

Prepared By:



Environmental Impact Study

Pretty River Preserve (Block 183)

Town of Collingwood

Project No. 04-016-2024

April 2026



April 10, 2026

Sunvale Homes
17 Swain Crescent
Collingwood, Ontario
L9Y 5T3

Attention: John Welton, President

**RE: Birks NHC File No. 04-016-2024
Pretty River Preserve (Block 183), Town of Collingwood
Environmental Impact Study**

Dear Mr. Welton:

Thank you for retaining Birks Natural Heritage Consultants, Inc. to prepare an Environmental Impact Study for the property identified as Part of Lot 40 Concession 8 for the Pretty River Preserve (Block 183, Plan 51M1945), in the Town of Collingwood. It is our understanding that an EIS is required as part of a Draft Plan of Subdivision application for the proposed townhouse residential development, continuing the Pretty River Preserve Subdivision. The EIS was deemed required due to the presence of lands identified by the Town of Collingwood as Category 1 Valleylands / Environmental Protection and Fish Habitat (Pretty River) (Official Plan 2004) and Natural Heritage System / Environmental Protection (new Official Plan 2024) within adjacent lands.

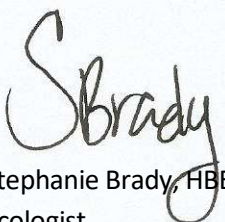
Site specific data was collected by Birks NHC staff during site visits on August 13 and September 27, 2024, and July 9, 2025. This report outlines the process by which natural heritage features are evaluated for presence and function and assesses the potential impacts that may occur because of the proposed residential development. Where potential impacts are identified, mitigation measures are proposed to reduce the potential negative effects. Assuming the mitigation measures recommended in this report are implemented, there is no expectation that



natural heritage features or functions associated with the Study Area will be negatively impacted by the proposed residential development.

If you have any questions or concerns regarding this report, please do not hesitate to contact the undersigned.

Birks Natural Heritage Consultants Inc.



Stephanie Brady, HBES
Ecologist



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1 INTRODUCTION

Birks Natural Heritage Consultants, Inc. (Birks NHC) was retained by Sunvale Homes to undertake the preparation of an Environmental Impact Study (EIS) for the lands identified as the Pretty River Preserve (Block 183) in the Town of Collingwood (herein referred to as the subject property). Sunvale Homes is proposing the development of a residential subdivision for a 33-unit townhouse development. It is our understanding that the subject property was subject to a recent Ontario Land Tribunal (OLT) decision involving the approval of an Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) to permit low-medium density residential development by way of site plan approval and condominium.

It is also our understanding that the EIS is required due to the presence of lands identified as Category 1 Valleylands as per the Town of Collingwood Official Plan (2004; Appendix A) and the Pretty River within 120 metres (m) of the subject property as well as Natural Heritage System according to the new Town of Collingwood Official Plan (2024).

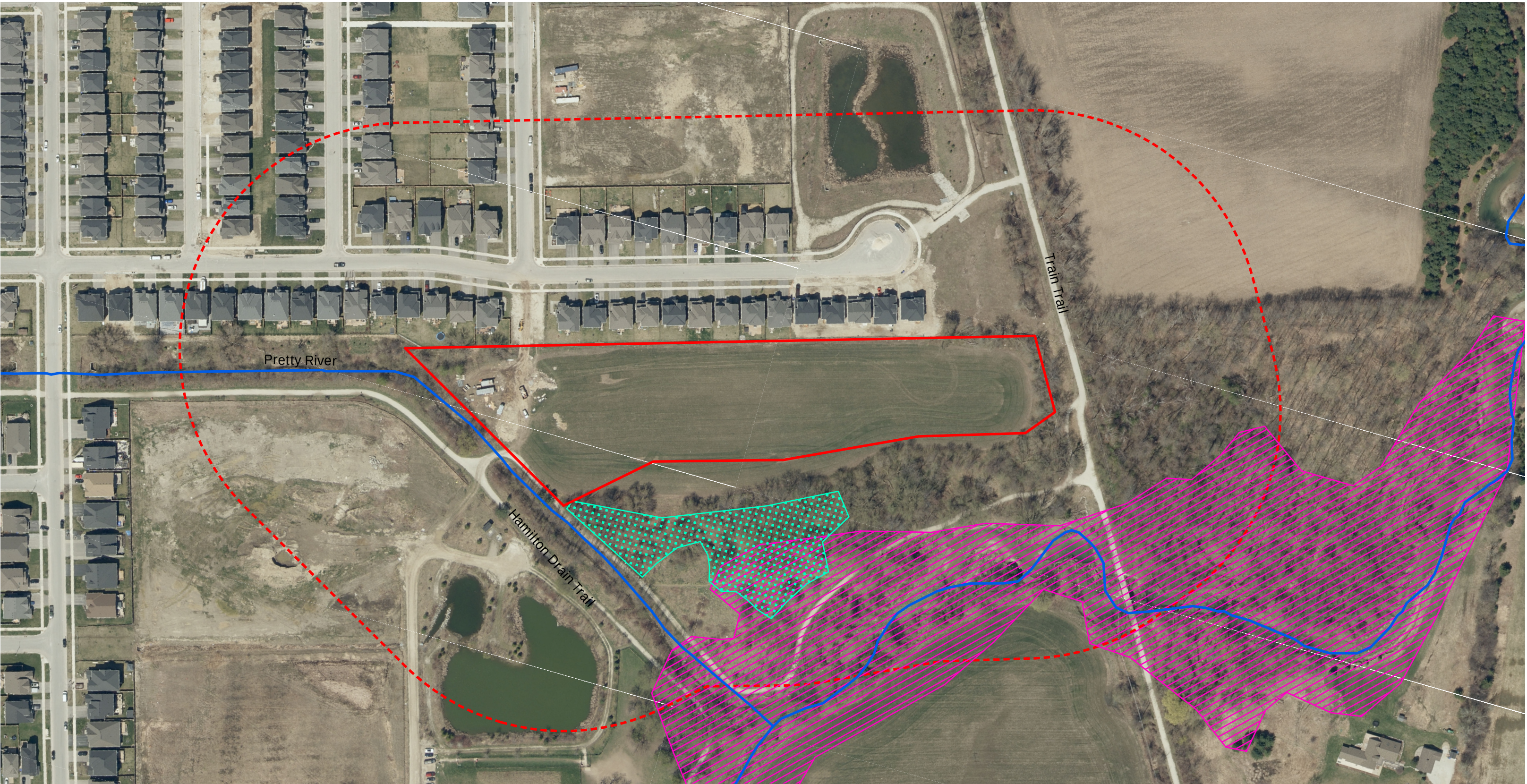
This report discusses the presence and function of the natural heritage features found on the subject property and adjacent lands and determines the level of impact resulting from the proposed activity. Mitigation and protection measures are recommended to address potential impacts to the natural heritage features and their functions.

1.1 PURPOSE

The purpose of this EIS is to characterize the natural heritage features associated with the subject property, determine their function within the greater natural landscape, evaluate the potential for impacts associated with the proposed residential subdivision, and recommend mitigation, restoration and/or enhancement measures to preserve and restore the identified natural features.

1.2 STUDY AREA

For the purposes of this EIS, the Study Area refers to an area of approximately 120 m surrounding the subject property limits (Figure 1). The Ministry of Natural Resources (MNR) published the Natural Heritage Reference Manual (MNR, 2010) to provide technical guidance for the implementation of the natural heritage policies of the *Provincial Planning Statement, 2024* (PPS) which outlines a distance of 120 m for use in consideration of impacts to adjacent features. An aerial interpretation of lands within the local landscape was also undertaken to identify other natural heritage features that contribute to the function of those that exist with the Study Area.



Pretty River Reserve
Town of Collingwood

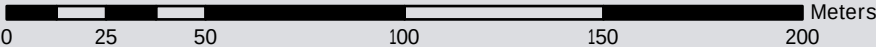
- Property Limit
-
- 120m Study Area

Watercourse (Ontario GeoHub)Category 1 Valleylands (Town of Collingwood 2004 OP)NVCA Wetland

Figure 1:
Study Area



MAP DRAWING INFORMATION:
DATA PROVIDED BY: ESRI CANADA
MAP CREATED BY: SB
MAP CHECKED BY: BB
MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:
Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-016-2024 Pretty River Estates
PROJECT: 04-016-2024 STATUS: DRAFT DATE: 29/01/2026



2 ENVIRONMENTAL POLICY FRAMEWORK

The following section identifies the applicable land use planning policies related to the subject property and the associated natural heritage features, sensitive habitats and protected species.

2.1 PROVINCIAL PLANNING STATEMENT (2024)

The Provincial Planning Statement (PPS, 2024) is a policy statement issued under the authority of Section 3 of the Planning Act and came into effect on October 20, 2024. The Provincial Planning Statement provides overall policy directions on matters of provincial interest related to land use planning and development in Ontario, and applies province-wide, except where this Provincial Planning Statement or another provincial plan provides otherwise.

Section 4.1 of the PPS specifies policy related to protection of natural heritage features and functions.

Section 4.1.4 of the PPS stipulates policy for the protection of natural heritage features and functions as follows:

Development and site alteration shall not be permitted in:

- a) significant wetlands in Ecoregions 5E, 6E; and 7E; and
- b) significant coastal wetlands.

Section 4.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in:

- a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
- b) significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- c) significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
- d) significant wildlife habitat;
- e) significant areas of natural and scientific interest; and
- f) coastal wetlands in Ecoregions 5E, 6E and 7E that are not subject to policy 4.1.4.b)

Sections 4.1.6 and 4.1.7 state that development and site alteration is not permitted in fish habitat or habitat of endangered and threatened species except in accordance with federal and provincial requirements.

Section 4.1.8 extends protection of those features defined above in policies 4.1.4, 4.1.5 and 4.1.6 to adjacent lands, typically those within 120 m of the potential impact. Section 4.1.8 states that development and site alteration shall not be permitted on adjacent lands to natural heritage features



and areas identified in policies 4.1.4, 4.1.5, and 4.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological function.

While many of these features are mapped and direction is available to allow for candidate features and functions to be identified, it remains the responsibility of the Province and/or the Municipality to designate areas identified within Section 4.1.4 and 4.1.5 of the PPS as significant. The Natural Heritage Reference Manual (MNR, 2010) and Ecoregion 6E Significant Wildlife Habitat Criterion Schedule (MNRF, 2015) were used within this report to identify candidate features and functions not currently identified by the province and/or municipality.

2.2 SPECIES CONSERVATION ACT, 2025

As of March 30, 2026, Ontario's *Species Conservation Act, 2025* ('SCA') came into force and the provincial *Endangered Species Act, 2007* was repealed. The SCA provides regulatory protection to Endangered and Threatened species as listed within Ontario Regulation ('O. Reg.') 60/26 Protected Species in Ontario List.

Section 16 of the SCA prohibits activities which would result in killing or harming a protected species, damaging or destroying their habitat, and possessing, transporting, buying, or selling protected species. The activities described in Section 16 may proceed through a registration, permit or exemption mechanism provided that the requirements as described in O. Reg. 75/26, O. Reg. 74/26 and O. Reg. 61/26 respectively are implemented prior to initiation of that activity.

As noted above, only species listed as Endangered and Threatened on the Protected Species in Ontario List receive species and habitat protection through the SCA. Special Concern species do not receive protection under the SCA. Further, aquatic species and migratory bird species listed as either Threatened, Endangered or Extirpated under the federal *Species at Risk Act, 2002* are not eligible for protection under the SCA. Activities impacting aquatic and migratory bird species not listed in the Protected Species in Ontario List must comply with federal legislation including the *Species at Risk Act, 2002*, the *Fisheries Act, 1985*, and the *Migratory Birds Convention Act, 1994*.

2.3 SPECIES AT RISK ACT, 2002

At a federal level, Species at Risk designations for species occurring in Canada are assessed by the Committee on the Status of Endangered Wildlife in Canada ('COSEWIC'). If approved by the federal Minister of Environment and Climate Change, species are added to Schedule 1, the federal list of wildlife Species at Risk.

Sections 32 and 33 of the *Species at Risk Act* ('SARA') are vital for protection of wildlife Species at Risk in Canada.



Section 32(1) says *“No person shall kill, harm, harass, capture or take an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species.”*

Section 32(2) *“No person shall possess, collect, buy, sell or trade an individual of a wildlife species that is listed as an extirpated species, an endangered species or a threatened species, or any part or derivative of such an individual.”*

Section 33 states that *“No person shall damage or destroy the residence of one or more individuals of a wildlife species that is listed as an endangered species or a threatened species, or that is listed as an extirpated species if a recovery strategy has recommended the reintroduction of the species into the wild in Canada.”*

Section 34(1) says *“With respect to individuals of a listed wildlife species that is not an aquatic species or a species of birds that are migratory birds protected by the Migratory Birds Convention Act, 1994, sections 32 and 33 do not apply in lands in a province that are not federal lands unless an order is made under subsection (2) to provide that they apply.”*

For aquatic species and migratory bird species protected under the *Migratory Birds Convention Act, 1994*, Section 32 applies to all lands in Canada. However, Section 34(1) says *“With respect to individuals of a listed wildlife species that is not an aquatic species or a species of birds that are migratory birds protected by the Migratory Birds Convention Act, 1994, sections 32 and 33 do not apply in lands in a province that are not federal lands unless an order is made under subsection (2) to provide that they apply.”*

Species listed on Schedule 1 as Endangered or Threatened are afforded protection of critical habitat on federal lands under the SARA. This habitat protection extends to all lands regardless of ownership where the habitat of a species listed in Schedule 1 is also protected by the *Migratory Breeding Birds Convention Act, 1994* or the *Fisheries Act, 1985* and in certain circumstances where provincial laws do not effectively protect the species or its residence, through an order issued by the Minister. The critical habitat protection afforded migratory birds extends only to the habitat protection provided by the *Migratory Birds Convention Act, 1994* (Sections 58(5.1, 5.2). The Protection Statement for the habitat to which the *Migratory Birds Convention Act, 1994* applies for migratory birds listed under the *Species at Risk Act* says that the habitat to which the *Migratory Birds Convention Act, 1994* applies refers to the nest only.

2.4 MIGRATORY BIRDS CONVENTION ACT, 1994

The *Migratory Birds Convention Act, 1994* protects migratory birds, their nests, and eggs anywhere they are found in Canada and prohibits the dumping of harmful substances to birds in water or areas that they frequent. The *Migratory Birds Convention Act, 1994* is implemented through two regulations: Migratory Birds Regulations and Migratory Bird Sanctuary Regulations.



The Migratory Birds Regulations (ECCC, 2022) prohibits the following (unless a person possesses authorization to do so):

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

Exceptions include a nest that was built by a species not listed in Schedule 1 that does not contain a live bird or viable egg; a nest shelter, eider duck shelter or duck box that does not contain a live bird or a viable egg; and, a nest that has not been used by migratory birds for a number of months beforehand that corresponds to the number of months set out in the relevant Table to that Schedule for the species.

The Migratory Bird Sanctuary Regulations (ECCC, 2022) provides protection in a migratory bird sanctuary. In a bird sanctuary, no person shall hunt migratory birds, destroy, damage or take the nests of migratory birds, or, have in possession a live migratory bird, or a carcass, nest or egg of a migratory bird. Further, no dog or cat shall be permitted to run “at large” in a migratory bird sanctuary.

Recent changes to the regulations associated with the *Migratory Birds Convention Act*, 1994 have added eighteen species of birds that are protected by the act year-round. There are certain conditions that must be met prior to destroying or disturbing a nest of these species.

2.5 FISHERIES ACT, 1985

The purpose of the federal *Fisheries Act*, 1985 is in part, to provide a framework for the conservation and protection of fish and fish habitat through the various regulations that protect against serious harm to fish by death or any permanent or temporary harmful alteration, disruption or destruction (‘HADD’) to their habitat. Fish habitat is defined within the *Fisheries Act*, 1985 as “spawning grounds and any other areas, including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes”. The fish and fish habitat protection provisions of the *Fisheries Act*, 1985 include:

- A prohibition against causing the death of fish, by means other than fishing (Section 34.4);
- A prohibition against causing the harmful alteration, disruption or destruction of fish habitat (Section 35);
- Establishment of standards and codes of practice in relation to works, undertakings and activities during any phase of their construction, operation, modification, decommissioning or abandonment for the avoidance of death to fish, HADD, and for the prevention of pollution (Section 34.2); and,
- Ministerial powers to ensure the free passage of fish or the protection of fish or fish habitat with respect to existing obstructions (Section 34.3).

The interpretation and application of the regulations of the *Fisheries Act*, 1985 is overseen by Fisheries and Oceans Canada (‘DFO’). Under the direction of DFO, projects that have potential to affect fish and



fish habitat are to be screened using their online guidance platform, 'Projects Near Water' to determine if the project will require review under the *Fisheries Act*, 1985. Projects that can not implement measures to mitigate impact to fish and fish habitat, and do not qualify under current Standards and Codes of Practice, require review by DFO prior to any site disturbance or alteration, including vegetation removal and grading.

2.6 NOTTAWASAGA VALLEY CONSERVATION AUTHORITY

Ontario's Conservation Authorities fall under the jurisdiction of the Conservation Authorities Act, 1990 which was reviewed and modernized in 2017 and again in 2019. The purpose of Conservation Authorities Act is 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".

An authority may issue a permit to a person to engage in an activity specified in the permit if, in the opinion of the authority, the activity is not likely to: a) affect the control of flooding, erosion, dynamic beaches or pollution or the conservation of land; b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and, (c) any other requirements that may be prescribed by the regulations are met.

The property is mapped as being in a regulated area by Nottawasaga Valley Conservation Authority (NVCA) under O. Reg. 41/24 Prohibited Activities, Exemptions and Permits.

2.7 TOWN OF COLLINGWOOD OFFICIAL PLANS

Two Town of Collingwood Official Plans are considered below. The Town's existing Official Plan (2004) and the Town's new Official Plan (2024) due to on-going appeals to portions of the 2024 Official Plan.

