

Scoped Environmental Impact Study: 335 Murray Road, Penetanguishene



Juliann Bridgeman

P/N 3422 | November 1, 2021

County of Simcoe

Town of Penetanguishene

335 Murray Road

SBA Skelton Brumwell
& Associates Inc.
ENGINEERING PLANNING ENVIRONMENTAL CONSULTANTS

Revision History

Issue	Date	Prepared by:	Revision Notes
First Issue	November 1, 2021	Taylor Wynia, Hon BSc Michael Wynia, MCIP, RPP	
Revision 1			
Revision 2			
Revision 3			

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Executive Summary

Skelton, Brumwell & Associates Inc. was retained by Juliann Bridgeman to complete a Scoped Environmental Impact Study (Scoped EIS) on 335 Murray Road Penetanguishene. The Scoped EIS was prepared to support the creation of a new lot and the proposed construction of a single detached dwelling on the retained parcel.

The subject lands are designated Rural in the Town of Penetanguishene Official Plan and are subject to an Environmental Protection overlay which applies to the woodlands on the site. The existing dwelling and proposed building envelope are located outside the overlay. The lands are designated as Settlements in the County of Simcoe Official Plan. The subject lands are also mapped as Rural in the Comprehensive Zoning By-law of the Town of Penetanguishene.

A building envelope has been identified on lands situated outside the boundaries of the significant valleylands, woodlands and wetland features.

Avoidance measures are as follows:

- Limit the proposed lot to the currently cleared area in the south west corner of the property;
- Limit the building envelope for the retained lot to the clearing immediate north of the proposed severance; and,
- Require that the building envelope be delineated by temporary fencing at the limits of the clearing (tree drip-line) and requiring that this fencing be maintained until such time as construction is completed.

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Scoped Environmental Impact Study

Scoped Analysis

335 Murray Road, Penetanguishene

1.0 Introduction

This Scoped EIS has been prepared on behalf of Juliann Bridgeman in support of a proposed creation of a new lot containing an existing dwelling and the establishment of a building envelope for construction of a single detached dwelling on the retained parcel.

Skelton Brumwell & Associates Inc. has been retained to prepare this Scoped Environmental Impact Study, which includes a description of the subject lands and the development proposal, analysis of the environmental planning framework, the results of background research and field investigations, and assessment of impacts, proposed mitigation and an opinion with respect to the proposed natural heritage policy compliance of the proposed development.

2.0 Proposal

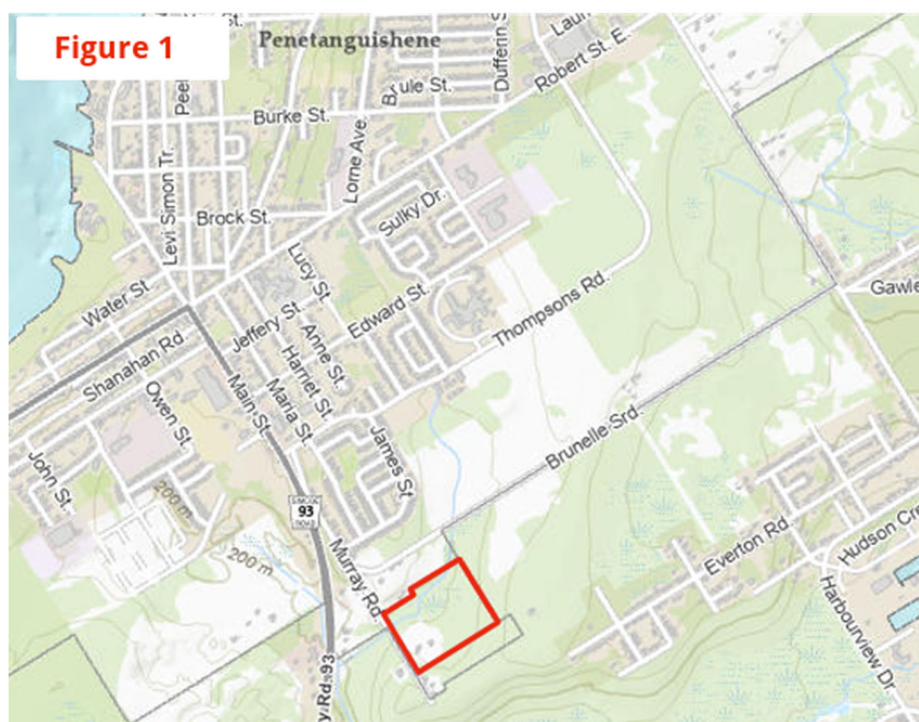


Figure 1

The subject lands are located at 335 Murray Road in the Town of Penetanguishene. The property is largely covered by woodlands with a clearing containing a dwelling and scattered specimen trees in the south-west corner. This clearing is the location of the development proposal.

The proposal involves a consent application to sever the existing dwelling off of the property. A building envelope is also proposed on the parcel

to be retained in the cleared area immediately north of the existing dwelling.

The intention is to not clear any trees within the woodland areas on the balance of the property. The landowner proposes to plant additional trees between the proposed building site and the existing dwelling. The construction of a new single detached dwelling in the proposed building envelope will also require a new driveway and private sewage system and well.



The subject lands are on the edge of the built up area of Penetanguishene and this is reflected in surrounding land uses:

North: Large rural lots and then smaller residential town lots.

East: Large rural and agricultural properties with extensive woodlands.

South: Two smaller residential lots and large rural properties with extensive woodlands.

West: Smaller residential lots to the north-west and large rural lots with extensive woodlands to the west and south-west rural and Environmental Protection designated lands.

The subject lands are designated Rural in the Town of Penetanguishene Official Plan and are subject to an Environmental Protection overlay which applies to the woodlands on the site. The existing dwelling and proposed building envelope are located outside the overlay. The lands are designated as Settlements in the County of Simcoe Official Plan. The subject lands are also mapped as Rural in the Comprehensive Zoning By-law of the Town of Penetanguishene.

3.0 Policy Context

The lands are governed by the Official Plans of the County of Simcoe and the Town Of Penetanguishene.

The requirement for an environmental impact study, or natural heritage assessment, arises from the fact that the property is subject to an Environmental Protection overlay in the Official Plan of the Town of Penetanguishene. The Official Plan indicates that no development or site alteration is permitted within the area subject to the Environmental Protection overlay as such areas contain a variety of natural heritage features and support associated ecological functions. The Official Plan also contains general policies regarding natural heritage features and areas in section 3.10. These policies reinforce and further outline the protection of significant natural heritage features and areas identified in the Environmental Protection overlay.

The proposed development of the lands is to take place outside the Environmental Protection overlay. The environmental impact study requirement is intended to ensure that the natural heritage features and areas have been appropriately identified and that development on lands adjacent to the those features and areas will not have a negative impact.

Compliance with the natural heritage protection policies of the Provincial and municipal documents applicable to the lands requires a determination of whether or not any of the following exist on the site or adjacent lands: significant wetlands; significant portions of the habitat of endangered or threatened species; permanent and intermittent streams and fish habitat; significant woodlands; significant valley lands; significant wildlife habitat; and significant areas of natural and scientific interest.

In accordance with the PPS, development and site alteration are not permitted in significant wetlands or in significant portions of the habitat of endangered and threatened species. The Growth Plan extends this development prohibition to the other key natural heritage natural heritage features listed above as well as to key hydrologic features. The Growth Plan for the Greater Golden Horseshoe which is applicable to the lands, states that within settlement areas the municipality will continue to protect natural heritage features and areas in a manner that is consistent with the Provincial Policy Statement. The provincial natural heritage system and associated policies do not apply within the settlement area.

Under the applicable policies of the Provincial Policy Statement, development and site alteration are permitted adjacent to natural heritage features where it has been demonstrated that there will be no negative impacts on natural features or ecological functions for which the area is identified and where appropriate minimum vegetation protection zones are provided. Therefore, where such features are located on the site or adjacent lands, further study is required to determine the potential impacts as well as outline mitigation measures to ensure that no loss of significant features or functions occurs.

The Provincial Policy Statement indicates that the diversity of natural features in an area, the natural connections between them, ecological function of the area, and the biodiversity of the area should be maintained or restored, and improved, where possible.

Therefore, although the Provincial policies establish a requirement to protect natural features and functions, it is not intended that development of the nature proposed be prohibited. Development may occur under an approved environmental impact study.

The following sections of this report are intended to address the natural heritage policy requirements of the Province in a scoped fashion.

The assessment approach involves determining, through an investigation of existing information data bases and the observation and analysis of site conditions, whether or not significant, or key, natural heritage features or functions occur on the development area or adjacent lands; whether or not the proposed development would detrimentally impact those features or functions; and, what measures are required, if any, to avoid impact to significant features and functions.

4.0 Background Information

Background research was completed to identify previously identified natural heritage features and functions on/or adjacent to the lot. The documents/sources listed below provided additional resources for this study:

- Ministry of Natural Resources (MNR) Natural Heritage Information Centre (NHIC);
- Town of Penetanguishene Official Plan and Comprehensive Zoning By-law;
- County of Simcoe Interactive Mapping; and
- iNaturalist and eBird mapping.

The background review indicated MNRF unevaluated wetland across the northern portion of the subject property.

A search of the MNRF NHIC database was performed. Square 17NK8556 cover the entire property and revealed a record of Common Snapping Turtle (*Chelydra serpentina*), Massasauga (*Sistrurus catenatus*), Speckled Giant Lacewing (*Polystoechotes punctata*) and Colonial Waterbird Nesting Area.

5.0 Field Investigations

In order to determine the potential for various key natural heritage features of the development area and adjacent lands, existing sources of information were used (such as official plan and natural heritage resource mapping) in addition to aerial photography and existing data base information, and a series of site visits were conducted as set out in this report.

As a scoped EIS was conducted and was intended to address the potential for a building envelope in the front portion of the lot, the majority of field work occurred in the front third of the property.

Field investigations occurred only on the subject lands. All other adjacent lands were investigated using roadside observations (i.e., visual observations from property lines, air photos, etc.).

Field investigations were scoped after background information was collected as well as the initial site visit, and included the following:

- General Site Visit (May 28th, 2021);
- Scoped snag and stick nest survey (May 28th, 2021);
- Spring Vascular Plant Survey (May 28th, 2021);
- Breeding Bird Survey (June 7th, July 4th, 2021);
- Summer Vascular Plant Survey (July 4th, 2021)
- Ecological Land Classification (July 4th, 2021).

5.1 Vegetation and Ecological Land Classification

5.1.1 Methodology

The vascular plant survey was completed using a roving transect through all habitats and areas planned for development. Particular attention was paid during field investigations for Species at Risk listed in the Ontario Endangered Species Act (2007).

The significance of vascular plants sampled was assessed based on the Natural Heritage Information Centre's (NHIC) rankings (Srank) for provincial rarity.

Vegetation communities were identified using the Ecological Land Classification (ELC) for Southern Ontario, First Approximation (Lee et al., 1998). Polygons were delineated using aerial photography, field sampled and classified into the most appropriate vegetation type. The polygons were identified based on vegetative cover, soils and landscape features.

The significance of the vegetation communities was assessed based on the Natural Heritage Information Centre's (NHIC) rankings where applicable and no significant vegetation communities were identified.

The iNaturalist data was reviewed relative to documented occurrence of all special concern and provincially rare (S1-S3, SH) plant and animal species.

5.1.2 Data

There were 101 plant species identified within property. All species observed on the property are found to be common to similar habitats found in Ontario.

A list of vascular plants and their status in Ontario is included in Appendix A.

No observations were recorded on the subject or adjacent lands in the reviewed iNaturalist data relative to documented occurrence of all special concern and provincially rare (S1-S3, SH) plant species.

Vegetation communities were identified within the study area using ELC to the Vegetation Type shown on Figure 3.

Detailed descriptions of communities are included below.

