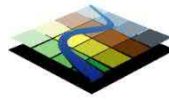


July 22, 2022
Project No.: 21119



TERRASTORY
environmental consulting inc.

Tomba Enterprises Ltd.
P. Box 324 Station A
145 The West Mall
Toronto, ON M9C 4V3

SUBJECT: EIS Brief
214 Ontario Street
Municipality of Brighton

Terrastory Environmental Consulting Inc. (hereinafter “Terrastory”) has prepared this Environmental Impact Study (EIS) Brief (hereinafter “EIS Brief”) in relation to a subdivision application at the above captioned location in Brighton. This letter report provides a general overview of the field investigations completed to date in support of the EIS, along with a summary of the fieldwork results, natural feature significance assessment, and policy conformity review. The location of the Subject Property and Study Area (i.e., natural areas within 120 m of the Subject Property) within their broader landscape setting are shown in **Figure 1**.

STUDY BACKGROUND

The Subject Property is an approximately 2.3 hectare (5.7 acre) parcel on the west side of Ontario Street just south of Raglan Street. The Subject Property appears to have been recently maintained as a garden centre and contains several greenhouses (recently demolished). Natural features are primarily restricted to the rear yard (i.e., western portion of the Subject Property), which is predominantly wooded.

The eastern portion of the Subject Property (i.e., fronting onto Ontario Street) is designated Highway Commercial per Schedule A (Map 2) of the Municipality’s Official Plan (OP), while the western portion (i.e., natural area) is designated Greenfield and Environmental Protection. While the property is overall situated within a designated Settlement/Urban Area (i.e., Brighton), natural heritage areas have been mapped as part of Northumberland County’s Natural Heritage System (NHS) study (culminating in Official Plan Amendment #1).

Provincial natural resource mapping suggests that wetland is present within the Subject Property; however, it is understood that staff at Lower Trent Conservation (LTC) previously confirmed the absence of wetland within the Subject Property. Wetland areas (i.e., coastal wetland) on Adjacent Lands to the west and southwest of the Subject Property were identified and characterized by LTC staff. Mapping of these wetlands (i.e., shapefiles) has been provided to Terrastory and incorporated into the graphics and assessment herein.

The Subject Property is proposed for conversion to residential uses. An Official Plan Amendment (OPA), Zoning By-law Amendment (ZBA), Plan of Condominium, and (future) Site Plan Application are required to facilitate development. The Municipality confirmed the need for a supporting EIS through a 4 August 2021 letter indicating all “Information Requirements for a Complete Application”.

A Terms of Reference for the EIS was prepared by Terrastory and approved by LTC via email correspondence received on 30 May 2022.

FIELD INVESTIGATIONS

Since project commencement in late May 2021, Terrastory has completed the following surveys and field investigations on-site:

- Anuran Calling Surveys (25 April 2022, 20 May 2022, 27 June 2022)
- Breeding Bird Surveys (16 June 2021 and 4 July 2021)
- Spring Vascular Plant Survey (16 June 2021)
- Ecological Land Classification (ELC) and Late Summer Vascular Plant Survey (17 August 2021)
- Tree Inventory (26 April 2022)
- Bat Roosting Habitat Assessment (26 April 2022)

BIOPHYSICAL CONDITIONS

Vegetation community mapping according to ELC, topographic contours, and direction of overland drainage are shown in **Figure 2**. The Subject Property and broader local landscape are known to contain sandy substrates with an elevated groundwater table.

Much of the Subject Property has been mapped as wetland by the Province. As noted above, LTC staff recently completed an on-site analysis of wetland conditions within the Subject Property and Adjacent Lands, finding that much of this area lacked wetland characteristics. LTC provided updated wetland mapping to the project team which is incorporated into **Figure 2**.

SIGNIFICANCE ASSESSMENT

Based on the field data collected by Terrastory through the 2021/2022 fieldwork program, with further consideration for existing natural feature mapping (e.g., County OP), the following significant natural features have been identified within the Study Area (see also **Figure 3**).

Wetlands

Wetlands are mapped by LTC on Adjacent Lands only based on their site-specific analysis. LTC wetland mapping is shown on **Figure 2** and **Figure 3** herein.

Significant Woodland

Policy 3.9.10 of the Municipality's OP directs that all woodlands >0.5 ha in size are to be considered for potential woodland significance. Policy D1.8(b) of the County's OP confirms that woodland significance is to be determined by the County in concert with the local municipalities.

