

Natural Heritage Evaluation - 459 7th Line Road, Peterborough



2020-07-09

Prepared for:
Marwood Payne

Cambium Reference No.: 10456-001

CAMBIUM INC.
866.217.7900
cambium-inc.com

Peterborough | Barrie | Oshawa | Kingston



Table of Contents

1.0	Introduction.....	1
1.1	Terms of Reference.....	2
1.2	Existing Site Conditions.....	2
1.3	Proposed Development and Conceptual Site Plan.....	2
2.0	Applicable Natural Heritage Policy and Regulation.....	3
2.1	Provincial Policy Statement, 2020.....	3
2.2	Growth Plan for the Greater Golden Horseshoe, 2019.....	3
2.3	Official Plan (County of Peterborough).....	5
2.4	Official Plan (Township of Douro-Dummer).....	5
2.5	Zoning By-law (Township of Douro-Dummer).....	5
2.6	Conservation Authority Regulation (O.Reg. 167/06).....	5
2.7	Endangered Species Act, 2007.....	6
2.8	Species at Risk Act.....	6
3.0	Technical Approach and Data Collection Methods.....	7
3.1	Background Information Review.....	7
3.1.1	Ministry Consultation.....	7
3.2	Field Investigations.....	8
3.2.1	Ecological Land Classification and Vegetation Inventory.....	8
3.2.2	Wetland Boundary Delineation.....	8
3.2.3	Habitat-Based Wildlife Surveys.....	9
4.0	Characterization of Natural Features and Functions.....	10
4.1	Landscape Position and Topography.....	10
4.2	Vegetation Communities.....	10
4.3	Wetland Delineation.....	11
4.4	Birds and Habitat Features.....	11
4.5	Amphibians and Habitat Features.....	12
4.6	Reptiles and Habitat Features.....	12



4.7	Mammals and Habitat Features	13
4.8	Species at Risk.....	14
5.0	Assessment of Natural Heritage Significance	16
5.1	Unevaluated Wetlands	16
5.2	Significant Woodlands.....	16
5.3	Significant Wildlife Habitat.....	17
5.3.1	Amphibian Breeding Habitat (Woodland)	17
5.3.2	Discussion of potential impacts and mitigation strategies are provided in Section	
6.3	Special Concern and Rare Wildlife Species	18
5.4	Habitat of Endangered and Threatened Species.....	18
6.0	Proposed Development and Impact Assessment.....	19
6.1	Unevaluated Wetlands	19
6.2	Significant Woodland.....	20
6.3	Significant Wildlife Habitat.....	21
6.4	Habitat for Endangered and Threatened Species	23
7.0	Policy Compliance.....	24
8.0	Recommended Mitigation, Compensation, and Best Practices	26
9.0	Closing	28

References

List of Inserted Tables

Table 1	Protected Features of the GPGGH	4
Table 2	Summary of Field Investigations	8
Table 3	Vegetation Communities.....	10
Table 4	Policy Compliance Summary	24



List of Appended Figures

- Figure 1 Site Location and Special Planning Areas
- Figure 2 Local Natural Heritage Features
- Figure 3 Site Natural Heritage Features and Survey Locations
- Figure 4 Proposed Natural Heritage Development Constraints

List of Appendices

- Appendix A Correspondence
- Appendix B Photographic Log
- Appendix C Vegetation Species List
- Appendix D Species at Risk Screening



1.0 Introduction

Cambium Inc. (Cambium) was retained by Marwood Payne to conduct a Natural Heritage Evaluation - 459 7th Line Road, Peterborough (Figure 1; the Site). The proposed development includes a severance of a lot at the northeast corner of the property (the Study Area), with the intention of building a residence in the future.

The Natural Heritage Evaluation (NHE) is required to address potential negative impacts to natural heritage features identified during the preliminary planning review process, as required by the Provincial Policy Statement, 2020 (PPS) and the Growth Plan for the Greater Golden Horseshoe, 2019. Based on the Preliminary Severance Review provided by the County of Peterborough dated November 22, 2019, the proposed severance is within 120 m of a key hydrological feature (i.e., unevaluated wetland).

The Site is within the jurisdiction of the Otonabee Region Conservation Authority (ORCA) and their regulated area overlaps the Site due to the presence of a watercourse and wetlands. The scoped NHE was prepared in consideration of the regulations on development adjacent to watercourses and wetlands imposed by ORCA's *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation (Ontario Regulation 167/06)* under the Conservation Authorities Act (1990).

The *Endangered Species Act, 2007 (ESA)* (Government of Ontario, 2018) protects endangered or threatened species and their habitats from harm or destruction. Habitat of endangered and threatened species is protected under provincial natural heritage policy; however, it is also the landowner's responsibility to ensure that no harm to these species occurs on their property. This NHE includes a species at risk (SAR) screening to determine if the Study Area has suitable habitat for any provincially or federal listed at-risk species.

In order to address the NHE requirements of the regulatory agencies, Cambium has conducted this NHE to provide an evaluation of reasonably anticipated ecological impacts, positive or negative, that may arise as a result of this proposed development to guide the decision making process.



1.1 Terms of Reference

Cambium undertook consultation with ORCA and to confirm the Terms of Reference (ToR) for the NHE and ensure it meets their requirements (email from Jasmine Gibson, Planning Ecologist, dated May 7, 2020; Appendix A)

1.2 Existing Site Conditions

The Site is currently occupied by a house, barn, and garage; however, a large portion of the property is undeveloped lands including forested areas, ponds, watercourses, and unevaluated wetlands. The Study Area is currently vacant. There are single residential dwellings located to the north, south, and east of the Study Area.

The Site is within Ecoregion 6E-8 of Ontario (Crins, Gray, Uhlig, & Wester, 2009).

1.3 Proposed Development and Conceptual Site Plan

The proposed development includes a severance of the property that would create one new lot and one retained lot, with road frontage on 8th Line Road and 7th Line Road, respectively. The retained lot would include the existing residential development. The Preliminary Severance Review provided by the County of Peterborough, dated November 22, 2019 (Appendix A), notes that the proposed severance does not conform to provincial policy due to the mapped unevaluated wetlands and waterbody less than 120 m away from the proposed severed lot.



2.0 Applicable Natural Heritage Policy and Regulation

At the provincial level, the Site is affected by the *Planning Act* R.S.O. 1990, as amended, and the associated Provincial Policy Statement, 2020 (PPS) as well as the *Places to Grow Act*, 2005 and the associated Growth Plan for the Greater Golden Horseshoe, 2019 (GPGGH). Although the PPS provides overall policy direction for the province related to land use and development, the GPGGH prevails where there is a conflict, with only two exceptions: natural environment and human health. In these cases, the policy that provides more protection prevails. For this site, the most stringent environmental policies are contained within the GPGGH. As such, the rest of this report seeks to address these comprehensive policies.

2.1 Provincial Policy Statement, 2020

Section 2.1 of the Provincial Policy Statement (PPS) (Ministry of Municipal Affairs and Housing, 2020) protects the form and function of natural heritage features as defined by the PPS. Natural heritage features included in the PPS are provincially significant wetlands (PSW), significant coastal wetlands, significant woodlands, significant valleylands, significant wildlife habitat (SWH), significant areas of natural and scientific interest (ANSI), fish habitat, and the habitat of endangered and threatened species. Given their significance, development is prohibited within PSWs in Ecoregions 5E, 6E, and 7E and within significant coastal wetlands. Development in fish habitat and the habitat of endangered and threatened species shall only be permitted in accordance with provincial and federal requirements. Development within other natural heritage features and on lands adjacent to all natural heritage features are permitted only if demonstrated that there will be no negative impacts on the feature or their ecological function. Development includes the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the *Planning Act*.

2.2 Growth Plan for the Greater Golden Horseshoe, 2019

The Greater Golden Horseshoe is one of the most dynamic and fast-growing regions in North America. To address the challenges of increased development within the area, the Growth Plan for the Greater Golden Horseshoe, 2019 (GPGGH) builds on the PPS “to establish a



unique land use planning framework for the Greater Golden Horseshoe that supports achievement of complete communities, a thriving economy, a clean and healthy environment, and social equity” (MMAH, 2019). In general, the GPGGH seeks to preserve agricultural lands, water resources, and natural areas by directing growth to settlement areas as defined in municipal Official Plans. The GPGGH contains policies regarding a provincial Natural Heritage System (NHS), key hydrologic features (KHF), key hydrologic areas (KHAs), and key natural heritage features (KNHFs)(Table 1). Policies that reference the provincial NHS apply once the municipal Official Plan has incorporated the provincial NHS into their schedules; until that time, the policies that reference the NHS will apply outside settlement areas to the natural heritage systems identified in Official Plans that were approved and in effect as of July 1, 2017. Section 4.2.3 of the GPGGH states that, outside of settlement areas, development or site alteration is generally not permitted in KNHFs that are part of the NHS or in KHFs. Section 4.2.4 states that, outside of settlement areas, a proposal for new development or site alteration within 120 metres of a KNHF within the NHS or a KHF will require a natural heritage evaluation or hydrologic evaluation that identifies a suitable vegetation protection zone (i.e., a development setback). For KHFs, fish habitat, and significant woodlands the vegetation protection zone can be no less than 30 m measured from the outside boundary of the feature.

Table 1 Protected Features of the GPGGH

Key Hydrologic Features		Key Natural Heritage Features	
Permanent Streams	Habitat of Endangered and Threatened Species	Significant Wildlife Habitat	
Intermittent Streams	Fish Habitat	Sand Barrens	
Inland Lakes and their Littoral Zones	Wetlands	Savannahs	
Seepage Areas and Springs	Life Science Areas of Natural and Scientific Interest (ANSI)	Tallgrass Prairies	
Wetlands	Significant Valleylands	Alvars	
	Significant Woodlands		

Based on the key hydrologic feature (i.e., wetlands and lakes) identified on the Site, the proposed development (land severance) is subject to the policies of the GPGGH. This study will focus specifically on Key Hydrologic Features and Key Natural Heritage Features on and within 120 m of the Study Area.



2.3 Official Plan (County of Peterborough)

According to the County of Peterborough's mapping, land use designation of the subject property is 'Rural Area'. Surrounding land use designations are predominantly 'Rural Area'.

2.4 Official Plan (Township of Douro-Dummer)

According to the Township of Douro-Dummer Schedule A4-2- Land Use and Transportation Dummer Ward (The Township of Douro-Dummer, 2008), the land use designation of the subject property is 'Rural'. Surrounding land use designations are predominantly 'Rural'.

2.5 Zoning By-law (Township of Douro-Dummer)

According to Zoning By-law No. 10-1996, the subject property is zoned 'Rural' (RU) and 'Environmental Constraint' (EC). Zoning of surrounding properties is predominantly 'Rural' (RU).

2.6 Conservation Authority Regulation (O.Reg. 167/06)

As per the *Otonabee Region Conservation Authority Regulation of Development, Interference with Wetlands and Alterations To Shorelines and Watercourses* (Ontario Regulation 167/06) under the *Conservation Authorities Act*, and the Otonabee Region Conservation Authority (ORCA) Watershed Planning and Regulation Policy Manual (2017) Section 7.0, development is not permitted within 120 m of a PSW boundary or within 30 m of a non-provincially significant wetland, unless it can be demonstrated through an Environmental Impact Study that such development will not have a negative impact on the natural features and the hydrologic functions of the wetland. Development includes the construction or reconstruction of a building, change in use of a building that alters the use, site grading, and the temporary or permanent placement or removal of any materials originating on the site or elsewhere.

Due to the mapped occurrences of wetlands and a lake, the Site is within the ORCA Development Control Area and a permit will be required in order to build on the Site. ORCA requires that a NHE be prepared to assess possible hydrologic and ecological impacts of the proposed development on the wetland area.



2.7 Endangered Species Act, 2007

Species listed as endangered or threatened on the Species at Risk in Ontario (SARO) list are protected under the provincial *Endangered Species Act, 2007* (ESA) (Government of Ontario, 2018). Section 9(1) of the ESA prohibits a person from killing, harming, harassing, capturing or taking a member of a species listed as endangered, threatened, or extirpated. Section 10(1) of the ESA prohibits the damage or destruction of habitat of species listed as endangered or threatened. Protection of special concern species is provided through designation of their habitat as significant wildlife habitat, a provincially protected natural heritage feature.

2.8 Species at Risk Act

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



3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

Existing background information pertaining to the Study Area and surrounding landscape was compiled and reviewed, as part of a comprehensive desktop exercise, to better understand local biophysical conditions. In southern Ontario, readily available data includes aerial orthophotography, topographic base mapping, and geological records. Natural environment and land use schedules prepared in support of the County of Peterborough and Township of Douro-Dummer Official Plans were reviewed to acquire municipal data. Natural area records and species occurrences were obtained from digital resources and reference materials. The comprehensive desktop review for this Site included the following resources:

- Natural Heritage Areas: Make-a-map (Ministry of Natural Resources and Forestry, 2018); ; Accessed June 30, 2020
- Ontario Reptile and Amphibian Atlas (Ontario Nature, 2018); Accessed June 30, 2020
- Ontario Breeding Birds Atlas (2001-2005) (Bird Studies Canada, 2005); Accessed June 30, 2020
- County of Peterborough Official Plan
- Township of Douro-Dummer Official Plan
- Township of Douro-Dummer Zoning By-law No. 10-1996

Figure 2 shows the mapped natural heritage features present in the general area of the Site.

3.1.1 Ministry Consultation

In early 2019, the Government of Ontario made changes to the regulating authority on matters related to SAR in the Province. The Ministry of Environment, Conservation and Parks (MECP) is now responsible for administering the ESA and providing direction on potential compliance issues. MECP has prepared a guidance document titled 'Client's Guide to Preliminary Screening for Species at Risk' to "help clients better understand their obligation to gather

information and complete a preliminary screening for Species at Risk before contacting the Ministry". This document was used to guide the SAR habitat-based screening for subject study.

3.2 Field Investigations

Information gathered through the background information review was used to guide the development of the fieldwork program. The purpose of the site visit(s) was to verify information acquired through existing documentation and to gather additional site-specific information. The following field-based activities were carried out on the Study Area and are summarized in Table 2. Representative photos are included in Appendix B .

