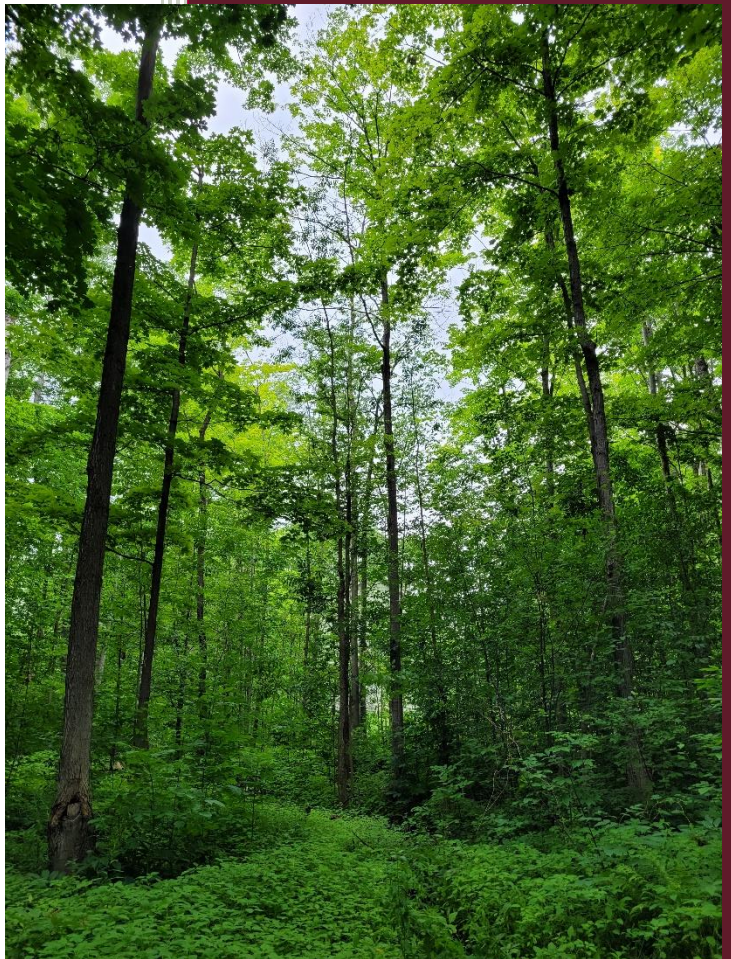


70 Polish Avenue, Penetanguishene

December 2022

Environmental Impact Study



Prepared For:
John Peter Douglas

Prepared By:
Sumac Environmental Consulting Ltd.



December 5, 2022

SEC 22-027

John Peter Douglas
(705) 427-4794
Petedouglas12@hotmail.com

Re: Environmental Impact Study at 70 Polish Avenue, Penetanguishene

Dear Mr. Douglas,

Thank you for retaining Sumac Environmental Consulting Ltd. (Sumac) to prepare an Environmental Impact Study at 70 Polish Avenue, Penetanguishene.

The following report identifies the form and function of natural heritage identified on the subject property and adjacent lands and assesses the potential impacts to said features with respect a proposed lot severance. Recommendations and mitigation strategies have been included. This report has been prepared for John Peter Douglas and the undersigned accepts no responsibility for future use by other parties.

We thank you for the opportunity to be part of this project and should you have any questions, please do not hesitate to contact the undersigned.

Sumac Environmental Consulting Ltd.

A handwritten signature in cursive script, appearing to read "C Fligg".

Cassandra Fligg, M.Sc.
Environmental Consultant

A handwritten signature in cursive script, appearing to read "Nathan Fligg".

Nathan Fligg, M.Sc.
Environmental Consultant

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1.0 Introduction

Sumac Environmental Consulting Ltd. (Sumac) was retained by landowner, John Peter Douglas, to prepare an Environmental Impact Study (EIS) at 70 Polish Avenue, Penetanguishene (hereinafter referred to as the “subject property”; Figure 1). The landowner wishes to sever the subject property to facilitate the development of two (2) single-family dwellings and associated amenities.

The subject property is a vacant lot measuring approximately 0.28 ha in size and has been left in a natural state. The surrounding area is predominantly composed of natural cover including woodland and Provincially Significant Wetland interspersed with single-family residential dwellings. Georgian Bay is located approximately 300 m east of the subject property.

2.0 Planning Context

2.1. Federal

2.1.1. Fisheries and Oceans Canada

The fish and fish habitat protection provisions of the *Fisheries Act* (Fisheries Act, 1985) include two (2) core prohibitions against persons carrying on works, undertaking or activities that result in the following:

- the death of fish, by means other than fishing; and
- the harmful alteration, disruption, or destruction of fish habitat.

2.2. Provincial

2.2.1. Endangered Species Act

Ontario’s *Endangered Species Act* (ESA) provides protection, designation, recovery and other relevant aspects of conservation for species at risk, including habitat protection in the Province.

As per Section 9 (1) of the ESA, no person shall

- a. kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
- b. possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,
 - (i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,
 - (ii) any part of a living or dead member of a species referred to in subclause (i),
 - (iii) anything derived from a living or dead member of a species referred to in subclause (i); or

- c. sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii). 2007, c. 6, s. 9 (1).

As per Section 10 (1) of the ESA, no person shall damage or destroy the habitat of,

- a. a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or
- d. a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause. 2007, c. 6, s. 10 (1).

2.2.2. Provincial Policy Statement

The *Provincial Policy Statement, 2020* (PPS) states that decisions affecting planning matters shall be consistent with policy statements issues under the *Planning Act*.

As per Section 2.1.4 of the PPS, development and site alteration shall not be permitted in:

- a. significant wetlands in Ecoregions 5E, 6E and 7E; and
- b. significant coastal wetlands.

As per Section 2.1.5 of the PPS, development and site alteration shall not be permitted in:

- a. significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
- b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- d. significant wildlife habitat;
- e. significant areas of natural and scientific interest; and
- f. coastal wetlands in Ecoregions 5E, 6E and 7E1 that are not subject to policy 2.1.4(b)

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

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

2.2.3. Growth Plan for the Greater Golden Horseshoe

The subject property is located within the Simcoe Sub-area of the Greater Golden Horseshoe (MMAH, 2020). The subject property is not mapped as part of the Natural Heritage System. Furthermore, as per Section 4.2.2.1 of the Growth Plan for the Greater Golden Horseshoe (MMAH, 2020), the Natural Heritage System for the Growth Plan excludes lands within settlement area boundaries that were approved and in effect as of July 1, 2017.

As per Section 4.2.6 of the Growth Plan for the Greater Golden Horseshoe (MMAH, 2020), beyond the Natural Heritage System for the Growth Plan, including within settlement areas, the municipality:

- a) Will continue to protect any other natural heritage features and areas in a manner that is consistent with the PPS; and
- b) May continue to protect any other natural heritage system or identify new systems in a manner that is consistent with the PPS.

2.3. Municipal

2.3.1. Upper Tier – County of Simcoe

As per Schedule 5.1 of the County of Simcoe Official Plan (office consolidation 2016), the subject property has been mapped as part of the Settlement Area.

As per Section 3.3.15 of the County of Simcoe Official Plan (office consolidation 2016), despite anything else in this Plan, except Section 4.4 as it applies to mineral aggregate operations only, development and site alteration shall not be permitted:

- i. In significant wetlands and significant coastal wetlands.
- ii. In the following unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions: Significant woodlands, significant valleylands, significant wildlife habitat, significant areas of natural and scientific interest (ANSIs), and coastal wetlands (not covered by 3.3.15 i) above).
- iii. In the following regional and local features, where a local official plan has identified such features, unless it has been demonstrated that there will be no negative impacts on the natural heritage features or their ecological functions: wetlands 2.0 hectares or larger in area determined to be locally significant by an approved EIS, including but not limited to evaluated wetlands, and Regional areas of natural and scientific interest (ANSIs).

- iv. In fish habitat except in accordance with provincial and federal requirements.
- v. In habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.
- vi. On adjacent lands to the natural heritage features and areas listed above, unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions. Adjacent lands shall generally be considered to be:
 - a. within 120 metres of habitat of endangered species and threatened species, significant wetlands, significant coastal wetlands, wetlands 2.0 hectares or larger determined to be locally significant by an approved EIS, significant woodlands, significant wildlife habitat, significant areas of natural and scientific interest – life science, significant valleylands, and fish habitat;
 - b. within 50 metres of significant areas of natural and scientific interest – earth science;
 - c. A reduced adjacent lands from the above may be considered based on the nature of intervening land uses. The extent of the reduced area will be determined by the approval authority in consultation with the applicant prior to the submission of a development application, and supported by an EIS, demonstrating there will be no negative impacts beyond the proposed reduced adjacent lands area

2.3.2. Lower Tier – Town of Penetanguishene

As per Schedule A and B of the Town of Penetanguishene Official Plan (office consolidation 2018), the following designations have been mapped on the subject property:

- Shoreline Area;
- Environmental Protection Area; and
- Environmental Protection.

As per Section 4.7.1 of the Town of Penetanguishene Official Plan (office consolidation 2018), the following residential uses are permitted in lands designated as Shoreline Area:

- Existing low-density residential uses legally existing on the date of adoption of this Plan shall.
- A Secondary Dwelling Unit in accordance with Section 3.8.4. 3.
- Bed and breakfast establishments, subject to the policies of Section 4.7.3. 4.
- Home occupations.

As per Section 4.7.2 of the Town of Penetanguishene Official Plan (office consolidation 2018), the creation of new lots may be permitted by consent or plan of subdivision subject to the following:

- a. Direct access is provided to an open and maintained public road.
- b. That a maximum of five new lots may be created by consent from one parcel of land, provided the Town is satisfied that a plan of subdivision is not required.
- c. Adequate water and wastewater servicing.
- d. The creation of new lots shall be subject to Site Plan Control. The Site Plan Agreement shall deal with such issues as the location of the building envelope, the driveway and the access to the shoreline. It is the policy of this Plan that the majority of the existing tree cover on new shoreline lots be preserved.
- e. Notwithstanding subsection a. above, a consent may be granted on a Private Road for the purposes of separating two existing dwellings that are located on one lot of record.

As per Section 4.10.1 of the Town of Penetanguishene Official Plan (office consolidation 2018), subject to the Land Use and Built Form policies of Section 4.10.2, the following uses shall assist in guiding the broad range of development permitted within the EP designation, as identified on Schedule A;

1. Fish, wildlife and forest management;
2. Conservation projects and flood and erosion control projects;
3. Existing agricultural uses;
4. Low-intensity recreational uses, subject to the policies of Section 3.10 of this Plan;
5. Parks and Open Spaces; and
6. Existing uses.

As per Section 4.10.2 of the Town of Penetanguishene Official Plan (office consolidation 2018), no development or site alteration within EP shall be permitted. However, should expansions to existing development within the EP designation be proposed, they shall be subject to the policies of Section 3.10 and 3.12 regarding any Natural Heritage Features and functions and/or Natural Hazard, which may be a constraint to development.

3.0 Background Review

The following resources were reviewed to gain a deeper understanding of natural heritage feature(s) with the potential of occurring in the study area and adjacent lands (*i.e.* up to 120 m):

- County of Simcoe Official Plan (office consolidation 2016);
- iNaturalist;
- Land Information Ontario;
- Natural Heritage Information Centre (*i.e.*, Atlas Square No. 17NK8861, 17NK8961, 17NK8860 and 17NK8960);
- Ontario Breeding Bird Atlas (*i.e.*, Atlas Square No. 17TNK86);
- Ontario Butterfly Atlas (*i.e.*, Atlas Square No. 17NK86);
- Ontario Reptile and Amphibian Atlas (*i.e.*, Atlas Square No. 17NK86); and
- Town of Penetanguishene Official Plan (office consolidation 2018).

Given the relevant planning jurisdiction, the following features are being considered in the NHE, where applicable to the subject property and adjacent lands:

- Wetlands;
 - Provincially Significant
 - Locally Significant Wetlands 2.0 Hectares or Larger
- Habitat of Endangered Species and Threatened Species;
- Significant Wildlife Habitat;
- Fish Habitat;
- Significant Valleylands;
- Areas of Natural and Scientific Interest; and
- Significant Woodlands.

4.0 Characterizing the Natural Environment: Approach and Methodology

A proposed Terms of Reference was submitted to the Severn Sound Environmental Association for review and comment to better define the purpose and structure of the EIS (Appendix A).

4.1. Ecological Land Classification

Orthographic imagery of the subject property and adjacent lands provided by the Ministry of Natural Resources and Forestry (MNR) Make-a-Map Tool was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on July 6, 2022. Vegetation communities were classified following protocol of the Ecological Land Classification

(ELC) for Southern Ontario (Lee, H. et al., 1998) and associated Vegetation Type List (Lee, H., 2008), where applicable.

4.2. Fish Habitat

Fish habitat is defined in subsection 2(1) of the *Fisheries Act* to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. All waters identified on the subject property were investigated on April 4, 2022, May 11, 2022 and August 2, 2022 for flow permanency and the potential to function as fish habitat.

4.3. Habitat of Endangered and Threatened Species

For the purpose of this study, we have defined “Species at Risk” (SAR) to include species designated special concern, threatened and endangered under O. Reg. 230/08 in accordance with the ESA. The following SAR have been documented in the local area:

- Birds: Bald eagle (special concern), bank swallow (threatened), barn swallow (threatened), black tern (special concern), bobolink (threatened), Canada warbler (special concern), Cerulean warbler (threatened), chimney swift (threatened), common nighthawk (special concern), Eastern meadowlark (threatened), Eastern whip-poor-will (threatened), Eastern wood-pewee (special concern), evening grosbeak (special concern), golden-winged warbler (special concern), grasshopper sparrow (special concern), king rail (endangered), least bittern (threatened), loggerhead shrike (endangered), Louisiana waterthrush (threatened), olive-sided flycatcher (special concern), peregrine falcon (special concern), piping plover (endangered), red-headed woodpecker (endangered), short-eared owl (special concern), wood thrush (special concern) and yellow rail (special concern);
- Fish: Lake sturgeon (threatened);
- Insects: Monarch (special concern);
- Mammals: Eastern Small-footed Myotis (endangered), Little Brown Myotis (endangered), Northern Myotis (endangered) and Tri-colored Bat (endangered);
- Reptiles: Blanding’s turtle (threatened), Eastern hog-nosed snake (threatened), Eastern musk turtle (special concern), Eastern ribbonsnake (special concern), five-lined skink (special concern), Massasauga (threatened), Northern map turtle (special concern) and snapping turtle (special concern); and
- Vascular Plants: Butternut (endangered).

A restricted species was documented in the local area. An information request was submitted to the Natural heritage Information Centre to identify said species. A response was received on May 5, 2022 (Appendix B). The restricted species has been included in the SAR screening accordingly.

An information request was submitted to the Ministry of Environment, Conservation and Parks (MECP) regarding SAR known to occur in the local area. A response was received on May 6, 2022 (Appendix C). The MECP did not have any species to add for consideration in the SAR screening.

A SAR screening was completed to assess the potential for the subject property and adjacent lands to provide suitable habitat for the above noted SAR (Table 1). The results of this screening suggest that the subject property has the potential to provide suitable habitat for the following SAR:

- Birds: Barn swallow and chimney swift;
- Insects: Monarch;
- Mammals: Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis and Tri-colored Bat;
- Reptiles: Blanding’s turtle, Eastern hog-nosed snake, Eastern ribbonsnake and Massasauga; and
- Vascular Plants: Butternut.

4.3.1. Birds

Two (2) breeding bird surveys (Table 2) were completed following the protocol as described by the Ontario Breeding Bird Atlas (Birds Canada, 2001). One (1) point count station was used to carry out the surveys (Figure 2). The survey conditions were as follows:

Date	Surveyor(s)	Time	Temp.	Cloud Cover	Wind	Precip.
June 04, 2022	Nathan Fligg	0740-0800	10°C	20%	B2	Nil.
July 06, 2022	Nathan Fligg	0940-1000	20°C	90%	B1	Nil.

4.3.2. Insects

The subject property was assessed for features/areas that have the potential to function as habitat for monarch. No species-specific surveys were completed for monarch.

4.3.3. Mammals

Candidate forested communities in the study area with the potential of providing habitat for SAR bats were identified in accordance with the protocol described in the Treed Habitats - Maternity Root Surveys guidance document as provided by the MECP in 2022.

Detailed mapping of snag/cavity trees was completed in the portion of the FOD5 community that falls within the limits of the subject property in general accordance with the protocol described in the Treed Habitats - Maternity Root Surveys guidance document as provided by the MECP in

2022. The mapping exercise was completed by Sumac staff on April 7, 2022. Data collected from this exercise was used 1) to calculate snag density in efforts of identifying high quality potential maternity roost habitat.

Passive acoustic monitoring was completed in June of 2022 using the Song Meter Mini Bat by Wildlife Acoustics to ensure full coverage of the subject property. Two (2) monitoring stations were used (Figure 2). Data was initially analyzed using Kaleidoscope Pro Analysis Software. Individual wavelengths and frequency of each recording was further scrutinized by Sumac staff to appropriately evaluate species presence.

4.3.4. Reptiles

The subject property was assessed for features/areas that have the potential to function as habitat for Blanding's turtle, Eastern hog-nosed snake, Eastern ribbonsnake and Massasauga. No species-specific surveys were completed for Blanding's turtle, Eastern hog-nosed snake, Eastern ribbonsnake and Massasauga.

