

RETAINING WALL REHABILITATION AT CEMETERY BOGOR BOGOR, WEST JAVA, INDONESIA

Reinforced Soil Walls and Slope Reinforcement

Problem

Cemetery of Yayasan Sri Asih Pratama is located at Pamoyanan, Bogor, West Java - Indonesia. A private client planned to build a retaining structure as part of the construction plan for a family cemetery. The contractor in charge of the work built a 5.5m high retaining wall combining stone masonry and 2.5m space of a concrete column. The masonry wall was made without suitable foundation support, thus it moved forward and rotated after the clayey-backfill behind the masonry wall was completed.

Solution

Maccaferri proposed to use MSE Wall built behind the existing masonry wall. The MSE Wall consisted of Terramesh and MacGrid WG20. In order to install the Terramesh and MacGrid, the backfill was excavated and the contractor also had the initiative to construct some bored piles under the masonry wall to give foundation support. Maccaferri also gave supervision support in this project to maintain the quality of Terramesh and MacGrid installation and backfill compaction.

Terramesh System is a modular system used for soil reinforcement made of pre-assembled units fabricated with double twisted wire mesh 8x10 made of Galvanized (Zn) and PVC coated steel wire.

The units are provided during the manufacturing process with a double twisted tail as anchorage (secondary reinforcement).

MacGrid WG is a Woven Planar Geogrid manufactured from high tenacity PET yarns coated with PVC in order to maximize its durability. The geogrid tensile strength used was equal to 200kN/m.

Client: PT. Pohon Besar Perkasa

Designer / Consultant: PT. Maccaferri Indonesia

Contractor: PT. Pohon Besar Perkasa

Products used (Qty.)

- Terramesh	150 sqm
- MacGrid WG	1,200 sqm
- MacTex Non-woven Geotextile	1,200 sqm

Date of construction: 05/2017 - 06/2017



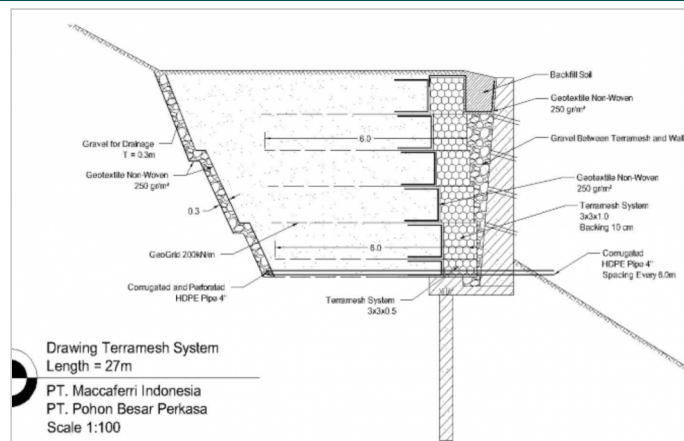
Initial site condition before installation of Maccaferri Solution



Bored piles construction under the masonry wall



Installation of first layer of Terramesh and MacGrid WG



Cross Section of The Adopted Solution



Installation of MacGrid WG20



MacTex MXS 250 as Separator between Backfill and Terramesh