

Version 1.3

50 & 60 Harborn Road in the City of Mississauga

May 2026

Environmental Impact Study



Prepared For:
W.E. Oughtred and Associates Inc.

Prepared By:
Sumac Environmental Consulting



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May 27, 2026

SEC 25-028

W.E. Oughtred and Associates Inc.
2140 Winston Park Drive, Suite 26
Oakville, Ontario
L6H 5V5

Re: Environmental Impact Study at 50 and 60 Harborn Road in the City of Mississauga

To whom it may concern,

Thank you for retaining Sumac Environmental Consulting to prepare an Environmental Impact Study at 50 and 60 Harborn Road in the City of Mississauga. The following report identifies the form and function of natural heritage on the subject properties 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 W.E. Oughtred and Associates Inc. 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 cursive script, appearing to read "C. Fligg".

Cassandra Fligg, M.Sc.
Environmental Consultant

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

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

Report Summary

Sumac Environmental Consulting has prepared an Environmental Impact Study at 50 and 60 Harborn Road in the City of Mississauga. It is our understanding that this report has been requested by the City of Mississauga in response to a development application that supports the construction of a residential subdivision on the subject properties. 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. HETS, hazardous lands, SWH and fish habitat were identified on or near the subject properties. 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:

- **Bird-Friendly Design:** Use warm, low-lumen lighting and apply bird-strike deterrents (e.g., exterior screens, bird-friendly glass, or exterior-applied patterns meeting 5 cm × 5 cm spacing and visibility criteria) on rear-facing windows to reduce collision risk.
- **Land Dedication:** Land dedication to the City should include all identified hazardous lands (e.g., watercourse, floodplain, valleyland) and associated buffer areas, as illustrated on Figure 3.
- **Ecological Offsetting Plan:** Prepare an Ecological Offsetting Plan following CVC (2020) guidelines, including 114 replacement trees, incorporation of Section 8.2.3 planting densities, a field-fit exercise, relocation of downed woody debris, and installation of two four-chambered bat houses with a three-year monitoring program.
- **Native Plantings:** Re-vegetate all disturbed areas with non-invasive native species using recommended densities (1,200 trees/ha; 4,350 tall shrubs/ha; 2,750 low shrubs/ha; 25 kg/ha groundcover) to the extent feasible and follow appropriate seasonal planting windows and nursery stock handling practices.
- **Perimeter Control:** Install and maintain tree protection hoarding and silt fencing prior to site works, ensuring both remain intact and functional for the duration of construction.
- **Preventing Entry of Deleterious Substances:** Implement measures to prevent contaminants from entering aquatic features, including maintaining clean machinery, restricting fueling/servicing and stockpiling within 30 m of water, and keeping spill kits and response plans on-site.
- **Sensitive Timing Windows:** Avoid vegetation clearing between April 5–August 28 (migratory birds) and woody vegetation removal between March 15–November 30 (roosting bats), unless cleared by a qualified biologist.

- Wildlife Encounters: Allow wildlife to exit the site unassisted via safe routes, avoid handling unless an animal is injured or in immediate danger, and document all encounters with appropriate details.

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) was retained to prepare an Environmental Impact Study (EIS) at 50 and 60 Harborn Road in the City of Mississauga (hereinafter referred to as the 'subject properties'). It is our understanding that an EIS has been requested by the City of Mississauga in response to a development application that supports the construction of a residential subdivision on the subject properties.

Together, the subject properties comprise approximately 0.32 ha (Figure 1). 50 Harborn Road is approximately 0.17 ha in size and consists of a single-family dwelling and amenity space (e.g., paved driveway, maintained lawn, accessory sheds, pool and landscaping). 60 Harborn Road is approximately 0.15 ha in size and consists of a single-family dwelling and amenity space (e.g., paved driveway, maintained lawn, accessory sheds and landscaping). The subject properties are located within the Cooksville neighbourhood of the City of Mississauga. Schedule 10 to the City of Mississauga Official Plan (office consolidation 2024) illustrates the 'Residential Low Density 1', 'Greenlands', and 'Natural Hazards' land use designation as occurring on the subject properties. Schedule 3 to the City of Mississauga Official Plan (office consolidation 2025) illustrates 'Residential Woodlands' on the subject properties. The surrounding area is predominantly composed of residential properties interspersed between tree cover.

2.0 Planning Context

2.1. Federal

2.1.1. Migratory Birds Convention Act

The purpose of the *Migratory Birds Convention Act* 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.

2.1.2. 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.

2.2. 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* (MBCA) 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.

2.2.3. Provincial Planning Statement

As per Section 4.1.5 of the Provincial Planning Statement, development and site alteration shall not be permitted in significant woodlands in ecoregion 7E, significant valleylands in ecoregion 7E, 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 Credit Valley Conservation (CVC) have been mapped on the subject properties (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. Credit Valley Conservation Watershed Planning and Regulation Policies

As per Section 4.6.1 c) of the CVC Planning and Regulations Policies (draft 2025), where a one zone concept is applied, CVC will not permit development or development activities within a floodway, regardless of whether the area of inundation contains high points of land not subject to flooding, except in accordance with this document and, in particular, the policies in Chapters 4, 5 and 6.

As per Section 4.9.1 b) of the CVC Planning and Regulations Policies (draft 2025), CVC will not permit development, development activities and site alteration within hazardous land associated with unstable soil or unstable bedrock, except in accordance with this document and, in particular, the policies in Chapters 5 and 6.

As per Section 5.2.1 a) of the CVC Planning and Regulations Policies (draft 2025), CVC will not support the creation of new lots through plan of subdivision or consent that extend into, or fragment ownership of, the natural system, specifically *wetlands*, *hazardous land* and *erosion*

access allowances, in consideration of the long-term management concerns related to risks to life and property.

As per Section 5.2.1 b) of the CVC Planning and Regulations Policies (draft 2025), in addition to policy 5.1.2a), CVC will recommend that lots created through plan of subdivision or consent are set back a minimum of whichever is the greatest of the following *buffers*:

- i. 10 metres from the limit of *flood hazards*;
- ii. 10 metres from the limit of *erosion hazards*;
- iii. 10 metres from the limit of *dynamic beach hazard*;
- iv. 0 metres from the limit of *unstable soils and bedrock*
- v. 10 metres from the limit of *wetlands*
- vi. 30 metres from the limit of *provincially significant wetlands*

As per Section 5.2.2 of the CVC Planning and Regulations Policies (draft 2025), CVC will not support the creation of new lots unless it is confirmed that suitable building envelopes exist within all parcels (existing and retained), consistent with relevant CVC and municipal requirements. This includes sufficient space within the suitable building envelope to incorporate necessary infrastructure including, but not limited to, private septic systems, wells, driveways and parking areas.

As per Section 6.1 b) of the CVC Planning and Regulations Policies (draft 2025), CVC may permit interference with a wetland or watercourse, or permit development activities within a regulated area if, in the opinion of CVC, the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock, and the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property.

As per Section 6.2.1 j) of the CVC Planning and Regulations Policies (draft 2025), with respect to general criteria for development, development activities will not be permitted unless:

- i. It has been demonstrated, to the satisfaction of CVC, that any interference with the hydrophytic vegetation or hydrologic function of the wetland is acceptable. A technical report to assess impacts may be required if the submitted plans do not demonstrate the following:
 - a. disturbances to natural vegetation communities contributing to the hydrologic function of the wetland are avoided;
 - b. the overall existing drainage patterns for the lot will be maintained;
 - c. disturbed area and soil compaction is minimized;

- d. development is located above the high water table; and
- e. all septic systems are located a minimum of 15 metres from the wetland and a minimum of 0.9 metres above the water table.

2.3. Municipal

2.3.1. City of Mississauga

As per the City of Mississauga Official Plan (office consolidation 2025), the following land use designations and/or features have been mapped on the subject properties:

- Urban Green System (Schedule 1A);
- Neighbourhood - Cooksville (Schedule 1B);
- Residential Woodlands (Schedule 3);
- Residential Low Density 1 (Schedule 10);
- Greenlands (Schedule 10);
- Natural Hazards (Schedule 10).

As per Section 6.3 of the Mississauga Official Plan (office consolidation 2025), the Green System in Mississauga is composed of:

- Natural Heritage System;
- The Urban Forest;
- Natural Hazard Lands; and
- Parks and Open Spaces.

As per Section 6.3.9 of the City of Mississauga Official Plan (office consolidation 2025), Mississauga's Natural Heritage System is composed of the following:

- Significant Natural Areas;
- Natural Green Spaces;
- Special Management Areas;
- Residential Woodlands; and
- Linkages.

Moreover, although the significant valleylands and the valley and watercourses are included and discussed under Natural Hazard Lands, they are also Significant Natural Areas and form part of the city's Natural Heritage System.

As per Section 6.3.12 of the City of Mississauga Official Plan (office consolidation 2025), Significant Natural Areas are areas that meet one or more of the following criteria:

- a) provincially or regional significant life science areas of natural and scientific interest (ANSI);
- b) environmentally sensitive or significant areas;
- c) habitat of threatened species or endangered species;
- d) fish habitat;
- e) significant wildlife habitat;
- f) significant woodlands;
- g) significant wetlands; and
- h) Significant Valleylands.

As per Section 6.3.14 of the City of Mississauga Official Plan (office consolidation 2025), Natural Green Spaces are areas that meet one or more of the following criteria:

- a) woodlands greater than 0.5 hectares that do not fulfill the requirements of a significant woodland;
- b) wetlands that do not fulfill the requirements of a significant wetland;
- c) watercourses that do not fulfill the requirements of a significant valleyland, even if they are predominantly engineered; and
- d) all natural areas greater than 0.5 hectares that have vegetation that is uncommon in the city.

As per Section 6.3.19 of the City of Mississauga Official Plan (office consolidation 2025), development proposals and site alteration for lands within a Residential Woodland will have regard for how existing tree canopy and understorey are protected, enhanced, restored and expanded. A site development plan may be required to demonstrate how the following, among other matters, have been addressed:

- a. existing topography and drainage patterns;
- b. maintenance of a high proportion of permeable ground cover to facilitate ground water recharge;
- c. habitat for tolerant canopy birds (both in migration and for breeding);
- d. habitat for urban wildlife; and
- e. connections to other elements within the Green System.

As per Section 6.3.27 of the City of Mississauga Official Plan (office consolidation 2025), development and site alteration as permitted in accordance with the Greenlands designation within or adjacent to a Significant Natural Area will not be permitted unless all reasonable alternatives

have been considered and any negative impacts minimized. Any negative impact that cannot be avoided will be mitigated through restoration and enhancement to the greatest extent possible.

As per Section 6.3.28 of the City of Mississauga Official Plan (office consolidation 2025), notwithstanding the policies of this Plan, development and site alteration will not be permitted in the following areas:

- a. provincially significant wetlands or Provincially significant coastal wetlands which are or meet the criteria of a Significant Natural Area;
- b. habitat of endangered species and threatened species, except in accordance with Provincial and Federal requirements;
- c. fish habitat, except in accordance with Provincial and Federal requirements; and
- d. Core Areas of the Greenlands System as defined in the Region of Peel Official Plan, except in accordance with Regional requirements.

As per Section 6.3.31 of the Mississauga Official Plan (office consolidation 2025), setbacks and buffers adjacent to fish habitat areas will be determined by an Environmental Impact Study, which will conform to approved fisheries management plans.

As per Section 6.3.32 of the Mississauga Official Plan (office consolidation 2025), development and site alteration will not be permitted within or adjacent to Natural Green Spaces, Linkages and Special Management Areas unless it has been demonstrated that there will be no negative impact to the natural heritage features and their ecological functions and opportunities for their protection, restoration, enhancement and expansion have been identified.

As per Section 6.3.40 of the City of Mississauga Official Plan (office consolidation 2025), Natural Heritage System policies are applicable to the Urban Forest. This includes policies regarding Significant Natural Areas, Natural Green Spaces, Linkages, Special Management Areas and Residential Woodlands and all related policies.

As per Section 6.3 of the City of Mississauga Official Plan (office consolidation 2025), Natural Hazard Lands and buffers will be designated Greenlands and zoned to protect life and property. Uses will be limited to conservation, flood and/or erosion control, essential infrastructure and passive recreation.

As per Section 6.3.47 of the City of Mississauga Official Plan (office consolidation 2025), development and site alteration will not be permitted within erosion hazards associated with valleyland and watercourse features. In addition, development and site alteration must provide

appropriate buffer to erosion hazards, as established to the satisfaction of the City and appropriate conservation authority.

As per Section 18.17.1 of the Mississauga Official Plan (office consolidation 2025), as a condition of development approval, natural hazard lands may be placed in public ownership for their long-term protection.

