



GUIDING SOLUTIONS IN THE
NATURAL ENVIRONMENT

Scoped Environmental Impact Study The Enclave (formerly 546 Ridge Road) Town of Fort Erie

Prepared For:

2175725 Ontario Inc

Prepared By:

Beacon Environmental Limited

Date: Project:

November 2022 220074

Table of Contents

	page
1. Introduction	1
2. Policy Context	1
2.1 <i>Endangered Species Act (2007)</i>	1
2.2 Provincial Policy Statement (2020)	2
2.3 Niagara Region Official Plan (2014).....	4
2.4 Town of Fort Erie Official Plan	4
3. Methodology.....	5
3.1 Background Review.....	5
3.2 Field Investigations.....	5
3.2.1 Vegetation	6
3.2.2 Wildlife Habitat	6
3.2.2.1 <i>Breeding Bird Surveys</i>	6
3.2.2.2 <i>Bat Habitat Assessment</i>	6
3.2.2.3 <i>Snakes</i>	7
4. Existing Conditions.....	8
4.1 Vegetation communities	8
4.2 Flora	8
4.3 Breeding Birds.....	8
4.4 SAR Bats.....	9
4.5 Other wildlife.....	9
5. Summary of Natural Heritage Features and Constraints	9
5.1 Habitat for Threatened and Endangered Species	10
5.2 Provincially Significant Wetlands	10
5.3 Areas of Natural and Scientific Interest.....	10
5.4 Significant Valleylands.....	10
5.5 Significant Wildlife Habitat	10
5.6 Significant Woodlands	11
5.7 Fish Habitat	12
6. Proposed Development	12
7. Impact Assessment and Proposed Mitigation	13
7.1 Impact Assessment	13
7.1.1 Terrestrial Vegetation	13
7.1.2 Wildlife Habitat	13
8. Mitigation Recommendations	13
9. Policy conformity	14
10. Conclusion	16

11. References.....17

Figures

Figure 1. Site Location.....	after page 2
Figure 2. Existing Conditions	after page 8
Figure 3. Proposed Development	after page 12

Tables

Table 1. Summary of 2020 Field Investigations	6
Table 2. Significant Woodland Assessment	12
Table 3. Policy Conformity Assessment.....	14

Appendices

Appendix A. EIS Terms of Reference	
Appendix B. Vascular Plant Species List	
Appendix C. Breeding Bird Species List	
Appendix D. Species at Risk Screening	
Appendix E. Significant Wildlife Habitat Assessment	

1. Introduction

Beacon Environmental Limited (Beacon) was retained to prepare a scoped Environmental Impact Study (EIS) in support of a draft plan of condominium for a vacant parcel located north of Hazel Street between Prospect Point Drive and Ridge Road in the Town of Fort Erie. Prior to a recent severance, the property was part of 546 Ridge Road. The location of the subject property is illustrated in **Figure 1**.

The property is mapped as Environmental Conservation Area (ECA) in the Niagara Region Official Plan. The ECA designated lands overlap with a small woodlot as well as trees within an existing yard. The woodlot on the property is approximately 0.7 ha. The Town of Fort Erie Official Plan schedules does not map any natural heritage features or environmental designated areas as being associated with the property.

The purpose of the EIS is to identify, delineate and evaluate natural features, assess the potential impacts of the proposed development on any features and functions, and recommend mitigation measures to avoid, minimize, or off-set impacts if required.

This EIS has been scoped in accordance with Terms of Reference that were established through consultation with the Niagara Region staff. EIS Terms or Reference are included in **Appendix A**.

2. Policy Context

The following sections provides of summary of the provincial and municipal natural heritage policies for this assessment.

2.1 *Endangered Species Act (2007)*

Ontario's *Endangered Species Act, 2007* (ESA) came into effect on June 30, 2008 and replaced the former 1971 Act. The ESA protects species listed as endangered and threatened by the Committee on the Status of Species at Risk in Ontario (COSSARO). Under the 2008 ESA over 200 species in Ontario are identified as extirpated, endangered, threatened, or of special concern.

The purpose of the ESA is:

- To identify species at risk based on the best available scientific information, including information obtained from community knowledge and aboriginal traditional knowledge;
- To protect species that are at risk and their habitats, and to promote the recovery of species that are at risk; and
- To promote stewardship activities to assist in the protection and recovery of species that is at risk.

Endangered or threatened species and their habitats receive protection under the regulations of the ESA. Specifically, Section 9 of the ESA prohibits the killing, harming, harassing, possession, collection,

buying and selling of extirpated, endangered, and threatened species on the Species at Risk in Ontario (SARO) List; and Section 10 prohibits the damage or destruction of protected habitat of species listed as extirpated, endangered or threatened on the SARO List.

Authorization from MECP is required under the ESA for any works proposed within the habitat of a threatened or endangered species. Searches for these species require seasonal field work and, in some cases, even if the species are found to be present, certain exemptions or a permit process may be available.

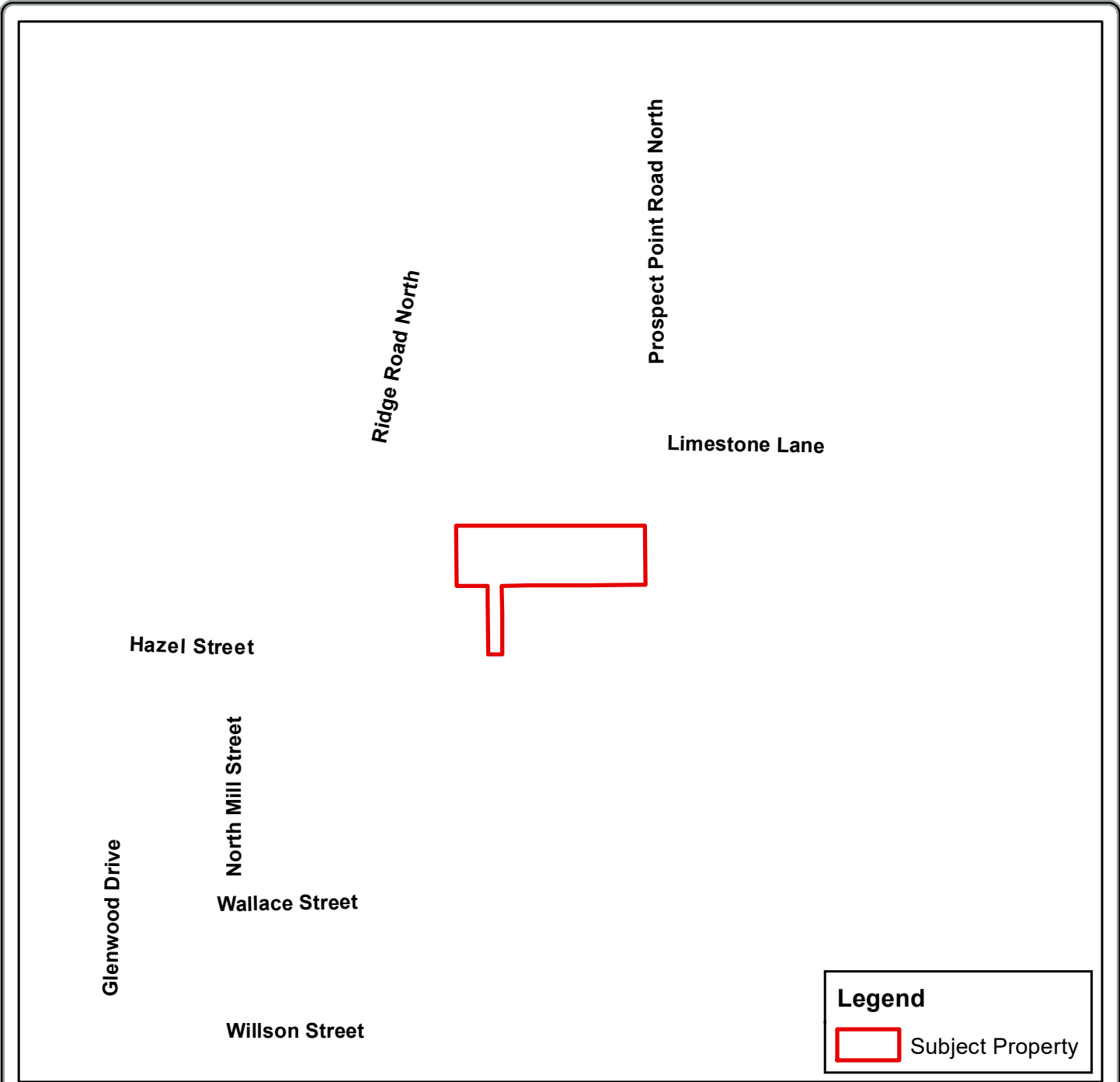
2.2 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) (MMAH 2020) provides policy direction to municipalities on matters of provincial interest as they relate to land use planning and development. The PPS provides for appropriate land use planning and development while protecting Ontario's natural heritage. Development governed by the *Planning Act* must be consistent with the policy statements issued under the PPS. These are outlined in Section 2.1 - Natural Heritage, Section 2.2 – Water, and Section 3.1 - Natural Hazards of the PPS, and relevant sections from each are provided in the following pages.


The PPS includes policies that speak to the identification and protection of natural heritage systems, as well as levels of protection for the various components that comprise such systems. Some of these features are present in the Study Area and must be assessed in the context of these policies.

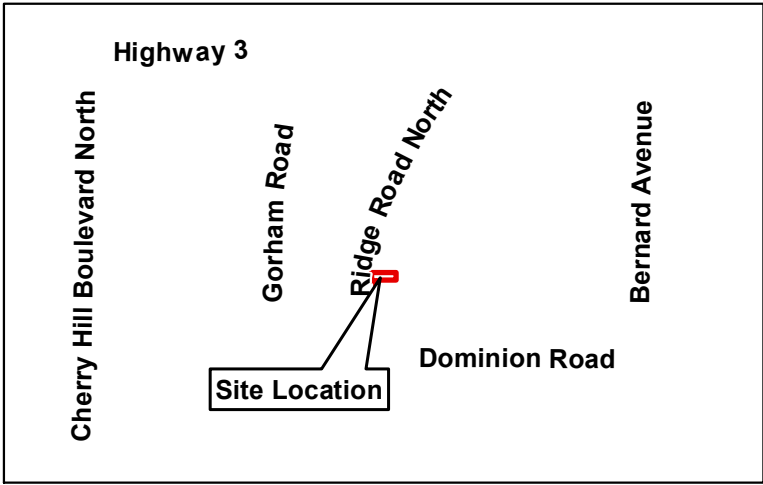
The policies specific to natural heritage are found in Section 2.1 of the PPS and are provided in their entirety below:

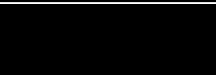

- 2.1.1 Natural features and areas shall be protected for the long term.*
- 2.1.2 The diversity and connectivity of natural features in an area, and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible, improved, recognizing linkages between and among natural heritage features and areas, surface water features and ground water features.*
- 2.1.3 Natural heritage systems shall be identified in Ecoregions 6E & 7E, recognizing that natural heritage systems will vary in size and form in settlement areas, rural areas, and prime agricultural areas.*
- 2.1.4. Development and site alteration shall not be permitted in:*
 - a. Significant wetlands in Ecoregions 5E, 6E and 7E; and*
 - b. Significant coastal wetlands.*



Legend

 Subject Property



Site Location		Figure 1
546 Ridge Road EIS		
		Project: 220074 Last Revised: November 2022
Client: 2175725 Ontario Inc.		Prepared by: BD Checked by: DW
	1:5,000	Inset Map: 1:50,000
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- 2.1.5 *Development and site alteration shall not be permitted in:*
- a. *Significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;*
 - b. *Significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
 - c. *Significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);*
 - d. *Significant wildlife habitat;*
 - e. *Significant areas of natural and scientific interest; and*
 - f. *Coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 2.1.4(b).*

Unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

- 2.1.6 *Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.*

- 2.1.7 *Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.*

- 2.1.8 *Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5 and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

- 2.1.9 *Nothing in policy 2.1 is intended to limit the ability of agricultural uses to continue.*

In terms of implementation, identification of the various natural heritage features noted above is a responsibility shared by the MECP, Ministry of Natural Resources and Forestry (MNR) and the municipal planning authority. The MECP is responsible for the confirmation of habitat of endangered species and threatened species, and for its regulation (under the Act as described above). The MNR is responsible for the identification of Provincially Significant Wetlands (PSWs) and Areas of Natural and Scientific Interest (ANSIs). Local and regional planning authorities are responsible for the identification of Significant Woodlands, Significant Valleylands, and Significant Wildlife Habitat, with support from applicable guidance documents (i.e., Natural Heritage Reference Manual, OMNR 2010; Significant Wildlife Habitat Technical Guidelines, OMNR 2000; Significant Wildlife Habitat Criteria for Ecoregion 6E or 7E, MNR 2015). Local and regional planning authorities in southern Ontario also typically work with their local conservation authority to identify and confirm non-PSWs that may have significance at the local or regional level. As described in **Section 2.1** above, identification and verification of fish habitat is now self-regulated although enforcement of the related policies and regulations is still managed by MNR and regulated by DFO.

In areas where significant natural heritage features have been identified by the appropriate agency or planning authority, the boundaries of such features can typically be refined through site-specific studies

undertaken as part of the planning process, with input from the responsible agency and/or planning authority.

2.3 Niagara Region Official Plan (2014)

Section 7 Natural of the Niagara Region Official Plan details the policies with respect to natural heritage. The Regions Core Natural Heritage System is shown on Schedule C, which consists of:

- Core Natural Areas, classified as either Environmental Protection Areas or Environmental Conservation Areas;
- Potential Natural Heritage Corridors connecting the Core Natural Areas;
- The Greenbelt Natural Heritage and Water Resources Systems; and
- Fish Habitat.

Environmental Protection Areas (EPA) include provincially significant wetlands; provincially significant Life Science Areas of Natural and Scientific Interest (ANSIs); and significant habitat of endangered and threatened species.

Environmental Conservation Areas (ECA) include significant woodlands; significant wildlife habitat; significant habitat of species of concern; regionally significant Life Science ANSIs; other evaluated wetlands; significant valleylands; savannahs and tallgrass prairies; and alvars; and publicly owned conservation lands.

Development is generally not permitted within EPA. Development may be permitted in ECA provided that it has been demonstrated that there will be no significant negative impact on the Core Natural Heritage System component or adjacent lands and the proposed development is not prohibited by other policies.

The subject property is identified as ECA in the Region's Official Plan. The ECA lands overlap with a small woodlot as well as trees within an existing yard.

2.4 Town of Fort Erie Official Plan

Section 8 of the Town's Official Plan outlines natural heritage protection policies that may be applicable to the development proposal. Natural Heritage Features are shown on Schedule A as EPA and ECA. EPAs include Provincially Significant Wetland, Areas of Natural and Scientific Interest, the habitat of threatened and endangered Species and species of special concern and natural hazard areas, including dune protection areas. ECAs include, significant natural areas, locally significant wetlands, as well as, other woodlands and meadows. Schedule C depicts the Natural Heritage features in more detail showing Provincially Significant Wetlands, identified Areas of Natural and Scientific Interest, Locally Significant Wetlands, Environmentally Sensitive Areas, Significant Natural Areas, Woodlands >2ha, and Corridors. Schedule C1 identifies Fish Habitat and Stream Corridors and Natural Hazard Areas including Valleylands and Dune Protection Areas.

Policy 8.2(I) states the development is not permitted in EPA, and Policy 8.2(IV) states that an EIS is required in support of proposed development on lands that lie adjacent to EPA. Policy 8.3(III) states that development within an ECA is permitted if supported by the findings of an EIS. Policy 8.3(V) states that upon the submission of a development proposal, the degree of protection and conservation afforded to the natural features and ecological functions of these areas in large part depends on the area's classification.

The Town's Official Plan schedules do not map any EPA or ECA on the subject property

3. Methodology

3.1 Background Review

Background information was gathered and reviewed at the outset of the project. This involved consideration of the following documents or information sources relevant to the subject property:

- Provincial Policy Statement;
- Niagara Region Official Plan;
- Town of Fort Erie Official Plan;
- Current and historic aerial imagery;
- Provincially Tracked Species Layer from Land Information Ontario (LIO);
- Ontario Breeding Bird Atlas;
- Ontario Reptile and Amphibian Atlas;
- Natural Heritage Information Centre (NHIC) Data via the Make-A-Map application;
- Species at risk range maps <https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>;
- High Resolution aerial photography of the property; and
- Natural and physical feature layers from LIO—these geospatial layers include wetlands (provincially significant and un-evaluated wetlands), and watercourses with thermal regime.

