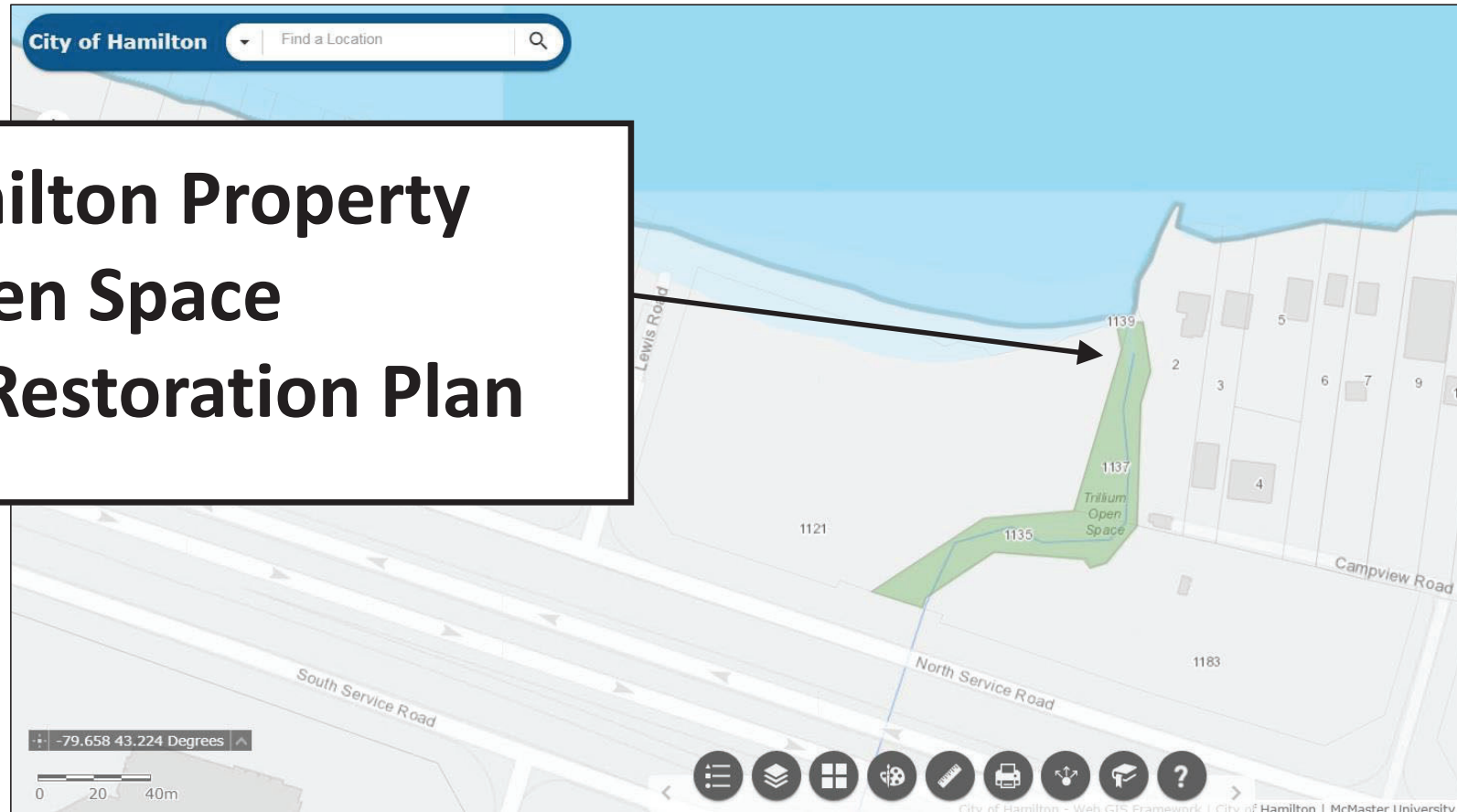


# City of Hamilton Property Trillium Open Space - Erosion Restoration Plan

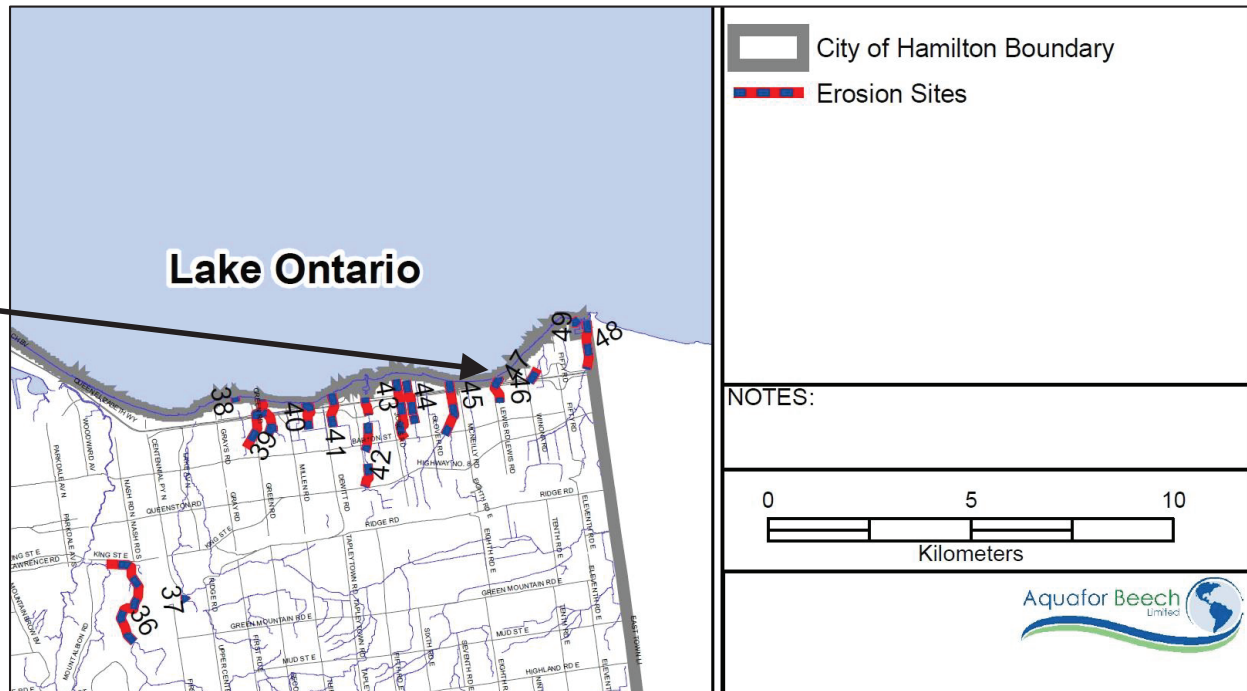


**Presentation to Public Works Committee  
February 1, 2021**

**Excerpt - City of Hamilton  
Stormwater Master Plan  
Class Environmental Assessment Report  
May 2007**

- Chapter 8, Figure 8.17

**Trillium Open Space  
identified as  
Erosion Site No. 47**



# Excerpt - City of Hamilton Stormwater Master Plan Class Environmental Assessment Report May 2007

- Chapter 10, page 143

**Trillium Open Space  
Erosion Site No. 47**

- Rated No. 2 for restoration
- Relative Priority
- Cost \$117,000

City of Hamilton  
Stormwater Master Plan – Class Environmental Assessment Report (City-Wide)  
May 2007