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 properties and adjacent lands (i.e., up to 120 m):

- Atlas of the Mammals of Ontario (Dobbyn, J., 1994);
- Atlas Square No. 17PJ1224 and 17PJ1225 the Natural Heritage Information Centre;
- Atlas Square No. 17PJ12 of the Ontario Butterfly Atlas;
- Atlas Square No. 17PJ12 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 17TPJ12 of the Ontario Breeding Bird Atlas;
- City of Mississauga Official Plan (office consolidation 2025);
- Department of Fisheries and Oceans Canada Aquatic Species at Risk Map;
- eBird;
- iNaturalist;
- Land Information Ontario; and
- Ministry of Natural Resources (MNR) Aquatic Resources Area Mapping.

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

- Areas of Natural and Scientific Interest (ANSI);
- Fish habitat;
- Habitat of endangered and threatened species;
- Significant wildlife habitat;
- Woodlands;
- Wetlands; and,
- Valleylands.

4.0 Characterizing the Natural Environment: Approach and Methodology

The terms of reference was submitted to the City of Mississauga and the CVC for review and comment to better define the purpose and structure of the EIS (Appendix B).

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed for the vegetation communities that occur on or extend onto the subject properties on June 3, 2025.

4.1.2. Vegetation Communities

Orthographic imagery of the subject properties and adjacent lands was used for the basis of Ecological Land Classification (ELC) and further refined through a ground-truthing exercise on June 3, 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 properties were screened for evidence of surface water features (e.g., watercourse, seeps, spring, vernal pool, inland lakes) on June 3, 2025. 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 properties. An ELC exercise was completed to identify potential habitat opportunities for the listed species at risk. A SAR Habitat Assessment was completed to identify candidate, confirmed and absent SAR habitat on the subject properties.

4.4.1. Birds

Two (2) dawn breeding bird surveys were completed in general accordance with dawn breeding bird survey protocol (OBBA, 2021). Surveys were completed within the first five (5) hours after dawn between May 24 and July 10. The first survey was completed on or before June 15. The second survey was completed on or after June 15. Surveys were not completed during events of

precipitation, fog or high winds (i.e., up to 3 on the Beaufort wind scale). One (1) point count station was used to carry out the surveys (Figure 2). The survey conditions were as follows:

Date	Surveyor(s)	Time	Temp.	Cloud Cover	Wind	Precip.
June 4, 2025	Tyler Ambeau	0544-0550	20°C	30%	B0	Nil.
July 3, 2024	Nathan Fligg	0743-0748	21°C	50%	B2	Nil.

4.4.2. Mammals

The subject properties were screened on April 24, 2025 for features, structures and/or treed areas with the potential of functioning as suitable roosting habitat for Eastern red bat, Eastern small-footed myotis, hoary bat, little brown myotis, Northern myotis, silver-haired bat and tri-colored bat.

Passive acoustic monitoring for bats was completed for ten (10) consecutive evenings in June of 2025 at two (2) monitoring stations using the Song Meter Mini Bat by Wildlife Acoustics to ensure maximum coverage of the subject properties (Figure 2). Data was initially analyzed using Kaleidoscope Pro Analysis Software. Individual wavelengths and frequency of each recording was further scrutinized by Sumac staff to appropriately evaluate species presence.

4.5. Hazardous Lands

The limit of hazardous lands on the subject properties was delineated using the Surveyor's Real Property Report (SRPR), based on the linework identified as the 'Staked Flood Plain Limit'.

4.6. Valleyland

The limit of valleylands on the subject properties was delineated using the SRPR, based on the linework identified as the 'LTSSL'. Valleyland was assessed for significance with consideration of Section 6.3.12 h. of the City of Mississauga Official Plan (office consolidation 2025).

4.7. Wetland

The subject properties were screened for candidate wetland feature(s) by a qualified wetland evaluator on June 3, 2025. If present, limits were approximated 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.

4.8. 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 on the subject properties were noted during Sumac's field investigations.

The potential for Significant Wildlife Habitat (SWH) on the subject properties was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNR, 2015) and the Peel-Caledon Significant Woodland and Significant Wildlife Habitat Study (2009).

4.9. Woodland

The extent of the woodland patch extending onto the subject properties was delineated using the flagged points shown on the SRPR, established during the natural feature staking completed in consultation with the City and CVC in October 2024. Where staking data was not available, the woodland limit was interpolated using a combination of field observations and aerial imagery review. The definition of 'Residential Woodland' as described in Section 6.3.17 of the Mississauga Official Plan (office consolidation 2025) was considered when reviewing the identified woodland patch.

Woodland significance was considered in accordance with Section 6.3.12 of the Mississauga Official Plan (office consolidation 2025), whereby significant woodlands are those that meet one or more of the following criteria:

- woodlands, excluding cultural savannahs, greater than or equal to four hectares.
- woodlands, excluding cultural woodlands and cultural savannahs, greater than or equal to two hectares and less than four hectares.
- any woodland greater than 0.5 hectares that:
 - o supports old growth trees (greater than or equal to 100 years old);
 - o supports a significant linkage function as determined through an Environmental Impact Study approved by the City in consultation with the appropriate conservation authority;
 - o is located within 100 metres of another Significant Natural Area supporting a significant ecological relationship between the two features;
 - o is located within 30 metres of a watercourse or significant wetland; or
 - o supports significant species or communities.

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

A list of vascular plant species has been provided for reference (Table 1).

5.1.2. Vegetation Communities

The subject properties contained two (2) distinct vegetation communities (Figure 2):

1. CVR_3 Single Family Residential: Approximately 2,804 m² of the subject properties consisted of residential land use. This area contained single-family dwellings and associated amenity features, including paved driveways, accessory sheds, wooden board fencing, and a pool. The remaining portion of this community was characterized by maintained lawn areas and hedgerows, primarily composed of uniform rows of Eastern white cedar. Additional vegetation included young to mid-aged landscape trees and shrubs (e.g., Scots pine, heartnut, white mulberry, English yew, common lilac, etc.), occurring in localized patches throughout the open space.
2. FOD2-4 Dry – Fresh Oak – Hardwood Deciduous Forest Type: Approximately 401 m² of a 2,175 m² patch of oak hardwood forest occurred at 60 Harborn Road. This community exhibited a semi-open canopy dominated by mature Northern red oak. The semi-open sub-canopy layer consisted primarily of Manitoba maple, with sugar maple, black cherry, and Northern red oak also present. The sparse shrub layer included chokecherry and European buckthorn, with occurrences of alternate-leaved dogwood and Eastern hop-hornbeam. The ground layer was moderately vegetated and dominated by European lily-of-the-valley, with garlic mustard, bracken fern, and zigzag goldenrod also present.

5.2. Area of Natural and Scientific Interest

The nearest mapped ANSI (Life Science), Credit River Coastal Marsh, is located approximately 1 km southwest of the subject properties (Appendix C). No further analysis required.

5.3. Fish Habitat

No fish habitat was encountered on the subject properties during field investigations.

A watercourse, Mary Fix Creek, occurs southwest of the subject properties in adjacent lands as identified through aerial imagery (Figure 3). Records from the MNR Aquatic Resource Area database indicate a warm thermal regime and presence of a variety of fish species (e.g., brown bullhead, creek chub, goldfish). The identified watercourse likely functions as fish habitat.

5.4. Habitat of Endangered and Threatened Species

No endangered or threatened plant species were encountered on the subject properties (Table 1).

One (1) threatened bird species, chimney swift, was observed with possible breeding evidence during the dawn breeding bird surveys (Table 2). No other threatened or endangered bird species were observed during the dawn breeding bird surveys nor through incidental occurrence.

Two (2) endangered bat species, hoary bat and silver-haired bat, were detected through acoustic monitoring at both stations.

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

5.4.1. Birds

Chimney Swift: Chimney swift was observed in the CVR_3 community on the subject properties during the dawn breeding bird survey with possible breeding evidence. No nesting/roosting sites identified on the subject properties. Chimney swift are likely utilizing the natural cover above watercourse as foraging habitat.

5.4.2. Mammals

Hoary Bat: Hoary bat was detected through acoustic monitoring at both monitoring stations. Potential roosting habitat within the subject area is most likely associated with the mid-aged and mature deciduous trees characteristic of the FOD2-4 community. Although the two mid-aged heartnut trees located near the driveway entrances exhibit suitable foliage-roosting attributes for hoary bat, this portion of the property is more likely to function as a foraging area. Elevated light levels and traffic-related noise from the adjacent roadway would reasonably be expected to discourage roosting behaviour in this location. Foraging habitat likely includes the water feature and forest edge.

Silver-haired Bat: Silver-haired bat was detected through acoustic monitoring at both monitoring stations. Candidate roosting sites likely include the mature deciduous trees exhibiting snag features that comprise the FOD2-4 community. Foraging habitat likely includes the water feature and forest edge.

5.5. Hazardous Lands

Floodplain has been mapped for reference (Figure 3).

5.6. Valleyland

The limit of valleyland, top of slope, has been mapped for reference (Figure 3). Mary Fix Creek converges with Kenollie Creek prior to discharging to the Credit River. Owing to its hydrological connectivity to a primary watercourse that ultimately drains to Lake Ontario, Mary Fix Creek would be expected to meet the criteria for designation as a Significant Valleyland.

5.7. Wetland

No wetland was encountered on or near the subject properties. No further analysis required.

5.8. Wildlife Habitat

- Big brown bat (*Eptesicus fuscus*);
- 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 SWH as occurring on the subject properties (Table 4a-b).

5.8.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: The FOD2-4 community identified on the subject properties may contain maternity roost sites and as such, has the potential to function as the SWH, Bat Maternity Colonies.

5.8.2. Habitats of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: A regionally rare vascular plant species, white spruce, was encountered on the subject properties in the CVR_3 community (Table 1). A provincially rare vascular plant species, trumpet creeper, was encountered on the subject properties in the CVR_3 community (Table 1). No provincially rare bird species were observed during the dawn breeding bird surveys nor through incidental occurrence (Table 2). Habitat of special concern species is not anticipated to occur on the subject properties (Table 3).

Trumpet Creeper: Trumpet creeper (*Campsis radicans*) was recorded on the subject properties during botanical surveys. Although provincially rare in Ontario—historically considered by Soper (1956) to be “probably indigenous only in Essex County at the extreme western end of Lake Erie,” with most southern Ontario occurrences arising as

escapes from cultivation (Bertin 1982a, 1982b)—the individuals observed on the subject properties are consistent with horticultural plantings rather than naturally occurring, significant populations. No further analysis required.

White Spruce: Regionally rare plant species, white spruce, was observed on the subject properties in the CVR_3 community. This species is considered regionally rare within the Region of Peel due to its limited natural distribution in southern Ontario. The occurrences likely consist of planted or ornamental specimens rather than naturally occurring, significant populations. No further analysis required.

5.9. Woodland

A woodland patch extends onto the subject properties, associated with the FOD2-4 community, measuring approximately 0.21 ha in size. Said woodland patch does not meet the minimum size criteria to be considered as Significant Woodland. The treed canopy at the front of the subject property is generally patchy in distribution and comprised of young to mid-aged species, including heartwood and cedar rows. As such, Residential Woodland has not been identified on the subject properties. No further analysis required.

6.0 Project Description

The proponent wishes to submit a development application that supports the construction of a residential subdivision on the subject properties. 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 proposed development will disturb up to 2,916 m² and 244 m² of the CVR_3 and FOD2-4 communities, respectively. The Arborist Report and Tree Preservation Plan, as prepared by Welwyn Consulting, indicates that a total of 100 trees will be removed as a result of the proposed development, two (2) from the FOD2-4 community and 98 from the CVR_3 community. 114 replacement trees are required to offset for tree removal (Section 8.2.3). The proponent is encouraged to re-vegetate all disturbed areas remaining post-development with non-invasive native trees, shrubs and/or groundcover (Section 8.2.4). Bird-friendly design is recommended due to proximity of the proposed development to natural cover (Section 8.2.1).

7.2. Fish Habitat

The proposed development is not located in the identified watercourse and as such, no direct impacts to fish habitat are anticipated. With consideration of thermal regime, a 20 m buffer to the identified watercourse is recommended to protect fish habitat. The proposed development

encroaches the prescribed buffer area in the amount of 114 m² and is located 13 m to the identified watercourse at its closest point. The proponent is encouraged to install plantings in the portion of fish habitat buffer that occurs between the proposed development and feature to create a stronger and more robust ecological buffer (Section 8.2.3). Site specific measures to avoid the deposition of sediments and contaminants during construction activities are recommended (Section 8.2.5 and Section 8.2.6).

7.3. Habitat of Endangered and Threatened Species

7.3.1. Birds

Chimney Swift: No roosting or nesting habitat for Chimney Swift is anticipated to be disturbed as part of the proposed development. The natural cover associated with the watercourse will be largely retained and is expected to be enhanced through post-development restoration measures. As a result, no significant impacts to candidate foraging habitat for Chimney Swift are anticipated.

