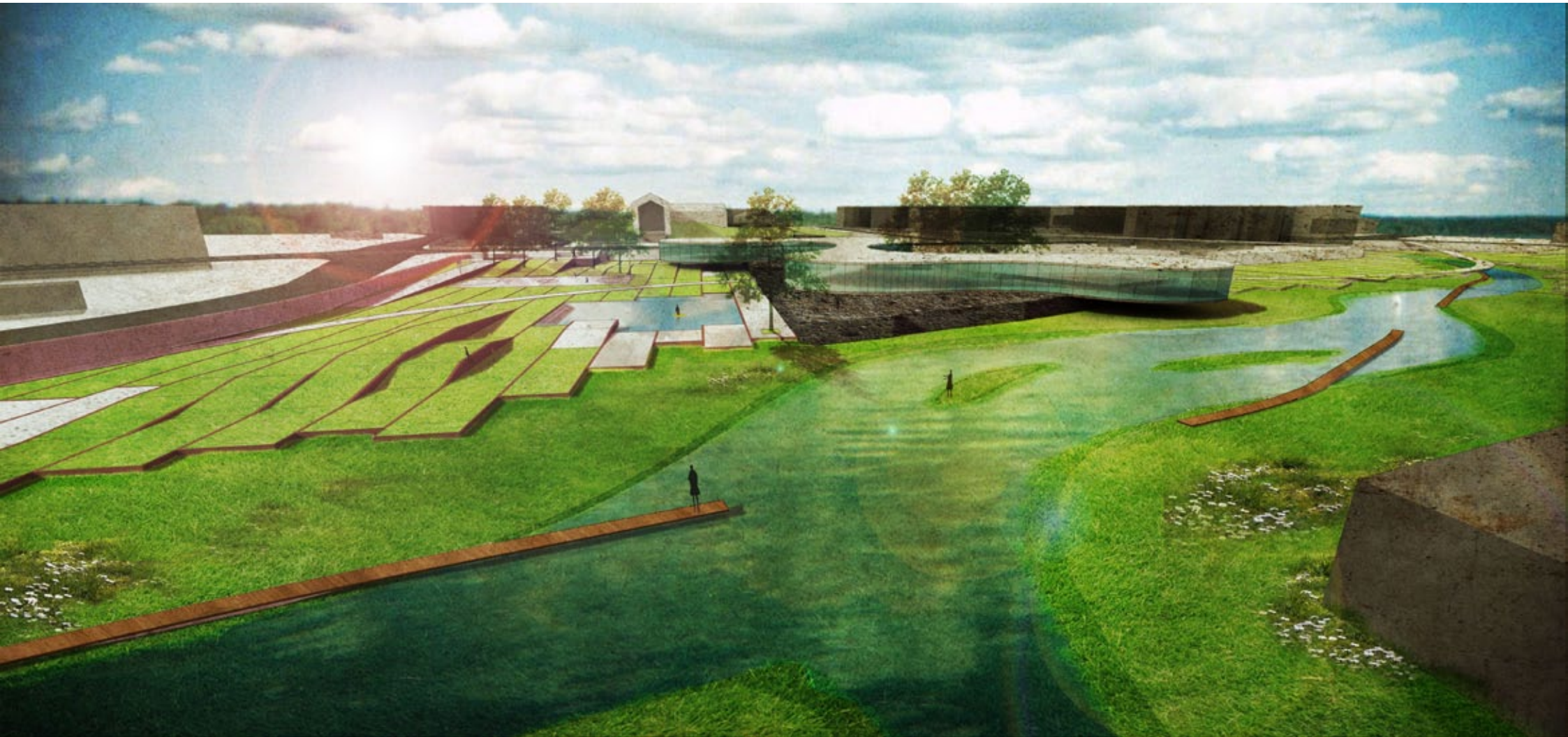


BROWN LINE REVOLUTION



REGENERATING ABANDONED TRANSPORTATION INFRASTRUCTURES IN THE RUHR AREA

Ruohao
4229185

Studio:Flowscapes: infrastructure as landscape, landscape as infrastructure
First Mentor:Rene van der Velde,
Second Mentor:Roberto Rocco
Studio Teachers:Steffen Nijhuis, Daniel Jaustin, Sjf Jansen



BROWN LINES

WHAT IS BROWN LINE?

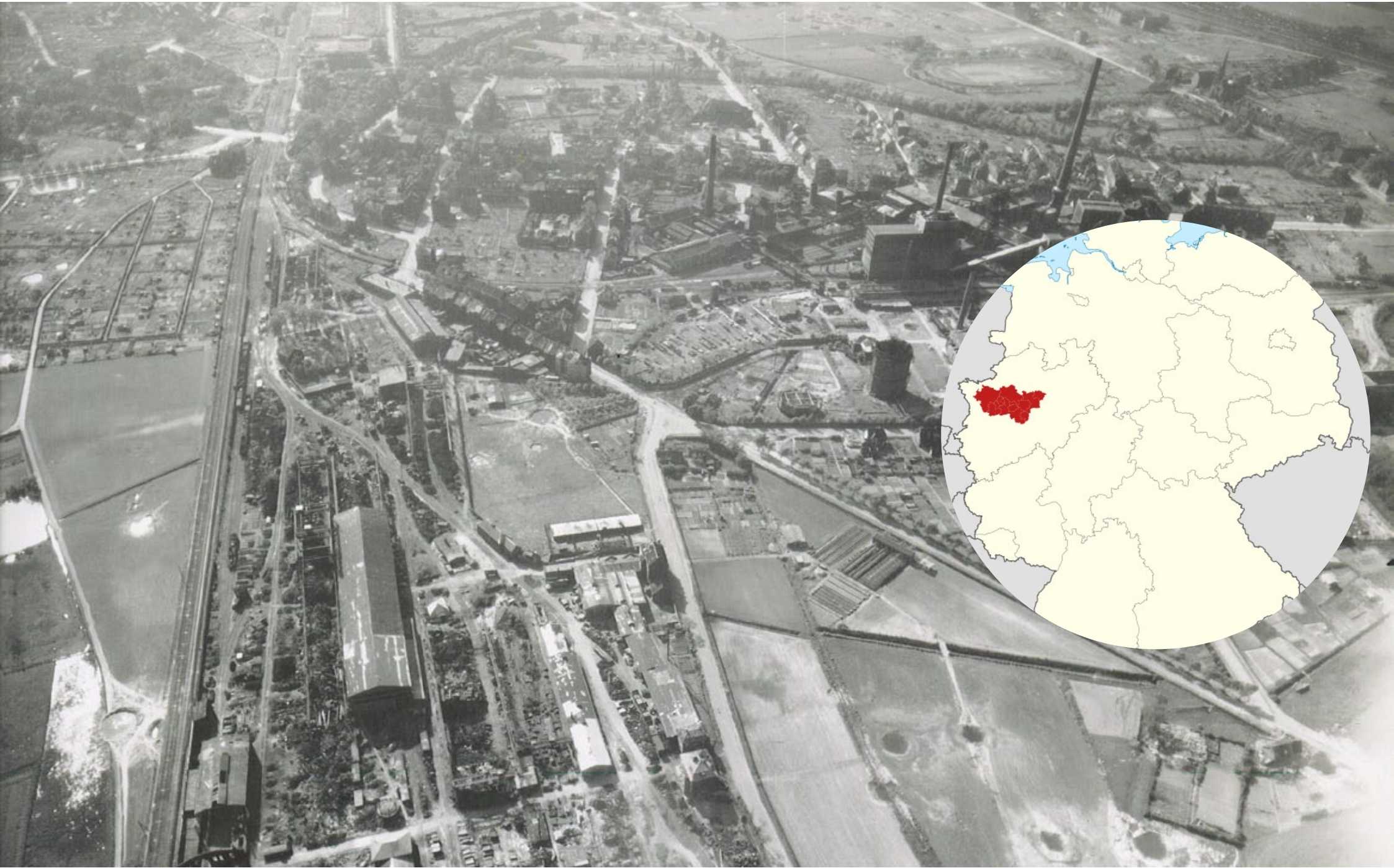


ABANDONED TRAIN LINES



ABANDONED CANALS

RUHR AREA



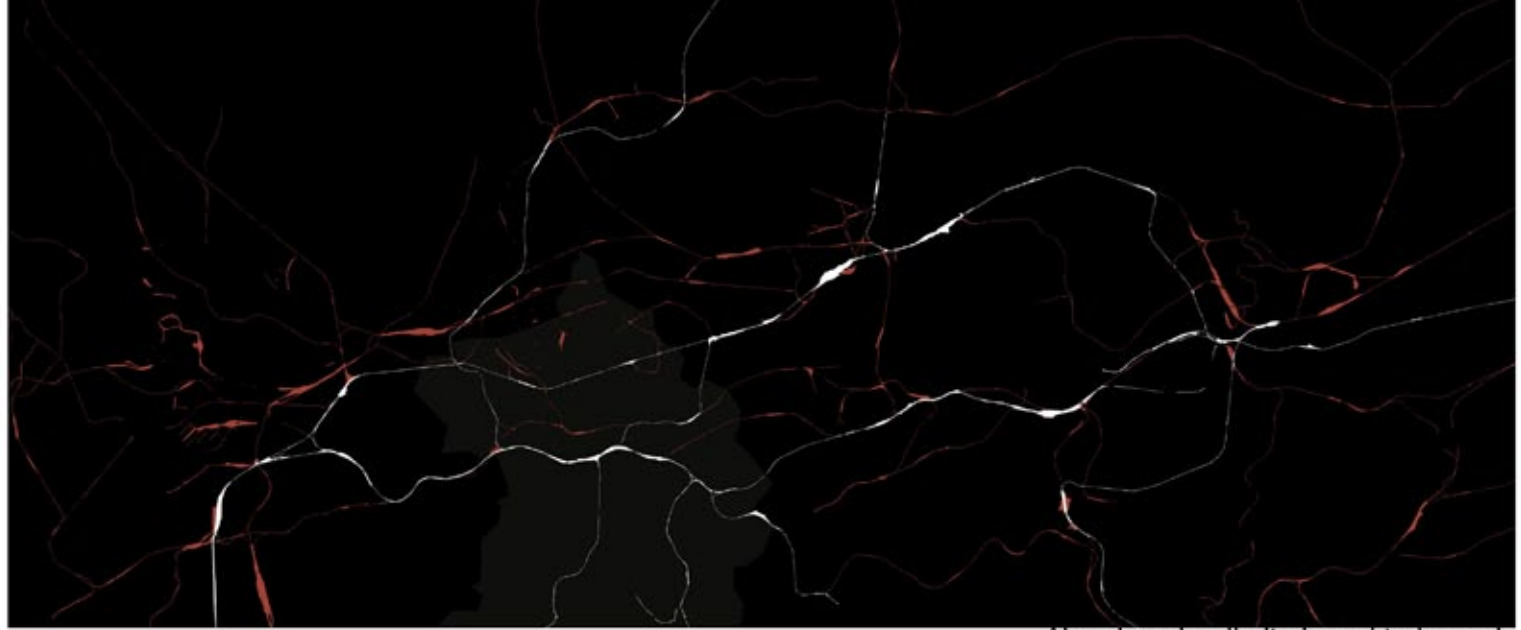


TRAIN TRACKS



CANALS

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



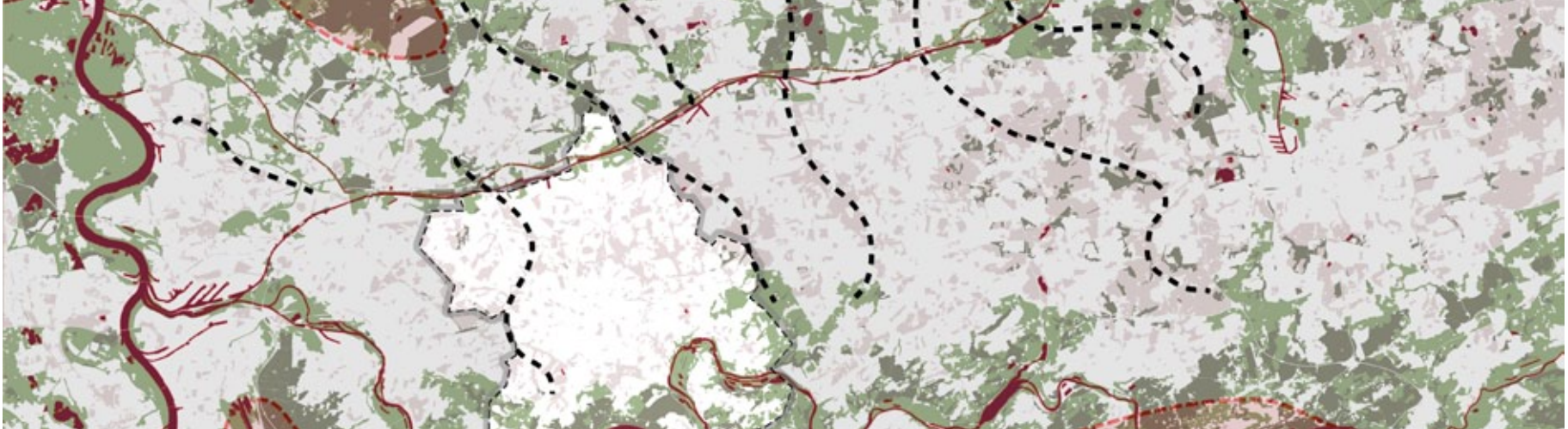
BARRIER IN THE CITY



PROBLEM/POSSIBILITY

From ecological aspect

GREEN CORRIDOR



HABBITAT




PROBLEM/POSSIBILITY

From social aspect

HISTORY

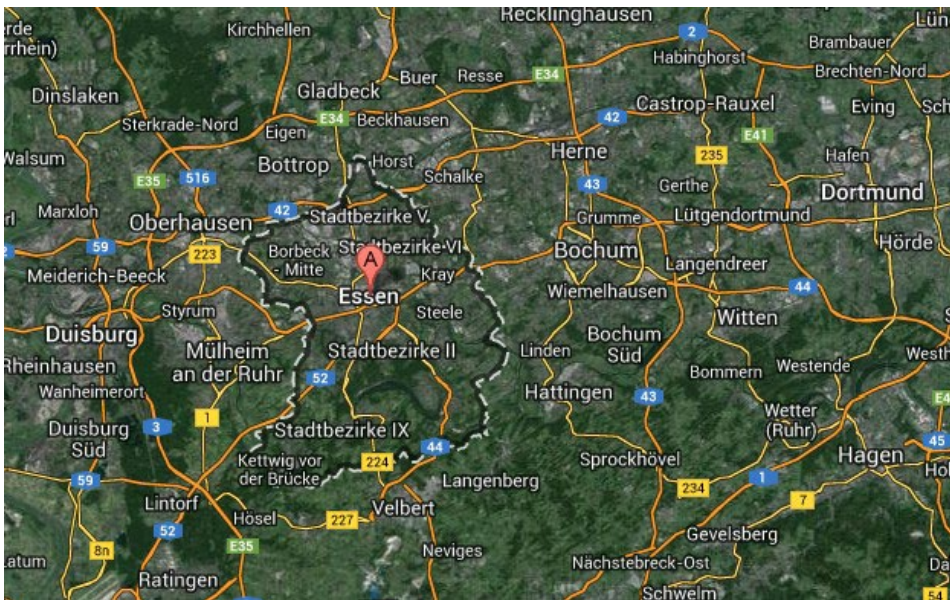


RESEARCH QUESTION:



How to regenerate abandoned transportation infrastructures to improve the public open space network and urban ecological system in the Ruhr area?

CASE STUDY : ESSEN





Essen South

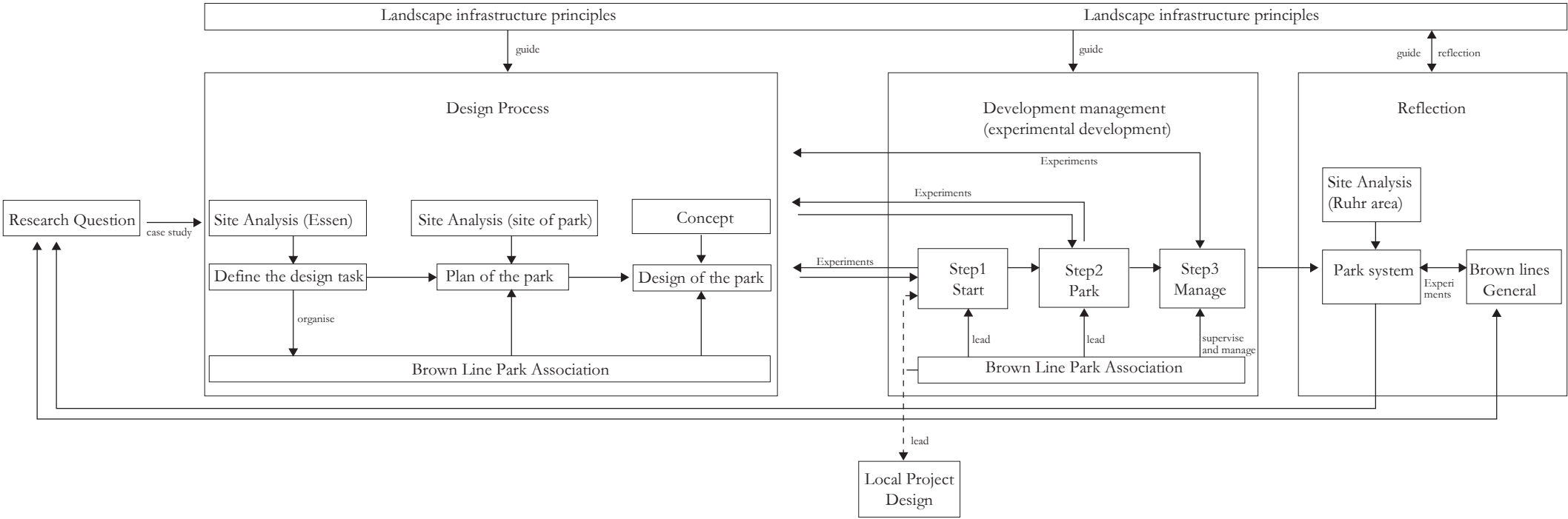


Essen North



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

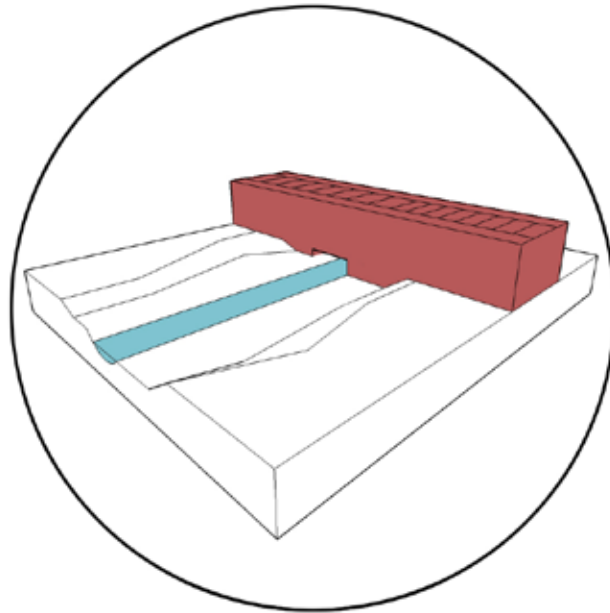


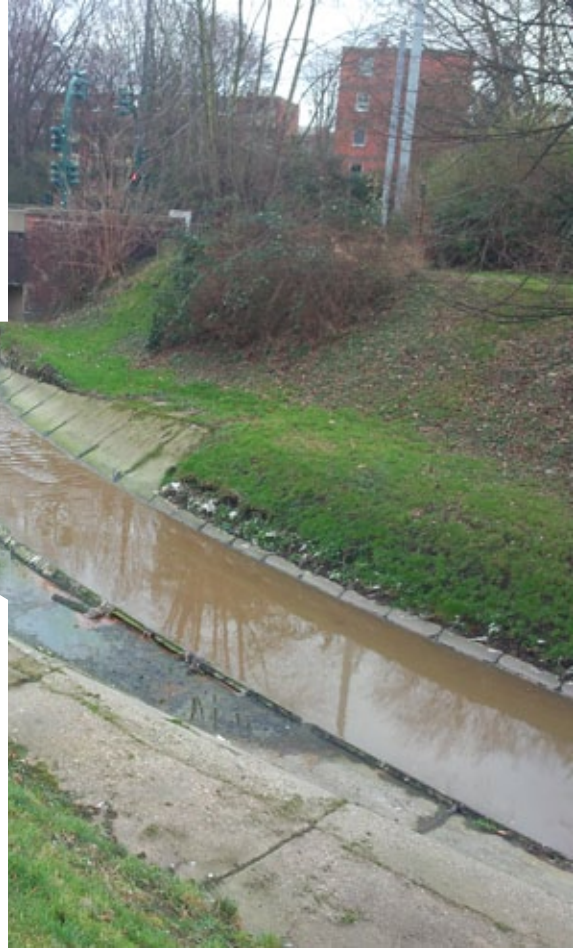
A black and white photograph capturing a collaborative design session. Two individuals are seated at a table, focused on architectural plans. The person on the right, wearing a light-colored long-sleeved shirt and a dark bracelet, is holding a pen and pointing at a drawing. The person on the left is also pointing at the same drawing. The drawings on the table include a site plan with various structures and a landscape sketch with trees. A central text box with a black border contains the words "DESIGN PROCESS" in a serif font.

DESIGN PROCESS

CHAPTER 1: DEFINE DESIGN TASK

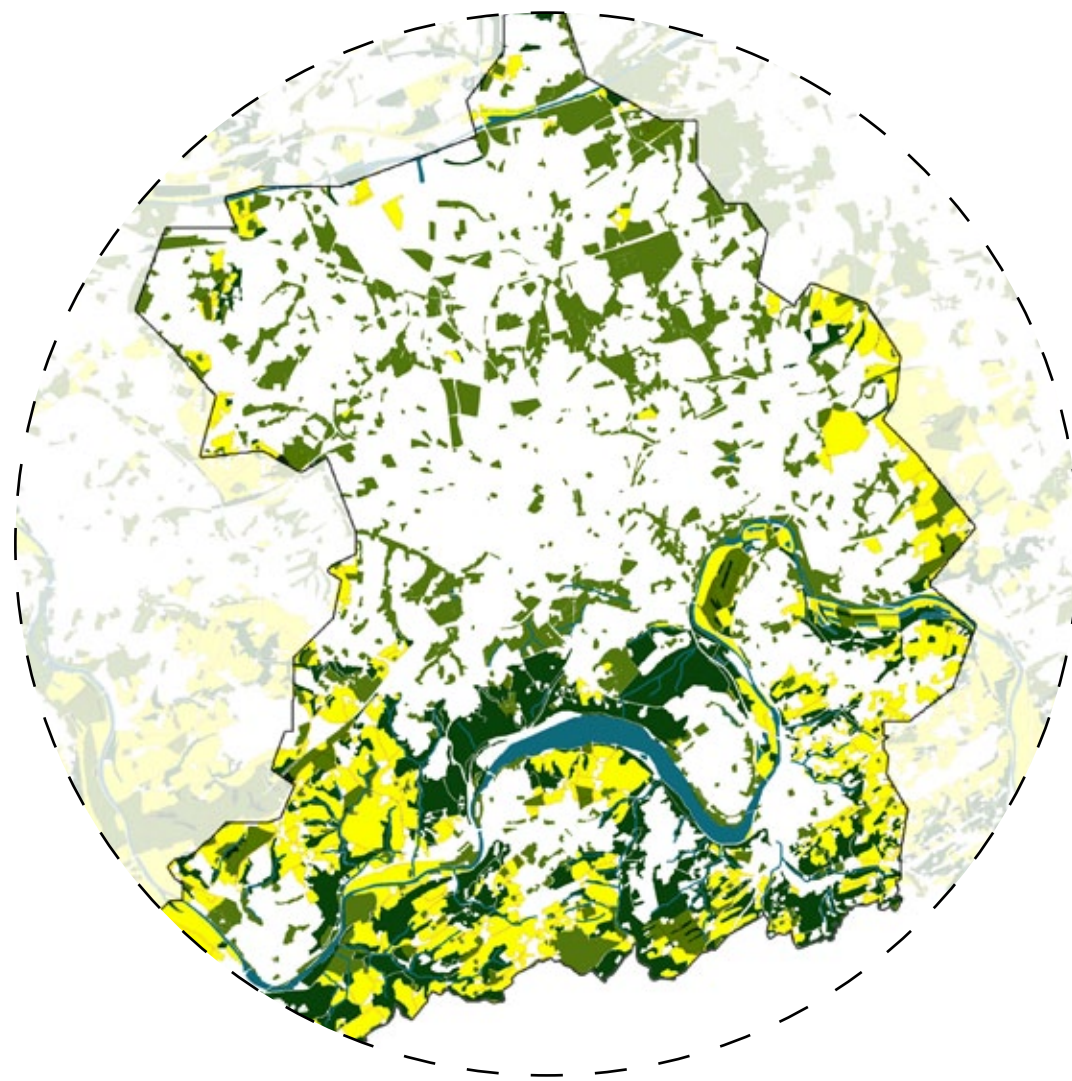
The landscape infrastructure is part of a dynamic, net-worked system.



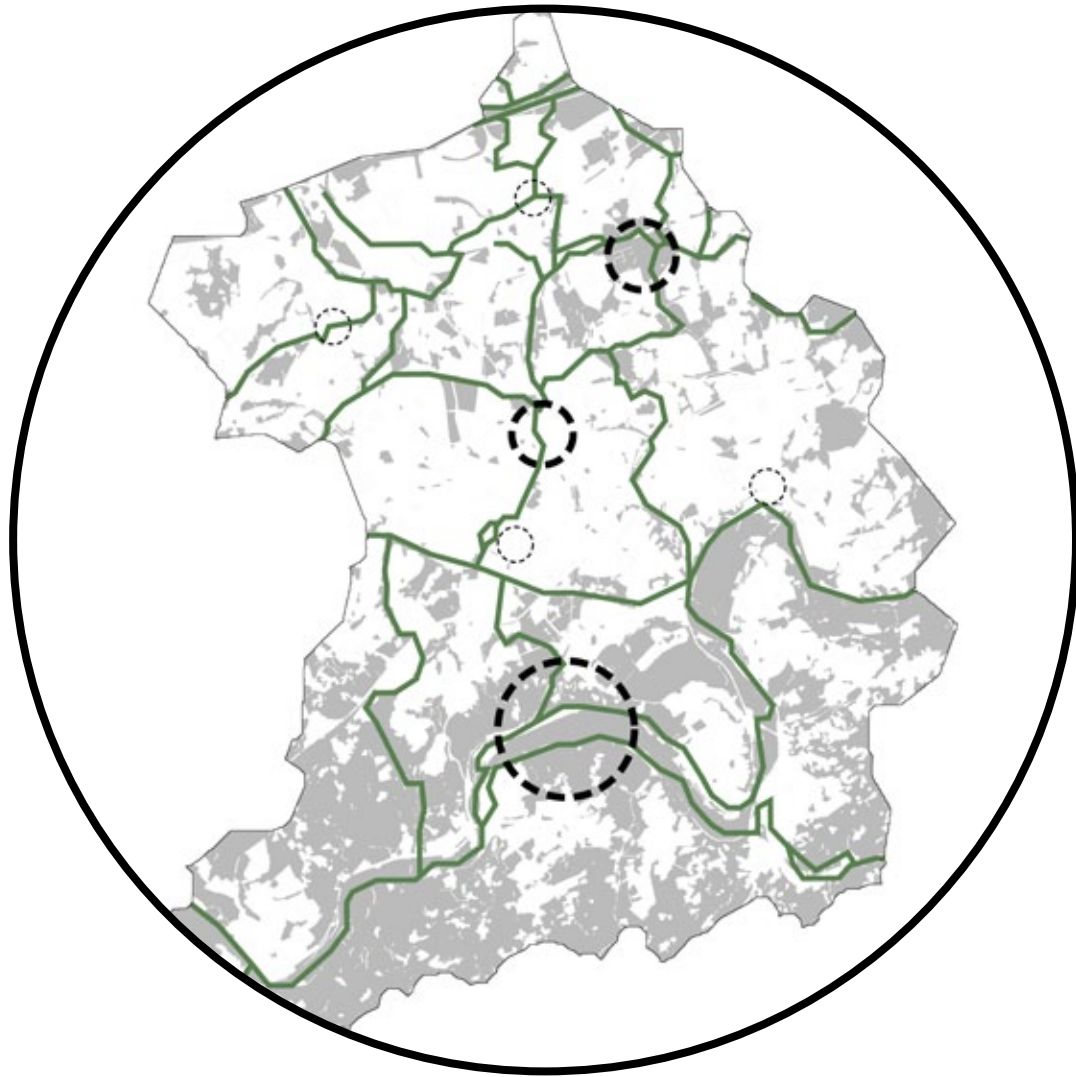




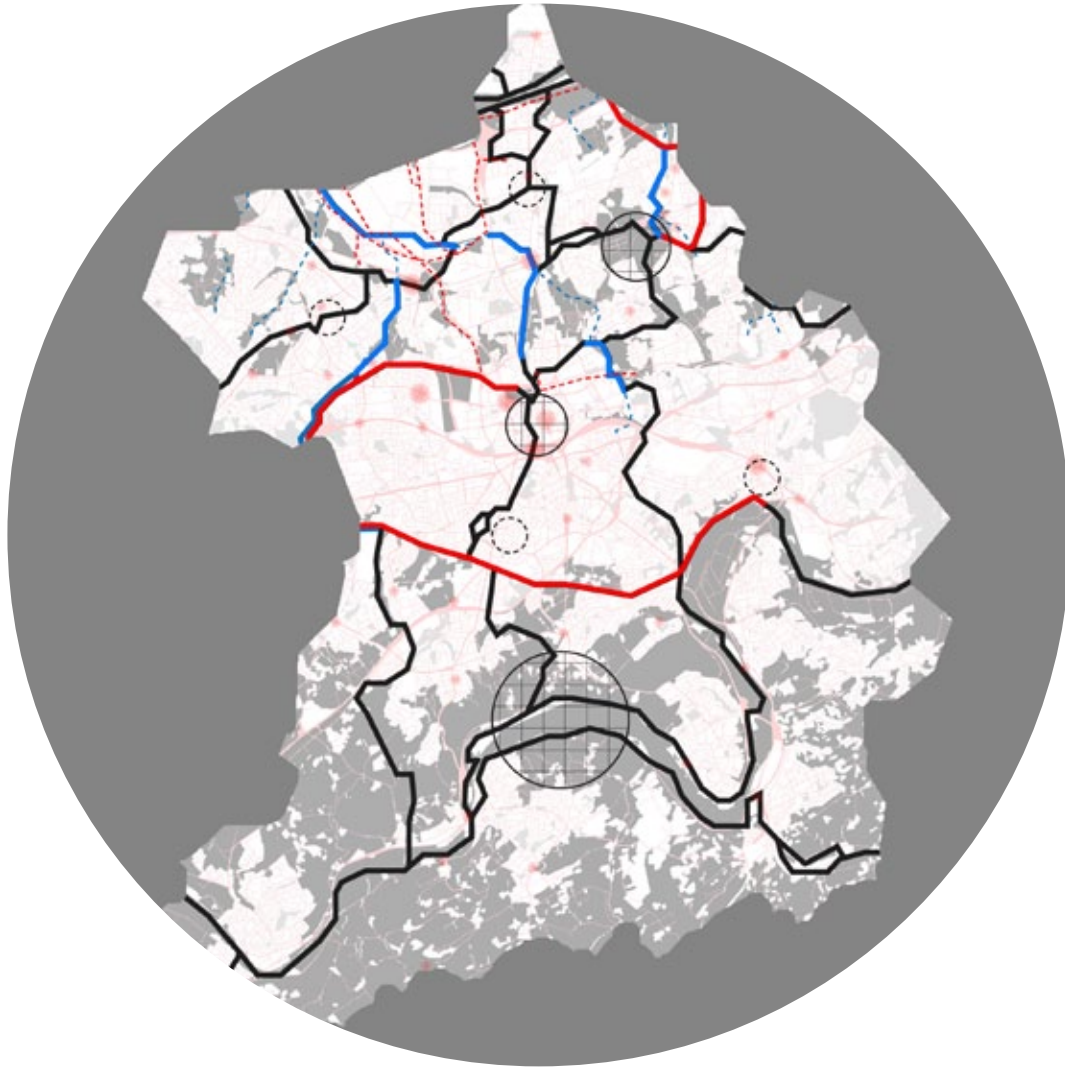
Essen Public Open Space Network



Essen Urban Ecological System



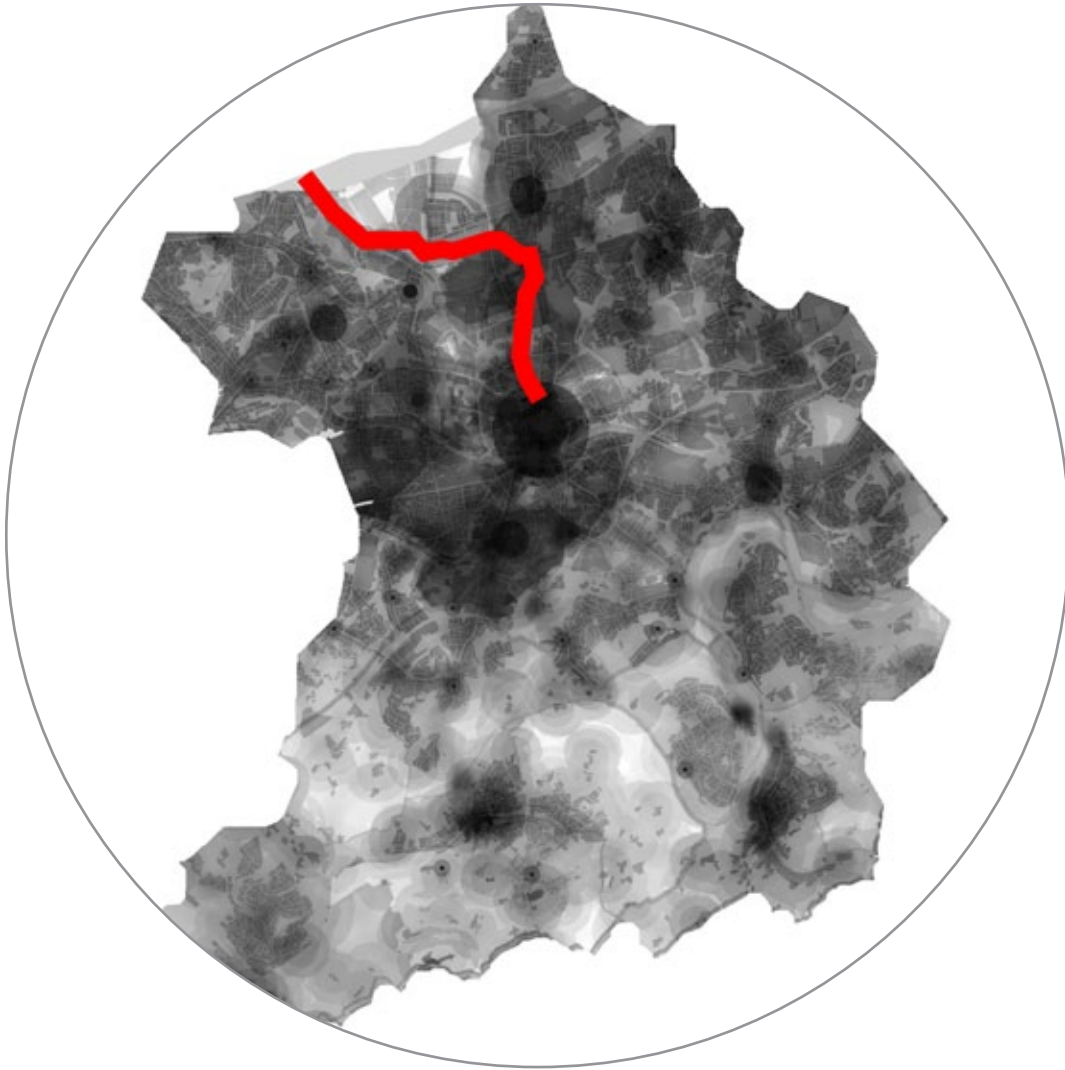
Essen Public Open Space Network



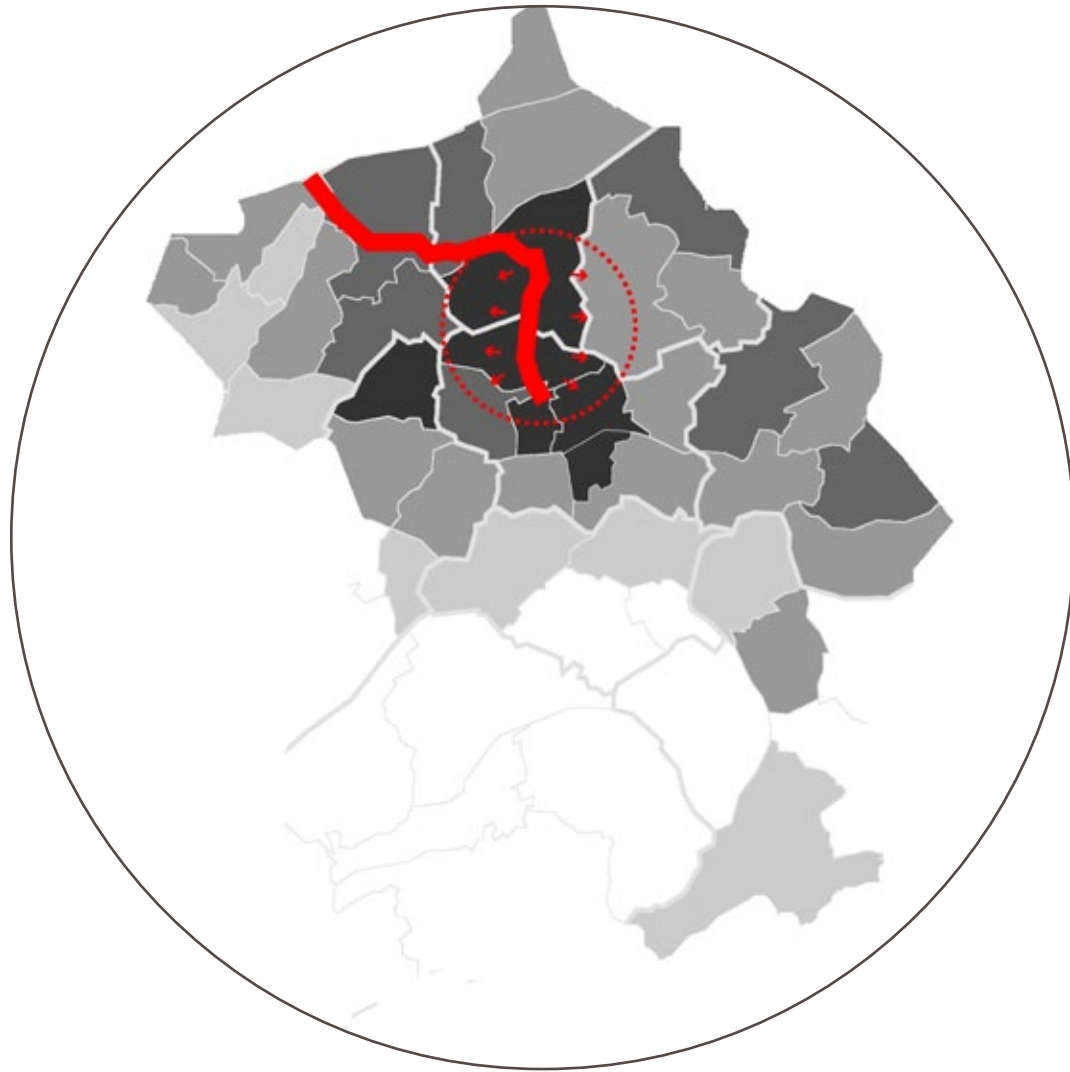
Brown Line in Essen public open space network



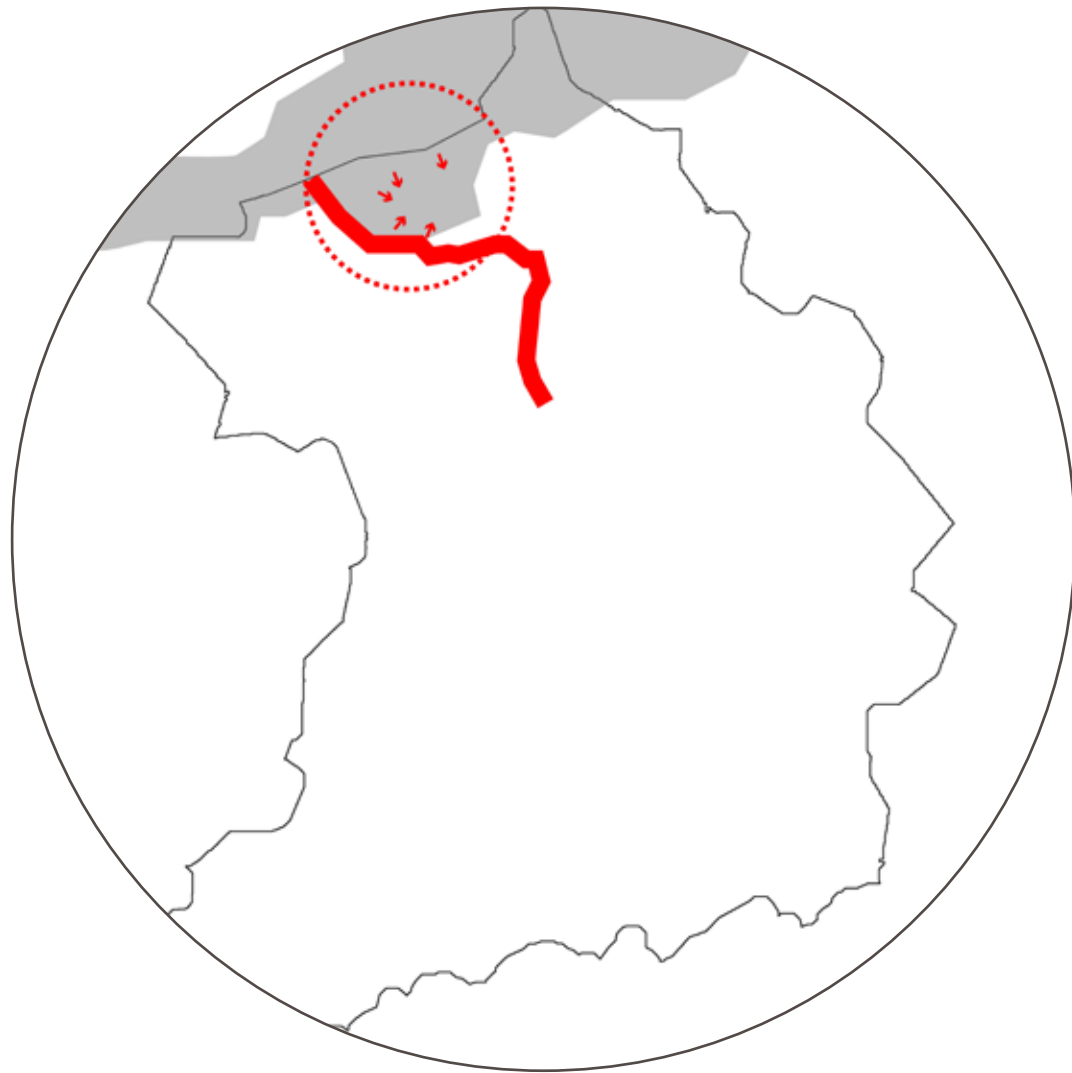
PROPOSE 1:
Essen Center-Emscher River
LINEAR PARK



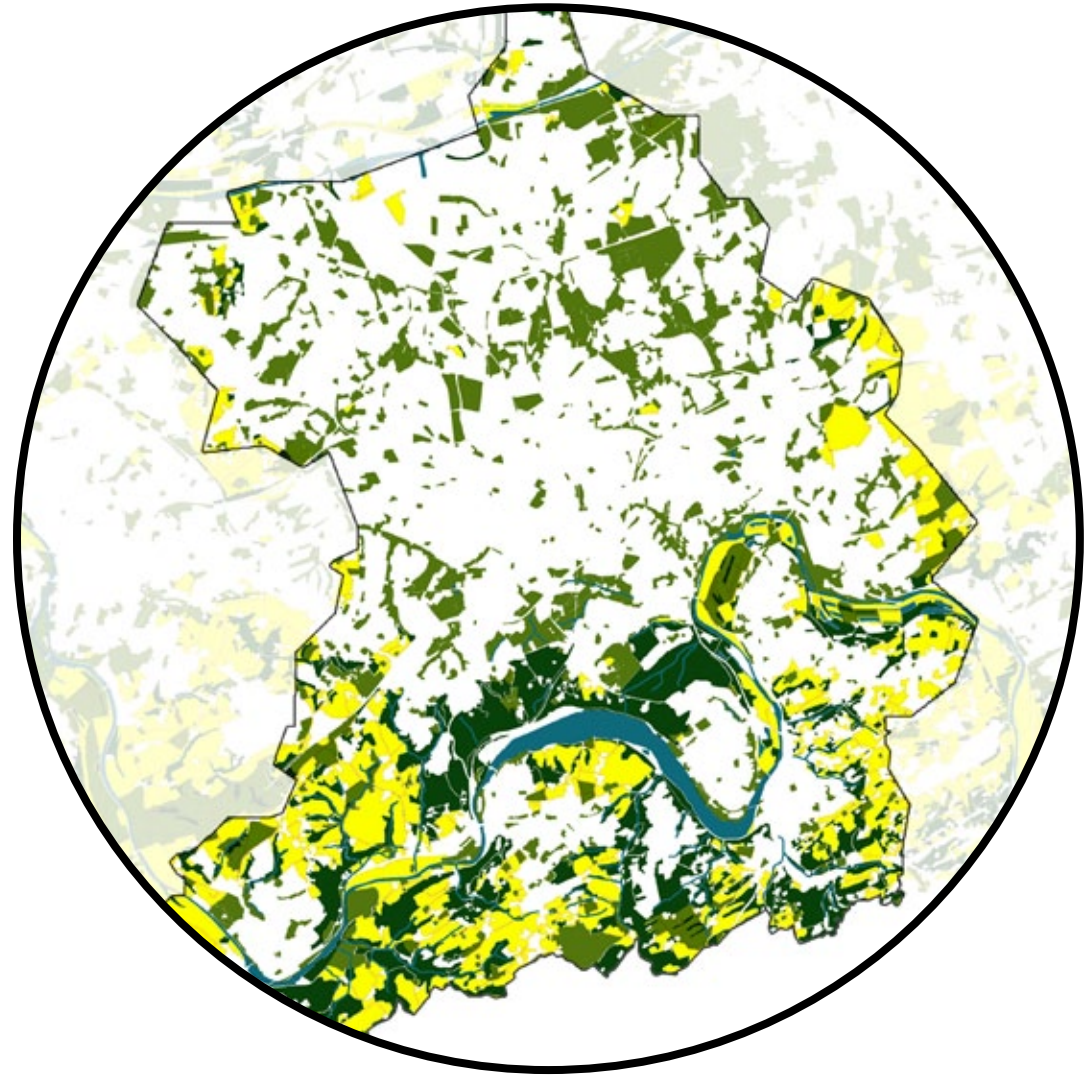
New Open space in city centrality area



Engine of urban regeneration



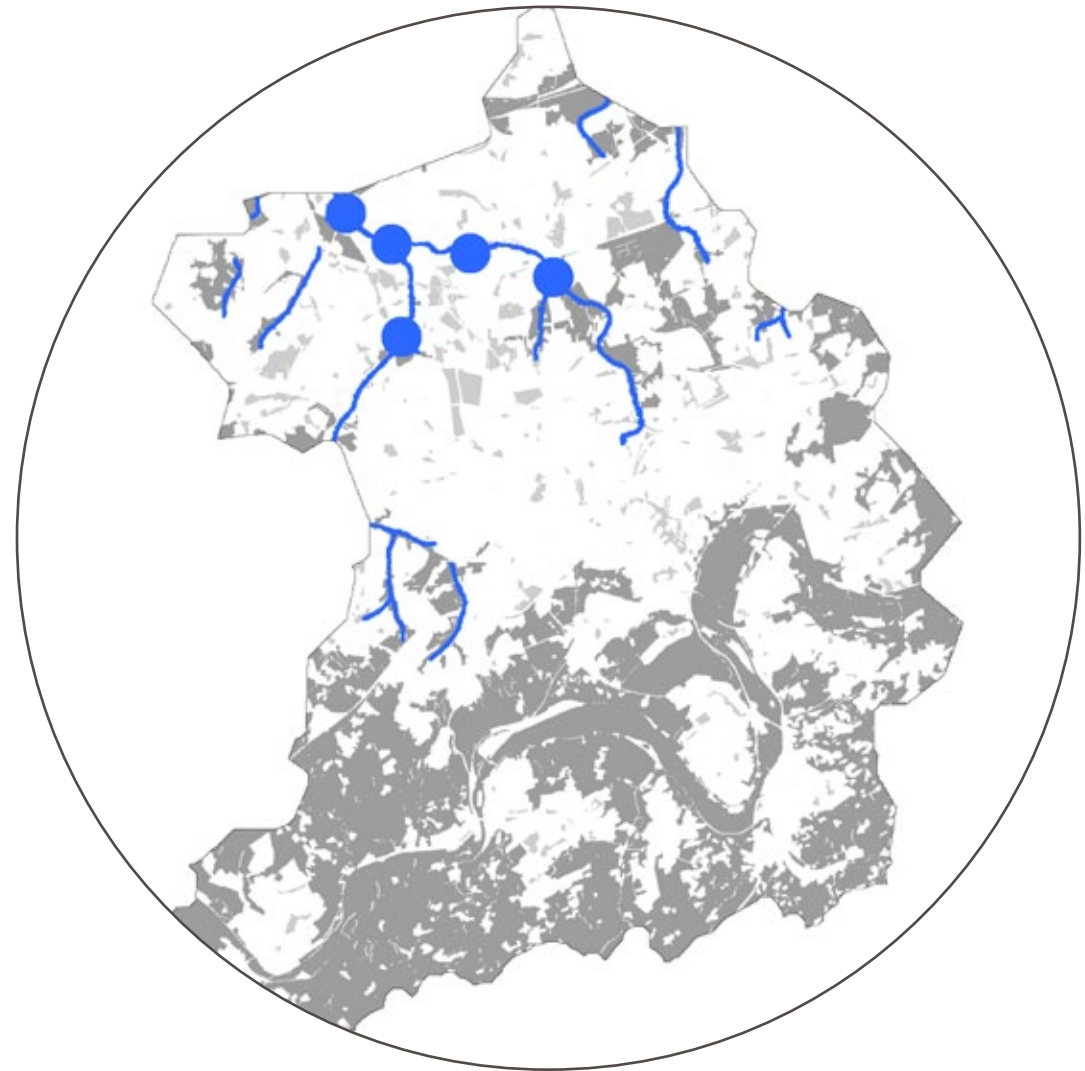
Start of new urban quarter

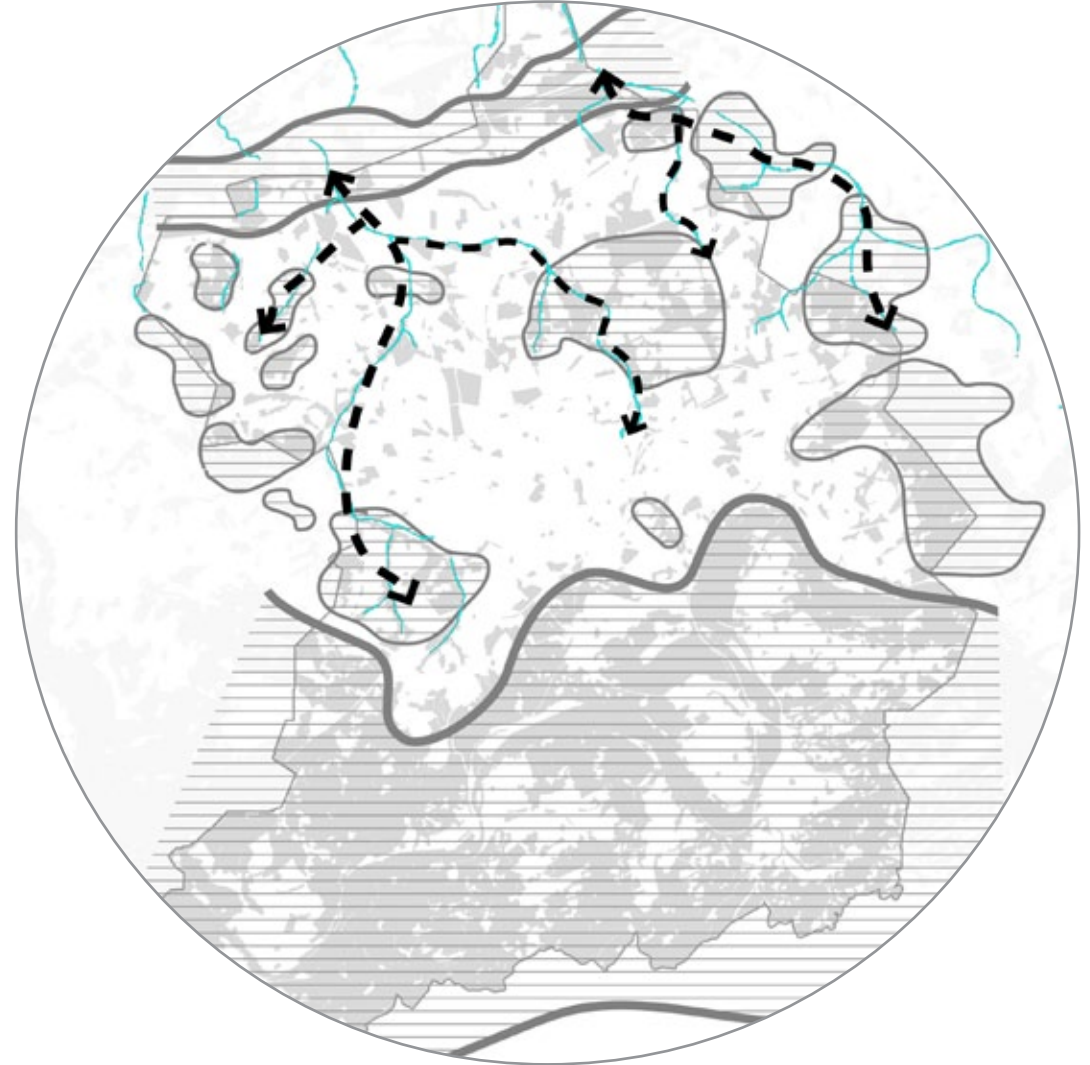


Essen Urban Ecological System

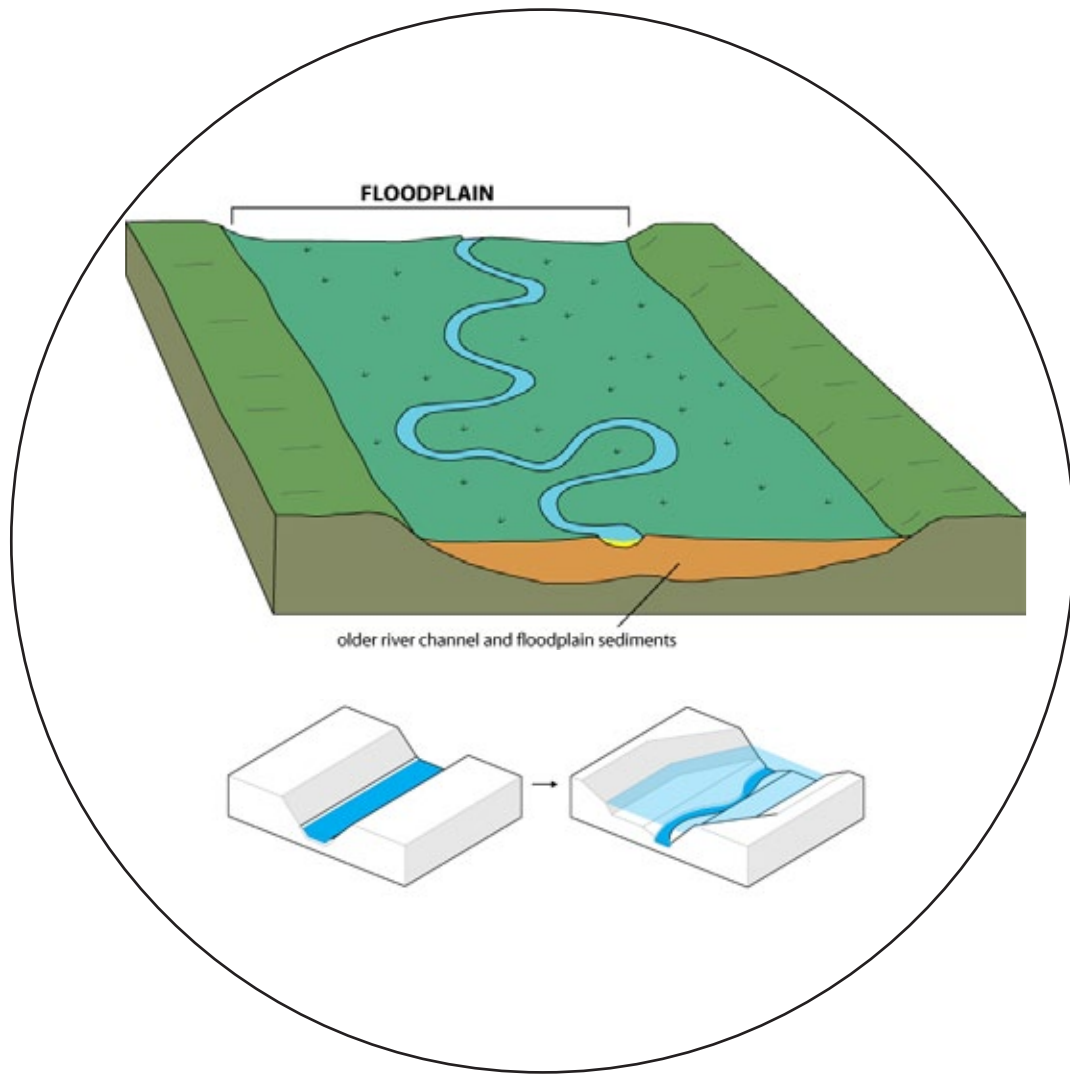
PROPOSE 2:

