



**Scoped Environmental Impact Study**  
**1043 Pine Grove Road**  
**Town of Penetanguishene**

Prepared for:  
David Mayer

Prepared by:  
Azimuth Environmental  
Consulting, Inc.

January 2026

AEC 24-305



Environmental Assessments & Approvals

January 9, 2026

AEC 24-305

David Mayer  
1043 Pine Grove Road  
Penetanguishene, Ontario  
L9M 2B7

Re: **Scoped Environmental Impact Study for a Proposed Development on  
1043 Pine Grove Road, Town of Penetanguishene, County of Simcoe**

Dear David Mayer:

Azimuth Environmental Consulting, Inc. was retained to provide a Scoped Environmental Impact Study report for a proposed lot severance and construction of a single residential dwelling at the location described above. The purpose of this report is to provide the Town of Penetanguishene and other review agencies with an understanding of natural environmental conditions and potential for impacts related to the proposed development on significant natural heritage features and functions of the property and adjacent lands. This report also documents the natural environmental features present within the property and adjacent lands with regard to Species at Risk and their habitats.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Yours truly,  
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

  
Jordan Wrobel, B.Sc.  
Terrestrial Ecologist



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## 1.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by David Mayer to prepare a Scoped Environmental Impact Study (Scoped EIS) for a proposed lot severance and construction of a single residential dwelling at 1043 Pine Grove Road in the Town of Penetanguishene (“Town”), County of Simcoe (“County”)(Figure 1). It is our understanding that the Town has requested that an EIS be undertaken as the property comprise of woodland, and adjacent lands contain the St. Andrews Provincially Significant Wetland (PSW) and corresponding Penetang Lake Area of Natural and Scientific Interest (ANSI) – Life Science.

This purpose of this Scoped EIS is to identify the candidate Key Natural Heritage Features (KNHFs) present within the study area and address potential impacts to candidate KNHFs. A review of background information in combination with a single site visit was undertaken in August, 2024 to identify natural heritage features and functions as candidates for consideration as significant KNHFs associated with the study area. This report also examines potential for Species at Risk (SAR) protected under the *Endangered Species Act*, 2007 (ESA) within the study area. The potential for negative impacts to natural heritage features resulting from the proposed development is considered and recommendations for avoidance and mitigation are provided.

For the purposes of this EIS the study area comprises the property as shown on Figures 1-2 and adjacent lands (within approximately 120 metres (m)) of the property limits). Natural features in the overall planning area beyond the defined study area limits are discussed where applicable throughout this report.

## 2.0 PLANNING CONTEXT

### 2.1 Provincial Planning Policy (2024)

The Provincial Planning Statement (PPS) (MMAH, 2024) outlines policies related to natural heritage features (Section 4.1) and water resources (Section 4.2). Ontario's *Planning Act*, (1990) requires that planning decisions shall be consistent with the PPS. The study area for this assessment is located entirely within **Ecoregion 6E**. According to the PPS development and site alteration shall not be permitted in:

- *Significant wetlands* in Ecoregions 5E, 6E and 7E; and,
- *Significant coastal wetlands*.



Similarly, Section 4.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted within:

- a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;
- b) *significant woodlands* in Ecoregions 6E; and 7E;
- c) *significant valleylands* in Ecoregions 6E; and 7E;
- d) *significant wildlife habitat*;
- e) *significant areas of natural and scientific interest*; and,
- f) *coastal wetlands* in Ecoregions 5E, 6E; and 7E that are not subject to policy 4.1.4(b)

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 4.1.4 and 4.1.5 of the PPS as “significant”.

Section 4.1.6 of the PPS states that development and site alteration is not permitted in fish habitat except in accordance with federal and provincial requirements.

Section 4.1.7 of the PPS states that development and site alteration shall not be permitted in habitat of Endangered and Threatened species, except in accordance with provincial and federal requirements.

Furthermore, under Section 4.1.8 of the PPS, no development and site alteration will be permitted on lands adjacent to natural heritage features and areas identified in policies 4.1.4, 4.1.5 and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated there will be no negative impacts on the natural features and their ecological functions.

## **2.2    *Endangered Species Act, 2007***

Ontario’s ESA, 2007 provides regulatory protection to Endangered and Threatened species prohibiting harassment, harm and/or killing of individuals and destruction of their habitats. The ESA was recently updated following adoption of Bill 5, Protect Ontario by Unleashing our Economy Act, 2025. Subsequent to Royal Assent (June 5, 2025), several “interim” changes to the ESA have taken place, including a modified definition of “habitat” under the provincial ESA, as follows:

*“habitat” means, subject to subsection (3),*

- a) *in respect of an animal species,*



- i) *a dwelling-place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and*
  - ii) *the area immediately around a dwelling place described in subclause (i) that is essential for the purposes set out in that subclause.*
- b) *in respect of a vascular plant species, the critical root zone surrounding a member of the species, and*
- c) *in respect of all other species, an area on which any member of a species directly depends in order to carry on its life processes; (“habitat”).*

The various schedules of the ESA included under O. Reg. 230/08 identify SAR in Ontario. These include species listed as Extirpated, Endangered, Threatened, and Special Concern. As noted above, only species listed as Endangered and Threatened receive protection from harm and destruction to habitat on which they depend.

It is anticipated that in early 2026 the ESA will be repealed and the new *Species Conservation Act*, 2025 will be implemented. At the time of this assessment, only the “interim” changes to the ESA were in effect. Information related to SAR may have to be revised/updated as new information is released by the province.

### **2.3 County of Simcoe**

The County of Simcoe Official Plan (Simcoe OP; County of Simcoe, 2023) Schedule 5.1 (Land Use Designations) designates the subject property as Settlement. According to Schedule 5.2.2 (Streams and Evaluated Wetlands) a PSW occurs adjacent to the subject property. According to Schedule 5.2.2 no watercourses or locally significant wetlands occur in the study area. Schedule 5.2.3 (ANSI) illustrates the study area containing a Regional ANSI (Appendix A).

### **2.4 Town of Penetanguishene**

The Town of Penetanguishene Official Plan (Penetanguishene OP; Town of Penetanguishene, 2018) Schedule A (Land Use Structure) designates the property as Rural Area, and adjacent lands containing Neighbourhood Area, and Environmental Protection Area (EP). According to Schedule B1 (Policy Overlays) the subject property contains Environmental Protection Overlay (EPO) (Appendix A), which may be permissive of development and site alteration pending the results of an EIS.

The Town of Penetanguishene Zoning By-law 2022-17 (Town of Penetanguishene, 2022) identifies the entire property as Rural (Appendix A).



## **2.5 Federal Fisheries Act**

The *Fisheries Act* includes protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water. The *Fisheries Act* provides protection against the “death of fish, other than by fishing”, (Section 34.4(1)) and the “harmful alteration, disruption or destruction of fish habitat”, (Section 35(1)), otherwise known as HADD. In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where Fisheries and Oceans Canada (DFO) review is not required, proponents are asked to submit a request for review to their Fish and Fish Habitat Protection Program regional office to determine approval requirements. All projects are encouraged to avoid causing the death of fish and a HADD of fish habitat, using measures to protect fish and fish habitat that include standards and codes of practice for common works, undertakings and activities.

## **3.0 STUDY APPROACH**

### **3.1 Field Program Summary**

Azimuth attended the property on August 30, 2024 (site conditions include 28°C, 50% cloud cover, B1, no precipitation) to carry out an assessment of the natural features within the study area. Prior to undertaking the field study an initial classification of habitats was undertaken using recent air photo imagery for an area encompassing the study area. Vegetation boundaries were then checked in the field and delineated as illustrated in Figure 2. Vegetation community types were classified using the Ecological Land Classification for Southern Ontario: First Approximation (ELC; Lee *et al.*, 1998, updated 2008).

A SAR screening was undertaken for the scope of this assignment that compares the habitat requirements of species with potential to occur in the overall planning area with habitat types that occur on the property. The screening is based on air photo interpretation combined with onsite evaluation of habitats within the study area as described below.

### **3.2 Background Information**

A review of the following background documents provided information on site characteristics, habitat, wildlife, rare species and communities and general cultural/historic aspects of the study area:

- Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC; MNR, 2026a);
- Atlas of the Breeding Birds of Ontario (OBBA; Cadman *et al.*, 2007);



- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2020);
- MECP's Species at Risk Ontario list (MECP, 2026);
- iNaturalist Rare Species of Ontario (iNaturalist, 2026);
- Air photos available for the Project Area (Google, VuMap);
- Government of Canada's Species at Risk Public Registry; and,
- Atlas of the Mammals of Ontario (Dobbyn, 1994).

### **3.3 Agency Correspondence**

A Terms of Reference for the above survey program was provided to the Town on November 12, 2024; to which a response was received December 3, 2024 with clarification from the Town. The Town's recommendations were reviewed, considered acceptable and implemented in the Scoped EIS. A consultation record between Azimuth and the Town is provided in Appendix B.

## **4.0 EXISTING CONDITIONS**

### **4.1 Land Use**

The subject property is located on the south side of Pine Grove Road and is approximately 0.36 hectares (ha) in size (Figure 1). The property contains an existing single-family dwelling and associated accessory structures (*i.e.*, sheds, driveway), maintained lawn, and woodland.

Lands north, east, and west of the subject property contain single-family residential dwellings. A newly constructed stormwater management pond (SWMP) and associated erosion and sediment control fencing occurs directly south of the property; and are components of a large active construction site. The St. Andrew's Lake, woodland, and associated ANSI are located southeast of the subject property (Appendix A), beyond the property limits.

### **4.2 Vegetation**

A field survey was undertaken to evaluate vegetation community types including representative plant species compositions on August 30, 2024. Property access was granted within the property boundary only (Figure 2), and therefore alternative survey techniques (*i.e.*, "fenceline"/binocular surveys) were completed for lands located beyond the property line. The site visit was undertaken by a qualified Terrestrial Ecologist with knowledge of rare, Threatened, and Endangered plant species with potential to occur in the area.



There are no elements of occurrence (EO\_ID) within the property or adjacent lands for provincially Endangered or Threatened, or provincially rare vegetation species according to the MNR NHIC database. A detailed survey was undertaken to identify Butternut (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*) trees; however, none were observed within the property limits or adjacent lands.

No plant species considered Endangered or Threatened were identified during the site investigation. Further, no provincially rare species were observed during the field program. None of the vegetation communities or species documented are of federal or provincial conservation concern (MNR, 2024a).

Vegetation communities within the study area were determined in accordance with the ELC system, and are illustrated in Figure 2. Vegetation communities identified within the study area are listed as follows:

- CVR\_3 (Single Family Dwelling)
- FOMM9 (Fresh-Moist White Pine-Hardwood Mixed Forest)
- WOMM3 (Dry-Fresh Mixed Woodland)

A vascular plant list of the vegetation communities on the subject property is listed in Table 1. A photographic record of the vegetation communities is presented in Appendix C.

#### **4.3 Wildlife**

Direct and indirect observations of wildlife (*e.g.*, tracks, scat, fur) were collected as a matter of course during the August 30, 2024 site investigation. The following species and signs thereof were observed within the study area limits during the site investigation:

- Birds: American Crow, American Robin, Black-capped Chickadee, Blue Jay
- Mammals: Eastern Chipmunk, Eastern Cottontail, Red Squirrel

A review of the MNR NHIC database (1 x 1km squares 17NK8660, 17NK8559, 17NK8460, 17NK8561, 17NK8461, 17NK8459, 17NK8560, 17NK8661, and 17NK8659) identified records for SAR, as follows:

- Red-headed Woodpecker (Endangered)
- Bobolink (Threatened)
- Blanding's Turtle (Threatened)



- Eastern Meadowlark (Threatened)
- Lake Sturgeon (Threatened)
- Massasauga (Threatened)
- Eastern Wood-pewee (Special Concern)
- Northern Map Turtle (Special Concern)
- Snapping Turtle (Special Concern)
- Wood Thrush (Special Concern)

#### 4.4 Species at Risk

A screening for SAR occurred within the planning area based on potentially suitable habitat features identified during the site investigation (Table 2). The SAR assessment fully considers SAR with potential to occur within the study area. Based on this assessment in combination with vegetation communities and other environmental features observed during the site investigation, the following species are considered below in this report:

- **Threatened and Endangered:** Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat, Blanding's Turtle, Massasauga
- **Special Concern:** Canada Warbler, Eastern Wood-pewee, Eastern Musk Turtle, Eastern Ribbonsnake, Olive-sided Flycatcher, Snapping Turtle, Wood Thrush

#### 4.5 Wetlands

The St. Andrew's Wetland (PE1) was identified within the study area, approximately 45m from the subject property, and is designated as Provincially Significant (Appendix A). The site visit completed August 30, 2024 confirmed no other wetlands occur in the study area.

#### 4.6 Candidate Significant Woodland

The WOMM3 and FOMM9 woodlands in the study area are mapped as EPO according to the Schedule B of Town's OP, and as such, have Significant Woodland designation according to Section 4.10 of the Town's OP (Town of Penetanguishene, 2018). However, Schedule B is not reflective of the current condition of the study area, given the recent vegetation clearance on adjacent lands. As illustrated on Figure 2, a proportion of previously identified Significant Woodlands on adjacent lands (west and south west of the property) were removed to accommodate development activities; fragmenting the WOMM3 from the main woodlands in the study area.





According to policy 1.7.7 of the Town's OP:

*"The boundaries of the Environmental Protection Overlay identified on Schedule B1, which includes Natural Heritage Features and Areas, may be further refined through an Environmental Impact Study (EIS)."*

According to the Natural Heritage Reference Manual (NHRM; MNR, 2010) woodland areas are considered continuous if intersected by narrow gaps of 20m or less between crown edges. As the WOMM3 is located over 40m from the adjacent FOMM9 woodland, WOMM3 is considered a separate feature. The WOMM3 is approximately 0.12ha in size and does not meet the minimum size criteria of 50ha for significance, according to the NHRM (MNR, 2010), as the Town's woodland cover is over 30% (SSEA, 2017). Nor does the WOMM3 meet other criteria listed in the NHRM for significance, including, woodland interior habitat, linkage, woodland diversity, or economic and social values. As such, the WOMM3 woodland is not considered significant.

For the purpose of this assessment, the FOMM9 community is considered Significant Woodland in the study area.

#### **4.7 Candidate Significant Valleyland**

No portion of the study area is identified as Significant Valleyland, nor assigned a similar designation according to municipal or provincial mapping resources.

There are no valleyland features located within the study area according to standards presented in the Penetang OP or NHRM, principally due to the lack of permanent or intermittent watercourses that constitute a defining component of a valleyland feature. No portion of the study area fulfills the well-defined valley morphology and landform prominence required to be considered Candidate Significant Valleyland.

#### **4.8 Candidate Significant Wildlife Habitat**

An assessment of the potential for Significant Wildlife Habitat (SWH) within study area was conducted using the criteria outlined within the Significant Wildlife Habitat Technical Guide (OMNR, 2000) and the accompanying the Ecoregion 6E Criteria Schedules (MNR, 2015), as illustrated in Table 3. The following Candidate SWH types were determined to be present, or have potential to be present within the study area based on the results of the field program:

- Bat Maternity Colonies
- Colonially-Nesting Bird Breeding Habitat (Ground) (NHIC confirmed)



- Colonially-Nesting Bird Breeding Habitat (Tree/Shrub) (NHIC confirmed)
- Waterfowl Nesting Area (MNR confirmed)
- Waterfowl Stopover and Staging Areas (Aquatic)
- Turtle Wintering Areas
- Amphibian Breeding Habitat (Wetland)
- Marsh Breeding Bird Habitat
- Terrestrial Crayfish
- Habitat for Special Concern and Rare Wildlife Species
  - Canada Warbler, Eastern Wood-pewee, Eastern Musk Turtle, Eastern Ribbonsnake, Olive-sided Flycatcher, Snapping Turtle, Wood Thrush

#### **4.9 Areas of Natural and Scientific Interest**

ANSIs are areas of land and water that contain features identified as having life science and/or earth science values related to natural heritage, protection, scientific study or education (Town of Penetanguishene, 2018). According to municipal and MNR NHIC mapping, a regionally significant Life Science ANSI – Penetang Lake occurs on adjacent lands approximately 20m from property boundary at its closest point (Figure 2).

#### **4.10 Fish and Fish Habitat**

A review of background mapping did not identify features with potential to provide fish habitat within the property limits, this was confirmed during the site visit August 30, 2024. The St Andrew's PSW located approximately 40m from the property boundary and is identified as direct fish habitat (SSEA, 2004). There are no records of aquatic SAR in the St. Andrew's PSW (DFO, 2024; Appendix A).

### **5.0 NATURAL HERITAGE FEATURES SUMMARY**

The results of Azimuth's site investigation combined with review of background information indicate the potential for the following candidate KNHFs within the study area:

- Habitat for Endangered and Threatened Species
  - Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat
  - Blanding's Turtle
  - Massasauga
- Provincially Significant Wetlands (St. Andrew's PSW)
- Candidate Significant Wildlife Habitat
  - Bat Maternity Colonies
  - Colonially-Nesting Bird Breeding Habitat (Ground) (NHIC confirmed)



- Colonially-Nesting Bird Breeding Habitat (Tree/Shrub) (NHIC confirmed)
- Waterfowl Nesting Area (MNR confirmed)
- Waterfowl Stopover and Staging Areas (Aquatic)
- Turtle Wintering Areas
- Amphibian Breeding Habitat (Wetland)
- Marsh Breeding Bird Habitat
- Terrestrial Crayfish
- Habitat for Special Concern and Rare Wildlife Species
  - Canada Warbler, Eastern Wood-pewee, Eastern Musk Turtle, Eastern Ribbonsnake, Olive-sided Flycatcher, Snapping Turtle, Wood Thrush
- ANSI (Penetang Lake Life Science ANSI)
- Fish Habitat

## **6.0 PROPOSED DEVELOPMENT**

The proposed development involves the severance of an approximate 0.12ha lot on the west side of the property (Appendix D), and the construction of a single detached dwelling, driveway, and accessory structures. The proposed development envelope comprises the entire proposed severed lot. The extent of tree removal within the lot severance is unknown, as such, the impact assessment below is prepared under the assumption the entire severance requires tree removal.

Mapping of the proposed lot severance as it related to environmental features on the property is presented in Figure 2.

## **7.0 IMPACT ASSESSMENT**

This impact assessment is prepared with regards to the proposed development, as described above and illustrated in Figure 2.

### **7.1 Habitat for Threatened and Endangered Species**

Impacts with regards to the ESA and Habitat of Threatened or Endangered Species are covered under Section 9 and 10 of the ESA. Section 9 deals directly with killing, harming, or harassing living members of a species while Section 10 covers destruction or damage to habitat of Threatened or Endangered species. The following Threatened and Endangered species have the potential to occur within the limits of the study area:



- Eastern Red Bat, Hoary Bat, Little Brown Myotis, Northern Myotis, Silver-haired Bat, Tri-colored Bat (Endangered Bats)
- Blanding's Turtle
- Massasauga

### Endangered Bats

Endangered bats may utilize woodlands and other treed areas as maternity roost sites, preferring trees >25 centimetres (cm) diameter at breast height (DBH) with evidence of cracks, holes, splits, lifted bark, *etc.* (called “snags”) to provide refuge for the rearing of young during the late spring and early summer months (approximately June). It is acknowledged however, that trees of any size may provide suitable habitat for bats where features providing access are present, recognizing that such features are generally less frequently identified on smaller stems. Maternity roosting habitat is confined to woodlands or suitable structures such as vacant homes, churches, *etc.* During the site investigation, potentially suitable snags were observed within the FOMM9 community and ornamental trees within the CVR\_3.

No suitable snag trees were observed in the WOMM3, and the young nature of the community (containing an average 10cm DBH) is expected to provide marginal habitat (Appendix C). Based on Azimuth's experience, young trees typically do not have the diameter, lack the cavities, and/or level of decay to produce suitable habitat for bats. Furthermore, the young nature of the WOMM3 community produces a dense subcanopy and understory that hinders bat accessibility to such features. These observations are congruent with MNR habitat monitoring guideline, as maternity roost surveys focus on trees over 25cm DBH (MNR, 2024b). Therefore, the WOMM3 community is anticipated to provide the least suitable habitat for SAR bats in the study area, and is considered marginal habitat.

Tree removal from the WOMM3 community will be required to support the proposed development. It would be our expectation that the extensive woodlands within the adjacent lands would retain potential bat habitat function (Figure 2), given only minor removals (up to 0.12ha) of poor quality roosting habitat for bats would be necessary to accommodate the proposed development. As such, the proposed works would not impact the ability for Endangered bat species to carry out their life processes should an appropriate mitigation approach be applied.

