



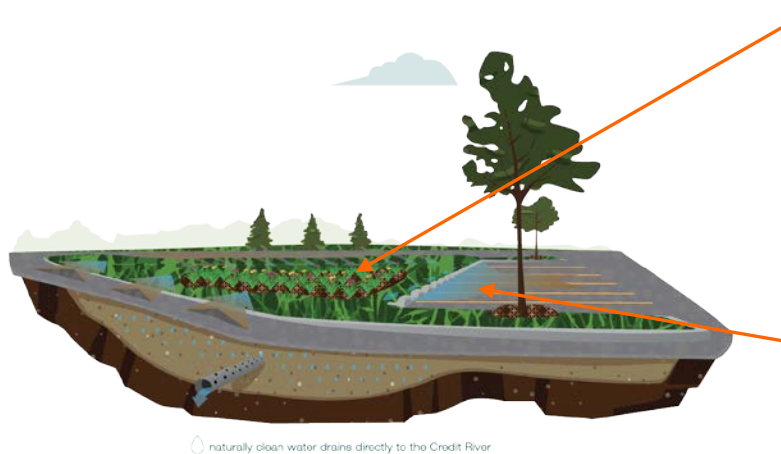
Portico: A Community Church

Location: Mississauga
 Constructed: 2011



Project Overview

The bioswale (rain garden) at Portico Church absorbs and filters runoff from a parking lot that would have otherwise drained directly into the Credit River. The parking lot bioswale was added to the parking lot island in 2011.



naturally clean water drains directly to the Credit River

Bioswale

The bioswale collects stormwater run-off from the parking lot and cleans the water through an engineered soil mixture and selected vegetation. In the bioswale, the interaction of plants, soil and natural microbes remove pollutants to improve the quality of water flowing back into the Credit River.

Sheet Flow

The design has curb-cuts to promote inflow of stormwater runoff. The parking lot runoff enters the rain garden as sheet flow.

Successes

CVC, in partnership with Portico Church, is conducting regular maintenance inspection and evaluating the performance of the bioswale. The successes achieved with this project include:

Innovative project – Portico Church includes a number of innovative low impact development practices, including permeable pavement and bioswales in the center of the parking lot that were installed in 2009. The project demonstrates the Church’s commitment to leading by example.

Protecting the Credit River – This project embraces the spirit of the Credit by showcasing how to manage and clean stormwater before it enters the River.

Demonstration showcase – Portico Church has been showcased in presentations and events. These efforts have helped educate numerous stakeholders on the benefits of LID.



Photo taken during an LID Inspection in July 2014

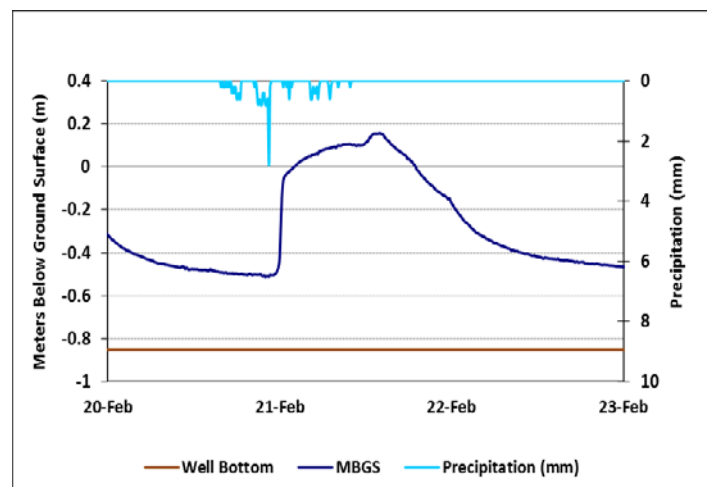
Infrastructure Assessment

As part of CVC’s Infrastructure Performance and Risk Assessment project, the performance of the Portico bioswale is being evaluated. This assessment will help to provide municipalities and property managers with the information and tools they need to ensure that LID practices on their property are working properly.

Landscaping – The bioswale landscaping consists of a variety of trees, shrubs, and flowering perennials. The plants have had four years to establish and have been found to thrive.

Maintenance – Portico Church has been performing maintenance including litter pickup and weeding.

Performance – Analysis of water level data collected from 2013 to 2014 indicate that the bioswale is performing well and functions within the design parameters. Any ponding of water that occurs on the surface is able to soak into the bioswale within 24 hours. The bioswale is also able to function in the winter when the ground is frozen as melt events are able to infiltrate through the engineered soil mix. The figure below shows a rain event in February 2014, where infiltration into the bioswale occurred after a short period of surface ponding.



Precipitation event and measured water level in February 2014

Proud Partners



Hawkey Church Management Inc.