Scoped Environmental Impact Study

1457 Tay Point Road

Town of Penetanguishene

Prepared for:
David Puddicombe

Prepared by:
Azimuth Environmental
Consulting, Inc.

December 2023

AEC 21-327

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

December 5, 2023 AEC 21-327

David Puddicombe
c/o David Brown
3199 Wilson Drive
Springwater, Ontario L9X 1X4

Re: **Scoped Environmental Impact Study for a Lot Severance - 1457 Tay Point Road, Town of Penetanguishene, County of Simcoe**

Dear Mr. Puddicombe:

Azimuth Environmental Consulting, Inc. was retained to provide Scoped Environmental Impact Study services pertaining to a Planning Consent Application for the address above. The purpose of this report is to provide the Town of Penetanguishene with an understanding of natural environmental conditions and potential for impacts related to the proposed lot severances and conceptual building envelopes on natural heritage features and functions on the property and/or adjacent lands. This report also documents natural environmental features present on the property and/or adjacent lands with regard to Species at Risk and their habitat. The assessment concludes that the proposed development can be achieved without impacts to key natural heritage features and functions, including Species at Risk and Species at Risk habitat.

Should you have any questions please do not hesitate to contact the undersigned.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

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1.0 EXECUTIVE SUMMARY

This Scoped Environmental Impact Study (Scoped EIS) report used a combination of background information and field investigations to describe existing natural heritage conditions associated with the ~16.85 hectare (ha) property located at 1457 Tay Point Road in the Town of Penetanguishene (Town) in the County of Simcoe (County). Lot severances and conceptual building envelopes have been proposed for the property. Based on in-season field surveys completed in 2022-2023, the study area was characterized in regards to plant communities, plant species, birds and wildlife present, including Species at Risk (SAR). Characterization of existing conditions included the presence of the Sucker Creek Provincially Significant Wetland (PSW), potential Significant Woodlands, Candidate Significant Wildlife Habitat (SWH) and possible fish habitat. Field investigations identified the presence of SAR Black Ash (Endangered), Blanding's Turtle (Threatened, one individual), Bobolink (Threatened) and Eastern Meadowlark (Threatened) in the study area. Special Concern Snapping Turtle and Grasshopper Sparrow were also detected in the study area. The potential for direct and/or indirect impacts to Natural Heritage Features and Areas (NHFAs) identified on the property and/or adjacent lands were evaluated as part of the impact assessment. It is concluded that no impacts to NHFAs, including to the Sucker Creek PSW, SAR and SWH, will occur providing the recommended mitigation measures are implemented. The proposed development will not impact habitat for Blanding's Turtle or other SAR. Mitigation measures include installation of permanent turtle exclusion fencing around the proposed four severed lots that complies with provincial requirements.

2.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by David Puddicombe (the client) to prepare a Scoped EIS for a Planning Consent Application pertaining to a four-lot severance (plus the retained lot) and establishment of conceptual building envelopes for a ~16.85ha property at 1457 Tay Point Road in the Town of Penetanguishene (Town), County of Simcoe (County) (Figure 1). It is our understanding that a Scoped EIS is required by the Town because the property is proximal to the Sucker Creek PSW Complex and Sucker Creek watercourse. The study area is outside the jurisdiction of an Ontario conservation authority.

The purpose of the study is to identify candidate NHFAs present in the study area and address potential impacts to those NHFAs. A review of background information, combined with field surveys, was undertaken in summer 2021, spring 2022 and spring 2023 to identify NHFAs. The report also examines potential for SAR and SAR habitat protected under Ontario's ***Endangered Species Act***, 2007 (ESA). The potential for

negative impacts to NHFAs resulting from the proposed development is considered and recommendations for avoidance and mitigation are provided.

For the purposes of this Scoped EIS, the study area comprises the property, as shown on Figures 1-4, and adjacent lands [within approximately 120 metres (m) of the property]. Natural features in the overall planning area beyond defined study area limits are discussed where applicable throughout the report.

3.0 PLANNING CONTEXT

3.1 Provincial Planning Policy (2020)

The Provincial Policy Statement (PPS) (MMAH, 2020) outlines policies related to natural heritage features (Section 2.1) and water resources (Section 2.2). Ontario's ***Planning Act***, (1990) requires that planning decisions shall be consistent with the PPS. The study area for this assessment is located entirely in **Ecoregion 6E**. According to the PPS, development and site alteration shall not be permitted in:

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

Similarly, Section 2.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted within:

a) ***significant wetlands*** in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;
b) ***significant woodlands*** in Ecoregions 6E; and 7E;
c) ***significant valleylands*** in Ecoregions 6E; and 7E;
d) ***significant wildlife habitat***;
e) ***significant areas of natural and scientific interest***; and,
f) ***coastal wetlands*** in Ecoregions 5E, 6E; and 7E that are not subject to policy 2.1.4(b)

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 2.1.4 and 2.1.5 of the PPS as “significant”.

Section 2.1.6 of the PPS states that development and site alteration is not permitted in fish habitat except in accordance with federal and provincial requirements.

Section 2.1.7 of the PPS states that development and site alteration shall not be permitted in habitat of Threatened and Endangered species, except in accordance with provincial and federal requirements.

Furthermore, under Section 2.1.8 of the PPS, no development and site alteration will be permitted on lands adjacent to natural heritage features and areas identified in policies 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 there will be no negative impacts on the natural features and ecological functions.

3.2 Endangered Species Act (2007)

Ontario's ESA provides regulatory protection to Endangered and Threatened species prohibiting harassment, harm and/or killing of individuals and destruction of their habitats. Habitat is broadly characterized within the ESA as the area prescribed by a regulation as the habitat of the species or an area on which the species depends, directly or indirectly, to carry on its life processes including reproduction, rearing of young, hibernation, migration or feeding.

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

3.3 County of Simcoe (2023)

The property is designated by the County's Official Plan (OP; County, 2023a) as occurring entirely in the Settlements designation (Schedule 5.1; Appendix A). The property and adjacent lands do not occur in the vicinity of mapped Greenlands, Greenbelt Plan Area or Growth Plan Area, Niagara Escarpment Plan Area, Oak Ridges Moraine Conservation Plan Area, Locally Significant Wetland or Area of Natural and Scientific Interest (ANSI) – Provincial or Regional (Schedule 5.1, Schedule 5.2.2 and Schedule 5.2.3; Appendix A).

The property and adjacent lands are in the vicinity of a mapped PSW and watercourse (Schedule 5.2.2; Appendix A). Simcoe County mapping (County, 2023b) illustrates a watercourse and Woodlands on the property; a portion of the Sucker Creek PSW occurs in the southwest corner of the property (Appendix A).

3.4 Town of Penetanguishene (2018)

The property is designated in the Town OP (Town, 2018) as Rural. The southwest corner of 1457 Tay Point Road is mapped as Environmental Protection Area (EP), with Sucker Creek PSW extending southwest of the property (Schedules A and B1; Appendix A).

Section 3.10.1.1(2) of the OP states "Development and site alteration shall not be permitted on land adjacent to a PSW, unless the ecological function of the adjacent land has been evaluated (in an EIS) and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological and/or hydrologic functions that cannot be adequately mitigated."

Section 3.10.3(1) states "Development shall only be permitted provided that it does not harmfully alter, disrupt or destroy fish habitat."

Section 3.10.6 defines Significant Woodlands as being "identified as an Environmental Protection Overlay on Schedule B1 of this Plan."

3.5 Federal Fisheries Act

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

4.0 STUDY APPROACH

A combination of background information and field data were used to fulfill the objectives of this EIS. Azimuth undertook the following activities for this study:

- Searched the County, Town, Ministry of Natural Resources and Forestry (MNRF), Ministry of the Environment, Conservation and Parks (MECP) and Fisheries and Oceans Canada (DFO) records to obtain available background information, including current information related to natural heritage conditions including SAR in the study area;

- Contacted the Town to confirm a Terms of Reference (TOR);
- Consulted with MECP to identify a restricted species mapped in the area;
- Conducted the following field surveys to document existing NHFAs:
    - Evaluated/ mapped vegetation community types based on Ecological Land Classification (ELC) methods (2021, 2022);
    - Conducted a vascular plant inventory, including a screening for Butternut (***Juglans cinerea***) and Black Ash (***Fraxinus nigra***) (both Endangered tree species) (2021, 2022);
    - Conducted one (1) assessment of drainage features on the property to characterize aquatic habitat conditions (summer 2021);
    - Completed three dawn breeding bird surveys with regard for SAR grassland birds (spring 2022);
    - Completed two rounds each of five (5) visual encounter surveys with consideration for SAR turtles proximal to the watercourse and PSW (spring 2022, spring 2023);
    - Recorded incidental wildlife observations during the above surveys;
- Completed an assessment of potential SAR and their habitat that could be present on the property and/or adjacent lands;
- Completed an assessment of SWH as per the provincial SWH guidance document for Ecoregion 6E;
- Assessed potential direct and indirect impacts of the proposed severance on NHFAs identified on and/or adjacent to the property;

The above scope was provided to the Town as a TOR for the field program and impact assessment on August 27, 2021. A response was received from the Town (Owen Taylor, Junior Planner) on September 27, 2021. In their response, the Town confirmed the scope of work undertaken was acceptable (Appendix A), with the following modifications: demonstrate conformity with the applicable policies; complete fish sampling to inform applicable setbacks and mitigation requirements unless there will be a 30m setback from all works and there are no plans to release anything directly into the creek (***i.e.***, SWM outfalls ***etc.***). Further correspondence with the Town and client confirmed that fish sampling would not be required (Appendix A). It was also discussed with the Town that desktop review of the wetland boundary would most likely be satisfactory (Appendix A).

As part of the SAR email correspondence on November 11, 2021 with the MECP to identify a Restricted Species record for the general area in the Natural Heritage Information Center (NHIC; MNRF, 2023a) database, Azimuth was notified by the MECP on November 12, 2021 about a record for Blanding's Turtle. Their response revealed the presence of a Blanding's Turtle record within 200m of the eastern property boundary. Consequently, five (5) basking turtle surveys were added to the EIS field program. A

second round of five (5) visual encounter surveys was completed in spring 2023 as due diligence. Correspondence with the MECP regarding Blanding's Turtle is in Appendix B. Since the Restricted Species is named in the ORAA database, it has been identified in this report for consistency.

4.1 Background Data

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

- NHIC (MNRF, 2023a);
    - Make-A-Map: Natural Heritage Areas application
- Atlas of the Breeding Birds of Ontario (OBBA; Cadman ***et al***., 2007);
- iNaturalist (NHIC) Rare Species of Ontario (iNaturalist, 2023);
- Ontario Reptile and Amphibian Atlas (ORAA; Ontario Nature, 2023);
- MECP's SAR Ontario list (MECP, 2023);
- Government of Canada's Species at Risk Public Registry (Government of Canada, 2023a);
- DFO Aquatic SAR interactive mapping (DFO, 2023);
- Government of Canada's Toporama interactive mapping (Government of Canada, 2023b);
- Fish ON-Line interactive mapping (MNRF, 2023b);
- Land Information Ontario (LIO) mapping (MNRF, 2023c);
- Aerial photographs available for the study area (Google Earth Pro, VuMap);
- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- County of Simcoe interactive mapping (County, 2023b);
- County OP (County, 2023a); and,
- Town OP (Town, 2018).

4.2 Vegetation Community Mapping and Surveys

Prior to undertaking the field studies, an initial classification of habitats was undertaken using recent air photo imagery for an area encompassing the study area. The Ecological Land Classification (ELC) vegetation community mapping and plant inventory effort was completed on September 24, 2021 (temperature: 13ºC, cloud cover: 100%, Beaufort wind: B2, precipitation: none) and June 13, 2022 (temperature: 15ºC, cloud cover: 5%, Beaufort wind: B1, precipitation: none) using ELC methods (Lee 2008, Lee ***et al***. 1998). Vegetation boundaries were checked during the growing season when the emergent ground cover vegetation layer was present.

To describe vascular plant species composition, a plant inventory was conducted to compile a list of species by ELC vegetation community. The property visits were undertaken by a qualified ecologist with existing knowledge related to rare, Threatened and Endangered plant species with potential to occur in the area. The assessment was focused during ELC work to ensure that appropriate effort was made to detect any federally or provincially designated species, notably SAR as identified by the provincial ESA, or provincially rare plants. Inventories included consideration for SAR plants that could potentially be on the property, including possible Butternut and Black Ash (both Endangered).

To assess whether or not woodland vegetation communities on and/or adjacent to the property were part of a Significant Woodland feature, Significant Woodland mapping on Schedule B1 of the Town OP was used. Presence and extent of possible Significant Woodlands in the study area was based on the municipal mapping (Town, 2018).

4.3 Wildlife Surveys

Wildlife species utilizing the study area were identified from direct observation, auditory signs and through interpretation of other signs (tracks, scats, vocalizations, ***etc***.) as a matter of course while conducting field surveys.

4.3.1 Species at Risk

The SAR screening undertaken for the scope of this assignment included an assessment of SAR with potential to occur at the County scale. The County list was then modified based on habitat features in the area and species' ranges. Where potentially suitable habitat was present, the assessment also included SAR occurrence records from the NHIC database (Appendix B). Habitat requirements and appropriate designations (Endangered, Threatened or Special Concern) are outlined in Table 1. The SAR assessment followed the MECP guidance document - Client's Guide to Preliminary Screening for SAR (MECP, 2019). The screening included an LIO search for aquatic SAR using DFO records.

4.3.2 Breeding Birds

Three dawn breeding bird surveys were conducted at two point count stations on the property on May 30, June 14 and June 27, 2022 guided by the point count methodology in the Ontario Breeding Bird Atlas (OBBA) Guide for Participants (OBBA, 2001). Three surveys were completed in consideration of the potential for SAR grassland birds (***e.g.*** Eastern Meadowlark, Bobolink) to be present. All surveys were conducted no earlier than one half hour before sunrise and were completed prior to 10:00am. Surveys were completed under suitable weather conditions [***i.e.*** no precipitation and light winds (Beaufort wind scale ≤3)]. Point counts were five (5) minutes (min) in duration and

otherwise followed the protocol of the OBBA Guide for Participants (OBBA, 2001). Survey station locations conferred reasonable coverage of vegetation communities in the study area. Breeding evidence was assessed using OBBA (2001) criteria. All birds seen or heard were identified to species and counted.

4.3.3 Turtles

Five visual encounter (basking) turtle surveys were completed in 2022 on May 6 (12:20-13:15), May 11 (10:35-11:20), May 18 (10:50-11:35), May 24 (09:45-10:20) and May 30 (10:10-10:55) in accordance with the open water wetlands provincial protocol for Blanding's Turtle (OMNRF, 2015). As per the protocol, the surveys were completed during the period between spring ice-off and June 15 from 08:00 and 17:00, during sunny weather with air temperatures at least 10ºC, or on partly overcast days with air temperatures above 15ºC. Each survey was approximately 20min in duration, with surveys spread out over at least three weeks (OMNR, 2015). Surveys were conducted at two survey stations located on the property in areas where potential basking or corridor movement habitat associated with the watercourse and adjacent PSW was considered to be present (Figure 2). A second due diligence round of five turtle visual encounter surveys was completed in 2023 on May 5 (12:50-13:10), May 11 (10:40-11:00), May 19 (12:10-12:30), May 24 (15:10-15:30) and May 29 (13:23-13:43).

4.4 Fish and Fish Habitat

The property was evaluated on September 13, 2021 to identify the location of drainage features or watercourses that may function as direct or indirect fish habitat. Using aerial imagery, a watercourse was identified on the property as a branch of Sucker Creek. The field assessment included a characterization of this watercourse feature, which included documentation of fish habitat features such as wetted width, water depth, flow, riparian and aquatic vegetation communities, and channel substrate. Field observations in combination with background information were utilized to determine fish habitat sensitivity and extent of direct or indirect fish habitat on the property.

The MNRF's LIO database and other online information sources, including DFO and Toporama mapping, were consulted for background fisheries data for Sucker Creek on the property. Aquatic SAR mapping from DFO was used to verify if there were any SAR fish records associated with Sucker Creek and its catchment area (DFO, 2023).

5.0 EXISTING CONDITIONS

5.1 Land Use

The property is approximately 2 kilometres (km) east of the developed portion of the Town of Penetanguishene, bordering Tay Point Road to the north and Curry Road to the

east. The property consists primarily of active agricultural lands with a remnant riparian conifer tree plantation area near Curry Road (Figure 2). The agricultural portion of the property is maintained in an actively cultivated state seasonally. The Sucker Creek PSW is approximately 100-325m southwest of the proposed lot severance areas. Outdoor dock storage occurs in the southeastern corner of the property (Figure 2). Topography in the northeastern region of the property is generally flat at approximately 195m above sea level (mASL), relief slopes gently downward in the southwestern region of the property (VuMap).

At the landscape scale, the property is approximately 1km east of St. Andrew's Lake, with Georgian Bay approximately 1.5km further east. Adjacent lands are primarily woodlands north of the property. A mosaic of wetlands (primarily to the southwest), woodlands and residential/agricultural land is present to the east, south and west.

5.2 Terrestrial Resources

5.2.1 Vegetation

Limits of the six ELC communities identified in the study area are illustrated on Figure 2. A complete list of vascular plant species identified is presented in Table 2, and summary descriptions of ELC vegetation communities are in Table 3. Appendix C provides a photographic record of the study area. The property is primarily an OAGM1 active agricultural area that appears to have been used for row crop production, with a remnant hedgerow associated with the southwestern property boundary. A Coniferous Plantation polygon (TAGM1) occurs in the central region of the property in association with the watercourse. Southwest of the TAGM1 vegetation community are Graminoid Mineral Meadow Marsh (MASM1), Mixed Willow Mineral Deciduous Thicket Swamp (SWTM3-6) and Green Ash Mineral Deciduous Swamp (SWDM2-2) vegetation communities. A Dry-Fresh Mixed Meadow (MEMM3) was identified in the eastern corner of the property.

A total of 176 vascular plant species were identified in the study area, 133 (73%) of which are considered native to Ontario (Table 2). No Butternut trees were found in the study area, but Black Ash was present in the SWDM2-2 and MASM1 vegetation communities proximal to the southwestern property boundary (***i.e.*** within the Sucker Creek PSW). No plant species are considered rare provincially (***i.e.*** S1-S3) (NHIC, 2023) in the study area.

5.2.2 Wildlife

<u>Mammals</u>

Evidence of five mammalian species including North American Beaver (direct observation), Ermine (direct observation), Raccoon (tracks, scat), Eastern Coyote (tracks)

and White-tailed Deer (tracks) was observed proximal to the southeastern property boundary. Given the study area proximity to large natural wooded and wetland areas at the landscape scale, it is expected that the following mammals could also conceivably be encountered in the study area: small mammal species (various mice, voles and shrews); Red Squirrel; Eastern Chipmunk; Eastern Cottontail; Long-tailed Weasel; Least Weasel; Virginia Opossum; American Mink; Muskrat; Groundhog; Striped Skunk; Porcupine; Eastern Gray Squirrel and Red Fox.

Reptiles and Amphibians (Herpetofauna)

One Blanding's Turtle and one Snapping Turtle were observed from Turtle Survey Station #2 during the basking turtle survey on May 11, 2022 (Figure 2). The two individuals were basking on adjacent lands located southwest of the property within the PSW near Sucker Creek. Neither species was observed in the study area at any other time during the field program in 2022. No Blanding's Turtles or Snapping Turtles were observed in the study area during turtle surveys completed in 2023. In summary, of the 10 turtle visual encounter surveys completed over 2022 and 2023, one Blanding's Turtle and one Snapping Turtle were observed once on adjacent lands off-property. The potential for habitat for Blanding's Turtle in relation to the study area is considered as part of the impact assessment (Figure 3). Background records review indicated the last Blanding's Turtle observation within 10km x 10km grid squares 17NK86 and 17NK85 was in 2015/2016; for Snapping Turtle, the last observation record was from 2018/2019.

No snakes were observed in the study area during fieldwork. No salamanders or newts were observed over the course of the field program, and no evidence of vernal pooling was observed on or adjacent to the property. American Toads and Spring Peepers were heard calling from the adjacent Sucker Creek PSW approximately 100-120m south of the southwestern property boundary while completing fieldwork in 2021. In 2022, American Toads were heard calling on May 6 and May 11 east of Curry Road. Three Gray Treefrogs were calling from the adjacent PSW approximately 100-120m southwest of the property on May 30, 2022 during the fifth turtle visual encounter survey. Background review indicates the latest ORAA records for evening calling amphibians within 10km of the property were from 2019 (Appendix B).

During turtle visual encounter surveys on May 5, May 11 and May 24, 2023, an American Toad was heard calling to the southwest of the property in the PSW an estimated 100m away. One Gray Treefrog was calling in the same area on May 29, 2023. Field data were consistent with background data.

Birds

Forty-two (42) bird species were detected on the property and/or on adjacent lands during fieldwork (Table 4). Eight (8) of the bird species were identified incidentally only (Table 4). One Eastern Meadowlark (Threatened) was heard calling on adjacent lands approximately 120m southwest of the property in an open field during the second dawn breeding bird survey on June 14, 2022 (Figure 2). No Eastern Meadowlark were detected on or proximal to the property during the three dawn breeding bird surveys, and no female Eastern Meadowlark were observed.

Background review indicated one record for Bobolink associated with lands near Curry Road (iNaturalist, 2023; Appendix B). In early spring, one male Bobolink (Threatened) was observed flying over the property towards adjacent lands southwest of the property during the second turtle visual encounter survey on May 11, 2023. Three male Bobolink were detected during the third turtle visual encounter survey on May 18, 2022. Two of these males were singing northwest of Turtle Survey Station #2 in the OAGM1 agricultural field on the property; a third individual was singing in an open field on the east side of Curry Road. On May 24, 2022, during the fourth turtle visual encounter survey, two Bobolink were singing an estimated 120m southwest of the property in a grassland field. Collectively, these early-mid May Bobolink observations were outside of the window for dawn breeding bird surveys, and are considered incidental observations of the species in the general area as individuals searched for suitable locations to establish territories.

During the first dawn breeding bird survey on May 30, 2022, two Bobolink were heard singing northwest of Point Count Station #2 on the property (Figure 2). One male was also heard approximately 120m from the eastern property limit in a field east of Curry Road after the first dawn breeding bird survey had been completed. These (presumably two) individuals appeared to be moving between the property and lands located east of Curry Road outside the study area, consistent with background data. Two Bobolink were heard on May 30, 2022 singing at least 120m away to the southwest in an open field (Figure 2). Bobolink were not detected in the study area during the second or third dawn breeding bird surveys. The data suggest that the species settled outside the study area. No female Bobolink were observed.

During the turtle visual encounter surveys in 2023 (May 5 to May 29), some bird species not detected in 2022 were found as incidental observations (Table 4), including a Barn Swallow (Special Concern) fly-over (see Table 1). Also in 2023, up to three male Eastern Meadowlark and up to three male Bobolink were heard singing in an open field approximately 120m southwest of the property. Neither Eastern Meadowlark nor Bobolink were detected on the property in 2023. These incidental observations are

consistent with data from 2022 for Eastern Meadowlark and Bobolink, suggesting that the two species were not breeding on or adjacent to the property. The General Habitat Description for Eastern Meadowlark (MNR, 2013a) and Bobolink (MNR, 2016) specifies that a break in habitat in the form of a road constitutes the limit of regulated habitat.

5.3 Species at Risk

The SAR assessment (Table 1) considers SAR and SAR habitat with potential to occur in the study area, in accordance with field data, based on known SAR for the County (Endangered, Threatened or Special Concern) and NHIC records (see Appendix B for NHIC data). Based on this assessment and in combination with vegetation communities and other environmental features observed during the investigation, the following species are considered below in this report:

- **Threatened or Endangered**;
  - Black Ash;
  - Blanding's Turtle (Adjacent);
  - Bobolink (Adjacent);
  - Eastern Meadowlark (Adjacent);
- **Special Concern**;
  - Grasshopper Sparrow; and,
  - Snapping Turtle (Adjacent).

Only species designated as Threatened or Endangered receive individual and habitat protection under Sections 9 and 10, respectively, of the ESA. Special Concern species are discussed below in the context of SWH. Although Black Ash is listed as Endangered, at the present time, protections for the species do not take effect until January 26, 2024. Activities prior to January 26, 2024 would not require consideration of Black Ash as an Endangered species in regards to the ESA. As described below in Section 8.1.1, the proposed development will not encroach into habitat for Black Ash or the root zone of individual Black Ash trees.

5.4 Fish and Fish Habitat

Sucker Creek enters the property from the southwest property boundary and flows in a northeast direction before crossing Curry Road to the northeast. Based on aerial imagery and MNRF LIO data (2019), two smaller branches of Sucker Creek converge near the southwest property boundary from the south and northwest, which then flow onto the assessed lands (Figure 2). Both of these features appear to be historically straightened for agricultural purposes. The northwest branch crosses Tay Point Road approximately 600m upstream of the property via a 1.4m diameter corrugated steel pile (CSP). The

channel at this location had a wetted width of 1m and a wetted depth of 0.25m and flow was visible.

On the property, Sucker Creek was the only identified watercourse feature. At the upstream edge of the property, Sucker Creek flows northeast where a remnant beaver dam was present near the southwest edge of the property (Figure 2). On the upstream side of the beaver dam, the channel had an average wetted depth of 0.2m and an average wetted width of 3.0m wide with thick muck/detritus substrate. No flow was visible in the channel at this location. Riparian lands at the upstream end of the property consist of grassed scrubland between two agricultural fields, with a riparian buffer of 10m on either side of the creek. Immediately downstream of the beaver dam, the channel narrowed with a wetted width of 0.14m and a wetted width of 2.0m. The channel continues in a northeast direction where it enters a forested area, which continues to the downstream extent of the property at Curry Road. Throughout the forested section, the channel varies in wetted depth from 0.08-0.32m, with an average wetted width of 1m. Terrestrial and wetland grasses were present throughout a majority of the channel feature in the forested section, with poorly defined banks sections and minimal substrate sorting observed. No refuge pools were noted, and the entire channel had a "run" morphology. Patches of watercress were noted, indicating potential groundwater inputs. A second smaller beaver/debris dam was noted in the forested section, with no visible flow in the area. The forested lands consist of large trees and ground vegetation that provide ample (>80%) shade of the channel.

At the downstream end of the property, Sucker Creek enters a CSP and continues to flow northeast. Sucker Creek enters a wetland feature on the north side of Tay Point Road approximately 426 m downstream, and enters Georgian Bay approximately 2.3km downstream to the northeast.

