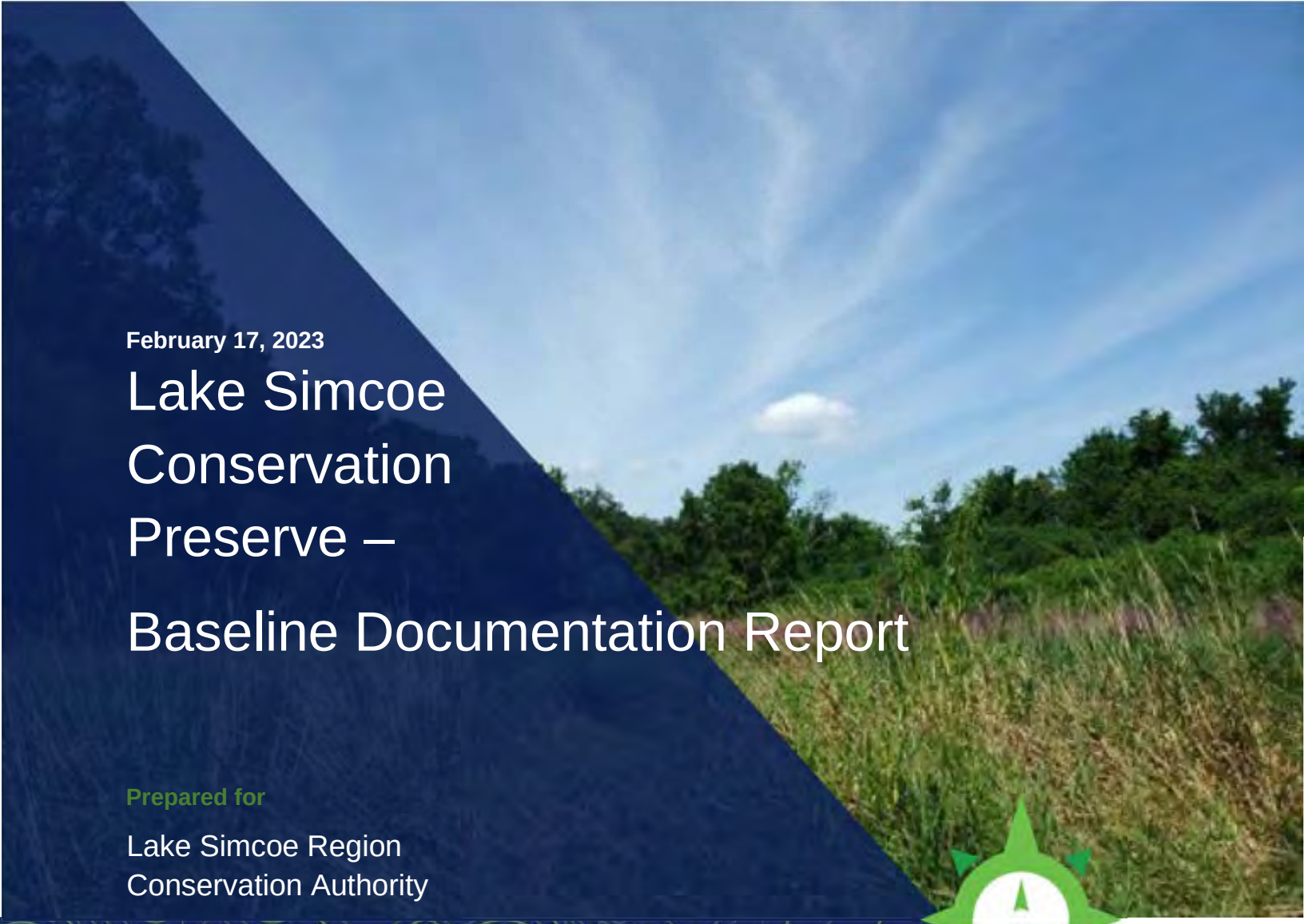

February 17, 2023

Lake Simcoe Conservation Preserve – Baseline Documentation Report

Prepared for

Lake Simcoe Region Conservation Authority

north-south ENVIRONMENTAL

North-South Environmental Inc. • 101B King Street West • Cambridge, Ontario • N3H 1B5

Preface and Purpose Statement

The Lake Simcoe Region Conservation Authority (the Conservation Authority) acquired several properties in March 2022 through a donation of significant ecological and agricultural lands. The land holdings comprising the Lake Simcoe Conservation Preserve total an area of 360 hectares in the Town of Georgina (the 'Subject Lands') (**Figures 1 and 2(a) – 2(d)**). The properties are located north of the Keswick urban area within the Georgina Creeks sub-watershed.

The Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) which designates the property as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land. The Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of the Lake Simcoe Conservation Preserve.

The purpose of this Baseline Documentation Report is to document the existing site conditions of the Lake Simcoe Conservation Preserve, identify significant ecological features, develop priority management actions, and provide stewardship recommendations for managing the conservation area. The conservation goals are to manage the lands for conservation and wildlife protection for future generations. promote natural succession and where appropriate rehabilitate existing natural features and ecological functions, expand, and enhance wetland and forest features, and control and manage the impacts of invasive species to protect native species and habitats.

The Lake Simcoe watershed has been inhabited by Indigenous Peoples since creation. The Conservation Authority recognize the Williams Treaties First Nations, including the Chippewas of Georgina Island, Rama, Beausoleil, the Mississaugas of Alderville, Curve Lake, Hiawatha, the Credit and Scugog Island, as well as the Huron Wendat and the Metis Nation of Ontario – Region 7. We are committed to renewing our relationships and deeply appreciate their historic connection and unwavering care for this land and water.

This Baseline Documentation Report was prepared by North South Environmental Inc. (N.S.E.), based on secondary source information and site visits by completed by field ecologists (Grace Pitman and Patrick Strzalkowski) on October 5, 6 and 7, 2022. This report has been prepared according to the Ontario Land Trust Alliance (O.L.T.A.) Baseline Documentation Guidelines (Draft March 2022).

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1. Introduction

This Baseline Documentation Report is a summary of the existing conditions of the Subject Lands comprising the Lake Simcoe Conservation Preserve as of October 7, 2022. The report details existing site conditions, significant ecological features, and provides stewardship recommendations for managing these lands. The goal of this natural heritage area is to manage the lands for conservation and wildlife protection, to enhance the existing natural features, expand and enhance wetland features and functions and minimize the impacts of invasive species, promote natural succession and enhance the ecological functions of the property for future generations.

The Lake Simcoe Conservation Preserve is owned by the Lake Simcoe Conservation Authority (the Conservation Authority), having been acquired through land donation in March 2022. The land holdings total an area of 360 hectares in the Town of Georgina (the 'Subject Lands') (**Figures 1 and 2a – 2d**).

The Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which designates the property as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land. Generally, permitted uses include forest, fish and wildlife, conservation and passive recreation uses. The Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of the Lake Simcoe Conservation Preserve.

The Lake Simcoe Conservation Preserve is comprised of both natural and cultural features. Vegetation communities include deciduous, coniferous and mixedwood swamps and forests, meadows, and thickets. Other natural features include permanent and intermittent streams, and small ponds. Agricultural fields are common and widespread, often separated by hedgerows. Although no permanent structures occur, trails, fences and other anthropogenic features are common. The Subject Lands provide habitat for many flora and fauna with a total of 294 species of vascular plants, 38 vegetation community types, and 110 wildlife species.

BDR Prepared by:

This Baseline Documentation Report was prepared by North South Environmental Inc. (N.S.E.), based on secondary source information and site visits by completed by Field Ecologists, Grace Pitman and Patrick Strzalkowski, on October 5, 6 and 7, 2022. The report was also authored by Izabela van Amelsvoort, Senior Ecologist and Project Manager.

Izabela van Amelsvoort – B.Sc. (Env.), M.F.C., Senior Ecologist

Izabela is a terrestrial ecologist with a specialization in botany with over 13 years of professional experience. She has a strong background in forestry, botany and zoology and is well versed in flora and fauna of the Great Lakes/St. Lawrence, Carolinian (including tallgrass prairie), and Boreal regions of Ontario. Izabela has considerable experience with restoration projects and management plans for both tallgrass prairie and woodland ecosystems in Southern Ontario. In her role a project manager, she has

participated in and supervised other staff in field work programs designed to characterize natural areas, identify constraints and opportunities related to both ecological restoration and development, as well as providing direction for management of natural areas, such as invasive species management and ecological restoration.

Grace Pitman – B.Sc., M.Sc., Ecologist

Grace Pitman is an ecologist and has been working in the ecological and environmental fields since 2010. She was previously employed at Nature Conservancy of Canada (NCC) and Wildlife Preservation Canada. Grace has a diverse background comprised from academic research, restoration ecology, and land planning and management. Grace has assisted with academic biological research affiliated with several universities with projects focused on Species at Risk monitoring and recovery (insects, birds, reptiles, and amphibians), animal migration tracking (insects, birds, mammals), and insect behaviour. Through these projects Grace has contributed to all stages of research from planning, applying methods, analyzing results, and collaborating on several published peer-reviewed papers.

Grace has experience with restoration ecology applying techniques to restore former agricultural fields to tall grass prairie and successional meadows. Additionally, she has facilitated the creation of inland wetlands and assisted with the development of visitor facilities to appreciate restored landscapes. Grace has extensive knowledge and experience managing and controlling invasive species on both restored and non-restored landscapes. She has also been instrumental in developing and implementing long-term property management plans.

Patrick Strzalkowski – B.Sc., M.Sc., Ecologist

As an ecologist at N.S.E., Patrick focuses on botanical inventories, including dedicated surveys for Species at Risk, in a variety of areas, such as wetlands, deciduous forests and urban areas.

Patrick assisted in teaching proper techniques for plant identification, including grasses and sedges. Patrick also has worked on projects involving species at risk in Ontario, helping to better understand the impacts that invasive species have on threatened populations. As a member of the Field Botanists of Ontario, Patrick is determined to further develop his expertise in botanical identification across all taxa.

Contact Information:

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905-854-1112

Indigenous Land Acknowledgement

The Lake Simcoe watershed has been inhabited by Indigenous Peoples since creation. The Conservation Authority recognizes the Williams Treaties First Nations, including the Chippewas of Georgina Island, Rama, Beausoleil, the Mississaugas of Alderville, Curve Lake, Hiawatha, the Credit and

Scugog Island, as well as the Huron Wendat and the Metis Nation of Ontario – Region 7. We thank all generations of Indigenous Peoples, past and present, for their enduring and unwavering care for this land and water. We are committed to renewing our relationships and deeply appreciate their historic connection and unwavering care for this land and water.

The Chippewas of Georgina Island are an Anishinaabe Nation located on the southern shores of Lake Simcoe. Georgina Island situated approximately 15 kilometres east of Lake Simcoe Conservation Preserve along the shores of Lake Simcoe in the Town of Georgina.

Landowners' Name: Lake Simcoe Region Conservation Authority
Address of Landowner: 120 Bayview Parkway, Newmarket, Ontario, L3Y 3W3
Phone: 905-895-1281

2. Property Information

2.1. Property Descriptions

Property descriptions are provided in **Table 1**.

Table 1. Lake Simcoe Conservation Preserve – Property Descriptions

No.	Property Name	Property Description	Roll No.	Emergency Number Farm 911	MPAC – PIN
1	Deer Park Road	Parts of Lots 23, 24 and 25, 65R-2903, Blocks 1, 2 and 5, Concession 3, Town of Georgina	1970 000 12195000.0000 & 1970 000 1219499.0000	26530 Woodbine Avenue, 851 Metro Road N, 655 Varney Road	03498-003 (LT) 03498-0005 (LT) 03498-006 (LT)
2	Boyers Road	Parts of Lots 21, 22, and 23, Concession 3, 65R-3920, Part 1 and 65R-40140, Part 1, Town of Georgina	1970 000 12123950.0000	403 The Queensway N, 26040 Woodbine Avenue	03499-0005 (LT) 03499-0025 (LT)
3	The Queensway	Parts of Lots 22 and 23, Concession3, 65R-14638, Part 2, Town of Georgina	1970 000 12602000.0000	430 The Queensway North	03499-004 (LT)
4	Varney Road	524 Varney Rd, Parts of Lots 21 and 22, Concession 2 and 3, 65R-29665 Part 1 and 2, Town of Georgina	1970 000 12525000.0000	524 Varney Road	03496-0189 (LT) 03496-0190 (LT)

2.2. Directions and Access

Access points (corresponding to Town of Georgine Farm 911 Emergency numbers) are shown on **Figures 2a-2d**.

Property 1 – Deer Park Road

From Keswick, follow north on Woodbine Avenue for approximately 4 km, just past Deer Park Drive. The property is located on the west side of Woodbine Avenue, framed approximately by Varney Road along its western boundary, Metro Road North along the northern boundary, and Deer Park Drive along the southern boundary. Access is available from a pull off at 26530 Woodbine Avenue, off Metro Road opposite Wolford Gate Rd (851 Metro Road North) and along the east side of Varney Road approximately 0.5 km north of Deer Park Road (655 Varney Road).

Property 2 – Boyers Road

From Keswick, follow north on Woodbine Avenue for approximately 3 km, just past Boyers Road. The property is located on the west side of Woodbine Avenue, framed approximately by The Queensway North along its western boundary, Deer Park Drive along the northern boundary, and Boyers Road along the southern boundary. Access is available at the northwest corner of The Queensway North and Deer Park Road (403 The Queensway North) and the west side of Woodbine Avenue at 26040 Woodbine Avenue (farm access).

Property 3 – The Queensway

From Keswick, follow north on The Queensway North for approximately 2.5 km, just past Boyers Road. The property is located on the west side of The Queensway North. Access is available at the northeast corner of the property at Deer Park and The Queensway North (430 Queensway North) and southeast corner of the property east side of The Queensway North (farm access).

Property 4 – Varney Road

From Keswick, follow north on The Queensway North for approximately 2.5 km, making a jog west along Boyers Road, to head north on Varney Road. The property is located on the west side Varney Road. Access is available along the west side of Varney Road at 524 Varney Road (farm access).

2.3. Current Uses

All properties contain active agricultural fields which are on lease to farmers (crop predominantly includes soy and corn, with one field on Property 4 planted with Perennial Ryegrass). The Canada Land Inventory (C.L.I.) provides a soil capability classification system for agriculture (**Figure 4**). All existing agricultural fields overlap with Capability Class 1 (capable of sustained use for growing common field crops; all or most crops grown). Unfarmed portions of Property 1 overlap with Capability Class 3 (capable of sustained use for growing common field crops) with Sub-class W (excessive wetness). Unfarmed portions of Property 4 overlap with Capability Class 3 with Sub-class S (undesirable soil structure, low fertility, and/or low moisture holding capacity).

The remaining lands are in natural state or varying forms of succession following previous disturbances. Vegetation communities / land cover and other natural heritage features are described in **Section 3**.

Although the Subject Lands are not currently open to public use, there is evidence of recent use in the form of informal trails and hunt stands (see **Section 4 and 5**). Public land access will be defined through the Conservation Area Master Plan, which will be developed by the Lake Simcoe Region Conservation Authority over the next few years.

2.4. Municipal and Provincial Planning Information

2.4.1. Land Use Designations

2.4.1.1. York Region Official Plan (2010; 2022 Consolidation)

According to the York Region Official Plan (2010; 2022 Consolidation), a portion of all parcels are mapped as part of the Regional Greenlands System. The Greenlands System consists of core areas, corridors and linkages which are protected from development and site alteration (policies under Section 2.0). All Properties also fall under the Agriculture Policy Area (**Figure 3**).

2.4.1.2. Town of Georgina Official Plan (2016; 2020 Consolidation)

According to the Town of Georgina Official Plan (2016; 2020 Consolidation), Property 1 is mapped as Town and Villages land use, and remaining properties as Countryside Area (Schedule A1).

Property 1 is designated Environmental Protection Area, and remaining properties are designated in part as Environmental Protection Area and Agricultural Protection Area (Schedule A2). All properties include key natural heritage features and/or key hydrologic features, which may include woodlands, wetlands and portions of the Greenlands System (Schedules B1 and B2) (**Figure 3**).

Development and site alteration within the Environmental Protection Area designation is regulated by policies under Section 5.3.1. Permitted uses in the Environmental Protection Area designation include:

a) Forest, fish and wildlife management
b) Conservation, stewardship, restoration and remediation undertakings
c) Flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest and after all alternatives have been considered
d) Retrofits of existing stormwater management works, but not new stormwater management works
e) Infrastructure, but only if the need for a project has been demonstrated through an Environmental Assessment or other similar environmental approval and there is no reasonable alternative
f) Existing agricultural uses
g) A mineral aggregate operation subject to the policies in Section 4.10.8
h) Passive recreational uses such as trails, walkways and bicycle paths
i) An existing single detached dwelling and accessory uses, and accessory buildings or structures thereto
j) A single detached dwelling on an existing vacant lot of record subject to policy 5.3.1.12
k) A home occupation in an existing single detached dwelling or as permitted by 5.3.1.12

Permitted uses in the Agricultural Protection Area are defined under Section 6.1.1. Permitted uses in the Agricultural Protection Area include:

a) Agricultural uses
b) Agriculture
c) Agriculture-related uses
d) On-farm diversified uses
e) Sustainable forestry and other activities connected with the conservation of soil, water resources and wildlife
f) A single detached dwelling
g) An accessory apartment
h) An accessory apartment in a detached accessory building or structure
i) A garden suite
j) Temporary accommodations for seasonal farm workers
k) A home occupation
l) A home industry
m) Mineral aggregate operations subject to policies in Section 4.10.

2.4.2. Zoning

As per the Town of Georgina Zoning Bylaw 500 (2013), Property 1 is zoned Low Density Urban Residential and Open Space, Property 2 is zoned Rural, Estate Residential and Open Space, and Properties 3 and 4 are zoned Rural.

However, as of April 1, 2022, the Subject Lands are the subject of a Minister's Zoning Order (M.Z.O.) (Regulation 251/22) (**Appendix 1**) which supersedes the Georgina Zoning Bylaw. The M.Z.O. designates the Subject Lands as Environmental Protection Area and describes permitted uses and intent for the long-term use of the land as follows:

Use of Land

"Every use of land and every erection, location or use of any building or structure is prohibited on the lands described, except,

a) Forest, fish and wildlife management
b) Conservation and flood or erosion control projects
c) Infrastructure
d) Passive recreation, and
e) Buildings or structures associated with the uses set out in clauses (a) to (d)"

Terms of Use

1) "Every use of land and every erection, location or use of any building or structure shall be in accordance with the M.Z.O.

2) Nothing in the M.Z.O. prevents the use of any land, building or structure for any use prohibited by the M.Z.O. if the land, building or structure is lawfully so used on the day the M.Z.O. comes into force (April 1, 2022)
3) Nothing in the M.Z.O. prevents the reconstruction of any building or structure that is damaged or destroyed by causes beyond the control of the owner if the dimensions of the original building or structure are not increased and its original use is not altered
4) Nothing in the M.Z.O. prevents the strengthening or restoration to a safe condition of any building or structure"

2.4.3. Additional Designations

2.4.3.1. Greenbelt Plan (2017)

The Subject Lands are designated Protected Countryside under the Greenbelt Plan (2017). Property 1 is also designated as Towns and Villages. Portions of Properties 2, 3 and 4 are also overlapped by the Natural Heritage System (**Figure 3**). The Protected Countryside lands identified in the Greenbelt Plan are intended to enhance the spatial extent of agriculturally and environmentally protected lands while at the same time improving linkages between these areas and the surrounding major lake systems and watersheds. Lands designated as Protected Countryside are subject to policies under Sections 3 and 4 of the Greenbelt Plan.

2.4.3.2. Lake Simcoe Watershed Natural Heritage System

According to the Natural Heritage System & Restoration Strategy for the Lake Simcoe Watershed (LSRCA 2018), portions of Properties 1, 2 and 4 are identified as Natural Heritage System Core and are subject to the policies set out in the strategy (**Figure 3**). Additionally, two local linkages are identified in the southeast extent of Property 2, subject to refinement.

3. Conservation Values / Natural Heritage Features

3.1. Ecoregion Context, Physiography and Soils

The Subject Lands are located in Ecodistrict 6E-6, known as the Barrie Ecodistrict, within the Lake Simcoe-Rideau Ecoregion 6E.

The Subject Lands are located within the Lake Simcoe Basin and include portions of sand plain, till plain (drumlinized) and scattered drumlins running in a southwest to northeast direction (Chapman and Putnam, 1984). The surficial geology of the area has been mapped on a regional basis by Barnett et al., 1991. This mapping shows the general area of the properties to be underlain by the Newmarket Till (Simcoe lobe), undifferentiated till, and Glaciolacustrine deposits consisting of sand, gravelly sand, and gravel.

The Soil Map of York County indicates the Subject Lands are generally underlain by clay loam, loam, and sandy loam soils with poor to imperfect drainage and smooth to gently sloping topography; portions

of Property 4 are underlain by well drained loam-sandy loam (Agriculture Canada and Ministry of Agriculture & Food, 1977).

3.2. Significant Areas

No Areas of Natural and Scientific Interest (A.N.S.I's) occur on the Subject Lands.

3.2.1. Provincially Significant Wetland

Provincially Significant Wetlands (P.S.W's) are present throughout the Subject Lands, including features which form part of two wetland complexes: North Keswick Wetland Complex (Property 3 and 4) and Paradise Beach-Island Grove Wetland Complex (Property 1 and 2) (**Figure 4**). The wetlands occurring on the Subject Lands consist of swamp and marsh.

3.2.2. Watercourses and Waterbodies

Crescent Creek, an intermittent stream which forms part of the Georgina Creek subwatershed, is identified by Land Information Ontario (L.I.O.) as crossing Property 2 (Boyers Road), through marsh communities. Results of October 2022 field surveys describe a poorly defined channel which, at the time, had no flowing water.

Georgina Creek, another intermittent stream forming part of the Georgina Creek subwatershed, is identified by L.I.O. as bisecting the east side of Property 4 (Varney Road), through marsh communities, draining west to Lake Simcoe. Results of October 2022 field surveys describe a poorly defined channel which, at the time, had no flowing water.

An unnamed ephemeral / intermittent stream was identified and mapped on Property 1 (Deer Park Road) during field investigations.

Watercourses are mapped on **Figure 4**. No waterbodies occur on the Subject Lands; open water features include small drainage ponds as described under Section 3.3. Vernal pools present during the October 2022 field surveys were also identified / mapped (see **Section 3.5**).

3.3. Ecological Land Classification

Existing vegetation community mapping was available for all properties from the Conservation Authority's Land Cover mapping (2018) for Property 1 from Dillon (2015). Field surveys undertaken in October 2022 verified delineations and classifications according to the Ecological Land Classification (E.L.C.) for Southern Ontario (Lee et al., 1998).

A total of 38 vegetation communities were recorded across the four properties, with Properties 1, 2, 3 and 4 having 19, 19, 5 and 16 communities, respectively. Vegetation communities are mapped in **Figures 5(a) – 5(d)**; descriptions, including area coverage per Property, are presented in **Table 2**. Representative photos are provided in **Appendix 2**. Complete photos are provided in a separate digital

data package. Locations of E.L.C. community Photo Documentation are illustrated on **Figures 7(a) – 7(d)**.

Property 1 (Deer Park Road) is dominated by deciduous and mixed swamp communities (more than 60% cover). The most common community type is a patchwork of Poplar and Conifer Mixed Mineral Swamps (S.W.M.3-2). The other common swamp communities, listed in descending order of area, are Green Ash Mineral Swamps (S.W.D.2-2), Black Ash Mineral Swamps (S.W.D.2-1), Poplar Mineral Deciduous Swamps (S.W.D.4-5) and a Trembling Aspen Organic Deciduous Swamps (S.W.D.7). The rest of the wooded areas are an equal split of deciduous and coniferous forests. These include Dry-Fresh Sugar Maple Forest (F.O.D.5-1), Moist Poplar Forest (F.O.D.8-1) and Moist White Cedar Forests (F.O.C.4 and F.O.C.4-1). The next largest community is the Mineral Meadow Marshes (M.A.M.2) / Cultural Thickets (C.U.T.) complex which occurs in lands previously cleared for road construction. Two agricultural fields (I.A.G.) and a few cultural meadows (C.U.M.) are present in the west and southwest. Two small areas of residential area encroachment (A.N.T.H.1 and A.N.T.H.2) occur in the west and northeast. An additional boundary encroachment is located around the property boundary at 779 Metro Road including an A.T.V. trail on the Subject Lands (A.N.T.H.3).

Property 2 (Boyers Road) is largely composed of agricultural fields, which make up 58% of the area. Hedgerows, Cultural Meadows, Cattail Marshes (M.A.S.2-1) and Meadow Marshes (M.A.M.2) border these fields. The largest intact communities are in the northeast, which is composed of a large White Cedar and Hardwood Mineral Mixed Swamp (S.W.M.1-1), a Willow Swamp Thicket (S.W.T.2-2), Moist White Cedar Forests (F.O.C.4), Fresh White Cedar Mixed Forests (F.O.M.4 & F.O.M.4-2), Fresh Sugar Maple Forest (F.O.D.5), Deciduous Swamps (S.W.D.), Floating-leaved Duckweed Ponds (S.A.F.1-3) and a Broad-leaved Sedge Shallow Marsh (M.A.S.2-4). Other wooded areas include a Fresh Sugar Maple and Basswood Forest (F.O.D.5-6) in the southeast, a Scots Pine Cultural Plantation (C.U.P.3-3) on the eastern edge and scattered Cultural Woodlands (C.U.W.). There is also a Cultural Thicket (C.U.T.) in the southeast.