CUP3-1: Red Pine Coniferous Plantation Type

This community is dominated by Red Pine (*Pinus resinosa*). Associate species include White Pine (*Pinus strobus*), Black Cherry (*Prunus serotina*), Sugar Maple (*Acer saccharum*) and White Ash (*Fraxinus americana*). Subcanopy includes European Buckthorn (*Rhamnus cathartica*). Ground cover consisted of young White Ash (*Fraxinus americana*), Poison Ivy (*Toxicodendron radicans*) and Herb Roberts (*Geranium robertianum*).

FOD5-8: Dry – Fresh Sugar Maple – White Ash Deciduous Forest Type

This community is dominated by Sugar Maple (*Acer saccharum*) and White Ash (*Fraxinus americana*). Associate species include Red Oak (*Quercus rubra*), Red Ash (*Fraxinus pennsylvanica*) and Trembling Aspen (*Populus tremuloides*). Ground cover was sparse but included Herb Roberts (*Geranium robertianum*), Virginia Creeper (*Parthenocissus quinquefolia*) and Poison Ivy (*Toxicodendron radicans*).

FOD4-2: Dry – Fresh White Ash Deciduous Forest Type

This community is largely dominated by White Ash (*Fraxinus americana*). Associate species include White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*) and Manitoba Maple (*Acer negundo*). Ground cover consisted primarily of Garlic Mustard (*Alliaria petiolata*), Common Burdock (*Arctium minus*), Staghorn Sumac (*Rhus typhina*) and Red Raspberry (*Rubus idaeus*).

FOM5: Dry – Fresh White Birch – Poplar - Conifer Mixed Forest Ecosite

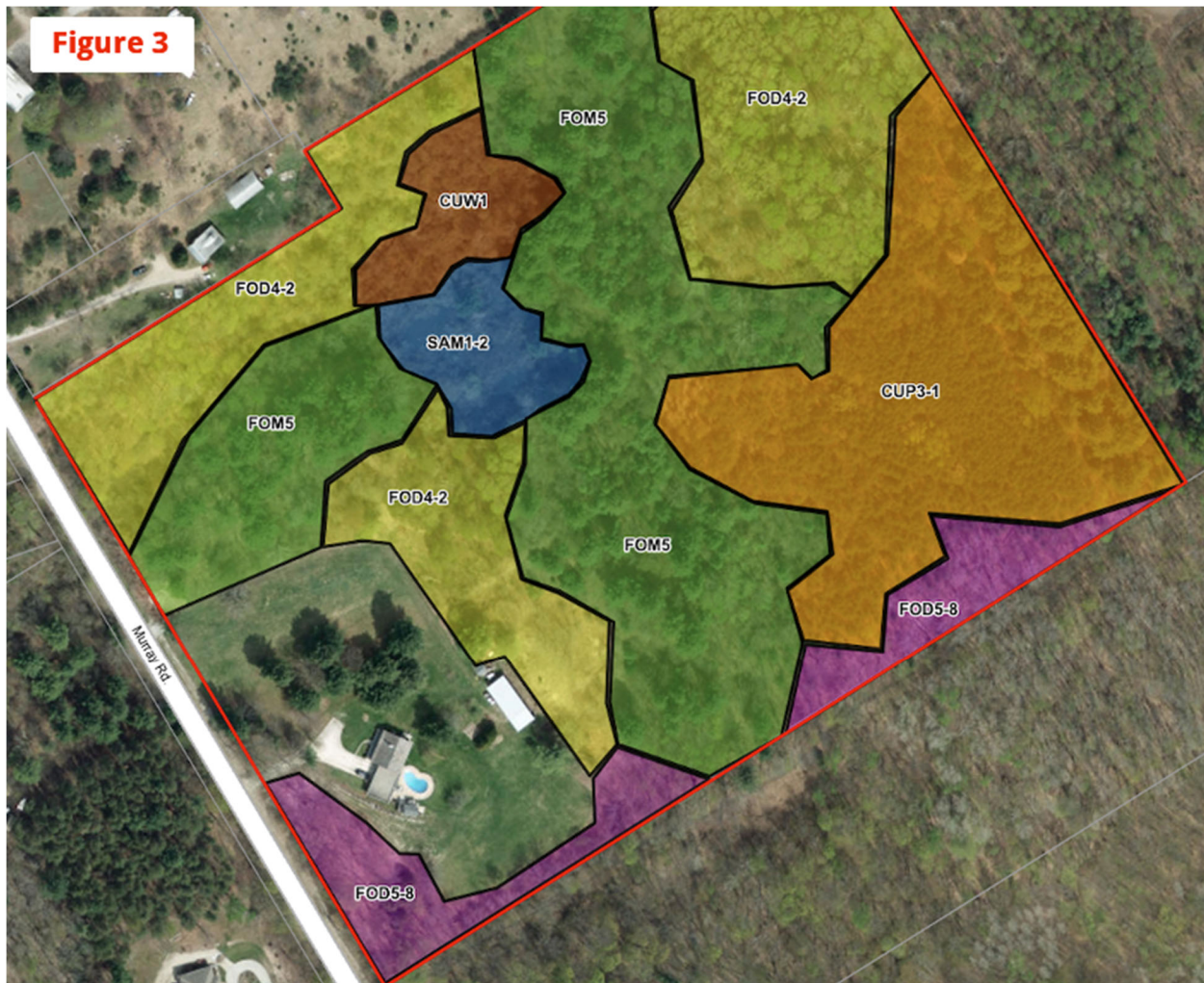
This community is dominated by White Birch (*Betula papyrifera*), Trembling Aspen (*Populus tremuloides*) and White Pine (*Pinus strobus*). Associate species include Sugar Maple (*Acer saccharum*), Ironwood (*Ostrya virginiana*), White Elm (*Ulmus laevis*), White Ash (*Fraxinus americana*), Black Cherry (*Prunus serotina*) and Red Oak (*Quercus rubra*). Ground cover consisted of Garlic Mustard (*Alliaria petiolata*), Poison Ivy (*Toxicodendron radicans*), Colts Foot (*Tussilago farfara*) and Alternate Leaved Dogwood (*Cornus alternifolia*).

SAM1-2: Duckweed Mixed Shallow Aquatic Type

This community is largely dominated by Duckweed (*Lemna*). This ecotype is made up of two small pond features.

CUW1: Mineral Cultural Woodland Ecosite

This community is largely dominated by European Buckthorn (*Rhamnus cathartica*). Associate species include Red Ash (*Fraxinus pennsylvanica*). Ground cover consisted of young European Buckthorn (*Rhamnus cathartica*), Virginia Creeper (*Parthenocissus quinquefolia*), Herb Roberts (*Geranium robertianum*) and Wild Grape (*Vitis vinifera*).



As seen in Figure 3 above, there is manicured lawn with specimen trees in the western portion of the site surrounding the existing dwelling as well as further north where the proposed building envelope is located.

5.2 Birds

5.2.1 Methodology

Two breeding bird surveys were conducted on the property. These consisted of wandering transects throughout the property between 5:00am and 10:00am as protocol dictates. Incidental observations were also made for birds during field investigations through observations of direct sightings and physical evidence (nesting, cavities). It should also be noted that bird feeders and houses are on the subject property which attracted many bird species.

A stick nest survey was conducted in the western portion of the property and immediately adjacent lands during the May 28th survey. This stick nest survey resulted in no nesting observations.

The website eBird's data was also reviewed relative to determination of the potential presence of threatened and endangered species as well as Woodland Area-Sensitive Bird Breeding Habitat within 200m of the site. The iNaturalist data was also reviewed relative to documented occurrence of bird species.

A review of iNaturalist data indicated that no observations of bird species were recorded on the subject or adjacent lands.

The eBird data was review relative to threatened and endangered bird species relative to documented occurrence within 200m of the site. The bird species reviewed were Acadian Flycatcher (no observations), American White Pelican (no observations), Bank Swallow (no observations), Bobolink (no observations), Cerulean Warbler (no observations), Chimney Swift (no observations), Eastern Meadowlark (no observations), Eastern Whip-poor-will (no observations), Golden Eagle (no observations), Henslow's Sparrow (no observations), King Rail (no observations), Kirtland's Warbler (no observations) Least Bittern (no observations), Loggerhead Shrike (no observations), Louisiana Waterthrush (no observations), Northern Bobwhite (no observations), Piping Plover (no observations), Prothonotary Warbler (no observations), Red Knot (no observations) and Yellow-breasted Chat (no observations). None of these bird species was reported within a 200m radius.

5.2.2 Data

During field visits the following species were observed on the site:

Species marked with an * were observed within the woodlands on the site.

- *American Crow *Corvus brachyrhynchos*
- American Goldfinch *Carduelis tristis*
- American Robin *Turdus migratorius*
- *Black-and-white Warbler *Mniotilta varia*
- Black-capped Chickadee *Poecile atricapillus*
- *Blue Jay *Cyanocitta cristata*
- *Brown Creeper *Certhia americana*
- Brown-headed Cowbird *Molothrus ater*
- *Chestnut-sided Warbler *Dendroica pensylvanica*
- Common Grackle *Quiscalus quiscula*
- Dark-eyed Junco *Junco hyemalis*
- *Downy Woodpecker *Picoides pubescens*
- *Eastern Wood-pewee *Contopus virens*
- European Starling *Sturnus vulgaris*
- Gray Catbird *Dumetella carolinensis*
- *Hairy Woodpecker *Picoides villosus*
- House Finch *Carpodacus mexicanus*
- House Wren *Troglodytes aedon*
- *Indigo Bunting *Passerina cyanea*
- *Least Flycatcher *Empidonax minimus*
- Mourning Dove *Zenaida macroura*
- Northern Cardinal *Cardinalis cardinalis*
- *Ovenbird *Seiurus aurocapilla*
- *Pileated Woodpecker *Dryocopus pileatus*
- Red-breasted Nuthatch *Sitta canadensis*
- *Red-eyed Vireo *Vireo olivaceus*

- Red-tailed Hawk Buteo jamaicensis
- Red-winged Blackbird Agelaius phoeniceus
- Ruby-throated Hummingbird Archilochus colubris
- *Ruffed Grouse Bonasa umbellus
- *Veery Catharus fuscescens
- *White-breasted Nuthatch Sitta carolinensis
- *Wild Turkey Meleagris gallopavo

Survey 1	June 7 th 2021	Survey 2	July 4 th 2021
Cloud Cover	0%	Cloud Cover	0%
Precipitation	None	Precipitation	None
Wind (Beaufort)	0	Wind (Beaufort)	0-1
Start Time	06:32	Start Time	07:02
End Time	09:45	End Time	10:00

5.3 Reptiles and Amphibians

5.3.1 Methodology

Incidental observations were made for herptiles (amphibians and reptiles) during field investigations through observations of direct sightings and physical evidence (scats, tracks) and for shelter, feeding and breeding sites (e.g., vernal pools, beneath logs, rocks, etc.).

Due to protocol timing restrictions and early spring weather, amphibian surveys could not be completed on the property.

During the initial site visit, observations were made for potential vernal pools which could support breeding amphibian species.

The iNaturalist data was reviewed relative to documented occurrence of reptile and amphibian species.

5.3.2 Data

No vernal pools were found on the subject property.

Two small ponds are present on the site which could support breeding habitat for amphibian species.

No incidental observations of reptiles or amphibians were recorded during site visits.

A review of iNaturalist data indicated that no observations of reptile or amphibian species were recorded on the subject or adjacent lands.

5.4 Mammals

5.4.1 Methodology

Incidental observations were made for mammals during field investigations through observations of direct sightings and physical evidence (scats, tracks) and for shelter, and evidence of feeding (e.g., browse).

During field investigation a bat snag/roost survey was completed to identify potential habitat for species at risk bats. The survey protocol used was the Survey Protocol for Species at Risk Bats within Treed Habitats Little Brown Myotis, Northern Myotis & Tri-Colored Bat April 2017.

The iNaturalist data was reviewed relative to documented occurrence of mammal species.

