



## Report to Council

Department: Infrastructure Services  
Division: Drainage  
Date: July 6, 2020  
Prepared by: Norman Nussio Manager of Operations/Drainage  
Report Number: Drainage-2020-05  
Subject: Adoption of Section 77(3) Engineer Letter of Opinion  
Richmond Drain Bank Repairs  
Number of Pages: 3

### Recommendation(s)

**That** Drainage Report -2020-05 entitled "Adoption of Section 77(3) Engineer Letter of Opinion Richmond Bank Repairs" as prepared by Norman Nussio, Manager of Operations and Drainage dated July 6<sup>th</sup> 2020 be received and supported, and

**That** By-law # 1928 being a by-law to adopt the Section 77(3) Engineer Letter of Opinion Richmond Drain Bank Repairs, be read a first, a second and third time, and finally passed on July 6<sup>th</sup> 2020.

### Purpose

The Richmond Drain banks have become compromised after several years of intense rain events and high water levels. The drain is specifically damaged on the north bank of the 5th Concession between Ferris road and McCormick road, as shown in the figure below. Many attempts have been made to repair the north bank to avoid large capital expenses. Unfortunately, they have been unsuccessful and the drain requires an engineer's opinion and design to stabilize the bank.

**Figure 1: Location of Work**



## Background and Discussion

The Richmond Drain has become a public health and safety concern as it continues to erode the banks and compromise the adjacent roadway, therefore, an engineer's letter of opinion in lieu of a report Section 77 has been prepared to address the deteriorating north bank of the Richmond drain.

Typically bank repairs are undertaken by a procured contractor who will excavate the eroded bank, line the excavation with filter cloth, and backfill gabion armor stone in an effort to save the roads edge and restore the drain back to its original design. Given the large volume of water conveyed by the Richmond drain, this practice would not suffice for this drain.

Therefore, the Drainage department procured Road Engineering to consider alternative construction practices and complete a design that would stop the erosion and protect the Town's road in the subject section.

The design, as shown in the letter of opinion attached, will consist 108 lineal meters of steel sheet pile wall installed at the toe of the north bank. The bank will then be backfilled with gabion armor stone to stop the eroding soil from being washed downstream, therefore, preventing the roadside from sliding further into the drain.

## **Financial Impact**

Council approved \$275,000 (including applicable taxes) in the 2020 capital budget for the design and construction of repairs to this identified section of the Richmond Drain. The attached Engineer's letter of opinion provides an estimate of the detailed works, however, actual costs will be identified following a request for tender process. The approval and award of these works will be brought to Council at a future date.

## **Consultations**

Kevin Girard, Director of Infrastructure Services

## **Link to Strategic Priorities**

- Manage, invest and plan for sustainable municipal infrastructure which meets current and future needs of the municipality and its citizens.
- Create a safe, friendly and inclusive community which encourages healthy, active living for people of all ages and abilities.
- Provide a fiscal stewardship and value for tax dollars to ensure long-term financial health to the municipality.
- Manage responsible and viable growth while preserving and enhancing the unique rural and small town character of the community.
- Improve the experiences of individuals, as both citizens and customers, in their interactions with the Town of Essex.

## Report Approval Details

Document Title:	Section 77 Richmond Drain.docx
Attachments:	- y-Final Rpt Richmond Dr Bank Repair REI2016D016.pdf - By-Law No. 1928 - To Approve Section 77 engineers report Richmond Drain Repairs with Schedule A.pdf
Final Approval Date:	Jun 30, 2020

This report and all of its attachments were approved and signed as outlined below:

**No Signature - Task assigned to Norm Nussio, Manager Operations and Drainage was completed by workflow administrator Robert Auger, Town Solicitor, Legal and Legislative Services/Clerk**

**Norm Nussio, Manager Operations and Drainage - Jun 30, 2020 - 9:03 AM**

**No Signature - Task assigned to Kevin Girard, Director, Infrastructure Services was completed by workflow administrator Robert Auger, Town Solicitor, Legal and Legislative Services/Clerk**

**Kevin Girard, Director, Infrastructure Services - Jun 30, 2020 - 9:05 AM**

**No Signature - Task assigned to Chris Nepszy, Chief Administrative Officer was completed by workflow administrator Robert Auger, Town Solicitor, Legal and Legislative Services/Clerk**

**Chris Nepszy, Chief Administrative Officer - Jun 30, 2020 - 9:08 AM**