7.3.2. Mammals

Hoary Bat and Silver-haired Bat: Although tree removal is required to facilitate the proposed development, only a small (i.e., <0.01%) portion of available roosting habitat for hoary bat and silver-haired bat will be removed to facilitate the proposed development. This amount of removal is not anticipated to significantly impair or eliminate the remaining available roosting habitat for hoary bat and silver-haired bat that likely exists across the greater landscape. To protect roosting hoary bat and silver-haired bat, tree clearing should not occur during the active bat season (Section 8.2.7).

7.4. Hazardous Lands

The proposed building envelope should not be located in the identified floodplain. In accordance with CVC policies, the proposed development should maintain a 10 m setback from the identified floodplain. The proposed development is not located in the identified setback (Figure 3).

7.5. Valleyland

The proposed building envelope should not be located in Significant Valleyland. In accordance with CVC policies, the proposed development should maintain a 10 m setback from the top of slope. The proposed development is not located in the identified setback (Figure 3).

7.6. Wildlife

The subject properties have the potential to provide habitat to a variety of wildlife. To protect breeding migratory birds, vegetation clearing should not occur between April 5 and August 28 of any given year unless otherwise directed by a biologist at the time of site works (Section 8.2.7).

To protect roosting bats, tree clearing should not occur between March 15 and November 30 of any given year unless otherwise directed by a biologist at the time of site works (Section 8.2.7). Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes (Section 8.2.8). Bird-friendly design is recommended given the proximity of the proposed addition to a natural area (Section 8.2.1).

7.6.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: Although some tree removal is required in the FOD2-4 community to facilitate the proposed development, the scale of removal is proportionally small—only two (2) trees are proposed for removal within this community—and is not expected to result in any significant impact to local bat habitat. Suitable roosting habitat remains widely available within the surrounding woodland and broader landscape. While no measurable adverse effects are anticipated, it is recommended that two (2) four-chambered bat houses be installed on the property to provide supplemental roosting opportunities and offset the minor loss of potential habitat (Section 8.2.3). A sensitive timing window to protect roosting bats is also recommended (Section 8.2.7).

8.0 Conclusion and Recommendations

8.1. Conclusion

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

8.2. Recommendations

8.2.1. Bird-Friendly Design

We recommend the use of warm-colored and low lumen lighting in the design of the proposed dwellings and backyard amenity space to limit light spill and pollution. Bird-strike deterrents (e.g., exterior screens, solar shades, shutters, bird-friendly glass) should be used on all windows on the rear face of the proposed dwellings or patterns can be applied that follow these rules:

- the pattern must be applied across the entire glass surface;
- there are no spaces greater than 5 cm between each component of the pattern (both horizontally and vertically);
- the pattern is applied to the outside surface of the window;
- each component of the pattern is at least 5 mm wide; and

- the colour of the pattern contrasts well with the reflected vegetation, and is easily seen.

8.2.2. Land Dedication

In accordance with the Mississauga Official Plan, which identifies significant valleylands, watercourses, and associated natural hazard lands as components of the City's Natural Heritage System, and consistent with Section 18.17.1 stating that natural hazard lands may be placed into public ownership as a condition of development approval, it is recommended that the City secure all identified hazardous lands through land dedication.

The recommended dedication area includes the delineated floodplain, valleyland, watercourse corridor, and their associated minimum buffer areas, as illustrated on Figure 3 of this EIS. Dedication of these lands will support long-term protection, ecological function, and appropriate management of the Natural Heritage System.

Based on the current development concept shown on Figure 3, the proposed lot layout can accommodate this dedication boundary while also providing an additional 6-metre access allowance adjacent to the dedicated lands. All proposed structures are situated at least 6 metres from the recommended dedication line, demonstrating that the development can proceed without encroachment into the hazard lands or their buffers while still enabling municipal access for inspection, maintenance, and stewardship.

8.2.3. Ecological Offsetting Plan

An Ecological Offsetting Plan should be prepared to offset the negative impacts to CVC-regulated lands including watercourse and up to 30 m, valleyland and up to 15 m, and floodplain and up to 15 m. The purpose of the Ecological Offsetting Plan is to achieve a measurable ecological net gain to Significant Valleyland and fish habitat through targeted restoration, enhancement, and long-term stewardship measures. The Ecosystem Offsetting Guidelines (CVC, 2020) should be used as the primary framework for developing the plan within the CVC-regulated lands. Outside of the CVC-regulated lands guidance for calculating replacement trees should adhere to the City of Mississauga's Tree Preservation and Protection Standards (The Urban Tree Management Group 2019) as described in the associated Arborist Report.

The Offsetting Plan should be informed by the tree removals from CVC-regulated lands identified in the Arborist Report prepared by Welwyn Consulting. Based on the DBH classes and offsetting ratios outlined in Table 3 of the Ecosystem Offsetting Guidelines (CVC, 2020), a total of 13 replacement trees are required. These values should be used as the basis for determining the scale of restoration plantings within the offsetting area (i.e., undeveloped and previously disturbed portions of the subject properties).

DBH Range (cm)	Count	Offsetting Ratio	Offset Required
> 5 – 10	0	1:1	0
10.1 – 20	1	1:3	3
20.1 – 30	1	1:10	10
30.1 – 40	0	1:15	0
40.1 – 50	0	1:20	0
50.1 – 60	0	1:30	0
60.1 – 70	0	1:40	0
70.1 +	0	1:50	0
Total			13

Based on the DBH classes and offsetting ratios outlined the Public Tree Replacement table of the City of Mississauga's Tree Preservation and Protection Standards (The Urban Tree Management Group 2019), a total of 101 replacement trees are required. These values should be used as the basis for determining the scale of restoration plantings within the offsetting area (i.e., undeveloped and previously disturbed portions of the subject properties).

DBH Range (cm)	Count	Offsetting Ratio	Offset Required
6-15	9	1:1	9
16-30	32	1:2	64
31-45	3	1:3	9
46-60	1	1:4	4
61-75	0	1:5	0
76-90	0	1:6	30
91-105	1	1:7	7
106-120	1	1:8	8
>120	0	1:9	0
Total			101

The Ecological Offsetting Plan should incorporate the planting densities, species composition, and restoration design guidance provided in Section 8.2.4 below to the extent feasible. These densities should guide the layout, spacing, and species selection for all offsetting plantings to ensure that the restored area supports long-term ecological function and aligns with the target community structure.

A field-fit exercise will likely be required to confirm the final planting layout, verify micro-site conditions, identify suitable planting zones, and refine the restoration design. This field-fit assessment should be completed by a qualified biologist and used to finalize the spatial arrangement of plantings, habitat features, and enhancement structures.

The Offsetting Plan should also include the replication or replacement of key habitat features observed within the disturbance area, including:

- **Downed debris:** We recommend that all downed debris (i.e., fallen trees, excluding stumps and snags) of native species with a diameter measuring greater than 7 cm be relocated to the remaining natural cover area in an effort of maintaining site biomass.
- **Bat habitat:** To offset the minor loss of potential roosting habitat within the FOD2-4 community, the plan should include the installation of two (2) four-chambered bat houses. These structures should be placed in locations that maintain connectivity with the woodland feature. Final siting should be determined during installation under the guidance of a qualified biologist. If installed on existing trees, care must be taken to avoid damage. Bat houses should be mounted at a height of 4–6 m, oriented south, southeast, or southwest, and placed in open, sunlit areas. Annual visual inspections should occur between November 1 and March 31 for a minimum of three years, with monitoring reports provided to the City at the end of the monitoring cycle. While a three-year monitoring period is recommended, the structures are intended to function as long-term habitat features and should receive ongoing maintenance.

8.2.4. Native Plantings

The proponent is encouraged to re-vegetate all disturbed areas remaining post-development with non-invasive native trees, shrubs and/or groundcover. We recommend the following planting densities, consistent with the Ecosystem Offsetting Guidelines (CVC, 2020), to the extent feasible:

- Trees: 1,200/ha
- Tall Shrubs: 4,350/ha
- Low Shrubs: 2,750/ha
- Groundcover: 25 kg/ha

The proponent should consult with the associated landscape professional supplying and/or planting the trees, shrubs and groundcover to discuss the appropriate fertilizing, watering and/or mulching schedule. 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 four weeks after deciduous trees have opened their leaves, or in the fall until freeze-up. Shrubs and ground cover 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 before planting. Conifers that have extensive girdling should not be used. Nursery stock trees should be planted as soon as possible after delivery.

8.2.5. Perimeter Control

Tree preservation hoarding should be erected prior to the onset of siteworks and must remain in place for the duration of all construction activity. The timing of hoarding installation and the limits of the work area illustrated on Figure 3 are dependent upon the removal of the two existing sheds located in the southernmost corner of the subject property. We recommend diligent monitoring of said fence throughout the entirety of the development to ensure the integrity of the fence does not fail.

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.

8.2.6. 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. If stockpiling of fill and/or construction material is required on the subject properties for the proposed development, it should be contained within the area of work following erection of the silt fence.

8.2.7. Sensitive Timing Window

To protect breeding migratory birds, vegetation clearing should not occur between April 5 and August 28 of any given year unless otherwise directed by a biologist at the time of site works.

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

8.2.8. Wildlife Encounters

Any wildlife encountered during 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

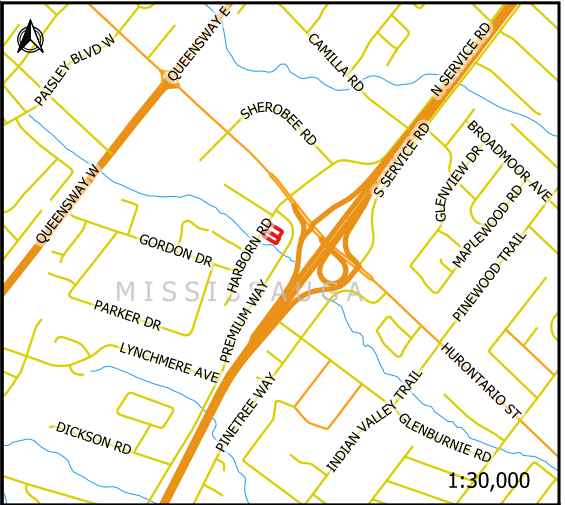
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R.S.O. 1990, c. P.13. Planning Act.
S.C. 1994, c.22. Migratory Birds Convention Act.
S.O. 1997, c. 41. Fish and Wildlife Conservation Act.
S.O. 2025, c. 4. Sched. 10. Species Conservation Act.

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

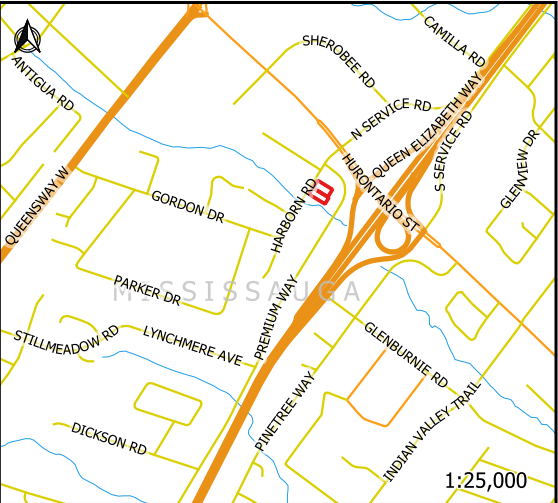
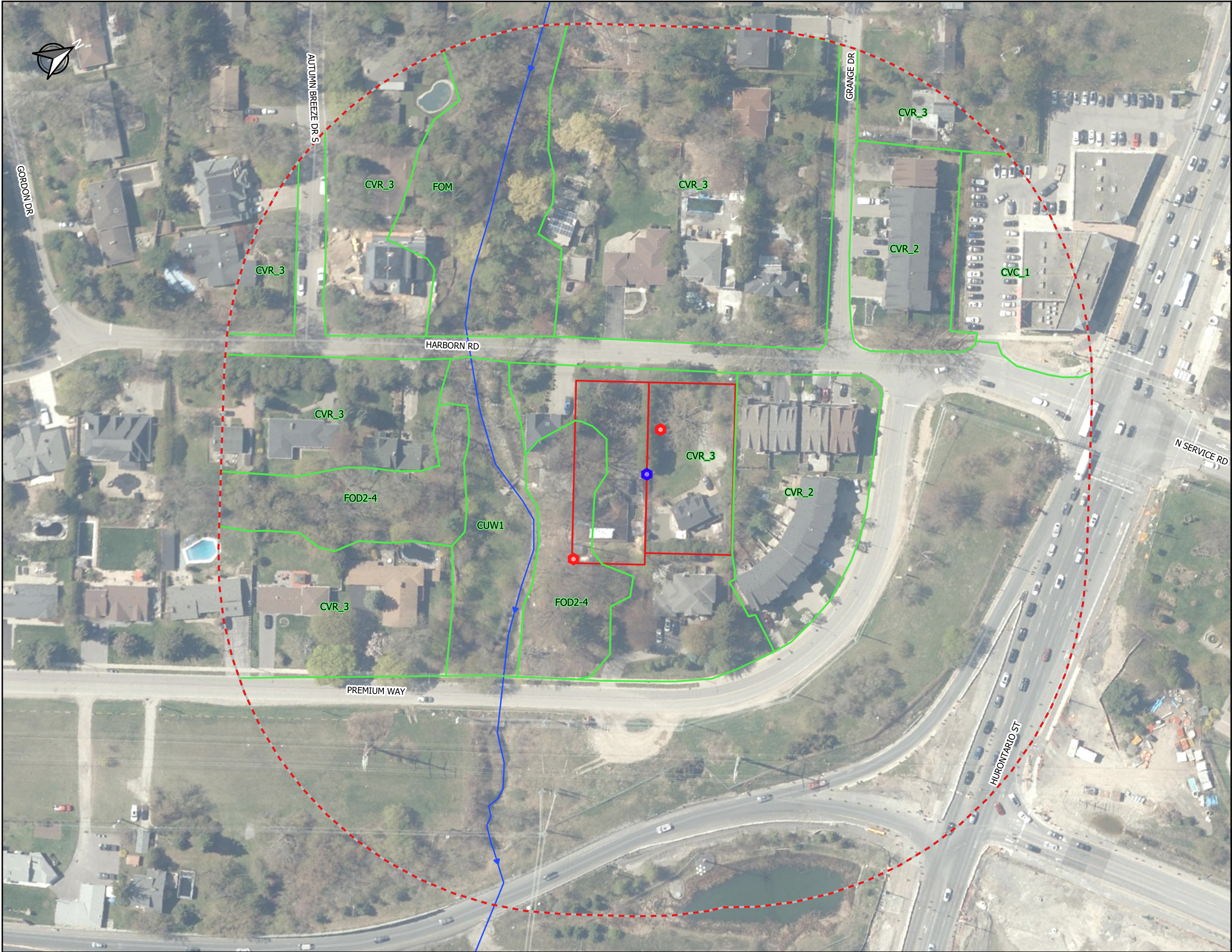
0 10 20 30 40 50 m