Property 3 (The Queensway) is mostly agricultural field, with 80% coverage. Those fields are surrounded by hedgerows of deciduous tree species. In the northwest corner, Cultural Meadows (C.U.M.1), Deciduous Forest (F.O.D.) and three Deciduous Swamps (S.W.D.) are present.

Property 4 (Varney Road) also has a high percentage of agricultural field coverage (41% cover), however it is restricted to the eastern half of the property. Cultural Woodlands (C.U.W.), Deciduous Forests (F.O.D.), Deciduous Swamps (S.W.D.), Cultural Meadows (C.U.M.1), Hedgerows and Meadow Marshes (M.A.M.2) border these fields. There is a small Floating-leaved Duckweed Pond (S.A.F.1-3), this feature appears to be of anthropogenic origin, constructed sometime after 1970. This pond lies between two Cultural Woodlands in the east. These Cultural Woodlands act as a path from Varney Road, which borders the property to the east. The western half is forests, swamps and meadow. The most common forest communities are Moist White Cedar (F.O.C.4-1), Fresh Maple and Beech (F.O.D.5-2), Fresh-Moist White Cedar and Hardwood Mixed (F.O.M.7-2), and Fresh-Moist Sugar Maple-Hardwood Deciduous Forest (F.O.D.6-5). The swamps are White Cedar and Hardwood Mixed Swamp (S.W.M.1-1) and two

Green Ash Mineral Swamps (S.W.D.2-2). A former agricultural field is now a Cultural Meadow (C.U.M.1), which is bordered to the west by a Mineral Mash (M.A.M.2), Meadow Marsh (M.A.S.) and Willow Swamp Thicket (S.W.T.2-2).

Table 2. List of vegetation communities

Community	Area (ha)	Description
A.N.T.H. Anthropogenic	Property 1 – 0.06 Total – 0.06	Areas that are not a vegetation community but are entirely changed due to anthropogenic activities. In Property 1, there are two small areas in the west and northeast that are the encroachment of residential yards (A.N.T.H. 1 and A.N.T.H. 2, respectively). A third encroachment, including yard and A.T.V. trail occurs at the north of Property 1 (A.N.T.H.3).
C.U.M./C.U.M.1/C.U.M.1-1 Cultural Mineral Meadow	Property 2 – 9.70 Property 3 – 0.31 Property 4 – 4.75 Total – 14.01	Communities that are generally composed of mostly herbaceous species with few shrubs or small trees. They occur commonly on old farm fields. Species are often non-native and can include a variety of asters (*Symphyotrichum spp.*), goldenrods (*Solidago spp.*), Clovers and agricultural grasses. This community is common throughout Properties 1, 2 and 4. (Photo 1 in Appendix 2)
C.U.M.1 (forb) Moist Forb Meadow	Property 1 – 6.53 Total – 6.53	Moist meadow communities (C.U.M.) that are dominated by non-graminoid flowering plants. Species included are goldenrods, milkweeds (*Asclepias spp.*), asters, Wild Carrot (*Daucus carota*) and agricultural grasses. This community occurs in the western edge of Property 1.
C.U.M.1 (mixed) Fresh-Moist Mixed Meadow	Property 1 – 0.25 Total – 0.25	Moist meadow communities (C.U.M.) that are equal parts forb and graminoids. Species include Wild Carrot, goldenrods and Reed Canary Grass (*Phalaris arundinacea*).
C.U.P.3-3	Property 2 – 0.21	A dense stand of Scots Pine (*Pinus sylvestris*) has grown within the cultural meadow. (Photo 2 in Appendix 2).
C.U.T. Cultural Thicket	Property 2 – 0.77 Total – 2.15	A community that is dominated by shrubs with mixed trees and herbaceous species. This community often arises from the succession of a C.U.M. or from human disturbances. The species are often non-native. C.U.T. is present in the southeast of Property 2 and it is a combination of a willow species (*Salix spp.*), Red-osier Dogwood (*Cornus sericea*), European Buckthorn (*Rhamnus cathartica*), and herbaceous meadow species.

Community	Area (ha)	Description
C.U.T. (Fresh-moist Mixed) Moist Mixed Thicket	Property 1 – 2.26 Total – 2.26	This community is composed of a mixture of regenerating coniferous and deciduous trees and shrubs. These include Eastern White Cedar (*Thuja occidentalis*), Green Ash (*Fraxinus pennsylvanica*), White Pine (*Pinus strobus*), Scots Pine, Common Buckthorn and Red-osier Dogwood.
C.U.W./C.U.W.1 Cultural Woodland	Property 1 – 0.85 Property 2 – 1.96 Property 4 – 2.39 Total – 5.19	Treed communities with less than 60% tree cover. They can often be present after human disturbances. C.U.W.s are scattered throughout all four properties. Common species include Manitoba Maple (*Acer negundo*), Black Locust (*Robinia pseudoacacia*), Black Walnut (*Juglans nigra*), Sugar Maple (*Acer saccharum*), Common Buckthorn, Dog-strangling Vine (*Cynanchum rossicum*) and Garlic Mustard (*Alliaria petiolata*). (Photo 3 in Appendix 2)
C.U.W.1 (Dry-fresh Mixed) Fresh Mixed Woodland	Property 1 – 5.58 Total – 5.58	This community is found in the southcentral area of Property 1. It has a canopy of about 50% cover with tree species composed of American Basswood (*Tilia americana*), Sugar Maple and American Elm (*Ulmus americana*). Shrubs include Common Buckthorn and Alternate-leaved Dogwood (*Cornus alternifolia*). Herbaceous species are Riverbank Grape (*Vitis riparia*) and Dog-strangling Vine. A few large Butternut (*Juglans cinerea*) were confirmed to be in this community. (Photo 4 in Appendix 2)
F.O.C.4 Moist White Cedar Forest	Property 1 – 1.44 Property 2 – 0.58 Total – 2.02	These communities, found on Properties 1 and 2, are forests composed of mostly Eastern White Cedar with few herbaceous species growing. Dog-strangling Vine is the dominant ground cover.
F.O.C.4-1 Pure Moist White Cedar Forest	Property 1 – 10.08 Property 4 – 7.93 Total – 18.02	These communities, found on Properties 1 and 4, are forests composed of very dense Eastern White Cedar with very few other tree species or herbaceous species present. Dog-strangling Vine is the dominant ground cover, patches of Bulblet Fern (*Cystopteris bulbifera*) were also observed. Overall, the species diversity is very low in these communities. There are scattered pockets of F.O.C.4-1 throughout Property 1 and one large stand in the western half of Property 4. (Photo 5 in Appendix 2)

Community	Area (ha)	Description
F.O.D. Deciduous Forest	Property 2 – 1.18 Property 3 – 0.28 Property 4 – 0.49 Total – 1.95	These communities are forests that are composed of mostly or entirely deciduous tree species. In Property 2, this community is dominated by Manitoba Maple (*Acer negundo*) with Garlic Mustard, Virginia Creeper (*Parthenocissus quinquefolia*) and Dog-strangling Vine in the herbaceous layer. In Property 3, this community is a small forest with a mixture of deciduous trees, Butternut, White Elm, American Basswood, Sugar Maple, Trembling Aspen (*Populus tremuloides*) and Willow. In Property 4, this community represents just the edge of a larger deciduous forest to the southwest and the edge of a coniferous plantation in the northeast.
F.O.D.5 Fresh Sugar Maple Deciduous Forest	Property 2 – 0.30 Total – 0.30	This small forest patch in Property 2 is composed of Sugar Maple, Common Buckthorn, Tartarian Honeysuckle (*Lonicera tatarica*) and Dog-strangling Vine with an overall very low species diversity. (Photo 6 in Appendix 2)
F.O.D.5-1 Dry-Fresh Sugar Maple Forest	Property 1 – 5.90 Total – 5.90	A few of these forest communities are in the east and southern parts of Property 1. They consist of forest canopies dominated by Sugar Maple with lesser amounts of American Beech, American Basswood and Eastern Hemlock. The understory has sparse Hop-hornbeam and Eastern White Cedar, and the herbaceous species are largely Zig-zag Goldenrod (*Solidago flexicaulis*), Canada Mayflower (*Maianthemum canadensis*), and Dog-strangling Vine.
F.O.D.5-2 Dry-Fresh Sugar Maple and Beech Forest	Property 4 – 5.48 Total – 5.48	This mature forest canopy is dominated by Sugar Maple and American Beech (*Fagus americana*) with some Eastern Hemlock (*Tsuga canadensis*), Red Oak (*Quercus rubra*) and American Basswood. The understory is composed of similar species, but Hop-hornbeam (*Ostrya virginiana*) is also common. Shrubs present are Alternate-leaved Dogwood and Common Buckthorn. Herbaceous species included fern species and Plantain-leaf Sedge (*Carex plantaginea*). Invasive species were present, such as Dog-strangling Vine, Garlic Mustard and Tartarian Honeysuckle, although less abundant than in other communities across the properties. Overall, there is a high species diversity, and the community is in good condition. (Photo 7 in Appendix 2)

Community	Area (ha)	Description
F.O.D.5-6 Dry-Fresh Sugar Maple and Basswood Forest	Property 2 – 1.25 Total – 1.25	This mature forested community is composed of Sugar Maple, American Basswood and Trembling Aspen (*Populus tremuloides*) in the canopy. American Elm, White Ash (*Fraxinus americana*) and Hop-hornbeam are in the understory. The shrub and herbaceous layers are dominated by Common Buckthorn and Dog-strangling Vine. This community is in fair to good condition. It has a mature canopy of native species, but is dominated by invasives on the ground. (Photo 8 in Appendix 2)
F.O.D.6-5 Moist Sugar Maple and Hardwood Forest	Property 4 – 0.82 Total – 0.82	This community is in the northwest corner of Property 4 and is part of a much larger Sugar Maple forest that extends off property. The canopy is made up of Sugar Maple, American Basswood, and Eastern White Cedar. Black Ash (*Fraxinus nigra*) is in the understory. The ground layer is dominated by Bittersweet Nightshade (*Solanum dulcamara*), Dog-strangling Vine and False Nettle (*Boehmeria cylindrica*). (Photo 9 in Appendix 2)
F.O.D.8-1 Moist Poplar Forest	Property 1 – 7.16 Total – 7.16	This community is scattered throughout the drier areas of Property 1. The canopy is dominated by Trembling Aspen, the sub-canopy has a mix of large Common Buckthorn and Green Ash. Common Buckthorn is also the dominant shrub. Dog-strangling Vine is the most common groundcover. Invasive species are common throughout this community. (Photo 10 in Appendix 2)
F.O.M.4 Dry-Fresh White Cedar Mixed Forest	Property 2 – 1.98 Total – 1.98	Located in two spots in Property 2, these communities are a mix of Eastern White Cedar, Trembling Aspen, White Pine, Sugar Maple and American Elm. Common Buckthorn and Cultivated Apple trees (*Malus spp.*) are the main shrubs, while Dog-strangling Vine is the dominant herbaceous species present. (Photo 11 in Appendix 2)
F.O.M.4-2 Fresh White Cedar Mixed Forest	Property 2 – 1.66 Total – 1.66	Located in the northeast corner of Property 2, this a regenerating community. It is composed of a mix of Trembling Aspen, White Cedar, Green Ash and American Elm in the canopy. Common Buckthorn dominates the shrub layer and Dog-strangling Vine is common throughout the herbaceous layer. (Photo 12 in Appendix 2)
F.O.M.7-2 Fresh-Moist White Cedar and Hardwood Mixed Forest	Property 4 – 1.49 Total – 1.49	Located in Property 4, this forest is a mixture of White Cedar, American Basswood, Trembling Aspen and Green Ash. White Cedar and Black Ash make up the understory, while Common Buckthorn is the dominant shrub. The herbaceous layer includes Dog-strangling Vine, Swamp Milkweed (*Asclepias incarnata*), and Yellow Lady's Slipper (*Cypripedium parviflorum*).

Community	Area (ha)	Description
Hedgerow	Property 2 – 1.66 Property 3 – 1.05 Property 4 – 1.20 Total – 3.91	Hedgerows are bordering the farm fields in Properties 2, 3 and 4. They are treed communities that are too narrow to be considered a forest. They are usually composed of a variety of deciduous trees, including Black Locust, Sugar Maple, Manitoba Maple and American Basswood. The understory is often thick and dominated by Common Buckthorn, Tartarian Honeysuckle and Riverbank Grape. Dog-strangling Vine, goldenrods and agricultural grasses make up the herbaceous layer. (Photo 13 in Appendix 2)
I.A.G. Intensive Agriculture	Property 1 – 4.71 Property 2 – 56.38 Property 3 – 8.72 Property 4 – 21.69 Total – 91.49	Agricultural fields make up a large portion of Properties 2, 3 and 4, and a small fraction of Property 1. At the time of field surveys, soy and corn were the two crops being grown. (Photo 14 in Appendix 2)
M.A.M.2 Mineral Meadow Marsh	Property 2 – 4.83 Property 4 – 1.44 Total – 5.92	The Meadow Marshes found in Properties 2 and 4 are made up of Reed Canary Grass, Purple Loosestrife (*Lythrum salicaria*), Canada Goldenrod (*Solidago canadensis*), New-England Aster (*Symphyotrichum novea-anglea*) and Red-osier Dogwood. They are often bordering agricultural fields. (Photo 15 in Appendix 2)
M.A.M.2/C.U.T. Mix of Mineral Meadow Marsh and Cultural Thicket	Property 1 – 33.30 Total – 33.30	This community is the result of succession from the time Property 1 had been cleared for proposed road construction. The Mineral Marsh sections are composed of Spotted Joe-Pye Weed (*Eutrochium maculatum*), goldenrods, New-England Aster, Swamp Milkweed, cattails (*Typha spp.*) and Reed Canary Grass. Trembling Aspen, Red-osier Dogwood, Eastern White Cedar and willow species are scattered. (Photos 16, 17 and 18 in Appendix 2)
M.A.S. Shallow Marsh	Property 4 – 0.19 Total – 0.19	The shallow marsh on the western side of Property 4 is made up of cattails, Spotted Joe-Pye Weed, and Reed Canary Grass.
M.A.S.2-1 Cattail Mineral Shallow Marsh	Property 1 – 0.22 Property 2 – 0.84 Total – 0.97	Small patches of Cattail Marshes are scattered through the farmlands of Property 2, and a single stand is present in the southern section of Property 1. They are dominated by cattails; Purple Loosestrife, Reed Canary Grass and Red-osier Dogwood are also common throughout. (Photo 19 in Appendix 2)

Community	Area (ha)	Description
M.A.S.2-4 Broad-leaved Sedge Shallow Marsh	Property 2 – 0.06 Total – 0.06	Located in the northeastern corner of Property 2, this community dominated by Lake Sedge (*Carex lacustris*) and Duckweed (*Lemna spp.*). The riparian portion is composed of Red-osier Dogwood, Reed Canary Grass, Sensitive Fern (*Onoclea sensibilis*) and Purple Loosestrife. (Photo 20 in Appendix 2)
S.A.F.1-3 Duckweed Floating-leaved Shallow Aquatic	Property 2 – 0.03 Property 4 – 0.03 Total – 0.06	One community occurs in Property 2, a collection of small ponds that are dominated by floating Duckweed. The canopy is partly covered in Black Ash, White Cedar and American Elm. The second community is a human-made pond in Property 4, constructed sometime after 1970. A small patch of Common Reed (*Phragmites australis*) grows along its shore. (Photos 21 and 22 in Appendix 2)
S.W.D. Deciduous Swamp	Property 2 – 1.04 Property 3 – 0.52 Property 4 – 0.69 Total – 2.26	These small deciduous swamps are composed of a combination of Willow, Green Ash, Manitoba Maple and Trembling Aspen.
S.W.D.2-1 Black Ash Mineral Deciduous Swamp	Property 1 – 10.37 Total – 10.37	Located only in Property 1, this community was formerly dominated by Ash trees which have been impacted by Emerald Ash Borer (E.A.B.) and now stand as snag. The current live dominant canopy consists of Silver Maple (*Acer saccharinum*), Freeman's Maple (*Acer x freemanii*) and Trembling Aspen. The understory is dense with American Elm, Yellow Birch (*Betula alleganiensis*) and Black Ash. Common Buckthorn is the most common shrub. Black Ash and Green Ash seedlings are remain common. However, all ash seedings have been impacted by Emerald Ash Borer (E.A.B.), and their abundance has likely decreased since the last survey by Dillon in 2012. (Photo 23 in Appendix 2)
S.W.D.2-2 Green Ash Mineral Deciduous Swamp	Property 1 – 15.16 Property 2 – 0.11 Property 4 – 1.53 Total – 16.80	Common throughout Property 1, this community has been heavily impacted by Emerald Ash Borer (E.A.B.). In Property 4, this community is composed of mostly standing Green Ash snags. Also in Property 4, a large patch of invasive European Black Alder (*Alnus glutinosa*) is growing in the shrub layer. Other common species are Fowl Manna Grass (*Glyceria striata*), Purple Loosestrife, Spotted Joe-Pye Weed, Sensitive Fern, and Red-osier Dogwood. (Photo 24 in Appendix 2)

Community	Area (ha)	Description
S.W.D.3 Maple Mineral Deciduous Swamp	Property 1 – 3.38 Total – 3.38	Previously identified as a Green Ash Swamp (Dillon 2015), this community is now dominated by Silver and Freeman's Maple due to impacts of the Emerald Ash Borer (E.A.B.). No Ash snags remain in the canopy. Other canopy species are Trembling Aspen, Eastern Cottonwood (*Populus deltoides*) and willow. American Elm and Green Ash are common in the sub-canopy and shrub layers. On the ground, Sensitive Fern, goldenrod, Fowl Manna Grass and False Nettle are common. (Photo 25 in Appendix 2)
S.W.D.4-5 Poplar Mineral Deciduous Swamp	Property 1 – 6.41 Total – 6.41	Scattered in a few patches in Property 1, this community is dominated by Trembling Aspen, Large-toothed Aspen (*Populus grandidentata*) and Eastern Cottonwood in the canopy and Green Ash in the understory. Common Buckthorn, Alternate-leaved Dogwood and Green Ash make up the shrub Layer. Dog-strangling Vine is the dominant groundcover, growing with Joe-Pye Weed, Raspberry species (*Rubus spp.*), Sensitive Fern and Common Buckthorn. (Photo 26 in Appendix 2)
S.W.D.7 Ash and Trembling Aspen Organic Deciduous Swamp	Property 1 – 5.55 Total – 5.55	This community is in the south of Property 1. It is another community where Emerald Ash Borer (E.A.B.) has had a large impact, which has removed Black and Green Ash from the canopy, leaving Trembling Aspen and willow. Both ash species are still common in the sub-canopy, shrub and ground layers. Common Buckthorn, Tartarian Honeysuckle and Common Elderberry (*Sambucus canadensis*) are common in the shrub layer. Virgin's Bower (*Clematis virginiana*), Dog-strangling Vine, Sensitive Fern, Spotted Jewelweed (*Impatiens capensis*), and Fowl Manna Grass are common herbaceous species. Evidence of an old road through this community is present. (Photo 27 in Appendix 2)
S.W.M.1-1 White Cedar and Hardwood Mineral Mixed Swamp	Property 2 – 9.38 Property 4 – 2.04 Total – 11.42	Common in both Properties 2 and 4, this community is a mixture of Eastern White Cedar, Green Ash, Freeman's Maple, Paper Birch (*Betula papyrifera*), Yellow Birch American Elm and Sugar Maple. Green Ash and Common Buckthorn are common understory and shrub species. Dog-strangling Vine, Reed Canary Grass, fern species and Scouring Rush are common herbaceous species (*Equisetum hyemale*). (Photo 28 in Appendix 2)

Community	Area (ha)	Description
S.W.M.3-2 Poplar and Conifer Mineral Mixed Swamp	Property 1 – 81.15 Total – 81.15	The most common community in Property 1, this swamp community comprises a canopy of Trembling Aspen, White Cedar, Balsam Fir (*Abies balsamea*), and Paper Birch. The understory is abundant with Common Buckthorn and Red-osier Dogwood. The herbaceous layer is composed of Canada Mayflower, Bulblet Fern and Dog-strangling Vine. (Photo 29 in Appendix 2)
S.W.T.2-2 Willow Mineral Thicket Swamp	Property 2 – 2.74 Property 4 – 0.64 Total – 3.38	Found in both Properties 2 and 4, the dominant shrubs are Heart-leaved Willow (*Salix eriocephala*) and Red-osier Dogwood. Purple Loosestrife, Spotted Joe-Pye Weed, and Reed Canary Grass are also common in the ground layer. (Photo 30 in Appendix 2)

3.4. Flora

A list of flora species occurring on the Subject Lands has been compiled based on October 2022 surveys for all properties, surveys completed by Dillon in 2012 (Dillon 2015) for Property 1 (Deer Park Road), and incidental observations by the Conservation Authority. A total of 294 flora species have been recorded on the four properties (**Appendix 3**).

Property 1 (Deer Park Road) has the largest number of recorded species, in part due to greater survey effort on this property to inform species list(s) (multi-season inventory undertaken by Dillon (2015)). Property 1 is also the largest, most intact property, with the highest diversity of vegetation communities. Of the 261 species recorded, 190 (73%) are native and 71 (27%) are non-native species.

Property 2 had 99 species recorded during the fall survey. Two-thirds of the species are native (67%) and the one-third are non-native (33%). Most of the native diversity is in the northeast, where the largest area of undisturbed forest is.

Property 3 had 32 species recorded during the fall survey. Approximately 80% of this property is comprised of agricultural fields. Of the 32 species, 25 (76%) are native and 7 (24%) are non-native.

Property 4 had 97 species recorded in the fall survey. Of these, 74 (76%) are native and 23 (24%) are non-native.

Many invasive species were recorded across the properties. Dog-strangling Vine was often the dominant groundcover in the forest communities. Common Buckthorn and Tartarian Honeysuckle were widespread in the shrub layer throughout most communities. Garlic Mustard was found in all properties except Property 3.

3.4.1. Species at Risk and Rare Species

Two Species at Risk (S.A.R.) flora were recorded (**Table 3**). Black Ash (*Fraxinus nigra*) was recorded on Properties 1, 2 and 4 and Butternut (*Juglans cinerea*) was recorded on Properties 1, 3 and 4. Black Ash

was common in the swamp understories but has been heavily impacted from Emerald Ash Borer (*Agrilus planipennis*). It is no longer common in the canopy, commonly replaced by Maple and Poplar trees with an increase of invasive species in the understory due to increased light penetration (open canopy).

Butternut was previously identified / inventoried by Dillon (2015) in Property 1. Some of those individuals were confirmed to still be alive, but many had since lost significant parts of their crown due to the Butternut Canker fungus. Butternut was also recorded on Properties 3 and 4.

Table 3. Flora Species at Risk and Rare Species

Scientific Name	Common Name	S Rank[1]	S.A.R.O.[2]	S.A.R.A.[2]	Property
Fraxinus nigra	Black Ash	S3	E.N.D.	N.A.R. (C.O.S.E.W. I.C. – T.H.R.)	1 – Deer Park Road, 2 – Boyers Road, 4 – Varney Road
Juglans cinerea	Butternut	S2	E.N.D.	E.N.D.	1 – Deer Park Road, 3 – The Queensway, 4 – Varney Road

S2 – Imperiled; S3 – Vulnerable
E.N.D. – Endangered; T.H.R. – Threatened

3.5. Fauna

Targeted species-specific surveys (Breeding Bird Surveys and Amphibian Calling Surveys) were undertaken for all properties in 2022 by the Conservation Authority (**Figure 6**), and for Property 1 by Dillon in 2012 (Dillon, 2015). Incidental fauna species were noted by N.S.E. in 2022.

A total of 110 fauna species were recorded on the four properties, with an additional 3 identified only to genus. A complete list of fauna is provided in **Appendix 4**. Of the 110 species, there was a total of 10 amphibian species, 2 reptile species, 80 bird species, 9 mammal species, and 6 insect species. Additionally, several terrestrial crayfish burrows were observed, however no individuals were seen to determine the species. Incidental observations of species and species signs (scat, nests, etc.) as well as wildlife habitat features (e.g., vernal pools, rock piles with reptile hibernacula potential, etc.) are mapped on **Figures 8(a) – 8(d)**, with descriptions provided in **Appendix 7**. Additional details are included in the digital data / photo package.

Species total per taxa by property is summarized in the following table below (**Table 4**).

Table 4. Fauna species totals per taxa by property

Property No. / Name	Amphibian	Reptile	Bird	Mammal	Insect	Terrestrial Crayfish Burrow (present)	Total per property
1 – Deer Park Road	9	2	76	8	8	x	104
2 – Boyers Road	3	0	46	5	0		54
3 – The Queensway	1	0	25	0	0		26
4 – Varney Road	2	0	42	1	2	x	48

3.5.1. Species at Risk and Rare Species

A total of four Species at Risk fauna were recorded on the four properties (**Table 5**). Eastern Wood-pewee (*Contopus virens*) and Barn Swallow (*Hirundo rustica*) occurred on all four properties. Wood Thrush (*Hylocichla mustelina*) was recorded on Property 1, and Monarch (*Danaus plexippus*) was recorded on Property 4. No provincially rare species (S1-S3) were recorded.

Additionally, Dillon (2015) reported the presence of Blue-spotted/Jefferson Salamander Complex (*Ambystoma laterale/ jeffersonianum*) on Property 1; however, it is unclear whether genetic testing was undertaken to determine whether the individual was a Jefferson Salamander dependent unisexual (list as Endangered by both S.A.R.O. and S.A.R.A.), or a Blue-spotted dependent unisexual (not-at-risk).

