

Scoped Natural Heritage Evaluation (sNHE)
Proposed One (1) Lot Severance
48 Hunts Line Road
Part Lot 5, Concession 12 (Harvey)
Municipality of Trent Lakes
County of Peterborough

Prepared For:

Mr. Michael Michell
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Project #: 21-2977

April 2022



ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

April 5th, 2022

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Attention: **Mr. Michael Michell**

Re: *Scoped Natural Heritage Evaluation (sNHE)*
Proposed One (1) Lot Severance
48 Hunts Line Road
Part Lot 5, Concession 12 (Harvey)
Municipality of Trent Lakes, County of Peterborough
ORE File No. 21-2977

Dear Mr. Michell:

As requested, Oakridge Environmental Ltd. (ORE) is pleased to provide this *Scoped Natural Heritage Evaluation (sNHE)* for the above-referenced property located in the Municipality of Trent Lakes.

ORE staff completed a series of site inspections during the summer and fall period. ORE staff did not detect any Threatened, Endangered or Special Concern species on the subject site. An unevaluated wetland was identified in the wooded area east of the proposed severance lot.

This sNHE has addressed the Key Natural Heritage Features and Significant Wildlife Habitat (SWH) identified on the property. Recommendations with respect to mitigation measures intended to limit the development from imposing on these local environmental features have been included in this report. It is expected the severance in the southwest corner of the property can proceed, provided the recommendations in this report are implemented.

Yours truly,
Oakridge Environmental Ltd.



Rob West, HBSoc., CSEB
Senior Environmental Scientist

Table of Contents

Page No.

1.0	Introduction	1
1.1	General	1
1.2	Site Description, Location and Access	1
2.0	Policy Framework	2
2.1	Provincial Policy Statement	2
2.2	Conservation Authority	3
2.3	Growth Plan for the Greater Golden Horseshoe (Growth Plan).	3
2.4	Peterborough County Official Plan	4
2.5	Municipality of Trent Lakes.	5
3.0	Scope of Work	5
4.0	Physical Setting.	5
4.1	Topography and Drainage	5
4.2	Geological Setting.	6
5.0	Background Data.	7
5.1	Natural Heritage Information Centre (NHIC)	7
5.2	Ontario Breeding Bird Atlas (OBBA)	7
5.3	eBird	8
5.4	iNaturalist.	9
6.0	Inspection Methodologies	9
6.1	Vegetation	9
6.2	Avifauna Surveys	10
6.3	Mammals.	11
6.4	Herptiles	11
6.5	Significant Wildlife Habitat (SWH).	12
7.0	Site Inspection Data	13
7.1	General	13
7.2	Ecological Land Classification (ELC)	13
7.3	Fauna	16
7.3.1	Avifauna	16
7.3.2	Herptiles.	16
7.3.3	Mammals	17
7.4	Endangered - Threatened or Provincially Rare Species	17
8.0	Significant Wildlife Habitat Assessment (SWH)	18
9.0	Impact Assessment	19
9.1	Sensitive Features	19
9.2	NHIC Species	20
9.3	Significant Wildlife Habitat	20
9.4	Area Sensitive Bird Species	21
9.5	Identified SAR/SAR Habitat	21
9.6	Construction	21

10.0	Conclusions	22
11.0	Recommendations	23

List of Figures

Figure 1	General Location
Figure 2	Topography and Drainage
Figure 3	Surficial Geology
Figure 4	Vegetation
Figure 5	Site Photos
Figure 6	Site Photos
Figure 7	Constraints

List of Appendices

Appendix A	Excerpt from the Provincial Policy Statement (PPS)
Appendix B	County of Peterborough Preliminary Severance Review (PSR)
Appendix C	Excerpt from the County of Peterborough Official Plan (OP)
Appendix D	Species Descriptions
Appendix E	NHIC Database
Appendix F	OBBA Database
Appendix G	Species List
Appendix H	Significant Wildlife Habitat (SWH)

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1.0 Introduction

1.1 General

Oakridge Environmental Ltd. (ORE) is pleased to provide this *Scoped Natural Heritage Evaluation (sNHE)* for the above-referenced property (referred to as the subject site), located southwest of Buckhorn, Ontario. It is understood that the current property owner would like to sever a single lot for the purpose of a residential development.

The subject site possesses unevaluated wetland identified via the provincial mapping database, which triggered the NHE. Given the presence of this sensitive environmental feature, a study must be completed to demonstrate that there will be no negative impacts as a result of the proposal to the local Key Hydrologic Features (KHF).

As you are aware, the application consists of a consent for two (2) lots, however, based on our review of the background data and the most recent inspection, only the southwest lot (on Hunts Line Road) appears to fall within 120 m of nearby wetlands. In addition, the County provided an email to the proponent confirming the proposed northeast lot would not require an evaluation. As such, the study has been requested to support the consent application for the southwest lot only.

1.2 Site Description, Location and Access

The site is situated at 48 Hunts Line Road within part of Lot 5, Concession 12, in the former Township of Harvey, now in the Municipality of Trent Lakes, County of Peterborough (Figure 1). The property is bound by 6 Foot Bay Road to the east and Hunts Line Road to the south, and contains an existing residence and accessory structures. The proposed severance lot is located in the southwest corner of the subject parcel.

The site is accessed directly from Hunts Line Road, approximately 2 km south of the intersection of Lakehurst Road and 6 Foot Bay Road. The total area of the subject site is approximately 100 acres (40.6 ha).

2.0 Policy Framework

2.1 Provincial Policy Statement

The 2020 Provincial Policy Statement (PPS) provides policy direction on matters of provincial interest related to land use planning and development. This document stresses the need for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of Natural Heritage Features.

Section 3 of the Planning Act requires that Planning authorities shall “have regard for” the PPS when exercising any authority that affects municipal Planning matters. Since this is a Planning application, the Municipality and County will usually apply the most recent version of the PPS Natural Heritage section requirements to ensure that the relevant natural heritage features are detected and that any required mitigation is applied to protect those features (Appendix A).

ORE is knowledgeable of and has reviewed Section 2.1 (Natural Heritage) of the 2020 PPS with specific regard to the applicability of the Policy to the subject site. In addition, ORE has reviewed and utilized the methodologies outlined in the Ministry of Northern Development, Mines, Natural Resources and Forestry’s (MNDMNR’s) Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005 (2005).

The PPS lists a number of features that must be addressed, including but not limited to the following:

- Significant Woodlands;
- Significant Wetlands;
- Significant Valleylands;
- Significant Wildlife Habitat (SWH);
- Significant Fisheries Habitat, and
- Species at Risk.

The MNDMNR’s assessment requirements under the “*Significant Wildlife Habitat Criteria Schedules For Ecoregion 6E*” is applicable to Planning Applications. ORE staff reviewed the site’s vegetation and formed a list of SWH, which was further refined based on our knowledge of the site conditions and extent of the vegetation types. The SWH assessment focussed on the type of vegetation to be impacted by the development, rather than all of the ELC types observed on the subject property, as those vegetation types outside of any site alterations would be unaffected/retained.

Similarly, the property was examined to determine whether any of the remaining KNHFs in the list above are present on-site and if so, whether they are applicable to the

development proposal.

2.2 Conservation Authority

The site does not occur within the jurisdiction of any Conservation Authority. Therefore, the proponent should not be required to satisfy any associated regulatory requirements.

The site is not known to possess any flooding hazards, and if it did, this would be addressed under the PPS at the Municipal and County levels. A separate study would be necessary to identify the flood limit.

2.3 Growth Plan for the Greater Golden Horseshoe (Growth Plan)

The proposed severance is subject to a Planning application and related approvals. Consequently, the Growth Plan is applicable.

In July of 2017, the Ministry of Municipal Affairs and Housing issued the Growth Plan for the Greater Golden Horseshoe (Growth Plan). The Growth Plan is a policy document intended to assist planning authorities implement a set of standardized objectives for development within their jurisdictions. Among other things, the Growth Plan established a Natural Heritage System (NHS) in accordance with the PPS for the entire region. The NHS identifies Key Natural Heritage Features (KNHF) and water resource systems (Key Hydrologic Features - KHF).

The Growth Plan also prescribes certain setbacks from these features, typically in the form of a “Vegetation Protection Zone” (VPZ), also commonly referred to as a Vegetation Protection Area (VPA)¹. The NHS and these prescribed setbacks are intended to be applicable to all new developments that require a Planning application, outside the designated settlement areas of the Greater Golden Horseshoe.

The Growth Plan was amended in May 2019 due to its restrictive nature. It was revised to allow Municipalities more decision-making abilities in their jurisdiction by providing their own Natural Heritage System (NHS), rather than adopting the Growth Plan in its entirety.

Section 4.2.3.1 of the Growth Plan states that “*outside of settlement areas, development or site alteration is not permitted in key natural heritage features that are part of the*

¹

For the purpose of this report, VPA is used in place of VPZ in an attempt to prevent confusion with regards to zoning regulations and bylaws.

Natural Heritage System for the Growth Plan or in key hydrologic features...". Since the Natural Heritage System for the Growth Plan has not yet been implemented by the County of Peterborough, this policy currently does not prohibit development in key natural heritage features (such as any potentially significant woodlands on site). However, this policy provides protection to the key hydrologic features (i.e., the unevaluated wetland) from development and site alteration.

Neither the Municipality nor County have a current NHS that would apply.

This assessment has reviewed the site conditions to confirm the absence/presence of any KHF within the subject site, or on lands directly adjacent to the subject site. The applicable setbacks have been applied as per the Growth Plan.

2.4 Peterborough County Official Plan

A Preliminary Severance Review (PSR) was completed by Peterborough County staff, at the request of the property owners, dated July 2, 2021. The PSR outlines the severance requirements and is included in Appendix B.

The Official Plan (OP) of Peterborough County states the relevant requirements for all studies to be completed in support of a proposed development application. The OP lists certain criteria that must be met for an "Environmental Impact Assessment". The applicable excerpts from the OP are included in Appendix C.

The County has not completely adopted the provincial Growth Plan requirements. Although the County adheres to the requirements under the Growth Plan regarding Key Hydrological Features (KHF), it currently does not adhere to the Significant Woodland requirements. It is understood that the County is drafting a Natural Heritage System (NHS), containing its own Significant Woodland requirements. Until then, the Significant Woodland evaluation and protection measures under the existing Growth Plan are not applicable.

Based on the County requirements, an EIA/NHE must be completed for this severance application due to the proposed location of the severance occurring within 120 m of a KHF. The County also requires the evaluation include a review and discussion of threatened and endangered species, either on or directly adjacent to the subject site, as part of a Planning application.

The County may require a peer review of this report. Therefore, additional information may be requested to satisfy both the County of Peterborough and their peer review consultant.

2.5 Municipality of Trent Lakes

The proponent's application is submitted to the Municipality of Trent Lakes for the purpose of obtaining Planning approvals for the consent. The Municipality relies on the County and the peer review process to ascertain whether the natural heritage objectives have been adequately addressed in this sNHE.

3.0 Scope of Work

In completing this sNHE, the following tasks have been completed:

- Relevant background information regarding the site (air photos, topographic mapping, etc.) was compiled and reviewed.
- A preliminary screening for Species at Risk (SAR), in accordance with the Ministry of Environment, Conservation and Parks (MECP) preliminary screening guideline requirements. Queries of the following databases were conducted: MNDMNR's Natural Heritage Information Centre (NHIC) website database, iNaturalist database, eBird database, and the Ontario Breeding Bird Atlas (OBBA) database. A number of the databases such as the Butterfly Atlas, and Herptile Atlas were recently incorporated into the iNaturalist database, therefore a review of the iNaturalist (NHIC Version) database would capture those rare species discussed in the former Atlas databases.
- A series of four (4) inspections were completed in the summer and fall seasons. A biological inventory of the flora and fauna of the property was completed. Basic vegetation communities were identified and any significant environmental features or important wildlife species were identified and their positions/boundaries were determined utilizing a dGPS. A base plan (using geo-referenced aerial photography) was prepared and all site information (i.e., vegetation and sensitive features) was plotted.
- All data have been interpreted and this report has been prepared.

4.0 Physical Setting

4.1 Topography and Drainage

As illustrated by Figure 2, the subject property is situated on a gradual, west-facing slope with a total relief of approximately 9 m. As the slope does not appear to be associated with a specific landform, it may be structurally controlled by the underlying

bedrock surface.

Three areas of unevaluated (forested) wetland occur on the property, for all intents and purposes surrounding a central dry area. While the mapping suggests that the wetland north of the proposed lot is a somewhat isolated pocket, the other wetlands in the area appear to be directly linked to a larger wetland feature that occurs west and south of the property, referred to as the Sandy Lake South (PSW complex). The Sandy Lake South wetland complex ultimately conveys flows to Buckhorn Lake, about 1.4 km to the south. No channelized watercourse features are mapped on the property.

The preponderance of wetlands on and surrounding the subject property may be indicative of a shallow water table condition.

4.2 Geological Setting

As illustrated by Figure 3, most of the subject property is underlain by a stony, carbonate-rich silt and sand till. This till is part of the Dummer Complex. Dummer Complex sediments have a sandy matrix supporting a coarse stony component. The coarse component is typically composed of large and angular (broken) blocks of Paleozoic bedrock limestone. The stone composition primarily reflects the underlying bedrock lithology, although can contain some granitic materials. Dummer Complex is composed of scattered, pitted hummocks of blocky, angular debris extending as a broad belt from Lake Simcoe to northeast of Kingston, traditionally regarded as an “end moraine”. The northern margin generally follows the Precambrian - Paleozoic bedrock contact. The somewhat loose density of this till can locally enhance permeability.

Figure 3 also indicates that there is a small arcuate area of stone-poor till that crosses part of the southern half of the subject property. This is an occurrence of the Newmarket Till, which is extensive south of the site where it is commonly drumlinized. The Newmarket Till is widely recognized as a regional aquitard.

While both tills have similar compositions, the Newmarket Till is more commonly a very dense and low-permeability substrate in comparison to till of the Dummer Complex. However, the upper part of the Newmarket Till can exhibit enhanced permeability due to weathering and fissuring.

Other than the tills, the mapping indicates that there are extensive deposits of organic soil (peat) which appear to occupy valleys and the local basin that contain the wetlands.

The thickness of the above soils cannot be determined from the mapping. However, from perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 5104850 encountered

2.7 m of till above the limestone bedrock. That well reportedly had a static water level of 4.57 m (below ground surface). Another nearby well (No. 5115337) penetrated through only 2.1 m of till above the bedrock, with a static water level of 1.5 m.

5.0 Background Data

5.1 Natural Heritage Information Centre (NHIC)

The NHIC provides an online database managed by the Ministry of Northern Development, Mines, Natural Resources and Forestry (MNDMNR). Within the database, Ontario has been divided into a grid consisting of 1 km² areas or regional squares, each given a unique identifier. The squares can be searched for species of conservation concern, plant communities, wildlife concentration areas and natural areas.

The property falls within four (4) of the 1 km² squares: 17QK0632, 17QK0633, 17QK0732, and 17QK0733.

The query indicates that four (4) Species at Risk (SAR) have been recorded in the area:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Black Ash	<i>Fraxinus nigra</i>	Threatened*
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern

*Note: COSEWIC only

A brief description of these species and their preferred habitat is included in Appendix D. Our site inspections included targeted searches for potential SAR habitat of these species. An excerpt from the NHIC's website illustrating the location of the squares relative to the subject site is included in Appendix E.

5.2 Ontario Breeding Bird Atlas (OBBA)

The OBBA² provides up-to-date reliable information on birds within Ontario. The information includes species descriptions, habitats, range, documented sightings, etc. The subject site occurs within the 10 km² area mapped as 17TQK03, Region 16,

²

managed by Bird Studies Canada.

Peterborough. The Summary Sheets for this atlas area are provided in Appendix F.

From our review of the information, significant breeding species that could potentially be associated with habitats in the site area include the following:

<u>Common Name</u>	<u>Scientific Name</u>	<u>SARO Status</u>
Barn Swallow	<i>Hirundo rustica</i>	Threatened
Black Tern	<i>Chlidonias niger</i>	Special Concern
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	Special Concern
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Special Concern
Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern

Brief descriptions of each of the listed species and associated preferred habitats are included in Appendix D. The site inspections included a review of potential SAR habitat and targeted searches for the above listed species.

5.3 eBird

eBird is a citizen science database, whereby birding individuals can attend public areas referred to as “hotspots” and list species of bird they have detected each time they visit the hotspot location. According to the eBird Geographic Information System (GIS) database, the nearest hotspot is Sandy Creek Bay (L4727815), located 1.5 km west of the site. A total of 10 species were recorded. Of those, one (1) species is considered SAR:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern

A brief descriptions for Common Nighthawk and its associated preferred habitats are included in Appendix D.

5.4 iNaturalist

The iNaturalist database provides a geographical site map which contains individual species occurrences. The NHIC version of the iNaturalist database is specific to those species tracked by the NHIC. These include SAR as per those identified in the Species at Risk Ontario website and also provincially rare species that the NHIC tracks in their records. The occurrence data includes the professional/surveyors name, confirmation identification by other professionals, occurrence photos, and the date the rare species was observed.

The iNaturalist Geographic Information System (GIS) database was reviewed to determine if any SAR sightings have occurred either on, or within the vicinity of the subject site. Four (4) SAR species were reported either directly on or in the general vicinity of the subject site. The species list of observations within a 2 km radius of the site has been compiled below:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Butternut	<i>Juglans cinerea</i>	Endangered
Blanding's Turtle	<i>Emydoidea blandingii</i>	Endangered
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Midland Painted Turtle	<i>Chrysemys picta marginata</i>	Special Concern*

*Note: COSEWIC only

The descriptions of SAR species and observations are provided in Appendix D.

6.0 Inspection Methodologies

6.1 Vegetation

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First Approximation and It's Applications* (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes.

There have been a number of updates to the classification system to further refine the Ecosites throughout Ontario. As a result, the 2008 *Draft ELC Guide* provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes

many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of both the 1998 ELC communities (considered the primary classification system) and the 2008 Draft ELC to supplement the 1998 ELC communities where feasible.

Prior to conducting the site inspections, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified community was subsequently inspected through soil and vegetation analysis. Dominant vegetation types were recorded and boundaries of the various communities were refined during the inspections. Any identified KHF's were mapped using a dGPS and the boundary of any such features applied to our GIS mapping for the site.

