Michalski Nielsen
ASSOCIATES LIMITED

February 27, 2024

Bob List
List Planning Ltd.
103 Southbank Drive
Bracebridge, Ontario P1L 1G3

Re: Natural Heritage Evaluation, 120 Lake Woods Drive, Township of Whitchurch-Stouffville; Our File 1023

Dear Mr. List:

Michalski Nielsen Associates Limited, working in conjunction with the firm Palmer, is pleased to provide you with this Natural Heritage Evaluation in relation to a proposal to sever an existing residential lot, located at 120 Lake Woods Drive in Whitchurch-Stouffville, into two residential lots, the first being approximately 1.3 ha in size and containing the existing dwelling, the second also being approximately 1.3 ha in size and being presently vacant. The subject property is shown in **Figure 1**. Additional background mapping and aerial photography showing the existing lot and the portion of it to be severed is included in **Appendix A**. As is evident from that aerial photography, the new lot to be created is characterized by an expanse of mown lawn, with very gentle grades. As is also clear from background mapping and aerial photography included in **Appendix A**, this application will result in two residential lots (one of which will contain the existing residence, the other which is currently vacant) of the same general size and character as surrounding lots within the rural subdivision abutting the subject property is located. It also appears quite clear from the manner in which the subject property was developed that the eventual plan, prior to current planning policy restrictions, was to sever this property into two.

1.0 BACKGROUND INFORMATION ON THE SUBJECT PROPERTY AND ITS SETTING

The subject property is located on the Oak Ridges Moraine and falls under the jurisdiction of the Oak Ridges Moraine Conservation Plan (ORMCP) (2017). The ORMCP was established as a regulation under the *Oak Ridges Moraine Conservation Act* (2001). This ecologically based plan recognizes that the ORM has a unique concentration of environmental, geological and hydrogeological features that make its ecosystem vital to South-central Ontario and is intended to provide land use and resource management planning direction which protects the areas ecological and hydrological features and functions. In doing so, it describes four land use designations, Natural Core Areas (38% of the plan area), Natural Linkage Areas (24% of the planning area), Countryside Areas (30% of the planning area) and Settlement Areas (8% of the planning area), with different

policy directions for each. The subject lands fall within a Natural Linkages Area, described under the plan as those areas which "protect critical natural and open space linkages between the Natural Core Areas and along rivers and streams. The only uses allowed in these areas are those in Natural Core Areas, plus some aggregate resource operations". Note that uses within the somewhat more restrictive Natural Core Areas are existing uses, agricultural uses and very restricted new resource management, low intensity recreational, home businesses, and infrastructure uses.

While the policy direction of the ORMCP would allow for an expansion of the existing home and associated amenity space into the lands which are proposed to be severed, it does not allow for a severance of a new residential lot off of this property, as appears to have been the original intentions for this lot (prior to the ORMCP having come into effect). Indeed, the policies of the plan would not have permitted the original plan of subdivision in which the subject lot was created, were it in effect prior to the application having been made for that land use. On the other hand, were the subject property to be located within the Countryside Area of the ORMCP, an area which is substantially similar in character to the lands in which the subject property is located, both plans of subdivision and new lots through consent agreement would be permitted (for example, under Section 15(1) of the ORMCP, minor infill is permitted within Rural Settlements).

The only way a new lot can be created and used within a Natural Linkage Area is through a Ministerial Zoning Order (MZO). It is my understanding that this proposed development is intended to proceed under such an order to establish permitted land uses and site regulations, as well as to proceed under a consent to sever application to split the property. It is the purpose of the present report to determine if these applications meet with the intent and spirit of the ORMCP legislation, ensuring that the land use change being considered protects the ecological and hydrological features and functions of this area?

On the matter of ecological features and functions, the ORMCP establishes minimum vegetation protection zones adjacent to various types of Key Natural Heritage Features and Key Hydrological Features, for example of 30 m from wetlands and 30 m from the drip line of woodlands. This establishes a very high level of protection for such resource features. However, there are policies under the ORMCP which provide flexibility in certain circumstances. For example, Policy 6(2) of the Plan allows for the expansion of an existing building or structure on the same lot, if the applicant demonstrates that there will be no change in use and that the expansion will not adversely affect the ecological integrity of the plan area. This clause is often used in consideration of the expansion of an existing dwelling and its amenity space, and does not require application of the minimum vegetation protection zone, so could for example allow for the existing dwelling on the subject lot to be expanded into the presently open lands, providing that new areas of building and amenity space were laid out to ensure that the significant woodland area occurring to the south of these lands was not harmed by these works. In requiring a MZO to allow for a new residential lot to be severed off of this property, it is our view that this less onerous test should be applicable, as the new land use is to be in character with what the current owner could do with these lands as of right (i.e., with an expansion of the existing dwelling and associated amenity space), and is consistent in character with the surrounding land uses. As such, it is our

view that the application of this less stringent test is appropriate in demonstrating that his land use change being considered protects the ecological and hydrological functions of this area.

To complete this assessment, the subject property was inspected on June 8, 2023 by two ecologists, who have combined over 50 years of experience in evaluating the impacts of land use change, including those on the ORM, on the natural environment. Prior to this inspection, background mapping and aerial photography were examined to better understand the site's ecological setting. During the inspection, we examined the relationship of the proposed severance parcel to adjacent lands, including adjacent ecologically-sensitive lands, site drainage conditions, vegetation and flora, the potential for Species at Risk and the potential for Significant Wildlife Habitat. In the pages which follow, we first describe our project methods, followed by a description of site conditions. We then describe the potential impacts of the proposed land use changes on the natural environment, with particular reference to Key Natural Heritage Features and Key Hydrological features. This is followed by our recommendations on the appropriateness of this land use change, from the perspective of its ability to protect the ecological and hydrological features and functions of this area, together with our associated recommendations to ensure that is the case.

2.0 PROJECT METHODS

2.1 Vegetation and Flora

Ecologists completed a field investigation on June 8, 2023 to document existing vegetation communities, natural features, and general site conditions. Weather conditions at the time of the investigation included an ambient temperature of 16° C with wind gusts of 10-15 km/h. Vegetation communities were mapped and described based on their best fit to community classifications within standard systems provided in the Ecological Land Classification (ELC) System for Southern Ontario (Lee, et al., 1998). The identification of vegetation communities assisted in the assessment of wildlife habitat opportunities.

Botanical surveys were completed by traversing the site and recording species observed in the representative vegetation communities. Provincial plant status was based on the *Provincially Rare Flora of Ontario* (Oldham and Brinker, 2009) and the Natural Heritage Information Centre (NHIC, 2020).

2.2 Wildlife

2.2.1 Species at Risk

Prior to fieldwork, existing Species at Risk (SAR) records were investigated on the NHIC Make-a-Map online application. Additional species to those identified in nearby NHIC squares were analyzed in this review due to the knowledge of their occurrence within the Township of Whitchurch-Stouffville. General screening for potential SAR habitat opportunities was completed for the subject property and adjacent lands during the field investigation. Habitat opportunities for SAR on the site were then assessed by comparing habitat preferences of species deemed to have potential to occur against current site conditions.

2.2.2 Significant Wildlife Habitat

The Significant Wildlife Habitat Criteria for Ecoregion 6E (MNRF 2015) were compared with the habitat attributes of the subject property and adjacent lands to determine the potential for SWH.

3.0 EXISTING CONDITIONS

3.1 Overview of Site Conditions and Drainage

The existing environmental conditions of the subject property are shown on **Figure 2**. The subject property is located on the south side of Lake Woods Drive, west of York Durham Line. It is located within a residential neighbourhood. The eastern half of the lot 120 Lake Woods Drive contains a single family home and associated amenity area and accessory structures. The westerly half of this property that is intended to be severed primarily supports mowed cultural meadow. Planted hedgerow occurs between the existing residence on the subject property and this area of mown cultural meadow, with an area of natural forest occurring to the immediate south. Wetland features (unevaluated) occur within 120 m of the subject property, on the east side of York Durham Line, but are more than 120 m from the parcel to be severed. There are additional wetland features to the north and northwest, also more than 120 m from the parcel to be severed.

The parcel to be severed has very gentle grades of ±5%, generally towards the northwest corner of the parcel. While there would not be any runoff from these lands under ordinary circumstances, any such runoff would sheet flow to ditching that has been established along Lake Woods Drive, from where it would flow west (note that the ditching along this road shows no evidence of regularly conveying flows).

3.2 Vegetation Communities and Flora

The parcel that is to be severed is primarily comprised of a mown meadow community, best classified as Dry to Moist, Old Field Meadow Ecosite Type (CUM1-1) (**Photograph 1**). This community consists of a variable mixture of common meadow herbaceous species such as Meadow Hawkweed (*Pilosella caespitosa*), Pineapple Weed (*Matricaria discoidea*), Red Clover (*Trifolium pratense*), Bull Thistle (*Cirsium vulgare*), Rough Cinquefoil (*Potentilla norvegica)*, Speedwell species (*Veronica* sp.), Common Dandelion species (*Taraxacum* sp.) and Common Plantain (*Plantago major*). Pasture grasses such as Kentucky Bluegrass species (*Poa* sp.) and Smooth Brome *(Bromus inermis*) are also present in abundance. There is also a small area of immature planted/retained successional trees on the east side of the meadow which consists of five Manitoba Maple (*Acer negundo*), two Balsam Poplar (*Populus balsamifera*), two Scots Pine (*Pinus sylvestris*) and one White Willow (*Salix alba*) (**Photograph 2**).

