



# From Residual to Restorative Landscape Design Strategies for Interstitial Spaces

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# Current Map of Rotterdam



# Interstitial Spaces



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Main Characteristics

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Main Findings in Literature

Perceived Biodiversity

Hypernature

Land Art

Behavioral Differentiation

Vegetation Driven

Cues

Synthesising

A Walk Through the Restorative Environment

Different Scenarios

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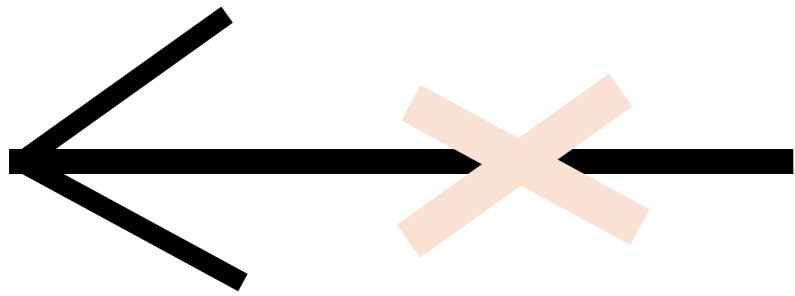
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# Main Characteristics



Not Accessible/Inviting



Different Human Usages



Green character

# Green Character



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## Interest - Mental Wellbeing



(Kaplan & Kaplan, 1989; Ulrich, 1983)

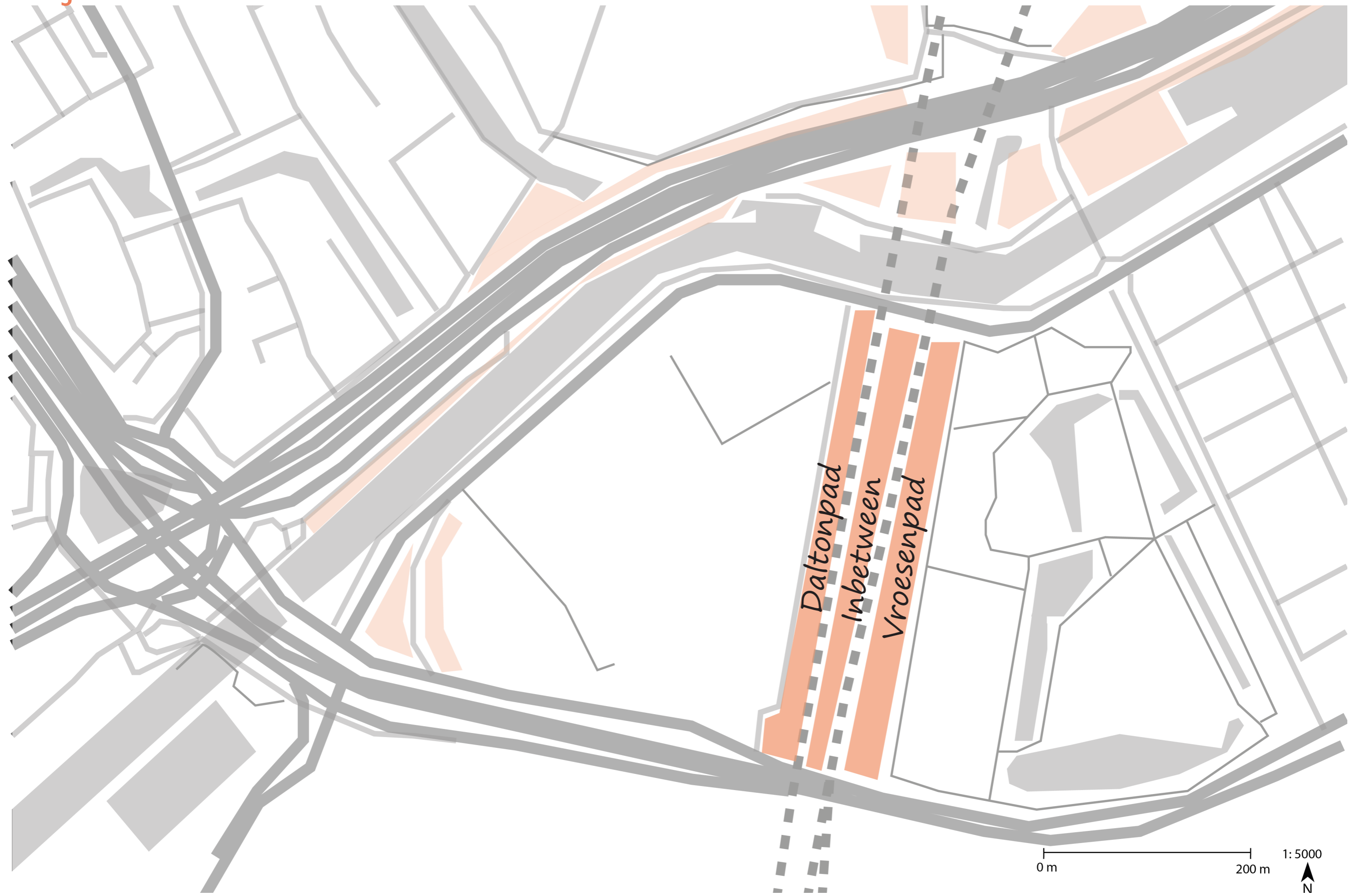
# Focus on Psychological Restoration

## *Psychological Restoration*



*The process through which depleted psychological resources, such as attentional capacity, stress regulation, and emotional balance, are renewed through interaction with supportive environments, particularly natural and semi-natural landscapes.*

# Project Location



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## 2 Main Findings

### Perceived Biodiversity

*Perceived biodiversity is the variety of plants, animals, and other natural elements in an environment as experienced and noticed by people, influencing their perception of complexity, richness, and connection to nature (bron).*

(Kaplan & Kaplan, 1989; Siltanen & Puhakka, 2025; Fuller et al., 2007)

### Behavioral Differentiation

*Behavioral differentiation refers to the variation in how people use, move through, and experienced different spaces based on their needs, preferences, or activities (bron).*

(Wen et al., 2025; Hartig et al., 2003)

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## Perceived Biodiversity



Height Variation

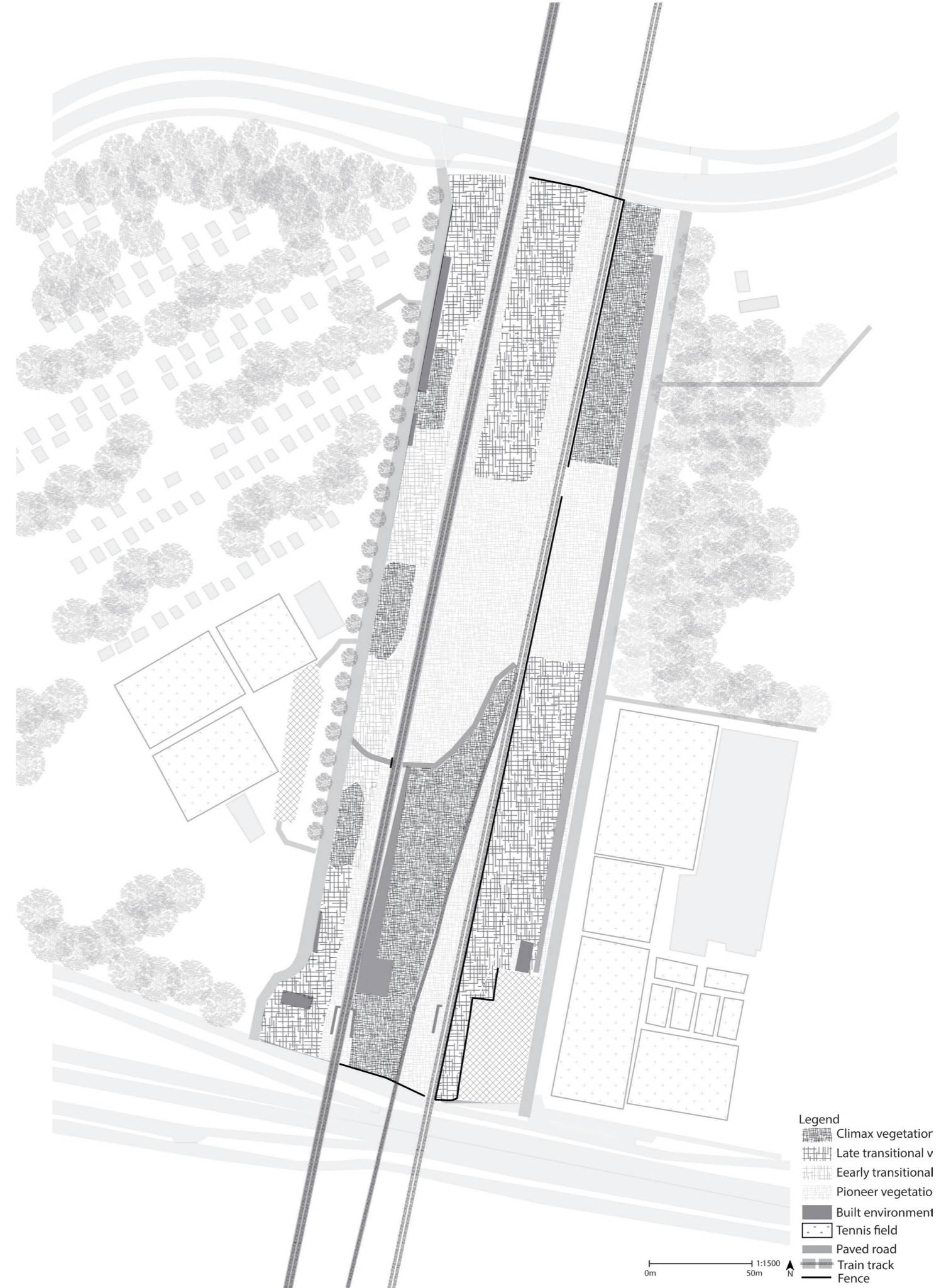
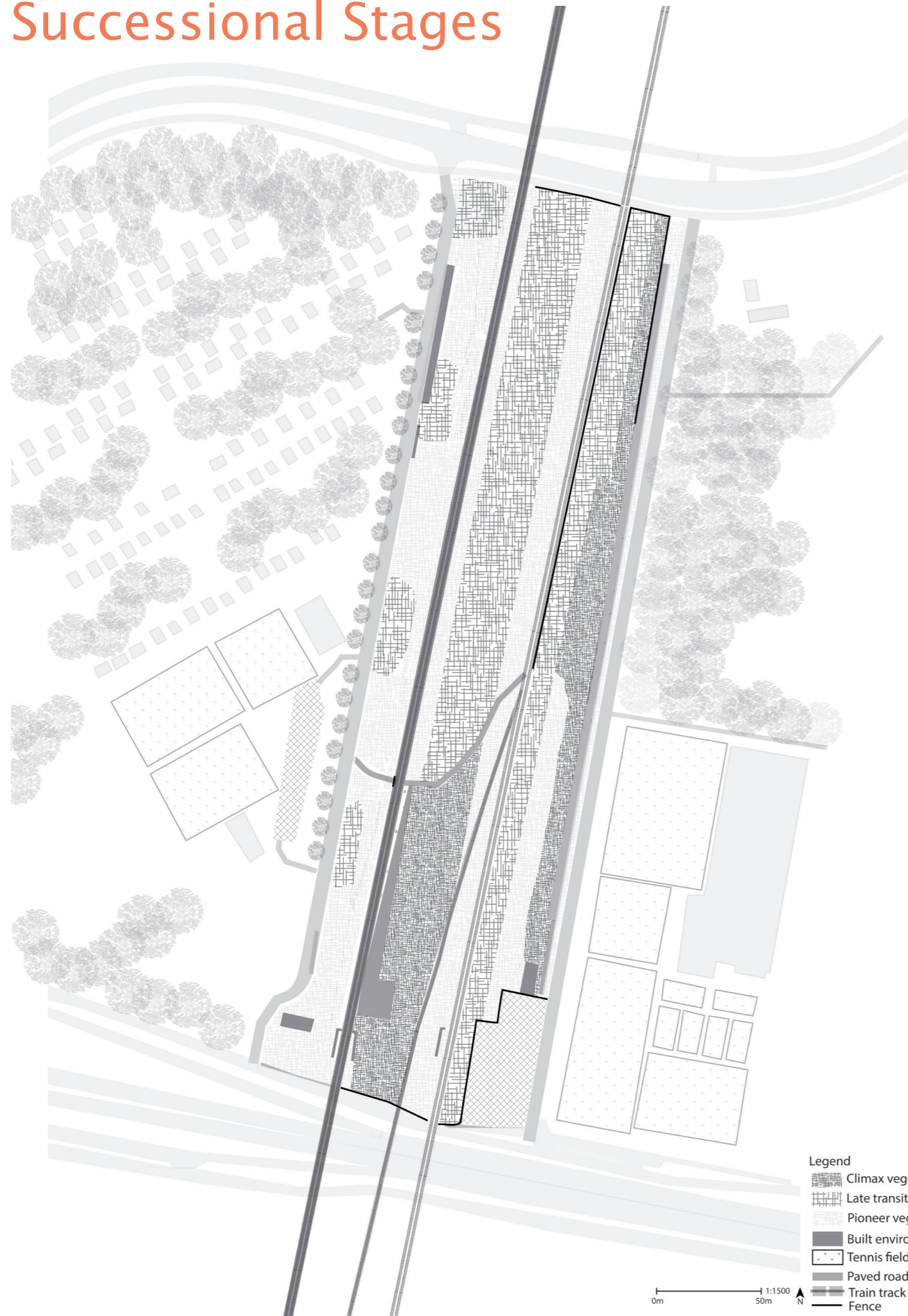


