Prepared By:

BIRKS
NATURAL HERITAGE CONSULTANTS

Environmental Impact Study
444503 Concession 8
Municipality of West Grey, County of Grey

Project No. 04-005-2022

March 2025

23 HERRELL AVENUE, BARRIE ON L4N 6T5
WWW.BIRKSNHC.CA

23 Herrell Ave
Barrie, Ontario
L4N 6T5

March 25, 2025

Tom Steen
444503 Concession 8
Municipality of West Grey, Ontario
N0C 1H0

Sent via email: 72steen@gmail.com

RE: BIRKS NHC 04-005-2022
Environmental Impact Study
444503 Concession 8, Municipality of West Grey

Dear Mr. Steen,

Thank you for retaining Birks Natural Heritage Consultants Inc. ('Birks NHC') to prepare an Environmental Impact Study ('EIS') for the property identified as 444503 Concession 8 in the Municipality of West Grey, County of Grey. It is our understanding that you are proposing severance in the southern portion of the property, with two new lots facing Concession 8, and that an EIS is required to assess potential impacts to natural heritage features known to occur on the property (*i.e.* woodlands, wetlands).

The purpose of this EIS is to identify and characterize the pertinent natural heritage features and functions present within and adjacent to the proposed severance area and to determine if potential ecological impacts to those features and functions could arise from the proposed development /severance.

Birks NHC completed field surveys in 2024 to review the existing conditions of the property with a focus on natural heritage features and functions present within and adjacent to the proposed severance. Through completion of the field surveys, review of background information, and

applicable policies and regulations, we have determined that the property and adjacent lands contain natural heritage features and functions relating to the presence of woodland and wetland habitat.

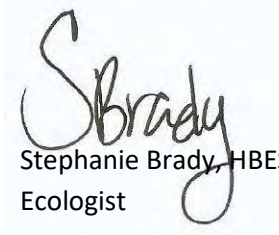
This report provides an assessment of potential impacts associated with the proposed severance and provides recommendations to mitigate for impact, where required. At this time, potential impacts to the identified features and functions are not expected as a result of the proposed severance, provided that the listed recommendations and mitigation measures in this report are applied accordingly.

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

Yours truly,
Birks Natural Heritage Consultants, Inc.

Heather Marcks, B.Sc., M.F.C.
Ecologist

Reviewed by:



Stephanie Brady, HBES
Ecologist

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1 INTRODUCTION

1.1 PURPOSE

Birks Natural Heritage Consultants, Inc. ('Birks NHC') was retained by Tom Steen (property owner) to undertake an Environmental Impact Study ('EIS') for the property identified as 444503 Concession 8, in the Municipality of West Grey. It is our understanding that the property owner intends to sever the southern portion of the property and that an EIS is required due to the presence of natural features associated with the property and adjacent lands, including woodlands and wetlands.

The purpose of the EIS is to identify and characterize natural heritage features and functions associated with the property, and in particular within the severance area, and evaluate potential impacts to those features and functions that may be associated with potential future development of the severed lots. Where potential impacts are identified, recommendations or mitigation measures are proposed to ensure that the appropriate natural heritage policies and legislation can be followed.

This report has been prepared to address the natural heritage requirements of the Provincial Planning Statement (2024), *Endangered Species Act* (2007), *Conservation Authorities Act* (1990), and County of Grey Official Plan (2024).

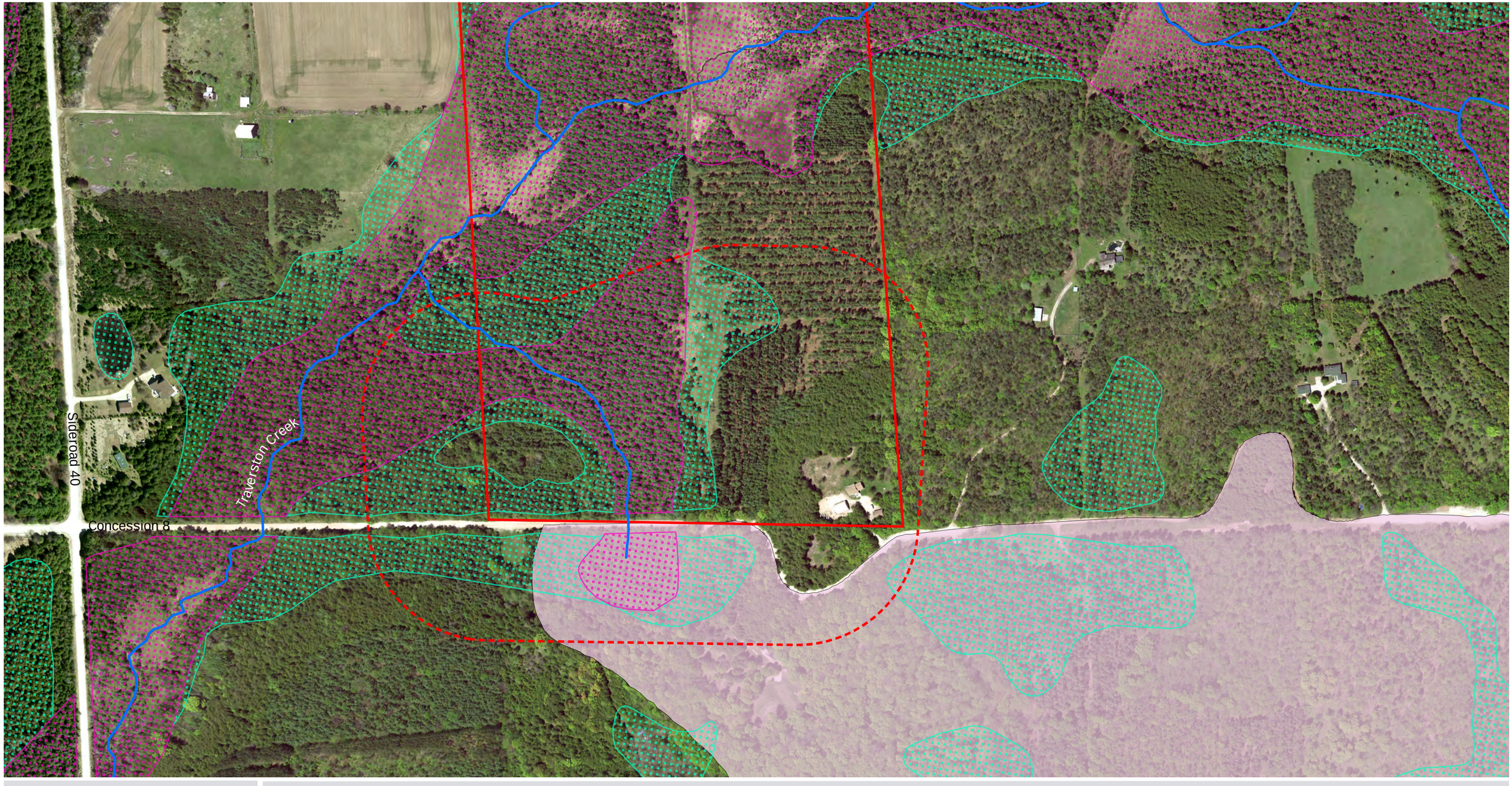
1.2 SITE DESCRIPTION

The property is within a rural area of the Municipality of West Grey and is accessed by Concession Road 8 at the southern property limit. The property measures approximately 40 hectares ('ha') in size. The property contains natural and managed woodlands, wetlands, and a single residential dwelling area at south-east corner. Pathways are present in the eastern portion of the property, primarily in association with the plantation managed forest lands and an accessway traverses through the centre of the property. Traverston Creek crosses the property in a general east-west direction and within the Traverston Creek Provincially Significant Wetland ('PSW').

Adjacent lands comprise rural single residential dwelling properties with natural woodlands, further components of the Traverston Creek PSW, and open agricultural lands.

1.3 STUDY AREA

For the purpose of this EIS, the Study Area is focused within an area approximately 120 metres ('m') surrounding the proposed 'development' (*i.e.*, severance), as illustrated in Figure 1. The Ministry of Natural Resources ('MNR') recommends a distance of 120 m for consideration of development and/or site alteration impacts to adjacent features, as outlined within the Natural Heritage Reference Manual (MNR, 2010).



444503 Concession 8

Municipality of West Grey

Property Limit
120m Study Area
Watercourse (GeoHub)
Traverston Creek Life Science ANSI

Wetland (GeoHub)
Un-evaluated
Provincially Significant

Figure 1:
Study Area

MAP DRAWING INFORMATION:
DATA PROVIDED BY: Grey County and GeoHub

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

N
W
E
S

0 45 90 180 270 360 Meters

FILE LOCATION:

Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-005-2022 Concession 8 West Grey

PROJECT: 04-005-2022 STATUS: DRAFT DATE: 13/03/2025

2 ENVIRONMENTAL POLICY FRAMEWORK

The following summarizes the planning policies and regulations related to natural heritage that apply to the proposed development.

2.1 PROVINCIAL PLANNING STATEMENT (2024)

Ontario's *Planning Act* requires that planning decisions shall be consistent with the Provincial Policy Statement ('PPS'). The PPS provides overall policy directions on matters of provincial interest related to land use planning and development in Ontario. The 2024 PPS is a streamlined province-wide land use planning policy framework that replaces both the Provincial Policy Statement, 2020 and A Place to Grow: Growth Plan for the Greater Golden Horseshoe, 2019.

Section 4.1 of the PPS (2024) specifies policy related to protection of natural heritage features and functions.

According to Section 4.1.4 of the PPS, development and site alteration shall not be permitted in the following features:

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 ('SWH');
e) Significant areas of natural and scientific interest ('ANSI's); and,
f) Coastal wetlands in Ecoregions 5E, 6E, and 7E that are not subject to policy 4.1.4(b).

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 Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) were used within this report to identify candidate features and functions not currently identified by the province and/or municipality.

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 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 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.

2.2 Ontario Endangered Species Act (2007)

Ontario's *Endangered Species Act,* 2007 ('ESA') provides regulatory protection to Endangered and Threatened species as listed under Ontario Regulation ('O. Reg.') 230/08, prohibiting harassment, harm and/or killing of individuals (Section 9) and destruction of their habitats (Section 10). Habitat is defined within the ESA as the following:

(a) with respect to a species of animal, plant or other organism for which a regulation made under clause 56 (1) (a) is in force, the area prescribed by that regulation as the habitat of the species, or

(b) with respect to any other species of animal, plant or other organism, an area on which the species depends, directly or indirectly, to carry on its life processes, including life processes such as reproduction, rearing, hibernation, migration or feeding.

As noted above, only species listed as Endangered and Threatened receive species and habitat protection through the ESA. Species designated as Special Concern may receive habitat protection under the SWH provisions of the PPS.

2.3 Conservation Authorities Act (1990)

Ontario's Conservation Authorities fall under the jurisdiction of the *Conservation Authorities Act*, which was most recently amended in April 2024. 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.

A portion of the property is mapped as being in a screening area by Saugeen Valley Conservation Authority under O. Reg. 41/24 *Prohibited Activities, Exemptions and Permits* (Appendix A).

2.4 County of Grey Official Plan (2024)

County of Grey Official Plan (Consolidated August 2024) Schedule A, Map 3 (Land Use) illustrates the property as Rural with Provincially Significant Wetlands and Hazard Lands on the property. Appendix B of the County Official Plan further maps the following natural heritage constraints on the property: Streams; Other Wetlands; and, Significant Woodlands (Appendix B). The property is outside of the County of Grey's Natural Heritage System (Appendix B).

Hazard Lands include floodplains, steep or erosion prone slopes, unstable or organic soils, and lands along the Georgian Bay shoreline. New development shall be directed away from Hazard Lands; buildings and structures are generally not permitted (Section 7.2). The County generally encourages development to be setback from wetlands and streams by at least 30 m (Section 7.3 and Section 7.9).

No development or site alteration may occur within Significant Woodlands or their adjacent lands unless it has been demonstrated through an EIS that there will be no negative impacts on the natural features of their ecological functions (Section 7.4). In the case of plantations that have begun to succeed into more natural woodlots an EIS may not be required for new development or site alteration, subject to the advice of a qualified professional (Section 7.4(6)). Where a significant amount of time has passed, and such plantation woodlands may now hold further natural value, an EIS may still be required.

2.5 Municipality of West Grey Zoning

The Official Plan of the Municipality of West Grey applies to the settlement area of Durham and Neustadt. Lands located outside of these two primary settlement areas are not subject to the local Official plan, and therefore the subject property is covered directly by the County of Grey Official Plan (discussed above).

All lands within the boundaries of West Grey are zoned according to the Municipality of Grey Zoning By-law. The Study Area is zoned A2 (Rural), NE (Natural Environment), and NE2 (Natural Environment 2) by the Municipality of West Grey (Appendix C). Natural Environment includes lands that are essentially non-developable due to inherent environmental hazards such as wetlands, poor drainage, organic soils, susceptibility to flooding and/or erosion, steep slopes, and other conditions that could pose a risk to life or property damage.

Permitted uses in the A2 Rural Zone include: agricultural uses and agricultural related uses, agricultural structures; bed and breakfast establishment; equestrian centre facilities; forestry; group home; home occupation; home industry; a detached dwelling; wayside pits and quarries; recreational trails operated by a public agency; recreational trailer; accessory apartment dwelling unit within a detached dwelling; accessory uses (By-law 37-2006, Section 9.1).