Table 5. Fauna Species at Risk and Rare Species

Taxa	Scientific Name	Common Name	G Rank[1]	S Rank[1]	S.A.R.O.[2]	S.A.R.A.[2]	Property
Bird	*Hirundo rustica*	Barn Swallow	G5	S5B	T.H.R.	T.H.R.	All properties
Bird	*Contopus virens*	Eastern Wood-pewee	G5	S4B	S.C.	S.C.	All properties
Bird	*Hylocichla mustelina*	Wood Thrush	G4	S4B	S.C.	T.H.R.	1 – Deer Park Rd, 2 – Boyers Road
Insect	*Danaus plexippus*	Monarch	G4	S2N S4B	S.C.	S.C.	1 – Deer Park Road, 4 – Varney Road
Amphibian	*Ambystoma laterale / jeffersonianum*	Blue-spotted / Jefferson Salamander Complex	G?	S?	?	?	1 – Deer Park Road

S2 – Imperiled; S4 – Apparently Secure; S5 – Secure
END – Endangered; T.H.R. – Threatened; S.C. – Special Concern

3.6. Species at Risk Screening

A background review was undertaken for Species at Risk flora and fauna (Endangered, Threatened, and Special Concern species) which may not have been recorded through surveys undertaken to date (i.e., those not captured by bird and amphibian-calling surveys or fall vegetation inventories). Sources included:

- The Natural Heritage Information Centre (N.H.I.C.) (M.N.R.F., 2022)
- Publicly accessible natural heritage databases such as the Ontario Breeding Bird Atlas and the Ontario Reptile and Amphibian Atlas
- Citizen Science databases: eBird and iNaturalist

Vegetation community information gathered through field surveys was used to assess the potential for Endangered or Threatened Species at Risk and their habitat to occur (**Appendix 5**). The following species have a high-moderate probability of occurring in the Subject Lands:

- Little Brown Myotis (*Myotis lucifugus*) (Endangered)
- Northern Myotis (*Myotis septentrionalis*) (Endangered)
- Snapping Turtle (*Chelydra serpentina*) (Special Concern)
- Bald Eagle (*Haliaeetus leucocephalus*) (Special Concern)

Department of Fisheries and Ocean (D.F.O.) Species at Risk mapping did not identify any records for the Subject Lands.

3.7. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (S.W.H.) screening was undertaken based on the known occurrence of species proximate to the site and an assessment of habitat suitability, and according to the S.W.H. Criteria Schedules for Ecoregion 6E (M.N.R.F., 2015) (**Appendix 6**). The following S.W.H. types were identified (S.W.H. types are considered Candidate unless otherwise indicated):

- Seasonal Concentration Areas of Animals
    - Waterfowl Stopover and Staging Areas (Terrestrial) – Property 2
    - Raptor Wintering Area (Bald Eagle) – Property 1
    - Bat Maternity Colonies – Properties 1, 2 and 4
    - Turtle Wintering Areas – Property 2
    - Reptile Hibernaculum – Properties 1 and 2
    - Deer Wintering Areas (Stratum 2) (Confirmed by M.N.R.F.) – Properties 1, 2 and 4
- Specialized Habitat for Wildlife
    - Waterfowl Nesting Area – Properties 1, 2 and 4
    - Bald Eagle Nesting, Foraging and Perching Habitat – Property 1
    - Woodland Raptor Nesting Habitat – Properties 1 and 2
    - Amphibian Breeding Habitat (Woodland) (Confirmed) – Property 1
    - Amphibian Breeding Habitat (Wetland) – Properties 2 and 4
    - Woodland Area-Sensitive Bird Breeding Habitat – Properties 1 and 2
- Habitat for Species of Conservation Concern
    - Terrestrial Crayfish – Properties 1 and 4
    - Special Concern and Rare Wildlife Species (see **Table 5** in **Section 3.5.1**, above)
- Animal Movement Corridors
    - Amphibian Movement Corridor – Properties 1, 2 and 4
    - Deer Movement Corridor – Properties 1, 2 and 4

4. Threats and Disturbances

Natural areas in southern Ontario are subjected to many threats and disturbances as a result of historic land use changes and human activities. The most significant threat is the presence of invasive species including Dog-strangling Vine (*Vincetoxicum rossicum*), Common Buckthorn (*Rhamnus cathartica*), Garlic Mustard (*Alliaria petiolata*), Common Reed (*Phragmites australis*), and Tartarian Honeysuckle (*Lonicera tatarica*). Other threats and disturbances include human impacts such as A.T.V. use, historic tree clearing, hunting, dumping, and culverts. Other impacts include Emerald Ash Borer (*Agrilus planipennis*) and Spongy Moth (formerly Gypsy Moth, *Lymantria dispar dispar*). Dominant invasive species, human impacts, and other impacts are described further in the following sections.

4.1. Dominant Invasive Species

Table 6 describes the dominant invasive species recorded on the Subject Lands and a brief species background on the impacts to biodiversity in natural areas. Although largely widespread, notable locations of invasive species are mapped on **Figures 9(a) – 9(d)**, with descriptions provided in **Appendix 7** (Note: Observation / Photo numbers are categorized as follows, IC = Incidental Observation, IS - Invasive Species, PD = Photo Documentation and SD = Site Disturbance and Anthropogenic Features). Additional details are included in the digital data / photo package.

See **Section 8** for recommended stewardship actions for management of invasive species.

Table 6. Dominant Invasive Species

Species Description	Photos
Dog-strangling Vine (*Vincetoxicum rossicum*), also known as European Swallowwort, is an invasive perennial herbaceous plant. It forms thick mats of vegetation which out-competes native plants and can also impact recreational activities, agriculture, and forestry due to its vine-like nature. The root of the plant releases chemicals to negatively affect nearby other plant species. In areas where it is common, it is found on the edges of forest and woodlands, along trails near natural areas and appears in other disturbed areas. It can threaten rare vegetation communities including alvars, tallgrass prairies, savannah, and woodlands. (Anderson, 2012a).	
Common Buckthorn (*Rhamnus cathartica*), also known as European Buckthorn, is a shrub or small tree native to Eurasia. Common Buckthorn is an aggressive and dominant species in the understory and ground layer that can thrive in a wide array of soil and light conditions. It is commonly found in forests, especially along the boundary, woodlands and thickets. Common Buckthorn forms dense thickets that shades native plants and can affect soil quality. The plant's berries are eaten by wildlife, such as birds and small mammals, and contain laxative properties which results in seeds being spread widely and rapidly (Anderson 2012b).	

Species Description	Photos
Garlic Mustard (*Alliaria petiolata*) is an aggressive biennial herbaceous plant that belong to the mustard family. Garlic Mustard often shows up in disturbed areas but is not a requirement, making it a threat to mature forests. Once introduced in an area, it quickly becomes a dominant ground layer vegetation in 5-7 years, displacing native spring ephemerals. Garlic Mustard releases allelopathic chemicals that prevents the growth of other plants by altering the soil chemistry. The leaves are nutrient rich and when they die, it can accelerate the speed of leaf litter decay, changing the decomposition cycle. Areas with high deer populations may increase Garlic Mustard. (Anderson 2012c)	
Common Reed (*Phragmites australis subsp. Australis*), more commonly referred to as Phragmites is an invasive perennial grass from Eurasia that has caused significant damage to coastal wetlands and beaches. Phragmites can grow in aquatic, semi-aquatic and terrestrial habitats, most often found in wetlands, ditches, roadsides, and other low-lying areas. This quick growing species spreads quickly with underground roots and rhizomes, and forms very dense patches that displace native plants and wildlife species. It also releases toxins from roots into the soil impeding the growth of surrounding plants. Phragmites seeds are spread by wind and water making management difficult. Overall, the impact of phragmites can result in loss of biodiversity, loss of habitat for native species, and changes in hydrology and nutrient cycling. (Nichols 2020)	

Species Description	Photos
Tartarian Honeysuckle (*Lonicera tatarica*) is a multi-stemmed deciduous woody shrub that can form dense thickets that can outcompete native understory and ground species. It is found in a variety of habitats and soil types, including thickets, floodplains, forests, and transition zones. Tartarian Honeysuckle and other related Honeysuckles (*Lonicera spp.*) thrive in disturbed areas such as urban forests and forests that have experienced disturbances such as forestry and grazing. Mature plants are tolerant of shade; however, seedlings prefer full sunlight, and take advantage of canopy gaps such as those created by dying ash (*Fraxinus sp*.) trees. As with other invasive species, this species produces leaves earlier in the spring and retains leaves longer into the fall than native species. Honeysuckles have high seed production, and the berries are eaten and dispersed by birds and small mammals which results in individual plants popping up in new locations making management difficult. (Tassie and Sherman, 2014).	
European Black Alder (*Alnus glutinosa*) is an invasive tree native to Europe and western Asia that is a threat to wetland and riparian species and habitats. It is an aggressive dominant species that grows quickly, forms monospecific stands which can result in shading native tree species. European Black Alder is a nitrogen-fixing species which adds nitrogen to the soil through roots, changing soil chemistry unfavourably for other species. Prefers wet to moist soils and full sun, taking advantage of canopy gaps such as the loss of ash species. Seeds spread by water, wind, and wildlife. (Anderson, 2013)	

Species Description	Photos
Black Locust (*Robina pseudoacacia*) is a deciduous tree native to southern Appalachians and the Ozarks that can grow in many different ecosystems and soil types and forms dense colonies that shade-out native plant species. This species is shade intolerant and thrives in open habitat such as meadows and degraded woodlands and forests. Black Locust spread by seeds and suckering from the root and stump. Black Locust is listed as a specific threat for a number of Species at Risk in Ontario such as Pink Milkwort (*Polygala incarnata*) and White Prairie Gentian (*Gentiana alba*). (Warne, 2016a)	
Purple Loosestrife (*Lythrum salicaria*) is an invasive, perennial, herbaceous plant native to Europe and Asia. It thrives in wetlands, shorelines, and roadside ditches, where it forms dense patches displacing native plant species. Purple Loosestrife spreads quickly in part due to the extremely dense seed heads and the ability to reproduce from plant fragments. This species is listed as a specific threat to several species at risk flora and fauna wetland species such as Dense Blazing Star (*Liatris spicata*) and King Rail (*Rallus elegans*). Purple Loosestrife can also impact water levels changing wetland functions and habitat quality. (Warne, 2016b)	

4.2. Human Impacts

Documented human impacts include A.T.V. and presumed snowmobile trails, tree and brush clearing, hunt stands, dumping, party spot/campsite, evidence of equestrian use, and culverts and drainage ditches. Detailed observations and locations of these disturbances are shown on **Figures 10(a) – 10(d)**, with descriptions provided in **Appendix 7**. Additional details are included in the digital data / photo package.

Property 1 (Deer Park Road) has experienced extensive clearing within the areas that were proposed residential sections (Dillon, 2015). These areas were likely cleared to make way for machinery and in

anticipation of construction of the previously proposed Maple Lake Estates development. These trails and laneways have filled in with vegetation overtime, however, the ruts are still present. The repeated clearing of vegetation within formerly forested swamp communities has changed these communities significantly, resulting in drier meadow marsh / thicket communities. Snowmobile / A.T.V. trails were most prevalent on Properties 1 and 2. Trails and other anthropogenic features are described below.

At Property 1, encroachment of residential yards occurs in three small areas in the west, northeast and north; these are mapped as 'Anthropogenic' according to ELC (**Figure 5(a)**, **Section 3.3**).

4.3. Trails & Structures

There were no buildings located on any of the properties. **Table 7** summarizes examples of trails, structures and signage. Detailed observations and locations of these disturbances are shown on **Figures 10(a) – 10(d)**, with descriptions provided in **Appendix 7**. Additional details are included in the digital data / photo package.

Table 7. Examples of Trails, Structure, and Signage

Trail, Structure, & Signage Examples	Photos
A.T.V. Tracks A.T.V. tracks (with evident A.T.V. ruts) are most prevalent on Property 1 from the proposed development and vegetation clearing activities, and within a small section of Property 2 in the open habitat. Approximately 15,418 m and 1,590 m of A.T.V. tracks are present on Property 1 and Property 2, respectively. Photo: Property 1 – Deer Park Road	

Trail, Structure, & Signage Examples	Photos
Laneways Laneway, distinguished from A.T.V. tracks / trails by greater width (and in most cases evidence of use by tractors / trucks) to enter Deer Park Road property from Woodbine Ave. Farm laneway present on Property 4 to access agricultural fields from Varney Road. Approximately 638 m and 1,089 m of laneway is present on Properties 1and 4, respectively. Photo: Property 1 – Deer Park Road	
Trails No formal trails are present. Many small informal trails present on Property 1, most are presumed to be deer trails due to the abundance of evidence of deer use (e.g., tracks, browse, scat), however, likely people use them as well. Dirt path trail on Property 2 likely used to access pond and hunt stand. Photo: Property 1 – Deer Park Road	

Trail, Structure, & Signage Examples	Photos
Metal Monitoring Well Pole One metal, locked, utility pole, likely a monitoring well installed during previous site investigations, was found on Property 2, located on the edge of an agricultural field and cultural woodland. Photo: Property 2 – Boyers Road	
Fences Several sections of fence, consisting of wood and/or page wire, exist on Property 2. Many of the fences are along tree lines or edges of fields. Cedar wood fence, approximately 20m, also present on Property 4, located on the edge of a cultural meadow, formerly an agricultural field. Photo: Property 2 – Boyers Road	

Trail, Structure, & Signage Examples	Photos
Culvert Metal culverts present along the laneway entrance from Woodbine Ave on Property 1. Culverts also present in wetland community on Property 1. Photo: Property 1 – Deer Park Road	
Hunt Stands (Deer Blinds) Three hunt stands on Property 1, four hunt stands on Property 2 and five hunt stands on Property 4. All are made of wood, and most are in poor to fair condition. Photo: Property 2 – Boyers Road	

Trail, Structure, & Signage Examples	Photos
Signage & Markers Snowmobile sign and other wooden stake markers on Property 1. Black metal trail markers attached to Eastern White Cedar on Property 4. Photos: Property 1 – Deer Park Road (top), Property 4 – Varney Road (bottom)	 

Trail, Structure, & Signage Examples	Photos
Wall / Rock Pile Start of farm laneway marked with stone wall entrance off Varney Road Property 4. Rock piles were found on Properties 1 and 2. Possibly old rock walls or boundary markers. Photos: Property 4 – Varney Road (top), Property 1 – Deer Park Road (bottom)	 

4.4. Other Impacts

Other documented impacts include invasive insects; Emerald Ash Borer (E.A.B., *Agrilus planipennis*) and Spongy Moth (formerly Gypsy Moth, *Lymantria dispar dispar*). E.A.B. is a species of wood-boring beetle native to East Asia that is responsible for the significant and widespread decline of ash trees (*Fraxinus spp*.) in North America. Dead standing and fallen ash trees were recorded as well as evidence of the exit holes made by the adult E.A.B. beetles. E.A.B. has likely impacted all properties, however, evidence was most obvious on Property 1 (Deer Park Road) and Property 4 (Varney Road) that previously had ash dominated forest communities. Spongy Moth is native to Europe and Asia and feeds on the foliage of trees as a caterpillar. In Ontario, this infestation in recent years has resulted in significant damage to several tree species, mostly hardwood species such as oak, birch, poplar, and maple. Evidence of

Spongy Moth, egg masses and pupal cases, were observed on Deer Park Road and Varney Road properties. The impacts of spongy moths are expected to subside in upcoming years, due to their 5-7-year cycle. Spongy moth populations spiked in 2020, and significantly in 2021, but the virus that kills them appeared in the fall of 2021, resulting in minimal impacts from spongy moths in 2022.

5. Property Data

5.1. Historic Land Use

A review of available historic aerial photography identified homes and structures previously present on the Subject Lands (1970, 1978. **Figures 11(a) – 11(d)**). These structures were subsequently demolished following development approvals in the 1980's. Natural cover increased on Properties 1 and 2 since the 70's, with the succession of fallow agricultural fields. Property 1 experienced significant clearing associated with the proposed road network for the Maple Lake Estates development between 1995-2012, which has since begun to succeed. The extent of natural cover / agricultural land use on Properties 3 and 4 appears largely unchanged.

5.2. Property Boundaries

The properties comprising the Subject Lands were surveyed and registered in the York Region Land Registry Office as follows (see **Appendix 8**):

- Property 1 – October 29, 1991, as 65M-2903 (Marshall Macklin Monaghan Ontario Ltd. (O.L.S.))
- Property 2 – May 21, 1981, as 65R-3920 (Marshall Macklin Monaghan Ontario Ltd. (O.L.S.)) and November 18, 2022, as 65R-40140 (GeoVerra (ON) Ltd. (O.L.S.))
- Property 3 – July 30, 1990, as 65R-14638, Part 2 (Marshall Macklin Monaghan Ontario Ltd. (O.L.S.))
- Property 4 – January 15, 2007, as 65R-29665, Part 1 and Part 2 (Lloyd & Purcell Ltd. (O.L.S.))

5.3. Adjacent Land Use

Lands adjacent to the Lake Simcoe Conservation Preserve include mixed uses. The Lake Simcoe shoreline occurs within 300 m north of Property 1 and 570 m east of Property 4 with shoreline residential communities along the waterfront. Woodlands / natural cover occur immediately to the north, east and west of the Subject Lands, including the Arnold C. Matthews Natural Reserve which occurs west of Property 4 (between the Subject Lands and Lake Simcoe). Agricultural fields are predominant to the south of the Subject Lands. Rural residential properties are scattered and occur in all directions.

5.4. Water Well Records

Published maps and reports of well records were accessed from the Ministry of the Environment and presented in **Table 8**.

Table 8. Well records (not including wells located in road right-of-way).

Parcel	Well ID	Well Depth (m)	Most Common Material
1	7185185	6.0	Silt, sand, clay
1	6904729	26.2	Clay, stones, gravel
1	6904730	21.3	Clay, hard pan
1	7042669	64.0	Loam, clay, sand
1	6925858	26.5	Sand, clay
2	7196425	7.6	Till
2	6914490	22.9	Clay, sand
2	6904722	11.0	Clay, sand
2	6904725	18.3	Clay, sand, gravel
3	6926840	98.8	Clay, gravel, limestone
4	6904721	42.7	Clay, sand, gravel
4	6904421	4.6	Clay, sand
4	6913220	19.5	Loam, sand, gravel
4	6904726	46.9	P.R.D.R., clay, sand
4	6927526	18.3	Clay, gravel
4	6915431	24.7	Sand, clay

6. Photo Documentation

Photo documentation included recording site conditions and vegetation communities (**Figures 7(a) – 7(d)**), Incidental Observations of fauna and noteworthy flora species and their habitat (**Figures 8(a) – 8(d)**), noteworthy observations of Invasive Species (**Figures 9(a) – 9(d)**), and observations of Site Disturbance / Anthropogenic Features (**Figures 10(a) – 10d**). Details of observations are provided in **Appendix 7**. Photos are provided in the digital data package, including observation details and direction of photo (compass bearing), where appropriate. (Note: Observation / Photo numbers are categorized as follows, I.C. = Incidental Observation, I.S. - Invasive Species, P.D. = Photo Documentation and S.D. = Site Disturbance and Anthropogenic Features)

7. Conservations Goals

The Lake Simcoe Region Conservation Authority is in the process of developing a long-term plan that will provide direction for the development and future management of this conservation property. The plan will assess the existing natural heritage and cultural features, identify areas to restore and enhance the natural heritage features and functions on the landscape, and where appropriate develop walking trails, other compatible passive recreational uses and continued agricultural uses (if appropriate). The long-term plan will be prepared in consultation with the public, municipal and private stakeholders, and Indigenous communities.

Development of the long-term Master Plan for the Lake Simcoe Conservation Preserve will take a few years to undertake subject to confirmation of funding support, completion of environmental studies, and public engagement.

This Baseline Documentation Report provides a summary of the existing conditions of the Conservation Authority's Lake Simcoe Conservation Preserve as of October 2022. The goals of the authority are to protect, enhance and restore these lands for future generations until such time as the long-term plan is prepared in the coming years.

The Conservation Goals are to:

- Manage the lands for conservation and natural heritage protection for future generations
- Promote natural succession and where appropriate rehabilitate / enhance existing natural features and ecological functions
- Expand and enhance wetland, forest and grassland features
- Control and manage the impacts of invasive species to protect native species and habitats

8. Recommended Stewardship Actions

The following section summarizes general stewardship actions identified as part of the preparation of this Baseline Documentation Report. Detailed issues, actions and priorities are contained in the companion Stewardship Plan for the Lake Simcoe Conservation Preserve.

8.1. Garbage Removal

Garbage dumping occurred throughout the Subject Lands (two sites on Property 1, five on Property 2, and two on Property 4), and included scrap metal, appliances, tires, roofing sheets, and other miscellaneous items. It is recommended that material be removed and disposed of appropriately. Signage to discourage dumping may also be considered.

8.2. Encroachment Management

At Property 1, encroachment of residential yards occurs in three areas in the west, north and northeast; these are mapped as 'Anthropogenic' according to ELC (**Figure 5(a)**, **Section 3.3**). In the case of the

western encroachment, shed structures have been placed within the Subject Lands. It is recommended that the Conservation Authority speak to the landowner of these adjacent properties to discuss property lines and removal of structures.

Encroachment also occurs in the form of trail use. As described in **Section 4.3**, A.T.V., snowmobile and other trails (and associated signage) occur throughout the Subject Lands. Location and details of these are shown on **Figures 10(a) – 10(d)**, with descriptions provided in **Appendix 7**. Depending on outcomes of future land use planning, it is recommended that trails be formalized for passive recreational use where appropriate, or otherwise decommissioned and left to succeed or restored to natural condition.

Hunt stands identified in **Section 4.3** and **Figures 10(a) – 10(d)**, are recommended for removal.

8.3. Invasive Species Management

Dominant invasive species recorded on the Subject Lands and a brief species background on the impacts to biodiversity in natural areas are described under **Section 4.1**. Although largely widespread, notable locations of invasive species are mapped on **Figures 9(a) – 9(d)**, with descriptions provided in **Appendix 7**.

Recommended control measures for each of the identified species is discussed below. For most species, chemical control with herbicides is identified as the most effective / time efficient control measure. However, care should be taken when considering the use of herbicides as these chemicals can harm wildlife including species at risk and pollinators. Control measures must typically be continued for at least five years to ensure that seedlings / the seed bank is depleted.

Given that invasive species are common and widespread throughout the Subject Lands, consideration should be given to prioritize management. This is discussed in the companion Stewardship Plan for the Lake Simcoe Conservation Preserve. A general approach to invasive species management is presented below.

Dog-strangling Vine

For small to medium infestations, a combination of clipping, mowing and herbicide application is recommended (Anderson, 2012a). To be most effective clipping / mowing should be done just after the dog-strangling vine flowers (June/July) and before it produces seed pods (late July/August).

Common Buckthorn

Cutting, followed by application of herbicide to prevent resprouting is recommended. A precise application of herbicide from a small hand-pump bottle can be done at any time of the year, although late spring/early summer is the most effective time. If infestations are large, it is recommended that the most prolific seed producers are removed first; the fruit-bearing trees can be identified in late autumn (Anderson, 2012b).

Garlic Mustard

For small to medium infestations, a combination of pulling, mowing / cutting, and herbicide application is recommended (Anderson, 2012c). Hand pulling must be repeated more than once and is more likely to be successful when followed with replanting with native species. While mowing reduced soil disturbance, it would have to be repeated throughout the season as plants can flower / seed more than once. Herbicides are best applied in spring or late fall when other plants are dormant.

Common Reed

The most effective management of Phragmites is through manual cutting coupled with herbicide treatment, either with glyphosate or imazapyr (Nichols, 2020). The timing of application is best in the late summer and early fall when there is reduced wildlife activity and when native flora is going dormant, reducing chance of unintentional harm due to spray drift. For smaller populations, using a spade and digging out the entire plant can also be effective. Anytime that Phragmites is being manually cut or dug up, care needs to be made to remove the entire rhizome to prevent it from regrowing.

Tartarian Honeysuckle

The most effective management for honeysuckle shrubs is cutting of stems, followed by herbicide application to the freshly cut stumps. The shrubs are horizontally cut at or near ground level, and herbicide is immediately applied to the cut stump (Tassie and Sherman 2014).

European Black Alder

Similarly, cutting is the preferred control method for adult European Black Alder (Anderson, 2013). Cutting must be done in conjunction with herbicide treatment to the stump to prevent re-sprouting. Otherwise, the Alder will re-sprout multiple stems with dense branches.

Black Locust

Cutting may be used to eradicate Black Locust. In this case, repeated cutting of stems including new stems must be done every growing season for several years in order to exhaust the root system. Combining this method with herbicide application can be effective (Warne, 2016a).

Purple Loosestrife

For infestations smaller than 0.5 ha, mechanical / chemical control is recommended (Warne, 2016b). Pulling small, individual plants is feasible; pulling large plants is very difficult. Hand pulling is most effective when a stand is under two years old. Herbicide may be applied when surface water is not present.

9. Recommendations for Future Property Monitoring

It is recommended that periodic monitoring be undertaken to document the following:

- Ongoing encroachment / public use and disturbance
    - Including the reappearance of hunt stands, further encroachment from backyards, new trails being developed, etc.
- Change in diversity of flora and fauna, or condition of habitat
- Comprehensive invasive species mapping, including future change in distribution or density of invasive species
- Annual invasive species monitoring, specifically at sites where control measures have been implemented (Effectiveness of any invasive species management)
- Positive impact monitoring to assess and track stewardship actions
- Other changes to existing conditions

As described, a complete inventory of invasive species was not conducted. It is recommended that comprehensive invasive species mapping, including patch size and density, be undertaken as part of future monitoring activities.

