Landscape Networks: Integrating Fragmented Urban Landscapes.
A proposal for Socio-Territorial Integration.

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Rotterdam and Dordrecht as main developments in the area. Rotterdam has developed as the main port city stimulating the development of the first suburbs such as Schiedam and Vlaardingen. Fast urban growth around and in Rotterdam. The port of Dordrecht is taken by the direction of the port of Rotterdam. Booming period. Dordrecht and Rotterdam established as main cities. Within 50 years, the area is totally urbanized mostly by suburbs.

Problem Statement

Historical Analysis

I. Site Location
II. Regional Analysis
III. Methodology
IV. The Dike
V. Local Analysis
VI. Design
MOSAIC LANDSCAPE = landscape composed of patches, corridors and a matrix which gives a Fragmented reading of the landscape. However, according to Cawood and Somers, there is a close relationship between the physical landscape structure and the social structure (2009). A fragmented landscape experiences a fragmented society?
I. Site Location

II. Regional Analysis

III. Methodology

IV. The Dike

V. Local Analysis

VI. Design

Population

Lost Connection to the River

Un-used Public Parks

Empty Playgrounds

Why?

25%
Potentiality

Environmental Satisfaction

I. Site Location
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1. "I do not use the parks very often. Sometimes I go to De Waal, but most of the parks you can not do BBQ."
2. "Most of the parks are far and I have to take the car. I use the park near the river once or twice a year."
3. "I prefer well-developed parks such as de Vondelpark, that is why I do not go to the river park. But I really like de Waalpark, I go there often."
4. "I do not use the parks, they are too far for me. I came here to do some shopping."
5. "I do not use any of the parks because there is nothing to do here in this city. Usually I go to Rotterdam."
6. "I prefer using the closest playground. It is close to my house and it has slides for children."
7. "I just use the Hugo de Vries eventually. The other parks are too far."
8. "If I take the car, I go to the river area."
9. "I do not use the public parks near the river. I walk my dog around the area."
10. "I use all the parks occasionally but the Hugo de Vries more often. I never go to the river area; it could be dangerous for my dog."
11. "My kids usually play outside the house, I like it that way so I can watch them and be close to my house. Sometimes we go to other playgrounds in the surrounding area."

- A: Lack of Place Attachment
- B: Lack of Recreation
- C: Un-used Public Spaces

- A: Public Spaces
- B: Recreation
- C: Place Attachment

Results in

- A: Lack of Place Attachment
- B: Lack of Recreation
- C: Un-used Public Spaces

Results in

- A: Public Spaces
- B: Recreation
- C: Place Attachment
Research Question

How to create a continue recreational network in a mosaic landscape able of connecting the different urban areas and public spaces creating place attachment and social identity in Suburbs?

Hypothesis:

1. Using the spatial elements of the **matrix** as landscape integrators.
2. Using the **specificity** of the landscape as generator of place attachment.
Site & Problem Statement

Regional Analysis

Methodology

The Dike

Local Analysis

Design
Methodology

Regional Analysis

The Dike

Local Analysis

Design

Site & Problem Statement

1.

2.

3.

4.

5.

6.
I. Site Location

II. Regional Analysis

III. Methodology
- Matrix Model
- Area or Patch Model
- Corridor Model

IV. The Dike

V. Local Analysis

VI. Design

The Resilient River, Minneapolis, U.S.A
- Design Proposal from Turenscape

Central Park, New York, USA
- Area or Patch Model

The New York Highline, New York, USA
- Corridor Model
Framework

>> Corridor Approach
>> Dike Corridor

I. Site Location
II. Regional Analysis
III. Methodology
IV. The Dike
V. Local Analysis
VI. Design
III. Methodology

Expectations of the Regional Scale

1. Green Patches
   Integration of the different urban areas and public open green spaces such as parks due to their recreational potential.

2. Network
   Creation of a network that links the different urban and green patches in order to have a fluid structure that brings people together in recreational purposes while showing the different stages of the landscape.