Regeneration of the canals

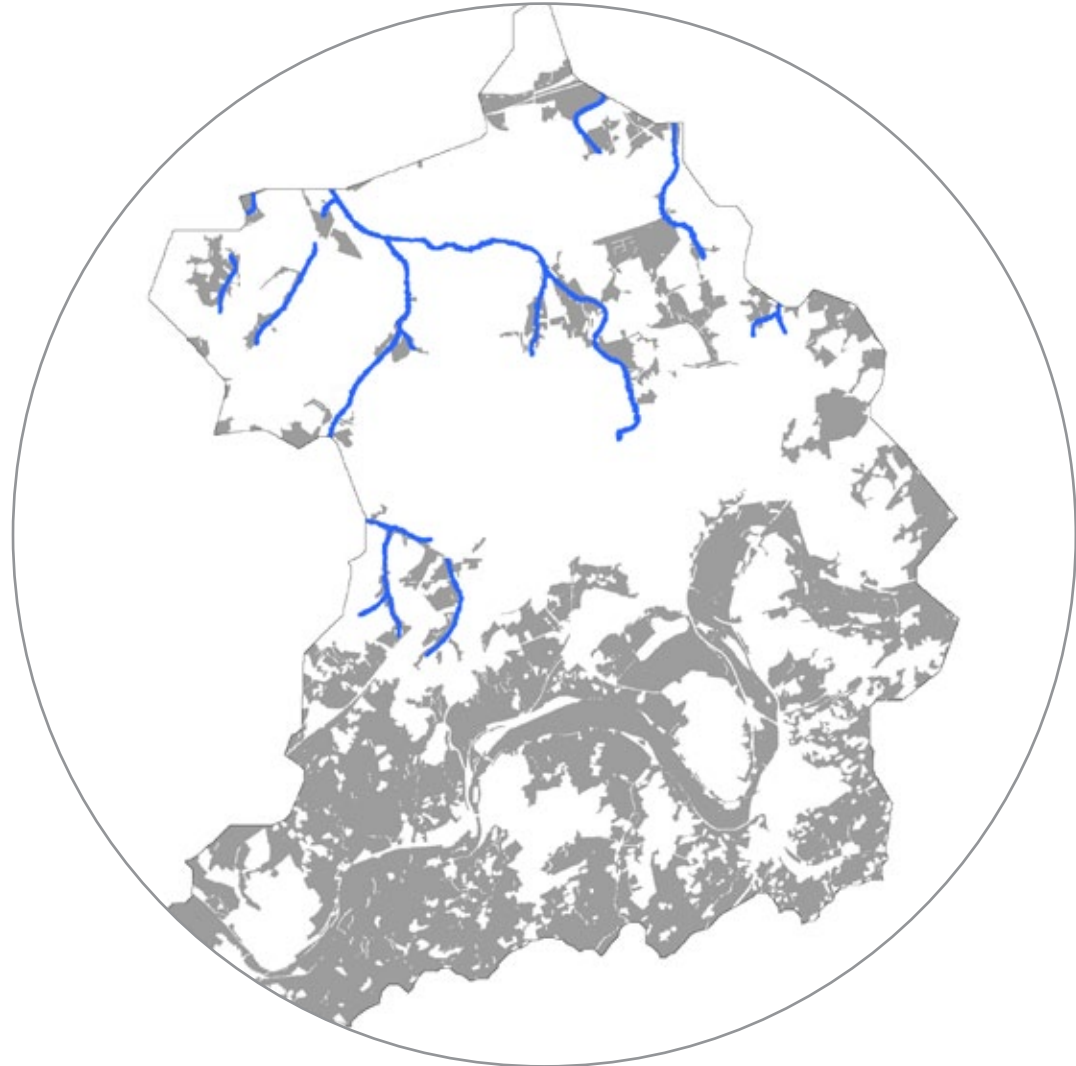




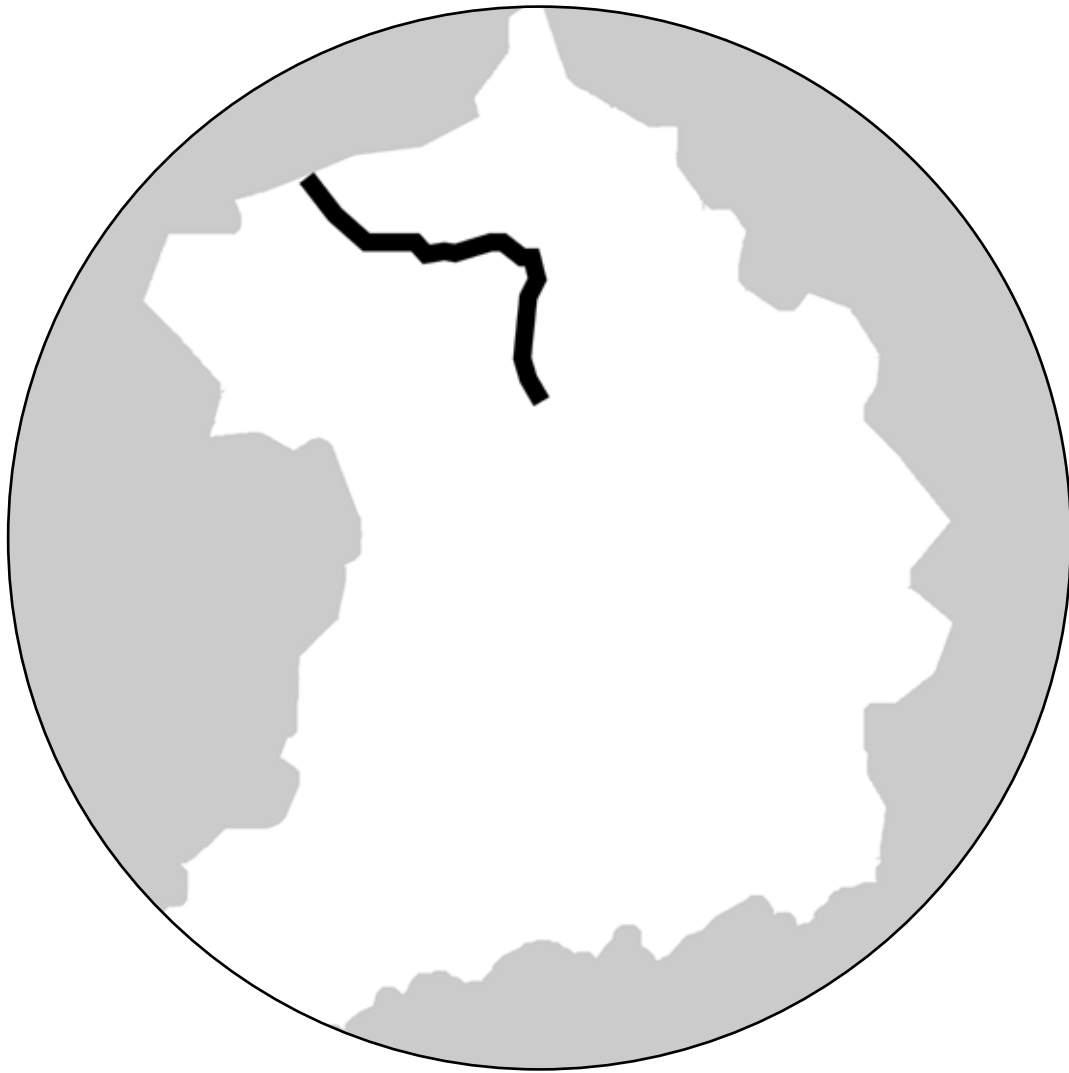
Naturalise the waterway---Green Corridor



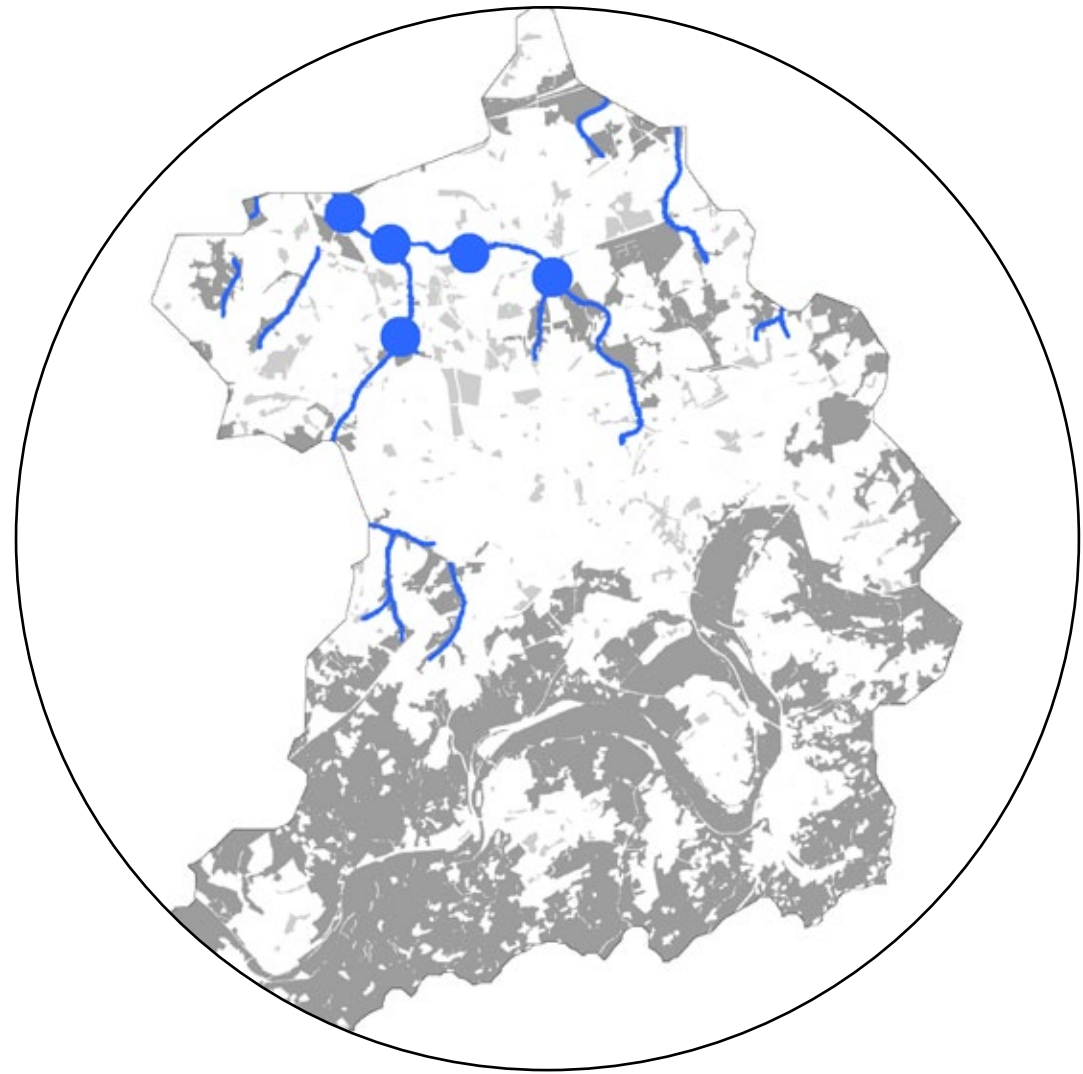
Controlled floodplain---Flood prevention



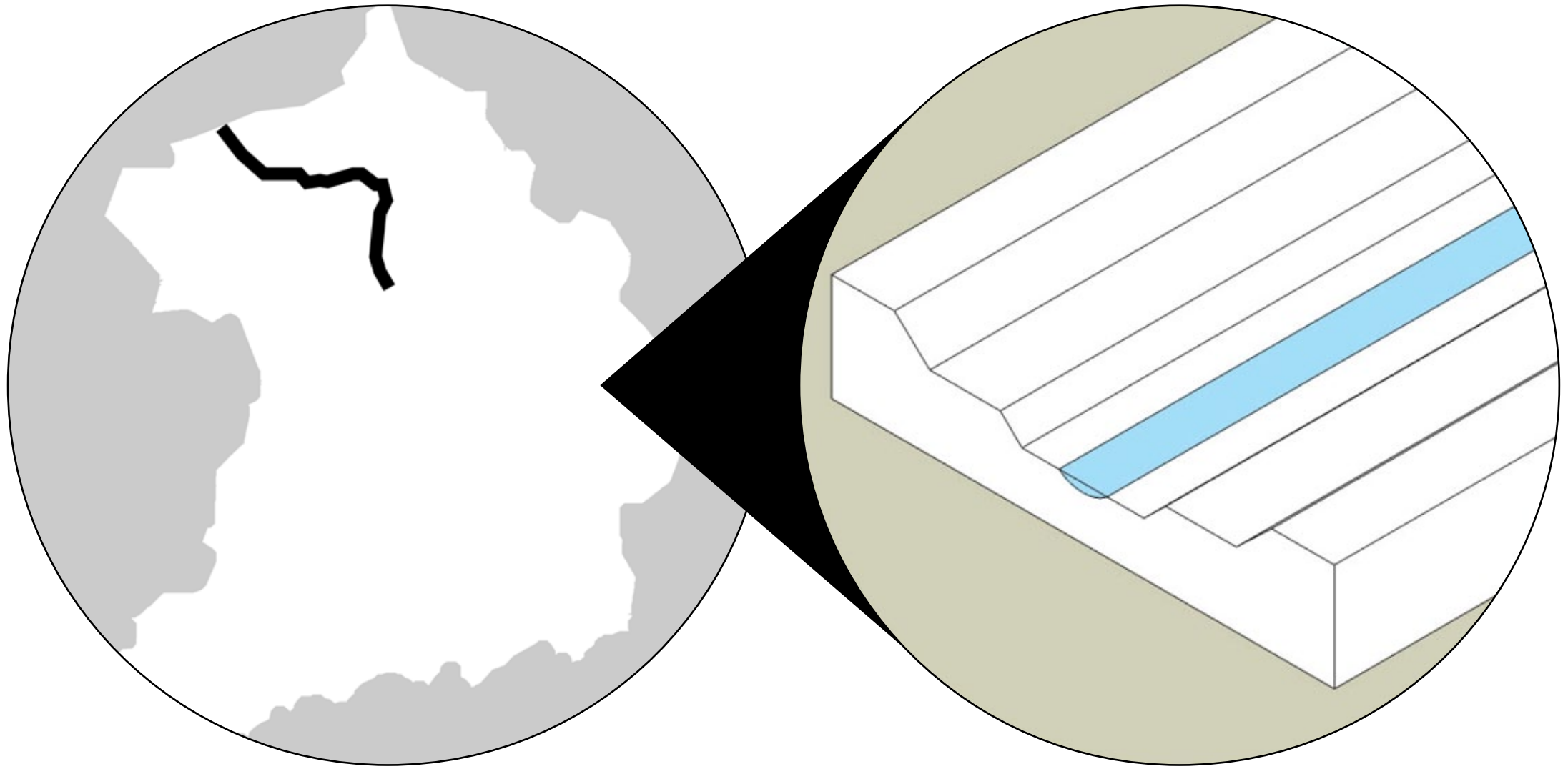
Habitat



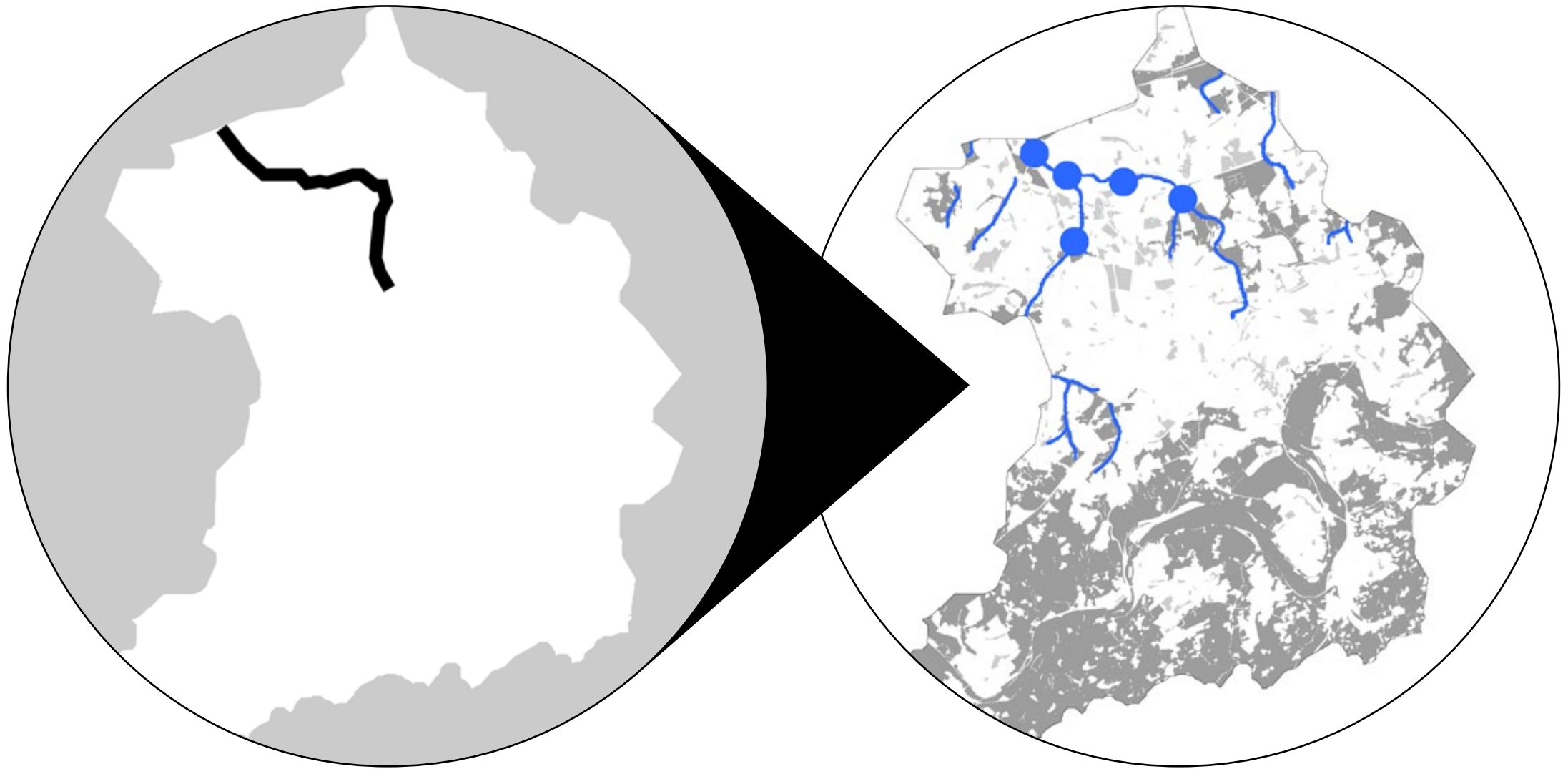
1.Essen Center-Emscher Linear Park



2.Waterway Regeneration

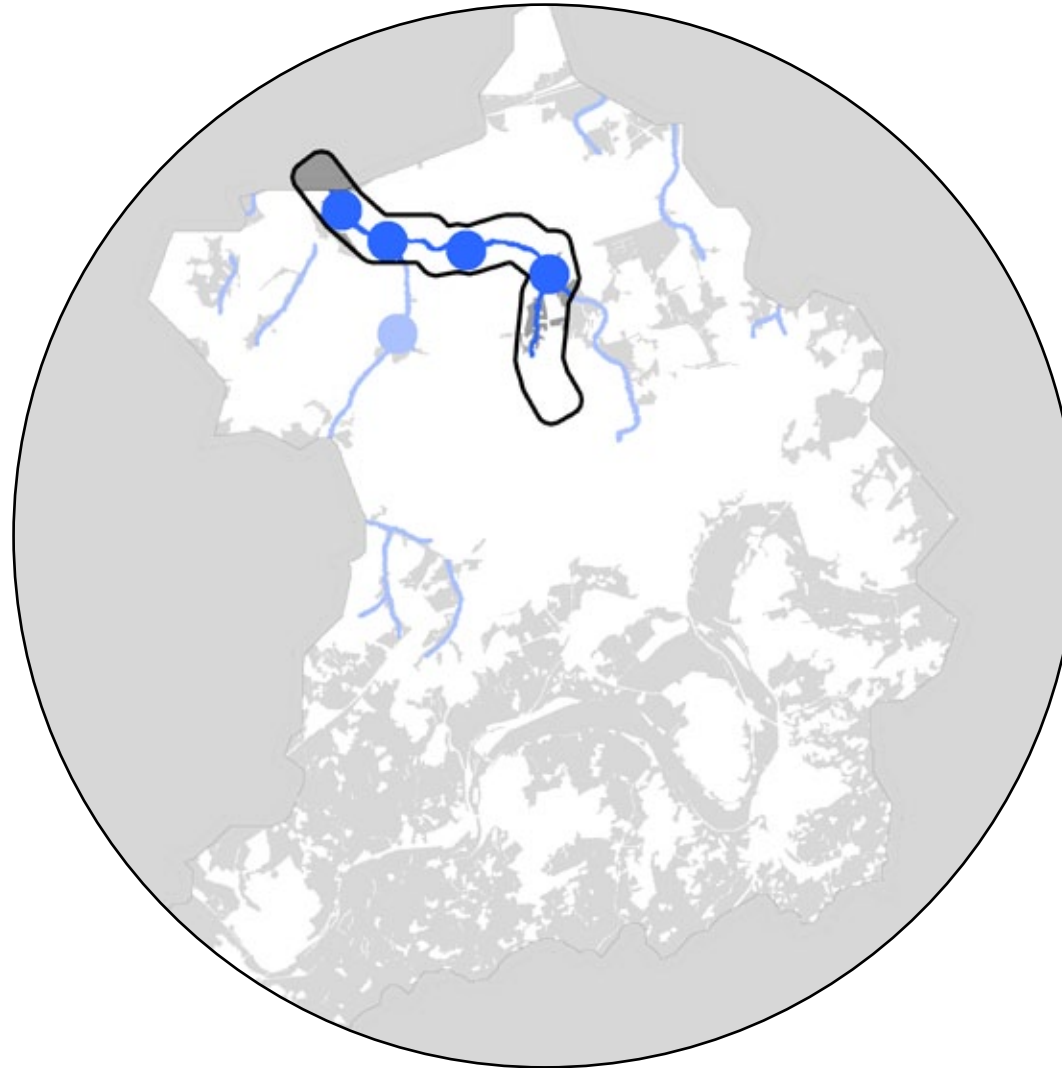


Ecological development creates condition of urban public open space developing project.



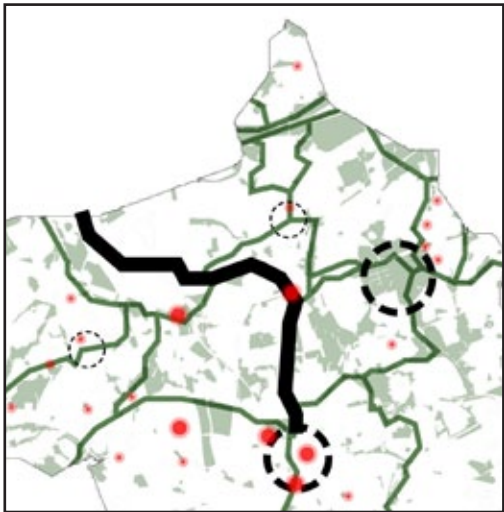
urban public open space developing project is an example project of urban ecological developing

DESIGN TASK

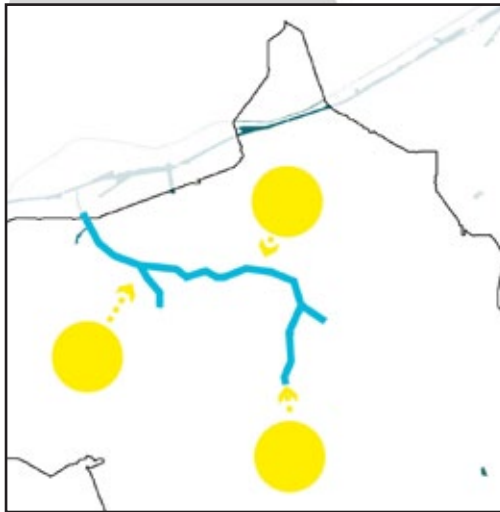


**WATER WAY REGENERATION CENTERED
LINEAR PARK**

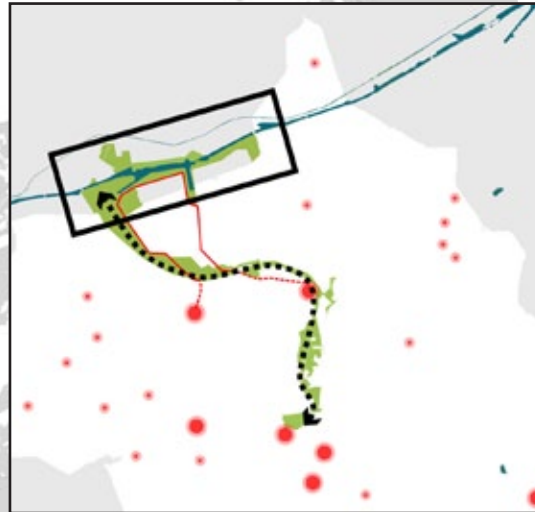
DESIGN TASK



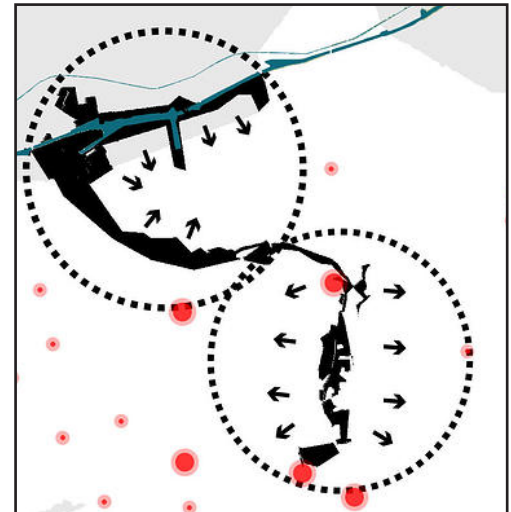
NEW OPEN SPACE



NEW WAY TO WATER



NEW PATH TO EMSCHER RIVER



ENGINE OF URBAN DEVELOPMENT

DESIGN PRINCIPLES



ABANDONED CANAL



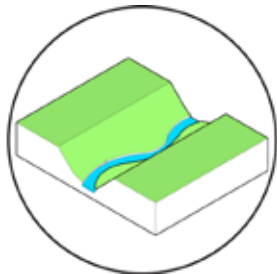
ABANDONED TRAIN LINE

DESIGN PRINCIPLES

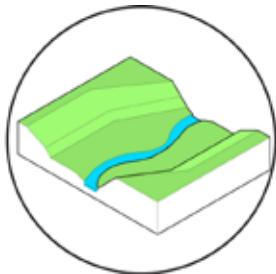


ABANDONED CANAL

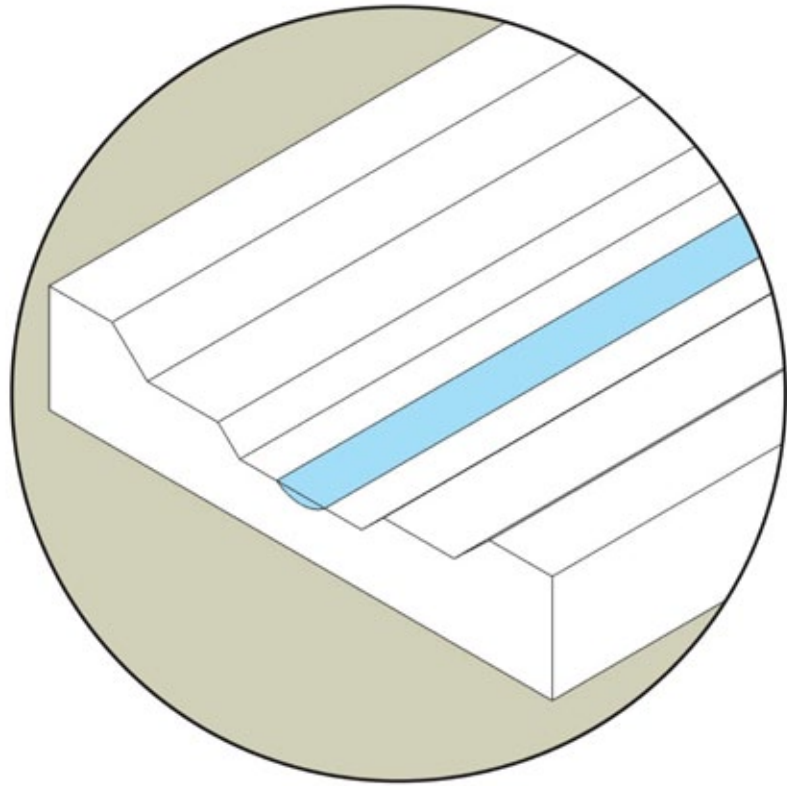
CANALS



CANALS



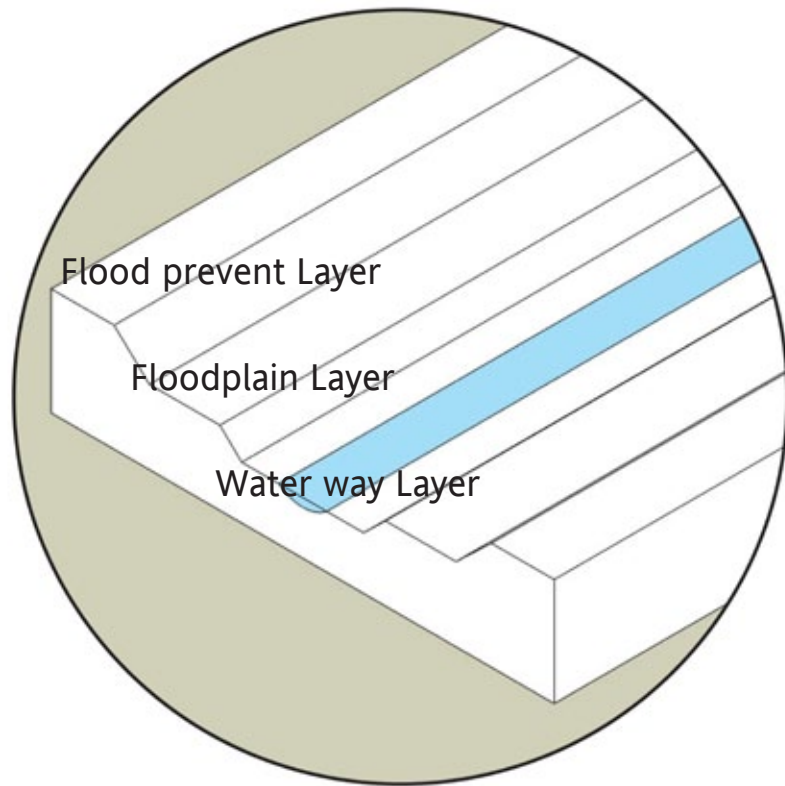
CANALS



New Water way



CANALS



Identity of park



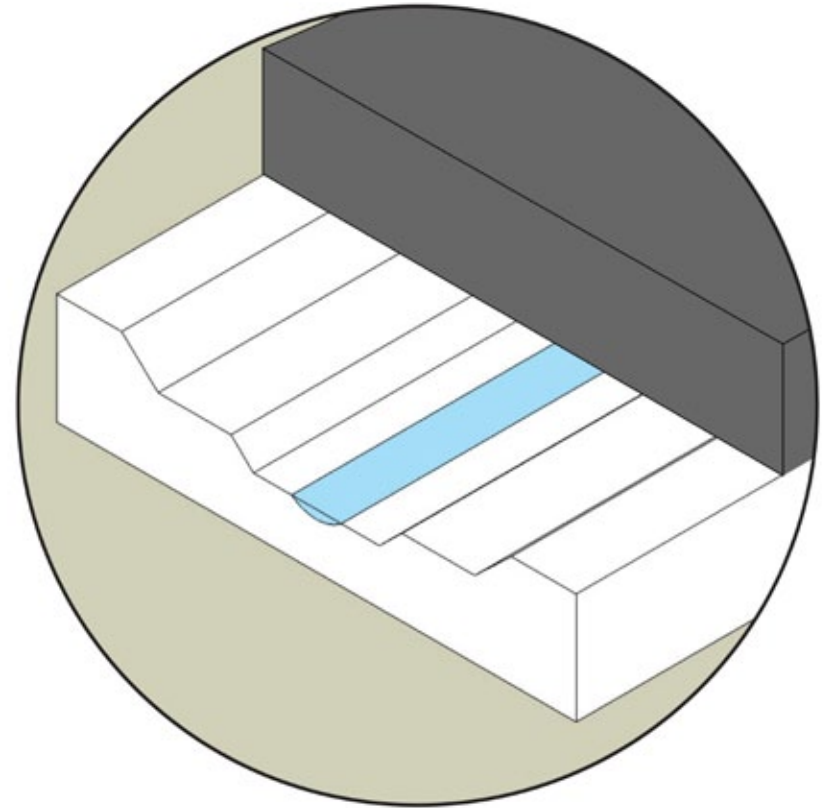
DESIGN PRINCIPLES



TRAIN TRACKS



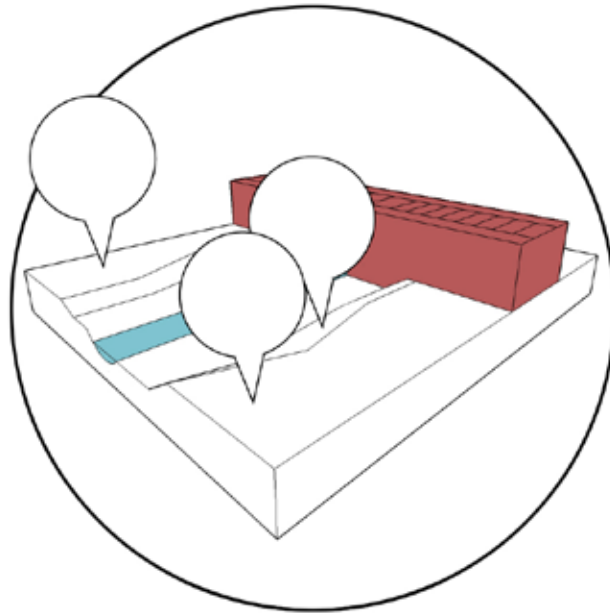
TRAIN TRACKS



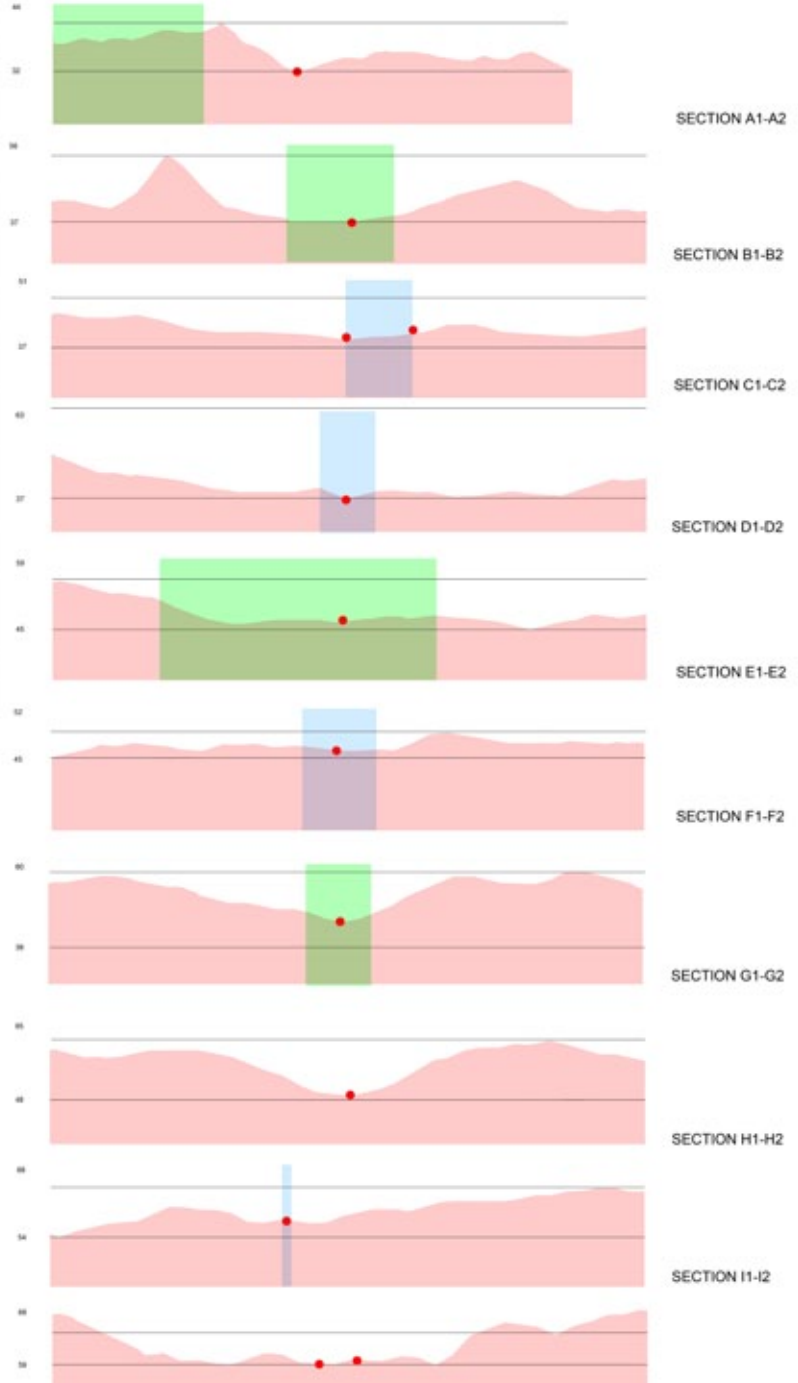
Identity of local project.

CHAPTER 2: PLAN OF THE PARK

Multi-functionality



PARK AS FLOODPLAIN



PARK AS FLOODPLAIN



PARK AS FLOODPLAIN



FLOODPLAIN

PARK AS FLOODPLAIN

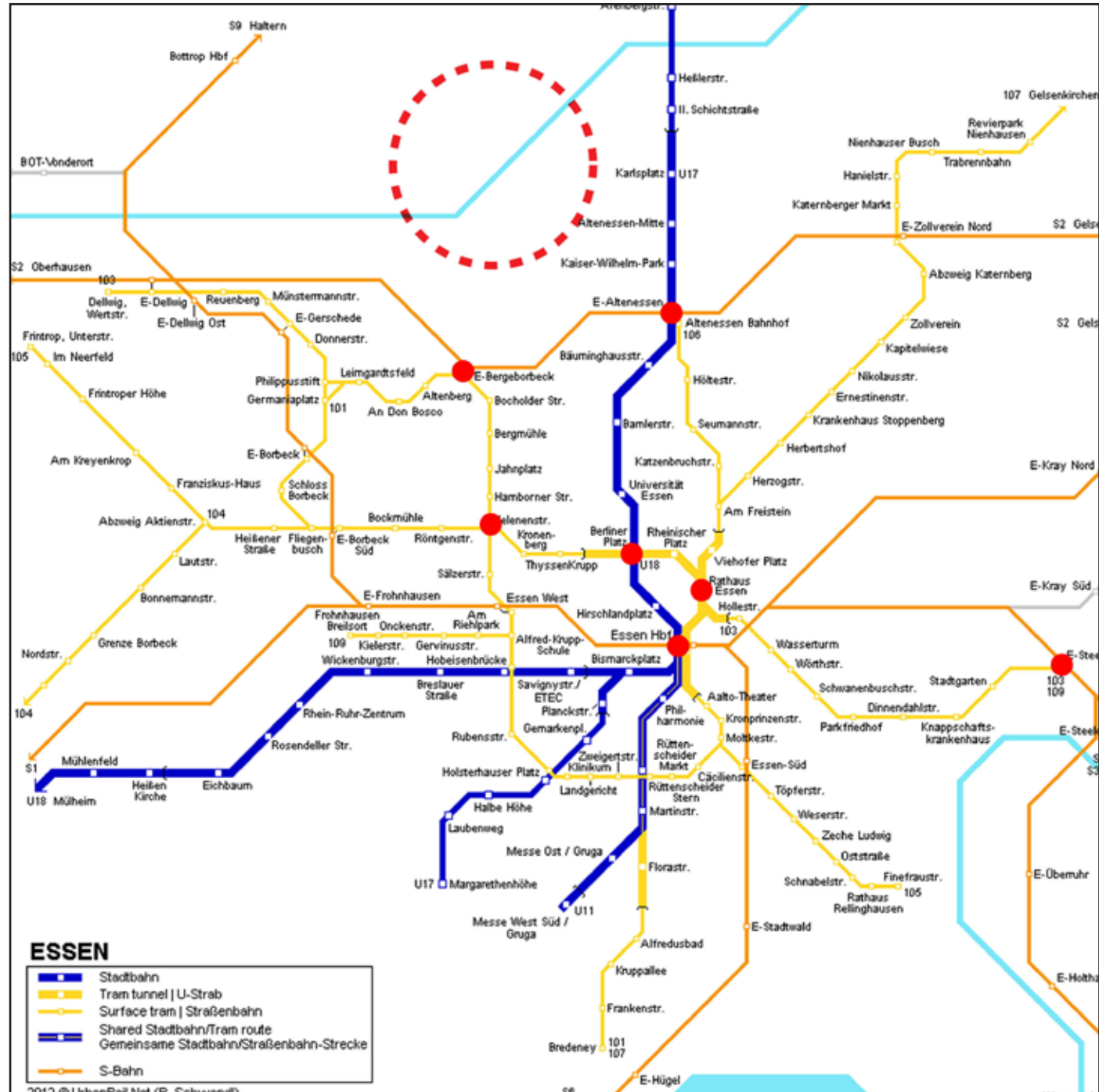


SCOPE

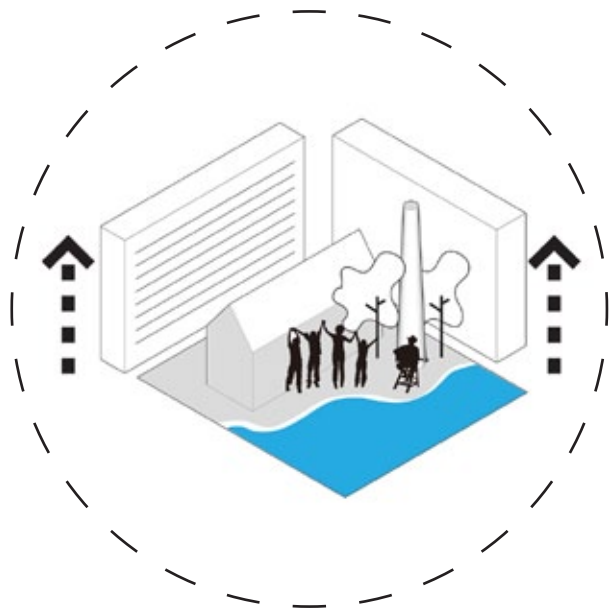
PARK AS URBAN DEVELOPMENT ENGINE



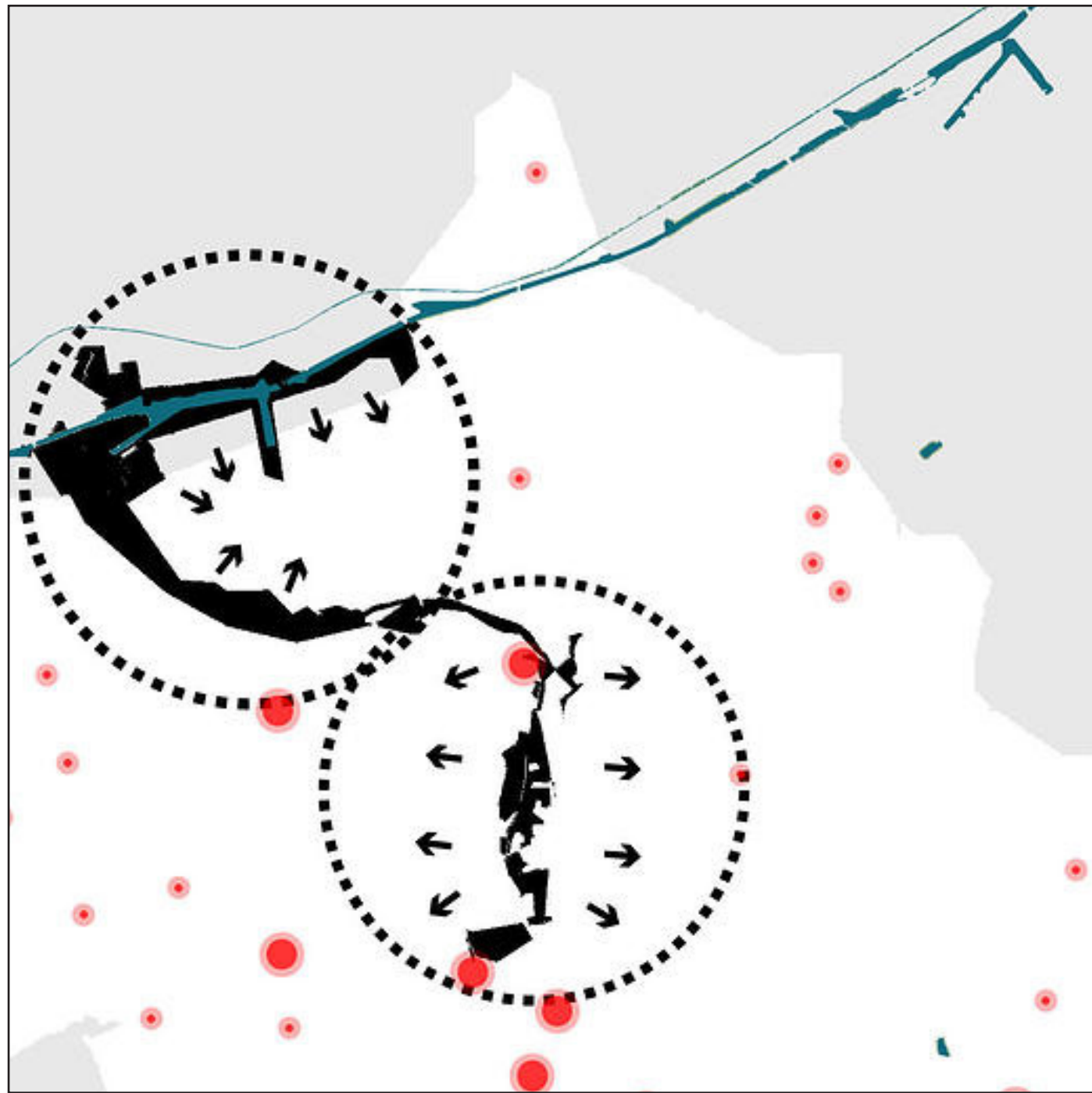
TOD
transit oriented development



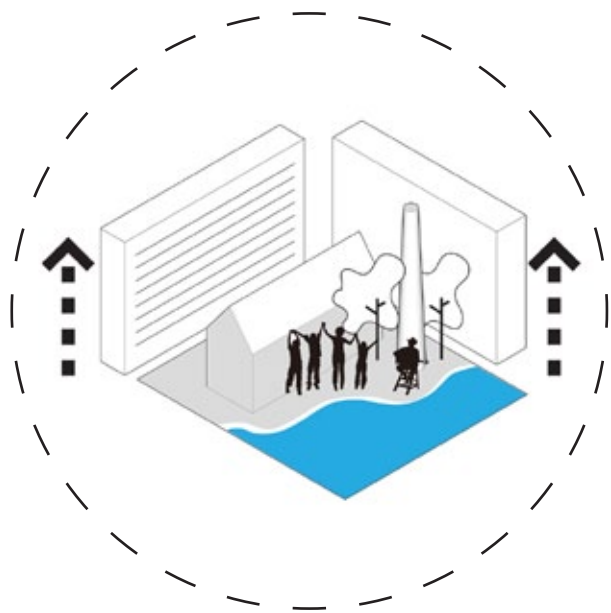
PARK AS URBAN
DEVELOPMENT ENGINE



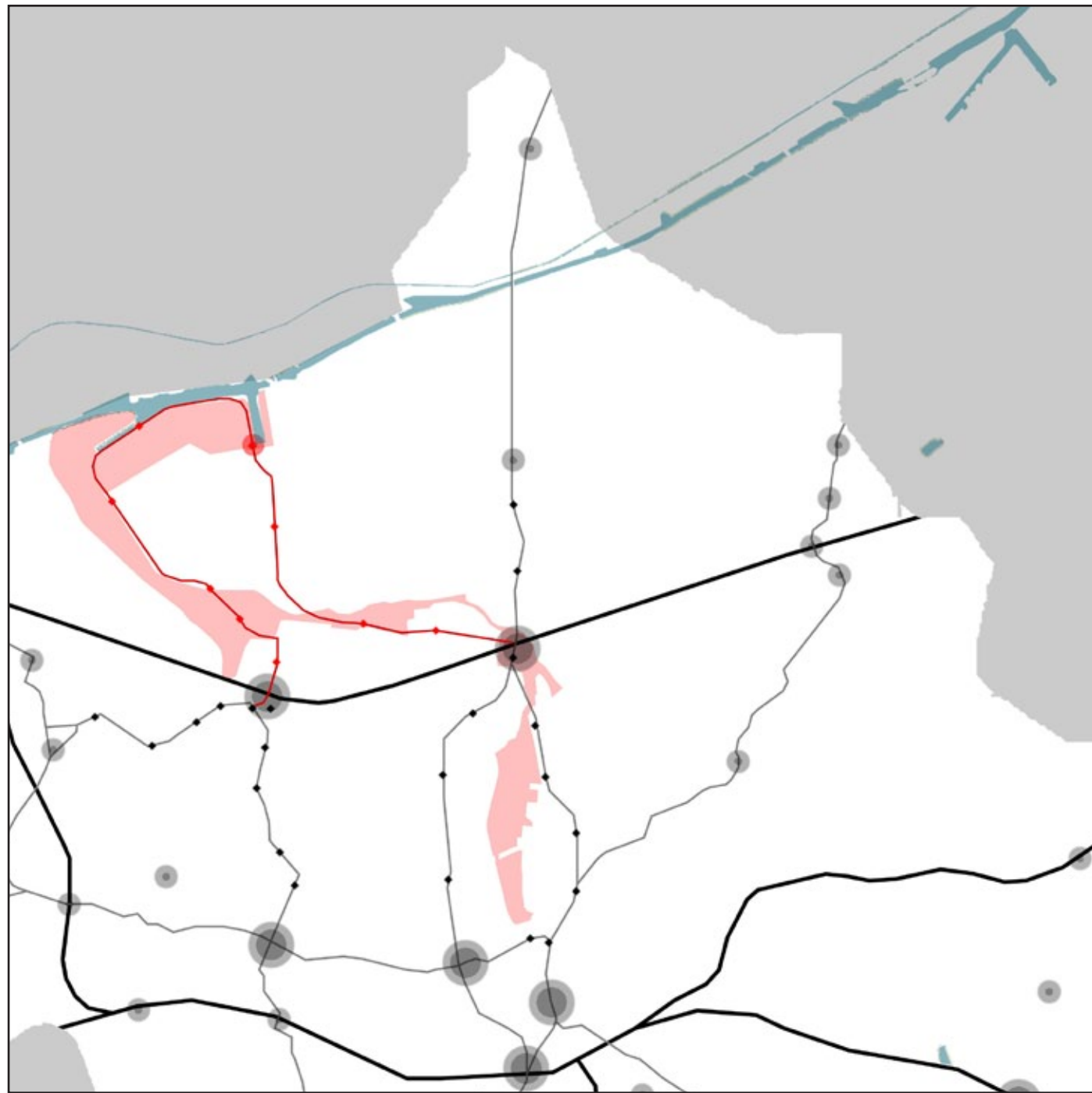
NEW TRAM



**PARK AS URBAN
DEVELOPMENT ENGINE**



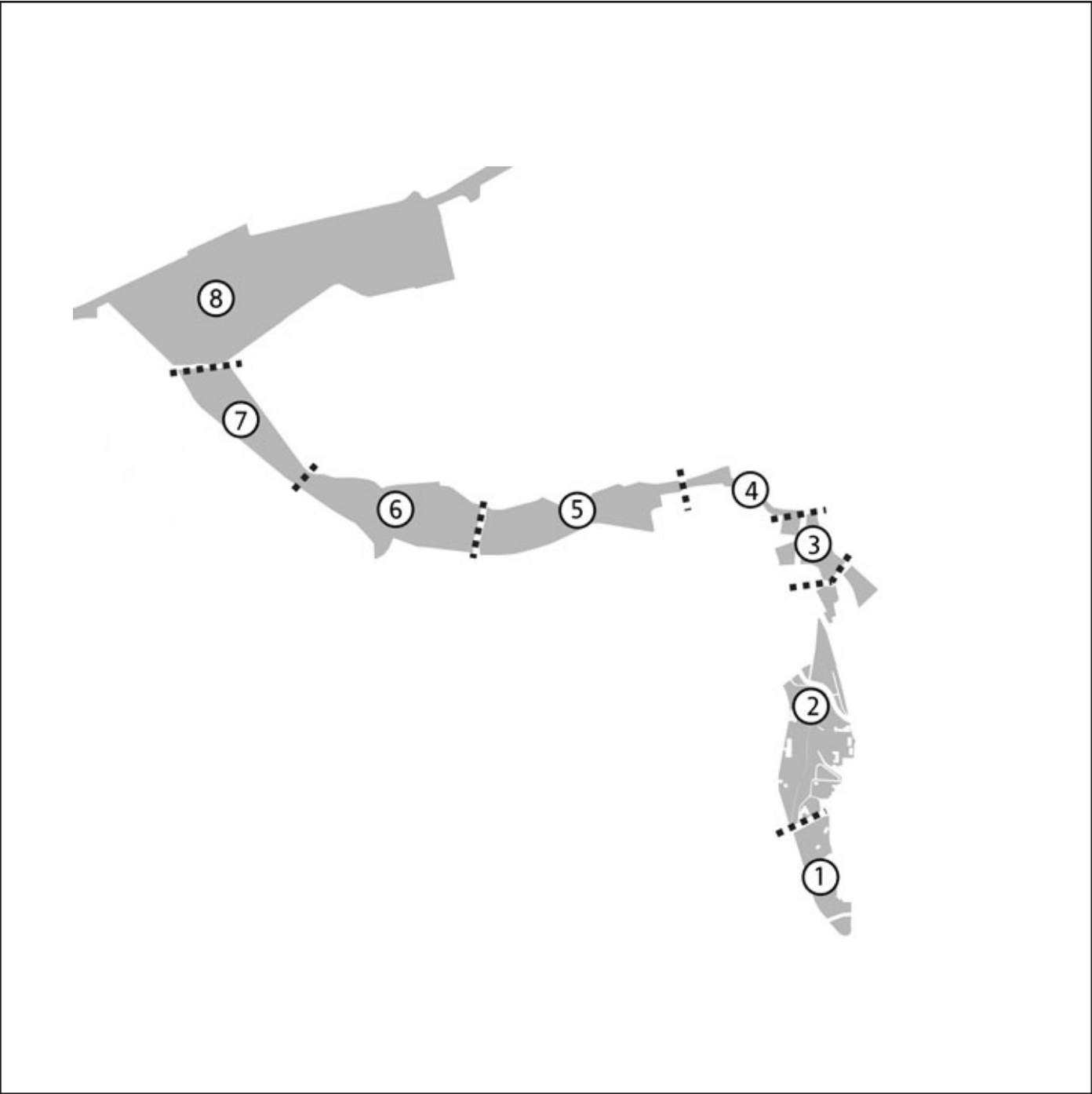
NEW TRAM



PARK AS PARK



PARK AS PARK



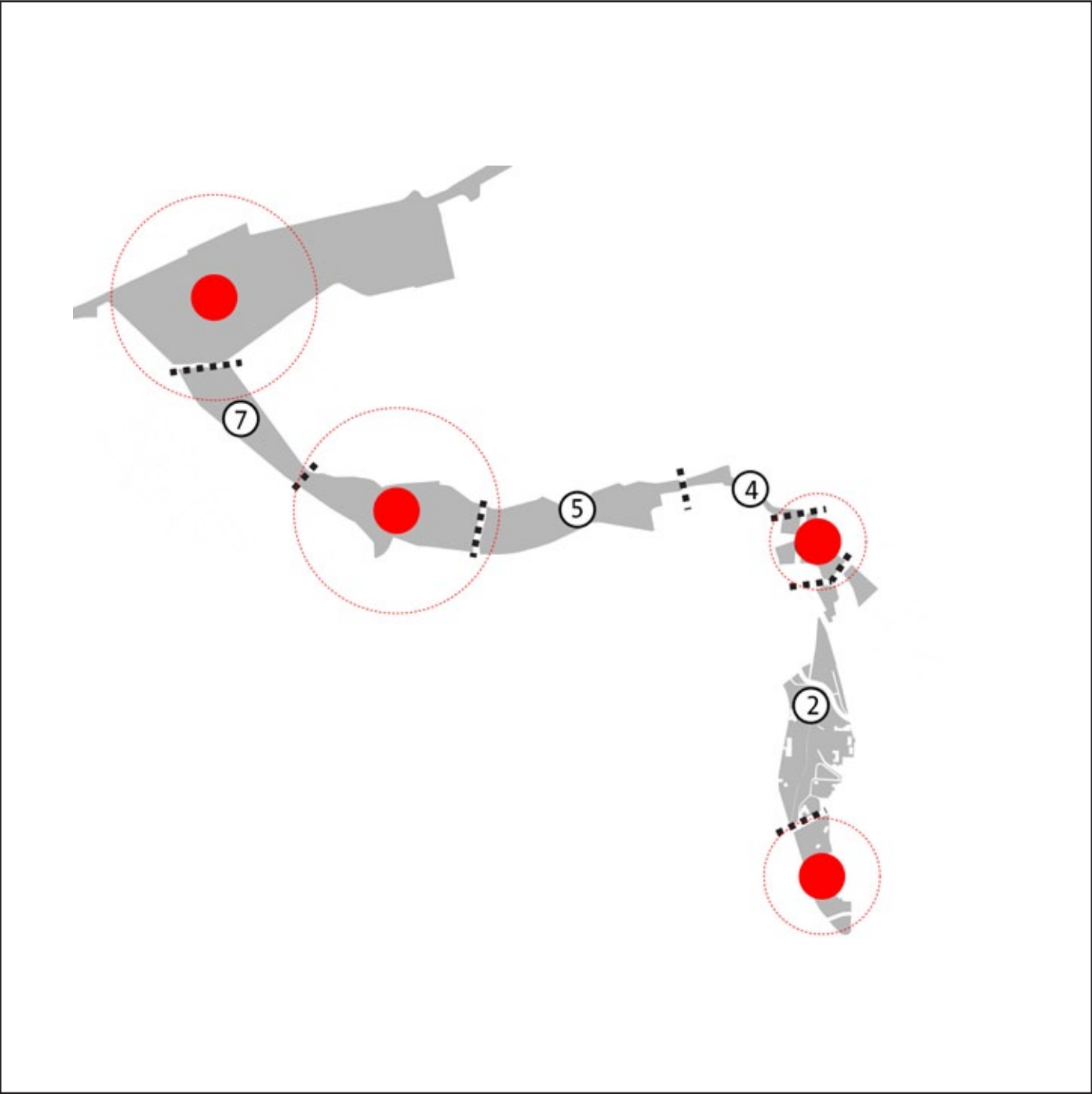
PARK AS PARK



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)

