

Meeting Date: December 4, 2023
Department: Engineering and Public Works
Report No.: EPW-2023-74
Prepared by: Steve Morriss, Drainage Superintendent
Submitted by: Jake Straus, Director, Engineering and Public Works
Approved by: Trisha McKibbin, Chief Administrative Officer

SUBJECT: Baran Drain 2023 – Report Consideration Meeting

RECOMMENDATION: THAT: Council adopt the Engineers Report for the Baran Drain 2023, and give first and second reading to provisional By-law #89-23 for the project.

BACKGROUND:

A Request for Major Drain Improvement was received by the Municipality of Strathroy-Caradoc for the Baran Drain 1971 on January 14, 2022. Council accepted the request on February 7, 2022 and appointed Spriet Associates Ltd. to prepare the engineer's report.

The Baran Drain was originally constructed pursuant to a report submitted by A.J. DeVos, P. Eng. dated August 16, 1974. The drain consists of a concrete tile extending from an outlet in the Government Drain No. 1 in the east half of Lot 3, Concession 3, north-westerly into Lot 4, then north-westerly across Falconbridge Drive, and then northerly into the west half of Lot 4 and to its head at the half lot line.

The required on site meeting was held on May 19, 2022 where landowners reported concerns of seasonal flooding on the north side of Falconbridge Drive and that the existing drain does not provide for adequate drainage. The engineer attended site to complete investigations of the existing drain on May 11, 2022, and July 11, 2023 with additional data collected on November 2, 2023. Site investigation revealed that the existing tile is too shallow for today's standards and the tile in its entirety is in poor working condition.

There are several major gas mains along Falconbridge Drive that have created conflicts with the existing drain resulting in several days being dedicated to daylighting the gas main locations and recording elevations. Initial analysis of the watershed noted that the Government Drain No 1 was re-routed to accommodate the proposed Hydro One Longwoods Transformer Station in late 1989. This provided an opportunity to improve the Baran Drain at a lower cost due to the now shortened distance required to reach the new outlet location of the Government Drain No. 1.

On March 3, 2023 and May 26, 2023, the municipality held informal public meetings to present the preliminary design and cost distribution prepared by the engineers to the assessed landowners where further landowners input was provided at those times.

COMMENTS:

Municipal drains have been a fixture of rural Ontario's infrastructure since the 1800's. Most municipal drains were constructed to improve the drainage of agricultural land by serving as the discharge point for private agricultural tile drainage systems. However, they also remove excess water collected by roadside ditches, residential lots, institutions, industrial lands, commercial lands and any other properties in rural areas. Drains are a vital component of the local infrastructure. Without them, many areas of the rural area would be subjected to regular flooding, reduced production from agricultural land and increased public health risks.

Most municipal drains are constructed on private lands and each drain is adopted under a By-Law when established. The Drainage Act provides access for drainage to have a legal outlet. Downstream landowners must accept flow of water from upstream landowners and must not impede or block the flow of water. As a result, downstream drains are larger and deeper on abutting property owners. Upstream landowners must contribute to the costs of downstream landowners for the allowance of a legal outlet. The landowners including road authorities (municipalities) and public utilities (Hydro One, Union Gas), within the defined drainage watershed, contribute for the construction of the municipal drain and the on-going maintenance of the drain.

CONSULTATION:

This report was reviewed in consultation with:

- Drainage Superintendent – Municipality of Strathroy-Caradoc
- Director of Engineering and Public Works
- Manager of Public Works
- Spriet Associates Ltd.

FINANCIAL IMPLICATIONS:

- Schedule of Net Assessment included in the report.

STRATEGIC PLAN ALIGNMENT:

This matter is in accord with the following strategic priorities:

- Households and businesses in Strathroy-Caradoc are supported by reliable, financially responsible and well-maintained infrastructure networks.

ATTACHMENTS:

- Spriet & Associates Engineering Report and Plans on the Baran Drain 2023