Monitoring should be undertaken at least once annually. A detailed monitoring plan associated with stewardship activities will be developed as part of the Stewardship Plan.

Additional studies may be considered to assess / define additional significant or sensitive areas. Considerations for these studies are presented in **Table 9**, below.

Table 9. Consideration for Additional Studies to Define Significant / Sensitive Areas

Survey Type	Objective
Undertake winter use and nesting surveys for Bald Eagle per S.W.H.-specific studies described below	To identify presence of Bald Eagle
Incidental observations in suitable feeding and nesting habitat during the active season (spring – fall).	To identify presence of Snapping Turtle
Bat exit surveys at suitable snag / habitat trees paired with bat audio detectors can be undertaken to identify species present (see Bats and Bat Habitats: Guidelines for Wind Power Projects)	To identify presence of Species at Risk bats
Spring surveys to capture adult salamanders in order to collect tail tips for subsequent species identification via genetic analysis of the tail tissue sample. (Note: Authorization from M.N.R.F. is required to conduct surveys which involve potentially handling of Jefferson Salamander eggs, larvae or adults, or which involves any entry into a breeding pond).	To identify presence of Jefferson Salamander dependent unisexuals

Survey Type	Objective
Surveys to Confirm Candidate S.W.H. Types*	
Surveys undertaken in mid-March to May (conducted during spring sheet water conditions) in cultural meadows and agricultural fields with spring sheet water.	To confirm presence of Waterfowl Stopover and Staging Areas (Terrestrial) S.W.H. Type
Surveys undertaken at Property 1 (where it occurs near Lake Simcoe) in winter to confirm use by Bald Eagle (habitat must be used regularly [min. 3 in 5 years] for a minimum of 20 days to confirm S.W.H. Type)	To confirm presence of Raptor Wintering Area (Bald Eagle) S.W.H. Type at Property 1
Snag density surveys undertaken in leaf-off conditions to further refine candidate bat maternity roosting habitat. Following this refinement, bat exit surveys paired with bat audio detectors can be undertaken at remaining candidate forests following methods outlined in the “Bats and Bat Habitats: Guidelines for Wind Power Projects”.	To confirm Bat Maternity Colonies S.W.H. Type at Properties 1, 2 and 4
Pond located on Property 2 may contain water deep enough water and soft mud substrates to provide Turtle Wintering Area S.W.H.. Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (September – October) or spring (March – May).	To confirm Turtle Wintering Areas S.W.H. Type at Property 2
Surveys to identify snake congregations near potential hibernacula (e.g., foundation or rocky slope) on sunny warm days in spring (April / May) or Fall (September / October).	To confirm Reptile Hibernaculum S.W.H. Type at Properties 1 and 2
Surveys to identify ascertain waterfowl nesting. Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods should follow “Bird and Bird Habitats: Guidelines for Wind Power Projects.”	To confirm Waterfowl Nesting Area S.W.H. Type at Properties 1, 2 and 4
In Ontario, Bald Eagles next between mid-February to mid-June. Surveys to confirm active nesting are required to confirm this S.W.H. Type.	To confirm Bald Eagle Nesting, Foraging and Perching Habitat S.W.H. Type at Property 1
Conduct field investigations from mid-March to end of May to identify active woodland raptor nesting. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.	To confirm Woodland Raptor Nesting Habitat S.W.H. Type at Properties 1 and 2
Conduct amphibian calling surveys at the pond located on Property 2 (not surveyed to date).	To confirm Amphibian Breeding Habitat (Wetland) S.W.H. Type at Properties 2 and 4

Survey Type	Objective
Conduct breeding bird surveys, noting detailed information regarding nesting or breeding behaviour.	To confirm Woodland Area-Sensitive Bird Breeding Habitat S.W.H. Type at Properties 1 and 2

* Refer to S.W.H. Criteria Schedule for Ecoregion 6E (M.N.R.F. 2015) for additional criteria information

10. Acknowledgment of Condition Statement

We the undersigned do accept and acknowledge that this document, including the attached maps and photographs as being, to the best of our respective knowledge, an accurate description of the natural features and current land uses on the subject property.

Document and Photographs prepared by:

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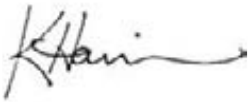

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Signing Representative for Landowner:

Phil Davies - M.F.C, R.P.F. Date: February 17, 2023

Director, Conservation Lands

Lake Simcoe Region Conservation Authority

11. References

Agriculture Canada and Ministry of Agriculture & Food. 1977. Soil Map of York County, Soil Survey Report No. 19. Soil Research Institute, Research Branch, Ontario, Canada.

Anderson, H. 2012 a. Invasive Dog-strangling Vine (*Vincetoxicum rossicum*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Anderson, H. 2012 b. Invasive Common (European) Buckthorn (*Rhamnus cathartica*): Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Anderson, H. 2012 c. Invasive Garlic Mustard (*Alliaria petiolata*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Anderson, H. 2013. Invasive European Black Alder (*Alnus glutinosa*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Barnett, P.J., Cowan, W.R. and Henry, A.P. 1991. Quaternary geology of Ontario, southern sheet; Ontario Geological Survey, Map 2556, scale 1:1 000 000.

Chapman, L.J., and Putnam, D.F. 1984: Physiography of Southern Ontario; Ontario Geological Survey, Map. P.2715 (coloured). Scale 1:600 000.

LSRCA (Lake Simcoe Region Conservation Authority). (2018). Natural Heritage System and Restoration Strategy for the Lake Simcoe watershed. 116pp.

Lee, H.T., Bakowsky, W.O., Riley, J., Bowles, J., Puddister, M., Uhlig, P., and S. McMurray. 1998. Ecological Land Classification for Southern Ontario: First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Science Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Nichols, G. 2020. Invasive *Phragmites* (*Phagmites australis*) Best Management Practices in Ontario: Improving species at risk habitat through the management of Invasive *Phragmites*. Ontario Invasive Plant Council, Peterborough, ON.

Tassie, D., and Sherman, K. 2014. Invasive Honeysuckles (*Lonicera spp.*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Warne, A. 2016a. Black locust (*Robina pseudoacacia*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

Warne, A. 2016b. Purple Loosestrife (*Lythrum salicaria*) Best Management Practices in Ontario. Ontario Invasive Plant Council, Peterborough, ON.

12. List of Maps

Figure 1 | Lake Simcoe CP
Study Area

Legend

Subject Property

0 500 1,000 1,500 2,000 2,500 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 2a | Lake Simcoe CP

Context Map - Property 1
Deer Park Road

Legend

- Subject Property
- Town of Georgina Farm 911 EAP Numbers

0 250 500 Meters

Project Number	Date:	N
22-1313	2023-02-02	

north-south ENVIRONMENTAL

Figure 2b | Lake Simcoe CP
Context Map - Property 2
Boyers Road

Legend

- Subject Property
- Town of Georgina Farm 911 EAP Numbers

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2023-02-02	

north-south ENVIRONMENTAL

Figure 2c | Lake Simcoe CP

Context Map - Property 3
The Queensway

Legend

- Subject Property
- Town of Georgina Farm 911 EAP Numbers

0 100 200 Meters

Project Number	Date:	N
22-1313	2023-02-02	

north-south ENVIRONMENTAL

Figure 2d | Lake Simcoe CP

Context Map - Property 4
Varney Road

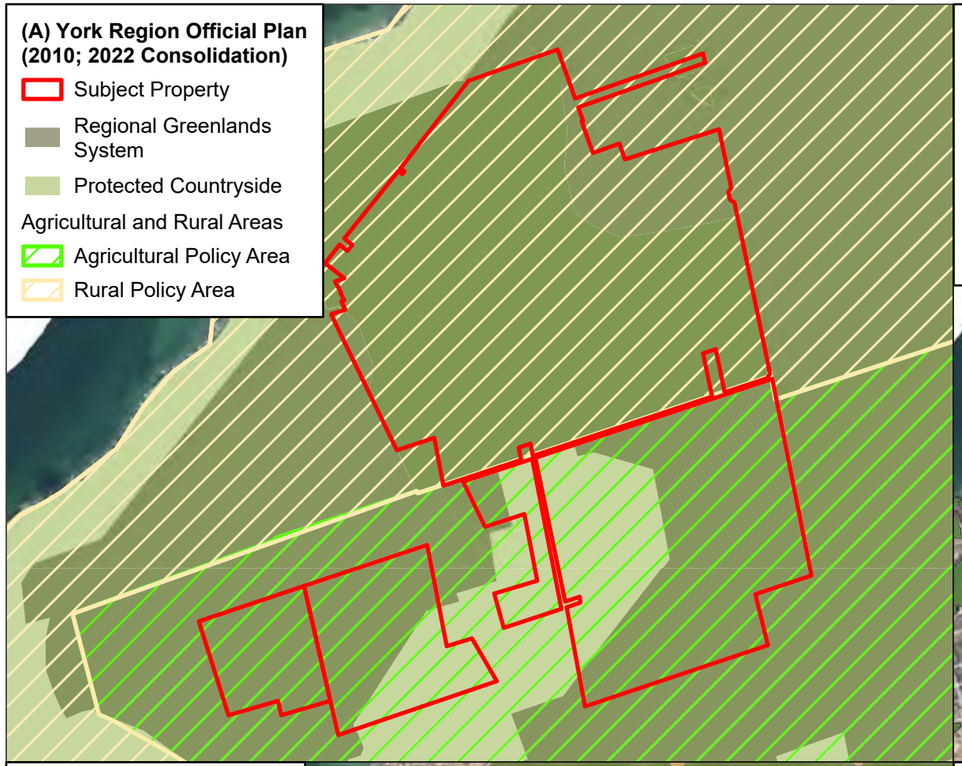
Legend

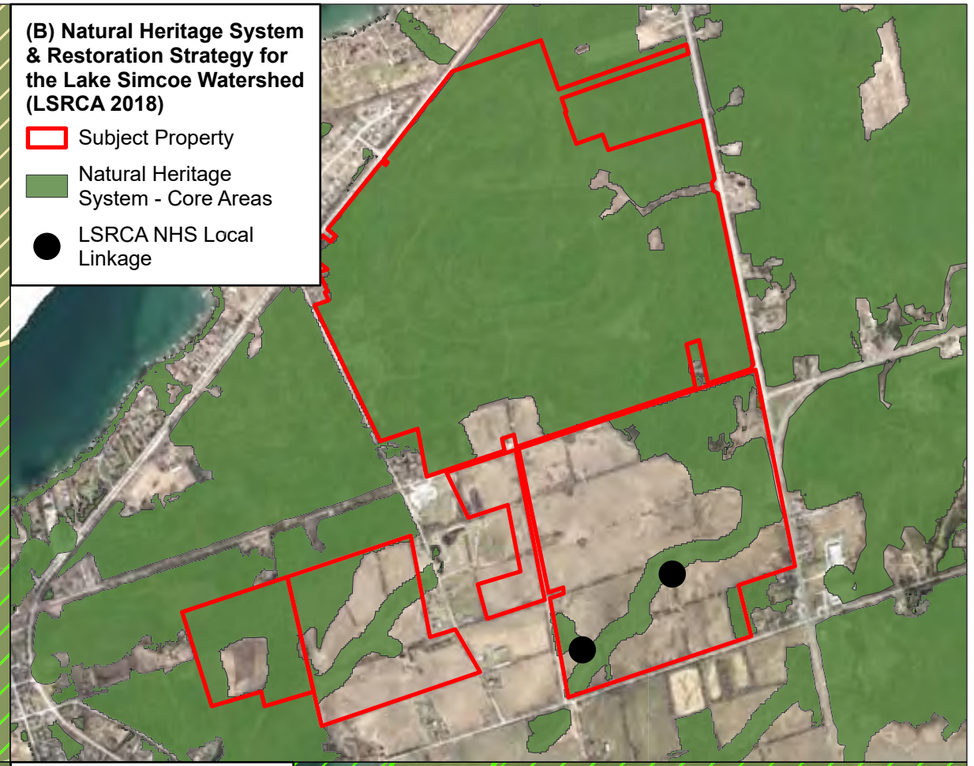
- Subject Property
- Town of Georgina Farm 911 EAP Numbers

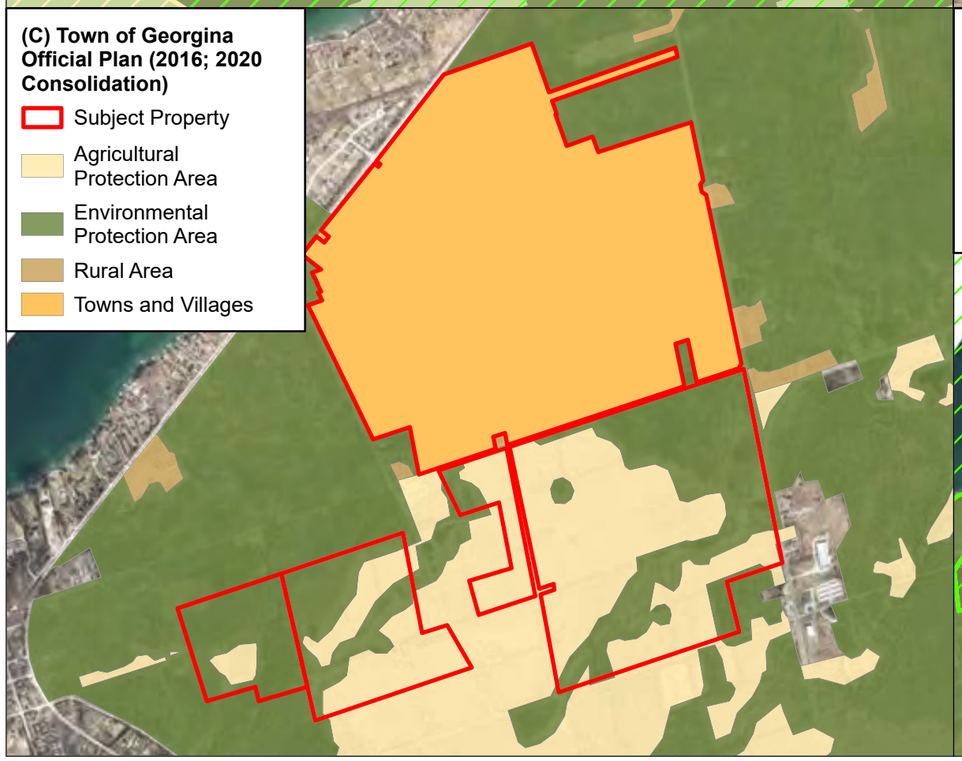
0 50 100 150 200 250 Meters

Project Number	Date:	N
22-1313	2023-02-02	

north-south ENVIRONMENTAL







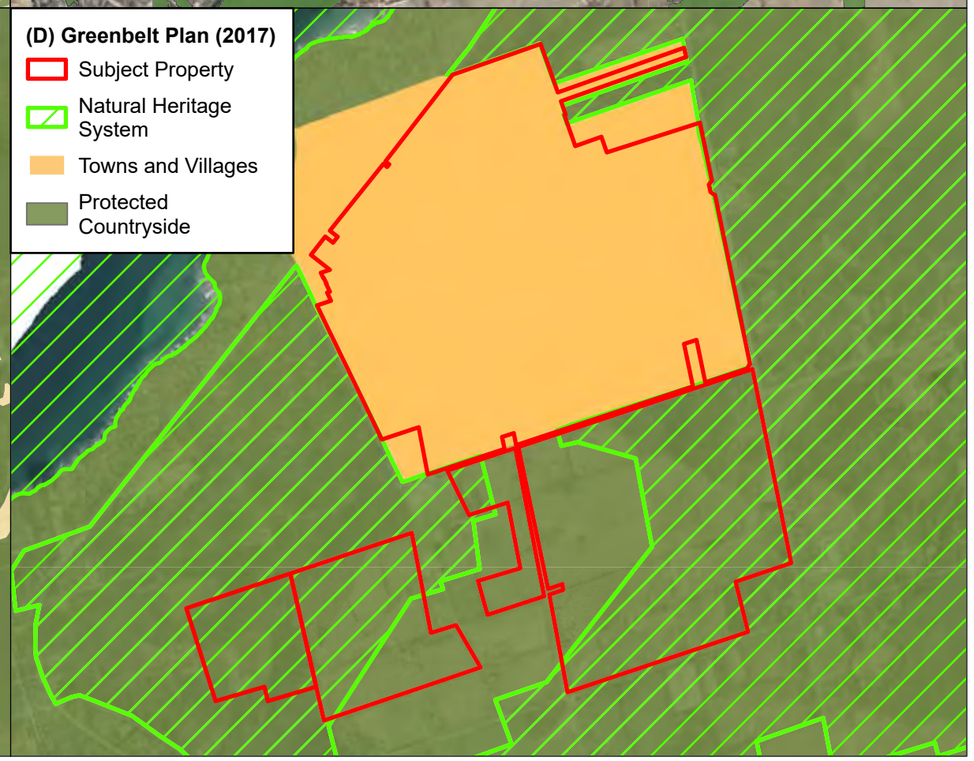


Figure 3 | Lake Simcoe CP
Municipal and Provincial Planning Information

Legend
Subject Property

Mapping of Official Plans and Natural Heritage System layers is approximate (1:10,000 scale digitization)

0 500 1,000 1,500 Meters

Project Number	Date:	N
22-1313	2023-02-02	

north-south ENVIRONMENTAL

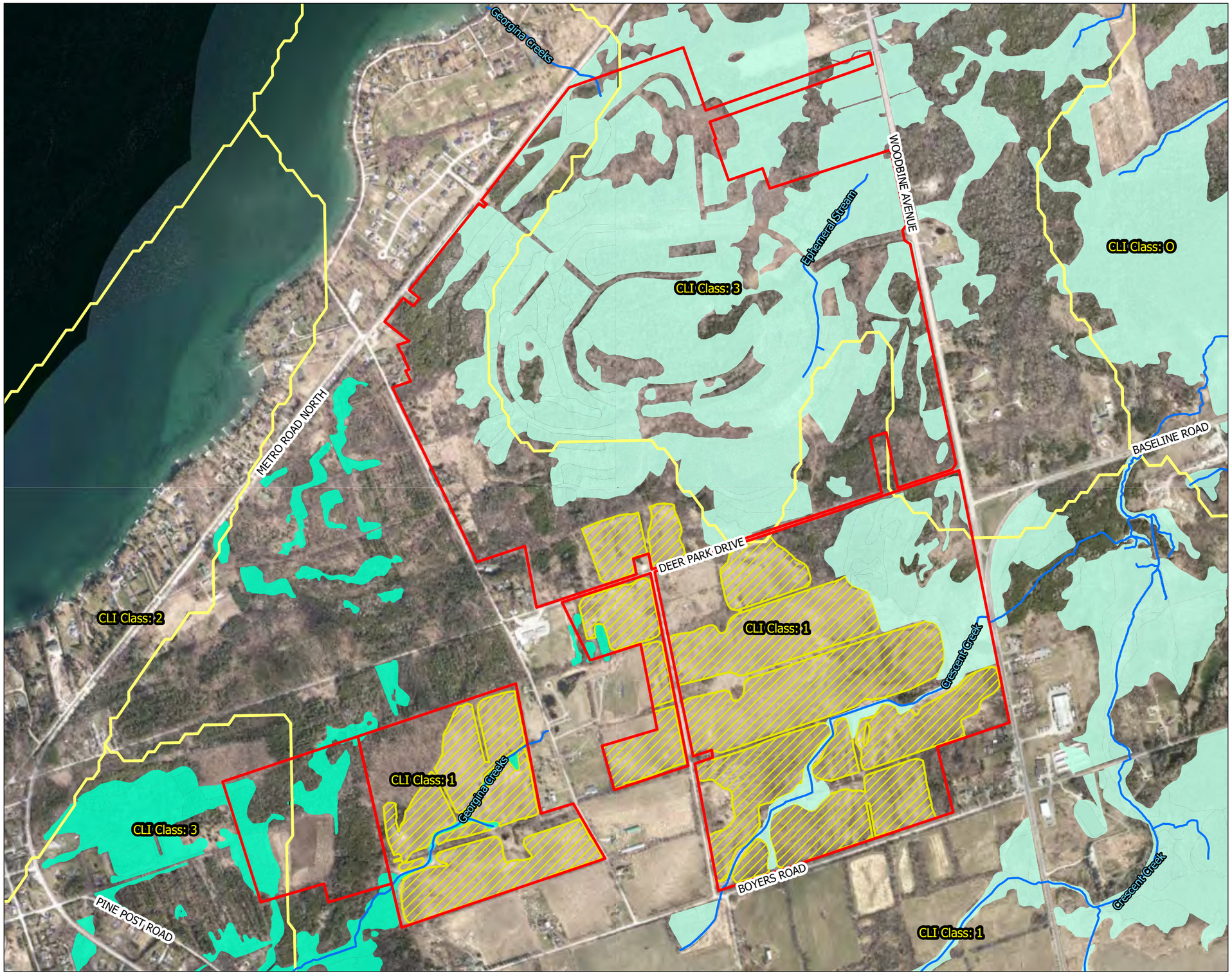


Figure 4 | Lake Simcoe CP
Conservation Agreement Base Map

Legend

- Subject Property
- Watercourses
- Paradise Beach-Island Grove Wetland Complex
- North Keswick Wetland Complex
- Current Agricultural Lands on Subject Property
- Canada Land Inventory (CLI)

Canada Land Inventory (CLI) Classes

1 . No Significant Limitations
2 . Moderate Limitations; moderate conservation practices required.
3 . Moderately Severe Limitations; range of crops restricted or special conservation practices required.
0 . Organic Soils

0 250 500 750 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 5a | Lake Simcoe CP
Property 1 - ELC

Legend

Subject Property

Ecological Land Classification (ELC)

Vegetation Communities:

ANTH - Anthropogenic
CUM1 - Mineral Cultural Meadow
CUT - Cultural Thicket
CUW - Cultural Woodland
CUW1 - Mineral Cultural Woodland
FOC4 - Fresh-Moist White Cedar Coniferous Forest
FOC4-1 - Fresh-Moist White Cedar Coniferous Forest
FOD5-1 - Dry-Fresh Sugar Maple Deciduous Forest
FOD8-1 - Fresh-Moist Poplar Deciduous Forest
IAG - Intensive Agriculture
MAM2 - Mineral Meadow Marsh
MAS2-1 - Cattail Mineral Shallow Marsh
SWD2-1 - Black Ash Mineral Deciduous Swamp
SWD2-2 - Green Ash Mineral Deciduous Swamp
SWD3 - Maple Mineral Deciduous Swamp
SWD4-5 - Poplar Mineral Deciduous Swamp
SWD7 - Birch-Poplar Organic Deciduous Swamp
SWM3-2 - Poplar-Conifer Mineral Mixed Swamp

0 100 200 300 400 500 Meters

Project Number	Date:	N
22-1313	2022-12-01	

north-south ENVIRONMENTAL

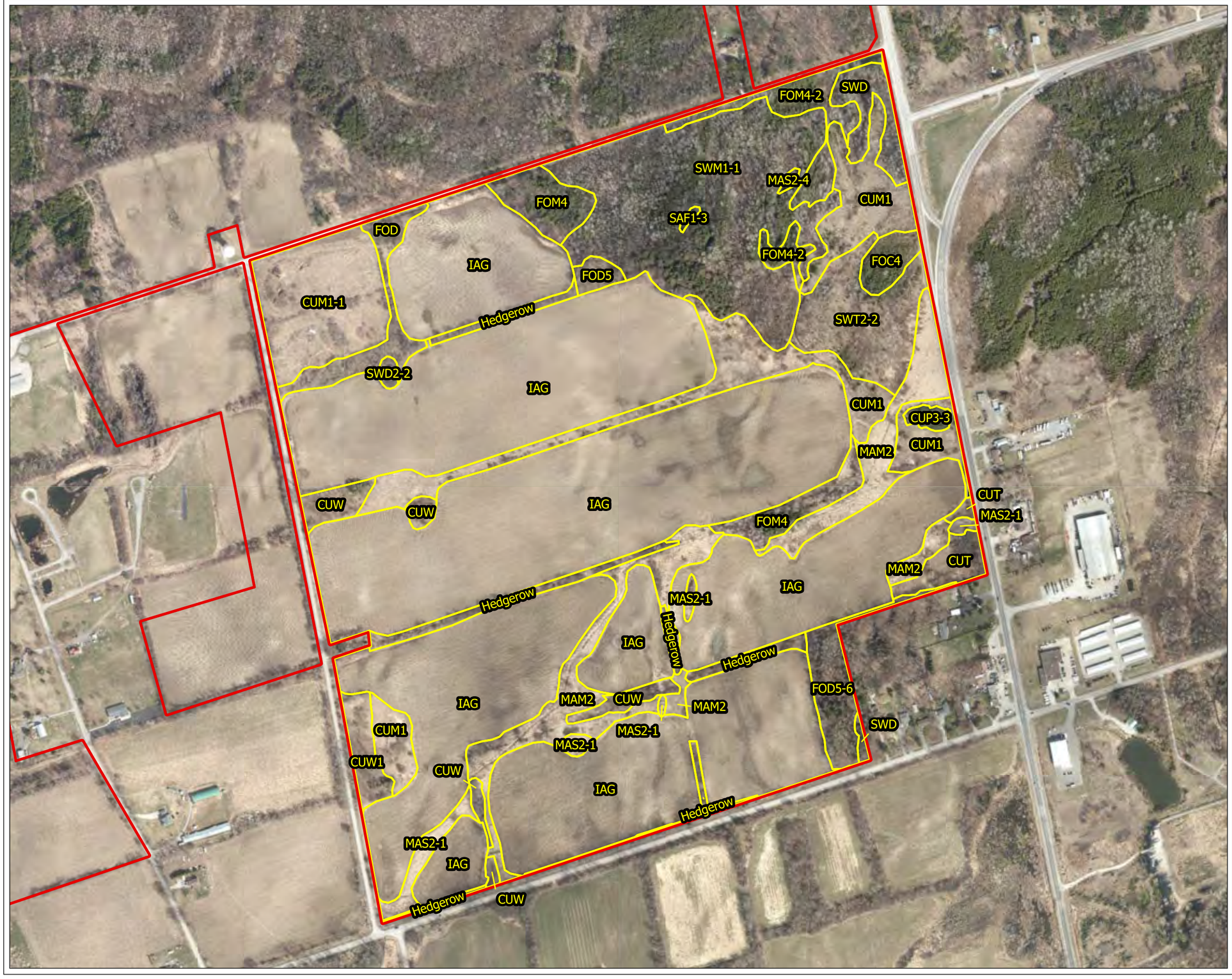


Figure 5b | Lake Simcoe CP
Property 2 - ELC

Legend

Subject Property

Ecological Land Classification (ELC)

