



MN-CW2, Thoubal, India

Consultant	GeoSewa
Client	PWD Manipur
Main contractor	M/S DRAIPL-ABCI Infra (JV)
Gripple Terra-Lock® System	TL606-A4, TL100-A3, TL-100-A2, GMAT C-350, TLP2
Application	Slope stability and Erosion protection work



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MN-CW2 is part of the North Eastern States Roads Investment Program which is upgrading the road between Thoubal and Kasom Khullen. The proposed improvement covers 47,125 km of existing roads which are mostly gravel tracks with single lane carriageways, passing through mountainous terrain and cutting through major hillsides. In order to build the road system the creation of new steep slopes at the side of the road was necessary. These slopes were highly susceptible to surface failure.

The main contractor and client required a slope stabilisation method which was less labour intensive to install than traditional methods. They found Gripple's Terra-Lock® System to be the most beneficial solution for this project after a Gripple engineer visited the sites to carry out an initial survey and provided design recommendations for the project.

The work was allocated across 5 different locations with slope stabilisation on hillsides and erosion protection on the sides of the valley. The slope stabilisation took place between an approximate height of 8m - 32m. In the areas where erosion protection work was the focus, the height of the protected slope was around 100m.

Throughout the survey, several slope stability analyses were carried out across the varying slope profiles. This ensured that the correct and most cost-effective system was used. Depth and spacing were also carefully selected to meet the requirements of the project. After consultation Gripple's TL 606 TL-A4, TL-100-A3, TL-100-A2, GMAT-C-350 and TLP2 were proposed to retain the slopes.

By using Gripple's Terra-Lock® System with the GMAT-C-350 it is able to hold back any failures and prevent any surface movement from falling into the infrastructure below. The System is durable and has been manufactured using corrosion resistant materials to ensure longevity. The System promotes vegetation growth meaning it is essentially 'self-healing', delivering longevity to the install. The survey carried out adds increased safety factors as the installation depth of the anchors is calculated based on engineering principles to guarantee the System locks into structurally sound soil.



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