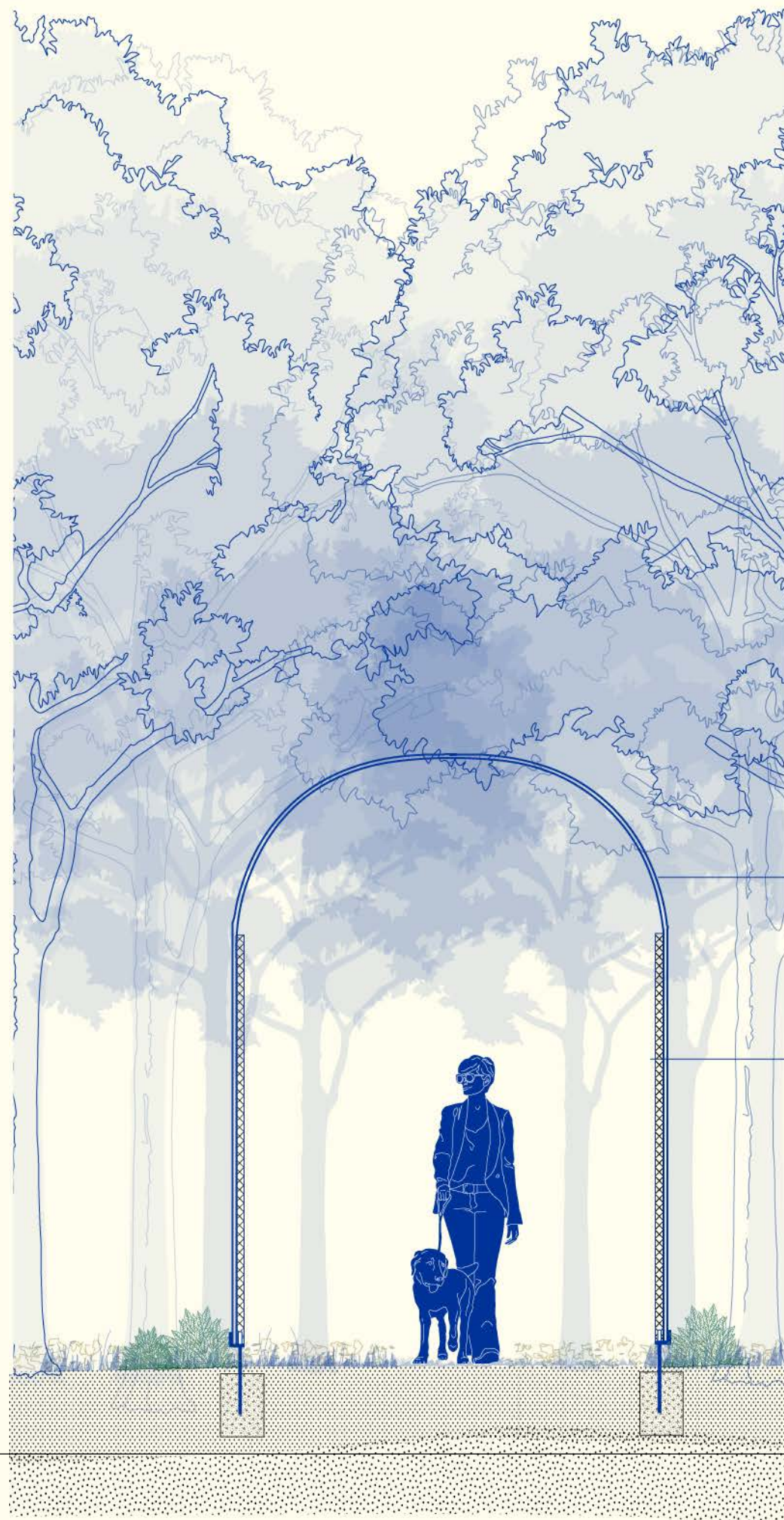


1. Historical Entrance
2. Slipbeek
3. Mariendaal Main Building
4. Balcony
5. Elevated forest trail
6. Elevated Forest Trail
7. Dancing Wakk
8. Power lines
9. New Bedstee

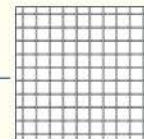




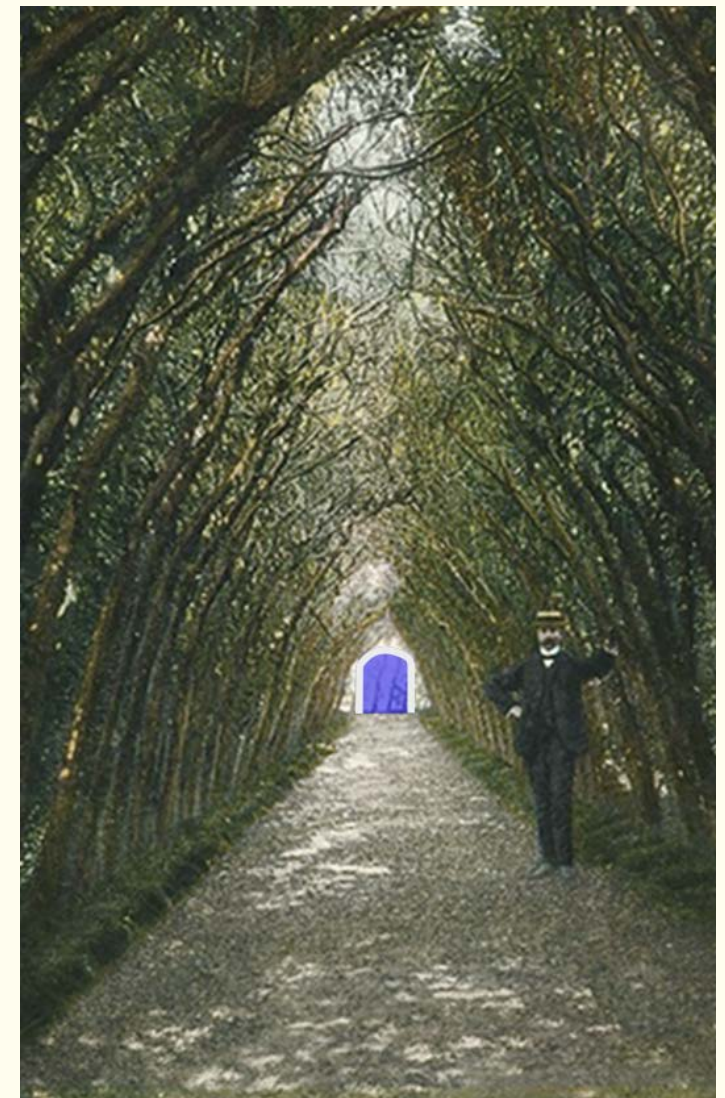




Polished Stainless Panel

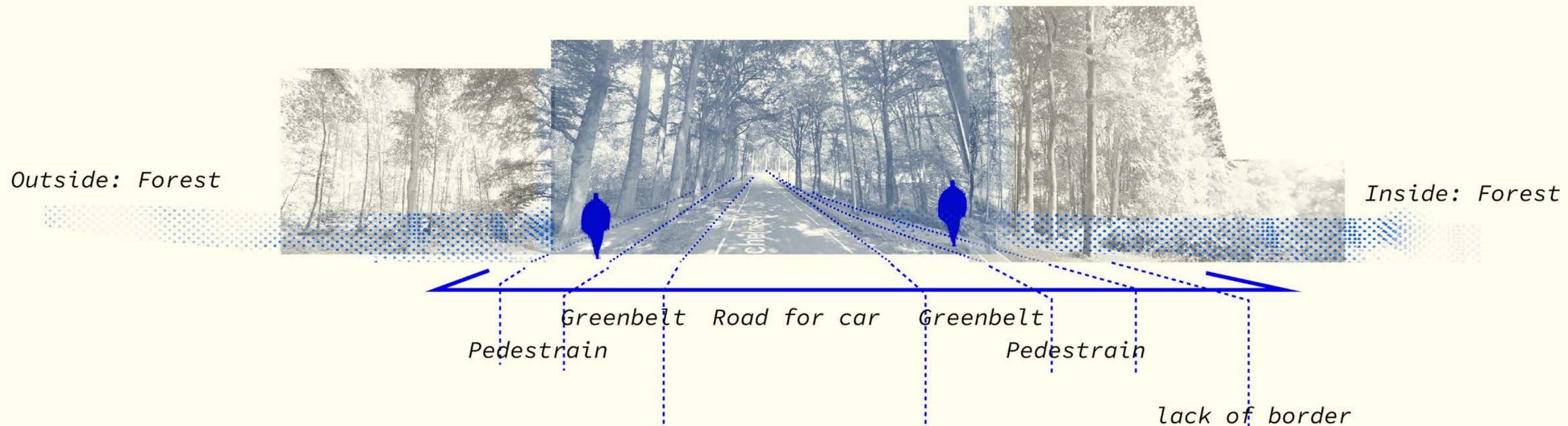
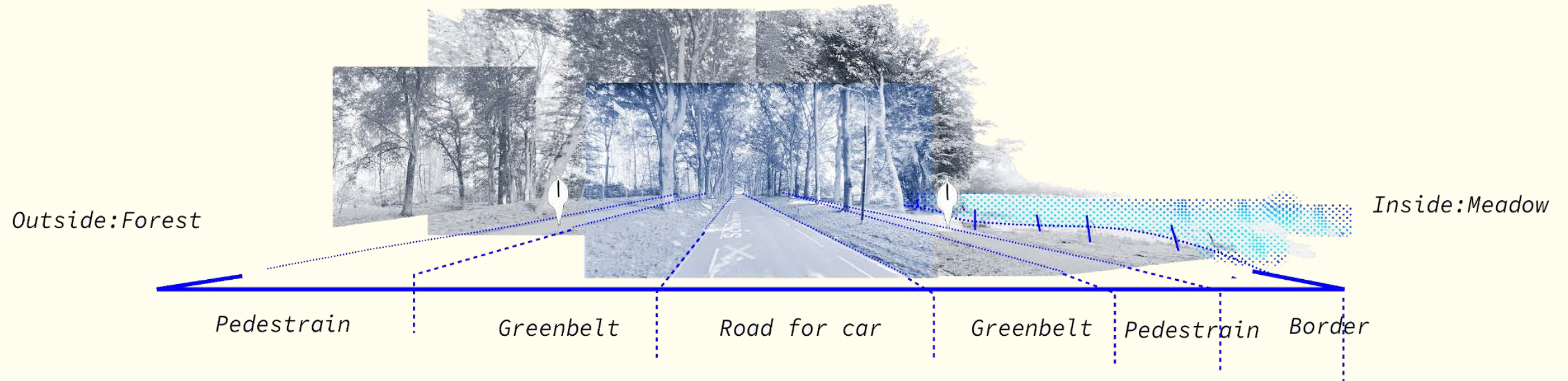
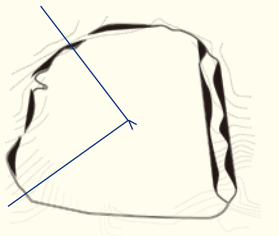


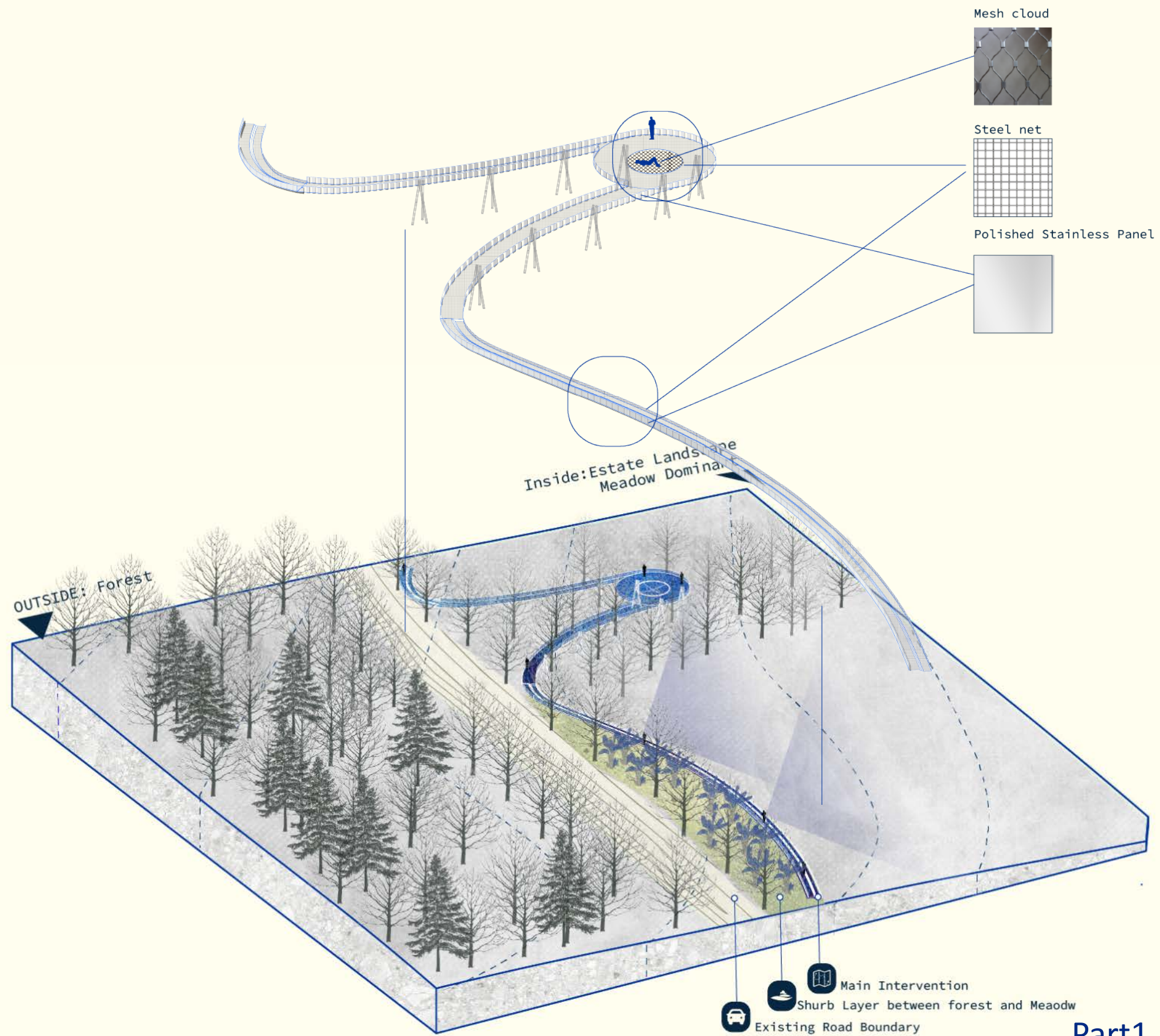
Metal Grid Panel



Part1 / Mysterious Boundaries
 Segment 1 / New Bedstee/ Boundaries along the railway