For projects of a similar scope, Azimuth engaged the MECP regarding potential impacts to woodland bat habitat. Guidance was provided via the Bat Survey Standards Note (MECP, 2022) which clarifies the following:



*“If a proposed activity will avoid impairing or eliminating the function of habitat for supporting bat life processes (e.g., remove, stub, etc. a small number of potential maternity or day roost trees in treed habitats which would not result in fragmentation/barriers) and the timing of tree removal will avoid the bat active season (April 1 – September 30 in Southern Ontario)” ... “then there is no need to conduct species at risk bat surveys of treed habitats.”*

The above is consistent with Azimuth’s understanding that when suitable habitat availability is not limiting, a mitigation approach that restricts vegetation removals during the active period for bats is a suitable approach to avoid a contravention to SAR bat individuals or habitats under Section 9 and Section 10 of the ESA.

Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact to Endangered bats or the habitat upon which they depend.

#### Blanding’s Turtle

Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by shallow water, organic substrates, and a high density of aquatic vegetation (COSEWIC, 2016a).

A Blanding’s Turtle record is documented in the NHIC MNR square 17NK8561 adjacent to the property (Appendix A). This record is likely associated with St. Andrew’s PSW and may provide suitable habitat (i.e., basking, overwintering, foraging opportunities). Therefore, without completing species specific surveys, the St. Andrew’s PSW is considered potential habitat for Blanding’s Turtle. All development is set back over 30m to the PSW and this potential habitat function will be maintained post-development.

Between the PSW and the proposed development area, an active construction site resulting in disturbance, vegetation removal, and construction of a SWMP; in conjunction with existing Erosion and Sediment Control (ESC) fencing (a physical barrier) occurs along the southern property boundary. The SWMP on adjacent lands is not considered suitable habitat for Blanding’s Turtle. The SWMP was recently constructed and will require routine disturbance (i.e., maintenance, cleanout activities, dewatering) to ensure functionality; as a result, the feature is not anticipated to provide suitable habitat or support ecological functions for Blanding’s Turtles.



With the above considerations, providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact Blanding's Turtle or the habitats upon which they depend.

### Massasauga

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessment reports for Massasauga and the General Habitat Description for the Massasauga (*Sistrurus catenatus*) (MNRF, 2013) were utilized to consider critical habitat elements for this SAR snake. Massasauga snakes prefer bedrock barrens, shoreline habitats, open wetlands, and edge habitats with canopy closure <50% in mid-late summer (COSEWIC, 2012a).

The adjacent St. Andrew's PSW may provide habitat for Massasauga at various life stages; including, overwintering, gestation, basking, and foraging. The proposed development will not result in direct removals of the St. Andrew's PSW or the adjacent FOMM9 community which may provide buffering of key habitat features along PSW edges, nor will any portion of the property be subject to disturbance within 30m of these features.

On the property there are limited foraging and basking opportunities (non-ESA protected habitat) for SAR snakes due to the anthropogenic nature of the property, as they require semi-open habitats with sufficient cover from predation, while providing thermoregulatory opportunities. Nor were suitable habitat features supporting gestation and/or overwintering habitat for these species observed within the property. Based on this information, there is no Massasauga protected habitat on the property as per the updated ESA definitions (see Section 2.2). Nonetheless, the proposed development is not anticipated to isolate or further prevent the movement of Massasauga within the study area; as the current disturbance and isolation resulting from the adjacent construction site, limits accessibility for Massasauga movement in the proposed development area.

## **7.2 Provincially Significant Wetlands**

The proposed development will not result in direct removals of the St. Andrew's PSW, nor will any portion of the property be subject to disturbance within 30m of the PSW which is anticipated to avoid negative indirect impacts to the feature. Providing that conformance is demonstrated for environmental considerations and mitigation described



in Section 8 below, there is no expectation that the proposed development will result in a negative impact upon the St. Andrew's PSW.

### **7.3 Candidate Significant Woodland**

According to the PPS development and site alteration are not permitted within Significant Woodlands located in Ecoregion 6E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions. The FOMM9 woodland on the property is treated as Candidate Significant Woodland for the purposes of this assessment.

The proposed development will not result in direct removals of Significant Woodland, nor will any portion of the property be subject to disturbance within 30m of Significant Woodland. Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact upon Significant Woodland.

### **7.4 Candidate Significant Wildlife Habitat**

According to the PPS development and site alteration are not permitted within SWH located in Ecoregion 6E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions. For the purposes of this assessment, Candidate SWH described below are treated as significant.

#### **7.4.1 Bat Maternity Habitat**

Bat Maternity Colonies can be found in tree cavities, vegetation and often in buildings (note: buildings are not considered SWH). According to MNR (2015), maternity colonies are located in deciduous or mixed forested communities with large diameter (>25cm DBH) trees. Based on this information, the woodland communities within the study area provide suitable habitat for bat maternity colonies.

The proposed development will result in tree removal from the WOMM3 woodland, and although the community provides marginal habitat opportunities (due to the young age of the stand), snag trees may require clearance. Given the potential bat roosting habitat is extensive within the surrounding landscape (as discussed in greater detail in Section 7.1 above), there is no expectation that the proposed works will result in a negative impact on Bat Maternity Colonies, providing that conformance is demonstrated for environmental considerations and mitigations described in Section 8 below.

#### **7.4.2 Colonially-Nesting Bird Breeding Habitat (Ground and Tree/Shrub), Waterfowl Nesting Area, Waterfowl Stopover and Staging Areas, Turtle Wintering Areas,**



### Amphibian Breeding Habitat (Wetland), Marsh Breeding Bird Habitat, Terrestrial Crayfish

Candidate SWH types restricted to wetland communities with potential to occur within the study area limits include Colonially-Nesting Bird Breeding Habitat, Waterfowl Nesting Area, Waterfowl Stopover and Staging Areas, Turtle Wintering Areas, Amphibian Breeding Habitat, Marsh Breeding Bird Habitat, and Terrestrial Crayfish. As shown in Figure 2, the proposed development will occur a minimum of 30m from St. Andrew's PSW and therefore no direct or indirect impacts to candidate SWH are anticipated.

Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact upon the above Candidate SWH categories.

#### 7.4.3 Habitat for Special Concern and Rare Wildlife Species

Species-specific surveys to target presence/absence of Special Concern species were not conducted as a part of this assessment. For the purposes of this assessment, presence of Special Concern species (for which suitable habitat may be present) is assumed in lieu of conducting appropriate screenings for these species.

##### Canada Warbler, Eastern Wood-pewee, Olive-sided Flycatcher, Wood Thrush

High quality Canada Warbler and Wood Thrush habitat consists of deciduous, coniferous, or mixed forest with a well-developed shrub layer, a complex forest floor, and with preferably moist conditions. They can often reside in forests regenerating after anthropogenic or natural disturbances (COSEWIC, 2020; COSEWIC, 2012b).

Eastern Wood-pewee inhabits mature deciduous and mixed stands with an open understory. This species is usually associated with woodland clearings and edges within the vicinity of its nest. It is most abundant in forests of intermediate age and in mature stands (COSEWIC, 2012c). The Olive-sided Flycatcher can be found in coniferous or mixed stands with natural woodland openings or forested edges near wetlands, and occasionally in human disturbed openings (COSEWIC, 2018). The presences of tall snags and residual live trees are essential for this species (COSEWIC, 2018).

The WOMM3 community does not contain the key habitat features required to support the four woodland birds; nor is the size of the woodland (0.12ha) suitable to support a breeding territory for the four species. As such, these four woodland bird species may only occur within the FOMM9 woodlands and St. Andrew's PSW complex in the study area. The proposed development will not encroach upon the expensive woodland community, nor will disturbance occur within 30m of potential habitat (Figure 2). No





negative impact to the aforementioned bird species or the availability of habitat for these species are anticipated as a result of the proposed development; providing that conformance is demonstrated for environmental considerations and mitigations described in Section 8 below.

#### Eastern Musk Turtle, Snapping Turtle

Eastern Musk Turtle and Snapping Turtle inhabit waterways such as rivers, ponds, and wetlands with slow currents and soft substrate (COSEWIC, 2012d; COSEWIC, 2008). The species prefers shallow waters with an abundance of vegetation. Eastern Musk Turtle do not venture far from shorelines, with the exception to nest or access adjacent wetlands (COSEWIC, 2012d). The St. Andrew's PSW may provide habitat for Snapping Turtle and Eastern Musk Turtle.

As shown in Figure 2, the proposed development will occur a minimum of 30m from St. Andrew's PSW, and therefore no direct or impact impacts to candidate SWH are anticipated. Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact upon the above Candidate SWH categories.

#### Eastern Ribbonsnake

Eastern Ribbonsnake occupies shorelines and a variety of wetland habitats with both flowing and standing water present (COSEWIC, 2012e). This species can also be found in vernal pools and moist woodlands (COSEWIC, 2012e). The species is not likely to occur within the WOMM3 woodland within the proposed severed area, due to immature composition, dry moisture conditions, lack of connectivity to surrounding natural features, and distance from the PSW feature. The presence of active residential land uses associated with the east side of 1043 Pine Grove Road is anticipated to further limit connectivity into the western proposed severance area. With regard for these considerations, impacts to habitat opportunities for the species are not anticipated to occur, thereby remaining in compliance with the requirements of the ESA.

### **7.5 Areas of Natural and Scientific Interest**

Life Science ANSIs represent segments of Ontario's biodiversity and natural landscapes including forests, valleys, wetlands, and their native plants and animals (Ontario Parks, 2011). Regionally Significant ANSIs represent natural features and landscapes afforded protection in certain parts of the province (Ontario Parks, 2011). Since 1996, provincially significant ANSIs have been afforded protection under the *Planning Act* and Natural Heritage policies of the PPS.



The proposed development will not encroach into the Penetang Lake ANSI, nor will any portion of the property be subject to disturbance within 30m of the ANSI (Figure 2). The proposed development (*i.e.*, severance and potential structure build-out) will be concentrated in the western portion of the property, >30m from the ANSI boundary, a setback that is expected to suitably limit potential negative impacts to the ANSI feature. Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact upon the Penetang Lake ANSI.

### **7.6 Fish Habitat**

The proposed development will not result in the direct alteration of fish habitat, nor will any portion of the property be subject to disturbance within 30m the St. Andrew's PSW. Providing that conformance is demonstrated for environmental considerations and mitigation described in Section 8 below, there is no expectation that the proposed development will result in a negative impact to fish or fish habitat under the Federal *Fisheries Act*.

## **8.0 RECOMMENDATIONS**

### **8.1 Species at Risk**

It should be noted that the absence of a protected species within the study area does not indicate that they will never occur within the area. Given the dynamic character of the natural environment, there is a constant variation in habitat use. Care should be taken in the interpretation of presence of species of concern including those listed under the ESA. Changes to policy, or the natural environment, could result in shifts, removal, or addition of new areas to the list of areas currently considered SAR habitat. This report is intended as a point in time assessment of the potential to impact SAR; not to provide long term "clearance" for SAR. While there is no expectation that the assessment should change significantly, it is the responsibility of the proponent to ensure that they are not in contravention of the ESA at the time that site works are undertaken. A review of the assessment provided in this report by a qualified person should be sufficient to provide appropriate advice at the time of the onset of future site works.

### **8.2 Migratory Breeding Birds and Bats**

Activities involving the removal of vegetation should be restricted from occurring during the breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, 1994 (MBCA) and the *Fish and Wildlife Conservation Act*, 1997 (FWCA). Environment Canada outlines dates when activities in any region have



potential to impact nests at the Environment Canada Website (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html>). In Zone C2 vegetation clearing should be avoided between **April 1 through August 31** of any given year. If work requires that vegetation clearing is required between these dates screening by an ecologist with knowledge of bird species present in the area could be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.

Activities involving tree removal on the property, should be avoided between **April 1 through September 30** of any given year, during the active period for bat species that may utilize trees for maternity and day roosting purposes. It is anticipated that adherence to this timing restriction will avoid impacts to individual SAR bats, therefore remaining in compliance with Section 9 of the ESA affording individual protection to Endangered species.

### **8.3 Sediment and Erosion Controls**

Diligent application of Erosion and Sediment Controls (ESCs) is recommended for all future construction activities to minimize the extent of accidental or unavoidable impacts to adjacent vegetation communities, wildlife habitat and fish habitat. Prior to the commencement of site works, silt fencing should be applied along the length of the proposed development area, and routine inspection/maintenance of the silt fencing should occur throughout construction. It is recommended that ESCs be maintained until vegetation is re-established post-construction.

Materials storage on the property (*i.e.*, soil stockpiles) should be located over 30m from natural features where feasible. Material storage areas should be contained with ESCs to avoid potential indirect impacts to natural features onsite.

### **8.4 Operations**

All maintenance activities (including refueling) required during future construction should be conducted at least 30m away from natural features to prevent accidental spillage of deleterious substances that may harm natural environments.

Snow fencing or equivalent should be installed at the limit of the work area to prevent the accidental intrusion of machinery operations into adjacent undisturbed natural areas.

The contractor is recommended to have a Contaminant and Spill Management Plan in place prior to initiation of works. This should include keeping an emergency spill kit on site at all times. In the event of a spill, the contractor must report it immediately to the provincial Spills Action Centre (SAC).



## 9.0 CONCLUSIONS

Based upon our analysis, it is concluded that the environmental conditions are not limiting to the proposed lot severance and development of a single detached dwelling, driveway, and accessory structures through incorporation of the environmental protection measures described in Section 8 of this report.

At this time, our findings are summarized as follows:

- The proposed development is consistent with the applicable natural heritage policies of the Provincial Policy Statement, ESA, County of Simcoe Official Plan and Town of Penetanguishene Official Plan.
- Our impact assessment has given full consideration to the habitat requirements of all SAR assumed and documented to occur in the area and results indicate the proposed development will not result in negative direct or indirect impacts to habitat of SAR providing conformance is demonstrated to mitigation measures described in Section 8.
- The proposed works are not expected to negatively impact the ecological functions of Provincially Significant Wetlands, Candidate Significant Woodland, or Candidate Significant Wildlife Habitat outlined in Section 5 if the appropriate mitigation measures outlined in Section 8 are followed.
- No ephemeral, intermittent or permanent drainage features, open water units, fish or fish habitat are expected to be negatively impacted as a result of the proposed works if the appropriate mitigation measures described in Section 8 are followed during construction.



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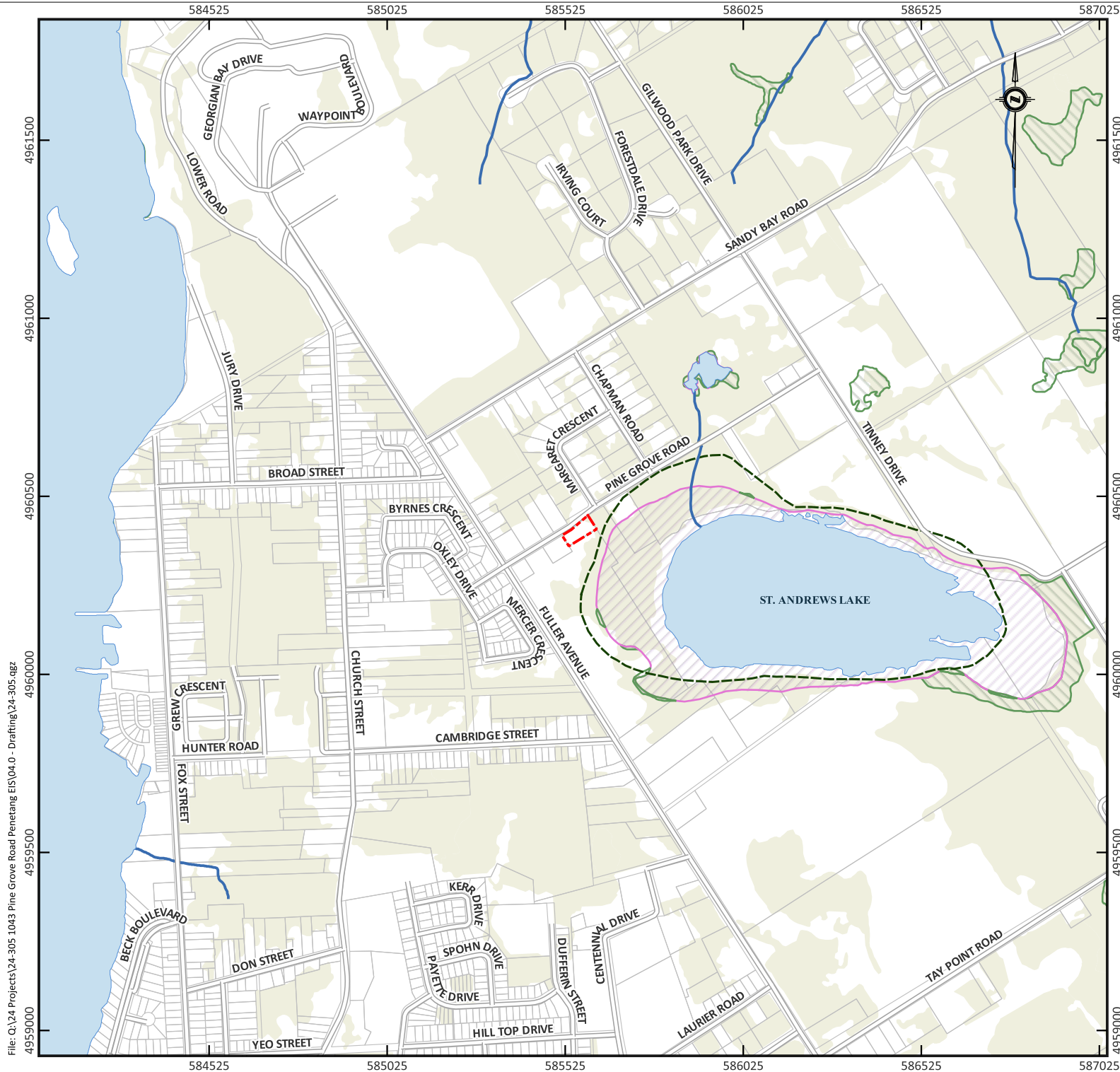


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## LEGEND

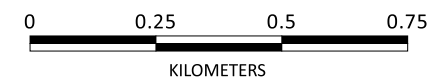
- Approx. Property Boundary
- Waterbody
- Mapped Watercourse
- Unevaluated Wetland
- Provincially Significant Wetland
- Wooded Area
- Areas of Natural and Scientific Interest (ANSI)
- Road

## NOTES

1. Watercourse, Waterbody, Wetland, Woodland and ANSI layers are derived from MNR GIS data, retrieved December 2022.
2. The metric grid displayed on the map corresponds to NAD83 / UTM zone 17N (EPSG:26917).