Vegetation Communities:

CUM1 - Mineral Cultural Meadow
CUM1-1 - Dry-Moist Old Field Meadow
CUT - Cultural Thicket
CUP3-3 - Scotch Pine Coniferous Plantation
CUW - Cultural Woodland
CUW1 - Mineral Cultural Woodland
FOC4 - Fresh-Moist White Cedar Coniferous Forest
FOD - Deciduous Forest
FOD5 - Dry-Fresh Sugar Maple Deciduous Forest
FOD5-6 - Dry-Fresh Sugar Maple-Basswood Deciduous Forest
FOM4 - Dry-Fresh White Cedar Mixed Forest
FOM4-2 - Dry-Fresh White Cedar-Poplar Mixed Forest
IAG - Intensive Agriculture
MAM2 - Mineral Meadow Marsh
MAS2-1 - Cattail Mineral Shallow Marsh
MAS2-4 - Broad-leaved Sedge Mineral Shallow Marsh
SAF1-3 - Duckweed Floating-leaved Shallow Aquatic
SWD - Deciduous Swamp
SWD2-2 - Green Ash Mineral Deciduous Swamp
SWM1-1 - White Cedar - Hardwood Mineral Mixed Swamp
SWT2-2 - Willow Mineral Thicket Swamp

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-01	

north-south ENVIRONMENTAL

Figure 5c | Lake Simcoe CP
Property 3 - ELC

Legend

- Subject Property
- Ecological Land Classification

Vegetation Communities:
CUM1 - Mineral Cultural Meadow
CUW - Cultural Woodland
IAG - Intensive Agriculture
SWD - Deciduous Swamp

0 50 100 150 200 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

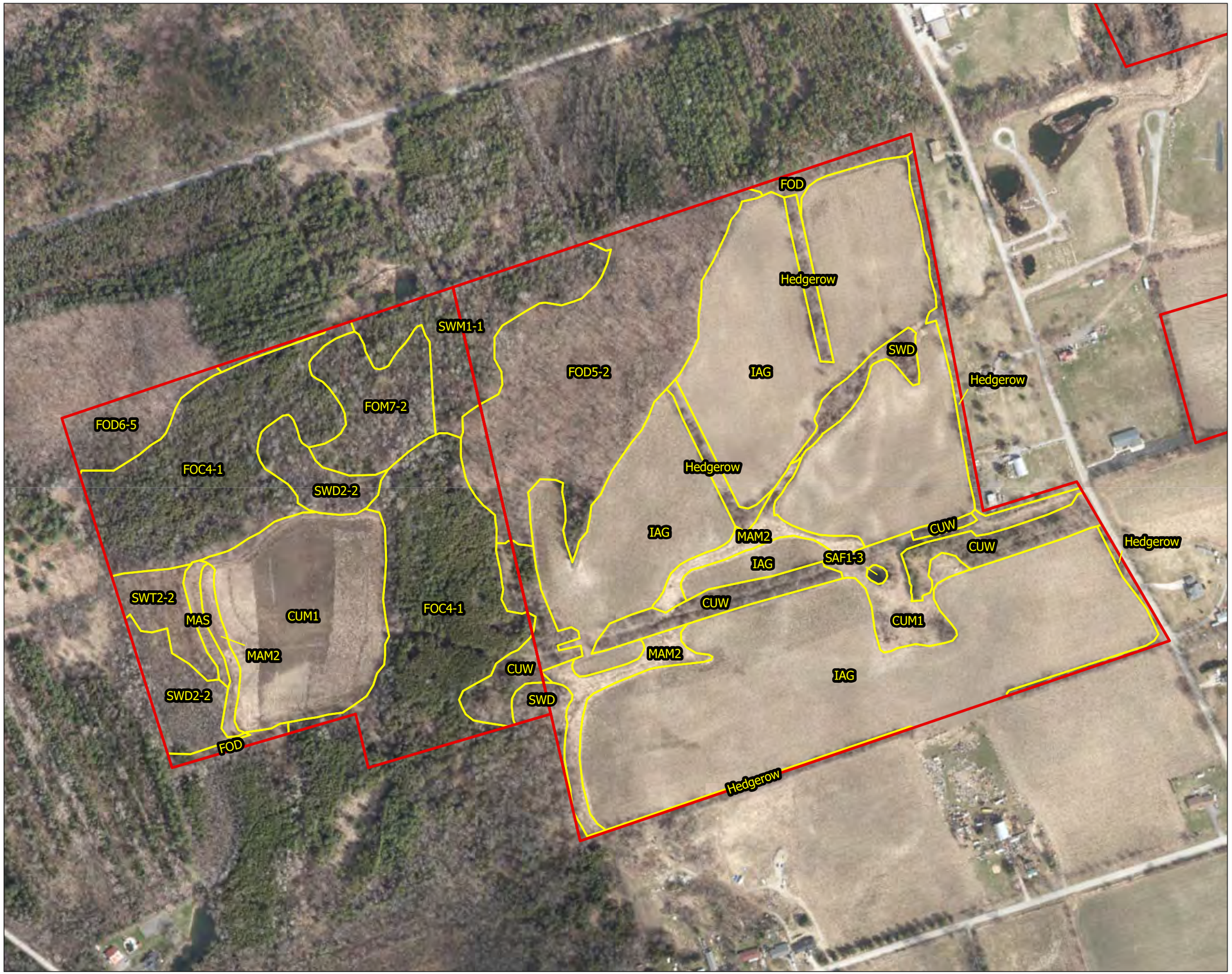


Figure 5d | Lake Simcoe CP
Property 4 - ELC

Legend

Subject Property

Ecological Land Classification (ELC)

Vegetation Communities:

CUM1 - Mineral Cultural Meadow
CUT - Cultural Thicket
CUP - Cultural Plantation
CUW - Cultural Woodland
CUW1 - Mineral Cultural Woodland
FOC4-1 - Fresh-Moist White Cedar Coniferous Forest
FOD - Deciduous Forest
FOD5-2 - Dry-Fresh Sugar Maple-Beech Deciduous Forest
FOD6-5 - Fresh-Moist Sugar Maple-Hardwood Deciduous Forest
FOM7-2 - Fresh-Moist White Cedar-Harwood Mixed Forest
IAG - Intensive Agriculture
MAM2 - Mineral Meadow Marsh
MAS - Shallow Marsh
SAF1-3 - Duckweed Floating-leaved Shallow Aquatic
SWD - Deciduous Swamp
SWD2-2 - Green Ash Mineral Deciduous Swamp
SWM1-1 - White Cedar - Hardwood Mineral Mixed Swamp
SWT2-2 - Willow Mineral Thicket Swamp

0 50 100 150 200 250 Meters

Project Number	Date:	N
22-1313	2022-12-01	

north-south ENVIRONMENTAL

Figure 6 | Lake Simcoe CP
2022 Wildlife Survey Locations

Legend

- Subject Property
- Breeding Bird Survey Locations (LSRCA)
- Amphibian Calling Survey Locations (LSRCA)

0 250 500 750 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 7a | Lake Simcoe CP
Property 1 - Photo Documentation

Legend

- Parcel Boundaries
- Photo Documentation (NSE; Point numbers correspond to PD Photos provided in Data Package)
- Ephemeral Watercourse

0 100 200 300 400 500 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

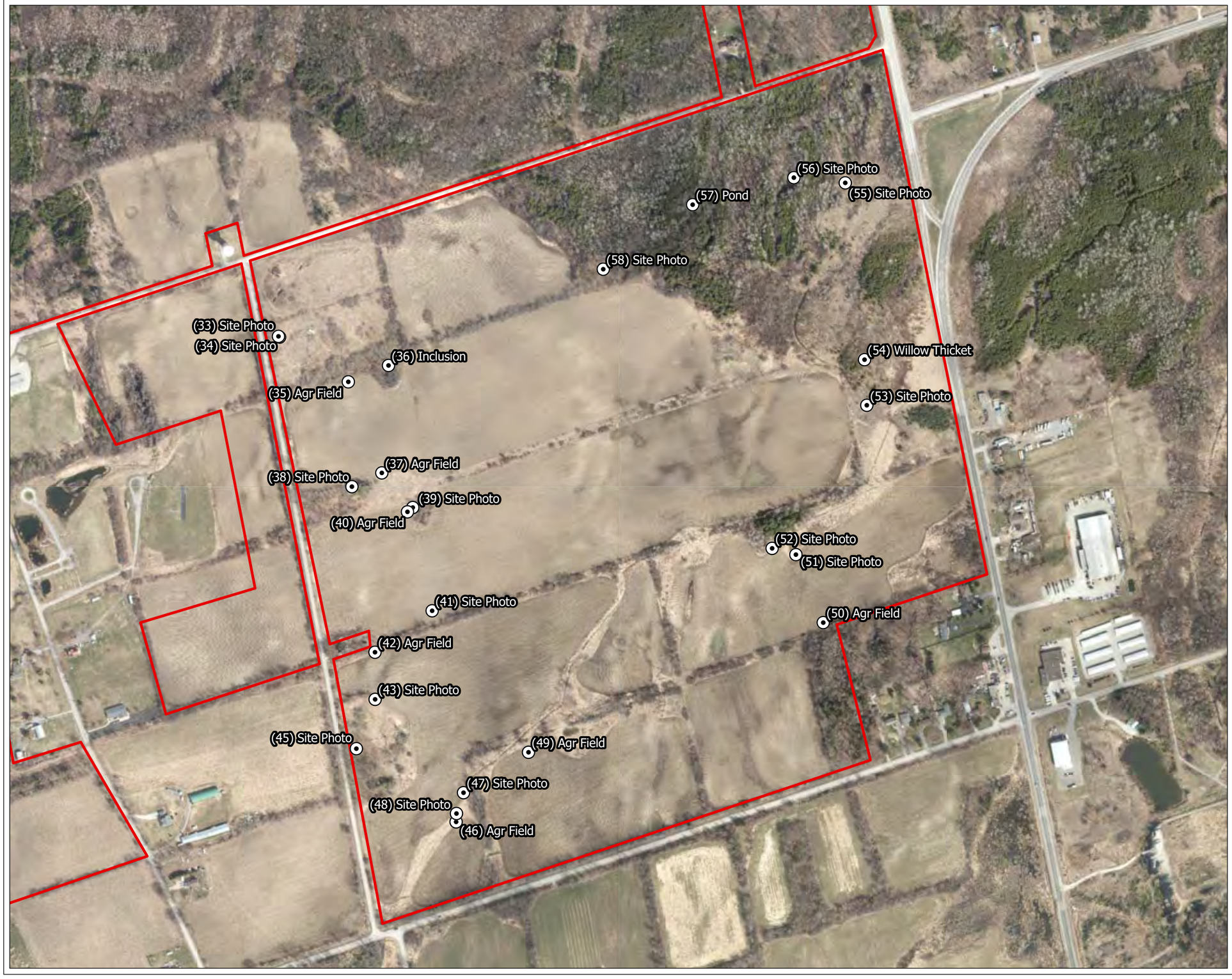


Figure 7b | Lake Simcoe CP
Property 2 - Photo Documentation

Legend

- Parcel Boundaries
- Photo Documentation (NSE; Point numbers correspond to PD Photos provided in Data Package)

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-16	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

Figure 7c | Lake Simcoe CP
Property 3 - Photo Documentation

Legend

- Parcel Boundaries
- Photo Documentation (NSE; Point numbers correspond to PD Photos provided in Data Package)

0 50 100 150 200 Meters

Project Number	Date:	N
22-1313	2022-12-16	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

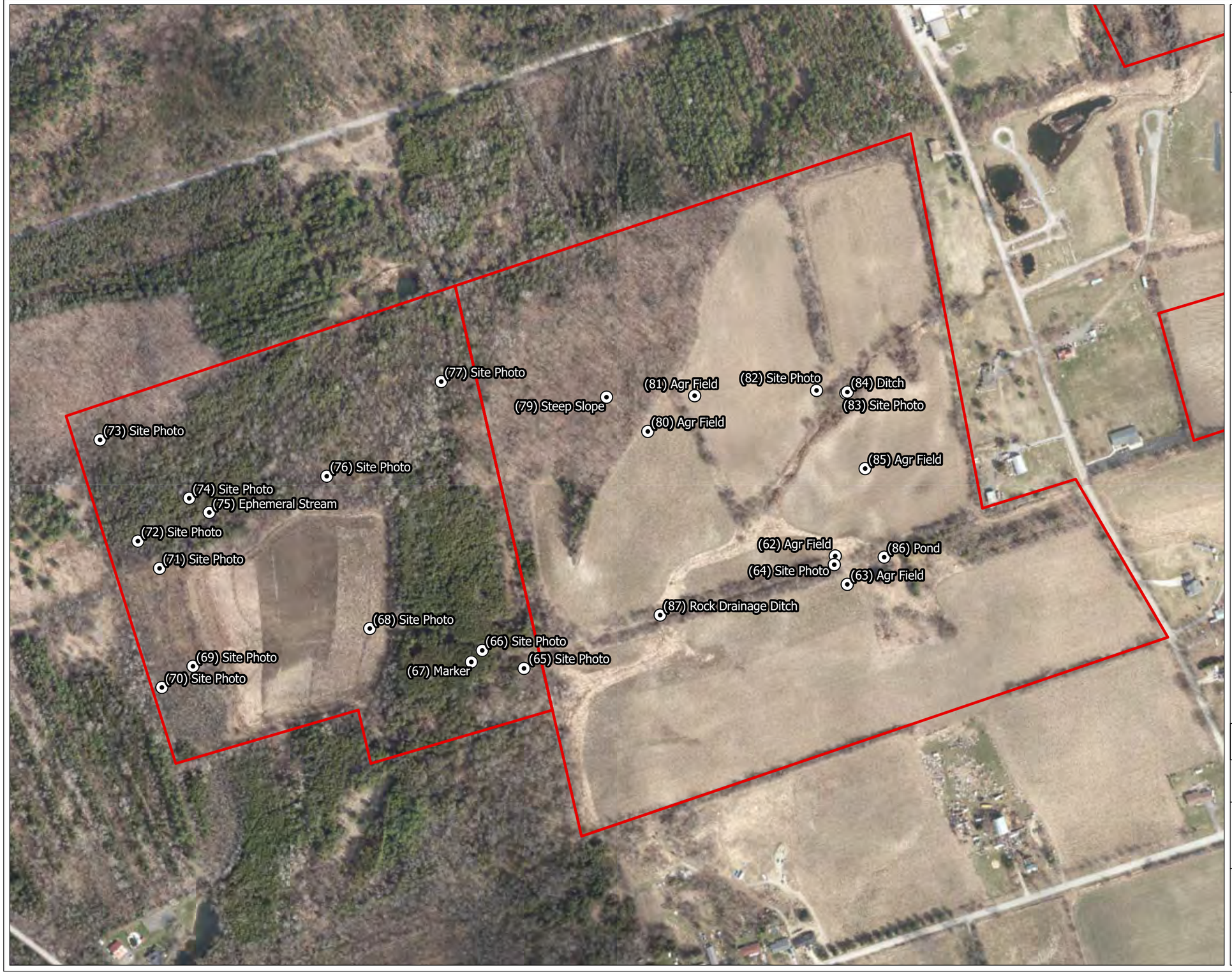


Figure 7d | Lake Simcoe CP
Property 4 - Photo Documentation

Legend

- Parcel Boundaries
- Photo Documentation (NSE; Point numbers correspond to PD Photos provided in Data Package)

0 50 100 150 200 250 Meters

N

Project Number	Date:	
22-1313	2022-12-16	

north-south ENVIRONMENTAL

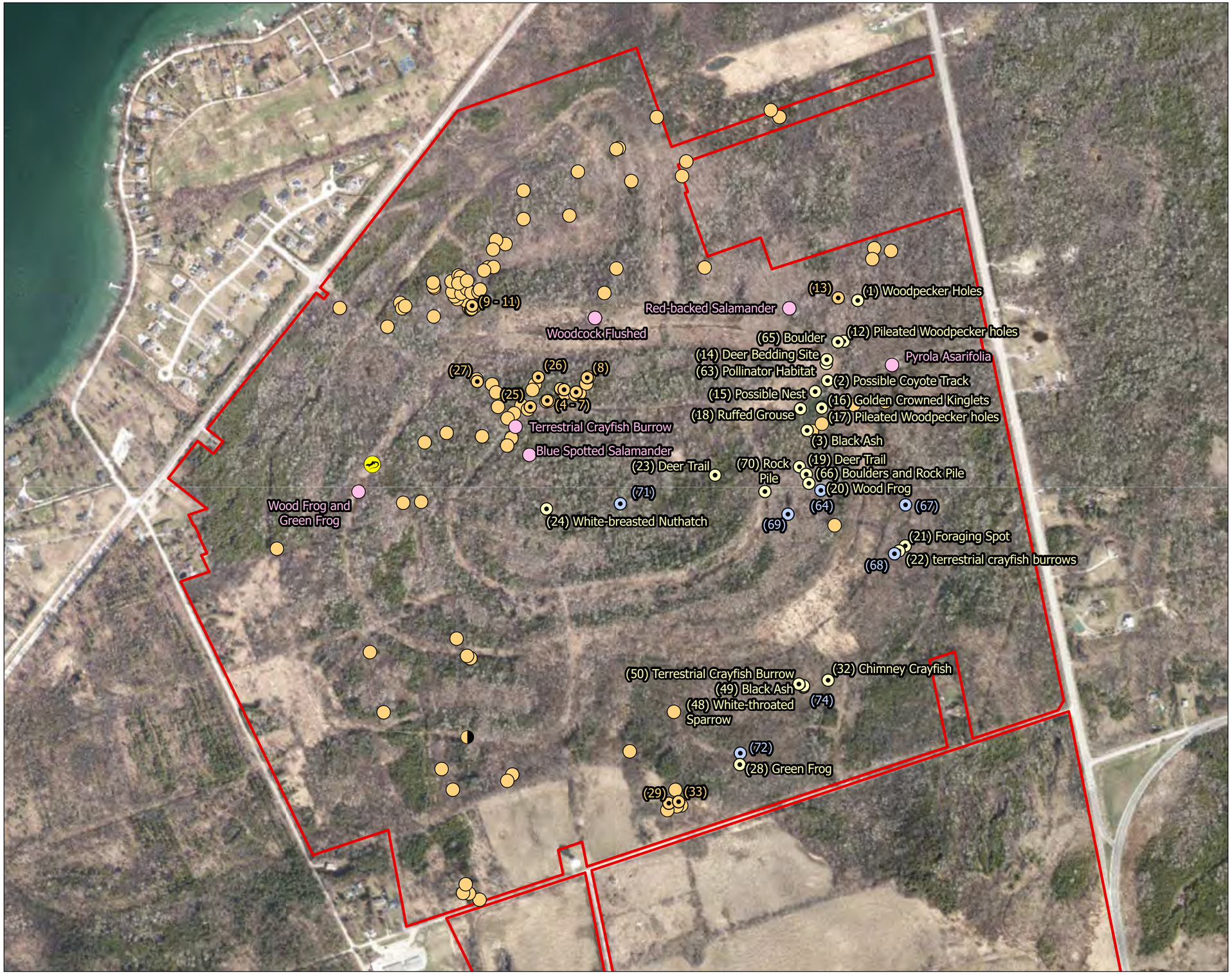


Figure 8a | Lake Simcoe CP
Property 1 - Incidental Observations

Legend

- Subject Property

Incidental Observations (NSE; Point numbers correspond to IC Photos provides in Data Package)

- Butternut
- Vernal Pools
- Other (Labelled on Map)

Incidental Observations (Dillon 2015)

- Butternut
- Salamander

Incidental Observations (LSCRA)

- Butternut
- Other (Labelled on Map)

0 100 200 300 400 500 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

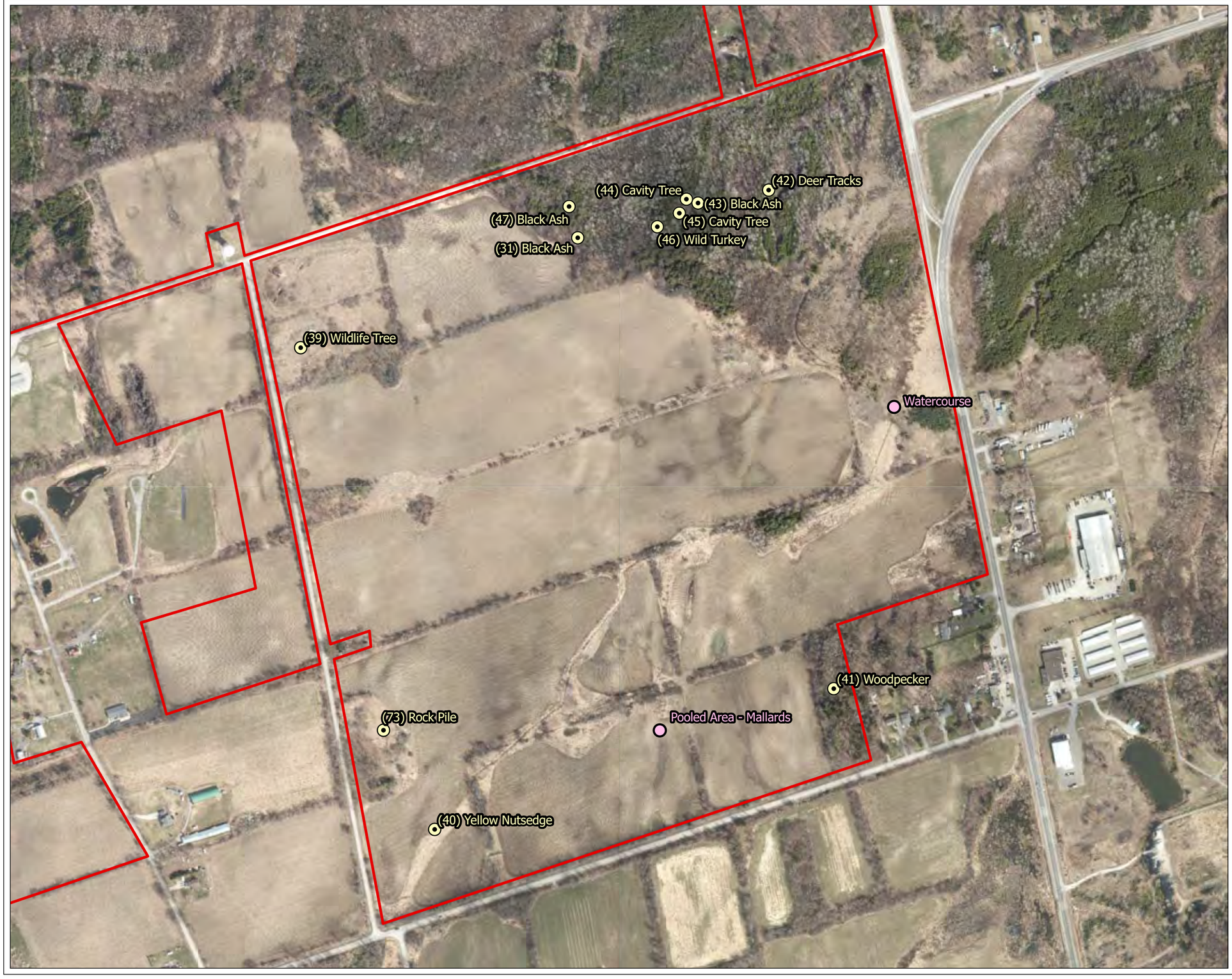


Figure 8b | Lake Simcoe CP
Property 2 - Incidental Observations

Legend

- Subject Property
- Incidental Observations (NSE; Point numbers correspond to IC Photos provided in Data Package)
- Incidental Observations (Other; LSRCA)

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 8c | Lake Simcoe CP
Property 3 - Incidental Observations

Legend

- Subject Property
- Incidental Observations (NSE; Point numbers correspond to IC Photos provided in Data Package)

0 50 100 150 200 Meters

Project Number	Date:	N
22-1313	2022-12-16	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

Figure 8d | Lake Simcoe CP
Property 4 - Incidental Observations

Legend

- Subject Property
- Incidental Observations (NSE; Point numbers correspond to IC Photos provided in Data Package)

0 50 100 150 200 250 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 9a | Lake Simcoe CP

Property 1 - Invasive Species Mapping

Legend

- Parcel Boundaries
- Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)
- Invasive Species - Dog-strangling Vine and Buckthorn (NSE)

