

Version 1.2

1812 County Road 10 in the
Township of Cavan Monaghan

April 2026

Environmental Impact Study



Prepared For:
Ian Cameron

Prepared By:
Sumac Environmental Consulting



Sumac Environmental Consulting
244 Barrie Street Thornton Ontario, L0L 2N0
Tel: (249) 880-4676
sumacenvironmental@gmail.com
www.sumacenvironmental.ca

April 17, 2026

SEC 25-016

Ian Cameron
c/o KMD Planning Inc.
560 Romaine Street
Peterborough, Ontario
K9J 2E3

**Re: Environmental Impact Study at 1812 County Road 10 in the Township of Cavan
Monaghan, County of Peterborough**

Dear Mr. Cameron,

Thank you for retaining Sumac Environmental Consulting to prepare an Environmental Impact Study at 1812 County Road 10 in the Township of Cavan Monaghan.

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

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

Sumac Environmental Consulting

A handwritten signature in dark ink, appearing to read "C Fligg".

Cassandra Fligg, M.Sc.
Environmental Consultant

A handwritten signature in dark ink, appearing to read "Nathan Fligg".

Nathan Fligg, M.Sc.
Environmental Consultant/GIS Technician

Report Summary

Sumac Environmental Consulting has prepared an Environmental Impact Study at 1812 County Road 10 in the Township of Cavan Monaghan. It is our understanding this report has been requested by the County of Peterborough in response to a development application that supports the construction of a residential subdivision. Site visits were carried out in spring and summer of 2025 to examine natural features that have the potential of being impacted by a proposed development. A Species at Risk Habitat Assessment was completed to screen for absent, candidate and confirmed habitat of endangered and threatened species (HETS). A Significant Wildlife Habitat (SWH) Assessment was completed to screen for absent, candidate and confirmed SWH. Fish habitat, HETS and SWH were identified as occurring on or near the subject property. Significant impacts to the identified features are not anticipated, should the proponent follow the recommendations provided herein.

The recommendations provided in Section 8.2 are summarized as follows:

- Install one 4-chambered bat house for each tree >25 cm dbh removed from the FODM11 community, placed 3 m high, oriented south-southeast-southwest, and located in open, sunlit areas under the direction of a qualified biologist.
- Restore disturbed areas with native, non-invasive vegetation following appropriate seasonal planting windows; apply the Township's Aggregate Inch Replacement method for tree removals, and complete a Tree Inventory and Preservation Plan (TIPP) at detailed design to quantify removals and illustrate compensation planting locations.
- Install and maintain tree preservation hoarding and silt fencing prior to construction, following municipal (or equivalent) specifications to protect retained trees and aquatic features throughout site works.
- Prepare a response plan and keep an emergency spill kit on-site.
- Maintain machinery in clean, leak-free condition.
- Prohibit washing, fueling, or servicing machinery within 30 m of aquatic features.
- Avoid stockpiling fill or construction materials within 30 m of aquatic features.
- Avoid vegetation removal during sensitive periods unless directed by a qualified biologist:
 - Migratory birds: April 1 – August 31.
 - Roosting bats: March 15 – November 30.
 - Monarch butterflies: June 1 – September 30.
- Encountered wildlife should be allowed to exit the site safely on their own.

Key Staff

Environmental Consultant – Cassandra Fligg, M.Sc.

Mrs. Fligg received a master's degree in science (biology) from Lakehead University. She has previously been qualified as an Ecologist with expertise in natural heritage and freshwater ecology by the Ontario Land Tribunal. Mrs. Fligg is proficient in the preparation of natural heritage reports in southern and central Ontario, particularly those that include policy of the Lake Simcoe Protection Plan, Greenbelt Plan, Oak Ridges Moraine Conservation Plan and Niagara Escarpment Plan. She has prepared species at risk screenings to the satisfaction of the Ministry of Environment, Conservation and Parks and assisted proponents in demonstrating avoidance to the harm and/or destruction of species at risk and their habitat, and navigated proponents through the overall benefit permit process where complete avoidance was not possible. Mrs. Fligg is a certified arborist as recognized by the International Society of Arboriculture, certified butternut health assessor as recognized by the Ministry of Natural Resources and Forestry, certified level 2 backpack electrofisher (crew leader) and has completed a fish identification workshop, turtle identification and handling workshop, and diatom algae culture and isolation workshop.

Environmental Consultant – Nathan Fligg, M.Sc.

Mr. Fligg is a well-versed ecologist with more than 15 years experience in both plant and wildlife identification. He is actively building on his identification skills and knowledge through the review of relevant flora literature and the undertaking of field studies for Sumac's natural heritage reports and species at risk screenings in southern and central Ontario. Mr. Fligg has performed various habitat and species-specific studies across southern and central Ontario to the satisfaction of municipalities, conservation authorities, environmental associations, land trust organizations, Niagara Escarpment Commission, Department of Fisheries and Oceans Canada, Ministry of Natural Resources and Forestry, as well as, the Ministry of Environment, Conservation and Parks. Mr. Fligg completed an undergraduate degree in Environmental Sustainability and further went on to receive a master's degree in science from Lakehead University. He is a provincially certified wetland evaluator, certified butternut health assessor, certified level 2 backpack electrofisher (crew leader) and is experienced in the safe handling and release of small mammals, birds, fish, amphibians and reptiles.

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1.0 Introduction

Sumac Environmental Consulting (Sumac) has been retained to prepare an Environmental Impact Study (EIS) at 1812 County Road 10 in the Township of Cavan Monaghan (hereinafter referred to as the 'subject property'). It is our understanding that an EIS has been requested by the County of Peterborough in response to a development application that supports the construction of a residential subdivision.

The subject property is approximately 13.1 ha in size and consists of a newly constructed single-family dwelling, gravel driveway, agricultural fields and natural cover (Figure 1). Schedule A to the Official Plan for the Township of Cavan Monaghan (office consolidation 2021) illustrates the 'Agricultural', 'Rural', and 'Natural Linkage Area' land use designations as occurring on the subject property. The surrounding area is predominantly composed of agriculture fields, natural cover and residential properties.

2.0 Planning Context

2.1. Federal

2.1.1. Species at Risk Act

The *Species at Risk Act (SARA)* provides the federal framework for the protection and recovery of species listed as extirpated, endangered, threatened, or of special concern in Canada. The purposes of the Act are outlined in *SARA* s. 6, which aims to prevent wildlife species from becoming extirpated or extinct, facilitate the recovery of listed species, and manage species of special concern to prevent further decline. Federal listing processes are established under *SARA* ss. 14 and 27, which govern how species are assessed by COSEWIC and formally added to Schedule 1.

General prohibitions against killing, harming, harassing, capturing, or taking individuals of listed endangered or threatened species are set out in *SARA* s. 32, while *SARA* s. 33 prohibits the damage or destruction of their residences (e.g., nests, dens, hibernacula). Once critical habitat is identified in a recovery strategy (*SARA* s. 37) or action plan (*SARA* s. 47), its protection is governed by *SARA* s. 58, which prohibits destruction of any part of that habitat on federal lands or for federally managed species (e.g., aquatic species, migratory birds protected by the *Migratory Birds Convention Act*).

In circumstances where an activity cannot avoid contravening the prohibitions in ss. 32 or 33, *SARA* provides a permitting mechanism under s. 73. Section 73(1) authorizes the competent federal minister to issue permits for three specific purposes:

- (a) Scientific research relating to the conservation of the species;

- (b) Activities that benefit the species or enhance its chances of survival in the wild; or
- (c) Activities that incidentally affect the species, provided they are otherwise carried out in accordance with the Act.

Under s. 73(2), the Minister must also be satisfied that all reasonable alternatives to the activity were considered and the best solution was adopted, that all feasible measures will be taken to minimize impacts, and that the activity will not jeopardize the survival or recovery of the species. Together, these provisions form the primary federal pathway for authorizing otherwise prohibited impacts to listed species, their residences, or their critical habitat on federal lands or for federally managed species.

2.1.2. Migratory Birds Convention Act

The purpose of the *Migratory Birds Convention Act (MBCA)* is to implement the Convention by protecting and conserving migratory birds – as populations and individual birds – and their nests. Migratory Birds Regulations is a regulation made under the *Migratory Birds Convention Act*. Section 5 (1) of the Migratory Birds Regulation states that a person must not engage in any of the following activities unless they have a permit that authorizes them to do so or they are authorized by these Regulations to do so:

- (a) capture, kill, take, injure or harass a migratory bird or attempt to do so;
- (b) destroy, take or disturb an egg; and
- (c) damage, destroy, remove or disturb a nest, nest shelter, eider duck shelter or duck box.

2.2. Provincial

2.2.1. Species Conservation Act

The *Species Conservation Act, 2025 (SCA)* establishes Ontario's current framework for identifying protected species and regulating their habitat. The purposes of the Act are set out in SCA s. 1, which directs the province to identify species at risk, support their protection and recovery, and balance ecological, social, and economic considerations.

A key component of the SCA is its definition of habitat, provided in SCA s. 2(1). For animal species, habitat is defined as a dwelling place, such as a den, nest or other similar place, that is occupied or habitually occupied by one or more members of a species for the purposes of breeding, rearing, staging, wintering or hibernating, and the area immediately around it that is essential for said purposes. For vascular plant species, habitat is defined as the critical root zone surrounding a member of the species. For all other species, habitat is defined as an area on which any member of the species directly depends in order to carry on its life processes. SCA s.2(2) states that for greater certainty, the definition of "habitat" does not include an area where the

species formerly occurred or has the potential to be reintroduced unless existing members of the species depend on that area to carry on their life processes.

Species protected under the Act are listed on the Protected Species in Ontario List, established under SCA s. 14, and do not include species of birds protected by the *Migratory Birds Convention Act* or aquatic species as defined in subsection 2(1) of the SARA. Activities that may harm protected species or damage regulated habitat are subject to prohibitions under SCA s. 16.

The SCA defines “section 16 activity” as any activity that results or is likely to result in, the killing, harming, capturing or taking of a member of a species that is listed on the Protected Species in Ontario List, or damage to or destruction of the habitat of a species that is listed on the Protected Species in Ontario List. A “registrable activity” means a section 16 activity that is not prescribed for the purposes of subsection 16 (2); that being in accordance with a permit. The SCA s.16(1) states that no person shall engage in a registrable activity unless,

- a) The person has registered the activity in the Registry in accordance with the regulations;
- b) The Minister has provided the person with a confirmation of registration in respect of the activity;
- c) The person engages in the activity in accordance with the regulations; and
- d) The registration is not suspended and has not been removed from the Registry.

Depending on the nature of the activity and the species involved, proponents may be required to complete an online registration (SCA ss. 17–20) or obtain a permit (SCA ss. 21–22) before proceeding with a section 16 activity.

2.2.2. Fish and Wildlife Conservation Act

The *Fish and Wildlife Conservation Act* aims to conserve and manage fish and wildlife in Ontario.

Section 7 (1) of the *Fish and Wildlife Conservation Act* states that a person shall not destroy, take or possess the nest or eggs of a bird that belongs to a species that is wild by nature.

Section 8 (2) of the *Fish and Wildlife Conservation Act* states that a person shall not intentionally damage or destroy the den or habitual dwelling of a furbearing mammal, other than a fox or skunk, unless the person holds a licence to trap furbearing mammals.

2.2.3. Provincial Planning Statement

As per Section 4.1.4 of the Provincial Planning Statement, development and site alteration shall not be permitted in significant wetlands in Ecoregions 6E.

As per Section 4.1.5 of the Provincial Planning Statement, development and site alteration shall not be permitted in significant woodlands in Ecoregions 6E, significant valleylands in Ecoregions 6E, significant wildlife habitat and significant areas of natural and scientific interest unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.

As per Section 4.1.6 of the Provincial Planning Statement, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

As per Section 4.1.7 of the Provincial Planning Statement, development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

As per Section 4.1.8 of the Provincial Planning Statement, development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions

2.2.4. Conservation Authorities Act

Regulated lands of the Otonabee Region Conservation Authority (ORCA) have been mapped on the subject property (Appendix A). Conservation Authorities are empowered by the *Conservation Authorities Act* to regulate development and activities in or adjacent to river or stream valleys, Great Lakes and inland lakes' shorelines, watercourses, hazardous lands and wetlands.

