Key achievements

- Cooperation between business units
- Keller performed the work with only one team of four people and one supervisor
- Wassara hammer with Jet-column nozzles
- 2066pc jet-columns with a maximum drilling depth of 26m

The project

The traffic interchange Kungens Kurva south of Stockholm is being rebuilt and a new tunnel is added. Skanska as a main contractor employed Keller Grundläggning for our expertise in jet grouting. Keller Grundläggning took help from our Austrian colleagues to execute the project.

Challenge

In connection to the tunnel, Skanska had placed a sheet pile wall to stabilize the shaft pit down to the bedrock. The bedrock in the area is at varying depths and often overlaid by blocky friction material. This could cause a large inflow of groundwater to sip in to the shaft. Keller Grundläggning was employed to seal the gap between sheet pile wall and bedrock to reduce the flow.

Solution

Pre-drilling was performed through the soil and further down about 1m into the rock. As the injection nozzle is pulled up, the grout is sprayed with a high pressure which erodes the soil. Unique for this project was the use of a Wassara hammer with built-in jet grouting nozzles. This allowed the columns to be executed in a sequence instead of drilling and then going back and inject the columns.