

Press Release

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Contact:

Magdalena Kirchner-Stephan
BAUER Aktiengesellschaft
BAUER-Strasse 1
86529 Schrobenhausen, Germany
Phone: +49 8252 97-1074
public.relations@bauer.de
www.bauer.de/en

Excavation completed for new sludge digestion plant in Frankfurt

- In total, Bauer Resources excavated approximately 45,000 m³ of soil and processed it using state-of-the-art technology.
- Highlights of the project include the sheet pile wall constructed by Bauer Spezialtiefbau using the U-Jagged method, as well as the use of a semi-autonomous Semi-GPS-3D excavator.

Frankfurt am Main, Germany – Frankfurt has dug deep for the future. A modern sludge digestion plant is currently being built on the site of the Frankfurt am Main Municipal Sewerage Authority (SEF) wastewater treatment plant, which will ensure that the city's wastewater treatment system is ready to meet future challenges. For the new construction, W. Schmidt-Diehler GmbH, together with specialists from the Bauer Umwelt division of BAUER Resources GmbH and BAUER Spezialtiefbau GmbH, created the turnkey excavation pit, covering an area of approximately 5,800 m² and executed with impressive precision.

Reusing excavated soil

Work began in February 2025 and was completed by the end of September 2025. Right from the start, the team faced particular challenges: The construction site had been filled with a variety of materials to a depth of up to 4 m in the 1960s. "We had to separate the backfilled soil from the natural gravel in order to sustainably reuse the latter, for example as an aggregate for concrete," explains Felix Blanco Ochando, Senior Site Manager in the Bauer Umwelt division of BAUER Resources GmbH, adding: "Our goal is to keep as many materials as possible in the cycle. Every ton of reused gravel and of recycled concrete reduces the need for new resources and protects the environment." At the same time, the site had to be prepared for special foundation engineering work.

Three construction phases: removal, drilling, excavation

In the first construction phase, the fill material was removed and a stable drilling subgrade covering approximately 6,700 m² was created through soil conditioning adding lime-cement. This was followed in the second construction phase by the installation of auger-cast concrete piles using a BAUER BG 30 and a sheet pile wall using the U-Jagged method with an RG 19 T from RTG, which results in greater stiffness and, in this case, does not require anchoring. Nevertheless, bored and GEWI anchors were installed in certain areas to optimize stability. "It was precisely the combination of different methods and the close collaboration between Bauer Resources and Bauer Spezialtiefbau that made for a smooth process here," emphasizes Blanco Ochando. In the second construction phase, the sheet pile wall was anchored, and areas suspected of containing unexploded ordnance were surveyed in parallel, while final excavation had already begun. A total of approximately 45,000 m³ of soil was moved with an accuracy of 2 cm. This was made

possible in part by the use of state-of-the-art technology: a Semi-GPS 3D excavator operated semi-autonomously, supported by a rover bar and drone surveying. “At the push of a button, the excavator leveled the subgrade almost on its own. It hardly gets any more precise or efficient than that,” says the senior site manager. The third construction phase involved the complete final excavation, the preparation of the fine subgrade, drainage and drainage layers, as well as the installation of a gravel base course as the foundation for the new digesters.

Turnkey excavation handover

At the end of September 2025, the excavation was handed over on a turnkey basis. Upon final completion, the new sludge digestion plant will play a key role in Frankfurt’s sewage sludge treatment, featuring state-of-the-art technology, sustainable construction, and a foundation that has been thought through down to the last detail.

Images: pressebild-press-image-baugrubenerstellung-excavation-pit-frankfurt-sindlingen-bauer-resources...



(1) Precision in action: The Semi-GPS 3D excavator grades the subgrade with an accuracy of up to 2 cm.



(2) A strong partnership: Bauer Resources and Bauer Spezialtiefbau worked hand in hand to complete the excavation on schedule and to exact specifications.



(3) U-Jagged sheet pile panels were precisely inserted using an RG 19 T. The piling work was carried out using a BG 30.



(4) Drone footage documented the progress of construction and the total volume of excavated soil, which amounted to 45,000 m³.

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About BAUER Resources Group

The regionally organized BAUER Resources GmbH is aligned to projects around the world with its subsidiaries in Germany, Africa, the Middle East and South America and has extensive expertise in the areas of drilling services and water wells, environmental services, constructed wetlands, mining and rehabilitation. With more than 30 years of experience, BAUER Resources GmbH's Bauer Umwelt business division is one of the leading specialists in site remediation, soil remediation and waste disposal, both in the domestic market and internationally. As an expert in pollution reduction, Bauer Umwelt offers a diverse range of services for all environmental issues. Other companies of the BAUER Resources Group are GWE GmbH, SCHACHTBAU NORDHAUSEN GmbH and SPESA Spezialbau und Sanierung GmbH. More at <https://resources.bauer.de/en>.

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. The Group can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments: Geotechnical Solutions, Equipment and Resources. Bauer profits enormously from the collaboration of its three business segments, enabling the Group to position itself as an innovative, highly specialized provider of products and services for demanding projects in specialist foundation engineering and related markets. Bauer therefore offers suitable solutions to the world's greatest challenges, such as urbanization, the growing infrastructure needs, the environment, as well as water. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2024, it employed about 11,000 people and achieved total Group revenues of EUR 2.2 billion worldwide. More information can be found at <https://www.bauer.de/en>. Follow us on [Facebook](#), [LinkedIn](#), [Instagram](#) and [YouTube](#)!