



GUIDING SOLUTIONS IN THE  
NATURAL ENVIRONMENT

# Scoped Environmental Impact Study 1736 Caughey Lane, Town of Penetanguishene, Simcoe County

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*Prepared For:*

**Johndec Properties Inc.**

*Prepared By:*

**Beacon Environmental Limited**

*Date: Project:*

**November 2023 222189**

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# 1. Introduction

Beacon Environmental Limited (Beacon) has been retained by Johndec Properties Inc. to undertake a Scoped Environmental Impact Study (EIS), as a requirement of the proposed lot severance for the property located 1736 Caughey Lane in the Town of Penetanguishene (the Town), in Simcoe County (hereafter the “subject property”) (**Figure 1**).

The subject property is approximately 18.7 ha (46 ac) in area and is largely composed of woodlands, unevaluated wetlands, one single detached residence and a cleared area with a communications tower. The landowner is proposing to sever the existing lot to create three (3) additional lots totalling approximately 2.76 ha; the area of disturbance for the combined building footprints is 0.93 ha, the balance of the lots would be allocated for rear yards.

The terms of reference, including the types of studies for this scoped EIS were established through consultation with the Town and the Severn Sound Environmental Association (SSEA) via email and virtual meeting (**Appendix A**).

The purpose of this EIS is to:

- Describe existing natural heritage conditions and features both on and immediately adjacent to the subject property;
- Evaluate project conformance with applicable ecological and/or natural heritage policies of the Provincial Policy Statement (PPS), the Town of Penetanguishene Official Plan (2019), the County of Simcoe Official Plan Consolidation (2008), and the provincial *Endangered Species Act* (ESA);
- Identify potential development impacts to natural heritage features and ecological functions; and
- Identify appropriate mitigation and compensation recommendations, if warranted.

# 2. Methodology

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

- Town of Penetanguishene Official Plan (2018);
- The County of Simcoe Official Plan Consolidation (2016);
- The Growth Plan for the Greater Golden Horseshoe (Office Consolidation, 2020);
- The *Endangered Species Act* (2007) and regulations;
- Provincial Policy Statement (2020);
- Natural Heritage Reference Manual (2010); and
- Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (2015).

Other sources of information such as aerial photographs were also consulted prior to commencing the field investigation. Field surveys conducted of the subject property are provided in **Table 1**.



**Table 1. Field Surveys by Type and Dates**

Field Survey	Dates
ELC, Vegetation Communities, General Habitat Assessment	July 13, 2022
Bat Habitat (Snag Survey)	December 16, 2022
Breeding Birds	June 4 and 30, 2023
Eastern Whip-poor-will survey	June 3, 2023

## 2.1 Ecological Land Classification

The existing conditions with respect to natural features of the subject property were examined to determine general characteristics, including a classification of the vegetation using the Ecological Land Classification (ELC) System for Southern Ontario (Lee *et al.* 1998) to Vegetation Type, the finest level of detail, in the vicinity of the proposed lot severances, and to Community Series for the portions of the subject property further from the proposed development.

## 2.2 Species at Risk

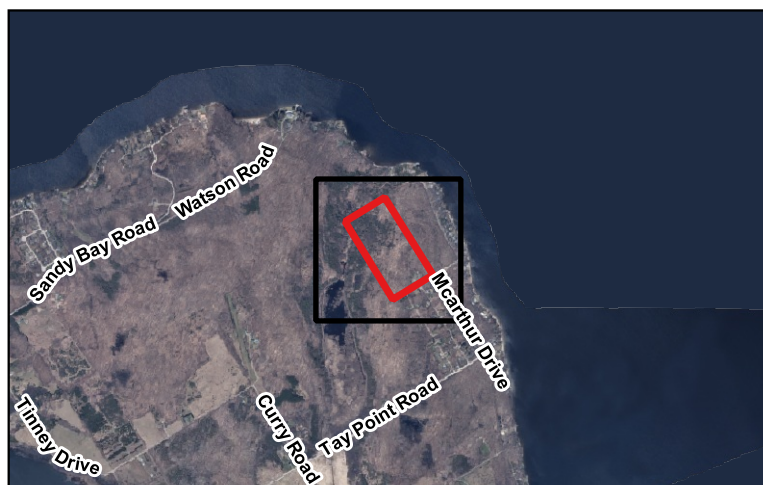
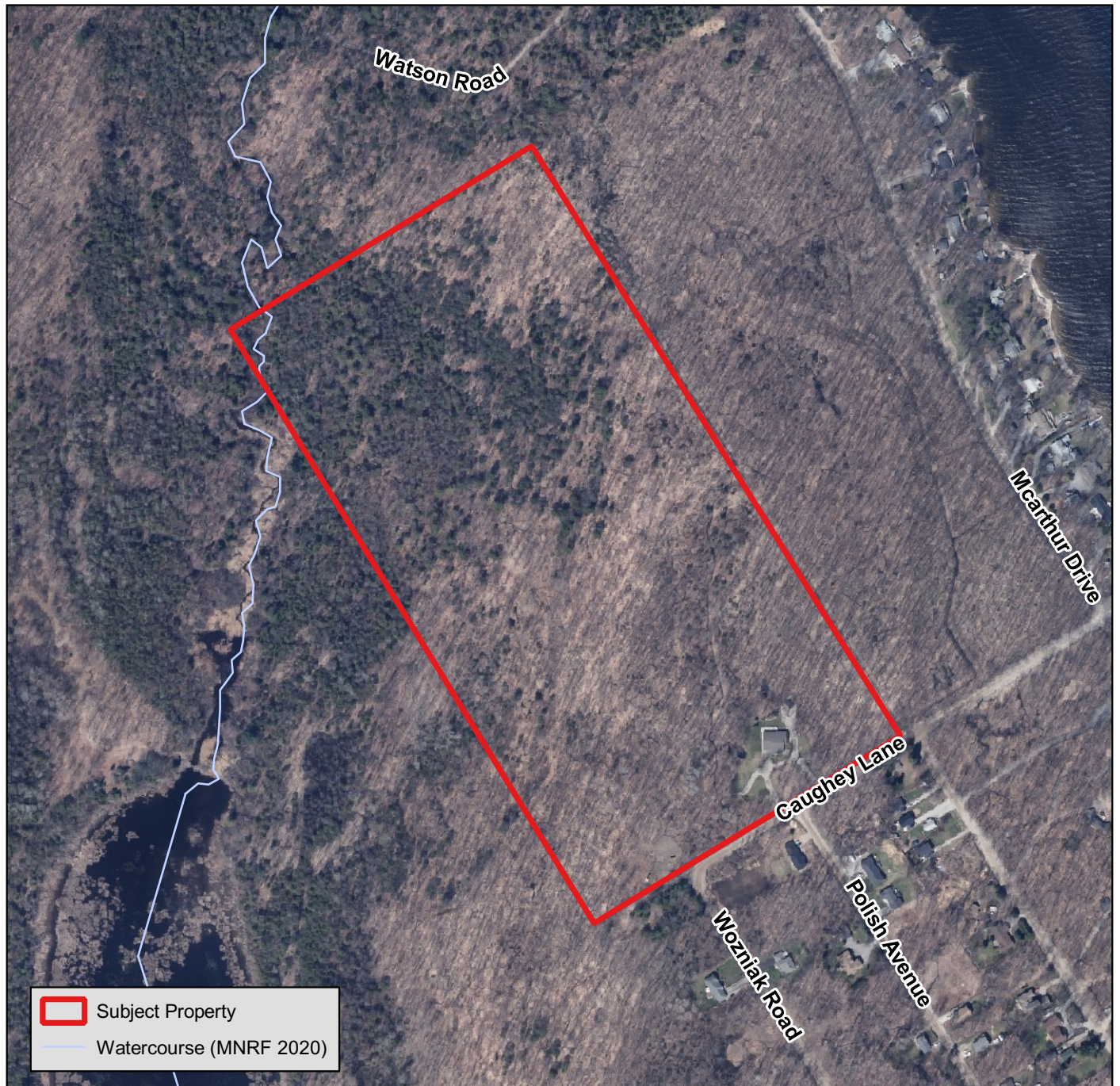
For Species at Risk (SAR), Beacon reviewed numerous information sources in a Geographic Information System (GIS) environment that facilitates an assessment of the likelihood that SAR and other natural heritage features and functions are present in an area of interest. This system allows Beacon to combine the most current information provided by the Ministry of Natural Resources and Forestry (MNRF) through the Land Information Ontario (LIO) portal with GIS layers from provincial floral and faunal atlases. All relevant layers can then be overlaid on the most recent high resolution orthoimagery. The screening process helps identify areas that can then be targeted (e.g., potential habitat) during field assessments to maximize the efficiency and effectiveness of on-site investigations.



The following information sources were reviewed:

- Provincially Tracked Species Layer (1 km grid) from LIO;
- Herps of Ontario on iNaturalist.com (formerly Ontario Reptile and Amphibian Atlas [ORAA]);
- Ontario Breeding Bird Atlas (OBBA);
- 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>;
- Aerial photography of the subject property; and
- Natural and physical feature layers from LIO—these geospatial layers include wetlands (provincially significant and unevaluated wetlands), and watercourses with thermal regime.

As part of the assessment of habitat for endangered bats, a bat snag survey was undertaken on December 16, 2022, on the southern portion of subject property (i.e., the proposed development area) to confirm the presence/absence of potential maternity roosting habitat for endangered species of bats.





<b>Site Location</b>		<b>Figure 1</b>
1736 Caughey Lane, Penetanguishene, EIS		
		Project: 222189 Last Revised: February 2023
Client: Johndec Properties Inc.		Prepared by: BD Checked by: GP
	1:5,200	Inset Map: 1:50,000
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The bat habitat assessment was undertaken in accordance with guidelines from the Ministry of Natural Resources and Forestry (MNRF) Midhurst District Maternity Roost Surveys—Treed Habitats (April 2017). The full methodology, results and analysis were provided in a letter report to the Ministry of the Environment, Conservation and Parks and is also provided in **Appendix A**.

## 2.3 Breeding Birds

Two breeding bird surveys were conducted on the mornings of June 4 and 30, 2023, on days with low to moderate wind (1 to 2 Beaufort Scale), no precipitation and temperatures within 5°C of normal average temperatures. Start times were between 7:30 and 7:45 am to capture the peak period of avian vocalization. The breeding bird community was surveyed using a roving type of survey, in which all parts of the study area 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.

One evening survey for Eastern Whip-poor-will (*Antrostomus vociferus*) was conducted on the night of the full moon on June 3, 2023. The survey was conducted according to the protocols of the Ontario Breeding Birds Atlas Nightjar Surveys (Hannah 2021) at three survey stations. Air temperature was between 18°C and 15°C, wind was low (1 to 2 Beaufort Scale) and cloud cover was 20%. Survey began approximately 30 minutes after sunset until 10:55 pm; moonrise was at 9 pm.

## 3. Policy Review

The following section provides the provincial and local policy context for this assessment.

### 3.1 Provincial Policy Statement (2020)

The Provincial Policy Statement (PPS) should be considered and applied as one integrated document. Policy 2.1 of the PPS provides direction to regional and local municipalities regarding planning policies specifically for the protection and management of natural heritage features and resources. The PPS defines seven natural heritage features and provides planning policies for each.

The *Natural Heritage Reference Manual* (MNR 2010) is a technical document used to help assess the natural heritage features listed below:

- Significant wetlands;
- Significant woodlands;
- Significant valleylands;
- Significant Areas of Natural and Scientific Interest (ANSIs);
- Significant wildlife habitat; and
- Significant coastal wetlands.

Each of these features is afforded varying levels of protection subject to guidelines, and in some cases, regulations. Of these features, significant wetlands can be designated either by the MNRF

and/or the municipality. The habitat of endangered or threatened species is regulated under the ESA (2007) and administered by the Ministry of the Environment, Conservation and Parks (MECP). Fish habitat is governed by the Department of Fisheries and Oceans Canada (DFO). The identification and regulation of the remaining features is the responsibility of the municipality or other planning authority.

### **3.2 Endangered Species Act, 2007**

The ESA came into force in June 2008 and there are over 200 species in Ontario that are identified as: extirpated, endangered, threatened, or of special concern.

The Act prohibits the killing or harming of threatened or endangered species, as well as the destruction of regulated habitat. Proposed development is required to demonstrate the activity would comply with the requirements of the ESA.

From the screening and field investigations, there are two species present for which the ESA applies. These are: Black Ash (*Fraxinus nigra*) and Red-headed Woodpecker (*Melanerpes erythrocephalus*).

### **3.3 A Place to Grow: Growth Plan for the Greater Golden Horseshoe (Office Consolidation, August 2020)**

The subject property is within the Growth Plan area, but within a Settlement Area (Town of Penetanguishene) and as such, the following natural heritage policies of the Growth Plan apply.

#### **Natural Heritage System**

1. *A Natural Heritage System for the Growth Plan has been mapped by the Province to support a comprehensive, integrated, and long-term approach to planning for the protection of the region's natural heritage and biodiversity. The Natural Heritage System for the Growth Plan excludes lands within settlement area boundaries that were approved and in effect as of July 1, 2017.*
6. *Beyond the Natural Heritage System for the Growth Plan, including within settlement areas, the municipality:*
  - a) *will continue to protect any other natural heritage features and areas in a manner that is consistent with the PPS; and*
  - b) *may continue to protect any other natural heritage system or identify new systems in a manner that is consistent with the PPS.*

Therefore, as the subject property is entirely within a Settlement Area, the NHS for the Growth Plan does not extend into these areas. However, the Town is obliged to make land use decisions consistent with the PPS with regard to the retention and protection of natural heritage features.

### **3.4 County of Simcoe Official Plan (2008, Office Consolidation 2016)**

Policies contained in the County of Simcoe Official Plan (County OP) provide additional guidance with respect to the protection of natural heritage features. The subject property is identified as within a Settlement (Town of Penetanguishene) and the County's Greenlands/Natural Heritage System designation does not apply to Settlement Areas.

Section 3.3 of the County OP includes General Development Policies that indicate in subsection 3.3.15 that development and site alteration are not permitted within significant woodlands, significant wildlife habitat and significant areas of natural and scientific interest (ANSIs) unless it has been demonstrated that there will be no negative impacts on the features or ecological function. Development and site alteration in fish habitat and habitat of endangered or threatened species must comply with federal and provincial requirements.

### 3.5 Town of Penetanguishene Official Plan (2018)

Policies contained in the Town OP provide guidance with respect to land use and development within and adjacent to natural heritage features and related ecological functions in the Town.

The subject property is designated Rural (Schedule A: Land Use Structure), with an Environmental Protection policy overlay (Schedule B1: Policy Overlays) in the Town's OP and zoned as Rural (RU) in the Town's Zoning Bylaw (2022) (**Appendix B**). The most relevant natural heritage policies pertaining to potential development on the subject property are provided below.

In section 3.10 of the OP, the Town identifies that natural heritage features and areas comprise:

- *Wetlands;*
  - *Provincially Significant;*
  - *Locally Significant Wetlands 2.0 Hectares or Larger;*
- *Habitat of endangered species and threatened species;*
- *Significant Wildlife Habitat;*
- *Fish habitat;*
- *Significant Valleylands;*
- *Areas of Natural and Scientific Interest;*
- *Significant Woodlands; and*
- *Linkage Areas.*

Section 3.10.6 provides policies on Significant Woodlands within the Town:

*Significant Woodlands are areas which are ecologically important in terms of species composition, age of trees and stand history. Significant Woodlands are functionally important due to their contribution to the broader landscape because of their location, size or extent of forest cover; and/or are economically important due to their site quality, species composition, or management history. Wildlife habitat is one of the primary ecological functions provided by Significant Woodlands. Wildlife habitat is an area where plants, animals and other organisms live, and find adequate amounts of food, shelter, water and space needed to sustain their populations. All plants and animals have individual habitat requirements, which vary for different periods in their life cycles.*

*1. Significant Woodlands are identified as an Environmental Protection Overlay on Schedule B1 of this Plan.*

*2. Development or site alteration proposed in a Significant Woodland feature shall be subject to the completion of an EIS prior to development or site alteration.*

*Development or site alteration in a Significant Woodland feature shall not be permitted unless it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.*

*4. Prior to considering development and/or site alteration on or within adjacent lands of a Significant Woodland, the Town, in consultation with the Province, will be satisfied that the EIS demonstrates that there will be no negative impacts on the habitat values upon which the species depend directly and indirectly, and any related ecological functions.*

Section 4.10 of the Town's OP provides a distinction on the land use policies for Environmental Protection Area (EP), on Schedule A, and the Environmental Protection Overlay (EPO) on Schedule B1:

#### 4.10 ENVIRONMENTAL PROTECTION AREA

*Penetanguishene contains a rich natural heritage system of rivers, streams, forests and natural areas. These lands have been designated as Environmental Protection Area (EP) on Schedule A and identified as an Environmental Protection Overlay (EPO) on Schedule B1 to this Plan. EP includes lands where development and site alteration are prohibited, including PSWs and Fish Habitat, for example, whereas EPO includes lands where development and site alteration may be permitted, subject to the preparation of an EIS, including Significant Woodlands, for example.*

*The Environmental Protection Area contains a high concentration of key natural heritage features, key hydrological features and landform conservation areas. Linkages between key features have been identified within this designation to ensure that these ecological connections are protected for the long term. Together, these areas will be protected to the highest extent through this designation from impacts resulting from development or adjacent development.*

*The diversity and connectivity of key natural heritage features in creating a system, and the long-term ecological function and biodiversity of key natural heritage features, should be maintained, restored or, where possible, improved, recognizing links or corridors between and among natural heritage features and areas, surface water features and groundwater features. The features may also have some passive recreational amenity for paths, trails, and education, and contribute to a continuous open space system.*

While the watercourse on the subject property is identified as EP on Schedule A, the majority of the subject property is woodland and part of a much larger (~500+ ha) woodland and identified as an Environmental Protection Overlay on Schedule B1 of the Town's OP. Development and site alteration area not permitted within significant woodlands unless demonstrated that there will be no negative impact on the features and functions of the woodland (section 3.10.6), which is to be provided through an EIS.

The Town seeks that wherever possible and appropriate that trees or natural vegetation be replanted at a 2:1 ratio (or some other compensation measures) to replace vegetation removal approved through the development process.

## 4. Existing Conditions

### 4.1 Aquatic Habitat

One drainage feature occurs within the subject property that was dry with no flow during the time of site investigations on July 13, 2022. The channel is approximately 50 cm wide and appears to have been dug and channelized in the past. No fish habitat assessment was conducted, nor was any hydrogeological study conducted; however, it appears that the drainage feature conveys flows only during the spring freshet or possibly during significant rain events. No development is proposed in, or within 15 m of this drainage feature.

The Ecological Land Classification communities are shown on **Figure 2** and described in the following paragraphs.

### 4.2 Vegetation Communities

#### **Dry-Fresh Sugar Maple Deciduous Forest (FOD5-1)**

This mature forest community is in the southeast portion of the subject property and extends beyond the property boundaries to the east. The canopy is dominated by Sugar Maple (*Acer saccharum*) with a few minor occurrences of American Beech (*Fagus grandifolia*) and Eastern Hop-hornbeam (*Ostrya virginiana*) in the subcanopy and seedlings of White Ash (*Fraxinus americana*) and Sugar Maple in the ground layer. Other species that occur in the understory are Canada Yew (*Taxus canadensis*), Blue Cohosh (*Caulophyllum thalictroides*), White Trillium (*Trillium grandiflorum*) and False Solomon Seal (*Maianthemum racemosum*).

#### **Dry-Fresh Sugar Maple - Beech Deciduous Forest (FOD5-2)**

Occupying the central and southwest portion of the subject property, this mature forest community is also dominated by Sugar Maple but with a greater proportion of American Beech, with some White Ash, Trembling Aspen (*Populus tremuloides*), Red Maple (*A. rubrum*), White Birch (*Betula papyrifera*) and some Eastern Hop-hornbeam in the subcanopy. The shrub layer contains saplings of Sugar Maple with scattered Prickly Gooseberry (*Ribes cynosbati*), Chokecherry (*Prunus virginiana*) and Serviceberry (*Amelanchier sp.*).

#### **Fresh-Moist Sugar Maple – Lowland Ash Deciduous Forest (FOD6-1)**

This mature forest community is found on either side of the northern portion of the watercourse that traverses the subject property flowing from south to north in the central eastern portion. The canopy is dominated by Green Ash (*F. pennsylvanica*), Sugar Maple and American Basswood (*Tilia americana*). The shrub layer consists mainly of Chokecherry and Sugar Maple seedlings and saplings.

### **Green Ash Mineral Deciduous Swamp (SWD2-2)**

This wetland community is found on either side of the drainage feature that originates on the subject property. The canopy is dominated by Green Ash with some Black Ash (*F. nigra*), White Elm (*Ulmus americana*), Sugar Maple and American Basswood (*Tilia americana*). The shrub layer consists mainly of Glossy Buckthorn (*Frangula alnus*) with lesser amounts of Common Elderberry (*Sambucus canadensis*), and the herbaceous ground cover is dominated by Sensitive Fern (*Onoclea sensibilis*) with some Bittersweet Nightshade (*Solanum dulcemara*) and Spotted Jewelweed (*Impatiens capensis*).

### **Coniferous Swamp (SWC)**

This community was not investigated in detail because it is located in the northern portion of the subject property, over 120 m from the proposed lot severances; however, this community is mapped as unevaluated wetland by MNRF, is a low lying area that appears to consist of Eastern White Cedar (*Thuja occidentalis*), Poplars (*Populus spp.*), Eastern Hemlock (*Tsuga canadensis*), Green and Black Ash.

### **Mixed Swamp (SWM)**

Also located beyond the areas proposed for lot severances, this low-lying wetland community is also mapped as unevaluated wetland and consist of a similar tree species composition as the Coniferous Swamp but with less coniferous cover.

