Environmental Impact Study - 1797 County Road 6, Township of Douro-Dummer, County of Peterborough, Ontario

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Prepared for:
Sherry Webster

Cambium Reference: 12929-001

CAMBIUM INC.

866.217.7900

cambium-inc.com

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Cambium Inc. (Cambium) was retained by Sherry Webster to conduct an Environmental Impact Study - 1797 County Road 6, Township of Douro-Dummer, County of Peterborough, Ontario (Figure 1). The proposed development includes a single residential lot severance on the northwest corner of the property and potential development of a dwelling and garage on the retained property. Based on the proposed development, the proposed severance and within 120 m of the proposed development will be considered the Site for this report.

The Environmental Impact Study (EIS; the Study) is required to address potential negative impacts to natural heritage features identified during the preliminary development review process, as required by the Provincial Policy Statement, 2020 (PPS) and the Growth Plan for the Greater Golden Horseshoe, 2020 (GPGGH). The Site contains or is adjacent to (within 120 m) the following natural heritage and/or hydrologic features: unevaluated wetlands and potential significant wildlife habitat. The Site is within Ecoregion 6E of Ontario (Crins, Gray, Uhlig, & Wester, 2009). The property is located outside of any Settlement Area.

The Site is within the jurisdiction of the Otonabee Region Conservation Authority (ORCA) and their regulated area does overlap the Site due to the presence of mapped unevaluated wetlands on-Site. As the Site contains wetlands, the Study will consider regulations on development as imposed by the local Conservation Authority's Regulation under the *Conservation Authorities Act, 1990*.

The *Endangered Species Act, 2007* (ESA) 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 Study includes a habitat-based screening for species of conservation concern to determine if the Site has suitable habitat for any provincial or federal species at risk (SAR).

In order to address the requirements of the approval authorities, Cambium has conducted this Study 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

The Terms of Reference (ToR) for this Study were circulated to ORCA and an email response with comments with respect to the ToR was received from Matt Wilkinson, Planner, on June 30, 2021. Relevant correspondence and documentation are provided in Appendix A.

1.2 Proposed Development

The Site is an irregular shape, is approximately 20 ha in size, and fronts County Road 6, Township of Douro-Dummer along the north and west property lines. Currently, the lot is vacant. Adjacent land uses include residential and agricultural.

The proposed development involves a single residential lot severance to front on County Road 6, at the northwest edge of the Site. In addition, the development of a single dwelling and garage is proposed within the central portion of the retained lot; this development would be accessed using an existing laneway entrance from County Road 6.

Site Plans have not yet been prepared, as the Client is awaiting the information provided herein to establish appropriate development limits.

2.0 Applicable Natural Heritage Policy and Regulation

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*.

Section 2.2 of the PPS protects the quality and quantity of water, including the form and hydrologic function of sensitive surface water features and sensitive ground water features. Focus is given to maintaining hydrologic linkages and functions at the watershed scale to minimize potential negative impacts, including cross-jurisdictional and cross-watershed impacts of development. Mitigative measures and/or alternative development approaches should be considered for development near water features.

2.2 Growth Plan for the Greater Golden Horseshoe, 2020

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, 2020 (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" (Ministry of Municipal Affairs and Housing, 2020). 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 (KHFs), 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	

2.3 Official Plan and Zoning By-Law

Peterborough County Official Plan, 1994

According to the Peterborough County Official Plan, the land designation of the Site is 'Rural'. The adjacent properties are also designated as 'Rural'. The Peterborough County Official Plan also functions as the Official Plan for the Township of Douro-Dummer.

Township of Douro-Dummer Comprehensive Zoning By-law, 2010

According to the Township of Douro-Dummer, the zoning of the Site is 'Rural' (RU). The adjacent properties are designated as 'Rural' (RU), 'Special District' (SD), and 'Residential' (R). Per policy 9.2.4 of the Zoning By-law, the minimum lot size for a single residential use in the RU zone is 0.4 ha, with 45 m of road frontage.

2.4 Conservation Authority Regulation

"Conservation Authorities are local watershed management agencies that deliver services and programs to protect and manage impacts on water and other natural resources in partnership with all levels of government, landowners and many other organizations" (Conservation Ontario, 2021). Conservation Authorities each have their own Ontario Regulation under the *Conservation Authorities Act, 1990*. In general, they regulate development within and adjacent to river or stream valleys, Great Lakes and inland lakes shorelines, watercourses, hazardous lands (flood, erosion, unstable soils) and wetlands.

Otonabee Region Conservation Authority regulates these features under Ontario Regulation 167/06: *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*.

2.5 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, 2007). 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.

3.0 Technical Approach and Data Collection Methods

3.1 Background Information Review

Existing background information pertaining to the Site 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 orthoimagery, topographic base mapping, and geological records. Natural environment and land use schedules prepared in support of Official Plans and Zoning By-Laws 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);
- Ontario Reptile and Amphibian Atlas (ORAA) (Ontario Nature, 2018);
- Ontario Breeding Birds Atlas (OBBA) (2001-2005) (Bird Studies Canada, 2005);
- Peterborough County Official Plan, 1994
- Township of Douro-Dummer Comprehensive Zoning By-law, 2010

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

3.1.1 Ministry Consultation

Depending on the natural feature of the Site, ministry consultation may include the Ministry of Northern Development, Mines, Natural Resources, and Forestry (NDMNRF) and/or the Ministry of Environment, Conservation, and Parks (MECP), as applicable.

In early 2019, the Government of Ontario made changes to the regulating authority on matters related to SAR in the province. The 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* (Ministry of the Environment,

Conservation and Parks, 2019). This document aims to "help clients better understand their obligation to gather information and complete a preliminary screening for SAR before contacting the Ministry". This document was used to guide the SAR habitat-based screening for the 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 sections provide the methods that were used to gather site-specific information.

3.2.1 Ecological Land Classification and Vegetation Inventory

The Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 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, et al., 1998) and the revised 2008 tables. ELC units were initially delineated and classified by orthoimagery interpretation. Field investigations served to confirm the type and extent of communities on the Site through vegetation inventory and soil assessment with a hand auger. Where vegetation communities extend off the Site, classification is done through observation from property boundaries and publicly accessible lands.

3.2.2 Wetland Boundary Delineation

Wetland boundaries were initially delineated and classified by orthoimagery interpretation. The presence/absence of wetlands on the Site was confirmed through field investigations during the growing season (late May through October). Wetland boundaries were determined using the 50% wetland vegetation rule. Where vegetation-based delineation was inconclusive, soil assessment with a hand auger was used to confirm wetland boundaries. Wetland boundaries on the Site were marked with a hand-held GPS unit. Where wetland communities extend off the Site, classification was done through observation from property boundaries and publicly accessible lands.

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 Site 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. Species and habitat observations were documented and photographed.

4.0 Characterization of Natural Features and Functions

Background information and field investigation data is provided in the following sections. Based on the background and field data, an assessment of significance has been completed to identify protected natural heritage features on and/or adjacent to the Site.

The following field investigations were carried out on the Site and are summarized in Table 2. Soil auger locations are shown on Figure 3.

Table 2 Summary of Field Investigations

Date	Time On Site	Weather	Observer	Activities
2021-07-22	0930-1430	24°C, sun and cloud Wind: 1 Noise: 1	T. Jamieson	Ecological Land Classification Wetland Boundary Delineation Habitat-Based Wildlife Survey

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 sampling, 3 – seriously affecting sampling, 4 – profoundly affecting sampling.

4.1 Landscape Position and Topography

The Site is within the Mixedwood Plains Ecozone: Lake Simcoe Rideau Ecoregion 6E, which extends southward from a line connecting Lake Huron in the west to the Ottawa River in the east, including Ottawa, Kingston, Peterborough, Barrie, Tobermory, Kitchener, and Toronto. This ecoregion is characterized by a mixed geology that includes both shallow soil areas such as alvar and bedrock plains, as well as deep soil areas such as the Oak Ridges Moraine. It falls within the Great-Lakes St. Lawrence Forest Region, including deciduous and mixed forests; however, over 50% of the landscape in this Ecoregion is currently in use as agricultural land (Lee, et al., 1998).

The Site is relatively flat, consisting of gentle rolling hills with minor elevation decreases where wetland areas exist, as detailed in Section 4.3.

4.2 Vegetation Communities

Utilizing aerial imagery dating back to 1985, it appears that no major changes to vegetation cover have occurred at the Site. Currently, the Site contains an existing driveway, forested areas to the east and west of the driveway, and open areas near the centre of the Site. The surrounding area is mainly residential or forested areas and have been this way since 1985.

The vegetation communities on the Site are summarized in Table 3 and are mapped on Figure 3. A list of identified species and representative photos for each community are provided in Appendix B.

Table 3 Vegetation Communities

No.	ELC Code	Community Description	Community Type	S -Rank
1	CUT1	Mineral Cultural Thicket	Terrestrial	SNA
2	FOC4-1	Fresh – Moist White Cedar Coniferous Forest	Terrestrial	S5
3	SWD2-2	Red/Green Ash Mineral Deciduous Swamp	Wetland	S5
4	MAS2-1	Cattail Mineral Shallow Marsh	Wetland	S5
5	FOM7-2	Fresh – Moist White Cedar – Hardwood Forest	Terrestrial	S5
6	FOD2-4	Dry – Fresh Oak – Hardwood Deciduous Forest	Terrestrial	S5
7	FOD3-2	Dry – Fresh White Birch Deciduous Forest	Terrestrial	S5
8	CUT1	Mineral Cultural Thicket	Terrestrial	SNA
9	FOD3-1	Dry – Fresh Poplar Deciduous Forest	Terrestrial	S5
10	SWT2-5	Red-osier Mineral Thicket Swamp	Wetland	S5
11	SWD3-2	Silver Maple Mineral Deciduous Swamp	Wetland	S5
12	SWD2-2	Red/Green Ash Mineral Deciduous Swamp	Wetland	S5

A search for butternut (*Juglans cinerea*; provincially endangered) was completed as part of the vegetation survey; no butternut were identified.

4.2.1 Significant Woodlands

Significant woodlands are natural heritage features that are afforded protection under provincial policy. The PPS defines woodlands as: treed areas, woodlots or forested areas, and states that woodlands may be delineated according to the Forestry Act definition or the Province's ELC system definition for "forest". According to the provincial ELC system, Vegetation Communities 2, 5, 6, 7, and 9 meet the woodland definition. Although not considered a woodland, swamps are treed areas and may also be considered part of significant woodlands. Vegetation Communities 3, 10, 11, and 12 are swamps and may be considered part of the significant woodlands.

Currently, according to their respective Official Plan Schedules, the planning authority has not explicitly defined or designated significant woodlands within their jurisdiction. In the absence of local criteria for evaluating woodlands, the NHRM provides guidance on evaluating woodlands (Ministry of Natural Resources, 2010). In addition, the Greenbelt Plan provides evaluation criteria: *Technical definitions and criteria for key natural heritage features in the Natural Heritage System of the Protected Countryside Area* (Ministry of Natural Resources, 2012). While the Site is outside the Greenbelt Plan area, the North Area of the Greenbelt Plan (i.e., north of the Oak Ridges Moraine) is representative of the geographic and planning context for this Site, and these technical definitions can be used to guide evaluations in the absence of local criteria.

