

E16 Bjørum-Skaret

Skui, Norway

Keller installed about 2100 pcs of Ø800 mm lime-cement columns to stabilize the ground nearby a new future road bridge for the project E16 Bjørum-Skaret. The lime-cement columns were installed in a predefined grid pattern.



The project

Skanska has been contracted by Statens vegvesen to execute the project E16 Bjørum-Skaret North of Sandvika near Oslo.

In the project there was an area with sensitive clay North of one of the road bridges in the project. Keller was therefore contracted as a sub-contractor to stabilize the soil with our Dry Deep Soil Mixing method.

The challenge

The challenge in the project was mainly that the columns were to be installed in a hill with sensitive clay underneath and the slope stability had to be accounted for.

The solution

The solution was to limit the inclination on the platform to 1:10 and install the columns in «stairs» down the slope. The columns were installed in sections from top-down to have control of the slope stability. Keller installed around 2100 pcs of Ø800 columns with a drilled length of about 10 m. The columns were tested with the FOPS-method where a wing is installed in the bottom of the column and connected to a steel wire.

After the column have hardened for a given period, the wing is pulled up with the wire and the resistance is measured. The required strength of the columns was 150 kPa after 28 days. The achieved strength was above 300 kPa after 7 days.

Project facts

Owner(s)

Statens Vegvesen

Keller business unit(s)

Keller Geoteknikk AS
Keller Grønteknikk AB

Main contractor(s)

Skanska Norge AS

Engineer(s)

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Solutions

Slope stabilisation

Markets

Infrastructure

Techniques

Dry soil mixing

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