In reviewing background MNRF data, there was no thermal regime information available for the assessed reach of Sucker Creek on the property. However, based on the cold water temperatures recorded during the September 13, 2021 site visit, which included recordings of 14.3°C and 16°C, it is our understanding that Sucker Creek would have a coldwater thermal characterization (***i.e.***, less than 19°C). Throughout a majority of the assessed reach of Sucker Creek on the property, most notably in the forested lands on the central and eastern part of the property, the channel had poorly defined banks, minimal substrate sorting, and terrestrial grasses along the channel bottom. These are all characteristics of an intermittent drainage feature. Therefore, the assessed reach of Sucker Creek on the property likely functions as poor seasonal coldwater fish habitat. The shallow water depths observed, lack of deep refuge pools, and flow alterations due to the beaver dam at the upstream end of the property likely limit direct fish use of Sucker

Creek on the assessed property. No fish were observed during the site visit, and there were no sensitive fish habitat features identified. Fish may enter the property from the wetland features identified upstream and downstream of the assessed reach, but likely become stranded during low flow conditions due to a lack of water depth and flow noted on the property. Therefore, the assessed reach is characterized as providing indirect coldwater fish habitat, and would be protected under the Federal ***Fisheries Act***. No portion of the channel assessed in the study area is considered sensitive or limiting to fish habitat functions. There were no identified aquatic SAR as per DFO aquatic SAR mapping.

5.5 Wetlands

Background NHIC and VuMap mapping (Appendix B) indicate the presence of part of the Sucker Creek PSW Complex on the southwestern-most portion of the property, as well as on adjacent lands further southwest. Three wetland polygons on the property were confirmed in the field: MASM1; SWTM3-6 and SWDM2-2 (Figure 2). Most of the SWTM3-6 and SWDM2-2 wetland communities are mapped provincially as being within the PSW; the MASM1 community is mapped as being outside the PSW (Figure 2). The MASM1 wetland on the property is considered part of the PSW for the purposes of this assessment because it is immediately next to the mapped PSW feature.

5.6 Significant Woodlands

As per Town OP mapping (Town, 2018), the SWDM2-2 treed wetland community at the southwest edge of the property is designated as part of a Significant Woodland, as are the woodlands that extend southwest of the property contained within the Sucker Creek PSW. The riparian conifer plantation corridor is not mapped as Significant Woodlands (Appendix A). Additional distinct Significant Woodlands are designated by the Town OP east and north of the property, but those areas are considered separate features due to their distance/gap separation in contiguous tree cover by open fields and roads (Appendix A). Woodland areas to the east and north do not extend onto the property. Consequently, for the purposes of this assessment, the TAGM1 conifer plantation is not considered to be a Significant Woodland feature (due to its small size and fragmented nature), but the SWDM2-2 community and connected woodlands to the southwest of the property are considered part of a larger Significant Woodland feature on the landscape (see Figure 2).

5.7 Significant Valleyland

No portion of the study area is identified as Significant Valleyland nor assigned a similar designation on Town, County (Appendix A), or provincial mapping resources (NHIC, 2021; Appendix B). As per direction in the Natural Heritage Reference Manual (OMNR, 2010), the watercourse on the property does not fulfill the well-defined valley

morphology or landform prominence criteria required to be considered Candidate Significant Valleyland. The watercourse also does not constitute a defining component of a valleyland feature.

5.8 Significant Wildlife Habitat

An assessment of the potential for SWH to occur in the study area was conducted using criteria in MNRF's SWH Technical Guide (2000) and the accompanying Ecoregion 6E Criteria Schedules (MNRF, 2015). Assessment of Candidate SWH categories relative to documented vegetation communities and habitat in the study area is presented in Table 5. The following Candidate SWH types were determined to be present, or have the potential to occur, based on results of the field program:

- Amphibian Breeding Habitat - Woodland (Adjacent);
- Amphibian Breeding Habitat - Wetlands (Adjacent);
- Marsh Breeding Bird Habitat (Potential);
- Special Concern and Rare Wildlife Species;
    - Grasshopper Sparrow; and,
    - Snapping Turtle (Adjacent).

These candidate SWH types are discussed below in the context of SWH function.

5.9 Areas of Natural and Scientific Interest

No portion of the study area is identified as ANSI on Town, County (Appendix A) or Provincial mapping resources (NHIC, 2022a; Appendix B).

6.0 NATURAL HERITAGE FEATURES AND FUNCTIONS

The results of Azimuth's field studies combined with review of background information indicate the potential for the following candidate NHFAs in the study area:

- Habitat for Threatened or Endangered Species;
    - Black Ash;
    - Blanding's Turtle (Adjacent);
    - Bobolink (Adjacent);
    - Eastern Meadowlark (Adjacent);
- Sucker Creek PSW;
- Significant Woodlands;
- Candidate Significant Wildlife Habitat;
    - Amphibian Breeding Habitat - Woodland (Adjacent);

- Amphibian Breeding Habitat - Wetlands (Adjacent);
- Marsh Breeding Bird Habitat (Potential);
- Special Concern and Rare Wildlife Species;
  - Grasshopper Sparrow;
  - Snapping Turtle (Adjacent);

- Fish Habitat; and,
  - Sucker Creek – indirect coldwater fish habitat.

7.0 PROPOSED DEVELOPMENT

The proposed development involves severance of 1457 Tay Point Road into four lots/conceptual building envelopes (Lots #1-4) plus one retained lot (Lot #5) conceptual building envelope for possible construction of a single detached dwelling plus amenities in the future [Lots #1-2 = 0.72ha each, Lot #3 = 0.81ha, Lot #4 = 1.07ha, retained Lot #5 12.08ha (with a conceptual building envelope of 1.44ha); Figure 4 and see Appendix D for Consent Sketch]. Severed Lots #1-2 would front onto Tay Point Road; severed Lots #3-4 and the retained Lot #5 would front onto Curry Road. (Figure 4, Appendix D). None of the proposed lot severances or conceptual building envelopes would be located in natural features or natural feature buffers.

8.0 IMPACT ASSESSMENT

This impact assessment is prepared with regard for the proposed lot severances/conceptual building envelopes, and the retained lot conceptual building envelope, as described above and illustrated on Figure 4.

8.1 Habitat for Threatened or Endangered Species

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

- Black Ash;
- Blanding's Turtle (Adjacent);
- Bobolink (Adjacent); and,
- Eastern Meadowlark (Adjacent).

8.1.1 Black Ash

Black Ash was observed in the SWDM2-2 and MASM1 ELC vegetation communities. The closest portions of the proposed development (***i.e.*** the rear lot lines for Lot #3-4 severances) are at least 80-100m northeast of SWDM2-2 (Figure 4). The proposed conceptual building envelopes for Lot #1-2 severances and Retained Lot #5 would be approximately 130-270m north of MASM1 (Figure 4). Since the proposed areas for development will not encroach into vegetation communities where Black Ash is present and occur >30m from all Black Ash stems, the proposed development will not pose a direct impact to Black Ash or their habitat.

Provided the mitigation measures recommended in Section 9.0 are followed, the potential for indirect impact to the species is considered mitigable. At this time, direction from MECP indicates that any development activities that occur on or after January 26, 2024 (when protections for the species under the ESA take effect) that might impact the species (***e.g.*** activities within 30m of individual "lingering" Black Ash with a diameter at breast height (DBH) of ≥8cm], will need to consider provincial SAR legislation in regards to Black Ash.

8.1.2 Blanding's Turtle

Email correspondence with the MECP revealed the presence of a Blanding's Turtle record within 200m of the eastern property boundary. During the visual encounter surveys completed in 2022, one (1) Blanding's Turtle was observed basking approximately 85m southwest of Turtle Survey Station #2 on lands adjacent to the property on May 11, 2022 (Figure 2). The location of the individual was in the adjacent PSW and in line with the naturally vegetated TAGM1 corridor that traverses the property on either side of Sucker Creek. No other Blanding's Turtles were observed in the study area during the other nine (9) visual encounter surveys completed, and no Blanding's Turtles were found in the OAGM1 portion of the property during the field program.

The General Habitat Description (MNR, 2013b) for Blanding's Turtle describes the species' habitat categories as follows:

- **Category 1 habitat** - a confirmed nesting or overwintering location and an area within 30m of that site;
- **Category 2 habitat** - the wetland complex that extends up to 2km from an occurrence, and the area within 30m around those suitable wetlands or water bodies; and,
- **Category 3 habitat** - an area between 30m and 250m around suitable wetlands/waterbodies identified in Category 2, within 2 km of an occurrence.

Although it is recognized that there may be potential turtle nesting SWH function outside of the study area in the broader Sucker Creek PSW (Table 5), a nesting site or possible overwintering site for Blanding's Turtle (Category 1 habitat) was not identified in the study area. As such, no Category 1 habitat is associated with the study area. According to the General Habitat Description (MNR, 2013b), Category 2 habitat includes a variety of wetland habitats that are typically eutrophic, shallow with organic substrate and often with emergent vegetation such as water lilies, cattails and ***Sphagnum*** moss. Blanding's Turtle use these wetlands for activities such as feeding, mating, thermoregulation, movement and refuge from predation. The species may use suitable Category 3 habitat as movement corridors that ideally confer protection from predators as the species moves under vegetation cover between wetlands. Category 2 and Category 3 habitat for Blanding's Turtle in the active season would be considered to be present in the study area within wetlands on the property and the TAGM1 conifer plantation, as illustrated on Figure 3 (see also Blanding's Turtle General Habitat Technical Memorandum submitted to the MECP on August 10, 2022 - Appendix E). The only Category 3 habitat considered suitable for Blanding's Turtle that confers a natural, sheltered vegetated movement corridor between the Sucker Creek PSW and other wetlands in the area to the north and south is within the TAGM1 ELC polygon. The balance of the property (***i.e.*** the OAGM1 ELC polygons) is not considered suitable Category 3 habitat for Blanding's Turtle because it is an active agricultural area that is exposed to predators, wind, offers poor thermoregulation opportunities and is subject to frequent disturbance (Figures 3-4).

The four proposed lots for severance and the conceptual building envelope for retained Lot #5 would occupy approximately 29% of the 16.85ha property and be restricted to the active agricultural field portion (Figure 4). The closest that the proposed development (***i.e.*** northwest lot severance limit for Lot #3, southeast conceptual building envelope limit for Retained Lot #5) will be from Category 2 or Category 3 habitat for Blanding's Turtle is approximately 30m and 70m, respectively. As such, no lands pertaining to areas determined to be Blanding's Category 2 or Category 3 habitat in this assessment will be altered by the proposed development, and the Category 2/Category 3 habitat will be buffered by at least 30m of existing natural vegetation (Figure 4).

Lot severance lines and conceptual building envelopes will respect identified Category 2 and Category 3 habitat for the species; 100% of this habitat will remain post-development. Mitigation in the form of turtle exclusion fencing that meets provincial requirements (MECP, 2021) around the perimeter of each of the four lots to be severed is recommended (see Section 9.0 below) to ensure that there is a "complete (and permanent) barrier to movement" between habitat for the species and the proposed development footprint (noted in June 7, 2023 and October 16, 2023 MECP email correspondence; Appendix B). Although the proposed development will remain outside of the portion of

the property determined to be Category 2 or Category 3 habitat, turtle exclusion fencing is considered a reasonable and complete barrier to movement to mitigate/prevent potential impact to the species (Section 9 of the ESA) and its habitat (Section 10 of the ESA). Permanent turtle exclusion fencing around the lots to be severed is shown on Figure 4.

Further MECP correspondence on October 16, 2023 stated "If the proposed activities will potentially impact habitat of Blanding's Turtle, MECP continues to advise that an Information Gathering Form be submitted to support Species at Risk Branch staff's review of the project, including quantifying the impact by habitat category." Ontario's ESA is a "proponent-driven" process. It is incumbent on a person completing an activity in an area having the potential to be occupied by species protected under the ESA to ensure that the activity does not result in "***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***" (ESA Section 9 [1] [a]); or, in keeping with ESA Section 10 (1) "***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 (b) 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)***" (emphasis added). Under the ESA, "damage" to habitat occurs when the function or usefulness of habitat for a species is impaired. "Destruction" of habitat occurs when function is eliminated (MNR, 2012). Based on these ESA definitions, the proposed development will not result in killing, harming, harassing, capture or taking of Blanding's Turtle. Furthermore, the proposed development will not result in damage or destruction of habitat determined to be suitable for the species. That is, the function or usefulness of Category 2 and Category 3 habitat will not be impaired or eliminated. The proposed development will not restrict movement opportunities for the species within Category 2 or Category 3 habitat, nor will the proposed activities impact or remove suitable habitat of Blanding's Turtle.

The General Habitat Description (MNR, 2013b) for Blanding's Turtle states that Category 3 habitat is "considered to have the highest tolerance to alteration" (MNR, 2013b). In addition, the document states "Activities in general habitat can continue as long as the function of these areas for the species is maintained and individuals of the species are not killed, harmed or harassed." Activities considered "generally compatible" include "small-scale alterations to land cover that do not impede movements or impair nesting sites" (MNR, 2013b). The proposed small-scale development will not impede movements or impair nesting sites, and there will be no negative impacts to Category 2 or Category 3 habitat. Consequently, the proposed development is considered to be in

compliance with the ESA. It is Azimuth's professional opinion that further MECP review by SAR Branch staff is not necessary in regards to Blanding's Turtle.

8.1.3 Bobolink and Eastern Meadowlark

As described above, Eastern Meadowlark were heard as incidental observations on lands an estimated 120m or more east and southwest of the property where suitable habitat occurs. Observational data regarding Bobolink also showed that Bobolink were present adjacent to the property at least 120m away to the southwest. Suitable habitat for either species is not present on the property because the property is in a state of active agriculture (no grassland habitat upon which the species depends is present). In terms of the MEMM3 ELC polygon in the eastern corner of the property, grasses and forbs in this area are generally short/compact, the area is dominated by dock storage and disturbed regularly. It follows that this area is also not suitable for breeding or nesting activities by either species. As per the General Habitat Description for Eastern Meadowlark (MNR, 2013a) and Bobolink (MNR, 2016), and of relevance to this property, a habitat break (***i.e.*** a road) defines the limit of regulated habitat.

Consequently, the proposed development will not pose a direct impact to the species or habitat of the species that is important/depended on for carrying out life processes (***e.g.*** breeding). At the landscape level, large open areas of suitable grassland/open field habitat occurs off-property on surrounding lands occurring entirely beyond the property limits and/or on the other side of roads that bound the property. Those suitable habitat areas do not extend onto the property. Over two years of data, Eastern Meadowlark and Bobolink were found to establish territories on those surrounding lands outside the study area. Those lands will remain post-development. Provided the mitigation measures recommended in Section 9.0 are followed, the potential for indirect impact to the species is considered mitigable.

8.2 Wetlands

According to the PPS, development and site alteration are not permitted in significant wetlands in Ecoregion 6E. Given the scale of the proposed development, distance between the proposed development footprint and the PSW [***i.e.*** 81.3m between the rear lot line for Lots #3-4 and the SWTM3-6/SWDM2-2 wetland community, ~70-250m (minimum) between the proposed Lots #1-2 and the conceptual building envelope for Retained Lot #5 and the MASM1 wetland community (Figure 4)], and the distinct vegetative boundary observed in the field between OAGM1 and these wetland areas, it is Azimuth's professional opinion that a more detailed review of the wetland boundary (***e.g.*** in-field delineation of the wetland boundary) would not be necessary. The lot severances and conceptual building envelopes will not encroach into the PSW, nor will they be

within 30m of the wetland boundary. Consequently, the lot severances will not result in a direct impact to the PSW or its buffer. Provided that the mitigation measures recommended below in Section 9.0 are followed, the potential for indirect impact to wetlands is considered mitigable.

8.3 Significant Woodlands

According to the PPS, development and site alteration are not permitted in Significant Woodlands in Ecoregion 6E unless it can be demonstrated that there will be no negative impacts upon the feature and its ecological functions.

The SWDM2-2 treed wetland community on the property, as well as Sucker Creek PSW and other contiguous woodlands further to the southwest of the property, are treated as Significant Woodland for the purposes of this assessment, in accordance with municipal mapping. Since the proposed development will not encroach into areas of Significant Woodland, and will be at least 70-275m away from Significant Woodlands on-property, there will be no direct impact to Significant Woodlands. Provided that the mitigation measures recommended below in Section 9.0 are followed, the potential for indirect impact is considered mitigable.

8.4 Candidate Significant Wildlife Habitat

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

- Amphibian Breeding Habitat - Woodland (Adjacent);
- Amphibian Breeding Habitat - Wetlands (Adjacent);
- Marsh Breeding Bird Habitat (Potential);
- Special Concern and Rare Wildlife Species;
    - Grasshopper Sparrow; and,
    - Snapping Turtle (Adjacent).

8.4.1 Amphibian Breeding Habitat

Field surveys indicated the presence of evening calling amphibians on lands adjacent to the property, but not on the property. Evening calling amphibian habitat (Woodland and Wetland) was determined to be an estimated 100-120m away from the property (Table 5). Since the proposed development will not encroach into breeding habitat for amphibians, the development does not pose a direct impact to SWH for breeding amphibians or its ecological function. The habitat will remain post-development.

8.4.2 Marsh Breeding Bird Habitat

Assessment of Candidate SWH indicated the potential for possible habitat for Green Heron on lands primarily associated with Sucker Creek adjacent/proximal to the southwest fringe of the property (Table 5). The proposed development will remain approximately 100m or more from the area of potential Green Heron breeding habitat. The majority of the potential habitat would be on adjacent lands southwest of the property in the larger Sucker Creek PSW. Since the proposed development will not encroach into potential habitat for the species, there will be no direct impact to possible Green Heron SWH or its ecological function. The habitat will remain post-development.

8.4.3 Special Concern and Rare Wildlife Species

All Special Concern and provincially rare species in Ontario receive consideration under provincial SWH Criteria Schedules for Ecoregion 6E (MNRF, 2015). The field program identified two Special Concern species for consideration as part of the impact assessment: Grasshopper Sparrow and Snapping Turtle. One Grasshopper Sparrow was detected during the first two dawn breeding bird surveys in the MEMM3 ELC vegetation community associated with the eastern corner of the property ("Probable" breeding, Table 4). The individual was also observed in grassland areas on the east side of Curry Road and southeast of the property on adjacent lands. This eastern corner of the property would not be considered to be high quality grassland habitat for the species due to the relatively short height of the plants, abundance of forbs and current use of the area for outdoor dock storage. In addition, the portion of the property between the TAGM1 and MEMM3 vegetation communities is actively maintained as agriculture. Consequently, the direct impact of the proposed severance of Lot #3 and Lot #4 on Grasshopper Sparrow would be considered low. At the landscape scale, grassland habitat for use by the species is widespread.

In regards to Snapping Turtle, the proposed development will not encroach into habitat where the individual was observed basking. Consequently, the proposed development will not impact basking habitat for Snapping Turtle. The SWH form and function will remain post-development.

Provided that the mitigation measures recommended are followed, the potential for indirect impact to the SWH or their ecological functions is considered mitigable.

8.5 Fish Habitat

The PPS states that development and site alteration are not permitted in fish habitat except in accordance with provincial and federal requirements. The Federal ***Fisheries***

Act provides protection against the "death of fish, other than by fishing", [Section 34.4(1)] and the "harmful alteration, disruption or destruction of fish habitat", [Section 35(1)], otherwise known as HADD. Any project taking place in or near water is responsible for understanding potential impacts to fish habitat, and is required to take measures to avoid and mitigate impacts accordingly to avoid contraventions of the Federal ***Fisheries Act***.

Based on the proposed development, which involves the severance of four lots (plus the retained lot), there are no anticipated impacts to fish and fish habitat on the property. The two proposed lot severances at the north corner of the Curry Road/Tay Point Road intersection are more than 200m from the Sucker Creek channel. The two proposed lots southeast of the channel are contained entirely within the existing agricultural field, do not intrude into the riparian treed lands along the existing channel, and maintain a watercourse buffer distance of at least 30m+, which conforms with provincial setback recommendations for coldwater fish habitat in the NHRM (OMNR, 2010). Therefore, no anticipated impacts to fish or fish habitat are anticipated as a result of the proposed severed lots.

9.0 RECOMMENDATIONS

9.1 Species at Risk

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

Tree clearing in the proposed development footprint is not anticipated. Nonetheless, it is noted that, should development activities (***e.g.*** tree clearing) with a potential to impact Black Ash on the property not be completed before January 26, 2024, then the ESA will apply in regards to Black Ash species and habitat protections for individual "lingering"

Black Ash with a DBH of ≥8cm. Regardless, impact to Black Ash will not occur in relation to the development proposed.

9.1.1 Turtle Exclusion Fencing

A permanent barrier to movement has been recommended by the MECP (Appendix B; April 22, 2023 and June 7, 2023 email correspondence). Permanent turtle exclusion fencing that is in accordance with provincial specifications (MECP, 2021) is recommended for installation around the perimeter of each of the four severed lots (Figure 4). The turtle exclusion fencing will provide a complete barrier, as recommended by the MECP, and mitigate against potential for movement of possible SAR turtles onto the proposed development footprints.

9.1.2 Worker Training

Worker training, if required by agencies, would assist the on-property workers in identification of SAR with potential to occur in the area (***e.g.*** Blanding's Turtle). Workers should be instructed to stop work and contact the MECP immediately if any SAR are encountered in the work area. Individuals working on-property should ensure that SAR are not harmed during construction or killed by heavy machinery, vehicles or other equipment.

The contractor should educate all site personnel to ensure that, if identified, the SAR are not wantonly injured or killed, and to ensure that damage to features which could constitute habitat is avoided. Information should be conveyed through a SAR expert and include:

- Species habitat and identification;
- Requirements under the ESA including avoidance of harm to the species and damage to relevant habitat;
- Appropriate action to take if the species is encountered;
- How to record sightings and encounters; and,
- That care should be taken when undertaking construction activities in order to avoid harming the species or damaging/destroying habitat.

The expert should be a qualified biologist who specializes in ecology/biology, or SAR.

9.2 Migratory Breeding Birds

Activities involving removal of vegetation/trees should be restricted from occurring during the migratory bird breeding season. Migratory birds, nests and eggs are protected by the ***Migratory Birds Convention Act***, 1994 (MBCA) and the ***Fish and Wildlife***

Conservation Act, 1997 (FWCA). Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods.html). In Zone C2, vegetation/tree clearing should be avoided between April 1 and August 31 of a given year to avoid impacts to migratory birds.

If future works require vegetation/tree clearing between April 1 and August 31, screening by an ecologist with knowledge of bird species present in the area is recommended to ensure that the vegetation/trees have been confirmed to be free of nests prior to clearing.

9.3 Sediment and Erosion Controls

Diligent application of sediment and erosion controls based on Best Management Practices (BMPs) is recommended for future earth works or construction activities to minimize the extent of accidental or unavoidable impacts to adjacent natural areas. Prior to commencement of future site development activities, silt fencing should be applied along the entire perimeter of the proposed work area (***i.e.*** around severed Lots #1-4 and the Lot #5 conceptual building envelope) to minimize potential for indirect impacts to natural features (***e.g.*** PSW, Candidate SWH, Significant Woodlands, Sucker Creek, fish and possible SAR turtle habitat).

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

9.4 Operations

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

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

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

9.5 Fish and Fish Habitat

Any project activity proposed in or near water should comply with the fish and fish habitat protection provisions of the ***Fisheries Act,*** incorporating measures to avoid causing the death of fish or HADD. Mitigation strategies for avoiding or reducing risk to fish and fish habitat are directly associated with factors such as maintaining riparian vegetation or minimizing disturbances to the extent possible, maintaining fish passage, ensuring proper sediment control (see Section 9.3 above), preventing entry of deleterious substances in water, and ensuring that all site disturbances are restored post construction through implementation of a post construction habitat enhancement plan (such as plantings or aquatic habitat elements). Considerations for Sucker Creek in regards to the proposed lot severances and conceptual building envelopes are as follows:

- Suitable ESC measures should be installed around development footprints prior to future construction activities to prevent sediment-laden runoff from entering Sucker Creek;
- Sediment fencing should be installed where necessary to capture site runoff and avoid the unintentional intrusion into nearby natural lands and riparian habitat;
- All machinery maintenance/refueling is recommended to maintain a minimum distance of 30m from retained woodlands and wetland, and fish habitat, to prevent accidental spillage of deleterious substances;
- No stockpiled material shall be placed within 30m of a watercourse or drainage feature, and shall be protected with appropriate ESC measures at all times;
- The retained contractor shall have a fully stocked spill kit on site at all times, and is required to have a contaminant and spill management plan in place prior to the initiation of works. In the event of a spill, the contractor must report it immediately to the Spills Action Centre (SAC) at 1-800-268-6060; and,
- If dewatering is necessary (not anticipated at this time), outlet pumps should be discharged into a filter bag placed on vegetated lands more than 30m from Sucker Creek.

10.0 CONCLUSIONS

Based on our analysis, it is concluded that environmental conditions in the study area are not limiting to the proposed lot severances or conceptual building envelopes through incorporation of the environmental protection measures described in Section 9.0 of this report. Given the NHFAs described resulting from the field program, the proposed development area appears to be the most appropriate and accessible for possible future construction of a single detached dwelling and amenities on each lot/conceptual building envelope shown.

At this time, our findings are summarized as follows:

- The proposed development is consistent with the applicable natural heritage policies of the Provincial Policy Statement, ESA, County of Simcoe Official Plan and Town of Penetanguishene Official Plan;

- Our impact assessment has given full consideration to habitat requirements of all SAR assumed and documented to occur in the area, and results indicate that the proposed lot severances/conceptual building envelopes will not result in negative direct or indirect impacts to habitat of SAR, as identified in this study, providing conformance is demonstrated to mitigation measures described in Section 9.0, including turtle exclusion fencing;

- The proposed lot severances/conceptual building envelopes are not expected to impact negatively the ecological form or function of the PSW, Candidate SWH (present or potential) or Significant Woodlands outlined in Section 6.0 if the appropriate mitigation measures outlined in Section 9.0 are followed; and,

- No ephemeral, intermittent or permanent drainage features, open water units, fish or fish habitat are expected to be impacted negatively as a result of the proposed development, providing the appropriate mitigation measures described in Section 9.0 are followed during construction.

