

application **Reinforced Slope**
 location **Sentosa Island, Singapore**
 product **Miragrid 5XT, Mirafi PET150/50,
 Miramat TM8**

Sentosa Island, located at the southern tip of Singapore, is a tourist attraction that is well known around the world. The Sentosa Cove Development is a marina resort located adjacent to the golf course on Sentosa Island.

The development called for a widening of the access road to the marina resort. To widen the road, which borders the golf course, the embankment side slopes had to be constructed steeper.

The embankment of the widened road would be in full view of golfers and so a structure with a 'soft and green' facing was the preferred solution. The solution adopted involved the construction of a reinforced steep slope with vegetation cover on the slope surface.

The foundation is in a low lying area prone to saturation during wet seasons

due to rising water table. The foundation treatment involved a novel use of a high strength geotextile as basal reinforcement. This geotextile would also act as a filter to the aggregate drainage blanket. **Mirafi PET150/50** was used as this geotextile reinforcement/filter.

The reinforced steep side slope of the embankment, which varied in height up to a maximum of 3.7 m, was constructed above the reinforced foundation drainage blanket. **Miragrid 5XT** geogrid was used as primary reinforcement at vertical spacings of 0.5 m. The geogrid was wrapped around soil bags at the facing of the side slope to ensure alignment of the slope profile.

Upon completion of the reinforced soil structure, **Miramat TM8** was laid over the steep side slope. At this project the **Miramat TM8** served a number of

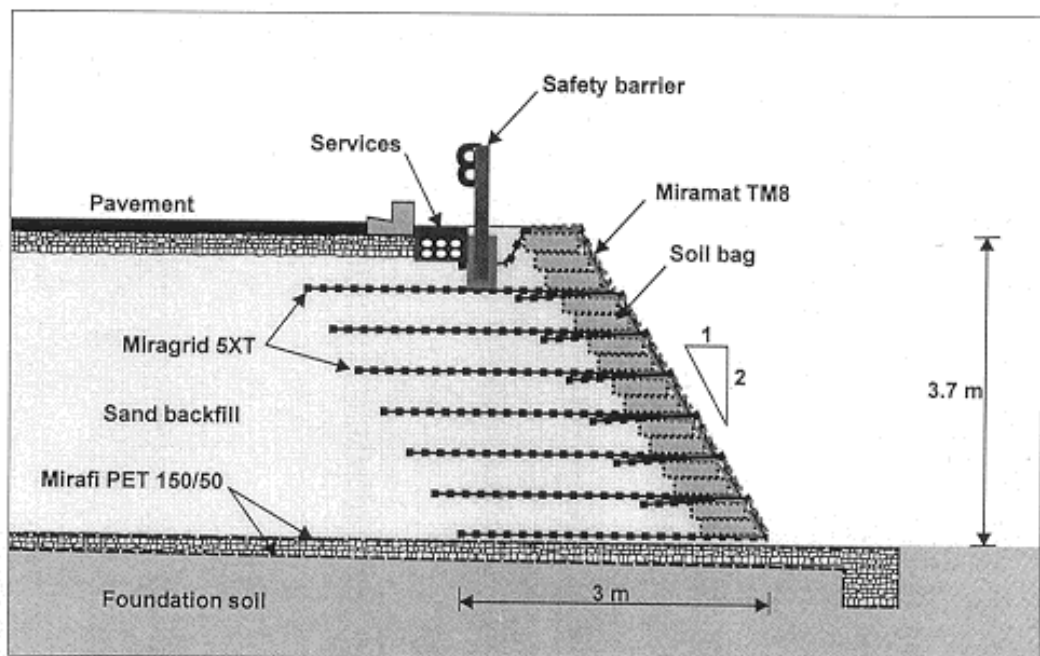
important functions. The green colour and structure of the **Miramat TM8** when laid looked like an instant turf cover on the side slope. The **Miramat TM8** would also provide immediate surficial erosion protection prior to the establishment of natural vegetation to the slope surface. The **Miramat TM8** also helps trap and retain topsoil to facilitate growth of vegetation. In the long term, **Miramat TM8** reinforces the surface vegetation to provide enhanced surficial erosion protection to the slope surface.

OWNER
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