



# Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

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March 9, 2023

Reference No. 2206-W054

Page 1 of 2

Beachcroft Investments Inc.  
20 Cachet Woods Court, Suite 6  
Markham, Ontario  
L6C 3G1

Attention: Ms. Uzo Rossouw

**Re: Wetland Water Balance (Hydrological) Risk Evaluation  
Proposed Residential Development  
63 and 63A Trafalgar Road  
Town of Erin**

Dear Madam:

This Technical Memorandum was prepared in support of the Wetland Water Balance Risk Evaluation which was requested by the Credit Valley Conservation Authority (CVC) in support of the proposed residential development at 63 and 63A Trafalgar Road, in the Town of Erin. The subject site location is shown on Drawing No. 1. The wetland of concern (study area) is located near the north corner of the site.

The concurrent hydrogeological assessment report, prepared by Soil Engineers Ltd. (SEL), "Preliminary Hydrogeological Assessment for Proposed Residential Development, Reference No. 2206-W054, dated February 2023", was reviewed for the preparation of this memorandum.

The risk evaluation was conducted based on the following four criteria, described in the Wetland Water Balance Risk Evaluation guidelines, developed by The Toronto and Region Conservation Authority, dated February 2017 (TRCA Guideline).

## **Catchment Size**

The pre- and post-development catchment areas for the study area were delineated base on review of the topographic map as well as the proposed grading plan, provided by Urbanworks, Drawing No. FG-01, Project No. 22-0020ER. The pre- and post-development catchment areas are shown in red and green, respectively on Drawing No. 2.

Please note that the topographic map of the area to the north and east, beyond the property limits was not available. Therefore, the limit of the topographic map was used as the limit of the catchment area along the northeast side of the. The actual catchment area will likely be a bit larger if the northeast portion located off site were to be included.



The pre-development catchment area comprises an area of about 46,160 m<sup>2</sup>. The post-development catchment size is approximately 41,360 m<sup>2</sup>. The change is 10.4%. However, considering the actual catchment area is larger than the delineated map based on review of available data, the change of the catchment size is expected to be less than 10%.

**Impervious Cover**

Lots 141 to 152, inclusive will be within the post-development catchment area. The total area of the lots that are within the catchment area is about 6821 m<sup>2</sup>. 60% of impervious coverage for each lot was assumed in the calculation. Therefore, the threshold impervious cover (T) is

$$(6821 \times 0.6) \div 41360 = 9.9\%$$

**Water Taking**

Based on our hydrogeological assessment, no construction dewatering or long-term foundation drainage is anticipated in this area. Therefore, there will be no interference impacts to the wetland water level.

**Recharge Areas**

The in-situ soils consist of sand or sandy soils. Therefore, the entire catchment area will be considered as recharge area. That being said, as long as in-situ soils are used for grading within this area, it will not affect the groundwater recharge areas.

Based on the above, the potential hydrological changes are anticipated to be low. Using the decision tree provided by TRCA guidelines, the proposed development will be categorized as low risk.

We trust the above satisfies your present requirements. Should you have any further queries, please feel free to contact this office.

Yours truly,  
**SOIL ENGINEERS LTD.**

Peng (Geoff) Gao, M.Eng., P.Eng.