Soil characteristics were determined using the methods outlined in the *Field Manual for Describing Soils in Ontario* (2009) and the results were used to further classify the ecological community. Where possible, any exposed soil areas were also explored to determine the overall texture of the soils in the area.

In addition to identifying and mapping the ELC communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive, and/or whether they may represent Species at Risk habitat.

6.2 Avifauna Surveys

ORE staff attended the site a total of four (4) times during the summer and fall seasons and conducted point-count surveys in general accordance with the OBBA survey techniques. ORE staff endeavoured to detect all available avian species by sight, calls and notes, within and proximal to the site. Bird calling devices and “pishing and squeaking” were used to attract bird species from within the forest communities outside of the typical morning chorus hours when birds are less vocal/active.

All species overheard or observed during the survey were recorded. The surveys were conducted in the early morning hours between approximately 6 AM and 7 AM, which was ideal for the season. The majority of birds were very active in the early morning period, foraging, singing, with dominant males still defending their territories during the summer period inspections.

The avian surveys did not stop during the early morning time periods; the late morning periods were spent searching the vegetation communities and identifying plant species, which were also useful in flushing and detecting birds.

Two (2) evening inspections were completed to determine whether any nocturnal

Species at Risk avian were present. The nocturnal surveys were completed between approximately 7 PM and 11 PM. One of the inspections was conducted in the shoulder period +/- four days of the full moon phase, which is favourable with respect to the Bird Studies Canada Roadside protocol, as Nightjars are more active during full moon phases.

6.3 Mammals

Mammals were detected utilizing the methodologies outlined in the MNDMNR's March 1998 - Wildlife Monitoring Programs and Inventory Techniques for Ontario. Mammals were generally identified by either direct observation or via their tracks and/or scat droppings at the site.

No live traps were set/installed at the site as a permit is necessary to trap mammals. This was deemed unnecessary as there are no known SAR mammals within the area. Tracking and other signs to detect mammals were sufficient for the purpose of this study.

The subject site does not contain any deer wintering habitat nor any other significant mammal wildlife habitat for those species outlined in the MNDMNR's October 2000 - Significant Wildlife Habitat Technical Guide.

ORE staff did not install acoustic bat detectors on-site; instead the site was reviewed in the context of whether the woodland represents SWH for colonized/roosting bats.

6.4 Herptiles

The protocol employed for detection of Herptiles followed MNDMNR's March 1998 - Wildlife Monitoring Programs and Inventory Techniques for Ontario. Furthermore, the December 2016 Survey Protocol for Ontario's Species at Risk Snakes was implemented on-site. The surveys were conducted during warm, low wind conditions, which were ideal for detecting basking snakes and lizards.

During the inspections, ORE staff conducted visual encounter surveys while searching through brush piles, rolled over lumber and deadfall within the woodland to determine whether any significant species of herptile could be detected. The visual encounter surveys extended to Hunts Line Road and 6 Foot Bay Road to identify dead-on-road herptiles from the previous evening.

ORE staff also checked within any covered areas associated with the existing building, plywood pieces, and other artificial cover objects looking for basking snakes in the early

morning and evening heat.

In addition, ORE staff completed two (2) evenings surveys in August and October for the purpose of collecting nocturnal avian data and to identify amphibian species utilizing the site. The amphibian surveys were conducted according to the MNDMNR's Marsh Monitoring Program (MMP). This program identifies the abundance of amphibians according to a numerical scale (from 1-3) such that: 1 = 1 to 2 individuals calling; 2 = there are several individuals calling, however, the number of individuals can still be identified; and, 3 = an abundance of amphibians calling and it is either very difficult or impossible to determine the number of individuals due to overlap in the number of calling males.

The surrounding wetlands that contain water throughout the growing season could provide suitable habitat for turtles from the early spring into mid-summer period. The road shoulders and open field area could provide potential nesting habitat for these species during the breeding period in the early spring season.

6.5 Significant Wildlife Habitat (SWH)

SWH has been evaluated utilizing the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E*, published by the MNR (January 2015).

Potential SWH were evaluated according to the criteria outlined in the Ecoregion 6E schedules for SWH. The SWH tables were consulted to assess whether the site possesses Seasonal Concentration Areas of Animals, Rare Vegetation Communities, Specialized Habitats of Wildlife considered SWH, and Animal Movement Corridors.

The subject site and surrounding areas possess limestone bedrock conditions at surface. The limestone bedrock was observed between the upland wooded areas and the Ash dominated swamp habitats in the vicinity of the proposed severance. The bedrock condition consisted of an exposed mini escarpment-like feature whereby the drop was fairly steep in some locations along the embankment. These conditions confirm that the SWH criteria for Ecoregion 6E is applicable in this situation. The site is located near the Precambrian and Ordovician limestone bedrock contact zone and local bedrock conditions should prevail. As described above, the till plain conditions observed at the site are consistent with the geological mapping. Therefore, if the site was dominated by an unmapped Precambrian bedrock outlier (or similar) the Ecoregion 5E criteria may have been applicable, instead.

7.0 Site Inspection Data

7.1 General

For this NHE, ORE staff conducted four (4) site inspections - two (2) diurnal and two (2) nocturnal on the following dates:

<u>Date of Inspection</u>	<u>Time of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Index</u>	<u>Conditions</u>
Diurnal- July 28, 2021	6 AM- 11 AM	25	1- Light Air	30% Cloud Cover, Migratory Bird Detection, Herptile Surveys, Vegetation Inspections
Diurnal - August 15, 2021	7AM - 11:30 AM	23	0 - Calm	30% Cloud Cover, Migratory Bird Detection, Herptile Surveys, Vegetation Inspections
Nocturnal - August 20, 2021	7 PM - 11 PM	18	1 - Light Air	15% Cloud Cover, Full Moon Cycle, Herptile/Amphibian and Nocturnal SAR Avian Detection. Vegetation Inspections.
Nocturnal - October 6, 2021	7 PM - 10:30 PM	12	3 - Gentle Breeze	50% Cloud Cover, Herptile/Amphibian and Nocturnal SAR Avian Vegetation Inspections.

The above mentioned inspections were completed to identify any/all species on the property. The species list was examined to identify any sensitive rare species (S1, S2, S3), and/or whether they have a Species at Risk Ontario status of Special Concern, Threatened, or Endangered. The vegetation types were also reviewed in the context of whether they are classified by the NHIC as provincially rare ecosites, or whether they are considered significant habitat for SAR. Three (3) of the site visits were conducted during the growing season; none were conducted during the peak breeding bird period as authorization to conduct the study was provided in mid July.

7.2 Ecological Land Classification (ELC)

ELC inspections were focussed on the proposed severance lot and immediate adjacent lands, as per the recommendations of the MNDMNR's Natural Heritage Reference

Manual. The identified ELC communities are illustrated on Figure 4 and photos of the communities/site conditions are provided in Figures 5 and 6.

Based on our site inspections, the following vegetation communities have been identified on the site, as per the 1998 and/or the draft 2008 Ecological Land Classification (ELC) for Southern Ontario:

Upland Communities:

1. Dry - Fresh Sugar Maple Deciduous Forest (FOD5)

According to the ELC, FOD5 is typically Sugar Maple rich with fewer occurrences of Beech (*Fagus grandifolia*), Red Oak (*Quercus rubra*), White Pine (*Pinus strobus*), Hop Hornbeam (*Ostrya virginiana*), American Basswood (*Tilia americana*), Black Cherry (*Prunus serotina*), White Ash (*Fraxinus americana*), Red Maple (*Acer rubrum*), White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*), and Largetooth Aspen (*Populus grandidentata*).

This community is predominantly located to the east of the proposed southwest lot, however, a small tract crosses the southern quarter of the proposed severance lot between Hunts Line Road and the small open field area. The northern portion of the proposed lot contains Cultural Meadow which is discussed below.

ORE staff did not utilize a manual auger to obtain surficial soils information, as shallow refusal was met in a number of locations, presumably on gravel or bedrock. Instead, ORE staff reviewed the soil stratigraphy in the small escarpment area between the swamp and FOD5 community. In those areas where the stratigraphy was exposed, it appeared as though the topsoil layer was consistently between 6 cm and 12 cm. The topsoil layer was dry. Below the topsoil was a till consisting of clay, silt and minor sand. There was also concentrated gravel in some parts of the till. This layer was dry-damp and measured to a depth of approximately 18 cm to 25 cm. Below this layer was a damp, heavily weathered bedrock layer that consisted of broken clasts of bedrock, mixed with sand and gravel. This layer ended at the more competent bedrock horizon which was typically 25 cm to 40 cm below the surface. ORE staff observed small bedrock fragment floats in the woodland that would sometimes overly the surficial soils. Some minor amounts of water were visible at the interface between the weathered bedrock materials and more competent bedrock zone.

2. Mineral Cultural Meadow (CUM1)

The ELC describes the CUM1 communities as resulting from cultural or anthropogenic-based disturbances/alterations to land. Tree cover is typically less than 25% and the

presence of shrubs is also less than 25%.

This community is located in the northern portion of the proposed severance lot and represents a small meadow opening surrounded by forested communities in this corner of the property. This area is relatively flat and is elevated above the surrounding wooded areas that the CUM1 habitat intersects, except for FOD5 community within the proposed severance lot. This small tract is elevated slightly above the Cultural Meadow and surrounding wooded areas, in this instance. Soils were not explored in this area as the dry compacted soils in the meadow made it very difficult to probe.

Wetland and Waterway Communities:

3. Ash Mineral Deciduous Swamp (SWD2)

The ELC (2008) describes the Ash Mineral Deciduous Swamp (SWD2) as having tree cover in greater than 25% of the ecosite. Water depth must be less than 2 m and present in greater than 20% of the ecosite. Vegetation must be predominately hydrophytic shrub and tree species. Deciduous species must be present in more than 75% of the canopy with the dominant species being Ash (*Fraxinus spp.*).

This community was observed in the woodland area east of the FOD5 community rim in the woodland tract east of the proposed severance parcel. There is a fairly dramatic drop from the FOD5 woodland community (on the order of 2 m to 2.5 m) to the low-lying SWD2 community. The embankment appears like a mini bedrock escarpment-type face whereby some areas along the slope are steep where the limestone bedrock is at surface. The remainder of the slope consists of bedrock rubble and/or till plastered bedrock slopes. The same type of condition occurs between the FOD5 and SWD2 habitats to the north of the proposed severance parcel, although the slope is less-steep than the bedrock escarpment in the east woodland tract.

ORE staff utilized a differential Global Positioning Satellite (dGPS) system to obtain the boundary of the wooded swamp feature east of the proposed severance on the retained lands. The wooded swamp feature to the north of the proposed severance on the retained lands was accurately mapped, other than the southern arm of the wetland as LIO inaccurately mapped this segment of wetland.

A hand auger was used to review the soil conditions in this feature. The soils were damp at the surface with leaf litter and ferns, and possessed a light grey-black detritus layer at the surface (up to 5 cm) and then directly into dense grey stoney till that possessed a rock flour-silty sand matrix. The till sediments were oxidized-rusty orange-grey in the upper 5 cm to 10 cm and then dark grey below 10 cm to 18 cm. The auger met refusal approximately 18 cm to 20 cm below the surface. There was water in the

base of the hand auger hole upon completion/refusal. ORE staff did not observe gley in this feature, however, it may have been deeper in amongst the coarser materials in the base of the trench-like feature. The hand auger location is provided on Figure 4.

7.3 Fauna

All faunal species identified during the site inspections were recorded. The list of faunal species observed at the site is presented in Appendix G. Relevant observations of faunal activities on and adjacent to the site are briefly discussed below.

7.3.1 Avifauna

ORE staff completed a total of four (4) inspections (two diurnal and two nocturnal). Three (3) of the inspections were completed during the migratory bird period, however, none were completed during the breeding bird period.

Early morning birding surveys were completed approximately between the hours of 6 AM and 8 AM. A good majority of avian will continue calling throughout the summer period in the early morning period. Although the surveys were conducted to detect any/all species according to their vocalizations and/or sightings, the focus was on detecting Species at Risk avian, either on or in the vicinity of the site.

ORE staff detected a number of Area Sensitive woodland bird species within the mature woodland tracts both on and adjacent to the subject site. The species detected included:

- Ovenbird (*Seiurus aurocapilla*);
- Veery (*Catharus fuscescens*);
- Pileated Woodpecker (*Hylatomus pileatus*);
- Black-throated Green Warbler (*Setophaga virens*);
- Hairy Woodpecker (*Leuconotopicus villosus*);
- Downy Woodpecker (*Picoides pubescens*), and
- Yellow-bellied Sapsucker (*Sphyrapicus varius*).

None of these bird species are listed within SARO, they are referred to sensitive woodland birds in the SWH.

7.3.2 Herptiles

Herptiles include amphibians, salamanders, lizards, turtles and snakes species. Both diurnal and nocturnal searches were conducted in the on-site habitats where these

species could occur.

ORE staff viewed beneath wood debris, and scanned the wooded swamp habitats to detect semi-aquatic herptiles and inspected the roadways for road-kill, in order to determine which herptile species are present on or near the subject site.

The main focus of the surveys was to detect the herptiles listed within the Species at Risk Ontario (SARO) website.

Only common species were overheard or observed. These are listed within Appendix G.

7.3.3 Mammals

Mammals include species such as fox, coyote, white-tailed deer, racoon, skunk, bats, etc.

SARO lists very few species of mammal within south-central Ontario as either Endangered, Threatened, or Special Concern. The majority of the listed mammals that have statuses occur within Northern and Southern Ontario regimes. Very few of those mammal species listed within SARO occur in the Peterborough region, other than bats and Mountain Lion (*Puma concolor*).

ORE staff did not install bat detectors on-site as part of this sNHE. The proposed severance possesses some deciduous woodland content that could be used by roosting bats, however, the overall area of the woodland is less than 1 ha, which is very minor.

It should be possible to mitigate the removal of good quality bat snags within this small wooded area, thus retaining any snags for communal bats.

None of the mammals observed on-site are listed within the Species at Risk Ontario (SARO) website.

7.4 Endangered - Threatened or Provincially Rare Species

ORE staff completed a thorough search of all potential SAR on the subject property when conducting the inspections. This included efforts to identify Butternut and any of the NHIC, OBBA, iNaturalist and eBird - provincially rare species.

No SAR were identified on-site during the inspections. ORE staff did observe Black Ash in the wooded swamp areas, however, there were hundreds of occurrences in the wooded swamp both on and off-site. Black Ash is not officially a Species at Risk and the

status is a recommendation by COSEWIC. Furthermore, COSWIC is a federal review body/panel and not a provincial panel, COSSARO would have to review and list Black Ash as Threatened or Endangered before it would have any real relevance to development proposals. That being said, if the Black Ash can be retained, it could benefit the species.

Although ORE staff did not detect any SAR bird species, the surveys were conducted outside the optimum period to detect these species.

No SAR snakes were observed on-site. ORE staff looked beneath artificial cover objects on-site in an effort to detect basking snakes. Snakes can cover a larger area during the spring and summer period, but tend to come back to the same hibernaculum each year. The site possesses exposed fractured bedrock escarpment/slope which can represent potential snake hibernaculum.

8.0 Significant Wildlife Habitat Assessment (SWH)

The assessment of SWH is divided into five (5) broad categories, consisting of Seasonal Concentration Area of Animals; Rare Vegetation Communities; Specialized Habitat for Wildlife; Habitat for Species of Conservation Concern (other than Endangered or Threatened), and Animal Movement Corridors. A summary table is provided in Appendix H indicating the potential for SWH to occur based on the criteria provided by the MNDRF and whether the site has suitable habitat and/or species occurrences. The following provides a discussion of areas deemed to be confirmed SWH (based on the MNR criteria) and as indicated in Appendix H.

The confirmed SWH in the area of the subject parcel and immediate surrounding lands is summarized below:

- Raptor Wintering Area;
- Bat Maternity Colonies;
- Waterfowl Nesting Area;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Seeps and Springs;
- Amphibian Breeding Habitat (Woodland);
- Amphibian Breeding Habitat (Wetlands);
- Woodland Area-Sensitive Breeding Bird Habitat;
- Open Country Bird Breeding Habitat, and
- Amphibian Movement Corridors.

The raptor wintering, woodland nesting, Bald Eagle and Osprey habitats would be

associated with the woodland areas. Some of this habitat occurs directly within the severance parcel and surrounding areas on the property.

The bat maternity colony SWH would also be associated with the mature woodland habitats. Good quality tree snags were observed on the subject property and the property directly west of the severance that should be mitigated for.

The seeps/springs, amphibian breeding, amphibian movement corridors would all be associated with the wooded swamp habitat. Provided the wetland can be unaltered in any way, it should be possible to retain the associated SWH.

The open country bird habitat present would be associated with the cultural meadow openings on the property.

A variety of woodland area-sensitive breeding birds were detected at the site consisting of woodpeckers and warblers. These woodland sensitive species were detected predominantly in the wooded area in the southern portion of the proposed severance and the tract that contains the small wooded swamp feature east of the proposed severance.

Mitigation for SWH is provided in the 2014 Significant Wildlife Habitat Mitigation Support Tool (SWHMiST). Mitigation is provided in the following sections and has regard for the tools outlined for Ecoregion 6E.

A brief description of the confirmed SWH on and immediately adjacent to the property is provided in Appendix H.

9.0 Impact Assessment

9.1 Sensitive Features

The main receptor with respect to potential impacts associated with future development is the unevaluated wetland that occurs on-site. The wetlands support the Sandy Lake South PSW complex. Potential impacts considered herein include the following:

- Potential impacts to the water quality of the unevaluated wetland from septic effluent;
- Potential impacts to Local SWH;
- Potential impacts to water quality from erosion and sedimentation during the construction phase;
- Potential impacts to the unevaluated wetlands from vegetation removal/degradation;

- Potential impacts from importation of fill to the site to raise areas of the lot for development; and,
- Potential impacts from introduction of invasive non-native species in the post construction era via imported materials.

Specific recommendations for mitigating potential impacts to sensitive features on and adjacent to the site are provided in a following section.

9.2 NHIC Species

According to the NHIC, Black Ash, Bobolink, Eastern Meadowlark, and Wood Thrush have been detected in the 1 km square area that the subject site falls within.