Segment 2 current

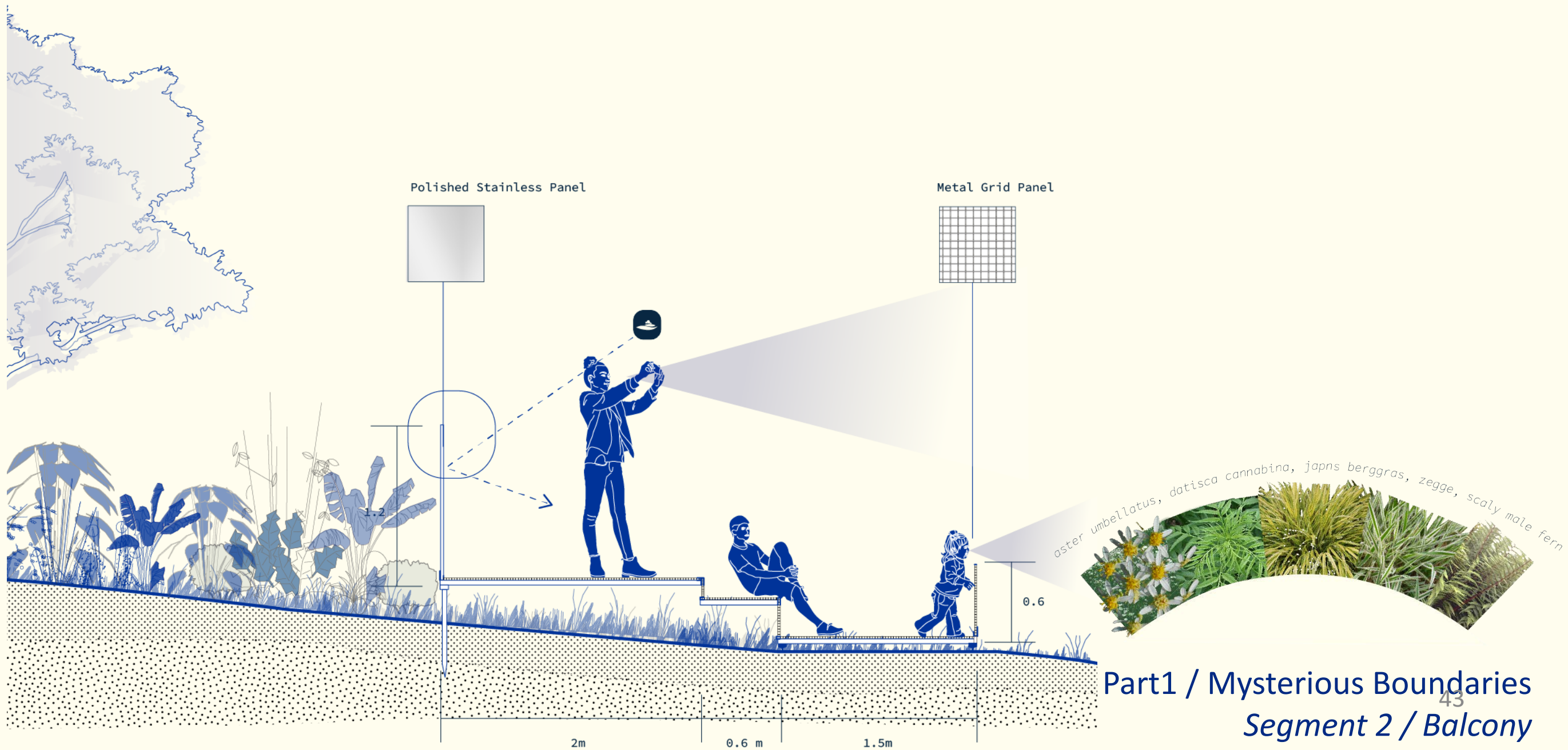




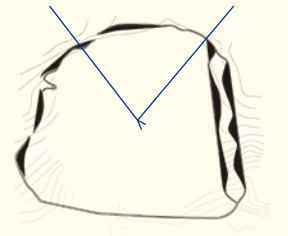
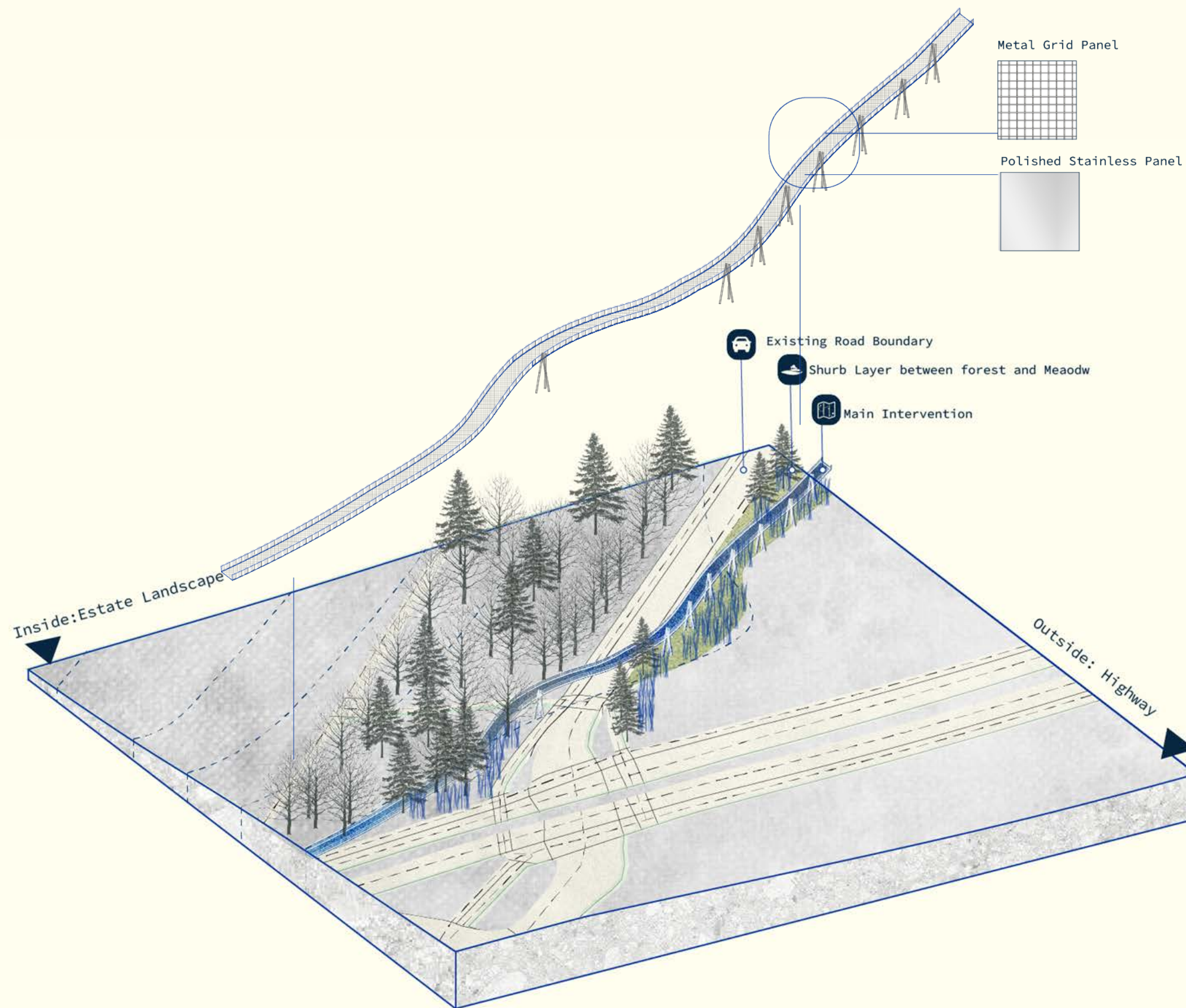
Node: Balcony

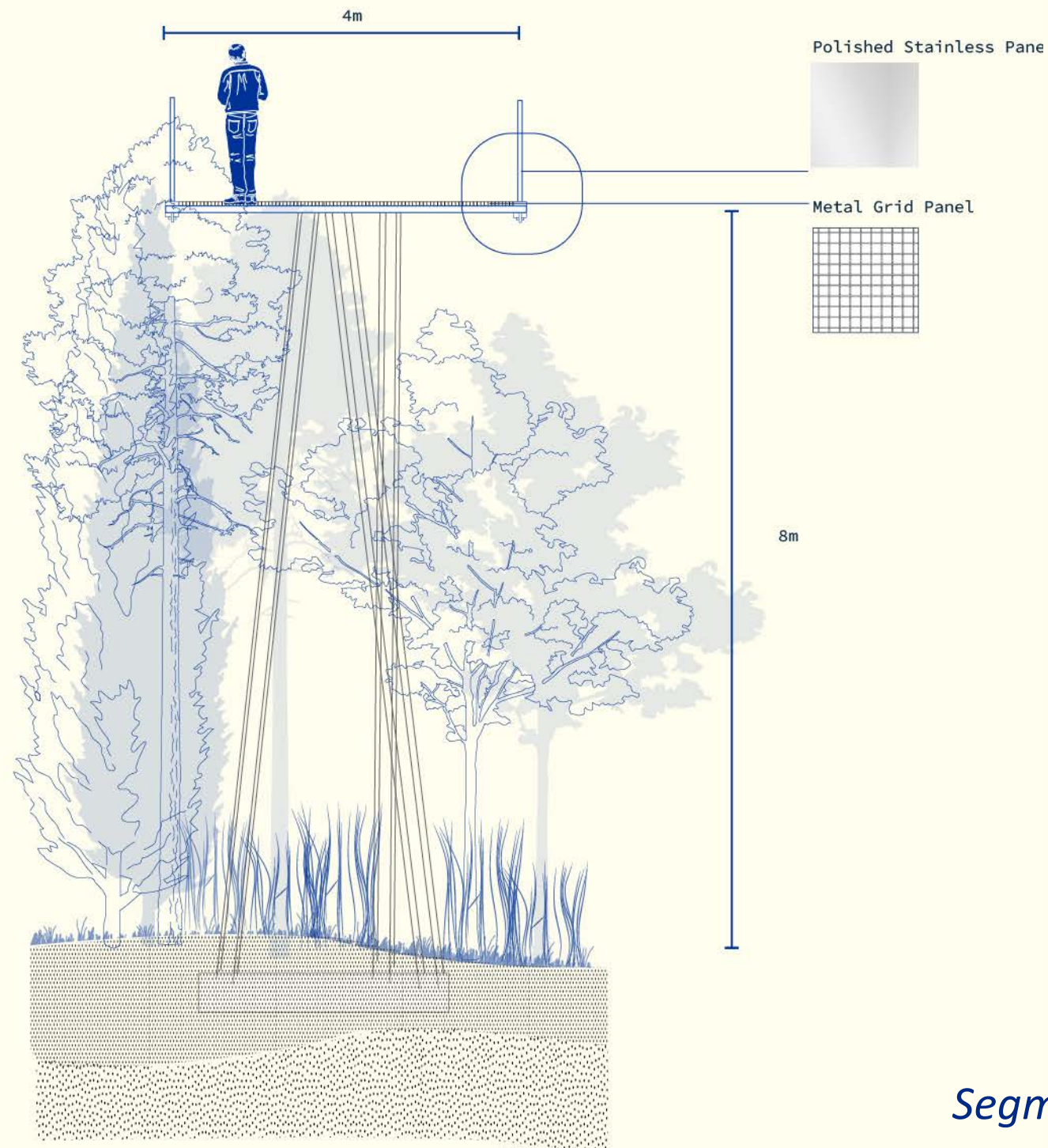
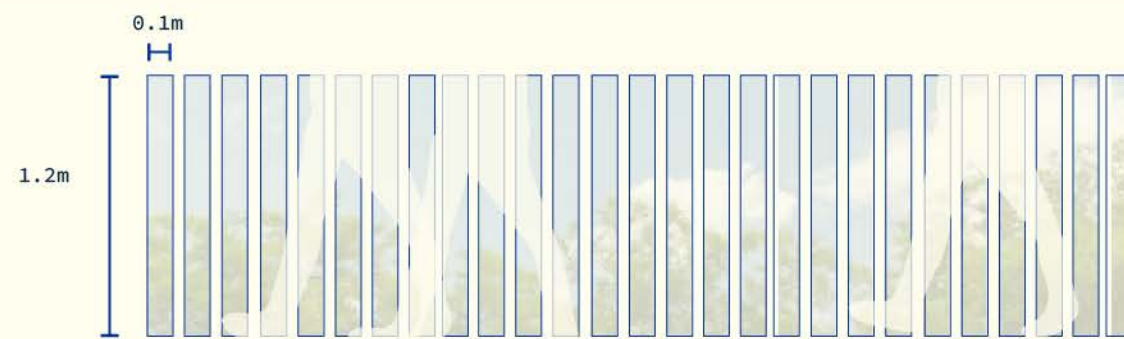
Part1 / Mysterious Boundaries
Segment 2 / Balcony

Environment Reflection On the polished stainless panel



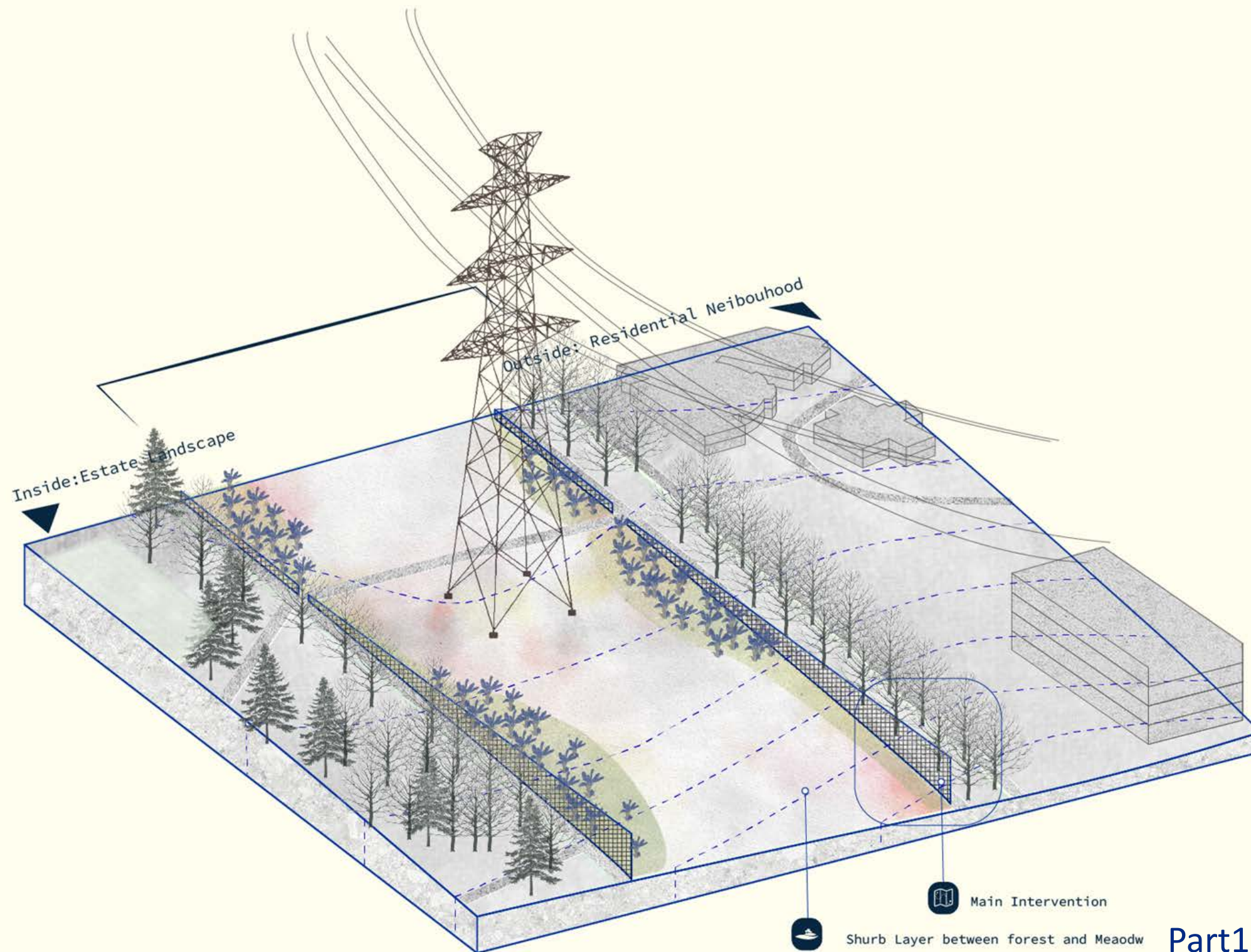
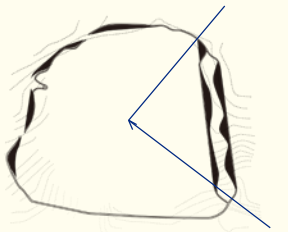




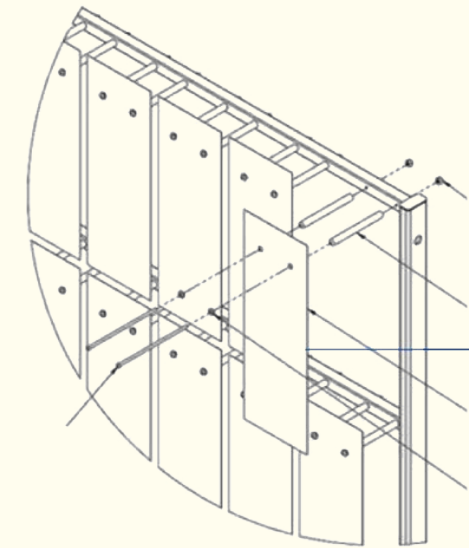


Part1 / Mysterious Boundaries
Segment 3 / Sky kiss / Boundaries Near Highway

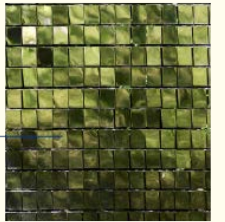




Part1 / Mysterious Boundaries
Segment 4 / Dancing Wall / Boundaries Under powerline