## REGIONAL MAP

SCALE 1:500000



## SITE LOCATION

1043 PINE GROVE ROAD  
PENETANG, ON

|              |               |                            |
|--------------|---------------|----------------------------|
| DATE ISSUED: | NOVEMBER 2024 | Figure No.<br><br><b>1</b> |
| CREATED BY:  | A.L.          |                            |
| PROJECT NO.: | 24-305        |                            |
| BASE MAP:    | MNR           |                            |



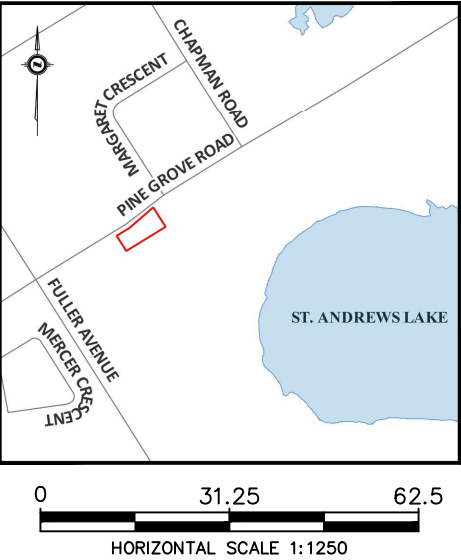
Plotted by: ALU on November 1, 2024, at 12:15pm  
File: G:\24\_Protection\24-305\_Pine Grove Road Penetang EIS\04.0 - Drafting\24-305 Site Layout.dwg Layout: 2 EXISTING CONDITIONS & PROPOSED DEVELOPMENT Plotstyle: 1



**LEGEND:**

- APPROX. PROPERTY BOUNDARY
- PROVINCIAL SIGNIFICANT WETLAND – ST. ANDREWS WETLAND (PE1) (PSW; MNR, 2024)
- LIFE SCIENCE AREA OF NATURAL SCIENTIFIC INTEREST – REGIONAL (PENETANG LAKE)
- ELC UPLAND COMMUNITIES:
  - CVR\_3 SINGLE FAMILY DWELLING
  - FOMM9 FRESH-MOIST WHITE PINE-HARDWOOD MIXED FOREST
  - WOMM3 DRY-FRESH MIXED WOODLAND
- EXISTING FENCE
- PROPOSED SEVERANCE LINE

**LOCATION PLAN**



**EXISTING CONDITIONS & PROPOSED DEVELOPMENT**

1043 PINE GROVE ROAD  
PENETANG, ON

|              |               |            |
|--------------|---------------|------------|
| DATE ISSUED: | NOVEMBER 2024 | Figure No. |
| CREATED BY:  | A.L.          | 2          |
| PROJECT NO.: | 24-305        |            |
| REFERENCE:   | SIMCOE COUNTY |            |



|                     |                                                    |                            | Vegetation Communities <sup>2</sup> |       |       | Conservation Rankings <sup>3</sup> |       |       |
|---------------------|----------------------------------------------------|----------------------------|-------------------------------------|-------|-------|------------------------------------|-------|-------|
| FAMILY <sup>1</sup> | SCIENTIFIC NAME <sup>1</sup>                       | COMMON NAME <sup>1</sup>   | CVR_3                               | WOMM3 | FOMM9 | GRANK                              | SRANK | TRACK |
| Aceraceae           | <i>Acer rubrum</i>                                 | Red Maple                  |                                     |       | X     | G5                                 | S5    | N     |
| Aceraceae           | <i>Acer saccharum</i>                              | Sugar Maple                |                                     | X     |       | G5                                 | S5    | N     |
| Anacardiaceae       | <i>Rhus typhina</i>                                | Staghorn Sumac             |                                     | X     |       | G5                                 | S5    | N     |
| Anacardiaceae       | <i>Toxicodendron radicans</i> var. <i>radicans</i> | Eastern Poison Ivy         | X                                   | X     | X     | G5T5                               | S5    | N     |
| Apiaceae            | <i>Daucus carota</i>                               | Wild Carrot                | X                                   | X     |       | GNR                                | SE5   | N     |
| Apocynaceae         | <i>Vinca minor</i>                                 | Lesser Periwinkle          |                                     | X     |       | GNR                                | SE5   | N     |
| Asteraceae          | <i>Ambrosia artemisiifolia</i>                     | Common Ragweed             | X                                   | X     |       | G5                                 | S5    | N     |
| Asteraceae          | <i>Pilosella caespitosa</i>                        | Meadow Hawkweed            | X                                   |       |       | GNR                                | SE5   | N     |
| Asteraceae          | <i>Rudbeckia hirta</i>                             | Black-eyed Susan           | X                                   | X     |       | G5                                 | S5    | N     |
| Asteraceae          | <i>Solidago canadensis</i>                         | Canada Goldenrod           | X                                   | X     | X     | G5                                 | S5    | N     |
| Asteraceae          | <i>Solidago rugosa</i>                             | Rough-stemmed Goldenrod    |                                     | X     | X     | G5                                 | S5    | N     |
| Asteraceae          | <i>Symphyotrichum lateriflorum</i>                 | Calico Aster               |                                     | X     |       | G5                                 | S5    | P     |
| Asteraceae          | <i>Taraxacum officinale</i>                        | Common Dandelion           | X                                   | X     |       | G5                                 | SE5   | N     |
| Asteraceae          | <i>Tussilago farfara</i>                           | Coltsfoot                  |                                     |       | X     | GNR                                | SE5   | N     |
| Betulaceae          | <i>Betula papyrifera</i>                           | Paper Birch                | X                                   | X     | X     | G5                                 | S5    | N     |
| Brassicaceae        | <i>Alliaria petiolata</i>                          | Garlic Mustard             |                                     |       | X     | GNR                                | SE5   | N     |
| Caryophyllaceae     | <i>Silene vulgaris</i>                             | Bladder Campion            | X                                   | X     | X     | GNR                                | SE5   | N     |
| Cornaceae           | <i>Cornus obliqua</i>                              | Silky Dogwood              |                                     |       | X     | G5                                 | S5    | N     |
| Fabaceae            | <i>Lotus corniculatus</i>                          | Garden Bird's-foot Trefoil | X                                   |       |       | GNR                                | SE5   | N     |
| Fagaceae            | <i>Quercus rubra</i>                               | Northern Red Oak           |                                     | X     | X     | G5                                 | S5    | N     |
| Juglandaceae        | <i>Juglans nigra</i>                               | Black Walnut               |                                     | X     |       | G5                                 | S4?   | N     |
| Liliaceae           | <i>Maianthemum canadense</i>                       | Wild Lily-of-the-valley    |                                     | X     |       | G5                                 | S5    | N     |
| Monotropaceae       | <i>Monotropa uniflora</i>                          | Indian-pipe                |                                     | X     |       | G5                                 | S5    | N     |
| Oleaceae            | <i>Fraxinus pennsylvanica</i>                      | Red Ash                    |                                     | X     |       | G4                                 | S4    | N     |
| Oleaceae            | <i>Syringa vulgaris</i>                            | Common Lilac               | X                                   |       |       | GNR                                | SE5   | N     |
| Oxalidaceae         | <i>Oxalis stricta</i>                              | Upright Yellow Wood-sorrel |                                     | X     |       | G5                                 | SE5   | N     |
| Pinaceae            | <i>Picea glauca</i>                                | White Spruce               | X                                   | X     |       | G5                                 | S5    | N     |
| Pinaceae            | <i>Pinus strobus</i>                               | Eastern White Pine         | X                                   | X     | X     | G5                                 | S5    | N     |
| Pinaceae            | <i>Pinus sylvestris</i> var. <i>sylvestris</i>     | Scots Pine                 |                                     | X     |       | GNRTNR                             | SE5   | N     |
| Plantaginaceae      | <i>Plantago major</i>                              | Common Plantain            | X                                   |       |       | G5                                 | SE5   | N     |
| Poaceae             | <i>Phleum pratense</i>                             | Common Timothy             | X                                   |       |       | GNR                                | SE5   | N     |
| Polygonaceae        | <i>Rumex crispus</i>                               | Curled Dock                | X                                   |       |       | GNR                                | SE5   | N     |
| Primulaceae         | <i>Lysimachia borealis</i>                         | Northern Starflower        |                                     | X     |       | G5                                 | S5    | N     |
| Rhamnaceae          | <i>Rhamnus cathartica</i>                          | European Buckthorn         |                                     | X     |       | GNR                                | SE5   | N     |
| Rosaceae            | <i>Crataegus</i> sp.                               | a Hawthorn                 |                                     | X     |       | N/A                                | N/A   | N/A   |
| Rosaceae            | <i>Geum canadense</i>                              | Canada Avens               |                                     | X     | X     | G5                                 | S5    | N     |
| Rosaceae            | <i>Prunus serotina</i>                             | Black Cherry               |                                     | X     |       | G5                                 | S5    | N     |
| Rosaceae            | <i>Rubus allegheniensis</i>                        | Allegheny Blackberry       |                                     | X     |       | G5                                 | S5    | N     |
| Rosaceae            | <i>Sorbus aucuparia</i>                            | European Mountain-ash      |                                     | X     | X     | G5                                 | SE4   | N     |
| Rosaceae            | <i>Spiraea alba</i>                                | White Meadowsweet          |                                     |       | X     | G5                                 | S5    | N     |
| Salicaceae          | <i>Populus grandidentata</i>                       | Large-toothed Aspen        |                                     |       | X     | G5                                 | S5    | N     |
| Salicaceae          | <i>Populus tremuloides</i>                         | Trembling Aspen            |                                     |       | X     | G5                                 | S5    | N     |
| Scrophulariaceae    | <i>Verbascum thapsus</i>                           | Common Mullein             | X                                   |       |       | GNR                                | SE5   | N     |
| Violaceae           | <i>Viola</i> sp.                                   | a Violet                   |                                     | X     |       | N/A                                | N/A   | N/A   |
| Vitaceae            | <i>Parthenocissus vitacea</i>                      | Thicket Creeper            |                                     | X     |       | G5                                 | S5    | N     |
| Vitaceae            | <i>Vitis riparia</i>                               | Riverbank Grape            |                                     | X     | X     | G5                                 | S5    | N     |

<sup>1</sup> Nomenclature based on Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC, 2024)

<sup>2</sup> ELC Codes based on Ecological Land Classification for Southern Ontario manual (Lee et al., 1998, 2008)

<sup>3</sup> Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (<https://www.ontario.ca/page/natural-heritage-information-centre>)

| Common Name                                             | Species Name                     | ESA | SARA       | Key Habitats Used By Species <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Initial Assessment                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------|----------------------------------|-----|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bank Swallow                                            | <i>Riparia riparia</i>           | THR | THR        | Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013a).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                   | Key habitat requirements for the species ( <i>e.g.</i> , vertival silt faces) are not found in the study area. Species not expected to occur.                                                                                                                                                                                       |
| Barn Swallow                                            | <i>Hirundo rustica</i>           | SC  | THR        | Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2011a).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                           | No barn swallow nests observed on the existings sturctures on the property. Species not expected to occur.                                                                                                                                                                                                                          |
| Black Ash                                               | <i>Fraxinus nigra</i>            | END | No Status  | Facultative wetland tree species frequently found in floodplain forests, swamps, seepage areas, shoreline margins and fens. Occupied sites are generally seasonally-flooded (COSEWIC, 2018a).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                 | Species was not observed within the study area.                                                                                                                                                                                                                                                                                     |
| Black Tern                                              | <i>Chlidonias niger</i>          | SC  | No status  | Colonial nesters typically found within marshes. Its preferred nesting habitat is a hemi-marsh ( <i>i.e.</i> a wetland with 50:50 open water and emergent vegetation). Nests are usually built on an upturned cattail root, floating vegetation mat or patch of mud (Cadman <i>et al.</i> , 2007).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                               | Marsh component of the St. Andrew's PSW complex does not occur within 120m of the subject property according to SSEA (2004). Species not expected to occur in study area.                                                                                                                                                           |
| Blanding's Turtle                                       | <i>Emydoidea blandingii</i>      | THR | END        | <b>Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by clear, shallow water, with organic substrates and high density of aquatic vegetation (COSEWIC, 2016a).</b><br><br>ESA Protection: Species and general habitat protection                                                                                                        | <b>MNR NHIC databses includes records of Blanding's Turtle within 1km of the study area (square 17NK8561), key habitat requirements for the species are found in the study area. Considered further in main text.</b>                                                                                                               |
| Bobolink                                                | <i>Dolichonyx oryzivorus</i>     | THR | THR        | Nests primarily in forage crops ( <i>e.g.</i> hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops ( <i>e.g.</i> corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2010).<br><br>ESA Protection: Species and general habitat protection | Although MNR NHIC databses includes records of Bobolink within 1km of the study area (squares 17NK8625, 17NK8661, 17NK8560, 17NK8459, 17NK8561, 17NK8460, 17NK8559, 17NK8660), key habitat requirements for the species ( <i>e.g.</i> , large grasslands) are not found in the study area. Species not expected to occur.           |
| Broad Beech Fern                                        | <i>Phygopteris hexagonoptera</i> | SC  | SC         | Rich soils in deciduous forests, such as Maple-Beech forests (MECP, 2022).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Species was not observed within the study area.                                                                                                                                                                                                                                                                                     |
| Butternut                                               | <i>Juglans cinerea</i>           | END | END        | Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2017a).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                                       | Species was not observed within the study area.                                                                                                                                                                                                                                                                                     |
| Canada Warbler                                          | <i>Cardellina canadensis</i>     | SC  | THR        | <b>Wet, mixed deciduous-coniferous forests with a well developed shrub layer. Shrub marshes, Red-Maple stands, cedar stands, Black Spruce swamps, larch and riparian woodlands along rivers and lakes (COSEWIC, 2020).</b><br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                       | <b>Key habitat requirements for the species (<i>e.g.</i>, mixed forests) are found in the study area. Considered further in main text.</b>                                                                                                                                                                                          |
| Chimney Swift                                           | <i>Chaetura pelagica</i>         | THR | THR        | Nests primarily in chimneys though some populations ( <i>i.e.</i> in rural northern areas) may nest in cavity trees (COSEWIC, 2018b). Recent changes in chimney design may be a significant factor in recent declines in numbers (Cadman <i>et al.</i> , 2007).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                               | No uncapped chimneys present on the property. Species not expected to occur.                                                                                                                                                                                                                                                        |
| Common Five-lined Skink<br>(Southern Shield population) | <i>Plestiodon fasciatus</i>      | SC  | SC         | Southern Shield population -rocky outcrops embedded in a matrix of coniferous and deciduous forest, and individuals in these populations seek refuge under rocks overlaid on open bedrock (COSEWIC, 2021a).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                                      | Key habitat requirements for the species ( <i>e.g.</i> , rock outcrops) are not found in the study area. Species not expected to occur.                                                                                                                                                                                             |
| Common Nighthawk                                        | <i>Chordeiles minor</i>          | SC  | THR        | Open habitats including sand dunes, beaches recently logged/burned over areas, forest clearings, short grass prairies, pastures, open forests, bogs, marshes, lakeshores, gravel roads, mine tailings, quarries, and other open relatively clear areas (COSEWIC, 2018c).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                         | Key habitat requirements for the species ( <i>e.g.</i> , open forests) are not found in the study area. Species not expected to occur.                                                                                                                                                                                              |
| Eastern Meadowlark                                      | <i>Sturnella magna</i>           | THR | THR        | Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, <i>etc.</i> Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011b).<br><br>ESA Protection: Species and general habitat protection                                                             | Although MNR NHIC databses includes records of Eastern Meadowlark within 1km of the study area (squares 17NK8625, 17NK8661, 17NK8560, 17NK8459, 17NK8561, 17NK8460, 17NK8559, 17NK8660), key habitat requirements for the species ( <i>e.g.</i> , large grasslands) are not found in the study area. Species not expected to occur. |
| Eastern Musk Turtle                                     | <i>Sternotherus oderatus</i>     | SC  | SC         | <b>Inhabit littoral zones of waterways such as rivers, lakes, bays, streams, ponds, canals, and swamps with slow to no current and soft bottoms. During the active season they prefer shallow water (&lt;2m) with abundant vegetation. Most are found close to shore and do not venture onto land except to nest or access adjacent wetlands (COSEWIC, 2012a).</b><br><br>ESA Protection: N/A                                                                                                                                                                               | <b>Key habitat requirements for the species (<i>e.g.</i>, lake with soft bottom) are found in the study area. Considered further in main text.</b>                                                                                                                                                                                  |
| Eastern Red Bat                                         | <i>Lasiurus borealis</i>         | END | Not Listed | <b>Roosting habitat include deciduous and coniferous forests of any age class. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind (COSEWIC, 2023).</b><br><br>ESA Protection: Species and habitat protection                                                                                                                                                                                                                                           | <b>Key habitat requirements for the species (<i>e.g.</i>, mature trees) are found in the study area. Species considered further in main text.</b>                                                                                                                                                                                   |
| Eastern Ribbonsnake                                     | <i>Thamnophis sauritus</i>       | SC  | SC         | <b>Found in wetland habitats with both flowing and standing water such as marshes, bogs, fens, ponds, lake shorelines and wet meadows. Most sightings occur near the water's edge (COSEWIC, 2012b).</b><br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                                          | <b>Key habitat requirements for the species (<i>e.g.</i>, wetlands) are found in the study area. Considered further in main text.</b>                                                                                                                                                                                               |
| Eastern Small-footed Myotis                             | <i>Myotis Llei</i> <i>bii</i>    | END | No Status  | Generally occurs in mountainous or rocky regions as well as in buildings, on the face of rock bluffs and beneath slabs of rock and stones. Hibernation is typically confined to caves and old mines (Best and Jennings, 1997).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                | Key habitat requirements for the species ( <i>e.g.</i> , caves, rock rows) are not found in the study area. Species is not expected to occur.                                                                                                                                                                                       |
| Eastern Whip-poor-will                                  | <i>Antrostomus vociferus</i>     | SC  | THR        | Semi-open forests or patchy forests with clearings, such as barrens or forests that are regenerating following major disturbances, are preferred nesting habitats (COSEWIC, 2009a).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                           | Key habitat requirements for the species ( <i>e.g.</i> , forest clearings) are not found in the study area. Species not expected to occur.                                                                                                                                                                                          |