**Table 10.5: Stream Restoration Costs**

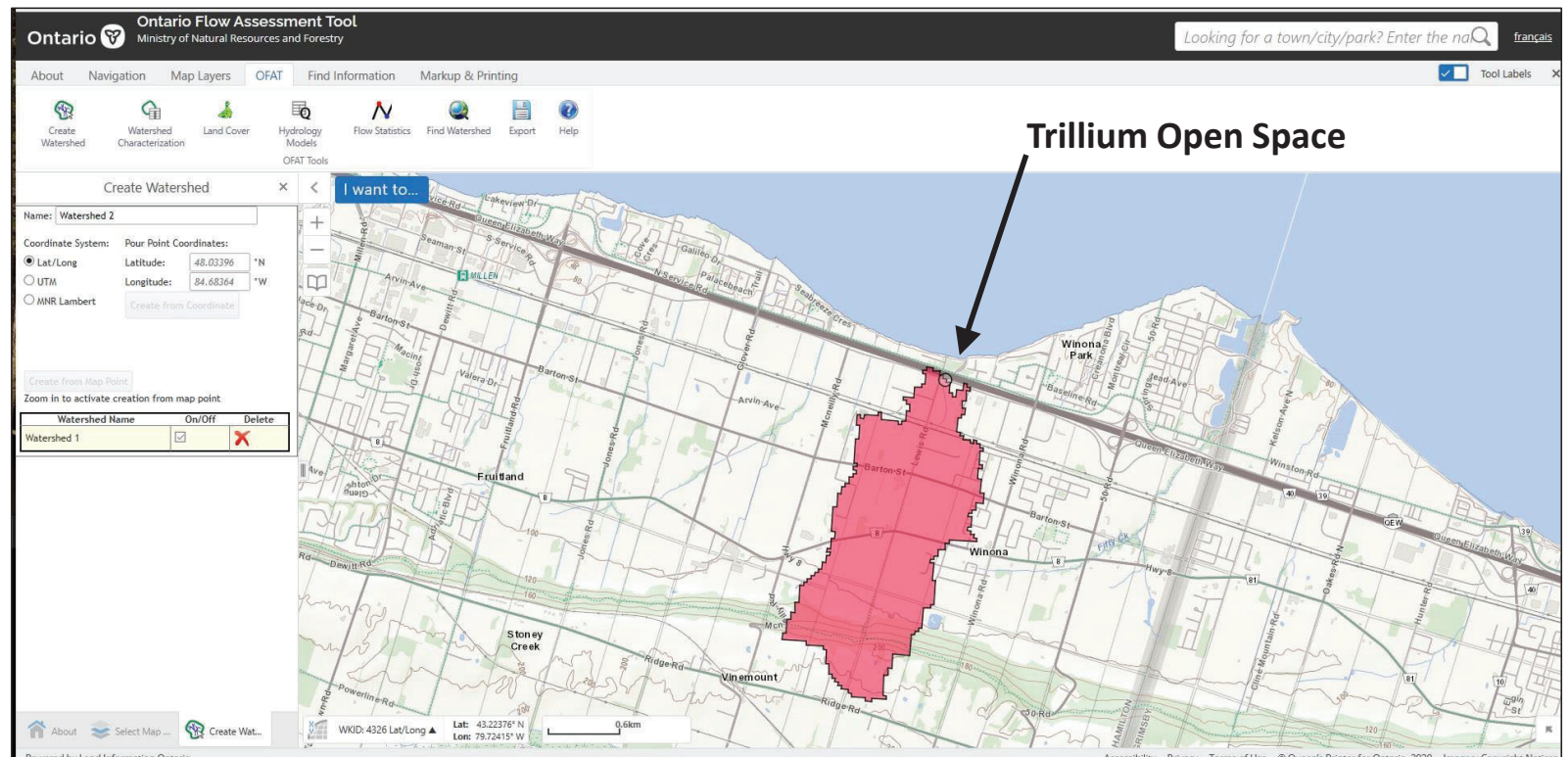
Site Number	Local Municipality	Watershed	Relative Priority	Capital Cost	Class EA Schedule
1	Flamborough	Grindstone	4	\$141,000	B
2	Flamborough	Grindstone	4	\$430,000	B
3	Flamborough	Grindstone	4	\$312,000	B
4	Flamborough	Grindstone	4	\$613,000	B
5	Flamborough	Grindstone	4	\$281,000	B
6	Flamborough	Borer's Creek	3	\$1,092,000	B
7	Ancaster	Sulphur Creek	3	\$212,000	B
8	Ancaster	Sulphur Creek	2	\$952,000	B
9	Ancaster	Sulphur Creek	3	\$624,000	B
10	Glanbrook	Twenty Mile Creek	2	\$100,000	B
11	Glanbrook	Twenty Mile Creek	2	\$100,000	B
12	Glanbrook	Twenty Mile Creek	3	\$100,000	B
13	Glanbrook	Twenty Mile Creek	2	\$100,000	B
14	Glanbrook	Twenty Mile Creek	2	\$352,000	B
15	Glanbrook	Twenty Mile Creek	1	\$899,000	B
16	Glanbrook	Twenty Mile Creek	2	\$301,000	B
17	Glanbrook	Twenty Mile Creek	3	\$260,000	B
18	Glanbrook	Twenty Mile Creek	3	\$236,000	B
19	Glanbrook	Twenty Mile Creek	1	\$429,000	B
20	Glanbrook	Welland River	2	\$335,000	B
21	Glanbrook	Welland River	2	\$245,000	B
22	Glanbrook	Welland River	1	\$386,000	B
23	Stoney Creek	Red Hill Creek	1	\$767,000	B
24	Glanbrook	Twenty Mile Creek	2	\$100,000	B
25	Glanbrook	Twenty Mile Creek	3	\$335,000	B
26	Glanbrook	Twenty Mile Creek	2	\$229,000	B
27	Stoney Creek	Red Hill Creek	2	\$309,000	B
28	Stoney Creek	Red Hill Creek	3	\$183,000	B
29	Glanbrook	Twenty Mile Creek	2	\$451,000	B
