

## WATERPROOFING OF STRUCTURES ON HIGH WATER TABLE



view of the water table



trenches around the foundation



**Project name:** AK-Çarşı Shopping Mall / 2009

**Location:** Akyazi in Adapazari

**Type of given service:** waterproofing of below grade areas by supplying and installing of BentoShield Max.

**Total installed amount:** 25.000 m<sup>2</sup>

**Project Definition:** AK Çarşı is a shopping mall whose foundation is below water table level.

The project is constructed on well known geothermal resources and the surrounding application environment has high water table.

### **Substrate Preparation:**

First deep trenches opened around the foundation area below the its level. By pumping water from these trenches water table level had decreased below the foundation level. The whole foundation area compacted ensuring the optimum humidity level of the ground and filling material.

### **BentoShield MAX Application:**

BentoShield® MAX rolls laid on the compacted substrate with overlaps of 10 cm. BS Granules 500 g/m placed in between the overlaps to reinforce the waterproofing performance of the overlaps because of the very high level of the water table.

Optional method of putting 5 cm concrete on the installed BentoShield® MAX is chosen for the protection against possible heavy rains in the environment and as a working platform for the reinforcing bars of the foundation.

BentoShield extended minimum 30 cm beyond the foundation contours for the connections with the side elements after pouring foundation concrete.



After pouring the foundation concrete while installing the form works of the side walls WaterStop BS placed in the middle of the walls on the cold joints.

### **Vertical application**

After finishing side walls BentoShield MAX fixed onto the wall vertically by using nails.

- 10 cm of overlaps also used on the vertical applications.
- On the bottom of the side walls a fillet is formed with BS Granules.
- The whole vertical applications on the wall applied as the upper coming roll overlap the roll form below.
- Metal termination bar is put to finish the BentoShield application at the top by embedding BentoPaste to the surrounding of those area.

At the end of the BentoShield MAX applications, backfilling is done with compaction.