5.5 Data

During field visits the following birds were observed in the study area:

- Eastern Coyote (*Canis latrans*)
- Red Squirrel (*Tamiasciurus hudsonicus*)
- White-tailed Deer (*Odocoileus virginianus*)
- Eastern Cottontail (*Sylvilagus floridanus*)
- Red Fox (*Vulpes vulpus*)
- Porcupine (*Erethizon dorsatum*)
- Woodchuck (*Marmota monax*)

The bat snag/roost survey found that there was not a sufficient density of snags/ possible roost habitats on site to support acoustic monitoring.

A review of iNaturalist data indicated that no observations of mammal species were recorded on the subject or adjacent lands.

5.6 Other Terrestrial Fauna

5.6.1 Methodology

Incidental observations were made for other fauna during field investigations through observations of direct sightings and physical evidence (scats, tracks) and for shelter, feeding and breeding evidence.

The iNaturalist data was reviewed relative to documented occurrence of other terrestrial fauna.

5.6.2 Data

No incidental observations of other terrestrial fauna occurred during field visits.

A review of iNaturalist data indicated that no observations of other terrestrial fauna were recorded on the subject or adjacent lands.

Although NHIC records indicate the observation of Speckled Giant Lacewing (*Polystoechotes punctata*) in the grid square applicable to the site, this species is no rare in eastern North America. None were observed during site visits.

5.7 Fish

5.7.1 Methodology

The potential presence of fish species as indicated by fish habitat was assessed through a review of mapping and aerial photography and site visits.

5.7.2 Data

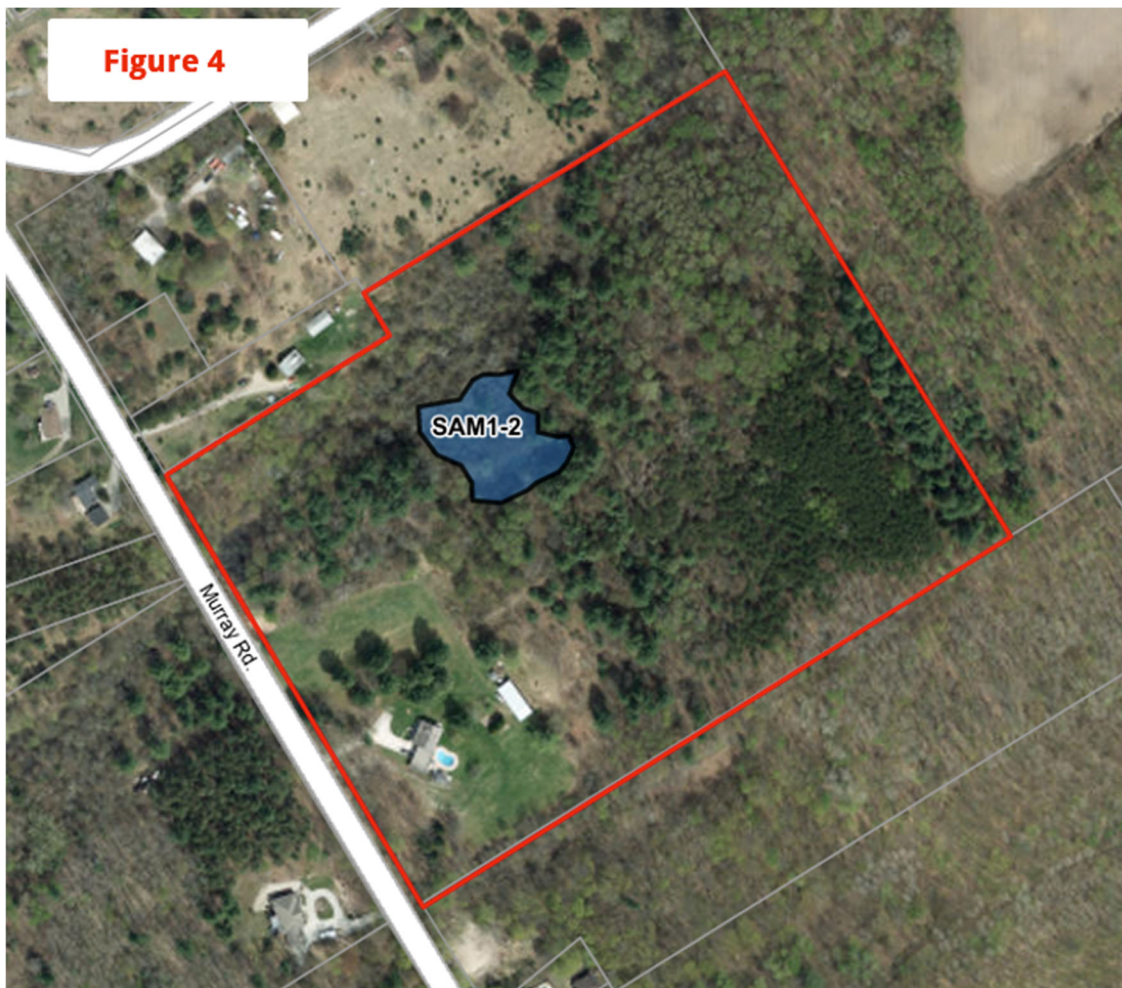
No fish were observed within the pond features on the property. The ponds appeared to be extremely shallow and have a significant potential to dry up or completely freeze making them less likely to

support fish. Although county mapping shows a watercourse running along the northern border of the property, during all three visits to the site no water was observed and vegetation within this area is not indicative of aquatic or riparian habitats.

6.0 Natural Heritage Features Identification

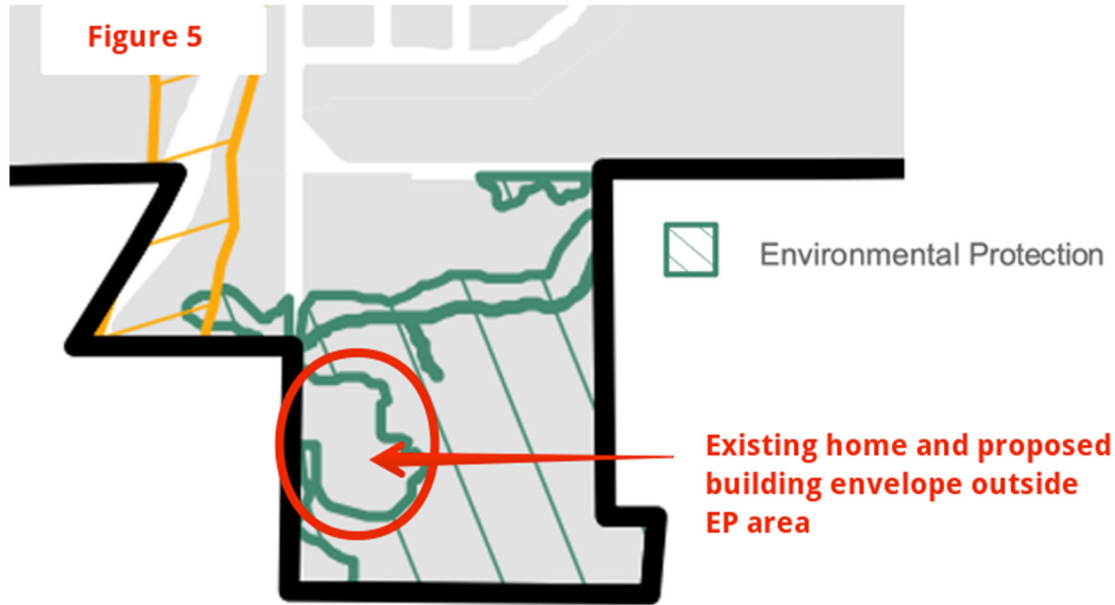
6.1 Wetlands

Ministry of Natural Resources and Forestry mapping indicated unidentified wetland across the northern portion of the subject property. Field investigations indicated that the unevaluated wetland identified in mapping was mistaken. The wetland is much smaller than identified by the MNRF. The wetland is approximately 0.75 acres (0.3ha) in size.



6.2 Significant Woodlands

The Town of Penetanguishene has not mapped significant woodlands, but has indicated that they form a basis for the Environmental Protection Overlay mapping which covers portions of the site on schedule B1 as illustrated in Figure 5 below.



The current dwelling and the proposed new building envelope are both outside of the Environmental Protection Overlay.

6.3 Significant Valleylands

The presence of significant valleylands was assessed through a review of planning authority information which potentially identifies significant valleylands.

No comprehensive study to identify significant valleylands has been undertaken by the relevant planning authorities. No significant valleylands are present on or in the vicinity of the subject lands.

6.4 Areas of Natural and Scientific Interest

A desktop review of the MNRF NHIC database and County of Simcoe Interactive Mapping found no ANSI's within or adjacent to the study area.

6.5 Species at Risk – Threatened and Endangered

Site Investigation indicated the presence of no Threatened or Endangered species on the subject lands.

A snag survey was conducted within 120m of the proposed dwelling and it determined that there was not enough suitable habitat for SAR bat species.

A Butternut survey was also conducted and no Butternut were found on the subject property.

A species at risk assessment was undertaken and is appended to this report (Appendix B). The assessment suggested no potential for the presence of habitat for threatened or endangered species.

6.6 Significant Wildlife Habitat

A significant wildlife habitat screening was undertaken. This screening, set out in Appendix C indicated the potential significant wildlife habitat features and functions in the portions of the property covered by woodlands and on adjacent lands. These include: raptor wintering habitat, bat maternity colony habitat; bat migratory stop over areas; reptile hibernaculum; deer yarding; deer winter congregation areas; woodland raptor nesting habitat; seeps and springs; amphibian breeding habitat; woodland area-sensitive bird breeding habitat; special concern and rare wildlife species (Eastern Wood Pewee); amphibian movement corridors; and deer movement corridors.

6.7 Fish Habitat

Fish habitat presence was evaluated within the two small pond features found on the subject property. However, these ponds were found not connected to any watercourse and appeared to be very shallow. These ponds therefore have a significant potential to dry up in the summer months or freeze completely suggesting limited potential to support fish. No fish were observed within these features during site visits.

6.8 Connectivity and Linkages

There are no riparian linkages present on the property.

The primary terrestrially based linkages occur on the rear (eastern) two-thirds of the lot where the woodlands are contiguous with similar features to the east and south. These in turn are linked across the landscape at a further distance from the site.

6.9 Other Natural Heritage Features

No other natural heritage features are present on the subject lands.

7.0 Analysis of Impacts and Recommendations

7.1 Wetlands

7.1.1 Avoidance

There are no provincial significant wetlands on or adjacent to the subject lands. However, there are Provincially Significant Wetlands 215m south of the property. These wetlands appear to connect through a stream on the subject property on NHIC mapping but during field investigation this was determined to be incorrect as no watercourse was present.

The proposed building envelope is situated well outside the area of the wetlands and a minimum 50m forested buffer has been recommended. No impacts are anticipated on locally significant wetland features as a result.

7.1.2 Mitigation

No mitigation is required or recommended.

7.1.3 Buffers and Setbacks

On a very conservative basis, which exceeds requirements to maintain wetlands areas and functions, a minimum 50m forested setback has been proposed for the building envelope.

7.1.4 Compensation

Compensation is not applicable or required.

7.1.5 Net Impacts

The proposal has no potential to impact wetland features or functions.

7.2 Significant Woodlands

7.2.1 Avoidance

As indicated, there are potentially significant woodlands on the subject lands within the Environmental Protection Overlay, however not within the building envelope. No trees are planned to be cut down or impacted during the proposed construction of the dwelling. Additional trees will be plant between the existing structure and proposed structure to help with privacy.

The function of the woodlands on the lot can be maintained by:

- limiting the proposed lot to the currently cleared area in the south west corner of the property;
- limiting the building envelope for the retained lot to the clearing immediate north of the proposed severance; and,
- requiring that the building envelope be delineated by temporary fencing at the limits of the clearing (tree drip-line) and requiring that this fencing be maintained until such time as construction is completed.

The recommended limit of both the severance boundary and building envelope are illustrated in Figure 6.