2.2.5. Otonabee Conservation Watershed Planning & Regulations

As per Section 2.4.2 (1) to the ORCA Watershed Planning & Regulations Policy & Procedures Manual, Otonabee Conservation will recommend that development and/or site alteration not be permitted within the existing channel of a watercourse, except in accordance with the policies in Chapter 3.

As per Section 2.4.2 (5) to the ORCA Watershed Planning & Regulations Policy & Procedures Manual, for all development and/or site alteration proposals adjacent to a watercourse, Otonabee Conservation will recommend the maintenance, establishment, and/or enhancement of a buffer of

an appropriate width based on intended land use and site conditions as determined by Otonabee Conservation staff in consultation with the application and guided by the 'Best Management Practices 15: Buffer Strips' (OMAFRA, 2004) and/or in accordance with the results of a technical report by a qualified professional.

2.3. Municipal

2.3.1. County of Peterborough Official Plan

As per Section 4.1.3.4 of the County of Peterborough Official Plan (office consolidation 2022), local plans will prohibit development and site alterations within significant wetlands and significant portions of the habitat of endangered and threatened species.

Moreover, local plans may permit development and site alteration in:

- significant woodlands south and east of the Canadian Shield;
- significant valleylands south and east of the Canadian Shield;
- significant wildlife habitat; and;
- significant areas of natural and scientific interest;

Moreover, development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas listed above unless the ecological function of the adjacent lands has been evaluated in accordance with an environmental impact assessment as described in Section 4.1.3.1 and it has been determined that there will be no new negative impacts on the natural features or on their ecological functions.

As per Section 7.13.7 of the County of Peterborough Official Plan (office consolidation 2022), in assessing proposals for residential development by plan of subdivision or condominium, the Township shall have regard for the following considerations: as many trees as possible shall be preserved, particularly mature and healthy stands of trees, and reforestation shall take place where necessary.

2.3.2. Township of Cavan Monaghan Official Plan

The Official Plan for Township of Cavan Monaghan (office consolidation 2021) identifies the following land use designations and/or features on the subject property:

- Agricultural (Schedule A);
- Rural (Schedule A);
- Special Policy Area (see Section 2.6) (Schedule A);
- Natural Linkage Area (Schedule A); and

- Significant Woodland (Schedule B).

As per Section 3.1 of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), with respect to general development criteria, there will be no negative impacts on significant natural features or their ecological functions.

As per Section 3.14.6 c) of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), prior to the consideration of an application for Plan of Subdivision or Condominium, the applicable criteria in Section 3.14.1 shall be satisfied.

As per Section 3.14.1 xi) of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), with respect to general development policies of lot creation, applications for consents shall only be granted where the conditions, such as the lot will not have a negative impact on the Natural Heritage Features and related ecological functions in the area, are satisfied.

Moreover, it is recognized however, that some trees may be removed or sustain damage as a result of construction or development and as such replacement plantings will be considered on the following basis:

- I. Trees that have been identified to be protected but cannot be preserved due to development constraints can be removed, with the use of the “Aggregate Inch Replacement” method. (i.e. One 30 cm dbh tree is removed and is replaced by 2 trees of 15 dbh or 3 trees of 10 dbh); and,
- II. Replacement trees should be planted in proximity to their removal, and efforts should be made to replace trees of the same species and size or replacement equivalent. However, where replacement of this nature is not practical, the Township may specify an alternate location where replacement trees may be placed.

As per Section 6 of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), the Natural Heritage System includes significant wildlife habitat, significant wetlands, significant woodlands, significant valley lands, areas of natural and scientific interest, buffer areas around these features and lands that link those areas.

As per Section 6.4.3 a) of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), the Natural Linkage Areas are intended to provide a natural buffer from key natural heritage features and a linkage between these features in the Township. Development in this designation shall only be permitted where the vegetative buffer and connectivity for which the area has been designated is preserved.

As per Section 6.4.3 b) of the Official Plan for the Township of Cavan Monaghan (office consolidation 2021), where development is proposed in the Natural Linkage Areas the Township may require the proponent to complete an Environmental Impact Study (EIS) in accordance with Section 3.7 of this Plan in order to ensure that the Linkage function will be preserved and enhanced as the result of the proposed development.

As per Section 6.7.1 a) of the Official Plan for Township of Cavan Monaghan (office consolidation 2021), key natural heritage features relate to wetlands, significant portions of the habitat of endangered, rare and threatened species, fish habitat, significant valleylands, significant woodlands, areas of natural and scientific interest (ANSI - Life Science and Earth Science), sand barrens, savannahs and tall grass prairies and significant wildlife habitat. Hydrologically sensitive features relate to permanent and intermittent streams, wetlands, kettle lakes and seepage areas and springs.

Table 1 to the Official Plan for Township of Cavan Monaghan (office consolidation 2021), illustrates the Minimum Area of Influence and Minimum Vegetation Protection Zones for Key Natural Heritage Features.

3.0 Background Review

The following resources were reviewed to gain a deeper understanding of natural heritage with the potential of occurring on the subject property and adjacent lands (i.e., up to 120 m):

- Atlas of the Mammals of Ontario (Dobbyn, 1994);
- Atlas Square No. 17QJ0098, 17QJ0099, 17QJ0198, 17QJ0199, 17QJ0298, and 17QJ0299 of the Natural Heritage Information Centre;
- Atlas Square No. 17QJ09 of the Ontario Butterfly Atlas;
- Atlas Square No. 17QJ09 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 17TQJ09 of the Ontario Breeding Bird Atlas;
- County of Peterborough Official Plan (office consolidation 2022);
- Department of Fisheries and Oceans Canada Aquatic Species at Risk Map;
- eBird;
- iNaturalist;
- Land Information Ontario;
- Ministry of Natural Resources (MNR) Aquatic Resources Area Mapping; and
- The Official Plan for Township of Cavan Monaghan (office consolidation 2021).

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

- ANSI;
- Fish Habitat;
- Habitat of Endangered and Threatened Species;
- Significant Valleylands;
- Significant Wildlife Habitat;
- Significant Woodlands; and
- Wetlands.

4.0 Characterizing the Natural Environment: Approach and Methodology

The proposed terms of reference for the EIS was submitted to the County of Peterborough and Township of Cavan Monaghan to better define the purpose and structure of the report. The response has been appended for reference (Appendix B).

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed on June 6, 2025 for the vegetation communities that occur on or extend onto the subject property.

4.1.2. Vegetation Communities

Orthographic imagery of the subject property and adjacent lands was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on June 06, 2025. Vegetation communities were classified following protocol of the Ecological Land Classification (ELC) for Southern Ontario (Lee, H. et al., 1998) and associated Vegetation Type List (Lee, H., 2008), where applicable.

4.2. Area of Natural and Scientific Interest

Background mapping from the MNR was reviewed to identify the nearest ANSI.

4.3. Fish Habitat

Fish habitat is defined in subsection 2(1) of the *Fisheries Act* to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. The subject property was screened on June 6, 2025 for evidence of surface water features (e.g., watercourse, seeps, spring, vernal pool, inland lakes). If present, identified surface

water feature(s) were mapped, characterized and assessed for the potential to function as fish habitat.

4.4. Habitat of Endangered and Threatened Species

For the purpose of this study, we have defined “Species at Risk” (SAR) to include species designated special concern, threatened and endangered under O. Reg. 60/26 in accordance with the SCA and Schedule 1 to the SARA. Species occurrence data from sources outlined in Section 3.0 of this report was used to determine which species at risk are known to occur in proximity to the subject property. An Ecological Land Classification (ELC) exercise was completed to identify potential habitat opportunities for the listed species at risk. Orthographic imagery of the subject property was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on June 6, 2025. Vegetation communities were classified following protocol of the Ecological Land Classification (ELC) for Southern Ontario (Lee, H. et al., 1998) and associated Vegetation Type List (Lee, H., 2008), where applicable. A SAR Habitat Assessment was completed to identify candidate, confirmed and absent SAR habitat on the subject property.

4.4.1. Birds

Three (3) dawn breeding bird surveys were completed in general accordance with grassland survey protocol (MNR, 2014). Surveys were completed within the first four (4) hours after sunrise between May 21 and July 3 and spaced a minimum of 7-10 days apart from one another. Surveys were not completed during events of precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale). Two (2) point count stations were used to carry out the surveys (Figure 2). The survey conditions were as follows:

Date	Surveyor(s)	Time	Temp.	Cloud Cover	Wind	Precip.
June 06, 2025	Nathan Fligg	0715-0730	14°C	40%	B2	Nil.
June 18, 2025	Tyler Ambeau	0805-0830	21°C	20%	B2	Nil.
June 25, 2025	Nathan Fligg	0930-1000	25°C	40%	B2	Nil.

4.5. Valleyland

The subject property was screened for valleyland on June 6, 2025. If present, identified valleyland was assessed for significance using the recommended evaluation criteria and standards as described in the Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement (MNR, 2005).

4.6. Wetland

The subject property was screened for wetland feature(s) on June 6, 2025 by a qualified wetland evaluator and if present, delineated following the appropriate method (e.g., 50% vegetation rule) as described in the Ontario Wetland Evaluation System: Southern Manual 4th Edition. Digital terrain models and orthographic imagery were used to identify candidate wetland on the adjacent lands.

4.7. Wildlife Habitat

Incidental observations of wildlife, wildlife signs (e.g., scat, tracks, remains of food, claw marks on trees or shrubs, trails or corridors, stunted vegetation, stick nests, turned stones) and habitat opportunities were noted during Sumac's field investigations.

The potential for Significant Wildlife Habitat (SWH) on the subject property was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015).

4.8. Woodland

The ELC approach for defining "forest" using canopy cover was used to delineate woodland patches. If present, woodland patches were assessed for significance using the recommended size criteria established by the MNR, whereby:

- Where woodland cover is less than 5% of the land cover in the local municipality, woodlands 2 ha in size or larger should be considered significant.
- Where woodland cover is 5-15% of the land cover in the local municipality, woodlands 4 ha in size or larger should be considered significant.
- Where woodland cover is 16-30% of the land cover in the local municipality, woodlands 20 ha in size or larger should be considered significant.
- Where woodland cover is 31-60% of the land cover in the local municipality, woodlands 50 ha in size or larger should be considered significant.

The woodland cover in the Township of Cavan Monaghan was approximated using the 'Wooded Area' dataset accessed through Land Information Ontario on March 24, 2026.

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

A list of vascular plant species for the vegetation communities that extend onto the subject property has been provided for reference (Table 1).

5.1.2. Vegetation Communities

The subject property contained four (4) distinct vegetation communities (Figure 2):

1. CUM1 Dry-Fresh Cultural Meadow Ecosite: Approximately 10.20 ha of cultural meadow occur throughout most of the subject property. Although this area was historically used for row-crop agriculture, active cultivation ceased prior to the field survey, allowing the site to transition into a perennial forb- and grass-dominated community. The vegetation is characteristic of early successional meadow, with a dominance of forbs and, to a lesser extent, graminoids, including Canada goldenrod, oxeye daisy, nodding thistle, annual fleabane, orchard grass, smooth brome, wild chicory, and common ragweed.
2. CUW1 Dry-Fresh Cultural Woodland Ecosite: Approximately 0.34 ha of cultural woodland occurred along the southwestern edge of the subject property and extending into the adjacent lands. An open canopy was vegetated predominately with Manitoba maple and basswood with red ash. The well vegetated shrub layer was dominated by staghorn sumac and European buckthorn. Vining plants were common in this community represented by riverbank grape, Virginia creeper and black swallowwort. The moderately vegetated ground level was comprised of Canada goldenrod, smooth brome and smooth bedstraw.
3. CVR_4 Rural: Approximately 1.30 ha of the subject property has been characterized as rural residential. This area contained a newly constructed single-family dwelling, gravel driveway, existing trees and forbs and graminoids were in the area surrounding the dwelling and driveway.
4. FODM11 Dry-Fresh Naturalizing Deciduous Hedgerow Ecosite: Approximately 0.8 ha of this community occurred in two linear patches between the CUM1 polygons. The canopy was dominated by Manitoba maple and black walnut with sugar maple and black cherry. A well vegetated tall shrub layer consisted mostly of European buckthorn and staghorn sumac. The shrub layer was moderately vegetated with red raspberry and western poison ivy. The ground level was well vegetated with graminoids such as smooth brome and perennial ryegrass and forbs (i.e., Canada goldenrod and Canada thistle).