A planted Hedgerow (HR) community exists along the eastern boundary of the parcel that is to be severed and extends in an easterly direction along the southern limits of the parcel to be retained. The hedgerow is dominated by White Spruce (*Picea glauca*) (**Photograph 3**).

KEY MAP

LEGEND

- Watercourse [1]
- Woodland Dripline (Palmer - June 8, 2023)

Wetland [1]

- Not Evaluazted as Per OWES
- Evaluated-Provincial
- Existing Ecological Conditions (ELC)
- ELC Inclusion
- Subject Property (1.3 ha)

ELC LEGEND:
ANTH: Anthropogenic
CUM1-1: Dry-Moist Old Field Meadow Type
FOM2-2: Dry-Fresh White Pine - Sugar Maple Mixed Forest Type
HR: Hedgerow

1 - Land Information Ontario (LIO)

0 25 50 75 100
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:1,700
Page Size: Tabloid (11 x 17 inches)

Drawn: --
Checked: --
Date: Jul 7, 2023

Source Notes:
Base imagery (2022) provided by York region open GIS services. Contains data licensed under the Open Data License (Ontario).

DRAFT

NORTH

CLIENT: MNAL

PROJECT: 120 Lake Woods Drive - Environmental Review

TITLE: **Existing Environmental Conditions**

Palmer

REF. NO. 16033128-2-2

Figure 2

Along the southern boundary of the parcel to be severed is a woodland area characterized as Dry to Fresh White Pine – Sugar Maple Mixed Forest Type (FOM2-2) (**Photograph 4**). The canopy throughout this community provides dense cover and is dominated by mature Eastern White Pine (*Pinus strobus*) and Sugar Maple (*Acer saccharum*). The White Pine have maximum sizes up to approximately 50 cm diameter at breast height (DBH). The subcanopy contains both White Spruce and Balsam Fir (*Abies balsamea*). Bitternut Hickory (*Carya cordiformis*) was also present in the subcanopy, but in limited amount. The understory layer provides approximately 25% cover and supports woody species that include the following: White Pine, Alternate-leaved Dogwood (*Cornus alternifolia*), Large-toothed Aspen (*Populus grandidentata*), Red Raspberry (*Rubus idaeus*) and also small amounts of European Buckthorn (*Rhamnus cathartica*) along the edges. Canada Mayflower (also known as Wild Lily-of-the-Valley; *Maianthemum canadense*), Wild Sarsaparilla (*Aralia nudicaulis*), and Sugar Maple saplings are present within the ground cover, providing approximately 40% cover. The edge of this community (as represented by the dripline) was carefully delineated by GPS during the 2023 field investigation.

Photographs 1 and 2. Typical conditions throughout the CUM1-1 meadow community (Photograph 1) and the planted trees within the meadow community (Photograph 2).

Photographs 3 and 4. Typical conditions of the White Pine Hedgerow (HR) (Photograph 3) and the mixed forest community (FOM2-2) (Photograph 4).

Plant species identified on the subject property are listed in **Appendix B**. A total of 25 species of vascular plants were observed during the field investigation. For those plants identified to species, the flora records result in 13 (52%) native species and 9 species (36%) identified as non-native to Ontario. There were three species only identified to family (12%). All of the native species have S-Ranks of S5, indicating they are common and secure in the province.

3.3 Species at Risk Screening

The *Endangered Species Act* (*ESA*) provides protection for species listed as Endangered or Threatened in Ontario, including their habitat. The Species at Risk in Ontario (SARO) List also identifies species of Special Concern that may become Threatened or Endangered in the future. Species of Special Concern and their habitats are not protected under the *ESA*.

A habitat screening and assessment of on-site habitat suitability was completed for species identified through our background review as having records in the general study area. This assessment can be found in **Appendix C,** providing a detailed description of each species' habitat, as well as a discussion of habitat suitability within the subject property and recommendations for mitigation where applicable. Potential habitat for the following SAR is primarily associated with the mixed forest community that extends south of the subject property:

Birds

- Eastern Wood-Pewee (*Contopus virens)*
- Canada Warbler (*Cardellina canadensis*)

Mammals

- Tri-colored Bat (Eastern Pipistrelle) (*Perimyotis subflavus*)
- Eastern Small-footed Myotis (*Myotis leibii*)
- Little Brown Myotis (*Myotis lucifugus*)
- Northern Myotis (*Myotis septentrionalis*)

Providing there is appropriate protection of the woodland area to the south, there are no concerns that any of these species could be impacted by the development of a home on the parcel that is proposed to be severed. Neither the hedgerow on the east side of the parcel to be severed or the small number of younger planted/retained successional trees on this parcel contribute to this habitat potential.

A larger range of species may be found within wetlands units identified to the east (a minimum 180 m from parcel to be severed) and north/northeast (a minimum 160 m from the parcel to be severed), including:

Herptiles (potential within wetland units)

- Blanding's Turtle (*Emydoidea blandingii*)
- Snapping Turtle (*Chelydra serpentina*)
- Western Chorus Frog (*Pseudacris triseriata*)

Site drainage from the parcel proposed to be severed occurs away from these wetland units, with no concern that the development of a home and associated amenity features on this parcel could negatively impact on those distant wetland units.

3.4 Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) can be difficult to appropriately determine at the site-specific level, as the assessment must incorporate information from a wide geographic area and consider other factors such as regional resource patterns and landscape effects. To help with site level assessments, the MNRF has developed the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (Ontario Ministry of Natural Resources, 2015).

SWH is defined by the MNRF in the Significant Wildlife Habitat Technical Guide (Ontario Ministry of Natural Resources, 2000) and includes the following categories:

- Seasonal Concentration Areas of Animals;
- Rare Vegetation Communities or Specialized Habitats for Wildlife;
- Habitats of Species of Conservation Concern; and
- Animal Movement Corridors.

Criteria for the identification of these features are also provided in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. These criteria were used to screen for potential SWH within and adjacent to the parcel that is proposed to be severed (**Appendix D**).

No potential SWH were identified as being present on the parcel to be severed. This was confirmed during the 2023 field investigation. However there is potential for bat maternity colonies within the mixed forest that extends south of these lands; providing there is appropriate protection of the woodland area to the south, there are no concerns that such habitat will be impacted by development of a home on this parcel. There is also

Significant Woodlands. The woodland community which borders the southern edge of the proposed severed lot does qualify as Significant Woodland. The dripline of this woodland has been carefully identified on **Figure 2**, and is very obvious on site. As has been previously noted, the policies of the ORMCP typically require a 30 m minimum vegetation protection zone from the edges of Significant Woodland features. However, there are exceptions to that, including those associated with Policy 6(2) of the ORMCP, which is applicable to all land use categories in the ORMCP and which allows for additions to existing structures providing that development will not adversely affect the ecological integrity of the plan area. It is noted that this policy would allow the property owner to expand their home and amenity space into the parcel that is to be severed, including within close proximity of the woodland. With that being the case, and with a 30 m minimum vegetation protection zone substantially restricting development potential within the proposed severed lot, it is important that the MZO apply this less restrictive text in this instance, which would still allow for development of these lands to meet with the intent/spirit of the ORMCP. In this regard, **the ecological integrity and functions of this woodland can be achieved with a structural setback of 7.5 m, and with grading to only be permitted within the first 2.5 m of that zone (i.e., a grading limit of 5 m from the drip line).** These setbacks and grading restrictions will ensure that the rooting systems of trees comprising this woodland will be protected and that this woodland will continue to provide the same ecological functions as it does today.

Significant Wildlife Habitat. A SWH review has been completed. While no SWH was identified on the subject property, candidate SWH was identified in association with the woodland to the south. That woodland is to be protected, with no concerns that SWH will be negatively impacted. Potential SWH associated with the distant wetlands will also be protected.

Sand Barrens, Savannahs and Tallgrass Prairies. There are no such features within or adjacent to the subject property.

Kettle Lakes. There are no such features within the subject property. Some of the wetlands within the surrounding area, the closest of which is a minimum 160 m from the parcel proposed to be severed, have attributes which suggest that they could be kettle depressions/ponds. There are no concerns, however, that development of the proposed severed lot could negatively impact on these resources.

Permanent and Intermittent Streams. There are no streams within the subject property, with the closest such watercourse being several hundred metres away. There are therefore no concerns the streams would be impacted by development of the proposed severed lot.