4.3.5. Vascular Plants

A vascular plant inventory (Table 3) and screening exercise for butternut was completed on July 6, 2022. The screening exercise was completed on the subject property by walking transects spaced adequately to ensure full visual coverage throughout.

4.4. Wetland

The subject property was screened for wetland feature(s) and delineated following guidelines as described by the Ontario Wetland Evaluation System by a qualified wetland evaluator. A spring frog survey was completed in April, May and June of 2022 in accordance with the Marsh Monitoring Protocol to further evaluate the function of wetland feature(s) that were identified on the subject property. One (1) survey station was used to conduct each survey (Figure 2).

4.5. Wildlife

Incidental observations of wildlife and habitat on the subject property was noted during Sumac's field investigations. The potential for Significant Wildlife Habitat (SWH) on the subject property was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015).

4.6. Woodland

The ELC definition for "forest" based on greater than 60% tree cover in combination with the Forest Act definition for "woodland" was used to delineate woodland patches. Woodland

significance was evaluated based on the recommended significant woodland evaluation criteria and standards as described in the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement (MNRFP, 2005).

5.0 Data Analysis

5.1. Ecological Land Classification

The subject property contained one (1) distinct community (Figure 2):

1. FOD5 Dry-Fresh Sugar Maple Deciduous Forest Ecosite: A mature deciduous forest covered the entire subject property, extending across the greater landscape. The continuous canopy was dominated by mature sugar maple with mixed associates (i.e., red oak, basswood, American beech and trembling aspen). A subcanopy was well vegetated with ironwood, sugar maple and ash spp.. The forest floor was well vegetated with forbs (e.g., spinulose wood fern, wild lily-of-the-valley, wild leak, blue cohosh). A wetland inclusion measuring approximately 160 m² in size occurred beneath the sugar maple dominated canopy at the southeast corner of the subject property.

The portion of the adjacent lands that includes dwellings, driveways, landscaped areas, etc. was characteristic of a more cultural and anthropogenic community and therefore, has been given the descriptor of 'Maintained Area' (Figure 2).

5.2. Fish Habitat

An intermittent stream traversed the subject property entering from a culvert located at the eastern limits of the subject property, draining towards a culvert at Polish Avenue located at the northern limits (Figure 2). On April 7, 2022, the wetted width and mean depth were 1.1 m and 7 cm, respectively. This stream likely provides seasonal fish habitat when the water table within the feature is seasonally high.

An ephemeral stream was observed entering from the southern limit of the subject property draining northeast to the intermittent stream (Figure 2). On April 7, 2022, the wetted width was 45 cm, but surface water was not flowing to a measurable depth. This stream likely provides indirect fish habitat via the contribution of flow, detritus, and invertebrates to the intermittent stream.

Both of the above noted water features are located east of the sucker creek watershed and drain northeast towards Georgian Bay through a single culvert under Polish Avenue. No barriers to fish passage were observed in either channel. Subsequent visits took place on May 11, 2022, and August 2, 2022. The intermittent stream was flowing during the May site visit. The ephemeral

stream was dry during the May site visit. The intermittent stream was dry during the August site visit.

5.3. Habitat of Endangered and Threatened Species

Candidate habitat of the following endangered and threatened species has been identified on the subject property and/or the adjacent lands:

- Birds: Barn swallow and chimney swift;
- Mammals: Eastern small-footed myotis, little brown myotis, Northern myotis and tri-colored bat; and
- Reptiles: Blanding's turtle, Eastern hog-nosed snake and Massasauga; and
- Vascular Plants: Butternut.

5.4. Birds

Suitable nesting habitat for barn swallow could occur within 200 m of the subject property associated with the existing structure on adjacent lands. No barn swallow were observed or heard calling during the dawn breeding bird surveys and therefore, the subject property is not anticipated to be considered as regulated habitat for barn swallow.

Uncapped chimneys with the potential of functioning as suitable habitat for chimney swift may occur on adjacent lands associated with the existing structures east of Polish Avenue. No chimney swift were observed or heard calling during the dawn breeding bird surveys nor through incidental occurrence and therefore, the subject property is not anticipated to be considered as regulated habitat for chimney swift.

5.5. Mammals

The FOD5 community was identified as having the potential of providing habitat for SAR bats.

A total of 56 trees exhibiting snag attributes were identified in the FOD5 community. 13 of the 56 trees were assessed as having potential for providing suitable bat habitat. Only one (1) of the 13 trees were assessed as 'high quality'. The FOD5 community was assessed as having 46 snags per hectare, respectively. Given this information, the FOD5 community is considered as high quality potential maternity roost habitat.

Eastern small-footed myotis was not detected using acoustic monitoring and therefore, the subject property is not anticipated to be considered as regulated habitat for this species.

Little brown myotis was not detected using acoustic monitoring and therefore, the subject property is not anticipated to be considered as regulated habitat for this species.

Roosting habitat for Northern myotis may be found in the FOD5 community. Northern myotis was detected using acoustic monitoring and therefore, the subject property is anticipated to be considered as regulated habitat for Northern myotis. Roosting habitat for Northern myotis may be found in the FOD5 community associated with the trees assessed as providing maternity roosting habitat. Foraging habitat for Northern myotis may include the intermittent stream and wetland inclusion.

Tri-colored bat was not detected using acoustic monitoring and therefore, the subject property is not anticipated to be considered as regulated habitat for this species.

5.6. Reptiles

Blanding's turtle has been documented within 2 km of the subject property associated with the Sucker Creek Wetland. No suitable wetlands or waterbodies for Blanding's turtle were identified on the subject property or within 30 m of the adjacent lands. Suitable wetlands for Blanding's turtle may occur within 250 m of the subject property and therefore, the subject property has the potential to be considered as Category 3 regulated habitat for Blanding's turtle. No nesting habitat for Blanding's turtle is anticipated on the subject property.

As it pertains to Eastern hog-nosed snake, no American toad were heard calling during the amphibian breeding surveys on the subject property. No thermoregulation, foraging, reproduction, shedding sites anticipated on the subject property. The subject property could be used as movement habitat for Eastern hog-noses snake, should this species be present.

Massasauga has been documented approximately 1.1 km from the subject property. As such the forested community that extends onto the subject property could be considered as Category 3 regulated habitat for Massasauga. Category 3 habitat is generally depended upon for life processes including foraging and movements between gestation sites, hibernacula and other activity areas.

5.7. Vascular Plants

No butternut were observed on the subject property or visually detected within 50 m of the adjacent lands from the property limits.

Black ash was detected in the wetland inclusion. For the purpose of this report, the habitat area for black ash is described as the extent of the feature from which it is found (i.e., wetland inclusion).

5.8. Wetland

The wetland inclusion consisted of a subcanopy of American elm, European buckthorn, green ash and black ash. The ground level of the wetland inclusion was partially flooded in the spring, specifically at the lowest elevations amongst pit-and-mound topography. No amphibian egg masses were observed. No standing water was observed in summer of 2022. Areas of seasonal flooding occurrence within the wetland inclusion were unvegetated with the exception of the occasional ground cover (e.g., American black currant, sensitive fern, stinging nettle). The relatively high elevations within the wetland inclusion were vegetated with upland species (e.g., blue cohosh, poison ivy, Pennsylvania sedge, black cherry). Surface water draining from the wetland inclusion northeast via an intermittent stream was observed following spring freshet.

The information collected from the amphibian breeding survey can be summarized as follows:

Date	Surveyor	Time	Temp.	Wind	Prec.	Species Calling	Call Code	Location
April 21, 2022	N. Fligg	2130-2145	7°C	B1	Nil.	Nil.	Nil	N/A
May 15, 2022	N. Fligg	2105-2120	17°C	B1	Nil.	Nil	N/A	N/A
June 24, 2022	N. Fligg	2150-2205	20°C	B1	Nil.	Nil	N/A	N/A

5.9. Wildlife

The following incidental wildlife observations were noted on the subject property during the field investigations:

- American toad (*Anaxyrus americanus*);
- Eastern chipmunk (*Tamias striatus*);
- Eastern cottontail (*Sylvilagus floridanus*);
- Eastern gray squirrel (*Sciurus carolinensis*);

The SWH assessment (Table 4) indicates that seven (7) SWH have the potential of occurring on the subject property.

5.9.1. Seasonal Concentration Areas of Animals

Raptor Wintering Area for Bald Eagle: Although no stick nests were observed on the subject property, the FOD5 community is part of a woodland feature that extends across the greater landscape adjacent to Georgian Bay and therefore, has the potential to function as the SWH, Raptor Wintering Area for Bald Eagle.

Bat Maternity Colonies: The FOD5 community was assessed as having 46 trees per hectare with the potential of functioning as bat maternity roost sites and therefore, has the potential to function as the SWH, bat maternity colonies. Only one (1) of the 46 trees were identified as exhibiting high-quality maternity roost potential.

Reptile Hibernaculum: Although no rock features or similar features extending below the frost line were observed on the subject property, they may occur within 100 m of the subject property and therefore, the subject property has the potential to function as the SWH, reptile hibernaculum.

5.9.2. Specialized Habitats of Wildlife Considered SWH

Bald Eagle and Osprey Nesting, Foraging and Perching Habitat: Although no stick nests were observed on the subject property, osprey and/or bald eagle nests could occur within 400 m of the subject property and therefore, the subject property has the potential to function as the SWH, bald eagle and osprey nesting, foraging and perching habitat.

Woodland Raptor Nesting Habitat: Although no stick nests were observed on the subject property, nests of the listed species could occur within 400 m of the subject property and therefore, the subject property has the potential to function as the SWH, woodland raptor nesting habitat.

5.9.3. Habitat of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: One (1) provincially rare listed species (i.e., black ash) was identified on the subject property in the wetland inclusion. Special concern species (i.e., monarch and Eastern ribbonsnake) have the potential of utilizing the subject property.

5.10. Woodland

Based on criteria described in the *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement* (Table 5), the woodland feature extending onto the subject property should be considered significant.

6.0 Project Description

The proposed development supports a lot severance and the construction of two (2) single-family dwellings measuring approximately 110 m² each. The limit of disturbance as provided by the landowner and depicted on Figure 3, includes the proposed buildings footprints, proposed well and septic locations, proposed soil absorption areas for sewage dispersal, proposed driveways and construction accessibility areas. The proposed development has been strategically designed to avoid encroachment into the wetland inclusion, intermittent stream, ephemeral stream and lands designated as Environmental Protection Area as per the Town of Penetanguishene Official Plan (office consolidation 2018).

7.0 Impact Assessment

7.1. Ecological Land Classification

540 m² of the FOD5 community will be disturbed to facilitate the proposed development.

7.2. Fish Habitat

The proposed development is not located in the identified intermittent and ephemeral streams and therefore, direct impacts to fish habitat are not anticipated. A 15 m buffer from fish habitat is recommended to mitigate indirect impacts as a result of the proposed development. The proposed development is located 15 m from fish habitat at its closest point. Due to the increase in impervious surfaces resulting from the proposed development, permanent alteration of the hydrologic regime of the identified fish habitat may occur if appropriate measures are not undertaken (Section 8.2.6). Furthermore, contamination and/or sediment deposition from construction activities may occur if appropriate measures are not undertaken (Section 8.2.2 and 8.2.5).

7.3. Habitat of Endangered and Threatened Species

The MECP completed a review of the project to assess the potential impacts of the proposed development on endangered and/or threatened species protected under the ESA and agree that the conclusions made that Section 9 nor 10 of the ESA will be contravened for the identified species, appear reasonable and valid and therefore authorization is not required (Appendix C).

7.3.1. Mammals

Northern myotis was detected in the FOD5 community. Five (5) trees assessed as having potential for providing suitable bat habitat in said communities are proposed to be removed to facilitate the proposed development. The design has been strategically located away from the 'high quality' tree.

An Ecological Offsetting Plan is recommended in an effort to provide an ecological net gain to SAR bat habitat (Section 8.2.1). The long-term objective of the Ecological Offsetting Plan is to offset the removed candidate roosting habitat for SAR bats.

7.3.2. Reptiles

The proposed development is located in Category 3 regulated habitat for Blanding's turtle. As such, this species has the potential to occur in the construction area. Wildlife exclusion fencing is recommended to prevent entry of SAR reptiles known to occur in the local area to the construction area (Section 8.2.5).

The proposed development is located in movement habitat for Eastern hog-nosed snake. As such, this species has the potential to occur in the construction area. Wildlife exclusion fencing is recommended to prevent entry of SAR reptiles known to occur in the local area to the construction area (Section 8.2.5).

The proposed development is located in Category 3 regulated habitat for Massasauga. As such, this species has the potential to occur in the construction area. Wildlife exclusion fencing is recommended to prevent entry of SAR reptiles known to occur in the local area to the construction area (Section 8.2.5).

7.3.3. Vascular Plants

It should be noted that the ministry has temporarily suspended protections for Black Ash for a period of two years from the time the species was added to the Species at Risk in Ontario List (Ontario Regulation 230/08). Notwithstanding that information, no black ash or its associated habitat as described herein is anticipated to be impacted as a result of the proposed development.

7.4. Wetland

The proposed development is not located in the wetland inclusion and therefore, direct impacts to wetland are not anticipated. A 10 m buffer from wetland is recommended to mitigate indirect impacts as a result of the proposed development. The proposed development is located 11 m from the wetland inclusion at its closest point. Due to the increase in impervious surfaces resulting from the proposed development, permanent alteration of the hydrologic regime of the identified wetland may occur if appropriate measures are not undertaken (Section 8.2.6). Furthermore, contamination and/or sediment deposition from construction activities may occur if appropriate measures are not undertaken (Section 8.2.2 and 8.2.5).

7.5. Wildlife

7.5.1. Seasonal Concentration Areas of Animals

Raptor Wintering Area for Bald Eagle: Approximately 540 m² of candidate Raptor Wintering Area for Bald Eagle will be disturbed as a result of the proposed development. However, the impacts resulting from the proposed development are not anticipated to impact nesting sites. Due to the scale and nature of the proposed development relative to the size of forest that extends across the greater landscape in proximity to Georgian Bay, negative impacts to the overall form and function of Raptor Wintering Area for Bald Eagle are not anticipated. In summary, direct impacts to the overall form and function of this SWH, should it be present, are not anticipated.

Bat Maternity Colonies: The FOD5 community was assessed as supporting 46 trees with the potential of functioning as bat maternity roost sites per hectare and therefore, has the potential to function as the SWH, Bat Maternity Colonies. The removal of five (5) trees with the potential of functioning as bat maternity roost sites is not anticipated to impair or eliminate the function of habitat for supporting bat life processes given the likely availability of habitat in the remaining portion of the forest that extends across the greater landscape. In summary, direct impacts to the overall form and function of this SWH, should it be present, are not anticipated.

Reptile Hibernaculum: Approximately 540 m² of candidate Reptile Hibernaculum will be disturbed as a result of the proposed development. However, the impacts resulting from the proposed development are anticipated to be limited to the adjacent lands associated with a hibernaculum which displayed a limited number of habitat opportunities for reptiles known to occur in the local area given the closed canopy and lack of anuran noted during the field studies. As such, negative impacts to the overall form and function of Reptile Hibernaculum, should it be present, are not anticipated.

7.5.2. Specialized Habitats of Wildlife Considered SWH

Bald Eagle and Osprey Nesting, Foraging and Perching Habitat: Approximately 540 m² of candidate Bald Eagle and Osprey Nesting, Foraging and Perching Habitat will be disturbed as a result of the proposed development. However, the impacts resulting from the proposed development are anticipated to be limited to perching habitat. Due to the scale and nature of the proposed development relative to the size of forest that extends across the greater landscape in proximity to Georgian Bay, negative impacts to the overall form and function of Bald Eagle and Osprey Nesting, Foraging and Perching Habitat are not anticipated. In summary, direct impacts to the overall form and function of this SWH, should it be present, are not anticipated.

Woodland Raptor Nesting Habitat: Approximately 540 m² of candidate Woodland Raptor Nesting Habitat will be disturbed as a result of the proposed development. However, the impacts resulting

from the proposed development are not anticipated to impact nesting sites. Due to the scale and nature of the proposed development relative to the size of forest that extends across the greater landscape in proximity to Georgian Bay, negative impacts to the overall form and function of Woodland Raptor Nesting Habitat are not anticipated. In summary, direct impacts to the overall form and function of this SWH, should it be present, are not anticipated.

7.5.3. Habitat of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: One (1) provincially rare listed species (i.e., black ash) was identified on the subject property in the wetland inclusion. This species and its habitat as described herein is not anticipated to be impacted as a result of the proposed development. Special concern species (i.e., monarch and Eastern ribbonsnake) have the potential of utilizing the subject property. Due to the scale and nature of the proposed development relative to the size of forest that extends across the greater landscape, negative impacts to the overall form and function of monarch habitat, should it be present, are not anticipated. The proposed development is not designed in a manner that is would otherwise inhibit snake movement and therefore, negative impacts to the overall form and function of eastern ribbonsnake habitat, should it be present, are not anticipated.

7.6. Woodland

The proposed development encroaches significant woodland in the amount of 540 m². This amount of disturbance is extremely small relative to the size of the significant woodland feature that extends across the greater landscape. Furthermore, interior habitat and connectivity with natural heritage features within and adjacent to the significant woodland is not anticipated to be impaired or eliminated as a result of the proposed development. In summary, the proposed development is not anticipated to impact the overall form and function of significant woodland. Residual impacts to the significant woodland may occur if appropriate measures are not undertaken (Section 8.2.5).