Structural Diversity

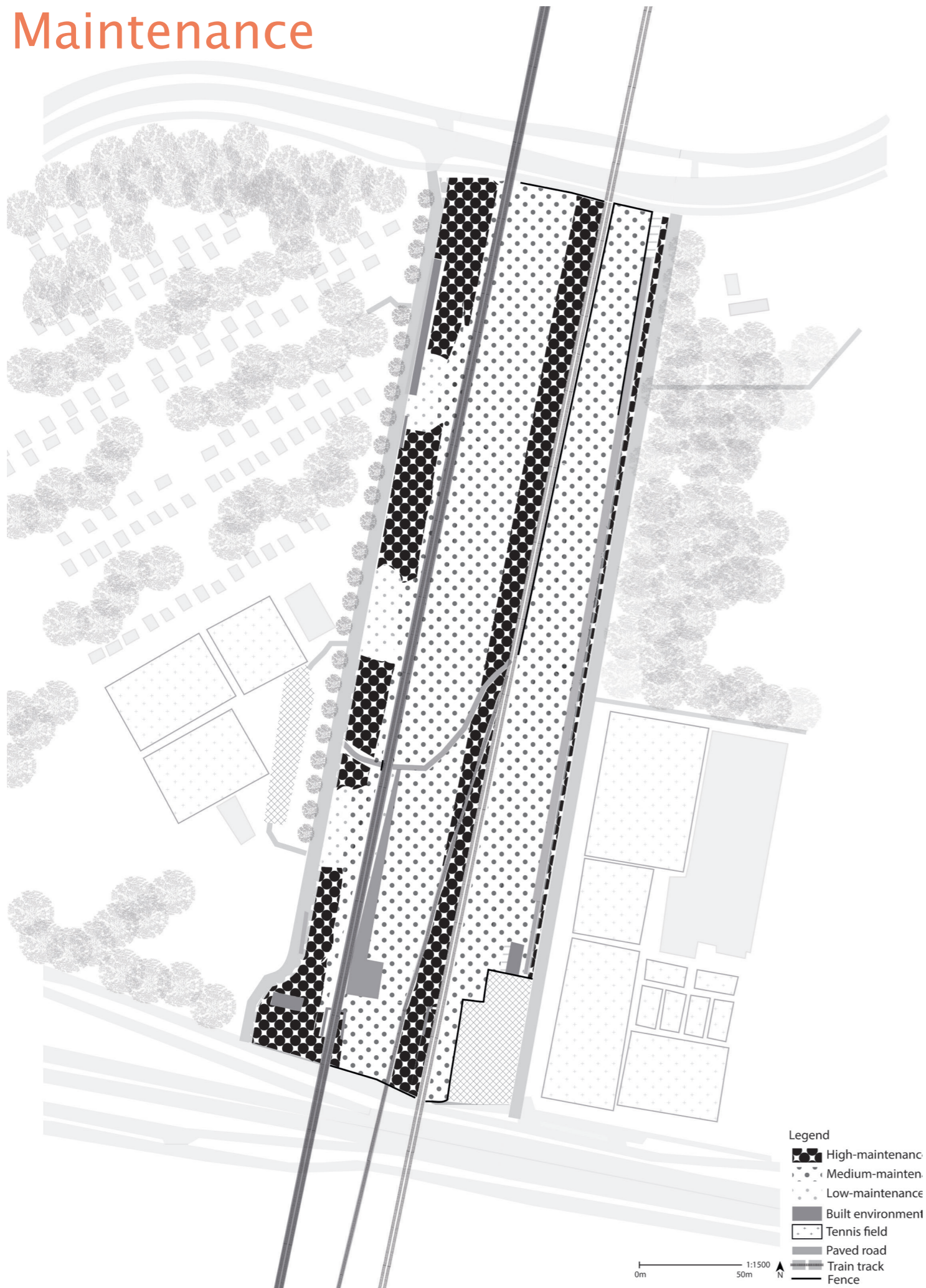


Decay

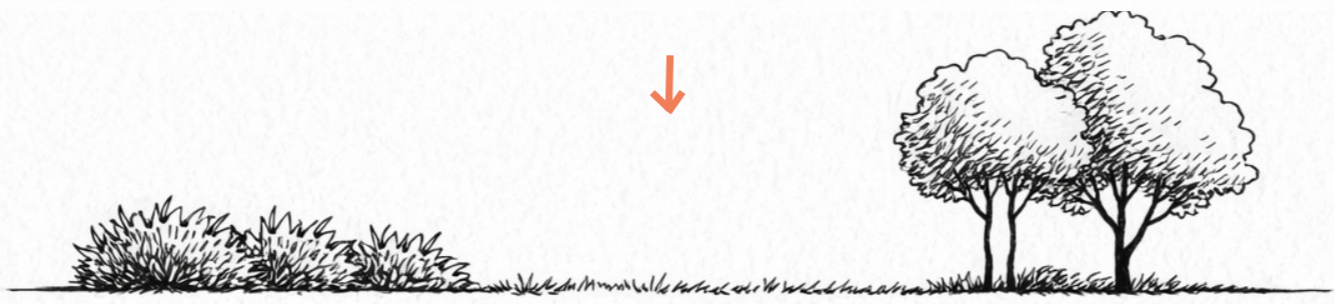
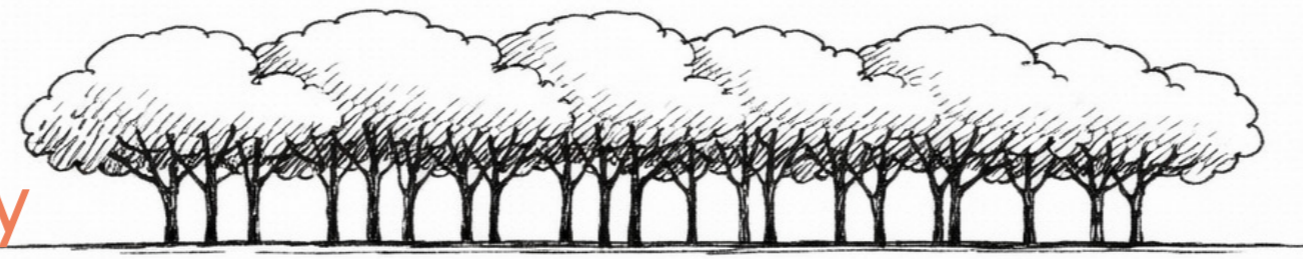
# Successional Stages



# Maintenance



# Enhancement Perceived Biodiversity



Vroesenpad



Daltonpad

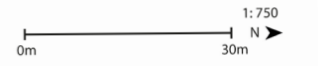


In Between

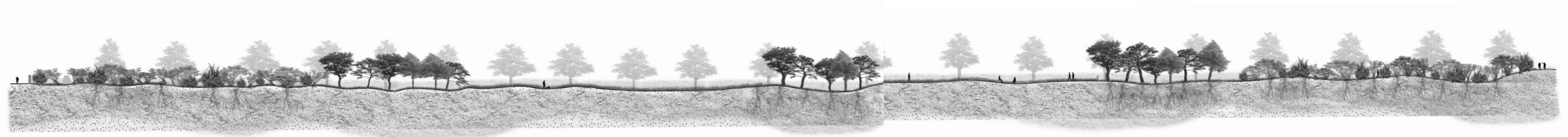
# Through Time



Now



Year 5



Year 50



# Perceived Biodiversity

## Hypernature

*Hypernature can be understood as the deliberate intensification of natural processes so that they remain perceptible even within the sensory overload of urban life (Meyer, 2008).*