The County recently approved OPA#1 which provides updated policies and mapping for the County NHS. While the County's NHS does not extend within Settlement Areas (and thus does not overlap with the Subject Property) per Schedule A-1 of OPA#1, wooded areas within the western portion of the Subject Property are mapped as a Natural Heritage Area (NHA) reflecting Significant Woodland per Schedules B-1 and B-2, which is carried forward as an NHA designation per Schedule A-2 of OPA#1.

Wooded areas within the western portion of the Subject Property form part of a broad natural area extending several hundred hectares in area to the Lake Ontario shoreline and incorporating areas of Provincially Significant Wetland and coastal wetlands. Based on the overall size and landscape position of the woodland within the Subject Property, Terrastory concurs with the County's determination of this feature as a Significant Woodland.

The Significant Woodland was delineated (i.e., dripline) by Terrastory in 2021 and is shown in **Figure 3**.

Significant Wildlife Habitat

Wood Thrush (*Hylocichla mustelina*) is designated Special Concern in Ontario per O. Reg. 230/08 pursuant to the ESA and is federally designated Special Concern by COSEWIC. Wood Thrush is predominantly found in deciduous and mixed forests with a well-developed understorey of regenerating trees and shrubs. This species is more often found in larger forest blocks but may successfully breed within smaller forest fragments (Cadman et al. 2007). In a study in Pennsylvania, Wood Thrush territory sizes were shown to be 2.5 ha on average with a range of 1.5-4 ha (Evans et al. 2008).

Wood Thrush is considered a probable breeder within the southwest corner of the Subject Property based on documentation of a singing male on two occasions in 2021. The territory established by the vocalizing male appeared to partially extend onto Adjacent Lands to the west (i.e., the male was heard singing from Adjacent Lands as well). Wood Thrush was also heard in the same general area incidentally by Terrastory staff during anuran calling surveys in 2022. As this species is considered a probable breeder based on the 2021 breeding bird surveys, its breeding territory is considered Significant Wildlife Habitat (SWH). The location in which a singing male Wood Thrush was documented is shown in **Figure 3**.

Given the proximity of the Subject Property to the shoreline of Lake Ontario (e.g., ~625 metres), additional candidate SWH types include migratory landbird and butterfly stopover areas. These SWH types tend to represent non-specific natural areas along and near the northern shoreline of Lake Ontario. The Subject Property also provides non-specific habitat for Monarch (*Danaus plexippus*) and Yellow-banded Bumblebee (*Bombus terricola*); both species are generalists and may be found in a wide range of habitats throughout southern Ontario.

No other SWH types were confirmed within the Subject Property based on the 2021/2022 fieldwork program. The following is noted in particular:

- Anuran calling surveys showed limited frog/toad calling activity within the wetlands on Adjacent Lands to the west and south.
- The density of potential bat roosting habitat (e.g., snags, cavity trees) was found to be below the threshold for significance (e.g., >10 candidate trees >25 cm DBH per ha).
- The abundance and diversity of interior forest breeding birds was found to be below the threshold for significance (e.g., minimum of three different indicator species).

Endangered and Threatened Species

An assessment of the likelihood that any Endangered and Threatened species or their habitats occur within the Subject Property or Adjacent Lands has been undertaken through this study. The

following Endangered or Threatened species are considered to have a possible likelihood of occurrence within the Subject Property (or were confirmed) given their habitat associations and current distribution in southern Ontario.

Little Brown Myotis and Northern Myotis

Little Brown Myotis and Northern Myotis have the potential to roost and forage within the Subject Property. Little Brown Myotis and Northern Myotis form maternity colonies that roost in large-diameter trees with cracks, crevices, and/or exfoliating bark; Little Brown Myotis will also frequently roost in buildings (e.g., attics, barns, etc.). Individuals (i.e., non-reproductive females and males) of both bat species may roost in smaller diameter trees and other spaces (e.g., beneath house siding, etc.) which are not occupied by maternity colonies. Overwintering habitat includes caves and mines that maintain temperatures above 0°C. White Nose Syndrome (a fungal disease caused by an introduced pathogen) has devastated populations of each species across their ranges. The fungus causes hibernating individuals to become dehydrated, leading to excessive arousal, depleted fat reserves, and ultimately emaciation and/or death.

