BROWN LINE REVOLUTION

REGENERATING ABANDONED TRANSPORTATION INFRASTRUCTURES IN THE RUHR AREA

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Studio: Flowscapes: infrastructure as landscape, landscape as infrastructure
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WHAT IS BROWN LINE?

ABANDONED TRAIN LINES

ABANDONED CANALS
RUHR AREA
ABANDONED TRANSPORTATION INFRASTRUCTURE IN RUHR AREA

Abandoned or limited used train roads

Sewage treatment system
PROBLEM/POSSIBILITY
From urban public open space network aspect

WASTE OF LAND

BARRIER IN THE CITY
PROBLEM/POSSIBILITY
From ecological aspect

GREEN CORRIDOR

HABBITAT
PROBLEM/POSSIBILITY
From social aspect

HISTORY
How to regenerate abandoned transportation infrastructures to improve the public open space network and urban ecological system in the Ruhr area?
CASE STUDY: ESSEN
1. The landscape infrastructure is part of a dynamic, net-worked system.
2. Multi-functionality
3. The development is a process.
RESEARCH AND DESIGN METHOD

Research Question
Site Analysis (Essen)
Define the design task
Brown Line Park Association
Site Analysis (site of park)
Plan of the park
Concept
Design of the park
Stage 1
Start
Stage 2
Park
Stage 3
Manage
Brown Line Park Association

Development management
(experimental development)
Experiments

Reflection
Site Analysis (Ruhr area)
Park system
Brown lines
General

Landscape infrastructure principles

organise
lead
lead
guide
lead
supervise
and manage
lead

Local Project Design
DESIGN PROCESS
CHAPTER 1: DEFINE DESIGN TASK
The landscape infrastructure is part of a dynamic, net-worked system.
Essen Public Open Space Network
Brown Line in Essen public open space network
PROPOSE 1:

Essen Center-Emscher River
LINEAR PARK
New Open space in city centrality area
Engine of urban regeneration
Start of new urban quarter
Essen Urban Ecological System
PROPOSE 2:
Regeneration of the canals
Naturalise the waterway—Green Corridor
Controlled floodplain—Flood prevention
Habitat
Ecological development creates condition of urban public open space developing project.
urban public open space developing project is an example project of urban ecological developing
DESIGN TASK

WATER WAY REGENERATION CENTERED
LINEAR PARK
DESIGN PRINCIPLES

ABANDONED CANAL

TRANSFORMATION

ABANDONED TRAIN LINE

PRESERVATION
DESIGN PRINCIPLES

TRANSFORMATION

ABANDONED CANAL
New Water way
CANALS

Water way Layer

Floodplain Layer

Flood prevent Layer

Identity of park
Identity of local project.
CHAPTER 2: PLAN OF THE PARK

Multi-functionality
PARK AS FLOODPLAIN
PARK AS FLOODPLAIN
PARK AS FLOODPLAIN
PARK AS FLOODPLAIN

SCOPE
PARK AS URBAN DEVELOPMENT ENGINE

TOD
transit oriented development
PARK AS URBAN DEVELOPMENT ENGINE

NEW TRAM
PARK AS URBAN DEVELOPMENT ENGINE

NEW TRAM
PARK AS PARK
PARK AS PARK
PARK AS PARK

Sections
1. Entrance Park
2. Residential Park
3. Community center
4. Residential Park
5. Nature Park
6. Sport & performance Park
7. Wetland park
8. Emscher water band park (new working area, new energy factory)
PARK AS PARK
PARK AS PARK

NODE OF MULTI-MOBILITY

CONFLUENT AREA (FLOODPLAIN)
PARK AS PARK

CENTER SECTIONS
CHAPTER 3: DESIGN OF THE PARK
URBAN ROUTE
Urban layer
(Flood prevented)

CULTURE ROUTE
Floodplain layer
(Flood in extreme rainy day)

NATURE ROUTE
water way layer
(Regular flood in rainy day)
NATURE ROUTE

water way layer
(Regular flood in rainy day)
STRENGTH THE INTERACTION BETWEEN NATURE AND PEOPLE
DISCONNECTION WOOD PATH ALONG THE WATER
REMIND OF THE CANALS
CULTURE ROUTE
Floodplain layer
(Flood in extreme rainy day)
MAIN ROUTE IN THE PARK, A SPACE FOR SOCIAL INTERACTION
You see people playing, you hear people talking, laughing, singing, shouting
You participate into the activities
IN DESIGN
(REMIND OF THE TRAIN TRACKS)
NEW CULTURE LANDSCAPE

Industry landscape

Agriculture Landscape
FUNCTION ORIENTED
RECTANGLE ARRAY

Factories

Agriculture Fields
FUNCTION ORIENTED
RECTANGLE ARRAY

Sport yards

Allotment Garden
FUNCTION ORIENTED
RECTANGULAR ARRAY

Public activities spaces
URBAN ROUTE
Urban layer
(Flood prevented)
"BROWN LINE
SPECIAL LINE"
A TOUR SHUTTLE BETWEEN CITY AND PARK
DESIGN STRATEGY (layer)

Essen

Paris

Rome

Rotterdam
DESIGN STRATEGY (layer)
3.1 LOCAL PROJECT
COMMUNITY CENTER SECTION
(Abandoned Train Line)
COMMUNITY CENTER SECTION
(Abandoned Canal)
COMMUNITY CENTER SECTION
(Propose1: Park Association Office)
Floodprevent Layer (Urban Route)

Floodplain Layer (Culture Route)

Waterway Layer (Nature Route)
Urban Layer
(Urban Route)
Floodplain Layer
(Culture Route)
Fluctuation of the "Bricks"
Waterway Layer
(Nature Route)
3.2 PARK
The composition of three pathes

The proportion of three layers

The different expression of design strategy
THREE PATHES

Tram Line (URBAN ROUTE)
Main road of park (CULTURE ROUTE)
Side Walk (NATURE ROUTE)
NATURE ROUTE
PARALLEL CULTURE ROUTE

Hey, son!