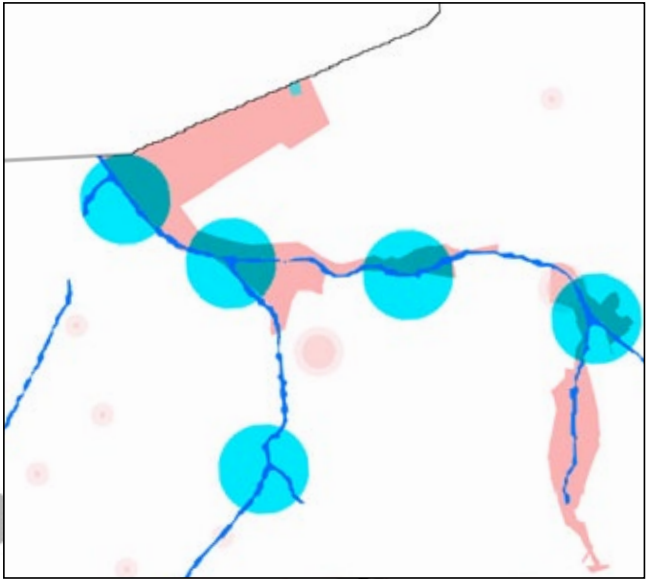
PARK AS PARK



PARK AS PARK



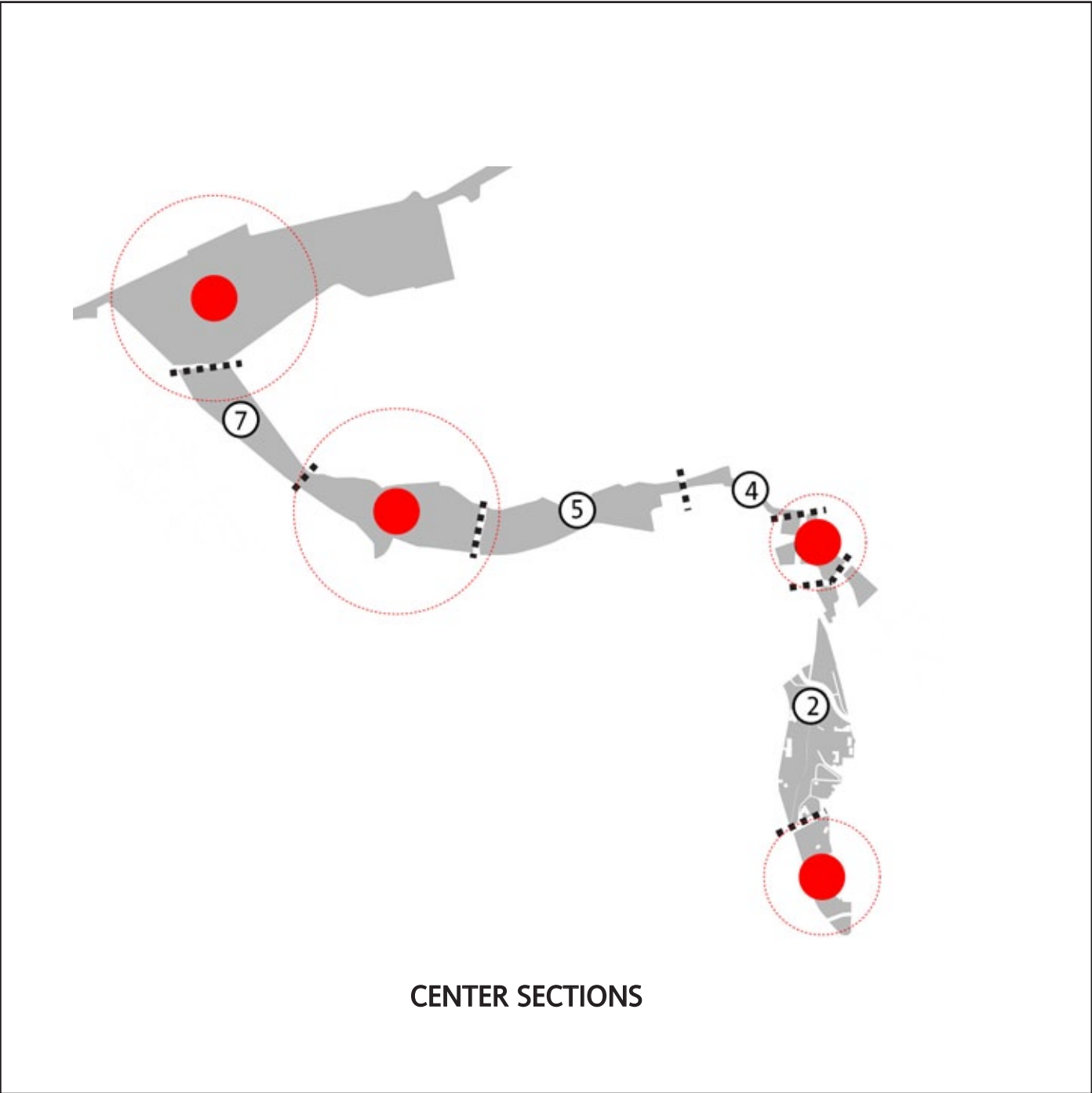
NODE OF MULTI-MOBILITY



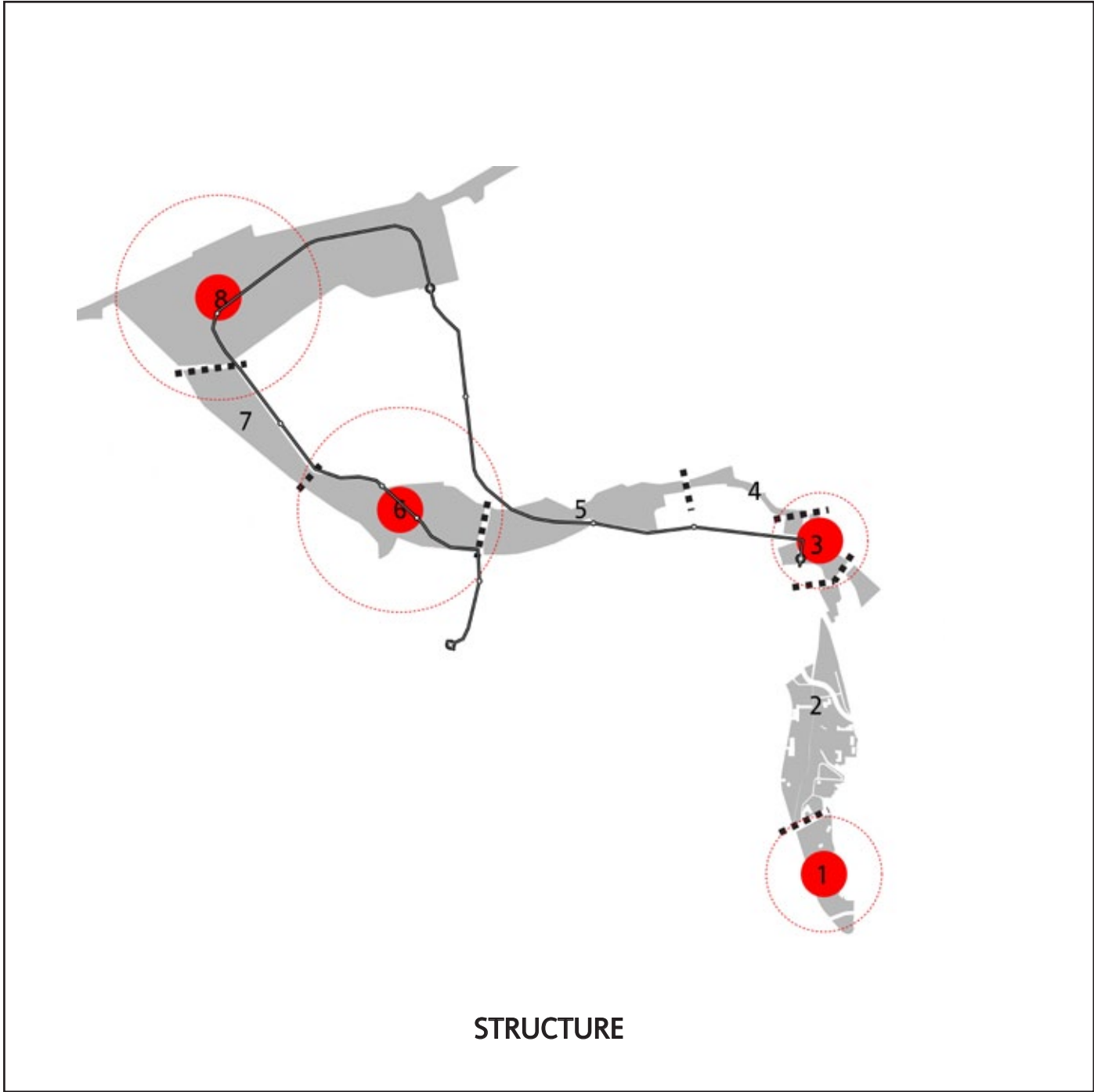
CONFLUENT AREA
(FLOODPLAIN)



PARK AS PARK

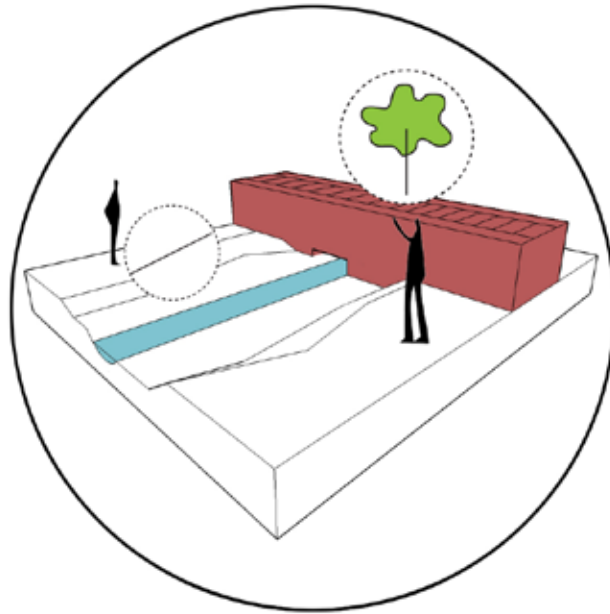


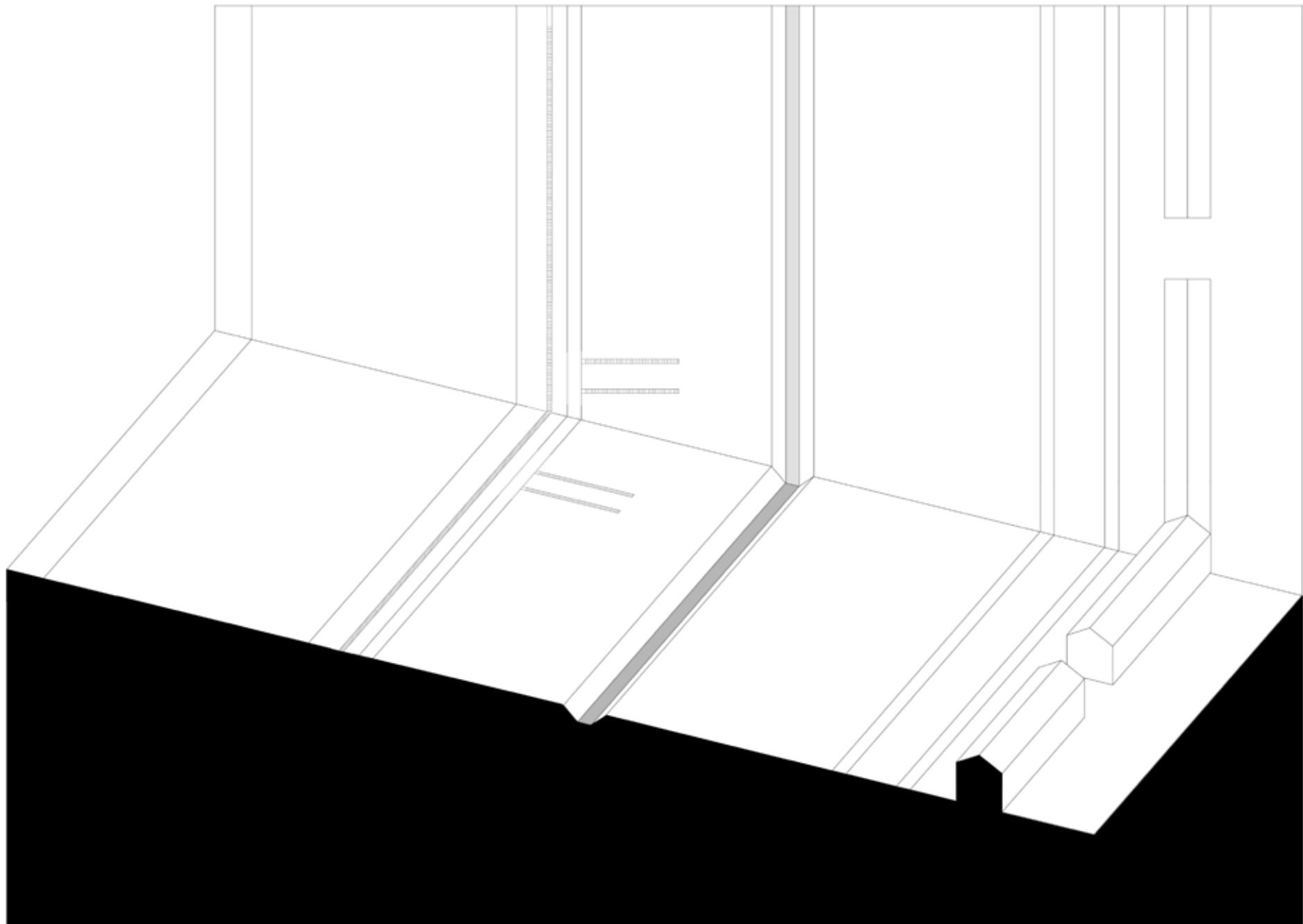
CENTER SECTIONS

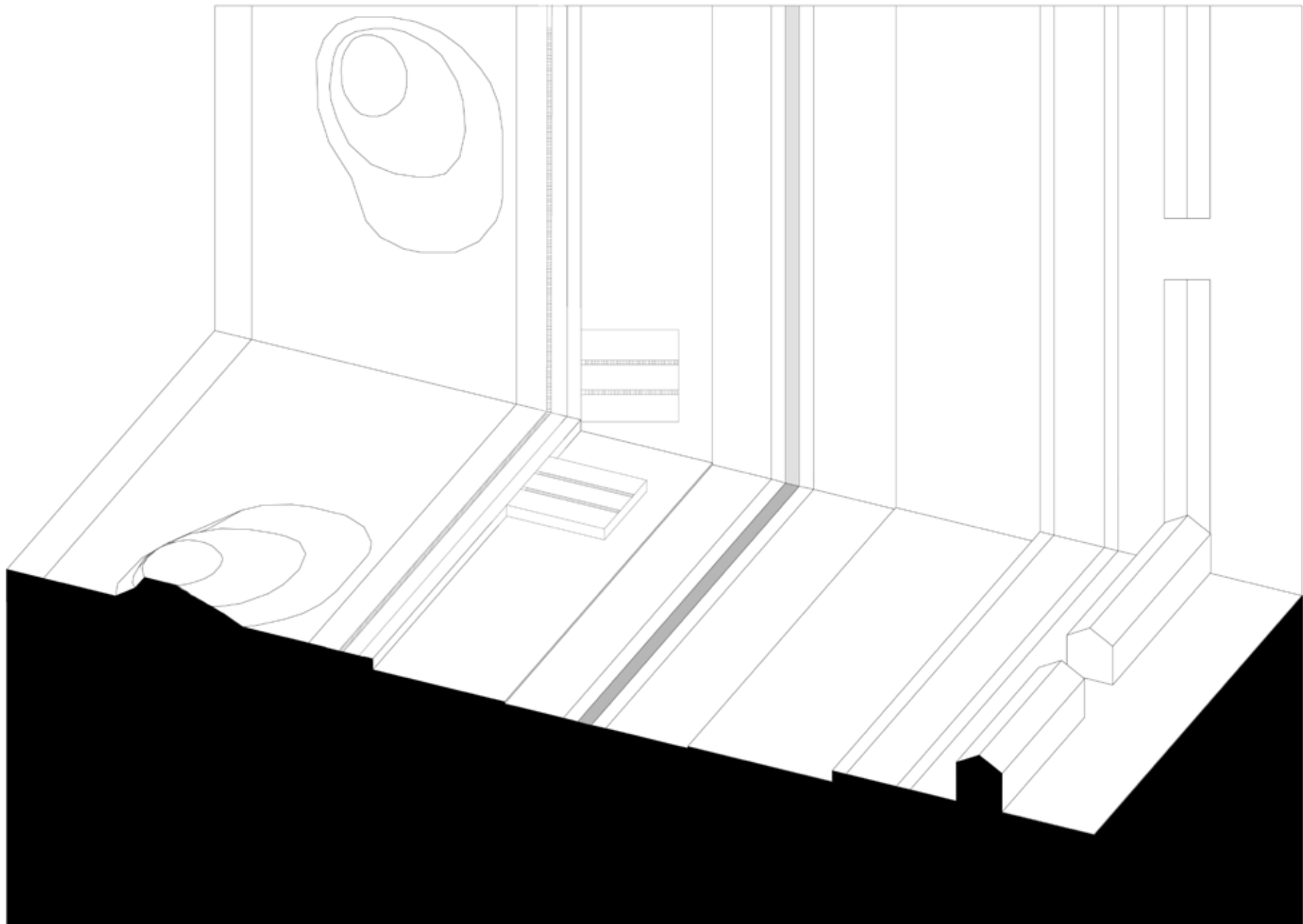


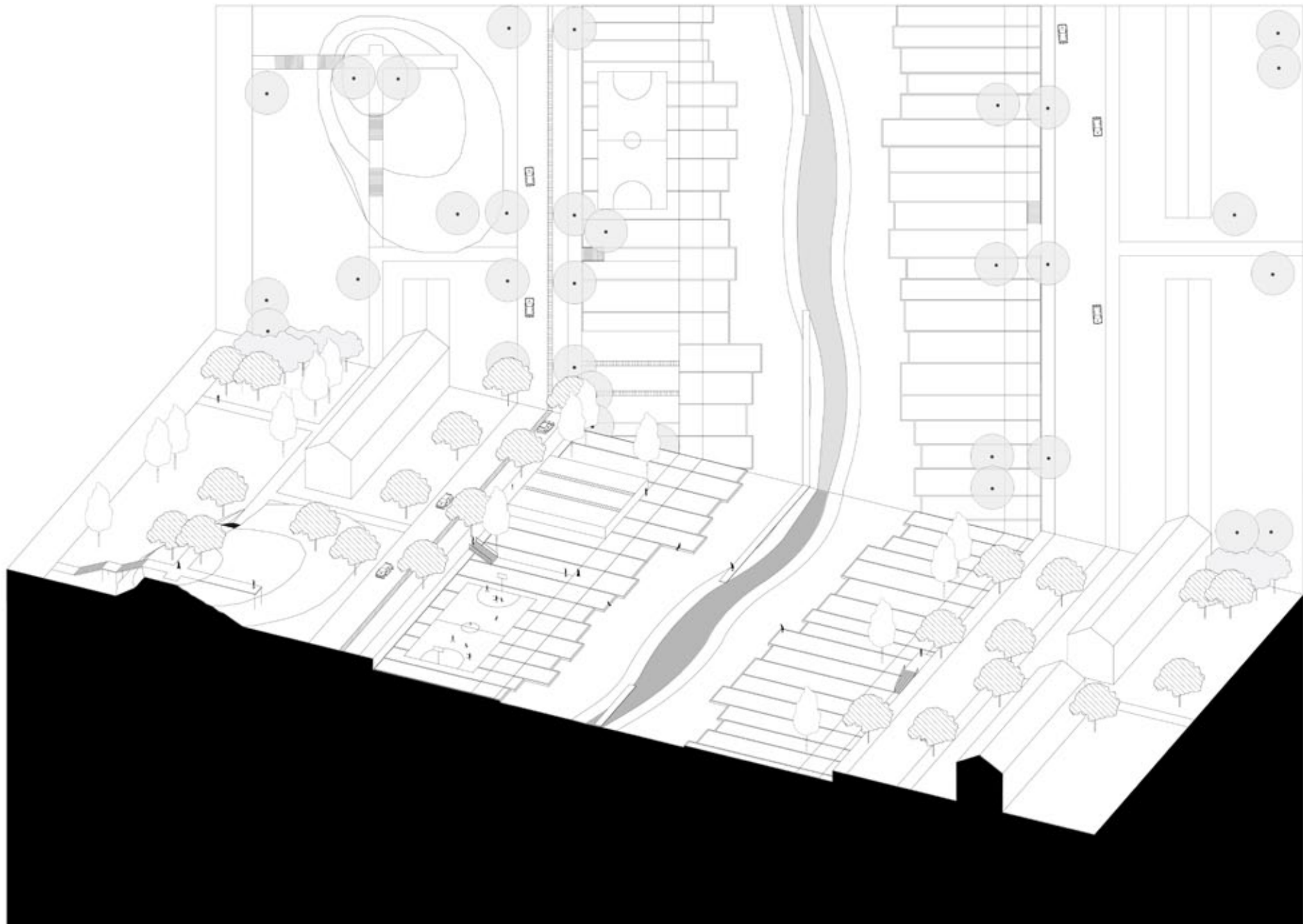
STRUCTURE

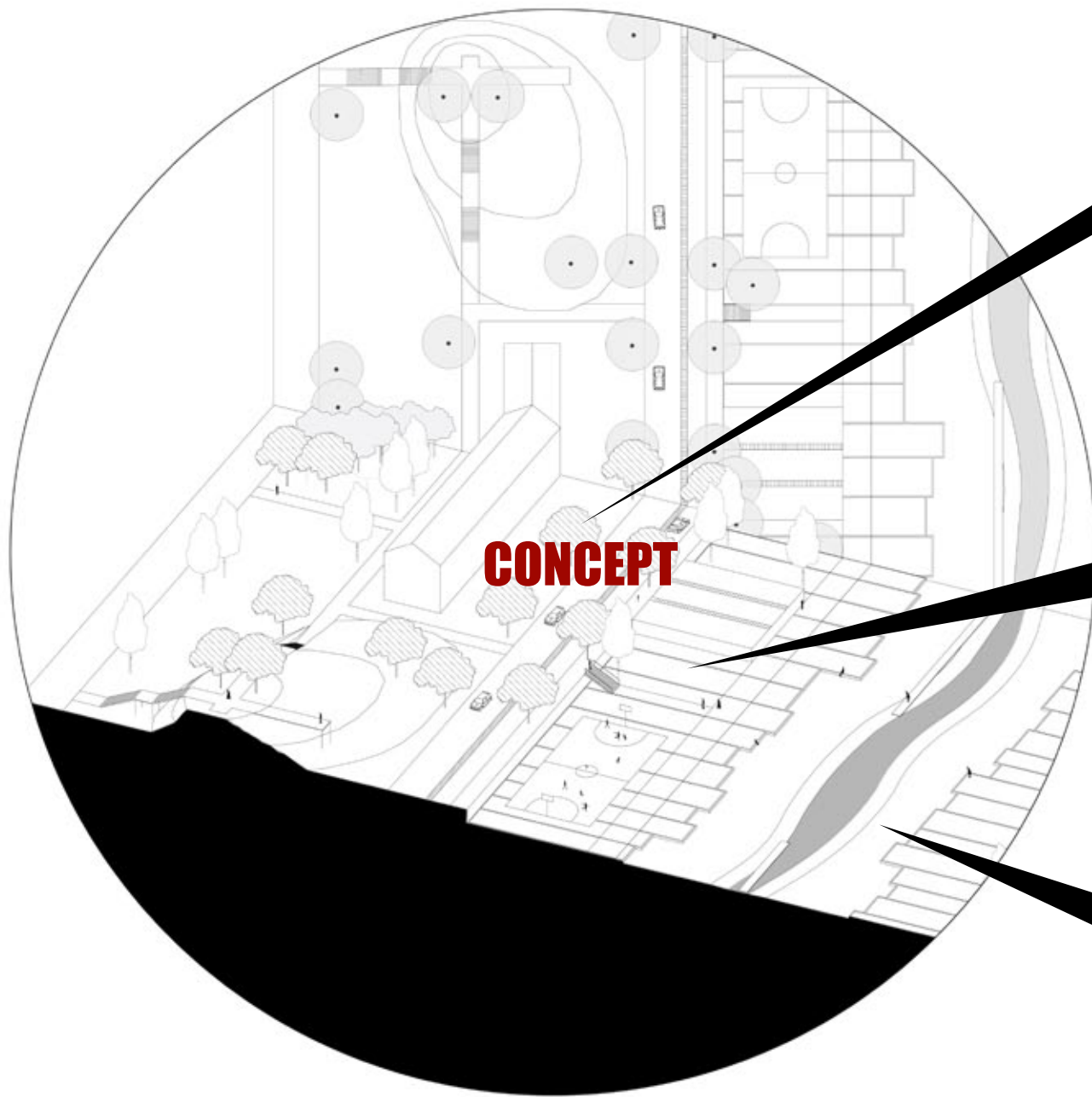
CHAPTER 3: DESIGN OF THE PARK











CONCEPT



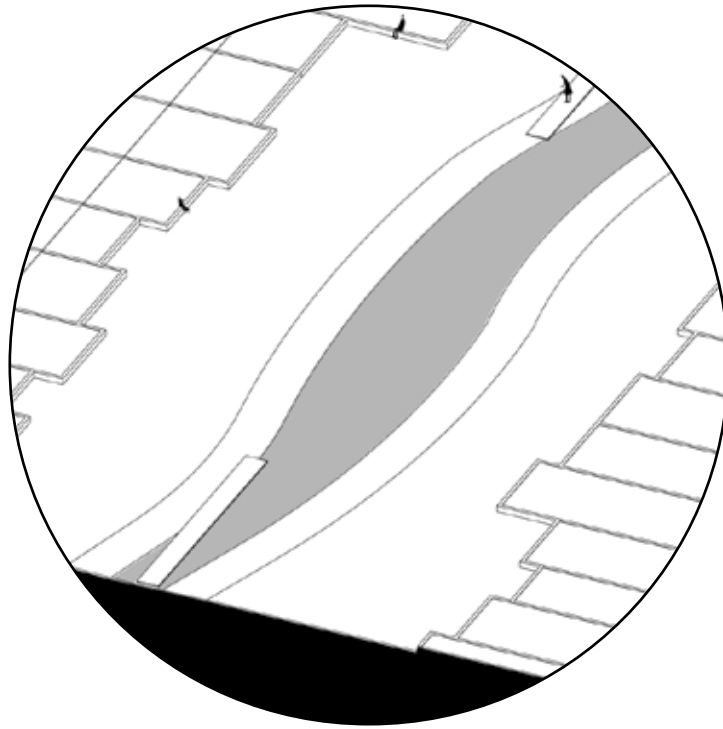
URBAN ROUTE
Urban layer
(Flood prevented)



CULTURE ROUTE
Floodplain layer
(Flood in extreme rainy day)



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

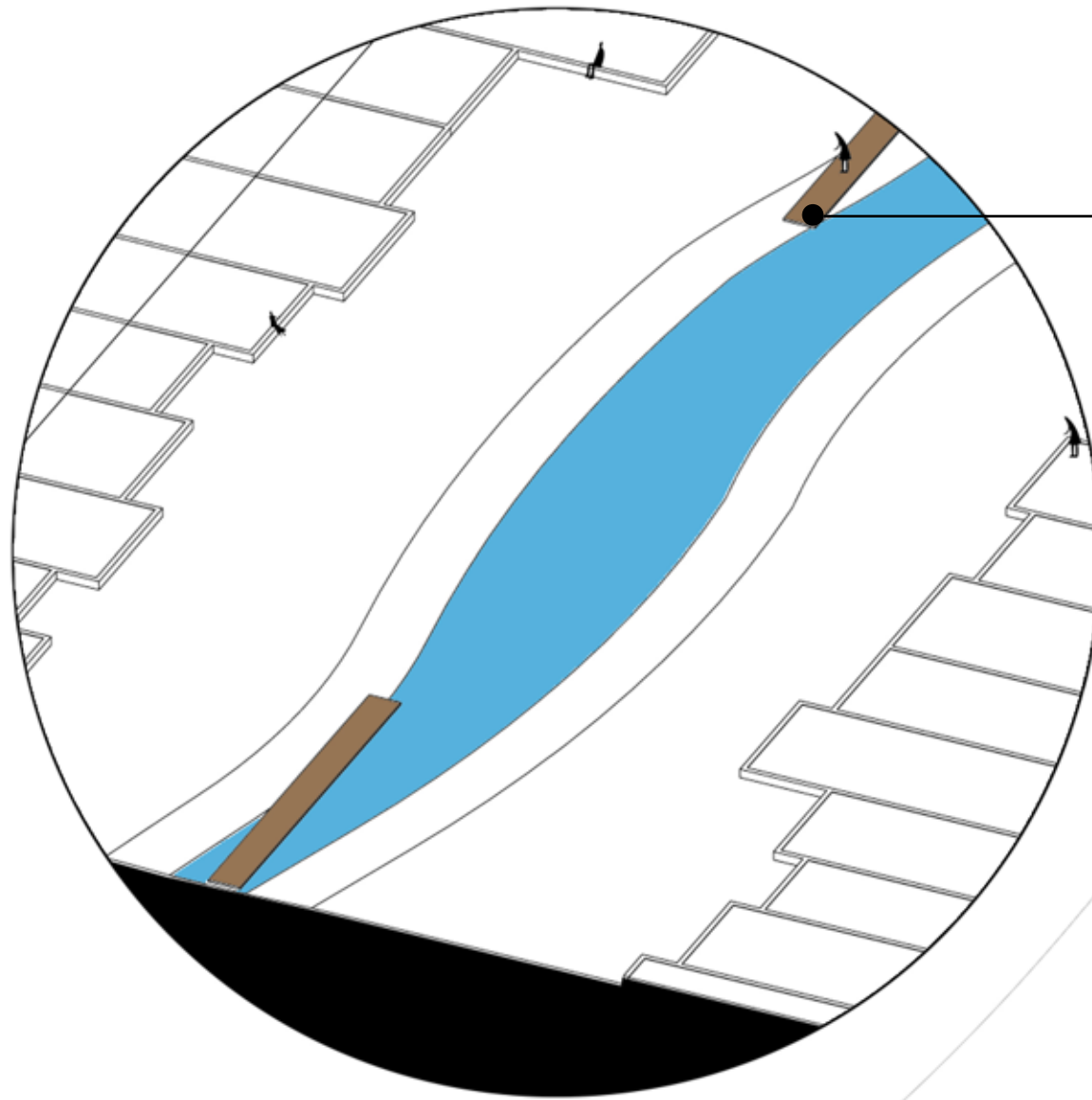


NATURE ROUTE

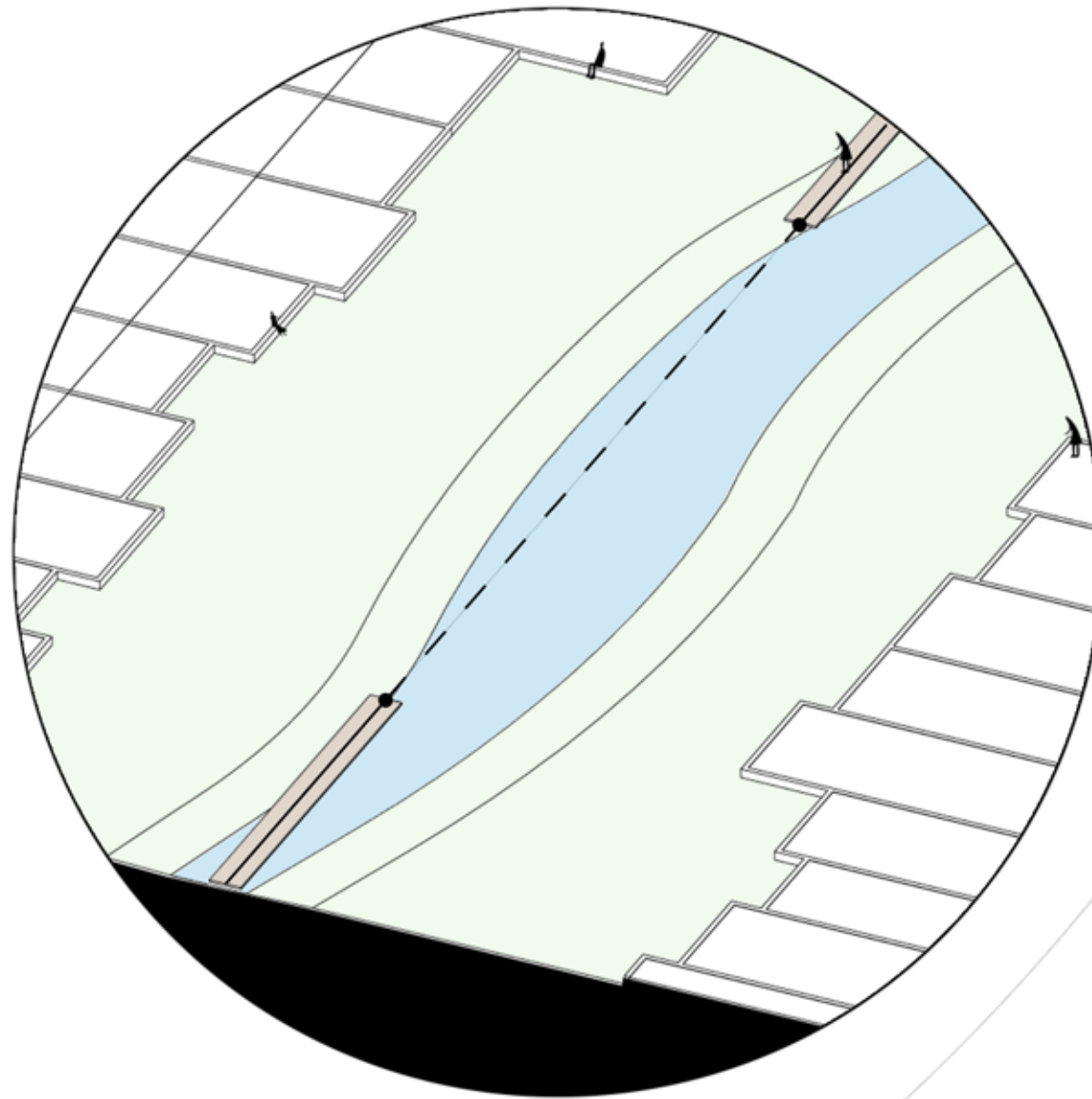
water way layer
(Regular flood in rainy day)



STRENGTH THE INTERACTION BETWEEN NATURE AND PEOPLE



DISCONNECTION WOOD PATH ALONG THE WATER



Grass Land



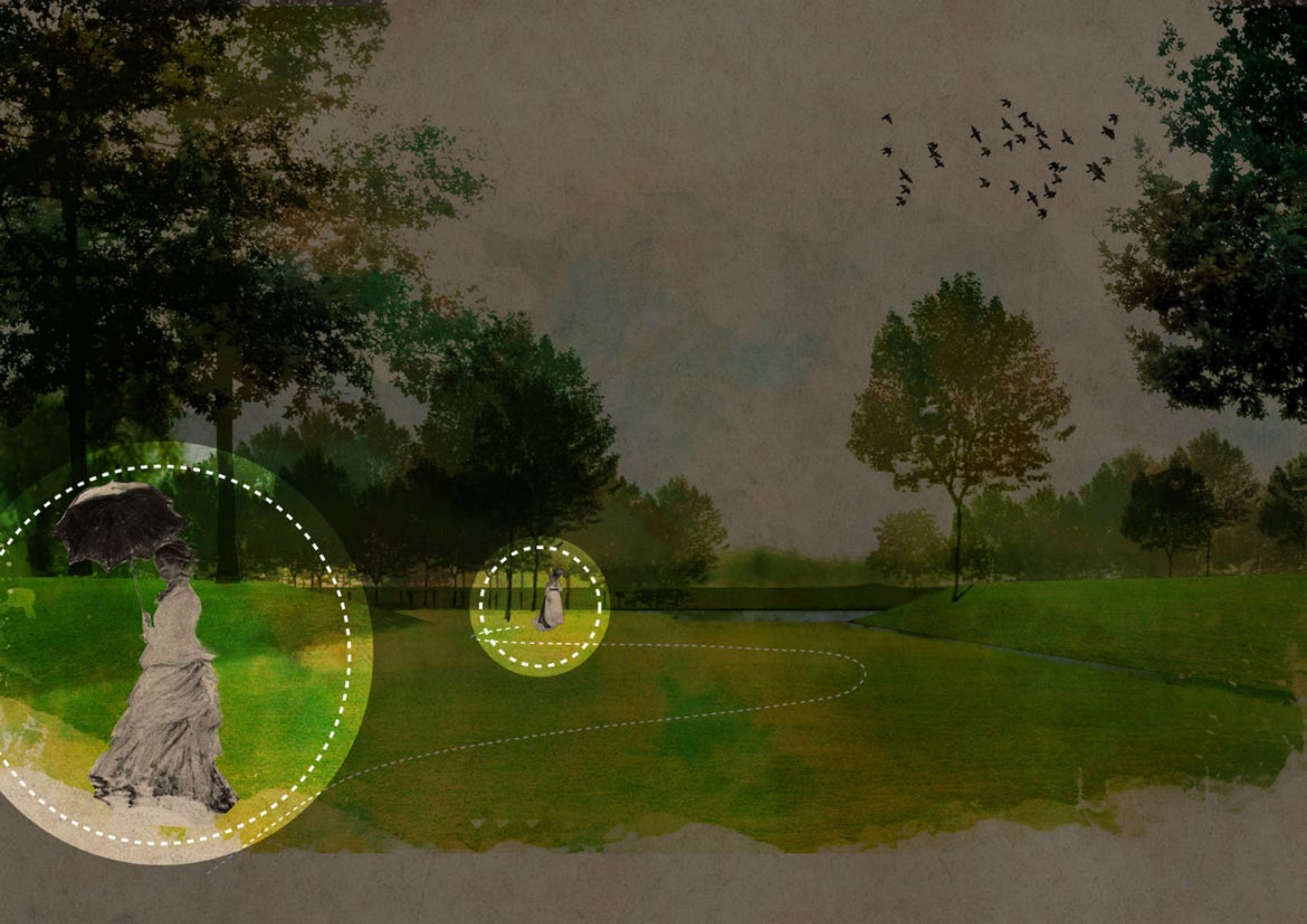
Wet Land



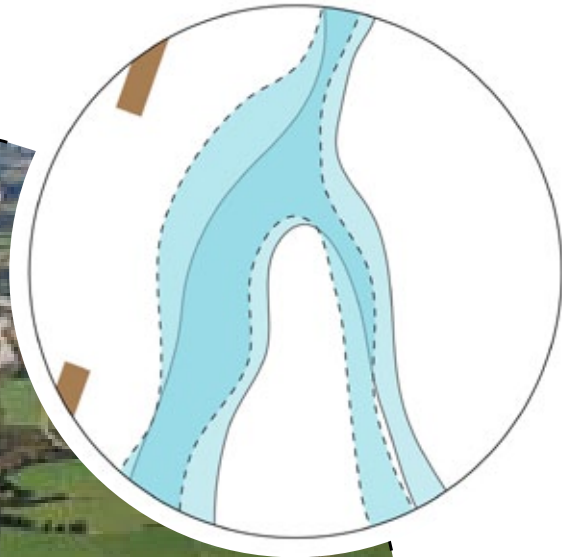
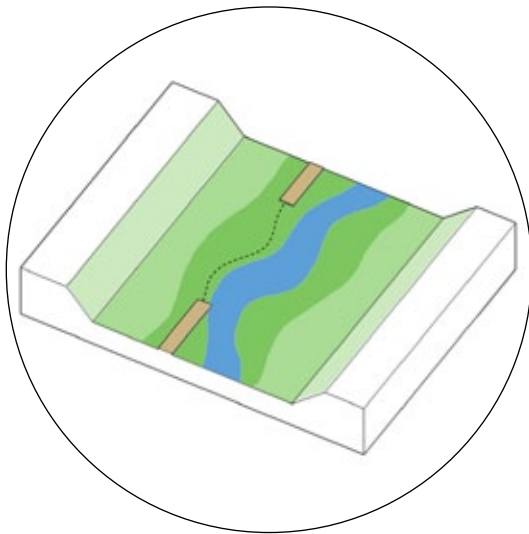
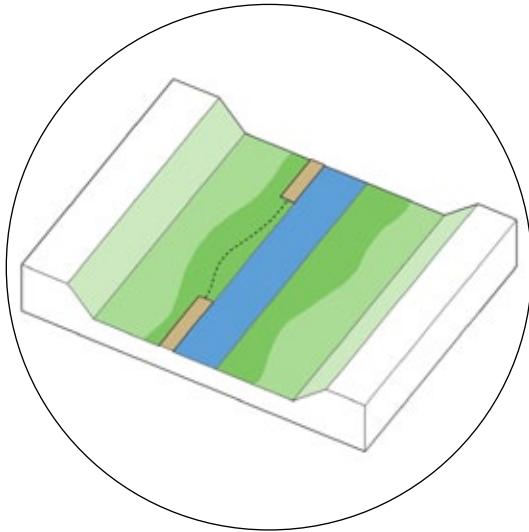
Water

WALK THEIR OWN WAY

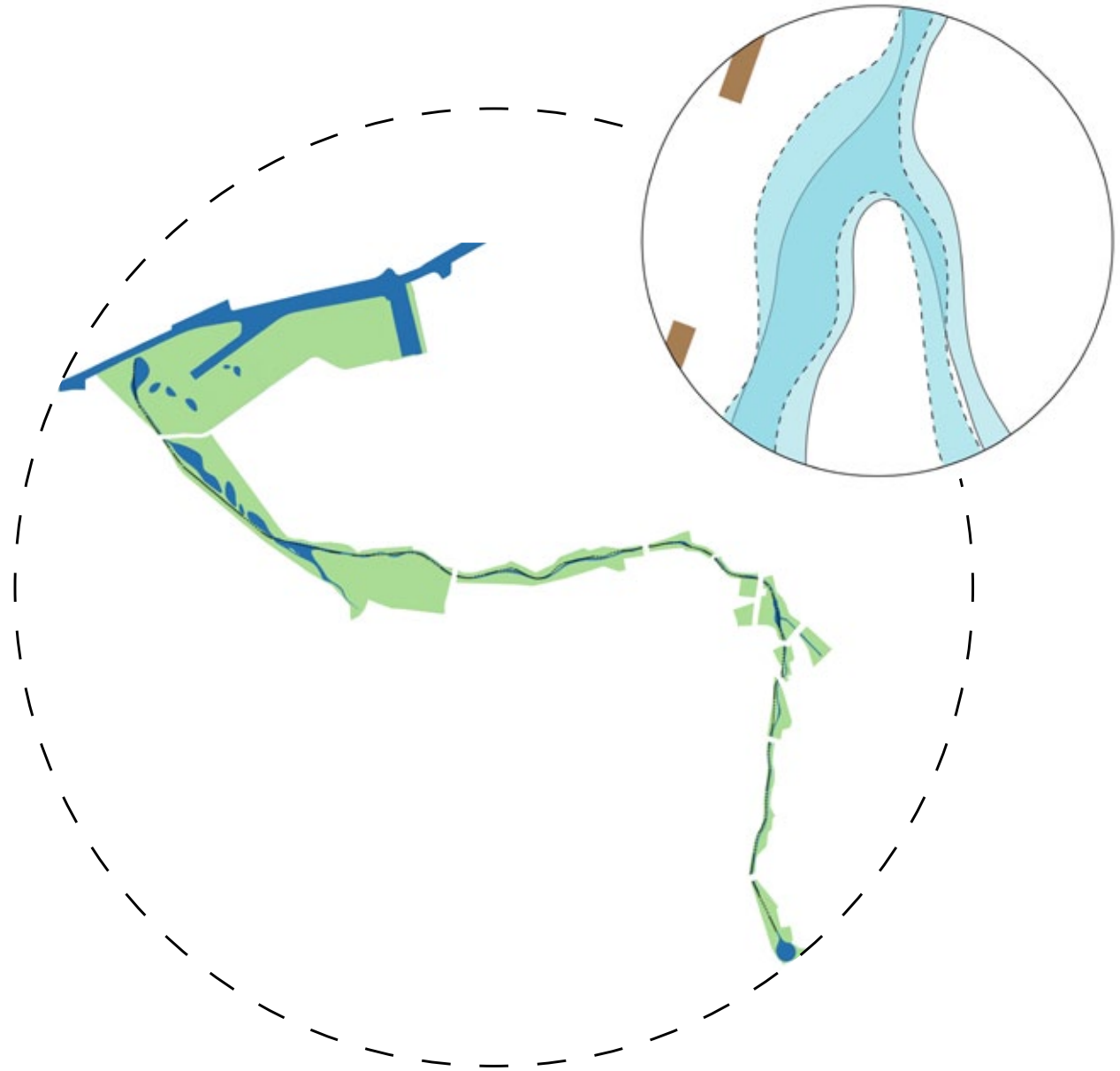
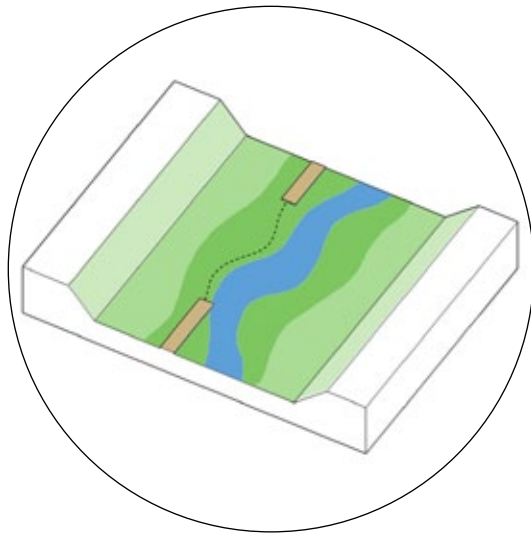
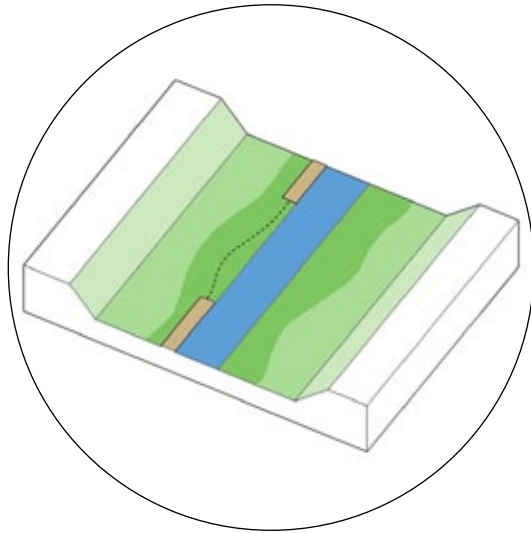




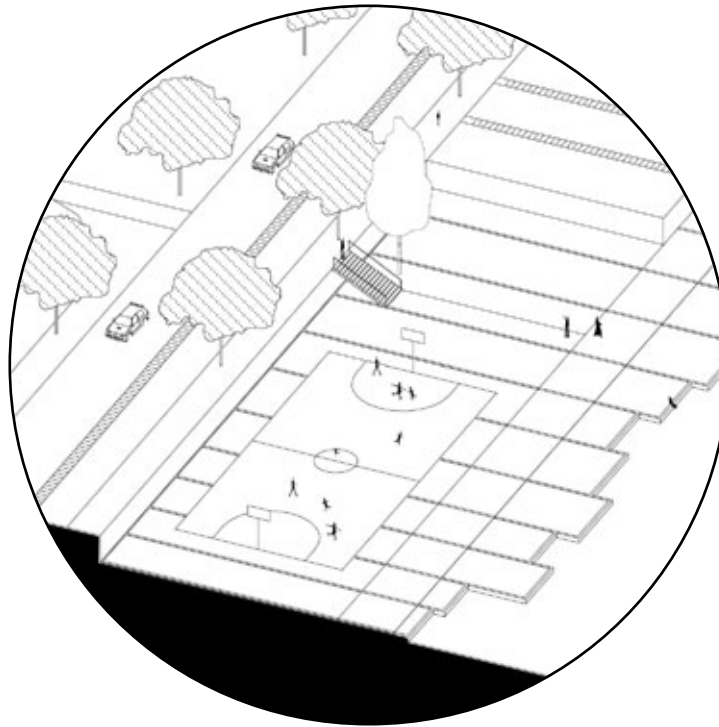




WATER VALLEY



WATER VALLEY



CULTURE ROUTE

Floodplain layer
(Flood in extreme rainy day)



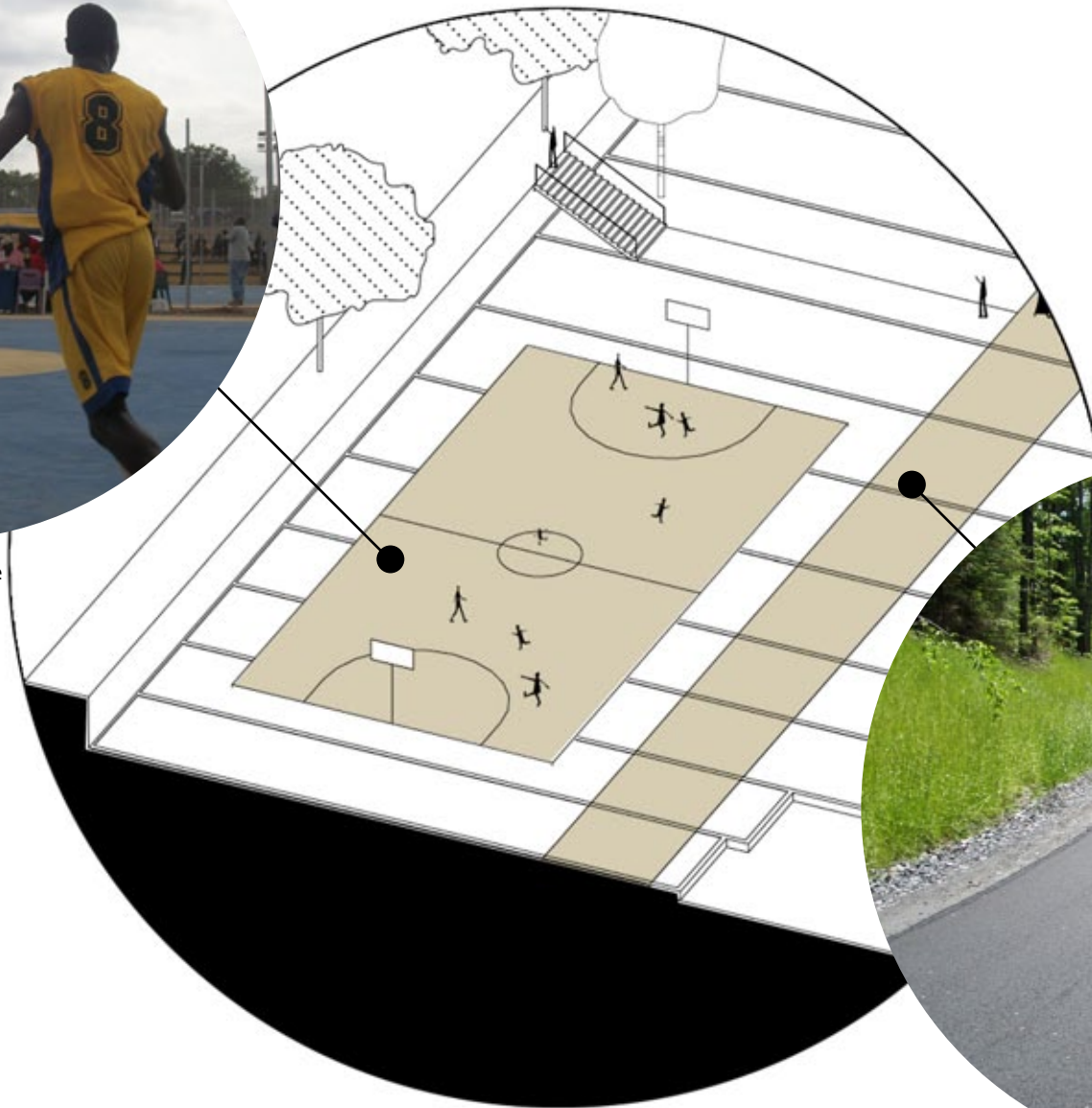
FLOODPLAIN



CULTURE



Public activities space



Main Route in the Park

MAIN ROUTE IN THE PARK, A SPACE FOR SOCIAL INTERACTION

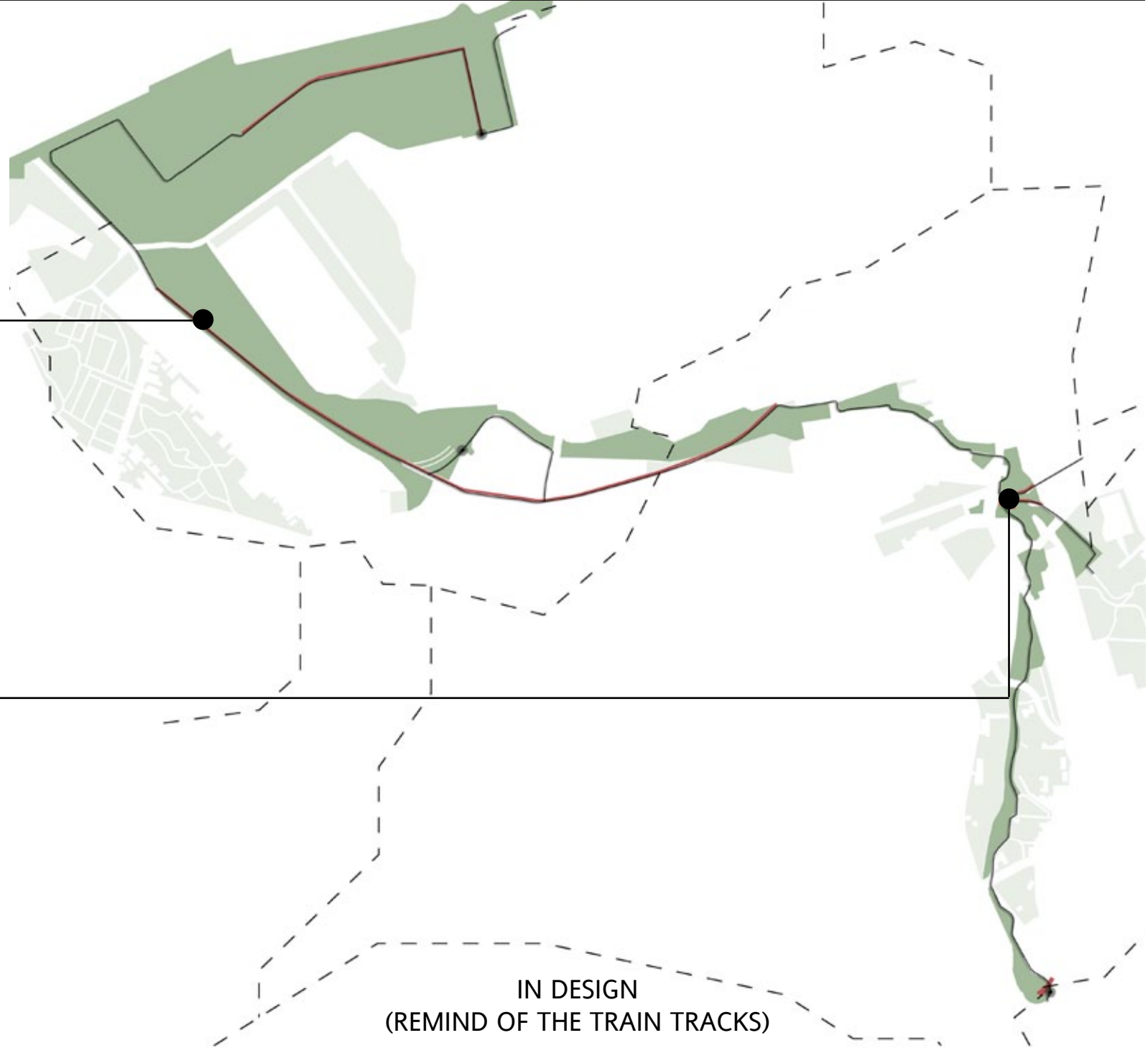
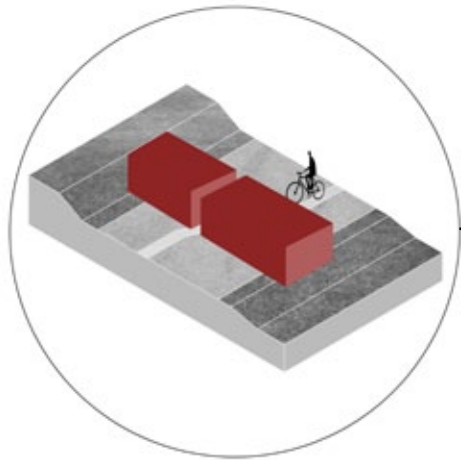
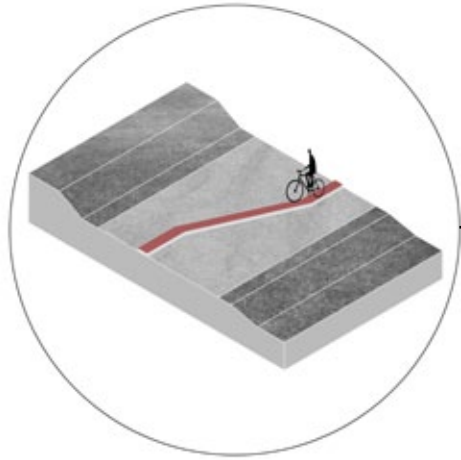


