

# Check survey in the Emscher sewer system



**Client:**

Emschergenossenschaft & Lippeverband

**Execution period:**

2011 - 2021

**Place:**

Ruhr area, NRW - Dortmund to Dinslaken

**Project description:**

The key of the new drainage system is the Emscher sewer. Over a length of 51 kilometers, it will take in the wastewater of around 2.26 million inhabitants and extensive quantities of wastewater from industry and commerce and feed it to the Bottrop wastewater treatment plant and the Emscher estuary wastewater treatment plant.

Total length: 73,4 km tunnelling  
 Tube diameter: DN1600 to DN2800  
 Shaft constructions: 113

**Service description:**

- Creating and measuring the base and portal network
- measurements for taking of evidence or quality control
- Control surveys during the tunnelling works
- As-built and final survey of the tunnels, shaft structures and surface survey after completion of construction work
- Laser scanning of the excavation pit to record the geometry
- As-built survey of the shaft structures by means of laser scanning and creation of a 3D model

Establishing more than **30 highly accurate base networks** for tunneling guidance.

Execution of more than 60 gyro campaigns for the orientation of the tunnel sections and support of more than **125 control measurements** in tunnelling.



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**9001**  
zertifiziert

DIN EN ISO  
**14001**  
zertifiziert



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