2.7.1 Official Plan (2004)

According to Section 4.1 of the Town of Collingwood Official Plan 2004, updated 2019:

The Environmental Protection - Natural Heritage Resource Areas classification on Schedule B identifies lands warranting varying levels of protection due to their environmental importance. The natural heritage features identified on Schedule B include Provincially significant wetland, valley lands, woodland, and fish and nursery habitats. These areas fall into two categories:

- *Category 1 lands are lands where development is prohibited. Category 1 lands are included within the Environmental Protection Areas designation on Schedule A in order to provide a heightened level of protection to Collingwood's most sensitive natural resources. Category 1 lands, by virtue of their significant functions, attributes and linkages, are those considered to make the greatest contribution to the natural heritage system of the Town of Collingwood and include, for example, Provincially-*



significant wetlands, major river valleys, fish habitat located within significant valley-lands and primary woodlands encompassing in excess of 4 hectares (9.9 acres) that are more than 75 years old, and

- *The Category 2 classification encompasses locally significant wetlands, younger woodland encompassing an area in excess of 10 hectares (25 acres), and/or fish habitat located outside significant valley-lands. Category 2 lands are where limited forms of development, in accordance with the land use designations on Schedule A, may be possible subject to the findings of an Environmental Impact Statement (EIS).*

No lands identified as Category 2 within Schedule B are present within the Study Area.

Section 4.1.3.3 Boundaries states:

The boundaries of the Environmental Protection Areas classification shown on Schedules A and B have been conceptually delineated. It is the intent of this Plan that their precise locations be determined in consultation with the Nottawasaga Valley Conservation Authority at the time of the consideration of specific development applications.

When major development is proposed adjacent to Nottawasaga Bay or a watercourse, and detailed engineered floodline mapping is not available, the proponent shall undertake a floodplain analysis at their expense, and to the satisfaction of the Town of Collingwood and the Nottawasaga Valley Conservation Authority to establish the precise location of the regulatory floodline. This shall form one component of the Environmental Impact Statement (EIS) in determining the precise boundaries of the Environmental Protection Area.

An amendment to this Plan shall not be required to make minor modifications to the boundaries of the Environmental Protection Areas classification provided the overall intent of the Plan is maintained. However, an amendment shall be required to Schedule A, when a boundary modification to a Category 1 natural heritage resource area is deemed to constitute a major change.

Section 4.1.3.4 Detailed Delineation states:

The Environmental Protection Areas classification shown on Schedules A and B are to be used only as a guide in preparing implementing zoning criteria and that appropriate setbacks from identified hazards (e.g. areas susceptible to flooding / erosion), engineered flood lines, the high water mark of any river, creek or shoreline, and the extent of environmental buffers, shall be established in the Zoning By-law in consultation with the mandated approval authority (Nottawasaga Valley Conservation Authority).



When more detailed mapping becomes available, it shall take precedence in the consideration of development applications, and Council shall amend the Official Plan and/or Zoning By-law to reflect the improved mapping.

Section 4.1.3.13 Environmental Buffers states:

Naturally vegetated buffers, generally extending a minimum of 30 metres (98.4 feet) from the edge of Category 1 and 2 Environmental Protection - Natural Heritage Resource Areas, shall be encouraged. The precise nature of the buffers and their dimensions shall be determined on a site-by-site basis through the findings of an EIS.

The naturally vegetated buffers to protect Category 1 and Category 2 resource areas may exceed the standard above and/or the building setbacks from identified natural hazards established in accordance with Section 4.1.3.7 for reasons of safety.

2.7.2 Official Plan (2024)

The subject property is depicted within the Town of Collingwood's Official Plan (2024) Schedule 2 Land Use Plan as 'Future Neighbourhood' and Environmental Protection within adjacent lands. The property is also situated within the Pretty River Flood Fringe area of the Two Zone Concept (Schedule 3.1 – Natural Hazards).

Section 5.1.5 Natural Heritage Lands and Hazard Lands (a) and (b) state that:

(a) Generally all development will be directed outside of natural heritage features and functions, and hazardous lands or sites, except as in accordance with this Plan. Any development within hazardous lands or sites may require a permit from the applicable conservation authority and development may not occur in the absence of any required permit.

b) While every effort has been made to capture significant natural heritage features and functions within the Environmental Protection Designation or Adjacent Lands Overlay, ecosystems are complex, varied and evolving. It is recognized that some significant features may exist within other Designations. Should screening tools, site visits or other information indicate that significant natural heritage features and functions might exist on lands outside of the Environmental Protection Designation or Adjacent Lands Overlay and/or as justification for major development proposals, the Town may request further evaluation of the features through an Environmental Impact Study prepared by a qualified professional and demonstration of no negative impacts on the identified features or their functions. In such cases, the relevant policies of the Environmental Protection Designation or Adjacent Lands Overlay addressing Environmental Impact Study content, scoping, compensation and dedication shall apply.



No Natural Heritage System Lands exist on the subject property, however, the property is situated within the Adjacent Lands Overlay area.

Section 5.6 (b) states that:

(b) The Natural Heritage System was established through an assessment of the mapping that is included as Appendix III: Natural Heritage System. The Natural Heritage System identified on Schedule 3 is comprised of one designation and an overlay:

- i. The Environmental Protection Designation, which comprises the identified significant natural heritage features and an associated 30 metre buffer, that the Town shall protect and conserve - identified on Schedule 3; and*
- ii. The Adjacent Lands Overlay, which is based on an approximate 90 metre setback from the boundary of the Environmental Protection Designation and is intended to act as a trigger for the completion of an Environmental Impact Study when required by the Town - identified on Schedule 3.*

Section 5.6.1.3 The Environmental Protection Designation is comprised of the following components:

(a) The Environmental Protection Designation is identified on Schedule 2, and is comprised of the following components:

- i. Provincially significant wetlands, including coastal wetlands;*
- ii. Provincially significant woodlands;*
- ix. Provincially significant valleylands;*
- x. Rivers and streams;*
- iv. Significant wildlife habitat attributes and functions, including habitat for species-at-risk, fish, and rare plant communities;*
- v. Significant areas of natural and scientific interest;*
- vi. Hazard lands, including the Nottawasaga Bay Shore Lands;*
- vii. Other natural heritage features (i.e., woodlands that are less than 4 hectares, locally significant wetlands, treed slopes, and cultural habitat features); and*
- viii. Linkages, enhancement/restoration areas.*

(b) The Environmental Protection Designation also includes a 30 metre buffer from identified natural heritage features to protect their ecological and hydrological functions. The 30 metre buffer is a minimum buffer and may be adjusted as a result of further analysis carried out in an Environmental Impact Study.

5.6.2.1 The Adjacent Lands Overlay Intent says:

(a) The intent of the Adjacent Lands Overlay is to trigger the requirement for the preparation of an Environmental Impact Study to support applications for development.

(b) Lands within 90 metres and abutting the Environmental Protection Designation are shown on Schedule 3 as the Adjacent Lands Overlay. Adjacent Lands may have ecological functions or



linkages that are important to the long-term health of the features and functions of the Natural Heritage System.

(c) As an Overlay, the policies in this Section of this Plan must be read in conjunction with the policies of the associated underlying land use designation that is identified for any specific site on Schedule 2.

Sections 5.6.3.6(d), (e) and (i) The Pretty River Sub-Watershed – Two Zone Concept say:

(d) Subject to compliance with stricter use provisions of the Environmental Protection Designation, land uses permitted within the flood-fringe may include: residential, commercial, industrial, institutional, agricultural and open space/recreational uses as identified in the underlying Designation. Any site alteration shall adequately consider and protect the Natural Heritage System and its associated ecological functions.

e) Land uses permitted within the flood-fringe shall be subject to the following standards:

- i. All major development permitted within the flood-fringe shall be subject to Site Plan Control and/or the provisions of a Subdivision Agreement;*
- ii. All uses shall be flood-proofed to the regulatory flood standard (Timmins Storm Flood Level);*
- iii. All development applications shall be accompanied by a Cumulative Impact Analysis. The Cumulative Impact Analysis shall identify the potential impacts on the hydraulics of the Pretty River floodplain and establish the precise areas available for development. The Conservation Authority, in consultation with the Town, may determine that an analysis is not required for minor development proposals; Working Appeal Copy December 2023 (Modified July 2024) Town of Collingwood • Official Plan Page 140*
- iv. Vehicles and people have a way of safely entering and exiting the area during times of flooding, erosion and other emergencies;*
- v. New hazards are not created and existing hazards are not aggravated; and*
- vi. No adverse environmental impacts will result.*

i) All development, including stormwater management facilities shall be set back a minimum of 30 metres from the stable top of the bank of the Pretty River or shall be located outside the 1:100 Year floodplain, whichever is greater.

The subject property is situated outside the 30 metre stable top of bank of the Pretty River.

Section 5.6.4.1 Analysis of Species at Risk states:

a) In addition to the Natural Heritage System identified on the Schedules to this Plan, it is a requirement of this Plan that all applications for development, regardless of whether they



are within a defined element of the Natural Heritage System, be accompanied by an analysis of Species at Risk, in accordance with Provincial legislation and policies to ensure the long-term conservancy of habitat for threatened and endangered species. Such an analysis shall be prepared by a qualified professional, with appropriate in-season field work, to the satisfaction of the Town, in consultation with the Province and any other agency having jurisdiction and may be scoped based on the scale and nature of the development proposed. The Town may require information of adherence to this policy through conditions of approval for site plan/subdivision/condominium.

3 STUDY APPROACH

The following activities and assessments were undertaken to fulfill the objectives of this study.

3.1 BACKGROUND DATA REVIEW AND SOURCES

Background documents provide information on site characteristics, habitat, wildlife, rare species and communities, and other aspects of the Study Area. The following sources were reviewed as part of our assessment:

- Ontario GeoHub for provincial mapping of natural heritage features. Accessed April 2025 at: <https://geohub.lio.gov.on.ca/>
- Natural Heritage Information Centre (NHIC) database (squares 17NK6326, 17NK6325) accessed April 2025 at: https://www.lioapplications.lrc.gov.on.ca/Natural_Heritage/index.html
- Ontario Reptile and Amphibian Atlas database (square 17NK62) accessed April 2025 at: <https://ontarionature.org/programs/community-science/reptile-amphibian-atlas/species/>
- Protected Species in Ontario List and range maps at <https://www.ontario.ca/page/species-risk-ontario>
- List of Wildlife Species at Risk in Canada at <https://laws.justice.gc.ca/eng/acts/s-15.3/page-10.html>
- Aquatic Species at Risk Maps (Fisheries and Oceans Canada) accessed March 2025 at: <https://www.dfo-mpo.gc.ca/species-especies/sara-lep/map-carte/index-eng.html>
- Ontario Breeding Bird Atlas 2 (OBBA; squares 17TNK62) accessed April 2025 at: <https://www.birdsontario.org/atlas-2/>
- Atlas of the Mammals of Ontario (Dobbyn 1994) regarding mammals recorded in the Study Area
- INaturalist accessed April 2025 at: <https://inaturalist.ca/observations>

3.2 FIELD SURVEYS

Natural heritage features and functions were characterized within the Study Area through the completion of site visits on August 13 and September 27, 2024, and July 9, 2025. Consideration was also given to the presence or absence of suitable Species at Risk habitat, based on habitat requirements of threatened and/or endangered species that may overlap the Study Area.



The following section lists and describes each survey conducted within the Study Area, including the provincial protocols that were followed during the field program. These sections also state where modifications were made to a specific provincial protocol to suit on-site conditions.

3.2.1 Vegetation Community Mapping and Survey

As a first step in identifying and assessing natural heritage features on the property, the vegetation communities were assessed using Ecological Land Classification (ELC). The ecological community boundaries were determined through a review of aerial photography and then further refined during site visits throughout the 2024 field season. The ELC system for Southern Ontario (Lee *et al.*, 1998) was used with modifications. In early 2007, the MNRF refined their original vegetation type codes to more fully encompass the vast range of natural and cultural communities across Southern Ontario. Through this process, new codes have been added while some have changed slightly. These updated ELC codes have also been used for reporting purposes in this Study Area where they are more representative of the vegetation communities within the subject property.

A Butternut Health Assessment (BHA) was also conducted within the Study Area on July 9, 2025 and was subsequently submitted to the Ministry of Environment, Conservation and Parks (MECP) on August 5, 2025.

3.2.2 Fish Habitat Assessment

The Study Area was visited on September 27, 2024, to complete a characterization of aquatic fish habitat within the Study Area. The assessment incorporated the following survey parameters: type of fish habitat present; and fish species observed/known to be present based on field data and available background information from the MNRF, Ontario GeoHub and NVCA.

Fish habitat identified within the Study Area was assigned one of the following designations:

- Permanent direct fish habitat: a feature where flowing or standing water is present year-round and connected to known fish habitat;
- Seasonal direct fish habitat: a feature that provides direct habitat for fish under elevated water levels (during spring freshet and large storm events), but not under low water conditions, due to insufficient open water and refuge habitat or anoxic water quality conditions; and
- Indirect fish habitat: a feature where there is sufficient water to sustain aquatic invertebrates and plants that discharges to direct habitat downstream. Fish cannot directly access the area as a result of a barrier to upstream fish movement (*i.e.* steep channel grade, low water levels, perched culvert).



3.2.3 General Wildlife Survey

A wildlife assessment for the Study Area was completed through incidental observations while on site. Any incidental observations of wildlife were noted including other wildlife evidence such as dens, tracks, and scat. For each observation notes and, when possible, photos were taken. These observations were also used in the consideration of the wildlife habitat function associated with the Study Area.

Wildlife habitat functions were evaluated according to provincial criteria outlined in the Ecoregion 6E Significant Wildlife Habitat Criterion Schedules (MNRF, 2015) (Appendix E).

3.3 SPECIES AT RISK ASSESSMENT

The Species at Risk assessment included an analysis of the habitat requirements of Species at Risk reported to occur in the region to identify those having potential to occur within the Study Area (Appendix F). Birks NHC staff reviewed data obtained through desktop review and the site visits related to potential habitat for provincially designated species, notably Protected Species listed under O. Reg. 60/26 of the SCA, ;listed as Threatened or Endangered and Schedule 1 of the SARA.

Habitat requirements of Threatened or Endangered species with habitat ranges overlapping the property were considered to document the presence or absence of suitable habitat. Species specific surveys were undertaken where habitat availability and the proposed activity would interact with that habitat in a manner that could reasonably be expected to result in potential for accidental contravention of the SCA.

4 EXISTING CONDITIONS

The following sections present a summary of our findings as they relate to current land usage and general observations related to the naturalized features found on the subject property and within the Study Area.

4.1 GENERAL SITE OVERVIEW

The subject property is approximately 1.9 ha in size and is composed mainly of an existing active agricultural field situated between an existing subdivision to the north and the riparian woodland habitat of the Pretty River to the west and south.

A small amount of woodland exists on the western and eastern ends of the property. The eastern woodland habitat includes a single Butternut tree (*Juglans cinerea*) (Endangered). This woodland area is connected to the small forest block to the south, along the Pretty River, as well as to more extensive woodlands extending to the east.



4.2 ADJACENT LAND USE

Existing residential subdivisions exist to the north and west. Lands to the east and south are primarily active agriculture with some woodland communities associated with the Pretty River corridor. There is a small wetland within the Town-owned woodland mapped in the Study Area by the NVCA and the Pretty River and a tributary of the Pretty River, the Hamilton Drain, also flow through the Study Area. Stormwater ponds are situated southwest of the property, south of the Hamilton Drain within the Study Area and to the north of the property at the end of Kirby Avenue.

4.3 VEGETATION COMMUNITIES

Vegetation communities and their respective locations are depicted in Figure 2 and briefly described below. Because most of the property is active agriculture and the remaining vegetation communities on the property are very small, a plant species list is not included in this report but can be made available as needed. A total of four (4) vegetation communities were identified on the subject property during the site assessment:

- OAGM1 – Annual Row Crops
- MEGM Graminoid Meadow (cultural)
This community represents the open meadow at the west end of the subject property. It was comprised of many weedy species such as Wild Carrot (*Daucus carota*), Curly Dock (*Rumex crispus*), Common Ragweed (*Ambrosia artemisiifolia*), and Hairy Crabgrass (*Digitaria sanguinalis*) as well as several native early colonizers such as Evening Primrose (*Oenothera biennis*), and Daisy and Common Fleabane (*Erigeron annuus* and *E. philadelphicus*).
- FODM7-2 Fresh-Moist Green Ash-Hardwood Lowland Deciduous Forest
This community occurs primarily on the adjacent Town-owned lands with a small portion present within the eastern portion of the property. It is comprised of Green Ash (*Fraxinus americana*), Basswood (*Tilia americana*), American Elm (*Ulmus americana*), Black Walnut (*Juglans nigra*) and several Butternut (Endangered). The shrub layer included Common Buckthorn and Manitoba Maple.
- THDM3 Fresh Deciduous Hedgerow Thicket
This community is dominated by Manitoba Maple (*Acer negundo*), Staghorn Sumac (*Rhus typhina*) and Trembling Aspen (*Populus tremuloides*) as well as a variety of non-native and native herbaceous species.

4.4 WILDLIFE AND WILDLIFE HABITAT

Wildlife activity was recorded on August 13 and September 27, 2024 and July 9, 2025 site visits. An assessment can be conducted based on these site visits and consideration of the habitats present and the species that are expected to occur. Below is a summary of the wildlife and wildlife habitat identified in the Study Area.