3.2 Field Investigations

Beacon ecologists undertook seasonal field investigations on the subject property in 2020. Seasonal surveys included a floral inventory, vegetation community classification, and breeding bird surveys, and bat habitat assessment. Incidental wildlife observations were also noted. A summary of the seasonal field visits and survey dates is presented in **Table 1**. More detailed survey descriptions are provided in the subsections that follow.

Table 1. Summary of 2020 Field Investigations

Field Investigation	Dates
Breeding Bird Surveys	June 3 and 17, 2020
Ecological Land Classification and Flora	November 19, 2019; April 8, May 22, June 26, August 12, and September 23, 2020
Bats	June 2020
Snakes	June 26, July 1, August 12, and September 23, 2020.

3.2.1 Vegetation

Vegetation communities on the subject property were mapped and described following the protocols of the Ecological Land Classification (ELC) system for Southern Ontario (Lee *et al.* 1998). This involved delineating vegetation communities on aerial photos of the property and recording pertinent information on the community structure and composition.

A three season (spring, summer, fall) vegetation survey was conducted for the property. A list was compiled of all flora species observed.

3.2.2 Wildlife Habitat

3.2.2.1 Breeding Bird Surveys

Two breeding bird surveys were conducted for the subject property in the mornings of June 3 and 17, 2020 with start times of 0700, and 0615 hrs. respectively, while the temperature was within 5° C of normal, it was not raining, nor excessively windy. The breeding bird community was surveyed using a roving type survey, in which all parts of the subject property were walked to within 50 m and all birds heard or observed and showing some inclination toward breeding were recorded as breeding species. All birds heard and seen were recorded in the location observed on an aerial photograph of the site.

3.2.2.2 Bat Habitat Assessment

There are four bat species currently listed as endangered in Ontario, including Eastern Small-footed Myotis (*Myotis leibii*), Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), and Tri-colored Bat (*Perimyotis subflavus*). These species typically over-winter in caves and mines, and during the spring and summer roost in trees and sometimes old buildings (e.g., attics). Confirming the presence of roosts requires specialized surveys and the province has provided guidance on such surveys.

The *Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat* (MNR 2017) includes three steps for identifying habitat of Endangered bats:

Step 1: Complete ELC mapping to determine if any coniferous, deciduous or mixed wooded ecosite, including treed swamps, that includes trees at least 10 cm diameter-at-breast

height (dbh) are present. If suitable habitat is to be impacted by a proposed activity, project proponents should proceed to step 2.

Step 2: Conduct surveys for suitable bat maternity roost trees within the coniferous, deciduous or mixed wooded ecosites. Trees with cavities, loose bark, and/or cracks may support maternity roost habitat for Little Brown Myotis and Northern Myotis (MNRF 2017). In addition, according to the MNRF guidelines (2017), oak trees and, to a lesser extent, maple trees are preferred habitat for Tri-colored Bat and the following trees should be documented:

- Any oak tree >10cm DBH;
- Any maple tree >10cm DBH if the tree includes dead/dying leaf clusters; and
- Any maple tree >25cm DBH.

Step 3: Conduct acoustic surveys within each ELC ecosite determined to be suitable maternity roost habitat in Step 1 to confirm presence/absence of Endangered bat species. The optimal locations of acoustic detectors within the ELC communities are determined based on the data collected in Step 2.

Preliminary ELC (Step 1) was completed for the subject property on February 3, 2020. Based on ELC mapping, a deciduous forest community was identified on the subject property (**Figure 2**).

Snag surveys (Step 2) were conducted for the feature on March 24, 2020. Potential maternity roost trees were identified within the woodland.

Acoustic monitoring (Step 3) was completed from June 1-June 15, 2020 to determine what species of bats, if any, inhabit the property. Three SM4BAT passive monitors, equipped with a SMM-U1 ultrasonic, omni-directional, microphone was installed in proximity to the identified snag trees. This device provided coverage of the majority of the forest community on the subject property. The microphones were deployed at least 2.5 m above the ground and was oriented to optimize echolocation detections. The monitor was programmed to record during triggered events each night for a period of six hours beginning at half an hour before sunset. A 12dB gain setting was used based on the SMM-U1 microphone, the surrounding habitat and proximity to potential roost trees. The unit was programmed to record with a 256 kHz sample rate and the high pass filter was set to 16 kHz to eliminate low frequency noise but to still capture the lowest frequency bat calls (e.g., Hoary Bat for the study area). All files were recorded as full spectrum in .WAV format.

Recordings from the detectors were analyzed using Kaleidoscope software. A combination of auto-identification and manual analysis was applied to call files to make species determinations. All files that fell within the approximate 40 KHz Myotis species and Tri-coloured Bat echolocation range were manually vetted. If the call did not fall within the approximate 40 kHz range, it was not analyzed further as it did not represent a threatened or endangered species of bat.

3.2.2.3 Snakes

Surveys for snakes were conducted by searching under cover objects during site visits on June 26, July 1, August 12, and September 23, 2020. Cover objects within the woodland were limited to logs and wood piles.

4. Existing Conditions

4.1 Vegetation communities

The subject property supports a single vegetation community classified as a Dry-Fresh Sugar Maple Deciduous Forest (FOD5-1). This feature is illustrated in **(Figure 2)**. This feature consists of mid-aged to mature Sugar Maple (*Acer saccharum*) in association with Black Walnut (*Juglans nigra*), Norway Maple (*Acer platanoides*), and Black Cherry (*Prunus serotina*). The understory consists of Choke Cherry (*Prunus virginiana*) and Sugar Maple (*Acer saccharum*). Ground covers include Garlic Mustard (*Alliaria petiolata*), Yellow Trout Lily (*Erythronium americana*), False Solomon's Seal (*Maianthemum racemosum*), and Virginia Waterleaf (*Hydrophyllum virginianum*).

4.2 Flora

A total of 59 species of vascular plants were identified on the subject property, the majority (83%) of which are native to Ontario. A plant list is included in **Appendix B**. Two regionally rare native species were identified, including False Mermaidweed (*Floerkea proserpinacoides*) and One-seeded Burr Cucumber (*Sicyos angulatus*). The locations of the species are illustrated in **Figure 2**. A single Honey Locust tree (*Gleditsia triancthos*) was observed on the property, which is ranked S2 (Imperilled) in Ontario. This tree was apparently planted as it is located along the woodland edge with other planted trees such as Norway Spruce (*Picea abies*).

4.3 Breeding Birds

A total of 17 species of breeding birds were recorded on the subject property, with an additional one species noted as foraging (**Appendix C**). This avian diversity is reflective of the habitat diversity within the subject property discussed in the preceding sections, whereby the property is predominantly wooded with anthropogenic areas.

The majority of breeding records were common species regularly found in urbanizing areas including the following species in descending order, in which two or more pairs were recorded: American Robin (*Turdus migratorius*), Common Grackle (*Quiscalus quiscula*), European Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*), Northern Cardinal (*Cardinalis cardinalis*) and House Wren (*Troglodytes aedon*).

A number of woodland species were recorded and include Red-bellied Woodpecker (*Melanerpes carolinus*), Great-crested Flycatcher (*Myiarchus crinitus*), Black-capped Chickadee (*Poecile atricapillus*), Red-eyed Vireo (*Vireo olivaceus*) and Mourning Warbler (*Geothlypis philadelphia*).

Area-sensitive birds are those that require larger tracts of suitable habitat in which to breed or are those that have a higher breeding success in larger areas of suitable habitat. No such species were present.

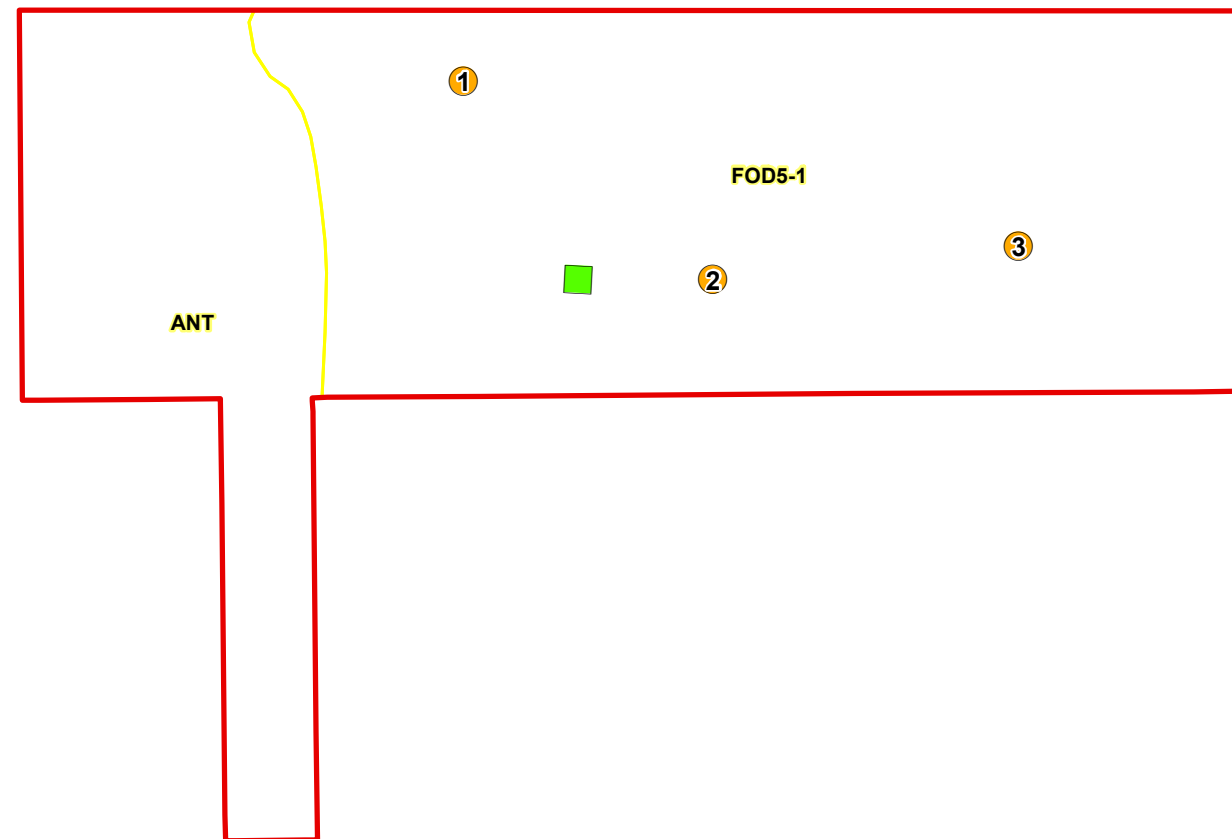
Legend

- Subject Property
- Ecological Communities
- Bat Acoustic Monitoring Locations
- False Mermaid
- One-seeded Bur Cucumber

Ridge Road North

Limestone Lane

Prospect Point Road North



ANT

1

FOD5-1

2

3

Hazel Street

Vegetation Community

Dry-Fresh Sugar Maple Deciduous Forest (FOD5-1)
 Anthropogenic (ANT)

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No species ranked as S1 through S3 (Critically Imperiled through Vulnerable) by the province, or species protected under the ESA were encountered. A number of Chimney Swift (*Chaetura pelagica*) were recorded as foraging over the subject property during the second breeding bird survey. These birds are protected under the ESA and typically use anthropogenic chimney structures in which to roost.

4.4 SAR Bats

To determine how SAR bats may be utilizing the woodland habitat in which they are detected from acoustic recordings, an analysis of their calls is completed by reviewing the number of calls by species, the time of day of the calls, and period intervals between calls. Calls that are recorded at sunset can be interpreted as indicative of an active maternity roost as lactating females generally forage closer by and return to roosts more frequently to feed pups. For the purposes of this analysis, it was assumed that calls detected earlier in the evening and before 10:05 pm are more likely to be associated with maternal behaviours.

The results from 15 nights of acoustic monitoring detected only five calls corresponding with endangered Little Brown Myotis, and no calls of other SAR bats. These results suggest that it is very unlikely that there are maternity roosts for SAR bats in the immediate area. If maternity roosts were present, then it would be expected that many more Little Brown Myotis calls, particularly around sunset, would be detected throughout the entire monitoring period.

4.5 Other wildlife

A single Red-back Salamander (*Plethodon cinereus*) was found within the woodland. No snakes or other amphibians were observed.

During the acoustic monitoring for SAR bats, several non-SAR bats were recorded including Big Brown Bat and Silver-haired Bat.

No other wildlife observations were noted.

5. Summary of Natural Heritage Features and Constraints

Based on information collected through the background review and field investigations, features on the subject property were identified/evaluated for significance according to criteria and guidance provided in the Niagara Region Official Plan and provincial guidelines, including the Significant Wildlife Habitat Technical Guide (OMNR 2000) and the Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (MNRF 2015).

5.1 Habitat for Threatened and Endangered Species

The subject property was assessed to determine the potential to support habitat for threatened or endangered species. The result of this assessment is included in **Appendix D**.

The only endangered species detected on the property was Little Brown Myotis; however, as discussed in **Section 4.4**, based on the low number of calls that were recorded during the monitoring period, the woodlot is likely not being utilized for maternity roosting by this species.

5.2 Provincially Significant Wetlands

There are no PSWs (or other wetlands) on or adjacent to the subject property.

5.3 Areas of Natural and Scientific Interest

There are no ANSIs on or adjacent to the subject property.

5.4 Significant Valleylands

There are no valleylands on or adjacent to the subject property.

5.5 Significant Wildlife Habitat

According to the Significant Wildlife Habitat Technical Guidelines (MNR 2000), there are four main categories of Significant Wildlife Habitat (SWH):

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities or Specialized Habitat for Wildlife;
- Habitat for Species of Conservation Concern; and
- Animal Movement Corridors.

Within each of these categories, there are multiple types of SWH, each intended to capture a specialized type of habitat that may or may not be captured by other existing feature-based categories (e.g., significant wetlands, significant woodlands). The Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF 2015) was used as a preliminary screening for SWH on the property. A full SWH screening table is included in **Appendix C**. Based on this screening, the subject property could potentially support maternity roost habitat for non-SAR bats.

The threshold for SWH is presence of at least 10 female big brown bats or at least five (5) female Silver haired bats (MNRF 2015). Acoustic monitoring confirmed the presence of Big Brown Bat and Silver-haired Bat.

Calls that are recorded at or near sunset can be indicative of an active roost near a monitoring station. For the purposes of this analysis, it was assumed that a call that occurred before 10:05 pm could belong to a bat emerging from a nearby roost. Another type of analysis that is used to determine relative activity of free flying bats through acoustic monitoring is the 5-minute activity index. This analysis provides a simple means to quantify activity by surveying for the presence or absence of a species within five-minute intervals. The application of an activity index is considered to be an effective measure of bat activity that allows for comparisons between sites, time, and species (Miller 2001).

Based on the number and timing of calls, a potential maternity roost for Big Brown Bat exists in the vicinity of one of bat detectors. To estimate the number of female big brown bats, the following assumptions were made:

- All calls were assumed to be females;
- Same individual assumed night after night; and
- Each 5 minute period is a different individual.

Applying this method, the highest estimate is seven Big Brown Bats, which is below the threshold for SWH.

5.6 Significant Woodlands

According to Policy 7.B.1.5 of the Regional Official Plan, to be identified as significant a woodland must meet one or more of the following criteria:

- Contain threatened or endangered species or species of concern;
- In size, be equal to or greater than:
 - 2 hectares, if located within or overlapping Urban Area Boundaries;
 - 4 hectares, if located outside Urban Areas and north of the Niagara Escarpment;
 - 10 hectares, if located outside Urban Areas and south of the Escarpment;
- Contain interior woodland habitat at least 100 metres in from the woodland boundaries;
- Contain older growth forest and be 2 hectares or greater in area;
- Overlap or contain one or more of the other significant natural heritage features listed in Policies 7.B.1.3 or 7.B.1.4; or
- Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.

The applicability of these criteria to the woodland on the subject property is summarized in **Table 2**. Based on this assessment, the woodland on the property does not qualify as a significant woodland in Niagara Region.