Table 2 Summary of Field Investigations

Date	Time On Site	Weather Conditions	Observer	Activities
2020-05-21	0900-1130	Sunny, 15°C	T. Jamieson	Ecological Land Classification

Notes:

Wind speed is reported as a Beaufort Wind Scale value (0 = 0-2 kph, 1 = 3-5 kph, 2 = 6-11 kph, 3= 12-19 kph, 4 = 20-30 kph, 5 = 31-39 kph, 6 = 40-50 kph)

Noise is reported based on background noise levels: Index 0 – no appreciable effect, 1 – slightly affecting sampling, 2 – moderately affecting

3.2.1 Ecological Land Classification and Vegetation Inventory

The Ecological Land Classification (ELC) System for Southern Ontario (Lee, 1998) was used to classify vegetation communities on the Site. Definitions of vegetation types are derived from the ELC for Southern Ontario First Approximation Field Guide (Lee, 1998) and the revised 2008 tables. ELC units were initially identified by aerial orthophoto interpretation during the desktop review. Field investigations served to confirm the type and extent of communities through vegetation inventory and soils assessment.

The vegetation inventory for the Study Area was conducted on May 21, 2020.

3.2.2 Wetland Boundary Delineation

The presence of wetlands on or adjacent to the Study Area was confirmed through field investigations during the growing season. Wetland boundaries were determined using the 50%



wetland vegetation rule, as specified by the Ontario Wetland Evaluation System (OWES) for Southern Ontario, 3rd Edition (Ministry of Natural Resources, 2013). Wetland boundaries are marked with a hand-held GPS unit and staked and flagged (pink with black dots) in the field.

The wetland boundary delineation for the Study Area was conducted on May 21, 2020.

3.2.3 Habitat-Based Wildlife Surveys

Given the scale of the proposed development, a habitat-based approach was used to assess potential impacts to wildlife, consistent with standard practice. General habitat information gathered through the field investigations was used to assess the connectivity of the Study Area with the surrounding landscape and evaluate the ecological significance of the local area. Cambium staff actively searched for features that may provide specialized habitat for wildlife. These searches included inspecting tree cavities, overturning logs, rocks and debris, and scanning for scat, browse, sheds, fur, etc. Any evidence of breeding, forage, shelter, or nesting was noted and samples were collected for further identification, as necessary. Species and habitat observations were documented and photographed.



4.0 Characterization of Natural Features and Functions

4.1 Landscape Position and Topography

The subject property is a large parcel of land that spans between South Dummer 7th Line Road and South Dummer 8th Line Road. The greater Site includes a mixture of coniferous and deciduous forest, open thicket communities, unevaluated wetlands, and open bodies of water (lakes). The proposed severance (Study Area) is in the northeast corner of the property. A mapped unevaluated wetland is located to the west of the Study Area.

The Study Area had an undulating topography and was gently sloped towards the west, in the direction of the wetland.

4.2 Vegetation Communities

The background review revealed that the Study Area consists of a previously cleared open area surrounded by coniferous forest (visible in 2018 imagery of the Study Area). A mapped unevaluated wetland was also identified to the west of the Study area.

Five vegetation community types were identified on and adjacent to the Study Area. The vegetation communities were initially classified through aerial photograph interpretation and were subsequently confirmed through the vegetation inventories conducted on May 21, 2020. The vegetation communities are summarized in Table 3.

Table 3 Vegetation Communities

ELC Code	Community Description	Community Type	S -Rank
CUT	Cultural thicket	Terrestrial	N/A
FOC2-2	Dry - Fresh White Cedar Coniferous Forest	Terrestrial	S5
SWD6-2	Silver Maple Organic Deciduous Swamp	Wetland	S5
SWM1-1	White Cedar - Mixed Mineral Swamp Type	Wetland	S5
SWM3-2	Poplar - Conifer Mineral Mixed Swamp Type	Wetland	S5



The extents of the vegetation communities identified on and adjacent to the Study Area are illustrated in Figure 3. A list of identified species and representative photos for each community are provided in Appendix C. A search for butternut (*Juglans cinerea*; provincially threatened) was completed as part of the vegetation survey; no butternut were identified.

4.3 Wetland Delineation

There was no wetland on the Study Area. Two wetland units, consisting of three wetland communities, were identified within 120 m of the Study Area. A mapped unevaluated wetland was identified west of the Study Area during the background review. The presence of this wetland was confirmed during the May 2020 site visit. This wetland consisted of two distinct wetland communities: SWM1-1 and SWD6-2 (Section 4.2). This wetland was delineated based on the dominance of wetland vegetation (>50% relative cover) and the presence of standing water. Soils within the SWM1-1 community consisted of a 22cm fibric to mesic organic matter horizon over silty clay. Mottles were observed at a depth of 45 cm and the water table was encountered at a depth of 20 cm. These soils are classified as Mineral Wetland under the ELC system. Soil sampling was foregone within the SWD6-2 community due to the presence of standing water.

A small wetland inclusion (SWM3-2) was observed on the adjacent property to the south of the Study Area. This wetland was located on private property beyond the Site boundaries; as such, it was delineated based on observations made from the property boundaries and orthographic imagery. This wetland was also delineated based on the dominance of wetland vegetation (>50% relative cover).

4.4 Birds and Habitat Features

A total of 132 bird species were identified within the general area of the Site through the OBBA (10 km UTM Grid Square 17QK32). Of these, 13 species are provincially listed as at-risk (Government of Canada, 2019; Government of Ontario, 2019). The identified at-risk species are included in the habitat-based screening for SAR summarized in Section 4.8.

The Study Area and adjacent lands present the following habitat types:



- Dense coniferous and mixed forested areas including swamps with standing water.
- Open thicket areas, with dense grasses, low shrubs and sparse trees.
- Open stony areas, with low vegetation and sparse shrub cover.
- Forest edge habitat. The forested areas were also connected to larger forests beyond the Study Area into the interior of the Site and adjacent properties. These areas likely provide interior forest habitat.

Incidental observations include a Sandhill Crane and a Barred Owl calling from beyond the Study Area boundaries within the interior of the Site.

4.5 Amphibians and Habitat Features

A review of ORAA (10 km UTM Grid Square 17QK32) did not reveal any records of amphibians in the area. However, the wetland communities adjacent to the Study Area certainly provides amphibian habitat. Standing water was observed within the SWD6-2 community during field investigations, though the flooding regime of the wetland is unknown. The SWD6-2 community is approximately 2,220 m² in size, and appears to be hydrologically connected to a larger wetland community that extends into the interior of the Site. The wetland was entirely forested and connected to a larger forested area. A Leopard Frog (*Lithoates pipens*) adult and Yellow Spotted Salamander (*Ambystoma maculatum*) eggs were also observed within this community during field investigations (Appendix B).

4.6 Reptiles and Habitat Features

One species of reptile was identified within the general area of the Site through the ORAA (10 km UTM Grid Square 17QK32). The only reptile to be listed was a SAR and is included in the habitat-based screening for SAR summarized in Section 4.8.

The Study Area and adjacent lands provide the following habitat types:

- Mixed and coniferous forested areas including swamps with standing water.



- A review of orthographic imagery revealed several relatively large areas of open water within the interior of the retained parcel, which may provide turtle overwintering habitat.
- Thicket areas with dense grass cover, low shrubs, and sparse trees. These areas provide potential foraging habitat and cover for basking snakes.
- An area of historical clearing was observed within the proposed severance area and another was located to the west within the retained area. Both of these areas were relatively open, with piles of stone and brush which provide suitable snake basking and foraging habitat (Appendix B).

The wetlands and open bodies of water within the interior of the Site provide potential turtle habitat; however, no open water suitable for overwintering turtles was observed in the Study Area. Given the proximity of the Study Area to the adjacent bodies of water, the Study Area may provide potential nesting habitat for turtles.

The complex combination of wetland and terrestrial habitat types also provide suitable habitat for snakes. Two Eastern Garter Snakes were observed on and adjacent to the Study Area: one was observed basking within the disturbed area in the middle of the Study Area and the other was observed under a rock in the disturbed area adjacent to the Study Area. The location of these observations is provided in Figure 3.

4.7 Mammals and Habitat Features

The Study Area and adjacent lands provide the following habitat types:

- Dense coniferous and mixed forested areas including swamps with standing water.
- Open thicket areas, with dense grasses, low shrubs and sparse trees.

The forested areas at the Study Area are connected to larger areas of woodland which likely provide overwintering habitat for larger mammals such as White-tailed Deer (*Odocoileus virginianus*). The Study Area also certainly provides habitat for small mammals such as raccoons (*Procyon lotor*), skunks (*Mephitis mephitis*), porcupines (*Erethizon dorsatum*), and squirrels, mice, and voles. A Red Fox (*Vulpes vulpes*) was observed in the Study Area during



the May 2020 field investigations. No trees with flaking bark or large cavities that may provide potential bat maternity roosting sites were observed within or adjacent to the Study Area.

4.8 Species at Risk

A SAR occurrence list has been compiled through the background review sources (as listed in Section 3.1). In addition, the SAR occurrence list has been augmented with direct field observations as detailed in the previous sections. Cambium has employed a habitat-based screening, supplemented with direct field surveys when necessary, in order to identify suitable habitat for at risk species located on or adjacent to the Site. A detailed habitat suitability analysis is provided in Appendix D and a discussion of the results is provided below.

The following SAR had high or moderate potential for habitat on or adjacent to the Study Area:

- Eastern Whip-poor-will – Threatened
- Evening Grosbeak – Special Concern
- Golden Winged Warbler – Special Concern
- Blanding’s Turtle – Threatened
- Snapping Turtle – Special Concern
- Eastern Milksnake – Special Concern (Federal)
- Eastern Ribbonsnake – Special Concern
- Western Chorus Frog – Threatened (Federal)

Western Chorus Frogs, a federally Threatened species, are a lowland terrestrial species that require aquatic and terrestrial habitat in close proximity to one another, preferring wooded wetlands adjacent to forested habitats. The SWD6-2 community offers potential breeding habitat for this species. While Western Chorus Frogs are listed as threatened federally, in this region of Ontario, they are locally abundant due to the wide availability of suitable habitat.

Similarly, the Milksnake is a federally listed species of Special Concern. This species tends to use open habitats such as rocky outcrops, fields and forest edges. The disturbed area and



surrounding forest and thicket communities provide potential habitat for this species. Though previously listed as a provincially at risk, Milksnake were delisted because of their local abundance and abundance of habitat.

At risk bats also have the potential to be present within the treed communities; however, no suitable cavity roost trees within the Study Area were documented during the Site visit. Bats can have roost habitat within large trees with cavities or flaking bark. Active season for bats extends from April until September.

It is noted that five of the above species are listed as Special Concern, which are afforded protection through the designation of their habitat as Significant Wildlife Habitat (SWH).



5.0 Assessment of Natural Heritage Significance

Based on information gathered from the background review and field investigations, the following natural heritage features that receive protection under provincial policy were considered in our assessment of features on the Site and adjacent lands: Wetlands, Candidate Significant Woodlands, Candidate Significant Wildlife Habitat, and Habitat of Threatened and Endangered Species.

5.1 Unevaluated Wetlands

Two unevaluated wetlands were identified within 120 m of the Study Area: one wetland was located to the west, and a second wetland inclusion was identified on the adjacent property to the south. Wetlands are considered to be a key hydrologic feature under the GPGGH.

Discussion of potential impacts and mitigation strategies is provided in Section 6.1.

5.2 Significant Woodlands

Significant woodlands are (key) natural heritage features that are afforded protection under both the PPS and the GPGGH (Section 2.1 and 4.2, respectively). According to their respective Official Plan Schedules, the County of Peterborough and Township of Douro-Dummer have not explicitly defined or designated significant woodlands within their jurisdiction. The woodland feature that overlaps the Study Area would be considered significant based on provincial criteria (Ministry of Natural Resources, 2010) because it is connected to a larger woodland that extends into the greater Site and beyond the Site boundaries and its connection to wetlands. While it is the responsibility of the Planning Authority to designate significant woodlands, the woodlands (FOC2-2; Table 3) in and adjacent to the Study Area will be considered candidate significant woodlands for the purpose of this study.

Discussion of potential impacts and mitigation strategies is provided in Section 6.2.



5.3 Significant Wildlife Habitat

Significant Wildlife Habitat guidance documents produced by the MNRF were used as a guide to identify and confirm SWH on the Site (MNR, 2000). The Site falls within Ecoregion 6E; therefore, the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (Ministry of Natural Resources, 2013) apply to the proposed works. Information gathered during the background study and field activities were compared to SWH criteria to identify potential SWH habitat at the Site. The results from the SWH assessment are provided in the following sections.

5.3.1 Amphibian Breeding Habitat (Woodland)

The Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E define Woodland Amphibian Breeding SWH based on the following criteria:

- All ecosites associated with the following ELC community Series: FOC, FOM, FOD, SWC, SWM, and SWD.
- A wetland, pond or woodland pool (including vernal pools) > 500 m² within or adjacent (within 120m) to a woodland.
- The presence of one or more of the listed newt/salamander species, or 2 or more of the listed frog species with at least 20 individuals (adults or egg masses) or 2 or more of the listed frog species with Call Level Codes of 3:
 - Eastern Newt
 - Blue-Spotted Salamander
 - Yellow Spotted Salamander
 - Gray Treefrog
 - Spring Peeper
 - Western Chorus Frog
 - Wood Frog



Yellow Spotted Salamander eggs were observed within the SWD6-2 community, which is connected the SWM1-1 community and to a larger woodland area (FOC2-2). The SWH Schedules defines the habitat as the wetland area, plus a 230m radius of woodland. Based on this, the wetland, plus 230m of the adjacent FOC2-2 community is considered Woodland Amphibian Breeding SWH.

5.3.2 Discussion of potential impacts and mitigation strategies are provided in Section 6.3.Special Concern and Rare Wildlife Species

Species of Special Concern are afforded protections through the designation of their habitat as SWH. The SAR screening revealed that Study Area had moderate to high habitat potential for four provincially listed species and one federally listed species: Evening Grosbeak, Golden Winged Warbler, Snapping Turtle, Eastern Milksnake (Federal), Eastern Ribbonsnake.

None of the above species were confirmed to be present during the field investigations. As such, the Study Area is considered Candidate Special Concern and Rare Wildlife Species SWH.

Discussion of potential impacts and mitigation strategies are provided in Section 6.3.

5.4 Habitat of Endangered and Threatened Species

Based on information gathered during the background review and field studies, the Study Area was determined to have moderate to high potential for two provincially listed Threatened species: Eastern Whip-poor-will and Blanding's Turtle. Discussion of potential impacts and mitigation strategies are provided in Section 6.4.



6.0 Proposed Development and Impact Assessment

The proposed development includes a severance of the property that would create one new lot and one retained lot, with road frontage on 8th Line Road and 7th Line Road, respectively. The retained lot would include the existing residential development.

The following sections address potential impacts to protected features identified on and adjacent to the Study Area that may result from the proposed development and site alteration:

- Unevaluated Wetlands
- Significant Woodlands
- Significant Wildlife Habitat
- Habitat of Endangered and Threatened Species

No other natural heritage features protected by provincial policy were confirmed on or adjacent to the Study Area.