You see people playing , you hear people talking, laughing, singing, shouting

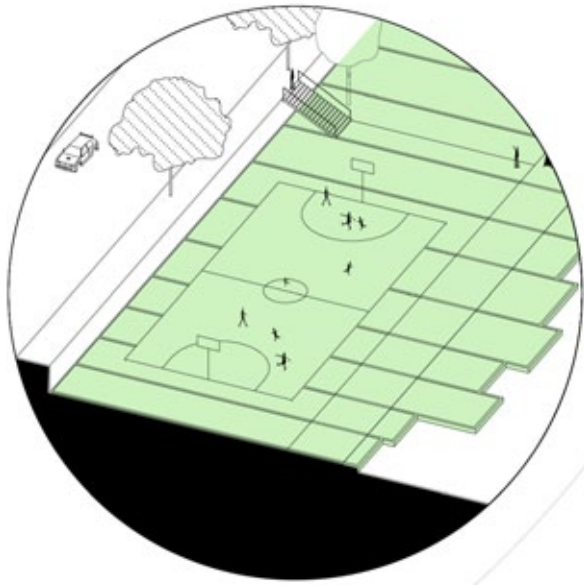


You participate into the activities

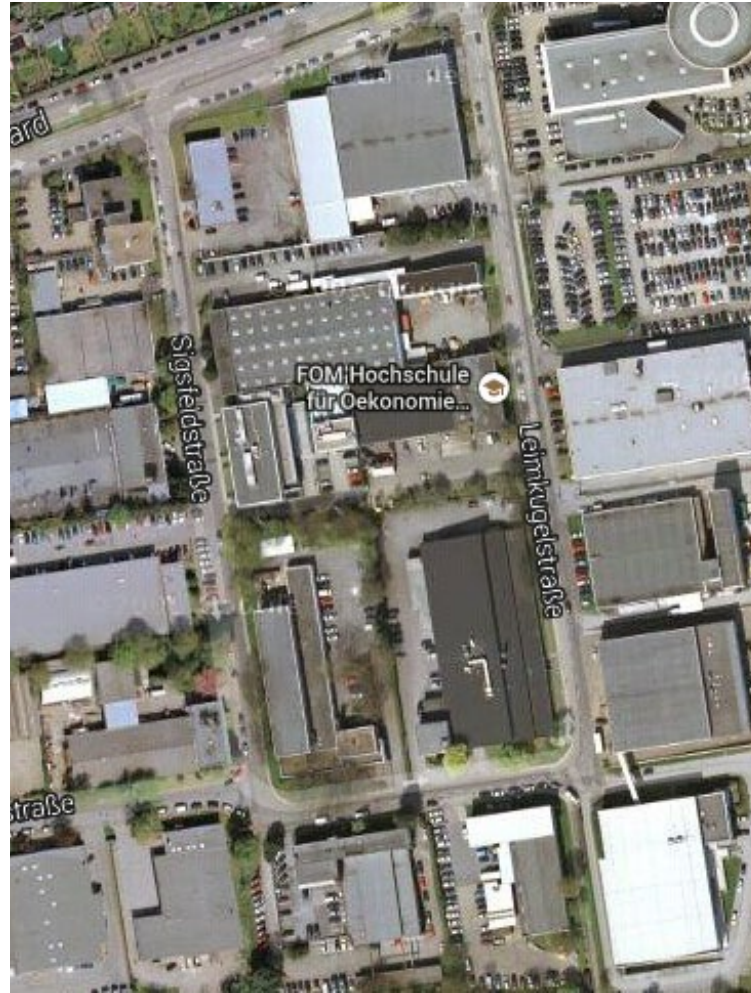
DESIGN STRATEGY (path)



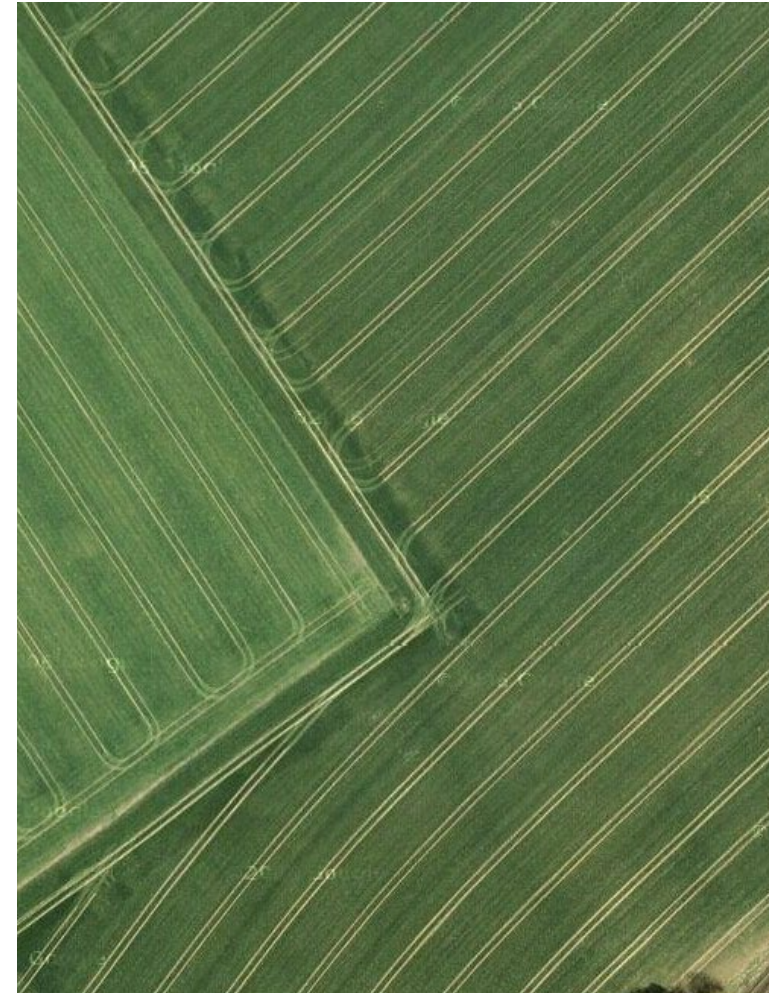
IN DESIGN
(REMINDE OF THE TRAIN TRACKS)



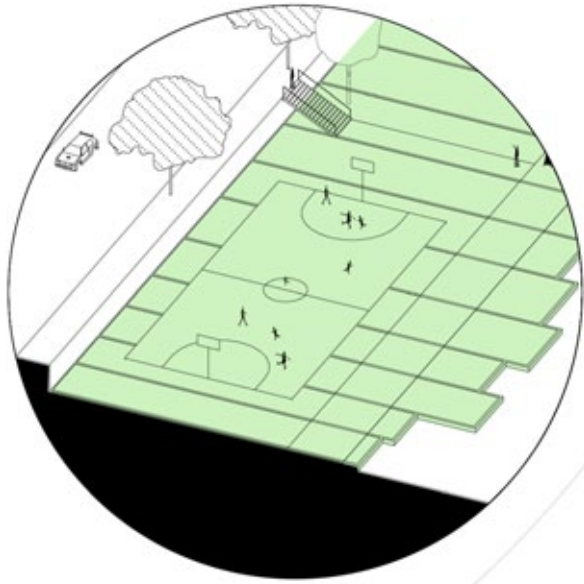
NEW CULTURE
LANDSCAPE



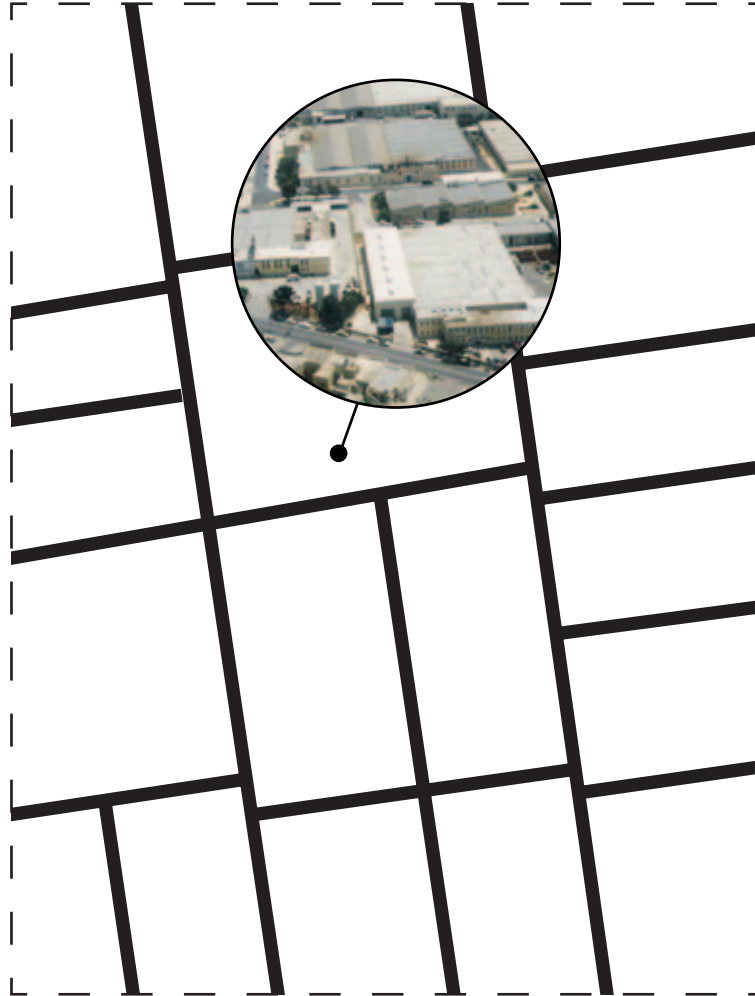
Industry landscape



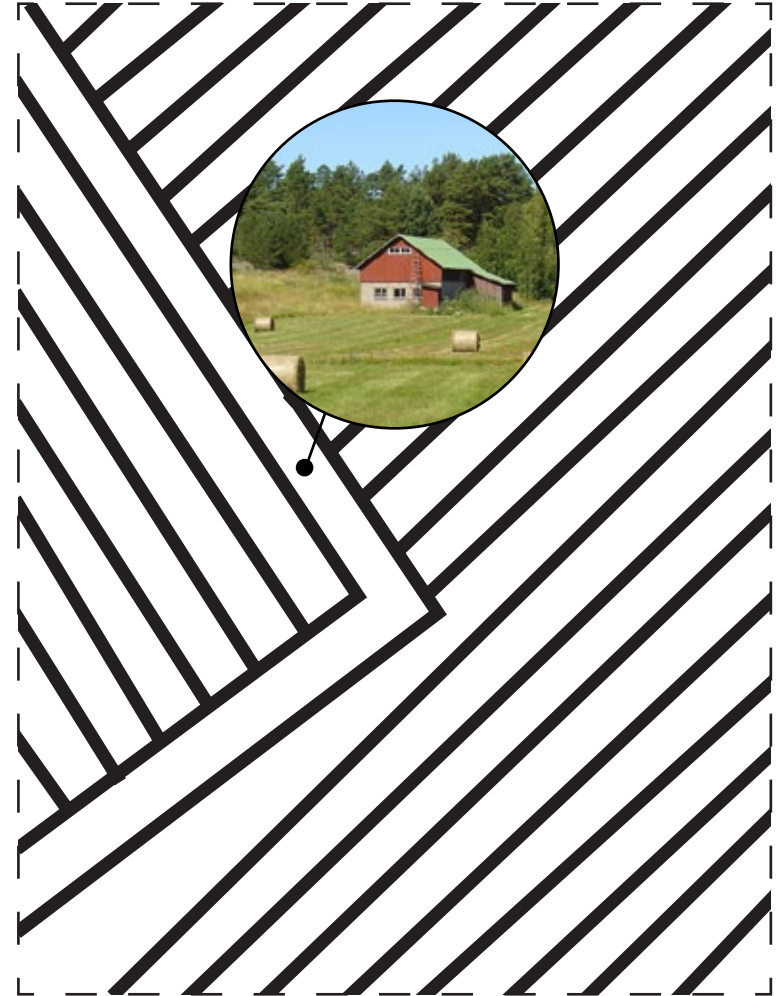
Agriculture Landscape



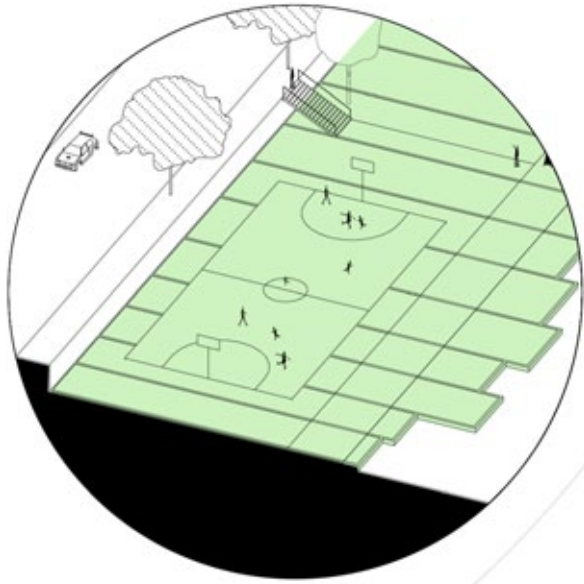
FUNCTION ORIENTED
RECTANGLE ARRAY



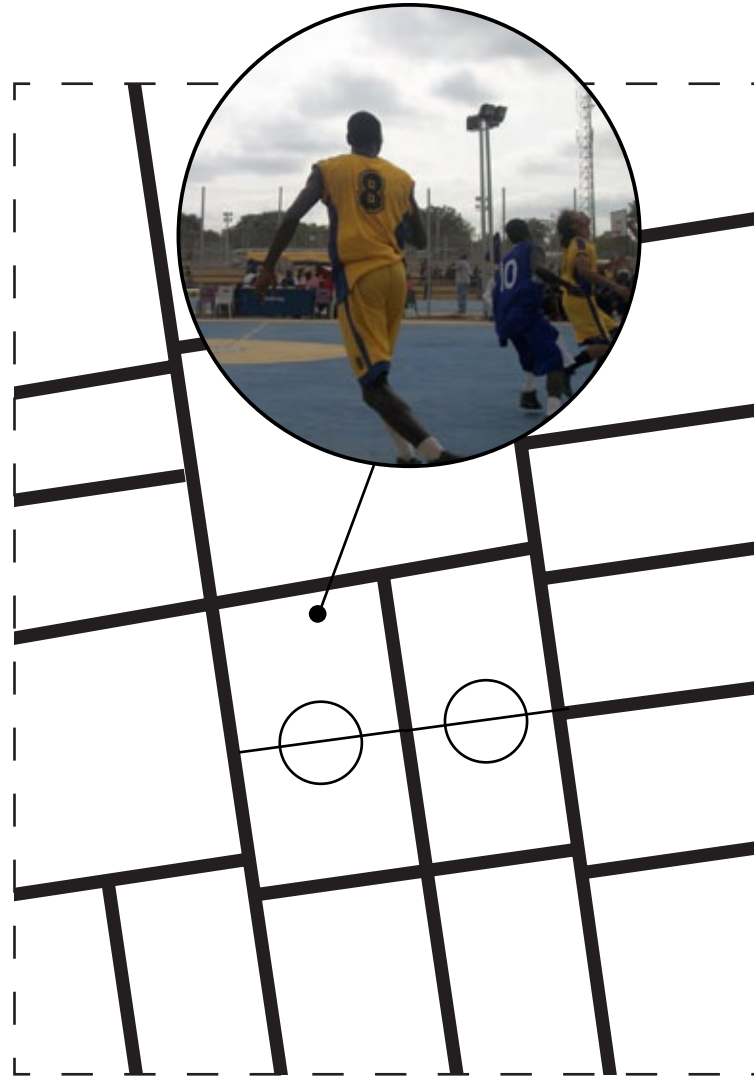
Factories



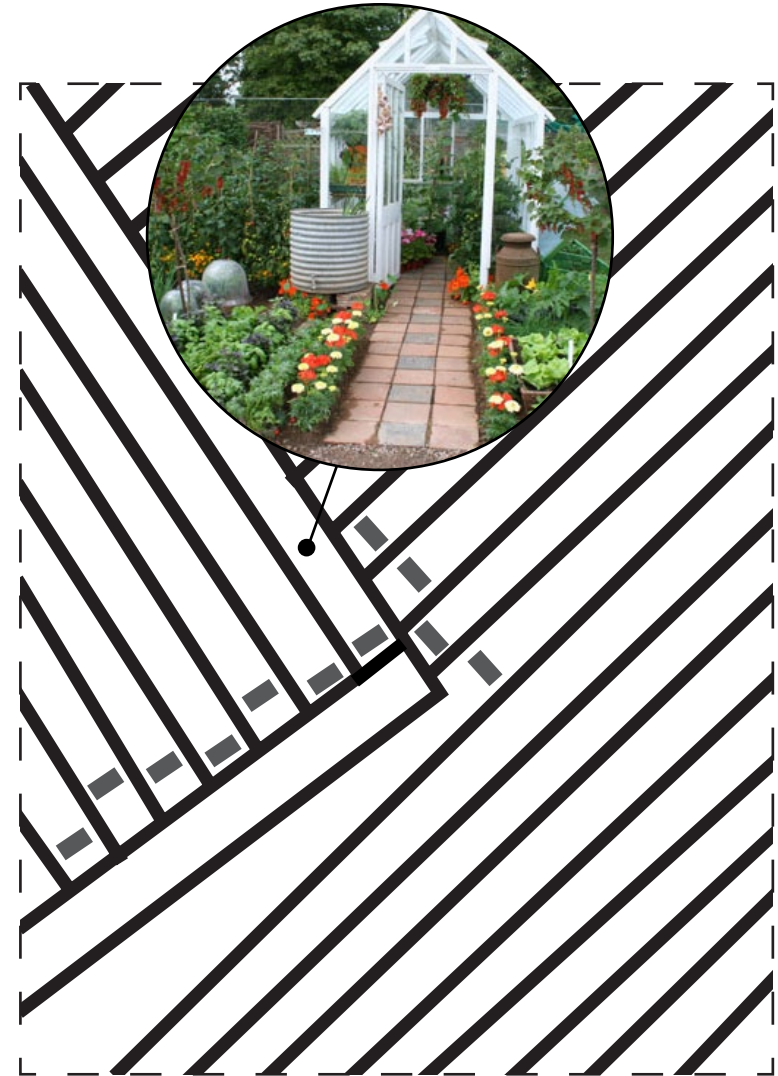
Agriculture Fields



FUNCTION ORIENTED
RECTANGLE ARRAY

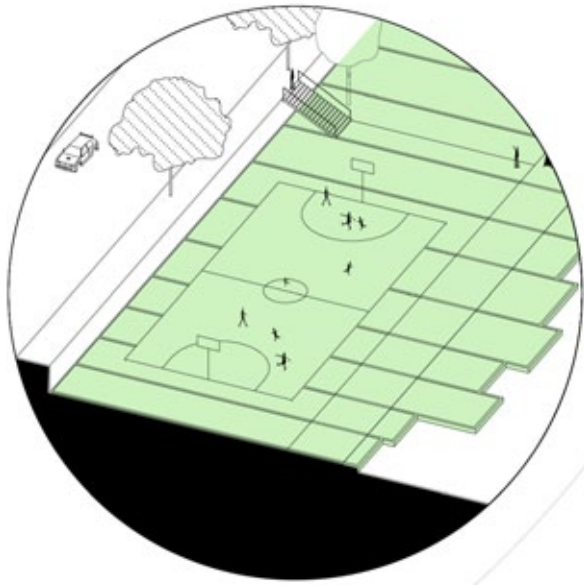


Sport yards

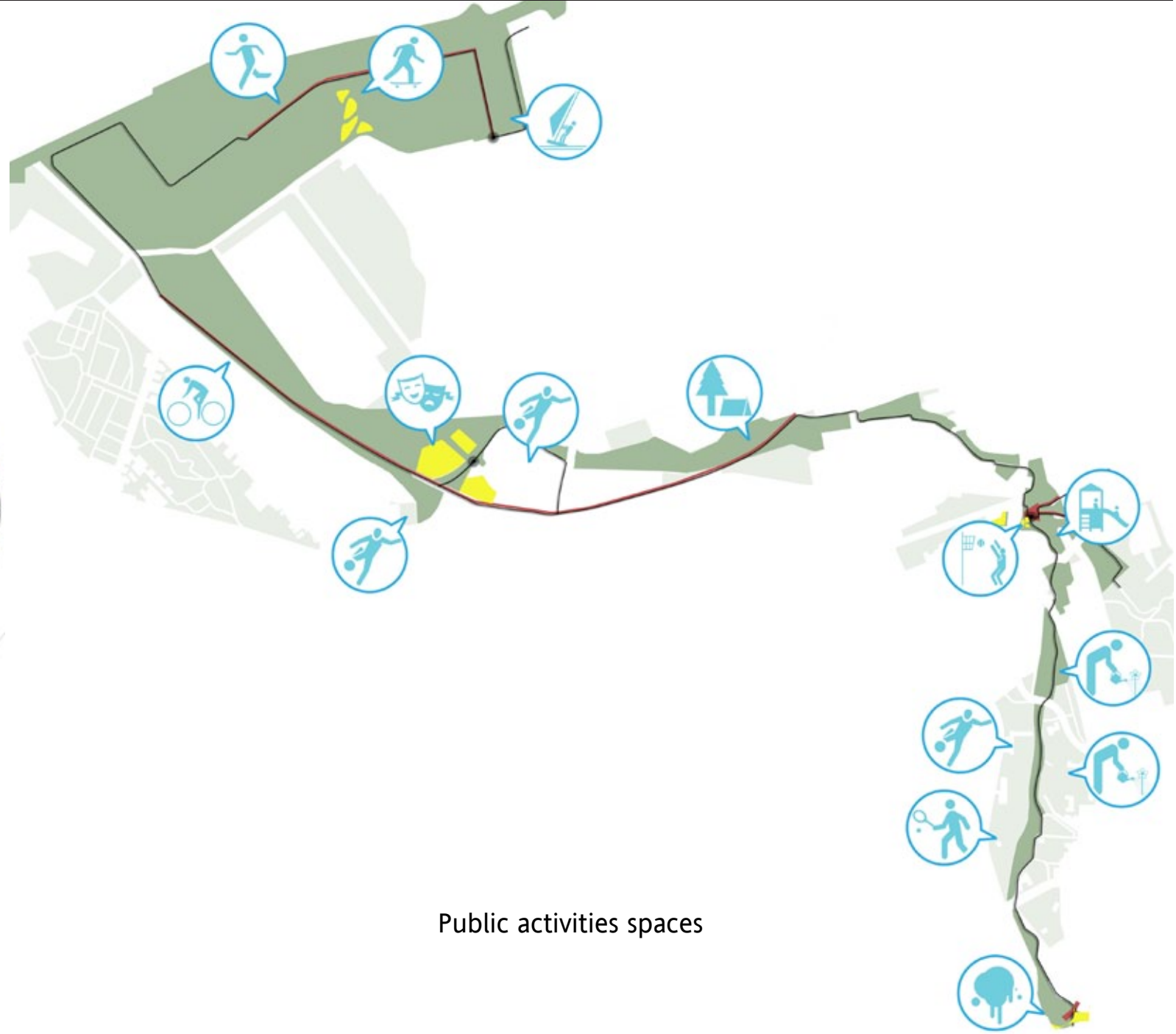


Allotment Garden

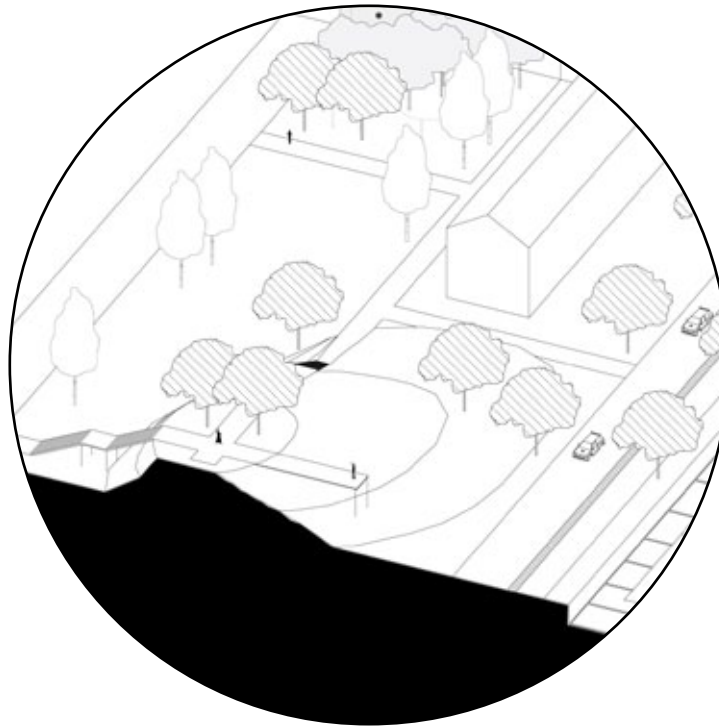
DESIGN STRATEGY (layer)



FUNCTION ORIENTED
RECTANGULAR ARRAY

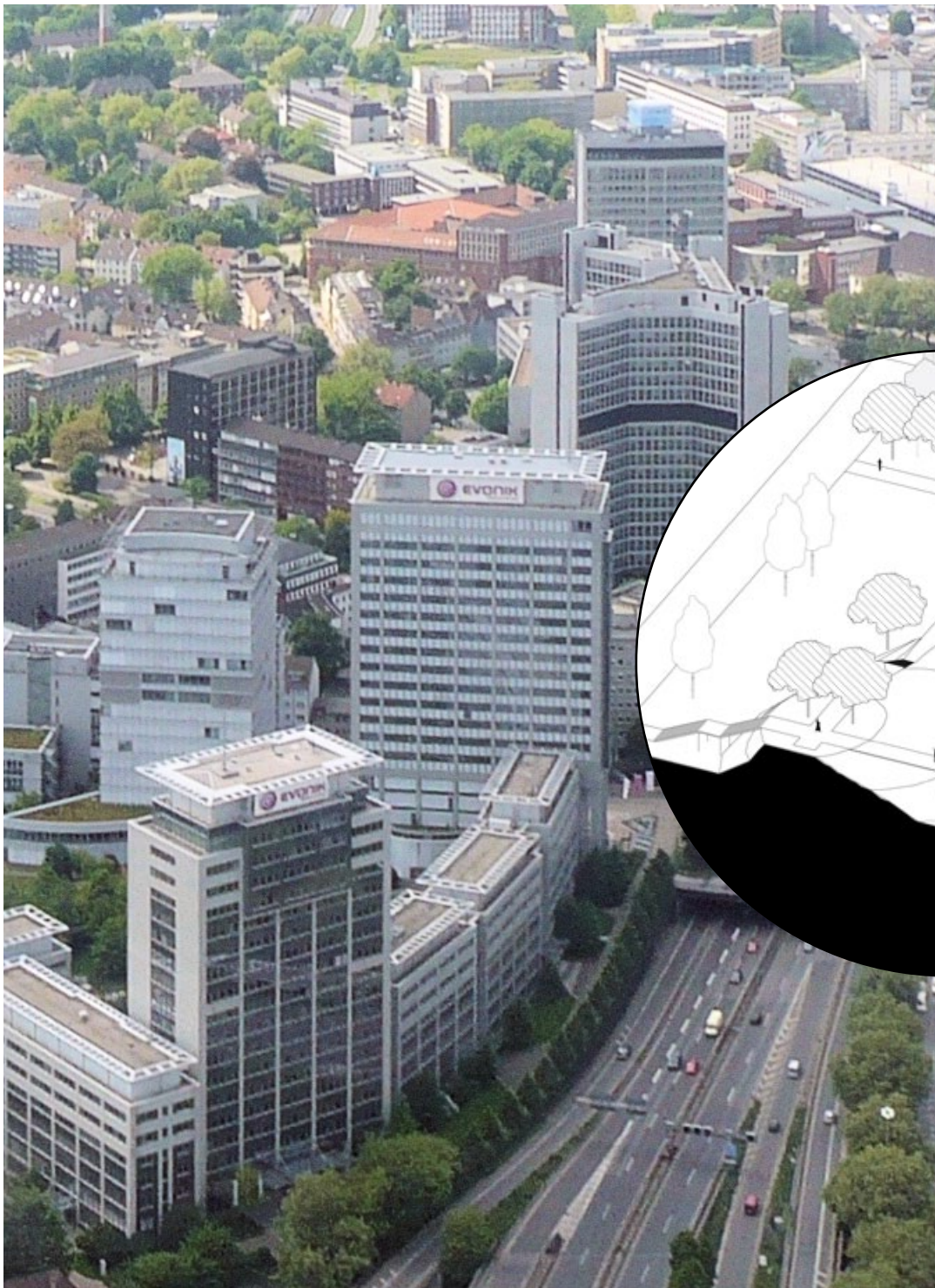


Public activities spaces



URBAN ROUTE

Urban layer
(Flood prevented)

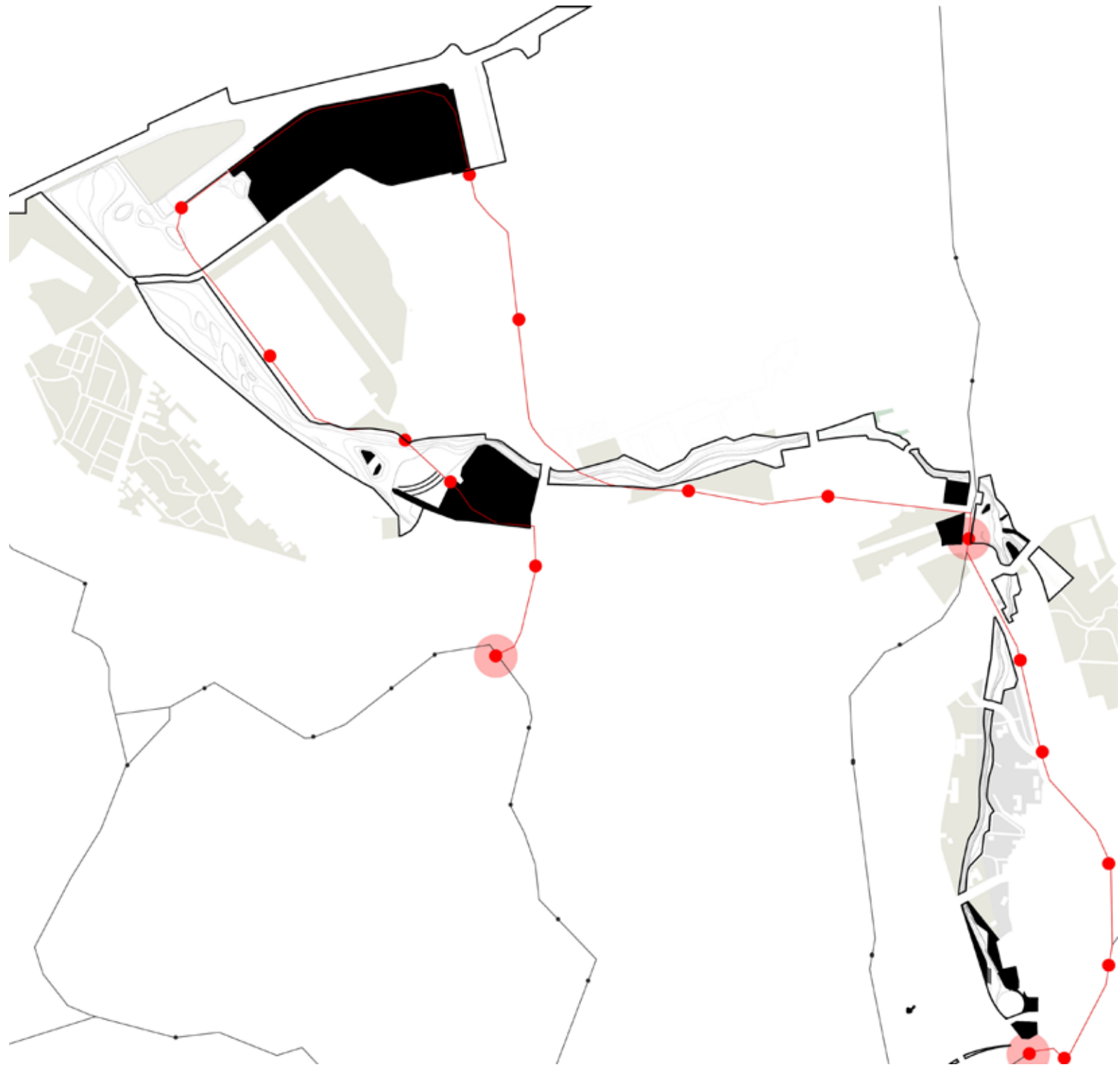


CITY



PARK

"BROWN LINE
SPECIAL LINE"



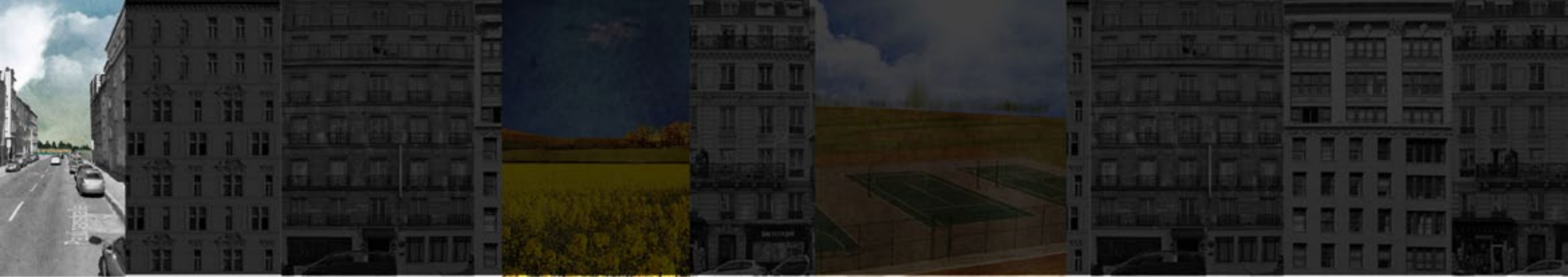


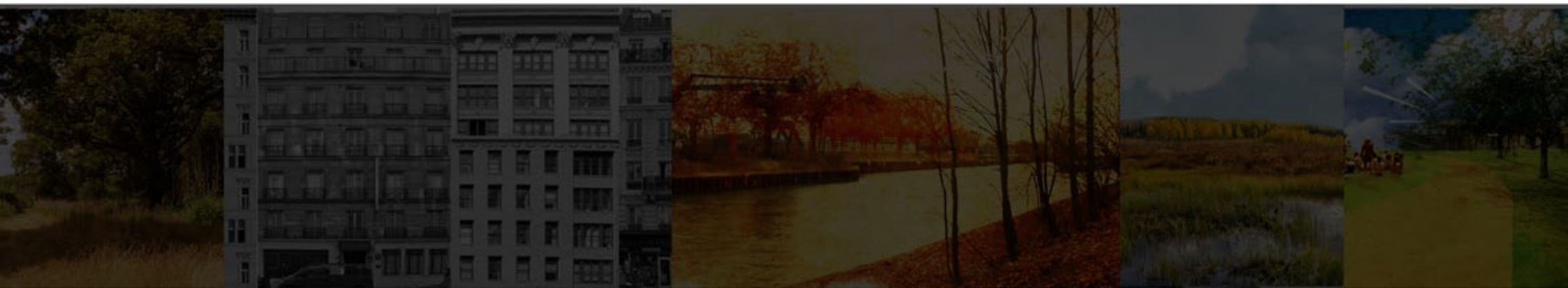
1. NOTICE

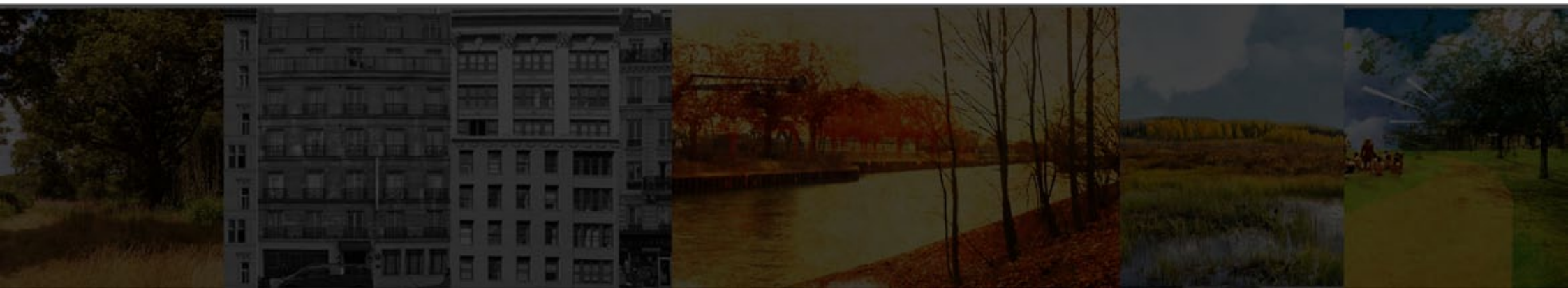
2. PASS

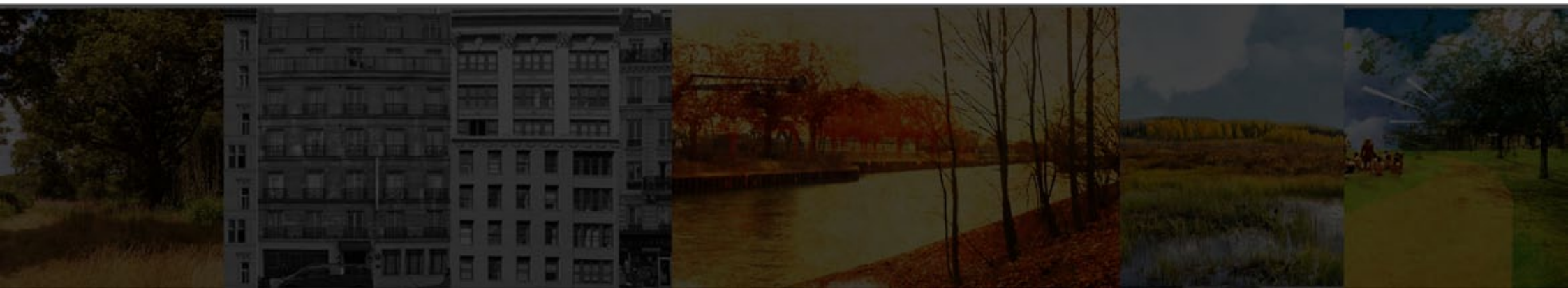
3. IN

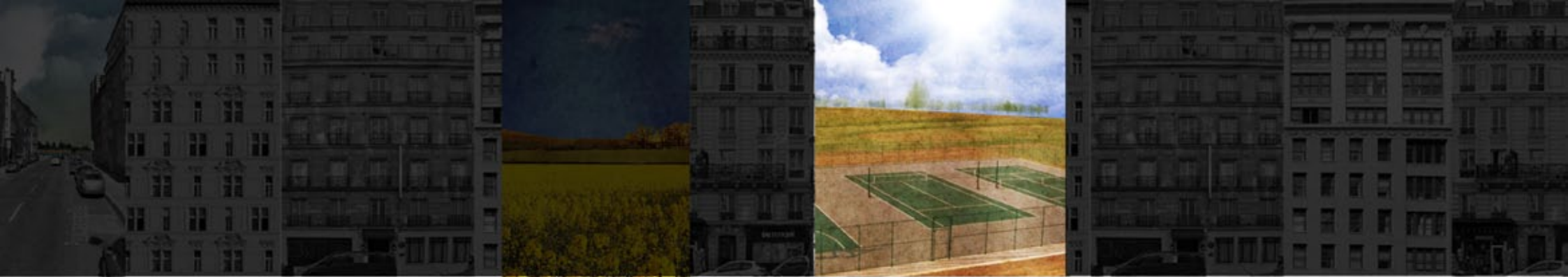
A TOUR SHUTTLE BETWEEN CITY AND PARK

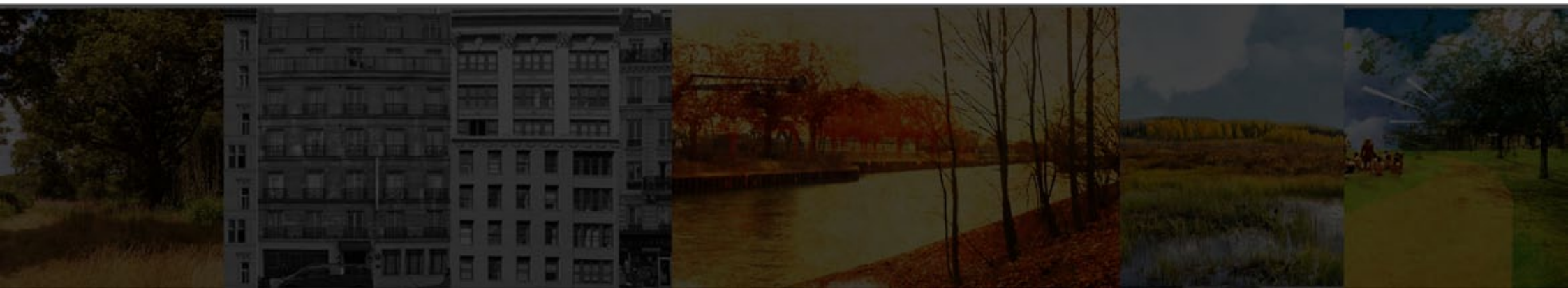


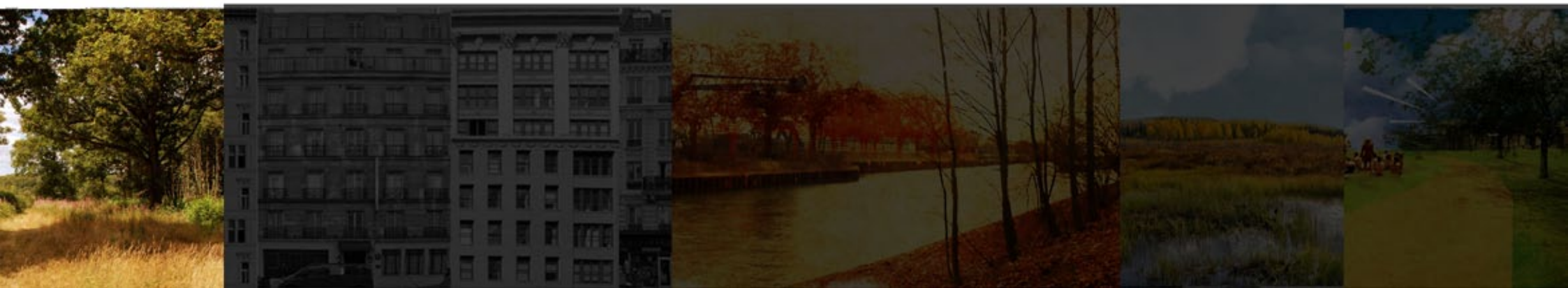












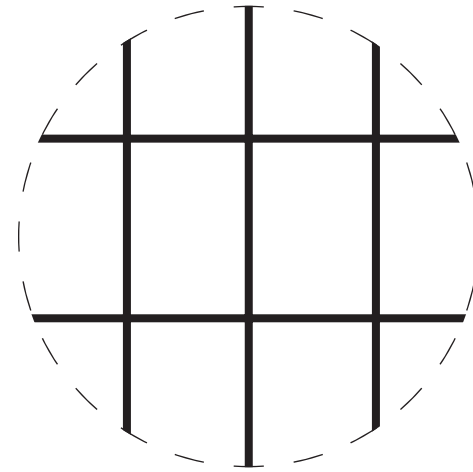
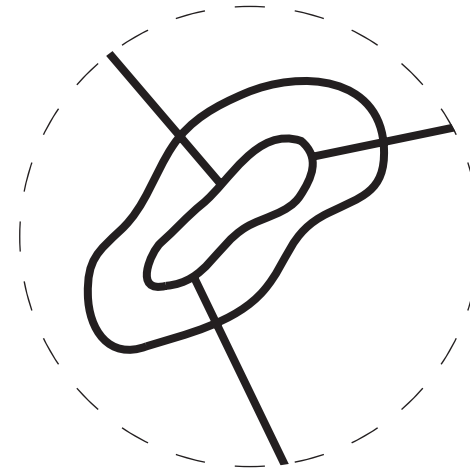
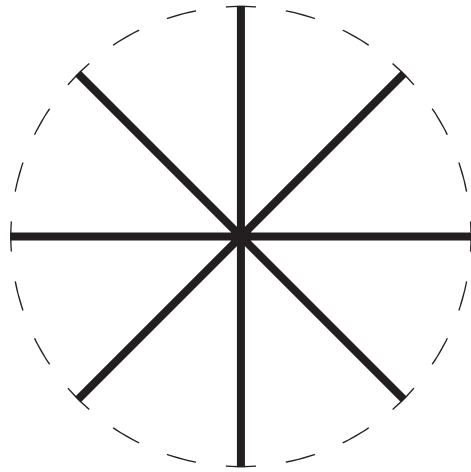








DESIGN STRATEGY (layer)



Essen



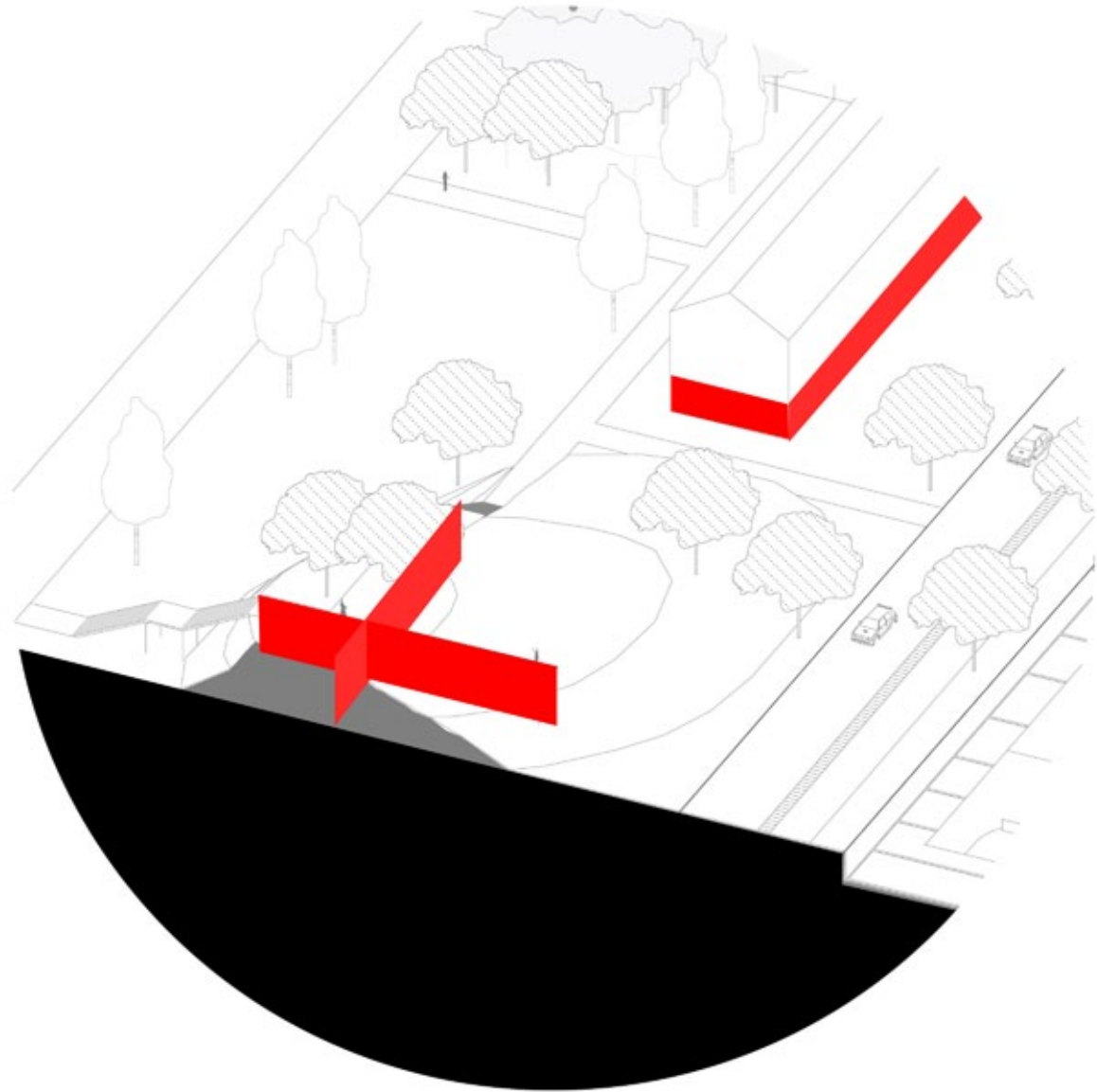
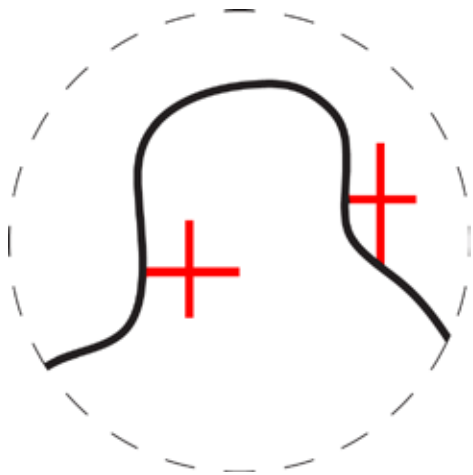
Paris



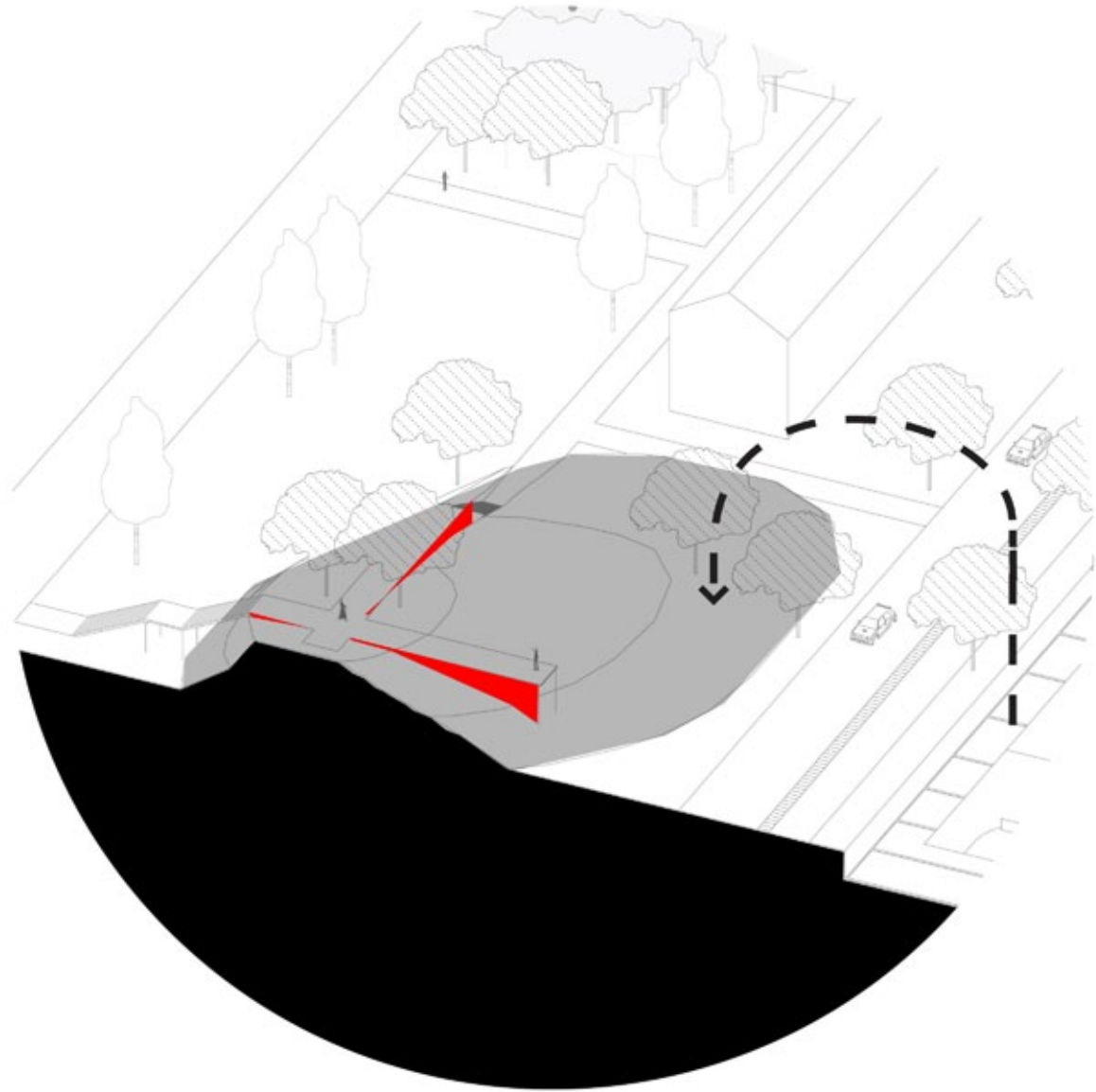
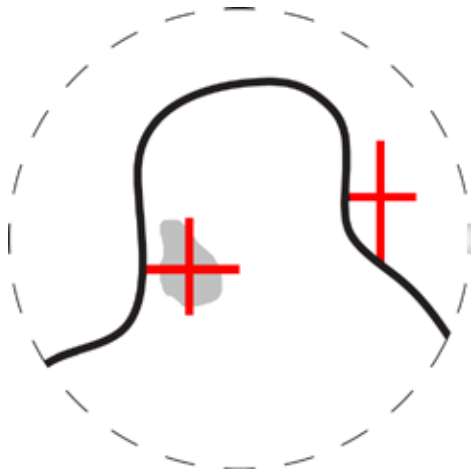
Rome

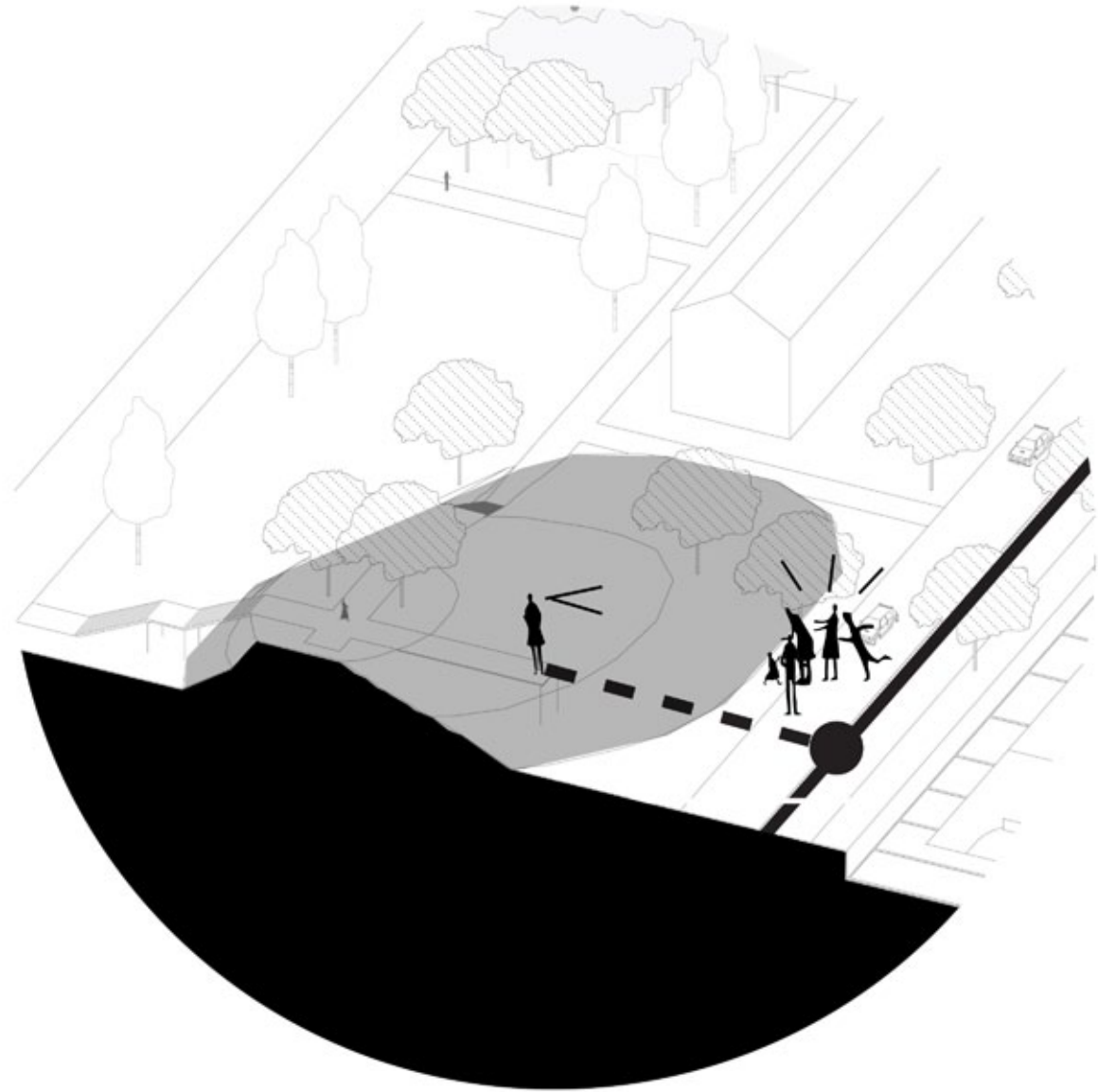
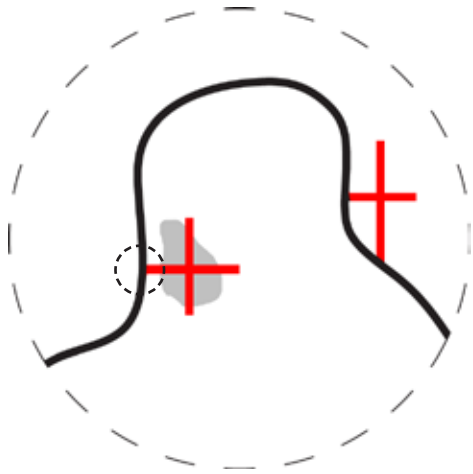


