

SOPHIA CREEK - Creekbank Stabilization

Year Constructed: 2015

Project Size: 115m²

Client: City of Barrie

Reinforcement: Geogrid

Vegetation: Hydroseed

Engineer

GHD – Waterloo, ON

Contractor: City of Barrie

Bag Filler

Marco Clay Products

Approving Authority

Lake Simcoe Region
Conservation Authority

+ Project Snapshot

After years of flooding and multiple 100-year storm events, the slopes, banks, and stream channel began to fail around an existing culvert. This section of Sophia Creek had approximately 2m high bare slopes undercut by water flow erosion. Working with the City of Barrie, old gabion baskets were removed around the existing culvert, and 25m of creek bank were replaced with the Envirolok system. During construction, Sophia Creek experienced an unprecedented 1:100 year storm event that accelerated erosion and caused the culvert to dislodge into the plunge pool. The Envirolok bags were left standing, much to the surprise of the City of Barrie Public Works officials and the Lake Simcoe Conservation Authority. Once construction was complete, the Envirolok system was hydroseeded with native grass, wildflower, and perennial rye cover crop seed mix. By utilizing Envirolok as a long-term solution, the project team quickly established native vegetative cover that continues to withstand urban storm events.