The Greenbelt Plan defines a woodland as significant if any of the following conditions are met:

- Size: woodland is larger than 10 ha
- Natural composition: area of the woodland composed of naturally occurring species is greater than 4 ha
- Age of trees: equal 10 or more trees per ha that are either 100 years old or 50 cm in diameter

- Woodlands of 4 ha or more that are within 30 m of a significant wetland, significant habitat, or significant woodland
- Any woodlands 0.5 ha or greater containing provincially rare treed vegetation with a S1, S2, or S3 ranking.

Woodlands on the Site can be divided into two main areas; west of the existing laneway (referred to as the west woodland), and east of the existing laneway (referred to as the east woodland). Please note that the distinction of the two woodlands is for discussion purposes only. As the woodland features are not disconnected by an area of 20 m or more, the woodlands are considered connected and thus are evaluated as one woodland.

The west woodland is approximately 3.6 ha in area, does not contain any interior habitat, and is bounded by a roadway (County Road 6) to the north and west, a historically cleared area on the Site toward the east, and developed areas to the south of the Site.

The east woodland is contiguous with woodlands to the south and is larger than 10 ha (approximately 20 ha). The east woodland also contains interior habitat as well as wetlands within the Site and adjacent lands.

Based on this review, the woodlands on the Site are considered candidate significant woodland in accordance with the Greenbelt Plan.

4.3 Wetland Delineation

There is mapped unevaluated wetland on and adjacent to the Site. The field investigations confirmed that wetlands are present on the Site, however, field verification identified discrepancies with the mapped features. A total of five wetland communities are present on-Site, as detailed in Table 3 and shown on Figure 3.

Wetland Communities 3 and 4 are located along slightly lower topography within the west woodland area, are connected, and exist directly adjacent the proposed severed area. A culvert was observed north of Community 4 under County Road 6 providing a connection to wetlands across the road north (Figure 3).

Communities 11 and 12 are connected and exist east of the proposed development area. These wetlands almost span the property boundaries, near the centre of the property. Community 10 covers a small area along the southern property boundary, south of the proposed development.

Wetland boundaries were determined in accordance with the OWES, as outlined in Section 3.2.2. Soil moisture regime, as determined through soil assessment using a hand auger, was used to confirm the plant-based evaluation. Wetlands observed on-Site and their connectivity were not completely consistent with mapped unevaluated wetlands. The boundaries were marked by GPS and are presented in Figure 3.

4.4 Species of Conservation Concern

A list of species of conservation concern, including SAR, with potential to occur in the general vicinity of the Site has been compiled based on known species' ranges, habitat requirements, and review of background information sources (as listed in Section 3.1). In addition, the list has been augmented with direct field observations from the current study, as detailed in the previous sections. Cambium has employed a habitat-based screening, supplemented with targeted field surveys when necessary, in order to identify suitable habitat for species located on or adjacent to the Site. A detailed habitat suitability analysis is provided in Appendix C and a discussion of the results is provided below.

4.4.1 Endangered and Threatened Species

During the background review, the Natural Heritage Areas: Make-a-map (Ministry of Natural Resources and Forestry, 2018) tool was used to determine if any known SAR have been previously identified on or adjacent to the Site. The Natural Heritage Information Centre (NHIC) report noted that Bobolink have been identified within the 1 km grid square of the Site. Bobolink require grassland or meadow habitat types. As no grassland or meadow communities exist on the Site, their habitat also does not exist and will not be discussed further herein.

Cavity trees / roosting trees that provide habitat for endangered bat species such as the Tri-coloured Bat, Eastern Small-footed Myotis, Little Brown Myotis, and Northern Myotis may

exist in some of the forested / treed swamp habitats on the Site; however, no cavity trees were observed in the proposed development areas or forest edges during the field visit. As such, no impacts to bats anticipated, and bats are not discussed further in this report.

The Western Chorus Frog is listed as threatened federally, but currently not listed provincially. Due to the wetlands and adjacent forested areas, potential habitat for Western Chorus Frog exists on the Site. No Western Chorus Frog were observed during the field visit. Given that this species is not provincially regulated and wetland habitats will be protected as detailed in Section 5.1, this species is not discussed further in this report.

4.4.2 Special Concern Species

The Canada Warbler is most abundant in moist, mixed forests, with a dense shrub layer, consistent with vegetation characteristics in Communities 2 and 5. No Canada Warbler were observed during the field visit.

The Eastern Wood-pewee lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests with little understorey vegetation, as available in woodlands throughout the Site. No Eastern Wood-pewee were observed during the field visit.

Golden-winged Warbler prefer forest edges and shrub cover to use for perching, singing, and searching for food. Forest edge exist throughout the Site and adjacent lands. The proposed development areas are comprised partly of thicket habitats (Communities 1 and 8), which provide shrub cover that may be utilized by this species. No Golden-winged Warbler were observed during the field visits.

Wood Thrush uses deciduous and mixed forests with moist stands of trees, moderate understories, shade, and abundant leaf litter, as can be found in the entire east woodland. No Wood Thrush were observed during the site visit.

Eastern Milksnake prefer open areas such as fields and forest edges, as what is presented in Community 5 and 8. Eastern Milksnake are a listed species federally but are not protected provincially. No Eastern Milksnake were observed during the site visit. Given that this species is not provincially regulated and forest edges will generally be protected as they fall within

wetland boundaries as detailed in Section 5.1, this species is not discussed further in this report.

Eastern Ribbonsnakes are typically found adjacent to wetlands and shallow water to find their main source of prey such as frogs and small fish. All wetlands on the Site represent potential habitat features that Eastern Ribbonsake may use to find prey. No Eastern Ribbonsnakes were observed during the site visit.

The Monarch Butterfly uses a variety of habitats with wildflowers, including habitats such as Community 8, but requires milkweed plants as a food source for their caterpillars. Common Milkweed was observed on the Site in Community 8; however, Monarch Butterflies were not observed during site visits. Recommendations to reduce the potential for impact to this species are included in Section 5.3.

The Yellow-banded Bumble Bee is a habitat generalist but are a pollinator species and therefore require wildflower and pollen generating species and therefore could use Community 1, 4, and 8. Yellow-banded Bumble Bees were not observed during site visits.

5.0 Impact Assessment and Mitigation Measures

The proposed development involves a single residential lot severance to front on County Road 6, at the northwest edge of the Site. In addition, the development of a single dwelling and garage is proposed within the central portion of the retained lot; this development would be accessed using an existing laneway entrance from County Road 6.

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

- Wetlands
- Significant Woodlands
- Potential Significant Wildlife Habitat for Special Concern Species

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

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.

5.1 Wetlands

As detailed in Section 4.3, wetlands were confirmed on the Site. Wetland boundaries were delineated as shown on Figure 3. No direct impacts to wetlands are expected as all development, including lot line placement, is recommended to occur outside of the wetlands. The following mitigation measures are provided to ensure there are no indirect impacts to wetlands.

A 30 m setback/Vegetation Protection Zone (VPZ) is recommended for all wetlands, as shown on Figure 4, in accordance with the natural heritage policies of the GPGGH. The 30 m VPZ is considered sufficient to protect the existing form and function of local wetland features provided that the area be maintained as the existing natural cover and be allowed to naturally self-sustain (i.e., a buffer area where no vegetation removals or grading is allowed).

Prior to any construction activities taking place, it is essential that perimeter sediment fencing be installed around construction areas. Fencing should be properly keyed into the ground and **securely fastened to vertical supports spaced ≤ 2 m apart.** This key control measure will help prevent sediment from entering surface water features (i.e., wetlands) in the surrounding landscape. All sediment fencing should be regularly maintained and kept in good working condition, until the area has been stabilized and/or successfully revegetated. Any observed overland drainage channels originating from Site, that may or may not have arisen as a result of erosion, should be directed to a check dam structure, prior to discharging to off-site areas.

Runoff from the Site is expected to increase with the introduction of impermeable surfaces (i.e., building roofs, roadways, and walkways) and compacted surfaces with reduced infiltration capacity. Measures to increase infiltration of run-off from these surfaces should be encouraged and, where possible, included in the Site Plan for the development. Eavestrough downspouts should be directed to vegetated areas (such as lawn, or gardens) and not onto hardened surfaces, to encourage infiltration.

Provided these recommendations are adhered to, no indirect impacts to the wetland are anticipated.

5.2 Significant Woodlands

As detailed in Section 4.2.1, candidate significant woodlands were identified based on provincial criteria within the Site and are illustrated on Figure 4. It is the responsibility of the Planning Authority to designate significant woodlands within their jurisdiction; therefore, these woodlands will be presumed candidate significant woodlands for the purpose of this Study.

The proposed severance lot lines may pass through the areas identified as candidate significant woodland. As lot lines are administrative in nature, direct and indirect impacts are not expected. Additionally, the proposed severance is at the western edge of the woodland and adjacent to a roadway. As the proposed severance would not impact an area considered interior habitat and minimal tree clearing is expected, the form and function of the woodland would not be impacted.

The western edge of the candidate significant woodland, adjacent to the developable area as shown on Figure 4, is fairly consistent with the 30 m wetland VPZ; as such the wetland VPZ will provide some protection to the candidate significant woodland edge. The proposed development within the retained lot will require some tree/vegetation removal within the candidate significant woodland (Community 5) in order to upgrade the existing laneway access to the retained lands from County Road 6. Vegetation removals represent a direct impact to the woodland and should be limited to the amount required for construction. Existing cleared areas should be used to the greatest extent possible. The tree removal will be located along an existing edge and interior habitat does not exist within this portion of the woodland. The upgrade to the laneway is not expected to significantly alter canopy cover from existing conditions. Compensation plantings have been recommended to offset the loss of vegetation that may be required during the upgrade to the laneway and is discussed in Section 5.5. Provided these recommendations are adhered to, these impacts are not anticipated to affect the overall form and function of the candidate significant woodland. Further, indirect impacts will be appropriately mitigated following the ESC recommendations as provided in Section 5.1.

5.3 Potential Significant Wildlife Habitat for Special Concern Species

As detailed in Section 4.4.2, the Site provides suitable habitat for seven species of special concern. These species are addressed under the appropriate measures below. Provided the recommendations herein are adhered to, no impacts to Significant Wildlife Habitat (SWH) for Special Concern species is anticipated in relation to the proposed developments on the Site.

Vegetation Clearing

Various woodland and thicket habitats on the Site have potential to support special concern bird SAR. In addition to SAR, other nesting birds are protected under the *Migratory Birds Convention Act, 1994*. To protect migratory birds during the development process, vegetation removals should be limited to the amount required for construction; existing cleared areas should be used to the extent possible. Furthermore, vegetation clearing on the Site should occur outside the breeding bird season, which extends from April 15 to August 15 in the local area (as per Environment and Climate Change Canada Guidelines).