Seepage Areas and Springs. There are no seepage areas or springs within the subject property. It is possible that some of the wetlands located in the broader area could be partially supported by seepage areas, however in all cases such seepage areas would be over 120 m from the proposed severed lot, with no concerns that development of this lot could negatively impact them.

The subject property is within a **Landform Conservation Area (Category 2)**. There are no pronounced landform features within the proposed severed parcel, which has very gentle grades, and therefore no concern that development could impact on landform.

5.0 Summary Comments and Recommendations

The parcel proposed to be severed and developed is a vacant portion of an existing residential property which has been maintained as lawn. It has very gentle grades. A driveway could easily be physically constructed into this property from Lake Woods Drive and a home could be easily built without any negative impacts on adjacent natural heritage features or their ecological functions, including on an area of Significant Woodland to the immediate south and on more distant unevaluated wetlands (all a minimum 160 m away). Such development can be undertaken in a manner that does not negatively impact any Key Natural Heritage Features or Key Hydrological Features, on Species at Risk and their habitats, or on Significant Wildlife Habitat. It will not negatively impact on landform. Further, the severance of the existing residential lot into two, and the build-out of the newly created lot, would be in character with the surrounding rural residential subdivision, where many lots are of similar size to the two lots that would be created through such a severance.

Because the subject property is located within the ORMCP area, and within lands designated as Natural Linkage Area, land division is not permitted, unless supported by a MZO and severance application. The MZO would also need to allow for a lesser setback from the adjacent Significant Woodland to the south than the 30 m minimum vegetation protection zone described in the ORMCP. It has been the purpose of this report to determine whether this MZO would still meet the intent/spirit of the ORMCP policy direction, and specifically whether it would allow for the protection of the ecological and hydrological features and functions of this area. Our report has demonstrated the answer to this is affirmative, and Michalski Nielsen Associates Limited therefore recommend that the MZO be granted, subject to the requirement for the following recommendations to be implemented in the build-out of the newly created lot:

- **all buildings are to be sited a minimum 7.5 m from the dripline edge of the woodland occurring along the south boundary of the parcel to be severed, with an allowance for regrading within the first 2.5 m of that setback (i.e., to a distance of 5.0 m from the dripline of the woodland). Grading in association with the sewage disposal system is to maintain a minimum 5.0 m setback from the woodland;**
- **the hedgerow along the east boundary of the parcel to be severed is also to be protected, with a 2.5 m grading setback to be established from that hedgerow;**
- **tree removals are to be limited to the small number of young planted/retained successional trees within the eastern portion of the parcel to be severed. Those tree removals are to occur outside of the period of April 1 to September 30, to protect against potential harm to nesting birds;**
- **development is to work with existing grades in order to minimize earthworks and site disturbance;**

- **sediment and erosion controls must be properly installed around all areas of intended earthworks. These controls are to be inspected at lease weekly, with any required repairs made immediately, until such time as earthworks are completed and all disturbed areas have been graded out and stabilized;**
- **roof leaders from the new home and any associated structures are to grade to soakaway pits which promote the infiltration of precipitation. In locations where that is not feasible, they are to grade to rock fans which broadly disperse such runoff; and**
- **drainage from areas of driveways, parking pads and patios are to be broadly dispersed. Permeable surfaces are encouraged wherever feasible, for example by including one inch spaces that are filled with crushed stone between flagstones used in patios and by having parking pads surfaced with gravel.**

All of the above conditions can be implemented through a 51(26) Agreement requiring same, imposed as a condition of the Consent to Sever.

* * * * *

In closing, I trust that this report fully addresses the requirements of the province and the Town of Whitchurch-Stouffville. Please do not hesitate to contact the undersigned should there be any questions or comments.

Yours truly,

MICHALSKI NIELSEN ASSOCIATES LIMITED
Per:

Gord Nielsen, M.Sc.
Ecologist
President

References

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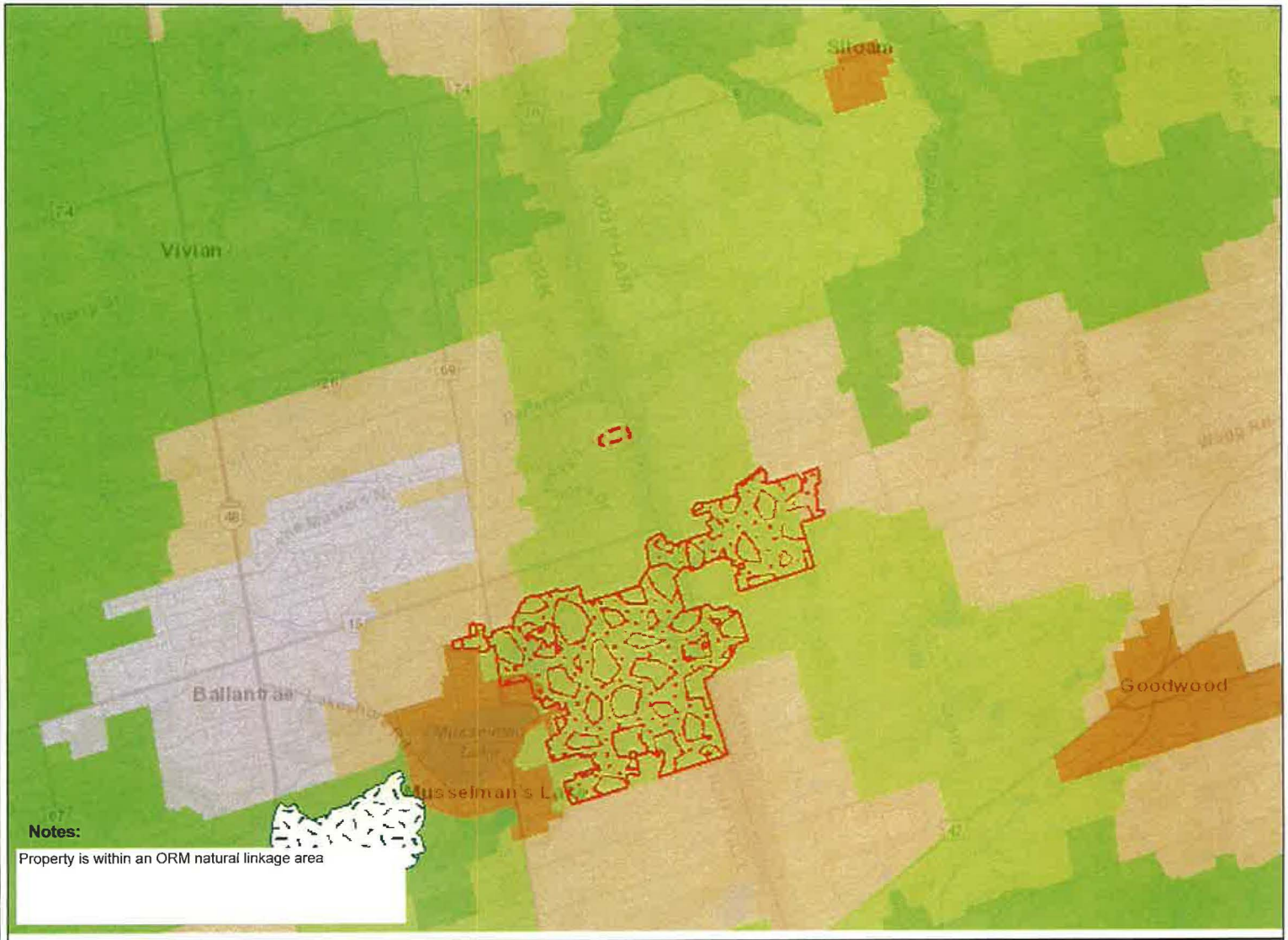
APPENDIX A – BACKGROUND MAPPING AND AERIAL PHOTOGRAPHY

Ontario

Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas

120 Lake Woods Drive, WS

Map created:6/7/2023



Notes:

Property is within an ORM natural linkage area

Legend

ANSI

- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Conservation Reserve
- Provincial Park

ORM Land Use Designation

- Countryside Area/zone de campagne
- Natural Core Area/zone centrale naturelle
- Natural Linkage Area/lien naturel
- Palgrave Estates Residential Community/communauté résidentielle de Palgrave Estates
- Rural Settlement/zone de peuplement rurale
- Settlement Area/zone de peuplement

2.6 0 1.32 2.6 Kilometres

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

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

Ontario

Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas

120 Lake Woods Drive, WS

Map created:6/7/2023

Legend

- Assessment Parcel
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland
- Woodland
- Conservation Reserve
- Provincial Park

0.7 0 0.33 0.7 Kilometres

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

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

CAUTION

THIS IS NOT A PLAN OF SURVEY AND SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK. THE WORK AND DRAWINGS HEREIN WERE COMPLETED FOR THE EXCLUSIVE USE OF OUR CLIENT AND NO LIABILITY IS ASSUMED TO ANY THIRD PARTIES OR SUBSEQUENT OWNERS.