Table 2. Significant Woodland Assessment

Criteria	EIS findings	Criteria met?
a) Contain threatened or endangered species or species of concern;	No habitat for threatened or endangered species species of concern was identified	No
b) In size, be equal to or greater than: <ul style="list-style-type: none"> • 2 hectares, if located within or overlapping Urban Area Boundaries; • 4 hectares, if located outside Urban Areas and north of the Niagara Escarpment; • 10 hectares, if located outside Urban Areas and south of the Escarpment; 	The woodland is less than 2 ha	No
c) Contain interior woodland habitat at least 100 metres in from the woodland boundaries;	The woodland is approximately 60 m in total width	No
d) Contain older growth forest and be 2 hectares or greater in area;	The woodland is largely secondary growth and is less than 2 ha	No
e) Overlap or contain one or more of the other significant natural heritage features listed in Policies 7.B.1.3 or 7.B.1.4; or	The woodland does not contain or overlap other significant features.	No
f) Abut or be crossed by a watercourse or water body and be 2 or more hectares in area.	There are no watercourses or waterbodies associated with the woodland	No

5.7 Fish Habitat

There is no fish habitat (watercourses, water bodies) on the subject property.

6. Proposed Development

The proposal for the subject property consists of a 17-unit townhouse development with a private roadway between Hazel Street and Prospect Point Road, as illustrated in **Figure 3**.

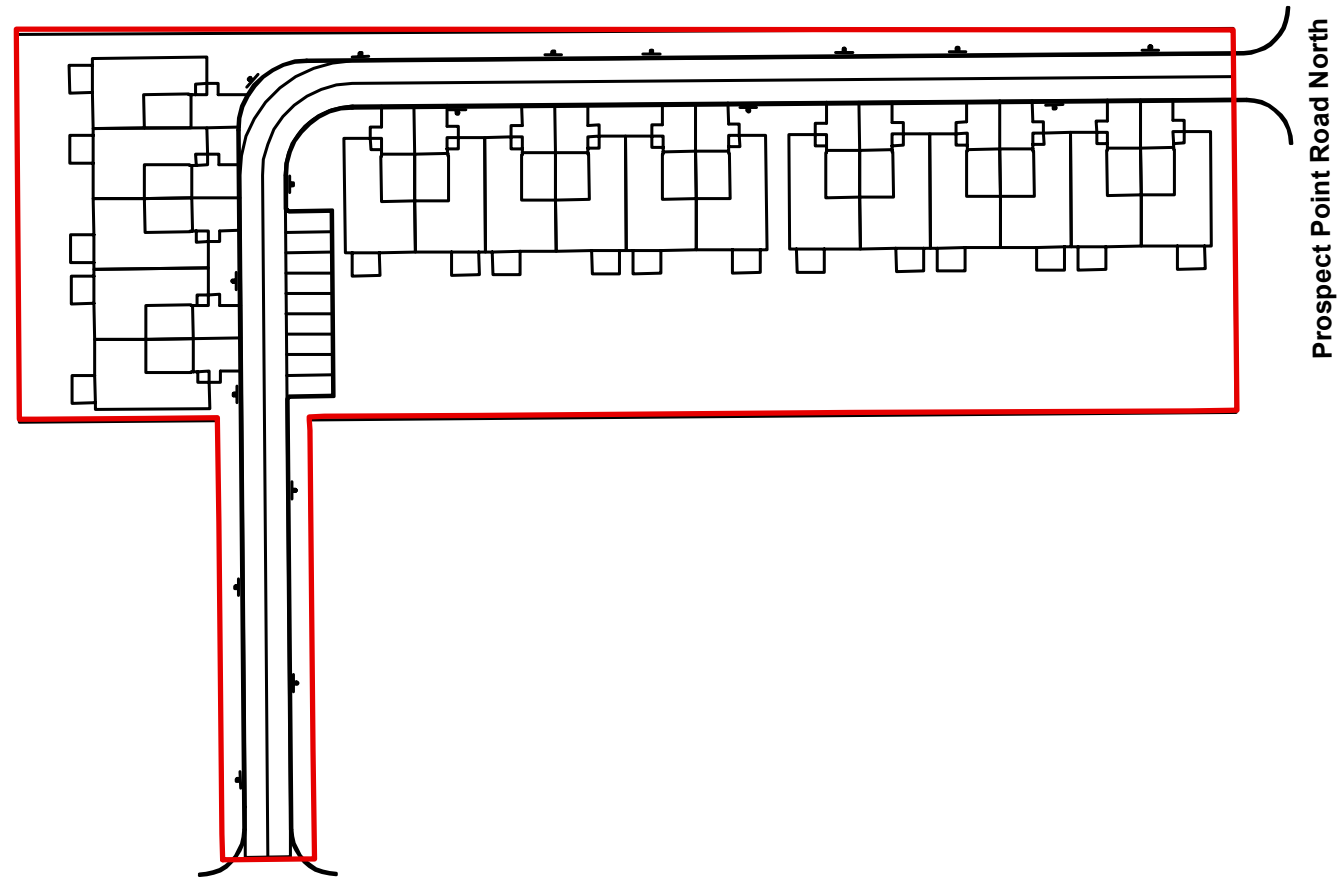
546 Ridge Road EIS

Legend

- Subject Property
- Proposed Development

Ridge Road North

Limestone Lane



Prospect Point Road North

Hazel Street

[REDACTED] Project: 220074
 Last Revised: November 2022

Client: 2175725 Ontario Inc. Prepared by: BD
 Checked by: DW

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7. Impact Assessment and Proposed Mitigation

7.1 Impact Assessment

7.1.1 Terrestrial Vegetation

The proposed development will require removal of the majority of forest vegetation from the property; however, a portion the woodland (approx. 0.2. ha) will be preserved along the south side of the property.

The majority of the vegetation to be removed is common within the province and region. Two regionally rare species will be impacted by the development, including False Mermaid and One-seed Burr Cucumber. As the Burr Cucumber is located along Prospect Point Road, there may be an opportunity to preserve this species along the roadside within the right of way. However, False Mermaid will be directly impacted and require removal or could potentially be transplanted to the retained portion of the woodland within the subject property.

7.1.2 Wildlife Habitat

Wildlife usage of the woodland is very limited as it is isolated by existing development on all sides.

The removal of a portion of the woodland will result in a loss of habitat for several forest birds, none of which are rare or species at risk.

While a single Red-backed Salamander was observed within the woodland, it is unlikely that a viable population can be sustained over the long term within this isolated woodland patch. The presence of Red-backed Salamander does not constitute SWH.

Data collected from acoustic monitoring for bats suggest that a roost for Big Brown Bat may be present; however, analysis of the data suggests that it does not meet the threshold for SWH (**Section 5.5**). The majority of Big Brown Bat calls were recorded at monitoring station located on the south of the subject property, within the retained portion of the woodland. Therefore, if a maternity roost tree for Big Brown Bat present, then it will likely be protected.

8. Mitigation Recommendations

The proposed development will not result in any direct impact on significant natural heritage or hydrological features; however, there are a number of mitigation measures that are recommended to ensure the removal of the woodland feature will minimize impacts on wildlife, and that construction activities will not impact on adjacent trees or downstream waterbodies.

- Soil erosion from construction sites can result in adverse environmental impacts if sediment-laden stormwater runoff reaches watercourses or waterbodies. Therefore, an erosion and sediment control plan should be implemented prior to any site alteration or construction to

prevent excessive sediment from entering the storm system via the ditch along Pleasant Point Road.

- To avoid impacts on breeding birds and roosting bats, tree removals should be conducted between October 1 and March 31.
- To protect trees along the edge of the development, the tree protection recommendations outlined in the Arborist Report/Tree Saving Plan (Beacon 2022) should be implemented.
- Regionally rare plant species (e.g. False Mermaid, Bur Cucumber) should be transplanted to the retained portion of the woodland on the subject property.
- If any wildlife is encountered during site preparation or construction, a qualified biologist should be contacted to ensure appropriate handling and relocation.

9. Policy conformity

A summary of provincial and municipal environmental protection and planning policies and regulations applicable to the subject property were discussed in **Section 2**. An evaluation of how the proposed re-development complies with the applicable environmental policies and legislation is summarized below in **Table 2**.

Table 3. Policy Conformity Assessment

Applicable Policy / Legislation	Policy Intent	EIS Findings & Recommendations
Ontario <i>Endangered Species Act</i> (2007)	Provides legal protection to endangered and threatened species and their habitats	Acoustic monitoring of the woodland identified Little Brown Myotis flying over the property. Only five Little Brown Myotis calls were recorded from the property over the entire 15-day monitoring period, which indicates that it is very unlikely this species is utilizing the woodland for maternity roosting. No other threatened or endangered species were identified on the property.
Provincial Policy Statement (2020)		
1. Habitat for Threatened and Endangered Species	The PPS does not permit development or site alteration in habitat for threatened and endangered species except in accordance with provincial and federal requirements.	See above.
2. Significant Wetlands	The PPS does not permit development or site alteration in Significant Wetlands, except for conservation, wildlife management and stewardship purposes.	No wetlands were identified on or adjacent to the property.

Applicable Policy / Legislation	Policy Intent	EIS Findings & Recommendations
	The PPS allows for development or site alteration on lands adjacent to Significant Wetlands if it can be demonstrated that such activities will not adversely impact upon the feature and its functions.	
3. Significant Woodlands	The PPS does not permit development or site alteration in Significant Woodlands unless it can be demonstrated through an EIS that there will be no negative impacts.	The property supports a small woodland which does not meet the Regional OP criteria for significance.
4. Significant Valleylands	The PPS allows for development or site alteration in Significant Valleylands if it can be demonstrated through an EIS that there will be no negative impacts.	No valleylands were identified on or adjacent to the property.
5. Significant Wildlife Habitat	The PPS allows for development or site alteration in SWH if it can be demonstrated through an EIS that there will be no negative impacts.	No significant wildlife habitat was identified on the subject property.
6. Significant Areas of Natural and Scientific Interest (ANSI)	The PPS allows for development or site alteration in Significant ANSIs if it can be demonstrated through an EIS that there will be no negative impacts.	No ANSIs were identified on or adjacent to the property.
7. Fish Habitat	Development and site alteration are not permitted in fish habitat except in accordance with provincial and federal requirements.	No fish habitat was identified on or adjacent to the property.
Region of Niagara Official Plan	<p>The Core Natural Heritage System of Niagara Region consists of:</p> <ul style="list-style-type: none"> • Core Natural Areas, classified as either Environmental Protection Areas or Environmental Conservation Areas; • Potential Natural Heritage Corridors connecting the Core Natural Areas; • The Greenbelt Natural Heritage System; and • Fish Habitat. <p>No development is permitted within EPA features. Development may be permitted within ECA lands if it has been demonstrated that, over the long term, there will be no significant negative impact on the Core Natural Heritage System component.</p> <p>Development and site alteration may be permitted within fish habitat and on adjacent lands if it will result in no net loss of the productive capacity of fish</p>	<p>Portions of the property are identified as ECA in the Region’s Official Plan. The ECA designation overlaps with a small woodlot on the east side of the property as well as trees associated with an existing manicured lawn setting on the west side of the property. The EIS confirmed that the woodland does not qualify as ECA.</p>

Applicable Policy / Legislation	Policy Intent	EIS Findings & Recommendations
	habitat as determined by the Department of Fisheries and Oceans. A 30 m buffer from the top of bank of critical fish habitat is typically required, however, a minimum 15 m buffer may be acceptable if it is demonstrated that there will be no impacts on fish habitat.	
Town of Fort Erie Official Plan	Policies are consistent with the Region of Niagara Official Plan (see above)	No ECA or EPA features have been identified on the subject property. The EIS confirmed that the woodland does not qualify as ECA.

10. Conclusion

This EIS has been prepared for a proposed residential development for a vacant parcel in Town of Fort Erie, which prior to a recent severance, was associated with 546 Ridge Road. The EIS describes the natural heritage features and ecological functions associated with the property, assesses the potential direct and indirect impacts of the proposed development on these features, and functions, and recommends mitigation measures.

The proposed development consists of 17 townhouses and an internal private roadway. The development will result in the removal of approximately 70% of the woodland feature on the property. The woodland is not a Significant Woodland by regional standards; however, it does provide habitat for common breeding birds and potentially non-SAR bats (e.g. Big Brown Bat); therefore, the tree EIS recommends that vegetation clearing be conducted from late fall to early spring (October 1 to March 31) to avoid the active nesting season for birds and the roosting period for bats. The woodland also supports two regionally rare plant species, which the EIS recommends transplanting to the retained portion of the woodland.

As no significant natural heritage features will be impacted by the development, it is the conclusion of this EIS that the proposed development is in conformity with provincial and municipal natural heritage policies.

Prepared by:
Beacon Environmental



Dan Westerhof, B.Sc., M.E.S.
Senior Terrestrial Ecologist,
ISA Certified Arborist (ON-1536A)

Reviewed by:
Beacon Environmental



Ken Ursic, B.Sc., M.Sc.
Principal, Senior Ecologist

11. References

- Government of Ontario. 2007.
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- Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998.
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Ontario Ministry of Natural Resources. SCSS Field Guide FG-02. 225 pp.
- Ministry of Natural Resources and Forestry. 2017.
Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern
Myotis & Tri-Colored Bat.
- Ontario Ministry of Municipal Affairs and Housing (MMAH). 2020.
Provincial Policy Statement. Toronto, Ontario.
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Appendix A

EIS Terms of Reference

June 23, 2020

BEL 220074

Adam Boudens
Senior Environmental Planner/Ecologist
Niagara Region
1815 Sir Isaac Brock Way
Thorold, ON L2V 4T7

Re: Proposed Terms of Reference for Scoped EIS – 546 Ridge Road, Fort Erie

Dear Mr. Boudens:

Beacon Environmental Limited (Beacon) has prepared the following Terms of Reference (TOR) for a Scoped Environmental Impact Study (EIS) in support of a proposed development at 546 Ridge Road in the Town of Fort Erie (**Figure 1**). This TOR is based on Beacon's knowledge of the subject property and Niagara Region's EIS Scope Requirements, which are included in **Attachment A**.

The majority of the property is mapped as Environmental Conservation Area (ECA) in the Region's Official plan. The ECA designation overlaps with a small woodlot on the east side of the property as well as trees associated with an existing residence and yard in the western portion of the property. The woodlot on the property is approximately 0.5 ha. No natural heritage features or designations have been identified on the property in the Town of Fort Erie Official Plan.

The purpose of the EIS is to delineate and evaluate the natural features on the property, assess impacts of the proposed development, and recommend mitigation measures to avoid, minimize, or off-set impacts.

Background Review

Beacon will review background information sources and policy documents related to the subject property including, but not limited to:

- Provincial Policy Statement;
- Town of Fort Official Plan;
- Niagara Region Official Plan;
- Natural Heritage Information Centre (NHIC) data
- NPCA watershed information;
- Wildlife atlases;
- Natural and physical feature layers from LIO—these geospatial layers include wetlands (provincially significant and un-evaluated wetlands), and watercourses with thermal regime;

- Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (MNRF 2015).

Species at Risk (SAR) and Significant Wildlife Habitat (SWH) Screening

A SAR screening was completed for the subject property. The results of the SAR screening are attached (**Attachment B**).

An SWH screening was also completed for the subject property based on the Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 7E (MNRF 2015). The results of the SWH screening area attached (**Attachment C**).

Field Investigations

Field investigations will be undertaken to document the vegetation and wildlife habitat on the subject property. The information will be used to evaluate the ecological function, significance, and sensitivity of the subject property. For this site, Beacon is proposing to undertake vegetation surveys, breeding bird surveys, bat surveys, and informal surveys for snakes.

Vegetation Communities (May-June 2020)

Vegetation communities on the property will be mapped and described according to the Ecological Land Classification system for southern Ontario which is the standard methodology for classifying ecosystems in southern Ontario. This involves delineating vegetation communities on an aerial photograph and recording pertinent information concerning the vegetation composition and structure.

Flora Surveys (May-August 2020)

A three-season survey for vascular plants will be undertaken. A list of all plant species observed on the property will be compiled and provided in the report. Specific emphasises will be placed on determining the presence of species at risk. Should they be found to occur, the location of rare, threatened, or endangered species will be located with a GPS unit.

Breeding Birds (May-June 2020)

Two early morning breeding bird surveys will be undertaken between late-May and late June to determine what species of birds are nesting on the subject property. For the surveys, a random walk foot survey will be conducted on the subject property. The lands represent a small survey area and can be walked such that all singing birds can be heard or observed and recorded. Point count or transit survey methods will not be undertaken, as these survey methods are typically only required for collecting statistically valid data sets for long term studies.