3. Place Attachment
   Using recreation in open public areas and through the dike as mean to create sense of place, attachment and identity.
IV. The Dike as corridor

Strategy

- The dike as connector of green and recreational spaces.
- The Utilitarian Dike
- The Recreational Dike
- Boat Network
IV. The Dike as corridor

The Utilitarian Dike
Objective: Highlighting the specificity of each landscape creating sense of Place

- Affect: Pride
- Cognition: Memory
- Historical Relevance
- Physical Place

Dike Typologies

- River Dikes
- Polder Dikes
- City Dikes

Cities Abstraction
Green Areas
River Dikes
Polder Dikes
City Dikes
Current Situation

Operation #1

High Speed Dike

Separating speed flows for safety and to emphasize the perception of the landscape in one side of the dike.

Operation #2

Permanence spaces for contemplation to exalt the beauty of the landscape.

Operation #3 Recreation & Program

In case of recreation on the floodplains, the dike should work as vertical connector to the land and its biodiversity. Recreation can be used to protect these valuable river spaces and their biodiversity.
Current Situation

Operation #1
High Speed Dike
Separating speed flows for safety and perception of both sides of the landscape without interrupting cars flow.

Operation #2
In case of agriculture in the area, transform the ring canals into bio-filters with reed in order to purify the water before being pumped into the river opening up new possibilities for biodiversity.

Operation #3 Involving the farmers community
In special occasions, an exposition can take place adding a temporary structure so farmers can sale their products.
Polder Dike Impression

Highlighting Landmarks for collective memory and identity.

Ecological Measures and Opportunities.

Contemplation and Recreational structures.

Polder Landscape

I. Site Location  II. Regional Analysis  III. Methodology  IV. The Dike  V. Local Analysis  VI. Design
Current Situation

Operation #1

Low Speed Dike

Softening the dike slope can allow more visual connection to both sides and therefore allow a better interaction.

Operation #2

For pedestrians, an intermediate path can be created for gathering spaces and flow continuity. The dike as infrastructure and transportation not only for cars and bikes but also people.

Operation #3 Recreation

In specific points, the dike can also be part of recreation adding some steps on the slope in order to create permanence and transition to other recreational spaces.
Grasses, shrubs and trees can provide a new ecological input for birds and butterflies.

Steps on the dike slope can represent a playful invitation to green spaces for recreation to which the dike has contact to.

A softer slope dike can allow a better relation between two neighborhoods allowing spaces for gathering, walking and other activities.
Flexible System

In case of both dike systems in the same situation, the operations can be combined. The idea was to create a flexible system that could respond to different situations.

Guidelines

**Priority and budget:** Any of the operations will be taken as a good progress. They do not have to be implemented in order and they will depend on the budget.

**Flexibility:** Due to the amount of different dikes and situation in The Netherlands, sometimes one dike responds to two different situations. Therefore, the system can be combined and so the operations.
Remarks

Trees can not be planted on dike slopes because they can affect the dike safety. Therefore, they should be planted on the ground (not on the dike) but recreating the dike shape filling it with clay or sand as shown in the example. However, this technique of using trees on dikes can also introduce rhythm, framings, program, entrances to a recreational area and continuity. Other opportunities as seasonal changes, blossoms, etc., can also be taken into account in order to show the beauty of the landscape and its elements.

Example

Rhythm and Seasonal Trees:
Planted at the same distance to create rhythm. It can represent program on the dike or in case of a seasonal tree, an entrance to a natural area with recreation or a seasonal change such flood in Spring.

Enclosure Trees:
After creating enclosure with several trees, the view will suddenly opens up. This strategy can be used to frame views.

Perspective Trees:
Will indicate continuity and high speed.
Bike Routes

Most Used Bike Routes

Entrances to the dike

River Dikes

Cities Abstraction

Green Areas

Polder-Dikes

City Dikes
Site Selection Criteria:

a. Contemplate green spaces with recreational potential.
b. Lack of Recreation and Program.
c. Dike Potential.
Building Typologies

Typology 1: Linear buildings with gardens in the inner space

Typology 2: Building complex forming a central patio

Typology 3: Houses with garden in between

Typology 4: Linear buildings with central public space

Typology 5: Buildings with central patio

Typology 6: Isolated Units

All give their back to the public space

The central patio has replaced the public space in the city
Green Areas and Public Parks

Green Areas

Cities Abstraction

River Dikes

Polder Dikes

City Dikes
I. Site Location

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Spatial Experience

Route A

Route B

Route C
Social Context

Demography by Ages

Entertaining
People’s Movement during the Weekend

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Conclusions

Under Use Public Parks

Parks are being used for basically the Northern part of Nederhoven district.

