For the construction of a new combined hotel and shopping centre in the centre of Kristiansand, Norway, Per Aarsleff A/S has established the construction pit. Due to the location of the future building in the centre of Kristiansand, the construction pit was carried out with the noise and vibration-free method of bored piles with soil anchors. The piles form the permanent basement wall for the underground car park. Our choice of execution method was also based on the good results of bored piles in the Kristiansand’s sand which is very homogeneous and without obstacles.

Soil anchors in one level were installed with our own Hutte anchor drilling rig. We worked seven days a week to comply with the time schedule.

Dry sand posed challenges
The dry sand of the area posed challenges for the piles and we had to use concret with extra bonding agent to retain the water. When establishing the concrete piles, we also had problems monitoring the concreting pressure and could therefore not control it. As a consequence, we had to repair the piles after excavation.

Bored piles
As Aarsleff had busy activity in Denmark, we hired a subcontractor from Belgium for installation of the concrete piles which were bored as VDW piles of DN620 millimetres.
Aarsleff Ground Engineering is one of Europe’s leading piling contractors, and we undertake a wide variety of piling, drilling and foundation projects in Denmark and abroad. We have offices in Poland, Sweden, Germany and the UK. Our fleet covers fully hydraulic piling and drilling rigs as well as cranes and vibrators.

Data
- 260 rm secant pile wall with 12-metre piles of DN620 mm
- 200 soil anchors in the form of strand anchors of 18-19 m

Client
Skanska Norway

Contractor
Per Aarsleff A/S

Cooperation partner
CVR NV

Type of contract
Subcontract

Consultant
Skanska Norway
COWI Norway

Construction period
February-June 2016

Contract value
DKK 13.3 million