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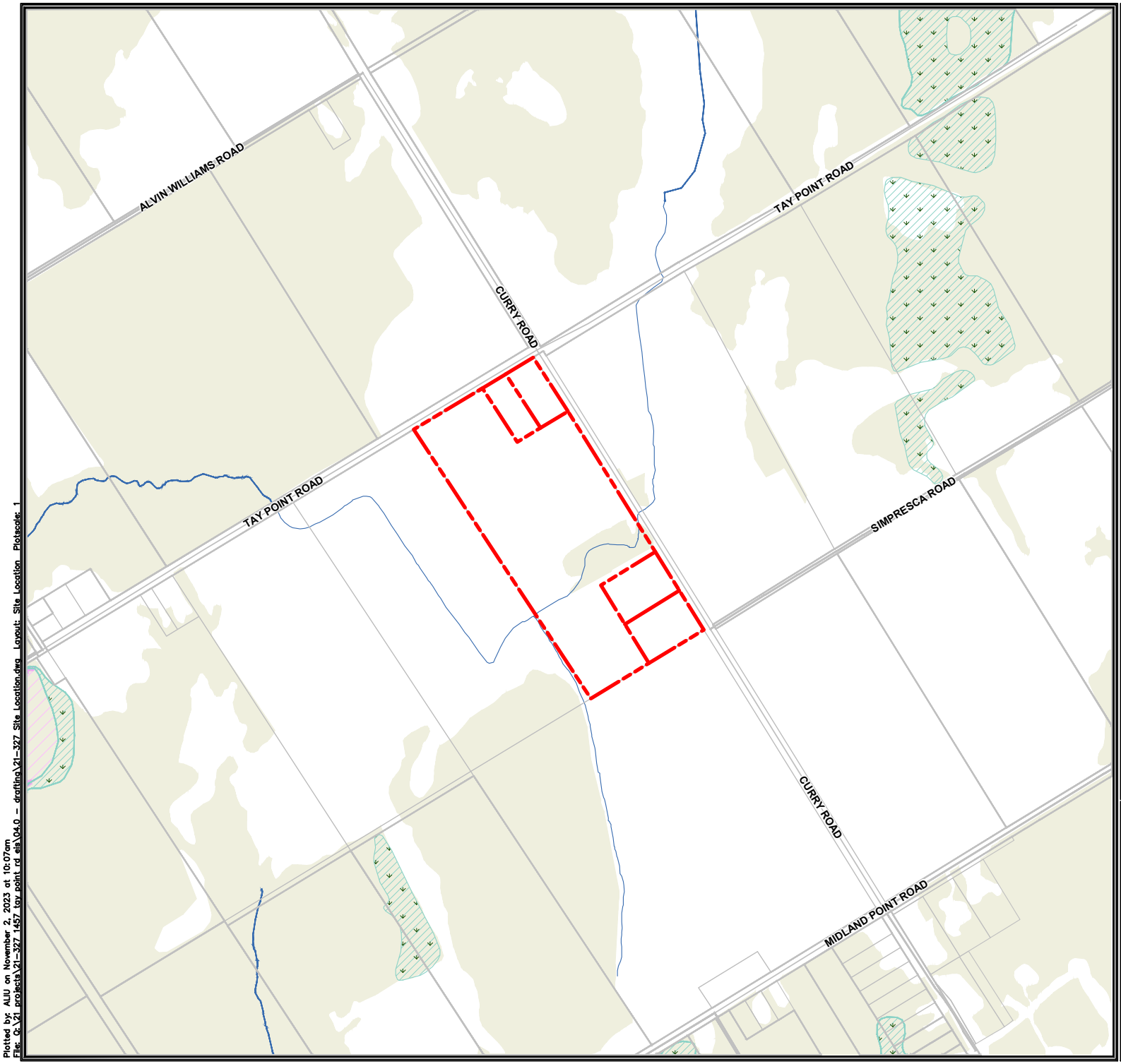


LEGEND:

APPROX. PROPERTY BOUNDARY

REGIONAL MAP

SCALE 1:100000

0 250 500

HORIZONTAL SCALE 1:10000

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

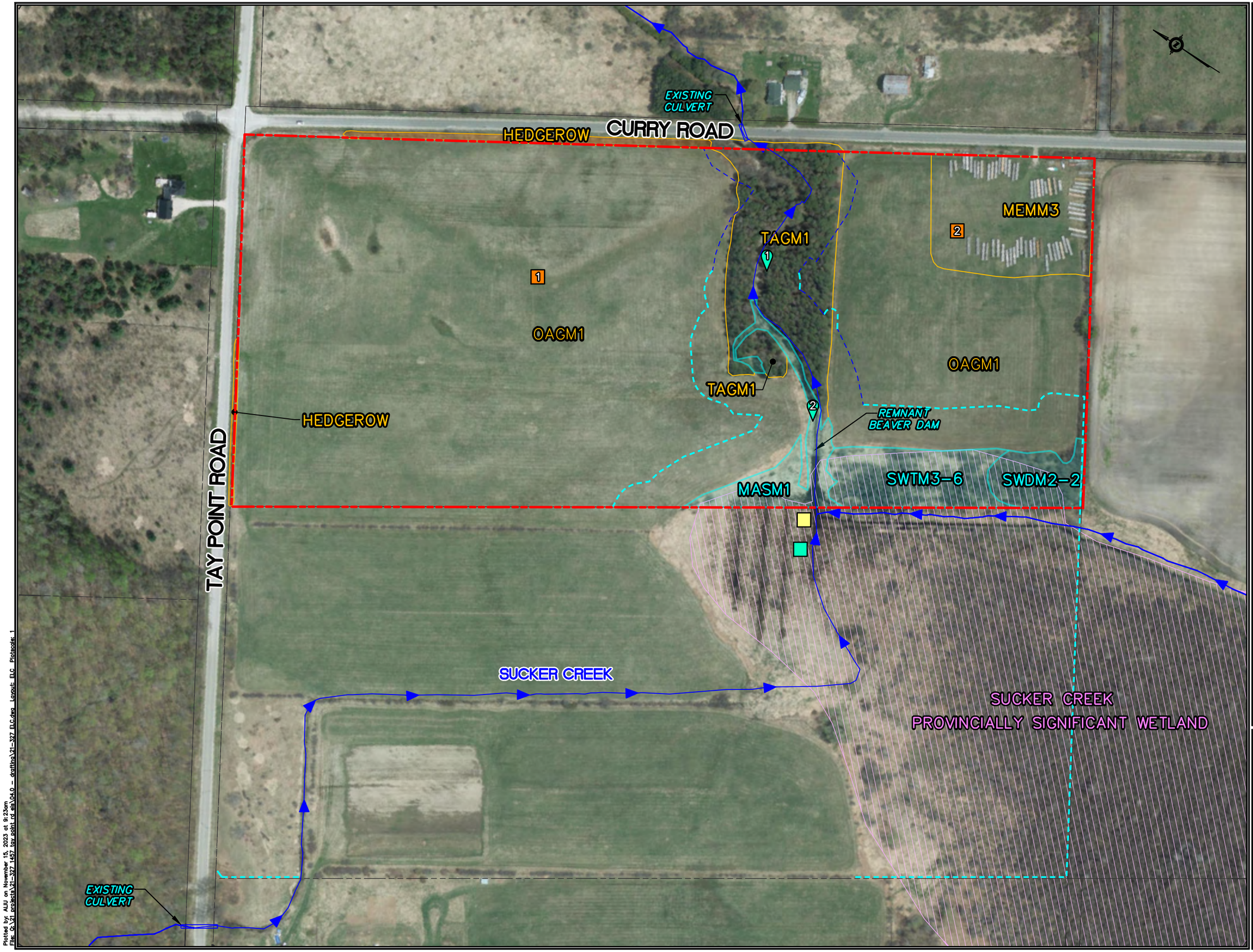
ENVIRONMENTAL ASSESSMENTS & APPROVALS

SITE LOCATION

1457 TAY POINT ROAD
PENETANGUISHENE, ON

DATE ISSUED: *OCTOBER 2023*	Figure No.
CREATED BY: *A.L.*	
PROJECT NO.: *21-327*	1
REFERENCE: *SIMCOE COUNTY*	

Plotted by: ALIU on November 2, 2023 at 10:07am
File: C:\21 projects\21-327 1457 tay point rd eis\04.0 - drafting\21-327 Site Location.dwg Layout: Site Location Plotscale: 1



LEGEND:

- APPROX. PROPERTY BOUNDARY
- EXISTING WATERCOURSE – INTERMITTENT, INDIRECT FISH HABITAT
- CULVERT LOCATION
- SUCKER CREEK PROVINCIALLY SIGNIFICANT WETLAND (PSW; ONTARIO MNR, 2020)

POINT COUNTS / SURVEY STATIONS

- DAWN BREEDING BIRD POINT COUNT
- BLANDING'S TURTLE OBSERVATION
- SNAPPING TURTLE OBSERVATION
- TURTLE SURVEY STATION

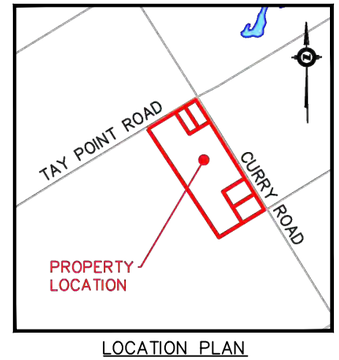
ELC VEGETATION COMMUNITIES:

OAGM1	ANNUAL ROW CROPS (AGRICULTURE)
MEMM3	DRY-FRESH MIXED MEADOW
TAGM1	CONIFEROUS PLANTATION

ELC WETLAND COMMUNITIES:

MASM1	GRAMINOID MINERAL SHALLOW MARSH
SWDM2-2	GREEN ASH MINERAL DECIDUOUS SWAMP
SWTM3-6	MIXED WILLOW MINERAL DECIDUOUS THICKET SWAMP

- 30m WETLAND BUFFER
- 30m WATERCOURSE BUFFER



LOCATION PLAN

0 62.50 125.0

HORIZONTAL SCALE 1:2500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

ENVIRONMENTAL FEATURES

1457 TAY POINT ROAD PENETANGUISHENE, ON

DATE ISSUED:	NOVEMBER 2023	Figure No. 2
CREATED BY:	A.L.	
PROJECT NO.:	21-327	
REFERENCE:	SIMCOE COUNTY	

Plotted by: ALU on November 15, 2023 at 9:23am
File: Q:\21 projects\21-327_1457 tay point rd ele\04.0 - drafting\21-327 ELC.dwg Layout: ELC Plotscale: 1

EXISTING CULVERT
HEDGEROW
CURRY ROAD
MEMM3
TAGM1
1
OAGM1
OAGM1
TAGM1
2
REMNANT BEAVER DAM
HEDGEROW
TAY POINT ROAD
MASM1
SWTM3-6
SWDM2-2
SUCKER CREEK
SUCKER CREEK
PROVINCIALLY SIGNIFICANT WETLAND
EXISTING CULVERT

LEGEND:

- APPROX. PROPERTY BOUNDARY
- EXISTING WATERCOURSE – INTERMITTENT, INDIRECT FISH HABITAT
- CULVERT LOCATION
- SUCKER CREEK PROVINCIALLY SIGNIFICANT WETLAND (PSW; ONTARIO MNR, 2020)

ELC VEGETATION COMMUNITIES:

OAGM1	ANNUAL ROW CROPS (AGRICULTURE)
MEMM3	DRY-FRESH MIXED MEADOW
TAGM1	CONIFEROUS PLANTATION

ELC WETLAND COMMUNITIES:

MASM1	GRAMINOID MINERAL SHALLOW MARSH
SWDM2-2	GREEN ASH MINERAL DECIDUOUS SWAMP
SWTM3-6	MIXED WILLOW MINERAL DECIDUOUS THICKET SWAMP

BLANDING'S TURTLE GENERAL HABITAT:

- CATEGORY 2
- CATEGORY 3

POINT COUNTS / SURVEY STATIONS

- BLANDING'S TURTLE OBSERVATION
- SNAPPING TURTLE OBSERVATION
- TURTLE SURVEY STATION

- 30m WETLAND BUFFER
- 30m WATERCOURSE BUFFER

0 62.50 125.0
HORIZONTAL SCALE 1:2500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

GENERAL HABITAT: BLANDING'S TURTLE

1457 TAY POINT ROAD
PENETANGUISHENE, ON

DATE ISSUED:	NOVEMBER 2023	Figure No. 3
CREATED BY:	A.L.	
PROJECT NO.:	21-327	
REFERENCE:	SIMCOE COUNTY	

Plotted by: ALIU on November 15, 2023 at 9:24am
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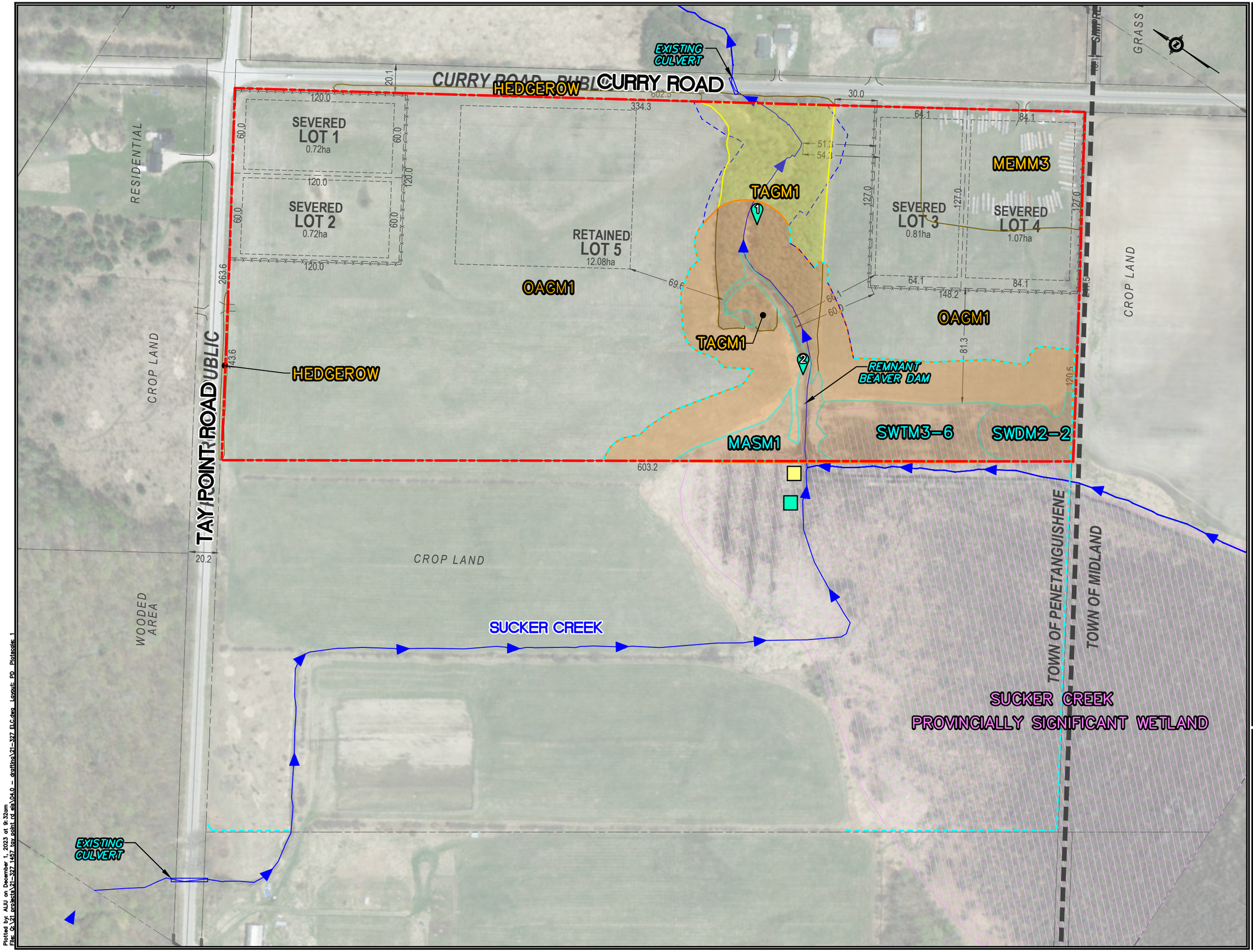

LEGEND:

- APPROX. PROPERTY BOUNDARY
- EXISTING WATERCOURSE – INTERMITTENT, INDIRECT FISH HABITAT
- CULVERT LOCATION
- SUCKER CREEK PROVINCIALLY SIGNIFICANT WETLAND (PSW; ONTARIO MNR, 2020)

ELC VEGETATION COMMUNITIES:

OAGM1	ANNUAL ROW CROPS (AGRICULTURE)
MEMM3	DRY-FRESH MIXED MEADOW
TAGM1	CONIFEROUS PLANTATION

ELC WETLAND COMMUNITIES:

MASM1	GRAMINOID MINERAL SHALLOW MARSH
SWDM2-2	GREEN ASH MINERAL DECIDUOUS SWAMP
SWTM3-6	MIXED WILLOW MINERAL DECIDUOUS THICKET SWAMP

BLANDING'S TURTLE GENERAL HABITAT:

- CATEGORY 2
- CATEGORY 3

POINT COUNTS / SURVEY STATIONS

- BLANDING'S TURTLE OBSERVATION
- SNAPPING TURTLE OBSERVATION
- TURTLE SURVEY STATION

- 30m WETLAND BUFFER
- 30m WATERCOURSE BUFFER

NOTES:

1. SHOWN ARE THE CONCEPTUAL BUILDING ENVELOPES FOR THE PROPOSED LOTS FOR SEVERANCE (LOTS #1–4) AND THE CONCEPTUAL BUILDING ENVELOPE FOR RETAINED LOT #5.

0 62.50 125.0

HORIZONTAL SCALE 1:2500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

PROPOSED DEVELOPMENT

1457 TAY POINT ROAD PENETANGUISHENE, ON

DATE ISSUED:	*NOVEMBER 2023*	Figure No.
CREATED BY:	*A.L.*	4
PROJECT NO.:	*21-327*	
REFERENCE:	*SIMCOE COUNTY*	

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
Bald Eagle	*Haliaeetus leucocephalus*	SC	No status	Nests are typically found near the shoreline of lakes or large rivers, often on forested islands (Cadman *et al.* , 2007). ESA Protection: N/A	Property and adjacent lands not associated with shorelines of lakes or large rivers. Property does not contain forested islands.
Bank Swallow	*Riparia riparia*	THR	THR	Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013b). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.* excavated vertical sand/silt stockpile faces) are not found in the study area. The property and adjacent lands are not associated with sand or gravel pits *etc* . Not observed during surveys.
Barn Swallow	*Hirundo rustica*	SC	THR	Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2011c). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.* old buildings or barns, box culverts, bridges) are not found in study area. No structures on the property or on adjacent lands. Not found during dawn breeding bird surveys, but detected as an incidental fly-over in 2023. Not considered further in the assessment.
Black Ash	*Fraxinus nigra*	END	No Status	Facultative wetland tree species frequently found in floodplain forests, swamps, seepage areas, shoreline margins and fens. Occupied sites are generally seasonally-flooded (COSEWIC, 2018). ESA Protection: Species and general habitat protection (ESA protections take effect January 27, 2024)	**Species observed in SWDM2-2 and MASM1 ELC vegetation communities. Considered further in main text.**
Blanding's Turtle	*Emydoidea blandingii*	THR	THR	Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by clear, shallow water, with organic substrates and high density of aquatic vegetation (COSEWIC, 2005a). ESA Protection: Species and general habitat protection	**Key habitat requirements for the species (*e.g.* open wetlands with emergent aquatic vegetation, lakes, ponds) occur on adjacent lands south of the property, specifically in the SWTM3-6 or SWD01/SWD02 ELC communities comprising the Sucker Creek PSW. Initial consultation with MECP indicates species occurrence within approximately 200m of property (NHIC 1km grid squares 17NK8759, 17NK8760, 17NK8859 and 17NK8860). One individual observed once on adjacent lands in 2022 but not in 2023. Considered further in main text.**
Bobolink	*Dolichonyx oryzivorus*	THR	THR	Nests primarily in forage crops (*e.g.* hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops (*e.g* . corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2010a). ESA Protection: Species and general habitat protection	**Key habitat requirements for the species do not occur on the property but species records occur in the general area (NHIC 1km grid squares 17NK8759, 17NK8760, 17NK8859 and 17NK88760). Species was present incidentally on the property early spring and during the first dawn breeding birds survey, but not detected during the second or third surveys. The species was also heard on adjacent lands to the east. Considered further in main text.**
Butternut	*Juglans cinerea*	END	END	Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2003a). ESA Protection: Species and general habitat protection	The species was not observed during surveys.

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
Eastern Meadowlark	*Sturnella magna*	THR	THR	Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, *etc*. Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011b). ESA Protection: Species and general habitat protection	**Key habitat requirements not present on property but occur adjacent (NHIC 1km grid squares 17NK8759, 17NK8760, 17NK8859 and 17NK88760). Species detected incidentally on adjacent lands. Considered further in main text.**
Eastern Musk Turtle	*Sternotherus oderatus*	SC	SC	Inhabit littoral zones of waterways such as rivers, lakes, bays, streams, ponds, canals, and swamps with slow to no current and soft bottoms. During the active season they prefer shallow water (<2m) with abundant vegetation. Most are found close to shore and do not venture onto land except to nest or access adjacent wetlands (COSEWIC, 2012a). ESA Protection: N/A	NHIC records indicate species occurrence in 1km grid squares 17NK8859 and 17NK8860, but the property and adjacent lands do not meet habitat requirements. Species would not be expected to occur on the property. Not considered further in our assessment.
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	THR	Found in wetland habitats with both flowing and standing water such as marshes, bogs, fens, ponds, lake shorelines and wet meadows. Most sightings occur near the water's edge (COSEWIC, 2012b). ESA Protection: N/A	The property does not meet habitat requirements. Wetlands to the south of the property have predominantly standing water. No water body shorelines. Not considered further in our assessment.
Eastern Small-footed Myotis	*Myotis Lleibii*	END	END	Generally occurs in mountainous or rocky regions as well as in buildings, on the face of rock bluffs and beneath slabs of rock and stones. Hibernation is typically confined to caves and old mines (Best and Jennings, 1997). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g*. rocky areas, bluffs, old suitable anthropogenic structures, caves, old mines) for the species are not found on or adjacent to the property. Hibernation habitat not present. The species would not be expected to occur.
Eastern Wood-pewee	*Contopus virens*	SC	SC	Mostly in mature and intermediate-age deciduous and mixed forests having an open understory. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012d). ESA Protection: N/A	Key habitat requirements not found on the property. Species was not observed on property during surveys.
Golden-winged Warbler	*Vermivora chrysoptera*	SC	THR	Areas of early successional scrub surrounded by mature forests including dry uplands, swamp forests, and marshes (COSEWIC, 2006). ESA Protection: N/A	Key habitat features not found on or adjacent to the property. The species would not be expected to occur, and not observed during surveys.
Grass Pickerel	*Esox americanus vermiculatus*	SC	SC	Warm, slow moving streams, isolated pools of such streams, and shallow bays of lakes (COSEWIC, 2005b). ESA Protection: N/A	Key habitat features not present in the stuudy area. No known records of the species in the area.

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
Grasshopper Sparrow *pratensis* subspecies	*Ammodramus savannarum pratensis*	SC	SC	Typically breeds in large human-created grasslands (≥5 ha), such as pastures and hayfields, and natural prairies, such as alvars, characterized by well-drained, often poor soil dominated by low, sparse perennial herbaceous vegetation (COSEWIC, 2013c). ESA Protection: N/A	**Species detected during dawn breeding bird surveys southeast of the TAGM1 ELC vegetation community. Considered further in main text.**
Least Bittern	*Ixobrychus exilis*	THR	THR	Breed strictly in marshes of emergents (usually cattails) that have relatively stable water levels and interspersed areas of open water (COSEWIC, 2009a). ESA Protection: Species and general habitat protection	Key habitat requirements not found on the property or elsewhere in the study area. Not detected during field program.
Little Brown Myotis	*Myotis lucifugus*	END	END	Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves (MNRF, 2014) (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	Key habitat requirements not found on or adjacent to the property. The species would not be expected to occur.
Massasauga Rattlesnake (Great Lakes - St. Lawrence pop.)	*Sistrurus catenatus*	THR	THR	Lives in tall grass prairie, bogs, marshes, shorelines forests and alvars. Requires open areas in the habitat for access to sunlight (e.g., pregnant females like open, dry areas such as rock barrens or forest clearings). ESA Protection: Species and regulated habitat protection	Key habitat requirements not on the property or on adjacent lands. The species would not be expected to occur in the study area. Provincial occurrence records (NHIC 1km grid squares 17NK8759, 17NK8760, 17NK8859 and 17NK8860) likley historic. Not considered further in the assessment.
Monarch	*Danaus plexippus*	SC	SC	Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2010b). ESA Protection: N/A	Key habitat requirements (*e.g.* meadow/grassland habitat with milkweed) present, but species not observed. Occrrence of milkweed on the property generally limited.
Northern Myotis	*Myotis septentrionalis*	END	END	Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	Key habitat requirements not found on or adjacent to the property. The species would not be expected to occur.
Northern Map Turtle	*Grapetemys geographica*	SC	SC	Inhabits rivers and lakes where it basks on emergent rocks, banks, logs and fallen trees. Prefer shallow, soft-bottomed aquatic habitats with exposed objects for basking (COSEWIC, 2012c). ESA Protection: N/A	Key habitat requirements not present on or adjacent to the property. Species would not be expected to occur and was not observed during surveys.
Olive-sided Flycatcher	*Contopus cooperi*	SC	THR	Natural forest openings, forest edges near natural openings (such as wetlands) or open to semi-open forest stands. Occasionally human made openings (such as clear cuts). Presence of tall snags and residual live trees is essential (COSEWIC, 2007a). ESA Protection: N/A	Suitable habitat not present on or adjacent to the property. The species was not observed during surveys.

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	Occurs in open deciduous forests, particularly those dominated by oak and beech, grasslands, forest edges, orchards, pastures along rivers and roads, urban parks, golf courses, cemeteries, beaver ponds and timber stands that have been treated with herbicides (COSEWIC, 2007b). ESA Protection: N/A	Key forest, orchard and/or urban park habitat not present on or adjacent to the property. The species was not detected during surveys.
Snapping Turtle	*Chelydra serpentina*	SC	SC	Habitat is characterized by slow-moving water with a soft mud bottom and dense aquatic vegetation. Often located in ponds, sloughs, shallow bays or river edges and slow streams, or areas combining several of these wetland habitats (COSEWIC, 2008a). ESA Protection: N/A	**NHIC records indicate the species is present in the area (1km grid squares 17NK8759, 17NK78760, 17NK8859 and 17NK8860). Species observed during surveys. Considered further in main text.**
Tri-colored Bat	*Perimyotis subflavus*	END	END	Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	Key habitat requirements not found on or adjacent to the property. The species would not be expected to occur.
West Virginia White	*Pieris virginiensis*	SC	No Status	This species lives in moist, deciduous woodlands and requires a supply of toothwort, a small, spring-blooming plant that is a member of the mustard family, since it is the only food source for the larvae (MNRF, 2014). ESA Protection: N/A	Moist deciduous forest habitat not present on or adjacdent to the property. The species would not be expected to occur.
Wood Thrush	*Hylocichla mustelina*	SC	THR	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012e). ESA Protection: N/A	Key habitat requirements do not occur. Species not present.
Wood Turtle	*Glyptemys insculpta*	END	THR	Rivers and streams with sand or gravel bottoms and prefers clear, meandering streams with moderate current. Riparian areas with diverse, patchy cover are most commonly used across the range (COSEWIC, 2007c). ESA Protection: Species and general habitat protection	Key habitat requirements not present on the property or on adjacent lands. The species would not be expected to occur.
Yellow Rail	*Coturnicops noveboracensis*	SC	SC	Nest in wet marshy areas of short grass-like vegetation. The habitat must remain wet throughout the breeding season (COSEWIC, 2009b). ESA Protection: N/A	Key habitat requirements not present on the property or on adjacent lands. Species not detected during field program.

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

Species at Risk in Ontario List (June 13, 2017)
Best, T., and J. Jennings. 1997. Mammalian Species, *Myotis leibii* . The American Society of Mammalogists. No. 547, pp. 1-6, 5 figs.
Cadman, M., D. Sutherland, G. Beck, D. Lepage and A. Couturier. 2007. Atlas of the Breeding Birds of Ontario 2001-2005. Bird Studies Canada, Environment Canada, Ontario
COSEWIC 2003a. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
COSEWIC. 2005a. COSEWIC assessment and update status report on the Blanding's Turtle *Enydoidea blandingii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa.viii +40 pp.
COSEWIC. 2005b. COSEWIC assessment and status report on the Grass Pickerel *Esox americanus vermiculatus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.
COSEWIC 2006. COSEWIC assessment and status report on the Golden-winged Warbler *Vermivora chrysoptera* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 30 pp.
COSEWIC. 2007a. COSEWIC assessment and status report on the Olive-sided Flycatcher *Contopus cooperi* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 25 pp.
COSEWIC. 2007b. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalu* s in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.
COSEWIC. 2007c. COSEWIC assessment and update status report on the Wood Turtle *Glyptemys insculpta* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 42 pp.