Hows there? Friend

Good Afternoon!
NATURE ROUTE
PARALLEL

CULTURE ROUTE
PARALLEL URBAN ROUTE
INTERSECT
THREE PATHES

water body (NATURE LAYER)
water way layer (NATURE LAYER)
floodplain layer (CULTURE ROUTE)
urban layer (URBAN ROUTE)
Public Performance Section

Entrance Park Section

Nature Park Section

Community Park Section
DEVELOPMENT PLAN

MULTI-STAGE
MULTI-ACTORS
2014 2015 2018 2023 2025 20??

Abandoned Train Track

Abandoned Canal

DESIGNER
Foundation of BROWN LINE PARK ASSOCIATION
| Public Sectors                          | Finances Department |
|                                       | Environment and construction Department |
|                                       | (Green and Gruga Essen, Water, Real Estate Industry, Department of Roads and Transport) |
|                                       | Plan Department |
|                                       | (Office for Urban Regeneration and Soil Management, Office for surveying, and land, Department of City Planning and Building Regulations) |
|                                       | Culture, Integration and Sport Department |
|                                       | (Community College, Folkwang Music School, Department of Intercultural orientation / municipal integration center food, Sports and Bäderbetriebe Essen, Cultural Office) |
|                                       | Youth, Education and Social Department |
|                                       | (Youth Office, Job Centre Essen, Department of School ) |
| Civil Sectors                         | Community Residential Association |
|                                       | Environmental protection organization |
|                                       | AGFS(the Association for Pedestrian and Bicycle-friendly Cities, Townships and Districts in North Rhine Westphalia) |
|                                       | Turkish Immigration Association |
|                                       | The Essen Cultural Advisory Council |
|                                       | Turkish consulate general |
|                                       | JHA(Youth Service Committee) |
|                                       | Essen-Duisburg University |
|                                       | Metropole Ruhr (Emscher Landscape Park) |
| Private Sectors                       | RWE Groups, Krupp Foundation |
|                                       | Water Companies: WTE,SHT Group AG, SWE Stadtwerk Essen AG |
|                                       | Theater and philhamonie Essen Company |
|                                       | EVAG (Essener Verkehrs AG) |
|                                       | Energy Companies: RWE Groups, E.ON Ruhrgas, Evonik Industries, STEAG |
|                                       | Real State Companies |
|                                       | Construction Companies |
| Designer                               | Ruohao Wu |
### Public Sectors
- **Finances Department**
- **Environment and construction Department**
  (Green and Gruga Essen, Water, Real Estate Industry, Department of Roads and Transport)
- **Plan Department**
  (Office for Urban Regeneration and Soil Management, Office for surveying, and land, Department of City Planning and Building Regulations)
- **Culture, Integration and Sport Department**
  (Community College, Folkwang Music School, Department of Intercultural orientation / municipal integration center food, Sports and Bäderbetriebe Essen, Cultural Office)
- **Youth, Education and Social Department**
  (Youth Office, Job Centre Essen, Department of School)

### Civil Sectors
- **Community Residential Association**
- **Environmental protection organization**
- **AGFS (the Association for Pedestrian and Bicycle-friendly Cities, Townships and Districts in North Rhine Westphalia)**
- **Turkish Immigration Association**
- **The Essen Cultural Advisory Council**
- **Turkish consulate general**
- **JHA (Youth Service Committee)**
- **Essen-Duisburg University**
- **Metropole Ruhr (Emscher Landscape Park)**

### Private Sectors
- **RWE Groups, Krupp Foundation**
- **Water Companys: WTE, SHT Group AG, SWE Stadtwerk Essen AG**
- **Theater and philhamonie Essen Company**
- **EVAG (Essener Verkehrs AG)**
- **Energy Companies: RWE Groups, E.ON Ruhrgas, Evonik Industries, STEAG**
- **Real State Companies**
- **Construction Companies**

### Designer
- **Ruohao Wu**
Start of IMPLEMENT of Brown Line park
DESIGN AS LEARNING
PARK ASSOCIATION

BROWN LINE PARK

STEP 1

DESIGN AS LEARNING
PARK ASSOCIATION

BROWN LINE PARK

STEP 2

DESIGN AS LEARNING
BROWN LINE PARK

PARK ASSOCIATION

STEP 2

DESIGN AS LEARNING
IMPLEMENT OF STEP1,STEP2

BROWN LINE PARK

Lead

PARK
BROWN LINE PARK

IMPLEMENT OF STEP 3

NATURE
Supervise and managing
Nature Route
Maintain
change of water way
prune over grown plants

CULTURE ROUTE
Construction
1. highlight the abandoned train line
2. Activity spaces locate along it
3. bike friendly, part of green route network (5m wide)

PEOPLE
Supervising
Urban Route
Management
New Buildings
Following the topics
2014 2015 2018 2023 2025 20??

Design

STEP 2

DESIGN AS LEARNING

POSSIBLE RESULT
REFELCTION
RUHR AREA

Brown Lines
RUHR AREA

Need more Brown Line Parks

Public Open space network aspect:
Connected and integrated

Urban Ecosystem aspect:
Green corridors
IN WIDER SOCIAL CONTEXT
In general, in landscape practices, the concept of landscape infrastructure could help designers understand the structure of human living environment from an across discipline, systematic aspect. The principles from methodology study of landscape infrastructure are quite important in, especially, dealing with complex urban context.
THE END

THANK YOU!
QUESTIONS?