Environmental Impact Study - 7582 County Road 9, Creemore, Ontario

September 12, 2025

Prepared for:
2826878 Ontario Inc.

Cambium Reference: *21805-001*

CAMBIUM INC.

866.217.7900

cambium-inc.com

Table of Contents

List of Embedded Tables

List of Appended Figures

List of Appendices

1.0 Introduction

Cambium Inc. (Cambium) was retained by 2826878 Ontario Inc. to conduct an Environmental Impact Study (EIS) at 7582 County Road 9, in the village of Creemore, Township of Clearview, County of Simcoe, Ontario (Figure 1). The proposed development consists of a residential subdivision by way of a Draft Plan of Subdivision application. Given the extent of development, the southern half of the property will be considered the Site for this report.

The following Environmental Impact Study (EIS; the Study) serves to address potential impacts to natural heritage features identified during the preliminary development review process, as required by the Provincial Planning Statement (PPS), 2024. The Site contains or is adjacent to (within 120 m of) the following mapped natural heritage and hydrologic features: woodlands, and a watercourse. The Site is within Ecoregion 6E-7 of Ontario (Crins, Gray, Uhlig, & Wester, 2009) and within a defined settlement area.

The Site is within the jurisdiction of the Nottawasaga Valley Conservation Authority (NVCA) and their regulated area partially overlaps the eastern extent of the property. The regulated area is derived from hazard/floodplain modelling associated with the mapped watercourse at the eastern extent of the Site. As such, the Study will consider regulations on development as imposed by Ontario Regulation 41/24 under the Conservation Authorities Act, 1990.

The *Endangered Species Act*, 2007 (ESA) protects endangered and threatened species and their habitats from harm or destruction. Habitat for endangered and threatened species is also afforded protection under provincial natural heritage policy; however, it is ultimately the proponent's responsibility to ensure that no harm to these species or their habitats occurs during their planned activities. This Study includes a habitat-based screening for species of conservation concern to determine if the Site has suitable habitat for any provincially or federally listed species at risk (SAR).

This Study has been prepared to meet application submission standards for the proposed development of the Site, and includes: the results of the background review, a description of methods used to collect Site-specific natural heritage information, and a summary of field

investigations conducted on the Site. Information has been compiled to characterize the existing form and function of natural heritage features on and adjacent to the Site and provide an evaluation of the significance and sensitivity of those features. Furthermore, an assessment of potential for impacts to these features in relation to the proposed development is provided. Data was interpreted in accordance with provincial and municipal policies and regulations to determine potential constraints to development, to guide the decision-making process and address approval authority requirements.

1.1 Terms of Reference

The Terms of Reference (TOR) were circulated to Amy Cann (Director of Planning and Building, Township of Clearview) on May 2, 2025. A response was received from Nick Ainley (Community Planner, Township of Clearview) on June 17, 2025. The response included comments from both the Township's peer review consultant (R.J. Burnside) and NVCA. Relevant correspondence and documentation are included in Appendix A.

1.2 Summary of Proposed Development

The Site is located on the southern portion of the property located at 7582 County Road 9, in the village of Creemore, Township of Clearview, and is approximately 3 ha in size. It is bound by Fairgrounds Road South to the east, vacant land to the north (northern portion of the property), and existing residential properties to the south and west. The Site is currently developed with a residential dwelling, a detached barn and an existing driveway to County Road 9. The remainder of the Site consists of a mix of naturalized areas and manicured lawn.

The proposed development includes a mix of single detached residential lots and a condominium development block, which includes townhouse dwellings, an amenity and Stormwater Management (SWM) facility area, and parking. The proposed development includes a private laneway access from both County Road 9 and Fairgrounds Road South. A Conceptual Site Plan is provided in Appendix B.

2.0 Natural Heritage Policy Context

The evaluation of the form and function of natural heritage features present on, and adjacent to, the Site was undertaken to meet the requirements of the following legislation, plans, and policies:

- Provincial Planning Statement, 2024 (PPS)
- The County of Simcoe Official Plan, 2023
- The Official Plan of the Township of Clearview, 2024
- The Township of Clearview Zoning By-law 06-54
- *Conservation Authorities Act*
- *O. Reg. 41/24: Prohibited Activities, Exemptions and Permits*
- *Endangered Species Act, 2007* (ESA)
- *Species at Risk Act* (SARA)
- *Fisheries Act*
- *Migratory Birds Convention Act*, *1994* (MBCA)

This Study includes an assessment of conformity of the proposed development with relevant natural heritage policies. A summary of policy conformity is included in Section 7.0.

2.1 Provincial Planning Statement, 2024

The PPS provides direction on matters of provincial interest related to land use planning and development. Section 4.1 of the PPS (Ministry of Municipal Affairs and Housing, 2024) protects the form and function of eight types of significant natural heritage features, which include:

- significant wetlands in Ecoregions 5E, 6E, and 7E
- significant coastal wetlands
- significant woodlands in Ecoregions 6E and 7E

- significant valleylands in Ecoregions 6E and 7E
- significant wildlife habitat (SWH)
- significant areas of natural and scientific interest (ANSI)
- fish habitat
- habitat of endangered and threatened species
- coastal wetlands in Ecoregions 5E, 6E, and 7E

Given their significance, development and site alteration are prohibited within provincially significant wetlands (PSW) in Ecoregions 5E, 6E, and 7E and within significant coastal wetlands. Development and site alteration in fish habitat and the habitat of endangered and threatened species shall only be permitted in accordance with provincial and federal requirements. Development and site alteration within other natural heritage features and on lands adjacent to all natural heritage features may be permitted if it is demonstrated that there will be no negative impacts on the feature or its ecological function. The PPS defines "development" as the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act. "Site alteration" means activities, such as grading, excavation and the placement of fill that would change the landform and natural vegetative characteristics of a site.

Section 4.2 of the PPS protects the quality and quantity of water, including the form and hydrologic function of sensitive surface water features and sensitive ground water features. Focus is given to maintaining hydrologic linkages and functions at the watershed scale to minimize potential negative impacts, including cross-jurisdictional and cross-watershed impacts of development. Mitigative measures and/or alternative development approaches should be considered for development near water features.

2.2 Municipal Official Plans and Zoning By-Law

The land use designations and zoning of the Site are summarized in Table 1.

Table 1 Summary of Municipal Official Plan Designations and Zoning

Source	Designation / Zoning
Official Plan – County of Simcoe	Settlement Area of Creemore
Official Plan – Township of Clearview (Schedule B-4)	Future Development
Official Plan – Township of Clearview (Schedule C)	Natural Heritage (Clearview Township) Watercourse
Zoning By-law – Township of Clearview	Development Area (DA)", with a Flood Plain Hazard Land Area

2.3 Conservation Authorities Act

Ontario's Conservation Authorities are "community-based watershed management agencies, whose mandate is to undertake watershed-based programs to protect people and property from flooding, and other natural hazards, and to conserve natural resources for economic, social and environmental benefits" (Conservation Ontario, 2022). NVCA regulates these features under *Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits* under the *Conservation Authorities Act.*

2.4 Endangered Species Act, 2007

Species listed as endangered or threatened on the Species at Risk in Ontario (SARO) list, and their habitats, are protected under the provincial *Endangered Species Act, 2007* (ESA) (Government of Ontario, 2007). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened, or extirpated. Section 10(1) of the ESA prohibits the damage or destruction of habitat of species listed as endangered or threatened. Habitat for special concern species is afforded protection as significant wildlife habitat (SWH) in the PPS. Species at risk (SAR) are discussed throughout this report, as applicable.

It is acknowledged that *Bill 5*: *Protect Ontario by Unleashing Our Economy Act*, 2025 received Royal Assent on June 5 ,2025, which enacts amendments to the *Endangered Species Act, 2007* that are now in force, as well as the creation of the *Species Conservation Act, 2025 (*not

yet in effect). These changes are intended to streamline permit applications and approvals and help projects proceed faster while continuing to provide important protections for species at risk and their habitats. The subject Study has been prepared within the existing policy framework of the *Endangered Species Act, 2007*, therefore modifications may be required should the Act be amended and/or repealed before completion of the proposed development.

2.5 Species at Risk Act

The federal *Species at Risk Act* (SARA) was adopted in 2002 to prevent endangered or threatened species from becoming extinct or extirpated, to help in the recovery of endangered, threatened, and extirpated species, and to manage species of special concern to help prevent them from becoming endangered or threatened. Habitat which is deemed necessary for the survival/recovery of a listed wildlife species, referred to as Critical Habitat, is protected under Section 56 of the SARA. The SARA applies to all federal lands in Canada; however, at-risk aquatic and migratory bird species located on private property in Ontario also receive protection under the Act.

Known aquatic SAR populations and associated critical habitats are mapped by DFO. Critical habitat for aquatic SAR may include areas used for spawning, rearing young, feeding, overwintering, and migration.

2.6 Fisheries Act

Fisheries and Oceans Canada (DFO) administers the federal *Fisheries Act* which defines fish habitat as "*spawning grounds and other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes*" (Subsection 2(1)). Works within and adjacent to lakes, watercourses, and other bodies of water containing fish have the potential to impact fish and/or fish habitat. The Fisheries Act prohibits the harmful alteration, disruption, or destruction (HADD) of fish habitat (Subsection 35(1)), which is defined as "*any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes*".

Furthermore, any work, undertaking, or activity other than fishing that results in the death of fish is considered an offence.

As a result of amendments to the *Fisheries Act* in 2019, projects near water that could potentially impact fish or fish habitat may require DFO review. The primary purpose of the review is to determine whether the death of fish and/or HADD of fish habitat, as defined by the Act, can be avoided. The DFO Fisheries Protection Program provides a Decision Framework and guidance material applicable to these reviews (available on-line at www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html).

2.7 Migratory Birds Convention Act, 1994

The federal *Migratory Birds Convention Act, 1994* (MBCA) prohibits killing, capturing, injuring, taking or disturbing of the listed migratory birds. Including damaging, destroying, removing, or disturbing of nests of all migratory bird species that contain a live birds or viable eggs. In 2022, new Migratory Birds Regulations (MBR) were adopted that afford year-round protection to the nests of 18 migratory species, until the nest is deemed to be abandoned. Nest abandonment must be reported through the Abandoned Nest Registry, administered by Environment and Climate Change Canada (ECCC), if there is a need to damage, disturb, destroy, or remove a nest of a species listed in Schedule 1 of the MBR. The time period to confirm nest abandonment varies by species, and ranges from 12 to 36 months.

3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

Supporting background information pertaining to the Site and surrounding landscape was compiled and reviewed, as part of a comprehensive desktop exercise, to better understand local biophysical conditions. Data was obtained from provincial, municipal, and other online resources to provide context to the development proposal, and to guide development of the site-specific work program. Field studies were subsequently conducted to verify and/or add detail to the high-level contextual information derived from these publicly available resources.

The comprehensive desktop review for this Site included the following resources:

- Land Information Ontario (LIO) database via the online Natural Heritage Areas: Make-a-Map tool (Ministry of Natural Resources and Forestry, 2022)
- Natural Heritage Information Center (NHIC) database: species at risk (SAR) occurrence records
- Online Atlas Data:
  - Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2020)
  - Ontario Breeding Birds Atlas (OBBA) (2001-2005) (Bird Studies Canada, 2005)
- Aquatic Species at Risk distribution maps (Fisheries and Oceans Canada, 2022)
- Aquatic Resource Area Summary Data (Government of Ontario, 2022)
- Fish ON-Line (Ministry of Natural Resources and Forestry, 2022)
- County of Simcoe Interactive Mapping (GIS) (County of Simcoe, 2025)
- Nottawasaga Valley Conservation Authority Regulated Area Mapping
- Mad River Subwatershed Health Check 2023 (Nottawasaga Valley Conservation Authority, 2023)

Mapped natural heritage features present in the general area of the Site are shown on Figure 1. A summary of background review results is provided in Table 2.

Table 2 Background Review Summary

Source	Location Reference	Relevant Records
LIO Geographic Database	Site and 120 m adjacent lands	Watercourse Woodlands
NHIC Database	17NK7009 17NK7008 17NK7109 17NK7108	Bobolink (*Dolichonyx oryzivorus*) - THR Eastern Wood-pewee (Contopus virens) – SC Eastern Milksnake (*Lampropeltis Triangulum*) – NAR Midland Painted Turtle (*Chrysemys picta picta*)
Ontario Breeding Bird Atlas (OBBA)	17TNK70	Incorporated into list of species within Appendix C
Ontario Reptile and Amphibian Atlas (ORAA) (ORAA, 2023)	17NK70	Incorporated into list of species within Appendix C
Aquatic SAR distribution maps	Site and 120 m adjacent lands	None

Note: THR = Threatened species on SARO list ; END = Endangered species on SARO list; SC = Special concern species on SARO list. The Species of Conservation Concern Screening provided in Appendix C includes a list of all species within the overlapping OBBA and ORAA squares with potential policy implications.

3.2 Consultation and Agency Correspondence

Regulatory agency consultation may involve input from Fisheries and Oceans Canada (DFO), the Ministry of Natural Resources and Forestry (MNRF), the Ministry of Environment, Conservation, and Parks (MECP), and/or the local Conservation Authority, as applicable. The MECP is responsible for administering the ESA and providing direction on potential compliance issues. MECP has prepared a guidance document titled *Client's Guide to Preliminary Screening for Species at Risk* (Ministry of the Environment, Conservation and Parks, 2019). This document aims to "help clients better understand their obligation to gather information and complete a preliminary screening for SAR before contacting the Ministry". This document was used to guide the SAR habitat-based screening for the Study.

No direct consultation with regulatory authorities was undertaken for this project due to the availability of site-specific data via publicly accessible resources.

3.3 Field Investigations

Ecological investigations were completed on the Site by a team of qualified ecologists to understand potential ecological constraints to development and opportunities for restoration/enhancement. Information gathered through the background review was used to guide the development of the fieldwork program and was supplemented with additional Site-specific information gathered through various standard methodologies. Survey methodologies for each of the field investigations completed on the Site are described in the following sections.

All surveys were conducted by appropriately trained Cambium staff. Survey stations were GPS marked in the field. Data were documented manually, reviewed upon return to the office, and transposed to digital format for secure data management.

A summary of the field investigations completed on the Site is presented in Table 3. Survey stations/areas are shown on Figure 2.

Table 3 Summary of Field Investigations

Date	Time On Site	Atmospheric Conditions	Observer	Activities
11/26/2024	9:00-14:15	Air Temp: 5.0-6.0ºC Sky: 2,5,8 Wind: 2,3 Noise: 1	M. Horn	• Ecological Land Classification/Vegetation Survey • Bat Maternity Roost Survey
4/28/2025	20:30-21:15	Air Temp: 17.3-17.4ºC Sky: 1 Wind:0 Noise: 0	B. Hnatiw	• Amphibian Breeding Survey 1
5/27/2025	21:00-21:45	Air Temp: 13.5-13.8ºC Sky: 0	M. Horn	• Amphibian Breeding Survey 2

Date	Time On Site	Atmospheric Conditions	Observer	Activities
		Wind: 1 Noise: 1		
5/29/2025	6:00-13:15	Air Temp: 7-22ºC Sky: 0 Wind:0 Noise: 0.	B. Hnatiw	• Breeding Bird Survey 1 • Grassland Bird Survey 1 • Ecological Land Classification/Vegetation Survey • Wetland Boundary Delineation • Aquatic Habitat Assessment
6/6/2025	5:45-6:15	Air Temp: 12-13ºC Sky: 1 Wind:0 Noise: 1	D. Leal	• Grassland Bird Survey 2
6/8/2025	20:00-22:15	Air Temp: 18.5-23.6ºC Sky: 1,2 Wind: 2,3 Noise: 0	M. Horn	• Bat Exit Survey 1
6/16/2025	20:15-22:30	Air Temp: 10.9 – 26.6ºC Sky: 0 Wind: 0 Noise: 0/1	B. Hnatiw	• Grassland Bird Survey 3 • Breeding Bird Survey 2 • Ecological Land Classification/Vegetation Survey • Wetland Boundary Delineation • Butternut Health Assessment
6/24/2025	20:15-22:30	Air Temp: 23.2-28.3ºC Sky: 1 Wind: 0 Noise: 1	M.Horn	• Bat Exit Survey 2 • Amphibian Breeding Survey 3
8/26/2025	8:00-10:00	Air Temp: 13.6-14.9ºC Sky: 0	B. Hnatiw D. Leal	• Vegetation Survey • Fish Community Sampling

Date	Time On Site	Atmospheric Conditions	Observer	Activities
		Wind: 2 Noise: 0/1		

Notes: Wind = Beaufort Wind Scale value (0 = 0-2 kph, 1 = 3-5 kph, 2 = 6-11 kph, 3= 12-19 kph, 4 = 20-30 kph, 5 = 31-39 kph, 6 = 40-50 kph). Noise is reported based on background noise levels: Index 0 – no appreciable effect, 1 – slightly affecting sampling, 2 – moderately affecting sampling, 3 – seriously affecting sampling, 4 – profoundly affecting sampling.

3.3.1 Plant Communities and Flora

3.3.1.1 Ecological Land Classification and Vegetation Surveys

The Ecological Land Classification (ELC) System for Southern Ontario (Lee H. , et al., 1998) was used to classify vegetation communities on the Site. Definitions of vegetation types are derived from the ELC for Southern Ontario First Approximation Field Guide (Lee H. , et al., 1998) and the revised 2008 tables. ELC units were initially delineated and classified by orthoimagery interpretation. Field investigations served to confirm the type and extent of ELC communities on the Site through vegetation surveys and soil assessments with a hand auger, where vegetation types could not be classified based on vegetation alone. Where vegetation communities extended off the Site, classification was completed through observation from property boundaries and publicly accessible lands.

Vegetation data reported herein includes the provincial status of plant species and vegetation communities, where such information exists. Sensitivity of individual vegetation species was evaluated based on the coefficient of conservatism (CC) which is a measure of the tolerance of a species to disturbance and fidelity to a specific habitat type; species with CC of 9-10 exhibit a high degree of fidelity to a narrow range of habitat parameters. The sensitivity of vegetation communities was evaluated through an assessment of various community attributes including age, habitat quality, degree of disturbance, presence of non-native/invasive species, and presence of sensitive plant species (plants with CC of 9-10). A description of CC values is provided in Table 4.

Table 4 Coefficient of Conservatism (Adapted from Oldham et al. 1995)

Coefficient of Conservatism	Rank	Description
0 to 3	Tolerant	Found in a wide variety of plant communities, including disturbed sites.
4 to 6	Moderately Conservative	Typically associated with a specific plant community but tolerate moderate disturbance.
7 to 8	Conservative	Typically associated with a plant community in an advanced successional stage that has undergone minor disturbance.
9 to 10	Highly Conservative	Typically displaying a high degree of fidelity to a specific plant community or a narrow range of synecological parameters.

3.3.1.2 Butternut Health Assessment

Butternut (*Juglans cinerea*) is an endangered species protected under the provincial *Endangered Species Act, 2007* (ESA) from being killed, harmed, or removed. The level of protection granted to Butternut trees is determined based on the degree to which an individual tree has been affected by the fungal pathogen known as butternut canker (*Sirococcus clavigignenti-juglandacearum*). Prior to undertaking any activity that may affect the Butternut or the lands within 25 m of a tree, an assessment of tree health must be performed by a Butternut Health Expert (BHE) (i.e., a qualified professional who has the expertise, education, training, and experience necessary to assess the health of butternut trees and to carry out the responsibilities imposed on the expert by Ontario Regulation 830/21). The health assessment divides trees into three health categories based on procedures outlined in the Butternut Assessment Guidelines (Ministry of Environment Conservation and Parks, 2021). For each tree, the BHE must determine: the health category of the tree, whether the tree is a putative hybrid, and whether the tree is believed to be naturally occurring or cultivated. Butternut health categories are defined as follows:

- Category 1: affected by butternut canker to such an advanced degree that retaining the tree would not support the protection or recovery of butternut trees in the area in which the tree is located.

- Category 2: not affected by butternut canker or affected by butternut canker but the degree to which it is affected is not as advanced as Category 1 and retaining the tree could support the protection or recovery of butternut trees in the area in which the tree is located.
- Category 3: could be useful in determining how to prevent or resist butternut canker.

Hybrids of Butternut and non-native Walnut trees are different species from Butternut, are not fully native to Ontario, and are not protected under the ESA. To determine if a tree is a putative hybrid, the BHE must use the Key for Field Identification of Butternut Hybrids as detailed in the ministry guidelines. Should the field assessment results be inconclusive, genetic testing may be pursued.

Butternut health evaluations should be carried out during the Butternut growing season (May 15 to August 31); out of season evaluations may be conducted but require the exclusion of certain assessment criteria, as detailed in the Ministry guidelines.

3.3.1.3 Wetland Boundary Delineation

In Ontario, wetlands are mapped and evaluated under the Ontario Wetland Evaluation System (OWES). Mapped evaluated wetlands have undergone extensive study and been assessed based on their form and function under four categories: Biological, Social, Hydrological, and Special Features (Ministry of Natural Resources, 2022). Evaluated wetlands that score high enough are deemed Provincially Significant Wetlands (PSW). Evaluated wetlands that do not score high enough to be a PSW are classified as Locally Significant Wetlands (LSW) or non-significant. The Province also maps unevaluated wetlands. These mapped wetlands are approximate; as such, they require field verification in order to confirm their presence and determine their boundaries.

Wetlands on the Site were delineated following provincially approved methods outlined in the Ontario Wetland Evaluation System: Southern Manual, 3rd Ed. (Ministry of Natural Resources, 2022). Fieldwork was carried out by provincially certified Cambium staff. Wetland boundaries were initially delineated and classified by orthoimagery interpretation. The presence/absence of wetlands on the Site was confirmed through field investigations during the growing season

(i.e., late May through October). Wetland boundaries were determined using the 50% wetland vegetation rule. In some cases, vegetation-based delineations were corroborated through soils assessment. Soils were sampled using a hand auger and moisture regime was determined based on industry standard guidance (Heck, et al., 2017).

Wetland boundaries on the Site were marked with a hand-held GPS unit in the field. Where wetland communities extend off the Site, classification was done through observation from property boundaries and publicly accessible lands.

To supplement the procedure outlined above, the Site was visited during the early spring in order to document the extent of surface flooding at that time of year. This information is used to assist with the determination of wetland boundaries during the growing season.

3.3.2 Aquatic Habitat and Fish

3.3.2.1 Aquatic Habitat Assessment

Aquatic habitat surveys were completed to identify and map all aquatic features on Site, including waterbodies, watercourses (permanent and intermittent), seeps, springs, and overland drainage paths. Orthoimagery and topographical mapping were reviewed to identify hydrologically connected aquatic features on adjacent lands that were inaccessible during the field assessments. On-site features were characterized based on in-stream and riparian cover, channel structure/morphology, substrates, flow, and hydrologic characteristics, as well as general documentation of channel instability, erosion/sedimentation, groundwater, and flow permanency indicators. If present, crossing features including bridges, culverts, and bed-level crossings were noted and georeferenced in the field. Standard assessment methods and technical criteria referenced in the Ontario Stream Assessment Protocol (Ministry of Natural Resources and Forestry, 2017) were applied to wadeable streams. All identified aquatic features were assessed to determine their potential function as fish habitat, with consideration for sensitive, limiting, or critical habitat, such as spawning locations, overwintering habitat, and migratory corridors. Fish observations, habitat connectivity, and barriers to fish movement

were documented, when present, to provide regional context to their function within the general aquatic network and sub-watershed.

3.3.2.2 Fish Community Sampling

Sampling methodologies for determining the presence, abundance, and distribution of fish within aquatic habitats vary depending on study objectives, habitat conditions, and target species. For all aquatic habitat sampling, Cambium employs sampling techniques in alignment with industry standards, based on guidance provided by applicable government agencies and ministries, and in accordance with manufacturers instructions for field equipment usage. All aquatic sampling was carried out by qualified Cambium staff, under the supervision of a qualified aquatic ecologist.

A Licence to Collect Fish for Scientific Purposes (LCFSP) was acquired from MNR (Permit # #AMOS-2025-FWCA-00784) to facilitate fish community sampling in the unnamed tributary to the Mad River. However, the feature was observed to only contain water during the early spring and late fall and was dry within the approved sampling window (July 15th to September 30th), including the August 26, 2025, site visit.

