

RETAINING WALL AT KUNINGAN DAM KUNINGAN, JAWA BARAT, INDONESIA

Reinforced Soil Walls and Slope Reinforcement

Problem

A cut slope at Kuningan Dam Project (Kuningan - Jawa Barat) needed to be reinforced to avoid stability failure. The original slope was cut to create space for the access road of the Dam. The selection of the right solution was necessary in order to build a cost-effective structure with prompt construction methods while fulfilling the standard of safety. Terramesh System by Maccaferri was selected in accordance with its easy installation method and capability to work together with available soil on site.

Solution

A combination of Terramesh System and geogrid combined with an additional structure of wrapped-around geogrid were built with 10.0m - 13.0m height. MacGrid WG as primary reinforcement has been installed and integrated with Terramesh system as secondary reinforcement or fascia. The retaining wall structure was constructed on a concrete capping with bored-piles underneath. A well-compacted soil as structural fill along with the system fulfilled the safety design criteria for the retaining structure. A drainage composite called Macdrain was added as a subdrain system inside the retaining wall structure to control any potential development of pore water pressure which might become a problem in the future. Maccaferri Terramesh System shall grant some advantages such as:

- Easy and Quick construction ;
- Allows drainage on the fascia of retaining wall ;
- Earthquake resistant thanks to its flexibility ;
- Cost-effective ;
- Environmentally friendly.

Client: PT. Wijaya Karya (Persero) Tbk.

Designer / Consultant: PT. Ika Adya Perkasa

Contractor: PT. Wijaya Karya Tbk.

Products used (Qty.)

- Terramesh	1,600 sqm
- MacGrid WG	1,900 sqm

Date of construction: 03/2018 - 10/2018



Condition before construction



Installation of MacDrain as subdrain



Installation of Terramesh System and MacGrid WG



Compaction process of the structural fill



Finished construction of the retaining wall