Bats (February/June 2020)

Based on the SAR screening (**Attachment B**) there is potential habitat for endangered bats. There is also potential habitat for non-SAR bats, which may represent SWH (**Attachment C**).

Surveys for bats will be conducted in accordance with the Ministry of Natural Resources and Forestry (MNR) *Survey Protocol for Species at Risk Bats within Treed Habitats* (April 2017).

Amphibians and Reptiles (July/August 2020)

No ponds or wetlands occur on the property that could be used by salamanders or frogs as breeding sites; therefore, spring monitoring for calling amphibians is not required.

Snakes seen will be noted while conducting other surveys of the site. Visual surveys will be completed by overturning objects that provide potential cover (i.e. large branches, logs, rocks, etc.).

Tree Saving Plan

A tree saving plan will be prepared in accordance with Section 1.36 of the Regional Tree and Forest Conservation By-law. The tree saving plan will be included in an appendix to the EIS Report.

EIS Report

The EIS report will characterize the subject property based on the findings of the background review and scoped field investigations, assess the function and significance of natural heritage features on the subject property, describe the proposed development, evaluate impacts of the proposed development, recommend mitigation and enhancement opportunities to avoid, minimize, or off-set impacts, and assess conformity with provincial and municipal policies and regulations. The EIS will be prepared according to the following outline:

Introduction – This section of the report will include introductory remarks regarding the purpose and scope of the study, a general description of the site and the site location, and a brief description of the proposed development.

Policy Context – The report will include a summary of applicable provincial, municipal and conservation authority natural heritage policies and legislation, and their relevance to the property, including the Provincial Policy Statement (2020), the Niagara Region Official Plan (2014), and the Town of Fort Erie Official Plan (2011).

Methodology – This section of the report will include a description of the methods used to characterize the site's natural heritage features and functions. A list of background information sources consulted as well as details of all field work and assessments will be included.

Characterization of Existing Conditions – The report will provide a detailed description of existing conditions based on the results of the background review and field investigations. Existing natural heritage features on the subject property, including wildlife habitat, vegetation communities, flora, and aquatic features will be described.

Summary of Natural Features – the significance of natural heritage features identified on the subject property will be evaluated as detailed above.

Description of Proposed Development – This section of the report will provide a description and location of the proposed development, including lot layout, roads, grading, and servicing.

Impact Assessment and Mitigation – This section will evaluate potential direct and indirect impacts of the proposed development on the natural heritage and hydrological features. Where appropriate, mitigation recommendations will be provided to prevent, minimize, or off-set impacts to natural heritage features.

Policy Conformity - The proposed development will be assessed to confirm conformity with applicable provincial and municipal policies and regulations.

Recommendations and Conclusion – The report will conclude with a review of net impacts of the proposed development on the natural heritage system and indicate whether the proposed development complies with applicable plans, policies and regulations.

Closing

We trust that our proposed approach to completing the Scoped EIS outlined in this letter is consistent with the Region's EIS Guidelines and scope requirements.

Should have any questions or require clarification, please do not hesitate to contact the undersigned.

Prepared by:
Beacon Environmental

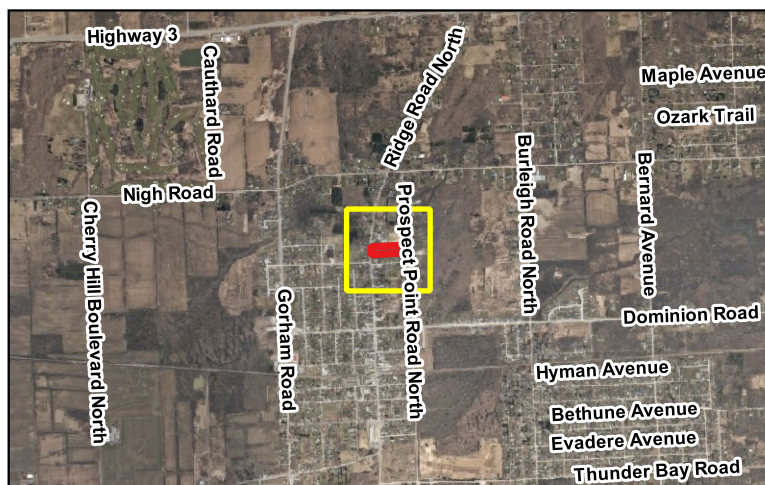




Dan Westerhof, B.Sc., M.E.S.
Terrestrial Ecologist, ISA Certified Arborist

Reviewed by:
Beacon Environmental



Ken Ursic, B.Sc., M.Sc.
Principal, Senior Ecologist



Site Location		Figure 1
546 Ridge Road EIS		
		Project: 220074 Last Revised: June 2020
Client:	Prepared by: BD	DRAFT
	Checked by:	
	1:3,000	Inset Map: 1:50,000
Contains information licensed under the Open Government License—Ontario Orthoimagery Baselayer: 2018 (FBS)		

Attachment A

Environmental Impact Study (EIS) Requirements

Proponent: Beacon Environmental Date: June 18, 2020 File # _____

Property Address: 546 Ridge Road N Municipality: Fort Erie

Type of Application: _____ Completed by: L. Karlewicz

Is the subject site **located within an Urban or Rural area?**

<input checked="" type="checkbox"/> Urban Area	<input type="checkbox"/> Rural Area	<input type="checkbox"/> Hamlet
Details:		

Is the subject site **identified in the Provincial Natural Heritage System?**

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Places to Grow Act	<input type="checkbox"/> Greenbelt Plan	<input type="checkbox"/> NEC
Details (<i>Designations</i>):			

Is the subject site **located within an identified Agricultural Area?**

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Good General Agricultural Area	<input type="checkbox"/> Unique Agriculture Area
Details:		

Is the subject site **regulated by another agency?**

<input checked="" type="checkbox"/> No	<input type="checkbox"/> NPCA	<input type="checkbox"/> MECP	<input type="checkbox"/> MNRF	<input type="checkbox"/> NEC	<input type="checkbox"/> Other Please Specify:
Details:					

Was a Site Visit Conducted?

Yes Date: June 18, 2020
 No Staff Member: L. Karlewicz
 Details: _____

Ecological Land Classification (ELC) Vegetation Communities identified on Mapping:

FOD

Natural Heritage features identified or likely to exist:

Environmental Protection Area (EPA)

	Feature	Located On and/or Adjacent Subject Property	Details
<input type="checkbox"/>	Provincially Significant Wetland (PSW)	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Name:
<input type="checkbox"/>	Provincially Significant Life Science Area of Natural and Scientific Interest (ANSI)	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Name:
<input checked="" type="checkbox"/>	Significant Habitat of Threatened or Endangered Species	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input checked="" type="checkbox"/> Both	Species: Potential
<input type="checkbox"/>	Key Natural Heritage features within the Greenbelt Natural Heritage System	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Feature:

Environmental Conservation Area (ECA)

	Feature	Located On and/or Adjacent Subject Property	Details
<input checked="" type="checkbox"/>	Significant Woodlands	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input checked="" type="checkbox"/> Both	Criteria: <input type="checkbox"/> Significant Wildlife Habitat <input type="checkbox"/> ANSI <input type="checkbox"/> Other <input type="checkbox"/> Environmentally Sensitive Area <input checked="" type="checkbox"/> Interior Habitat <input type="checkbox"/> Old Growth <input type="checkbox"/> Rare Species <input checked="" type="checkbox"/> Size: <input type="checkbox"/> Water <input type="checkbox"/> Wetland
<input checked="" type="checkbox"/>	Significant Wildlife Habitat	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input checked="" type="checkbox"/> Both	Details: Potential
<input checked="" type="checkbox"/>	Significant Habitat of Species of Concern	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input checked="" type="checkbox"/> Both	Species: Potential
<input type="checkbox"/>	Significant Valleylands	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Details:
<input type="checkbox"/>	Other Evaluated Wetland (<i>Non-Provincially Significant</i>)	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Name:

<input type="checkbox"/>	Regionally Significant Life Science ANSI	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Name:
<input type="checkbox"/>	Publicly Owned Conservation Lands	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Details:
<input type="checkbox"/>	<input type="checkbox"/> Savannah <input type="checkbox"/> Tallgrass Prairie <input type="checkbox"/> Alvar <input type="checkbox"/> Dune	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Details:
<input type="checkbox"/>	Regional Local Amendment	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Details:

Fish Habitat

	Feature	Located On and/or Adjacent Subject Property	Details
<input type="checkbox"/>	Fish Habitat <input type="checkbox"/> Reach (Watercourse) <input type="checkbox"/> Area (Pond/Lake)	<input type="checkbox"/> On <input type="checkbox"/> Adjacent <input type="checkbox"/> Both	Fish Habitat Classification: (identified by MNRF) <input type="checkbox"/> 1: Critical <input type="checkbox"/> 2: Important <input type="checkbox"/> 3: Marginal Details:

Candidate Significant Wildlife Habitat (Study must determine presence/absence)

Seasonal Concentration Areas of Animals:

<input type="checkbox"/> Waterfowl Stopover and Staging Areas (Terrestrial and Aquatic)	<input type="checkbox"/> Colonially Nesting Bird Breeding Habitat (Bank and Cliff/ Tree/ Shrub/ Ground)	<input type="checkbox"/> Reptile Hibernacula
<input type="checkbox"/> Shorebird Migratory Stopover Area	<input type="checkbox"/> Turtle Wintering Area	<input type="checkbox"/> Deer Winter Congregation Area
<input type="checkbox"/> Raptor Wintering Area	<input type="checkbox"/> Bat Hibernacula	<input type="checkbox"/> Deer Yarding Area
<input type="checkbox"/> Landbird Migratory Stopover Area	<input checked="" type="checkbox"/> Bat Maternity Colonies	
<input type="checkbox"/> Migratory Butterfly Stopover Area	<input type="checkbox"/> Bat Migratory Stopover Area	

Rare Vegetation Communities:

<input type="checkbox"/> Cliff and Talus Slope	<input type="checkbox"/> Old Growth Forest	<input type="checkbox"/> Other
<input type="checkbox"/> Sand Barren	<input type="checkbox"/> Savannah	
<input type="checkbox"/> Alvar	<input type="checkbox"/> Tallgrass Prairie	

Specialized Habitat for Wildlife:

<input type="checkbox"/> Waterfowl Nesting Area	<input type="checkbox"/> Woodland Raptor Nesting Habitat	<input type="checkbox"/> Seeps and Springs
<input type="checkbox"/> Bald Eagle and Osprey Nesting, Foraging, Perching Habitat	<input type="checkbox"/> Turtle Nesting Areas	<input type="checkbox"/> Amphibian Breeding Habitat – Woodland and Wetland

Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

<input type="checkbox"/> Marsh Bird Breeding Habitat	<input type="checkbox"/> Shrub/Early Successional Bird Breeding Habitat	<input checked="" type="checkbox"/> Special Concern and Rare Wildlife Species
<input type="checkbox"/> Open Country Bird Breeding Habitat	<input type="checkbox"/> Terrestrial Crayfish	<input type="checkbox"/>

Animal Movement Corridors

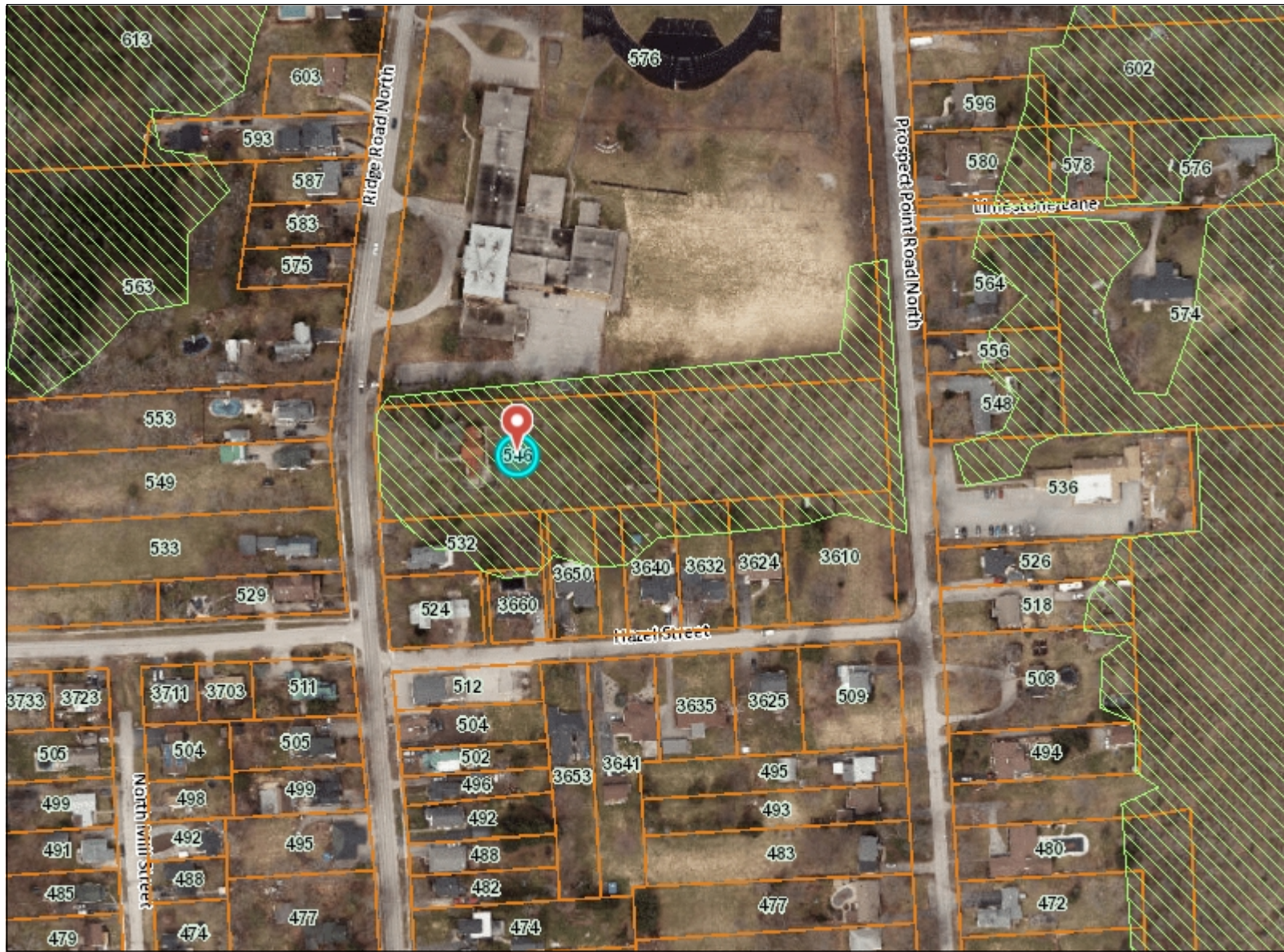
<input type="checkbox"/> Amphibian Movement Corridors	<input type="checkbox"/> Bat Migratory Stopover Area	<input type="checkbox"/> Deer Movement Corridors
---	--	--

Has the property been identified as a Groundwater Protection Area (HVA)?

- Yes
- No

Details: _____

Additional Comments/Details:



Legend

- Fish Habitat Reaches**
 - 'Critical' Type 1
 - 'Important' Type 2
 - 'Marginal' Type 3
- MNR Evaluated Wetlands**
 - Non-Provincially Significant Wetland
 - Provincially Significant Wetland
- NRVIS ANSI**
 - Provincial
 - Regional
- Contemporary Mapping of Water**
 - Flow
 - Shoreline
 - Shoreline/Other
 - Other
 - LAM Stormwater
- Address Points**
 - CNH - Fish Habitat
 - CNH - Municipal Drain
 - CNH - Earth Science ANSI
 - EPA: Greenbelt NHS
 - EPA: Provincial Life ANSI
 - EPA: Provincially Significant W
 - EPA Other Greenbelt NHS Key
 - ECA: Public Conservation Lan
 - ECA: Other Evaluated Wetlands



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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. This map is not to be used for navigation.