### **Anthropogenic (ANT)**

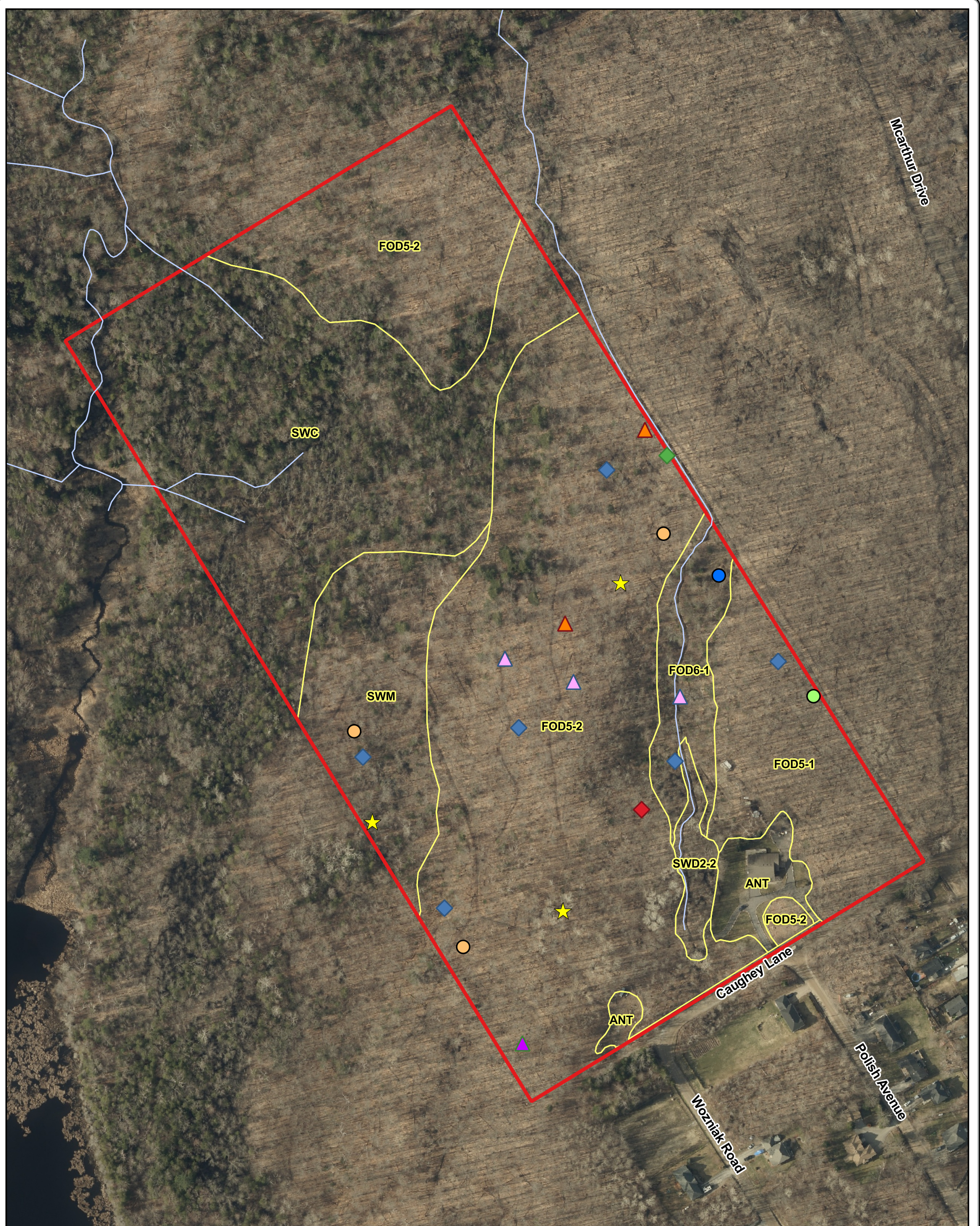
These small areas include the existing residential area and the area cleared for the communications tower. The residence is mostly maintained lawn and landscaped gardens. Most plant species are common, adventitious native species or introduced weeds such as Canada Goldenrod (*Solidago canadensis*), Wild Carrot (*Daucus carota*), Red Clover (*Trifolium pratense*), Oxeye Daisy (*Leucanthemum vulgare*), and Common Dandelion (*Taraxacum officinale*).

## **4.3 Floral Inventory**

One hundred and five plant species were observed on the subject property, 81 of which (78%) are species considered to be native in Ontario (**Appendix C**). One species, Upright Yellow Wood-sorrel (*Oxalis stricta*), has been assigned a rarity of R5 (five occurrences) in Simcoe County, indicating that it is a native species that is rare in the area (Riley 1989), However, based on our experience and recorded observations on iNaturalist, this species is much more common.

One species, Black Ash (*Fraxinus nigra*) has a rarity status of S3 in Ontario and is also assessed as Endangered by COSSARO. However, the province has delayed adding this species to the list of Species at Risk in Ontario, and therefore delayed extending protection to this species under the ESA, until January 2024.





**Legend**

- Subject Property
- Ecological Communities
- Watercourse

**Bird Species**

- ◆ Red-headed Woodpecker (Endangered)
- Canada Warbler (Special Concern)
- Eastern Wood Pewee (Special Concern)
- ▲ Wood Thrush (Special Concern)
- Black-throated Green Warbler
- ◆ Ovenbird
- ◆ Scarlet Tanager
- ▲ Veery
- ▲ Winter Wren
- ★ Yellow-bellied Sapsucker

Code	Wetland Communities
SWM	Mixed Swamp
SWC	Coniferous Swamp
SWD2-2	Green Ash Mineral Deciduous Swamp
Woodland Communities	
FOD5-2	Dry - Fresh Sugar Maple - Beech Deciduous Forest
FOD5-1	Dry - Fresh Sugar Maple Deciduous Forest
FOD6-1	Fresh - Moist Sugar Maple - Lowland Ash Deciduous Forest
Other Communities	
ANT	Anthropogenic

**Existing Conditions**

**Figure 2**

1736 Caughey Lane, Penetanguishene, EIS



Project: 222189  
Last Revised: August 2023

Client: Johndec Properties Inc.

Prepared by: BD  
Checked by: GP



1:2,500

0 50 100 m

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The remaining species are identified either as status S4 – Common and Apparently Secure, or status S5 – Secure (NHIC, 2019) indicating a species is considered common with secure populations throughout the province.

#### 4.4 Breeding Birds

A total of 42 species of breeding birds were documented on the subject property during the 2023 breeding season (**Appendix D**) and were distributed throughout the surveyed lands. The entirety of the property is heavily wooded as discussed in the preceding sections of this report. Most of the breeding birds at this location are typically found within woodlands, or anthropogenic areas. The mature woodlands were noted to be supporting a diverse assortment of birds. The most abundant species were American Robin (*Turdus migratorius*) and Red-eyed Vireo (*Vireo olivaceus*), along with multiple territories of other species such as Baltimore Oriole (*Icterus galbula*), Black-throated Green Warbler (*Setophaga virens*), Great Crested Flycatcher (*Myiarchus crinitus*), Veery (*Catharus fuscescens*) and Ovenbird (*Seiurus aurocapillus*). A number of woodpecker species were present as well including Northern Flicker (*Colaptes auratus*), Yellow-bellied Sapsucker (*Sphyrapicus varius*), Red-bellied Woodpecker (*Melanerpes carolinus*) and Pileated Woodpecker (*Dryocopus pileatus*).

Area-sensitive birds 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. Thirteen such species were recorded and are documented in **Appendix D**. All of these were woodland sensitive species and included White-breasted Nuthatch (*Sitta carolinensis*), Brown Creeper (*Certhia americana*), Canada Warbler (*Cardellina canadensis*), Ovenbird, Winter Wren (*Troglodytes hiemalis*) and Scarlet Tanager (*Piranga olivacea*). All these species require large areas of woodland habitat in which to breed. It should be noted that in assessing SWH, Woodland Area-sensitive birds are those species listed by MNRF (2015) and provided in **Appendix E**.

No species provincially ranked as S1 through S3 (Critically Imperiled through Vulnerable) were present on the subject property throughout these surveys. Red-headed Woodpecker was observed along the property fringes during both site visits and is likely breeding in this area as it was observed roughly in the same location both times. This bird was recently re-assessed and is listed as endangered on the list of Species at Risk in Ontario. In addition, three species that are provincially listed as special concern were recorded. Special concern species are not subject to habitat regulation under the ESA. Eastern Wood-pewee (*Contopus virens*) is listed as special concern both provincially and federally based on a declining trend over their range, these birds remain relatively common in both urban and urbanizing woodlands. They are somewhat tolerant of forest fragmentation and will live in both edge habitats and forest interiors. Wood Thrush (*Hylocichla mustelina*) and Canada Warbler are both listed special concern provincially but are listed as threatened federally.

A targeted nocturnal survey was conducted on June 3, 2023, to assess for the potential presence of Eastern Whip-poor-will (*Antrostomus vociferus*), a species listed as threatened in Ontario. Though these birds breed in the general area, the woodlands on the property are likely too dense to support this species which is often found in association with gaps in larger woodland tracts. These birds are relatively easy to hear if present. No individuals of the species were heard vocalizing on the subject property.

## 4.5 Species at Risk

An assessment was completed through a review of site conditions and consulting the Natural Heritage Information Centre (NHIC, 2023) and other data bases, to determine whether suitable habitat was present for any SAR known to occur in the vicinity (within 5 km) of the subject property. This assessment identified a total of 21 species (**Table 2**) with a record of occurrence within 5 km of the subject property. It should be noted that only species listed as endangered or threatened under the ESA receive protection. Species and their habitat listed as special concern are not protected under the ESA, and although not listed in **Table 2**, consideration for these species by the province may be required under other polices such as for Significant Wildlife Habitat under the PPS.

**Table 2. Species at Risk Known to Occur in the Area**

Species	ESA <sup>1</sup> Status	Species or Habitat Present on the Subject Property
<b>Mammals</b>		
Northern Myotis <i>Myotis septentrionalis</i>	Endangered	<b>Yes</b> – 29 potential maternity roosting (snag) trees occur within the three potential building footprints. MECP has been consulted.
Tri-colored Bat <i>Perimyotis subflavus</i>	Endangered	<b>Yes</b> – 29 potential maternity roosting (snag) trees occur within the three potential building footprints. MECP has been consulted.
Little Brown Myotis <i>Myotis lucifugus</i>	Endangered	<b>Yes</b> – 29 potential maternity roosting (snag) trees occur within the three potential building footprints. MECP has been consulted.
Eastern Small-footed Myotis <i>Myotis leibii</i>	Endangered	<b>Yes</b> – 29 potential maternity roosting (snag) trees occur within the three potential building footprints. MECP has been consulted.
<b>Reptiles</b>		
Eastern Hog-nosed Snake <i>Heterodon platirhinos</i>	Threatened	<b>Not likely</b> , species prefer sandy, well-drained habitats such as beaches and dry forests; usually only occurs where toads can be found.
Eastern Foxsnake <i>Pantherophis gloydi</i>	Threatened	<b>No</b> , species is found in open areas near water (old fields, hedgerows, marshes) usually within 150 m of the Georgian Bay shoreline. Subject property is closed forest over 250 m from shoreline.
Massasauga Rattlesnake <i>Sistrurus catenatus</i>	Threatened	<b>Not likely</b> – lives in prairies, bogs, marshes, shorelines, forests and alvars; needs open areas sun themselves.
Spotted Turtle <i>Clemmys guttata</i>	Endangered	<b>No</b> – lives mostly in shallow water and nests in open sandy or gravelly areas near streams, lakes and wetlands.
Blanding’s Turtle <i>Emydoidea blandingii</i>	Threatened	<b>No</b> – lives mostly in shallow water and nests in open sandy or gravelly areas near streams, lakes and wetlands.
<b>Birds</b>		
King Rail <i>Rallus elegans</i>	Endangered	<b>No</b> – species’ habitat is open marshes with shallow water; no marshes on subject property.
Bobolink <i>Dolichonyx oryzivorus</i>	Threatened	<b>No</b> – breeds in grasslands.

Species	ESA <sup>1</sup> Status	Species or Habitat Present on the Subject Property
Barn Swallow <i>Hirundo rustica</i>	Threatened	<b>No</b> – there are no barns or other open, covered structures such as bridges on the subject property.
Bank Swallow <i>Riparia riparia</i>	Threatened	<b>No</b> – species nests in exposed steep sandy slopes and cutbanks; none on subject property.
Eastern Whip-poor-will <i>Antrostomus vociferus</i>	Threatened	<b>Not Present</b> – breeds in sparse forests or at the edge of forests adjacent to open habitats required for foraging. None detected during targeted survey.
Cerulean Warbler <i>Setophaga cerulea</i>	Threatened	<b>Not Present</b> – Species lives in mature deciduous forests, which is present on the subject property. None detected during breeding bird surveys.
Least Bittern <i>Ixobrychus exilis</i>	Threatened	<b>No</b> – Lives in marshes, especially cattail marshes.
Eastern Meadowlark <i>Sturnella magna</i>	Threatened	<b>No</b> – breeds in grasslands.
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i>	Endangered	<b>Yes</b> – pair present at edge of subject property.
<b>Plants</b>		
Forked Three-awned Grass <i>Aristida basiramea</i>	Endangered	<b>No</b> – Species grows in open, or sparsely vegetated areas. None on the subject property
Butternut <i>Juglans cinerea</i>	Endangered	<b>Not Present</b> – grows on forest edges and openings and hedgerows. None were found.
<b>Fishes</b>		
Lake Sturgeon <i>Acipenser fulvescens</i>	Threatened	<b>No</b> – Species lives in rivers

1. ESA – Endangered Species Act (2007)

## 5. Assessment of Natural Features

Based on site investigations, the presence or absence of natural features discussed in the PPS is provided in **Table 3** below.

**Table 3. Assessment of Presence of Natural Features**

Natural Feature	Presence or Absence
Significant wetlands	<b>None.</b> There is a Provincially Significant Wetland (PSW) approximately 240 m to the east of the subject property boundary that will not be affected.  There are unevaluated wetlands in the northern portion located beyond the proposed lot lines and approximately 80 m from proposed development footprint. There is also a small unevaluated wetland adjacent to the southern portion of the drainage feature.
Significant woodlands	<b>Yes.</b> The woodlands on and surrounding the subject property are designated significant woodland in the Town’s Official Plan based on

Natural Feature	Presence or Absence
	criteria such as location, area, age and natural features.
Significant valleylands	<b>None.</b> There are no significant valleylands within or adjacent to the subject property.
Significant Areas of Natural and Scientific Interest (ANSIs)	<b>None.</b> No ANSIs are identified on or within 120 m of the subject property.
Significant wildlife habitat	<b>Yes.</b> The planning authority has no SWH criteria although they are responsible for the designation of SWH. Based on the <u>recommended criteria</u> of MNRF (2015) SWH is present on the subject property in the form of Woodland Area-Sensitive Bird Breeding Habitat as described by MNRF (2015), and species of special concern ( <b>Appendix E</b> ).
Habitat of Threatened or Endangered Species	<b>Yes.</b> Based on presence of breeding activity, habitat for Red-headed Woodpecker exists within the subject property.  Based on a bat habitat survey and assessment and consultations with the SAR branch at the MECP, the proposed development will not result in an adverse effect on the species or their habitat (see <b>Appendix A</b> ).
Fish Habitat	<b>Not likely.</b> The drainage feature was not assessed but no water was observed in July, 2022 and the presence of fish would be confined to the spring period.

**Table 4** provides a summary of the natural heritage features that were identified in this EIS and which need to be addressed with respect to potential impacts in the context of the proposed development, the results of the vegetation and wildlife surveys and based on applicable policy and regulations related to natural heritage.

In accordance with the applicable provincial and local planning documents, as outlined in Section 3, consideration for the sensitivity, quality, and function of the natural environmental features are also discussed.

**Table 4. Feature Impact Assessment Matrix**

Feature or Function	Potential Impact to Natural Features & Functions	Recommended Mitigation & Enhancement	Residual Effect
Wetland (unevaluated)	Construction works such as grading, grubbing and excavation can cause the movement of sediment into downslope areas such as the wetland.	<ul style="list-style-type: none"> <li>Sediment and erosion controls should be implemented as per an ESC plan to be prepared by a qualified engineer and approved by the Town.</li> <li>Design and plan the development of driveways, utilities and building sites with as little soil excavation and disturbance as possible.</li> <li>Physically delineate the limits of clearing and construction with flagging or staking, ahead of construction, to avoid unnecessary disturbance to the surrounding vegetation.</li> <li>Re-vegetate/protect exposed areas and bare soils immediately after construction.</li> </ul>	None.
Significant Woodland	<p>The proposed lots and building footprints will result in the removal of trees and vegetation and potential indirect effects on the adjacent remaining woodland such as light and wind penetration, dumping of residential yard waste and introduction of non-native, invasive species and off-leash pets.</p> <p>Most of the treed areas to be removed are mature forest except for a small, disturbed area for a communication tower.</p> <p>Total forest removal is approximately 0.93 ha which represents &lt;0.1% of the larger 500+ ha woodland. The indirect disturbance effects of removal will extend approximately 100 m into the surrounding remaining forest.</p> <p>The features and functions of the woodland will remain. Areas of forest removal are within 60 m of the forest edge and the adjacent existing detached residence, thereby minimizing the reduction of forest interior habitat.</p>	<ul style="list-style-type: none"> <li>Use best management practices to ensure that trees being retained adjacent to construction areas are not damaged.</li> <li>Design and plan the development of driveways, utilities and building sites with as little soil excavation and disturbance as possible.</li> <li>Physically delineate the limits of clearing and construction with flagging or staking, ahead of construction, to avoid unnecessary disturbance to any surrounding vegetation.</li> <li>Re-vegetate/protect exposed areas and bare soils immediately after construction.</li> <li>Coniferous trees should be planted along the new forest edge to mitigate edge effects such as light and wind penetration into the remaining forest.</li> <li>Exterior lighting should be minimized and directed away from the remaining forest.</li> <li>Plan seeding and plantings using native species, to allow establishment before end of growing season.</li> </ul>	A portion (direct 0.93 ha) is being removed and approximately an additional 3 to 5 ha being subject to effects due to creation of a new forest edge. However this is within a much larger (500+ ha) contiguous forest that is being retained. With recommended mitigation measures, negative impact is anticipated on the features and functions of the woodland but the impacts will be minimal.
<p>Threatened or Endangered Species</p> <p>Red-headed Woodpecker</p> <p>Bats</p> <p>Four bat species have the potential to occur on the subject property.</p>	<p>The proposed development will result in the loss/alteration of a relatively small amount of forest habitat.</p> <p>Negative effects on Red-headed Woodpecker are not anticipated as it was observed to be breeding approximately 250 m from the nearest proposed building footprint.</p> <p>Roosting bats could be adversely affected if trees were removed during the active bat season.</p>	<ul style="list-style-type: none"> <li>To avoid direct impacts to the species, site alteration (i.e., removal of trees, clearing, etc.) <b>should not occur on the subject property from April 1 through August 31</b>, as this time corresponds to the peak nesting period for the species.</li> <li>Beyond the building footprints, efforts should be made to retain larger, decaying and dying trees for Red-headed Woodpecker habitat.</li> <li>Consultation with the MECP has confirmed that neither the species nor their habitat will be adversely affected, provided that site alteration (i.e., removal of trees, clearing, etc.) <b>does not occur between April 1 and October 1</b>, (see <b>Appendix A</b>)</li> </ul>	Neutral

Feature or Function	Potential Impact to Natural Features & Functions	Recommended Mitigation & Enhancement	Residual Effect
<p>Significant Wildlife Habitat:</p> <p><i>Specialized Habitat for Wildlife</i></p> <p>Six woodland area-sensitive breeding birds were identified as likely breeding within the subject property.</p> <p><i>Habitat for Species of Conservation Concern (not including endangered or threatened species)</i></p> <p>Three bird species of special concern were identified as likely breeding within the surveyed portion of the subject property: two pairs each of Eastern Wood-Pewee, and Wood Thrush, and one pair of Canada Warbler.</p> <p>A more comprehensive analysis of the types of SWH presence or absence on the subject property is provided in <b>Appendix E</b>.</p>	<p>Because of the removal of treed upland communities, bird species that breed in these habitat types will be affected. However, all but one of the Woodland Area-sensitive species' occurrences and all of the Species of Special Concern, were observed outside of the proposed development envelopes.</p> <p>There will be both direct (e.g., removal of potential nesting habitat) and indirect impacts (e.g., edge effects).</p>	<ul style="list-style-type: none"> <li>• Site alteration (i.e., removal of trees, clearing, etc.) <b>should not occur on the subject property from April 1 through August 31</b>, as this time corresponds to the peak nesting period for the majority of migratory birds and encompasses the breeding season for the species documented on the subject property during the breeding bird surveys.</li> <li>• The federal <i>Migratory Birds Convention Act</i> (1994) and provincial <i>Fish and Wildlife Conservation Act</i> protect the nests, eggs and young of most bird species from harm or destruction. As the breeding bird season in central Ontario is generally from April to the end of August, the clearing of vegetation should occur outside of these periods.</li> <li>• Coniferous trees should be planted along the new forest edge to mitigate edge effects such as light and wind penetration into the remaining forest.</li> </ul>	<p>The area of woodland habitat that is proposed for removal, relative to the size of the woodland being retained makes the potential impacts to the local breeding populations of birds, with mitigation measures, very low.</p>
<p>Fish Habitat</p> <p>A drainage feature flows from the southern portion of the subject property northwards.</p>	<p>No development is proposed in or within 15 m of this drainage feature.</p> <p>Construction works such as grading, grubbing and excavation can cause the movement of sediment into watercourses, both on and downstream of the property.</p> <p>The clearing, grubbing and grading has the potential to add flows of silt and sediment to the watercourse.</p>	<ul style="list-style-type: none"> <li>• As shown in <b>Figure 3</b> and the Concept Plan (<b>Appendix F</b>), the watercourse will be buffered by a 15 m setback.</li> <li>• Sediment and erosion controls should be implemented as per an ESC plan to be prepared by a qualified engineer and approved by the Town.</li> <li>• Design and plan the development of driveways, utilities and building sites with as little soil excavation and disturbance as possible to reduce the potential for sedimentation and erosion.</li> <li>• Physically delineate the limits of clearing and construction with flagging or staking, ahead of construction, to avoid unnecessary disturbance to the surrounding vegetation.</li> <li>• Re-vegetate/protect exposed areas and bare soils immediately after construction.</li> <li>• Plan seeding and plantings using native species, to allow establishment before end of growing season.</li> <li>• Minimize the removal and disturbance of vegetation outside of development envelopes.</li> <li>• Use mulches and other organic stabilizers to minimize erosion until vegetation is established on sensitive soils.</li> </ul>	<p>Neutral</p>



## 6. Proposed Development

The proposed development includes severing the existing lot to create three (3) additional lots totalling approximately 2.76 ha, with the area of disturbance for the combined building footprints estimated at 0.93 ha (**Figure 3** and **Appendix F**). The building footprints are conceptual and include three single detached residences and associated driveways, septic beds and yards.