As the wooded area in the western portion of the Subject Property is dominated by early-successional species (e.g., poplar, cedar), generally contains smaller-diameter trees, and generally contains relatively few potential roosting sites (e.g., snags, cavity trees), bat acoustic monitoring was not undertaken through this study. Potential maternity roosting habitat for Little Brown Myotis and Northern Myotis within the Subject Property is considered limited. Notwithstanding this, individual roosting bats (e.g., males or non-reproductive females) are less specific in their roosting requirements and could occupy trees of various sizes and stages of decay. As such, the Subject Property is considered to contain potential marginal/non-specific day roosting habitat (and feeding habitat) for Little Brown Myotis and Northern Myotis.

Black Ash

Black Ash is federally classified as “Threatened” by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and provincially designated “Endangered” under O. Reg. 242/08 of the (ESA). Like most Ash species (*Fraxinus* spp.), Black Ash has been negatively impacted by the Emerald Ash Borer (*Agilus planipennis*). Per O. Reg. 23/22, Sections 9(1) and 10(1) of the ESA, which prohibit killing, harming, possessing, transporting, etc. living or dead species and/or damaging or destroying their habitats, have been suspended until 26 January 2024. As such, the protections afforded Threatened and Endangered species under the ESA are currently not applicable to Black Ash.

Black Ash most often occupies wetlands with shallow peat (i.e., “muck”) substrate, particularly hardwood swamps. It may also occur in wet mineral soils and/or other wetland types (e.g., thicket swamp, marsh), riparian/floodplain habitats, and to a lesser extent moist upland forests. This species is moderately shade tolerant and may be dominant or found intermixed with other hardwoods (e.g., Silver/Freeman’s Maple, Red Maple, Trembling Aspen, American Elm, Yellow Birch) or conifers (e.g., Balsam Fir).

Several Black Ash stems were documented within the wooded area in the western portion of the Subject Property. As noted above, this species is not currently afforded protections under the ESA until at least 26 January 2024.

ENVIRONMENTAL POLICY CONTEXT

Based on a review of the proposed lot configuration, the Applicant is proposing to develop within or adjacent to the following significant natural heritage features:

- **Wetland** – Proposed development/disturbance appears to extend slightly within the 30 m setback associated with the wetland mapped by LTC on Adjacent Lands.
- **Significant Woodland** – approximately one ha of Significant Woodland (as mapped by the County and confirmed herein) is proposed to be removed.
- **Significant Wildlife Habitat** – the southwest corner of the proposed lot configuration slightly overlaps with probable breeding habitat for Wood Thrush, and the wooded area also provides candidate significant habitat for migratory landbirds and butterflies.
- **Habitat of Endangered/Threatened Species** – several Black Ash (not currently protected by the ESA) and potential (non-specific/marginal) roosting (i.e., day roost) and feeding habitat for Little Brown Myotis and Northern Myotis overlapping with the Significant Woodland are proposed to be removed.

The subdivision application must establish “no negative impact” to the Significant Woodland and SWH as required by the Provincial Policy Statement, County OP, and Municipality’s OP. Development within 30 m of a wetland requires justification to address relevant LTC policies. Mitigation measures (particularly a timing window restriction on tree removal and replacement of roosting habitat) are considered necessary to avoid impacts to Little Brown Myotis and Northern Myotis. Additional natural heritage policies are also relevant to the application (e.g., protection of nesting birds per the federal *Migratory Birds Convention Act* and provincial *Fish and Wildlife Conservation Act*).

An overall Woodland Mitigation and Enhancement Strategy will be required to address encroachment within the above-captioned natural features and/or buffers. This Woodland Mitigation and Enhancement Strategy is to incorporate the following components (at a minimum):

- Consideration for minimization/avoidance of natural feature encroachment to the extent feasible.
- Mitigation of feature/buffer encroachment through off-site enhancement measures (e.g., woodland/tree compensation, replacement bat roosting structures), preferably in the vicinity of broader natural area extending southward to the Lake Ontario shoreline.


NEXT STEPS

This EIS Brief provides a summary of the results of Terrastory’s field investigations, significance analysis, and conformity assessment to date. A fulsome EIS must be prepared following preliminary agency review of the subdivision application, to be coupled with a Woodland Mitigation and Enhancement Strategy to demonstrate consistency with relevant natural heritage policies.