Notes

Required Field Surveys

(Any relevant information gathered from existing studies conducted within the last 5 years should be discussed to determine whether they are suitable to replace some of the requirements below)

	Field Surveys	General Timing Window	Protocol	Notes
<input checked="" type="checkbox"/>	Ecological Land Classification (ELC) mapping, including soils	Spring to Fall (i.e., generally May to October)	Ecological Land Classification for Southern Ontario (Lee et al., 1998)	Undertake ecological land classification down to eco-element (vegetation type).
<input checked="" type="checkbox"/>	Botanical Inventory (floral species list)	<input type="checkbox"/> Single Season	Systematic searches	Must be completed for each ELC community, with particular attention to presence/absence and habitat for rare (local and S1-S3) species and SAR.
<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/> Two Season (Spring/Summer and Fall)		
<input type="checkbox"/>		<input type="checkbox"/> Three Season (Spring/Summer/Fall)		
<input type="checkbox"/>		<input type="checkbox"/> Other		
<input checked="" type="checkbox"/>	Breeding Birds	<ul style="list-style-type: none"> Between May 24th and July 10th; Two surveys spaced 10 days apart; Anytime between dawn and 5 hours after dawn. 	Ontario Breeding Bird Atlas – Guide for Participants (2001)	<ul style="list-style-type: none"> Counts should <i>not</i> be done if it is raining, there is thick fog, or if winds are greater than 19km/hr; If unseasonably warm or cold conditions are encountered in the spring, survey dates may need to be adjusted.

<input type="checkbox"/>	<p>Amphibians: Frogs and Toads</p>	<p>Three rounds of surveys between the following dates at least 15 days apart:</p> <ul style="list-style-type: none"> ➤ April 15th – April 30th (when night-time air temp exceeds 5°C) ➤ May 15th – May 30th (when night-time air temp exceeds 10°C) ➤ June 15th – June 30th (when night-time air temp exceeds 17°C) 	<p>Marsh Monitoring Program Participant’s Handbook for Surveying Amphibians (Environment Canada, 2008)</p>	<ul style="list-style-type: none"> • Dates provided as a guideline, as air temperature and lack of wind are the most important variables; • If unseasonably warm or cold conditions are encountered in the spring, survey dates may need to be adjusted; • Favourable conditions consist of nights that are damp, foggy or have light rain falling. Persistent or heavy rainfall and nights with strong winds are to be avoided; • Surveys can begin half hour after sunset and end before midnight; • Each station is surveyed for three minutes; • Additional amphibian breeding habitat surveys may be required based on the results of the calling surveys.
<input checked="" type="checkbox"/>	<p>Bats</p>	<p>Spring, Fall or Winter (i.e., both leaf-off and leaf-on periods)</p>	<p>Criteria from the <i>Significant Wildlife Technical Guide (MNRF 2000)</i> in conjunction with methods outlined by MNRF Guelph District (<i>Recommended Approach for Surveying Buildings and Survey method for SAR Bats within Treed Habitats – Please contact MECP for protocols and field data sheets</i>)</p>	<ul style="list-style-type: none"> • Surveys to identify potentially suitable habitat should be completed prior to June; • If suitable maternity roost habitat is identified, separate acoustic surveys in the month of June may be recommended by MECP; • Please contact the MECP for protocols, field data sheets, and guidance.

<input type="checkbox"/>	Deer	Variable depending on survey effort	<ul style="list-style-type: none"> • Some information pertaining to the habitat specification of winter deer yards is available in the <i>Forest Management Guidelines for the Provisions of White-tailed Deer Habitat</i>; • More information pertaining to protocols that can be used to monitor deer populations is available in the <i>Wildlife Monitoring Programs and Inventory Techniques for Ontario</i>. 	<ul style="list-style-type: none"> • Correspondence with the MNRF is required in order to confirm survey protocols and details on the evaluation of winter deer yards; • To confirm the presence of deer migration corridors, transects can be completed in order to evaluate the use of habitat in relation to a study area.
<input type="checkbox"/>	Meander Belt Study	Variable	Meander Belt Width Delineation Protocol (Toronto and Region Conservation Authority, Revised 2004)	
<input type="checkbox"/>	Migratory Bird Survey	Spring Surveys (March to May) and Fall Surveys (August to October)	Bird and Bird Habitats: Guidelines for Wind Power Projects (MNRF, 2011)	

<input type="checkbox"/>	Fisheries Assessment	<input type="checkbox"/> Headwater Drainage Features Assessment	Evaluation, Classification and Management of Headwater Drainage Features Guidelines (CVC & TRCA, 2013)	<ul style="list-style-type: none"> Habitat assessments follow the methods outlines in the OSAP Protocol; Aquatic habitat characterization should identify potential baseflow sources, barriers to fish migration and general habitat quality; Physical stream measurements should be identified (width, height, length); Identify any evidence of upwelling or groundwater concentration (may require a late fall/early winter site visit); Fisheries inventories should be completed in the spring to ensure any fish usage of intermittent or ephemeral systems is identified. Inventories of permanent features may occur throughout the spring and summer. Habitat assessments and detailed habitat mapping should be completed during snow/ice free conditions; Surveys should be completed within spring and fall, as these seasons capture the most diverse community assemblages.
		<input type="checkbox"/> Habitat Characterization	Ontario Stream Assessment Protocol – Version 10.0 (Ontario, 2017); Environmental Guide for Fish and Fish Habitat (MTO, 2009)	
		<input type="checkbox"/> Fisheries Assessment	Ontario Stream Assessment Protocol – Version 10.0 (Ontario, 2017)	
<input type="checkbox"/>	Raptor Nests	Between March 23 rd and April 23 rd , prior to “leaf out”	Forest Raptors & Their Nests in Central Ontario: A guide to Stick Nests & Their Users (Ontario, 1998)	<ul style="list-style-type: none"> Surveys should consist of a thorough investigation of potentially suitable habitat searching for active or inactive stick nests and evidence of raptor activity.
<input checked="" type="checkbox"/>	Species at Risk Screening	Variable	<input type="checkbox"/> DFO <input checked="" type="checkbox"/> MECP	<ul style="list-style-type: none"> Contact applicable agencies for survey requirements. All agency correspondence must be included in the EIS.

☐	Marsh Birds	<ul style="list-style-type: none"> • Between May 20th and July 5th; • Two surveys spaced 10 days apart; • Morning or Evening, must remain consistent for both visits; • Morning surveys can begin 30 min before sunrise and end no later than 10 am; Evening surveys can begin no earlier than 4 hours before sunset and must be completed by dark. 	Marsh Monitoring Participant's Handbook for Surveying Marsh Birds (Environment Canada, 2008)	<ul style="list-style-type: none"> • Each station is surveyed for 15 minutes; • Surveys should be undertaken in weather that is favourable for surveying birds: <i>good visibility, warm temperatures (at least 16°C), no precipitation and little or no wind.</i>
☐	Water Balance	Variable	Wetland Water Balance Monitoring Protocol (Toronto and Region Conservation Authority, 2016)	
☐	Wetland Evaluation	Variable	Ontario Wetland Evaluation System - Southern Manual (Ontario, 2013)	Any proposed refinements to Provincially Significant Wetland boundaries require approval from the MNRF. Please include all correspondence as an appendix in the EIS.
☐	Wildlife Movement Survey (e.g. Road Mortality)	Variable	Environmental Guide for Mitigating Road Impacts to Wildlife (MTO, 2017)	

<input type="checkbox"/>	Salamanders	Early Spring – between late-March to mid-April, immediately following snow melt and/or the first spring rains	Wildlife Monitoring Programs and Inventory Techniques for Ontario	<p>Surveys can consist of one or more of the following three techniques:</p> <ul style="list-style-type: none"> • Visual Surveys completed in the evenings during the period specified. A visual inspection of the habitat, including carefully overturning and replacing potential cover can be included as part of this survey. Egg mass surveys can also be completed during daylight hours; • Fine mesh dipnets can be used to catch amphibians. Capture occurs by sweeping or churning the water. <i>Correspondence with the MNRF/MECP prior to survey commencement recommended as permits may be required;</i> • Pitfall or funnel traps, often in association with drift fences, are the most common way of trapping terrestrial amphibians. Traps should be checked daily, before noon to minimize mortality. <i>Correspondence with the MNRF/MECP prior to survey commencement recommended as permits may be required.</i>
<input checked="" type="checkbox"/>	Tree Saving Plan	Variable	Section 1.36 of the Niagara Region’s Tree and Forest Conservation By-law (By-law No. 30-2008)	<ul style="list-style-type: none"> • All requirements listed in the identified protocol must be included for a Tree Saving Plan to be deemed complete.

<input checked="" type="checkbox"/>	Snakes	<ul style="list-style-type: none"> • Spring, Summer and Fall; • most likely to be observed under cover objects in the morning after cool evenings when they seek out their area and try and maintain their body temperatures. 	<ul style="list-style-type: none"> • Survey Protocol for Ontario’s Species at Risk Snakes (MNRF, 2016) and/or Milksnake Protocol (MNRF, 2013) is recommended for species that are not at risk; • Wildlife Monitoring Programs and Inventory Techniques for Ontario. 	<ul style="list-style-type: none"> • Visual surveys should be completed by overturning all objects that provide cover (i.e., large branches, logs, rocks, etc.). Objects should be returned, to the extent possible, to their original positions; • Roadside surveys can also be used; • Artificial cover boards can be installed recognizing that it takes time for the boards to be used as habitat; • Contact the MECP for protocols related to SAR snakes.
<input type="checkbox"/>	Turtles	<ul style="list-style-type: none"> • Early Spring • Between 8 am and 5 pm on sunny days when the air temperature is at least 10 °C; • Between 8 am and 5 pm on partially cloudy or overcast days when air temperatures are greater than 15 °C, and greater than water temperatures 	<ul style="list-style-type: none"> • Wildlife Monitoring Programs and Inventory Techniques for Ontario (MNRF, 1997) • Occurrence Survey Protocol for Blanding’s Turtle in Ontario (MNRF, 2013) 	<ul style="list-style-type: none"> • Visual surveys of ponds or wetlands; • Searching for basking turtles is the most effective method of confirming presence of turtles within suitable habitat; • In open water wetlands, surveys can be completed from the shoreline using binoculars to scan the perimeter of the shoreline and potential basking sites; • Basking surveys should be surveyed from the sunlit side as this is the side that turtles are most likely to be located; • In wetlands that lack large pools of open water, surveys should consist of using evenly spaced transects or aerial surveys to cover all areas of the wetland; and • Surveying roads with sandy and gravelly shoulders near wetlands during the late May to early July nesting season may also be undertaken.

What must be included in an EIS?

The EIS should focus on the significant natural heritage features and/or hydrological features and functions for which the area was designated, and any additional natural heritage or hydrological features identified on site. It should identify, describe and delineate these features and their ecological and hydrological functions in order to avoid impacts to them. However, it should also address the site's setting in the broader landscape and its role in, and linkages to, broader natural heritage and hydrologic systems. It should assess any unavoidable impacts of the proposed development, indicating the magnitude and implications of those impacts, recommend mitigation measures to reduce negative impacts, identify opportunities for restoration or enhancement of natural heritage features which may also help offset negative impacts, recommend further study, monitoring, and provide recommendations on proceeding with the proposed development, including conditions to be attached to any approvals.

The key components of an EIS include:

- A biophysical and/or hydrologic inventory and analysis, including a description and analysis of the aquatic and terrestrial settings, as well as hydrological conditions such as surface and groundwater features and functions;
- A description of the ecological and hydrological functions served and required by the natural heritage features and/or hydrologic features;
- A description of the linkages between and among natural features and areas, surface water features and ground water features both on the site and in the surrounding area;
- A description of the proposed undertaking;
- Identification of constraints and opportunities;
- Mapping;
- Identification and analysis of potential direct, indirect and cumulative impacts from the proposed activities on the ecological and/or hydrological functions identified;
- The development of appropriate development modifications, recommendations, mitigation measures and enhancement opportunities;
- An assessment of the significance of the cumulative net environmental impacts expected over the long term after these measures have been implemented;
- The recommendation and description of monitoring needs and programs; and
- Recommendations regarding possible residual impacts, including recommendations for proceeding with the development as proposed or modified.

Steps involved in the environmental impact study process:

Step 1: Determining EIS Requirements

1.1 Initial Screening to Determine if an EIS is Required, or if EIS Requirement can be Waived

1.2 Pre-consultation and Scoping (This EIS Scoping Checklist satisfies this step)

Step 2: Terms of Reference (Next Step!)

Step 3: Constraints Analysis

Step 4: Ecological Impact Assessment

Step 5: Recommendations and Conclusion

Please refer to the Niagara Region's Environmental Impact Study Guidelines for a detailed description of each step.

Attachment B

Attachment B

SAR Screening

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Habitat suitability and Proposed Surveys
Birds	Acadian Flycatcher <i>Empidonax virescens</i>	END	In Ontario, the Acadian Flycatcher primarily lives in the warmer climate of southern Ontario's Carolinian forests. It needs large, undisturbed forests, often more than 40 hectares in size. It is typically found in mature, shady forests with ravines, or in forested swamps with lots of maple and beech trees. The nest is placed near the tip of a lower limb on a tree, and is loosely woven, with strands of plant material hanging down.	In Canada, the Acadian Flycatcher nests only in southwestern Ontario, mostly in large forests and forested ravines near the shore of Lake Erie. It has also been known to nest at a few sites in the Greater Toronto Area but this is unusual. The Acadian Flycatcher population in Ontario is very small, with 25 to 75 breeding pairs recorded in 2010.	Breeding Birds
Birds	Bank Swallow <i>Riparia riparia</i>	THR	Bank Swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs.	The Bank Swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron).	No suitable habitat
Birds	Barn Owl <i>Tyto alba</i>	END	In southern Ontario, this adaptable owl nests and roosts in barns and abandoned buildings. It may also use natural cavities in trees or holes in cliff faces, as it did before the arrival of Europeans in North America. It lives year round at its nest site and hunts for rodents over orchards, and grasslands such as farmlands, fallow fields and meadows.	In Canada, Barn Owl breeds only in extreme southern Ontario and British Columbia. The Barn Owl cannot tolerate severe winter temperatures, and southern Ontario is the northern limit of its range. Breeding sites in Ontario seem to be restricted to areas with the moderating effects of the Great Lakes (within 50 kilometres of the lakes). The Barn Owl is extirpated (no longer found) in Michigan and has declined in other parts of the northeastern and midwestern parts of the United States. Today, there are fewer than five pairs of Barn Owls in Ontario.	No suitable habitat
Birds	Barn Swallow <i>Hirundo rustica</i>	THR	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces.	The Barn Swallow may be found throughout southern Ontario and can range as far north as Hudson Bay, wherever suitable locations for nests exist.	No suitable habitat
Birds	Bobolink <i>Dolichonyx oryzivorus</i>	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping.	The Bobolink breeds across North America. In Ontario, it is widely distributed throughout most of the province south of the boreal forest, although it may be found in the north where suitable habitat exists.	No suitable habitat
Birds	Cerulean Warbler <i>Dendroica cerulea</i>	THR	Cerulean Warblers spend their summers (breeding seasons) in mature, deciduous forests with large, tall trees and an open under storey. In late summer, they begin their long migration to wintering grounds in the Andes Mountains in South America.	In Canada the Cerulean Warbler's breeding range extends from extreme southwestern Quebec to southern Ontario. In southern Ontario, populations appear to be separated into two distinct bands: one from southern Lake Huron to western Lake Ontario, and further north, the other from the Bruce Peninsula and Georgian Bay area to the Ottawa River.	Breeding Bird Surveys
Birds	Chimney Swift <i>Chaetura pelagica</i>	THR	Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.	The Chimney Swift breeds in eastern North America, possibly as far north as southern Newfoundland. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel. It winters in northwestern South America.	Breeding Bird Surveys