# Case Study - Teardrop Park New York

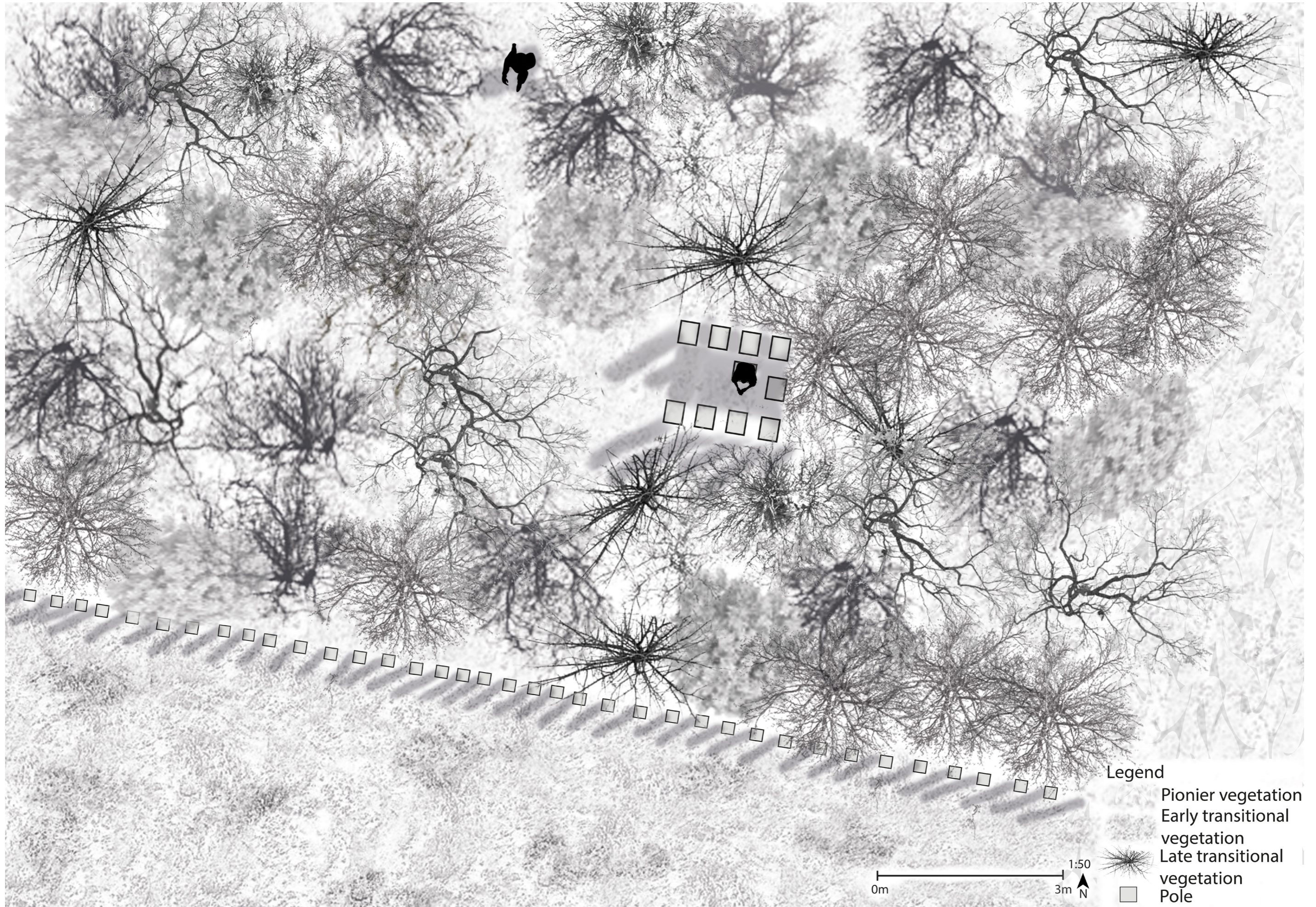


(Michael Van Valkenburgh, 2009)

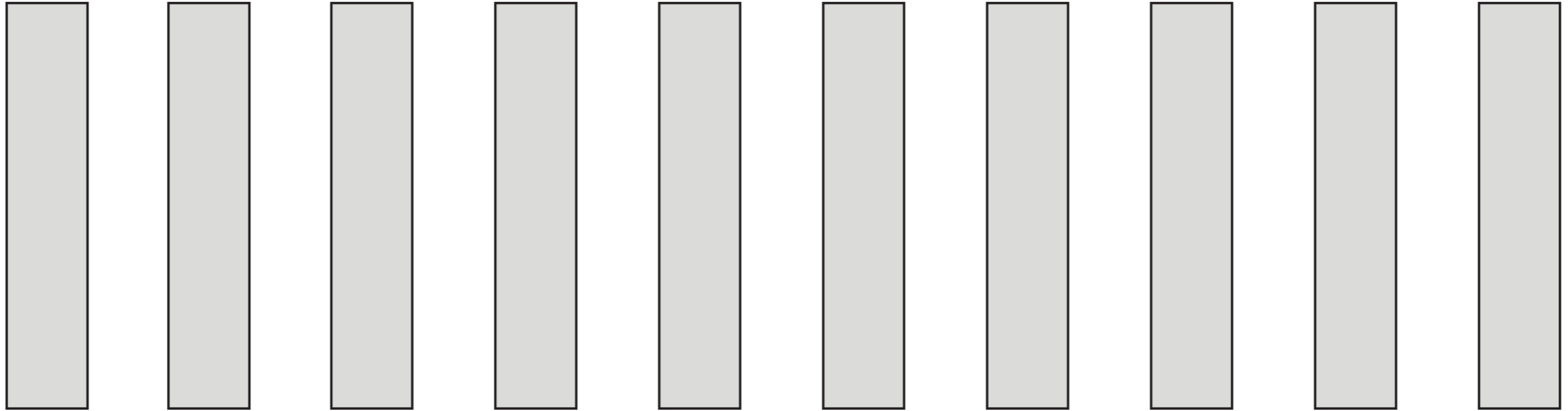


(Michael Van Valkenburgh, 2009)

# Transition



Intervention



Transition

# Transition



# Perceived Biodiversity

## Land Art

*Land art is a way of making art, in which artists create site-specific works directly in the natural landscape to shape and shift focus to the direct environment.*

# Case Study - Sun Tunnels Utah

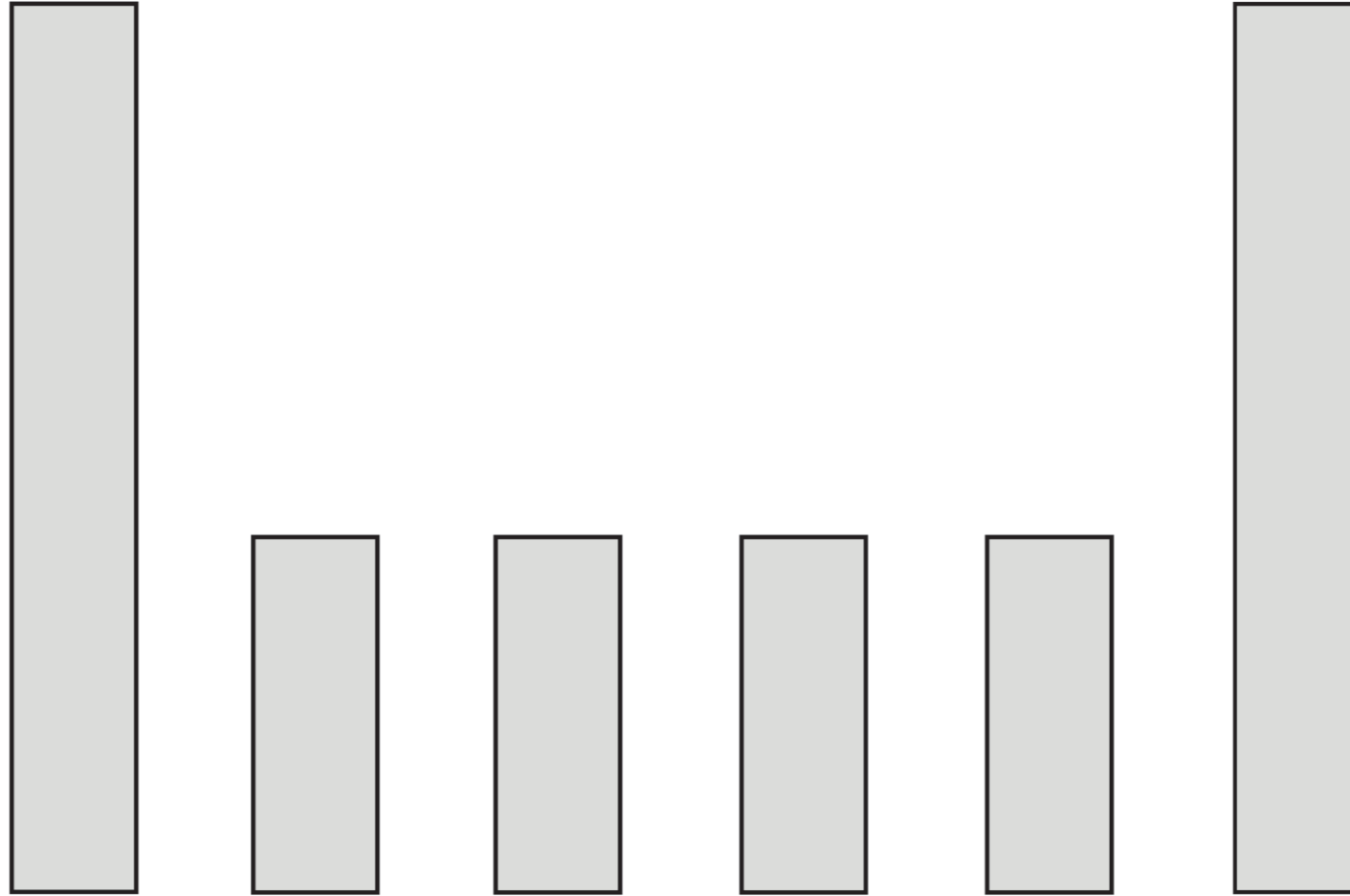


(Holt/Smithson Foundation,1977)



(Holt/Smithson Foundation,1977)