Within any NE Zone, no land shall be used and no building or new structure shall be constructed, altered or used; maintenance of existing driveways within the natural environment shall be permitted (By-law 37-2006, Section 31). Any cutting or destruction of trees shall be subject to the requirements of the

County of Grey Tree Cutting By-law. Conservation uses (forest management, fish and wildlife management, flood and erosion control) are permitted in NE and NE2 zones, as well as agricultural uses, excluding new buildings and structures.

No building or structure, including private sewage treatment system and any associated tile weeping bed, shall be constructed closer than an approved setback from the limit of a NE Zone. Lands zoned NE shall not be used in the calculation of the lot area but may be used for lot frontage, required yard, and lot coverage as is required for the development occurring on that portion of a lot not zoned NE (By-law 37-2006, Section 6.20.2).

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. For the purpose of this EIS, the following sources were considered:

- Aerial images (Google, ESRI);
- Ontario GeoHub (MNR/GEO, accessed 2024)
- Natural Heritage Information Centre ('NHIC'; MNR, accessed December 2024)
- Ontario Reptile and Amphibian Atlas (Ontario Nature, accessed December 2024);
- Species at Risk in Ontario list (MECP, accessed 2025); and
- Aquatic Species at Risk Map (DFO, accessed 2025).

3.2 Field Surveys

Natural heritage features and functions within the Study Area were characterized through completion of field surveys. The following sections outline the methods used for each of the surveys, including specific provincial protocols utilized. Incidental wildlife, plant and habitat observations were considered during all surveys. Searches were also conducted to document the presence or absence of suitable habitat, based on habitat requirements of Threatened or Endangered species with habitat ranges overlapping the property. The dates when all surveys were completed are included in Table 1 below.

Table 1: Summary of Field Surveys Conducted in 2024

Dates	Start/End Time	Type of Survey	Birks NHC Ecologist(s)
June 18, 2024 June 26, 2024	7:35 – 8:34 7:45 – 8:48	Breeding Bird Surveys	H. Marcks K. Tuininga

Table 1: Summary of Field Surveys Conducted in 2024

Dates	Start/End Time	Type of Survey	Birks NHC Ecologist(s)
June 18, 2024 August 22, 2024	8:34 – 10:30 11:00 – 14:00	Vegetation Community, Plant Surveys and Wetland Delineation	H. Marcks
June 20, 2024	21:40 – 22:10	Evening Amphibian Call Survey	M. Fuller

3.2.1 Vegetation Community Mapping and Surveys

The Ecological Land Classification ('ELC') system for Southern Ontario (Lee et al., 1998) was used with modifications. In early 2007, the MNR refined their original vegetation type codes to encompass the vast range of natural and cultural communities across Southern Ontario. These updated ELC codes have also been used for reporting purposes in this study.

Wetland boundaries were established in the field using the Ontario Wetland Evaluation System ('OWES') to identify a boundary between upland and wetland habitat based on vegetation cover (MNR, 2022). The wetland boundary indicated on Figure 2 was marked June 18 and August 22, 2024 by Birks NHC utilizing a hand-held GPS unit.

The resulting mapping is illustrated in Figure 2; a formal list of vegetation species is included in Appendix D.

3.2.2 Breeding Bird Surveys

Breeding bird surveys within the property followed methods outlined in the Ontario Breeding Bird Atlas Guide for Participants (Cadman *et al*., 2001). Specifically, breeding bird surveys consisted of ten-minute point counts that were used to establish qualitative estimates of bird abundance, species presence, and breeding activity in habitat types within the property. Four locations were surveyed on June 18 and June 26 of 2024 (Figure 2). A formal list of species encountered during the breeding bird surveys and incidentals recorded during vegetation surveys is included in Appendix E.

3.2.3 Evening Amphibian Call Survey

The amphibian call survey occurred in June at a time that coincides with breeding season for the majority of local amphibian species. During the survey, evening temperature was 24^{0}C and wind strength was 0 on the Beaufort Scale.

Following the Bird Studies Canada Marsh Monitoring Protocol (2008), the calling activity of individuals is to be estimated to be within 100 m of the monitoring station. For each species heard, call activity is ranked using one of the three call level code categories:

- Call code 1 - Individuals can be counted, calls not simultaneous;
- Call code 2 - Calls distinguishable, some simultaneous calling; or,

- Call code 3 - Full chorus, calls simultaneous and overlapping.

No amphibians were heard calling in the Study Area during the June 20, 2024 evening call survey.

3.2.4 General Wildlife Surveys

A wildlife assessment within the Study Area was completed through incidental observations while on site. Any incidental observations of wildlife were noted, as well as other wildlife evidence such as dens, tracks, and scat. These observations also helped validate our conclusions on the ecological function of the ecosystems identified within the Study Area.

Wildlife habitat functions were evaluated according to provincial criteria outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015). SWH functions were assessed utilizing expert knowledge of the site; habitat and species data sources were reviewed in addition to field data gathered by Birks NHC. The SWH assessment is included as Appendix F of this report.

3.3 Fish Habitat Assessment

A characterization of fish habitat for the area was completed through assessment of the following parameters: type of fish habitat present; thermal regime; and fish species observed/known to be present based on field data and available background information. Fish community data for Traverston Creek was obtained from Ontario GeoHub (MNR/GEO, 2024).

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, stormwater infrastructure).

3.4 Species at Risk

Birks NHC staff reviewed data obtained through desktop review and the field surveys related to potential habitat for provincially designated species, notably Species at Risk listed under O. Reg. 230/08 of the ESA as Threatened or Endangered. The Species at Risk assessment included an analysis of the habitat requirements of Species at Risk reported to occur in the area to identify those having potential to occur within the Study Area. Habitat requirements of Threatened or Endangered species with habitat ranges overlapping the property were considered to document the presence or absence of suitable habitat.

4 EXISTING CONDITIONS

Existing conditions were determined through the various field surveys and background research described in Section 3. The following sections present an examination of our observations and findings as they relate to natural heritage features and functions of the Study Area, in particular the proposed severance area and adjacent lands.

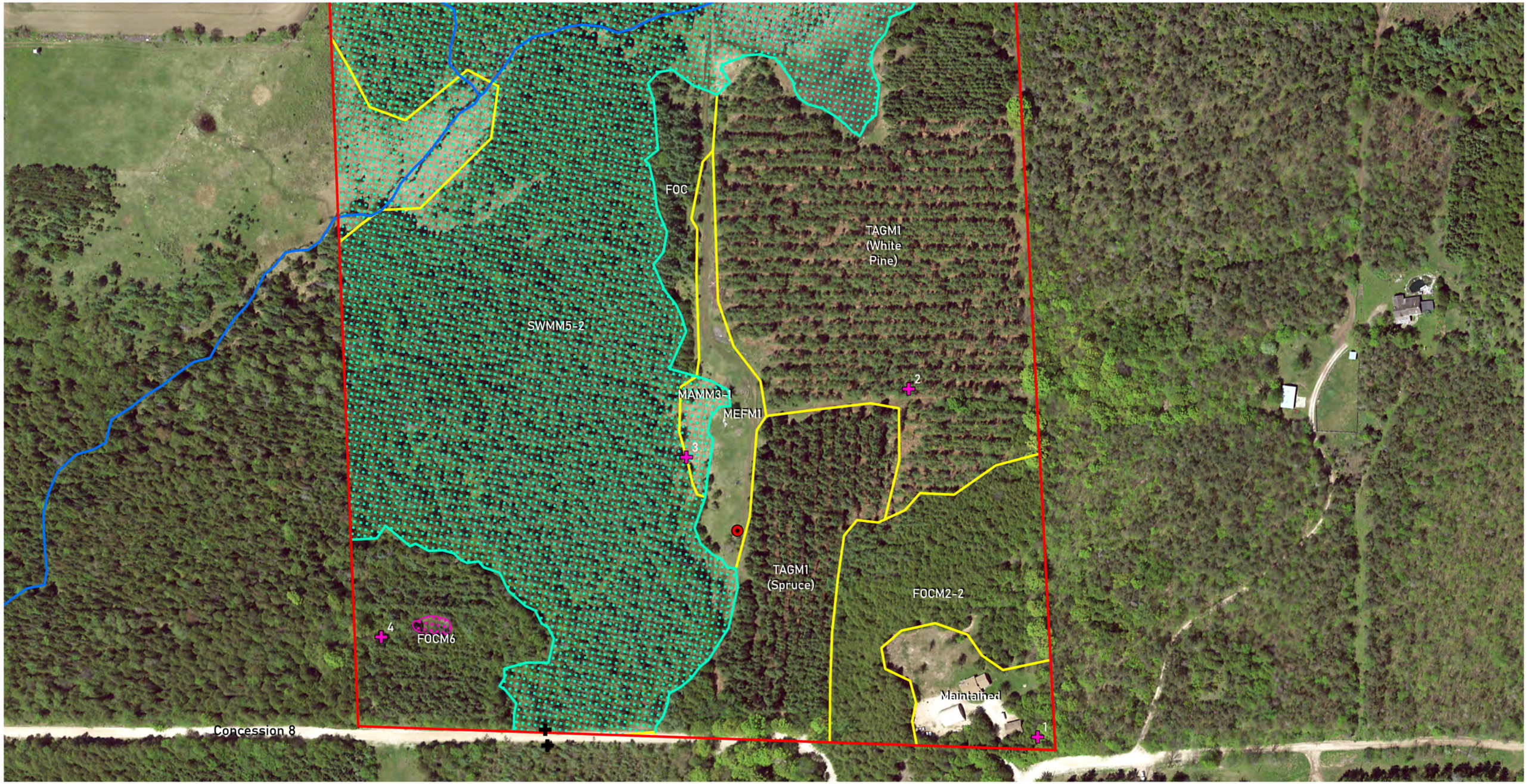
4.1 VEGETATION COMMUNITIES AND PLANTS

The Study Area contains natural and managed woodlands, wetlands, and a single residential dwelling area at south-east corner (Figure 2). The plantations are mapped on Figure 2 utilizing the ELC code 'TAGM1' (Treed Agriculture – Coniferous Plantation); the south-western corner mapped as 'FOCM6' (Naturalized Coniferous Plantation) recognizes that the area is in the process of transformation from a managed plantation of row trees to a more natural woodland. Eastern White Cedar forest surrounds the maintained residential area, with plantations further to the north and west of the Eastern White Cedar (Figure 2).

Pathways are present in the eastern portion of the property, primarily in association with the plantation managed forest lands. An informal trail surrounded by open meadow habitat traverses through the centre of the property, mapped as Forb Meadow (Figure 2). A portion of the meadow was classified as Meadow Marsh as a component of the larger wetland that comprises the western portion of the property and crosses the middle of the property. The main wetland was classified as Tamarack – Hardwood mixed swamp ('SWMM2-2'). A single small (~0.01 ha) pocket within the FOCM6 community is mapped as a wetland inclusion (Figure 2). It is located approximately 40 m from the main swamp with no obvious overland hydrological connection.

Plant species recorded by Birks NHC are provincially and locally common. Species recorded in the swamp and marsh communities were indicative of the wet soil conditions and contained the following wetland indicators (as per the OWES Southern Manual, MNR 2022); Yellow Marsh Marigold, Showy Lady's-slipper, Red-osier Dogwood, Crested Wood Fern, Spotted Joe Pye Weed, Spotted Jewelweed, Harlequin Blue Flag, Tamarack, Fen Grass-of-Parnassus, Marsh Fern, Sensitive Fern, Royal Fern, Fowl Mannagrass, Shining Willow, Marsh Skullcap, Common Boneset, and Narrow-leaved Cattail. The vegetative species observed in the meadow and forest/plantation communities were reflective of the upland conditions in the eastern and south-western portion of the property, such as White Spruce, Eastern White Pine, Black Cherry, Common Milkweed, Oxeye Daisy, Heart-leaved Aster, and English Plantain.

Non-native/'exotic' plant species were prevalent in the upland meadow community, which would be expected given cultural legacy (*i.e.* within created open accessway).



444503 Concession 8

Municipality of West Grey

Figure 2:
Existing Conditions & Survey Locations

- Property Limit
- Watercourse (GeoHub/Birks NHC)
- Partially Buried Culvert
- Wetland Inclusion
- Wetland Limit (Birks NHC)
- Wetland Area (Birks NHC)
- Rock Foundation
- Dawn Breeding Bird Survey Station
- ELC Vegetation Communities

TAGM1 Coniferous Plantation
FOCM2-2 Dry-Fresh White Cedar Coniferous Forest
MEFM1 Dry-Fresh Forb Meadow
SWMM5-2 Tamarack-Hardwood Mineral Mixed Swamp
MAMM3-1 Mixed Mineral Meadow Marsh
FOCM6 Naturalized Coniferous Plantation
FOC Coniferous Forest

MAP DRAWING INFORMATION:
DATA PROVIDED BY: Grey County and GeoHub

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

N W E S

0 25 50 100 150 200 Meters

FILE LOCATION:

Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-005-2022 Concession 8 West Grey

PROJECT: 04-005-2022 STATUS: DRAFT DATE: 11/02/2025

Exotic species such as Spotted Knapweed, Tufted Vetch, Common Timothy, Black Medic, and Plantain were recorded. The coniferous plantations contained non-native/exotic species in the understory, however comparatively with much less prominence than the upland meadow community. Species such as Broad-leaved Helleborine, Common St. John's-wort, Bittersweet Nightshade and Butter-and-eggs were noted in the plantation communities.