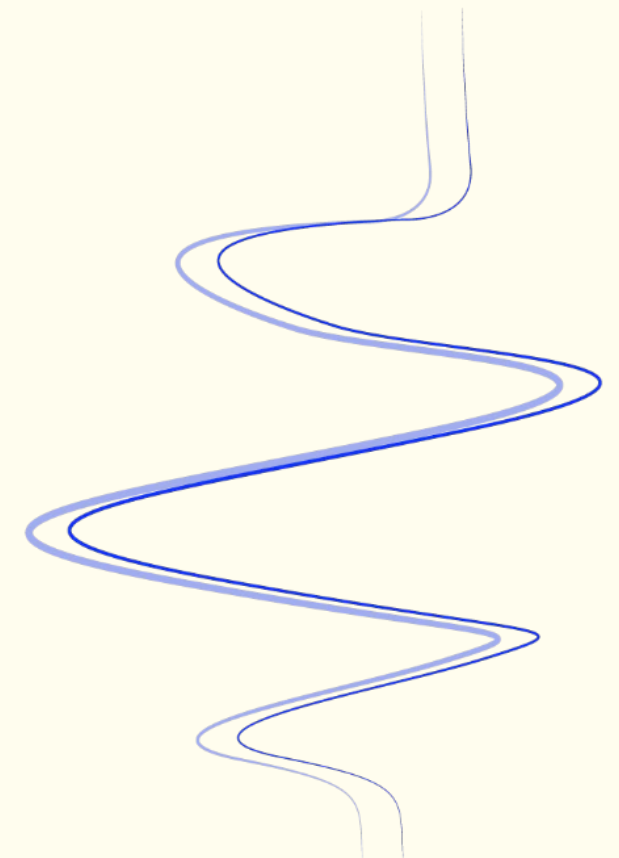


Polished Stainless Panel

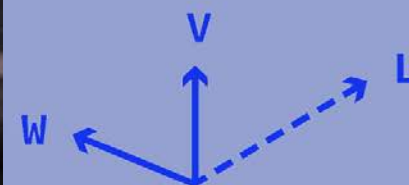


Part1 / Mysterious Boundaries

Segment 4 / Dancing Wall / Boundaries Under powerline



PERMEABLE BOUNDARIES



Width

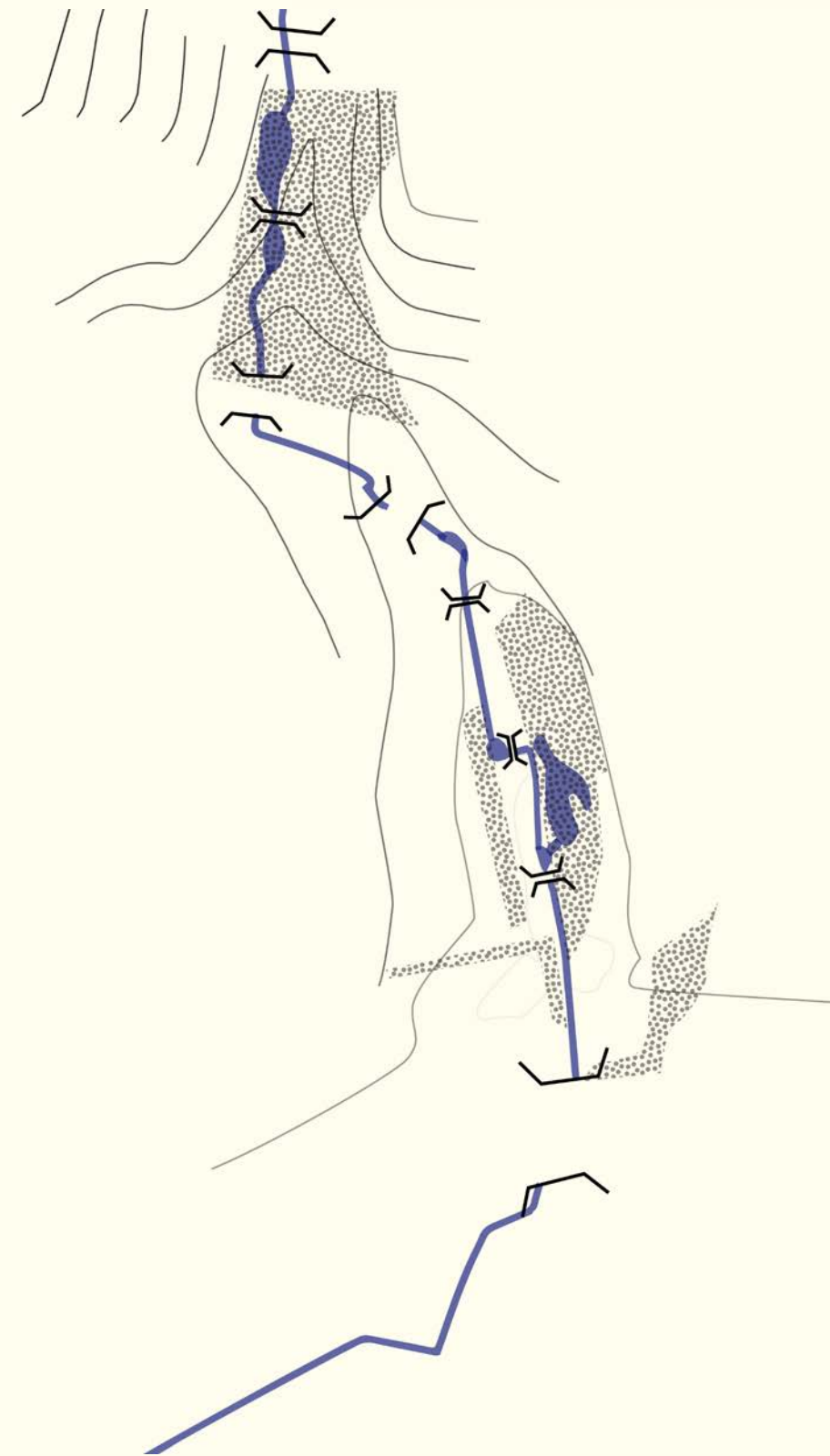
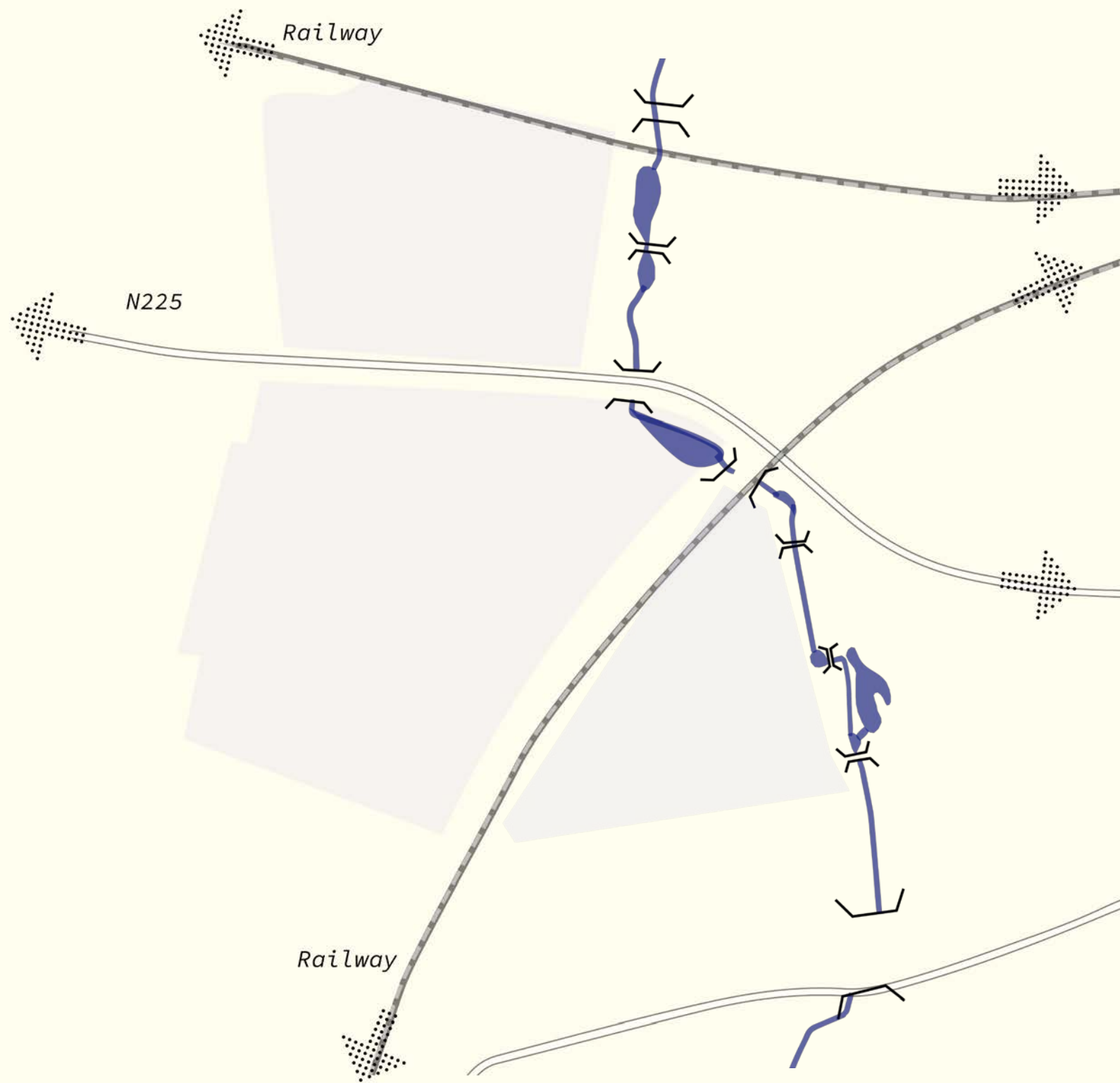
Widen riparian space

Length

Reconnect the slipbeek

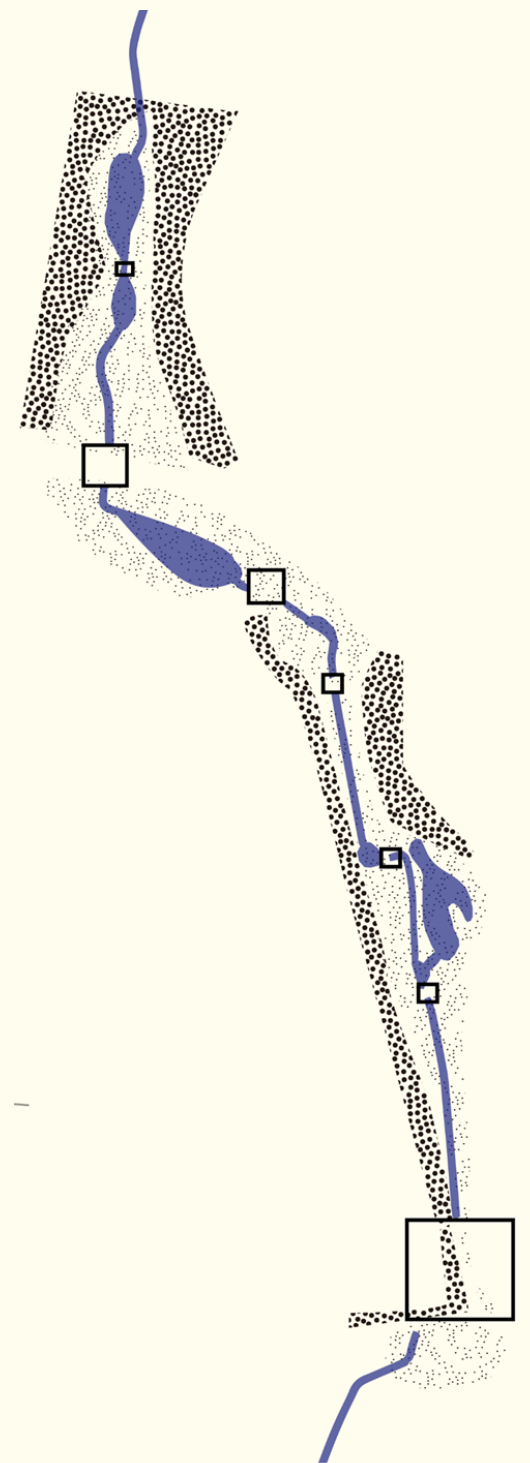
Verticality

diversify the threshold



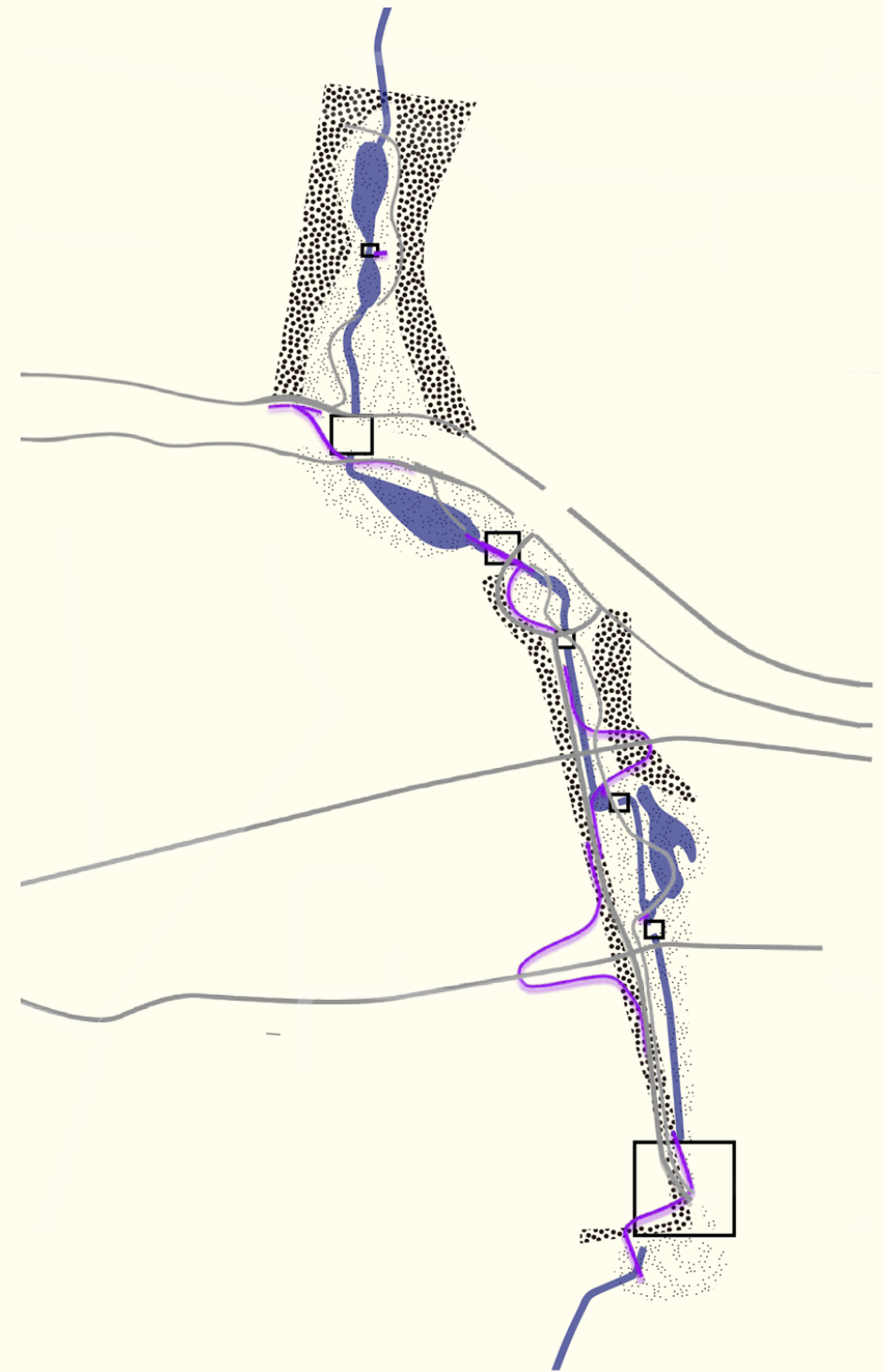
Relocating the boundaries – Slipbeek as new boundary

Part2 / Permeable Boundaries
Boundaries Lens – Topo



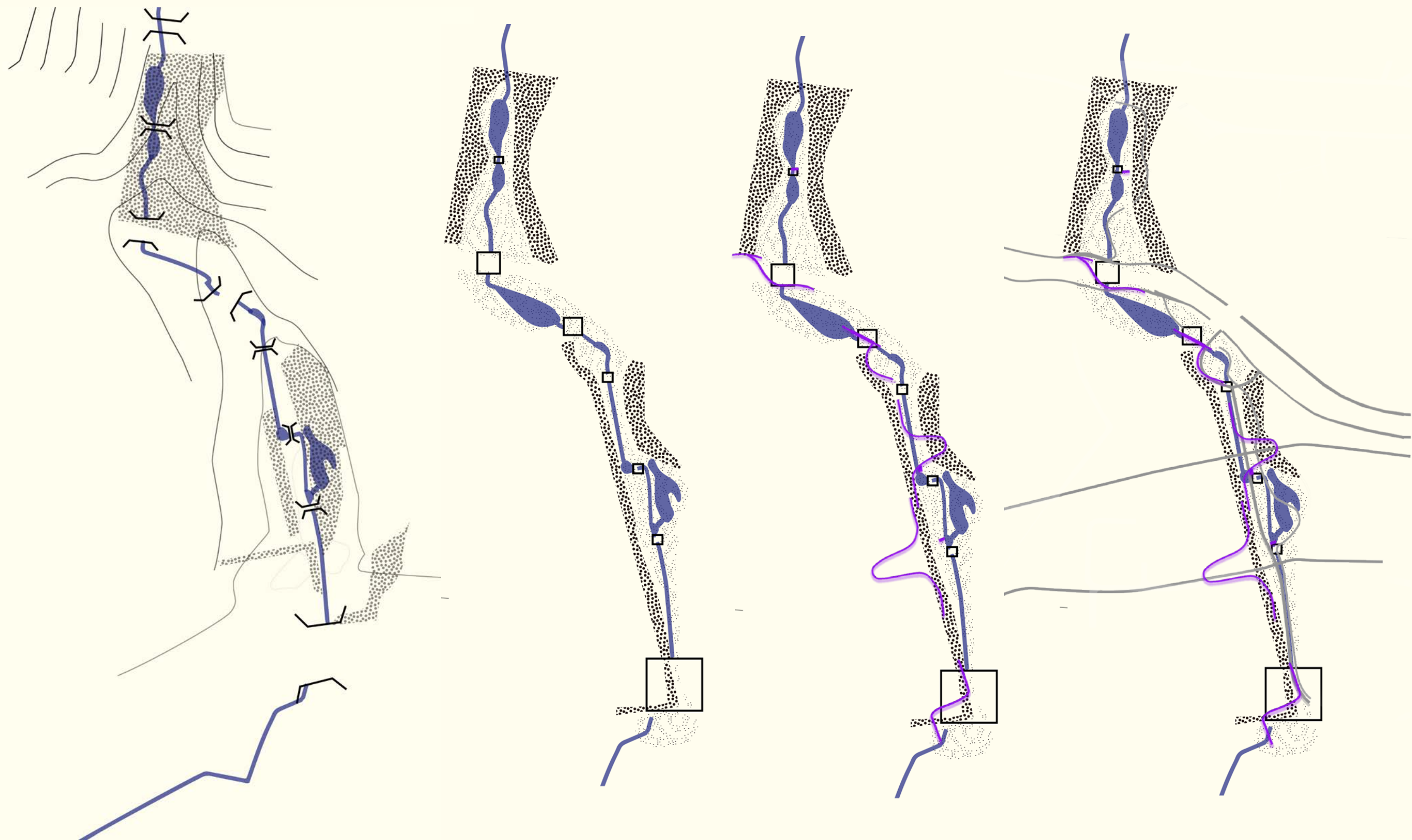
W: Add Riparian zone

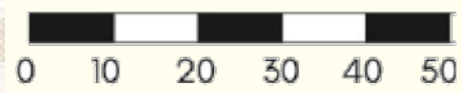
Part2 / Permeable Boundaries
Boundaries Lens- Eco tone