1:1,500

Figure 1: Subject Properties



Designed by:N.F.
Date: 01/22/2026
Project: SEC 25-028



Legend

	Subject Property
	Adjacent Lands
	Bird Monitoring Station
	Acoustic Monitoring Station
	Watercourse
	ELC Vegetation Communities

CUW1	Dry-Fresh Mineral Cultural Woodland Ecosite
CVC_1	Business Sector
CVR_2	High Density Residential
CVR_3	Single Family Residential
FOD2-4	Dry - Fresh Oak - Hardwood Deciduous Forest Type
FOM	Mixed Forest

0 10 20 30 40 50 m

1:1,200

Figure 2: Existing Conditions

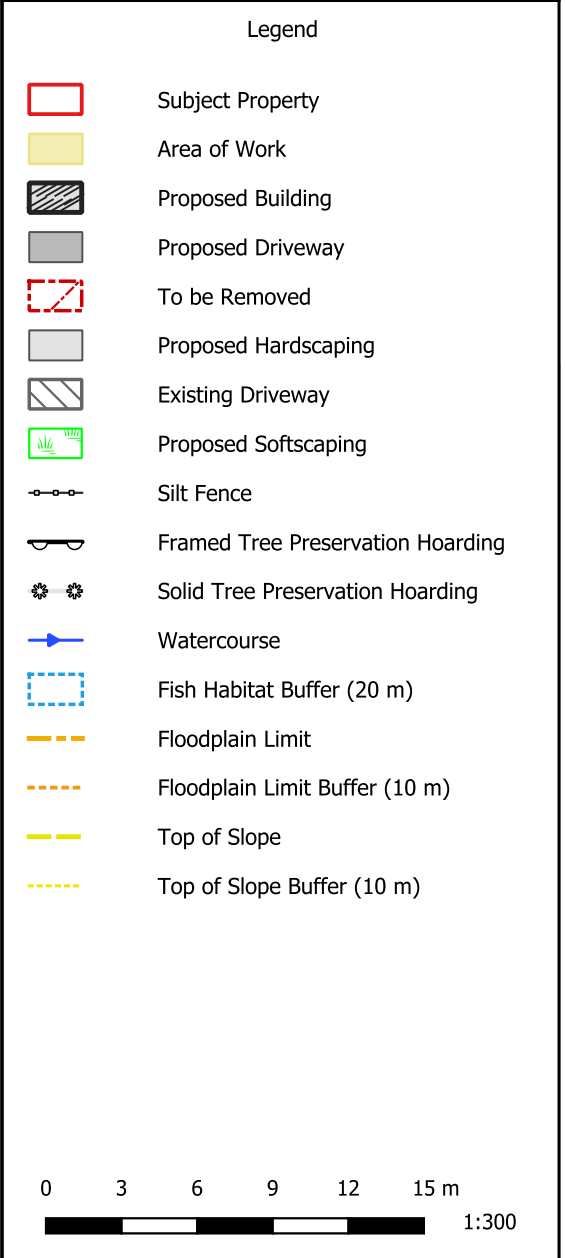
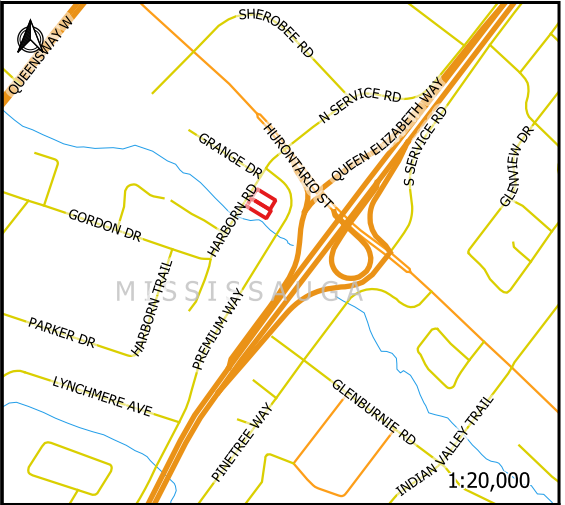


Figure 3: Proposed Development

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	Carolinian Zone	GTA Flora Rarity Status ^F	Peel Flora Rarity Status ^G
		CVR_3	FOD2-4				Provincial ^D	Federal ^E					
<i>Acer negundo</i>	Manitoba Maple	✓	✓	S5	G5	N				0	C	X	X
<i>Acer rubrum</i>	Red Maple	✓		S5	G5	N				0	C	X	X
<i>Acer saccharum</i>	Sugar Maple		✓	S5	G5	N				3	C	X	X
<i>Akebia quinata</i>	Five-leaf Akebia	✓		SNA	GNR	N			SE1	0	IR		
<i>Alliaria petiolata</i>	Garlic Mustard	✓	✓	SNA	GNR	N			SE5	0	IC	X	X
<i>Ampelopsis glandulosa</i>	Amur Peppervine	✓	✓	SNA	G5	N			SEH	0	IH	X	
<i>Arctium minus</i>	Common Burdock		✓	SNA	GNR	N			SE5	3	IC	X	X
<i>Athyrium filix-femina</i> var. <i>angustum</i>	Northeastern Lady Fern		✓	S5	G5T5	N				0		X	X
<i>Campsis radicans</i>	Trumpet Creeper	✓		S2?	G5	Y				0	R		
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	✓		SNA	GNR	N			SE2	5	IR	X	X ^{SR}
<i>Cerastium fontanum</i>	Common Mouse-ear Chickweed	✓		SNA	GNR	N			SE5	3	IC	X	X
<i>Convallaria majalis</i>	European Lily-of-the-valley	✓	✓	SNA	G5	N			SE5	5	IX	X	X
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood		✓	S5	G5	N				3		X	X
<i>Erigeron annuus</i>	Annual Fleabane	✓		S5	G5	N				3	C	X	X
<i>Euonymus europaeus</i>	European Euonymus	✓		SNA	GNR	N			SE2	5	IR	X	X
<i>Fagus grandifolia</i>	American Beech	✓	✓	S4	G5	N				3	C	X	X
<i>Forsythia suspensa</i>	Weeping Forsythia	✓		SNA	GNR	N			SE1	5			0
<i>Fraxinus americana</i>	White Ash	✓		S4	G4	N				3	C	X	X
<i>Geum canadense</i>	Canada Avens	✓		S5	G5	N				0	C	X	X
<i>Hamamelis virginiana</i>	American Witch-hazel			S5	G5	N				3	C	X	X
<i>Hedera helix</i>	English Ivy	✓		SNA	GNR	N			SE1	3			
<i>Hemerocallis fulva</i>	Orange Daylily	✓		SNA	GNA	N			SE5	5	IU	X	X
<i>Hydrangea arborescens</i>	Smooth Hydrangea	✓											
<i>Juglans ailantifolia</i> var. <i>cordiformis</i>	Heartnut	✓											
<i>Lolium arundinaceum</i>	Tall Ryegrass	✓		SNA	GNR	N			SE5	3	IC	X	X
<i>Lonicera tatarica</i>	Tatarian Honeysuckle	✓		SNA	GNR	N			SE5	3	IC	X	X
<i>Medicago lupulina</i>	Black Medick	✓		SNA	GNR	N			SE5	3	IC	X	X
<i>Morus alba</i>	White Mulberry	✓		SNA	GNR	N			SE5	0	IC	X	X
<i>Ostrya virginiana</i>	Eastern Hop-hornbeam		✓	S5	G5	N				3	C	X	X
<i>Oxalis stricta</i>	Upright Yellow Wood-sorrel	✓		SNA	G5	N			SE5	3	C	X	X
<i>Parthenocissus vitacea</i>	Thicket Creeper	✓		S5	G5	N				3	C	X	X
<i>Picea abies</i>	Norway Spruce	✓		SNA	G5	N			SE3	5	IX	X	X
<i>Picea glauca</i>	White Spruce	✓		S5	G5	N				3	U	X	R ^{3}
<i>Picea pungens</i>	Blue Spruce	✓		SNA	G5	N			SE1	3	IR	X	
<i>Pinus sylvestris</i>	Scots Pine	✓		SNA	GNR	N			SE5	3	IX	X	X
<i>Plantago lanceolata</i>	English Plantain	✓		SNA	G5	N			SE5	3	IC	X	X
<i>Plantago major</i>	Common Plantain	✓		SNA	G5	N			SE5	3	IC	X	X
<i>Poa pratensis</i>	Kentucky Bluegrass	✓		S5	G5	P				3			
<i>Prunus serotina</i>	Black Cherry		✓	S5	G5	N				3	C	X	X

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	Carolinian Zone	GTA Flora Rarity Status ^F	Peel Flora Rarity Status ^G
		CVR_3	FOD2-4				Provincial ^D	Federal ^E					
<i>Prunus virginiana</i> var. <i>virginiana</i>	Chokecherry		✓	S5	G5T5	N				3		X	X
<i>Pteridium aquilinum</i>	Bracken Fern		✓	S5	G5	N				3			
<i>Quercus rubra</i>	Northern Red Oak	✓	✓	S5	G5	N				3	C	X	X
<i>Rhamnus cathartica</i>	European Buckthorn		✓	SNA	GNR	N			SE5	0		X	X
<i>Solidago canadensis</i>	Canada Goldenrod	✓		S5	G5	N				3	C	X	X
<i>Solidago flexicaulis</i>	Zigzag Goldenrod	✓	✓	S5	G5	N				3	C	X	X
<i>Syringa vulgaris</i>	Common Lilac	✓		SNA	GNR	N			SE5	5	IX	X	X
<i>Taraxacum officinale</i>	Common Dandelion	✓		SNA	G5	N			SE5	3	IC	X	X
<i>Taxus baccata</i>	English Yew	✓											
<i>Thuja occidentalis</i>	Eastern White Cedar	✓		S5	G5	N				-3	C	X	X
<i>Trifolium repens</i>	White Clover	✓		SNA	GNR	N			SE5	3	IC	X	X
<i>Trillium grandiflorum</i>	White Trillium		✓	S5	G5	N				3	C	X	X
<i>Vinca minor</i>	Lesser Periwinkle	✓		SNA	GNR	N			SE5	5	IX	X	X
<i>Viola sororia</i>	Woolly Blue Violet	✓		S5	G5	N				0	C	X	X
<i>Vitis riparia</i>	Riverbank Grape	✓		S5	G5	N				0	C	X	X
<i>Wisteria sinensis</i>	Chinese Wisteria	✓											

^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).

^FStatus information sourced from Distribution and Status of the Vascular Plants of the Greater Toronto Area (Varga *et al.* , 2004) . See document for full definitions.

^GStatus information sourced from Distribution and Status of the Vascular Plants of the Greater Toronto Area: Peel Region (Varga *et al.* , 2004) . See document for full definitions.