Lost Connection to the River

The use of the park along the river is very rare. Sometimes once or twice a year.

Interest for Natural walkable Spaces

Some people in Zwijndrecht shown an interest for the Develbos park because of its natural value and walking paths.

Search of Activities for young People

Teenagers and young people move to other cities searching for more social activities.
Site & Problem Statement

Regional Analysis

Methodology

The Dike

Local Analysis

Design
Zwijndrecht as Starting Point

I. Site Location
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- District Identity
- Regional Identity
- City Identity

- Regional Community Involved
- City Community Involved
- Neighborhood Community Involved
General Plan and Relation to the Surroundings

Pedestrian Bridge

Site Location

II. Regional Analysis

III. Methodology

IV. The Dike

V. Local Analysis

VI. Design
In Place Interventions and Design Decisions

1. Site Location
2. Regional Analysis
3. Methodology
4. The Dike
5. Local Analysis
6. Design
**Design Intentions**

- Wooden steps make an invitation to join the playground and visually recreate the streets direction.
- Street as attractor.
- Trees were used to form a contained space.
- Water as landscape activator.
Materialization

Section a-a´

I. Site Location
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VI. Design

Water Gushes
Wooden Path
Carex Pendula
Stones
Viewpoint

Contextual Analysis

I. Site Location
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IV. The Dike
V. Local Analysis
VI. Design

Park connects to other District through a pedestrian bridge

Extension of the Park

Parking

I. Site Location
Design Intentions

- Viewpoint as frame of the River Landscape.
- The dike as vertical connector.
- Extension of the green linear space.
- Separated from the dike allows the creation of an inner Patio with the surrounding grasses.
- Wooden platform for Summer festivals.
- Boat Connection.
Design Intentions

- Direct connection from the park to the viewpoint.
- The height of the viewpoint is the same as the dike in order to keep the openness from the dike and the park.
- The terrace can allow different activities such as: Yoga Classes, music performances, resting place and so on.
Materialization

Section b-b´
I. Site Location
Design Intentions

- The dike as scenario for the bazaar and restaurant.
- Potatoes and Vegetables crops provide the food for the bazaar.
- Small Garden.
Design Intentions

- Pergola with creeper plants offering a shaded space and making the intervention recognizable.
Materialization

Section c-c´
Future Steps
Street Interventions

Nederhoven District
Kort Ambacht
Noord Center

Streets proposed for Intervention
Chosen Example
Bridges on canals can help integrating neighborhoods.

Sidewalks should be the priority in streets corridors provided with urban equipment and resting spaces.

Some small squares can take place in long ways or as meeting spaces for communities.
Current Situation

Operation #1

Sidewalks

Streets must have pedestrian paths in order to allow continuity. Also, allowing pedestrians to walk will increase the use of the public spaces and their activation.

Operation #2

Bridging

If necessary and in case of an important street, a bridge can be built to increase interaction and integration of both sides.

Operation #3

Squares

Sidewalks can also respond to meeting spaces such as squares in case of a long and important connecting street.
Room for the River Programme.

Objectives:
- Increasing the physical diversity between the river branches.
- Maintain and strengthen the openness of the river with its waterfronts.
- Conserve and develop the scenic, ecological, geological, cultural and historic values.
- Promote use of the main navigable waterways by professional and recreational craft.
Recreational Purposes: Wetland Park

A Reed Border helps to slow down the water causing less erosion.

In case of developing recreation, paths should be lifted to preserve the biodiversity and soil.

Lowering the floodplains give more space to the river and make sure biodiversity is in contact with water.
Interventions on the Floodplains

Current Situation

Operation #1
Creating a small mound with reed in order to slow down the water.

Operation #2
Leveling and lowering the floodplains so its biodiversity can be in touch with water constantly. Also provides more room for the river.

Operation #3
Develop recreation program will promote the protection and attachment to the area. In case of building paths, they should be lifted so they can not harm or altered the natural vegetation.
Ecological Potential

Floodplain Forest & Wetlands
Meadow
Polder

Tree Species
- Fraxinus Excelsior
- Alnus Glutinosa
- Populus x Canadensis
- Acer Saccharium

Grasses
- Spartina Alterniflora
- Phragmites
- Salix Viminalis
- Molina Caerulea

Animals
- Cod
- Purple Heron
- Tureluur
- Wulp
Spring Time

Winter Time
Thank You