

## Follo Line Ski RW SP4-5

Ski, Norway

- Shoring walls consisting of Steel Piles, Ground Anchors and Shotcrete to retain the excavation of up to 7m depth.
- 391 Steel Piles (5950 m), 199 Ground Anchors (5400 m) and 1500 m<sup>2</sup> Shotcrete.
- Ring-Bit system with Pilot bit used for Piles and Double Rotary Head system used for Anchor drilling.



### The project

The Follo Line Ski project is part of the new high-speed railway line between Oslo and Ski. After completion in 2022, Ski will have a modern transport hub with three platforms and a completely renewed station area.

To build the tracks north of the station a permanent retaining wall had to be built.

## The challenge

- Difficult soil conditions including sensitive soft clay, moraine layers, large blocks and bedrock.
- Extraordinary welding detail requirements for piles and anchor beams.
- Complex site logistics and limited working space.
- Presence of fully operational rail tracks along the wall.
- Sequencing works to maximize the production (up to 3 drilling rigs concurrently on site).

## The solution

- Double Rotary Head system to minimize disturbance of surrounding soil.
- Welding plant to prefabricate the pile casings and anchor beams.
- Spare equipment to keep the tight time schedule.

## Project facts

### Owner(s)

Bane NOR

### Keller business unit(s)

Keller Geoteknikk AS  
Keller Grundläggning AB  
Keller Grundbau GesmbH

### Main contractor(s)

OHL Norge

### Engineer(s)

Project Manager - Vidal Alcon  
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### Solutions

Excavation support

### Markets

Infrastructure

### Techniques

Sheet piles  
Ground anchors  
Jet grouting

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