Rotterdam

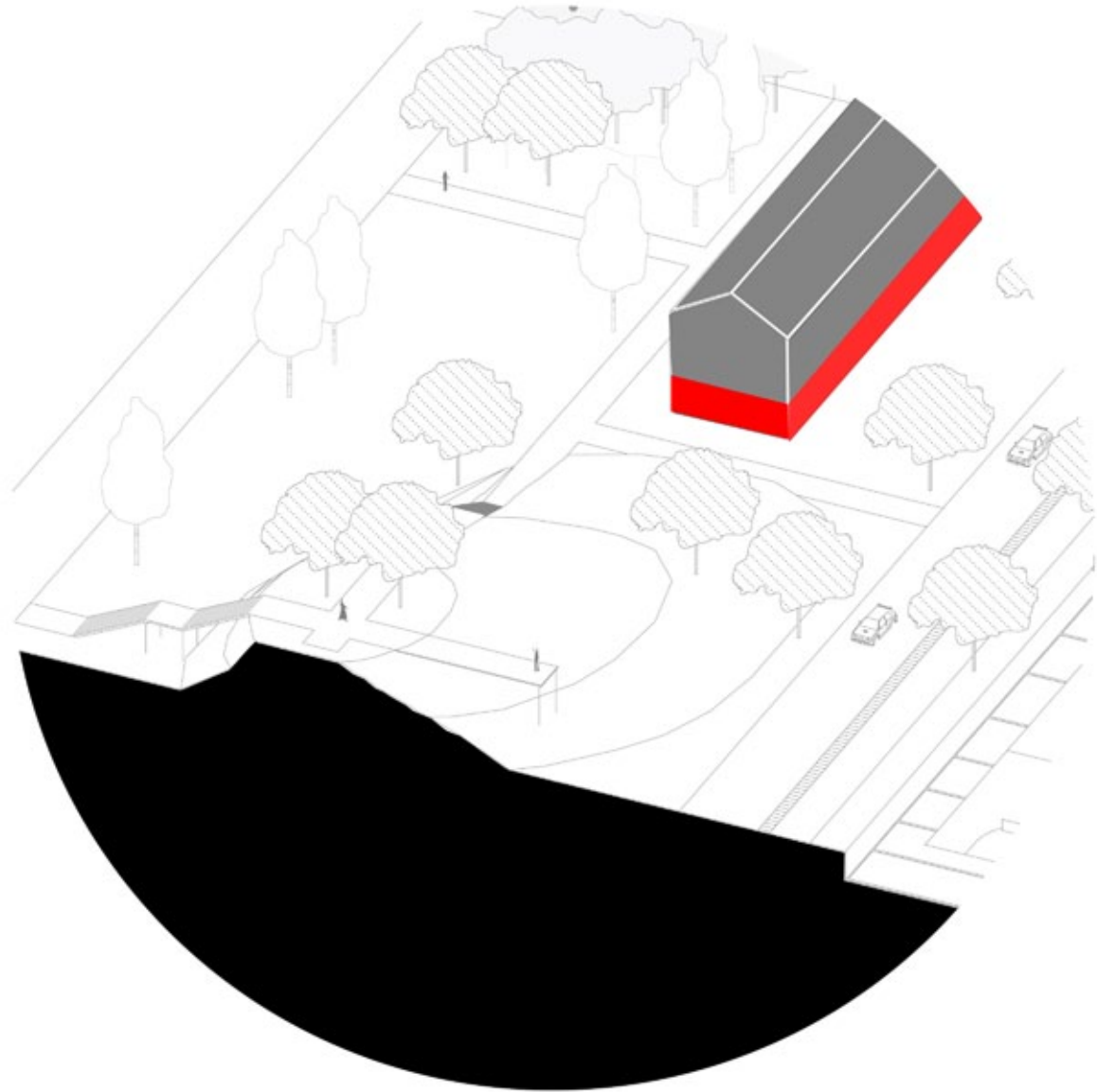
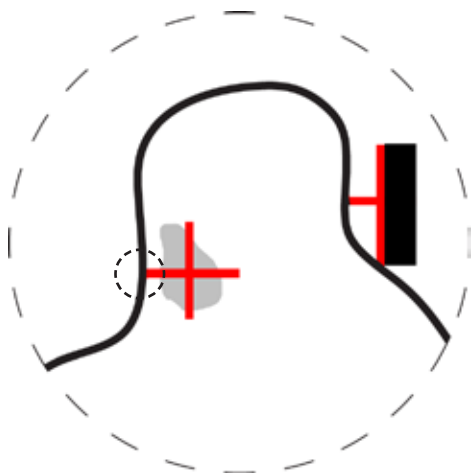


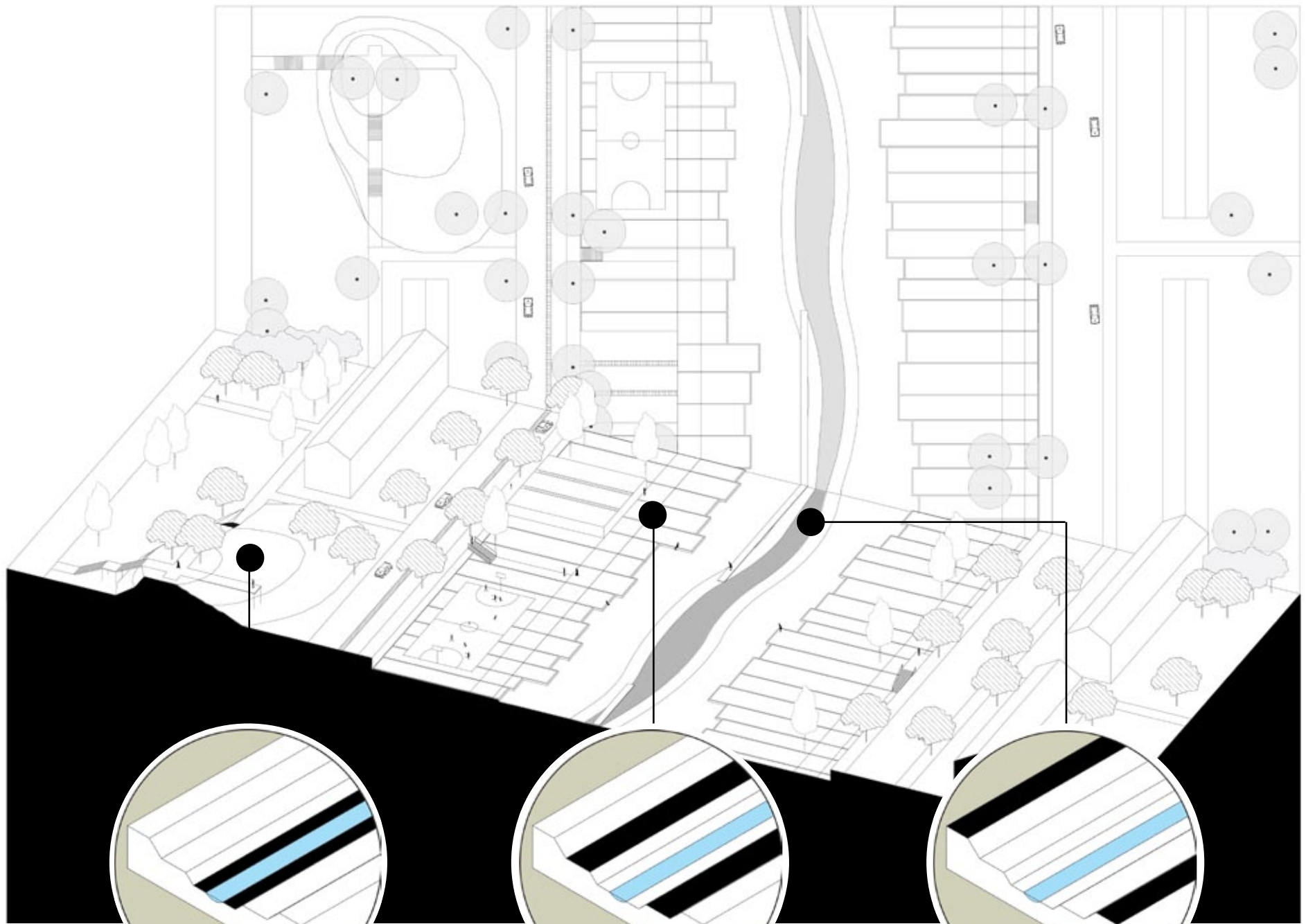
DESIGN STRATEGY (layer)





DESIGN STRATEGY (layer)

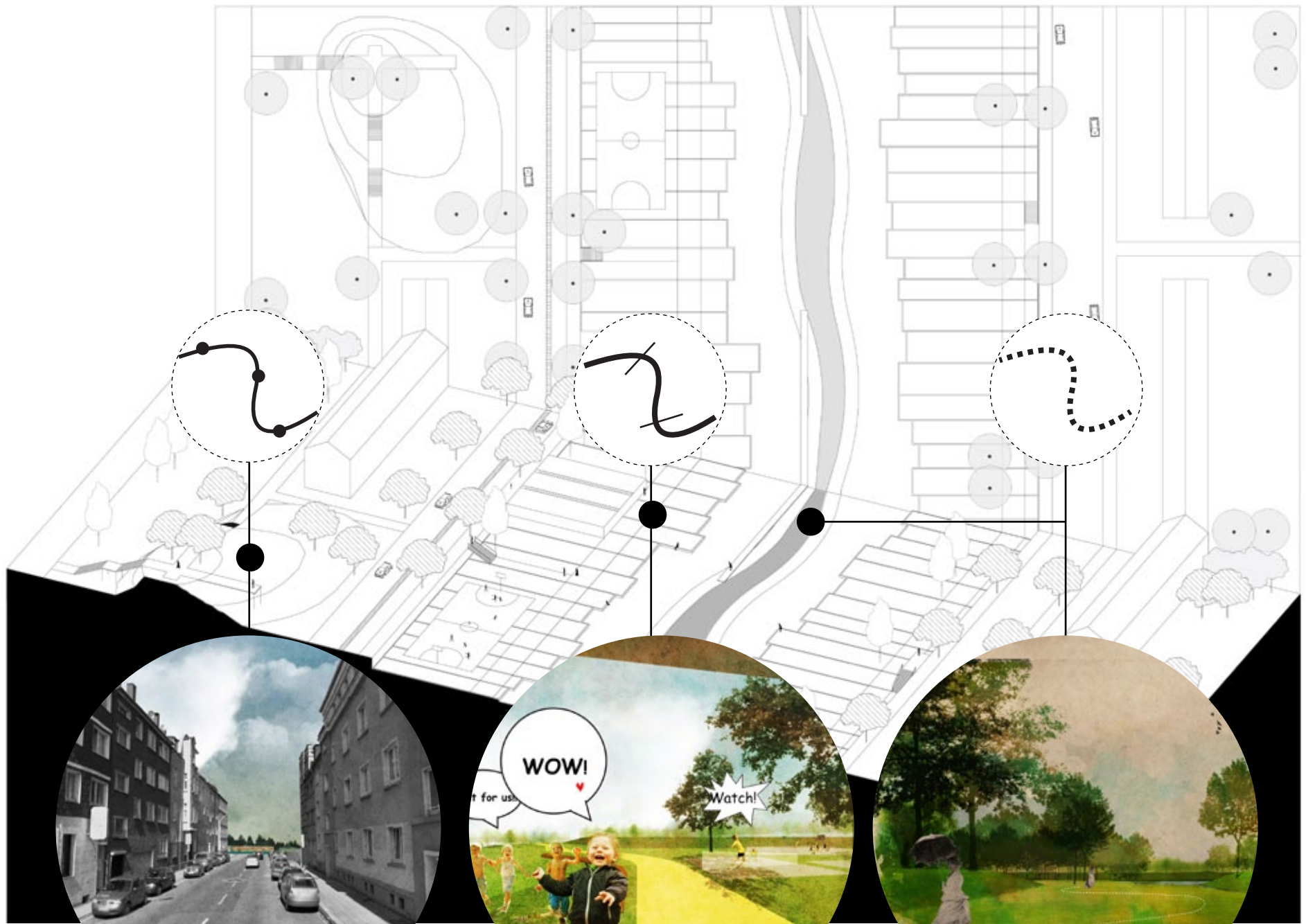




Nature Route

Culture Route

Urban Route



Nature Route



Culture Route



Urban Route



Environment

District

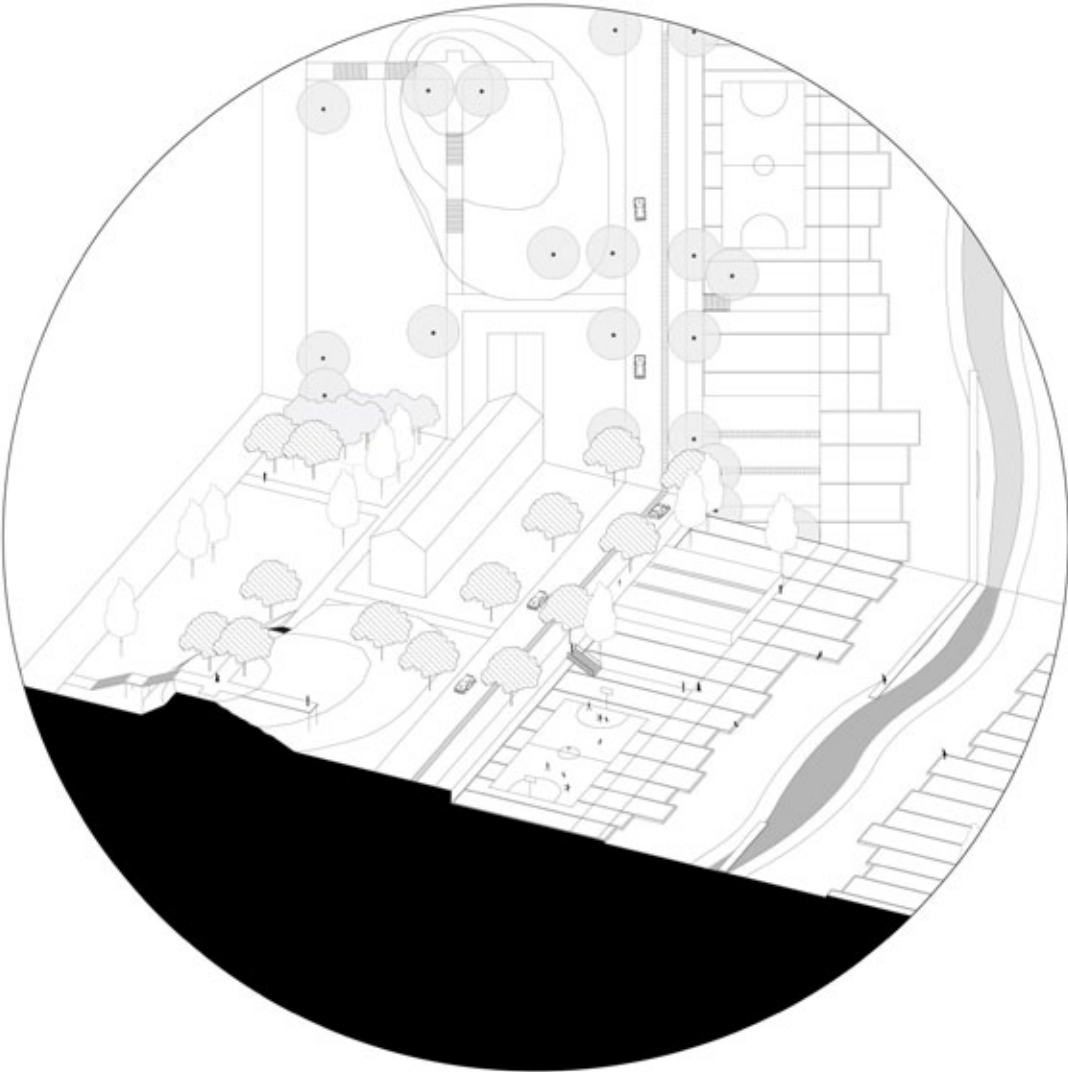
View

Nature Route

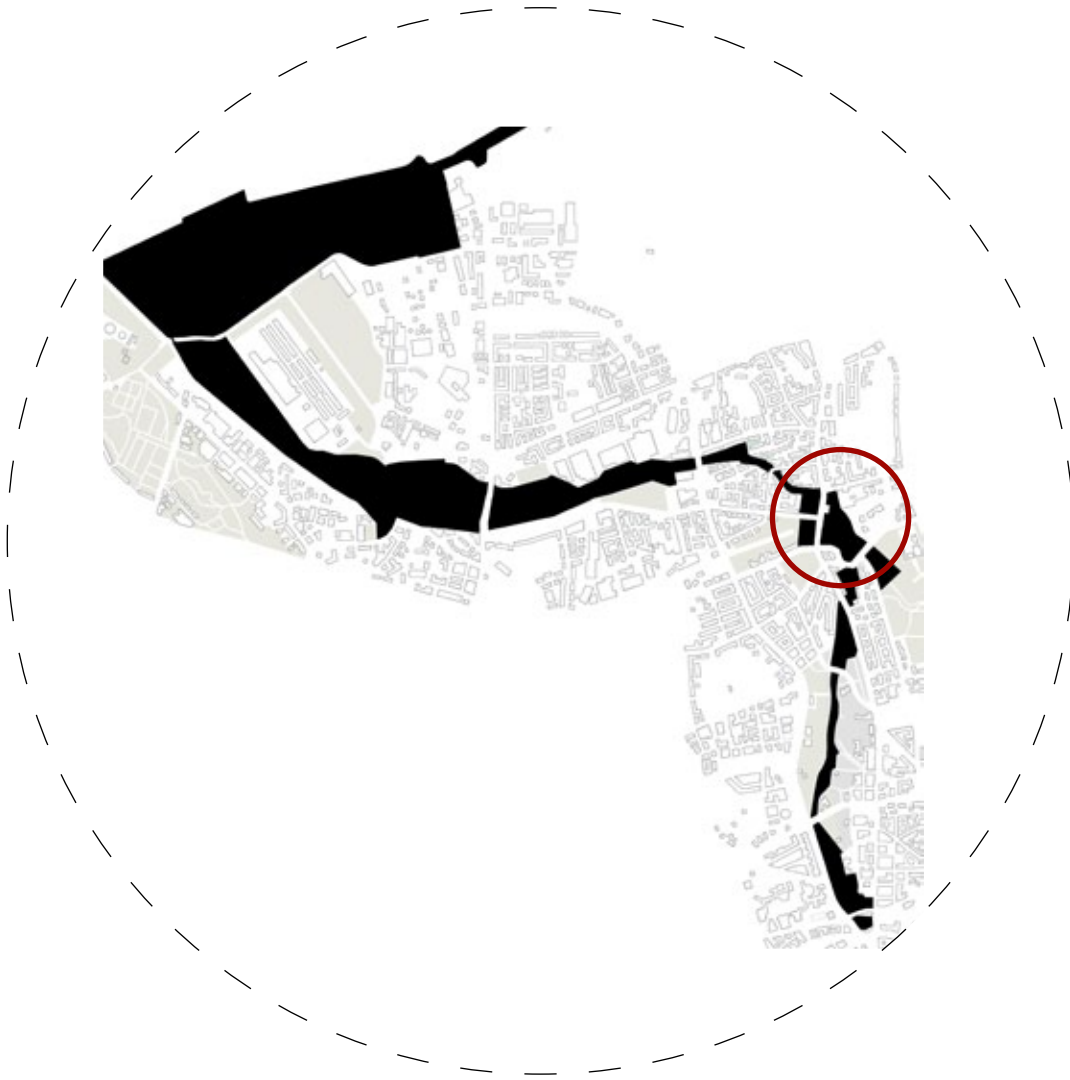
Culture Route

Urban Route

3.1 LOCAL PROJECT



COMMUNITY CENTER SECTION



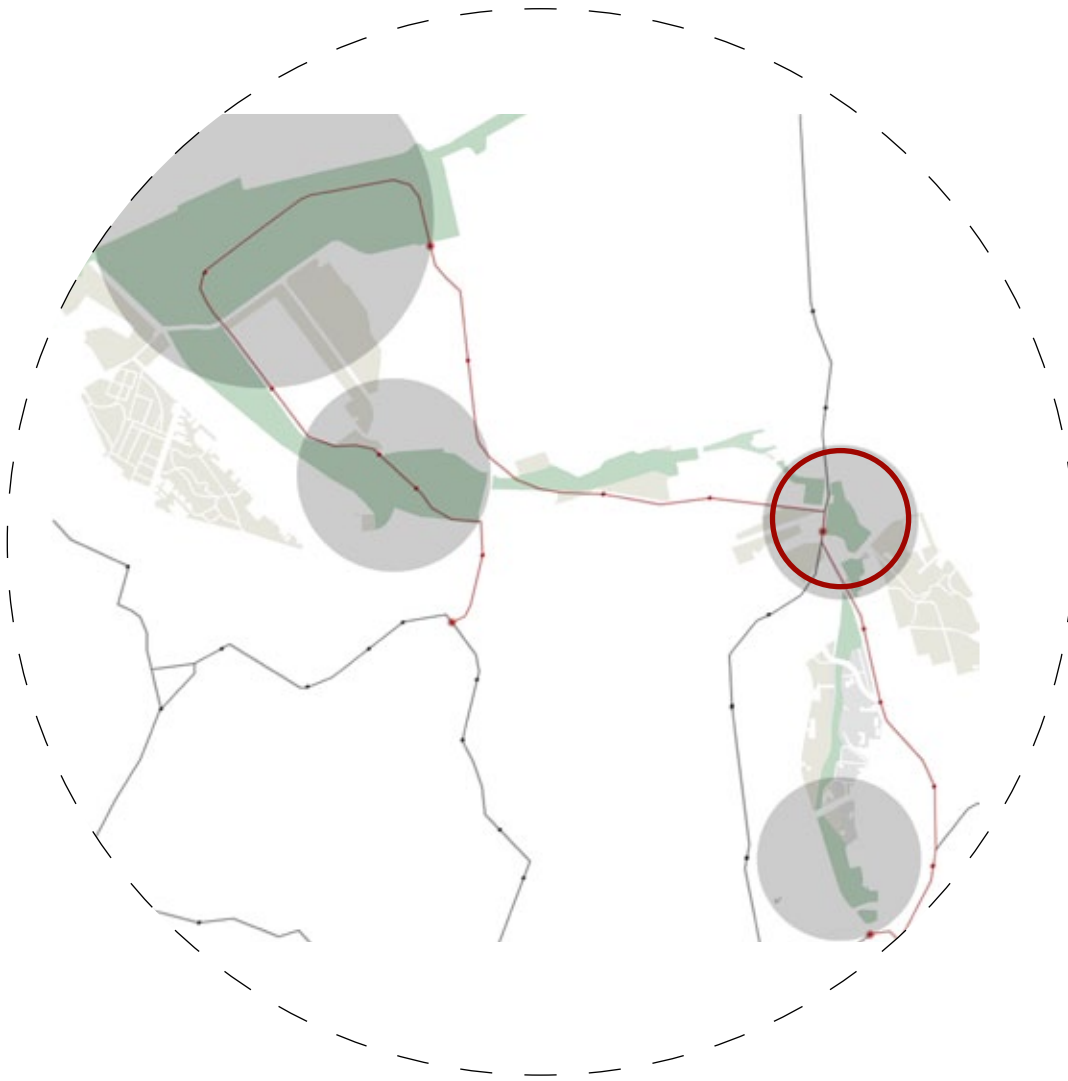
**COMMUNITY CENTER SECTION
(Abandoned Train Line)**



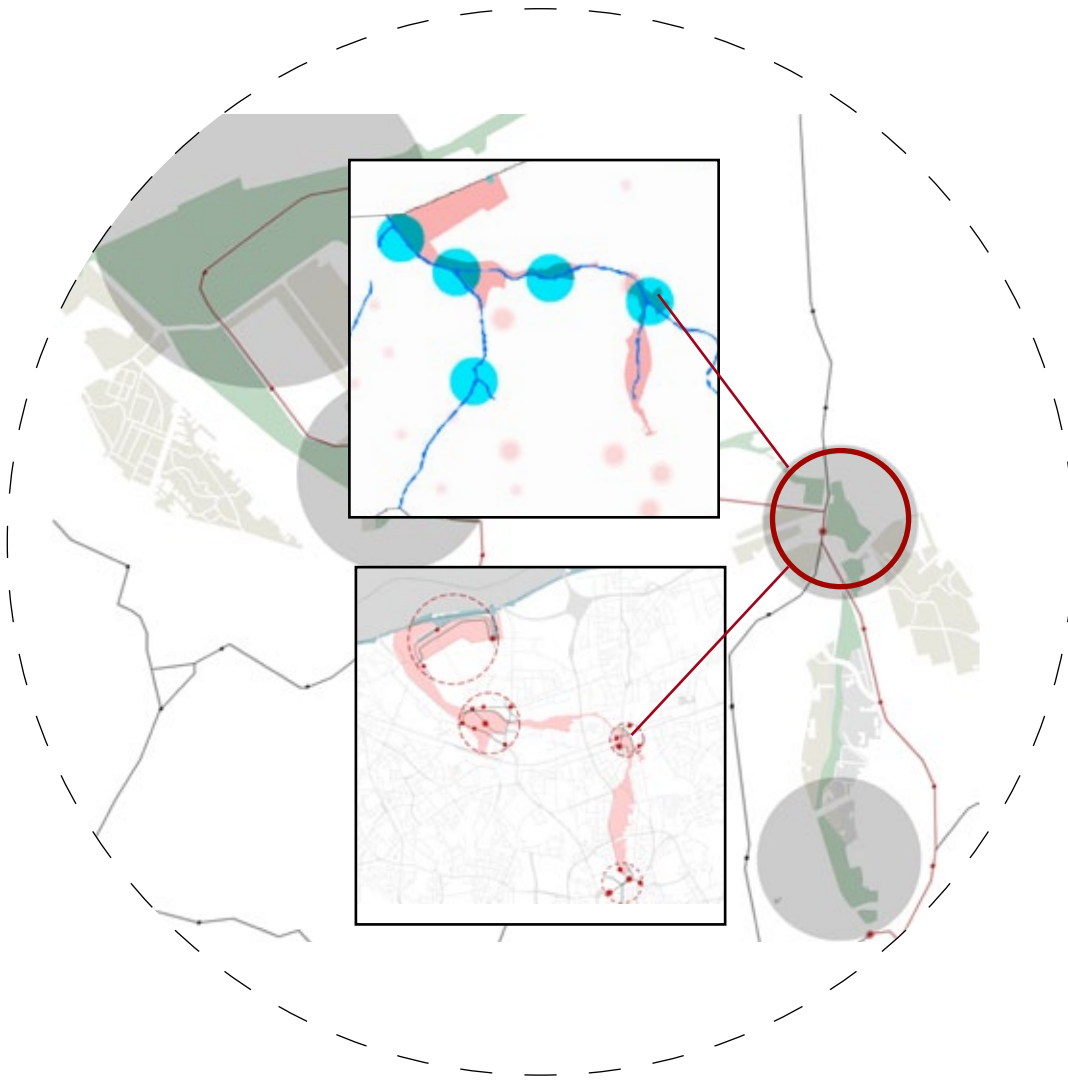
**COMMUNITY CENTER SECTION
(Abandoned Canal)**



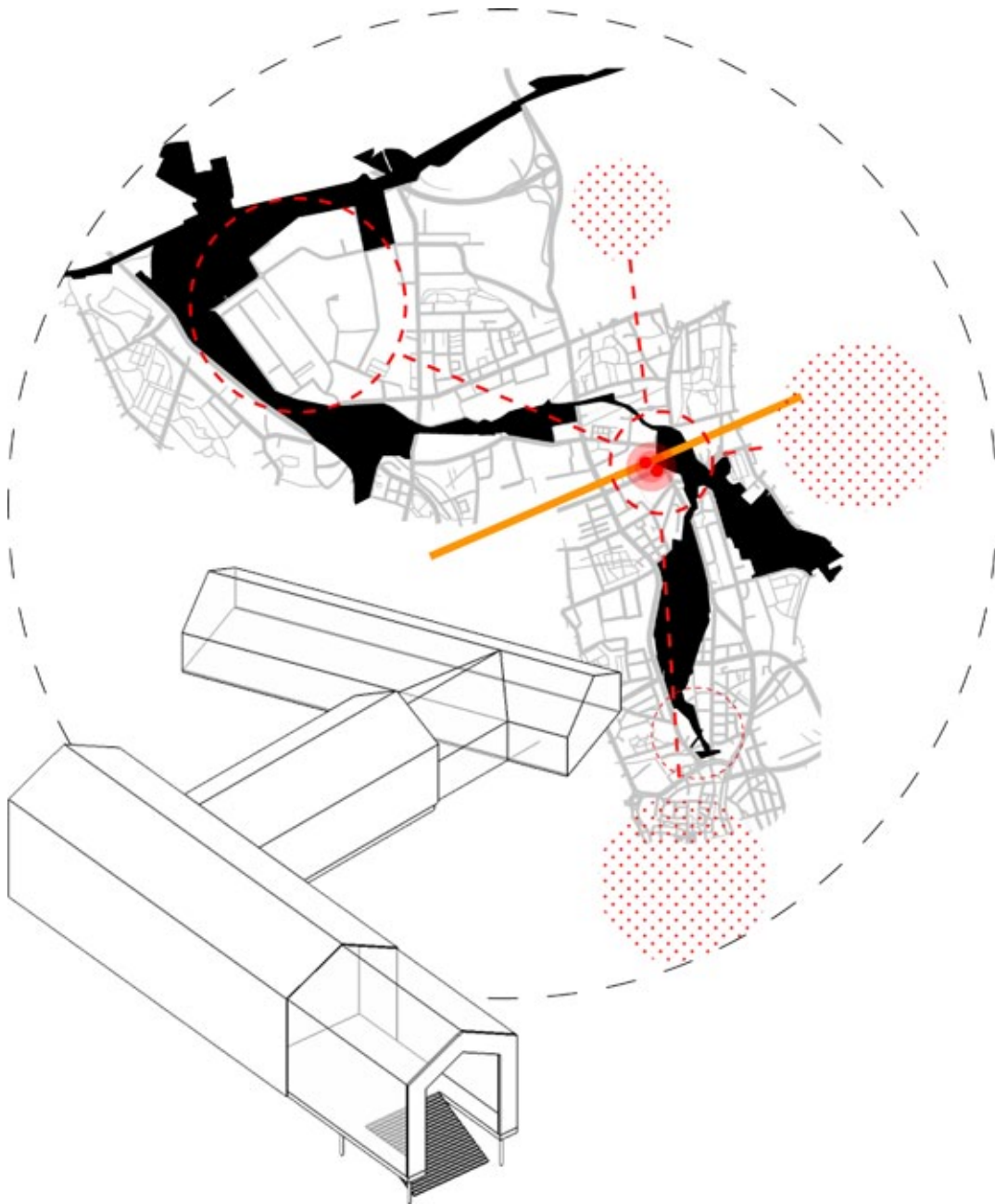
COMMUNITY CENTER SECTION



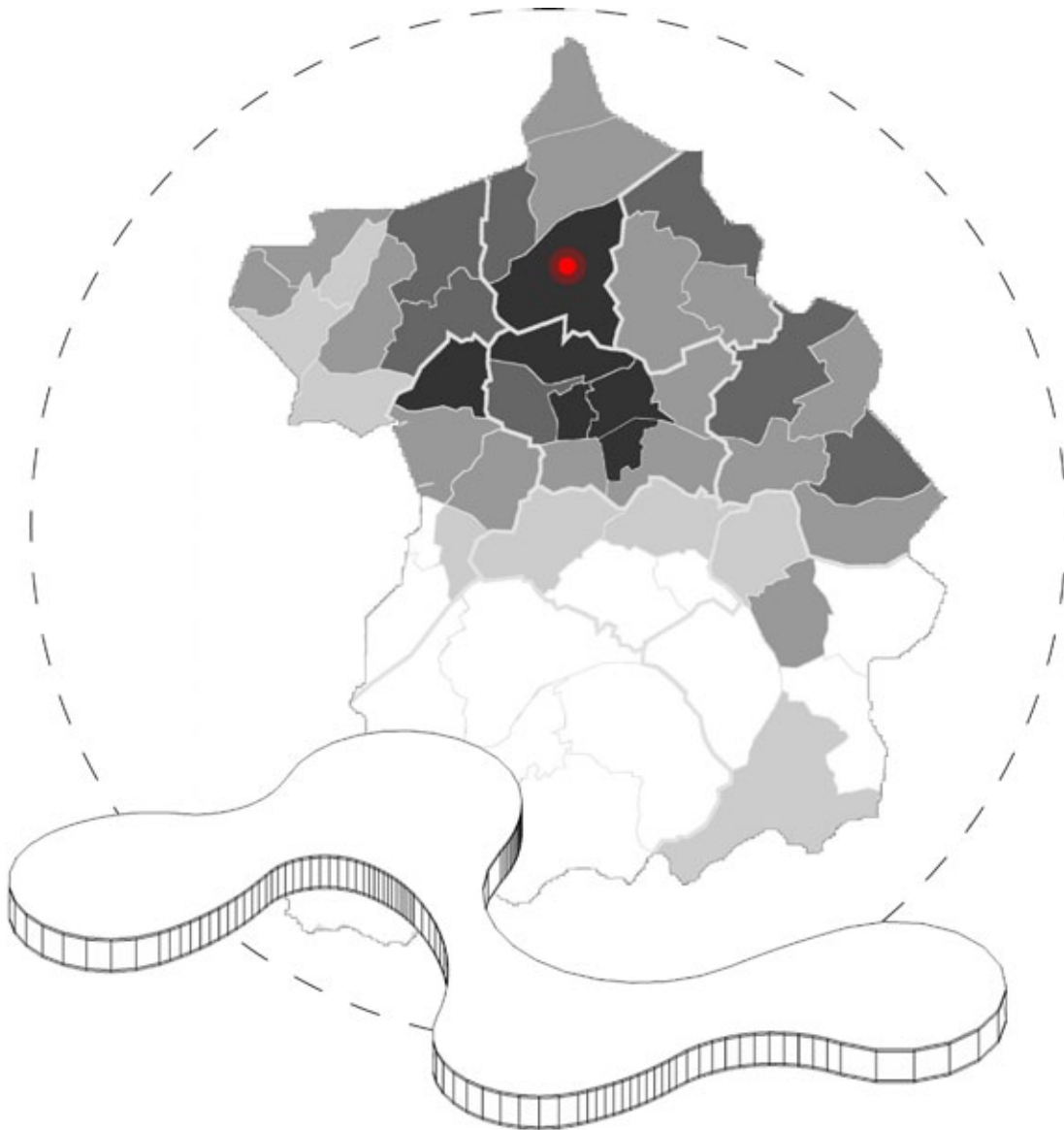
COMMUNITY CENTER SECTION

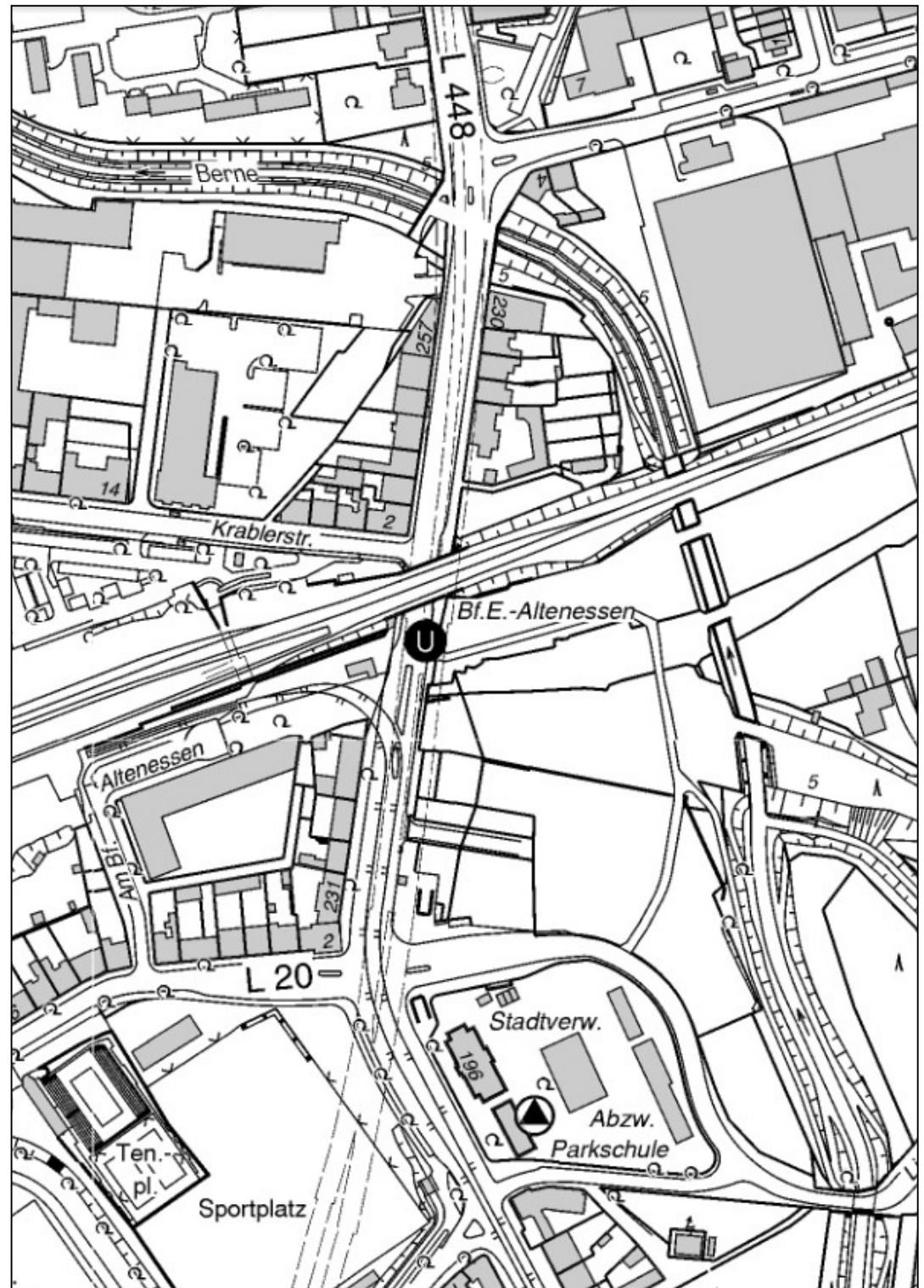
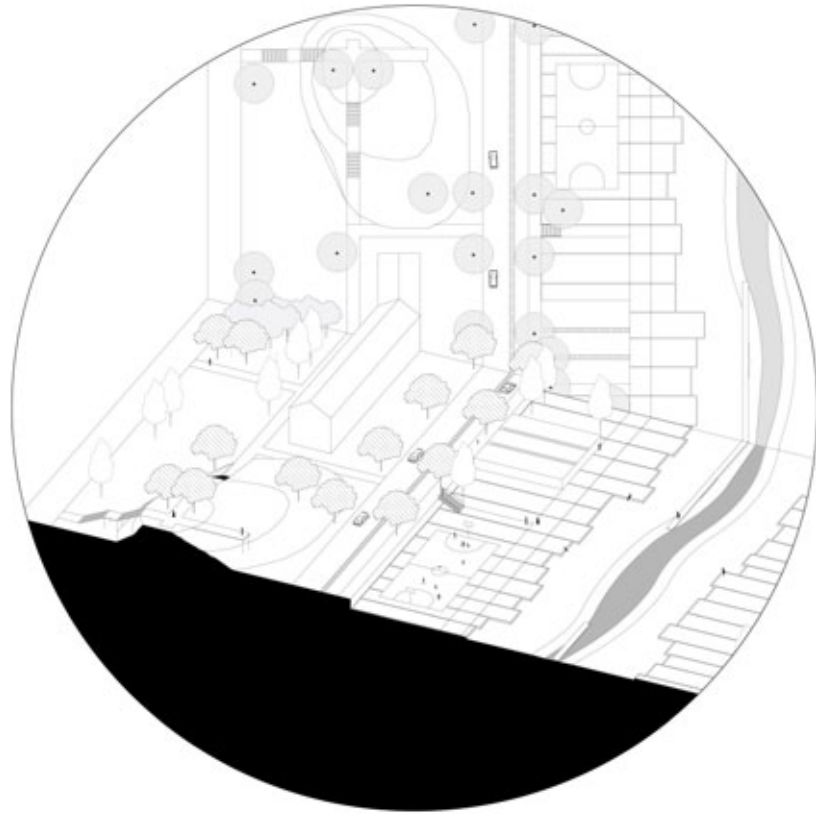


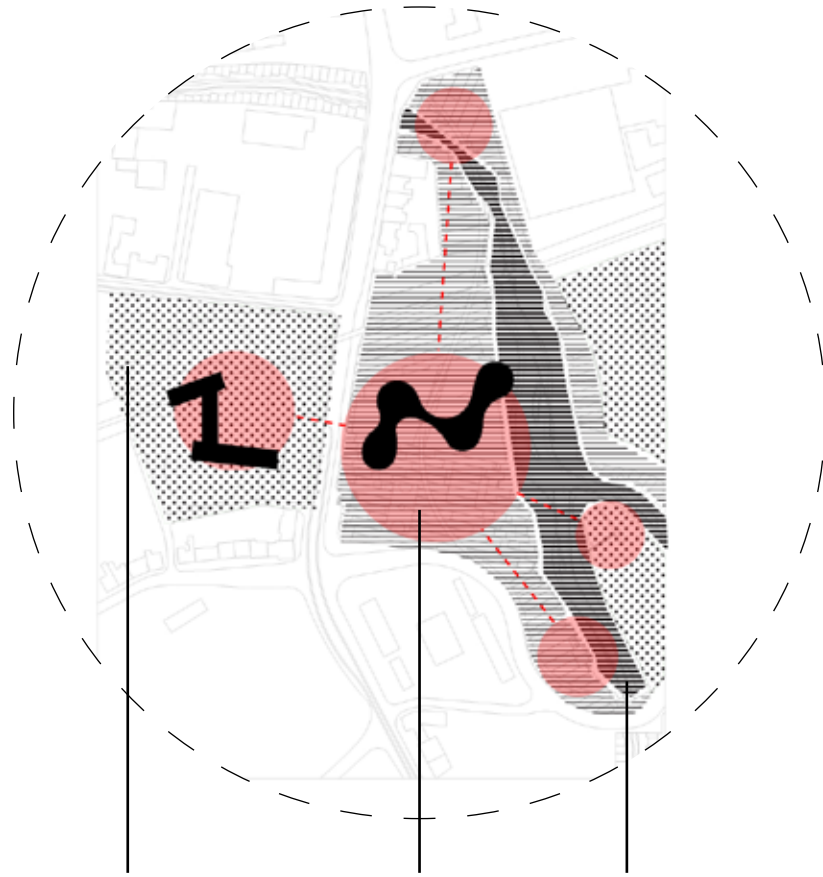
COMMUNITY CENTER SECTION
(Propose1: Park Association Office)



COMMUNITY CENTER SECTION
(Propose2: Community Center)





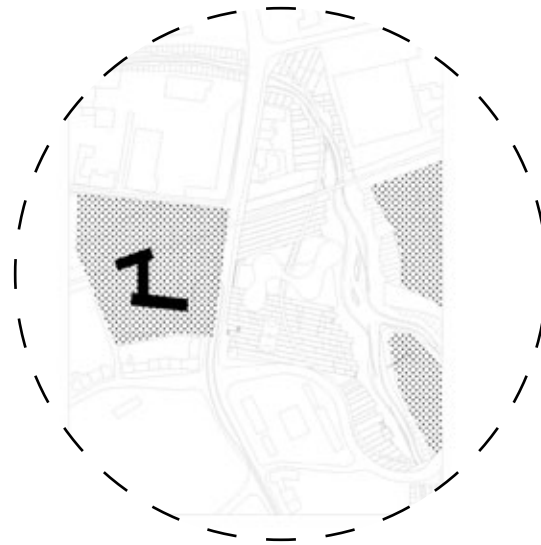


Floodprevent Layer
(Urban Route)

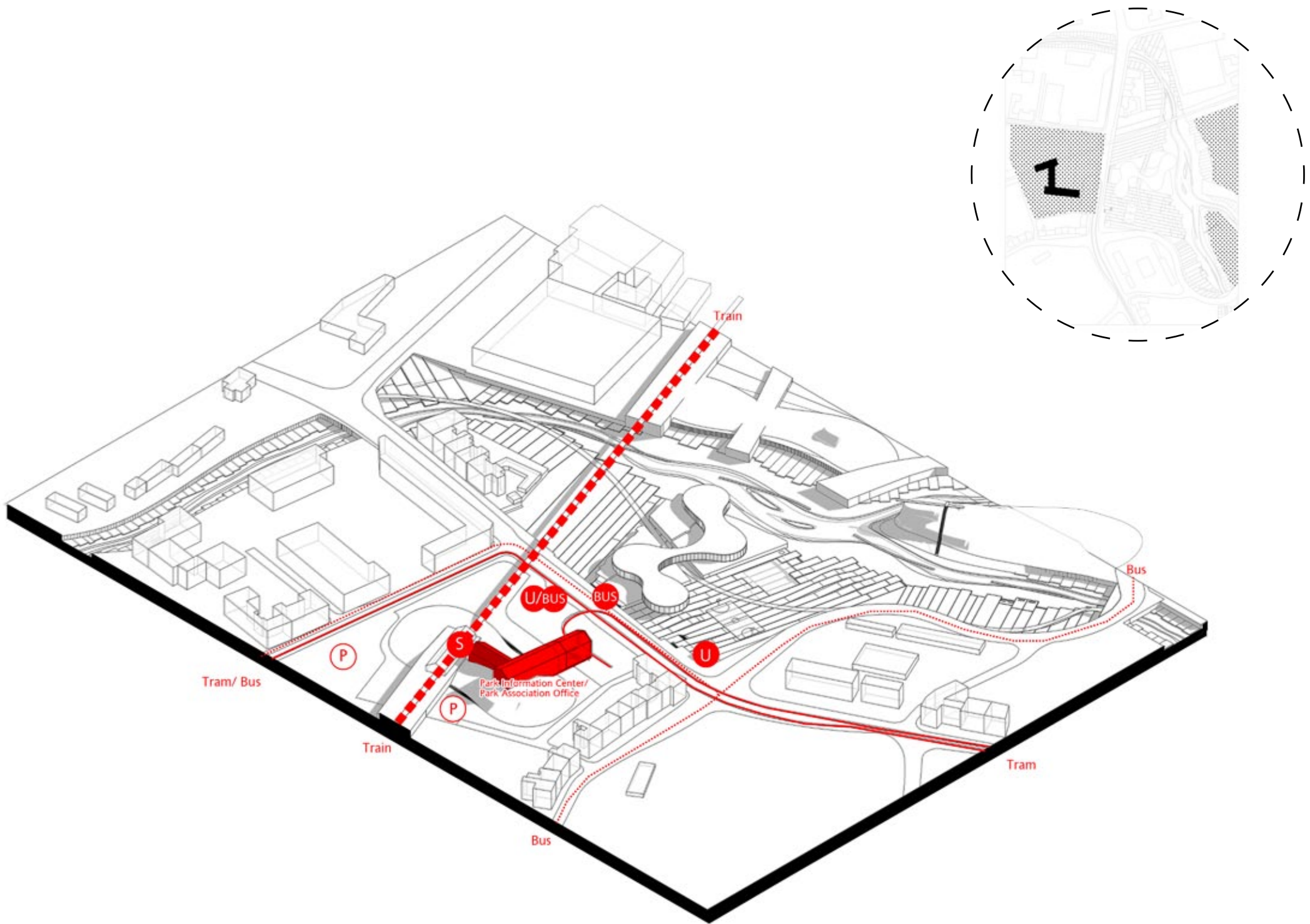
Floodplain Layer
(Culture Route)

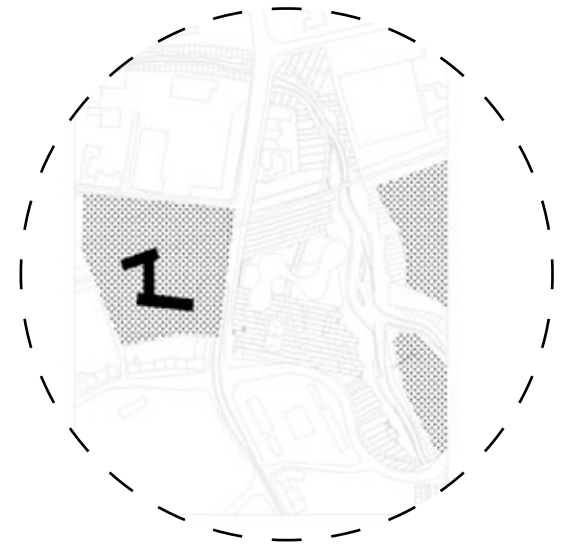
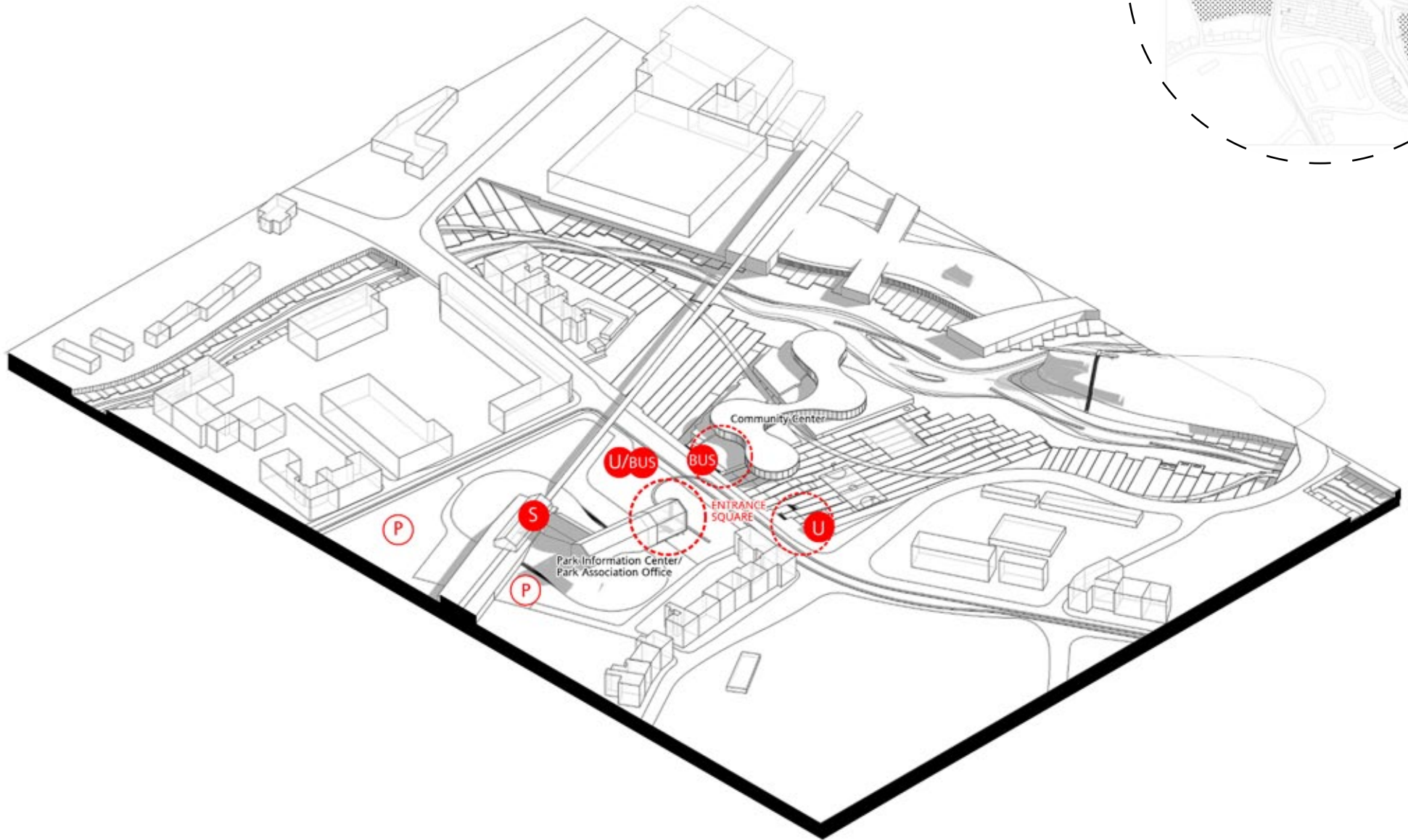
Waterway Layer
(Nature Route)

