Natural Heritage Evaluation

Eastern Ontario Regional Network
Cell Tower C8726

November 22, 2024

Prepared for:
Rogers Communications Canada

Prepared by:
Stantec Consulting Ltd.

Project/File:
160930483

Stantec

Limitations and Sign-off

The conclusions in the Report titled Natural Heritage Evaluation are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from Rogers Communications Canada (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by Esraelian, Martine Digitally signed by Esraelian, Martine Date: 2024.11.22 14:22:40 -05'00'
(signature)

Martine Esraelian, B.Sc.
Senior Ecologist

Reviewed by Digitally signed by Giesbrecht, Debbie Date: 2024.11.22 15:59:35 -05'00'
(signature)

Debbie Giesbrecht, M.Sc.
Senior Ecologist, Ecologist Team Lead

Approved by Digitally signed by Giesbrecht, Debbie Date: 2024.11.22 16:00:32 -05'00'
(signature)

Debbie Giesbrecht, M.Sc.
Senior Ecologist, Ecologist Team Lead

Table of Contents

List of Tables

List of Figures

List of Appendices

Acronyms / Abbreviations

ANSI	Area of Natural and Scientific Interest
ECCC	Environment and Climate Change Canada
ELC	Ecological Land Classification
EORN	Eastern Ontario Regional Network
ESA	*Endangered Species Act,* 2007
GRCA	Ganaraska Region Conservation Authority
KHF	Key Hydrologic Feature
KNHF	Key Natural Heritage Feature
LIO	Land Information Ontario
MBCA	*Migratory Birds Convention Act*, 1994
MBR 2022	*Migratory Birds Regulations*, 2022
MECP	Ministry of the Environment, Conservation and Parks
MVPZ	Minimum Vegetation Protection Zone
MNR	Ministry of Natural Resources [formerly Ministry of Natural Resources and Forestry (MNRF)]
NHE	Natural Heritage Evaluation
NHIC	Natural Heritage Information Centre
NHRM	Natural Heritage Reference Manual

NHS	Natural Heritage System
ORAA	Ontario Reptile and Amphibian Atlas
O.Reg.	Ontario Regulation
ORMCP	Oak Ridges Moraine Conservation Plan
PPS	Provincial Policy Statement
SAR	Species at Risk
SARA	*Species at Risk Act*
SARO	Species at Risk in Ontario
SOCC	Species of Conservation Concern
SWH	Significant Wildlife Habitat

1 Introduction

Stantec Consulting Ltd. (Stantec) was retained by Rogers Communications Canada to complete a Natural Heritage Evaluation (NHE) for the construction of the proposed Eastern Ontario Regional Network (EORN) tower site C8726. The Project is located at 1564 Oak Hill Road, Campbellcroft, ON in the Municipality of Port Hope, County of Northumberland, and is within the Oak Ridges Moraine Natural Core Area designation. This NHE has been prepared in support of a site plan application in accordance with the requirements of the Municipality of Port Hope Official Plan and Oak Ridges Moraine Conservation Plan (ORMCP).

2 Planning Policies

2.1 Municipal Official Plan

The Municipality of Port Hope Official Plan includes policies for development within the Oak Ridges Moraine Natural Core Area designation. Policy F2.4 deals with land use and development policies within the Oak Ridges Moraine. This policy focuses on development that aligns with the ORCMP (Section 2.3) to protect key natural heritage features (KNHFs) and key hydrologic features (KHFs). It emphasizes the importance of connectivity among natural features, establishes minimum vegetation protection zones (MVPZs), and sets guidelines for permissible activities within these sensitive areas. These policies are highlighted below:

- **Policy F2.4.1 Connectivity states** *"All applications for development and site alteration in the Natural Core Area, Natural Linkage Area and Countryside Area shall identify planning and design construction practices that ensure that no buildings or other site alterations impede the movement of plants and animals among key natural heritage features, hydrologically sensitive features and adjacent land within Natural Core and Natural Linkage Areas. As per section 2.4.9 of this Secondary Plan, the Municipality will prepare a by-law to regulate site alteration and tree cutting which will promote the principle of connectivity."*
- **Policy F2.4.2 Key Natural Heritage Features and Hydrologically Sensitive Features Minimum Vegetation Protection Zones and Minimum Areas of Influence** states *"The Oak Ridges Moraine Conservation Plan establishes minimum areas of influence and minimum vegetation protection zones that relate to key natural heritage features and significant hydrological features as shown in Table 1. Development is restricted based on proximity to key natural heritage features and significant hydrological features, as set out in Table 1 [to the ORMCP].*

  If land falls within more than one item in Column 1 of Table 1, the provisions that are more restrictive shall apply. All development and site alteration with respect to land within a vegetation protection zone is prohibited except as permitted in Sections 22(2) and 26(2) of the Oak Ridges Moraine Conservation Plan."

- **Policy F2.4.3.1 Key Natural Heritage Features** states *"Schedule "G" to this Secondary Plan shows Key Natural Heritage Features as established through mapping provided by the Province of Ontario. No amendment will be required to the schedule where minor changes are proposed based upon studies carried out in accordance with the Oak Ridges Moraine Conservation Plan. The following are key natural heritage features:*

  i) wetlands;

  ii) significant portions of habitat of endangered, rare and threatened species;

  iii) fish habitat

  iv) areas of natural and scientific interest (life science);

  v) significant valleylands;

  vi) significant woodlands;

  vii) significant wildlife habitat; and

  viii) sandbarrens, savannahs and tallgrass prairies.

  Schedule "G" does not define significant valleylands, significant wildlife habitat and the habitat of endangered, rare and threatened species. These features are to be identified using criteria established by the Ministry of Natural Resources and Forestry and the Ministry of the Environment and Climate Change.

  Environmentally Significant Areas on the Oak Ridges Moraine, identified by the Conservation Authority, are also considered to be key natural heritage features, subject to the same requirements for protection and study as those identified in the Oak Ridges Moraine Conservation Plan for Areas of Natural and Scientific Interest (life science)."

- **Policy F2.4.3.2 Development and Site Alteration within Key Natural Heritage Features** states " *All development and site alteration with respect to land within a key natural heritage feature or the related minimum vegetation protection zone referred to in Table 1 [to the ORMCP] is prohibited, except the following:*

  i) Forest, fish, and wildlife management.

  ii) Conservation and flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest after all alternatives have been considered.

iii) Transportation, infrastructure, and utilities as described in Section 41 of the Oak Ridges Moraine Conservation Plan, but only if the need for the project has been demonstrated and there is no reasonable alternative.

iv) Low-intensity recreational uses as described in Section 37 of the Oak Ridges Moraine Conservation Plan.

- Policy F 2.4.3.3 Natural Heritage Evaluation states *"An application for development and/or site alteration in the minimum area of influence (of Key Natural Heritage Features) defined by Table 1 shall be accompanied by a natural heritage evaluation pursuant to Section 23 of the Oak Ridges Moraine Conservation Plan. An evaluation may result in a minimum vegetation protection zone greater or different, than that shown in the table to the Oak Ridges Moraine Conservation Plan.*

  Where site specific studies or updated information from the Province of Ontario, result in refinements to the boundary or extent of key natural heritage features, such refinements shall not require an amendment to this Plan.

  No new agricultural uses and/or agriculture-related uses shall be permitted within key natural heritage features and their associated minimum vegetation protection zone if the lands were not being used for that use on November 15, 2001."

2.2 Provincial Policy Statement

The *Provincial Policy Statement, 2024* (PPS) was issued under section 3 of the *Planning Act, 1990*; and came into effect October 20, 2024. The PPS provides the framework for provincial planning documents and regulating land use and development planning policies for specific geographic areas within Ontario.

The natural heritage provisions are outlined in section 4.1 of the PPS with a focus on maintaining the diversity, ecological functions, and linkages of natural heritage features and areas, natural heritage systems, surface water and groundwater features over the long term. These provisions restrict development and site alteration in or adjacent to significant natural heritage features and areas (e.g., wetlands, woodlands, valleylands, wildlife habitat and areas of natural and scientific interest) unless it can be demonstrated that there will be no negative impacts on the features and their ecological

functions. Additionally, these provisions apply to fish habitat and habitat of endangered and threatened species, except in accordance with provincial and federal requirements. The natural heritage policies are not intended to limit the ability of agricultural uses to continue.

2.3 Oak Ridges Moraine Conservation Plan

The Oak Ridges Moraine Conservation Plan (ORMCP; 2017) is set out in *Ontario Regulation (O.Reg.) 140/02* under the *Oak Ridges Moraine Conservation Act*, 2001. The ORMCP builds upon the policy framework of the PPS and includes policies for land use designations (Part II), ecological and hydrological features (Part III) and specific land uses (Part IV). The Subject Property is located within the Natural Core Area designation which permits infrastructure uses, subject to the ecological and hydrological policies in Part III (sections 20 to 30) and infrastructure policies in Part IV (section 41).

Key provisions for Key Natural Heritage Features (KNHFs) and Key Hydrologic Features (KHFs) in Natural Core Areas

The following policies govern the protection of KNHFs and KHFs in Natural Core Areas. These policies emphasize the importance of preserving ecological integrity, supporting hydrological functions, and maintaining connectivity among natural systems. Sections 20, 22(3), and 23(1) of the applicable framework provide detailed guidance for development and site alteration applications in these sensitive areas. These provisions emphasize planning, design, and construction practices that minimize environmental impacts, maintain critical ecological linkages, and adhere to rigorous evaluation processes through an NHE.

- **Section 20** states *"Every application for development or site alteration shall identify planning, design and construction practices that ensure that no buildings or other site alterations impede any hydrological functions or the movement of plants and animals among key natural heritage features, key hydrologic features, and adjacent land within Natural Core Areas and Natural Linkage Areas."*

- **Section 22 (3)** states "*An application for development or site alteration with respect to land within the minimum area of influence that relates to a key natural heritage feature, but outside the key natural heritage feature itself and the related minimum vegetation protection zone, shall be accompanied by a natural heritage evaluation under section 23.*"

Requirements for a Natural Heritage Evaluation:

- **Section 23 (1)** states "*A natural heritage evaluation shall,*
  - *a) demonstrate that the development or site alteration applied for will have no adverse effects on the key natural heritage feature or on the related ecological functions;*
  - *b) identify planning, design and construction practices that will maintain and, where possible, improve or restore the health, diversity and size of the key natural heritage feature and its connectivity with other key natural heritage features and with key hydrologic features;*
  - *c) in the case of an application relating to land in a Natural Core Area, Natural Linkage Area or Countryside Area, demonstrate how connectivity within and between key natural heritage features and key hydrologic features will be maintained and, where possible, improved or restored before, during and after construction;*
  - *d) if the Table to this Part specifies the dimensions of a minimum vegetation protection zone, determine whether it is sufficient, and if it is not sufficient, specify the dimensions of the required minimum vegetation protection zone and provide for the maintenance and, where possible, improvement or restoration of natural self-sustaining vegetation within it;*
  - *e) if the Table to this Part does not specify the dimensions of a minimum vegetation protection zone, determine whether one is required, and if one is required, specify the dimensions of the required minimum vegetation protection zone and provide for the maintenance and, where possible, improvement or restoration of natural self-sustaining vegetation within it; and*
  - *f) in the case of a key natural heritage feature that is fish habitat, ensure compliance with the requirements of the Department of Fisheries and Oceans (Canada)."*

Minimum Area of Influence and Minimum Vegetation Protection Zone (MVPZ):

The minimum area of influence and MVPZ *for each of the KNHFs and KHFs are summarized in* Table 2.1 below*, as provided in Table 1 to Part III of the ORMCP.*

Table 2.1 Key Natural Heritage Features and Key Hydrologic Features

Item	Feature	Minimum Area of Influence (21)	Minimum Vegetation Protection Zone (21, 23, 26(4), 30(12))
1	Wetlands	All land within 120 metres of any part of feature	All land within 30 metres of any part of feature, subject to clause 23 (1) (d) if a natural heritage evaluation is required
2	Habitat of endangered and threatened species	None	None
3	Fish habitat	All land within 120 metres of any part of feature	All land within 30 metres of any part of feature, subject to clause 23 (1) (d) if a natural heritage evaluation is required
4	Areas of natural and scientific interest (life science)	All land within 120 metres of any part of feature	As determined by a natural heritage evaluation carried out under section 23
5	Areas of natural and scientific interest (earth science)	All land within 50 metres of any part of feature	As determined by an earth science heritage evaluation carried out under subsection 30 (12)
6	Significant valleylands	All land within 120 metres of stable top of bank	All land within 30 metres of stable top of bank, subject to clause 23 (1) (d) if a natural heritage evaluation is required

Item	Feature	Minimum Area of Influence (21)	Minimum Vegetation Protection Zone (21, 23, 26(4), 30(12))
7	Significant woodlands	All land within 120 metres of any part of feature	All land within 30 metres of the tree canopy drip line of the outermost trees within the woodland, subject to clause 23(1)(d) if required
8	Significant wildlife habitat	All land within 120 metres of any part of feature	As determined by a natural heritage evaluation carried out under section 23
9	Sand barrens, savannahs, and tallgrass prairies	All land within 120 metres of any part of feature	All land within 30 metres of any part of feature, subject to clause 23 (1) (d) if a natural heritage evaluation is required
10	Kettle lakes	All land within 120 metres of the surface catchment area	All land within the surface catchment area or within 30 metres of any part of feature, whichever is greater, subject to clause 26 (4) (c) if a hydrological evaluation is required
11	Permanent and intermittent streams	All land within 120 metres of meander belt	All land within 30 metres of meander belt, subject to clause 26 (4) (c) and subsection 26 (5) if a hydrological evaluation is required
12	Seepage areas and springs	All land within 120 metres of any part of feature	All land within 30 metres of any part of feature, subject to clause 26 (4) (c) and subsection 26 (5) if a hydrological evaluation is required

Key provisions for specific land use policies for infrastructure in Natural Core Areas

Land use policies for infrastructure are detailed in section 41, Part IV of the ORCMP and summarized below. As defined in section 41(1), the following components of the Project are considered infrastructure and include: electricity transmission lines, telecommunications lines and facilities, including broadcasting towers, and rights of way required for the systems and facilities.