0 100 200 300 400 500 Meters

N

Project Number	Date:
22-1313	2022-12-20

north-south ENVIRONMENTAL

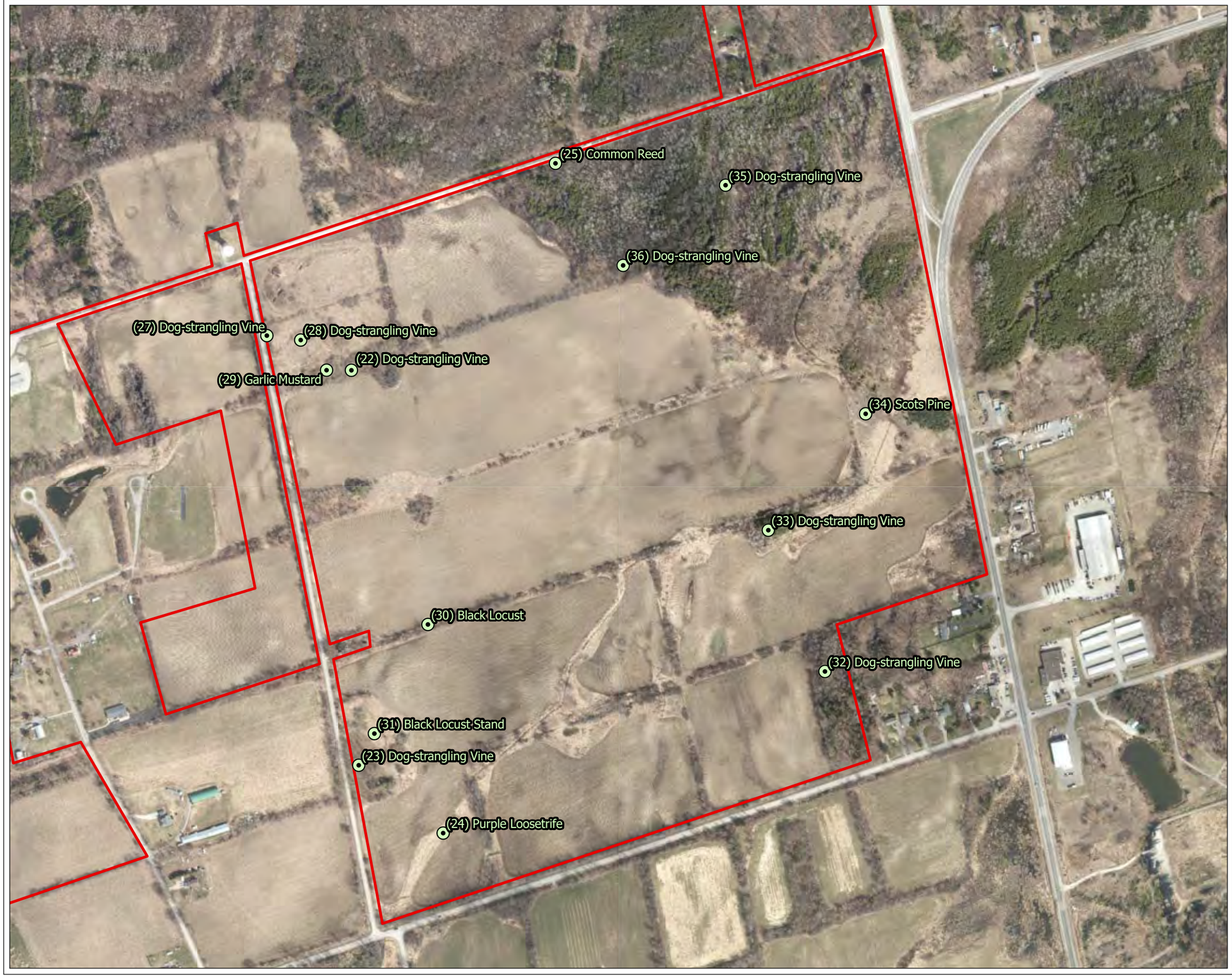


Figure 9b | Lake Simcoe CP

Property 2 - Invasive Species Mapping

Legend

- Parcel Boundaries
- Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-20	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

Figure 9c | Lake Simcoe CP
Property 3 - Invasive Species Mapping

Legend

- Parcel Boundaries
- Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)

0 50 100 150 200 Meters

Project Number	Date:	N
22-1313	2022-12-20	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

Figure 9d | Lake Simcoe CP

Property 4 - Invasive Species Mapping

Legend

- Parcel Boundaries
- Invasive Species (NSE; Point numbers correspond to IS Photos provided in Data Package)
- Invasive Species - European Black Alder (NSE)

0 50 100 150 200 250 Meters

Project Number	Date:	N
22-1313	2022-12-20	

north-south ENVIRONMENTAL

Figure 10a | Lake Simcoe CP

Property 1 - Site Disturbance and Anthropogenic Features

Legend

- Parcel Boundaries
- Site Disturbance and Anthropogenic Features (NSE; Point numbers correspond to SD Photos provided in Data Package)
- Deer Blinds (NSE/LSRCA; Point numbers correspond to SD Photos provided in Data Package)
- MOE Well Records (Point Numbers correspond to Well ID)
- Yard Encroachment
- Trail
- Laneway

0 100 200 300 400 500 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

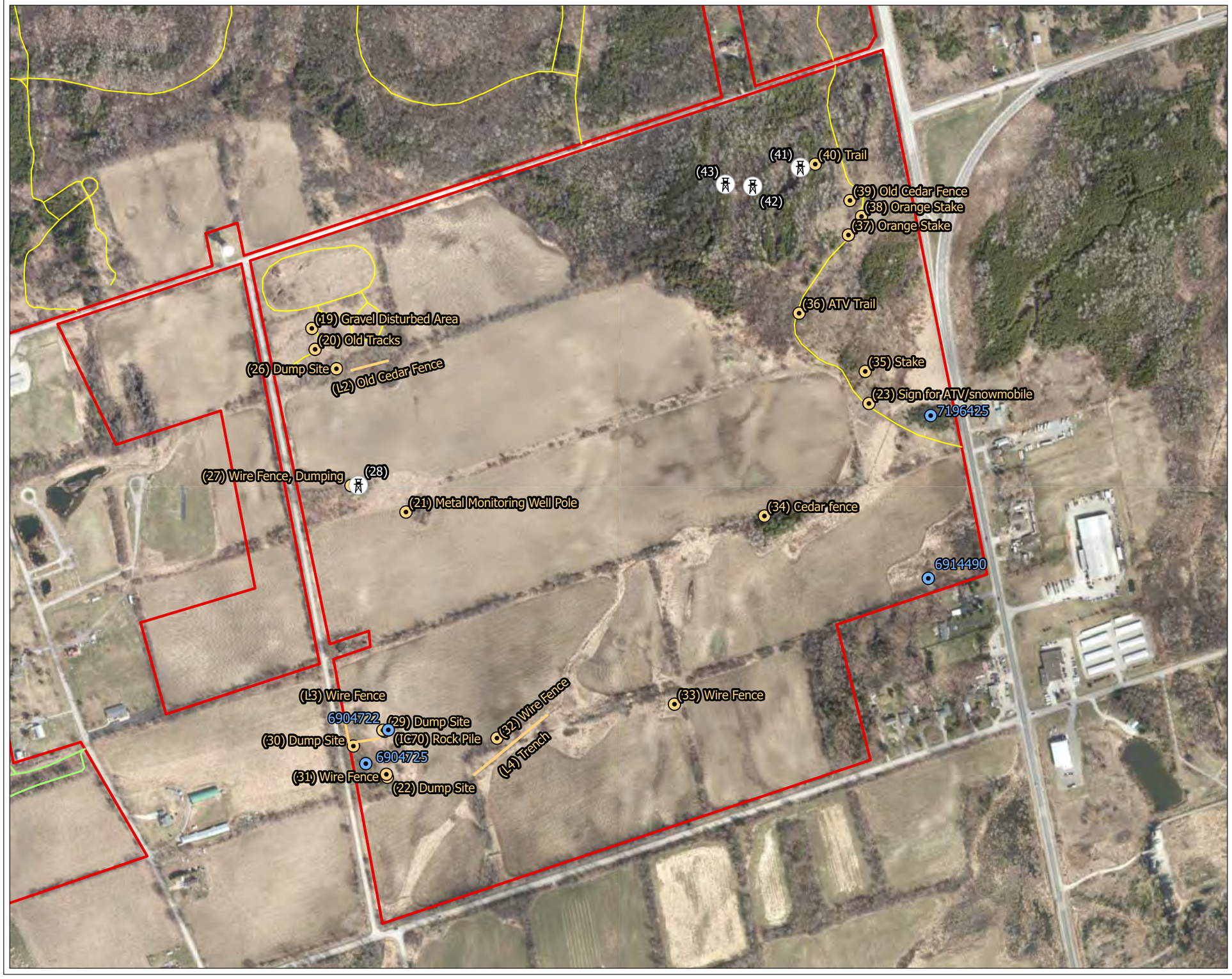


Figure 10b | Lake Simcoe CP

Property 2 - Site Disturbance and Anthropogenic Features

Legend

- Parcel Boundaries
- Site Disturbance and Anthropogenic Features (NSE; Point numbers correspond to SD Photos provided in Data Package)
- Site Disturbance and Anthropogenic Features (NSE)
- Deer Blinds (NSE/LSRCA; Point numbers correspond to SD Photos provided in Data Package)
- MOE Well Records (Point Numbers correspond to Well ID)
- Trail
- Laneway

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-16	

Data Provided by: North South Environmental Inc.
Imagery: York Region 2021

north-south ENVIRONMENTAL

Figure 10c | Lake Simcoe CP

Property 3 - Site Disturbance and Anthropogenic Features

Legend

- Parcel Boundaries
- Site Disturbance and Anthropogenic Features (NSE; Point numbers correspond to SD Photos provided in Data Package)
- MOE Well Records (Point Numbers correspond to Well ID)
- Trail

0 50 100 150 200 Meters

Project Number	Date:	N
22-1313	2022-12-16	

north-south ENVIRONMENTAL

Figure 10d | Lake Simcoe CP

Property 4 - Site Disturbance and Anthropogenic Features

Legend

- Parcel Boundaries
- Site Disturbance and Anthropogenic Features (NSE; Point numbers correspond to SD Photos provided in Data Package)
- Deer Blinds (NSE/LSRCA; Point numbers correspond to SD Photos provided in Data Package)
- MOE Well Records (Point Numbers correspond to Well ID)
- Trail
- Laneway

0 50 100 150 200 250 Meters

N

Project Number	Date:
22-1313	2022-12-16

north-south ENVIRONMENTAL

Figure 11a | Lake Simcoe CP

Historic Land Use 1970 - Property 1
Deer Park Road

Legend

- Subject Property
- Historic Structures

0 250 500 Meters

Project Number	Date:	N
22-1313	2022-12-01	

north-south ENVIRONMENTAL

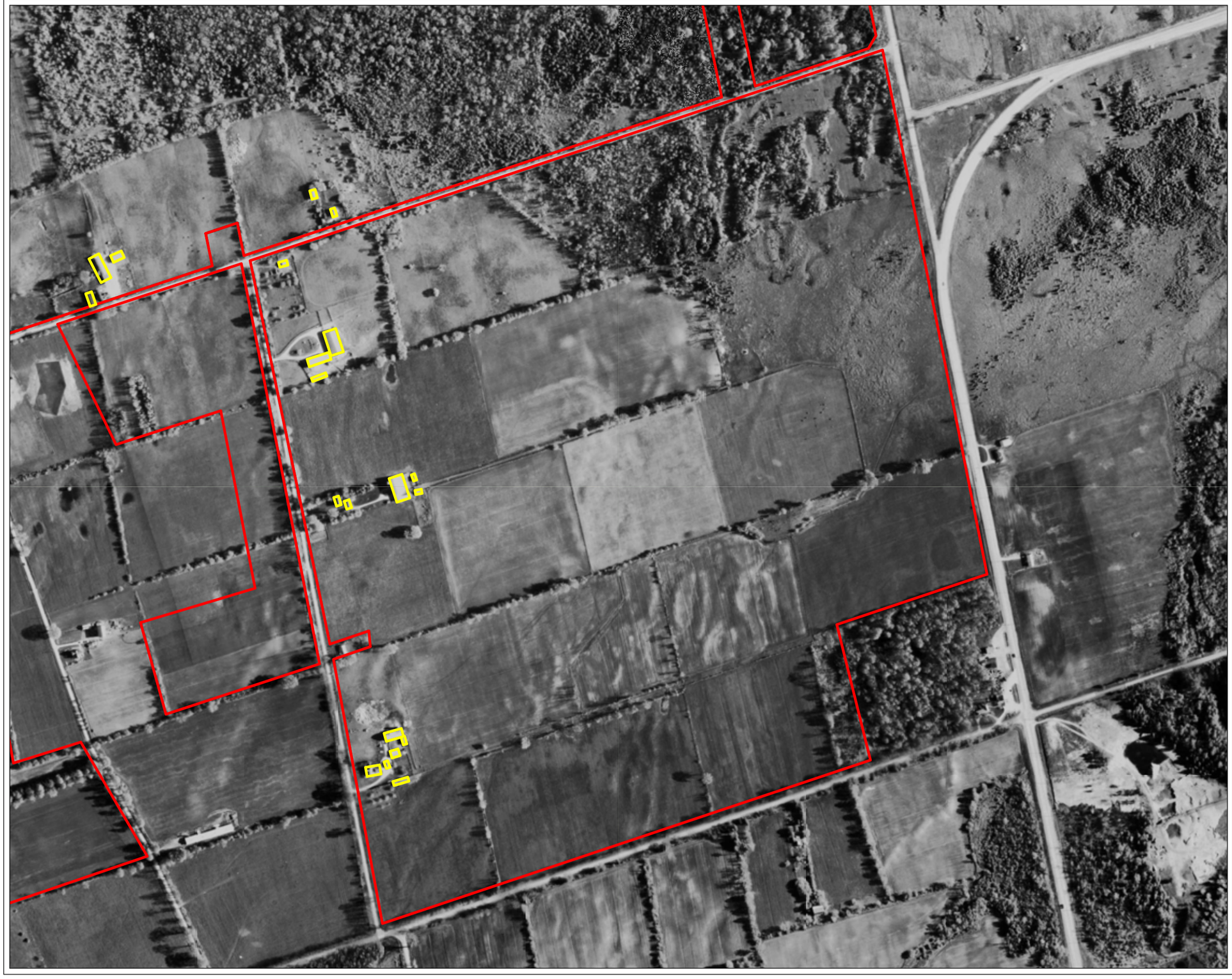


Figure 11b | Lake Simcoe CP
Historic Land Use 1970 - Property 2
Boyers Road

Legend

- Subject Property
- Historic Structures

0 100 200 300 400 Meters

Project Number	Date:	N
22-1313	2022-12-01	

north-south ENVIRONMENTAL

Figure 11c | Lake Simcoe CP

Historic Land Use 1970 - Property 3
The Queensway

Legend

- Subject Property
- Historic Structures

0 100 200 Meters

N

Project Number	Date:	
22-1313	2022-12-01	

north-south ENVIRONMENTAL

Figure 11d | Lake Simcoe CP

Historic Land Use 1970 - Property 4
Varney Road

Legend

- Subject Property
- Historic Structures

0 50 100 150 200 250 Meters

Project Number	Date:	N
22-1313	2022-12-01	

Data Provided by: North South Environmental Inc.
Imagery: York Region 1970

north-south ENVIRONMENTAL

APPENDIX 1 | Ministry Zoning Order (M.Z.O.)

ONTARIO REGULATION 251/22

made under the

PLANNING ACT

Made: April 1, 2022
Filed: April 1, 2022
Published on e-Laws: April 1, 2022
Printed in *The Ontario Gazette*: April 16, 2022

ZONING ORDER - TOWN OF GEORGINA, REGIONAL MUNICIPALITY OF YORK

Application

1. This Order applies to lands in the Town of Georgina, Regional Municipality of York, being the lands identified as Environmental Protection Area and marked with hatching lines on a map numbered 257 and filed at the Toronto office of the Ministry of Municipal Affairs and Housing located at 777 Bay Street.

Use of land

2. Every use of land and every erection, location or use of any building or structure is prohibited on the lands described in section 1, except,

(a) forest, fish and wildlife management;

(b) conservation and flood or erosion control projects;

(c) infrastructure;

(d) passive recreation uses; and

(e) buildings and structures associated with the uses set out in clauses (a) to (d).

Terms of use

3. (1) Every use of land and every erection, location or use of any building or structure shall be in accordance with this Order.

(2) Nothing in this Order prevents the use of any land, building or structure for any use prohibited by this Order if the land, building or structure is lawfully so used on the day this Order comes into force.

(3) Nothing in this Order prevents the reconstruction of any building or structure that is damaged or destroyed by causes beyond the control of the owner if the dimensions of the original building or structure are not increased and its original use is not altered.

(4) Nothing in this Order prevents the strengthening or restoration to a safe condition of any building or structure.

Commencement

4. This Regulation comes into force on the day it is filed.

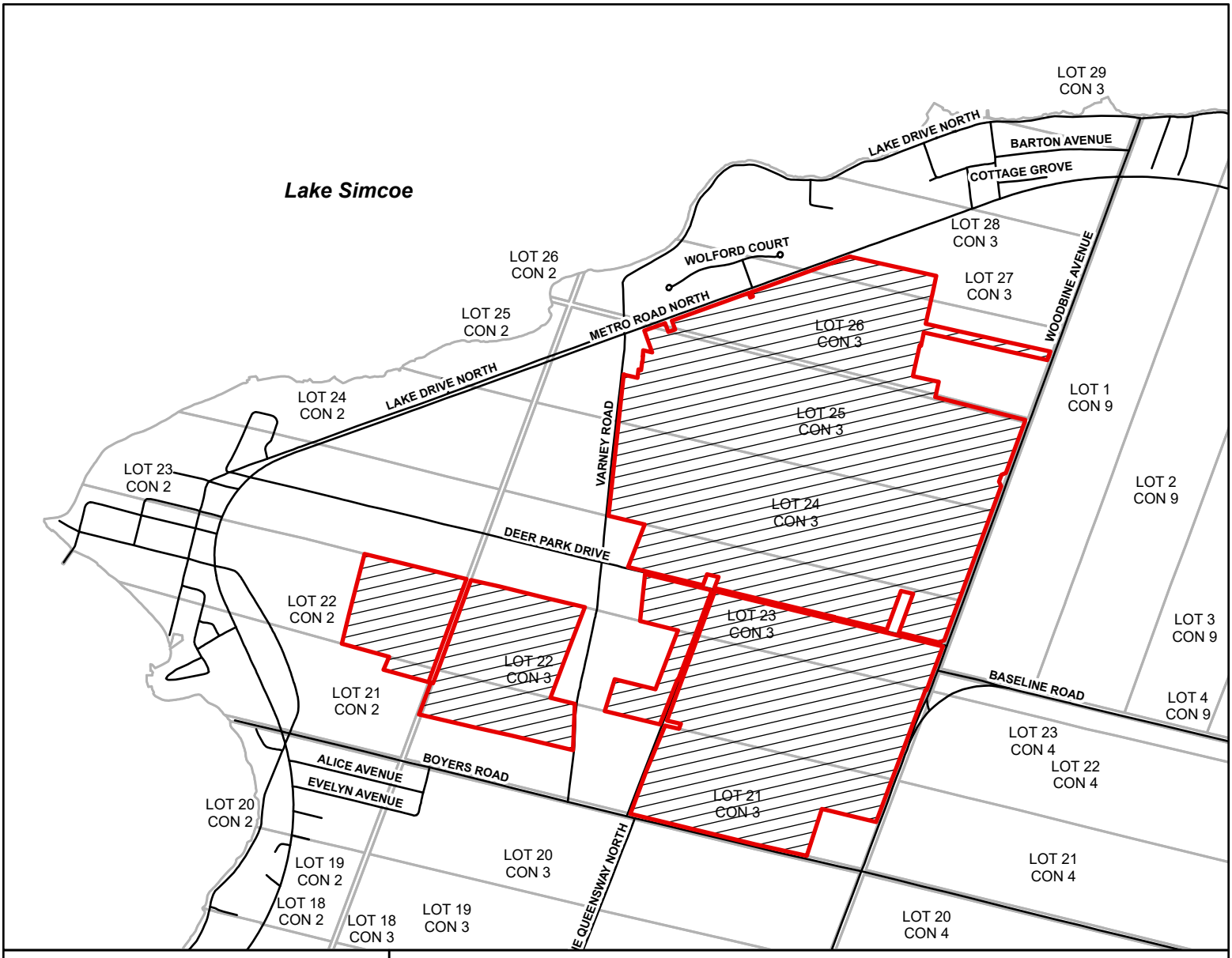
Made by:

STEVE CLARK
Minister of Municipal Affairs and Housing

Date made: April 1, 2022

Back to top

Part of Lots 21 and 22, Concession 2, and Part of Lots 21- 27, Concession 3, Town of Georgina, Regional Municipality of York



MAP No. 257

Map filed at the office of the Ontario Ministry of Municipal Affairs and Housing, 777 Bay St., Toronto, Ontario,

Planning Act

Ontario Regulation: 251/22

Date: April 1, 2022

Original Signed By: Minister of Municipal Affairs and Housing

LEGEND

- Environmental Protection Area
- Lands Subject to Zoning Order
- Lot & Concession
- Roads

Ontario

Map North (Degrees): 32°E

0 300 600 1,200

Metres

1 cm equals 256 metres

THIS IS NOT A PLAN OF SURVEY

Information provided by the Ministry of Municipal Affairs and Housing, under licence with the Ministry of Natural Resources.

Map Description: This is map no. 257 referred to in a Minister's Zoning Order. It shows lands which are located in Part of Lots 21 and 22, Concession 2, and Part of Lots 21-27, Concession 3, Town of Georgina, Regional Municipality of York. We are committed to providing accessible customer service (https://www.ontario.ca/page/accessible-customer-service-policy).
On request, we can arrange for accessible formats and communications supports.
Please contact MMAH by email (mininfo@ontario.ca) for regulation details.

APPENDIX 2 | Vegetation Community Photos

Photo 1. Cultural Meadow (C.U.M.1-1) from Property 2. This meadow is the result of an abandoned agricultural field.

Photo 2. Distant shot of a Scots Pine Cultural Plantation (C.U.P.3-3). This photo is highlighting a dense stand of Scots Pine on Property 2.

Photo 3. Cultural Woodland (C.U.W.) from Property 2. This woodland is dominated by Black Locust, European Buckthorn and Reed Canary Grass.

Photo 4. A Dry-Fresh Mixed Cultural Woodland (C.U.W.1). This community is on Property 1 and is an open canopy of deciduous and coniferous tree species.

Photo 5. Moist White Cedar Forest (F.O.C.4-1). A low diversity community that is dominated by White Cedar with sparse shrub and herbaceous layer.

Photo 6. Deciduous Forest (F.O.D.). This specific community is found in the northeast section of Property 2.

Photo 7. The Maple-Beech Forest (F.O.D.5-2) found on property 4. A mature forest dominated by Sugar Maple and American Beech. This photo also highlights a hunt stand.

Photo 8. A Dry-Fresh Sugar Maple-Basswood Deciduous Forest (F.O.D.5-6) found in Property 2. The photo is highlighting the dense groundcover of Dog-strangling Vine.

Photo 9. A Fresh-Moist Sugar Maple Hardwood Deciduous Forest (F.O.D.6-5) found on Property 4. A moist community that also supports Black Ash.

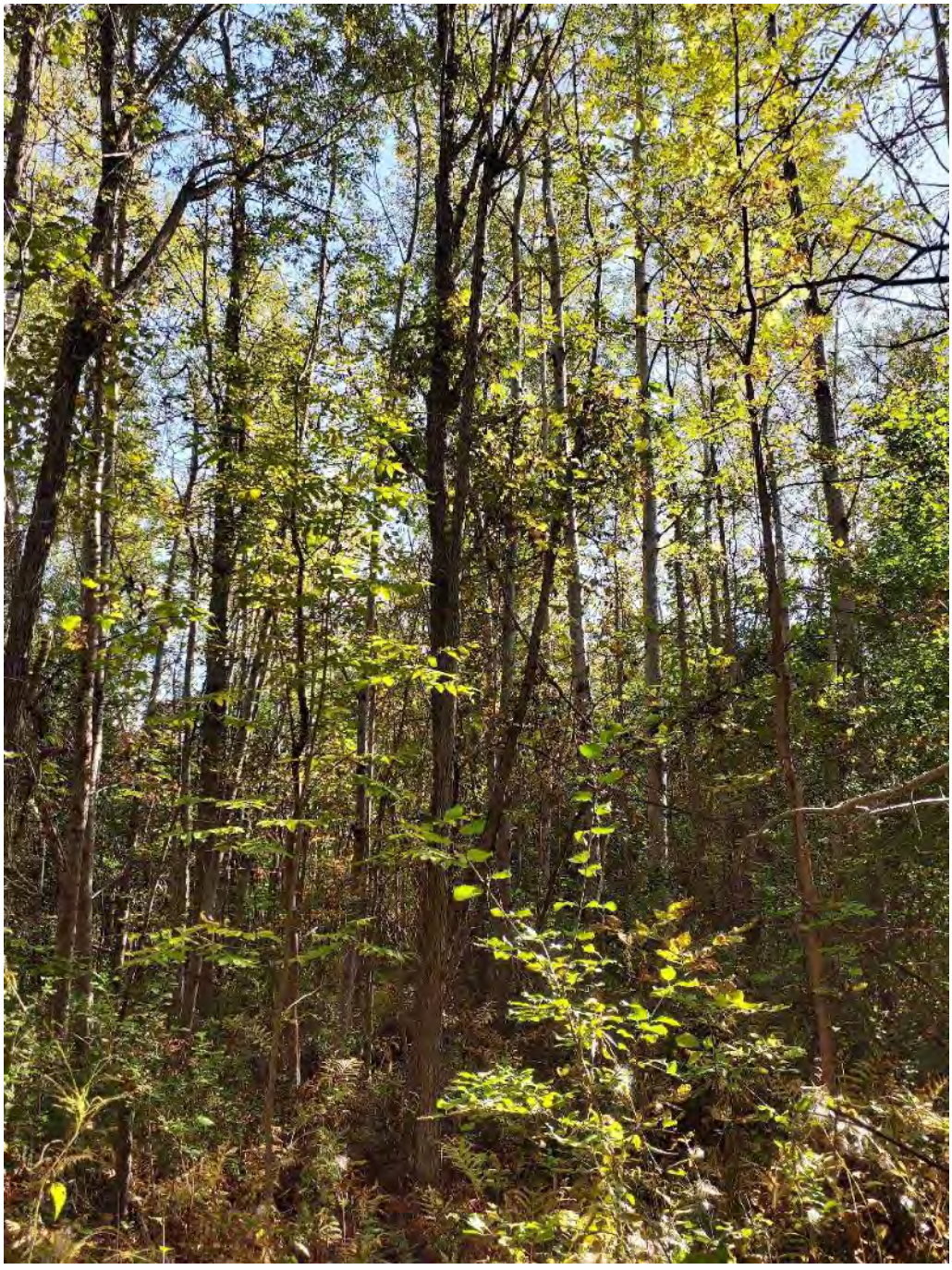


Photo 10. Fresh-Moist Poplar Forest (F.O.D.8-1) that is found throughout Property 1.