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment

COSEWIC. 2008a. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.
COSEWIC. 2009a. COSEWIC assessment and update status report on the Least Bittern *Ixobrychus exilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.
COSEWIC. 2009b. COSEWIC assessment and status report on the Yellow Rail *Coturnicops noveboracensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
COSEWIC. 2010a. COSEWIC assessment and update status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.
COSEWIC. 2010b. COSEWIC assessment and status report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 43 pp.
COSEWIC. 2011b. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.
COSEWIC. 2011c. COSEWIC assessment and update status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.
COSEWIC. 2012a. COSEWIC assessment and status report on the Eastern Musk Turtle *Sternotherus odoratus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 68 pp
COSEWIC. 2012b. COSEWIC assessment and status report on the Eastern Ribbonsnake *Thamnophis sauritus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 39 pp.
COSEWIC. 2012c. COSEWIC assessment and status report on the Northern Map Turtle *Graptemys geographica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.
COSEWIC. 2012d. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.
COSEWIC. 2012e. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.
COSEWIC. 2013a. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subfalvus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.
COSEWIC. 2013b. COSEWIC assessment and update status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.
COSEWIC. 2013c. COSEWIC assessment and status report on the Grasshopper Sparrow pratensis subspecies *Ammodramus savannarum pratensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 36 pp.
COSEWIC. 2018. COSEWIC assessment and status report on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.
Ministry of Natural Resources and Forestry (MNRF). 2014. Eastern Small-footed Bat. Queen's Printer for Ontario. https://www.ontario.ca/environment-and-energy/eastern-small-footed-bat
Ministry of Natural Resources and Forestry (MNRF). 2016. Species at Risk in Ontario. http://www.ontario.ca/environment-and-energy/species-risk

Table 2: Vascular Plant Species List, 1457 Tay Point Road EIS, Town of Penetanguishene (2023)

			[2] ELC Codes - Corresponding to Figure 2						[1] Conservation Rank Information			
Family	**[1] Scientific Name**	**[1] Common Name**	**SWTM3-6**	**SWDM2-2**	**MASM1**	**TAGM1**	**MEMM3**	**Hedgerows**	**S-Rank**	**G-Rank**	**SARO**	**Tracked by MNRF**
Aceraceae	*Acer negundo*	Manitoba Maple				x		x	S5	G5		N
Aceraceae	*Acer rubrum*	Red Maple			x	x			S5	G5		N
Aceraceae	*Acer saccharinum*	Silver Maple	x		x				S5	G5		N
Aceraceae	*Acer saccharum*	Sugar Maple				x		x	S5	G5		N
Alismataceae	*Alisma triviale*	Northern Water-plantain			x	x			S5	G5		N
Anacardiaceae	*Toxicodendron radicans var. rydbergii*	Western Poison Ivy				x		x	S5	G5		N
Apiaceae	*Daucus carota*	Wild Carrot					x	x	SE5	GNR		N
Apocynaceae	*Apocynum androsaemifolium*	Spreading Dogbane				x		x	S5	G5		N
Apocynaceae	*Asclepias incarnata*	Swamp Milkweed			x	x			S5	G5		N
Apocynaceae	*Asclepias syriaca*	Common Milkweed			x	x	x	x	S5	G5		N
Asteraceae	*Arctium minus*	Common Burdock			x			x	SE5	GNR		N
Asteraceae	*Bidens frondosa*	Devil's Beggarticks	x		x				S5	G5		N
Asteraceae	*Centaurea sp.*	Knapweed species					x	x	-	-	-	-
Asteraceae	*Cirsium arvense*	Canada Thistle			x		x	x	SE5	G5		N
Asteraceae	*Cirsium vulgare*	Bull Thistle					x	x	SE5	GNR		N
Asteraceae	*Doellingeria umbellata*	Flat-top White Aster			x				S5	G5		N
Asteraceae	*Erigeron annuus*	Annual Fleabane				x	x	x	S5	G5		N
Asteraceae	*Erigeron philadelphicus*	Philadelphia Fleabane					x	x	S5	G5		P
Asteraceae	*Euthamia graminifolia*	Grass-leaved Goldenrod			x		x	x	S5	G5		N
Asteraceae	*Eutrochium maculatum var. maculatum*	Spotted Joe Pye Weed			x			x	S5	G5T5		N
Asteraceae	*Leucanthemum vulgare*	Oxeye Daisy					x	x	SE5	GNR		N
Asteraceae	*Matricaria discoidea*	Pineappleweed						x	SE5	G5		N
Asteraceae	*Pilosella caespitosa*	Meadow Hawkweed				x		x	SE5	GNR		N
Asteraceae	*Solidago altissima*	Tall Goldenrod		x		x		x	S5	G5		P
Asteraceae	*Solidago canadensis*	Canada Goldenrod					x	x	S5	G5		N
Asteraceae	*Solidago gigantea*	Giant Goldenrod		x				x	S5	G5		P
Asteraceae	*Solidago rugosa*	Rough-stemmed Goldenrod			x		x	x	S5	G5		N
Asteraceae	*Symphyotrichum lanceolatum*	Panicled Aster	x	x			x	x	S5	G5		P
Asteraceae	*Symphyotrichum lateriflorum*	Calico Aster			x	x		x	S5	G5		P
Asteraceae	*Symphyotrichum novae-angliae*	New England Aster			x			x	S5	G5		N
Asteraceae	*Symphyotrichum puniceum*	Purple-stemmed Aster			x				S5	G5		N
Asteraceae	*Symphyotrichum urophyllum*	Arrow-leaved Aster				x	x	x	S4	G4G5		N
Asteraceae	*Taraxacum officinale*	Common Dandelion				x	x	x	SE5	G5		N
Asteraceae	*Tragopogon pratensis*	Meadow Goatsbeard						x	SE5	GNR		N
Asteraceae	*Tussilago farfara*	Coltsfoot				x			SE5	GNR		N
Balsaminaceae	*Impatiens capensis*	Spotted Jewelweed			x	x	x	x	S5	G5		N
Betulaceae	*Betula papyrifera*	Paper Birch				x			S5	G5		N
Boraginaceae	*Cynoglossum officinale*	Common Hound's-tongue						x	SE5	GNR		N
Boraginaceae	*Lithospermum officinale*	European Gromwell						x	SE5	GNR		N
Brassicaceae	*Barbarea vulgaris*	Bitter Wintercress					x	x	SE5	GNR		N
Brassicaceae	*Nasturtium sp.*	Watercress species				x			-	-	-	-
Brassicaceae	*Thlaspi arvense*	Field Pennycress					x	x	SE5	GNR		N
Caprifoliaceae	*Diervilla lonicera*	Northern Bush-honeysuckle						x	S5	G5		N
Caprifoliaceae	*Lonicera x bella*	(Lonicera morrowii X Lonicera tatarica)				x				GNA		N
Caprifoliaceae	*Sambucus canadensis*	Common Elderberry				x			S5	G5T5		N
Caprifoliaceae	*Viburnum lentago*	Nannyberry		x	x	x	x	x	S5	G5		N

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Family	**[1] Scientific Name**	**[1] Common Name**	**SWTM3-6**	**SWDM2-2**	**MASM1**	**TAGM1**	**MEMM3**	**Hedgerows**	**S-Rank**	**G-Rank**	**SARO**	**Tracked by MNRF**
Caprifoliaceae	*Viburnum opulus*	Cranberry Viburnum				x		x	S5	G5		N
Caryophyllaceae	*Cerastium fontanum*	Common Mouse-ear Chickweed						x	SE5	GNR		N
Caryophyllaceae	*Dianthus armeria*	Deptford Pink				x			SE5	GNR		N
Caryophyllaceae	*Stellaria graminea*	Grass-leaved Starwort					x	x	SE5	GNR		N
Celastraceae	*Celastrus scandens*	Climbing Bittersweet					x	x	S5	G5		N
Clusiaceae	*Hypericum perforatum*	Common St. John's-wort				x		x	SE5	GNR		N
Convolvulaceae	*Calystegia sepium*	Hedge False Bindweed					x	x	S5	G5		N
Cornaceae	*Cornus alternifolia*	Alternate-leaved Dogwood				x			S5	G5		N
Cornaceae	*Cornus obliqua*	Silky Dogwood	x	x				x	S5	G5		N
Cornaceae	*Cornus sericea*	Red-osier Dogwood	x	x	x	x		x	S5	G5		N
Crassulaceae	*Penthorum sedoides*	Ditch Stonecrop						x	S5	G5		N
Cupressaceae	*Juniperus communis*	Common Juniper				x			S5	G5		N
Cupressaceae	*Juniperus virginiana*	Eastern Red Cedar						x	S5	G5		N
Cyperaceae	*Carex bebbii*	Bebb's Sedge			x		x	x	S5	G5		N
Cyperaceae	*Carex crinita*	Fringed Sedge			x	x	x	x	S5	G5		N
Cyperaceae	*Carex gracillima*	Graceful Sedge		x		x	x	x	S5	G5		N
Cyperaceae	*Carex hystericina*	Porcupine Sedge			x			x	S5	G5		N
Cyperaceae	*Carex intumescens*	Bladder Sedge			x				S5	G5		N
Cyperaceae	*Carex lacustris*	Lake Sedge	x		x				S5	G5		N
Cyperaceae	*Carex lupulina*	Hop Sedge	x	x					S5	G5		N
Cyperaceae	*Carex projecta*	Necklace Sedge			x				S5	G5		N
Cyperaceae	*Carex retrorsa*	Retrorse Sedge			x				S5	G5		N
Cyperaceae	*Carex scoparia*	Pointed Broom Sedge					x	x	S5	G5		N
Cyperaceae	*Carex stricta*	Tussock Sedge			x				S5	G5		N
Cyperaceae	*Carex tuckermanii*	Tuckerman's Sedge			x				S5	G5		N
Cyperaceae	*Carex vulpinoidea*	Fox Sedge					x	x	S5	G5		N
Cyperaceae	*Scirpus atrovirens*	Dark-green Bulrush		x					S5	G5		N
Cyperaceae	*Scirpus cyperinus*	Common Woolly Bulrush	x		x				S5	G5		N
Dennstaedtiaceae	*Pteridium aquilinum*	Bracken Fern				x		x	S5	G5		N
Dryopteridaceae	*Athyrium filix-femina var. angustum*	Northeastern Lady Fern			x	x			S5	G5T5		N
Dryopteridaceae	*Dryopteris carthusiana*	Spinulose Wood Fern			x	x			S5	G5		N
Dryopteridaceae	*Dryopteris intermedia*	Evergreen Wood Fern				x			S5	G5		N
Dryopteridaceae	*Onoclea sensibilis*	Sensitive Fern			x	x		x	S5	G5		N
Equisetaceae	*Equisetum arvense*	Field Horsetail		x	x	x		x	S5	G5		N
Fabaceae	*Amphicarpaea bracteata*	American Hog-peanut	x	x	x	x			S5	G5		N
Fabaceae	*Lotus corniculatus*	Garden Bird's-foot Trefoil	x			x	x	x	SE5	GNR		N
Fabaceae	*Trifolium pratense*	Red Clover				x	x	x	SE5	GNR		N
Fabaceae	*Trifolium repens*	White Clover					x	x	SE5	GNR		N
Fabaceae	*Vicia cracca*	Tufted Vetch	x		x		x	x	SE5	GNR		N
Fagaceae	*Fagus grandifolia*	American Beech				x			S4	G5		N
Fagaceae	*Quercus rubra*	Northern Red Oak				x		x	S5	G5		N
Geraniaceae	*Geranium robertianum*	Herb-Robert				x			S5	G5		N
Grossulariaceae	*Ribes cynosbati*	Eastern Prickly Gooseberry				x		x	S5	G5		N
Iridaceae	*Iris versicolor*	Harlequin Blue Flag	x		x				S5	G5		N
Juglandaceae	*Juglans nigra*	Black Walnut						x	S4?	G5		N
Juncaceae	*Juncus effusus*	Soft Rush		x	x				S5	G5		N

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Lamiaceae	*Lycopus americanus*	American Water-horehound	x		x				S5	G5		N
Lamiaceae	*Mentha canadensis*	Canada Mint			x				S5	G5		N
Lamiaceae	*Prunella vulgaris*	Common Self-heal			x				S5	G5		N
Lamiaceae	*Scutellaria lateriflora*	Mad-dog Skullcap			x				S5	G5		N
Lemnaceae	*Lemna minor*	Small Duckweed			x				S5	G5		N
Liliaceae	*Maianthemum stellatum*	Star-flowered False Solomon's Seal						x	S5	G5		N
Oleaceae	*Fraxinus americana*	White Ash				x		x	S4	G4		N
Oleaceae	*Fraxinus nigra*	Black Ash		x	x				S4	G5	END	Y
Oleaceae	*Fraxinus pennsylvanica*	Red Ash	x	x	x		x	x	S4	G4		N
Onagraceae	*Circaea canadensis*	Broad-leaved Enchanter's Nightshade				x			S5	G5		N
Onagraceae	*Epilobium ciliatum*	Northern Willowherb			x				S5	G5		N
Onagraceae	*Epilobium coloratum*	Purple-veined Willowherb	x						S5	G5		N
Onagraceae	*Epilobium hirsutum*	Hairy Willowherb						x	SE5	GNR		N
Onagraceae	*Oenothera biennis*	Common Evening-primrose						x	S5	G5		N
Oxalidaceae	*Oxalis stricta*	Upright Yellow Wood-sorrel				x			SE5	G5		N
Pinaceae	*Picea glauca*	White Spruce				x			S5	G5		N
Pinaceae	*Pinus sylvestris*	Scots Pine			x	x			SE5	GNR		N
Plantaginaceae	*Plantago lanceolata*	English Plantain			x		x	x	SE5	G5		N
Plantaginaceae	*Plantago major*	Common Plantain				x	x	x	SE5	G5		N
Poaceae	*Agrostis gigantea*	Redtop			x	x		x	SE5	G4G5		N
Poaceae	*Agrostis stolonifera*	Creeping Bentgrass			x			x	SE5	G5		N
Poaceae	*Bromus inermis*	Smooth Brome				x	x	x	SE5	G5T5		N
Poaceae	*Calamagrostis canadensis*	Bluejoint Reedgrass		x	x				S5	G5		N
Poaceae	*Dactylis glomerata*	Orchard Grass			x	x	x	x	SE5	GNR		N
Poaceae	*Elymus repens*	Quackgrass					x	x	SE5	GNR		N
Poaceae	*Glyceria grandis*	Tall Mannagrass			x				S5	G5		N
Poaceae	*Glyceria striata*	Fowl Mannagrass		x	x	x			S5	G5		N
Poaceae	*Leersia oryzoides*	Rice Cutgrass			x				S5	G5		N
Poaceae	*Lolium arundinaceum*	Tall Ryegrass						x	SE5	GNR		N
Poaceae	*Lolium pratense*	Meadow Ryegrass					x	x	SE5	G5		N
Poaceae	*Phalaris arundinacea*	Reed Canarygrass	x	x	x	x	x	x	S5	G5		N
Poaceae	*Phleum pratense*	Common Timothy			x	x	x	x	SE5	GNR		N
Poaceae	*Poa palustris*	Fowl Bluegrass			x				S5	G5		N
Poaceae	*Poa pratensis*	Kentucky Bluegrass					x	x	S5	G5		P
Polygonaceae	*Persicaria amphibia*	Water Smartweed	x		x			x	S5	G5		N
Polygonaceae	*Persicaria lapathifolia*	Pale Smartweed			x	x			S5	G5		N
Polygonaceae	*Persicaria maculosa*	Spotted Lady's-thumb			x		x	x	SE5	G3G5		N
Polygonaceae	*Rumex acetosella*	Sheep Sorrel					x	x	SE5	GNR		N
Polygonaceae	*Rumex crispus*	Curled Dock				x	x	x	SE5	GNR		N
Polygonaceae	*Rumex obtusifolius*	Bitter Dock						x	SE5	GNR		N
Primulaceae	*Lysimachia ciliata*	Fringed Yellow Loosestrife		x					S5	G5		N
Primulaceae	*Lysimachia nummularia*	Creeping Yellow Loosestrife			x				SE5	GNR		N
Ranunculaceae	*Actaea pachypoda*	White Baneberry				x			S5	G5		N
Ranunculaceae	*Clematis virginiana*	Virginia Clematis						x	S5	G5		N
Ranunculaceae	*Ranunculus acris*	Common Buttercup				x	x	x	SE5	G5		N
Rhamnaceae	*Frangula alnus*	Glossy Buckthorn	x	x	x	x	x	x	SE5	GNR		N

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Rosaceae	*Amelanchier sp.*	Serviceberry species				x		x	-	-	-	-
Rosaceae	*Agrimonia gryposepala*	Hooked Agrimony				x		x	S5	G5		N
Rosaceae	*Crataegus sp.*	Hawthorn species				x	x	x	-	-	-	-
Rosaceae	*Fragaria virginiana*	Wild Strawberry				x	x	x	S5	G5		N
Rosaceae	*Geum canadense*	Canada Avens				x		x	S5	G5		N
Rosaceae	*Malus pumila*	Common Apple						x	SE4	G5		N
Rosaceae	*Potentilla recta*	Sulphur Cinquefoil						x	SE5	GNR		N
Rosaceae	*Prunus nigra*	Canada Plum						x	S4	G4G5		N
Rosaceae	*Prunus serotina*	Black Cherry				x		x	S5	G5		N
Rosaceae	*Prunus virginiana*	Chokecherry			x	x	x	x	S5	G5		N
Rosaceae	*Rosa blanda*	Smooth Rose						x	S5	G5		N
Rosaceae	*Rosa multiflora*	Multiflora Rose				x			SE5	GNR		N
Rosaceae	*Rosa palustris*	Swamp Rose			x				S5	G5		N
Rosaceae	*Rubus allegheniensis*	Allegheny Blackberry				x	x	x	S5	G5		N
Rosaceae	*Rubus idaeus ssp. strigosus*	North American Red Raspberry			x	x	x	x	S5	G5T5		N
Rosaceae	*Rubus pubescens*	Dwarf Raspberry				x			S5	G5		N
Rosaceae	*Sorbus aucuparia*	European Mountain-ash				x			SE4	G5		N
Rosaceae	*Spiraea alba*	White Meadowsweet	x		x	x		x	S5	G5		N
Rubiaceae	*Galium asprellum*	Rough Bedstraw						x	S5	G5		N
Rubiaceae	*Galium palustre*	Common Marsh Bedstraw	x		x			x	S5	G5		N
Rubiaceae	*Mitchella repens*	Partridgeberry				x			S5	G5		N
Salicaceae	*Populus tremuloides*	Trembling Aspen			x		x	x	S5	G5		N
Salicaceae	*Salix bebbiana*	Bebb's Willow	x	x	x			x	S5	G5		N
Salicaceae	*Salix discolor*	Pussy Willow	x	x	x	x		x	S5	G5		N
Salicaceae	*Salix eriocephala*	Cottony Willow						x	S5	G5		N
Salicaceae	*Salix lucida*	Shining Willow	x						S5	G5T5		N
Salicaceae	*Salix petiolaris*	Meadow Willow	x	x	x				S5	G5		N
Scrophulariaceae	*Veronica officinalis*	Common Speedwell				x			SE5	G5		N
Solanaceae	*Solanum dulcamara*	Bittersweet Nightshade	x		x	x			SE5	GNR		N
Sparganiaceae	*Sparganium sp.*	Burreed species			x				-	-	-	-
Tiliaceae	*Tilia americana*	Basswood			x	x		x	S5	G5		N
Typhaceae	*Typha angustifolia*	Narrow-leaved Cattail			x			x	SE5	G5		N
Typhaceae	*Typha latifolia*	Broad-leaved Cattail			x				S5	G5		N
Ulmaceae	*Ulmus americana*	White Elm			x	x	x	x	S5	G4		N
Urticaceae	*Boehmeria cylindrica*	Small-spike False Nettle			x				S5	G5		N
Verbenaceae	*Verbena hastata*	Blue Vervain			x	x			S5	G5		N
Vitaceae	*Parthenocissus vitacea*	Thicket Creeper			x	x	x	x	S5	G5		N
Vitaceae	*Vitis riparia*	Riverbank Grape	x			x	x	x	S5	G5		N

[1] Nomenclature and Conservation Rankings based on Ministry of Natural Resources and Forestry (MNRF) Natural Heritage Information Centre (NHIC, 2023)

[2] ELC Codes based on Ecological Land Classification for Southern Ontario manual (Lee *et al.* 1998, and 2008 updates)

[3]Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)

G-Rank = Global scale (from 1-5); G1 - Critically Imperiled, G2 - Imperiled, G3 - Vulnerable, G4 - Apparently Secure, G5 – Secure/Common; NR – Not Ranked,
T – Infraspecific Taxon/Trinomial (*e.g.* subspecies)

S-rank = Sub-national/provincial scale (from 1-5); S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common; NA – Not Applicable because not a suitable conservation target; E - Exotic; H - Historic

Table 2: Vascular Plant Species List, 1457 Tay Point Road EIS, Town of Penetanguishene (2023)

			[2] ELC Codes - Corresponding to Figure 2						[1] Conservation Rank Information			
Family	**[1] Scientific Name**	**[1] Common Name**	**SWTM3-6**	**SWDM2-2**	**MASM1**	**TAGM1**	**MEMM3**	**Hedgerows**	**S-Rank**	**G-Rank**	**SARO**	**Tracked by MNRF**
Track = Tracked provincially; Y - Yes, N - No, N/A = Not Applicable												

Ecological Land Classification[1]					
System	**Community Class**	**Community Series**	**Ecosite/Vegetation Type**	**Composition**	**Ground Cover**
Wetland	Swamp	SWT, Thicket Swamp	SWTM3-6, Mixed Willow Mineral Deciduous Thicket Swamp	Polygon is a relatively young, successional, mineral swamp thicket dominated by tall shrub willows. Aerial imagery available through the County of Simcoe[1] indicates that this polygon was open farmland as recently as 1989, regenerating as thicket swamp between 1989 and present. This polygon may have been abandoned in the intervening timeframe due to increasing flooding pressure/wetness during that time. Canopy sparse, containing a few scattered Green Ash and Silver Maple. Subcanopy layer relatively dense, dominated by shrub willows, particularly Pussy Willow with elements of Meadow Willow and Bebb's Willow, with a lesser degree of Glossy Buckthorn.	Ground cover dense, ground relatively flooded throughout. Understory dense, dominated by Reed Canary Grass with elements of White Meadowsweet, Red-osier Dogwood, *Carex* sedges, shorter shrub Willows and young Glossy Buckthorn. Ground layer also dense, composed of American Water-horehound, Common Marsh Bedstraw, Purple-veined Willowherb, Water Smartweed and others.
Wetland	Swamp	SWD, Deciduous Swamp	SWDM2-2, Green Ash Mineral Deciduous Swamp	Polygon is a relatively young, deciduous mineral swamp dominated by a canopy of Green Ash. Aerial imagery available through the County of Simcoe[1] indicates that, similar to the SWTM3-6, this polygon was open farmland as recently as recently as 1989, regenerating as deciduous swamp between 1989 and present. This polygon may have been abandoned in the intervening timeframe due to increasing flooding pressure/wetness during that time. Canopy dense, composed primarily of Green Ash with few very tall Pussy Willow scattered within. Subcanopy layer somewhat dense, composed largely of Glossy Buckthorn and shrub willows, particularly Pussy Willow with elements of Meadow Willow and Bebb's Willow.	Ground cover dense, ground relatively wet/flooded except at northmost edges. Understory dense, dominated by Glossy Buckthorn with lesser degrees of Green Ash, *Carex* sedges and Red-osier Dogwood. Ground layer also dense, dominated by Glossy Buckthorn with lesser degrees of *Carex* sedges, Fowl Mannagrass and others.
Wetland	Marsh	MAS, Shallow Marsh	MASM1, Graminoid Mineral Shallow Marsh	Polygon is a variable marsh that is relatively well-flooded except at its margins. Community exhibits some areas of Reed Canary Grass-dominance (especially in disturbed areas), while *Carex* sedges and Bluejoint Reedgrass are strongly represented in other areas. Portions of this community which could be evaluated within the study area were based on mineral soil, although there is potential for this community to transition to an organic marsh in interior portions of the Sucker Creek PSW. Composition variable, but generally wetland canopy is very sparse. Within the main Sucker Creek PSW region, canopy typically includes Willows, Ash and some Poplars, though these elements are minimal within the subject property. Where the MASM1 polygon enters the TAGM1 community, canopy trees from the plantation (such as Scots Pine, Basswood, White Elm, Red Maple) provide a minor degree of adjacent cover. Polygon subcanopy also somewhat sparse, typically including Glossy Buckthorn, shrub Willows and others. Within the main portion of the wetland upstream of the remnant beaver dam, subcanopy elements also include White Elm and Black Ash.	Understory dense, overall most consistently dominated by Reed Canary Grass. Within portions of the wetland upstream of the remnant beaver dam, substantial understory elements of *Carex* sedges and Bluejoint Reedgrass, White Meadowsweet and Cattails also occur. Ground layer somewhat sparse, (typically outcompeted by the understory layer), most frequently composed of young sedges, Water Smartweed, and others.
				Additional polygon notes: Aerial imagery available through the County of Simcoe[1] suggests that the southwest portion of this polygon (upstream of the remnant beaver dam) was historically used for animal grazing around 1978/1989. Once this agricultural land use stopped, beaver activity increased in the area of the remnant dam, with subsequent imagery showing flooding and regeneration as MASM. This polygon may have been abandoned in the intervening timeframe due to increasing flooding pressure/wetness during that time. The riparian (north) portions of the wetland appear to have been established in their modern form after a period of watercourse widening/dredging between 1997-2001[1]. This riparian wetland includes both flooded central areas and seasonally inundated creek bank portions; vegetation remains relatively dense and dominated by Reed Canary Grass along this section. A small swamp inclusion is connected to the north end of the polygon from the west, which is mostly embedded within the TAGM1 community.	
Terrestrial	Cultural	TAG, Treed Agriculture	TAGM1, Coniferous Plantation	Polygon is a rectangular Scots Pine plantation surrounding a watercourse, which is showing signs of eventual succession towards deciduous forest. Aerial imagery available through the County of Simcoe[1] indicates that the plantation was established prior to 1978. A small moist inclusion (<0.1ha) occurs at the north end of the polygon, surrounding the north end of the watercourse where it crosses Curry Road. Plantation canopy dense, dominated by Scots Pine, with lesser elements of Basswood, Maple (Red Maple, Sugar Maple), Riverbank Grape and White Elm. Subcanopy also dense, dominated primarily by Glossy Buckthorn with lesser elements of Cherry (Black Cherry, Chokecherry), White Elm, Basswood and White Ash.	Understory somewhat sparse, composed largely of Glossy Buckthorn, Chokecherry and Black Cherry, with lesser elements of Raspberry and young Ash. Ground layer somewhat dense, variable, including elements of Glossy Buckthorn, Chokecherry, Black Cherry, Common Speedwell, Western Poison Ivy, Herb-Robert and others.
Terrestrial	Meadow	MEM, Mixed Meadow	MEMM3, Dry - Fresh Mixed Meadow	Polygon is an open post-agricultural meadow with some areas being used for storage. Overall the meadow is dry-fresh in nature, although some minor fresh-moist patches occur. Canopy and subcanopy not present.	Understory dense , typically composed of Common Timothy, Orchard Grass, Kentucky Bluegrass, Ryegrass (Meadow Ryegrass, Tall Ryegrass) and occasional Goldenrod. Ground layer composed largely of Red Clover, Common Buttercup, Garden Bird's-foot Trefoil, younger grasses and several other species.

