

Specialist Press Release

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Maximum efficiency: Bauer Resources constructs excavation pit with geothermally activated elements

Munich, Germany – Over an area of 35,000 m², there was hardly a stone left standing. Most of the buildings on the site in Munich's Schwabing district were converted or partially demolished in some cases. Only the old wool factory and a garage complex in the northern area of Lodenfrey Park were left as a reminder of old times – but that's not the case anymore. The former grounds of the textile company Lodenfrey were gradually converted into a modern business park after production was relocated in the 1980s. Now the last remnants of the former textile production factory will also be removed. Where silk, satin, velvet and loden cloths were formerly stored, a modern and groundbreaking new building will soon enrich the campus grounds: Haus K. To make the construction of this new commercial property possible, BAUER Resources GmbH is demonstrating its versatile skill in collaboration with BAUER Spezialtiefbau GmbH, ranging from demolition and pit excavation to foundation engineering and energy.

Demolition without breaking down

The demolition work began in September 2022. But how should this type of industrial construction work be tackled? That's easy: by relying on experts in the field. Operations Manager Jan Uhlig and Foreman Erwin Resch from the Bauer Umwelt Division of BAUER Resources GmbH are always involved in dismantling projects and provide valuable insider knowledge, for example regarding remnants in the soil and buildings. At this former production site as well, the first step was clearing out and removing contaminated materials – including roofing paper containing asbestos, polluted wood and hazardous insulation material. The subsequent demolition was a piece of cake for the team on site. Using large equipment, the building was gradually dismantled and roughly 35,000 m³ of cubical content were demolished. "Of course, the process was not entirely silent," explains Machine Operator Bernhard Friedrich from the Bauer Umwelt Division. "But with lots of experience and a sharp intuition, you can also work with a demolition excavator on an urban site with a comparatively low level of noise – that's something we understand inside-out, along with smooth removal of excavated material."

Hand in hand to the excavation pit

After the demolition of the building, Jan Uhlig and his team took on the initial excavation of the pit. For the foundation work, they called in their colleagues from Bauer Spezialtiefbau, because the rule is always: Safety first. Since the task was to construct an 8 m deep excavation pit, 3,000 m² of Mixed-in-Place wall (MIP) were installed. This had to be tied back with roughly 84 anchors and 84 MIP king piles needed to be prepared for geothermal activation. In addition, the Spezialtiefbau team inserted 6 m long GEWI piles into the ground for uplift prevention of the 2,500 m² foundation slab. At the same time, the Bauer Resources team continued the excavation work on the pit including dewatering. By the end

of this joint work, roughly 18,000 m³ of excavated material had been moved and properly disposed of – an enormous effort overall. But thanks to good teamwork, years of experience and close coordination, it was possible to seamlessly interlink the dismantling, excavation and foundation work. “What makes our concept unique: it is a complete solution from a single source. We take care of everything on and below ground all the way to a turnkey excavation pit,” highlights Jan Uhlig. “This offers maximum efficiency and pays off for our customers on the bottom line.”

Geothermal heat as the “green” icing on the cake

Even after the main work was completed, a challenging project phase had to be tackled: geothermal activation of the MIP wall and foundation slab. Like clockwork, the experts from Bauer Resources laid more than 5 km of pipeline on the excavation base for this purpose – a real tough job. Since then, the site has been on pause until the shell and first floor are completed. After that, a thermal response test can be conducted to determine the heat conductivity of the ground, the distributor units can be installed and the geothermal heating and cooling system with an output of roughly 100 kW can be commissioned.

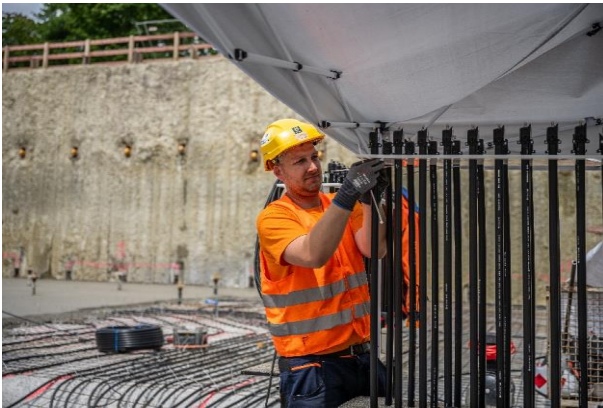
Photos: 2023-07_bauer-resources-excavation-pit-geothermally-activated-elements...



(1) On a former textile site in Munich’s Schwabing district, the Bauer Umwelt Division of BAUER Resources GmbH constructed an 8 m deep excavation pit.



(2) Roughly 3,000 m² of Mixed-in-Place wall (MIP) and a 2,500 m² foundation slab were geothermally activated.



(3) More than 5 km of pipelines were laid on the excavation base.

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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 GERMAN WATER and ENERGY GROUP (GWE), SCHACHTBAU NORDHAUSEN GmbH and SPESA Spezialbau und Sanierung GmbH. More at bre.bauer.de

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 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. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2022, it employed about 12,000 people and achieved total Group revenues of EUR 1.7 billion worldwide. More information can be found at www.bauer.de. Follow us on [Facebook](#), [LinkedIn](#) and [YouTube](#)!