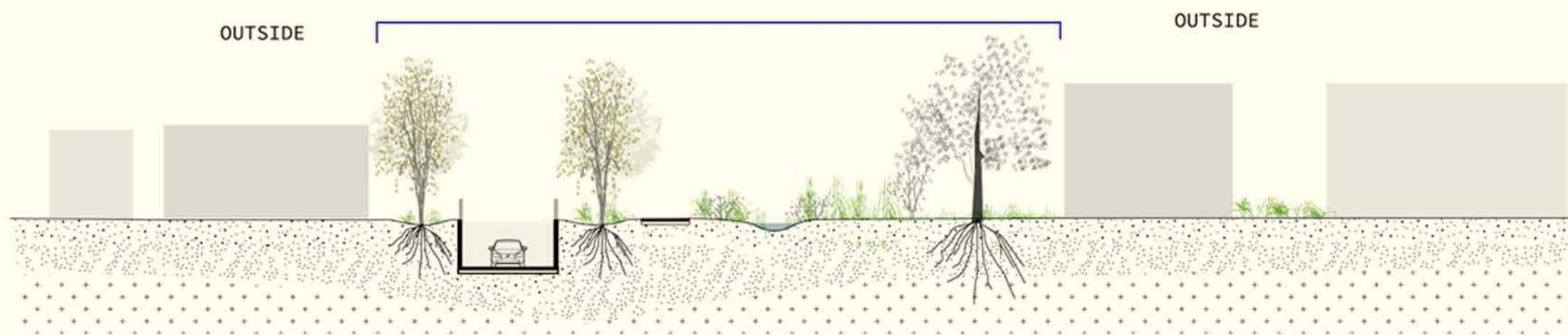
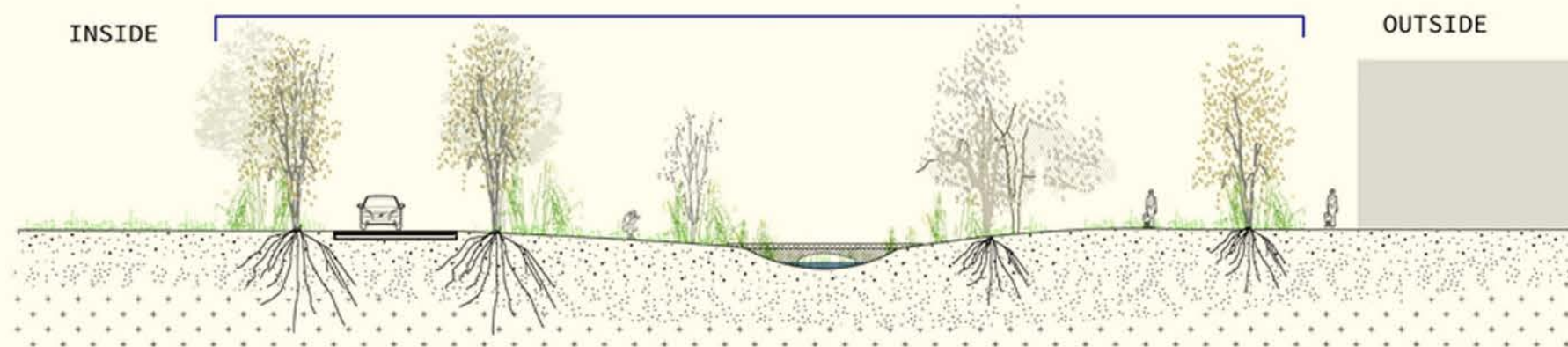
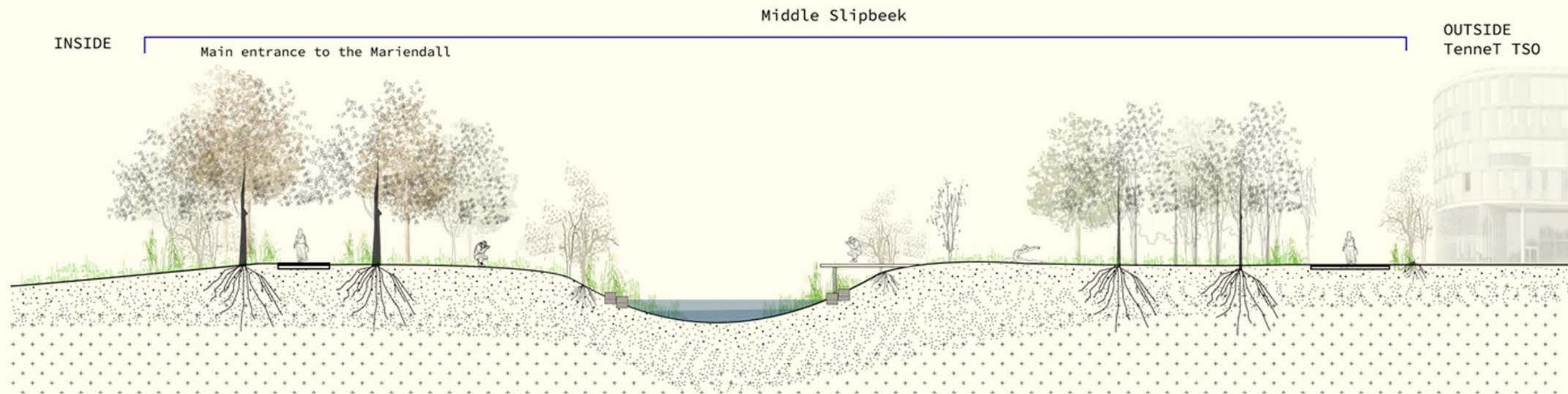
L: Design Intervention stitching up the gaps

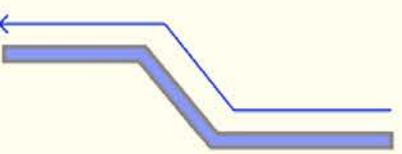
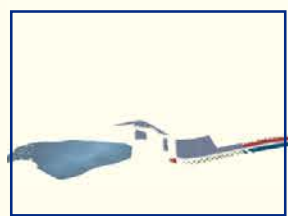
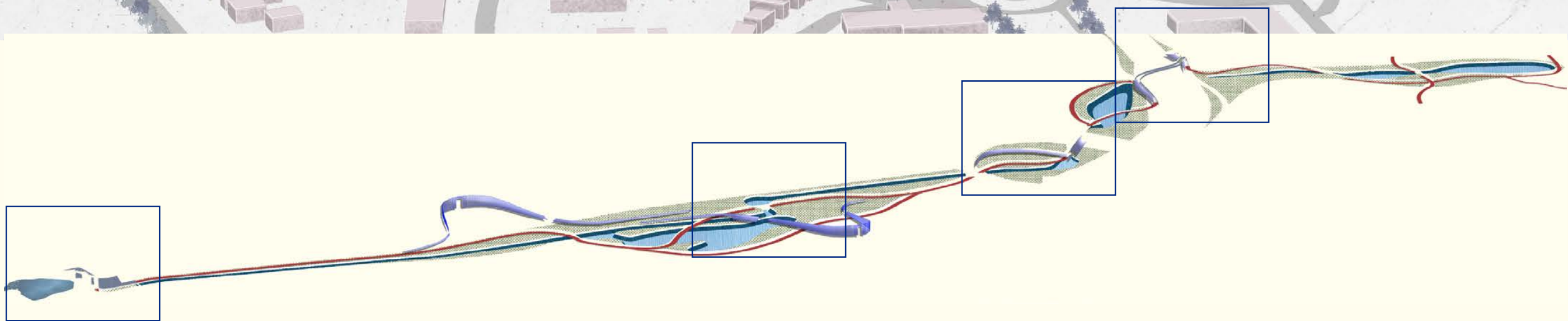
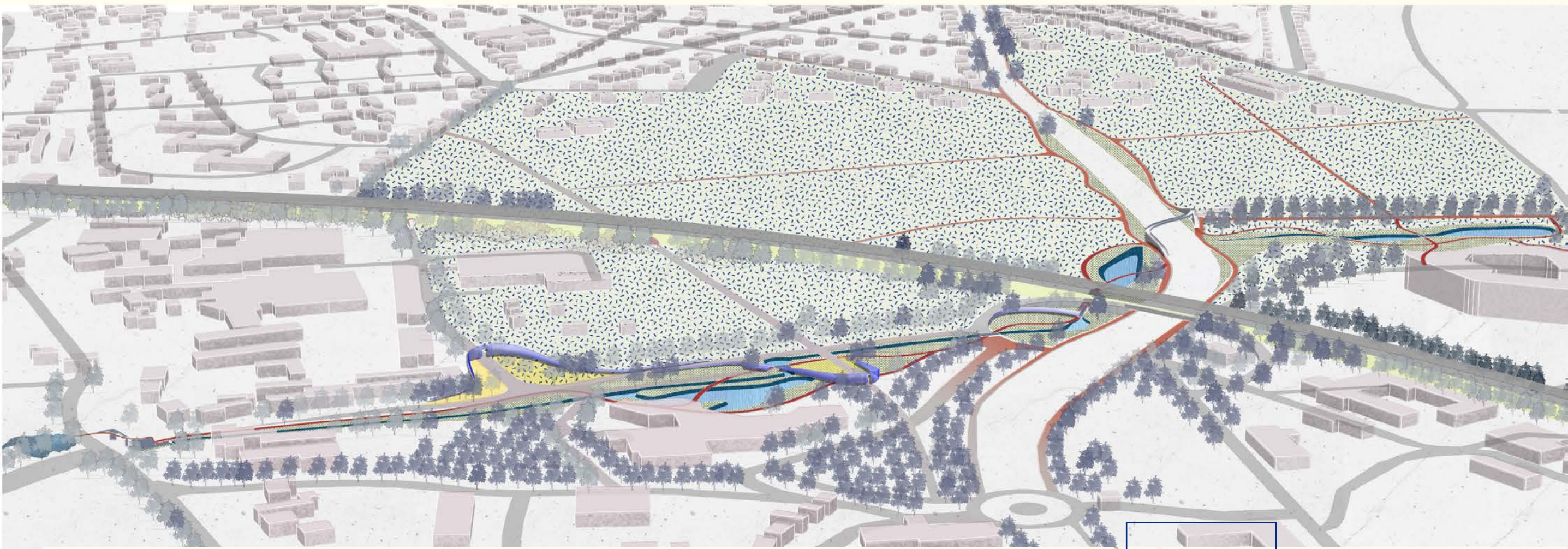
Part2 / Permeable Boundaries
 Boundaries Lens- Social



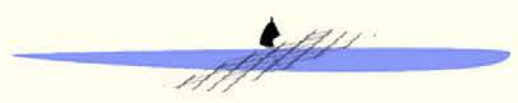


- 1. Historical Entrance
- 2. Riparian Zone
- 3. Skybridge
- 4. Water Tunnel
- 5. Mirror Retaining wall
- 6. Mirror Gate
- 7. Gabions Purification
- 8. Aquatic Fountain
- 9. Water Basin

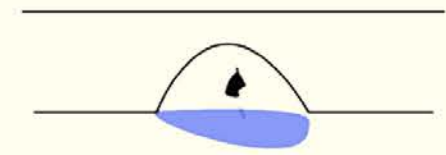




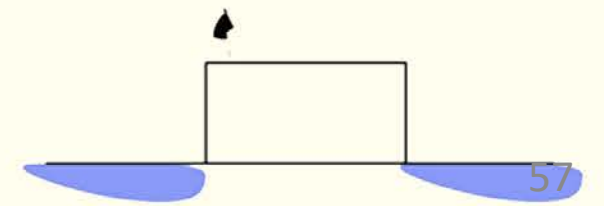
Aquatic Intervention



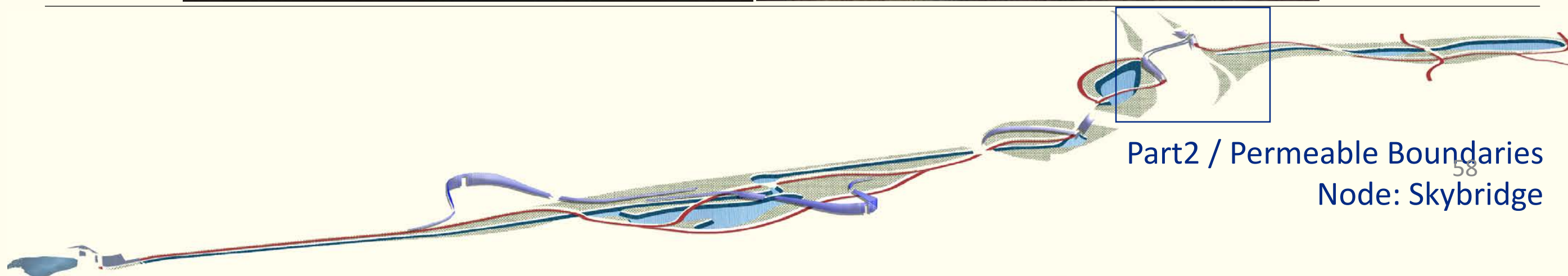
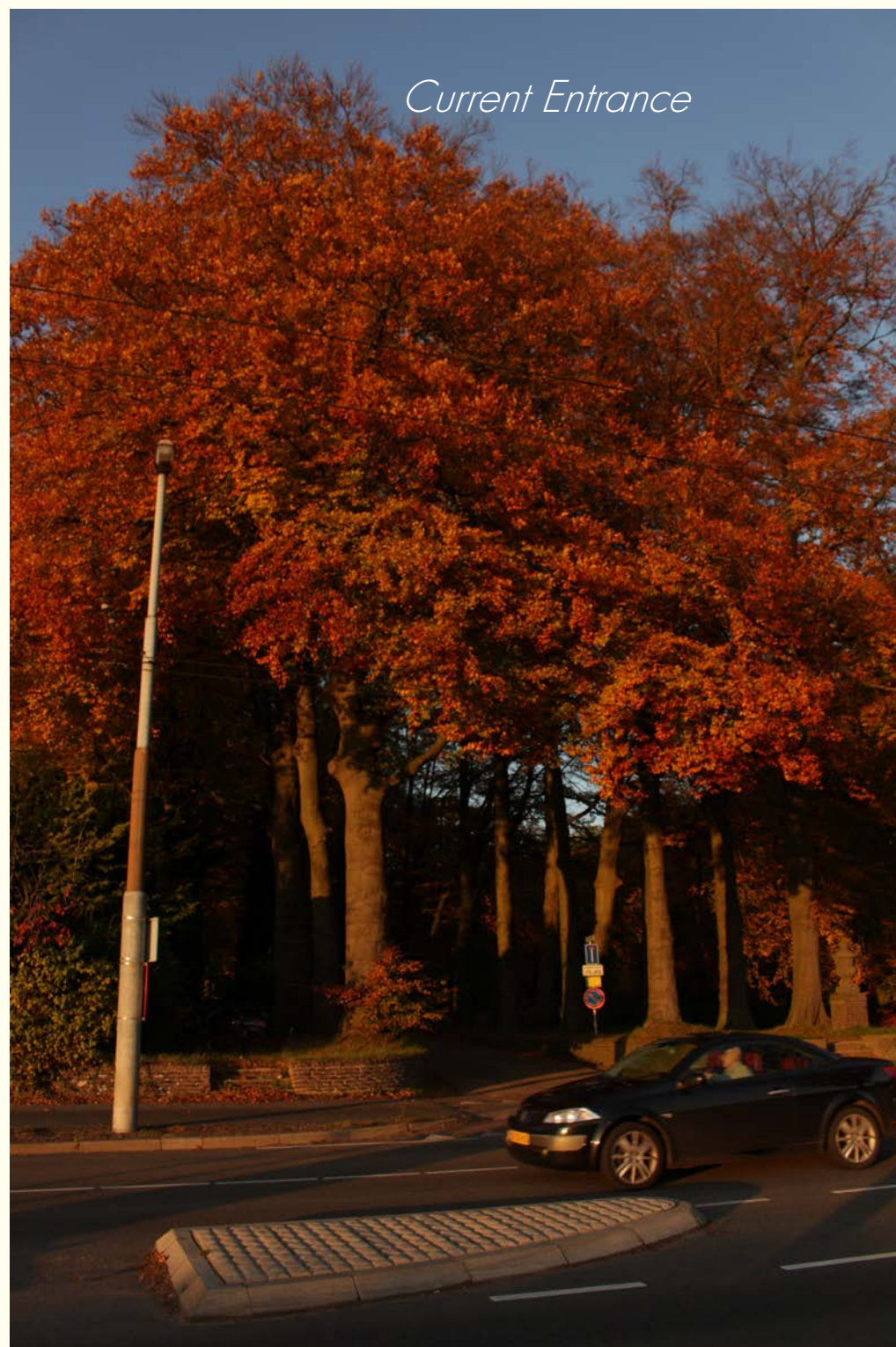
Visible Crossing