7.2.2 Mitigation

Temporary construction fencing for the building envelope at the development limits (tree drip-line) has been recommended to delineate the limits of disturbance. No additional mitigation is recommended at this time as the woodlands are adequately protected by environmental protection zoning and the Simcoe County Forest Conservation By-law.

7.2.3 Buffers and Setbacks

As no new woodland edges are being created the need for buffers is limited to the recommended temporary construction fencing at the tree drip-line.

7.2.4 Compensation

Compensation is not applicable or required.

7.2.5 Net Impacts

The proposed development of the site does not have an impact on significant woodlands and the proposed building envelope will appropriately ensure no loss of feature or function in the woodlands.

7.3 7.3 Significant Valleylands

7.3.1 Avoidance

There are no significant valleylands and avoidance is not applicable.

7.3.2 Mitigation

There are no significant valleylands and mitigation is not applicable.

7.3.3 Buffers And Setbacks

There are no significant valleylands and buffers and setbacks are not applicable.

7.3.4 Compensation

There are no significant valleylands and buffers and setbacks are not applicable.

7.3.5 Net Impacts

There are no significant valleylands identified on the subject property or within 120 metres. There is therefore no potential to impact significant valleylands.

7.4 Areas Of Natural and Scientific Interest

7.4.1 Avoidance

There are no areas of natural and scientific interest and avoidance is not applicable.

7.4.2 Mitigation

There are no areas of natural and scientific interest and mitigation is not applicable.

7.4.3 Buffers and Setbacks

There are no areas of natural and scientific buffers and setbacks are not applicable.

7.4.4 Compensation

There are no areas of natural and scientific interest and compensation is not applicable.

7.4.5 Net Impacts

There are no areas of natural and scientific interest identified on the subject property or within 120 metres. There is therefore no potential to impact significant valleylands.

7.5 Species at Risk – Threatened and Endangered

7.5.1 Avoidance

There are no Species at Risk on the site and avoidance is not applicable. Although the NHIC square contains a historic report of Massasauga Rattlesnake, the site does not support habitat for this species.

7.5.2 Mitigation

There are no Species at Risk and mitigation is not applicable.

7.5.3 Buffers and Setbacks

There are no Species at Risk and Buffer and Setbacks is not applicable.

7.5.4 Compensation

There are no Species at Risk and compensation is not applicable.

7.5.5 Net Impacts

There are no Species at Risk and no net impacts are anticipated.

7.6 Significant Wildlife Habitat

7.6.1 Avoidance

Potential significant wildlife habitat features are associated with the woodlands and small wetland. Although a number of features are potentially present, detailed site investigations for lands within 120m of the proposed limit of the severance and building envelope indicate no features of concern. Ensuring that all development occurs outside the woodlands on the site is sufficient to avoid impact to potentially present significant wildlife habitat features.

Additional notations regarding individual significant wildlife habitat features are set out in Appendix C.

7.6.2 Mitigation

No mitigation is required or recommended.

7.6.3 Buffers and Setbacks

No additional buffers or setbacks are required.

7.6.4 Compensation

Compensation is not applicable or required.

7.6.5 Net Impacts

The establishment of the development limit ensures that no new woodland edges are created, and the existing zoning and woodland conservation measures are sufficient to ensure the protection of the woodland. Ensuring that all development is situated outside the woodland is sufficient to avoid impact. The development of an additional residential building envelope does not alter the nature of land uses on the site, does not result in additional clearing and does not significantly alter the intensity of land uses. No impact of significant wildlife habitat features or functions is anticipated.

7.7 Fish Habitat

7.7.1 Avoidance

There are no streams on the subject property. The wetland feature on the property that has limited potential to support fish habitat has a minimum of 50m forested setback from development.

7.7.2 Mitigation

Due to the large setback from the building envelope to the wetland no mitigation is necessary.

7.7.3 Buffers and Setbacks

No buffers or setbacks are required.

7.7.4 Compensation

Compensation is not applicable.

7.7.5 Net Impacts

There is no potential to impact fish habitat.

7.8 Connectivity and Linkages

7.8.1 Avoidance

The proposed building envelopes minimally add to existing development impacts along the road frontage and the road frontage is situated opposite semi cleared lands which do not provide a linkage to other areas.

7.8.2 Mitigation

Linkages and connectivity are adequately protected as they are situated outside the recommended building envelope. No additional mitigation is required.

7.8.3 Buffers and Setbacks

No additional buffers or setbacks are required.

7.8.4 Compensation

Compensation is not applicable or required.

7.8.5 Net Impacts

Proposed development will not impact natural heritage connectivity or linkages across the local landscape.

7.9 Other Natural Heritage Features

7.9.1 Avoidance

No other natural heritage features have been identified.

7.9.2 Mitigation

No other natural heritage features have been identified and mitigation is not required.

7.9.3 Buffers and Setbacks

No other natural heritage features have been identified and additional buffers and setbacks are not required.

7.9.4 Compensation

Compensation is not applicable or required.

7.9.5 Net Impacts

No other natural heritage features have been identified and no net impacts are therefore anticipated.

8.0 Net Impact Assessment and Policy Compliance

Both the proposed lot and the building envelope are situated on previously cleared lands associated with the existing single detached dwelling on the property. The development proposal will not result in the creation of any new woodland edges and it has been recommended that at the time of construction temporary fencing be established at the drip-line of the woodland edge and be maintained until construction has been completed.

The recommended limits of development are sufficient to ensure that the proposal is consistent with the requirements of the Provincial Policy Statement (2020) and conforms to the Official Plan of the Town.

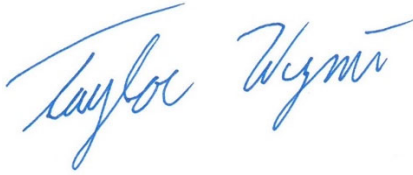
9.0 Conclusion

Based on the analysis of the observed field results, associated policy interpretation and impact assessment, the proposed building envelope will have no negative impact on natural heritage features and functions and is consistent with the Provincial Policy Statement (2020) and conforms to the Town of Penetanguishene Official Plan.

A consolidated list of recommendations is set out in Appendix D.

All of which is respectfully submitted,
SKELTON, BRUMWELL & ASSOCIATES INC.

Per:

Handwritten signature of Taylor Wynia in blue ink.

Taylor Wynia Hon BSc
Ecologist/Herpetologist

Handwritten signature of Michael Wynia in blue ink.

Michael Wynia, MCIP, RPP
Senior Ecologist and Planner/Partner

Appendix A

Vascular Plant List

Breeding Bird List

Incidental Wildlife Observations

Vascular Plant List

Common Name	Scientific Name	S_Rank
Alternate-leaved Dogwood	<i>Cornus alternifolia</i>	S5
American Beech	<i>Fagus grandifolia</i>	S5
American Elm	<i>Ulmus americana</i>	S5
Annual Ragweed	<i>Ambrosia artemisiifolia</i>	S5
Apple Tree	<i>Malus sp.</i>	SNA
Balsam Fir	<i>Abies balsamea</i>	S5
Balsam Poplar	<i>Populus balsamifera</i>	S5
Basswood	<i>Tilia americana</i>	S5
Bitter Wintercress	<i>Barbarea vulgaris</i>	SNA
Black Cherry	<i>Prunus serotina</i>	S5
Black Walnut	<i>Juglans nigra</i>	S4
Black-eyed Susan	<i>Rudbeckia hirta</i>	S5
Bladder Campion	<i>Silene vulgaris</i>	SNA
Blue Beed Lily	<i>Clintonia borealis</i>	S5
Blue Cohosh	<i>Caulophyllum thalictroides</i>	S5
Brachen Fern	<i>Pteridium aquilinum</i>	S5
Canada Anemone	<i>Anemone canadensis</i>	S5
Canada Fly Honeysuckle	<i>Lonicera canadensis</i>	S5
Canada Goldenrod	<i>Solidago canadensis</i>	S5
Canada Mayflower	<i>Maianthemum canadense</i>	S5
Chicory	<i>Cichorium intybus</i>	SNA
Climbing Nightshade	<i>Solanum dulcamara</i>	SNA
Colt's-foot	<i>Tussilago farfara</i>	SNA
Common Burdock	<i>Arctium minus</i>	SNA
Common Dandelion	<i>Taraxacum officinale</i>	SNA
Common Lilac	<i>Syringa vulgaris</i>	SNA
Common Milkweed	<i>Asclepias syriaca</i>	S5
Common Motherwort	<i>Leonurus cardiaca</i>	SNA
Common Mullein	<i>Verbascum thapsus ssp. thapsus</i>	SNA
Common Plantain	<i>Plantago major</i>	SNA
Common Speedwell	<i>Veronica officinalis</i>	SNA
Common St. John's-wort	<i>Hypericum perforatum</i>	SNA
Common Viper's-bugloss	<i>Echium vulgare</i>	SNA
Common Viper's-bugloss	<i>Echium vulgare</i>	SNA
Common Wood Sedge	<i>Carex blanda</i>	S5
Common Yarrow	<i>Achillea millefolium</i>	SNA
Cow Vetch	<i>Vicia cracca</i>	SNA
Dame's Rocket	<i>Hesperis matronalis</i>	SNA
Eastern Hemlock	<i>Tsuga canadensis</i>	S5
Eastern White Cedar	<i>Thuja occidentalis</i>	S5

Continued		
Common Name	Scientific Name	S_Rank
European Buckthorn	<i>Rhamnus cathartica</i>	SNA
False Solomon's-seal	<i>Maianthemum racemosum</i>	S5
Field Horsetail	<i>Equisetum arvense</i>	S5
Field Penny-cress	<i>Thlaspi arvense</i>	SNA
Field strawberry	<i>Fragaria vesca</i>	S5
Fragrant Bedstraw	<i>Galium triflorum</i>	S5
Garlic Mustard	<i>Alliaria petiolata</i>	SNA
Hawthorn	<i>Crataegus Sp.</i>	SNA
Herb-Robert	<i>Geranium robertianum</i>	S5
Ironwood	<i>Ostrya virginiana</i>	S5
Jack Pine	<i>Pinus banksiana</i>	S5
Jack-in-the-pulpit	<i>Arisaema triphyllum</i>	S5
Jewelweed	<i>Impatiens capensis</i>	S5
Kentucky bluegrass	<i>Poa pratensis</i>	SU
Large-tooth Aspen	<i>Populus grandidentata</i>	S5
Manitoba Maple	<i>Acer negundo</i>	S5
Marginal Wood Fern	<i>Dryopteris marginalis</i>	S5
Northern Starflower	<i>Lysimachia borealis</i>	S5
Orange Hawkweed	<i>Pilosella aurantiaca</i>	SNA
Ostrich Fern	<i>Matteuccia struthiopteris</i>	S5
Ox-eye Daisy	<i>Leucanthemum vulgare</i>	SNA
Pin Cherry	<i>Prunus pensylvanica</i>	S5
Pinappleweed	<i>Matricaria discoidea</i>	SNA
Plantain leaved Sedge	<i>Carex plantaginea</i>	S5
Poison Ivy	<i>Toxicodendron radicans</i>	S5
Prickly Gooseberry	<i>Ribes cynosbati</i>	S5
Red Ash	<i>Fraxinus pennsylvanica</i>	S4
Red clover	<i>Trifolium pratense</i>	SNA
Red Oak	<i>Quercus rubra</i>	S5
Red Osier Dogwood	<i>Cornus stolonifera</i>	S5
Red Pine	<i>Pinus resinosa</i>	S5
Red Raspberry	<i>Rubus idaeus</i>	SNA
Red Trillium	<i>Trillium erectum</i>	S5
Rose Twisted-stalk	<i>Streptopus lanceolatus</i>	S5
Scots Pine	<i>Pinus sylvestris</i>	SNA
Self-heal	<i>Prunella vulgaris</i>	S5
Sensitive Fern	<i>Onoclea sensibilis</i>	S5
Silverweed	<i>Argentina anserina</i>	S5

