

## ROAD EMBANKMENT STABILIZATION SEREMBAN, NEGERI SEMBILAN, MALAYSIA

### GEOTECHNICAL ENGINEERING

#### Product: TERRAMESH

##### Problem

The slope failure along the embankment of Senawang Main Road occurred after several days of prolonged and intense rainfall. In this occurrence, the rainwater infiltration would have reduced the matric suction of the soil in the slope and caused the shear strength to drop below the minimum level required for stability, which subsequently triggered the collapsed of the slope.

##### Solution

The initial proposal was an 8m high Maccaferri Gabions wall to reinstate the slope. Nonetheless, Maccaferri took the initiative to propose Terramesh Mechanically Stabilised Earth (MSE) Wall to Jabatan Kerja Raya (JKR) Negeri Sembilan to reduce the overall construction cost.

The Terramesh MSE Wall has all the advantages of a gabion wall (i.e. speedy and simple construction, flexible, permeable and etc.) In this situation, the Terramesh MSE Wall was adopted because it will normally be more cost-effective as compared to a gabion wall, if the wall height is more than 5m.

For this project, the client was very pleased with the cost saving obtained and the rate of construction was at about 36 - 40m<sup>2</sup> per day with a team of 11 workers using only a 3 tonne roller compactor and excavator.



Before construction



During construction



After construction

Client:

JABATAN KERJA RAYA (JKR) NEGERI SEMBILAN

Main contractor:

ZIKA ENTERPRISE SDN BHD

Consultant:

JABATAN KERJA RAYA (JKR) NEGERI SEMBILAN

Products used:

320 M<sup>2</sup> TERRAMESH

Date of construction:

MAY 2004

##### Maccaferri (Malaysia) Sdn Bhd

Unit 511, Block G, Phileo Damansara 1, No. 9, Jalan 16/11,  
Off Jalan Damansara, 46350 Petaling Jaya, Selangor, Malaysia  
T: +(60-3) 7955 7800 F: +(60-3) 7955 7801  
E: mm@maccaferri-asia.com  
[www.maccaferri.com.my](http://www.maccaferri.com.my)