3.3.3 Wildlife and Wildlife Habitat

3.3.3.1 Breeding Bird Surveys

Two breeding bird surveys were carried out during the peak breeding season between May 24 and July 10, a minimum of seven days apart. Point counts were completed using the Ontario Breeding Bird Atlas (OBBA) Guide for Participants (Ontario Breeding Bird Atlas, 2001). Point count stations were established in various habitat types and were combined with incidental observations to determine the presence, variety, abundance, and breeding evidence of species. As outlined in the OBBA protocol, point counts are to be done between dawn and five hours after dawn, when wind speed is low (<19 km/h) and in the absence of rain or thick fog. Surveys conducted outside of this five hour window remain valid, provided that the protocol adjustment is documented and justifiable. All species observations (visual and auditory) were recorded at predetermined point count stations during a five minute period. Observations were

also documented between point count stations and were tabulated with the nearest station. Each species observed was classified and assigned a code based on the highest level of breeding evidence, as defined by the protocol: Confirmed, Probable, Possible or Observed.

The Natural Heritage Information Center (NHIC) database and Species at Risk in Ontario (SARO) list were reviewed to determine the current provincial status for each bird species.

3.3.3.2 Grassland Bird Surveys

Bobolink (*Dolichonyx oryzivorus*) and Eastern Meadowlark (*Sturnella magna*) are SAR listed as threatened on the SARO list. These species prefer natural grasslands and agricultural fields, including pasture, hayfields, and abandoned fields (CUM vegetation type under the ELC system), for breeding and nesting sites. Bobolink is an area-sensitive species that requires a minimum area of 5 ha to support breeding habitat, with larger areas generally providing additional habitat benefits (Ministry of Natural Resources and Forestry, 2018). Eastern Meadowlark are not as strongly area sensitive; however, a minimum area of 5 ha is also required to support preferred breeding habitat (Ministry of Natural Resources and Forestry, 2018).

In order to determine if the Site is being used as nesting habitat by Bobolink or Eastern Meadowlark, targeted avian surveys were conducted following the approved MNR protocol for Eastern Meadowlark (Ontario Ministry of Natural Resources, 2013). This protocol is suitable for use with both of these species. This method involves recording Bobolink and Eastern Meadowlark observations via both point count location(s) and traveling transects between points. The protocol requires that the Site be visited three times between May 21 and July 3 (the nesting season for both of these species) with survey dates being evenly distributed within this period and conducted within 7-10 days of each other. Surveys are conducted between sunrise and four hours after sunrise when wind speed is low (<19 km/h; Beaufort Wind Scale of 3 or lower) and with light or no precipitation.

3.3.3.3 Amphibian Breeding Surveys

The presence of frog and toad breeding habitat was determined using auditory surveys following the Marsh Monitoring Program Participant's Handbook for Surveying Amphibians (Bird Studies Canada, 2008). According to the protocol, three amphibian surveys should be conducted between April and July, at least 15 days apart, in order to span the breeding seasons of all species that may be present in an area. Air temperature is the primary factor in determining survey dates, as different species call when air and water temperatures reach certain levels; therefore, nighttime air temperature should be greater than 5°C for the first survey, greater than 10°C for the second survey and greater than 17°C for the third survey. Other weather conditions are also taken into consideration. Conditions are considered appropriate when wind speed is low (<19 km/h; Beaufort Wind Scale of 3 or lower) and there is light or no precipitation occurring (high humidity is ideal but heavier rain can impact ability to hear and differentiate calls). Sample points are established during the first survey and re-visited during following surveys. At each sample point, calls from all species are aurally surveyed for three minutes and noted to the greatest extent possible, on a 100 m semi-circular area in front of the sampling station using call intensity codes established by the protocol:

- Code 0: No calls heard
- Code 1: Calls can be counted individually (calls do not overlap)
- Code 2: Calls overlap, but numbers of individuals can be estimated
- Code 3: Calls overlap and are continuous (full chorus); therefore, a count estimate is unreliable

3.3.3.4 Bat Surveys

3.3.3.4.1.1 Maternity Roost Habitat Surveys

A snag or cavity tree is defined as a standing live or dead tree, with cracks, crevices, hollows, cavities and/or loose or naturally exfoliating bark appropriate for bat roosting. According to

MNRF guidance, high quality or Maternity Roost Colony SWH is defined as woodlands with greater than 10 roost trees per hectare.

Given the size and composition of the forested communities on the Site, transects were walked in each forested ELC Community to document snags. Individual trees that met the criteria were documented in terms of their habitat features, and georeferenced with a hand-held GPS unit.

3.3.3.4.1.2Exit Surveys

When artificial structures and buildings that have the potential to provide maternity roost habitat for bats are identified, exit surveys are recommended to determine if the buildings are being used by species at risk bats. As outlined in the Use of Buildings by Species at Risk Bats (Ministry of Environment, Conservation and Parks, 2018) artificial structures should be monitored for evidence of maternity colonies through exit surveys as follows:

- Exit Surveys should be conducted during the month of June
- Observers should choose a viewing station with a clear view of cavity or crevice openings
- Cavity opening or crevice should be monitored from 30 minutes before dusk until 60 minutes after dusk for evidence of bats exiting
- A hand-held heterodyne bat detector should be used in conjunction with visual surveys to determine species
- Each candidate roost need only be monitored once.

The handheld Echo Meter Touch 2 device was used in conjunction with exit surveys to identify any bat species that might be present during the exit survey.

3.3.3.5 Habitat-Based and Encounter Surveys

Given the scale of the proposed development, a habitat-based approach was used to assess potential impacts to wildlife, consistent with standard practice. General habitat information gathered through the field investigations was used to assess the connectivity of the Site with the surrounding landscape and evaluate the ecological significance of the local area. Cambium

staff actively searched for features that may provide specialized habitat for wildlife. These searches included inspecting tree cavities, overturning logs, rocks and debris, and scanning for scat, browse, sheds, fur, etc. Any evidence of breeding, forage, shelter, or nesting was noted. Species habitat and nesting observations were documented and photographed.

Encounter surveys included track and sign surveys, area searches, and incidental observations, concurrent with other field surveys. Any wildlife (including mammals, reptiles, amphibians, birds, butterflies, native bumble bees and dragonflies) seen and identified were recorded. When encountered, tracks and other signs (e.g., stick or cavity nests, tracks, scats, hair, tree scrapes, etc.) were identified to a species, if possible, and recorded.

3.3.4 Approach to Assessment of Significance and Impact Assessment

An assessment was conducted to determine the significance of natural features as well as significant species observed or determined to have the potential to exist on the Site or on adjacent lands. The assessment was completed by analysing natural environment data collected through the background material described in Section 3.1 and field surveys, using the methods and criteria outlined in the following reference materials:

- Natural Heritage Reference Manual [NHRM; (MNRF, 2010)]
- Significant Wildlife Habitat Technical Guide [SWHTG; (MNRF, 2000)]
- Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E [SWHCS; (MNRF, 2015)]
- Habitat mapping for provincially endangered and threatened species through application of ESA regulated habitat or General Habitat Descriptions to the Site, where available.

An assessment was then conducted to determine how the proposed project may negatively impact significant natural features or SAR. Preventative, mitigative, and remedial measures were considered in assessing the net effects of the proposed project on the surrounding ecosystem. Where impacts to significant wildlife habitat were determined to be possible, mitigation was determined using the guidance provided in the Significant Wildlife Habitat Mitigation Support Tool [SWHMiST; (MNRF, 2014)].

4.0 Existing Conditions

Data acquired through the background information review and field investigations is summarized in the following sections.

4.1 Landscape Position and Topography

The Site is located within the Mixedwood Plains Ecozone: Lake Simcoe Rideau Ecoregion 6E, which extends southward from a line connecting Lake Huron in the west to the Ottawa River in the east, including Ottawa, Kingston, Peterborough, Barrie, Tobermory, Kitchener, and Toronto. This Ecoregion is characterized by a mixed geology that includes both shallow soil areas such as alvar and bedrock plains, as well as deep soil areas such as the Oak Ridges Moraine. It falls within the Great-Lakes St. Lawrence Forest Region, including deciduous and mixed forests; however, over 50% of the landscape in this Ecoregion is currently in use as agricultural land (Lee H. T., et al., 1998).

A topographic survey was completed by Tatham Engineering in January 2024. Based on this survey the property generally slopes from north to south at a moderate grade (8%+) on the north half and a flat grade (0-3%) on the south half (the Site).

4.2 Surface Water, Hydrology, and Hydrogeology

Provincial mapping shows a watercourse (tributary of the Mad River) east of the Site boundary that flows southward. The feature was investigated to confirm presence, delineate channel alignment, and characterize habitat within the system. Based on Cambium's investigation the feature is located directly east of the eastern Site boundary (off site), and parallels Fairgrounds Road South. The watercourse is wholly contained (i.e., confined) within the roadside ditch network and is heavily anthropogenically influenced. At its lower extent, the feature conveys flow under Fairgrounds Road South towards the County Road 9 ditch line through a concrete box culvert. Fish habitat was evaluated and is discussed further in Section 4.5.

In addition, two drainage features were identified on/adjacent to the Site during field investigations, as shown on Figure 2.

The upgradient drainage originated at a 300 mm corrugated steel pipe (CSP) culvert which attenuates and controls discharge from an open water pond (Community 9). This drainage feature conveys flow southward towards an unmapped wetland community present on the Site (Community 4). No flowing water was observed during any of the field investigations.

The downgradient drainage was identified south of the unmapped wetland (Community 4) and was characterized as an undefined channel that lacked defined bed and banks and directed overland flow southward before infiltrating at the interface of Community 7. No surface connectivity or flow was documented from the drainage to the downgradient hydrologic network during field investigations (including early spring). Further, no flow path, evidence of scour or changes in vegetation is present downgradient of the feature through review of historical orthoimagery.

An unmapped wetland was identified on the Site extending onto adjacent lands to the north. Details on the wetland community are discussed in 4.4.1.

4.3 Current and Historic Land Use

The Site is currently developed, consisting of one residential dwelling and a barn structure. The rest of the Site is undeveloped and consists of manicured lawn, old agricultural lands, and naturalized areas. Based on a review of historical imagery available through the County of Simcoe interactive mapping, the land use for these properties has not changed in the past 20 years. Prior to this a large portion of the property appears to have been cleared and used for agricultural purposes (County of Simcoe, 2025).

4.4 Plant Communities and Species

4.4.1 Ecological Land Classification

The plant communities on the Site are summarized in Table 5 and are mapped on Figure 2. A list of identified species for each community are provided in Appendix D.

Table 5 Plant Communities

No.	ELC Code	Community Description	S -Rank
Upland Plant Communities			
1	CUM1	Mineral Cultural Meadow (Old Agriculture)	SNA
2	CUW	Cultural Woodland	SNA
3	FOD8-1	Moist- Fresh Aspen – Poplar Deciduous Forest	S5
5	CUP3	Coniferous Planation	SNA
6	CUM1	Mineral Cultural Meadow	SNA
8	FODM11	Naturalized Deciduous Hedgerow	SNA
10	FOD	Deciduous Forest	SNA
Wetland Plant Communities			
4	MAS2-1	Cattail Mineral Shallow Marsh	S5
Aquatic Plant Communities			
9	OAO	Open Aquatic	SNA
Anthropogenic			
7	CVR	Residential	SNA

4.4.1.1 Floral Inventory

Community 1 was identified as an old agricultural field that has naturalized. It was dominated by Perennial Ryegrass (*Lolium perenne*) with Orchard Grass (*Dactylis glomerata*), and Alfalfa (*Medicago sativa*) co-dominate. Other species present are common species found in cultural meadows such as Philadelphia Fleabane (*Erigeron philadelphicus*), Wild Carrot (*Daucus carota)*, Bitter Dock (*Rumex obtusifolius*), Bull Thistle (*Cirsium vulgare*), Common Milkweed (*Asclepias syriaca*), Red Clover (*Trifolium pratense*), Tufted Vetch (*Vicia cracca*) and Garlic

Mustard (*Alliaria petiolate*). Black Walnut (*Juglans nigra*) and Manitoba Maple (*Acer negundo*) saplings (<1m) were starting to establish themselves, but no large trees or shrub species were documented within the community. Black Raspberry (*Rubus occidentalis*) was also noted to be encroaching into the community edges.

Community 2 was a deciduous forest dominated by Manitoba Maple, and to a lesser extent Black Walnut and White Ash (*Fraxinus Americana*). This community appears to have been previously cleared for agricultural practices and left to establish naturally, as shown in historical imagery from 1978 (County of Simcoe, 2025). The canopy was open in the centre of the community. Understory was minimal, but when present, included Morrow's Honeysuckle (*Lonicera morrowii*), Chokecherry (*Prunus virginiana*) and Black Raspberry. Groundcover was thick and dominated by grasses which included Smooth Brome (*Bromus inermis*), Reed Canary Grass (*Phalaris arundinacea*), Orchard Grass and Poa spp. Anthropogenic disturbance was noted throughout the community, including garbage/waste and tractor tracks/ruts. Other species included Black Locust (*Robinia pseudoacacia*), Butternut (*Juglans cinerea)*, Norway Maple (*Acer platanoides*), Scots Pine (*Pinus sylvestris*), Garlic Mustard, Goutweed (*Aegopodium podagraria*), Lesser Periwinkle (*Vinca minor*) and Norway Spruce (*Picea abies*).

Community 3 was a deciduous forest dominated by Balsam Poplar and to a lesser extent Manitoba Maple. Other species included Norway Maple, Black Walnut, and Large-toothed Aspen (*Populus grandidentata*). Understory was minimal but when present was primarily composed of Morrow's Honeysuckle and Black Raspberry. Groundcover was thick and dominated by Canadian Goldenrod (*Solidago canadensis*) with Orchard Grass, Smooth Brome, and Reed Canary Grass co-dominate species. This community appears to have been heavily disturbed in the past, corroborated by historical imagery showing it was cleared in 1978 (County of Simcoe, 2025).

Community 4 was a mineral marsh dominated by Broad-leaved Cattail (*Typha latifolia*) with Fowl Mannagrass (*Glyceria striata*), Field Horsetail (*Equisetum arvense)* and Hairy Willowherb (*Epilobium hirsutum*) co-dominate. The community was in a low-lying area that slopes slightly southward, with the majority of the feature being located off-site on adjacent lands to the north.

A pan-handle from the community extends southward onto the Site, which has established due to the input of drainage from Community 9. Soil conditions are provided in Table 6 below.

Community 5 was a small stand of planted Norway Spruce. There was no understory and canopy cover was thick. Groundcover consisted primarily of bare exposed soil and spruce needles.

Community 6 was another cultural meadow; however, unlike Community 1 it does not appear to have been recently used for agricultural purposes. This community was dominated by Smooth Brome and to a lesser extent Reed Canary Grass. Shrubby growth occurring in the centre of the community where an old Manitoba Maple appears to have been previously. This shrubby area contained individual young Staghorn Sumac (*Rhus typhina*), Morrows Honeysuckle and Black Raspberry. Some young Manitoba Maple and Black Walnut saplings (>1m) were starting to establish along the western edge.

Community 9 is an open aquatic pond feature located off-site. This community had sparse cattail growth occurring around the edges. The southern half is bordered by Community 3, which provides shade for the morning and most of the afternoon. Water depth in this pond was approximately 1 m. As noted, a culvert at the southern edge of the pond attenuates flow and outlets into Community 3.

No at-risk or provincially rare (S1, S2, S3) vegetation species were identified on the Site. A search for Butternut (*Juglans cinerea*; endangered) and Black Ash (*Fraxinus nigra*; endangered) was completed as part of the vegetation survey; four Butternut trees were identified on the Site. Additional details on the Butternut trees are provided in Section 5.4.1.

As outlined above, the Site appears to have been heavily disturbed in the past for agricultural purposes. There were many invasives and non-native species through the Site. These included Black Locust, Manitoba Maple, Morrow's Honeysuckle, Garlic Mustard, Garlic Mustard, Goutweed, Lesser Periwinkle and Norway Spruce.

4.4.1.2 Soil Characterization

A summary of the soils conditions on the Site is provided in Table 6. Soils assessment stations are illustrated on Figure 2.

Table 6 Summary of Soil Conditions

Station	Community No. and ELC Code	Soil Description	Effective Texture	Moisture Regime
1	Community 4 (MAS2-1)	Sampled to a depth of 50 cm. Loam throughout sample. Mottles observed at 5 cm, no gleying observed. Water table encountered at surface.	4	6

4.5 Fish and Fish Habitat

The tributary of the Mad River, located directly adjacent to the eastern Site boundary, was a low complexity, channelized / constrained feature and homogeneous throughout the assessment reach. Bed and bank structure were symmetrical and lacked complexity, as is common in municipal ditches. The mean bankfull width of the feature adjacent to the Site was approximately 2.1 m. The riparian habitat conditions were dominated by a narrow strip of cultural meadow type vegetation to the east and a naturalized hedgerow to the west. The riparian area provided moderate shading / cooling effect due to the density of overhanging tree cover. The in-stream aquatic vegetation consisted of wetland/emergent and terrestrial vegetation, including, Spotted Jewelweed, Coltsfoot (*Tussilago farfara*), Norway Maple and Manitoba Maple. The substrates consisted of 40% gravel, 30% cobbles, 20 % boulders, 5% sand and 5 % silt.

A Licence to Collect Fish for Scientific Purposes (LCFSP) was acquired from MNR (Permit # #AMOS-2025-FWCA-00784) to facilitate fish community sampling in the unnamed tributary to the Mad River. However, the feature was observed to only contain water during the early spring, and late fall, and was dry within the approved sampling window (July 15th to September 30th), including the August 26, 2025 site visit.

Based on field investigations, the feature was characterized as intermittent, with a bimodal flow regime (i.e, flowing late fall and early spring, but dry throughout the summer). Observations indicate the subject tributary does not provide summer habitat for fish and does not provide indirect coldwater input to summer habitat downstream in the Mad River. The feature may provide seasonal fish habitat proximal to the County Road 9 during flowing water conditions, however, connectivity to the downstream network appears poor through orthoimagery review, with habitat accessibility and utilization potential decreasing upstream due to gradient. No overwintering potential was noted in the upper reach that could support resident populations.

4.6 Wildlife and Wildlife Habitat

The Site is a mix of developed lands (residence, driveway, and manicured lawn) and naturalized ecosite communities. As noted in Section 4.4, the Site contains a wetland which may provide potential amphibian breeding habitat. The treed and meadow landscapes also offer potential habitat to local breeding bird populations.

4.6.1 Avifauna

4.6.1.1 Birds (General)

Breeding bird surveys were completed as a part of the current study in accordance with OBBA standards. Bird species and breeding activity observations for habitats on or adjacent to the Site are summarized in Appendix E. Species-specific federal and provincial statuses and s-ranks are also provided. A total of six bird species demonstrated probable, or confirmed breeding activity (shaded cells in Appendix E).

Species with probable, or confirmed breeding evidence on the Site included:

- American Robin (*Turdus migratorius*)
- Red-winged Blackbird (*Agelaius phoeniceus*)
- American Crow (*Corvus brachyrhynchos*)
- American Goldfinch (*Spinus tristis*)

- Common Yellowthroat (*Geothlypis trichas*)
- Blue Jay (*Cyanocitta cristata*)

An inactive Barn Swallow (*Hirundo rustica*) nest was observed in the on-Site barn; however, no Barn Swallows were documented during the breeding bird surveys or incidentally during any other field investigations.

Field investigations also identified a Wild Turkey (*Meleagris gallopavo*) nest with eggs within Community 2, near the northern Site boundary, as well as both a Common Grackle (*Quiscalus quiscula*) nest and Red-winged Blackbird nest within Community 1, in the southeast corner of the Site.

4.6.1.2 Grassland Birds

Grassland bird surveys were completed within the cultural meadow community (Community 1) in the southeast corner of the Site. No grassland bird species were documented during the targeted surveys or incidentally during any of the field investigation.

4.6.2 Herpetofauna

4.6.2.1 Frogs and Toads

Amphibian breeding surveys were completed at one sample point (see Figure 2). A total of three species were identified on and adjacent to the Site, as detailed in Table 7 (bold species were located on the Site). Of these, one species exhibited Level 3 calling: Spring Peeper (*Pseudacris crucifer*).

Based on findings from these surveys, the amphibian activity in the portion of wetland located on the Site is limited, as only three individual Gray Treefrogs (*Dryophytes versicolor*) were documented. A higher amount of amphibian activity was documented north of the Site, within the wetland and pond on adjacent lands; however, activity levels were still limited and less than criteria thresholds for significance outlined in the Natural Heritage Reference Manual Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015).

Table 7 Summary of Amphibian Survey Results

Sample Point	Survey Date	Survey Direction	Species	Maximum Call Intensity	# of Individuals
1	2025-04-23	S	(None)	-	-
	2025-05-27		(None)	-	-
	2025-06-24		**Gray Treefrog**	**1**	**3**
1	2025-04-23	N	American Toad Spring Peeper	1 3	2 n/a
	2025-05-27		Spring Peeper Gray Treefrog	2 1	14 2
	2025-06-24		Gray Treefrog	1	3

Notes: "-" indicates no calls heard

4.6.3 Mammals

Incidental mammal species observations on the Site included: White-tailed Deer tracks (*Odocoileus virginianus*), Eastern Raccoon (*Procyon lotor*), Grey Squirrel (*Sciurus carolinensis*), Red Squirrel (*Sciurus vulgaris*), and Eastern Cottontail (*Sylvilagus floridanus*).

4.6.3.1 Bats

4.6.3.1.1 Bat Roost Habitat in Treed Areas

Given the small size and composition of the treed communities on the Site, transects were walked in each treed ELC Community to document snags for the bat maternity roost survey. Individual trees that met the criteria were documented and georeferenced with a hand-held GPS unit. Based on this survey, no suitable snags or leaf clusters were documented on the Site. The ecosites identified on the were classified as young successional forests, established within the last 40 years. The age, species composition, and health of the three forested communities on the Site likely resulted in a lack of suitable bat habitat. In particular, Community 2 consisted of young, healthy, Manitoba Maple and Black Walnut; Community 3 was dominated by young, healthy, Balsam poplar; and Community 5, was planted Norway Spruce. Further, no rocky outcrops, rock piles / walls, or historical foundations were documented during Cambium's investigations.

4.6.3.1.1 Bat Habitat in Anthropogenic Structures

Two exit surveys were completed to document utilization of the on-Site barn by bats. Field staff observed two bats flying overhead during Exit Survey 1, and six bats flying overhead during Exit Survey 2. No bats were observed exiting or entering the barn. No guano or signs of bat usage were documented during the visual inspection of the interior and exterior of the barn structure.

The handheld Echo Meter Touch 2 device was used in conjunction with exit surveys to identify bat species during the exit survey. Based on the handheld acoustic readings, Hoary Bat (*Lasiurus cinereus*) was the only species documented during the exit surveys; however, this species is not known to utilize anthropogenic structures, preferring to roost alone in the foliage of deciduous trees (Lacki, Hayes, & Kurta, 2007).

5.0 Assessment of Significance and Impact Assessment

This section assesses the significance of natural features and functions (as outlined in Section 3.3.4) observed on the Site or on adjacent lands, as well as the potential impacts to those features that may result from the proposed project, in consideration of the recommended mitigation measures.

5.1 Significant Woodlands

5.1.1 Evaluation of Local Criteria

Significant woodlands are natural heritage features that are afforded protection under provincial policy within Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River), which occur to the south and east of the Canadian Shield.

The Simcoe County Official Plan (2023) defines a significant woodland as: *an area which is ecologically important in terms of features such as species composition, age of trees and stand history; functionally important due to its contribution to the broader landscape because of its location, size or due to the amount of forest cover in the planning area; or economically important due to site quality, species composition, or past management history.*

However, the Simcoe County Official Plan also states that local municipalities shall determine whether a woodlot is a significant woodland within a Settlement Area based on criteria established within the local Official Plan. In particular, Section 3.8.14 of the Simcoe County Official Plan states:

> *Local municipalities shall determine whether a woodlot is a significant woodland within a settlement area based on criteria established within the local official plan.*

As such, the Simcoe County Official Plan defers to the Township of Clearview Official Plan in determining and delineating significant woodlands.

The Township has identified significant woodlands on Schedule C-2. Based on a review of Schedule C-2, no significant woodlands have been identified on-site. Further, based on historical imagery dating back to 1978, the Site, and adjacent lands to the north were

previously cleared of woodlands and appeared to be entirely used for agricultural purposes (County of Simcoe, 2025). Therefore, based on the Township's mapping, and given the past cultural disturbances, the woodlands on the Site and on adjacent lands are not considered significant.

5.2 Significant Wildlife Habitat

The NHRM includes high level guidance for identifying SWH, which is further refined in the Significant Wildlife Habitat Technical Guide (SWHTG) and the Significant Wildlife Habitat Criteria Schedules (SWHCS) (MNRF, 2000; MNRF, 2015a). These documents are the basis for identifying areas and features that are considered SWH by the province, and were used in this study to determine SWH at the Site and on adjacent lands.