THIS PLAN IS NOT AN ORIGINAL UNLESS EMBOSSED BY A SURVEYORS SEAL

SKETCH TO ILLUSTRATE
UNOBSTRUCTED SITE LINES – PROPOSED LOT

120 LAKE WOODS DRIVE
TOWN OF WHITCHURCH–STOUFFVILLE

SCALE 1 : 750 METRES

0 15 30 60

DISTANCE NOTES – METRIC

DISTANCES ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTE

POINTS OF ORIGIN FOR THE UNOBSTRUCTED SITE LINES ARE 1.8m OFFSET FROM THE EDGE OF ASPHALT – THE APPROXIMATE DISTANCE A DRIVER OF A VEHICLE WOULD BE WHEN ENTERING THE RIGHT OF WAY (LAKEWOODS DRIVE)

ERTL-HUNT
SURVEYORS
A division of IBW Surveyors Ltd.
IBWSURVEYORS.COM | 1.800.667.0696

PARTY CHIEF: • | DRAWN BY: DV | CHECKED BY: • | PLOT DATE: JUNE 6, 2023
FILE NAME: 120 LAKEWOODS | Copies available at ProtectYourBoundaries.ca

APPENDIX B – FLORA INVENTORY

Appendix B. Flora Inventory.

Scientific Name	Common Name	Provincially Tracked	COSEWIC Status	SAR Schedule 1 Status	SARO Status	S Rank	G Rank	N Rank	Exotic Status	Coefficient of Conservatism	Coefficient of Wetness
Abies balsamea	Balsam Fir	N				S5	G5	N5		5	-3
Abies balsamea	Balsam Fir	N				S5	G5	N5		5	-3
Acer negundo	Manitoba Maple	N				S5	G5	N5		0	0
Acer saccharum	Sugar Maple	N				S5	G5	N5		4	3
Aralia nudicaulis	Wild Sarsaparilla	N				S5	G5	N5		4	3
Bromus inermis	Smooth Brome	N				SNA	G5	NNA	SE5		5
Carya cordiformis	Bitternut Hickory	N				S5	G5	N5		6	0
Cirsium vulgare	Bull Thistle	N				SNA	GNR	NNA	SE5		3
Cornus alternifolia	Alternate-leaved Dogwood	N				S5	G5	N5		6	3
Dryopteris sp.	Wood Fern Species										
Endotropis alnifolia	Alder-leaved Buckthorn	N				S5	G5	N5		7	-5
Equisetum arvense	Field Horsetail	N				S5	G5	N5		0	0
Eurybia macrophylla	Large-leaved Aster	N				S5	G5	N5		5	5
Fagus grandifolia	American Beech	N				S4	G5	N5		6	3
Frangula alnus	Glossy Buckthorn	N				SNA	GNR	NNA	SE5		0
Fraxinus americana	White Ash	N				S4	G5	N5		4	3
Fraxinus pennsylvanica	Red Ash	N				S4	G5	N5		3	-3
Galium mollugo	Smooth Bedstraw	N				SNA	GNR	NNA	SE5		5
Geranium robertianum	Herb-Robert	N				S5	G5	N5		2	3
Geum canadense	Canada Avens	N				S5	G5	N5		3	0
Hesperis matronalis	Dame's Rocket	N				SNA	G4G5	NNA	SE5		3
Impatiens capensis	Spotted Jewelweed	N				S5	G5	N5		4	-3
Lactuca canadensis	Canada Lettuce	N				S5	G5	N5		3	3
Linnaea borealis	Twinflower	N				S5	G5	N5		7	0
Maianthemum canadense	Wild Lily-of-the-valley	N				S5	G5	N5		5	3
Maianthemum canadense	Wild Lily-of-the-valley	N				S5	G5	N5		5	3
Maianthemum racemosum	Large False Solomon's Seal	N				S5	G5	N5		4	3
Maianthemum sp.	Solomon's Seal Species										
Matricaria discoidea	Pineappleweed	N				SNA	G5	N5	SE5		3
Matteuccia struthiopteris	Ostrich Fern	N				S5	G5	N5		5	0
Mentha sp.	Mint Species										
Milium effusum	Wood Millet	N				S4S5	G5	N5		8	3
Myosotis scarpioides	True Forget-me-not	N				SNA	G5	NNA	SE5		-5
Onoclea sensibilis	Sensitive Fern	N				S5	G5	N5		4	-3
Osmundastrum cinnamomeum	Cinnamon Fern	N				S5	G5	N5		7	-3
Ostrya virginiana	Eastern Hop-hornbeam	N				S5	G5	N5		4	3
Oxalis montana	White Wood-sorrel	N				S5	G5	N5		7	3
Oxalis stricta	Upright Yellow Wood-sorrel	N				S5	G5	N5		0	3
Parthenocissus quinquefolia	Virginia Creeper	N				S4?	G5	N4?		6	3
Picea glauca	White Spruce	N				S5	G5	N5		6	3
Picea glauca	White Spruce	N				S5	G5	N5		6	3
Pilosella caespitosa	Meadow Hawkweed	N				SNA	GNR	NNA	SE5		5
Pinus strobus	Eastern White Pine	N				S5	G5	N5		4	3
Pinus strobus	Eastern White Pine	N				S5	G5	N5		4	3
Pinus sylvestris	Scots Pine	N				SNA	GNR	NNA	SE5		3
Plantago major	Common Plantain	N				SNA	G5	NNA	SE5		3

Appendix B. Flora Inventory.

Scientific Name	Common Name	Provincially Tracked	COSEWIC Status	SAR Schedule 1 Status	SARO Status	S Rank	G Rank	N Rank	Exotic Status	Coefficient of Conservatism	Coefficient of Wetness
Plantago major	Common Plantain	N				SNA	G5	NNA	SE5		3
Poa pratensis	Kentucky Bluegrass	P				S5	G5	N5		0	3
Poa sp.	Bluegrass Species										
Populus alba	White Poplar	N				SNA	G5	NNA	SE5		5
Populus balsamifera	Balsam Poplar	N				S5	G5	NNR		4	-3
Populus grandidentata	Large-toothed Aspen	N				S5	G5	N5		5	5
Populus grandidentata	Large-toothed Aspen	N				S5	G5	N5		5	5
Populus heterophylla	Swamp Cottonwood	Y				S1	G5	N1		10	-5
Potentilla norvegica	Rough Cinquefoil	N				S5	G5	N5		0	0
Prunus serotina	Black Cherry	N				S5	G5	N5		3	3
Pyrola elliptica	Shinleaf	N				S5	G5	N5		5	5
Quercus ellipsoidalis	Northern Pin Oak	Y				S3	G5	N3		9	5
Quercus rubra	Northern Red Oak	N				S5	G5	N5		6	3
Ranunculus acris	Common Buttercup	N				SNA	G5	NNA	SE5		0
Rhamnus cathartica	European Buckthorn	N				SNA	GNR	NNA	SE5		0
Rhus typhina	Staghorn Sumac	N				S5	G5	N5		1	3
Ribes cynosbati	Eastern Prickly Gooseberry	N				S5	G5	N5		4	3
Rubus idaeus	Red Raspberry	N				S5	G5	N5		2	3
Rubus idaeus	Red Raspberry	N				S5	G5	N5		2	3
Rubus pubescens	Dwarf Raspberry	N				S5	G5	N5		4	-3
Salix alba	White Willow	N				SNA	G5	NNA	SE4		-3
Salix sp.	Willow Species										
Solidago caesia	Blue-stemmed Goldenrod	N				S5	G5	N5		5	3
Sorbus decora	Showy Mountain-ash	N				S5	G5	N5		8	3
Taraxacum sp.	Dandelion Species										
Thelypteris palustris	Marsh Fern	N				S5	G5	N5		5	-3
Thuja occidentalis	Eastern White Cedar	N				S5	G5	N5		4	-3
Tilia americana	Basswood	N				S5	G5	N5		4	3
Toxicodendron radicans	Poison Ivy	N				S5	G5	N5		2	0
Trifolium pratense	Red Clover	N				SNA	GNR	NNA	SE5		3
Ulmus sp.	Elm Species										
Uvularia grandiflora	Large-flowered Bellwort	N				S5	G5	N5		6	5
Veronica officinalis	Common Speedwell	N				SNA	G5	NNA	SE5		5
Veronica sp.	Speedwell Species	N				S5	G5	N5		5	0
Viburnum opulus ssp. trilobum	Highbush Cranberry	N				S5	G5TNR	NNR		5	-3
Vitis sp.	Grape Species										

APPENDIX C – SPECIES AT RISK SCREENING

Appendix C. Species at Risk Screening.