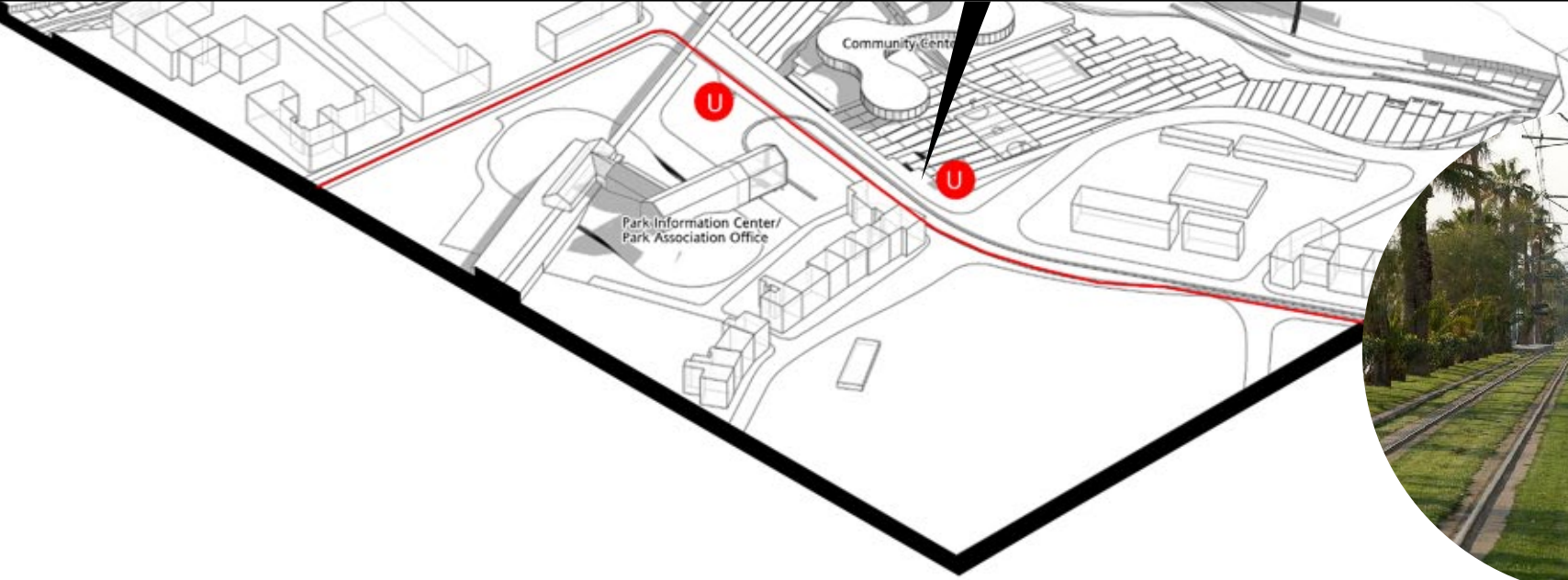


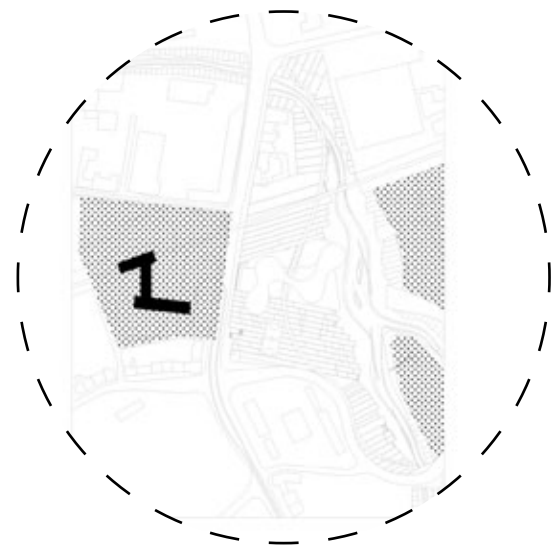
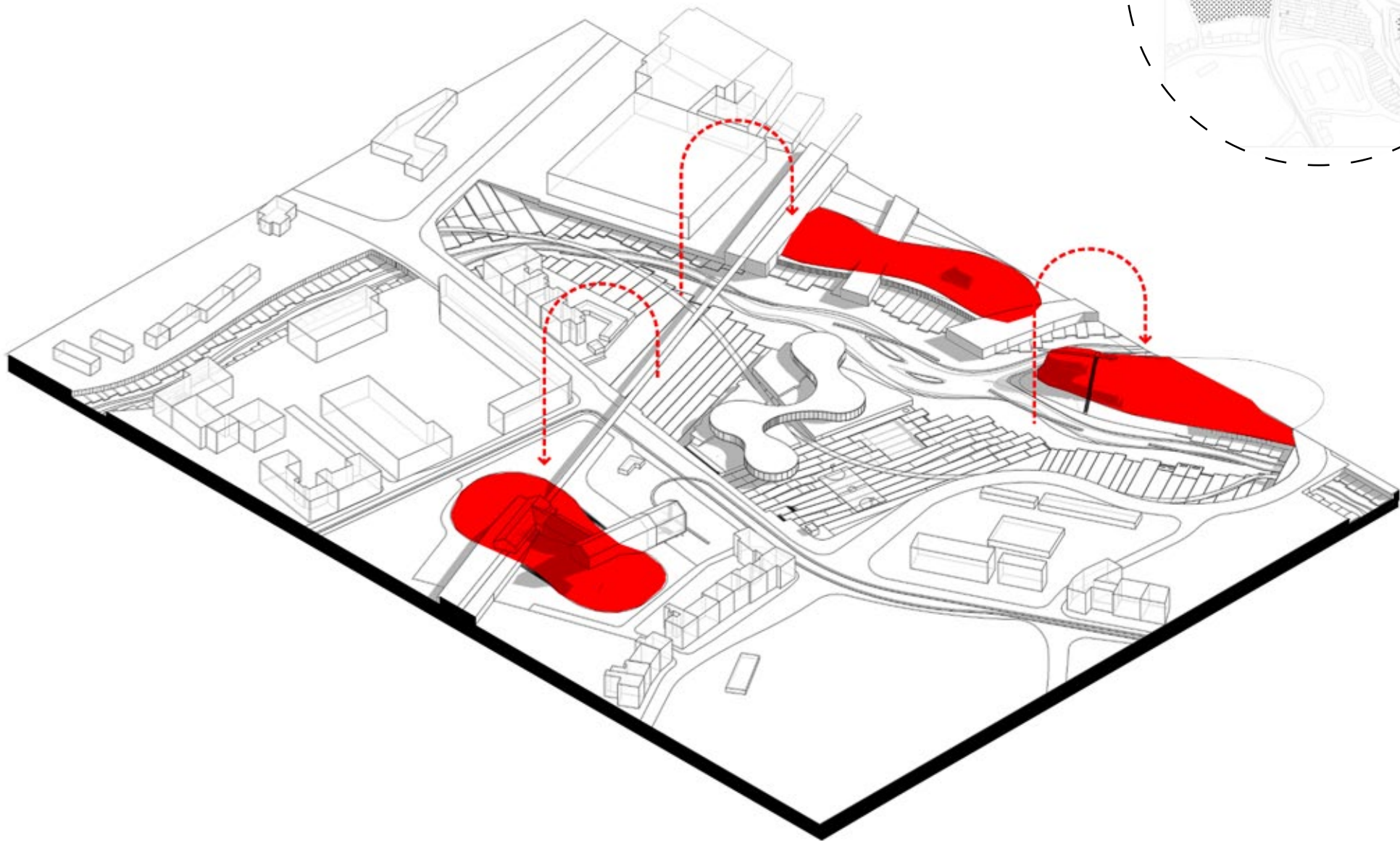


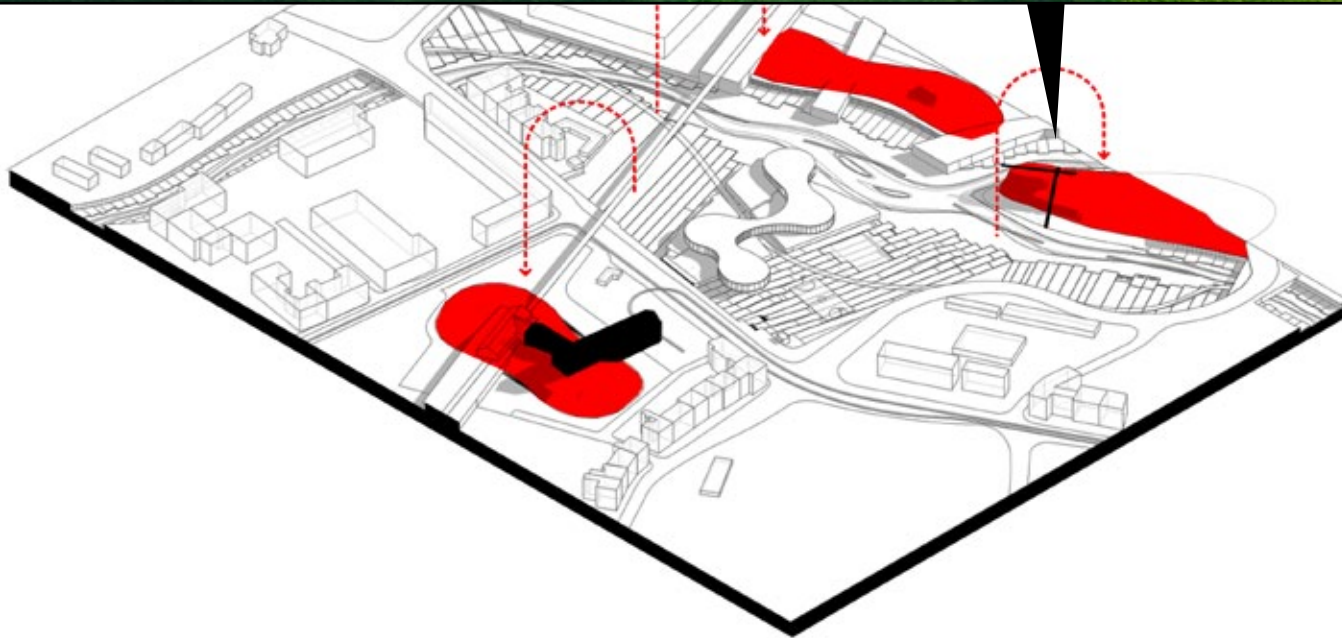
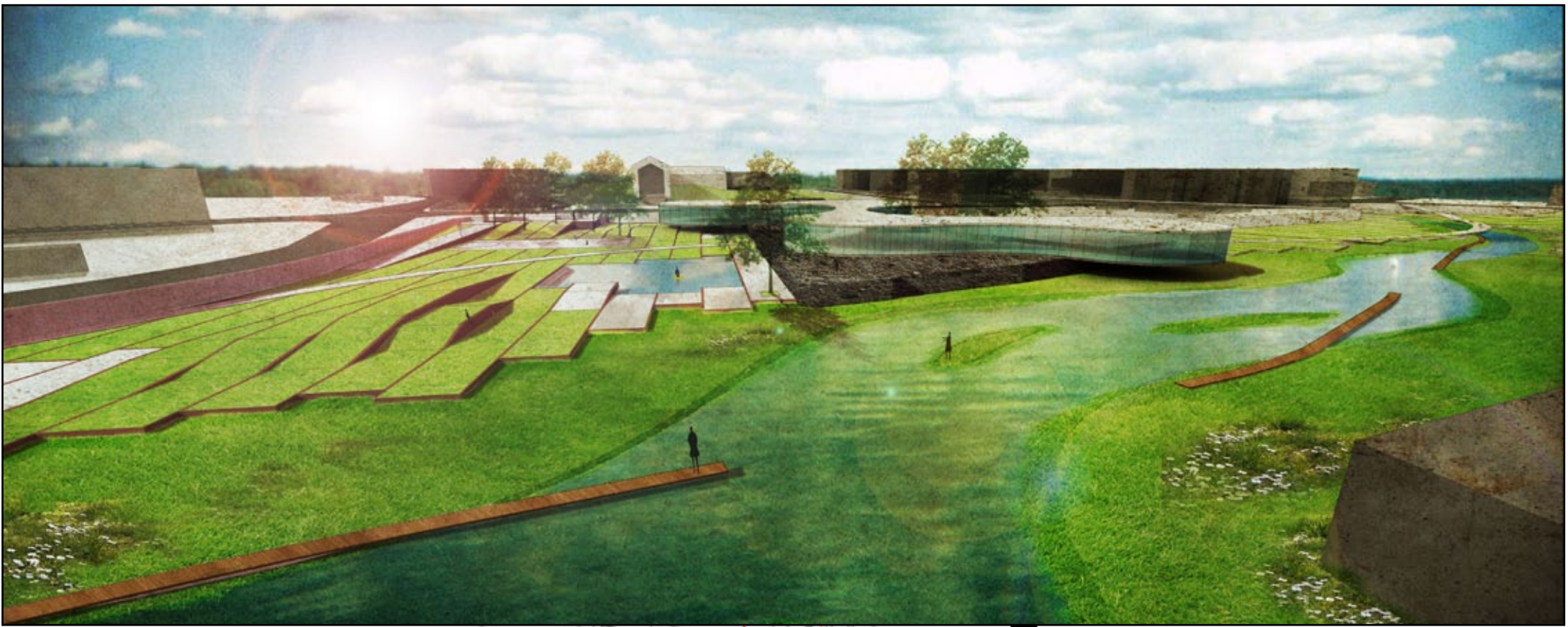
Urban Layer
(Urban Route)





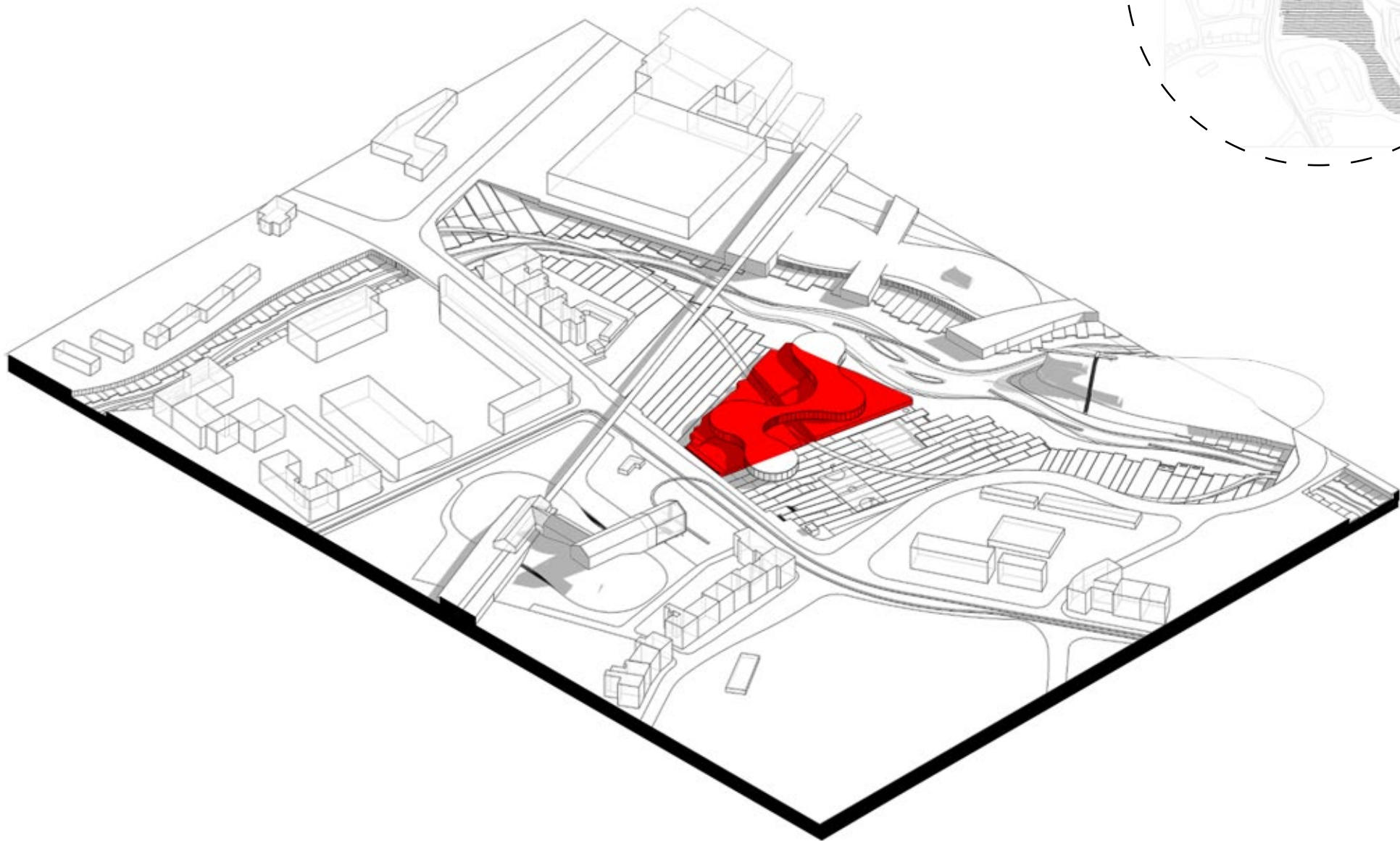


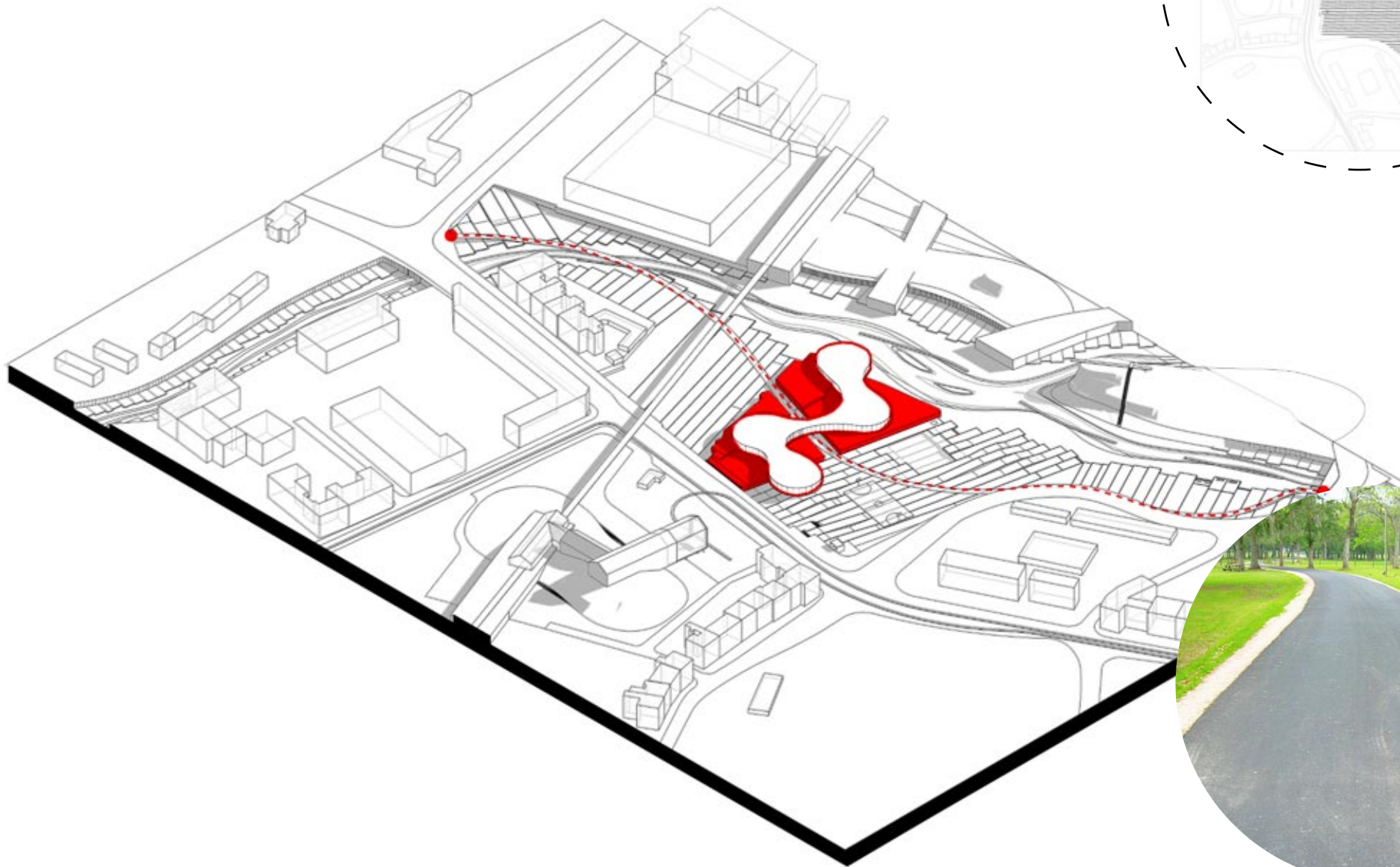


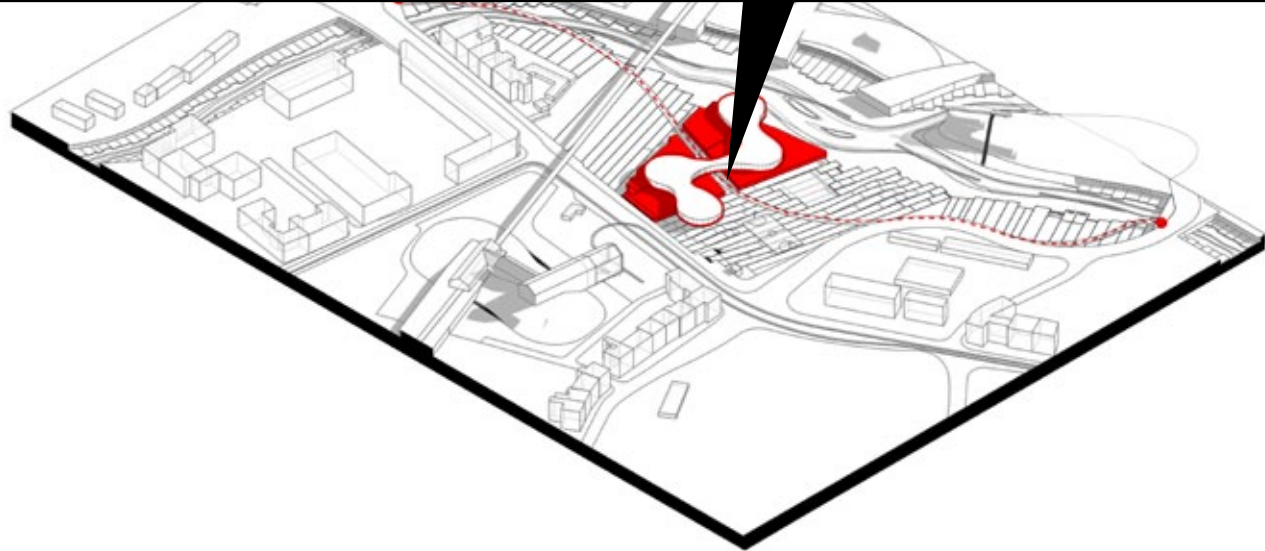
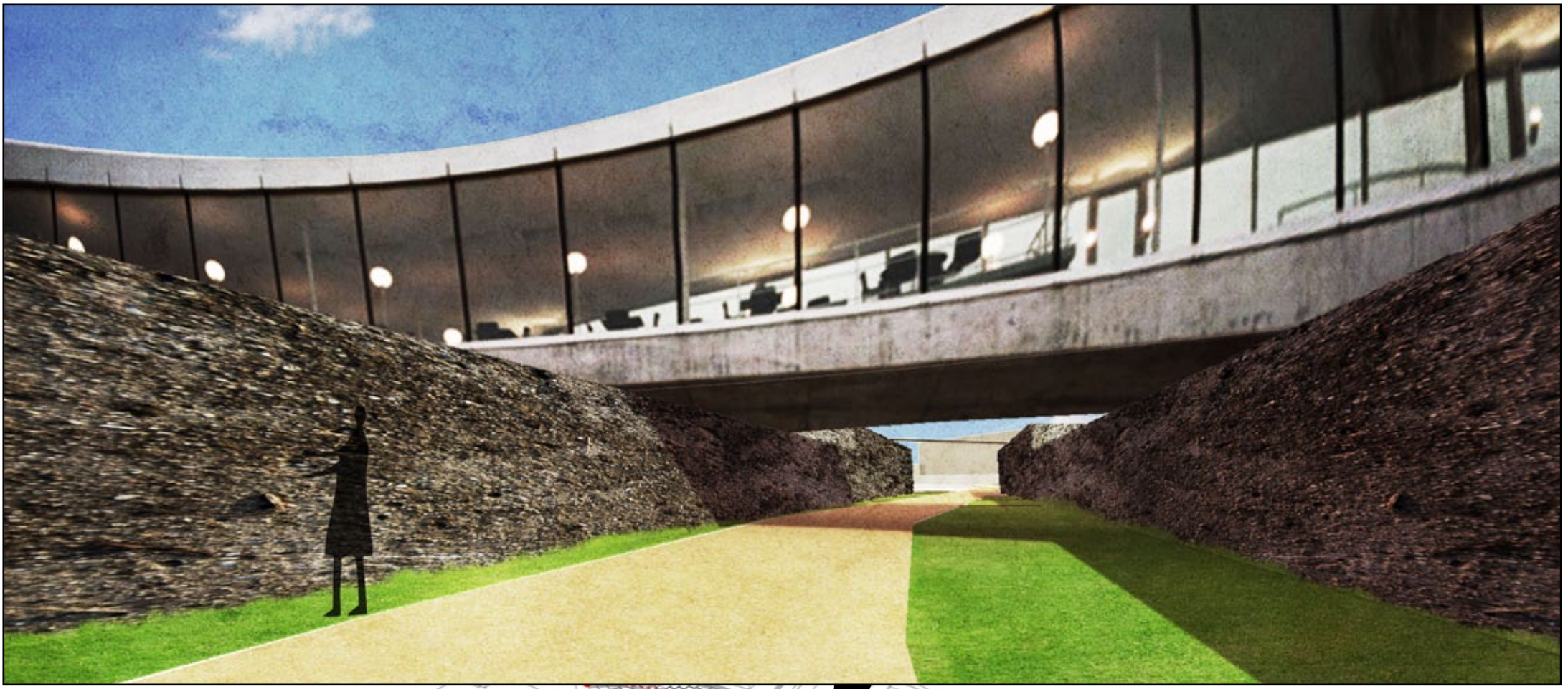


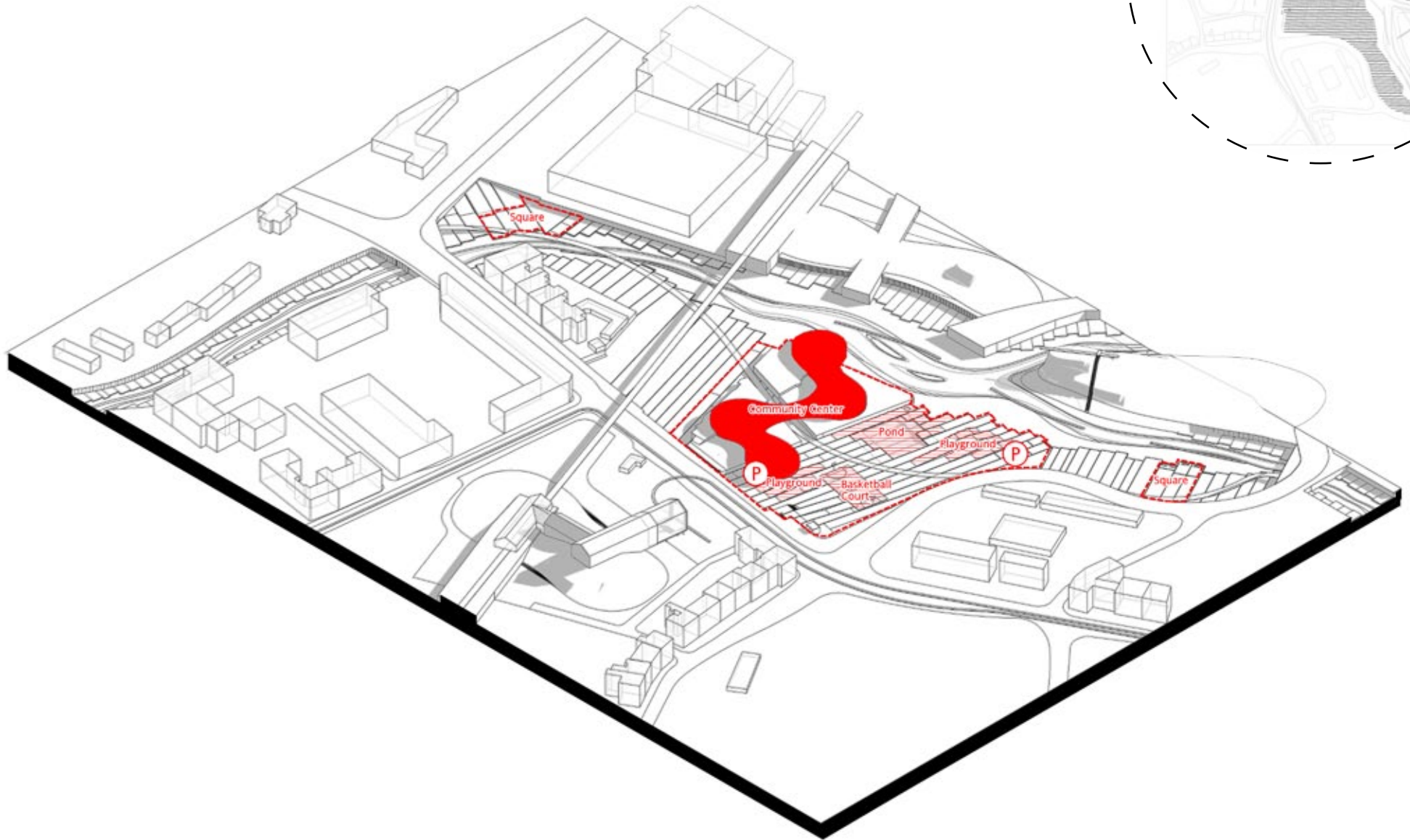


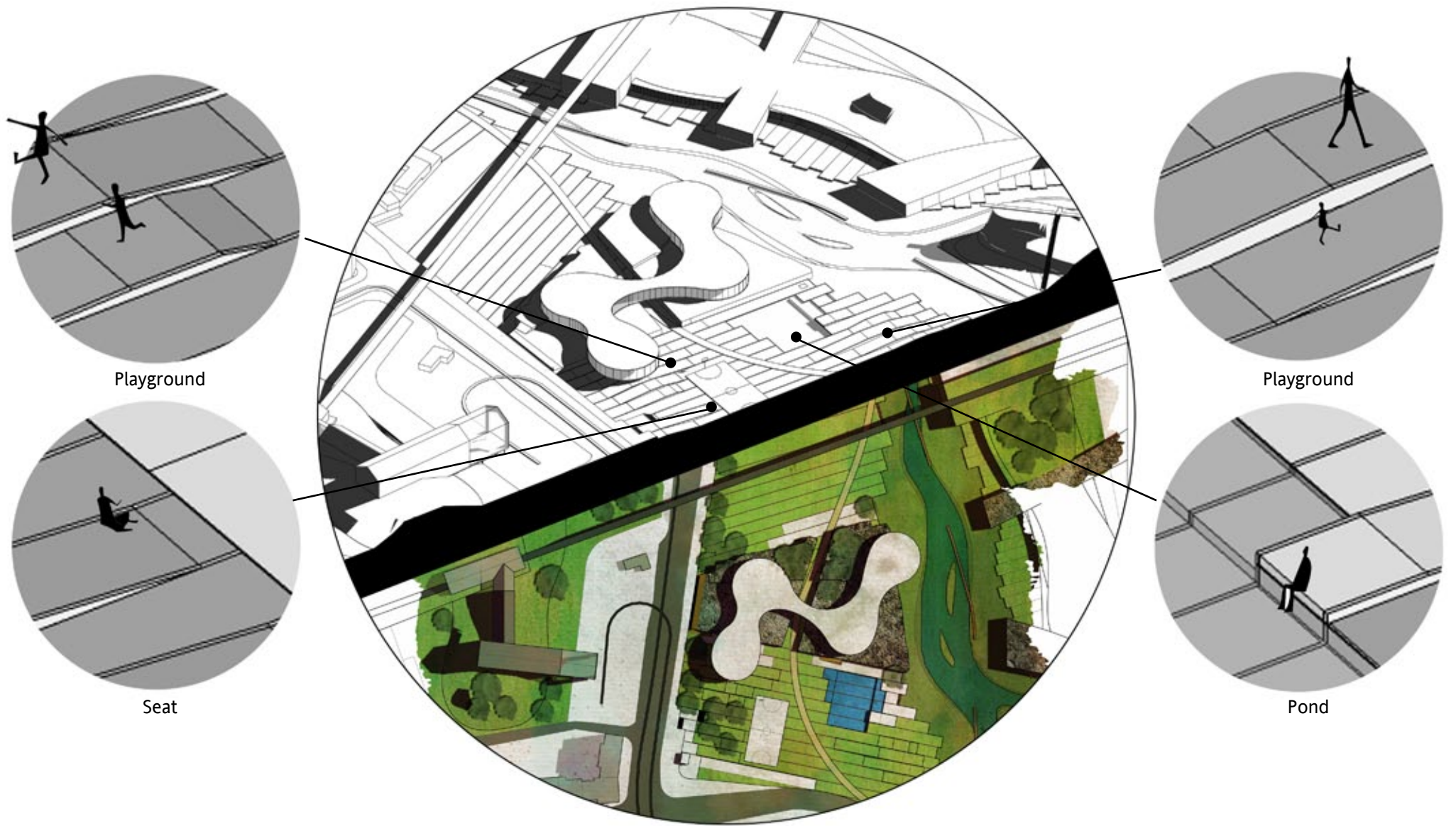
Floodplain Layer
(Culture Route)



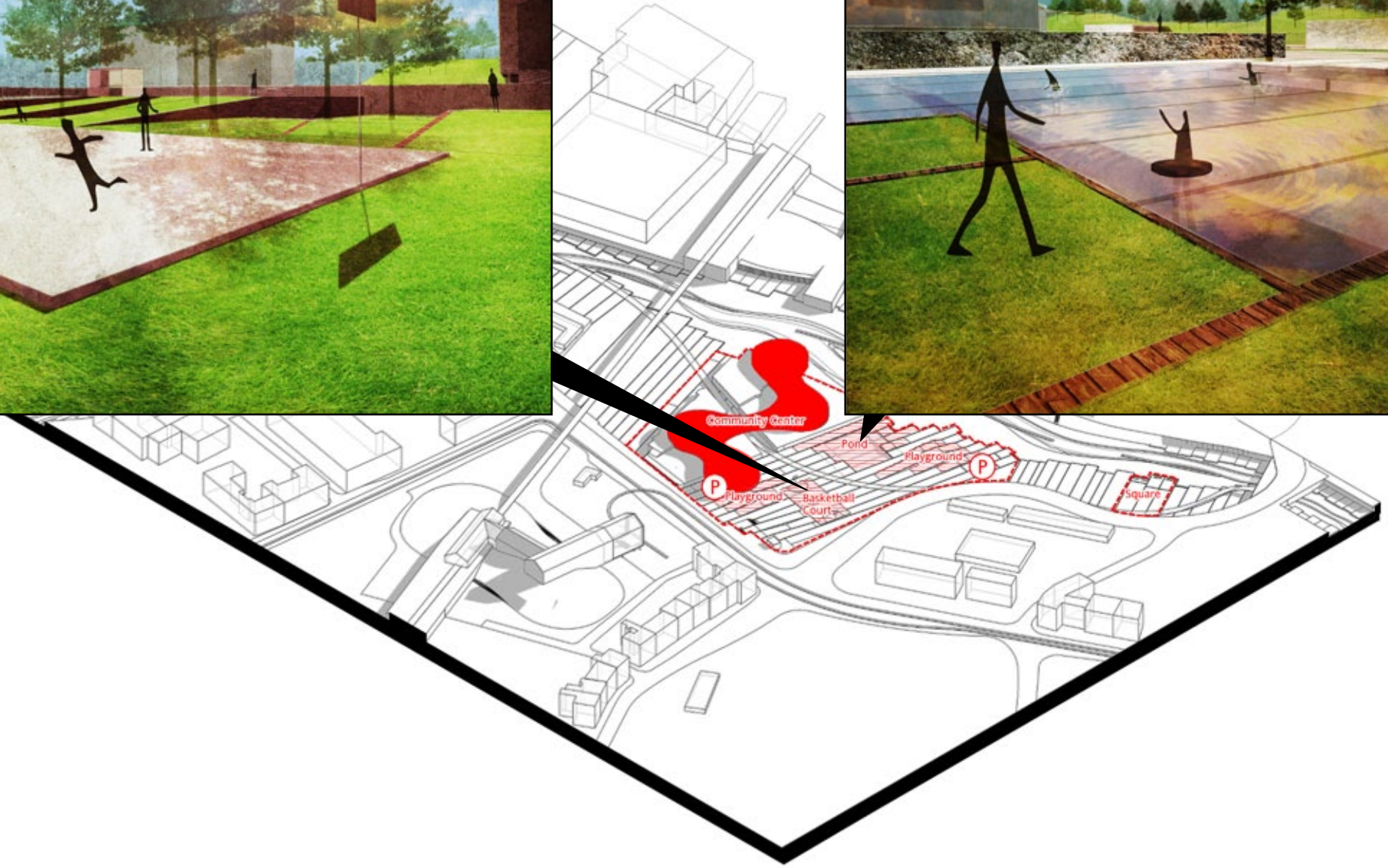
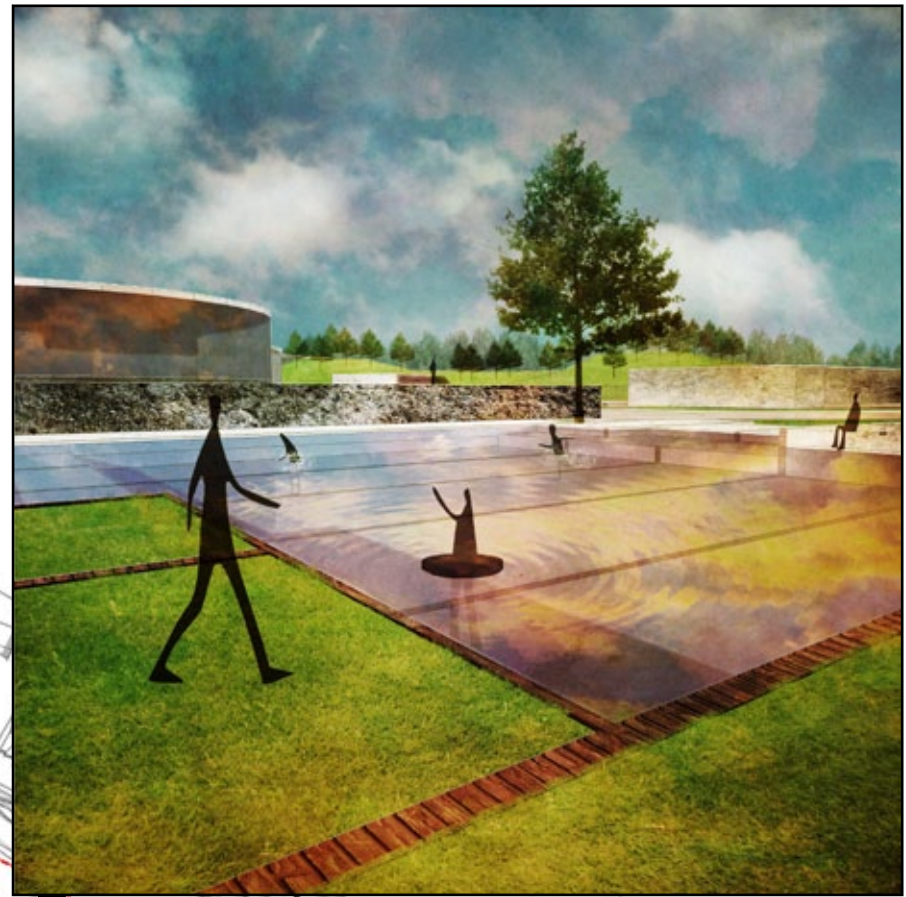






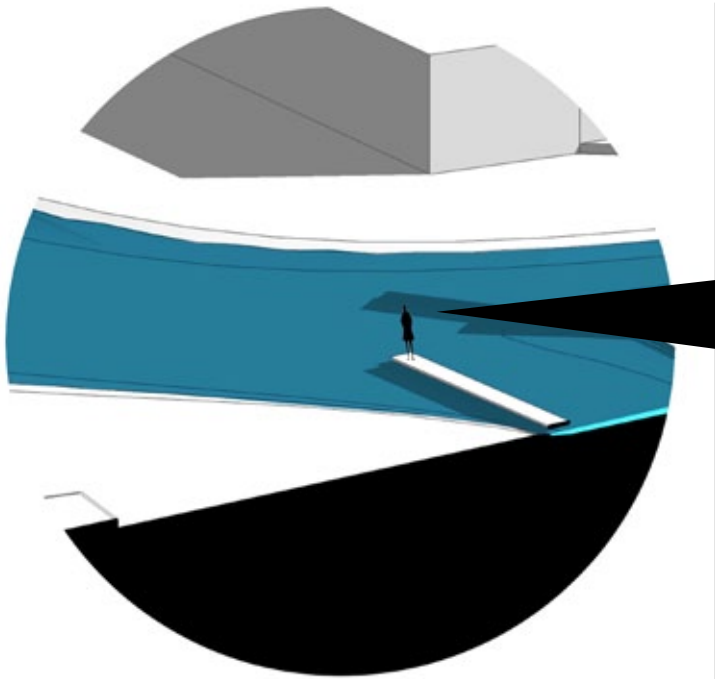


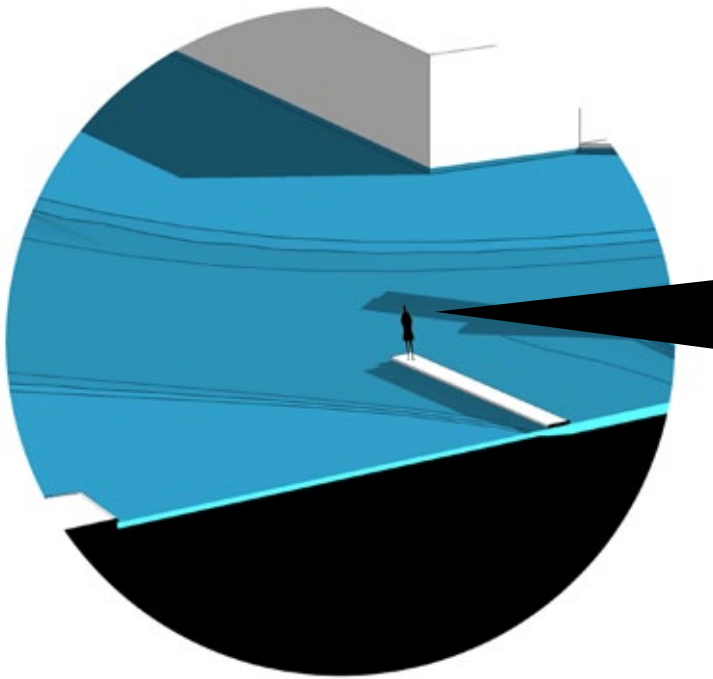
Fluctuation of the "Bricks"

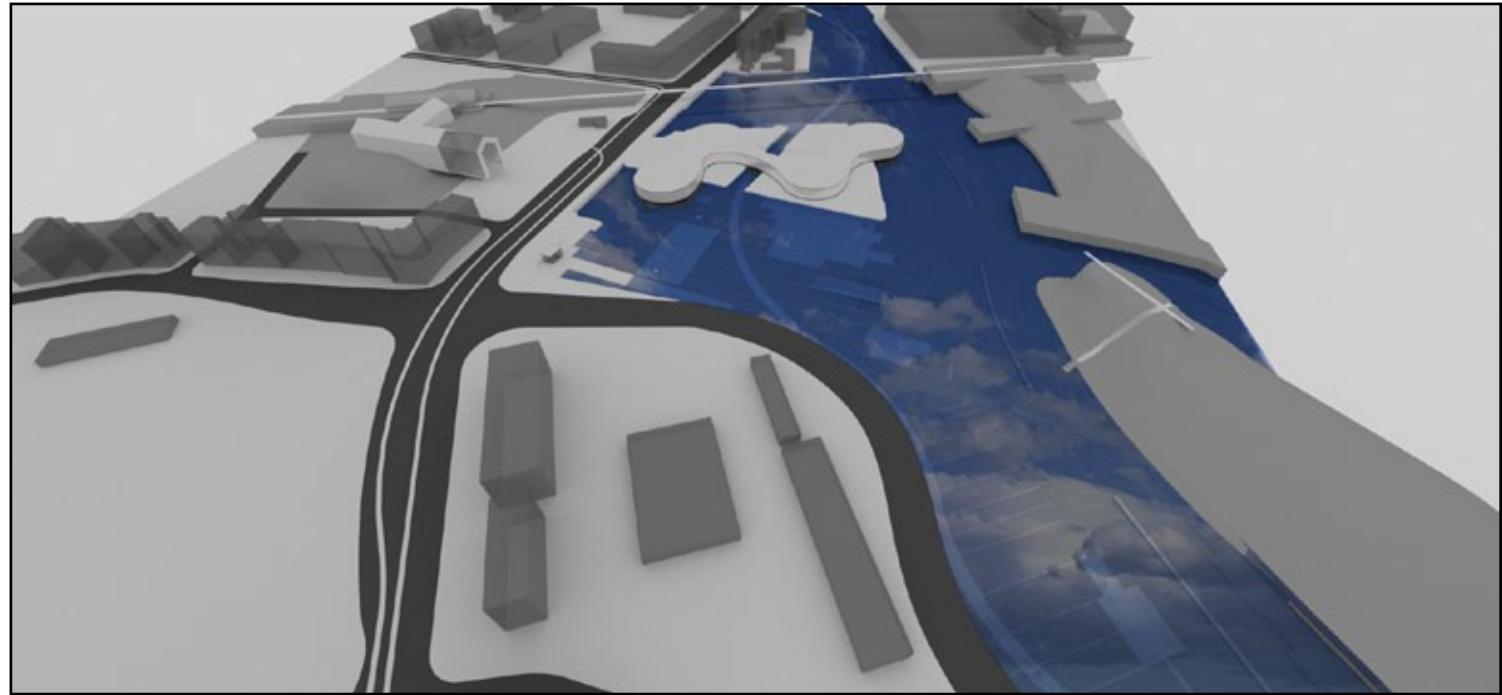
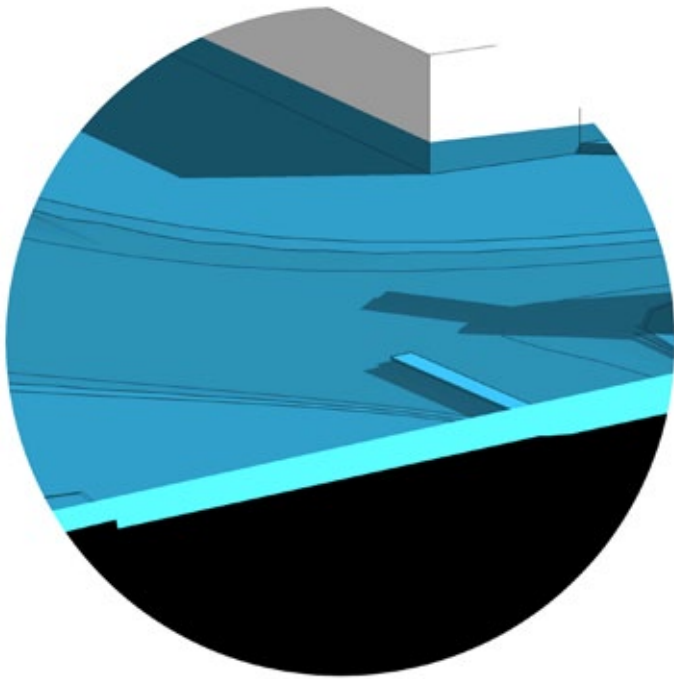




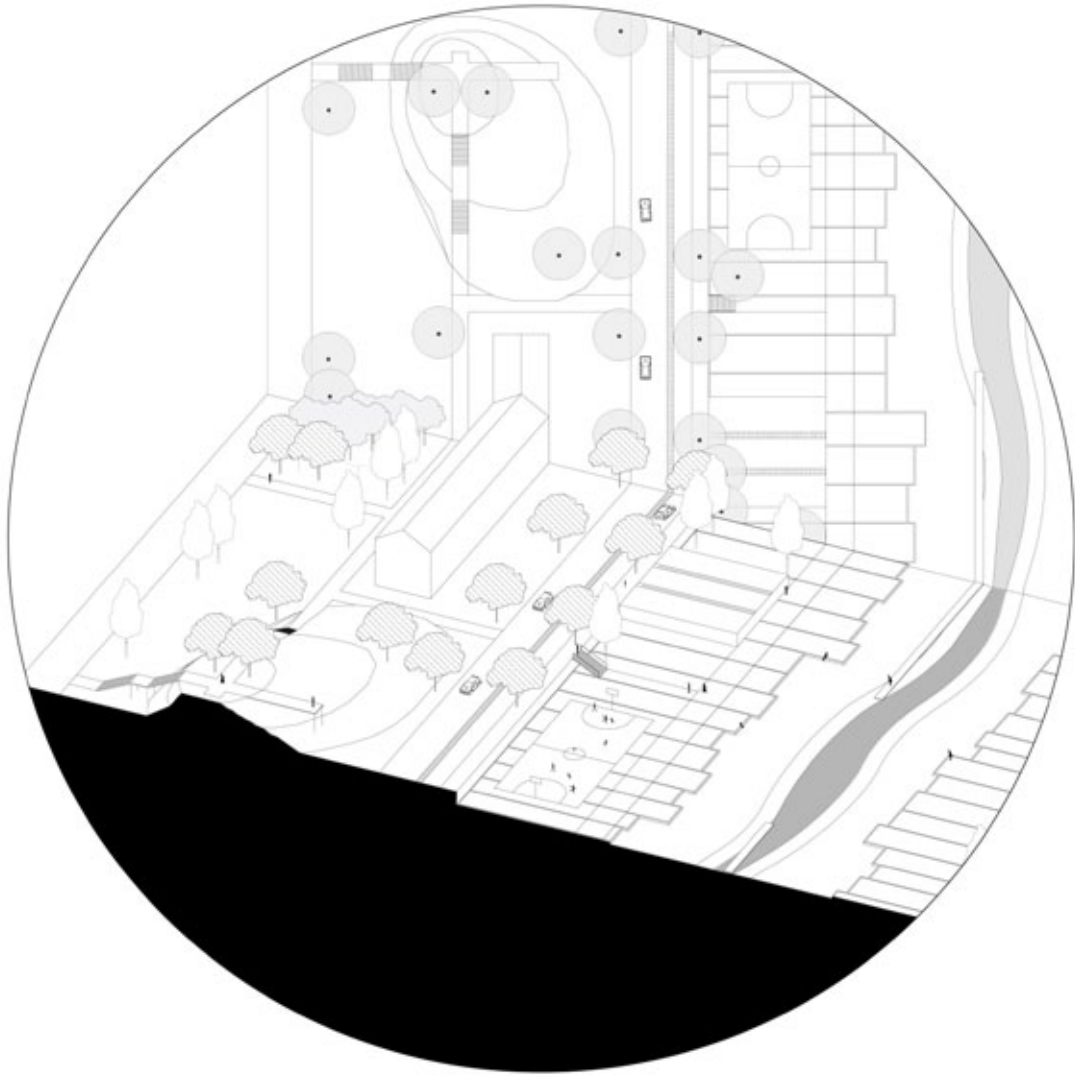
Waterway Layer
(Nature Route)

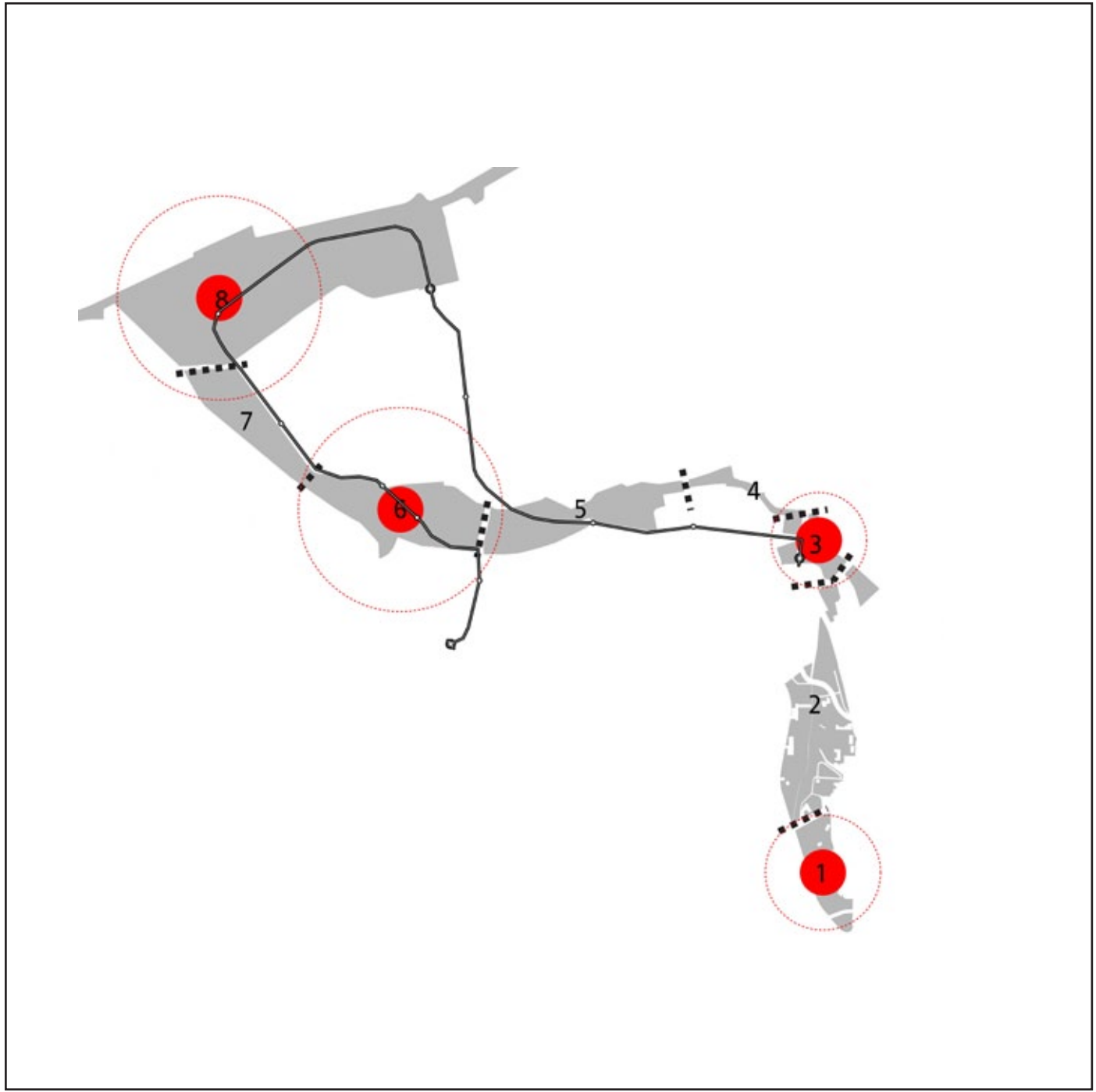
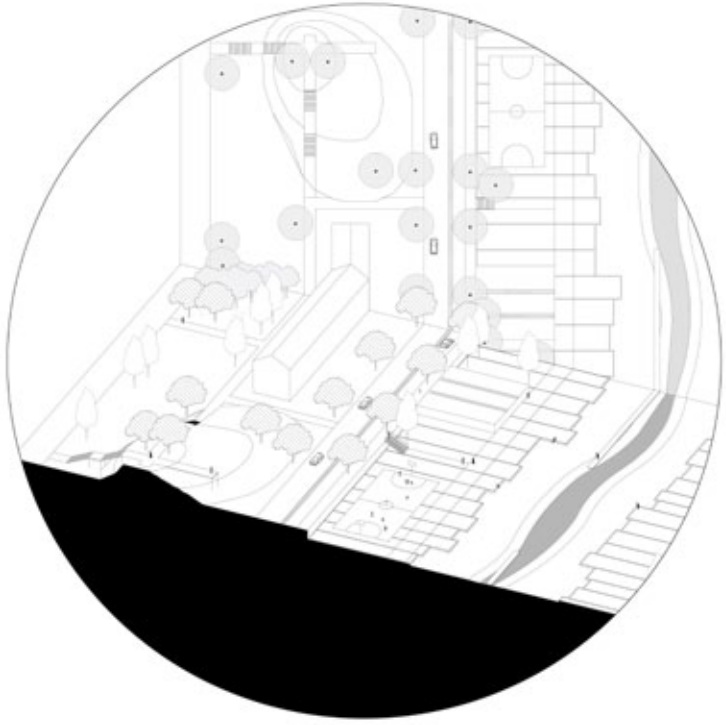