8.0 Conclusion and Recommendations

8.1. Conclusion

Should the proponent adhere to the proposed development plan and follow the prescribed recommendations as noted below (Section 8.2), negative impacts to the overall form and function of the identified natural heritage on the subject property will be appropriately mitigated. Furthermore, it is our understanding that the proposed development as described herein would not contravene applicable environmental policy and regulations as described in Section 2.0 of this report.

8.2. Recommendations

8.2.1. Ecological Offsetting Plan

We recommend erecting five (5) 4-chamber bat houses to replace each tree assessed as having potential for providing suitable bat habitat removed from the FOD5 community.

8.2.2. Preventing Entry of Deleterious Substances in Aquatic Feature(s)

Deleterious substances should never be deposited and/or enter aquatic feature(s), including wetland. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not be completed in or near (i.e., up to 30 m) of aquatic feature(s).

8.2.3. Sensitive Timing Window

As a precaution to protect breeding birds and bats, vegetation removal and tree clearing should not occur between April 1 and September 30 of any given year.

8.2.4. Species at Risk Encounters

Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes. Construction staff should not attempt to capture or handle most kinds of wildlife, unless an animal is in imminent peril or is injured and cannot wait for rescue by qualified personnel. Improper handling can result in injuries to both workers and wildlife, and may in some cases contravene provincial or federal legislation. Removal and relocation of mammals, in particular, should only be done by qualified wildlife service providers working in accordance with applicable laws (i.e., *Fish and Wildlife Conservation Act, 1997*).

8.2.5. Perimeter Control

Tree preservation hoarding with woven geotextile fabric is recommended to protect the woodland feature and control sediment. The fence should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity. The recommended location of the fence is depicted on Figure 3. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

Wildlife exclusion fencing is recommended to prevent entry of SAR reptiles known to occur in the local area to the construction area. The fence should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity. The recommended location of the fence is depicted on Figure 3. The wildlife exclusion fence should be installed with turn-

arounds to assist in redirecting wildlife away from Polish Avenue. The fencing material should consist of more durable materials that can withstand the anticipated timeframe of the proposed site works (e.g., heavy-duty geotextile with a minimum density of 270R or equivalent woven geotextile fabric). The fence should be buried a minimum depth of 10 – 20 cm with a horizontal lip extending outward an additional 10 to 20 cm. The minimum height of the fence after it has been installed including the buried components and any installed overhangs or extended lips is 100 cm. The overhang or lip should point towards the species side. For support, this fencing uses a woven wire fence (e.g., chain link) or some other structure. The wire fence should be installed on the activity side. Backfill and compact soil along the entire length on both sides of the fence. A survey of the enclosed/secluded area should be conducted immediately following fence installation to ensure that no individuals have been trapped on the wrong side of the fence. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

8.2.6. Water Balance

Due to the proximity of the proposed development to water features, any grading or filling to be conducted in the study area should be designed to maintain existing overland flow patterns and ensure infiltration will match pre- and post-development.

References:

- County of Simcoe Official Plan (office consolidation 2016).
Fisheries Act. 1985. Fisheries Act, R.S.C., 1985. c. F-14.
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Migratory Birds Convention Act, 1994 (MBCA, 1994). Migratory Birds Convention Act. S.C.
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Ministry of Natural Resources and Forestry, 2015 (MNRF, 2015). Significant Wildlife Habitat
Criteria Schedules for Ecoregion 6E.
Ontario Breeding Bird Atlas, 2001 (OBBA, 2001). Guide for Participants. Atlas Management
Board, Federation of Ontario Naturalists, Don Mills.
R.S.O. 1990, c. P.13, Section 3. Provincial Policy Statement.
S.O. 1997, c. 41. Fish and Wildlife Conservation Act.
S.O. 2007, c. 6. Endangered Species Act.
Town of Penetanguishene Official Plan (office consolidation 2018).

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CAUGHEY LANE

MCARTHUR DRIVE

POLISH AVENUE

WOZNIAK ROAD



Legend



Subject Property
Adjacent Lands

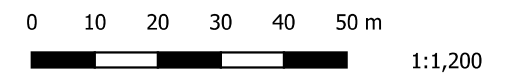
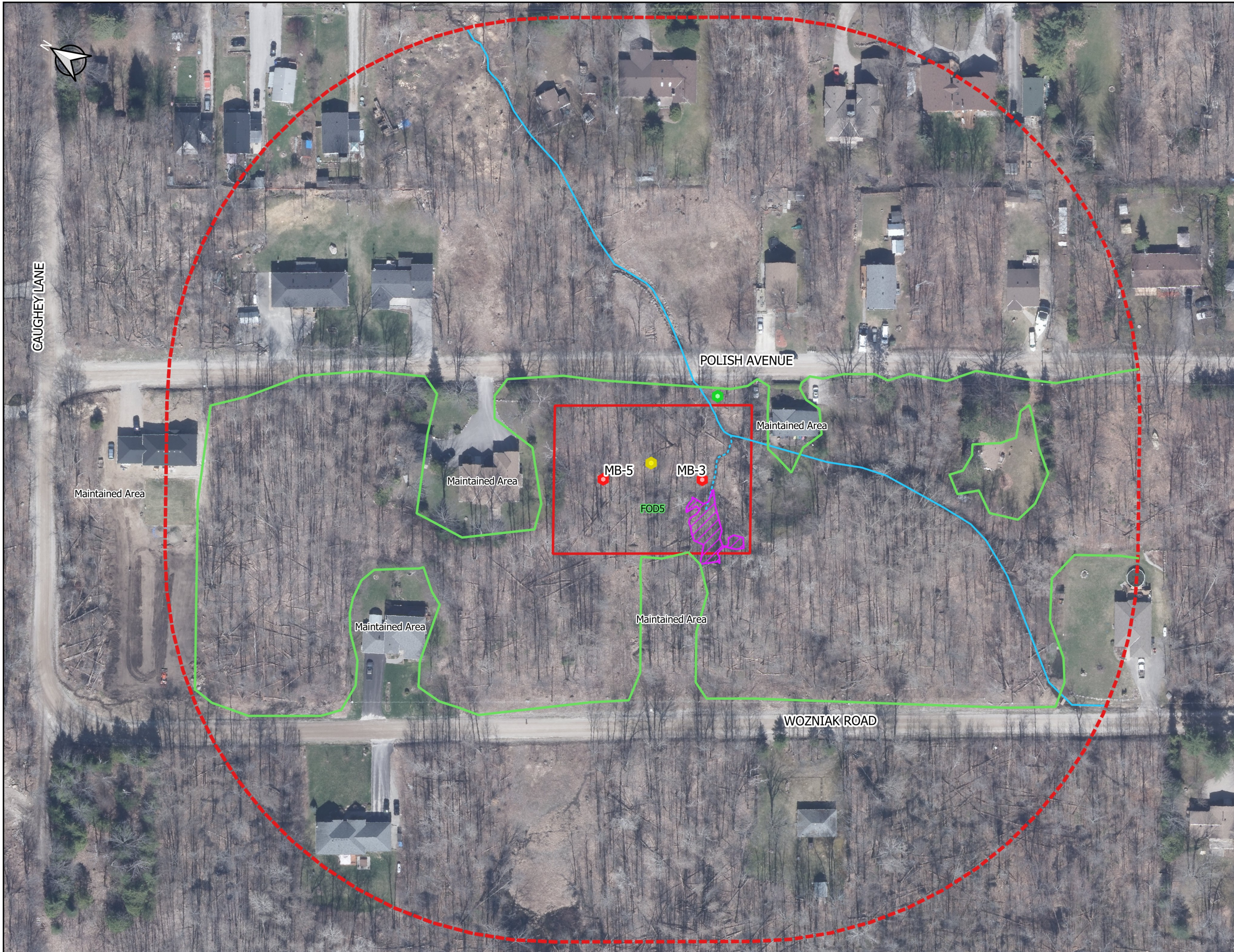


Figure 1: Subject Property



Designed by: N.F.
Date: 05/05/2022
Project: SEC 22-027



Legend

- Subject Property
- Adjacent Lands
- Amphibian Monitoring Station
- Bat Monitoring Station
- ◆ Dawn Breeding Bird Monitoring Station
- Intermittent Stream
- - - Ephemeral Stream
- Wetland Inclusion
- ELC Vegetation Communities
- FOD5** Dry-Fresh Sugar Maple Deciduous Forest Ecosite

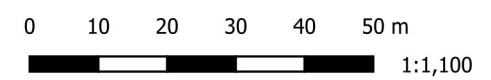
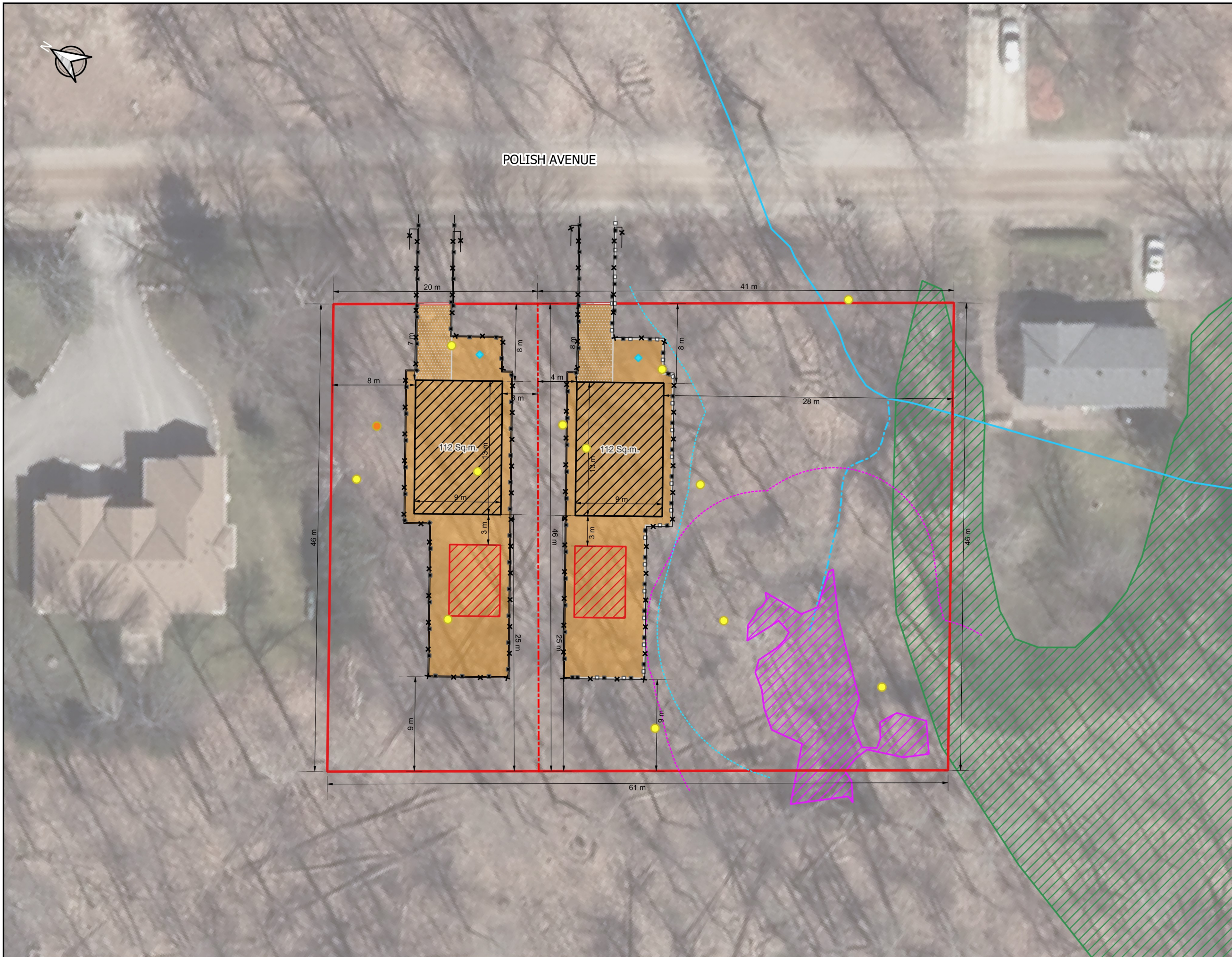


Figure 2: Existing Conditions



Designed by: N.F.
Date: 09/09/2022
Project: SEC 22-027



Legend

- Subject Property
- Proposed Lot Severance
- Proposed Driveway
- Proposed Dwelling
- Proposed Septic Area
- Limit of Disturbance
- Tree Preservation Hoarding / Silt Fence
- Tree Preservation Hoarding Fence
- Wildlife Exclusion Fence
- ◆ Proposed Well
- Approximated Environmental Protection Area
- Ephemeral Stream
- Intermittent Stream
- Ephemeral and Intermittent Stream Buffer (15 m)
- Wetland Inclusion
- Wetland Inclusion Buffer (10 m)
- Tree with Snag Attributes and Potential Bat Roosting Habitat
- High Quality Tree with Snag Attributes and Potential Maternity Bat Roosting Habitat
- Approximate Dimension

0 2.5 5 7.5 10 12.5 15 m

1:350

Figure 3: Proposed Development

Table 1: Species at Risk Screening

Species Grouping	Common Name	Scientific Name	Provincial Status^A	Federal Status^B	Candidate Habitat on the subject property?
Birds	Bald Eagle	<i>Haliaeetus leucocephalus</i>	Special Concern	NAR	No. No nesting habitat (i.e., stick nests) and foraging habitat (i.e., productive, shallow waterbodies) was observed on the subject property.
Birds	Bank Swallow	<i>Riparia riparia</i>	Threatened	Threatened	No. No nesting sites, foraging areas or nocturnal roost sites were identified on the subject property.
Birds	Barn Swallow	<i>Hirundo rustica</i>	Threatened	Threatened	Yes. Suitable nesting habitat could occur within 200 m of the subject property associated with the existing structure on adjacent lands.
Birds	Black Tern	<i>Chlidonias niger</i>	Special Concern	Not at Risk	No. No shallow marshes identified on the subject property.
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Threatened	No. No prairies, open meadows or hayfields identified on the subject property.
Birds	Canada Warbler	<i>Cardellina canadensis</i>	Special Concern	Threatened	No. The FOD5 community would not be characterized as a wet forest type with a well-developed shrub layer.
Birds	Cerulean Warbler	<i>Setophaga cerulea</i>	Threatened	Endangered	No. The FOD5 community would not be characterized as having an open understory.
Birds	Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Threatened	Yes. Potentially suitable habitat within 90 m of the subject property associated with the existing structures on adjacent lands.
Birds	Common Nighthawk	<i>Chordeiles minor</i>	Special Concern	Special Concern	No. No open areas with the potential to function as suitable habitat for common nighthawk identified on the subject property.
Birds	Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Threatened	No. The subject property does not contain the appropriate combination of the listed biophysical attributes.
Birds	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened	Threatened	No. No open/woodland areas with the potential to function as suitable habitat for Eastern whip-poor-will identified on the subject property.
Birds	Eastern Wood-pewee	<i>Contopus virens</i>	Special Concern	Special Concern	No. No forest clearings or suitable forest edges identified on the subject property.
Birds	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Special Concern	Special Concern	No. No mixed-wood forests identified on the subject property.
Birds	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern	Threatened	No. No areas abundant with young shrubs identified on the subject property.
Birds	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern	Special Concern	No. No grasslands identified on the subject property.
Birds	King Rail	<i>Rallus elegans</i>	Endangered	Endangered	No. No marshes identified on the subject property.
Birds	Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Threatened	No. No cattail marshes identified on the subject property.
Birds	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered	Non-active	No. No grasslands identified on the subject property.
Insects	Louisiana Waterthrush	<i>Parkesia motacilla</i>	Threatened	Threatened	No. No steep, forested ravines with fast-flowing streams identified or large pools of open water on the subject property.
Mammals	Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern	Special Concern	No. No openings nor indication of recent logging or burning activities on the subject property.
Mammals	Peregrine Falcon	<i>Falco peregrinus</i>	Special Concern	Not at Risk	No. No cliffs identified on the subject property.
Mammals	Piping Plover	<i>Charadrius melodus</i>	Endangered	Non-active	No. No beaches identified on the subject property.
Mammals	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Endangered	Endangered	No. No woodland or areas with many dead trees identified on the subject property.