4.4.1 Birds

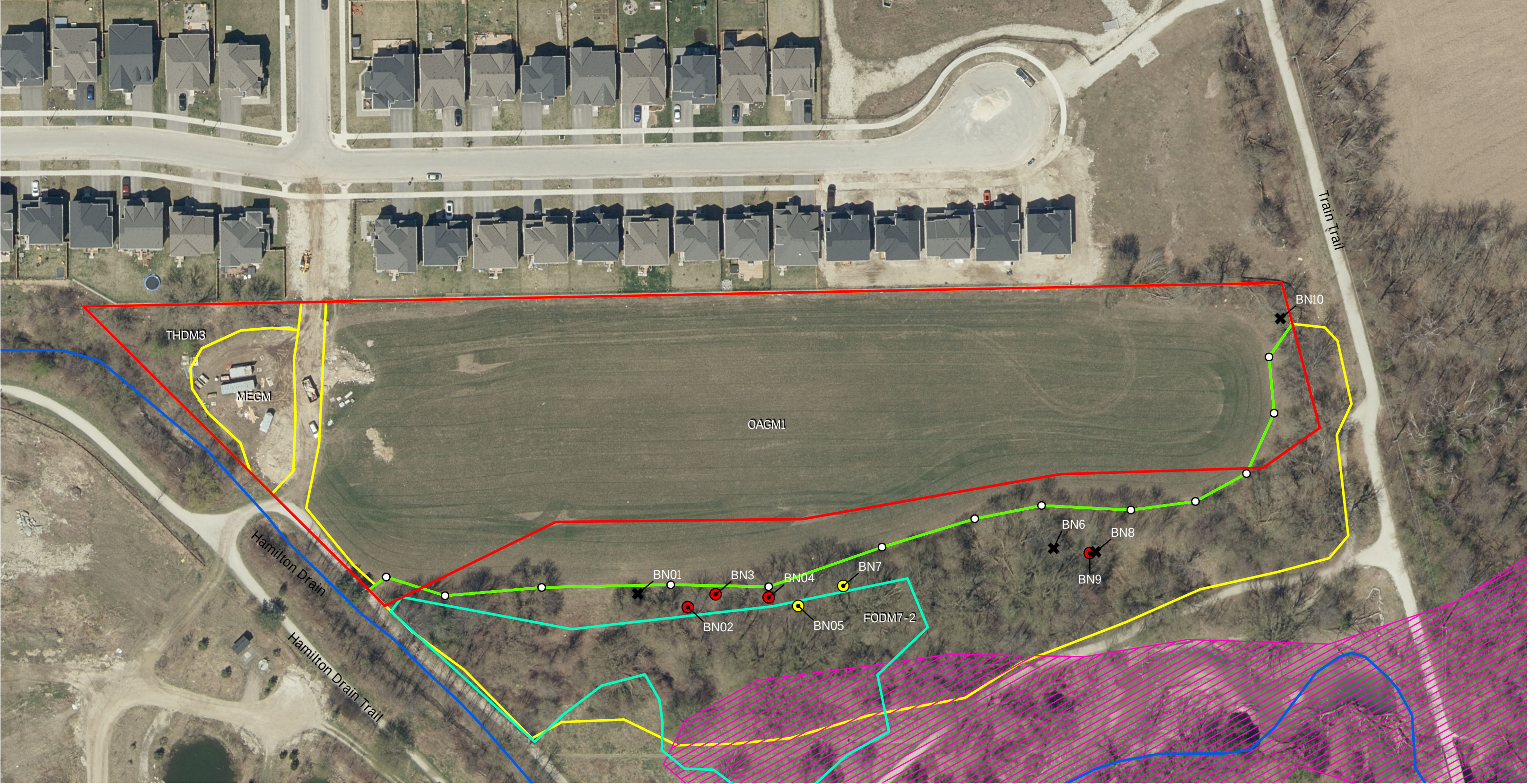
While formal dawn breeding bird surveys were not conducted as part of this study, due to the agricultural extent of the property, a number of common species were recorded during site visits including: Black-capped Chickadee (*Poecile atricapillus*), Mourning Dove (*Zenaida macroura*), Blue Jay (*Cyanocitta cristata*), American Goldfinch (*Spinus tristis*), Gray Catbird (*Dumetella carolinensis*), American Robin (*Turdus migratorius*), Northern Cardinal (*Cardinalis cardinalis*), American Crow (*Corvus brachyrhynchos*), Downy Woodpecker (*Dryobates pubescens*), Brown-headed Cowbird (*Molothrus ater*), Cedar Waxwing (*Bombycilla cedrorum*). An Eastern Wood-pewee (*Contopus virens*) was also recorded outside of the property limits, within the Town-owned lands.

4.4.2 Mammals

No incidental occurrences were recorded during the site assessment. However, typical mammals observed in urban settings are expected to utilize the habitats within the Study Area. These include Eastern Coyote (*Canis latrans*), Red Squirrel (*Sciurus vulgaris*), Raccoon (*Procyon lotor*), Skunk (*Mephitis mephitis*), and Eastern Cottontail (*Sylvilagus floridanus*).

4.4.3 Amphibians and Reptiles

Given the limited amount of wetland habitat present, few amphibian and reptile species are expected to occur within the subject property or the Study Area. Based on species range maps (Ontario Nature, 2022), American Toad (*Anaxyrus americanus*) may utilize the upland margins of the subject property. The stormwater ponds located on adjacent lands may support more diverse amphibian populations, including Spring Peeper (*Pseudacris crucifer*) and Green Frog (*Rana clamitans*). The pond may also support Midland Painted Turtle (*Chrysemys picta*) and Snapping Turtle (*Chelydra serpentina*), however, stormwater ponds do not qualify as a SWH.



Pretty River Reserve

Town of Collingwood

Property Limit

Watercourse (Ontario GeoHub)

Woodland Limit GPS Points (Birks NHC)

Woodland Limit (Birks NHC)

Category 1 Valleylands (Town of Collingwood 2004 OP)

NVCA Wetland Inclusion (SWT)

Butternut Health Assessment

Category 1 (non-retainable)

Category 2 (retainable)

Category 3 (archivable)

ELC Vegetation Communities

FODM7-2 Fresh – Moist Green Ash - Hardwood Lowland Deciduous Forest

THDM3 Dry-Fresh Deciduous Hedgerow Thicket

MEGM Graminoid Meadow

OAGM1 Annual Row Crops

Figure 2:
Existing Condition



5 NATURAL HERITAGE FEATURES AND FUNCTIONS

The following sections present a summary of the natural heritage features and their functions in the Study Area. As discussed in Section 2.4 above, the presence of Significant Valleyland mapping and fish habitat is what triggered the requirement for the EIS. In accordance with the Town of Collingwood Official Plan, the report will focus on the presence of Significant Valleyland and fish habitat as well as other natural heritage features present and whether any potential ecological impacts may arise as a result of the proposed development.

5.1 PROVINCIALY SIGNIFICANT WETLAND

No Provincially Significant Wetlands are mapped within the 120 m Study Area (Figure 1).

5.2 OTHER WETLANDS

A small wetland (0.47 ha) which has been mapped by the NVCA within the Town-owned woodland is the only wetland identified within the 120 m Study Area (Figure 1).

5.3 CANDIDATE SIGNIFICANT WOODLAND

The PPS protects Significant Woodlands south and east of the Canadian Shield. No Significant Woodlands are identified within the Study Area by the Town of Collingwood Official Plan Schedule B; however, the PPS requires the woodland feature be assessed for significance (Appendix G). Mapping of the contiguous woodland area, including portions within adjacent lands, resulted in an area of 15.1 ha (Appendix H). The Recommended Significant Woodland Evaluation Criteria and Standards in the Natural Heritage Reference Manual (NHRM; MNR, 2005) lists a set of criteria for woodlands when considering significance. The contiguous woodland feature meets the following criteria for significance (for the complete Significant Woodland Assessment see Appendix G):

- a portion of the woodland is located within a specified distance (e.g., 30 m) of a significant natural feature or fish habitat likely receiving ecological benefit from the woodland and the entire woodland meets the minimum area threshold (e.g., 0.5–20 ha, depending on circumstance);
- it is located within a defined natural heritage system; and:
- if it has a naturally occurring composition of native forest species that have declined significantly south and east of the Canadian Shield.

The woodland feature is part of the Category 1 Valleylands and is adjacent to the Pretty River which supports fish habitat and could be receiving ecological benefits from the woodland (Town of Collingwood Official Plan 2004). Therefore, based on *Proximity to Other Woodlands or Other Habitats Criteria* (NRRM, 2005), the woodland unit within the Study Area could be considered Significant in the context of the PPS. The woodland feature is identified as part of a natural heritage system (Town of Collingwood Official Plan Schedule 3 Natural Heritage System; Appendix D in this report) therefore



would fulfill the *Linkages Criteria* and be considered Significant. And because it contains Butternut trees, a species that has declined significantly south and east of the Canadian Shield and meets minimum area threshold, it would also be Significant due to *Woodland Diversity Criteria*.

As per Section 4.1.5 of the PPS, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in Significant Woodlands in Ecoregions 6E and 7E, or on adjacent lands.

5.4 SIGNIFICANT VALLEYLANDS

The PPS protects Significant Valleylands south and east of the Canadian Shield. In highly urbanized or fragmented landscapes, such as in southern Ontario, valleylands may constitute the only remaining natural areas within the planning area and are often considered essential for establishing connectivity within a natural heritage system. As per Section 4.1.5 of the PPS, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted in Significant Valleylands in Ecoregions 6E and 7E, or on adjacent lands.

The Pretty River corridor within the Study Area, not including the Hamilton Drain, is also mapped as Significant Valleylands in the Town of Collingwood Official Plan (2004) Schedule B. However, no development is proposed within the feature and a buffer of locally native vegetation is proposed to protect the FODM7-2 woodland situated adjacent to the Pretty River corridor. The buffer will extend from the northern boundary of the Town-owned woodland limits to the proposed development (Figure 3).

5.5 SIGNIFICANT WILDLIFE HABITAT

Significant Wildlife Habitat functions were assessed utilizing knowledge of the site (Appendix E). The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) were utilized in assessing candidate SWH within the Study Area. It was determined that the woodland and wetland habitat components within the Study Area may provide the following Significant Wildlife Habitat functions:

- Bat Maternity Colonies
- Terrestrial Crayfish

5.5.1 Bat Maternity Colonies

Suitable habitat for Bat Maternity Colonies may be limited on the property due to the small amount of woodland, however, suitable habitat is presumed to be available within the woodlands in the Study Area. According to the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015), candidate maternity colonies Significant Wildlife Habitat are located in mature deciduous or mixed forest stands with greater than 10 large diameter (>25cm diameter at breast height (DBH)) wildlife trees per hectare. Bat maternity colonies for Silver-haired Bat and Big Brown Bat are identified as candidate Significant Wildlife Habitat because known locations of forested bat maternity colonies are extremely



rare in Ontario. It remains extremely difficult to confirm this Significant Wildlife Habitat designation as it requires confirmation of use by more than ten Big Brown Bats or more than five Silver-haired Bats.

Although surveys were not completed within suitable habitat on adjacent lands as part of this study, it can be assumed that this function is present based on the age class and overall structure of the woodland habitat within the Study Area.

5.5.2 Terrestrial Crayfish

According to the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015), terrestrial crayfish are only found within south-western Ontario in Canada and their habitats are rare. Terrestrial crayfish construct burrows in wet meadows, mudflats, and edges of shallow marshes. Confirmation of one or more individuals of Chimney Crayfish, Digger Crayfish, Devil Crayfish or Meadow Crayfish, or their chimneys/burrows in suitable ecosites confirms this SWH type. Although terrestrial crayfish burrows were not documented by Birks NHC ecologists, the presence of the small wetland unit within adjacent lands, as mapped by the NVCA, may provide this function. Therefore, candidate SWH for terrestrial crayfish is assumed present within the Study Area.

5.6 AREAS OF NATURAL AND SCIENTIFIC INTEREST

No Areas of Natural and Scientific Interest are located in the 120 m Study Area.

5.7 FISH HABITAT

No watercourses are found on the property; however, the Pretty River and the Hamilton Drain are situated within the Study Area. The drain is located approximately 5 m west of the property and the Pretty River, at its closest point, is approximately 50 m south of the property. The river and drain are considered permanent direct fish habitat. The drain, at the crossing of the Train Trail, had a wetted width of 1 m and a depth of 30 centimetres (cm). The substrate was silt/muck with some cobble and boulders where it emptied in the Pretty River. At this location the drain had a wetted width of 60 cm and a depth of 70 cm.

No fish survey was conducted in either the drain nor the river, however, Ontario GeoHub data indicate the following species in the reach of the Pretty River immediately south of the property: Blacknose Dace (*Rhinichthys atratulus*), Northern Redbelly Dace (*Chrosomus eos*), Longnose Dace (*Rhinichthys cataractae*), Common Shiner (*Luxilus cornutus*), Creek Chub (*Semotilus atromaculatus*), Johnny Darter (*Etheostoma nigrum*), Mottled Sculpin (*Cottus bairdii*), Chinook Salmon (*Oncorhynchus tshawytscha*) and Rainbow Trout (*Oncorhynchus mykiss*).

5.8 HABITAT OF THREATENED AND ENDANGERED SPECIES

Ontario's SCA identifies Protected Species through O. Reg. 60/26, and which includes species listed as Extirpated, Endangered, and Threatened. The habitat requirements of those species listed as



Threatened and Endangered under the SCA were considered in relation to the habitat features noted within the property limits and the adjacent lands (*i.e.*, within 120m).

The Species at Risk assessment, including an analysis of the habitat requirements of all Protected Species reported to occur in the area to identify those having potential to occur within the property and adjacent lands, is provided in Appendix F. Based on habitat use, site knowledge and data available, it was determined that potential and confirmed habitat for the following species either is or may be present in the Study Area:

- Butternut
- Endangered Bat Species

5.8.1 Butternut

Butternut is a small to medium sized deciduous tree that is listed as an Endangered species in Ontario (SCA) and Canada (SARA). The Endangered status of Butternut is based on observed declines due to a fungal disease known as Butternut Canker that often results in tree mortality. This tree species can grow in a variety of treed and open habitats, individually or in small groups. Disturbed areas (*i.e.*, fencerow, road, trail) are more likely to have Butternut because the tree species is intolerant of shade and requires open sunlight, however Butternut can also occur in forested communities in a canopy opening or near the forest edge.

Ten (10) Butternut trees were found within the Study Area but only one (1) was on the property, within the eastern portion of the property (Figure 2). The remaining nine were found within the central portion of the woodland community (FODM7-2) south of the property, within Town-owned lands. Due to the proximity of the trees to the proposed development limit, a Butternut Health Assessment was undertaken on July 9, 2025, for the ten Butternut trees. Authorization for completing the BHA was obtained from the Town as these are located within Town-owned land.

Eight of the Butternut trees within the Study Area are large trees, two are smaller (11 cm DBH). A total of four trees have been assessed as Category 1 (non retainable), two as Category 2 (retainable) and four as Category 3 (archivable).



Table 1. Butternut Health Assessment Results.

Tree Number	Tree Diameter (cm)	Category	Impact by Development	Compensation Required
1	11	1	No	N/A
2	35	3	No	N/A
3	30	3	No	N/A
4	59	3	No	N/A
5	71	2	No	N/A
6	44	1	No	N/A
7	54	2	No	N/A
8	23	1	No	N/A
9	23	3	No	N/A
10	11	1	Removal	No

5.8.2 Endangered Bat Species

Eight species of bats live in Ontario, seven of which are provincially listed as Endangered, including four species of overwintering bats (Little brown Myotis, Northern Myotis, Tri-colored Bat, and Eastern Small-footed Myotis) and three species of migratory bats (Hoary Bat, Eastern Red Bat, and Silver-haired Bat). The main threats to populations of these bat species are wind energy turbines (for migratory bat species), White Nose Syndrome (a fungal disease), and loss of forested roosting habitats.

Important habitat functions for these species include hibernacula, day roosts, foraging habitat, and maternity roosts. Hibernacula for bats in Ontario are often found in caves, abandoned mine shafts, underground foundations, and karsts. These features were not documented within the property limits, and thus this habitat function is not likely associated with the property.

Day roosts are those that are used by males and non-reproductive females as they move across the landscape and can take the form of any tree with appropriate snag features such as loose bark, cracks or crevices.

Among the four non-migratory Endangered bat species, three (3) are known to form maternity roosting colonies in forest habitats: Little Brown Myotis, Northern Myotis, and Tri-colored Bat. Evidence has shown that Little Brown Myotis and Northern Myotis tend to utilize crevices and holes in tree snags and old buildings, while Tri-colored Bat roosts in tree leaves and needles (R.W. Watt & Caceres, 1999). Additional studies on the foraging habits of Ontario bat species found that proximity to water and hibernacula were also factors in the presence of *Myotis sp.* (Furlong, Deward, & Fenton, 1986). The summer activities of Eastern Small-footed Myotis are poorly understood, but it is thought to primarily roost in open, sunny rocky habitats, including cracks and crevices in cliffs and boulders, in talus slopes, beneath stones on rock barrens and in rocky outcrops containing crevices; they have also occasionally



been found in buildings. The Study Area does not contain any type of rocky habitat or cliffs/slopes in vicinity to the property or the Study Area. Therefore, this area is not considered suitable habitat for the Eastern Small-footed Myotis.

Hoary Bats and Eastern Red Bats typically roost among the foliage of trees and occasionally shrubs (COSEWIC 2023). Both species are known to roost alone, or with their pups and do not form maternity colonies with other females. Trees used as maternity roosts by Hoary Bats and Eastern Red Bats tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy. Roost use during migration appears to be more variable than during the maternity season. Non-foliage roosts are occasionally used and include shrubs, bridges, and the sides of buildings (COSEWIC 2023).

Silver-haired Bats roost in a variety of large diameter coniferous and deciduous trees. Reproductive females generally roost in small groups within tree cavities or under bark (COSEWIC 2023). Silver-haired Bats may occasionally roost in or on buildings, especially during migration when natural roosting sites may be scarce.

Limited day roosting and maternity roosting habitat is likely to be present on the property as it is primarily an agricultural field with a small strip of woodland along its eastern boundary. More extensive habitat is presumed available in the Town-owned woodland and in the forested area east of the Train Trail within and beyond the Study Area.

The Preliminary Technical Habitat Summary for Bats (MECP, 2025) was reviewed in order to appropriately characterize bat habitat and determine whether the proposed land use change activity would have an adverse impact on habitat. Based on this guidance, Maternity roosting habitat (*for Resident and Migratory Bats*) generally includes:

- as a dwelling place, the natural roost feature (*e.g.*, tree, snag, rock) or entire anthropogenic structure (*e.g.*, entire bridge, barn, or rock pile) occupied for breeding (gestation, birth) and rearing pups (hereafter, “maternity roost”)
- the portion of the area required by the species for breeding and rearing pups, up to a 1000 m radius from the maternity roost

Based on the above description of habitat, it is expected that the contiguous woodland habitat within adjacent lands may constitute potential maternity roosting habitat and adjacent natural lands providing suitable habitat (*i.e.*, forest habitat) within 1000m would receive protection under the SCA. In addition, the individual bats are protected under Section 16 of the SCA. Therefore, the potential for indirect impacts will be considered on the basis that no loss of suitable habitat of potential maternity roost habitat will occur as a result of the proposed development.