Continued		
Common Name	Scientific Name	S_Rank
Speckled Alder	<i>Alnus incana</i>	S5
Spotted Jewelweed	<i>Impatiens capensis</i>	S5
Spotted Joe-pye Weed	<i>Eutrochium maculatum</i>	S5
St. Johns Wort	<i>Hypericum perforatum</i>	SNA
Staghorn Sumac	<i>Rhus typhina</i>	S5
Sugar Maple	<i>Acer saccharum</i>	S5
Tall Buttercup	<i>Ranunculus acris</i>	SNA
Tall Meadow Rue	<i>Thalictrum pubescens</i>	S5
Trembling Aspen	<i>Populus tremuloides</i>	S5
Virginia creeper	<i>Parthenocissus quinquefolia</i>	S4
White Ash	<i>Fraxinus americana</i>	S4
White Birch	<i>Betula papyrifera</i>	S5
White Clover	<i>Trifolium repens</i>	SNA
Wild Asparagus	<i>Asparagus officinalis</i>	SNA
Wild Carrot	<i>Daucus carota</i>	SNA
Wild Grape	<i>Vitis riparia</i>	S5
Wild Sarsaparilla	<i>Aralia nudicaulis</i>	S5
Woodland Horsetail	<i>Equisetum sylvaticum</i>	S5
Woodland Strawberry	<i>Fragaria vesca</i>	S5
Woolly Blue Violet	<i>Viola sororia</i>	S5
Wormseed Wallflower	<i>Erysimum cheiranthoides</i>	SNA

Breeding Bird List

Common Name	Scientific Name	S-Rank
American Crow	<i>Corvus brachyrhynchos</i>	S5B
American Goldfinch	<i>Carduelis tristis</i>	S5B
American Robin	<i>Turdus migratorius</i>	S5B
Black-and-white Warbler	<i>Mniotilta varia</i>	S5B
Black-capped Chickadee	<i>Poecile atricapillus</i>	S5
Blue Jay	<i>Cyanocitta cristata</i>	S5
Brown Creeper	<i>Certhia americana</i>	S5B
Brown-headed Cowbird	<i>Molothrus ater</i>	S4B
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	S5B
Common Grackle	<i>Quiscalus quiscula</i>	S5B
Dark-eyed Junco	<i>Junco hyemalis</i>	S5B
Downy Woodpecker	<i>Picoides pubescens</i>	S5
Eastern Wood-pewee	<i>Contopus virens</i>	S4B
European Starling	<i>Sturnus vulgaris</i>	SNA
Gray Catbird	<i>Dumetella carolinensis</i>	S4B
Hairy Woodpecker	<i>Picoides villosus</i>	S5
House Finch	<i>Carpodacus mexicanus</i>	SNA
House Wren	<i>Troglodytes aedon</i>	S5B
Indigo Bunting	<i>Passerina cyanea</i>	S4B
Least Flycatcher	<i>Empidonax minimus</i>	S4B
Mourning Dove	<i>Zenaida macroura</i>	S5
Northern Cardinal	<i>Cardinalis cardinalis</i>	S5
Ovenbird	<i>Seiurus aurocapilla</i>	S4B
Pileated Woodpecker	<i>Dryocopus pileatus</i>	S5
Red-breasted Nuthatch	<i>Sitta canadensis</i>	S5
Red-eyed Vireo	<i>Vireo olivaceus</i>	S5B
Red-tailed Hawk	<i>Buteo jamaicensis</i>	S5
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S4
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	S5B
Ruffed Grouse	<i>Bonasa umbellus</i>	S4
Veery	<i>Catharus fuscescens</i>	S4B
White-breasted Nuthatch	<i>Sitta carolinensis</i>	S5
Wild Turkey	<i>Meleagris gallopavo</i>	S5

Incidental Wildlife Observations

Common Name	Scientific Name	S_Rank
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	S5
Coyote	<i>Canis latrans</i>	S5
Eastern Cottontail	<i>Sylvilagus floridanus</i>	S5
Red Fox	<i>Vulpes vulpes</i>	S5
Porcupine	<i>Erethizon dorsatum</i>	S5
White-tailed Deer	<i>Odocoileus virginianus</i>	S5
Woodchuck	<i>Marmota monax</i>	S5

Appendix B

Species at Risk Assessment

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Acadian Flycatcher	<i>Empidonax virescens</i>	Endangered	Mostly in large deciduous forests and forest ravines, often near wetlands.	No	No observations in area/habitat not present
American White Pelican	<i>Pelecanus erythrorhynchos</i>	Threatened	Islands and shorelines of large waterbodies with little tree cover.	No	No observations in area/habitat not present
Bank Swallow	<i>Riparia riparia</i>	Threatened	Stable banks made of silt or sand.	No	No observations in area/habitat not present
Barn Owl	<i>Tyto alba</i>	Endangered	Open grasslands and orchards.	No	No observations in area/habitat not present
Barn Swallow	<i>Hirundo rustica</i>	Threatened	Usually found near human development, like unpainted ruff wood to nest.	No	No observations in area/habitat not present
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened	Hay fields and long grass meadows.	No	No observations in area/habitat not present
Cerulean Warbler	<i>Setophaga cerulea</i>	Threatened	Mature deciduous forests with large, tall trees and open understory.	Possible	No observations in area/habitat potential in rear portion of site/ no habitat in development envelope
Chimney Swift	<i>Chaetura pelagica</i>	Threatened	Most often found in urban settlements, often close to water for feeding.	No	No observations in area/habitat not present
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened	Open meadow or field habitats.	No	No observations in area/habitat not present

Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened	Forest openings and rock outcropping.	No	No observations in area/habitat not present
Golden Eagle	<i>Aquila chrysaetos</i>	Endangered	Large undisturbed forests near open areas.	No	No observations in area/habitat not present
Henslow's Sparrow	<i>Ammodramus henslowii</i>	Endangered	Tall grass fields and flowering plants.	No	No observations in area/habitat not present
King Rail	<i>Rallus elegans</i>	Endangered	Densely vegetated freshwater marshes.	No	No observations in area/habitat not present
Kirtlands Warbler	<i>Setophaga kirtlandii</i>	Endangered	Large stands of young jack pine stands.	No	No observations in area/habitat not present
Least Bittern	<i>Ixobrychus exilis</i>	Threatened	Primarily cattail marshes.	No	No observations in area/habitat not present
Loggerhead Shrike	<i>Lanius ludovicianus</i>	Endangered	Pasture and grasslands with Hawthorn.	No	No observations in area/habitat not present
Louisiana Waterthrush	<i>Parkesia motacilla</i>	Threatened	Deciduous forests with steep ravines and fast flowing stream/ occasionally woodland swamps.	No	No observations in area/habitat not present
Northern Bobwhite	<i>Colinus virginianus</i>	Endangered	Grasslands/Savannahs/Farm Fields.	No	No observations in area/habitat not present
Piping Plover	<i>Charadrius melodus</i>	Endangered	Along sandy and gravel beaches above high-water levels.	No	No observations in area/habitat not present
Prothonotary Warbler	<i>Protonotaria citrea</i>	Endangered	Carolinian Deciduous flooded or swamp forests.	No	No observations in area/habitat not present
Red Knot (Rufa Subspecies)	<i>Calidris canutus rufa</i>	Endangered	Beaches/Mudflats/Coastal Lagoons.	No	No observations in area/habitat not present
Yellow-breasted Chat	<i>Icteria virens</i>	Endangered	Thickets and scrub, overgrown clearings.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Allegheny Mountain Dusky Salamander	<i>Desmognathus ochrophaeus</i>	Endangered	Small slow flowing rocky streams.	No	No observations in area/habitat not present
Northern Dusky Salamander	<i>Desmognathus fuscus</i>	Endangered	Small slow flowing rocky streams.	No	No observations in area/habitat not present
Jefferson Salamander	<i>Ambystoma jeffersonianum</i>	Endangered	Mole salamander, lives underground but best chance to see it is during breeding season in vernal pools, usually lives near wetland.	No	No observations in area/habitat not present
Small-mouthed Salamander	<i>Ambystoma texanum</i>	Endangered	Mole Salamander, lives under ground and can be seen just under the leaf litter. Usually lives near wetland.	No	No observations in area/habitat not present
Folwers Toad	<i>Anaxyrus fowleri</i>	Endangered	Sandy Shorelines.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Five Lined Skink (Carolinian population)	<i>Plestiodon fasciatus</i>	Endangered	Found within open forest habitats and stabilized sand dunes.	No	No observations in area/habitat not present
Blue Racer	<i>Coluber constrictor foxii</i>	Endangered	Typically found in open grassland habitats but can be found in open forest and edge habitats.	No	No observations in area/habitat not present
Bulter's Gartersnake	<i>Thamnophis butleri</i>	Endangered	Found in open grassy and meadow habitats, often found under cover.	No	No observations in area/habitat not present
Eastern Foxsnake (Carolinian population)	<i>Pantherophis gloydi</i>	Endangered	Often found near human development, most found in edge habitats.	No	No observations in area/habitat not present
Eastern Foxsnake (Georgian Bay population)	<i>Pantherophis gloydi</i>	Threatened	Found near water in edge or open habitats/require rotting logs for nesting's.	No	No observations in area/habitat not present
Eastern Hog-nosed Snake	<i>Heterodon platirhinos</i>	Threatened	Edge habitats near water but can be found within primarily deciduous forests.	Possible	No observations in area / Habitat features on site do not support quality habitat for this species
Queensnake	<i>Regina septemvittata</i>	Endangered	Within rivers with rocky shorelines.	No	No observations in area/habitat not present
Gray Ratsnake (Carolinian population)	<i>Pantherophis spiloides</i>	Endangered	Arboreal species found within deciduous forest and edge habitats.	No	No observations in area/habitat not present

Gray Ratsnake (Frontenac Axis population)	<i>Pantherophis spiloides</i>	Threatened	Arboreal species found within deciduous forest and edge habitats.	No	No observations in area/habitat not present
Eastern Massasauga Rattlesnake (Carolinian population)	<i>Sistrurus catenatus</i>	Endangered	Within 50km from water usually closer, most often found in edge habitats.	No	No observations in area/habitat not present
Eastern Massasauga Rattlesnake (Great Lakes population)	<i>Sistrurus catenatus</i>	Threatened	Within 50km from water usually closer, most often found in edge habitats.	No	No observations in area/habitat not present
Spiny Softshell	<i>Apalone spinifera</i>	Endangered	Found in large rivers with sandy bottoms.	No	No observations in area/habitat not present
Spotted Turtle	<i>Clemmys guttata</i>	Endangered	Small shallow wetlands, bogs and marshes sometimes ponds.	No	No observations in area/habitat not present
Wood Turtle	<i>Glyptemys insculpta</i>	Endangered	Rivers that are not too fast and their tributaries.	No	No observations in area/habitat not present
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened	Ideal habitat is wetlands and ponds with clean water and mucky bottoms but can be found within lakes and degraded habitat.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
American Eel	<i>Anguilla rostrata</i>	Endangered	Most diverse habitat characteristics of any Ontario fish.	No	No observations in area/habitat not present
Black Redhorse	<i>Moxostoma duquesnei</i>	Threatened	Sandy gravel bottoms of pools and riffles.	No	No observations in area/habitat not present
Cutlip Minnow	<i>Exoglossum maxillingua</i>	Threatened	Warm slow-moving rivers with rocky and gravel bottoms.	No	No observations in area/habitat not present
Eastern Sand Darter	<i>Ammocrypta pellucida</i>	Endangered	Shallow habitats in lakes streams and rivers with clean sandy bottoms.	No	No observations in area/habitat not present
Lake Chubsucker	<i>Erimyzon sucetta</i>	Threatened	Lakes and marshes with clear warm water and plenty of aquatic vegetation.	No	No observations in area/habitat not present
Lake Sturgeon (Great Lakes - Upper St Lawrence population)	<i>Acipenser fulvescens</i>	Endangered	Lakes or Rivers with soft bottoms of mud/sand or gravel.	No	No observations in area/habitat not present
Northern Madtom	<i>Noturus stigmosus</i>	Endangered	Large creeks and rivers with moderate to swift current with sand, gravel and mud bottoms.	No	No observations in area/habitat not present
Pugnose Minnow	<i>Opsopoeodus emiliae</i>	Threatened	Coastal wetlands, clear warm water with abundant vegetation.	No	No observations in area/habitat not present
Pugnose Shiner	<i>Notropis anogenus</i>	Threatened	Lakes and clam water with clear water and sandy or muddy bottoms.	No	No observations in area/habitat not present
Redsided Dace	<i>Clinostomus elongatus</i>	Endangered	Pools and slow-moving small streams with gravel bottoms.	No	No observations in area/habitat not present
River Darter	<i>Percina shumardi</i>	Endangered	Medium to large rivers with gravel and cobble.	No	No observations in area/habitat not present