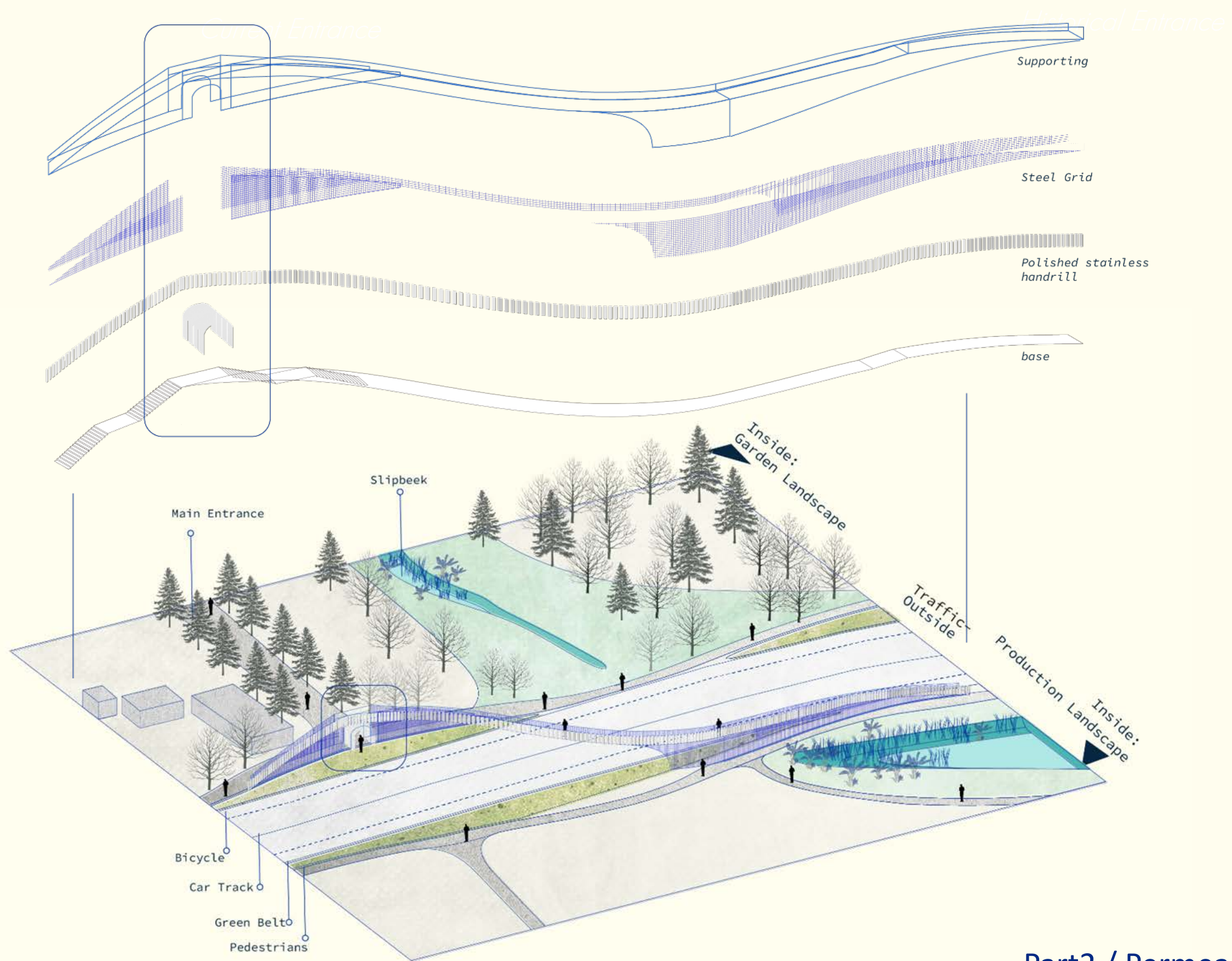
Tunnel under the railway



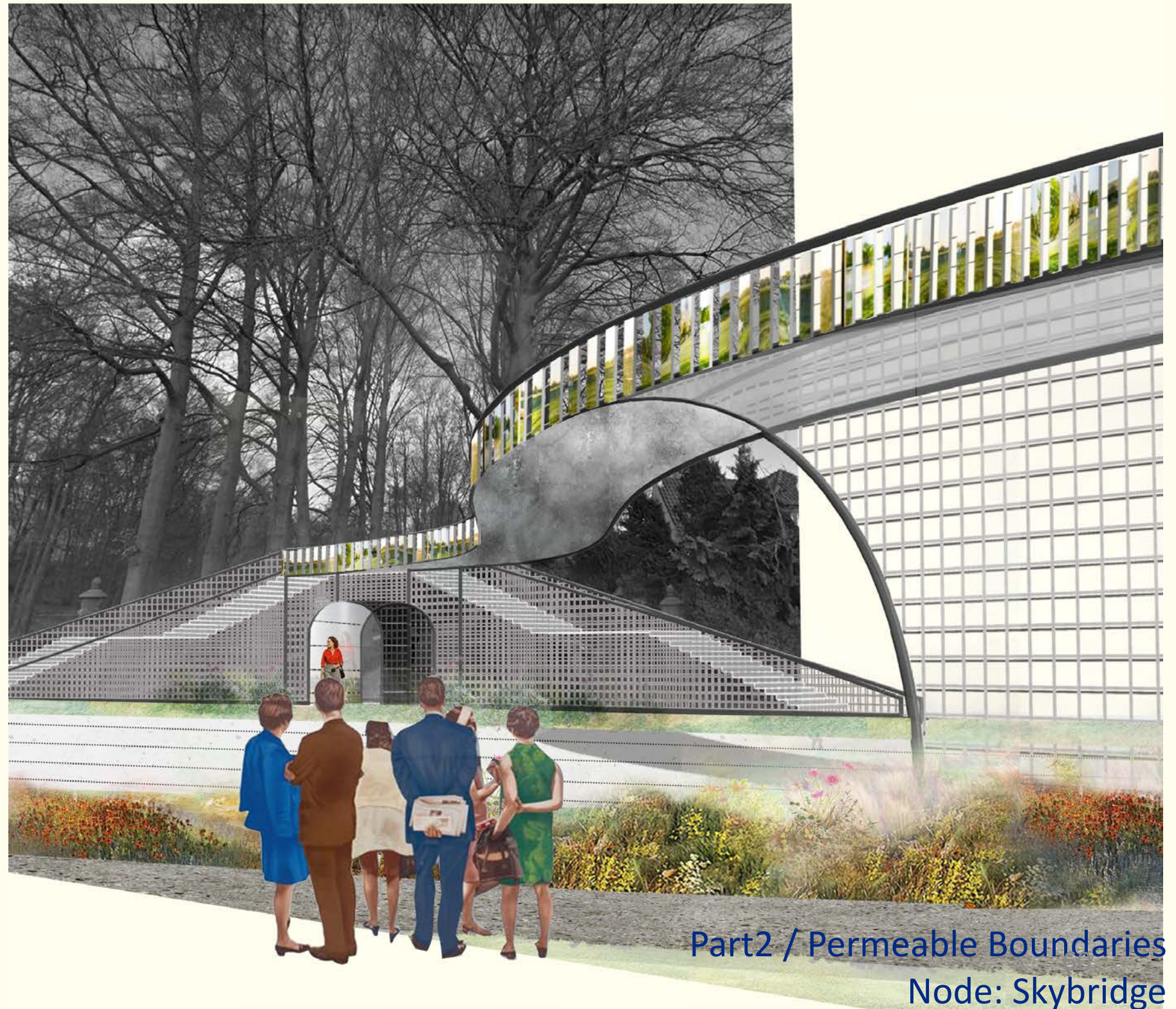
Skybridge over the road



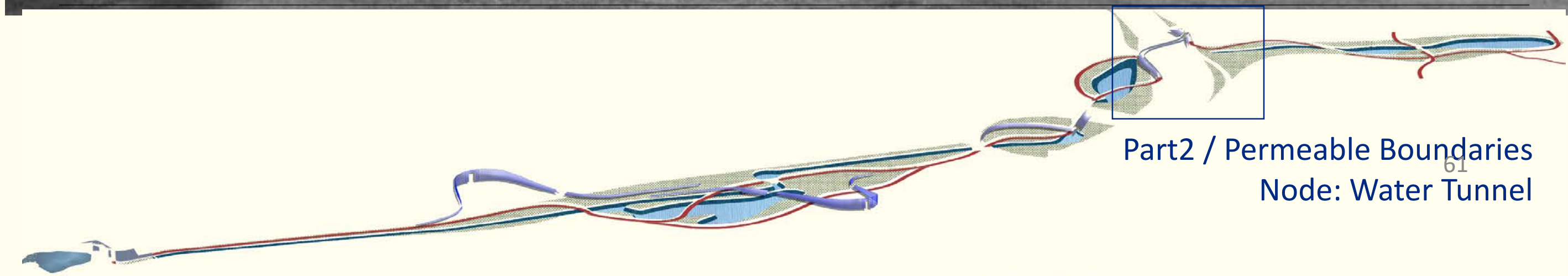
Part2 / Permeable Boundaries
Node: Skybridge



Current Entrance

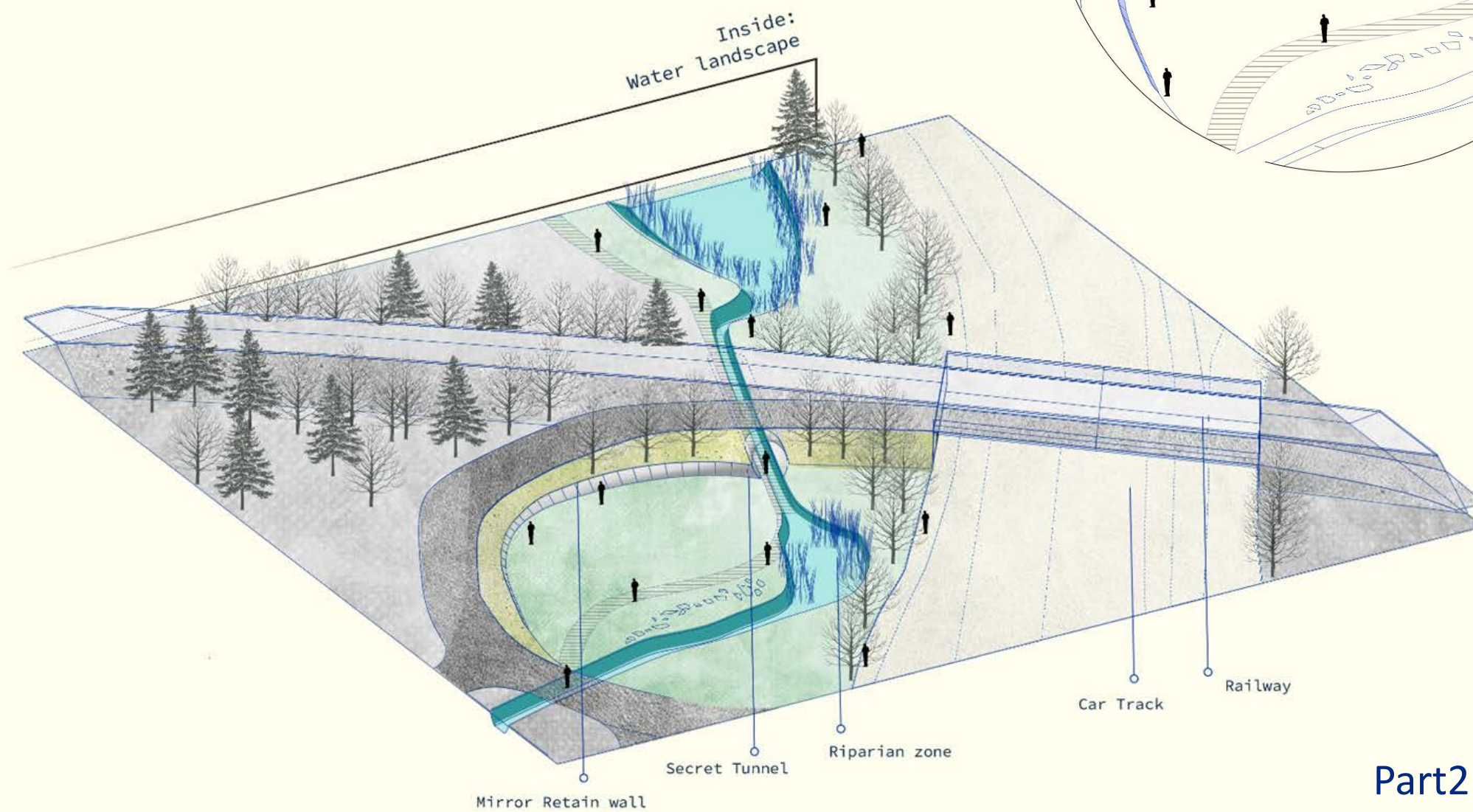
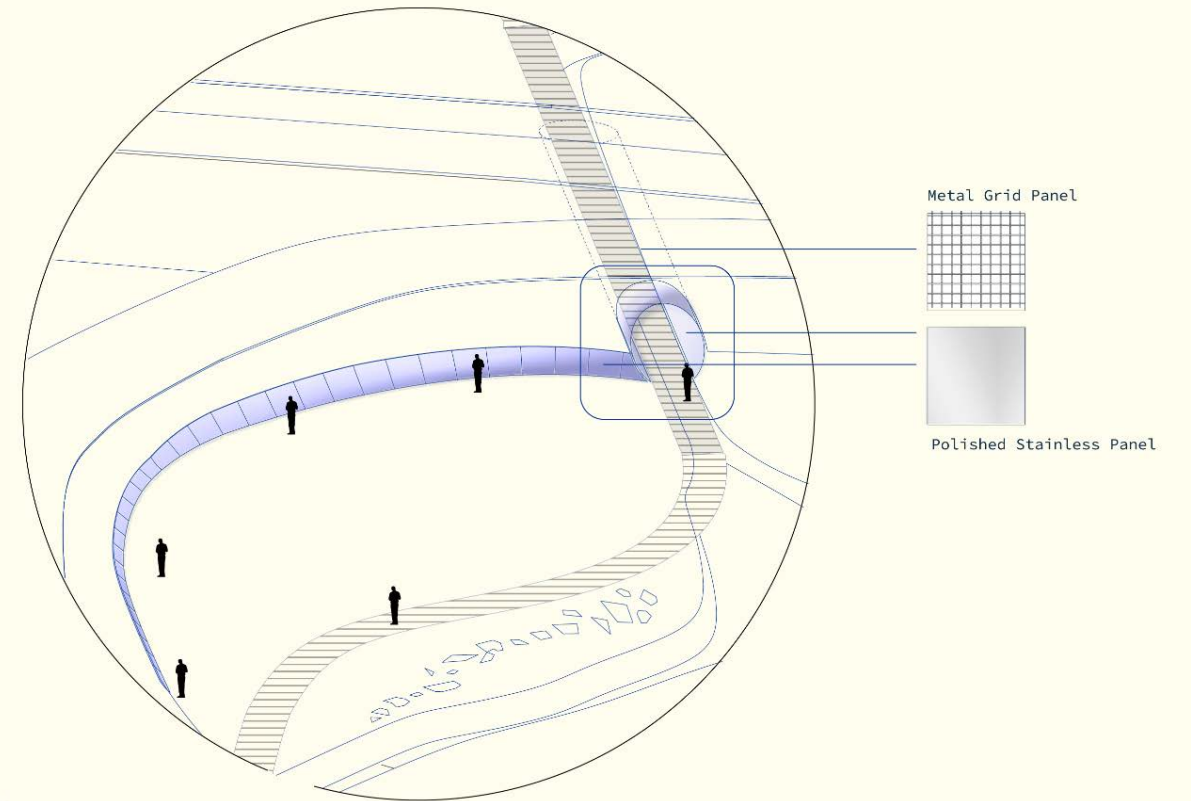