Intervention



Frame

## Perception + Sightlines



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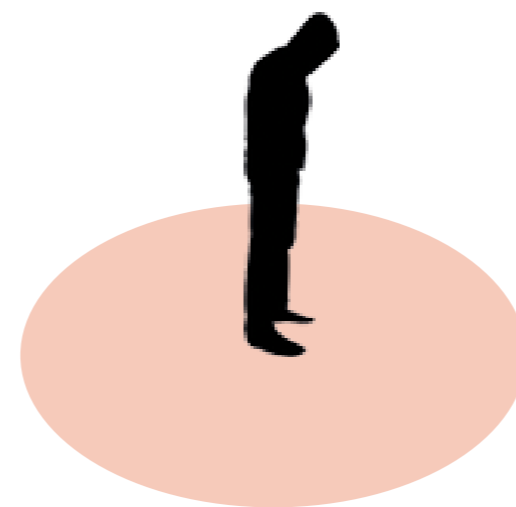
Network

Restorative Landscape

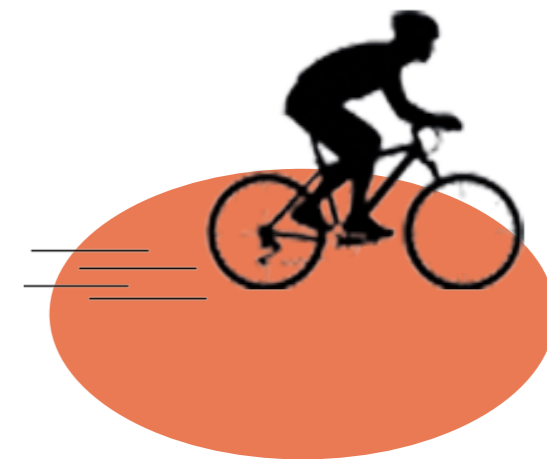
# Behavioral Differentiation



Social Gathering



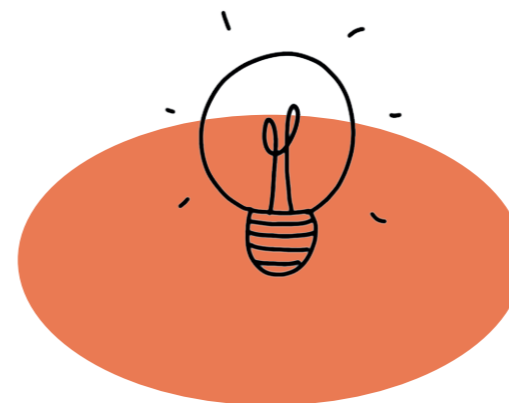
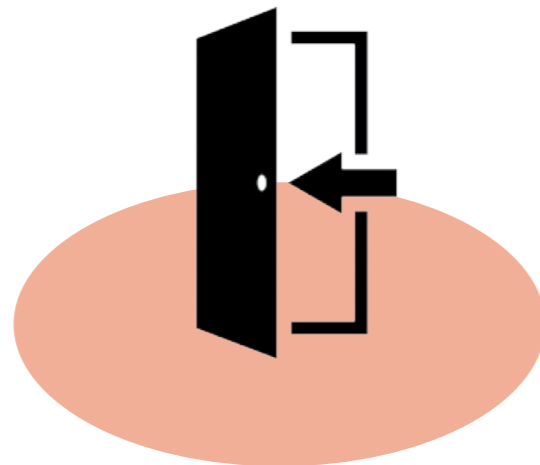
Withdrawing



Movement /  
Activity

# Sensory Perceptibility

*Sensory perceptibility refers to the degree to which an environment can be understood and experienced through multisensory cues (Gibson, 1979; Pallasmaa, 2005), enabling people to recognise affordances and engage meaningfully with a place which results in greater aesthetic valuation and the perception of beauty (Tuan, 1974; Daniel, 2001).*



1. Vegetation-driven spatial differentiation
2. Differentiation driven by cues

# Behavioral Differentiation - Vegetation-driven



Social Gathering



Withdrawing



Movement /  
Activity

# Behavioral Differentiation - Cues

## Cues to Care

*Cues to care are recognizable, human-made signs of intention and stewardship that signal to users that a landscape is deliberately cared for and therefore safe, meaningful, and worth attending to (Nassauer, 1995). It also steers people's behavior because of this.*

# Case Study - Cues to Care

## Südgelände, Berlin



*(Berlin.de, n.d.)*

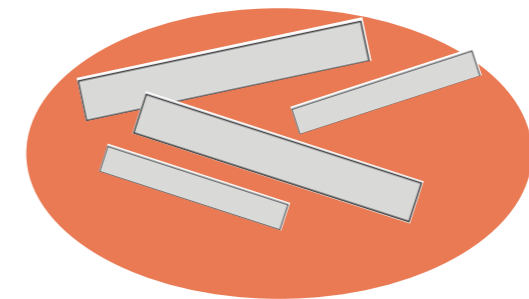
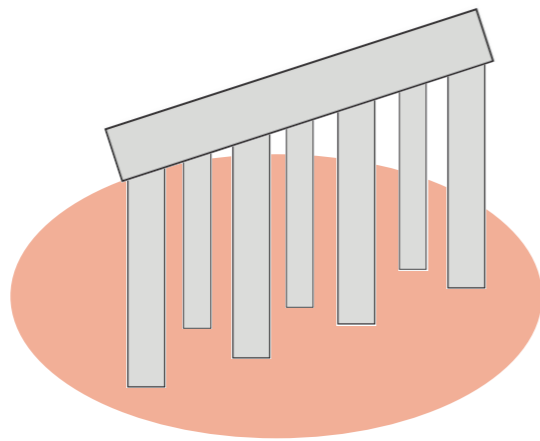
## Meijendel, Wassenaar



*(Mascha, 2024)*

# Informality

*A spatial or ecological condition that is unstructured, spontaneous and not shaped by strict design rules. The current character.*



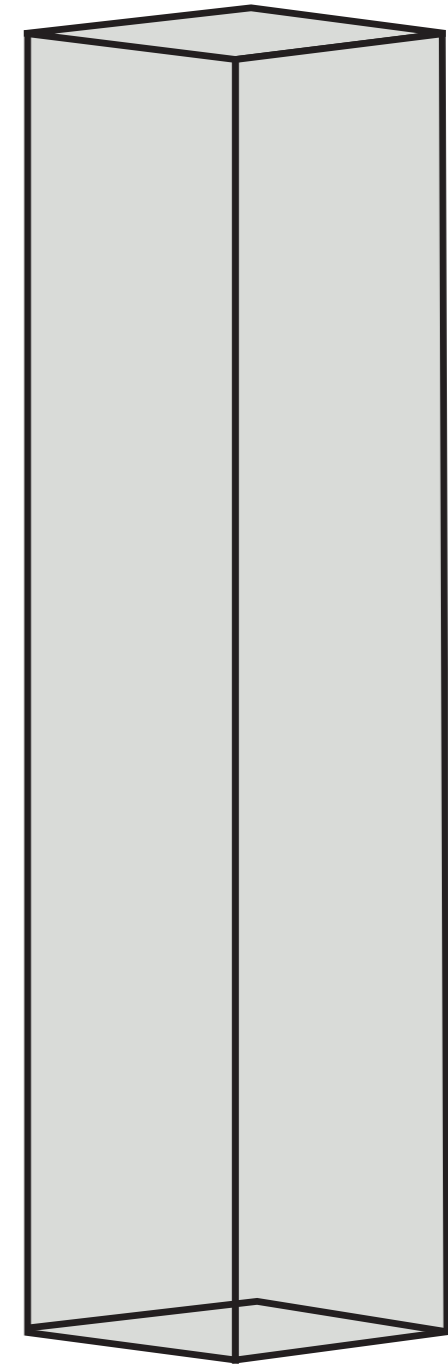
# Using 1 Element as a Spatial Instrument

