

## CASE STUDY

### Piling, Barratt Residential Development Portsmouth

**Development:** High spec residential apartments

**Location:** Portsmouth City Centre

**Client:** Barratt Southampton Ltd

#### Project Overview

To maximise the potential value of the development a single storey basement car park was planned. In order to deliver this, a secant wall was needed as part of the build project due to the presence of a high water table across the site.



From the initial design to the completion of the project we consulted with the client on a regular basis, designed the wall to meet their construction programme, constructed a guide wall, installed all the bearing piles and piled the secant wall.

In order to allow an unobstructed dig to the basement, the wall was designed as un-propped on one side and anchored by the ground beams on the other three.

Due to the contamination within the soil on the site it had to be stored for six weeks before removal. This caused a problem for Barratts as the site didn't have the optimal storage conditions. So, as part of our original design and project costing we installed all the bearing piles around the perimeter of the development to provide anchorage for the capping beam. The extra surcharge on the wall from the spoil (un-propped) was catered for within our secant wall design.



## Result

The programme was planned and executed within nine weeks. Our design using the ground beams as anchors enabled our client to turn a potential negative into a positive and stopped the spoil issues from interfering with the job. Hence there was no down time trying to solve the soil problem, we simply designed it into the job as part of the original cost.

## Technical information

We installed 173 No 450mm bearing piles to 18m and 180lm of secant wall consisting of 200 No 600mm female piles to 6m and 200 No 600mm male piles to 14m.

Rig: Soilmec CM70