Shortjaw Cisco	<i>Coregonus zenithicus</i>	Threatened	Large lakes 55-180 metres of water.	No	No observations in area/habitat not present
Shortnose Cisco	<i>Coregonus reighardi</i>	Endangered	Large Lakes 22-144 metres of water.	No	No observations in area/habitat not present
Silver Chub	<i>Macrhybopsis storeriana</i>	Threatened	Usually in 12 metres of water.	No	No observations in area/habitat not present
Silver Shiner	<i>Notropis photogenis</i>	Threatened	Medium to large streams with swift currents with gravel or boulder bottoms.	No	No observations in area/habitat not present
Spotted Gar	<i>Lepisosteus oculatus</i>	Endangered	Coastal wetlands with abundant vegetation.	No	No observations in area/habitat not present
Warmouth	<i>Lepomis gulosus</i>	Endangered	Silt free marshs with mucky bottoms and abundant vegetation.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Algonquin Wolf	<i>Canis sp.</i>	Threatened	Deciduous or mixed forests, dens in coniferous forests near water.	No	No observations in area/habitat not present
American Badger (Northwestern Ontario)	<i>Taxidea taxus</i>	Endangered	Tall grass prairie/sand barrens and farmlands.	No	No observations in area/habitat not present
American Badger (Southwestern Ontario)	<i>Taxidea taxus</i>	Endangered	Tall grass prairie/sand barrens and farmlands.	No	No observations in area/habitat not present
Caribou (Boreal)	<i>Rangifer tarandus</i>	Threatened	Dense Boreal Forests.	No	No observations in area/habitat not present
Eastern Small-footed Myotis	<i>Myotis leibii</i>	Endangered	Under rocks/buildings/caves.	No	No observations in area/habitat not present
Gray Fox	<i>Urocyon cinereoargenteus</i>	Threatened	Deciduous forests and marshes.	No	No observations in area/habitat not present
Little Brown Myotis	<i>Myotis lucifugus</i>	Endangered	Deciduous forests with snags and urban areas.	Possible	Snag surveys did not support high quality habitat that would support this species
Mountain Lion	<i>Puma concolor</i>	Endangered	Large forests with abundant white-tailed deer populations.	No	No observations in area/habitat not present
Northern Myotis	<i>Myotis septentrionalis</i>	Endangered	Forests.	Possible	Snag surveys did not support high quality habitat that would support this species
Tri-coloured Bat	<i>Perimyotis subflavus</i>	Endangered	Deciduous Forest/Oaks and Maples Primarily.	Possible	Snag surveys did not support high quality habitat that would support this species
Wolverine	<i>Gulo gulo</i>	Threatened	Boreal Forests.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Broad-Banded Forestsnail	<i>Allogona profunda</i>	Endangered	Forests with sandy soils.	No	No observations in area/habitat not present
Eastern Banded Tigersnail	<i>Anguispira kochi kochi</i>	Endangered	Deciduous forests.	No	No observations in area/habitat not present
Fawnsfoot	<i>Truncilla donaciformis</i>	Endangered	Shallow waters or slow-moving medium to large rivers.	No	No observations in area/habitat not present
Hickorynut	<i>Obovaria olivaria</i>	Endangered	Sandy beds in large wide deep rivers with moderate to strong currents.	No	No observations in area/habitat not present
Kidneyshell	<i>Ptychobranchus fasciolaris</i>	Endangered	Small to medium shallow clear fast-moving streams with gravel and sand bottoms.	No	No observations in area/habitat not present
Lilliput	<i>Toxolasma parvum</i>	Threatened	Variety of soft river bottoms.	No	No observations in area/habitat not present
Northern Riffleshell	<i>Epioblasma torulosa rangiana</i>	Endangered	Riffles in streams with rocky or sand or gravel bottoms.	No	No observations in area/habitat not present
Proud Globelet	<i>Patera pennsylvanica</i>	Endangered	Sandy Oak Forests.	No	No observations in area/habitat not present
Rayed Bean	<i>Villosa fabalis</i>	Endangered	Sand or gravel in shallow clear headwaters and riffles of small tributaries.	No	No observations in area/habitat not present
Round Hickorynut	<i>Obovaria subrotunda</i>	Endangered	Moderate to fast flowing rivers with clay/sand/gravel bottoms.	No	No observations in area/habitat not present
Round Pigtoe	<i>Pleurobema sintoxia</i>	Endangered	Deep rivers with sandy/rocky or mud bottoms.	No	No observations in area/habitat not present
Salamander Mussel	<i>Simpsonaias ambigua</i>	Endangered	Swift current rivers with soft bottoms.	No	No observations in area/habitat not present

Snuffbox	<i>Epioblasma triquetra</i>	Endangered	Clean, Clear swift flowing streams with rocky/gravel or sand bottoms.	No	No observations in area/habitat not present
Threehorn Wartyback	<i>Obliquaria reflexa</i>	Threatened	Large rivers with moderate current and stable gravel, sand or mud bottoms.	No	No observations in area/habitat not present
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Threatened	Small to medium sized rivers with moderate currents in riffles with sand or rocky or gravel bottoms.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
American Chesnut	<i>Castanea dentata</i>	Endangered	Carolinian habitat, dryer upland deciduous forests with sandy, acidic to neutral soils.	No	No observations in area/habitat not present
American Columbo	<i>Frasera caroliniensis</i>	Endangered	Dry upland open deciduous forests.	No	No observations in area/habitat not present
American Ginseng	<i>Panax quinquefolius</i>	Endangered	Along ridges and ravines of deciduous or mixed forests/ Micro habitats.	No	No observations in area/habitat not present
American Water-Willow	<i>Justicia americana</i>	Threatened	Grows along the shores and in the water with wave action.	No	No observations in area/habitat not present
Bent Spike Rush	<i>Eleocharis geniculata</i>	Endangered	Wet, sandy, muddy soil in open flats.	No	No observations in area/habitat not present
Birds-foot Violet	<i>Viola pedata</i>	Endangered	Black Oak Savanna.	No	No observations in area/habitat not present
Blue Ash	<i>Fraxinus quadrangulata</i>	Threatened	Deciduous floodplain forests and along sandy beaches and limestone outcroppings.	No	No observations in area/habitat not present
Bluehearts	<i>Buchnera americana</i>	Endangered	Wet meadow communities between sand dunes/tall grass prairies.	No	No observations in area/habitat not present
Blunt-lobed Woodsia	<i>Woodsia obtusa</i>	Endangered	Steep chalky rock faces in deciduous forests.	No	No observations in area/habitat not present
Branched Bartonian	<i>Bartonia paniculata</i> ssp. <i>paniculata</i>	Threatened	Sphagnum bog and fen wetlands dominated by sedges.	No	No observations in area/habitat not present
Butternut	<i>Juglans cinerea</i>	Endangered	Deciduous forests, prefers moist well drained soil often found along streams with lot of	Possible	No observations in NHIC records or eBird for site or adjacent lands /

			sun, can grow in gravel dominated soils.		none observed on site
Cherry Birch	<i>Betula lenta</i>	Endangered	Moist well drained clay loam soil over limestone bedrock with or deciduous trees.	No	No observations in area/habitat not present
Colicroot	<i>Aletris farinosa</i>	Endangered	Open sunny moist habitats with sandy or mucky soil such as prairie or old fields.	No	No observations in area/habitat not present
Cucumber Tree	<i>Magnolia acuminata</i>	Endangered	Upland moist deciduous or mixed forest habitats, well drained soils.	No	No observations in area/habitat not present
Deerberry	<i>Vaccinium stamineum</i>	Threatened	Dry open woods on sandy well drained soils growing under oaks, pitch pine or white pine near large water bodies.	No	No observations in area/habitat not present
Dense Blazing Star	<i>Liatris spicata</i>	Threatened	Dense moist prairies, grasslands, wet areas between dunes and abandoned fields.	No	No observations in area/habitat not present
Drooping Trillium	<i>Trillium flexipes</i>	Endangered	Damp sandy soil in mature deciduous forests close to a river.	No	No observations in area/habitat not present
Dwarf Hackberry	<i>Celtis tenuifolia</i>	Threatened	Several different habitats, dry sandy areas near lakeshores inland dunes, ridge tops and limestone alvars.	No	No observations in area/habitat not present
Eastern Flowing Dogwood	<i>Cornus florida</i>	Endangered	Mid age to mature deciduous or mixed forests in flood plains, ravines or on slopes or bluffs.	No	No observations in area/habitat not present
Eastern Prairie Fringed-Orchid	<i>Platanthera leucophaea</i>	Endangered	Wetlands, fens, swamps, and tall grass prairie.	No	No observations in area/habitat not present

Eastern Prickly Pear Cactus	<i>Opuntia humifusa</i>	Endangered	Dry sandy areas in full sun.	No	No observations in area/habitat not present
Engelmanns Quillwort	<i>Isoetes engelmannii</i>	Endangered	Aquatic plant, shallow water in lakes and rivers.	No	No observations in area/habitat not present
False Hop Sedge	<i>Carex lupuliformis</i>	Endangered	Riverine swamps and marshes around temporary forest ponds.	No	No observations in area/habitat not present
Flase Rue-anemone	<i>Enemion biternatum</i>	Threatened	Deciduous forests and thickets with rich, moist soil, often in valleys, floodplains and ravine bottoms.	No	No observations in area/habitat not present
Few-flowered Club Rush	<i>Trichophorum planifolium</i>	Endangered	Steep slopes of oak forests.	No	No observations in area/habitat not present
Forked Three-awned Grass	<i>Aristida basiramea</i>	Endangered	Open bare ground sparsely covered grassy areas/ Disturbed areas.	No	No observations in area/habitat not present
Four-leaved Milkweed	<i>Asclepias quadrifolia</i>	Endangered	Dry woodlands dominated by tallgrass prairie herbs, bur oak and shagbark hickory/ woodland alvar dominated by red cedar and pastureland.	No	No observations in area/habitat not present
Gattinger's Agalinus	<i>Agalinis gattingeri</i>	Endangered	Dry open tall grass prairie and alvars.	No	No observations in area/habitat not present
Goldenseal	<i>Hydrastis canadensis</i>	Threatened	Rich moist semi open closed areas of deciduous forests/ floodplains.	No	No observations in area/habitat not present
Heart-leaved Plantain	<i>Plantago cordata</i>	Endangered	Undisturbed wet woods, near slow moving streams and have limestone base/Strongly associated with maple trees.	No	No observations in area/habitat not present
Hill's Thistle	<i>Cirsium hillii</i>	Threatened	Open alvar grasslands, limestone bedrock, prairie or	No	No observations in area/habitat not present