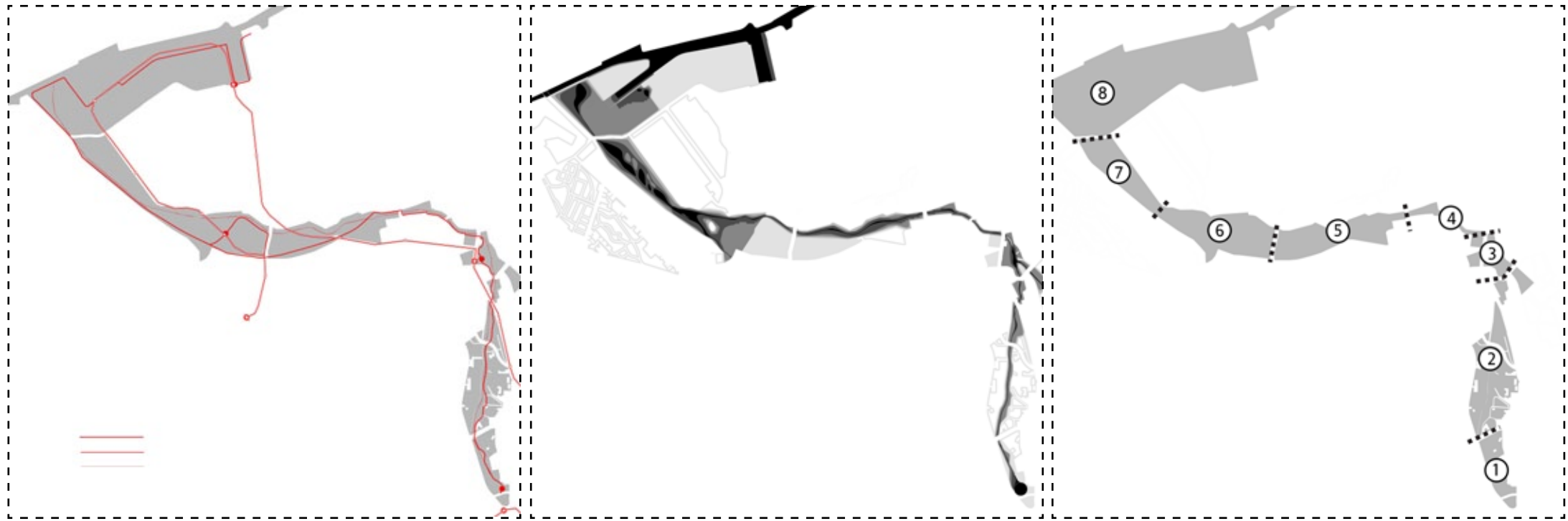




3.2 PARK







The composition of
three pathes

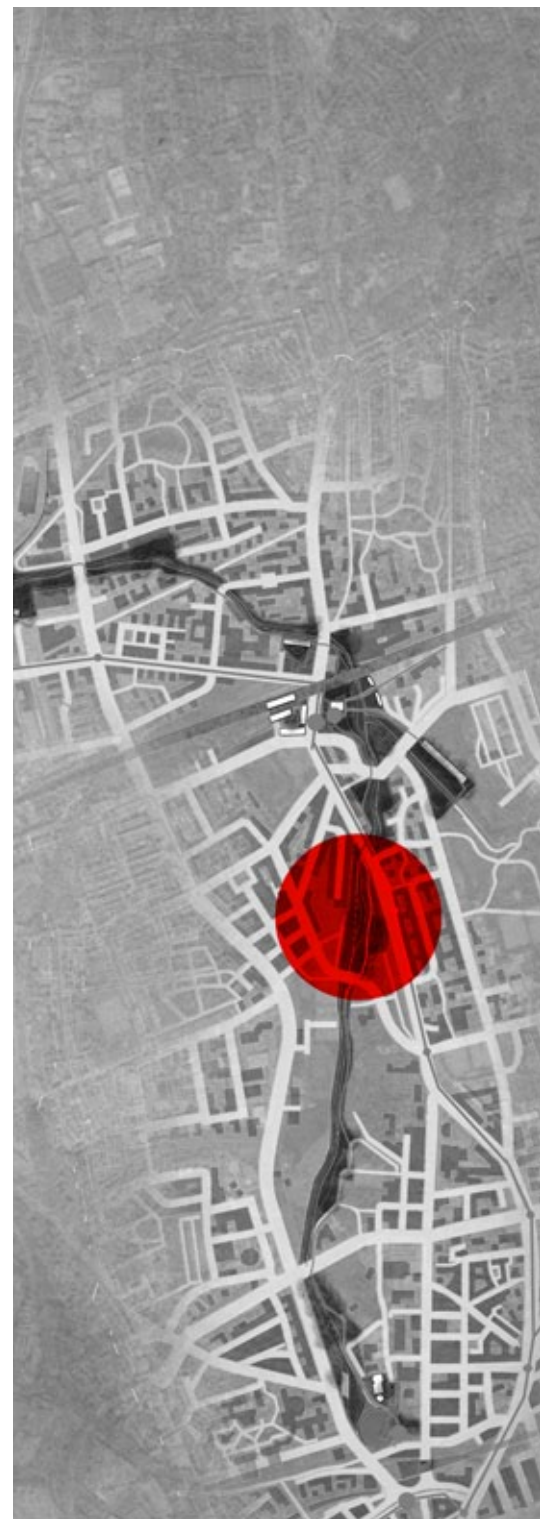
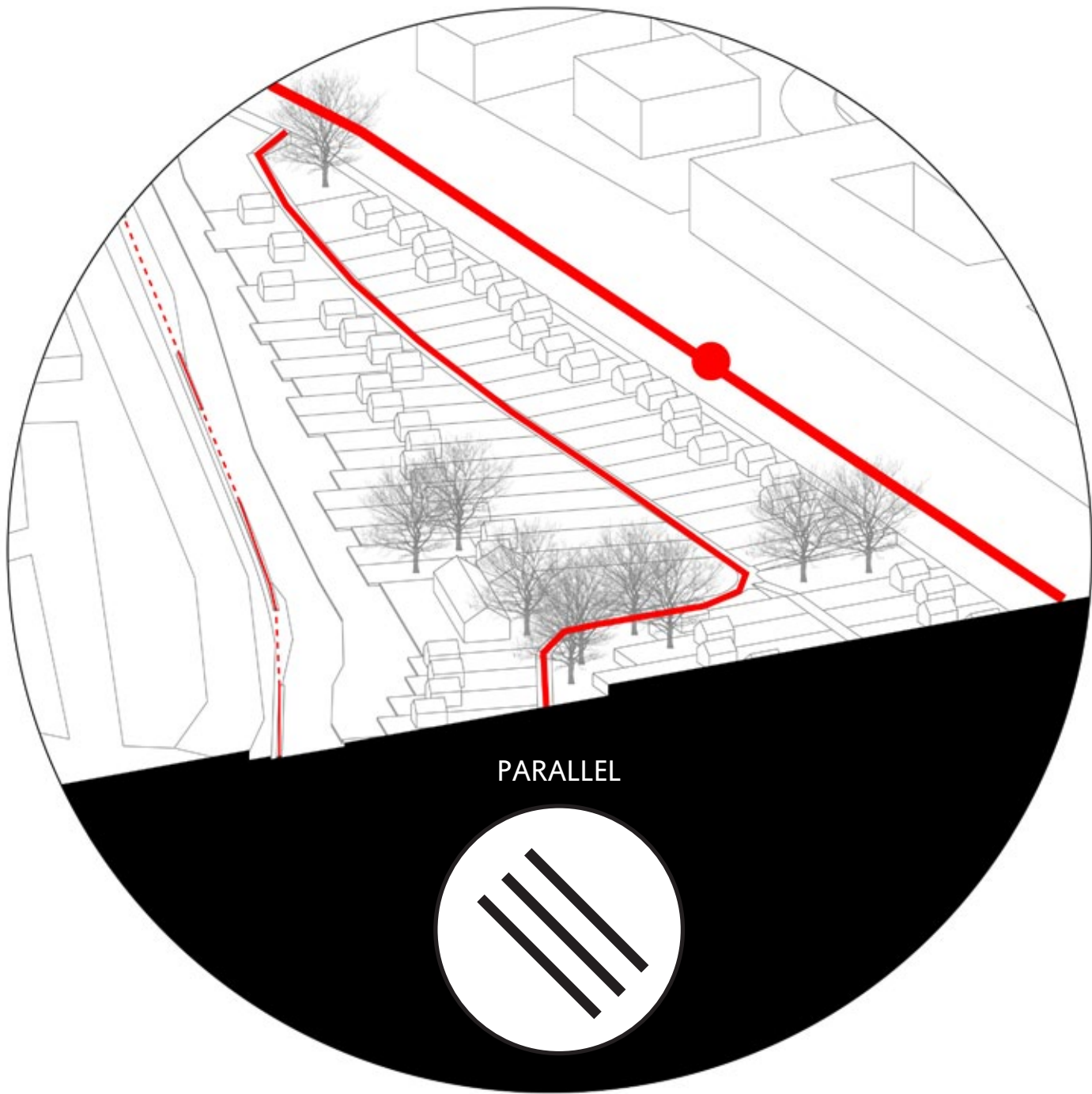
The proportion of three
layers

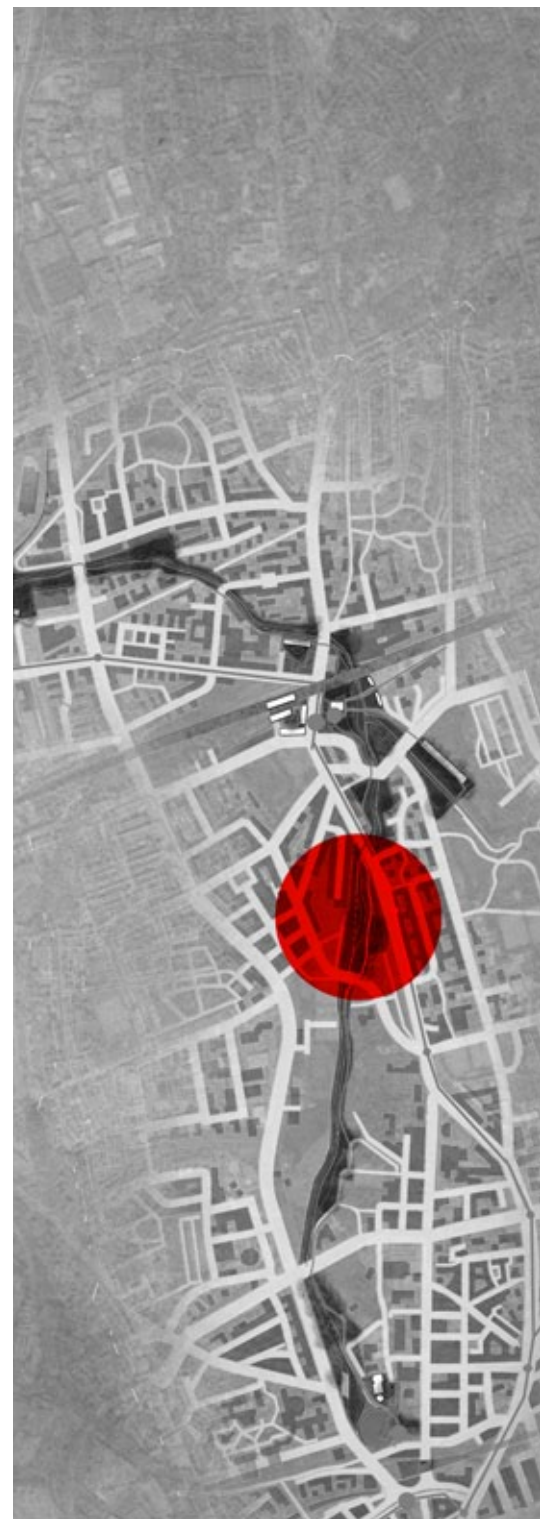
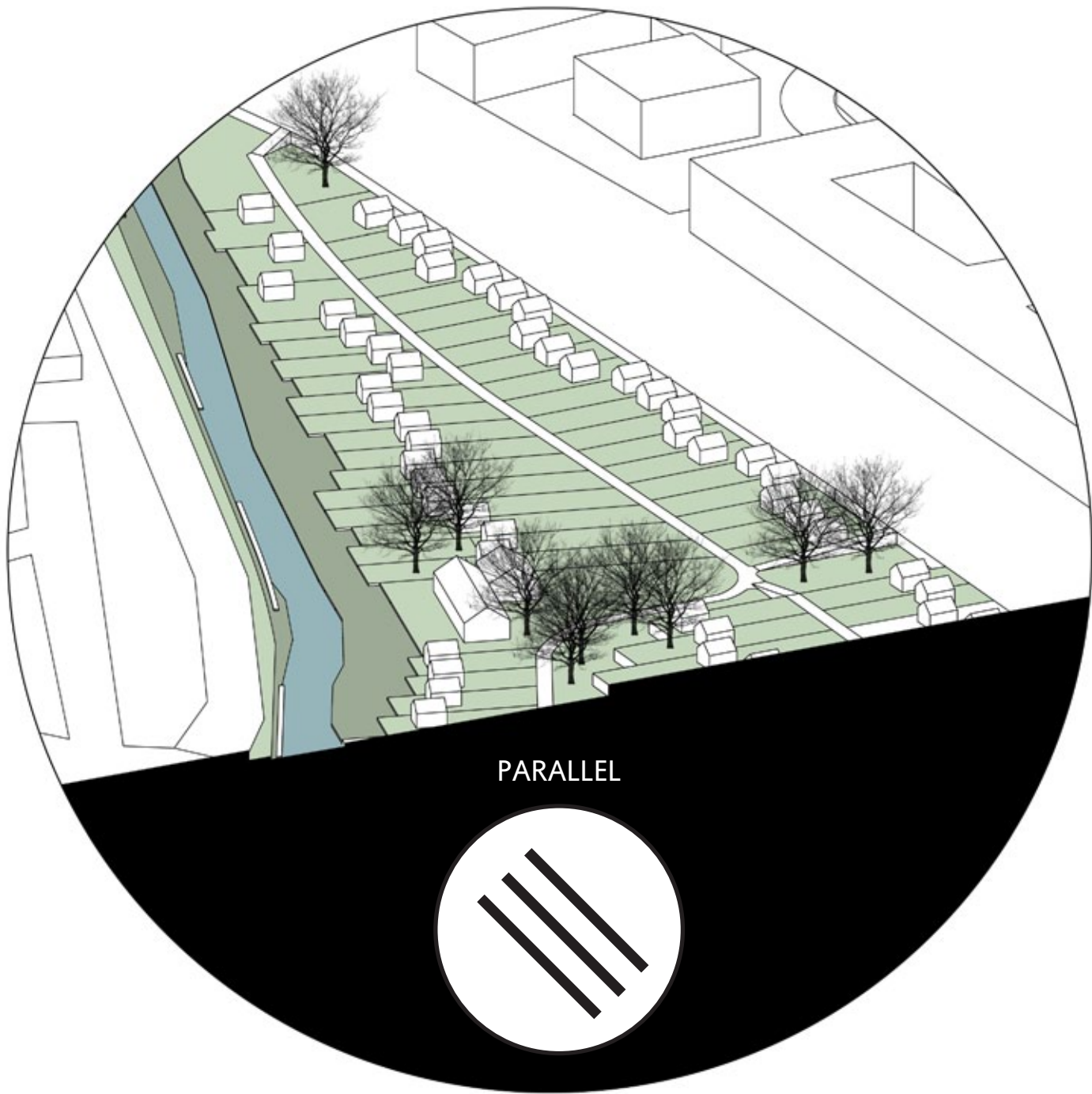
The different expression
of design strategy

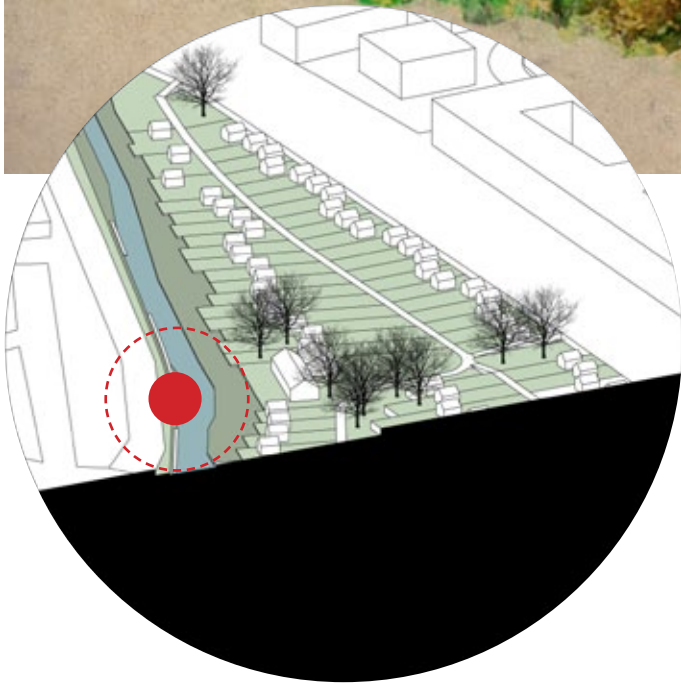
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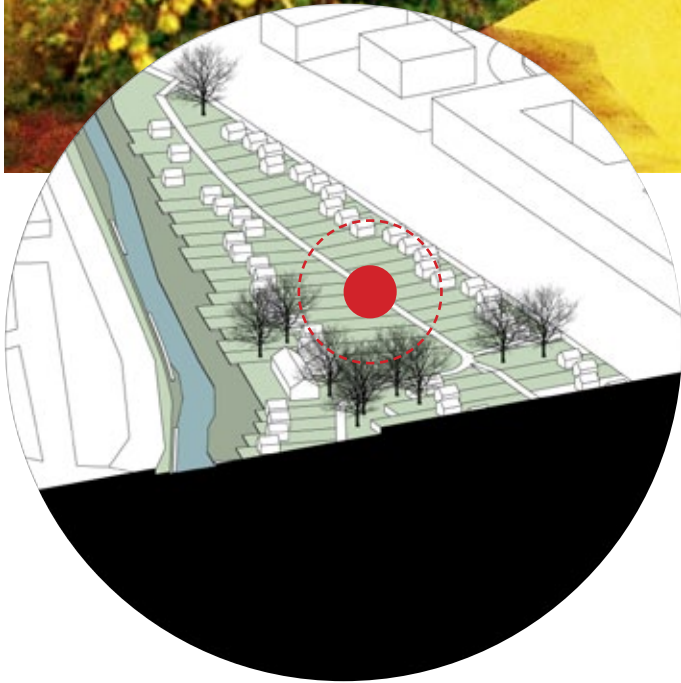
THREE PATHES



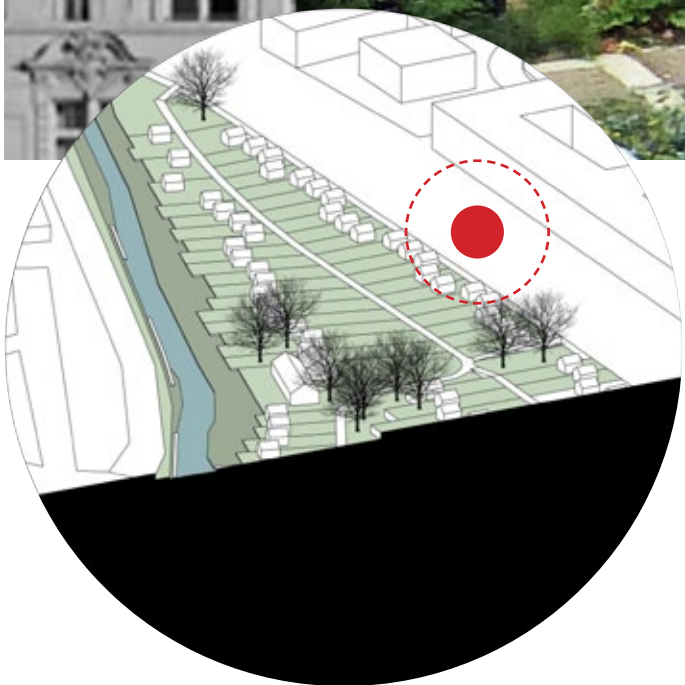




NATURE ROUTE



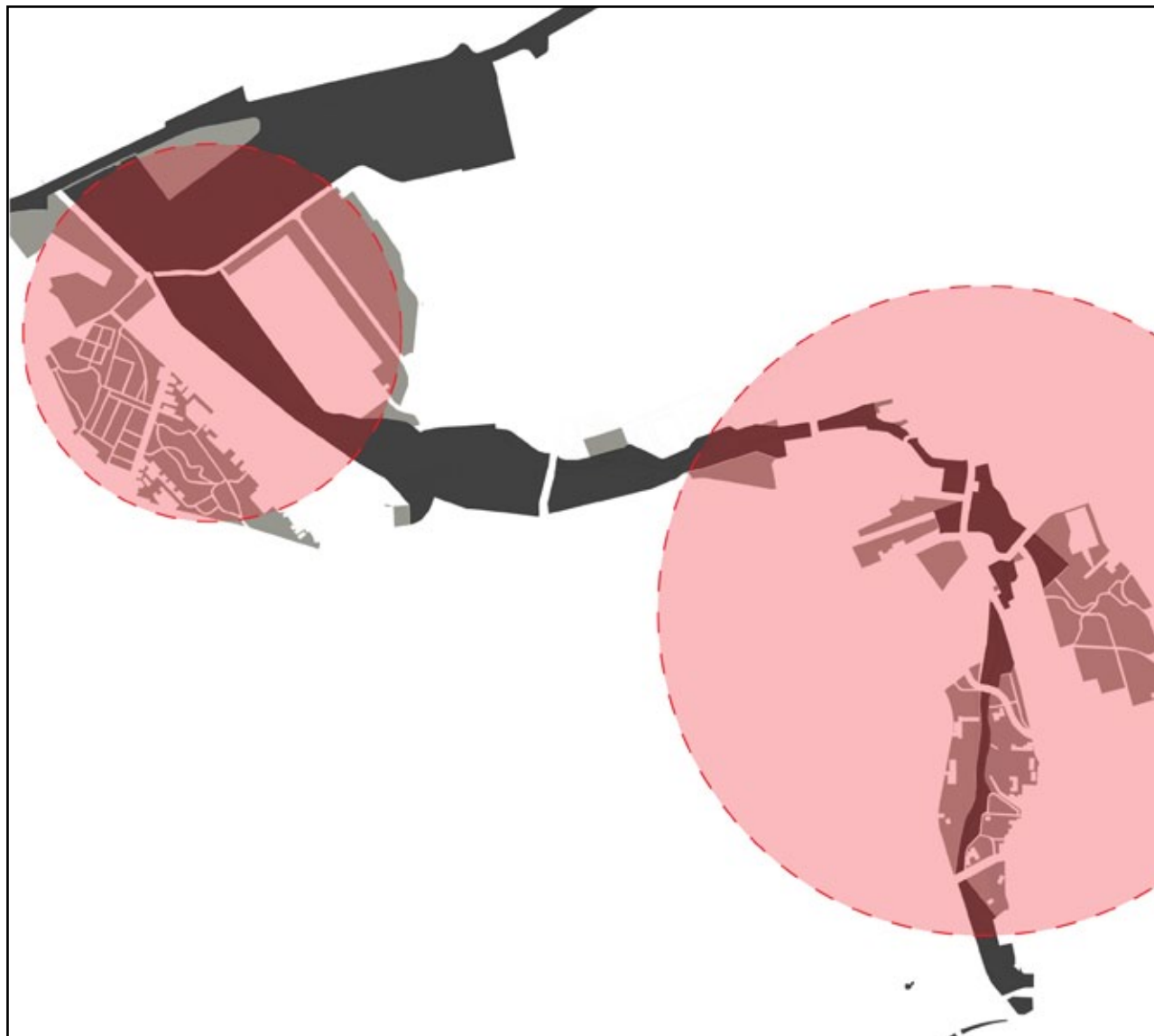
CULTURE ROUTE

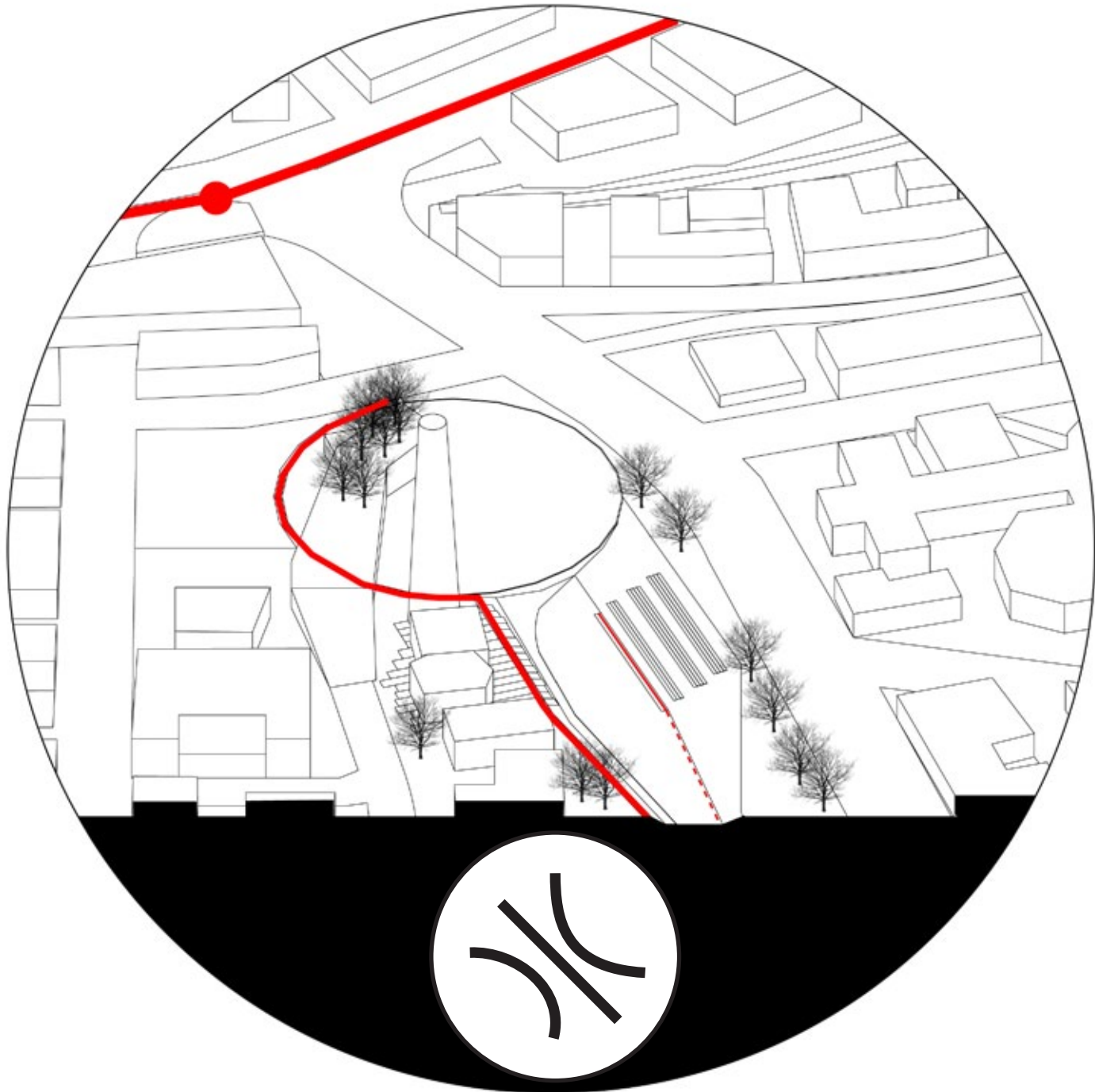


URBAN ROUTE



PARALLEL





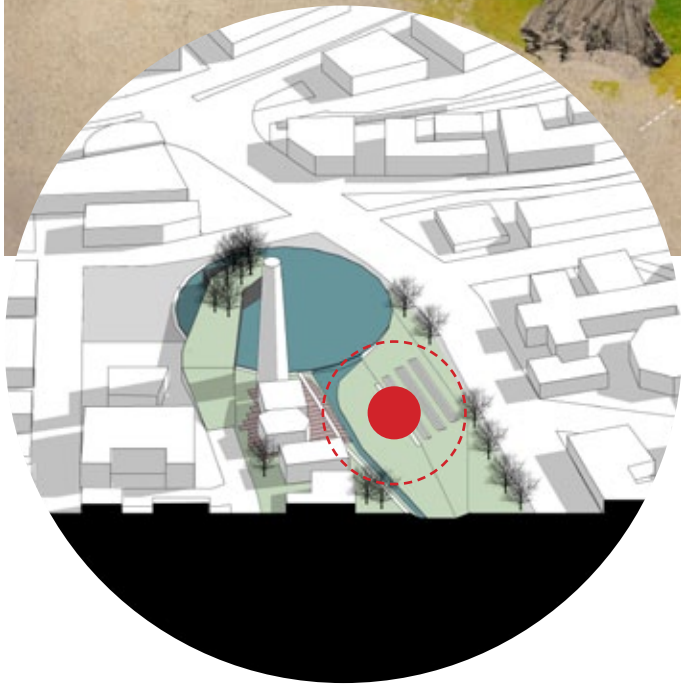
APART



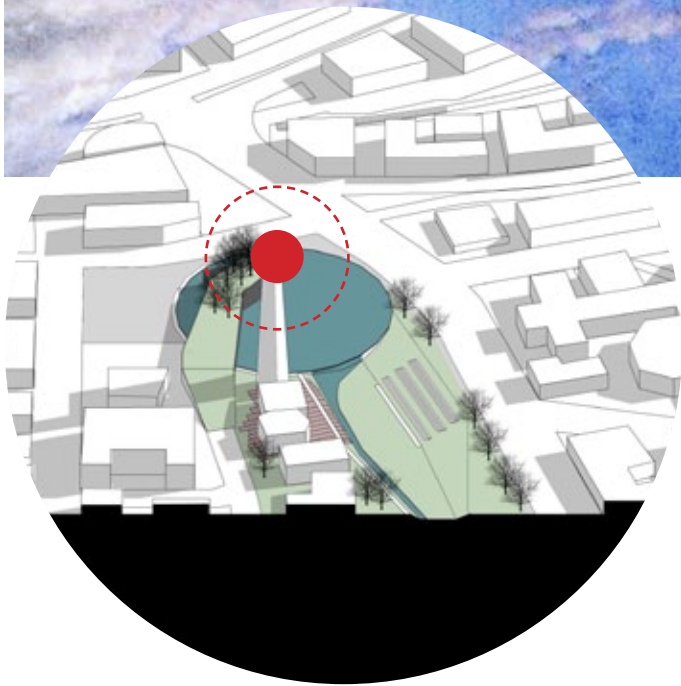


APART

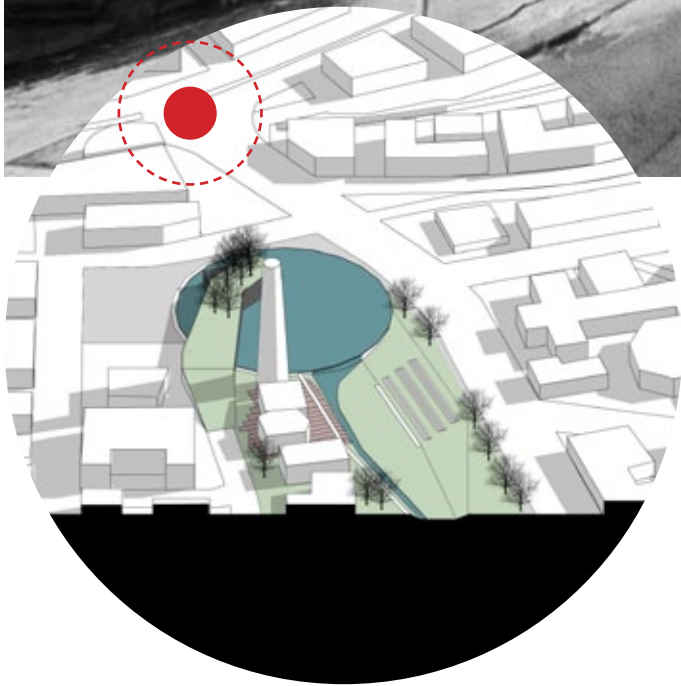




NATURE ROUTE



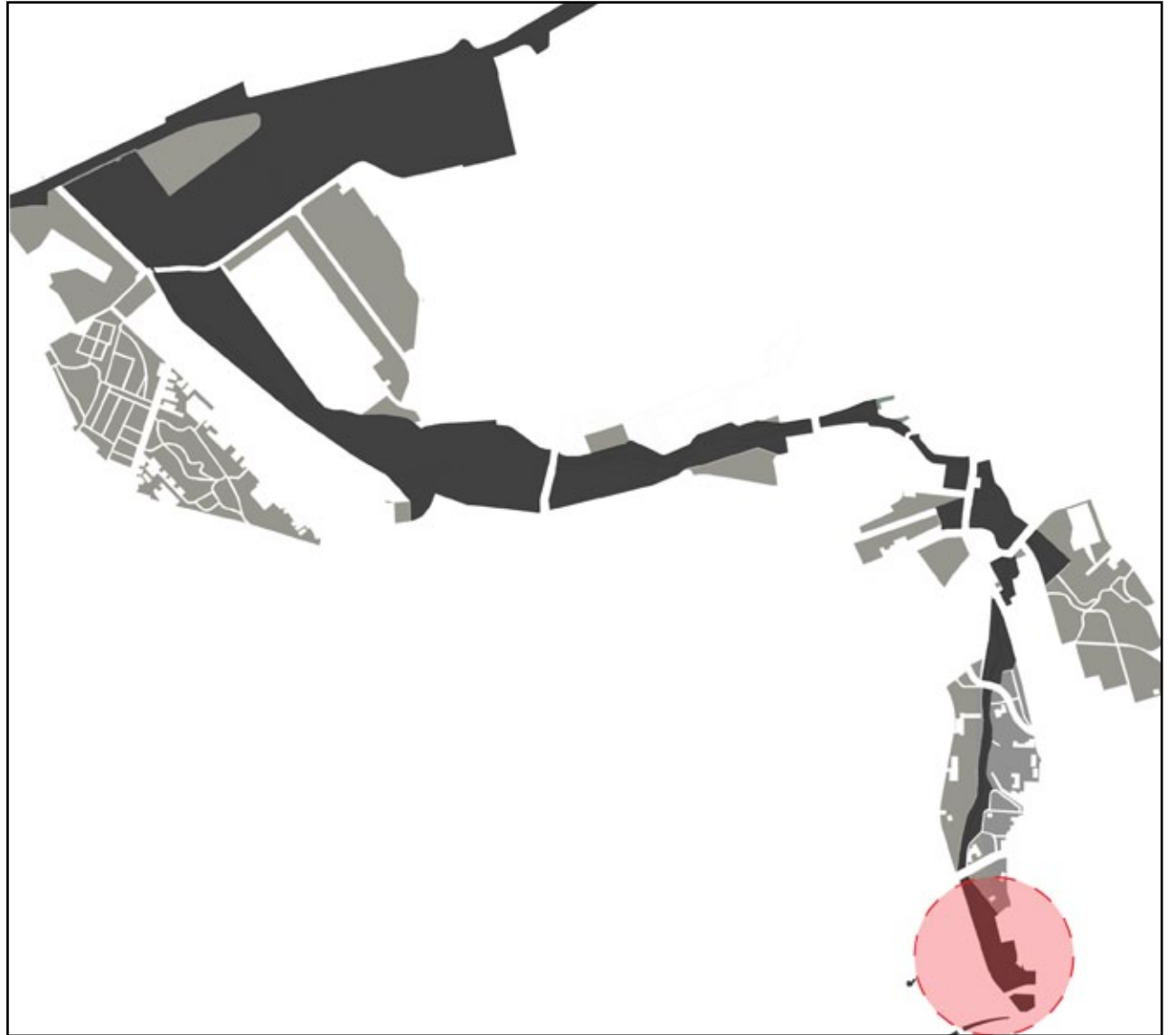
CULTURE ROUTE

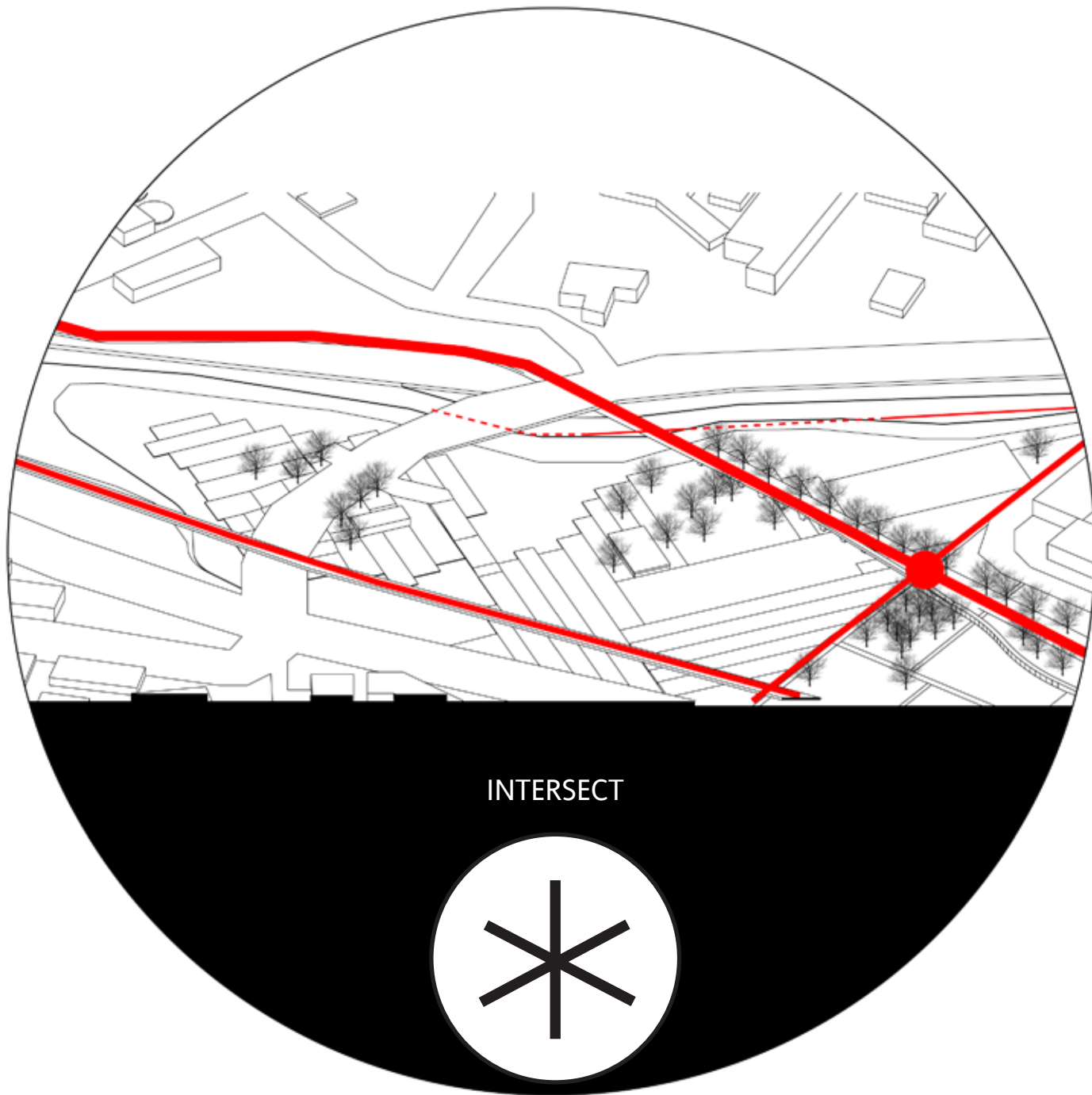


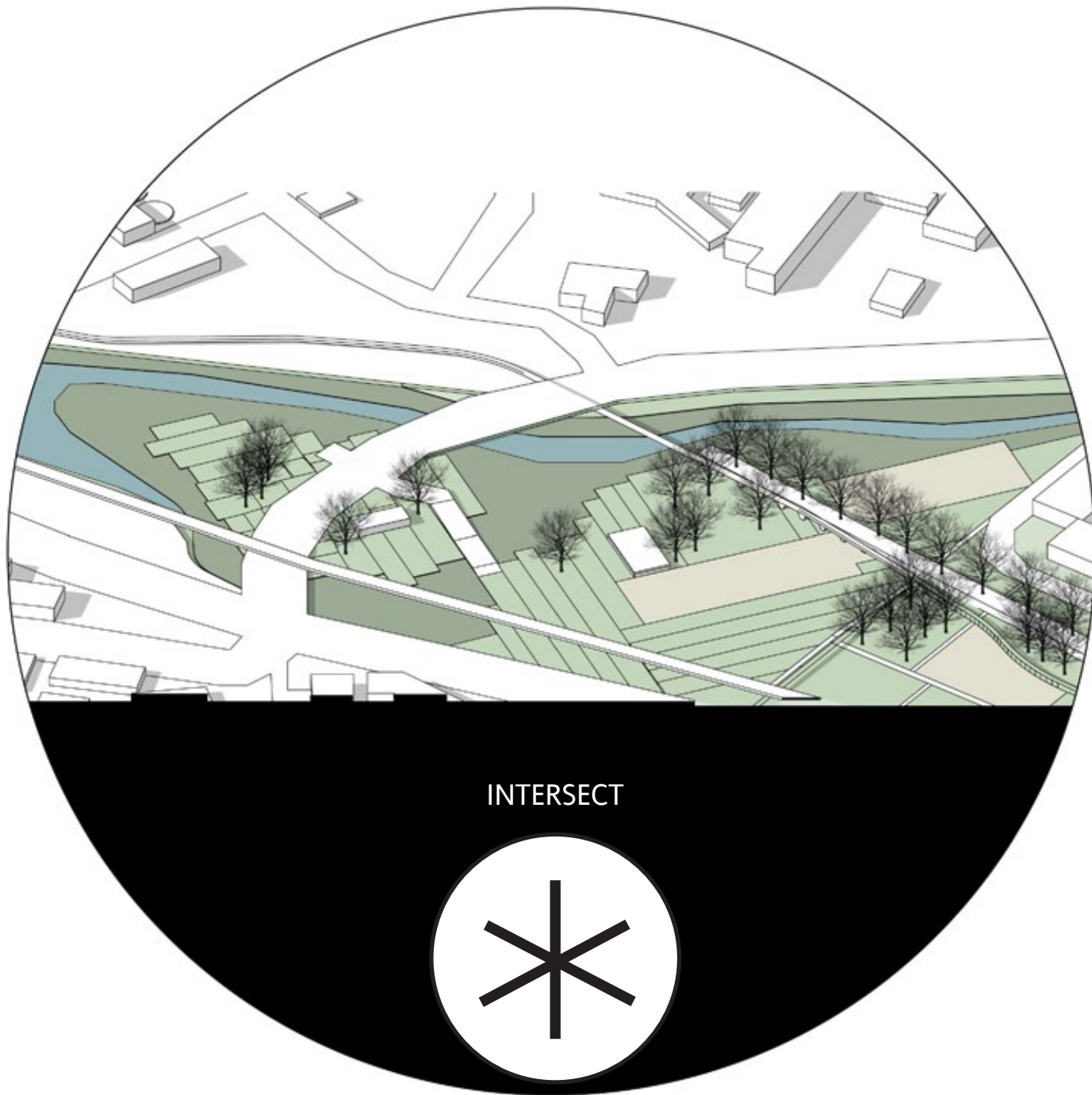
URBAN ROUTE

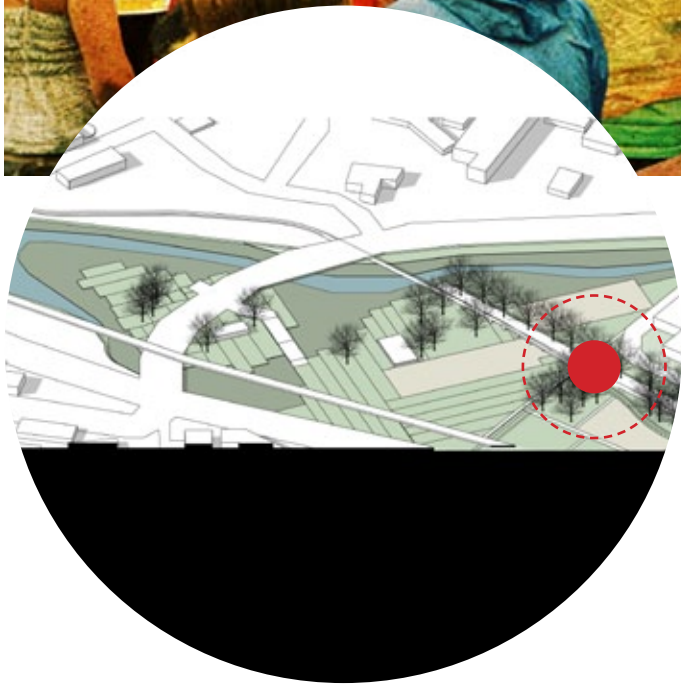


APART

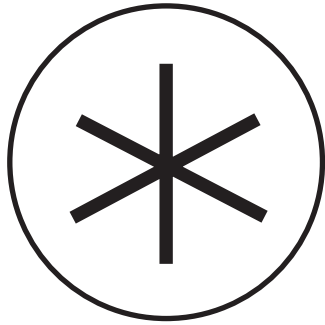








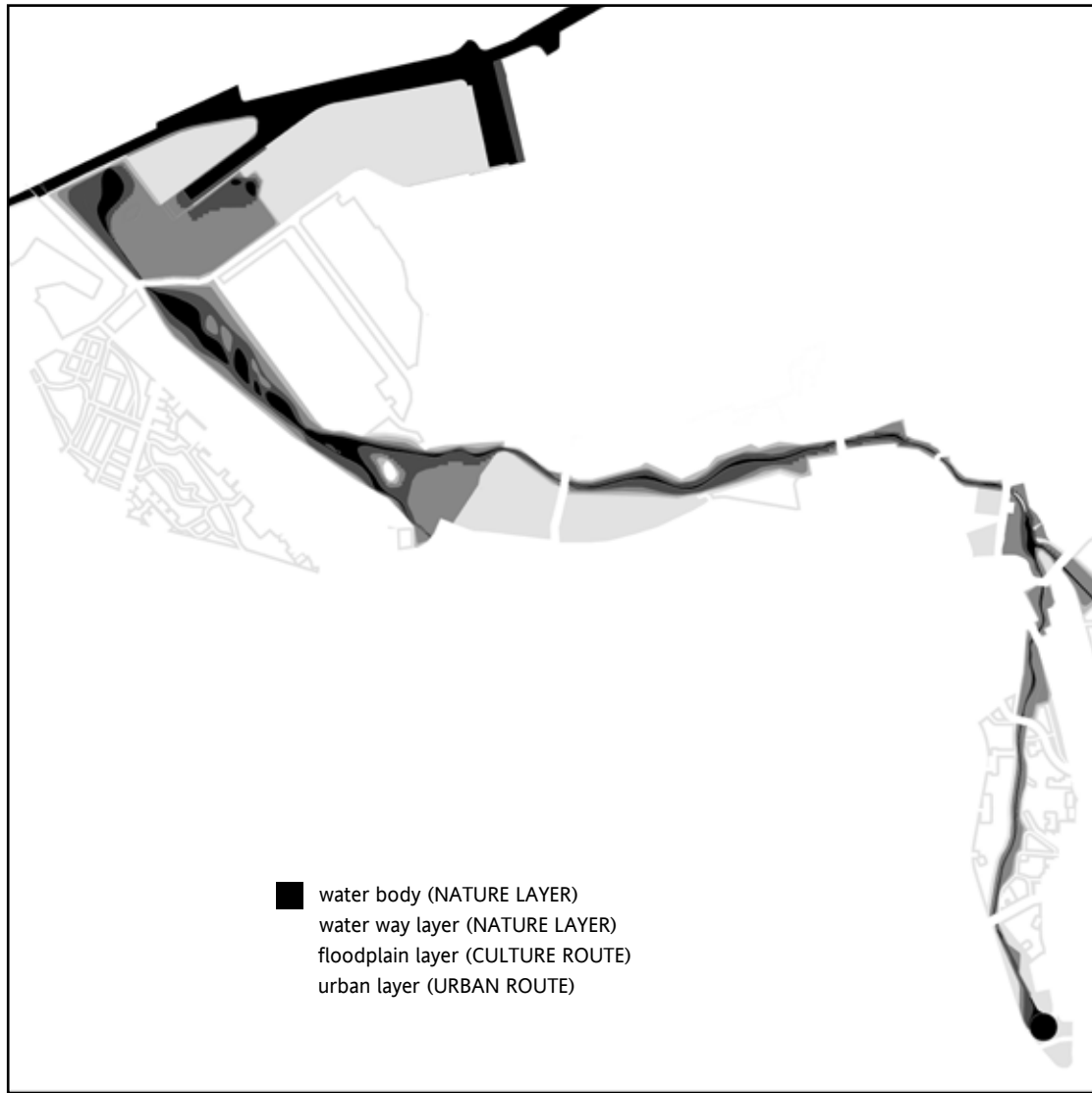
NATURE/URBAN ROUTE



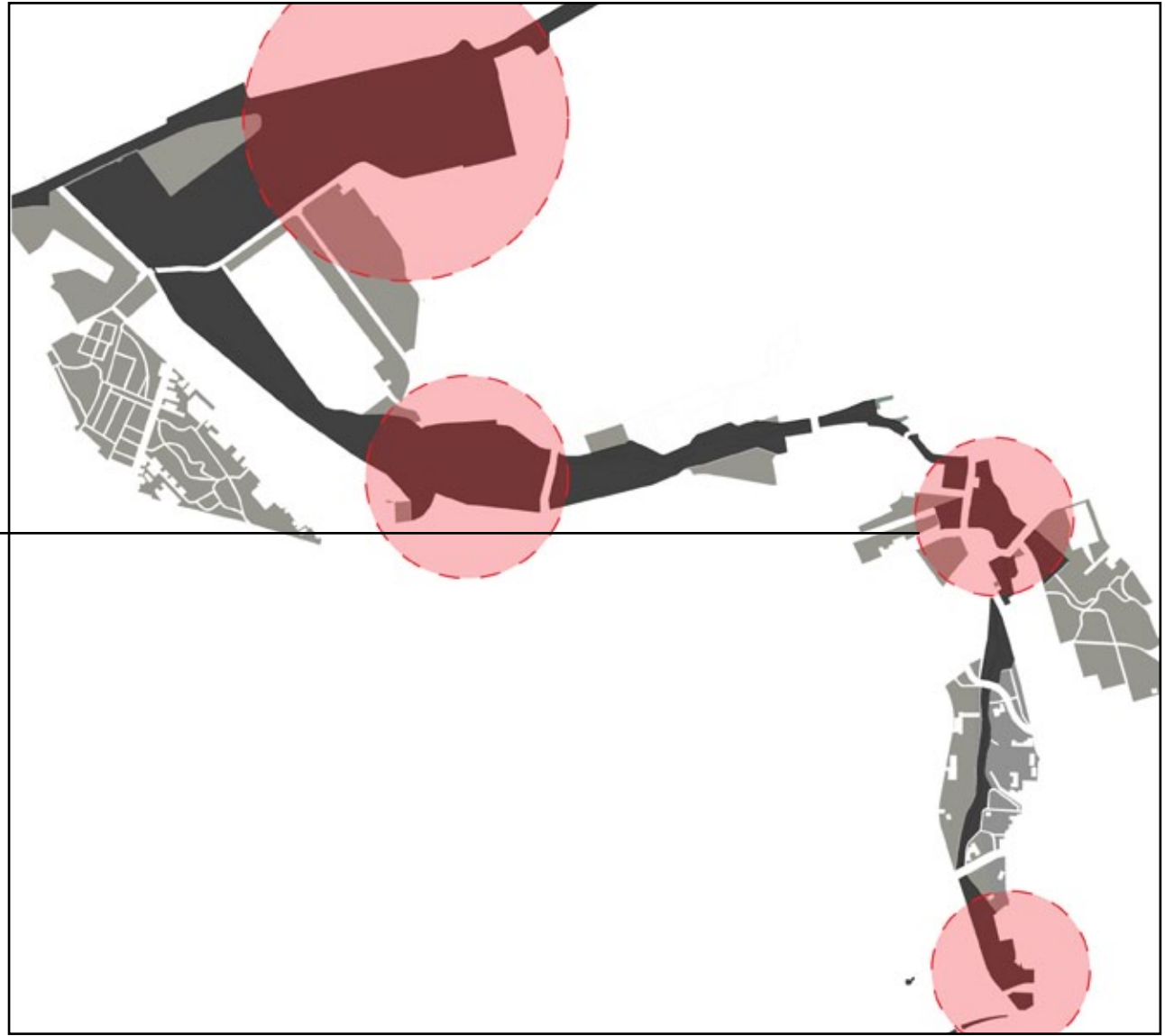
INTERSECT

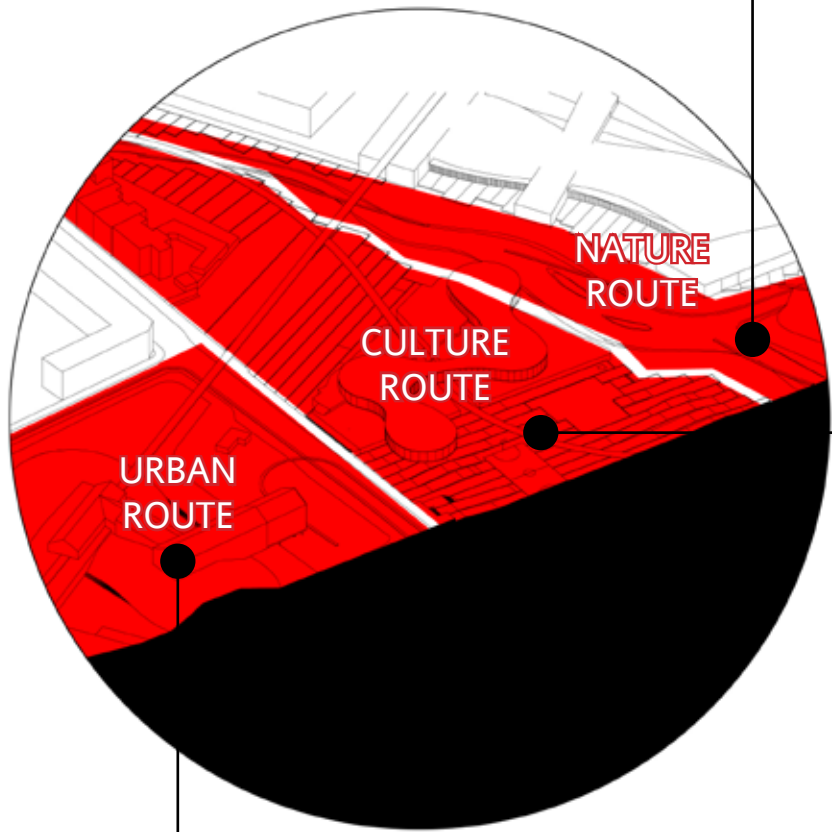


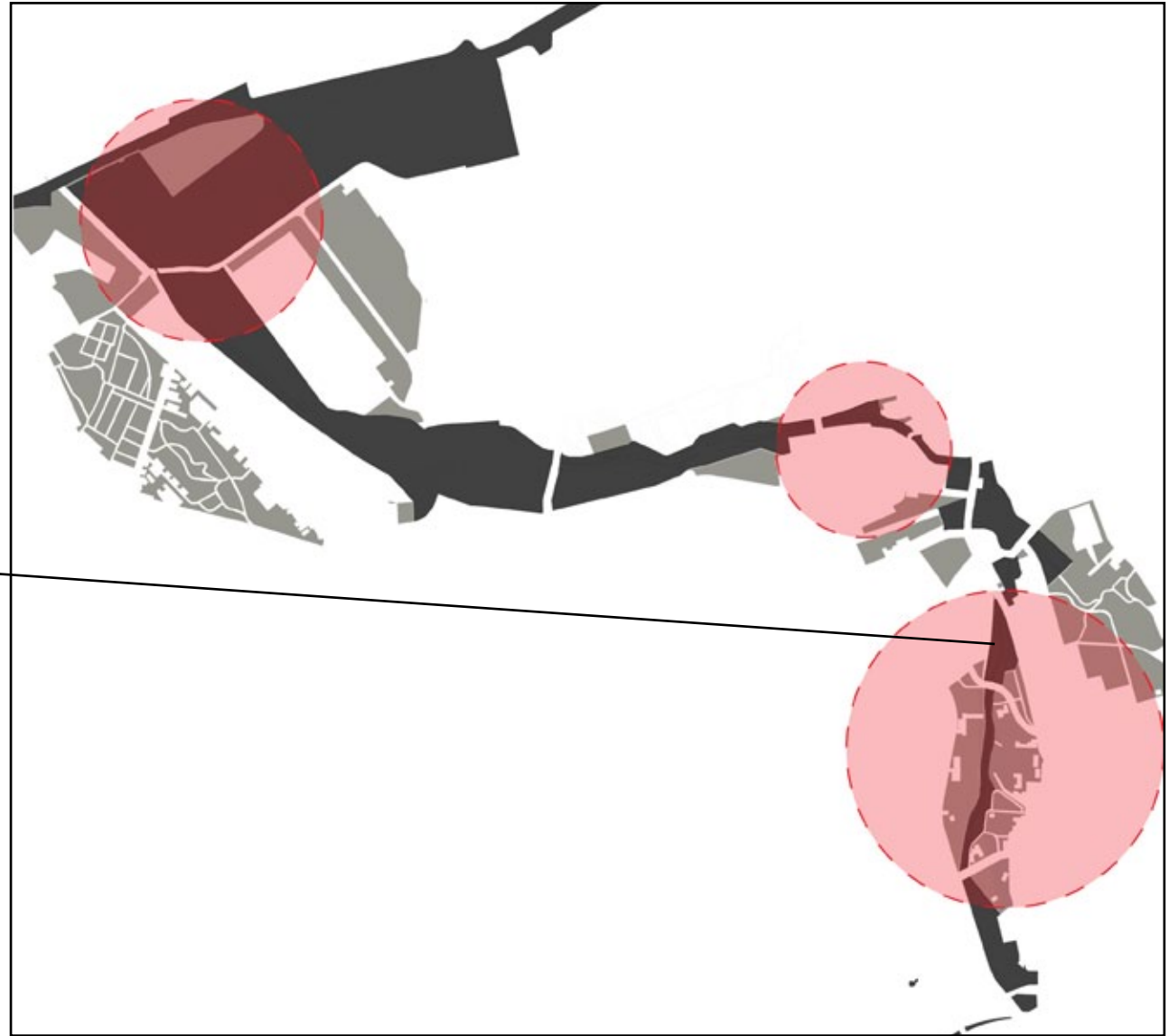
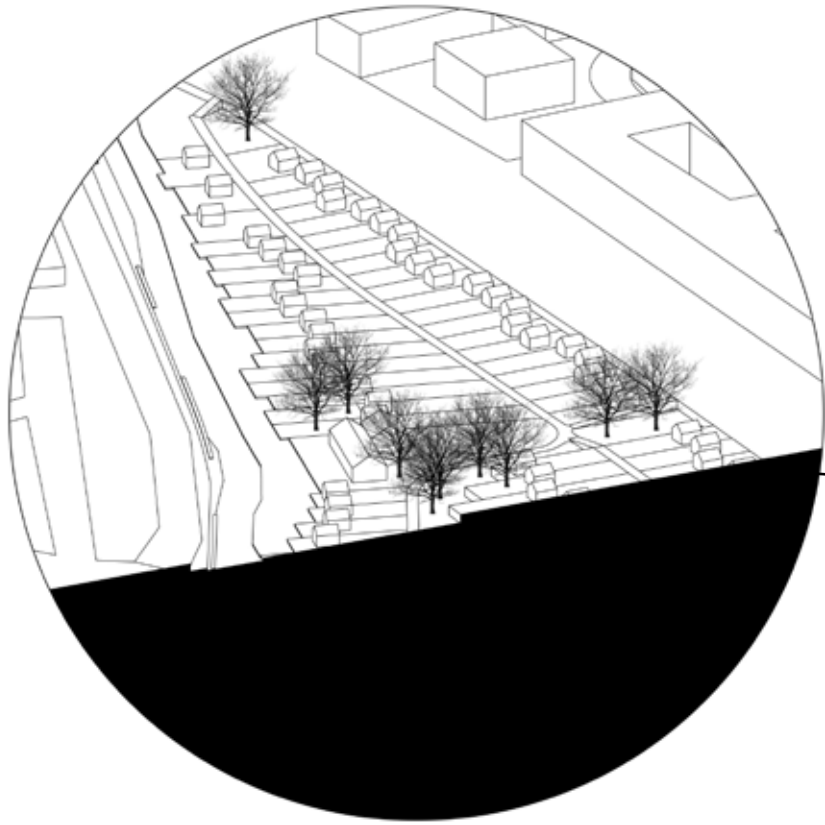
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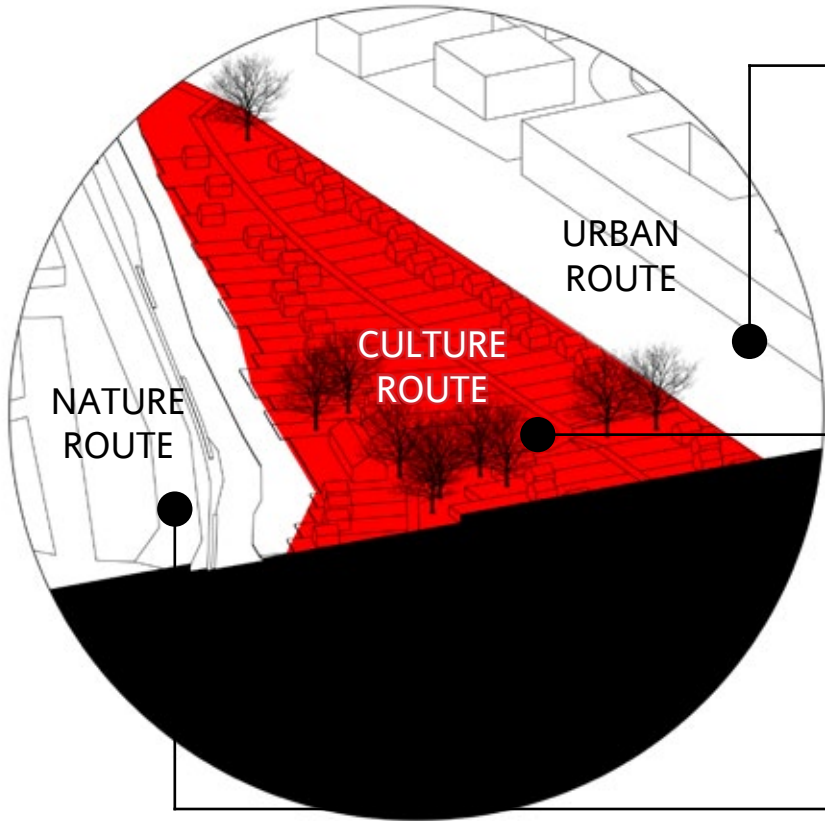