The locations of the vegetation communities are illustrated on Figure 2; vegetative species list is provided in Appendix D.

4.2 Wildlife Habitat

4.2.1 Birds

A total of 25 bird species were recorded during the field surveys (Appendix E). Species recorded are considered provincially and locally common and are representative of the woodland habitats in the area. Common bird species such as American Crow, Mourning Dove, Blue Jay, American Goldfinch, Black-capped Chickadee, and American Robin were observed.

Given the expanse of woodland habitat within and adjacent to the Study Area, a number of woodland breeding bird species were recorded on the property such as White-throated Sparrow, Pileated Woodpecker, Eastern Wood-pewee (Special Concern), and Golden-crowned Kinglet. Six species listed in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015) in association with Woodland Area-Sensitive Breeding Bird SWH were recorded by Birks NHC (Red-breasted Nuthatch, Veery, Blue-headed Vireo, Black-throated Green Warbler, Ovenbird, and Winter Wren).

The Study Area is primarily wooded, with small area of open habitat central to the property which is utilized as an access laneway, and openings within the plantation areas. Given the absence of larger open habitats, habitat for open country/grassland breeding birds is not present. Forest edge and open woodland species recorded on the property included those such as Indigo Bunting and Song Sparrow.

4.2.2 Mammals

Typical mammals observed in central Ontario are expected to utilize the habitats in the Study Area such as Gray Squirrel, Eastern Chipmunk, White-tailed Deer, and small rodents. Red Squirrel and Cottontail Rabbit were observed on site. Based on available background mapping from Ontario GeoHub, no deer wintering habitat is present within the Study Area.

The presence of aquatic habitats, woodlands and open areas may indicate presence of bat foraging habitat. Forested habitat may also provide roosting habitat for bats. Typically, bats in Ontario roost in mature trees in the early stages of decay, with features such as cracks, crevices or loose bark. One species (Tri-colored Bat) is known to roost in clusters of tree leaves/needles. The Study Area woodlands, however, are primarily coniferous with smaller diameter trees, which are less likely to support bat habitat in terms of roosting. Mixed woods (swamp) outside of the proposed severance and off property

may provide a greater opportunity for bat roosting. Additional discussions related to bat habitat is provided in Section 5 below.

4.2.3 Fish and Fish Habitat

The Study Area is located within the Rocky Saugeen River subwatershed which includes communities from the Municipality of West Grey, the Municipality of Grey Highlands, and the Township of Chatsworth. Land use in the Rocky Saugeen River subwatershed is almost evenly split between agricultural lands and forest. Forest conditions and surface water conditions for the Rocky Saugeen River subwatershed were graded as Excellent in the 2023 SVCA Watershed Report Card (SVCA, 2023).

Tributaries within the subwatershed include McKechnie, Blacks, Traverston and Barhead Creeks, as well as the West Arm Rocky Saugeen River (SVCA, 2018). Traverston Creek traverses the property in a general east-west direction, where it flows through marsh and swamp wetlands within the central portion of the property. The creek continues south-west outside of the property limits. The thermal regime of Traverston Creek is characterized as cold-water based on fish species present in the creek (MNR/GEO, 2024). No aquatic Species at Risk are mapped in the area (DFO, 2025). The creek is located over 120 m from the proposed severance and is therefore outside of the Study Area.

Background mapping indicates a water feature flowing from Concession 8 north through the property wetlands and converging with Traverston Creek. Partially buried culverts were noted at Concession 8 in the area indicated by the background mapping however no features were observed within the woodlands to indicate an existing channel where the feature was previously mapped.

4.2.4 Amphibians and Reptiles

During vegetation surveys Eastern Gartersnake, Leopard Frog and Wood Frog were observed. Given the habitats present, species range maps, and observations in the general area (Ontario Nature, 2024), the following amphibians and reptiles may also utilize habitats associated with the Study Area: Northern Leopard Frog, Green Frog, Spring Peeper, American Toad, Pickerel Frog, Red-spotted Newt, and Red-bellied Snake.

Habitat features within the Study Area appropriate for amphibian breeding were deemed to be potentially present within the Study Area however no amphibians were heard calling during an evening amphibian call survey in June during optimal survey conditions (24^0C, no wind).

5 NATURAL HERITAGE FEATURES AND FUNCTIONS

In the following sections we summarize the range of natural heritage features and functions attributable to the Study Area based on existing designations/delineations by agencies and as revealed through the application of provincial guidelines for identification of significant natural heritage features and functions.

5.1 Provincially Significant Wetland (PSW)

Unevaluated wetlands and the Traverston Creek PSW were previously mapped on the property and adjacent lands (Ontario GeoHub, MNR/GEO). The wetland boundary within the southern portion of the property was refined and marked on site June 18 and August 22, 2024 by Birks NHC utilizing a hand-held GPS unit (Figure 2). Grey County ecologist has acknowledged the wetland boundary mapped by Birks NHC. For the purposes of this report, the wetlands on the property illustrated on Figure 2 are considered part of the Traverston Creek PSW.

PSW is also mapped by MNR within adjacent lands to the west and south of the property limits (Figure 1).

5.2 Other Wetlands

Birks NHC identified a small (~0.01 ha) wetland inclusion within the naturalized coniferous plantation in the south-western portion of the property (Figure 2). It is located approximately 40 m from the main swamp with no obvious overland hydrological connection and for the purposes of this report is considered 'Other Wetlands' outside of the PSW.

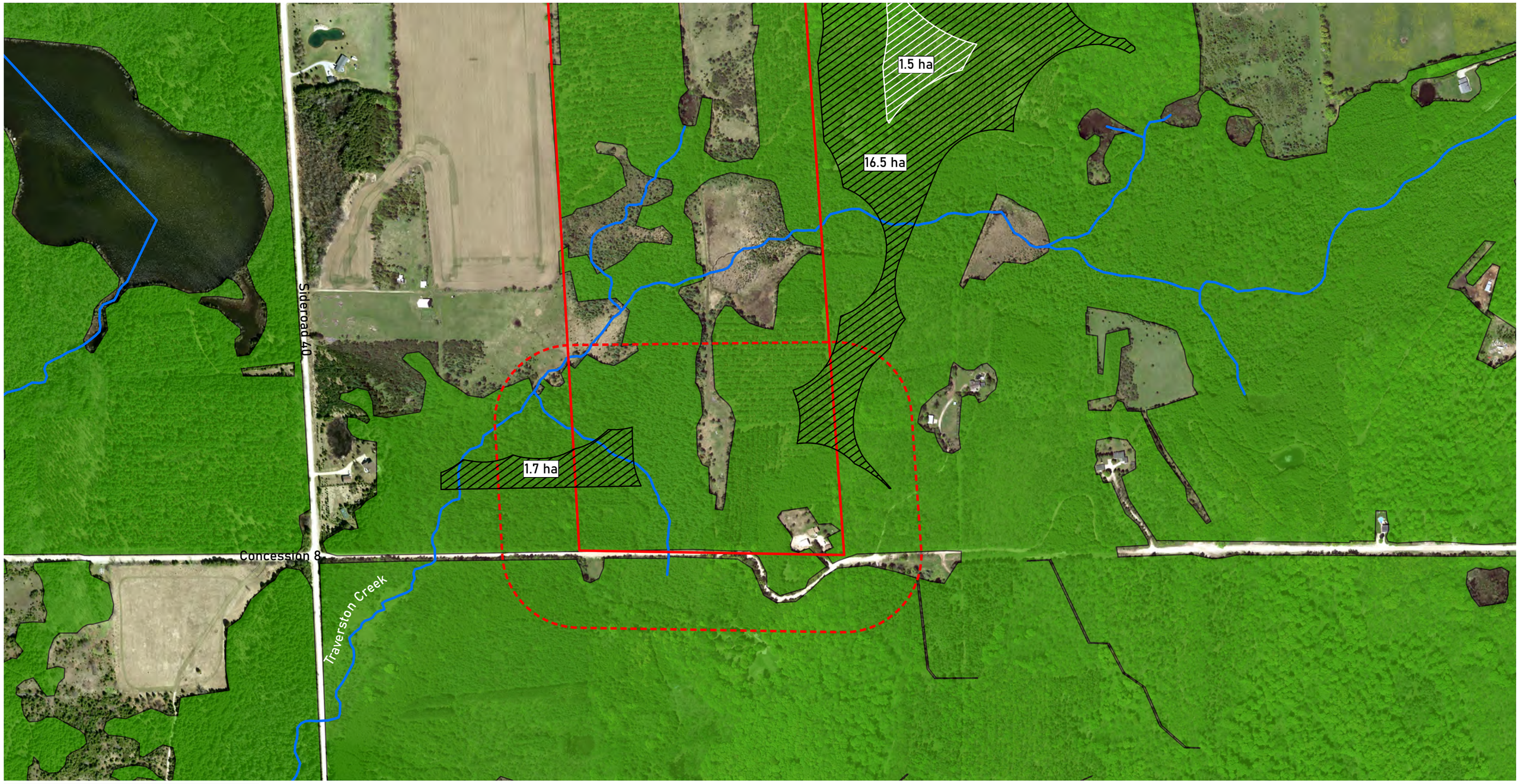
Unevaluated wetlands are mapped by MNR within adjacent lands to the west and south of the property limits (Figure 1).

5.3 Significant Woodland

The property is outside of the County of Grey's Natural Heritage System, however, the Grey County Official Plan maps the following natural heritage constraints on the property: Streams; Wetlands; and, Significant Woodlands (Appendix B). The County of Grey's Significant Woodland mapping is illustrated on Figure 3 of this report.

Significant Woodlands mapping developed by the County of Grey was primarily a desktop exercise utilizing MNR data and airphoto analysis, along with data collected as part of the Natural Heritage System study. The following criteria was utilized by the County of Grey:

- In order to be considered significant, a woodland shall be either greater than or equal to 40 ha in size outside of settlement areas, or greater than or equal to 4 ha in size within settlement area boundaries.



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Municipality of West Grey

Property Limit
120m Study Area
Watercourse (GeoHub)
Grey County - Significant Woodlands
100m Woodland Interior
200m Woodland Interior

Figure 3:
Woodland Mapping

MAP DRAWING INFORMATION:
DATA PROVIDED BY: Grey County and GeoHub

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

N W E S

0 70 140 280 420 560 Meters

FILE LOCATION:

Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-005-2022 Concession 8 West Grey

PROJECT: 04-005-2022 STATUS: DRAFT DATE: 09/01/2025

- If a woodland fails to meet the size criteria outside a settlement area, a woodland can also be significant if it meets any two of the following three criteria:
    - proximity to other woodlands;
    - overlap with the boundaries of a PSW and Significant Coastal Wetlands, Core Area, Significant Valleylands, or an ANSI;
    - interior habitat of greater than or equal to 8 ha, with a 100 m interior buffer on all sides.

(County of Grey, 2024, Section 7.4).

5.4 Significant Valleylands

The Grey County Official Plan maps natural heritage constraints, including ANSIs, Significant Woodlands, and Significant Valleylands (Appendix B). No Significant Valleylands are mapped within the Study Area by the County of Grey and no features were identified by Birks NHC as candidate Significant Valleylands.

5.5 Significant Wildlife Habitat

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015) was reviewed by Birks NHC as part of this study to determine whether any portion of the Study Area would meet the criteria for candidate or confirmed SWH.

SWH functions were assessed utilizing expert knowledge of the site; habitat and species data sources were reviewed in addition to field data gathered by Birks NHC. The SWH assessment is included as Appendix F of this report. Based on that assessment, the following SWH functions have been carried forward for consideration within the EIS:

- Candidate SWH Bat Maternity Colonies – outside of proposed severance lots
- Candidate SWH Reptile Hibernaculum – outside of proposed severance lots
- Candidate SWH Special Concern Species (Snapping Turtle) - outside of proposed severance lots
- Candidate SWH Special Concern Species (Eastern Wood-pewee) - outside of proposed severance lots

5.5.1 Bat Maternity Colonies

Bat Maternity Colonies is identified as SWH because known locations of forested bat maternity colonies are extremely rare in Ontario. According to Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015), maternity colonies located in mature deciduous or mixed forest stands with more than 10 large diameter (greater than 25 cm dbh) wildlife trees (snags) per ha are candidates for SWH designation.

The proposed severance areas and adjacent vegetation communities within the Study Area are predominantly coniferous, lacked trees of sufficient size and did not display snag characteristics for bat

maternal roosting (*i.e.* loose bark, cracks, holes, crevices). The proposed severance areas therefore are not expected to provide this function of SWH for Bat Maternity Colonies (MNRF, 2015).

Notwithstanding, mixed woods (swamp) outside of the proposed severance and extending off property may provide this function to the listed bat species in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, 2015).

5.5.2 Reptile Hibernaculum

Snakes overwinter in Ontario by accessing underground hibernation sites below the frost line. They will utilize rock crevices, rodent burrows, tree root systems and structures such as old building foundations to obtain sufficient depth as to prevent freezing. Because of the variability in features that snakes will use for hibernation, snake hibernaculum may be found in almost any habitat (except for very wet ones). Since features associated with this function appear to be common in the landscape, reptile hibernaculum SWH may be present within the Study Area. While there are no rock crevices in the Study Area, reptiles may gain access to below the frost line for hibernation through rodent burrows and tree root systems in the upland areas. A rock foundation was also noted in the Study Area, outside of the proposed severance, which may provide access to hibernation habitat (location of foundation is illustrated on Figure 2).