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Habitat suitability and Proposed Surveys
Birds	Eastern Meadowlark <i>Sturnella magna</i>	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.	No suitable habitat
Birds	Eastern Whip-poor-will <i>Caprimulgus vociferus</i>	THR	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. It lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators.	The Eastern Whip-poor-will's breeding range includes two widely separate areas. It breeds throughout much of eastern North America, reaching as far north as southern Canada and also from the southwest United States to Honduras. In Canada, the Whip-poor-will can be found from east-central Saskatchewan to central Nova Scotia and in Ontario they breed as far north as the shore of Lake Superior.	No suitable habitat
Birds	Eastern Wood-Pewee <i>Contopus virens</i>	SC	The Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation.	The eastern wood-pewee is found across most of southern and central Ontario, and in northern Ontario as far north as Red Lake, Lake Nipigon and Timmins.	Breeding bird surveys
Birds	Grasshopper Sparrow	SC	It lives in open grassland areas with well-drained, sandy soil. It will also nest in hayfields and pasture, as well as alvars, prairies and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated. Its nests are well-hidden in the field and woven from grasses in a small cup-like shape.	The Grasshopper Sparrow can be found throughout southern Ontario, but only occasionally on the Canadian Shield. It is most common where grasslands, hay or pasture dominate the landscape.	No suitable habitat
Birds	Henslow's Sparrow <i>Ammodramus henslowii</i>	END	In Ontario, the Henslow's Sparrow lives in open fields with tall grasses, flowering plants, and a few scattered shrubs. It has also been found in abandoned farm fields, pastures, and wet meadows. It tends to avoid fields that have been grazed or are crowded with trees and shrubs. It prefers extensive, dense, tall grasslands where it can more easily conceal its small ground nest.	The Henslow's Sparrow breeds in the northeastern and east-central United States and reaches its northeastern limit in Ontario. It was once fairly common in scattered areas of suitable habitat south of the Canadian Shield. However, steep declines since the 1960s have all but wiped this bird out as a breeding species in Ontario. A few are still seen each spring at migration hotspots such as Point Pelee National Park, and a few may breed at selected locations.	No suitable habitat
Birds	Least Bittern <i>Ixobrychus exilis</i>	THR	In Ontario, the Least Bittern is found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails. The nests are almost always built near open water, which is needed for foraging. This species eats mostly frogs, small fish, and aquatic insects.	In Ontario, the Least Bittern is mostly found south of the Canadian Shield, especially in the central and eastern part of the province. Small numbers also breed occasionally in northwest Ontario. This species has disappeared from much of its former range, especially in southwestern Ontario, where wetland loss has been most severe. In winter, Least Bitterns migrate to the southern United States, Mexico and Central America.	No suitable habitat
Birds	Wood Thrush <i>Hylocichla mustelina</i>	SC	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests, but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech.	The wood thrush is found all across southern Ontario. It is also found, but less common, along the north shore of Lake Huron, as far west as the southeastern tip of Lake Superior. There is a very small population near Lake of the Woods in northwestern Ontario, and there have been scattered sightings in the mixed forest of northern Ontario.	Breeding bird surveys
Birds	Yellow-breasted Chat <i>Icteria virens</i>	END	The Yellow-breasted Chat lives in thickets and scrub, especially locations where clearings have become overgrown. These birds spend their winters in coastal marshes.	In Canada, it lives in southern British Columbia, the Prairies, and southwestern Ontario, where it is concentrated in Point Pelee National Park and Pelee Island in Lake Erie.	No suitable habitat
Mammals	Eastern Small-footed Myotis (Bat) <i>Myotis leibii</i>	END	In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. These bats often change their roosting locations every day. At night, they hunt for insects to eat, including beetles, mosquitos, moths, and flies. In the winter, these bats hibernate, most often in caves and abandoned mines. They seem to choose colder and drier sites than similar bats and will return to the same spot each year.	The Eastern Small-footed bat has been found from south of Georgian Bay to Lake Erie and east to the Pembroke area. There are also records from the Bruce Peninsula, the Espanola area, and Lake Superior Provincial Park. Most documented sightings are of bats in their winter hibernation sites.	Survey Protocol for Species at Risk Bats within Treed Habitats (MNR 2017).

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Habitat suitability and Proposed Surveys
Mammals	Little Brown Myotis (Bat) <i>Myotis lucifugus</i>	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through very tiny spaces (as small as six millimetres across) and this is how they access many roosting areas. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. This species can typically be associated with any community where suitable roosting (i.e. cavity trees, houses, abandoned buildings, barns, etc.) habitat is available.	The Little Brown Myotis is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Outside Ontario, this bat is found across Canada (except in Nunavut) and most of the United States.	Survey Protocol for Species at Risk Bats within Treed Habitats (MNR 2017).
Mammals	Northern Myotis (Bat) <i>Myotis septentrionalis</i>	END	Northern Myotis bats are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines.	The Northern Myotis is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon.	Survey Protocol for Species at Risk Bats within Treed Habitats (MNR 2017).
Mammals	Tricoloured Bat <i>Perimyotis subflavus</i>	END	Tricoloured Bat inhabits a variety of forested communities, and will roost older forests and barns (or other structures). Foraging habitats include areas over water and streams. They hibernate in cave where they typically roost independently rather than in groups.	Tricoloured Bat is found in southern Ontario, where its northern limit is in proximity to Sudbury. Due to its rarity, their distribution is scattered.	Survey Protocol for Species at Risk Bats within Treed Habitats (MNR 2017).
Plants	American Columbo <i>Frasera caroliniensis</i>	END	American Columbo grows primarily in open deciduous forests, and to a lesser extent along open forest edges and dense shrub thickets in Ontario. It is most commonly found in dry upland woods, but in parts of its range it has been found in grasslands, moist woods and swampy habitats.	American Columbo is widely distributed in eastern North America, ranging from southern Ontario west to Illinois and south to eastern Oklahoma, northern Mississippi, and western South Carolina. In Canada, American Columbo is only found in the Carolinian forest region of southern Ontario.	Vegetation surveys
Plants	American Ginseng <i>Panax quinquefolius</i>	END	In Ontario, American Ginseng typically grows in rich, moist, but well-drained, and relatively mature, deciduous woods dominated by Sugar Maple (<i>Acer saccharum</i>), White Ash (<i>Fraxinus americana</i>) and American Basswood (<i>Tilia americana</i>). It usually grows in deep, nutrient rich soil over limestone or marble bedrock.	American Ginseng ranges from Louisiana and Georgia north to New England and Minnesota. In Canada, it is found in southwestern Quebec and southern Ontario.	Vegetation surveys
Plants	Butternut <i>Juglans cinerea</i>	END	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges.	Butternut can be found throughout central and eastern North America. In Canada, Butternut occurs in Ontario, Quebec and New Brunswick. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield.	Vegetation surveys
Plants	Cherry Birch <i>Betula lenta</i>	END	The Cherry Birch is a medium-sized deciduous tree that grows up to 20 metres tall. The leaves are oval-shaped with a finely toothed edge and a slender tip. In Ontario, the Cherry Birch is found on moist, well-drained clay loam soil over limestone bedrock with White Oak, Red Oak, Eastern Hemlock, Sugar Maple and other deciduous trees.	The single population of Cherry Birch in Canada is isolated at two sites on the Niagara peninsula in southern Ontario. A survey of the two sites in 2010, found only 17 trees out of the 50 trees that were originally identified in 1967.	Vegetation surveys
Plants	Cucumber Tree <i>Magnolia acuminata</i>	END		The cucumber tree is rare in Ontario, confined to only a few locations in Norfolk County and the Niagara Region. It is the only species of magnolia native to Canada.	Vegetation surveys
Plants	Eastern Flowering Dogwood <i>Cornus florida</i>	END	Eastern Flowering Dogwood grows under taller trees in mid-age to mature deciduous or mixed forests. It most commonly grows on floodplains, slopes, bluffs and in ravines, and is also sometimes found along roadsides and fencerows.	In Canada, it can only be found in southern Ontario in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie).	Vegetation surveys
Plants	Red Mulberry <i>Morus rubra</i>	END	In Ontario, Red Mulberry grows in moist, forested habitats and on both sandy and limestone-based loamy soils. It is often found in areas where the forest canopy is quite open and allows lots of sunlight to reach the forest floor, but it will tolerate some shade.	Red Mulberry occurs in eastern North American forests. In Canada, it is only found in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie) near rivers, the shores of Lake Erie, and the slopes of the Niagara Escarpment.	Vegetation surveys

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	Habitat suitability and Proposed Surveys
Plants	Round-leaved Greenbrier <i>Smilax rotundifolia</i>	THR	In Ontario, Round-leaved greenbrier is found mainly in the warmer climate of the Carolinian Forest. It prefers open moist to wet woodlands, often growing on sandy soil.	In Ontario, Round-leaved greenbrier is found mainly in the warmer climate of the Carolinian Forest. It prefers open moist to wet woodlands, often growing on sandy soil.	Vegetation surveys
Plants	Swamp Rose-mallow <i>Hibiscus moscheutos</i>	SC	In Ontario, Swamp Rose-mallow is restricted to shoreline marshes, in the Carolinian and Great Lakes - St. Lawrence forest regions, associated with lakes Erie, Ontario or St. Clair. Swamp Rose-mallow is most commonly found in deep-water cattail marshes and in meadow marshes. It reaches its greatest numbers in dyked wetlands, where competition from other plants is controlled and the open habitat is maintained by periodic flooding. It is also found in open wet woods, thickets, spoil banks, and drainage ditches.	The Swamp Rose-mallow range in North America extends from the lower Great Lakes region south to Florida and west to New Mexico. It may be adventive (introduced and locally common) farther west. In Ontario, it has been found at approximately 60 to 70 sites and is believed to currently occur at about 50 sites. Most sites are in coastal marshes of Lake Erie and Lake St. Clair. However, in the last 15 years, plants have colonized sites on the shores of Lake Ontario, expanding the distribution northwards. The species has also been introduced to Europe where it is locally common.	No suitable habitat
Plants	Virginia Mallow <i>Sida hermaphrodita</i>	END	Virginia mallow grows in riparian habitats that are flooded in most years. It benefits from this moist environment and is usually found in sunny or partly shaded areas with sandy soils. Loose sandy or rocky soils of scoured riversides and floodplains, and disturbed areas along roadsides and railroad banks are its preferred habitats.	Virginia mallow is found from the Appalachian Mountains to the Mississippi and Atlantic watersheds. In Ontario, it is found in only two sites, in Haldimand County, and the Niagara Region.	Not suitable habitat
Plants	White Wood Aster <i>Eurybia divaricata</i>	THR	White wood aster is a perennial plant that usually grows 30 to 90 centimetres tall. Its leaves are deeply and irregularly serrated: the lower leaves are heart-shaped while the upper leaves are elongated. White wood aster grows in open, dry deciduous forests that are dominated by Sugar maple and American beech trees. It is often found mixed in with other asters. The plant does best in well-drained soils and it may prefer a low level of disturbance, as it has been found to grow along trails. It does well in partial to full shade.	In Canada, it is restricted to a relatively small number of sites in the Niagara region and a few woodlots in southwestern Quebec.	Vegetation surveys
Reptiles	Blanding's Turtle <i>Emydoidea blandingii</i>	THR	Blanding's Turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April.	The Blanding's Turtle is found in and around the Great Lakes Basin, with isolated populations elsewhere in the United States and Canada. In Canada, the Blanding's Turtle is separated into the Great Lakes-St. Lawrence population and the Nova Scotia population. Blanding's Turtles can be found throughout southern, central and eastern Ontario.	No suitable habitat.
Reptiles	Eastern Hog-nosed Snake <i>Heterodon platirhinos</i>	THR	The Eastern Hog-nosed Snake specializes in hunting and eating toads, and usually only occurs where toads can be found. Eastern Hog-nosed Snakes prefer sandy, well-drained habitats such as beaches and dry forests where they can lay their eggs and hibernate. They use their up-turned snout to dig burrows below the frost line in the sand where eggs are deposited.	The Eastern Hog-nosed Snake is only found in eastern North America, with about ten per cent of its range occurring in Canada. The Canadian population is limited to Ontario where it can be found in two areas: The Carolinian Region and Great Lakes-St. Lawrence Region.	Habitat not suitable. Records for this species are associated with Point Abino and Pleasant Beech where sandy soils are prevalent.
Reptiles	Snapping turtle <i>Chelydra serpentina</i>	SC	Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	The Snapping Turtle's range extends from Ecuador to Canada. In Canada this turtle can be found from Saskatchewan to Nova Scotia. It is primarily limited to the southern part of Ontario. The Snapping Turtle's range is contracting.	No suitable habitat.

Attachment C

Attachment C

Significant Wildlife Habitat Assessment

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Seasonal Concentration Areas of Animals		
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water or fields utilized by Tundra Swans during Spring (mid March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless used by Tundra Swans in the Long Point, Rondeau, Lk. St. Clair, Grand Bend and Pt. Pelee areas.	No Suitable habitat was not observed within the subject property
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, costal inlets and watercourses that are used as stopover areas during migration. These habitat typically have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water).	No Suitable habitat was not observed within the subject property
Shorebird Migratory Stopover Area	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH	No Suitable habitat was not observed within the subject property
Raptor Winter Area	A combination of fields and woodlands that provide roosting, foraging and resting habitat for wintering raptors. These sites need to be larger than 20 ha in size, of which at least 15 ha needs to be comprised of idle/fallow or lightly grazed field/meadow.	No Suitable habitat was not observed within the subject property
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts.	No Suitable habitat was not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and buildings. Deciduous and mixed forest communities with greater than 10/ha of larger diameter (> 25 cm dbh) wildlife trees.	Yes Potentially suitable habitat is associated with the woodlands
Turtle Winter Areas	Over-wintering sites for turtles are typically in the same area as their core habitat. Waterbodies have to be deep enough to not freeze and have soft mud substrates.	No Suitable habitat was not observed within the subject property
Snake Hibernaculum	Snakes hibernate in sites located below frost lines in burrows, rock crevices and other natural locations. Rock piles, slopes, stones fences and crumbling foundations can also be used by hibernating snakes. Areas of broken and fissures rocks can also provide access to sites below the frost line.	No Suitable habitat was not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.	No Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat Breeding Habitat (Tree/Shrubs)	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent vegetation may also be used.	No Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns occur on rocky islands or peninsulas within a lake or larger river	No Suitable habitat was not observed within the subject property
Migratory Butterfly Stopover Areas	Cultural meadow, savannah and thicket communities that are within 5 km of Lake Ontario, at least 10 ha in size and contain a combination of field and forest habitat	No Suitable habitat was not observed within the subject property
Landbird Migratory Stopover Areas	Woodlands that are at least 10 ha in size and within 5 km of lake Ontario.	No Suitable habitat not observed within the subject property
Deer Yarding Areas	Deer yarding areas or winter concentration within a mixed or coniferous forest and swamp communities.	No Suitable habitat not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Deer Winter congregation Areas	Deer movement in winter months within eco-region 6E are not constrained by snow depth, however they still congregate in suitable woodlands. These woodlands will typically be larger than 100 ha in size, however woodlands smaller than 100 ha may be considered significant based on MNR assessments.	No Suitable habitat was not observed within the subject property
Rare Vegetation Communities		
Cliffs and Talus Slops	A cliff is a vertical to near vertical bedrock that is greater than 3 m in height. A talus slope is rock rubble at the base of a cliff made up of coarse rocky debris.	No Cliffs or tallus slopes were not observed within the subject property
Sand Barren	Sand barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little to no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah.	No Sand barren was not observed within the subject property
Alvar	Alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil.	No Alvar was not observed within the subject property
Old Growth Forest	Old growth forests are characterized by heavy mortality or turnover of over story trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. Stands must be 30 ha or greater in size with a minimum of 10 ha of interior habitat (interior habitat determined with a 100 m buffer).	No Old growth forest was not observed within the subject property
Savannah	Savannah is a tallgrass prairie habitat that has tree cover between 20 - 60%.	No Savannah habitat was not observed within the subject property
Tallgrass Prairie	Tallgrass Prairie has ground cover that is dominated by prairie grasses. An open tallgrass prairie has less than 25% tree cover.	No Tallgrass Prairie was not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Other Rare Vegetation Communities	Rare vegetation communities may include beaches, fens, forests, marsh, barrens, dunes and swamps, as identified in Appendix M of the Significant Wildlife Habitat Technical Guide.	No Rare vegetation communities were not observed within the subject property
Specialized Habitat for Wildlife		
Waterfowl Nesting Area	Waterfowl nesting areas are upland areas adjacent to marsh, shallow aquatic and swamp habitat. In order to be considered significant these features must extend 120 m from of a wetland in order to deter predators	No Suitable habitat not observed within the subject property
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Nests for these species are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or on structures over water. Osprey nests are usually at the top of a tree, while Bald Eagle nests are typically in super canopy trees.	No No Bald Eagle or Osprey nests were observed within the subject property
Woodland Raptor Nesting Habitat	Woodland raptor habitat can be found in all natural or conifer plantation woodland/forest stands that are greater than 30 ha in size with more than 10 ha of interior forest habitat (interior habitat determined with a 200 m buffer).	No Suitable habitat was not observed within the subject property
Turtle Nesting Areas	Ideal nesting habitat for turtles are close to water and away from roads and sites that are less prone to loss of eggs by predation. These areas are often associated with exposed mineral soil (sand or gravel) areas within 100 m of a marsh, shallow aquatic, bog or fen habitat.	No Suitable habitat was not observed within the subject property
Seeps and Springs	Seeps/springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats.	No Seeps/springs were not observed within the subject property
Amphibian Breeding Habitat (Woodland)	This type of habitat is associated with the presence of a wetland, lake or pond that is within or adjacent (within 120m) of a woodland. Woodlands with permanent ponds or those contain water until mid-July are more likely to be used as breeding habitat.	No Suitable habitat was not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Amphibian Breeding Habitat (Wetlands)	Wetlands and pools that are greater than 500 m ² and are isolated from woodlands (greater than 120 m)	No Suitable habitat was not observed on the subject property.
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)		
Marsh Bird Breeding Habitat	This type of habitat occurs in wetlands with shallow water and emergent aquatic vegetation present	No Suitable habitat was not observed within the subject property
Woodland Area-Sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding. These forests are typically larger mature forest stands or woodlands that are greater than 30 ha in size (interior habitat determined with a 200 m buffer).	No Suitable habitat was not observed within the subject property
Open Country Bird Breeding Habitat	This type of habitat occurs in larger grassland areas (including natural and cultural fields and meadows) that are greater than 30 ha in size. Grasslands that are being actively used for farming (i.e. row cropping, intensive hay, livestock pasturing in the last 5 years) typically do not provide ideal habitat for open country bird species.	No Suitable habitat was not observed within the subject property
Shrub/Early Successional Bird Breeding Habitat	This type of habitat occurs in large field areas succeeding to shrub and thicket habitats that are greater than 10 ha in size.	No Suitable habitat was not observed within the subject property
Terrestrial Crayfish	This type of habitat occurs in meadows and edge of shallow marshes.	No Suitable habitat not observed within the subject property
Special Concern and Rare Wildlife Species	This type of habitat occurs wherever special concern and provincially rare (S1, S2, S3 and SH) plant and animal species occur.	To be determined through wildlife and vegetation surveys