Table 1: Species at Risk Screening

Reptiles	Short-eared Owl	<i>Asio flammeus</i>	Special Concern	Special Concern	No. No grasslands, marshes or tundra identified on the subject property.
Reptiles	Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern	Threatened	No. The FOD5 community would not be characterized as a moist stand.
Reptiles	Yellow Rail	<i>Coturnicops noveboracensis</i>	Special Concern	Special Concern	No. No marshes identified on the subject property.
Fish	Lake Sturgeon (Great Lakes - Upper St. Lawrence populations)	<i>Acipenser fulvescens</i>	Threatened	Threatened	No. No fish habitat with depths measuring 5-20 m or fast-flowing shallow water anticipated on the subject property.
Insects	Monarch	<i>Danaus plexippus</i>	Special Concern	Endangered	Yes. Candidate habitat associated with the subject property.
Mammals	Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Not Listed	Yes. No features with the potential of providing suitable roosting habitat for Eastern small-footed myotis identified on the subject property. Candidate foraging habitat associated with the intermittent stream and wetland inclusion.
Mammals	Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Yes. Candidate roosting habitat associated with the FOD5 community and existing structures on adjacent lands. Candidate foraging habitat associated with the intermittent stream and wetland inclusion.
Mammals	Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Yes. Candidate roosting habitat associated with the FOD5 community. Candidate foraging habitat associated with the intermittent stream and wetland inclusion.
Mammals	Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Yes. Candidate roosting habitat associated with the FOD5 community. Candidate foraging habitat associated with the intermittent stream and wetland inclusion.
Reptiles	Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Endangered	Yes. Blanding's turtle has been documented within 2 km of the subject property associated with the Sucker Creek Wetland. No suitable wetlands or waterbodies identified on the subject property or 30 m of the adjacent lands. Suitable wetlands may occur within 250 m of the subject property and therefore, the subject property has the potential to be considered as Category 3 regulated habitat for Blanding's turtle.
Reptiles	Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>	Threatened	Threatened	Yes. No American toad heard calling during the amphibian breeding surveys on the subject property. No thermoregulation, foraging, reproduction, shedding sites anticipated on the subject property. The subject property could be used as movement habitat for Eastern hog-noses snake, should this species be present.
Reptiles	Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Special Concern	Special Concern	No. No ponds, lakes, marshes or rivers identified on the subject property. No nesting habitat anticipated to occur on the subject property.
Reptiles	Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	Special Concern	Threatened	Yes. No thermoregulation, foraging, reproduction, shedding sites anticipated on the subject property. The subject property could be used as movement habitat for Eastern ribbonsnake, should this species be present.
Reptiles	Common Five-lined Skink (Southern Shield population)	<i>Plestiodon fasciatus</i>	Special Concern	Special Concern	No. No suitable habitat for five-lined anticipated on the subject property.

Reptiles	Massasauga (Great Lakes - St. Lawrence population)	<i>Sistrurus catenatus</i>	Threatened	Threatened	Yes. Massasauga has been documented approximately 1.1 km from the subject property. As such the forested community that extends onto the subject property could be considered as Category 3 regulated habitat for Massasauga. Category 3 habitat is generally depended upon for life processes including foraging and movements between gestation sites, hibernacula and other activity areas.
Reptiles	Northern Map Turtle	<i>Graptemys geographica</i>	Special Concern	Special Concern	No. No rivers and lakeshores identified on the subject property.
Reptiles	Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern	Special Concern	No. No shallow waters with the potential of functioning as suitable habitat for snapping turtle anticipated on the subject property. No candidate nesting sites observed on the subject property.
Vascular Plants	Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Yes. Candidate habitat associated with the subject property.
Restricted Species	██████████	██████████	Endangered	Endangered	No. No ponds, marshes, bogs, etc. on the subject property. No candidate nesting sites observed on the subject property.

^AClassification of species as they are anticipated to appear on the updated O. Reg. 230/08 Species at Risk Ontario (SARO) list on, or before, January 27, 2022. See the following link for more details: <https://ero.ontario.ca/notice/019-4280>

^BClassification of species as they appear on Schedule 1 of the Species at Risk Act

Scientific Name	Common Name	Point Count Station		Incidental	Location	Breeding ^A	Non-native?	S-Rank ^B	G-Rank ^C	Species at Risk Status	
		1								Provincial ^D	Federal ^E
		June 4, 2022	July 6, 2022								
<i>Agelaius phoeniceus</i>	Red-winged Blackbird	S(1)			Adjacent Lands	Possible		S4	G5		
<i>Icterus galbula</i>	Baltimore Oriole			S(2)	Subject Property	Possible		S4B	G5		
<i>Melospiza melodia</i>	Song Sparrow		S(1)		Adjacent Lands	Possible		S5B	G5		
<i>Picoides pubescens</i>	Downy Woodpecker		H(1)		Subject Property	Possible		S5	G5		
<i>Poecile atricapillus</i>	Black-capped Chickadee	S(1)	S(1)		Subject Property	Possible		S5	G5		
<i>Setophaga ruticilla</i>	American Redstart	S(1)			Subject Property	Possible		S5B	G5		
<i>Sitta carolinensis</i>	White-breasted Nuthatch			S(1)	Subject Property	Possible		S5	G5		
<i>Spinus tristis</i>	American Goldfinch	S(1)			Subject Property	Possible		S5B	G5		
<i>Troglodytes aedon</i>	House Wren	S(1)	S(1)		Adjacent Lands	Possible		S5B	G5		
<i>Turdus migratorius</i>	American Robin	S(1)	S(1), T(1)		Adjacent Lands	Probable		S5B	G5		
<i>Vireo olivaceus</i>	Red-eyed Vireo	S(1)			Subject Property	Possible		S5B	G5		
<i>Zenaida macroura</i>	Mourning Dove	S(1)	P(2)		Adjacent Lands	Probable		S5	G5		

^ABreeding Evidence as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

^BProvincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRrank.htm.

^CGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRrank.htm.

^DSpecies at Risk status as per the O. Reg. 230/08.

^ESpecies at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

^FBreeding Code as per Ontario Breeding Bird Atlas: Guide for Participants (March 2001)

^GNumber of individuals observed

Table 3: Vascular Plant Inventory

Scientific Name	Common Name	Vegetation Community ^A		S-Rank ^B	G-Rank ^C	Species at Risk Status		Non-native	Coefficient of Wetness
		FOD4	Wetland Inclusion			Provincial ^D	Federal ^E		
<i>Acer saccharum</i>	Sugar Maple	✓		S5	G5				3
<i>Actaea rubra</i>	Red Baneberry	✓		S5	G5				3
<i>Adiantum pedatum</i>	Northern Maidenhair Fern	✓		S5	G5				3
<i>Allium tricoccum</i>	Wild Leek	✓		S4	G5				3
<i>Ambrosia artemisiifolia</i>	Common Ragweed	✓		S5	G5				3
<i>Athyrium filix-femina</i>	Common Lady Fern	✓	✓	S5	G5				0
<i>Betula papyrifera</i>	Paper Birch	✓		S5	G5				3
<i>Carex arctata</i>	Drooping Woodland Sedge	✓		S5	G5				5
<i>Carex gracillima</i>	Graceful Sedge	✓		S5	G5				3
<i>Carex pensylvanica</i>	Pennsylvania Sedge	✓		S5	G5				5
<i>Carex plantaginea</i>	Plantain-leaved Sedge	✓		S5	G5				5
<i>Caulophyllum thalictroides</i>	Blue Cohosh	✓		S5	G5				5
<i>Convolvulus arvensis</i>	Field Bindweed	✓		SNA	GNR			✓	5
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood	✓		S5	G5				3
<i>Cornus rugosa</i>	Round-leaved Dogwood	✓		S5	G5				5
<i>Dactylis glomerata</i>	Orchard Grass	✓		SNA	GNR			✓	3
<i>Dryopteris intermedia</i>	Evergreen Wood Fern	✓		S5	G5				0
<i>Equisetum arvense</i>	Field Horsetail	✓		S5	G5				0
<i>Erigeron philadelphicus</i>	Philadelphia Fleabane	✓		S5	G5				-3
<i>Erythronium americanum</i>	Yellow Trout-lily	✓		S5	G5				5
<i>Fagus grandifolia</i>	American Beech	✓		S4	G5				3
<i>Fraxinus americana</i>	White Ash	✓		S4	G5				3
<i>Fraxinus nigra</i>	Black Ash		✓	S3	G5	Endangered	Not on Schedule 1		-3
<i>Fraxinus pennsylvanica</i>	Red Ash	✓	✓	S4	G5				-3
<i>Impatiens capensis</i>	Spotted Jewelweed	✓		S5	G5				-3
<i>Lysimachia nummularia</i>	Creeping Yellow Loosestrife		✓	SNA	GNR			✓	-3
<i>Maianthemum canadense</i>	Wild Lily-of-the-valley	✓		S5	G5				3
<i>Maianthemum stellatum</i>	Star-flowered False Solomon's Seal	✓		S5	G5				0
<i>Myosotis sylvatica</i>	Woodland Forget-me-not	✓		SNA	G5			✓	5
<i>Onoclea sensibilis</i>	Sensitive Fern	✓	✓	S5	G5				-3
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam	✓		S5	G5				3
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	✓		S4?	G5				3
<i>Plantago major</i>	Common Plantain	✓		SNA	G5			✓	3
<i>Poa pratensis</i>	Kentucky Bluegrass	✓		S5	G5				3
<i>Populus grandidentata</i>	Large-toothed Aspen	✓		S5	G5				5
<i>Populus tremuloides</i>	Trembling Aspen	✓		S5	G5				0
<i>Prunus serotina</i>	Black Cherry	✓		S5	G5				3
<i>Prunus virginiana</i>	Chokecherry	✓		S5	G5				3
<i>Quercus rubra</i>	Northern Red Oak	✓		S5	G5				3
<i>Rhamnus cathartica</i>	European Buckthorn	✓		SNA	GNR			✓	0
<i>Rhus typhina</i>	Staghorn Sumac	✓		S5	G5				3

Table 3: Vascular Plant Inventory

<i>Ribes americanum</i>	American Black Currant		✓	S5	G5				-3
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry	✓		S5	G5				3
<i>Rumex crispus</i>	Curled Dock	✓		SNA	GNR			✓	0
<i>Sambucus racemosa</i>	Red Elderberry	✓		S5	G5				3
<i>Symphotrichum lanceolatum</i>	Paniced Aster		✓	S5	G5				-3
<i>Taraxacum officinale</i>	Common Dandelion	✓		SNA	G5			✓	3
<i>Taxus canadensis</i>	Canada Yew	✓		S4	G5				3
<i>Tilia americana</i>	Basswood	✓		S5	G5				3
<i>Toxicodendron radicans</i>	Poison Ivy	✓		S5	G5				0
<i>Trifolium pratense</i>	Red Clover	✓		SNA	GNR			✓	3
<i>Trifolium repens</i>	White Clover	✓		SNA	GNR			✓	3
<i>Trillium grandiflorum</i>	White Trillium	✓		S5	G5				3
<i>Ulmus americana</i>	White Elm	✓	✓	S5	G4				-3
<i>Viburnum acerifolium</i>	Maple-leaved Viburnum	✓		S5	G5				5

^ARefer to Figure 2 for Ecological Land Classification descriptors.

^BProvincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRrank.htm.

^CGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRrank.htm.

^DSpecies at Risk status as per the O. Reg. 230/08.

^ESpecies at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

Seasonal Concentration Areas of Animals

Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	SWH Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
<p>Waterfowl Stopover and Staging Areas (Terrestrial)</p> <p>Rationale: Habitat important to migrating waterfowl.</p>	<p>American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall</p>	<p>CUM1 CUT1 - Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.</p>	<p>Fields with sheet water during Spring (mid-March to May). -Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. -Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available cxlviii. <u>Information Sources</u> -Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. -Reports and other information available from Conservation Authorities -Sites documented through waterfowl planning processes (eg. EHJV implementation plan) -Field Naturalist Clubs -Ducks Unlimited Canada -Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</p>	<p>Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -Any mixed species aggregations of 100 or more individuals required. -The flooded field ecosite habitat plus a 100-300m radius, dependant on local site conditions and adjacent land use is the significant wildlife habitat cxlviii. -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). -SWH MISTcxlix Index #7 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property and adjacent lands.</p>

<p>Waterfowl Stopover and Staging Areas (Aquatic)</p> <p>Rationale: Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district</p>	<p>Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck</p>	<p>MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7</p>	<p>-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. -These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water) <u>Information Sources</u> -Environment Canada -Naturalist clubs often are aware of staging/stopover areas. -OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. -Sites documented through waterfowl planning processes (eg. EHJV implementation plan) -Ducks Unlimited projects -Element occurrence specification by Nature Serve: http://www.natureserve.org -Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area</p>	<p>Studies carried out and verified presence of: -Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. -Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH cxlix -The combined area of the ELC ecosites and a 100m radius area is the SWH cxlviii -Wetland area and shorelines associated with sites identified within the SWHTG cxlviii Appendix K cxlix are significant wildlife habitat. -Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -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). -SWH MISTcxlix Index #7 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property and adjacent lands.</p>
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<p>Shorebird Migratory Stopover Area</p> <p>Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.</p>	<p>Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin</p>	<p>BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5</p>	<p>-Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. -Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. -Sewage treatment ponds and storm water ponds do not qualify as a SWH. <u>Information Sources</u> -Western hemisphere shorebird reserve network. -Canadian Wildlife Service (CWS) Ontario Shorebird Survey. -Bird Studies Canada -Ontario Nature -Local birders and naturalist clubs -Natural Heritage Information Centre (NHIC) Shorebird Migratory Concentration Area</p>	<p>Studies confirming: -Presence of 3 or more of listed species and > 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) -Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. -The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area cxlviii -Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects"ccxi -SWH MISTcxlix Index #8 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property and adjacent lands.</p>
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<p>Raptor Wintering Area Rationale: Sites used by multiple species, a high number of individuals and used annually are most significant</p>	<p>Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl</p> <p>Special Concern: Short-eared Owl Bald Eagle</p>	<p><u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class;</p> <p>Forest: FOD, FOM, FOC.</p> <p>Upland: CUM; CUT; CUS; CUW.</p> <p>Bald Eagle: Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).</p>	<p>-The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors.</p> <p>-Raptor wintering (hawk/owl) sites need to be > 20 ha cxlviii, cxlix with a combination of forest and upland.</p> <p>-Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands</p> <p>-Field area of the habitat is to be wind swept with limited snow depth or accumulation.</p> <p>-Eagle sites have open water and large trees and snags available for roosting</p> <p><u>Information Sources:</u></p> <p>-OMNRF Ecologist or Biologist</p> <p>-Naturalist clubs</p> <p>-Natural Heritage Information Centre (NHIC) Raptor Winter Concentration Area</p> <p>-Data from Bird Studies Canada</p> <p>-Results of Christmas Bird Counts</p> <p>-Reports and other information available from Conservation Authorities.</p>	<p>Studies confirm the use of these habitats by:</p> <p>-One or more Short-eared Owls or; One of more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species</p> <p>-To be significant a site must be used regularly (3 in 5 years) cxlix for a minimum of 20 days by the above number of birds.</p> <p>-The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area</p> <p>-Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi</p> <p>-SWH Index #10 and #11 provides development effects and mitigation measures.</p>	<p>Hawks/Owls: Absent. No meadow areas located on the subject property or in close proximity.</p> <p>Bald Eagle: Candidate. The FOD4 community is part of a woodland feature that extends across the greater landscape adjacent to Georgian Bay. No stick nests were observed on the subject property.</p>
<p>Bat Hibernacula Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.</p>	<p>Big Brown Bat Tri-coloured Bat</p>	<p>Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)</p>	<p>-Hibernacula may be found in caves, mine shafts, underground foundations and Karsts.</p> <p>-Active mine sites should not be considered as SWH</p> <p>-The locations of bat hibernacula are relatively poorly known.</p> <p><u>Information Sources</u></p> <p>-OMNRF for possible locations and contact for local experts</p> <p>-Natural Heritage Information Centre (NHIC) Bat Hibernaculum</p> <p>-Ministry of Northern Development and Mines for location of mine shafts.</p> <p>-Clubs that explore caves (eg. Sierra Club)</p> <p>-University Biology Departments with bat experts.</p>	<p>-All sites with confirmed hibernating bats are SWH .</p> <p>-The area includes 200m radius around the entrance of the hibernaculum cxlviii, ccvii, for most development types and 1000m for wind farms ccv.</p> <p>-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”ccv.</p> <p>-SWH MISTcxlix Index #1 provides development effects and mitigation measures.M9</p>	<p>Absent. None of the listed communities were identified on the subject property and adjacent lands.</p>