There are four general categories of significant wildlife habitat: seasonal concentration areas, rare vegetation communities or specialized habitats for wildlife, species of conservation concern, and animal movement corridors. Each category includes several different types of SWH.

The table provided in Appendix F outlines all the types of SWH that are to be considered in Ecoregion 6E according to the SWHCS, and includes an assessment of whether or not the criteria for 'candidate' SWH is present at the Site for each type (i.e., presence/absence of listed ELC ecosite codes and/or habitat criteria). Where 'candidate' SWH is present at the Site, the table goes on to compare the habitats and results of field surveys at the Site to the defining criteria as listed in the SWHCS to determine presence/absence of 'confirmed' SWH. Where 'confirmed' SWH is identified through the analysis presented in Appendix F, those types of SWH are discussed below in the context of the proposed development. Where presence of 'confirmed' SWH can not be ruled out, a conservative approach has been implemented by identifying 'candidate' SWH.

5.2.1 Seasonal Concentration Areas

Seasonal concentration areas are areas where wildlife occur in aggregations at certain times of year. Examples include concentrations of wildlife during migration, hibernation, wintering areas or specialized breeding areas for colonial species.

The SWHCS for ecoregion 6E identifies the following types of seasonal concentrations of animals that may be considered significant wildlife habitat:

- Waterfowl stopover and staging areas (aquatic and/or terrestrial)
- Shorebird migratory stopover areas
- Raptor wintering areas
- Bat hibernacula
- Bat maternity roost colonies
- Turtle wintering areas
- Reptile hibernaculum
- Colonially nesting bird breeding habitat (bank / cliff)
- Colonially nesting bird breeding habitat (tree / shrub)
- Colonially nesting bird breeding habitat (ground)
- Migratory butterfly stopover areas
- Landbird migratory stopover areas
- Deer yarding and winter congregation areas

No types of seasonal concentration area SWH from the above list that have been identified at the Site based on the analysis presented in Appendix F.

Within the 120 m adjacent lands, the pond (Community 9) located to the north of the Site, may provide a turtle wintering area outlined in Appendix F. No turtles were documented on or adjacent to the Site during the field investigations; however no targeted surveys were

completed. Based on a review of the grading plan, minor grading is proposed on adjacent lands, immediately north of the Site, within the upgradient drainage feature, which attenuates and controls discharge from the open water pond (Community 9). The proposed works include minor modifications to the existing drainage swale to accommodate drainage post-development. The proposed swale is captured within the proposed Conceptual Restoration and Enhancement Area, discussed in Section 6.1, which is intended to be naturalized post-construction. As such, the proposed works is considered temporary impacts and it is not anticipated to negatively impact the long-term function of the area. Provided the mitigation and recommendations provided herein are implemented, no impacts to any off-Site seasonal concentration areas are anticipated.

5.2.2 Rare Vegetation Communities or Specialized Habitats for Wildlife

5.2.2.1 Rare Vegetation Communities

Rare vegetation communities are those that are considered rare in the province (communities assigned an SRANK of S1 to S3 (extremely rare to rare-uncommon) by the NHIC) as well as vegetation communities that may be rare in a planning area. Such habitats are considered more likely to support rare species of plants or wildlife. Rare vegetation communities to be considered in ecoregion 6E are:

- Cliffs and talus slopes
- Sand barren
- Alvar
- Savannah
- Tallgrass prairie
- Other communities considered provincially rare
- Old growth forests

No types of rare vegetation community SWH from the above list have been identified at the Site or on adjacent lands based on the analysis presented in Appendix F.

5.2.2.2 Specialized Habitats for Wildlife

Specialized habitats are those habitats that support wildlife during a critical part of the life processes, primarily during breeding, but also includes specific features or micro-habitats, such as seeps. Specialized habitats that are to be considered in ecoregion 6E are:

- Waterfowl nesting areas
- Bald eagle (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*) nesting, foraging and perching habitat
- Woodland raptor nesting habitat
- Turtle nesting areas
- Seeps and springs
- Amphibian breeding habitat (woodland / wetland)
- Woodland area sensitive bird breeding habitat

No specialized habitats for wildlife SWH from the above list have been identified at the Site or on adjacent lands based on the analysis presented in Appendix F.

5.2.3 Habitat for Species of Conservation Concern

Habitat for species of conservation concern (SCC) includes certain habitats for groups of species that are declining provincially, as well as individual species that are considered rare. The types of habitat for SCC to be considered in ecoregion 6E are:

- Marsh bird breeding habitat
- Open country bird breeding habitat
- Shrub / early successional bird breeding habitat
- Terrestrial crayfish

- Special concern or rare wildlife species, including:
  - Species that are ranked S1-S3 by the NHIC and/or are provincially tracked
  - Species with populations that are significantly declining or have a high percentage of their global population in Ontario
  - Species listed as special concern under the ESA
  - Species listed as threatened or endangered under SARA only
  - Regionally or locally rare species, where lists are available

The following text provides a discussion of the 'candidate' or 'confirmed' types of habitat for species of conservation concern SWH from the above list that have been identified at the Site or on adjacent lands based on the analysis presented in Appendix F.

Based on the habitat-based screening, provided in Appendix C, four special concern species have potential to occur on the Site, Monarch Butterfly (*Danaus plexippus*), Yellow-banded Bumblebee (*Bombus terricola*), Barn Swallow (*Hirundo rustica*) and Snapping Turtle (*Chelydra serpentina*); therefore qualifying as a candidate SWH type (Special Concern and Rare Wildlife Species).

Monarch Butterfly relies on milkweed plants as a food source for growing caterpillars, however adult monarchs, are habitat generalists, foraging in diverse habitats for nectar. As such, the Site could provide potential habitat for this species. Similarly, Yellow-banded Bumble Bee are habitat generalists, typically nesting in woodlands or edge habitat, adjacent to meadows, grasslands, and farmlands to collect pollen and nectar from a variety of plant genera. As such, the Site could provide potential habitat for this species. Cambium does not consider the subject habitat type present on-site to be significant at the local level. Extensive similar, or better habitats, are present within the local landscape. No Monarch Butterfly or Yellow-banded Bumble Bee were observed during field investigations.

An inactive Barn Swallow nest was observed in the on-Site barn; however, no Barn Swallows were documented during the breeding bird surveys or incidentally during any other field investigations. As such, the Site could provide potential habitat for this species, however, no

active nesting was documented. To minimize negative impacts to this species and all other bird species protected under the *Migratory Birds Convention Act, 1994*, vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 1 to August 31 in the local area (as per Environment and Climate Change Canada Guidelines).

Based on our observations during field investigations and the ELC classifications described in Section 4.4, the wetland and pond on/adjacent to the Site have the potential to provide suitable habitat for Snapping Turtle, although no Snapping Turtles were observed during the field investigations. The majority of the wetland and the pond will be retained, with only a small portion of the wetland (0.032 ha) that extends onto the Site to be permanently impacted by the proposed development. As discussed in Section 5.2.1, grading is proposed on adjacent lands, immediately north of the Site, within the upgradient drainage feature, which attenuates and controls discharge from the open water pond (Community 9). The proposed works include minor modifications to the existing drainage swale to accommodate drainage post-development. The proposed swale is captured within the proposed Conceptual Restoration and Enhancement Area, discussed in Section 6.1, which is intended to be naturalized post-construction. As such, the proposed works are considered temporary and not anticipated to negatively impact the function of the area long-term. Provided the mitigation and recommendations provided herein are implemented, no impacts to any off-Site seasonal concentration areas are anticipated.

5.2.4 Animal Movement Corridors

Animal movement corridors are naturally vegetated parts of the landscape used by animals to move from one habitat to another, typically in response to different seasonal habitat requirements. The SWHCS indicates that movement corridors are to be identified only where certain types of SWH have been identified according to the SWHCS, including:

- Amphibian movement corridors: to be identified when significant amphibian breeding habitat (wetland) is present.
- Deer movement corridors: to be identified when deer wintering habitat is present.

No animal movement corridor SWH from the above list have been identified at the Site or on adjacent lands based on the analysis presented in Appendix F.

5.3 Fish Habitat / Intermittent Stream

A tributary to the Mad River is present east of the Site boundary (off site), paralleling Fairgrounds Road South, which may provide seasonal fish habitat. A 10 m setback is recommended to provide protection for this feature as shown on Figure 3. The 10 m setback is considered sufficient to protect the form and function of the feature as it is considered a low sensitivity feature due to its intermittent flow regime and low complexity form (i.e., channelized and constrained).

The proposed development includes a road crossing of the watercourse (see Figure 3). Through the incorporation of industry standards and best management practices for in-water work, we expect both direct and indirect impacts to fish habitat can be appropriately mitigated. Nonetheless, a DFO Request for Project Review should be completed once the proposed crossing design has been established to ensure harmful alteration, disruption, or destruction (HADD) of fish habitat, as defined by the Act, can be avoided.

The subject watercourse is also afforded protection under the Ontario Regulation (41/24), conformity with this regulation is discussed in Section 7.1.1.

5.4 Habitat of Endangered and Threatened Species

A list of SAR, with potential to occur in the general vicinity of the Site has been compiled based on known species' ranges, habitat requirements, and review of background information sources (as listed in Section 3.1). In addition, the list has been augmented with direct field observations from the Study, as detailed in the previous sections. Cambium has employed a habitat-based screening, supplemented with targeted field surveys, when necessary, in order to identify suitable habitat for species located on or adjacent to the Site. A detailed habitat suitability analysis is provided in Appendix C and a discussion of the results is provided below.

5.4.1 Butternut

Butternut trees across North America have been infected by a fungus known as Butternut canker, which is usually fatal. Butternut is an endangered species and protected under Ontario's *Endangered Species Act, 2007*. Ontario Regulation 830/21 states that before a Butternut tree can be removed or harmed, its health must be evaluated by a person designated to assess the health of butternut trees. Butternut trees are divided into three categories based on their health:

- Category 1: in the advanced stages of disease as a result of butternut canker (formerly "non-retainable")
- Category 2: the tree does not have butternut canker or the disease is not as advanced (formerly "retainable")
- Category 3: could be useful in determining how to prevent or resist butternut canker (formerly "achievable")

Each category of tree dictates different requirements under the ESA *Ontario Regulation 830/21* Section 23.7. For Category 1 trees, an assessment report must be sent to the MECP office 30 days before the proposed removal and ministry staff must be allowed to visit within the 30-day period, if asked. After 30 days, you can remove or harm any Category 1 tree. Up to fifteen Category 2 trees can be removed, but registration with the MECP is required and additional rules must be followed (i.e., plant butternut seedlings and monitoring requirements for multiple years, or contribute payment to the Species Conservation Fund). Up to five Category 3 trees can be removed, but registration with the MECP is required and additional rules must be followed (i.e., plant butternut seedlings and monitoring requirements for multiple years or contribute payment to the Species Conservation Fund).

As outlined in Section 4.4.1.1, four Butternuts were documented on the Site (see Figure 2). A Butternut Health Assessment was completed by a qualified Assessor at Cambium, in June 2025. Based on this assessment all four trees were identified as Category 1.

To comply with provincial legislation, results from the BHA's have been submitted to MECP for review, initiating the 30-day audit period.

5.4.2 Bats

Maternity roosting habitat surveys were completed on the Site but did not identify suitable snags that could be used for bat maternity roosting sites. Exit surveys completed on the Site documented low activity of Hoary Bats in the vicinity of the barn; however, based on habitat preferences for this species it is thought these observations were likely bats foraging, as this species is not known to utilize anthropogenic structures. As such, potential use of the Site by SAR bats (Little Brown Myotis (*Myotis lucifugus*), Northern Myotis (*Myotis septentrionalis*), Tri-coloured Bat (*Perimyotis subflavus*), Eastern Red Bat (*Lasiurus borealis*), Hoary Bat (*Lasiurus cinereus*), and Silver-haired Bat (*Lasionycteris noctivagans*)) is expected to be low, and if present, would be in the form of a general movement or foraging activities. Given the local landscape, foraging habitat is not a limiting habitat type. Further, given the amendments to the ESA within *Bill 5: Protect Ontario by Unleashing our Economy Act, 2025*, foraging habitat is no longer afforded protective provision under the ESA.

To mitigate impacts from the project, it is recommended that vegetation and structure removal on the Site occur outside of the active roosting season for bats, which extends from April 1 – November 30 of any given year (i.e., removal recommended between December 1 and March 31). If any individuals are encountered, activities should cease until consultation MECP has occurred. Provided these mitigation measures are implemented, we are of the opinion that that the proposed development will not contravene the ESA.

5.5 Additional Natural Features

5.5.1 Wetlands

As noted in Section 4.2 and 4.4, a mapped unevaluated wetland feature is present on/adjacent to Site (see Figure 2). The unevaluated wetland consisted of a Cattail Mineral Shallow Marsh (MAS2-1). Based on the analysis presented in this EIS, the portion of wetland that extends on

the Site does not exhibit significant habitat characteristics identified in the PPS (e.g., non-provincially significant, no significant wildlife habitat, no significant woodlands, etc.).

However, despite provisions in the PPS, the wetland is still afforded regulatory protections under O.Reg. 41/24 by NVCA, as it relates to natural hazards. As such, approval from NVCA will be required to facilitate the removal, prior to site alteration.

Based on the current Site Plan, the proposed development will require the removal of 0.032 ha of the subject wetland, as shown on Figure 3. Mitigation measures are provided in Section 6.0 to minimize indirect impacts to adjacent features on the landscape. Potential restoration and enhancement options are discussed in Section 6.1 for the proposed wetland removal area.

6.0 Recommended Mitigation, Best Practices, and Monitoring

The mitigation measures and best management practices outlined below should be implemented on the Site, to minimize the potential for adverse impacts to natural heritage features and functions on and adjacent to the Site.

6.1 Setbacks, Restoration and Enhancements

A 10 m setback has been recommended to protect the form and function of the adjacent watercourse (tributary of Mad River), as shown on Figure 3. The proposed development includes a road crossing of the watercourse. Through the incorporation of industry standards and best management practices for in-water work, we expect both direct and indirect impacts to fish habitat can be appropriately mitigated. Nonetheless, a DFO Request for Project Review should be completed once the proposed crossing design has been established to ensure harmful alteration, disruption, or destruction (HADD) of fish habitat, as defined by the Act, can be avoided.

Based on the current Site Plan, the proposed development will require the removal of 0.032 ha of wetland (NVCA regulated feature), as shown on Figure 3. As such, the removals are subject to the offsetting requirements outlined in the *Achieving Net Gains through Ecological Offsetting* document (Nottawasaga Valley Conservation Authority, 2021). Based on this guidance document, the removal of the wetland would require compensation at a 2:1 ratio to achieve alignment with NVCA's Ecological Offsetting policies. In addition, any encroachment into the 30 m wetland setback (provided it is a naturally-occurring upland vegetation community) would need to be offset at a 1:1 ratio. Offsetting ratios, and total area of gain required have been provided in Table 8 below.

Table 8 Offsetting Ratio Calculations

Regulated Area	Offsetting Ratio	Area of Loss (ha)	Required Area of Gain
Wetland	1:2	0.032	0.064
Wetland Setback (30 m) **Excludes CVR lands*	1:1	0.35	0.35
		Total Required Area of Gain:	**0.414 ha**

NVCA's Ecological Offsetting policies provide two potential offsetting paths, one being a proponent-led offsetting project, the alternate being cash-in-lieu compensation.

Cambium has identified potential areas for future restoration and enhancement, shown as "Conceptual Restoration and Enhancement Area" on Figure 3. The "Conceptual Restoration and Enhancement Area" is comprised of lands currently proposed for drainage swales along the northern Site boundary, lands within the recommended 10 m watercourse setback, and an area of grading which extends onto adjacent lands to the north.

Cambium recommends a hybrid approach to offsetting, reducing the total cash-in-lieu compensation through on-site restoration activities. This would necessitate a site-specific Restoration and Vegetation Planting Plan be developed during detailed design. The proposed areas would need to be naturalized with wetland seed mix (where hydrological conditions permitting) and supporting vegetation to naturalize the areas post-development. In addition, the details of the proponent-led project would need to be reviewed and approved by NVCA and be monitored and maintained following development.

Alternatively, the wetland removal could be compensated for through cash-in-lieu at a rate of $120,000/ha.

In either scenario, a demonstration of feasibility and conformity with applicable policies has been provided with sufficient detail to support the proposed *Planning Act* application. Cambium

recommends that the supporting deliverables be a condition of Draft Plan approval, which can be provided during the detailed design stage of the project.

6.2 Mitigation for Significant Natural Features

Vegetation removal or alteration should take place outside the breeding bird season (April 1 to August 31) and the active roosting period for bats (April 1 – November 30). Should any clearing be required during the breeding bird season, nest searches conducted by a qualified person must be completed within 48 hours prior to clearing activities. If nests are found, work within the area must cease until the nest has fledged, as per the federal *Migratory Birds Convention Act*. Should any clearing be required during the active roosting period for bats, please contact the Ministry of Environment, Conservation and Parks for further direction (e.g. acoustic monitoring, exit surveys) to ensure conformity with the *Endangered Species Act.*

6.3 Best Management Practices

Table 9 Best Management Practice Recommendations

Potential Impact	Recommended Best Practice
Erosion and Sedimentation	Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas. Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart. This key control measure will help prevent sediment from entering surface water features (i.e., wetlands and the watercourse) in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that may or may not have arisen as a result of erosion, should be directed to a check dam structure, prior to discharging to off-site areas. Construction activities that require earthworks (e.g., grading, excavation, etc.) should be scheduled to avoid dates of heavy rainfall events and times of high runoff volumes.
Wildlife: Reptiles (Disturbance and Harm)	Turtles and snakes are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses, and waterbodies. Sediment fencing can function as wildlife exclusion fencing. To exclude wildlife from the Site, sediment fencing should be installed

Potential Impact	Recommended Best Practice
	around the entire perimeter of the construction area prior to the earlier of May 1 or commencement of Site preparation to keep turtles and snakes from entering the construction area. This fencing should be made of heavy-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below surface of the ground, with an above-ground height of at least 60 cm. The sediment fence should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. A designated point of ingress/egress should be identified, and a moveable barrier be constructed, to allow for the Site to fully remain enclosed while allowing vehicular access to the Site as needed. The construction area should also be actively inspected for turtles and snakes each day prior to the start of work throughout the duration of construction. As the Site is located adjacent to potential habitat for turtles, workers should be aware of the nesting season for turtles, which extends from May 15 to August 15. All stockpiled materials should be kept inside the exclusion fencing area and ideally should be covered and well secured around the base, to prevent turtles from nesting in loose substrates. Should any nesting turtles be encountered, work should stop immediately, and the turtle should be left to finish nesting undisturbed. The turtle should be photographed, and the nest marked to ensure it is not disturbed during construction, or until eggs have hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated. If any individuals are encountered, they should be photographed and allowed time to move out of harm's way.
Species at Risk (SAR; Threatened and Endangered)	SAR observations, including most species of snakes and turtles, should be reported to the Natural Heritage Information Centre (NHIC). If any individuals are encountered, they should be photographed and allowed time to move out of harm's way. SAR should not be handled by unauthorized individuals.
Spread of Invasive Species	Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include: 1. Revegetate with species native to the local area.

Potential Impact	Recommended Best Practice
	2. Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media. 3. Get to know the most common invasive species in the area. 4. Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Equipment and vehicles coming into the work area should be free of soil and seeds that could introduce non-native and invasive species following the Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention (Halloran, 2013) 5. Immediately eradicate invasive species if they are observed on the property. 6. Do not compost invasive species; put them in plastic bags and dispose of them in the garbage. 7. Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions. An excellent resource for identifying and controlling invasive species can be found through the Ontario Invasive Plant Council: Home - Ontario Invasive Plant Council (ontarioinvasiveplants.ca) (OIPC, 2022)
Anthropogenic Impacts – Noise	Noise is not expected to increase significantly because of the proposed development as it is consistent with the land use on the surrounding properties. Maintaining the wooded areas surrounding the natural features on the Site will serve to buffer wildlife within the natural areas from noise-related impacts. Temporary acute noise may occur during construction activities and should follow appropriate local noise by-laws. All equipment should be equipped with appropriate mufflers to mitigate noise levels during construction.
Anthropogenic Impacts – Lighting	Artificial lighting can have an impact on nocturnal movement of wildlife within natural areas. To minimize impacts to wildlife, it is recommended that outdoor lights be operated on timers, rather than by motion detection. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting. Lighting in common areas should be capped to direct light to the intended area of the ground to limit light pollution.

7.0 Policy Conformity and Regulatory Compliance

7.1 Provincial Policies and Regulations

Based on the natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development is in conformity with the PPS. Conformity with applicable natural heritage policy is further demonstrated in Table 10. Note that natural heritage and hydrologic feature types not relevant to the development application have been intentionally omitted from the tables below.

Table 10 PPS Policy Conformity Summary

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Significant Wildlife Habitat (including habitat of special concern species)	Potentially	Potentially	Yes, 4.1.5 d); 4.1.8
	Explanation: Candidate SWH was documented for four special concern species. Details are provided in Section 5.2 outlining potential negative impacts and associated mitigation measures and recommendations. Provided the mitigation and recommendations outlined herein are implemented, Cambium is of the opinion that negative impacts to the ecological function of the identified natural heritage features can be avoided and/or adequately mitigated through site-specific avoidance and enhancement measures.		
Habitat of Threatened and Endangered Species	Yes	Potentially	Yes, 4.1.7
	Explanation: The woodlands have the potential to support SAR bats, although potential impacts to the species on the local landscape is considered low. To mitigate impacts from the project, it is recommended that vegetation removal occur outside of the active roosting season for bats, which extends from April 1 – November 30 of any given year of any given year (i.e., clearing recommended between December 1 and March 31). If any individuals are encountered, activities should cease until consultation MECP has occurred. Provided mitigation measures are		

Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
	implemented, we are of the opinion that impacts to the species can be avoided and/or adequately minimized.		
Fish Habitat	No	Potentially	Yes, 4.1.6; 4.1.8
	Explanation: A 10 m setback to the adjacent watercourse is recommended to protect the form and function of the feature. A DFO Request for Project Review should be completed once the proposed crossing design has been established to ensure the harmful alteration, disruption, or destruction (HADD) of fish habitat, as defined by the Act, can be avoided.		

7.1.1 Conservation Authority Act

The proposed development will require the removal of a portion of unevaluated wetland (regulated feature) and encroachment into regulated areas (wetland and watercourse setbacks) and will therefore require approval from NVCA under O.Reg 41/24. Details are provided in Section 6.1 outlining how the proposed development can be completed in conformity with Ontario Regulation 41/24 and NVCA's *Achieving Net Gains through Ecological Offsetting* document (Nottawasaga Valley Conservation Authority, 2021).

A Natural Hazard Study was completed by Tatham Engineering, to delineate the flood and erosion hazard limits associated with the tributary. Based on this study the regional flood limit was contained to the banks, and erosion hazards were not applicable.

7.2 Municipal Policies and By-laws

As outlined in Section 2.2, the Site is designated as "Future Development" on the Township of Clearview's Official Plan (Schedule B-4). However, the Township has also mapped natural heritage features on Schedule C of the Official Plan. Based on a review of Schedule C, a

natural heritage area has been identified on/adjacent to the Site, as well as a watercourse. Schedule C includes three sub-schedules to provide greater detail on wetlands (Schedule C-1), woodlands (Schedule C-2), and steep slopes (Schedule C-3). No wetlands or woodlands are mapped on the Site, but Schedule C-3, shows a “steep slope” overlapping the Site. As outlined above, the discussion and evaluation of natural hazards are provided by other consultants, with details provided under separate cover.

Policy 5.2.1 of the Offical Plan outlines the features and area within the Township’s natural heritage system which are generally consistent with the features protected through the PPS, with the addition of public lands as defined in the *Publics Lands Act* and linkage areas as defined in Policy 5.2.1.9. As detailed within this report, signficant wildlife habitat, habitat of endangered and threatened species, and fish habitat have been identifed as potentially present on or adjacent to the Site.

Policy 5.2.1.4 outlines that development or site alteration is not permitted in habitat of endangered and threatened species or fish habitat except in accordance with provincial and federal requirements. Provided the mitigation measures and recommendations outlined above in Section 6.0 are implemented, Cambium is of the opinion that the proposed development can proceed in accordance with provincial and federal requirements.

Regarding signifcant wildlife habitat (SWH), Policy 5.2.1.4 d) outlines that development or site alteration is not permitted in SWH unless it has been demonstrated that there will be no negative impacts on the feature or its function. Details regarding SWH and potential negative impacts are provided in Section 5.2 of this report. Provided the mitigation and recommendations outlined herein are implemented, Cambium is of the opinion that negative impacts to the ecological function of the identified natural heritage features can be avoided and/or adequately mitigated through site-specific avoidance and enhancement measures.