Mitigation measures and best management practices have been recommended to ensure that the integrity of the current existing natural features are protected and/or enhanced and furthermore that their functions are not negatively impacted during or following construction.

6.1 Unevaluated Wetlands

The proposed development includes the creation of lot lines on the Site and the construction of single residential dwellings with associated infrastructure. The GPGGH specifies that a 30 m minimum vegetation protection zone (VPZ) be applied for development adjacent to wetlands; this VPZ is mapped on Figure 4. No direct impacts to the wetlands are associated with the creation of the severance lines. Given the location of the Study Area, there is sufficient space to locate the proposed severance outside the 30 m VPZ; therefore, the area of direct impacts associated with the construction of dwellings and infrastructure will be at least 30 m from the wetlands. No indirect impacts are anticipated to the wetland features provided this VPZ is adhered to and all proposed building, structures, and infrastructure are located outside the features and the VPZ. The 30 m VPZ is considered sufficient to protect the existing form and



function of these wetland features provided that the VPZ be maintained as the existing forest cover and be allowed to naturally self-sustain (i.e., no clearing/removal of seedling/saplings, no mowing, or removal of woody debris).

It will be essential that light-duty silt fencing be installed properly around the perimeter of the construction area. This will prevent sediment from entering the features in the surrounding landscape including the identified wetland features. All silt fencing should be properly trenched in and maintained in good working order until the area has been successfully revegetated. Any observed overland drainage channels originating from the development areas, that may or may not have arisen as a result of erosion, should pass through a check dam structure prior to discharge into any surface water body. Sedimentation, as a result of erosion, can have significant impacts on fish, fish habitat, water temperature, nutrient levels and water clarity.

6.2 Significant Woodland

The proposed development includes the creation of lot lines on the Site. No direct impacts to the significant woodland are associated with the proposed severance lines. Future construction activities within the Study Area have the potential to impact the forest directly through tree clearing, limiting natural regeneration, introduction of invasive species, and other anthropogenic influences. Tree clearing can contribute to forest fragmentation and the loss of interior wildlife habitat. For example, the creation of a laneway and building envelope within the middle of the woodland may expose interior wildlife species to predators that utilize forest edges for foraging. Potential impacts to forest habitat can be effectively mitigated with the strategic placement of a building envelope where edge habitat already exists. The severed lot will encompass an area that has been previously cleared. Subject to other zoning rules, it is recommended that future construction be directed into the previously cleared area. In addition, tree clearing should be limited to the area of the proposed building envelope. No tree clearing should occur within the FOC2-2 community, including the removal of shrubs and woody debris on the forest floor.

In order to maintain the existing natural species diversity of the woodland, it is recommended that all enhancement and landscaping plants used on the property be selected primarily



from native plant species. When using non-native species, care should be taken to select species that are non-invasive. Invasive species can quickly colonize their preferred habitats, out-compete native species, and cause significant damage to the natural beauty of woodlands.

6.3 Significant Wildlife Habitat

The proposed development includes the creation of lot lines on the Site. No direct impacts to the significant wildlife habitat are associated with the proposed severance lines. Future construction activities within the Study Area do have the potential to impact the species and habitats on the Site; therefore, avoidance and mitigation measures are provided below.

The wetland (SWD6-2 and SWM1-1 communities) to the west of the Study Area was determined to be Woodland Amphibian Breeding SWH. This habitat includes 230 m of connected woodland around the wetland, which includes the FOC2-2 community that extends into the proposed severance area. Given that the FOC2-2 was also determined to be candidate Significant Woodland, this breeding habitat will continue to exist on and adjacent to the Study Area following residential development as the proposed lot lines, buildings, and structures should be located outside the wetland and the 30 m minimum vegetation protection zone (VPZ) that is to be applied to the wetland. Further, future construction should be directed to the previously cleared area of the Study Area. Given that tree clearing is expected to be minimal, Woodland Amphibian Breeding SWH will still exist within the retained lot and no negative impacts are anticipated for this SWH as a result of the proposed development.

The Study Area was also identified as being candidate Special Concern and Rare Wildlife SWH for birds, turtles and snakes. The Site was determined to contain potential habitat for Evening Grosbeak and Golden Winged Warbler. Provided vegetation clearing is limited to the already disturbed portion of the Study Area during future construction, habitat for these species will continue to exist. Extensive areas of potential habitat will also remain intact within the interior of the Site. Provided that tree clearing meets the restrictions specified below, no negative impacts are anticipated for this SWH as a result of the proposed development.

In order to avoid direct impacts to these bird species, it is recommended that tree clearing be limited to the previously disturbed area of the Study Area. Trees should be removed in the fall



or winter to avoid the breeding bird nesting season. The woodland community should be left in its natural state and should be allowed to regenerate and succeed through forest processes naturally. Tree clearing should be limited to the removal of hazard trees as necessary, avoiding breeding season as noted above. Edge habitat should be maintained as certain species rely on this habitat type. No dumping or yard waste disposal should occur within the woodland in order to maintain the natural state and avoid the introduction of non-native or invasive species. Provided these recommendations are adhered to, no direct or in-direct impacts to the habitat of these species is anticipated to occur resulting from the proposed development.

In general, nesting birds are protected under the Migratory Birds Convention Act, 1994. Vegetation clearing within the Study Area should occur outside the breeding bird season, which extends from April 15 to August 15 in this area (as per Environment and Climate Change Canada Guidelines). In the event that construction is planned to proceed during the breeding season, the construction area should be investigated regularly for the presence of breeding birds and nests containing eggs and/or young (some birds nest on man-made structures/machinery or in recently cleared areas). Nests discovered should be left undisturbed until young have fledged or the nest is determined to be inactive.

The Study Area was also determined to have potential habitat for Snapping Turtle, Eastern Milksnake, and Eastern Ribbonsnake. The wetlands adjacent to the Study Area, and within the interior of the Site, may provide turtle habitat. As such, there is the potential for turtles to utilize the Study Area for nesting. Eastern Garter Snakes were also observed on and adjacent to the Study Area. This indicates that the Study Area offers suitable snake basking habitat. Snakes may also utilize the Study Area for foraging.

Turtles and snakes are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses and waterbodies. The Study Area does provide potential nesting habitat for turtle species and workers should be aware of the nesting season for turtles, which is May 15th to August 15th. Wildlife exclusion fencing, such as light-duty silt fence, should be properly installed (i.e., trenched-in) around the construction area(s) prior to May 15 of the year of construction in order to keep turtles and snakes from entering the construction area. Given



the shallow soils and exposed bedrock at the Study Area, sand bags may be required to secure the flap of the silt fence where there are insufficient soils to trench in the fencing.

6.4 Habitat for Endangered and Threatened Species

The proposed development includes the creation of lot lines on the Site. No direct impacts to the endangered and/or threatened species are associated with the proposed severance lines. Future construction activities at the Site do have the potential to impact the species. Potential habitat endangered or threatened amphibians, birds, and turtles was determined to be present at and adjacent to the Study Area: Eastern Whip-poor-will and Blanding's Turtle. Mitigation strategies provided in Section 6.3 for SWH are also sufficient to protect the above listed SAR.

Given the absence of cavity trees, the Study Area was found to have low habitat potential for at risk bat species. As such, direct or in-direct impacts to bats or bat habitat are not anticipated. Regardless, best management practices for wildlife recommends timing tree clearing to occur in the fall and winter to avoid impacts to wildlife.



7.0 Policy Compliance

Based on the key natural heritage features identified on and adjacent to the Study Area (wetlands, significant woodlands, and significant wildlife habitat) the proposed development (land severance) is subject to the policies of the PPS and GPGGH. In the absence of a mapped natural heritage system within the Official Plans, the policies of the PPS apply to development within 120 m of significant woodlands, significant wildlife habitat, and habitat for endangered and threatened species. The policies of the GPGGH apply to the development within 120 m of wetlands. Compliance with applicable natural heritage policy is summarized in Table 4.

Table 4 Policy Compliance Summary

Key Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Wetland	No	Yes	Yes: GPGGH 4.2.4.1-3
<p>Explanation: Any proposed development, including severance lines and buildings/structures, on the Site should be located outside the wetland and the 30 m development setback/vegetation protection zone (Figure 4). This 30 m setback should be maintained as the existing forest cover.</p>			
Significant Woodland	Yes: Candidate	Yes: Candidate	Yes: PPS 2.1.5/2.1.8
<p>Explanation: No negative impacts to significant woodland are anticipated to result from the proposed severance provided the recommendations provided herein are adhered to.</p>			
Significant Wildlife Habitat (including habitat of special concern species)	Yes: Candidate	Yes: Candidate	Yes: PPS 2.1.5/2.1.8
<p>Explanation: No negative impacts to significant wildlife habitat are anticipated to result from the proposed severance provided the recommendations provided herein are adhered to.</p>			



Habitat of Threatened and Endangered Species	Potentially	Potentially	Yes: PPS, 2.1.7/2.1.8
<p>Explanation: No negative impacts to Habitat of Threatened and Endangered Species are anticipated to result from the proposed severance provided the recommendations provided herein are adhered to.</p>			



8.0 Recommended Mitigation, Compensation, and Best Practices

1. Site Plans developed for the proposed development, including severance lines and building envelopes, should show the location of all confirmed natural features and setbacks, including the wetland boundary and 30 m wetland setback.
2. The proposed lot lines, buildings, and structures should be located outside the wetland and the 30 m wetland setback shown on Figure 4.
3. Where feasible, the proposed buildings and structures for the severed lot should be located within the identified cleared area.
4. The forest communities outside the building envelope should be left in their natural state and should be allowed to regenerate and succeed through forest processes naturally.
5. Vegetation clearing should occur outside the breeding bird season and bat roosting season which includes the period from April 15 to October 1 in the area (as per Environment and Climate Change Canada Guidelines and Ontario Ministry of Natural Resources and Forestry recommendations).
6. For construction on the severed lot, it will be essential that light-duty silt fencing be installed properly around the perimeter of the construction area. All silt fencing should be properly trenched in and maintained in good working order until the area has been successfully revegetated. Silt fencing will also serve as wildlife exclusion fencing to prevent access by some wildlife species.
7. Due to the nearby wetlands, workers should be aware of the nesting season for turtles which extends from May 15 to August 15. Should any nesting turtles be encountered, work should stop immediately and the turtle should be left to finish nesting undisturbed. The turtle should be photographed and the nest marked to ensure it is not disturbed during construction until it has hatched (late August – September). If a nest is laid in a stockpile or other area that requires disturbance, Cambium should be contacted to determine if the nest can be relocated.



8. Though not identified in the field inventories, any subsequently identified SAR discovered on the property will be left undisturbed as dictated by the Endangered Species Act, 2007. If any SAR individuals are encountered, they should be photographed and allowed time to move out of harms way. SAR observations should be reported to the Natural Heritage Information Centre.



9.0 Closing

In conclusion, potential negative impacts associated with the proposed severances and future development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 8.0 are adhered to. The information presented herein demonstrates that the proposed development can be carried out in a way that will not adversely impact natural heritage features and function identified on or adjacent to the Study Area.

Respectfully submitted,

Cambium Inc.

Andrea Hicks, M.Sc.
Senior Ecologist / Project Manager

Tyler Jamieson, M.Sc.
Biological/Ecological Technologist

References

- Bird Studies Canada. (2005). *Atlas of the Breeding Birds of Ontario*.
- Crins, W. J., Gray, P. A., Uhlig, P. W., & Wester, M. C. (2009). *The Ecoregions of Ontario, Part I: Ecozones and Ecoregions*. Peterborough, Ontario: Ministry of Natural Resources: Inventory, Monitoring and Assessment. Retrieved from <https://dr6j45jk9xcmk.cloudfront.net/documents/2712/stdprod-101587.pdf>
- Government of Canada. (2019). *A to Z Species Index*. Retrieved from Species at Risk Public Registry: http://www.registrelep-sararegistry.gc.ca/sar/index/default_e.cfm
- Government of Ontario. (2018, August). *O.Reg 230/08: Species at Risk in Ontario List under Endangered Species Act, 2007, S.O. 2007, c.6*. Retrieved from e-Laws: <https://www.ontario.ca/laws/regulation/080230>
- Government of Ontario. (2019, August). *O.Reg 230/08: Species at Risk in Ontario List under Endangered Species Act, 2007, S.O. 2007, c.6*. Retrieved from e-Laws: <https://www.ontario.ca/laws/regulation/080230>
- Lee, H. W. (1998). *Ecological Land Classification for Southern Ontario: First Approximation and Its Application*. Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guid FG-02: Ontario Ministry of Natural Resources.
- Ministry of Municipal Affairs and Housing. (2020). Provincial Policy Statement.
- Ministry of Natural Resources. (2010). *Natural Heritage Reference Manual from the Natural Heritage Policies of the Provincial Policy Statement, 2005 - Second Ed.*
- Ministry of Natural Resources. (2011). *Bat and Bat Habitats: Guidelines for Wind Power Projects*. Ontario, Canada: Queen's Printer for Ontario.
- Ministry of Natural Resources. (2013). *Ontario Wetland Evaluation System Southern Manual, 3rd Ed.* Ontario.
- Ministry of Natural Resources. (2013). *Ontario Wetland Evaluation System Southern Manual, 3rd Ed.* Ontario.



Ministry of Natural Resources and Forestry. (2018). Retrieved from Make a Map: Natural Heritage Areas:

http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US

MMAH. (2019). *Growth Plan for the Greater Golden Horseshoe, 2019*. Queens Printer for Ontario.

MNR. (2000). *Significant Wildlife Habitat Technical Guide*. 151p. Ministry of Natural Resources.

Ontario Nature. (2018). *Ontario Reptile and Amphibian Atlas*. Retrieved from Ontario Nature: <https://ontarionature.org/oraa/maps/>

The Township of Douro-Dummer. (2008). *Official Plan*.



**ENVIRONMENTAL
IMPACT STUDY
MARWOOD PAYNE**
459 7th Line,
Norwood, Ontario

LEGEND

- Major Road
- Minor Road
- Waterbody
- Ecodistrict
- Site (93.5 ha.)