| Common Name                                                  | Species Name                           | ESA | SARA       | Key Habitats Used By Species <sup>1</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Initial Assessment                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------|----------------------------------------|-----|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eastern Wood-pewee                                           | <i>Contopus virens</i>                 | SC  | SC         | Mostly in mature and intermediate-age deciduous and mixed forests having an open understory. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012c).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                      | MNR NHIC databases includes records within 1km of the study area (squares 17NK8660, 17NK8559, 17NK8661, 17NK8659), key habitat requirements for the species are found in the study area. Considered further in main text.                                                                                                                                                   |
| Grasshopper Sparrow<br><i>pratensis</i> subspecies           | <i>Ammodramus savannarum pratensis</i> | SC  | SC         | Typically breeds in large human-created grasslands (≥5 ha), such as pastures and hayfields, and natural prairies, such as alvars, characterized by well-drained, often poor soil dominated by low, sparse perennial herbaceous vegetation (COSEWIC, 2013b).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                  | Key habitat requirements for the species (e.g., large grassland) are not found in the study area. Species not expected to occur.                                                                                                                                                                                                                                            |
| Henslow's Sparrow                                            | <i>Ammodramus henslowii</i>            | END | END        | Requires grassland habitat and occurs more frequently and at higher densities in large patches of suitable habitat. Nests in tallgrass prairie, wet meadow, and marsh habitats as well as agricultural grasslands, lightly grazed pasture and grasslands on reclaimed surface mines (COSEWIC, 2011c).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                     | Key habitat requirements for the species (e.g., large grassland) are not found in the study area. Species not expected to occur.                                                                                                                                                                                                                                            |
| Hoary Bat                                                    | <i>Lasiurus cinereus</i>               | END | Not Listed | Utilize mostly treed habitats (deciduous and coniferous of any age class) for roosting or foraging. Maternity roost trees tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy with southern exposure and sheltered from the wind. Hoary Bats typically roost among the foliage of trees and occasionally shrubs and are typically solitary roosters (COSEWIC, 2023).<br><br>ESA Protection: Species and habitat protection                                                                                   | Key habitat requirements for the species (e.g., mature trees) are found in the study area. Species considered further in main text.                                                                                                                                                                                                                                         |
| Lake Sturgeon (Great Lakes - Upper St. Lawrence populations) | <i>Acipenser fulvescens</i>            | END | No status  | Generally found in the shallow areas of lakes or larger rivers, moving into smaller rivers to spawn. Usually found at depths of 5 -10 m and are in areas where water velocity does not exceed 70 cm/sec (COSEWIC, 2017b).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                 | No records of the Lake Sturgeon associated with the St. Andrew's PSW according to DFO and SSEA St. Andrew's Lake Wetland Evaluation. Species not expected to occur.                                                                                                                                                                                                         |
| Least Bittern                                                | <i>Ixobrychus exilis</i>               | THR | THR        | Breed strictly in marshes of emergents (usually cattails) that have relatively stable water levels and interspersed areas of open water (COSEWIC, 2009b).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                                 | Marsh component of the St. Andrew's PSW complex does not occur within 120m of the subject property according to SSEA (2004). Species not expected to occur in study area.                                                                                                                                                                                                   |
| Little Brown Myotis                                          | <i>Myotis lucifugus</i>                | END | END        | Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves (MNRF, 2014) (COSEWIC, 2013c).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                        | Key habitat requirements for the species (e.g. , forest with large trees suitable for roosting) are found in the study area. The residential dwelling on the property is well maintained and occupied, and not considered suitable roosting habitat. No caves for hibernacula were associated with the property. Considered further in main text with respect to woodlands. |
| Massasauga<br>(Great Lakes - St. Lawrence population)        | <i>Sistrurus catenatus</i>             | THR | THR        | In Georgian Bay, Massasaugas use bedrock barrens, conifer swamps, beaver meadows, fens, bogs, and shoreline habitats. On the upper Bruce Peninsula, forested habitats are used during hibernation and open, wetland, and edge habitat with canopy closure <50% in mid-late summer (COSEWIC, 2012d).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                       | Species record occurs within the study area according to MNR NHIC 1x1km squares 17NK8660, 17NK8559, 17NK8460, 17NK8561, 17NK8461, 17NK8459, 17NK8560, 17NK8661, AND 17NK8659; and potential suitable habitat occurs in the study area. Considered further in main text.                                                                                                     |
| Monarch                                                      | <i>Danaus plexippus</i>                | SC  | SC         | Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2016b).<br><br>ESA Protection: N/A                                                                                                                                                               | No milkweed observed in the study area.                                                                                                                                                                                                                                                                                                                                     |
| Northern Myotis                                              | <i>Myotis septentrionalis</i>          | END | END        | Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013c).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                               | Key habitat requirements for the species (e.g. , forest with large trees suitable for roosting) are found in the study area. The residential dwelling on the property is well maintained and occupied, and not considered suitable roosting habitat. No caves for hibernacula were associated with the property. Considered further in main text with respect to woodlands. |
| Northern Map Turtle                                          | <i>Graptemys geographica</i>           | SC  | SC         | Inhabits rivers and lakes where it basks on emergent rocks, banks, logs and fallen trees. Prefer shallow, soft-bottomed aquatic habitats with exposed objects for basking (COSEWIC, 2012e).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                                  | Species record occurs in proximity to study area according to MNR NHIC 1x1km square 17NK8461 and is associated with the Georgian Bay shoreline. Species not expected to occur within the study area.                                                                                                                                                                        |
| Olive-sided Flycatcher                                       | <i>Contopus cooperi</i>                | SC  | THR        | Natural forest openings, forest edges near natural openings (such as wetlands) or open to semi-open forest stands. Occasionally human made openings (such as clear cuts). Presence of tall snags and residual live trees is essential (COSEWIC, 2018d).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                      | Key habitat requirements for the species (e.g., forests near wetlands) are found in the study area. Considered further in main text.                                                                                                                                                                                                                                        |
| Red-headed Woodpecker                                        | <i>Melanerpes erythrocephalus</i>      | END | END        | Occurs in open deciduous forests, particularly those dominated by oak and beech, groves of dead trees, floodplain forests, orchards, cemeteries, savannas and savanna-like grasslands. Although the species occupies a range of habitat types, key habitat is characteristically composed of woodlands where tall trees are of large circumference (i.e.mature cover) and are at a low density. A high density of snag trees is also an indicator of key habitat types (COSEWIC, 2018e).<br><br>ESA Protection: Species and general habitat protection. | Although MNR NHIC databases includes records of Red-headed Woodpecker within 1km of the study area (squares 17NK8460, 17NK8660, 17NK8659), key habitat requirements for the species (e.g., open forests) are not found in the study area. Species not expected to occur.                                                                                                    |
| Short-eared Owl                                              | <i>Asio flammeus</i>                   | THR | SC         | A wide variety of unforested habitats are used, including grasslands, fallow pastures, and occasionally fields planted with row-crops (COSEWIC, 2021b).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                                                                                                                      | Key habitat requirements for the species (e.g., pastures) are not found in the study area. Species not expected to occur.                                                                                                                                                                                                                                                   |
| Silver-haired Bat                                            | <i>Lasionycteris noctivagans</i>       | END | Not Listed | Roosting by Silver-haired Bats occurs under bark and in the cavities of trees, therefore, they rely on large, decaying trees (deciduous and coniferous). Deciduous species ( <i>Populus spp.</i> ) often have characteristics that make them ideal as roost sites, particularly in older forests. Can utilize old woodpecker cavities. May occasionally roost in buildings, especially during migration (COSEWIC, 2023)<br><br>ESA Protection: Species and habitat protection                                                                           | Key habitat requirements for the species (e.g., mature trees) are found in the study area. Species considered further in main text.                                                                                                                                                                                                                                         |
| Snapping Turtle                                              | <i>Chelydra serpentina</i>             | SC  | SC         | Habitat is characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats (COSEWIC, 2008).<br><br>ESA Protection: N/A                                                                                                                                                                                                                                                                      | Although MNR NHIC databases includes records of Snapping Turtle within 1km of the study area (squares 17NK8660, 17NK8559, 17NK8560, 17NK8659). Key habitat requirements for the species (e.g., wetland) are found in the study area. Considered further in main text.                                                                                                       |
| Tri-colored Bat                                              | <i>Perimyotis subflavus</i>            | END | END        | Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013c).<br><br>ESA Protection: Species and general habitat protection                                                                                                                                                                                                                                                                                                                             | Key habitat requirements for the species (e.g. , forest with large trees suitable for roosting) are found in the study area. The residential dwelling is well maintained and occupied and not considered suitable roosting habitat. No caves for hibernacula were associated with the property. Considered further in main text with respect to woodlands.                  |

| Common Name | Species Name                      | ESA | SARA | Key Habitats Used By Species <sup>1</sup>                                                                                                                                                                      | Initial Assessment                                                                                                                                                                                                      |
|-------------|-----------------------------------|-----|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Wood Thrush | <i>Hylocichla mustelina</i>       | SC  | THR  | <b>Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012f).</b><br><br>ESA Protection: N/A | <b>Species record occurs within proximity of the property according to NHIC 1x1km squares 17NK8561, 17NK8661, and 17NK8660; and habitat for the species occurs in the study area. Considered further in maint text.</b> |
| Yellow Rail | <i>Coturnicops noveboracensis</i> | SC  | SC   | Nest in wet marshy areas of short grass-like vegetation. The habitat must remain wet throughout the breeding season (COSEWIC, 2009c).<br><br>ESA Protection: N/A                                               | Marsh component of the St. Andrew's PSW complex does not occur within 120m of the subject property according to SSEA (2004). Species not expected to occur in study area.                                               |

<sup>1</sup> Habitat as outlined within the MNR's Species at Risk in Ontario website files (<https://www.ontario.ca/environment-and-energy/species-risk-ontario-list>), or Species Specific COSEWIC Reports referenced in this document.

Species at Risk in Ontario List ( November 24, 2024)

Severn Sound Environmental Association (SSEA). 2004. St. Andrew's Lake Wetland Evaluation.

Best, T., and J. Jennings. 1997. Mammalian Species, *Myotis leibii* . The American Society of Mammalogists. No. 547, pp. 1-6, 5 figs.

Cadman, M., D. Sutherland, G. Beck, D. Lepage and A. Couturier. 2007. Atlas of the Breeding Birds of Ontario 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field

COSEWIC. 2008. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.

COSEWIC. 2009a. COSEWIC assessment and update status report on the Whip-poor-will *Caprimulgus vociferus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp.

COSEWIC. 2009b. COSEWIC assessment and update status report on the Least Bittern *Ixobrychus exilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.

COSEWIC. 2009c. COSEWIC assessment and status report on the Yellow Rail *Coturnicops noveboracensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.

COSEWIC. 2010. COSEWIC assessment and update status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.

COSEWIC. 2011a. COSEWIC assessment and update status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.

COSEWIC. 2011b. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.

COSEWIC. 2011c. COSEWIC assessment and update status report on the Henslow's Sparrow *Ammodramus henslowii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 37 pp.

COSEWIC. 2012a. COSEWIC assessment and status report on the Eastern Musk Turtle *Sternotherus odoratus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 68 pp

COSEWIC. 2012b. COSEWIC assessment and status report on the Eastern Ribbonsnake *Thamnophis sauritus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 39 pp.

COSEWIC. 2012c. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.

COSEWIC. 2012d. COSEWIC assessment and update status report on the Massasauga *Sistrurus catenatus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 84 pp.

COSEWIC. 2012e. COSEWIC assessment and status report on the Northern Map Turtle *Graptemys geographica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.

COSEWIC. 2012f. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

COSEWIC. 2013a. COSEWIC assessment and update status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.

COSEWIC. 2013b. COSEWIC assessment and status report on the Grasshopper Sparrow pratensis subspecies *Ammodramus savannarum pratensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 36 pp.

COSEWIC. 2013c. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subfalvus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.

COSEWIC. 2016a. COSEWIC assessment and status report on the Blanding's Turtle *Emydoidea blandingii* , Nova Scotia population and Great Lakes/St. Lawrence population, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa.

COSEWIC. 2016b. COSEWIC assessment and status report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 59 pp.

COSEWIC. 2017a. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 74 pp.

COSEWIC. 2017b. COSEWIC assessment and status report on the Lake Sturgeon *Acipenser fulvescen*s, Western Hudson Bay populations, Saskatchewan-Nelson River populations, Southern Hudson Bay-James Bay populations and Great Lakes-Upper St.

COSEWIC. 2018a. COSEWIC assessment and status report on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.

COSEWIC. 2018b. COSEWIC assessment and status report on the Chimney Swift *Chaetura pelagic*a in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.

COSEWIC. 2018c. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 50 pp.

COSEWIC. 2018d. COSEWIC assessment and status report on the Olive-sided Flycatcher *Contopus cooperi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 52 pp.

COSEWIC. 2018e. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalu*s in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 60 pp.

COSEWIC. 2020. COSEWIC assessment and status report on the Canada Warbler *Wilsonia Canadensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 54 pp.

COSEWIC. 2021a. COSEWIC assessment and status report on the Five-lined Skink *Eumeces fasciatus*, Carolinian population and Great Lakes/St. Lawrence population in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xvi +

COSEWIC. 2021b. COSEWIC assessment and status report on the Short-eared Owl *Asio flammeus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 69 pp.

COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat (*Lasiurus cinereus* ), Eastern Red Bat (*Lasiurus borealis*) and Silver-haired Bat (*Lasionycteris noctivagans* ) in Canada. Ottawa. xxi + 100 pp.

Ministry of the Environment, Conservation and Parks (MECP). 2026. Species at Risk in Ontario (<https://www.ontario.ca/page/species-risk-ontario>)

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Table 3: Significant Wildlife Habitat Assessment

Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E

Seasonal Concentration Areas of Animals

| Wildlife Habitat                                                                                                                                                                                                                                                       | Wildlife Species                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Candidate SWH                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Assessment                                                                                                                                                                                                              |
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|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | ELC Ecosite Codes                                                                                         | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                         |
| <b>Waterfowl Stopover and Staging Areas (Terrestrial)</b><br><br><b>Rationale:</b> Habitat important to migrating waterfowl.                                                                                                                                           | American Black Duck<br>Wood Duck<br>Green-winged Teal<br>Blue-winged Teal<br>Mallard<br>Northern Pintail<br>Northern Shoveler<br>American Wigeon<br>Gadwall                                                                                                                                                                                                                                                                                                                          | CUM1<br>CUT1<br>Plus evidence of annual spring flooding from melt water or run-off within these Ecosites. | Fields with sheet water during Spring (mid-March to May). <ul style="list-style-type: none"><li>Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl.</li><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> <u>Information Sources</u> <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 (e.g. 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>                                                                                          | 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” <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, dependant 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>                                                                                                                                               | Study area does not meet habitat criteria related to ELC ecosites and spring flooding. No further assessment required.                                                                                                  |
| <b>Waterfowl Stopover and Staging Areas (Aquatic)</b><br><br><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. | Canada Goose<br>Cackling Goose<br>Snow Goose<br>American Black Duck<br>Northern Pintail<br>Northern Shoveler<br>American Wigeon<br>Gadwall<br>Green-winged Teal<br>Blue-winged Teal<br>Hooded Merganser<br>Common Merganser<br>Lesser Scaup<br>Greater Scaup<br>Long-tailed Duck<br>Surf Scoter<br>White-winged Scoter<br>Black Scoter<br>Ring-necked duck<br>Common Goldeneye<br>Bufflehead<br>Redhead<br>Ruddy Duck<br>Red-breasted Merganser<br>Brant<br>Canvasback<br>Ruddy Duck | MAS1<br>MAS2<br>MAS3<br>SAS1<br>SAM1<br>SAF1<br>SWD1<br>SWD2<br>SWD3<br>SWD4<br>SWD5<br>SWD6<br>SWD7      | <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> <u>Information Sources</u> <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 (e.g. 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><li>Natural Heritage Information Centre (NHIC) Waterfowl Concentration Areas</li></ul> | Studies carried out and verified presence of: <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.</li><li>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 numbers and dates recorded).</li><li>SWHMiST Index #7 provides development effects and mitigation measures.</li></ul> | The St. Andrew’s Wetland (PEI) on adjacent lands has potential to support waterfowl. Conservatively, Azimuth has identified this potential SWH function in lieu of completing surveys. Considered further in main text. |

| Wildlife Habitat                                                                                                                                                     | Wildlife Species                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Candidate SWH                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Assessment                                                                                               |
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|                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ELC Ecosite Codes                                                                                                                                                                                                                                                                                                                                                                   | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                          |
| <b>Shorebird Migratory Stopover Area</b><br><br><b>Rationale:</b> High quality shorebird stopover habitat is extremely rare and typically has a long history of use. | Greater Yellowlegs<br>Lesser Yellowlegs<br>Marbled Godwit<br>Hudsonian Godwit<br>Black-bellied Plover<br>American Golden-Plover<br>Semipalmated Plover<br>Solitary Sandpiper<br>Spotted Sandpiper<br>Semipalmated Sandpiper<br>Pectoral Sandpiper<br>White-rumped Sandpiper<br>Baird’s Sandpiper<br>Least Sandpiper<br>Purple Sandpiper<br>Stilt Sandpiper<br>Short-billed Dowitcher<br>Red-necked Phalarope<br>Whimbrel<br>Ruddy Turnstone<br>Sanderling<br>Dunlin | BBO1<br>BBO2<br>BBS1<br>BBS2<br>BBT1<br>BBT2<br>SDO1<br>SDS2<br>SDT1<br>MAM1<br>MAM2<br>MAM3<br>MAM4<br>MAM5                                                                                                                                                                                                                                                                        | <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> <u>Information Sources</u> <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><li>Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area</li></ul>                                                                                                              | Studies confirming: <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> | Study area does not meet habitat criteria related to shorelines. No further assessment required.         |
| <b>Raptor Wintering Area</b><br><br><b>Rationale:</b> Sites used by multiple species of individuals and used annually are most significant                           | Rough-legged Hawk<br>Red-tailed Hawk<br>Northern Harrier<br>American Kestrel<br>Snowy Owl<br><br><b>Special Concern:</b> Short-eared Owl<br>Bald Eagle                                                                                                                                                                                                                                                                                                              | <u>Hawks/Owls:</u><br>Combination of ELC Community Series; need to have present one Community Series from each land class;<br>Forest:<br>FOD, FOM, FOC.<br><br>Upland:<br>CUM; CUT; CUS; CUW.<br><br><u>Bald Eagle:</u><br>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). | <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 windswept with limited snow depth or accumulation.</li><li>Eagle sites have open water, large trees and snags available for roosting.</li></ul> <u>Information Sources:</u> <ul style="list-style-type: none"><li>OMNRF Ecologist or Biologist 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 Reports and other information available from Conservation Authorities.</li></ul> | Studies confirm the use of these habitats by: <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>                                                                                          | Study area does not meet habitat criteria or size requirements (>20 ha). No further assessment required. |
| <b>Bat Hibernacula</b><br><br><b>Rationale:</b> Bat hibernacula are rare habitats in all Ontario landscapes.                                                         | Big Brown Bat<br>Tri-coloured Bat                                                                                                                                                                                                                                                                                                                                                                                                                                   | Bat Hibernacula may be found in these ecosites:<br>CCR1<br>CCR2<br>CCA1<br>CCA2<br>(Note: buildings are not considered to be SWH)                                                                                                                                                                                                                                                   | <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>OMNRF for possible locations and contact for local experts</li><li>Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern</li><li>Development and Mines for location of mine shafts.</li><li>Clubs that explore caves (<i>e.g.</i> Sierra Club)</li><li>University Biology Departments with bat experts.</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><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>                                                                                                                                                                                                                                 | Study area does not meet habitat criteria related to ELC codes. No further assessment required.          |

Table 3



| Wildlife Habitat                                                                                                                                                                | Wildlife Species                                                                                                                                                                                                                                                                                                                              | Candidate SWH                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Assessment                                                                                                                                                                                                              |
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|                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                               | ELC Ecosite Codes                                                                                                                                                                                                                                                                                                                                                                 | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                         |
| <b>Bat Maternity Colonies</b><br><br><b>Rationale:</b> Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.                         | <b>Big Brown Bat</b><br><b>Silver-haired Bat</b>                                                                                                                                                                                                                                                                                              | <b>Maternity colonies considered SWH are found in forested Ecosites.</b><br><br>All ELC Ecosites in ELC Community Series:<br>FOD<br>FOM<br>SWD<br>SWM                                                                                                                                                                                                                             | <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> <b>Information Sources</b> <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>                                                                                                                                                                                                                                                                                                                                                                                       | <b>The woodland communities within the study area have the potential to provide this SWH function. Considered further in main text.</b>                                                                                 |
| <b>Turtle Wintering Areas</b><br><br><b>Rationale:</b> Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant. | <b>Midland Painted Turtle</b><br><br><b>Special Concern:</b><br><b>Northern Map Turtle</b><br><b>Snapping Turtle</b>                                                                                                                                                                                                                          | <b>Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO</b><br><br>Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.                                                                                                         | <ul style="list-style-type: none"><li>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.</li><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> <b>Information Sources</b> <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>                                                                                                                                                   | <b>The St. Andrew’s Wetland (PEI) on adjacent lands has potential to support turtle wintering habitat. Conservatively, Azimuth has identified this potential SWH function. Considered further in main text.</b>         |
| <b>Reptile Hibernaculum</b><br><br><b>Rationale:</b> Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.   | <b>Snakes:</b><br>Eastern Gartersnake<br>Northern Watersnake<br>Northern Red-bellied Snake<br>Northern Brownsnake<br>Smooth Green Snake<br>Northern Ring-necked Snake<br><br><b>Special Concern:</b><br>Milksnake<br>Eastern Ribbonsnake<br><br><b>Lizard:</b><br><b>Special Concern</b><br>(Southern Shield population):<br>Five-lined Skink | For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats.<br><br>Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator.<br><br>For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3 | <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 below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH.</li><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> <b>Information Sources</b> | Studies confirming: <ul style="list-style-type: none"><li>Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp.</li><li>Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (<i>e.g.</i> foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct)</li><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 (<i>e.g.</i> temperature, humidity, <i>etc.</i>) 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 (<i>e.g.</i> 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></ul> | Study area does not meet general habitat criteria related to hibernacula opportunities. No features with potential function as overwintering sites were observed within the study area. No further assessment required. |

Table 3

| Wildlife Habitat                                                                                                                                                                                                                                                                           | Wildlife Species                                                                                                                | Candidate SWH                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Assessment                                                                                                |
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|                                                                                                                                                                                                                                                                                            |                                                                                                                                 | ELC Ecosite Codes                                                                                                                                                                                                                                                         | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                           |
|                                                                                                                                                                                                                                                                                            |                                                                                                                                 |                                                                                                                                                                                                                                                                           | <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 wintering skinks.</li></ul>                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"><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>                                                                                                                                                                                                                                                                                                           |                                                                                                           |
| <b>Colonially -Nesting Bird Breeding Habitat (Bank and Cliff)</b><br><br><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. | Cliff Swallow<br>Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)        | Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles.<br>Cliff faces, bridge abutments, silos, barns.<br><br>Habitat found in the following ecosites:<br>CUM1<br>CUT1<br>CUS1<br>BLO1<br>BLS1<br>BLT1<br>CLO1<br>CLS1<br>CLT1                            | <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> <u>Information Sources</u> <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> | Studies confirming: <ul style="list-style-type: none"><li>Presence of 1 or more nesting sites with 8or 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><li>SWHMiST Index #4 provides development effects and mitigation measures.</li></ul>                                                      | Study area does not meet habitat criteria related to ELC codes. No further assessment required.           |
| <b>Colonially-Nesting Bird Breeding Habitat (Tree/Shrubs)</b><br><br><b>Rationale:</b> Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.                                                                         | <b>Great Blue Heron</b><br><b>Black-crowned Night-Heron</b><br><b>Great Egret</b><br><b>Green Heron</b>                         | SWM2<br>SWM3<br>SWM5<br>SWM6<br>SWD1<br>SWD2<br>SWD3<br>SWD4<br>SWD5<br>SWD6<br>SWD7<br>FET1                                                                                                                                                                              | <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>Ontario Breeding Bird Atlas, colonial nest records.</li><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>                 | Studies confirming: <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 &lt;15.0ha with a colony is the SWH.</li><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> | The MNR NHIC database confirms occurrence of this SWH in the study area. Considered further in main text. |
| <b>Colonially-Nesting Bird Breeding Habitat (Ground)</b><br><br><b>Rationale:</b> Colonies are important to local bird population, typically sites are only known colony in area and are used annually.                                                                                    | Herring Gull<br>Great Black-backed Gull<br>Little Gull<br>Ring-billed Gull<br>Common Tern<br>Caspian Tern<br>Brewer’s Blackbird | Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map).<br><br>Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer’s Blackbird)<br><br>MAM1 – 6;<br>MAS1 – 3; | <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> <u>Information Sources</u> <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></ul>                                                                                                                                                 | Studies confirming: <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></ul>                                                                    | The MNR NHIC database confirms occurrence of this SWH in the study area. Considered further in main text. |