The subject site does not possess suitable habitat for Bobolink or Eastern Meadowlark, as they prefer large open field/agricultural areas, typically 50 acres, or more. Wood Thrush, however, could be associated with the woodland areas on and surrounding the proposed severance lot. The Ash swamp contains Black Ash, and although it is considered Threatened by COSEWIC (scientific community), it has not been adopted to the SARO website. Therefore, it is not officially considered a SAR. Regardless, impacts to the wooded swamp should be minimized or avoided.

9.3 Significant Wildlife Habitat

Potential SWH were examined either on or directly adjacent to the proposed severance and confirmed using the MNDMNR criteria. The following SWH have been compiled based on the types of vegetation present in the study area:

- Raptor Wintering Area;
- Bat Maternity Colonies;
- Waterfowl Nesting Area;
- Bald Eagle and Osprey Nesting, Foraging and Perching Habitat;
- Woodland Raptor Nesting Habitat;
- Seeps and Springs;
- Amphibian Breeding Habitat (Woodland);
- Amphibian Breeding Habitat (Wetlands);
- Woodland Area-Sensitive Breeding Bird Habitat;
- Open Country Bird Breeding Habitat, and
- Amphibian Movement Corridors.

The above mentioned SWH seem to be predominantly associated with woodland and swamp habitats either on the severance parcel or in the retained lands, and therefore,

provided mitigation is applied to the proposed development that either avoids or retains the woodland and swamp habitats, the development would not interfere with any of the above listed SWH.

Included below are specific recommendations for avoiding negative impacts to the features listed above.

9.4 Area Sensitive Bird Species

Some Area Sensitive bird species were identified to occur within the woodland habitats both on and within those habitats that abut the subject site.

Potential impacts to Area Sensitive Avian in the woodland would be in the form of significant tree removal/loss and further disruption/disturbance of the forest floor, where some of the woodland sensitive species nest.

9.5 Identified SAR/SAR Habitat

No SAR were detected on-site. Although there may be small areas of potential habitat on the property, the species do not appear to be utilizing these areas. If the habitat were satisfactory to the potential SAR, they would have likely been present during the inspections into the summer period. The majority of the SAR that could utilize the habitat would likely be Special Concern woodland species. Provided it is possible to avoid and retain the majority of the woodland, the habitat would always be available for the woodland related avian.

The small open field is not large enough for Threatened/Special Concern open country birds such as Eastern Meadowlark, Bobolink and Grasshopper Sparrow. Therefore, this habitat is unlikely to be utilized by any of these SAR.

9.6 Construction

General potential impacts related to eventual construction activities are listed below:

- noise and vibration from operation of equipment;
- wetland habitat damage, vegetation removal or disturbance;
- erosion and sedimentation generated by exposed unconsolidated soils during excavation and grading activities;
- mismanagement of fill materials and presence of construction debris or waste materials during the construction period, and

- importation of materials containing invasive species that out-compete well established native species.

To mitigate the potential for impacts associated with the above, appropriate construction scheduling will need to be considered. In addition, careful attention to the limits associated with building/grading envelopes and maintaining buffers will be required.

Specific recommendations for mitigation of impacts associated with construction activities are provided in a following section.

10.0 Conclusions

10.1 The proposed one (1) lot severance should be permitted, as the proposed development can meet the local Planning and Growth Plan requirements for all the locally identified KNHFs on-site. Overall, the development will have little impact on the identified natural heritage features/sensitive areas, provided the recommendations presented herein are adhered to.

10.2 Avian surveys were conducted during the early morning and nocturnal periods. No Species at Risk were identified on the property during these surveys.

Therefore, there are no requirements under the Endangered Species Act (ESA), Official Plans/PPS, or the Growth Plan with respect to Endangered or Threatened species.

No Special Concern species were detected on the subject property during the surveys. Therefore, no requirements are necessary under the Significant Wildlife Habitat Mitigation and Support Tool (SWHMiST) guideline. That being said, the areas on-site that may constitute suitable habitat for certain Special Concern species include the woodland habitats. It is within these woodland communities that ORE staff overheard several Area Sensitive Woodland avian. It will not be possible for the proposed lot to avoid these wooded areas entirely.

10.3 Impacts to the nearby wetlands by the proposed development are not perceived. The residential development will be required to meet the Ontario Building Code (with respect to sewage systems). The septic system will need to be located a sufficient distance away from the on-site wetlands, such that the path length increases the residence time of the effluent in the subsurface, ensuring it is more thoroughly renovated before it reaches these features. Considering a 30 m setback is proposed to occur off the boundary of the unevaluated wetlands, and the lot line cannot occur within

these features, it should be possible to maintain a distance greater than 30 m from the wetlands on the subject lot. This is twice the distance that the Ontario Building Code for Sewage Disposal Systems requires.

Additional recommendations are provided below with respect to sewage disposal on the proposed lot.

- 10.4 Both the subject site and retained lands possess SWH; the list is provided above and the recommendations (below) should be included in a set of conditions that mitigate both direct and indirect impacts to these habitats and adhere to the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST).

Mitigation should be in the form of maintaining KNHFs that support the overall SWH. Avoidance is key with respect to the maintaining the on-site woodland SWH. Similarly, if the building envelope can be targeted predominantly within the open field area to avoid the woodland and wetland communities, it should be possible to mitigate impacts to those features.

11.0 Recommendations

- 11.1 Considering that no Special Concern, Threatened or Endangered SAR were observed on-site, the Ministry of Environment, Conservation and Parks (MECP) was not contacted to determine if there are any permitting requirements with respect to SAR. As such, none are recommended herein.
- 11.2 ORE staff identified unevaluated wetlands to the east and north of the proposed severance and located the boundary of this feature according to the Ontario Wetland Evaluation System's (OWES - for Southern Ontario) 50/50 rule. The boundary of the wetland is provided on Figure 7. The Municipality of Trent Lakes Official Plan and Growth Plan requires a 30 m setback be applied to any/all KHF's. According to the current lot layout submitted by the property owner, it should be possible to maintain the recommended 30 m VPA to the KHF's on the retained lands. Figure 7 illustrates the constraints that would be associated with the new residential lot (if approved).
- Provided the proposed new lot meets all of the remaining municipal Planning requirements, it should be possible to move forward with the application.
- 11.3 The septic systems should be situated/installed toward the downgradient side of the lot which corresponds to the rear portion of the proposed lot. It is possible the proposed lot

may require the construction of a raised bed system, depending on the soil and water table conditions. If the local approval authority will authorize the installation of a filter bed unit to service the new lot, ORE would recommend utilizing that type of system given their smaller footprint and filtering capacity. However, installation of a filter bed unit is voluntary and is not a requirement.

- 11.4 The proposed lot layout illustrates that the wooded areas associated with the unevaluated wetland (and 30 m VPA) to the north and east will not be impacted by the proposed severance. There is a section of open space/farm field where the building envelope can be targeted, thus retaining these wooded areas on the subject property. By avoiding the wooded areas surrounding the swamps, this will retain the habitat for the Area Sensitive Avian Woodland SWH.

Some clearing may be necessary within the lot, however, this will be minor if the building envelope can be located predominantly within the northern portion of the proposed lot. By targeting the majority of the building envelope in the meadow portion on the lot, it should be possible to retain the majority of the core woodland habitat in the southern part of the lot.

- 11.5 Proper erosion/sedimentation controls will be required at all times while heavy equipment is in operation at this site. Silt fencing (double-row) must be installed to identify the boundary of the approved development envelope (i.e., work areas) and to serve as barriers to prevent construction activities from imposing on the 30 m VPA.

The first row should be positioned directly along the boundary of the VPA and the 2nd row should be situated within 2 m of the 1st row on the downgradient side. Both rows should be maintained on a regular basis. The 2nd row is meant to be a secondary barrier in the event of a failure. If eroded materials are able to bypass either row of silt fence, the materials should be removed manually (without equipment) and reestablished in the construction zone.

Bales of straw wrapped with a suitable geotextile filter cloth should be strategically located inside the silt fencing, especially in areas where heavier sediment loads may occur during precipitation events. The clothed bales can also be used at the corners of the silt fence to improve stability. Construction should not continue during heavy precipitation events. After any such events, the fence and bales should be checked to ensure their effectiveness.

The silt fence and cloth wrapped hay bales provide a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results from the construction on-site, this may require another type of erosion/sedimentation control such as a rock

check dam with geotextile filter cloth to ensure any sediment laden runoff is contained within the construction area. ORE staff does not expect concentrated flows on the site, and the above mentioned would only be necessary if the contractor fills the area or does significant grading on the site to drain the lot areas.

If filling is necessary, the volume and areas should be illustrated on the Site Plan/Grading Plan. The agencies should determine whether additional fill is allowed on-site. Notwithstanding the above, the fill should not contain organic materials such as plant debris or topsoil that may carry with it exotic or invasive species that could out-compete native species in the woodland. If imported topsoil is required, then screened topsoil should be the only material applied as top dressing on-site.

Provided this distance is maintained and the above mentioned standard erosion-sedimentation controls are installed during the construction period, neither KHF will be impacted.

- 11.6 There is the potential for bird species to be impacted during their nesting, breeding and fledging stages by land clearing/vegetation removal. To mitigate the potential for impacts resulting from vegetation removal during these sensitive avian life cycle stages, the property owner must not conduct any vegetation removal between April 1st and August 31st, corresponding to the main breeding bird period in the Migratory Bird Convention Act. This is a standard requirement for all construction. Provided the vegetation is removed prior to this period, the remainder of the construction within the building envelope can proceed within the migratory bird/breeding bird period.

Implementing a no construction/tree removal period will mitigate for the Area Sensitive bird species in the general vicinity of the lot.

- 11.7 The property possesses woodland and wetland SWH. According to the Significant Wildlife Habitat Mitigation Support Tool (SWHMiST), avoidance is the primary mitigation tool.

In this instance, it should be possible to avoid the wetland and woodland SWH by directing the building envelope on the lot within the open area (Figure 7). A 30 m VPA is to applied to the on-site unevaluated wetlands. Therefore, this SWH/KHF will be avoided altogether. The 30 m VPA goes beyond what is required in the SHWMiST.

- 11.8 The local woodlands possess good woodland habitat for bats. Therefore, the following mitigation measures are recommended:

- To retain good quality bat snags, the new laneway and building envelope shall be routed/located such that they avoid the better quality bat roosting snags on the proposed lot. The MNDMNR's criteria for good quality bat snags would be used to identify these trees;
- As a means of reducing tree loss and future bat snag communal roosting snags, the property owner shall plant three native trees on-site for every tree removed within the good quality mature deciduous forest community on the proposed severance lot, and
- In addition to the compensatory tree plantings, the proponent shall construct and or purchase one (1) large communal bat houses and install them along the woodland edge, overlooking the proposed residential area.

11.9 Following the construction, any/all disturbed areas shall be quickly seeded or sodded with native grass species to re-establish the root structure within the upper soils. Once the seeding or sodding is determined to be a success and the soils are stable, the erosion/sedimentation controls can be removed.

Re-vegetation of the disturbed area should occur as soon as possible after construction to prevent erosion and the introduction of invasive/exotic species in newly disturbed areas. ORE staff recommends that once the woodland has been cleared for the purpose of the proposed access road and the building envelope, that smaller native shrubs be planted along the edge to prevent sun damage of the existing forest floor species and counter the introduction of invasive species into these areas. The yard space lawn should extend beneath the native shrubs canopy overhang on the development side. In addition to protecting the health of the woodland, it will preserve the native woodland edge species and reduce the potential for exotic species such as Garlic Mustard, Dog Strangling Vine and Common Buckthorn from germinating in these areas.

11.10 Vehicle and equipment refuelling and/or maintenance shall be conducted within a defined staging area 30 m from any watercourse during the vegetation clearing and construction phase.

11.11 All soil stockpile locations should be located a minimum of 40 m from wetlands and surrounded by sediment controls when not in use. Once the stockpile materials are delivered to their intended areas, both the area where the stockpile was, and the newly disturbed areas where the stockpile materials have been applied, should also be stabilized as quickly as possible. The contractor should apply native grass seed to these areas; there are native grass seed sources in both Lindsay and Peterborough. If the property owner cannot find a source, the owner should contact ORE staff for a native

grass seed source.

- 11.12 Although no SAR herptiles were observed on the subject site or in the vicinity of the proposed severance, ORE staff recommend checking the area for turtles and snakes during construction activities. If any individuals are encountered, they should be photographed and allowed time to move out of harm's way.

Any observations of Endangered and Threatened species should be reported to ORE staff who can then report them to MECP immediately. Failure to do so could stop work indefinitely until a SAR permit is acquired. While the site does not provide ideal nesting habitat for turtle species (as suggested by the lack of nesting sites along the roadside), turtles can be highly migratory as they seek out places to lay their eggs, especially Blanding's Turtle. The wooded swamps can flood/pool in the spring season creating a migration corridor for turtles to go from one wetland to the next. Therefore, the site supervisor/contractor who is overseeing the construction should be aware of the nesting season for turtles which is May 15 to August 15.

- 11.13 During construction, it is recommended that equipment be cleaned of existing debris from previous job site locations to remove unwanted exotic species seeds and prevent them from being introduced on the subject site. Similarly, once the site work is complete on the subject site, the contractor should clean the equipment when leaving the site to reduce the risk of spreading exotic/invasive species to other properties they intend to work on next. The contractor should consult the Clean Equipment Protocol for Industry.

- 11.14 In addition to the bat houses, the woodland possesses a variety of woodpeckers, warblers and other deciduous tree related species that utilize any/all woodpecker cavities in the forest for nesting purposes. ORE staff recommend installing three (3) birdhouses about the new lot as a means of mitigating cavity nest loss that must be removed for the purpose of constructing the access road, the single residence and private services.

In some cases, it may be possible to remove the section of the tree that contains a good quality cavity nest and re-post it elsewhere within the woodland edge. If not, an unstained wood structure nesting box could be installed instead. One (1) of the recommendations above is to map any/all good quality bat snags and reroute/relocate the lane and building envelope such that they do not impact the bat snags.

- 11.15 Provided the recommendations outlined in this NHE report are adhered to, impacts to the KNHF/KHF and pertinent SWH identified on Figure 7 should be undetectable. Given that all of the sensitive features identified on the site will not be impacted provided the mitigation measures are applied, then it should be possible to create a single residential lot and future residence with private services in the southwest corner on the subject parcel.

The recommendations in this NHE should form the basis of a Mitigation Measures Agreement (MMA) between the lot owner and the Municipality/County, prior to the severance being created. The Mitigation Measures Agreement should be registered with the lot to ensure no matter who owns the lot, the natural heritage requirements outlined in this report will be respected. The MMA should also include additional requirements with respect to the post construction impacts.