- **Section 41(2)** states "*An application for the development of infrastructure in or on land in a Natural Linkage Area shall not be approved unless,*
    - *a) the need for the project has been demonstrated and there is no reasonable alternative; and*
    - *b) the applicant demonstrates that the following requirements will be satisfied, to the extent that is possible while also meeting all applicable safety standards:*

    1. The area of construction disturbance will be kept to a minimum.
    2. Right of way widths will be kept to the minimum that is consistent with, i. meeting other objectives such as stormwater management and erosion and sediment control, and ii. locating as much infrastructure uses within a single corridor as possible.
    3. The project will allow for wildlife movement.
    4. Lighting will be focused downwards and away from Natural Core Areas.
    5. The planning, design and construction practices adopted will keep any adverse effects on the ecological integrity of the Plan Area to a minimum."
- **Section 41(3)** states "*An application for the development of infrastructure in or on land in a Natural Core Area shall not be approved unless the applicant demonstrates that,*
    - *a) the requirements of subsection (2) have been met;*
    - *b) the project does not include and will not in the future require a highway interchange or a transit or railway station in a Natural Core Area; and*
    - *c) the project is located as close to the edge of the Natural Core Area as possible."*

- **Section 41(4)** states "*Except as permitted in subsection (5), with respect to land in a key natural heritage feature or a key hydrologic feature, the development of new infrastructure and the upgrading or extension of existing infrastructure, including the opening of a road within an unopened road allowance, is prohibited*."
- **Section 41(5)** states "*Infrastructure may be permitted to cross a key natural heritage feature or a key hydrologic feature if the applicant demonstrates that,*
    a) *the need for the project has been demonstrated and there is no reasonable alternative;*
    b) *the planning, design and construction practices adopted will keep any adverse effects on the ecological integrity of the Plan Area to a minimum;*
    c) *the design practices adopted will maintain, and where possible improve or restore, key ecological and recreational linkages, including the trail system referred to in section 39;*
    d) *the landscape design will be adapted to the circumstances of the site and use native plant species as much as possible, especially along rights of way; and*
    e) *the long-term landscape management approaches adopted will maintain, and where possible improve or restore, the health, diversity, size and connectivity of the key natural heritage feature or a key hydrologic feature.*
- **Section 41(6)** states "*Service and utility trenches for infrastructure shall be planned, designed and constructed so as to keep disruption of the natural groundwater flow to a minimum.*"

2.4 Endangered Species Act

The *Endangered Species Act,* 2007 (ESA) applies to species that are designated as extirpated, endangered or threatened and listed on the Species at Risk in Ontario (SARO) List (O.Reg. 230/08). Species and general habitat protection apply to all species, except those designated as special concern, which are not afforded protection under the ESA. Species specific habitat protection is also given to those species with regulated habitat, as identified in O.Reg. 832/21. The ESA also includes specific exemptions from the provisions of the ESA under certain conditions under O.Reg. 242/08 and O. Reg. 830/21. Exemptions and conditions vary by species, type of activity, the date the species was listed and the date the activity commenced.

2.5 Conservation Authorities Act

The Conservation Authorities Act, 1990, was updated in late 2022 with the purpose to provide for the organization and delivery of programs and services that further the conservation, restoration, development, and management of natural resources in watersheds in Ontario.

The Project is within the Ganaraska Region Conservation Authority jurisdiction, which administers *Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits* under section 28 of the *Conservation Authorities Act*. The proposed development will not include works within the regulated limits and therefore, a permit is not anticipated.

2.6 Species at Risk Act

The federal *Species at Risk Act, 2002* (SARA) includes provisions for the protection of species that are classified as extirpated, endangered and threatened on Schedule 1 of the Act. This includes protection of the species and their residence (e.g., nest, den) and critical habitat. Critical habitat is defined as those habitats necessary for the survival or recovery of a listed species, as identified in the recovery strategy or in an action plan for the species. While SARA applies to species on federal land, such as Canadian oceans and waterways, national parks, national wildlife areas, some migratory bird sanctuaries and First Nations reserve lands, it also applies to migratory birds protected under the *Migratory Birds Convention Act*, 1994 and fish, anywhere they occur. Under section 73 of SARA, the competent minister may enter into an agreement or issue a permit authorizing an activity affecting a listed wildlife species, any part of its critical habitat, or the residences of its individuals and provided that the activity meets the following purposes:

1. The activity is scientific research relating to the conservation of the species and conducted by qualified persons.
2. The activity benefits the species or is required to enhance its chance of survival in the wild.

3. Affecting the species is incidental to the carrying out of the activity.

2.7 Migratory Birds Convention Act

The *Migratory Birds Convention Act*, 1994 (MBCA) affords protection and conservation to migratory bird populations, individuals, and their nests within all of Canada. Most bird species in Canada are afforded protection, except for a few families (e.g., cormorants, pelicans, grouse, quail, pheasants, ptarmigan, hawks, owls, eagles, falcons, kingfishers, and corvids). The MBCA is the enabling statute for the Migratory Birds Regulations (MBR), which were updated in May 2022 (MBR 2022). Section 6 of the MBR 2022 states that without the authorization of a permit, the disturbance, destruction, or taking of a nest, egg, nest shelter, eider duck shelter, or duck box of a migratory bird, or possession of a migratory bird, carcass, skin, nest, or egg of a migratory bird are prohibited. Under the MBR 2022, nests for 18 bird species (7 of which occur in Ontario) receive year-round protection for a prescribed length of time ranging from 24-36 months (Schedule 1), and all other nests of migratory birds are protected when they contain a live bird or viable egg (S. 5(2)(b)). If a nest of a species identified on Schedule 1 of the MBR 2022 is determined to be empty of live birds or viable eggs, then the nest can be registered under Environment and Climate Change Canada's (ECCC) Abandoned Nest Registry, at which point the prescribed period of inactivity begins.

3 Study Approach

3.1 Background Review

The following sources were reviewed for information related to KNHFs and KHFs within the Study Area. A list of wildlife compiled from the background review is provided in Appendix B.

- Land Information Ontario (LIO) GeoHub database (MNR 2024a)
- Natural Heritage Areas Make-a-Map Application and Natural Heritage Information (NHIC) database (MNR 2024b)
- iNaturalist (iNaturalist 2024)
- Ontario Reptile and Amphibian Atlas (ORAA; Ontario Nature 2020)
- Ontario Butterfly Atlas (Alan et al 2024)
- Atlas of the Mammals of Ontario (Dobbyn 1994)
- Species at Risk Act (SARA), Schedule 1 (GOC 2024)
- Species at Risk in Ontario (SARO) List (MECP 2024)

3.2 Site Investigations

A site investigation was completed on November 5, 2024, to document existing conditions and verify findings from the background review. The site investigation was completed on the Subject Property, with adjacent lands characterized based on what was visible from the Subject Property and the municipal right-of-way.

Vegetation communities were generally characterized following the first approximation of the Ecological Land Classification (ELC) System for Southern Ontario (Lee et al. 1998). The second approximation of ELC (Lee 2008) was also used when there was no code available for a specific community type in the first approximation. Incidental observations of wildlife or evidence of wildlife were also documented during the site investigation. ELC was used to assess overall habitat within the Study Area to inform

the significant wildlife habitat (SWH) and habitat of endangered and threatened species assessments.

3.3 Significant Wildlife Habitat Screening

A preliminary screening for confirmed and candidate SWH was completed for the Study Area following the *SWH Criteria Schedules for Ecoregion 6E* (MNRF 2015). The screening was completed based on vegetation communities identified during the site investigation, with results provided in Section 5.3.

The MNR provides specific guidance on identifying and assessing wildlife habitat in the Significant Wildlife Habitat (SWH) Criteria Schedules for Ecoregion 6E (MNRF 2015). Other guidance documents used as part of the SWH assessment included the SWHTG (MNR 2000) and Natural Heritage Reference Manual (NHRM; MNR 2010). The MNR recognizes five (5) main categories of wildlife habitat, each with several wildlife habitat types. The general definitions of these habitat types are provided below:

- **Seasonal Concentration Areas of Animals** – defined as “areas where animals occur in relatively high densities for the species at specific periods in their life cycles and/or in particular seasons” and areas that are “localized and relatively small in relation to the area of habitat used at other times of the year” (MNR 2010).
- **Rare Vegetation Communities** – defined as “areas that contain a provincially rare vegetation community and areas that contain a vegetation community that is rare within the planning area” (MNR 2010).
- **Specialized Habitat for Wildlife** – defined as “areas that support wildlife species that have highly specific habitat requirements, areas with high species and community diversity, and areas that provide habitat that greatly enhances species’ survival” (MNR 2010).

- **Habitat for SOCC** – defined as “habitats of species that are designated at the national level as endangered or threatened by COSEWIC, which are not protected in regulation under Ontario’s ESA, 2007; habitats of species listed as special concern under the ESA, 2007 on the SARO List (formerly referred to as “vulnerable” in the SWHTG); and habitats of species that are rare or substantially declining, or have a high percentage of their global population in Ontario” (MNR 2010). More specifically, species of conservation concern (SOCC) include:
    - **globally rare species** – These species are assessed by NatureServe and assigned a global conservation status rank (G-rank) of G1 to G3.
    - **nationally rare species** – These species are assessed by COSEWIC as extirpated, endangered, threatened, or special concern but not listed in SARA; species not protected under SARA including those designated as special concern on Schedule 1 (e.g., Monarch) or any of the listed species in Schedule 2 and Schedule 3; species on non-federal land listed on Schedule 1 of SARA, other than migratory birds and fish.
    - **provincially rare species** – These species are designated and assessed under two categories: species listed as special concern on the SARO List, and species that are assigned a provincial sub-national conservation status rank of S1 to S3. There are species that can be found in both categories.
- **Animal Movement Corridors** – defined as “elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another” (MNR 2000).

3.4 Habitat of Endangered and Threatened Species

Habitat of endangered and threatened species are protected under the ESA and/or SARA. This includes:

- Provincially protected species on the Species at Risk in Ontario (SARO) List under Ontario Regulation 230/08 of the ESA.
- Federally listed migratory birds and fish on Schedule 1 of SARA; these species are protected anywhere they occur, including non-federal lands. All other federally listed species are generally (except through an Order) only protected under SARA if they occur on federal lands.

A background review was completed to identify potential for endangered and threatened species previously recorded in the Study Area. All identified species were screened for habitat suitability, availability, and likelihood to occur within the Subject Property. The results of the screening are provided in Section 5.6.

4 Existing Conditions

4.1 Designated Areas

Designated Areas are defined by resource agencies, municipalities, the government and/or the public, through legislation, policies, or approved management plans, to have special or unique value. Such areas may have a variety of ecological, recreational, and/or aesthetic features and functions that are highly valued. Designated areas include provincial land use and environmental plan areas (e.g., Oak Ridges Moraine), national and provincial parks, designated federal wildlife/marine areas, Area of Natural and Scientific Interest (ANSI) and environmentally sensitive areas.