5.2. Area of Natural and Scientific Interest

The nearest ANSI, Cavan Creek Wetlands, is mapped approximately 1.26 km southeast of the subject property (Appendix C). No further analysis required.

5.3. Fish Habitat

No evidence of surface water features was encountered on the subject property during field investigations. An unnamed tributary of Cavan Creek has been mapped just past the southwestern extent of the subject property (Figure 2). Data extracted from the MNR Aquatic Resource Area database identified this feature as exhibiting a cold-water thermal regime with documented occurrences of a variety of fish species (e.g., blacknose dace, brassy minnow, brook stickleback, brook trout, brown bullhead, creek chub, fathead minnow, hornyhead chub, largemouth bass, logperch, longnose dace, longnose sucker, mottled sculpin, Northern redbelly dace, rock bass, sculpins, smallmouth bass, white sucker etc.).

5.4. Habitat of Endangered and Threatened Species

An endangered plant species, butternut, was encountered on the subject property during the vascular plant inventory (Table 1). No threatened plant species were encountered on the subject property.

One (1) threatened bird species, Eastern meadowlark, was observed during the dawn breeding bird surveys (Table 2). No endangered bird species were observed during the dawn breeding bird surveys nor through incidental occurrence.

The SAR Habitat Assessment identified candidate and confirmed habitat of endangered species on the subject property (Table 3).

5.4.1. Birds

Eastern Meadowlark: Eastern meadowlark were observed during the dawn breeding bird survey with probable breeding evidence in the CUM1 community on the subject property. The observed locations of Eastern meadowlark have been illustrated for reference (Figure 3). Upon a species' listing as threatened or endangered and critical habitat is defined by the recovery strategy (SARA s. 37) or action plan (SARA s. 47) for said species, its protection is governed by SARA s. 58, which prohibits destruction of any part of that habitat occurring on federal lands or for federally managed species (e.g. species protected by the MBCA). With consideration of the SARA's definition of critical habitat, it is our understanding that regulated habitat for Eastern meadowlark does not occur on the subject property as it is outside of 10 x 10 km grid as mapped in the proposed recovery strategy for the Eastern meadowlark in Canada (Environment and Climate Change Canada 2022). Though regulated habitat does not occur on the subject property SARA

and the MBCA prohibit killing, harming and harassing of eastern meadowlark and the destruction, damage, removal or disturbance of nests.

5.4.2. Mammals

Eastern Red Bat, Hoary Bat, Little Brown Myotis, and Tri-coloured Bat: The FODM11 community has the potential to function as suitable roosting habitat for Eastern red bat, hoary bat, little brown myotis, and tri-coloured bat. Foraging habitat may include watercourse just southwest of the subject property and forest edge, should these species be present.

5.4.3. Vascular Plants

Butternut: Three (3) butternut were identified on the subject property in the CUW1 community (Figure 3). A butternut health assessment was carried out on August 28, 2025 whereby all three (3) individuals were assessed as Category 1 (non-retainable). A Butternut Health Expert report was submitted to the Ministry of Environment, Conservation and Parks detailing the results of the assessment on September 10, 2025 (Appendix D). Retaining said trees would not support the protection or recovery of butternut trees in the areas in which the tree is located. No further analysis required.

5.5. Valleyland

The topography on the subject property was not suggestive of the presence of valley or other landform depression associated with flowing or standing water. No further analysis required.

5.6. Wetland

No wetland features were encountered on the subject property. No further analysis required.

5.7. Wildlife Habitat

The following observation were noted during Sumac's field investigations:

- Eastern Cottontail (*Sylvilagus floridanus*);
- Eastern Gray squirrel (*Sciurus carolinensis*); and
- White-tailed deer (*Odocoileus virginianus*).

All of the abovenoted species are considered common in the Province of Ontario.

The SWH Assessment identified two (2) candidate and confirmed SWH as occurring on the subject property (Table 4).

5.7.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: The FODM11 community has the potential of containing bat maternity roost sites and functioning as the SWH, Bat Maternity Colonies.

5.7.2. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: Provincially rare plant species were encountered on the subject property including, butternut (Table 1). No provincially rare bird species were observed on the subject property during the dawn breeding bird surveys (Table 2). Habitat for special concern species was not identified on the subject property (Table 3).

Butternut: See Section 5.4.3 above.

5.8. Woodland

Two (2) woodland patches associated with the FODM11 community occurred on the subject property (Appendix E). Said patches are isolated linear treed areas that do not meet the minimum width threshold identified in the Natural Heritage Reference Manual (i.e., 40 m) to be considered in a significant woodland assessment. Four (4) other woodland patches were identified on adjacent lands associated with the FOD, FOC and CUP communities. The Township of Cavan Monaghan has an estimated 32% woodland cover. Where woodland cover is 31-60% of the land cover in the local municipality, woodlands 50 ha in size or larger should be considered significant. None of the identified woodland patches meet said minimum size criteria and as such, would not be considered as Significant Woodland. No further analysis required.

6.0 Project Description

The proposed development consists of a 31-lot rural residential subdivision including 30 lots for single detached dwellings and one (1) stormwater management block. Lot 5 will preserve the newly built dwelling, septic system and well. The impact assessment below reviews impacts associated with a development contained within the Area of Work, as depicted on Figure 3.

7.0 Impact Assessment

7.1. Vegetation

The following vegetation communities are anticipated to be disturbed to facilitate the proposed development:

- Up to 9.2 ha of the CUM1 community;
- Up to 0.03 ha of the CUW1 community;
- Up to 0.8 ha of the FODM11 community; and

- Up to 1.3 ha of the CVR_4 community.

The proponent is encouraged to re-vegetate all disturbed areas remaining post-development with non-invasive native trees, shrubs and groundcover, where feasible (Section 8.2.2).

7.2. Fish Habitat

The proposed development is situated outside the tributary of Cavan Creek and therefore does not encroach upon the watercourse itself. As a result, no direct impacts to fish habitat are anticipated. Coldwater systems such as this tributary are typically protected through the application of a 30 m buffer (Figure 3). While a portion of the newly created residential lot extends into this recommended buffer area, it is our understanding that all grading, site alteration, and construction activities associated can be located outside the buffer. In addition, the septic system is fully situated beyond the 30 m buffer. Because no physical disturbance, vegetation removal, or infrastructure placement is proposed within the buffer, the functional integrity of the riparian zone will be maintained. With the buffer remaining undisturbed and the watercourse itself unaffected, no negative impacts to fish habitat or the ecological function of the coldwater system are anticipated. Site specific measures are recommended to protect fish habitat during construction (Section 8.2.3 and Section 8.2.4).

7.3. Habitat of Endangered and Threatened Species

7.3.1. Birds

Eastern Meadowlark: For the purposes of the SARA and MBCA, timing restrictions must be adhered to avoid adverse impacts to Eastern meadowlark and active nests of Eastern meadowlark (Section 8.2.5).

With mitigation in place, residual impacts are expected to be minor and localized, characterized by:

- Permanent loss of habitat only within the development footprint
- No measurable effect on regional population viability
- Continued availability of extensive high-quality habitat in the surrounding landscape

Given the abundance of suitable habitat across the broader area, the project is not anticipated to result in significant adverse effects on Eastern meadowlark at the local or regional scale.

7.3.2. Mammals

Eastern Red Bat, Hoary Bat, Little Brown Myotis, and Tri-coloured Bat: The proposed development will require the removal of two (2) FODM11 – Naturalized Deciduous Hedge-row Ecosite polygons that occur as narrow, isolated hedgerows surrounded by agricultural fields, as well as a small portion of the CUW1 – Dry–Fresh Mineral Cultural Woodland Ecosite along its outer edge. These features provide some potential habitat for endangered bat species, including Eastern red bat, hoary bat, little brown myotis, and tri-coloured bat. The FODM11 hedgerows contain scattered deciduous trees and linear edge conditions that may offer opportunistic day-roosting habitat, while the CUW1 woodland edge and nearby watercourse contribute to a broader network of foraging and commuting habitat across the landscape.

Direct impacts will occur where these vegetation communities are removed. The isolated FODM11 hedgerows proposed for clearing may support occasional day roosts or serve as minor commuting features; however, their narrow structure, fragmentation, and position within an intensively farmed matrix limit their suitability for maternity roosting or sustained habitat use. The removal of a small portion of the CUW1 woodland edge may also result in the loss of a limited number of potential roost trees and a modest reduction in edge foraging habitat. Importantly, the interior of the CUW1 woodland and the larger, more structurally complex treed communities (including FOD, CUT1, and CUS1) remain intact, preserving the majority of high-quality roosting and foraging opportunities on and adjacent to the property.

Indirect impacts may arise during construction, including temporary disturbance from noise, vibration, and increased human activity, which could reduce bat use of adjacent woodland edges during active periods. The introduction of artificial lighting associated with the development may also influence bat behaviour by altering insect distribution or discouraging light-averse species from foraging along illuminated edges. Minor microclimatic changes may occur where hedgerows are removed, such as increased wind exposure and reduced insect concentrations along former edges; however, these effects are expected to be localized and limited in magnitude.

When considered cumulatively, the proposed vegetation removals do not represent a meaningful reduction in bat habitat at the landscape scale. The surrounding area contains numerous additional hedgerows, woodlots, and forest edges, as well as the nearby watercourse southwest of the property, all of which continue to provide abundant roosting, foraging, and commuting opportunities. Connectivity across the landscape remains intact, as the remaining CUW1 woodland, adjacent natural communities, and off-site treed features continue to form a continuous network of movement corridors. The incremental loss of several short hedgerow segments and a small woodland edge does not create barriers to movement nor diminish the overall availability of suitable habitat for endangered bat species.

Overall, although some tree removal is required to facilitate the proposed development, the affected features represent low to moderate quality bat habitat, and their loss is not anticipated to significantly impair or eliminate roosting, foraging, or movement opportunities for Eastern red bat, hoary bat, little brown myotis, or tri-coloured bat. Adherence to sensitive timing windows for tree and woody vegetation removal (Section 8.2.5) will further reduce the potential for direct impacts to roosting bats.

7.4. Wildlife

7.4.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: The proposed development will require the removal of two (2) FODM11 – Naturalized Deciduous Hedge-row Ecosite polygons. Said community has the potential to function as the SWH, Bat Maternity Colonies. These hedgerows occur as narrow, linear features within an agricultural landscape and provide limited potential bat habitat, including opportunistic maternity roosting. Their narrow width, fragmentation, and isolation substantially limit their suitability for sustained or high-quality roosting habitat. Given the uncertainty of snag density within the remaining treed communities, the proponent is encouraged to replace each tree with a diameter at breast height greater than 25 cm removed from the FODM11 community with a bat house to offset habitat loss (Section 8.2.1). This measure will help maintain roosting opportunities despite the removal of low-quality hedgerow trees. At the landscape scale, the loss of these short hedgerow segments does not meaningfully reduce bat habitat availability. Numerous woodlots, hedgerows, and forest edges in the surrounding area, along with the nearby watercourse, continue to provide abundant roosting, foraging, and commuting opportunities. Connectivity remains intact, and the development is not expected to impair overall bat movement or habitat function in the area.

7.4.2. Habitats of Species of Conservation Concern Considered SWH

Butternut: See Section 5.4.3 above.

8.0 Conclusion and Recommendations

8.1. Conclusion

This Environmental Impact Study was completed to evaluate the potential effects of the proposed 31-lot rural residential subdivision at 1812 County Road 10 on natural heritage features and their associated ecological functions. The assessment was undertaken in accordance with applicable federal, provincial, and municipal policy frameworks and considered existing site conditions, the surrounding landscape context, and the mitigation measures outlined in Section 8.2.