<p>Bat Maternity Colonies Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.</p>	<p>Big Brown Bat Silver-haired Bat</p>	<p>Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM</p>	<p>-Maternity colonies can be found in tree cavities, vegetation and often in buildingsxxxii, xxv, xxvi, xxvii, xxxi (buildings are not considered to be SWH). -Maternity roosts are not found in caves and mines in Ontarioxxii. -Maternity colonies located in Mature deciduous or mixed forest standsccix, ccx, ccv with >10/ha large diameter (>25cm dbh) wildlife treesccvii -Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 ccxiv or class 1 or 2 ccxii . -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 preferredccx, lxiv Information Sources -OMNRF for possible locations and contact for local experts -University Biology Departments with bat experts.Q10</p>	<p>-Maternity Colonies with confirmed use by; ->10 Big Brown Bats ->5 Adult Female Silver- haired Bats -The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies. -Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”ccv. -SWH MISTcxlix Index #12 provides development effects and mitigation measures.</p>	<p>Candidate. The FOD4 community contains more than 10 trees per hectare with the potential of functioning as bat maternity roost sites.</p>
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<p>Turtle Wintering Areas Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Midland Painted Turtle Special Concern: Northern Map Turtle Snapping Turtle</p>	<p>Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.</p>	<p>-For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. -Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen cix, cx, cxi, cxii -Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. <u>Information Sources</u> -EIS studies carried out by Conservation Authorities. -Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. -OMNRF Ecologist or Biologist -Field Naturalist clubs -Natural Heritage Information Centre (NHIC)</p>	<p>-Presence of 5 over-wintering Midland Painted Turtles is significant. -One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. -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. -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) cvii. -Congregation of turtles is more common where wintering areas are limited and therefore significant cix, cx, cxi, cxii. -SWH MISTcxlix Index #28 provides development effects and mitigation measures for turtle wintering habitat.</p>	<p>Absent. No turtle wintering areas on the subject proeprty.</p>
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<p>Reptile Hibernaculum Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.</p>	<p>Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake Special Concern: Milksnake Eastern Ribbonsnake Lizard: Special Concern (Southern Shield population): Five-lined Skink</p>	<p>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. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3</p>	<p>-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. -Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. l, li, lii, cxii . -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. -Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures. <u>Information Sources</u> -In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). -Reports and other information available from Conservation Authorities. -Field Naturalist Clubs -University herpetologists -Natural Heritage Information Centre (NHIC)</p>	<p>Studies confirming: -Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. -Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) -Note: If there are Special Concern Species present, then site is SWH -Note: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH -SWH MIST Index #13 provides development effects and mitigation measures for snake hibernacula. -Presence of any active hibernaculum for skink is significant.</p>	<p>Candidate. Although no rock features or similar features extending below the frost line were observed on the subject property, they may occur within 100 m of the subject property.</p>
<p>Colonially - Nesting Bird Breeding Habitat (Bank and Cliff) Rationale: Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.</p>	<p>Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1</p>	<p>-Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. -Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. -Does not include a licensed/permitted Mineral Aggregate Operation. <u>Information Sources</u> -Reports and other information available from Conservation Authorities. -Ontario Breeding Bird Atlas -Bird Studies Canada; NatureCounts http://www.birdscanada.org/birdmon/ -Field Naturalist Clubs.</p>	<p>Studies confirming: -Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. -A colony identified as SWH will include a 50m radius habitat area from the peripheral nests -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” -SWH MIST Index #4 provides development effects and mitigation measures</p>	<p>Absent. No banks or cliffs were observed on the subject property or within 50 m of the adjacent lands.</p>

<p>Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) Rationale: Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	<p>Great Blue Heron Black-crowned Night-heron Great Egret Green Heron</p>	<p>SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1</p>	<p>-Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. -Most nests in trees are 11 to 15 m from ground, near the top of the tree. <u>Information Sources</u> -Ontario Breeding Bird Atlas ccv, colonial nest records. -Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). -Natural Heritage Information Centre (NHIC) Mixed Wader Nesting Colony -Aerial photographs can help identify large heronries. -Reports and other information available from Conservation Authorities. -MNRF District Offices. -Local Naturalist Clubs.</p>	<p>Studies confirming: -Presence of 5 or more active nests of Great Blue Heron or other listed species. -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 <15.0ha with a colony is the SWH cc, ccvii -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 -SWH MISTcxlix Index #5 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property nor was this SWH mapped within 300 m of the subject property as per LIO.</p>
<p>Colonially - Nesting Bird Breeding Habitat (Ground) Rationale: Colonies are important to local bird population, typically sites are only known colony in area and are used annually.</p>	<p>Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer’s Blackbird</p>	<p>Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer’s Blackbird) MAM1 – 6; MAS1 – 3; CUM CUT CUS</p>	<p>-Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. -Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u> -Ontario Breeding Bird Atlas, rare/colonial species records. -Canadian Wildlife Service -Reports and other Information available from Conservation Authorities. -Natural Heritage Information Centre (NHIC) colonial Waterbird Nesting Area -MNRF District Offices. -Field Naturalist Clubs.</p>	<p>Studies confirming: -Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. -Presence of 5 or more pairs for Brewer’s Blackbird. -Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. -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 <3.0ha with a colony is the SWH cc, ccvii -Studies would be done during May/June when actively nesting. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -SWH MISTcxlix Index #6 provides development effects and mitigation measures.</p>	<p>Absent. The subject property is not located on a rocky island or peninsula within a lake or large river.</p>

<p>Migratory Butterfly Stopover Areas</p> <p>Rationale: Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.</p>	<p>Painted Lady Red Admiral</p> <p><u>Special Concern</u> Monarch</p>	<p>Combination of ELC Community Series; need to have present one Community Series from each landclass:</p> <p>Field: CUM CUT CUS</p> <p>Forest: FOC FOD FOM CUP</p> <p>Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.</p>	<p>A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario cxlix.</p> <p>-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 xxxii, xxxiii, xxxiv, xxxv, xxxvi.</p> <p>-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 cxlviii, cxlix.</p> <p>-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 xxxvii, xxxviii, xxxix, xl, xli.</p> <p><u>Information Sources</u></p> <p>-OMNRF (NHIC)</p> <p>-Agriculture Canada in Ottawa may have list of butterfly experts.</p> <p>-Field Naturalist Clubs</p> <p>-Toronto Entomologists Association</p> <p>-Conservation Authorities</p>	<p>Studies confirm:</p> <p>-The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct)xliiii. 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/dayxxxvii, significant variation can occur between years and multiple years of sampling should occur xl, xlii.</p> <p>-Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD.</p> <p>-MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral’s is to be considered significant.</p> <p>-SWH MIST cxlix Index #16 provides development effects and mitigation measures.</p>	<p>Absent. The subject property is not located within 5 km of Lake Ontario.</p>
<p>Landbird Migratory Stopover Areas</p> <p>Rationale: Sites with a high diversity of species as well as high numbers are most significant.</p>	<p>All migratory songbirds.</p> <p>Canadian Wildlife Service Ontario website: http://www.ec.gc.ca/nature/_default.asp?lang=En&n=42_1B7A9D-1</p> <p>All migrant raptors species:</p> <p>Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)</p>	<p>All Ecosites associated with these ELC Community Series;</p> <p>FOC FOM FOD SWC SWM SWD</p>	<p>-Woodlots need to be >10 ha in size and within 5 km iv, v, vi, vii, viii, ix, x, xi, xii, xiii, xiv, xv of Lake Ontario.</p> <p>-If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario are more significant cxlix</p> <p>-Sites have a variety of habitats; forest, grassland and wetland complexes cxlix.</p> <p>-The largest sites are more significant cxlix</p> <p>-Woodlots and forest fragments are important habitats to migrating birdsccxviii, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH cxlviii.</p> <p><u>Information Sources</u></p> <p>-Bird Studies Canada</p> <p>-Ontario Nature</p> <p>-Local birders and field naturalist clubs</p> <p>-Ontario Important Bird Areas (IBA) Program</p>	<p>Studies confirm:</p> <p>-Use of the habitat by >200 birds/day and with >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.</p> <p>-Studies should be completed during spring (Mar to May) and fall (Aug to Oct) migration using standardized assessment techniques. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi</p> <p>-SWH MIST cxlix Index #9 provides development effects and mitigation measures.</p>	<p>Absent. The subject property is not located within 5 km of Lake Ontario.</p>

<p>Deer Yarding Areas Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.</p>	<p>White-tailed Deer</p>	<p>Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include: FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT</p>	<p>-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. -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%cxv. -OMNRF determines deer yards following methods outlined in “Selected Wildlife and Habitat Features: Inventory Manual” cxv</p>	<p>No Studies Required: -Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths >40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. lvi, lvii, lviii, lix, lx, -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). -Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. cxv -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. -SWHMiSTcxlix Index #2 provides</p>	<p>Absent. According to Land Information Ontario, no deer yarding areas have been mapped on the subject property.</p>
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<p>Deer Winter Congregation Areas Rationale: 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^{cxlviii}.</p>	<p>White-tailed Deer</p>	<p>All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Conifer plantations much smaller than 50 ha may also be used.</p>	<p>-Woodlots will typically be >100 ha in size. Woodlots >100ha may be considered significant based on MNRF studies or assessment. -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 cxlviii. -If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule. -Large woodlots > 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 ccxxiv. -Woodlots with high densities of deer due to artificial feeding are not significant. Information Sources -MNRF District Offices. -LIO/NRVIS</p>	<p>Studies confirm: -Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF cxlviii. -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 -Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques ccxxiv , ground or road surveys. or a pellet count deer density survey ccxxv. -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. -SWH MIST cxlix Index #2 provides development effects and mitigation measures.</p>	<p>Absent. According to Land Information Ontario, no deer winter congregation areas have been mapped on the subject property.</p>
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Rare Vegetation Communities

Rare Vegetation Community	CANDIDATE SWH			CONFIRMED SWH	SWH Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
<p>Cliffs and Talus Slopes Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.</p>	<p>Any ELC Ecosite within Community Series: TAO CLO TAS CLS TAT CLT</p>	<p>A Cliff is vertical to near vertical bedrock >3m in height. 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. <u>Information Sources</u> -The Niagara Escarpment Commission has detailed information on location of these habitats. -OMNRF Districts -Natural Heritage Information Centre (NHIC) has location information available on their website -Field Naturalist Clubs -Conservation Authorities</p>	<p>-Confirm any ELC Vegetation Type for Cliffs or Talus Slopes lxxviii -SWH MISTcxlix Index #21 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>

<p>Sand Barren Rationale: Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry</p>	<p>ELC Ecosites: SBO1 SBS1 SBT1 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 >0.5ha in size. Information Sources -OMNRF Districts. -Natural Heritage Information Centre (NHIC) has location information available on their website. -Field Naturalist Clubs -Conservation Authorities</p>	<p>-Confirm any ELC Vegetation Type for Sand Barrens lxxviii -Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). -SWH MISTcxlx Index #20 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>
<p>Alvar Rationale: 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 Paleozoic-Precambrian contact.</p>	<p>ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 Five Alvar Indicator Species: 1) <i>Carex crawei</i> 2) <i>Panicum philadelphicum</i> 3) <i>Eleocharis compressa</i> 4) <i>Scutellaria parvula</i> 5) <i>Trichostema brachiatum</i> These indicator species are very specific to Alvars within Ecoregion 6Ecxlix</p>	<p>An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover lxxviii.</p>	<p>An Alvar site > 0.5 ha in size lxxv. Information Sources -Alvars of Ontario (2000), Federation of Ontario Naturalists lxxvi. -Ontario Nature – Conserving Great Lakes Alvarsccviii. -Natural Heritage Information Centre (NHIC) has location information available on their website. -OMNRF Staff. -Field Naturalist Clubs. -Conservation Authorities.</p>	<p>-Field studies that identify four of the five Alvar Indicator Species lxxv, cxlix at a Candidate Alvar site is Significant. -Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). -The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses lxxv -SWH MISTcxlx Index #17 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>

<p>Old Growth Forest Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.</p>	<p>Forest Community Series: FOD FOC FOM SWD SWC SWM</p>	<p>Old Growth forests are characterized by heavy mortality or turnover of over-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.</p>	<p>Woodland area is 30ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. <u>Information Sources</u> -OMNRF Forest Resource Inventory mapping -OMNRF Districts. -Field Naturalist Clubs -Conservation Authorities -Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. -Municipal forestry departments</p>	<p>Field Studies will determine: -If dominant trees species of the are >140 years old, then the area containing these trees is Significant Wildlife Habitat cxlviii -The forested area containing the old growth characteristics will have experienced no recognizable forestry activities cxlviii (cut stumps will not be present) -The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH. -Determine ELC vegetation types for the forest forest area containing the old growth characteristics lxxviii -SWH MISTcxlix Index #23 provides development effects and mitigation measures.</p>	<p>Absent. The FOD4 community did not exhibit sufficient old-growth characteristics to be considered as this SWH.</p>
<p>Savannah Rationale: Savannahs are extremely rare habitats in Ontario.</p>	<p>TPS1 TPS2 TPW1 TPW2 CUS2</p>	<p>A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%lxxix, lxxx, lxxxi, lxxxii, lxxxiii.</p>	<p>No minimum size to site Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> -Natural Heritage Information Centre (NHIC) has location data available on their website. -OMNRF Districts. -Field Naturalists Clubs. -Conservation Authorities.</p>	<p>Field studies confirm one or more of the Savannah indicator species listed in cxlix Appendix N should be present . Note: Savannah plant spp. list from Ecoregion 7E should be usedcxlviii. -Area of the ELC Ecosite is the SWH. -Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). -SWH MISTcxlix Index #18 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>

<p>Tallgrass Prairie Rationale: Tallgrass Prairies are extremely rare habitats in Ontario.</p>	<p>TPO1 TPO2</p>	<p>A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover lxxix, lxxx, lxxxi, lxxxii, lxxxiii .</p>	<p>No minimum size to site . Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> -Natural Heritage Information Centre (NHIC) has location information available on their website. -OMNRF Districts -Field Naturalists Clubs. -Conservation Authorities.</p>	<p>Field studies confirm one or more of the Prairie indicator species listed in cxlix Appendix N should be present . Note: Prairie plant spp. list from Ecoregion 6E should be usedcxlvi -Area of the ELC Ecosite is the SWH. -Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). -SWH MISTcxlix Index #19 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>
<p>Other Rare Vegetation Communities Rationale: Plant communities that often contain rare species which depend on the habitat for survival.</p>	<p>Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG^{cxlviii} . Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.</p>	<p>Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.</p>	<p>ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M cxlviii The OMNRF/NHIC will have up to date listing for rare vegetation communities. <u>Information Sources</u> -Natural Heritage Information Centre (NHIC) has location information available on their website. -OMNRF Districts. -Field Naturalists Clubs. -Conservation Authorities.</p>	<p>Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTGcxlviii. -Area of the ELC Vegetation Type polygon is the SWH. -SWH MIST cxlix Index #37 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>

Specialized Habitats of Wildlife considered SWH

Specialized Wildlife Habitat	Wildlife Species	CANDIDATE SWH		CONFIRMED SWH	SWH Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	

<p>Waterfowl Nesting Area Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.</p>	<p>American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard</p>	<p>All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to Provincially Significant Wetlands</p>	<p>A waterfowl nesting area extends 120 m cxlix 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 cxlix. -Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. -Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> -Ducks Unlimited staff may know the locations of particularly productive nesting sites. -OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. -Reports and other information available from Conservation Authorities.</p>	<p>Studies confirmed: -Presence of 3 or more nesting pairs for listed species excluding Mallards, or; -Presence of 10 or more nesting pairs for listed species including Mallards. -Any active nesting site of an American Black Duck is considered significant. -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”ccxi -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 cxlviii from the wetland and will provide enough habitat for waterfowl to successfully nest. -SWH MISTcxlix Index #25 provides development effects and mitigation measures.</p>	<p>Absent. The subject property is not likely located within 120 m of a wetland meeting the description of this SWH.</p>
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<p>Bald Eagle and Osprey Nesting, Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Ecoregion 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.</p>	<p>Osprey Special Concern Bald Eagle</p>	<p>ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands</p>	<p>Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. -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. -Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). <u>Information Sources</u> -Natural Heritage Information Centre (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. -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. -Nature Counts, Ontario Nest Records Scheme data. -OMNRF District. -Check the Ontario Breeding Bird Atlas ccv or Rare Breeding Birds in Ontario for species documented -Reports and other information available from Conservation Authorities. -Field Naturalists clubs</p>	<p>Studies confirm the use of these nests by: -One or more active Osprey or Bald Eagle nests in an areacxlviiii . -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. -For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH ccvii, maintaining undisturbed shorelines with large trees within this area is important cxlviii. -For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. cvi, ccvii Area of the habitat from 400-800m is dependant on site lines from the nest to the development and inclusion of perching and foraging habitat cvi - To be significant a site must be used annually. When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. ccvii - Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid August.</p>	<p>Candidate. Although no stick nests were observed on the subject property, osprey and/or bald eagle nests could occur within 400 m of the subject property.</p>
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<p>Woodland Raptor Nesting Habitat</p> <p>Rationale: Nests sites for these species are rarely identified; these area sensitive habitats are often used annually by these species.</p>	<p>Northern Goshawk Cooper’s Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk</p>	<p>May be found in all forested ELC Ecosites.</p> <p>May also be found in SWC, SWM, SWD and CUP3</p>	<p>All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat lxxxviii, lxxxix, xc, xci, xciii, xciv, xcv,xcvi, cxxxiii. Interior habitat determined with a 200m buffercxlvi</p> <p>-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.</p> <p>-In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.</p> <p><u>Information Sources</u></p> <p>-OMNRF Districts.</p> <p>-Check the Ontario Breeding Bird Atlas ccv or Rare Breeding Birds in Ontario for species documented.</p> <p>-Check data from Bird Studies Canada.</p> <p>-Reports and other information available from Conservation Authorities.</p>	<p>Studies confirm:</p> <p>-Presence of 1 or more active nests from species list is considered significantcxlvi.</p> <p>-Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH ccvii. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest)</p> <p>-Barred Owl – A 200m radius around the nest is the SWH ccvii.</p> <p>-Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWHccvii.</p> <p>-Sharp-Shinned Hawk – A 50m radius around the nest is the SWHccvii.</p> <p>-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.</p> <p>-SWH MIST cxlix Index #27 provides development effects and mitigation measures.</p>	<p>Candidate. Although no stick nests were observed on the subject property, nests of the listed species could occur within 400 m of the subject property.</p>
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<p>Turtle Nesting Areas <u>Rationale:</u> These habitats are rare and when identified will often be the only breeding site for local populations of turtles.</p>	<p>Midland Painted Turtle <u>Special Concern Species</u> Northern Map Turtle Snapping Turtle</p>	<p>Exposed mineral soil (sand or gravel) areas adjacent (<100m) cxlviii or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1</p>	<p>-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. -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. -Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <u>Information Sources</u> -Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). -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. -Natural Heritage Information Centre (NHIC) -Field Naturalist Clubs</p>	<p>Studies confirm: -Presence of 5 or more nesting Midland Painted Turtles -One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. -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.cxlvi -Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat.cxlvi -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. -SWH MIST cxlix Index #28 provides development effects and mitigation measures for turtle nesting habitat.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>
<p>Seeps and Springs <u>Rationale:</u> Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.</p>	<p>Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.</p>	<p>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 areas of a stream could have seeps/springs.</p>	<p>Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system cxvii, cxlix. -Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species cxix, cxx, cxxi, cxxii, cxiii, cxiv. <u>Information Sources</u> -Topographical Map. -Thermography. -Hydrological surveys conducted by Conservation Authorities and MOE. -Field Naturalists Clubs and landowners. -Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped.</p>	<p>Field Studies confirm: -Presence of a site with 2 or more seeps/springs should be considered SWH. -The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat cxlviii. -SWH MIST cxlix Index #30 provides development effects and mitigation measures</p>	<p>Absent. No seepage areas or springs were observed on the subject property.</p>