The Study Area is within the Oak Ridges Moraine Natural Core Area designation (Appendix A, Figure 1). Development within Natural Core Areas requires completion of an NHE, as discussed in Section 2 and 2.3. There are no other designated areas within the Study Area

4.2 Vegetation Communities

The Subject Property is primarily on agricultural lands comprising open pasture and hayfield, with a small portion within a grassed meadow community. The surrounding lands are primarily agricultural, comprising row crops with a treed hedgerow immediately east of the Subject Property. Natural areas such as woodlands, wetlands, meadows and thickets are also present towards the west and southern limits of the Study Area. A summary of vegetation communities recorded within the Study Area is provided in Table 4.1, below and shown in Appendix A, Figure 2.

Table 4.1 Vegetation Communities within the Study Area

ELC Code	ELC Name	Description
Developed Areas		
CVI_1	Transportation	Roads
CVR_4	Rural Property	Rural property and buildings
Agriculture		
OAG	Open Agriculture	Idle field
OAGM1	Annual Row Crops	Row crops comprising corn and soybean
OAGM2	Perrenial Cover Crops	Hayfield
OAGM4	Open Pasture	Pasture
Meadow		
MEGM3-4	Kentucky Blue Grass Graminoid Meadow Type	Meadow community dominated by grasses, primarily Kentucky blue grass and reed-canary grass. Herbs such as dog-strangling vine, goldenrod species and aster species also present
MEGM3-8	Reed Canary Grass Graminoid Meadow Type	Small reed canary dominated meadow within valley area along the southern portion of the Study Area.
Hedgerow		
FOCM5	Naturalized Coniferous Hedgerow Ecosite	Coniferous hedgerow dominated by eastern redcedar.

ELC Code	ELC Name	Description
FODM11	Naturalized Deciduous Hedgerow Ecosite	Deciduous hedgerow along the eastern boundary of the Subject Property, approximately 35 m wide with an existing access trail. Dominated by sugar maple and poplar species, with white birch, black cherry, American elm, American beech, red oak, and hickory species. Buckthorn dominated the understory with staghorn sumac also present.
Thicket		
THDM2-6	Buckthorn Deciduous Shrub Thicket Type	Deciduous shrub thicket dominated by buckthorn with scattered Manitoba maple.
Woodland		
CUP	Coniferous Plantation	Coniferous plantation dominated by pine species
FOC	Coniferous Forest	Dominated by eastern redcedar with pine species
WOC	Coniferous Woodland	Open wooded area with scattered trees dominated by spruce species
FOM	Mixed Forest	Assessed from Oak Hill Road with species Manitoba maple and pine species observed.
Wetland		
MAM	Meadow Marsh Ecosite	Assessed through air photo interpretation. Lowland area associated with the watercourse west of the Study Area.

4.3 Wildlife and Wildlife Habitat

Evidence of wildlife and habitat features were recorded during the site visit. Several potential bat roosting trees were identified within the hedgerow east of the Subject Property. These trees have the potential to provide candidate SWH for bat maternity colonies and habitat of endangered bat species. Evidence of Pileated Woodpecker activity was also observed, including several feeding cavities and potential nesting cavities. These habitat features are shown in Appendix A, Figure 2.

5 Key Natural Heritage and Hydrologic Features

This section summarizes the results of the assessment of KNHFs and KHFs within the Study Area based on findings from the background review and site investigation. The KNHFs and KHFs within the minimum area of influence and minimum vegetation protection zone (MVPZ) of the Subject Property are discussed in the sections below. A map showing KNHFs and KHFs is provided in Appendix A, Figure 3.

5.1 Wetlands

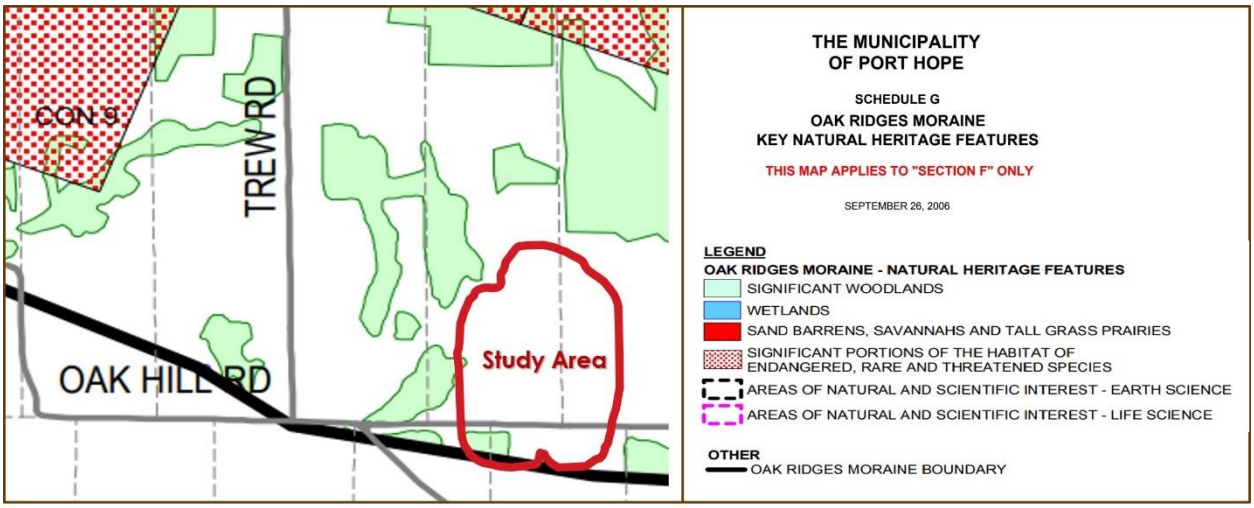
The background review did not identify any wetlands within the Study Area. However, a potential wetland community was identified along the western limits of the Study Area based on a review of satellite imagery. The wetland appears to be a meadow marsh community adjacent to a tributary of the Ganaraska River. This community is located approximately 50 m west of the existing access road and 200 m west of the proposed tower site compound area.

Policy Conformity: Project infrastructure will not be located within the 30 m MVPZ for wetlands.

5.2 Significant Woodlands

There are two significant woodlands that extend into the Study Area, along the west and southern boundaries, based on a review of Schedule G of the Port Hope Official Plan (Figure 5.1). None of these woodlands are within the Subject Property or within the MVPZ where proposed works are anticipated.

Figure 5.1 Key Natural Heritage Features within the Study Area



As shown in Figure 5.1 above and Appendix A (Figure 3), the woodland along the western boundary is characterized as coniferous forest (FOC) and located approximately 115 m west of the existing access and greater than 420 m west of the proposed tower site compound area. The woodland along the southern boundary of the Study Area is located along the south side of Oak Hill Road and is characterized as a mixed forest (FOM) dominated by Manitoba maple with pine species. This woodland is located approximately 15 m south of the existing access road and greater than 500 m from the proposed tower site compound area. Upgrades to the existing access road are not anticipated.

Policy Conformity: Project infrastructure will not be located within the 30 m MVPZ for significant woodlands.

5.3 Significant Wildlife Habitat

An assessment of confirmed and candidate SWH was completed for the Study Area following the protocols established by MNR. The SWH assessment was based on findings from the background review and site investigation with results summarized in Table 5.1. A screening for SOCC is provided in Appendix C.

The background review did not identify any confirmed SWH types within the Study Area, although candidate SWH was identified based on results of the site investigation. The candidate SWH types are associated with the natural areas along the western and southern boundaries and hedgerow east of the Subject Property. The hedgerow is within 30 m of the Subject Property and was identified as having candidate SWH for bat maternity colonies

Table 5.1 Significant Wildlife Habitat Screening

Seasonal Concentration Areas of Animals							
N	Waterfowl Stopover and Staging Areas (Aquatic)	N	Waterfowl Stopover and Staging Areas (Terrestrial)	N	Shorebird Migratory Stopover Area	N	Raptor Wintering Area
N	Bat Hibernacula	C	**Bat Maternity Colonies** (within 30 m)	N	Turtle Wintering Areas	C	**Reptile Hibernaculum**
N	Colonially - Nesting Bird Breeding Habitat (Bank/Cliff)	N	Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)	N	Colonially - Nesting Bird Breeding Habitat (Ground)	N	Migratory Butterfly Stopover Area
N	Landbird Migratory Stopover Areas	N	Deer Winter Congregation Areas				
Rare Vegetation Community							
N	Cliffs and Talus Slopes	N	Sand Barren	N	Alvar	N	Tallgrass Prairie
N	Old Growth Forest	N	Savannah	N	Other		

Specialized Habitat for Wildlife							
C	**Waterfowl Nesting Area**	N	Bald Eagle and Osprey Nesting/Foraging/Perching	N	Woodland Raptor Nesting Habitat	C	**Turtle Nesting Areas**
N	Seeps and Springs	C	**Amphibian Breeding Habitat (Woodland)**	C	**Amphibian Breeding Habitat (Wetland)**	N	Woodland Area-sensitive Bird Breeding Habitat
Habitat for Species of Conservation Concern							
C	**Marsh Bird Breeding Habitat**	N	Open Country Bird Breeding Habitat	N	Shrub/Early Successional Bird Breeding Habitat	C	**Terrestrial Crayfish**
C	Special Concern and Rare Species See Appendix C						
Animal Movement Corridors							
C	**Amphibian Movement Corridors**	N	Deer Movement Corridors				
Y = yes (confirmed) C = candidate (potential) N = no (unlikely)							

Policy Conformity: Project infrastructure will not encroach within candidate SWH. The candidate SWH for bat maternity colonies is located approximately 15 m west of the proposed tower site compound area. Construction of the tower is not expected to impact habitat following implementation of the best management practices in Section 6.2.

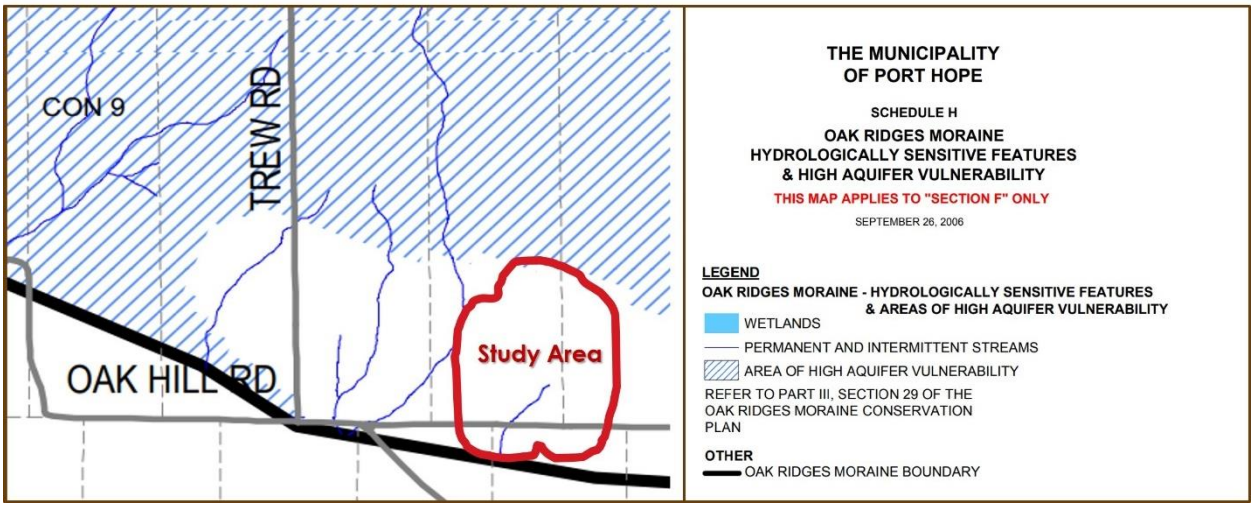
5.4 Permanent and Intermittent Streams

There are two tributaries of the Ganaraska River within 120 m of the Study Area but not within 30 m of the Subject Property based on a review of Schedule G of the Port Hope Official Plan (Figure 5.2) These tributaries are characterized as permanent streams which flow south towards the Ganaraska River.

As shown in Figure 5.2, above and Appendix A (Figure 3), the tributary along the western boundary of the Study Area, originates approximately 400 m north and flows south along the western boundary. This tributary is approximately 115 m west of the existing access road and greater than 420 m west of the proposed tower site compound area.

