LOWER TRENT CONSERVATION

RESTORING THE TRENTON GREENBELT

Site preparation

Lower Trent Conservation is revitalizing a small 0.3 ha section of the Trenton Greenbelt Conservation Area located in downtown Trenton on the bank of the Trent River. This special urban greenspace will be transformed from a lawn into a native wildflower meadow with scattered shade trees, complete with wide walking trails and comfortable resting spots.

Successfully seeding native wildflowers and grasses to create new habitat requires a bare soil "blank canvas" free of competition from plants with aggressive growth habits. To prepare the project site for seeding and planting, the existing lawn and invasive plants must be removed. Then locally sourced seeds can be sown to increase native species diversity and support pollinators, and other wildlife. Native plants take time to establish – it will take about three years to achieve the desired aesthetic and ecological benefits.

Restoring the Trenton Greenbelt project site.

"Working with Local Communities to Protect Our Natural Environment"

In the following table, we carefully evaluated common ecological restoration approaches and selected herbicide treatment as the most efficient way to transition turf to a naturalized meadow.

Method	How it works	Pros	Cons	Feasibility
Tilling	Mechanically rips up soil, uprooting plants.	Improves compaction of topsoil. Kills plants by uprooting.	Promotes germination of seedbank. Requires numerous passes to exhaust seedbank. May cause soil erosion near water. Damages soil structure and biodiversity.	Not feasible – Shallow soils and limited timeframe will not produce desired bare soil results.
Solarizing	Thick plastic sheets laid over vegetation kills plants, roots and seeds with captured solar heat.	Easy to use. Good for small areas.	Use of non-recyclabe plastic in a 0.3 ha area crates a lot of garbage. Requires many months and consistent high heat for good results. Wind may blow plastic off.	Not feasible – Use of solarizing plastic on a large scale (0.3 ha) is not feasible.
Industrial vinegar (high strength)	Burns off green plant tissue, but does not kill roots.	Easy to use. Good for small areas.	Highly acidic, thus requires 10m setback from water. May not effectively kill competing plants.	Not feasible – 10m setback from the river includes much of the site. Ineffective in killing aggressive plants.
Herbicide (glyphosate)	Absorbed by green tissue killing actively growing plants.	Small amount used for ecological restoration efforts, compared to agricultural uses.	Impacts environment through prolonged large-scale industrial application.	Feasible – Apply 2-3 times, following safety guidelines, to eliminate competing plant species.
Sod removal	Stripping a thin layer of top soil containing grass and weed roots.	Good for small areas.	Loss of already very shallow topsoil. Increased likelihood of soil erosion.	Not feasible – Top soil is very shallow and needs to be preserved and restored to health.
Smothering grass	Use of surface barrier like cardboard and/or mulch to block out sunlight and kill plants.	Good for small areas. Good for planting potted plants directly into soil through the barrier.	Covers bare ground required for successful wildflower and grass germination; would need to be removed. Requires a large amount of mulch material, importation of which is restricted in the regulated floodplain area.	Not feasible – Covering bare ground with mulch prevents native wildflower seed germination.

This project is undertaken with the financial support of the Nature Smart Climate Solutions Fund, a Government of Canada's Department of Environment and Climate Change program in partnership with Conservation Ontario.