Beacon reviewed the lot severance Concept Plan prepared by Groundswell Urban Planners Inc. (October 27, 2022). Servicing will entail individual wells and septic for each lot.

## 7. Impact Assessment and Mitigation

In order to accommodate the three lot severances and associated single detached residences, the removal of a total of approximately 0.93 ha of deciduous woodland (FOD5-1 and FOD5-2) will be required. At the time of building permit issuance, if the building footprints shift but remain the same in total area, the findings of this report would still be valid as this would not impact any of the identified features.

The proposed new lots are located along the road frontage on either side of an existing single, detached residence at the southern edge of the 18.66 ha property.

This edge area has previously been developed (the existing residence) and partially cleared for construction of a communication tower.

Accordingly, it is anticipated that negative effects to the natural system will be generally limited. However, potential effects on the natural features that could occur (a) during the construction phase and (b) following completion of construction, are discussed below and in **Table 4**.

Potential effects on the subject property and to the adjacent natural heritage features or species during construction include:

- Direct loss of significant woodland (0.93 ha);
- Indirect disturbance effects in approximately 3 to 5 ha of forest (e.g., edge effects, noise and physical disturbance, yard waste and intrusion of people and pets);
- Loss of habitat for wildlife through the removal of woodland; and
- Erosion and sediment runoff during site alteration, grading and soil stockpiling.

With the mitigation measures recommended in **Table 4**, the net effects of the proposed development include minor impacts to the features and functions of the significant woodland due to direct loss of woodland area and indirect edge effect impacts on the adjacent remaining woodland.



## 8. Policy Conformity

Based on the results of the existing conditions assessment and review of the applicable planning and policy documents as outlined in Section 3, relevant findings are summarized in the following sections.

### 8.1 Provincial Policy Statement

The subject property supports significant woodlands and by applying the MNRF criteria, significant wildlife habitat. The potential impacts of the proposed development have been assessed and with the recommended mitigation measures, the negative impacts to the features and functions of the woodland and wildlife habitat are anticipated to be minimal.

### 8.2 *Endangered Species Act*

The subject property contains potential habitat for endangered bat species. The potential habitat was inventoried and assessed. The results, with mitigation measures were provided to the MECP and it was concluded that the species will not be adversely affected.

Red-headed Woodpecker, listed as endangered under the ESA, is breeding on the subject property. As the proposed development area is small compared to the amount of woodland habitat to be retained, and the development is relatively remote from the nesting area, potential impacts to the species and its habitat are not anticipated.

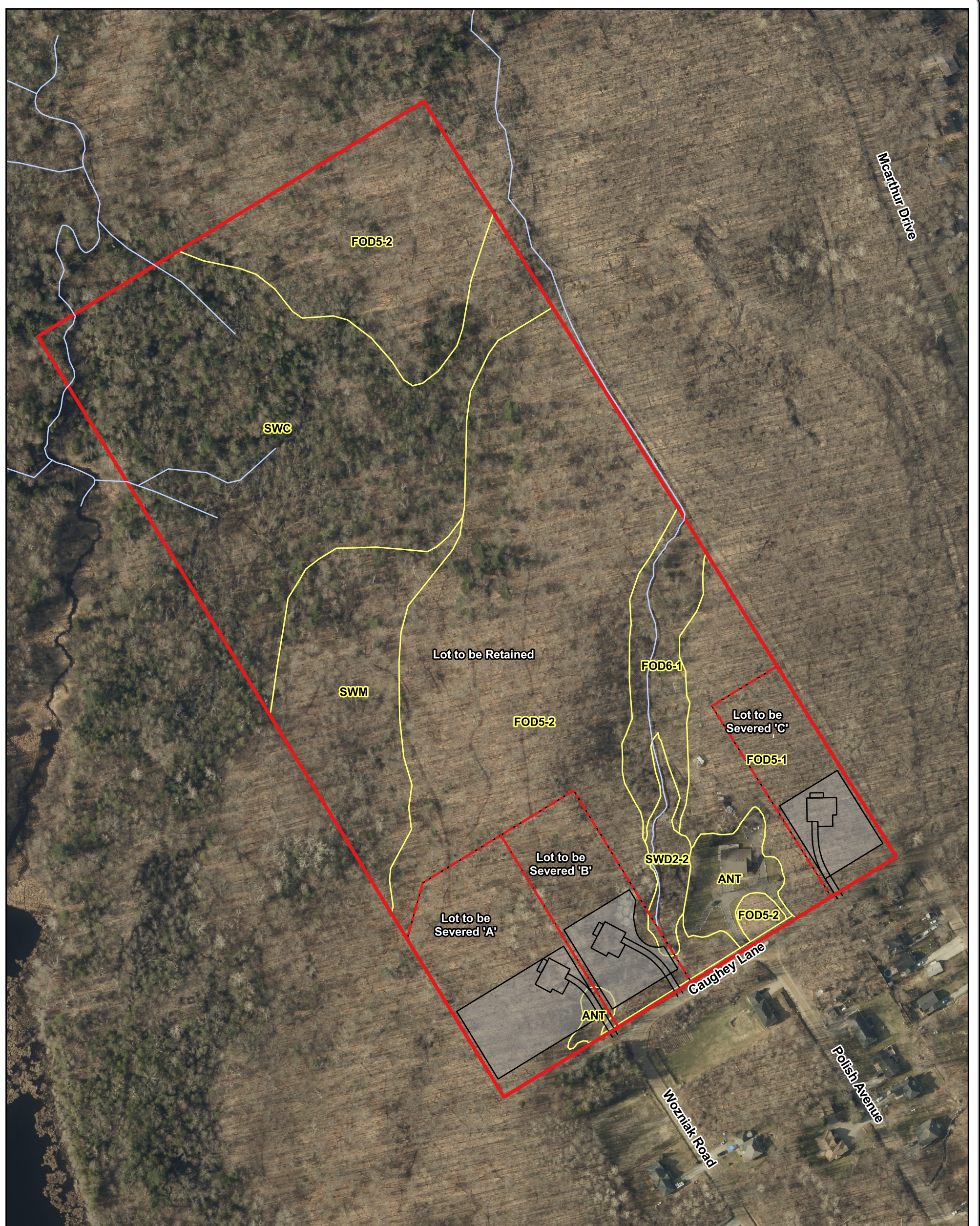
### 8.3 Local and County Official Plans

Both the County of Simcoe and Town of Penetanguishene Official Plans contain policies that prohibit development or site alteration in a significant woodland or in significant wildlife habitat unless it has been demonstrated, through an EIS, that there will be no negative impacts on the natural features or on their ecological functions. Through the analysis in Section 7 of this EIS, the negative impacts to these features, with recommended mitigation measures, will be minimal.

## 9. Conclusion

This EIS was scoped based on consultation with the Town of Penetanguishene and the Severn Sound Environmental Association. A background review and seasonal field investigations were undertaken as part of this EIS to identify and characterize the natural heritage features, functions and potential for threatened and endangered species on the subject property. These features were reviewed in the context of the proposed development and the applicable provincial, county and local municipal natural heritage policies and regulations.





**Legend**

- Subject Property
- Ecological Communities
- Proposed Development
- Watercourse
- Proposed Area of Disturbance
- Proposed Lot Severance

Code	Wetland Communities
SWM	Mixed Swamp
SWC	Coniferous Swamp
SWD2-2	Green Ash Mineral Deciduous Swamp
<b>Woodland Communities</b>	
FOD5-2	Dry - Fresh Sugar Maple - Beech Deciduous Forest
FOD5-1	Dry - Fresh Sugar Maple Deciduous Forest
FOD6-1	Fresh - Moist Sugar Maple - Lowland Ash Deciduous Forest
<b>Other Communities</b>	
ANT	Anthropogenic

**Proposed Development**

**Figure 3**

1736 Caughey Lane, Penetanguishene, EIS



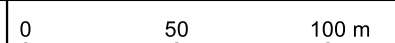
Project: 222189  
Last Revised: August 2023

Client: Johndec Properties Inc.

Prepared by: BD  
Checked by: GP



1:2,500



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This EIS has determined that provided that the mitigation measures outlined in Section 7 are implemented, impacts from the proposed development to the natural features or ecological functions associated with the subject property are considered limited and minimal.

The study has demonstrated that the proposed development meets the intent the official plans including the natural heritage policies of the Town of Penetanguishene, and County of Simcoe as detailed in Sections 3 and 8.

Prepared by:  
**Beacon Environmental**



Geri Poisson, B.A. (Hons.), Dipl. Eco. Restoration  
Senior Ecologist,  
ISA Certified Arborist (ON-1288A)

Prepared by:  
**Beacon Environmental**



Candace Chaloner, B.A.S.  
Ecologist

Reviewed by:  
**Beacon Environmental**



Brian E. Henshaw  
CEO, Senior Ecologist

## 10. References

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# Appendix A

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## Agency Consultations

**From:** [Michelle Hudolin](#)  
**To:** [Geri Poisson](#)  
**Cc:** [Owen Taylor](#)  
**Subject:** RE: Caughey, Penetanguishene  
**Date:** January 18, 2023 12:10:04 PM

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Hi Geri,

I have been in contact with the Town (Owen is copied here) about your email, and offer the following response.

Given that you have confirmed that there is no amphibian breeding habitat on the property, I agree that amphibian surveys would not be needed in the case of 1736 Caughey Lane.

The provincial Significant Wildlife Habitat (SWH) Ecoregion Criteria Schedules typically outline criteria for 'candidate' and 'confirmed' types of SWH; normally, 'candidate' SWH is identified based on habitat, and the next step is site-specific surveys to confirm whether the SWH actually exists on a site or the site does not meet the criteria for 'confirmed' SWH. If portions of the subject property meet provincial criteria for candidate SWH, then in the absence of site-specific surveys (such as breeding bird surveys to confirm area sensitive bird breeding and/or special concern bird species), the EIS would need to assume that the habitat could be SWH and appropriately address applicable policy/mitigation as part of the report.

Likewise, if Species At Risk (SAR) have potential habitat or have potential to be on-site or the adjacent lands, the EIS must address this, which typically requires site-specific surveys. For example, if a site is potential habitat for Eastern Whip-poor-will, nocturnal surveys during the appropriate weather and lunar conditions are typically needed to establish if the species is actually present [if it is, then there are Endangered Species Act implications]. If the EIS can demonstrate that there is no potential SAR habitat on the property, then additional surveys (e.g. breeding bird surveys) may not be required in this case.

An option would be for Beacon to provide your assessment/evaluation of the potential of the subject property and adjacent land to function as SAR and SWH as preliminary findings (rather than submitting the full EIS at this stage). You could provide this to the Town and SSEA as a memo or email, with detail about the site conditions/features compared to candidate SWH and potential SAR habitat (including identifying type/species), then we would review this information to determine if additional surveys are, or are not, needed as part of the completion of the EIS. The EIS would be finalized based on the surveys (if applicable).

Kind regards,  
Michelle

**Michelle Hudolin | Wetlands & Habitat Biologist**  
**Severn Sound Environmental Association**

Tel: 705-534-7283 ext. 202 | [MHudolin@severnsound.ca](mailto:MHudolin@severnsound.ca)

[www.severnsound.ca](http://www.severnsound.ca) | Twitter @SSEA\_SSRAP | Instagram @severnsoundea

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**\*\* OFFICE CLOSED \*\***

Out of an abundance of caution, as the circumstances caused by COVID-19 continue to evolve, we have **temporarily closed the SSEA offices**. Our staff will continue to operate remotely. We expect this to cause delays in our ability to respond to requests. For more information see [www.severnsound.ca](http://www.severnsound.ca)

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**From:** Geri Poisson <gpoisson@beaconenviro.com>  
**Sent:** January 10, 2023 10:58 AM  
**To:** Michelle Hudolin <MHudolin@severnsound.ca>  
**Subject:** FW: Caughey, Penetanguishene

Hi Michelle,  
Just wondering if you had a chance to review my last email below.

Thanks,

***Geri Poisson, B.A. (Hons.), Dipl. Eco. Restoration / Terrestrial Ecologist, ISA Certified Arborist***  
**BEACON ENVIRONMENTAL**

6 Cumberland St., Barrie, ON L4N 2P4  
T) 705.999.4935 x249 C) 705.828.1196  
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**To protect our staff, families, clients and the greater community all Beacon staff are working remotely. We will continue to provide timely communications *via* email and telephone and are committed to providing the highest level of service possible during this challenging time.**

---

**From:** Geri Poisson  
**Sent:** Wednesday, November 30, 2022 11:19 AM  
**To:** Michelle Hudolin <[MHudolin@severnsound.ca](mailto:MHudolin@severnsound.ca)>  
**Subject:** FW: Caughey, Penetanguishene

Hi Michelle,  
Thanks for reviewing the proposed ToR for this site, and providing further details.

I would just like to respond to note #4. My understanding is that the Town will be satisfied with a limited scoped EIS, hence the single site visit and given the limited footprints of the proposed severances and eventual homes, this seemed reasonable. I have attached the latest concept plan to

provide the context.

The disturbance would be limited to the southern portion of the property, adjacent to the existing residents and the road, and for the most westerly lot, the proposed footprint has already been partially cleared recently when the communication tower was constructed. The small intermittent water course in the central area will be protected with a 15 m buffer. Development will be well setback from the top of slope the leads down to the wetland, and the nearest proposed footprint is ~80 m from the wetland.

We did not include breeding bird surveys because even if we were to find candidate SWH such as area sensitive species, the proposed footprints would have minimal impact on the interior habitat of this property as they would be peripheral to the core interior of the woodlands and would be adjacent to the existing edge-influence areas. Timing restrictions for tree and vegetation removal would avoid impacts to birds during the breeding season. In this context, we are of the opinion that conducting breeding bird surveys would not serve a useful purpose.

No amphibian breeding habitat (ephemeral or permanent pools of water) was found during our site visit, thus I see no need for amphibian call surveys.

In terms of SAR bat habitat, a snag survey would be needed to provide further information for consultations with MECP and conformity with the ESA.

Please let me know if this approach is acceptable. Feel free to call me if you'd like to discuss further.

Thanks very much,

***Geri Poisson, B.A. (Hons.), Dipl. Eco. Restoration / Senior Terrestrial Ecologist, ISA Certified Arborist (he/him)***

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**From:** Anthony DeCarli <[anthony.decarli@gmail.com](mailto:anthony.decarli@gmail.com)>

**Sent:** July 24, 2022 7:20 PM

**To:** Geri Poisson <[gpoisson@beaconenviro.com](mailto:gpoisson@beaconenviro.com)>

**Subject:** Caughey, Penetanguishene

Hi Geri. We received response from SSEA for severance proposal.

Please see added reference documents (in red) below.



Perhaps we can find some time to talk this coming week?

Thanks.

**Task 1. Background Data and Policy Review**

*The first task will include a review of relevant up-to-date datasets and previously prepared studies and surveys concerning the subject property, and any other relevant documents. This will provide an understanding of the natural heritage features and functions that are known to occur on the subject property. Beacon will also review the most recent natural heritage information sources in a Geographic Information System (GIS) environment that will facilitate an assessment of the likelihood that species at risk (SAR) and other significant natural heritage features and functions are present. This system allows Beacon to combine the most current information provided by the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR) through the Land Information Ontario (LIO) portal with GIS layers from provincial floral and faunal atlases. All relevant layers can then be overlaid on the most recent high resolution orthoimagery. The screening process helps identify areas that can then be targeted (e.g., potential habitat) during field assessments to maximize the efficiency and effectiveness of on-site investigations.*

*The following information sources will be reviewed:*

- *Provincially Tracked Species Layer (1 km grid) from LIO;*
- *Herps of Ontario on iNaturalist.com (formerly Ontario Reptile and Amphibian Atlas [ORAA]);*
- *Ontario Breeding Bird Atlas (OBBA);*
- *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>;*
- *Aerial photography of the subject property; and*
- *Natural and physical feature layers from LIO—these geospatial layers include wetlands (provincially significant and unevaluated wetlands), and watercourses with thermal regime.*

*A review of the relevant environmental policies, regulations and guidelines that may apply to SAR and natural heritage features and functions associated with the subject property will also be completed. This will include but not be limited to:*

- *Town of Penetanguishene Official Plan (2018);*
- *The County of Simcoe Official Plan Consolidation (2008);*
- *The Endangered Species Act (2007) and regulations*
- *The Growth Plan for the Greater Golden Horseshoe (2020); and*
- *Provincial Policy Statement (2020).*
- **Provincial Natural Heritage Reference Manual (2010)**
- **Provincial Significant Wildlife Habitat (SWH) Technical Guide (2000) and SWH Criteria Schedules For Ecoregion 6E (2015) or successor documents**

### **Task 2. Field Investigation**

*One site visit is proposed during the early summer of 2022. Vegetation communities associated with the subject property will be mapped approximately and described according to the Ecological Land Classification System (ELC), which is the current standard methodology for classifying ecosystems in southern Ontario. ELC will be completed based on a combination of aerial photography interpretation and ground truthing to the ELC vegetation type. Other features will be noted as they are encountered. A list of vascular plants observed on the subject property will be compiled and screened for species at risk and species listed as regionally or provincially rare. The site investigation will focus on the southern portion of the subject property where the proposed lots would be created, and include any natural heritage constraints, including occurrences of SAR or their habitat (e.g., Butternut trees). Additional wildlife surveys are not anticipated to be completed at this time.*

### **Task 3. Data Analysis and Report Preparation**

*Beacon will prepare a scoped EIS report that will provide a description of the existing conditions on the subject property. Natural heritage features and constraints will be identified, including setbacks or buffers, as well as any listed SAR and their potential habitat on the subject property. Digital mapping will be provided in GIS format. The report will also address the applicable policies of the Town and County Official Plans, the provincial Growth Plan and the Provincial Policy Statement. The report will also provide recommendations for avoiding, minimizing, mitigating and, if necessary, compensating for negative impacts on the natural heritage features and functions on the subject property.*

#### Additional notes and clarification on EIS requirements

1. ELC descriptions should include the size of the community (both on-site and an estimate for off-site); for development proposals on or adjacent to land identified as potential or confirmed Significant Woodlands, descriptions of species, composition, and age structure are also required.
2. The EIS must describe existing biophysical conditions and appropriately address natural heritage features and areas and any applicable adjacent lands that are subject to regulations (e.g., Fisheries Act, Endangered Species Act) and planning policies (e.g., Provincial Policy Statement, upper- and/or lower-tier Official Plan, Growth Plan for the Greater Golden Horseshoe, etc.). This includes documenting and delineating the presence and location of any known and previously unknown or undocumented natural heritage features (e.g., wetlands, vernal pools, watercourses, Species At Risk habitat features, Significant Wildlife Habitat) during the appropriate season(s), taking into consideration any applicable federal or provincial policies/legislation and guidance documents.
3. The EIS must establish and address Species At Risk (SAR) that have potential habitat or have potential to be on-site or the adjacent lands, based on the habitat and features present and as identified through field studies. It is noted that background information sources and species occurrence records/range maps will be consulted,

however, if appropriate habitat exists, due diligence is required, regardless of whether a species has been previously recorded/confirmed on site or nearby. The records in NHIC and other databases are not exhaustive are not a substitute for on-site surveys; there are information gaps, especially on private land. Appropriate field work, including thorough searches, species-specific surveys and specialized survey effort or methodologies in the appropriate season(s), time of day, and habitat must be conducted to determine presence and address any potential SAR. Note: Information on the location of many federal and provincial SAR should be treated as sensitive data, and in these cases, information must be **disclosed to the municipality and applicable agencies in a manner that does not make it part of public record** (e.g., mapping/ information provided separate from the main report, subject to restricted access). If any SAR or SAR habitat is identified during field investigations, the approval agency must be notified as soon as possible so that the requirement for any additional field work or specific surveys can be assessed.

4. Beacon indicates that specific wildlife surveys are not being completed as part of the EIS. An assessment of wildlife habitat functions, including identifying, mapping and describing all potential Significant Wildlife Habitat (SWH) [as per to the current SWH Ecoregion Criteria Schedules] that is within or adjacent to a proposal is needed to ensure all applicable policy is considered. Assessment of many SWH features (e.g., amphibian breeding habitat [which includes an adjacent woodland radius], woodland area-sensitive bird breeding habitat, bat maternity/roosting habitat) requires site-specific information from surveys such as breeding bird surveys (dawn surveys, also nocturnal surveys where suitable habitat is present), amphibian surveys (call counts and larval observational surveys), bat habitat surveys, visual surveys/active searching for observations of reptiles (individuals and signs such as shed skins, eggshells), etc. that must be collected during the appropriate season(s) and conditions and using appropriate protocols in order to determine whether an area meets the current criteria for candidate or confirmed SWH. It is unclear at this point how potential SWH would be addressed if no wildlife surveys are being conducted in support of the EIS, and additional information in this regard should be provided for review.
5. The EIS will inform the proposal and establish what portions of the subject lands can be developed based on an ecological rationale (e.g., assist in defining suitable lot sizes and configurations/development envelopes which take into consideration appropriate buffers/setbacks that will protect natural heritage features and their associated functions). Depending on on-site conditions and features, the developable portion(s) of the lands may or may not be consistent with initial concept(s).