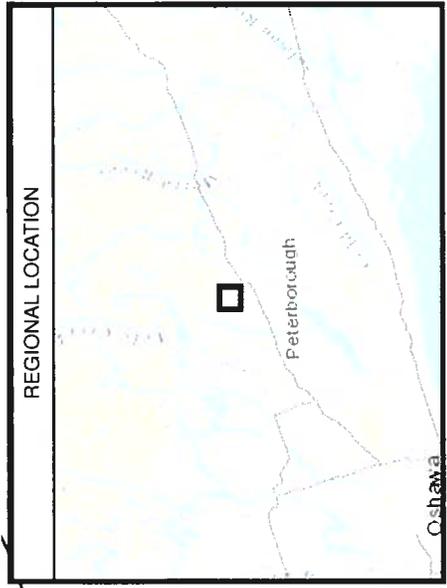
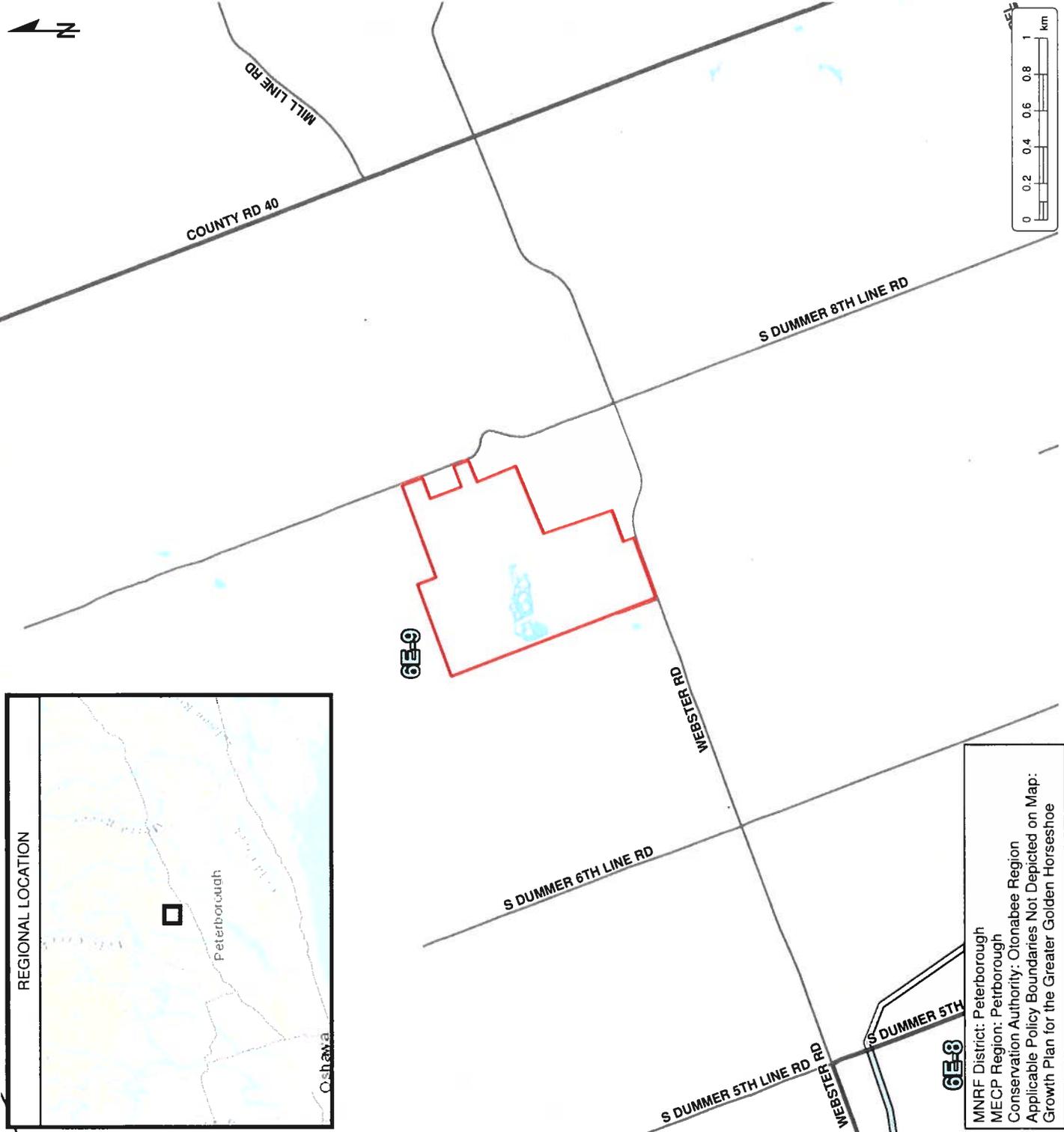
Notes: - approximations and was obtained from the County of Peterborough
- some GIS
- Base mapping features are © Queen's Printer of Ontario, 2017 (this does
not constitute an endorsement by the Ministry of Natural Resources and
Forestry on the part of the province, and can be copyrighted to itself by
standing by © 2018
- Cambium Inc. makes every effort to ensure the map is accurate, but
cannot be held responsible for any errors or omissions. This map
map should not be used for navigation or legal purposes. It is intended for
general reference use only.



P.O. Box 325, 52 Hunter Street East
Peterborough, Ontario, K9H 1G5
Tel: (705) 742-7900 Fax: (705) 742-7907
www.cambium-inc.com

**SITE LOCATION AND
SPECIAL PLANNING AREAS**

Project No.:	10456-001	Date:	June 2020
Scale:	1:30,000	Rev.:	
Projection:	NAD 1983 UTM Zone 17N		
Created by:	TLC	Checked by:	ALH
Figure:	1		



GE-8
MNR District: Peterborough
MECP Region: Peterborough
Conservation Authority: Otonabee Region
Applicable Policy Boundaries Not Depicted on Map:
Growth Plan for the Greater Golden Horseshoe







**ENVIRONMENTAL
IMPACT STUDY
MARWOOD PAYNE**
459 7th Line,
Norwood, Ontario

LEGEND

-  30m Wetland Setback
-  Confirmed Wetland Boundary
-  Contour 5m Interval
-  Study Area (1.5ha.)
-  Site (93.5 ha.)

Notes: - approximations and we obtained from the County of Peterborough
using GIS
Base mapping features are © Queen's Printer of Ontario, 2017 (this does
not constitute an endorsement by the Ministry of Natural Resources, and
liability on the plan and its contents and can be assumed to rest by
drawing by 0.3048
The map is not a warranty, there is no guarantee that the map is true, but
cannot be held responsible for any damages, loss or consequences. The
map should not be used for navigation or legal purposes. It is intended for
general reference use only.



P.O. Box 325, 52 Hunter Street East
Peterborough, Ontario, K9H 1G5
Tel: (705) 742 7900 Fax: (705) 742 7907
www.cambium-inc.com

**PROPOSED NATURAL
HERITAGE DEVELOPMENT
CONSTRAINTS**

Project No.:	10456-001	Date:	June 2020
Scale:	1:2,500	Projection:	NAD 1983 UTM Zone 17N
Created by:	TLC	Checked by:	ALH
		Figure:	4





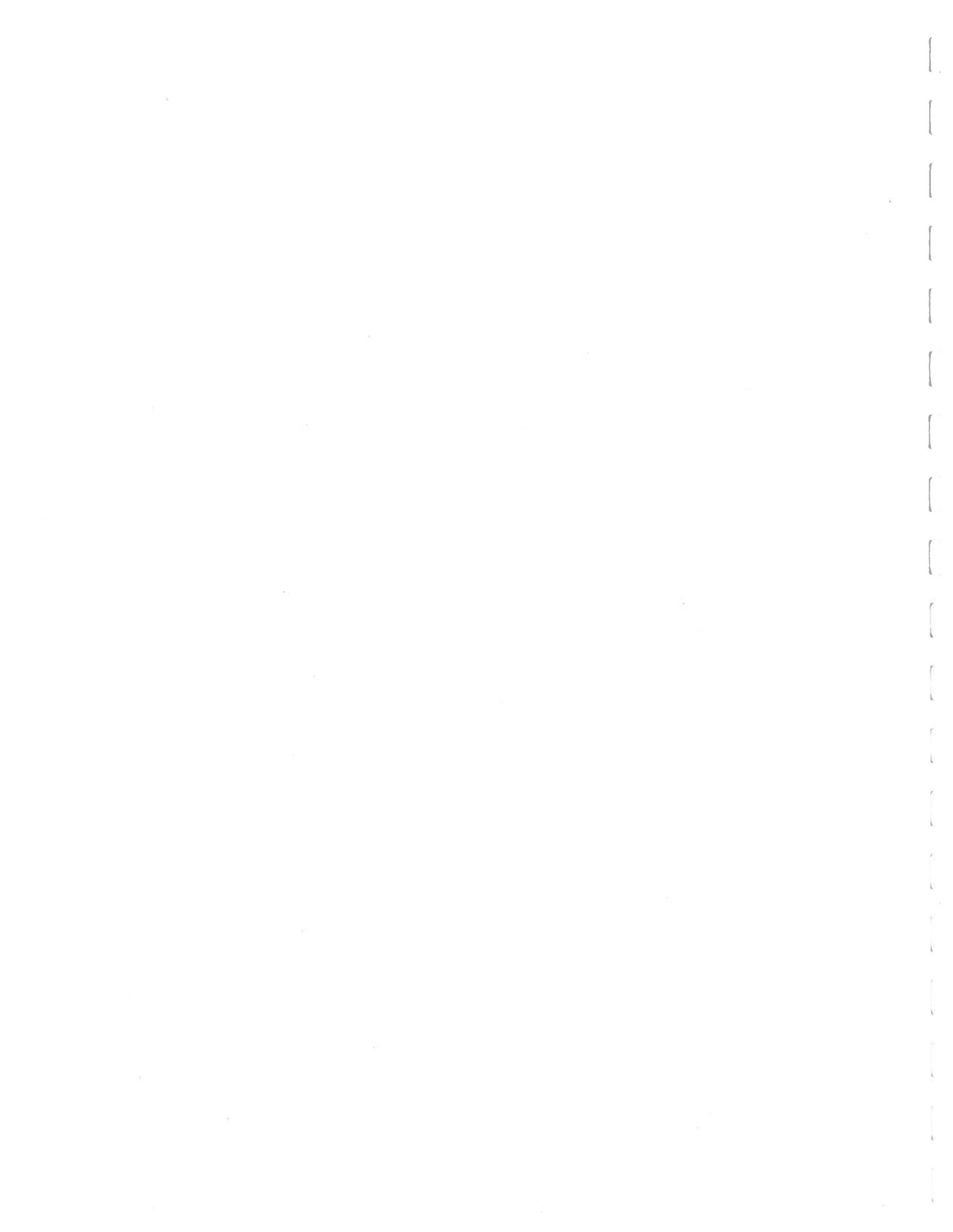
Natural Heritage Evaluation - 459 7th Line Road, Peterborough

Marwood Payne

Ref. No.: 10456-001

7/09/20

Appendix A
Correspondence



As applicable, consents must meet road frontage & access, Zoning By-law, Health Unit and Minimum Distance Separation (MDS) requirements (Sections 7.12.2, 7.12.4, and 7.12.12).

Municipal Zoning By-Law Review: The severed parcel is zoned Rural Zone (RU) in the Municipal Zoning By-law. A single-detached dwelling is permitted in the (RU) zone (Section 9.1.5), provided the parcel has a minimum lot area of 0.4 hectares and a minimum lot frontage of 45 meters (Sections 9.2.4 (a) & (b)). The severed parcel appears to meet these requirements.

The retained parcel is zoned Rural Zone (RU) and Environmental Conservation (EC) in the Municipal Zoning By-law. An agricultural use is permitted in the (RU) zone (Section 9.1.1), provided the parcel has a minimum lot area of 20 hectares and a minimum lot frontage of 135 meters (Sections 9.2.1 (a) & (b)). The retained parcel appears to meet these requirements.

The applicant should be aware that the Environmental Conservation zone on the retained parcel does not permit new buildings or structures (Section 19.1).

Provincial Policy Review: The Provincial Policy Statement, 2014 (PPS) and Growth Plan for the Greater Golden Horseshoe, 2019 (GPGGH) apply to this proposal.

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

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. The severed parcel is located within 120 metres of the above key hydrologic features, a natural heritage evaluation and/or hydrologic evaluation is required. There is a possibility that there could be an impact on the existing heritage features in the surrounding area.

A portion of the subject property, in the retained parcel, is traversed by an area identified for habitat of endangered species and threatened species. 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 lot. Therefore, a Species at Risk Assessment is not required.

Minimum Distance Separation Formula I (MDS I) as per policy 1.1.5.9 of the 2014 Provincial Policy Statement has been not been calculated for the livestock facilities (i.e. barns). There does not appear to be any livestock facilities within 750 meters of the proposed severed parcel. The proposal appears to meet MDS I setback requirements.

Additional Notes:

* The lands appear to be regulated by Regulation 167/06, the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation of the Otonabee Conservation Authority. Therefore, the proposal should be discussed with Matt Wilkinson/Alex Bradburn at (705) 745-5791 ext.213/ext.227 to determine what, if any permits may be necessary.

* The applicant and any prospective owners are advised that endangered and/or threatened species exist in the area and may exist on the site. It is the responsibility of the landowner to identify endangered and threatened species and their habitat within 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.

This Preliminary Severance Review has been circulated by the Planning Department to the following agencies (marked with an X):

- Local Municipality of Douro-Dummer
- County Infrastructure Services (i.e. Roads) ;
- Conservation Authority ;
- First Nations ;
- Other

Agencies to be Contacted by Owner/Agent (marked with an X):

- | | |
|--|---|
| <input checked="" type="checkbox"/> Township | <input checked="" type="checkbox"/> Health Unit |
| <input checked="" 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 does not appear to conform to the Growth Plan for the Greater Golden Horseshoe and/or Provincial Policy Statement policies.

The severance proposal does not appear to conform to the Provincial Plan(s). There is a non-evaluated wetland and a lake less than 120 meters away from the proposed severed lot. This proposal does not conform to Provincial policies unless an Environmental Impact Study is completed which demonstrates there will be no negative impacts on the wetlands.

Proposal appears to conform to County Official Plan policies.

The severance proposal appears to conform to the County Official Plan.

Proposal appears to conform to Township Official Plan policies.

The severance proposal appears to conform to the Township Official Plan.