Part2 / Permeable Boundaries
Node: Skybridge



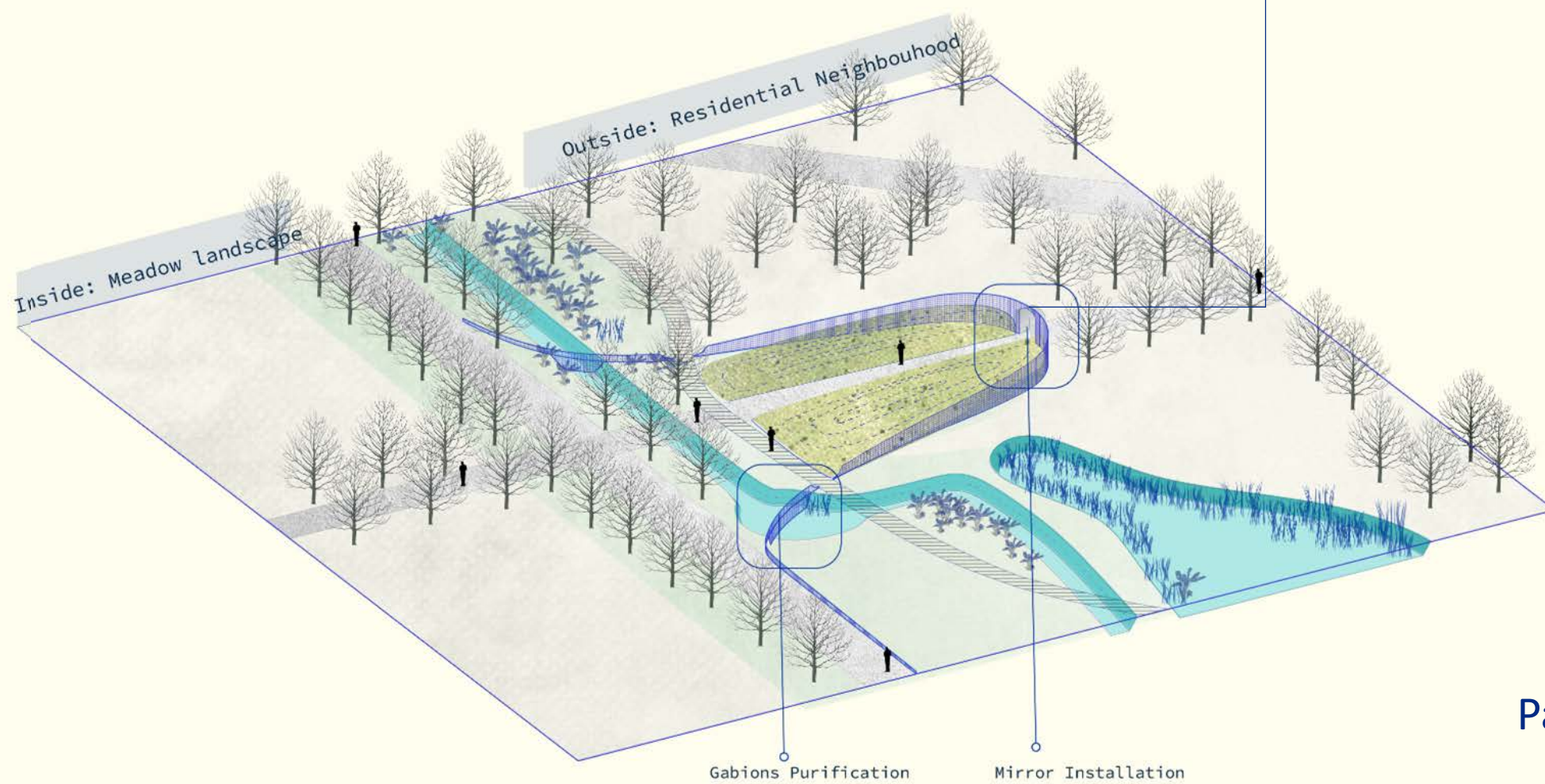
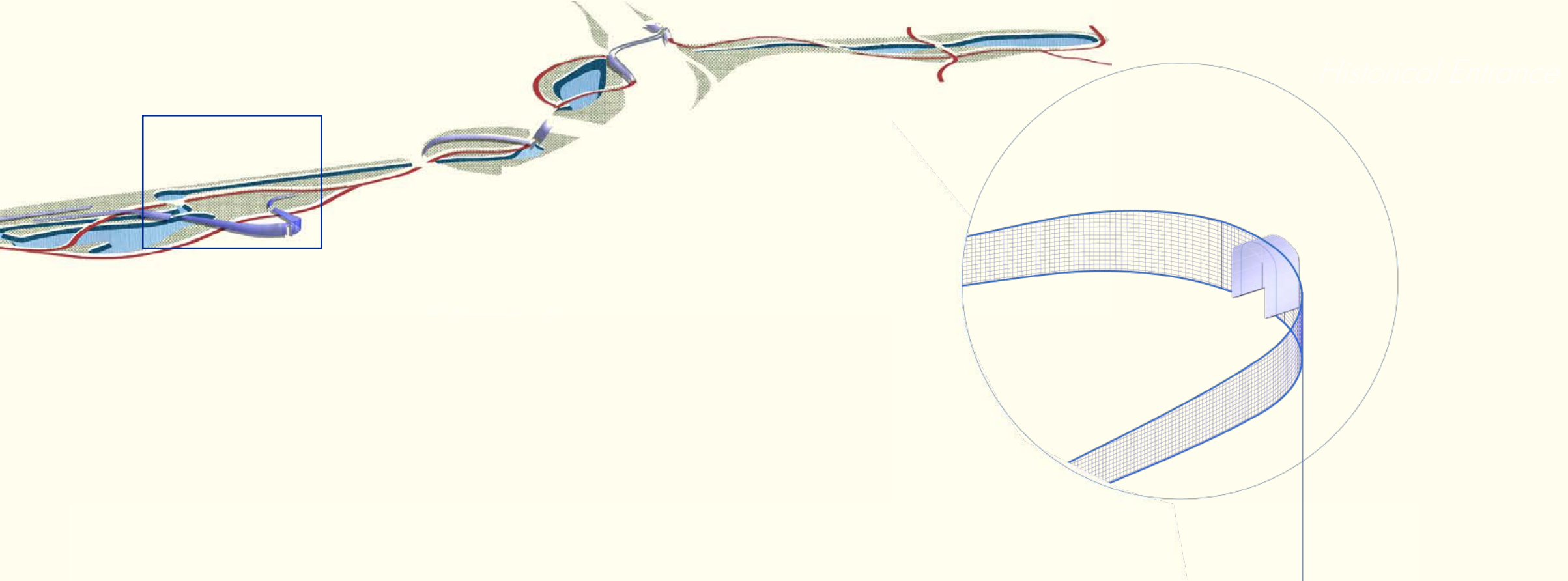
Part2 / Permeable Boundaries
Node: Water Tunnel

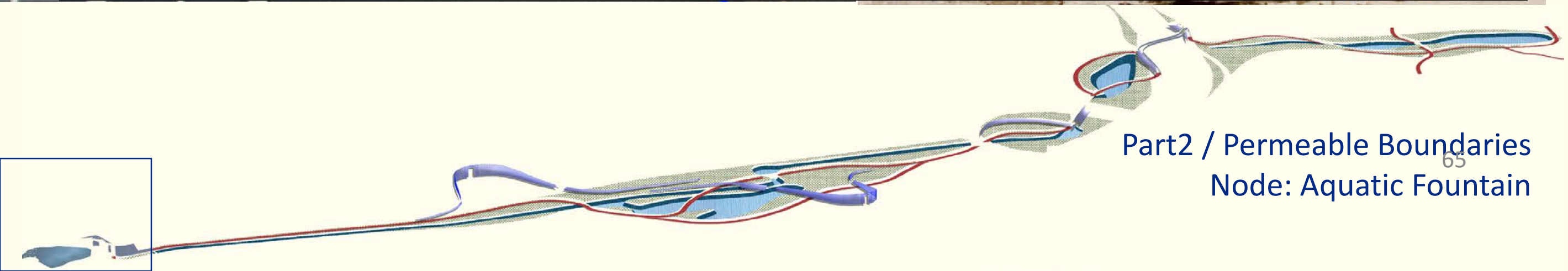
Current Entrance



Part2 / Permeable Boundaries
Node: Water Tunnel







Part2 / Permeable Boundaries
Node: Aquatic Fountain

Current Entrance

Historical Entrance

Archimedes Screw Pump
(Manual/Mechanical)

Archimedes Screw Pump
(Mechanical)

Polished stainless

Supporting

Steel Grid

Residential Neighborhood

Outside:

Inside: Polder Landscape

New water channel

Downstream of slipbeek

Middle stream of
Slipbeek

/ Permeable Boundaries
Node: Aquatic Fountain

Current Entrance

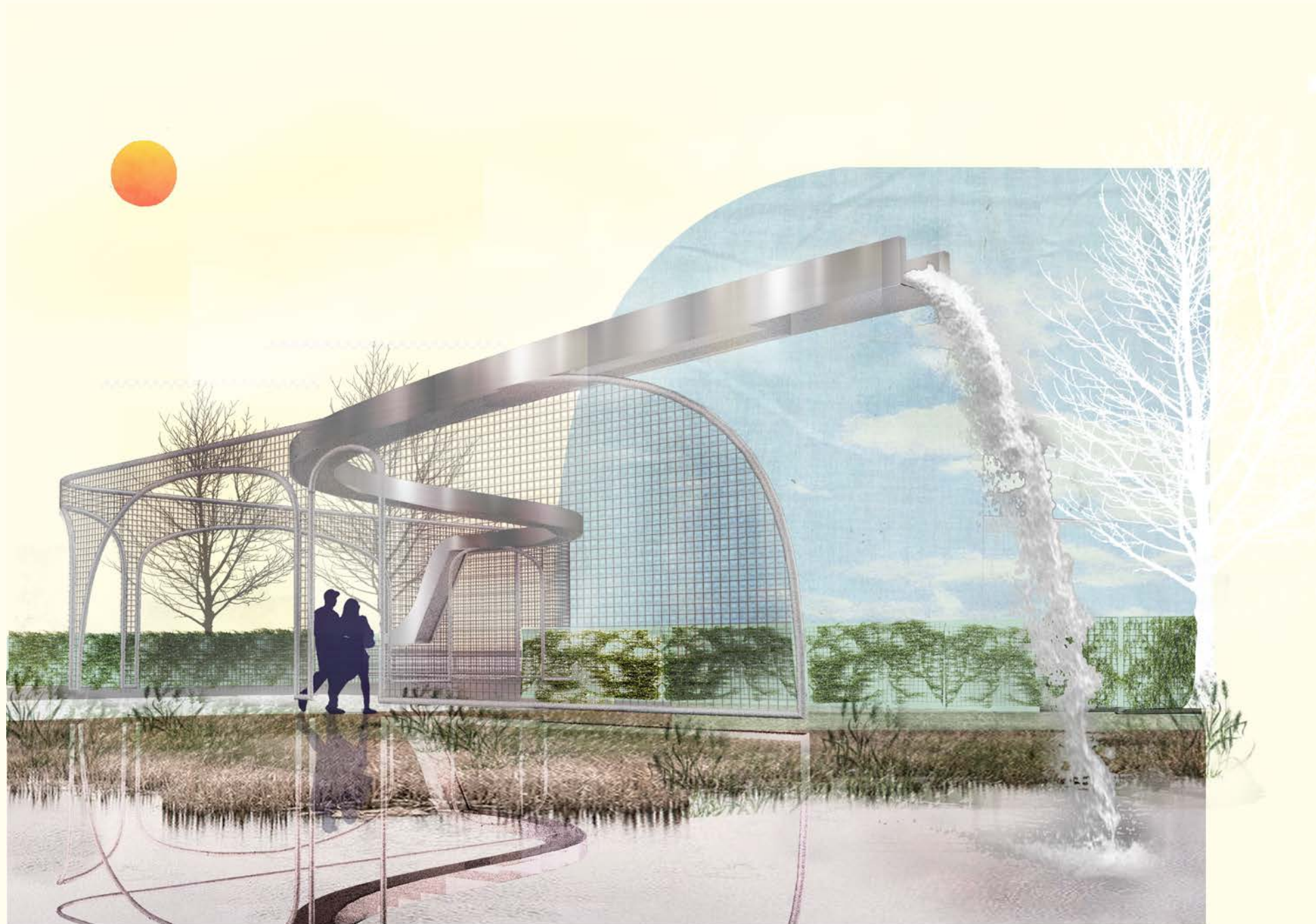
Historical Entrance



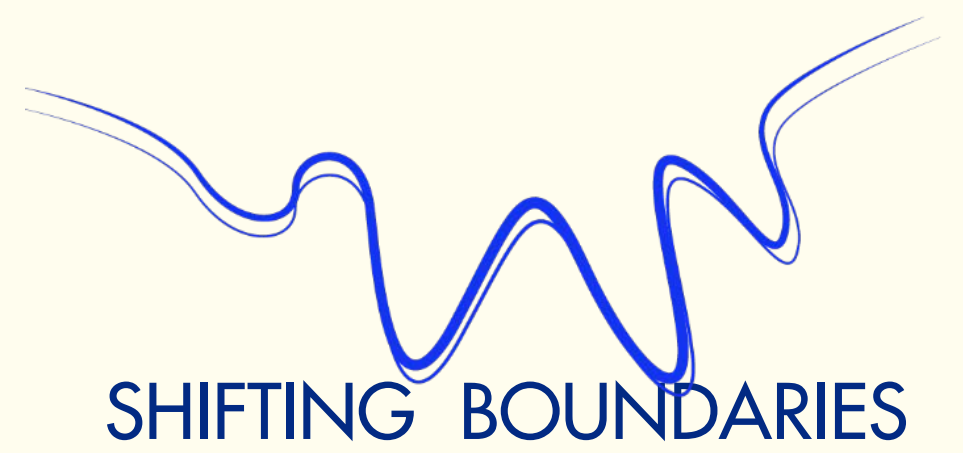
Part2 / Permeable Boundaries
Node: Aquatic Fountain