#### Report & Mapping

6. Map ELC vegetation communities and other natural heritage features or functions (e.g., potential or confirmed significant wildlife habitat, SAR habitat, drainage features, wetlands, vernal pools, areas of ground water discharge, etc.), overlaid on current high-quality aerial photos. Mapping is to show the environmental features with the

imagery, and also the proposed development together with (e.g., superimposed on) the environmental features and the imagery.

7. The EIS and the biophysical surveys undertaken in support of it must be completed by appropriately qualified professional(s) with any applicable training or certification(s) relevant to the required work. Field work will be conducted during appropriate season(s), weather conditions and using suitable protocols to identify and evaluate the natural feature(s) and their ecological functions. All field work will be described to the following standards:
  - a. Date, time, and duration of field work/survey (including start time, end time of site investigations)
  - b. Sampling locations and/or area searched (i.e., identified on a map)
  - c. Purpose of field work and survey protocol(s) used/ summary of investigation methods
  - d. Relevant temperature and weather conditions during site investigations (cloud cover, wind speed [Beaufort scale or km/h], precipitation [type and amount])
  - e. Personnel involved (name and qualifications)
  
8. Copies of the approved Terms of Reference and correspondence with relevant agencies will be included as appendices to the EIS.

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Sent from Gmail Mobile

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This email was scanned by Bitdefender

**From:** [Eplett, Megan \(MECP\)](#)  
**To:** [Geri Poisson](#)  
**Subject:** RE: Bat Habitat Review, Caughey Lane, Penetanguishene, Simcoe County  
**Date:** April 4, 2023 1:49:44 PM

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Hello Geri,

The Ministry of the Environment, Conservation and Parks (MECP) Species at Risk Branch has reviewed the information provided in the **Habitat Assessment for Endangered Bats, 1736 Caughey Lane in the Town of Penetanguishene, Simcoe County Memo** prepared by Beacon Environmental submitted on March 1, 2023 to assess the potential impacts of the proposal on species at risk bats protected under the *Endangered Species Act, 2007* (ESA).

Based on our review of the project documentation and information that has been provided, the conclusions that Beacon Environmental has made that neither sections 9 nor 10 of the ESA will be contravened for species identified above, appear reasonable and valid and therefore authorization is not required.

Should any of the project activities change, please notify MECP immediately to obtain advice on whether the changes require authorization under the ESA. Failure to carry out these projects as described could potentially result in contravention of the ESA. Further, it is recommended that Beacon Environmental continue to monitor for species at risk bat activity during the course of site development to document changes, in the event that there should be any. You remain responsible for ensuring compliance with the ESA and may be subject to prosecution or other enforcement action if your activities result in any harm to an at-risk species or habitat.

Our position here is based on the information that has been provided by Beacon Environmental and its project team. Should information not have been made available and considered in our review or new information come to light that changes the conclusions made by, or if on-site conditions and circumstances change so as to alter the basis for said conclusions, please contact the Species at Risk Branch as soon as possible to discuss next steps.

We also note that while it does not appear that an ESA permit will be required regarding species at risk bats, should other species at risk and/ or their habitats be impacted by the proposed development these should be assessed and appropriate due diligence undertaken.

The proposed activities may be subject to other approvals, such as those issued by local municipalities and conservation authorities. Please be advised that it is the responsibility of the proponent to be aware of and comply with all other relevant provincial or federal requirements, municipal by-laws or required approvals from other agencies. It is also the responsibility of the proponent to ensure that all required approvals are obtained and relevant policies adhered to.

Thank you,

Megan

**Megan Eplett | Management Biologist | Landscape Species Recovery Section | Species at Risk Branch**  
Ministry of the Environment, Conservation and Parks | Email: [megan.eplett@ontario.ca](mailto:megan.eplett@ontario.ca)

---

**From:** Geri Poisson <gpoisson@beaconenviro.com>  
**Sent:** Thursday, March 16, 2023 9:58 AM  
**To:** Species at Risk (MECP) <SAROntario@ontario.ca>  
**Subject:** RE: Bat Habitat Review, Caughey Lane, Penetanguishene, Simcoe County

**CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.**

Hello,

We submitted the attached memo for review two weeks ago. Could you confirm receipt and a time frame for a response?

Thanks very much,

***Geri Poisson, B.A. (Hons.), Dipl. Eco. Restoration / Senior Ecologist, ISA Certified Arborist (he/him)***

**BEACON ENVIRONMENTAL**

6 Cumberland St., Barrie, ON L4N 2P4

T) 705.999.4935 x249 C) 705.828.1196

[www.beaconenviro.com](http://www.beaconenviro.com)

---

**From:** Geri Poisson  
**Sent:** March 1, 2023 3:24 PM  
**To:** Species at Risk (MECP) <SAROntario@ontario.ca>  
**Subject:** Bat Habitat Review, Caughey Lane, Penetanguishene, Simcoe County

Hello,

Beacon has been retained to provide a scoped Environmental Impact Study for a 3 lot severance in the Town of Penetanguishene, County of Simcoe.

Attached is our letter with the results of our Bat Habitat Snag Survey.

I would like to request a review of our findings and conclusions.

Please let me know if the Ministry is agreement that the development will not result in an adverse effect on the species.

Let me know you have any questions or required further information.

Thank you,

***Geri Poisson, B.A. (Hons.), Dipl. Eco. Restoration / Senior Ecologist, ISA Certified Arborist (he/him)***

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# Memorandum

**To:** Ministry of the Environment Conservation and Parks (MECP)

**From:** Candace Chaloner and Geri Poisson, Beacon Environmental Limited

**Date:** March 1, 2023

**Ref:** 222189

**Re: Habitat Assessment for Endangered Bats, 1736 Caughey Lane in the Town of Penetanguishene, Simcoe County**

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Beacon Environmental Limited (Beacon) has been retained by Johndec Properties Inc. (the proponent) to prepare a scoped Environmental Impact Study (EIS) for the property located 1736 Caughey Lane in the Town of Penetanguishene (the Town), in Simcoe County (hereafter the subject property). The subject property is approximately 18.66 ha (46.11 ac) and is largely composed of woodlands, unevaluated wetlands, one single detached residence and a small, cleared area with a communications tower. The subject property is zoned as Rural (RU) in the Town's Zoning Bylaw (2022) and is designated Environmental Protection by the Town in their Official Plan (Schedule B1: Policy Overlays) (**Figure 1**). The landowner is proposing to sever the existing lot to create three (3) additional lots totalling approximately 2.76 ha, but the area of disturbance for the combined building footprints is 0.93 ha. A habitat assessment for endangered bats has been completed in support of the proposed severance of the subject property.

The purpose of this memorandum is to provide the results of the bat habitat assessment, the proposed mitigation measures with regard to bat habitat, and to ensure compliance with the *Endangered Species Act* (ESA).

## Snag Survey Methodology and Results

During site investigations on July 13, 2022, in the southern portion of the subject property, the vegetation communities were documented and classified according to the Ecological Land Classification System for Southern Ontario (Lee *et al.* 1998). As part of the assessment of habitat for endangered bats, a bat snag survey was undertaken on December 16, 2022, on the southern portion of subject property to confirm the presence/absence of potential maternity roosting habitat for endangered species of bats.

The bat habitat assessment was undertaken in accordance with guidelines from the Ministry of Natural Resources and Forestry (MNR) Midhurst District *Maternity Roost Surveys—Treed Habitats* (April 2017).

As per Step 1 of the *Maternity Roost Surveys – Treed Habitats*, any coniferous, deciduous or mixed wooded ecosite that includes snags or cavity trees is considered candidate maternity roost habitat. The subject property is comprised of deciduous forests (FOD5-1, FOD5-2, FOD7-2), mixed swamp (SWM), and coniferous swamp (SWC) (**Figure 2**). Based on the community type and canopy cover, and the area of proposed development, only the communities in the southern portion of the subject property were further assessed for their potential to function as maternity roost habitat.

Beacon completed a snag survey only within the area of the proposed development envelopes (dwellings, septics, driveways, pathways), which consisted of FOD communities, in accordance with relevant portions of *Step 2* of the guidelines (*Snag Density Calculations*) to determine habitat potential for endangered bats. The total area of the proposed development envelopes is approximately 0.93 ha which is expected to encompass the maximum areas of potential tree removal. Although the protocol requires using random plots, the areas of development are small enough that Beacon completed a survey of the entire area proposed for development, as per *Step 5 - Detailed Mapping of Snag/Cavity Trees* of the guidelines to document every snag tree proposed to be removed. Snag trees measuring approximately 25 cm diameter at breast height (DBH) or greater with characteristics favourable to *Myotis* species were considered.

Detailed bat snag surveys were undertaken on December 16, 2022, during leaf off, and under suitable conditions (i.e., no precipitation, not immediately following heavy snowfall). All snag trees observed were provided a unique number and the following parameters were documented:

- Species;
- Location;
- Approximate tree height;
- Diameter breast height;
- Number of cavities;
- Characteristics of cavity;
- Approximately height of cavities; and
- Tree condition.

The FOD communities are comprised primarily of mature Sugar Maple (*Acer saccharum*) with lesser amounts of White Ash (*Fraxinus americana*), Green Ash (*F. pennsylvanica*), Red Oak (*Quercus rubra*), American Beech (*Fagus grandifolia*), Trembling Aspen (*Populus tremuloides*) and Red Maple (*Acer rubrum*). Tree species in the subcanopy include Sugar Maple, White Ash and the occasional American Beech, the understory is relatively sparse (**Photograph 1**).

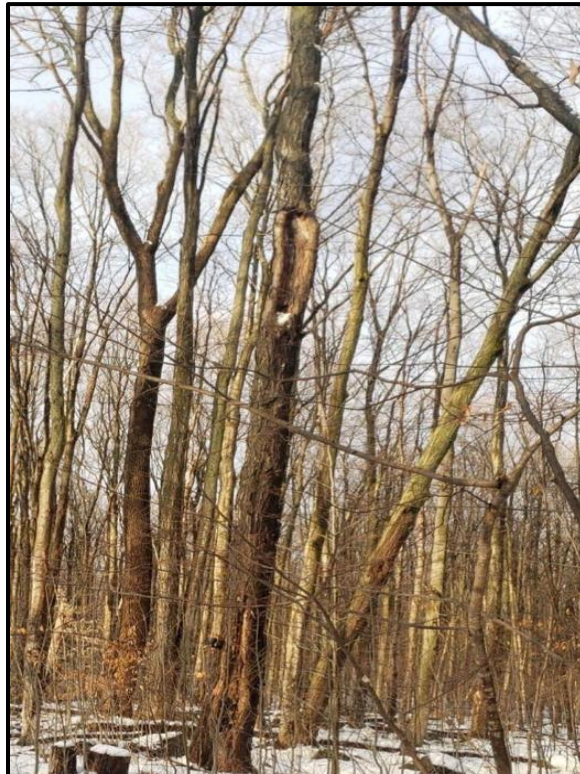
A total of 58 snag trees were recorded that demonstrated characteristics favourable to *Myotis* species (**Figure 3**). A summary of individual tree characteristics is included with this memorandum (**Attachment A**). Of the 58 snag trees documented, approximately 29 are within the three proposed building envelopes, which total 0.93 ha. The snag density for the three building envelopes averages 31 snags/ha and is considered high quality potential maternity roost habitat.

It should be noted that although no formal snag habitat surveys were conducted on the entire subject property to the north of the proposed building envelopes, site investigations confirm that the remainder of the property supports mature forests similar in age and composition to the forest within the proposed lots in the south. It is therefore assumed that the larger, surrounding forests would support potential bat maternity roosting habitat similar to that found within the proposed building envelopes.

In addition, the woodland on the subject property is part of a much larger, surrounding contiguous woodland block (approx. 500+ ha) which includes a variety of habitat types, including open wetlands, coniferous, mixed and deciduous forests and swamps. The total area of woodland removal for the three



lots would be quite small (total of 0.93 ha), especially in relation to the surrounding large woodland habitat (less than 0.2%). The proposed tree removal areas are not in close proximity to other habitat types or features, such as wetlands, and are not anticipated to have a negative effect on them. In this context, Beacon is of the opinion that removal of the proposed 0.93 ha of habitat, with mitigation measures, would not have a negative effect on the species, nor the habitat function of mature woodland, as there is more than sufficient remaining habitat to sustain the species in this area.



**Photograph 1. FOD Community (December 16, 2022)**

Based on our experience consulting with the MECP on similar sites in a similar context, i.e., a small area of potential bat roosting habitat adjacent to a much larger area of suitable bat roosting treed habitats, it is our professional opinion that the proposed treed habitat removals will not result in an adverse effect on the species or its habitat functions, provided that the following avoidance mitigation measures are implemented:

- All tree removals are to occur outside of the active bat roosting period (April 1- September 30) to avoid interacting with bats.

## **Conclusion**

Based on the analysis, it is anticipated that the removal of 29 snag trees associated with the removal of 0.93 ha of wooded communities will not adversely affect the regulated species. The trees are

proposed to be removed outside of the active bat roosting period (April 1 - September 30). Furthermore, it will not impede the species use of the general area as it is a fraction of the larger contiguous woodland.

We trust the above provides sufficient information for MECP to confirm that no further measures are required to address regulated bat species and their habitat.

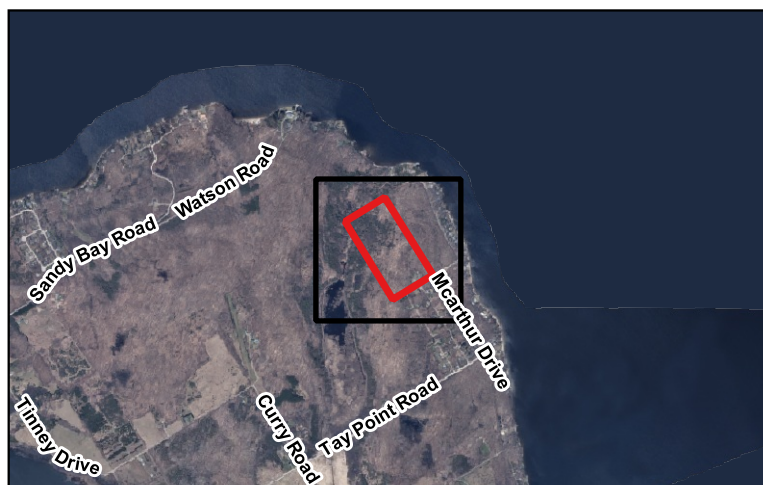
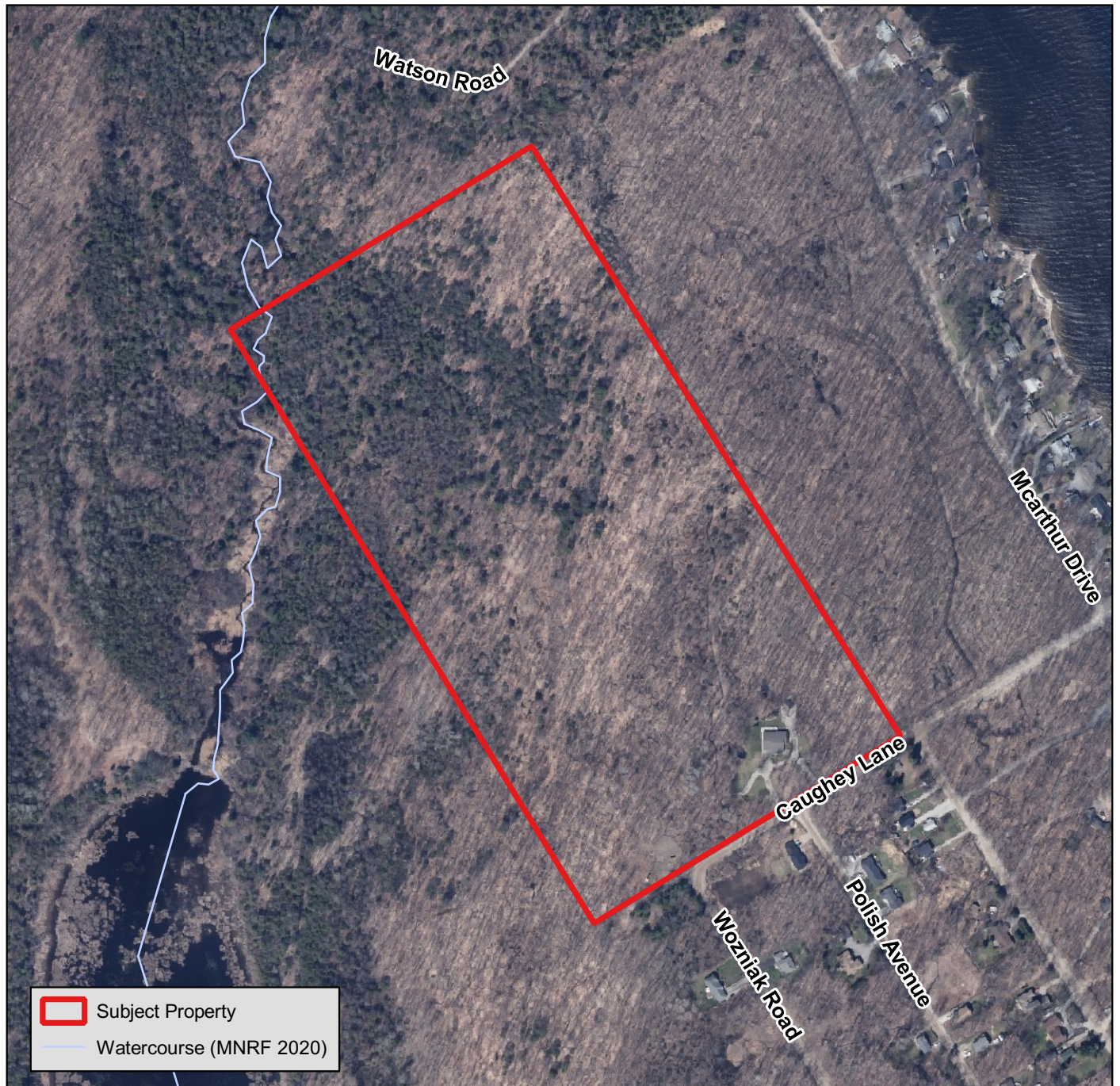
## **Attachments**



Attachment A. Snag Survey Data.

## **References**

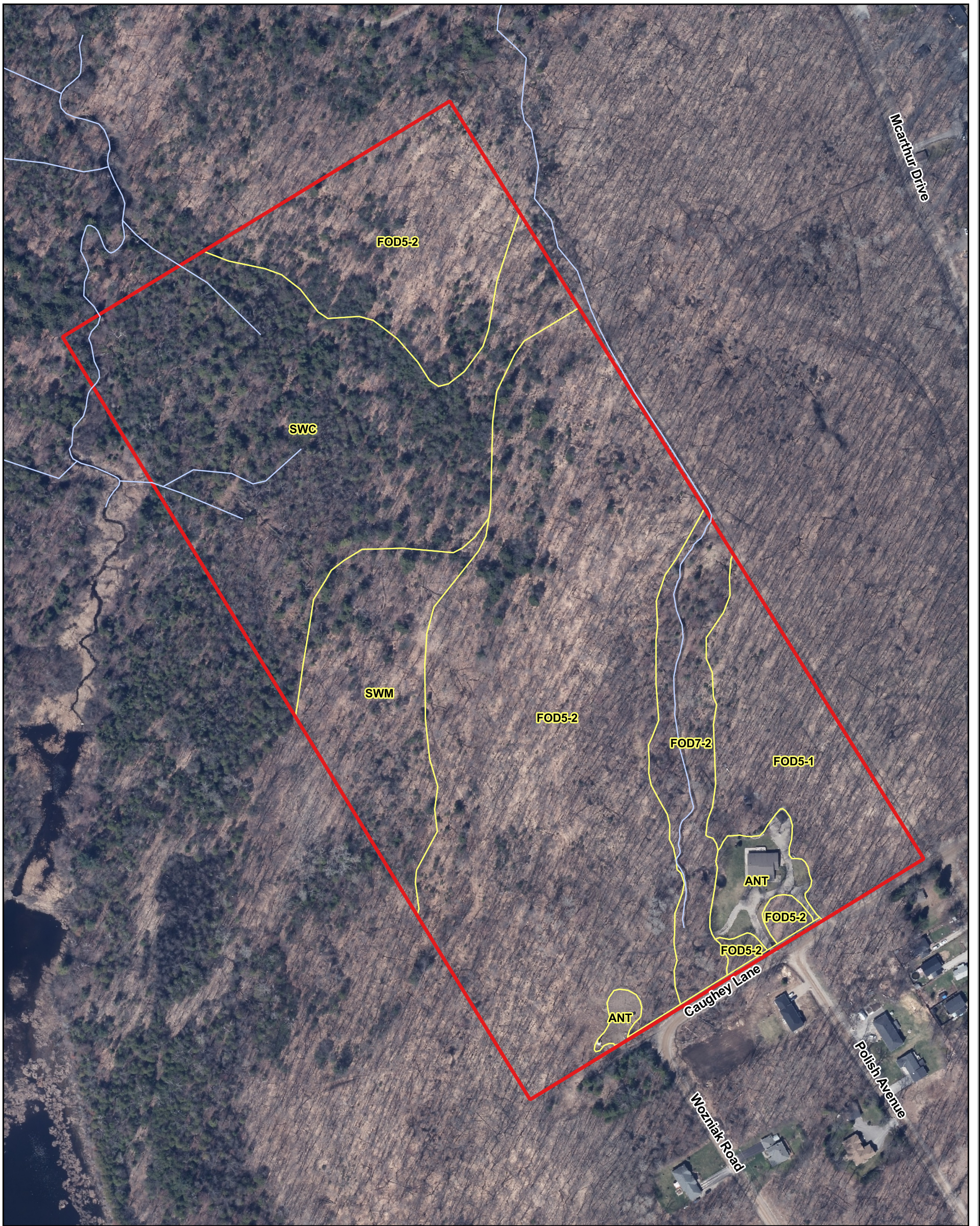
Ministry of Natural Resources and Forestry. 2017.  
Treed Habitats – Maternity Roost Surveys, Midhurst District.