* end of report *

Yours truly,
Oakridge Environmental Limited

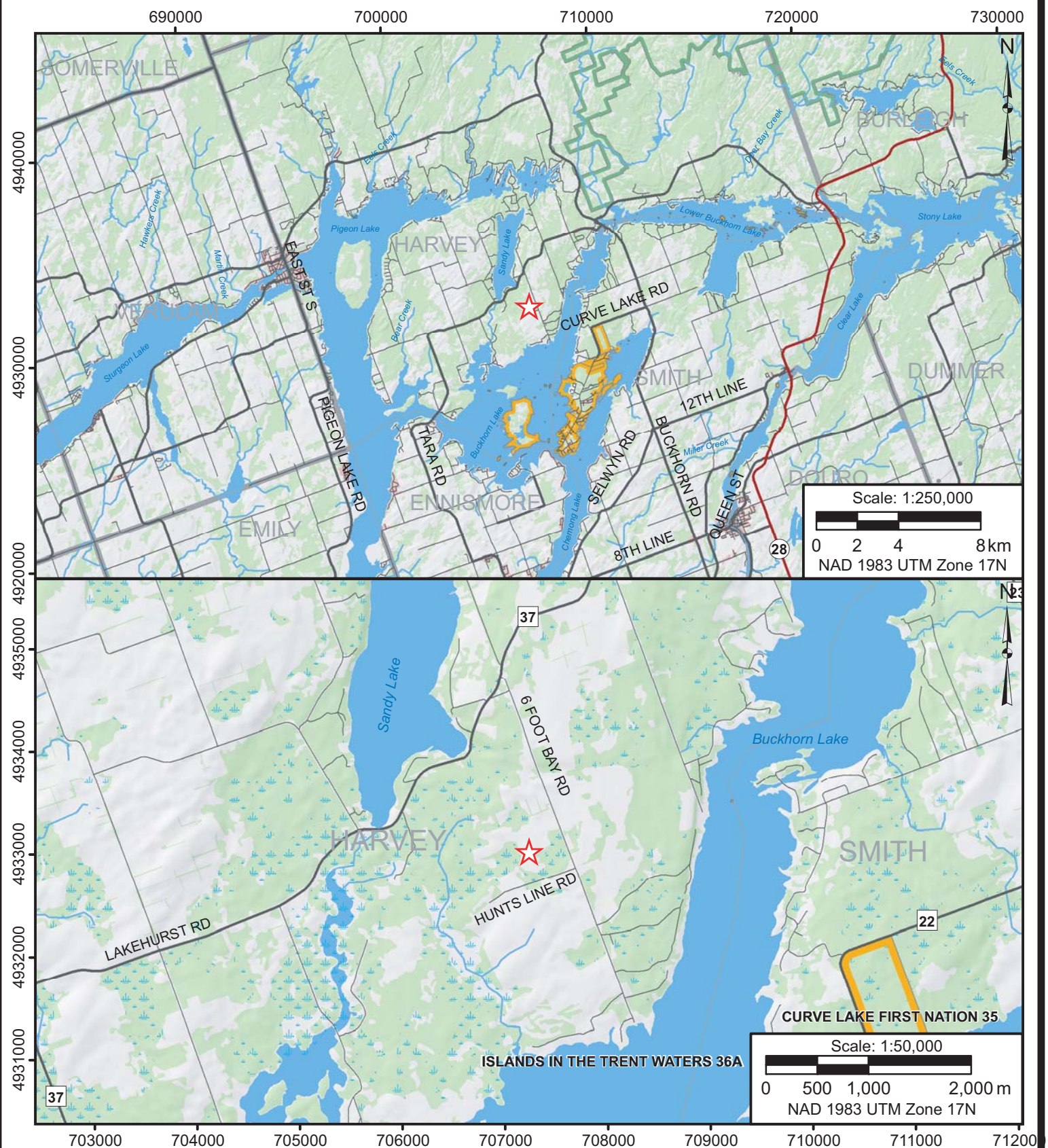


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Figures



Approximate Site Location

**Scoped Natural Heritage Evaluation (sNHE)
Proposed One (1) Lot Severance**

48 Hunts Line Road
Part Lot 5, Concession 12 (Harvey)
Municipality of Trent Lakes, County of Peterborough



ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services

North American Datum (NAD) 1983

TITLE

General Location

PROJECT #
21-2977

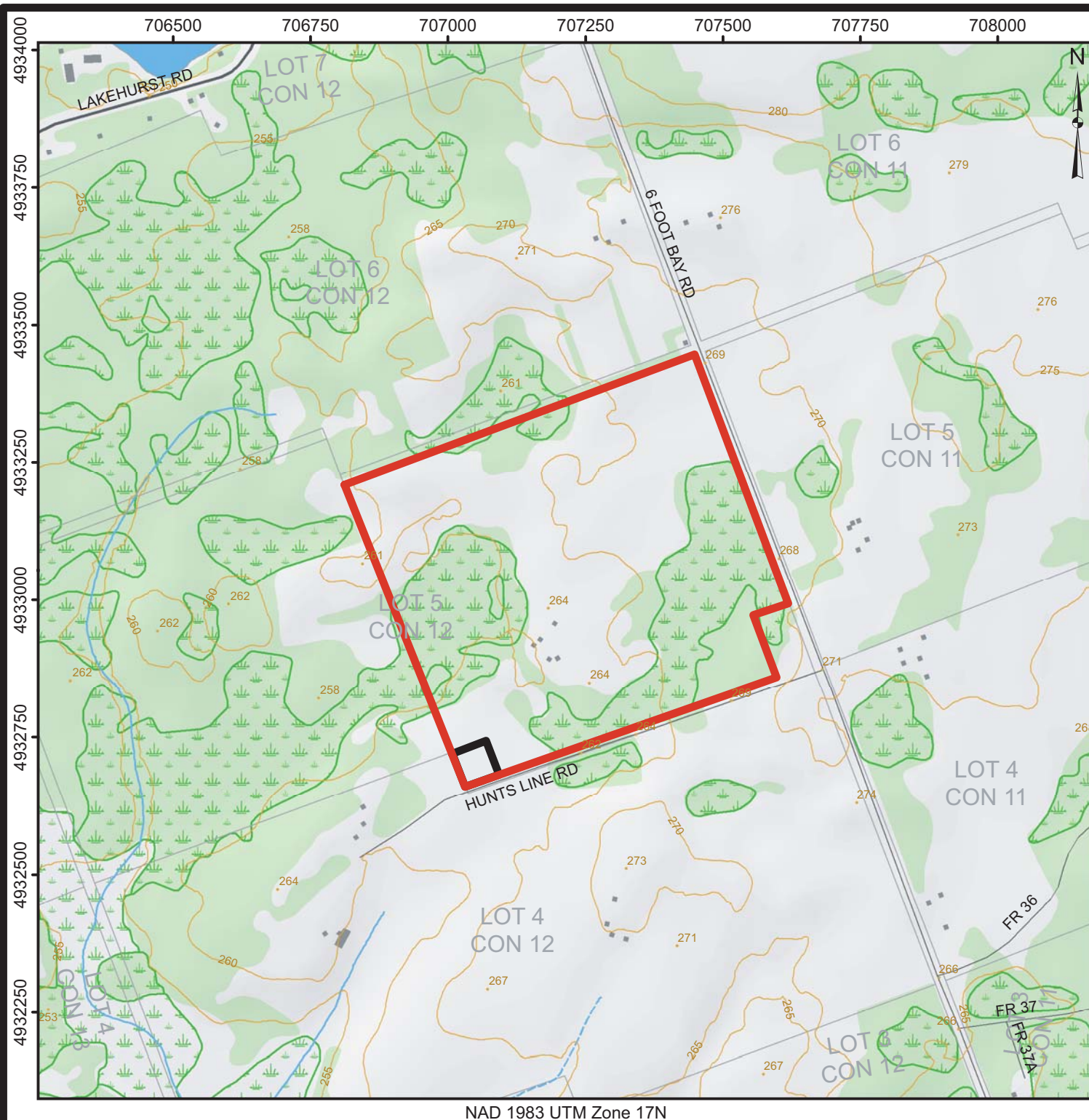
DATE
April 2022

FIGURE NO.

1

Notes: Base maps provided by Land Information
Ontario and Natural Resources Canada (2022)

Optimized for Oakridge Environmental Ltd. printing



Scoped Natural Heritage Evaluation (sNHE)

Proposed One (1) Lot Severance

48 Hunts Line Road
Part Lot 5, Concession 12 (Harvey)
Municipality of Trent Lakes
County of Peterborough

- Approximate Site Boundary
- Proposed Severance
- Geographic Lot Fabric
- Contour
- Spot Height
- Building (to scale)
- Building (symbol)
- Watercourse
- Intermittent Watercourse
- Wetland (Evaluated)
- Waterbody
- Wooded Area

Scale: 1:10,000



Contour Interval: 5 m

Elevations in m asl

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)

Optimized for Oakridge Environmental Ltd. printing

TITLE

Topography and Drainage



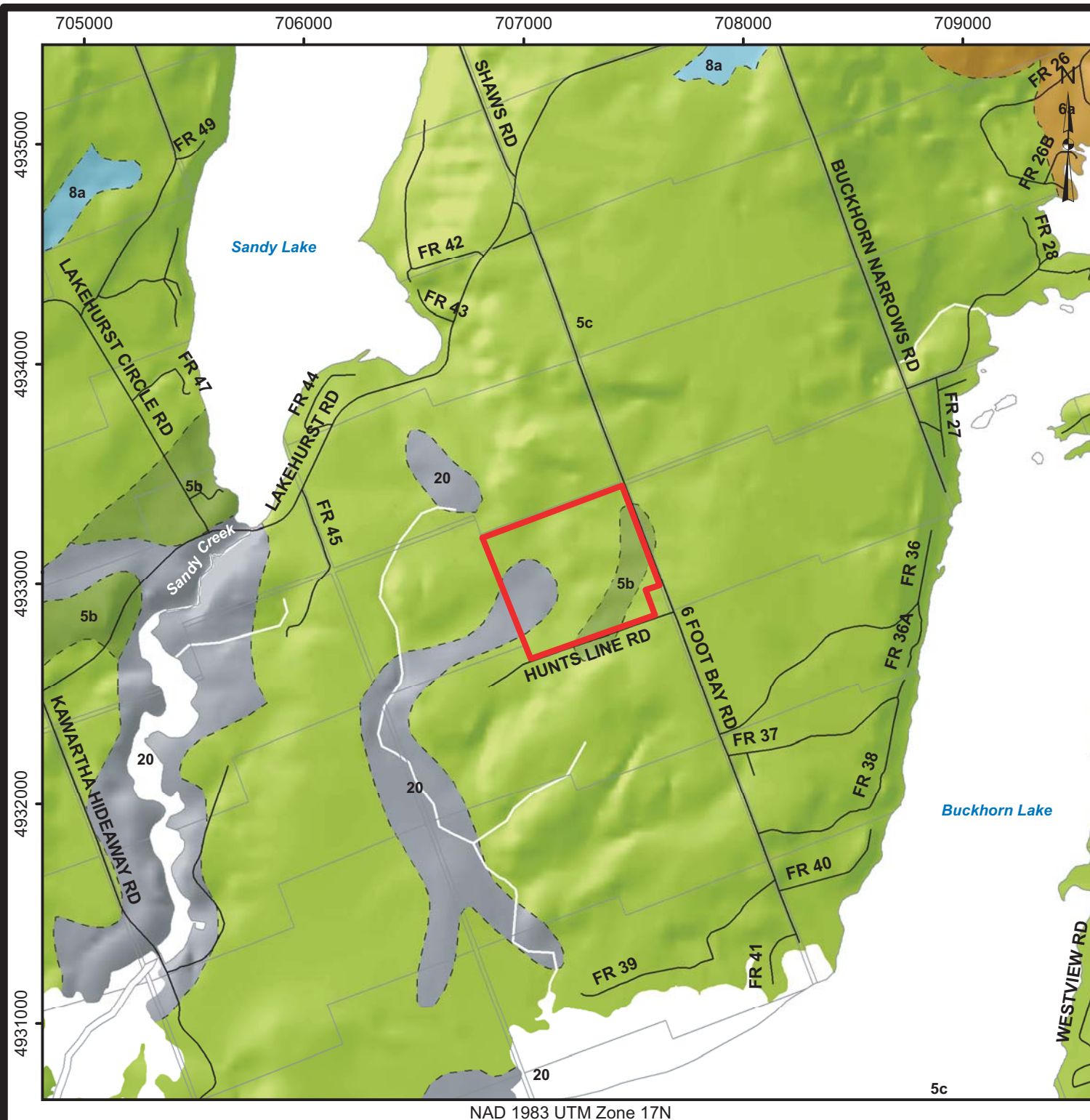
PROJECT #
21-2977

DATE
April 2022

FIGURE NO.

2

NAD 1983 UTM Zone 17N



Scoped Natural Heritage Evaluation (sNHE) **Proposed One (1) Lot Severance** 48 Hunts Line Road Part Lot 5, Concession 12 (Harvey) Municipality of Trent Lakes County of Peterborough

- Approximate Property Boundary
- - - Geological Contact
- 5b** Stone-poor, carbonate-derived silty to sandy till
- 5c** Stony, carbonate-derived silty to sandy till
- 6a** In moraines, kames, eskers and crevasse fills
- 8a** Massive-well laminated
- 20** Organic deposits

Scale: 1:25,000

0 250 500 1,000 m

Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022).

Optimized for Oakridge Environmental Ltd. printing.

TITLE

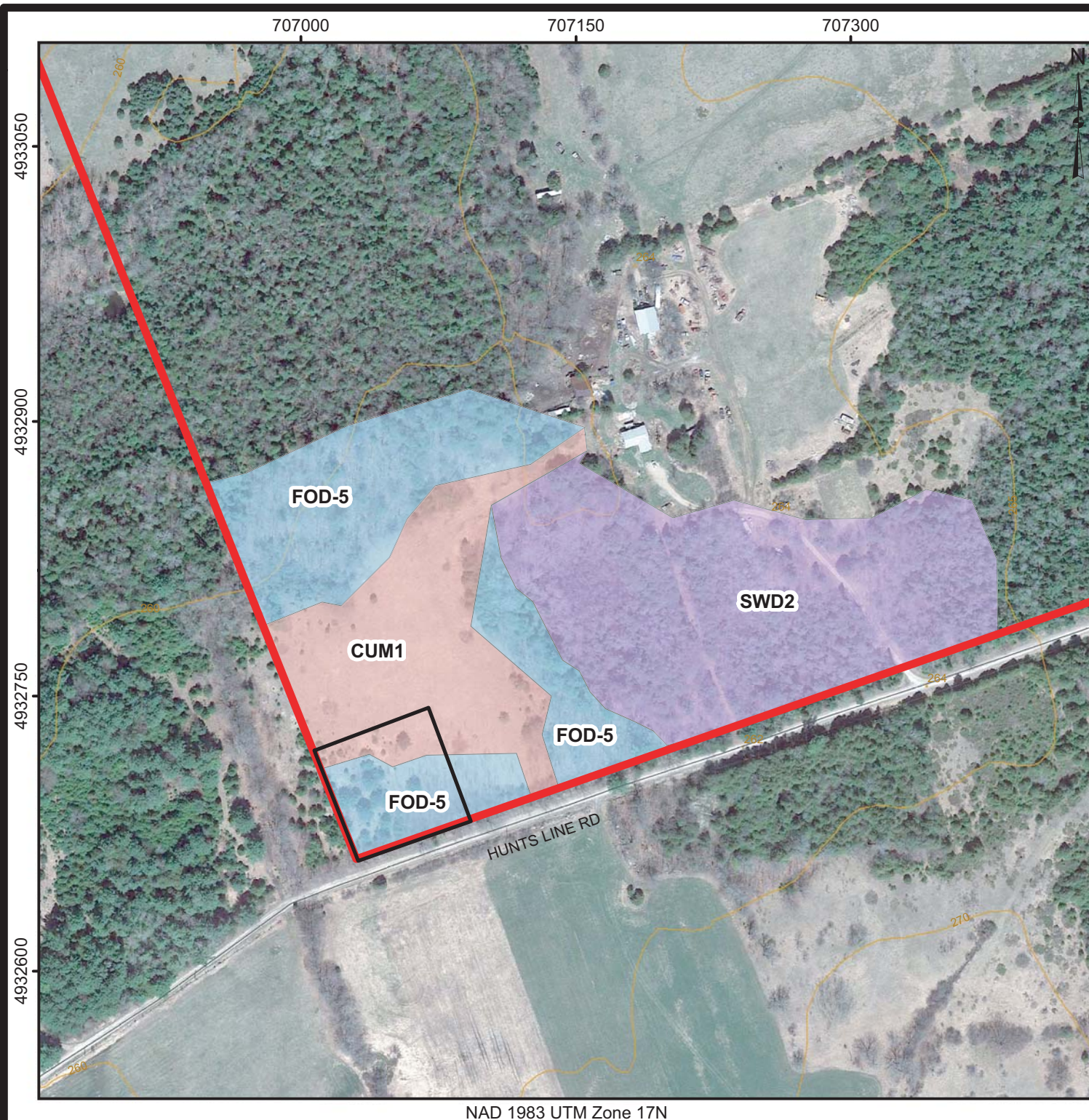
Surfacial Geology

ORE
Oakridge Environmental Ltd.
 Environmental and Hydrogeological Services

PROJECT #
21-2977

DATE
April 2022

FIGURE NO.
3



NAD 1983 UTM Zone 17N

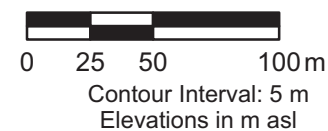
Scoped Natural Heritage Evaluation (sNHE)

Proposed One (1) Lot Severance

48 Hunts Line Road
Part Lot 5, Concession 12 (Harvey)
Municipality of Trent Lakes
County of Peterborough

- Approximate Property Boundary
- Proposed Severance
- Ash Mineral Deciduous Swamp (SWD2)
- Cultural Meadow (CUM1)
- Dry-Fresh Sugar Maple Deciduous Forest (FOD-5)
- Road
- Contour
- Spot Height

Scale: 1:3,000



Notes: Base maps provided by Land Information Ontario and Natural Resources Canada (2022)

Optimized for Oakridge Environmental Ltd. printing

TITLE

Vegetation



PROJECT #
21-2977

FIGURE NO.

DATE
April 2022

4



Photo A (Above): This photo is of the upland woodland between the proposed severance and the small unevaluated wetland.



Photo B (Above): This photo was taken looking north within the transition area to the wooded swamp.



Photo C (Above): This photo is a large Black Ash in the wooded swamp/low-lying area to the east of the proposed severance.



Photo D (Above): This photo is of the typical Fern base in the wooded swamp. The species in the foreground which dominated the base layer in the wetland is Ostrich Fern. There was also minor amounts of Spinulose Wood-fern and Sensitive Fern.


Photos Taken: July 28, 2021	<div>Scoped Natural Heritage Evaluation (sNHE) Proposed One (1) Lot Severance 48 Hunts Line Road Part Lot 5, Concession 12 (Harvey) Municipality of Trent Lakes, County of Peterborough</div>	TITLE <div>Site Photos</div>	
		PROJECT # 21-2977	FIGURE NO. <div>5</div>
Optimized for Oakridge Environmental Ltd. printing	<div></div>	DATE April 2022	




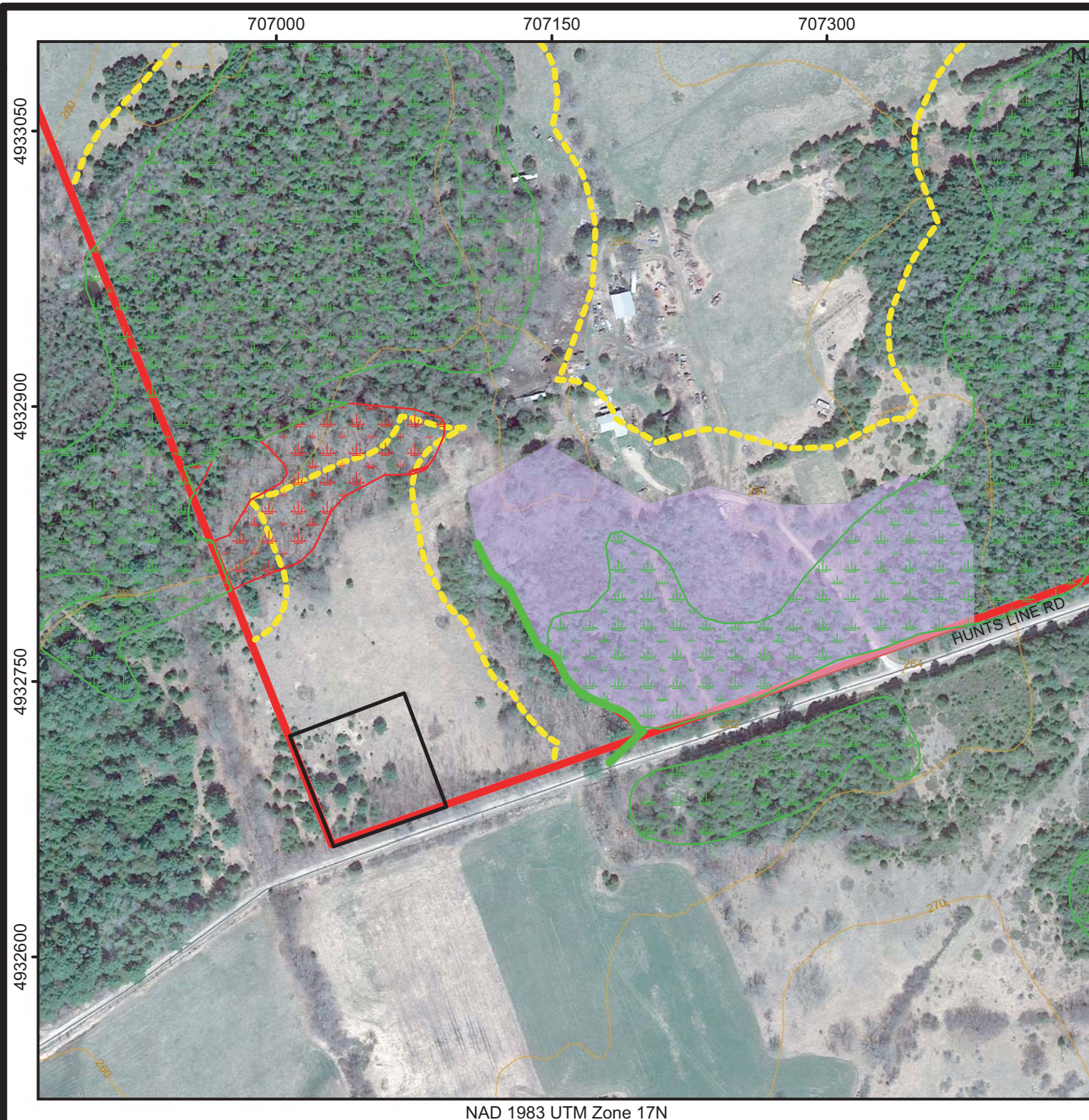
Photo A (Left): This photo was taken from Hunts Line Road towards the area where the severance is proposed.