Terrestrial	N/A	N/A	Hedgerows	Hedgerows occur along the north, east and south margins of the subject property, along the road edge/ditches of Tay Point Road and Curry Road, and along the border between the farmlands of the subject lands and those to the south of the property. The majority of tree and shrub cover in these hedgerows appears to be natural in origin. The resulting composition is variable; however, Glossy Buckthorn is a common element throughout. Canopy-level trees are generally sparse; this layer is typically composed of taller Ash (including White and Green Ash), White Elm, Trembling Aspen, and occasionally Sugar Maple. Subcanopy layer varies from dense to relatively dense; this layer is most consistently dominated by Glossy Buckthorn and (in some areas) Nannyberry, with varying degrees of Hawthorn, Riverbank Grape, Thicket Creeper, Chokecherry, Ash and others.	Understory is dense and variable, composed of a broad assortment of species including Glossy Buckthorn, Orchard Grass, Smooth Brome, Nannyberry, Goldenrods, North American Red Raspberry, Chokecherry, Riverbank Grape, Thicket Creeper, Grass-leaved Goldenrod, Climbing Bittersweet, Spreading Dogbane and others. Ground layer also dense, variable, frequently composed of Western Poison Ivy, grasses, Glossy Buckthorn, Thicket Creeper, Garden-bird's-foot Trefoil and others.

ELC Codes based on Ecological Land Classification for Southern Ontario Manual (Lee et al. 1998, and 2008 update).

[1]Aerial Image Source: County of Simcoe. 2022. County of Simcoe online mapping database. https://opengis.simcoe.ca/public/.

Table 4: Dawn Breeding Birds Survey, 1457 Tay Point Road EIS, Town of Penetanguishene [2022 (and 2023 - Incidental Only)]

Surveyor: Dr. Scott Tarof

AEC21-327

			Location[1,2]									Conservation Rankings[3]				
FAMILY	SCIENTIFIC NAME	COMMON NAME	1			2			Adjacent Lands	Breeding Evidence	Incidental	Incidental (2023)	GRANK	SRANK	ESA	SARA	TRACK
			Visit 1	Visit 2	Visit 3	Visit 1	Visit 2	Visit 3									
Anatidae	*Anas platyrhynchos*	Mallard Duck							√	P	√	√	G5	S5			N
Anatidae	*Branta canadensis*	Canada Goose								X		√	G5	S5			N
Bombycillidae	*Bombycilla cedrorum*	Cedar Waxwing	S				S/VIS		S	Po		√	G5	S5			N
Cardinalidae	*Cardinalis cardinalis*	Northern Cardinal	S			C				Pr			G5	S5			N
Cardinalidae	*Passerina cyanea*	Indigo Bunting			S			S		Pr			G5	S5B			N
Cathartidae	*Cathartes aura*	Turkey Vulture				F/O		F/O		X		√	G5	S5B,S3N			N
Charadriidae	*Charadrius vociferus*	Killdeer				S				Po		√	G5	S4B			N
Columbidae	*Zenaida macroura*	Mourning Dove		S		VIS	S		F/O	Pr		√	G5	S5			N
Corvidae	*Corvus brachyrhynchos*	American Crow		C	C		C	VIS, C		Pr	√	√	G5	S5			N
Corvidae	*Corvus corax*	Common Raven								X	√	√	G5	S5			N
Corvidae	*Cyanocitta cristata*	Blue Jay		C						Po		√	G5	S5			N
Falconidae	*Falco sparverius*	American Kestrel								X	√		G5	S4			N
Fringillidae	*Spinus tristis*	American Goldfinch			S		S	S		Pr		√	G5	S5			N
Hirundinidae	*Hirundo rustica*	Barn Swallow								X		√	G5	S4B	SC		N
Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird		C		S,C				Po		√	G5	S5			N
Icteridae	*Dolichonyx oryzivorus*	Bobolink				S,VIS			S	X	√	√	G5	S4B	THR	THR	Y
Icteridae	*Icterus galbula*	Baltimore Oriole				S				Po		√	G5	S4B			N
Icteridae	*Molothrus ater*	Brown-headed Cowbird		S						Po		√	G5	S5			N
Icteridae	*Sturnella magna*	Eastern Meadowlark							C	X	√	√	G5	S4B,S3N	THR	THR	Y
Laridae	*Larus argentatus*	Gull					F/O		S	X			G5	S4B,S5N			N
Mimidae	*Dumetella carolinensis*	Gray Catbird	S			S				Pr	√	√	G5	S5B,S3N			N
Mimidae	*Mimus polyglottos*	Northern Mockingbird					S			Po			G5	S4			N
Paridae	*Poecile atricapillus*	Black-capped Chickadee			C			C		Pr		√	G5	S5			N
Parulidae	*Geothlypis trichas*	Common Yellowthroat		S		S	S		S	Pr	√		G5	S5B,S3N			N
Parulidae	*Mniotilta varia*	Black-and-white Warbler								X		√	G5	S5B			N
Parulidae	*Setophaga palmarum*	Palm Warbler								X	√		G5	S5B			P
Parulidae	*Setophaga petechia*	Yellow Warbler			VIS	S	S	S	S	Pr		√	G5	S5B			N
Parulidae	*Setophaga ruticilla*	American Redstart				S	S	S		Pr		√	G5	S5B			N
Parulidae	*Setophaga virens*	Black-throated Green Warbler								X		√	G5	S5B			N
Parulidae	*Spizella passerina*	Chipping Sparrow								X		√	G5	S5B			N
Passerellidae	*Ammodramus savannarum*	Grasshopper Sparrow		S		S	S		S	Pr			G5	S4B	SC		Y
Passerellidae	*Melospiza melodia*	Song Sparrow	S		S	S	S	S	S	Pr	√	√	G5	S5			N
Passerellidae	*Passerculus sandwichensis*	Savannah Sparrow								X		√	G5	S5B			N
Passerellidae	*Spizella pusilla*	Field Sparrow							S	X	√		G5	S4B,S3N			N
Passeriformes	*Tachycineta bicolor*	Tree Swallow								X		√	G5	S4,S5B			N
Picidae	*Dryobates pubescens*	Downy Woodpecker								X	√		G5	S5			N
Sturnidae	*Sturnus vulgaris*	European Starling								X		√	G5	SNA			N
Troglodytidae	*Troglodytes aedon*	House Wren	S	S		S	S	S	S	Pr		√	G5	S5B			N
Turdidae	*Turdus migratorius*	American Robin	S	S		VIS	C		S	Pr		√	G5	S5			N
Tyrannidae	*Myiarchus crinitus*	Great-crested Flycatcher	S			S				Po			G5	S5B			N
Tyrannidae	*Tyrannus tyrannus*	Eastern Kingbird				S				Po			G5	S4B			N
Vireonidae	*Vireo olivaceus*	Red-eyed Vireo							S	X			G5	S5B			N

[1] **Visit 1**: May 30, 2022, Observer: S.Tarof, Tempurature 23ºC, Cloud Cover 20% , Wind: B1, Precipitation: No rain, Survey Time 09:46 to 10:06; **Visit 2:** June 14, 2022, Observer: S.Tarof, Tempurature 14ºC, Cloud Cover 5% , Wind: B0, Precipitation: No rain, Survey Time 07:08 to 07:31; **Visit 3:** June 22, 2022, Observer: S. Tarof, Temperature 15°C, Cloud Cover 5%, Wind: B2, Precipitation: No rain, Survey Time: 08:08 to 08:26.

[2] Breeding Bird Evidence Codes: X/√ - Species observed or heard, VIS - Visual, C - Call heard, FO - Flyover (Species presence); H - Species observed in its breeding season in suitable nesting habitat, S - Singing male (Po - Possible Breeding, Pr - Probable Breeding); P - Pair observed, T - Territorial behaviour, A - Agitated behaviour or anxiety calls of adult, V - Visiting a probably nest site, N - Nest building or excavation of nest hole (Probable Breeding); DD - Distraction display or injury feigning, NU - Used Nest or egg shells, FY - Recently fledged young, AE - Adult leaving or entering nest sites, FS - Adult carrying fecal sac, CF - Adult carrying food for young, NE - Nest containing eggs, NY - Nest with young seen or heard (Confirmed Breeding).

Breeding).

[3] Conservation Rankings: From Ontario Ministry of Natural Resources, Natural Heritage Information Centre (http://nhic.mnr.gov.on.ca/nhic_.cfm)
S-Rank = Sub-national/provincial scale (from 1-5), S1 - Extremely Rare, S2 - Very Rare, S3 - Rare to Uncommon, S4 - Common, S5 - Very Common, E - Exotic
G-Rank = Global scale (from 1 - "Critically Imperiled" to 5 - "Secure" or common), G1 - Critically Imperiled, G2 - Imperiled, G3 - Vulnerable, G4 - Apparently Secure, G5 - Secure.
B = Breeding Populations, N = Non-breeding Populations; M = Migratory Populations; SARO: EXT - Extirpated, END - Endangered, THR - Threatened, SC - Special Concern,
Track (Is the species tracked provincially?) = Y - Yes, N = No, P = Partial
NA - Not Applicable (*i.e.* not native to Ontario), Blank - Not at Risk in Ontario.

Table 5. Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E, 1457 Tay Point Road EIS, Town of Penetanguishene (2023)

Table 1.1 Seasonal Concentrations of Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Stopover and Staging Areas (Terrestrial) **Rationale:** Habitat important to migrating waterfowl.	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	Fields with sheet water during Spring (mid-March to May). • 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. Information Sources • 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 (***e.g.*** EHJV implementation plan) • Field Naturalist Clubs • Ducks Unlimited Canada • Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	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" • Any mixed species aggregations of 100 or more individuals required. • The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat. • 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). • SWHMiST Index #7 provides development effects and mitigation measures.	The wildlife habitat is not present on or adjacent to the property.
Waterfowl Stopover and Staging Areas (Aquatic) **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.	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	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	• 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). Information Sources • 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 (***e.g.*** EHJV implementation plan) • Ducks Unlimited projects • Element occurrence specification by Nature Serve: http://www.natureserve.org • Natural Heritage Information Centre (NHIC) Waterfowl Concentration Areas	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. • The combined area of the ELC ecosites and a 100m radius area is the SWH. • Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • 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). • SWHMiST Index #7 provides development effects and mitigation measures.	MAS2 and SWD2 ELC ecosites present on the southwestern fringe of the property (and further to the southwest on adjacent lands), but access to suitable water areas is very limited. Listed species not observed.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Shorebird Migratory Stopover Area **Rationale:** High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	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	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	• 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. Information Sources • 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 Center (NHIC) Shorebird Migratory Concentration Area	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. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWHMiST Index #8 provides development effects and mitigation measures.	ELC ecosites listed are not present on the property. Species not observed.
Raptor Wintering Area **Rationale:** Sites used by multiple species of individuals and used annually are most significant	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl **Special Concern:** Short-eared Owl Bald Eagle	Hawks/Owls: Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW. 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).	• The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Raptor wintering sites (hawk/owl) need to be > 20 ha with a combination of forest and upland. • Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands. • Field area of the habitat is to be windswept with limited snow depth or accumulation. • Eagle sites have open water, large trees and snags available for roosting. Information Sources: • OMNRF Ecologist or Biologist Field Naturalist Clubs • Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area • Data from Bird Studies Canada • Results of Christmas Bird Counts Reports and other information available from Conservation Authorities.	Studies confirm the use of these habitats by: • One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species. • To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. • The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWHMiST Index #10 and #11 provides development effects and mitigation measures.	Property does not provide the combination of field/upland forest habitat to provide raptor wintering function.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Bat Hibernacula **Rationale:** Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat Tri-coloured Bat	Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)	• Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. • Active mine sites should not be considered as SWH • The locations of bat hibernacula are relatively poorly known. Information Sources • OMNRF for possible locations and contact for local experts • Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern • Development and Mines for location of mine shafts. • Clubs that explore caves (***e.g***. Sierra Club) • University Biology Departments with bat experts.	• All sites with confirmed hibernating bats are SWH. • The habitat area includes a 200m radius around the entrance of the hibernaculum, for most development types and 1000m for wind farms • 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. • SWHMiST Index #1 provides development effects and mitigation measures.	No caves, mine shafts, underground foundations and karsts. No suitable habitat in study area.
Bat Maternity Colonies **Rationale:** Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Big Brown Bat Silver-haired Bat	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM	• Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). • Maternity roosts are not found in caves and mines in Ontario. • Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. • Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. • Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred. Information Sources • OMNRF for possible locations and contact for local experts • University Biology Departments with bat experts.	• Maternity Colonies with confirmed use by; o >10 Big Brown Bats o >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". • SWHMiST Index #12 provides development effects and mitigation measures.	SWD ecosite occurs on the property, but potentially suitable trees with bat snag features not observed.
Turtle Wintering Areas **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Midland Painted Turtle **Special Concern:** Northern Map Turtle Snapping Turtle	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.	• 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. • Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. Information Sources • 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 Center (NHIC)	• 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) • Congregation of turtles is more common where wintering areas are limited and therefore significant • SWHMiST Index #28 provides development effects and mitigation measures for turtle wintering habitat.	Although SW and MA ELC community series occur on property, habitat not suitable for overwintering turtles (***e.g.*** water too shallow and sparse). Candidate criteria not met.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Reptile Hibernaculum **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	**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	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	• 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. • 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. Information Sources • 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 Naturalists clubs • University herpetologists • Natural Heritage Information Center (NHIC) • OMNRF ecologist or biologist may be aware of locations of wintering skinks	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 (***e.g.*** 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. • SWHMiST Index #13 provides development effects and mitigation measures for snake hibernacula. • Presence of any active hibernaculum for skink is significant. • SWHMiST Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.	No features were identified in the study area that could provide suitable reptile hibernaculum. The study area would not be expected to provide reptile hibernaculum habitat function.
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.	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	• 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. Information Sources • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas • Bird Studies Canada; ***NatureCounts*** http://www.birdscanada.org/birdmon/ • Field Naturalist Clubs.	Studies confirming: • Presence of 1 or more nesting sites with 8or 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”. • SWHMiST Index #4 provides development effects and mitigation measures.	No suitable habitat in the study area. The study area would not be expected to provide the habitat function.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	• 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. Information Sources • Ontario Breeding Bird Atlas, colonial nest records. • Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). • Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony • Aerial photographs can help identify large heronries. • Reports and other information available from CAs. • MNRF District Offices • Local naturalist clubs	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. • 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. • SWHMiST Index #5 provides development effects and mitigation measures.	SWD ELC ecosite present on southwestern edge of property, but key habitat requirements for candidacy (e.g. areas of mature tall trees surrounded by areas of water) not met. Species not observed. NHIC records indicate Mixed Wader Nesting in general area (Appendix B), but not suitable habitat on property or adjacent.
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.	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM CUT CUS	• 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 low bushes in close proximity to streams and irrigation ditches within farmlands. Information Sources • Ontario Breeding Bird Atlas , rare/colonial species records. • Canadian Wildlife Service • Reports and other information available from CAs. • Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area • MNRF District Offices • Field Naturalist clubs	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. • Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWHMiST Index #6 provides development effects and mitigation measures.	Not a rocky island/peninsula or on a lake/large river. NHIC records indicate Colonial Waterbird Nesting in the general area (Appendix B), but no suitable habitat in study area or on the property. Not considered further in assessment.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Migratory Butterfly Stopover Areas **<u>Rationale:</u>** Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Painted Lady Red Admiral <u>Special Concern</u> Monarch	Combination of ELC Community Series; need to have present one Community Series from each land class: <u>Field:</u> CUM CUT CUS <u>Forest:</u> FOC FOD FOM CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present, and will be located within 5 km of Lake Ontario. • 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. • 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. • 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. <u>Information Sources</u> • OMNRF (NHIC) • Agriculture Canada in Ottawa may have list of butterfly experts. • Field Naturalist Clubs • Toronto Entomologists Association • Conservation Authorities	Studies confirm: • The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. • Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. • MUD of >5000 **or** >3000 with the presence of Painted Ladies or Red Admiral's is to be considered significant. • SWHMiST Index #16 provides development effects and mitigation measures.	Property is not located within 5km of Lake Ontario. No suitable habitat present in study area.
Landbird Migratory Stopover Areas **<u>Rationale:</u>** Sites with a high diversity of species as well as high numbers are most significant.	All migratory songbirds. Canadian Wildlife Service Ontario website. All migratory songbirds. Canadian Wildlife Service Ontario website:	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. • If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. • The largest sites are more significant. • Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH . <u>Information Sources</u> • Bird Studies Canada • Ontario Nature • Local birders and naturalist club • Ontario Important Bird Areas (IBA) Program	Studies confirm: • 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. • Studies should be completed during spring (Apr./May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects". • SWHMiST Index #9 provides development effects.	Not located within 5km of Lake Ontario.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Yarding Areas **<u>Rationale:</u>** Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.	White-tailed Deer	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	• 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%. • OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual". • Woodlots with high densities of deer due to artificial feeding are not significant.	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. • 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. • 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. • SWHMiST Index #2 provides development effects and mitigation measures.	ELC ecosites listed are not present on the property. Habitat function not mapped by MNRF in study area.
Deer Winter Congregation Areas **<u>Rationale:</u>** Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.	White-tailed Deer	All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may also be used.	• Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as 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 . • 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. • Woodlots with high densities of deer due to artificial feeding are not significant. <u>Information Sources</u> • MNRF District Offices • LIO/NRVIS	Studies confirm: • Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF. • 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, ground or road surveys. or a pellet count deer density survey. • 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. • SWHMiST Index #2 provides development effects and mitigation measures.	SWD ecosite occurs on property but is not of sufficient size to be considered for this potential SWH function. No deer winter congregation areas mapped in area (MNRF mapping).

Table 1.2.1 Rare Vegetation Communities

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Cliffs and Talus Slopes **Rationale:** Cliffs and Talus Slopes are extremely rare habitats in Ontario.	Any ELC Ecosite within Community Series: TAO TAS TAT CLO CLS CLT	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.	Most cliff and talus slopes occur along the Niagara Escarpment. Information Sources • The Niagara Escarpment Commission has detailed information on location of these habitats. • OMNRF District • Natural Heritage Information Center (NHIC) has location information available on their website • Field Naturalist clubs • Conservation Authorities	• Confirm any ELC Vegetation Type for Cliffs or Talus Slopes • SWHMiST Index #21 provides development effects and mitigation measures.	No cliffs or talus slopes.
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	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%.	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%.	A sand barren area >0.5ha in size. Information Sources • MNRF Districts • Natural Heritage Information Center (NHIC) has location information available on their website. • Field Naturalist clubs • Conservation Authorities	• Confirm any ELC Vegetation Type for Sand Barrens • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) • SWHMiST Index #20 provides development effects and mitigation measures.	No sand barrens.
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 Palaeozoic-Precambrian contact.	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 **Five Alvar Species:** 1) ***Carex crawei*** 2) ***Panicum philadelphicum*** 3) ***Eleocharis compressa*** 4) ***Scutellaria parvula*** 5) ***Trichostema brachiatum*** These indicator species are very specific to Alvars within Ecoregion 6E.	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover.	An Alvar site > 0.5 ha in size. Information Sources • Alvars of Ontario (2000), Federation of Ontario Naturalists. • Ontario Nature – Conserving Great Lakes Alvars. • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs • Conservation Authorities	• Field studies that identify four of the five **Alvar Indicator Species** 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. • SWHMiST Index #17 provides development effects and mitigation measures.	No alvar.

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
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.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth forests are characterized by heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. Information Sources • 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	Field Studies will determine: • If dominant trees species are >140 years old, then the area containing these trees is Significant Wildlife Habitat. • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present). • The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest area containing the old growth characteristics. • SWHMiST Index #23 provides development effects and mitigation measures.	No known old growth forest.
Savannah **Rationale:** Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. Information Sources • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs • Conservation Authorities	Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • SWHMiST Index #18 provides development effects and mitigation measures.	No savannah.
Tallgrass Prairie **Rationale:** Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. Information Sources • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs • Conservation Authorities	Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • SWHMiST Index #19 provides development effects and mitigation measures.	No tallgrass prairie.
Other Rare Vegetation Communities **Rationale:** Plant communities that often contain rare species which depend on the habitat for survival.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M The OMNRF/NHIC will have up to date listing for rare vegetation communities. Information Sources • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs • Conservation Authorities	Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG. • Area of the ELC Vegetation Type polygon is the SWH. • SWHMiST Index #37 provides development effects and mitigation measures.	No rare vegetation communities in study area.

1.2.2 Specialized Habitat for Wildlife

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Nesting Area **Rationale;** Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard Duck	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**	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120m of each individual wetland where waterfowl nesting is known to occur. • Upland areas should be at least 120m 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. Information Sources • 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.	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”. • A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest. • SWHMiST Index #25 provides development effects and mitigation measures.	MAS, SWT and SWD ELC ecosites present on southwestern fringe of the property and adjacent. One Mallard Duck pair observed on adjacent lands approximately 50m southwest of property in Sucker Creek during one property visit, but the pair was not observed to be actively nesting nor were young observed. The other listed species were not detected during field surveys. No expectation for 10 or more nesting Mallard Duck pairs in study area, and no expectation of three or more nesting pairs in the study area of the other listed species. Possible suitable nesting habitat approximately 830m to the southwest. Not considered further in the assessment.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat **Rationale;** Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Osprey **Special Concern** Bald Eagle	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. • 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). Information Sources • Natural Heritage Information Center (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 Districts • Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented • Reports and other information available from Conservation Authorities. • Field Naturalists clubs	Studies confirm the use of these nests by: • One or more active Osprey or Bald Eagle nests in an area. • 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, maintaining undisturbed shorelines with large trees within this area is important. • For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on site lines from the nest to the development and inclusion of perching and foraging habitat. • 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. • Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid March to mid August. • Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”. • SWHMiST Index #26 provides development effects and mitigation measures.	SWD ELC ecosite present on southwestern edge of property, but trees in the area are generally considered to be too small/unsuitable for possible nesting by the species. Potential treed PSW habitat occurs beyond the study area but not within the study area. Listed species not observed nor were possible nests of listed species observed.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Woodland Raptor Nesting Habitat **<u>Rationale:</u>** Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	Northern Goshawk Cooper's Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer • 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. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <u>Information Sources</u> • OMNRF Districts. • Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. • Check data from Bird Studies Canada. • Reports and other information available from Conservation Authorities.	Studies confirm: • Presence of 1 or more active nests from species list is considered significant. • Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH . (The 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest). • Barred Owl – A 200m radius around the nest is the SWH. • Broad-winged Hawk and Coopers Hawk– A 100m radius around the nest is the SWH. • Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. • 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. • SWHMiST Index #27 provides development effects and mitigation measures.	TAGM1 coniferous plantation does not meet candidate habitat criteria. SWD ELC ecosite present on the property, but too small to be considered potentially suitable. Not considered further in the assessment.
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.	Midland Painted Turtle <u>Special Concern Species</u> Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	• 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 Center (NHIC) • Field Naturalist clubs	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. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. • 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. • SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat.	Suitable exposed mineral soil (sand) present on adjacent lands southwest of property but not on-property. One Blanding's Turtle and one Snapping Turtle observed basking southwest of property, but were not nesting. No expectation of confirmatory turtle species nesting criteria being met in study area. Potential turtle nesting habitat further to the southwest beyond the study area. Not considered further in the assessment.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Seeps and Springs **<u>Rationale;</u>** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species. <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.	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. • SWHMiST Index #30 provides development effects and mitigation measures.	Areas of potential seeps/springs not observed in study area.
Amphibian Breeding Habitat (Woodland). **<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.	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD 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.	• Presence of a wetland, pond or woodland pool (including vernal pools) >500m^2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat. <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 District • OMNRF wetland evaluations • Field Naturalist clubs • Canadian Wildlife Service • Amphibian Road Call Survey • Ontario Vernal Pool Association: http://www.ontariovernalpools.org	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) or 2 or more of the listed frog species with Call Level Codes of 3. • A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. • The habitat is the wetland area plus a 230m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. • SWHMiST Index #14 provides development effects and mitigation measures.	**SWD ELC ecosite present on property. Spring Peepers and Gray Treefrogs heard incidentally on adjacent lands 100-120m away from the property. Amphibian surveys not part of approved scope, but treated as present. Considered further in main text.**

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SHW	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Breeding Habitat (Wetlands) **Rationale:** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	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	ELC Community Classes SW, MA, FE, BO, OA and SA. 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.	• Wetlands>500m^2 (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. • 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. • Bullfrogs require permanent water bodies with abundant emergent vegetation. Information Sources • Ontario Herpetofaunal Summary Atlas (or other similar atlases) • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. • OMNRF Districts and wetland evaluations • Reports and other information available from Conservation Authorities	Studies confirm: • Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3. **or;** Wetland with confirmed breeding Bullfrogs are significant. • The ELC ecosite wetland area and the shoreline are the SWH. • A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. • 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. • SWHMiST Index #15 provides development effects and mitigation measures.	**SWD ELC ecosite present on property. American Toad and Gray Treefrogs heard incidentally on adjacent lands 100-120m from the property. Amphibian surveys not part of approved scope, but treated as present. Considered further in main text.**
Woodland Area-Sensitive Bird Breeding Habitat **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.	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 **Special Concern:** Cerulean Warbler Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. • Interior forest habitat is at least 200 m from forest edge habitat. Information Sources • 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.	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”. • SWHMiST Index #34 provides development effects and mitigation measures.	Potential ELC habitat polygons too small (and trees too young) to be considered suitable. Listed species not observed.