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							Provincial ^D	Federal ^E
		06-04-2025	07-03-2025							
<i>Agelaius phoeniceus</i>	Red-winged Blackbird		S ^F (1) ^G		Adjacent Lands	Possible	S5	G5		
<i>Aix sponsa</i>	Wood Duck			✓	Adjacent Lands	Possible	S5B,S3N	G5		
<i>Cardinalis cardinalis</i>	Northern Cardinal	S(1)			On Site	Possible	S5	G5		
<i>Chaetura pelagica</i>	Chimney Swift	X(3)			On Site	Possible	S3B	G4G5		THR
<i>Cyanocitta cristata</i>	Blue Jay	S(1)			On Site	Possible	S5	G5		
<i>Megaceryle alcyon</i>	Belted Kingfisher			✓	Adjacent Lands	Possible	S5B,S4N	G5		
<i>Nannopterum auritum</i>	Double-crested Cormorant	X(4)			Adjacent Lands	Observed	S5B,S4N	G5		
<i>Passer domesticus</i>	House Sparrow	S(6)	T(2)		On Site	Probable	SNA	G5		
<i>Poecile atricapillus</i>	Black-capped Chickadee		S(1)		On Site	Possible	S5	G5		
<i>Spinus tristis</i>	American Goldfinch		S(1)		On Site	Possible	S5	G5		
<i>Sturnus vulgaris</i>	European Starling	S(2)	T(1)		On Site	Probable	SNA	G5		
<i>Troglodytes aedon</i>	House Wren		S(1)		Adjacent Lands	Possible	S5B	G5		
<i>Turdus migratorius</i>	American Robin	S(1)	S(2), T(1)		On Site	Probable	S5	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_SRank.htm.

^CGlobal Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRank.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
Amphibians	Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Endangered	Endangered	Absent. No suitable breeding habitat for Jefferson salamander encountered on the subject properties nor anticipated to occur in up to 200 m of the adjcaent lands.
Birds	Bank Swallow	<i>Riparia riparia</i>	Not Listed	Threatened	Absent. No suitable nesting habitat for bank swallow identified on the subject properties. 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 structures of the subject properties. 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 properties.
Birds	Bobolink	<i>Dolichonyx oryzivorus</i>	Not Listed	Threatened	Absent. No suitable open habitat for bobolink identified on the subject properties.
Birds	Canada Warbler	<i>Cardellina canadensis</i>	Not Listed	Threatened	Absent. No suitable forest habitat for Canada warbler identified on the subject properties.
Birds	Cerulean Warbler	<i>Setophaga cerulea</i>	Not Listed	Endangered	Absent. No suitable forest habitat for Cerulean warbler identified on the subject properties.
Birds	Chimney Swift	<i>Chaetura pelagica</i>	Not Listed	Threatened	Candidate. Chimney swift was observed in the CVR_3 community on the subject properties during the dawn breeding bird survey with possible breeding evidence. No nesting/roosting sites identified on the subject properties. Chimney swift are likely utilizing the natural cover above watercourse as foraging habitat.
Birds	Common Nighthawk	<i>Chordeiles minor</i>	Not Listed	Special Concern	Absent. No suitable open habitat for common nighthawk identified on the subject properties.
Birds	Eastern Wood-pewee	<i>Contopus virens</i>	Not Listed	Special Concern	Absent. Eastern wood-pewee were not observed during the dawn breeding bird surveys nor through incidental occurrence.
Birds	Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Not Listed	Threatened	Absent. No suitable open habitat for golden-winged warbler identified on the subject properties.
Birds	Grasshopper Sparrow	<i>Ammodramus savannarum pratensis</i>	Not Listed	Special Concern	Absent. No suitable open habitat for grasshopper sparrow identified on the subject properties.
Birds	Least Bittern	<i>Ixobrychus exilis</i>	Not Listed	Threatened	Absent. No suitable wetland habitat for least bittern identified on the subject properties.
Birds	Louisiana Waterthrush	<i>Parkesia motacilla</i>	Not Listed	Threatened	Absent. No suitable aquatic habitat for Louisiana waterthrush identified on the subject properties.
Birds	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Not Listed	Endangered	Absent. Red-headed woodpecker were not observed during the dawn breeding bird surveys nor through incidental occurrence. Moreover, no red-headed woodpecker cavities were encountered during Sumac's field investigations.
Birds	Short-eared Owl	<i>Asio flammeus</i>	Threatened	Special Concern	Absent. No suitable open habitat for short-eared owl identified on the subject properties.
Birds	Wood Thrush	<i>Hylocichla mustelina</i>	Not Listed	Threatened	Absent. Wood thrush were not observed during the dawn breeding bird surveys nor through incidental occurrence.
Insects	Monarch	<i>Danaus plexippus</i>	Not Listed	Endangered	Absent. No milkweed for supporting monarch breeding was encountered on the subject properties. Moreover, no adult monarch were oberved during Sumac's field investigations.
Mammals	Eastern Red Bat	<i>Lasiurus borealis</i>	Endangered	Not Listed	Absent. Eastern red bat generally avoid dense urban developments and as such, is not anticipated to occur on or near the subject properties. Moreover, this species was not detected through acoustic monitoring.

Table 3: Species at Risk Habitat Assessment

Species Grouping	Common Name	Scientific Name	Provincial Status ^A	Federal Status ^B	SAR Habitat Assessment
Mammals	Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Not Listed	Absent. No rocks or similar features with the potential to function as roosting habitat for Eastern small-footed myotis encountered on the subject properties. Moreover, this species was not detected through acoustic monitoring.
Mammals	Hoary Bat	<i>Lasiurus cinereus</i>	Endangered	Not Listed	Confirmed. Hoary bat was detected through acoustic monitoring at both monitoring stations. Potential roosting habitat within the subject area is most likely associated with the mid-aged and mature deciduous trees characteristic of the FOD2-4 community. Although the two mid-aged heartnut trees located near the driveway entrances exhibit suitable foliage-roosting attributes for hoary bat, this portion of the property is more likely to function as a foraging area. Elevated light levels and traffic-related noise from the adjacent roadway would reasonably be expected to discourage roosting behaviour in this location. Foraging habitat likely includes the water feature and forest edge.
Mammals	Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Absent. Little brown myotis was not detected through acoustic monitoring.
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, form and lack of 'intact' interior habitat of the woodland feature that extends onto the subject properties, this species and its habitat are not anticipated. Moreover, this species was not detected through acoustic monitoring.
Mammals	Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Endangered	Not Listed	Confirmed. Silver-haired bat was detected through acoustic monitoring at both monitoring stations. Candidate roosting sites likely include the mature deciduous trees exhibiting snag features that comprise the FOD2-4 community. Foraging habitat likely includes the water feature and forest edge.
Mammals	Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Absent. Tri-colored bat was not detected through acoustic monitoring.
Reptiles	Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Endangered	Absent. No suitable aquatic habitat for Blanding's turtle identified on the subject properties.
Reptiles	Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Not Listed	Special Concern	Absent. No suitable aquatic habitat for Eastern musk turtle identified on the subject properties.
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 properties.
Reptiles	Snapping Turtle	<i>Chelydra serpentina</i>	Not Listed	Special Concern	Absent. No suitable aquatic habitat for snapping turtle identified on the subject properties.
Vascular Plants	American Chestnut	<i>Castanea dentata</i>	Endangered	Endangered	Absent. No American chestnut encountered on the subject properties.
Vascular Plants	Black Ash	<i>Fraxinus nigra</i>	Endangered	Not Listed	Absent. No black ash encountered on the subject properties.
Vascular Plants	Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	Absent. No butternut encountered on the subject properties.

^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. None of the appropriate ELC ecosites were identified on or near the subject properties.
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 or near the subject properties.
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 or near the subject properties.
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. The appropriate combination of upland and lowland habitat is not anticipated to extend onto the subject properties. Bald Eagle: Absent. The subject properties are not situated on shoreline or adjacent to a highly productive waterbody, and as such, bald eagle are not anticipated to occur on or near the subject properties.
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 properties nor anticipated to occur within 200 m of the subject properties.
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 FOD2-4 community identified on the subject properties may contain maternity roost sites and as such, has the potential to function 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 candidate turtle wintering area identified on the subject properties.
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 candidate hibernacula was observed on the subject properties nor visually detected from the limits of the subject properties.
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 for the appropriate species identified on the subject properties.

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 properties.
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 properties are not located on a rocky island or peninsula.
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. No suitable open/forest habitat for monarch stopover identified on the subject properties.
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. No suitable forest habitat with the potential to function as the SWH, Landbird Migratory Stopover Area, identified on the subject properties.
Seasonal Concentration Areas of Animals	Deer Winter Congregation Areas Rationale: Deer movement during winter in the southern areas of Eco- region 7E 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. Deer Wintering Area has not been mapped on the subject properties, as per data from Land Information Ontario (accessed October 14, 2025).
Rare Vegetation Communities	Cliffs and Talus Slopes Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.	Absent. No cliffs or talus slopes identified on the subject properties.
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. No sand barrens identified on the subject properties.
Rare Vegetation Communities	Alvar Rationale: Alvars are extremely rare habitats in Ecoregion 7E.	Absent. None of the appropriate ELC ecosites identified on the subject properties.
Rare Vegetation Communities	Old Growth Forest Rationale: Due to historic logging practices and land clearance for agriculture, old growth forest is rare in Ecoregion 7E.	Absent. No old growth forest identified on the subject properties.
Rare Vegetation Communities	Savannah Rationale: Savannahs are extremely rare habitats in Ontario.	Absent. None of the appropriate ELC ecosites were identified on the subject properties.

Wildlife Category	Wildlife Habitat	SWH Assessment
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 properties.
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 properties.
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 or near the subject properties.
Specialized Habitats of Wildlife considered SWH	Bald Eagle and Osprey Nesting, Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Ecoregion 7E 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. Bald eagle and osprey are not anticipated to occur on or near the subject properties.
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 forest of adequate size identified on the subject properties.
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 properties.
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 observed on the subject properties.
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 candidate amphibian breeding habitat encountered on the subject properties nor anticipated to occur on adjacent lands.
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. No candidate amphibian breeding habitat encountered on the subject properties nor anticipated to occur on adjacent lands.
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. No suitable forest with adequate interior habitat to function as the SWH, Woodland Area-Sensitive Bird Breeding Habitat, identified on the subject properties.

Wildlife Category	Wildlife Habitat	SWH Assessment
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.	Marsh Breeding Bird: Absent. None of the appropriate ELC ecosites were identified on the subject properties. Green Heron: Absent. None of the appropriate ELC ecosites were identified on the subject properties.
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. None of the appropriate ELC ecosites were identified on the subject properties.
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. None of the appropriate ELC ecosites were identified on the subject properties.
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. None of the appropriate ELC ecosites were identified on the subject properties.
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. A provincially rare vascular plant species, trumpet creeper, was encountered on the subject properties in the CVR_3 community (Table 1). No provincially rare bird species were observed during the dawn breeding bird surveys nor through incidental occurrence (Table 2). Habitat of special concern species is not anticipated to occur on the subject properties (Table 3).
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. Amphibian breeding habitat is not anticipated to occur on or near the subject properties.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 7E	7E-2	Absent. The subject properties are not located in EcoRegion 7E-2.

Significant Wildlife Habitat (SWH) Criteria	Recommended for Peel and/or Caledon?	Recommended Thresholds (where applicable)	SWH Assessment
A. Seasonal Concentrations Areas			
A1. Deer Wintering Area	Yes, with threshold	Deer wintering areas in the Region of Peel and Town of Caledon will be assessed and mapped by OMNR staff. According to OMNR, mapping will not be based on the traditional assessment methodology. Instead, it will be based on a detailed assessment of historic and recent motor vehicle accident data for Caledon in association with local expert knowledge.	Absent. Refer to Table 4a.
A2. Colonial Bird Nesting Sites (e.g., heronry, gull colony)	Yes, with threshold	It is recommended that thresholds be based on the Significant Wildlife Habitat Technical Guide (OMNR 2000) and ORMCP TP2 (Queen's Printer for Ontario 2007a) supplemented by information from: -Atlas of the Breeding Birds of Ontario 2000 - 2005 (Cadman <i>et al.</i> 2007) -Breeding Birds of Ontario Vols. 1 & 2 (Peck and James 1983, 1987) -Communications with OMNR and Conservation Authority staff Therefore, it is recommended that any nesting colonies of the following species be considered SWH in the Region of Peel and Town of Caledon: Great Blue Heron, Great Egret, Black-crowned Night-Heron, and Black Tern. In addition, it is recommended that habitats that support the following number of nests/pairs be considered SWH in the Region of Peel and Town of Caledon: Green Heron, 2; Common Tern, 5; Nothern Rough-winged Swallow, 5; Bank Swallow 30; Cliff Swallow, 8; Barn Swallow 3; Sedge Wren, 3; and Marsh Wren, 3. <u>Note 1:</u> Excluded areas include (a) actively used portions of recreational areas (e.g., sports fields, golf courses) and parks, and (b) lands permanently transformed for human services or infrastructure (e.g., roads, buildings, piers, active pits and quarries). <u>Note 2:</u> If fewer than 5 naturally occuring Bank Swallow colonies exist in any of the jurisdictions with the Region of Peel (e.g., Town of Caledon), all colonies should be considered significant.	Absent. Refer to Table 4a.
A3. Waterfowl Nesting Habitat	Yes, with threshold	The recommended thresholds for Region of Peel and Town of Caledon are based on ORMCP TP2 (Queen's Printer for Ontario 2007a) but incorporate additions to the species list. Therefore, it is recommended that SWH be defined as waterfowl nesting areas that support: a) Any combination of 3 or more nesting pairs of: Wood Duck, Gadwall, American Wigeon, American Black Duck, Blue-winged Teal, Northern Shoveler, Northern Pintail, Green-winged Teal, Redhead, Hooded Merganser, Common Merganser, and Ruddy Duck b) Any combination of 10 or more nesting pairs of listed species above, including Mallard <u>Note:</u> Waterfowl nesting areas generally correspond with upland habitats adjacent to marsh, swamp and shallow water ELC community classes, and generally extend out as far as 120 from the wetland (>0.5 ha) or a cluster of 3 or more smaller wetlands (<0.5 ha) within 150 m of each other.	Absent. Refer to Table 4a.