30	Glanbrook	Twenty Mile Creek	2	\$255,000	B
31	Glanbrook	Welland River	1	\$784,000	B
32	Glanbrook	Welland River	2	\$383,000	B
33	Glanbrook	Welland River	2	\$527,000	B
34	Glanbrook	Welland River	3	\$166,000	B
35	Glanbrook	Welland River	3	\$122,000	B
36	Stoney Creek	Red Hill Creek	3	\$887,000	B
37	Stoney Creek	Community of Stoney Creek Watercourses	4	\$100,000	B
38	Stoney Creek	Community of Stoney Creek Watercourses	4	\$100,000	B
39	Stoney Creek	Community of Stoney Creek Watercourses	2	\$685,000	B
40	Stoney Creek	Community of Stoney Creek Watercourses	3	\$240,000	B
41	Stoney Creek	Community of Stoney Creek Watercourses	3	\$262,000	B
42	Stoney Creek	Community of Stoney Creek Watercourses	2	\$540,000	B
43	Stoney Creek	Community of Stoney Creek Watercourses	1	\$488,000	B
44	Stoney Creek	Community of Stoney Creek Watercourses	2	\$338,000	B
45	Stoney Creek	Community of Stoney Creek Watercourses	1	\$423,000	B
46	Stoney Creek	Community of Stoney Creek Watercourses	4	\$215,000	B
47	Stoney Creek	Community of Stoney Creek Watercourses	2	\$117,000	B
48	Stoney Creek	Community of Stoney Creek Watercourses	3	\$100,000	B
49	Stoney Creek	Community of Stoney Creek Watercourses	2	\$370,000	B
50	Ancaster	Big Creek	2	\$1,301,000	B
51	Ancaster	Big Creek	3	\$450,000	B
52	Ancaster	Big Creek	2	\$1,433,000	B
53	Glanbrook	Twenty Mile Creek	1	\$397,000	B
				<b>Total Cost</b>	<b>\$21,557,000</b>

