



Country /City .....

University / School .....

Academic year .....

Title of the project .....

Authors .....

Germany, Gelsenkirchen-Ückendorf

RWTH Aachen University, Institute of Landscape Architecture

Summer 2022

Green-blue streets: green-blue Ückendorf

Helen Radermacher, Marco Kämpgen, Felix Schweizer

## TECHNICAL DOSSIER

<b>Title of the project</b>	Green-blue streets: green-blue Ückendorf
<b>Authors</b>	Helen Radermacher, Marco Kämpgen, Felix Schweizer
<b>Title of the course</b>	Design studio "Green-blue streets" (1 semester, 15 ECTS)
<b>Academic year</b>	Summer 2022
<b>Teaching Staff</b>	Dr.-Ing. Axel Timpe (LA), Dipl.-Ing. Sebastian Schlecht (LA), Dr.-Ing. Andreas Witte (ISB)
<b>Department / Section / Program of belonging</b>	Institute of Landscape Architecture (LA) in cooperation with Institute of Urban and Transport Planning (ISB), M. Sc. in Architecture, M.Sc. in Urban Planning, M.Sc. in Transport Engineering and Mobility
<b>University / School</b>	RWTH Aachen University



### Written statement, short description of the project in English, no more than 250 words

Ückendorf is a neglected urban area in the post-industrial city of Gelsenkirchen and is frequently confronted with stormwater events flooding streets and basements in the area. The Green-blue Ückendorf design proposal redistributes stormwater flows in the neighbourhood to increase the resilience against extreme events and to use rainwater as an element of urban design as much as possible. The existing stormwater flow paths are remodelled towards the park and integrated as open bioswales in the urban streets. While Bochumer Straße conserves its main function of guiding the traffic in North-South direction, the streets in East-West direction become multifunctional green-blue public spaces improving the liveability of the neighbourhood by combining slow traffic with water management and new plantations which make the city cooler. Existing open spaces beyond the streets are redesigned to allow to temporarily store stormwater from streets and other sealed surfaces and integrated this function with playgrounds, urban gardening or space for biodiversity. The cleaner water flow of stormwater from roofs is partly stored in cisterns to be used for watering in urban gardening activities and a rainwater playground.

The strength of the project lies in a systemic integration and management of the different waterflows and a design approach which stages rainwater in public spaces for improving the quality of life of the neighbourhood. Three highlights of this design approach are the urban gardening square at Bochumer Straße, the schoolyard in Stephanstraße and the rainwater playground in Munscheidstraße.

### 12th International Biennial Landscape Barcelona

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### SCHOOL PRIZE

For further information

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# DESIGN

## MASTERPLAN



### ① QUARTER ENTRANCE NORTH

- ① Extension sea near streets
- ② Urbane fountain
- ① Accessibility park
- ② Bike-sharing

### ② BOCHUMER STRASSE

- ③ Retention area arking area church
- ① Upgrading church forecourt
- ② Social street interventions: Cafes, restaurants, reatail
- ③ 30-speed-zone Bochumer street
- ④ Foot crossings and sidewalk widening

### ③ SOCIAL CENTER ÜCKENDORF

- ④ Retention area
- ⑤ Urban fountain
- ③ Urban gardening
- ④ Green seating island

### ④ QUARTER ENTRANCE SOUTH

- ⑤ Conversion bunker
- ⑥ Supermarket & cafe
- ⑤ Visible train station
- ⑥ Bike sharing
- ⑦ Parking & car sharing

### ⑤ STEPHANSTRASSE

- ⑥ Road-accompanying trough trench
- ⑧ One way street
- ⑨ Bikeway
- ⑩ Parking

### ⑥ ELEMENTARY SCHOOL

- ⑦ Retention area
- ⑦ Upgrading school grounds
- ⑧ Public outdoor sportsfield
- ⑪ Dop-off zone

### ⑦ WATER PARK

- ⑧ Retention area
- ⑨ Water playground
- ⑩ Playground
- ⑫ Bike-street

### ⑧ SCIENCE PARK

- ⑨ Promote biodiversity
- ⑪ Upgrade recreation area

### ⑨ PLAYGROUND

- ⑩ Retention area
- ⑪ Road-accompanying trough trench
- ⑫ Upgrade playground



## INTERVENTIONS

### BLUE

- ← Retention areas
- ← Swale trench
- Storage
- ▭ Retention area
- ▭ Use of roof water for street greenery
- ⦿ Bioswales
- ⦿ Tree ditch
- ⦿ fountain
- ⦿ Unsealed parking area
- ← Flow direction rainwater
- ← Overflow
- ⦿ Decentralized infiltration
- ▭ Sea
- ⦿ Cooling/ evaporation
- ⦿ Playground
- ⦿ Urban gardening
- ⦿ Biodiversity



## INTERVENTIONS

### GREEN

- Street tree
- ← Extend street green
- ▭ Public green
- ▭ Green roof
- ⦿ Photovoltaics area
- ⦿ Bioswales
- ⦿ Gravel liner
- ⦿ Park recreation
- ⚡ Existing street green
- ▭ Privat green
- ⦿ Urban gardening
- ⦿ Tree ditch
- ⦿ Urban fountain
- ⦿ Playground
- ⦿ Sports area

# WATER PARK