The impact assessment determined that the proposed development will result in the permanent removal of portions of cultural meadow and limited treed vegetation within the development

footprint. This includes removal of low- to moderate-quality bat habitat associated with narrow hedgerows and woodland edges. While these impacts are anticipated to be permanent within the area of development, they represent a relatively small proportion of the suitable habitat available within the broader surrounding landscape, which remains dominated by extensive agricultural fields, woodlots, hedgerows, and surface water features.

With the implementation of the mitigation measures outlined in Section 8.2—including adherence to sensitive timing windows, installation of tree protection and sediment controls, use of wildlife-friendly lighting, native re-vegetation, bat house installation, and compliance with applicable Species at Risk legislation—negative effects on natural heritage features and ecological functions are expected to be minor, localized, and manageable. Residual effects are not anticipated to result in measurable adverse impacts at the local or regional scale.

Natural Linkage Area mapping indicates that ecological connectivity in the area is primarily associated with natural cover southwest of the subject property, including mapped woodland and watercourse features. The proposed development does not encroach upon these features, and an appropriate vegetated buffer to the adjacent watercourse has been incorporated into the site design. As such, the linkage function for which the Natural Linkage Area has been designated will be preserved. Furthermore, linkage functions associated with surface water features do not typically extend across major road corridors such as County Road 10 due to physical and traffic-related barriers; therefore, the proposed development is not anticipated to disrupt connectivity with Natural Linkage Area mapped across County Road 10.

Provided the project proceeds in accordance with the development plans and the recommendations contained herein, the proposed development appears consistent with the relevant policies of the Provincial Planning Statement, County of Peterborough Official Plan, and Township of Cavan Monaghan Official Plan. Overall, the project is not expected to result in significant adverse effects on natural heritage features or their ecological functions and can be undertaken in an environmentally responsible manner.

8.2. Recommendations

8.2.1. Bat Habitat Creation

A 4-chambered bat house should be installed on the subject property for each tree with a diameter at breast height measuring greater than 25 cm removed from the FODM11 community. The bat houses should be strategically located on the subject property in connectivity with the adjacent treed communities and under the direction of a qualified biologist. Bat houses should be placed at a minimum height of 3 m and be facing south, southwest or southeast in relatively open and sunlit areas.

8.2.2. Native Plantings

Disturbed areas should be re-seeded and planted with native, non-invasive vegetation following construction, where feasible. The proponent should consult with the landscape professional supplying and/or planting the trees, shrubs, and groundcover to determine appropriate fertilizing, watering, and mulching schedules. Deciduous trees should be planted in the spring, following thaw, or in the fall during leaf-off until freeze-up. Conifers should be planted in the spring until approximately four weeks after deciduous trees have opened their leaves, or in the fall until freeze-up. Shrubs and groundcover can be planted in spring (e.g., April 15 to mid-June) and/or fall (e.g., September 1 to October 15). All conifers should be inspected for girdling roots prior to planting, and any stock with extensive girdling should not be used. Nursery stock trees should be planted as soon as possible after delivery.

In addition to these planting guidelines, the Township's tree replacement requirements apply where trees are removed or damaged as a result of development. Trees identified for protection that cannot be preserved due to development constraints may be removed using the Aggregate Inch Replacement method, whereby the total diameter removed is replaced through an equivalent sum of replacement tree diameters (e.g., one 30 cm dbh tree replaced with two 15 cm dbh trees or three 10 cm dbh trees). Replacement trees should be planted in proximity to their removal, with efforts made to re-vegetate the fish habitat buffer and match species where practical. Where on-site replacement is not feasible, the Township may identify an alternate location for placement of the required replacement trees.

To support implementation of these requirements, a Tree Inventory and Preservation Plan (TIPP) is recommended. The TIPP should quantify all trees proposed for removal or protection, identify those requiring compensation under the Aggregate Inch Replacement method, and illustrate the proposed locations for replacement plantings. As the project is currently at a preliminary stage, the TIPP should be completed during detailed design, when site grading, servicing, and final layout allow for accurate assessment of tree impacts and feasible placement of compensation plantings.

8.2.3. Perimeter Control

Tree preservation hoarding is recommended to protect the remaining treed communities. The fence should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity. The recommended location of the fence is depicted on Figure 3. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail. Tree preservation hoarding should meet municipal standards and specifications. In the absence of municipal standards and specifications, the following standards and specifications may be used:

- Orange high density polyethylene with 8.89 cm x 3.81 openings should be used for fencing material.
- Fence height should be a minimum of 1.2 m.
- Steel posts should be installed for support and spaced 2.43 m on center.
- Steel posts dimensions should be 5 cm x 1.82 m.
- Installation of tree preservation hoarding should not alter the existing grade unless otherwise indicated on the plans.
- Signage laminated in plastic should be affixed to the fencing, spaced every 15 m. Signage should read “KEEP OUT TREE PROTECTION AREA”.

A silt fence consisting of non-woven geotextile material wire looped to wooden/metal stakes installed at 2-m intervals for support should be erected prior to the onset of siteworks to protect aquatic features. The proposed location of silt fence has been depicted on Figure 3. The silt fence should remain in place for the duration of all construction activity. The silt fence should be buried into the ground a minimum 30 cm and compacted with native materials. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

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

Deleterious substances should never be deposited and/or enter aquatic features. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not occur within 30 m of aquatic features. Stockpiling of fill and/or construction material should not occur within 30 m of aquatic features.

8.2.5. Sensitive Timing Window

To protect breeding migratory birds including Eastern meadowlark, vegetation removal should not occur between April 1 and August 31 of any given year unless otherwise directed by a qualified biologist at the time of site works.

To protect roosting bats, tree and woody vegetation removal should not occur between March 15 and November 30 of any given year unless otherwise directed by a qualified biologist at the time of site works.

To protect breeding monarch, vegetation removal should not occur between June 1 to September 30 of any given year unless otherwise directed by a qualified biologist at the time of site works.

8.2.6. Wildlife Encounters

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

9.0 References

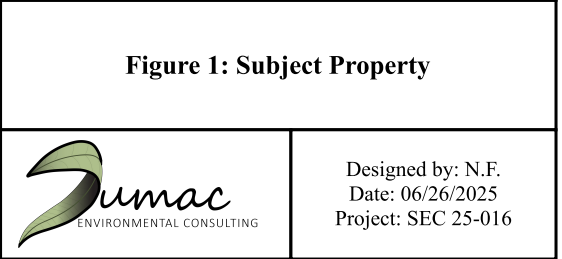
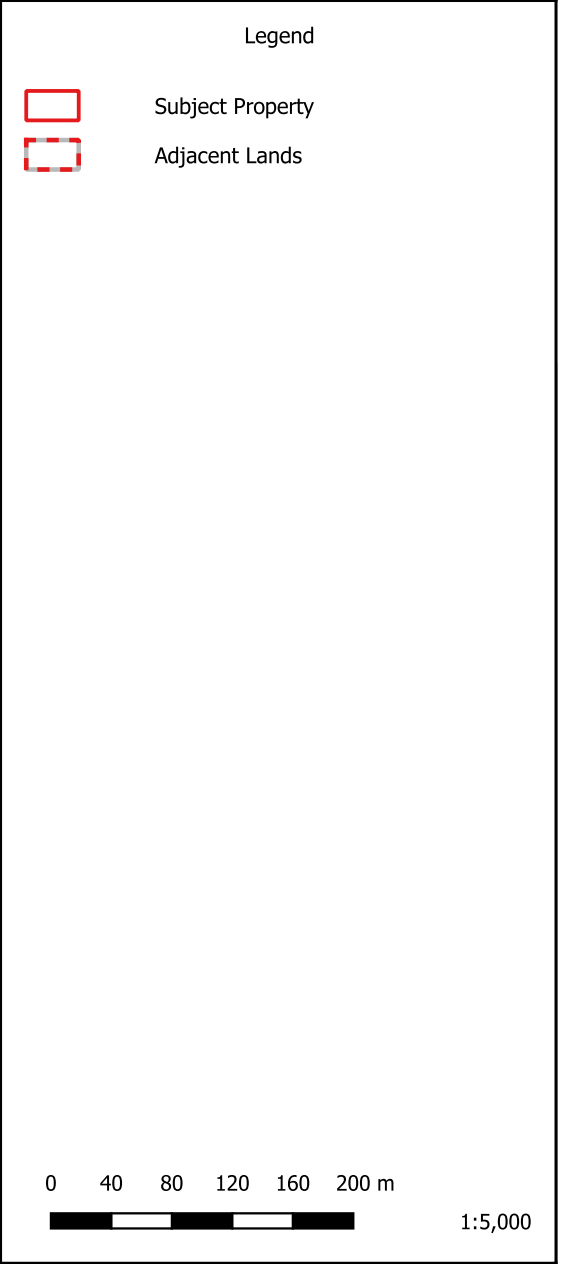
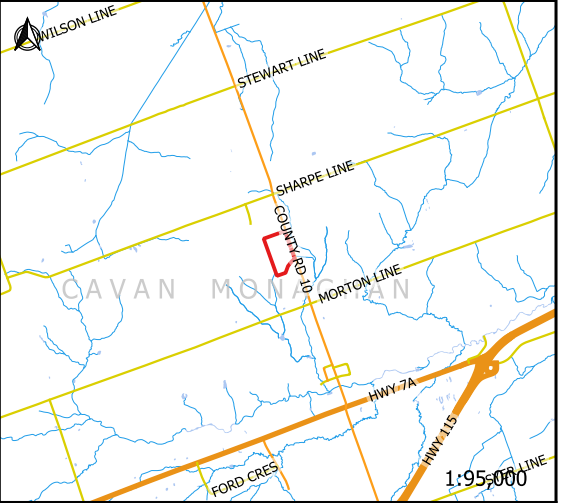
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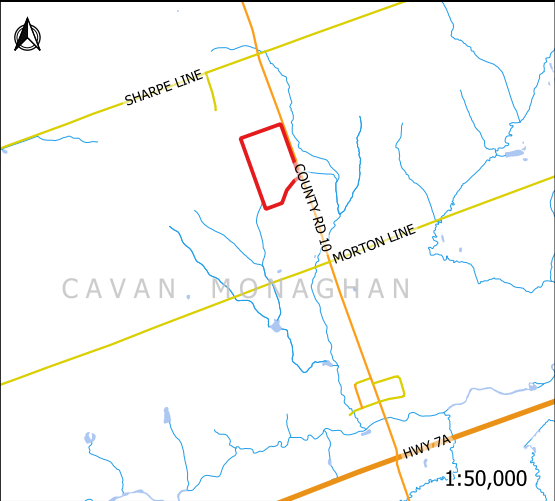
Limitations:

This report was prepared using the most current site plan provided to Sumac's office. The conclusion and recommendations provided herein may no longer be applicable should changes be made to the site plan following submission of this report. The assessment provided herein is valid at the time of inspection.