<b>Site Location</b>		<b>Figure 1</b>
1736 Caughey Lane, Penetanguishene, EIS		
		Project: 222189 Last Revised: February 2023
Client: Johndec Properties Inc.		Prepared by: BD Checked by: GP
	1:5,200	Inset Map: 1:50,000
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**Legend**

- ▭ Subject Property
- ▭ Ecological Communities
- Watercourse

Code	Wetland Communities
SWM	Mixed Swamp
SWC	Coniferous Swamp
Wetland Communities	
FOD5-2	Dry - Fresh Sugar Maple - Beech Deciduous Forest
FOD5-1	Dry - Fresh Sugar Maple Deciduous Forest
FOD7-2	Fresh - Moist Ash Lowland Deciduous Forest
Other Communities	
ANT	Anthropogenic

**Existing Conditions**

**Figure 2**

1736 Caughey Lane, Penetanguishene, EIS



Project: 222189  
Last Revised: February 2023

Client: Johndec Properties Inc.

Prepared by: BD  
Checked by: GP

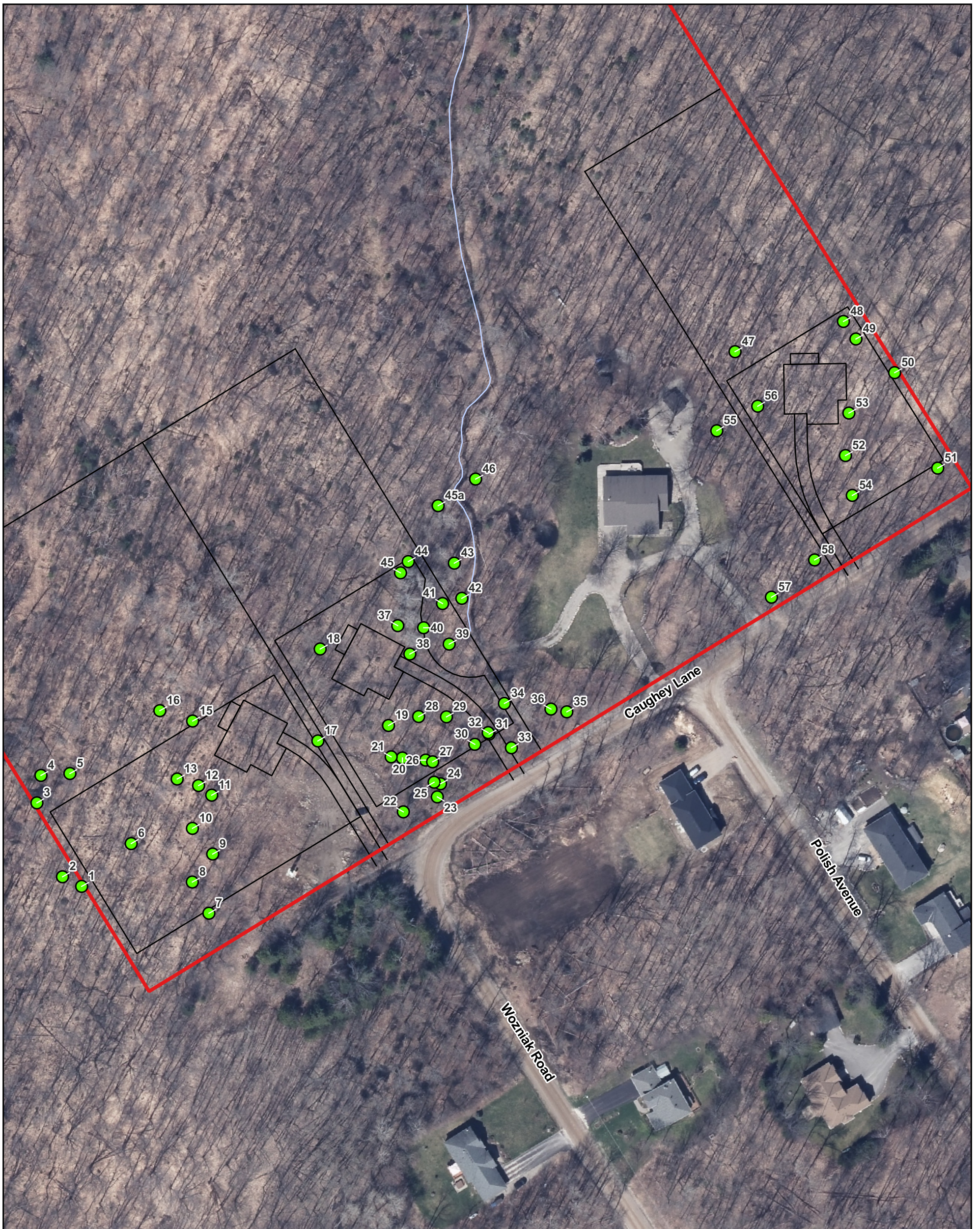


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0 50 100 m

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Orthoimagery Baselayer: 2016 (FBS)





**Legend**

- ▭ Subject Property
- Proposed Development
- Snag Locations
- Watercourse

**Bat Habitat Assessment**

**Figure 3**

1736 Caughey Lane, Penetanguishene, EIS



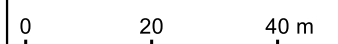
Project: 222189  
Last Revised: February 2023

Client: Johndec Properties Inc.

Prepared by: BD  
Checked by: GP



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# Attachment A

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# Attachment A

## Snag Survey Data

Table A-1. Individual Snag Survey Data 2022

Tree #	Tree Species	# of Cavities	Snag Attributes	DBH (cm)	Feature Ht. (m)	Tree Ht. (m)	Loose Bark ?	Decay Class	Canopy Cover (%)	Height Class	Leaf Nests	Within Bldg Envelope?
1	White Ash (Fraxinus americana)	1	{Knot hole}	44	{5-10}	15-20		2	50-75	1=Dominant (above canopy)		
2	Sugar Maple (Acer saccharum)	2	{Cavity}	28	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		
3	White Ash (Fraxinus americana)	2	{Cavity}	30	{5-10}	10-15		6	25-50	3=Intermediate (just below canopy)		
4	Red Maple (Acer rubrum)	10+	{Cavity}	36	{10-15}	15-20		2	25-50	3=Intermediate (just below canopy)		
5	American Beech (Fagus grandifolia)	10+	{Cavity}	51	{15-20,10-15}	15-20		2	< 25	3=Intermediate (just below canopy)		
6	Sugar Maple (Acer saccharum)	10+	{Cavity}	41	{15-20}	15-20		2	50-75	2=Co-dominant (canopy height)		Y
7	Sugar Maple (Acer saccharum)	2	{Cavity,Crack}	25	{5-10}	0-5		6	< 25	4=Suppressed (well below canopy)		
8	Sugar Maple (Acer saccharum)	1	{Cavity}	44	{5-10}	15-20		1	75-100	1=Dominant (above canopy)		Y
9	Sugar Maple (Acer saccharum)	1	{Cavity}	28	{0-5}	15-20		1	25-50	1=Dominant (above canopy)		Y
10	Sugar Maple (Acer saccharum)	3	{Cavity}	42	{0-5}	0-5		6	< 25	4=Suppressed (well below canopy)		Y
11	American Beech (Fagus grandifolia)	1	{Woodpecker hole}	25	{15-20}	15-20		1	75-100	3=Intermediate (just below canopy)	1	Y
12	Sugar Maple (Acer saccharum)	10+	{Cavity,Knot hole}	20	{0-5}	5-10		6	< 25	4=Suppressed (well below canopy)		Y
13	Sugar Maple (Acer saccharum)	2	{Cavity}	18, 29, 30	{0-5}	15-20		2	50-75	1=Dominant (above canopy)		Y
15	Trembling Aspen (Populus tremuloides)	2	{Cavity}	37	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		
16	American Beech (Fagus grandifolia)	10+	{Cavity}	30	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		
17	American Beech (Fagus grandifolia)	1	{Cavity}	50	{0-5}	15-20		1	75-100	1=Dominant (above canopy)		
18	Sugar Maple (Acer saccharum)	2	{Cavity}	39	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		Y
19	Sugar Maple (Acer saccharum)	3	{Knot hole,Cavity,Crack}	40	{5-10}	15-20		2	< 25	2=Co-dominant (canopy height)		Y
20	Sugar Maple (Acer saccharum)	5	{Cavity}	29	{5-10}	15-20		6	< 25	3=Intermediate (just below canopy)		Y
21	Sugar Maple (Acer saccharum)	3	{Cavity}	23	{0-5}	15-20		6	25-50	2=Co-dominant (canopy height)		Y
22	Sugar Maple (Acer saccharum)	10+	{Cavity}	66	{0-5,5-10,10-15}	15-20		5	< 25	3=Intermediate (just below canopy)		
23	Sugar Maple (Acer saccharum)	6	{Cavity}	42	{5-10}	15-20		6	< 25	4=Suppressed (well below canopy)		
24	Sugar Maple (Acer saccharum)	2	{Cavity}	23	{0-5}	0-5		6	< 25	4=Suppressed (well below canopy)		
25	Sugar Maple (Acer saccharum)	10+	{Cavity}	31, 36	{5-10,0-5}	10-15		6	< 25	4=Suppressed (well below canopy)		
26	Sugar Maple (Acer saccharum)	10+	{Cavity}	71	{0-5,5-10,10-15}	15-20		6	< 25	1=Dominant (above canopy)		Y
27	Sugar Maple (Acer saccharum)	3	{Cavity}	30	{5-10,10-15}	15-20		6	< 25	2=Co-dominant (canopy height)		Y
28	Sugar Maple (Acer saccharum)	3	{Cavity}	35	{5-10,10-15}	15-20		2	25-50	1=Dominant (above canopy)		Y
29	Red Maple (Acer rubrum)	4	{Cavity}	30	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		Y
30	Red Maple (Acer rubrum)	5	{Cavity}	23	{5-10,10-15}	15-20		6	< 25	2=Co-dominant (canopy height)		Y
31	Red Maple (Acer rubrum)	2	{Cavity}	24	{5-10}	15-20		6	< 25	3=Intermediate (just below canopy)		Y
32	Red Maple (Acer rubrum)	6	{Cavity}	20	{5-10}	10-15		6	< 25	4=Suppressed (well below canopy)		Y
33	American Beech (Fagus grandifolia)	1	{Crack}	20	{0-5}	0-5		6	< 25	4=Suppressed (well below canopy)		Y

Tree #	Tree Species	# of Cavities	Snag Attributes	DBH (cm)	Feature Ht. (m)	Tree Ht. (m)	Loose Bark ?	Decay Class	Canopy Cover (%)	Height Class	Leaf Nests	Within Bldg Envelope?
34	Trembling Aspen (Populus tremuloides)	3	{Crack,Knot hole,Cavity}	65	{10-15,15-20}	15-20		1	75-100	1=Dominant (above canopy)		
35	American Beech (Fagus grandifolia)	4	{Cavity}	40	{5-10}	10-15		6	< 25	3=Intermediate (just below canopy)		
36	Sugar Maple (Acer saccharum)	4	{Cavity}	40	{5-10}	10-15		6	< 25	3=Intermediate (just below canopy)		
37	Trembling Aspen (Populus tremuloides)	2	{Cavity}	54	{10-15}	15-20		1	50-75	2=Co-dominant (canopy height)		Y
38	Red Maple (Acer rubrum)	2	{Knot hole}	39	{10-15}	15-20		1	50-75	2=Co-dominant (canopy height)		Y
39	White Ash (Fraxinus americana)	3	{Cavity}	27	{10-15,15-20}	15-20		5	< 25	2=Co-dominant (canopy height)		
40	Red Maple (Acer rubrum)	3	{Cavity}	49	{10-15,15-20}	15-20		2	50-75	2=Co-dominant (canopy height)		
41	Paper Birch (Betula papyrifera)	7	{Cavity}	39	{10-15,15-20}	15-20		4	< 25	3=Intermediate (just below canopy)		
42	Red Maple (Acer rubrum)	10+	{Cavity}	32	{5-10,0-5}	10-15		6	< 25	4=Suppressed (well below canopy)		
43	Trembling Aspen (Populus tremuloides)	10+	{Cavity}	39	{5-10,10-15,15-20}	15-20		5	< 25	3=Intermediate (just below canopy)		
44	Trembling Aspen (Populus tremuloides)	2	{Cavity}	32	{0-5}	0-5		6	< 25	4=Suppressed (well below canopy)		Y
45	Trembling Aspen (Populus tremuloides)	1	{Cavity}	55	{0-5}	15-20		1	50-75	2=Co-dominant (canopy height)		Y
45a	Trembling Aspen (Populus tremuloides)	1	{Crack}	41	{5-10}	5-10		6	< 25	4=Suppressed (well below canopy)		
46	White Ash (Fraxinus americana)	1	{Crack}	65	{10-15}	15-20		1	75-100	2=Co-dominant (canopy height)		
47	Sugar Maple (Acer saccharum)	7	{Cavity}	30	{10-15,15-20}	15-20		2	50-75	2=Co-dominant (canopy height)		
48	Sugar Maple (Acer saccharum)	2	{Cavity}	29	{15-20}	15-20		2	50-75	2=Co-dominant (canopy height)		Y
49	Sugar Maple (Acer saccharum)	1	{Cavity}	27	{5-10}	15-20		2	50-75	2=Co-dominant (canopy height)		Y
50	Sugar Maple (Acer saccharum)	2	{Cavity}	31	{10-15}	15-20		1	25-50	2=Co-dominant (canopy height)		
51	Sugar Maple (Acer saccharum)	3	{Cavity}	38	{15-20}	15-20		1	25-50	2=Co-dominant (canopy height)		
52	Sugar Maple (Acer saccharum)	1	{Knot hole}	37	{15-20}	15-20		2	25-50	2=Co-dominant (canopy height)		Y
53	White Ash (Fraxinus americana)	7	{Woodpecker hole,Cavity}	37	{15-20}	15-20		2	25-50	2=Co-dominant (canopy height)		Y
54	Red Maple (Acer rubrum)	3	{Cavity}	35	{5-10}	15-20		2	25-50	2=Co-dominant (canopy height)		Y
55	Sugar Maple (Acer saccharum)	3	{Cavity,Knot hole}	47	{10-15}	15-20		1	25-50	2=Co-dominant (canopy height)		
56	Sugar Maple (Acer saccharum)	1	{Cavity}	18	{0-5}	15-20		5	< 25	4=Suppressed (well below canopy)		Y
57	Red Maple (Acer rubrum)	1	{Cavity}	24	{0-5}	15-20		2	50-75	2=Co-dominant (canopy height)		
58	Red Maple (Acer rubrum)	3	{Cavity}	15 33	{10-15}	15-20		4	25-50	3=Intermediate (just below canopy)		



# **Appendix B**

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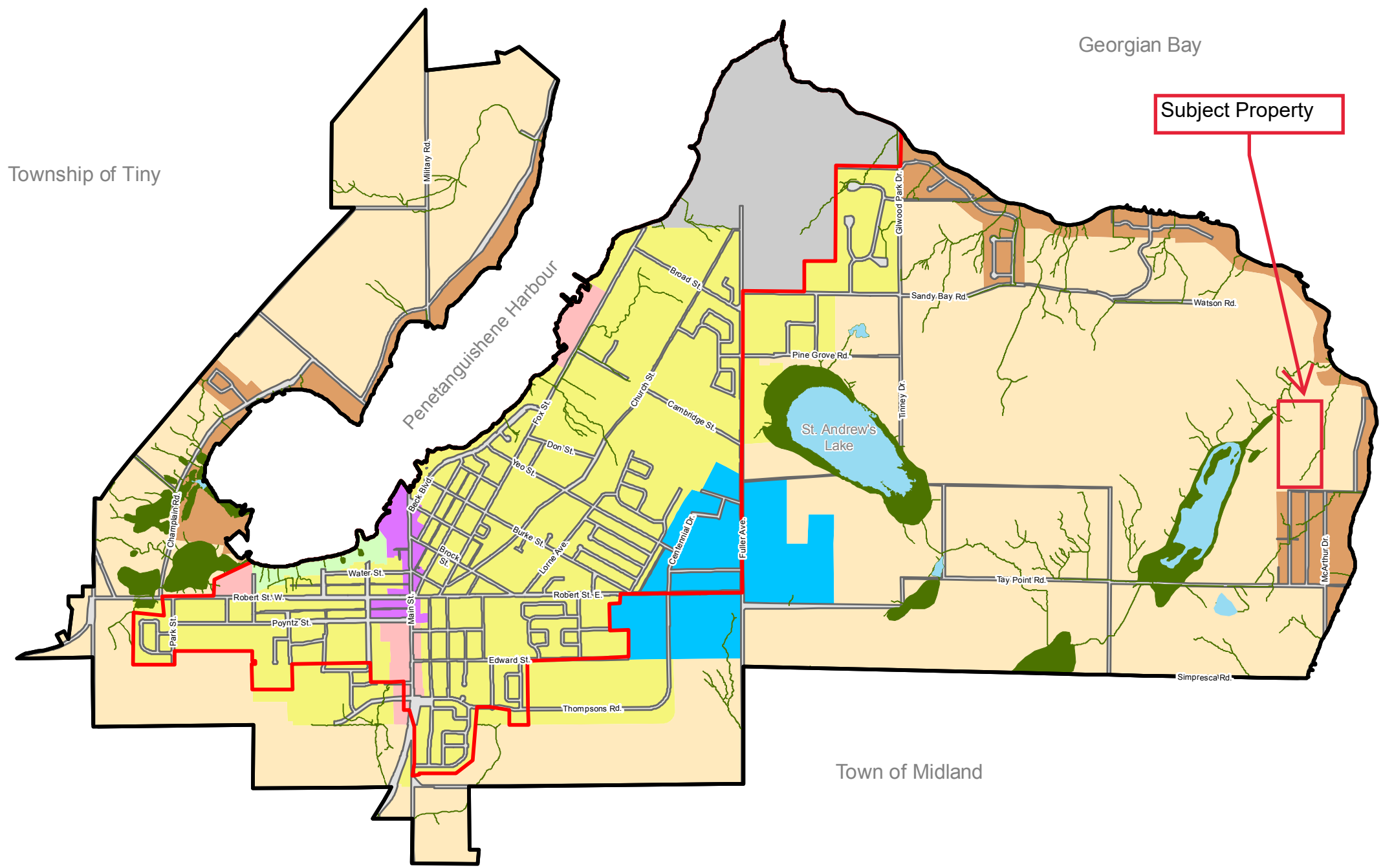
## **Town of Penetanguishene OP Schedules**



**OFFICIAL PLAN**  
**Schedule A: Land Use Structure**

- Neighbourhood Area
- Downtown and Waterfront Area
- Mixed-Use and Commercial Area
- Employment Area
- Major Open Space Area
- Shoreline Area
- Rural Area
- Provincial Institution Area
- Environmental Protection Area (EP)
- Delineated Built Boundary

Interpretation Note:  
 This Schedule shall be read and interpreted  
 in conjunction with the Official Plan.

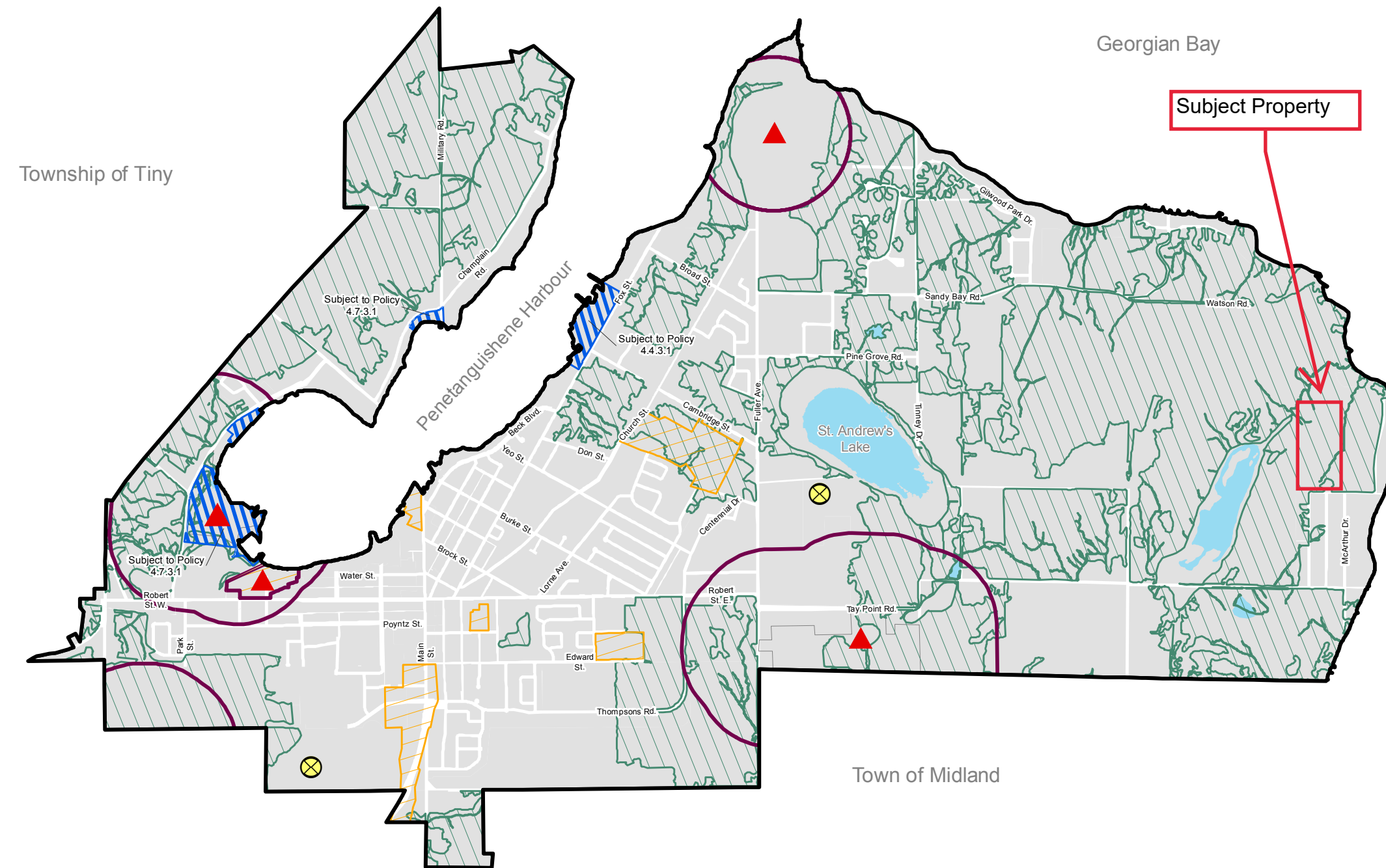




**OFFICIAL PLAN**  
**Schedule B1: Policy Overlays**

-  Environmental Protection
-  Future Study Areas
-  Site Specific Policy Areas
-  Waste Disposal Influence Area
-  Waste Disposal Site
-  Pits and Quarries

Interpretation Note:  
 This Schedule shall be read and interpreted  
 in conjunction with the Official Plan.



