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City Hall

Drilling work started for geothermal probes at Berliner Platz

65 geothermal probes // Boreholes up to 130 metres // Utilisation of heat from the ground

This week, drilling work began on Berliner Platz to utilise geothermal energy for the renovated town hall. A total of 65 deep boreholes are being drilled to create a system that will efficiently supply the building with heating and cooling in future.

With the start of drilling, the city of Bocholt is taking an important step towards the future energy supply of the town hall. The work is being carried out by a specialised company. Each of the 65 geothermal probes extends around 130 metres underground. Once completed, the boreholes will be filled with a thermally conductive cement-clay suspension and connected to the heat pump technology in the town hall via collection shafts.

Geothermal energy is the use of natural geothermal energy, explains geologist Dr Roland Gaschnitz. A fluid circulates in the geothermal probes, where it is heated by several degrees. "This energy is then used for heating via a large heat pump in the building", says Gaschnitz. As the subsoil offers temperatures of between ten and twelve degrees Celsius all year round, the system can work efficiently, especially in the winter cold. In summer, the stored energy can be used to cool the building.

The geological conditions at Berliner Platz are well suited to this approach. The dissolved rock is continuously sampled during the ongoing drilling. "These samples can be used to determine both the age and the composition of the layers", says Gaschnitz. Finds such as mussel and snail shells or organic components show that a shallow sea with a tropical climate existed here around 25 to 30 million years ago - "including palm trees and lush vegetation", the geologist surmises.

Focus on environmental safety

The technology used fulfils extensive environmental and safety standards. The drilling rig has exhaust gas purification and noise protection and works without vibrations. Preliminary investigations confirm that neither structural damage nor effects on the groundwater are to be expected.

At the end of the process, the boreholes are filled with a thermally conductive material to create a temperature gradient through which the heat from the undisturbed ground is channelled to the probe. This creates a stable system that can supply the town hall all year round.



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Samples from different depths under Berliner Platz tell geologists a lot about the history of the site