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- Legend
- Subject Property
 - Adjacent Lands
 - Grassland Bird Survey
 - Watercourse
 - Eastern Meadowlark Locations
 - ELC Vegetation Communities
- | | |
|--------|---|
| CGL | Green Lands |
| CUM1 | Dry - Fresh Mineral Cultural Meadow Ecosite |
| CUP3 | Coniferous Plantation |
| CUS1 | Dry - Fresh Mineral Cultural Savannah Ecosite |
| CUT1 | Dry - Fresh Mineral Cultural Thicket Ecosite |
| CUW1 | Dry-Fresh Mineral Cultural Woodland Ecosite |
| CVC | Commercial and Institutional |
| CVR_3 | Single Family Residential |
| CVR_4 | Rural Property |
| FOC | Coniferous Forest |
| FOD | Deciduous Forest |
| FODM11 | Naturalized Deciduous Hedge-row Ecosite |

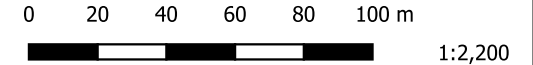


Figure 2: Existing Conditions



Designed by: T.A.
Date: 03/27/2026
Project: SEC 25-016

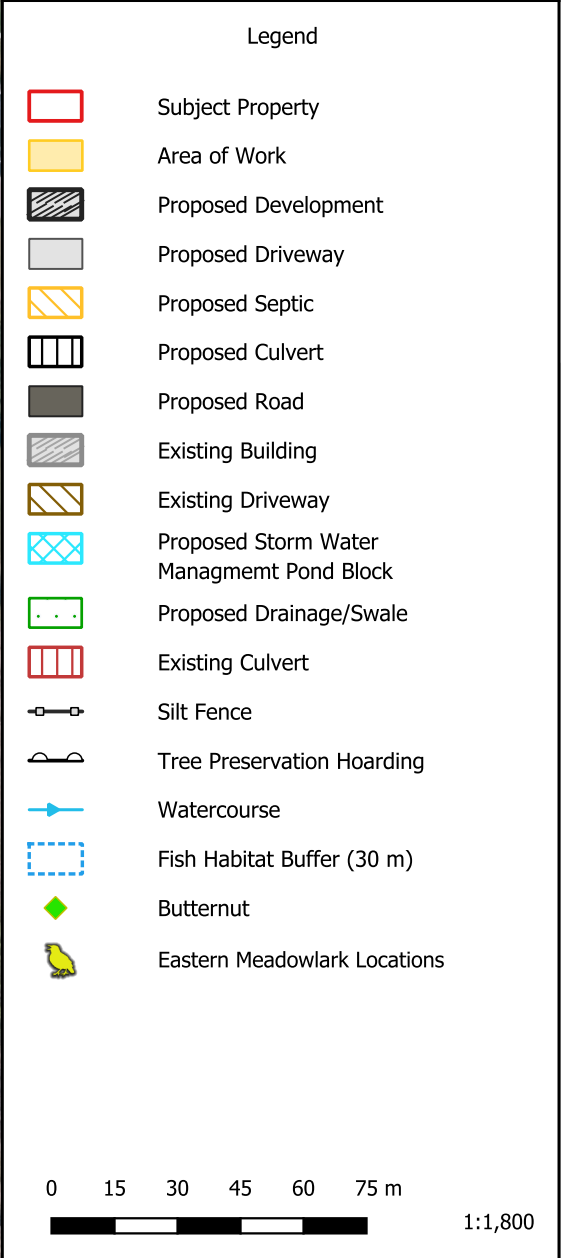
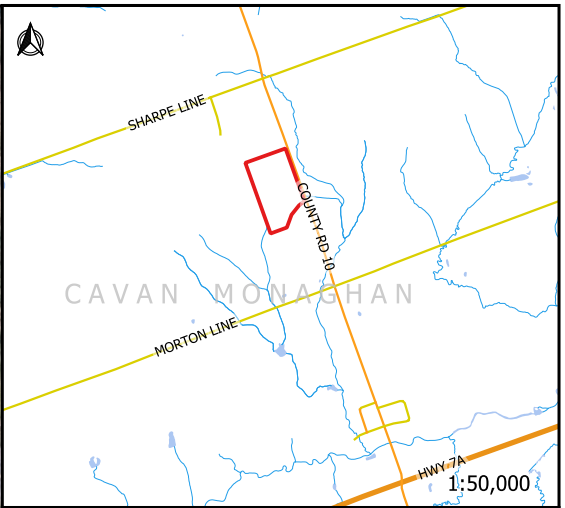


Figure 3: Proposed Development

Table 1: Vascular Plant Inventory

Scientific Name	Common Name	Vegetation Community ^A					S-Rank ^B	G-Rank ^C	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		CUM1	CUS1	CUW1	CVR_4	FODM11				Provincial ^D	Federal ^E		
<i>Acer negundo</i>	Manitoba Maple		✓	✓		✓	S5	G5	N				0
<i>Acer platanoides</i>	Norway Maple				✓		SNA	GNR	N			SE5	5
<i>Acer saccharum</i>	Sugar Maple			✓		✓	S5	G5	N				3
<i>Ambrosia artemisiifolia</i>	Common Ragweed	✓					S5	G5	N				3
<i>Asclepias syriaca</i>	Common Milkweed					✓	S5	G5	N				5
<i>Asparagus officinalis</i>	Garden Asparagus		✓				SNA	G5?	N			SE5	3
<i>Bromus inermis</i>	Smooth Brome	✓	✓		✓	✓	SNA	G5T5	N			SE5	5
<i>Capsella bursa-pastoris</i>	Common Shepherd's Purse	✓					SNA	GNR	N			SE5	3
<i>Carduus nutans</i>	Nodding Thistle	✓			✓		SNA	GNR	N			SE5	3
<i>Chenopodium album</i>	Common Lamb's-quarters	✓			✓		SNA	G5	N			SE5	3
<i>Circaea canadensis</i>	Broad-leaved Enchanter's Nightshade			✓			S5	G5	N				3
<i>Cirsium arvense</i>	Canada Thistle					✓	SNA	G5	N			SE5	3
<i>Clinopodium vulgare</i>	Wild Basil	✓					S5	G5	N				5
<i>Convolvulus arvensis</i>	Field Bindweed					✓	SNA	GNR	N			SE5	5
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood		✓	✓		✓	S5	G5	N				3
<i>Dactylis glomerata</i>	Orchard Grass	✓					SNA	GNR	N			SE5	3
<i>Daucus carota</i>	Wild Carrot					✓	SNA	GNR	N			SE5	5
<i>Dryopteris carthusiana</i>	Spinulose Wood Fern			✓			S5	G5	N				-3
<i>Echium vulgare</i>	Common Viper's Bugloss				✓		SNA	GNR	N			SE5	5
<i>Elaeagnus umbellata</i>	Autumn Olive		✓				SNA	GNR	N			SE3	3
<i>Equisetum arvense</i>	Field Horsetail	✓					S5	G5	N				0
<i>Erigeron annuus</i>	Annual Fleabane	✓			✓		S5	G5	N				3
<i>Fraxinus pennsylvanica</i>	Red Ash		✓	✓		✓	S4	G4	N				-3
<i>Galium mollugo</i>	Smooth Bedstraw		✓			✓	SNA	GNR	N			SE5	5
<i>Juglans cinerea</i>	Butternut			✓			S3	G3G4	Y	END	END		3
<i>Juglans nigra</i>	Black Walnut					✓	S4?	G5	N				3
<i>Juniperus virginiana</i>	Eastern Red Cedar		✓				S5	G5	N				3
<i>Lactuca serriola</i>	Prickly Lettuce	✓				✓	SNA	GNR	N			SE5	3
<i>Leucanthemum vulgare</i>	Oxeye Daisy	✓			✓		SNA	GNR	N			SE5	5
<i>Lolium perenne</i>	Perennial Ryegrass					✓	SNA	GNR	N			SE4	3
<i>Maianthemum racemosum</i>	Large False Solomon's Seal		✓	✓			S5	G5T5	N				3
<i>Malus pumila</i>	Common Apple		✓			✓	SNA	G5	N			SE4	5
<i>Matteuccia struthiopteris</i>	Ostrich Fern			✓			S5	G5	N				0
<i>Medicago lupulina</i>	Black Medick				✓	✓	SNA	GNR	N			SE5	3
<i>Medicago sativa</i>	Alfalfa	✓	✓				SNA	GNR	N			SE5	5
<i>Onoclea sensibilis</i>	Sensitive Fern			✓			S5	G5	N				-3
<i>Parthenocissus quinquefolia</i>	Virginia Creeper		✓	✓		✓	S4?	G5	N				3
<i>Phleum pratense</i>	Common Timothy	✓	✓		✓		SNA	GNR	N			SE5	3
<i>Pinus sylvestris</i>	Scots Pine		✓				SNA	GNR	N			SE5	3
<i>Plantago lanceolata</i>	English Plantain				✓	✓	SNA	G5	N			SE5	3
<i>Plantago major</i>	Common Plantain	✓					SNA	G5	N			SE5	3

Table 1: Vascular Plant Inventory

Scientific Name	Common Name	Vegetation Community ^A					S-Rank ^B	G-Rank ^C	Provincially Tracked	Species at Risk Status		Non-native Status	Coefficient of Wetness
		CUM1	CUS1	CUW1	CVR_4	FODM11				Provincial ^D	Federal ^E		
<i>Poa compressa</i>	Canada Bluegrass		✓				SNA	GNR	N			SE5	3
<i>Poa pratensis</i>	Kentucky Bluegrass				✓		S5	G5	P				3
<i>Populus tremuloides</i>	Trembling Aspen			✓			S5	G5	N				0
<i>Potentilla recta</i>	Sulphur Cinquefoil					✓	SNA	GNR	N			SE5	5
<i>Prunus serotina</i>	Black Cherry			✓		✓	S5	G5	N				3
<i>Prunus virginiana</i>	Chokecherry			✓			S5	G5	N				3
<i>Rhamnus cathartica</i>	European Buckthorn		✓	✓		✓	SNA	GNR	N			SE5	0
<i>Rhus typhina</i>	Staghorn Sumac			✓		✓	S5	G5	N				3
<i>Ribes cynosbati</i>	Eastern Prickly Gooseberry			✓			S5	G5	N				3
<i>Rubus idaeus</i>	Red Raspberry					✓	S5	G5	N				3
<i>Rubus occidentalis</i>	Black Raspberry		✓				S5	G5	N				5
<i>Rumex crispus</i>	Curled Dock					✓	SNA	GNR	N			SE5	0
<i>Sambucus racemosa</i>	Red Elderberry		✓				S5	G5	N				3
<i>Silene latifolia</i>	White Campion					✓	SNA	GNR	N			SE5	5
<i>Silene vulgaris</i>	Bladder Campion					✓	SNA	GNR	N			SE5	5
<i>Solidago canadensis</i>	Canada Goldenrod	✓	✓	✓	✓		S5	G5	N				3
<i>Sonchus arvensis</i>	Field Sow-thistle	✓					SNA	GNR	N			SE5	3
<i>Symphotrichum lanceolatum</i>	Panicled Aster		✓				S5	G5	P				-3
<i>Taraxacum officinale</i>	Common Dandelion	✓	✓		✓		SNA	G5	N			SE5	3
<i>Thlaspi arvense</i>	Field Pennycress	✓					SNA	GNR	N			SE5	5
<i>Tilia americana</i>	Basswood			✓		✓	S5	G5	N				3
<i>Toxicodendron radicans</i> var. <i>rydbergii</i>	Western Poison Ivy					✓	S5	G5	N				0
<i>Tragopogon dubius</i>	Yellow Goatsbeard				✓		SNA	GNR	N			SE5	5
<i>Trifolium pratense</i>	Red Clover	✓	✓				SNA	GNR	N			SE5	3
<i>Trifolium repens</i>	White Clover	✓			✓		SNA	GNR	N			SE5	3
<i>Ulmus americana</i>	White Elm					✓	S5	G4	N				-3
<i>Verbascum thapsus</i>	Common Mullein	✓					SNA	GNR	N			SE5	5
<i>Viburnum lentago</i>	Nannyberry					✓	S5	G5	N				0
<i>Viburnum opulus</i>	Cranberry Viburnum		✓				S5	G5	N				-3
<i>Vicia cracca</i>	Tufted Vetch					✓	SNA	GNR	N			SE5	5
<i>Vincetoxicum rossicum</i>	European Swallowwort		✓	✓		✓	SNA	GNR	N			SE5	5
<i>Vitis riparia</i>	Riverbank Grape		✓	✓		✓	S5	G5	N				0

^ARefer to Figure 2 for Ecological Land Classification descriptors.