In addition, although the watercourse (i.e., potential fish habitat) is located on adjacent lands, the Township’s Offical Plan has policies regarding development adjacent to natural heritage features, specifically Policy 5.2.1.5. The subject EIS has been prepared to address this policy,

and demonstrate that the proposed development will not have negative impacts on the adjacent features and their functions.

The Township Official Plan also has specific policies for key hydrologic features, which include intermittent streams and wetlands, as outlined in Policy 5.3.1.1. These policies require hydrologic/hydrogeologic studies for any development within 120 m of a key hydrologic feature. Hydrogeologic studies were completed by Tatham Engineering and are provided under separate cover. Based on the preliminary water balance completed by Tatham (Tatham Engineering, 2025), the annual pre-development infiltration volume for the Site was calculated to be 6,074 m^3/year, with the annual post-development infiltration volume being 2,220 m^3/year, resulting in a deficit of 3,854 m^3/year. The proposed open-bottom underground storage tank will offset this infiltration deficit, and result in an increase of annual infiltration on the Site, of 4,250 m^3. Post-development peak flow rates are to be controlled to pre-development levels for 1:2-year to 1:100-year design storms to ensure no adverse impacts on drainage systems downstream. This will be achieved through the underground storage facility, which will outlet to a proposed storm sewer, and eventually to the adjacent watercourse. Water quality will be controlled via two DM-OS OGS units, which will have a TSS removal efficiency of 94%, exceeding the 80% requirement. In general, the drainage patterns on-the Site will be maintained, as post-development catchments 202 and 203 flows will be conveyed to the watercourse via overland flow routes and catchments 201 and 204 flows will be conveyed to the underground tank which will ultimately be discharged to the watercourse.

Further to the above, Policy 5.3.1.12 and 5.3.1.13 states that *any development occurring adjacent to a watercourse or surface water feature shall be required:*

(a) to provide a sufficient setback from the top-of-bank or from the high-water mark, whichever is further from the watercourse or feature in question; and

(b) to maintain the lands within the setback as a naturally vegetated buffer.

And that *the distance of the setback referred to in Policy No. 5.3.1.12 above shall generally be no less than 30 metres, with the specific setback distance to be determined on-site in consultation with a qualified professional, at no expense to the Township.*

However, Policy 5.3.1.15 states that "*Within a Settlement Area, the minimum 30-metre setback referred to in No. 5.3.1.13 may be reduced if:*

(a) the existing pattern of development in the vicinity of the site makes such a reduction appropriate; and

(b) the Township, in consultation with the NVCA and any other agency having jurisdiction, is satisfied that the reduced setback will have no negative impact on the watercourse or surface water feature.

As outlined in Section 5.3 a reduced setback of 10 m is considered sufficient to protect the form and function of the feature as it is considered a low sensitivity feature due to its intermittent flow regime and low complexity form (i.e., channelized and constrained). The potential to support a reduced setback due to the channelization and low degree of naturalization was outlined in NVCA's response to the Terms of Reference correspondence, provided in Appendix A.

7.3 Federal Policies and Regulations

7.3.1 Species at Risk Act

The SARA applies to federal lands in Canada; however, at-risk aquatic and migratory bird species located on private property in Ontario also receive protection under the Act. No at risk aquatic species were documented on or adjacent to the Site.

7.3.2 Fisheries Act

Protection provisions in the federal *Fisheries Act* prohibit the harmful alteration, disruption or destruction (HADD) of fish habitat. Any work proposed within or near a watercourse must be assessed to determine the risk of causing HADD of fish habitat. Although the mitigation measures and best practices detailed in Section 6.0 are expected to minimize impacts to fish and fish habitat and align with agency guidance, the proposed works will require a formal review by DFO. A Request for Project Review should be completed once the proposed crossing design has been established.

7.3.3 Migratory Birds Convention Act, 1994

Nesting birds and their nests, eggs, and young are protected under the *Migratory Birds Convention Act*, 1994. Vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 1 to August 31 in the local area (as per Environment and Climate Change Canada Guidelines). Provided this timing window is respected, no impacts to breeding birds are anticipated.

8.0 Summary of Recommendations

The following recommendations are provided for the proposed development:

1. All required approvals and permits should be obtained prior to the commencement of site alteration or construction activities.
2. All development setbacks identified herein should be included on future Site Plans.
3. Vegetation removal or alteration should take place outside the breeding bird season (April 1 to August 31) and the active roosting period for bats (April 1 – November 30). Should any clearing be required during the breeding bird season, nest searches conducted by a qualified person must be completed within 48 hours prior to clearing activities. If nests are found, work within the area must cease until the nest has fledged, as per the federal *Migratory Birds Convention Act*. Should any clearing be required during the active roosting period for bats, please contact the Ministry of Environment, Conservation and Parks for further direction (e.g. acoustic monitoring, exit surveys) to ensure conformity with the *Endangered Species Act*.
4. Based on the current Site Plan, the proposed development will require the removal of 0.032 ha of wetland (NVCA regulated feature). As such, the removals are subject to the offsetting requirements outlined in the *Achieving Net Gains through Ecological Offsetting* document (Nottawasaga Valley Conservation Authority, 2021). Details and recommendations are provided in Section 6.1 to satisfy and demonstrate conformity with applicable policies, which can be completed during detailed design.
5. The proposed development includes a road crossing of the watercourse. Through the incorporation of industry standards and best management practices for in-water work, we expect both direct and indirect impacts to fish habitat can be appropriately mitigated. Nonetheless, a DFO Request for Project Review should be completed once the proposed crossing design has been established to ensure harmful alteration, disruption, or destruction (HADD) of fish habitat, as defined by the Act, can be avoided.

6. An Erosion and Sediment Control (ESC) Plan that includes perimeter light duty sediment fencing should be implemented along the watercourse side of the construction area prior to the commencement of any Site alteration.

- Fencing should be properly keyed into the ground and securely fastened to vertical supports spaced ≤ 2 m apart.
- All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated.
- All ESC fencing should be removed following construction once exposed soils have been revegetated.
- Machinery or construction materials should be stored within the construction area throughout the construction period.

7. Turtles and snakes are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses, and waterbodies.
8. To exclude wildlife from the Site, sediment fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 1 or commencement of Site preparation to keep turtles and snakes from entering the construction area. This fencing should be made of heavy-duty sediment fence, staked at regular intervals, trenched-in at least 10-20 cm below surface of the ground, with an above-ground height of at least 60 cm. The sediment fence should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. A designated point of ingress/egress should be identified, and a moveable barrier be constructed, to allow for the Site to fully remain enclosed while allowing vehicular access to the Site as needed.
9. The construction area should also be actively inspected for turtles and snakes each day prior to the start of work throughout the duration of construction.
10. As the Site is located adjacent to potential habitat for turtles, workers should be aware of the nesting season for turtles, which extends from May 15 to August 15. All stockpiled

materials should be kept inside the exclusion fencing area and ideally should be covered and well secured around the base, to prevent turtles from nesting in loose substrates. Should any nesting turtles be encountered, work should stop immediately, and the turtle should be left to finish nesting undisturbed. The turtle should be photographed, and the nest marked to ensure it is not disturbed during construction, or until eggs have hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated. If any individuals are encountered, they should be photographed and allowed time to move out of harm's way.

11. Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands, woodlands, and watercourses. Best management practices to reduce the spread of invasive species include:

- Revegetate with species native to the local area.
- Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media.
- Get to know the most common invasive species in the area.
- Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property. Equipment and vehicles coming into the work area should be free of soil and seeds that could introduce non-native and invasive species following the Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention (Halloran, 2013)
- Immediately eradicate invasive species if they are observed on the property.
- Do not compost invasive species; put them in plastic bags and dispose of them in the garbage.
- Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions.

12. Noise is not expected to increase significantly because of the proposed development as it is consistent with the land use on the surrounding properties. Temporary acute noise may occur during construction activities and should follow appropriate local noise by-laws. All equipment should be equipped with appropriate mufflers to mitigate noise levels during construction.
13. Artificial lighting can have an impact on nocturnal movement of wildlife within natural areas. To minimize impacts to wildlife, it is recommended that outdoor lights be operated on timers, rather than by motion detection. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting. Lighting in common areas should be capped to direct light to the intended area of the ground to limit light pollution.
14. Though not identified in the field inventories, any subsequently identified SAR discovered on the property must be left undisturbed as required by the Endangered Species Act, 2007. If any SAR individuals are encountered, they should be photographed and allowed time to move out of harms way. All SAR observations should be reported to the MNRF Natural Heritage Information Centre.

9.0 Closing

In closing, potential negative impacts associated with the proposed development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 8.0 are followed. The information presented herein demonstrates that the proposed development can be carried out in a way that conforms with applicable policies and/or will not adversely impact natural heritage and hydrologic features and function identified on or adjacent to the subject Site.

Respectfully submitted,

Cambium Inc.

Danielle Leal, B.Sc. Coordinator / Ecologist	Camden Jermey, B.Sc., Can-CISEC Project Manager / Senior Ecologist

\\cambiumincstorage.file.core.windows.net\projects\21800 to 21899\21805-001 2826878 On - MSP - 7582 Cnty Rd 9\Deliverables\REPORT - EIS\Draft\2025-09-12 RPT EIS - 7582 County Rd 9.docx

10.0 References

Bird Studies Canada. (2005). *Atlas of the Breeding Birds of Ontario.*

Bird Studies Canada. (2008). *Marsh Monitoring Program Participant's Handbook for Surveying Amphibians.*

Conservation Ontario. (2022). *Conservation Ontario*. Retrieved from About Conservation Ontario: https://conservationontario.ca/about-us/conservation-ontario

County of Simcoe. (2025). *County of Simcoe Interative Mapping (GIS)*. Retrieved from https://opengis.simcoe.ca/

Crins, W. J., Gray, P. A., Uhlig, P. W., & Wester, M. C. (2009). *The Ecoregions of Ontario, Part I: Ecozones and Ecoregions.* Peterborough, Ontario: Ministry of Natural Resources: Inventory, Monitoring and Assessment. Retrieved from https://dr6j45jk9xcmk.cloudfront.net/documents/2712/stdprod-101587.pdf

Fisheries and Oceans Canada. (2022). *Aquatic Species at Risk Map.* Retrieved from Fisheries and Oceans Canada: http://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html

Government of Ontario. (2007, August). *O.Reg 230/08: Species at Risk in Ontario List under Endangered Species Act, 2007, S.O. 2007, c.6.* Retrieved from e-Laws: https://www.ontario.ca/laws/regulation/080230

Government of Ontario. (2022). *Aquatic Resource Area Summary.* Retrieved from Land Information Ontario: https://www.ontario.ca/data/aquatic-resource-area-survey-point

Halloran, J. (2013). *Clean Equipment Protocol for Industry: Inspecting and Cleaning Equipment for the Purposes of Invasive Species Prevention.* Peterborough: Ontario Invasive Plant Council.

Heck, R., Kroetsch, D., Lee, H., Leadbeater, D., Wilson, E., & Winstone, B. (2017). *Characterizing Sites, Soils & Substrates - Volume 1 - Field Description Manual.* School of Environmental Sciences, University of Guelph.

Lacki, M. J., Hayes, J. P., & Kurta, A. (2007). *Bats in Forest Conservation and Management.*

Lee, H. T., Bakowsky, W. D., Riley, J., Bowles, J., Puddister, M., Uhlig, P., & McMurray, S. (1998). *1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application.* Ministry of Natural Resources, South Central Region, Science.

Lee, H., Bakowsky, W., Riley, J., Bowles, J., Puddister, M., uhlig, P., & McMurray, S. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and Its Application.* Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guid FG-02: Ministry of Natural Resources.

Ministry of Environment Conservation and Parks. (2021). *Butternut Assessment Guidelines: Assessment of Butternut Tree Health for the Purposes of the Endangered Species Act, 2007.* Queen's Printer for Ontario.

Ministry of Municipal Affairs and Housing. (2024). *Provincial Planning Statement.*

Ministry of Natural Resources. (2022). *Ontario Wetland Evaluation System Southern Manual, 4th Ed.* Ontario.

Ministry of Natural Resources and Forestry. (2018). *Bobolink General Habitat Description.* Retrieved from Species at Risk: https://www.ontario.ca/page/bobolink-general-habitat-description

Ministry of Natural Resources and Forestry. (2018). *Eastern Meadowlark General Habitat Description.* Retrieved from Species at Risk: https://www.ontario.ca/page/eastern-meadowlark-general-habitat-description

Ministry of Natural Resources and Forestry. (2022). Retrieved from Make a Map: Natural Heritage Areas: http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US

Ministry of Natural Resources and Forestry. (2022). *Fish ON-Line*. Retrieved from https://www.gisapplication.lrc.gov.on.ca/FishONLine/Index.html?locale=en-US&site=FishONLine&viewer=FishONLine

Ministry of the Environment, Conservation and Parks. (2019). *Client's Guide to Preliminary Screening for Species at Risk.*

MNRF. (2000). *Significant Wildlife Habitat Technical Guide.* Ministry of Natural Resources and Forestry.

MNRF. (2010). *Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 Second Edition.* Ministry of Natural Resources and Forestry.

MNRF. (2014). *Significant Wildlife Habitat Mitigation Support Tool.* Ministry of Natural Resources and Forestry.

MNRF. (2015). *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.*]: Ministry of Natural Resources and Forestry.

MNRF. (2015a). Occurrence Survey Protocol for Blanding's Turtle (Emydoidea blandingii) in Ontario. Peterborough, Ontario: Ministry of Natural Resources and Forestry, Species at Risk Branch.

Nottawasaga Valley Conservation Authority. (2021). *Achieving Net Gains through Ecological Offsetting.*

Nottawasaga Valley Conservation Authority. (2023). *Mad River Subwatershed Health Check 2023.*

OIPC. (2022, August 2). *Ontario Invasive Plant Council*. Retrieved from Best Management Practices: https://www.ontarioinvasiveplants.ca/resources/best-management-practices/

Ontario Breeding Bird Atlas. (2001). *Guide for Participants.* Don Mills: Atlas Management Board, Federation of Ontario Naturalists.

Ontario Ministry of Natural Resources. (2013). *Ontario Wetland Evaluation System Southern Manual, 3rd Ed.* Ontario.

Ontario Nature. (2020). *Ontario Reptile and Amphibian Atlas.* Retrieved from Ontario Nature: https://www.ontarioinsects.org/herp

ORAA. (2023). *Ontario Reptile and Amphibian Atlas, 2009-2019.* Ontario Nature.

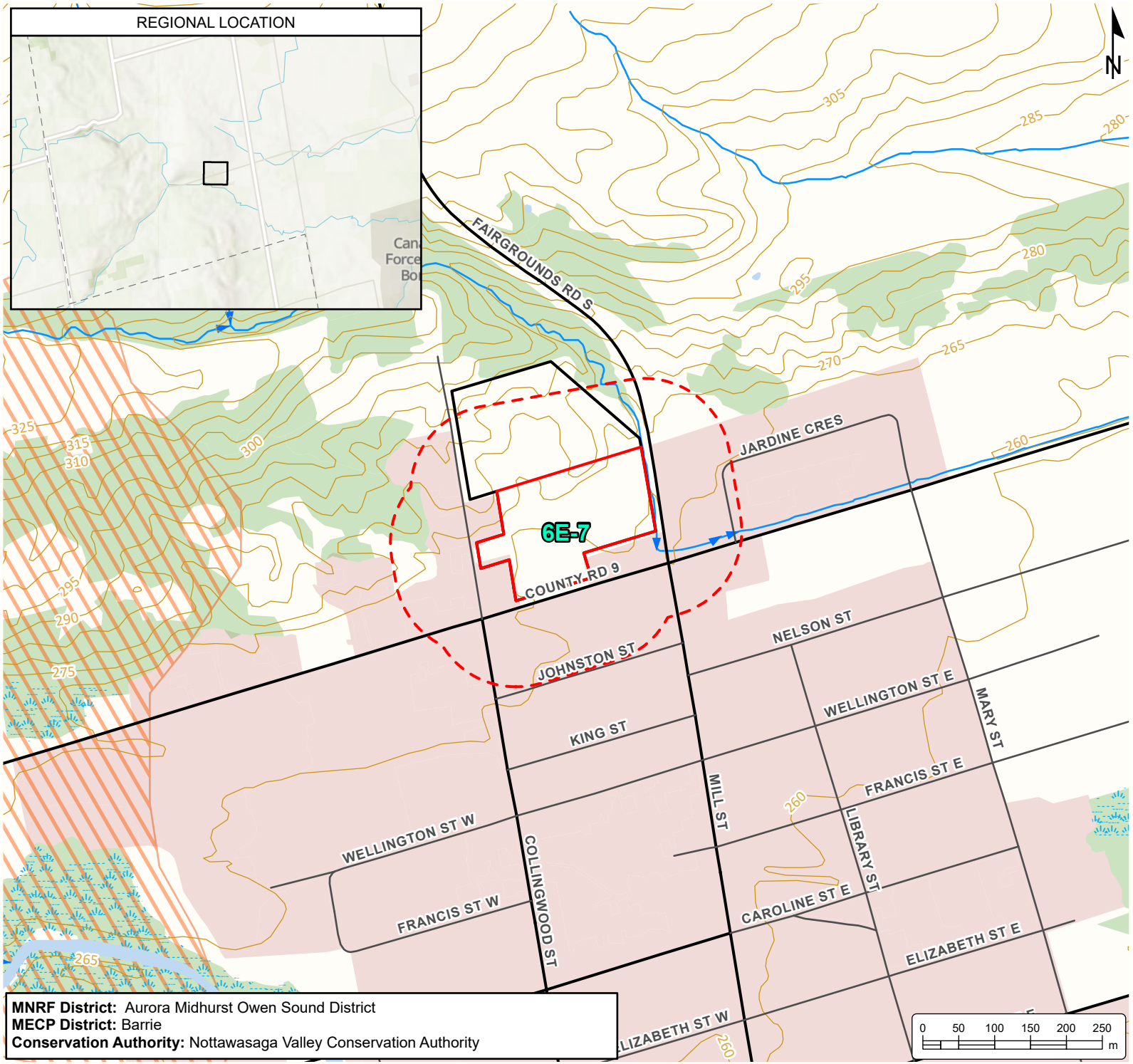
Tatham Engineering. (2025). *7582 County Road 9, Creemore - Functional Servicing & Stormwater Managment Report.*

11.0 Glossary of Terms

ANSI: Area of Natural and Scientific Interest
ARA: Aquatic Resources Area
ARA: Aggregate Resources Act
AS: Agricultural System
ATK: Aboriginal Traditional Knowledge
BMA: Bear Management Area
BMP: Best Management Practice
CA: Conservation Authority
CEAA: Canadian Environmental Assessment Act/Agency
CFA: Canadian Forestry Association
CFIP: Community Fisheries Involvement Program
CFS: Canadian Forestry Service
CHU: Critical Habitat Unit
CH: Cultural Heritage
CLI: Canada Land Inventory
CLU: Crown Land Use
COSSARO: Committee on the Status of Species at Risk in Ontario
CR: Conservation Reserve
CWIP: Community Wildlife Involvement Program
CWS: Canadian Wildlife Service
DFO: Fisheries and Oceans Canada
EA: Environmental Assessment
EAA: Environmental Assessment Act
EAB: Emerald Ash Borer
EBR: Environmental Bill of Rights
EIA: Environmental Impact Assessment
EIS: Environmental Impact Study/Statement
ELC: Ecological Land Classification
ELUP: Ecological Land Use Plan
END: Endangered Species
EPA: Environmental Protection Act
ER: Environmental Registry
ESA: Endangered Species Act, 2007
ESA: Environmentally Sensitive Area
ESC: Erosion and Sediment Control
F&W: Fish and Wildlife
FA: Fisheries Act
GPGGH: Growth Plan for the Greater Golden Horseshoe, 2020
GPS: Global Positioning System
HSA: Habitat Suitability Analysis
HIS: Habitat Suitability Index
KHA: Key Hydrologic Area(s)
KHF: Key Hydrologic Feature(s)
KNHF: Key Natural Heritage Feature(s)
LCFSP: Licence to Collect Fish for Scientific Purposes
LIO: Land Information Ontario
LRIA: Lakes and Rivers Improvement Act
LUP: Land Use Permit or Plan
MA: Management Area
MAFA: Moose Aquatic Feeding Area
MCEA: Municipal Class Environmental Assessment
MECP: Ontario Ministry of Environment, Conservation and Parks
MNRF: Ontario Ministry of Natural Resources and Forestry
NER: Natural Environment Report
NHIC: Natural Heritage Information Centre
NHIS: Natural Heritage Information System
NHS: Natural Heritage System
OBM: Ontario Base Map
OFIS: Ontario Fisheries Information System
OLI: Ontario Land Inventory
OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs
OWES: Ontario Wetland Evaluation System
PPS: Provincial Planning Statement, 2024
PSW: Provincially Significant Wetland
RLUP: Regional Land Use Plan
RMP: Regional Management Plan
RPF: Registered Professional Forester
SAR: Species at Risk
SARO: Species at Risk in Ontario
SC: Special Concern species
SWH: Significant Wildlife Habitat

FEC: Forest Ecosystem Classification
FMP: Forest Management Plan
FRI: Forest Resources Inventory
FWCA: Fish and Wildlife Conservation Act
GGH: Greater Golden Horseshoe
GHP: General Habitat Protection
GIS: Geographic Information System
GLSL: Great Lakes – St. Lawrence
SWM: Stormwater Management
THR: Threatened species
TOR: Terms of Reference
TPP: Tree Preservation Plan
WIA: Woodlands Improvement Act
WMU: Wildlife Management Unit
WSCA: Wildlife Scientific Collector's Authorization

Appended Figures



MNRF District: Aurora Midhurst Owen Sound District
MECP District: Barrie
Conservation Authority: Nottawasaga Valley Conservation Authority

ENVIRONMENTAL IMPACT STUDY

2826878 ONTARIO INC.
7582 County Road 9
Creemore, Ontario

LEGEND

- Major Road
- Minor Road
- Contour (5m Interval)
- Watercourse, Permanent
- Unevaluated Wetland
- White-tailed Deer Wintering Area (Stratum 2)
- Ecodistrict
- Water Area
- Wooded Area
- Built Up Area
- Site (approximate)
- Adjacent Lands (120m)
- Subject Property

Notes:
- This document contains information licensed under the Open Government License - Ontario.
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

CAMBIUM
194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

SITE LOCATION AND POLICY AREAS

Project No.: 21805-001		Date: August 2025 Rev.:	
Scale: 1:7,500		Projection: NAD 1983 UTM Zone 17N	
Created by: DBC	Checked by: CJ	Figure:	1

O:\GIS\MXDs\21800-21899\21805-001 2826878 On - MSP - 7582 Cnty Rd 9\2024-11-22 EIS.aprx

ENVIRONMENTAL IMPACT STUDY

2826878 ONTARIO INC.
7582 County Road 9
Creemore, Ontario

Vegetation Community	Description
1	CUM1 Mineral Cultural Meadow
2	CUW1 Mineral Cultural Woodland
3	FOD8-1 Moist - Fresh Aspen - Poplar Deciduous Forest Type
4	MAS2-1 Cattail Mineral Shallow Marsh Type
5	CUP3 Coniferous Plantation
6	CUM1 Mineral Cultural Meadow
7	CVR Residential
8	FODM11 Naturalized Deciduous Hedgerow
9	OAO Open Aquatic
10	FOD Deciduous Forest

LEGEND

- Butternut
- Soil Point
- Barn Swallow
- Amphibian Survey Station
- Bat Exit Survey
- Breeding Bird Survey Station
- Grassland Birds
- Contour (5m Interval)
- Drainage Feature
- Watercourse
- Culvert
- Pond
- Field Verified Wetland
- Vegetation Community
- Site (approximate)
- Adjacent Lands (120m)
- Subject Property