# Appendix C

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## Vascular Plant List

# Appendix C

## Vascular Plant List

Scientific Name	Common Name	CC	CW	COSEWIC	SARO	SRank	Simcoe County (Riley 1989)	Native Status
<i>Abies balsamea</i>	Balsam Fir	5	-3			S5		N
<i>Acer negundo</i>	Manitoba Maple	0	0			S5		N
<i>Acer rubrum</i>	Red Maple	4	0			S5		N
<i>Acer saccharum</i>	Sugar Maple	4	3			S5		N
<i>Achillea millefolium</i>	Common Yarrow	0	3			SE5?		I
<i>Actaea pachypoda</i>	White Baneberry	6	5			S5		N
<i>Actaea rubra</i>	Red Baneberry	6	3			S5		N
<i>Alliaria petiolata</i>	Garlic Mustard	0	0			SE5		I
<i>Allium tricoccum</i>	Wild Leek	7	3			S4		N
<i>Ambrosia artemisiifolia</i>	Common Ragweed	0	3			S5		N
<i>Amelanchier arborea</i>	Downy Serviceberry	5	3			S5		N
<i>Amphicarpaea bracteata</i>	American Hog-peanut	4	0			S5		N
<i>Aralia nudicaulis</i>	Wild Sarsaparilla	4	3			S5		N
<i>Arctium minus</i>	Common Burdock	0	3			SE5		I
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	5	-3			S5		N
<i>Athyrium filix-femina</i>	Common Lady Fern	4	0			S5		N
<i>Betula papyrifera</i>	Paper Birch	2	3			S5		N
<i>Bidens cernua</i>	Nodding Beggarticks	2	-5			S5		N
<i>Boehmeria cylindrica</i>	Small-spike False Nettle	4	-5			S5		N
<i>Carex arctata</i>	Drooping Woodland Sedge	5	5			S5		N
<i>Carex intumescens</i>	Bladder Sedge	6	-3			S5		N
<i>Carex lupulina</i>	Hop Sedge	6	-5			S5		N
<i>Carex pensylvanica</i>	Pennsylvania Sedge	5	5			S5		N
<i>Carex rosea</i>	Rosy Sedge	2	5			S5		N
<i>Caulophyllum thalictroides</i>	Blue Cohosh	5	5			S5		N
<i>Circaea canadensis</i>	Broad-leaved Enchanter's Nightshade	2	3			S5		N
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	6	3			S5		N
<i>Cornus sericea</i>	Red-osier Dogwood	2	-3			S5		N
<i>Dactylis glomerata</i>	Orchard Grass	0	3			SE5		I
<i>Daucus carota</i>	Wild Carrot	0	5			SE5		I

Scientific Name	Common Name	CC	CW	COSEWIC	SARO	SRank	Simcoe County (Riley 1989)	Native Status
<i>Dianthus armeria</i>	Deptford Pink	0	5			SE5		I
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern	5	-3			S5		N
<i>Epifagus virginiana</i>	Beechdrops	6	5			S5		N
<i>Epipactis helleborine</i>	Broad-leaved Helleborine	0	3			SE5		I
<i>Equisetum arvense</i>	Field Horsetail	0	0			S5		N
<i>Erigeron canadensis</i>	Canada Horseweed	0	3			S5		N
<i>Erigeron strigosus</i>	Rough Fleabane	4	3			S5		N
<i>Eurybia macrophylla</i>	Large-leaved Aster	5	5			S5		N
<i>Euthamia graminifolia</i>	Grass-leaved Goldenrod	2	0			S5		N
<i>Eutrochium maculatum</i>	Spotted Joe Pye Weed	3	-5			S5		N
<i>Fagus grandifolia</i>	American Beech	6	3			S4		N
<i>Fragaria virginiana</i>	Wild Strawberry	2	3			S5		N
<i>Frangula alnus</i>	Glossy Buckthorn	0	0			SE5		I
<i>Fraxinus americana</i>	White Ash	4	3			S4		N
<i>Fraxinus nigra</i>	Black Ash	7	-3	THR		S3		N
<i>Fraxinus pennsylvanica</i>	Red Ash	3	-3			S4		N
<i>Geranium robertianum</i>	Herb-Robert	2	3			S5		N
<i>Geum aleppicum</i>	Yellow Avens	2	0			S5		N
<i>Glyceria striata</i>	Fowl Mannagrass	3	-5			S5		N
<i>Impatiens capensis</i>	Spotted Jewelweed	4	-3			S5		N
<i>Lactuca biennis</i>	Tall Blue Lettuce	6	0			S5		N
<i>Leucanthemum vulgare</i>	Oxeye Daisy	0	5			SE5		I
<i>Lotus corniculatus</i>	Garden Bird's-foot Trefoil	0	3			SE5		I
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	5	3			S5		N
<i>Maianthemum racemosum</i>	Large False Solomon's Seal	4	3			S5		N
<i>Matteuccia struthiopteris</i>	Ostrich Fern	5	0			S5		N
<i>Medicago lupulina</i>	Black Medick	0	3			SE5		I
<i>Melilotus albus</i>	White Sweet-clover	0	3			SE5		I
<i>Mitchella repens</i>	Partridgeberry	6	3			S5		N
<i>Monotropa uniflora</i>	Indian-pipe	6	3			S5		N
<i>Onoclea sensibilis</i>	Sensitive Fern	4	-3			S5		N
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	4	3			S5		N
<i>Oxalis stricta</i>	Upright Yellow Wood-sorrel	0	3			S5	R5	N
<i>Parthenocissus vitacea</i>	Thicket Creeper	4	3			S5		N
<i>Pinus strobus</i>	Eastern White Pine	4	3			S5		N
<i>Plantago lanceolata</i>	English Plantain	0	3			SE5		I
<i>Plantago major</i>	Common Plantain	0	3			SE5		I
<i>Poa compressa</i>	Canada Bluegrass	0	3			SE5		I
<i>Poa palustris</i>	Fowl Bluegrass	5	-3			S5		N



Scientific Name	Common Name	CC	CW	COSEWIC	SARO	SRank	Simcoe County (Riley 1989)	Native Status
<i>Poa pratensis</i>	Kentucky Bluegrass	0	3			S5		N
<i>Populus tremuloides</i>	Trembling Aspen	2	0			S5		N
<i>Prunella vulgaris</i>	Common Self-heal	0	0			S5		N
<i>Prunus serotina</i>	Black Cherry	3	3			S5		N
<i>Prunus virginiana</i>	Chokecherry	2	3			S5		N
<i>Pyrola elliptica</i>	Shinleaf	5	5			S5		N
<i>Quercus rubra</i>	Northern Red Oak	6	3			S5		N
<i>Ranunculus acris</i>	Common Buttercup	0	0			SE5		I
<i>Ranunculus recurvatus</i>	Hooked Buttercup	4	-3			S5		N
<i>Rhus typhina</i>	Staghorn Sumac	1	3			S5		N
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	4	3			S5		N
<i>Rosa blanda</i>	Smooth Rose	3	3			S5		N
<i>Rubus idaeus</i>	Red Raspberry	2	3			S5		N
<i>Sambucus canadensis</i>	Common Elderberry	5	-3			S5		N
<i>Smilax herbacea</i>	Herbaceous Carrionflower	5	0			S4?		N
<i>Solanum dulcamara</i>	Bittersweet Nightshade	0	0			SE5		I
<i>Solidago canadensis</i>	Canada Goldenrod	1	3			S5		N
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	6	3			S5		N
<i>Solidago rugosa</i>	Rough-stemmed Goldenrod	4	0			S5		N
<i>Symphyotrichum novae-angliae</i>	New England Aster	2	-3			S5		N
<i>Taraxacum officinale</i>	Common Dandelion	0	3			SE5		I
<i>Taxus canadensis</i>	Canada Yew	7	3			S4		N
<i>Thuja occidentalis</i>	Eastern White Cedar	4	-3			S5		N
<i>Tilia americana</i>	Basswood	4	3			S5		N
<i>Toxicodendron radicans var. rydbergii</i>	Western Poison Ivy	2	0			S5		N
<i>Trifolium pratense</i>	Red Clover	0	3			SE5		I
<i>Trillium grandiflorum</i>	White Trillium	5	3			S5		N
<i>Tsuga canadensis</i>	Eastern Hemlock	7	3			S5		N
<i>Tussilago farfara</i>	Coltsfoot	0	3			SE5		I
<i>Ulmus americana</i>	White Elm	3	-3			S5		N
<i>Vicia cracca</i>	Tufted Vetch	0	5			SE5		I
<i>Vinca minor</i>	Lesser Periwinkle	0	5			SE5		I
<i>Viola pubescens</i>	Yellow Violet	5	3			S5		N
<i>Vitis riparia</i>	Riverbank Grape	0	0			S5		N

# Appendix D

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## Breeding Bird List

# Appendix D

## Breeding Bird List

Common Name	Scientific Name	Status				# Breeding Territories
		National Species at Risk COSEWICa	Species at Risk in Ontario Listing a	Provincial breeding season SRANK <sup>b</sup>	Area-sensitive (OMNR)c	
Wild Turkey	<i>Meleagris gallopavo</i>			S5		1
Mourning Dove	<i>Zenaida macroura</i>			S5		3
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	THR	END	S4		1
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>			S5	A	3
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>			S4		2
Downy Woodpecker	<i>Dryobates pubescens</i>			S5		1
Hairy Woodpecker	<i>Dryobates villosus</i>			S5	A	1
Northern Flicker	<i>Colaptes auratus</i>			S4		2
Pileated Woodpecker	<i>Dryocopus pileatus</i>			S5	A	1
Eastern Wood-Pewee	<i>Contopus virens</i>	SC	SC	S4		2
Great Crested Flycatcher	<i>Myiarchus crinitus</i>			S4		2
Blue Jay	<i>Cyanocitta cristata</i>			S5		3
American Crow	<i>Corvus brachyrhynchos</i>			S5		1
Black-capped Chickadee	<i>Poecile atricapillus</i>			S5		1
White-breasted Nuthatch	<i>Sitta carolinensis</i>			S5	A	2
House Wren	<i>Troglodytes aedon</i>			S5		4
Winter Wren	<i>Troglodytes hiemalis</i>			S5	A	2
Veery	<i>Catharus fuscescens</i>			S4	A	2
Wood Thrush	<i>Hylocichla mustelina</i>	THR	SC	S4		2
American Robin	<i>Turdus migratorius</i>			S5		5
Gray Catbird	<i>Dumetella carolinensis</i>			S4		1
Cedar Waxwing	<i>Bombycilla cedrorum</i>			S5		2
European Starling	<i>Sturnus vulgaris</i>			SE		1
Red-eyed Vireo	<i>Vireo olivaceus</i>			S5		8
Yellow Warbler	<i>Setophaga petechia</i>			S5		1

Common Name	Scientific Name	Status				# Breeding Territories
		National Species at Risk COSEWIC <sup>a</sup>	Species at Risk in Ontario Listing <sup>a</sup>	Provincial breeding season SRANK <sup>b</sup>	Area-sensitive (OMNR) <sup>c</sup>	
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>			S5	A	1
Black-throated Green Warbler	<i>Setophaga virens</i>			S5	A	3
Black-and-white Warbler	<i>Mniotilta varia</i>			S5	A	2
American Redstart	<i>Setophaga ruticilla</i>			S5	A	1
Ovenbird	<i>Seiurus aurocapillus</i>			S4	A	3
Northern Waterthrush	<i>Parkesia noveboracensis</i>			S5		1
Canada Warbler	<i>Cardellina canadensis</i>	THR	SC	S4	A	1
Scarlet Tanager	<i>Piranga olivacea</i>			S4	A	1
Northern Cardinal	<i>Cardinalis cardinalis</i>			S5		2
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>			S4		2
Indigo Bunting	<i>Passerina cyanea</i>			S4		1
Chipping Sparrow	<i>Spizella passerina</i>			S5		1
Song Sparrow	<i>Melospiza melodia</i>			S5		1
Brown-headed Cowbird	<i>Molothrus ater</i>			S4		1
Baltimore Oriole	<i>Icterus galbula</i>			S4		2

Field Work Conducted On: June 4 and 30, 2023

Number of Species: 41

Number of (provincial and national) Species at Risk: 4

Number of S1 to S3 Species: 0

Number of Area-sensitive Species: 13

**KEY**

a COSEWIC = Committee on the Status of Endangered Wildlife in Canada

a Species at Risk in Ontario List (as applies to ESA) as designated by COSSARO (Committee on the Status of Species at Risk in Ontario)

END = Endangered, THR = Threatened, SC = Special Concern

<sup>b</sup> SRANK (from Natural Heritage Information Centre) for breeding status if:

S1 (Critically Imperiled), S2 (Imperiled), S3 (Vulnerable), S4 (Apparently Secure), S5 (Secure)

SNA (Not applicable... 'because the species is not a suitable target for conservation activities'; includes non-native species)

<sup>c</sup> Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide (Appendix G). 151 p plus appendices.



# Appendix E

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## Significant Wildlife Habitat

# Appendix E

## Significant Wildlife Habitat

**Table 1. Seasonal Concentration Areas of Animals**

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p><b>Waterfowl Stopover and Staging Areas (Terrestrial)</b></p> <p><b>Rationale:</b> Habitat important to migrating waterfowl.</p>	<p>American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall</p>	<p>CUM1 CUT1 - Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.</p>	<p>Fields with sheet water during Spring (mid-March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl.</p> <ul style="list-style-type: none"> <li>Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence.</li> <li>Reports and other information available from Conservation Authorities</li> <li>Sites documented through waterfowl planning processes (eg. EHJV implementation plan)</li> <li>Field Naturalist Clubs</li> <li>Ducks Unlimited Canada</li> <li>Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</li> </ul>	<p>Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects</p> <ul style="list-style-type: none"> <li>Any mixed species aggregations of 100 or more individuals required.</li> <li>The flooded field ecosite habitat plus a 100-300m radius area, dependent on local site conditions and adjacent land use is the significant wildlife habitat.</li> <li>Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates).</li> <li>SWHMiST Index #7 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate SWH present on the subject property.</b></p>
<p><b>Waterfowl Stopover and Staging Areas (Aquatic)</b></p> <p><b>Rationale:</b> Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.</p>	<p>Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American WigeonGadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck</p>	<p>MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7</p>	<ul style="list-style-type: none"> <li>Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.</li> <li>These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water)</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Environment Canada.</li> <li>Naturalist clubs often are aware of staging/stopover areas.</li> <li>OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging.</li> <li>Sites documented through waterfowl planning processes (eg. EHJV implementation plan)</li> <li>Ducks Unlimited projects</li> <li>Element occurrence specification by Nature Serve: <a href="http://www.natureserve.org">http://www.natureserve.org</a></li> </ul>	<p>Studies carried out and verified presence of:</p> <ul style="list-style-type: none"> <li>Aggregations of 100 or more of listed species for 7 days, results in &gt; 700 waterfowl use days.</li> <li>Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH. The combined area of the ELC ecosites and a 100m radius area is the SWH</li> <li>Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat.</li> <li>Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”</li> <li>Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species</li> </ul>	<p><b>NO.</b> <b>None of the wildlife species listed for this habitat were observed on the subject property.</b></p>

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
			<ul style="list-style-type: none"> <li>Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</li> </ul>	<p>numbers and dates recorded).</p> <ul style="list-style-type: none"> <li>SWHMiST Index #7 provides development effects and mitigation measures.</li> </ul>	
<p><b>Shorebird Migratory Stopover Area</b></p> <p><b>Rationale:</b> High quality shorebird stopover habitat is extremely rare and typically has a long history of use.</p>	<p>Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin</p>	<p>BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5</p>	<ul style="list-style-type: none"> <li>Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats.</li> <li>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.</li> <li>Sewage treatment ponds and storm water ponds do not qualify as a SWH.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Western hemisphere shorebird reserve network.</li> <li>Canadian Wildlife Service (CWS) Ontario Shorebird Survey.</li> <li>Bird Studies Canada</li> <li>Ontario Nature</li> <li>Local birders and naturalist clubs</li> </ul> <p>Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area</p>	<p>Studies confirming:</p> <ul style="list-style-type: none"> <li>Presence of 3 or more of listed species and &gt; 1000 shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period)</li> <li>Whimbrel stop briefly (&lt;24hrs) during spring migration, any site with &gt;100 Whimbrel used for 3 years or more is significant.</li> <li>The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #8 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate SWH is present on the subject property.</b></p>
<p><b>Raptor Wintering Area</b></p> <p><b>Rationale:</b> Sites used by multiple species, a high number of individuals and used annually are most significant</p>	<p>Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl</p> <p><b>Special Concern:</b> Short-eared Owl Bald Eagle</p>	<p><u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC.</p> <p>Upland: CUM; CUT; CUS; CUW.</p> <p><u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).</p>	<ul style="list-style-type: none"> <li>The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors.</li> <li>Raptor wintering sites (hawk/owl) need to be &gt; 20 ha with a combination of forest and upland.</li> <li>Least disturbed sites, idle/fallow or lightly grazed field/meadow (&gt;15ha) with adjacent woodlands</li> <li>Field area of the habitat is to be wind swept with limited snow depth or accumulation.</li> <li>Eagle sites have open water, large trees and snags available for roosting</li> </ul> <p><u>Information Sources:</u></p> <ul style="list-style-type: none"> <li>OMNRF Ecologist or Biologist</li> <li>Field Naturalist Clubs</li> <li>Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area</li> <li>Data from Bird Studies Canada</li> <li>Results of Christmas Bird Counts</li> </ul> <p>Reports and other information available from Conservation Authorities.</p>	<p>Studies confirm the use of these habitats by:</p> <ul style="list-style-type: none"> <li>One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species.</li> <li>To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds.</li> <li>The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #10 and #11 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>None of the listed species were observed on or near the proposed development areas.</b></p>
<p><b>Bat Hibernacula</b></p> <p><b>Rationale:</b> Bat hibernacula are rare habitats in all Ontario landscapes.</p>	<p>Big Brown Bat Tri-coloured Bat</p>	<p>Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2</p>	<ul style="list-style-type: none"> <li>Hibernacula may be found in caves, mine shafts, underground foundations and Karsts.</li> <li>Active mine sites should not be considered as SWH</li> <li>The locations of bat hibernacula are relatively poorly known.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF for possible locations and contact for local</li> </ul>	<ul style="list-style-type: none"> <li>All sites with confirmed hibernating bats are SWH.</li> <li>The habitat area includes a 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms.</li> </ul>	<p><b>NO.</b> <b>No hibernacula habitat exists on or adjacent to the proposed development areas.</b></p>

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
		(Note: buildings are not considered to be SWH)	<ul style="list-style-type: none"> <li>experts</li> <li>Natural Heritage Information Center (NHIC) Bat Hibernaculum</li> <li>Ministry of Northern Development and Mines for location of mine shafts.</li> <li>Clubs that explore caves (eg. Sierra Club)</li> <li>University Biology Departments with bat experts.</li> </ul>	<ul style="list-style-type: none"> <li>Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”.</li> <li>SWHMiST Index #1 provides development effects and mitigation measures.</li> </ul>	
<p><b>Bat Maternity Colonies</b></p> <p><b>Rationale:</b> Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.</p>	Big Brown Bat Silver-haired Bat	<p>Maternity colonies considered SWH are found in forested Ecosites.</p> <p>All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM</p>	<ul style="list-style-type: none"> <li>Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH).</li> <li>Maternity roosts are not found in caves and mines in Ontario.</li> <li>Maternity colonies located in Mature deciduous or mixed forest stands with &gt;10/ha large diameter (&gt;25cm dbh) wildlife trees</li> <li>Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2.</li> <li>Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF for possible locations and contact for local experts</li> <li>University Biology Departments with bat experts.</li> </ul>	<ul style="list-style-type: none"> <li>Maternity Colonies with confirmed use by; <ul style="list-style-type: none"> <li>&gt;10 Big Brown Bats</li> <li>&gt;5 Adult Female Silver-haired Bats</li> </ul> </li> <li>The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies.</li> <li>Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”.</li> <li>SWHMiST Index #12 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No known bat maternity colonies for the listed species.</b></p>
<p><b>Turtle Wintering Areas</b></p> <p><b>Rationale:</b> Generally, sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	Midland Painted Turtle  Northern Map Turtle Snapping Turtle	<p>Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO</p> <p>Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.</p>	<p>For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates.</p> <ul style="list-style-type: none"> <li>Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen</li> <li>Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>EIS studies carried out by Conservation Authorities.</li> <li>Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites.</li> <li>OMNRF Ecologist or Biologist</li> <li>Field Naturalist clubs</li> <li>Natural Heritage Information Center (NHIC)</li> </ul>	<ul style="list-style-type: none"> <li>Presence of 5 over-wintering Midland Painted Turtles is significant.</li> <li>One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant.</li> <li>The mapped ELC ecosite area with the over-wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over-wintering is the SWH.</li> <li>Over-wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May).</li> <li>Congregation of turtles is more common where wintering areas are limited and therefore significant.</li> <li>SWHMiST Index #28 provides development effects and mitigation measures for turtle wintering habitat.</li> </ul>	<p><b>NO.</b> <b>No waterbodies occur within or adjacent to the proposed development areas.</b></p>
<p><b>Reptile Hibernaculum</b></p> <p><b>Rationale:</b> Generally</p>	<p><b>Snakes:</b> Eastern Gartersnake Northern Watersnake</p>	For all snakes, habitat may be found in any ecosite other than very wet ones.	<ul style="list-style-type: none"> <li>For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go</li> </ul>	<p>Studies confirming:</p> <ul style="list-style-type: none"> <li>Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or;</li> </ul>	<p><b>NO.</b> <b>No known reptile hibernacula within the subject property.</b></p>



