Implenia

Reference

Deep well at Hellerhöfe



SHORT DESCRIPTION

On a two-hectare site in the Gallus district of Frankfurt, BAUWENS Development Frankfurt GmbH is working with F.A.Z. and Frankfurter Societät to develop a mixed-use urban quarter.

THE PROJECT

After the above-ground demolition of the existing buildings, a disused 117-meter-deep well, built in 1924 to supply the F.A.Z. printing press with water, was still on the site.
During provisional sealing measures at the well head in 2013, an artesian groundwater pressure head of around 3.0 m above the current courtyard surface was encountered, indicating damage to the well. In addition, water analyses carried out in the course of the sealing work revealed significantly increased sulphate values and traces of lead.
To prevent an uncontrolled leakage of groundwater and the entry of the detected pollutants into the groundwater, the well had to be dismantled over its entire length and the borehole then filled with suitable material. The natural separation of the groundwater horizons should be restored and all pollutants removed from the groundwater/soil.
Taking into account the drilling tolerances, the well diameter and the great drilling depth, a minimum diameter for the over-drilling of greater than or equal to 1,000 mm was specified by the expert.
Drilling with comparable depths and diameters, including the removal of obstacles in the form of the old steel well pipe, annular space backfilling and concrete seals against artesian groundwater, had not yet been carried out in Frankfurt and represented a technically demanding and unusual challenge.
Implenia, under the leadership of the client, worked with expert consultants and environmental and regulatory authorities to develop a decommissioning concept that was finally commissioned in spring 2024 and executed in summer 2024.
The concept involves the complete overcoring of the old well in accordance with DIN EN 1536 under water load using a HS 8130 duty cycle crawler crane and ball grabs while protecting the full casing. The 150cm diameter $_{(a)}$ casing was inserted

using an RDM 2000 casing rotation machine. After reaching the final depth of 120m and the complete dismantling of the well, the borehole was filled with DiWa-Mix material in accordance with the requirements of the lower water authority and the casing was pulled.

The initial borehole diameter of 150cm was chosen to allow telescoping to 120cm should the skin friction become too great with increasing drilling depth. Ultimately, however, the use of the powerful RDM 2000 pipe-rotating machine, which is available in Germany only from Implenia, made it possible to dispense with this and to complete the drilling at a diameter of 150 cm throughout its entire length.
The project was completed on schedule, without defects and without accidents, to the complete satisfaction of the customer and the authorities, thanks to Implenia's outstanding expertise in the field of special civil engineering combined with the exclusive availability of the equipment.

The next step is to construct the excavation pit for the new building on the site.

FACTS

Location	Hellerhofstraße 2-4, Frankfurt , Germany
Status	completed
Construction volume (value of our services)	460,000 EUR
Start of construction	February 2024
Completion	July 2024

SERVICES

Deponiebau und Altlastensicherung

Civil engineering

https://implenia.com/en/references/detail/ref/tiefbrunnen-hellerhoefe/

Creation: 15.11.2026 01:39