If vegetation clearing is to occur between April 15 and August 15, the vegetation should be investigated by a qualified biologist to confirm if any nests are present. Vegetation clearing can proceed provided there are no active nests. If active nests are confirmed, the nests should be left undisturbed until young have fledged or the nest is determined to be inactive.

In the event that construction is planned to proceed during the breeding season, the area should be investigated for the presence of breeding birds and nests containing eggs and/or young, prior to Site alteration. Nests discovered should be left undisturbed until young have fledged or the nest is determined to be inactive.

Wildlife Exclusion

Small wildlife including snakes, amphibians, and small mammals are particularly vulnerable to construction-related impacts on sites adjacent to wetlands and woodlands. The ESC fencing detailed in Section 5.1 can also function as wildlife exclusion fencing. Fencing should be installed around the entire perimeter of the construction area prior to the earlier of May 1 or the commencement of Site preparation, in order to keep turtles and snakes from entering the construction area. This fencing should be made of light-duty silt fence, staked at regular intervals, trenched-in at least 10-20 cm below ground, with an above ground height of at least 60 cm.

The fencing should be inspected regularly to ensure that it remains in good condition: and any downed areas, rips, or holes should be repaired or replaced immediately. The area of construction should also be actively inspected for turtles and snakes each day prior to the start of work, throughout the duration of construction.

If any wildlife are encountered, they should be photographed and allowed time to move out of harm's way. If any SAR are discovered on the property, they should 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 (NHIC).

Native Pollinator Plants

As the Site may provide habitat for pollinator species such as Monarch Butterfly and Yellow-banded Bumble Bee Vegetation, vegetation removal should be limited to the amount required for construction. If feasible, vegetation clearing should occur after August 31, to protect the Monarch Butterfly during the last hatch of the season.

Including native flowering herbaceous plants in the future landscaping plans will aid in maintaining habitat for these pollinator species. Cambium recommends applying suitable native plant seed mixtures that include Common Milkweed, the Monarch Butterfly's host plant, where possible. The Ontario Seed Company (OSC) based out of Waterloo, Ontario carries a variety of seed mixtures. Specialized mixtures such as an 'erosion control mixture' and the 'early successional dry prairie meadow mix' contain wildflowers and grass species, which provide rapid vegetation cover and a diversity of habitat for pollinators. These mixtures provide an excellent method of rehabilitating areas with a diverse composition of plant species suitable for the conditions documented.

5.4 Best Management Practices

5.4.1 Invasive Species

Invasive species are becoming problematic throughout Ontario and can adversely impact our natural landscapes, including wetlands and woodlands. No vegetation dumping or yard waste disposal should occur within the wetlands or forested areas of the Site to maintain the natural state and avoid the introduction or spread of non-native or invasive species. Landscape Plans should focus on native or non-invasive species. Additional best management practices to reduce the spread of invasive species include:

- Revegetate with species native to the local area.
- Request fill and compost from reputable sources that are conscious of the potential for the spread of invasive species via these media.
- Get to know the most common invasive species in the area.

- Brush off or clean any shoes, boots and equipment that have encountered invasive species before returning to the property.
- Immediately eradicate invasive species if they are observed on the property.
- Do not compost invasive species; put them in plastic bags and dispose of them in the garbage.
- Do not dispose of lawn or garden clippings in the forest or wetlands to avoid species introductions.

5.4.2 Noise and Artificial Lighting

Noise is not expected to increase significantly because of the proposed residential development as it is consistent with the land use on the surrounding properties. Maintaining the wooded areas surrounding the wetland will serve to buffer wildlife within the natural areas from any noise-related impacts.

Artificial lighting can have an impact on nocturnal movement of wildlife within natural areas. To minimize impacts to wildlife, it is recommended that outdoor lights be operated on timers, rather than by motion detection. Outdoor lighting associated with the development should be directed at the ground, rather than into the adjacent natural areas. Bulb wattage should be as low as practical while meeting the safety intent of the lighting.

5.5 Opportunities for Enhancement

Physical development of the Site should be limited to cleared areas and remain as close to the building footprint as possible, to reduce disturbance to the natural areas of the Site. Vegetation clearing for upgrades to the existing laneway should be minimized.

As site alteration is anticipated within areas in which forest bird SAR habitat may exist, Cambium recommends planting 10 each of the following species, within the vicinity of the new dwelling: Eastern White Cedar (*Thuja occidentalis*), Nannyberry (*Viburnum lentago*), Ninebark (*Physocarpus opulifolius*), and Red Elderberry (*Sambucus racemosa*). These plantings can be used to supplement the existing forest edge, or to create habitat patches within 10 m of the

forest edge. If planted greater than 10 m from the existing forest edge, the plantings should be installed in random groupings of at least 3 individuals to better replicate natural species associations. The selected species provide a diverse habitat and food source for local birds and wildlife, as well as added visual appeal. Furthermore, it is recommended that any future landscaping surrounding the proposed developments should be comprised of native tree and shrub species consistent with the composition of the surrounding woodlands (see botanical species list within the ELC data contained in Appendix B).

6.0 Policy Compliance

Based on the key natural heritage and/or hydrologic features identified on or adjacent to the Site and the findings of the field investigations detailed herein, the proposed development of the Site is in compliance with the PPS and GPGGH. Compliance with applicable natural heritage policy is summarized Table 4.

Table 4 Policy Compliance Summary

Key Natural Heritage / Hydrologic Feature	On Site	On Adjacent Lands	Meets Associated Policy
Wetland	Yes	Yes	Yes; GPGGH: 4.2.3.1 & 4.2.4.1-3
	Explanation: No impacts to wetlands are expected. Development is not proposed within wetlands or associated 30 m setbacks (Figure 4).		
Significant Wildlife Habitat (including habitat of special concern species)	Potentially	Potentially	Yes; PPS: 2.1.5 & 2.1.8
	Explanation: Potential SWH for special concern species exists on the Site and adjacent lands. Direct and indirect impacts can be appropriately avoided or mitigated through the recommendations provided herein.		
Significant Woodland	Yes	Yes	Yes; PPS: 2.1.5 & 2.1.8
	Explanation: No negative impacts to the significant woodland are anticipated related to the proposed residential severance. Limited vegetation removals within the significant woodland may be required in order to upgrade the existing laneway access from County Road 6 to the identified Developable Area on the retained lot. Due to the proposed limited clearing required and absence of interior habitat in that area, the form and function of the significant woodland is not expected to be impacted. Recommendations for supplemental plantings made herein will enhance the existing woodland, and compensate for any small-scale effects to the existing habitat.		

7.0 Summary of Mitigation, Compensation, and Best Practices

The following measures area recommended for the proposed development:

1. Site Plans developed for the proposed development, including severances and building envelopes, should show the location of all confirmed natural features and setbacks (Figure 4).
2. In order to preserve the candidate significant woodland, tree and vegetation clearing should be limited to the area necessary for construction.
3. ESC fencing should be installed around development areas to contain potential impacts from construction. ESC fencing can also function as exclusion fencing. ESC fencing should then be installed around the perimeter of construction areas prior to May 1 (or commencement of Site preparation) in order to isolate the area from wildlife. All ESC fencing should be removed once the development is complete and the soils are stabilized.
4. In order to limit the spread of invasive species, vegetation or yard waste dumping should not occur within the wetlands or forested areas of the Site.
5. With proposed future development in the retained lot, runoff from the Site is expected to increase with the introduction of impermeable surfaces. Measures to increase infiltration of run-off from these surfaces should be encouraged and, where possible, included in the Site Plan for the development.
6. Outdoor lights should be operated on timers, rather than by motion detection, directed at the ground and bulb wattage should be as low as practical.
7. Cambium recommends planting 10 each of the following species, within the vicinity of the new dwelling. Eastern White Cedar (*Thuja occidentalis*), Nannyberry (*Viburnum lentago*), Ninebark (*Physocarpus opulifolius*), and Red Elderberry (*Sambucus racemosa*) would provide a diverse habitat and food source for local birds and wildlife, as well as added visual appeal. Plantings should be installed within 10 m of the existing forest edge, or if greater than 10 m from an edge should be planted in groups of 3 individuals to replicate natural species associations.

8. Nesting birds are protected under the Migratory Birds Convention Act, 1994. In the event that construction is planned to proceed during the breeding season (April 1 to August 31), 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 by a certified biologist.
9. To protect Monarch Butterfly during vulnerable life stages, it is recommended that herbaceous vegetation clearing be completed after August 30, and that Common Milkweed be included in native seed mixes for revegetating disturbed areas.
10. During the construction phase, the work area should be actively checked for the presence of wildlife. Reptiles are particularly vulnerable to construction-related impacts on sites adjacent to wetlands, watercourses, and waterbodies.
11. Any SAR discovered on the property should 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.

8.0 Closing

In closing, potential negative impacts associated with the proposed development and site alteration can be appropriately minimized, provided that the recommendations outlined in Section 7.0 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 and hydrologic features and function identified on or adjacent to the subject Site. Furthermore, the proposed development complies with applicable provincial policy.

Respectfully submitted,

Cambium Inc.

Myles Latter, Hons. B.A., Dipl.
Project Coordinator

Kristina Domsic, B.E.S.
Ecologist/Project Coordinator

Andrea Coppins, B.A. Hon., Dipl.
Project Manager/Senior Ecologist

ML/kd/azc

\\camfile\Projects\12900 to 12999\12929-001 Sherry Webster - EIS - 1797 County Road 6, Douro-Dummer\Deliverables\REPORT - EIS\Final\2022-01-24 RPT EIS 1797 County Rd, Douro-Dummer - FINAL.docx