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Animal Movement Corridors		
Amphibian Movement Corridors	This habitat consists of movement corridors between breeding habitat and summer habitat. Corridors may be found in all ecosystems associated with water.	No Suitable habitat was not observed within the subject property

Appendix B

Vascular Plant Species List

Appendix B

Vascular Plant Species List

Scientific Name	Common Name	SARO	SRank	Niagara
<i>Acer platanoides</i>	Norway Maple		SE5	IX
<i>Acer saccharum</i>	Sugar Maple		S5	X
<i>Acer x freemanii</i>	(<i>Acer rubrum</i> X <i>Acer saccharinum</i>)		SNA	hyb
<i>Aesculus hippocastanum</i>	Horse Chestnut		SE2	IU
<i>Alliaria petiolata</i>	Garlic Mustard		SE5	IC
<i>Allium schoenoprasum</i>	Wild Chives		S4	IR
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit		S5	C
<i>Athyrium filix-femina</i>	Common Lady Fern		S5	C
<i>Carex blanda</i>	Woodland Sedge		S5	C
<i>Carex gracillima</i>	Graceful Sedge		S5	C
<i>Carex rosea</i>	Rosy Sedge		S5	C
<i>Carya ovata</i>	Shagbark Hickory		S5	C
<i>Circaea canadensis</i>	Broad-leaved Enchanter's Nightshade		S5	C
<i>Claytonia virginica</i>	Eastern Spring Beauty		S5	C
<i>Convallaria majalis</i>	European Lily-of-the-valley		SE5	IU
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern		S5	C
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane		S5	C
<i>Erythronium americanum</i>	Yellow Trout-lily		S5	C
<i>Euonymus obovatus</i>	Running Strawberry-bush		S4	C
<i>Floerkea proserpinacoides</i>	False Mermaidweed		S4	R
<i>Fraxinus pennsylvanica</i>	Red Ash		S4	C
<i>Galium aparine</i>	Common Bedstraw		S5	C
<i>Geranium robertianum</i>	Herb-Robert		S5	C
<i>Gleditsia triacanthos</i>	Honey Locust		S2?	R
<i>Glyceria striata</i>	Fowl Mannagrass		S5	C
<i>Hesperis matronalis</i>	Dame's Rocket		SE5	IX
<i>Hydrophyllum virginianum</i>	Virginia Waterleaf		S5	C
<i>Impatiens capensis</i>	Spotted Jewelweed		S5	C
<i>Juglans nigra</i>	Black Walnut		S4?	C
<i>Ligustrum vulgare</i>	European Privet		SE5	IC
<i>Lonicera tatarica</i>	Tatarian Honeysuckle		SE5	IC

Scientific Name	Common Name	SARO	SRank	Niagara
<i>Maianthemum racemosum</i>	Large False Solomon's Seal		S5	C
<i>Matteuccia struthiopteris</i>	Ostrich Fern		S5	C
<i>Onoclea sensibilis</i>	Sensitive Fern		S5	C
<i>Parthenocissus vitacea</i>	Thicket Creeper		S5	C
<i>Picea abies</i>	Norway Spruce		SE3	IC
<i>Pilea pumila</i>	Dwarf Clearweed		S5	C
<i>Plantago rugelii</i>	Rugel's Plantain		S5	C
<i>Poa palustris</i>	Fowl Bluegrass		S5	C
<i>Poa pratensis</i>	Kentucky Bluegrass		S5	IC
<i>Polygonatum pubescens</i>	Hairy Solomon's Seal		S5	C
<i>Prunus serotina</i>	Black Cherry		S5	C
<i>Prunus virginiana</i>	Chokecherry		S5	C
<i>Rubus idaeus ssp. strigosus</i>	North American Red Raspberry		S5	C
<i>Rubus occidentalis</i>	Black Raspberry		S5	C
<i>Sanguinaria canadensis</i>	Bloodroot		S5	C
<i>Sanicula marilandica</i>	Maryland Sanicle		S5	C
<i>Scilla siberica</i>	Siberian Squill		SE2	IR
<i>Sicyos angulatus</i>	One-seed Bur Cucumber		S4S5	R
<i>Smilax herbacea</i>	Herbaceous Carrionflower		S4?	C
<i>Solidago altissima</i>	Tall Goldenrod		S5	C
<i>Symphyotrichum lanceolatum</i>	Panicled Aster		S5	C
<i>Taraxacum officinale</i>	Common Dandelion		SE5	IC
<i>Tilia americana</i>	Basswood		S5	C
<i>Trillium erectum</i>	Red Trillium		S5	C
<i>Trillium grandiflorum</i>	White Trillium		S5	C
<i>Viburnum acerifolium</i>	Maple-leaved Viburnum		S5	C
<i>Viola pubescens</i>	Yellow Violet		S5	C
<i>Vitis riparia</i>	Riverbank Grape		S5	C

Appendix C

Breeding Bird Species List

Appendix C

Breeding Bird Species List

Common Name	Scientific Name	Status			Number of Pairs/Territories
		COSEWIC ¹	COSARO ²	S-RANK ³	
Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Threatened	S4	3 - foraging only
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>			S4	1
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			S4	1
Blue Jay	<i>Cyanocitta cristata</i>			S5	1
American Crow	<i>Corvus brachyrhynchos</i>			S5	1
Black-capped Chickadee	<i>Poecile atricapillus</i>			S5	1
House Wren	<i>Troglodytes aedon</i>			S5	2
Carolina Wren	<i>Thryothorus ludovicianus</i>			S4	1
American Robin	<i>Turdus migratorius</i>			S5	3
Gray Catbird	<i>Dumetella carolinensis</i>			S4	1
Cedar Waxwing	<i>Bombycilla cedrorum</i>			S5	1
European Starling	<i>Sturnus vulgaris</i>			SNA	2
Red-eyed Vireo	<i>Vireo olivaceus</i>			S5	1
Mourning Warbler	<i>Geothlypis philadelphia</i>			S4	1
Northern Cardinal	<i>Cardinalis cardinalis</i>			S5	2
Common Grackle	<i>Quiscalus quiscula</i>			S5	2
American Goldfinch	<i>Spinus tristis</i>			S5	1
House Sparrow	<i>Passer domesticus</i>			SNA	2

¹Committee on the Status of Endangered Wildlife in Canada

²Committee on the Status of Species at Risk in Ontario

³Provincial Status: S4 = Apparently Secure, S5=Secure, SNA = Status not applicable (exotic/non-native)

Appendix D

Species at Risk Screening

Appendix D

SAR Screening

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	EIS Findings
Birds	Acadian Flycatcher <i>Empidonax virescens</i>	END	In Ontario, the Acadian Flycatcher primarily lives in the warmer climate of southern Ontario's Carolinian forests. It needs large, undisturbed forests, often more than 40 hectares in size. It is typically found in mature, shady forests with ravines, or in forested swamps with lots of maple and beech trees. The nest is placed near the tip of a lower limb on a tree, and is loosely woven, with strands of plant material hanging down.	In Canada, the Acadian Flycatcher nests only in southwestern Ontario, mostly in large forests and forested ravines near the shore of Lake Erie. It has also been known to nest at a few sites in the Greater Toronto Area but this is unusual. The Acadian Flycatcher population in Ontario is very small, with 25 to 75 breeding pairs recorded in 2010.	Not recorded during breeding bird surveys
Birds	Bank Swallow <i>Riparia riparia</i>	THR	Bank Swallows nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. Many nests are on banks of rivers and lakes, but they are also found in active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs.	The Bank Swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River (which flows into Lake Huron).	No suitable habitat
Birds	Barn Owl <i>Tyto alba</i>	END	In southern Ontario, this adaptable owl nests and roosts in barns and abandoned buildings. It may also use natural cavities in trees or holes in cliff faces, as it did before the arrival of Europeans in North America. It lives year round at its nest site and hunts for rodents over orchards, and grasslands such as farmlands, fallow fields and meadows.	In Canada, Barn Owl breeds only in extreme southern Ontario and British Columbia. The Barn Owl cannot tolerate severe winter temperatures, and southern Ontario is the northern limit of its range. Breeding sites in Ontario seem to be restricted to areas with the moderating effects of the Great Lakes (within 50 kilometres of the lakes). The Barn Owl is extirpated (no longer found) in Michigan and has declined in other parts of the northeastern and midwestern parts of the United States. Today, there are fewer than five pairs of Barn Owls in Ontario.	No suitable habitat
Birds	Barn Swallow <i>Hirundo rustica</i>	THR	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. The species is attracted to open structures that include ledges where they can build their nests, which are often re-used from year to year. They prefer unpainted, rough-cut wood, since the mud does not adhere as well to smooth surfaces.	The Barn Swallow may be found throughout southern Ontario and can range as far north as Hudson Bay, wherever suitable locations for nests exist.	No suitable habitat
Birds	Bobolink <i>Dolichonyx oryzivorus</i>	THR	Historically, Bobolinks lived in North American tallgrass prairie and other open meadows. With the clearing of native prairies, Bobolinks moved to living in hayfields. Bobolinks often build their small nests on the ground in dense grasses. Both parents usually tend to their young, sometimes with a third Bobolink helping.	The Bobolink breeds across North America. In Ontario, it is widely distributed throughout most of the province south of the boreal forest, although it may be found in the north where suitable habitat exists.	No suitable habitat
Birds	Cerulean Warbler <i>Dendroica cerulea</i>	THR	Cerulean Warblers spend their summers (breeding seasons) in mature, deciduous forests with large, tall trees and an open under storey. In late summer, they begin their long migration to wintering grounds in the Andes Mountains in South America.	In Canada the Cerulean Warbler's breeding range extends from extreme southwestern Quebec to southern Ontario. In southern Ontario, populations appear to be separated into two distinct bands: one from southern Lake Huron to western Lake Ontario, and further north, the other from the Bruce Peninsula and Georgian Bay area to the Ottawa River.	Not recorded during breeding bird surveys
Birds	Chimney Swift <i>Chaetura pelagica</i>	THR	Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.	The Chimney Swift breeds in eastern North America, possibly as far north as southern Newfoundland. In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel. It winters in northwestern South America.	Not recorded during breeding bird surveys

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	EIS Findings
Birds	Eastern Meadowlark <i>Sturnella magna</i>	THR	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.	No suitable habitat
Birds	Eastern Whip-poor-will <i>Caprimulgus vociferus</i>	THR	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. It lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators.	The Eastern Whip-poor-will's breeding range includes two widely separate areas. It breeds throughout much of eastern North America, reaching as far north as southern Canada and also from the southwest United States to Honduras. In Canada, the Whip-poor-will can be found from east-central Saskatchewan to central Nova Scotia and in Ontario they breed as far north as the shore of Lake Superior.	No suitable habitat
Birds	Eastern Wood-Pewee <i>Contopus virens</i>	SC	The Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-age mature forest stands with little understory vegetation.	The eastern wood-pewee is found across most of southern and central Ontario, and in northern Ontario as far north as Red Lake, Lake Nipigon and Timmins.	Not recorded during breeding bird surveys
Birds	Grasshopper Sparrow	SC	It lives in open grassland areas with well-drained, sandy soil. It will also nest in hayfields and pasture, as well as alvars, prairies and occasionally grain crops such as barley. It prefers areas that are sparsely vegetated. Its nests are well-hidden in the field and woven from grasses in a small cup-like shape.	The Grasshopper Sparrow can be found throughout southern Ontario, but only occasionally on the Canadian Shield. It is most common where grasslands, hay or pasture dominate the landscape.	No suitable habitat
Birds	Henslow's Sparrow <i>Ammodramus henslowii</i>	END	In Ontario, the Henslow's Sparrow lives in open fields with tall grasses, flowering plants, and a few scattered shrubs. It has also been found in abandoned farm fields, pastures, and wet meadows. It tends to avoid fields that have been grazed or are crowded with trees and shrubs. It prefers extensive, dense, tall grasslands where it can more easily conceal its small ground nest.	The Henslow's Sparrow breeds in the northeastern and east-central United States and reaches its northeastern limit in Ontario. It was once fairly common in scattered areas of suitable habitat south of the Canadian Shield. However, steep declines since the 1960s have all but wiped this bird out as a breeding species in Ontario. A few are still seen each spring at migration hotspots such as Point Pelee National Park, and a few may breed at selected locations.	No suitable habitat
Birds	Least Bittern <i>Ixobrychus exilis</i>	THR	In Ontario, the Least Bittern is found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails. The nests are almost always built near open water, which is needed for foraging. This species eats mostly frogs, small fish, and aquatic insects.	In Ontario, the Least Bittern is mostly found south of the Canadian Shield, especially in the central and eastern part of the province. Small numbers also breed occasionally in northwest Ontario. This species has disappeared from much of its former range, especially in southwestern Ontario, where wetland loss has been most severe. In winter, Least Bitterns migrate to the southern United States, Mexico and Central America.	No suitable habitat
Birds	Wood Thrush <i>Hylocichla mustelina</i>	SC	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests, but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech.	The wood thrush is found all across southern Ontario. It is also found, but less common, along the north shore of Lake Huron, as far west as the southeastern tip of Lake Superior. There is a very small population near Lake of the Woods in northwestern Ontario, and there have been scattered sightings in the mixed forest of northern Ontario.	Not recorded during breeding bird surveys
Birds	Yellow-breasted Chat <i>Icteria virens</i>	END	The Yellow-breasted Chat lives in thickets and scrub, especially locations where clearings have become overgrown. These birds spend their winters in coastal marshes.	In Canada, it lives in southern British Columbia, the Prairies, and southwestern Ontario, where it is concentrated in Point Pelee National Park and Pelee Island in Lake Erie.	No suitable habitat
Mammals	Eastern Small-footed Myotis (Bat) <i>Myotis leibii</i>	END	In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. These bats often change their roosting locations every day. At night, they hunt for insects to eat, including beetles, mosquitos, moths, and flies. In the winter, these bats hibernate, most often in caves and abandoned mines. They seem to choose colder and drier sites than similar bats and will return to the same spot each year.	The Eastern Small-footed bat has been found from south of Georgian Bay to Lake Erie and east to the Pembroke area. There are also records from the Bruce Peninsula, the Espanola area, and Lake Superior Provincial Park. Most documented sightings are of bats in their winter hibernation sites.	Acoustic monitoring confirmed no roosting.
Mammals	Little Brown Myotis (Bat) <i>Myotis lucifugus</i>	END	Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Bats can squeeze through	The Little Brown Myotis is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Outside Ontario, this	Acoustic monitoring confirmed no roosting.