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

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

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

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

Table 2: Bird Inventory

Scientific Name	Common Name	Point Count Station						Incidental	Location	Breeding ^A	S-Rank ^B	G-Rank ^C	Species at Risk Status	
		1			2								Provincial ^D	Federal ^E
		06-06-2025	06-18-2025	06-25-2025	06-06-2025	06-18-2025	06-25-2025							
<i>Agelaius phoeniceus</i>	Red-winged Blackbird					S ^F (1) ^G			On Property	Possible	S5	G5		
<i>Cardinalis cardinalis</i>	Northern Cardinal					S(1)			Adjacent Lands	Possible	S5	G5		
<i>Cathartes aura</i>	Turkey Vulture							✓	On Property	-	S5B,S3N	G5		
<i>Corvus corax</i>	Common Raven	S(1)							On Property	Possible	S5	G5		
<i>Cyanocitta cristata</i>	Blue Jay							✓	On Property	-	S5	G5		
<i>Dumetella carolinensis</i>	Gray Catbird			S(1)					On Property	Possible	S5B,S3N	G5		
<i>Geothlypis trichas</i>	Common Yellowthroat		S(1)			S(1)	S(1),T(1)		On Property	Probable	S5B,S3N	G5		
<i>Meleagris gallopavo</i>	Wild Turkey							✓	On Property	-	S5	G5		
<i>Melospiza melodia</i>	Song Sparrow	S(1)	S(1), T(1)	S(1), T(1)	S(1)	S(2)	T(1)		On Property	Probable	S5	G5		
<i>Passerculus sandwichensis</i>	Savannah Sparrow	S(1)			S(1)		S(1)		On Property	Possible	S5B,S3N	G5		
<i>Passerina cyanea</i>	Indigo Bunting	S(1)	S(2)	S(1)	S(2)	S(3)	T(1)		On Property	Probable	S5B	G5		
<i>Quiscalus quiscula</i>	Common Grackle							✓	On Property	-	S5	G5		
<i>Sayornis phoebe</i>	Eastern Phoebe							✓	On Property	-	S5B	G5		
<i>Setophaga coronata</i>	Yellow-rumped warbler				S(1)				On Property	Possible	S5B,S4N	G5		
<i>Setophaga pensylvanica</i>	Chestnut-sided Warbler					S(1)	T(1)		On Property	Probable	S5B	G5		
<i>Setophaga petechia</i>	Yellow Warbler	S(1)	S(1)						On Property	Possible	S5B	G5		
<i>Setophaga ruticilla</i>	American Redstart				S(1)				On Property	Possible	S5B	G5		
<i>Spinus tristis</i>	American Goldfinch			S ^F (1) ^G	H(1)	S(1)			On Property	Possible	S5	G5		
<i>Spizella passerina</i>	Chipping Sparrow					S(1)			On Property	Possible	S5B,S3N	G5		
<i>Spizella pusilla</i>	Field Sparrow	S(1)				S(2)			On Property	Possible	S4B,S3N	G5		
<i>Sturnella magna</i>	Eastern Meadowlark		S(1)			P(1), A(1)			On Property	Probable	S4B,S3N	G5	THR	THR
<i>Sturnus vulgaris</i>	European Starling					N(6)			On Property	Probable	SNA	G5		
<i>Toxostoma rufum</i>	Brown Thrasher	S(1)					S(1)		On Property	Possible	S4B	G5		
<i>Turdus migratorius</i>	American Robin				S(2)				On Property	Possible	S5	G5		
<i>Vermivora chrysoptera</i>	Golden-winged Warbler						S(1)		Adjacent Lands	Possible	S3B	G4	SC	THR
<i>Vireo olivaceus</i>	Red-eyed Vireo				S(1)				On Property	Possible	S5B	G5		
<i>Zenaida macroura</i>	Mourning Dove				S(1)				Adjacent Lands	Possible	S5	G5		

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

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

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

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

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

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

^GNumber of individuals observed

Table 3: Species at Risk Habitat Assessment

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Birds	Bank Swallow	<i>Riparia riparia</i>	Not Listed	Threatened	Absent. No suitable nesting sites for bank swallow identified in the subject property nor anticipated to occur in up to 500 m of the adjacent lands. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Barn Swallow	<i>Hirundo rustica</i>	Not Listed	Threatened	Absent. No barn swallow nests were observed on the existing structure on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Black Tern	<i>Chlidonias niger</i>	Endangered	Not Listed	Absent. No suitable wetland habitat for black tern identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>	Not Listed	Threatened	Absent. Bobolink was not observed on the subject property during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Canada Warbler	<i>Cardellina canadensis</i>	Not Listed	Threatened	Absent. No suitable forest for Canada warbler identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Cerulean Warbler	<i>Setophaga cerulea</i>	Not Listed	Endangered	Absent. No suitable forest for Cerulean warbler identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Chimney Swift	<i>Chaetura pelagica</i>	Not Listed	Threatened	Absent. No suitable nesting sites for chimney swift encountered on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Eastern Meadowlark	<i>Sturnella magna</i>	Not Listed	Threatened	Absent. Eastern meadowlark were observed during the dawn breeding bird survey with probable breeding evidence in the CUM1 community on the subject property. The observed locations of Eastern meadowlark have been illustrated for reference (Figure 3). Upon a species’ listing as threatened or endangered and critical habitat is defined by the recovery strategy (SARA s. 37) or action plan (SARA s. 47) for said species, its protection is governed by SARA s. 58, which prohibits destruction of any part of that habitat occurring on federal lands or for federally managed species (e.g. species protected by the MBCA). With consideration of the SARA's definition of critical habitat, it is our understanding that regulated habitat for Eastern meadowlark does not occur on the subject property as it is outside of 10 x 10 km grid as mapped in the proposed recovery strategy for the Eastern meadowlark in Canada (Environment and Climate Change Canada 2022). Though regulated habitat does not occur on the subject property SARA and the MBCA prohibit killing, harming and harassing of eastern meadowlark and the destruction, damage, removal or disturbance of nests.
Birds	Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Not Listed	Threatened	Absent. Despite the presence of open and forested areas on the subject property and adjacent lands, current site conditions appear overly vegetated and are unlikely to provide suitable Eastern Whip-poor-will habitat.
Birds	Eastern Wood-Pewee	<i>Contopus virens</i>	Not Listed	Special Concern	Absent. No suitable forest habitat for Eastern wood-pewee identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Not Listed	Threatened	Absent. Golden-winged Warbler was observed calling from adjacent lands during the dawn breeding bird survey. While suitable candidate habitat, including CUS1 ecosite, is present on adjacent lands, this habitat does not extend onto the subject property. As such, this species is considered absent from the subject property.
Birds	Grasshopper Sparrow	<i>Ammodramus savannarum pratensis</i>	Not Listed	Special Concern	Absent. Grasshopper sparrow was not observed on the subject property during the dawn breeding bird surveys, nor through incidental occurrence.

Table 3: Species at Risk Habitat Assessment

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Birds	Least Bittern	<i>Ixobrychus exilis</i>	Not Listed	Threatened	Absent. No suitable wetland habitat for least bittern identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Loggerhead Shrike	<i>Lanius ludovicianus</i>	Not Listed	Endangered	Absent. Loggerhead shrike was not observed on the subject property during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Olive-sided Flycatcher	<i>Contopus cooperi</i>	Not Listed	Special Concern	Absent. No suitable disturbed or treed habitat for olive-sided flycatcher identified on the subject property. Moreover, this species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Peregrine Falcon	<i>Falco peregrinus</i>	Not Listed	Not Listed	Absent. No suitable cliffs or ledges for peregrine falcon identified on the subject property nor anticipated to occur in close proximity to the subject property.
Birds	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Not Listed	Endangered	Absent. No suitable treed habitat with a high abundance of dead/dying trees for red-headed woodpecker identified on the subject property. Moreover, no candidate red-headed woodpecker cavities encountered during site investigations. This species was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Birds	Wood Thrush	<i>Hylocichla mustelina</i>	Not Listed	Threatened	Absent. Wood thrush was not observed during the dawn breeding bird surveys, nor through incidental occurrence.
Insects	Monarch	<i>Danaus plexippus</i>	Not Listed	Endangered	Candidate. Monarch breeding may occur in the FODM11 community where common milkweed is found. Monarch foraging may occur in the CUM1 and CUS1 communities where an abundance of favorable nectar sources is found.
Mammals	Eastern Red Bat	<i>Lasiurus borealis</i>	Endangered	Not Listed*	Candidate. The FODM11 community has the potential to function as suitable roosting habitat for Eastern red bat. Foraging habitat may include watercourse just southwest of the subject property and forest edge, should this species be present.
Mammals	Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Not Listed	Absent. No suitable features with the potential of functioning as roosting habitat for Eastern small-footed myotis encountered on the subject property.
Mammals	Hoary Bat	<i>Lasiurus cinereus</i>	Endangered	Not Listed	Candidate. The FODM11 community has the potential to function as roosting habitat for hoary bat. Foraging habitat may include watercourse just southwest of the subject property and forest edge, should this species be present.
Mammals	Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Candidate. The FODM11 community has the potential to function as roosting habitat for little brown myotis. Foraging habitat may include watercourse just southwest of the subject property and forest edge, should this species be present.
Mammals	Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Absent. Northern myotis is generally associated with old growth forests and relies on intact interior forest habitat with low edge-to-interior ratios. Given the age and lack of 'intact' interior habitat in and near the subject property, this species and its habitat are not anticipated.
Mammals	Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Endangered	Not Listed	Absent. Silver-haired bat are generally associated with forests containing upwards of 21 snags per hectare. Given the age and overall structure of the woodland feature that extends onto the subject property, this species and its habitat are not anticipated.
Mammals	Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Candidate. The FODM11 community has the potential to function as roosting habitat for tri-colored bat. Foraging habitat may include watercourse just southwest of the subject property and forest edge, should this species be present.
Reptiles	Northern Map Turtle	<i>Graptemys geographica</i>	Not Listed	Special Concern	Absent. No suitable aquatic habitat for Northern map turtle identified on the subject property.
Reptiles	Snapping Turtle	<i>Chelydra serpentina</i>	Not Listed	Special Concern	Absent. No suitable aquatic habitat for snapping turtle identified on the subject property.

Table 3: Species at Risk Habitat Assessment

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Vascular Plants	Black Ash	<i>Fraxinus nigra</i>	Endangered	Not Listed	Absent. No black ash were enocuntered on the subject property.
Vascular Plants	Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Confirmed. Three (3) butternut were identified on the subject property in the CUW1 community (Figure 3). A butternut health assessment was carried out on August 28, 2025 whereby all three (3) individuals were assessed as Category 1 (non-retainable).

^AClassification of species as they appear on O. Reg. 60/26 made under the *Species Conservation Act* (March, 2026).

^BClassification of species as they appear on Schedule 1 of the *Species at Risk Act* (February, 2026).

Wildlife Category	Wildlife Habitat	SWH Assessment
Seasonal Concentration Areas of Animals	Waterfowl Stopover and Staging Areas (Terrestrial) Rationale: Habitat important to migrating waterfowl.	Absent. Spring aerial imagery from 2017 and 2020 did not indicate any areas of sheet flooding on the subject property.
Seasonal Concentration Areas of Animals	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.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Seasonal Concentration Areas of Animals	Shorebird Migratory Stopover Area Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Absent. None of the appropriate ELC Ecosites were identified on the subject property or up to 100 m of the adjacent lands.
Seasonal Concentration Areas of Animals	Raptor Wintering Area Rationale: Sites used by multiple species, a high number of individuals and used annually are most significant.	Hawks/Owls: Absent. None of the listed species or nests/cavities of the listed species were encountered on the subject property. Data from LIO does not identify documented occurrences of the listed species in up to 300 m of the adjacent lands (assessed March 23, 2026). Bald Eagle: Absent. The subject property is not located on the shoreline of a prime bald eagle foraging site.
Seasonal Concentration Areas of Animals	Bat Hibernacula Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.	Absent. None of the appropriate ELC Ecosites were identified on the subject property or anticipated to occur up to 200 m of the adjacent lands.
Seasonal Concentration Areas of Animals	Bat Maternity Colonies Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Candidate. The FODM11 community has the potential of containing bat maternity roost sites and functioning as the SWH, Bat Maternity Colonies.
Seasonal Concentration Areas of Animals	Turtle Wintering Areas Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Absent. No suitable aquatic features for turtle overwintering identified on the subject property.
Seasonal Concentration Areas of Animals	Reptile Hibernaculum Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Absent. No rock features or similar features extending below the frost line with the potential of functioning as the SWH, Reptile Hibernaculum, were observed on the subject property.
Seasonal Concentration Areas of Animals	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.	Absent. No suitable banks or cliffs were observed on the subject property nor within 50 m of the adjacent lands.