The tributary along the southern boundary originates along the south side of Oak Hill Road, although both sides of the road are connected by a culvert. The topography on the north side of Oak Hill Road naturally directs surface water through a grassed valley area towards the culvert. The valley area does not have a defined channel, although may contain some standing water during spring or heavy rainfall events. This tributary and valley area are located 30 m from the existing access road and between 350 to 480 m south of the proposed tower site compound area.

Figure 5.2 Hydrologically Sensitive Features within the Study Area



Policy Conformity: Project infrastructure will not be located within the 30 m MVPZ of the tributaries or valley area along the southern boundary.

5.5 Fish Habitat

The tributaries of the Ganaraska River (discussed in Section 5.3) provide fish habitat for coldwater species. A list of species recorded in these tributaries based on the background review is provided in Appendix B. Habitat for these species do not extend within 30 m of the Subject Property.

Policy Conformity: Project infrastructure will not be located within the 30 m MVPZ of the Ganaraska River tributaries

5.6 Habitat of Endangered and Threatened Species

A screening for habitat of endangered and threatened species was completed based on findings from the background review and site investigation. The results are provided in Appendix D, with species with the potential to occur within 30 m of the Subject Property summarized below.

- ***Bobolink and Eastern Meadowlark*** – The hayfield and open pasture are not considered suitable habitat based on existing agricultural practices and the frequency and timing of cutting. However, if future conditions become favorable for nesting, these areas will need to be reassessed for suitability and permitting under the ESA.
- ***Bats*** – Potential roosting habitat for bats is present within the hedgerow along the eastern boundary of the Subject Property. Encroachment of habitat is not anticipated and therefore, a permit under the ESA is not anticipated. However, if tree removal is required, a habitat assessment and acoustic surveys may be required. Consultation with MECP would also be required to confirm permitting requirements.

Policy Conformity: Project infrastructure will not be located within suitable habitat of endangered and threatened species. The Project will be within the 30 m of potential habitat for bats, although potential effects can be mitigated through implementation of the best management practices in Section 6.2. Further, if habitat for Bobolink and Eastern Meadowlark becomes suitable in the future (e.g., if cutting frequency and timing changes that favor nesting) or if tree removals are required within the hedgerow that support bats, further studies and a permit under the ESA may be required.

5.7 Summary of Key Natural Heritage Features and Key Hydrologic Features

A summary of key natural heritage features and key hydrologic features within the Study Area are summarized in Table 5.2, below and shown in Appendix A, Figure 3. There are no key natural heritage features or key hydrologic features within the Subject Property. However, the Project has the potential to occur within the MVPZ for candidate SWH and habitat of endangered and threatened species (bat SAR, Bobolink and Eastern Meadowlark).

Table 5.2 Summary of Key Natural Heritage Features and Key Hydrologic Features in the Study Area

Feature	Subject Property		Summary
	Minimum Area of Influence	Minimum Vegetation Protection Zone / Adjacent Lands	
ANSI (life sciences)	No	No	Absent within the Study Area.
ANSI (earth sciences)	No	No	Absent within the Study Area.
Significant valleylands	No	No	Absent within the Study Area.
Wetlands	Yes	No	There is one wetland community within 120 m of the Subject Property. However, the Project will not be constructed within the MVPZ.
Significant woodlands	Yes	No	There are two significant woodlands within 120 m of the Subject Property. However, the Project will not be constructed within the MVPZ.
Significant wildlife habitat	Potential	Potential	The Subject Property is within 30 m of candidate SWH for bats. Suitable habitat is within the hedgerow along the eastern boundary. Tree removals are not anticipated. However, if conditions change, further studies will be required to confirm habitat use and approvals from the municipality may be required. Implement best management practices.

Feature	Subject Property		Summary
	Minimum Area of Influence	**Minimum Vegetation Protection Zone / Adjacent Lands**	
Sand barrens, savannahs, and tallgrass prairies	No	No	Absent within the Study Area.
Fish habitat	Yes	No	Absent within 30 m of the Subject Property (excluding the existing access, where no works are proposed)
Kettle lakes	No	No	Absent within the Study Area.
Permanent and Intermittent streams	yes	No	Absent within 30 m of the Subject Property (excluding the existing access, where no works are proposed)
Seepage areas and Springs	No	No	There were no seepage or springs documented within 30 m of the Subject Property.
Habitat of endangered and threatened species	Potential	Potential	The Subject Property is within 30 m of suitable roosting habitat for bats. The hayfield and open pasture are not currently suitable for Bobolink and Eastern Meadowlark based on existing agricultural practices. A permit or registration under the ESA is not anticipated; however, if conditions

Feature	Subject Property		Summary
	Minimum Area of Influence	**Minimum Vegetation Protection Zone / Adjacent Lands**	
			change, additional surveys or consultation with MECP may be required. Implement best management practices.

Notes:

- Minimum area of influence is 120 m for all features except ANSI (earth sciences), which is 50 m
- MVPZ is 30 m for all species except for ANSIs and SWH with MVPZs determined through an NHE. There is no MVPZ for habitat of endangered or threatened species.

6 Effects Assessment and Mitigation

6.1 Potential Effects

The proposed development will use the existing entrance and access road from Oak Hill Road, approximately 400 m in length, where it will connect to a new access road. The new access will comprise a dirt road, approximately 260 m in length, where it will connect to the proposed tower site compound area. A transmission line, with approximately seven utility poles, is proposed along the eastern extent of the Subject Property where it will connect the tower site to a hydro source along Oak Hill Road. The transmission line will be constructed within agricultural lands; encroachment within the hedgerow is not anticipated.

The Project is not expected to result in direct encroachment of a key natural heritage feature; however, Project infrastructure is anticipated to be within the MVPZ which may result in indirect effects. Portions of the new access road, tower site compound area and transmission line will be within 30 m of the hedgerow along the eastern boundary, which may support candidate SWH. The hayfield and open pasture were determined to be unsuitable for Bobolink and Eastern Meadowlark (both threatened species) based on existing agricultural practices and the frequency and timing of cutting. However, if future conditions become favorable for nesting, these areas will need to be reassessed.

Construction activities will result in vegetation removal within the agricultural fields and a small portion of meadow community along the eastern boundary of the Subject Project; these areas are not within a key natural heritage feature, although a portion is within the MVPZ.

Direct effects to key natural heritage features are not anticipated, although indirect effects may occur where works occur within the MVPZ. Construction of the Project may result in temporary effects including:

- Disruption and avoidance of habitat by wildlife due to noise and human presence

- Incidental take or injury of wildlife during vegetation clearing or tree removals (if required), including collisions with vehicles and equipment
- Soil compaction and damage to the rooting zone of edge trees if construction activities encroach within the dripline
- Fugitive dust resulting in smothered vegetation
- Accidental spills
- Temporary disturbance and alteration of habitat due to noise, dust generation and potential; disruption and avoidance of habitat; and injury and incidental take.

6.2 Best Management Practices

The following best management practices are recommended during construction to reduce the likelihood of effects to key natural heritage features and general wildlife:

- Locate site project infrastructure as far as possible from a KNF (e.g., hedgerow) and associated MVPZ (e.g., 30 m).
- Restrict construction activities to the work areas to avoid encroachment of the hedgerow. If necessary, install tree protection fencing along the dripline to protect the root zone and off-site encroachment.
- Accidental damage to trees, or unexpected vegetation removal, should be replaced / restored with native species
- Implement timing restrictions with vegetation and tree removals (if required) to occur outside of the active periods for migratory birds (April 1 to August 31) and bats (April 1 to September 30).
    - Migratory Birds
        - If vegetation and tree removals occur during the active period, a nest sweep must be completed by a Qualified Biologist to confirm no active nests are present. Nest sweeps in complex habitat where several trees are to be removed (e.g., woodlands) are not recommended.
        - If nests of a species protected under the MBCA are found:
            - Work cannot resume until the young have left the nest (fledged).
            - A setback distance (e.g., 30 m) must be determined by a Qualified Biologist, and the no-work limits must be clearly demarcated.

        - Removal of trees with Pileated Woodpecker nests is not permitted unless authorized by Environment and Climate Change Canada (ECCC) under the MBR 2022.
    - Bats
        - Tree removal of suitable roosts within candidate SWH or habitat of endangered bats is not permitted, except as authorized by the municipality or MECP
        - A permit under the ESA may be required if endangered bats are confirmed. Consultation with MECP will be required.
        - Where tree removal is permitted in bat habitat, removal of roost trees shall not occur during the active period, where possible.
        - If removal is necessary during the active period and permitted by agencies:
            - A Qualified Biologist shall complete a bat exit survey of each tree prior to removal and confirm there are no endangered bats.
            - A Qualified Biologist must conduct a bat exit survey to confirm no bats, including endangered bats are present. Removal of active roosts is not permitted.
            - Trees occupied by bats shall not be removed until they have vacated the roost or as authorized by MECP for endangered species
- All maintenance activities, vehicle refueling or washing, as well as the storage of chemical and construction equipment should be located outside of the MVPZ.
- In the event of an accidental spill, the MOECC Spills Action Centre should be contacted, and emergency spill procedures implemented immediately
- All waste resulting from construction shall be removed from the site and disposed of at an appropriate facility. This includes packaging (bags, wraps, boxes, ties, etc.), waste materials (excess fill, cement, grout, asphalt, or other substances).

7 Conclusions

This report summarizes the results of the Natural Heritage Evaluation and is intended to provide guidance for assessing potential effects of development and site alteration in Key Natural Heritage features and Key Hydrologic Features. This report conforms with Policy F2.4 of the Port Hope Official Plan and Part III Protecting Ecological and Hydrological Integrity, which demonstrates that the proposed development will not have adverse effects on a key natural heritage features or key hydrologic feature or related ecological functions.

Key constraints for the Project are summarized below:

- **Candidate SWH** – Project infrastructure will not encroach within candidate SWH. The candidate SWH for bat maternity colonies is located approximately 15 m west of the proposed tower site compound area. Construction of the tower is not expected to impact habitat following implementation of the best management practices in Section 6.2.
- **Habitat of Endangered and Threatened Species** – Project infrastructure will not be located within suitable habitat of endangered and threatened species. The Project will be within the MVPZ for bats, although potential effects can be mitigated through implementation of the best management practices in Section. Further, if cutting frequency and timing changes that favor nesting for Bobolink and Eastern Meadowlark or if tree removals are required within the hedgerow that support bats, further studies and a permit under the ESA may be required.
- **Migratory Birds** – There is potential for migratory birds protected under the MBCA to be nesting within the Subject Property. Compliance with the MBCA can be achieved through implementation of the best management practices (e.g., timing windows and nest sweeps) described in this report. Further, evidence of Pileated Woodpecker was documented throughout the hedgerow along the eastern boundary. Pileated Woodpecker receives year-round protection under the MBR 2022. If tree clearing is required, additional studies to confirm nesting cavity trees will be required prior to removals. Removal of nests is not permitted unless authorized by ECCC under the MBR 2022.

The data presented in this report are in accordance with Stantec's understanding of the Project at the time of reporting. If habitat conditions on the Subject Property change, subsequent surveys and permitting may be required.

8 References

Alan Macnaughton, Ross Layberry, Rick Cavasin, Bev Edwards and Colin Jones. Ontario Butterfly Atlas. Accessed November 12, 2024.

Dobbyn, J.S. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Don Mills, Ontario, 120 pp.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998. Ecological land classification for Southern Ontario: first approximation and its application. Ontario Ministry of Natural Resources, South Central Region, Science Development and Transfer Branch. Technical Manual ELC-005.