*Bhawandeep Singh Brar*  
Bhawandeep Singh Brar, B.Sc.  
PG/BB/GO

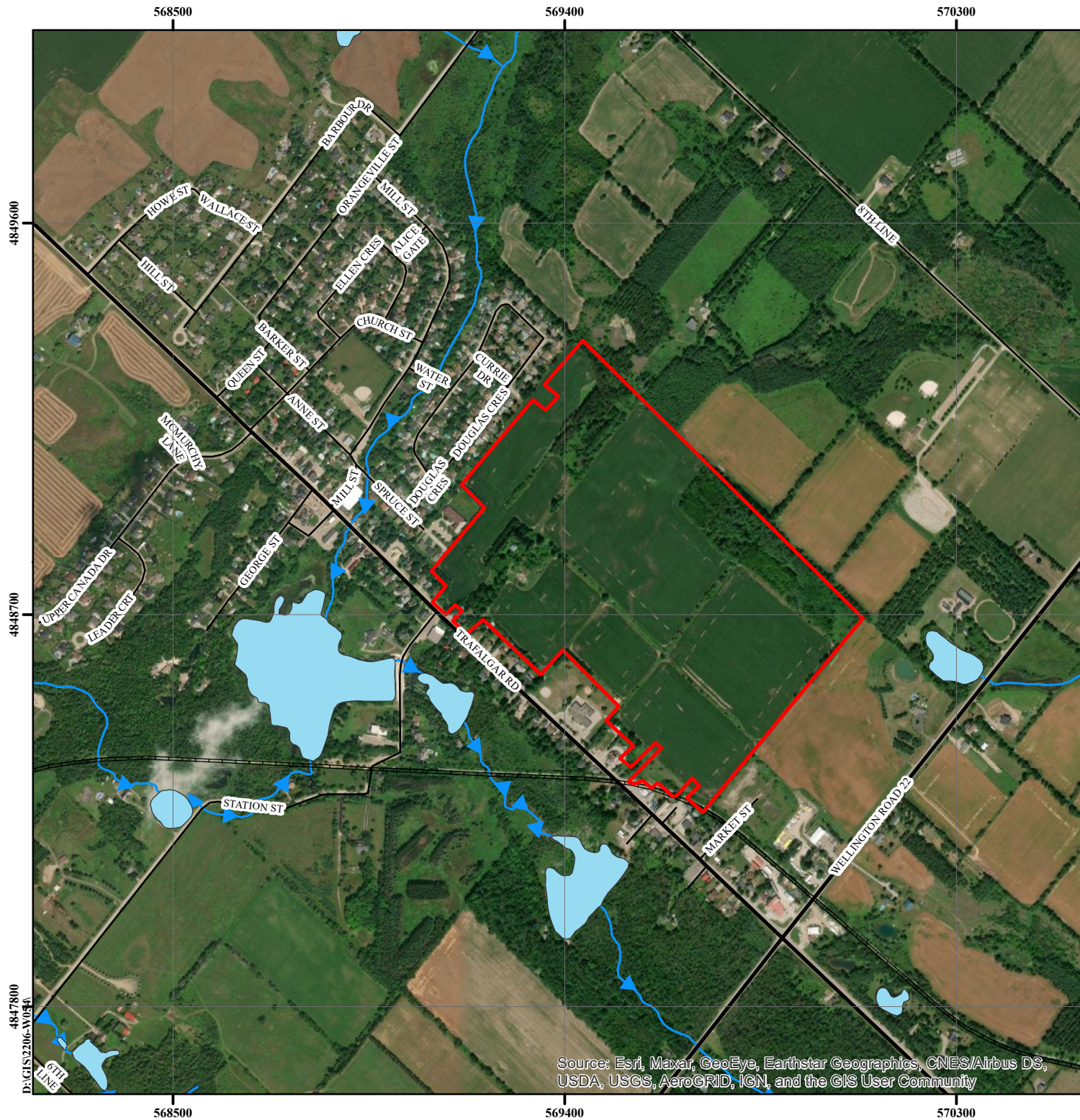


*Gavin O'Brien*  
Gavin O'Brien, M.Sc., P.Geo.

**ENCLOSURES**

- Site Location Plan..... Drawing No. 1
- Wetland Catchment Areas..... Drawing No. 2

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Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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**Legend**

- Approximate Boundary of Subject Site
- Waterbody
- Road
- Railway
- ➔ Watercourse

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**Soil Engineers Ltd.**

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Title: Site Location Plan

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Project:  
 Proposed Residential Development  
 Address: 63 and 63A Trafalgar Road,  
 Town of Erin, ON

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Reference No. 2206-W054

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Date: March 9, 2023

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Scale:  