Wildlife Category	Wildlife Habitat	SWH Assessment
Seasonal Concentration Areas of Animals	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.	Absent. None of the appropriate ELC Ecosites were identified on the subject property nor was this SWH mapped within 300 m of the subject property as per LIO (accessed March 24, 2026).
Seasonal Concentration Areas of Animals	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.	Absent. The subject property is not located on a rocky island or peninsula within a lake or large river.
Seasonal Concentration Areas of Animals	Migratory Butterfly Stopover Areas Rationale: Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Absent. The subject property is not located within 5 km of Lake Ontario.
Seasonal Concentration Areas of Animals	Landbird Migratory Stopover Areas Rationale: Sites with a high diversity of species as well as high numbers are most significant.	Absent. The subject property is not located within 5 km of Lake Ontario.
Seasonal Concentration Areas of Animals	Deer Yarding Areas Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.	Absent. According to data extracted from LIO (accessed March 24, 2026), no White-tailed Deer Yarding Areas have been mapped on the subject property.
Seasonal Concentration Areas of Animals	Deer Winter Congregation Areas Rationale: Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.	Absent. According to data extracted from LIO (accessed March 24, 2026), no deer winter congregation areas have been mapped on or near the subject property.
Rare Vegetation Communities	Cliffs and Talus Slopes Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	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.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.

Wildlife Category	Wildlife Habitat	SWH Assessment
Rare Vegetation Communities	Alvar Rationale: Alvars are extremely rare habitats in Ecoregion 6E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 6E are small and highly localized just north of the Paleozoic-Precambrian contact.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	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.	Absent. The treed communities that extend onto the subject property did not exhibit old growth forest characteristics to be considered for this SWH.
Rare Vegetation Communities	Savannah Rationale: Savannahs are extremely rare habitats in Ontario.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	Tallgrass Prairie Rationale: Tallgrass Prairies are extremely rare habitats in Ontario.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	Other Rare Vegetation Communities Rationale: Plant communities that often contain rare species which depend on the habitat for survival.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	Waterfowl Nesting Area Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	Bald Eagle and Osprey Nesting, Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Ecoregion 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Absent. No bald eagle or osprey nests were encountered on the subject property nor have they been documented within 800 m of the adjacent lands as per LIO (accessed March 24, 2026).
Specialized Habitats of Wildlife considered SWH	Woodland Raptor Nesting Habitat Rationale: Nests sites for these species are rarely identified; these area sensitive habitats are often used annually by these species.	Absent. No nests of the appropriate raptor species were encountered on the subject property nor have they been documented within 400 m of the adjacent lands as per LIO (accessed March 24, 2026).
Specialized Habitats of Wildlife considered SWH	Turtle Nesting Areas Rationale: These habitats are rare and when identified will often be the only breeding site for local populations of turtles.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.

Wildlife Category	Wildlife Habitat	SWH Assessment
Specialized Habitats of Wildlife considered SWH	Seeps and Springs Rationale: Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Absent. No seepage areas or springs were observed on the subject property.
Specialized Habitats of Wildlife considered SWH	Amphibian Breeding Habitat (Woodland). Rationale: These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations.	Absent. No suitable wetland habitat was identified within the forested communities on the subject property.
Specialized Habitats of Wildlife considered SWH	Amphibian Breeding Habitat (Wetlands) Rationale: Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Absent. None of the appropriate ELC Ecosites were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	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.	Absent. The subject property did not contain three or more of the appropriate species with probable or confirmed breeding evidence to be considered as the SWH, Woodland Area-Sensitive Bird Breeding Habitat.
Habitats of Species of Conservation Concern considered SWH	Marsh Breeding Bird Habitat Rationale: Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	Absent. None of the appropriate ELC Ecosites were identified on the subject property. No green heron or green heron nests were observed on the subject property.
Habitats of Species of Conservation Concern considered SWH	Open Country Bird Breeding Habitat 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.	Absent. The required species abundance to be considered as this SWH was not met through the observations made during the dawn breeding bird surveys, and therefore would not support the SWH, Open Country Bird Breeding Habitat.
Habitats of Species of Conservation Concern considered SWH	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.	Absent. Golden-winged Warbler was observed during the dawn breeding bird survey calling from adjacent lands, within the CUS1 community. Field investigations did not identify probable or confirmed breeding evidence of the appropriate species on the subject property.
Habitats of Species of Conservation Concern considered SWH	Terrestrial Crayfish Rationale: Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Absent. No terrestrial crayfish chimneys observed on the subject property.
Habitats of Species of Conservation Concern considered SWH	Special Concern and Rare Wildlife Species Rationale: These species are quite rare or have experienced significant population declines in Ontario.	Confirmed. Provincially rare plant species were encountered on the subject property including, butternut (Table 1). No provincially rare bird species were observed on the subject property during the dawn breeding bird surveys (Table 2). Habitat for special concern species was not identified on the subject property (Table 3).

Wildlife Category	Wildlife Habitat	SWH Assessment
Animal Movement Corridors	Amphibian Movement Corridors Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Absent. No candidate amphibian corridor associated with a waterway identified on the subject property.
Animal Movement Corridors	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.	Absent. No candidate deer movement corridor identified on the subject property.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E	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.	Absent. The subject property is not located in EcoDistrict 6E-14.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E	6E-17 Rationale: Sharp-tailed grouse only occur on Manitoulin Island in Ecoregion 6E, Leks are an important habitat to maintain their population.	Absent. The subject property is not located in EcoDistrict 6E-17.

List of Appendices

- Appendix A: ORCA Regulated Lands Mapping
- Appendix B: Terms of Reference Consultation
- Appendix C: Natural Heritage Areas Mapping
- Appendix D: Butternut Health Assessment Report
- Appendix E: Woodland Analysis

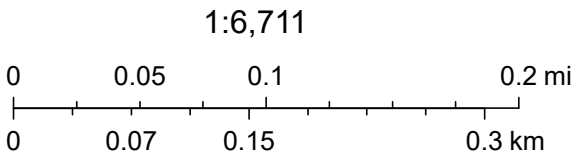
Appendix A: ORCA Regulated Lands Mapping

ORCA



12/12/2025, 2:12:15 PM

 Regulated Area



Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Appendix B: Terms of Reference Consultation



Cassandra Fligg <cfligg@sumacenvironmental.ca>

1812 County Road 10 - EIS Terms of Reference

Holden, Keziah <KHolden@ptbocounty.ca>

Thu, Feb 5, 2026 at 9:47 AM

To: Cassandra Fligg <cfligg@sumacenvironmental.ca>, "kellis@cavanmonaghan.net" <kellis@cavanmonaghan.net>

Cc: "Hejazi, Arya" <AHejazi@ptbocounty.ca>

Hi Cassandra,

Our peer review consultant (Stantec) has indicated that the Terms of Reference provided below is sufficient for this project.

Stantec indicated that it is the responsibility of the proponent/consultant that if, during the background research and/or initial field visits, additional natural heritage features, SWH, etc., are identified, that the features will receive the correct investigation/surveys to delineate the features, assess/survey the features and determine the potential impacts. Examples may be if there are wetlands, watercourses, old barns or potential exposed bedrock/hibernacula or SWH subsequently identified on the property, then appropriate surveys/impacts to amphibians, bats, snakes and/or fish/fish habitat should be considered to ensure compliance with the PPS, OP, etc. Please keep this in mind and address appropriately in the EIS if additional features are found to be present on site.

Let us know if you require anything further.

Sincerely,

Keziah Holden, B.A., MCIP, RPP
General Manager of Planning, Peterborough County

Phone: (705) 743-0380 ext. 2402

From: Cassandra Fligg <cfligg@sumacenvironmental.ca>

Sent: Monday, February 2, 2026 4:51 PM

To: kellis@cavanmonaghan.net <kellis@cavanmonaghan.net>; Holden, Keziah <kholden@ptbocounty.ca>

Subject: 1812 County Road 10 - EIS Terms of Reference

Good afternoon,

Sumac Environmental Consulting (Sumac) has been retained to complete an Environmental Impact Statement (EIS) at 1812 County Road 10 in the Township of Cavan-Monaghan, County of Peterborough. It is our understanding that an EIS has been requested by the Township and County in response to a development application that supports the construction of a residential subdivision.

An EIS will be completed to determine the potential impacts, direct and indirect, of a proposed development on natural heritage features that occur on or near (i.e., up to 120 m) the subject property. The EIS will conclude with an assessment of policy conformity and if applicable, recommendations whether the proposal should proceed or proceed subject to conditions (e.g., design modifications, mitigation measures).

Sumac anticipates the following tasks to be required for the EIS:

- Complete a background review of documented occurrences of Species at Risk (SAR) in the local area. This includes a search of publicly available resources such as the Natural Heritage Information Centre, Ontario Breeding Bird Atlas, Ontario Butterfly Atlas, Ontario Reptile and Amphibian Atlas, E-bird and iNaturalist.
- Complete the following field studies on the subject property:

1. Classify vegetation communities in general accordance with protocol of the Ecological Land Classification of Southern Ontario (Lee et al., 1998) in spring of 2025. ELC descriptions will include the size of the community, species, soils, etc.
 2. Complete a vascular plant inventory with particular regard for SAR plants known to occur in the local area (e.g., butternut, black ash) in spring of 2025.
 3. Where suitable open habitat exists, three (3) dawn breeding bird surveys carried out in general accordance with the Draft Survey Protocol for Eastern Meadowlark (*Sturnella magna*) in Ontario (MNR, 2014). Surveys will be begin at or after sunrise, and up to 4 hours after sunrise between May 21 to July 3. Surveys will not be completed during events of precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale).
 4. Where all other habitat exists, two (2) dawn breeding bird surveys will be carried out in general accordance with the Ontario Breeding Bird Atlas: Guide For Participants (OBBA, 2021) document. Surveys will be completed within the first five (5) hours after dawn between May 24 and July 10. The first survey will be completed on or before June 15. The second survey will be completed on or after June 15. Surveys will not be completed during events of precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale).
 5. Record incidental observations of wildlife, wildlife signs (e.g., scat, tracks, remains of food, claw marks on trees or shrubs, trails or corridors, stunted vegetation, stick nests, turned stones) and habitat opportunities.
- Prepare an EIS report that includes the following:
 1. A review of natural heritage policies and regulations applicable to the proposed development from documents such as the Official Plan for the Township of Cavan Monaghan, County of Peterborough Official Plan (office consolidation 2023), Peterborough County Official Plan (draft 2023), Migratory Birds Convention Act, Provincial Planning Statement and Endangered Species Act.
 2. A description of the form and function of natural heritage feature(s) identified on the subject property and up to 120 m of the adjacent lands.
 3. A Species at Risk Habitat Assessment.
 4. A Significant Wildlife Habitat Assessment.
 5. An impact assessment that identifies potential impacts to natural heritage feature(s) resulting from the proposed development.
 6. Mapping that depicts natural heritage feature(s), buffer areas and the proposed development.
 7. Conclusion and recommendations (e.g., design considerations and mitigation measures).

At this time, I ask that the Township and County to please provide review for the proposed terms of reference for the EIS as outlined above.

Kind regards,

Cassandra Fligg, M.Sc.
Environmental Consultant

Sumac Environmental Consulting
244 Barrie Street, Thornton ON, L0L 2N0
Office: (249) 880-4676 Ext. 102
Mobile: (705) 627-7754
www.sumacenvironmental.ca

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Appendix C: Natural Heritage Areas Mapping

Legend

-  Assessment Parcel
- ANSI**
-  Earth Science Provincially Significant/sciences de la terre d'importance provinciale
-  Earth Science Regionally Significant/sciences de la terre d'importance régionale
-  Life Science Provincially Significant/sciences de la vie d'importance provinciale
-  Life Science Regionally Significant/sciences de la vie d'importance régionale



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.

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

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Appendix D: Butternut Health Assessment Report

Instructions to Butternut Health Experts (BHEs):

Please enter the 6-character BHE Report number: [SAL003](#) _____

BHE Report numbering format:

BHE Report numbers are to be assigned by the BHE using the first 3 letters of BHE's last name, followed by BHE's own 3-digit report numbering system. If the BHE's last name has fewer than 3 letters, use the full last name and numbers for the remaining characters.