5.5.3 Woodland Area-Sensitive Breeding Bird Habitat

Woodland Area-Sensitive Breeding Bird Habitat generally requires large mature trees present in contiguous forest communities with sufficient area of interior forest habitat at least 200 m from the forest edge. Natural and plantation woodlands are present in the Study Area that contribute to a feature greater than 30 ha in size that extends beyond the Study Area. While interior habitat 200 m from the forest edge is present in the woodland feature, it is located outside of the property and absent from the Study Area (Figure 3).

Six species listed in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNR, 2015) in association with Woodland Area-Sensitive Breeding Bird SWH were recorded by Birks NHC [Red-breasted Nuthatch (breeding bird survey Station 3, during one of the breeding bird surveys), Veery (breeding bird survey Station 4; both breeding bird survey dates), Blue-headed Vireo (breeding bird survey Station 3, during one of the breeding bird surveys), Black-throated Green Warbler (breeding bird survey Station 2, during one of the breeding bird surveys), Ovenbird (breeding bird survey Stations 1,2 and 4), and Winter Wren (breeding bird survey Station 4, during one of the breeding bird surveys)].

No interior woodland habitat is present in the Study Area at 200 m from forest edge and a limited amount of forest interior at 100 m is present; however, interior habitat is present in the larger woodland feature, outside of the property. The largest contiguous forested area with the greatest amount of forest interior habitat is located on the south side of Concession 8, followed by a location to the north-east of the Study Area outside of the eastern property line. Given the expanse of adjacent woodland

habitat, it is expected that woodland area-sensitive breeding bird species be associated with the property and general landscape.

5.5.4 Special Concern and Rare Wildlife Species

Habitat for all Special Concern and provincially rare (S1-S3, SH) plant and animal species is considered SWH. When an occurrence is identified within a survey grid square for a Special Concern or provincially rare species, an assessment of the Study Area to provide candidate habitat for the species is warranted. The following Special Concern wildlife species were identified in the Study Area or as potentially occurring within the Study Area:

Snapping Turtle (Special Concern)

The Snapping Turtle occurs in almost any freshwater habitat including small wetlands, ponds, and ditches. This species has recent occurrences recorded in the survey grid square which encompass the Study Area (Ontario Reptile and Amphibian Atlas square 17NK20). Snapping Turtle has potential to utilize the wetland habitats and drainage features (*i.e.* Traverston Creek) within and adjacent to the Study Area.

Eastern Wood-pewee (Special Concern)

The Eastern Wood-pewee is a small forest bird that lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundant in intermediate-aged forest stands with little understory vegetation. Eastern Wood-pewee was recorded at breeding bird survey Station 2 during both of the survey dates (at the station and to the north of the station) and Station 3 only during the second survey date (heard singing to the north-west of the station). Breeding bird survey stations 2 and 3 were located in plantation and forest edge type habitats (see Figure 2 for breeding bird survey station locations).

Hart's-tongue Fern (Special Concern)

Hart's-tongue Fern is an evergreen fern that occurs in shaded Sugar Maple woods on limestone and dolostone habitats of the Niagara Escarpment. The fern requires a specific microhabitat consisting of moss-covered limestone or dolostone under deciduous trees, particularly Sugar Maple dominated forests, in deep shade (COSEWIC, 2016). An occurrence of Hart's-tongue Fern is listed in NHIC square 17NK2502 which encompasses the Study Area. Hart's-tongue Fern was not identified on the property. Further, the Study Area is not on the Niagara Escarpment and microhabitat conditions for this plant species are absent from the Study Area.

5.6 Areas of Natural and Scientific Interest (ANSI)

ANSIs are areas of land and/or water containing natural landscapes or features that have been identified by MNR as important for natural heritage protection, appreciation, scientific study or education. A Life Science ANSI exhibits ecological features and consists of the biodiversity of the area and its landscapes,

and has not been affected by human development. The Traverston Creek Life Science ANSI is mapped to the south of the property and Concession 8 (Figure 1).

5.7 Fish and Fish Habitat

Traverston Creek traverses the property in a general east-west direction, where it flows through the central portion of the property. The creek continues south-west outside of the property limits. The creek is located over 120 m from the proposed severance and is therefore outside of the Study Area.

5.8 Habitat of Threatened and Endangered Species

The habitat requirements of species listed as Threatened or Endangered under the ESA were considered in relation to the habitat features noted within the proposed severance area and adjacent lands. Of the species identified, Endangered bat species are relevant to the Study Area and are therefore considered further.

5.8.1 Endangered Bat Species

Eight species of bats live in Ontario, seven of which are currently listed as Endangered in Ontario. Eastern Red Bat, Hoary Bat and Silver-haired Bat were recently added as Endangered species in January of 2025, along with Eastern Small-footed Myotis, Little Brown Myotis, Northern Myotis, and Tri-colored bat which have been listed as Endangered since 2013. The main threats to populations of these bat species are wind energy turbines (for migratory bat species - Hoary Bat, Eastern Red Bat, and Silver-haired Bat), White Nose Syndrome (a fungal disease), and loss of forested roosting habitats.

Important habitat functions for these species include hibernacula, foraging habitat, day roosts, 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 surveyed area of the property and are unlikely to be present in adjacent lands within the Study Area. As discussed above, potential foraging habitat would be associated with woodland and wetland areas that provide an abundance of flying insects. Foraging habitat is widely available within wetland and wooded areas common throughout the region.

Among the four non-migratory Endangered bat species, three are known to form maternity roosting colonies in forested habitats, utilizing mature trees in the early stages of decay with features such as cracks, crevices, and loose bark (Little Brown Myotis, Northern Myotis) or clusters of tree leaves/needles (Tri-colored Bat). Silver-haired Bats also are known to roost in a variety of large diameter trees; reproductive Silver-haired Bat females generally roost in small groups within tree cavities or under bark (COSEWIC, 2023). Hoary Bats and Eastern Red Bats are known to roost alone, or with their pups and do not form maternity colonies with other females. However, trees used as roosts by Hoary Bats and Eastern Red Bats are similar to those utilized by other bat species, including tall, large diameter trees (*i.e.,* super canopy trees). Therefore, generally speaking, for most of Ontario's bat species, maternity roosting habitat is found in woodlands providing a relatively high density of larger diameter wildlife

cavity trees. The proposed severance areas and adjacent vegetation communities within the Study Area lacked trees of sufficient size (diameter and height) and characteristics for bat roosting and therefore are not expected to provide this function for bat maternity roosting. Mixed woods (swamp) outside of the proposed severance and off property may provide candidate bat roosting habitat.

Eastern Small-footed Myotis are 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 and therefore is not considered suitable habitat for Eastern Small-footed Myotis roosting.

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 mature tree with appropriate features such as loose bark, cracks, or crevices. As mentioned above, the proposed severance areas and adjacent vegetation communities within the Study Area lacked trees of sufficient size and characteristics for maternity bat roosting. Therefore, there is a low probability that the severance areas provide day roosting habitat for Endangered bat species.

5.9 Natural Heritage Features and Functions Summary

The results of the field surveys and review of background information indicate both confirmed and candidate natural heritage features and functions associated within the Study Area. Our impact assessment will consider potential impacts only to features and functions summarized in Table 2 below.

Table 2: Natural Heritage Features and Functions Summary

Natural Heritage Feature / Function	Within Proposed Severance Area	Within 120 m of Proposed Severance Area	Actions Required
Provincially Significant Wetland	None	Traverston Creek PSW	Further consideration required for potential impacts. This is provided in the following sections.
Other Wetland	Small wetland inclusion on Lot 1	Unevaluated wetlands mapped by MNR, outside of property	Further consideration required for potential impacts. This is provided in the following sections.
Significant Woodlands	Mapped by the Grey County Official Plan	Mapped by the Grey County Official Plan	Further evaluation is required for potential impacts. This is provided in the following sections.
Significant Valleylands	None	None	No further consideration required.

Table 2: Natural Heritage Features and Functions Summary

Natural Heritage Feature / Function	Within Proposed Severance Area	Within 120 m of Proposed Severance Area	Actions Required
Significant Wildlife Habitat	None	Potential SWH • Bat Maternity Colonies • Reptile Hibernaculum • Special Concern Species (Snapping Turtle, Eastern Wood-pewee)	Further evaluation is required for potential impacts. This is provided in the following sections.
Provincial Areas of Natural and Scientific Interest	None	Traverston Creek Life Science ANSI – south of Concession 8	No negative impacts are anticipated for natural heritage features and associated functions located within adjacent lands to the south of Concession 8 road.
Fish Habitat	None	None	No further consideration required.
Habitat of Threatened or Endangered Species	Endangered bat species (potential day roosting habitat; low probability)	Endangered bat species (potential day and/or maternal roosting habitat)	Further evaluation is required for potential impacts. This is provided in the following sections.

6 IMPACT ASSESSMENT

The intent of this study is to identify natural heritage features and functions associated with the Study Area and determine if potential impacts could arise from the proposed severance and future residential development of the lots. Impacts are evaluated based upon current knowledge of the Study Area as acquired through background information review and site specific data collected in 2024 by Birks NHC, in consideration of the proposed activity. In the following sections we assess the potential for negative ecological impacts to the identified natural heritage features and functions within the proposed severance area and adjacent lands.

No negative impacts are anticipated for natural heritage features and associated functions located within adjacent lands to the south of Concession 8 road.

6.1 Development Plan

The proposal involves severance of the property into two lots fronting Concession Road 8, with the two new lots proposed to be 0.68 ha and 1.16 ha in size, and the retained portion of the property being approximately 38 ha. The severance concept on Figure 4 illustrates the lot size and locations. Residential development of a single unit within each of the new lots is anticipated, with driveway access from Concession 8. The proposal provides a minimum 15 m setback from the PSW boundary which takes into account the relative grade change as the proposed severance lots are located upslope from the wetlands.

Note that there is an accessway within the retained portion of the property which falls within the 15 m PSW setback on the eastern side of the feature. The accessway is an existing informal trail surrounded by open natural meadow habitat that was in existence at least 19 years ago (based on historical aerial photos). The accessway is utilized in association with plantation forest management activities.

6.2 Direct Impacts

Direct impacts are those that are immediately evident as a result of a development. 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. The following assesses the potential for, and degree of, potential negative impacts of the proposed development on the identified natural heritage features and functions in the Study Area.

6.2.1 Significant Woodland Tree Removals

The Grey County Official Plan illustrates Significant Woodlands on the property and adjacent lands. The proposed development involves severance of the property with the anticipated future residential development of the two new severed lots (*i.e.* residential dwelling, driveway, servicing, associated structures). Vegetation removals would be required for development of the severed lots. In accordance with provincial and local policies, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration is not permitted in Significant Woodlands.

Given the location (edge habitat), total size of the severances, and area of removals that would be required for single dwelling residential development of the severed lots relative to the size of the overall feature (approximately 0.1% of the woodland feature), there is no expectation that tree removals within the proposed lots would constitute a negative ecological impact to the overall Significant Woodland feature, including the ecological functions associated with the feature. That is, the woodland feature post-development would continue to be of sufficient size to maintain the current ecological functions, including provision of interior habitat, water protection, and proximity to other significant features (woodlands, wetlands). Nonetheless, it is recommended that woodland/tree retention is considered during future site plan design to minimize the amount of tree removals on the new lots.

Further, the woodlands in the proposed severed lots consist of 'TAGM1' (Treed Agriculture – Coniferous Plantation), 'FOCM6' (Naturalized Coniferous Plantation) and 'FOCM2-2' (Eastern White Cedar Forest) upland communities. The monocultural communities have little structure and provide limited habitat for wildlife. Higher quality treed habitats with greater diversity, complexity and understory growth can be found on the property (such as the mixed swamp community) and are to be retained as part of the proposed severance.

6.2.2 Loss of Potential Habitat for Species at Risk and Potential for Incidental Harm

Endangered Bat Species

Natural bat roosting habitat can take the form of any mature tree in the early stages of decay with appropriate features such as cracks, crevices, and loose bark. As discussed above, the proposed severance lots are predominantly coniferous, lacked trees of sufficient size and did not display snag characteristics for bat roosting and therefore have a low probability to provide this function. However, mixed woods (swamp) outside of the proposed severances and off property may provide bat roosting habitat and would remain after the proposed development.

Given the composition and size of the trees within the proposed severance lands, they are less likely to support bat habitat in terms of roosting, however there is a possibility that some trees within the area could be utilized as day roost trees. It is therefore recommended that development and site alteration proceed in consideration of the protection of bats and bat habitats, through minimizing removal of snag trees and adhering to timing restrictions set out in Section 7 of this report.

Potential foraging habitat would be associated with open woodland, meadow and wetland communities that provide an abundance of flying insects. Foraging habitat is widely available and common to the area, and there is a significant amount of woodland and wetland habitat that would remain within the property and adjacent lands that would be available for roosting and foraging.

Therefore, provided the recommendations and mitigation measures provided are applied accordingly, it is anticipated that the proposed severance and anticipated future development can proceed in accordance with the ESA, and that Endangered bats and their habitats can be protected from potential impacts.