5.9 NATURAL HERITAGE FEATURES AND FUNCTIONS SUMMARY

The analysis of data obtained through the site assessment and the background information review indicate the potential for significant natural heritage features and functions within the Study Area. This impact assessment will consider potential impacts only to features and functions identified above and summarized in Table 2 on the next page.



Table 2: Natural Heritage Features and Functions Summary

Natural Heritage Feature and Function	Within the Subject Property	Within the Study Area	Evaluation Provided
Provincially Significant Wetland	None		No actions required.
Other Wetland	None	NVCA mapped wetland (0.47 ha)	Evaluation for potential impacts is provided.
Significant Woodlands	Candidate Significant Woodland (15.1 ha)		Evaluation for potential impacts is provided.
Significant Valleylands	None	Category 1 Valleylands (Town of Collingwood)	Evaluation for potential impacts provided.
Significant Wildlife Habitat	None	<u>Potential:</u> - Bat Maternity Colonies - Terrestrial Crayfish	Evaluation for potential impacts provided.
Provincial Areas of Natural and Scientific Interest	None		No actions required.
Fish Habitat	None	Hamilton Drain and Pretty River	Evaluation for potential impacts provided.
Habitat of Threatened or Endangered Species	<u>Confirmed:</u> Butternut	<u>Confirmed:</u> Butternut	Evaluation for potential impacts provided.



Table 2: Natural Heritage Features and Functions Summary

Natural Heritage Feature and Function	Within the Subject Property	Within the Study Area	Evaluation Provided
	<u>Limited Potential</u> Endangered bat species (forest roosting)	<u>Potential:</u> Endangered bat species (forest roosting)	



6 IMPACT ASSESSMENT

6.1 PROPOSED DEVELOPMENT

The proposed development plan includes a 33-unit residential townhouse development the limits of which were established via a recent OLT decision (Figure 3). Stormwater will be directed to east side of the property and then north to the existing stormwater pond situated at the east end of Kirby Avenue.

6.2 DIRECT IMPACTS

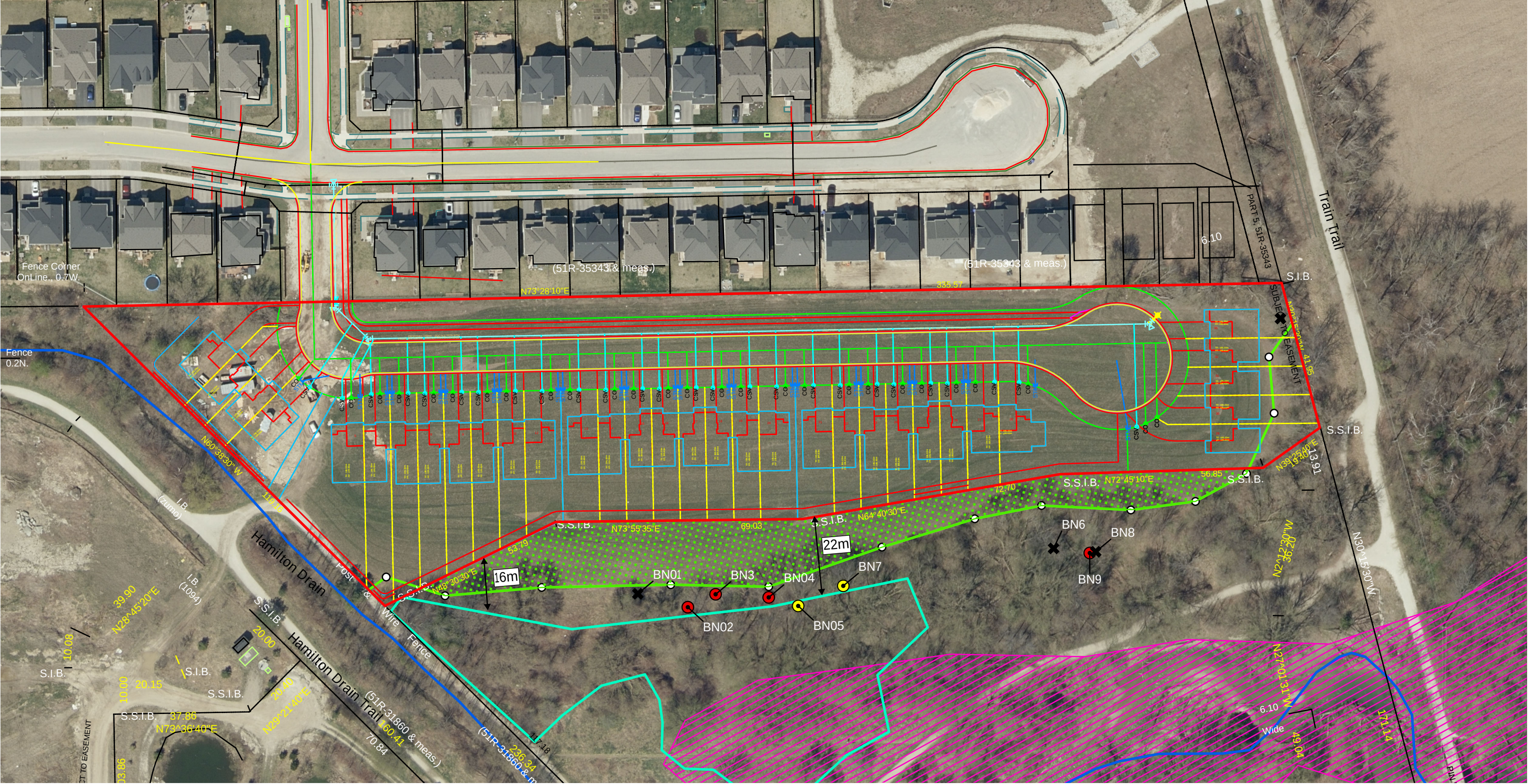
Direct impacts are those that are immediately evident as a result of a development and typically occur during the active phases of construction. The results of direct impacts are often associated with complete or partial removal of a natural feature and alteration to a feature's function to the degree that it can no longer support wildlife species or their associated habitats. Because the property is primarily an agriculture field and most habitat features within the Study Area are on adjacent lands few direct impacts are anticipated. Anticipated direct impacts are summarized and further elaborated upon below:

- Candidate Significant Woodland loss;
- Loss of Species at Risk Habitat and Incidental Harm;
- Loss of and Disturbance to Wildlife and Wildlife Habitat;
- Erosion and Sedimentation to Natural Heritage Features; and
- Changes to the Hydrology/Water Quality Entering Sensitive Features and Aquatic Habitat

In the following sections we assess the potential for negative ecological impact to the identified natural heritage features and functions.

6.2.1 Significant Woodland Loss

A small narrow parcel of woodland exists along the eastern edge of the property, extends beyond the property onto adjacent lands associated with the Train Trail and ties into the FODM7-2 community to the south along the Pretty River valley. It is within this parcel that a single Butternut tree (Category 1 – non retainable) is found on the property. The removal of this Butternut is addressed in Section 6.2.2. The contiguous woodland community that extends east and north of the property, is considered candidate significant woodland and measures 15.1 ha (Appendix H). The area to be removed measures approximately 0.04 ha or 433 m² or 0.26% of the contiguous woodland area. As discussed above, the woodland feature is considered candidate significant woodland due to the presence of the Category 1 Valleylands designation and the Pretty River (fish habitat) (*Proximity to Other Woodlands and Other Habitats*), being part of the Town of Collingwood Natural Heritage System (*Linkages*) and because it contains Butternut a declining species (*Woodland Diversity*) according to the Natural Heritage Reference



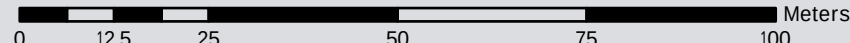
Pretty River Reserve
Town of Collingwood

Figure 3:
Proposed Site Plan

- Property Limit
- Watercourse (Ontario GeoHub)
- Woodland Limit GPS Points (Birks NHC)
- Woodland Limit (Birks NHC)
- Category 1 Valleylands (Town of Collingwood 2004 OP)
- NVCA Wetland Inclusion (SWT)
- Butternut Health Assessment
 - Category 1 (non-retainable)
 - Category 2 (retainable)
 - Category 3 (archivable)
- Proposed Re-Naturalization Area (0.3 ha)



MAP DRAWING INFORMATION:
DATA PROVIDED BY: ESRI CANADA
MAP CREATED BY: SB
MAP CHECKED BY: BB
MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:
Path: C:\Users\S. Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-016-2024 Pretty River Estates
PROJECT: 04-016-2024 STATUS: DRAFT DATE: 10/04/2026



Manual (MNR, 2010, Section 7.3.1, Table 7-2). The proposed residential development is located varying distances from the NVCA wetland including 22 m at the greatest distance. It is 45 m from the mapped Category 1 Valleylands and 50 m from the Pretty River (fish habitat). Furthermore, the woodland removals include only a portion of the parcel situated between the corn field and the Train Trail and will not create a fragmentation of the woodland unit. The small woodland area proposed for removal is therefore not expected to result in a negative ecological impact to the overall candidate Significant Woodland feature and associated functions.

Based on the above, the proposed development is not expected to result in a negative ecological impact to the candidate Significant Woodland feature; the woodland will continue to meet the three criteria for woodland significance. The small portion of woodland to be removed constitutes 0.26 % of the contiguous woodland. The removal will not fragment the woodland as it is a narrow strip that forms a portion of the woodland on the east side of the property. The location and size of the removal also does not impact the contiguous woodland connection to the Pretty River and so the ecological benefits the Pretty River may receive will continue (*Proximity to other Woodlands and Habitats Criteria*). The woodland will also continue to be connected to and part of the Town's Natural Heritage System (*Linkage Criteria*). Finally, no Category 2 or 3 Butternut trees will be removed and the development would not result in impacts to the habitat of Butternut trees. Therefore these declining forest species will continue to be present in the woodland feature (*Woodland Diversity Criteria*).

6.2.2 Loss of Species at Risk Habitat and Incidental Harm

Butternut

As discussed above, a single Category 1 (non retainable) Butternut tree located within the subject property is proposed for removal. O. Reg. 61/26 of the SCA provides an exception for Butternut trees that are *impacted by butternut canker to such an advanced degree that retaining the member would not support the protection or recovery of the Butternut species in the area where the member is located*. The assessed Category 1 trees would fall within this exception. Therefore, no registration or permit would be required for Category 1 trees. Thus, this tree can be removed 30 days following the submission of the Butternut Health Assessment. A letter confirming receipt of the Butternut Health Assessment was received from the MECP on August 6, 2025 (Appendix I).

The proposed development would not involve the removal of any Category 2 or Category 3 Butternut trees. Furthermore, the development would not impact the Critical Root Zone ('CRZ') of the species, which is the SCA definition of the habitat for vascular plant species. The proposed development, at the closest location, would be at 21m of a Butternut tree. This is well enough removed from the CRZ of all protected Butternut trees.

Therefore, the proposed development is not expected to be considered a Section 16 activity as defined in the SCA as:



- (a) any activity that results or is likely to result in,
 - (i) the killing, harming, capturing or taking of a member of a species that is listed on the Protected Species in Ontario List, or
 - (ii) damage to or destruction of the habitat of a species that is listed on the Protected Species in Ontario List

The proposed development can therefore be developed in compliance with the SCA.

Endangered Bat Species

As discussed, it is expected that the FODM7-2 community provides some roosting habitat for Endangered bat species. The portion of the FODM7-2 community with most of the potential habitat within the Study Area is off the property, within the Town-owned lands and will remain post-development. There is no expectation that the proposed residential development will result in a negative ecological impact to this habitat function.

Provided mitigation measures are applied accordingly, there is no expectation that the proposed works will result in a negative impact to Endangered bat species and their habitats. Mitigation measures are provided in Section 7 below.

6.2.3 Loss of and Disturbance to Wildlife and Wildlife Habitat

Typical wildlife species observed in urban and rural settings are expected to utilize the limited habitat within the property. Potential Significant Wildlife Habitat was assessed as potentially occurring within the Study Area, associated with the presence of candidate Significant Woodland habitat and the small wetland unit within adjacent lands. The woodland habitat within the Study Area may function as Bat Maternity Colonies and the wetland habitat may function as habitat for Terrestrial Crayfish.

Bat Maternity Colonies

As discussed, the potential for Bat Maternity Colonies is presumed to be present within the mapped significant woodland feature. The proposed development would result in the loss of approximately 0.04 ha or 433 m² or 0.26% of the contiguous woodland area. This minimal loss of potential habitat is not expected to result in a reduced availability of maternity colony habitat presumed to be within the contiguous woodland feature. Big Brown Bats and Silver-haired Bats returning to the area will continue to locate available habitat features within the Study Area. Therefore, the proposed development is not expected to result in a negative impact to Bat Maternity Colonies. Mitigation measures are provided in Section 7.

Terrestrial Crayfish

The proposed development would not result in any loss of wetland habitat that could provide this function. The small wetland unit, as mapped by the NVCA, is located entirely within the adjacent Town-owned lands. The proposed development is not expected to result in any changes to the groundwater



level within the Study Area, as no permanent dewatering would be required. Therefore, this candidate SWH function, would continue to function for Terrestrial Crayfish post-development. Mitigation measures are provided in Section 7.

6.2.4 Erosion and Sedimentation to Natural Heritage Features

Construction activities, especially operations involving the handling of earthen material, increase the availability of sediment for erosion and transport by surface drainage. In order to mitigate the adverse environmental impacts caused by the release of sediment-laden runoff into any potential receiving watercourses and woodland communities, measures for erosion and sediment control are required. Given the proximity of site alteration to fish habitat (Hamilton Drain and the Pretty River) and candidate Significant Woodland and Category 1 Significant Valleylands, it is recommended that a sediment and erosion control plan for the works be developed and implemented during construction. If properly implemented and enforced, any potential direct impacts to habitats which could result from sedimentation can be mitigated. Erosion and sediment control measures must be implemented prior to site alteration and maintained until the site is stabilized.

6.2.5 Changes to the Hydrology/Water Quality Entering Sensitive Features and Aquatic Habitat

Change of land use could result in changes to surface water run-off and water quality entering the NVCA wetland, the Hamilton Drain and the Pretty River. Lot level water quality controls such as limiting coverage with hard surfaces and avoiding inappropriate disposal of deleterious substances (oil, gas, paint, etc.) can limit the potential for contaminated water to enter natural features. Stormwater for the site will be directed to the existing Kirby Avenue stormwater pond. Specific mitigation measures are provided in Section 7.

6.3 INDIRECT IMPACTS

Indirect impacts are those that do not always manifest in the core development area but in the lands adjacent to the development. Indirect impacts have potential to result following the completion of the proposed activity. Usually this comes as a result of the project or human use of the project site following completion of the project. Indirect impacts often have a wider potential area of impact. Indirect impacts of the proposed development include:

- Anthropogenic disturbance;
- Increased potential for introduction of non-native species

6.3.1 Anthropogenic Disturbance

Anthropogenic disturbance post development can take many forms. A residential development could be expected to bring increased human presence and associated anthropogenic disturbances in the form of increased noise and light, predation by pets, waste deposition, and supplemental feeding (*i.e.*, people depositing food for deer in the winter). These impacts would be more prominent when a new development is proposed in un-developed areas but can still present important impacts long term to



neighbouring natural heritage features. The 33-unit townhouse development is a relatively small addition to the existing residential subdivisions to the north and west. Agricultural and natural lands lie to the east and south. While the proposed development will result in an increase in human residence it is not expected to result in significant intensification of indirect human impacts. Notwithstanding, in proximity to the natural areas including the Hamilton Drain, Pretty River and Town-owned woodland, mitigation measures including Fencing (Section 7.5), Signage (Section 7.6), and Lighting (Section 7.7) are recommended to reduce potential impacts and discourage encroachment into the retained natural areas.

6.3.2 Increased Potential for Introduction of Non-native Species

Site disturbance may increase the likelihood that non-native and/or invasive vegetation species will become established within the retained vegetation communities. Currently, the vegetation communities on the property and within the adjacent Town-owned woodland contain populations of non-native and invasive species such as Glossy Buckthorn (*Rhamnus frangula*), Garlic Mustard (*Alliaria petiolata*), Bladder Campion (*Silene vulgaris*), and Burdock (*Actium lappa*). Additionally, if construction equipment from other work sites is used without first being cleaned properly, additional non-native species introductions could occur. Mitigation measures are provided in Section 7 of this report intended to control the potential introduction and spread of invasive species.

7 RECOMMENDATIONS AND MITIGATION MEASURES

Mitigation refers to the avoidance or reduction of impacts associated with the proposed works through best practices. As previously discussed, potential impacts were identified which could result to the identified natural heritage features and functions associated with the Study Area. Where applied correctly, mitigation is intended to reduce the potential for impacts to ensure that the natural heritage features and functions will continue uninhibited by the proposed development. Thus, mitigation would be required to ensure that there is no negative impact, and the development can proceed in conformity with the relevant planning documents and in compliance with environmental law.

7.1 SPECIES AT RISK

7.1.1 General

Given the dynamic character of the natural environment, as well as changes to policy (*i.e.*, new species listing), consideration is recommended in the interpretation of potential presence of Threatened or Endangered species as protected under the SCA.

This report was produced based on the most up-to-date policy information however, it is not intended to act as a long-term assessment of potential Species at Risk. The SCA is recognized as being a 'proponent-driven' piece of legislation and therefore it is the responsibility of the landowner/developer to ensure compliance with the regulations made under this act. It is recommended that a review of the



assessment provided within this report be undertaken by a qualified ecologist to ensure compliance with the SCA at that time.

All current Threatened or Endangered species listed under O. Reg. 60/26 made under the SCA with an e-Law currency date of April 7, 2026, have been considered within this report.

7.1.2 Endangered Bats

The Study Area may support suitable Endangered bat habitat, in terms of potential roosting habitat. Thus, tree removals in woodlands should occur outside of the active season for bats to avoid incidental harm to the species. Therefore, tree cutting should be timed to occur outside of the bat active season (April 1 – October 31) and no cutting activity in forested areas should occur during that period. This will ensure that no bats actively roosting in trees will be accidentally killed or harmed as a result of clearing activities.