A4i. Migratory Landbird Stopover Areas	Region of Peel - Yes, with threshold Town of Caledon - No, not applicable	It is recommended that all 'natural areas' be identified as SWH within: a. 2 km of Lake Ontario b. River and creek valleys within 5 km of Lake Ontario, and c. 500 m of a river valley, but within 5 km of Lake Ontario. 'Successional communities' are also to be identified as SWH if they are: -≥5 ha in size and immediately on the lakeshore, or -≥10 ha in size and within any of the zones (a, b, c) identified above. 'Natural areas' = all terrestrial and wetland communities as defined under the Ecological Land Classification (ELC) system (Lee <i>et al.</i> 1998), as well as cultural woodlands and plantations. 'Successional areas' = cultural savannahs, cultural thickets and cultural meadows. Excluded areas include (a) actively used portions of recreational areas (<i>e.g.</i> , sport fields, golf courses) and parks, and (b) lands permanently transformed for human services or infrastructure (<i>e.g.</i>, roads, buildings, piers, active pits and quarries). <u>Note 1:</u> SWH designation is not intended to limit existing agricultural activities from continuing. <u>Note 2:</u> It is suggested that the City of Mississauga consider reviewing their Tree Permit By-law Number 474-05 to regulate the cutting of trees within 2 km of the lakeshore more rigorously.	Absent. Refer to Table 4a.
A4ii. Migratory Bat Stopover Areas	Yes, without threshold	There is insufficient information currently available to suggest a threshold. However, in the not too distant future the OMNR Wind Resource Atlas (http://www.ontariowindatlas.ca/) will indicate areas considered important to bat migration. These areas should be considered candidate SWH in the Region of Peel and Town of Caledon. Further field studies will be required to confirm their significance. In the meantime, the protection of significant migratory bat stopover areas is probably accomplished by criterion A4i, at least along Lake Ontario.	Absent. Refer to Table 4a.
A4iii. Migratory Butterfly Stopover Areas	Region of Peel - Yes, without threshold Town of Caledon - No, not applicable	There is insufficient information currently available to suggest a threshold. It is therefore recommended that the Region of Peel and Town of Caledon defer to the Significant Wildlife Habitat Technical Guide (OMNR 2000) approach, or guidelines for Eco-region 7E (in preparation by OMNR), until more data is gathered/analyzed. These areas are likely covered by criterion A4i along Lake Ontario. <u>Note:</u> According to CVC, migratory butterfly congregations have been observed along the Lake Ontario shoreline (<i>e.g.</i>, Lakeside Park and Rattray Marsh) during the fall.	Absent. Refer to Table 4a.
A4iv. Migratory Waterfowl Stopover and/or Staging (Terrestrial)	Yes, with threshold	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds (but incorporating 4 additional species) are recommended for the Region of Peel and Town of Caledon: -annual aggregations (observed on a single day) of 100 individuals or more in any combination of the listed species. <u>Listed species include:</u> Wood Duck, Gadwall, American Wigeon, American Black Duck, Blue-winged Teal, Northern Shoveler, Northern Pintail, Green-winged Teal, or Ring-necked Duck. <u>Note 1:</u> Annual habitat use can be based on background information or field studies conducted over at least a two-year period. <u>Note 2:</u> SWH designation is not intended to limit existing agricultural activities from continuing, or preventing built infrastructure (<i>e.g.</i>, sewage lagoons) from functioning as required.	Absent. Refer to Table 4a.

A4v. Migratory Waterfowl Stopover and/or Staging (Aquatic)	Yes, with threshold	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds are recommended for mainland portions of the Region of Peel and Town of Caledon (<i>i.e.</i>, annual aggregations of 100 or more individuals (observed during a single day), in any combination, included on the Mainland species list). Nearshore waters of Lake Ontario within the globally significant "The West End of Lake Ontario" Important Bird Area (IBA) should automatically be designated as SWH. However, for nearshore waters of Lake Ontario east of the IBA, it is recommended that areas that support annual aggregations of 250 or more individuals (observed during a single day), in any combination, included on the Nearshore species list be considered SWH. <u>Mainland species list:</u> Wood Duck, Gadwall, American Wigeon, American Black Duck, Blue-winged Teal, Northern Pintail, Northern Shoveler, Green-winged Teal, Ring-necked Duck, Lesser Scaup, Bufflehead, Common Goldeneye, Hooded Merganser, Common Merganser. <u>Nearshore species list:</u> Brant, Canvasback, Redhead, Greater Scaup, Lesser Scaup, King Eider, Common Eider, Harlequin Duck, Surf Scoterm White-winged Scoter, Black Scoter, Long-tailed Duck, Bufflehead, Common Goldeneye, Common Merganser, Red-breasted Merganser, Ruddy Duck, Horned Grebe, Red-necked Grebe. <u>Note 1:</u> Annual habitat use can be based on background information of field studies conducted over at least a two-year period. <u>Note 2:</u> SWH designation is not intended to limit existing agricultural activities from continuing or preventing built infrastructure (<i>e.g.</i> , sewage lagoons) from functioning as required. <u>Note 3:</u> The nearshore waters of Lake Ontario are part of conservation authority jurisdiction under the <i>Conservation Authorities Act</i> and in an agreement with DFO for development planning review including municipal activities and approvals.	Absent. Refer to Table 4a.
A4vi. Migratory Shorebird Stopover Areas	Yes, with threshold	It is recommended that sites that support annual aggregations of ≥ 75 individuals (observed on a single day during migration), of any combination of species, be considered SWH: <u>Note 1:</u> A site is defined as (a) a 100 m reach of shoreline (centered at any location), or (b) a habitat patch 0.2 ha in size (centered at any location). This is roughly equivalent to a circle with a 25 m radius or square with 45 m sides. <u>Note 2:</u> The determination of annual habitat use can be based on background information or field studies conducted over at least a two-year period. <u>Note 3:</u> These thresholds should be examined in the future and revised if necessary by consulting with local naturalist clubs and/or Ontario Field Ornithologists. <u>Note 4:</u> The designation of SWH is not intended to limit the ability of existing, normal agricultural uses from continuing, or preventing existing municipal infrastructure (<i>e.g.</i> sewage lagoons, piers, etc.) from functioning as required.	Absent. Refer to Table 4a.

A5. Raptor Wintering Areas (<i>i.e.</i> , used for feeding and/or roosting)	Yes, with threshold	Until information specific to the Region of Peel and Town of Caledon becomes available, it is recommended that the provincial guidelines presented in the Significant Wildlife Habitat Technical Guide (OMNR 2000) be used in both jurisdictions. Accordingly, it is recommended that open fields >20 ha in size adjacent to woodlands be considered candidate SWH. Open fields generally correspond with cultural meadows or abandoned agricultural lands. Smaller sites should also be considered if there is any evidence or reasonable possibility of regular winter raptor activity. Confirmed sites should be occupied at least 60% of winters (almost 2 out of every 3 years), and based on suggestions made by OMNR staff, include 2 or more species and at least 10 individuals of the following species: Northern Harrier, Red-tailed Hawk, Rough-legged Hawk, or American Kestrel, Refer to Section 6.5.10 to see how occurrence data can be collected. <u>Note 1:</u> Any wintering sites used by Short-eared Owl (designated "Special Concern" in Ontario and Canada) should also be designated SWH. <u>Note 2:</u> SWH designation is not intended to limit the ability of existing, normal agricultural uses from continuing.	Absent. Refer to Table 4a.
A6. Snake Hibernacula	Yes, with threshold	It is recommended that sites that support the following conditions should be considered SWH in the Region of Peel and Town of Caledon, Thresholds are based on ORMCP TP2 (Queen's Printer of Ontario 2007a) and supplemented by Ontario Herpetofaunal Atlas data. -10 or more Eastern Gartersnakes, or -5 or more or DeKay's Brownsnakes, or -2 or more of the following species: Ring-necked Snake, Smooth Greensnake, Northern Watersnake, and Red-bellied Snake, or -2 or more of the above species. <u>Note 1:</u> Foundations of buildings in active use should be exempt. Any significant hibernacula associated with buildings/structures should however be considered for protection through some type of stewardship or mitigation measures. <u>Note 2:</u> Significant snake hibernacula assocaited with existing municipal infrastructure should be managed in such a way that maintains the function of the facility, but reduces its potential impact.	Absent. Refer to Table 4a.
A7. Bat Maternal Roosts and Hibernacula	Yes, with threshold	Until information specific to the Region of Peel and Town of Caledon becomes available, it is recommended that the provincial guidelines presented in the Significant Wildlife Habitat Technical Guide (OMNR 2000) be used in both jurisdictions. Therefore, the following numbers of bats should be considered significant at maternity colonies and winter roosts, respectively: Big Brown Bat, 30, 30; Little Brown Bat, 100, 50; Eastern Pipstrelle, 10, 20; Silver-haired Bat, 10, N/A; Long-eared Bat, 10, 20; Small-footed Bat, 10, all sites. However, with the discover of White Nost Syndrome in neighbouring New York State in 2007, OMNR staff must be contacted to see if more restrictive thresholds are warranted. If so, these should supersede those in the Significant Wildlife Hbaitat Technical Guide (OMNR, 2000). <u>Note:</u> The Natural Heritage Information Centre (OMNR) will be providing hibernacula habitat mapping in the future. However, due to its sensitive nature, specific location information will not be available. It is possible that larger patches will be shown on the MNR Wind Resource Atlas representing candidate SWH. It must also be understood that many hibernacula have not been found, therefore any known cave or crevice ecosites or old mine shafts should be considered candidate SWH and evaluated as such.	Candidate. Refer to Table 4a.
A8. Bullfrog Concentration Areas	Yes, but will be covered by criterion B8ii	The thresholds recommended for the ORM (OMNR, 2007) will be incorporated in criterion B8ii (Amphibian breeding habitat - non-forested sites). That is, any sites supporting breeding Bullfrogs in the Region of Peel and Town of Caledon should be considered SWH.	Absent. The recommended thresholds for Significant Wildlife Habitat are not present within the subject properties.