<p>Amphibian Breeding Habitat (Woodland).</p> <p><u>Rationale:</u> These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations</p>	<p>Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog</p>	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p> <p>Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians</p>	<p>-Presence of a wetland, pond or woodland pool (including vernal pools) >500m² (about 25m diameter) ccvii within or adjacent (within 120m) to a woodland (no minimum size).clxxxii, lxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx Some small wetlands may not be mapped and may be important breeding pools for amphibians. -Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat cxlviii</p> <p><u>Information Sources</u> -Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records -Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. -OMNRF Districts and wetland evaluations -Field Naturalist clubs -Canadian Wildlife Service Amphibian Road Call Survey -Ontario Vernal Pool Association: http://www.ontariovernalpools.org</p>	<p>Studies confirm; -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) lxxi or 2 or more of the listed frog species with Call Level Codes of 3. -A combination of observational study and call count surveys cviii will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. -The habitat is the wetland area plus a 230m radius of woodland arealxiii, lxv, lxvi, lxvii, lxviii, lxix, lxx, lxxi . 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. -SWH MIST cxlix Index #14 provides development effects and mitigation measures.</p>	<p>Absent. No wetland, pond or woodland pool of sufficient size was identified on the subject property or adjacent lands.</p>
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<p>Amphibian Breeding Habitat (Wetlands)</p> <p>Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p> <p>Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.</p>	<p>-Wetlands>500m2 (about 25m diameter) ccvii, supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats clxxxii.</p> <p>-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.</p> <p>-Bullfrogs require permanent water bodies with abundant emergent vegetation.</p> <p>Information Sources</p> <p>-Ontario Herpetofaunal Summary Atlas (or other similar atlases)</p> <p>-Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count.</p> <p>-OMNRF Districts and wetland evaluations.</p> <p>-Reports and other information available from Conservation Authorities.</p>	<p>Studies confirm:</p> <p>-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) lxxi or 2 or more of the listed frog/toad species with Call Level Codes of 3. or; Wetland with confirmed breeding Bullfrogs are significant.</p> <p>-The ELC ecosite wetland area and the shoreline are the SWH.</p> <p>-A combination of observational study and call count surveys cviii will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands.</p> <p>-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.</p> <p>-SWH MIST cxlix Index #15 provides development effects and mitigation measures.</p>	<p>Absent. No wetland of sufficient size was identified on the subject property or adjacent lands.</p>
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<p>Woodland Area-Sensitive Bird Breeding Habitat</p> <p>Rationale: Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.</p>	<p>Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren</p> <p>Special Concern: Cerulean Warbler Canada Warbler</p>	<p>All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD</p>	<p>-Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. cv, cxxxix, cxxxii, cxxxiii, cxxxiv, cxxxv, cxxxvi, cxxxvii, cxxxviii, cxxxix, cxl, cxli, cxlii, cxliii, cxliv, cxlv, cxlvi, cl, cli, clii, cliii, cliv, clv, clvi, clvii, clviii, clix, -Interior forest habitat is at least 200 m from forest edge habitat. clxiv <u>Information Sources</u> -Local bird clubs. -Canadian Wildlife Service (CWS) for the location of forest bird monitoring. -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 -Reports and other information available from Conservation Authorities.</p>	<p>Studies confirm: -Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. -Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. -Conduct field investigations in spring and early summer when birds are singing and defending their territories. -Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -SWH MIST cxlix Index #34 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed species were heard calling during either of the dawn breeding bird surveys.</p>
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Habitats of Species of Conservation Concern considered SWH

Wildlife	Species	CANDIDATE SWH		CONFIRMED SWH	SWH Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
<p>Marsh Breeding Bird Habitat Rationale: Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.</p>	<p>American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan</p> <p>Special Concern: Black Tern Yellow Rail</p>	<p>MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1</p> <p>For Green Heron: All SW, MA and CUM1 sites.</p>	<p>-Nesting occurs in wetlands. -All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present cxxiv. -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. <u>Information Sources</u> -OMNRF District and wetland evaluations. -Field Naturalist clubs -Natural Heritage Information Centre (NHIC) Records. -Reports and other information available from Conservation Authorities. -Ontario Breeding Bird Atlas.</p>	<p>Studies confirm: -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 . -Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH . -Area of the ELC ecosite is the SWH. -Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. -Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -SWH MIST cxlix Index #35 provides development effects and mitigation measures</p>	<p>Absent. None of the listed communities were identified on the subject property. Furthermore, no green heron nests were observed on the subject property.</p>

<p>Open Country Bird Breeding Habitat</p> <p>Rationale: This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.</p>	<p>Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow</p> <p>Special Concern: Short-eared Owl</p>	<p>CUM1 CUM2</p>	<p>-Large grassland areas (includes natural and cultural fields and meadows) >30 ha clx, clxi, clxii, clxiii, clxiv, clxv, clxvi, clxvii, clxviii, clxix. -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). -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. -The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. <u>Information Sources</u> -Agricultural land classification maps, Ministry of Agriculture. -Local bird clubs. -Ontario Breeding Bird Atlas -EIS Reports and other information available from Conservation Authorities.</p>	<p>Field Studies confirm: -Presence of nesting or breeding of 2 or more of the listed species. -A field with 1 or more breeding Short-eared Owls is to be considered SWH. -The area of SWH is the contiguous ELC ecosite field areas. -Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. -Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -SWH MIST cxlix Index #32 provides development effects and mitigation measures</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>
<p>Shrub/Early Successional Bird Breeding Habitat</p> <p>Rationale: 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.</p>	<p><u>Indicator Spp:</u> Brown Thrasher Clay-coloured Sparrow</p> <p><u>Common Spp.</u> Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher</p> <p>Special Concern: Yellow- breasted Chat Golden-winged Warbler</p>	<p>CUT1 CUT2 CUS1 CUS2 CUW1 CUW2</p> <p>Patches of shrub ecosites can be complexed into a larger habitat for some bird species</p>	<p>Large field areas succeeding to shrub and thicket habitats>10ha clxiv in size. -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) . -Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species clxxiii. -Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. <u>Information Sources</u> -Agricultural land classification maps, Ministry of Agriculture. -Local bird clubs. -Ontario Breeding Bird Atlas -Reports and other information available from Conservation Authorities.</p>	<p>Field Studies confirm: -Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. -A habitat with breeding Yellow- breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat. -The area of the SWH is the contiguous ELC ecosite field/thicket area. -Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories -Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”ccxi -SWH MIST cxlix Index #33 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>

<p>Terrestrial Crayfish Rationale: Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare. Ccii</p>	<p>Chimney or Digger Crayfish; (<i>Fallicambarus fodiens</i>) Devil Crayfish or Meadow Crayfish; (<i>Cambarus Diogenes</i>)</p>	<p>MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.</p>	<p>Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. -Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. -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. <u>Information Sources</u> -Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for the WWF and CNF March 1998</p>	<p>Studies Confirm: -Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites cci -Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. -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 cci -SWH MIST cxlix Index #36 provides development effects and mitigation measures.</p>	<p>Absent. None of the listed communities were identified on the subject property.</p>
<p>Special Concern and Rare Wildlife Species Rationale: These species are quite rare or have experienced significant population declines in Ontario.</p>	<p>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 (NHIC).</p>	<p>All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy</p>	<p>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 lxxviii <u>Information Sources</u> -Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. -NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca -Ontario Breeding Bird Atlas -Expert advice should be sought as many of the rare spp. have little information available about their requirements.</p>	<p>Studies Confirm: -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. -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 e.g. specific nesting habitat or foraging habitat. -SWH MIST cxlix Index #37 provides development effects and mitigation measures.</p>	<p>Confirmed. One (1) provincially rare listed species (i.e., black ash) was identified on the subject property in the wetland inclusion. Special concern species (i.e., monarch and Eastern ribbonsnake) have the potential of utilizing the subject property.</p>

Animal Movement Corridors

Habitat	SPECIES	CANDIDATE SWH		CONFIRMED SWH	SWH Assessment
		ELC Eco-sites	Habitat Criteria and Information Sources	Defining Criteria	

<p>Amphibian Movement Corridors Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>Corridors may be found in all ecosites associated with water. -Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1</p>	<p>Movement corridors between breeding habitat and summer habitat clxxiv, clxxv, clxxvi, clxxvii, clxxviii, clxxix, clxxx, clxxxi. -Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule. <u>Information Sources</u> -MNRF District Office. -Natural Heritage Information Centre (NHIC). -Reports and other information available from Conservation Authorities. -Field Naturalist Clubs.</p>	<p>-Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. -Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant cxlix -Corridors should have at least 15m of vegetation on both sides of waterway cxlix or be up to 200m wide cxlix of woodland habitat and with gaps <20m cxlix . -Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat cxlix. -SWH MIST cxlix Index #40 provides development effects and mitigation measures</p>	<p>Absent. The SWH, Amphibian Breeding Habitat (Woodland/Wetland) was absent from the subject property and adjacent lands.</p>
<p>Deer Movement Corridors Rationale Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.</p>	<p>White-tailed Deer</p>	<p>Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.</p>	<p>Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule. -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 clxxxii, clxxxiii, cxlix, cxliv. -Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <u>Information Sources</u> • MNRF District Office. • Natural Heritage Information Center (NHIC). • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs</p>	<p>-Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. -Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. -Corridors should be at least 200m wide cxlix with gaps <20m cxlix and if following riparian area with at least 15m of vegetation on both sides of waterway cxlix . Shorter corridors are more significant than longer corridors, cxlix. -SWH MiST cxlix Index #39 provides development effects and mitigation measures.</p>	<p>Absent. No deer winter congregation areas or deer yarding areas were mapped on the subject property and adjacent lands.</p>

Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E

	Wildlife Habitat and	Candidate SWH	Confirmed SWH	
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EcoDistrict	Wildlife Habitat and Species	Ecosites	Habitat Description, Criteria and Information	Defining Criteria	SWH Assessment
<p>6E-14</p> <p>Rationale: 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. clxxxvi, ccxvii</p>	<p>Mast Producing Areas</p> <p>Black Bear</p>	<p>All Forested habitat represented by ELC Community Series:</p> <p>FOM FOD</p>	<p>-Black bears require forested habitat that provides cover, winter hibernation sites, and mastproducing tree species. clxxxv, clxxxvii, clxxxviii, clxxxix, cxc, cxci, cxcii, cxcii, ccxvii</p> <p>-Forested habitats need to be large enough to provide cover and protection for black bears ccxvii.</p> <p>Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech).</p> <p>Information Sources Important forest habitat for black bears may be identified by OMNRF.</p>	<p>-All woodlands > 30 ha with a 50% composition of these ELC Vegetation Types are considered significant:</p> <p>FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5</p> <p>SWHMiST cxlix Index #3 provides development effects and mitigation measures.</p>	<p>Absent. The subject property is not located in EcoDistrict 6E-14.</p>

<p>6E-17</p> <p>Rationale: Sharp-tailed grouse only occur on Manitoulin Island in Ecoregion 6E, Leks are an important habitat to maintain their population.</p>	<p>Lek</p> <p>Sharp-tailed Grouse</p>	<p>CUM CUS CUT</p>	<p>-The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography . -Leks are typically a grassy field/meadow >15ha with adjacent shrublands and >30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated.</p> <p>Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland. -Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) -Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting</p> <p>Information Sources <ul style="list-style-type: none"> • OMNRF district office • Bird watching clubs • Local landowners • Ontario Breeding Bird Atlas </p>	<p>Studies confirming lek habitat are to be completed from late March to June. -Any site confirmed with sharp-tailed grouse courtship activities is considered significant -The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat -SWHMiST cxlix Index #32 provides development effects and mitigation measures</p>	<p>Absent. The subject property is not located in EcoDistrict 6E-17.</p>
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Criteria		Standards	Significant Woodland Assessment
1. Woodland Size Criteria		<p>Where woodlands cover:</p> <ul style="list-style-type: none"> - is less than about 5% of the land cover, woodlands 2 ha in size or larger should be considered significant - is about 5–15% of the land cover, woodlands 4 ha in size or larger should be considered significant - is about 15–30% of the land cover, woodlands 20 ha in size or larger should be considered significant - is about 30–60% of the land cover, woodlands 50 ha in size or larger should be considered significant - occupies more than about 60% of the land, a minimum size is not suggested, and other factors should be considered <p>Note: The size threshold should be reduced in the absence of information for the other three criteria. As a consideration in addressing the potential loss of biodiversity, the largest woodland in the planning area (or sub-unit) should be identified as significant.</p>	<p>According to the Penetanguishene Natural Heritage Study Update by Severn Sound Environmental Association (2017), the Town of Penetanguishene has 50% forest cover. The woodland feature that covers the subject property and extends across the greater landscape is estimated to be greater than 50 ha in size and therefore, should be considered significant for this criteria.</p>
2. Ecological Functions Criteria	a. Woodland interior	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> - any interior habitat where woodlands cover less than about 15% of the land cover - 2 ha or more of interior habitat where woodlands cover about 15–30% of the land cover - 8 ha or more of interior habitat where woodlands cover about 30–60% of the land cover - 20 ha or more of interior habitat where woodlands cover more than about 60% of the land cover 	<p>The woodland feature that covers the subject property and extends across the greater landscape is estimated to have greater than 8 ha of interior habitat and therefore, should be considered significant for this criteria.</p>
	b. Proximity to other woodlands or other habitats	<p>Woodlands should be considered significant if:</p> <ul style="list-style-type: none"> - a portion of the woodland is located within a specified distance (e.g., 30 m) of a significant natural feature or fish habitat likely receiving ecological benefit from the woodland and the entire woodland meets the minimum area threshold (e.g., 0.5–20 ha, depending on circumstance) 	<p>The woodland feature that covers the subject property and extends across the greater landscape is connected to Georgian Bay, Sucker Creek Wetland, and other fish habitat and meets the minimum area threshold. Therefore, the woodland feature that covers the subject property and extends across the greater landscape should be considered significant for this criteria.</p>
	c. Linkages	<p>Woodlands should be considered significant if they:</p> <ul style="list-style-type: none"> - are located within a defined natural heritage system or provide a connecting link between two other significant features, each of which is within a specified distance (e.g., 120 m) and meets minimum area thresholds (e.g., 1–20 ha, depending on circumstance) 	<p>The woodland feature that covers the subject property and extends across the greater landscape is connected to Georgian Bay, Sucker Creek Wetland, and other fish habitat and meets the minimum area threshold. Therefore, the woodland feature that covers the subject property and extends across the greater landscape should be considered significant for this criteria.</p>
	d. Water protection	<p>Woodlands should be considered significant if they:</p> <ul style="list-style-type: none"> - are located within a sensitive or threatened watershed or a specified distance (e.g., 50 m or top of valley bank if greater) of a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, watercourse or fish habitat and meet minimum area thresholds (e.g., 0.5–10 ha, depending on circumstance) 	<p>The woodland feature that covers the subject property and extends across the greater landscape is connected to fish habitat and meets the minimum area threshold. Therefore, the woodland feature that covers the subject property and extends across the greater landscape should be considered significant for this criteria.</p>

	<p>e. Woodland diversity</p> <p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> - a naturally occurring composition of native forest species that have declined significantly south and east of the Canadian Shield and meet minimum area thresholds (e.g., 1–20 ha, depending on circumstance) - a high native diversity through a combination of composition and terrain (e.g., a woodland extending from hilltop to valley bottom or to opposite slopes) and meet minimum area thresholds (e.g., 2–20 ha, depending on circumstance) 	<p>The portion of the woodland feature that covers the subject property does not exhibit the key features to be considered as meeting the standards for 'woodland diversity' as described. Not enough data is known about the woodland feature that extends across the greater landscape to appropriately evaluate this criteria.</p>
<p>3. Uncommon Characteristics Criteria</p>	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> - a unique species composition or the site is represented by less than 5% overall in woodland area and meets minimum area thresholds (e.g., 0.5 ha, depending on circumstance) - a vegetation community with a provincial ranking of S1, S2 or S3 (as ranked by the NHIC and meet minimum area thresholds (e.g., 0.5 ha, depending on circumstance) - habitat (e.g., with 10 individual stems or 100 m2 of leaf coverage) of a rare, uncommon or restricted woodland plant species and meet minimum area thresholds (e.g., 0.5 ha, depending on circumstance): <ul style="list-style-type: none"> a. vascular plant species for which the NHIC’s Southern Ontario Coefficient of Conservatism is 8, 9 or 10 b. tree species of restricted distribution such as sassafras or rock elm c. species existing in only a limited number of sites within the planning area - characteristics of older woodlands or woodlands with larger tree size structure in native species and meet minimum area thresholds (e.g., 1–10 ha, depending on circumstance): <ul style="list-style-type: none"> a. older woodlands could be defined as having 10 or more trees/ha greater than 100 years old b. larger tree size structure could be defined as 10 or more trees/ha at least 50 cm in diameter, or a basal area of 8 or more m2 /ha in trees that are at least 40 cm in diameter 	<p>The portion of the woodland feature that covers the subject property does not exhibit the key features to be considered as meeting the standards for 'uncommon characteristics' as described. Not enough data is known about the woodland feature that extends across the greater landscape to appropriately evaluate this criteria.</p>
<p>4. Economic and Social Functional Values Criteria</p>	<p>Woodlands should be considered significant if they have:</p> <ul style="list-style-type: none"> - high productivity in terms of economically valuable products together with continuous native natural attributes and meet minimum area thresholds (e.g., 2–10 ha, depending on circumstance) - a high value in special services, such as air-quality improvement or recreation at a sustainable level that is compatible with long-term retention and meet minimum area thresholds (e.g., 0.2–10 ha, depending on circumstance) - important identified appreciation, education, cultural or historical value and meet minimum area thresholds (e.g., 0.2–10 ha, depending on circumstance) 	<p>The woodland feature that covers the subject property and extends across the greater landscape has not been identified as having high productivity, high value in special services, or important identification and therefore would not be considered significant for this criteria.</p>

List of Appendices

- Appendix A: Terms of Reference
- Appendix B: NHIC Information Request
- Appendix C: MECP Consultation

Appendix A: Terms of Reference



Cassandra Fligg <sumacenvironmental@gmail.com>

70 Polish Avenue, Penetanguishene

Owen Taylor <otaylor@penetanguishene.ca>
To: Cassandra Fligg <sumacenvironmental@gmail.com>
Cc: Andrea Betty <abetty@penetanguishene.ca>

Tue, May 17, 2022 at 11:53 AM

Hi Cassandra,

The proposed TOR have been reviewed by SSEA with revisions noted in red.