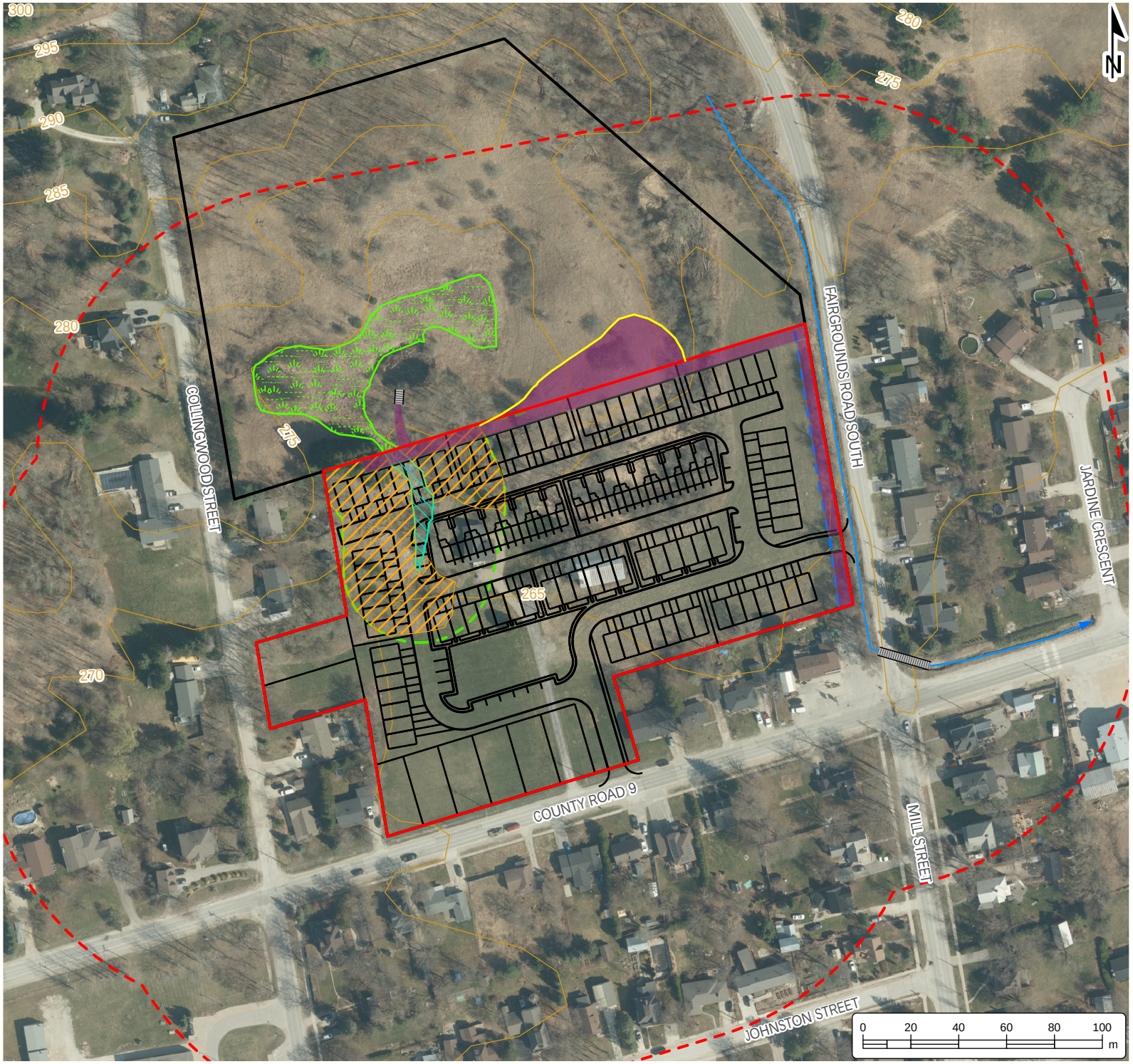
Notes:
- This document contains information licensed under the Open Government License - Ontario.
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

CAMBIUM
194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

NATURAL HERITAGE FEATURES

Project No.: 21805-001	Date: September 2025 Rev.:	
Scale: 1:2,500	Projection: NAD 1983 UTM Zone 17N	
Created by: DBC	Checked by: CJ	Figure: 2

O:\GIS\MXDs\21800-21899\21805-001 2826878 On - MSP - 7582 Cnty Rd 9\2024-11-22 EIS.aprx



ENVIRONMENTAL IMPACT STUDY

2826878 ONTARIO INC.
7582 County Road 9
Creemore, Ontario

LEGEND

- Watercourse
- Grading Limit
- Contour (5m Interval)
- Proposed Development
- Culvert
- Watercourse Setback (10m)
- Wetland Removals (0.032 ha)
- Field Verified Wetland
- Wetland Setback (30m)
- 30m Buffer Encroachment (0.35 ha)
- Conceptual Restoration and Enhancement Area (0.30 ha) (approximate)
- Site (approximate)
- Adjacent Lands (120m)
- Subject Property

Notes:
- This document contains information licensed under the Open Government License - Ontario.
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

CAMBIUM
194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

NATURAL HERITAGE CONSTRAINTS

Project No.: 21805-001		Date: September 2025 Rev.:	
Scale: 1:2,250		Projection: NAD 1983 UTM Zone 17N	
Created by: DBC	Checked by: CJ	Figure:	3

O:\GIS\MXDs\21800-21899\21805-001 2826878 On - MSP - 7582 Cnty Rd 9\2024-11-22 EIS.aprx

Appendix A

Correspondence

CAMBIUM

Environmental

Geotechnical

Building Sciences

Construction Testing & Inspections

Telephone
(866) 217.7900
(705) 742.7900

Facsimile
(705) 742.7907

Website
cambium-inc.com

Mailing Address
P.O. Box 325,
Peterborough, Ontario
Canada, K9J 6Z3

Locations
Peterborough
Kingston
Barrie
Ottawa
Whitby

Laboratory
Peterborough

Professional Engineers Ontario

APGO

May 2, 2025

Township of Clearview
217 Gideon Street
Stayner, ON
L0M 1S0

Attn: Amy Cann
Director of Planning & Building

Re: Proposed Terms of Reference for the Environmental Impact Study at 7582 County Road 9, Creemore, Ontario
Cambium Reference: 21805-001

Dear Amy Cann,

Cambium has been retained by 2826878 Ontario Inc. (the Client) to conduct an Environmental Impact Study (EIS; the Study) at 7582 County Road 9, in the village of Creemore, Township of Clearview, County of Simcoe, Ontario (the Site); regarding the proposed residential subdivision. We are submitting the proposed Terms of Reference (ToR) for the EIS below to ensure it will meet the requirements of the Township of Clearview as well as other authorities.

Based on the proposed scope of development, we propose the following Terms of Reference for the EIS:

Cambium will complete the following ecological surveys to document natural features on the property as outlined in Table 1.

Table 1 Summary of Ecological Field Investigations

Activity	Details	Timing
Bat Roosting and Wildlife Tree Surveys	One survey during leaf-off period; MNRF protocols and updated (2022) guidance for bat maternity roost surveys.	November 2024
Amphibian Breeding Surveys	Three evening surveys for frogs and toads; Marsh Monitoring Program (MMP) protocol	Ranging from April, May, and June, 2025
Vascular Plant Survey and	Three-season vegetation survey; Ecological Land Classification (ELC) System for Southern Ontario; Communities will be	November 2024 May 2025 June 2025

CAMBIUM

Environmental

Geotechnical

Building Sciences

Construction Testing & Inspections

Telephone
(866) 217.7900
(705) 742.7900

Facsimile
(705) 742.7907

Website
cambium-inc.com

Mailing Address
P.O. Box 325,
Peterborough, Ontario
Canada, K9J 6Z3

Locations
Peterborough
Kingston
Barrie
Ottawa
Whitby

Laboratory
Peterborough

Professional Engineers Ontario

APGO

May 2, 2025

Activity	Details	Timing
Community Classification	evaluated for their sensitivity, rarity, and botanical quality	
Wetland Boundary Delineation	One survey during the growing season; MNRF Ontario Wetland Evaluation System (OWES) protocol; boundary to be marked with hand-held GPS, and flagged/staked, where required (e.g. within 30 m of proposed development)	June 2025
Aquatic and Drainage Feature Mapping	One survey under ice-free conditions; confirmation of mapping and identification of unmapped watercourses, waterbodies, springs/seeps, and other surface drainage features	May 2025
Breeding Bird/ Grassland Breeding Bird Surveys	Three morning surveys; MNRF protocol for Eastern Meadowlark, during overlapping survey period for Bobolink and Ontario Breeding Bird Atlas protocol	May 21 to July 3, 2025
SAR Bat Exit Surveys	Two evening site visits in June to complete visual exit surveys paired with targeted acoustic monitoring, to assess usage of buildings by SAR bats.	June 2025
General Wildlife Habitat Surveys	Visual encounter surveys for evidence of breeding, foraging, sheltering, nesting, and/or movement.	Concurrent with all field investigations

Cambium will also prepare a detailed report that includes:

- An overview of applicable natural heritage policy and regulation.
- A summary of the background information collected.
- A summary of field investigations carried out, and associated protocols.
- Descriptions of natural heritage and hydrologic features identified on and adjacent to the Site.
- A habitat-based screening for species of conservation concern (including Species at Risk), supplemented by targeted survey results, where applicable.
- An assessment of Significant Wildlife Habitat.

CAMBIUM

Environmental

Geotechnical

Building Sciences

Construction Testing & Inspections

Telephone
(866) 217.7900
(705) 742.7900

Facsimile
(705) 742.7907

Website
cambium-inc.com

Mailing Address
P.O. Box 325,
Peterborough, Ontario
Canada, K9J 6Z3

Locations
Peterborough
Kingston
Barrie
Ottawa
Whitby

Laboratory
Peterborough

Professional Engineers Ontario

APGO

May 2, 2025

- A list of additional field investigations required to address regulatory requirements, where applicable (e.g., targeted surveys for species at risk where sensitive habitat is identified through the screening process).
- An overview of the proposed development and site alteration.
- Analysis of impacts, and discussion of mitigation, restoration, and/or compensation measures required to address study requirements. Additional best management practices and/or enhancement measures may be recommended, as appropriate.
- An evaluation and summary of conformity with applicable provincial, municipal, and Conservation Authority natural heritage policy.
- A comprehensive list of recommendations, for ease of transfer to Site Plan/Draft Plan agreements.
- Detailed mapping of survey stations/areas, natural features, key species observations, and field-verified boundaries; and,
- Detailed mapping of constraint areas including development setbacks and buffers.

We trust that the proposed Terms of Reference meet your expectations. If you have any questions or require clarification of any aspect of this submission, please do not hesitate to contact the undersigned at (705) 719-0700.

Best regards,

Cambium Inc.

DocuSigned by:

DD6F5C07A33A475...

Danielle Leal, B.Sc.
Ecologist / Project Coordinator

Copies: *Katelyn Wardlaw, NVCA <kwardlaw@nvca.on.ca>*
Emma Perry, NVCA <eperry@nvca.on.ca>

\\cambiumincstorage.file.core.windows.net\projects\21800 to 21899\21805-001 2826878 On - MSP - 7582 Cnty Rd 9\Correspondence\ToR\2025-05-02 LTR - Terms of Reference (21805-001).docx

From:	Nick Ainley
To:	Danielle Leal
Cc:	Camden Jermey; CambiumAdmin
Subject:	RE: Proposed Terms of Reference - Environmental Impact Study at 7582 County Road 9, Creemore, Ontario (21805-001)
Date:	Tuesday, June 17, 2025 4:11:12 PM
Attachments:	image001.png image002.png image003.png image004.png

---

Hi Danielle,

Please refer to the following comments on the submitted EIS TOR from the Township peer-review consultant (R.J. Burnside) as well as the NVCA. Although natural heritage review will primarily be the responsibility of the Township, NVCA also provided comments associated with their responsibilities to review Wetland Delineation and the Aquatic and Drainage Feature Mapping that may identify additional areas that are Regulated by the NVCA.

Township of Peer-review Consultant (R.J. Burnside)

- Delineation of the wetland and watercourse as part of the natural feature delineation is required.
- The fall vegetation assessment completed in November 2024 (post frost) results in a big gap in the growing season when considering the summer investigation will take place in June. The June investigation should occur late in the month, and a later summer / fall inventory is completed before frost (late August - late September).
- Federal policy such as the Migratory Birds Convention Act and the Fisheries Act should be referenced.
- A listing of timing and weather conditions in a table for the fieldwork methodology to confirm conformity with the protocols.

NVCA

- "The ToR by Cambium has been reviewed against the regulation maps and no wetlands appear to be present within the subject site. There is however a pond ~20m north of the property line on the abutting property that appears to have wetland characteristics based on air photo interpretation. This area should be investigated as it is within the study scope of adjacent lands within the report as a potential wetland - the 30m wetland regulation limit may encroach within the subject site and development envelope which lies topographically downgradient. This pond may be attributed to groundwater discharge, so a hydrogeologic study should be provided as part of a complete submission to support the proposed plan of subdivision. As for the watercourse, it appears to be channelized with a very low degree of naturalization. A setback reduced from the required 15m may be supportable from an ecological perspective if there is no encroachment on naturalized vegetation communities or natural hazards. More information is required to determine the regulation limits on the site which hopefully will be provided in the EIS once completed."

If you have any further questions do not hesitate to contact me directly.

Best regards,
Nick Ainley, *B.U.R.PL*
Community Planner
Township of Clearview
(705) 428-6230 ext. 242
nainley@clearview.ca

In Office (Monday-Wednesday & Friday)
Remote Work (Thursday)

From: Danielle Leal <Danielle.Leal@cambium-inc.com>
Sent: June 3, 2025 8:37 AM
To: Nick Ainley <nainley@clearview.ca>
Cc: Camden Jermey <Camden.Jermey@cambium-inc.com>; CambiumAdmin <CambiumAdmin@cambium-inc.com>; Amy Cann <acann@clearview.ca>
Subject: RE: Proposed Terms of Reference - Environmental Impact Study at 7582 County Road 9, Creemore, Ontario (21805-001)

Good morning, Nick,

Our client sent the requested review fee on May 14 via mail.

Could you please confirm when this payment has been received, and the TOR has been circulated for review.

Thank you,

Danielle Leal, B.Sc.
Coordinator - Ecologist
t: 705.719.0700
m: 249.359.6112

e: Danielle.Leal@cambium-inc.com

From: Nick Ainley <nainley@clearview.ca>
Sent: Tuesday, May 6, 2025 2:32 PM
To: Danielle Leal <Danielle.Leal@cambium-inc.com>
Cc: Camden Jermey <Camden.Jermey@cambium-inc.com>; File <file@cambium-inc.com>; Amy Cann <acann@clearview.ca>
Subject: RE: Proposed Terms of Reference - Environmental Impact Study at 7582 County Road 9, Creemore, Ontario (21805-001)

Hello Danielle,

Further to Amy C. earlier email, I will be able to assist with coordination of the TOR review for the above noted property. However, in accordance the Township's Fees and Charges By-law 25-01, each TOR must be accompanied by a $500.00 review fee which can be submitted via cheque and payable to the Corporation of the Township of Clearview. Once received, I will be able process the payment and proceed will circulation of the TOR for review.

I trust this brief overview is satisfactory. Please let me know if you have any questions.

Best regards,
Nick Ainley, *B.U.R.PL*
Community Planner
Township of Clearview
(705) 428-6230 ext. 242
nainley@clearview.ca

In Office (Monday-Wednesday & Friday)
Remote Work (Thursday)

From: Amy Cann <acann@clearview.ca>
Sent: May 2, 2025 11:40 AM
To: Danielle Leal <Danielle.Leal@cambium-inc.com>; Nick Ainley <nainley@clearview.ca>
Cc: Camden Jermey <Camden.Jermey@cambium-inc.com>; File <file@cambium-inc.com>; Katelyn Wardlaw <kwardlaw@nvca.on.ca>; Emma Perry <eperry@nvca.on.ca>
Subject: Re: Proposed Terms of Reference - Environmental Impact Study at 7582 County Road 9, Creemore, Ontario (21805-001)

Received. Thank you Danielle.

Kindly direct all future communication to @Nick Ainley the Planner assigned to this file.

Emma and Katelyn - please hold your review until coordinated appropriately through Nick.

Enjoy the weekend all!

Thanks,

Amy Cann, M. PI., MCIP, RPP (she/her)

Director of Planning & Building

Township of Clearview

Ph: 705-243-1512

acann@clearview.ca

My workday may look different from your workday. Please do not feel obligated to respond outside of your typical working hours. I work in the office Monday to Thursday and remotely on Fridays.

From: Danielle Leal <Danielle.Leal@cambium-inc.com>
Sent: Friday, May 2, 2025 11:14 AM
To: Amy Cann <acann@clearview.ca>
Cc: Camden Jermey <Camden.Jermey@cambium-inc.com>; File <file@cambium-inc.com>; Katelyn Wardlaw <kwardlaw@nvca.on.ca>; Emma Perry <eperry@nvca.on.ca>
Subject: Proposed Terms of Reference - Environmental Impact Study at 7582 County Road 9, Creemore, Ontario (21805-001)

Good morning Amy;

Cambium has been retained to conduct an Environmental Impact Study (EIS; the Study)

at 7582 County Road 9, in the village of Creemore, Township of Clearview, County of Simcoe, Ontario (the Site). We understand the Client is pursuing development of a residential subdivision.

A proposed Terms of Reference (ToR) has been attached for the forthcoming EIS in order to meet the requirements of the Township.

We welcome any input or comments from your designated reviewer regarding the proposed work plan.

Thanks,

Danielle Leal, B.Sc.
Coordinator - Ecologist
t: 705.719.0700
m: 249.359.6112

e: Danielle.Leal@cambium-inc.com

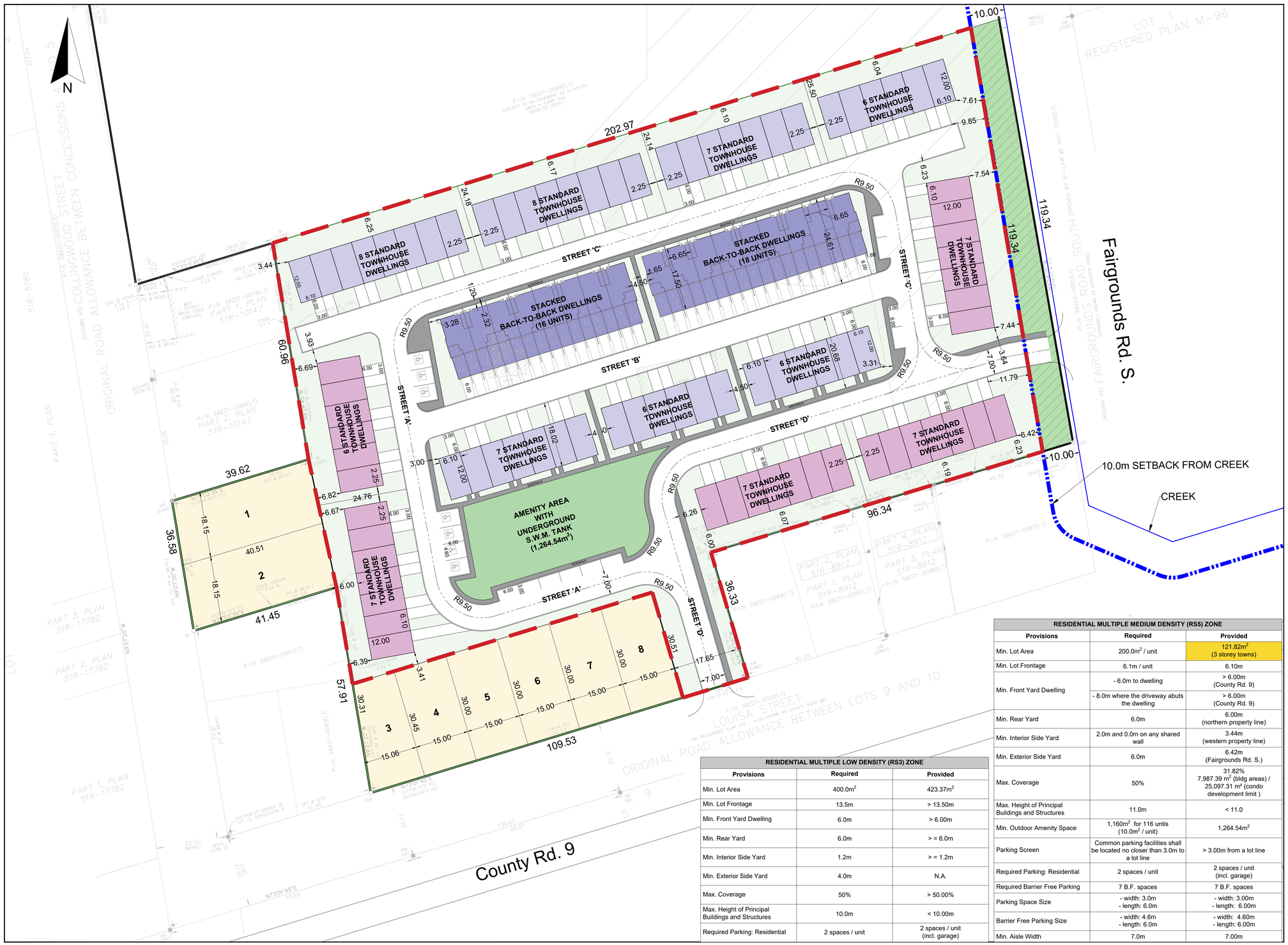
Clearview Township

Clearview Township

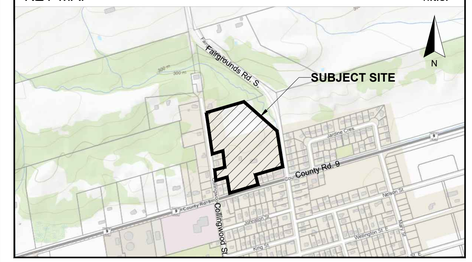
CONFIDENTIALITY NOTICE: This e-mail message (including attachments, if any) is intended for the use of the individual or entity to which it is addressed and may contain information that is privileged, proprietary, confidential and exempt from disclosure. If you are not the intended recipient, you are notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify the sender and permanently delete this email.

Appendix B

Conceptual Site Plans



KEY MAP n.t.s.



CONCEPTUAL SITE PLAN

Scale

0 10 20 30 40 50m

LEGEND

- Ownership Area:
  - Area: 66,950.44m² / 6.69ha
- Development Limit
  - Area: 29,269.89m² / 2.92ha
  - Density: 42.75 units / ha
- Condo Development Limit
  - Area: 25,097.31m² / 2.51ha
  - Density: 49.40 units / ha
- Lands to be be Conveyed to N.V.C.A.
  Area: 1,005.16 m²
- Single Detached - 8 lots
- 2 Storey Standard Townhouse Dwellings - 34 units
  - Unit Size: 6.10m x 12.00m
  - Unit G.F.A.: 128.40m² (excl. garage)
- 3 Storey Standard Townhouse Dwellings - 48 units
  - Unit Size: 6.10m x 12.0m
  - Unit G.F.A.: 201.60m² (excl. garage)
- 3 Storey Stacked Back-To-Back Townhouse Dwellings - 34 units
  - Dwelling Size: 6.65m x 17.50m
  - Unit G.F.A.: 155.57m² / unit (excl. garage)
- Amenity Area (1,264.54m²)
- Fire Route
- N.V.C.A. Reg. Limit
- Sidewalk

Total Parking: 249 spaces (excl. single detached)
- 17 visitor parking spaces incl. 7 B.F. spaces
- 232 spaces (incl. garage)

RESIDENTIAL MULTIPLE LOW DENSITY (RS3) ZONE

Provisions	Required	Provided
Min. Lot Area	400.0m²	423.37m²
Min. Lot Frontage	13.5m	> 13.50m
Min. Front Yard Dwelling	6.0m	> 6.00m
Min. Rear Yard	6.0m	> = 6.0m
Min. Interior Side Yard	1.2m	> = 1.2m
Min. Exterior Side Yard	4.0m	N.A.
Max. Coverage	50%	> 50.00%
Max. Height of Principal Buildings and Structures	10.0m	< 10.00m
Required Parking: Residential	2 spaces / unit	2 spaces / unit (incl. garage)

RESIDENTIAL MULTIPLE MEDIUM DENSITY (RS5) ZONE

Provisions	Required	Provided
Min. Lot Area	200.0m² / unit	121.82m² (3 storey towns)
Min. Lot Frontage	6.1m / unit	6.10m
Min. Front Yard Dwelling	- 6.0m to dwelling	> 6.00m (County Rd. 9)
	- 8.0m where the driveway abuts the dwelling	> 6.00m (County Rd. 9)
Min. Rear Yard	6.0m	6.00m (northern property line)
Min. Interior Side Yard	2.0m and 0.0m on any shared wall	3.44m (western property line)
Min. Exterior Side Yard	6.0m	6.42m (Fairgrounds Rd. S.)
Max. Coverage	50%	31.82% 7,987.39 m² (bldg areas) / 25,097.31 m² (condo development limit)
Max. Height of Principal Buildings and Structures	11.0m	< 11.0
Min. Outdoor Amenity Space	1,160m² for 116 untis (10.0m² / unit)	1,264.54m²
Parking Screen	Common parking facilities shall be located no closer than 3.0m to a lot line	> 3.00m from a lot line
Required Parking: Residential	2 spaces / unit	2 spaces / unit (incl. garage)
Required Barrier Free Parking	7 B.F. spaces	7 B.F. spaces
Parking Space Size	- width: 3.0m - length: 6.0m	- width: 3.00m - length: 6.00m
Barrier Free Parking Size	- width: 4.6m - length: 6.0m	- width: 4.60m - length: 6.00m
Min. Aisle Width	7.0m	7.00m

Source: Township of Clearview Zoning By-Law
County of Simcoe Interactive Mapping
Note: Information shown is approximate and subject to change.