Photo B (Right): This photo is of the wooded swamp area to the east of the proposed severance. This area can be aerated in the summer period.



Photo C (Left): This photo was taken looking northeast within the wooded swamp east of the proposed severance. Note the fern-rush base, conifer dominants and Black Ash

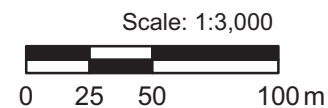
	Scoped Natural Heritage Evaluation (sNHE) Proposed One (1) Lot Severance 48 Hunts Line Road Part Lot 5, Concession 12 (Harvey) Municipality of Trent Lakes, County of Peterborough		
		TITLE Site Photos	
Photos Taken: July 28, 2021		PROJECT # 21-2977	FIGURE NO. 6
Optimized for Oakridge Environmental Ltd. printing		DATE April 2022	



NAD 1983 UTM Zone 17N

Scoped Natural Heritage Evaluation (sNHE)
Proposed One (1) Lot Severance
 48 Hunts Line Road
 Part Lot 5, Concession 12 (Harvey)
 Municipality of Trent Lakes,
 County of Peterborough

- Approximate Property Boundary
- Proposed Severance
- Unevaluated Wetland (LIO)
- Inaccurate Wetland
- Delineated Wetland Boundary (ORE)
- Wetland Setback 30 m
- Ash Mineral Deciduous Swamp (SWD2)
- Road
- Contour (5 m Intervals)



Notes: Base maps provided by Land Information
 Ontario and Natural Resources Canada (2022)

Imagery provided by Google Earth (2019)

Feature locations determined by differential
 GPS (+/- 3.0 m)

Optimized for Oakridge Environmental Ltd. printing
 TITLE

Constraints



PROJECT #
21-2977

DATE
April 2022

FIGURE NO.

7

Appendix A

Excerpt from the Provincial Policy Statement (PPS)

The following has been copied from the 2020 Provincial Policy Statement (PPS):

“2.1.2 The diversity and connectivity of natural features in an area and the long-term ecological function and biodiversity of natural heritage systems, should be maintained, restored or, where possible improved, recognizing the linkages between and among natural heritage features and areas, surface water features and ground water features.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in Policies 2.1.3, 2.1.4 and 2.1.5 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

2.2 Water

2.2.1 Planning authorities shall protect, improve or restore the quality and quantity of water by:

a) using the watershed as the ecologically meaningful scale for integrated and long-term planning, which can be a foundation for considering cumulative impacts of development;

b) minimizing potential negative impacts, including cross-jurisdictional and cross-watershed impacts;

c) identifying water resource systems consisting of ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas, which are necessary for the ecological and hydrological integrity of the watershed;

d) maintaining linkages and related functions among ground water features, hydrologic functions, natural heritage features and areas, and surface water features including shoreline areas;

e) implementing necessary restrictions on development and site alteration to:

1. protect all municipal drinking water supplies and designated vulnerable areas; and

2. protect, improve or restore vulnerable sensitive surface water features and sensitive ground water features, and their hydrologic functions;

f) planning for efficient and sustainable use of water resources, through practices for water conservation and sustaining water quality;

g) ensuring consideration of environmental lake capacity, where applicable; and

h) ensuring stormwater management practices minimize stormwater volumes and contaminant loads, and maintain or increase the extent of vegetative and pervious surfaces.

2.2.2 Development and site alteration shall be restricted in or near sensitive surface water features and sensitive ground water features such that these features and their related hydrologic functions will be protected, improved or restored.

Mitigative measures and /or alternative development approaches may be required in order to protect, improve or restore sensitive surface water features, sensitive ground water features, and their hydrologic functions.”

Appendix B

County of Peterborough Preliminary Severance Review (PSR)

Preliminary Severance Review

Prepared by the Peterborough County
Planning Department



Date: July 2, 2021

Name: Gloria & Don Curry

Email: glocofarms@aol.com

Agent: Mike Michell

Phone: 705-657-3625

Municipality: Trent Lakes, Harvey Ward

Lot: 5

Concession: 12

Roll No.: 1542-010-001-15500

Municipal Address: 48 Hunts Line Road

Type of Severance: residential lot(s)

	Severed	Retained
County Official Plan	Rural	Rural
Municipal Official Plan	Rural	Rural
Municipal Zoning	Rural (RU)	Rural (RU)
Area and Frontage	Lot 1 ± 0.40 hectares, ± 60 m frontage on Hunt's Line Road Lot 2 ± 0.40 hectares, ± 60 m frontage on Six Foot Bay Road	± 40.1 hectares, ± 500 m frontage Hunt's Line Road
Existing Use/Buildings	Vacant	Dwelling, Barns

Conforms to Provincial policies?

☐ Yes ☒ No

Studies will be required to determine conformity with the provincial plans.

Conforms to County Official Plan policies?

☒ Yes ☐ No

Conforms to Township Official Plan policies?

☒ Yes ☐ No

Conforms to Township Zoning By-Law?

Severed parcel meets Zoning requirements:

☐ Yes ☒ No

Retained parcel meets Zoning requirements:

☒ Yes ☐ No

Severed parcels do not meet the minimum lot area requirements for residential uses in the Rural (RU) zone and may require a rezoning.

Studies required to support the application?

☒ Yes ☐ No

- Natural Heritage Evaluation / Environmental Impact Study

Provincial Policy Review:

The following key natural heritage features and/or key hydrologic features have been identified on or adjacent to the subject property:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Wetlands | <input type="checkbox"/> Significant Wildlife Habitat | <input type="checkbox"/> Area of Natural and Scientific Interest (ANSI) |
| <input type="checkbox"/> Fish habitat | <input checked="" type="checkbox"/> Significant Woodlands | <input checked="" type="checkbox"/> Other key hydrologic feature (stream, pond, lake) |
| <input checked="" type="checkbox"/> Species at Risk | <input checked="" type="checkbox"/> Habitat of Endangered or Threatened Species | |

Does the proposal require a Natural Heritage Evaluation to address the features identified above?

☒ Yes ☐ No

Sections 4.2.3 and 4.2.4.1(c) of the Growth Plan (2019) state that development and site alteration, including lot creation, is not permitted in key hydrologic features or the minimum 30 metre vegetation protection zone (VPZ) surrounding the feature. The original proposal would not conform to the requirements of the Growth Plan.

After adjusting the proposed lots to the corners of the subject lands, Lot 1 is still within 120 metres of the mapped wetlands. Section 4.2.4.1 of the Growth Plan (2019) states that development and site alteration, including lot creation, within 120 metres of a key hydrologic feature will require a natural heritage evaluation/hydrologic evaluation that identifies a vegetation protection zone (VPZ) that is no less than 30 metres. Lot 2 appears to be located further than 120 metres from the mapped wetlands so this severance would not require an evaluation. Evaluations undertaken in accordance with policy 4.2.4.1 will identify any additional restrictions to be applied before, during and after development to protect the hydrologic and ecological functions of the feature. Please note that any technical study submitted to the County will be peer reviewed at the County's request. Both the cost of the study and the peer review will be at the applicant's expense.

A portion of the subject property is traversed by an area identified for habitat of endangered species and threatened species, as shown on the attached sketch. Policy 2.1.7 of the Provincial Policy Statement prohibits development and site alteration, including lot creation, within habitat of endangered species and threatened species, except in accordance with provincial and federal requirements. Species at Risk Data available to the County indicates that there have been no observations of species at risk on or adjacent to the proposed severed lots. Therefore, a Species at Risk Assessment is not required, however, species at risk screening should still be included in the NHE reference above.

Does the proposal meet Minimum Distance Separation requirements?

☒ Yes ☐ No ☐ Not Applicable

Minimum Distance Separation Formula I (MDS I) as per policy 1.1.5.8 of the 2020 Provincial Policy Statement has been calculated for the livestock facilities within 750 metres of the subject property, including 48 Hunts Line Road, 114 Hunts Line Road, vacant lot along Hunt's Line Road, 148 Six Foot Bay Road, 153 Six Foot Bay Road, 209

Six Foot Bay Road, 265 Six Foot Bay Road and 358 Six Foot Bay Road. Please note that MDS I setbacks must be calculated for any livestock facilities reasonably capable of housing livestock regardless as to whether or not it is currently being used for such purposes. Calculations were based on MPAC assessment data and confirmation by aerial imagery using the County GIS mapping.

County Official Plan Policy Review:

Section 2.6.3.5 of the Plan suggests that residential severances for land holdings located in the Rural Area should be discouraged in favour of development in Settlement Areas in an effort to promote orderly growth and development. However, severances in the Rural Area may be considered provided Health Unit, road frontage and access and Minimum Distance Separation requirements can be met (Ss.2.6.3.5 (A), (C) & (G)) and provided the applicable policies of Sections 2.6.3.1, 2.6.3.5, 4.1.3 and 4.3 are complied with (S.2.6.3.5 (H)).

Municipal Official Plan Policy Review:

The lands proposed for severance are designated Rural in the Municipal Official Plan. In the Rural designation, permitted uses include agricultural uses, and limited permanent and recreational residential dwellings at a very low density (S 5.2.1). Section 5.2.2 states that "In general, consents for residential purposes in the Rural area shall be discouraged and development shall be encouraged by plan of subdivision. However residential severances may be granted in accordance with the policies of Section 6.0 of this Plan."

In the Rural designation, the maximum number of lots that may be created by consent per land holding shall be two (2) severed lots and one (1) retained lot where a land holding is defined as a parcel of land recorded as a separate parcel in the Land Registry Office at least fifteen (15) years prior to the date of the severance application (S. 6.2.1.1). A search of County Land Division records indicates that the subject lands have not received any consents (severances) for new lot creation within the past 15 years and therefore, appear to be eligible for consent.

As applicable, all consent applications must comply with Zoning, Health Unit, and Minimum Distance Separation requirements (S. 6.2.1.5, 6.2.1.4.1, 6.2.1.6 & 6.2.1.14). The proposed severed parcels do not meet the required 1 hectare (2.5 acre) minimum lot area for a single-detached dwelling in the Rural (RU) Zone. It is recommended that the applicants discuss the proposal with the Township to determine if a rezoning to Rural Residential (RR) would be supported.

Reviewed By: Amanda Warren

Additional Notes

Agencies to be contacted by landowner or agent (marked with an X):

- | | |
|--|--|
| <input checked="" type="checkbox"/> Township | <input checked="" type="checkbox"/> Peterborough Public Health |
| <input type="checkbox"/> Conservation Authority | <input type="checkbox"/> Trent-Severn Waterway |
| <input type="checkbox"/> Source Water Risk Management Officer | <input type="checkbox"/> First Nations |
| <input type="checkbox"/> Ministry of Environment, Conservation and Parks | <input type="checkbox"/> Other |

- ☒ Proposal requires confirmation from the Township or identified agency regarding policy conformity.

* The landowner should be aware that local council may not support a rezoning or minor variance to create a lot that is not in compliance with the provisions of the Zoning By-law.

* The lands may be within the watershed of a local Conservation Authority. It is recommended that you contact the Authority to determine what, if any, permits may be necessary:

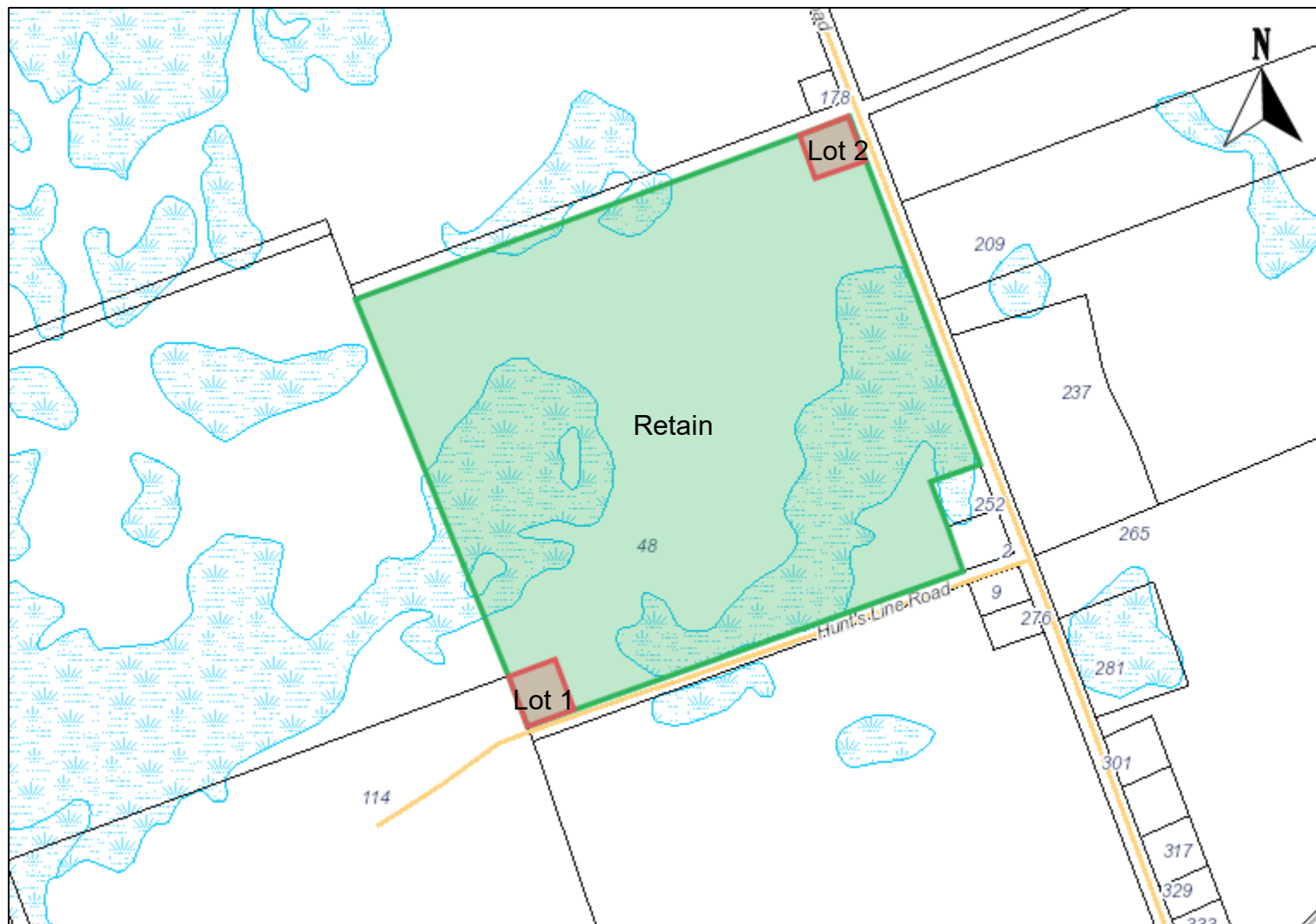
- ☒ No Conservation Authority in the area
- ☐ Otonabee Region Conservation Authority (ORCA), (705) 745-5791
- ☐ Crowe Valley Conservation Authority (CVCA), (613) 472-3137
- ☐ Kawartha Region Conservation Authority (KRCA), (705) 328-227

* It is the responsibility of the landowner to identify endangered and threatened species and their habitat on the property prior to undertaking work, and to ensure that the work/activity will not result in negative impacts. Landowners are encouraged to consult with the Ministry of Environment, Conservation and Parks (MECP) if they have questions about the *Endangered Species Act, 2007 (ESA)*. Any sightings of a threatened or endangered species during development and construction on the property must be reported in accordance with the ESA.

Important

Our position on the overall conformity of the proposal is based on information available at the time of review. Subsequent information from commenting agencies can change our comments relating to any formal application for severance which is subsequently filed. The above-noted comments should not be construed as preliminary approval or denial of a proposal but recognized as a position of the County Planning Department based on the availability of current information.