MNR (Ministry of Natural Resources). 2024a. Land Information Ontario open geospatial data from Ontario GeoHub. Available online: https://geohub.lio.gov.on.ca/

MNR (Ministry of Natural Resources) 2024b. Make A Map: Natural Heritage Areas web application, NHIC database. Available Online: http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US

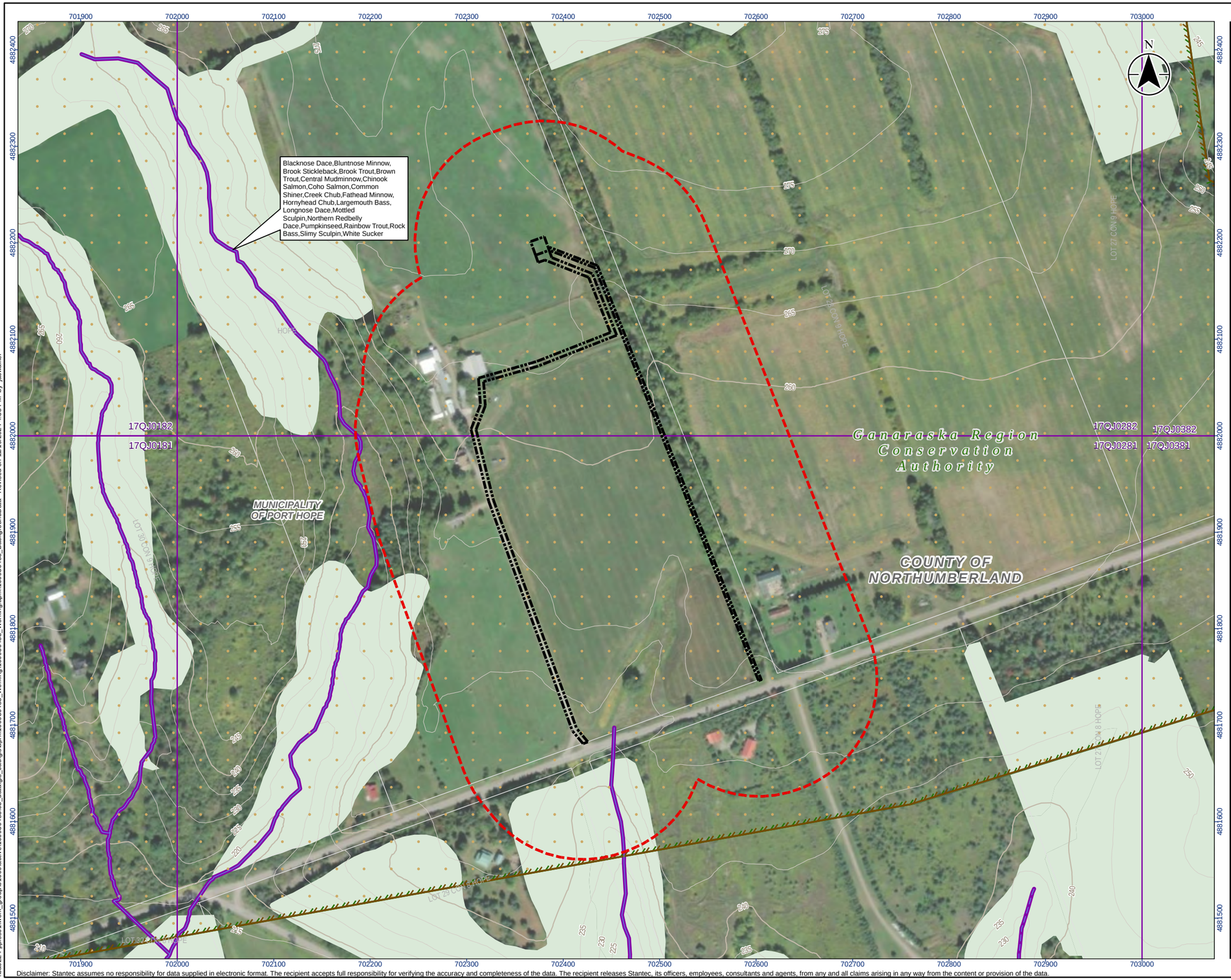
MNRF (Ministry of Natural Resources and Forestry). 2015. Significant Wildlife Habitat Criterion Schedule for Ecoregion 6E.

Ontario Nature. 2020. Reptiles and Amphibians of Ontario. Ontario Reptile and Amphibian Atlas. Available online at: https://www.ontarioinsects.org/herp/

Toronto Entomologists' Association. 2024. Ontario Butterfly Atlas. Available online at: https://www.ontarioinsects.org/atlas/

Appendices

Appendix A Figures



Stantec

Legend

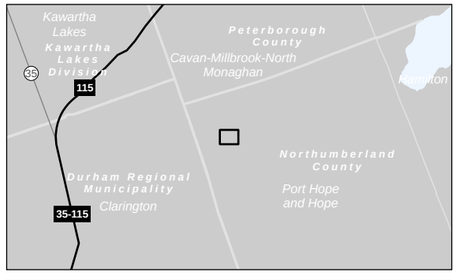
- Project Footprint
- Study Area
- Municipal Boundary, Upper
- Municipal Boundary, Lower
- 1 km UTM Grid
- Oak Ridges Moraine Natural Core Area
- Greenbelt Natural Heritage System
- Conservation Authority Administrative Boundary
- Wooded Area
- Lot
- Watercourse (Intermittent)
- Watercourse (Permanent)
- Thermal Regime, Cold
- Contour (10 m Interval)
- Contour (5 m Interval)

0 100 200 m

1:4,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2024.
3. Contains information licensed under the Open Government Licence – Canada
4. Orthoimagery © First Base Solutions, 2024. Imagery Date, 20XX.



Project Location
Port Hope, ON

REVA
Prepared by jacwalker on 2024-11-19
Technical Review by ABC on 2024-mm-dd

Client/Project
ROGERS COMMUNICATIONS CANADA
ROGERS CELL TOWER C8726
NATURAL HERITAGE EVALUATION

Figure No.
1

Title
Background Review

Stantec

Legend

- Study Area
- Ecological Land Classification (ELC)
- Photo Location and Direction
- Bat Roost (Potential)
- Pileated Woodpecker Cavity
- Watercourse (Intermittent)
- Watercourse - Permanent Stream / Fish Habitat
- Significant Woodland
- Wetland

ELC Key

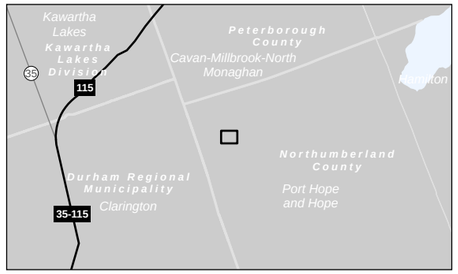
CUP 3	Coniferous Plantatio
CVI	Transportation and Utilities
CVR_4	Rural Property
FOC	Coniferous Forest
FOD	Deciduous Forest
FODM11	Naturalized Deciduous Hedge-row
FOM	Mixed Forest
MAM	Meadow Marsh
MEGM3-4	Kentucky Blue Gras Graminoid Meadow
MEGM3-8	Reed Canary Grass Graminoid Meadow
OAG	Open Agriculture
OAGM1	Annual Row Crops
OAGM2	Perrenial Cover Crops
OAGM4	Open Pasture
THDM2-6	Buckthorn Deciduous Shrub Thicket

0 100 200 m

1:3,500 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2024.
3. Contains information licensed under the Open Government Licence – Canada
4. Orthoimagery © First Base Solutions, 2024. Imagery Date, 20XX.



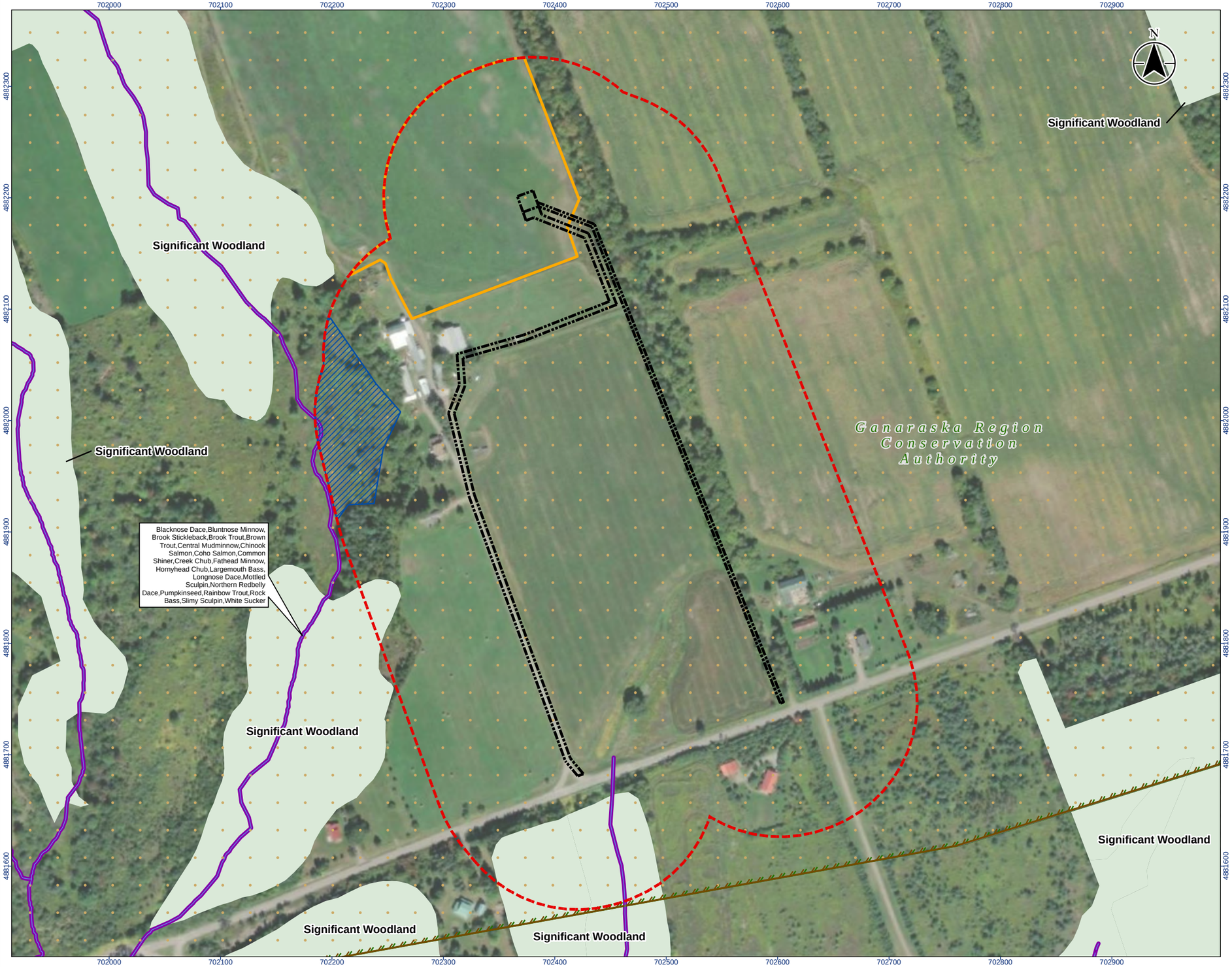
Project Location
Port Hope, ON

REVA
Prepared by jacwalker on 2024-11-19
Technical Review by ABC on 2024-mm-dd

Client/Project
ROGERS COMMUNICATIONS CANADA
ROGERS CELL TOWER C8726
NATURAL HERITAGE EVALUATION

Figure No.
2

Title
Existing Conditions



Stantec

Legend

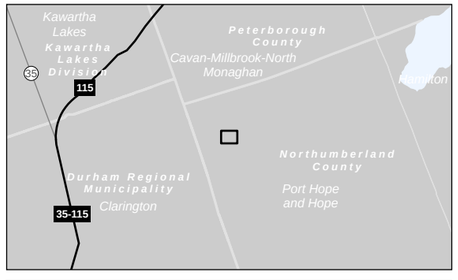
- Project Footprint
- Study Area
- Wetland
- Watercourse (Intermittent)
- Watercourse - Permanent Stream / Fish Habitat
- Thermal Regime, Cold
- Bobolink/Eastern Meadowlark Habitat (Potential)
- Conservation Authority Administrative Boundary
- Candidate Significant Wildlife Habitat
- Oak Ridges Moraine Natural Core Area
- Greenbelt Natural Heritage System

0 100 200 m

1:3,500 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the Ontario Ministry of Natural Resources and Forestry © King's Printer for Ontario, 2024.
3. Contains information licensed under the Open Government Licence – Canada
4. Orthoimagery © First Base Solutions, 2024. Imagery Date, 20XX.