Any questions please let me know.

At the request of the Town (via email on May 5th, 2022), the SSEA has reviewed the proposed Terms of Reference for the EIS for [70 Polish Ave, Penetanguishene](#).

Aerial imagery and available background mapping shows that the property is predominantly wooded (part of a woodland that extends offsite), and an unevaluated wetland is mapped partially on site (and extending offsite).

*SSEA offers the following comments and clarification on the proposed scope of work for the EIS, including modifications/additions (shown in **red text**) to what has been proposed (which is shown below in italics).*

[Proposed Terms of Reference for 70 Polish Avenue, Penetanguishene:](#)

Sumac anticipates the following tasks be required for the completion of the Environmental Impact Study (EIS):

- *Complete a background review of documented occurrences of Species at Risk (SAR) and natural heritage **features and functions** in the area and submit an inquiry to the Ministry of Environment, Conservation and Parks for additional data.*
- *Complete the following field studies on the subject property:*
 1. *Assess the potential for forested communities identified on the subject property to function as high quality maternity roost for SAR bats in April of 2022 - **to be conducted during leaf-off conditions**.*
 2. *Complete a single-season vascular plant inventory in June of 2022.*
 3. *Classify vegetation communities following protocol of the Ecological Land Classification of Southern Ontario (Lee et al. 1998) in June of 2022. **ELC descriptions should include the size of the community (both on-site and an estimate for off-site); for development proposals on or adjacent to land identified as potential or confirmed Significant Woodlands, descriptions of species, composition, and age structure are also required***
 4. *Delineate the limits of wetland feature(s) during the active growing season.*
 5. *Complete three (3) amphibian breeding surveys in April, May and June of 2022 following the Marsh Monitoring Protocol (CWS and Bird Studies Canada) - **if habitat that is potentially suitable for breeding***

amphibians is present, larval observational surveys must also be conducted, including for salamanders (i.e. not just calling amphibian species).

6. Complete two (2) dawn breeding bird surveys following protocol as described by the Ontario Breeding Bird Atlas (OBBA, 2001) in June of 2022 *and nocturnal surveys for nightjars (during appropriate moon phase and when moon is visible in sky) if suitable habitat exists for these species.*
7. Assess the potential for fish and fish habitat in general accordance with OSAP protocol.
8. Record incidental occurrences of wildlife and habitat.

With the information collected from the above noted activities, an EIS will be prepared with particular emphasis on the following:

1. A description of the form and function of natural heritage feature(s) identified on the subject property and adjacent lands (i.e. up to 120 m).
2. A SAR screening that assesses the potential for SAR and/or their habitat on the subject property and adjacent lands.
3. A Significant Wildlife Habitat (SWH) screening that assesses the potential for SWH areas on the subject property and adjacent lands.
4. A review of environmental policy and regulations applicable to the subject property based on location and existing conditions.
5. Impact assessment that identifies any potential impacts to the identified natural heritage feature(s) as a result of the proposed development.
6. Mapping that depicts natural heritage feature(s), buffer areas, proposed development footprint, etc., where applicable.
7. Recommendations and mitigation measures (e.g. alternative design considerations, sensitive timing windows, etc.).

Additional notes and clarification on EIS requirements

The EIS will:

1. Describe existing biophysical conditions and appropriately address natural heritage features and areas and any applicable adjacent lands that are subject to regulations (e.g., Fisheries Act, Endangered Species Act) and planning policies (e.g., Provincial Policy Statement, upper- and/or lower-tier Official Plan, Growth Plan for the Greater Golden Horseshoe, etc.). This includes documenting and delineating the presence and location of any known or previously unknown or undocumented natural heritage features (e.g., wetlands, vernal pools, watercourses, Species At Risk habitat features, Significant Wildlife Habitat) during the appropriate season(s), taking into consideration any applicable federal or provincial policies/legislation and guidance documents.
2. Establish and address Species At Risk (SAR) that have potential habitat or have potential to be on-site or the adjacent lands, based on the habitat and features present and as identified through field studies. Background information sources and species occurrence records/range maps will be consulted (e.g., information request to province, NHIC, Ontario Breeding Bird Atlas, Reptiles and Amphibian Atlas, etc.). 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. 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.
3. 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, also 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.**

4. Assess potential direct and indirect impacts of the proposal and its interactions with the natural heritage features/areas, sensitive or significant natural heritage features and their related ecological and hydrological functions. The EIS will inform the proposal and establish what portions of the subject lands can be developed based on an ecological rationale (e.g., assist in defining suitable lot sizes and configurations/development envelopes which take into consideration appropriate buffers/setbacks 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).
5. 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) and identify opportunities for enhancement, restoration, or monitoring.

Report & Mapping

6. Map ELC vegetation communities and other natural heritage features or functions (e.g., potential or confirmed significant wildlife habitat, SAR habitat, drainage features, wetlands, vernal pools, areas of ground water discharge, etc.), overlaid on current high-quality aerial photos. Mapping is to show the environmental features with the imagery, and also the proposed development together with (e.g., superimposed on) the environmental features and the imagery.
7. The EIS and the biophysical surveys undertaken in support of it must be completed by appropriately qualified professional(s) with any applicable training or certification(s) relevant to the required work [I am not familiar with Sumac consulting; information on their qualifications and experience should be provided]. Field work will be conducted during appropriate season(s), weather conditions and using suitable protocols to identify and evaluate the natural feature(s) and their ecological functions. All field work will be described to the following standards:
 - a. Date, time, and duration of field work/survey (including start time, end time of site investigations)
 - b. Sampling locations and/or area searched (i.e., identified on a map)
 - c. Purpose of field work and survey protocol(s) used/ summary of investigation methods
 - d. Relevant temperature and weather conditions during site investigations (cloud cover, wind speed [Beaufort scale or km/h], precipitation [type and amount])
 - e. Personnel involved (name and qualifications)
8. Copies of the approved Terms of Reference and correspondence with relevant agencies will be included as appendices to the EIS.

The EIS report that is submitted should be in an electronic format that allows copying and pasting of text, to facilitate review/commenting.

Regards,

Owen Taylor, BEDP

Planner

Town of Penetanguishene

10 Robert Street West, P.O. Box 5009

Penetanguishene, ON L9M 2G2

(tel) 705-549-7453 ext. 251

(fax) 705-549-3743

Appendix B: NHIC Information Request



Cassandra Fligg <sumacenvironmental@gmail.com>

Restricted Species Record

NHIC-Requests (NDMNRF) <nhicrequests@ontario.ca>
To: Cassandra Fligg <sumacenvironmental@gmail.com>
Cc: "NHIC-Requests (NDMNRF)" <nhicrequests@ontario.ca>

Thu, May 5, 2022 at 11:06 AM

Hello Cassandra,
The name of the restricted species associated with those squares, is [REDACTED].

Regards,

Tanya Taylor

Natural Heritage Information Centre

Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)

Ministère du Développement du Nord, des Mines, des Richesses Naturelles et des Forêts (DNMRNF)

[300 Water Street, 2nd Floor North](#)

Peterborough, ON K9J 3C7

NHICrequests@ontario.ca | 705.755.2159

Please Note: As part of providing [accessible customer service](#), please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: May 5, 2022 10:45 AM
To: NHIC-Requests (NDMNRF) <nhicrequests@ontario.ca>
Subject: Restricted Species Record

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

Good morning,

Sumac Environmental Consulting Ltd. (Sumac) has been retained to complete an Environmental Impact Study at 70 Polih Avenue, Penetanguishene.

A search for documented occurrence() of natural heritage and Species at Risk (SAR) in the local area, including a search using the Natural Heritage Information Centre (NHIC) Make-a-Map Tool was completed. The NHIC database documented the occurrence of a Restricted Species in Atlas NAD83 Identification No. 17NK8861 and 17NK8961.

At this time, I ask that you please identify the 'Restricted Species' as mentioned above.

Should you have any questions, please do not hesitate to ask.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting Ltd.

70 Hawthorne Crescent, Barrie ON, L4N 9Y8

Tel: (249) 880-4676

Mobile: (705) 627-7754

www.sumacenvironmental.ca

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Appendix C: MECP Consultation



Technical Memorandum

To: Ministry of Environment, Conservation and Parks

From: Cassandra Fligg, Environmental Consultant at Sumac Environmental Consulting Ltd.

Date: May 5, 2022

Re: SEC 22-027 Information Request

Project ID: SEC 22-027 Polish Avenue

Municipal Address: 70 Polish Avenue, Penetanguishene

UTM Coordinates: 17T 589024 m E, 4961346 m N (Figure 1)

Project Overview: Proposed lot severance and development of two (2) single-family dwellings and associated amenities.

Background Review: A search for documented occurrence(s) of natural heritage and Species at Risk (SAR) in the local area was completed. The following information summarizes our findings:

Background mapping from the Natural Heritage Information Centre and observations noted during a preliminary site visit by Sumac staff in 2022 suggests the presence of the following features on the subject property and/or adjacent lands (*i.e.* up to 120 m):

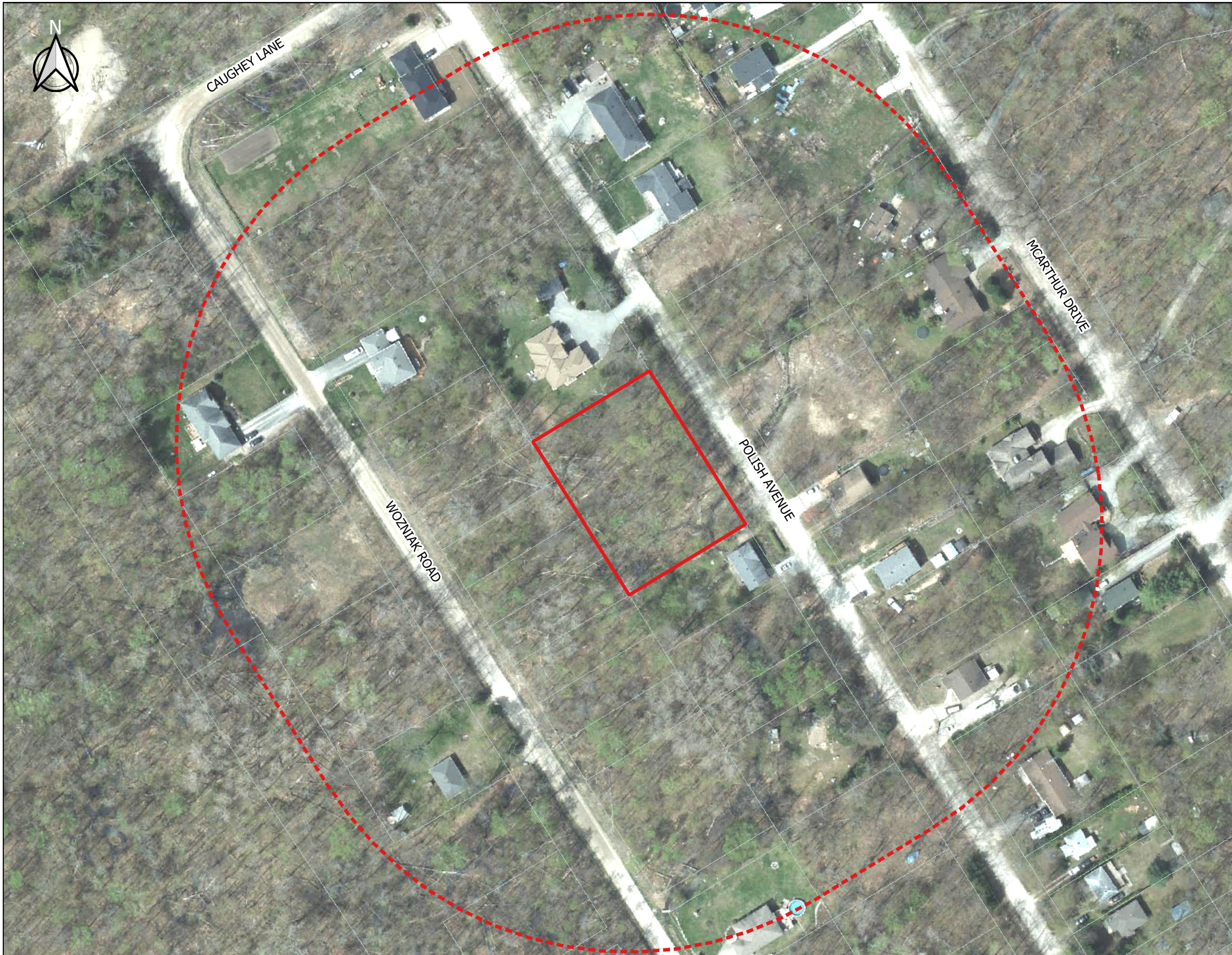
- Unevaluated wetland; and
- Woodland.

Upon review of publicly available online resources and related documents, the following SAR have been documented in the local area:



- Birds: Bald eagle, bank swallow, barn swallow, black tern, bobolink, Canada warbler, Cerulean warbler, chimney swift, common nighthawk, Eastern meadowlark, Eastern whip-poor-will, Eastern wood-pewee, evening grosbeak, golden-winged warbler, grasshopper sparrow, king rail, least bittern, loggerhead shrike, Louisiana waterthrush, olive-sided flycatcher, peregrine falcon, piping plover, red-headed woodpecker, short-eared owl, wood thrush and yellow rail;
- Fish: Lake sturgeon (Great Lakes – Upper St. Lawrence River Population);
- Insects: Monarch;
- Mammals: Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis and Tri-colored Bat;
- Plants: Butternut; and



- Reptiles: Blanding's turtle, Eastern hog-nosed snake, Eastern musk turtle, Eastern ribbonsnake, five-lined skink, Massasauga (Great Lakes / St. Lawrence population), Northern map turtle, snapping turtle and spotted turtle.



Legend

-  Subject Property
-  Adjacent Lands

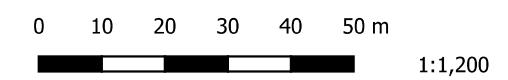


Figure 1: Subject Property



Designed by: N.F.
Date: 05/05/2022
Project: SEC 22-027



Cassandra Fligg <sumacenvironmental@gmail.com>

MECP SARB Review: Information Request 70 Polish Ave

Snell, Shamus (MECP) <Shamus.Snell@ontario.ca>
To: Cassandra Fligg <sumacenvironmental@gmail.com>

Fri, May 6, 2022 at 11:36 AM

Hi Cassandra,

The Ministry of Environment, Conservation and Parks (MECP) Species at Risk Branch (SARB) has conducted a review of the subject property located at 70 Polish Avenue and did not detect any additional Species at Risk (SAR) occurrences which need to be considered as part of your species list.

While this review represents MECP's best currently available information, it is important to note that a lack of information for a site does not mean that SAR or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in areas not previously surveyed. On-site assessments and surveys are required to better verify site conditions, identify and confirm the presence of SAR and/or their habitats.

There are a handful of Blanding's Turtle occurrences less than 2 km away from the subject property with the nearest occurring roughly ~700 meters away to the south east of the subject property. This observation and the others would trigger the habitat protection for Blanding's Turtle under the Endangered Species Act (ESA). The General Habitat Description (GHD) for Blanding's Turtle (attached) suggests that there is the potential that the subject property may be considered Category 2 or 3 habitat.

- Location of nearest Blanding's Turtle occurrence: NAD 83 Zone 17T 589532e 4960873; Date: 2020-06-22

There is a Massasauga occurrence roughly 1.1 km away from the subject property. This occurrence would trigger the habitat protection as defined by the GHD for Massasauga (attached).