NAME	SARA STATUS	SARO	COSEWIC	SCHEDULE	S RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/P/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
AVIFAUNA										
Bank Swallow (*Riparia riparia*)	THR	THR	THR	1	S4B	The Bank Swallow is threatened by loss of breeding and foraging habitat, destruction of nesting habitat and widespread pesticide use. Bank swallows are small songbirds with brown upperparts, white underparts and a distinctive dark breast band. It averages 12 cm long and weighs between 10 and 18 grams. The swallow can be distinguished in flight from other swallows by its quick, erratic wing beats and its almost constant buzzy, chattering vocalizations. They nest in burrows in natural and human-made settings where there are vertical faces in silt and sand deposit, including banks of rivers and lakes, active sand and gravel pits or former ones where the banks remain suitable. The birds breed in colonies ranging from several to a few thousand pairs (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	No habitat present on subject property or study area.	None expected.
Barn Swallow (*Hirundo rustica*)	THR	SC	SC	1	S4B	The Barn Swallow is a threatened species, is found throughout southern Ontario, and can range into the north as long as suitable nesting locations can be found. These birds prefer to nest within human made structures such as barns, bridges, and culverts. Barn Swallow nests are cup-shaped and made of mud; they are typically attached to horizontal beams or vertical walls underneath an overhang. A significant decline in populations of this species has been documented since the mid-1980s, which is thought to be related to a decline in prey. Since the Barn Swallow is an aerial insectivore, this species relies on the presence of flying insects at specific times during the year. Changes in building practices and materials may also be having an impact on this species (Ministry of Natural Resources and Forestry, 2015).	OBBA	N	While potential nesting habitat may be associated with the existing building structures located adjacent to the subject property, the imemdiate property limits are undeveloped and thus no habitat is available.	None expected.
Bobolink (*Dolichonyx oryzivorus*)	THR	THR	THR	1	S4B	The Bobolink is found in grasslands and hayfields, and feeds and nests on the ground. This species is widely distributed across most of Ontario; however, are designated at risk because of rapid population decline over the last 50 years (Ministry of Natural Resources and Forestry, 2014). The historical habitat of the bobolink was tallgrass prairie and other natural open meadow communities; however, as a result of the clearing of native prairies and the post-colonial increase in agriculture, bobolinks are now widely found in hayfields. Due to their reproductive cycle, nesting habits, and use of agricultural areas, bobolink nests and young are particularly vulnerable to loss as a result of common agricultural practices (i.e. first cut hay).	OBBA	N	There is a large meadow present on the Subject Property. However, this meadow has been mown which means the meadow no longer provides suitable habitat. **Therefore, there is no suitable habitat within the subject property.**	None expected.
Canada Warbler (*Cordellina canadensis*)	THR	SC	SC	1	S4B	The Canada Warbler is found in a variety of forest types, but is most abundant in moist, mixed forests with a well-developed, dense shrub layer. This species can also be locally abundant in regenerating forests following natural or anthropogenic disturbances. Nests are usually located on or near the ground on mossy logs, and along stream banks. In Canada, habitat loss due to conversion of swamp forests, agricultural activities and road development have contributed to the species' significant long-term decline, and its special concern designation. A reduction in forests with a well-developed shrub-layer has also likely impacted Canada warblers throughout their breeding range in Ontario (Committee on the Status of Endangered Wildlife in Canada, 2008).	OBBA	Y	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of nesting birds. As this forest community is to be retained, no impacts to individuals are anticipated.
Chimney Swift (*Chaetura pelagica*)	THR	THR	THR	1	S4B,S4N	The Chimney Swift is a threatened species which breeds in Ontario and winters in northwestern South America. It is found mostly near urban areas where the presence of chimneys or other manmade structures provide nesting and roosting habitat. Prior to settlement, the Chimney Swift would mainly nest in cave walls and hollow tress. The Chimney Swift initially benefitted from human settlement; however, recent declines in flying insects and the modernization of chimneys are factors attributed to their current population declines. As a threatened species, the Chimney Swift receives protection for both species and habitat under the ESA (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	While potential nesting habitat may be associated with the existing building structures located adjacent to the subject property, the imemdiate property limits are undeveloped and thus no habitat is available.	None expected.
Eastern Meadowlark (*Sturnella magna*)	THR	THR	THR	1	S4B	The Eastern Meadowlark is a bird that prefers pastures and hayfields, but is also found to breed in orchards, shrubby fields and human use areas such as airports and roadsides. Eastern meadowlarks can nest from early May to mid-August, in nests that are built on the ground and well-camouflaged with a roof woven from grasses. The decline in population of these species is thought to be at least partially related to habitat destruction and agricultural practices (Ministry of Natural Resources and Forestry, 2014).	NHIC/OBBA	N	There is a large meadow present on the Subject Property. However, evidence of regular maintenance of this community indicates that it likely does not provide suitable habitat for this species. **Therefore, there is no suitable habitat within the subject property.**	None expected.
Eastern Wood-Pewee (*Contopus virens*)	SC	SC	SC	1	S4B	The Eastern Wood-pewee is classified as a species of special concern by COSSARO. Their population has been gradually declining since the mid-1960's (The Cornell Lab of Ornithology, 2015). The Eastern Wood-pewee is a "flycatcher", a bird that eats flying insects, that lives in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It prefers intermediate-age forest stands with little understory vegetation. Threats to the population are largely unknown; however, causes may include loss of habitat due to urban development and decreases in the availability of flying insect prey (Ministry of Natural Resources and Forestry, 2014).	NHIC/OBBA	P	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of nesting birds. As this forest community is to be retained, no impacts to individuals are anticipated.
Wood Thrush (*Hylocichla mustelina*)	THR	SC	THR	1	S4B	The Wood Thrush is a species of Special Concern because of habitat degradation or destruction by anthropogenic development. The Wood Thrush is a medium-sized songbird, generally rusty-brown on the upper parts with white under parts and large blackish spots on the breast and sides, and about 20 cm long. The Wood Thrush forages for food in leaf litter or on semi-bare ground, including larval and adult insects as well as plant material. They seek moist stands of trees with well-developed undergrowth in large mature deciduous and mixed (conifer-deciduous) forests. The Wood Thrush flies south to Mexico and Central America for the winter (Ministry of Natural Resources and Forestry, 2014).	OBBA	N	The forest community in the study area and subject property is dry-fresh not moist. Therefore, **suitable habitat is not present on the Subject Property.**	None expected.

Appendix C. Species at Risk Screening.