9.0 References

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10.0 Glossary of Terms

ANSI: Area of Natural and Scientific Interest
ARA: Aquatic Resources Area
ARA: Aggregate Resources Act
AS: Agricultural System
ATK: Aboriginal Traditional Knowledge
BMA: Bear Management Area
BMP: Best Management Practice
CA: Conservation Authority
CEAA: Canadian Environmental Assessment Act/Agency
CFA: Canadian Forestry Association
CFIP: Community Fisheries Involvement Program
CFS: Canadian Forestry Service
CHU: Critical Habitat Unit
CH: Cultural Heritage
CLI: Canada Land Inventory
CLU: Crown Land Use
COSSARO: Committee on the Status of Species at Risk in Ontario
CR: Conservation Reserve
CWIP: Community Wildlife Involvement Program
CWS: Canadian Wildlife Service
DFO: Fisheries and Oceans Canada
EA: Environmental Assessment
EAA: Environmental Assessment Act
EAB: Emerald Ash Borer
EBR: Environmental Bill of Rights
EIA: Environmental Impact Assessment
EIS: Environmental Impact Study/Statement
ELC: Ecological Land Classification System
ELUP: Ecological Land Use Plan
END: Endangered species
EPA: Environmental Protection Act
ER: Environmental Registry
ESA: Endangered Species Act (2007)
ESA: Environmentally Sensitive Area
ESC: Erosion and Sediment Control
GIS: Geographic Information System
GLSL: Great Lakes – St. Lawrence
GPGGH: Growth Plan for the Greater Golden Horseshoe
GPS: Global Positioning System
HSA: Habitat Suitability Analysis
HIS: Habitat Suitability Index
KHA: Key Hydrologic Areas
KHF: Key Hydrologic Features
KNHF: Key Natural Heritage Features
LCFSP: Licence to Collect Fish for Scientific Purposes
LIO: Land Information Ontario
LRIA: Lake and Rivers Improvement Act
LUP: Land Use Permit or Plan
MA: Management Area
MAFA: Moose Aquatic Feeding Area
MCEA: Municipal Class Environmental Assessment
MECP: Ontario Ministry of Environment, Conservation and Parks
MNDMRF: Ontario Ministry of Natural Resources and Forestry
NER: Natural Environment Report
NHIC: Natural Heritage Information Centre
NHIS: Natural Heritage Information System
NHS: Natural Heritage System
OBM: Ontario Base Map
OFIS: Ontario Fisheries Information System
OLI: Ontario Land Inventory
OMAFRA: Ontario Ministry of Agriculture, Food and Rural Affairs
OWES: Ontario Wetland Evaluation System
PPS: Provincial Policy Statement (2014)
PSW: Provincially Significant Wetland
RLUP: Regional Land Use Plan
RMP: Regional Management Plan
R.P.F.: Registered Professional Forester
SAR: Species at Risk
SARO: Species at Risk in Ontario
SC: Special Concern species

F&W: Fish and Wildlife
FA: Fisheries Act (Federal)
FEC: Forest Ecosystem Classification
FMP: Forest Management Plan
FRI: Forest Resources Inventory
FWCA: Fish and Wildlife Conservation Act
GGH: Greater Golden Horseshoe
GHP: General Habitat Protection
SWH: Significant Wildlife Habitat
SWM: Stormwater Management
THR: Threatened species
TOR: Terms of Reference
TPP: Tree Preservation Plan
WIA: Woodlands Improvement Act
WMU: Wildlife Management Unit

11.0 Standard Limitations

Limited Warranty

In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

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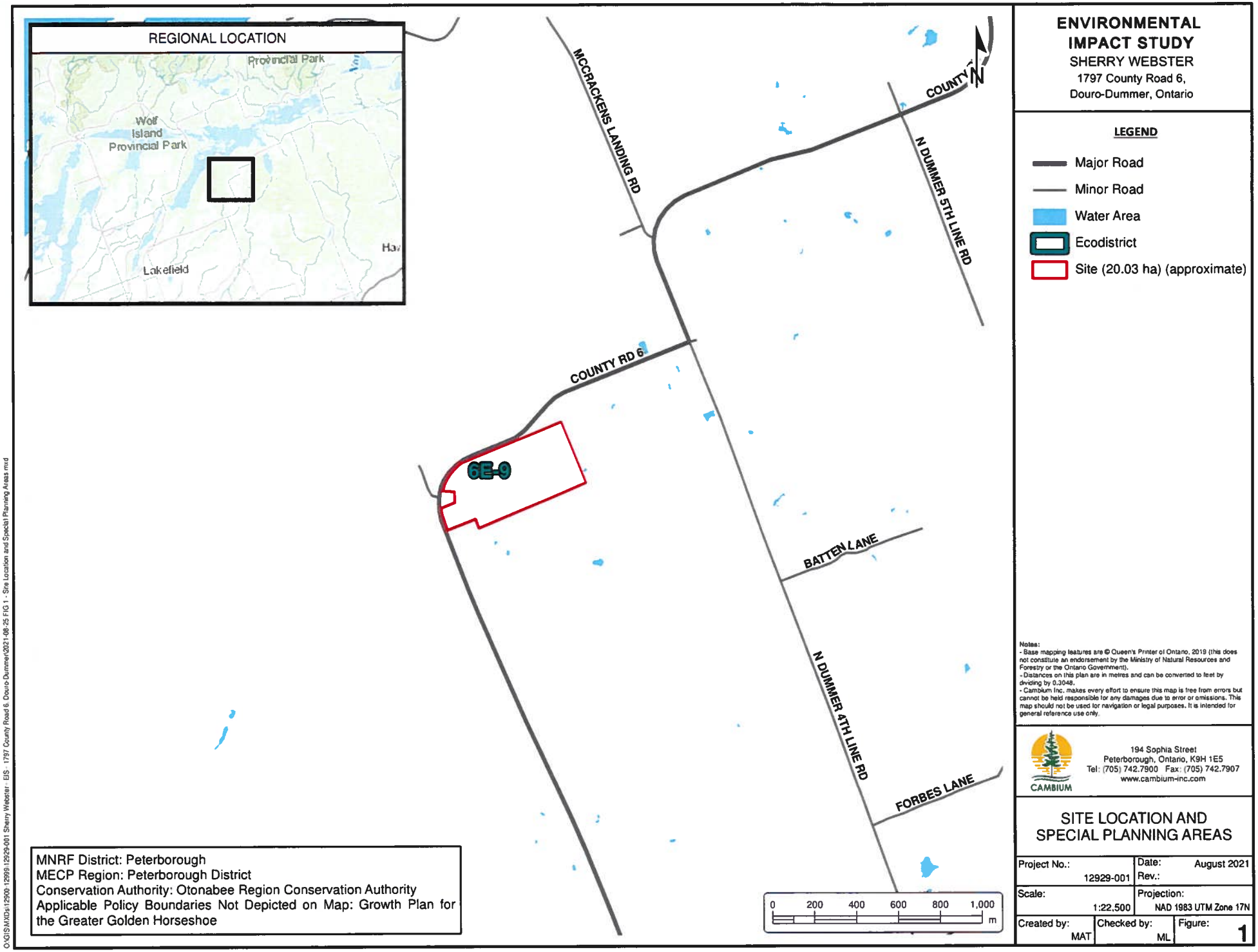
Appended Figures



ENVIRONMENTAL IMPACT STUDY

SHERRY WEBSTER
1797 County Road 6,
Douro-Dummer, Ontario

LEGEND

- Major Road
- Minor Road
- Water Area
- Ecodistrict
- Site (20.03 ha) (approximate)

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

Notes:
- Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources and Forestry or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
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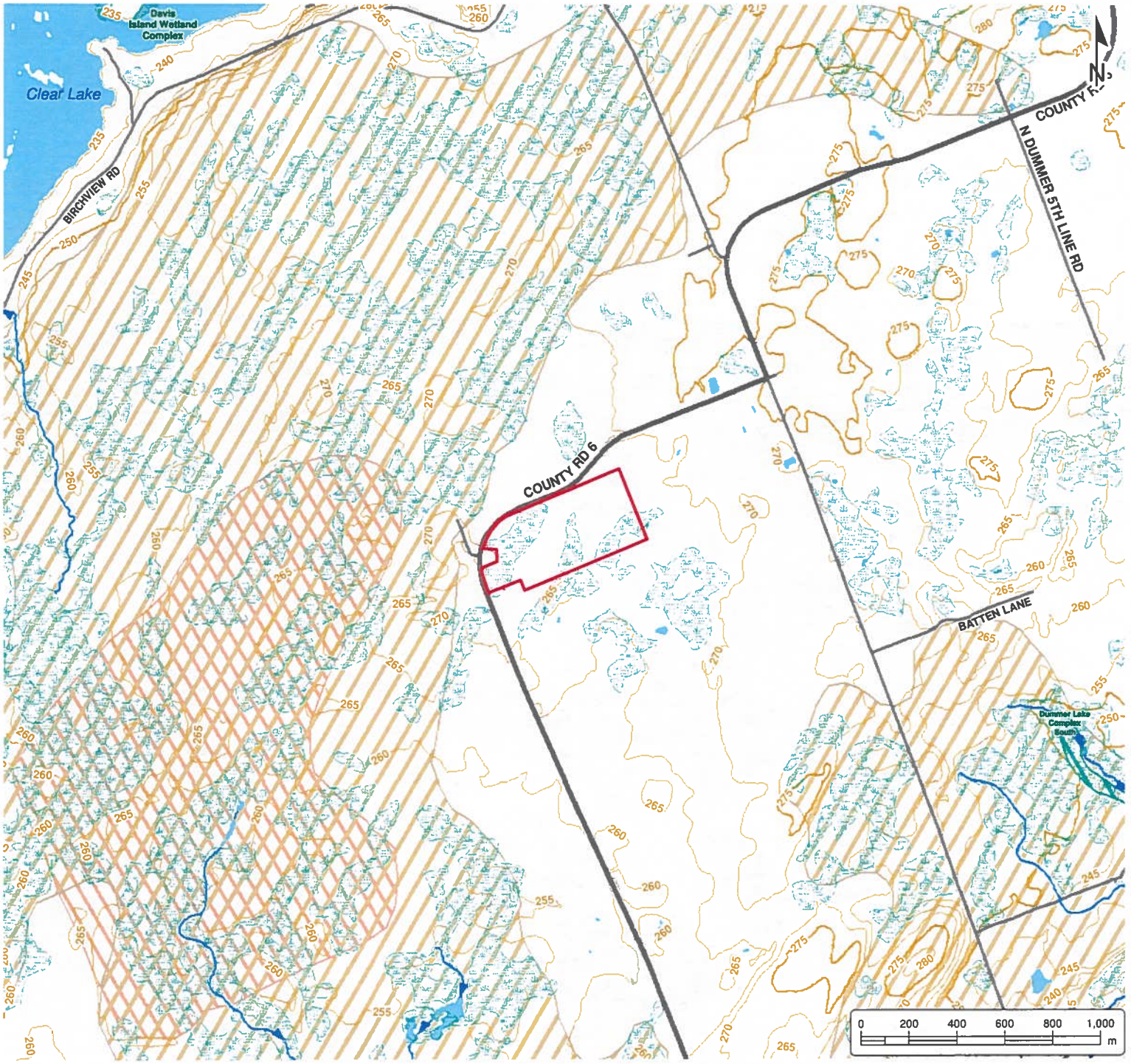
SITE LOCATION AND SPECIAL PLANNING AREAS

Project No.: 12929-001		Date: August 2021	Rev.:
Scale: 1:22,500		Projection: NAD 1983 UTM Zone 17N	
Created by: MAT	Checked by: ML	Figure: 1	

O:\GIS\MXDs\12900-12999\12929-001 Sherry Webster - EIS - 1797 County Road 6, Douro-Dummer\2021-08-25 FIG 1 - Site Location and Special Planning Areas.mxd



ENVIRONMENTAL IMPACT STUDY

SHERRY WEBSTER
1797 County Road 6,
Douro-Dummer, Ontario

LEGEND

- Major Road
- Minor Road
- Watercourse, Permanent
- Contour 5m Interval (Major)
- Contour 5m Interval (Minor)
- Unevaluated Wetlands
- Locally Significant Wetlands
- Water Area
- Deer Wintering Area (Stratum 1)
- Deer Wintering Area (Stratum 2)
- Site (20.03 ha) (approximate)