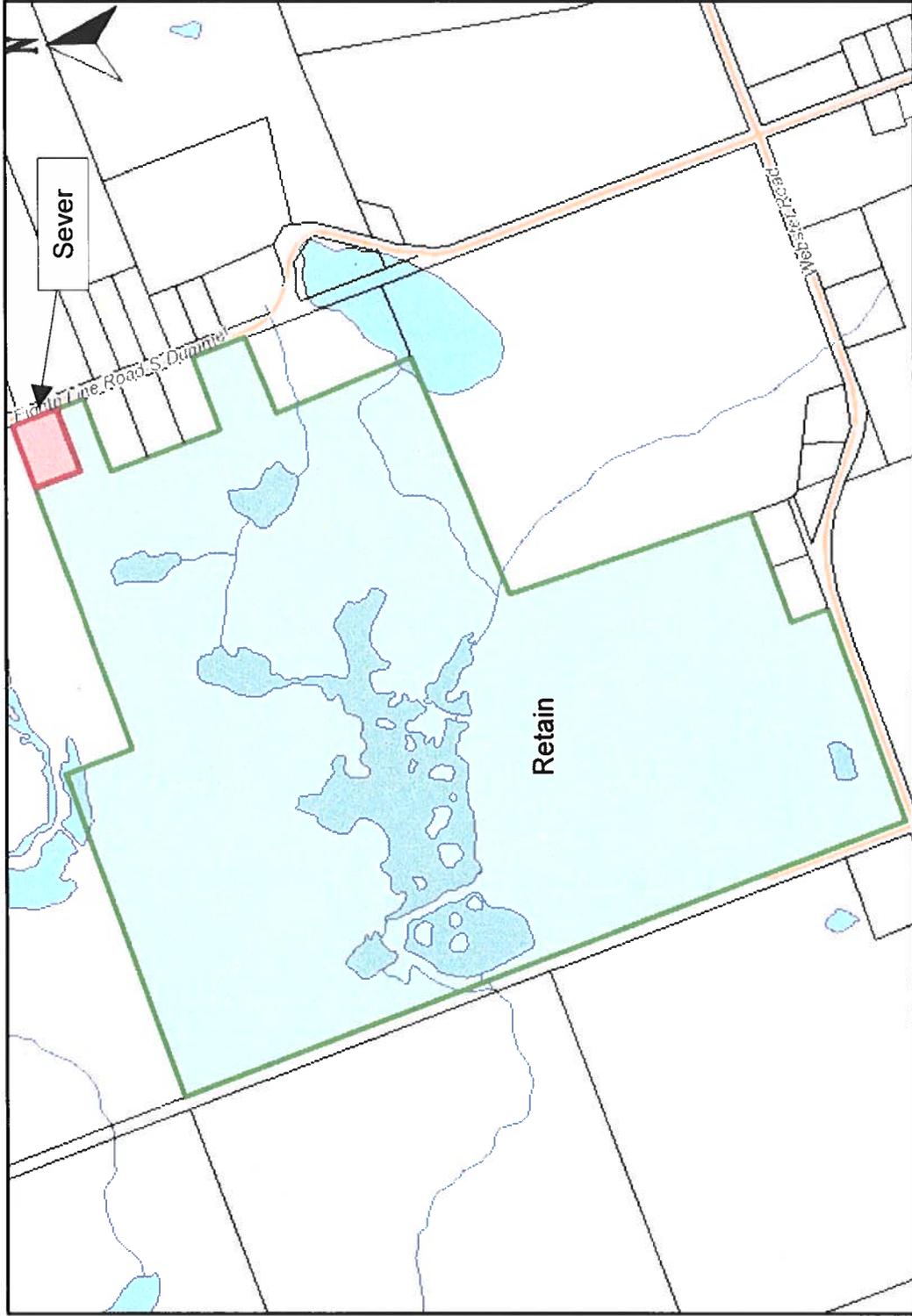
- Application requires confirmation from the Township or identified agency regarding policy conformity. **Please note that the landowner should be aware that members of the local council may not support a rezoning or minor variance to create a lot that is not in compliance with the provisions of the zoning by-law.****

Reviewed By: Zachary Tonello

Important

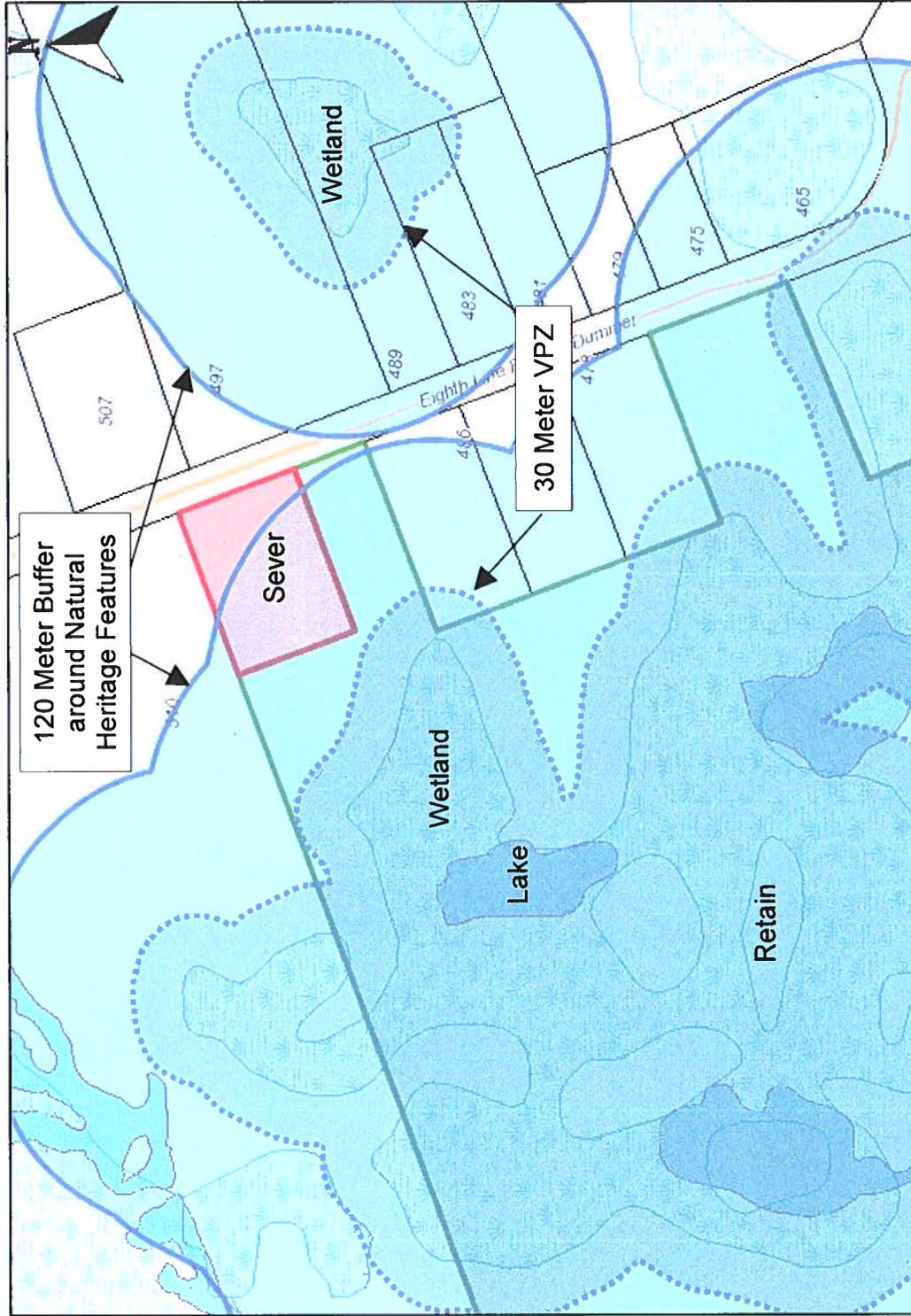
Our position on the overall conformity of the proposal is based on information available at the time of review. Subsequent information from commenting agencies can change our comments relating to any formal application for severance which is subsequently filed. Therefore, the above-noted comments should 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 # 1522-020-002-01000
Lot 6 and 7, Concession 7, Dummer



Scale (metric)
1:10,000

Roll # 1522-020-002-01000
Special Features Map: Wetlands and Lakes



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

Scale (metric)
1:4,000

Rachael Doyle

From: Jasmine Gibson <jgibson@otonabeeconservation.com>
Sent: Thursday, May 7, 2020 10:08 AM
To: Tyler Jamieson; Matt Wilkinson
Cc: Andrea Hicks
Subject: RE: Severance at 459 7th Line Road (10456-001)

Good morning Tyler (and Andrea),

Re: 459 7th Line (Roll # 1522-020-002-0100) Consent Application

I hope this email finds you well.

Based on 2018 aerial photography there appears to be wetland features in close proximity to the proposed severed parcel; based on the lot line configuration, it appears that the parcel is setback 30m from the proposal. However, this has to be field verified. The wetlands on the retained look like they are hydrologically connected to the offsite Westwood PSW. However, provided 30m+ buffers are applied to setback the new lot; the PSW connectivity is not a concern at this time. Please note that PPS and Growth Plan policies apply to this application.

While I support the Terms of Reference in principle, any changes to the proposal because of site conditions, etc., should be discussed with staff to ensure the ToRs continues to address relevant planning and permitting policies to avoid delays. With respect to bird surveys, I recommend aligning your review with the MECP's "Client's Guide to Preliminary Screening for Species at Risk" to address PPS 2.1.7; this will determine whether or not species-specific surveys are warranted. In general, single-lot development for a residential use is considered low risk for SAR/SWH, and typically an existing species occurrence triggers concerns, but the potential habitat mapping exercise and reviewing SAR/SWH resources appears to demonstrate due diligence.

Let me know if you have any questions/concerns; thanks.

Regards,
Jasmine



Please note that in response to Covid-19, our Administrative Office at 250 Milroy Drive is closed to the public. Be assured that we are doing our best to continue providing our services remotely and therefore, email is our preferred method of communication at this time. We will do our best to get back to you within one business day.

We are committed to keeping communications open to our watershed residents. Contact us if you have any questions. [Please check our website for regular updates...](#)

Jasmine Gibson
Planning Ecologist

Otonabee Region Conservation Authority
250 Milroy Drive, Peterborough, ON, K9H 7M9
705-745-5791 x233



From: Tyler Jamieson (Tyler.Jamieson@cambium-inc.com) <Tyler.Jamieson@cambium-inc.com>
Sent: Monday, May 4, 2020 1:57 PM
To: Matt Wilkinson <mwilkinson@otonabeeconservation.com>; Jasmine Gibson <jgibson@otonabeeconservation.com>
Cc: Andrea Hicks <Andrea.Hicks@cambium-inc.com>; Cambium File <file@cambium-inc.com>
Subject: Severance at 459 7th Line Road (10456-001)

Good afternoon Matt and Jasmine,

Cambium has been employed by Marwood Payne to complete a NHE for a proposed severance at 459 7th Line Road, Peterborough, ON. I've attached the PSR for your review.

The Site is an existing developed property with a house, barn, and garage; however, a large portion of the property is undisturbed lands including forested areas, ponds, lakes, watercourses, and unevaluated wetlands. The PSR indicates the proposed severance is within 120 m of a key hydrological feature (i.e., unevaluated wetland). The area of the proposed severance appears to have been partially cleared in the past, and currently consists of a mixture of open space and shrub thicket.

Based on the contents of the PSR and the current state of the Site, Cambium has proposed the following terms of reference (ToR):

One (1) site visit in mid to late May 2020 to document natural features and functions on the property, if any, including:

- Delineate the boundaries of the wetland based on the Ontario Wetland Evaluation System (OWES) for Southern Ontario (Ministry of Natural Resources, 2013). The site visit will capture appropriate wetland delineation characteristics, including vegetation species and wetted limits.
- Identify vegetation communities occupying the Site and classify according to the Ecological Land Classification System for Southern Ontario (Lee, et al., 1998).
- Document watercourse characteristics including riparian vegetation, erosion prone areas, and special habitat features.
- Record observations of wildlife occurrences and assess wildlife habitat function, including significant wildlife habitat on the Site. Any evidence of breeding, forage, shelter or nesting sites, and/or travel corridors will be noted.
- Conduct a habitat-based species at risk screening for the proposed severance area.

- Evaluate the potential impacts to natural features and function on adjacent lands, with emphases on the non-evaluated wetlands.

The report will include constraints mapping indicating the location of proposed severance in relation to any key natural or hydrological features identified at the site, and their designated setbacks. Recommendations regarding impacts to SAR and their habitat will also be provided.

As stated previously, the proposed severance area consists of open space/shrub thicket, which likely provides limited bird SAR habitat. As such we are hoping to avoid breeding bird surveys, and instead include a habitat-based SAR screening.

Please advise if you feel there is anything else that needs to be addressed.

Kind regards,

Tyler



Tyler Jamieson. B.Sc. Hon., M.Sc.
Technologist Ecological/Biological

Cambium Inc. - Peterborough

Environmental | Building Sciences | Geotechnical | Construction Monitoring
p: 705.742.7900 | c: 705.957.1457 | toll: 866.217.7900 | w: cambium-inc.com

Under modified work conditions in response to the current pandemic and government directives, Cambium continues to provide the professional services you have come to expect to guide good decisions. The well-being and safety of our teams, clients, and communities are a top priority. We ask for your patience and look forward to working together as we evolve into the "new normal". Stay safe. Better days are ahead.

This email and attachments is intended solely for the use of the recipient and may contain personal information that is regulated in accordance with the Personal Information Protection and Electronic Documents Act, S.C. 2000-05. If you are not the intended recipient or do not agree to comply with the Act, please notify the sender by return email and delete the original message and attachments without making a copy.



Check out our [video](#) - an inside look at Cambium's culture & career opportunities





Appendix B
Photographic Log





Photo 1 Piles of stone observed in cleared area within the Study Area, May 2020.



Photo 2 Piles of brush observed in cleared area adjacent to the Study Area, May 2020.

