

Follo Line Railway and Railway Tunnel Dry Soil Mixing

Oslo, Norway

The Follo Line project is the largest infrastructure project in Norway. It includes 22 km of new railway from Oslo to Ski.



The project

The main part of the project consists of a 20 km long tunnel which will be the longest in the north of Europe when it is finished. On the project, Keller has mainly performed Dry soil mixing, Steel core piles, Jet grouting and grouting in rock in Oslo S.

The challenge

At the workplace there were many different technologies and nationalities, so logistics and planning were important. In some parts the clay was soft and quick, but in other parts the clay was medium stiff and low to medium sensitivity. Above the clay there was a layer of dry crust and fill that mostly varied between 1 and 5m in thickness. Beneath the clay there was a moraine layer with a thickness that varied between 1 and 20m. The moraine layer was thickest in areas with the largest depth to rock. The basic conditions at the worksite varied more than expected, where the clay locally was very difficult to drill.

The solution

With its large foundation portfolio, Keller was able to assist the client with several different technologies when adjustments were necessary. This eliminated eventual time loss for the client. Keller installed more than 25 000 pc, Ø800 mm Dry soil mixed columns totalling more than 400,000 m of stabilised length. Keller had four rigs on site at the same time and also provided a large machine park, consisting of 130 drilling machines which created flexibility and security for the client.

Project facts

Owner(s)

Bane NOR

Keller business unit(s)

Keller Grundläggning

Main contractor(s)

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Infrastructure

Techniques

Dry soil mixing

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