Should you have any questions or require further clarification regarding the contents of this letter, I would be pleased to discuss them further and can be reached by phone (905.745.5398) or email (tristan@terrastoryenviro.com).

Regards,

Terrastory Environmental Consulting Inc.


Tristan Knight, M.E.S., M.Sc.
Senior Ecologist | President

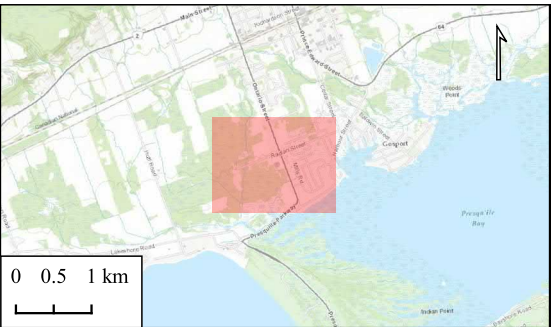
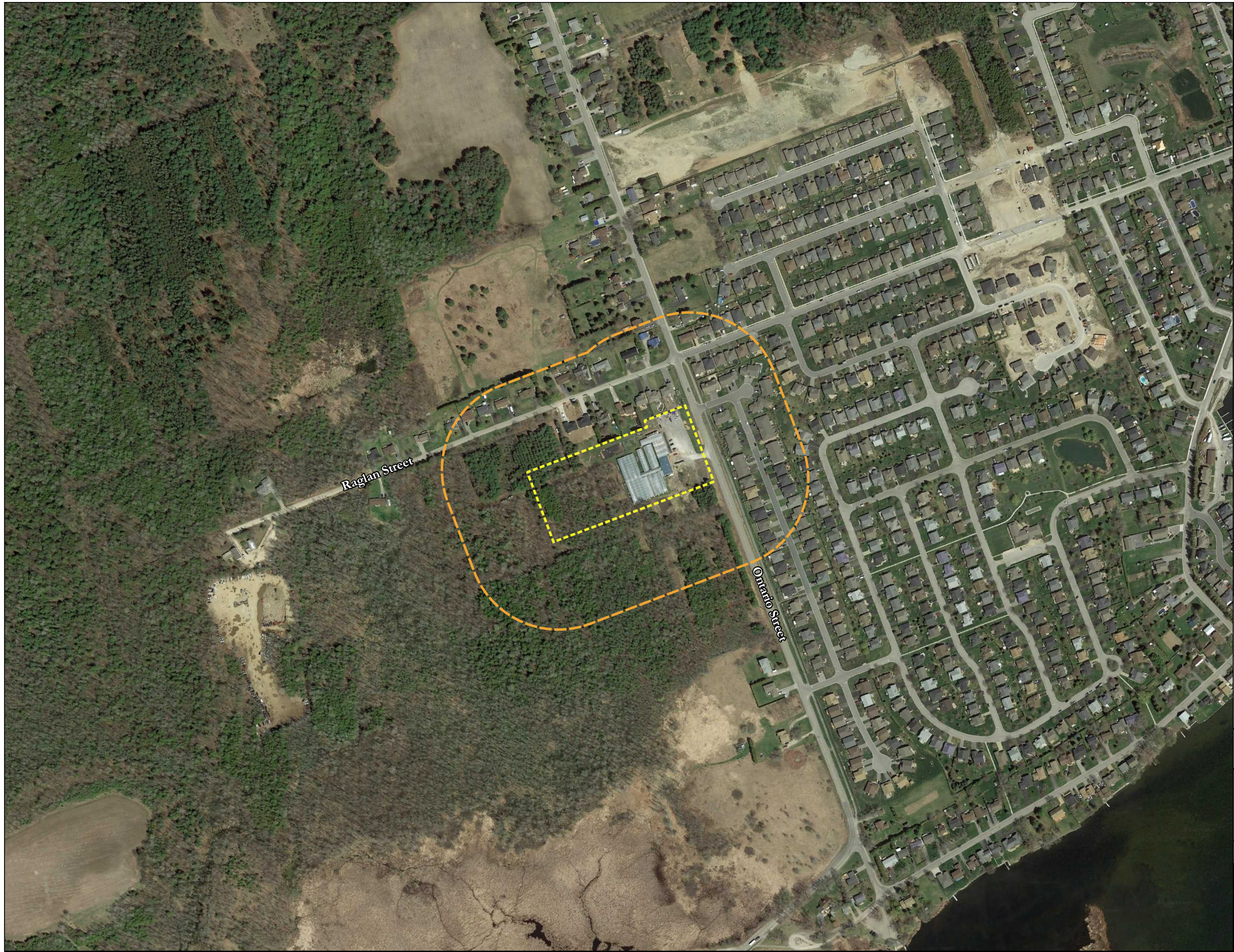
REFERENCES