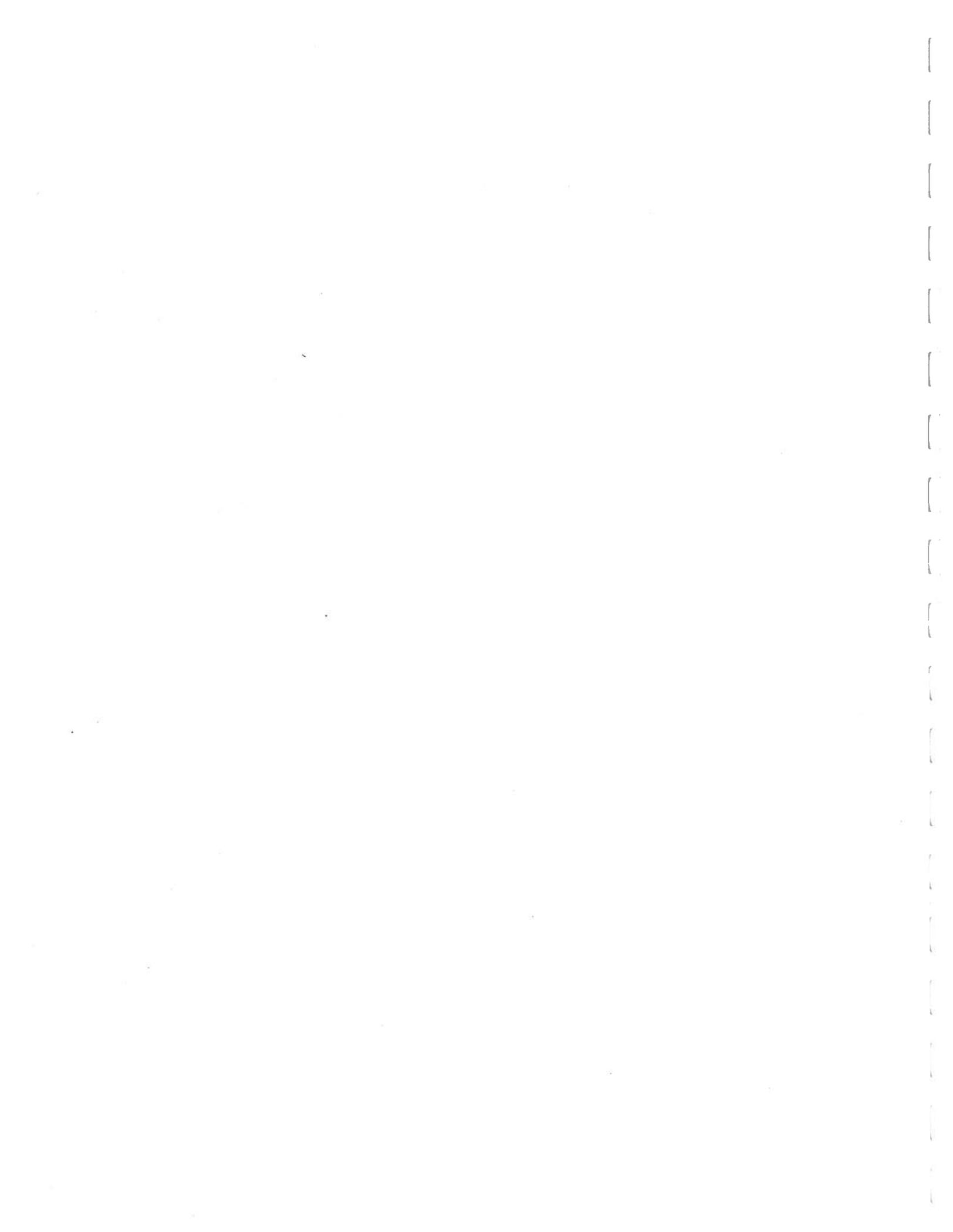
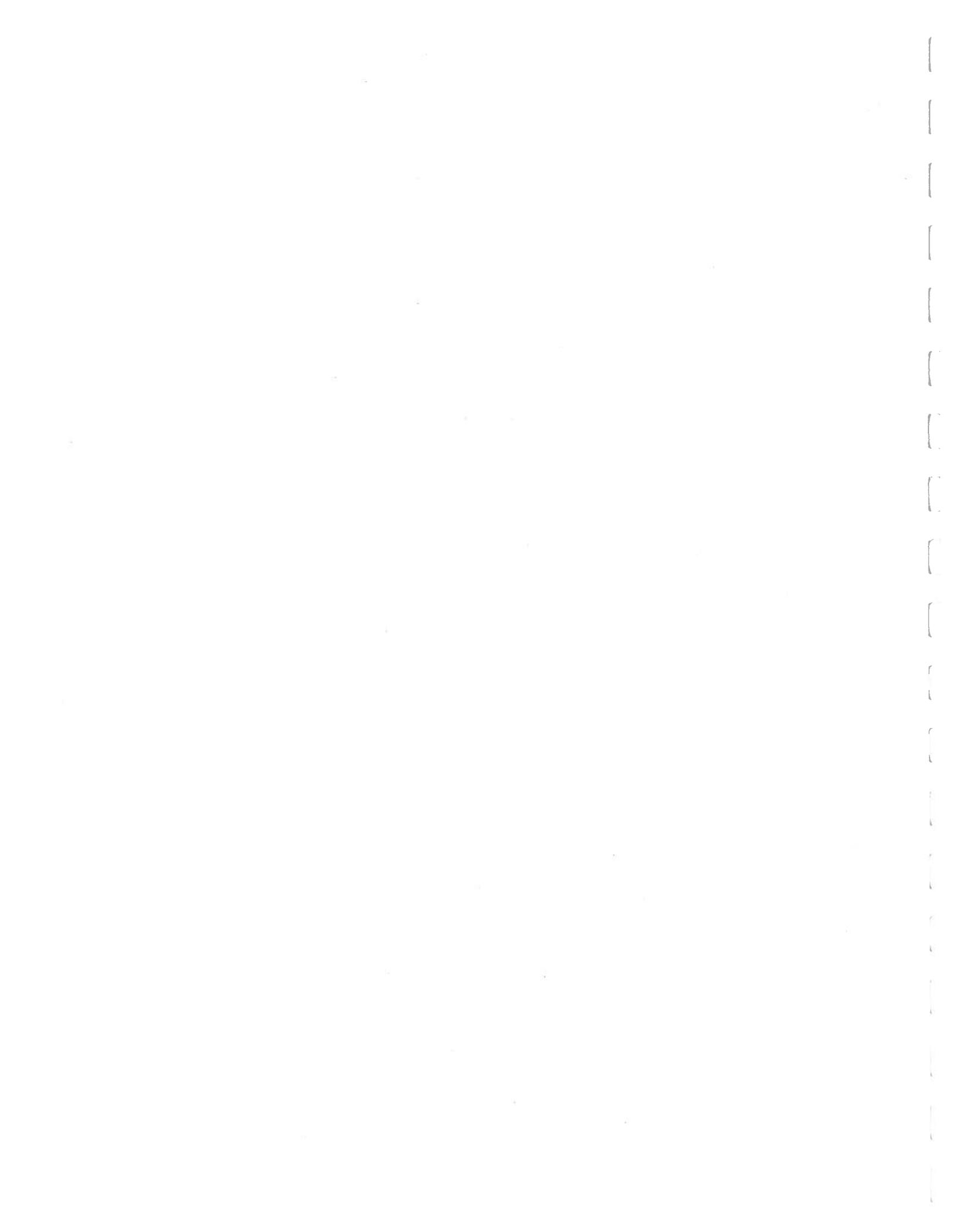




Photo 3 Yellow Spotted Salamander eggs in SWD6-2 community, May 2020.



Photo 4 Leopard Frog in SWD6-2 community, May 2020.





Appendix C
Vegetation Species List



VEGETATION COMMUNITY CLASSIFICATION: Cultural Thicket (CUT)

LOCATION: 459 7th Line Road,
Peterborough

COORDINATES: 44.42902773582372, -
78.02382043700823

PROJECT NUMBER: 10456-001

DATE: May 21, 2020

PROJECT
MANAGER: Andrea Hicks

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	COSEWIC	SARO	CoC	S-Rank
Poverty Oatgrass	<i>Danthonia spicata</i>	Poaceae			5	S5
Canada Goldenrod	<i>Solidago canadensis</i> var. <i>canadensis</i>	Asteraceae			1	S5
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae			4	S5
Common Mullein	<i>Verbascum thapsus</i> ssp. <i>thapsus</i>	Scrophulariaceae				SNA
Common Red Raspberry	<i>Rubus idaeus</i> ssp. <i>idaeus</i>	Rosaceae				SNA
Wild Strawberry	<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Rosaceae			2	S5
Labrador Violet	<i>Viola labradorica</i>	Violaceae			3	S5
Common Dandelion	<i>Taraxacum officinale</i>	Asteraceae				SNA
Black Cherry	<i>Prunus serotina</i> var. <i>serotina</i>	Rosaceae			3	S5
Tufted Vetch	<i>Vicia cracca</i>	Fabaceae				SNA
Red Clover	<i>Trifolium pratense</i>	Fabaceae				SNA
Gay-wing Milkwort	<i>Polygaloides paucifolia</i>	Polygalaceae			6	S5

NOTES: Cultural Thicket. Disturbed area in centre of Study Area similar species, with no tree or shrub cover..

VEGETATION COMMUNITY PHOTOS:





VEGETATION COMMUNITY CLASSIFICATION: Coniferous Forest (FOC2-2)

LOCATION: 459 7th Line Road,
Peterborough

COORDINATES: 44.42896086248905, -
78.02401713430217

PROJECT NUMBER: 10456-001

DATE: May 21, 2020

PROJECT
MANAGER: Andrea Hicks

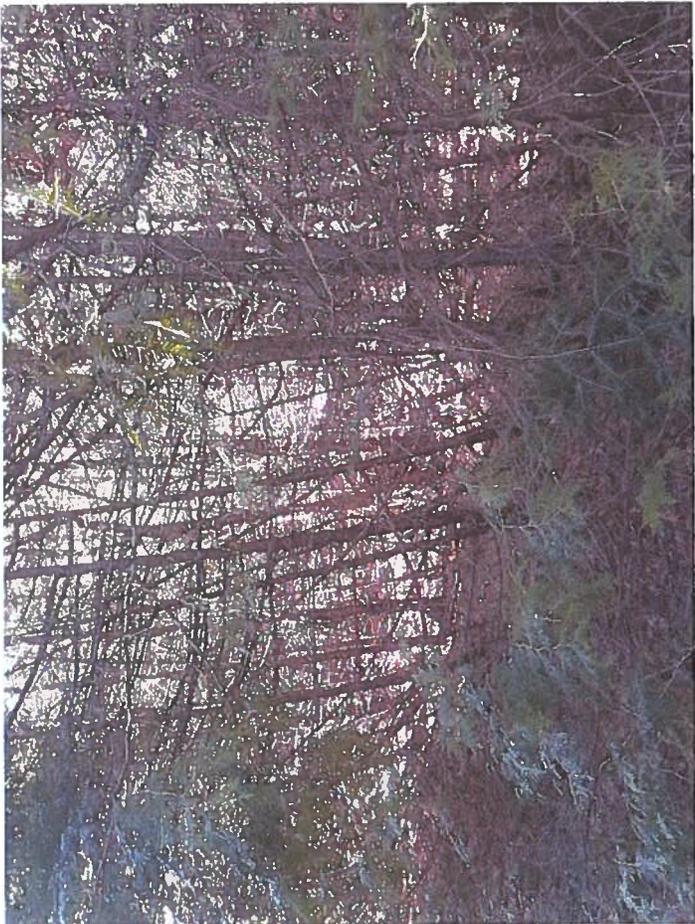
FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	COSEWIC	SARO	CoC	S-Rank
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae			4	S5
Eastern White Pine	<i>Pinus strobus</i>	Pinaceae			4	S5
White Spruce	<i>Picea glauca</i>	Pinaceae			6	S5
Poverty Oatgrass	<i>Danthonia spicata</i>	Poaceae			5	S5
Canada Goldenrod	<i>Solidago canadensis</i> var. <i>canadensis</i>	Asteraceae			1	S5
Common Juniper	<i>Juniperus communis</i> var. <i>communis</i>	Cupressaceae				SNA
Common Red Raspberry	<i>Rubus idaeus</i> ssp. <i>idaeus</i>	Rosaceae				SNA
Labrador Violet	<i>Viola labradorica</i>	Violaceae			3	S5
Wild Strawberry	<i>Fragaria virginiana</i> ssp. <i>virginiana</i>	Rosaceae			2	S5
Red Clover	<i>Trifolium pratense</i>	Fabaceae				SNA
Sulphur Cinquefoil	<i>Potentilla recta</i>	Rosaceae				SNA
Yellow Trout-lily	<i>Erythronium americanum</i> ssp. <i>americanum</i>	Liliaceae			5	S5

NOTES: FOC. Dominated by EWC. Occasional Pine, Spruce. Very dense. No ground cover in thick areas. Gaps contain similar species to disturbed area.

VEGETATION COMMUNITY PHOTOS:





CAMBIUM

VEGETATION COMMUNITY CLASSIFICATION: Mixed Swamp (SWM1-1) 459 7th Line Road, 44.428651573313836,
 LOCATION: Peterborough COORDINATES: -78.02533278648878