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

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Marsh Breeding Bird Habitat **Rationale;** Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan **Special Concern:** Black Tern Yellow Rail	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites.	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. • 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. Information Sources • OMNRF District and wetland evaluations. • Field Naturalist clubs • Natural Heritage Information Center (NHIC) Records. • Reports and other information available from Conservation Authorities. • Ontario Breeding Bird Atlas	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”. • SWHMiST Index #35 provides development effects and mitigation measures.	**MASM1 ELC ecosite present in study area, but availability of shallow water limited. Species not observed.** **Potential for habitat for Green Heron possibly associated with the edge of Sucker Creek (primarily adjacent to the southwest), although Sucker Creek seems to have limited productivity. Considered further in main text.**
Open Country Bird Breeding Habitat Sources Defining Criteria **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.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern** Short-eared Owl	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha. • 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. Information Sources • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities.	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”. • SWHMiST Index #32 provides development effects and mitigation measures.	Grasslands of suitable size not present in study area. Grasshopper Sparrow observed on the property during the first two dawn breeding bird surveys in a small (~2ha) disturbed dock storage area near Curry Road (Figure 2). The area where species was observed is much smaller than the 30ha minimum size, and the habitat was no longer present during the third survey. Species detected on adjacent lands to the southeast and southwest where suitable habitat is abundant. Not considered further in our assessment.
Shrub/Early Successional Bird Breeding Habitat **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.	Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:** Yellow-breasted Chat Golden-winged Warbler	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species	Large field areas succeeding to shrub and thicket habitats>10ha 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. • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. Information Sources • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs • Ontario Breeding Bird Atlas • Reports and other information available from Conservation Authorities.	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”. • SWHMiST Index #33 provides development effects and mitigation measures.	ELC ecosites listed not present in study area. Habitat requirements not met and species not expected to occur on property. One Field Sparrow detected on adjacent lands as an incidental. Not considered further in the assessment.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Terrestrial Crayfish **<u>Rationale:</u>** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (***Fallicambarus fodiens***) Devil Crayfish or Meadow Crayfish; (***Cambarus Diogenes***)	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.	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.	Studies Confirm: • Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. • 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. • SWHMiST Index #36 provides development effects and mitigation measures.	MAS, SWD and SWT ELC ecosites present on the property, but terrestrial crayfish or their chimneys not observed.
Special Concern and Rare Wildlife Species **<u>Rationale:</u>** These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy.	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites <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.	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. • SWHMiST Index #37 provides development effects and mitigation measures.	**Three Special Concern species were observed in the field: Grasshopper Sparrow (on-property); Barn Swallow (incidental fly-over) and Snapping Turtle (adjacent). Considered further in main text.**

1.4 Animal Movement Corridors

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Movement Corridors **Rationale;** Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	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	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	Movement corridors between breeding habitat and summer habitat. • Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (**Amphibian Breeding Habitat –Wetland)** of this Schedule. Information Sources • MNRF District Office • Natural Heritage Information Center (NHIC) • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs	• 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. • Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. • Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. • SWHMiST Index #40 provides development effects and mitigation measures.	Amphibian breeding habitat not detected on the property.
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.	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	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. • Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). Information Sources • MNRF District Office • Natural Heritage Information Center (NHIC). • Reports and other information available from Conservation Authorities. • Field Naturalist Clubs	• 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 with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. • Shorter corridors are more significant than longer corridors. • SWHMiST Index #39 provides development effects and mitigation measures.	No deer wintering habitat present.

1.5 Exceptions for EcoRegion 6E

EcoDistrict	Wildlife Habitat and Species	Candidate			Confirmed SWH	Assessment
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria	
6E-14 **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.	**Mast Producing Areas** Black Bear	All Forested habitat represented by ELC Community Series: FOM FOD	• Black bears require forested habitat that provides cover, winter hibernation sites, and mast-producing tree species. • Forested habitats need to be large enough to provide cover and protection for black bears.	Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech). Information Sources Important forest habitat for black bears may be identified by OMNRF.	All woodlands > 30ha with a 50%composition of these ELC Vegetation Types are considered significant: 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 SWHMiST Index #3 provides development effects and mitigation measures.	Not on Bruce Peninsula.
6E- 17 **Rationale:** Sharp-tailed grouse only occur on Manitoulin Island in Eco-region 6E, Leks are an important habitat to maintain their population	Lek Sharp-tailed Grouse	CUM CUS CUT	• 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.	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 Information Sources • OMNRF district office • Bird watching clubs • Local landowners • Ontario Breeding Bird Atlas	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 Index #32 provides development effects and mitigation measures	Not on Manitoulin Island.

APPENDICES

Appendix A: Municipal and Regional Background and Correspondence
Appendix B: Provincial and Federal Background and Correspondence
Appendix C: Photographic Record
Appendix D: Consent Sketch
Appendix E: Blanding's Turtle MECP Technical Memorandum

APPENDIX A

Municipal and Regional Background and Correspondence

COUNTY OF SIMCOE
For the Greater Good

SCHEDULE 5.1

To the County of Simcoe Official Plan

LAND USE DESIGNATIONS

Designations

- Settlements
- Greenlands
- Agricultural
- Rural
- Strategic Settlement Employment Areas and Economic Employment Districts
- Lands not subject to this plan
- Settlement Area Boundary Under Appeal
- 1 General Location of Site-Specific Appeals
- Lands Subject to Non-Decision

Reference Data

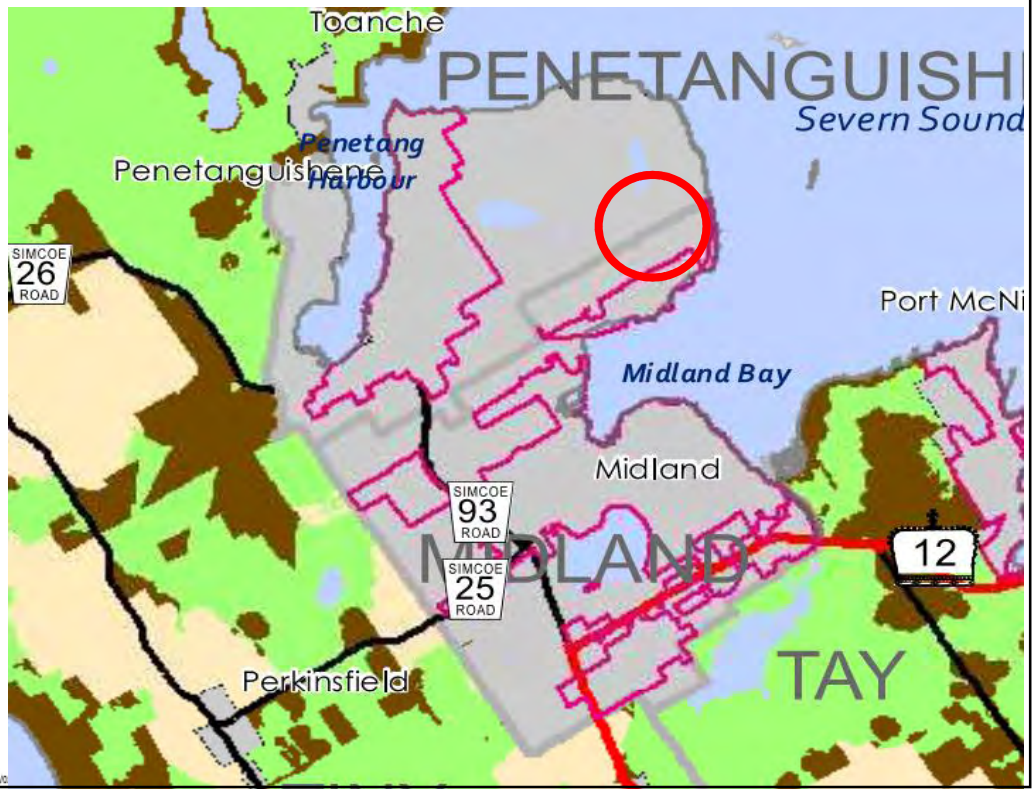
- Settlement Area Boundary
- Built Boundaries
- Special Development Area: Friday Harbour Resort
- Greenbelt Plan - Protected Countryside (Refer to Schedule 5.3.3 For Details)
- Niagara Escarpment Plan Area (Refer to Schedule 5.3.1 For Details)
- Oak Ridges Moraine Conservation Plan Area (Refer to Schedule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

** Greenbelt Plan – Protected Countryside, Oak Ridges Moraine Conservation Plan Area and Niagara Escarpment Plan Area are included within the Greenbelt Plan Area*

This schedule must be referred to in conjunction with the text of the County of Simcoe Official Plan

Office Consolidation February 2023

Printed: 2023/0



COUNTY OF SIMCOE

For the Greater Good

SCHEDULE 5.2.2

To the County of Simcoe Official Plan

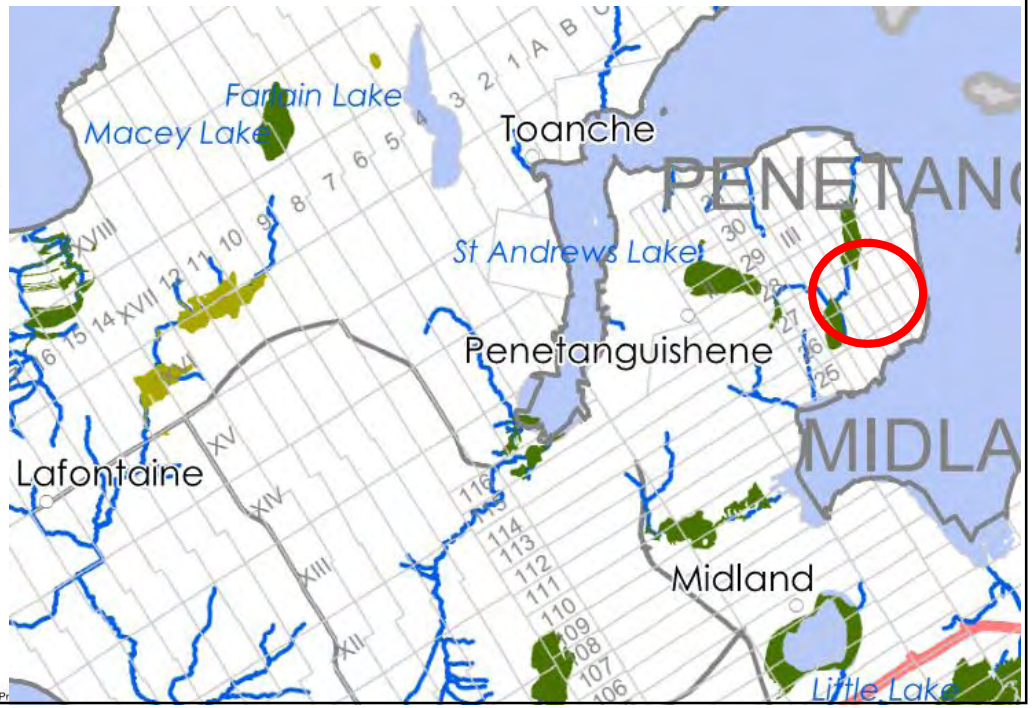
STREAMS AND EVALUATED WETLANDS

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

This schedule must be referred to in conjunction with the text of the County of Simcoe Official Plan - November 25, 2008

Source: Midhurst District MNR

Approved by OMB on May 9, 2016



COUNTY OF SIMCOE
For the Greater Good

SCHEDULE 5.2.3

To the County of Simcoe Official Plan

AREAS OF NATURAL AND SCIENTIFIC INTEREST

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

This schedule must be referred to in conjunction with the text of the County of Simcoe Official Plan - November 25, 2008
Source: Ministry of Natural Resources

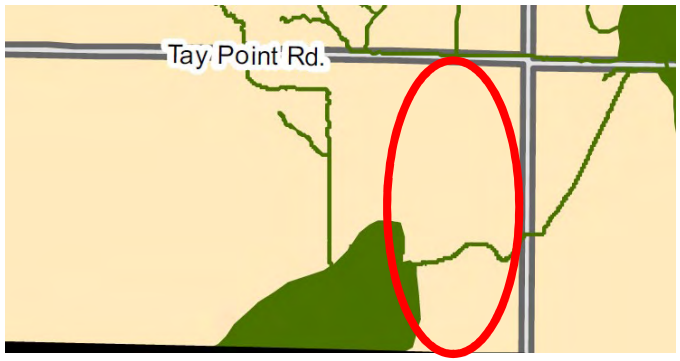
Approved by the OMB on April 19, 2013

Printed: 5/17/2013

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

Town of / Ville de Penetanguishene

OFFICIAL PLAN
Schedule A: Land Use Structure



Environmental Protection

Future Study Areas

Site Specific Policy Areas

Waste Disposal Influence Area

Waste Disposal Site

Pits and Quarries

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

0 1 2 km

Date: February 2019
Consolidated with County Modifications

Town of / Ville de Penetanguishene

OFFICIAL PLAN
Schedule B1: Policy Overlays

1457 Tay Point Road County of Simcoe - Web Map

0 500 1000 1500m

1 : 16,451

Dec. 5, 2023

Legend

Groups:

All Layers

Municipal Administration Centre

Airport

Police Station

Paramedic Station

Fire Hall

Hospital

Library

Education Facility

Museum And Archives

Childcare Facility

Ontario Early Years Centre

Ontario Works Office

Long Term Care Facility

Community Health Centre

Housing Support Agency

Hydro Provider Service Boundary

- Alectra Utilities
- EPCOR
- Hydro One
- InnPower
- Midland Power Utility Corporation
- Newmarket-Tay Power Distribution
- Orillia Power
- Wasaga Distribution

Ontario Employment Services Centre

Service Ontario Centre

Service Canada Centre

Bag Tag Location

Public Landfill

Public Washroom

Public Parking Lot

Boat Launch

Casino

Community Area

Community Facilities

- Arena
- Casino
- Community Centre
- Conference Centre
- Curling Club
- Entertainment Venue
- Fairgrounds
- Meeting Hall
- Municipal Building
- Other
- Outdoor Ice Rink
- Outdoor Rink
- Pool
- Recreation Complex
- Recreational Camp
- Seniors Centre
- Theatre

Conservation Area

Innovation Centres

Place of Worship

Solid Waste Management Facility

- Open Landfill, Operational Facility
- Open Landfill, Non-Operational Facility
- Closed Landfill, Operational Facility
- Closed Landfill, Non-Operational Facility
- Closed Landfill, Waste Removed - No D4 Required

Train Station

Settlement Services Offices

Golf Course

Marina Mooring Launch

LSRCA Conservation Area Point

NVCA Conservation Area Point

9 Mile Portage Trail

Bruce Trail

Ganaraska Trail

Ganaraska Trail Backup


Zoomedin


ZoomedOut

Trans Canada Trail

Contour (2 metre)


Elevation AMSL


Elevation AMSL

Issued Tree Cut Permit

County Forest Access Road


Primary Forest Access Route


Secondary Forest Access Route

County Forest Stand

County Forest Tract


County Forest Tract


County Forest Tract - No Hunting

Municipal Park

Crown Land

Provincial Park

Barn Quilts

Forestry Parking Area


Winter Maintenance Yes


Winter Maintenance No

HTG Loop Trail

Scenic Driving Route

Historic Site

National Historic Site
Provincial Historic Site
Local Historic Site

Historic Railway

Lot and Concession

Historic Geographic Township Boundary

Proposed Areas to be Removed From Prime Agricultural Areas (Draft March 2022)

Proposed Refined Prime Agricultural Area (Draft March 2022)

Proposed Refined Natural Heritage System for the Growth Plan Overlay (March 28, 2022)

Proposed Areas to be Removed or Added From Natural Heritage System Overlay (Draft March 2022)

Addition
Removal

County Official Plan Road Systems

Primary Arterial
Secondary Arterial
Primary Arterial - Controlled Access

Greenbelt Plan Boundary

Niagara Escarpment Land Use Boundary

Oak Ridges Moraine Boundary

Lake Simcoe Protection Act Boundary

County Official Plan County Owned Waste Facilities

Open Landfill Site
Open Stump Dump
Under Development Landfill Site
Closed Landfill Site

County Official Plan Local and Private Waste Facilities

County Official Plan Licenced Pit & Quarries

County Official Plan Employment Areas

Primary Settlement Area
Bradford West Gwillimbury Strategic Settlement Employment Area
Innisfil Heights Strategic Settlement Employment Area
Lake Simcoe Regional Airport Economic Employment District
Rama Road Economic Employment District

County Official Plan Bedrock Aggregate Resources (Midhurst District)

County Official Plan Primary Sand & Gravel Deposits

County Official Plan Secondary Sand & Gravel Deposits

Evaluated Wetland

Unevaluated Wetland

Oak Ridges Moraine ANSI

Significant Groundwater Recharge Area

Vulnerability Score = 2
Vulnerability Score = 4
Vulnerability Score = 6

Highly Vulnerable Aquifer

Wellhead Protection Area

- Wellhead Protection Area Zone Name = A
- Wellhead Protection Area Zone Name = B
- Wellhead Protection Area Zone Name = C
- Wellhead Protection Area Zone Name = C1
- Wellhead Protection Area Zone Name = D
- Wellhead Protection Area Zone Name = E

Wellhead Protection Area Q1 and Q2

- Wellhead Protection Area -Q2
- Wellhead Protection Area -Q1

Wellhead Protection Area Vulnerability Score

- Wellhead Protection Area Vulnerable Score = 2
- Wellhead Protection Area Vulnerable Score = 4
- Wellhead Protection Area Vulnerable Score = 6
- Wellhead Protection Area Vulnerable Score = 8
- Wellhead Protection Area Vulnerable Score = 10

Soil Class (Canada Land Inventory)

- Class 1, 2 or 3 Soil
- Class 4 Soil
- Class 5, 6 or 7 Soil
- Water
- Organic Soil

Wildlife Management Unit

Vacant Commercial and Industrial Land

Assessment Parcel

Ownership Parcel

Condo Unit Parcel

First Nation Land Parcel

Address Number

Named Place Label

Assessment Parcel Labels

Woodlands

Building

Curbside Waste Collection Day

- MONDAY
- TUESDAY
- WEDNESDAY
- THURSDAY
- FRIDAY
- NO COLLECTION

Local Real Estate

- Residential
- Commercial
- Farm
- Vacant Land

Municipal Borders

Municipal Ward Boundary

Federal and Provincial Riding

Business Development Corporation

- Centre for Business and Economic Development
- North Simcoe Community Futures Development Corporation
- Nottawasaga Futures Development Corporation
- Orillia & Area Community Development Corporation

Business Enterprise Centre

- Barrie, Simcoe County and Orillia Small Business Enterprise Centre
- South Georgian Bay Small Business Enterprise Centre

Catholic Elementary School Attendance Boundary

- Canadian Martyrs Elementary Catholic School
- Father Fx O'Reilly Elementary Catholic School
- Foley Elementary Catholic School
- Guardian Angel Elementary Catholic School
- Holy Cross Elementary Catholic School
- Holy Family Elementary Catholic School
- Monsignor Castex Elementary Catholic School
- Monsignor Clair Elementary Catholic School
- Monsignor JE Ronan Elementary Catholic School
- Monsignor Lee Elementary Catholic School
- Mother Teresa Elementary Catholic School
- Notre Dame Elementary Catholic School
- Our Lady of Assumptions Elementary Catholic School
- Our Lady of Grace Elementary Catholic School
- Our Lady of Lourdes Catholic School
- Prince of Peace Elementary Catholic School
- Sacred Heart Elementary Catholic School
- Saint Gabriel The Archangel Elementary Catholic School
- Sister Catherine Donnelly Elementary Catholic School
- St Angela Merici Elementary Catholic School
- St Ann's Elementary Catholic School
- St Antoine Daniel Elementary Catholic School
- St Bernadette Elementary Catholic School
- St Bernard's Elementary Catholic School
- St Catherine of Siena Elementary Catholic School
- St Charles Elementary Catholic School
- St Francis of Assisi Elementary Catholic School
- St James Elementary Catholic School
- St Jean De Brebeuf Elementary Catholic School
- St John Paul II Elementary Catholic School
- St John Vianney Elementary Catholic School
- St Marguerite D'Youville Elementary Catholic School
- St Marie of the Incarnation Elementary Catholic School
- St Mary's Barrie Elementary Catholic School
- St Mary's Collingwood Elementary Catholic School
- St Michael The Archangel Elementary Catholic School
- St Monica's Elementary Catholic School
- St Nicholas Elementary Catholic School
- St Noel Chabanel Elementary Catholic School
- St Pauls Elementary Catholic School
- The Good Shepherd Elementary Catholic School

Catholic Secondary School Attendance Boundary

Holy Trinity Catholic High School
Jean Vanier Catholic High School
Patrick Fogarty Catholic Secondary School
St. Joan Of Arc Catholic High School
St. Joseph's Catholic High School
St. Peter's Catholic Secondary School
St. Theresa's Catholic High School
St. Thomas Aquinas Catholic Secondary School

Linx Specialized Service Area

Area of Natural or Scientific Interest ANSI

Provincial ANSI
Regional ANSI

Archaeological Potential

Economic Development Business Improvement Area

Economic Development Municipal Incentives

Surface Water System

Water System

Water Treatment Plant

Water System Well

Intake Protection Zone Vulnerable Score

Intake Protection Zone Vulnerable Score -1
Intake Protection Zone Vulnerable Score - 2

Waterbody

Stream

Intermittent
Permanent

Transit Stop

Transit Route - Local

- Barrie
- Bradford
- Clearview
- Collingwood
- Midland
- Orillia
- Penetanguishene
- Wasaga Beach

Transit Stop - Local Municipal

- Barrie Transit
- Bradford West Gwillimbury Transit
- Clearview Transit
- Collingwood Transit
- Midland Penetanguishene Transit
- Northlander
- Orillia Transit
- Wasaga Beach Transit

Transit Route - Linx

- Route 1- Barrie to Midland/Penetanguishene
- Route 2- Wasaga Beach to Barrie
- Route 3- Orillia to Barrie
- Route 4- Collingwood to Wasaga Beach
- Route 5 -New Tecumseth to Bradford

Transit Stop - Linx

Transit Stop - Regional (Other)

- Simcoe County Linx
- Greyhound
- Muskoka Extended Transit

Road Construction - Bridges

Road Construction - Roads

Reduced Load (March 1st to April 30th)

Road Network Old


Unclassified, Unclassified
Unclassified
Unclassified
Residential
Unclassified
Residential
Unclassified, Unclassified
Unclassified
Unclassified
Residential
Unclassified
Residential
Tertiary, Tertiary
Tertiary
Tertiary
Tertiary, Tertiary
Tertiary
Tertiary
LOCAL, LOCAL
LOCAL
LOCAL
LOCAL, LOCAL
LOCAL
LOCAL
Primary, Primary
Primary
Primary, Primary
MAJOR ROAD
Primary, Primary
Primary
Primary, Primary
MAJOR ROAD

Motorway, Motorway

Motorway

Trunk

Trunk, Trunk

Motorway, Motorway

Trunk

Motorway

Trunk

Trunk

Trunk, Trunk

Trunk

Motorway, Motorway

Trunk

Motorway

Motorway, Motorway

Motorway

Local Trails

Railway

Road Network

Freeway; Highway; Major Arterial

Highway Ramp; Major Arterial Ramp

Local

Local Ramp

Private; Unassumed; Seasonal

Road Yard

County

Municipal

Provincial

Fire Insurance Plan Barrie - 1907 1917

Fire Insurance Plan Beeton - 1926

Fire Insurance Plan BellEwart - 1936

Fire Insurance Plan Brechin - 1898

Fire Insurance Plan Coldwater - 1926

Fire Insurance Plan Cookstown - 1885

Fire Insurance Plan Creemore - 1894 1904

Fire Insurance Plan Elmvale - 1900 1904

Fire Insurance Plan Midland 1904 - 1911

Fire Insurance Plan Orillia - 1941

Fire Insurance Plan Penetanguishene - 1912

Fire Insurance Plan Tottenham - 1890

Fire Insurance Plan Victoria Harbour - 1890 1913

Fire Insurance Plan Waubaushene - 1890 1904

Fire Insurance Plan Wasaga Beach - 1936

Layer info page generated using opengis.simcoe.ca interactive mapping.

Generated on: August 22, 2022

Scott Tarof

From: Scott Tarof
Sent: Wednesday, January 5, 2022 1:26 PM
To: 'Owen Taylor'
Cc: David Brown
Subject: RE: 21-327 Terms of Reference Confirmation - 1457 Tay Point Road, Town of Penetanguishene

Dear Owen:

Thank you for your reply. Good to hear that a desktop review of the wetland boundary sounds likely, with an associated site visit a part of the boundary review unlikely.

Scott

From: Owen Taylor [mailto:otaylor@penetanguishene.ca]
Sent: Wednesday, January 5, 2022 11:09 AM
To: Scott Tarof
Cc: David Brown
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Scott,

Apologies for the late response. I have since contacted Ken Mott from the MNRF Midhurst District who provided the following:

> *In general, MNRF would be able to do a desktop review on a wetland boundary but our opinion would depend on the quality of the information that we are provided.*
> *The boundary would have to be reviewed:*
> - *At the proper time of year*
> - *By an OWES-certified person (OWES – Ontario Wetland Evaluation System)*
> - *Using the most current OWES methodology*
>
> *MNRF would have to be provided detailed photographic evidence and draft mapping in order to complete our desktop review.*
> *We would not likely have to go onsite to review this information, but we may have to do so in order to be more definitive about our review.*

If the MNRF is unable to conduct a review, we can have our peer reviewer conduct the review.

Kind regards,

Owen Taylor
Junior 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

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From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: Thursday, November 11, 2021 2:31 PM
To: Owen Taylor <otaylor@penetanguishene.ca>
Cc: David Brown <dbrown24686@hotmail.com>
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Owen.

In regards to the Town's feedback on the Terms of Reference, it has come to our attention that the MNDMNRF no longer confirms wetland boundaries (at least in the field).

We could provide the MNDMNRF with an opportunity to do a desktop screening of our delineated wetland boundary, although we are finding that they are often generally reticent on this front also. Failing that, perhaps the Town's peer reviewer could screen the wetland boundary as part of their review of the EIS report.

Please advise.

Thank you.
Scott

From: Owen Taylor [mailto:otaylor@penetanguishene.ca]
Sent: Tuesday, September 28, 2021 3:57 PM
To: Scott Tarof
Cc: David Brown
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Scott,

I was thinking the same thing to myself when I saw “MNDMNRF”. It is the Ministry of Northern Development, Mines, Natural Resources and Forestry. Based on the recent merger of ministries (MNRF and MNDM).

Regards,

Owen Taylor
Junior 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

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From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: Monday, September 27, 2021 9:28 AM
To: Owen Taylor <otaylor@penetanguishene.ca>
Cc: David Brown <dbrown24686@hotmail.com>
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Owen.

Could you please clarify what you mean by “MNDMNRF”? We are familiar with the MNRF, but are not sure what MNDMNRF is in reference to.

Thank you.
Scott

From: Scott Tarof
Sent: Monday, September 27, 2021 9:23 AM
To: 'Owen Taylor'
Cc: David Brown
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Owen.

Thank you for reviewing these Terms of Reference.

Scott

From: Owen Taylor [mailto:otaylor@penetanguishene.ca]
Sent: Monday, September 27, 2021 9:16 AM
To: Scott Tarof
Cc: David Brown
Subject: RE: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Good morning,

Please find below comments on the TOR noted in red. Should you have any questions please let me know.