			sand dunes also used.		
Hoary Mountain-mint	<i>Pycnanthemum incanum</i>	Endangered	Dry oak woodland habitat on steep warm slopes.	No	No observations in area/habitat not present
Horsetail Spike-rush	<i>Eleocharis equisetoides</i>	Endangered	Shallow water along the edges of ponds.	No	No observations in area/habitat not present
Houghton's Goldenrod	<i>Solidago houghtonii</i>	Threatened	Open alvars very little soil and bedrock.	No	No observations in area/habitat not present
Juniper Sedge	<i>Carex juniperorum</i>	Endangered	Open alvars, and oak savannah.	No	No observations in area/habitat not present
Kentucky Coffee-tree	<i>Gymnocladus dioicus</i>	Threatened	Moist rich soil, floodplains, shade intolerant.	No	No observations in area/habitat not present
Lakeside Daisy	<i>Tetaneuris herbacea</i>	Threatened	Open Grassland and pavement alvars.	No	No observations in area/habitat not present
Large Whorled Pogonia	<i>Isotria verticillata</i>	Endangered	Deciduous or mixed forests with sandy soil and thick leaf litter.	No	No observations in area/habitat not present
Lowland Toothcup	<i>Rotala ramosior</i>	Endangered	Along lakes on thin sandy muddy or gravelly soils on Precambrian bedrock.	No	No observations in area/habitat not present
Nodding Pogonia	<i>Triphora trianthophora</i>	Endangered	Rich moist deciduous forests, well developed tree canopy with deep leaf litter.	No	No observations in area/habitat not present
Ogden's Pondweed	<i>Potamogeton ogdenii</i>	Endangered	Clear slow-moving streams, beaver ponds and lakes.	No	No observations in area/habitat not present
Pink Milkwort	<i>Polygala incarnata</i>	Endangered	Open Moist to dry sandy prairie habitats.	No	No observations in area/habitat not present
Pitcher's Thistle	<i>Cirsium pitcheri</i>	Threatened	Windblown sand dunes ridges, requires sand movement in these open bare areas.	No	No observations in area/habitat not present
Purple Twayblade	<i>Liparis liliifolia</i>	Threatened	Wide variety of habitat, open oak woodland, savannah, shrub thicket, shrub	No	No observations in area/habitat not present

			alvar, deciduous swamp, coniferous plantations.		
Red Mulberry	<i>Morus rubra</i>	Endangered	Forested valleys and floodplains.	No	No observations in area/habitat not present
Round-leaved Greenbrier	<i>Smilax rotundifolia</i>	Threatened	open wet sandy soil Carolinian forests.	No	No observations in area/habitat not present
Scarlet Ammannia	<i>Ammannia robusta</i>	Endangered	Mudflats, sandy beaches, edges of wetlands and ponds that are seasonally flooded.	No	No observations in area/habitat not present
Showy Goldenrod (Boreal)	<i>Solidago speciosa</i>	Threatened	Prairie Grasslands on south facing slope bordered with pine.	No	No observations in area/habitat not present
Showy Goldenrod (Great Lakes Plains)	<i>Solidago speciosa</i>	Endangered	Prairie Grasslands/Oak Savannahs.	No	No observations in area/habitat not present
Skinner's Agalinis	<i>Agalinis skinneriana</i>	Endangered	Tallgrass prairie habitats.	No	No observations in area/habitat not present
Slender Bush-clover	<i>Lespedeza virginica</i>	Endangered	Dry sandy soil in tallgrass prairie habitats.	No	No observations in area/habitat not present
Small White Lady's Slipper	<i>Cypripedium candidum</i>	Endangered	Moist prairie savannahs and limestone fens.	No	No observations in area/habitat not present
Small Whorled Pogonia	<i>Isotria medeoloides</i>	Endangered	Moist mixed forests with acidic soils and decaying leaves.	No	No observations in area/habitat not present
Small-flowered Lipocarpa	<i>Lipocarpa micrantha</i>	Threatened	Sandy beaches seasonally flooded and protected from waves.	No	No observations in area/habitat not present
Spotted Wintergreen	<i>Chimaphila maculata</i>	Threatened	Dry oak pine woodland habitats with sandy soils.	No	No observations in area/habitat not present
Virginia Goat's-rue	<i>Tephrosia virginiana</i>	Endangered	Acidic sand deposits in remnant black oak savannah.	No	No observations in area/habitat not present
Virginia Mallow	<i>Sida hermaphrodita</i>	Endangered	Loose sandy or rocky soils which are wet, usually around rivers,	No	No observations in area/habitat not present

			ditches or railroads.		
Western Silvery Aster	<i>Symphyotrichum sericeum</i>	Endangered	Open bur oak savannahs on shallow soils or bedrock.	No	No observations in area/habitat not present
White Prairie Gentian	<i>Gentiana alba</i>	Endangered	Sunny oak hickory savannah.	No	No observations in area/habitat not present
White Wood Aster	<i>Eurybia divaricata</i>	Threatened	open dry deciduous forests dominated by Beech and Sugar maple	No	No observations in area/habitat not present
Wild Hyacinth	<i>Camassia scilloides</i>	Threatened	Openings in woodlots, shrubby areas and forest edges with rich soil.	No	No observations in area/habitat not present
Willowleaf Aster	<i>Symphyotrichum praealtum</i>	Threatened	Oak Savannahs, along roadsides, railways, abandoned fields.	No	No observations in area/habitat not present
Wood-poppy	<i>Stylophorum diphyllum</i>	Endangered	Rich mixed deciduous woodlands, forested ravines and slopes along wooded streams.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Provide Rational
Golden eyed-lichen	<i>Teloschistes chrysophthalmus</i>	Endangered	Open habitats near water on various tree species.	No	No observations in area/habitat not present
Pale-bellied frost lichen	<i>Physconia subpallida</i>	Endangered	Requires open habitat, the bark of hardwood trees such as White ash, Black walnut, and American elm. It can also be found growing on fence posts and boulders.	No	No observations in area/habitat not present
Spoon-leaved moss	<i>Bryoandersonia illecebra</i>	Endangered	low-lying areas that are seasonally flooded under trees or shrub thickets, associated with swamps, marshes, and wet meadows.	No	No observations in area/habitat not present

Common Name	Latin Name	Status	Habitat Characteristics	Candidate for Subject Property? Yes or No or Possible	Rational
Aweme borer moth	<i>Papaipema aweme</i>	Endangered	prairie habitats, such as sand dunes and oak savannas.	No	No observations in area/habitat not present
Bogbean buckmoth	<i>Hemileuca sp. 1</i>	Endangered	restricted to open, chalky, low shrub fens containing large amounts of bogbean.	No	No observations in area/habitat not present
Gypsy Cuckoo Bumble Bee	<i>Bombus bohemicus</i>	Endangered	Occurs in diverse habitats such as open meadows, agricultural and urban areas, boreal forest and woodlands.	No	No observations in area/habitat not present
Hine's emerald	<i>Somatochlora hineana</i>	Endangered	groundwater-fed wetlands with grassy vegetation.	No	No observations in area/habitat not present
Hoptree Borer	<i>Prays atomocella</i>	Endangered	Common Hoptree.	No	No observations in area/habitat not present
Hungerford's crawling water beetle	<i>Brychius hungerfordi</i>	Endangered	small to medium-sized streams with cool, high quality, fast-flowing water, often immediately downstream from beaver dams, culverts and man-made barriers.	No	No observations in area/habitat not present
Lake Huron Grasshopper	<i>Trimerotropis huroniana</i>	Threatened	lives exclusively in open dune habitat along the shores.	No	No observations in area/habitat not present
Laura's clubtail	<i>Stylurus laurae</i>	Endangered	shallow, sandy or sandy-muddy bottomed creeks with forested shorelines.	No	No observations in area/habitat not present
Mottled duskywing	<i>Erynnis martialis</i>	Endangered	meadows, open barrens, sandy patches among woodlands, and alvars.	No	No observations in area/habitat not present
Northern barrens tiger beetle	<i>Cicindela patruela</i>	Endangered	sandy oak-pine woodlands and savannah.	No	No observations in area/habitat not present

Pygmy snaketail	<i>Ophiogomphus howei</i>	Endangered	large, fast flowing rivers having substrates of sand and gravel.	No	No observations in area/habitat not present
Rapids clubtail	<i>Phanogomphus quadricolor</i>	Endangered	found in clear, cool medium-to-large rivers with gravel shallows and muddy pools.	No	No observations in area/habitat not present
Riverine clubtail	<i>Stylurus amnicola</i>	Endangered	streams and rivers with sandy, muddy, or gravelly beds.	No	No observations in area/habitat not present
Rusty-patched bumble bee	<i>Bombus affinis</i>	Endangered	open habitat such as mixed farmland, urban settings, savannah, open woods and sand dunes.	No	No observations in area/habitat not present

Appendix C

Significant Wildlife Habitat Screening

<u>Wildlife Habitat</u>	<u>Wildlife Species</u>	<u>ELC Ecosite Codes</u>	<u>Habitat Criteria and Information Sources</u>	<u>Candidate SWH? Yes or No or Possible</u>	<u>Provide Rationale</u>
Seasonal Concentration Areas of Animals	-	-			
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck, Wood Duck, Green-winged Teal, Blue-winged Teal, Mallard, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall	CUM1, CUT1 - plus evidence of annual spring flooding from melt water or run-off within these Ecosites.	Fields with sheet water during Spring (mid-March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH.	No	Habitat feature not present on site.
Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall, Green-winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White-winged Scoter, Black Scoter, Ring-necked duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant, Canvasback, Ruddy Duck	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Need aggregations of 100 or more of listed species for 7 days and >700 waterfowl use days.	No	Habitat feature too small to support aggregations of 100 or more birds

<p>Shorebird Migratory Stopover Area</p>	<p>Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit, Black-bellied Plover, American Golden-Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt, Sandpiper, Short-billed Dowitcher, Red-necked, Phalarope Whimbrel, Ruddy Turnstone, Sanderling, Dunlin</p>	<p>BB01, BB02, BBS1, BBS2, BBT1, BBT2, SD01, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5</p>	<p>shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines are extremely important. Need 3 or more listed species and >1000 shorebird use days in spring or fall migration period to confirm significance.</p>	<p>No</p>	<p>Habitat feature not present on site.</p>
<p>Raptor Wintering Area</p>	<p>Rough-legged Hawk, Red-tailed Hawk, Northern Harrier, American Kestrel, Snowy Owl Special Concern: Short-eared Owl</p>	<p>Combination of ELC Community Series; need to have present one Community Series from each land class; Forest: FOD, FOM, FOC. Upland: CUM; CUT; CUS; CUW.</p>	<p>Habitat consists of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. Need to be >20Ha with combination of forest and upland.</p>	<p>Possible</p>	<p>Habitat feature possible within woodlands on and adjacent to the site. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.</p>
<p>Bat Hibernacula</p>	<p>Big Brown Bat, Little Brown Myotis, Eastern Pipistrelle/Tri-coloured Bat,</p>	<p>CCR1, CCR2, CCA1, CCA2 (buildings not considered SWH)</p>	<p>Caves, mine shafts, underground foundations and Karsts. Studies should be done during the peak</p>	<p>No</p>	<p>Habitat feature not present on site.</p>

	Northern Myotis, Eastern Small-footed Myotis		swarming period (Aug-Sept).		
Bat Maternity Colonies	Big Brown Bat, Little Brown Myotis, Silver-haired Bat, Northern Myotis	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD, FOM	Tree cavities, vegetation and often in buildings. Not caves and mines in Ontario. Located in mature (>80 yrs old) deciduous or mixed forest stands with > 10Ha large diameter (>25cm dbh) wildlife tree (snags).	Possible	Habitat feature possible within woodlands. Snag density in vicinity of proposal not sufficient to warrant acoustic monitoring. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.
Bat Migratory Stopover Area	Hoary Bat, Eastern Red Bat, Silver-haired Bat	No specific ELC types.		Possible	Habitat feature possible within woodlands. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.
Turtle Wintering Areas	Midland Painted Turtle Special Concern: Northern Map Turtle, Snapping Turtle	Snapping and Midland Painted turtles, ELC Community Classes; SW, MA, OA and SA, ELC Community Series; FEO and BOO Northern Map Turtle - Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	Water has to be deep enough not to freeze and have soft mud substrates. Permanent waterbodies, large wetlands, and bogs or fens with adequate dissolved oxygen.	No	Wetland feature less than 30cm deep. Will not support wintering habitat.