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p>sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake</p> <p><b>Special Concern:</b> Milksnake Eastern Ribbonsnake</p> <p><b>Lizard:</b> <b>Special Concern</b> (Southern Shield population): Five-lined Skink</p>	<p>Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.</p> <p>For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3</p>	<p>below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH.</p> <ul style="list-style-type: none"> <li>• Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line.</li> <li>• Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.</li> <li>• Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells).</li> <li>• Reports and other information available from Conservation Authorities.</li> <li>• Field Naturalists clubs</li> <li>• University herpetologists</li> <li>• Natural Heritage Information Center (NHIC)</li> <li>• OMNRF ecologist or biologist may be aware of locations of</li> <li>• wintering skinks</li> </ul>	<p>individuals of two or more snake spp. Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (e.g. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct)</p> <ul style="list-style-type: none"> <li>• <b>Note:</b> If there are Special Concern Species present, then site is SWH</li> <li>• <b>Note:</b> Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH</li> <li>• SWHMiST Index #13 provides development effects and mitigation measures for snake hibernacula.</li> <li>• Presence of any active hibernaculum for skink is significant.</li> <li>• SWHMiST Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.</li> </ul>	
<p><b>Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)</b></p> <p><b>Rationale:</b> Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.</p>	<p>Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns.</p> <p>Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1</p>	<ul style="list-style-type: none"> <li>• Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area.</li> <li>• Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles.</li> <li>• Does not include a licensed/permitted Mineral Aggregate Operation.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• Reports and other information available from Conservation Authorities.</li> <li>• Ontario Breeding Bird Atlas</li> <li>• Bird Studies Canada; <i>NatureCounts</i> <a href="http://www.birdscanada.org/birdmon/">http://www.birdscanada.org/birdmon/</a></li> <li>• Field Naturalist Clubs.</li> </ul>	<p>Studies confirming:</p> <ul style="list-style-type: none"> <li>• Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season.</li> <li>• A colony identified as SWH will include a 50m radius habitat area from the peripheral nests</li> <li>• Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> </ul> <p>SWHMiST Index #4 provides development effects and mitigation measures</p>	<p><b>NO.</b> <b>No known habitats within the subject property.</b></p>
<p><b>Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)</b></p> <p><b>Rationale:</b> Large colonies are important to local bird population, typically sites</p>	<p>Great Blue Heron Black-crowned Night- Heron Great Egret Green Heron</p>	<p>SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1</p>	<ul style="list-style-type: none"> <li>• Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.</li> <li>• Most nests in trees are 11 to 15 m from ground, near the top of the tree.</li> </ul> <p><u>Information Sources</u></p> <p>Ontario Breeding Bird Atlas, colonial nest records.</p>	<p>Studies confirming:</p> <ul style="list-style-type: none"> <li>• Presence of 5 or more active nests of Great Blue Heron or other listed species.</li> <li>• The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island</li> </ul>	<p><b>NO.</b> <b>None of the listed species or colonies observed within the development area of the subject property.</b></p>

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
are only known colony in area and are used annually.			<ul style="list-style-type: none"> <li>Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF).</li> <li>Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony</li> <li>Aerial photographs can help identify large heronries.</li> <li>Reports and other information available from CAs.</li> <li>MNRF District Offices.</li> <li>Local naturalist clubs.</li> </ul>	<p>&lt;15.0ha with a colony is the SWH</p> <ul style="list-style-type: none"> <li>Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells</li> <li>SWHMiST Index #5 provides development effects and mitigation measures.</li> </ul>	
<p><b>Colonially - Nesting Bird Breeding Habitat (Ground)</b></p> <p><b>Rationale:</b> Colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	<p>Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird</p>	<p>Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map).</p> <p>Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird)</p> <p>MAM1 – 6; MAS1 – 3; CUM CUT CUS</p>	<ul style="list-style-type: none"> <li>Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas.</li> <li>Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Ontario Breeding Bird Atlas , rare/colonial species records.</li> <li>Canadian Wildlife Service</li> <li>Reports and other information available from CAs.</li> <li>Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area</li> <li>MNRF District Offices.</li> <li>Field Naturalist clubs.</li> </ul>	<p>Studies confirming:</p> <ul style="list-style-type: none"> <li>Presence of &gt; 25 active nests for Herring Gulls or Ring-billed Gulls, &gt;5 active nests for Common Tern or &gt;2 active nests for Caspian Tern.</li> <li>Presence of 5 or more pairs for Brewer's Blackbird.</li> <li>Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant.</li> <li>The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island &lt;3.0ha with a colony is the SWH</li> <li>Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #6 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>None of the listed species are present on the subject property.</b></p>
<p><b>Migratory Butterfly Stopover Areas</b></p> <p><b>Rationale:</b> Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.</p>	<p>Painted Lady Red Admiral</p> <p><u>Special Concern</u> Monarch</p>	<p>Combination of ELC Community Series; need to have present one Community Series from each land class:</p> <p><u>Field:</u> CUM CUT CUS</p> <p><u>Forest:</u> FOC FOD FOM CUP</p> <p>Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.</p>	<p>A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario cxlix.</p> <ul style="list-style-type: none"> <li>The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south.</li> <li>The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat.</li> <li>Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF (NHIC) Agriculture Canada in Ottawa may have list of butterfly experts.</li> <li>Field Naturalist Clubs</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur.</li> <li>Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD.</li> <li>MUD of &gt;5000 or &gt;3000 with the presence of Painted Ladies or Red Admirals is to be considered significant.</li> <li>SWHMiST Index #16 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>Subject property not located within 5km of Lake Ontario.</b></p>

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
			<ul style="list-style-type: none"> <li>Toronto Entomologists Association</li> <li>Conservation Authorities</li> </ul>		
<b>Landbird Migratory Stopover Areas</b>  <b>Rationale:</b> Sites with a high diversity of species as well as high numbers are most significant.	All migratory songbirds.  Canadian Wildlife Service Ontario website: <a href="http://www.ec.gc.ca/nature/default.asp?lang=En&amp;n=421B7A9D-1">http://www.ec.gc.ca/nature/default.asp?lang=En&amp;n=421B7A9D-1</a>  All migrant raptors species:  Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. <ul style="list-style-type: none"> <li>If multiple woodlands are located along the shoreline those Woodlands &lt;2km from Lake Ontario are more significant</li> <li>Sites have a variety of habitats; forest, grassland and wetland complexes.</li> <li>The largest sites are more significant</li> <li>Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH.</li> </ul> <b>Information Sources</b> <ul style="list-style-type: none"> <li>Bird Studies Canada</li> <li>Ontario Nature</li> <li>Local birders and naturalist club</li> <li>Ontario Important Bird Areas (IBA) Program</li> </ul>	Studies confirm: <ul style="list-style-type: none"> <li>Use of the habitat by &gt;200 birds/day and with &gt;35 spp. with at least 10 bird spp. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant.</li> <li>Studies should be completed during spring (Apr./May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #9 provides development effects and mitigation measures.</li> </ul>	<b>NO.</b> <b>Subject property not located within 5km of Lake Ontario.</b>
<b>Deer Yarding Areas</b>  <b>Rationale:</b> Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.	White-tailed Deer	Note: OMNRF to determine this habitat.  ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC.  Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	<ul style="list-style-type: none"> <li>Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter.</li> <li>The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%.</li> <li>OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual"</li> <li>Woodlots with high densities of deer due to artificial feeding are not significant.</li> </ul>	No Studies Required: <ul style="list-style-type: none"> <li>Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths &gt; 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH.</li> <li>Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO).</li> <li>Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations.</li> <li>If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area, then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li> <li>SWHMiST Index #2 provides development effects and mitigation measures.</li> </ul>	<b>NO.</b> <b>No Deer Yarding areas, as mapped by MNRF, are known on or in the vicinity of the subject property.</b>
<b>Deer Winter Congregation Areas</b>  <b>Rationale:</b>	White-tailed Deer	All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC	<ul style="list-style-type: none"> <li>Woodlots will typically be &gt;100 ha in size. Woodlots &lt;100ha may be considered as significant based on MNRF studies or assessment.</li> <li>Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however</li> </ul>	Studies confirm: <ul style="list-style-type: none"> <li>Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF.</li> </ul>	<b>NO.</b> <b>No deer winter congregation areas mapped by MNRF are on or near the subject</b>



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.		<p>SWM SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p>	<p>deer will annually congregate in large numbers in suitable woodlands.</p> <ul style="list-style-type: none"> <li>• If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule.</li> <li>• Large woodlots &gt; 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha.</li> <li>• Woodlots with high densities of deer due to artificial feeding are not significant.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• MNRF District Offices.</li> <li>• LIO/NRVIS</li> </ul>	<ul style="list-style-type: none"> <li>• Use of the woodlot by white- tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF</li> <li>• Studies should be completed during winter (Jan/Feb) when &gt;20cm of snow is on the ground using aerial survey techniques ground or road surveys or a pellet count deer density survey.</li> <li>• If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li> <li>• SWHMiST Index #2 provides development effects and mitigation measures.</li> </ul>	<p><b>property.</b></p>



**Table 2. Rare Vegetation Communities**

Rare Vegetation Community	Candidate SWH			Confirmed SWH	SWH on Subject Property?
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	Yes or No with Comments
<p><b>Cliffs and Talus Slopes</b></p> <p><b>Rationale:</b> Cliffs and Talus Slopes are extremely rare habitats in Ontario.</p>	<p>Any ELC Ecosite within Community Series: TAO CLO TAS CLS TAT CLT</p>	<p>A Cliff is vertical to near vertical bedrock &gt;3m in height.</p> <p>A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris</p>	<p>Most cliff and talus slopes occur along the Niagara Escarpment.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>The Niagara Escarpment Commission has detailed information on location of these habitats.</li> <li>OMNRF District</li> <li>Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>Field Naturalist clubs</li> <li>Conservation Authorities</li> </ul>	<ul style="list-style-type: none"> <li>Confirm any ELC Vegetation Type for Cliffs or Talus Slopes</li> <li>SWHMiST Index #21 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate ecosites on the subject property.</b></p>
<p><b>Sand Barren</b></p> <p><b>Rationale:</b> Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry</p>	<p>ELC Ecosites: SBO1 SBS1 SBT1</p> <p>Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%.</p>	<p>Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered, but less than 60%.</p>	<p>A sand barren area &gt;0.5ha in size.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF Districts.</li> <li>Natural Heritage Information Center (NHIC) has location information available on their website.</li> <li>Field Naturalist clubs</li> <li>Conservation Authorities</li> </ul>	<ul style="list-style-type: none"> <li>Confirm any ELC Vegetation Type for Sand Barrens</li> <li>Site must not be dominated by exotic or introduced species (&gt;50% vegetative cover are exotic spp.).</li> <li>SWHMiST Index #20 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate ecosites on the subject property.</b></p>
<p><b>Alvar</b></p> <p><b>Rationale:</b> Alvars are extremely rare habitats in Ecosregion 6E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 6E are small and highly localized just north of the Palaeozoic-Precambrian contact.</p>	<p>ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2</p> <p><b>Five Alvar Indicator Species:</b> 1) <i>Carex crawei</i> 2) <i>Panicum philadelphicum</i> 3) <i>Eleocharis compressa</i> 4) <i>Scutellaria parvula</i> 5) <i>Trichostema brachiatum</i></p> <p>These indicator species are very specific to Alvars within Ecoregion 6E</p>	<p>An 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. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover.</p>	<p>An Alvar site &gt; 0.5 ha in size.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Alvars of Ontario (2000), Federation of Ontario Naturalists.</li> <li>Ontario Nature – Conserving Great Lakes Alvars.</li> <li>Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>OMNRF Districts</li> <li>Feld Naturalist clubs.</li> <li>Conservation Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>Field studies that identify four of the five <b>Alvar Indicator Species</b> at a Candidate Alvar site is Significant.</li> <li>Site must not be dominated by exotic or introduced species (&gt;50% vegetative cover are exotic spp.).</li> <li>The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses</li> <li>SWHMiST Index #17 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate ecosites on the subject property.</b></p>

Rare Vegetation Community	Candidate SWH			Confirmed SWH	SWH on Subject Property?
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	Yes or No with Comments
<p><b>Old Growth Forest</b></p> <p><u>Rationale:</u> Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.</p>	<p>Forest Community Series: FOD FOC FOM SWD SWC SWM</p>	<p>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.</p>	<p>Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. <u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• OMNRF Forest Resource Inventory mapping</li> <li>• OMNRF Districts.</li> <li>• Field Naturalist clubs</li> <li>• Conservation Authorities</li> <li>• Sustainable Forestry License (SFL) companies will possibly know locations through field operations.</li> <li>• Municipal forestry departments</li> </ul>	<p>Field Studies will determine:</p> <ul style="list-style-type: none"> <li>• If dominant trees species of the are &gt;140 years old, then the area containing these trees is Significant Wildlife Habitat</li> <li>• The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present) The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH.</li> <li>• Determine ELC vegetation types for the forest area containing the old growth characteristics</li> <li>• SWHMiST Index #23 provides development effects and mitigation</li> <li>• measures.</li> </ul>	<p><b>NO.</b> <b>The forest on or adjacent to the proposed lot severances and associated building footprints do not contain old-growth characteristics; previous forestry activities are evident.</b></p>
<p><b>Savannah</b></p> <p><u>Rationale:</u> Savannahs are extremely rare habitats in Ontario.</p>	<p>TPS1 TPS2 TPW1 TPW2 CUS2</p>	<p>A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.</p>	<p>No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u></p> <ul style="list-style-type: none"> <li>□ Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>• OMNRF Districts</li> <li>• Feld Naturalist clubs.</li> <li>• Conservation Authorities.</li> </ul>	<p>Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used.</p> <ul style="list-style-type: none"> <li>• Area of the ELC Ecosite is the SWH.</li> <li>• Site must not be dominated by exotic or introduced species (&lt;50% vegetative cover are exotic sp.).</li> <li>• SWHMiST Index #18 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate ecosites on the subject property.</b></p>
<p><b>Tallgrass Prairie</b></p> <p><u>Rationale:</u> Tallgrass Prairies are extremely rare habitats in Ontario.</p>	<p>TPO1 TPO2</p>	<p>A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has &lt; 25% tree cover.</p>	<p>No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>• OMNRF Districts</li> <li>• Feld Naturalist clubs.</li> <li>• Conservation Authorities.</li> </ul>	<p>Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used</p> <ul style="list-style-type: none"> <li>• Area of the ELC Ecosite is the SWH. Site must not be dominated by exotic or introduced species (&lt;50% vegetative cover are exotic sp.).</li> <li>• SWHMiST Index #19 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>No candidate ecosites on the subject property.</b></p>

Rare Vegetation Community	Candidate SWH			Confirmed SWH	SWH on Subject Property?
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	Yes or No with Comments
<p><b>Other Rare Vegetation Communities</b></p> <p><b>Rationale:</b> Plant communities that often contain rare species which depend on the habitat for survival.</p>	<p>Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG.</p> <p>Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.</p>	<p>Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.</p>	<p>ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M</p> <p>The OMNRF/NHIC will have up to date listing for rare vegetation communities.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>• Natural Heritage Information Center (NHIC) has location information available on their website</li> <li>• OMNRF Districts</li> <li>• Field Naturalist clubs.</li> </ul> <p>Conservation Authorities.</p>	<p>Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG.</p> <ul style="list-style-type: none"> <li>• Area of the ELC Vegetation Type polygon is the SWH.</li> <li>• SWHMiST Index #37 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b></p> <p><b>No provincially rare vegetation communities on the subject property.</b></p>

**Table 3. Specialized Habitats of Wildlife considered SWH**

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p><b>Waterfowl Nesting Area</b></p> <p><b>Rationale:</b> Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.</p>	<p>American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard</p>	<p>All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4</p> <p><b>Note: includes adjacency to Provincially Significant Wetlands</b></p>	<p>A waterfowl nesting area extends 120 m from a wetland (&gt; 0.5 ha) or a wetland (&gt;0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (&lt;0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur.</p> <ul style="list-style-type: none"> <li>Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests.</li> <li>Wood Ducks and Hooded Mergansers utilize large diameter trees (&gt;40cm dbh) in woodlands for cavity nest sites.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Ducks Unlimited staff may know the locations of particularly productive nesting sites. OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat.</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<p>Studies confirmed:</p> <ul style="list-style-type: none"> <li>Presence of 3 or more nesting pairs for listed species excluding Mallards, or;</li> <li>Presence of 10 or more nesting pairs for listed species including Mallards.</li> <li>Any active nesting site of an American Black Duck is considered significant.</li> <li>Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest.</li> <li>SWHMiST Index #25 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b> <b>None of the listed species were observed on the subject property.</b></p>
<p><b>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</b></p> <p><b>Rationale:</b> Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.</p>	<p>Osprey <b>Special Concern</b> Bald Eagle</p>	<p>ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands</p>	<p>Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water.</p> <ul style="list-style-type: none"> <li>Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy.</li> <li>Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario.</li> <li>MNRF values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat.</li> <li>Nature Counts, Ontario Nest Records Scheme data.</li> <li>OMNRF Districts.</li> <li>Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Field Naturalists clubs</li> </ul>	<p>Studies confirm the use of these nests by:</p> <ul style="list-style-type: none"> <li>One or more active Osprey or Bald Eagle nests in an area.</li> <li>Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH.</li> <li>For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH, maintaining undisturbed shorelines with large trees within this area is important. For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on sight lines from the nest to the development and inclusion of perching and foraging habitat</li> <li>To be significant a site must be used annually. When found inactive, the site must be known to be inactive for ≥ 3 years or suspected of not being used for &gt;5 years before being considered not significant.</li> <li>Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid-March to mid-August.</li> </ul>	<p><b>NO.</b> <b>None of the wildlife species listed for this habitat were observed on the subject property.</b></p>



Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
				<ul style="list-style-type: none"> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #26 provides development effects and mitigation measures</li> </ul>	
<p><b>Woodland Raptor Nesting Habitat</b></p> <p><b>Rationale:</b> Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.</p>	<p>Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk</p>	<p>May be found in all forested ELC Ecosites.</p> <p>May also be found in SWC, SWM, SWD and CUP3</p>	<p>All natural or conifer plantation woodland/forest stands &gt;30ha with &gt;10ha of interior habitat. Interior habitat determined with a 200m buffer</p> <ul style="list-style-type: none"> <li>Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands.</li> <li>In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF Districts.</li> <li>Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented.</li> <li>Check data from Bird Studies Canada.</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of one or more active nests from species list is considered significant.</li> <li>Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest)</li> <li>Barred Owl – A 200m radius around the nest is the SWH.</li> <li>Broad-winged Hawk and Coopers Hawk, – A 100m radius around the nest is the SWH.</li> <li>Sharp-Shinned Hawk – A 50m radius around the nest is the SWH.</li> <li>Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.</li> <li>SWHMiST Index #27 provides development effects and mitigation measures.</li> </ul>	<p><b>NO.</b></p> <p><b>None of the wildlife species listed, nor any stick nests were observed on the subject property.</b></p>
<p><b>Turtle Nesting Areas</b></p> <p><b>Rationale:</b> These habitats are rare and when identified will often be the only breeding site for local populations of turtles.</p>	<p>Midland Painted Turtle</p> <p><u>Special Concern Species</u> Northern Map Turtle Snapping Turtle</p>	<p>Exposed mineral soil (sand or gravel) areas adjacent (&lt;100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1</p>	<ul style="list-style-type: none"> <li>Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals.</li> <li>For an area to function as a turtle- nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH.</li> <li>Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels).</li> <li>Check the Ontario Herpetofauna Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them.</li> <li>Natural Heritage Information Center (NHIC)</li> <li>Field Naturalist clubs</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of 5 or more nesting Midland Painted Turtles</li> <li>One or more Northern Map Turtle or Snapping Turtle nesting is a SWH.</li> <li>The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependent on slope, riparian vegetation and adjacent land use is the SWH.</li> <li>Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat.</li> <li>Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method.</li> </ul> <p>SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat.</p>	<p><b>NO.</b></p> <p><b>No exposed mineral soil sites (sand or gravel) within 100m of a wetland</b></p>
<p><b>Seeps and Springs</b></p>	<p>Wild Turkey Ruffed Grouse Spruce Grouse</p>	<p>Seeps/Springs are areas where ground water comes to</p>	<p>Any forested area (with &lt;25% meadow/field/pasture) within the headwaters of a stream or river system.</p>	<p>Field Studies confirm:</p>	<p><b>NO.</b></p>