Table 3

| Wildlife Habitat                                                                                                                                                                                                                                                                         | Wildlife Species                                                                                                                                     | Candidate SWH                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Assessment                                                                                    |
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|                                                                                                                                                                                                                                                                                          |                                                                                                                                                      | ELC Ecosite Codes                                                                                                                                                                                                                                                                                               | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                               |
|                                                                                                                                                                                                                                                                                          |                                                                                                                                                      | CUM<br>CUT<br>CUS                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"><li>MNRF District Offices</li><li>Field Naturalist clubs</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"><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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                               |
| <b>Migratory Butterfly Stopover Areas</b><br><br><b>Rationale:</b> Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.                                                                          | Painted Lady<br>Red Admiral<br><br><u>Special Concern</u><br>Monarch                                                                                 | Combination of ELC Community Series; need to have present one Community Series from each land class:<br><br><u>Field:</u><br>CUM<br>CUT<br>CUS<br><br><u>Forest:</u><br>FOC<br>FOD<br>FOM<br>CUP<br><br>Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed. | 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. <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>OMNRF (NHIC)</li><li>Agriculture Canada in Ottawa may have list of butterfly experts.</li><li>Field Naturalist Clubs</li><li>Toronto Entomologists Association</li><li>Conservation Authorities</li></ul> | Studies confirm: <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 <b>or</b> &gt;3000 with the presence of Painted Ladies or Red Admiral’s is to be considered significant.</li><li>SWHMiST Index #16 provides development effects and mitigation measures.</li></ul> | The study area is not located within 5km of Lake Ontario. No further assessment required.     |
| <b>Landbird Migratory Stopover Areas</b><br><br><b>Rationale:</b> Sites with a high diversity of species as well as high numbers are most significant.                                                                                                                                   | All migratory songbirds.<br>Canadian Wildlife Service Ontario website.<br><br>All migratory songbirds.<br>Canadian Wildlife Service Ontario website: | All Ecosites associated with these ELC Community Series;<br>FOC<br>FOM<br>FOD<br>SWC<br>SWM<br>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> <u>Information Sources</u> <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.</li></ul>                                                                                                                                                               | The study area is not located within 5km of Lake Ontario. No further assessment required.     |
| <b>Deer Yarding Areas</b><br><br><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 | White-tailed Deer                                                                                                                                    | Note: OMNRF to determine this habitat.<br>ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC.<br><br>Or these ELC Ecosites;<br>CUP2<br>CUP3<br>FOD3<br>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></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</li></ul>                                                            | The province does not map the study area as a deer yard area. No further assessment required. |

Table 3

| Wildlife Habitat                                                                                                                                                                                                                                                                                             | Wildlife Species  | Candidate SWH                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Assessment                                                                                                                                                    |
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|                                                                                                                                                                                                                                                                                                              |                   | ELC Ecosite Codes                                                                                                                                                                  | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                               |
| by deer, yards typically represent 10-15% of an areas summer range.                                                                                                                                                                                                                                          |                   |                                                                                                                                                                                    | <ul style="list-style-type: none"><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>                                                                                                                                                                                                                                                                                                                             | <p>establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations.</p> <ul style="list-style-type: none"><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>Deer Winter Congregation Areas</b><br><br><b><u>Rationale:</u></b> 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. | White-tailed Deer | <p>All Forested Ecosites with these ELC Community Series;<br/>FOC<br/>FOM<br/>FOD<br/>SWC<br/>SWM<br/>SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p> | <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 deer will annually congregate in large numbers in suitable woodlands .</li><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> | <p>Studies confirm:</p> <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><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> | Study area does not meet habitat criteria related to minimum woodlot size. Not mapped by the province as a congregation area. No further assessment required. |

Rare Vegetation Communities

| Rare Vegetation Community                                                                                                                                                              | Candidate SWH                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Confirmed SWH                                                                                                                                                                                                                                                                                 | Assessment                                                                                      |
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|                                                                                                                                                                                        | ELC Ecosite Code                                                                                                                                                                                                  | Habitat Description                                                                                                                                                                                                                                                                                       | Detailed Information and Sources                                                                                                                                                                                                                                                                                                                                                                                                                 | Defining Criteria                                                                                                                                                                                                                                                                             |                                                                                                 |
| <b>Cliffs and Talus Slopes</b><br><br><b><u>Rationale:</u></b> Cliffs and Talus Slopes are extremely rare habitats in Ontario.                                                         | Any ELC Ecosite within Community Series:<br>TAO<br>TAS<br>TAT<br>CLO<br>CLS<br>CLT                                                                                                                                | <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>                                                                                                    | Study area does not meet habitat criteria related to ELC codes. No further assessment required. |
| <b>Sand Barren</b><br><br><b><u>Rationale:</u></b> Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry | <p>ELC Ecosites:<br/>SBO1<br/>SBS1<br/>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>MNRF 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 (&lt;50% vegetative cover are exotic sp.)</li><li>SWHMiST Index #20 provides development effects and mitigation measures.</li></ul> | Study area does not meet habitat criteria related to ELC codes. No further assessment required. |

Table 3

| Rare Vegetation Community                                                                                                                                                                                                                          | Candidate SWH                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Assessment                                                                                                                                                                            |
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|                                                                                                                                                                                                                                                    | ELC Ecosite Code                                                                                                                                                                                                                                                                                                                                              | Habitat Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Detailed Information and Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                       |
| <b>Alvar</b><br><br><b><u>Rationale:</u></b> Alvars are extremely rare habitats in Ecoregion 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. | ALO1<br>ALS1<br>ALT1<br>FOC1<br>FOC2<br>CUM2<br>CUS2<br>CUT2-1<br>CUW2<br><br><b>Five Alvar Species:</b><br>1) <i>Carex crawei</i><br>2) <i>Panicum philadelphicum</i><br>3) <i>Eleocharis compressa</i><br>4) <i>Scutellaria parvula</i><br>5) <i>Trichostema brachiatum</i><br><br>These indicator species are very specific to Alvars within Ecoregion 6E. | 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 are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover. | An Alvar site > 0.5 ha in size.<br><u>Information Sources</u> <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>Field 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 (&lt;50% vegetative cover are exotic sp.).</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>                                                                                                                                                                                                           | Study area does not meet habitat criteria related to ELC codes. No further assessment required.                                                                                       |
| <b>Old Growth Forest</b><br><br><b><u>Rationale:</u></b> 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.            | Forest Community Series:<br>FOD<br>FOC<br>FOM<br>SWD<br>SWC<br>SWM                                                                                                                                                                                                                                                                                            | Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.                                                                                                                                                                                                                                                                                                                                                                                               | Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.<br><u>Information Sources</u> <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 Licence (SFL) companies will possibly know locations through field operations.</li><li>Municipal forestry departments</li></ul> | Field Studies will determine: <ul style="list-style-type: none"><li>If dominant trees species 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).</li><li>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 measures.</li></ul> | Forest communities in study area do not meet key criteria related to Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat. No further assessment required. |
| <b>Savannah</b><br><br><b><u>Rationale:</u></b> Savannahs are extremely rare habitats in Ontario.                                                                                                                                                  | TPS1<br>TPS2<br>TPW1<br>TPW2<br>CUS2                                                                                                                                                                                                                                                                                                                          | A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 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.<br><u>Information Sources</u> <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><li>Conservation Authorities</li></ul>                                                                           | 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. <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>                                                                                                                                                                                                                                       | Study area does not meet habitat criteria related to ELC codes. No further assessment required.                                                                                       |
| <b>Tallgrass Prairie</b><br><br><b><u>Rationale:</u></b> Tallgrass Prairies are extremely rare habitats in Ontario.                                                                                                                                | TPO1<br>TPO2                                                                                                                                                                                                                                                                                                                                                  | A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 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.<br><u>Information Sources</u> <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><li>Conservation Authorities</li></ul>                                                                           | 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. <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 #19 provides development effects and mitigation measures.</li></ul>                                                                                                                                                                                                                                         | Study area does not meet habitat criteria related to ELC codes. No further assessment required.                                                                                       |

Table 3

| Rare Vegetation Community                                                                                                                                            | Candidate SWH                                                                                                                                                                                          |                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Confirmed SWH                                                                                                                                                                                                                                                                                                          | Assessment                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                      | ELC Ecosite Code                                                                                                                                                                                       | Habitat Description                                                                              | Detailed Information and Sources                                                                                                                                                                                                                                                                                                                                                                                                                              | Defining Criteria                                                                                                                                                                                                                                                                                                      |                                                                                                       |
| <b>Other Rare Vegetation Communities</b><br><br><b><u>Rationale:</u></b> Plant communities that often contain rare species which depend on the habitat for survival. | Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH. | Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps. | ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M<br><br>The OMNRF/NHIC will have up to date listing for rare vegetation communities.<br><u>Information Sources</u> <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><li>Conservation Authorities</li></ul> | Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG. <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> | Study area does not contain Provincially Rare vegetation communities. No further assessment required. |

Specialized Habitat for Wildlife

| Wildlife Habitat                                                                                                                                                                                                  | Wildlife Species                                                                                                                                             | Candidate SHW                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Assessment                                                                                                                                                                                                                                                                                         |
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|                                                                                                                                                                                                                   |                                                                                                                                                              | ELC Ecosite Codes                                                                                                                                                                                                                                                                                             | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                    |
| <b>Waterfowl Nesting Area</b><br><br><b><u>Rationale:</u></b> Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.                  | American Black Duck<br>Northern Pintail<br>Northern Shoveler<br>Gadwall<br>Blue-winged Teal<br>Green-winged Teal<br>Wood Duck<br>Hooded Merganser<br>Mallard | All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH:<br>MAS1<br>MAS2<br>MAS3<br>SAS1<br>SAM1<br>SAF1<br>MAM1<br>MAM2<br>MAM3<br>MAM4<br>MAM5<br>MAM6<br>SWT1<br>SWT2<br>SWD1<br>SWD2<br>SWD3<br>SWD4<br><b>Note: includes adjacency to Provincially Significant Wetlands</b> | A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>Ducks Unlimited staff may know the locations of particularly productive nesting sites.</li><li>OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat.</li><li>Reports and other information available from Conservation Authorities.</li></ul> | <b>Studies confirmed:</b> <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> | <b>The MNR Wildlife Values Area database confirms occurrence of this SWH in the study area. Considered further in main text.</b>                                                                                                                                                                   |
| <b>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat</b><br><br><b><u>Rationale:</u></b> Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting | Osprey<br><br><b>Special Concern</b><br>Bald Eagle                                                                                                           | ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands                                                                                                                                                                          | Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. <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 (<i>e.g.</i> telephone poles and constructed nesting platforms).</li></ul> <u>Information Sources</u> <ul style="list-style-type: none"><li>Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario.</li></ul>                                                                                                                                                                                                                                                                        | Studies confirm the use of these nests by: <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.</li><li>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 site lines from the nest to the development and inclusion of perching and foraging habitat.</li></ul>                                                                                                   | Although forest habitat is present within the Study Area (Figure 2), no Osprey or Bald Eagle nests observed during Azimuth’s field investigations. Due to the anthropogenic nature of the study area species are not expected to utilize the woodland for nesting. No further assessment required. |

Table 3



| Wildlife Habitat                                                                                                                                                                                           | Wildlife Species                                                                                                  | Candidate SHW                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Assessment                                                                                                                                                                                     |
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|                                                                                                                                                                                                            |                                                                                                                   | ELC Ecosite Codes                                                                                                                                                                | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                |
| locations may be lost due to increasing shoreline development pressures and scarcity of habitat.                                                                                                           |                                                                                                                   |                                                                                                                                                                                  | <ul style="list-style-type: none"><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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"><li>• To be significant a site must be used annually. When found inactive, the site must be known to be inactive for &gt; 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><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>                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                |
| <b>Woodland Raptor Nesting Habitat</b><br><br><b><u>Rationale:</u></b><br>Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species. | Northern Goshawk<br>Cooper’s Hawk<br>Sharp-shinned Hawk<br>Red-shouldered Hawk<br>Barred Owl<br>Broad-winged Hawk | May be found in all forested ELC Ecosites.<br>May also be found in SWC, SWM, SWD and CUP3                                                                                        | All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer <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> <u>Information Sources</u> <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>                                                                                                                                                                                                                             | Studies confirm: <ul style="list-style-type: none"><li>• Presence of 1 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> | Study area does not meet habitat criteria related to minimum woodlot size and interior habitat. No stick nests observed during Azimuth’s field investigations. No further assessment required. |
| <b>Turtle Nesting Areas</b><br><br><b><u>Rationale:</u></b><br>These habitats are rare and when identified will often be the only breeding site for local populations of turtles.                          | Midland Painted Turtle<br><br><u>Special Concern Species</u><br>Northern Map Turtle<br>Snapping Turtle            | Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites:<br>MAS1<br>MAS2<br>MAS3<br>SAS1<br>SAM1<br>SAF1<br>BOO1<br>FEO1               | <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> <u>Information Sources</u> <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 Herpetofaunal 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> | Studies confirm: <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 dependant 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><li>• SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat.</li></ul>                                                  | Suitable turtle nesting habitat is not present within the study area, as the adjacent area with exposed soil is an active construction site. No further assessment required.                   |
| <b>Seeps and Springs</b><br><br><b><u>Rationale:</u></b><br>Seeps/Springs are typical of headwater areas and are often at                                                                                  | Wild Turkey<br>Ruffed Grouse<br>Spruce Grouse<br>White-tailed Deer<br>Salamander spp.                             | Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater | Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. <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> <u>Information Sources</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Field Studies confirm: <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</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No seeps or springs were documented within the study area. No further assessment required.                                                                                                     |

Table 3

| Wildlife Habitat                                                                                                                                                                                                                             | Wildlife Species                                                                                                                                                                                                                | Candidate SHW                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Assessment                                                                                                                                                                                                                       |
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|                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                 | ELC Ecosite Codes                                                                                                                                                                                                                                                                                            | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                  |
| the source of coldwater streams.                                                                                                                                                                                                             |                                                                                                                                                                                                                                 | areas of a stream could have seeps/springs.                                                                                                                                                                                                                                                                  | <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat.</p> <ul style="list-style-type: none"><li>SWHMiST Index #30 provides development effects and mitigation measures.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                  |
| <b>Amphibian Breeding Habitat (Woodland).</b><br><br><b>Rationale:</b><br>These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations. | Eastern Newt<br>Blue-spotted Salamander<br>Spotted Salamander<br>Gray Treefrog<br>Spring Peeper<br>Western Chorus Frog<br>Wood Frog                                                                                             | <p>All Ecosites associated with these ELC Community Series; FOC<br/>FOM<br/>FOD<br/>SWC<br/>SWM<br/>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 Herpetofaunal 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</li><li>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 230m 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>                                                                                   | No woodlands present within the study area with suitable habitat (vernal pools, ponds) occurs in the study area. No further assessment required.                                                                                 |
| <b>Amphibian Breeding Habitat (Wetlands)</b><br><br><b>Rationale:</b><br>Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.                                 | Eastern Newt<br>American Toad<br>Spotted Salamander<br>Four-toed Salamander<br>Blue-spotted Salamander<br>Gray Treefrog<br>Western Chorus Frog<br>Northern Leopard Frog<br>Pickerel Frog<br>Green Frog<br>Mink Frog<br>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>                                          | <ul style="list-style-type: none"><li>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.</li><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 Herpetofaunal 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 Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.</li><li>SWHMiST Index #15 provides development effects and mitigation measures.</li></ul> | The St. Andrew’s Wetland (PEI) on adjacent lands has potential to support amphibian breeding. Conservatively, Azimuth has identified this potential SWH function in lieu of completing surveys. Considered further in main text. |
| <b>Woodland Area-Sensitive Bird Breeding Habitat</b><br><br><b>Rationale:</b><br>Large, natural blocks of mature woodland                                                                                                                    | Yellow-bellied Sapsucker<br>Red-breasted Nuthatch<br>Veery<br>Blue-headed Vireo<br>Northern Parula                                                                                                                              | <p>All Ecosites associated with these ELC Community Series; FOC<br/>FOM<br/>FOD<br/>SWC</p>                                                                                                                                                                                                                  | <p>Habitats where interior forest breeding birds are breeding, typically large mature (&gt;60 yrs old) forest stands or woodlots &gt;30 ha.</p> <ul style="list-style-type: none"><li>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></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></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Study area does not meet habitat criteria related to minimum woodlot size and lacks any interior forest habitat. No further assessment required.                                                                                 |

Table 3

| Wildlife Habitat                                                                                                           | Wildlife Species                                                                                                                                                                                       | Candidate SHW     |                                                                                                                                                                                                                                                                                                                                                                                                                             | Confirmed SWH                                                                                                                                                                                                              | Assessment |
|----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
|                                                                                                                            |                                                                                                                                                                                                        | ELC Ecosite Codes | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                    | Defining Criteria                                                                                                                                                                                                          |            |
| habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds. | Black-throated Green Warbler<br>Blackburnian Warbler<br>Black-throated Blue Warbler<br>Ovenbird<br>Scarlet Tanager<br>Winter Wren<br><br><b>Special Concern:</b><br>Cerulean Warbler<br>Canada Warbler | SWM<br>SWD        | <ul style="list-style-type: none"><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 Authorities.</li></ul> | <ul style="list-style-type: none"><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> |            |

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

| Wildlife Habitat                                                                                                                                                                                                                                                                               | Wildlife Species                                                                                                                                                                                                                                            | Candidate SHW                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Assessment                                                                                                                                                                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                             | ELC Ecosite Codes                                                                                                                                 | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                     |
| <b>Marsh Breeding Bird Habitat</b><br><br><b>Rationale;</b><br>Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.                                                                                                                        | American Bittern<br>Virginia Rail<br>Sora<br>Common Moorhen<br>American Coot<br>Pied-billed Grebe<br>Marsh Wren<br>Sedge Wren<br>Common Loon<br>Sandhill Crane<br>Green Heron<br>Trumpeter Swan<br><br><b>Special Concern:</b><br>Black Tern<br>Yellow Rail | MAM1<br>MAM2<br>MAM3<br>MAM4<br>MAM5<br>MAM6<br>SAS1<br>SAM1<br>SAF1<br>FEO1<br>BOO1<br><br><b>For Green Heron:</b><br>All SW, MA and CUM1 sites. | <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> <b>Information Sources</b> <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>                                                                                                                                     | <b>Studies confirm:</b> <ul style="list-style-type: none"><li>Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 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 1 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> | <b>The St. Andrew’s Wetland (PEI) on adjacent lands has potential to support marsh breeding. Conservatively, Azimuth has identified this potential SWH function in lieu of completing surveys. Considered further in main text.</b> |
| <b>Open Country Bird Breeding Habitat Sources Defining Criteria</b><br><br><b>Rationale;</b><br>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. | Upland Sandpiper<br>Grasshopper Sparrow<br>Vesper Sparrow<br>Northern Harrier<br>Savannah Sparrow<br><br><b>Special Concern</b><br>Short-eared Owl                                                                                                          | CUM1<br>CUM2                                                                                                                                      | Large grassland areas (includes natural and cultural fields and meadows) >30 ha. <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> <b>Information Sources</b> <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> | Field Studies confirm: <ul style="list-style-type: none"><li>Presence of nesting or breeding of 2 or more of the listed species.</li><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>                                                                           | Study area does not meet habitat criteria related to ELC codes. No further assessment required.                                                                                                                                     |
| <b>Shrub/Early Successional Bird Breeding Habitat</b><br><br><b>Rationale;</b>                                                                                                                                                                                                                 | Indicator Spp:<br>Brown Thrasher<br>Clay-coloured Sparrow<br>Common Spp.<br>Field Sparrow                                                                                                                                                                   | CUT1<br>CUT2<br>CUS1<br>CUS2<br>CUW1<br>CUW2                                                                                                      | Large field areas succeeding to shrub and thicket habitats>10ha in size. <ul style="list-style-type: none"><li>Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years).</li><li>Shrub thicket habitats (&gt;10 ha) are most likely to support and sustain a diversity of these species.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Field Studies confirm: <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 Golden-winged Warbler is to be considered as Significant Wildlife Habitat.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                 | Study area does not meet habitat criteria related to ELC codes. No further assessment required.                                                                                                                                     |