7.2 SEDIMENT AND EROSION CONTROL

It is recommended that sediment and erosion controls along the limits of the development be installed prior to all construction activities. Sediment and erosion controls should remain in place until site works have been completed, and the risk of sedimentation is no longer a concern. No development activities (*i.e.*, material and equipment storage, grading, equipment activity, *etc.*) are permitted within the adjacent natural habitats. Equipment maintenance during and post construction should be undertaken in an appropriate area. Tool and vehicle maintenance and cleaning should be completed away from the retained natural areas in a manner that does not encourage the movement of cleaning or maintenance products including cleaners, oils or fuel into the neighbouring forested areas. Fuel and chemical storage should follow appropriate legislation to ensure that it is maintained and stored in a way that will not result in accidental release or spills to the adjacent forested areas, valleylands or watercourses.

7.3 OPERATIONS

Development activities should be contained within the proposed development area. This area should be appropriately delineated prior to beginning of construction to ensure that no accidental deviation from the intended removals occurs.

Equipment maintenance during and post construction should be undertaken in an appropriate area. Tool and vehicle maintenance and cleaning should be completed away from the retained natural areas in a manner that does not encourage the movement of cleaning or maintenance products including cleaners, oils or fuel into the neighbouring forested areas. Fuel and chemical storage should follow appropriate legislation to ensure that it is maintained and stored in a way that will not result in accidental release or spills to the neighboring forested or riparian areas.

Potentially contaminated materials (*i.e.*, fill, soil, gravel, excavated materials) shall be controlled and moved by equipment during construction to prevent the introduction of invasive plants. Vehicles and



equipment must be inspected and cleaned prior to allowing access to the property to prevent the spread of additional invasive plant species into the site.

7.4 RE-NATURALIZED BUFFER

A re-naturalized buffer on the Town-owned lands between the development and the FODM7-2 community (and the NVCA wetland) adjacent to the Pretty River is recommended subject to the Town's approval and in turn will provide ecological benefits to these features. This approximately 0.3 ha area should be planted with locally native species and maintained as such.

7.5 FENCING

Permanent fencing should be installed along the boundary of the development area to prevent intrusion into the created buffer and adjacent woodlands from the residential lots. No rear yard gates shall be permitted for the lots backing onto the re-naturalized buffer. A 'no dumping' policy will be addressed via the subdivision agreement.

7.6 LIGHTING INSTALLATIONS

Light can reduce natural heritage function in retained natural areas in proximity to large light sources such as residential developments. In order to minimize the effects of light on the retained adjacent lands we recommend that features such as streetlights be shielded, downward facing, and directed towards the development area. In addition, blue light emissions should be minimized with a preference for warm light. The use of bright unshielded floodlamps and streetlights should be avoided particularly along the south side of the development.

7.7 MIGRATORY BIRDS

Construction activities involving the removal of vegetation shall be restricted from occurring during the bird breeding season. Migratory birds, nests, and eggs are protected by the *Migratory Birds Convention Act*, 1994 and the *Fish and Wildlife Conservation Act*, 1997. Environment Canada outlines dates when activities in any region have potential to impact nests at the Environment Canada Website (<https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds.html>). For this location, vegetation removal should be avoided between April 1st and August 30 of any given year.

7.8 AGENCY APPROVALS

Portions of the Study Area associated with valleylands, and riparian habitat are regulated under O. Reg. 41/24 (NVCA). Therefore, a permit from the appropriate authorities may be required prior to any site works within regulated areas.



8 CONCLUSIONS

Sunvale Homes is proposing to construct a 33-unit residential townhouse development within the subject property on Pretty River Preserve (Block 183) in the Town of Collingwood, County of Simcoe. As such this EIS report was prepared to identify the functions associated with natural heritage features present on the subject property and Study Area and determine if potential impacts to those functions could arise from the proposed activity. Potential ecological impacts were assessed using a variety of background sources and data that was collected on site.

Results presented above demonstrate that where potential natural heritage features or associated ecological functions are identified, there is minimal and mitigable potential for negative impacts. Provided the mitigation measures recommended in this report are followed, the proposed activity will not impact any identified features. Thus, the proposed development would conform with the Municipal and Regional Official Plans and the Provincial Planning Statement (2024) and comply with the *Species Conservation Act*, 2025.



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APPENDIX A

Collingwood Official Plan (2004) Schedule A Land Use Plan



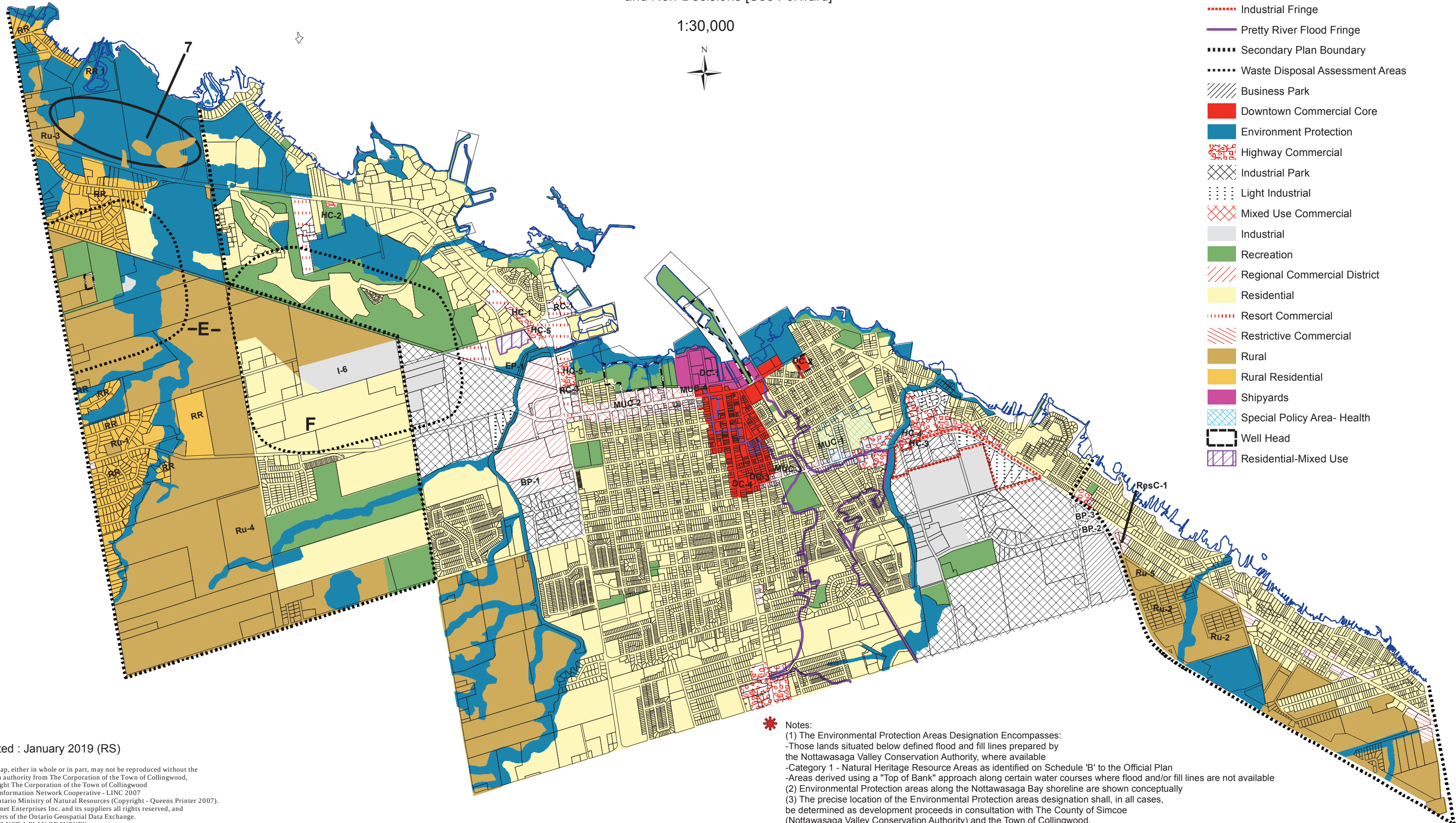


Official Plan of the Town of Collingwood

SCHEDULE 'A' - Land Use Plan

Depicting OMB Appeals [See Appellant Chart/Appeal Disposition]
and Non-Decisions [See Forward]

1:30,000



Legend

- Inactive Private Landfill
- Industrial Fringe
- Pretty River Flood Fringe
- Secondary Plan Boundary
- Waste Disposal Assessment Areas
- Business Park
- Downtown Commercial Core
- Environment Protection
- Highway Commercial
- Industrial Park
- Light Industrial
- Mixed Use Commercial
- Industrial
- Recreation
- Regional Commercial District
- Residential
- Resort Commercial
- Restrictive Commercial
- Rural
- Rural Residential
- Shipyards
- Special Policy Area- Health
- Well Head
- Residential-Mixed Use

Printed : January 2019 (RS)

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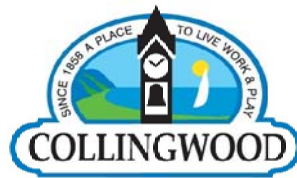
Notes:

- (1) The Environmental Protection Areas Designation Encompasses:
 - Those lands situated below defined flood and fill lines prepared by the Nottawasaga Valley Conservation Authority, where available
 - Category 1 - Natural Heritage Resource Areas as identified on Schedule 'B' to the Official Plan
 - Areas derived using a "Top of Bank" approach along certain water courses where flood and/or fill lines are not available
- (2) Environmental Protection areas along the Nottawasaga Bay shoreline are shown conceptually
- (3) The precise location of the Environmental Protection areas designation shall, in all cases, be determined as development proceeds in consultation with The County of Simcoe (Nottawasaga Valley Conservation Authority) and the Town of Collingwood.

APPENDIX B

Collingwood Official Plan (2004) Schedule B Environmental Protection





Official Plan of the Town of Collingwood

SCHEDULE 'B' - Environmental Protection-

Natural Heritage Resource Areas

Legend

--- Fish

SCHEDULE B

NATURAL_FE

 CATEGORY 1 VALLEYLANDS

 CATEGORY 1 WETLANDS

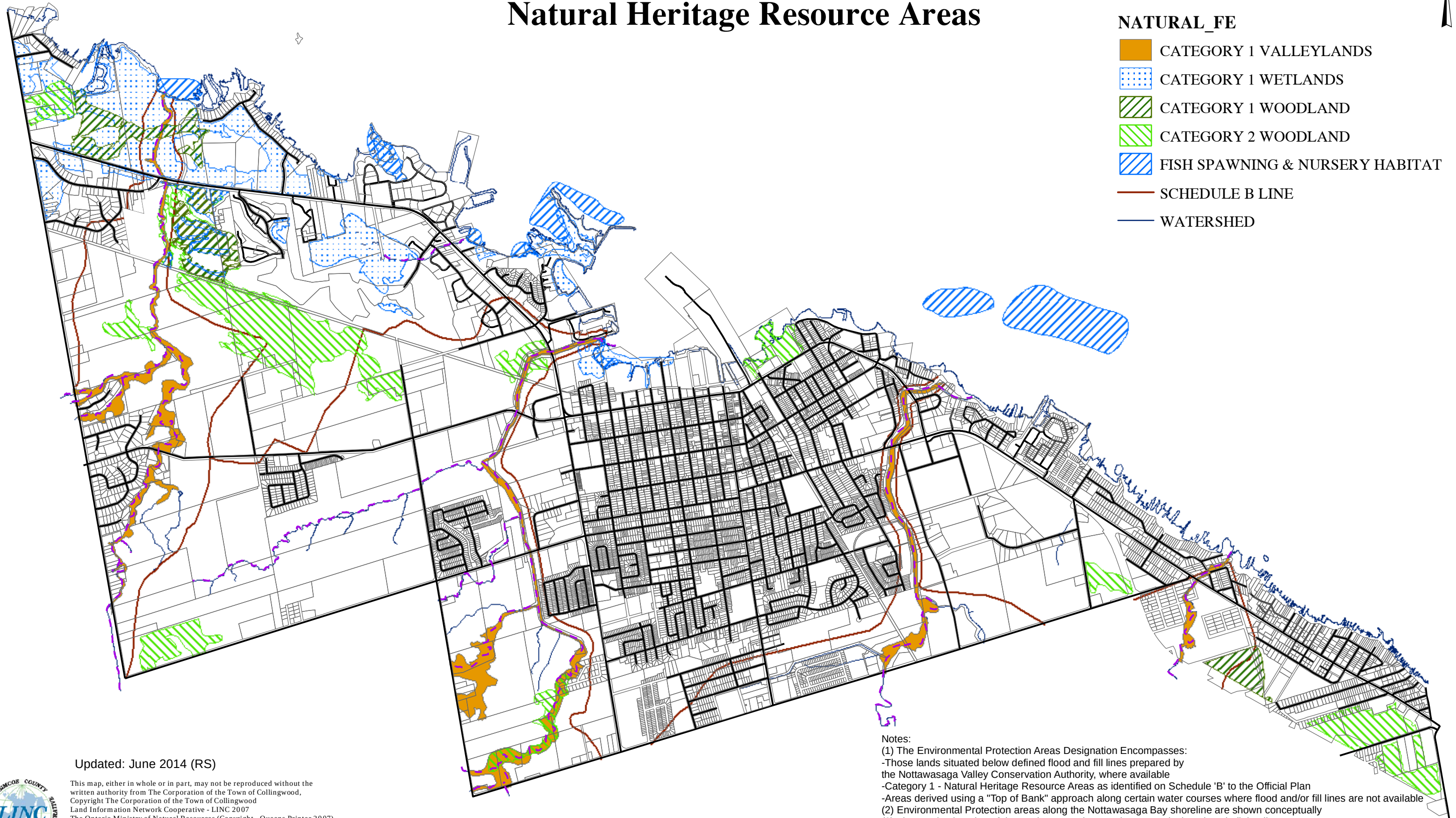
 CATEGORY 1 WOODLAND

 CATEGORY 2 WOODLAND

 FISH SPAWNING & NURSERY HABITAT

 SCHEDULE B LINE

 WATERSHED



Notes:

- (1) The Environmental Protection Areas Designation Encompasses:
 - Those lands situated below defined flood and fill lines prepared by the Nottawasaga Valley Conservation Authority, where available
 - Category 1 - Natural Heritage Resource Areas as identified on Schedule 'B' to the Official Plan
 - Areas derived using a "Top of Bank" approach along certain water courses where flood and/or fill lines are not available
- (2) Environmental Protection areas along the Nottawasaga Bay shoreline are shown conceptually
- (3) The precise location of the Environmental Protection areas designation shall, in all cases, be determined as development proceeds in consultation with The County of Simcoe (Nottawasaga Valley Conservation Authority) and the Town of Collingwood.

Updated: June 2014 (RS)

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APPENDIX C

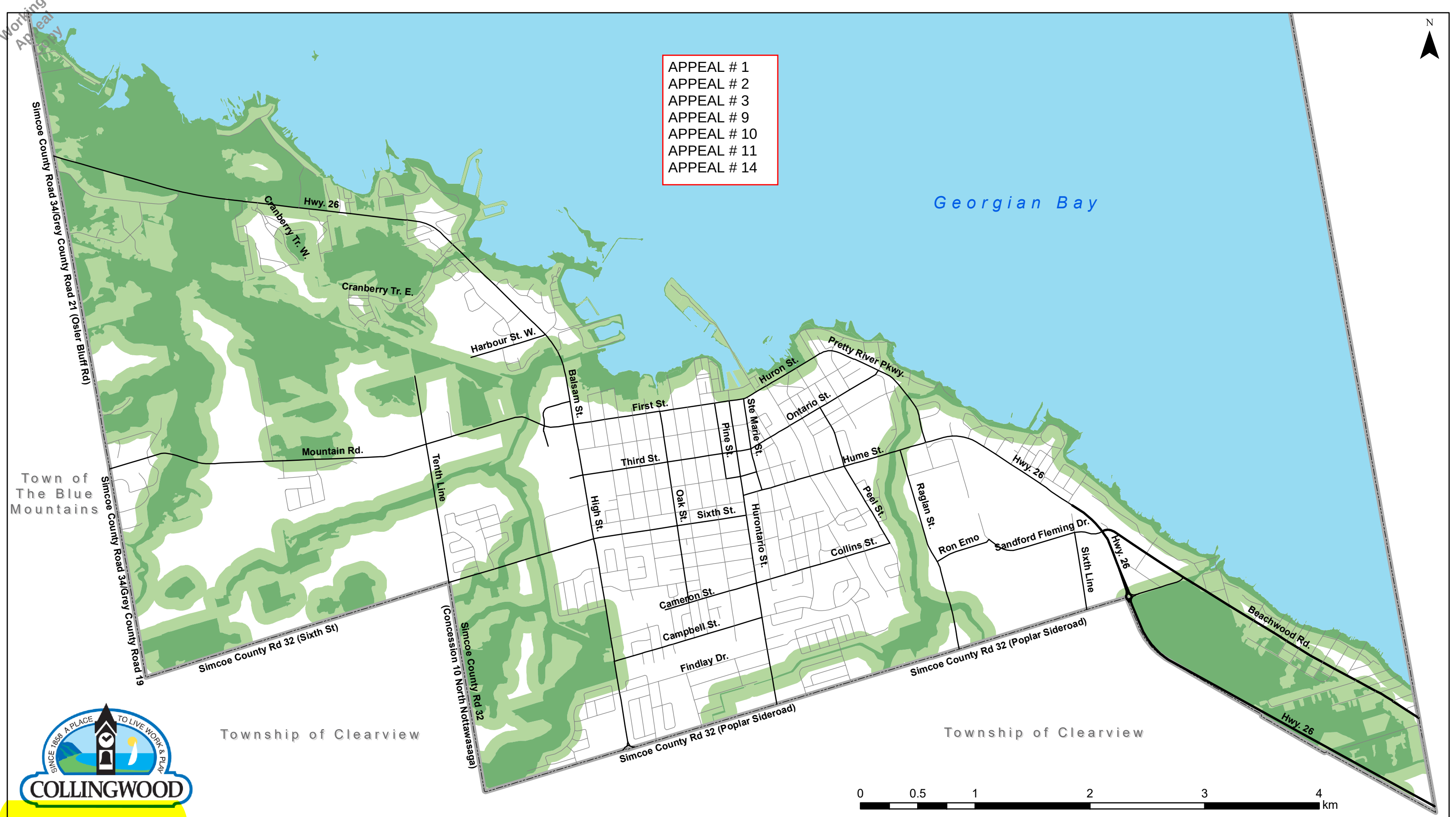
Collingwood Official Plan (2024) Schedule 2 Land Use Plan