A9. Wild Turkey Winter Range	No, see text in Section 6.5.14	No threshold will be recommended. Wild Turkey is no longer of conservation concern in Ontario, the Region of Peel or Town of Caledon.	There is no recommended threshold for this criterion due to the Wild Turkey no longer being a species of conservation concern,
A10. Turkey Vulture Summer Roosting Areas	Yes, without threshold	None. Insufficient information currently available to suggest a threshold.	Absent. No turkey vultures were noted on the subject properties and adjacent lands. The subject properties and adjacent lands are not anticipated to function as the SWH, Turkey Vulture Summer Roosting Areas.
B. Rare Vegetation Communities or Specialized Habitats for Wildlife			
B1. Rare Vegetation Communities	Yes, with threshold	-All communities ranked as S1, S2 or S3 by NHIC (as per Bakowsky 1996) -Targeted vegetation communities ranked S3, S4, S4 or S5 in Ecodistricts 6E-7 and 7E-4 in the Great Lakes Conservation Blueprint (Henson and Brodribb 2005), or identified as rare on the ORM in the ORMCP TP2 (Queen's Printer for Ontario 2007a): -Dry - Fresh White Pine - Red Pine Coniferous Forest Type (FOC1-2) -Dry - Fresh White Pine - Sugar Maple Forest Ecosite (FOM2-2) -Dry - Fresh White Pine - Oak Mixed Forest Type (FOM2-1) -Moist - Fresh Hemlock - Sugar Maple Mixed Forest Type (FOM6-1) -Dry - Fresh Red Oak Deciduous Forest Type (FOD1-1) -Dry - Fresh White Oak Deciduous Forest Type (FOD1-2) -Dry - Fresh Mixed Oak Deciduous Forest Type (FOD1-4) -Dry - Fresh Oak - Hickory Deciduous Forest Type (FOD2-2) -Dry - Fresh Hickory Deciduous Forest Type (FOD2-3) -Fresh Sugar Maple - Black Maple Deciduous Forest (FOD6-2) -Broad-leaved Sedge Organic Meadow Marsh Type (MAM3-6) -White Cedar - Conifer Organic Swamp Type (SWC3-2) -Willow Organic Thicket Swamp Type (SWT3-2) -All bog and fen wetland communities (considered rare in the Region of Peel and Town of Caledon) Note 1: The S3S4, S4 and S5 ranked woodland ELC Vegetation communities listed above are also captured by the significant woodlands criteria for significant communities (see Section 5.1.15). Note 2: The minimum size for rare vegetation communities is 0.5 ha.	Absent. Given the noted criteria, the FOD2-4 community would not likely be considered as Rare Vegetation Communities.
B2. Forests Providing a High Diversity of Habitats	Yes, but will be covered by significant woodlands	It is assumed that all forests providing a high diversity of habitats (as described in the Significant Wildlife Habitat Technical Guide (OMNR 2000) will be captured by the suite of significant woodlands criteria (e.g., size/interior, proximity to a watercourse, and presence of significant habitats and/or species) even though the diversity criterion itself has not been recommended. Note: See Sections 5.3 and 6.5.16 of this report for more details.	Absent. The recommended thresholds for Significant Wildlife Habitat are not present within the subject properties.
B3. Old-growth or Mature Forest Stands	Yes, but will be covered by significant woodlands	It is assumed that all old-growth and mature forests will be captures by the significant woodlands criteria for old-growth and size. Note: See Sections 5.3.3.5 and 6.5.18 of this report for more details.	Absent. Refer to Table 4a.

B4. Foraging Areas with Abundant Mast	Yes, with threshold	It has been assumed that most forests providing foraging areas with abundant mast (<i>i.e.</i>, nuts like acorns and fruit bearing shrubs) will be captured by the significant woodlands criterion for size/interior, as well as the criterion for old-growth (see Section 5.3.1 - 5.3.3). To capture some areas that may not be captured as significant woodlands, we are also recommending any ELC community that is: -FOD1 (Dry - Fresh Oak Deciduous Forest Ecosite), -FOD2 (Dry - Fresh Oak - Maple - Hickory Deciduous Forest Ecosite) or -FOD9 (Fresh - Moist Oak - Maple - Hickory Deciduous Forest Ecosite) also be considered SWH under this criterion. <u>Note:</u> See Sections 5.3 and 6.5.19 of this report for a more comprehensive rationale.	Absent. The FOD2-4 community likely does not meet the required size criteria to function as the SWH, Foraging Areas with Abundant Mast.
B5. Highly Diverse Areas	Yes, with threshold	The top 5% most diverse habitat patches in the Region of Peel (a) in the Rural System (<i>i.e.</i> , the Town of Caledon) and (b) in the Urban System (<i>i.e.</i> , the Cities of Brampton and Mississauga). Diversity was determined by the number of ELC community types (at the Community Series level) per habitat patch. Habitat patches were defined as continuous natural areas (<i>i.e.</i> , all woodland - FOD, FOC, FOM; wetland - MA, SW, FE; and successional community polygon types - CUT, CUS, CUP, CUW) not seperated by arterial or collector roads or built-up areas by more than 20 m gaps. <u>Note:</u> Cultural meadows (CUM) were excluded because of the difficulty in distinguishing them from active agricultural areas in air photo interpretation. All agricultural areas (AGR) were excluded as well.	Absent. The recommended thresholds for Significant Wildlife Habitat are not present within the subject properties.
B6. Cliffs and Caves	Yes, with threshold	Any cliff, talus, crevice or cave community (per ELC, Lee <i>et al.</i> 1998) ranked as S1, S2 or S3 by the NHIC. <u>Note 1:</u> No minimum size threshold is recommended. <u>Note 2:</u> Areas where quarry licenses are active are excluded.	Absent. Refer to Table 4a.
B7. Seeps and Springs	Yes, with threshold	Site specific confirmation of presence through any of the following: -Visual confirmation of surface discharge or springs -Groundwater investigations or detailed vegetation assessments (<i>e.g.</i> , confirm3ed presence of plant species known to be associated with seepage areas in souther Ontario such as <i>Carex scabrata</i>). -Areas with red or rust coloured stains on the soil surface (these are usually precipitates of iron hydroxides indicating areas of groundwater discharge). -Locating patches of ground that are free of ice and snow in winter and where there is evidence of seepage or springs, or where there are previously confirmed records for seeps or springs. -Presence of marl (<i>i.e.</i> , precipitates of carbonates in solutaiton where groundwater pathways go through areas of concentrated dissolved solids and come to the surface) The above site analysis needs to be completed in conjunction with evidence collected through background or current site-specific studies that concludes the seep or spring provides habtiat for or otherwise supports other SWH criteria (as identified in this study). -<i>e.g.</i> , Deer Wintering Areas, Wild Turkey Winter Range, Rare Vegetation Communities (mostly indirectly), Highly Diverse Areas, Amphibian Breeding Habtiat (indirectly), and Habitat for Species of Conservation Concern. <u>Note:</u> In addition to protection of the specific seep or spring zone, there needs to be consideration for protection of the hydrologic drnamics within the groundwater catchment area in the Official Plan policies and/or supporting guidelines.	Absent. Refer to Table 4a.

B8i. Amphibian Breeding Habitat Forested Sites (e.g., vernal pools)	Yes, with threshold	Based mostly on standards developed for the ORM (OMNR, 2007), it is recommended that sites that support the following conditions be considered SWH in the Region of Peel and Town of Caledon. -Breeding populations of 2 or more listed species in Group A with a combined total of at least 40 individuals present. -A combined total of at least 30 individuals from any species listed in Group B (<i>i.e.</i> , species that tend to behave more like vernal pool obligates, at least in Peel Region). -All breeding populations of Four-toes Salamander regardless of number of individuals. <u>Group A</u>: Red-spotted Newt, Blue-spotted Salamadner, Jefferson Salamander complex 'hybrids' (where the Blue-spotted Salamander genome dominates), Spotted Salamander, unidentified members of the <i>Ambystoma</i> salamander genus, Gray Treefrog, Spring Peeoper, and Wood Frog. <u>Group B</u>: Blue-spotted Salamander, unidentified members of the Jefferson Salamander complex or 'hybrids' where the Blue-spotted Salamander genome dominates, and Wood Frog. In addition, management recommendations in "Conserving Pool-breeding Amphibians ..." (Calhoun and Klemens 2002) should be followed (<i>e.g.</i> , protect and maitnain pool hydrology and water quality). <u>Note 1</u>: It is assumed that for every male frog heard calling a female frog is also present. That is, if 5 male frogs are heard calling, it is assumed 10 individuals are present. <u>Note 2</u>: In order to be sure how many individuals are present, field surveys must be conducted in a seasonally appropriate manner. Timing is critical. Refer to Section 6.5.23 for more information. <u>Note 3</u>: Larvae/egg masses numbers cannot reliable reveal how many individuals are present at a site. Documenting adults at the right time of year, under the right weather conditions, and using the right methodology should be the priority. Refer to Section 6.5.23 for more information.	Absent. Refer to Table 4a.
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B8ii. Amphibian Breeding Habitat Non-Forested Sites (e.g. , marshes)	Yes, with threshold	Based mostly on standards developed for the ORM (OMNR, 2007), it is recommended that sites that support the following conditions be considered SWH in the Region of Peel and Town of Caledon. -Breeding populations of 2 or more listed species in Group A with a combined total of at least 40 individuals presents. -A combined total of at least 30 individuals from any species listed in Group B (<i>i.e.</i> , species that tends to behave more like vernal pool obligates, at least in Peel Region). -All breeding populations of Bullfrog regardless of number of individuals -All breeding populations of Mudpuppy regardless of number of individuals In addition, wetland hydrology and water qualtiy must be maintained. Protection must also be extended to adjacent upland habitats to appropriately accomodate the terrestrial portion of their life cycles. The size of the area protected must reflect the habitat requirements of the listed species present. <u>Group A</u>: Red-spotted Newt, Blue-spotted Salamander, Jefferson Salamander complex 'hybrids' (where the Blue-spotted Salamander genome dominates), Spotted Salamander, unidentified members of the <i>Ambystoma</i> salamander genus, American Toad, Gray Treefrog, Spring Peeper, Green Frog, Pickerel Frog, Northern Leopard Frog, Mink Frog, and Wood Frog. <u>Group B</u>: Blue-spotted Salamander, unidentified members of the Jefferson Salamander complex or 'hybrids' where the Blue-spotted Salamander genome dominates, and Wood Frog. <u>Note 1</u>: It is assumed that for every male frog or toad heard calling a female frog is also present. That is, if 5 male frogs or toads are heard calling, is it assumed 10 individuals are present. <u>Note 2</u>: In order to be sure how many individuals are present, field surveys must be conducted in a seasonally appropriate manner. Timing is critical. Refer to Section 6.5.24 for more information.	Absent. Refer to Table 4a.
B9. Turtle Nesting Habitat and Turtle Overwintering Areas	Yes, with threshold	It is recommended that the thresholds developed for the ORM (OMNR, 2007), <i>i.e.</i> , breeding or overwintering presence of 5 or more pairs/individuals of Snapping Turtle or Midland Painted Turtle, apply to the Region of Peel and Town of Caledon. It is also recommended that the documentation required be expanded to include turtle nests, not just pairs. <u>Note</u>: Snapping Turtle was designated "Special Concern" nationally in Dec. 2008. It's may receive similar Species at Risk status in Ontario in 2009. Northern Map Turtle was removed from the list since it is designated Special Conern in Ontario and is therefore included under criterion C2.	Absent. Refer to Table 4a.

B10. Habitat for Area-Sensitive Forest Interior Breeding Bird Species	Yes, with threshold	The recommended threshold is based on: 1. an analysis of the habitat requirements of area-sensitive forest interior species occurring in Peel, as well as forest interior patch size, and 2. the presence of species listed in the ORMCP TP2 (Queen's Printer for Ontario 2007a). Therefore, it is recommended that mature forests (<i>i.e.</i>, greater than 60 years of age) with interior patch size ≥ 4 ha be considered SWH in the Region of Peel and Town of Caledon. In addition, habitats in either jurisdiction (including plantations) that support 3 or more listed species with probable or confirmed breeding evidence should be considered significant. <u>Listed Species include:</u> Hairy Woodpecker, Pileated Woodpecker, Red-breast Nuthatch, Brown Creeper, Winter Wren, Veery, Northern Parula, Black-throated Blue Warbler, Black-throated Green Warbler, Blackburnian Warbler, Black-and-white Warbler, Ovenbird, and Scarlet Tanager. <u>Note 1:</u> Whip-poor-will, Yellow-bellied Sapsucker, and Blue-headed Vireo were removed from the list since they also occur along forest edges and openings. Hairy Woodpecker, Pileated Woodpecker, Brown Creeper, Winter Wren, and Black-throated Blue Warbler were added to the list. <u>Note 2:</u> Small inclusions of younger forest should not be excluded when analyzing forest interior patch size.	Absent. Refer to Table 4a.
B11. Habitat for Open Country and Early Successional Breeding Bird Species	Yes, with threshold	Open country habitats ≥ 10 ha, not actively farmed for ≥ 5 years and with confirmed habitat utilization by: -at least 4 area-sensitive species from Group A, or -3 area-sensitive species from Group A and 4 or more species from Group B. <u>Group A:</u> Bobolink, Eastern Meadowlark, Grasshopper Sparrow, Northern Harrier, Savannah Sparrow, Upland Sandpiper and Western Meadowlark. <u>Group B:</u> American Kestrel, Brown Thrasher, Clay-coloured Sparrow, Eastern Bluebird, Eastern Kingbird, Field Sparrow, Horned Lark, Sedge Wren, Vesper Sparrow, Willow Flycatcher.	Absent. Refer to Table 4a.
B12. Habitat for Wetland Breeding Bird Species	Yes, with threshold	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds are recommended for mainland portions of the Region of Peel and Town of Caledon: 5 nesting pairs of any combination of species from Group A, or 4 nesting pairs of any combination of species from Group B. <u>Group A:</u> Common Loon, Pied-billed Grebe, American Bittern, Virginia Rail, Common Moorhen, Sora, American Coot, Sandhill Crane, Wilson's Snipe, Wilson's Phalarope, Black Tern, Marsh Wren and Sedge Wren. <u>Group B:</u> Black Tern, Marsh Wren and Sedge Wren.	Absent. None of the listed species were documented during the dawn breeding bird surveys nor through incidental occurrence.
B13i. Raptor Nesting Habitat (Raptors associated with wetlands, ponds, and rivers)	Yes, with threshold	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds are recommended for the Region of Peel and Town of Caledon: the presence of one or more active nests of Northern Harrier or Osprey. <u>Note:</u> Short-eared Owl was removed from the list of species considered since it is designated Special Concern in Ontario and Canada. It is included under criterion C2 and C3.	Absent. None of the listed species were documented during the dawn breeding bird surveys nor through incidental occurrence.

