



Consultant	Design Werkz Engineering Pvt Ltd
Main contractor	Shubh Enterprises
Gripple Terra-Lock™ System	TL100-A3, GMAT C-350, TLP2
Application	Slope Stability

Gripple was approached by Design Werkz Engineering Pvt Ltd to provide an alternative solution to Gabion retaining wall proposed for slope stabilization. In order to deliver the right solution, a Gripple engineer visited the site to carry out an initial survey to provide a design recommendation for slope protection. The height of the slope to be retained was about 12m and the slope inclination was maintained at 1.5V:1H which was quite steep considering the shear parameters of the soil which was used for backfilling.

Gripple recommended to fill the existing strata slope of 35° up to 40° with achievable compaction. Gripple's TL100-A3, GMAT C-350 and TLP2 were proposed to protect the slope. Gripple's Terra-Lock™ System is an innovative method of geotechnical engineering for slope stability which creates sustainable and durable green structures by reinforcing nature. The GMAT C-350 is a long lasting environmental friendly mat which provides an effective erosion control and vegetative root reinforcement layer, while TL100-A3 anchors are designed to drive efficiency, maximum load capacity and vegetation establishment through perforations. GMAT was hydra-seeded with top soil to allow vegetation growth.

At the corner of the plot, there is an area which was prone to repeated landslide. Damage from the previous years' monsoon were observed, and special protection measures needed to be adopted to protect this area. A heavy protection method with concrete mats were suggested to prevent future landslides, and water collected on the plot was diverted through a drainage pipe. This ensured the collection and draining of surface and sub-surface water. The existing soil fill in had failed, so it was removed and refilled with a suitable watering and compaction. Post compaction and dressing the concrete canvas mat was done with drainage pipes over this slope. The mats were secured to the slope gradient with Gripple Terra-Lock™ Anchors and Terra Pins.



Concrete Canvas installed with the Gripple Terra-Lock™ System

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