APPENDIX D

Collingwood Official Plan (2024) Schedule 3 Natural Heritage System





**Official Plan of the
Town of Collingwood
Schedule '3'
Natural Heritage System**

-  Natural Heritage System
-  Adjacent Lands Overlay
-  Municipal Boundary

APPENDIX E

Significant Wildlife Habitat Assessment





Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E

Seasonal Concentrations of Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Stopover and Staging Areas (Terrestrial) Rationale: Habitat important to migrating waterfowl.	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	CUM1 CUT1 Plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	Fields with sheet water during Spring (mid-March to May). - Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. - Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available. <u>Information Sources</u> - Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. - Reports and other information available from Conservation Authorities - Sites documented through waterfowl planning processes - Field Naturalist Clubs - Ducks Unlimited Canada - Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Any mixed species aggregations of 100 or more individuals required. - The flooded field ecosite habitat plus a 100-300m radius area, dependant on local site conditions and adjacent land use is the significant wildlife habitat. - Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). - Significant Wildlife Habitat Mitigation Support Tool Index #7 provides development effects and mitigation measures.	The property is primarily an agriculture field and habitat in the Study Area does not meet criteria related to ELC Ecosite Codes. The meadow habitat within the property is too small to provide this function. Adjacent lands within the Study Area contain active agriculture lands and developed lands which do not provide this function. No further consideration required.
Waterfowl Stopover and Staging Areas (Aquatic) Rationale: Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	- Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. - These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water) <u>Information Sources</u> - Environment Canada. - Naturalist clubs often are aware of staging/stopover areas. - OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. - Sites documented through waterfowl planning processes - Ducks Unlimited projects - Element occurrence specification by Nature Serve: http://www.natureserve.org - Natural Heritage Information Centre (NHIC) Waterfowl Concentration Areas	Studies carried out and verified presence of: - Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. - Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH - The combined area of the ELC ecosites and a 100m radius area is the SWH - Wetland area and shorelines associated with sites identified within the Significant Wildlife Habitat Technical Guide Appendix K are significant wildlife habitat. - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). - Significant Wildlife Habitat Mitigation Support Tool Index #7 provides development effects and mitigation measures.	The property does not contain appropriate ELC codes. A small wetland unit is located within adjacent lands in the Study Area. However, this wetland unit is too small to support this function. No further consideration required.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Shorebird Migratory Stopover Area Rationale: High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird’s Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	- Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. - Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. - Sewage treatment ponds and storm water ponds do not qualify as a SWH. <u>Information Sources</u> - Western hemisphere shorebird reserve network. - Canadian Wildlife Service (CWS) Ontario Shorebird Survey. - Bird Studies Canada - Ontario Nature - Local birders and naturalist clubs - Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area	Studies confirming: - Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) - Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. - The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Mitigation Support Tool Index #8 provides development effects and mitigation measures.	The property does not contain appropriate ELC codes. The small wetland unit within adjacent lands does not meet habitat criteria to support this function. No further consideration required.
Raptor Wintering Area Rationale: Sites used by multiple species, a high number of individuals and used annually are most significant	Rough-legged Hawk Red-tailed Hawk Northern Harrier American Kestrel Snowy Owl Special Concern: Short-eared Owl Bald Eagle	<u>Hawks/Owls:</u> Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW. <u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area).	- The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. - Raptor wintering sites (hawk/owl) need to be > 20 ha with a combination of forest and upland. - Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands - Field area of the habitat is to be wind swept with limited snow depth or accumulation. - Eagle sites have open water, large trees and snags available for roosting <u>Information Sources:</u> - OMNRF Ecologist or Biologist Field Naturalist Clubs - Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area - Data from Bird Studies Canada - Results of Christmas Bird Counts Reports and other information available from Conservation Authorities.	Studies confirm the use of these habitats by: - One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species. - To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. - The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Mitigation Support Tool Index #10 and #11 provides development effects and mitigation measures.	The Study Area contains suitable forest communities however no idle/fallow or lightly grazed pastures of sufficient size are known from the Study Area. Most adjacent fields are active agriculture (<i>i.e.</i>, row crops) and not suitable for this function. Background information suggests that sufficient numbers of indicator hawk/owl/eagle species are not present.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Bat Hibernacula Rationale: Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat Tri-coloured Bat	Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)	- Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. - Active mine sites should not be considered as SWH - The locations of bat hibernacula are relatively poorly known. <u>Information Sources</u> - OMNRF for possible locations and contact for local experts - Natural Heritage Information Center (NHIC) Bat Hibernaculum Ministry of Northern - Development and Mines for location of mine shafts. - Clubs that explore caves (e.g. Sierra Club) - University Biology Departments with bat experts.	- All sites with confirmed hibernating bats are SWH. - The habitat area includes a 200m radius around the entrance of the hibernaculum, for most development types and 1000m for wind farms - Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects. - Significant Wildlife Habitat Mitigation Support Tool Index #1 provides development effects and mitigation measures.	No caves, mine shafts, karst or underground foundations have been identified within the Study Area. No further consideration required.
Bat Maternity Colonies Rationale: Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Big Brown Bat Silver-haired Bat	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM	- Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). - Maternity roosts are not found in caves and mines in Ontario. - Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees - Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3. - Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred <u>Information Sources</u> - OMNRF for possible locations and contact for local experts - University Biology Departments with bat experts.	- Maternity Colonies with confirmed use by; >10 Big Brown Bats[®] >5 Adult Female Silver-haired Bats - The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies. - Evaluation methods for maternity colonies should be conducted following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”. - Significant Wildlife Habitat Mitigation Support Tool Index #12 provides development effects and mitigation measures.	Woodland habitat present immediately adjacent to the property and elsewhere within the Study Area may provide this function to the listed bat species.
Turtle Wintering Areas Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Midland Painted Turtle Special Concern: Northern Map Turtle Snapping Turtle	Snapping and Midland Painted Turtles; ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	- For most turtles, wintering areas are in the same general area as their core habitat. Water must be deep enough not to freeze and have soft mud substrates. - Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen - Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH. <u>Information Sources</u> - EIS studies carried out by Conservation Authorities. - Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. - OMNRF Ecologist or Biologist - Field Naturalist clubs - Natural Heritage Information Center (NHIC)	- Presence of 5 over-wintering Midland Painted Turtles is significant. - One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. - The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep-water pool where the turtles are over wintering is the SWH. - Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May) - Congregation of turtles is more common where wintering areas are limited and therefore significant - Significant Wildlife Habitat Mitigation Support Tool Index #28 provides development effects and mitigation measures for turtle wintering habitat.	There is a small wetland unit within the Study Area, outside of the property limit. However, this wetland feature is not expected to contain standing water of sufficient depth to provide this function. No ponds have been identified within the Study Area.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Reptile Hibernaculum Rationale: Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Snakes: Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake Milksnake Special Concern: Eastern Ribbonsnake Lizard: Special Concern (Southern Shield population): Five-lined Skink	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3	- For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. - Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line - Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. - Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures . <u>Information Sources</u> - In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g. old dug wells). - Reports and other information available from Conservation Authorities. - Field Naturalists clubs - University herpetologists - Natural Heritage Information Center (NHIC) - OMNRF ecologist or biologist may be aware of locations of wintering skinks	Studies confirming: - Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. - Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) Note: If there are Special Concern Species present, then site is SWH Note: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH - Significant Wildlife Habitat Mitigation Support Tool Index #13 provides development effects and mitigation measures for snake hibernacula. - Presence of any active hibernaculum for skink is significant. - Significant Wildlife Habitat Mitigation Support Tool Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.	Features associated with this function appear to be common in the general landscape, however no evidence of these features which could support a congregation of snakes was identified within the Study Area. No further consideration required.
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff) Rationale: Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow populations are declining in Ontario.	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	- Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. - Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. - Does not include a licensed/permitted Mineral Aggregate Operation. <u>Information Sources</u> - Reports and other information available from Conservation Authorities. - Ontario Breeding Bird Atlas - Bird Studies Canada; <i>NatureCounts</i> http://www.birdscanada.org/birdmon/ - Field Naturalist Clubs.	Studies confirming: - Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. - A colony identified as SWH will include a 50m radius habitat area from the peripheral nests - Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Mitigation Support Tool Index #4 provides development effects and mitigation measures	Habitat in the Study Area does not meet key criteria to be considered significant – cliffs or banks were not observed within the Study Area. No further consideration required.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs) Rationale: Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	- Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. - Most nests in trees are 11 to 15 m from ground, near the top of the tree. <u>Information Sources</u> - Ontario Breeding Bird Atlas, colonial nest records. - Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). - Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony - Aerial photographs can help identify large heronries. - Reports and other information available from CAs. - MNRF District Offices. - Local naturalist clubs.	Studies confirming: - Presence of 5 or more active nests of Great Blue Heron or other listed species. - The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH - Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells - Significant Wildlife Habitat Mitigation Support Tool Index #5 provides development effects and mitigation measures.	The property is primarily an agriculture field and habitat in the Study Area does not meet criteria related to ELC Ecosite Codes. No further consideration required.
Colonially -Nesting Bird Breeding Habitat (Ground) Rationale: Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer’s Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer’s Blackbird) MAM1 – 6; MAS1 – 3; CUM CUT CUS	- Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. - Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u> - Ontario Breeding Bird Atlas , rare/colonial species records. - Canadian Wildlife Service - Reports and other information available from CAs. - Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area - MNRF District Offices. - Field Naturalist clubs.	Studies confirming: - Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. - Presence of 5 or more pairs for Brewer’s Blackbird. - Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. - The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH - Studies would be done during May/June when actively nesting. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Mitigation Support Tool Index #6 provides development effects and mitigation measures.	The property is primarily an agriculture field and habitat in the Study Area does not meet criteria related to ELC Ecosite Codes. No further consideration required.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Migratory Butterfly Stopover Areas Rationale: Butterfly stopover areas are extremely rare habitats and are biologically important for butterfly species that migrate south for the winter.	Painted Lady Red Admiral <u>Special Concern</u> Monarch	Combination of ELC Community Series; need to have present one Community Series from each land class: <u>Field:</u> CUM CUT CUS <u>Forest:</u> FOC FOD FOM CUP Anecdotally, a candidate site for butterfly stopover will have a history of butterflies being observed.	A butterfly stopover area will be a minimum of 10 ha in size with a combination of field and forest habitat present and will be located within 5 km of Lake Ontario. - The habitat is typically a combination of field and forest, and provides the butterflies with a location to rest prior to their long migration south - The habitat should not be disturbed, fields/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. - Staging areas usually provide protection from the elements and are often spits of land or areas with the shortest distance to cross the Great Lakes <u>Information Sources</u> - OMNRF (NHIC) - Agriculture Canada in Ottawa may have list of butterfly experts. - Field Naturalist Clubs - Toronto Entomologists Association - Conservation Authorities	Studies confirm: - The presence of Monarch Use Days (MUD) during fall migration (Aug/Oct). MUD is based on the number of days a site is used by Monarchs, multiplied by the number of individuals using the site. Numbers of butterflies can range from 100-500/day, significant variation can occur between years and multiple years of sampling should occur. - Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. - MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral’s is to be considered significant. - Significant Wildlife Habitat Mitigation Support Tool Index #16 provides development effects and mitigation measures.	Study Area is not located within 5km of Lake Ontario and thus this habitat function is not applicable. No further consideration required.
Landbird Migratory Stopover Areas Rationale: Sites with a high diversity of species as well as high numbers are most significant.	All migratory songbirds.: Canadian Wildlife Service Ontario website. All migrant raptor species: Ontario Ministry of Natural Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario. - If multiple woodlands are located along the shoreline those Woodlands <2km from Lake Ontario are more significant - Sites have a variety of habitats; forest, grassland and wetland complexes. - The largest sites are more significant - Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Ontario are Candidate SWH . <u>Information Sources</u> - Bird Studies Canada - Ontario Nature - Local birders and naturalist club - Ontario Important Bird Areas (IBA) Program	Studies confirm: - Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. This abundance and diversity of migrant bird species is considered above average and significant. - Studies should be completed during spring (Apr./May) and fall (Aug/Oct) migration using standardized assessment techniques. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Mitigation Support Tool Index #9 provides development effects	Study Area is not located within 5km of Lake Ontario and thus this habitat function is not applicable. No further consideration required.



Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Yarding Areas Rationale: Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in “yards” to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.	White-tailed Deer	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	- Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. - The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. - OMNRF determines deer yards following methods outlined in “Selected Wildlife and Habitat Features: Inventory Manual” - Woodlots with high densities of deer due to artificial feeding are not significant.	No Studies Required: - Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. - Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO). - Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. - If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined within this Schedule. - Significant Wildlife Habitat Mitigation Support Tool Index #2 provides development effects and mitigation measures.	No portions of the Study Area are mapped as Stratum II by the MNR (source: Ontario GeoHub). No further consideration required.
Deer Winter Congregation Areas Rationale: Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.	White-tailed Deer	All Forested Ecosites with these ELC Community Series; FOC FOM FOD SWC SWM SWD Conifer plantations much smaller than 50 ha may also be used.	- Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNRF studies or assessment. - Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands . - If deer are constrained by snow depth refer to the Deer Yarding Area habitat. - Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha . - Woodlots with high densities of deer due to artificial feeding are not significant. <u>Information Sources</u> - MNRF District Offices - LIO/NRVIS	Studies confirm: - Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF - Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF - Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey. - If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined below. - Significant Wildlife Habitat Mitigation Support Tool Index #2 provides development effects and mitigation measures.	Study Area is located in the northern part of Ecoregion 6E in an area that receives >20cm of snow accumulation per year. Thus, this criterion is not applicable. No further consideration required.



Rare Vegetation Communities

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Cliffs and Talus Slopes Rationale: Cliffs and Talus Slopes are extremely rare habitats in Ontario.	Any ELC Ecosite within Community Series: TAO TAS TAT CLO CLS CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris	Most cliff and talus slopes occur along the Niagara Escarpment. <u>Information Sources</u> - The Niagara Escarpment Commission has detailed information on location of these habitats. - OMNRF District - Natural Heritage Information Center (NHIC) has location information available on their website - Field Naturalist clubs - Conservation Authorities	- Confirm any ELC Vegetation Type for Cliffs or Talus Slopes - Significant Wildlife Habitat Mitigation Support Tool Index #21 provides development effects and mitigation measures.	Habitat in the Study Area does not meet defining criteria to be considered significant. No further consideration required.
Sand Barren Rationale: Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry	ELC Ecosites: SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always ≤ 60%	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered, but less than 60%.	A sand barren area >0.5ha in size. <u>Information Sources</u> - OMNRF Districts. - Natural Heritage Information Center (NHIC) has location information available on their website. - Field Naturalist clubs - Conservation Authorities	- Confirm any ELC Vegetation Type for Sand Barrens - Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.) - Significant Wildlife Habitat Mitigation Support Tool Index #20 provides development effects and mitigation measures.	Habitat in the Study Area does not meet defining criteria to be considered significant. No further consideration required.
Alvar Rationale: Alvars are extremely rare habitats in Ecosregion 6E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 6E are small and highly localized just north of the Palaeozoic-Precambrian contact.	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 Five Alvar Species: 1) <i>Carex crawei</i> 2) <i>Panicum philadelphicum</i> 3) <i>Eleocharis compressa</i> 4) <i>Scutellaria parvula</i> 5) <i>Trichostema brachiatum</i> These indicator species are very specific to Alvars within Ecoregion 6E	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover	An Alvar site > 0.5 ha in size. <u>Information Sources</u> - Alvars of Ontario (2000), Federation of Ontario Naturalists. - Ontario Nature – Conserving Great Lakes Alvars. - Natural Heritage Information Center (NHIC) has location information available on their website - OMNRF Districts - Field Naturalist clubs. - Conservation Authorities.	- Field studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. - Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). - The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses - Significant Wildlife Habitat Mitigation Support Tool Index #17 provides development effects and mitigation measures.	Habitat in the Study Area does not meet defining criteria to be considered significant. No further consideration required.
Old Growth Forest	Forest Community Series: FOD	Old Growth forests are characterized by heavy mortality	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.	Field Studies will determine:	Forest communities in Study Area do not meet defining criteria related to Woodland areas.



Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Rationale: Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	FOC FOM SWD SWC SWM	or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	<u>Information Sources</u> • OMNRF Forest Resource Inventory mapping • OMNRF Districts. • Field Naturalist clubs • Conservation Authorities • Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations. • Municipal forestry departments	• If dominant trees species of the are >140 years old, then the area containing these trees is SWH • The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present) • The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest area containing the old growth characteristics • Significant Wildlife Habitat Mitigation Support Tool Index #23 provides development effects and mitigation measures.	Woodland habitat is not considered to be old growth forest. No further consideration required.
Savannah Rationale: Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs. • Conservation Authorities.	Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used. • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • Significant Wildlife Habitat Mitigation Support Tool Index #18 provides development effects and mitigation measures.	Habitat in the Study Area does not meet defining criteria to be considered significant. No further consideration required.
Tallgrass Prairie Rationale: Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs. • Conservation Authorities.	Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used • Area of the ELC Ecosite is the SWH. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). • Significant Wildlife Habitat Mitigation Support Tool Index #19 provides development effects and mitigation measures.	Habitat in the Study Area does not meet defining criteria to be considered significant. No further consideration required.
Other Rare Vegetation Communities Rationale: Plant communities that often contain rare species which depend on the habitat for survival.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the Significant Wildlife Habitat Technical Guide. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in appendix M The OMNRF/NHIC will have up to date listing for rare vegetation communities. <u>Information Sources</u> • Natural Heritage Information Center (NHIC) has location information available on their website • OMNRF Districts • Field Naturalist clubs. • Conservation Authorities.	Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of Significant Wildlife Habitat Technical Guide. • Area of the ELC Vegetation Type polygon is the SWH. • Significant Wildlife Habitat Mitigation Support Tool Index #37 provides development effects and mitigation measures.	No rare vegetation communities have been documented within the Study Area. No further consideration required.