Table 3

| Wildlife Habitat                                                                                                                                                                 | Wildlife Species                                                                                                                                               | Candidate SHW                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Assessment                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                  |                                                                                                                                                                | ELC Ecosite Codes                                                                                                                                                                                     | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                 |
| This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records. | Black-billed Cuckoo<br>Eastern Towhee<br>Willow Flycatcher<br><br><b>Special Concern:</b><br>Yellow-breasted Chat<br>Golden-winged Warbler                     | Patches of shrub ecosites can be complexed into a larger habitat for some bird species                                                                                                                | <ul style="list-style-type: none"><li>Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.</li></ul> <u>Information Sources</u> <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>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>                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                 |
| <b>Terrestrial Crayfish</b><br><br><u><b>Rationale:</b></u><br>Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.                 | <b>Chimney or Digger Crayfish;</b><br><i>(Fallicambarus fodiens)</i><br><br><b>Devil Crayfish or Meadow Crayfish;</b><br><i>(Cambarus Diogenes)</i>            | MAM1<br>MAM2<br>MAM3<br>MAM4<br>MAM5<br>MAM6<br>MAS1<br>MAS2<br>MAS3<br>SWD<br>SWT<br>SWM<br><br>CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.    | <b>Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish.</b> <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>Information sources from “Conservation Status of Freshwater Crayfishes” by Dr. Premek Hamr for the WWF and CNF March 1998.</li></ul>             | <b>Studies Confirm:</b> <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 difficult.</li><li>SWHMiST Index #36 provides development effects and mitigation measures.</li></ul>                      | <b>The St. Andrew’s Wetland (PEI) on adjacent lands has potential to support terrestrial crayfish. Conservatively, Azimuth has identified this potential SWH function in lieu of completing surveys. Considered further in main text.</b>                                       |
| <b>Special Concern and Rare Wildlife Species</b><br><br><u><b>Rationale:</b></u><br>These species are quite rare or have experienced significant population declines in Ontario. | All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre. | All plant and animal element occurrences (EO) within a 1 or 10km grid.<br><br>Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy. | When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites<br><u>Information Sources</u> <ul style="list-style-type: none"><li>Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data.</li><li>NHIC Website “Get Information” : <a href="http://nhic.mnr.gov.on.ca">http://nhic.mnr.gov.on.ca</a></li><li>Ontario Breeding Bird Atlas</li><li>Expert advice should be sought as many of the rare spp. have little information available about their requirements.</li></ul> | <b>Studies Confirm:</b> <ul style="list-style-type: none"><li>Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable.</li><li>The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species <i>e.g.</i> specific nesting habitat or foraging habitat.</li><li>SWHMiST Index #37 provides development effects and mitigation measures.</li></ul> | <b>Potential suitable habitat for Canada Warbler, Eastern Wood-pewee, Eastern Musk Turtle, Eastern Ribbonsnake, Olive-sided Flycatcher, Snapping Turtle, and Wood Thrush are associated with the woodlands and St. Andrew’s Wetland (PEI). Considered further in main text.</b> |

Animal Movement Corridors

| Wildlife Habitat                                                                                                                                                          | Wildlife Species                                                                                                                               | Candidate SHW                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                             | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                             | Assessment                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                           |                                                                                                                                                | ELC Ecosite                                                                                                                                                                              | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                    | Defining Criteria                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                            |
| <b>Amphibian Movement Corridors</b><br><br><u><b>Rationale:</b></u><br>Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be | Eastern Newt<br>American Toad<br>Spotted Salamander<br>Four-toed Salamander<br>Blue-spotted Salamander<br>Gray Treefrog<br>Western Chorus Frog | Corridors may be found in all ecosites associated with water. <ul style="list-style-type: none"><li>Corridors will be determined based on identifying the significant breeding</li></ul> | Movement corridors between breeding habitat and summer habitat. <ul style="list-style-type: none"><li>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.</li></ul> <u>Information Sources</u> <ul style="list-style-type: none"><li>MNR District Office</li><li>Natural Heritage Information Center (NHIC)</li></ul> | <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></ul> | The Study area is not anticipated to act as an amphibian movement corridor due to the anthropogenic nature of the property |

Table 3

| Wildlife Habitat                                                                                                                                                                                                                                                            | Wildlife Species                                                              | Candidate SHW                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Assessment                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                             |                                                                               | ELC Ecosite                                                                                                                                      | Habitat Criteria and Information Sources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                      |
| extremely important for local populations.                                                                                                                                                                                                                                  | Northern Leopard Frog<br>Pickerel Frog<br>Green Frog<br>Mink Frog<br>Bullfrog | habitat for these species in Table 1.1                                                                                                           | <ul style="list-style-type: none"><li>Reports and other information available from Conservation Authorities.</li><li>Field Naturalist Clubs</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <ul style="list-style-type: none"><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.</li><li>SWHMiST Index #40 provides development effects and mitigation measures.</li></ul>                                                                                                                                                             |                                                                                                                                                                                                      |
| <b>Deer Movement Corridors</b><br><br><u><b>Rationale:</b></u><br>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. | White-tailed Deer                                                             | Corridors may be found in all forested ecosites.<br><br>A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors. | Movement corridor must be determined when <b>Deer Wintering Habitat</b> is confirmed as SWH from Table 1.1 of this schedule. <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> <u>Information Sources</u> <ul style="list-style-type: none"><li>MNRF District Office</li><li>Natural Heritage Information Center (NHIC).</li><li>Reports and other information available from Conservation Authorities.</li><li>Field Naturalist Clubs</li></ul> | <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.</li><li>Shorter corridors are more significant than longer corridors.</li><li>SWHMiST Index #39 provides development effects and mitigation measures.</li></ul> | Study area does not meet key habitat criteria related to presence of identified deer wintering areas. No potential for Deer Wintering Habitat within the study area. No further assessment required. |

Exceptions for Ecoregion 6E

| EcoDistrict                                                                                                                                                                                                               | Wildlife Habitat and Species                  | Candidate                                                                   |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Confirmed SWH                                                                                                                                                                                                                                                                                                                                                                                                            | Assessment                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
|                                                                                                                                                                                                                           |                                               | Ecosites                                                                    | Habitat Description                                                                                                                                                                                                                                                                                                                                 | Habitat Criteria and Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Defining Criteria                                                                                                                                                                                                                                                                                                                                                                                                        |                           |
| <b>6E-14</b><br><br><b><u>Rationale:</u></b><br>The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast-producing tree species is important for bears. | <b>Mast Producing Areas</b><br><br>Black Bear | All Forested habitat represented by ELC Community Series:<br><br>FOM<br>FOD | <ul style="list-style-type: none"><li>Black bears require forested habitat that provides cover, winter hibernation sites, and mast-producing tree species.</li><li>Forested habitats need to be large enough to provide cover and protection for black bears.</li></ul>                                                                             | Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech).<br><br><u>Information Sources</u><br>Important forest habitat for black bears may be identified by OMNRF.                                                                                                                                                                                                                                                                                                                                                                 | All woodlands > 30ha with a 50%composition of these ELC Vegetation Types are considered significant:<br>FOM1-1<br>FOM2-1<br>FOM3-1<br>FOD1-1<br>FOD1-2<br>FOD2-1<br>FOD2-2<br>FOD2-3<br>FOD2-4<br>FOD4-1<br>FOD5-2<br>FOD5-3<br>FOD5-7<br>FOD6-5<br><br>SWHMiST Index #3 provides development effects and mitigation measures.                                                                                           | Not on Bruce Peninsula.   |
| <b>6E- 17</b><br><br><b><u>Rationale:</u></b><br>Sharp-tailed grouse only occur on Manitoulin Island in Eco-region 6E, Leks are an important habitat to maintain their population                                         | Lek<br><br>Sharp-tailed Grouse                | CUM<br>CUS<br>CUT                                                           | <ul style="list-style-type: none"><li>The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography.</li><li>Leks are typically a grassy field/meadow &gt;15ha with adjacent shrublands and &gt;30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated.</li></ul> | Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland. <ul style="list-style-type: none"><li>Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying)</li><li>Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting</li></ul> <u>Information Sources</u> <ul style="list-style-type: none"><li>OMNRF district office</li><li>Bird watching clubs</li><li>Local landowners</li><li>Ontario Breeding Bird Atlas</li></ul> | Studies confirming lek habitat are to be completed from late March to June. <ul style="list-style-type: none"><li>Any site confirmed with sharp-tailed grouse courtship activities is considered significant</li><li>The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat</li><li>SWHMiST Index #32 provides development effects and mitigation measures</li></ul> | Not on Manitoulin Island. |





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## **APPENDICES**

**Appendix A:** Background Mapping

**Appendix B:** Agency Correspondence

**Appendix C:** Photographic Record

**Appendix D:** Proposed Development Concept

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## **APPENDIX A**

### **Background Mapping**

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Notes:

0.1 0 0.04 0.1 Kilometres

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry (OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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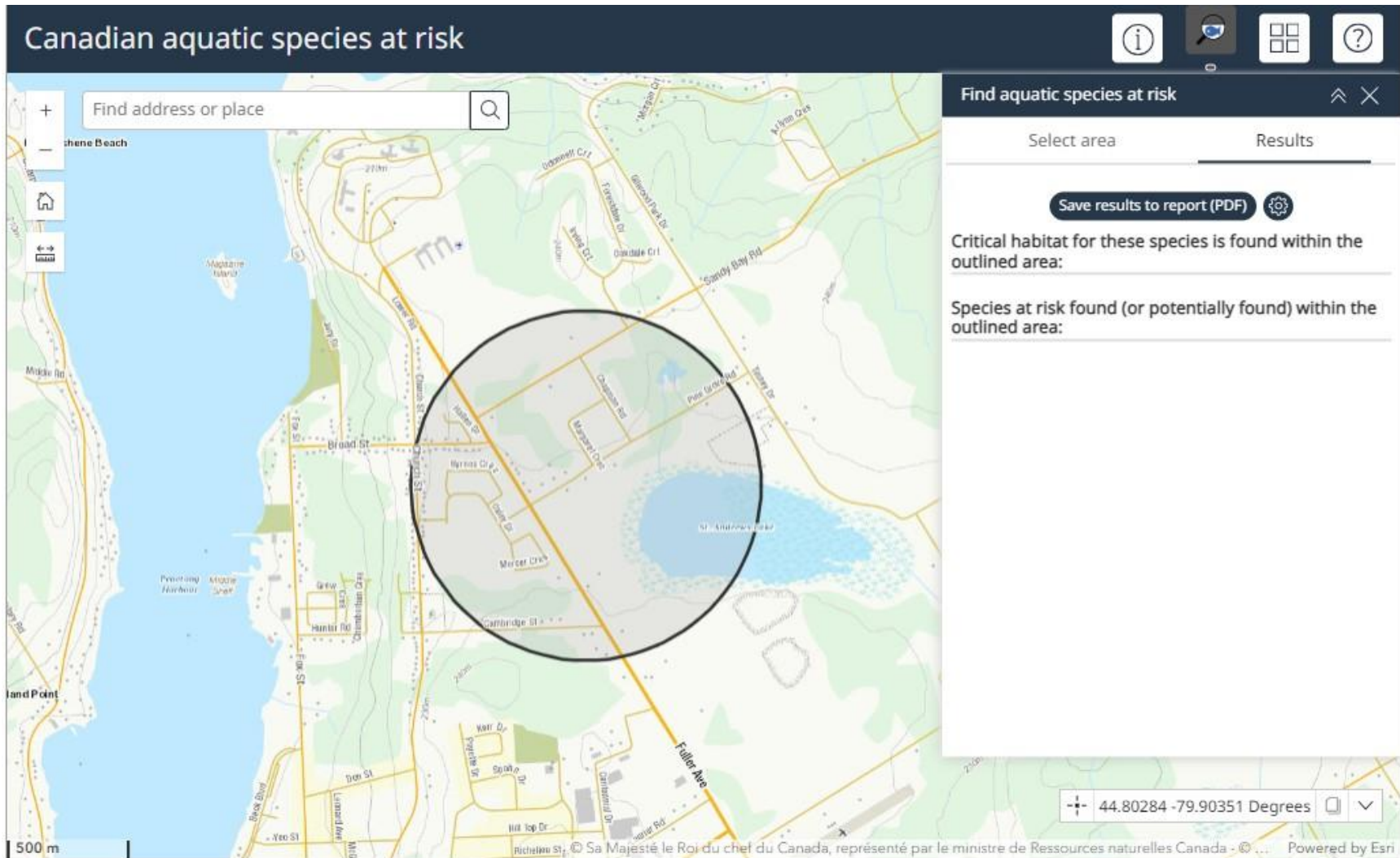


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GTA 2005 / SWOOP 2006 / Simcoe-Muskoka-Dufferin © FirstBase Solutions, 2005 / 2006 / 2008  
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## Legend

-  Assessment Parcel
- ANSI**
-  Earth Science Provincially Significant/sciences de la terre d'importance provinciale
-  Earth Science Regionally Significant/sciences de la terre d'importance régionale
-  Life Science Provincially Significant/sciences de la vie d'importance provinciale
-  Life Science Regionally Significant/sciences de la vie d'importance régionale
-  Evaluated Wetland
-  Provincially Significant/considérée d'importance provinciale
-  Non-Provincially Significant/non considérée d'importance provinciale
-  Unevaluated Wetland
-  Woodland
-  Natural Heritage System





(DFO, 2024)



# Wildlife Values Area

✓ Authoritative



Private Member 

Land Information Ontario

## Summary

Get spatial data on the location of wildlife values features (represented as points and polygons) collected because of their importance to MNRF Regional Operations Division forest management planning.

[View Full Details](#)

[Download](#)

## Details



**Dataset**  
Feature Layer



**April 2, 2020**  
Info Updated



**As Needed**  
Data Updated: July 30, 2024 at 9:24 AM

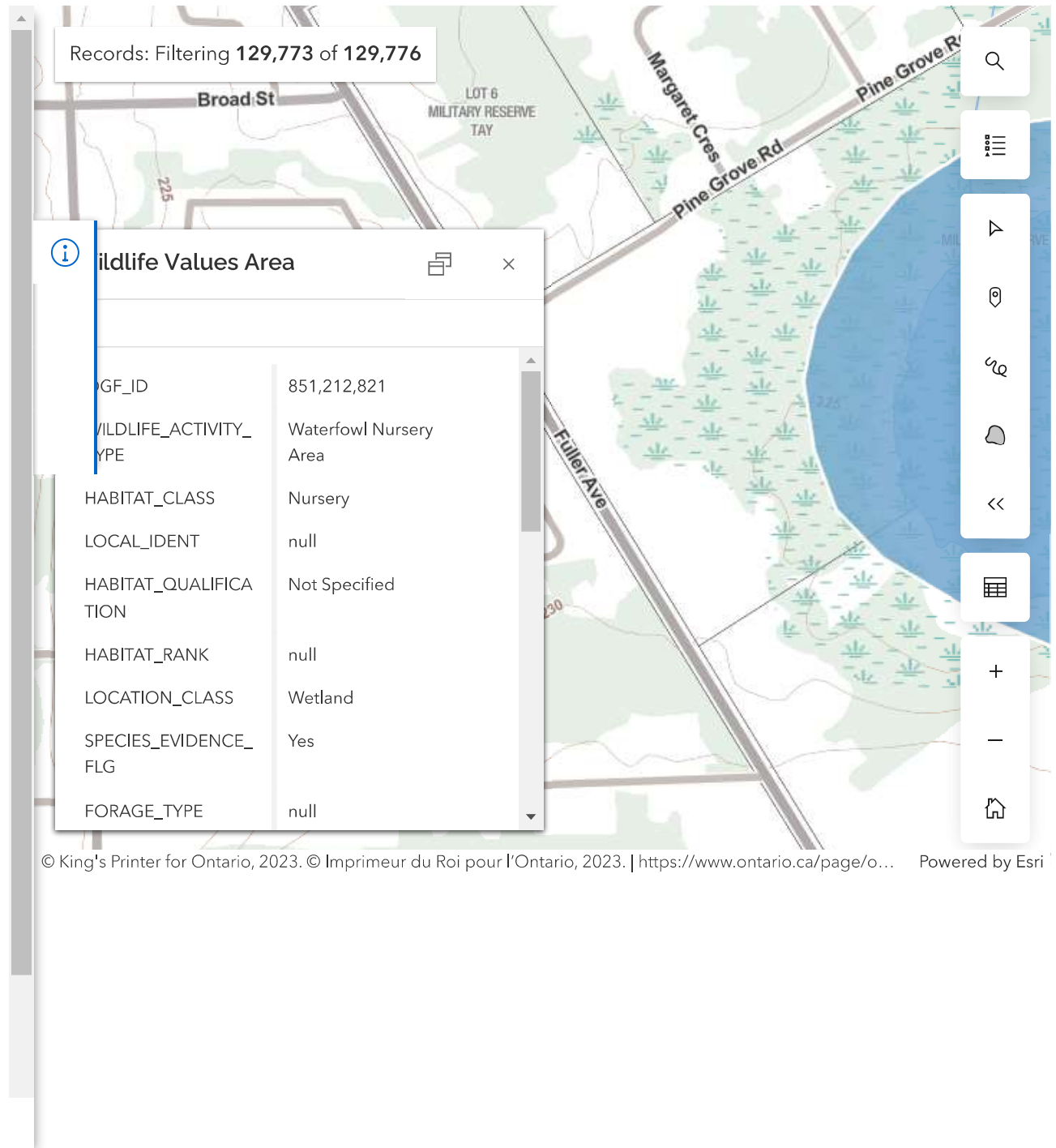


**January 1, 2000**  
Published Date



**Records: 129,776**  
[View data table](#)

I want to use this





## SCHEDULE 5.1

To the County of Simcoe Official Plan

### LAND USE DESIGNATIONS

#### Designations

- Settlements
- Greenlands
- Agricultural
- Rural
- Strategic Settlement Employment Areas and Economic Employment Districts
- Lands not subject to this plan

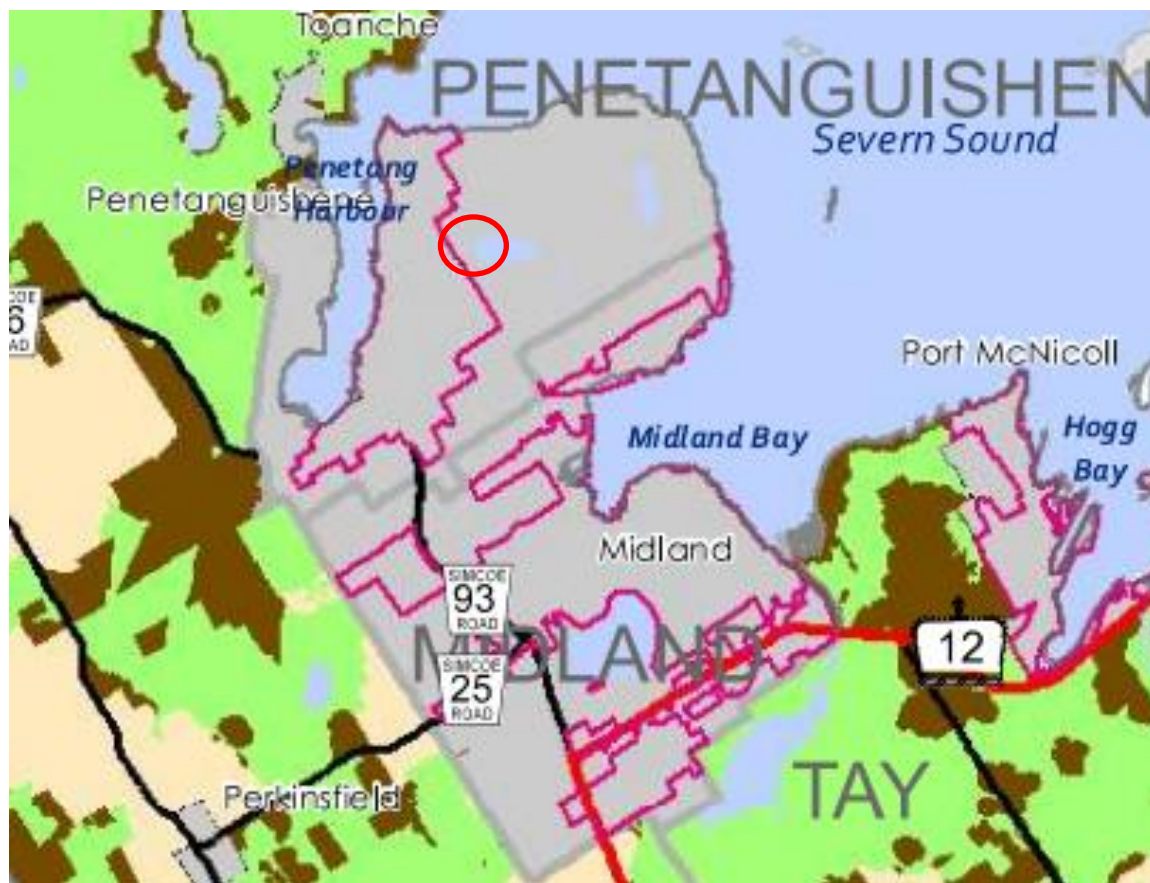
Settlement Area Boundary Under Appeal

General Location of Site-Specific Appeals

Lands Subject to Non-Decision

#### Reference Data

- Settlement Area Boundary
- Built Boundaries
- Special Development Area: Friday Harbour Resort
- Greenbelt Plan - Protected Countryside (Refer to Schedule 5.3.3 For Details)
- Niagara Escarpment Plan Area (Refer to Schedule 5.3.1 For Details)
- Oak Ridges Moraine Conservation Plan Area (Refer to Schedule 5.3.2 For Details)
- Provincial Highway
- County Road
- Trans Canada Pipeline
- Lake Simcoe Protection Plan - Watershed Boundary



