



## MUNICIPAL INFRASTRUCTURE

### Engineer-of-Record, Model Keeper & Peer Reviewer

#### Angus Infrastructure Master Plan (Incl. Other Settlements)

*Client: Township of Essa, Ontario*

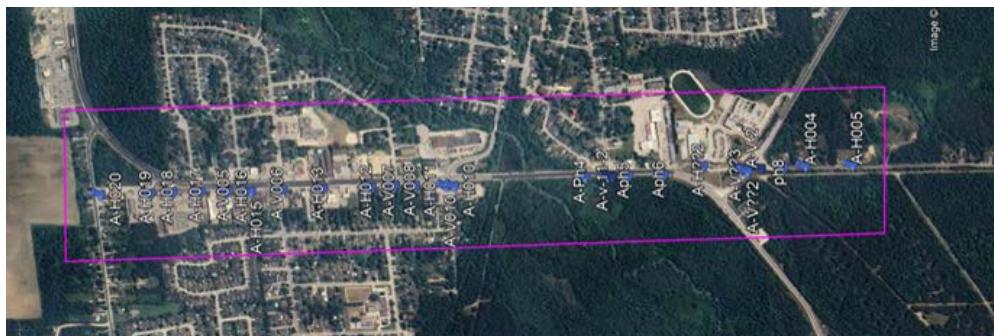
*Location: Community of Angus and All Other Settlement Areas*

*Various Projects and Schedule: On-going (Since 2021)*

**In 2021**, the Township of Essa (Township) initially retained Greenland International Consulting Ltd. (GREENLAND®) to complete an Infrastructure Master Plan (IMP) Update for the Community of Angus (Angus). The purpose of the IMP **(and over many years)** will be to complete a 25-year forecast (ultimate development horizon) of proposed capital projects for water, wastewater and stormwater management (SWM) infrastructure servicing requirements to facilitate future growth expected in Angus. GREENLAND® is also providing concurrent peer reviews services for all development applications within the Township and aligned with the municipal infrastructure Asset Management Plan (AMP). This includes using earlier infrastructure models by GREENLAND® of the Angus existing development water distribution and sanitary/force main systems with respect to project prioritizations and any asset upgrade needs to be paid by the affected developer(s). Also, transportation and traffic upgrade requirements are also being addressed as part of the AMP.

To-date, all IMP studies have been completed under the Class Environmental Assessment Act. The initial projects have been Schedule 'B' projects, allowing them to proceed towards implementation, while also identifying any additional required technical studies and/or Schedule 'C' projects, which require the completion of Phases '3' and '4' of the Class E.A. process prior to implementation. In terms of the latter, and **as of December 2025**, the need for a new Wastewater Treatment Plant in Angus may be a priority soon and given an overture affecting the adjacent C.F.B. Borden expansion plans by the Federal Government and which can be serviced by the Angus AMP (and as a priority).

Finally, **in July 2025**, and as a **specialized consulting service** and address a priority AMP need, GREENLAND® completed a **water transmission main wall condition assessment** on the 2.2 km long major trunk main within Angus. Non-invasive acoustic tests were conducted. The findings concluded most of the pipe segments had lost about 50% of their original strength. Many pipe segments were also exposed to high traffic loads and have suffered more deterioration as well. Therefore, it was recommended that the trunk main be monitored immediately at critical segments until the entire Mill Street watermain can be replaced within the next few years. **In late 2025**, the Township Council approved GREENLAND® to initiate the replacement detailed design of the trunk main and which is expected to cost almost \$5 Million. **The picture insert below shows the 2.2 km trunk main length investigated and which will also be same (future) re-construction project limits.**





October 18, 2023

**Greenland International Consulting Ltd.**

**Head Office: 120 Hume Street  
Collingwood, Ontario  
L9Y 1V5**

**Attention: Mr. R. Mark Palmer, P. Eng.  
President / CEO**

**RE: Township of Essa Engineering Services**

Dear Mr. Palmer:

On behalf of the Township of Essa (Township), I would like to acknowledge Greenland for its exemplary services to complete the 2022 Community of Angus Infrastructure Master Plan (IMP) Class Environmental Assessment (EA). This legacy Township document developed municipal water and wastewater system models. These calibrated tools were then used by Greenland to develop a sustainable infrastructure planning framework for water and wastewater servicing expansion requirements within the Community of Angus. The project was completed “on-budget and on-time” and cognizant of environmental, technical and socio-economic constraints and opportunities affecting the Township of Essa.

We also appreciate your team’s expertise to provide subsequent model-keeper and development peer review support services. These important responsibilities and overseen by Township staff will help ensure new development approvals proceed in a manner which is consistent with the infrastructure management and expansion needs established by the completed IMP EA project.

We look forward to working with Greenland on other projects and serving as a professional reference.

Sincerely,

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Michael Mikael, P.Eng

Manager of Public Works/Deputy CAO