Project Location
Port Hope, ON

REVA
Prepared by jacwalker on 2024-11-19
Technical Review by ABC on 2024-mm-dd

Client/Project
ROGERS COMMUNICATIONS CANADA
ROGERS CELL TOWER C8726
NATURAL HERITAGE EVALUATION

Figure No.
3

Title
Key Natural Heritage and Hydrologic Features

\\ca0224-pfss01\work_group\01609\active\160930483\03_data\gis_cad\gis\aprx\160930483_Working\160930483_Working.aprx\160930483_Key Features Revised on 11/19/2024 5:01 PM by jacwalker

Appendix B Wildlife List

Appendix B: Fish and Wildlife with the Potential to Occur within the Study Area

Species		SAR Status		Conservation Rank and Rarity Status			
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)	National (COSEWIC)	Global (G-rank)	Provincial (S-rank)	Source
AMPHIBIANS							
American Bullfrog	*Lithobates catesbeianus*				G5	S4	ORAA
American Toad	*Bufo americanus*				G5	S5	ORAA
Eastern Red-backed Salamander	*Plethodon cinereus*				G5	S5	ORAA
Gray Treefrog	*Hyla versicolor*				G5	S5	ORAA
Green Frog	*Rana clamitans*				G5	S5	ORAA
Mudpuppy	*Necturus maculosus*			SC	G5	S4	ORAA
Northern Leopard Frog	*Rana pipiens*				G5	S5	ORAA
Red-spotted Newt	*Notophthalmus viridescens viridescens*				G5T5	S5	ORAA
Spotted Salamander	*Ambystoma maculatum*				G5	S4	ORAA
Spring Peeper	*Pseudacris crucifer*				G5	S5	ORAA
Wood Frog	*Lithobates sylvaticus*				G5	S5	ORAA
REPTILES							ORAA
Eastern Gartersnake	*Thamnophis sirtalis*				G5T5	S5	ORAA
Eastern Milksnake	*Lampropeltis triangulum*		SC, Schedule 1	SC	G5	S4	NHIC, ORAA
Eastern Ribbonsnake	*Thamnophis saurita*	SC		SC	G5	S4	ORAA
Midland Painted Turtle	*Chrysemys picta marginata*		SC, Schedule 1	SC	G5T5	S4	ORAA
Northern Map Turtle	*Graptemys geographica*	SC	SC, Schedule 1	SC	G5	S3	ORAA
Red-bellied Snake	*Storeria occipitomaculata*				G5	S5	ORAA
Snapping Turtle	Chelydra serpentina	SC	SC, Schedule 1	SC	G5	S4	ORAA
MAMMALS							
Beaver	*Castor canadensis*				G5	S5	AMO
Big Brown Bat	*Eptesicus fuscus*				G5	S4	AMO
Coyote	*Canis latrans*				G5	S5	AMO
Eastern Chipmunk	*Tamias striatus*				G5	S5	AMO
Eastern Cottontail	*Sylvilagus floridanus*				G5	S5	AMO
Eastern Grey Squirrel	*Sciurus carolinensis*				G5	S5	AMO
Eastern Red Bat	*Lasiurus borealis*	END (January 31, 2025)		END	G3G4	S4	AMO
Eastern Small-footed Myotis	*Myotis leibii*	END			G4	S2S3	AMO
Hoary Bat	*Lasiurus cinereus*	END (January 31, 2025)		END	G3G4	S4	AMO
Little Brown Myotis	*Myotis lucifugus*	END	END, Schedule 1	END	G3G4	S3	AMO
Northern Short-tailed Shrew	*Blarina brevicauda*				G5	S5	AMO
Northern Myotis	*Myotis septentrionalis*	END	END, Schedule 1	END	G2G3	S3	AMO
Raccoon	*Procyon lotor*				G5	S5	AMO

Species		SAR Status		Conservation Rank and Rarity Status			Source
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)	National (COSEWIC)	Global (G-rank)	Provincial (S-rank)	
Red Squirrel	*Tamiasciurus hudsonicus*				G5	S5	AMO
Silver-haired Bat	Lasionycteris noctivagans	END (January 31, 2025)		END	G3G4	S4	AMO
Tri-colored Bat	*Perimyotis subflavus*	END	END, Schedule 1	END	G3G4	S3?	AMO
White-tailed deer	*Odocoileus virginianus*				G5	S5	AMO
BIRDS							
Alder Flycatcher	*Empidonax alnorum*				G5	S5B	OBBA
American Bittern	*Botaurus lentiginosus*				G5	S5B	OBBA
American Black Duck	*Anas rubripes*				G5	S4	OBBA
American Crow	*Corvus brachyrhynchos*				G5	S5	OBBA
American Goldfinch	*Spinus tristis*				G5	S5	OBBA
American Goshawk	*Accipiter atricapillus*				G5	S4	OBBA
American Kestrel	*Falco sparverius*				G5	S4	OBBA
American Redstart	*Setophaga ruticilla*				G5	S5B	OBBA
American Robin	*Turdus migratorius*				G5	S5	OBBA
American Wigeon	*Mareca americana*				G5	S4B,S4N,S5M	OBBA
American Woodcock	*Scolopax minor*				G5	S4B	OBBA
Baltimore Oriole	*Icterus galbula*				G5	S4B	OBBA
Bank Swallow	*Riparia riparia*	THR	THR, Schedule 1	THR	G5	S4B	OBBA
Barn Swallow	*Hirundo rustica*	SC	THR, Schedule 1	SC	G5	S4B	OBBA
Barred Owl	*Strix varia*				G5	S5	OBBA
Belted Kingfisher	*Megaceryle alcyon*				G5	S5B,S4N	OBBA
Black-and-white Warbler	*Mniotilta varia*				G5	S5B	OBBA
Black-billed Cuckoo	*Coccyzus erythropthalmus*				G5	S4S5B	OBBA
Blackburnian Warbler	*Setophaga fusca*				G5	S5B	OBBA
Black-capped Chickadee	*Poecile atricapillus*				G5	S5	OBBA
Black-throated Green Warbler	*Setophaga virens*				G5	S5B	OBBA
Blue Jay	*Cyanocitta cristata*				G5	S5	OBBA
Blue-headed Vireo	*Vireo solitarius*				G5	S5B	OBBA
Blue-winged Teal	*Spatula discors*				G5	S3B,S4M	OBBA
Blue-winged Warbler	*Vermivora cyanoptera*				G5	S4B	OBBA
Bobolink	*Dolichonyx oryzivorus*	THR	THR, Schedule 1	SC	G5	S4B	NHIC, OBBA
Broad-winged Hawk	*Buteo platypterus*				G5	S5B	OBBA
Brown Creeper	*Certhia americana*				G5	S5	OBBA
Brown Thrasher	*Toxostoma rufum*				G5	S4B	OBBA
Brown-headed Cowbird	*Molothrus ater*				G5	S5	OBBA
Canada Goose	*Branta canadensis*				G5	S5	OBBA
Canada Warbler	*Cardellina canadensis*	SC	THR, Schedule 1	SC	G5	S5B	OBBA
Cedar Waxwing	*Bombycilla cedrorum*				G5	S5	OBBA

Species		SAR Status		Conservation Rank and Rarity Status			
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)	National (COSEWIC)	Global (G-rank)	Provincial (S-rank)	Source
Chestnut-sided Warbler	*Setophaga pensylvanica*				G5	S5B	OBBA
Chimney Swift	*Chaetura pelagica*	THR	THR, Schedule 1	THR	G4G5	S3B	OBBA
Chipping Sparrow	*Spizella passerina*				G5	S5B,S3N	OBBA
Clay-colored Sparrow	*Spizella pallida*				G5	S4B	OBBA
Cliff Swallow	*Petrochelidon pyrrhonota*				G5	S4S5B	OBBA
Common Grackle	*Quiscalus quiscula*				G5	S5	OBBA
Common Nighthawk	*Chordeiles minor*	SC	SC, Schedule 1	SC	G5	S4B	OBBA
Common Raven	*Corvus corax*				G5	S5	OBBA
Common Yellowthroat	*Geothlypis trichas*				G5	S5B,S3N	OBBA
Cooper's Hawk	*Accipiter cooperii*				G5	S4	OBBA
Downy Woodpecker	*Dryobates pubescens*				G5	S5	OBBA
Eastern Bluebird	*Sialia sialis*				G5	S5B,S4N	OBBA
Eastern Kingbird	*Tyrannus tyrannus*				G5	S4B	OBBA
Eastern Meadowlark	*Sturnella magna*	THR	THR, Schedule 1	THR	G5	S4B,S3N	OBBA
Eastern Phoebe	*Sayornis phoebe*				G5	S5B	OBBA
Eastern Screech-Owl	*Megascops asio*				G5	S4	OBBA
Eastern Towhee	*Pipilo erythrophthalmus*				G5	S4B,S3N	OBBA
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	THR, Schedule 1	SC	G5	S4B	OBBA
Eastern Wood-Pewee	*Contopus virens*	SC	SC, Schedule 1	SC	G5	S4B	OBBA
European Starling	*Sturnus vulgaris*				G5	SNA	OBBA
Field Sparrow	*Spizella pusilla*				G5	S4B,S3N	OBBA
Gadwall	*Mareca strepera*				G5	S4B,S4N,S5M	OBBA
Golden-crowned Kinglet	*Regulus satrapa*				G5	S5	OBBA
Golden-winged Warbler	*Vermivora chrysoptera*	SC	THR, Schedule 1	THR	G4	S3B	OBBA
Grasshopper Sparrow	*Ammodramus savannarum*	SC		SC	G5	S4B	OBBA
Gray Catbird	*Dumetella carolinensis*				G5	S5B,S3N	OBBA
Great Blue Heron (+)	*Ardea herodias*				G5	S4	OBBA
Great Crested Flycatcher	*Myiarchus crinitus*				G5	S5B	OBBA
Great Horned Owl	*Bubo virginianus*				G5	S4	OBBA
Green Heron (+)	*Butorides virescens*				G5	S4B	OBBA
Green-winged Teal	*Anas crecca*				G5	S4B,S4N,S5M	OBBA
Hairy Woodpecker	*Dryobates villosus*				G5	S5	OBBA
Hermit Thrush	*Catharus guttatus*				G5	S5B,S4N	OBBA
Hooded Merganser	*Lophodytes cucullatus*				G5	S5	OBBA
Horned Lark	*Eremophila alpestris*				G5	S4	OBBA
House Finch	*Haemorhous mexicanus*				G5	SNA	OBBA
House Sparrow	*Passer domesticus*				G5	SNA	OBBA
House Wren	*Troglodytes aedon*				G5	S5B	OBBA
Indigo Bunting	*Passerina cyanea*				G5	S5B	OBBA
Killdeer	*Charadrius vociferus*				G5	S4B	OBBA
Least Flycatcher	*Empidonax minimus*				G5	S5B	OBBA
Long-eared Owl	*Asio otus*				G5	S4	OBBA

Species		SAR Status		Conservation Rank and Rarity Status			Source
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)	National (COSEWIC)	Global (G-rank)	Provincial (S-rank)	
Mallard	*Anas platyrhynchos*				G5	S5	OBBA
Marsh Wren	*Cistothorus palustris*				G5	S4B,S3N	OBBA
Mourning Dove	*Zenaida macroura*				G5	S5	OBBA
Mourning Warbler	*Geothlypis philadelphia*				G5	S5B	OBBA
Nashville Warbler	*Leiothlypis ruficapilla*				G5	S5B	OBBA
Northern Cardinal	*Cardinalis cardinalis*				G5	S5	OBBA
Northern Flicker	*Colaptes auratus*				G5	S5	OBBA
Northern Harrier	*Circus hudsonius*				G5	S5B,S4N	OBBA
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*				G5	S4B	OBBA
Northern Saw-whet Owl	*Aegolius acadicus*				G5	S5	OBBA
Northern Waterthrush	*Parkesia noveboracensis*				G5	S5B	OBBA
Osprey	*Pandion haliaetus*				G5	S5B	OBBA
Ovenbird	*Seiurus aurocapilla*				G5	S5B	OBBA
Pied-billed Grebe	*Podilymbus podiceps*				G5	S4B,S2N	OBBA
Pileated Woodpecker (+)	*Dryocopus pileatus*				G5	S5	OBBA
Pine Siskin	*Spinus pinus*				G5	S5	OBBA
Pine Warbler	*Setophaga pinus*				G5	S5B,S3N	OBBA
Purple Finch	*Haemorhous purpureus*				G5	S5	OBBA
Purple Martin	*Progne subis*				G5	S3B	OBBA
Red-breasted Nuthatch	*Sitta canadensis*				G5	S5	OBBA
Red-eyed Vireo	*Vireo olivaceus*				G5	S5B	OBBA
Red-shouldered Hawk	*Buteo lineatus*				G5	S4B,S2N	OBBA
Red-tailed Hawk	*Buteo jamaicensis*				G5	S5	OBBA
Red-winged Blackbird	*Agelaius phoeniceus*				G5	S5	OBBA
Rock Pigeon	*Columba livia*				G5	SNA	OBBA
Rose-breasted Grosbeak	*Pheucticus ludovicianus*				G5	S5B	OBBA
Ruby-throated Hummingbird	*Archilochus colubris*				G5	S5B	OBBA
Ruffed Grouse	*Bonasa umbellus*				G5	S5	OBBA
Savannah Sparrow	*Passerculus sandwichensis*				G5	S5B,S3N	OBBA
Scarlet Tanager	*Piranga olivacea*				G5	S5B	OBBA
Sedge Wren	*Cistothorus stellaris*				G5	S4B	OBBA
Sharp-shinned Hawk	*Accipiter striatus*				G5	S5	OBBA
Song Sparrow	*Melospiza melodia*				G5	S5	OBBA
Spotted Sandpiper	*Actitis macularius*				G5	S5B	OBBA
Swamp Sparrow	*Melospiza georgiana*				G5	S5B,S4N	OBBA
Tree Swallow	*Tachycineta bicolor*				G5	S4S5B	OBBA
Turkey Vulture	*Cathartes aura*				G5	S5B,S3N	OBBA
Upland Sandpiper	*Bartramia longicauda*				G5	S2B	OBBA
Veery	*Catharus fuscescens*				G5	S5B	OBBA
Vesper Sparrow	*Pooecetes gramineus*				G5	S4B	OBBA
Virginia Rail	*Rallus limicola*				G5	S4S5B	OBBA
Warbling Vireo	*Vireo gilvus*				G5	S5B	OBBA
White-breasted Nuthatch	*Sitta carolinensis*				G5	S5	OBBA
White-throated Sparrow	*Zonotrichia albicollis*				G5	S5	OBBA
White-winged Crossbill	*Loxia leucoptera*				G5	S5	OBBA