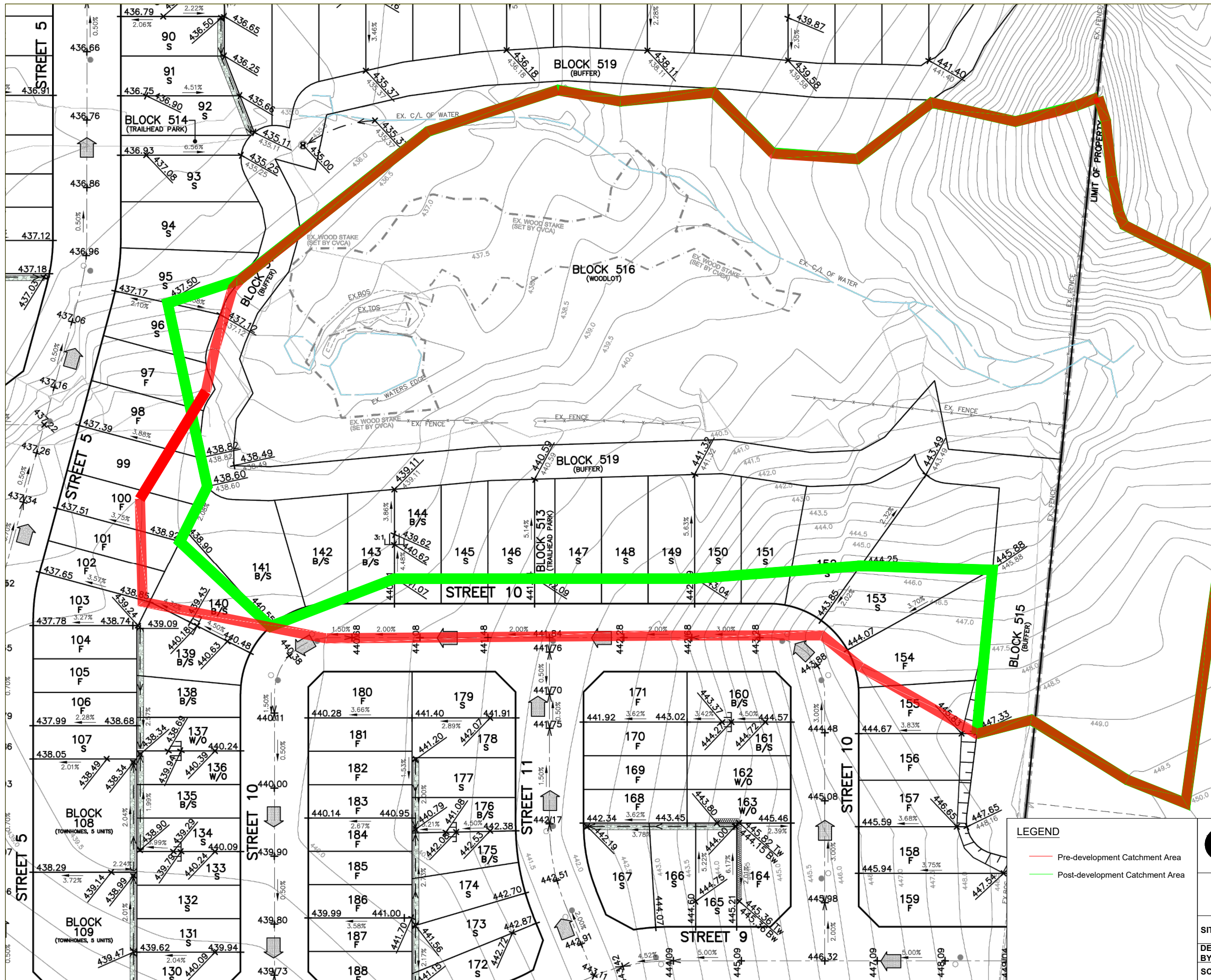
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Drawing No. 1

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Source: Ontario Ministry of Natural Resources and Forestry  
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- DENOTES EXISTING CONTOUR
- ➔ DENOTES OVERLAND FLOW ROUTE
- F DENOTES FRONT-DRAINING LOT
- S DENOTES SPLIT-DRAINING LOT
- B/S DENOTES BACK-SPLIT LOT
- W/O DENOTES WALKOUT LOT
- RW/O DENOTES REVERSE WALKOUT LOT

**NOT FOR CONSTRUCTION**  
 THE DESIGN PRESENTED ON THIS DRAWING IS FOR THE SUPPORT OF A FUNCTIONAL SERVICING PLAN ONLY AND IS NOT TO BE USED FOR CONSTRUCTION

Code	Description
FS-01	FUNCTIONAL SERVICING
FS-02	FUNCTIONAL SERVICING
FG-01	FUNCTIONAL GRADING
FG-02	FUNCTIONAL GRADING
FSC-01	FUNCTIONAL EROSION CONTROL

SUBMISSION HISTORY	
No.	ISSUED FOR
1.	ISSUED FOR 1st SUBMISSION

No.	DESCRIPTION

**LEGEND**

- Pre-development Catchment Area
- Post-development Catchment Area

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**Wetland Catchment Areas**

SITE: 63 and 63A Trafalgar Road, Town of Erin

DESIGNED BY:	P. G.	CHECKED BY:	G.O.	DWG NO.:	2
SCALE: NTS	REF. NO.:	2206-W054	DATE: March 2023	REV	