Azimuth anticipates the following study approach:

- Search the County of Simcoe (County), Town, Ministry of Natural Resources and Forestry (MNRF), Ministry of the Environment, Conservation and Parks (MECP), and Fisheries and Oceans Canada (DFO) records to obtain available background information, including obtaining current information related to natural heritage conditions including SAR on the properties and/or nearby area;
- Contact the Town and Severn Sound Environmental Association (SSEA) to confirm that the Terms of Reference are appropriate;
- Consult with the MECP to determine the identification of the restricted species mapped in the area;
- Conduct the following field surveys to document existing natural heritage features, functions and species on the properties:
    - Evaluate/map vegetation community types based on Ecological Land Classification methods (summer 2021);
    - Conduct one vascular plant inventory, including a screening for Butternut trees (*Juglans cinerea*) (Endangered) (summer 2021);
    - Delineate the boundary of the portion of PSW associated with the property boundaries by flagging and collecting Global Positioning System (GPS) coordinates; - confirm the boundary of the wetland with MNDMNRF
    - Conduct one assessment of drainage features on the property to characterize aquatic habitat conditions (summer 2021);
    - Record incidental wildlife observations during the above surveys, including evidence of turtles or turtle nesting;
- Complete an assessment of potential SAR and their habitats that could be present on the properties and/or adjacent lands;
- Assess the potential direct and indirect impacts of the proposed lot severance on natural heritage features and functions identified on or adjacent to the properties;
- Prepare one (1) version of a draft Scoped EIS Report (electronic) for client review and comment prior to finalizing for submission to agencies. The report would use natural heritage data collected to verify the building envelope proposed for each of the properties, and propose revised building envelope(s), if necessary. The

report would include information on impact mitigation, and feature buffers as per planning policy (*e.g.*, PSW, Sucker Creek); and,

- Prepare up to five (5) bound copies of the final Scoped EIS Report for client distribution to agencies.
- Complete an assessment of Significant Wildlife Habitat per the Provincial SWH guidance document for Ecoregion 6E.
- Demonstrate conformity with the applicable policies, legislation and plans (e.g., Town of Penetanguishene Official Plan, County of Simcoe Official Plan, Provincial Policy Statement 2020, Endangered Species Act, Species At Risk Act, Migratory Birds Convention Act, Fisheries Act).
- If insufficient background information is available to characterize the fish community and associated thermal regime, fish sampling should be completed to inform applicable setbacks and mitigation requirements. However, if there will be a 30 m setback from all works and there are no plans to release anything directly into the creek (i.e. SWM outfalls etc.) then fish sampling is not required.

Regards,

Owen Taylor
Junior Planner
Town of Penetanguishene
10 Robert Street West, P.O. Box 5009
Penetanguishene, ON L9M 2G2
(tel) 705-549-7453 ext. 251
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From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: Friday, August 27, 2021 10:24 AM
To: Owen Taylor <otaylor@penetanguishene.ca>

Cc: David Brown <dbrown24686@hotmail.com>
Subject: 21-327 Terms of Reference Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

27 August 2021

Dear Mr. Taylor:

Azimuth Environmental Consulting, Inc. (Azimuth) is providing environmental consulting services related to the above two properties for a Planning Consent Application. The proponent is interested in lot severance. A Conceptual Building Footprint Plan is attached (prepared by proponent) showing the location of the subject properties. Below we provide the proposed Terms of Reference (TOR) for the environmental work and would appreciate it if you could please review and confirm the scope.

Azimuth proposes that we proceed with scoped late-summer studies in 2021 to advance the project, and complete three dawn breeding bird surveys in spring 2022 (June to early July) with regard for SAR grassland birds in the area. Azimuth proposes to address the potential for SAR and/or Special Concern (SC) reptiles to potentially occur on the properties through mitigation.

Azimuth anticipates the following study approach:

- Search the County of Simcoe (County), Town, Ministry of Natural Resources and Forestry (MNRF), Ministry of the Environment, Conservation and Parks (MECP), and Fisheries and Oceans Canada (DFO) records to obtain available background information, including obtaining current information related to natural heritage conditions including SAR on the properties and/or nearby area;
- Contact the Town and Severn Sound Environmental Association (SSEA) to confirm that the Terms of Reference are appropriate;
- Consult with the MECP to determine the identification of the restricted species mapped in the area;
- Conduct the following field surveys to document existing natural heritage features, functions and species on the properties:
    - Evaluate/map vegetation community types based on Ecological Land Classification methods (summer 2021);
    - Conduct one vascular plant inventory, including a screening for Butternut trees (*Juglans cinerea*) (Endangered) (summer 2021);
    - Delineate the boundary of the portion of PSW associated with the property boundaries by flagging and collecting Global Positioning System (GPS) coordinates;
    - Conduct one assessment of drainage features on the property to characterize aquatic habitat conditions (summer 2021);
    - Record incidental wildlife observations during the above surveys, including evidence of turtles or turtle nesting;
- Complete an assessment of potential SAR and their habitats that could be present on the properties and/or adjacent lands;
- Assess the potential direct and indirect impacts of the proposed lot severance on natural heritage features and functions identified on or adjacent to the properties;
- Prepare one (1) version of a draft Scoped EIS Report (electronic) for client review and comment prior to finalizing for submission to agencies. The report would use natural heritage data collected to verify the building envelope proposed for each of the properties, and propose revised building envelope(s), if necessary. The report would include information on impact mitigation, and feature buffers as per planning policy (*e.g.*, PSW, Sucker Creek); and,
- Prepare up to five (5) bound copies of the final Scoped EIS Report for client distribution to agencies.

Thank you in advance for your time. We look forward to your reply.

Thank you.

Warm regards,

Dr. Scott Tarof (PhD Biology)
Terrestrial Ecologist
Certified Ontario MNRF Wetland Evaluator
Contract Faculty (Biology, Physical Geography), York University

Due to COVID-19, our staff are working remotely. Our offices are closed to the public but I can be reached on my cell or email. I look forward to talking with you.

Azimuth Environmental Consulting, Inc.
642 Welham Road, Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 230
cell: (705) 715-7105
starof@azimuthenvironmental.com
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

Scott Tarof

From: David Brown [dbrown24686@hotmail.com]
Sent: Monday, January 17, 2022 3:34 PM
To: Scott Tarof
Cc: Patrick Townes
Subject: Fw: Fish Sampling Requirement on 1457 Tay Point Road

Hey Scott,

Hope you're well and haven't been too snowed-in today!

I've confirmed with Owen from the Township that your interpretation of the TOR was correct (see email chain, below).

With that, we've discussed it and feel the 30m setback will be okay given they're sizable lots, and so we will decline the fish sampling.

Our overall objective is to provide the potential buyers of these lots with a "turn-key" solution such that the only thing they need to worry about is their building permit, and their allowable building envelope is clear to them as they're working through that process with the Town.

Cheers!

Dave
(705) 796-2631

From: Owen Taylor <otaylor@penetanguishene.ca>
Sent: January 14, 2022 13:28
To: David Brown <dbrown24686@hotmail.com>
Cc: Patrick Townes <ptownes@mhbcplan.com>; Andrea Betty <abetty@penetanguishene.ca>
Subject: RE: Fish Sampling Requirement on 1457 Tay Point Road

Hey Dave,

The approved terms of reference for the EIS notes the following:

> *If insufficient background information is available to characterize the fish community and associated thermal regime, fish sampling should be completed to inform applicable setbacks and mitigation requirements. However, if there will be a 30 m setback from all works and there are no plans to release anything directly into the creek (i.e. SWM outfalls etc.) then fish sampling is not required.*

Fish sampling is not required if a 30 metre setback can be implemented.

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

NOTICE: The Town of Penetanguishene municipal offices and all facilities are currently operating by **appointment only** until further notice as a precaution to help against the spread of COVID-19. Visit our website, www.penetanguishene.ca for an up-to-date and comprehensive list of impacts on Town of Penetanguishene municipal services.

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From: David Brown <dbrown24686@hotmail.com>
Sent: Thursday, January 13, 2022 12:15 PM
To: Owen Taylor <otaylor@penetanguishene.ca>
Cc: Patrick Townes <ptownes@mhbcplan.com>
Subject: Fish Sampling Requirement on 1457 Tay Point Road

Hi Owen,

I have been working with Scott Tarof from Azimuth on the EIS component on the consent application for 1457 Tay Point Road, and I just have a question RE fish sampling.

Scott mentioned a possible need to do a fish sampling, given he was unable to find sufficient background information on the watercourse that runs through 1457 (which is currently designated EP and is connected to Sucker Creek - I've attached a snippet from the current town plan showing the watercourse). However, he did note that the Town had suggested that if there were no outlets to the watercourse and a 30m setback was applied to any building envelope, that fish sampling would not be required.

I'm just writing to confirm that interpretation - we will have no outlets to the watercourse, and we plan to build into the zoning for the new lots a building envelope that is at least 30m set back from the watercourse.

With that, will the town still require a fish sampling study be done on the watercourse on 1457 Tay Point Road?

Thank you!

Dave Brown
(705) 796-2631

APPENDIX B

Provincial and Federal Background and Correspondence

Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

21-327 1457 Tay Point Road EIS

Map created:7/20/2022

Legend

- Assessment Parcel
- NHIC 1 Km Grid
- Ecoregion
- Greenbelt Area Boundary
- NEP Boundary
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland
- Woodland
- Natural Heritage System

0.7 0 0.33 0.7 Kilometres

Absence of a feature in the map does not mean they do not exist in this area.

NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
988613	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17NK8759	
988613	SPECIES	Speckled Giant Lacewing	Polystoechotes punctata				17NK8759	
988613	SPECIES	Eastern Milksnake	Lampropeltis triangulum		NAR	SC	17NK8759	
988613	SPECIES	Eastern Meadowlark	Sturnella magna		THR	THR	17NK8759	
988613	SPECIES	Bobolink	Dolichonyx oryzivorus		THR	THR	17NK8759	
988613	SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1		THR	THR	17NK8759	
988613	SPECIES	Snapping Turtle	Chelydra serpentina		SC	SC	17NK8759	
988613	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17NK8759	
988613	WILDLIFE CONCENTRATION AREA	Mixed Wader Nesting Colony		SNR			17NK8759	

NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
988704	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17NK8760	
988704	SPECIES	Speckled Giant Lacewing	Polystoechotes punctata				17NK8760	
988704	SPECIES	Eastern Meadowlark	Sturnella magna		THR	THR	17NK8760	
988704	SPECIES	Bobolink	Dolichonyx oryzivorus		THR	THR	17NK8760	
988704	SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1		THR	THR	17NK8760	
988704	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17NK8760	
988704	RESTRICTED SPECIES	Restricted Species	Restricted Species				17NK8760	
988704	WILDLIFE CONCENTRATION AREA	Mixed Wader Nesting Colony		SNR			17NK8760	

NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

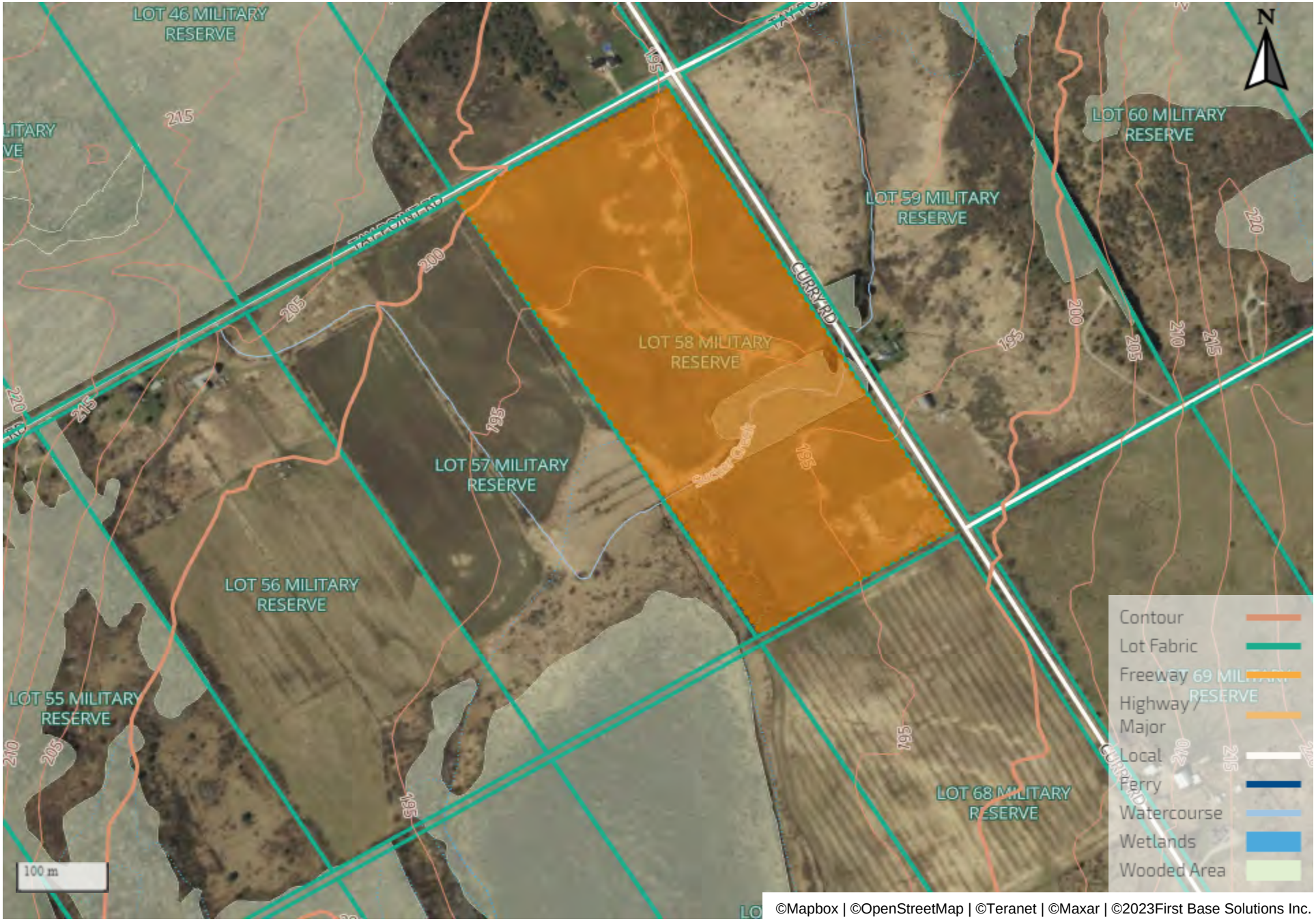
OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
988623	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17NK8859	
988623	SPECIES	Speckled Giant Lacewing	Polystoechotes punctata				17NK8859	
988623	SPECIES	Eastern Milksnake	Lampropeltis triangulum		NAR	SC	17NK8859	
988623	SPECIES	Eastern Musk Turtle	Sternotherus odoratus		SC	SC	17NK8859	
988623	SPECIES	Eastern Meadowlark	Sturnella magna		THR	THR	17NK8859	
988623	SPECIES	Bobolink	Dolichonyx oryzivorus		THR	THR	17NK8859	
988623	SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1		THR	THR	17NK8859	
988623	SPECIES	Snapping Turtle	Chelydra serpentina		SC	SC	17NK8859	
988623	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17NK8859	
988623	RESTRICTED SPECIES	Restricted Species	Restricted Species				17NK8859	
988623	WILDLIFE CONCENTRATION AREA	Mixed Wader Nesting Colony		SNR			17NK8859	

NHIC Data

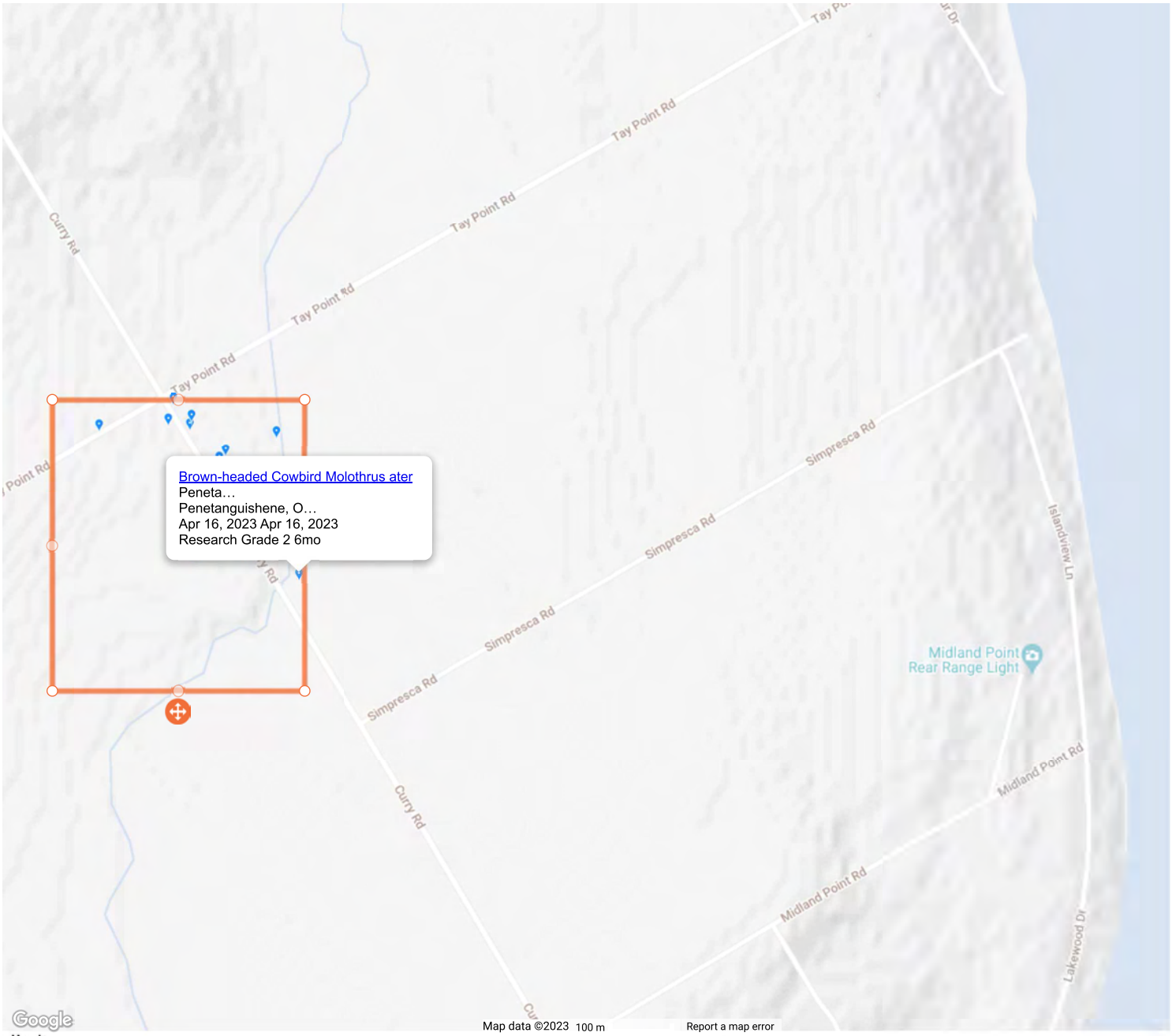
To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
988714	WILDLIFE CONCENTRATION AREA	Colonial Waterbird Nesting Area		SNR			17NK8860	
988714	SPECIES	Speckled Giant Lacewing	Polystoechotes punctata				17NK8860	
988714	SPECIES	Eastern Musk Turtle	Sternotherus odoratus		SC	SC	17NK8860	
988714	SPECIES	Eastern Meadowlark	Sturnella magna		THR	THR	17NK8860	
988714	SPECIES	Bobolink	Dolichonyx oryzivorus		THR	THR	17NK8860	
988714	SPECIES	Massasauga (Great Lakes / St. Lawrence population)	Sistrurus catenatus pop. 1		THR	THR	17NK8860	
988714	SPECIES	Snapping Turtle	Chelydra serpentina		SC	SC	17NK8860	
988714	SPECIES	Blanding's Turtle	Emydoidea blandingii		THR	END	17NK8860	
988714	RESTRICTED SPECIES	Restricted Species	Restricted Species				17NK8860	
988714	WILDLIFE CONCENTRATION AREA	Mixed Wader Nesting Colony		SNR			17NK8860	

1457 Tay Point Road



VuMAP



Rank
High
Low
Sort By
Date Added
Desc
Date Observed
Any Exact Date YYYY-MM-DD Range Start End Months Select Options
More Filters
Person
Username or User ID
Project
Name or URL slug, e.g. my
Place
Place
Photo Licensing All
Reviewed
Any Yes No
Date Added
Any Exact Date YYYY-MM-DD Range Start End
Update Search Reset Search Filters
Identify Atom Download
Species
1457 Tay Point Road, Penet Go
Custom Boundary

16
observations
11
species
24
Identifiers
4
Observers
Map Grid List

- Map
- Satellite
- Labels
- Terrain

Places of Interest

Standard

Community Curated

Redo search in map Reset

Map Legend
kenmacdonald
Brown-headed Cowbird Molothrus ater
Peneta…
Penetanguishene, O…
Apr 16, 2023 Apr 16, 2023
Research Grade 2 6mo
Savannah Sparrow Passerculus sandwichensis
Peneta…
Penetanguishene, O…
Apr 14, 2023 Apr 14, 2023
Research Grade 2 6mo
Painted Turtle Chrysemys picta
Tay Po…
Tay Point Rd, Pene…
Jun 6, 2022 Jun 6, 2022
Research Grade 3 1y
Cedar Waxwing Bombycilla cedrorum
Peneta…
Penetanguishene, O…
Jun 20, 2020 Jun 20, 2020
Research Grade 2 3y
Bobolink Dolichonyx oryzivorus
Tay Po…
Tay Point Rd, Pene…
May 30, 2020 May 30, 2020
Research Grade 2 3y
Eastern Bluebird Sialia sialis
Peneta…
Penetanguishene, P…
Mar 26, 2020 Mar 26, 2020
Research Grade 3 4y
Blue Jay Cyanocitta cristata
Curry…
Curry Rd, Penetang…
Feb 25, 2020 Feb 25, 2020
Research Grade 7 4y
Northern Shrike Lanius borealis
Curry…
Curry Rd, Penetang…
Jan 6, 2020 Jan 6, 2020
Research Grade 5 4y
Eastern Bluebird Sialia sialis
Curry…
Curry Rd, Penetang…
Oct 18, 2019 Oct 18, 2019
Research Grade 3 4y
Brown Thrasher Toxostoma rufum
643–84…
643–841 Curry Rd,…
May 29, 2019 May 29, 2019

Research Grade 3 4y
Yellow Warbler Setophaga petechia
642–84…
642–840 Curry Rd,…
May 29, 2019 May 29, 2019
Research Grade 3 4y
Tree Swallow Tachycineta bicolor
643–84…
643–841 Curry Rd,…
May 29, 2019 May 29, 2019
Research Grade 3 4y
Bobolink Dolichonyx oryzivorus
642–84…
642–840 Curry Rd,…
May 29, 2019 May 29, 2019
Research Grade 2 4y
Bobolink Dolichonyx oryzivorus
642–84…
642–840 Curry Rd,…
May 25, 2019 May 25, 2019
Research Grade 4 4y
Yellow Warbler Setophaga petechia
642–84…
642–840 Curry Rd,…
May 25, 2019 May 25, 2019
Research Grade 4 4y
Eastern Bluebird Sialia sialis
643–84…
643–841 Curry Rd,…
May 4, 2019 May 4, 2019
Research Grade 2 4y
Brown-headed Cowbird Molothrus ater
Peneta…
Penetanguishene, O…
Apr 16, 2023 Apr 16, 2023
Research Grade 2 6mo

Twitter Instagram

- None
-

- ☐ January
- ☐ February
- ☐ March
- ☐ April
- ☐ May
- ☐ June
- ☐ July
- ☐ August
- ☐ September
- ☐ October
- ☐ November
- ☐ December

Species list in taxonomic order for square 17NK86

All species

Number of rows of data displayed below: 32.

Species #	Common Name	# of Records	Earliest Yr	Latest Yr
1	Blanding's Turtle	11	1974	2015
2	Eastern Musk Turtle	5	1925	2018
3	Midland Painted Turtle	20	1964	2018
4	Northern Map Turtle	37	1973	2019
6	Snapping Turtle	27	1974	2018
10	Dekay's Brownsnake	17	1964	2019
11	Eastern Foxsnake	13	1998	2018
12	Eastern Gartersnake	64	1967	2019
13	Eastern Hog-nosed Snake	51	1973	2019
14	Eastern Ribbonsnake	1	2016	2016
17	Massasauga	51	1963	2019
18	Milksnake	33	1973	2018
19	Northern Watersnake	50	1964	2019
21	Red-bellied Snake	5	1990	2013
23	Northern Ring-necked Snake	7	1985	2018
24	Smooth Greensnake	7	1972	2000
25	American Bullfrog	37	1973	2018
27	Gray Treefrog	40	1974	2016
28	Green Frog	90	1973	2019
29	Mink Frog	3	1989	2011
30	Northern Leopard Frog	58	1964	2018
31	Pickerel Frog	6	1972	1989
32	Spring Peeper	62	1973	2018
34	Wood Frog	56	1973	2018
35	American Toad	71	1964	2018
38	Blue-spotted Salamander	4	2012	2018

40	Red-spotted Newt	47	1964	2018
41	Eastern Red-backed Salamander	48	1964	2019
42	Four-toed Salamander	5	1989	2017
44	Mudpuppy	1	1989	1989
48	Spotted Salamander	26	1981	2000
49	Five-lined Skink	4	1981	2017

TEA home page | Main atlas page

Species list in taxonomic order for square 17NK85

All species

Number of rows of data displayed below: 21.

Species #	Common Name	# of Records	Earliest Yr	Latest Yr
1	Blanding's Turtle	3	1984	2016
2	Eastern Musk Turtle	2	1973	1983
3	Midland Painted Turtle	13	1971	2019
4	Northern Map Turtle	5	1977	2018
6	Snapping Turtle	12	1978	2019
10	Dekay's Brownsnake	1	2011	2011
12	Eastern Gartersnake	5	1971	2018
13	Eastern Hog-nosed Snake	2	2013	2013
17	Massasauga	2	1967	1969
18	Milksnake	8	1937	2019
19	Northern Watersnake	1	2013	2013
24	Smooth Greensnake	1	1982	1982
27	Gray Treefrog	23	1989	2013
28	Green Frog	23	1992	2004
30	Northern Leopard Frog	23	1989	2004
31	Pickerel Frog	1	1999	1999
32	Spring Peeper	24	1988	2005
34	Wood Frog	8	1979	2003
35	American Toad	11	1971	2008
40	Red-spotted Newt	1	1986	1986
41	Eastern Red-backed Salamander	4	1971	2018

TEA home page | Main atlas page

Scott Tarof

From: Species at Risk (MECP) [SAROntario@ontario.ca]
Sent: Friday, November 12, 2021 11:33 AM
To: Scott Tarof
Subject: MECP SARB Restricted Species Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene
Attachments: GHD_Blanding's_Turtle.pdf

Hi Scott,

The restricted species appears to be Massasauga (Great Lakes / St. Lawrence population)(*Sistrurus catenatus*).

It's also worth noting that there is an occurrence of Blanding's Turtle which appears to overlap the subject property. This occurrence and others would trigger the habitat protection as defined by the General Habitat Description for Blanding's Turtle.

Regards,

Shamus Snell
A/ Management Biologist
Species at Risk Branch
Ministry of Environment, Conservation and Parks
Email: shamus.snell@ontario.ca

From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: November 11, 2021 10:34 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: 21-327 Restricted Species Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

To whom it may concern:

Azimuth is providing environmental consulting services for one of our clients related to future development of two residential lots located at 1403 & 1457 Tay Point Road, Town of Penetanguishene.

Background mapping review has indicated the presence of a restricted species in the general area of the properties, as attached. We would appreciate it if the MECP can please confirm the identification of the restricted species.