PROJECT

MANAGER: Andrea Hicks

DATE: May 21, 2020

PROJECT NUMBER: 10456-001

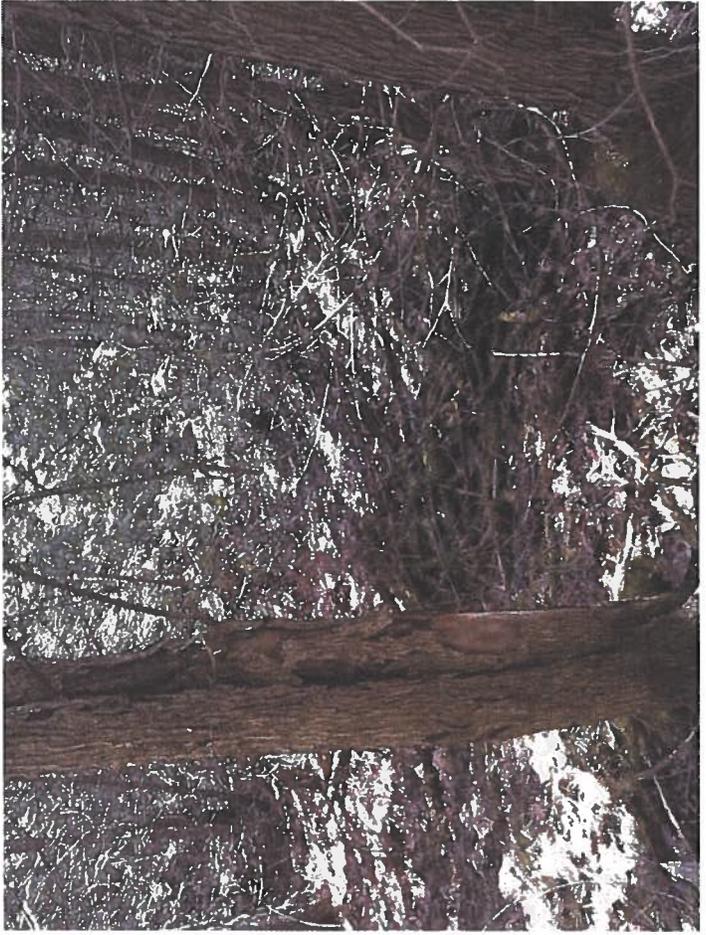
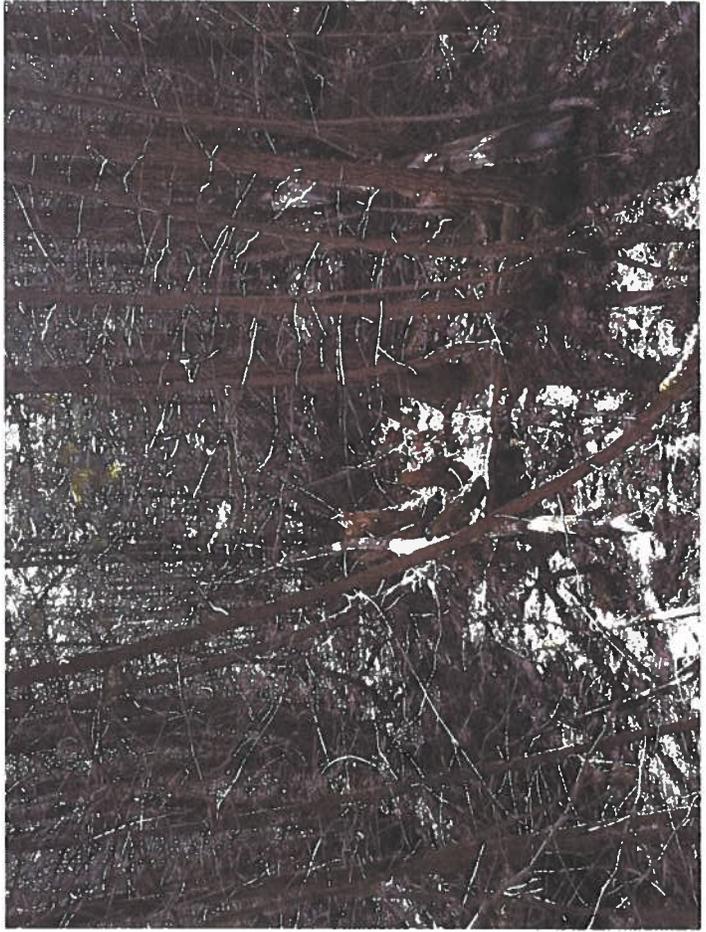
FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	COSEWIC	SARO	CoC	S-Rank
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae			4	S5
Trembling Aspen	<i>Populus tremuloides</i>	Salicaceae			2	S5
Silver Maple	<i>Acer saccharinum</i>	Aceraceae			5	S5
American Elm	<i>Ulmus americana</i>	Ulmaceae			3	S5
Paper Birch	<i>Betula papyrifera</i>	Betulaceae			2	S5
Green Ash	<i>Fraxinus pennsylvanica</i>	Oleaceae			3	S4

NOTES: Swamp. Dominated by ewc with poplar. Sphag moss. Signs of flooding.

VEGETATION COMMUNITY PHOTOS:





CAMBIUM

VEGETATION COMMUNITY CLASSIFICATION: Mixed Swamp Inclusion (SWM3-2)

LOCATION: 459 7th Line Road, Peterborough

COORDINATES: NA

PROJECT NUMBER: 10456-001

DATE: May 21, 2020

PROJECT MANAGER: Andrea Hicks

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	COSEWIC	SARO	CoC	S-Rank
Trembling Aspen	<i>Populus tremuloides</i>	Salicaceae			5	S5
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae			4	S5
Sensitive Fern	<i>Onoclea sensibilis</i>	Dryopteridaceae			4	S5
Red-osier Dogwood	<i>Cornus sericea</i>	Cornaceae			2	S5
White Spruce	<i>Picea glauca</i>	Pinaceae			6	S5

NOTES: T.Aspen > Cedar > Spruce. Signs of intermittent standing water.

VEGETATION COMMUNITY PHOTOS:





CAMBIUM

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY CLASSIFICATION: Deciduous Swamp (SWD6-2) LOCATION: 459 7th Line Road, Peterborough COORDINATES: 44.428489832214474, -78.02453996744252

PROJECT NUMBER: 10456-001 DATE: May 21, 2020 PROJECT MANAGER: Andrea Hicks FIELD STAFF: Tyler Jamieson

Common Name	Scientific Name	Family	COSEWIC	SARO	CoC	S-Rank
Silver Maple	<i>Acer saccharinum</i>	Aceraceae			5	S5
Eastern White Cedar	<i>Thuja occidentalis</i>	Cupressaceae			4	S5
Speckled Alder	<i>Alnus incana</i> ssp. <i>rugosa</i>	Betulaceae			6	S5
Red-osier Dogwood	<i>Cornus sericea</i>	Cornaceae			2	S5
Tamarack	<i>Larix laricina</i>	Pinaceae			7	S5

NOTES: SWD. Silver Maple > EWC. Open with standing water. Y. Spotted salamander eggs. Sedges.

VEGETATION COMMUNITY PHOTOS:







Appendix D
Species at Risk Screening



APPENDIX: Species at Risk Habitat-Based Screening - County of Peterborough

COMMON NAME	SCIENTIFIC NAME	Federal		Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	HABITAT-BASED SCREENING (High/Moderate/Low)		RATIONALE
		SARA	SARO	S-RANK	S-RANK				
Birds									
Acadian Flycatcher	<i>Empidonax virens</i>	END	END	S2S3B		The Acadian Flycatcher has an olive green crown and back, a pale throat and breast, bold white ring around each eye, and a short, wide-based beak used to snatch insects out of the air. It is a forest interior species, requiring large tracts of mature, shady forests with ravines or forested swamps with lots of maple and beech trees. In Canada, the Acadian Flycatcher nests only in southwestern Ontario, near the shore of Lake Erie, in large Carolinian forests and forested ravines (1).	Low	The Site is not within the known habitat range of this species.	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	No Status	SC	S2N, S4B		The Bald Eagle is a bird of prey with a white head, neck and tail, a massive bright yellow beak, powerful legs, and a wingspan of over 2 m. It nests in a variety of habitats and forest types, almost always near a major lake or river where they do most of their hunting. These nests are usually on islands in freshwater lakes or in large trees such as the pine and poplar. During the winter, they may also be found near open bodies of water that do not freeze (1).	Low	The Site is relatively far away from any major water bodies. No large stick nests were observed during the May 2020 Site visit.	
Bank Swallow	<i>Riparia riparia</i>	THR	THR	S4B		The Bank Swallow is a small songbird of around 12 cm long with a distinctive dark breast band, that flies with quick and erratic wingbeats (1). It nests in burrows in natural and human-made settings where there are vertical faces in silt and sand deposits. This can include banks of rivers and lakes, bluffs, active sand and gravel pits, road cuts and stockpiles of soils. However, they prefer sand-silt substrates for excavating their nest burrows. They often use large wetlands as communal nocturnal roosts post breeding or during wintering periods (2).	Low	This species was identified as within the area based on the OBBA, however, no suitable habitat for this species was identified at the Site.	
Barn Swallow	<i>Hirundo rustica</i>	THR	THR	S4B		The Barn Swallow is a mid-sized songbird with steel-blue backs and wings, glossy in males, and a line of white spots across its upper tail. It lives in a variety of open habitats for foraging, such as grassy fields, pastures, certain agricultural crops, shorelines, cottage areas, wetlands, or subarctic tundra (2). They prefer to nest within human-made structures such as barns, bridges, and culverts. Barn swallow nests are cup-shaped and made of mud, typically attached to horizontal beams or vertical walls underneath an overhang (1).	Low	This species was identified as within the area based on the OBBA, however, no suitable habitat for this species was identified at the Site.	
Black Tern	<i>Chlidonias niger</i>	No Status	SC	S3B		The Black Tern is a small waterbird with a forked tail, straight pointed bill, slender shape, and black head during breeding season. It builds floating nests in loose colonies in shallow marshes, with a preference for cattails. They breed primarily in the marshes along the edges of the Great Lakes, but may also use wetlands further north if suitable (1).	Low	This species was identified as within the area based on the OBBA. Potential habitat is may be present within the interior of the retained lot, however, no habitat was observed at the Site.	
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	S4B		The Bobolink is a mid-sized songbird of tan colour with black stripes, except for males during summer breeding season who are black with a white back and yellow collar. It prefers tall, grassy meadows, hayfields and some croplands, and feeds (largely on insects) on the ground in dense grasses (1). It tends to nest in forage crops: hayfields and pastures dominated by species including clover, bluegrass, and broadleaf plants (2).	Low	This species was identified as within the area based on the OBBA, however, no suitable habitat for this species was identified at the Site.	
Canada Warbler	<i>Cardellina canadensis</i>	THR	SC	S4B		The Canada Warbler is a small songbird with bright yellow underparts and bluish grey back and tail (1). It can be found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. Nests are usually located on or near the ground on mossy logs, and along stream banks (3).	Low	This species was identified as within the area based on the OBBA, however, no suitable habitat for this species was identified at the Site.	
Cerulean Warbler	<i>Setophaga cerulea</i>	END	THR	S3B		The Cerulean Warbler, a small songbird, is blue-green with white eyebrows and two prominent white wing bars (1). It requires relatively large tracts of mature deciduous forest (>100 ha), and nests in older, second-growth deciduous forests. During breeding season, it is found in relatively large tracts of mature deciduous forests that feature large, tall trees and an open understory (4).	Low	This species was not identified as being within the area based on the OBBA. No potential habitat was observed at the Site.	
Chimney Swift	<i>Chaetura pelagica</i>	THR	THR	S4B, S4N		The Chimney Swift is a small bird, between 12 and 14 cm, with a brown, cigar-shaped body, slender wings, and an erratic flight pattern. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow trees. Now, it is found mostly near urban and suburban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. They also tend to stay in habitat close to the water (1).	Low	This species was not identified as being within the area based on the OBBA. No potential habitat was observed at the Site.	
Common Nighthawk	<i>Chordeiles minor</i>	THR	SC	S4B		The Common Nighthawk is a medium-sized migratory songbird with a bright yellow throat and belly, a black V-shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	Moderate	This species was identified as within the area based on the OBBA. Potential habitat was present at the Site.	
Eastern Meadowlark	<i>Sturnella magna</i>	THR	THR	S4B		The Eastern Meadowlark is a medium-sized migratory songbird with a bright yellow throat and belly, a black V-shape on its chest, and a pointed bill. It prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields, human-use areas such as airports and roadsides, or other open areas. The Eastern Meadowlark can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses (1).	Low	This species was identified as within the area based on the OBBA, however, no suitable habitat for this species was identified at the Site.	

Eastern Whip-poor-will	<i>Anarastomus vociferus</i>	THR	THR	S4B	The Eastern Whip-poor-will is a medium-sized bird with mottled brown and grey feathers to blend in with its surroundings. A large flattened head, and small bill. They are usually found in areas with a mix of open and forested areas such as patchy forests with clearings, forests that are regenerating after major disturbances, savannahs, open woodlands or openings in more mature forests. Breeding habitat is dependent on forest structure rather than composition, although common tree associations are pine and oak, and it nests directly on the forest floor (2). The species prefers to nest in semi-open or patchy forests with clearings as it forages in open areas and uses forested areas for roosting (1).	Moderate	This species was identified as being within the area based on the OBBA. Potential habitat was present at the Site.
Eastern Wood Pewee	<i>Contopus virens</i>	SC	SC	S4B	The Eastern Wood pewee is a species of flycatcher, a bird that eats flying insects. It grows to approximately 15 cm, has greyish-olive upper parts and pale bars on its wings. This species lives in the mid canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation (1). It typically creates nests on tree branches 2-12 m in height (2).	Low	This species was identified as being within the area based on the OBBA. No potential habitat was observed at the Site.
Evening Grosbeak	<i>Coccothraustes vespertina</i>	No Status	SC	S4B	The Evening Grosbeak is a large songbird with a thick greenish bill. It is a social bird that is often found in flocks, particularly during the winter months. Their preferred habitat is thick coniferous forest. During their breeding season, they are generally found in open, mature mixed forests dominated by Firs, White Spruce, or Trembling Aspen (1).	Moderate	This species was identified as being within the area based on the OBBA. Potential habitat was identified in the area of the Site
Golden Winged Warbler	<i>Vermivora chrysopara</i>	THR	SC	S4B	The Golden-winged Warbler is a small songbird with distinctive yellow wing patches and patches behind their eyes. It inhabits early successional habitat of old fields and favour areas where trees are spread out or forest edges to use for perching, singing, and searching for food. They seem to prefer regeneration zones with young shrub growth, surrounded by mature forest, locations that have recently been disturbed, such as field edges, hydro or utility right-of-ways, or logged areas for their breeding sites, often frequenting clusters of herbaceous plants and low bushes (1).	Moderate	This species was not identified as being within the area based on the OBBA. Much of the surrounding area in the retained lot consisted of potentially suitable habitat; however, no habitat was observed on the Site.
Grasshopper Sparrow	<i>Ammodramus saviannorum</i>	SC	SC	S4B	The Grasshopper Sparrow is a small songbird with a streaked back, a white stripe down the center of its crown, a flatish head, and a conical beak. It inhabits open grasslands and prairies with well drained soil, preferring areas that are sparsely vegetated. It will also nest in hayfields and pastures, as well as always and occasionally grain crops such as barley (1).	Low	This species was identified as within the area based on the OBBA; however, no suitable habitat for this species was identified at the Site.
Least Bittern	<i>Icthyophaga exilis</i>	THR	THR	S4B	The Least Bittern is a small member of the heron family, reaching around 30 cm in length. It has brown and beige plumage with chestnut patches on its wings (1). The species nests in marshes (5-10 ha) and swamps dominated by emergent vegetation, preferably cattails, interspersed with patches of woody vegetation and open water. They require dense vegetation and open water with stable levels within 10 m for nesting, and access to clear, open water for foraging (4).	Low	This species was identified as within the area based on the OBBA. Potential habitat for this species may exist within the interior of the retained lands; however, no suitable habitat for this species was identified at the Site.
Loggerhead Shrike	<i>Lanius ludovicianus</i>	END	END	S2B	The Loggerhead Shrike is a small bird with a black, hooked bill, grey crown, and white throat and chest. This species has specific habitat requirements that are dependent on active livestock grazing, or grassland areas that have naturally short grass cover (i.e. alvar communities). They also require spiny, multi-branched shrubs, or barbed fencing, to catch prey. They prefer grassland habitats that have sporadic occurrences of low trees and shrubs; particularly hawthorn species, which are used as part of their feeding behaviour (1).	Low	This species was not identified as being within the area based on the OBBA, and no suitable habitat was identified at the Site.
Olive-sided Flycatcher	<i>Contopus cooperi</i>	THR	SC	S4B	The Olive-sided Flycatcher is a medium-sized songbird with olive colouring, often seen perching on top of tall trees waiting to catch their prey. It prefers open areas along natural mature forest edges, forest edges near natural openings such as rivers or swamps, human-made openings, or burned forest openings with numbers of dead trees. Breeding habitat usually consists of coniferous or mixed forests adjacent to rivers or wetlands, in Ontario often nesting in White and Black Spruce, Jack Pine, and Balsam Fir (1).	Low	This species was identified as being within the area based on the OBBA. Potential habitat was identified in the area of the Site
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	THR	SC	S4B	The Red-headed Woodpecker is a mid-sized bird, at around 20 cm long, with a vivid red head, neck and breast as well as a strong bill. The species can be found in open woodland and woodland edges, often near man-made landscapes such as parks, golf courses and cemeteries. These areas must contain a large number of dead trees for perching and nesting (1).	Low	This species was identified as being within the area based on the OBBA. No suitable habitat was identified at the Site
Short-eared owl	<i>Asio flammeus</i>	SC	SC	S2N,S4B	The Short-eared Owl has a large round head with small tufts of feathers, long wings, a short tail, and cryptic colouring of brown streaks. This species is found in scattered pockets across the province where suitable open habitat, including grasslands, tundra, peat bogs and marsh, can be found in sufficient quantities. Adults build nests on the ground in grassy areas and occasionally agricultural fields (1). The main factor influencing their choice in habitat is believed to be an abundance of their food source, primarily rodents and other small mammals (2).	Low	This species was not identified as being within the area based on the OBBA, and no suitable habitat was identified at the Site.
Wood Thrush	<i>Hylocichia mustelina</i>	THR	SC	S4B	The Wood Thrush is a medium-sized songbird of around 20 cm with rusty brown coloured upper parts and white underparts with large dark spots. It breeds in deciduous and mixed forests with moderate understorey, shade and abundant leaf litter where it forages for food, including larval and adult insects as well as plant material. They prefer moist stands of trees with well-developed undergrowth and tall trees for perches (1).	Low	This species was identified as being within the area based on the OBBA. Potential habitat for this species may be present within the interior of the retained property; however, no suitable habitat was identified at the Site.
Herpetiles							

