



Committee of the Whole Report

Report Number: ENG2021-012
Meeting Date: June 1, 2021
Title: Kenhill Beach Road and Long Beach Road Drainage Issues
Description: Road Drainage Issues
Author and Title: Michael Farquhar, Supervisor of Technical Services

Recommendation(s):

That Report ENG2021-012, **Kenhill Beach Road and Long Beach Road Drainage Issues**, be received; and

That this recommendation be brought forward to Council for consideration at the next Regular Council meeting on June 15, 2021

Department Head: _____

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

Background:

At the Committee of the Whole meeting on April 6, 2021 and subsequently a resolution at the April 20th 2021 Council Meeting, the following resolutions were passed in relation to direction by Council to staff to review and report back on drainage issues on Kenhill Beach Road and Long Beach Road .

COW2021-04.8.1

Memorandum Regarding Kenhill Beach Road Drainage

Councillor Ashmore

CW2021-106

Moved By Councillor Ashmore

Seconded By Councillor Yeo

That the Memorandum from Councillor Ashmore, **regarding Kenhill Beach Road Drainage**, be received;

That staff be referred to inspect the ditching and drainage in this area on Kenhill Beach Road and on Long Beach Road and determine if remediation is required;

That staff report back to Council by end of Q2 should any remediation be required; and

That this recommendation be forwarded to Council for consideration at the next Regular Council Meeting.

Carried

CW2021-106

That the Memorandum from Councillor Ashmore, **regarding Kenhill Beach Road Drainage**, be received;

That staff be referred to inspect the ditching and drainage in this area on Kenhill Beach Road and on Long Beach Road and determine if remediation is required; and

That staff report back to Council by end of Q2 should any remediation be required.

Carried

Rationale:

Based on the above resolutions and a March 11th, 2021 site investigation of Kenhill Beach Road, staff have done the following review.

Kenhill Beach Road

Staff were onsite on Kenhill Beach Road on March 1st 2021 to document the flooding that had taken place due to the seasonally warm weather over a 2-day period during this timeframe. This section of the report is an overview of what was observed on March 11th 2021 and what is historically known about drainage in general in this area of Kenhill Beach Road.

There are three locations (Please see Image 1 and Appendix A) that were observed on Kenhill Beach Road where water was overtopping Kenhill Beach Road, presumably due to the overland flow based on early spring thaw conditions. The location where water overtopped the road was witnessed in proximity to or between municipal address #19 – 27 Kenhill Beach Road, #57-59 Kenhill Beach Road and #69-74 Kenhill Beach Road. Close to each location there are cross culverts that lead to buried pipes that extend over private property to outlets at the lake (This can be seen in Appendix A). From staffs review at the time of thaw these pipes are seasonally inundated in the spring thaw scenario at the location of outlet 1 and 2 which seems not to be able to handle the hydraulic flow. This would seem to be in part due to the size of pipe and steep slope it travels to the lake. In Green on the maps in appendix A you will see the locations of where the flooding over topped the road. In blue are 3 separate locations of watercourses (creek), an overland overflow of the watercourse (creek) and an overland watercourse which is seasonal. At outlet location 3 there are twin 450 mm CSP pipes which take the flow of water from the watercourse (creek) across the road to a 600mm pipe which is a buried pipe to the outlet at the lake over private property. These twin pipes seasonally become blocked with ice which causes the flooding at this location. Due to the location and depth of these twin culverts it seems that it is difficult operationally to keep blockages at this location clear.

Image 1: (Map of areas of drainage concern – Kenhill Beach Road)



Based on the identified drainage issues a comprehensive drainage design looking at the hydrology of the drainage shed for the outlet areas of Kenhill Beach Road is required in order to properly propose capital improvements to alleviate the seasonal flooding in this area. The extent of the seasonal flooding of the road and surrounding areas would warrant this. A cost for this design is estimated at \$45,000. The design would recommend improvements for the area which could then be budgeted for in future capital budgets

Image 2: (picture of flooding near #74 Kenhill Beach Road)



Image 3: (picture of flooding near #74 Kenhill Beach Road)



Image 4: (picture between #19-27 Kenhill Beach Road)



Long Beach Road

From site investigations on Long Beach Road there is an observed watercourse that begins at the south section of Long Beach Road and flows north over private property known as Concession 8 E PT Lot 10 former Fenelon Township as well as properties municipally addressed as 487 to 495 Long Beach Road. The south section of Long Beach Road where the water course begins is an Arterial road section constructed in the 1970's by the former County of Victoria. At the location of where the watercourse begins near #403 Long Beach Road, the roadside drainage for this section of Long Beach Road outlet to the watercourse through an approximately sized 750 mm CPS culvert that crosses Long Beach Road and outlets into the watercourse that then travels over the above described private land (see image 5 and Appendix B). The watercourse the over private properties is a straight and channelized watercourse which then turns and travels between addresses #493 and #495 Long Beach Road, where it outlets through an 800 mm CSP pipe under Long Beach Road into Sturgeon Lake. The watercourse in its total length is approximately 686 meters long.

During spring time conditions locations along the watercourse over private property have been observed by residents to overtop the banks of the channelized watercourse

with water and travel overland. As well where as seen in image 6 seasonally the water course channel outlets to Long Beach Road there is an 800 mm CSP culvert that can become blocked with snow and ice which causes the flooding at this location. Due to the location and depth of this culvert it seems that it is difficult operationally to keep blockages cleared.

Based on the identified drainage issues a comprehensive drainage design looking at the hydrology of the drainage shed for the identified outlet areas of Long Beach Road is required in order to properly propose capital improvements to alleviate the seasonal flooding in this area. The extent of the seasonal flooding of the road and surrounding areas would warrant this. At this point the recommendation would be for a scoped drainage shed review of the watercourse to determine improvement types if necessary within the City right of way to elevate drainage concerns. Once completed a decision can be made as to whether a petition by the road authority is required for a municipal drain to deal with any potential required improvements to the watercourse channel over private property that would help with the hydrology in the identified water shed for this watercourse. It is estimated that the cost for this exercise would be \$20,000.

Image 5: (map of Watercourse area on Long Beach Road)



Image 6: (Picture of watercourse at inlet to 800 mm CSP pipe crossing Long Beach Road)



Image 7: (Picture of watercourse that spans over Concession 8 E PT Lot 10 Fenelon Twp and 487-495 Long Beach Road)



Other Alternatives Considered:

The City can continue to prepare for the seasonal flooding in these area and address them operationally, as conditions allow. Alternatively, the Municipality could look at petitioning for a municipal drain under the Ontario Drainage Act in both locations.

Alignment to Strategic Priorities

This report aligns with the following aspects of the City's strategic plan

1. Healthy Environment
2. Good Government

[Kawartha Lakes Strategic Plan 2020-2023](#)

Financial/Operation Impacts:

The cost for the Design at the location of Kenhill Beach Road is approximately \$45,000 and at the location of Long Beach Road is \$20,000. It is recommended that these design projects be brought forward through the 2022 capital budgeting process.

Consultations:

Public Works

Attachments:

Appendix A – Areas of Drainage Concern Kenhill Beach Road



Appendix A Areas
of drainage Concern

Appendix B- Long Beach Road Drainage issue



Appendix B
Longbeach road dra

Department Head email: jerojas@kawarthalakes.ca

Department Head: Juan Rojas