Notes:
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Tel: (705) 742.7900 Fax: (705) 742.7907
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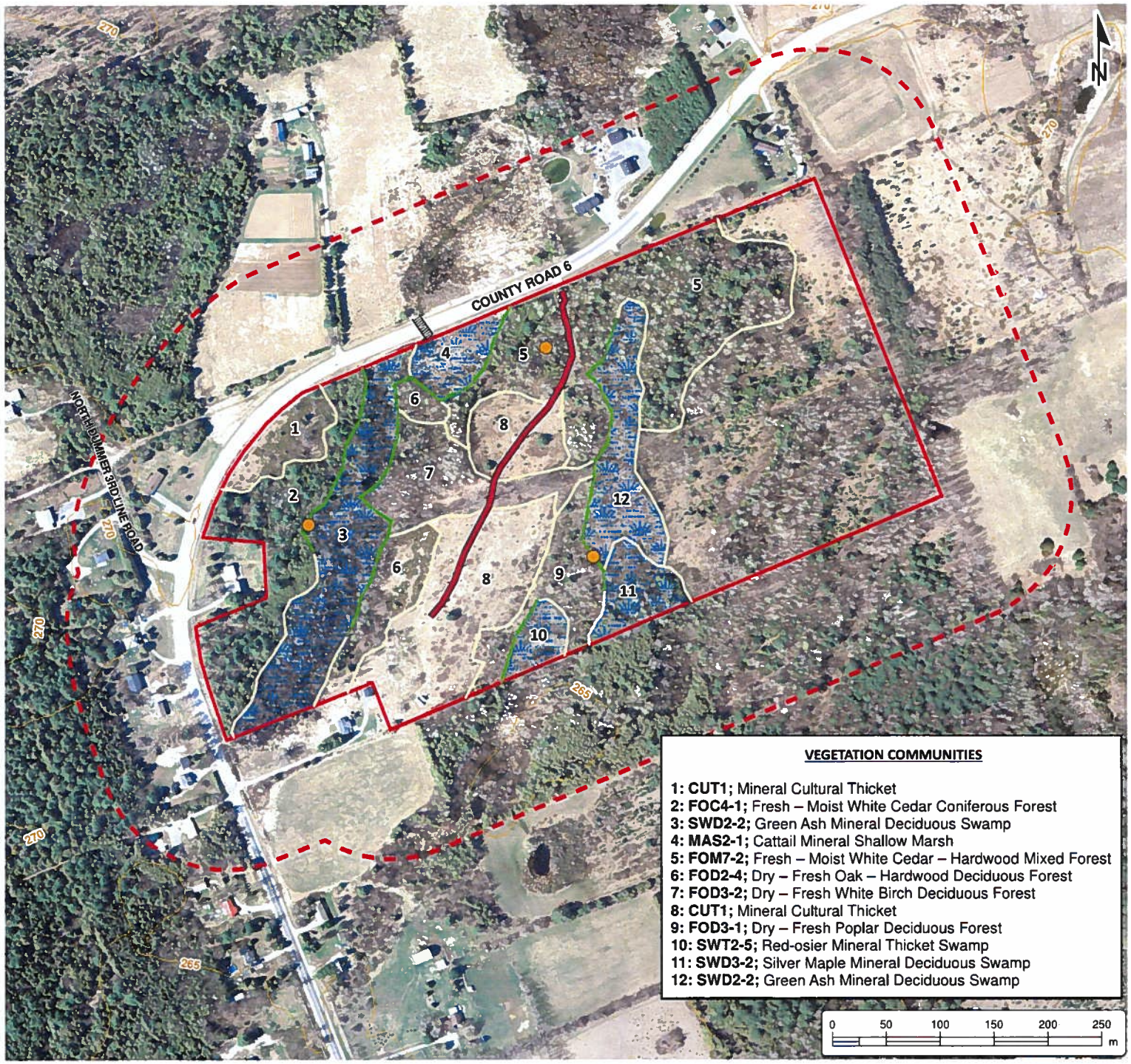
SITE LOCATION AND SPECIAL PLANNING AREAS

Project No.: 12929-001		Date: August 2021	
		Rev.:	
Scale: 1:22,500		Projection: NAD 1983 UTM Zone 17N	
Created by: MAT	Checked by: ML	Figure:	2

O:\GIS\MXDs\12900-12999\12929-001 Sherry Webster - EIS - 1797 County Road 6, Douro-Dummer\2021-06-25 FIG 2 - Local Natural Heritage Features.mxd



ENVIRONMENTAL IMPACT STUDY

SHERRY WEBSTER
1797 County Road 6,
Douro-Dummer, Ontario

LEGEND

- Soil Point
- Existing Laneway
- Culvert
- Confirmed Wetland Boundary
- Contour 5m Interval (Minor)
- Vegetation Communnity
- Wetland
- 120m Adjacent Lands
- Site (20.03 ha) (approximate)

VEGETATION COMMUNITIES

1: **CUT1;** Mineral Cultural Thicket
2: **FOC4-1;** Fresh – Moist White Cedar Coniferous Forest
3: **SWD2-2;** Green Ash Mineral Deciduous Swamp
4: **MAS2-1;** Cattail Mineral Shallow Marsh
5: **FOM7-2;** Fresh – Moist White Cedar – Hardwood Mixed Forest
6: **FOD2-4;** Dry – Fresh Oak – Hardwood Deciduous Forest
7: **FOD3-2;** Dry – Fresh White Birch Deciduous Forest
8: **CUT1;** Mineral Cultural Thicket
9: **FOD3-1;** Dry – Fresh Poplar Deciduous Forest
10: **SWT2-5;** Red-osier Mineral Thicket Swamp
11: **SWD3-2;** Silver Maple Mineral Deciduous Swamp
12: **SWD2-2;** Green Ash Mineral Deciduous Swamp

0 50 100 150 200 250 m

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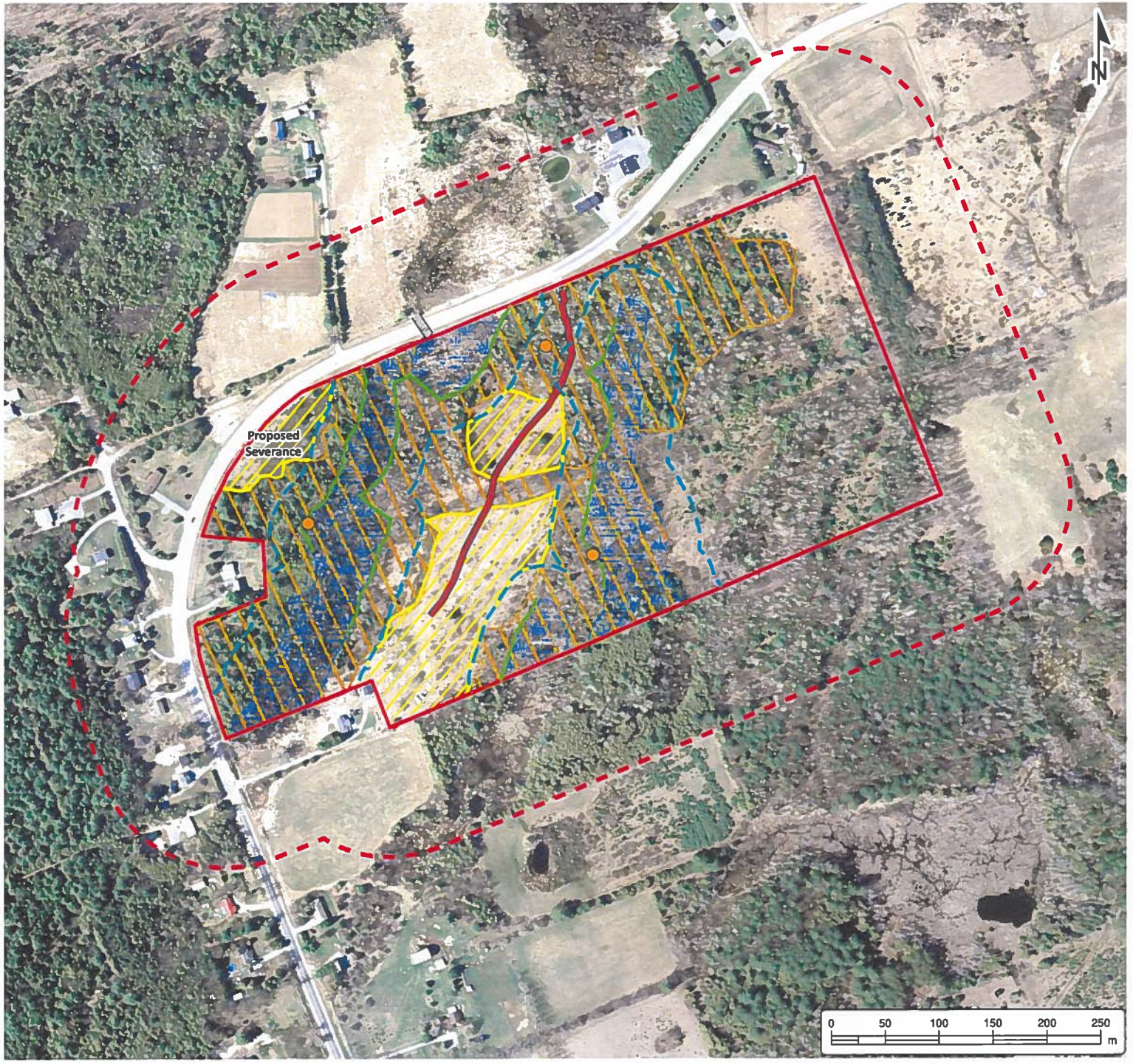
194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

LOCAL NATURAL HERITAGE FEATURES

Project No.: 12929-001		Date: August 2021 Rev.:	
Scale: 1:5,000		Projection: NAD 1983 UTM Zone 17N	
Created by: MAT	Checked by: ML	Figure:	3

O:\GIS\MXDs\12900-12999\12929-001 Sherry Webster - EIS - 1797 County Road 6, Douro-Dummer\2021-08-25 FIG 3 - Site Natural Heritage Features.mxd



ENVIRONMENTAL IMPACT STUDY

SHERRY WEBSTER
1797 County Road 6,
Douro-Dummer, Ontario

LEGEND

- 120m Adjacent Lands
- Site (20.03 ha) (approximate)
- Soil Point
- 30m Wetland Setback
- Existing Laneway
- Culvert
- Candidate Significant Woodland
- Confirmed Wetland Boundary
- Wetland
- Developable Area

Notes:
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CAMBIUM
194 Sophia Street
Peterborough, Ontario, K9H 1E5
Tel: (705) 742.7900 Fax: (705) 742.7907
www.cambium-inc.com

NATURAL HERITAGE CONSTRAINTS

Project No.: 12929-001		Date: August 2021	
		Rev.: January 2022	
Scale: 1:5,000		Projection: NAD 1983 UTM Zone 17N	
Created by: MAT	Checked by: ML	Figure: 4	

O:\GIS\MXDs\12900-12999\12929-001 Sherry Webster - EIS - 1797 County Road 6, Douro-Dummer\2021-08-25 FIG 4 - Natural Heritage Constraints.mxd

Appendix A
Correspondence

Myles Latter

From: Matt Wilkinson <mwilkinson@otonabeeconservation.com>
Sent: July 2, 2021 6:04 AM
To: Myles Latter
Cc: Cambium File; Jasmine Gibson
Subject: RE: 2021-06-30 ToR 1797 County Road 6, Douro-Dummer (12929-P)

Hi Myles,
I've been out to this property.
We would recommend a phased approach. Maybe start with a constraint map that could be updated.
I would recommend discussing this with the county and get a PSR completed.