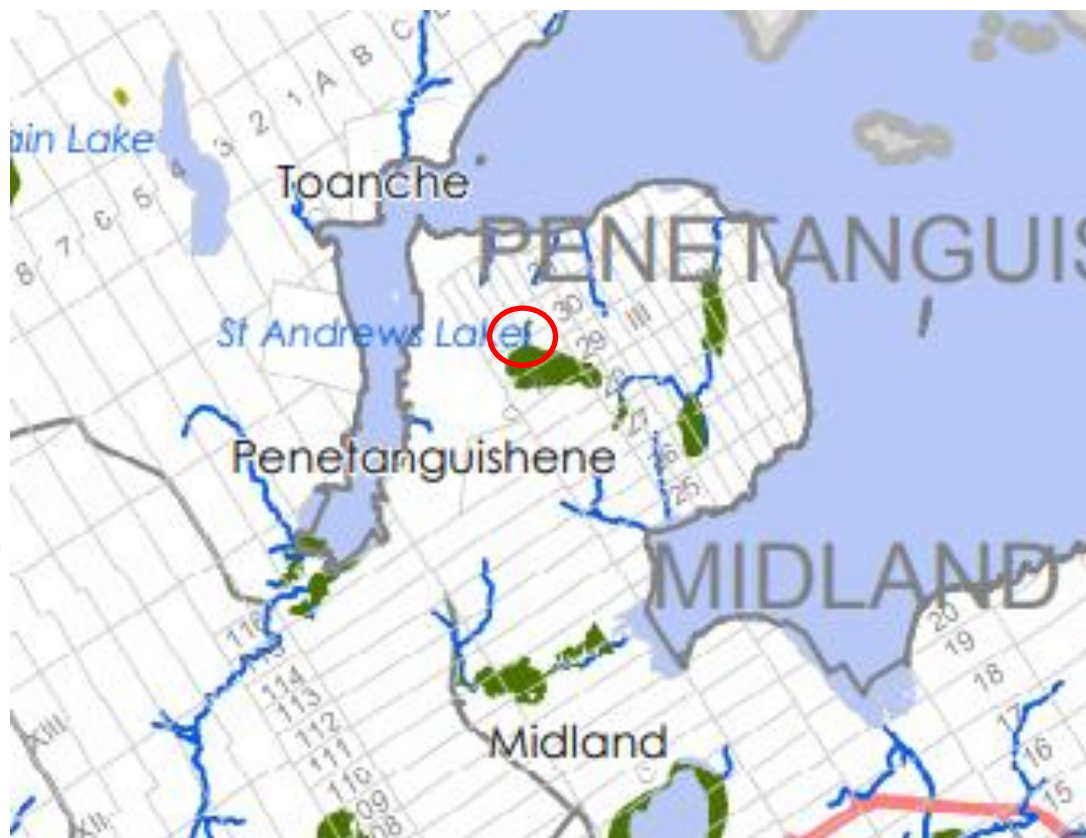




## SCHEDULE 5.2.2

To the County of Simcoe Official Plan  
STREAMS AND EVALUATED WETLANDS

-  Provincially Significant Wetland
-  Locally Significant Wetland
-  Watercourse
-  Lands not subject to this plan

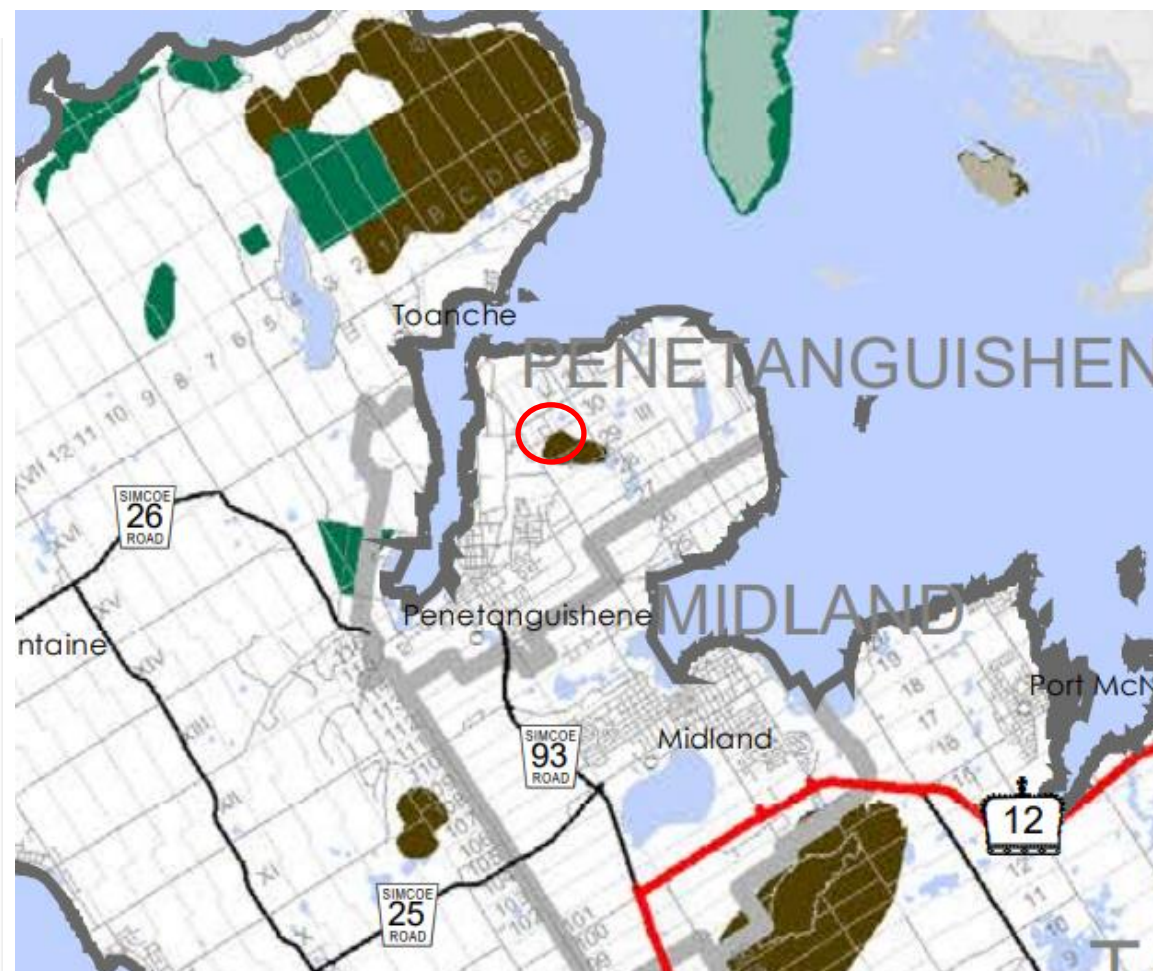




## SCHEDULE 5.2.3

To the County of Simcoe Official Plan  
AREAS OF NATURAL  
AND SCIENTIFIC INTEREST

-  Oak Ridges Moraine ANSI
-  ANSI - Provincial
-  ANSI - Regional
-  Lands not subject to this plan





## County of Simcoe - Web Map



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0 20 40 60m

1 : 1,128



Aug. 30, 2024



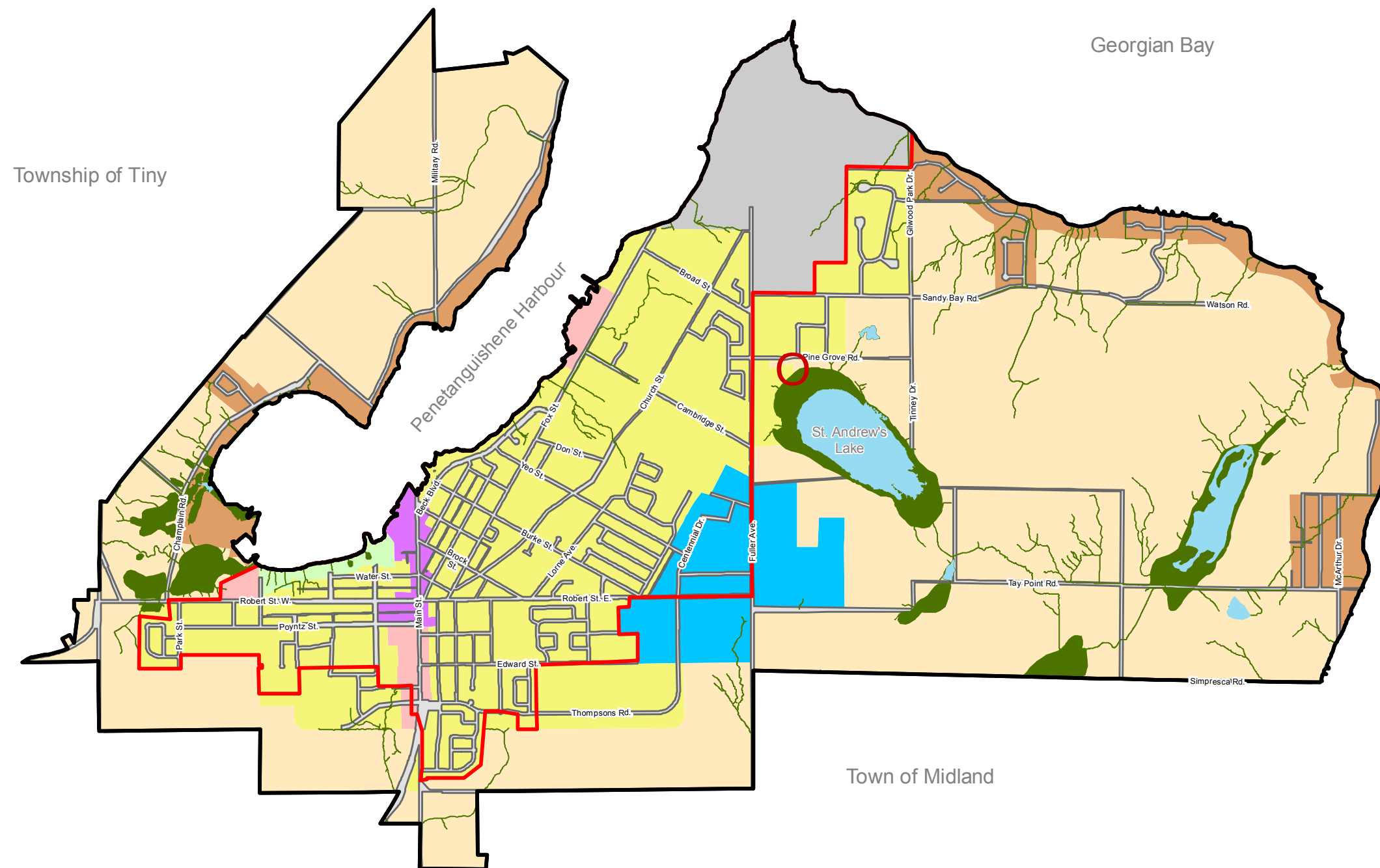
**OFFICIAL PLAN**  
**Schedule A: Land Use Structure**

- 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.



0 1 2 km







## OFFICIAL PLAN

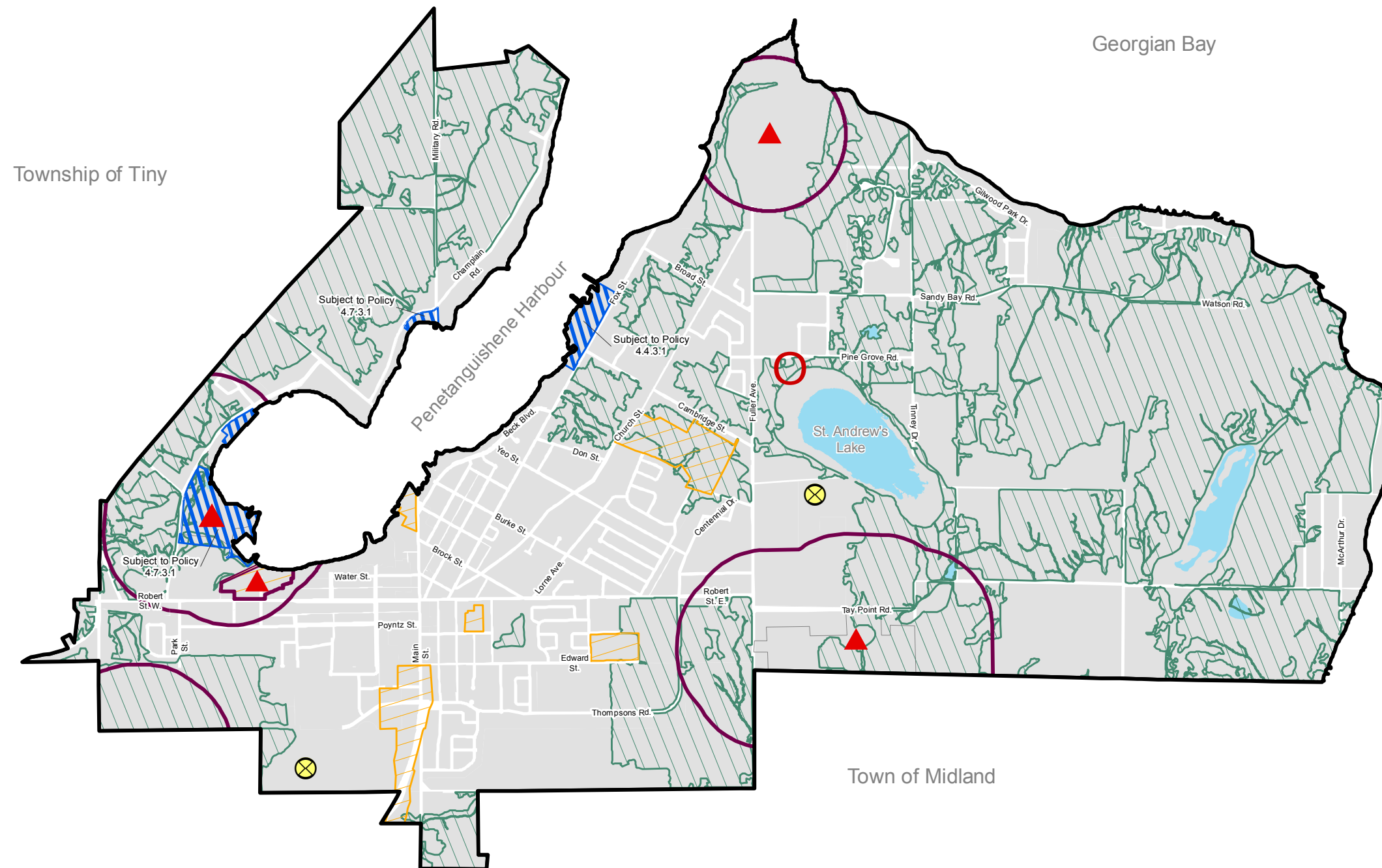
### Schedule B1: Policy Overlays

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

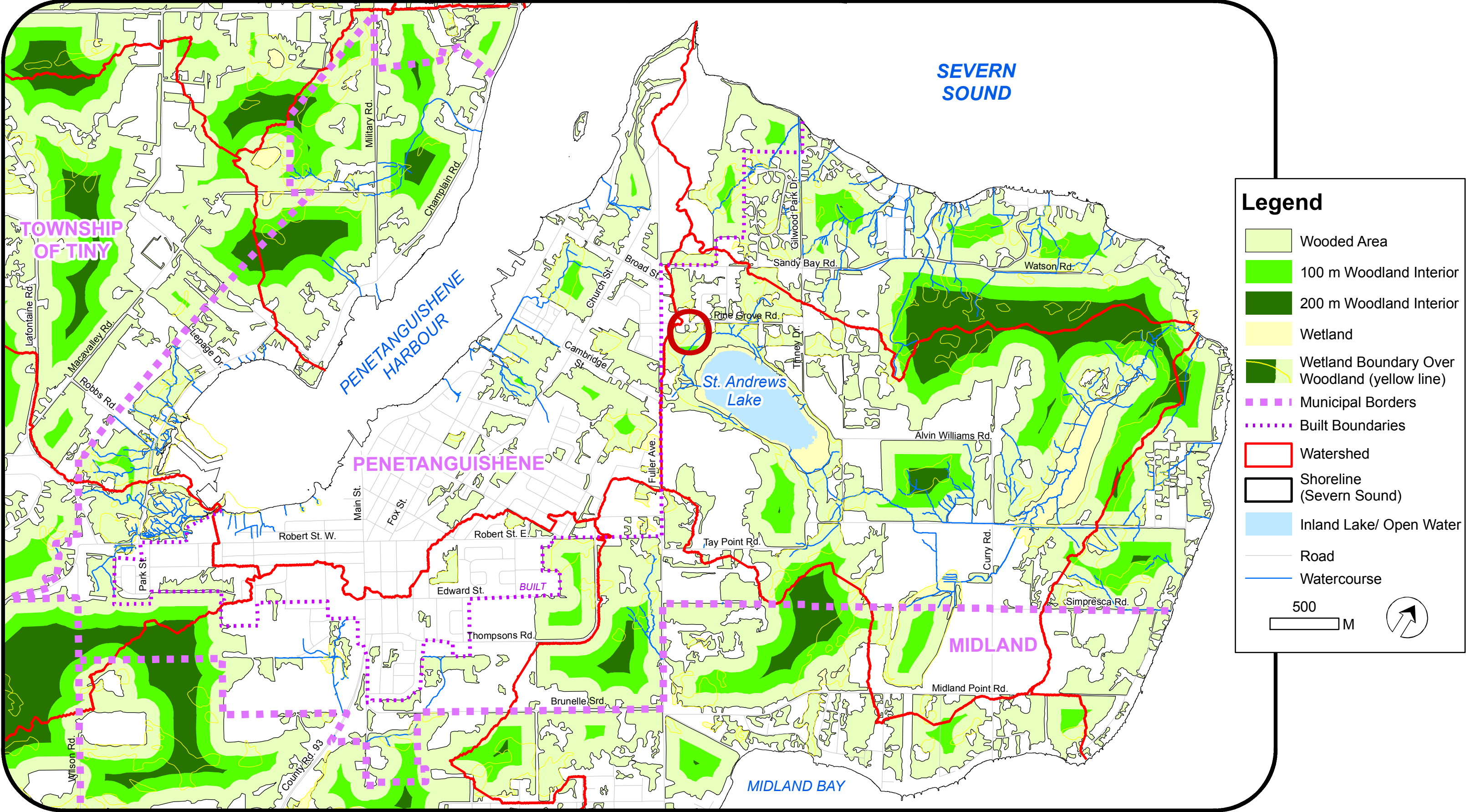
Interpretation Note:  
This Schedule shall be read and interpreted  
in conjunction with the Official Plan.