Blanding's Turtle	<i>Emydoidea blandingi</i>	THR	THR	S3	Blanding's Turtles are identifiable by their bright yellow throat and chin and domed shell. They spend the majority of their life cycle in the aquatic environment, usually in large wetlands or shallow lakes with high densities of water plants (1). These turtles prefer shallow, nutrient rich water with organic sediment and dense vegetation. They use terrestrial sites for travel between habitat patches and to lay clutches of eggs, often going hundreds of meters from their nearest water body. Blanding's Turtles nest in dry coniferous and mixed forest habitats, as well as fields and roadsides (2). From late October until the end of April, they hibernate in the mud at the bottom of permanent water bodies (1).	Moderate	This species was identified as in the area based on ORAA. The open water wetlands located within the interior of the retained lands may provide potential habitat for this species. As such, the Site may provide potential nesting habitat.
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	SC	SC	S3	The Eastern Musk Turtle is small with a narrow carapace, a dark brown body and two light stripes on each side of their head (5). It is a small freshwater turtle found primarily in slow moving water bodies with abundant emergent vegetation and mucky bottoms along the southern edge of the Canadian Shield within which they burrow into overwinter. Nesting sites vary, but must be close to the water and exposed to direct sunlight (1).	Low	This species was not identified as in the area based on ORAA. No potential habitat was identified on or adjacent to the Site.
Northern Map Turtle	<i>Graptemys geographica</i>	SC	SC	S3	The Northern Map Turtle is a medium sized turtle identified by its carapace's map contour-like patterning. It lives in larger lakes and rivers, requiring high water quality to support their primary prey species: molluscs. This species can often be seen in large groups basking together on rocks and logs. In the winter, the Northern Map Turtle can be found hibernating on the bottom of slow-moving rivers (1).	Low	This species was not identified as in the area based on ORAA. No potential habitat was identified on or adjacent to the Site.
Snapping Turtle	<i>Chelydra serpentina</i>	SC	SC	S3	The Snapping Turtle, with its large serrated carapace, small plastron, and spiked tail, is Canada's largest freshwater turtle (5). It spends the majority of its life in water, preferring shallow water with soft mud and leaf litter, and will travel upland to gravel or sandy embankments, roadsides, along railway lines or beaches to lay their eggs (1).	High	This species was not identified as in the area based on ORAA. The open water wetlands located within the interior of the retained lands may provide potential habitat for this species. As such, the Site may provide potential nesting habitat.
Spotted Turtle	<i>Clemmys guttata</i>	END	END	S2	The Spotted Turtle is named after the distinct yellow spots on its carapace. The species is semi-aquatic and prefers ponds, marshes, bogs and even ditches with slow moving, unpolluted water and an abundant supply of aquatic vegetation. This species usually hibernates in wetlands or seasonally wet areas with structures such as overhanging banks, hummocks, tree roots, or aquatic animal burrows (1).	Low	This species was not identified as in the area based on ORAA. No potential habitat was identified on or adjacent to the Site.
Wood Turtle	<i>Glyptemys msculpta</i>	THR	END	S2	The Wood Turtle has orange coloured front legs, neck and chin and a sculpted carapace with raised, pyramidal scutes (5). They prefer clear rivers and streams that have moderate current, and sandy or gravelly substrates. This species spends more time on land than other turtle species including in meadows, swamps and fields. Wooded areas are an essential habitat component, and the species uses aquatic habitats for hibernation and mating. Nesting occurs in areas with sandy soil and abundant light (1).	Low	This species was not identified as in the area based on ORAA. Based on the rarity of this species, it is unlikely to be dependent on the Site for habitat.
Eastern Hog nosed Snake	<i>Heterodon platirhinos</i>	THR	THR	S3	The Eastern Hog nosed Snake can be a variety of colours and patterns so is most easily identified by its flattened, upturned nose. They prefer sandy well-drained habitats such as beaches and dry forests because they lay their eggs, hibernate and burrow in these areas. The main diet of this snake is toads and frogs, so they usually stay close to water including marshes and swamps, where they have an increased chance of finding their preferred prey (1).	Low	This species was not identified as in the area based on ORAA. No potential habitat was identified on or adjacent to the Site.
Eastern Milksnake	<i>Lampropeltis triangulum</i>	SC	NAR	S4	The Eastern Milksnake's coloration is grey or tan with reddish alternating blotches outlined in black along its back and sides (5). It has recently been delisted from being a species at risk in Ontario (1). This species tends to use open habitats such as rocky outcrops, fields and forest edges. The preferred prey of milksnakes are mice, small rodents, and ground nesting birds which are amply found in and surrounding agricultural outbuildings. The milksnake is secretive and is not likely to be encountered during the day or at night while hunting (5).	High	This species was not identified as in the area based on ORAA. Potential habitat for this species was identified at the Site.
Eastern Ribbonsnake	<i>Thamnophis sauritus</i>	SC	SC	S4	The Eastern Ribbonsnake is slender with three bright yellow stripes running down its back and sides and a white crescent in front of each eye. This snake is usually found close to water as they are strong swimmers, often fleeing predators by diving into shallow water. It prefers wetland habitats where its prey species, frogs and small fish, are abundant. Over winter, they congregate in underground burrows or rock crevices to hibernate (1).	Moderate	This species was not identified as in the area based on the ORAA; however, potential habitat may be present for this species within the interior of the retained lands.
Gray Ratsnake (Great Lakes/St. Lawrence population)	<i>Pontherophis spiloides</i>	THR	THR	S3	The Gray Ratsnake, which can grow to 2.5 m in length, is black with faint patterning and a white checkerboard patterned belly (5). The Great Lakes/St. Lawrence population uses a variety of habitat types including deciduous forests, wetlands, agricultural fields and rocky outcrops that provide suitable sites for sunning and winter hibernation below ground (1). They may spend the summer in more open areas such as old fields and meadows (5).	Low	This species was not identified as in the area based on the ORAA. The Site is outside of the known habitat range of this species.
Common Five lined Skink (Southern Shield Population)	<i>Plestiodon fasciatus</i>	SC	SC	S3	The Common Five-lined Skink is Ontario's only lizard species. Its Southern Shield population can be found underneath rocks on open bedrock in forests and like to bask on sunny rocks and logs. They hibernate in crevices among rocks or buried in the soil (1). They hibernate in groups under rocks and tree stumps or in rotting wood (5).	Low	This species was not identified as in the area based on ORAA. No potential habitat was identified on or adjacent to the Site.
Western Chorus Frog	<i>Pseudacris triseriata</i>	THR	THR	S3	The Western Chorus Frog is small with a dark stripe running through its eye and a light stripe underneath (5). It is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environments, including leaf litter, wood debris, and vacant animal burrows (2).	Moderate	This species was not identified as in the area based on ORAA. Potential habitat for this species was identified at the Site.
Invertebrates							

Gypsy Cuckoo Bumble Bee	<i>Bombus bohemicus</i>	END	END	\$152	The Gypsy Cuckoo Bumble Bee is a medium-sized bumble bee that resides in a wide range of habitats such as open meadows, agricultural and urban areas, boreal forest, and woodlands. In Ontario, it was historically found throughout the province; however, in recent years it is only known to occur in Pinery Provincial Park (1).	Low	The Site is outside of this species' natural range.	
Monarch Butterfly	<i>Danaus plexippus</i>	SC	SC	\$2N,54B	The Monarch is an orange and black butterfly with small white spots and a wingspan of around 10 cm. It relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers (1).	Low	No milkweed was identified at the Site.	
West Virginia White	<i>Pieris virginensis</i>	No Status	SC	\$3	The West Virginia White is a small, dingy white butterfly. This species is found in moist deciduous woods, and requires a supply of toothwort, a small, spring-blooming plant, which provides the only source of food for its larvae. The West Virginia White is found mostly in the central and southern parts of Ontario, but its range extends north to Manitoulin and St. Joseph islands (1).	Low	No Toothwort was identified at the Site.	
Mammals								
Tri-colored Bat	<i>Perimyotis subflavus</i>	END	END	\$3?	The Tri-colored Bat is small, with pale brown with orange-red forearms, muzzle, and ears. It is named for the black, yellow, and brown hairs on its back. It is considered rare in this region of Ontario which is at the northernmost limit of the natural range. These bats prefer to nest in foliage, tree cavities and woodpecker holes, but are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Tri-colored Bats prefer an open forest habitat type in proximity to water (6).	Low	The Site was relatively open with no large cavity trees. More suitable habitat is likely present elsewhere within the interior of the retained lands.	
Eastern Small-footed Myotis	<i>Myotis leibii</i>	No Status	END	\$253	The Eastern Small-footed Myotis has fur with black roots and shiny brown tips as well as very small feet. In the spring and summer, the Eastern Small-footed Myotis will roost in a variety of habitats, including in or under rocks, in rock outcroppings, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects. They hibernate in winter, often in caves and abandoned mines choosing colder and drier sites than other similar bats (1).	Low	The Site was relatively open with no large cavity trees. More suitable habitat is likely present elsewhere within the interior of the retained lands.	
Little Brown Myotis	<i>Myotis lucifugus</i>	END	END	\$4	The Little Brown Myotis has glossy brown fur and a fleshy projection covering the entrance to its ears. This species roosts in trees and buildings, often selecting attics, abandoned buildings and barns for summer colonies where they can raise their young. Little Brown Bats hibernate from October/November to March/April, most often in caves or abandoned mines that are humid and remain above-freezing (1).	Low	The Site was relatively open with no large cavity trees. More suitable habitat is likely present elsewhere within the interior of the retained lands.	
Northern Myotis	<i>Myotis septentrionalis</i>	END	END	\$3	The Northern Myotis has dull yellow-brown fur with pale bellies and long, rounded ears. This species is found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October/November to March/April, most often in caves or abandoned mines (1).	Low	The Site was relatively open with no large cavity trees. More suitable habitat is likely present elsewhere within the interior of the retained lands.	
Algonquin Wolf	<i>Canis lycan</i>	SC	THR	\$4	Formerly called the Eastern Wolf, this canine was recently renamed the Algonquin Wolf. In the southern portion of the province, this species prefers deciduous and mixed forest landscapes while their northern range includes mixed and coniferous forests. It is most prevalent in areas with abundant prey species which include Beaver, White-tailed Deer and Moose. Dens sites are usually found in coniferous forests with easily excavated soil types like sand and close to a permanent water source (1).	Low	No suitable habitat present at the Site.	
Trees, plants, fungi and lichens								
American Ginseng	<i>Panax quinquefolius</i>	END	END	\$2	American Ginseng is a perennial plant which grows up to 60 centimetres in height. The leaves typically have five leaflets arranged in a whorl at the end of the leaf stem. The root looks like a gnarled parsnip. The flowers are an inconspicuous green-white in colour, but the berries are bright red and arranged in a cluster. In Ontario, the American Ginseng typically grows in rich, moist, and mature deciduous woods dominated by Sugar Maple, White Ash, and American Basswood. It typically grows in deep, nutrient-rich soil over limestone or marble bedrock (1).	Low	No habitat present at the Site.	
Butternut	<i>Juglans cinerea</i>	END	END	\$2?	The Butternut is a medium-sized tree reaching 30 m in height. It has large compound leaves with 11 to 17 leaflets. The fruit is oval, fuzzy and sticky. In Ontario, the Butternut prefers moist, well-drained soil, often along streams, or occasionally well-drained gravel sites. It grows alone or in small groups in deciduous forests (1).	Low	No butternut were observed during the Site visit.	
Pale-bellied Frost Lichen	<i>Physcia subpallida</i>	END	END	\$3	The Pale-bellied Frost Lichen resembles a light dusting of frost on a dark tree trunk. This species is found throughout eastern North America, growing in wooded areas rich in hardwood species, such as White Ash, Hop Hornbeam (Ironwood), Black Walnut, and American Elm. It is also common to find this species growing on fenceposts or borders within or near these wooded areas. In Ontario, this species has been found in the following counties: Frontenac, Haliburton, Hastings, Peterborough, Lennox and Addington (1).	Low	No habitat present at the Site.	

References

1. Ministry of Environment, Conservation and Parks. (2019). Species at risk in Ontario. Retrieved from <https://www.ontario.ca/page/species-risk-ontario>
2. Government of Canada. (2019). Species at risk public registry. Retrieved from <https://species-registry.canada.ca/index/en/html/#/species?range=58.sortBy=commonNameSort&sortDirection=asc&pageSize=10>
3. Committee on the Status of Endangered Wildlife in Canada. (2008).
4. Environment Canada. (2018).
5. Ontario Nature. (2020). Reptiles and amphibians. Retrieved from <https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas/species/>
6. University of Michigan Museum of Zoology. (2004).