The proposed severed lot looks quite close to the wetlands, considering it will require a 30 metre setback.

Based on the imagery it appears the wetlands may be more extensive than mapped – The field work needs to be a two-fold approach, spring for wetland mapping to ensure cedar swamps are appropriately designated, including soil sampling, in support of the Otonabee Conservation permit, AND secondly field work should be considerate of 'habitat-use' by regulated ESA species through presence/not detected on site review.

Best,
Matt

Otonabee
CONSERVATION

Matt Wilkinson
Planner
705-745-5791 x213
mwilkinson@otonabeeconservation.com

ARE YOU PLANNING AN UPCOMING CONSTRUCTION PROJECT ON YOUR PROPERTY? Submit a Property Inquiry Form so we can help you understand how natural hazards may affect your property.

From: Myles Latter <Myles.Latter@cambium-inc.com>
Sent: June 30, 2021 2:05 PM
To: Matt Wilkinson <mwilkinson@otonabeeconservation.com>
Cc: Cambium File <file@cambium-inc.com>
Subject: 2021-06-30 ToR 1797 County Road 6, Douro-Dummer (12929-P)

Good afternoon Matt,

Can I please confirm the Terms of Reference with you for this project? No PSR has been conducted from my knowledge. The only natural heritage features that are mapped are unevaluated wetlands. I have attached some images from the client regarding their proposed severance and building area on the retained lands.

The following scope has been provided:

One Site visit in summer 2021 to document natural features on the property that were not identified in Task 1, 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.
- Classify existing vegetation communities on the Site, according to the Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 1998), and evaluate them for sensitivity, rarity, and botanical quality.
- Document drainage connectivity and/or watercourse characteristics including riparian vegetation, erosion prone areas, and special habitat features.
- Record observations of wildlife occurrences and assess wildlife habitat function on the Site. Any evidence of breeding, forage, shelter or nesting sites, and/or travel corridors will be noted. A habitat-based screening for SAR will be completed for the Site.

Please let me know if there is anything that I have missed.

Thanks and take care,

CAMBIUM

Myles Latter, B.A. Hons., Dipl.
Project Coordinator

Cambium Inc. - Peterborough
Environmental | Building Sciences | Geotechnical | Construction Monitoring
p: 705.742.7900 x 252 | **c:** 705.957.5571 | **toll:** 866.217.7900 | **w:** cambium-inc.com

Appendix B
Vegetation Species List

VEGETATION COMMUNITY CLASSIFICATION: CUT1 COMMUNITY #: 1 LOCATION: 1797 County Road 6, DD COORDINATES: 44.5109922, -78.1468951

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Black Cherry	*Prunus serotina var. serotina*	*Rosaceae*	3	3			S5
Black-eyed Susan	*Rudbeckia hirta var. pulcherrima*	*Asteraceae*	3	0			S5
Canada Goldenrod	*Solidago canadensis var. canadensis*	*Asteraceae*	3	1			S5
Chokecherry	*Prunus virginiana var. virginiana*	*Rosaceae*	3	2			S5
Climbing Bittersweet	*Celastrus scandens*	*Celastraceae*	3	3			S5
Common Apple	*Malus pumila*	*Rosaceae*	5				SNA
Common Juniper	*Juniperus communis var. communis*	*Cupressaceae*	3				SNA
Common Lilac	*Syringa vulgaris*	*Oleaceae*	5				SNA
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	*Lamiaceae*	0				SNA
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	*Clusiaceae*	5				SNA
Common Timothy	*Phleum pratense ssp. pratense*	*Poaceae*	3				SNA
Eastern Red Cedar	*Juniperus virginiana*	*Cupressaceae*	3	4			S5
Eastern White Cedar	*Thuja occidentalis*	*Cupressaceae*	-3	4			S5
Eastern White Pine	*Pinus strobus*	*Pinaceae*	3	4			S5
Garden Bird's-foot Trefoil	*Lotus corniculatus*	*Fabaceae*	3				SNA
Grass-leaved Goldenrod	*Euthamia graminifolia*	*Asteraceae*	0	2			S5
Grey-stemmed Goldenrod	*Solidago nemoralis ssp. nemoralis*	*Asteraceae*	5	2			S5
New England Aster	*Symphyotrichum novae-angliae*	*Asteraceae*	-3	2			S5
Orchard Grass	*Dactylis glomerata*	*Poaceae*	3				SNA
Oxeye Daisy	*Leucanthemum vulgare*	*Asteraceae*	5				SNA
Poison Ivy	*Toxicodendron radicans*	*Anacardiaceae*	0	2			S5
Poverty Oatgrass	*Danthonia spicata*	*Poaceae*	5	5			S5
Red Raspberry	*Rubus idaeus*	*Rosaceae*	3	2			S5
Redtop	*Agrostis gigantea*	*Poaceae*	-3				SNA

VEGETATION COMMUNITY CLASSIFICATION: CUT1 COMMUNITY #: 1 LOCATION: 1797 County Road 6, DD COORDINATES: 44.5109922, -78.1468951

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Rough-stemmed Goldenrod	*Solidago rugosa*	*Asteraceae*	0	4			S5
Scots Pine	*Pinus sylvestris var. sylvestris*	*Pinaceae*	3				SNA
Smooth Brome	*Bromus inermis*	*Poaceae*	5				SNA
Staghorn Sumac	*Rhus typhina*	*Anacardiaceae*	3	1			S5
Sugar Maple	*Acer saccharum*	*Aceraceae*	3	4			S5
Tufted Vetch	*Vicia cracca*	*Fabaceae*	5				SNA
White Ash	*Fraxinus americana*	*Oleaceae*	3	4			S4
White Heath Aster	*Symphyotrichum ericoides var. ericoides*	*Asteraceae*	3	4			S5
White Sweet-clover	*Melilotus albus*	*Fabaceae*	3				SNA
Wild Basil	*Clinopodium vulgare ssp. vulgare*	*Lamiaceae*	5	4			S5
Wild Carrot	*Daucus carota*	*Apiaceae*	5				SNA

NOTES: Cultural Thicket

VEGETATION COMMUNITY CLASSIFICATION: CUT1

COMMUNITY #: 1

LOCATION: 1797 County Road 6, DD

COORDINATES: 44.5109922, -78.1468951

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOC4-1 COMMUNITY #: 2 LOCATION: 1797 County Rd 6, DD COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Black Cherry	*Prunus serotina var. serotina*	*Rosaceae*	3	3			S5
Broad-leaved Helleborine	*Epipactis helleborine*	*Orchidaceae*	3				SNA
Eastern White Cedar	*Thuja occidentalis*	*Cupressaceae*	-3	4			S5
Eastern White Pine	*Pinus strobus*	*Pinaceae*	3	4			S5
European Buckthorn	*Rhamnus cathartica*	*Rhamnaceae*	0				SNA
Pinesap	*Hypopitys monotropa*	*Monotropaceae*	5	6			S4
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Sugar Maple	*Acer saccharum*	*Aceraceae*	3	4			S5
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5

NOTES: Coniferous Forest, cedar dominates.

VEGETATION COMMUNITY CLASSIFICATION: FOC4-1

COMMUNITY #: 2

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001

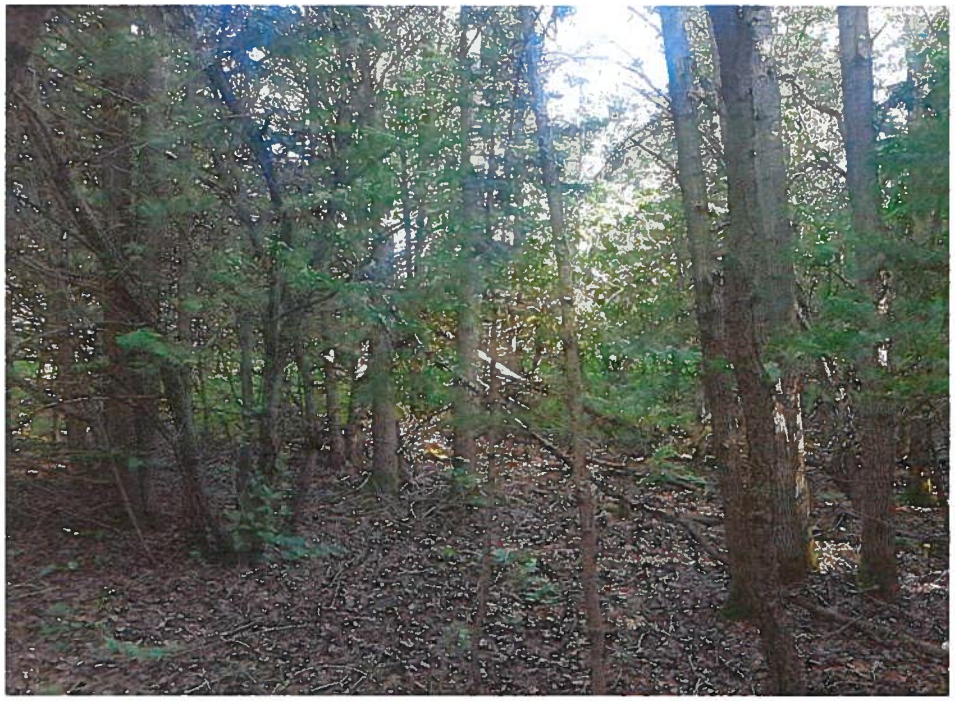
DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:



VEGETATION COMMUNITY CLASSIFICATION: SWD2-2 COMMUNITY #: 3 LOCATION: 1797 County Rd 6, DD COORDINATES: 44.510186, -78.1466259

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Alder-leaved Buckthorn	*Endotropis alnifolia*	*Rhamnaceae*	-5	7			S5
American Water-horehound	*Lycopus americanus*	*Lamiaceae*	-5	4			S5
Balsam Poplar	*Populus balsamifera*	*Salicaceae*	-3	4			S5
Bittersweet Nightshade	*Solanum dulcamara*	*Solanaceae*	0				SNA
Bur Oak	*Quercus macrocarpa*	*Fagaceae*	3	5			S5
Canada Wood Nettle	*Laportea canadensis*	*Urticaceae*	-3	6			S5
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Sedge Species	*Carex spp.*	*Cyperaceae*	-				-
Sensitive Fern	*Onoclea sensibilis*	*Dryopteridaceae*	-3	4			S5
Spinulose Wood Fern	*Dryopteris carthusiana*	*Dryopteridaceae*	-3	5			S5
Spotted Jewelweed	*Impatiens capensis*	*Balsaminaceae*	-3	4			S5
Virginia Creeper	*Parthenocissus quinquefolia*	*Vitaceae*	3	6			S4?
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5
Yellow Avens	*Geum aleppicum*	*Rosaceae*	0	2			S5

NOTES: Deciduous swamp. Red (green) ash dominates.