Cadman, M. D., D. A. Sutherland, G. G. Beck, D. Lepage, and A. R. Couturier. 2007. *Atlas of the Breeding Birds of Ontario, 2001–2005*.



Evans, M. L., B. J. M. Stutchbury, and B. E. Woolfenden. 2008. "Off-Territory Forays and Genetic Mating System of the Wood Thrush (*Hylocichla Mustelina*).” *The Auk* 125 (1): 67–75.

STATEMENT OF LIMITATIONS

This report has been prepared by Terrastory Environmental Consulting Inc. (hereinafter "Terrastory") for the client. All information, conclusions, and recommendations contained in this report are subject to the scope and limitations set out in the agreement between Terrastory and the client and qualifications contained in this report. This report shall not be relied upon by any third parties without the prior written consent of Terrastory. Terrastory is not responsible for any injury, loss, or damages arising from improper use of this report by third parties. Excerpts of this report or alterations to this report taken without the authorization of Terrastory invalidates the report and any conclusions therein.




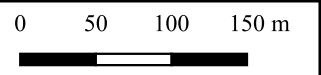
Legend

- Study Area**
-  Study Area
 -  Subject Property

GENERAL NOTES:
 -Features depicted herein should not be used in place of a professional survey.
 -Numeric scale is for a 11x17 inch print.

