

Vaughan, ON — Slope Protection

Year of Construction: 2022

Location: Vaughan, ON

Product Installed: Coir Mats

Category: Erosion Control

CASE STUDY

CHALLENGE

Visible rills formed on a 2:1 slope, threatening sedimentation into the Black Creek watershed, a critical Humber River tributary.

SOLUTION

Coir mats were installed over the seeded soil, ensuring erosion protection while supporting vegetation growth.

SPECIAL NOTE

A slope of approximately 1,000 sqm in area with a grade of 2:1 (H:V) near the Black Creek watershed required erosion protection. Geotechnical assessments confirmed the slope's global stability but highlighted visible rill formation, indicating surface erosion risks. To prevent sedimentation into the Black Creek watershed, a major tributary of the Humber River, an eco-friendly solution was critical. Terrafix proposed Coir Mats (900 g/m²) for its ability to provide immediate erosion control while fostering vegetation growth.

Coir Mats are made from coconut husk fibres (coir), known for its strength and durability. These mats are woven into various densities (400, 700, 900 g/m²), making them suitable for stabilizing slopes, preventing soil erosion, and supporting vegetation growth. Coir Mats allow water to pass through, reducing runoff velocity and promoting soil retention while providing a stable environment for seed germination. Over time, the mats naturally decompose, enriching the soil, while mature vegetation performs as **the permanent erosion** protection.

Mats measuring 2m x 50m, were installed and stapled over a seeded surface during the fall. By the following spring, vegetation was well-established, stabilizing the slope and mitigating erosion.