Specialized Habitat for Wildlife

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Nesting Area Rationale: Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Mallard	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1 SWT2 SWD1 SWD2 SWD3 SWD4 Note: includes adjacency to Provincially Significant Wetlands	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. - Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. - Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> - Ducks Unlimited staff may know the locations of particularly productive nesting sites. - OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. - Reports and other information available from Conservation Authorities.	Studies confirmed: - Presence of 3 or more nesting pairs for listed species excluding Mallards, or; - Presence of 10 or more nesting pairs for listed species including Mallards. - Any active nesting site of an American Black Duck is considered significant. - Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest. - Significant Wildlife Habitat Technical Guide Index #25 provides development effects and mitigation measures.	The property is primarily an agriculture field and habitat in Study Area does not meet criteria related to ELC Ecosite Codes. A small wetland unit is located within adjacent lands. However, the upland habitat adjacent to the wetland is not at least 120m wide. Therefore the Study Area is not expected to provide this function. No further consideration required.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat Rationale: Nest sites are fairly uncommon in Eco-region 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Osprey Special Concern Bald Eagle	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. - Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree’s canopy. - Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). <u>Information Sources</u> - Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. - MNRF values information (LIO/NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat. - Nature Counts, Ontario Nest Records Scheme data. - OMNRF Districts. - Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented - Reports and other information available from Conservation Authorities. - Field Naturalists clubs	Studies confirm the use of these nests by: - One or more active Osprey or Bald Eagle nests in an area. - Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. - For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH , maintaining undisturbed shorelines with large trees within this area is important . - For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. , Area of the habitat from 400-800m is dependent on-site lines from the nest to the development and inclusion of perching and foraging habitat - To be significant a site must be used annually. When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. - Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid March to mid August. - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects”	A limited amount of forest habitat exists within the Study Area in proximity to the Pretty River however no large stick nests were observed during the field investigations.



Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
				Significant Wildlife Habitat Technical Guide Index #26 provides development effects and mitigation measures	
Woodland Raptor Nesting Habitat Rationale: Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	Northern Goshawk Cooper’s Hawk Sharp-shinned Hawk Red-shouldered Hawk Barred Owl Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. Interior habitat determined with a 200m buffer - Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. - In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <u>Information Sources</u> - OMNRF Districts. - Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. - Check data from Bird Studies Canada. - Reports and other information available from Conservation Authorities.	Studies confirm: - Presence of 1 or more active nests from species list is considered significant. - Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH (the 28ha habitat area would be applied where optimal habitat is irregularly shaped around the nest) - Barred Owl – A 200m radius around the nest is the SWH. - Broad-winged Hawk and Coopers Hawk– A 100m radius around the nest is the SWH. - Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. - Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area. - Significant Wildlife Habitat Technical Guide Index #27 provides development effects and mitigation measures.	The property is primarily a corn field and woodland areas within the Study Area are primarily deciduous. None of the woodlands within the Study Area are >30 ha with > 10 ha of interior habitat.
Turtle Nesting Areas Rationale: These habitats are rare and when identified will often be the only breeding site for local populations of turtles.	Midland Painted Turtle <u>Special Concern Species</u> Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	- Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. - For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. - Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <u>Information Sources</u> - Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). - Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. - Natural Heritage Information Center (NHIC) - Field Naturalist clubs	Studies confirm: - Presence of 5 or more nesting Midland Painted Turtles - One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. - The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH. - Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. - Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. Significant Wildlife Habitat Technical Guide Index #28 provides development effects and mitigation measures for turtle nesting habitat.	Suitable ELC ecosites were not documented within the Study Area. The agricultural field is regularly disturbed and not appropriate for this function. No further consideration required.



Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Seeps and Springs Rationale: Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. - Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species <u>Information Sources</u> - Topographical Map. - Thermography. - Hydrological surveys conducted by Conservation Authorities and Ministry of the Environment, Conservation and Parks. - Field Naturalists clubs and landowners. - Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped.	Field Studies confirm: - Presence of a site with 2 or more seeps/springs should be considered SWH. - The area of an ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. - Significant Wildlife Habitat Technical Guide Index #30 provides development effects and mitigation measures	Groundwater seepage was not observed within the Study Area, and the Study Area is not within a headwater system. No further consideration required.
Amphibian Breeding Habitat (Woodland). Rationale: These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians	- Presence of a wetland, pond or woodland pool (including vernal pools) >500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. - Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat <u>Information Sources</u> - Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records - Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. - OMNRF District. - OMNRF wetland evaluations - Field Naturalist clubs - Canadian Wildlife Service - Amphibian Road Call Survey - Ontario Vernal Pool Association: http://www.ontariovernalpools.org	Studies confirm; - Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. - A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. - The habitat is the wetland area plus a 230m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. - Significant Wildlife Habitat Technical Guide Index #14 provides development effects and mitigation measures.	The habitat within the Study Area does not meet the criteria. No woodland pools or natural ponds exit on the property or in the immediately adjacent woodland.
Amphibian Breeding Habitat (Wetlands) Rationale: Wetlands supporting breeding for these amphibian species are extremely important	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species	- Wetlands>500m2 (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. - Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. - Bullfrogs require permanent water bodies with abundant emergent vegetation.	Studies confirm: Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3. or; Wetland with confirmed breeding Bullfrogs are significant.	The small wetland unit located within the Study Area, outside of the property limits, is not expected to contain standing water to support this function.



Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
and fairly rare within Central Ontario landscapes.	Green Frog Mink Frog Bullfrog	(e.g. Bull Frog) may be adjacent to woodlands.	<u>Information Sources</u> - Ontario Herpetofaunal Summary Atlas (or other similar atlases) - Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. - OMNRF Districts and wetland evaluations - Reports and other information available from Conservation Authorities.	- The ELC ecosite wetland area and the shoreline are the SWH. - A combination of observational study and call count surveys will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. - If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined below. - Significant Wildlife Habitat Technical Guide Index #15 provides development effects and mitigation measures.	
Woodland Area-Sensitive Bird Breeding Habitat <u>Rationale:</u> Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest song birds.	Yellow-bellied Sapsucker Red-breasted Nuthatch Veery Blue-headed Vireo Northern Parula Black-throated Green Warbler Blackburnian Warbler Black-throated Blue Warbler Ovenbird Scarlet Tanager Winter Wren Special Concern: Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha, - Interior forest habitat is at least 200 m from forest edge habitat. <u>Information Sources</u> - Local bird clubs. - Canadian Wildlife Service (CWS) for the location of forest bird monitoring. - Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species - Reports and other information available from Conservation Authorities.	Studies confirm: - Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. - Note: any site with breeding Canada Warblers is to be considered SWH. - Conduct field investigations in spring and early summer when birds are singing and defending their territories. - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Technical Guide Index #34 provides development effects and mitigation measures.	The wooded area within the Study Area does not contain mature forest conditions. Further no large woodlots >30 ha are present within the Study Area and none are sufficiently large to provide interior forest habitat.



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

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Marsh Breeding Bird Habitat Rationale: Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied-billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan Special Concern: Black Tern Yellow Rail	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites.	- Nesting occurs in wetlands. - All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. - For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. <u>Information Sources</u> - OMNRF District and wetland evaluations. - Field Naturalist clubs - Natural Heritage Information Center (NHIC) Records. - Reports and other information available from Conservation Authorities. - Ontario Breeding Bird Atlas.	Studies confirm: - Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. - Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. - Area of the ELC ecosite is the SWH. - Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Technical Guide Index #35 provides development effects and mitigation measures	The property is primarily an agriculture field and habitat in the Study Area does not meet criteria related to ELC Ecosite Codes. A small wetland unit is present within the Study Area, adjacent to the property. However, this wetland unit is not expected to contain standing water to support this function. No further consideration required.
Open Country Bird Breeding Habitat Sources Defining Criteria Rationale: This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Upland Sandpiper Vesper Sparrow Northern Harrier Savannah Sparrow Special Concern Short-eared Owl Grasshopper Sparrow	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha - Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). - Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. - The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. <u>Information Sources</u> - Agricultural land classification maps, Ministry of Agriculture. - Local bird clubs. - Ontario Breeding Bird Atlas - Reports and other information available from Conservation Authorities.	Field Studies confirm: - Presence of nesting or breeding of 2 or more of the listed species. - A field with 1 or more breeding Short-eared Owls or Grasshopper Sparrow is to be considered SWH. - The area of SWH is the contiguous ELC ecosite field areas. - Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Technical Guide Index #32 provides development effects and mitigation measures	The property is primarily an agriculture field and no large grassland areas (>30 ha) are known within the Study Area.
Shrub/Early Successional Bird Breeding Habitat Rationale: This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	<u>Indicator Spp:</u> Brown Thrasher Clay-coloured Sparrow <u>Common Spp.</u> Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher Special Concern: Golden-winged Warbler	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species	Large field areas succeeding to shrub and thicket habitats>10ha in size. - Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years). - Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. - Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. <u>Information Sources</u> - Agricultural land classification maps, Ministry of Agriculture. - Local bird clubs. - Ontario Breeding Bird Atlas - Reports and other information available from Conservation Authorities.	Field Studies confirm: - Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. - A habitat with breeding Golden-winged Warbler is to be considered as Significant Wildlife Habitat. - The area of the SWH is the contiguous ELC ecosite field/thicket area. - Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories - Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” - Significant Wildlife Habitat Technical Guide Index #33 provides development effects and mitigation measures.	The property is primarily an agriculture field. Other agricultural fields within the study area are also actively farmed. Some smaller thicket areas (<10 ha) are found within the Study Area but none meet criteria for significance.



Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Terrestrial Crayfish Rationale: Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (<i>Fallicambarus fodiens</i>) Devil Crayfish or Meadow Crayfish; (<i>Cambarus Diogenes</i>)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1 with inclusions of above meadow marsh or swamp ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. - Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. - Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed. <u>Information Sources</u> - Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for the WWF and CNF March 1998	Studies Confirm: - Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites - Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. - Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult - Significant Wildlife Habitat Technical Guide Index #36 provides development effects and mitigation measures.	The property is primarily an agriculture field and habitat in the Study Area does not meet criteria related to ELC Ecosite Codes. A small wetland unit is present within the Study Area, adjacent to the property. Confirmation of this function could not be confirmed and thus will be considered for potential presence within the Study Area in the EIS report.
Special Concern and Rare Wildlife Species Rationale: These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites <u>Information Sources</u> - Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. - NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca - Ontario Breeding Bird Atlas - Expert advice should be sought as many of the rare spp. have little information available about their requirements.	Studies Confirm: - Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. - The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. - Significant Wildlife Habitat Technical Guide Index #37 provides development effects and mitigation measures.	Butternut is a plant species with a conservation status of S2 (Imperiled). Butternut is also a Protected Species under the SCA and thus is being considered appropriately under that legislation. No provincially rare animal species have been identified within the Study Area. No further consideration required.



Animal Movement Corridors

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Movement Corridors Rationale: Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	Corridors may be found in all ecosites associated with water. Corridors will be determined based on identifying the significant breeding habitat for these species	Movement corridors between breeding habitat and summer habitat. - Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH (Amphibian Breeding Habitat –Wetland) <u>Information Sources</u> - MNRF District Office. - Natural Heritage Information Center (NHIC). - Reports and other information available from Conservation Authorities. - Field Naturalist Clubs.	- Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. - Corridors should consist of native vegetation, with several layers of vegetation. - Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant - Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20mcxlix . - Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat. - Significant Wildlife Habitat Technical Guide Index #40 provides development effects and mitigation measures	The Study Area is unlikely to meet the criteria for Amphibian breeding habitat (sufficient numbers of species or individuals), and so the riparian habitat within the Study Area is not expected to provide this function.
Deer Movement Corridors Rationale: Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH - A deer wintering habitat identified by the OMNRF as will have corridors that the deer use during fall migration and spring dispersion. - Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <u>Information Sources</u> - MNRF District Office. - Natural Heritage Information Center (NHIC). - Reports and other information available from Conservation Authorities. - Field Naturalist Clubs.	- Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. - Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. - Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. - Shorter corridors are more significant than longer corridors. - Significant Wildlife Habitat Technical Guide Index #39 provides development effects and mitigation measures	GeoHub does not indicate that any deer wintering habitat is present within the Study Area.



Exceptions for Ecoregion 6E

EcoDistrict	Wildlife Habitat and Species	Candidate			Confirmed SWH	Assessment
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria	
6E-14 <u>Rationale:</u> The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast-producing tree species is important for bears.	Mast Producing Areas Black Bear	All Forested habitat represented by ELC Community Series: FOM FOD	- Black bears require forested habitat that provides cover, winter hibernation sites, and mast-producing tree species. - Forested habitats need to be large enough to provide cover and protection for black bears	Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech), <u>Information Sources</u> Important forest habitat for black bears may be identified by OMNRF.	All woodlands > 30ha with a 50%composition of these ELC Vegetation Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5 Significant Wildlife Habitat Technical Guide Index #3 provides development effects and mitigation measures.	Not applicable, Study Area is not located on the Bruce Peninsula.
6E- 17 <u>Rationale:</u> Sharp-tailed grouse only occur on Manitoulin Island in Eco-region 6E, Leks are an important habitat to maintain their population	Lek Sharp-tailed Grouse	CUM CUS CUT	- The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography. - Leks are typically a grassy field/meadow >15ha with adjacent shrublands and >30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated.	Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland. - Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) - Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting <u>Information Sources</u> - OMNRF district office - Bird watching clubs - Local landowners - Ontario Breeding Bird Atlas	Studies confirming lek habitat are to be completed from late March to June. - Any site confirmed with sharp-tailed grouse courtship activities is considered significant - The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat - Significant Wildlife Habitat Technical Guide Index #32 provides development effects and mitigation measures	Not applicable, Study Area is not located on Manitoulin Island.

APPENDIX F

Species at Risk Assessment





Appendix F. Species at Risk Assessment (Threatened and Endangered Species protected under Section 16 of the SCA, 2025 and Schedule 1 of the SARA).

Common Name	Scientific Name	Provincial Designation (SCA) ¹	Federal Designation (SARA) ¹	Habitat Requirements	Background Records	Habitat Affinities Present Within Study Area	Potential for Impacts to Species
Reptiles							
Massasauga rattlesnake (Great Lakes – St. Lawrence pop.)	<i>Sistrurus catenatus</i>	Threatened	Threatened	Populations in Great Lakes/St. Lawrence are concentrated in the upper Bruce Peninsula and east side of Georgian Bay. Massasaugas require semi-open habitat to provide both cover and opportunities for thermoregulation. In Georgian Bay, Massasaugas use a mosaic of bedrock barrens, conifer swamps, beaver meadows, fens, bogs, and shoreline habitats.	No known records of the species in the Study Area. Most recent record in the Ontario Reptile and Amphibian Atlas square 17NK62 for this species is 1994. No iNaturalist records exist for this species in this area.	Forested habitats within the property are not representative of key habitat for this species. Mature forest conditions lack the availability of open conditions required for thermoregulation. This species is largely restricted to Eastern Georgian Bay.	Species not expected to occur within the Study Area. No further consideration required.
Birds							
Eastern Meadowlark	<i>Sturnella magna</i>	Not Listed	Threatened	Primarily tall native grasslands, such as pastures, savannahs and hayfields. Non-native pastures, hayfields, weedy meadows. Large tracts of open area are preferred over smaller fragments.	NHIC square 17NK6325 identifies this species as occurring within the general area. Ontario Breeding Bird Atlas square 17TNK62 indicates confirmed breeding in the general area.	No open meadow habitats exist within the property and the study area. Species was not observed site visits.	No suitably sized grassland habitats exist in the Study Area. Agricultural fields are mainly row crops and no pasture is present. No suitable habitat is present in the Study Area. No further consideration required.
Bobolink	<i>Dolichonyx oryzivorus</i>	Not Listed	Threatened	Common in areas of agricultural grasslands such as hay and pasture farm fields but are also found in other open areas.	NHIC squares 17NK6325 and 17NK6326 identify this species as occurring within the general area. Ontario Breeding Bird Atlas square 17TNK62 indicates probable breeding in the general area.	No open meadow habitats exist within the property and the study area. Species was not observed during site visits.	No suitably sized grassland habitats exist in the Study Area. Agricultural fields are mainly row crops and no pasture is present. No suitable habitat is present in the Study Area. No further consideration required.
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	Not Listed	Endangered	Considered generalist omnivores, feeding on a variety of plants, insects and even small vertebrates, and showing flexibility in habitat selection. However, they are cavity-nesters. As such, they rely on an abundance of dead older wood to excavate nests.	Ontario Breeding Bird Atlas square 17TNK62 indicates probable breeding evidence for this species. No other known background sources.	Although mature forest conditions are present within the Study Area, none are present on the property and an abundance of dead ‘snag’ trees were not evident within the Study Area.	No large areas consisting of dead snags are known from the Study Area, therefore the species is unlikely to be found in the Study Area. No further consideration required.
Mammals							
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Not listed	Roosts in rock outcrops, buildings, under bridges, in caves, mines or hollow trees. Hibernates in caves and abandoned mines.	No known background sources.	No suitable habitat features present within the Study Area.	Most buildings within the Study Area are relatively new homes, less likely to provide habitat for the species. No mines or caves are present. No further consideration required.
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Endangered	Roosts in buildings, barns, or trees with suitable characteristics (<i>i.e.</i> , loose bark, cavities). Forages over water, along waterways, forest edges.	No known background sources.	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the	Consideration for potential impacts required.



Appendix F. Species at Risk Assessment (Threatened and Endangered Species protected under Section 16 of the SCA, 2025 and Schedule 1 of the SARA).

Common Name	Scientific Name	Provincial Designation (SCA) ¹	Federal Designation (SARA) ¹	Habitat Requirements	Background Records	Habitat Affinities Present Within Study Area	Potential for Impacts to Species
				Hibernates in caves or abandoned mines.		Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	
Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Endangered	Roosts in trees with suitable characteristics <i>i.e.</i> , loose bark, cavities). Forages in forest edges and forest gaps. Hibernates in caves or abandoned mines.	No known background sources.	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	Consideration for potential impacts to habitat required.
Tri-colored Bat	<i>Perimyotis subflavus</i>	Endangered	Endangered	Roosts in structures, barns, or trees with suitable characteristics. Forages over water, along waterways and in the forest. Hibernates individually in caves or abandoned mines.	Less common. Found in southern Ontario, with a scattered distribution. No known background sources.	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	Consideration for potential impacts to habitat required.
Hoary Bat	<i>Lasiurus cinereus</i>	Endangered	Not Listed	Similarly to Eastern Red Bat, Hoary Bat using mostly treed habitats (coniferous or deciduous) for roosting or foraging, with a particularly strong dependence on trees as roosting sites (COSWEIC 2024). Trees used as maternity roosts by Hoary Bats and Eastern Red Bats tend to be large diameter and tall, reaching or exceeding the height of the surrounding canopy (COSEWIC 2024).	Hoary Bat is a wide-ranging species across North America and is considered among the widest ranging native terrestrial mammals in the Western Hemisphere (COSSARO 2024).	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	Consideration for potential impacts required.
Eastern Red Bat	<i>Lasiurus borealis</i>	Endangered	Not Listed	Summer habitat is characterized as foraging, drinking and roost sites which are primarily deciduous and coniferous forests of any age class. Roosting occurs among the foliage of trees and occasionally shrubs but tend to be on large diameter and tall trees reaching or exceeding the height of the surrounding canopy (COSSARO 2024). Eastern Red Bats avoid conifer species when suitable deciduous species are present (COSEWIC 2024).	Eastern Red Bat’s range spans most of Ontario and appears commonly on fatality data from wind energy facilities.	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	Consideration for potential impacts required.