NAME	SARA STATUS	SARO	COSEWIC	SCHEDULE	S-RANK	HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/P/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
insert page break										
HERPTILES										
Blanding's Turtle (*Emydoidea blandingii*)	END	THR	END	1	S3	Blanding's turtles are threatened in Ontario primarily as a result of habitat loss and fragmentation. Blanding's turtles spend the majority of their life cycle in the aquatic environment, using terrestrial sites for travel between habitat patches and to lay clutches of eggs. These turtles prefer shallow nutrient rich water with organic sediment and dense vegetation. Blanding's turtles nest in dry coniferous and mixed forest habitats, as well as fields and roadsides (Government of Canada, 2015).	ORAA	N	There is a wetland present adjacent to the York Durham Line which is within the study area. **While this means suitable habitat is found within the larger study area (120m), no wetlands or suitable habitat are located on the subject property.**	None expected.
Snapping Turtle (*Chelydra serpentina*)	SC	SC	SC	1	S3	The snapping turtle is a species of special concern in Ontario due to the potential for the species to become threatened or endangered as a result of biological factors or other identified threats. While not presently protected by law, the snapping turtle has been recognized as a species of special concern by COSSARO. Snapping turtles spend the majority of their lives in water and travel slightly upland to gravel or sandy embankments or beaches to lay their eggs (Ontario Ministry of Natural Resources and Forestry, 2014).	NHIC/ORAA	N	There is a wetland present adjacent to the York Durham Line which is within the study area. **While this means suitable habitat is found within the larger study area (120m), no wetlands or suitable habitat are located on the subject property.**	None expected.
Western Chorus Frog (*Pseudacris triseriata*)	THR	-	THR	1	S3	The Great Lakes/St. Lawrence – Canadian Shield population of the western chorus frog is federally listed as threatened by COSEWIC. This small frog is primarily a lowland terrestrial species that requires access to terrestrial and aquatic habitats in close proximity to one another. Relying on marshes and wooded wetlands adjacent to forested habitats, this species also requires isolated, predator free pools for breeding. Temporary pools, such as vernal pools in wooded areas, are preferred. This species hibernates terrestrially in a variety of environs, including leaf litter, wood debris, and vacant animal burrows (Government of Canada, 2016)	ORAA	N	No wooded wetlands are present on the subject property nor the study area. However, there is a small wetland adjacent to the mixed forest community in th study area. There also may be temporary vernal pools could be present in the spring which this species could use. This means **while there is no suitable habitat in the subject property, there is potential in the larger study area (120m).**	None expected.
VASCULAR PLANTS										
Butternut (*Juglans cinerea*)	END	END	END	1	S2?	The butternut is designated as endangered by COSSARO and is tracked by the NHIC as a species at risk. The tree is federally regulated by the Species at Risk Act (2002). Butternut belongs to the walnut family and produces edible nuts which are a preferred food source for wildlife. The range of butternut trees is south of the Canadian Shield on soils derived from calcium rich limestone bedrock. Butternut trees, which at one time were much more common to the south extending to the northern aspect of zone 6E, have been declining due to factors including forest loss and disease. Butternut trees suffer from a highly transmissible fungal disease called butternut canker. Butternut canker is causing very rapid decline in this tree species across its native range. The fungal disease is easily transmitted by wind and is very difficult to prevent. Trees often die within a few years of infection by butternut canker (Ministry of Natural Resource and Forestry, 2014).	-	N	While this species could be present, none were noted on the study area nor the subject property.	None expected.
MAMMALS										
Tri-colored Bat (Eastern Pipistrelle) (*Perimyotis subflavus*)	END	END	END	1	S3?	The eastern pipistrelle is a small bat that is widely distributed in eastern North America and whose range extends north to southern Ontario. The eastern pipistrelle is rare in this region of Ontario which is at the northernmost limit of the natural range for the species. These bats prefer to nest in foliage, tree cavities and woodpecker holes, and are occasionally found in buildings; though this is not their preferred habitat. Winter hibernation takes place in caves, mines and deep crevices. Eastern pipistrelles feed primarily on small insects and prefer an open forest habitat type in proximity to water (University of Michigan Museum of Zoology, 2004).	-	P	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of roosting bats. As this forest community is to be retained, no impacts to individuals are anticipated.
Eastern Small-footed Myotis (*Myotis leibii*)	No Statu	END	No Statu	o Schedu	S2S3	The eastern small-footed myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Eastern small-footed bat's fur has black roots and shiny light brown tips, giving it a yellowish-brown appearance. Its face mask, ears and wings are black, and its underside is grayish-brown, about 8 cm long in size and weighs 4-5 grams. In the spring and summer, eastern small-footed bats will roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines, or hollow trees. They change their roosting locations daily and hunt at night for insects to eat, including beetles, mosquitos, moths, and flies. They hibernate in winter, often in caves and abandoned mines. They can be found from south of Georgian Bay to Lake Erie and east to the Pembroke area, and choose colder and drier sites (Ministry of Natural Resources and Forestry, 2014).	-	P	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of roosting bats. As this forest community is to be retained, no impacts to individuals are anticipated.
Little Brown Myotis (*Myotis lucifugus*)	END	END	END	1	S4	Little brown myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Little brown bats have glossy brown fur and usually weigh between four and 11 grams. Bats are nocturnal. During the day they roost in trees and buildings. They often select attics, abandoned buildings and barns for summer colonies where they can raise their young. Little brown bats hibernate from October or November to March or April, most often in caves or abandoned mines that are humid and remain above freezing – an ideal environment for the fungus to grow and flourish. The syndrome affects bats by disrupting their hibernation cycle, so that they use up body fat supplies before the spring when they can once again find food sources (Ministry of Natural Resources and Forestry, 2014).	-	P	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of roosting bats. As this forest community is to be retained, no impacts to individuals are anticipated.
Northern Myotis (*Myotis septentrionalis*)	END	END	END	1	S3	The northern long-eared myotis, a bat, are an endangered species threatened by a disease known as white nose syndrome, caused by a fungus from Europe. Northern long-eared bats have dull yellow-brown fur with pale grey bellies. They are approximately eight cm long, with a wingspan of about 25 cm, and usually weigh six to nine grams. Northern long-eared bats can be found in boreal forests, roosting under loose bark and in the cavities of trees. These bats hibernate from October or November to March or April, most often in caves or abandoned mines (Ministry of Natural Resources and Forestry, 2014).	-	P	The mixed forest community (FOM2-2) that extends south of the subject property may provide suitable habitat for this species. **This species could be present within the subject property.**	The primary mitigation is for the protection of roosting bats. As this forest community is to be retained, no impacts to individuals are anticipated.

Appendix C. Species at Risk Screening.

NAME	SARA STATUS	SARO	COSEWIC	SCHEDULE	S-RANK		HABITAT REQUIREMENTS	SOURCE OF RECORD	POTENTIAL HABITAT PRESENT (Y/P/N)	RATIONALE	POTENTIAL IMPACTS AND MITIGATION
OTHER											
Monarch Butterfly (*Danaus plexippus*)	SC	SC	END	1	S2N,S4B	The monarch is an orange and black butterfly with small white spots and is classified as a species of special concern by COSSARO. The monarch relies on milkweed plants as a food source for growing caterpillars, but the adult butterflies forage in diverse habitats for nectar from wildflowers. The greatest threat to the monarch is loss of overwintering habitat in Mexico. Other threats include use of pesticides and herbicides throughout its range (Ministry of Natural Resources and Forestry, 2014).	OBA	N	There is a large meadow present on the Subject Property. However, evidence of regular maintenance of this community indicates that it likely does not provide suitable habitat for this species. **Therefore, there is no suitable habitat within the subject property.**	None expected.

Notes:
SC - Special Concern
THR - Threatened
END - Endangered
S1 - Extremely rare in Ontario
S2 - Very rare in Ontario
S3 - Rare to uncommon in Ontario
S4 - Considered to be common in Ontario
S5 - Species is widespread in Ontario
SH - Possibly extirpated
S#S# - Indicates insufficient information exists to assign a single rank.
S#? - Indicates some uncertainty with the classification due to insufficient data.
S#N - Nonbreeding
S#B - Breeding
Y= Yes, P = Potential, N = No

APPENDIX D – SIGNIFICANT WILDLIFE HABITAT SCREENING

Appendix D. Significant Wildlife Habitat Screening.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	Additional Notes and Species Observations
Seasonal Concentration Areas of Animals					
Waterfowl Stopover and Staging Areas (Terrestrial)	Ducks	CUM + CUT ecosites	Fields with sheet-water flooding mid-March to May	N	No Suitable Habitat.
Waterfowl Stopover and Staging Area (Aquatic)	Ducks, Geese	Ponds, Lakes, Inlets, Marshes, Swamps, Shallow Water Ecosites	Sewage & SWM ponds **not** SWH. Reservoir managed as a large wetland or pond/lake qualifies.	N	No Suitable Habitat.
Shorebird Migratory Stopover Area	Shorebirds	Beaches, Dunes, Meadow Marshes	Shorelines. Sewage treatment ponds and storm water ponds **not** SWH.	N	No Suitable Habitat.
Raptor Wintering Area	Eagles, Hawks, Owls	**Hawks/Owls:** Combination of both Forest and Cultural Ecosites **Bald Eagle:** Forest or swamp near open water (hunting ground)	**Raptors:** >20ha, with a combo of forest and upland. Meadow (>15ha) with adjacent woodlands. **Eagles:** open water, large trees & snags for roosting.	N	No Suitable Habitat.
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	Caves, Crevices, mines, karsts	Buildings and active mine sites **not** SWH.	N	No Suitable Habitat.
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	Decidious or mixed forests and swamps.	Mature deciduous and mixed forests with >10/ha cavity trees >25 cm DBH.	P	The mixed forest community that extends south of the subject property may have potential to support this type of SWH; no impacts are expected as development to remain outside of this community.
Turtle Wintering Area	**Turtles** (Midland, N. Map, Snapping)	SW, MA, OA, SA, FEO, BOO (requires open waters)	**Free water beneath ice.** Soft mud substrate. Permanent water bodies, large wetlands, bogs, fens with adequate DO.	N	No Suitable Habitat.
Reptile Hibernaculum	Snakes	**Snakes:** Any ecosite (esp. w/ rocky areas), other than very wet ones. **Five-lined Skink:** FOD and FOM, FOC1, FOC3 - with rock outcrops	**Access below frost line:** burrows; **rock** crevices, piles or slopes, **stone** fences or foundations. Conifer/shrubby swamps/swales, poor fens, depressions in bedrock w/ accumulations of sphagnum moss or sedge hummock ground cover.	N	No Suitable Habitat.
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, N. Rough-winged Swallow	Banks, sandy hills/piles, pits, slopes, cliff faces, bridge abutments, silos, barns.	Exposed soil banks, **not** a licensed/permitted aggregate area or new man-made features (2 yrs).	N	No Suitable Habitat.