<p>Reptile Hibernaculum</p>	<p>Snakes: Eastern Gartersnake, Northern Watersnake, Northern Red-bellied Snake, Northern Brownsnake, Smooth Green Snake, Northern Ring-necked Snake</p> <p>Special Concern: Milksnake, Eastern Ribbonsnake</p> <p>Lizard: Special Concern (Southern Shield population): Five-lined Skink</p>	<p>Any ecosites in Ontario.</p>	<p>Sites located below frost lines in burrows, rock crevices and other natural locations. Areas of broken and fissured rock are valuable since they provide access to sites below the frost lines. Wetlands can also be important over-wintering habitat.</p>	<p>Possible</p>	<p>Habitat feature possible within woodlands. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.</p>
<p>Colonial-Nesting Bird Breeding Habitat (Bank and Cliff)</p>	<p>Bank Swallow, Cliff Swallow, Northern Rough-winged Swallow</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles (Bank Swallow and N. Rough-winged Swallow). Cliff faces, bridge abutments, silos, barns (Cliff Swallows). Habitat found in the following ecosites: CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1</p>	<p>Exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. Man-made structures or recently disturbed soil areas (berms/embankments/stockpiles not included).</p>	<p>No</p>	<p>Habitat feature not present on site.</p>
<p>Colonial Nesting Bird Breeding Habitat (Trees/Shrubs)</p>	<p>Great Blue Heron, Black-crowned Night-Heron, Great Egret, Green Heron</p>	<p>SWM2, SWM3, SWM5, SWM6, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7, FET1</p>	<p>Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Most nests in trees are 11-15m from ground, near the top of the tree.</p>	<p>No</p>	<p>Although reported in NHIC square applicable to this site no habitat feature present</p>

					on site or adjacent lands.
Colonial Nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1:50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM, CUT, CUS	Any rocky island or peninsula within a lake or large river. Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird).	No	Habitat feature not present on site.
Migratory Butterfly Stopover Areas	Painted Lady, White Admiral Special Concern: Monarch	Combination of ELC Community Series; need to have present one Community Series from each landclass: Field: CUM, CUT, CUS Forest: FOC, FOD, FOM, CUP Anecdotally, a candidate sight for butterfly stopover will have a history of butterflies being observed.	need minimum 10Ha with field and forest habitat and needs to be located within 5 Km of LO.	No	Habitat feature not present on site.
Landbird Migratory Stopover Areas	All migratory songbirds. Canadian Wildlife Service Ontario website: http://www.on.ec.gc.ca/wildlife_e.html All migrant raptors species. Ontario Ministry of Natural	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD	woodlots > 10Ha and within 5 Km of LO, woodlots located on peninsulas or points or oriented in N to S direction along the shore and located within 5 Km of LO.	No	Habitat feature not present on site.

	Resources: Fish and Wildlife Conservation Act, 1997. Schedule 7: Specially Protected Birds (Raptors)				
Deer Yarding Areas	White-tailed Deer	Note: OMNR to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2, CUP3, FOD3, CUT		Possible	Habitat feature possible within woodlands in the eastern portion of the site. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.
Deer Winter Congregation Areas	White-tailed Deer	All Forested Ecosites with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD Conifer plantations much smaller than 50 ha may also be used.		Possible	Habitat feature possible within woodlands in the eastern portion of the site. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.

Rare Vegetation Communities	-	-			
Talus Slope (Cliffs and Talus Slopes)		Any ELC Ecosite within Community Series: TAO, TAS, TAT, CLO, CLS, CLT	Cliff and talus slopes occur along the Niagara Escarpment.	No	Vegetation feature not present on site.
Sand Barren		ELC Ecosites: SBO1, SBS1, SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicket-like (SBS1), or more closed and treed (SBT1). Tree cover always < 60%.	Exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Little or no solid and the underlying rock protrudes through the surface. Usually located within forests or savannah. Vegetation can vary from patchy and barren to tree covered by less than 60%.	No	Vegetation feature not present on site.
Alvar		ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. Alternating periods of inundation and drought. Sparse lichen-moss, grasslands, shrublands and indicator plants. Vegetation cover varies from patchy to barren with a less than 60% tree cover.	No	Vegetation feature not present on site.
Old Growth Forest		Forest Community Series: FOD, FOC, FOM	Heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris. Stands 30Ha or greater in size or with at least 10Ha interior habitat assuming 100m buffer at edge of forest.	No	Vegetation feature not present on site.

Savannah		TPS1, TPS2, TPW1, TPW2, CUS2	Tallgrass prairie habitat that has tree cover between 25-60%. No minimum size to site.	No	Vegetation feature not present on site.
Tallgrass Prairie		TPO1, TPO2	Has ground cover dominated by prairie grasses. An open tallgrass prairie habitat has < 25% tree cover. No minimum size to site.	No	Vegetation feature not present on site.
Other Rare Vegetation Communities		Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTGcxlviii. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Alvar, cliffs, beaches, fens, forest, marsh, barrens, dunes, swamps, and prairies.	No	Vegetation feature not present on site.

<u>Specialized Habitat for Wildlife</u>	-	-			
Waterfowl Nesting Area	American Black Duck, Northern Pintail, Northern Shoveler, Gadwall, Blue-winged Teal, Green-winged Teal, Wood Duck, Hooded Merganser, Mallard	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4 Note: includes adjacency to Provincially Significant Wetlands	Extends 120m from a wetland (>0.5 Ha) or a wetland (>0.5Ha) within 120m or a cluster of 3 or more small (<0.5Ha) wetlands within 120m of each individual wetland where waterfowl nesting is known to occur.	No	Habitat feature to small (0.3ha) to support as significant wildlife habitat feature.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey Special Concern: Bald Eagle	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	A list of ecosites directly adjacent to riparian areas-rivers, lakes, ponds and wetlands. Nests along forested shorelines, islands, or on structures over water. Osprey nests: top of tree, Eagle nests: in super canopy trees in notch within the tree's canopy.	No	Habitat feature not present on site.
Woodland Raptor Nesting Habitat	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3	All natural or conifer plantation woodland/forest stands >30Ha with 10Ha of interior habitat. Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees.	Possible	Habitat feature possible within woodlands. No stick nests observed. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.

Turtle Nesting Areas	Midland Painted Turtle Special Concern Species: Northern Map Turtle, Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) cxlviii or within the following ELC Ecosites: MAM2, MAM3, MAM4, MAM5, MAM6, MAM1, MAM2, MAM3, SAS1, SAM1, SAF1, BOO1, FEO1	Exposed mineral soil areas adjacent or within the listed ecosites. Close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. It must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas.	No	Habitat feature not present on site.
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Areas where groundwater comes to the surface. Often, they are found within headwater areas within forested habitats. Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system.	Possible	Habitat feature possible within wetland ecotype although limited. Wetland is well buffered from existing and potential development areas by woodlands which are to be retained.
Amphibian Breeding Habitat (Woodland)	Eastern Newt, Blue-spotted Salamander, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog	All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians	Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians. Presence of a wetland, lake, or pond within or adjacent (within 120m) to a woodland (no minimum size). Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	No	Habitat feature not present on site.

<p>Amphibian Breeding Habitat (Wetland)</p>	<p>Eastern Newt, American Toad, Spotted Salamander, Four-toed Salamander, Blue-spotted Salamander, Gray Treefrog, Western Chorus Frog, Northern Leopard Frog, Pickerel Frog, Green Frog, Mink Frog, Bullfrog</p>	<p>ELC Community Classes SW, MA, FE, BO, OA and SA.</p>	<p>Wetlands and pools >500m2 supporting high species diversity, small or ephemeral habitats could also be significant. Presence of shrubs and logs increase significance of pond for some amphibian species (structures for calling, foraging, escape and concealment from predators). Permanent waterbodies with abundant emergent vegetation (bullfrogs).</p>	<p>Possible</p>	<p>Habitat feature possible within wetland feature. No incidental observations of species. Wetland is well buffered from existing and potential development areas by woodlands which are to be retained.</p>

<u>Habitat for Species of Conservation Concern</u>					
Marsh Bird Breeding Habitat	<p>American Bittern, Virginia Rail, Sora, Common, Moorhen, American Coot, Pied-billed Grebe, Marsh Wren, Sedge Wren, Common Loon, Sandhill Crane, Green Heron, Trumpeter Swan</p> <p>Special Concern: Black Tern, Yellow Rail</p>	<p>MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SAS1, SAM1, SAF1, FEO1, BOO1</p> <p>For Green Heron: All SW, MA and CUM1 sites.</p>	<p>Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present.</p>	No	Habitat feature not present on site.
Woodland Area-Sensitive Bird Breeding Habitat	<p>Yellow-bellied Sapsucker, Red-breasted Nuthatch, Veery, Blue-headed Vireo, Northern Parula, Black-throated Green Warbler, Blackburnian Warbler, Black-throated Blue Warbler, Ovenbird, Scarlet Tanager, Winter Wren</p> <p>Special Concern: Cerulean Warbler, Canada Warbler</p>	<p>All Ecosites associated with these ELC Community Series; FOC, FOM, FOD, SWC, SWM, SWD</p>	<p>Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30Ha. Interior forest is at least 100m from forest edge habitat.</p>	Possible	<p>Habitat feature possible within woodland portion of the property. The woodland portion of the property is where Red-breasted Nuthatch, Veery, and Ovenbird, were observed during the breeding season. No direct evidence of nesting was observed. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.</p>
Open Country Bird Breeding Habitat	<p>Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier,</p>	<p>CUM1 CUM2</p>	<p>Large grassland areas >30Ha. Not Class 1 or 2 agricultural lands and not being actively used for farming.</p>	No	Habitat feature not present on site.

	Savannah Sparrow Special Concern: Short-eared Owl				
Shrub/Early Successional Bird Breeding Habitat	Indicator Spp: Brown Thrasher, Clay-coloured Sparrow Common Spp.: Field Sparrow, Black-billed, Cuckoo, Eastern Towhee, Willow Flycatcher Special Concern: Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2 Patches of shrub ecosites can be complexed into a larger habitat for some bird species	Large natural field areas succeeding to shrub and thicket habitats >30Ha in size.	No	Habitat feature not present on site.
Terrestrial Crayfish	Chimney or Digger Crayfish; (Fallicambarus fodiens) Devil Crawfish or Meadow Crayfish; (Cambarus Diogenes)	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3	Meadow and edges of shallow marshes (no minimum size) identified should be surveyed for terrestrial crayfish.	No	Habitat feature not present on site.
Special Concern and Rare Wildlife Species	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre.	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy		Common Snapping Turtle & Massasauga found within NHIC Mapping & Eastern Wood Pewee observed within eastern woodland portion of property	Common snapping turtle habitat not present on site. Massasauga Rattlesnake habitat not present on site. Eastern Wood Pewee observed in woodland where no impacts expected as severance is for existing use and proposed building envelope is outside woodland.

Animal Movement Corridors	-	-			
Amphibian Movement Corridors	Eastern Newt, Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog	Corridors may be found in all ecosites associated with water. • Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1	Corridors may be found in all ecosites associated with water. Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH.	Possible	Habitat feature possible immediately adjacent to wetland feature. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.
Deer Movement Corridors	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.		Possible	Habitat feature possible within eastern woodland portion of property. No woodland impacts expected as severance is for existing use and proposed building envelope is outside woodland.

Appendix D

Recommendations

Avoidance

- Limit the proposed lot to the currently cleared area in the south west corner of the property;
- Limit the building envelope for the retained lot to the clearing immediate north of the proposed severance; and,
- Require that the building envelope be delineated by temporary fencing at the limits of the clearing (tree drip-line) and requiring that this fencing be maintained until such time as construction is completed.

Mitigation

- No mitigation is recommended at this time.

Buffers And Setbacks

- No additional buffers or setbacks are required.

Compensation

Compensation is not applicable to this proposal.