B13ii. Raptor Nesting Habitat (Raptors associated with woodland habitats)	Yes, with threshold	ORMCP TP2 (Queen's Printer for Ontario 2007a) thresholds are recommended for the Region of Peel and Town of Caledon (<i>i.e.</i> , the presence of one or more active nests from listed species). <u>Listed species include:</u> Sharp-shinned Hawk, Cooper's Hawk, Northern Goshawk, Red-shouldered Hawk, Broad-winged Hawk, Northern Saw-whet Owl, Barred Owl and Long-eared Owl. <u>Note:</u> Eastern Screech-Owl was left off the list because of its common status.	Absent. None of the listed species were documented during the dawn breeding bird surveys nor through incidental occurrence.
B14. Mink, River Otter, Marten, and Fisher Denning Sites	Yes, with threshold	Based on available distribution and occurrence data, it is recommended that the following supporting habitats be considered SWH: -All River Otter, Marten and Fisher den sites (<i>i.e.</i> , a min. 10 x 10 m area around the den site); -Mink den sites in natural areas with low levels of disturbance (<i>i.e.</i> , a min. 10 x 10 m area around the den site). With respect to Mink and River Otter, it is also recommended that as much wetland and undeveloped, undisturbed shoreline is protected as possible by established a 30 m no-development buffer from the shoreline for a distance of up to 500 m in either direction upstream and downstream for Mink and 2 km in either direction upstream and downstream for River Otter. For Fisher, it is recommended that as many large blocks of contiguous mid-aged to mature forest as possible surrounding the den site is protected. <u>Note:</u> Marten is not found in the planning area.	Absent. According to the Ontario Fur Managers Federation, Mink prefer den sites dominated by coniferous trees such as spruce, balsam and cedar. This habitat is not found within the subject properties. According to the Atlas of Mammals of Ontario (Dobbyn, 1994), River Otter, Marten and Fisher species ranges are found north of Lake Simcoe and therefore, not present within the subject properties.
B15. Mineral Licks	No, not applicable	No thresholds are suggested as this criterion is primarily meant for Moose and not considered applicable to the Region of Peel or Town of Caledon.	Absent. No mineral licks identified on the subject properties.
C. Habitat for Species of Conservation Concern Criteria			
C1. Species Identified as Nationally Endangered or Threatened by COSEWIC which are not listed as Endangered or Threatened under Ontario's <i>Endangered Species Act</i> .	Yes, with threshold	The habitat for any species identified to be nationally Endangered or Threatened by COSEWIC that is not identified as an Endangered or Threatened species on the Species at Risk in Ontario (SARO) List under Ontario's <i>Endangered Species Act</i> should be designated as SWH. As of April 2009, species in this category that occur or have occurred within the Region of Peel or Town of Caledon include: Rapids Clubtail, Western Chorus Frog, Common Nighthawk, Chimney Swift, Red-headed Woodpecker, Olive-sided Flycatcher, Golden-winged Warbler, Canada Warbler and Lake Sturgeon. Requirements for habitat protection to be determined on a case-by-case basis in consultation with OMNR. <u>Note:</u> Does not include species that have been designated Threatened or Endangered by OMNR. These species are protected under Ontario's <i>Endangered Species Act</i> and Section 2.1.3 (<i>significant habitat of endangered and threatened species</i>) of the Provincial Policy Statement (2005).	Absent. None of the listed species were documented during the dawn breeding bird surveys nor through incidental occurrence. No other species that meet this criterion have the potential to occur on the subject properties.
C2. Species Identified as Special Concern based on Species at Risk in Ontario list that is Periodically updated by OMNR.	Yes, with threshold	Per the Significant Wildlife Habitat Technical Guide (OMNR 2000), the habitat for any species designated Special Concern according to the Species at Risk in Ontario List should be identified and protected as SWH. Habitat requirements would need to be determined on a case-by-case basis. <u>Note:</u> Species of conservation concern do not include species that have been designated Threatened or Endangered by OMNR. These species are protected under Ontario's <i>Endangered Species Act</i> and Section 2.1.3 (<i>significant habitat of endangered and threatened species</i>) of the Provincial Policy Statement (2005).	Absent. Refer to Table 4a.

C3. Species that are listed as Rare (S1-S3) or Historical in Ontario based on records kept by the NHIC.	Yes, with threshold	Per the Significant Wildlife Habitat Technical Guide (OMNR 2000), habitat for any species listed as S1, S2 and S3 (based on the records kept by the NHIC), should be identified and protected as SWH. Habitat requirements would need to be determined on a case-by-case basis.	Absent. Refer to Table 4a.
C4. Species whose populations appear to be experiencing substantial declines in Ontario.	Yes, without threshold	It is recommended that "substantial declines" be defined as significant declines at the p <0.10 (90%) confidence level. <u>Breeding Birds</u> Upon careful review of existing information sources such as the Breeding Bird Survey (BBS), Forest Bird Monitoring Program (FBMP), Marsh Monitoring Program (MMP), and the recently completed Atlas of the Breeding Birds of Ontario, the consultant team did not feel comfortable putting forward a threshold. Each had deficiencies or biases. <u>Other Wildlife Groups</u> Calling frog and toad population trend data gathered as part of the Marsh Monitoring Program. Frogwatch Ontario, Amphibian Road Call County, and Backyard Frog Survey, could be utilized if deemed suitable. There is no Ontario-wide population trend data available for other wildlife groups in Ontario.	Absent. None of the species identified on the subject properties are experiencing substantial declines suitable to meet the recommended thresholds for Significant Wildlife Habitat.
C5. Species that have a high percentage of their global population in Ontario and are Rare or Uncommon in the Regional Municipality of Peel/Town of Caledon.	Yes, without threshold	An adequate analysis of what species should be considered needs to been undertaken before a threshold can be recommended for the Region of Peel or Town of Caledon.	Plants: Confirmed. Regionally rare plant species, white spruce, was observed on the subject properties in the CVR_3 community. This species is considered regionally rare within the Region of Peel due to its limited natural distribution in southern Ontario. The occurrences likely consist of planted or ornamental specimens rather than naturally occurring, significant populations. No further analysis required.
C6. Species that are Rare within the Regional Municipality of Peel/Town of Caledon, even though they may not be Provincially Rare.	Plants - Yes, with threshold Wildlife - Yes, without threshold	<u>Plants</u>: It is recommended that Varga <i>et al</i> ., 2005 be used to determine what species are rare in the Region of Peel and Town of Caledon. <u>Wildlife</u>: It is recommended that a composite TRCA/CVC list be prepared. However, CVC only has a list of species of conservation concern for birds, and that list is dated. <u>Note</u>: In addition, the significant species lists in Appendix A of the ORMCP TP6 should apply to areas on the ORM and should be considered during development of a wildlife list.	Plants: Confirmed. Regionally rare plant species, white spruce, was observed on the subject properties in the CVR_3 community. This species is considered regionally rare within the Region of Peel due to its limited natural distribution in southern Ontario. The occurrences likely consist of planted or ornamental specimens rather than naturally occurring, significant populations. No further analysis required.

C7. Species that are subjects of Recovery Programs.	Yes	This criterion applies to species that are designated as Threatened, Endangered or Extirpated by COSEWIC but not Special Concern, Threatened or Endangered in Ontario. In the Region of Peel or Town of Caledon as of April 2009, this applies to: Rapids Clubtail, the Great Lakes/St. Lawrence - Canadian Shield population of Western Chorus Frog, Common Nighthawk, Whip-poor-will, Chimney Swift, Olive-sided Flycatcher, and Canada Warbler. Habitats that support any of these species in the Region or Town should be considered SWH. In addition, if any other species are subject to other recovery programs (such as Black Duck), habitats for these species should also be considered SWH. <u>Note:</u> COSEWIC and OMNR web sites should be checked regularly to ensure that the list of species that qualify for protection under criterion C7 is up-to-date.	Further information is required to appropriately assess this criteria.
C8. Species considered important to the Region of Peel/Town of Caledon, based on recommendations from a Local Conservation Advisory.	Yes	No list of species is being recommended since no Conservation Advisory Committee currently exists in Peel or Caledon. However, this criterion is recommended should a list of species ever be developed for the Region or Town. <u>Note:</u> The term "Conservation Advisory Committee" was taken verbatim from the Significant Wildlife Habitat Technical Guide (OMNR 2000). It generically describes a committee with membership of knowledgeable naturalists familiar with conditions and biota in the jurisdiction. Some 'Environmental Advisory Committees' possibly fall into this category although typically their role is to review planning submissions and they may not have the necessary field knowledge, or mandate to develop such specific lists. It is expected that a Conservation Advisory Committee would be aware of and consult status lists prepared by local conservation authorities, but would have the knowledge base to refine the use of such lists.	Further information is required to appropriately assess this criteria.
D. Animal Movement Corridors			
Includes amphibian and White-tailed Deer movement corridors as well as more general animal and plant movement corridors.	Yes	Thresholds for this criterion need to be developed in accordance with the Region's Greenlands System framework for both the Region of Peel and Town of Caledon and should incorporate three scales of corridors, as follows: -Primary (<i>e.g.</i> , Niagara Escarpment) -Secondary (<i>e.g.</i> , major river valleys) -Tertiary corridors (<i>e.g.</i> , hedgerows) <u>Note:</u> While primary and secondary corridors can likely be identified and mapped at the municipal-wide scale, tertiary corridors will likely need to be identified through site-specific studies, although guidelines for their identification could be addressed in policy.	Absent. Refer to Table 4a.

List of Appendices

- Appendix A: CVC Regulated Lands Mapping
- Appendix B: Terms of Reference Consultation
- Appendix C: Natural Heritage Areas Mapping

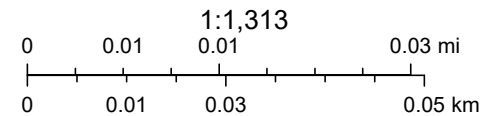
Appendix A: CVC Regulated Lands Mapping

Credit Valley Conservation



10/7/2025, 12:57:20 PM

-  Credit River Watershed Boundary
-  Parcels around Regulated Area
-  Generic Regulation Mapping



York University, City of Toronto, Region of Peel, Province of Ontario, Ontario MNR, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, EPA, USDA, AAFC, NRCan

Credit Valley Conservation

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Appendix B: Terms of Reference Consultation



Cassandra Fligg <sumacenvironmental@gmail.com>

50-60 Harborn Road, Mississauga - EIS

Marinas, Maricris <Maricris.Marinas@cvc.ca>
To: Cassandra Fligg <sumacenvironmental@gmail.com>

Fri, May 23, 2025 at 12:44 PM

Hi Cassandra,

CVC staff have completed our review of the EIS TOR (as outlined in the email below as well as the attached checklist) and provide the following comments:

1. The 10m buffer from the greatest of the hazards/constraints is to be vegetated to mitigate the impacts of the adjacent proposed development/landuse.
2. It appears that two trees potentially associated with the regulated valley slope are proposed for removal. To avoid impacts on the natural hazard it is important to make efforts to preserve the natural function and slope stability provided by the trees and their root systems. Please amend the plan to show preservation of all trees associated with the valley (i.e., the staked tree line), if feasible. Based on satellite images, these trees are likely quite large and old and thus would correspond to large offsetting requirements as per CVC's Offsetting Guideline – up to 100 trees planted purely based on the removal of these two trees alone (pending DBH measurements). If the removal of these trees is unavoidable, offsetting efforts should take place onsite – a restoration plan is to be provided. Please note that cash in-lieu maybe pursued; however, further discussion/details are required to assess whether this is an appropriate option.
3. Please ensure inclusion of the Conservation Authorities Act and Ontario Regulation 41/24 within the policy and regulations review as they outline the 15m regulated area adjacent the valley slope. In addition, reference and use of applicable CVC guidelines should also be included within the forthcoming EIS.

I trust that the above is helpful – should you have any questions please do not hesitate to contact me.

Regards,

Maricris

Maricris Marinas | M.Sc. | she/her/hers

Senior Planner, Planning and Policy, Watershed Management and Development Services |
Credit Valley Conservation

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Our working hours may be different. Please do not feel obligated to reply outside of your scheduled working hours. Let's work together to help foster healthy work-life boundaries.

From: Cassandra Fligg <sumacenvironmental@gmail.com>

[Quoted text hidden]

trisha.hughescvc.ca>; steve.chamississauga.ca; Simon Latam <simon.latam@mississauga.ca>

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EIS TOR Checklist 25-028 Harborn Trail.pdf

1071K

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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