Perceived Biodiversity

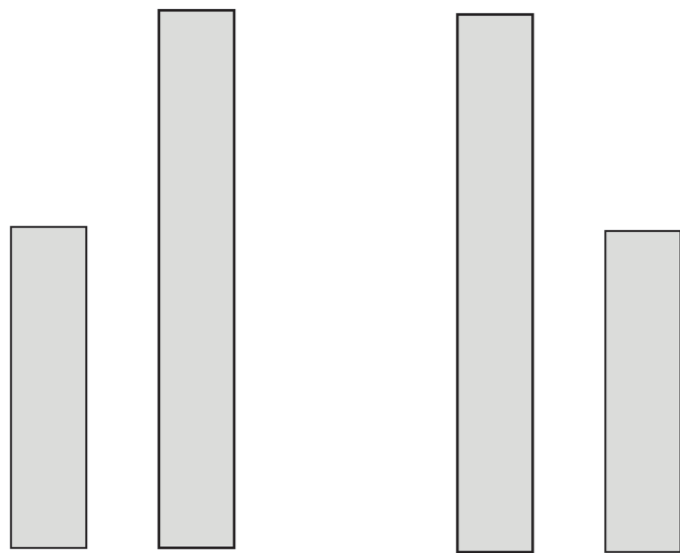
Connectivity

Entrances

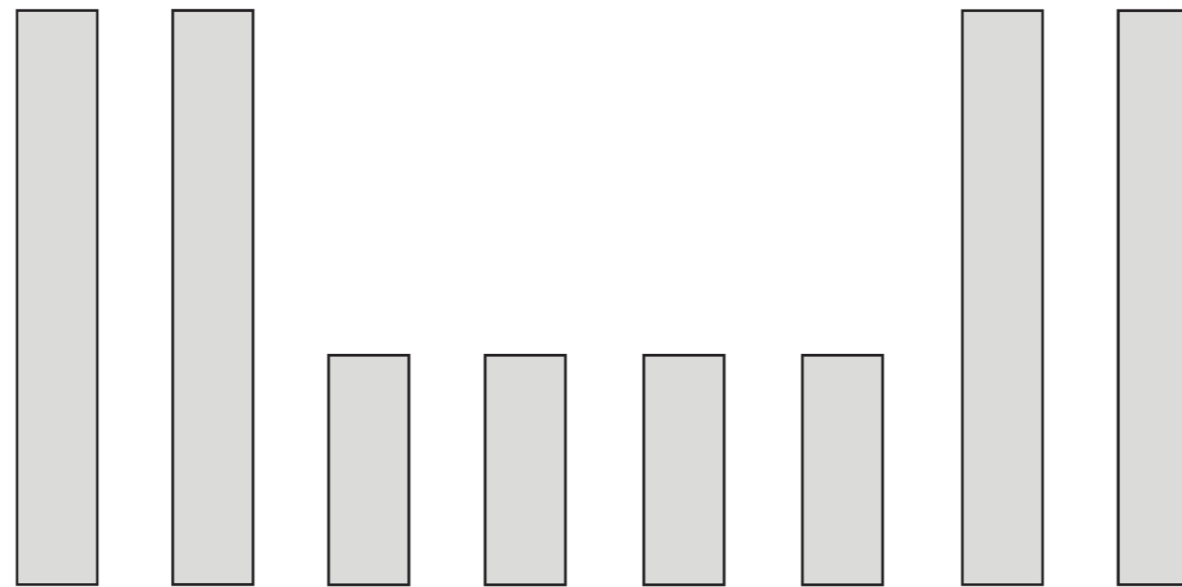
Behavioral Differentiation



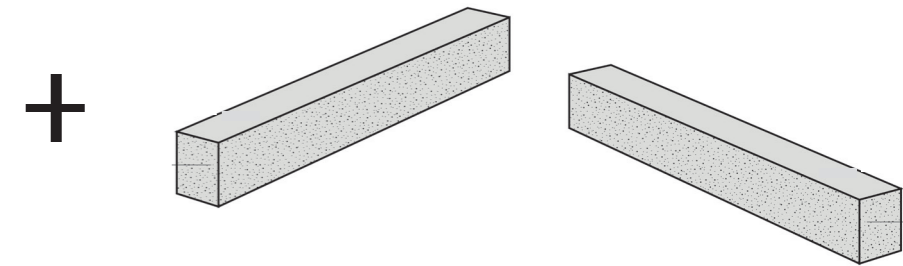
# Enhancing Entrances and Behavioral Differentiation