Appendix D. Significant Wildlife Habitat Screening.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	Additional Notes and Species Observations
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned NightHeron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1 to SWD7, FET1	Nests in live or dead standing trees in wetlands, lakes, islands and peninsulas. Shrubs and emergents may be used. Nests in trees are 11 - 15 m from ground, near tree tops.	N	No Suitable Habitat.
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	**Gulls/Terns:** Rocky island or peninsula in lake or river. **Brewer's Blackbird:** close to watercourses in open fields or pastures with scattered trees or shrubs.	**Gulls/Terns:** islands or peninsulas with open water or marshy areas. **Brewers Blackbird colonies:** on the ground in low bushes close to streams and irrigation ditches.	N	No Suitable Habitat.
Migratory Butterfly Stopover Area	Painted Lady, Red Admiral, **Special Concern:** Monarch	Combination of open (CU) and forested (FO) ecosites (need one from each).	≥10 ha, located within 5 km of Lake Ontario. Undisturbed sites, with preferred nectar species.	N	No Suitable Habitat.
Landbird Migratory Stopover Areas	All migratory songbirds. All migrant raptor species.	Forest (FO) and Swamp (SW) ecosites	Woodlots >10 ha within 5 km of Lake Ontario. If multiple woodlands are along the shoreline, those <2 km from L. Ontario are more significant.	N	No Suitable Habitat.
Deer Yarding Areas	White-tailed Deer	Mixed or Conifer ecosites	Determined by MNRF - no studies	N	No Suitable Habitat.
Deer Winter Congregation Areas	White-tailed Deer	Mixed or Conifer ecosites	Determined by MNRF - no studies	N	No Suitable Habitat.
Rare Vegetation Communities					
Cliffs and Talus Slopes		TAO, TAS, CLO, CLS, TAT, CLT e.g., Niagara Escarpment (contact NEC)	**Cliff:** near vertical bedrock >3m **Talus Slope:** coarse rock rubble at the base of a cliff	N	No Suitable Habitat.
Sand Barren		SBO1, SBS1, SBT1	Sand Barrens >0.5 ha. Vegetation can vary from patchy and barren to tree covered, but <60%. <50% vegetation cover are exotic species.	N	No Suitable Habitat.
Alvar	*Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum,* Loggerhead Shrike	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Alvar >0.5 ha. **Need 4 of the 5 Alvar Inidcator Spp**. <50% vegetation cover are exotic species.	N	No Suitable Habitat.

Appendix D. Significant Wildlife Habitat Screening.

SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	Additional Notes and Species Observations
Old Growth Forest	Trees >140 yrs; heavy mortaily = gaps. Multi-layer canopy, lots of snags and downed logs	FOD, FOC, FOM, SWD, SWC, SWM	Woodland areas ≥30 ha with a≥10 ha interior habitat, assuming a 100 m buffer at edge of forest.	N	No Suitable Habitat.
Savannah	Prairie Grasses w/ trees	TPS1, TPS2, TPW1, TPW2, CUS2	A Savannah is a tallgrass prairie habitat that has tree cover of 25 – 60%. <50% cover of exotic species.	N	No Suitable Habitat.
Tallgrass Prairie	Prairies Grasses dominate	TPO1, TPO2	An open Tallgrass Prairie habitat has < 25% tree cover. Less than 50% cover of exotic species.	N	No Suitable Habitat.
Other Rare Vegetation Communities		Provincially Rare S1 - S3 veg. comm. are listed in Appendix M of SWHTG.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	N	No Suitable Habitat.
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	Ducks	Upland habitats adjacent to: MAS1 to MAS3, SAS1, SAM1, SAF1, MAM1 to MAM6, SWT1, SWT2, SWD1 to SWD4 (>0.5 ha open water wetlands, alone or collectively).	Extends 120 m from a wetland or wetland complex. Upland areas should be at least 120 m wide. Wood Ducks and Hooded Mergansers use cavity trees (>40 cm dbh).	N	No Suitable Habitat.
Bald Eagle & Osprey Nesting, Foraging and Perching Habitat	Osprey, Bald Eagle	FOD, FOM, FOC, SWD, SWM, SWC directly adjacent to riparian areas	Nesting areas are associated with waterbodies along forested shorelines, islands, or on structures over water.	N	No Suitable Habitat.
Woodland Raptor Nesting Habitat	Barred Owl. **Hawks:** N. Goshawk, Cooper's, Sharp-shinned, Red-shouldered, Broad-winged.	Forests (FO), swamps (SW), and conifer plantations	>30 ha with > 10 ha interior habitat.	N	No Suitable Habitat.
Turtle Nesting Areas	Midland Painted Turtle **Special Concern:** Snapping Turtle, Northern Map Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within: MAS1 to MAS3, SAS1, SAM1, SAF1, BOO1	Nest sites within open sunny areas with soil suitable for digging. Sand and gravel beaches.	N	There are no waterbodies present on the subject property, owith the closest potential habitat being that associated with wetlands located a minimum 180 m to the southeast.
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.	Any forested area within the headwaters of a stream/river system. **(2 or more confirms SWH type).**	N	No Suitable Habitat.
Amphibian Breeding Habitat (Woodland)	Woodland Frogs and Salamanders	FOC, FOM, FOD, SWC, SWM, SWD	Open water wetlands, pond or woodland pool of >500 m^2 within or adjacent to wooded areas. Permanent ponds or holding water until mid-July preferred.	N	There are no waterbodies present on the subject property, owith the closest potential habitat being that associated with wetlands located a minimum 180 m to the southeast.

Appendix D. Significant Wildlife Habitat Screening.

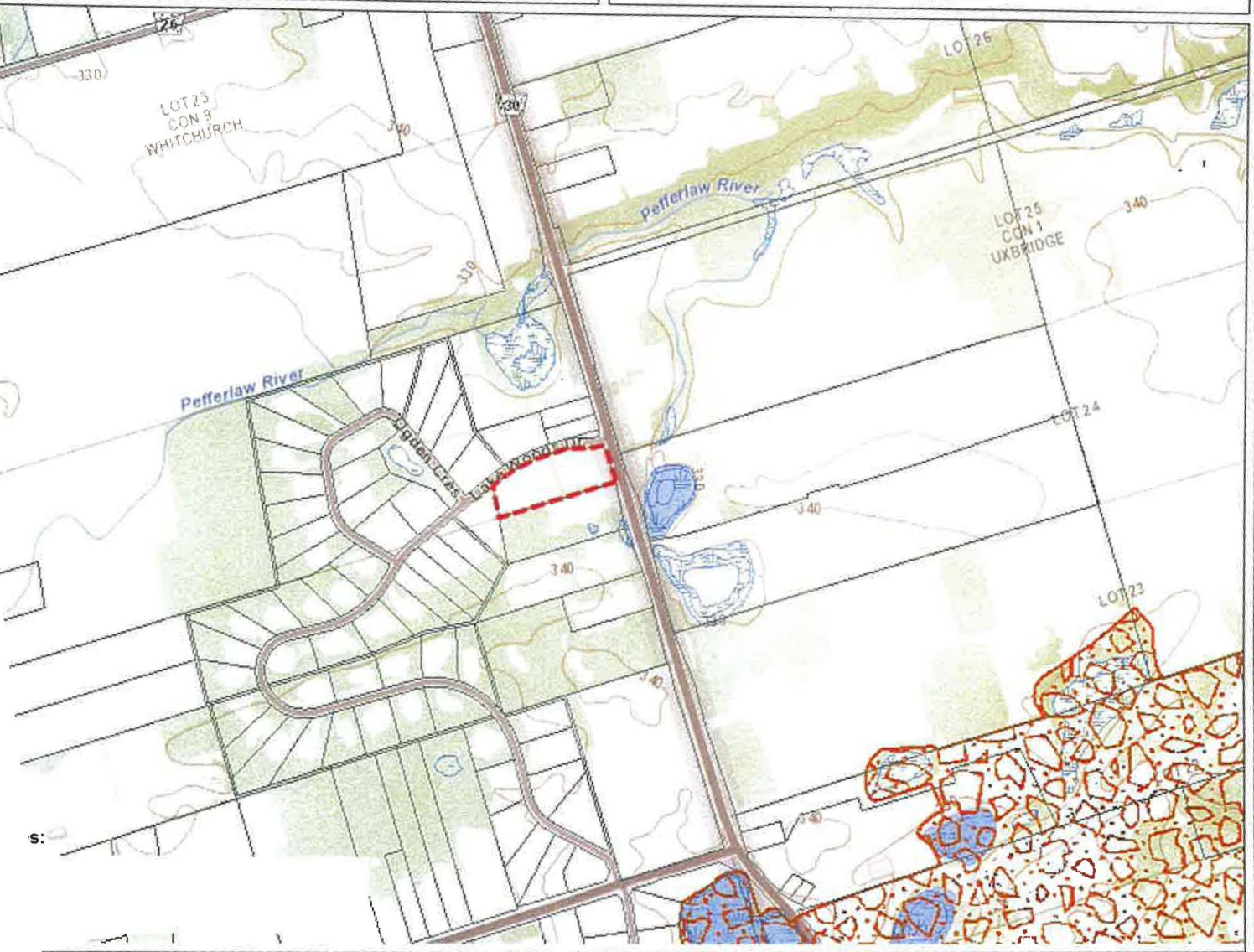
SWH Type	Associated Species	Associated ELC Ecosites	Habitat Criteria	Presence (Y/P/N)	Additional Notes and Species Observations
Amphibian Breeding Habitat (Wetlands)	Toads, Frogs, and Salamanders	SW, MA, FE, BO, OA and SA. Typically isolated (>120m) from woodland ecosites, however larger wetlands may be adjacent to woodlands.	Open water wetland ecosites >500m^2 isolated from woodland ecosites with high species diversity. Permanent water with abundant vegetation for bullfrogs.	N	No Suitable Habitat.
Woodland Area-Sensitive Bird Breeding Habitat	Birds (area-sensitive species)	FOC, FOM, FOD, SWC, SWM, SWD	Large mature (>60 years) forest stands/woodlots >30 ha. Interior forest habitat >200m from forest edge.	N	No Suitable Habitat.
Habitat of Species of Conservation Concern					
Marsh Bird Breeding Habitat	Wetland Birds	MAM1 to MAM6, SAS1, SAM1, SAF1, FEO1, BOO1 **Green Heron**: SW, MA and CUM1	Wetlands with shallow water and emergent vegetation. Gr. Heron @ edges of these types w/ woody cover.	N	No Suitable Habitat.
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, N. Harrier, Savannah Sparrow, **Short-eared Owl (SC)**	CUM1, CUM2	Grassland/meadow >30 ha. Not being actively used for farming. Habitat established for 5 years or more.	N	No Suitable Habitat.
Shrub/Early Successional Bird Breeding Habitat	**Brown Thrasher + Clay-coloured Sparrow (indicators),** Field Sparrow, Black-billed Cuckoo, E. Towhee, Willow Flycatcher, Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large field areas succeeding to shrub and thicket habitats > 10 ha. Areas not actively used for farming in the last 5 years.	N	No Suitable Habitat.
Terrestrial Crayfish	Chimney or Digger Crayfish; Devil Crayfish or Meadow Crayfish	MAM1 to MAM6, MAS1 to MAS3, SWD, SWT, SWM. CUM1 sites with inclusions of the aforementioned.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish (typc. protected by wetland setbacks).	N	No Suitable Habitat.
Special Concern and Rare Wildlife Species	Any species of concern or rare wildlife species	Any ELC code.	Presence of species of concern or rare wildlife species.	N	No Suitable Habitat.
Animal Movement Corridors					
Amphibians	Amphibians	all ecosites assoc. w/ water	When Breeding Habitat - wetland confirmed	N	No Suitable Habitat.
Deer Movement	White-tailed Deer	all forested ecosites	When Deer Wintering Habitat confirmed	N	No Suitable Habitat.
Exceptions for Ecoregion 6E					
Mast Producing: 6E-14	Black Bear	Forested Ecosites	>30 ha w/ mast producing species: Cherry (berries), Oak, Beech (nuts).	N	No Suitable Habitat.
Leks: 6E-17	Sharp-tailed Grouse	CUM, CUS, CUT	Grassland/meadow >15 ha adjacent to shrublands, >30 ha adjacent to woodlands. Low agricultural intensity.	N	No Suitable Habitat.

