

MALINAO-GENERAL LUNA ROAD SIARGAO ROCKFALL PROTECTION
SIARGAO, REGION XIII, PHILIPPINES

Surface Strengthening and Support

Problem

Siargao Island in the province of Surigao del Norte is known to be the Surfing Capital of the Philippines. Not just for surfers, Siargao's fascinating natural beauty captivates both local and foreign tourists. However, some areas are susceptible to landslides and other natural hazards due to the geologic setting and weather conditions.

Certain sections of the road is confined by cut-slopes along its perimeter which is unprotected and presents the following risks:

- (1) erosion of soil - leading to slippery roads, (2) dislodgement of rocks leading to rockfall events, and (3) localized slope failure from surfacial instability. Even small rockfalls, or debris flows can block infrastructure and can have far-reaching economic effects beyond the immediate disruption.

Solution

Constructing a slope protection system along these road sections will promote the road's resiliency and is geared to improve the life and well-being of the people using the infrastructure. Erosion prevention and rockfall mitigation are key elements in the security and safety of infrastructure, buildings, or people.

To address this matter, Maccaferri Philippines used Steelgrid® HR 30, a high strength, high stiffness steel composite netting/drapery system of double twisted steel wire hexagonal mesh. Steelgrid® HR is installed in the same general way as conventional double twist mesh, easy to handle, and will not require extensive modification of existing method statements and installation techniques. The inclusion of the steel ropes greatly enhances the transfer of loads from the mesh into the anchorage system, thereby increasing safety, capacity, and durability of the mesh as a complete system—an innovative, cost-effective, and reliable system for surface protection and stabilization.

Eventually, the slope will start to vegetate, leading to an aesthetically pleasing green facing that will enhance Siargao's beauty while ensuring the safety and security of the infrastructure and the people.

Client: Department of Public Works & Highways

Designer / Consultant: Department of Public Works and Highways

Contractor: Road Edge Trading / BMDK

Products used (Qty.)

- Steelgrid HR N/A
- MacMat N/A

Date of construction: 05/2019 - 09/2019



Before Construction



Before Construction



During Construction



Completion



Completion