

Dam Rehabilitation Millbrook, ON

CASE STUDY

Year of Construction: 2019

Location: Millbrook, ON

Product Installed: Flexamat

CHALLENGE

A local Conservation Authority had concerns that a major rainfall could cause an existing dam to fail, ultimately flooding a small town in Ontario.

SOLUTION

The dam was redesigned and reconstructed lined with Flexamat, a tied concrete block mat.

SPECIAL NOTE

Otonabee Regional Conservation Authority wanted to replace a 200 year old dam which was deemed unsafe. Two requirements had to be met:

- 1) Functionality: the dam needed to withstand possible erosion from high flow scenarios of up to 181 m³/s
- 2) Aesthetics: the area needed to be accessible to the local residence and visually pleasing.

Once the spillway was regraded, the contractor installed Flexamat. The system consists of concrete blocks tied together with high strength geogrid, creating a flexible, highstrength hard armour against erosion. The mat allows vegetation to establish while serving as a hard armour erosion control solution.

Rolls are custom fabricated, providing the contractor many options for selecting roll dimensions. They decided to proceed with 16' wide x 50' long rolls to meet their site configuration needs.

Rolls were installed side by side down both sides of the dam. FM200 (turf reinforcement mat) was installed along the longitudinal seams for added protection. Seams were then secured every 2' using 18" u-shaped rebars. Once the entire dam was lined with Flexamat, a cover soil followed by hydroseeding was applied followed by a layer of C200 (double coconut blanket). Vegetation was established later in the summer complementing the surrounding park.

Case Study Video:

https://youtu.be/_upmh6RIY_w?si=0h81K5fu524ahP31

