

**SLOPE PROTECTION AT TENGKU AMPUAN FATIMAH, KUANTAN, PAHANG
KUANTAN, PAHANG, MALAYSIA**

Vertical Drainage Works

Problem

Rumah Kanak-Kanak Tengku Ampuan Fatimah is a nonprofit organization builds with the purpose of providing shelter, care and protection for orphans and children who have suffered from abuse. The institution has 11 acres of land and currently accommodates a total of 164 children from various under privileged background.

Construction of the new phase required retaining wall and surface preparation for the platform surrounding the structure. The Client prefers that the system suggested should be more eco-friendly and aesthetic. Therefore, geogrid wrap around system was chosen in order to have a green facade.

Solution

The geogrid wrap around slope consist of MacGrid™ WG8i geogrid (80 x 30 kn/m) as a reinforcement of the slope with inclination of approximately at 60 degree and covers up to a total of 21,320 meter square.

With the height of 6m tall, the construction began with the base preparation using suitable granular material with thickness of 500mm and wrapped around with MacTex™ MXC 50 non-woven geotextile as a separator layer. Standard compaction was applied and the sequence of geogrids installation was repetitive until it reached designated height. Biodegradable mat BioMac was used as a vegetation purpose in retaining grass seeds. As for drainage purposes, MacDrain which consist of flexible composite matting enables heavy discharged was introduced.

Client: Department of Social Welfare Malaysia

Designer / Consultant: Panji Alam Consult

Contractor: SPS Bina Sdn Bhd

Products used (Qty.)

- Geosynthetic Accessories 22,000 square metre
- MacDrain N 20 pieces
- MacTex N 22,000 square metre

Date of construction: 05/2015 - 09/2015



During Construction



During Construction



During Construction



After Completion