

Miklagard Fase 2

Kløfta, Norway

Keller installed around 3000 pcs of Ø800mm Lime Cement Columns as ground stabilization for a new Hotel in Kløfta. The ground consisted of soft clay and had to be stabilized before further construction could continue directly on the Lime Cement Columns.



The project

Our main contractor, Nordby Maskin, won a contract for the phase 2 of a hotel in conjunction with Miklagard Golf course in Kløfta. Phase 2 consisted of a new hotel building nearby the ongoing construction in phase 1. The ground consisted of soft clay and had to be treated before the construction of the hotel could start. Keller was hired to use the DDSM-technique to stabilize the soil. The hotel was then built on top of the stabilized soil with a bottom slab only.

The challenge

The challenge in this project was mainly the soft soil and the close proximity to the ongoing phase 1 of the project where our machines got very close to other workers. Measurements was implemented to reduce risks and make the site safe.

The solution

Keller established around 3000 pcs of Ø800 Lime Cement Columns with lengths between 9 and 25 meters. A mesh of ribs under the whole area of the hotel was made and the columns were executed in sections. The rig is fully GPS-controlled to accurately find the correct position of each column. Due to the soft ground, some binder had to be injected also above the excavation level. The columns was tested with FKPS where a wing is penetrating the columns from above. The test showed a shear strength of well above the required shear strengths. After the completion of the soil stabilization, the bottom slab of the hotel was established from the excavation level, right on top of the columns.

Project facts

Owner(s)

Heut Nordic

Keller business unit(s)

Keller Grundläggning AB
Keller Geoteknikk AS

Main contractor(s)

Nordby Maskin AS

Engineer(s)

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Solutions

Slope stabilisation

Markets

Institutional / public

Techniques

Dry soil mixing

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