

Specialist Press Release

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Giving gravel a second life: How to protect the environment while constructing excavation pits

Kirchheim bei München, Germany – Concrete is the most widely used construction material in the world. However, it is not sustainable – unless recycled materials are used for its production. In the Rathausviertel district of Kirchheim bei München, excavated gravel was generated by the ton during the construction of excavation pits for a new residential quarter, which is now being reused for concrete production. In this way, the Bauer Umwelt Division of BAUER Resources GmbH is unearthing a new treasure that not only makes a sustainable contribution to a clean environment, but also embraces the philosophy of a circular economy.

Before the valuable resource could be excavated, however, a few work steps were necessary. In the first step, the site was set up: that is, the site boundaries were positioned, access routes created and storage areas were prepared for the excavated material. Then the planning for the excavation pit was drawn up – the centerpiece of the entire project, as Burc Akker, Site Manager from the Bauer Umwelt Division of BAUER Resources GmbH reports. “Particularly when a project needs to be completed in just eight weeks, every movement has to be planned,” he emphasizes. This takes some time at the beginning – but experience shows that this effort always pays off. Next came the gradual excavation of the three excavation pits up to a depth of 3 m. In the process, a total of 38,000 m³ of material was removed and disposed of. The 33,000 m³ of gravel generated here was loaded directly, transported to a nearby gravel plant and treated there so it can be processed into concrete. In comparison, the CO₂ emissions and consumption of resources for the production of conventional concrete are immense.

In Germany alone, approximately 27.5 million tons of concrete are produced each year. If just a small portion of this were produced from recycled gravel, concrete manufacturing would be a whole lot more sustainable. Natural raw materials would be conserved and excavated materials would not have to be disposed of. “The excavated gravel is therefore urgently needed and also adds tremendous value to the team’s work on site,” says Sales Manager Thomas Reinthaler from the Bauer Umwelt Division of BAUER Resources GmbH.

Finally, the team from the Bauer Umwelt Division will construct the capping layer and install a king post wall deep in the ground to secure the excavation pit. Once this work is finished, a modern residential quarter with 138 apartments and 28 townhouses will soon enrich the community of Kirchheim bei München.

Photos: 2022-07_BAUER_Kirchheim...



(1) Construction of an excavation pit in the town hall district of Kirchheim near Munich



(2) Site Manager Burc Akker



(3) A total of 33,000 m³ of gravel was excavated and transported for further processing.

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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 the GERMAN WATER and ENERGY GROUP (GWE) – manufacturers of pioneering products and developers of integrated applications for well-drilling and geothermal – as well as SPESA Spezialbau und Sanierung GmbH and the Site Group for Services and Well Drilling Ltd. in Jordan. More at bre.bauer.de

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. With over 110 subsidiaries, Bauer can rely on a worldwide network on all continents. The Group's operations are divided into three forward-looking segments with high synergy potential: Construction, 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, oil and gas. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2021, it employed about 12,000 people in around 70 countries and achieved total Group revenues of EUR 1.5 billion. BAUER Aktiengesellschaft is listed in the Prime Standard of the German Stock Exchange. More information can be found at www.bauer.de. Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!