Soil Engineers Ltd.
CONSULTING ENGINEERS
GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE
90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 · TEL: (416) 754-8515 · FAX: (905) 881-8335

BARRIE	MISSISSAUGA	OSHAWA	NEWMARKET	GRAVENHURST	HAMILTON
TEL: (705) 721-7863	TEL: (905) 542-7605	TEL: (905) 440-2040	TEL: (905) 853-0647	TEL: (705) 684-4242	TEL: (905) 777-7956
FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (905) 881-8335	FAX: (705) 684-8522	FAX: (905) 542-2769

March 9, 2023 Reference No. 2206-W054

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^2. The post-development catchment size is approximately 41,360 m^2. 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^2. 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.

LICENSED PROFESSIONAL ENGINEER
P GAO
100207146
Mar 14/23
PROVINCE OF ONTARIO

PROFESSIONAL GEOSCIENTIST
GAVIN R. O'BRIEN
PRACTISING MEMBER
1287
March 14, 2023
ONTARIO

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

Bhawandeep Singh Brar
Bhawandeep Singh Brar, B.Sc.

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

PG/BB/GO

ENCLOSURES

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

N

Legend

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

Soil Engineers Ltd.

Title: Site Location Plan

Project:

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

Reference No. 2206-W054

Date: March 9, 2023

Scale:

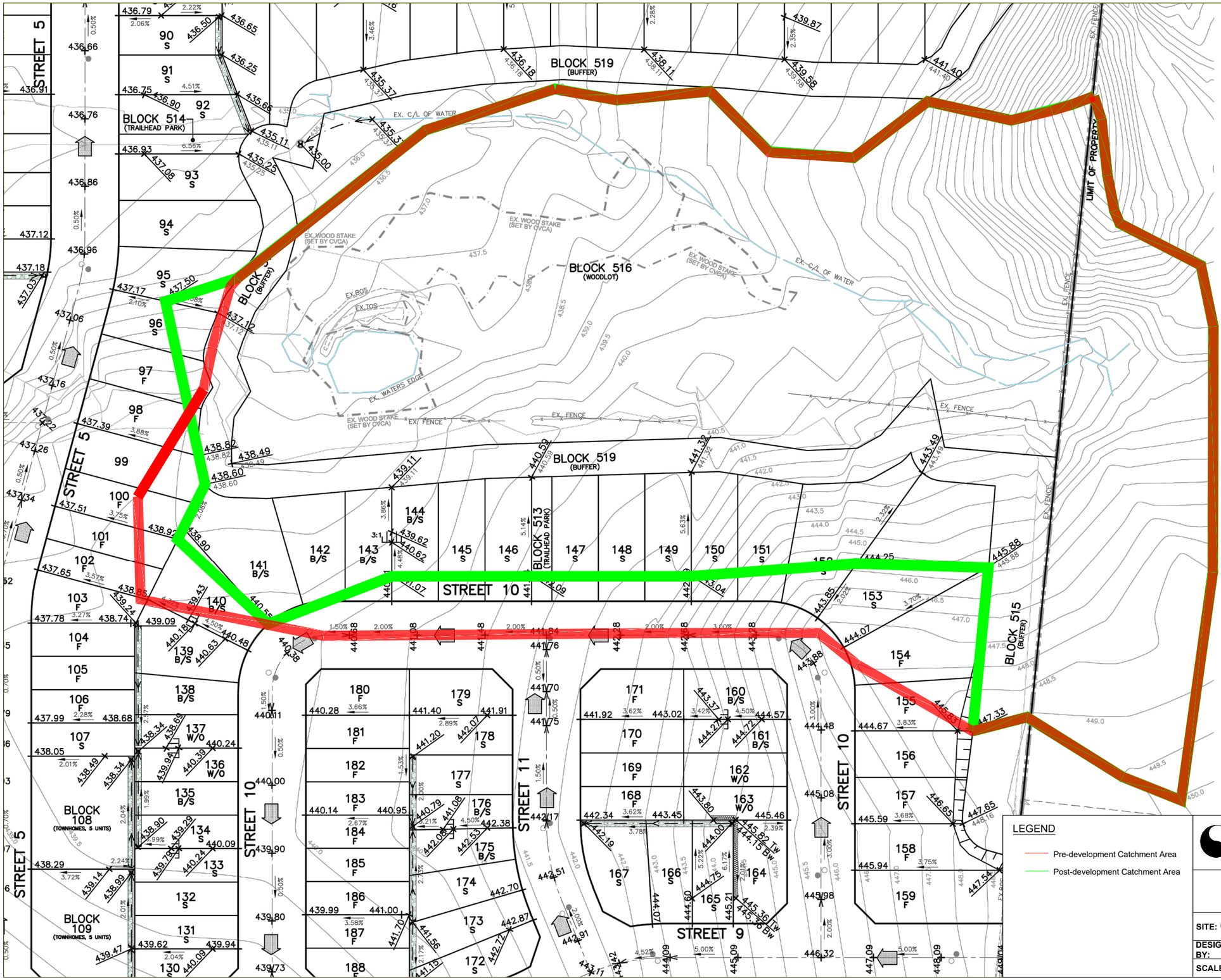
0 50 100 200 300 400 500

Metres

Drawing No. 1

D:\GIS\2206-W054\

Source: Ontario Ministry of Natural Resources and Forestry



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 CONSTRUCTIO

THE DESIGN PRESENTED ON THIS DRAWI
SUPPORT OF A FUNCTIONAL SERVICING
NOT TO BE USED FOR CONSTRUCTION

	DR
FS–01	FUNCTIONAL SERVIC
FS–02	FUNCTIONAL SERVIC
FG–01	FUNCTIONAL GRADI
FG–02	FUNCTIONAL GRADI
FSC–01	FUNCTIONAL EROSIC

No.	SUBMI / ISSUED F
1.	ISSUED FOR 1st SUBMISSION

No.	DESCRIPT

LEGEND

Pre-development Catchment Area

Post-development Catchment Area

Soil Engineers Ltd.
CONSULTING ENGINEERS
GEOTECHNICAL | ENVIRONMENTAL | HYDROGEOLOGICAL | BUILDING SCIENCE
90 WEST BEAVER CREEK ROAD, SUITE #100, RICHMOND HILL, ONTARIO L4B 1E7 · TEL: (416) 754-8515 · FAX: (905) 881-8335

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