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	EIS Findings
			very tiny spaces (as small as six millimetres across) and this is how they access many roosting areas. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing. This species can typically be associated with any community where suitable roosting (i.e. cavity trees, houses, abandoned buildings, barns, etc.) habitat is available.	bat is found across Canada (except in Nunavut) and most of the United States.	
Mammals	Northern Myotis (Bat) <i>Myotis septentrionalis</i>	END	Northern Myotis bats are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines.	The Northern Myotis is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon.	Acoustic monitoring confirmed no roosting.
Mammals	Tricoloured Bat <i>Perimyotis subflavus</i>	END	Tricoloured Bat inhabits a variety of forested communities, and will roost older forests and barns (or other structures). Foraging habitats include areas over water and streams. They hibernate in cave where they typically roost independently rather than in groups.	Tricoloured Bat is found in southern Ontario, where its northern limit is in proximity to Sudbury. Due to its rarity, their distribution is scattered.	Acoustic monitoring confirmed no roosting.
Plants	American Columbo <i>Frasera caroliniensis</i>	END	American Columbo grows primarily in open deciduous forests, and to a lesser extent along open forest edges and dense shrub thickets in Ontario. It is most commonly found in dry upland woods, but in parts of its range it has been found in grasslands, moist woods and swampy habitats.	American Columbo is widely distributed in eastern North America, ranging from southern Ontario west to Illinois and south to eastern Oklahoma, northern Mississippi, and western South Carolina. In Canada, American Columbo is only found in the Carolinian forest region of southern Ontario.	Not identified during vegetation surveys
Plants	American Ginseng <i>Panax quinquefolius</i>	END	In Ontario, American Ginseng typically grows in rich, moist, but well-drained, and relatively mature, deciduous woods dominated by Sugar Maple (<i>Acer saccharum</i>), White Ash (<i>Fraxinus americana</i>) and American Basswood (<i>Tilia americana</i>). It usually grows in deep, nutrient rich soil over limestone or marble bedrock.	American Ginseng ranges from Louisiana and Georgia north to New England and Minnesota. In Canada, it is found in southwestern Quebec and southern Ontario.	Not identified during vegetation surveys
Plants	Butternut <i>Juglans cinerea</i>	END	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges.	Butternut can be found throughout central and eastern North America. In Canada, Butternut occurs in Ontario, Quebec and New Brunswick. In Ontario, this species is found throughout the southwest, north to the Bruce Peninsula, and south of the Canadian Shield.	Not identified during vegetation surveys
Plants	Cherry Birch <i>Betula lenta</i>	END	The Cherry Birch is a medium-sized deciduous tree that grows up to 20 metres tall. The leaves are oval-shaped with a finely toothed edge and a slender tip. In Ontario, the Cherry Birch is found on moist, well-drained clay loam soil over limestone bedrock with White Oak, Red Oak, Eastern Hemlock, Sugar Maple and other deciduous trees.	The single population of Cherry Birch in Canada is isolated at two sites on the Niagara peninsula in southern Ontario. A survey of the two sites in 2010, found only 17 trees out of the 50 trees that were originally identified in 1967.	Not identified during vegetation surveys
Plants	Cucumber Tree <i>Magnolia acuminata</i>	END		The cucumber tree is rare in Ontario, confined to only a few locations in Norfolk County and the Niagara Region. It is the only species of magnolia native to Canada.	Not identified during vegetation surveys
Plants	Eastern Flowering Dogwood <i>Cornus florida</i>	END	Eastern Flowering Dogwood grows under taller trees in mid-age to mature deciduous or mixed forests. It most commonly grows on floodplains, slopes, bluffs and in ravines, and is also sometimes found along roadsides and fencerows.	In Canada, it can only be found in southern Ontario in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie).	Not identified during vegetation surveys
Plants	Red Mulberry <i>Morus rubra</i>	END	In Ontario, Red Mulberry grows in moist, forested habitats and on both sandy and limestone-based loamy soils. It is often found in areas where the forest canopy is quite open and allows lots of sunlight to reach the forest floor, but it will tolerate some shade.	Red Mulberry occurs in eastern North American forests. In Canada, it is only found in the Carolinian Zone (the small area of Ontario southwest of Toronto to Sarnia down to the shores of Lake Erie) near rivers, the shores of Lake Erie, and the slopes of the Niagara Escarpment.	Not identified during vegetation surveys
Plants	Round-leaved Greenbrier <i>Smilax rotundifolia</i>	THR	In Ontario, Round-leaved greenbrier is found mainly in the warmer climate of the Carolinian Forest. It prefers open moist to wet woodlands, often growing on sandy soil.	In Ontario, Round-leaved greenbrier is found mainly in the warmer climate of the Carolinian Forest. It prefers open moist to wet woodlands, often growing on sandy soil.	Not identified during vegetation surveys
Plants	Swamp Rose-mallow <i>Hibiscus moscheutos</i>	SC	In Ontario, Swamp Rose-mallow is restricted to shoreline marshes, in the Carolinian and Great Lakes - St. Lawrence forest regions, associated with lakes Erie, Ontario or St. Clair. Swamp Rose-mallow is most commonly found in deep-water cattail marshes and in	The Swamp Rose-mallow range in North America extends from the lower Great Lakes region south to Florida and west to New Mexico. It may be adventive (introduced and locally common) farther west. In Ontario, it has been found at approximately 60 to 70 sites and is believed to currently	No suitable habitat

Taxonomy	Species	ESA Status	Preferred Habitat ^{1, 2}	Known Species Range ^{1, 2}	EIS Findings
			meadow marshes. It reaches its greatest numbers in dyked wetlands, where competition from other plants is controlled and the open habitat is maintained by periodic flooding. It is also found in open wet woods, thickets, spoil banks, and drainage ditches.	occur at about 50 sites. Most sites are in coastal marshes of Lake Erie and Lake St. Clair. However, in the last 15 years, plants have colonized sites on the shores of Lake Ontario, expanding the distribution northwards. The species has also been introduced to Europe where it is locally common.d	
Plants	Virginia Mallow <i>Sida hermaphrodita</i>	END	Virginia mallow grows in riparian habitats that are flooded in most years. It benefits from this moist environment and is usually found in sunny or partly shaded areas with sandy soils. Loose sandy or rocky soils of scoured riversides and floodplains, and disturbed areas along roadsides and railroad banks are its preferred habitats.	Virginia mallow is found from the Appalachian Mountains to the Mississippi and Atlantic watersheds. In Ontario, it is found in only two sites, in Haldimand County, and the Niagara Region.	Not suitable habitat
Plants	White Wood Aster <i>Eurybia divaricata</i>	THR	White wood aster is a perennial plant that usually grows 30 to 90 centimetres tall. Its leaves are deeply and irregularly serrated: the lower leaves are heart-shaped while the upper leaves are elongated. White wood aster grows in open, dry deciduous forests that are dominated by Sugar maple and American beech trees. It is often found mixed in with other asters. The plant does best in well-drained soils and it may prefer a low level of disturbance, as it has been found to grow along trails. It does well in partial to full shade.	In Canada, it is restricted to a relatively small number of sites in the Niagara region and a few woodlots in southwestern Quebec.	Not identified during vegetation surveys
Reptiles	Blanding's Turtle <i>Emydoidea blandingii</i>	THR	Blanding's Turtles live in shallow water, usually in large wetlands and shallow lakes with lots of water plants. It is not unusual, though, to find them hundreds of metres from the nearest water body, especially while they are searching for a mate or traveling to a nesting site. Blanding's Turtles hibernate in the mud at the bottom of permanent water bodies from late October until the end of April.	The Blanding's Turtle is found in and around the Great Lakes Basin, with isolated populations elsewhere in the United States and Canada. In Canada, the Blanding's Turtle is separated into the Great Lakes-St. Lawrence population and the Nova Scotia population. Blanding's Turtles can be found throughout southern, central and eastern Ontario.	No suitable habitat.
Reptiles	Eastern Hog-nosed Snake <i>Heterodon platirhinos</i>	THR	The Eastern Hog-nosed Snake specializes in hunting and eating toads, and usually only occurs where toads can be found. Eastern Hog-nosed Snakes prefer sandy, well-drained habitats such as beaches and dry forests where they can lay their eggs and hibernate. They use their up-turned snout to dig burrows below the frost line in the sand where eggs are deposited.	The Eastern Hog-nosed Snake is only found in eastern North America, with about ten per cent of its range occurring in Canada. The Canadian population is limited to Ontario where it can be found in two areas: The Carolinian Region and Great Lakes-St. Lawrence Region.	Habitat not suitable.
Reptiles	Snapping turtle <i>Chelydra serpentina</i>	SC	Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits.	The Snapping Turtle's range extends from Ecuador to Canada. In Canada this turtle can be found from Saskatchewan to Nova Scotia. It is primarily limited to the southern part of Ontario. The Snapping Turtle's range is contracting.	No suitable habitat.

Appendix E

Significant Wildlife Habitat Assessment

Appendix E

Significant Wildlife Habitat Assessment

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Seasonal Concentration Areas of Animals		
Waterfowl Stopover and Staging Areas (Terrestrial)	Fields with sheet water or fields utilized by Tundra Swans during Spring (mid March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless used by Tundra Swans in the Long Point, Rondeau, Lk. St. Clair, Grand Bend and Pt. Pelee areas.	No Suitable habitat was not observed within the subject property
Waterfowl Stopover and Staging Areas (Aquatic)	Ponds, marshes, lakes, bays, costal inlets and watercourses that are used as stopover areas during migration. These habitat typically have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water).	No Suitable habitat was not observed within the subject property
Shorebird Migratory Stopover Area	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH	No Suitable habitat was not observed within the subject property
Raptor Winter Area	A combination of fields and woodlands that provide roosting, foraging and resting habitat for wintering raptors. These sites need to be larger than 20 ha in size, of which at least 15 ha needs to be comprised of idle/fallow or lightly grazed field/meadow.	No Suitable habitat was not observed within the subject property
Bat Hibernacula	Hibernacula may be found in caves, mine shafts, underground foundations and karsts.	No Suitable habitat was not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Bat Maternity Colonies	Maternity colonies can be found in tree cavities, vegetation and buildings. Deciduous and mixed forest communities with greater than 10/ha of larger diameter (> 25 cm dbh) wildlife trees.	No A potential roost for Big Brown Bat occurs in the woodlot, but acoustic data suggests the SWH threshold of 10 big brown bats is not met.
Turtle Winter Areas	Over-wintering sites for turtles are typically in the same area as their core habitat. Waterbodies have to be deep enough to not freeze and have soft mud substrates.	No Suitable habitat was not observed within the subject property
Snake Hibernaculum	Snakes hibernate in sites located below frost lines in burrows, rock crevices and other natural locations. Rock piles, slopes, stones fences and crumbling foundations can also be used by hibernating snakes. Areas of broken and fissures rocks can also provide access to sites below the frost line.	No Suitable habitat was not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)	Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.	No Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and occasionally emergent vegetation may also be used.	No Suitable habitat not observed within the subject property
Colonially - Nesting Bird Breeding Habitat (Ground)	Nesting colonies of gulls and terns occur on rocky islands or peninsulas within a lake or larger river	No Suitable habitat was not observed within the subject property
Migratory Butterfly Stopover Areas	Cultural meadow, savannah and thicket communities that are within 5 km of Lake Ontario, at least 10 ha in size and contain a combination of field and forest habitat	No Suitable habitat was not observed within the subject property
Landbird Migratory Stopover Areas	Woodlands that are at least 10 ha in size and within 5 km of Lake Ontario.	No Suitable habitat not observed within the subject property
Deer Yarding Areas	Deer yarding areas or winter concentration within a mixed or coniferous forest and swamp communities.	No Suitable habitat not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Deer Winter congregation Areas	Deer movement in winter months within eco-region 6E are not constrained by snow depth, however they still congregate in suitable woodlands. These woodlands will typically be larger than 100 ha in size, however woodlands smaller than 100 ha may be considered significant based on MNR assessments.	No Suitable habitat was not observed within the subject property
Rare Vegetation Communities		
Cliffs and Talus Slops	A cliff is a vertical to near vertical bedrock that is greater than 3 m in height. A talus slope is rock rubble at the base of a cliff made up of coarse rocky debris.	No Cliffs or talus slopes were not observed within the subject property
Sand Barren	Sand barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little to no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah.	No Sand barren was not observed within the subject property
Alvar	Alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil.	No Alvar was not observed within the subject property
Old Growth Forest	Old growth forests are characterized by heavy mortality or turnover of over story trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. Stands must be 30 ha or greater in size with a minimum of 10 ha of interior habitat (interior habitat determined with a 100 m buffer).	No Old growth forest was not observed within the subject property
Savannah	Savannah is a tallgrass prairie habitat that has tree cover between 20 - 60%.	No Savannah habitat was not observed within the subject property
Tallgrass Prairie	Tallgrass Prairie has ground cover that is dominated by prairie grasses. An open tallgrass prairie has less than 25% tree cover.	No Tallgrass Prairie was not observed within the subject property
Other Rare Vegetation Communities	Rare vegetation communities may include beaches, fens, forests, marsh, barrens, dunes and swamps, as identified in Appendix M of the Significant Wildlife Habitat Technical Guide.	No Rare vegetation communities were not observed within the subject property

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Specialized Habitat for Wildlife		
Waterfowl Nesting Area	Waterfowl nesting areas are upland areas adjacent to marsh, shallow aquatic and swamp habitat. In order to be considered significant these features must extend 120 m from of a wetland in order to deter predators	No Suitable habitat not observed within the subject property
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Nests for these species are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or on structures over water. Osprey nests are usually at the top of a tree, while Bald Eagle nets are typically in super canopy trees.	No No Bald Eagle or Osprey nests were observed within the subject property
Woodland Raptor Nesting Habitat	Woodland raptor habitat can be found in all natural or conifer plantation woodland/forest stands that are greater than 30 ha in size with more than 10 ha of interior forest habitat (interior habitat determined with a 200 m buffer).	No Suitable habitat was not observed within the subject property
Turtle Nesting Areas	Ideal nesting habitat for turtles are close to water and away from roads and sites that are less prone to loos of eggs by predation. These areas are often associated with exposed mineral soil (sand or gravel) areas within 100 m of a marsh, shallow aquatic, bog or fen habitat.	No Suitable habitatwas not observed within the subject property
Seeps and Springs	Seeps/springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats.	No Seeps/springs were not observed within the subject property
Amphibian Breeding Habitat (Woodland)	This type of habitat is associated with the presence of a wetland, lake or pond that is within or adjacent (within 120m) of a woodland. Woodlands with permanent ponds or those contain water until mid-July are more likely to be used as breeding habitat.	No Suitable habitat was not observed within the subject property
Amphibian Breeding Habitat (Wetlands)	Wetlands and pools that are greater than 500 m ² and are isolated from woodlands (greater than 120 m)	No Suitable habitat was not observed on the subject property.
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)		

Significant Wildlife Habitat Type	Habitat Description	Habitat Assessment
Marsh Bird Breeding Habitat	This type of habitat occurs in wetlands with shallow water and emergent aquatic vegetation present	No Suitable habitat was not observed within the subject property
Woodland Area-Sensitive Bird Breeding Habitat	Habitats where interior forest breeding birds are breeding. These forests are typically larger mature forest stands or woodlands that are greater than 30 ha in size (interior habitat determined with a 200 m buffer).	No Suitable habitat was not observed within the subject property
Open Country Bird Breeding Habitat	This type of habitat occurs in larger grassland areas (including natural and cultural fields and meadows) that are greater than 30 ha in size. Grasslands that are being actively used for farming (i.e. row cropping, intensive hay, livestock pasturing in the last 5 years) typically do not provide ideal habitat for open country bird species.	No Suitable habitat was not observed within the subject property
Shrub/Early Successional Bird Breeding Habitat	This type of habitat occurs in large field areas succeeding to shrub and thicket habitats that are greater than 10 ha in size.	No Suitable habitat was not observed within the subject property
Terrestrial Crayfish	This type of habitat occurs in meadows and edge of shallow marshes.	No Suitable habitat not observed within the subject property
Special Concern and Rare Wildlife Species	This type of habitat occurs wherever special concern and provincially rare (S1, S2, S3 and SH) plant and animal species occur.	No No special concern or rare wildlife were identified on the property.
Animal Movement Corridors		
Amphibian Movement Corridors	This habitat consists of movement corridors between breeding habitat and summer habitat. Corridors may be found in all ecosystems associated with water.	No Suitable habitat was not observed within the subject property