Cover letter to client:

Insert your cover letter to your client here and include the below list of enclosures.

Dear Mr. Cameron,

Thank you for retaining Sumac Environmental Consulting (SUMAC) to complete a Butternut Health Expert's Report at 1812 County Road 10 in the Township of Cavan-Monaghan for a proposed development. Sumac staff, Michaela Sallows, screened the subject property on August 28, 2025 whereby three (3) butternuts were identified. All of the Identified butternuts were assessed as category 1 (non-retainable).

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

Sumac Environmental Consulting

Cassandra Fligg, M.Sc.
Environmental Consultant

Enclosures:

1. Information from the Ministry of the Environment, Conservation and Parks about Butternut and the *Endangered Species Act, 2007*
2. Butternut Health Expert's Report, including the completed Butternut Data Collection Form

Species at Risk Branch
40 St. Clair Avenue West
14th Floor
Toronto ON M4V 1M2

Direction des espèces en péril
40, avenue St. Clair Ouest
14^e étage
Toronto ON M4V 1M2

Information for the Property Owner (or person(s) who requested the enclosed Butternut Health Expert's Report):

The enclosed Butternut Health Expert's Report (BHE Report) documents the results of the Butternut health assessment that was conducted by the Butternut Health Expert (BHE) identified in the top section of the report. If there are other Butternut trees (of any size or age) at the site that may be impacted by a proposed activity that are not identified in the enclosed BHE Report, they too must be assessed by a BHE before commencing any actions that may impact those Butternut trees or their habitat.

Butternut (*Juglans cinerea*) is listed as an endangered species in Schedule 2 of Ontario Regulation (O. Reg.) 230/08 "the Species at Risk in Ontario List". As an endangered species, the *Endangered Species Act, 2007* (ESA) prohibits adversely impacting Butternut and its habitat. A permit or agreement under the ESA is required before engaging in an activity that is otherwise prohibited under the ESA. The activity may be eligible for the Butternut conditional exemption in Part V of O. Reg. 830/21, provided the requirements of the regulation are met.

If the proposed activity is eligible for the conditional exemption in Part V of O. Reg. 830/21, the next step is to submit the BHE Report and the Butternut Data Collection Form enclosed in this package to the Ministry of the Environment, Conservation and Parks (MECP).

If the enclosed BHE Report does not identify which Butternut tree(s) are proposed to be killed, harmed or taken and the reasons for doing so (e.g., if "unknown" is indicated in Table 1) or if the information in the last two columns of Table 1 has changed since the date this BHE Report was produced, **do not edit the BHE Report to update this information**. Instead, the report must be submitted together with a cover letter that identifies which Butternut tree(s) are proposed to be killed, harmed or taken (by referencing the tree identification numbers) when you submit the BHE Report to MECP.

The BHE Report must be submitted to MECP at least 30 days before registering an activity in respect of the Butternut conditional exemption. MECP may need to examine the Butternut trees subject to the report during this 30-day period. **Adversely impacting Butternut trees during this 30-day period or before registration is completed is prohibited by the ESA**. Further, the conditional exemption for Butternut does not apply unless the requirements of Part V of O. Reg. 830/21 are being followed.

If the proposed activity is eligible for the Butternut conditional exemption, you may register the proposed activity using the “**Notice of Butternut Impact**” form after the 30-day period has elapsed.

If the proposed activity is not eligible for a regulatory exemption, please contact MECP to determine whether the proposed activity would require a permit or agreement under the ESA in order to proceed.

Please retain this information and a copy of the BHE Report for your records, along with any other documentation you may receive from MECP should an examination of the trees occur.

This information should not be relied upon to determine legal obligations. To determine your legal obligations, consult the *Endangered Species Act, 2007* and the relevant regulations made thereunder. These may be found at www.ontario.ca/laws. If legal advice is required, consult a legal professional. In the event of an error on this template or a conflict between this template and any applicable law, the law prevails.

If you have any questions, please contact MECP at SAROntario@ontario.ca.

Butternut Health Expert's Report (BHE Report)

BHE Report Number: [SAL003](#)

Butternut Health Expert Contact Information

Name of Butternut Health Expert

Last Name

[Sallows](#)

First Name

[Michaela](#)

Mailing Address

Unit Number

Street Number

[48](#)

Street Name

[Redfern](#)

PO Box

City/Town

[Barrie](#)

Province

[Ontario](#)

Postal Code

[L4N 9G3](#)

Telephone Number

[249-880-4676](#)

Email Address

sumacenvironmental@gmail.com

Summary of qualifications as a Butternut Health Expert

a) expertise in relation to butternut

[Studied butternut, butternut hybrid, Japanese walnut, Persian walnut and black walnut identification traits and characteristics. Successfully identified many tree species common to central Ontario. Attended multiple butternut health assessments performed by a certified butternut health assessor, Nathan Fligg.](#)

b) expertise, education, training and experience necessary to assess the health of butternut trees

[See above comments.](#)

Property Owner Contact Information

Name of Property Owner (or representative)

Last Name

[Cameron](#)

First Name

[Ian](#)

Mailing Address

Unit Number

Street Number

[560](#)

Street Name

[Romaine](#)

PO Box

Lot Number

Concession

Township

Rural Route

City/Town

[Peterborough](#)

Province

[Ontario](#)

Postal Code

[K9J 2E3](#)

Telephone Number

[705-749-6710](#)

Email Address

Site Location

Unit Number

Street Number

[1812](#)

Street Name

[County Road 10](#)

PO Box

Lot Number

Concession

Township

[Cavan](#)

Rural Route

City/Town

[County of Peterborough](#)

Province

[Ontario](#)

Postal Code

[L0A 1C0](#)

Additional Site Location Information

[UTM Coordinates of property: 17T 701356.46 m E 4899239.10 m N](#)

Date(s) of Butternut health assessment

Start Date (yyyy/mm/dd) 2025/08/28

End Date (yyyy/mm/dd) 2025/08/28

Date BHE Report prepared (yyyy/mm/dd) 2025/09/10

Map datum used: ☒ NAD83 ☐ WGS84

Total number of trees assessed in this BHE Report 3

The assessed trees were numbered on site using white paint and flagging tape

The numbers at the site correspond to the tree identification numbers referenced in this report.

This BHE Report includes the following tables:

- Table 1: Butternut trees assessed by the BHE
- Table 2: Trees determined by the BHE to be Butternut hybrids
- Table 3: Summary of Butternut health assessment results

Table 1: Butternut trees assessed by the BHE

Tree ID #	UTM coordinates	Accuracy (+/-)	Category ¹ (1, 2 or 3)	Tree stem diameter ² (cm)	Is tree stem shorter than 1.37 m? (Yes/No)	Cultivated? (Yes/No)	Proposed to be: (killed, harmed, taken, or unknown ³)	If tree is proposed to be killed, harmed or taken, indicate reason tree is to be killed, harmed or taken, if known
1	17T 4899089 m N 701301 m E	5 m	1	9	Yes	No	killed	site development
2	17T 4898860 m N 701385 m E	5 m	1	3	No	No	killed	site development
3	17T 4898836 m N 701439 m E	5 m	1	5	No	No	killed	site development

¹ Details regarding the extent to which the tree is affected by Butternut Canker is presented in the Butternut Data Collection Form that accompanies this BHE Report.

² Diameter of the tree stem rounded to nearest cm, measured in accordance with the Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the *Endangered Species Act, 2007*

³ In this column, “unknown” indicates that at the time of assessment and reporting, there are no proposals to kill, harm or take this tree that are known to the BHE.

Table 2: Trees determined by the BHE to be Butternut hybrids

Tree ID #	UTM coordinates	Method used (genetic testing or field identification)	Additional Comments on Method Used
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Tree ID #	UTM coordinates	Method used (genetic testing or field identification)	Additional Comments on Method Used

Table 3: Summary of Butternut health assessment results

Result	Total number of trees in this category	Information for persons planning activities that may impact Butternut
Category 1	3	- Category 1 Butternut tree — the Butternut tree is affected by Butternut Canker to such an advanced degree that retaining the tree would not support the protection or recovery of Butternut trees in the area in which the tree is located. - If the proposed activity will kill, harm or take one or more Butternut trees of any category (including Category 1), the BHE Report must be submitted to MECP at SARontario@ontario.ca.
Category 2	0	- Category 2 Butternut tree — the Butternut tree is not affected by Butternut Canker or the Butternut tree is affected by Butternut Canker but the degree to which it is affected is not as advanced as a Category 1 Butternut tree and retaining the tree could support the protection or recovery of Butternut trees in the area in which the tree is located. - Activities that may kill, harm or take up to a maximum of fifteen (15) Category 2 trees may be eligible for the conditional exemption in Part V of Ontario Regulation 830/21. Refer to the regulation for eligibility conditions and requirements that must be fulfilled. - If the proposed activity will kill, harm or take more than fifteen (15) Category 2 trees, contact MECP for information on how to seek an ESA authorization (e.g., a permit).
Category 3	0	- Category 3 Butternut tree — the Butternut tree may be useful in determining sources of resistance to Butternut Canker. - Activities that may kill, harm or take up to a maximum of five (5) Category 3 trees may be eligible for the conditional exemption in Part V of Ontario Regulation 830/21. Refer to the regulation for eligibility conditions and requirements that must be fulfilled. - If the proposed activity will kill, harm or take more than five (5) Category 3 trees, contact MECP for information on how to seek an ESA authorization (e.g., a permit).

Result	Total number of trees in this category	Information for persons planning activities that may impact Butternut
Cultivated	0	An activity that will kill, harm or take a cultivated Butternut tree that was required to be planted to fulfil a condition of an ESA permit or agreement, or a conditional exemption, is not eligible for the exemption for cultivated trees that is provided by subsection 25 (5) of O. Reg. 830/21. Refer to the regulation for eligibility conditions.
Hybrid	0	Hybrid Butternut trees are not protected under the ESA but impacts to these trees may be subject to local municipal by-laws and other legislation.

Additional Information on Cultivated Tree Determination

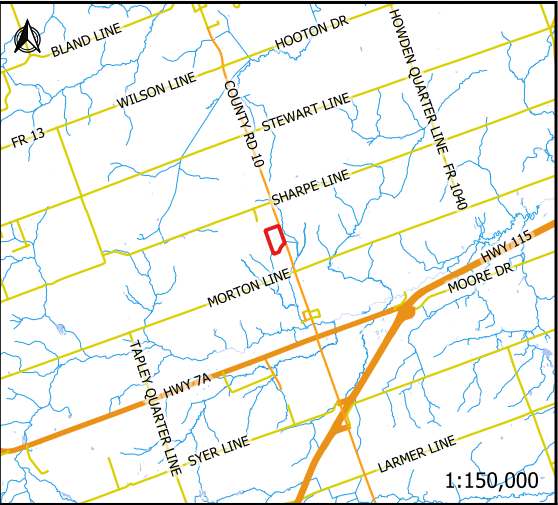
Please note:

- A BHE Report that is submitted to MECP must include the completed Butternut Data Collection Form. As appropriate, please also ensure additional relevant documentation to support the assessment (e.g., completed Data Sheets for Field Identification of Butternut Hybrids, evidence that the Butternut was cultivated) and all relevant maps and photographs are provided.
- During the 30-day period that follows the submission of this BHE Report to MECP, no Butternut trees (of any category) may be killed, harmed or taken. MECP may need to examine the Butternut trees subject to the report during this 30-day period.

Butternut Health Expert's Comments

Note to BHEs: use this space to provide general comments.

Appendix E: Woodland Analysis



Legend

- Subject Property
- Adjacent Lands
- Watercourse

Woodland:

- Patch A (0.3 ha)
- Patch B (0.5 ha)
- Patch C (1.27 ha)
- Patch D (15.25 ha)
- Patch E (4.09 ha)
- Patch F (14.49 ha)
- Patch G (0.34 ha)

0 20 40 60 80 100 m

1:2,200

Woodland Analysis

 Sumac
ENVIRONMENTAL CONSULTING

Designed by: N.F.
Date: 03/24/2026
Project: SEC 25-016