

The Multi Service Group.

## Excavation Pit Operncarree

Berlin, Germany



Works included the complete installation of an 11 m deep, watertight excavation pit including the demolition of a building basement in Berlin.

The retaining wall consisted of single-level tied-back diaphragm walls with 60 and 80 cm wall thickness and depth of up to 15 m. The old foundation walls within the diaphragm route needed to be removed by clearance borings using the rotary drilling method. Construction material debris as well as steel parts inside an old bomb crater had to be removed using the same techniques.

Two neighboring buildings had to be secured by underpinning using jet-grouting methods.

Sealing of the base slab was achieved by a medium-high lying jet grouted slab, tied down by mini piles (GEWI).

### Quantities:

2,000 linear m clearance boring,  $d = 1.20$  m

3,350 m<sup>2</sup> diaphragm wall,  $d = 60+80$  cm

1,256 m<sup>3</sup> jet grouted underpinning of buildings

185 Nos. retaining anchors, design load of up to 844 kN

2,400 m<sup>2</sup> jet grouting slab,  $d = 1.20$  m, drilling depth 13.20 m

300 Nos. mini piles (GEWI) to tie down base slab,  
length = 24 m

### Contract Value (net):

2.40 Mio EURO

### Construction Period:

03/2004 – 08/2004

### Client:

Hochtief Construction AG

Berlin

GERMANY

### Services:

Soldier pile and lagging wall

Diaphragm wall

Injection anchors

Jet grouting slab

Jet grouted underpinning

Mini piles (GEWI)

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