Roll #1542-010-001-15500
Curry (Michell)
Part Lot 5, Concession 12, Harvey
Severance Sketch



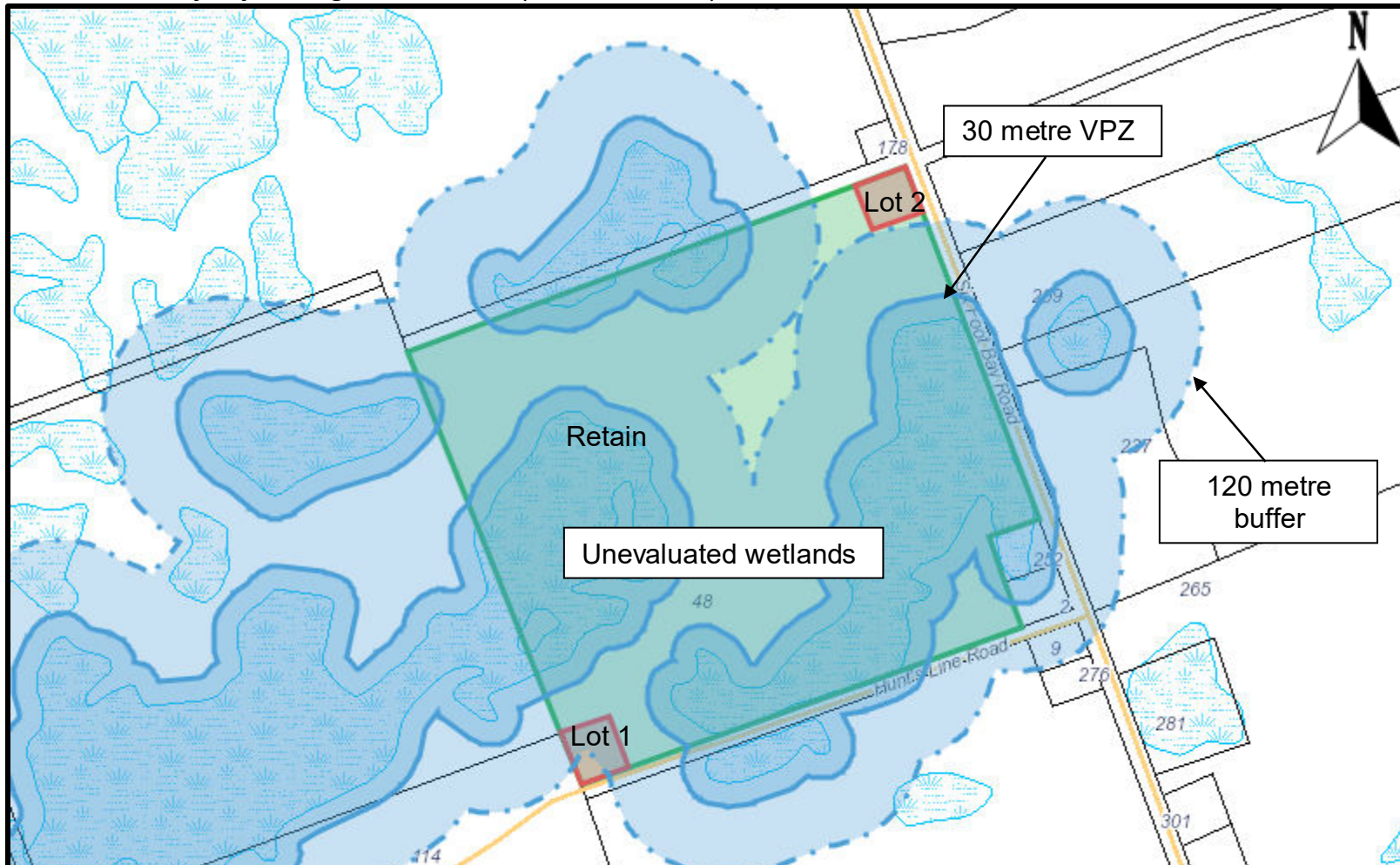
Scale (metric)
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Roll #1542-010-001-15500

Curry (Michell)

Part Lot 5, Concession 12, Harvey

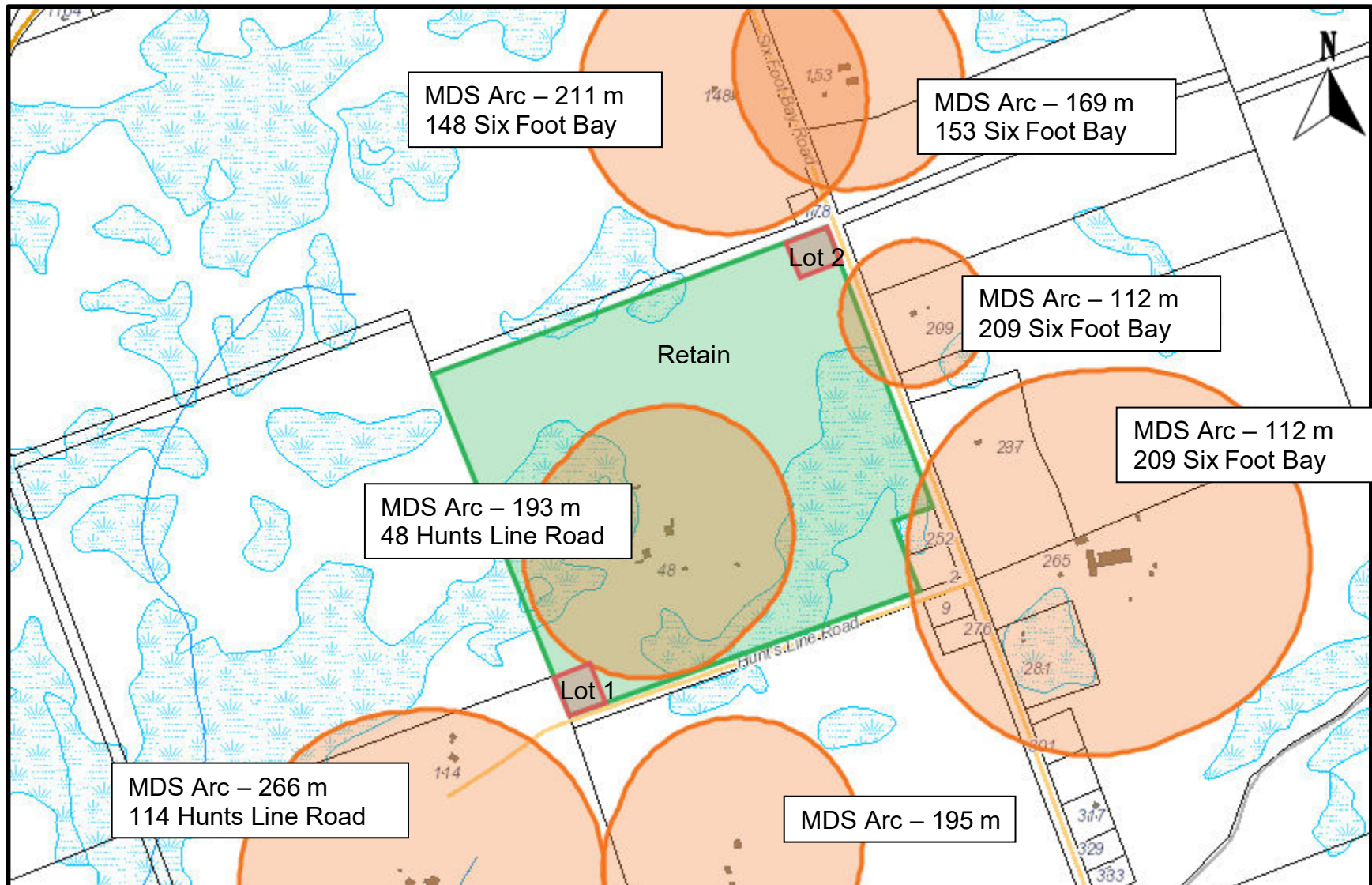
Key Hydrologic Features (i.e. wetlands) – 120 metre buffer and 30 metre VPZ



NOTE: Development and site alteration is not permitted within key hydrologic features; any development proposed within the 120 metre buffer surrounding key hydrologic features requires a natural heritage evaluation/hydrologic evaluation to identify a vegetative protection zone (no less than 30 metres). No development, including lot creation, is permitted within the 30 metre vegetation protection zone (VPZ).

Scale (metric)
1:8400

Roll #1542-010-001-15500
Curry (Michell)
Part Lot 5, Concession 12, Harvey
Minimum Distance Separation (MDS)



NOTE: New development, including lot creation, must be located outside the MDS arc(s) shown above.

Scale (metric)
1:9600

Appendix C

Excerpt from the County of Peterborough Official Plan (OP)

The following has been copied from the County of Peterborough Official Plan:

- *“a description of the proposal and statement of rationale for the undertaking;*
- *a description of the existing land use(s) on site and adjacent lands;*
- *the land use designation on site and adjacent lands, as identified by the County and local municipal Official Plans;*
- *a description of alternative development proposals for the site as well as the environmental impacts of the alternatives;*
- *a comprehensive description of the proposal including its direct and indirect effect on the environment and considering both the advantages and disadvantages of the proposal;*
- *an identification of environmental constraint areas;*
- *an environmental inventory of the area under development consideration (plant life, land-based and aquatic wildlife, wetlands, natural landforms, surface waters, hydrogeological features);*
- *a statement of environmental and ecological significance of the area affected by the proposed development;*
- *a statement on how the development will establish or facilitate the establishment of linkages between natural areas within the watershed and adjacent watersheds and how these linkages will contribute to the preservation and enhancement of the natural areas;*
- *a detailed description of mitigating effects;*
- *any additional information requested by the local municipality;*
- *an assessment of options for servicing the development with full municipal or communal water and sewage services as well as the environmental impacts of the servicing options.*

An environmental impact assessment for proposed development within or adjacent to a significant natural heritage feature will include as its study area the natural heritage feature plus the area surrounding that feature as follows:

- *significant wetlands - all lands within 120 metres;*
- *significant portions of the habitat of endangered and threatened species - all lands within 50 metres;*
- *fish habitat - all lands within 30 metres of the high water mark of all watercourses;*
- *significant wildlife habitat - all lands within 50 metres;*
- *significant woodlands south of the southern limit of the Canadian Shield - all lands within 50 metres;*
- *significant valleylands south of the southern limit of the Canadian Shield - all lands within 50 metres;*
- *significant areas of natural and scientific interest (ANSI) - all lands within 50 metres.”*

Appendix D

Species Descriptions

Birds

Barn Swallow (*Hirundo rustica*) is listed as “Threatened” by SARO and is protected under the ESA. The Barn Swallow inhabits open-rural and urban sites where buildings are situated near watercourses. Nesting is typically sporadic within loose colonies on building structures, bridges and other suitable overhanging structures. The cup-like mud nest is adhered to areas beneath the roof of the structure to conceal the nest from predators and keep it dry. The Barn Swallow feeds on insects by catching them on the wing.

Black Tern (*Chlidonias niger*) is listed as “Special Concern” by SARO, and is not protected under the ESA. The Black Tern prefers shallow, freshwater cattail marshes, wetlands, lake edges and sewage ponds with emergent vegetation. Nesting occurs on dead plant material piled upon aquatic floating vegetation. The Black Tern hunts small insects and minnows along the surface of lakes and ponds.

Bobolink (*Dolichonyx oryzivorus*) is listed as “Threatened” by SARO and is protected under the ESA. The Bobolink prefers large tracts of tallgrass areas, either true prairies or hay fields, as it forages low to the ground in search of larvae and seeds.

Common Nighthawk (*Chordeiles minor*) is listed as “Special Concern” by SARO, and is not protected under the ESA. The Common Nighthawk is part of the Nightjar family which prefers forest openings, bogs and sometimes open field/meadow areas. Nesting is on bare ground where both adults feed the young. Feeding can take place during day or night, while the species constantly forages for all types of insects.

Eastern Meadowlark (*Sturnella magna*) is listed as “Threatened” by SARO and is protected under the ESA. The Eastern Meadowlark is similar to Bobolink, as this species also prefers large tracts of agricultural fields or tallgrass prairies to nest within. Eastern Meadowlark is a ground nester, thus requires the tall grass to conceal its nest and eggs. Feeding includes beetles, crickets and spiders.

Eastern Whip-poor-will (*Anthrostomus vociferus*) is listed as “Threatened” by SARO and is protected under the ESA. The Whip-poor-will prefers a combination of large natural tracts of secondary succession forest, watercourses and edge habitat consisting of meadow areas, with open deciduous and pine woodlands. The Whip-poor-will does not construct a nest, but rather uses the soft leaf litter on the ground to form a nest and lay the eggs directly on the ground. The Whip-poor-will is a nighttime hunter, calling its own name while searching for large flying insects, beetles, moths, mosquitos and sometimes grasshoppers. The Whip-poor-will often choose pine species adjacent to waterways to call from.

Eastern Wood-Pewee (*Contopus virens*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species prefers mixed deciduous and coniferous woodlands which are open or considered edge habitat. Nesting occurs on a tree branch as the species catches insects from a perch.

Golden-winged Warbler (*Vermivora chrysoptera*) is listed as “Special Concern” by SARO and is not protected under the ESA. The Golden-winged Warbler prefers woodland edge habitat with young successional tree species and moist shrubby fields. This species gleans insects on shrubs and the forest floor and nesting occurs on the ground.

Grasshopper Sparrow (*Ammodramus savannarum*) is listed as “Special Concern” by SARO and is not protected under the ESA. The Grasshopper Sparrow prefers large (greater than 5 ha) grassland habitats where it breeds. Grassland habitats include pastures, hayfields, natural prairies, alvars. Nests are typically hidden within the grassland and its preferred diet in the summer is large insects (i.e., Grasshoppers).

Wood Thrush (*Hylocichia mustelina*) is listed as “Special Concern” by SARO and is protected under the ESA. The Wood Thrush enjoys relatively undisturbed, mature woodlands. Nesting occurs low in the fork of a tree as this species forages for berries and insects at ground level. Similar to the Eastern Wood-Pewee, this species prefers large tracts of woodland.

Amphibians & Reptiles

Blanding’s Turtle (*Emydoidea blandingii*) is listed as “Threatened” by SARO and is protected under the ESA. It tends to inhabit shallow waters within large wetlands or shallow lakes that have lots of aquatic plants. However, they have been known to travel hundreds of metres from a main body of water for nesting or mating. This species is most easily identified by its bright yellow throat and chin.

Midland Painted Turtle (*Chrysemys picta marginata*) is listed as “Special Concern” by COSEWIC and is currently under review by COSSARO. Midland Painted Turtles spend the majority of their lives in water. They prefer shallow water with aquatic vegetation, soft mud, and leaf litter at the bottom. Typically found basking on logs, rocks, and shorelines in sunlight. Midland Painted Turtles nest between mid-spring and early summer. They tend to choose gravely, sandy and loam soils for nesting.

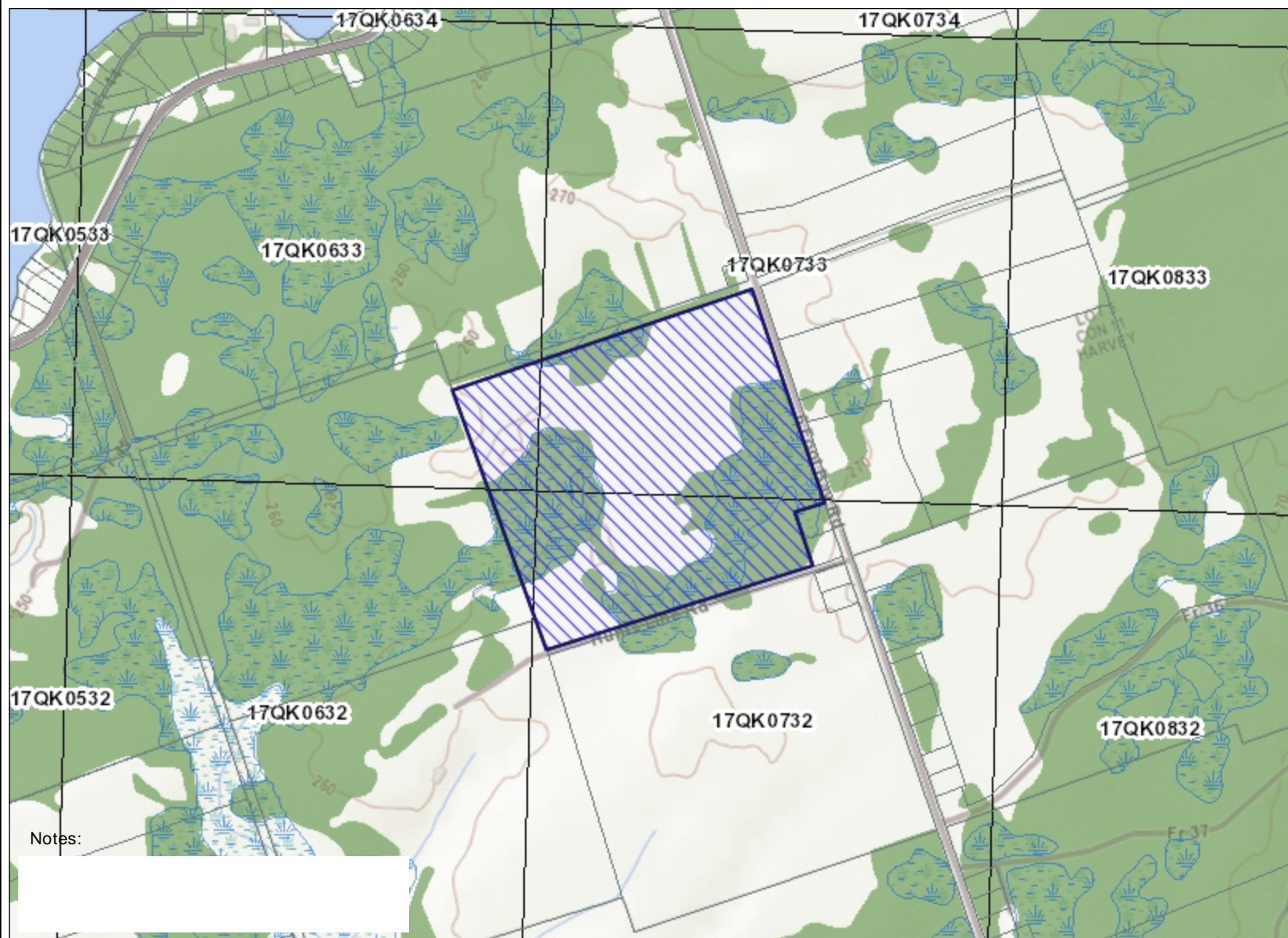
Plants

Black Ash (*Fraxinus nigra*): is listed as “Threatened” by COSEWIC and is currently under review by COSSARO. Black Ash is a shade tolerant species that prefers moist alkaline soil. Black Ash occurs in and around swamp type environments, areas which have seasonal flooding, and moist upland forests.

Butternut (*Juglans cinerea*) is listed as “Endangered” by SARO and is protected under the ESA. Butternut usually grows alone or in small groups in deciduous forests. It prefers moist, well-drained soil and is often found along streams. It may also be found on well-drained gravel sites and rarely on dry rocky soil. This species does not do well in the shade, and often grows in sunny openings and near forest edges.

Appendix E

NHIC Database



Notes:

0.7 0 0.33 0.7 Kilometres

Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry(OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.