CONCEPTUAL SITE PLAN - 124 UNITS

267 COLLINGWOOD ST., CREEMORE

SCHEDULE OF REVISIONS

No.	Date	Description	By
1	2025-06-04	Overlay the survey and update the dev. limits	A.G.

IPS INNOVATIVE PLANNING SOLUTIONS
PLANNERS • PROJECT MANAGERS • LAND DEVELOPERS
647 WELHAM ROAD, UNIT 9, BARRIE, ON, L4N 0B7
tel: 705 • 812 • 3281 fax: 705 • 812 • 3438 e: info@ipsconsultinginc.com www.ipsconsultinginc.com

Date:	June 4, 2025	Drawn By:	A.S.
File:	23 - 1297	Checked:	K.B.

Appendix C

Species at Risk Screening

APPENDIX: Species of Conservation Concern - Simcoe County

COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Birds								
Bank Swallow	*Riparia riparia*	THR	THR	S4B	The Bank Swallow is a small songbird of around 12 cm long with a distinctive dark breast band, that flies with quick and erratic wingbeats (1). It nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. This can include banks of rivers and lakes, bluffs, active sand and gravel pits, road cuts and stockpiles of soils. However, they prefer sand-silt substrates for excavating their nest burrows. They often use large wetlands as communal nocturnal roosts post-breeding or during wintering periods (2).	No	Known to occur in the general area	No further consideration required
Barn Swallow	*Hirundo rustica*	THR	SC	S4B	The Barn Swallow is a mid-sized songbird with steel-blue backs and wings, glossy in males, and a line of white spots across its upper tail. It lives in a variety of open habitats for foraging, such as grassy fields, pastures, certain agricultural crops, shorelines, cottage areas, wetlands, or subarctic tundra (2). They prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud, typically attached to horizontal beams or vertical walls underneath an overhang (1).	Yes: on-site	Incidental observation on-site	Potential significant wildlife habitat on-site
Black Tern	*Chlidonias niger*	No Status	SC	S3B	The Black Tern is a small waterbird with a forked tail, straight pointed bill, slender shape, and black head during breeding season. It builds floating nests in loose colonies in shallow marshes, with a preference for cattails. They breed primarily in the marshes along the edges of the Great Lakes, but may also use wetlands further north if suitable (1).	No	Known to occur in the general area	No further consideration required
Bobolink	*Dolichonyx oryzivorus*	THR	THR	S4B	The Bobolink is a mid-sized songbird of tan colour with black stripes, except for males during summer breeding season who are black with a white back and yellow collar. It prefers tall, grassy meadows, hayfields and some croplands, and feeds (largely on insects) on the ground in dense grasses (1). It tends to nest in forage crops: hayfields and pastures dominated by species including clover, bluegrass, and broadleaf plants (2).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Canada Warbler	*Cardellina canadensis*	THR	SC	S4B	The Canada Warbler is a small songbird with bright yellow underparts and bluish-grey back and tail (1). It can be found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. Nests are usually located on or near the ground on mossy logs, and along stream banks (3).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Cerulean Warbler	*Setophaga cerulea*	END	THR	S3B	The Cerulean Warbler, a small songbird, is blue-green with white eyebrows and two prominent white wing bars (1). It requires relatively large tracts of mature deciduous forest (>100 ha), and nests in older, second-growth deciduous forests. During breeding season, it is found in relatively large tracts of mature deciduous forests that feature large, tall trees and an open understorey (4).	No	Known to occur in the general area	No further consideration required
Chimney Swift	*Chaetura pelagica*	THR	THR	S4B,S4N	The Chimney Swift is a small bird, between 12 and 14 cm, with a brown, cigar-shaped body, slender wings, and an erratic flight pattern. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow trees. Now, it is found mostly near urban and suburban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. They also tend to stay in habitat close to the water (1).	No	Known to occur in the general area	No further consideration required
Common Nighthawk	*Chordeiles minor*	SC	SC	S4B	The Common Nighthawk is a medium-sized bird with long, pointed wings, a long tail with a notch, and large eyes. Its plumage of dark brown with black and white specks blends with its roost site. It is typically found in open areas such as gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailing areas, cultivated fields, urban parks, gravel roads, and orchards (1).	No	Known to occur in the general area	No further consideration required
Eastern Meadowlark	*Sturnella magna*	THR	THR	S4B	The Eastern Meadowlark is a medium-sized migratory songbird with a bright yellow throat and belly, a black V shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	SC	S4B	The Eastern Whip-poor-will is a medium-sized bird with mottled brown and grey feathers to blend in with its surroundings, a large flattened head, and small bill. They are usually found in areas with a mix of open and forested areas such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor (2). The species prefers to nest in semi-open or patchy forests with clearings as it forages in open areas and uses forested areas for roosting (1).	No	Known to occur in the general area	No further consideration required
Eastern Wood-Pewee	*Contopus virens*	SC	SC	S4B	The Eastern Wood-pewee is a species of 'flycatcher', a bird that eats flying insects. It grows to approximately 15 cm, has greyish-olive upper parts and pale bars on its wings. This species lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation (1). It typically creates nests on tree branches 2-12 m in height (2).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Evening Grosbeak	*Coccothraustes vespertinus*	SC	SC	S4B	The Evening Grosbeak is a large songbird with a thick greenish bill. It is a social bird that is often found in flocks, particularly during the winter months. Their preferred habitat is thick coniferous forest. During their breeding season, they are generally found in open, mature mixed forests dominated by Firs, White Spruce, or Trembling Aspen (1).	No	Known to occur in the general area	No further consideration required
Golden Winged Warbler	*Vermivora chrysoptera*	THR	SC	S4B	The Golden-winged Warbler is a small songbird with distinctive yellow wing patches and patches behind their eyes. It inhabits early successional habitat of old fields and favour areas where trees are spread out or forest edges to use for perching, singing, and searching for food. They seem to prefer regeneration zones with young shrub growth, surrounded by mature forest, locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas for their breeding sites; often frequenting clusters of herbaceous plants and low bushes (1).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Grasshopper Sparrow	*Ammodramus savannarum*	SC	SC	S4B	The Grasshopper Sparrow is a small songbird with a streaked back, a white stripe down the center of its crown, a flattish head, and a conical beak. It inhabits open grasslands and prairies with well-drained soil, preferring areas that are sparsely vegetated. It will also nest in hayfields and pastures, as well as alvars and occasionally grain crops such as barley (1).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
King Rail	*Rallus elegans*	END	END	S2B	The King Rail is a large bird, standing at around 40 cm tall, with a long, curved bill, orange chest and neck, and black sides with vertical white bars. This species prefers densely vegetated freshwater marshes with open shallow water and shrub thicket areas. Current records for Ontario suggest that these birds prefer sites within coastal marshes of the Great Lakes. Most breeding pairs left in Ontario are found in wetlands bordering Lake St Clair or coastal marshes along Lakes Erie and Ontario (1).	No	Known to occur in the general area	No further consideration required

APPENDIX: Species of Conservation Concern - Simcoe County

COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Least Bittern	*Ixobrychus exilis*	THR	THR	S4B	The Least Bittern is a small member of the heron family, reaching around 30 cm in length. It has brown and beige plumage with chestnut patches on its wings (1). The species nests in marshes (> 5 ha) and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. Although Least Bitterns usually nest in larger marshes territorial individuals have been found in marshes as small as 0.4 ha. They require dense vegetation and open water with stable levels within 10 m for nesting, and access to clear, open water for foraging (3).	No	Known to occur in the general area	No further consideration required
Loggerhead Shrike	*Lanius ludovicianus*	END	END	S2B	The Loggerhead Shrike is a small bird with a black, hooked bill, grey crown, and white throat and chest. This species has specific habitat requirements that are dependent on active livestock grazing, or grassland areas that have naturally short grass cover (i.e. alvar communities). They also require spiny, multi-branched shrubs, or barbed fencing, to catch prey. They prefer grassland habitats that have sporadic occurrences of low trees and shrubs; particularly hawthorn species, which are used as part of their feeding behaviour (1).	No	Known to occur in the general area	No further consideration required
Olive-sided Flycatcher	*Contopus cooperi*	SC	SC	S4B	The Olive-sided Flycatcher is a medium-sized songbird with olive colouring, often seen perching on top of tall trees waiting to catch their prey. It prefers open areas along natural mature forest edges, forest edges near natural openings such as rivers or swamps, human-made openings, or burned forest openings with numbers of dead trees. Breeding habitat usually consists of coniferous or mixed forests adjacent to rivers or wetlands, in Ontario often nesting in White and Black Spruce, Jack Pine, and Balsam Fir (1).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Peregrine Falcon	*Falco peregrinus*	NAR	SC	S3B	The Peregrine Falcon is a bird of prey with a slate blue back, cream-coloured chest with dark markings, and pointed wings spanning around 1 m. It also has bright yellow feet and legs. This species can be found nesting on tall, steep cliff ledges close to large bodies of water. They prefer open habitats such as wetlands, tundra, savannah, sea coasts and mountain meadows for hunting , but may also be found above open forests. This species has also adapted well to living and nesting in urban areas, and has been documented using the ledges of tall buildings and other tall man-made structures for perches and nesting (1).	No	Known to occur in the general area	No further consideration required
Piping plover	*Charadrius melodus*	END	END	S1B	The Piping Plover is a small shorebird with light colouring, a stubby orange bill and orange legs. This species almost exclusively nests on dry sandy or gravelly beaches above the high-water mark to avoid waves. It can be found pecking the sand, searching for small pools of water for insects and small crustaceans to consume. Although not particularly common in Ontario, it is found along the shores of the Great Lakes, and in the Lake of the Woods in northwestern Ontario (1).	No	Known to occur in the general area	No further consideration required
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	S4B	The Red-headed Woodpecker is a mid-sized bird, at around 20 cm long, with a vivid red head, neck and breast as well a strong bill. The species can be found in open woodland and woodland edges, often near man-made landscapes such as parks, golf courses and cemeteries. These areas must contain a large number of dead trees for perching and nesting (1).	No	Known to occur in the general area	No further consideration required
Short-eared owl	*Asio flammeus*	SC	THR	S2N,S4B	The Short-eared Owl has a large round head with small tufts of feathers, long wings, a short tail, and cryptic colouring of brown streaks. This species is found in scattered pockets across the province where suitable open habitat, including grasslands, tundra, peat bogs and marsh, can be found in sufficient quantities. Adults build nests on the ground in grassy areas and occasionally agricultural fields (1). The main factor influencing their choice in habitat is believed to be an abundance of their food source, primarily rodents and other small mammals (2).	No	Known to occur in the general area	No further consideration required
Wood Thrush	*Hylocichla mustelina*	THR	SC	S4B	The Wood Thrush is a medium-sized songbird of around 20 cm with rusty brown coloured upper parts and white underparts with large dark spots. It breeds in deciduous and mixed forests with moderate understories, shade and abundant leaf litter where it forages for food, including larval and adult insects as well as plant material. They prefer moist stands of trees with well-developed undergrowth and tall trees for perches (1).	Yes: on-site and adjacent lands	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Yellow Rail	*Coturnicops noveboracensis*	SC	SC	S4B	The Yellow Rail is a small, quail-like marsh bird with a short yellow or black bill, short tail, with yellowish and black streaks on its back and white wing patches. This species is mainly found in the Hudson Bay Lowlands region, and is only found in localized marshes in southern Ontario. It is a secretive bird that lives deep within the reeds, sedges, and marshes of shallow wetlands which nest on the ground in areas that have an overlying mat of dry vegetation that can be used for nest building (1).	No	Known to occur in the general area	No further consideration required
Fish								
American Eel	*Anguilla rostrata*	No Status	END	S1?	The American Eel is a long, slender bodied fish, with one long fin extending down the back and around the tail, and two small pectoral fins. It has thick lips, and a protruding lower jaw that extends out above the upper jaw. At the juvenile stage, they swim up the St. Lawrence River to reach Lake Ontario and connected tributaries where they will remain for 8 to 23 years before migrating back to their spawning grounds. In Ontario, the American eel prefers mud, sand or gravel substrates during the juvenile stage when they reside primarily in the benthic zone of waterbodies. More mature eels are able to thrive in most environments provided there is available cover during daylight hours, and the habitat is accessible (2).	No	Known to occur in the general area	No further consideration required
Deepwater Sculpin	*Myoxocephalus thompsonii*	SC	-	S1	The Deepwater Sculpin grows tup to 8 cm in length, and has eyes on top of its head, a large mouth, three dark bands on its pectoral fins, and lacks true scales. This species inhabits the bottoms of cold, highly oxygenated lakes (2).	No	Known to occur in the general area	No further consideration required
Grass Pickerel	*Esox americanus*	SC	SC	S3	Like other members of the pike family, the Grass Pickerel has a long, cylindrical body with a long snout and forked tail. Colouration may vary, but often consists of several thin, dark, wavy vertical bars along the sides. The fins are dusky to yellow-green. Adults have a dark bar extending below the eye. Grass Pickerel are foujnd in wetlands, pond, slow moving streams and shallow bays of larger lakes with warm, shallow, clear water and abundant aquatic vegetation. In Ontario, Grass Pickerel is found in coastal wetlands in the Great Lakes and tributaries of Lake St. Clair, Lake Erie, Lake Huron, the Niagara River, Lake Ontario and the St. Lawrence River, and inland in the Severn River system (2).	No	Known to occur in the general area	No further consideration required
Lake Sturgeon	*Acipenser fulvescens*	No Status	END	S2	The Lake Sturgeon, a large freshwater fish, has an extended snout with four whisker-like organs hanging near the mouth and is dark to light brown or grey on its back and sides with a lighter belly. In Ontario, this fish is found in the rivers of the Hudson Bay Basin, the Great Lakes basin, and their connecting waterways. Lake Sturgeon's live almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel and are usually found at depths of 5 to 20 m. They spawn in relatively shallow, fast-flowing water or if available deeper water habitat as well (1).	No	Known to occur in the general area	No further consideration required
Nothern Brook Lamprey	*Ichthyomyzon fossor*	SC	SC	S3	The Northern Brook Lamprey is a small, elongate fish growing up to 16 cm long with a round, jawless mouth, sevel gill openings, and no pectoral or pelvic fins. This species has a larval stage, in which they require soft substrates for burrowing and typically use slow-moving portions of coolwater streams, and an adult stage, in which they are more typically associated with fast flowing ripples in coolwater strams with rock or gravel bottoms (1).	No	Known to occur in the general area	No further consideration required

APPENDIX: Species of Conservation Concern - Simcoe County

COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Northern Sunfish (Great Lakes - Upper St. Lawrence population)	*Lepomis peltastes*	SC	SC	S3	The Northern Sunfish is a small (about 130 mm long), typical looking member of the sunfish family (Centrarchidae). It has a deep, laterally compressed and olive coloured body with bright blue and red markings. In Ontario, the Northern Sunfish lives in shallow vegetated areas of quiet, slow flowing rivers and streams, as well as warm lakes and ponds, with sandy banks or rocky bottoms. Northern Sunfish prefer to be near aquatic vegetation where they can avoid strong currents. The Great Lakes - Upper St. Lawrence Populations are found throughout southern Ontario including waters flowing into Lake Huron, Georgian Bay, Lake St. Clair, Lake Erie and Lake Ontario, as well as rivers and small lakes in eastern Ontario (1).	No	Known to occur in the general area	No further consideration required
Silver Lamprey (Great Lakes - Upper St. Lawrence River population)	*Ichthyomyzon unicuspis*	SC	SC	S3	The Silver Lamprey is an eel-shaped fish growing from 9 to 39 cm long, with a sucking disc mouth and no jaws or paired fins. They can be differed from other lamprey species based on fin shapes and teeth arrangements. Their habitat requirements include clear water, the availability of fish hosts, and relatively clean beds of sand or organic debris (1).	No	Known to occur in the general area	No further consideration required
Herptiles								
Blanding's Turtle	*Emydoidea blandingii*	END	THR	S3	Blanding's Turtles are identifiable by their bright yellow throat and chin and domed shell. They spend the majority of their life cycle in the aquatic environment, usually in large wetlands or shallow lakes with high densities of water plants (1). These turtles prefer shallow, nutrient rich water with organic sediment and dense vegetation. They use terrestrial sites for travel between habitat patches and to lay clutches of eggs, often going hundreds of meters from their nearest water body. Blanding's Turtles nest in dry coniferous and mixed forest habitats, as well as fields and roadsides (2). From late October until the end of April, they hibernate in the mud at the bottom of permanent water bodies (1).	No	Known to occur in the general area	No further consideration required
Eastern Musk Turtle	*Sternotherus odoratus*	SC	SC	S3	The Eastern Musk Turtle is small with a narrow carapace, a dark brown body and two light stripes on each side of their head (5). It is a small freshwater turtle found primarily in slow moving water bodies with abundant emergent vegetation and mucky bottoms along the southern edge of the Canadian Shield within which they burrow into overwinter. Nesting sites vary, but must be close to the water and exposed to direct sunlight (1).	No	Known to occur in the general area	No further consideration required
Northern Map Turtle	*Graptemys geographica*	SC	SC	S3	The Northern Map Turtle is a medium sized turtle identified by its carapace's map contour-like patterning. It lives in larger lakes and rivers, requiring high water quality to support their primary prey species: molluscs. This species can often be seen in large groups basking together on rocks and logs. In the winter, the Northern Map Turtle can be found hibernating on the bottom of slow-moving rivers (1).	No	Known to occur in the general area	No further consideration required
Snapping Turtle	*Chelydra serpentina*	SC	SC	S3	The Snapping Turtle, with its large serrated carapace, small plastron, and spiked tail, is Canada's largest freshwater turtle (5). It spends the majority of its life in water, preferring shallow water with soft mud and leaf litter, and will travel upland to gravel or sandy embankments, roadsides, along railway lines or beaches to lay their eggs (1).	Yes: adjacent lands only	Known to occur in the general area	Potential significant wildlife habitat on adjacent lands
Spotted Turtle	*Clemmys guttata*	END	END	S2	The Spotted Turtle is named after the distinct yellow spots on its carapace. The species is semi-aquatic and prefers ponds, marshes, bogs and even ditches with slow-moving, unpolluted water and an abundant supply of aquatic vegetation. This species usually hibernates in wetlands or seasonally wet areas with structures such as overhanging banks, hummocks, tree roots, or aquatic animal burrows (1).	No	Known to occur in the general area	No further consideration required
Wood Turtle	*Glyptemys insculpta*	THR	END	S2	The Wood Turtle has orange coloured front legs, neck and chin and a sculpted carapace with raised, pyramidal scutes (5). They prefer clear rivers and streams that have moderate current, and sandy or gravelly substrates. This species spends more time on land than other turtle species including in meadows, swamps and fields. Wooded areas are an essential habitat component, and the species uses aquatic habitats for hibernation and mating. Nesting occurs in areas with sandy soil and abundant light (1).	No	Known to occur in the general area	No further consideration required
Eastern Fox Snake (Georgian Bay GLSL Population)	*Pantherophis gloydi*	END	THR	S3	The Eastern Foxsnake has a rusty orange head and a golden-brown body with dark blotches. The Georgian Bay population predominantly uses open habitats along shorelines (e.g., coastal rock barrens and meadow marshes) as habitat during the active season. The foxsnakes inhabiting this coastline do not venture far inland, restricting the majority of their activity to within 150 m of the water (4). The females require rotten logs, stumps, compost or decaying leaf piles for incubating their eggs (5).	No	Known to occur in the general area	No further consideration required
Eastern Hog-nosed Snake	*Heterodon platirhinos*	THR	THR	S3	The Eastern Hog-nosed Snake can be a variety of colours and patterns so is most easily identified by its flattened, upturned nose. They prefer sandy well-drained habitats such as beaches and dry forests because they lay their eggs, hibernate and burrow in these areas. The main diet of this snake is toads and frogs, so they usually stay close to water including marshes and swamps, where they have an increased chance of finding their preferred prey (1).	No	Known to occur in the general area	No further consideration required
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	SC	S4	The Eastern Ribbonsnake is slender with three bright yellow stripes running down its back and sides and a white crescent in front of each eye. This snake is usually found close to water as they are strong swimmers, often fleeing predators by diving into shallow water. It prefers wetland habitats where its prey species, frogs and small fish, are abundant. Over winter, they congregate in underground burrows or rock crevices to hibernate (1).	No	Known to occur in the general area	No further consideration required
Massasauga Rattlesnake (Great Lakes - St. Lawrence population)	*Sistrurus catenatus*	THR	THR	S3	The Massasauga, Ontario's venomous snake, can be identified by its rattle, vertical pupils, and triangular head. It inhabits a range of different habitats throughout Ontario, including tall grass prairies, marshes, bogs, shorelines, forests, and alvars. Within these habitats they require open areas to warm themselves in the sun (1).	No	Known to occur in the general area	No further consideration required
Common Five-lined Skink (Southern Shield Population)	*Plestiodon fasciatus*	SC	SC	S3	The Common Five-lined Skink is Ontario's only lizard species. Its Southern Shield population can be found underneath rocks on open bedrock in forests and like to bask on sunny rocks and logs. They hibernate in crevices among rocks or buried in the soil (1). They hibernate in groups under rocks and tree stumps or in rotting wood (5).	No	Known to occur in the general area	No further consideration required
Western Chorus Frog	*Pseudacris triseriata*	THR	-	S3	The Western Chorus Frog is small with a dark stripe running through its eye and a light stripe underneath (5). It is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environments, including leaf litter, wood debris, and vacant animal burrows (2).	Yes: adjacent lands only	Not observed during targeted surveys; unlikely to occur on Site	No further consideration required
Invertebrates								
Monarch Butterfly	*Danaus plexippus*	SC	SC	S2N,S4B	The Monarch is an orange and black butterfly with small white spots and a wingspan of around 10 cm. It relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Hine's Emerald	*Somatochlora hineana*	END	END	S1	Hine's Emerald is a medium-sized dragonfly with a dark abdomen, metallic gree thorax with two yellow stripes, and green eyes. Its habitat consists of groundwater-fed wetlands with grassy vegetation (1).	No	Known to occur in the general area	No further consideration required

