

BİLECİK UNIVERSITY PARKING LOT WALL
BİLECİK, İÇ ANADOLU, TURKEY**Reinforced Soil Walls and Slope Reinforcement****Problem**

As a result of the excavations carried out for the construction of the car park area belonging to the new rectorate building of Bilecik University, steep slopes with an angle of 80° were created. Ensuring the stability of these slopes and securing the parking lot was needed.

In addition, it could be seen that the ground and existing slopes would be affected very quickly by freeze-thaw events due to the clay-soil material of the slopes.

The suitable option for retaining this structure was construction of a retaining wall. However, the construction had to be green and adapt to natural conditions.

Solution

After the discovery made by Maccaferri Turkey engineers at the construction site, it was concluded that instead of building a single-piece retaining wall and building the entire car park on this structure, it would be much better to reduce the height of the retaining structure by building a two-storey parking lot, both in terms of security, cost and landscape. The parking lot area will be side by side with the forest as can be seen from the photos. It was necessary that the retaining wall to be built should not alter the appearance of nature and appear as a whole with it. For this reason, the project work required for the construction of the Green Terramesh retaining wall was started by Maccaferri Turkey with the acceptance of the client.

Stability calculations of retaining structures are made with Macstar W program developed by Maccaferri. Since the province of Bilecik is an earthquake zone, the studies have been carried out comprehensively, and the stability calculations in earthquake and non-earthquake conditions are presented separately to the client.

In addition, the erosion that may occur in the slope area behind the 6.00 m high wall that has been designed was prevented by using Macmat R1 6822 GN material.

In the project, Paragrid 80/05 Geogrid material was selected as the reinforcement material in the Green Terramesh System retaining wall and a 6.00 m high retaining wall was created.

Client: HAKKI EKŞİ GYO LTD.ŞTİ.

Designer / Consultant: MACCAFERRI TURKEY

Contractor: BİLECİK ŞEYH EDEBALI ÜNİVERSİTESİ

Products used (Qty.)

- Green Terramesh	600
- MacMat	400
- ParaGrid	N/A

Date of construction: 08/2013 - 09/2013



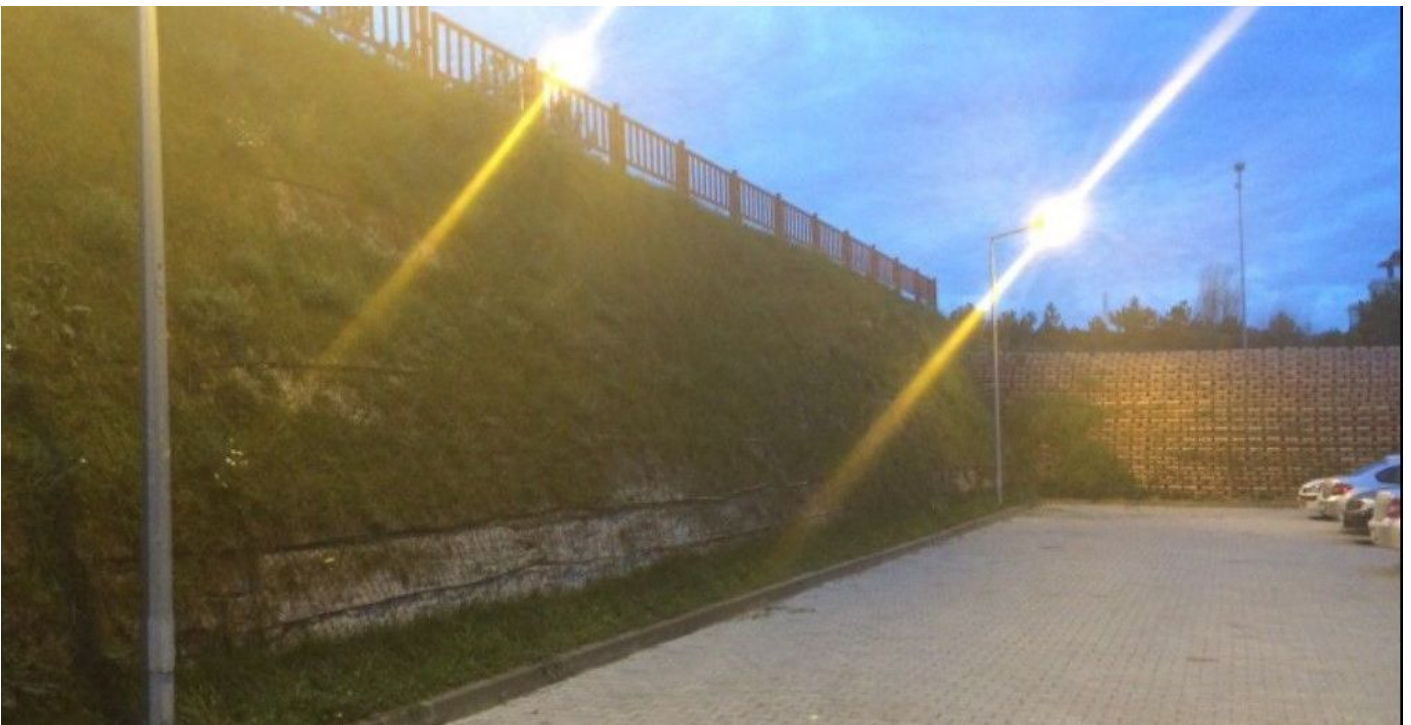
Before The Application



Green Terramesh



Green Terramesh



3 Months After The Green Terramesh Application