

ENBRIDGE COMPRESSOR STATION CHETWYND, BC



Problem



Solution



Result

Application: Permanent Stabilization

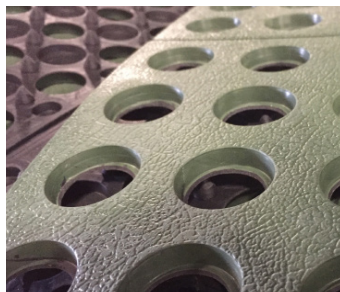
Product: TMax HPTRM, ShoreMax

Site Issues: Fire retardant requirement • Cut slope stabilization • Non-vegetated application • Remote site • Resistant to Glyphosate • Turbulent water flow mitigation • Cold climate

Problem: Layfield was contacted September 2021 for design options to stabilize a cut slope for a proposed building site. The site was 45 km (28 miles) SW of Chetwynd and quite remote. The owner did not want vegetation on this slope; however, it required some form of erosion control. There was also a request for a material that was fire retardant (FR) and resistant to any damage from the longterm application of glyphosate for vegetation control.

Solution: The TMax high performance turf reinforcement mat (HPTRM) with an FR additive was selected to protect the slope. Additionally, the TMax was designed to be installed with Falcon anchors and hex pins to secure it to the slope face for long term performance. The HPTRM TMax FR was chosen in a tan color to match the surrounding landscape. Rather than subject the synthetic yarns to frequent use of herbicides, the consultant opted to recommend a weed barrier (NuBarrier) to be installed underneath the HPTRM to prevent vegetation from establishment. The project was installed in September 2022 with the green NuBarrier placed first, followed by the HPTRM. All material overlaps were done in the direction of surface water flow. The system was secured using the combination of Falcon percussion driven anchors and hex pins.

Result: There was a concern during the installation, due to a small drainage channel placed within the slope, that might affect the cross directional overlaps of the material. The contractor wanted to install rip rap within this area to further protect the HPTRM but also to reduce any turbulent velocity of the surface water runoff. After discussion with the Consultant, the site owners opted to install ShoreMax transition mats in place of the large rock rip rap. These mats provided reduction in turbulent flow without posing a risk of damage to the HPTRM as was the possibility with the rock. The ShoreMax also provided a mechanical reinforcement to the overlaps of the HPTRM further securing the entire system.



PRODUCT HIGHLIGHTS

- Fire retardant additive, and UV stabilization of the TMax HPTRM provided additional slope protection
- Falcon Anchors provided mechanical strength for surficial slope protection and high-loading capabilities
- Falcon Hex Pins provide anchoring and soil-to-mat conformance across the slope and seams of the matting.