APPENDIX: Species of Conservation Concern - Simcoe County

COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
West Virginia White	*Pieris virginiensis*	No Status	SC	S3	The West Virginia White is a small, dingy white butterfly. This species is found in moist deciduous woods, and requires a supply of toothwort, a small, spring-blooming plant, which provides the only source of food for its larvae. The West Virginia White is found mostly in the central and southern parts of Ontario, but its range extends north to Manitoulin and St. Joseph islands (1).	No	Known to occur in the general area	No further consideration required
Yellow-banded Bumble Bee	*Bombus terricola*	SC	SC	S3S5	The Yellow-banded Bumble Bee is a medium-sized bumble bee with a distinct yellow and black abdominal band pattern found on its queens, males, and workers. This species is a forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions. It can be found in mixed and coniferous woodlands, particularly for nesting and overwintering, as well as a variety of open habitat such as native grasslands, farmlands and urban areas. The Yellow-banded Bumble Bee ranges from the Mixedwood Plains of southern Ontario to the Hudson Bay Lowlands in the north (1). Their nest sites are often found underground in abandoned burrows or decomposing logs.	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Mammals								
Eastern Red Bat	*Lasiurus borealis*	END	END	S3	The Eastern Red Bat has similar habitat needs to the hoary bat. It roosts among the foliage of trees and occasionally shrubs. Red bats roost alone, including at maternity roosts (with pups), and prefer sites with foliage overhead for cover, and open areas for flight below. Deciduous, mixed, and coniferous forests are are used, but roost trees are usually deciduous trees. Trees used for maternity roosts are typically mature tall trees, with a large diameter, reaching or exceeding the height of the surrounding canopy. Foraging habitat includes a variety of open habitats. (3)	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under the ESA
Hoary Bat	*Lasiurus cinereus*	END	END	S3	The Hoary bat has similar habitat needs to the eastern red bat. It roosts among the foliage of trees and occasionally shrubs. Hoary bats roost alone, including at maternity roosts (with pups), and prefer sites with foliage overhead for cover, and open areas for flight below. Deciduous, mixed, and coniferous forests are used, but roost trees are usually deciduous trees. Trees used for maternity roosts are typically mature tall trees, with a large diameter, reaching or exceeding the height of the surrounding canopy. Foraging habitat includes a variety of open habitats. (3)	Yes: on-site and adjacent lands	Incidental observation on-site	Consideration required under the ESA
Silver-haired Bat	*Lasionycteris noctivagans*	END	END	S3	Silver haired bats primarily roost under the bark and in the cavities of trees. They are reliant on mature where large cavity and decaying trees occur such as mature or semi-mature forests Although they can utilize both deciduous and coniferous trees, deciduous trees more commonly have the characteristics requires by this species. Old woodpecker cavities are commonly used. Maternity roosts usually include small groups of females within these habitat features. Foraging habitat is not well understood but includes openings within forests, and along forest edges. (3)	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under the ESA
Tri-colored Bat	*Perimyotis subflavus*	END	END	S3?	The Tri-colored Bat is small, with pale brown with orange-red forearms, muzzle, and ears. It is named for the black, yellow, and brown hairs on its back. It is considered rare in this region of Ontario which is at the northernmost limit of the natural range. These bats prefer to nest in foliage, tree cavities and woodpecker holes, but are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Tri-colored Bats prefer an open forest habitat type in proximity to water (6).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under the ESA
Eastern Small-footed Myotis	*Myotis leibii*	No Status	END	S2S3	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (1).	No	Known to occur in the general area	No further consideration required
Little Brown Myotis	*Myotis lucifugus*	END	END	S4	The Little Brown Myotis has glossy brown fur and a fleshy projection covering the entrance to its ears. This species roosts in trees and buildings, often selecting attics, abandoned buildings and barns for summer colonies where they can raise their young. Little Brown Bats hibernate from October/November to March/April, most often in caves or abandoned mines that are humid and remain above freezing (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under the ESA
Northern Myotis	*Myotis septentrionalis*	END	END	S3	The Northern Myotis has dull yellow-brown fur with pale bellies and long, rounded ears. This species is found in forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October/November to March/April, most often in caves or abandoned mines (1).	Yes: on-site and adjacent lands	Known to occur in the general area	Consideration required under the ESA
Algonquin Wolf	*Canis lycaon*	SC	THR	S4	Formerly called the Eastern Wolf, this canine was recently renamed the Algonquin Wolf. In the southern portion of the province, this species prefers deciduous and mixed forest landscapes while their northern range include mixed and coniferous forests. It is most prevalent in areas with abundant prey species which include Beaver, White-tailed Deer and Moose. Dens sites are usually found in coniferous forests with easily excavated soil types like sand and close to a permanent water source (1).	No	Known to occur in the general area	No further consideration required
Trees, plants, fungi and lichens								
American Ginseng	*Panax quinquefolius*	END	THR	S2	American Ginseng is a perennial plant which grows up to 60 centimetres in height. The leaves typically have five leaflets arranged in a whorl at the end of the leaf stem. The root looks like a gnarly parsnip. The flowers are an inconspicuous green-white in colour, but the berries are bright red and arranged in a cluster. In Ontario, the American Ginseng typically grows in rich, moist, and mature deciduous woods dominated by Sugar Maple, White Ash, and American Basswood. It typically grows in deep, nutrient rich soil over limestone or marble bedrock (1).	No	Known to occur in the general area	No further consideration required
American Hart's-tongue Fern	*Asplenium scolopendrium*	SC	SC	S3	American Hart's Tongue Fern is a perennial evergreen fern with fronds growing from a short underground stem. Its blades are strap-shaped with a heart-shaped base and pointed tip. The species grows on calcareous rocks on slopes in deciduous forests, preferring deep shade. In Ontario, most occurences are in maple-beech forests (1).	No	Known to occur in the general area	No further consideration required
Black Ash	*Fraxinus nigra*	No status	END	S4	The Black Ash is a smaller-sized tree with a narrow crown, light grey and scaly bark, and green, oval leaflets on a central stalk. It grows everywhere in Ontario except for the far north, preferring moist climates and soils such as swampy woodlands or bogs (1).	No	Known to occur in the general area	No further consideration required
Broad Beech Fern	*Phegopteris hexagonoptera*	SC	SC	S3	The Broad Beech Fern can grow to a height of 50 cm or more and has a creeping, scaly root (2). The fern has large divided leaves called fronds which grow from 25 to 75 cm long and triagular leaf blades. The Broad Beech Fern perfers rich, moist soils in deciduous forests, usually in full shade and often dominated by Maple and Beech trees. In Ontario, it is found in southern Muskoka, along Lake Erie, and in the eastern Lake Ontario - St Lawrence River region (1).	No	Known to occur in the general area	No further consideration required
Butternut	*Juglans cinerea*	END	END	S2?	The Butternut is a medium sized tree reaching 30 m in height. It has large compound leaves with 11 to 17 leaflets. The fruit is oval, fuzzy and sticky. In Ontario, the Butternut prefers moist, well-drained soil, often along streams, or occasionally well-drained gravel sites. It grows alone or in small groups in deciduous forests (1).	Yes: on-site and adjacent lands	Confirmed habitat on-site through targeted surveys	Consideration required under the ESA

APPENDIX: Species of Conservation Concern - Simcoe County

COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Eastern Prairie Fringed-orchid	*Platanthera leucophaea*	END	END	S2	The Eastern Prairie Fringed-Orchid has distinctive fringed white flowers with a deep "nectar spur" containing nectar and a flat, fringed "lip" serving as a platform for pollinating insects. It may lie dormant for years before flowering. It can be found in areas of tallgrass prairie or fen throughout the province and in some tamarack swamps of the Bruce Peninsula and Ottawa Area (1).	No	Known to occur in the general area	No further consideration required
Purple Twayblade	*Liparis liliifolia*	THR	THR	S2	The Purple Twayblade is a small orchid with two broad, shiny leaves at the base of the plant and a single stem from which mauve-purple flowers cluster. It can be found in a variety of habitats including open woodlands, mixed deciduous forests, shrub thickets, deciduous swamps, and coniferous plantations. It requires partial, but can not tolerate full, shade and therefore depends on natural disturbances to keep its habitat relatively open (1).	No	Known to occur in the general area	No further consideration required

References

1. Ministry of Environment, Conservation and Parks. (2022). Species at Risk in Ontario. Retrieved from https://www.ontario.ca/page/species-risk-ontario
2. Government of Canada. (2021). Species at Risk Public Registry. Retrieved from https://species-registry.canada.ca/index-en.html#/species?ranges=5&sortBy=commonNameSort&sortDirection=asc&pageSize=10
3. Committee on the Status of Endangered Wildlife in Canada. (2008).
4. Environment Canada. (2018).
5. Ontario Nature. (2020). Reptiles and Amphibians. Retrieved from https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/
6. University of Michigan Museum of Zoology. (2004).
7. Ontario Breeding Bird Atlas. (2020).
8. Government of Canada. (2021). Aquatic Species at Risk Map. https://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html

Appendix D

Vegetation Species List

Appendix D - Plant Species List

Scientific Name	Common Name	Status/Rarity			CC	CW	Vegetation Community					
		Federal	Provincial				1	2	3	4	5	6
		SARA	SARO	S-Rank			CUM1	CUW1	FOD8-1	MAS2-1	CUP3	CUM1
Acer negundo	Manitoba Maple	-	-	S5	0	0	X	X	X			X
Acer platanoides	Norway Maple	-	-	SNA	-	5		X	X			
Acer saccharum	Sugar Maple	-	-	S5	4	3		X				
Aegopodium podagraria	Goutweed	-	-	SNA	-	0		X	X			
Alliaria petiolata	Garlic Mustard	-	-	SNA	-	0	X	X	X			X
Arctium minus	Common Burdock	-	-	SNA	-	3	X					X
Arrhenatherum elatius	Tall Oatgrass	-	-	SNA	-	3	X					
Artemisia vulgaris	Common Wormwood	-	-	SNA	-	5	X					
Asclepias syriaca	Common Milkweed	-	-	S5	0	5	X					X
Barbarea vulgaris	Bitter Wintercress	-	-	SNA	-	0	X			X		
Bromus inermis	Smooth Brome	-	-	SNA	-	5	X	X	X			X
Carex stipata	Awl-fruited Sedge	-	-	S5	3	-5				X		
Centaurea jacea	Brown Knapweed	-	-	SNA	-	5	X					X
Centaurea nigra	Black Knapweed	-	-	SNA	-	5			X			
Chenopodium album	Common Lamb's-quarters	-	-	SNA	-	3	X					
Circaea canadensis	Canada Enchanter's Nightshade	-	-	S5	2	3		X				
Cirsium vulgare	Bull Thistle	-	-	SNA	-	3	X	X	X			X
Clematis virginiana	Virginia Clematis	-	-	S5	3	0						X
Cornus alternifolia	Alternate-leaved Dogwood	-	-	S5	6	3		X				
Dactylis glomerata	Orchard Grass	-	-	SNA	-	3	X	X	X			X
Daucus carota	Wild Carrot	-	-	SNA	-	5	X	X				X
Dryopteris carthusiana	Spinulose Wood Fern	-	-	S5	5	-3		X				
Echinocystis lobata	Wild Cucumber	-	-	S5	3	-3		X				
Elaeagnus umbellata	Autumn Olive	-	-	SNA	-	3		X				
Epilobium hirsutum	Hairy Willowherb	-	-	SNA	-	-3				X		
Equisetum arvense	Field Horsetail	-	-	S5	0	0		X	X	X	X	X
Equisetum hyemale	Common Scouring-rush	-	-	S5	2	0				X		
Equisetum laevigatum	Smooth Scouring-rush	-	-	S4	7	-3		X				
Erigeron philadelphicus	Philadelphia Fleabane	-	-	S5	1	-3	X					X
Euthamia graminifolia	Grass-leaved Goldenrod	-	-	S5	2	0				X		X
Eutrochium maculatum var. maculatum	Spotted Joe Pye Weed	-	-	S5	3	-5				X		
Fragaria virginiana	Wild Strawberry	-	-	S5	2	3		X	X			
Fraxinus americana	White Ash	-	-	S4	4	3		X	X		X	X
Geranium robertianum	Herb-Robert	-	-	S5	2	3		X				
Geum aleppicum	Yellow Avens	-	-	S5	2	0	X	X	X			
Geum canadense	Canada Avens	-	-	S5	3	0	X		X			
Geum macrophyllum	Large-leaved Avens	-	-	S5	9	-3		X				
Glechoma hederacea	Ground-ivy	-	-	SNA	-	3	X					X
Glyceria striata	Fowl Mannagrass	-	-	S5	3	-5				X		
Hesperis matronalis	Dame's Rocket	-	-	SNA	-	3	X	X				X
Impatiens capensis	Spotted Jewelweed	-	-	S5	4	-3		X		X		X
Inula helenium	Elecampane	-	-	SNA	-	3				X		X
Juglans cinerea	Butternut	END	END	S2?	6	3		X				
Juglans nigra	Black Walnut	-	-	S4?	5	3	X	X	X			X
Juncus effusus	Soft Rush	-	-	S5	4	-5				X		
Juniperus virginiana	Eastern Red Cedar	-	-	S5	4	3		X				
Lamium galeobdolon	Yellow Archangel	-	-	SNA	-	-		X				
Leonurus cardiaca	Common Motherwort	-	-	SNA	-	5	X		X			
Leucanthemum vulgare	Oxeye Daisy	-	-	SNA	-	5	X					
Lolium arundinaceum	Tall Ryegrass	-	-	SNA	-	3	X		X			X
Lolium perenne	Perennial Ryegrass	-	-	SNA	-	3	X		X			X
Lonicera morrowii	Morrow's Honeysuckle	-	-	SNA	-	3		X	X			X
Malus spp	Apple species	-	-	SNA	-	5		X	X			
Matteuccia struthiopteris	Ostrich Fern	-	-	S5	5	0		X				
Medicago lupulina	Black Medick	-	-	SNA	-	3	X					
Medicago sativa	Alfalfa	-	-	SNA	-	5	X					
Melilotus albus	White Sweet-clover	-	-	SNA	-	3	X					
Mentha canadensis	Canada Mint	-	-	S5	3	-3				X		
Mentha spicata	Spearmint	-	-	SNA	-	-3				X		X
Myosotis sylvatica	Woodland Forget-me-not	-	-	SNA	-	5	X	X	X			X
Phalaris arundinacea	Reed Canarygrass	-	-	S5	0	-3	X	X	X	X		X
Phleum pratense	Common Timothy	-	-	SNA	-	3	X	X				X
Picea abies	Norway Spruce	-	-	SNA	-	5		X			X	
Pinus sylvestris	Scots Pine	-	-	SNA	-	3			X			
Poa spp	Grass species	-	-	S5	0	3	X	X	X			X
Populus balsamifera	Balsam Poplar	-	-	S5	4	-3			X	X		
Populus grandidentata	Large-toothed Aspen	-	-	S5	5	5			X			
Potentilla recta	Sulphur Cinquefoil	-	-	SNA	-	5	X	X				
Prunus serotina	Black Cherry	-	-	S5	3	3		X				
Prunus virginiana	Chokecherry	-	-	S5	2	3		X				
Pyrus spp.	Pear species	-	-	SNA	-	5		X				
Quercus rubra	Northern Red Oak	-	-	S5	6	3		X				
Ranunculus acris	Common Buttercup	-	-	SNA	-	0		X	X	X		X
Ranunculus repens	Creeping Buttercup	-	-	SNA	-	0		X				
Rhus typhina	Staghorn Sumac	-	-	S5	1	3						X
Robinia pseudoacacia	Black Locust	-	-	SNA	-	3		X				
Rosa multiflora	Multiflora Rose	-	-	SNA	-	3		X				
Rubus idaeus	Red Raspberry	-	-	S5	2	3		X				
Rubus occidentalis	Black Raspberry	-	-	S5	2	5	X	X	X			X
Rumex crispus	Curled Dock	-	-	SNA	-	0	X		X			X
Rumex obtusifolius	Bitter Dock	-	-	SNA	-	-3	X	X				X
Saponaria officinalis	Bouncing-bet	-	-	SNA	-	3		X				
Solanum dulcamara	Bittersweet Nightshade	-	-	SNA	-	0		X		X		
Solidago canadensis	Canada Goldenrod	-	-	S5	1	3	X	X	X			X

Scientific Name	Common Name	Status/Rarity			CC	CW	Vegetation Community					
		Federal	Provincial				1	2	3	4	5	6
		SARA	SARO	S-Rank			CUM1	CUW1	FOD8-1	MAS2-1	CUP3	CUM1
Solidago gigantea	Giant Goldenrod	-	-	S5	4	-3			X	X		
Symphyotrichum lanceolatum ssp. lanceolatu	Eastern Panicled Aster	-	-	S5	3	-3				X		
Symphyotrichum lateriflorum var. lateriflorum	Calico Aster	-	-	S5	3	0		X	X			X
Symphyotrichum puniceum	Purple-stemmed Aster	-	-	S5	6	-5				X		X
Taraxacum officinale	Common Dandelion	-	-	SNA	-	3	X	X	X		X	X
Thlaspi arvense	Field Pennycress	-	-	SNA	-	5	X					
Thuja occidentalis	Eastern White Cedar	-	-	S5	4	-3		X				
Trifolium pratense	Red Clover	-	-	SNA	-	3	X					
Typha latifolia	Broad-leaved Cattail	-	-	S5	1	-5				X		
Ulmus americana	White Elm	-	-	S5	3	-3		X	X			
Viburnum opulus	Cranberry Viburnum	-	-	S5	5	-3		X				X
Vicia cracca	Tufted Vetch	-	-	SNA	-	5	X	X				X
Vinca minor	Lesser Periwinkle	-	-	SNA	-	5		X				
Vitis riparia	Riverbank Grape	-	-	S5	0	0		X	X	X		X

Rarity / Status Definitions	
SARA	Species at Risk Act
SARO	Species at Risk in Ontario
SC	Special Concern
THR	Threatened
END	Endangered
NAR	Not at risk
S-Rank	Provincial rank used by the Natural Heritage Information Centre to prioritize protection efforts
S1	Extremely rare in Ontario
S2	Very rare in Ontario
S3	Rare to uncommon in Ontario
S4	Common in Ontario
S5	Widespread in Ontario
SNA	Not Applicable (typically introduced species)
"?"	Indicates uncertainty in classification due to lack of information
CC	Coefficient of Conservatism - assigned on a a scale of 1-10, with 1 being the least conservative and 10 being the most conserva applies to native species)
CW	Coefficient of Wetness - assigned on a scale of 5 to -5, with 5 indicating upland habitat and -5 indicating obligage wetland habit species in the middle of the range are commonly refered to as facultative (applies to all species, native and non-native)

Appendix E

Bird Species List

Appendix - Avifauna Observations

Common name	Scientific name	Station	Breeding Code	COSEWIC	SARO	S-Rank	Date
American Robin	*Turdus migratorius*	1	S			S5B	5/29/2025
Baltimore Oriole	*Icterus galbula*	1	S			S4B	5/29/2025
Blue Jay	*Cyanocitta cristata*	1	S			S5	5/29/2025
Common Grackle	*Quiscalus quiscula*	1	S			S5B	5/29/2025
Northern Cardinal	*Cardinalis cardinalis*	1	S			S5	5/29/2025
Red-winged Blackbird	*Agelaius phoeniceus*	1	S			S4	5/29/2025
Warbling Vireo	*Vireo gilvus*	1	S			S5B	5/29/2025
American Robin	*Turdus migratorius*	2	S			S5B	5/29/2025
Blue Jay	*Cyanocitta cristata*	2	S			S5	5/29/2025
Cedar Waxwing	*Bombycilla cedrorum*	2	S			S5B	5/29/2025
Common Yellowthroat	*Geothlypis trichas*	2	S			S5B	5/29/2025
Northern Cardinal	*Cardinalis cardinalis*	2	S			S5	5/29/2025
Red-winged Blackbird	*Agelaius phoeniceus*	2	S			S4	5/29/2025
Song Sparrow	*Melospiza melodia*	2	S			S5B	5/29/2025
American Robin	*Turdus migratorius*	3	S			S5B	5/29/2025
Blue Jay	*Cyanocitta cristata*	3	S			S5	5/29/2025
Northern Cardinal	*Cardinalis cardinalis*	3	S			S5	5/29/2025
Red-winged Blackbird	*Agelaius phoeniceus*	3	S			S4	5/29/2025
Savannah Sparrow	*Passerculus sandwichensis*	3	S			S4B	5/29/2025
Song Sparrow	*Melospiza melodia*	3	S			S5B	5/29/2025
*Note: *Grey shading indicates probable or confirmed breeding evidence.*							

Appendix - Avifauna Observations

Common name	Scientific name	Station	Breeding Code	COSEWIC	SARO	S-Rank	Date
American Crow	*Corvus brachyrhynchos*	1	S			S5B	6/16/2025
American Goldfinch	*Spinus tristis*	1	S			S5B	6/16/2025
American Robin	*Turdus migratorius*	1	T			S5B	6/16/2025
Baltimore Oriole	*Icterus galbula*	1	T			S4B	6/16/2025
Blue Jay	*Cyanocitta cristata*	1	T			S5	6/16/2025
Common Yellowthroat	*Geothlypis trichas*	1	S			S5B	6/16/2025
Eastern Phoebe	*Sayornis phoebe*	1	S			S5B	6/16/2025
Red-winged Blackbird	*Agelaius phoeniceus*	1	T			S4	6/16/2025
American Crow	*Corvus brachyrhynchos*	2	S			S5B	6/16/2025
American Goldfinch	*Spinus tristis*	2	S			S5B	6/16/2025
American Robin	*Turdus migratorius*	2	T			S5B	6/16/2025
Brown-headed Cowbird	*Molothrus ater*	2	S			S4B	6/16/2025
Cedar Waxwing	*Bombycilla cedrorum*	2	T			S5B	6/16/2025
Common Yellowthroat	*Geothlypis trichas*	2	T			S5B	6/16/2025
Eastern Phoebe	*Sayornis phoebe*	2	S			S5B	6/16/2025
Northern Cardinal	*Cardinalis cardinalis*	2	T			S5	6/16/2025
Red-eyed Vireo	*Cardinal cardinalis*	2	S			S5	6/16/2025
Red-winged Blackbird	*Agelaius phoeniceus*	2	T			S4	6/16/2025
Song Sparrow	Melospiza melodia	2	T			S5B	6/16/2025
American Crow	Corvus brachyrhynchos	3	S			S5B	6/16/2025
Baltimore Oriole	Icterus galbula	3	S			S4B	6/16/2025
Blue Jay	Cyanocitta cristata	3	T			S5	6/16/2025
Cedar Waxwing	Bombycilla cedrorum	3	S			S5B	6/16/2025
Common Yellowthroat	Geothlypis trichas	3	S			S5B	6/16/2025
Eastern Phoebe	Sayornis phoebe	3	S			S5B	6/16/2025
House Wren	Troglodytes aedon	3	S			S5B	6/16/2025
Red-eyed Vireo	Vireo olivaceus	3	S			S5B	6/16/2025
Red-winged Blackbird	Agelaius phoeniceus	3	T			S4	6/16/2025
*Note: *Grey shading indicates probable or confirmed breeding evidence.*							

Code	Description
X	Species observed during its breeding season, but NOT in suitable nesting habitat (no breeding evidence found). Note that this code is rarely used as birds tend to occupy nesting habitat during the breeding season. Do not use for species known to be migrants.
H	Species observed in suitable nesting Habitat during its breeding season.
S	Singing male or adult producing other sounds associated with breeding (e.g., calls or drumming) in suitable nesting habitat during the species' breeding season.
M	Multiple singing/calling/drumming individuals (7 or more) heard during one visit to a single square and in suitable nesting habitat during the species' breeding season. Use with caution to avoid counting migrants.
P	Pair observed in suitable nesting habitat during the species' breeding season.
T	Presumed Territory based on the presence of an adult bird (usually singing, but not necessarily so), in the same suitable nesting habitat patch on at least two visits, one week or more apart, during the species' breeding season. Use discretion when using this code. "T" is not to be used for colonial birds, or species that might forage or loaf a long distance from their nesting site (e.g. Turkey Vulture, and male waterfowl).
D	Courtship or Displays involving a male and female (e.g., courtship feeding, copulation) or antagonistic behavior between two or more individuals (e.g., territorial disputes or chases), in suitable nesting habitat during the species' breeding season.
V	Bird Visiting a probable nest site in suitable nesting habitat during the species' breeding season.
A	Agitated behavior or alarm calls of an adult in suitable nesting habitat during the species' breeding season.
B	Brood patch or cloacal protuberance on an adult in suitable nesting habitat during the species' breeding season.
N	Nest-building by wrens or nest hole excavation by woodpeckers (both may build dummy or roosting nests so nest-building alone is not enough to confirm breeding).
NB	Nest building, including the carrying of nesting material, by all species except wrens and woodpeckers.
DD	Distraction Display, injury-feigning, or other displays attempting to draw attention away from a nest or young.
NU	Empty Nest Used or identifiable eggshells from earlier in the same nesting season.
FY	Recently Fledged Young (nidicolous species – whose young are raised in a nest) or downy young (nidifugous species – whose young leave the nest soon after hatching) incapable of sustained flight.
AE	Adult Entering, occupying, or leaving a nest site (visible or not) or whose behavior suggests the presence of an occupied nest.
FS	Adult carrying a Faecal Sac.
CF	Adult Carrying Food for young.
NE	Nest containing eggs
NY	Nest with Young (seen or heard)

Notes:

COSEWIC - Committee on the Status of Endangered Wildlife in Canada

SARO - Species at Risk in Ontario

S-Rank - Provincial rank used by the Natural Heritage Inforamation Centre to prioritize protection efforts

SC - Special Concern

THR - Threatened

END - Endangered

NAR - Not at risk

S1 - Extremely rare in Ontario

S2 - Very rare in Ontario

S3 - Rare to uncommon in Ontario

S4 - Considered to be common in Ontario

S5 - Species is widespread in Ontario

SNA - Not Applicable (typically introduced species)