Note:  
4 = Highest Priority, 1 = Lowest Priority

Aquafor Beach Limited  
Reference: 64392

## Trillium Open Space

- Major stormwater outlet
- >250 Ha contributing drainage basin
- Industrial parks/ Barton St./ Hwy 8





**Excerpt - City of Hamilton Report  
Assessment of City Owned Assets  
SNC-Lavalin - June 2019  
- Appendix C, Page 14**

**Site 7, 1137/35  
(Trillium Open Space)**

- **Dangerous**
- **Stability issue**
- **No protection**
- **Replacement**

**Site 7 1137 / 35 North Services Rd Trillium + Site 8 Lewis  
Road – Assessed Condition: Poor**

Site 7 and 8 cover 180 m of unprotected shoreline. This area shows ongoing erosion along the bluffs that characterize this site. These sections may be **dangerous for the un-informed general public**. It is recommended to put up a fence and signs warning pedestrians.

The elevation of the bluff toe varies from 76 to 77 m. The wave effects are likely undercutting and eroding the bluffs, currently approximately 3 to 4 m high. There is also a geotechnical **stability issue** considering the angle and material of the bluff. Run-off will also contribute for the upper land erosion, since **no drainage or protection is present**.

Due to the bluffs height, overtopping volumes are low, but the storm wave energy, which must be dissipated along the bluff height during high water levels is significant, and will likely continue eroding / undermining the crest.

Currently, there is no active land use on the property. It is a potential site for a green pilot project, either by cutting down the slope (which will require geotechnical input) or by encroachment on the lake shoreline at the base of the eroding cliffs. The site has potential to be designed as a beach environment, below the cliffs, for the public and a pilot of a green shoreline protection, including creation of fish and bird habitat.

Alternatively, the armouring of the bluff toe and a slight cut back on the slope could reduce erosion rates in the short term.

Site 7 1137 / 35 North Services Rd Trillium	
Conditions	Poor
Crest Elevation	81.1/ 75.9 (toe) m IGLD
Solution	Replacement
Options	D

**Excerpt - City of Hamilton Report  
SNC-Lavalin – June 2019  
Site 7, 1137/35**

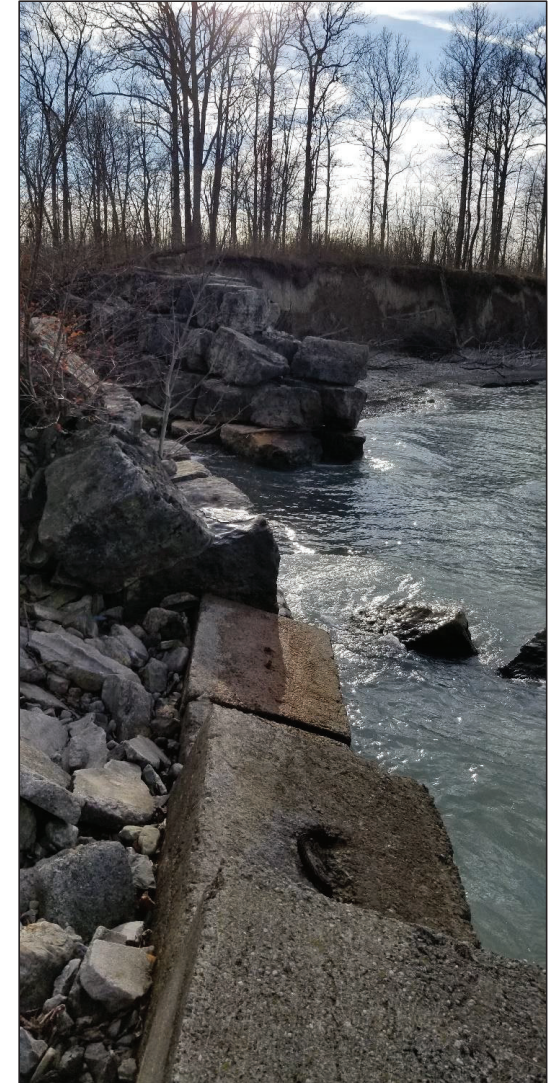


**Figure 7-4 Site 7 North Services Rd. and ~~Lewis Rd.~~ Campview**



## **Trillium Open Space - current condition**

- **Property damage**
- **Collapsed armour stones**
- **Erosion and undercutting**









# **Request of the Public Works Committee**

- 1. That the City prepare and implement an EA and detailed design of an Erosion Restoration Plan for the Trillium Open Space in accordance with the 2007 Stormwater Master Plan, as soon as possible;**
- 2. That the City allow Robert & Valerie Nielsen to participate in the preparation and implementation of an integral Erosion Restoration Plan;**
- 3. That the City engage with the owner of No. 1121 North Service Road to enforce the installation of an Erosion Protection Plan required to prevent further catastrophic property damage.**

**- End of presentation -**