6.3 Indirect Impacts

Indirect impacts often occur as a result of a change in property usage, examples of which include an increase in local traffic, human presence or alterations to the existing natural or anthropogenic features. Indirect impacts do not always manifest in the core development area but in the lands adjacent to the disturbance and have the potential to negatively affect a wider area than the core development footprint. Indirect impacts of the proposed development include the following:

6.3.1 Changes to the Hydrology/Water Quality Entering Sensitive Features

The development area is proposed outside of a 15 m naturalized setback to the PSW boundary and at least 180 m from Traverston Creek. The wetland setback will remain post development and no site alteration is proposed beyond the setback.

Alteration of land use may influence surface water run-off and water quality entering aquatic features present within the Study Area. Water quality controls such as limiting lot coverage with hard surfaces, avoiding inappropriate disposal of deleterious substances (oil, gas, paint, etc.) and ensuring successful operation the septic system can limit the potential for contaminated water to enter adjacent retained natural features. The 15 m setback will also serve to limit the potential for substances to enter the wetland feature. No new building or structure shall be constructed within the PSW or the PSW setback, and private sewage treatment system and any associated tile weeping bed shall be constructed no closer than an approved setback from protected natural features.

It is expected that drainage and surface water patterns will be considered during site planning by the future lot holder. Going forward, mitigation measures have been provided in Section 7 to ensure protection of retained wetlands.

6.3.2 Loss and Disturbance to Wildlife and Significant Wildlife Habitat

Species recorded on the property are considered common and are representative of the woodland habitats in the area. In addition, woodland/wetland habitats within adjacent lands to the proposed severance lots may function as SWH for bat maternity colonies and provide habitat for Special Concern wildlife species (Eastern Wood-pewee, Snapping Turtle). Habitat features required for those SWH functions would include snag/cavity trees, forest edge/clearings with little understory vegetation, and aquatic habitat. No development is proposed in aquatic habitats. Further, the proposed severance plan provides a minimum 15 m setback to the PSW and the proposed lots are located over 180 m from Traverston Creek.

As discussed above, the proposed development would result in a maximum removal of approximately 1.8 ha of coniferous woodlands (plantation/successional plantation, Eastern White Cedar forest). This constitutes less than 0.1% of the total area of the Significant Woodland feature. Given the expanse of woodland habitat within and adjacent to the Study Area, a number of woodland breeding bird species were recorded on the property including woodland area-sensitive breeding bird species as well as forest edge and open woodland species, and Special Concern species the Eastern Wood-pewee. The development of the proposed severance lots considers the retention of woodland habitat features in the landscape that may provide the habitat functions mentioned above; the woodlands post-development would continue to be of sufficient size to maintain the current ecological functions, including provision of interior habitat as well as forest edge habitat and retention of snag/cavity trees. Nonetheless, it is recommended that woodland/tree retention is considered during future site plan design to minimize the amount of tree removals on the new lots.

Further, reptile hibernaculum SWH may be present within the Study Area given that reptiles can gain access to below the frost line for hibernation through rodent burrows and tree root systems. A rock foundation was also noted in the Study Area, outside of the proposed severance, which may provide access to hibernation habitat (location of foundation is illustrated on Figure 2). A significant amount of woodlands will be retained and no development is proposed in the area of the old rock foundation that could impair the function of potential reptile hibernacula. As such, it is expected that snakes will continue to utilize potential hibernacula post-development.

Overall, tree removals that are anticipated to occur as a result of the proposed severance and future single dwelling development of each lot are not expected to impair the function of the wildlife habitats present given the small size of the tree removals compared to the overall size of the woodland communities and the lack of complexity in the coniferous upland communities. It is expected that wildlife would continue to access and utilize adjacent habitats and that the proposed development would not result in negative impacts to wildlife or their habitats.

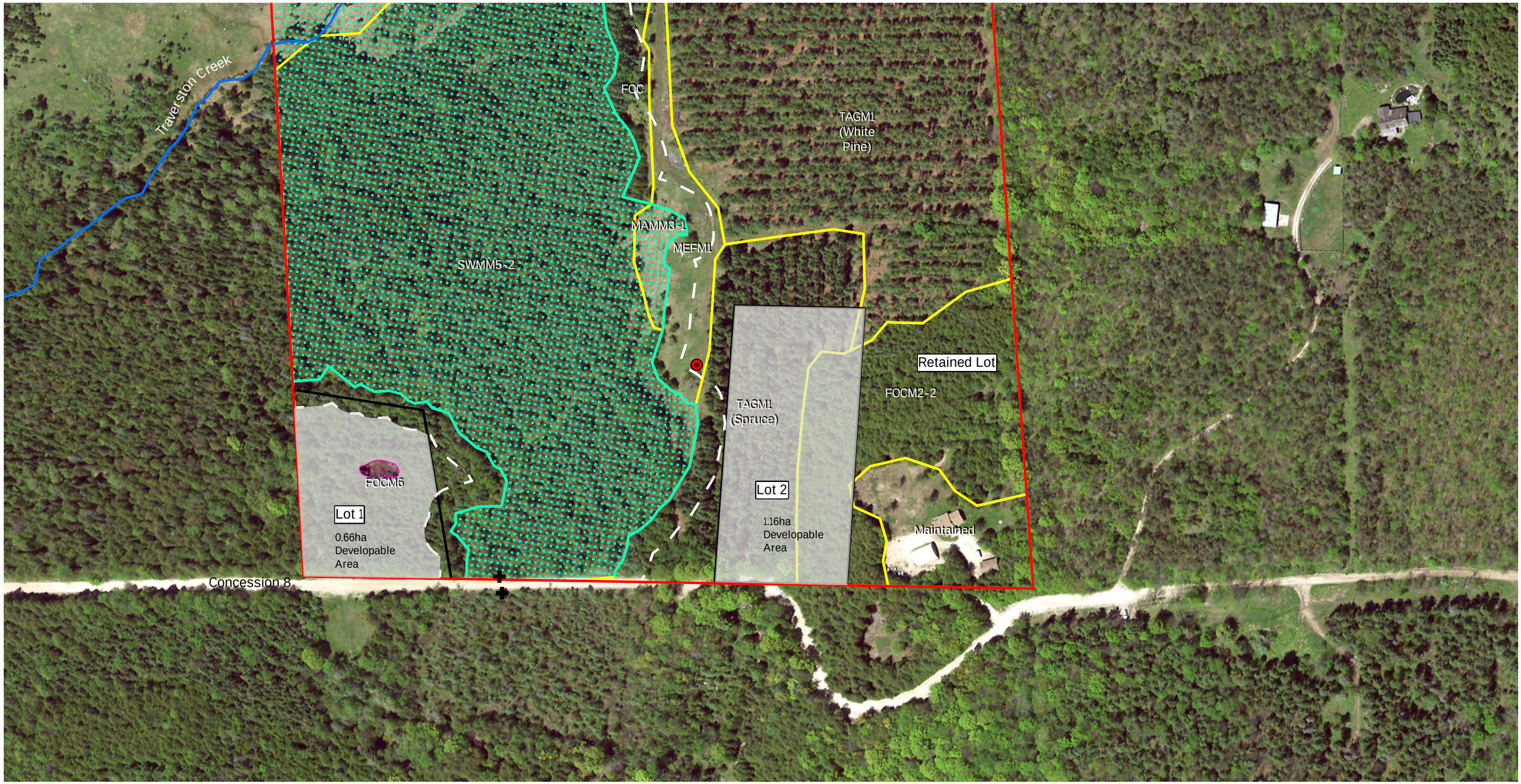
6.3.3 Anthropogenic Disturbance

Disturbance to local wildlife populations and vegetation communities due to indirect impacts on the lands adjacent to the proposed development have potential to occur when development is proposed in the vicinity of natural areas. Noise, light, and human presence are indirect impacts that can negatively impact natural heritage features and functions. These impacts are more prominent when new development is proposed in un-developed areas and on a larger scale.

Development is proposed in an area with existing disturbances (*i.e.*, active managed forest, adjacent dwelling) and utilizes an existing access route (Concession road 8). As above, it is expected that wildlife would continue to access and utilize adjacent habitats and that the proposed development would not result in a significant intensification of use of the lands. Regardless, best management practices should be implemented to protect adjacent habitat features and prevent accidental encroachment. Provided the mitigation measures discussed in Section 7 are implemented, there is no expectation that the limited increase in disturbance would result in significant indirect impacts to wildlife or their habitats.

6.3.4 Increased Potential for Invasion 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. Additionally, if construction equipment is not properly cleaned between use, invasive species transport may occur. Currently, the severance area does not contain an abundance of exotic (non-native) invasive species. Mitigation measures are provided in Section 7 below to control and limit the new establishment of invasive and non-native species.



444503 Concession 8

Municipality of West Grey

Figure 4:
Severance Plan

- Property Limit
- Watercourse (GeoHub/Birks NHC)
- Wetland Limit (Birks NHC)
- Wetland Area (Birks NHC)
- Wetland Inclusion
- 15m Wetland Setback
- Partially Buried Culvert
- Rock Foundation
- Proposed Lot
- Developable Area
- ELC Vegetation Communities

TAGM1 Coniferous Plantation
FOCM2-2 Dry-Fresh White Cedar Coniferous Forest
MEFM1 Dry-Fresh Forb Meadow
SWMM5-2 Tamarack-Hardwood Mineral Mixed Swamp
MAMM3-1 Mixed Mineral Meadow Marsh
FOCM6 Naturalized Coniferous Plantation
FOC Coniferous Forest

MAP DRAWING INFORMATION:
DATA PROVIDED BY: Grey County and GeoHub

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

N W E S

0 25 50 100 150 200 Meters

FILE LOCATION:

Path: C:\Users\S_Brady\BirksNHC\Birks NHC Team for all - Documents\Project Folders\04 - SBrady Projects\ArcGIS - Projects here\Projects - here\04-005-2022 Concession 8 West Grey

PROJECT: 04-005-2022 STATUS: DRAFT DATE: 18/03/2025

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 affect 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.

To support the implementation of local policies, mitigation measures have been proposed to avoid disturbance to the identified Study Area features and functions and provide additional protection. The following mitigation measures are recommended to minimize the potential natural heritage impacts identified within this report:

7.1 Breeding Birds (Including Special Concern Species)

Construction activities involving the removal of vegetation should 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 31st of any given year. If vegetation clearing is required between these dates, screening by an ecologist with knowledge of bird species present in the area should be undertaken to ensure that the vegetation has been confirmed to be free of nests prior to clearing.

7.2 Species at Risk

Given the dynamic character of the natural environment, as well as changes to policy (*i.e.,* new species listing, changes in species health or habitat conditions), annual consideration of current legislation and Species at Risk habitats is recommended in the interpretation of potential presence of Threatened or Endangered species as protected under the ESA.

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 ESA 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. Should a considerable length of time and/or sudden change in policy occur prior to development of the severance lots, it is recommended that a review of the assessment provided within this report be undertaken by a qualified ecologist to ensure compliance with the ESA at that time.

All current Threatened or Endangered species listed under O. Reg. 230/08 made under the ESA (last amended January 2025) have been considered within this report.

7.2.1 Endangered Bat Species

The Study Area consists of aquatic habitats, woodlands and open areas which may provide bat foraging habitat. The woodlands, being primarily coniferous (Pine, Spruce and Eastern White Cedar dominated), and generally lacking large trees and snag features, are less likely to support bat habitat in terms of roosting. Nonetheless, there is a low probability that trees in the severance lots could be utilized as day roost trees, and therefore to be cautious, tree removals should occur outside of the active breeding/day roosting/nesting season for all Species at Risk that may utilize habitats in the area, including bats.

Tree cutting should be timed to occur during the period between November 1 to March 31 and no removals outside of the designated development area should occur. This will ensure that no bats actively roosting in trees will be killed or harmed as a result of clearing activities.

7.3 Natural Heritage Feature Protection

The severance is proposed within coniferous woodlands (plantation/successional plantation, Eastern White Cedar forest) and set back from the PSW to minimize and avoid impacts to natural heritage features and their associated functions. Development activities should be contained within development areas of the severance lots, with the intention of retaining existing trees where possible. The development envelope should be appropriately delineated prior to beginning of construction to ensure that no accidental deviation occurs from the area of disturbance and intended tree removals. Sediment and erosion control fencing would be sufficient to demark the limit of development area/area of disturbance within the lot and act as natural feature/tree protection. Protection fencing is to be in place until all site works have been completed and the risk of tree damage/sediment and erosion is no longer a concern. No site alterations, storage of materials or equipment are permitted within the PSW setback.

It is recommended that woodland/tree retention is considered during future site plan design to minimize the amount of tree removals on the new lot. At this time, no compensation for removals within the lots is being recommended given the monocultural nature of the communities and limited natural value in terms of habitat. Nonetheless, any cutting or destruction of trees on the proposed severance lots may require a permit and be subject to the requirements of the County of Grey Tree Cutting By-law.

The swamp wetland will be protected with the PSW designation and Municipality of West Grey Natural Environment zoning. Further, the installation of a permanent fence should be considered for Lot 1 (western lot) to ensure that the 15 m PSW setback remains naturally vegetated and protected. No site alteration, building or new structure shall be constructed within the PSW setback and no building or

structure, including private sewage treatment system and any associated tile weeping bed, shall be constructed closer than an approved setback from the limit of a NE Zone.