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p><b>Rationale:</b> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.</p>	White-tailed Deer Salamander spp.	the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	<ul style="list-style-type: none"> <li>Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Topographical Map.</li> <li>Thermography.</li> <li>Hydrological surveys conducted by Conservation Authorities and MOE.</li> <li>Field Naturalists clubs and landowners.</li> <li>Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped.</li> </ul>	<ul style="list-style-type: none"> <li>Presence of a site with 2 or more seeps/springs should be considered SWH.</li> <li>The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat.</li> <li>SWHMiST Index #30 provides development effects and mitigation measures</li> </ul>	<b>No seeps or springs were identified on the subject property.</b>
<p><b>Amphibian Breeding Habitat (Woodland).</b></p> <p><b>Rationale:</b> These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations</p>	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians</p>	<ul style="list-style-type: none"> <li>Presence of a wetland, pond or woodland pool (including vernal pools) &gt;500m<sup>2</sup> (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size. Some small wetlands may not be mapped and may be important breeding pools for amphibians.</li> <li>Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Ontario Herpetofauna Summary Atlas (or other similar atlases) for records</li> <li>Local landowners may also provide assistance as they may hear spring- time choruses of amphibians on their property.</li> <li>OMNRF District.</li> <li>OMNRF wetland evaluations</li> <li>Field Naturalist clubs</li> <li>Canadian Wildlife Service Amphibian Road Call Survey</li> <li>Ontario Vernal Pool Association: <a href="http://www.ontariovernalpools.org">http://www.ontariovernalpools.org</a></li> </ul>	<p>Studies confirm;</p> <ul style="list-style-type: none"> <li>Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3.</li> <li>A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands.</li> <li>The habitat is the wetland area plus a 230 m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.</li> <li>SWHMiST Index #14 provides development effects and mitigation measures.</li> </ul>	<b>NO. No wetland breeding habitat present on or adjacent to the proposed development.</b>
<p><b>Amphibian Breeding Habitat (Wetlands)</b></p> <p><b>Rationale:</b> Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.</p>	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p> <p>Typically these wetland ecosites will be isolated (&gt;120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.</p>	<p>Wetlands &gt;500m<sup>2</sup> (about 25m diameter) supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats.</p> <ul style="list-style-type: none"> <li>Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators.</li> <li>Bullfrogs require permanent water bodies with abundant emergent vegetation.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Ontario Herpetofauna Summary Atlas (or other similar atlases)</li> <li>Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count.</li> <li>OMNRF Districts and wetland evaluations</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3 or; Wetland with confirmed breeding Bullfrogs are significant.</li> <li>The ELC ecosite wetland area and the shoreline are the SWH.</li> <li>A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands.</li> <li>If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement</li> </ul>	<b>NO. No wetland breeding habitat present on or adjacent to the proposed development.</b>

Specialized Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
				<p>Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</p> <ul style="list-style-type: none"> <li>SWHMiST Index #15 provides development effects and mitigation measures.</li> </ul>	
<p><b>Woodland Area-Sensitive Bird Breeding Habitat</b></p> <p><b>Rationale:</b> Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.</p>	<p>Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren</p> <p><b>Special Concern:</b> Cerulean Warbler Canada Warbler</p>	<p>All Ecosites associated with these ELC communities Series; FOC FOM FOD SWC SWM SWD</p>	<ul style="list-style-type: none"> <li>Habitats where interior forest breeding birds are breeding, typically large mature (&gt;60 yrs old) forest stands or woodlots &gt;30 ha. Interior forest habitat is at least 200 m from forest edge habitat.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Local bird clubs.</li> <li>Canadian Wildlife Service (CWS) for the location of forest bird monitoring.</li> <li>Bird Studies Canada conducted a 3- year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species</li> <li>Reports and other information available from Conservation</li> <li>Authorities.</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of nesting or breeding pairs of 3 or more of the listed wildlife species.</li> <li>Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH.</li> <li>Conduct field investigations in spring and early summer when birds are singing and defending their territories.</li> <li>Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”</li> <li>SWHMiST Index #34 provides development effects and mitigation measures.</li> </ul>	<p><b>YES.</b> <b>Canada Warbler is breeding on the subject property.</b> <b>Also, six of the listed species:</b> <b>Yellow-bellied Sapsucker</b> <b>Veery</b> <b>Black-throated Green Warbler</b> <b>Ovenbird</b> <b>Scarlet Tanager</b> <b>Winter Wren</b></p>



**Table 4. Habitats of Species of Conservation Concern Considered SWH**

Wildlife	Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p><b>Marsh Breeding Bird Habitat Rationale:</b> Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.</p>	<p>American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan</p> <p><b>Special Concern:</b> Black Tern Yellow Rail</p>	<p>MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1</p> <p>For Green Heron: All SW, MA and CUM1 sites.</p>	<ul style="list-style-type: none"> <li>Nesting occurs in wetlands.</li> <li>All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present.</li> <li>For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>OMNRF District and wetland evaluations.</li> <li>Field Naturalist clubs</li> <li>Natural Heritage Information Center (NHIC) Records.</li> <li>Reports and other information available from Conservation Authorities.</li> <li>Ontario Breeding Bird Atlas.</li> </ul>	<p>Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or one pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species.</li> <li>Note: any wetland with breeding of one or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH.</li> <li>Area of the ELC ecosite is the SWH.</li> <li>Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats.</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #35 provides development effects and mitigation measures</li> </ul>	<p><b>NO.</b> None of the listed species nor ELC ecosites occur on or adjacent to the proposed development areas.</p>
<p><b>Open Country Bird Breeding Habitat</b></p>	<p>Upland Sandpiper Grasshopper Sparrow</p>	<p>CUM1 CUM2</p>	<ul style="list-style-type: none"> <li>Large grassland areas (includes natural and cultural fields and meadows) &gt;30 ha.</li> </ul>	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of nesting or breeding of 2 or more of the listed species.</li> </ul>	<p><b>NO.</b> Grasslands on the subject lands &lt; 30 ha and being actively used for hay. Only one of the listed species observed.</p>
<p><b>Rationale:</b> This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.</p>	<p>Vesper Sparrow Northern Harrier Savannah Sparrow</p> <p><b>Special Concern</b> Short-eared Owl</p>		<ul style="list-style-type: none"> <li>Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years).</li> <li>Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older.</li> <li>The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Agricultural land classification maps, Ministry of Agriculture.</li> <li>Local bird clubs.</li> <li>Ontario Breeding Bird Atlas</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>A field with 1 or more breeding Short-eared Owls is to be considered SWH.</li> <li>The area of SWH is the contiguous ELC ecosite field areas.</li> <li>Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories.</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #32 provides development effects and mitigation measures</li> </ul>	
<p><b>Shrub/Early Successional Bird Breeding Habitat</b></p> <p><b>Rationale:</b> This wildlife habitat is</p>	<p><u>Indicator Spp:</u> Brown Thrasher Clay-coloured Sparrow</p> <p><u>Common Spp.</u></p>	<p>CUT1 CUT2 CUS1 CUS2 CUW1</p>	<p>Large field areas succeeding to shrub and thicket habitats &gt;10ha in size.</p> <ul style="list-style-type: none"> <li>Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used</li> </ul>	<p>Field Studies confirm:</p> <ul style="list-style-type: none"> <li>Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species.</li> <li>A habitat with breeding Yellow-breasted Chat or</li> </ul>	<p><b>NO.</b> No Ecosites of sufficient size; no indicator species detected.</p>



Wildlife	Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?												
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments												
<p>declining throughout Ontario and North America.</p> <p>The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.</p>	<p>Field Sparrow Black-billed Cuckoo</p> <p>Eastern Towhee Willow Flycatcher</p> <p><b>Special Concern:</b> Yellow-breasted Chat Golden-winged Warbler</p>	<p>CUW2</p> <p>Patches of shrub ecosites can be</p> <p>complexed into a larger habitat for some bird species</p>	<p>for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years).</p> <ul style="list-style-type: none"> <li>Shrub thicket habitats (&gt;10 ha) are most likely to support and sustain a diversity of these species.</li> <li>Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Agricultural land classification maps, Ministry of Agriculture.</li> <li>Local bird clubs.</li> <li>Ontario Breeding Bird Atlas</li> <li>Reports and other information available from Conservation Authorities.</li> </ul>	<p>Golden-winged Warbler is to be considered as Significant Wildlife Habitat.</p> <ul style="list-style-type: none"> <li>The area of the SWH is the contiguous ELC ecosite field/thicket area.</li> <li>Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories</li> <li>Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"</li> <li>SWHMiST Index #33 provides development effects and mitigation measures.</li> </ul>													
<p><b>Terrestrial Crayfish</b></p> <p><b>Rationale:</b> Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.</p>	<p>Chimney or Digger Crayfish; (<i>Fallicambarus fodiens</i>)</p> <p>Devil Crayfish or Meadow Crayfish; (<i>Cambarus Diogenes</i>)</p>	<table border="0"> <tr> <td>MAM1</td> <td>MAM2</td> </tr> <tr> <td>MAM3</td> <td>MAM4</td> </tr> <tr> <td>MAM5</td> <td>MAM6</td> </tr> <tr> <td>MAS1</td> <td>MAS2</td> </tr> <tr> <td>MAS3</td> <td>SWD</td> </tr> <tr> <td>SWT</td> <td>SWM</td> </tr> </table> <p>CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.</p>	MAM1	MAM2	MAM3	MAM4	MAM5	MAM6	MAS1	MAS2	MAS3	SWD	SWT	SWM	<p>Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish.</p> <ul style="list-style-type: none"> <li>Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water.</li> <li>Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed.</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>Information sources from</li> </ul>	<p>Studies Confirm:</p> <ul style="list-style-type: none"> <li>Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites</li> <li>Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH.</li> <li>Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very</li> </ul>	<p><b>NO.</b> <b>No listed species observed, nor any chimney burrows.</b></p>
MAM1	MAM2																
MAM3	MAM4																
MAM5	MAM6																
MAS1	MAS2																
MAS3	SWD																
SWT	SWM																

**Table 5. Animal Movement Corridors**

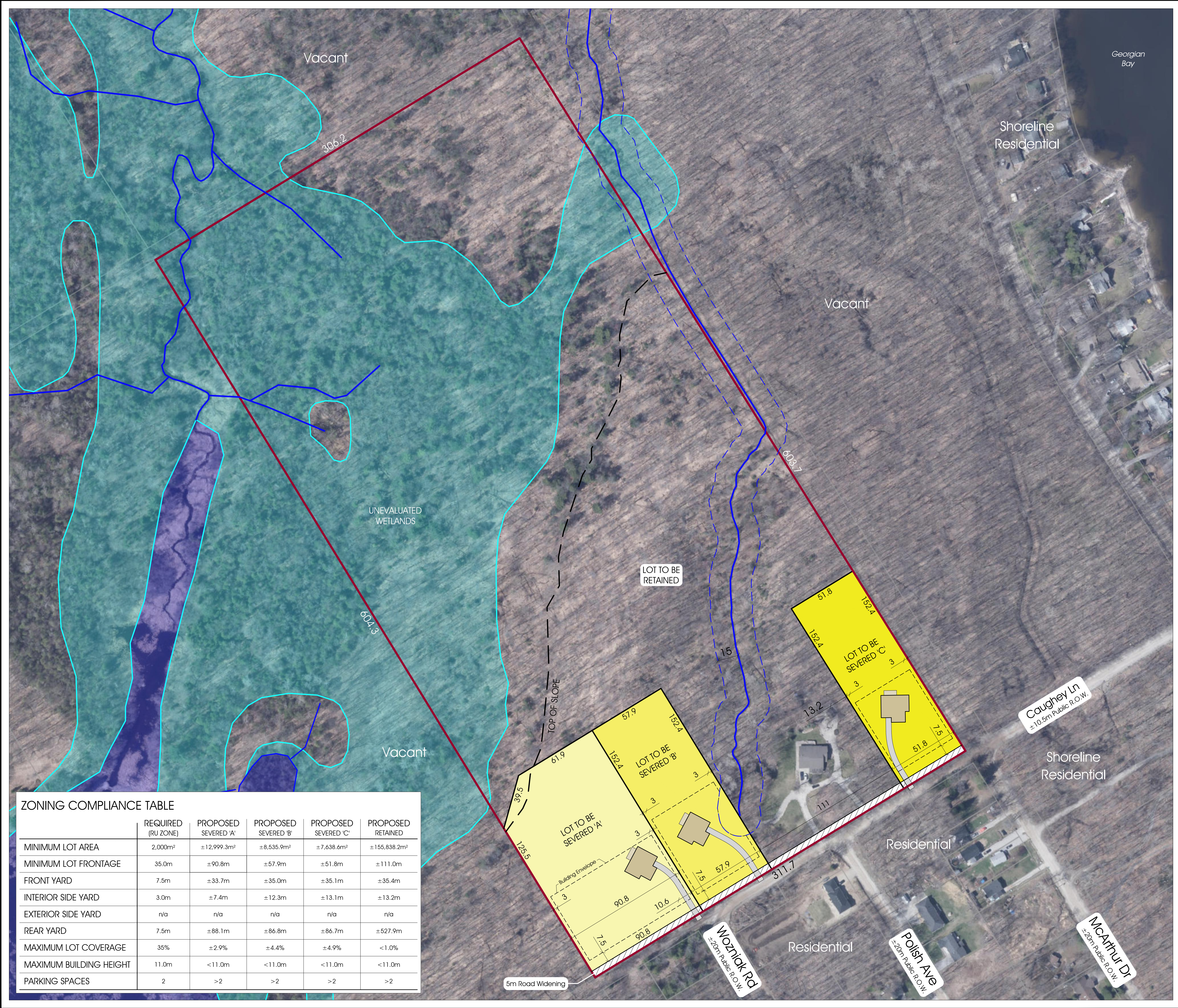
Habitat	Species	Candidate SWH		Confirmed SWH	SWH on Subject Property?
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria	Yes or No with Comments
<p><b>Amphibian Movement Corridors</b></p> <p><b>Rationale:</b> Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>Corridors may be found in all ecosites associated with water.</p> <ul style="list-style-type: none"> <li>Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1</li> </ul>	<p>Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (<b>Amphibian Breeding Habitat –Wetland</b>) of this Schedule.</p> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>MNR District Office.</li> <li>Natural Heritage Information Center (NHIC).</li> <li>Reports and other information available from Conservation Authorities.</li> </ul> <p>Field Naturalist Clubs.</p>	<ul style="list-style-type: none"> <li>Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites.</li> <li>Corridors should consist of native vegetation, with several layers of vegetation.</li> <li>Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant</li> <li>Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps &lt;20m.</li> <li>Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat<sup>cxlix</sup>.</li> <li>SWHMiST Index #40 provides development effects and mitigation measures</li> </ul>	<p><b>No.</b> <b>The proposed development lots are not located between known amphibian breeding habitat and summer habitat.</b></p>
<p><b>Deer Movement Corridors</b></p> <p><b>Rationale:</b> Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.</p>	<p>White-tailed Deer</p>	<p>Corridors may be found in all forested ecosites.</p> <p>A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.</p>	<p>Movement corridor must be determined when <b>Deer Wintering Habitat</b> is confirmed as SWH from Table 1.1 of this schedule.</p> <ul style="list-style-type: none"> <li>A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion.</li> <li>Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges).</li> </ul> <p><u>Information Sources</u></p> <ul style="list-style-type: none"> <li>MNR District Office.</li> <li>Natural Heritage Information Center (NHIC).</li> <li>Reports and other information available from Conservation Authorities.</li> </ul> <p>Field Naturalist Clubs.</p>	<ul style="list-style-type: none"> <li>Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas.</li> <li>Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas.</li> <li>Corridors should be at least 200m wide with gaps &lt;20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors.</li> <li>SWHMiST Index #39 provides development effects and mitigation measures</li> </ul>	<p><b>No.</b> <b>No known deer wintering habitat on or in the vicinity of the subject property.</b></p>

# Appendix F

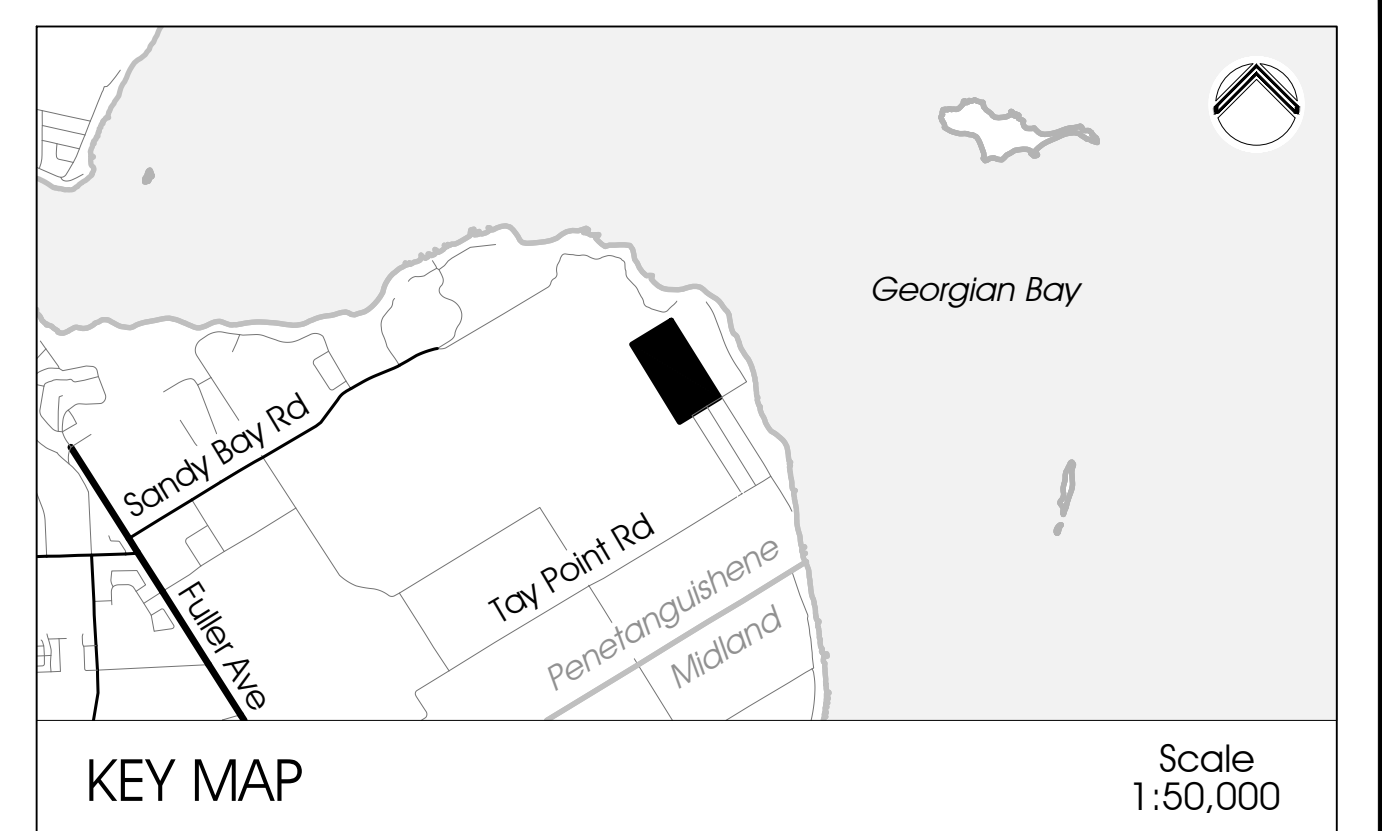
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## Concept Plan





ZONING COMPLIANCE TABLE					
	REQUIRED (RU ZONE)	PROPOSED SEVERED 'A'	PROPOSED SEVERED 'B'	PROPOSED SEVERED 'C'	PROPOSED RETAINED
MINIMUM LOT AREA	2,000m <sup>2</sup>	±12,999.3m <sup>2</sup>	±8,535.9m <sup>2</sup>	±7,638.6m <sup>2</sup>	±155,838.2m <sup>2</sup>
MINIMUM LOT FRONTAGE	35.0m	±90.8m	±57.9m	±51.8m	±111.0m
FRONT YARD	7.5m	±33.7m	±35.0m	±35.1m	±35.4m
INTERIOR SIDE YARD	3.0m	±7.4m	±12.3m	±13.1m	±13.2m
EXTERIOR SIDE YARD	n/a	n/a	n/a	n/a	n/a
REAR YARD	7.5m	±88.1m	±86.8m	±86.7m	±527.9m
MAXIMUM LOT COVERAGE	35%	±2.9%	±4.4%	±4.9%	<1.0%
MAXIMUM BUILDING HEIGHT	11.0m	<11.0m	<11.0m	<11.0m	<11.0m
PARKING SPACES	2	>2	>2	>2	>2



**LEGEND**

- SUBJECT LANDS  
Lot Area: ±186,570.3m<sup>2</sup>  
Lot Frontage: ±311.7m
- LOT TO BE SEVERED 'A':  
Lot Area: ±12,999.3m<sup>2</sup>  
Lot Frontage: ±90.8m
- LOT TO BE SEVERED 'B':  
Developable Area: ±8,535.9m<sup>2</sup>  
Lot Frontage: ±57.9m
- LOT TO BE SEVERED 'C':  
Lot Area: ±7,638.6m<sup>2</sup>  
Lot Frontage: ±51.8m
- LOT TO BE RETAINED  
Lot Area: ±155,838.2m<sup>2</sup>  
Lot Frontage: ±111.0m
- UNEVALUATED WETLANDS
- PROVINCIALLY SIGNIFICANT WETLAND - SUCKER CREEK (PE2)
- 15.0m WATERCOURSE SETBACK
- TOP OF SLOPE (approximate)
- 5.0m ROAD WIDENING
- BUILDING ENVELOPE
- PROPOSED DWELLING (approximate)

No.	REVISION	DATE

Notes: This drawing is for discussion purposes only. Property boundary to be verified by an O.L.S. Private well and septic will be provided.

Sources: County of Simcoe interactive map.

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## CONCEPT PLAN - ZBL 2022-17

1736 CAUGHEY LANE  
Part of Lot 41 Military Reserve Tay  
TOWN OF PENETANGUSHENE  
COUNTY OF SIMCOE

SEAL		SCALE	1:1,250
DESIGN	AM	DRAWN	AM
APPROVED	KK	DATE	Oct. 27, 2022
PROJECT	PROJECT No.		-
	DRAWING No.		01