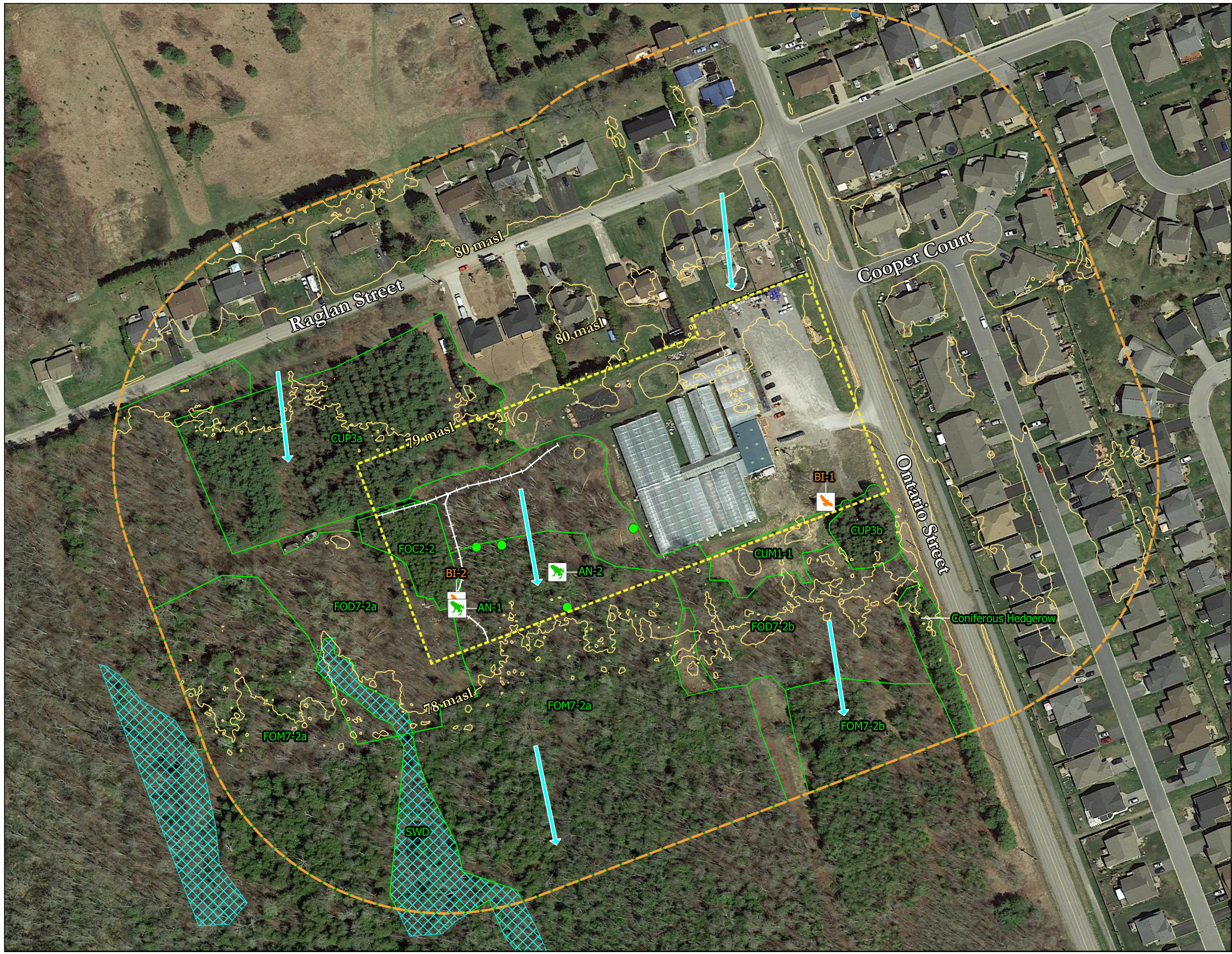


TERRASTORY
 environmental consulting inc.
 info@terrastoryenviro.com 905.745.5398

 1:5,000 

Location:
 214 Ontario Street,
 Municipality of Brighton

Project No.: 21119	Figure 1: Location of the Subject Property and Study Area
Date: 2022-07-20	
By: TK Checked: --	
Orthophotograph Date: 2018 (Google Maps).	



Legend

- Study Area**
- Study Area
 - Subject Property
- Built Structures and Infrastructure**
- Trail
- Survey Stations**
- Anuran Calling Stations
 - Breeding Bird Survey Stations
- Biophysical Conditions - Terrastory**
- Topographic Contours (1 m intervals; LiDAR-derived)
 - Direction of Overland Drainage
 - Vegetation Communities
 - Snags / Cavity Trees >25 cm DBH
- Biophysical Conditions - Agency Identified**
- Wetlands Delineated by Lower Trent Conservation

Vegetation Community Codes:

- UPLAND**
- CUM1-1: Dry-Fresh Old Field Meadow ("Cultural Meadow")
 - CUP3a/CUP3b: Coniferous Plantation
 - FOC2-2: Dry-Fresh White Cedar Coniferous Forest
 - FOD7-2a/FOD7-2b: Fresh - Moist Ash Lowland Deciduous Forest
 - FOM7-2a/FOM7-2b: Fresh - Moist White Cedar - Hardwood Mixed Forest

- WETLAND**
- SWD: Deciduous Swamp

GENERAL NOTES:

- Adjacent Lands have not been assessed and may contain additional natural heritage constraints and/or considerations.
- Features depicted herein should not be used in place of a professional survey.
- Numeric scale is for a 11x17 inch print.

