Sewer Construction

New construction of the sewer system with sewers DN 1200 to DN 1400

The challenge

The Emscherverband association used the RSS® Flüssigboden method for the new construction of the sewer system with sewers DN 1200 to DN 1400. The section of the sewer construction measure relevant for the application of the liquid soil construction method is about 400 m long in the Östingstraße in Hamm, Germany. Reinforced concrete or GRP pipes DN 1000 to DN 1400 were to be used. The average bottom depth is 3.74 m below terrain surface. A railway line runs directly next to the trench. It is to be backfilled in a timed construction method with rapid refixing under strongly changing soil conditions. Groundwater was present between 3.60 m and 3.80 m below the surface at the time of the subsoil investigations. The project site is located just outside the flood area of the river Main. For the determined groundwater level, the planned sewer with storage capacity is located below the groundwater table. The trench is backfilled with the technology of hanging installation by means of pipe laying aids.

The solution

The trench was filled according to the given technology in timed construction with hanging installation. Due to inhomogeneous soil conditions, daily to weekly quantities of the source material were stored and processed for the production of liquid soil. Appropriate mix designs were used for each of these quantities.

Properties of RSS® Flüssigboden

- Strength and elasticity in the form of load-bearing capacity or unconfined compressive strength, and viscosity according to technical planning.
- Handling of strongly changing soils according to in-house standard procedure for complex soils.

Construction project

Hamm, Östingstraße
New construction of sewer system
DN 1200-DN 1400

Builder

Lippe Verband association

Construction works

Karl Pollmann GmbH

Construction period

2017

Technical planning

LOGIC Logistic Engineering GmbH

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