Appendix F. Species at Risk Assessment (Threatened and Endangered Species protected under Section 16 of the SCA, 2025 and Schedule 1 of the SARA).

Common Name	Scientific Name	Provincial Designation (SCA) ¹	Federal Designation (SARA) ¹	Habitat Requirements	Background Records	Habitat Affinities Present Within Study Area	Potential for Impacts to Species
				Eastern Red Bat overwinter in the southern United States.			
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Endangered	Not Listed	Roosting by Silver-haired Bats occurs primarily under bark and in the cavities of trees, making them reliant on habitats where large, decaying trees are available. Silver-haired Bats roost in a variety of large diameter coniferous and deciduous trees. Unlike lasiurines, where use of anthropogenic structures is rare, Silver-haired Bats may occasionally roost in or on buildings, especially during migration when natural roosting sites may be scarce.	The Silver-haired bat is widely distributed in North America, found from the northern boreal to the state of Tamaulipas, Mexico (COSSARO 2024).	Possible – the species might use the agriculture field on the property and the storm ponds and watercourse in the Study Area for foraging. The forested habitat within the Study Area is presumed to provide suitable roosting habitat.	Consideration for potential impacts to habitat required.
Plants							
Butternut	<i>Juglans cinerea</i>	Endangered	Endangered	In Ontario, Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It is also found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade and often grows in sunny openings and near forest edges.	Generally known occurrences in Simcoe County.	Yes - Species documented during vegetation surveys. One Butternut was found in the northeastern corner of the property and nine (9) were found in the deciduous forest community south of the property in the Study Area.	Consideration for potential impacts required.

¹Designation Status

Provincial Designation – Protected Species in Ontario List, Ontario Regulation 60/26 under *Species Conservation Act*, 2025

Federal Designation – List of Wildlife Species at Risk, Schedule 1 under *Species at Risk Act*, 2002

APPENDIX G

Significant Woodland Assessment





Appendix G. Significant Woodland Assessment

CRITERIA	STANDARDS	ASSESSMENT
Woodland Size Criteria		
- Size refers to the aerial (spatial) extent of the woodland (irrespective of ownership) - Woodland areas are considered to be generally continuous even if intersected by narrow gaps 20m or less in width between crown edges. - Size value is related to the scarcity of woodland in the landscape derived on a municipal basis with consideration of the differences in woodland coverage among physical sub-units (e.g., watersheds, biophysical regions). - Size criteria should also account for differences in landscape-level physiography (e.g., moraines, clay planes) and community vegetation types.	Where woodlands cover: - Is less than about 5% of land cover, woodlands 2ha in size or larger should be considered significant - Is about 5-15% of land cover, woodlands 4ha in size or larger should be considered significant - Is about 15-30% of land cover, woodlands 20ha in size or larger should be considered significant. Is about 30-60% of land cover, woodlands 50ha in size or larger should be considered significant - Occupies more than 60% of the land, a minimum size is not suggested, and other factors should be considered	- The Blue Mountains subwatershed contains 4 main creek/river systems with a combined drainage of approximately 222 square kilometers: Silver Creek, Black Ash Creek, Pretty River and Batteaux River that discharge to Nottawasaga Bay/Georgian Bay along the Town of Collingwood shoreline. - Approximately 39.1% of the Blue Mountains subwatershed area consists of natural vegetative cover (source: Blue Mountains Subwatershed Health Check 2023). - Therefore, a woodland within this watershed must be 50 ha in size or larger to be considered significant. - Woodland habitat on and immediately adjacent to the property (mostly south) is bound by the Pretty River valley, the agricultural field making up the property and the Town trail system. The contiguous woodland feature that includes this area is approximately 15.1 ha in size and therefore does not meet the Woodland Size Criteria. Therefore, based on <u>Woodland Size Criteria</u>, the contiguous woodland unit within and adjacent to the study area does not appear to be considered Significant in the context of the PPS.
Ecological Function Criteria		
Woodland Interior		
- Interior Habitat more than 100m from the edge (as measured from the limits of a continuous woodland as defined above) is important for some species. - For purposes of this criterion, a maintained public road would create an edge even if the opening was not wider than 20m and did not create a separate woodland.	Woodlands should be considered significant if they have: - Any interior habitat where woodlands cover less than about 15% of the land cover 2 ha or more of interior habitat where woodlands cover about 15-30% of the land cover 8 ha or more of interior habitat where woodlands cover about 30-60% of the land cover 20 ha or more of interior habitat where woodlands cover about 60% of the land cover	- The Blue Mountain Subwatershed Health Check (2023) indicates the area has 30.9% forest cover requiring 8 ha or more of interior habitat. - The contiguous woodland area does not contain interior habitat. Therefore, the contiguous woodland unit within and adjacent to the study area does not appear to be significant by the <u>Woodland Interior Criteria</u> in the context of the PPS.



Appendix G. Significant Woodland Assessment

CRITERIA	STANDARDS	ASSESSMENT
Proximity to Other Woodlands or Other Habitats		
- Woodlands that overlap, abut or are close to other significant natural heritage features or areas could be considered more valuable or significant than those that are not. - Patches close to each other are of greater mutual benefit and value to wildlife.	Woodlands should be considered significant if: A portion of the woodland is located within a specific distance (e.g., 30m) of a significant natural feature or fish habitat likely receiving ecological benefit from the woodland and the entire woodland meets the minimum area threshold (e.g., 0.5-20ha, depending on circumstance)	- The woodland community on and adjacent to the property is directly adjacent to the <u>Pretty River (direct permanent fish habitat)</u> which could be receiving ecological benefit from those woodland units. - The woodland community meets the overall size criterion to be considered significant. Therefore, based on <u>Proximity to Other Woodlands or Other Habitats</u> Criteria, the woodland community within the Study Area would be considered Significant in the context of the PPS.
Linkages		
- Linkages are important connections providing for movement between habitats. - Woodlands that are located between other significant features or areas can be considered to perform an important linkage function as “stepping stones” for movement between habitats.	Woodlands should be considered significant if they: Are located within a defined natural heritage system or provide a connecting link between two other significant features, each of which is within a specified distance (e.g., 120m) and meets minimum area thresholds (e.g., 1-20ha, depending on circumstance)	- Woodland on and adjacent to the property is bordered by agricultural land, the Pretty River valley and the Town trail system which affects the linkage function of the feature to other significant features. - The Woodland habitat is documented in the Town of Collingwood Official Plan as “Natural Heritage System.” Therefore, based on <u>Linkages</u> Criteria, the woodland within the study area would be considered Significant in the context of the PPS.
Water Protection		
- Source water protection is important. - Natural hydrological processes should be maintained.	Woodlands should be considered significant if they: Are located within a sensitive or threatened watershed or a specific distance (e.g., 50m or top of valley bank if greater) or a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, watercourse or fish habitat and meet minimum area thresholds (e.g., 0.5-10ha, depending on circumstance)	- According to the Simcoe Source Water Protection Mapping, the property is not mapped as being within a Significant Groundwater Recharge Area. Therefore, based on <u>Water Protection</u> Criteria, woodland within the study area would be not considered Significant in the context of the PPS.

Appendix G. Significant Woodland Assessment

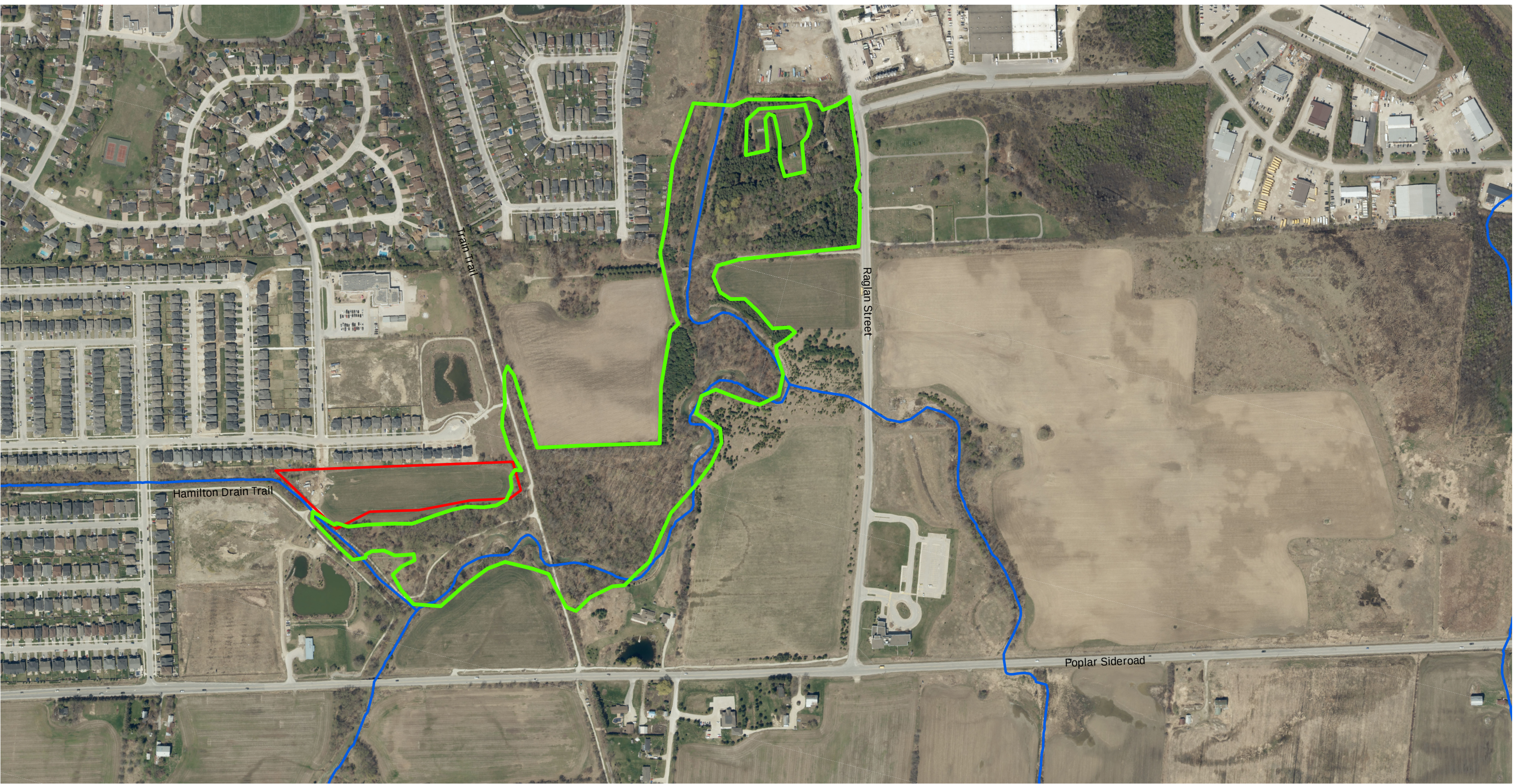
CRITERIA	STANDARDS	ASSESSMENT
Woodland Diversity		
- Certain woodland species have had major reductions in representation on the landscape and may need special consideration. - More native diversity is more valuable than less diversity.	Woodlands should be considered significant if they have: - A naturally occurring composition of native forest species that have declined significantly south and east of the Canadian Shield and meet minimum area thresholds (e.g., 1-20ha, depending on circumstance) - A high native diversity through a combination of composition and terrain (e.g., a woodland extending from a hilltop to a valley bottom or to opposite slopes) and meet minimum area thresholds (e.g., 2-20ha, depending on circumstance)	- The FODM7-2 community on and adjacent to the property supports Butternut trees, a species that has declined due to disease. - The mapped woodland units are not characteristic of a varying terrain. Therefore, the mapped woodland units within the study area are considered Significant by the <u>Woodland Diversity</u> criteria in the context of the PPS.
Uncommon Characteristics Criteria		
- Woodlands that are uncommon in terms of species composition, cover type, age or structure should be protected. - Older woodlands (i.e., woodlands greater than 100 years old) are particularly valuable for several reasons, including their contributions to genetic, species and ecosystem diversity.	Woodlands should be considered significant if they have: - A unique species composition or the site is represented by less than 5% overall in woodland area and meets minimum area thresholds (e.g., 0.5ha, depending on circumstance) - A vegetation community with a provincial ranking of S1, S2 or S3 (as ranked by the NHIC and meet minimum area thresholds (e.g., 0.5ha, depending on circumstance) - Habitat (e.g., with 10 individual stems or 100m² of leaf coverage) of a rare, uncommon or restricted woodland plant species and meet minimum area thresholds (e.g., 0.5ha, depending on circumstance): vascular plant species for which the NHIC’s Southern Ontario Coefficient of Conservatism is 8, 9 or 10; tree species of restricted distribution such as sassafras or rock elm; species existing	- The ELC vegetation communities within the study area are not uncommon in terms of species composition, cover types (i.e., composition of ELC vegetation types), structure or age. Therefore, the mapped woodland units within the study area are not considered Significant by the <u>Uncommon Characteristics</u> Criteria in the context of the PPS.

Appendix G. Significant Woodland Assessment

CRITERIA	STANDARDS	ASSESSMENT
	only in a limited number of sites within the planning area Characteristics of older woodlands or woodlands with larger tree size structure in native species meet minimum area thresholds (e.g., 1-10ha, depending on circumstance): older woodlands could be defined as having 10 or more trees/ha greater than 100 years old; larger tree size structure could be defined as 10 or more trees/ha at least 50cm in diameter, or a basal area of 8 or more m²/ha in trees that are at least 40cm in diameter	
Economic and Social Function Values Criteria		
Woodlands that have high economic or social values through particular site characteristics or deliberate management should be protected.	Woodlands should be considered significant if they have: - High productivity in terms of economically viable products together with continuous native natural attributes and meet minimum area thresholds (e.g., 2-20ha, depending on circumstance) - A high value in special services such as air-quality improvement or recreation at a sustainable level that is compatible with long-term retention and meet minimum area thresholds (e.g., 0.2-10ha, depending on circumstance) - Important identified appreciation, education, cultural or historical value and meet minimum area thresholds (e.g., 0.2-10ha, depending on circumstance)	- The contiguous woodland feature does not generate economically viable forest products. - No formal recreational use of property or adjacent land, however extensive recreational trails do exist surrounding the property and are frequently used by area residents. - The woodland feature is not identified as providing education, cultural or historical value. <i>Therefore, the woodland unit within the study area does not appear Significant by the <u>Economic and Social Function Values Criteria</u> in the context of the PPS.</i>

APPENDIX H
Significant Woodland Mapping





Pretty River Reserve
Town of Collingwood



Property Limit



Watercourse (Ontario GeoHub)



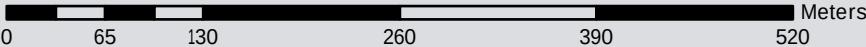
Candidate Significant Woodland (Birks NHC; 15.1 ha)

Candidate Significant Woodland
Mapping



MAP DRAWING INFORMATION:
DATA PROVIDED BY: ESRI CANADA

MAP CREATED BY: SB
MAP CHECKED BY: BB
MAP PROJECTION: NAD 1983 UTM ZONE 17N



FILE LOCATION:
Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-016-2024 Pretty River Estates

PROJECT: 04-016-2024 STATUS: DRAFT DATE: 05/11/2025

APPENDIX I

MECP Butternut Health Assessment Confirmation



From: [Species at Risk \(MECP\)](#)
To: [Stephanie Brady](#)
Subject: RE: Butternut Health Assessment - Part of Lot 40 Concession 8, Collingwood
Date: August 6, 2025 11:39:00 AM
Attachments: [image004.png](#)
[image006.png](#)

Hi Stephanie,

Thank you for submitting your Butternut Health Assessment (BHA) to the Species at Risk Branch of the Ministry of the Environment, Conservation and Parks (MECP).

Please use this email as receipt of your approved submission, dated August 5, 2025.

If you intend to rely on [Part 5 of Ontario Regulation 830/21](#) for the tree(s) identified in the BHA, then you are eligible to do so 30-days following the date that the BHA was submitted to the Species at Risk Branch. Please note that eligible activities must comply with all relevant conditions of *Part 5 of Ontario Regulation 830/21*, including registering with the [Natural Resources Registry](#) and adhering to requirements associated with impacts to Category 2 and Category 3 Butternut trees, in order to be exempt from the prohibitions of the *Endangered Species Act, 2007*.

Any technical questions related to registering the activity through the Natural Resources Registry can be sent to speciesatriskregistry@ontario.ca.

Thank you,

Species at Risk Branch | Direction des espèces en péril
Ministry of the Environment, Conservation and Parks | Ministère de l'Environnement, de la Protection de la nature et des Parcs
SAROntario@ontario.ca



From: Stephanie Brady <sbrady@birksnhc.ca>
Sent: Tuesday, August 5, 2025 10:41 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: Butternut Health Assessment - Part of Lot 40 Concession 8, Collingwood

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

To whom this may concern:

Please find attached the Butternut Health Assessment (BHA) completed for the property identified as Part of Lot 40 Concession 8 in the Town of Collingwood.

Don't hesitate to contact me should you have any questions.

Thank you,



Stephanie Brady, HBES/Ecologist
Birks Natural Heritage Consultants, Inc.
c. (705)305-9102
w. www.birksnhc.ca
a. 23 Herrell Avenue, Barrie L4N 6T5