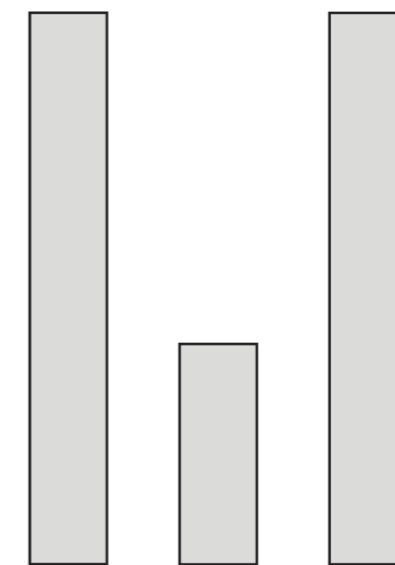
Entrance  
Movement



Social Gathering

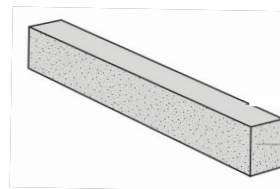


+

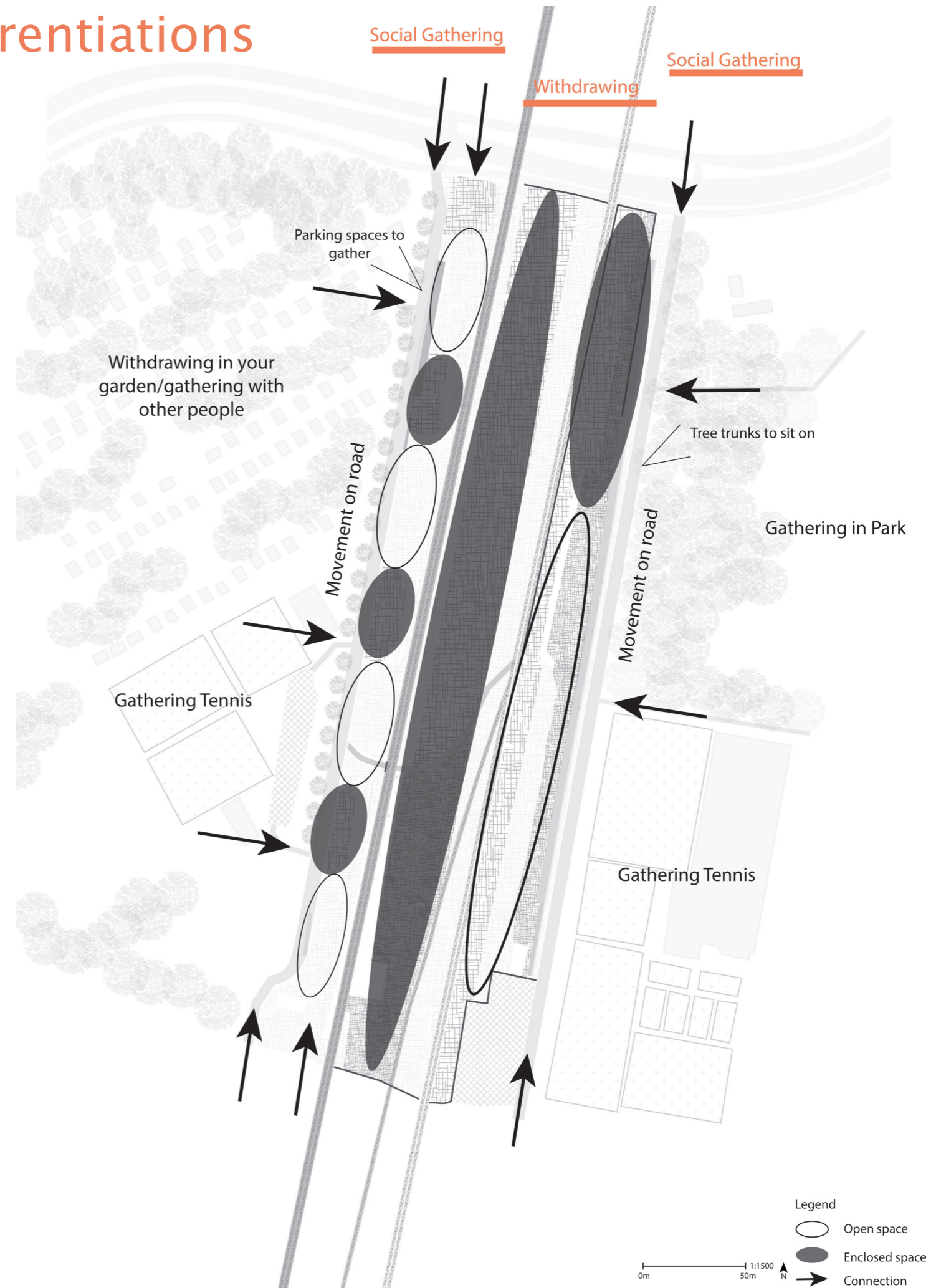


Withdrawing

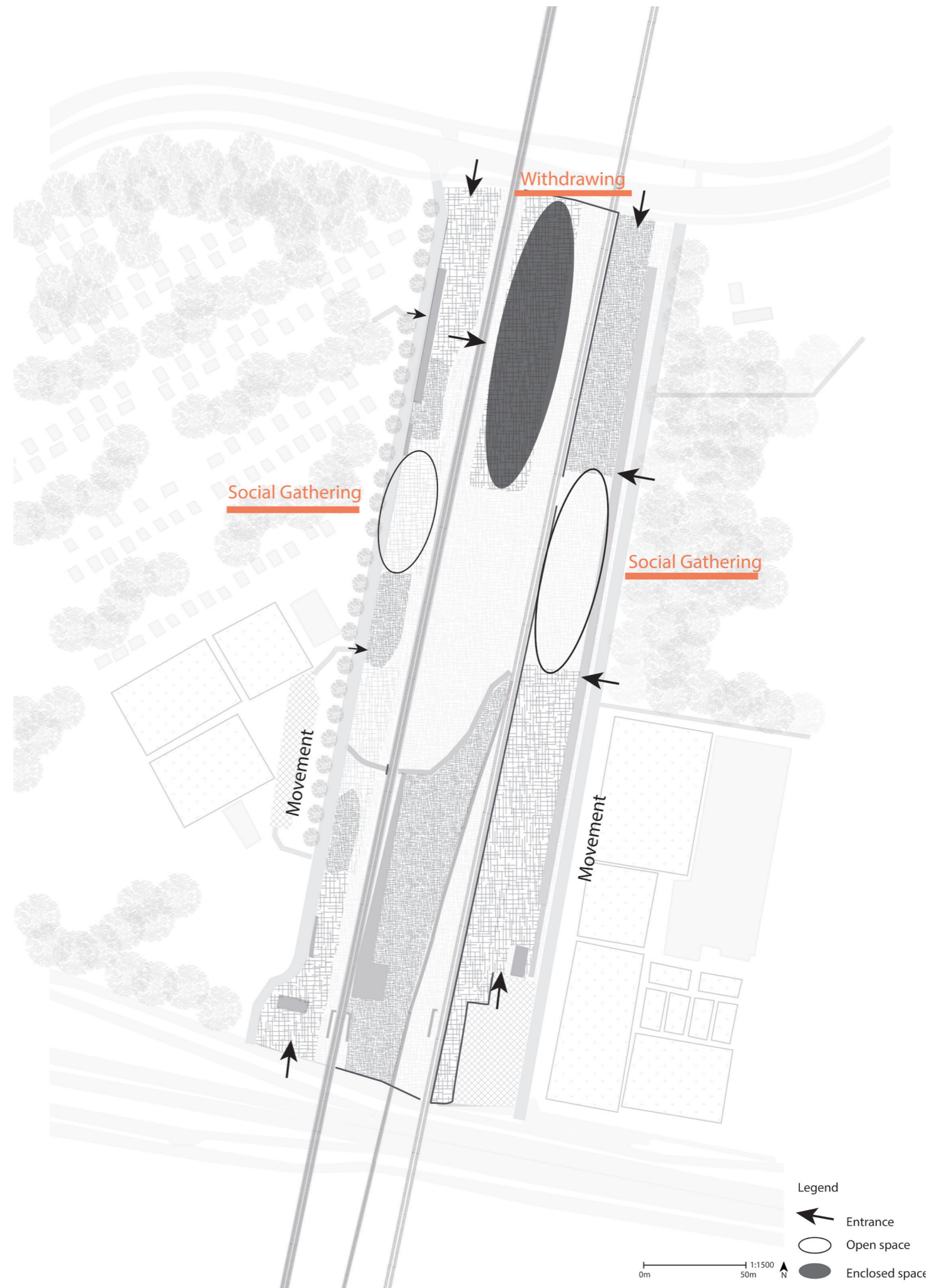
+



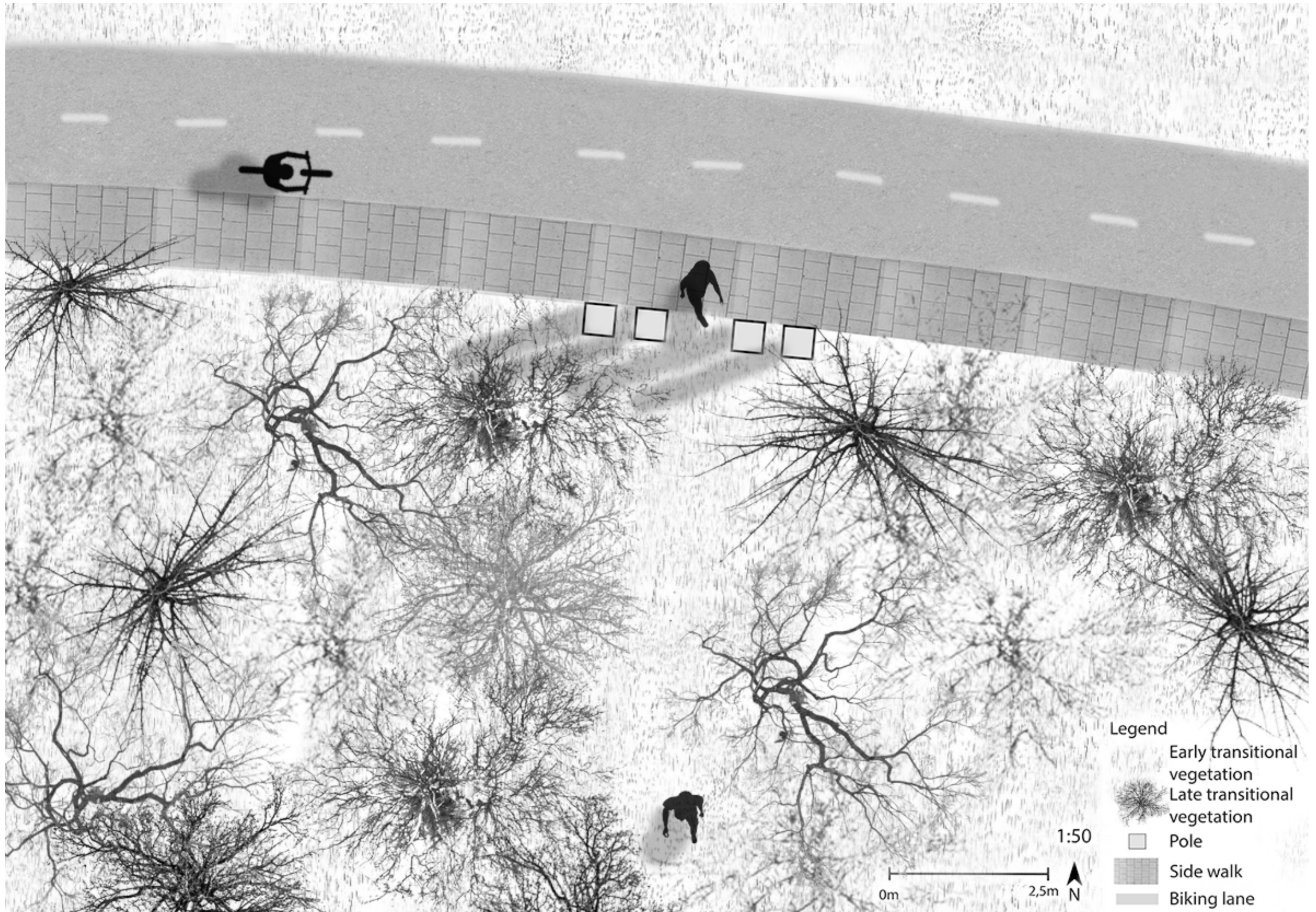
# Analysis Spatial and Contextual Differentiations



# Design Decisions



# Entrance



# Entrance



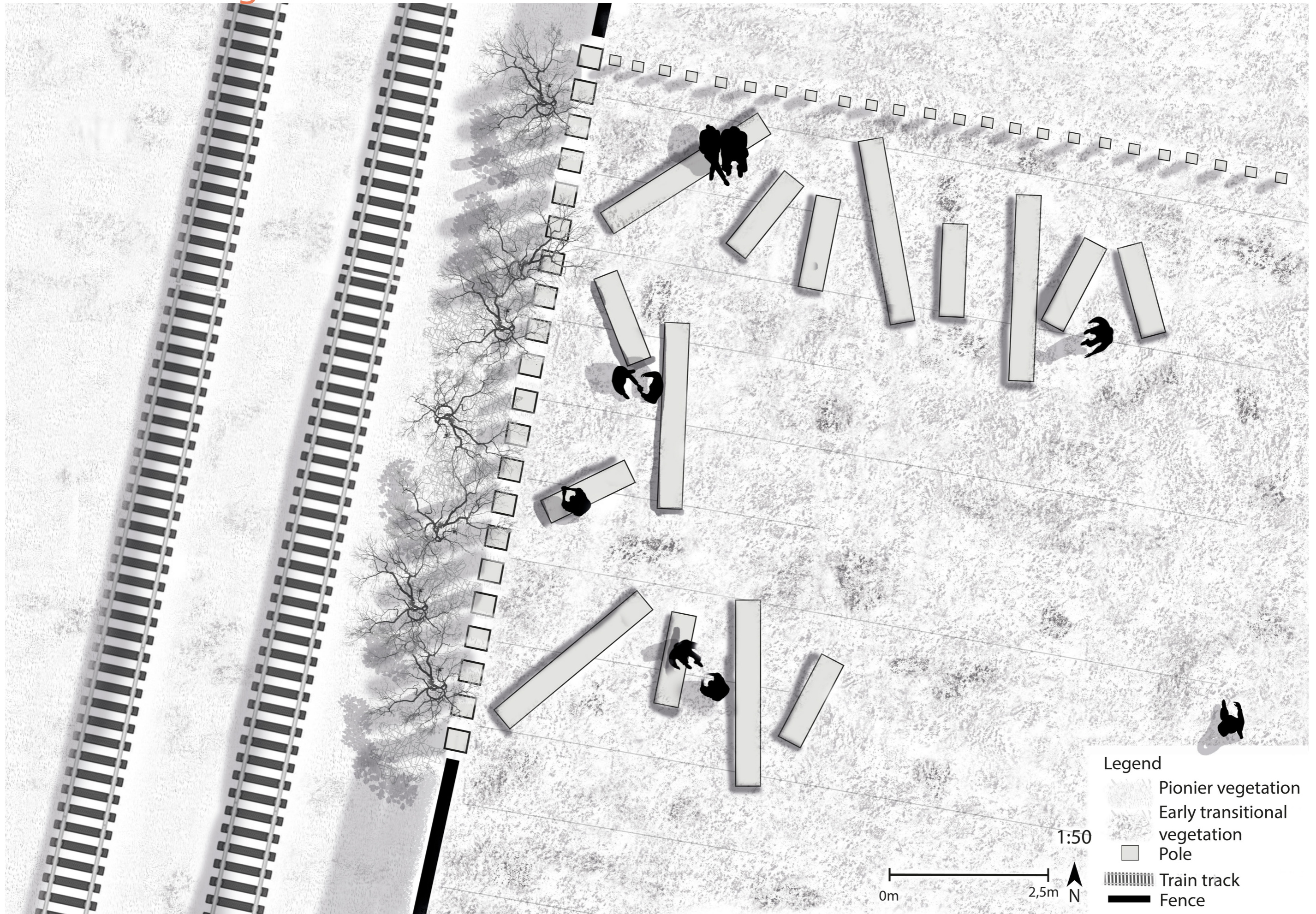