Ontario

Ministry of Natural Resources and Forestry
Make-a-Map: Natural Heritage Areas

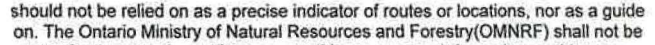
120 Lake Woods Drive, WS

Map created:3/8/2023



Legend

- Assessment Parcel
- ANSI
- Earth Science Provincially Significant/sciences de la terre d'importance provinciale
- Earth Science Regionally Significant/sciences de la terre d'importance régionale
- Life Science Provincially Significant/sciences de la vie d'importance provinciale
- Life Science Regionally Significant/sciences de la vie d'importance régionale
- Evaluated Wetland
- Provincially Significant/considérée d'importance provinciale
- Non-Provincially Significant/non considérée d'importance provinciale
- Unevaluated Wetland
- Conservation Reserve
- Provincial Park



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

s:

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

KEY MAP

LEGEND

- Watercourse [1]
- **Wetland [1]**
- Not Evaluazted
- Evaluated-Provincial
- Subject Property (2.4 ha)

1 - Land Information Ontario (LIO)

0 50 100 150 200
METRE SCALE

North American Datum 1983
Universal Transverse Mercator Projection Zone 17

Scale: 1:3 000
Page Size: Tabloid (11 x 17 inches)

Drawn: --
Checked: --
Date: Jun 21, 2023

Source Notes:
Base Imagery (2022) provided by York region open GIS services. Contains data licensed under the Open Data License (Ontario).

DRAFT

Z
NORTH

CLIENT
MNAL

PROJECT
120 Lake Woods Drive - Environmental Review

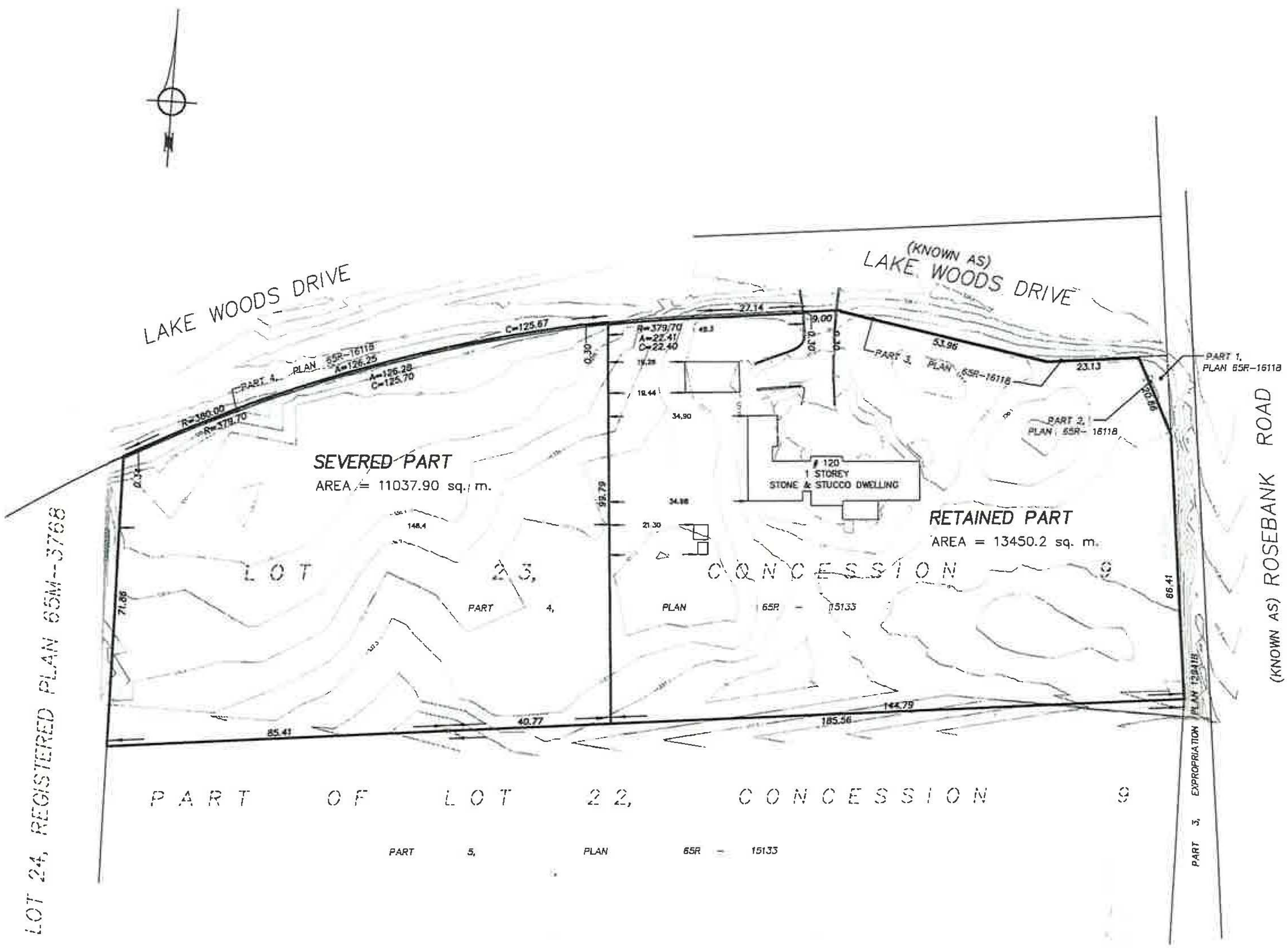
TITLE
Site Location

Palmer

REF. NO. 16033128-1-1

Figure 1

Document Path: G:\Shared drives\Projects 2016\16033 - MNAL\16033128 - 120 Lake Woods Drive - Environmental Review\GIS\1_Workspace\Task 2 - Environmental Review Figures\16033128-1-1-Site Location.mxd



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DRAFT SKETCH PART 4, PLAN 65R-16118
VERSION #4

120 LAKE WOODS DRIVE

TOWN OF WHITCHURCH-STOUFFVILLE

SCALE 1 : 750 METRES

0 15 30 60

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THIS PLAN IS NOT AN ORIGINAL UNLESS EMBOSSED BY A SURVEYORS SEAL

NOTE

PROPERTY DIMENSIONS SHOWN HEREON ARE IN ACCORDANCE WITH IBW SURVEYORS RECORDS. (22-037-S)

DISTANCE NOTES – METRIC

DISTANCES ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

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PARTY CHIEF: • | DRAWN BY: DV | CHECKED BY: • | PLOT DATE: JUNE 6, 2023
FILE NAME: A-041100-SKETCH-V4-A