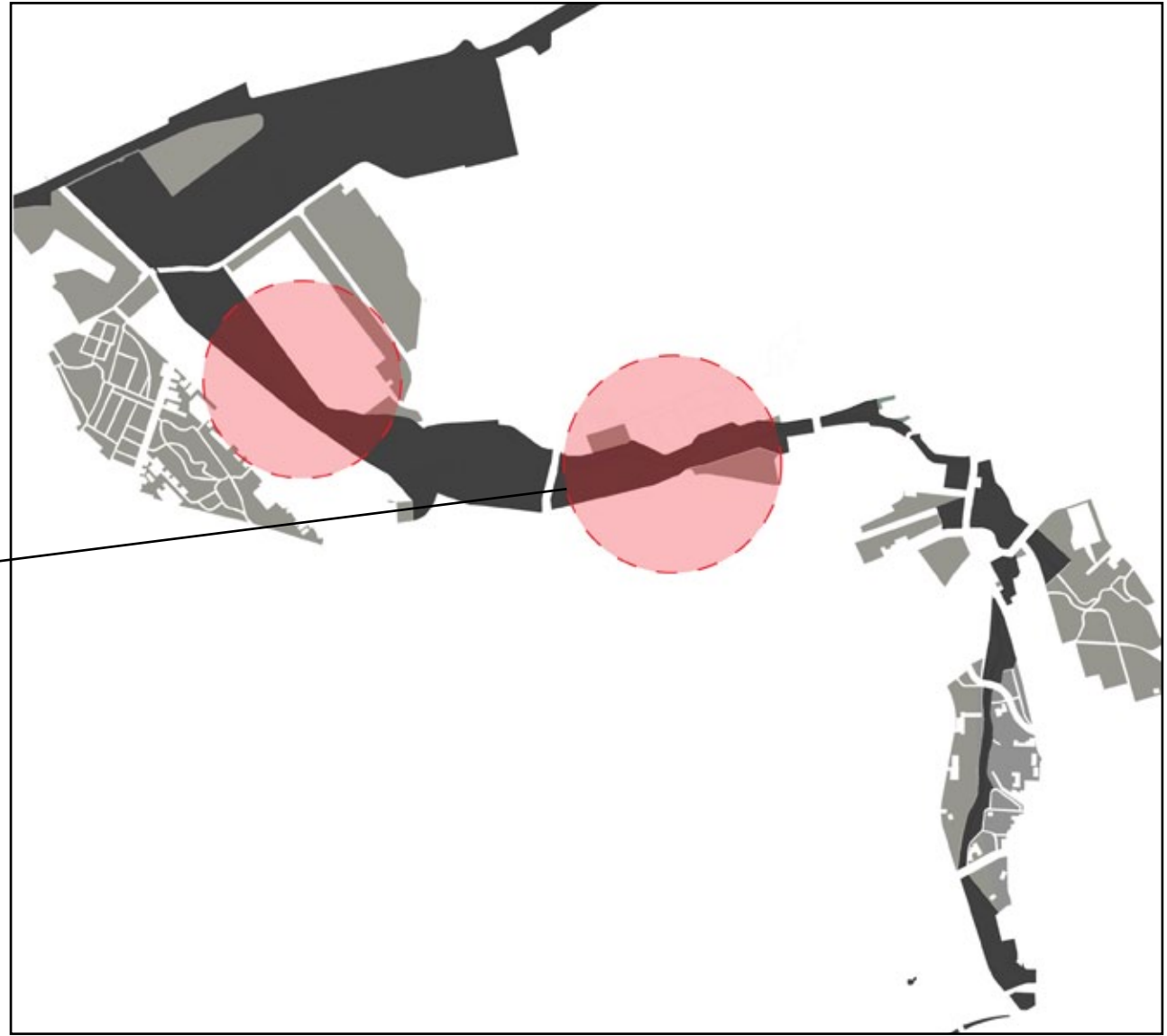
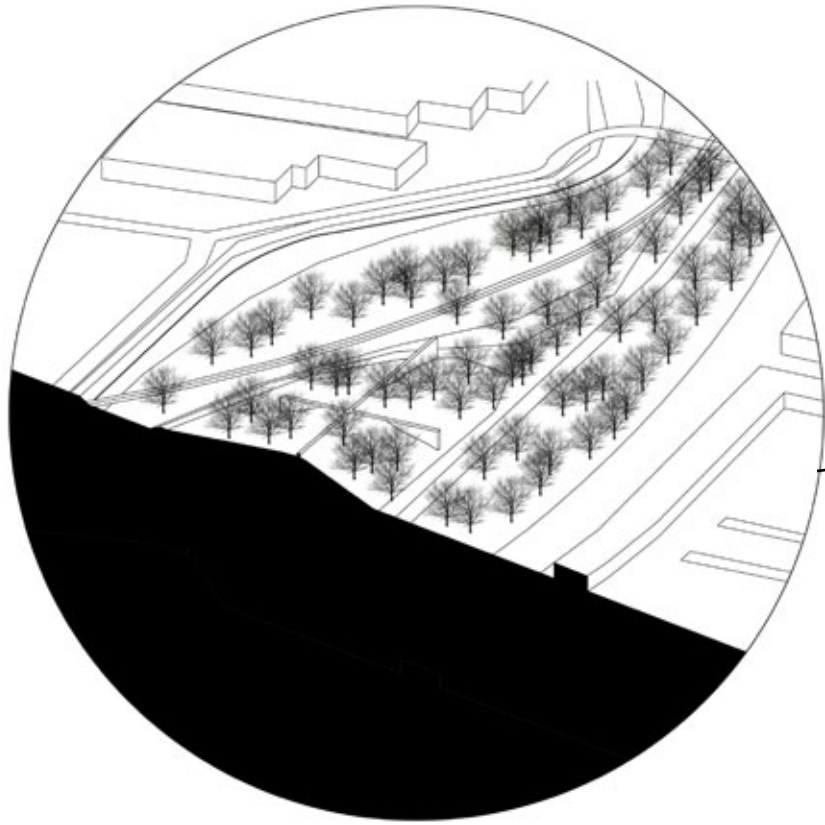
THREE PATHES

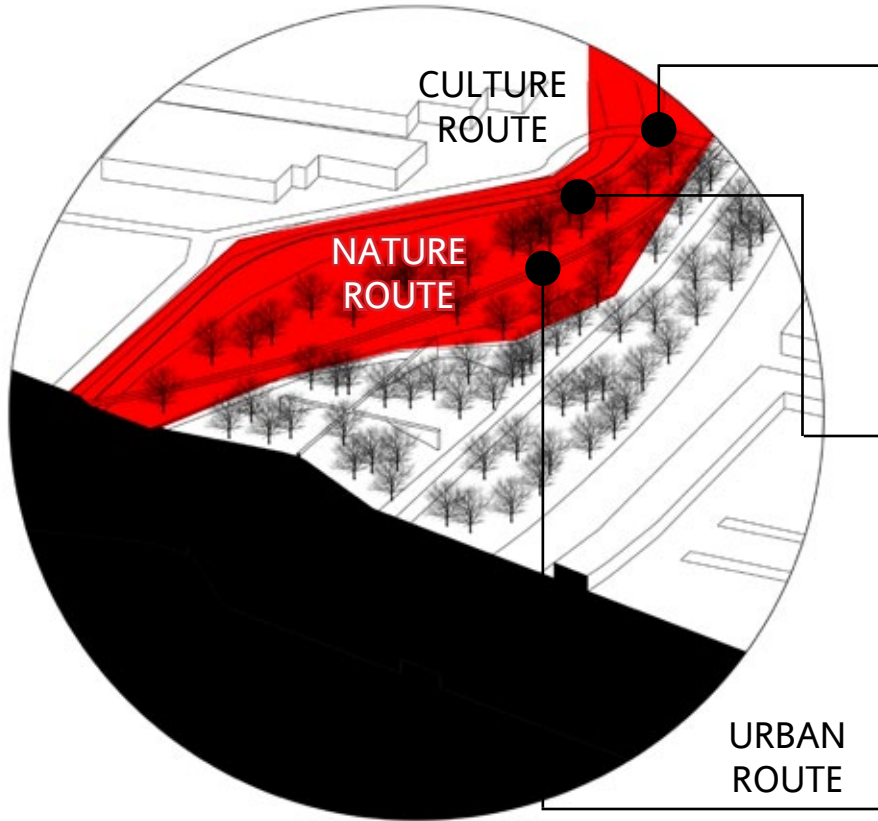




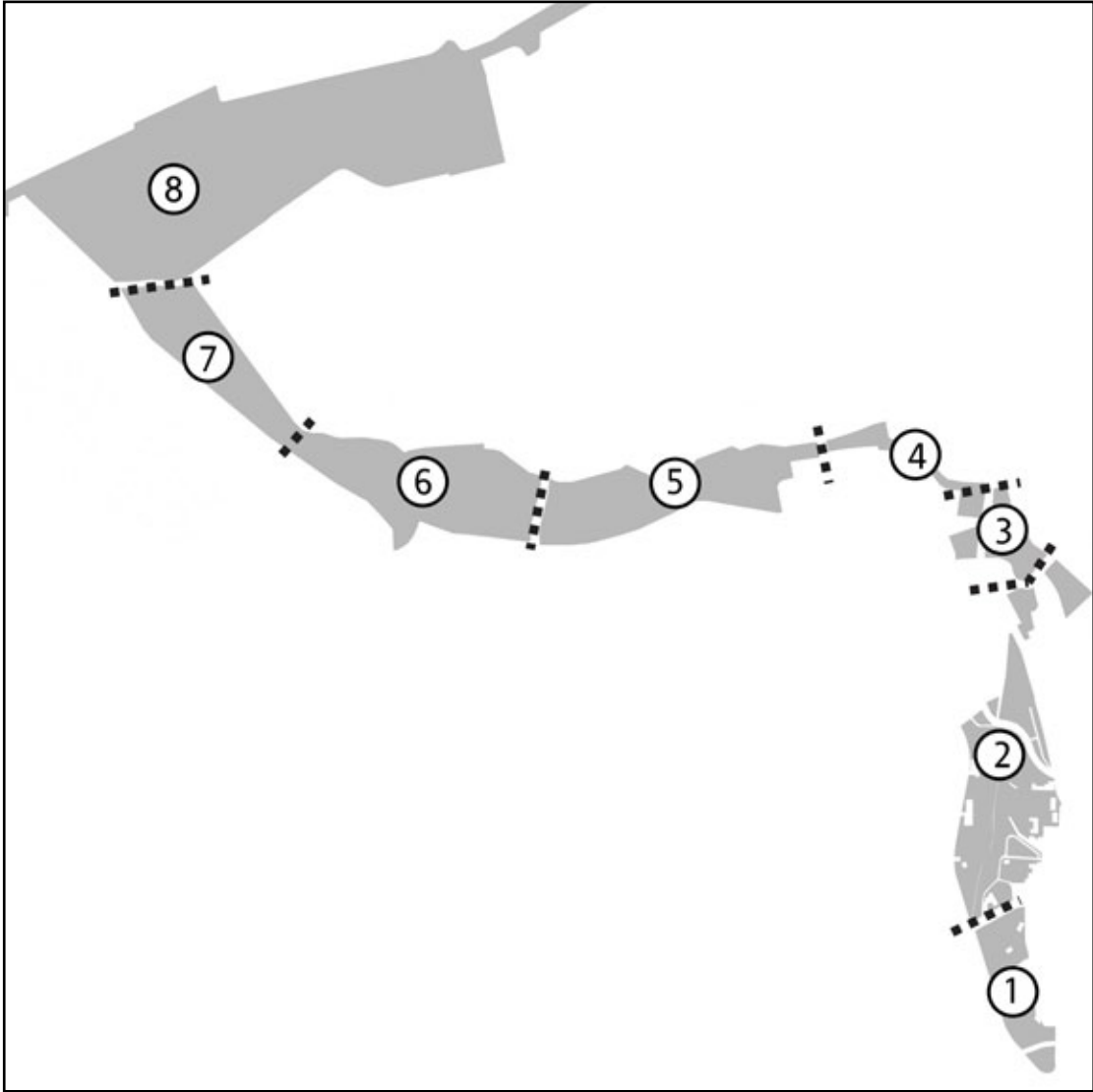


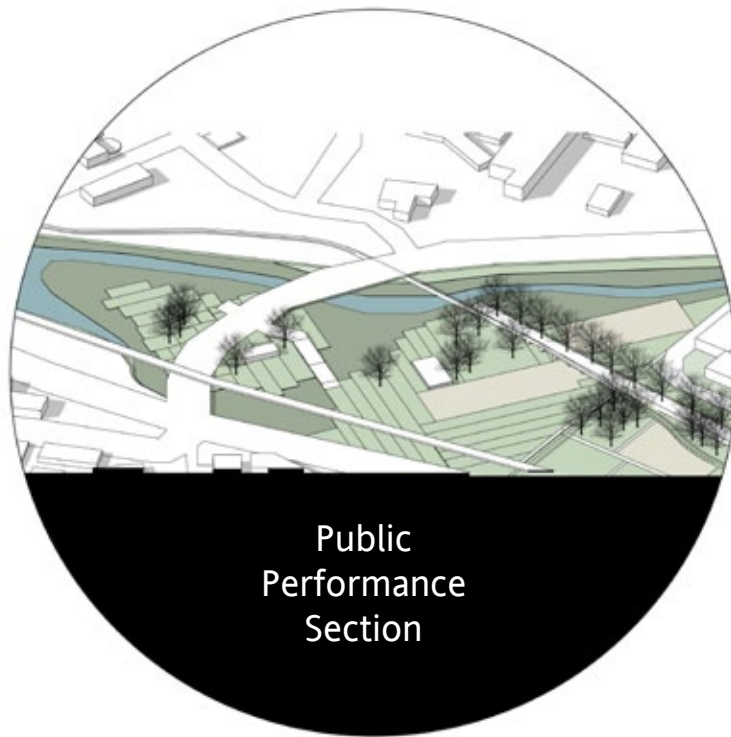




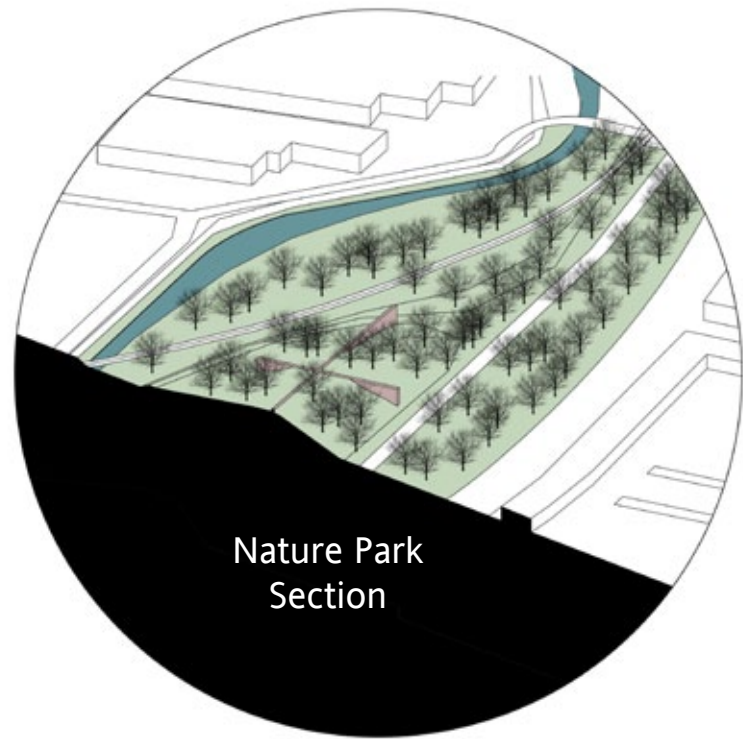


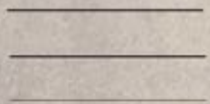
3





3







DEVELOPMENT PLAN

MULTI-STAGE
MULTI-ACTORS

2014

2015

2018

2023

2025

20??



DESIGNER



Abandoned Train Track



Abandoned Canal

2014

2015

2018

2023

2025

20??

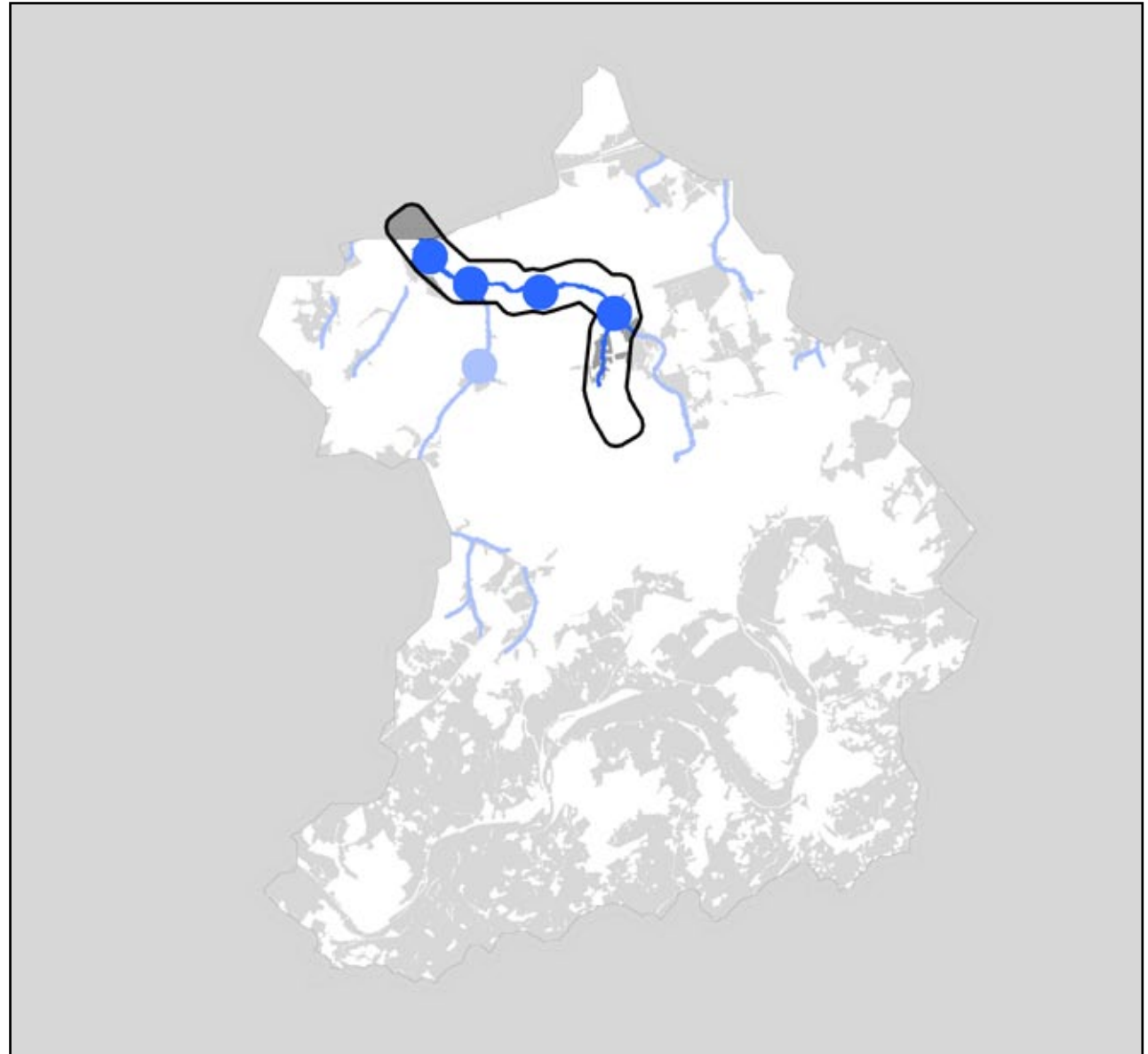


DESIGNER



PROPOSAL

Brown Line Park



2014

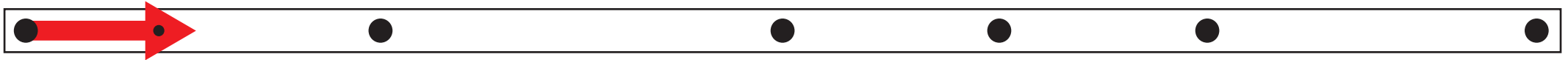
2015

2018

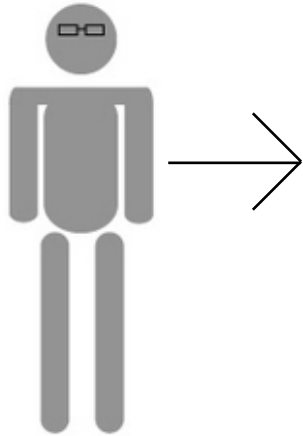
2023

2025

20??



DESIGNER



Public Sectors



Civil Sectors



Private Sectors

2014

2015

2018

2023

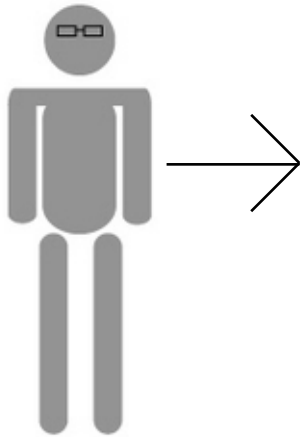
2025

20??



Foundation of
BROWN LINE PARK ASSOCIATION

DESIGNER



Public Sectors



Civil Sectors



Private Sectors

2014

2015

2018

2023

2025

20??



PARK ASSOCIATION



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

2014

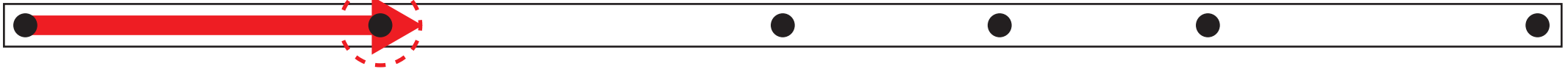
2015

2018

2023

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PARK ASSOCIATION



Public Sectors	<p>Finances Department Environment and construction Department <i>(Green and Gruga Essen, Water, Real Estate Industry, Department of Roads and Transport)</i></p> <p>Plan Department <i>(Office for Urban Regeneration and Soil Management, Office for surveying, and land, Department of City Planning and Building Regulations)</i></p> <p>Culture, Integration and Sport Department <i>(Community College, Folkwang Music School, Department of Intercultural orientation / municipal integration center food, Sports and Bäderbetriebe Essen, Cultural Office)</i></p> <p>Youth, Education and Social Department <i>(Youth Office, Job Centre Essen, Department of School)</i></p>
Civil Sectors	<p>Community Residential Association Environmental protection organization AGFS(the Association for Pedestrian and Bicycle-friendly Cities, Townships and Districts in North Rhine Westphalia)</p> <p>Turkish Immigration Association The Essen Cultural Advisory Council Turkish consulate general JHA(Youth Service Committee) Essen-Duisburg University Metropole Ruhr (Emscher Landscape Park)</p>
Private Sectors	<p>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 Inustries, STEAG Real State Companies Construction Companies</p>
Designer	<p>Ruohao Wu</p>

2014

2015

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PARK ASSOCIATION



2014

2015

2018

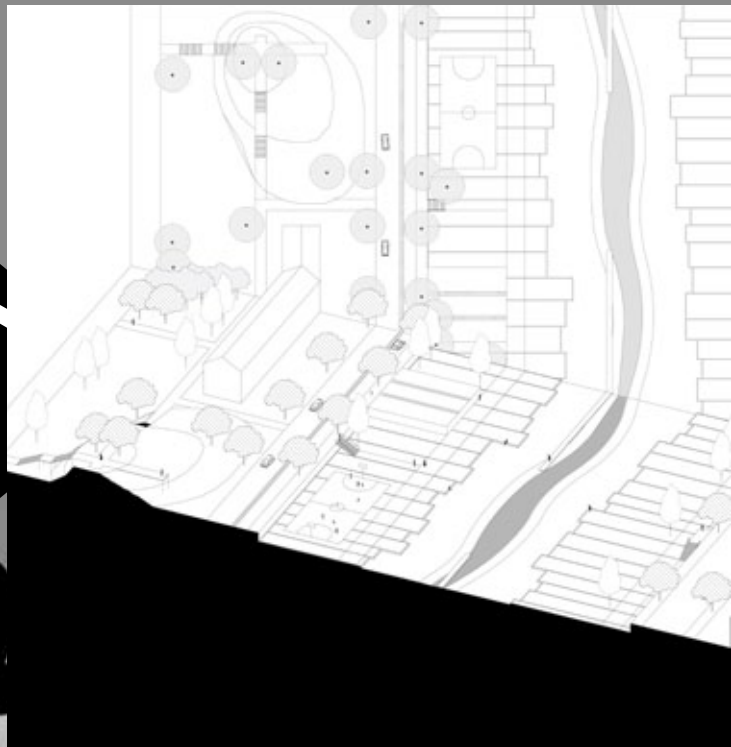
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PARK ASSOCIATION



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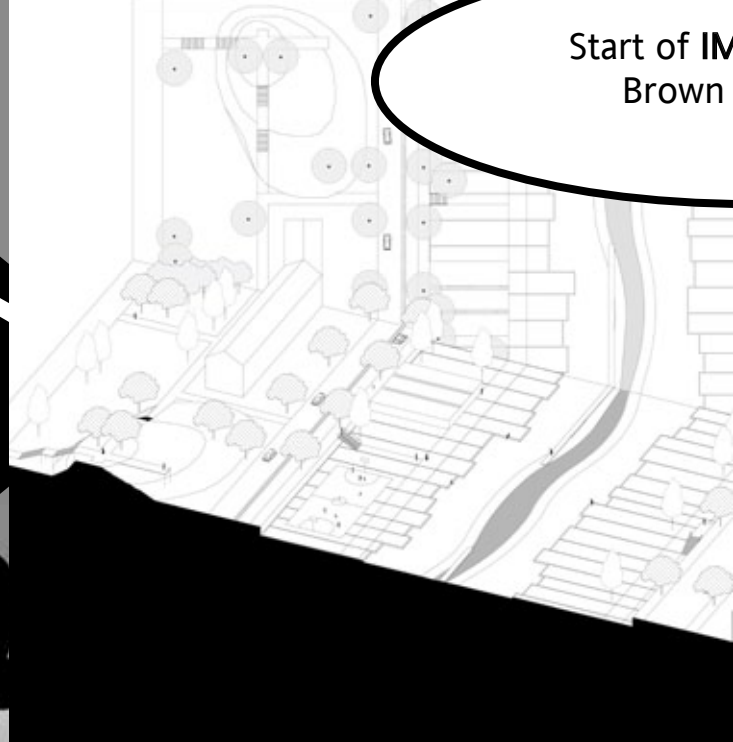


PARK ASSOCIATION

**BROWN
LINE
PARK**

**BROWN
LINE
PARK**

Start of **IMPLEMENT** of
Brown Line park



2014

2015

2018

2023

2025

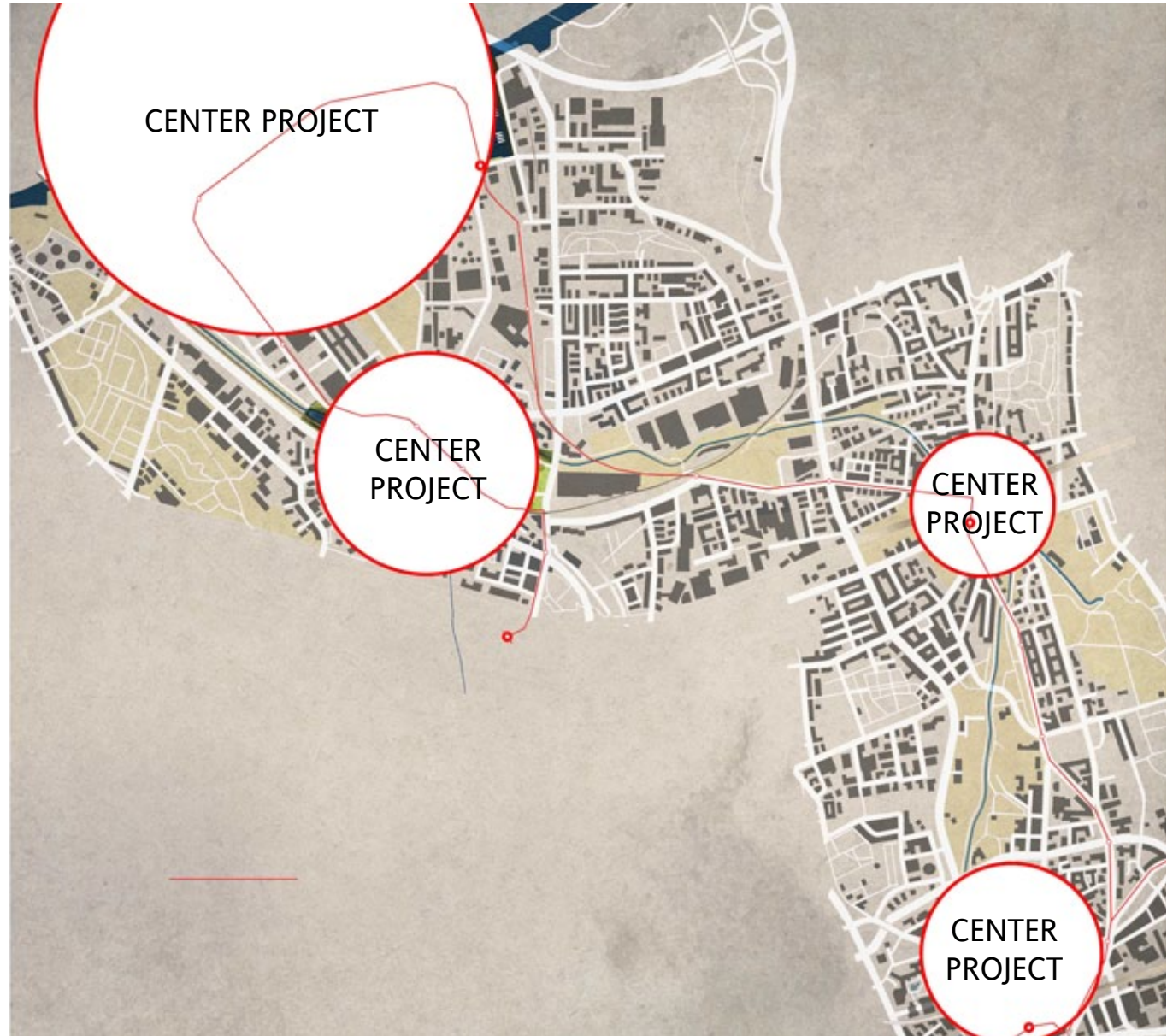
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PARK ASSOCIATION



STEP 1



2014

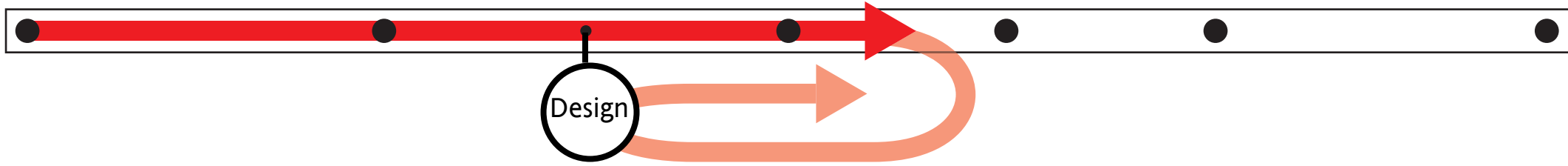
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PARK ASSOCIATION



STEP 1

DESIGN AS LEARNING



2014

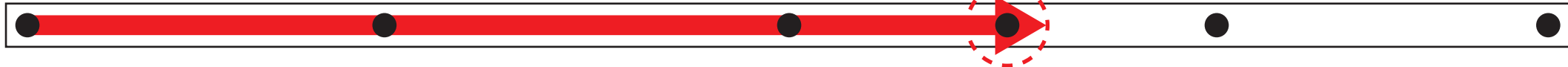
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PARK ASSOCIATION



STEP 1

DESIGN AS LEARNING



2014

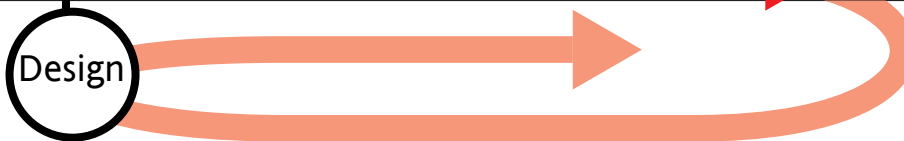
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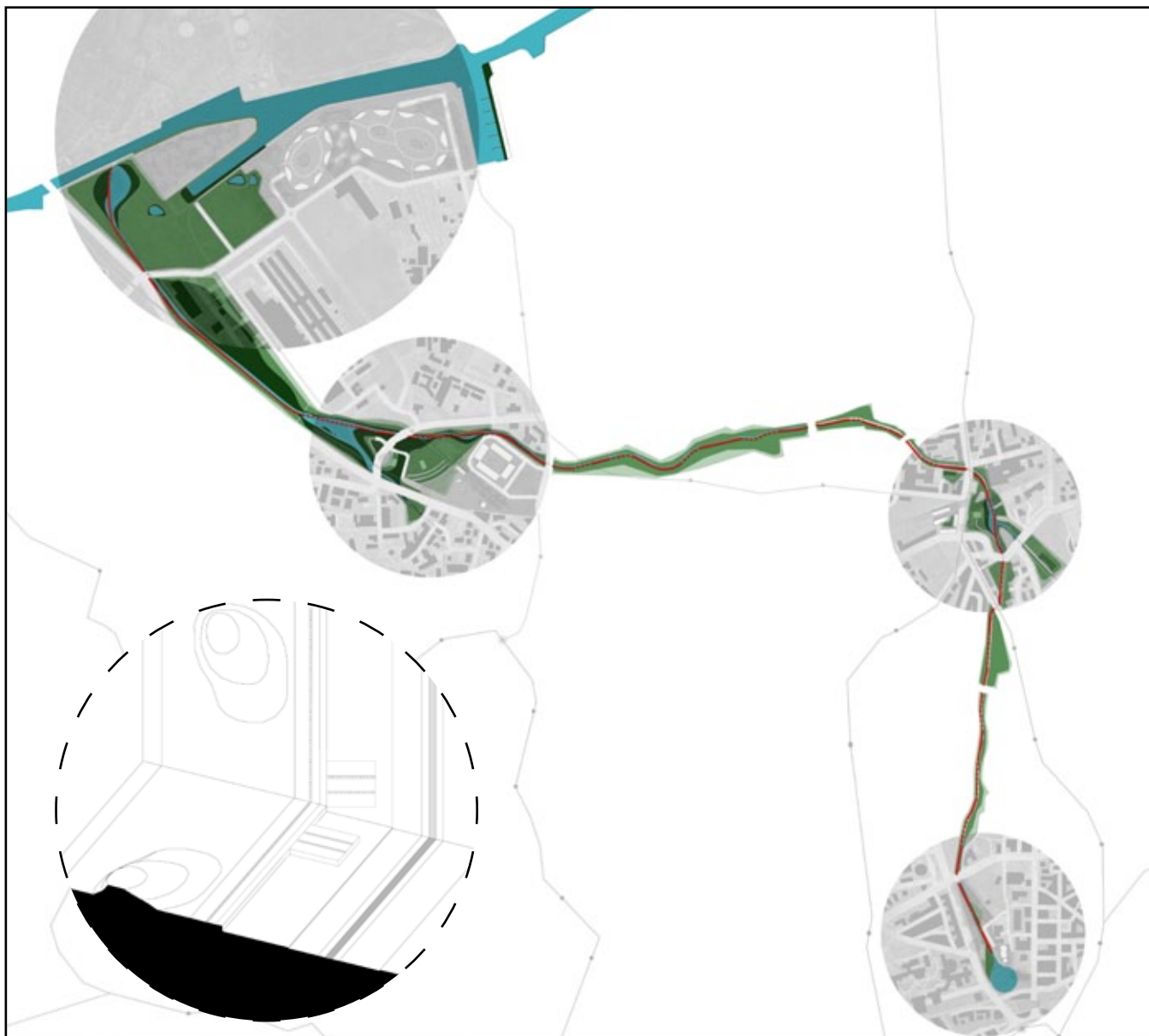


PARK ASSOCIATION



STEP 2

DESIGN AS LEARNING



2014

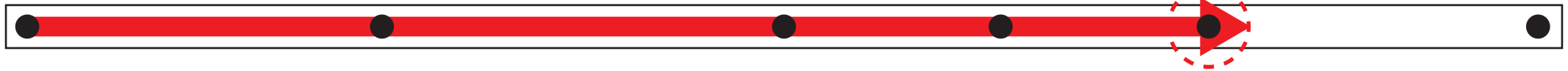
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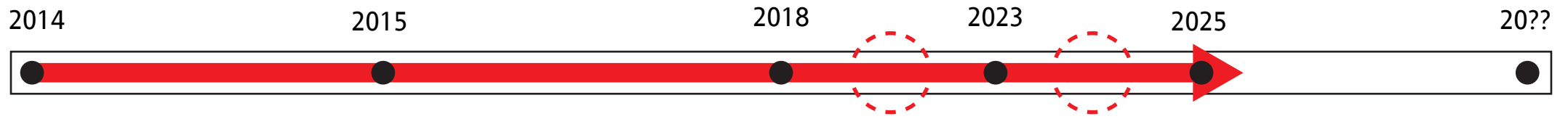
PARK ASSOCIATION



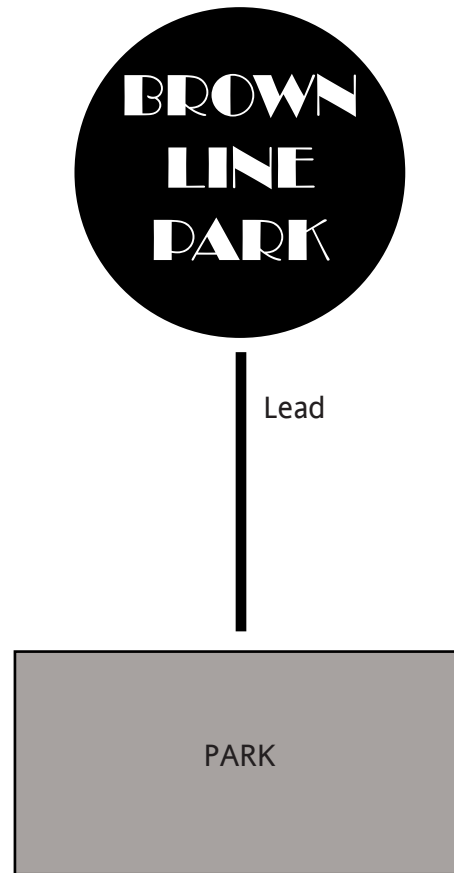
STEP 2

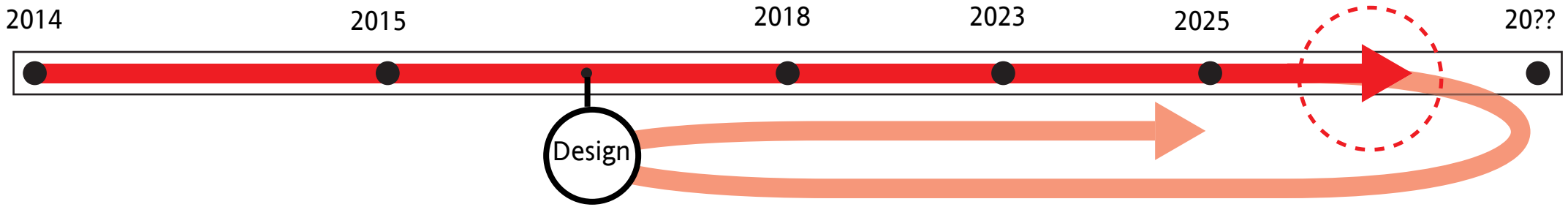
DESIGN AS LEARNING



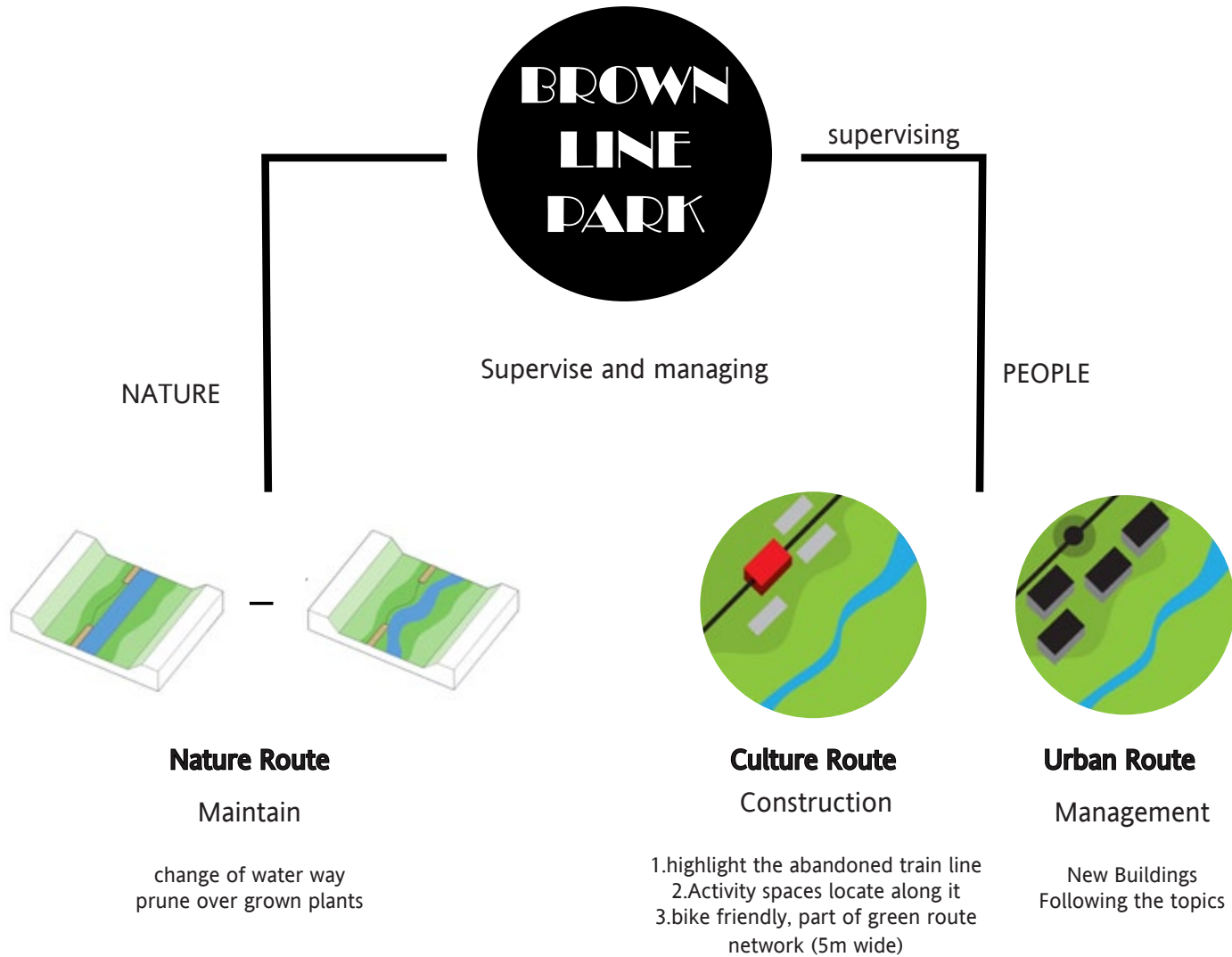


IMPLEMENT OF STEP1,STEP2





IMPLEMENT OF STEP3



2014

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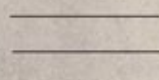
Design

PARK ASSOCIATION



STEP 2

DESIGN AS LEARNING



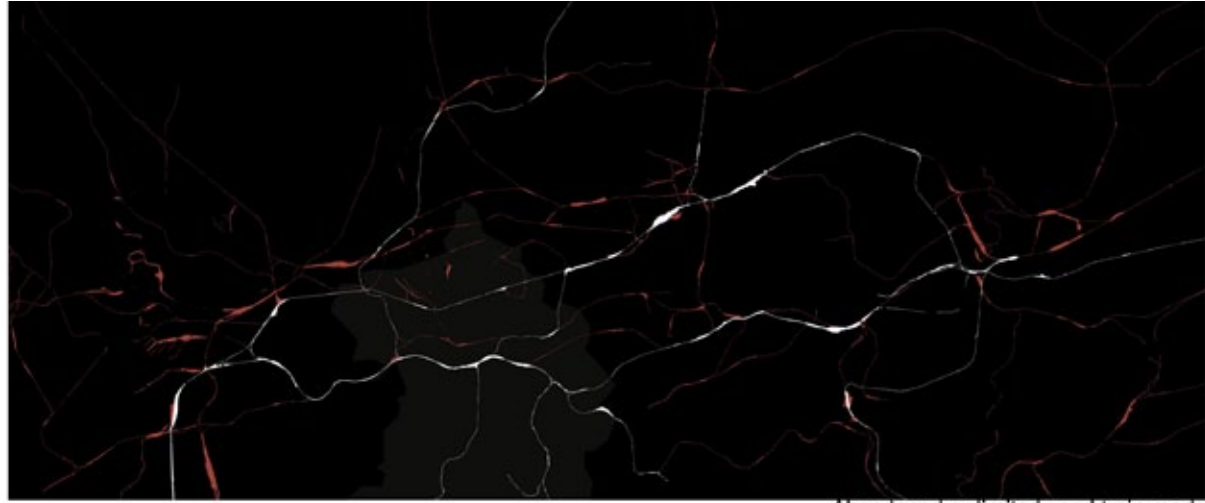
POSSIBLE RESULT

An aerial, black and white photograph of a modern architectural site. The central focus is a large, low-profile building with a prominent arched entrance. The surrounding landscape is a mix of paved walkways, grassy areas, and landscaped gardens with trees and shrubs. A person is visible walking on a path in the lower-left quadrant. The sky is filled with scattered clouds, and the overall scene is captured from a high-angle perspective.

REFELCTION

RUHR AREA

Brown Lines



Abandoned or limited used train roads

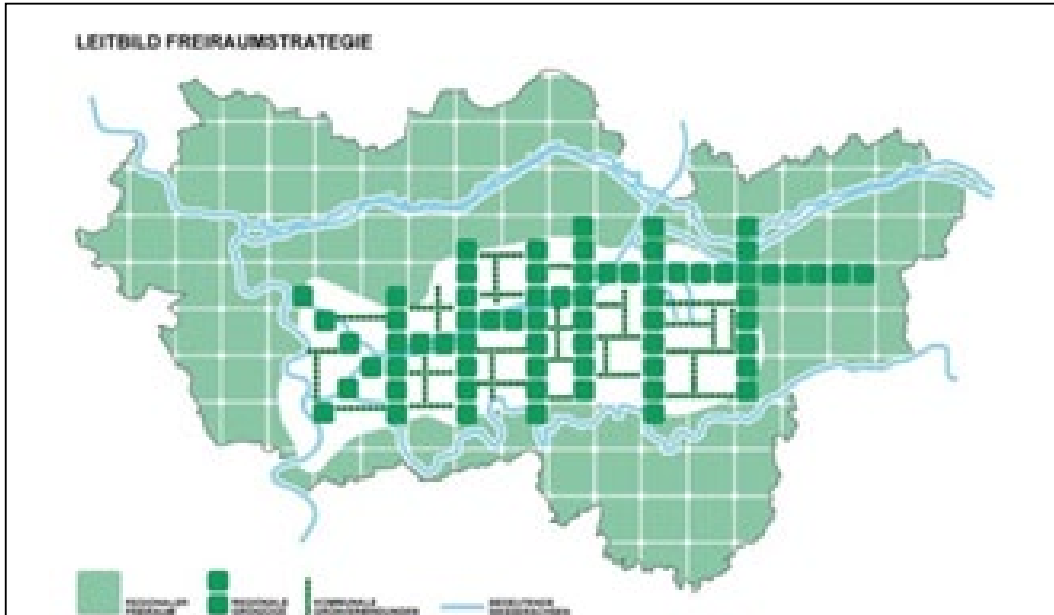


Sewage treatment system

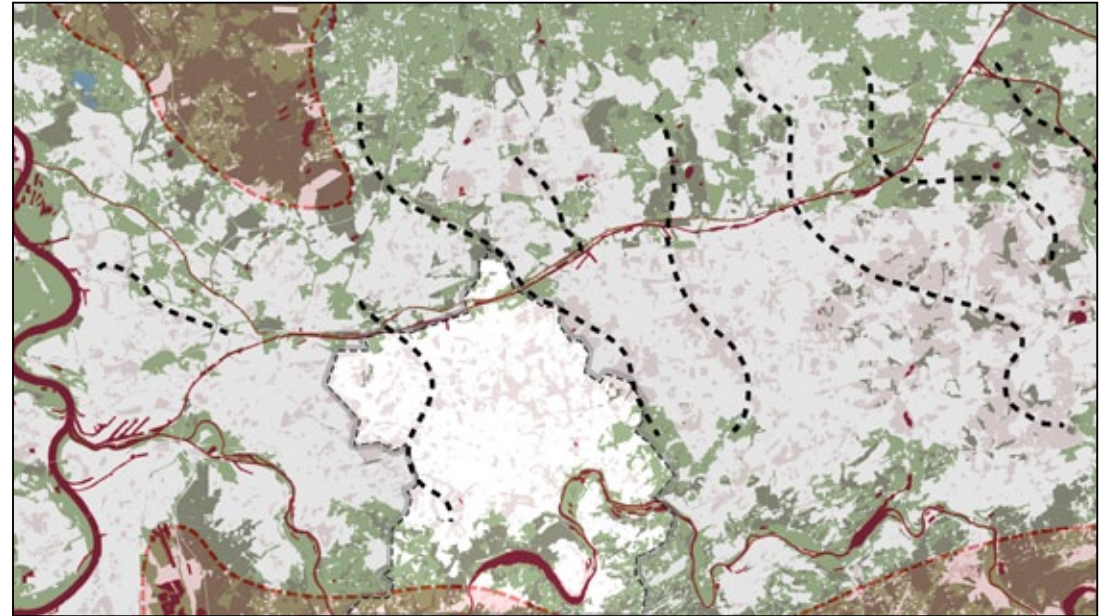
RUHR AREA

Need more Brown Line Parks

Public Open space network aspect:
Connected and integrated



Urban Ecosystem aspect:
Green corridors

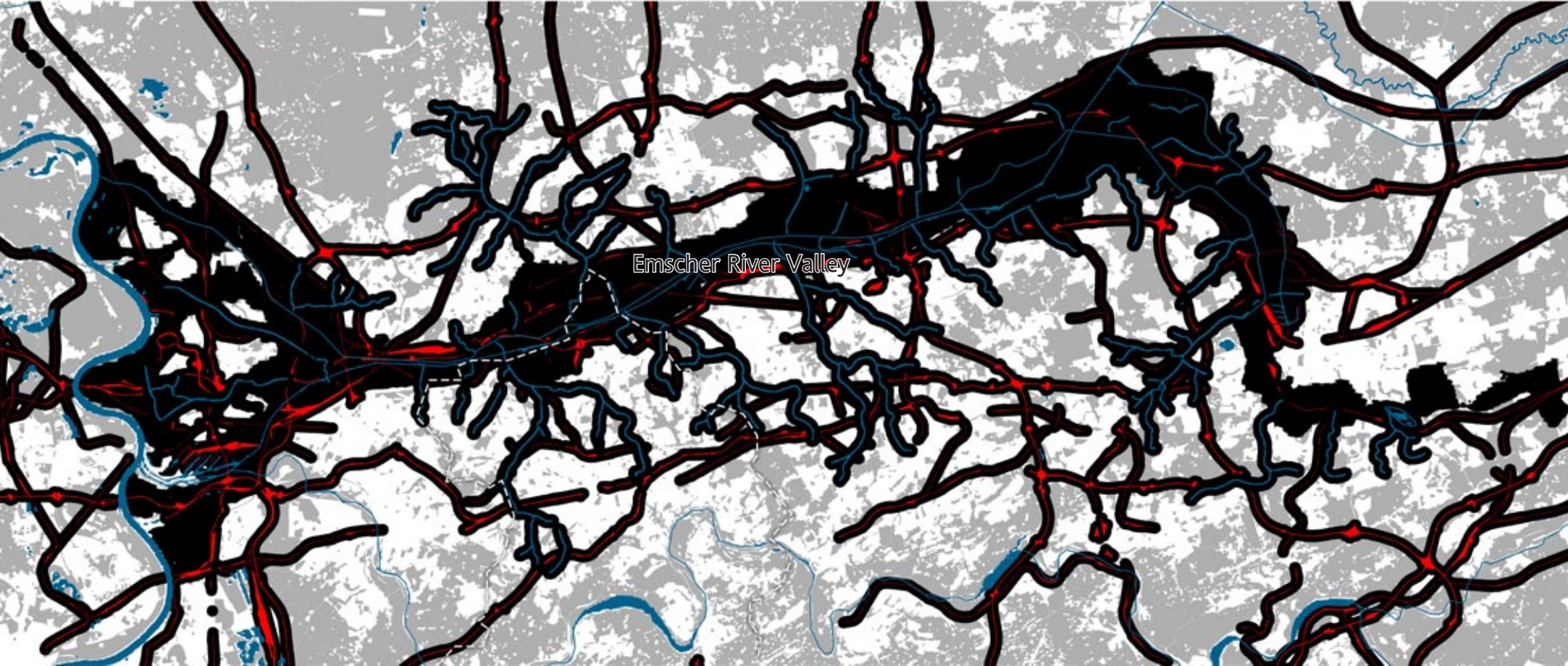


DESIGN AS LEARNING

Case Study



BROWN LINE PARK SYSTEM

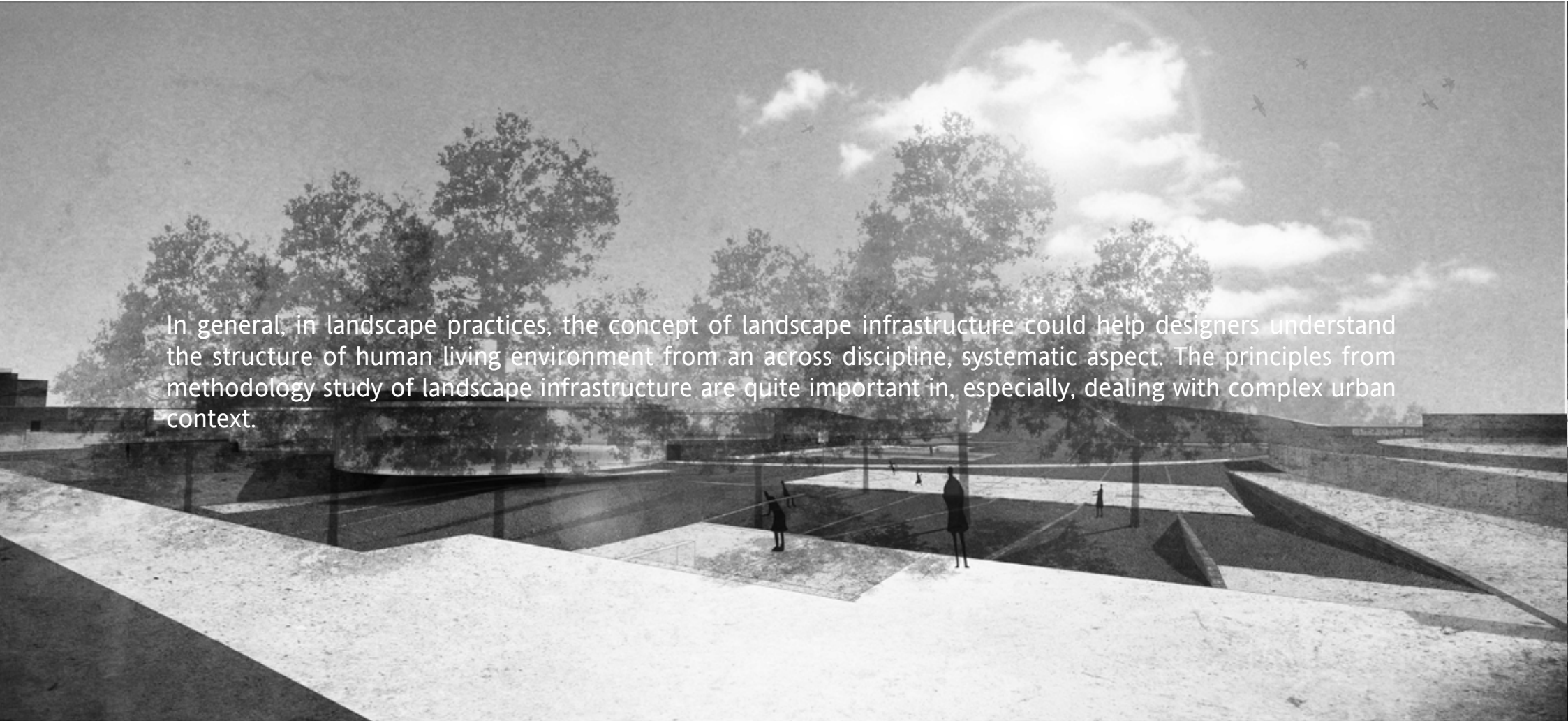


IN WIDER SOCIAL CONTEXT



IN GENERAL

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?