Due to the proximity of Traverston Creek PSW, an EIS and potential additional studies are required for review and approval by SVCA, the County of Grey and the Municipality of West Grey. The County of Grey may establish a provisional that the isolated wetland pocket in Lot 1 remain unaltered through development on the site.

7.4 General Mitigation Measures

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 and wetland 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 natural areas.

Potentially contaminated materials (*i.e.*, fill, soil, gravel, excavated materials) shall be controlled and moved by equipment during construction to prevent the spread of invasive plants. Vehicles and equipment shall be inspected and cleaned prior to allowing access to the property to prevent the spread of invasive plant species into the site.

8 CONCLUSIONS

Birks NHC has undertaken this EIS for the proposed severance of the property at 444503 Concession 8, in the Municipality of West Grey. The proposal involves severance of the property, with the two new lots proposed to be 0.68 ha and 1.16 ha in size and the retained portion of the property being approximately 38 ha. Residential development of a single unit within each of the new lots is anticipated, with driveway access from Concession 8.

Through the assessment, it was determined that the severance area and adjacent lands contain natural heritage features and functions relating to the presence of woodland and wetland habitat. The intent of the EIS was to identify and characterize the pertinent natural heritage features and functions present within and adjacent to the severance area and to determine if potential ecological impacts to those features and functions could arise from the proposed development. Among the impacts identified, the proposed severance and future development would require removal of coniferous woodlands (plantation/naturalized plantation, Eastern White Cedar forest communities) to accommodate construction of a single residential dwelling and associated structures on each of the two new lots.

Given the small size of the proposed woodland removal relative to the overall size and function of the natural landscape, direct impacts to the function of the mapped Significant Woodland and the SWHs

identified herein are not anticipated. Nevertheless, measures are recommended in this report to mitigate direct and indirect impacts that may occur as a result of the proposed development. Overall, potential ecological impacts are mitigable provided the listed mitigation measures are applied accordingly.

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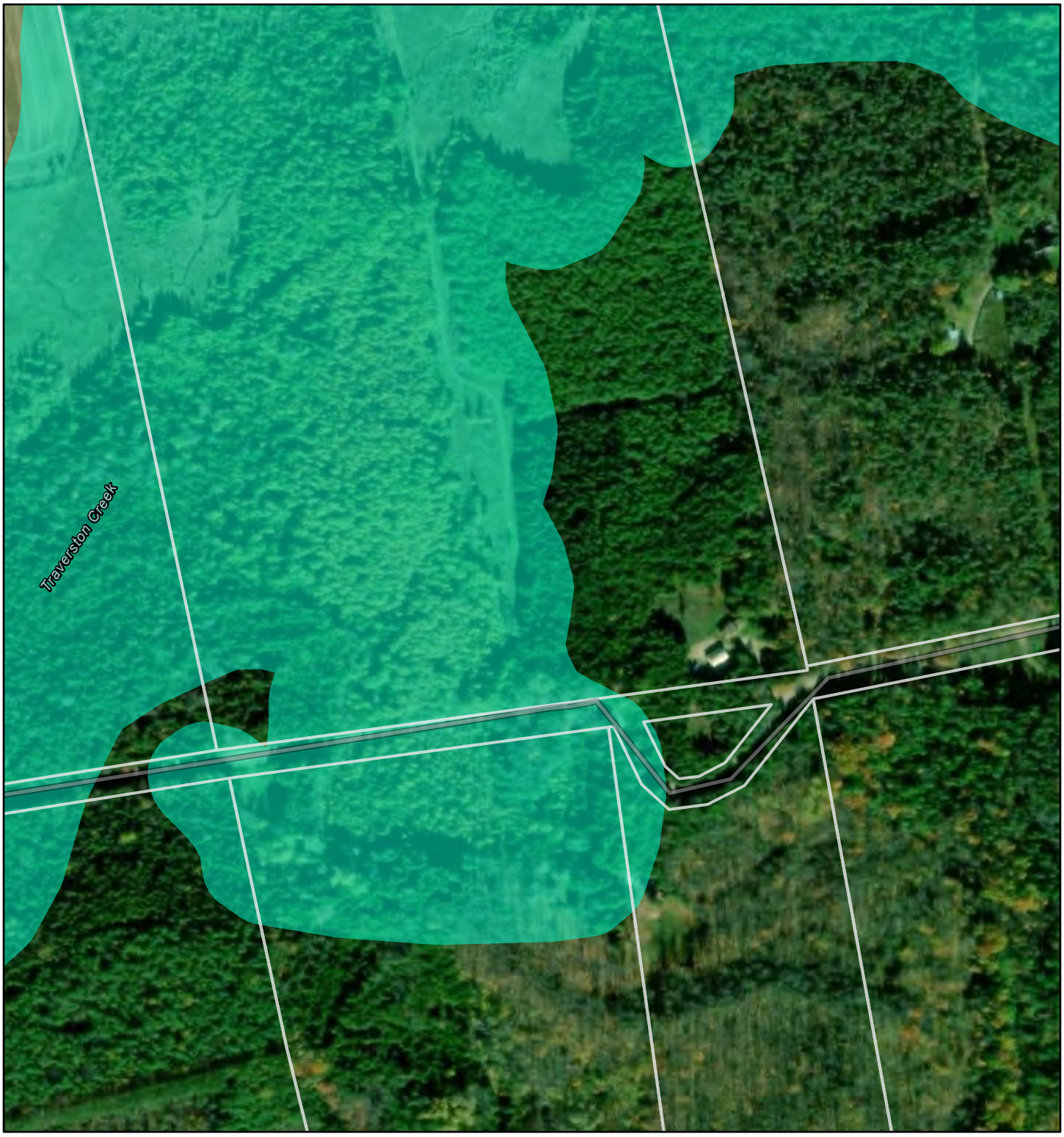
Appendix A

Saugeen Valley Conservation Authority
Regulation Screening Area Map

444503 Concession 8, Grey County - SVCA Screening Area



12/11/2024, 1:47:14 PM

Property Boundary

1:5,351

0 180 360 720 ft

0 50 100 200 m

Esri Community Maps Contributors, Province of Ontario, Esri Canada, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, NRCan, Parks Canada, Maxar

Appendix B

County of Grey Official Plan
Schedule A – Land Use Types
Schedule C – Natural Heritage System
Appendix B – Constraint Mapping

N

BROOKE

SPRINGMOUNT

OWEN SOUND

CREAMERY HILL

ROCKFORD

KILSYTH

KEADY

BOGNOR

SEE SCHEDULE A - MAP 1

SEE SCHEDULE A - MAP 2

Bruce County

Huron County

Wellington County

THE COUNTY OF GREY OFFICIAL PLAN

SCHEDULE A
Land Use Types

MAP 3

LEGEND

- Provincial Highway Connecting Link
- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Agricultural
- Special Agricultural
- Rural
- Primary Settlement Area *
- Secondary Settlement Area *
- Inland Lakes & Shoreline Settlement Area
- Recreational Resort Settlement Area
- Sunset Strip Settlement Area
- Industrial Business Park Settlement Area
- Space Extensive Industrial and Commercial
- Niagara Escarpment Plan Boundary **
- Niagara Escarpment Development Control Area
- Escarpment Natural Area
- Escarpment Recreation Area
- Hazard Lands
- Provincially Significant Wetlands and Significant Costal Lands

* *refer to Secondary Schedules for further detail.*

** *certain settlement areas within the Niagara Escarpment Plan Boundary may be subject to Development Control.*

SCALE 1:95,000

0 1,125 2,250 4,500 6,750 9,000 Meters

AUTHOR: Grey County Planning
FILE NAME: GR_OP_SchedA_Map3westX36.mxd
CONSOLIDATION: July 12, 2024
INTERACTIVE MAP: geo.grey.ca
DOWNLOAD PDF: grey.ca/planning-development

This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.

N

GEORGIAN BAY

BIG BAY
OXENDEN
KEMBLE
COBBLE BEACH
EAST LINTON
SHALLOW LAKE
CRUICKSHANK
BALMY BEACH
LEITH
ANNAN
BROOKE
OWEN SOUND
SPRINGMOUNT
CREAMERY HILL
ROCKFORD
KILSYTH
KEADY
CHATSWORTH
DESBORO
MASSIE
BOGNOR
WALTER'S FALLS
MEAFORD
WOODFORD
THORNBURY
CLARKSBURG
HEATHCOTE
ROCKLYN
RAVENNA
KIMBERLEY
EUGENIA
FEVERSHAM
MAXWELL
SINGHAMPTON
HOLLAND CENTRE
WILLIAMSFORD
BERKELEY
DORNOCH
MARKDALE
CRAWFORD
ELMWOOD
HANOVER
ALLAN PARK
DURHAM
VARNEY
FLESHERTON
CEYLON
PRICEVILLE
SWINTON PARK
DROMORE
HOPEVILLE
DUNDALK
BADJEROS
NEUSTADT
AYTON
HOLSTEIN
CEDARVILLE

Land Force Central Area Training Centre

Refer to Secondary Plan in the Town of the Blue Mountains Official Plan

Simcoe County

Dufferin County

Bruce County

Wellington County

Huron County

THE COUNTY OF GREY OFFICIAL PLAN

SCHEDULE C
Natural Heritage System Core Areas and Linkages

LEGEND

- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Core Area
- Linkage (200m wide)
- Niagara Escarpment Plan Area

SCALE 1: 135,000

0 1,625 3,250 6,500 9,750 13,000 Meters

AUTHOR: Grey County Planning
FILE NAME: GR_OP_SchedC_Map0X36.mxd
CONSOLIDATION: May 1, 2023
INTERACTIVE MAP: geo.grey.ca
DOWNLOAD PDF: grey.ca/planning-development

This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.

N

SEE APPENDIX B - MAP 1

SEE APPENDIX B - MAP 2

Bruce County

Huron County

Wellington County

THE COUNTY OF GREY OFFICIAL PLAN

APPENDIX B
Constraint Mapping

MAP 3

LEGEND

- Provincial Highway
- County Road
- Local Road
- Seasonal Road
- Stream / River
- Lakes
- Other Wetlands
- Significant Earth & Life ANSI
- Significant Earth ANSI
- Significant Life ANSI
- Significant Valleylands
- Significant Woodlands

SCALE 1:95,000

0 1,125 2,250 4,500 6,750 9,000 Meters

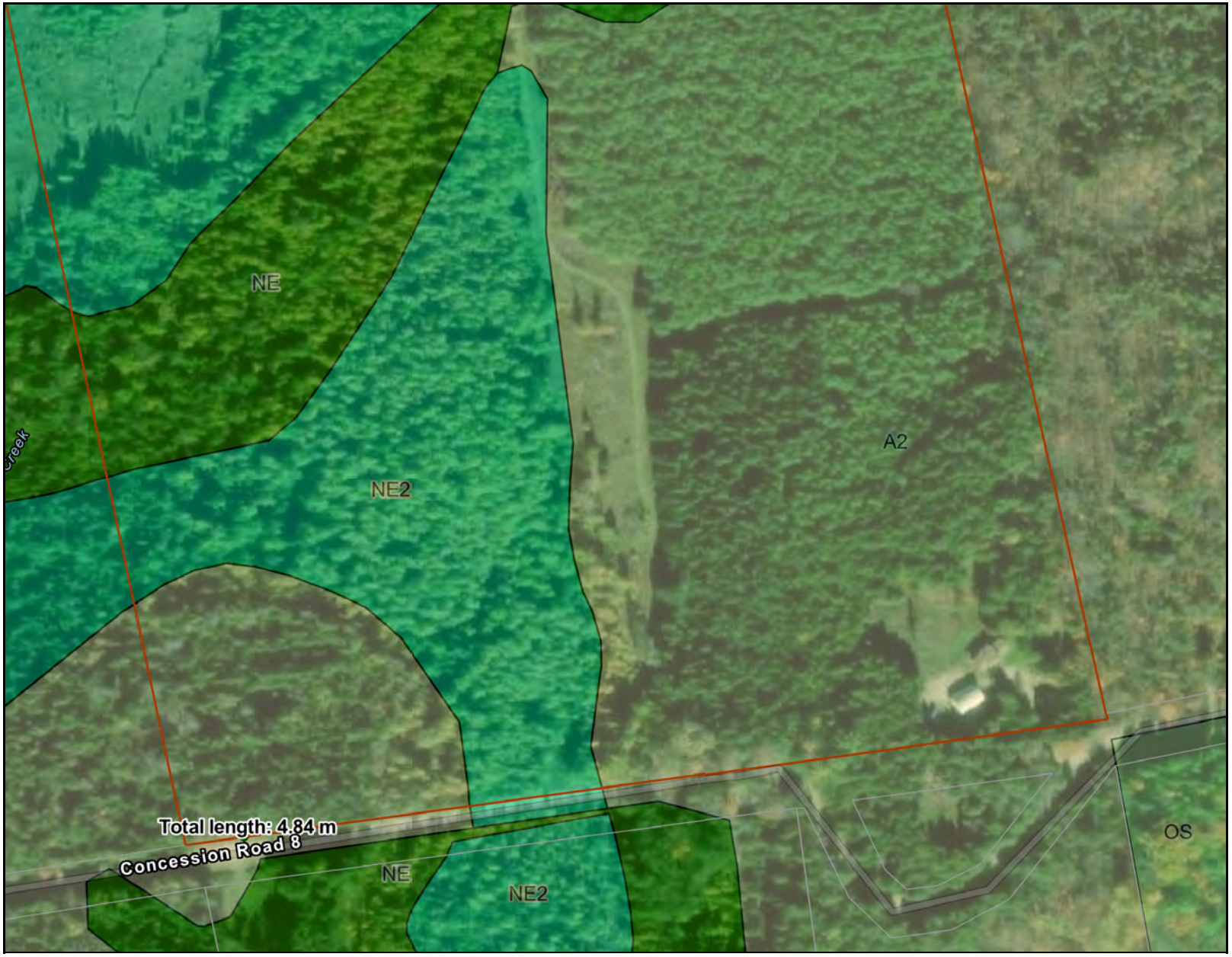
AUTHOR: Grey County Planning
FILE NAME: GR_OP_ApdxB_Map3westX36.mxd
CONSOLIDATION: May 1, 2023
INTERACTIVE MAP: geo.grey.ca
DOWNLOAD PDF: grey.ca/planning-development

This map is for illustrative purposes only. Do not rely on this map as being a precise indicator of routes, location of features or surveying purposes. This map may contain cartographical errors or omissions.