Current Entrance

Historical Entrance



Part2 / Permeable Boundaries
Node: Aquatic Fountain



SHIFTING BOUNDARIES



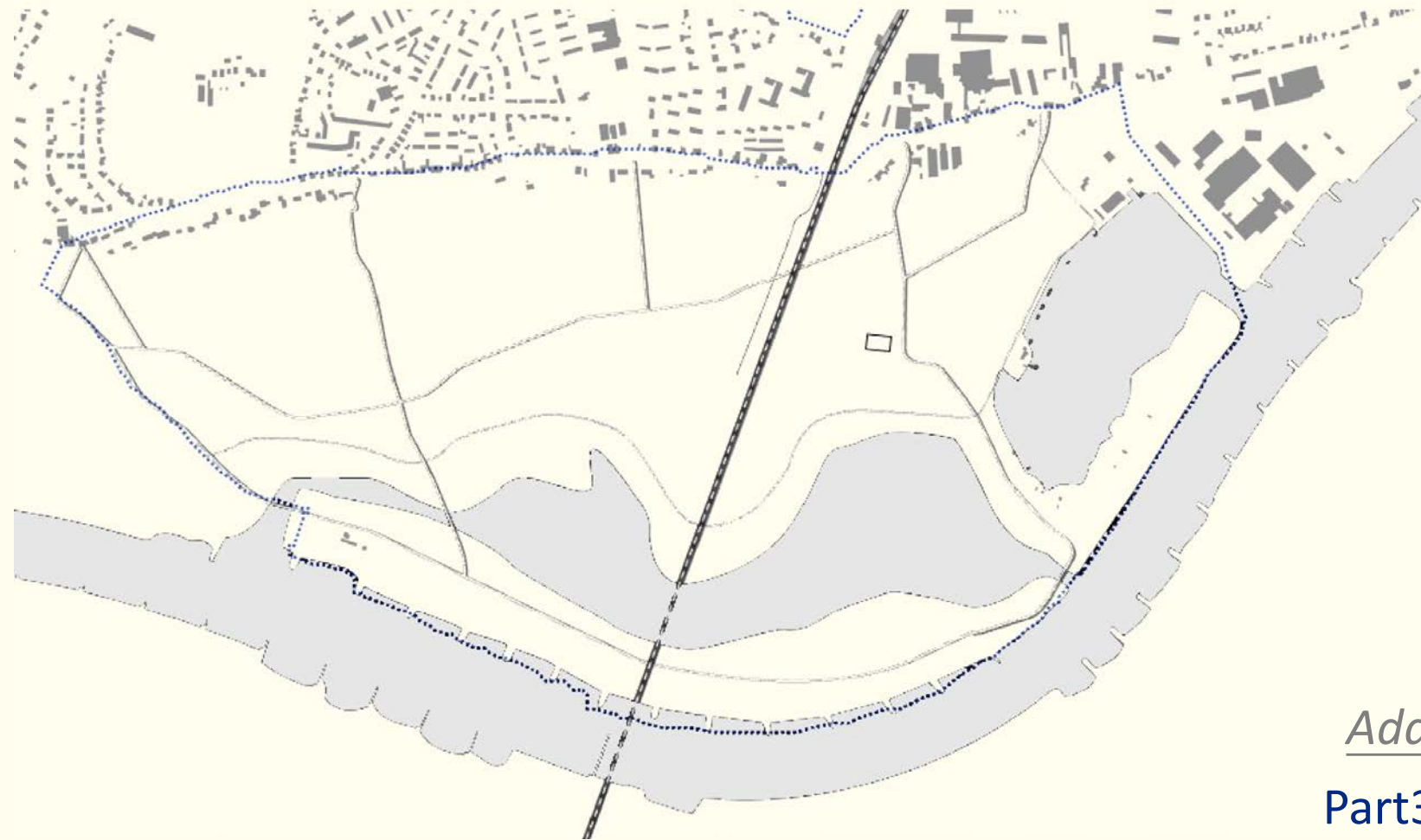
Curre



Part3 /Shifting Boundaries
Master Plan

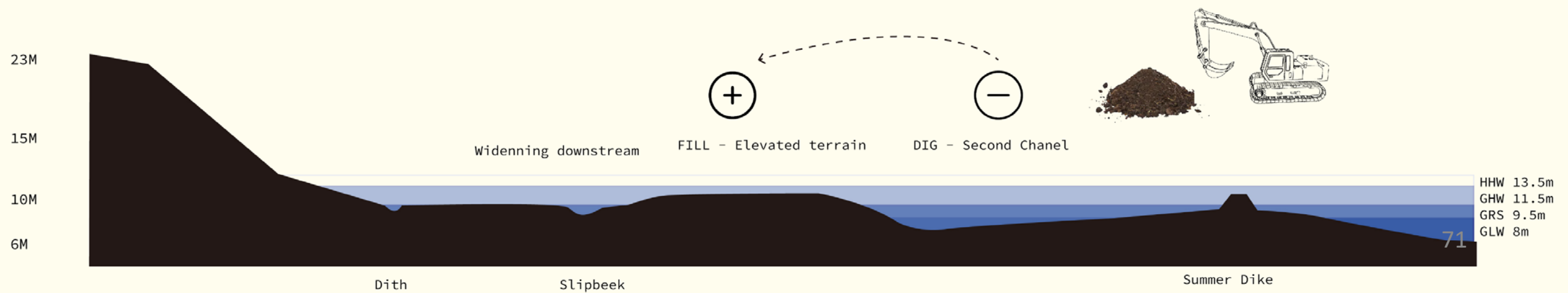


Current Entrance



Add Second Water Chanel

Part3 / Shifting Boundaries
Strategies Elaboration On site



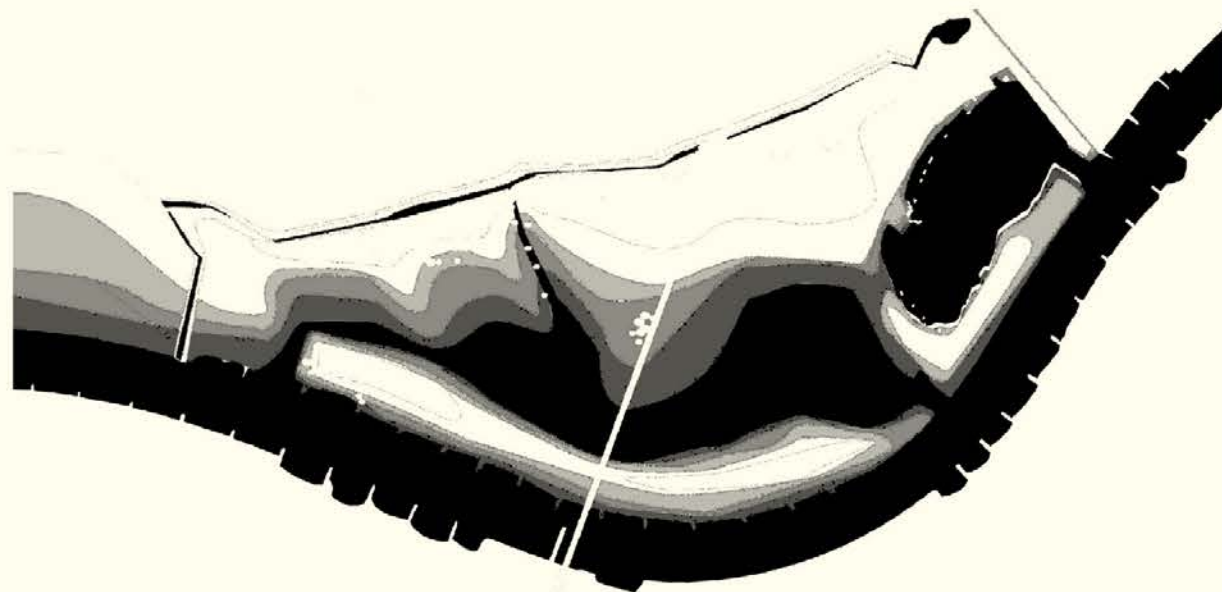
Current Entrance



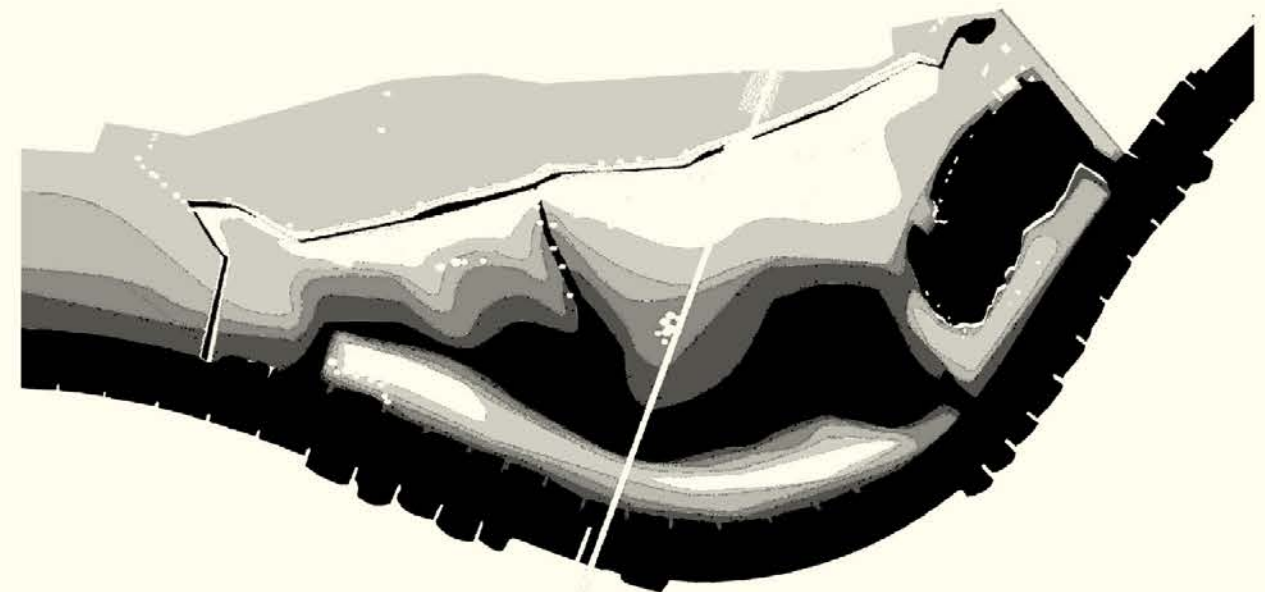
Low water level 8m



Normal water level 9.5m



High water level 11.5m



Extreme weather >12m

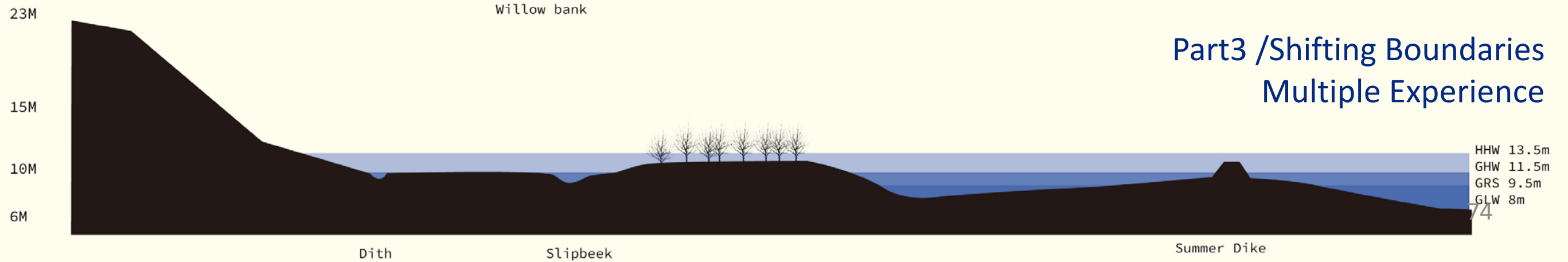
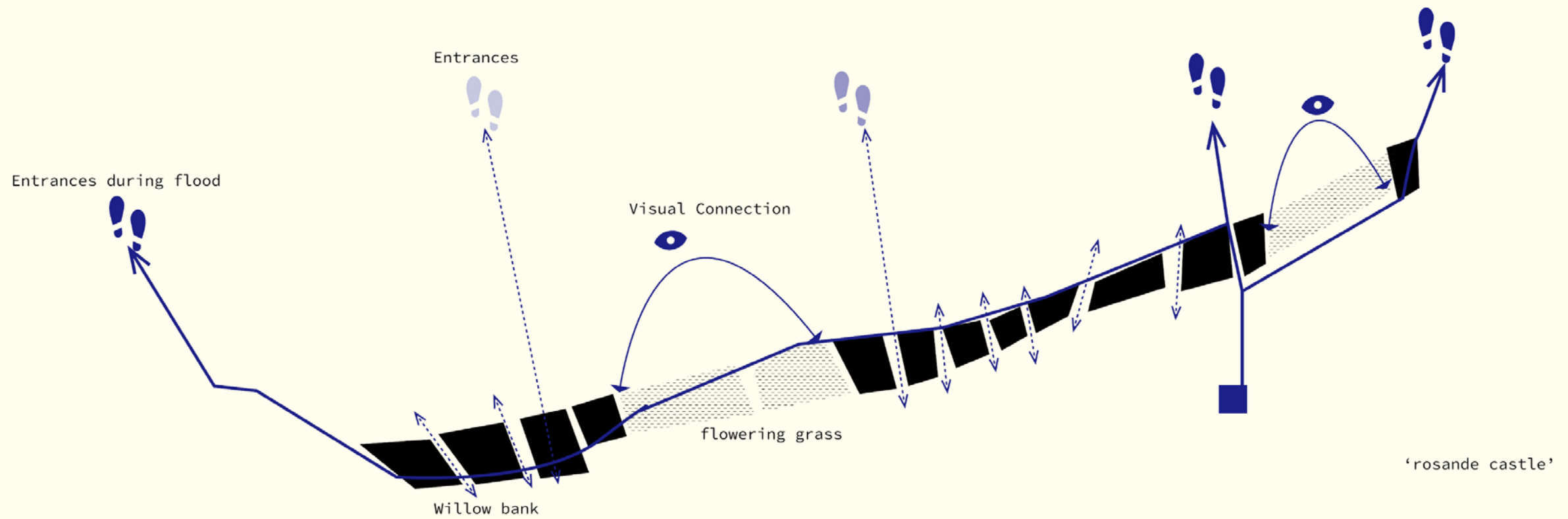
Part3 / Shifting Boundaries
Strategies Elaboration On site



Willow in flood, what about people?

Current Entrance

Historical Entrance



Part3 /Shifting Boundaries Multiple Experience

Current Entrance

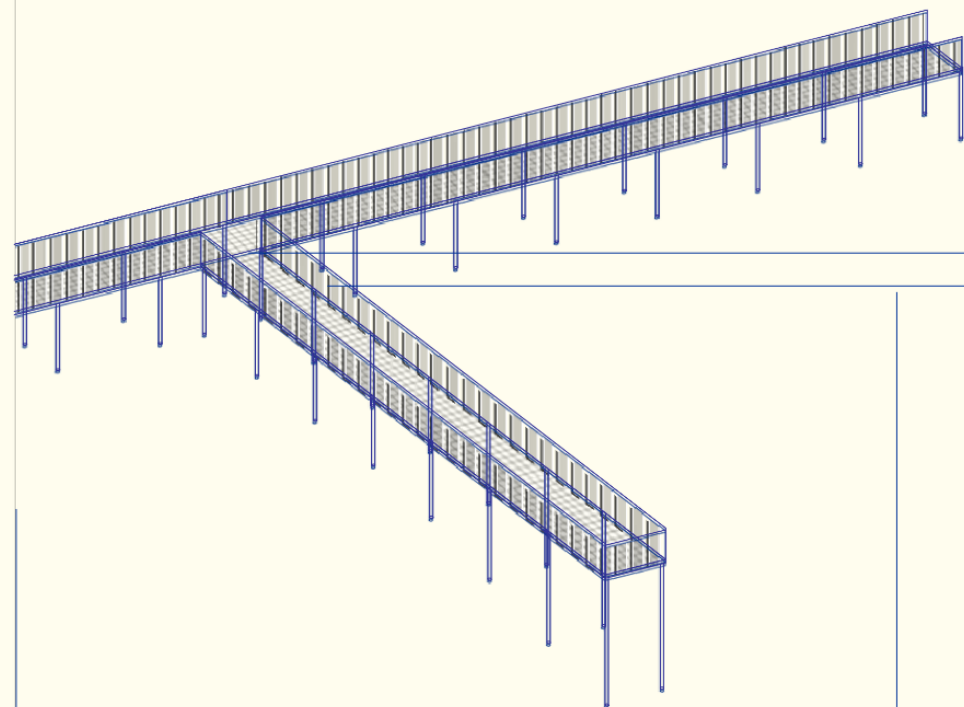
Historical Entrance

0 10 20 30 40 50

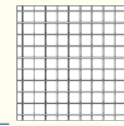


1. Water Basin
2. Slipbeek
3. Main Entrance
4. 'Castle' Monument
5. Willow Bank
6. Footbridge
7. Temporary Path
8. Camping Site

Historical Entrance



Metal Grid Panel



Polished Stainless Panel

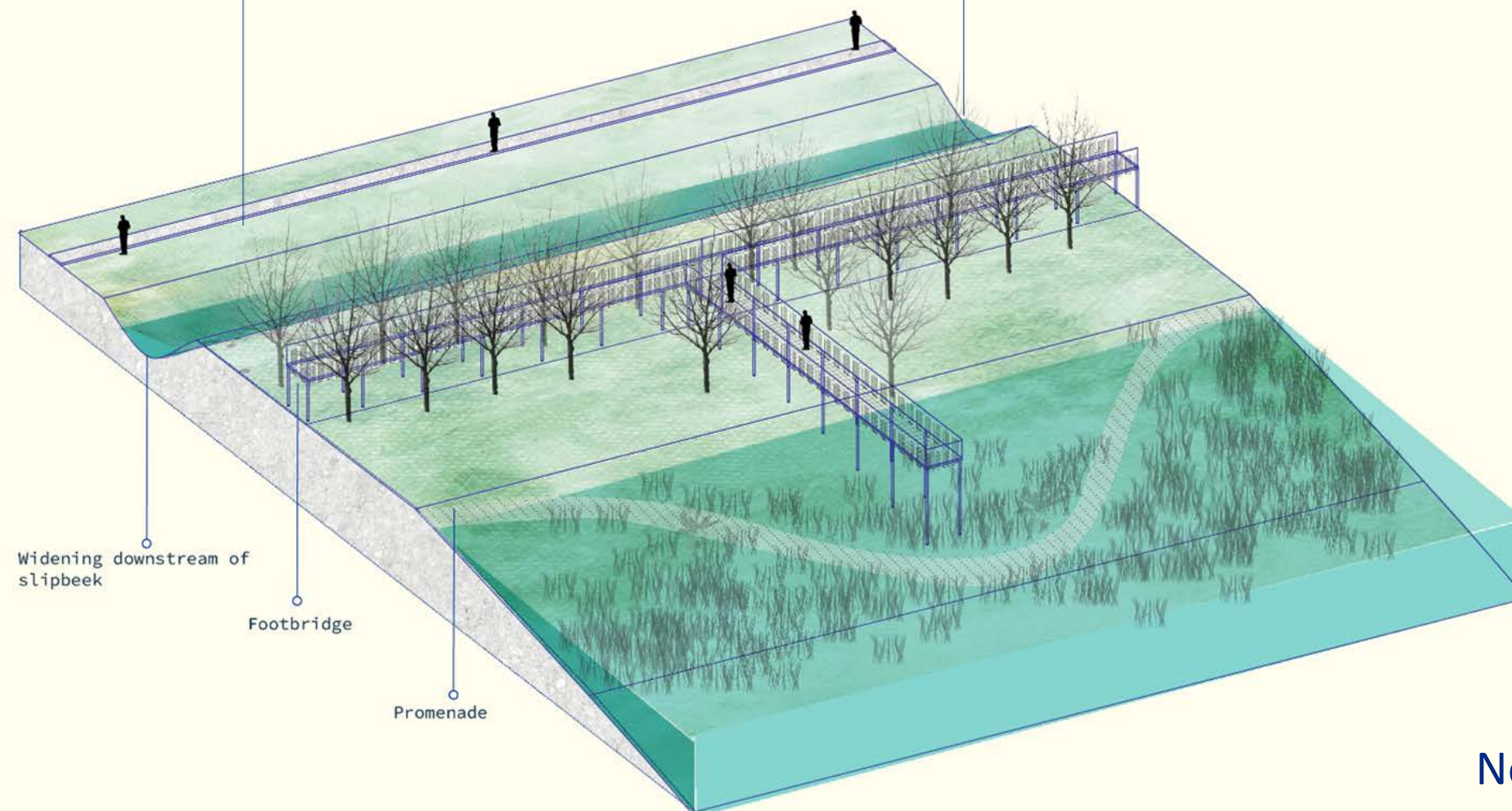
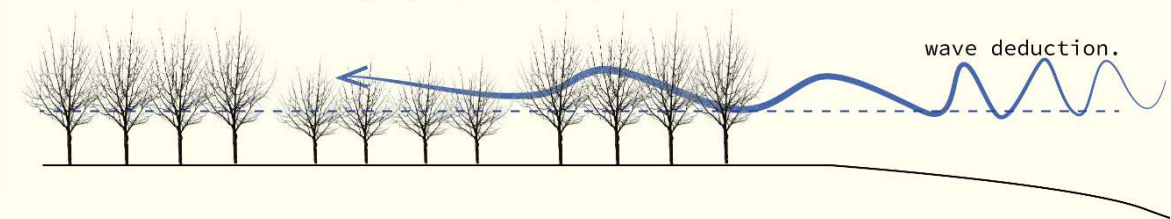


Eupatorium Canadense, *Elytrigia Atherica*, *Spindotter*, *Bolboschoenus Maritimus*

Mixed *Salix Alba* & *Salix Viminalis*:



Maintainancel: Cut didfferent year, 1 year 2.5m/ 2 year 4.5 m



Widening downstream of slipbeek

Footbridge

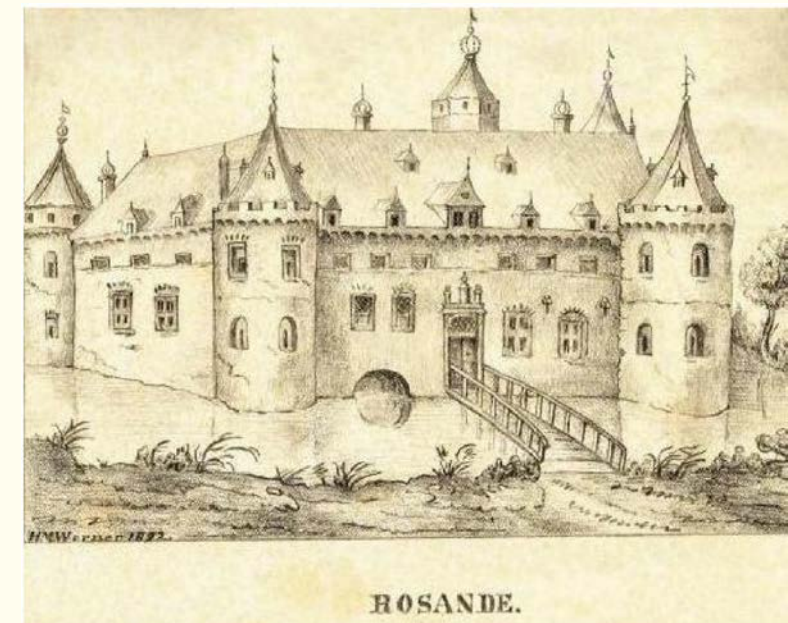
Promenade

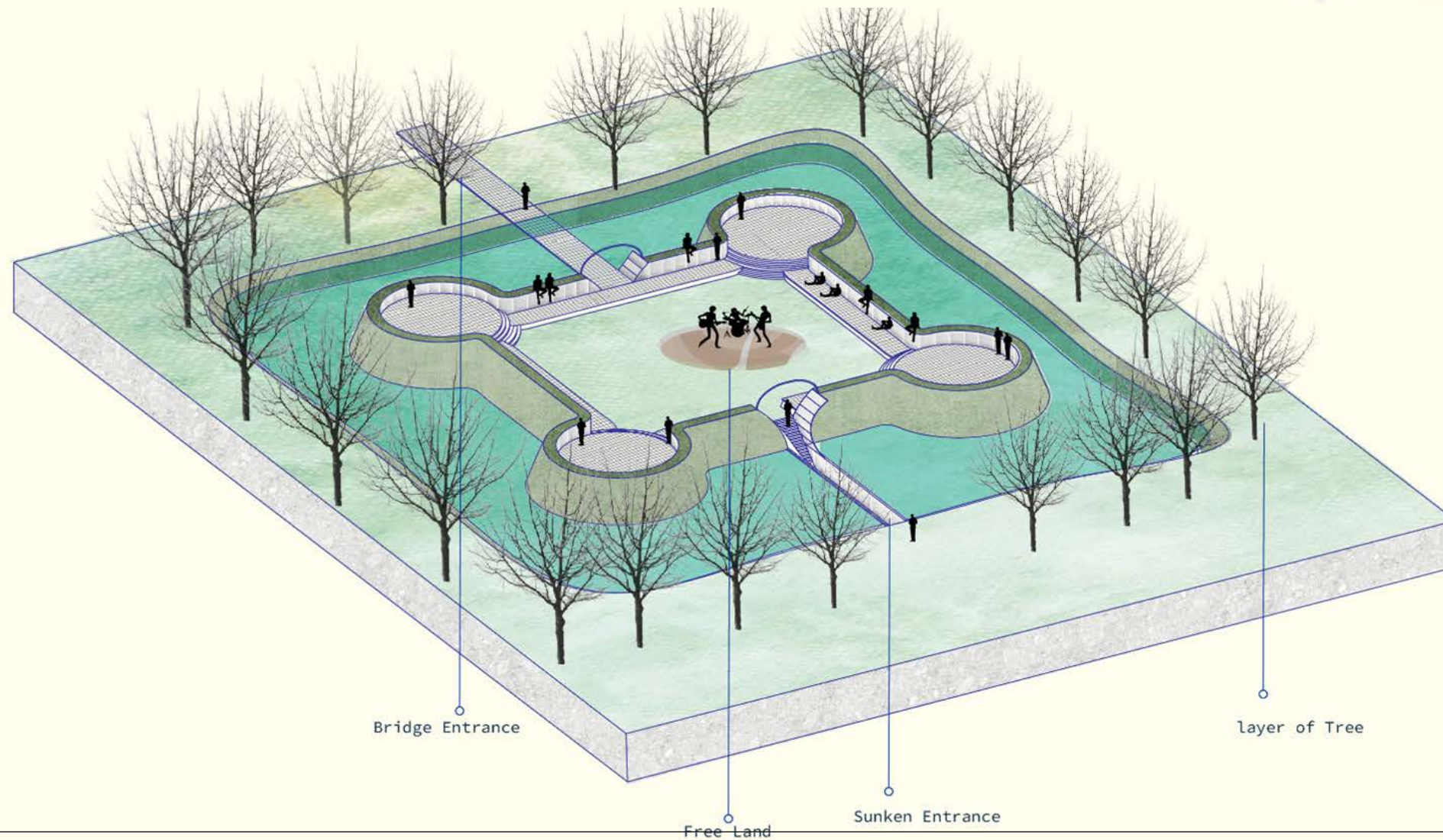
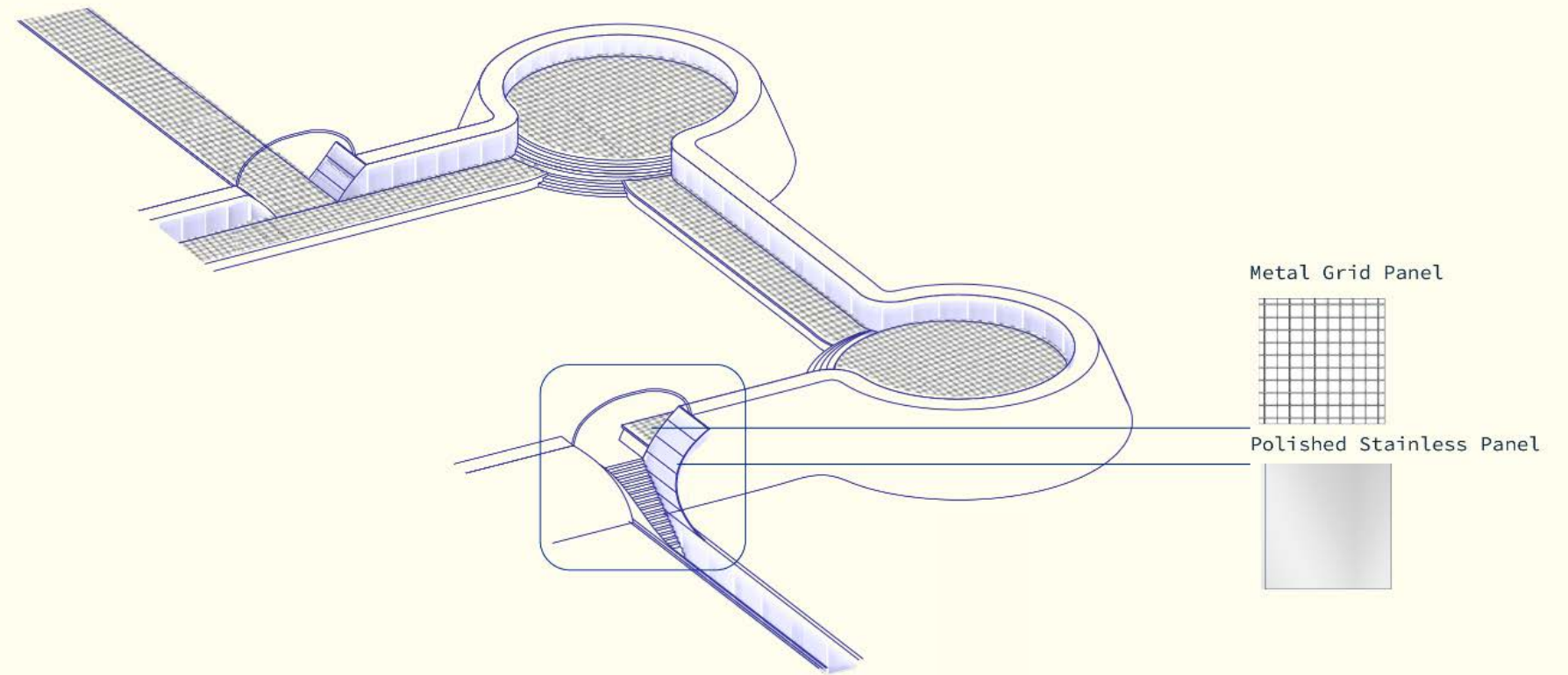
Part3 /Shifting Boundaries
Node: Willow Bank/ Footbridge



Current Rosande Castle

Historical Entrance





Part3 /Shifting Boundaries
Node: Land Monument



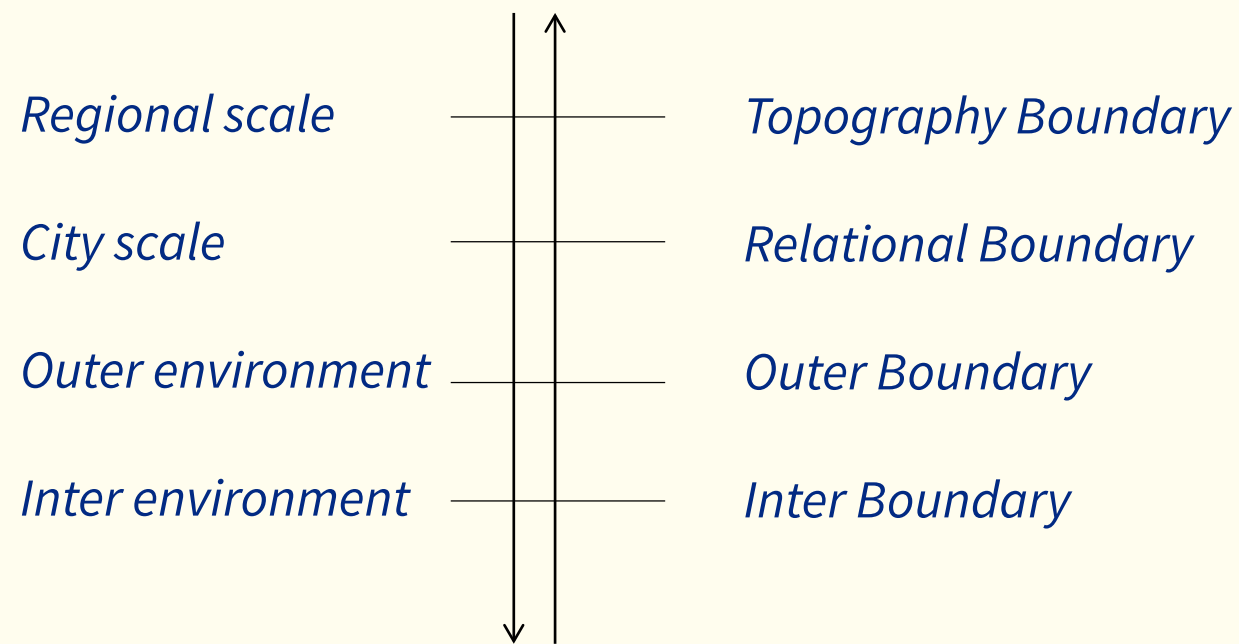
Boundaries Plan

Slipbeek –water corridor

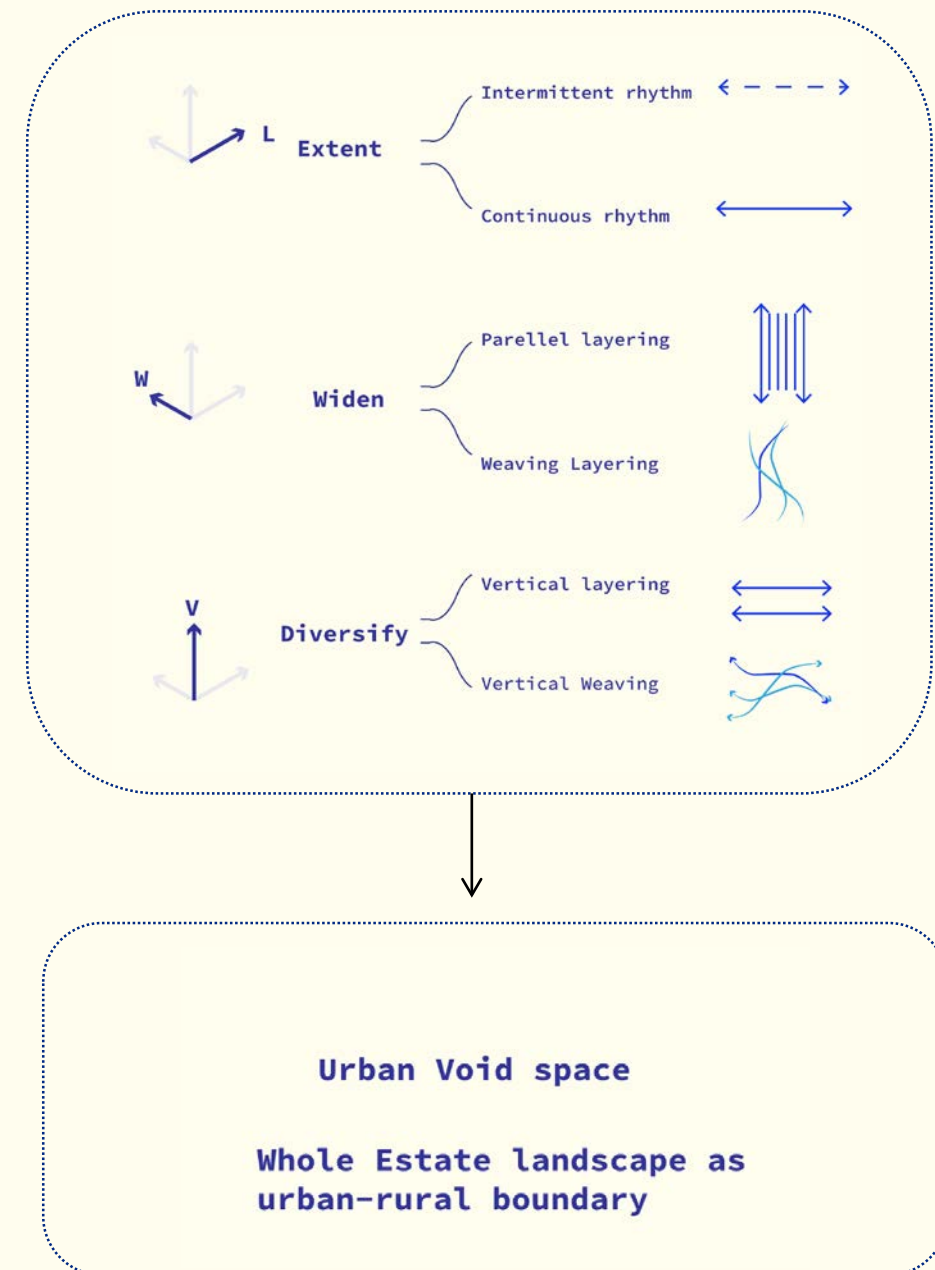
People Movements

Reflection
Coherence Thinking

Research - spatializing



Design - Boundaries Approaches



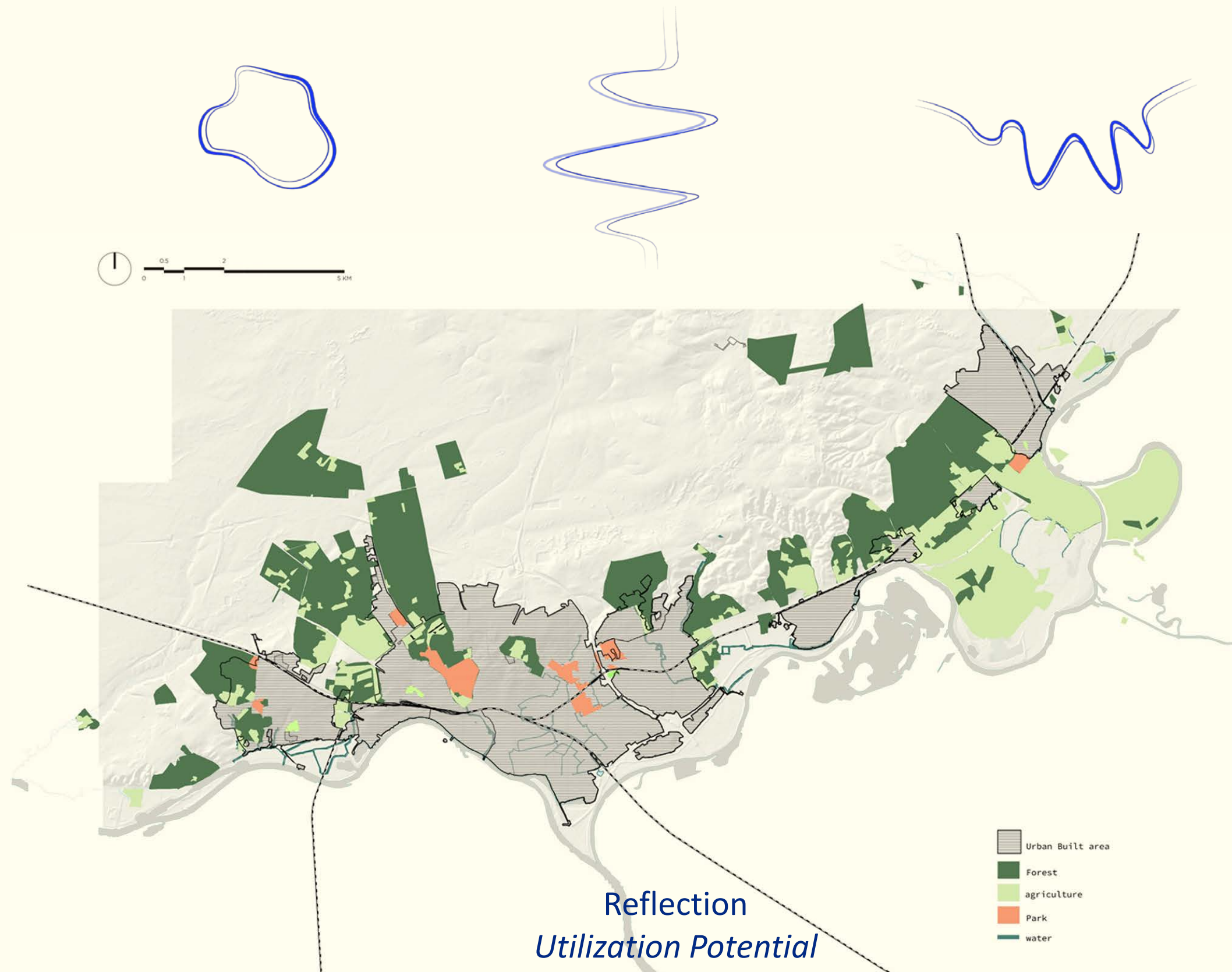
Reflection

Research design & Design By research

Mysterious Boundaries

Permeable Boundaries

Shifting Boundaries



Three hands are visible, pointing towards the center text. Two hands are at the top, pointing downwards, and one hand is at the bottom, pointing upwards. They are positioned around a horizontal line that separates the top and bottom halves of the image.

CIAO
CIAO!

BETWEENNESS

TANGIBLE & INTANGIBLE BOUNDARIES

Yuyu Peng 27/08/2020