Photo 11. A White Cedar Mixed Forest (F.O.M.4) found on property 2. Other species are White Pine and Trembling Aspen.

Photo 12. Fresh White Cedar Mixed Forest (F.O.M.4-2). A regenerating community composed of a mix of White Cedar and fast-growing deciduous species.

Photo 13. Hedgerow on Property 2. Hedgerows are common through Properties 2, 3 and 4. They are a thin line of trees and shrubs that are too small to be a forest.

Photo 14. An Intensive Agricultural Field (I.A.G.) of soybeans from Property 2. Agricultural fields make up a large percentage of Properties 2, 3 and 4.

Photo 15. A Meadow Marsh (M.A.M.2) from Property 2. Composed of wet-growing herbaceous and shrub species. This community is often found on the edges of agricultural fields.

Photo 16. One section of the previously cut sections of Property 1. It is a mixture of Meadow Marsh and Cultural Thickets (M.A.M.2/C.U.T.). This photo is highlighting a field of Reed Canary Grass with A.T.V. ruts through the middle of it.

Photo 17. Another section the previously cut sections of Property 1. It is a mixture of Meadow Marsh and Cultural Thickets (M.A.M.2/C.U.T.). This photo is highlighting a gravel road and the shrubs that are growing along the edges.

Photo 18. Another section the previously cut sections of Property 1. It is a mixture of Meadow Marsh and Cultural Thickets (M.A.M.2/C.U.T.). This photo is highlighting a less disturbed section of this community. This Meadow Marsh is dominated by Joe-Pye Weed and Goldenrods. The canopy has been thinned due to Emerald Ash Borer.

Photo 19. A Cattail Shallow Marsh (M.A.S.2-1) on the edge of an agricultural field on Property 2. A few of these communities are scattered on the borders or within agricultural fields.

Photo 20. Floating-leaved Aquatic habitat dominated by Lake Sedge with some Duckweed present (S.A.F.1-3). This community is an inclusion in the White Cedar Mixed Swamp in the Northeast of Property 2.

Photo 21. A Floating Leaved Duckweed Shallow Pond (S.A.F.1-3). A small patchwork of this community is in Property 2, in the northeast S.W.M.1-1 community.

Photo 22. Another Floating-leaved Duckweed Shallow Pond (S.A.F.1-3) that is a man-made pond in Property 4. It has little riparian vegetation and is covered in Duckweed. The pond was not present in 1970 imagery.

Photo 23. A Black Ash Swamp (S.W.D.2-1) found on Property 1. This community has been heavily impacted by the Emerald Ash Borer. The canopy is transitioning away from Black Ash to other deciduous tree species.

Photo 24. A Green Ash Swamp (S.W.D.2-2). This photo is from Property 4. This community is heavily impacted by Emerald Ash Borer and the canopy is transitioning to Poplar and Elms as the Green Ash dies.

Photo 25. A Maple Swamp (S.W.D.3) found on Property 1. This community appears to have transitioned from an Ash dominated canopy to a Maple dominated canopy.

Photo 26. A Poplar Deciduous Swamp (S.W.D.4-5). A community dominated by Poplar and Aspen species in the canopy. This community is found scattered throughout Property 1.

Photo 27. An Ash and Trembling Aspen Swamp (S.W.D.7). This community is found in Property 1. It has been impacted by the Emerald Ash Borer and Trembling Aspen and Willow trees are more common in the canopy then Ash. Green and Black Ash are still common in the understory and shrub layers.

Photo 28. White Cedar Mixed Swamp (S.W.M.1-1). This photo is from one part of the northeast corner of Property 2. This community is a mixture of deciduous and coniferous tree species with moist soils to standing water.

Photo 29. The Poplar and Conifer Mixed Swamp (S.W.M.3-2) is the most abundant community in Property 1. The canopy species are mostly Trembling Aspen. White Cedar, Yellow Birch and Balsam Fir.

Photo 30. Willow Swamp Thickets (S.W.T.2-2) are found in both Property 2 and Property 4. They are dense with Willow shrubs and Red-osier Dogwood. This photo is from Property 4.

APPENDIX 3 | Recorded Flora

Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Adoxaceae	*Sambucus canadensis*	Common Elderberry		G5	S5			x		x	
Adoxaceae	*Sambucus racemosa subsp. pubens var. pub*	Red Elderberry		G5T5	S5			x			
Adoxaceae	*Viburnum lantana*	Wayfaring Viburnum	TRUE	GNR	SNA			x		x	
Adoxaceae	*Viburnum lentago*	Nannyberry		G5	S5			x			
Adoxaceae	*Viburnum opulus*	Cranberry Viburnum		G5	S5			x	x	x	
Amaryllidaceae	*Allium tricoccum*	Wild Leek		G5	S4						x
Anacardiaceae	*Rhus typhina*	Staghorn Sumac		G5	S5			x	x		x
Anacardiaceae	*Toxicodendron radicans var. radicans*	Eastern Poison Ivy		G5T5	S5			x			
Anacardiaceae	*Toxicodendron radicans var. rydbergii*	Western Poison Ivy		G--T5	S5			x			
Apiaceae	*Daucus carota*	Wild Carrot	TRUE	GNR	SNA			x	x		x
Apiaceae	*Sium suave*	Common Water-parsnip		G5	S5			x	x		
Apiaceae	*Torilis japonica*	Erect Hedge-parsley	TRUE	GNR	SNA				x		
Apocynaceae	*Apocynum cannabinum*	Hemp Dogbane		GNR	S5			x			
Apocynaceae	*Asclepias exaltata*	Poke Milkweed		G5	S4			x			
Apocynaceae	*Asclepias incarnata subsp. incarnata*	Swamp Milkweed		G5T5	S5			x	x		x
Apocynaceae	*Asclepias syriaca*	Common Milkweed		G5	S5			x	x	x	x
Apocynaceae	*Cynanchum sp.*	Swallowwort	TRUE	GNR	S?			x			
Apocynaceae	*Vincetoxicum rossicum*	European Swallowwort	TRUE	GNR	SNA			x	x	x	x
Araceae	*Arisaema triphyllum subsp. triphyllum*	Jack-in-the-pulpit		G5T5	S5			x			
Araceae	*Lemna sp.*	Duckweed		GNR	S?				x		
Araliaceae	*Aralia nudicaulis*	Wild Sarsaparilla		G5	S5			x			
Aristolochiaceae	*Asarum canadense*	Canada Wild Ginger		G5	S5						x
Asparagaceae	*Asparagus officinalis*	Garden Asparagus	TRUE	G5?	SNA			x			
Asparagaceae	*Convallaria majalis var. majalis*	European Lily-of-the-valley	TRUE	G--T5	SNA			x		x	
Asparagaceae	*Maianthemum canadense*	Wild Lily-of-the-valley		G5	S5			x			
Asparagaceae	*Maianthemum racemosum*	Large False Solomon's Seal		G5	S5			x			

Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Asparagaceae	*Polygonatum pubescens*	Hairy Solomon's Seal		G5	S5			x			
Asteraceae	*Achillea millefolium*	Common Yarrow	TRUE	G5	SNA			x			
Asteraceae	*Ageratina altissima var. altissima*	Common White Snakeroot		G5T5	S5			x			
Asteraceae	*Ambrosia artemisiifolia*	Common Ragweed		G5	S5			x	x		
Asteraceae	*Arctium minus*	Common Burdock	TRUE	GNR	SNA			x	x		x
Asteraceae	*Artemisia biennis*	Biennial Wormwood	TRUE	G5	SNA				x		
Asteraceae	*Bidens frondosa*	Devil's Beggarticks		G5	S5			x	x		x
Asteraceae	*Centaurea macrocephala*	Globe Knapweed	TRUE	GNR	SNA			x			
Asteraceae	*Cichorium intybus*	Wild Chicory	TRUE	GNR	SNA			x	x		x
Asteraceae	*Cirsium arvense*	Canada Thistle	TRUE	G5	SNA			x	x		
Asteraceae	*Erigeron annuus*	Annual Fleabane		G5	S5			x			
Asteraceae	*Eupatorium perfoliatum*	Common Boneset		G5	S5			x	x		x
Asteraceae	*Euthamia graminifolia*	Grass-leaved Goldenrod		G5	S5			x	x	x	x
Asteraceae	*Eutrochium maculatum*	Spotted Joe Pye Weed		G5	S5			x	x		x
Asteraceae	*Inula helenium*	Elecampane	TRUE	GNR	SNA			x	x		x
Asteraceae	*Nabalus albus*	White Rattlesnakeroot		G5	S5			x			
Asteraceae	*Rudbeckia hirta var. pulcherrima*	Black-eyed Susan		G5T5	S5			x			
Asteraceae	*Solidago altissima*	Tall Goldenrod		G5	S5			x			x
Asteraceae	*Solidago altissima var. altissima*	Tall Goldenrod		G--T5	S5			x			
Asteraceae	*Solidago caesia var. caesia*	Blue-stemmed Goldenrod		G--T5	S5			x			
Asteraceae	*Solidago canadensis*	Canada Goldenrod		G5	S5			x	x	x	x
Asteraceae	*Solidago flexicaulis*	Zigzag Goldenrod		G5	S5			x	x	x	x
Asteraceae	*Solidago gigantea*	Giant Goldenrod		G5	S5			x			
Asteraceae	*Solidago juncea*	Early Goldenrod		G5	S5			x			
Asteraceae	*Solidago rugosa*	Rough-stemmed Goldenrod		G5	S5			x	x		
Asteraceae	*Solidago rugosa subsp. rugosa var. rugos*	Northern Rough-leaved Goldenrod		G5T5	S5			x			
Asteraceae	*Symphyotrichum cordifolium*	Heart-leaved Aster		G5	S5			x	x		x

Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Asteraceae	*Symphyotrichum ericoides*	White Heath Aster		G5	S5			x	x		
Asteraceae	*Symphyotrichum lanceolatum*	White Panicled Aster		G5	S5			x		x	x
Asteraceae	*Symphyotrichum lateriflorum*	Calico Aster		G5	S5			x	x		x
Asteraceae	*Symphyotrichum lateriflorum var. laterif*	Calico Aster		G5T5	S5			x			
Asteraceae	*Symphyotrichum novae-angliae*	New England Aster		G5	S5			x	x	x	x
Asteraceae	*Symphyotrichum puniceum var. puniceum*	Purple-stemmed Aster		G5T5	S5			x			x
Asteraceae	*Symphyotrichum urophyllum*	Arrow-leaved Aster		G4G5	S4			x			
Asteraceae	*Taraxacum officinale*	Common Dandelion	TRUE	G5	SNA			x			
Asteraceae	*Tussilago farfara*	Coltsfoot	TRUE	GNR	SNA			x	x	x	x
Athyriaceae	*Athyrium filix-femina var. angustum*	Northeastern Lady Fern		G5T5	S5			x			x
Balsaminaceae	*Impatiens capensis*	Spotted Jewelweed		G5	S5			x	x		x
Berberidaceae	*Berberis thunbergii*	Japanese Barberry	TRUE	GNR	SNA			x			x
Berberidaceae	*Berberis vulgaris*	European Barberry	TRUE	GNR	SNA			x			
Berberidaceae	*Caulophyllum thalictroides*	Blue Cohosh		G5	S5			x			
Betulaceae	*Alnus glutinosa*	European Black Alder	TRUE	GNR	SNA						x
Betulaceae	*Betula alleghaniensis*	Yellow Birch		G5	S5			x			x
Betulaceae	*Betula papyrifera*	Paper Birch		G5	S5			x	x		x
Betulaceae	*Betula populifolia*	Grey Birch		G5	S4				x		
Betulaceae	*Ostrya virginiana*	Eastern Hop-hornbeam		G5	S5			x	x		x
Boraginaceae	*Hackelia virginiana*	Virginia Stickseed		G5	S5			x	x		x
Boraginaceae	*Hydrophyllum virginianum var. virginianu*	Virginia Waterleaf		G5T5	S5			x	x		x
Boraginaceae	*Myosotis scorpioides*	True Forget-me-not	TRUE	G5	SNA			x			
Boraginaceae	*Myosotis sp.*	Forget-me-not		GNR	S?			x			
Brassicaceae	*Alliaria petiolata*	Garlic Mustard	TRUE	GNR	SE5			x	x		x
Brassicaceae	*Barbarea vulgaris*	Bitter Wintercress	TRUE	GNR	SNA			x			

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Brassicaceae	*Capsella bursa-pastoris*	Common Shepherd's Purse	TRUE	GNR	SNA			x			
Brassicaceae	*Cardamine diphylla*	Two-leaved Toothwort		G5	S5			x			
Brassicaceae	*Hesperis matronalis*	Dame's Rocket	TRUE	G4G5	SNA			x			
Brassicaceae	*Nasturtium officinale*	Watercress	TRUE	GNR	SNA			x			
Campanulaceae	*Lobelia inflata*	Indian Tobacco		G5	S5			x			
Caprifoliaceae	*Dipsacus fullonum*	Common Teasel	TRUE	GNR	SNA			x			x
Caprifoliaceae	*Lonicera sp.*	Honeysuckle		GNR	S?			x			
Caprifoliaceae	*Lonicera tatarica*	Tartarian Honeysuckle	TRUE	GNR	SNA			x	x	x	x
Caryophyllaceae	*Cerastium fontanum subsp. vulgare*	Common Mouse-ear Chickweed	TRUE	GNRTNR	SE5			x			
Caryophyllaceae	*Stellaria media*	Common Chickweed	TRUE	GNR	SNA			x			
Cornaceae	*Cornus alternifolia*	Alternate-leaved Dogwood		G5	S5			x	x	x	x
Cornaceae	*Cornus racemosa*	Grey Dogwood		G5	S5			x			
Cornaceae	*Cornus sericea*	Red-osier Dogwood		G5	S5			x	x	x	x
Cucurbitaceae	*Echinocystis lobata*	Wild Cucumber		G5	S5				x		
Cupressaceae	*Juniperus sp.*	Juniper		GNR	S?			x			
Cupressaceae	*Thuja occidentalis*	Eastern White Cedar		G5	S5			x	x		x
Cyperaceae	*Carex bebbii*	Bebb's Sedge		G5	S5			x			
Cyperaceae	*Carex gracillima*	Graceful Sedge		G5	S5			x			
Cyperaceae	*Carex intumescens*	Bladder Sedge		G5	S5			x			
Cyperaceae	*Carex lacustris*	Lake Sedge		G5	S5			x	x		
Cyperaceae	*Carex lupulina*	Hop Sedge		G5	S5			x	x		x
Cyperaceae	*Carex pedunculata*	Long-stalk Sedge		G5	S5			x			
Cyperaceae	*Carex plantaginea*	Plantain-leaved Sedge		G5	S5						x
Cyperaceae	*Carex rosea*	Rosy Sedge		G5	S5			x			
Cyperaceae	*Carex sp.*	Sedge		GNR	S?			x	x		x
Cyperaceae	*Carex vulpinoidea*	Fox Sedge		G5	S5			x			
Cyperaceae	*Cyperus esculentus*	Perennial Yellow Flatsedge		G5	S5				x		
Cyperaceae	*Schoenoplectus tabernaemontani*	Soft-stemmed Bulrush		G5	S5			x	x		
Cyperaceae	*Scirpus atrovirens*	Dark-green Bulrush		G5	S5			x	x		

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Cyperaceae	*Scirpus cyperinus*	Common Wooly Bulrush		G5	S5			x			x
Cyperaceae	*Scirpus pendulus*	Hanging Bulrush		G5	S5			x			
Cystopteridaceae	*Cystopteris bulbifera*	Bulblet Bladder Fern		G5	S5			x			x
Dennstaedtiaceae	*Pteridium aquilinum var. latiusculum*	Bracken Fern		G5T5	S5			x	x		
Dryopteridaceae	*Dryopteris carthusiana*	Spinulose Wood Fern		G5	S5			x			
Dryopteridaceae	*Dryopteris cristata*	Crested Wood Fern		G5	S5			x	x		
Dryopteridaceae	*Dryopteris intermedia*	Evergreen Wood Fern		G5	S5			x			x
Dryopteridaceae	*Dryopteris marginalis*	Marginal Wood Fern		G5	S5			x			
Dryopteridaceae	*Polystichum acrostichoides*	Christmas Fern		G5	S5						x
Equisetaceae	*Equisetum arvense*	Field Horsetail		G5	S5			x			
Equisetaceae	*Equisetum hyemale*	Common Scouring-rush		G5	S5				x		
Ericaceae	*Pyrola asarifolia subsp. asarifolia*	Pink Pyrola		G5T5	S5			x			
Fabaceae	*Amphicarpaea bracteata*	American Hog Peanut		G5	S5						x
Fabaceae	*Desmodium canadense*	Canada Tick-trefoil		G5	S4			x			
Fabaceae	*Lotus corniculatus*	Garden Bird's-foot Trefoil	TRUE	GNR	SNA			x			
Fabaceae	*Medicago lupulina*	Black Medick	TRUE	GNR	SNA			x			
Fabaceae	*Melilotus albus*	White Sweet-clover	TRUE	G5	SNA			x			
Fabaceae	*Robinia pseudoacacia*	Black Locust	TRUE	G5	SNA				x		
Fabaceae	*Trifolium aureum*	Yellow Clover	TRUE	GNR	SNA			x			
Fabaceae	*Trifolium pratense*	Red Clover	TRUE	GNR	SNA			x	x		x
Fabaceae	*Trifolium repens*	White Clover	TRUE	GNR	SNA			x			
Fabaceae	*Vicia cracca*	Tufted Vetch	TRUE	GNR	SNA			x	x	x	x
Fagaceae	*Fagus grandifolia*	American Beech		G5	S4						x
Fagaceae	*Quercus macrocarpa*	Bur Oak		G5	S5			x			
Fagaceae	*Quercus rubra*	Northern Red Oak		G5	S5						x
Geraniaceae	*Geranium maculatum*	Spotted Geranium		G5	S5			x			
Geraniaceae	*Geranium robertianum*	Herb-Robert		G5	S5			x			x

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Grossulariaceae	*Ribes americanum*	American Black Currant		G5	S5			x			
Grossulariaceae	*Ribes cynosbati*	Eastern Prickly Gooseberry		G5	S5			x			
Grossulariaceae	*Ribes sp.*	Gooseberry/Currant		GNR	S?			x			
Hypericeae	*Hypericum perforatum subsp. perforatum*	Common St. John's-wort	TRUE	GNR	SE5			x	x		
Iridaceae	*Iris pseudacorus*	Yellow Iris	TRUE	GNR	SNA			x			
Iridaceae	*Sisyrinchium montanum*	Strict Blue-eyed Grass		G5	S5			x			
Juglandaceae	*Carya cordiformis*	Bitternut Hickory		G5	S5						x
Juglandaceae	*Juglans cinerea*	Butternut		G3	S2?	END	END	x		x	x
Juglandaceae	*Juglans nigra*	Black Walnut		G5	S4?			x	x		x
Juncaceae	*Juncus canadensis*	Canada Rush		G5	S5			x			
Juncaceae	*Juncus sp.*	Rush		GNR	S?				x		
Juncaceae	*Juncus tenuis*	Path Rush		G5	S5			x			
Juncaceae	*Juncus torreyi*	Torrey's Rush		G5	S5			x			
Lamiaceae	*Clinopodium vulgare*	Wild Basil		G5	S5			x			
Lamiaceae	*Glechoma hederacea*	Ground-ivy	TRUE	GNR	SNA			x	x		
Lamiaceae	*Leonurus cardiaca subsp. cardiaca*	Common Motherwort	TRUE	GNRTNR	SE5			x	x		x
Lamiaceae	*Lycopus americanus*	American Water-horehound		G5	S5			x			
Lamiaceae	*Lycopus uniflorus*	Northern Water-horehound		G5	S5			x	x		
Lamiaceae	*Mentha arvensis*	Wild Mint		G5	SNA			x			
Lamiaceae	*Mentha sp.*	Mint		GNR	S?			x			
Lamiaceae	*Monarda fistulosa*	Wild Bergamot		G5	S5			x			
Lamiaceae	*Nepeta cataria*	Catnip	TRUE	GNR	SNA			x			
Lamiaceae	*Physostegia virginiana subsp. virginiana*	Virginia False Dragonhead		G5T5	S4			x			
Lamiaceae	*Prunella vulgaris*	Common Self-heal		G5	S5				x		x
Lamiaceae	*Prunella vulgaris subsp. lanceolata*	Lance-leaved Self-heal		G5T5	S5			x			
Lamiaceae	*Scutellaria lateriflora*	Mad-dog Skullcap		G5	S5			x			
Liliaceae	*Clintonia borealis*	Yellow Clintonia		G5	S5			x			
Lythraceae	*Lythrum salicaria*	Purple Loosestrife	TRUE	G5	SNA			x			

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Malvaceae	*Tilia americana*	American Basswood		G5	S5			x			
Melanthiaceae	*Trillium erectum*	Red Trillium		G5	S5			x	x		x
Melanthiaceae	*Trillium grandiflorum*	White Trillium		G5	S5			x	x	x	x
Melanthiaceae	*Trillium sp.*	Trillium		GNR	S?			x			
Menispermaceae	*Menispermum canadense*	Canada Moonseed		G5	S4			x			
Moraceae	*Morus alba*	White Mulberry	TRUE	GNR	SNA						x
Oleaceae	*Fraxinus americana*	White Ash		G5	S4			x		x	
Oleaceae	*Fraxinus nigra*	Black Ash		G5	S3	THR		x			
Oleaceae	*Fraxinus pennsylvanica*	Red Ash		G5	S4			x			
Oleaceae	*Syringa vulgaris*	Common Lilac	TRUE	GNR	SNA			x	x		x
Onagraceae	*Circaea canadensis subsp. canadensis*	Canada Enchanter's Nightshade		G5TNR	S5			x	x	x	x
Onagraceae	*Epilobium ciliatum*	Northern Willowherb		G5	S5			x			
Onagraceae	*Epilobium parviflorum*	Small-flowered Hairy Willowherb	TRUE	GNR	SNA			x			x
Onocleaceae	*Matteuccia struthiopteris var. pensylvan*	Ostrich Fern		G5T5	S5			x	x		
Onocleaceae	*Onoclea sensibilis*	Sensitive Fern		G5	S5			x			
Orchidaceae	*Cypripedium parviflorum*	Yellow Lady's-slipper		G5	S5			x			x
Orchidaceae	*Epipactis helleborine*	Braod-leaved Helleborine	TRUE	GNR	SNA			x	x		x
Orobanchaceae	*Agalinis tenuifolia*	Slender-leaved False Foxglove		G5	S4S5						x
Orobanchaceae	*Epifagus virginiana*	Beechdrops		G5	S5			x			x
Oxalidaceae	*Oxalis stricta*	European Wood-sorrel		G5	S5			x			
Penthoraceae	*Penthorum sedoides*	Ditch Sstonecrop		G5	S5						x
Phrymaceae	*Mimulus ringens var. ringens*	Square-stemmed Monkeyflower		G5T5	S5			x			
Pinaceae	*Abies balsamea*	Balsam Fir		G5	S5						x
Pinaceae	*Larix laricina*	Tamarack		G5	S5			x			
Pinaceae	*Picea abies*	Norway Spruce	TRUE	G5	SNA			x			
Pinaceae	*Picea glauca*	White Spruce		G5	S5			x			
Pinaceae	*Pinus resinosa*	Red Pine		G5	S5			x			