Appendix C

Municipality of West Grey Zoning

Grey County GIS | 444503 Concession 8, West Grey Zoning



Legend

Assessment Parcel

Zoning - West Grey

Zoning - West Grey

- A2 Rural
- NE Natural Environment
- NE2 Natural Environment 2
- OS Open Space

Notes

Print Date: 12/12/2024 12:00:07

0 100 200 m

Appendix D

Plant List

Vascular Plant List

		ELC Communities											
Scientific Name	**Common Name**	**MEFM1 Forb Meadow**	**MAMM3-1 Mixed Meadow Marsh**	**FOCM2-2 Eastern White Cedar Coniferous Forest**	**TAGM1 Coniferous Plantation**	**SWMM5-2 Tamarack - Hardwood Mixed Swamp**	**FOCM6 Naturalized Coniferous Plantation**	**FOCM6: Wetland Inclusion**	**Exotic Status**	**Coefficient of Wetness**	**Subnational (Provincial) S_Rank**	**Provincial Endangered Species Act**	**National N_Rank**
Abies balsamea	Balsam Fir					X	X			-3	S5	---	N5
Acer rubrum	Red Maple					X				0	S5	---	N5
Acer saccharum	Sugar Maple						X			3	S5	---	N5
Aralia nudicaulis	Wild Sarsaparilla					X				3	S5	---	N5
Asclepias syriaca	Common Milkweed	X								5	S5	---	N5
Caltha palustris	Yellow Marsh Marigold					X				-5	S5	---	N5
Carex hystericina	Porcupine Sedge							X		-5	S5	---	N5
Centaurea stoebe	Spotted Knapweed	X							SE5	5	SNA	---	NNA
Clinopodium vulgare	Wild Basil	X			X					5	S5	---	N5
Cornus alternifolia	Alternate-leaved Dogwood				X			X		3	S5	---	N5
Cornus rugosa	Round-leaved Dogwood					X				5	S5	---	N5
Cornus sericea	Red-osier Dogwood		X			X		X		-3	S5	---	N5
Crataegus sp.	Hawthorn sp.						X			---	---	---	---
Cypripedium parviflorum	Yellow Lady's-slipper					X				0	S5	---	N5
Cypripedium reginae	Showy Lady's-slipper					X				-3	S4	---	N4N5
Daucus carota	Wild Carrot	X							SE5	5	SNA	---	NNA
Dryopteris cristata	Crested Wood Fern					X				-5	S5	---	N5
Epipactis helleborine	Broad-leaved Helleborine				X		X		SE5	3	SNA	---	NNA
Eupatorium perfoliatum	Common Boneset		X							-3	S5	---	N5
Euthamia graminifolia	Grass-leaved Goldenrod									0	S5	---	N5
Eutrochium maculatum	Spotted Joe Pye Weed		X			X				-5	S5	---	N5
Fragaria virginiana	Wild Strawberry	X				X				3	S5	---	N5
Fraxinus pennsylvanica	Red Ash			X	X	X		X		-3	S4	---	N5
Geranium robertianum	Herb-Robert					X				3	S5	---	N5
Glyceria striata	Fowl Mannagrass					X				-5	S5	---	N5
Hypericum perforatum	Common St. John's-wort				X				SE5	5	SNA	---	NNA
Impatiens capensis	Spotted Jewelweed					X				-3	S5	---	N5
Iris versicolor	Harlequin Blue Flag					X				-5	S5	---	N5
Larix laricina	Tamarack		X			X				-3	S5	---	N5
Leucanthemum vulgare	Oxeye Daisy	X							SE5	5	SNA	---	NNA
Linaria vulgaris	Butter-and-eggs				X				SE5	5	SNA	---	NNA
Lycopus uniflorus	Northern Water-horehound									-5	S5	---	N5
Lysimachia borealis	Northern Starflower					X				0	S5	---	N5
Lythrum salicaria	Purple Loosestrife							X	SE5	-5	SNA	---	NNA
Maianthemum canadense	Wild Lily-of-the-valley				X		X			3	S5	---	N5
Medicago lupulina	Black Medick	X							SE5	3	SNA	---	NNA
Onoclea sensibilis	Sensitive Fern					X		X		-3	S5	---	N5
Osmunda regalis	Royal Fern					X				-5	S5	---	N5
Parnassia glauca	Fen Grass-of-Parnassus					X				-5	S5	---	N5
Phalaris arundinacea	Reed Canarygrass		X							-3	S5	---	N5
Phleum pratense	Common Timothy	X							SE5	3	SNA	---	NNA
Picea glauca	White Spruce				X		X			3	S5	---	N5
Pilosella aurantiaca	Orange Hawkweed	X							SE5	5	SNA	---	NNA
Pilosella caespitosa	Meadow Hawkweed	X			X				SE5	5	SNA	---	NNA
Pinus strobus	Eastern White Pine			X	X					3	S5	---	N5
Plantago lanceolata	English Plantain	X			X				SE5	3	SNA	---	NNA
Plantago major	Common Plantain	X							SE5	3	SNA	---	NNR
Populus balsamifera	Balsam Poplar		X			X		X		-3	S5	---	NNR
Potentilla recta	Sulphur Cinquefoil	X							SE5	5	SNA	---	NNA

Scientific Name	Common Name	MEFM1 Forb Meadow	MAMM3-1 Mixed Meadow Marsh	FOCM2-2 Eastern White Cedar Coniferous Forest	TAGM1 Coniferous Plantation	SWMM5-2 Tamarack - Hardwood Mixed Swamp	FOCM6 Naturalized Coniferous Plantation	FOCM6: Wetland Inclusion	Exotic Status	Coefficient of Wetness	Subnational (Provincial) S_Rank	Provincial Endangered Species Act	National N_Rank
Prunella vulgaris	Common Self-heal	X			X	X	X			0	S5	---	N5
Prunus serotina	Black Cherry				X					3	S5	---	N5
Prunus virginiana	Chokecherry							X		3	S5	---	N5
Pteridium aquilinum	Bracken Fern									3	S5	---	N5
Ranunculus acris	Common Buttercup	X			X				SE5	0	SNA	---	NNA
Rhododendron groenlandicum	Common Labrador Tea					X				-5	S5	---	N5
Rudbeckia hirta	Black-eyed Susan									3	S5	---	N5
Rumex crispus	Curled Dock		X						SE5	0	SNA	---	NNA
Salix bebbiana	Bebb's Willow									-3	S5	---	N5
Salix discolor	Pussy Willow							X		-3	S5	---	N5
Salix eriocephala	Cottony Willow							X		-3	S5	---	N5
Salix lucida	Shining Willow					X				-3	S5	---	N5
Salix petiolaris	Meadow Willow		X					X		-3	S5	---	N5
Scirpus atrovirens	Dark-green Bulrush									-5	S5	---	N5
Scirpus cyperinus	Common Woolly Bulrush									-5	S5	---	N5
Scutellaria galericulata	Marsh Skullcap					X				-5	S5	---	N5
Solanum dulcamara	Bittersweet Nightshade				X	X		X	SE5	0	SNA	---	NNA
Solidago canadensis	Canada Goldenrod	X	X							3	S5	---	N5
Solidago gigantea	Giant Goldenrod				X					-3	S5	---	N5
Solidago rugosa	Rough-stemmed Goldenrod	X	X		X					0	S5	---	N5
Spiraea alba	White Meadowsweet					X				-3	S5	---	N5
Symphyotrichum cordifolium	Heart-leaved Aster	X								5	S5	---	N5
Symphyotrichum lanceolatum	Panicled Aster	X								-3	S5	---	N5
Symphyotrichum puniceum	Purple-stemmed Aster									-5	S5	---	NNR
Taraxacum officinale	Common Dandelion	X			X				SE5	3	SNA	---	N5
Thelypteris palustris	Marsh Fern					X				-3	S5	---	N5
Thuja occidentalis	Eastern White Cedar			X	X	X	X	X		-3	S5	---	N5
Trifolium pratense	Red Clover	X							SE5	3	SNA	---	NNA
Tussilago farfara	Coltsfoot					X			SE5	3	SNA	---	NNA
Typha angustifolia	Narrow-leaved Cattail		X						SE5	-5	SNA	---	N5
Ulmus americana	White Elm					X	X			-3	S5	---	N5
Verbascum thapsus	Common Mullein	X							SE5	5	SNA	---	NNA
Vicia cracca	Tufted Vetch	X							SE5	5	SNA	---	NNA
Vitis riparia	Riverbank Grape			X	X					0	S5	---	N5

Subnational (Provincial) Exotic Status: SE1 to SE5 based on increasing abundance
Coefficient of Wetness: reflects species affiinity for wet soil conditions; ranges from obligate wetland species (-5) to obligate upland species (5)
Subnational (Provincial) Rank: S1 - Critically Imperiled, S2 - Imperiled, S3 - Vulnerable, S4 - Apparently Secure, S5 - Secure, S#? - Inexact Numeric Rank, SNA - Not Applicable, SNR - Unranked
National Rank: N1 - Critically Imperiled, N2 - Imperiled, N3 - Vulnerable, N4 - Apparently Secure, N5 - Secure, N#? - Inexact Numeric Rank, NNA - Not Applicable, NNR - Unranked
Endagered Species Act: EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern), NAR (Not At Risk)

Appendix E

Breeding Bird Survey Data

Dawn Breeding Bird Data

			Survey Station						Conservation Rank		
Family	**Scientific Name**	**English Common Name**	**1**	**2**	**3**	**4**	**Incidental**	**Breeding Evidence**	**National N-rank**	**Provincial S-rank**	**Provincial Endangered Species Act**
Cardinalidae	*Passerina cyanea*	Indigo Bunting			S^{A}			Possible	N5B	S5B	---
Columbidae	*Zenaida macroura*	Mourning Dove		S^{A}				Possible	N5B,N5N	S5	---
Corvidae	*Corvus brachyrhynchos*	American Crow			H^{B}		X	Possible	N5B,N5N	S5	---
Corvidae	*Cyanocitta cristata*	Blue Jay		H^{B}			X	Possible	N5	S5	---
Fringillidae	*Haemorhous purpureus*	Purple Finch	S^{B}					Possible	N5B,N5N	S5	---
Fringillidae	*Spinus tristis*	American Goldfinch	S^{A}		S^{A}/FO^{B}	S^{A}		Probable	N5B,N5N	S5	---
Paridae	*Poecile atricapillus*	Black-capped Chickadee		S^{A}/H^{B}	S^{A}	S^{A}	X	Probable	N5	S5	---
Parulidae	*Geothlypis trichas*	Common Yellowthroat			S^{B}	$S^{A,B}$	X	Probable	N5B,N3N	S5B,S3N	---
Parulidae	*Seiurus aurocapilla*	Ovenbird	$S^{A,B}$	S^{A}		S^{A}		Probable	N5B	S5B	---
Parulidae	*Setophaga virens*	Black-throated Green Warbler		S^{B}			X	Possible	N5B	S5B	---
Passerellidae	*Melospiza melodia*	Song Sparrow		S^{B}	S^{B}			Possible	N5B,N5N	S5	---
Passerellidae	*Zonotrichia albicollis*	White-throated Sparrow			A^{B}		X	Probable	N5B,N5N	S5	---
Picidae	*Dryobates villosus*	Hairy Woodpecker		S^{B}				Possible	N5	S5	---
Picidae	*Dryocopus pileatus*	Pileated Woodpecker		S^{B}				Possible	N5	S5	---
Regulidae	*Regulus satrapa*	Golden-crowned Kinglet			S^{B}	S^{A}		Possible	N5B,N5N	S5	---
Sittidae	*Sitta canadensis*	Red-breasted Nuthatch			S^{B}			Possible	N5	S5	---
Troglodytidae	*Troglodytes aedon*	House Wren			S^{B}			Possible	N5B	S5B	---
Troglodytidae	*Troglodytes hiemalis*	Winter Wren				S^{B}		Possible	N5B,N4N	S5B,S4N	---
Turdidae	*Catharus fuscescens*	Veery				$S^{A,B}$	X	Probable	N5B	S5B	---
Turdidae	*Turdus migratorius*	American Robin	$S^{A,B}$	S^{B}	S^{B}	$S^{A,B}$		Probable	N5B,N5N	S5	---
Tyrannidae	***Contopus virens***	**Eastern Wood-pewee**		**$S^{A,B}$**	**S^{B}**		**X**	Probable	**N4B**	**S4B**	**SC**
Tyrannidae	*Sayornis phoebe*	Eastern Phoebe		S^{A}	S^{A}			Possible	N5B	S5B	---
Vireonidae	*Vireo flavifrons*	Yellow-throated Vireo	S^{B}					Possible	N4B	S4B	---
Vireonidae	*Vireo olivaceus*	Red-eyed Vireo	S^{A}					Possible	N5B,N5N	S5B	---
Vireonidae	*Vireo solitarius*	Blue-headed Vireo			S^{B}			Possible	N5B	S5B	---