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Legend

- Assessment Parcel
- NHIC 1 Km Grid
- ANSI
 - Earth Science Provincially Significant/sciences de la terre d'importance provinciale
 - Earth Science Regionally Significant/sciences de la terre d'importance régionale
 - Life Science Provincially Significant/sciences de la vie d'importance provinciale
 - Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
 - Provincially Significant/considérée d'importance provinciale
 - Non-Provincially Significant/non considérée d'importance provinciale
 - Unevaluated Wetland
- Woodland



NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1056197 SPECIES		Eastern Meadowlark	Sturnella magna		THR	THR	17QK0633	
1056196 SPECIES		Eastern Meadowlark	Sturnella magna		THR	THR	17QK0632	
1056196 SPECIES		Bobolink	Dolichonyx oryzivorus		THR	THR	17QK0632	
1056196 SPECIES		Wood Thrush	Hylocichla mustelina		SC	THR	17QK0632	
1056196 SPECIES		Black Ash	Fraxinus nigra			THR	17QK0632	
1056207 SPECIES		Eastern Meadowlark	Sturnella magna		THR	THR	17QK0733	
1056207 SPECIES		Bobolink	Dolichonyx oryzivorus		THR	THR	17QK0733	
1056206 SPECIES		Eastern Meadowlark	Sturnella magna		THR	THR	17QK0732	
1056206 SPECIES		Bobolink	Dolichonyx oryzivorus		THR	THR	17QK0732	

Appendix F

OBBA Database



Legend		Légende	
Expressway or highway	—	Autoroute ou route nationale (asphaltée)	
Regional or local road	—	Route régionale ou locale (asphaltée ou non)	
Resource / Recreation	---	Ressource / route récréative	
Rail line	+	Chemin de fer	
Utility corridor	---	Ligne de transport d'énergie	
Watercourse	—	Rivière ou ruisseau	
Protected or conserved area	□	Zone protégée ou conservée	
Fire disturbance since 2000	▨	Incendie perturbé depuis 2000	
Broadleaf forest	21	Forêt de feuillus	
Coniferous forest	3	Forêt de conifères	
Mixed forest	24	Forêt mixte	
Shrubland	3	Milieu arbustif	
Grassland	1	Prairie	
Barren	1	Dénudé	
Wetland	3	Milieu humide	
Agriculture	19	Milieu agricole	
Water	21	Eau	
Developed area	6	Zone développée	
Unclassified	□	Non classifié	

The approximate percent coverage of each habitat type is indicated by the numbered box in the legend.

La couverture approximative est indiquée en pourcentage dans le rectangle coloré de la légende.

Cartographic production by Birds Canada
Production cartographique par oiseaux Canada

Note: The project partners are in no way responsible for any inaccuracies, mistakes or omissions in the information that appears on this map.

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6° Universal Transverse Mercator (UTM) Projection; Zone 17,
Central Meridian -81°; North American Datum 1983 (NAD 83)

Projection universelle transverse de Mercator (UTM) 6°

Zone 17, méridien central -81°;

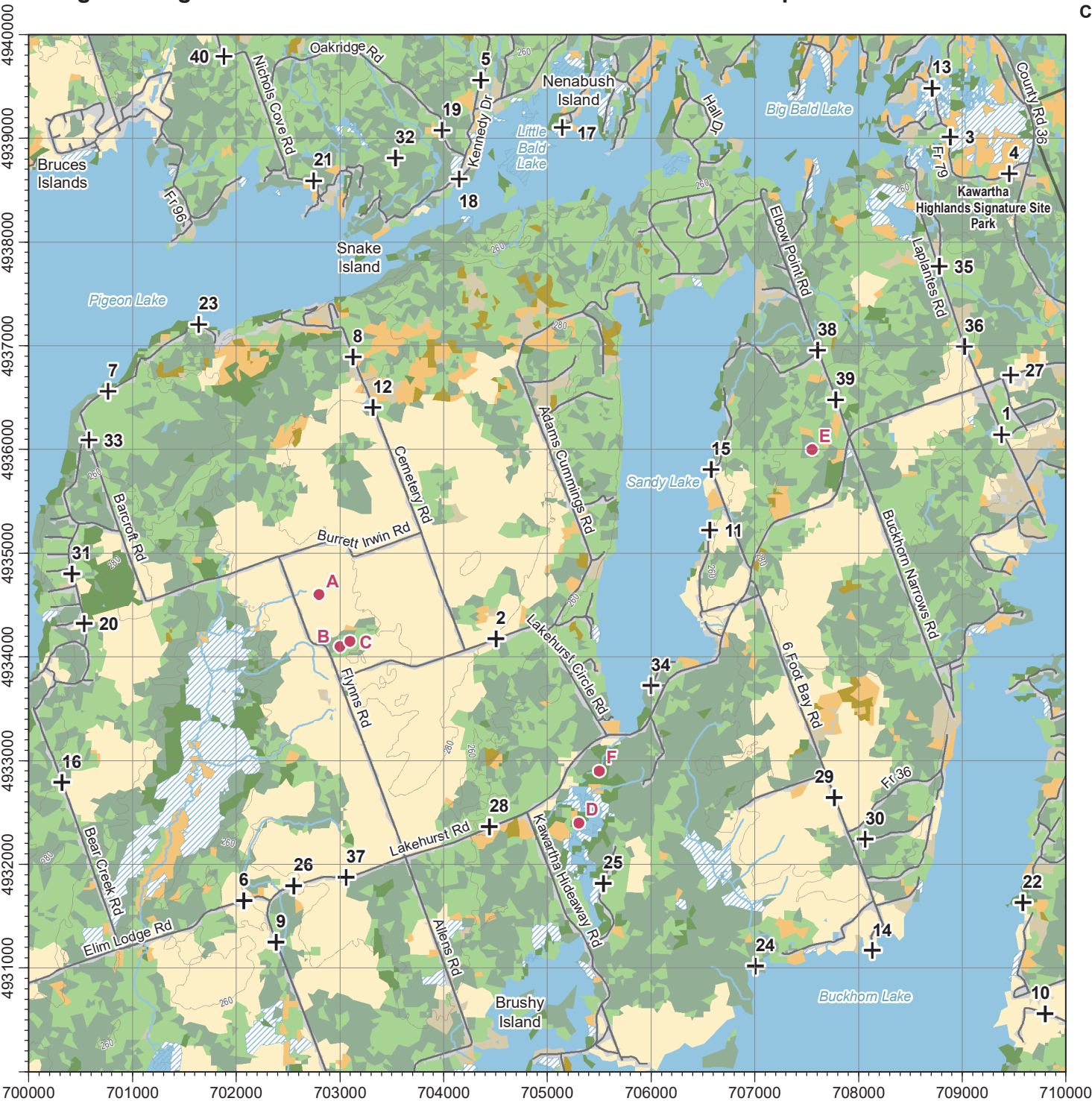
Système de référence géodésique nord-américain 1983 (NAD 83)



BIRDS CANADA OISEAUX CANADA

March 2021 / mars 2021

<https://www.birdsontario.org/>



Number of off-road point counts
Nombre de points d'écoute hors route

Broadleaf forest:	2	Grassland:	0
Coniferous forest:	0	Wetland:	1
Mixed forest:	2	Shrubland:	0

Predefined / Prédéterminés: 20
Off-road / Hors route: 5

Atlas-2 off-road point Point hors route Atlas-2



0 1 km



Square Summary (17TQK03) [\[change\]](#)

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	45	32	15	92	51.3	23.7	20	16
Prev.	26	38	51	115	116.1	—	72	

Region summary (#16: Peterborough, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
60	57	181	60	5
60	60	185	0	60

Target number of point counts in this square: 25 in total: 20 road side, 5 off road (Broadleaf Forest in 2, Mixed Forest in 2, Wetland in 1). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat. **Predef. completed:** [02, 06, 09, 16, 31]

SPECIES	Prev.	Code	%
Canada Goose	FY	FY	71
Mute Swan ‡			3
Trumpeter Swan		P	19
Wood Duck	FY	P	71
Blue-winged Teal ‡	H		8
Northern Shoveler ‡			0
Gadwall ‡			0
American Wigeon ‡			0
Mallard	FY	FY	68
American Black Duck			3
Northern Pintail ‡			0
Green-winged Teal ‡	P		0
Redhead †			0
Ring-necked Duck			19

Lesser Scaup ‡			0
Hooded Merganser	FY	H	45
Common Merganser ‡	P	H	21
Ruddy Duck ‡			0
Wild Turkey	P	FY	66
Ruffed Grouse	T	S	73
Ring-necked Pheasant ‡			0
Pied-billed Grebe			7
Rock Pigeon (Feral Pigeon)	V	H	40
Mourning Dove	FY	T	71
Yellow-billed Cuckoo		P	45
Black-billed Cuckoo	FY	T	66
Coccyzus sp. ‡	S		0
Common Nighthawk §	D		21
Eastern Whip-poor-will §	T	S	33
Chimney Swift ‡			7
Ruby-throated Hummingbird	P	T	56
Virginia Rail	S		43
Sora	S		14

SPECIES	Prev.	Code	%
Common Gallinule ‡			10
American Coot ‡			1
Sandhill Crane ‡			22
Killdeer §	H	H	47
Upland Sandpiper †	H		7
American Woodcock	T		40
Wilson's Snipe			40
Spotted Sandpiper	P	H	31
Ring-billed Gull § ‡			1
Herring Gull §			19
Caspian Tern ‡			0
Black Tern †	H		1
Common Tern § ‡			0
Common Loon	P	AE	61
Double-crested Cormorant § ‡			3
American Bittern	H		38
Least Bittern ‡			22

Least Bittern †			22
Great Blue Heron §	AE	H	50
Green Heron §	H	H	36
Turkey Vulture	H	H	71
Osprey	AE	H	47
Northern Harrier	H		22
Sharp-shinned Hawk	H		7
Cooper's Hawk		H	14
Northern Goshawk ‡			1
Bald Eagle ‡			5
Red-shouldered Hawk	P		17
Broad-winged Hawk	P	H	63
Red-tailed Hawk	H	AE	42
Eastern Screech-Owl			8
Great Horned Owl ‡	P		14
Barred Owl	T	D	33
Long-eared Owl ‡			3

SPECIES	Prev.	Code	%
Short-eared Owl †			0
Northern Saw-whet Owl	S		1
Belted Kingfisher	NY	T	78
Yellow-bellied Sapsucker	NY	P	89
Red-headed Woodpecker †			5
Red-bellied Woodpecker		D	33
Black-backed Woodpecker ‡			1
Downy Woodpecker	P	S	71
Hairy Woodpecker	CF	S	78
Pileated Woodpecker	AE	S	78
Northern Flicker	CF	S	78
American Kestrel §	H		40
Merlin	AE		31
Peregrine Falcon ‡			0
Olive-sided Flycatcher ‡			7
Eastern Wood-Pewee §	T	S	78
Yellow-bellied Flycatcher ‡			0
<u>Alder Flycatcher</u>	T		78

Willow Flycatcher			31
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<u>Least Flycatcher</u>	S		68
Eastern Phoebe	AE	NY	84
Great Crested Flycatcher	FY	T	82
Eastern Kingbird	AE	AE	77
Yellow-throated Vireo	S		22
Blue-headed Vireo		S	45
Philadelphia Vireo ‡			0
Warbling Vireo	CF	S	57
Red-eyed Vireo	FY	T	92
Loggerhead Shrike †			0
Canada Jay ‡			0
Blue Jay	CF	T	94
American Crow	FY	S	84
Common Raven		FY	91

Breeding Bird Atlas - Summary Sheet for Square 17TQK03 (page 2 of 2)

SPECIES	Prev.	Code	%
Black-capped Chickadee	CF	T	98
Boreal Chickadee ‡			0
Horned Lark ‡			5
Northern Rough-winged Swallow	P		15
Purple Martin ‡			0
<u>Tree Swallow</u>	AE		59
Bank Swallow §			10
<u>Barn Swallow</u> §	FY		63
Cliff Swallow §			14
Ruby-crowned Kinglet ‡	S		0
Golden-crowned Kinglet			19
Red-breasted Nuthatch		S	82
White-breasted Nuthatch	P	T	73
Brown Creeper	T	H	42
Blue-gray Gnatcatcher ‡			3
House Wren	CF	AE	59
Winter Wren	FY	S	77
Sedge Wren ‡			8
Marsh Wren	T	S	40
Carolina Wren ‡			5
European Starling	FY	P	70
Gray Catbird	FY	A	73
Brown Thrasher	FY	CF	61
Northern Mockingbird ‡			1
Eastern Bluebird	AE	P	40
Veery	A	S	89
Swainson's Thrush	S	H	7
Hermit Thrush	T	S	57
Wood Thrush §	S	S	66
American Robin	NY	NY	98
Cedar Waxwing	CF	S	66
House Sparrow	FY		33
Evening Grosbeak ‡			0
SPECIES	Prev.	Code	%

House Finch			15
Purple Finch	FY	H	73
Red Crossbill ‡			5
White-winged Crossbill ‡			3
Pine Siskin ‡	P		5
American Goldfinch	D	S	78
Grasshopper Sparrow §	S		21
Chipping Sparrow	CF	CF	82
Clay-colored Sparrow ‡	CF		15
Field Sparrow §	FY	T	57
Dark-eyed Junco ‡			3
White-throated Sparrow	T	S	80
Vesper Sparrow			19
Savannah Sparrow	T	S	52
Song Sparrow	CF	T	96
Lincoln's Sparrow ‡			5
Swamp Sparrow	CF	S	87
Eastern Towhee §	S	S	43
Bobolink §	D		45
Eastern Meadowlark §	D	S	50
Orchard Oriole ‡			3
Baltimore Oriole	D	T	64
Red-winged Blackbird	CF	T	94
Brown-headed Cowbird	FY	S	47
Common Grackle	FS	CF	92
Ovenbird	T	T	87
Northern Waterthrush	T	T	73
Golden-winged Warbler †	H	S	14
Blue-winged Warbler ‡			8
Black-and-white Warbler	T	S	80
Tennessee Warbler ‡			0
Nashville Warbler	CF	H	73
<u>Mourning Warbler</u>	S		50

SPECIES	Prev.	Code	%
Common Yellowthroat	T	A	89
Hooded Warbler ‡			0
American Redstart	AE	T	82

Cape May Warbler ‡			0
Cerulean Warbler †			3
Northern Parula ‡	S		10
Magnolia Warbler		S	57
Bay-breasted Warbler ‡			0
Blackburnian Warbler	S	S	35
Yellow Warbler	CF	S	78
Chestnut-sided Warbler	CF	T	73
Black-throated Blue Warbler	T	S	40
Pine Warbler	CF	FY	82
Yellow-rumped Warbler	CF	T	64
Prairie Warbler †			0
Black-throated Green Warbler	CF	T	68
Canada Warbler §			40
Scarlet Tanager	P	CF	75
Northern Cardinal	CF	T	42
Rose-breasted Grosbeak	D	T	82
Indigo Bunting	CF	T	73

This list includes all breeding species expected in the region #16 (Peterborough). Underlined species are those that you should try to add to this square (17TQK03). They have not yet been reported in this square, but have been reported in more than 50% of the squares in this region so far. "Prev." is the code for the highest breeding evidence for that species in square 17TQK03 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQK03 over the last 5 years. The % columns give the percentage of squares in that region where that species was reported (this gives an idea of the expected chance of finding that species in region #16). Rare/Colonial Species Report Forms should be completed for species marked: § (Species of interest), ‡ (regionally rare), † (provincially rare). An up-to-date version of this sheet is available from <https://www.birdscanada.org/naturecounts/atlas/summaryform.jsp?squareID=17TQK03&lang=EN> Data current as of **19/01/2022 07:24**.

