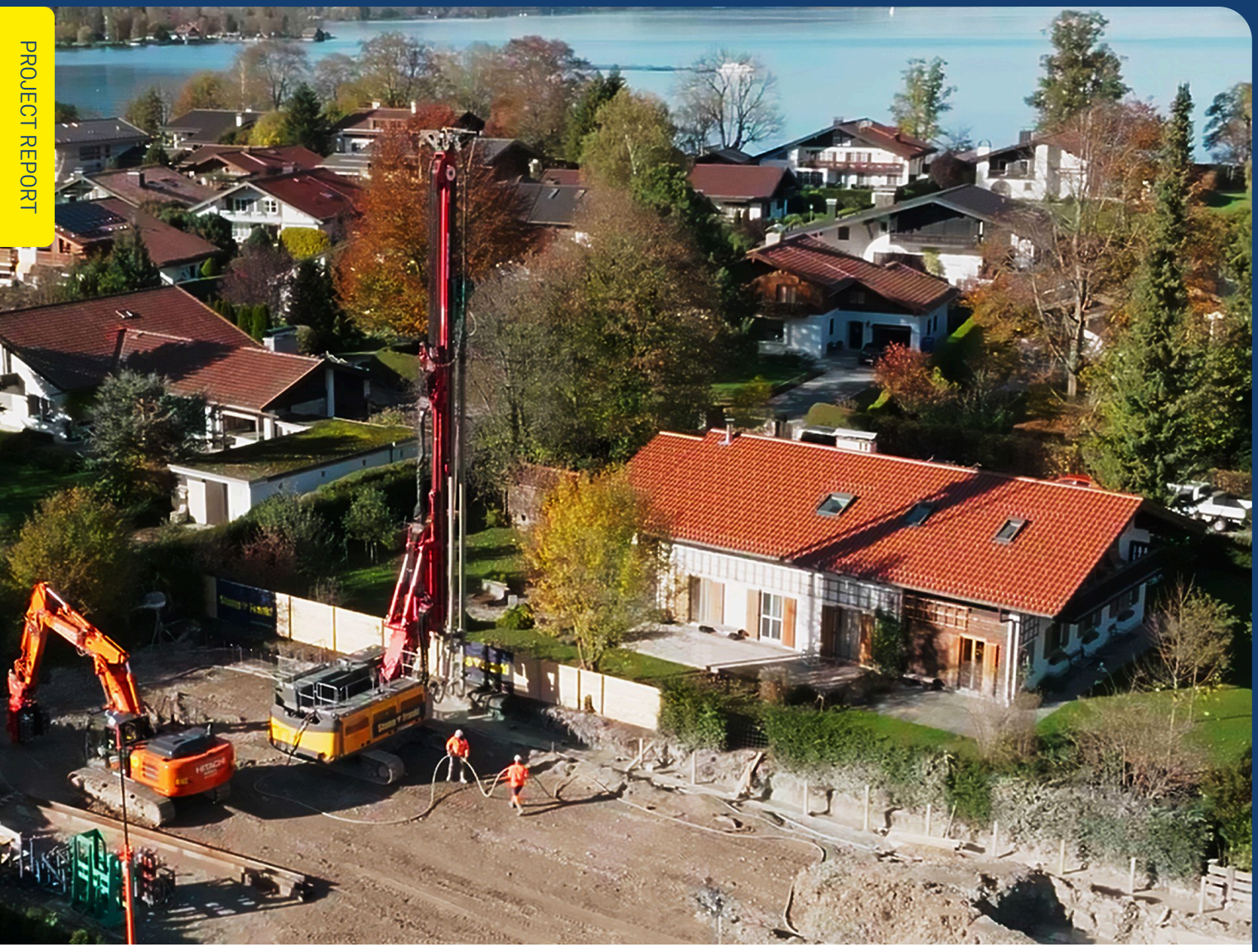
PROJECT REPORT



Environmentally friendly excavation work in Rottach-Egern

Egerner Chalets

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Sealing slabs, Turnkey construction pits
Runtime	10.2022 - 02.2023
Principal	CR 26 GmbH & Co. KG, Grünwald

Project report online

www.porr-group.com

PROJECT REPORT

Project with a view of the Tegernsee mountains

The three chalets, comprising a total of seven apartments, are being built on a 2,097 m² plot just a three-minute walk from the shores of Lake Tegernsee. ‘Sustainable and high-quality’ is the builder's motto for all of its properties in this dream location in Upper Bavaria. As a result, the requirements for civil engineering methods that are environmentally friendly and considerate of residents were correspondingly high.

The soil mixing method is environmentally friendly and resident-friendly

A total of 1,360 m² of construction pit walls, approximately 11 m deep and 60 cm thick, were constructed using the soil mixing method. In this method, the existing soil is mixed with a binder suspension. This causes the soil to self-harden, thereby improving its load-bearing capacity. The overlapping columns create a continuous, watertight enclosure around the excavation pit. In order to minimise deformation of the retaining wall, double U-beams were inserted into the fresh columns as supporting elements. These also enabled section-by-section back anchoring with temporary strand anchors. To seal the construction pit horizontally against groundwater, the soil mixing walls are integrated into deep, 1,730 m² DSV sealing slabs. In addition, 70 GEWI micro piles with a diameter of 32 mm, lengths of up to 8 m and permanent corrosion protection were installed to secure the underground car park floor slab against uplift. Thanks to the minimal soil extraction required by the process and the savings in cement, the soil mixing method scores highly with a low CO_2 footprint and reduces transport and disposal costs.

High demands on special civil engineering

Permeable gravel and a high groundwater level near the lake placed high demands on the special civil engineering work. In addition, the shoring directly at the property boundary required great care and sensitivity. Under no circumstances were the trees, hedges and fences of the residents to be damaged. As the soil mixing method uses only a small amount of cement and requires minimal soil excavation, PORR special civil engineering convinced the client with a sustainable and at the same time economical concept.

Impressions

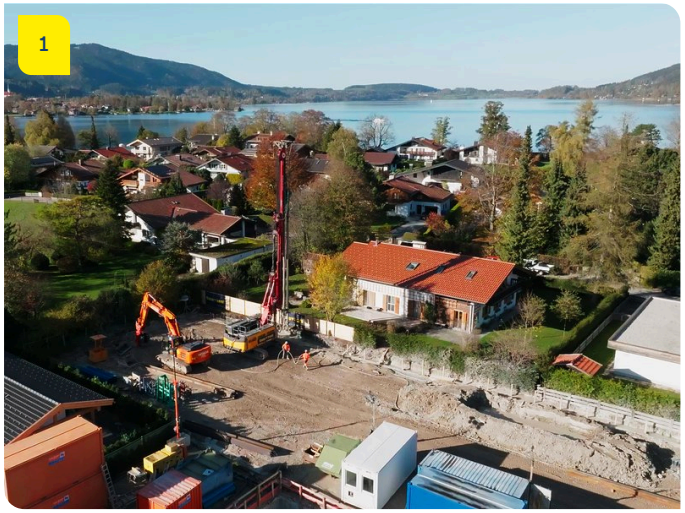


Image notes

1 PORR Spezialtiefbau Egerner Chalets in Rottach-Egern

2 Egerner Chalets in Rottach-Egern

3 Egerner Chalets in Rottach-Egern

Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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