VEGETATION COMMUNITY CLASSIFICATION: SWD2-2

COMMUNITY #: 3

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.510186, -78.1466259

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: MAS2-1

COMMUNITY #: 4

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5129201, -78.1430284

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Narrow-leaved Cattail	*Typha angustifolia*	*Typhaceae*	-5				SNA
Purple Loosestrife	*Lythrum salicaria*	*Lythraceae*	-5				SNA
Red Maple	*Acer rubrum*	*Aceraceae*	0	4			S5
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5

NOTES: Cattails dominate

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOM7-2 COMMUNITY #: 5 LOCATION: 1797 County Rd 6, DD COORDINATES: 44.5115603, -78.1440166

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Broad-leaved Helleborine	*Epipactis helleborine*	*Orchidaceae*	3				SNA
Eastern White Cedar	*Thuja occidentalis*	*Cupressaceae*	-3	4			S5
Eastern White Pine	*Pinus strobus*	*Pinaceae*	3	4			S5
Garden Stonecrop	*Hylotelephium telephium*	*Crassulaceae*	5				SNA
Indian-pipe	*Monotropa uniflora*	*Monotropaceae*	3	6			S5
Paper Birch	*Betula papyrifera*	*Betulaceae*	3	2			S5
Poison Ivy	*Toxicodendron radicans*	*Anacardiaceae*	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Red Maple	*Acer rubrum*	*Aceraceae*	0	4			S5
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5

NOTES: Mixed forest. Cedar and poplar dominate.

VEGETATION COMMUNITY CLASSIFICATION: FOM7-2

COMMUNITY #: 5

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5115603, -78.1440166

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOD2-4 COMMUNITY #: 6 LOCATION: 1797 County Rd 6 COORDINATES: 44.5111288, -78.1451789

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Balsam Poplar	*Populus balsamifera*	*Salicaceae*	-3	4			S5
Bur Oak	*Quercus macrocarpa*	*Fagaceae*	3	5			S5
Chokecherry	*Prunus virginiana var. virginiana*	*Rosaceae*	3	2			S5
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	*Lamiaceae*	0				SNA
Dwarf Raspberry	*Rubus pubescens*	*Rosaceae*	-3	4			S5
European Buckthorn	*Rhamnus cathartica*	*Rhamnaceae*	0				SNA
Field Horsetail	*Equisetum arvense*	*Equisetaceae*	0	0			S5
Northern Red Oak	*Quercus rubra*	*Fagaceae*	3	6			S5
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Rough-stemmed Goldenrod	*Solidago rugosa*	*Asteraceae*	0	4			S5
Small Enchanter's Nightshade	*Circaea alpina ssp. alpina*	*Onagraceae*	-3	6			S5
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
Virginia Creeper	*Parthenocissus quinquefolia*	*Vitaceae*	3	6			S4?
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5
Yellow Avens	*Geum aleppicum*	*Rosaceae*	0	2			S5

NOTES: Small area of oak/poplar forest.

VEGETATION COMMUNITY CLASSIFICATION: FOD2-4

COMMUNITY #: 6

LOCATION: 1797 County Rd 6

COORDINATES: 44.5111288, -78.1451789

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOD3-2 COMMUNITY #: 7 LOCATION: 1797 County Rd 6, DD COORDINATES: 44.5102574, -78.1455899

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Basswood	*Tilia americana*	*Tiliaceae*	3	4			S5
Black Cherry	*Prunus serotina var. serotina*	*Rosaceae*	3	3			S5
Broad-leaved Helleborine	*Epipactis helleborine*	*Orchidaceae*	3				SNA
Canada Enchanter's Nightshade	*Circaea canadensis ssp. canadensis*	*Onagraceae*	3	2			S5
Chokecherry	*Prunus virginiana var. virginiana*	*Rosaceae*	3	2			S5
Common Self-heal	*Prunella vulgaris ssp. vulgaris*	*Lamiaceae*	0				SNA
Creeping Wood-sorrel	*Oxalis corniculata*	*Oxalidaceae*	3				SNA
European Buckthorn	*Rhamnus cathartica*	*Rhamnaceae*	0				SNA
Garden Stonecrop	*Hylotelephium telephium*	*Crassulaceae*	5				SNA
Northern Red Oak	*Quercus rubra*	*Fagaceae*	3	6			S5
Paper Birch	*Betula papyrifera*	*Betulaceae*	3	2			S5
Poison Ivy	*Toxicodendron radicans*	*Anacardiaceae*	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Sugar Maple	*Acer saccharum*	*Aceraceae*	3	4			S5
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
Virginia Creeper	*Parthenocissus quinquefolia*	*Vitaceae*	3	6			S4?
Yellow Avens	*Geum aleppicum*	*Rosaceae*	0	2			S5

NOTES: Paper birch dominates

VEGETATION COMMUNITY CLASSIFICATION: FOD3-2

COMMUNITY #: 7

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5102574, -78.1455899

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: CUT1 COMMUNITY #: 8 LOCATION: 1797 County Rd 6, DD COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Black-eyed Susan	*Rudbeckia hirta var. pulcherrima*	*Asteraceae*	3	0			S5
Canada Bluegrass	*Poa compressa*	*Poaceae*	3				SNA
Canada Goldenrod	*Solidago canadensis var. canadensis*	*Asteraceae*	3	1			S5
Canada Thistle	*Cirsium arvense*	*Asteraceae*	3				SNA
Chokecherry	*Prunus virginiana var. virginiana*	*Rosaceae*	3	2			S5
Common Apple	*Malus pumila*	*Rosaceae*	5				SNA
Common Evening-primrose	*Oenothera biennis*	*Onagraceae*	3	0			S5
Common Juniper	*Juniperus communis var. communis*	*Cupressaceae*	3				SNA
Common Milkweed	*Asclepias syriaca*	*Apocynaceae*	5	0			S5
Common St. John's-wort	*Hypericum perforatum ssp. perforatum*	*Clusiaceae*	5				SNA
Common Timothy	*Phleum pratense ssp. pratense*	*Poaceae*	3				SNA
Eastern White Pine	*Pinus strobus*	*Pinaceae*	3	4			S5
Grass-leaved Goldenrod	*Euthamia graminifolia*	*Asteraceae*	0	2			S5
Low Hop Clover	*Trifolium campestre*	*Fabaceae*	5				SNA
New England Aster	*Symphyotrichum novae-angliae*	*Asteraceae*	-3	2			S5
Orange Hawkweed	*Pilosella aurantiaca*	*Asteraceae*	5				SNA
Oxeye Daisy	*Leucanthemum vulgare*	*Asteraceae*	5				SNA
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Red-osier Dogwood	*Cornus sericea*	*Cornaceae*	-3	2			S5
Redtop	*Agrostis gigantea*	*Poaceae*	-3				SNA
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
Tufted Vetch	*Vicia cracca*	*Fabaceae*	5				SNA
White Meadowsweet	*Spiraea alba var. alba*	*Rosaceae*	-3	3			S5
Wild Basil	*Clinopodium vulgare ssp. vulgare*	*Lamiaceae*	5	4			S5
Wild Strawberry	*Fragaria virginiana ssp. virginiana*	*Rosaceae*	3	2			S5

VEGETATION COMMUNITY CLASSIFICATION: CUT1

COMMUNITY #: 8

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

NOTES: Shrub cover varies throughout community (>25% cover total)

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: FOD3-1 COMMUNITY #: 9 LOCATION: 1797 County Rd 6 COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Balsam Fir	*Abies balsamea*	*Pinaceae*	-3	5			S5
Basswood	*Tilia americana*	*Tiliaceae*	3	4			S5
Canada Enchanter's Nightshade	*Circaea canadensis ssp. canadensis*	*Onagraceae*	3	2			S5
Indian-pipe	*Monotropa uniflora*	*Monotropaceae*	3	6			S5
Northern Red Oak	*Quercus rubra*	*Fagaceae*	3	6			S5
Poison Ivy	*Toxicodendron radicans*	*Anacardiaceae*	0	2			S5
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Red Raspberry	*Rubus idaeus*	*Rosaceae*	3	2			S5
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Sensitive Fern	*Onoclea sensibilis*	*Dryopteridaceae*	-3	4			S5
Spinulose Wood Fern	*Dryopteris carthusiana*	*Dryopteridaceae*	-3	5			S5
Sugar Maple	*Acer saccharum*	*Aceraceae*	3	4			S5
Trembling Aspen	*Populus tremuloides*	*Salicaceae*	0	2			S5
Virginia Creeper	*Parthenocissus quinquefolia*	*Vitaceae*	3	6			S4?

NOTES: Poplar with Ash. Red Oak and Sugar Maple.

VEGETATION COMMUNITY CLASSIFICATION: FOD3-1

COMMUNITY #: 9

LOCATION: 1797 County rd 6

COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: SWT2-5

COMMUNITY #: 10

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5091307, -78.1443896

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Bebb's Willow	*Salix bebbiana*	*Salicaceae*	-3	4			S5
Red-osier Dogwood	*Cornus sericea*	*Cornaceae*	-3	2			S5
Rough-stemmed Goldenrod	*Solidago rugosa*	*Asteraceae*	0	4			S5
Sensitive Fern	*Onoclea sensibilis*	*Dryopteridaceae*	-3	4			S5
Spotted Jewelweed	*Impatiens capensis*	*Balsaminaceae*	-3	4			S5
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5
White Meadowsweet	*Spiraea alba var. alba*	*Rosaceae*	-3	3			S5

NOTES: Rod and willow dominant

VEGETATION COMMUNITY CLASSIFICATION: SWT2-5

COMMUNITY #: 10

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5091307, -78.1443896

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: SWD3-2 COMMUNITY #: 11 LOCATION: 1797 County Rd 6 COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-002 DATE: July 22, 2021 PROJECT MANAGER: Myles Latter FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Red-osier Dogwood	*Cornus sericea*	*Cornaceae*	-3	2			S5
Riverbank Grape	*Vitis riparia*	*Vitaceae*	0	0			S5
Sedge Species	*Carex spp.*	*Cyperaceae*	-	-			-
Sensitive Fern	*Onoclea sensibilis*	*Dryopteridaceae*	-3	4			S5
Silver Maple	*Acer saccharinum*	*Aceraceae*	-3	5			S5
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5

NOTES: Silver Maple and Ash.