Thank you.

Warm regards,

Dr. Scott Tarof (Ph.D. Biology)
Terrestrial Ecologist
Certified Ontario MNRF Wetland Evaluator
Contract Faculty (Biology, Physical Geography), York University

Due to COVID-19, our staff are working remotely. Our offices are closed to the public but I can be reached on my cell or email. I look forward to talking with you.

Azimuth Environmental Consulting, Inc.
642 Welham Road, Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 230
cell: (705) 715-7105
starof@azimuthenvironmental.com
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

Scott Tarof

From: Snell, Shamus (MECP) [Shamus.Snell@ontario.ca]
Sent: April 22, 2022 3:13 PM
To: Scott Tarof
Subject: RE: MECP SARB BLTU habitat Mapping Review - 1403 & 1457 Tay Point Road

Hi Scott,

Unless there is a complete barrier to movement around the OAGM1 polygon then the category three habitat extends into the OAGM1 polygon. Blanding's Turtle are known to travel considerable distances from their wetland of origin during nesting migrations, with movements of 6 km being documented. Given here are a number of wetlands that surrounding the subject property that have Blanding's Turtle occurrences associated with them that are within 1 km of the subject property making it highly likely that Blanding's Turtle are moving between all these wetlands.

Regards,

Shamus Snell
A/ Management Biologist
Species at Risk Branch
Ministry of Environment, Conservation and Parks
Email: shamus.snell@ontario.ca

From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: April 4, 2022 2:01 PM
To: Snell, Shamus (MECP) <Shamus.Snell@ontario.ca>
Subject: RE: MECP SARB BLTU habitat Mapping Review - 1403 & 1457 Tay Point Road

Hi Shamus.

Thank you for your email.

Azimuth's understanding of the General Habitat Description for Blanding's Turtle is that, for Category 3 habitat (Pg. 3 of the General Habitat Description), the species prefers movement corridors that are associated with water and the species is most likely to use habitat corridors with the preferred presence of water (eg wetlands, ponds) or the watercourse in this case that crosses Curry Road. This was our rationale for showing Category 3 habitat as only associated with the watercourse feature that passes through the MASM1/SWTM3-6/ wetland area and traverses 1457 Tay Point Road through the TAGM1 ELC polygon. Since the OAGM1 ELC polygon is dry agricultural land that is not associated with water, we would not consider it as being preferred Category 3 corridor movement habitat for Blanding's Turtle.

Does this interpretation of the General Habitat Description change MECP's assessment of the extent of Category 3 habitat on the property?

Thank you.
Scott

From: Snell, Shamus (MECP) [mailto:Shamus.Snell@ontario.ca]
Sent: Friday, April 1, 2022 10:46 AM
To: Scott Tarof
Subject: MECP SARB BLTU habitat Mapping Review - 1403 & 1457 Tay Point Road

Hi Scott,

I reviewed the attached mapping which you provided offer the following comment:

- Blanding's Turtle are well known to undertake significant overland movements and have had movements of up to 6 km recorded in some parts of Ontario. Therefor, unless there is a very significant barrier to movement into and across the OAGM1 ecosites then the Category 3 habitat would extend up to 250 meters into the OAGM1 ecosite off of all the category 2 habitat and not just where the watercourses occur. Therefore, the majority of the subject property which is not currently classified as Blanding' Habitat is like to be classified as Category 3.

If any of the proposed development related to the subject property is going to occur within or adjacent to the protected habitat for Blanding's Turtle then I recommend that you complete and submit an Information Gathering Form (IGF). This will allow for Species at Risk Branch (SARB) to determine if the proposed project is likely to contravene the Endangered Species Act (ESA) and provide a recommendation regarding if a ESA authorization should be sought.

Regards,

Shamus Snell
A/ Management Biologist
Species at Risk Branch
Ministry of Environment, Conservation and Parks
Email: shamus.snell@ontario.ca

From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: March 17, 2022 9:17 AM
To: Snell, Shamus (MECP) <Shamus.Snell@ontario.ca>
Subject: RE: MECP SARB BLTU Information and Survey Direction - 1403 & 1457 Tay Point Road

Hi Shamus.

Attached please find the MECP-requested mapping of Blanding's Turtle habitat related to the above property, as part of a Tech Memo general habitat assessment for the species.

We look forward to your response.

Warmest regards,
Scott

From: Scott Tarof
Sent: Friday, November 12, 2021 2:38 PM
To: 'Snell, Shamus (MECP)'
Subject: RE: MECP SARB BLTU Information and Survey Direction - 1403 & 1457 Tay Point Road

Hi Shamus.

Thank you for the additional information and guidance. We'll discuss with our client.

Blessed weekend,
Scott

From: Snell, Shamus (MECP) [mailto:Shamus.Snell@ontario.ca]
Sent: Friday, November 12, 2021 1:58 PM
To: Scott Tarof
Subject: MECP SARB BLTU Information and Survey Direction - 1403 & 1457 Tay Point Road

Hi Scott,

Without a map of the subject property it's a bit hard to tell the distance but the nearest occurrence appears to be within ~200 meters. The occurrence is located where Sucker Creek crosses Tay Point Road to the Northeast of the subject property, Information regarding this occurrence suggests it was a female searching for a suitable nesting location. There are a handful of other occurrences within 2 km to the west and east of the subject property with the most recent occurrence recorded in June of 2020.

You would have to map the habitat according to the direction in the General Habitat Description. This generally means ground truthing any wetland boundaries to confirm the correct location so the different categories of habitat can be mapped. If your client wishes to try and prove that Blanding's Turtle is absence then you will need to conduct multiple years of surveys per direction in the Blanding's Turtle survey protocol.

In regards to eDNA, it is still an experimental survey method and is continuing to be developed. At this time, the use of eDNA in place of standard survey methodologies is not endorsed by the ministry. It is the ministry's view that the use of eDNA still has an unacceptable risk of false results. It is the SARB's recommendation that if surveys are to be conducted, they are to follow standardized protocols.

Regards,

Shamus Snell
A/ Management Biologist
Species at Risk Branch
Ministry of Environment, Conservation and Parks
Email: shamus.snell@ontario.ca

From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: November 12, 2021 12:02 PM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: RE: MECP SARB Restricted Species Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Shamus.

Thank you for your prompt reply.

How far away and in what compass direction is the Blanding's species occurrence in relation to the subject property?

Would the province be looking for basking turtle surveys to be done as part of the EIS? Would the province accept eDNA surveys instead of basking surveys?

Warmly,
Scott

From: Species at Risk (MECP) [mailto:SAROntario@ontario.ca]
Sent: Friday, November 12, 2021 11:33 AM
To: Scott Tarof
Subject: MECP SARB Restricted Species Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

Hi Scott,

The restricted species appears to be Massasauga (Great Lakes / St. Lawrence population)(*Sistrurus catenatus*).

It's also worth noting that there is an occurrence of Blanding's Turtle which appears to overlap the subject property. This occurrence and others would trigger the habitat protection as defined by the General Habitat Description for Blanding's Turtle.

Regards,

Shamus Snell
A/ Management Biologist
Species at Risk Branch
Ministry of Environment, Conservation and Parks
Email: shamus.snell@ontario.ca

From: Scott Tarof <starof@azimuthenvironmental.com>
Sent: November 11, 2021 10:34 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: 21-327 Restricted Species Confirmation - 1403 & 1457 Tay Point Road, Town of Penetanguishene

To whom it may concern:

Azimuth is providing environmental consulting services for one of our clients related to future development of two residential lots located at 1403 & 1457 Tay Point Road, Town of Penetanguishene.

Background mapping review has indicated the presence of a restricted species in the general area of the properties, as attached. We would appreciate it if the MECP can please confirm the identification of the restricted species.

Thank you.

Warm regards,

Dr. Scott Tarof (Ph.D. Biology)
Terrestrial Ecologist

Certified Ontario MNRF Wetland Evaluator
Contract Faculty (Biology, Physical Geography), York University

Due to COVID-19, our staff are working remotely. Our offices are closed to the public but I can be reached on my cell or email. I look forward to talking with you.

Azimuth Environmental Consulting, Inc.
642 Welham Road, Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 230
cell: (705) 715-7105
starof@azimuthenvironmental.com
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

Scott Tarof

From: Williams, Daniel (MECP) [Daniel.Williams2@ontario.ca]
Sent: October 16, 2023 11:55 AM
To: Scott Tarof
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Hi Scott,

The provided mapping of Blanding's Turtle habitat should include the watercourse as Category 2 habitat (including the 30 metre buffer); the associated Category 3 habitat that extends can then also be mapped. While the installation of exclusion fencing may avoid Section 9 impacts, it may not mitigate or avoid Section 10 impacts depending on the activity. If the proposed activities will potentially impact habitat of Blanding's Turtle, MECP continues to advise that an IGF be submitted to support SARB staffs review of the project, including quantifying the impact by habitat category.

Thanks,
Dan

Daniel Williams
Management Biologist, Landscape Species Recovery Section
Species at Risk Branch
Ministry of the Environment, Conservation and Parks
Peterborough, ON K9J 3C7

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: Scott Tarof <starof@azimuthenvironmental.com>
Sent: September 13, 2023 9:19 AM
To: Williams, Daniel (MECP) <Daniel.Williams2@ontario.ca>
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Hi Daniel.

We are following up with you in regards to the proposed turtle exclusion fencing option to address the SAR concerns associated with this property. If it would be helpful, perhaps we could arrange to discuss on the phone if you require clarification.

We look forward to your soon reply.

Thank you.
Scott

From: Scott Tarof
Sent: July 21, 2023 12:39 PM
To: Williams, Daniel (MECP)
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Hi Daniel.

We appreciate your reply; thank you.

The client is proposing the attached turtle exclusion fencing to protecting Blanding's Turtles and their habitat (please see attached mockup). Severance of the four lots (Lots #1-4) is proposed, plus the retained lot on 1457 Tay Point Road. The current development plan is to only create the four lots; the retained lot will not be developed.

On the attached mockup, turtle exclusion fencing is proposed around the four lots proposed for severance. Fencing around the four severed lots meets the guidance provided by MECP. Any turtles in the area would be able to access the Category 3 habitat on 1457 Tay Point Rd. for movement purposes from one wetland to another, while preventing potential impact to individual turtles and Category 3 habitat by using exclusion fencing around the proposed lots. Since Category 3 habitat for Blanding's is used by the species as movement corridors between wetlands, fencing the four severed lots will not impact movement. This solution avoids potential impact to Blanding's Turtles and their habitat.

Please provide comment as to the suitability of this proposed solution.

Thank you.
Scott

From: Williams, Daniel (MECP) [mailto:Daniel.Williams2@ontario.ca]
Sent: Wednesday, June 7, 2023 3:20 PM
To: Scott Tarof
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Hi Scott,

I have completed my review of the provided Tech Memo. Based on the information provided, there is not sufficient rationale to oppose the previous comment provided by Shamus Snell regarding the mapping of Blanding's Turtle habitat:

> Unless there is a complete barrier to movement around the OAGM1 polygon then the category three habitat extends into the OAGM1 polygon. Blanding's Turtle are known to travel considerable distances from their wetland of origin during nesting migrations, with movements of 6 km being documented. Given here are a number of wetlands that surrounding the subject property that have Blanding's Turtle occurrences associated with them that are within 1 km of the subject property making it highly likely that Blanding's Turtle are moving between all these wetlands.

If the habitat of Blanding's Turtle or any other species at risk listed as threatened or endangered may be impacted by the proposed activities, it is advised that an Information Gathering Form be completed and submitted for review.

Please reach out to me directly if you have any questions,
Dan

Daniel Williams
Management Biologist, Landscape Species Recovery Section
Species at Risk Branch
Ministry of the Environment, Conservation and Parks
Peterborough, ON K9J 3C7

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: Scott Tarof <starof@azimuthenvironmental.com>
Sent: January 17, 2023 9:43 AM
To: Williams, Daniel (MECP) <Daniel.Williams2@ontario.ca>
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

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

Hi Daniel.

We thought we would follow-up on the Blanding's Turtle Tech Memo submission below for 1457 Tay Point Road in the Town of Penetanguishene. We look forward to your feedback on our assessment.

Thank you for your time.
Scott

From: Scott Tarof
Sent: Thursday, August 25, 2022 2:28 PM
To: 'Williams, Daniel (MECP)'
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Thank you very much Dan. We appreciate it.

Scott

From: Williams, Daniel (MECP) [mailto:Daniel.Williams2@ontario.ca]
Sent: Thursday, August 25, 2022 2:25 PM
To: Scott Tarof
Subject: RE: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

Hi Scott,

Thank you for your submission, please let this email serve as confirmation of receipt. Once I have completed my review, I will reach out to you directly with any comments.

Thanks,
Dan
Daniel Williams
Management Biologist, Landscape Species Recovery Section
Species at Risk Branch
Ministry of the Environment, Conservation and Parks
Peterborough, ON K9J 3C7

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: Scott Tarof <starof@azimuthenvironmental.com>
Sent: August 10, 2022 10:27 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: MECP SAR Branch Blanding's Turtle Habitat Mapping and Assessment - 1457 Tay Point Road

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

Dear SAR Branch:

Attached please find mapping of Blanding's Turtle habitat related to the above property, as part of a Tech Memo general habitat assessment for the species.

We look forward to your response in regards to our assessment.

Thank you.

Warm regards,

Dr. Scott Tarof (Ph.D. Biology)
Terrestrial Ecologist
Certified Ontario MNRF Wetland Evaluator
Contract Faculty (Biology, Physical Geography), York University

Azimuth Environmental Consulting, Inc.
642 Welham Road, Barrie, ON, L4N 9A1
ph: (705) 721-8451 ext 230
cell: (705) 715-7105
starof@azimuthenvironmental.com
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering

APPENDIX C

Photographic Record

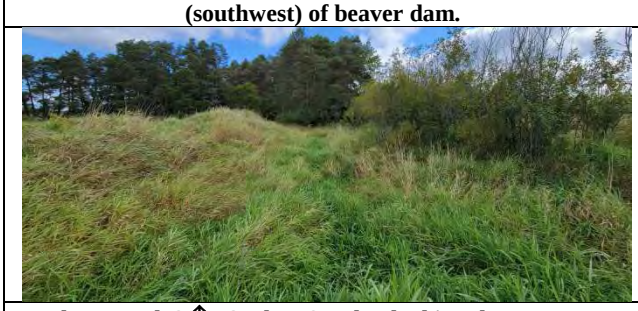
Photograph 1. OAGM1 ELC community on 1457 Tay Point Road (facing east). Location of the proposed severed lots (Lot #1-#2) would be toward the foreground northern corner of the property (September 24, 2021).

Photograph 2. OAGM1 ELC polygon on the north side of the TAGM1 ELC community (facing southwest) (September 24, 2021).

Photograph 3. Dock storage area (foreground) in eastern corner of the property, facing south through Curry Road ROW hedgerow (May 30, 2022). Southern property boundary of severed Lot #4 is in the foreground.

Photograph 4. Sucker Creek flowing into the TAGM1 ELC community (facing southwest, upstream is in background) (September 13, 2021).

Photograph 5. Dock storage area (foreground) with the distinct SWTM3-6/SWDM2-2 wetland boundary (background) (facing southwest, June 13, 2022).

	
Photograph 1 ↑: Sucker Creek - Looking upstream (southwest) of beaver dam.	**Photograph 2 ↑: Sucker Creek – Beaver dam near southwest property boundary.**
	
Photograph 3 ↑: Sucker Creek – looking downstream (northeast) of beaver dam. Channel overgrown with terrestrial grasses.	**Photograph 4 ↑: Sucker Creek – looking downstream at typical segment of creek in forested lands, overgrown with terrestrial grasses.**
	
Photograph 5 ↑: Sucker Creek – looking upstream at typical segment of creek in forested lands, overgrown with terrestrial grasses.	**Photograph 6 ↑: Sucker Creek – typical segment of creek in forested lands, no defined banks and minimal substrate sorting.**
	
Photograph 7 ↑: Sucker Creek – typical cross section in forested lands, no defined banks and minimal substrate sorting.	**Photograph 8 ↑: Sucker Creek – typical segment of creek near downstream extent of property, overgrown with terrestrial grasses.**

APPENDIX D

Consent Sketch

CONSENT SKETCH

Puddicombe Consent

1457 Tay Point Road
Lot 58 Military Reserve
Geographic Township of Tay
Town of Penetanguishene
County of Simcoe

LEGEND

- Site Boundary Line
- Parcel Fabric
- Proposed Severance Line
- Proposed Building Envelope
- Proposed Wildlife Exclusion Fence
- Municipal Boundary
- Wooded Area (Azimuth)
- Watercourse (Land Information Ontario)
- Provincially Significant Wetland (Azimuth)
- Building
- Entrance

NOTES

All dimensions are in metres and areas are approximate.

Exclusion fence to provide complete barrier to movement onto developed areas. Fencing to be constructed and installed as per provincial requirements (e.g. 0.25" diameter mesh size, minimum burial depth 10-20cm, minimum height 60cm). E.g. Galvanized Farm Fence with galvanized mesh cloth up to the specified height, attached to wood posts. To be installed prior to emergence from hibernation (before April 1 of a given year).

DATE

November 29, 2023

SOURCES

ESRI
County of Simcoe
Land Information Ontario

SCALE

0 20 40 60 80 100
Metres

N:\Penetanguishene\ 2158A\Drawings\Consent Sketch\CAD

MHBC PLANNING URBAN DESIGN & LANDSCAPE ARCHITECTURE
113 COLLIER STREET, BARRIE, ON. L4M 1H2
P: 705.728.0045 F: 705.728.2010 | WWW.MHBCPLAN.COM

APPENDIX E

Blanding's Turtle MECP Technical Memorandum

Technical Memorandum

To: **Species at Risk Branch, Ministry of Environment, Conservation and Parks**

Re: **Blanding's Turtle General Habitat, 1457 Tay Point Road, Town of Penetanguishene, County of Simcoe**

From: Dr. Scott Tarof, Terrestrial Ecologist, Azimuth Environmental Consulting, Inc.

Date: August 10, 2022

1.0 BACKGROUND INFORMATION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by David and Christine Puddicombe to conduct a scoped Environmental Impact Study (EIS) for 1457 Tay Point Road in the Town of Penetanguishene, County of Simcoe. As part of the Species at Risk (SAR) assessment under the EIS scope, Azimuth consulted with the Ministry of Environment, Conservation and Parks (MECP) via email on November 12, 2021. The consultation revealed the presence of a Blanding's Turtle record within 200 meters (m) of the property. Blanding's Turtle is listed as Threatened on the Ontario SAR list. Threatened species, as well as their habitat, are protected under Sections 9 and 10 of Ontario's ***Endangered Species Act***, 2007 (ESA). As requested by MECP, this memo provides an assessment of General Habitat for Blanding's Turtle on the property.

2.0 BLANDING'S TURTLE HABITAT

Blanding's Turtle is an aquatic reptile that occurs in a variety of wetland habitats. The species is described as inhabiting areas such as lakes, permanent ponds, temporary ponds, slow-flowing brooks, creeks, marshes, river sloughs, marshy meadows, man-made channels, coastal areas and the bays of Lake Erie (COSEWIC, 2005). Key habitat also includes areas of fen, marsh, swamp, open areas of sand or fine gravel, and rock barrens.

The General Habitat Description guidance document produced by the Ministry of Natural Resources and Forestry (MNRF) for the Blanding's Turtle (2013) describes habitat as follows:

- Category 1 habitat is considered to be a confirmed nesting or overwintering location and an area within 30m of that site.
- Category 2 habitat as the wetland complex that extends up to 2km from an occurrence, and the area within 30m around those suitable wetlands or water bodies.
- Category 3 habitat is considered to be an area between 30m and 250m around suitable wetlands/waterbodies identified in Category 2, within 2 km of an occurrence.

As discussed, correspondence with MECP indicates that the closest Blanding's Turtle sighting occurs within 200m of the property. As such, Category 2 and 3 habitat for this SAR occurs on the property. According to the General Habitat Description guidance document (MNRF, 2013), Category 2 habitat includes a variety of wetland habitats that are typically eutrophic, shallow with organic substrate and often with emergent vegetation such as water lilies, cattails and ***Sphagnum*** moss. Blanding's Turtle depend on these wetlands for life processes including feeding, mating, thermoregulation, movement and refuge from predation. The species uses Category 3 habitat that is suitable for movement between wetlands.

3.0 ASSESSMENT

Category 2 Habitat

On-site, Sucker Creek Provincially Significant Wetland (PSW), as well as 30m surrounding this wetland, is considered Category 2 habitat for Blanding's Turtle, as illustrated on the attached Figure 3. While the fringe of the wetland complex located on the property consisted of minimal suitable basking features and generally lacked aquatic vegetation, the PSW community is anticipated to provide suitable habitat for the species.

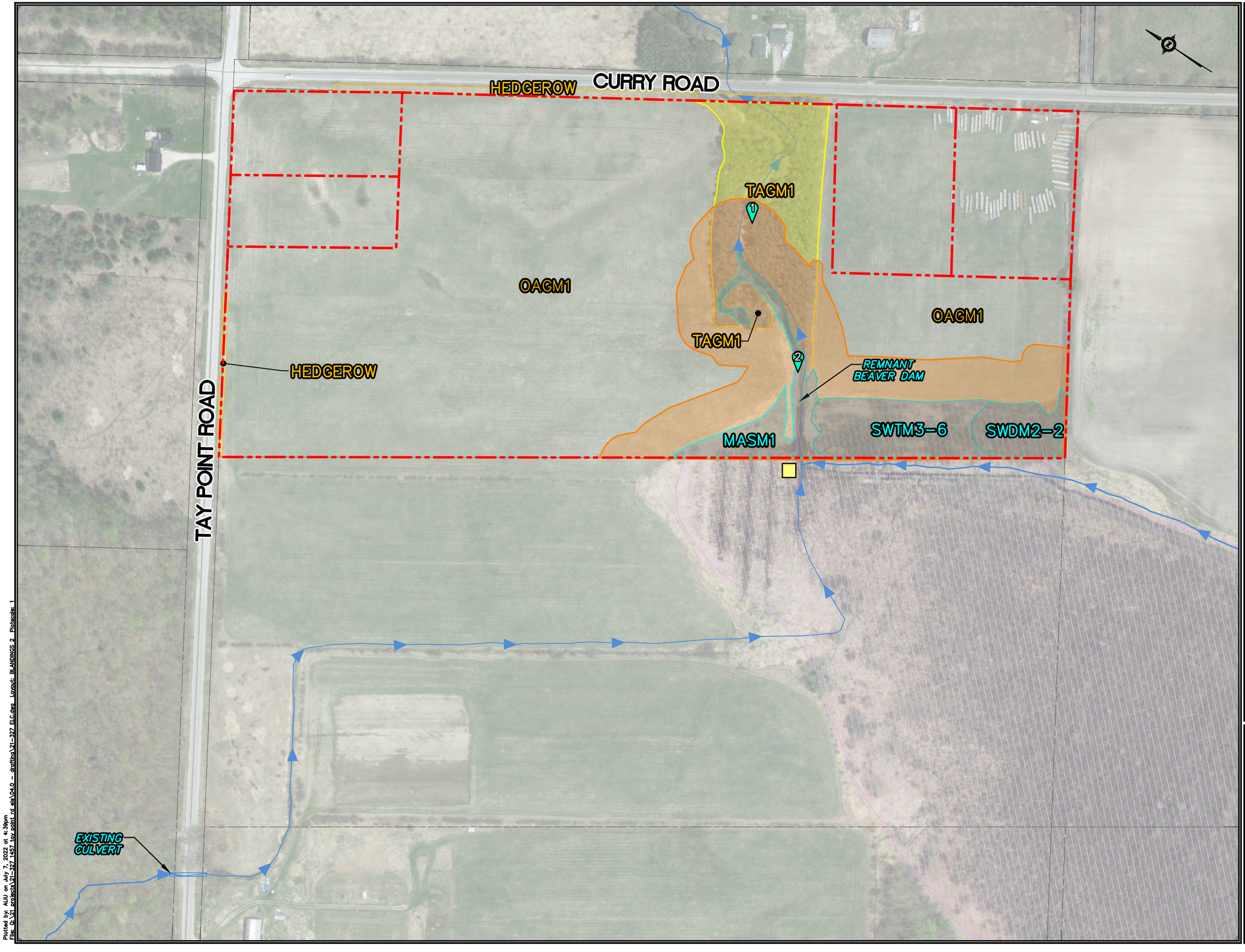
Category 3 Habitat

As per the guidance document (MNRF, 2013), "Category 3 habitat provides essential movement corridors of up to 500m between wetlands, which will encompass the areas that are most likely to be used for overland movement." As such, our assessment has identified environmental features on the property with the greatest likelihood of functioning as movement corridors for Blanding's Turtle, as per the guidance document.

The watercourse corridor that traverses the property and adjacent conifer plantation (TAGM1) abutting Curry Road (Figure 3) have been identified as most likely to be used for overland movement by Blanding's Turtle. Due to the presence of these natural features on the landscape and the cover they provide from predation and risk of desiccation, we identify these features as Category 3 habitat for Blanding's Turtle. Throughout the 2021/2022 field program, no Blanding's Turtles were observed on the property, but one individual was observed off-property in association with the PSW and watercourse corridor (Figure 3) – consistent with our assessment of what constitutes Category 2 and Category 3 habitat on the property. As per direction from the MNRF guidance document (2013), the bare agricultural lands have not been identified as Category 3 habitat because these lands on the property are least likely to be used by turtles moving overland (no cover or protection from predators, high risk of desiccation due to exposure).

4.0 CONCLUSION

The PSW on the property has been identified as Category 2 habitat for Blanding's Turtle. Connecting natural features (watercourse corridor and adjacent conifer plantation) are inferred to function as a movement corridor for this species, and thus, have been identified as Category 3 habitat.



LEGEND:

- APPROX. PROPERTY BOUNDARY
- EXISTING WATERCOURSE (ONTARIO MNR, 2020)
- CULVERT LOCATION
- SUCKER CREEK PROVINCIALLY SIGNIFICANT WETLAND (PSW; ONTARIO MNR, 2020)

ELC VEGETATION COMMUNITIES:

TAGM1	CONIFEROUS PLANTATION
OAGM1	ANNUAL ROW CROPS (AGRICULTURE)

ELC WETLAND COMMUNITIES:

MASM1	GRAMINOID MINERAL SHALLOW MARSH
SWDM2-2	GREEN ASH MINERAL DECIDUOUS SWAMP
SWTM3-6	MIXED WILLOW MINERAL DECIDUOUS THICKET SWAMP

BLANDING'S TURTLE GENERAL HABITAT:

- CATEGORY 2
- CATEGORY 3

POINT COUNT STATIONS

- TURTLE SURVEY STATION
- BLANDING'S TURTLE

DRAFT

0 62.50 125.0

HORIZONTAL SCALE 1:2500

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

GENERAL HABITAT: BLANDING'S TURTLE

1457 TAY POINT ROAD
PENETANGUISHENE, ON

DATE ISSUED:	JULY 2022	Figure No. 3
CREATED BY:	A.L.	
PROJECT NO.:	21-327	
REFERENCE:	SIMCOE COUNTY	