Surveys Conditions:

[B]June 18, 2024: Start Time 0735hr/ End Time 0834hr; Temperature 23°C; Wind B0; Cloud Cover 45%; Precipitation none; Observer: H. Marcks

[B]June 26, 2024: Start Time 0745hr/ End Time 0848hr; Temperature 17°C; Wind B2; Cloud Cover 0%; Precipitation none; Observer: K. Tuininga

Breeding Evidence Codes:

H - Species observed in its breeding season in suitable nesting habitat
C - Call heard (male or female), in suitable nesting habitat in nesting season.
S - Singing male present, or breeding calls heard, in suitable nesting habitat in nesting season.
A - Agitated behaviour or alarm calls of an adult in suitable nesting habitat during the species breeding season
FO - Fly over

Conservation Rank

S-rank: S1 - Critically Imperiled; S2 - Imperiled, S3 - Vulnerable, S4 - Apparently Secure, S5 - Secure, SNR - Unranked, SNA - Not applicable, SU - Unrankable, S#? - Inexact Numeric Rank, S#B - Breeding, S#N - Non-breeding, S#M - Migrant
N-rank: N1 - Critically Imperiled; N2 - Imperiled, N3 - Vulnerable, N4 - Apparently Secure, N5 - Secure, NNR - Unranked, NNA - Not applicable, NU - Unrankable, N#? - Inexact Numeric Rank, N#B - Breeding, N#N - Non-breeding, N#M - Migrant
Endangered Species Act Species at Risk in Ontario List: EXP (Extirpated), END (Endangered), THR (Threatened), SC (Special Concern), NAR (Not At Risk)

Appendix F

Significant Wildlife Habitat Assessment Table

Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E

Seasonal Concentrations of Areas of Animals

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		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. Information Sources • 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.	Habitat in the Study Area does not meet criteria; the meadow habitat is small and incapable of supporting aggregations of waterfowl. Listed species were not documented on site. SWH for waterfowl stopover and staging (terrestrial) therefore is considered to be absent in Study Area.
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) Information Sources • 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.	No ponds, lakes, bays, coastal inlets are present in the Study Area. Meadow marshes and swamp are present in the Study Area however are not suitable to provide this function. NHIC does not list Waterfowl Concentration Areas as occurring in the area. None of the listed wildlife species were documented during site visits. SWH for waterfowl stopover and staging (aquatic) therefore is not present in Study Area.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		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. Information Sources • 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.	No lakes, rivers, beach areas, bars or seasonally flooded, muddy and un-vegetated shoreline habitats are present in the Study Area. Study Area does not contain any Great Lakes coastal shoreline. NHIC does not list Shorebird Migratory Concentration Area as occurring in the area. Listed species were not documented during field investigations. SWH for migratory shorebird migratory stopover is therefore not present.
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	Hawks/Owls: 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. Bald Eagle: 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 Information Sources: • 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.	Although the Study Area contains both open meadow habitat and woodlands, the Study Area does not contain suitable habitat to provide Raptor Wintering SWH; the disturbed meadow on the property is less than 1 ha in size. No fields are located within the Study Area; open field to the northwest outside of the Study Area is a disturbed agricultural field that would not be appropriate habitat to contribute to wintering raptor habitat. NHIC does not list Raptor Winter Concentration Area as occurring in the area. Listed species were not documented during field investigations. SWH for raptor wintering is therefore not present.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		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. Information Sources • 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. Bat hibernacula SWH is therefore not present.
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 Information Sources • 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.	The woodlands present within and adjacent to the Study Area contain forested communities, however the woodlands are dominated by coniferous tree species, therefore listed candidate habitat is not present in the Study Area. **A mixed swamp community on the property may contain suitable candidate bat roost trees. Further discussion is provided in the EIS.**
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. Information Sources • 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.	No core turtle habitat was noted in the Study Area and no drainage feature was observed on the property to contain suitable habitat (*i.e.*, permanent deep water) for turtle wintering.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		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 . Information Sources • 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.	While potential overwintering habitat features are generally common within the landscape, this function is generally intended to protect congregations of individuals overwintering. There are no talus, rock barren, or alvar sites in the area. **Within the Study Area reptiles may gain access to below the frost line for hibernation through rodent burrows and tree root systems. A rock foundation was also noted in the Study Area which may provide access to hibernation habitat.** **Further discussion is provided in the EIS.**

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Colonially -Nesting Bird Breeding Habitat (Bank and Cliff) **<u>Rationale:</u>** 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; *NatureCounts* 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 Study Area does not meet criteria related to ELC Ecosite Codes and the listed wildlife species were not documented during field investigations. No bridges, steep slopes, cliffs or banks were observed within the Study Area. SWH for bank and cliff colonial nesting birds is therefore not present.
Colonially -Nesting Bird Breeding Habitat (Tree/Shrubs) **<u>Rationale</u>:** 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.	No lakes, islands or peninsulas are present in or adjacent to the property; mixed swamp wetlands are present in the Study Area however are not considered appropriate breeding habitat as there are no lakes, ponds and no open water/flooded areas were observed on the property in the Study Area. NHIC does not list Mixed Wader Nesting Colony occurrence in the area. Ontario GeoHub Wildlife Values data does not have records of colonial nesting in the area. None of the listed species were documented during the field investigations.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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. Information Sources • 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.	Meadow Marsh habitat is present in the Study Area however no lakes, large rivers, rocky islands or peninsulas were present in the Study Area. The Traverston Creek riparian areas are vegetated and not in open fields or pastures. NHIC does not list Colonial Waterbird Nesting Area as occurring in the area. None of the listed species were recorded on site. SWH for ground colonial nesting breeding birds is therefore considered to be absent from the Study Area.
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 Special Concern Monarch	Combination of ELC Community Series; need to have present one Community Series from each land class: Field: CUM CUT CUS Forest: 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 Information Sources • 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 5 km of Lake Ontario. Therefore, this SWH type is not applicable to the Study Area.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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. Information Sources • 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 5 km of Lake Ontario. Therefore, this SWH type is not applicable to the Study Area.
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 woodlands within and adjacent to the property are mapped as deer wintering habitat by MNR (source: Ontario GeoHub).

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of SWH in Study Area
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Winter Congregation Areas **<u>Rationale:</u>** 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.	No woodlands within and adjacent to the property are mapped as deer wintering habitat by MNR (source: Ontario GeoHub).

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. Information Sources • 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 key criteria to be considered significant. No cliff or talus slopes are present in the area.
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. Information Sources • 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 key criteria to be considered significant. No sand barren sites are present in the area.
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) *Carex crawei* 2) *Panicum philadelphicum* 3) *Eleocharis compressa* 4) *Scutellaria parvula* 5) *Trichostema brachiatum* 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. Information Sources • 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 key criteria to be considered significant. No alvar sites are present in the area.

Rare Vegetation Community	Candidate SWH			Confirmed SWH	Assessment
	ELC Ecosite Code	Habitat Description	Detailed Information and Sources	Defining Criteria	
Old Growth Forest **Rationale:** Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth forests are characterized by heavy mortality 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.	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. Information Sources • 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	Field Studies will determine: • 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.	The woodland habitat is not considered to be old growth forest as the dominant trees are less than 140 years old and the woodlands lack the characteristics required to be considered old growth.
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. Information Sources • 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 key criteria to be considered significant. No savannah sites are present in the area.
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. Information Sources • 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 key criteria to be considered significant. There are no tallgrass prairie sites within the area.
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. Information Sources • 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.

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. Information Sources • 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.	Upland treed habitats are present in the Study Area and adjacent to marsh wetlands (small marsh wetland within the Study Area and larger marsh wetland to the north of the Study Area). The meadow marsh habitat within the Study Area however is small and inappropriate for waterfowl use. Further, the uplands are coniferous plantations that do not contain sufficient cavity trees for nesting. None of the listed species were documented in the Study Area. SWH for waterfowl nesting is therefore considered to be absent from the Study Area.
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). Information Sources • 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” • Significant Wildlife Habitat Technical Guide Index #26 provides development effects and mitigation measures	Suitable habitat for Bald Eagle is not present as there are no lakes or rivers in the Study Area. Further, no Bald Eagle nesting sites are listed in the area (Ontario GeoHub) and Ontario Breeding Bird Atlas data indicates that there is only a small possibility of Bald Eagle being recorded in Grey Region. No Bald Eagles were documented during site surveys. No Osprey nest site is mapped in Ontario GeoHub for the area and no Osprey were recorded during site surveys. Suitable habitat features are not present within the Study Area; no shorelines, islands, lakes, ponds or rivers are present in the Study Area. Criteria for Bald Eagle and Osprey Nesting, Foraging and Perching SWH is not present in the Study Area.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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. Information Sources • 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.	Natural and plantation woodlands are present in the Study Area that contribute to a feature greater than 30 ha in size. Interior habitat 200 m from the forest edge is present in the feature, outside of the property and absent from the Study Area. The most contiguous forested area with the greatest amount of forest interior habitat is located outside of the Study Area, on the south side of Concession 8. None of the listed species were documented on site.
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 Special Concern Species 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. Information Sources • 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 nesting habitat was not observed within the Study Area.

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 Information Sources • 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.
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 Information Sources • 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 June amphibian evening call survey indicated that the Study Area is not a candidate for significant amphibian breeding habitat.
Amphibian Breeding Habitat (Wetlands) **Rationale;** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	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	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 (e.g. Bull Frog) may be adjacent to woodlands.	• 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. Information Sources • 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.	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 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.	The June amphibian evening call survey indicated that the Study Area is not a candidate for significant amphibian breeding habitat.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
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.	No interior habitat measured 200 m from the forest edge is present in the Study Area. **Red-breasted Nuthatch, Veery, Blue-headed Vireo, Black-throated Green Warbler, Ovenbird, and Winter Wren were recorded on site.** **Further discussion is provided in the EIS.**

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. Information Sources • 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 meadow marsh habitat within the Study Area is small and inappropriate for marsh breeding bird use. No pond is present in the Study Area. Traverston Creek is present in the Study Area, over 100 m from the proposed severance areas and mixed swamp comprises the western portion of the property. Suitable habitat to provide this function is absent from the proposed severance areas; Green Heron habitat may be present outside of the property to the north-west in association with Traverston Creek. None of the listed wildlife species were documented during field investigations.
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. Information Sources • 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	No large grassland areas are present in the Study Area. None of the listed species were recorded on site. Habitat for open country bird breeding SWH is not present in 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	Indicator Spp: Brown Thrasher Clay-coloured Sparrow Common Spp. Field Sparrow Black-billed Cuckoo Eastern Towhee Willow Flycatcher **Special Concern:**	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. Information Sources • Agricultural land classification maps, Ministry of Agriculture. • Local bird clubs. • Ontario Breeding Bird Atlas	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”	The Study Area contains coniferous forest and plantation, and mixed swamp. No large fields succeeding to shrub or thicket habitats are present on the property or adjacent lands. None of the listed species were recorded during site surveys. Suitable candidate habitat for Shrub/Early Successional Bird Breeding SWH is therefore not present in the Study Area.

Wildlife Habitat	Wildlife Species	Candidate SHW		Confirmed SWH	Assessment
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
CWS (2004) trend records.	Golden-winged Warbler		• Reports and other information available from Conservation Authorities.	• Significant Wildlife Habitat Technical Guide Index #33 provides development effects and mitigation measures.	
Terrestrial Crayfish **<u>Rationale:</u>** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish; (*Cambarus Diogenes*)	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.	Terrestrial Crayfish chimneys were not documented within the Study Area.
Special Concern and Rare Wildlife Species **<u>Rationale:</u>** 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.	**Eastern Wood-pewee (Special Concern) was recorded on site.** **Snapping Turtle (Special Concern) has occurrences recorded in the survey grid square which encompass the Study Area (Ontario Reptile and Amphibian Atlas square 17NK20).** **Further discussion is provided in the EIS.**

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)** Information Sources • 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	Assessment of the amphibian call survey results indicate that the Study Area does not contain significant amphibian breeding habitats therefore amphibian movement corridors is not expected to be present.
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). Information Sources • 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	No woodlands within and adjacent to the property are mapped as deer wintering habitat by MNR. Therefore, consideration for deer movement corridors SWH is not warranted.

Exceptions for Ecoregion 6E

EcoDistrict	Wildlife Habitat and Species	Candidate			Confirmed SWH	Assessment
		Ecosites	Habitat Description	Habitat Criteria and Information	Defining Criteria	
6E-14 **Rationale:** The Bruce Peninsula has an isolated and distinct population of black bears. Maintenance of large woodland tracts with mast-producing tree species is important for bears.	**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), Information Sources 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 **Rationale:** 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 Information Sources • 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.