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Location:
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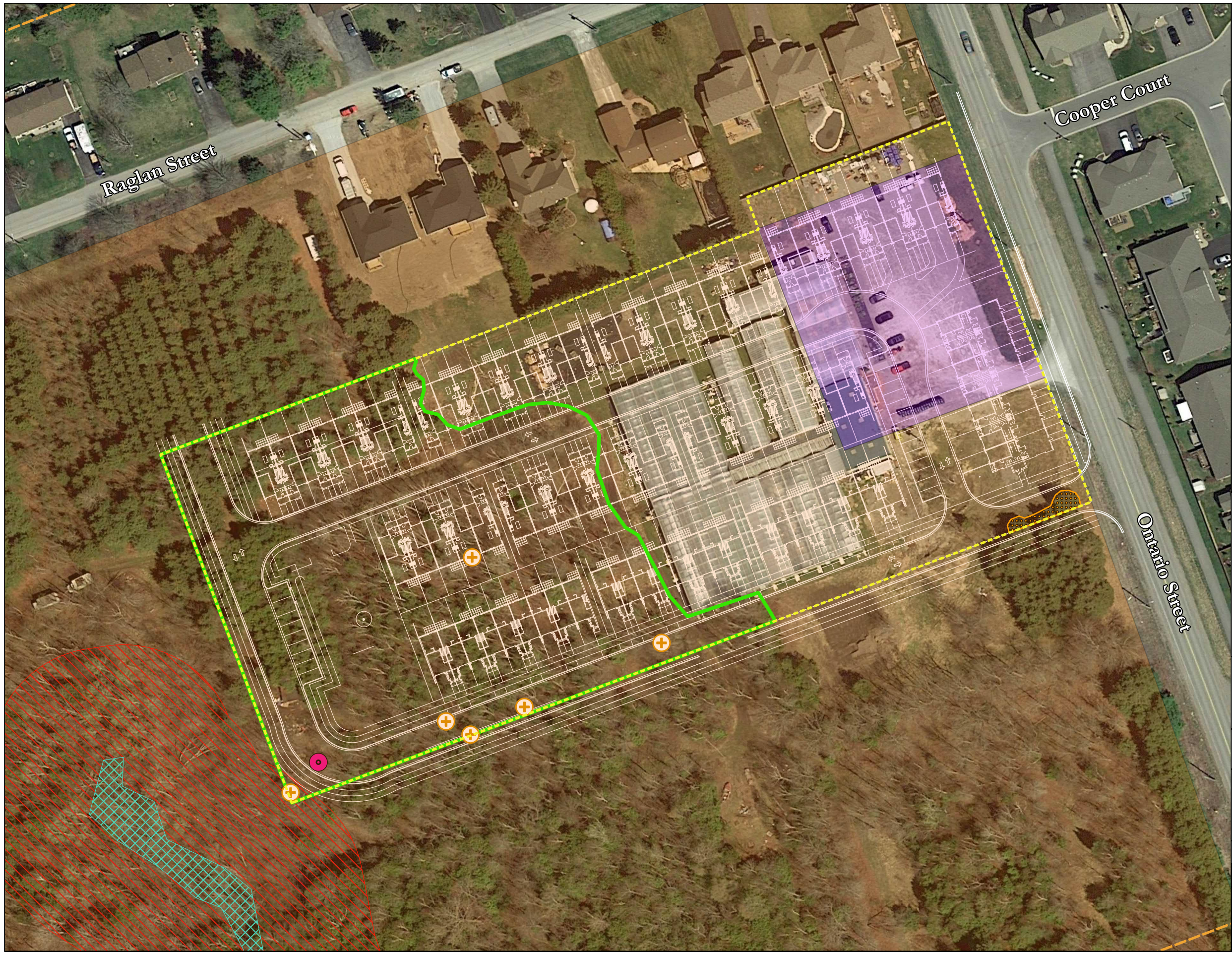
Date: 2022-07-20

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Orthophotograph Date:
 2018 (Google Maps).

Figure 2:

**Biophysical Features
 and Conditions**



Legend

- Study Area**
- Subject Property
- Official Plan Designations**
- Greenfield
- Highway Commercial
- Significant Natural Features - Agency Identified**
- Wetlands Delineated by Lower Trent Conservation
- Significant Natural Features - Terrastory**
- Species of Conservation Concern**
- Black Ash (Endangered Tree Species)
- Wood Thrush (Special Concern Bird Species)
- Natural Heritage Features/Areas**
- Significant Woodland
- Plantation
- Natural Feature Setbacks Prescribed by Policy**
- 30 m Wetland Setback (LTC)
- Proposed Activities**
- Lot Configuration

GENERAL NOTES:

- Lot configuration and Subject Property boundaries shown herein are approximate and are to be confirmed.
- Adjacent Lands have not been assessed and may contain additional natural heritage constraints and/or considerations.
- Development within a Significant Woodland must meet relevant policy requirements (i.e., Provincial Policy Statement Section 2.1.8).
- Mapping of wetlands on Adjacent Lands provided by LTC.
- Features depicted herein should not be used in place of a professional survey.
- Numeric scale is for a 11x17 inch print.

TERRASTORY
 environmental consulting inc.
 info@terrastoryenviro.com 905.745.5398

1:1,000 0 10 20 30 m

Location:

214 Ontario Street,
Municipality of Brighton

Project No.: 21119
Date: 2022-07-20
By: TK **Checked:** --
Orthophotograph Date:
 2018 (Google Maps).

Figure 3:
 Significant Natural
 Heritage Features
 with Development
 Overlay