SU - Status is uncertain due to insufficient information

"?" - Indicates uncertainty in classification due to lack of information

Appendix F

Significant Wildlife Habitat Assessment

APPENDIX: Significant Wildlife Habitat Screening - 6E

			SITE			ADJACENT LANDS
SWH Type	**Habitat Descriptions & Criteria for Candidate SWH**	**Listed Species & Defining Criteria for Confirmed SWH**	**Candidate SWH Criteria Present: Yes/No**	**Species or Defining Criteria Observations**	**Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes**	**Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No**
Seasonal Concentration Areas of Animals						
Waterfowl Stopover and Staging Areas (Terrestrial)	Meadow, Thicket, or Agricultural Field WITH spring flooding/sheet water (Mar-May) AND size potential to support 100+ individuals AND potential established/recurring annual use	American Black Duck, American Wigeon, Blue-winged Teal, Gadwall, Green-winged Teal, Mallard, Northern Pintail, Northern Shoveler, Wood Duck Defining Criteria: 100+ individuals SWH: ecosite + 100-300m radius; dependent on local site conditions and adjacent land use	No	N/A	Absent SWH	No
Waterfowl Stopover and Staging Area (Aquatic)	Shallow Marsh, Deciduous Swamp, Shallow Aquatic, Open Aquatic, reservoirs managed as wetland/ lake/ pond AND size potential to support 100+ individuals for 7+ days *Rare: typically only a few locations per EcoDistrict *EXCLUDES SWM and sewage treatment ponds*	American Black Duck, American Wigeon, Black Scoter, Blue-winged Teal, Brant, Bufflehead, Cackling Goose, Canada Goose, Canvasback, Common Goldeneye, Common Merganser, Gadwall, Greater Scaup, Green-winged Teal, Hooded Merganser, Lesser Scaup, Long-tailed Duck, Northern Pintail, Northern Shoveler, Red-breasted Merganser, Redhead, Ring-necked duck, Ruddy Duck, Snow Goose, Surf Scoter, White-winged Scoter Defining Criteria: 100+ individuals for 7+ days (>700 waterfowl use days) OR annual staging of Ruddy Ducks, Canvasbacks and Redheads OR wetlands and shorelines associated with sites identified in SWHTG Appendix K SWH: combined ecosites + 100m radius	No	N/A	Absent SWH	No
Shorebird Migratory Stopover Area	Beach/Bar, Sand Dune, Meadow Marsh, Shorelines of lakes, rivers and wetlands (including seasonally flooded, muddy, unvegetated shoreline habitats) WITH size potential to support 100+ Whimbrel OR 3+ species for 1000+ shorebird use days *EXCLUDES SWM and sewage treatment ponds*	American Golden Plover, Baird's Sandpiper, Black-bellied Plover, Dunlin, Greater Yellowlegs, Hudsonian Godwit, Least Sandpiper, Lesser Yellowlegs, Marbled Godwit, Pectoral Sandpiper, Purple Sandpiper, Red-necked Phalarope, Ruddy Turnstone, Sanderling, Semipalmated Plover, Short-billed Dowitcher, Solitary Sandpiper, Spotted Sandpiper, Stilt Sandpiper, Whimbrel, White-rumped Sandpiper Defining Criteria: 3+ species and 1000+ shorebird use days (#birds x #days) OR 100+ Whimbrel for at least 3 yrs (makes brief stops of <24 hrs during migration) SWH: combined ecosites + 100m radius	No	N/A	Absent SWH	No
Raptor Wintering Area (Hawks and Owls)	COMBINATION of Forest, Meadow, Thicket, Savannah, Woodland or lightly grazed pasture of combined 20+ha area WITH 15+ha of the area consisting of open habitat; Fields should be wind swept with limited snow accumulation / depth	Hawks: American Kestrel, Red-tailed Hawk, Rough-legged Hawk, Northern Harrier Owls: Short-eared Owl, Snowy Owl Defining Criteria: 1+ Short-eared Owls OR 10+ individuals of 2+ listed hawk/owl species; AND must be used regularly (at least 20 days during each year for at least 3 in 5 years) SWH: not specified in Criteria Schedules	No	N/A	Absent SWH	No
Raptor Wintering Area (Bald Eagle)	Forest or Treed Swamp on shoreline of large rivers or lakes WITH large trees and snags for roosting	Bald Eagle Defining Criteria: 1+ Bald Eagle AND used regularly (at least 20 days out of 3 in 5 years) SWH: shoreline forest ecosites directly adjacent to the prime hunting area (open water)	No	N/A	Absent SWH	No
Bat Hibernacula	Crevices, Caves, Karst Features, Abandoned Mines *EXCLUDES buildings and active mines*	Big Brown Bat, Tri-coloured Bat Defining Criteria: all sites with confirmed hibernacula are SWH SWH: entrance + 1000m radius for wind farms OR + 200m radius for other projects	No	N/A	Absent SWH	No
Bat Maternity Colonies	Mature Deciduous or Mixed Forests and Swamps WITH 10+/ha cavity trees WITH 25+ cm DBH; Trees in lesser decay categories (1-3) preferred *EXCLUDES Coniferous Forests and Swamps and buildings*	Big Brown Bat, Silver-haired Bat Defining Criteria: >10 Big Brown Bats OR >5 Adult Female Silverhaired Bats SWH: entire Ecosite or Ecoelement containing the maternity colony	Yes	Candidate SWH snag density of 10+/ha was not met.	Absent SWH	No
Turtle Wintering Area (Painted and Snapping Turtles)	Swamp, Marsh, Shallow Aquatic, Open Aquatic, Open Fen, Open Bog WITH soft mud substrates AND enough depth to maintain free water beneath ice AND adequate dissolved oxygen *EXCLUDES man-made ponds such as SWM and sewage treatment ponds*	Midland Painted Turtle, Snapping Turtle Defining Criteria: 5+ Painted Turtles OR 1+ Snapping Turtle SWH: ecosite	No	N/A	Absent SWH	Yes
Turtle Wintering Area (Northern Map Turtle)	Open Aquatic, including deeper rivers or streams and lakes WITH current AND soft mud substrates AND enough depth to maintain free water beneath ice AND adequate dissolved oxygen *EXCLUDES SWM and sewage treatment ponds*	Northern Map Turtle Defining Criteria: 1+ Northern Map Turtle SWH: ecosite OR the pool where overwintering occurs in a stream/river	No	N/A	Absent SWH	No
Reptile Hibernaculum (Snakes)	Any ecosites other than very wet ones, broken/fissured bedrock, burrows, rock piles or slopes, old stone fences, or abandoned crumbling foundations, some wetlands (conifer or shrub swamps and swales, poor fens or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover)WITH openings below frost line:	Eastern Gartersnake, Eastern Ribbonsnake, Milksnake, Northern Brownsnake, Northern Red-bellied Snake, Northern Ring-necked, Northern Watersnake, Smooth Green Snake Defining Criteria: 5+ individuals of a species OR any number snakes of 2 or more species OR presence of a Special Concern species AND observed near a potential hibernacula on warmy sunny days in spring and fall SWH: feature containing hibernacula +30 m radius	No	N/A	Absent SWH	No
Reptile Hibernaculum (Five-lined Skink)	Mixed Forests, Deciduous Forest, or Coniferous Forest dominated by Pine/Hemlock WITH cover rocks overlaying fissured granite bedrock	Five-lined Skink (Southern Shield population) Defining Criteria: All sites with active Skink hibernacula are SWH SWH: feature containing hibernacula +30 m radius	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills/piles, pits, steep slopes, cliff faces WITH size potential to support 8+ nests *EXCLUDES all man-made structures (bridge abutments, silos, barns, etc.) AND recently (2 years) disturbed soil (berms, embankments, stock piles, aggregate operations)*	Cliff Swallow, Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies) Defining Criteria: 1+ nesting site with 8+ pairs SWH: peripheral nests + 50 m radius	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Deciduous and Mixed Swamp (excluding those dominated by Cedar) or Treed Fen, lake shorelines/ islands/ peninsulas WITH size to support 5+ nests; Nests are typically 11-15 m above ground near top of live or dead standing trees / occasionally in shrubs and emergent vegetation	Black-crowned Night Heron, Great Blue Heron, Green Heron, Great Egret Defining Criteria: 5+ active nests SWH: edge of the colony + minimum 300 m radius OR extent of the forest ecosite OR any island <15 ha with a colony	No	N/A	Absent SWH	No
Colonially-nesting Bird Breeding Habitat (Ground; Terns and Gulls)	Rocky island or peninsula (natural or artificial) in lake or large river	Caspian Tern, Common Tern, Great Black-backed Gull, Herring Gull, Little Gull, Ring-billed Gull Defining Criteria: 25+ active Herring Gull or Ring-billed Gull nests OR 5+ active Common Tern nests OR 2+ active Caspian Tern nests OR 1+ active Little Gull or Great Black-backed Gull nest SWH: edge of the colony + 150+m radius OR the ecosites containing the colony OR any island <3 ha	No	N/A	Absent SWH	No

APPENDIX: Significant Wildlife Habitat Screening - 6E

			SITE			ADJACENT LANDS
SWH Type	**Habitat Descriptions & Criteria for Candidate SWH**	**Listed Species & Defining Criteria for Confirmed SWH**	**Candidate SWH Criteria Present: Yes/No**	**Species or Defining Criteria Observations**	**Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes**	**Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No**
Colonially-nesting Bird Breeding Habitat (Ground; Brewer's Blackbird)	Close proximity to watercourses in pastures, Meadows, Thickets, Savannah, Meadow Marsh, Shallow Marsh AND scattered trees or shrubs	Brewer's Blackbird Defining Criteria: 5+ pairs SWH: edge of the colony + 150+ m radius OR the ecosites containing the colony OR any island <3 ha	No	N/A	Absent SWH	No
Migratory Butterfly Stopover Area	Combination of Forest or Plantation AND Meadow, Thicket, or Savannah WITH size of 10+ha AND located within 5 km of Lake Ontario AND relatively undisturbed with abundance of preferred nectar plants	Monarch, Painted Lady, Red Admiral Defining Criteria: Monarch Use Days (MUD) of 5000+ OR 3000+ MUD and presence of Painted Ladies or Red Admirals SWH: not indicated in Criteria Schedules	No	N/A	Absent SWH	No
Landbird Migratory Stopover Areas	Forest or Treed Swamp that may be complexed with grassland or wetland AND size of 10+ ha AND located within 5 km of Lake Ontario	All migratory songbirds and raptors Defining Criteria: 200+ birds/day of 35+ species AND 10+ bird species on 5+ survey dates (April/May and August/October) SWH: not indicated in Criteria Schedules	No	N/A	Absent SWH	No
Deer Yarding Areas	Stratum I (Core): Coniferous Forest or Swamp WITH 60+% canopy cover by Pine, Hemlock, Cedar, or Spruce Stratum II (typically surrounds Stratum I): Mixed or Deciduous Forest or Swamp WITH plenty of browse (esp. those dominated by Poplar or Birch); can include agricultural fields *EXCLUDES woodlots with high densities of deer due to artificial feeding*	White-tailed Deer **Presence is determined by MNRF** *If present, consider Movement Corridors*	No	N/A	Absent SWH	No
Deer Winter Congregation Areas	Forest and Treed Swamps; Typically applies to areas of 100+ ha, but can be smaller (e.g., conifer plantations) *EXCLUDES woodlots with high densities of deer due to artificial feeding*	White-tailed Deer **Presence is determined by MNRF** *If present, consider Movement Corridors*	No	N/A	Absent SWH	No
Rare Vegetation Communities						
Cliffs and Talus Slopes	Cliff (near vertical bedrock 3+m tall) OR Talus. In 6E, most cliffs and talus slopes are associated with the Niagara Escarpment	No listed species Defining Criteria: no added criteria SWH: ecosite	No	N/A	Absent SWH	No
Sand Barren	Sand Barren WITH size 0.5+ha AND <60% tree cover; usually located within other types of habitat; caused by lack of moisture, periodic fires and erosion	No listed species Defining Criteria: <50% cover by exotic/invasive species SWH: ecosite	No	N/A	Absent SWH	No
Alvar	Alvar, Coniferous Forest dominated by Pine or Cedar, Bedrock Cultural Meadow, Juniper Bedrock Alvar Cultural Thicket, Bedrock Cultural Savannah (CUS2), Bedrock Cultural Woodland (CUW2) WITH size 0.5+ha AND <60% tree cover; typically level mosaic of rock pavements and bedrock overlain by thin veneer of soil	Indicator Species: Crawe's Sedge, Flat-stemmed Spikerush, Fluxweed, Philadelphia Panicgrass, Small Skullcap Defining Criteria: 4+ listed Alvar Indicator Species AND <50% cover by exotic / introduced species AND in excellent condition AND fits surrounding landscape with few conflicting land uses SWH: ecosite	No	N/A	Absent SWH	No
Old Growth Forest	Forest, Treed Swamp WITH size of 30+ha WITH 10+ha interior habitat (measured 100 m from forest edge)	No listed species Defining Criteria: presence of 140+ year old trees AND no cut stumps or other signs of logging SWH: limited to area that meets criteria	No	N/A	Absent SWH	No
Savannah	Tallgrass Savannah, Talgrass Woodland, Cultural Savannah of any size WITH tree cover 25-60%; may be a natural or restored site *EXCLUDES remnant sites such as railway right of ways*	Indicator Species (SHWTG Appendix N): Dwarf Hackberry, Early-branching Panicgrass, Illinois Tick-trefoil, Redtop Panicgrass, Side-oats Gramma, Small-leaved Tick-trefoil, White Prairie Gentian Defining Criteria: 1+ indicator species present AND <50% cover by exotic / introduced species SWH: ecosite	No	N/A	Absent SWH	No
Tallgrass Prairie	Tallgrass Prairie of any size WITH <25 tree cover; may be a natural or restored site *EXCLUDES remnant sites such as railway right of ways*	Indicator Species (SWHTG Appendix N): Dwarf Hackberry, Early-branching Panicgrass, Illinois Tick-trefoil, Redtop Panicgrass, Side-oats Gramma, Small-leaved Tick-trefoil, White Prairie Gentian Defining Criteria: 1+ indicator species present AND <50% cover by exotic / introduced species SWH: ecosite	No	N/A	Absent SWH	No
Other Communities Considered Provincially Rare	ELC communities considered provincially rare by the NHIC	ELC communities considered provincially rare by the NHIC	No	N/A	Absent SWH	No
Specialized Habitat for Wildlife						
Waterfowl Nesting Area	Upland habitats 120+m wide AND adjacent shallow aquatic, shallow marsh, meadow marsh, thicket swamp, or deciduous treed swamp (i.e., all wetlands excluding coniferous and mixed treed swamps). Wetlands must be >0.5 ha or a cluster of three or more <0.5 ha wetlands within 120 m of each other where waterfowl nesting is known to occur. *Wood Ducks Bufflehead, Common Goldeneye, and Hooded Mergansers utilize large diameter trees (>40 cm dbh) in woodlands for cavity nest sites	American Black Duck, Blue-winged Teal, Gadwall, Green-winged Teal, Hooded Merganser, Mallard, Northern Pintail, Northern Shoveler, Wood Duck Defining Criteria: 1+ nesting site of American Black Duck OR 10+ nesting pairs (including Mallards) OR 3+ nesting pairs (excluding Mallards) SWH: 120 m radius (+/- as determined by site-specific study) of upland habitat adjacent to a wetland	No	N/A	Absent SWH	No
Bald Eagle and Osprey Nesting, Foraging, and Perching Habitat	Forest, Swamp AND directly adjacent to shoreline/riparian areas of rivers, lakes, ponds, wetlands *EXCLUDES nests on man-made objects (e.g., telephone poles, constructed platforms)*	Osprey, Bald Eagle Defining Criteria: 1+ active nest of either species AND known to be used annually; to be excluded, nests must be known to be inactive for 3+ yrs or suspected to be inactive for 5+ yrs SWH: Osprey: active nest +300m radius OR contiguous woodland; Bald Eagle: active nest +400-800 m radius	No	N/A	Absent SWH	No

APPENDIX: Significant Wildlife Habitat Screening - 6E

			SITE			ADJACENT LANDS
SWH Type	**Habitat Descriptions & Criteria for Candidate SWH**	**Listed Species & Defining Criteria for Confirmed SWH**	**Candidate SWH Criteria Present: Yes/No**	**Species or Defining Criteria Observations**	**Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes**	**Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No**
Woodland Raptor Nesting Habitat	Forest, Treed Swamp, Coniferous Plantations of 30+ ha AND 10+ ha of interior habitat (measured 200 m from the forest edge)	Barred Owl, Broad-winged Hawk, Cooper's Hawk, Northern Goshawk, Red-shouldered Hawk, Sharp-shinned Hawk Defining Criteria: 1+ active nest SWH: Red-shouldered Hawk, Northern Goshawk: active nest +400m radius OR 28 ha of suitable habitat; Barred Owl: active nest +200m radius; Broad-winged Hawk, Coopers Hawk: active nest +100m radius; Sharp-shinned Hawk: active nest +50m radius	No	N/A	Absent SWH	No
Turtle Nesting Areas	Exposed mineral soil (sand and gravel) areas WITHIN 100 m of adjacent Bog, Fen, Shallow Marsh, Shallow Aquatic, or undisturbed shallow weedy areas of marshes, lakes, and rivers *EXCLUDES habitat along municipal or provincial roads*	Midland Painted Turtle, Snapping Turtle, Northern Map Turtle Defining Criteria: 5+ nesting Midland Painted Turtle OR 1+ nesting Northern Map Turtle or Snapping Turtle SWH: nesting area + 30-100m radius, depending on slope, riparian vegetation, adjacent land use, and consideration of travel routes to/from nest sites	No	N/A	Absent SWH	No
Seeps and Springs	Forest in headwaters area of a stream/river system; important wildlife feeding/drinking areas, especially in the winter	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp. Defining Criteria: 2+ seeps/springs SWH: ecosite/ecoelement; protection of the recharge area considering slope, vegetation, height of trees and groundwater condition	No	N/A	Absent SWH	No
Amphibian Breeding Habitat (Woodland)	Wetland, pond or breeding pool, including vernal pools WITH size of 500+m^2 (~25m diameter) AND located in or within 120m of Forest or Treed Swamp *Permanent ponds or those containing water until at least mid-July are preferred	Blue-spotted Salamander, Eastern Newt, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog Defining Criteria: 1+ breeding salamander sp or newt OR 2+ breeding frog sp WITH 20+ individuals (adults or eggs masses) / Call Level Code 3 SWH: breeding pond/wetland +230m radius of woodland habitat *If present adjacent to woodland, travel corridor linking feature to the woodland is to be included*	Yes	Candidate SWH call level activity did not meet criteria threshold	Absent SWH	No
Amphibian Breeding Habitat (Wetlands)	Swamp, Fen, Bog, Meadow Marsh, Shallow Marsh, Shallow Aquatic, Open Aquatic WITH size of 500+m^2 (~25 m diameter) AND typically >120 m from Forest except in the case of larger habitats containing predominantly aquatic species (e.g., Bullfrog) which may have riparian Forest *Shrubs and logs increase significance for some species because of structure for calling, foraging, escape, and concealment from predators	Blue-spotted Salamander, Eastern Newt, Four-toed Salamander, Spotted Salamander, American Toad, Bullfrog, Gray Treefrog, Green Frog, Mink Frog, Northern Leopard Frog, Pickerel Frog, Western Chorus Frog Defining Criteria: 1+ breeding salamander sp or newt OR 2+ breeding frog/toad sp WITH 20+ individuals (adults or eggs masses) / Call Level Code 3 OR any number of breeding Bullfrogs SWH: wetland ecosite + adjacent shoreline *If present, travel corridor SWH is to be considered*	Yes	Candidate SWH call level activity did not meet criteria threshold	Absent SWH	No
Woodland Area Sensitive Bird Breeding Habitat	Forest and Treed Swamps, typically WITH mature (>60 yrs old) stands AND woodlots >30 ha; consider presence of interior forest habitat measured 200+m from any edge	Blackburnian Warbler, Black-throated Blue Warbler, Black-throated Green Warbler, Blue-headed Vireo, Canada Warbler, Cerulean Warbler, Northern Parula, Ovenbird, Red-breasted Nuthatch, Scarlet Tanager, Veery, Winter Wren, Yellow-bellied Sapsucker Defining Criteria: nesting or breeding pairs of 3+ listed species OR any breeding Cerulean Warbler or Canada Warbler SWH: not defined in criteria schedules	No	N/A	Absent SWH	No
Habitat of Species of Conservation Concern						
Marsh Bird Breeding Habitat	Wetland WITH shallow water AND emergent vegetation *Green Heron prefers edge of water (sluggish streams, ponds, marshes sheltered by shrubs and trees), but can also be found in upland shrubs or forest a considerable distance from water	American Bittern, American Coot, Black Tern, Common Loon, Common Moorhen, Green Heron, Sora, Marsh Wren, Pie-billed Grebe, Sandhill Crane, Sedge Wren, Trumpeter Swan, Virginia Rail, Yellow Rail Defining Criteria: 1+ breeding Black Tern, Sandhill Crane, Trumpeter Swan, Green Heron or Yellow Rail OR 5+ nesting pairs of Sedge Wren or Marsh Wren OR breeding by 5+ other listed species SWH: ecosite	No	N/A	Absent SWH	No
Open Country Bird Breeding Habitat	Natural and Cultural Meadows WITH size 30+ha AND should have a history of longevity; present for at least 5 years *EXCLUDES Class 1 or 2 agricultural lands AND lands being actively used for row crops, intensive hay or pasture in the last 5 years*	Grasshopper Sparrow, Northern Harrier, Savannah Sparrow, Short-eared Owl, Upland Sandpiper, Vesper Sparrow Defining Criteria: nesting/breeding of 2+ listed species OR 1+ breeding Short-eared Owl SWH: contiguous ecosite field habitats	No	N/A	Absent SWH	No
Shrub/Early Successional Bird Breeding Habitat	Field habitats succeeding to Cultural Woodland, Cultural Savannah or Cultural Thicket WITH size of 10+ha AND should have a history of longevity; present for at least 5 years *EXCLUDES Class 1 or 2 agricultural lands AND lands being actively used for crops or pasture in the last 5 years*	Indicator Species: Brown Thrasher, Clay-coloured Sparrow Common Species: Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher Special Concern: Yellow-breasted Chat, Golden-winged Warbler Defining Criteria: 1+ indicator species AND 2+ listed common species OR 1+ breeding Yellow-breasted Chat or Golden-winged Warbler SWH: contiguous ecosite field/thicket habitats	No	N/A	Absent SWH	No
Terrestrial Crayfish *Canadian populations limited to SW Ontario	Meadow Marsh, Shallow Marsh, Thicket Swamp, Deciduous or Mixed Treed Swamp, or Cultural Meadow containing Meadow Marsh or Swamp inclusions	Chimney or Digger Crayfish (*Fallicambarus fodiens*), Devil or Meadow Crayfish (*Cambarus diogenes*) Defining Criteria: 1+ individuals of a listed species OR chimneys SWH: ecosite OR ecoelement of marsh/swamp habitat within a larger ecosite	No	N/A	Absent SWH	No
Special Concern and Rare Wildlife Species	Any - varies by species; habitat needs to cover an important life stage component (e.g., nesting, foraging, or wintering habitat)	Species that are ranked S1-S3 by the NHIC and/or are provincially tracked Species with populations that are significantly declining or have a high percentage of their global population in Ontario Species listed as special concern under the ESA Species listed as threatened or endangered under SARA only Regionally or locally rare species, where lists are available Defining Criteria: no additional criteria SWH: finest scale that protects the habitat form and function	Yes	See Species at Risk Screening	Candidate SWH	Yes

APPENDIX: Significant Wildlife Habitat Screening - 6E

			SITE			ADJACENT LANDS
SWH Type	**Habitat Descriptions & Criteria for Candidate SWH**	**Listed Species & Defining Criteria for Confirmed SWH**	**Candidate SWH Criteria Present: Yes/No**	**Species or Defining Criteria Observations**	**Candidate/Confirmed /Absent SWH: Area to be Defined & Relevant Notes**	**Candidate or Confirmed SWH Potentially Present Based on Habitats and Field Observations: Yes/No**
Animal Movement Corridors						
Amphibian Movement Corridors	Any terrestrial habitat associated with water; shorter corridors are more significant than longer ones *potential determined based on identification of Amphibian Breeding (Wetland) SWH (i.e., not Woodland)	American Toad, Blue-spotted Salamander, Bullfrog, Eastern Newt, Four-toed Salamander, Gray Treefrog, Green Frog, Mink Frog, Northern Leopard Frog, Pickerel Frog, Spotted Salamander, Western Chorus Frog Defining Criteria: allowing amphibians to travel between terrestrial and breeding habitat; several layers of native vegetation; ideally unbroken by roads, waterways, waterbodies, and development; ideally with gaps less than 20 m SWH: 15+m on both sides of a waterway/ecosite OR up to 200m wide in woodland habitats	No	N/A	Absent SWH	No
Deer Movement Corridors	Any forested habitat; shorter corridors are more significant than longer ones; often associated with Stratum II Deer Wintering Areas; typically follow riparian areas, woodlots, areas of physical geography (ravines or ridges) *potential determined based on identification of Deer Wintering SWH	White-tailed Deer Defining Criteria: allowing movement to and from wintering areas; MNRF-identified deer wintering habitat will have corridors used by deer during spring and fall; should be unbroken by roads and residential areas SWH: Corridors should be 200+m wide including canopy gaps <20m OR 15+m riparian vegetation cover on both sides of a waterway	No	N/A	Absent SWH	No