# Entrance



# Entrance



# Social Gathering Place



# Social Gathering Place



# Social Gathering Place



# Withdrawing Place



# Withdrawing Place



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# Layers of the Design

## Perceived Biodiversity

Enhancing habitat diversity

## Informality

Preserving and enhancing the informal character of the space

## Sensory perceptibility

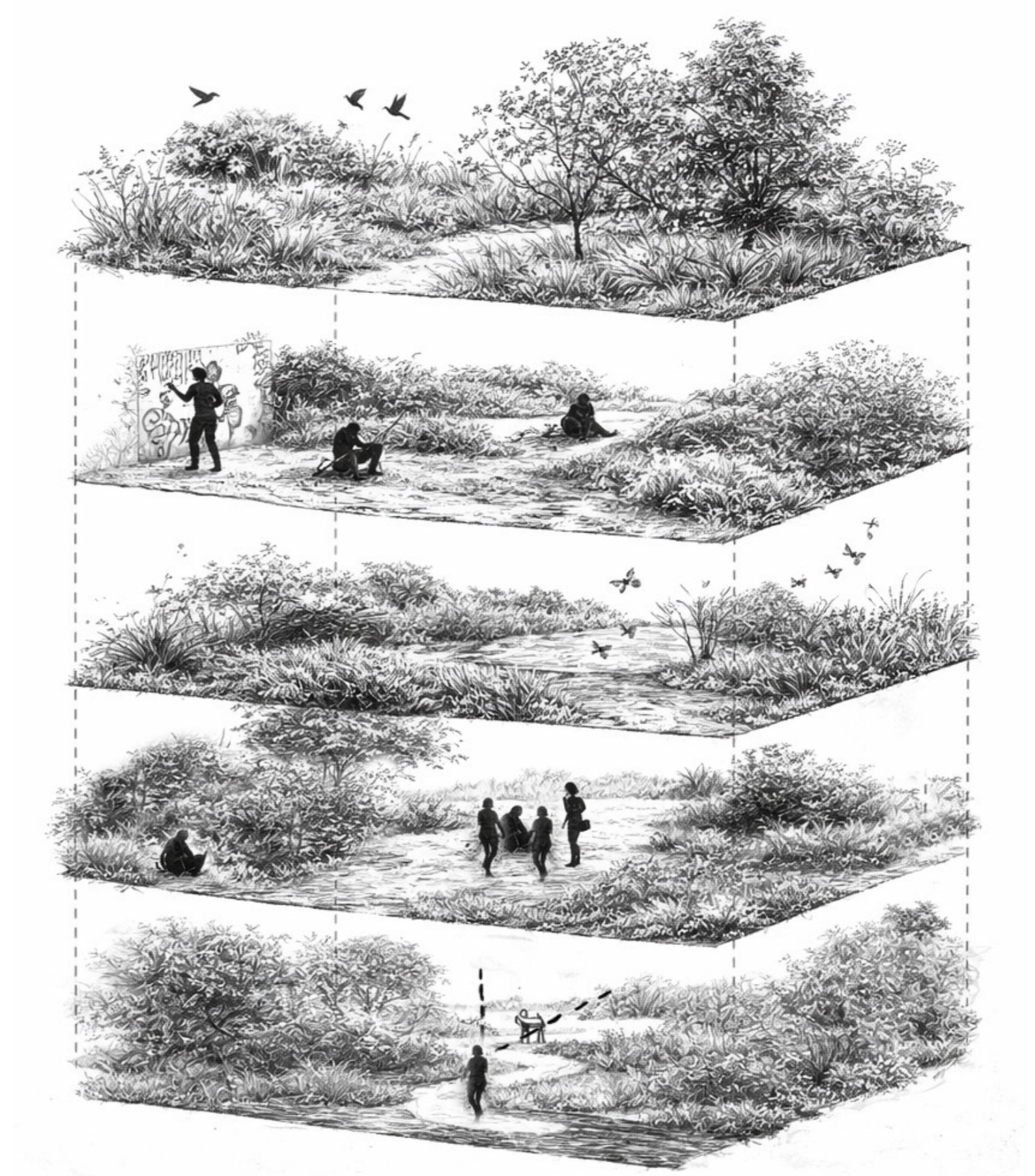
Invite to the area and make affordances clear