0 1 2 km



# MAP 2A - Town of Penetanguishene - Woodland Habitat

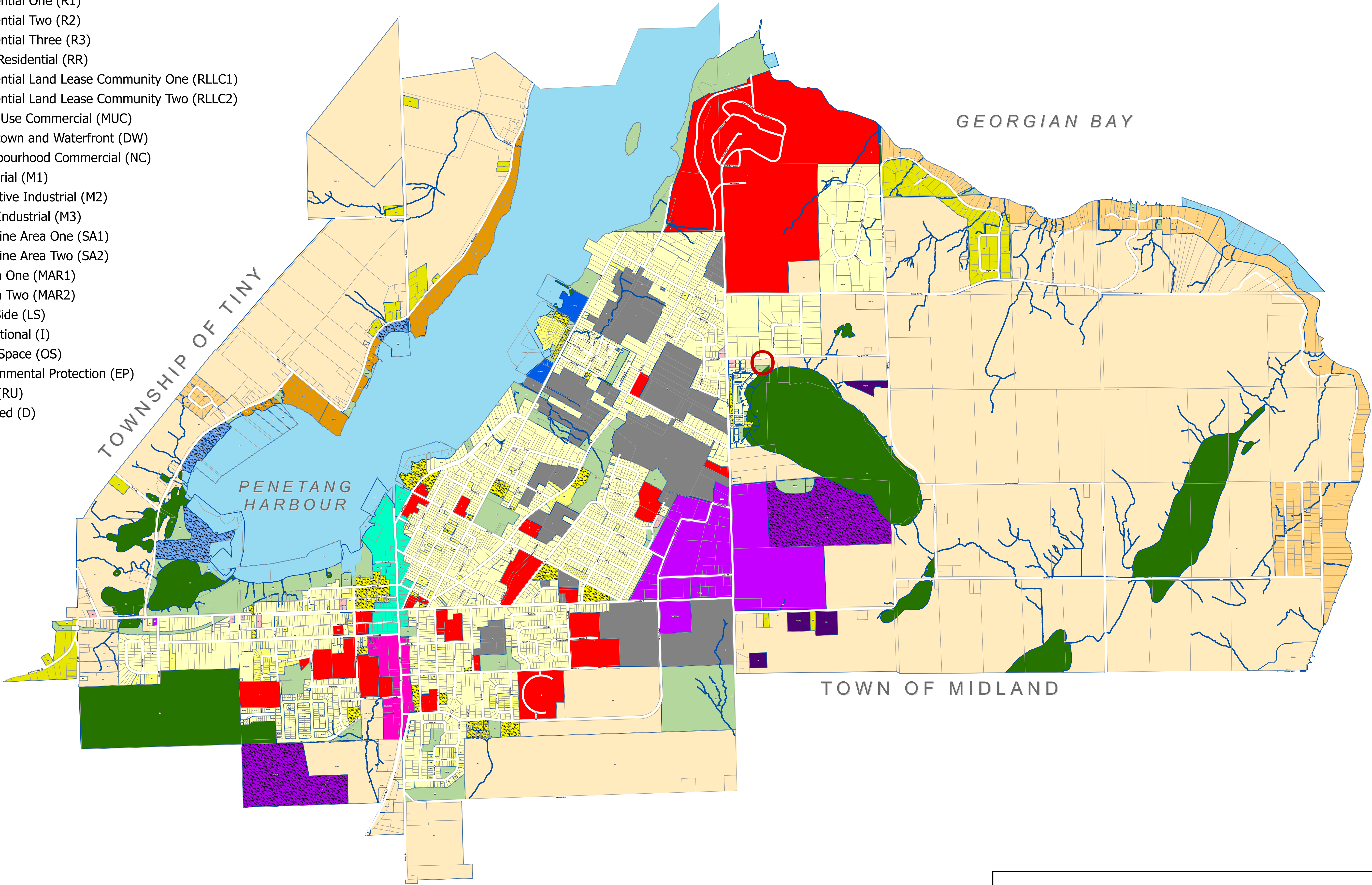


Produced for the Town of Penetanguishene by the Severn Sound Environmental Association with data supplied in part from the County of Simcoe, the Ontario Ministry of Natural Resources (© Queen's Printer 2017) and under License with members of the Ontario Geospatial Data Exchange, 2017. 2012 and 2016 Ortho-photo based data © County of Simcoe, 2017. Drainage feature data have been interpreted from various sources, under data sharing agreements. While every effort has been made to accurately depict the drainage feature data, errors may exist. Any party relying on this information does so at their own risk.



Legend

- Residential One (R1)
- Residential Two (R2)
- Residential Three (R3)
- Rural Residential (RR)
- Residential Land Lease Community One (RLLC1)
- Residential Land Lease Community Two (RLLC2)
- Mixed Use Commercial (MUC)
- Downtown and Waterfront (DW)
- Neighbourhood Commercial (NC)
- Industrial (M1)
- Extractive Industrial (M2)
- Rural Industrial (M3)
- Shoreline Area One (SA1)
- Shoreline Area Two (SA2)
- Marina One (MAR1)
- Marina Two (MAR2)
- Lake Side (LS)
- Institutional (I)
- Open Space (OS)
- Environmental Protection (EP)
- Rural (RU)
- Deferred (D)







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## **APPENDIX B**

### **Agency Correspondence**

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## Jordan Wrobel

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**From:** Owen Taylor <otaylor@penetanguishene.ca>  
**Sent:** December 3, 2024 10:08 AM  
**To:** Jordan Wrobel  
**Subject:** RE: 1043 Pine Grove Road - Terms of Reference  
**Attachments:** SAR Addendum 20190719.pdf;  
Scoped\_Environmental\_Impact\_Study\_Update\_Birks\_St\_Andrews\_Village\_1145\_Fuller\_Ave\_February\_5\_2019.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Jordan,

Please see the revisions to the TOR in red below. Additional notes and clarification for the TOR are also noted below. Attached is an EIS that was undertaken for the St-Andrew's Village subdivision (1145 Fuller Avenue), south of the subject property which might be helpful for reference.

*The following Terms of Reference is proposed toward completion of the Scoped EIS:*

- *Investigate background data review (including the Town, County, MNR, DFO, OBBA, ORAA, **iNaturalist**, **NHIC**) to assess natural heritage features and functions attributed to lands in the vicinity of the proposed development,*
- *Conduct field studies in August 2024 to document existing natural heritage features, functions, and species. Surveys include:*
  - *Evaluate/ map vegetation community types based on Ecological Land Classification methods (August 2024);*
  - *One (1) vascular plant inventory, including a screening for Butternut and Black Ash trees (both Endangered) (August 2024); and,*
  - *Record all incidental wildlife observations during site visits;*
- *Complete an assessment of potential SAR and their habitat that could be present within the study area; using field data collected by Azimuth staff and other data available and/or provided by agencies to confirm environmental constraints;*
- *Complete an assessment of potential Significant Wildlife Habitat within the study area;*
- *Assess the potential direct and indirect impacts of the proposed development on the natural heritage features and functions identified on or adjacent to the property; and,*
- *Prepare a Scoped EIS report. The Scoped EIS will include a description of existing natural heritage features and functions, an explanation of the development, provide relevant mapping, an evaluation of potential impacts, and mitigation/avoidance/restoration strategy as required.*

### Additional notes and clarification on EIS requirements

The EIS will:

1. Describe existing biophysical conditions and appropriately address natural heritage features and hydrologic features/areas and any applicable adjacent lands that are subject to Acts/regulations (e.g., Fisheries Act, Endangered Species Act) and policies (e.g., Provincial Planning Statement, upper- and/or lower-tier Official Plan, etc.). This includes documenting and delineating/mapping the presence and location of any known or previously unknown or undocumented natural heritage features (e.g., wetlands, vernal pools, watercourses, Species At Risk habitat features, Significant Wildlife Habitat, and appropriate buffers/ setbacks [where applicable]) during the appropriate season(s), taking into consideration any applicable federal or provincial policies/legislation and guidance documents.

2. 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 configuration/development envelope which take into consideration appropriate buffers/setbacks from natural heritage features). Depending on on-site conditions and features, the developable portion(s) of the lands may or may not be consistent with initial concept(s).
3. Identify constraints to development, provide recommendations to avoid and/or mitigate the potential for negative environmental impacts on any features/ecological functions (including establishing appropriate buffers to natural heritage features based on an ecological rationale that will protect the features and their associated functions from anticipated or potential impacts of development) prior to, during or after future site alteration/development, and identify opportunities for enhancement, restoration, or monitoring.
4. Demonstrate conformity with the applicable policies, legislation and plans (e.g., Town of Penetanguishene Official Plan, Provincial Planning Statement 2024, Endangered Species Act, Species At Risk Act, Migratory Birds Convention Act, etc.).

#### Wildlife Habitat, Significant Wildlife Habitat and Species At Risk

5. Assess wildlife habitat functions, including identifying, mapping and describing all potential Significant Wildlife Habitat (SWH); provide sufficient detail to determine whether these areas meet the current criteria for candidate or confirmed SWH [refer to the current SWH Ecoregion Criteria Schedule]. Assessment of some features (e.g., amphibian breeding habitat, woodland area-sensitive bird breeding habitat, bat maternity/roosting habitat) requires site-specific information from surveys such as breeding bird surveys (dawn surveys, nocturnal surveys where suitable habitat for nightjars 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.
6. Establish and address Species At Risk (SAR) or their habitat that have potential to be on-site or the adjacent lands, based on the habitat and features present and as identified through field studies. Background information sources and species occurrence records/range maps will be consulted. 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 and 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.

The SAR assessment must consider any species that are applicable at time of report writing/submission. For example, in addition to the four species of bats currently listed as Endangered in Ontario, three additional bat species have been assessed by COSSARO as Endangered and are expected to be afforded protection under the ESA by January 2025: Eastern Red Bat, Hoary Bat, and Silver-haired Bat, and habitat for these species should be a consideration for EIS fieldwork and reporting.

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.

#### Report & Mapping

7. Map ELC vegetation communities, 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.), key hydrologic features/areas, and appropriate buffers/setbacks to these features (where applicable), 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.

8. The EIS report must be legible – e.g., font size of text in the report, figures, tables, and appendices must be reasonable, photocopies of field data sheets must be readable, etc. Electronic report formats must allow reviewers to copy and paste text (i.e., not be simply a scan of the hard-copy report), to facilitate commenting by the municipality and applicable agencies/peer reviewer, if necessary. Digital mapping (e.g., ELC) provided to review agencies will be compatible with ArcGIS.
9. 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 relevant to work undertaken-can be provided under separate cover, e.g., CV)
10. Copies of the approved Terms of Reference and correspondence with relevant agencies will be included as appendices to the EIS.

Please let me know if you have any questions.

Regards,  
Owen



## Owen Taylor

Planner

Town of Penetanguishene

(705) 549-7453 ext 251

otaylor@penetanguishene.ca | www.penetanguishene.ca

10 Robert St W, Penetanguishene, L9M 2G2



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**From:** Jordan Wrobel <JWrobel@azimuthenvironmental.com>

**Sent:** Tuesday, November 12, 2024 11:23 AM

**To:** Owen Taylor <otaylor@penetanguishene.ca>

**Subject:** 1043 Pine Grove Road - Terms of Reference



Hello Owen,

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained by property owners to complete a Scoped Environmental Impact Study (EIS) report for a property located at 1043 Pine Grove Road, Town of Penetanguishene, County of Simcoe. The property contains a young isolated woodland and a single dwelling with accessory structures. There are no tributaries or waterbodies associated with the property. Directly adjacent (south) to the property is a stormwater management pond and active construction site. In addition, the St. Andrews Provincially Significant Wetland (PSW) and corresponding Penetang Lake Area of Natural and Scientific Interest (ANSI) – Life Science is located within 120m of the property. Please see the attached maps identifying the property.

It is our understanding that the proponent intends to sever the western portion of an existing residential property and construct a second detached dwelling, driveway, and associated amenities within the severed parcel. Please see the attached maps identifying the property.

The following Terms of Reference is proposed toward completion of the Scoped EIS:

- Investigate background data review (including the Town, County, MNR, DFO, OBBA, ORAA) to assess natural heritage features and functions attributed to lands in the vicinity of the proposed development,
- Conduct field studies in August 2024 to document existing natural heritage features, functions, and species. Surveys include:
  - Evaluate/ map vegetation community types based on Ecological Land Classification methods (August 2024);
  - One (1) vascular plant inventory, including a screening for Butternut and Black Ash trees (both Endangered) (August 2024); and,
  - Record all incidental wildlife observations during site visits;
- Complete an assessment of potential SAR and their habitat that could be present within the study area; using field data collected by Azimuth staff and other data available and/or provided by agencies to confirm environmental constraints;
- Complete an assessment of potential Significant Wildlife Habitat within the study area;
- Assess the potential direct and indirect impacts of the proposed development on the natural heritage features and functions identified on or adjacent to the property; and,
- Prepare a Scoped EIS report. The Scoped EIS will include a description of existing natural heritage features and functions, an explanation of the development, provide relevant mapping, an evaluation of potential impacts, and mitigation/avoidance/restoration strategy as required.

**The purpose of this email is to confirm the above proposed Terms of Reference towards completion of the EIS.** We would also like to take this opportunity to request any natural heritage background information from the Town that may be helpful in completing the Scoped EIS.

Do not hesitate to reach out if you would like to discuss the project in more detail.

Regards,



**Jordan Wrobel, B.Sc.**

Terrestrial Ecologist

Azimuth Environmental Consulting, Inc.

642 Welham Road Barrie, ON L4N 9A1

Office: 705-721-8451 x221

Cell: 705-305-4830  
[www.azimuthenvironmental.com](http://www.azimuthenvironmental.com)

*Providing services in hydrogeology, terrestrial and aquatic ecology, environmental engineering, and arborist assessments.*



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## **APPENDIX C**

### **Photographic Record**

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**Photograph 1:** The maintained side yard adjacent to the proposed severance location (facing southwest; August 30, 2024).



**Photograph 2:** The CVR\_3 community with the existing dwelling (facing northwest; August 30, 2024).





**Photograph 3:** The WOMM3 community edge adjacent to Pine Grove Road (facing west; August 30, 2024).



**Photograph 4:** View of WOMM3 dominated by Scotch Pine (facing south; August 30, 2024).





**Photograph 5:** View of species composition and stand age of the WOMM3 community (August 30, 2024).



**Photograph 6:** View of the adjacent stormwater management pond and existing ESC fencing (facing southwest; August 30, 2024).



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## **APPENDIX D**

### **Proposed Development Concept**

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1. THESE DRAWINGS MUST BE CHECKED BY THE OWNER OR CONTRACTOR.
2. ANY ERRORS OR OMISSIONS MUST BE REPORTED IN WRITING TO THE DESIGNER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. OWNER OR CONTRACTOR MUST CHECK AND VERIFY ALL SITE CONDITIONS PRIOR TO PROCEEDING WITH THE WORK. VERIFY ALL DIMENSIONS
4. DO NOT SCALE THE DRAWINGS.



SEAL:

BCIN:

## REVISION SCHEDULE

| REV | ISSUED FOR    | DATE     |
|-----|---------------|----------|
| 1   | CLIENT REVIEW | 2024-8-7 |
|     |               |          |
|     |               |          |
|     |               |          |
|     |               |          |

PROJECT:

**MAYER**

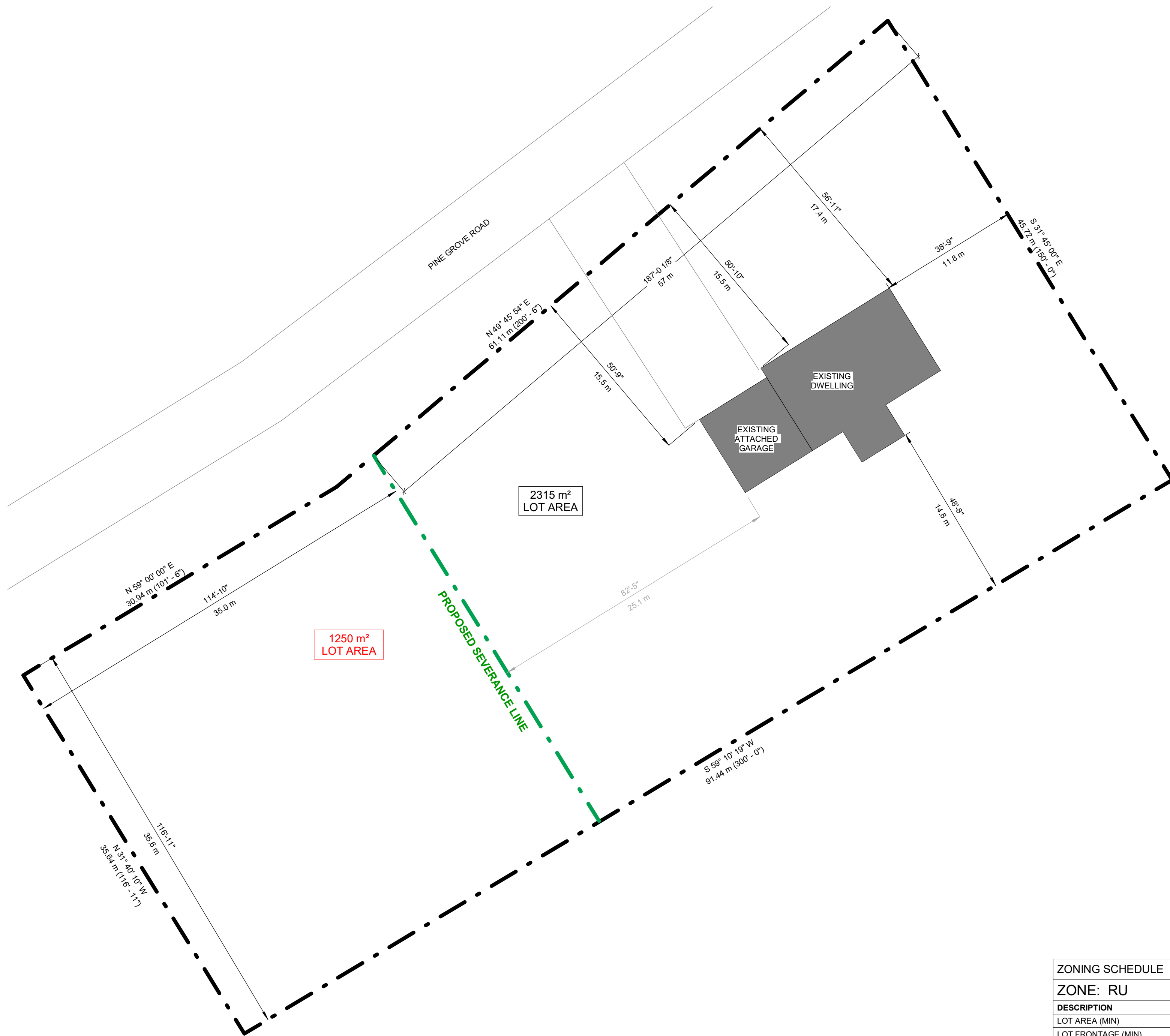
1043 Pine Grove Rd, Penetanguishene, ON L9M 2B5

|       |  |
|-------|--|
| TITLE |  |
|-------|--|

# SITE SEVERANCE PLAN

**A003**

Scale: As Indicated



## ZONING SCHEDULE

ZONE: RU

| DESCRIPTION              | REQUIRED                  | EXISTING                | PROPOSED               |
|--------------------------|---------------------------|-------------------------|------------------------|
| LOT AREA (MIN)           | 2000.0 m <sup>2</sup>     | 3566 m <sup>2</sup>     | - m <sup>2</sup>       |
| LOT FRONTAGE (MIN)       | 35.0 m                    | - m                     | - m                    |
| LOT COVERAGE (MAX)       | 35 %<br>xx m <sup>2</sup> | - %<br>- m <sup>2</sup> | - %<br>-m <sup>2</sup> |
| FRONT YARD (MIN)         | 7.5 m                     | - m                     | - m                    |
| REAR YARD (MIN)          | 7.5 m                     | - m                     | - m                    |
| INTERIOR SIDE YARD (MIN) | 3.0 m                     | - m                     | - m                    |
| EXTERIOR SIDE YARD (MIN) | (7.5) m                   | - m                     | - m                    |
| BUILDING HEIGHT (MAX)    | 11.0 m                    | - m                     | - m                    |

\*\* LOT INFORMATION SCALED FROM COUNTY OF SIMCOE GIS MAPS

1 SITE LOCATION PLAN - SEVERANCE  
1" = 20'-0"

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1" = 20'-0"