- Location of nearest Massasauga occurrence: NAD 83 Zone 17T 589219e 4960158; Date: 2013-05-20

The 2021 Bat Survey Standards Note and related protocols have been attached to this email for your reference and consideration.

It is the responsibility of the proponent to ensure that SAR are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the proposed activities to be carried out on the site. If the proposed activities can not avoid impacting protected species and their habitats then the proponent will need to apply for a authorization under the Endangered Species Act.

Regards,

Shamus Snell

A/ Management Biologist

Species at Risk Branch

Ministry of the Environment, Conservation and Parks

Email: shamus.snell@ontario.ca

From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: May 5, 2022 11:24 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: Information Request, Simcoe County

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

Good morning,

Sumac Environmental Consulting Ltd. (Sumac) has been retained to complete an Environmental Impact Study at [70 Polish Avenue, Penetanguishene](#) for a proposed lot severance and the development of two (2) single-family dwelling and associated amenities.

At this time, Sumac requests that you review the attached document and indicate whether or not the Ministry of Environment, Conservation and Parks has additional natural heritage or species at risk occurrence that should be considered for the subject property and adjacent lands (*i.e.* up to 120 m).

I'm available to discuss, should you have any questions.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting Ltd.

[70 Hawthorne Crescent, Barrie ON, L4N 9Y8](#)

Tel: (249) 880-4676

Mobile: (705) 627-7754

www.sumacenvironmental.ca

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7 attachments



Bat Survey Standards Note 2021.pdf
114K



Treed Habitats - Maternity Roost Surveys.docx
25K



SAR Bat Building Exit and Roost Survey Protocols.docx
41K



GHD_Blanding's_Turtle.pdf
300K



BMP_Snake_Habitat.pdf
8025K



Survey_Protocol_Snakes.pdf
5500K



GHD_Massasauga.pdf
268K



Cassandra Fligg <sumacenvironmental@gmail.com>

MECP SARB Review: Information Request 70 Polish Ave

Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
To: Cassandra Fligg <sumacenvironmental@gmail.com>

Wed, Nov 23, 2022 at 2:15 PM

Hello Cassandra,

Thank you for providing additional information regarding this site. The Ministry of the Environment, Conservation and Parks (MECP) has reviewed the information provided to assess the potential impacts of the proposal on Little Brown Myotis and Blanding's Turtle protected under the *Endangered Species Act, 2007* (ESA).

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

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

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

We also note that while it does not appear that an ESA permit will be required, the proposed activities may be subject to other approvals, such as those issued by local municipalities and conservation authorities. Please be advised that it is the responsibility of the proponent to be aware of and comply with all other relevant provincial or federal requirements, municipal by-laws or required approvals from other agencies. It is also the responsibility of the proponent to ensure that all required approvals are obtained and relevant policies adhered to.

Should you have any questions please feel free to contact me.

Thank you,

Megan

Megan Eplett | Management Biologist | Landscape Species Recovery Section | Species at Risk Branch

Ministry of the Environment, Conservation and Parks | Email: megan.eplett@ontario.ca

From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: Thursday, November 10, 2022 2:54 PM
To: Eplett, Megan (MECP) <Megan.Eplett@ontario.ca>
Subject: Re: MECP SARB Review: Information Request 70 Polish Ave

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

Hi Megan,

Please see the attached table that identifies the results of the acoustic surveys (Table 1). It should be noted that although there was only one (1) pass of Northern myotis detected, the recorded wavelength falls within the acceptable limits of Northern myotis based on a number of criteria (e.g., highest apparent frequency, lowest apparent frequency, inflection, duration, etc.) in accordance with the data reported by the Humboldt State University Bat Lab (Humboldt State University, 2011) and [Recognition of Species of Insectivorous Bats by their Echolocation Calls](#) (Fenton et al., 1981).

A wetland inclusion measuring approximately 160 m² in size occurred beneath the sugar maple dominated canopy at the southeast corner of the subject property (Figure 2). The wetland inclusion consisted of a subcanopy of American elm, European buckthorn, green ash and black ash. The ground level of the wetland inclusion was partially flooded in the spring, specifically at the lowest elevations amongst pit-and-mound topography. No amphibian egg masses were observed. No standing water was observed in summer of 2022. Areas of seasonal flooding occurrence within the wetland inclusion were unvegetated with the exception of the occasional ground cover (e.g., American black currant, sensitive fern, stinging nettle). The relatively high elevations within the wetland inclusion were vegetated with upland species (e.g., blue cohosh, poison ivy, Pennsylvania sedge, black cherry). Surface water draining from the wetland inclusion northeast via an intermittent stream was observed following spring freshet. No anuran were heard calling from this feature (or anywhere on the subject property) during the spring frog surveys. Given the overall size and anticipated limited function, it is our understanding that this feature would not likely function as Blanding's turtle habitat. Please advise if the MECP is in agreement with this assumption.

We recommend erecting five (5) 4-chamber bat houses to replace each tree assessed as having potential for providing suitable bat habitat removed from the FOD5 community.

The following recommendations have been made as it relates to the proposed development:

- Preventing Entry of Deleterious Substances in Aquatic Feature(s): Deleterious substances should never be deposited and/or enter aquatic feature(s), including wetland. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not be completed in or near (i.e. up to 30 m) of aquatic feature(s).
- Sensitive Timing Window: As a precaution to protect breeding birds and bats, vegetation removal and tree clearing should not occur between April 1 and September 30 of any given year.
- Species at Risk Encounters: Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes. Construction staff should not attempt to capture or handle most kinds of wildlife, unless an animal is in imminent peril or is injured and cannot wait for rescue by qualified personnel. Improper handling can result in injuries to both workers and wildlife, and may in some cases contravene provincial or federal legislation. Removal and relocation of mammals, in particular, should only be done by qualified wildlife service providers working in accordance with applicable laws (i.e. Fish and Wildlife Conservation Act, 1997).
- Perimeter Control: Tree preservation hoarding with woven geotextile fabric is recommended to protect the woodland feature and control sediment (Figure 3). Wildlife exclusion fencing is recommended to prevent entry of SAR reptiles known to occur in the local area to the construction area (Figure 3). The wildlife exclusion fence should be installed with turn-arounds to assist in redirecting wildlife away from Polish Avenue. The fencing material should consist of more durable materials that can withstand the anticipated timeframe of the proposed site works (e.g., heavy-duty geotextile with a minimum density of 270R or equivalent woven geotextile fabric). The fence should be buried a minimum depth of 10 – 20 cm with a horizontal lip extending outward an additional 10 to 20 cm. The minimum height of the fence after it has been installed including the buried components and any installed overhangs or extended lips is 100 cm. The overhang or lip should point towards the species side. For support, this fencing uses a woven wire fence (e.g., chain link) or some other structure. The wire fence should be installed on the activity side. Backfill and compact soil along the entire length on both sides of the fence. A survey of the enclosed/secluded area should be conducted immediately following fence installation to ensure that no individuals have been trapped on the wrong side of the fence. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail. Hoarding and wildlife exclusion fence should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity.
- Water Balance: Due to the proximity of the proposed development to water features, any grading or filling to be conducted in the study area should be designed to maintain existing overland flow patterns and ensure infiltration will match pre- and post-development.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting Ltd.

[200 Muirfield Drive, Barrie ON, L4N 6K7](#)

Tel: (249) 880-4676

Mobile: (705) 627-7754

www.sumacenvironmental.ca

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On Mon, Oct 31, 2022 at 11:44 AM Eplett, Megan (MECP) <Megan.Eplett@ontario.ca> wrote:

Hello Cassandra,

MECP has reviewed the information provided below collected to inform potential species at risk habitat features at 70 Polish Avenue in Penetanguishene. MECP understands the landowner wishes to sever the lot to allow for two residential dwellings with associated amenities (septic, etc.).

It is noted from your email below the areas are currently forested and surveys were undertaken to assess habitat and use by species at risk bats on site. Your email below states that Northern Myotis was identified through acoustic monitoring. Can you please provide the results of the acoustic surveys?

The figures provided show a wetland inclusion area on the property however below you have indicated there is no suitable habitat for Blanding's Turtle on site. Can you please provide additional information or rationale regarding why this wetland area was not determined to be habitat for the species?

As the area could be considered category 3 or movement habitat for several SAR Reptiles could you please provide information on any planned mitigation measures that may be implemented on site during construction?

Thanks,

Megan

Megan Eplett | Management Biologist | Landscape Species Recovery Section | Species at Risk Branch

Ministry of the Environment, Conservation and Parks | Email: megan.eplett@ontario.ca

From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: Friday, October 21, 2022 4:11 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: Fwd: MECP SARB Review: Information Request 70 Polish Ave

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

Good afternoon,

The landowner of [70 Polish Avenue, Penetanguishene](#) (Figure 1; UTM Coordinates: 17T 589024 m E 4961346 m N) wishes to sever the subject property to create one (1) new parcel of land and develop each parcel with a single-family dwelling and associated amenities.

A Species at Risk Screening (Table 1) was completed as part of the Environmental Impact Study for the proposed development whereby candidate habitat of the following endangered and threatened species were identified on the subject property:

- Birds: Barn swallow and chimney swift;
- Mammals: Eastern small-footed myotis, little brown myotis, Northern Myotis and Tri-colored Bat;
- Reptiles: Blanding's turtle, Eastern hog-nosed snake, Eastern ribbonsnake, Massasauga; and
- Vascular Plants: Butternut.

The attached Figure 2 provides mapping of the vegetation communities on the subject property.

Barn Swallow: Suitable nesting habitat for barn swallow could occur within 200 m of the subject property associated with the existing structures on adjacent lands. Two (2) breeding bird surveys were completed following the protocol as described by the Ontario Breeding Bird Atlas (Birds Canada, 2001). No barn swallow were observed or heard calling during the dawn breeding bird surveys and therefore, the subject property is not anticipated to be considered as regulated habitat for barn swallow.

Chimney Swift: Uncapped chimneys with the potential of functioning as suitable habitat for chimney swift may occur on adjacent lands associated with the existing structures east of Polish Avenue. Two (2) breeding bird surveys were completed following the protocol as described by the Ontario Breeding Bird Atlas (Birds Canada, 2001). No chimney swift were observed or heard calling during the dawn breeding bird surveys nor through incidental occurrence and therefore, the subject property is not anticipated to be considered as regulated habitat for chimney swift.

Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis and Tri-colored Bat: Detailed mapping of snag/cavity trees was completed in the portion of the FOD5 community that falls within the limits of the subject property in general accordance with the protocol described in the Treed Habitats - Maternity Root

Surveys guidance document as provided by the MECP in 2022. The mapping exercise was completed by Sumac staff on April 7, 2022. Data collected from this exercise was used 1) to calculate snag density in efforts of identifying high quality potential maternity roost habitat. Passive acoustic monitoring was completed in June of 2022 using the Song Meter Mini Bat by Wildlife Acoustics to ensure full coverage of the subject property. Two (2) monitoring stations were used (Figure 2). Data was initially analyzed using Kaleidoscope Pro Analysis Software. Individual wavelengths and frequency of each recording was further scrutinized by Sumac staff to appropriately evaluate species presence

The FOD5 community was assessed as high quality potential maternity roost habitat. Northern myotis was detected using acoustic monitoring in the FOD5 community and therefore, the subject property is anticipated to be considered as regulated habitat for Northern myotis. No other SAR bats were detected in the FOD5 community. Foraging habitat for Northern myotis may include the intermittent stream and wetland inclusion.

Blanding's Turtle: Blanding's turtle has been documented within 2 km of the subject property associated with the Sucker Creek Wetland. No suitable wetlands or waterbodies for Blanding's turtle were identified on the subject property or within 30 m of the adjacent lands. Suitable wetlands for Blanding's turtle may occur within 250 m of the subject property and therefore, the subject property has the potential to be considered as Category 3 regulated habitat for Blanding's turtle. No candidate turtle nesting habitat was observed on the subject property.

Eastern Hog-nosed Snake: As it pertains to Eastern hog-nosed snake, no American toad were heard calling during the amphibian breeding surveys on the subject property. No thermoregulation, foraging, reproduction, shedding sites anticipated on the subject property. The subject property could be used as movement habitat for Eastern hog-nosed snake, should this species be present.

Massasauga: Massasauga has been documented approximately 1.1 km from the subject property. As such, the forested community that extends onto the subject property could be considered as Category 3 regulated habitat for Massasauga. Category 3 habitat is generally depended upon for life processes including foraging and movements between gestation sites, hibernacula and other activity areas.

The proposed development supports a lot severance and the construction of two (2) single-family dwellings measuring approximately 110 m² each. The limit of disturbance as provided by the landowner and depicted on Figure 3, includes the proposed buildings footprints, proposed well and septic locations, proposed soil absorption areas for sewage dispersal, proposed driveways and construction accessibility areas. The total area of disturbance is approximately 540 m². The proposed development has been strategically designed to avoid encroachment into the wetland inclusion, intermittent stream, ephemeral stream and lands designated as Environmental Protection Area as per the Town of Penetanguishene Official Plan (office consolidation 2018).

I'm happy to provide additional information upon request.

Otherwise, I ask that you please review the information provided and make recommendations for next-steps.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting Ltd.

200 Muirfield Drive, Barrie ON, L4N 6K7

Tel: (249) 880-4676

Mobile: (705) 627-7754

www.sumacenvironmental.ca

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----- Forwarded message -----

From: Snell, Shamus (MECP) <Shamus.Snell@ontario.ca>

Date: Fri, May 6, 2022 at 11:36 AM

Subject: MECP SARB Review: Information Request 70 Polish Ave

To: Cassandra Fligg <sumacenvironmental@gmail.com>

Hi Cassandra,

The Ministry of Environment, Conservation and Parks (MECP) Species at Risk Branch (SARB) has conducted a review of the subject property located at [70 Polish Avenue](#) and did not detect any additional Species at Risk (SAR) occurrences which need to be considered as part of your species list.

While this review represents MECP's best currently available information, it is important to note that a lack of information for a site does not mean that SAR or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in areas not previously surveyed. On-site assessments and surveys are required to better verify site conditions, identify and confirm the presence of SAR and/or their habitats.

There are a handful of Blanding's Turtle occurrences less than 2 km away from the subject property with the nearest occurring roughly ~700 meters away to the south east of the subject property. This observation and the others would trigger the habitat protection for Blanding's Turtle under the Endangered Species Act

(ESA). The General Habitat Description (GHD) for Blanding's Turtle (attached) suggests that there is the potential that the subject property may be considered Category 2 or 3 habitat.

- Location of nearest Blanding's Turtle occurrence: NAD 83 Zone 17T 589532e 4960873; Date: 2020-06-22

There is a Massasauga occurrence roughly 1.1 km away from the subject property. This occurrence would trigger the habitat protection as defined by the GHD for Massasauga (attached).

- Location of nearest Massasauga occurrence: NAD 83 Zone 17T 589219e 4960158; Date: 2013-05-20

The 2021 Bat Survey Standards Note and related protocols have been attached to this email for your reference and consideration.

It is the responsibility of the proponent to ensure that SAR are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the proposed activities to be carried out on the site. If the proposed activities can not avoid impacting protected species and their habitats then the proponent will need to apply for a authorization under the Endangered Species Act.

Regards,

Shamus Snell

A/ Management Biologist

Species at Risk Branch

Ministry of the Environment, Conservation and Parks

Email: shamus.snell@ontario.ca

From: Cassandra Fligg <sumacenvironmental@gmail.com>

Sent: May 5, 2022 11:24 AM

To: Species at Risk (MECP) <SAROntario@ontario.ca>

Subject: Information Request, Simcoe County

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

Good morning,

Sumac Environmental Consulting Ltd. (Sumac) has been retained to complete an Environmental Impact Study at [70 Polish Avenue, Penetanguishene](#) for a proposed lot severance and the development of two (2) single-family dwelling and associated amenities.

At this time, Sumac requests that you review the attached document and indicate whether or not the Ministry of Environment, Conservation and Parks has additional natural heritage or species at risk occurrence that should be considered for the subject property and adjacent lands (*i.e.* up to 120 m).

I'm available to discuss, should you have any questions.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting Ltd.

[70 Hawthorne Crescent, Barrie ON, L4N 9Y8](#)

Tel: (249) 880-4676

Mobile: (705) 627-7754

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Scientific Name	Common Name	Acoustic Monitoring Station																								S-Rank ^A	G-Rank ^B	Species at Risk Status	
		MB-3												MB-5														Provincial ^C	Federal ^D
		June 20, 2022	June 21, 2022	June 22, 2022	June 23, 2022	June 24, 2022	June 25, 2022	June 26, 2022	June 27, 2022	June 28, 2022	June 29, 2022	June 30, 2022	June 20, 2022	June 21, 2022	June 22, 2022	June 23, 2022	June 24, 2022	June 25, 2022	June 26, 2022	June 27, 2022	June 28, 2022	June 29, 2022	June 30, 2022						
<i>Lasiurus cinereus</i>	Hoary Bat		X ^E (2) ^F		X(1)							X(1)		X(2)	X(1)	X(1)								S4	G3G4				
<i>Lasionycteris noctivagans</i>	Silver-haired Bat	X(1)																						S4	G3G4				
<i>Myotis septentrionalis</i>	Northern Myotis																X(1)							S3	G1G2	END	END		

^AProvincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRrank.htm.

^BGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRrank.htm.

^CSpecies at Risk status as per the O. Reg. 230/08.

^DSpecies at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)*.

^EX = Species Detected

^FNumber of passes