Species		SAR Status		Conservation Rank and Rarity Status			
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)	National (COSEWIC)	Global (G-rank)	Provincial (S-rank)	Source
Wild Turkey	*Meleagris gallopavo*				G5	S5	OBBA
Willow Flycatcher	*Empidonax traillii*				G5	S4B	OBBA
Wilson's Snipe	*Gallinago delicata*				G5	S5B	OBBA
Winter Wren	*Troglodytes hiemalis*				G5	S5B,S4N	OBBA
Wood Duck	*Aix sponsa*				G5	S5B,S3N	OBBA
Wood Thrush	*Hylocichla mustelina*	SC	THR, Schedule 1	THR	G4	S4B	NHIC, OBBA
Yellow Warbler	*Setophaga petechia*				G5	S5B	OBBA
Yellow-bellied Sapsucker	*Sphyrapicus varius*				G5	S5B,S3N	OBBA
Yellow-billed Cuckoo	*Coccyzus americanus*				G5	S4B	OBBA
Yellow-throated Vireo	*Vireo flavifrons*				G5	S4B	OBBA
Yellow-rumped Warbler	*Setophaga coronata*				G5	S5B,S4N	OBBA
INVERTEBRATES							
Monarch	*Danaus plexippus*	SC	SC, Schedule 1	END	G4	S2N, S4B	OBA
FISH							
Blacknose Dace	*Rhinichthys atratulus*				G5	S5	LIO
Bluntnose Minnow	*Pimephales notatus*				G5	S5	LIO
Brook Stickleback	*Culaea inconstans*				G5	S5	LIO
Brook Trout	*Salvelinus fontinalis*				G5T5	S5	LIO
Brown Trout	*Salmo trutta*				G5	SNA	LIO
Central Mudminnow	*Umbra limi*				G5	S5	LIO
Chinook Salmon	*Oncorhynchus tshawytscha*				G5	SNA	LIO
Coho Salmon	*Oncorhynchus kisutch*				G5	SNA	LIO
Common Shiner	*Luxilus cornutus*				G5	S5	LIO
Creek Chub	*Semotilus atromaculatus*				G5	S5	LIO
Fathead Minnow	*Pimephales promelas*				G5	S5	LIO
Hornyhead Chub	*Nocomis biguttatus*				G5	S4	LIO
Largemouth Bass	*Micropterus salmoides*				G5	S5	LIO
Longnose Dace	*Rhinichthys cataractae*				G5	S5	LIO
Mottled Sculpin	*Cottus bairdii*				G5	S5	LIO
Northern Redbelly Dace	*Chrosomus eos*				G5	S5	LIO
Pumpkinseed	*Lepomis gibbosus*				G5	S5	LIO
Rainbow Trout	*Oncorhynchus mykiss*				G5	SNA	LIO
Rock Bass	*Ambloplites rupestris*				G5	S5	LIO
Slimy Sculpin	*Cottus cognatus*				G5	S5	LIO
White Sucker	*Catostomus commersonii*				G5	S5	LIO

Definitions, Acronyms and Symbols

(+) = Migratory Birds Regulations (MBR 2022) Schedule 1 Species

Species of Conservation Concern (SOCC)

Species at Risk (SAR)

OBBA, ORAA, OBA, OMA 10km^2 Map Squares: 17TQJ08

NHIC 1km^2 Map Squares: 17QJ0282 and 17QJ0281

Global G-rank

G1: Critically Imperiled (at very high risk of extinction)
G2: Imperiled (at high risk of extinction)
G3: Vulnerable (at moderate risk of extinction)
G4: Apparently Secure (Uncommon but not rare)
G5: Secure (common, widespread and abundant)
G#G#: Range Rank (range of uncertainty about the status of a taxon or ecosystem type)
GU: Unrankable (currently unrankable due to lack of information)
GNR: Unranked (global rank not yet assessed)
GNA: Not Applicable (species is not a suitable target for conservation activities)
T: Denotes that the rank applies to a subspecies or variety
B: Breeding
N: Non-breeding

COSEWIC: Committee on the Status of Endangered Wildlife in Canada
ESA: Endangered Species Act
SARA: Species at Risk Act
SARO: Species at Risk in Ontario

SARA or ESA designagtion
END - Endangered
THR - Threatened
SC - Special Concern

Provincial S-rank

S1: Critically Imperiled (i.e. fewer than 5 occurrences in the nation and/or province)
S2: Imperiled (i.e. fewer than 20 occurrences in the nation and/or province)
S3: Vulnerable (i.e. 20-80 occurrences in the nation and/or province)
S4: Apparently Secure (uncommon, but not rare in the nation and/or province)
S5: Secure (common, widespread and abundant in the nation and/or province)
SNA: Not Applicable (species is not a suitable target for conservation activities)
SHB: Breeding is not confirmed in Ontario
S#S#: Range Rank (range of uncertainty about the status of the species or community)
S#?: Rank is Uncertain
S?: Not Ranked Yet
B: Breeding migrants/vagrants
M: Migrant species occurring regularly on migration
N: Non-breeding migrants/vagrants

Appendix C Species of Conservation Concern Screening

Appendix C: Species of Conservation Concern Screening

Species		SAR Status		Conservation Rank and Rarity Status			Source	Habitat	Assessment
Common Name	**Scientific Name**	**Provincial (ESA, 2007)**	**National (SARA)**	**National (COSEWIC)**	**Global (G-rank)**	**Provincial (S-rank)**			
REPTILES									
Mudpuppy	*Necturus maculosus*			SC	G5	S4	ORAA	Inhabit permanent water bodies such as rivers, lakes, and streams with rocky or muddy bottoms. They prefer clear water with plenty of cover, including submerged rocks, logs, or aquatic vegetation.	Suitable habitat is considered absent within the Study Area.
Eastern Milksnake	*Lampropeltis triangulum*		SC, Schedule 1	SC	G5	S4	NHIC, ORRA	Generally, occur in rural areas, where it is most frequently reported in and around buildings, especially old structures.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. This species would likely be found near the farm structures or along the western and southern portions of the Study Area within the naturalized areas.
Eastern Ribbonsnake	*Thamnophis saurita*	SC		SC	G5	S4	ORRA	Found in wetlands, such as marshes, ponds, and riparian areas. They prefer areas with abundant vegetation and proximity to water, often basking near shorelines or moving through wetland habitats.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. Habitat may be present in the wetland community associated with the watercourse along the western limits of the Study Area.
Midland Painted Turtle	*Chrysemys picta marginata*		SC, Schedule 1	SC	G5T5	S4	ORRA	Midland Painted Turtles inhabit water bodies, such as ponds, marshes, lakes, and slow-moving creeks, that have a soft bottom and provide abundant basking sites and aquatic vegetation. These turtles often bask on shorelines or on logs and rocks that protrude from the water. The midland-painted turtle hibernates on the bottom of water bodies.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. This species may be found within the tributary along the western boundary of the Project.
Northern Map Turtle	*Graptemys geographica*	SC	SC, Schedule 1	SC	G5	S3	ORRA	Found in large rivers, lakes, and reservoirs with slow-moving water and ample basking sites, such as logs or rocks. They often choose areas with abundant aquatic vegetation and sandy or muddy substrates for nesting.	Suitable habitat is considered absent within the Study Area.
Snapping Turtle	Chelydra serpentina	SC	SC, Schedule 1	SC	G5	S4	ORRA	Snapping Turtles inhabit ponds, sloughs, streams, rivers, and shallow bays that are characterized by slow-moving water, aquatic vegetation, and soft bottoms.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. This species may be found within the tributary along the western boundary of the Project.
BIRDS									
Blue-winged Teal	*Spatula discors*				G5	S3B,S4M	OBBA	Grasslands with dense, short to medium tall vegetation adjacent to wetlands.	Suitable habitat is considered absent within the Study Area.
Common Nighthawk	*Chordeiles minor*	SC	SC, Schedule 1	SC	G5	S4B	OBBA	Inhabit open areas, including grasslands, forest clearings, and urban rooftops. They prefer habitats with bare or sparsely vegetated ground for nesting and are frequently seen foraging for insects at dusk or dawn.	Suitable habitat is present within the Study Area but considered absent from the Subject Property. There is an open woodland along the southern boundary of the Study Area, south of Oak Hill Road that may be suitable.
Eastern Kingbird	*Tyrannus tyrannus*				G5	S4B	OBBA	Found in open habitats with scattered trees or shrubs, such as fields, orchards, and forest edges. They often nest on tree branches or shrubs near open spaces, where they hunt for flying insects.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. The treed communities within the Study Area may provide suitable

Species		SAR Status		Conservation Rank and Rarity Status			Source	Habitat	Assessment
Common Name	**Scientific Name**	**Provincial (ESA, 2007)**	**National (SARA)**	**National (COSEWIC)**	**Global (G-rank)**	**Provincial (S-rank)**			
									habitat. This includes the hedgerow east of the Subject Property.
Eastern Wood-Pewee	*Contopus virens*	SC	SC, Schedule 1	SC	G5	S4B	OBBA	The Eastern Wood-Pewee is a forest bird of deciduous and mixed woods. Nest-site selection favors open space near the nest, typically provided by clearings, roadways, water, and forest edges.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. Suitable habitat is present within the wooded areas along the western and southern boundaries of the Project.
Grasshopper Sparrow	*Ammodramus savannarum*	SC		SC	G5	S4B	OBBA	Grassland specialists, favoring open fields, meadows, and prairies with sparse vegetation. They build their nests on the ground, concealed by grass or other low-growing plants.	Suitable habitat is considered absent within the Study Area.
Purple Martin	*Progne subis*				G5	S3B	OBBA	Colonial nesters that rely on open areas near water, where they can forage for flying insects. They nest in cavities, often in artificial structures such as birdhouses, placed in open, predator-free locations.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. Suitable habitat is present within the wooded areas along the western and southern boundaries of the Project.
Upland Sandpiper	*Bartramia longicauda*				G5	S2B	OBBA	Inhabit open grasslands, pastures, and hayfields. They prefer tall grasses for nesting and are often found in agricultural or prairie-like landscapes.	Suitable habitat is considered absent within the Study Area, including Subject Property. The hayfields and open pasture are unlikely suitable due to existing agricultural practices and frequency and timing of cutting.
Wood Duck	*Aix sponsa*				G5	S5B,S3N	OBBA	Wooded wetlands, swamps, and riparian areas with abundant vegetation. They nest in tree cavities near water but will also use artificial nest boxes placed in suitable habitats.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. Suitable habitat may be present within wetland and riparian areas along the western boundary of the Project.
INVERTEBRATES									
Monarch	*Danaus plexippus*	SC	SC, Schedule 1	END	G4	S2N, S4B	OBA	In southern Ontario the Monarch is found primarily wherever milkweed and wildflowers (including goldenrods, asters, and purple loosestrife) exist. The Larvae occur only where milkweed exists; adults are more generalized, feeding on a variety of wildflower nectar.	Suitable habitat is present within the Study Area but considered absent within the Subject Property. Milkweed was observed within the grassland meadow community east of the existing access road and the north side of Oak Hill Road.