Appendix G

Species List

Observed Species List

KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia	American Black Bear	Ursus americanus	NAR	
	American Crow	Corvus brachyrhynchos		
	American Goldfinch	Spinus tristis		
	American Kestrel	Falco sparverius		
	American Redstart	Setophaga ruticilla		
	American Robin	Turdus migratorius		
	American Snout	Libytheana carinenta		
	American Toad	Anaxyrus americanus		
	American Woodcock	Scolopax minor		
	Baltimore Oriole	Icterus galbula		
	Barred Owl	Strix varia		
	Black Saddlebags	Tramea lacerata		
	Black-and-gold Bumble Bee	Bombus auricomus		
	Black-and-white Warbler	Mniotilta varia		
	Black-billed Cuckoo	Coccyzus erythrophthalmus		
	Black-capped Chickadee	Poecile atricapillus		
	Black-throated Green Warbler	Setophaga virens		
	Blue Jay	Cyanocitta cristata		
	Blue-spotted Salamander	Ambystoma laterale		
	Broad-winged Hawk	Buteo platypterus		
	Brown-headed Cowbird	Molothrus ater		
	Cabbage White	Pieris rapae		
	Canada Goose	Branta canadensis		
	Cedar Waxwing	Bombycilla cedrorum		
	Chestnut-sided Warbler	Setophaga pensylvanica		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Chipping Sparrow	Spizella passerina		
	Clay-colored Sparrow	Spizella pallida		
	Common Baskettail	Epithea cynosura		
	Common Gartersnake	Thamnophis sirtalis		
	Common Grackle	Quiscalus quiscula		
	Common Whitetail	Plathemis lydia		
	Coyote	Canis latrans		
	Dark-eyed Junco	Junco hyemalis		
	Deer Mouse	Peromyscus maniculatus		
	Downy Woodpecker	Dryobates pubescens		
	Eastern American Toad	Anaxyrus americanus americanus		
	Eastern Chipmunk	Tamias striatus		
	Eastern Kingbird	Tyrannus tyrannus		
	Eastern Phoebe	Sayornis phoebe		
	Eastern Tailed Blue	Cupido comyntas		
	Eastern Tiger Swallowtail	Papilio glaucus		
	Eastern Towhee	Pipilo erythrophthalmus		
	European Starling	Sturnus vulgaris		
	Gray Treefrog	Dryophytes versicolor		
	Great Horned Owl	Bubo virginianus		
	Hairy Woodpecker	Dryobates villosus		
	House Wren	Troglodytes aedon		
	Indigo Bunting	Passerina cyanea		
	Killdeer	Charadrius vociferus		
	Magnolia Warbler	Setophaga magnolia		
	Mourning Dove	Zenaida macroura		
	Nashville Warbler	Leiosthlypis ruficapilla		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Northern Leopard Frog	Lithobates pipiens	NAR	
	Northern Raccoon	Procyon lotor		
	Ovenbird	Seiurus aurocapilla		
	Red Fox	Vulpes vulpes		
	Red Squirrel	Tamiasciurus hudsonicus		
	Red-eyed Vireo	Vireo olivaceus		
	Red-tailed Hawk	Buteo jamaicensis	NAR	
	Red-winged Blackbird	Agelaius phoeniceus		
	Ring-billed Gull	Larus delawarensis		
	Rose-breasted Grosbeak	Pheucticus ludovicianus		
	Ruffed Grouse	Bonasa umbellus		
	Scarlet Tanager	Piranga olivacea		
	Sharp-shinned Hawk	Accipiter striatus	NAR	
	Song Sparrow	Melospiza melodia		
	Spring Peeper	Pseudacris crucifer		
	Striped Skunk	Mephitis mephitis		
	Swamp Sparrow	Melospiza georgiana		
	The Old Maid	Catocala badia coelebs		
	Tree Swallow	Tachycineta bicolor		
	Turkey Vulture	Cathartes aura		
	Veery	Catharus fuscescens		
	White Admiral	Limenitis arthemis arthemis		
	White-breasted Nuthatch	Sitta carolinensis		
	White-crowned Sparrow	Zonotrichia leucophrys		
	White-tailed Deer	Odocoileus virginianus		
	Wild Turkey	Meleagris gallopavo		
	Wilson's Snipe	Gallinago delicata		
	Wilson's Warbler	Cardellina pusilla		
	Winter Wren	Troglodytes hiemalis		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Wood Frog	Lithobates sylvaticus		
	Yellow Warbler	Setophaga petechia		
	Yellow-rumped Warbler	Setophaga coronata		
Plantae				
	Alsike Clover	Trifolium hybridum		
	Alternate-leaved Dogwood	Cornus alternifolia		
	American Beech	Fagus grandifolia		
	American Mountain-ash	Sorbus americana		
	Annual Bluegrass	Poa annua		
	Balsam Fir	Abies balsamea		
	Basswood	Tilia americana		
	Beechdrops	Epifagus virginiana		
	Bitternut Hickory	Carya cordiformis		
	Black Ash	Fraxinus nigra		
	Black Cherry	Prunus serotina		
	Black Locust	Robinia pseudoacacia		
	Black Raspberry	Rubus occidentalis		
	Black Swallowwort	Vincetoxicum nigrum		
	Black Walnut	Juglans nigra		
	Blue Cohosh	Caulophyllum thalictroides		
	Blue-beech	Carpinus caroliniana ssp. virginiana		
	Bouncing-bet	Saponaria officinalis		
	Bracken Fern	Pteridium aquilinum		
	Broad-leaved Cattail	Typha latifolia		
	Bull Thistle	Cirsium vulgare		
	Bur Oak	Quercus macrocarpa		
	Butter-and-eggs	Linaria vulgaris		
	Calico Aster	Symphyotrichum lateriflorum		
	Canada Enchanter's Nightshade	Circaea canadensis ssp. canadensis		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Canada Goldenrod	<i>Solidago canadensis</i>		
	Chokecherry	<i>Prunus virginiana</i>		
	Coltsfoot	<i>Tussilago farfara</i>		
	Common Bladderwort	<i>Utricularia vulgaris</i>		
	Common Bugloss	<i>Anchusa officinalis</i>		
	Common Burdock	<i>Arctium minus</i>		
	Common Buttercup	<i>Ranunculus acris</i>		
	Common Dandelion	<i>Taraxacum officinale</i>		
	Common Elderberry	<i>Sambucus canadensis</i>		
	Common Hawkweed	<i>Hieracium lachenalii</i>		
	Common Lilac	<i>Syringa vulgaris</i>		
	Common Milkweed	<i>Asclepias syriaca</i>		
	Common Morning Glory	<i>Ipomoea purpurea</i>		
	Common Mullein	<i>Verbascum thapsus</i>		
	Common Prickly-ash	<i>Zanthoxylum americanum</i>		
	Common Self-heal	<i>Prunella vulgaris</i>		
	Common Sow-thistle	<i>Sonchus oleraceus</i>		
	Common Speedwell	<i>Veronica officinalis</i>		
	Common St. John's-wort	<i>Hypericum perforatum</i>		
	Common Timothy	<i>Phleum pratense</i>		
	Common Viper's Bugloss	<i>Echium vulgare</i>		
	Common Yarrow	<i>Achillea millefolium</i>		
	Downy Yellow Violet	<i>Viola pubescens</i> var. <i>pubescens</i>		
	Dudley's Rush	<i>Juncus dudleyi</i>		
	Early Meadow-rue	<i>Thalictrum dioicum</i>		
	Eastern Hemlock	<i>Tsuga canadensis</i>		
	Eastern Hop-hornbeam	<i>Ostrya virginiana</i>		
	Eastern Marsh Fern	<i>Thelypteris palustris</i> var. <i>pubescens</i>		
	Eastern Prickly Gooseberry	<i>Ribes cynosbati</i>		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Eastern Red Cedar	<i>Juniperus virginiana</i> var. <i>virginiana</i>		
	Eastern Star Sedge	<i>Carex radiata</i>		
	Eastern White Cedar	<i>Thuja occidentalis</i>		
	Eastern White Pine	<i>Pinus strobus</i>		
	English Hawthorn	<i>Crataegus monogyna</i>		
	European Mountain-ash	<i>Sorbus aucuparia</i>		
	Field Brome	<i>Bromus arvensis</i>		
	Field Mustard	<i>Brassica rapa</i>		
	Field Pussytoes	<i>Antennaria neglecta</i>		
	Field Sow-thistle	<i>Sonchus arvensis</i>		
	Finely-nerved Sedge	<i>Carex leptoneura</i>		
	Fox Sedge	<i>Carex vulpinoidea</i>		
	Garden Bird's-foot Trefoil	<i>Lotus corniculatus</i>		
	Hard Fescue	<i>Festuca trachyphylla</i>		
	Hedge Bindweed	<i>Fallopia dumetorum</i>		
	Herb-Robert	<i>Geranium robertianum</i>		
	Inflated Sedge	<i>Carex vesicaria</i>		
	Large-leaved Aster	<i>Eurybia macrophylla</i>		
	Large-leaved Goldenrod	<i>Solidago macrophylla</i>		
	Large-toothed Aspen	<i>Populus grandidentata</i>		
	Low Hop Clover	<i>Trifolium campestre</i>		
	Manitoba Maple	<i>Acer negundo</i>		
	Naked Mitrewort	<i>Mitella nuda</i>		
	Narrow-leaved Cattail	<i>Typha angustifolia</i>		
	New England Aster	<i>Symphyotrichum novae-angliae</i>		
	New York Aster	<i>Symphyotrichum novi-belgii</i>		
	Northern Dewberry	<i>Rubus flagellaris</i>		
	Northern Maidenhair Fern	<i>Adiantum pedatum</i>		
	Norway Maple	<i>Acer platanoides</i>		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Orchard Grass	Dactylis glomerata		
	Ostrich Fern	Matteuccia struthiopteris		
	Paper Birch	Betula papyrifera		
	Path Rush	Juncus tenuis		
	Pearly Everlasting	Anaphalis margaritacea		
	Pennsylvania Sedge	Carex pensylvanica		
	Perennial Ragweed	Ambrosia psilostachya		
	Philadelphia Fleabane	Erigeron philadelphicus		
	Poison Ivy	Toxicodendron radicans		
	Purple Loosestrife	Lythrum salicaria		
	Pussy Willow	Salix discolor		
	Red Clover	Trifolium pratense		
	Red Fescue	Festuca rubra		
	Red Maple	Acer rubrum		
	Red Trillium	Trillium erectum		
	Red-osier Dogwood	Cornus sericea		
	Riverbank Grape	Vitis riparia		
	Rock Polypody	Polypodium virginianum		
	Rough-stemmed Goldenrod	Solidago rugosa		
	Rugel's Plantain	Plantago rugelii		
	Russian Pigweed	Axyris amaranthoides		
	Scots Pine	Pinus sylvestris		
	Sensitive Fern	Onoclea sensibilis		
	Shagbark Hickory	Carya ovata		
	Sheep Sorrel	Rumex acetosella		
	Silver Maple	Acer saccharinum		
	Small Enchanter's Nightshade	Circaea alpina		
	Smooth Bedstraw	Galium mollugo		
	Smooth Black Sedge	Carex nigra		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Smooth Brome	Bromus inermis		
	Speckled Alder	Alnus incana ssp. rugosa		
	Spinulose Wood Fern	Dryopteris carthusiana		
	Spotted Jewelweed	Impatiens capensis		
	Staghorn Sumac	Rhus typhina		
	Sugar Maple	Acer saccharum		
	Swamp White Oak	Quercus bicolor		
	Sweet Gale	Myrica gale		
	Tall Meadow-rue	Thalictrum pubescens		
	Tatarian Honeysuckle	Lonicera tatarica		
	Thyme-leaved Sandwort	Arenaria serpyllifolia		
	Trembling Aspen	Populus tremuloides		
	Tussock Sedge	Carex stricta		
	Upright Brome	Bromus erectus		
	Virginia Creeper	Parthenocissus quinquefolia		
	White Ash	Fraxinus americana		
	White Elm	Ulmus americana		
	White Meadowsweet	Spiraea alba		
	White Oak	Quercus alba		
	White Spruce	Picea glauca		
	White Sweet-clover	Melilotus albus		
	Wild Carrot	Daucus carota		
	Wild Chicory	Cichorium intybus		
	Wild Lily-of-the-valley	Maianthemum canadense		
	Wild Marjoram	Origanum vulgare		
	Wild Raisin	Viburnum cassinoides		
	Wild Sarsaparilla	Aralia nudicaulis		
	Wild Strawberry	Fragaria virginiana		
	Wood Avens	Geum urbanum		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Woods' Rose	Rosa woodsii		
	Yellow Goatsbeard	Tragopogon dubius		
	Yellow Sweet-clover	Melilotus officinalis		
	Yellow Trout-lily	Erythronium americanum		
	Zigzag Goldenrod	Solidago flexicaulis		

Appendix H

Significant Wildlife Habitat (SWH)

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Wildlife Concentration Areas					
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM1, CUT1, plus annual spring flooding	Fields with sheet water during the spring	YES	NO	Not Applicable
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1 to MAS 3, SAS1, SAM1, SAF1, SWD1 to SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration	YES	NO	Not Applicable
Shorebird Migratory Stopover Area	BBO1 to 2, BBS1 to 2, BBT1 to 2, SDO1, SDS2, SDT1, MAM1 to 5	Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and unvegetated shoreline habitats	NO	NO	Not Applicable
Raptor Wintering Area	At least one of FOD, FOM or FOC and one of CUM, CUT, CUS, CUW	The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors	YES	YES	Applicable
Bat Hibernacula	CCR1, CCR2, CCA1, CCA2	Caves, mine shafts, underground foundations and Karsts. Hibernacula relatively poorly known	NO	NO	Not Applicable
Bat Maternity Colonies	FOD, FOM, SWD, SWM	Mature forests with >10 ha of large diameter (>25 cm dbh) wildlife trees, 21 snags per hectare preferred	YES	YES	Applicable
Turtle Wintering Areas	Classes SA, MA, OA and SA, ELC Community Series FEO and BOO	Within core habitat, water must be deep enough not to freeze and have soft mud substrates	NO	NO	Not Applicable
Reptile Hibernaculum (Turtles assessed separately)	Any Ecosite with the exception of very wet communities, Five-lined Skink prefers FOD and FOM communities, Ecosites FOC1 & FOC3	Below frost lines in burrows, rock crevices and other natural or naturalized locations. Rock crevices, talus slopes, etc.	NO	NO	Not Applicable
Colonial Nesting Bird Breeding Habitat (Bank and Cliff)	CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns. Man-made structure and disturbance over 2 years old	YES	NO	Not Applicable

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Colonial Nesting Bird Breeding Habitat (Tree/Shrubs)	SWM2, SWM3, SWM5, SWM6, SWD1-7, FET1	Live or dead standing trees (typically 11 to 15 m tall) in wetlands, lakes, islands and peninsulas. Occasionally shrubs and emergent vegetation.	YES	NO	Not Applicable
Colonial Nesting Bird Breeding Habitat (Ground)	MAM1 - 6, MAS1 - 3, CUM, CUT, CUS	Rocky island or peninsula within a lake or river. Close proximity to watercourses in open fields or pastures with scattered trees or shrubs	YES	NO	Not Applicable
Migratory Butterfly Stopover Areas	At least one of FOD, FOM, FOC and CUP and one of CUM, CUT, CUS	At least 10 ha in size with combination of field and forest within 5 km of Lake Ontario	NO	NO	Not Applicable
Landbird Migratory Stopover Areas	FOC, FOM, FOD, SWC, SWM, SWD	Woodlots need to be >10 ha in size and within 5 km of Lake Ontario	NO	NO	Not Applicable
Deer Yarding Areas	FOM, FOC, SWM, SWC, CUP2, CUP3, FOD3, CUT MNRF to confirm	Core (Stratum I) is located within Stratum II. Core is critical for survival of deer during winter months	NO	NO	Not Applicable
Deer Winter Congregation Areas	FOC, FOM, FOD, SWC, SWM, SWD	Large woodlots typically >100 ha, however smaller woodlots with densities of 0.1 - 1.5 deer/ha may also be considered	NO	NO	Not Applicable
Rare Vegetation Communities					
Cliffs and Talus Slopes	TAO, TAS, TAT, CLO, CLS, CLT	Cliff is vertical to near vertical >3 m tall Talus slope is rock rubble at base of a cliff made up of coarse rock debris	NO	NO	Not Applicable
Sand Barren	SBO1, SBS1, SBT1	Typically >0.5 ha with exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion	NO	NO	Not Applicable
Alvar	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW	Typically >0.5 ha with level, mostly fractured calcareous bedrock	NO	NO	Not Applicable

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Old Growth Forest	FOD, FOM, SWD, SWC, SWM	Woodland areas 30 ha or greater with at least 10 ha interior habitat assuming 100 m buffer at edge of forest	NO	NO	Not Applicable
Savannah	TPS1, TPS2, TPW1, TPW2, CUS2	Any tallgrass prairie habitat that has tree cover between 25 - 60%	NO	NO	Not Applicable
Tallgrass Prairie	TPO1, TPO2	Dominated by prairie grasses with < 25% tree cover	NO	NO	Not Applicable
Other Rare Vegetation Communities	Provincially Rare S1, S2 and S3 vegetation communities, refer to Appendix M of SWHTG	Beaches, fens, forest, marsh, barrens, dunes and swamps	NO	NO	Not Applicable
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	MAS1 to 3, SAS1, SAM1, SAF1, MAM1 to 6, SWT1, SWT2, SWD1 to 4	Extends 120 m from a wetland (>0.5 ha) or a wetland (>0.5 ha) and any small wetlands or a cluster of 3 small wetlands where waterfowl nesting is known to occur	YES	YES	Great Blue Heron Nesting/Site Colony approximately 1 km away.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands or in structures over water	YES	YES	Osprey nesting site within 1 km
Woodland Raptor Nesting Habitat	All forested ecosites May also occur in SWC, SWM, SWD, CUP3	All natural or conifer plantation woodland / forest stands >30 ha with >10 ha of interior habitat	YES	YES	Applicable
Turtle Nesting Areas	Exposed mineral soil area adjacent (<100m) or within MAS1 to 3, SAS1, SAM1, SAF1, BOO1, FEO1	Close to water with sand and gravel that turtles are able to dig in, located in open sunny areas.	NO	NO	Not Applicable
Seeps and Springs	Any forested Ecosite within a headwater area	Any forested area (with >25% meadow/field/pasture) within headwaters of a stream or river system	YES	YES	Applicable
Amphibian Breeding Habitat (Woodland)	FOC, FOM, FOD, SWC, SWM, SWD	Presence of a wetland, pond or woodland pool >500m ² , within or adjacent to woodland	YES	YES	Applicable
Amphibian Breeding Habitat (Wetlands)	Classes SW, MA, FE, BO, OA, SA Typically isolated (>120 m) from woodland ecosites	Wetlands >500m ² (25m diameter), supporting high species diversity	YES	YES	Applicable

Significant Wildlife Habitat Screening					
Significant Wildlife Habitat Type	ELC Habitat (for internal use)	General Habitat Description	ELC Observed	SWH Present	Comments
Woodland Area-Sensitive Breeding Bird Habitat	FOC, FOM, FOD, SWC, SWM, SWD	Habitats where interior forest birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha	YES	YES	Applicable
Habitat of Species of Conservation Concern (other than Threatened or Endangered)					
Marsh Breeding Bird Habitat	MAM1 to 6, SAS1, SAM1, SAF1, FEO1, BOO1 Green Heron: SW, MA, CUM1	Nesting occurs in wetlands consisting of shallow water with emergent aquatic vegetation Green Heron: edge water habitat	YES	NO	Applicable
Open Country Bird Breeding Habitat	CUM1, CUM2	Large grassland areas (including natural and cultural field and meadows) >30 ha	YES	YES	Applicable
Shrub/Early Successional Bird Breeding Habitat	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub thicket habitats >10 ha in size	NO	NO	Not Applicable
Terrestrial Crayfish	MAM1 to 6, MAS1 to 3, SWD, SWT, SWM CUM1 with inclusions above meadow marsh or swamp ecosites	Wet meadow edges of shallow marshes Only found in SW Ontario	YES	NO	Not accurate is in Peterborough and Lindsay Area. Not Applicable here.
Special Concern and Rare Wildlife Species	Varies	All Special Concern and Provincially Rare plant and animal species. May also consider Area Sensitive and Culturally Sensitive Species	NO	NO	Not Applicable
Animal Movement Corridors					
Amphibian Movement Corridors	Corridors found in all ecosites associated with water, determined from breeding habitats	Determined as part of breeding habitat assessment	YES	YES	Applicable
Deer Movement Corridors	All forested Ecosites	All proposals within Stratum II Deer Wintering Area have potential for corridors	YES	NO	No Wintering Area within 5 km
General Comments:					