VEGETATION COMMUNITY CLASSIFICATION: SWD3-2

COMMUNITY #: 11

LOCATION: 1797 County Rd 6

COORDINATES: 44.5089365, -78.1427769

PROJECT NUMBER: 12929-002

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

VEGETATION COMMUNITY PHOTOS:

VEGETATION COMMUNITY CLASSIFICATION: SWD2-2

COMMUNITY #: 12

LOCATION: 1797 County Rd 6, DD

COORDINATES: 44.5105436, -78.143304

PROJECT NUMBER: 12929-001

DATE: July 22, 2021

PROJECT MANAGER: Myles Latter

FIELD STAFF: Tyler Jamieson

FIELD SHEET – Vegetation Species List

Common Name	Scientific Name	Family	CoW	CoC	SARA	SARO	S-Rank
Black Ash	*Fraxinus nigra*	*Oleaceae*	-3	7			S3
European Buckthorn	*Rhamnus cathartica*	*Rhamnaceae*	0				SNA
Red Ash	*Fraxinus pennsylvanica*	*Oleaceae*	-3	3			S4
Rough-stemmed Goldenrod	*Solidago rugosa*	*Asteraceae*	0	4			S5
Sedge Species	*Carex spp.*	*Cyperaceae*	-	-			-
White Elm	*Ulmus americana*	*Ulmaceae*	-3	3			S5

NOTES: Green and Black Ash.

VEGETATION COMMUNITY PHOTOS:

Appendix C

Species Of Conservation Concern Screening

CAMBIUM

APPENDIX: Species of Conservation Concern - County of Peterborough

COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Birds								
Bald Eagle	*Haliaeetus leucocephalus*	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).	No	Known to occur in the general area	No further consideration required
Bank Swallow	*Riparia riparia*	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).	No	Known to occur in the general area	No further consideration required
Barn Swallow	*Hirundo rustica*	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).	No	Known to occur in the general area	No further consideration required
Black Tern	*Chlidonias niger*	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).	No	Known to occur in the general area	No further consideration required
Bobolink	*Dolichonyx oryzivorus*	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).	No	Known to occur in the general area	No further consideration required
Canada Warbler	*Cardellina canadensis*	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).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site
Cerulean Warbler	*Setophaga cerulea*	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 understorey (4).	No	Known to occur in the general area	No further consideration required
Chimney Swift	*Chaetura pelagica*	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).	No	Known to occur in the general area	No further consideration required

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COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Common Nighthawk	*Chordeiles minor*	THR	SC	S4B	The Common Nighthawk is a medium-sized bird with long, pointed wings, a long tail with a notch, and and large eyes. Its plumage of dark brown with black and white specks blends with its roost site. It is typically found in open areas such as gravel beaches, rock outcrops and burned woodlands, that have little to no ground vegetation. This species can also be found in highly disturbed locations such as clear cuts, mine tailing areas, cultivated fields, urban parks, gravel roads, and orchards (1).	No	Known to occur in the general area	No further consideration required
Eastern Meadowlark	*Sturnella magna*	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).	No	Known to occur in the general area	No further consideration required
Eastern Whip-poor-will	*Antrostomus vociferus*	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).	No	Known to occur in the general area	No further consideration required
Eastern Wood-Pewee	*Contopus virens*	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).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Evening Grosbeak	*Coccothraustes vespertinus*	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).	No	Known to occur in the general area	No further consideration required
Golden Winged Warbler	*Vermivora chrysoptera*	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).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site
Grasshopper Sparrow	*Ammodramus savannarum*	SC	SC	S4B	The Grasshopper Sparrow is a small songbird with a streaked back, a white stripe down the center of its crown, a flattish 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 alvars and occasionally grain crops such as barley (1).	No	Known to occur in the general area	No further consideration required

CAMBIUM

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COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Least Bittern	*Ixobrychus exilis*	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).	No	Known to occur in the general area	No further consideration required
Loggerhead Shrike	*Lanius ludovicianus*	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).	No	Known to occur in the general area	No further consideration required
Olive-sided Flycatcher	*Contopus cooperi*	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).	No	Known to occur in the general area	No further consideration required
Red-headed Woodpecker	*Melanerpes erythrocephalus*	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 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).	No	Known to occur in the general area	No further consideration required
Short-eared owl	*Asio flammeus*	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 agriultural 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).	No	Known to occur in the general area	No further consideration required
Wood Thrush	*Hylocichla mustelina*	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 understories, 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).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Fish								
American Eel	*Anguilla rostrata*	No Status	END	S1?	The American Eel is a long, slender bodied fish, with one long fin extending down the back and around the tail, and two small pectoral fins. It has thick lips, and a protruding lower jaw that extends out above the upper jaw. At the juvenile stage, they swim up the St. Lawrence River to reach Lake Ontario and connected tributaries where they will remain for 8 to 23 years before migrating back to their spawning grounds. In Ontario, the American eel prefers mud, sand or gravel substrates during the juvenile stage when they reside primarily in the benthic zone of waterbodies. More mature eels are able to thrive in most environments provided there is available cover during daylight hours, and the habitat is accessible (2).	No	Known to occur in the general area	No further consideration required

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COMMON NAME	SCIENTIFIC NAME	Federal	Provincial		SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
		SARA	SARO	S-RANK				
Lake Sturgeon	*Acipenser fulvescens*	No Status	END	S2	The Lake Sturgeon, a large freshwater fish, has an extended snout with four whisker-like organs hanging near the mouth and is dark to light brown or grey on its back and sides with a lighter belly. In Ontario, this fish is found in the rivers of the Hudson Bay Basin, the Great Lakes basin, and their connecting waterways. Lake Sturgeon's live almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel and are usually found at depths of 5 to 20 m. They spawn in relatively shallow, fast-flowing water or if available deeper water habitat as well (1).	No	Known to occur in the general area	No further consideration required
Herptiles								
Blanding's Turtle	*Emydoidea blandingii*	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).	No	Known to occur in the general area	No further consideration required
Eastern Musk Turtle	*Sternotherus odoratus*	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).	No	Known to occur in the general area	No further consideration required
Midland Painted Turtle	*Chrysemys picta marginata*	SC	-	S4	The Midland Painted Turtle has a olive to black carapace with red or dark orange markings on the marginal scutes, as well as red and yellow stripes on the head and neck. The species uses a variety of waterbodies including, ponds, marshes, lakes and slow-moving creeks with a soft bottom and an abundance of basking sites and aquatic vegetation. This species usually hibernates on the bottom of waterbodies (5).	No	Known to occur in the general area	No further consideration required
Northern Map Turtle	*Graptemys geographica*	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).	No	Known to occur in the general area	No further consideration required
Snapping Turtle	*Chelydra serpentina*	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).	No	Known to occur in the general area	No further consideration required
Spotted Turtle	*Clemmys guttata*	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).	No	Known to occur in the general area	No further consideration required

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COMMON NAME	SCIENTIFIC NAME	Federal SARA	Provincial SARO	Provincial S-RANK	SPECIES DESCRIPTION AND HABITAT REQUIREMENTS	SUITABLE HABITAT	SPECIES OBSERVATIONS	ASSESSMENT
Wood Turtle	*Glyptemys insculpta*	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).	No	Known to occur in the general area	No further consideration required
Eastern Hog-nosed Snake	*Heterodon platirhinos*	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).	No	Known to occur in the general area	No further consideration required
Eastern Milksnake	*Lampropeltis triangulum*	SC	NAR	S4	The Eastern Milksnake's colouration is grey or tan with reddish alternating blotches otlines 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).	Yes: on-site and adjacent lands	Known to occur in the general area	No further consideration required
Eastern Ribbonsnake	*Thamnophis sauritus*	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).	Yes: on-site and adjacent lands	Known to occur in the general area	Potential significant wildlife habitat on-site
Common Five-lined Skink (Southern Shield Population)	*Plestiodon fasciatus*	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).	No	Known to occur in the general area	No further consideration required
Western Chorus Frog	*Pseudacris triseriata*	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).	Yes: on-site	Known to occur in the general area	No further consideration required
Invertebrates								
Monarch Butterfly	*Danaus plexippus*	SC	SC	S2N,S4B	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).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site

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Mottled Duskywing	*Erynnis martialis*	No Status	END	S2	The mottled duskywing is a medium-sized butterfly in the skipper family with a wingspan of 25-42 mm. It is dark grey with yellow-brown spots on its hind wings that give the species its mottled appearance and its name. The wings of freshly emerged adults have a purplish iridescence that fades with age. The mottled duskywing tends to live in dry habitats with sparse vegetation. These include open barrens, sandy patches among woodlands, and alvars. In Ontario, the mottled duskywing will only deposit their eggs on two closely-related plants: New Jersey tea and prairie redroot (1).	No	Known to occur in the general area	No further consideration required
West Virginia White	*Pieris virginiensis*	No Status	SC	S3	The West Viginia 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).	No	Known to occur in the general area	No further consideration required
Yellow-banded Bumble Bee	*Bombus terricola*	SC	SC	S3S5	The Yellow-banded Bumble Bee is a medium-sized bumble bee with a distinct yellow and black abdominal band pattern found on its queens, males, and workers. This species is a forage and habitat generalist, able to use a variety of nectaring plants and environmental conditions. It can be found in mixed woodlands, particularly for nesting and overwintering, as well as a variety of open habitat such as native grasslands, farmlands and urban areas. The Yellow-banded Bumble Bee ranges from the Mixedwood Plains of southern Ontario to the Hudson Bay Lowlands in the north (1).	Yes: on-site	Known to occur in the general area	Potential significant wildlife habitat on-site
Mammals								
Tri-colored Bat	*Perimyotis subflavus*	END	END	S3?	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).	No	Known to occur in the general area	No further consideration required
Eastern Small-footed Myotis	*Myotis leibii*	No Status	END	S2S3	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 outcrops, 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).	No	Known to occur in the general area	No further consideration required
Little Brown Myotis	*Myotis lucifugus*	END	END	S4	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).	No	Known to occur in the general area	No further consideration required
Northern Myotis	*Myotis septentrionalis*	END	END	S3	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).	No	Known to occur in the general area	No further consideration required

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Algonquin Wolf	*Canis lycaon*	SC	THR	S4	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 include 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).	No	Known to occur in the general area	No further consideration required
Trees, plants, fungi and lichens								
American Ginseng	*Panax quinquefolius*	END	END	S2	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 gnarly 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).	No	Confirmed absent through targeted surveys	No further consideration required
Butternut	*Juglans cinerea*	END	END	S2?	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).	No	Confirmed absent through targeted surveys	No further consideration required
Pale-bellied Frost Lichen	*Physconia subpallida*	END	END	S3	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 boulders within or near these wooded areas. In Ontario, this species has been found in the following counties: Frontenac, Haliburton, Hastings, Peterborough, Lanark and Renfrew (1).	No	Confirmed absent through targeted surveys	No further consideration required

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