## Behavioral differentiation

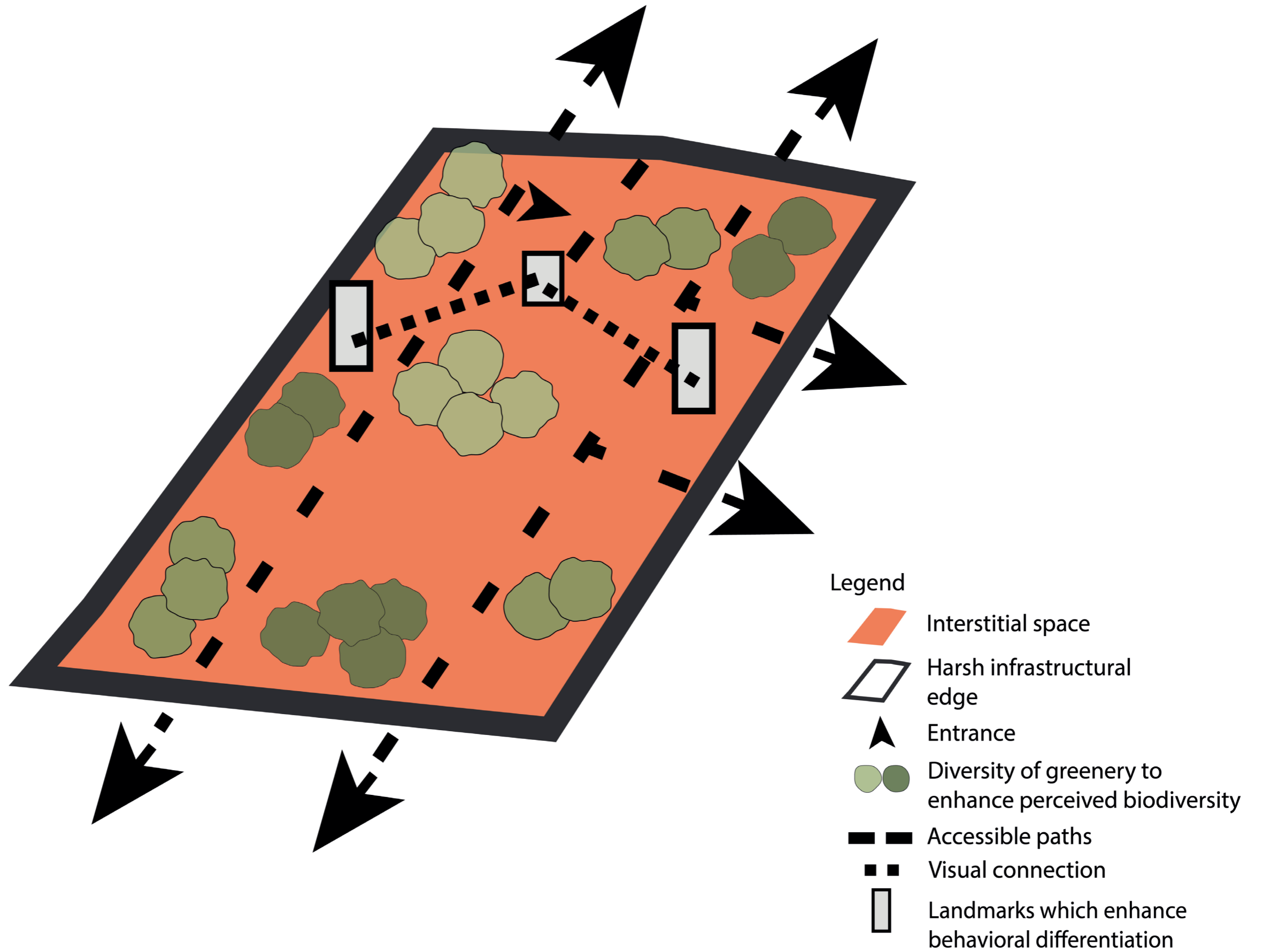
Spatial differentiation

## Visual connectivity

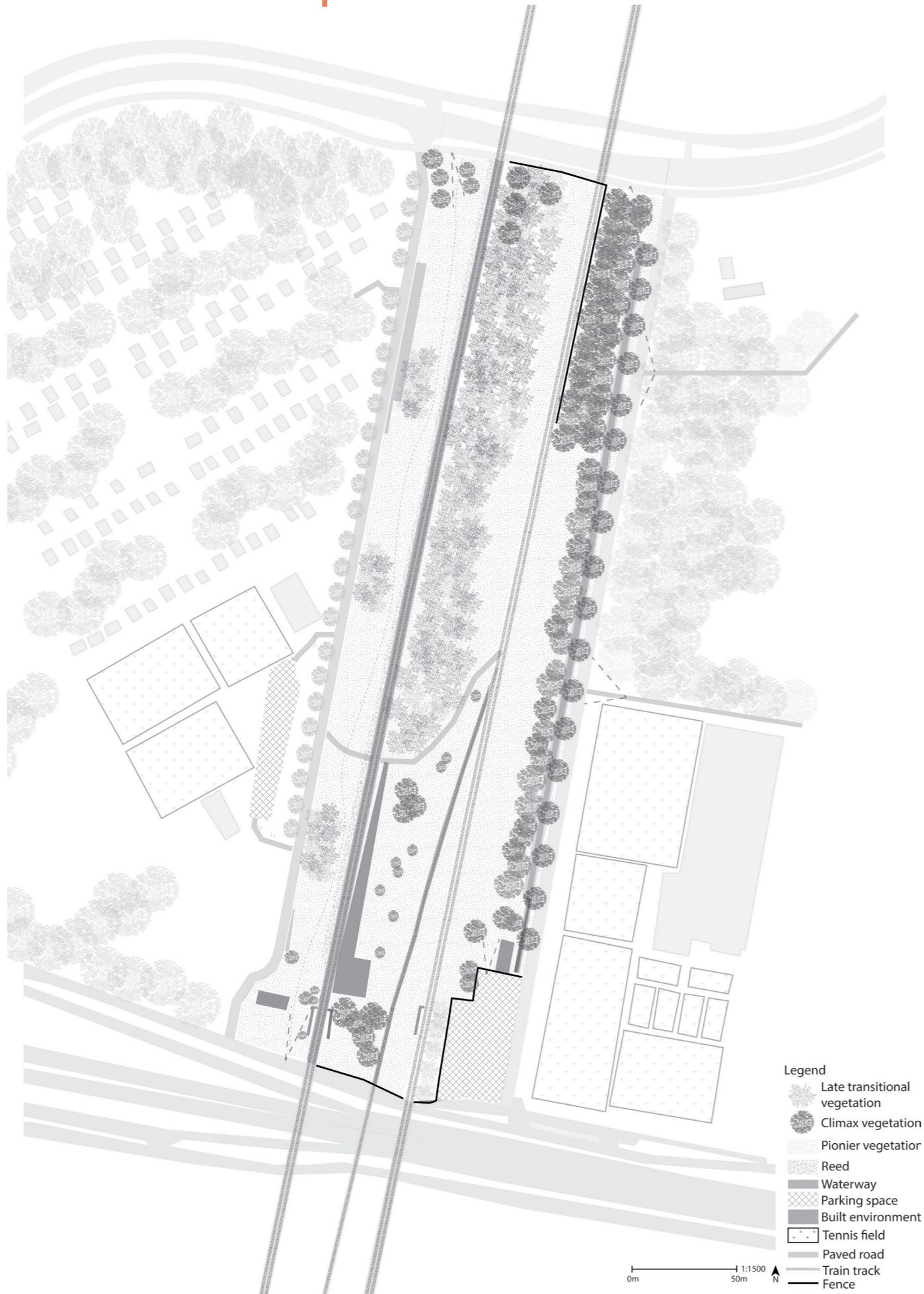
Creating sightlines



# Concept



# Interstitial Spaces Now vs. Restorative



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# Sequence - Man with Dog











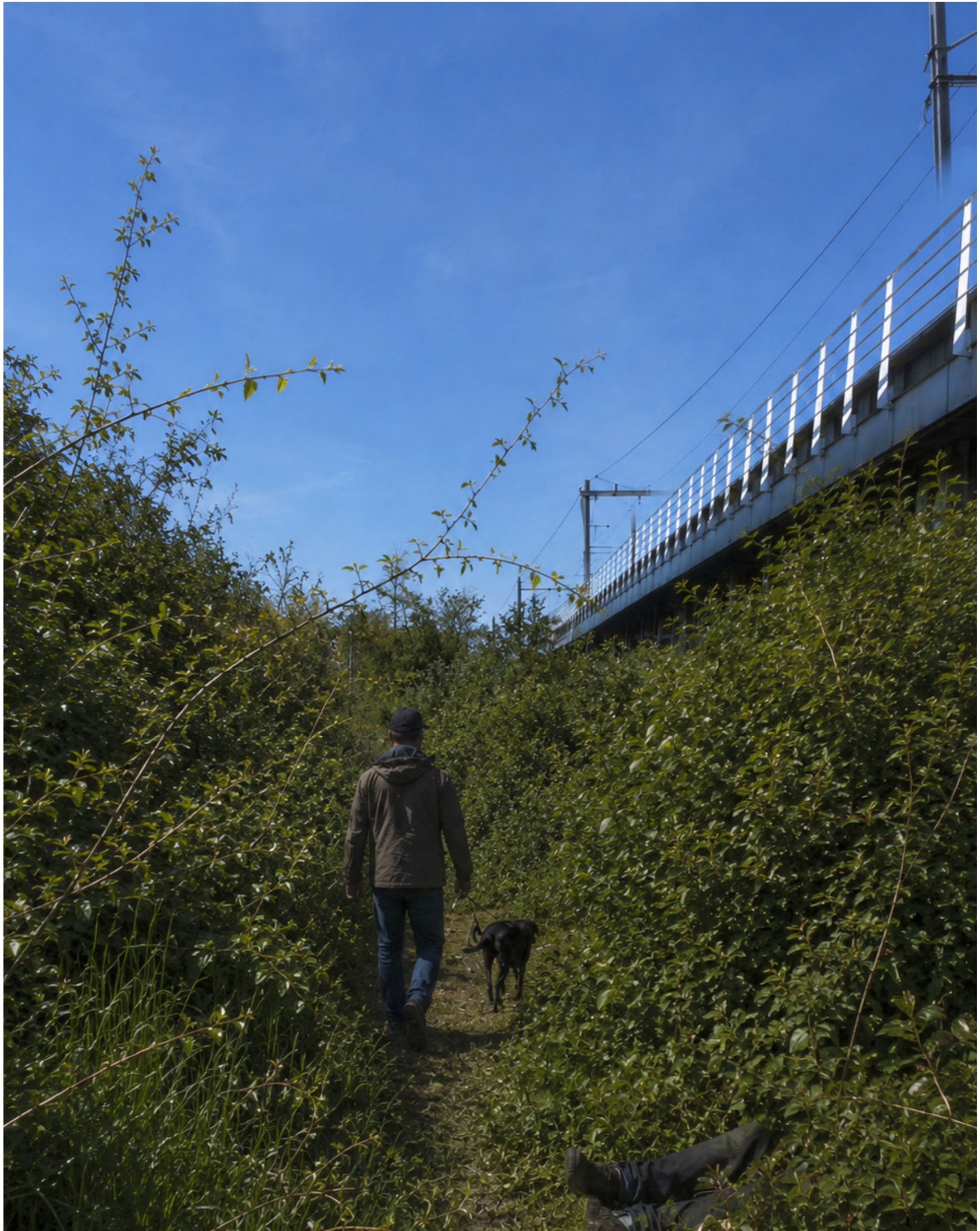






































# Sequence - Two Girls









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## Scenario - Graffiti



# Scenario - Allotment Garden



## Scenario - Unhoused spot



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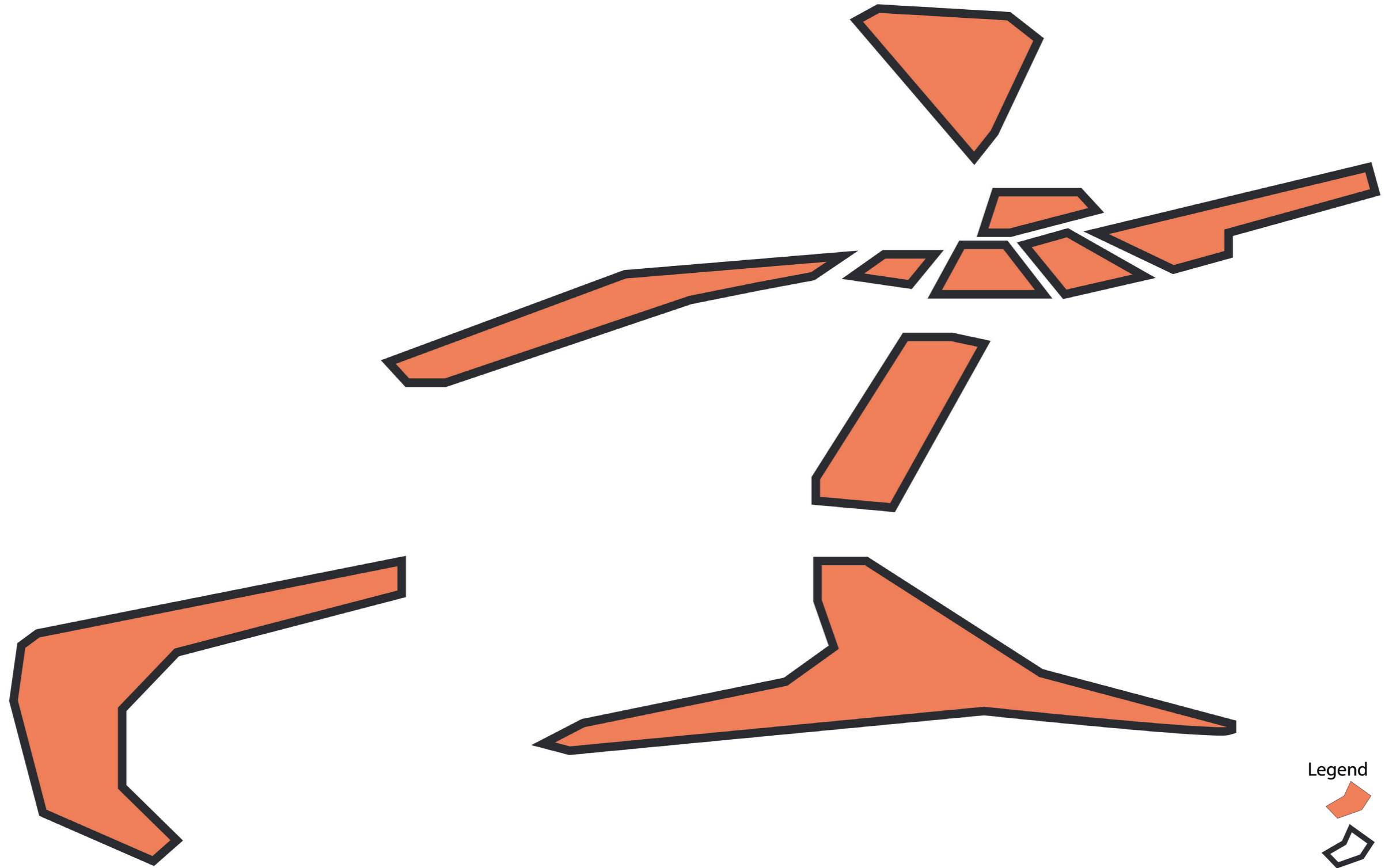
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Different Scenario's

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# Fragmented



- Legend
- Interstitial space
  - Harsh infrastructural edge

# Case Study - Fragmented Network

## Material - Landschaftspark Duisburg



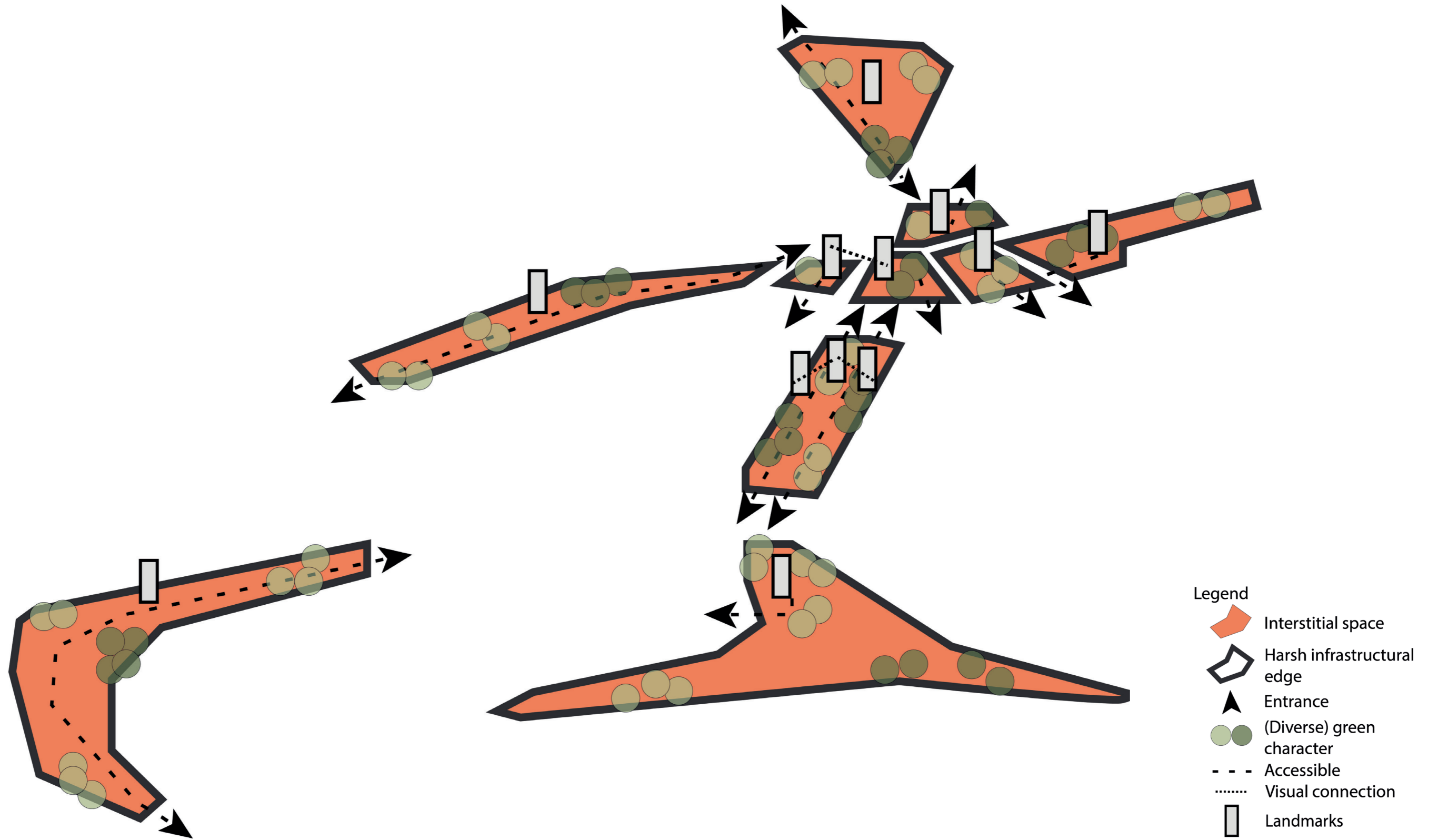
*(Groenblauwe Netwerken, n.d.)*

## Sightlines - Stowe Landscape Garden



*(Capability Brown, n.d.)*

# Concept Big Scale - Stadspark West



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# Rotterdam Map Now



# New View on Rotterdam - Restorative Landscape