Definitions, Acronyms and Symbols

(+) = Migratory Birds Regulations (MBR 2022) Schedule 1 Species

Species of Conservation Concern (SOCC)

Species at Risk (SAR)

OBBA, ORAA, OBA, OMA 10km^2 Map Squares: 17TQJ08

NHIC 1km^2 Map Squares: 17QJ0282 and 17QJ0281

Global G-rank

G1: Critically Imperiled (at very high risk of extinction)
G2: Imperiled (at high risk of extinction)
G3: Vulnerable (at moderate risk of extinction)
G4: Apparently Secure (Uncommon but not rare)
G5: Secure (common, widespread and abundant)
G#G#: Range Rank (range of uncertainty about the status of a taxon or ecosystem type)
GU: Unrankable (currently unrankable due to lack of information)
GNR: Unranked (global rank not yet assessed)
GNA: Not Applicable (species is not a suitable target for conservation activities)
T: Denotes that the rank applies to a subspecies or variety
B: Breeding
N: Non-breeding

COSEWIC: Committee on the Status of Endangered Wildlife in Canada
ESA: Endangered Species Act
SARA: Species at Risk Act
SARO: Species at Risk in Ontario

SARA or ESA designation
END - Endangered
THR - Threatened
SC - Special Concern

Provincial S-rank

S1: Critically Imperiled (i.e. fewer than 5 occurrences in the nation and/or province)
S2: Imperiled (i.e. fewer than 20 occurrences in the nation and/or province)
S3: Vulnerable (i.e. 20-80 occurrences in the nation and/or province)
S4: Apparently Secure (uncommon, but not rare in the nation and/or province)
S5: Secure (common, widespread and abundant in the nation and/or province)
SNA: Not Applicable (species is not a suitable target for conservation activities)
SHB: Breeding is not confirmed in Ontario
S#S#: Range Rank (range of uncertainty about the status of the species or community)
S#?: Rank is Uncertain
S?: Not Ranked Yet
B: Breeding migrants/vagrants
M: Migrant species occurring regularly on migration
N: Non-breeding migrants/vagrants

Appendix D Endangered and Threatened Species Screening

Appendix D: Species at Risk Screening

Species		SAR Status		Source	Habitat	Assessment
Common Name	**Scientific Name**	**Provincial (ESA, 2007)**	**National (SARA)**			
MAMMALS						
Eastern Red Bat	*Lasiurus borealis*	END (January 31, 2025)	END	AMO	Forage in open areas, forested and non-forested habitats, including both deciduous and coniferous forests. Maternity roosts tend to be large diameter and tall, exceeding the forest canopy. Saplings have been used for roosting by males. Roosts by hanging from branches and using several trees during the breeding season with high inter-annual roosting area fidelity. Migratory species that overwinter in the southern United States. (COSEWIC 2023).	Suitable habitat is present within the Study Area but considered absent within the Subject Property. The treed communities within the Study Area may provide suitable habitat, including the hedgerow east of the Subject Property. Encroachment of habitat is not anticipated and therefore, a permit under the ESA is not anticipated. However, if tree removal is required, a habitat assessment and acoustic surveys may be required. Consultation with MECP would also be required to confirm permitting requirements. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Eastern Small-footed Myotis	*Myotis leibii*	END		AMO	Overwintering habitat: Caves and mines that remain above 0 degrees Celsius; Maternal Roosts: primarily under loose rocks on exposed rock outcrops, crevices, and cliffs, and occasionally in buildings, under bridges and highway overpasses and under tree bark.	
Hoary Bat	*Lasiurus cinereus*	END (January 31, 2025)	END	AMO	Forage in open areas, wetlands, open/patchy treed areas, open fields and grasslands. This species will use both deciduous and coniferous forests, with maternity roosts tending to be large diameter and tall, exceeding the forest canopy. Roosts by hanging from branches and using several trees during the breeding season with high inter-annual roosting area fidelity. Migratory species that overwinter in the southern United States. (COSEWIC 2023).	
Little Brown Myotis	*Myotis lucifugus*	END	END, Schedule 1	AMO	Uses caves, quarries, tunnels, hollow trees or buildings for roosting; winters in humid caves; maternity sites in dark warm areas such as attics and barns; feeds primarily in wetlands, forest edges (MNRF, 2000). Roosts in crevices and cavities in dead or dying trees, or sometimes beneath naturally loose bark on species like Shagbark Hickory (MNRF, 2017).	
Northern Myotis	*Myotis septentrionalis*	END	END, Schedule 1	AMO	Hibernates during winter in mines or caves; during summer males roost alone and females form maternity colonies of up to 60 adults; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy (MNRF, 2000)	
Silver-haired Bat	Lasionycteris noctivagans	END (January 31, 2025)	END	AMO	Forage along the edge of forests, forest openings, including young and old forests and edge of forests. Roost in tree cavities or under exfoliating bark. Migratory species that overwinters in the United States, southeastern British Columbia and occasionally the Great Lakes region (COSEWIC 2023).	
Tri-colored Bat	*Perimyotis subflavus*	END	END, Schedule 1	AMO	Open woods near water; roosts in trees, cliff crevices, buildings or caves; hibernates in damp, draft-free, warm caves, mines, or rock crevices (MNRF, 2000). Prefers roosts in foliage within or below the canopy, mostly in oak species but also sometimes in maples. Clusters of dead or dying leaves on live branches are preferred (MNRF, 2017).	
BIRDS						

Species		SAR Status		Source	Habitat	Assessment
Common Name	Scientific Name	Provincial (ESA, 2007)	National (SARA)			
Bank Swallow	*Riparia riparia*	THR	THR, Schedule 1	OBBA	The Bank Swallow is ranked as S4B (apparently secure breeding status) in Ontario and is designated provincially as threatened (June 2014). This species receives general habitat protection under the ESA (2007). The Bank Swallow excavate nests in exposed earth banks along watercourses and lakeshores, roadsides, stockpiles of soil, and the sides of sand and gravel pits. Single nests may occur, although colonies are typical and range from two to several thousand. Adjacent grasslands and watercourses are used for foraging habitat (Cadman et al., 2007).	Suitable habitat is considered absent within the Study Area, including the Subject Property.
Barn Swallow	*Hirundo rustica*	SC	THR, Schedule 1	OBBA	Barn Swallows often live in close association with humans, building their cup-shaped mud nests almost exclusively on human-made structures such as open barns, under bridges and in culverts. They prefer unpainted, rough-cut wood as mud does not adhere as well to smooth surfaces.	Suitable habitat is present in the Study Area but considered absent in the Subject Property. Nesting habitat is limited to the building within the western and southern limits of the Study Area. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Bobolink	*Dolichonyx oryzivorus*	THR	THR, Schedule 1	NHIC, OBBA	Bobolink nest primarily in forage crops with a mixture of grasses and broad-leaved forbs, predominantly hayfields and pastures. Preferred ground cover species include grasses such as Timothy and Kentucky bluegrass and forbs such as clover and dandelion (COSEWIC 2022). Bobolink is an area-sensitive species, with reported lower reproductive success in small habitat fragments (COSEWIC 2022).	Suitable habitat is present in the Study Area and absent within the Subject Property based on existing conditions. The hayfield and open pasture within the Subject Property are considered unsuitable habitat based on existing agricultural practices and the frequency and timing of cutting. However, if future conditions become favorable for nesting, these areas will need to be reassessed for suitability and permitting under the ESA. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Canada Warbler	*Cardellina canadensis*	SC	THR, Schedule 1	OBBA	Inhabit moist, mixed woodlands with dense understory, often near wetlands, streams, or bogs. They prefer forested areas with abundant shrubs and mossy ground cover for nesting.	Suitable habitat may be present in the Study Area but is considered absent in the Subject Property. Suitable habitat includes the wooded areas along the western and southern boundaries of the Project. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Chimney Swift	*Chaetura pelagica*	THR	THR, Schedule 1	OBBA	Urban specialists that nest and roost in chimneys or other vertical structures. Historically, they used hollow trees in old-growth forests, but now they are most commonly found in areas with human-made structures.	Suitable habitat may be present in the Study Area if chimneys are present but considered absent in the Subject Property. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Eastern Meadowlark	*Sturnella magna*	THR	THR, Schedule 1	OBBA	Meadowlarks are ground nesting birds (Harrison, 1975), which are often associated with human-modified habitats where they sing from prominent perches such as roadside wires, trees, and fenceposts. As a grassland species, the Eastern Meadowlark typically occurs in meadows, hayfields and pastures. The Eastern Meadowlark is generally tolerant of habitat with an early succession of trees or shrubs.	Suitable habitat is present in the Study Area and absent within the Subject Property based on existing conditions. The hayfield and open pasture within the Subject Property are considered unsuitable habitat based on existing agricultural practices and the frequency and timing of cutting. However, if future conditions become favorable for nesting, these areas will need to be reassessed for suitability and permitting under the ESA. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	THR, Schedule 1	OBBA	Inhabits open woodlands, forest edges, and rocky or sandy clearings. They nest directly on the ground, often choosing sites with sparse vegetation and good camouflage, close to areas for nocturnal insect foraging.	Suitable habitat is present within the Study Area but considered absent from the Subject Property. There is an open woodland along the southern boundary of the Study Area, south of Oak Hill Road that may be suitable. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***

Species		SAR Status		Source	Habitat	Assessment
Common Name	**Scientific Name**	**Provincial (ESA, 2007)**	**National (SARA)**			
Golden-winged Warbler	*Vermivora chrysoptera*	SC	THR, Schedule 1	OBBA	Breeds in successional scrub habitat surrounding by mature forests, including upland communities, swamps and marshes (COSEWIC 2006).	Suitable habitat is considered absent within the Study Area, including the Subject Property.
Wood Thrush	*Hylocichla mustelina*	SC	THR, Schedule 1	NHIC, OBBA	Prefers moist deciduous or mixed second-growth forests with dense undergrowth and tall trees for perching (COSEWIC, 2012).	Suitable habitat may be present in the Study Area but is considered absent in the Subject Property. Suitable habitat includes the wooded areas along the western and southern boundaries of the Project. ***Construction of the Project is <u>not</u> expected to impact this species or its habitat.***

Definitions, Acronyms and Symbols

ESA: Endangered Species Act
SARA: Species at Risk Act

SARA or ESA designation
EXT - Extinct
END - Endangered
THR - Threatened
SC - Special Concern

NAR - Not at Risk

References / Sources

Cadman, M. D., D.A. Sutherland, G.G. Beck, D. Lepage, A.R. Couturier. 2007. Atlas of the Breeding Birds of Ontario, 2001-2005. (eds) Bird Studies Canada, Environment Canada, Ontario Field Ornithologists, Ontario Ministry of natural resources, and Ontario Nature, Toronto, xxii + 318pp

COSEWIC 2006. COSEWIC assessment and status report on the Golden-winged Warbler Vermivora chrysoptera in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 30 pp. (www.sararegistry.gc.ca/status/status_e.cfm).

COSEWIC. 2012. COSEWIC assessment and status report on the Wood Thrush Hylocichla mustelina in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.

COSEWIC. 2013. COSEWIC assessment and status report on the Little Brown Myotis *Myotis lucifugus*, Northern Myotis *Myotis septentrionalis* and Tricolored Bat *Perimyotis subflavus* in Canada. COSEWIC. Ottawa. xxiv + 93 pp.

COSEWIC. 2022. COSEWIC assessment and status report on the Bobolink Dolichonyx oryzivorus in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 60 pp.

COSEWIC. 2023. COSEWIC assessment and status report on the Hoary Bat Lasiurus cinereus, Eastern Red Bat Lasiurus borealis and Silver-haired Bat, Lasionycteris noctivagans, in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxi + 100 pp. (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html).

Environment and Climate Change Canada. 2022. Recovery Strategy for the Eastern 4 Meadowlark (Sturnella magna) in Canada [Proposed]. Species at Risk Act Recovery 5 Strategy Series. Environment and Climate Change Canada, Ottawa. vii + 91 pp.

Harrison, H. H. 1975. A field guide to birds' nests.

Houghton Mifflin Co., Boston, MA. P. 236

MNRF. 2000. Significant Wildlife Habitat Technical Guide. 344 pp.

MNRF. 2017. Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat. Guelph District.

Poisson, G., and M. Ursic. 2013. Recovery Strategy for the Butternut (Juglans cinerea) in Ontario. Ontario Recovery Strategy Series. Prepared for the Ontario Ministry of Natural Resources, Peterborough, Ontario. v + 12 pp. + Appendix vii + 24 pp. Adoption of the Recovery Strategy for the Butternut (Juglans cinerea) in Canada (Environment Canada 2010).