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Pinaceae	*Pinus strobus*	Eastern White Pine		G5	S5			x	x		x
Pinaceae	*Pinus sylvestris var. sylvestris*	Scots Pine	TRUE	GNRTNR	SNA			x	x		
Pinaceae	*Tsuga canadensis*	Eastern Hemlock		G5	S5			x	x		
Plantaginaceae	*Chelone glabra*	White Turtlehead		G5	S5			x	x		
Plantaginaceae	*Linaria vulgaris*	Butter-and-eggs	TRUE	GNR	SNA			x			x
Plantaginaceae	*Plantago lanceolata*	English Plantain	TRUE	G5	SNA			x			
Plantaginaceae	*Plantago major*	Common Plantain	TRUE	G5	SNA			x	x		
Plantaginaceae	*Plantago rugelii*	Rugel's Plantain		G5	S5				x		
Plantaginaceae	*Veronica officinalis*	Common Speedwell	TRUE	G5	SNA			x			
Poaceae	*Bromus inermis*	Smooth Brome	TRUE	G5	SNA						x
Poaceae	*Dactylis glomerata*	Orchard Grass	TRUE	GNR	SNA			x			
Poaceae	*Echinochloa crus-galli*	Large Barnyard Grass	TRUE	GNR	SNA			x	x		
Poaceae	*Elymus riparius*	Eastern Riverbank Wildrye		G5	S4			x	x		x
Poaceae	*Elymus virginicus*	Virginia Wildrye		G5	S5			x	x		
Poaceae	*Festuca sp.*	Fescue		GNR	S?			x			
Poaceae	*Glyceria striata var. striata*	Fowl Mannagrass		G5T5	S5			x			
Poaceae	*Leersia oryzoides*	Rice Cutgrass		G5	S5			x			
Poaceae	*Phalaris arundinacea*	Reed Canarygrass		G5	S5			x	x		x
Poaceae	*Phalaris canariensis*	Annual Canarygrass	TRUE	GNR	SNA			x			
Poaceae	*Phleum pratense subsp. pratense*	Common Timothy	TRUE	GNRTNR	SE5			x	x		x
Poaceae	*Phragmites australis subsp. australis*	European Reed	TRUE	G5T5	SE5			x			
Poaceae	*Poa pratensis*	Kentucky Bluegrass		G5	S5			x	x		x
Poaceae	*Poa pratensis subsp. pratensis*	Kentucky Bluegrass	TRUE	G5T5	SE5			x			x
Poaceae	*Setaria viridis var. viridis*	Green Foxtail	TRUE	GNRTNR	SNA				x		x
Poaceae	*Sporobolus sp.*	Dropseed		GNR	S?			x			
Polygonaceae	*Persicaria maculosa*	Spotted Lady's Thumb	TRUE	G3G5	SNA				x		
Polygonaceae	*Rumex crispus*	Curled Dock	TRUE	GNR	SNA						x
Primulaceae	*Lysimachia sp.*	Loosestrife		GNR	S?			x	x		
Ranunculaceae	*Actaea pachypoda*	White Baneberry		G5	S5			x			

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Ranunculaceae	*Actaea rubra*	White-fruited Red Baneberry		G5	S5			x			
Ranunculaceae	*Anemonastrum canadense*	Canada Anemone		G5	S5			x			x
Ranunculaceae	*Anemone virginiana var. virginiana*	Tall Anemone		G5T5	S5?			x			
Ranunculaceae	*Clematis virginiana*	Virginia Clematis		G5	S5			x			
Ranunculaceae	*Hepatica acutiloba*	Sharp-lobed Hepatica		G5	S5			x			
Ranunculaceae	*Ranunculus abortivus*	Kidney-leaved Buttercup		G5	S5			x			
Ranunculaceae	*Ranunculus acris*	Tall Buttercup	TRUE	G5	SNA						x
Ranunculaceae	*Ranunculus hispidus var. caricetorum*	Northern Swamp Buttercup		G5T5	S5			x			
Ranunculaceae	*Ranunculus recurvatus var. recurvatus*	Hooked Buttercup		G5T5	S5			x			
Ranunculaceae	*Thalictrum pubescens*	Tall Meadow-rue		G5	S5			x			
Rhamnaceae	*Frangula alnus*	Glossy Buckthorn	TRUE	GNR	SNA			x			
Rhamnaceae	*Rhamnus cathartica*	European Buckthorn	TRUE	GNR	SNA			x			
Rosaceae	*Agrimonia gryposepala*	Hooked Agrimony		G5	S5			x			
Rosaceae	*Amelanchier arborea*	Downy Serviceberry		G5	S5			x	x	x	x
Rosaceae	*Amelanchier sp.*	Serviceberry		G?	S?			x			
Rosaceae	*Crataegus sp.*	Hawthorn		GNR	S?			x			
Rosaceae	*Fragaria vesca*	Woodland Strawberry		G5	S5			x			
Rosaceae	*Fragaria virginiana*	Wild Strawberry		G5	S5			x		x	x
Rosaceae	*Geum aleppicum*	Yellow Avens		G5	S5			x			
Rosaceae	*Geum canadense*	Canada Avens		G5	S5			x	x		
Rosaceae	*Malus pumila*	Common Apple	TRUE	G5	SNA			x			
Rosaceae	*Malus sp.*	Apple		GNR	S?			x	x		
Rosaceae	*Physocarpus opulifolius*	Eastern Ninebark		G5	S5			x	x		x
Rosaceae	*Potentilla recta*	Sulphur Cinquefoil	TRUE	GNR	SNA			x			
Rosaceae	*Prunus serotina var. serotina*	Black Cherry		G5T5	S5					x	
Rosaceae	*Prunus virginiana var. virginiana*	Chokecherry		G5T5	S5			x			
Rosaceae	*Rosa multiflora*	Multiflora Rose	TRUE	GNR	SNA			x			
Rosaceae	*Rubus allegheniensis*	Allegheny Blackberry		G5	S5			x	x		x

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Rosaceae	*Rubus idaeus*	Red Raspberry		G5	S5			x			
Rosaceae	*Rubus idaeus subsp. idaeus*	European Red Raspberry	TRUE	G5T5	SE1			x			
Rosaceae	*Rubus idaeus subsp. strigosus*	North American Red Raspberry		G5T5	S5			x			
Rosaceae	*Rubus occidentalis*	Black Raspberry		G5	S5			x			
Rosaceae	*Rubus odoratus*	Purple-flowering Raspberry		G5	S5			x			
Rosaceae	*Rubus pubescens*	Dwarf Raspberry		G5	S5			x	x	x	x
Rubiaceae	*Galium aparine*	Common Bedstraw		G5	S5			x			
Rubiaceae	*Galium asprellum*	Rough Bedstraw		G5	S5			x	x		
Rubiaceae	*Galium mollugo*	Smooth Bedstraw	TRUE	GNR	SNA			x			
Rubiaceae	*Galium palustre*	Common Marsh Bedstraw		G5	S5			x			
Rubiaceae	*Galium triflorum*	Three-flowered Bedstraw		G5	S5			x			
Rubiaceae	*Galium verum*	Yellow Bedstraw	TRUE	GNR	SNA			x			
Salicaceae	*Populus alba*	White Poplar	TRUE	G5	SNA			x			
Salicaceae	*Populus balsamifera*	Balsam Poplar		G5	S5			x	x		
Salicaceae	*Populus deltoides*	Eastern Cottonwood		G5	S5			x			
Salicaceae	*Populus grandidentata*	Large-tooth Aspen		G5	S5			x	x		x
Salicaceae	*Populus tremuloides*	Trembling Aspen		G5	S5			x			
Salicaceae	*Salix alba*	White Willow	TRUE	G5	SNA			x			
Salicaceae	*Salix bebbiana*	Bebb's Willow		G5	S5			x	x	x	x
Salicaceae	*Salix cordata*	Heart-leaved Willow		G4	S4			x			
Salicaceae	*Salix eriocephala*	Cottony Willow		G5	S5			x			
Salicaceae	*Salix lucida*	Shining Willow		G5	S5						x
Salicaceae	*Salix petiolaris*	Meadow Willow		G5	S5			x			
Salicaceae	*Salix sp.*	Willow		GNR	S?			x			
Sapindaceae	*Acer negundo*	Manitoba Maple		G5	S5			x	x		
Sapindaceae	*Acer nigrum*	Black Maple		G5	S4?			x		x	x
Sapindaceae	*Acer platanoides*	Norway Maple	TRUE	GNR	SNA			x	x	x	x
Sapindaceae	*Acer rubrum*	Red Maple		G5	S5			x			
Sapindaceae	*Acer saccharinum*	Silver Maple		G5	S5			x			
Sapindaceae	*Acer saccharum*	Sugar Maple		G5	S5			x			
Sapindaceae	*Acer x freemanii*	Freeman's Maple		GNA	SNA			x			
Saxifragaceae	*Tiarella cordifolia*	Heart-leaved Foamflower		G5	S5			x	x	x	x

Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Scrophulariaceae	*Verbascum thapsus subsp. thapsus*	Great Mullein	TRUE	GNR	SE5			x			
Solanaceae	*Solanum dulcamara*	Bittersweet Nightshade	TRUE	GNR	SNA			x			
Typhaceae	*Typha angustifolia*	Narrow-leaved Cattail	TRUE	G5	SNA			x	x		
Typhaceae	*Typha latifolia*	Broad-leaved Cattail		G5	S5			x	x		x
Ulmaceae	*Ulmus americana*	White Elm		G4	S5				x		x
Urticaceae	*Boehmeria cylindrica*	Small-spike False Nettle		G5	S5			x	x		
Urticaceae	*Laportea canadensis*	Canada Wood Nettle		G5	S5			x	x	x	x
Urticaceae	*Pilea pumila*	Canada Clearweed		G5	S5			x	x		x
Urticaceae	*Urtica dioica subsp. gracilis*	Slender Stinging Nettle		G5T5	S5			x			
Verbenaceae	*Verbena hastata*	Blue Vervain		G5	S5			x			
Verbenaceae	*Verbena urticifolia*	White Vervain		G5	S5			x			
Vitaceae	*Parthenocissus quinquefolia*	Virginia Creeper		G5	S4?			x			
Vitaceae	*Vitis riparia*	Riverbank Grape		G5	S5			x			

G Rank – Global Rank

G4 – Apparently secure
G5 – Secure

S Rank = Sub-national Rank

S4 – Considered to be common in Ontario / Apparently Secure
S5 – Indicates that a species is widespread in Ontario / Secure
SNA – Not applicable (hybrids, etc)
SE – Exotic – 1-5, 5 is most common.

SARO = Species at Risk in Ontario

SARA = Species at Risk Act

END – Endangered
THR – Threatened
SC – Special Concern

APPENDIX 4 | Recorded Fauna

Taxa	Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Area Sensitive	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Amphibian	Ambystomatidae	*Ambystoma laterale*	Blue-spotted Salamander		G5	S5				x			
Amphibian	Ambystomatidae	*Ambystoma laterale-jeffersonianum*	Blue-spotted /Jefferson Salamander Complex		G?	S?	?	?		x			
Amphibian	Bufonidae	*Anaxyrus americanus*	American Toad		G5	S5				x			
Amphibian	Hylidae	*Hyla versicolor*	Gray Treefrog		G5	S5				x	x	x	x
Amphibian	Ranidae	*Lithobates catesbeianus*	American Bullfrog		G5	S4			TRUE		x		
Amphibian	Ranidae	*Lithobates clamitans*	Green Frog		G5	S5				x	x		x
Amphibian	Ranidae	*Lithobates pipiens*	Northern Leopard Frog		G5	S5		NAR		x			
Amphibian	Ranidae	*Lithobates sylvaticus*	Wood Frog		G5	S5				x			
Amphibian	Plethodontidae	*Plethodon cinereus*	Eastern Red-backed Salamander		G5	S5				x			
Amphibian	Hylidae	*Pseudacris crucifer*	Spring Peeper		G5	S5				x			
Amphibian	Hylidae	*Pseudacris maculata pop. 1*	Western Chorus Frog - Great Lakes - St. Lawrence - Canadian Shield population		G5TNR	S4	NAR	THR		x			
Bird	Scolopacidae	*Actitis macularius*	Spotted Sandpiper		G5	S5					x		
Bird	Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird		G5	S4				x	x	x	x
Bird	Anatidae	*Aix sponsa*	Wood Duck		G5	S5				x			
Bird	Anatidae	*Anas discors*	Blue-winged Teal		G5	S4				x			
Bird	Anatidae	*Anas platyrhynchos*	Mallard		G5	S5				x	x	x	
Bird	Trochilidae	*Archilochus colubris*	Ruby-throated Hummingbird		G5	S5B				x	x		
Bird	Ardeidae	*Ardea herodias*	Great Blue Heron		G5	S4				x	x		
Bird	Bombycillidae	*Bombycilla cedrorum*	Cedar Waxwing		G5	S5B				x	x	x	x
Bird	Phasianidae	*Bonasa umbellus*	Ruffed Grouse		G5	S4				x			
Bird	Anatidae	*Branta canadensis*	Canada Goose		G5	S5				x			
Bird	Accipitridae	*Buteo jamaicensis*	Red-tailed Hawk		G5	S5		NAR		x	x	x	x
Bird	Cardinalidae	*Cardinalis cardinalis*	Northern Cardinal		G5	S5				x	x	x	x
Bird	Cathartidae	*Cathartes aura*	Turkey Vulture		G5	S5B				x		x	x
Bird	Turdidae	*Catharus fuscescens*	Veery		G5	S4B			TRUE	x	x	x	x

Taxa	Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Area Sensitive	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Bird	Turdidae	*Catharus guttatus*	Hermit Thrush		G5	S5B			TRUE	m			
Bird	Certhiidae	*Certhia americana*	Brown Creeper		G5	S5B			TRUE	x			
Bird	Charadriidae	*Charadrius vociferus*	Killdeer		G5	S5B S5N				x	x	x	x
Bird	Picidae	*Colaptes auratus*	Northern Flicker		G5	S4B				x	x	x	x
Bird	Columbidae	*Columba livia*	Rock Pigeon	SE	G5	SNA					x		x
Bird	Tyrannidae	*Contopus virens*	Eastern Wood-pewee		G5	S4B	SC	SC		x	x	x	x
Bird	Corvidae	*Corvus brachyrhynchos*	American Crow		G5	S5B				x	x		x
Bird	Corvidae	*Corvus corax*	Common Raven		G5	S5				x			
Bird	Corvidae	*Cyanocitta cristata*	Blue Jay		G5	S5				x	x		x
Bird	Picidae	*Dryocopus pileatus*	Pileated Woodpecker		G5	S5			TRUE	x		x	x
Bird	Mimidae	*Dumetella carolinensis*	Gray Catbird		G5	S4B				x	x	x	x
Bird	Tyrannidae	*Empidonax alnorum*	Alder Flycatcher		G5	S5B				x			
Bird	Tyrannidae	*Empidonax minimus*	Least Flycatcher		G5	S4B			TRUE	m			
Bird	Parulidae	*Geothlypis philadelphia*	Mourning Warbler		G5	S4B				x			
Bird	Parulidae	*Geothlypis trichas*	Common Yellowthroat		G5	S5B				x	x	x	x
Bird	Fringillidae	*Haemorhous mexicanus*	House Finch	SE	G5	SNA							x
Bird	Hirundinidae	*Hirundo rustica*	Barn Swallow		G5	S5B	THR	THR		x	x	x	x
Bird	Turdidae	*Hylocichla mustelina*	Wood Thrush		G4	S4B	THR	SC		x	x		
Bird	Icteridae	*Icterus galbula*	Baltimore Oriole		G5	S4B				x	x	x	
Bird	Laridae	*Larus delawarensis*	Ring-billed Gull		G5	S5B S4N				x	x		
Bird	Anatidae	*Lophodytes cucullatus*	Hooded Merganser		G5	S5B S5N				x			
Bird	Picidae	*Melanerpes carolinus*	Red-bellied Woodpecker		G5	S4				x	x		x
Bird	Phasianidae	*Meleagris gallopavo*	Wild Turkey		G5	S5				x	x		x
Bird	Passerellidae	*Melospiza georgiana*	Swamp Sparrow		G5	S5B				x			
Bird	Passerellidae	*Melospiza melodia*	Song Sparrow		G5	S5B				x	x	x	x
Bird	Parulidae	*Mniotilta varia*	Black-and-white Warbler		G5	S5B			TRUE	x	x		x
Bird	Icteridae	*Molothrus ater*	Brown-headed Cowbird		G5	S4B				x			x

Taxa	Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Area Sensitive	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Bird	Tyrannidae	*Myiarchus crinitus*	Great Crested Flycatcher		G5	S4B				x	x		x
Bird	Parulidae	*Parkesia noveboracensis*	Northern Waterthrush		G5	S5B				x			
Bird	Passerellidae	*Passerculus sandwichensis*	Savannah Sparrow		G5	S4B			TRUE	x			
Bird	Cardinalidae	*Passerina cyanea*	Indigo Bunting		G5	S4B				x	x		x
Bird	Cardinalidae	*Pheucticus ludovicianus*	Rose-breasted Grosbeak		G5	S4B				x	m		
Bird	Picidae	*Picoides pubescens*	Downy Woodpecker		G5	S5				x	x		x
Bird	Picidae	*Picoides villosus*	Hairy Woodpecker		G5	S5			TRUE	x			x
Bird	Passerellidae	*Pipilo erythrophthalmus*	Eastern Towhee		G5	S4B				x			
Bird	Cardinalidae	*Piranga olivacea*	Scarlet Tanager		G5	S4B			TRUE	x	m		x
Bird	Paridae	*Poecile atricapillus*	Black-capped Chickadee		G5	S5				x	x		x
Bird	Passerellidae	*Pooecetes gramineus*	Vesper Sparrow		G5	S4B					x		
Bird	Hirundinidae	*Progne subis*	Purple Martin		G5	S3S4B				x			
Bird	Icteridae	*Quiscalus quiscula*	Common Grackle		G5	S5B				x	x		x
Bird	Regulidae	*Regulus satrapa*	Golden-crowned Kinglet		G5	S5B				x			
Bird	Scolopacidae	*Scolopax minor*	American Woodcock		G5	S4B				x			
Bird	Parulidae	*Seiurus aurocapilla*	Ovenbird		G5	S4B			TRUE	x	x		x
Bird	Parulidae	*Setophaga fusca*	Blackburnian Warbler		G5	S5B			TRUE	x			
Bird	Parulidae	*Setophaga magnolia*	Magnolia Warbler		G5	S5B			TRUE	m			
Bird	Parulidae	*Setophaga petechia*	Yellow Warbler		G5	S5B				x	x	x	x
Bird	Parulidae	*Setophaga ruticilla*	American Redstart		G5	S5B			TRUE	x	x	x	x
Bird	Parulidae	*Setophaga virens*	Black-throated Green Warbler		G5	S5B			TRUE	x	x		x
Bird	Sittidae	*Sitta canadensis*	Red-breasted Nuthatch		G5	S5			TRUE	x			
Bird	Sittidae	*Sitta carolinensis*	White-breasted Nuthatch		G5	S5			TRUE	x	x		x
Bird	Picidae	*Sphyrapicus varius*	Yellow-bellied Sapsucker		G5	S5B			TRUE	x			
Bird	Fringillidae	*Spinus tristis*	American Goldfinch		G5	S5B				x	x	x	x
Bird	Passerellidae	*Spizella passerina*	Chipping Sparrow		G5	S5B				x			x

Taxa	Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Area Sensitive	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Bird	Passerellidae	*Spizella pusilla*	Field Sparrow		G5	S4B				m			
Bird	Strigidae	*Strix varia*	Barred Owl		G5	S5			TRUE	x			
Bird	Sturnidae	*Sturnus vulgaris*	European Starling	SE	G5	SNA				x	x	x	x
Bird	Hirundinidae	*Tachycineta bicolor*	Tree Swallow		G5	S4B				x			
Bird	Mimidae	*Toxostoma rufum*	Brown Thrasher		G5	S4B				m			
Bird	Troglodytidae	*Troglodytes aedon*	House Wren		G5	S5B				x	x	x	x
Bird	Turdidae	*Turdus migratorius*	American Robin		G5	S5B				x	x	x	x
Bird	Tyrannidae	*Tyrannus tyrannus*	Eastern Kingbird		G5	S4B				x		x	
Bird	Vireonidae	*Vireo gilvus*	Warbling Vireo		G5	S5B				x			
Bird	Vireonidae	*Vireo olivaceus*	Red-eyed Vireo		G5	S5B				x	x	x	x
Bird	Vireonidae	*Vireo solitarius*	Blue-headed Vireo		G5	S5B			TRUE	x	m		
Bird	Columbidae	*Zenaida macroura*	Mourning Dove		G5	S5				x	x	x	x
Bird	Passerellidae	*Zonotrichia albicollis*	White-throated Sparrow		G5	S5B				x	x		x
Crustacean	Cambaridae		Terrestrial Crayfish sp.		GNR	S?				x			x
Insect	Aeshnidae	*Anax junius*	Common Green Darner		G5	S5				x			
Insect	Apidae	*Bombus sp.*	Bumblebee sp.		GNR	S?				x			
Insect	Nymphalidae	*Danaus plexippus*	Monarch		G4	S2N S4B	SC	SC		x			x
Insect	Corduliidae	*Epitheca princeps*	Prince Baskettail		G5	S5				x			
Insect	Nymphalidae	*Limenitis archippus*	Viceroy		G5	S5				x			
Insect	Erebidae	*Lymantria dispar*	Spongy Moth	SE	G5	SNA				x			x
Insect	Papilionidae	*Papilio polyxenes*	Black Swallowtail		G5	S5				x			
Insect	Libellulidae	*Sympetrum sp.*	Meadowhawk sp.		GNR	S?				x			
Mammal	Canidae	*Canis latrans*	Coyote		G5	S5				x	x		
Mammal	Castoridae	*Castor canadensis*	Beaver		G5	S5				x			
Mammal	Erethizontidae	*Erethizon dorsatum*	Porcupine		G5	S5				x			
Mammal	Dipodidae	*Napaeozapus insignis*	Woodland Jumping Mouse		G5	S5				x			
Mammal	Cervidae	*Odocoileus virginianus*	White-tailed Deer		G5	S5				x	x		
Mammal	Procyonidae	*Procyon lotor*	Raccoon		G5	S5				x	x		
Mammal	Sciuridae	*Sciurus carolinensis*	Eastern Gray Squirrel		G5	S5					x		
Mammal	Sciuridae	*Tamiasciurus hudsonicus*	Red Squirrel		G5	S5				x	x		x
Mammal	Canidae	*Vulpes vulpes*	Red Fox		G5	S5				x			

Taxa	Scientific Family	Scientific Name	Common Name	Introduced	G Rank	S Rank	SARO	SARA	Area Sensitive	Property 1 - Deer Park Road	Property 2 – Boyers Road	Property 3 - The Queensway	Property 4 – Varney Road
Reptile	Colubridae	*Storeria occipitomaculata*	Red-bellied Snake		G5	S5				x			
Reptile	Colubridae	*Thamnophis sirtalis sirtalis*	Eastern Gartersnake		G5T5	S5				x			

G Rank – Global Rank

G4 – Apparently secure
G5 – Secure

S Rank = Sub-national Rank

S4 – Considered to be common in Ontario / Apparently Secure
S5 – Indicates that a species is widespread in Ontario / Secure
SNA – Not applicable (hybrids, etc)
SE – Exotic – 1-5, 5 is most common.

SARO = Species at Risk in Ontario

SARA = Species at Risk Act

END – Endangered
THR – Threatened
SC – Special Concern

x = species present on property
m = species only detected using the Merlin bird identification app

Area Sensitive = Area Sensitive Species in Ontario
MNR. 2000. Significant Wildlife Habitat Technical Guide. Appendix C: A list of Area Sensitive Species and Key Resources. Fish and Wildlife Branch, Wildlife Section, Science Development and Transfer Branch, Southcentral Sciences, Peterborough. Queen's Printer for Ontario. Pgs. 161-165

APPENDIX 5 | Species at Risk Screening

Endangered and Threatened Species						
Species	**Source**	**Status**	**Habitat Description**	**Habitat Present on Site**	**Surveys Conducted**	**Occurrence on Site**
Reptiles						
Blanding's Turtle *Emydoidea blandingii*	Reptile & Amphibian Atlas (2005)	SARO - THR SARA - END	Shallow water marshes, bogs, ponds or swamps, or coves in larger lakes with soft muddy bottoms and aquatic vegetation; basks on logs, stumps, or banks; surrounding natural habitat is important in summer as they frequently move from aquatic habitat to terrestrial habitats; hibernates in bogs; not readily observed (OMNR 2000)	LOW - Ponds and swamps present. Species is encountered infrequently in the area.	No targeted surveys undertaken	LOW - Ponds and swamps present. Species is encountered infrequently in the area.
Birds						
Bobolink *Dolichonyx oryzivorus*	NHIC, OBBA	SARO - THR SARA - THR	Large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha (OMNR 2000).	LOW - No sutitable habitat present. Meadows do not meet the size requirements.	Bobolink *Dolichonyx oryzivorus*	NHIC, OBBA
Eastern Meadowlark *Sturnella magna*	NHIC, eBird, iNaturalist, OBBA	SARO - THR SARA - THR	Generally prefers large, open expansive grasslands with dense ground cover; hayfields, meadows or fallow fields; marshes; requires tracts of grassland >50 ha. In migration and winter uses freshwater marshes and grasslands (OMNR 2000).	LOW - No sutitable habitat present. Meadows do not meet the size requirements.	Eastern Meadowlark *Sturnella magna*	NHIC, eBird, iNaturalist, OBBA
Mammals						
Little Brown Myotis *Myotis lucifugus*	Atlas of the Mammals of Ontario, iNaturalist	SARO - END SARA - END	Hibernates during winter in mines or caves; during summer males roost alone and females form maternity colonies of up to 60 adults; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy (OMNR 2000)	HIGH - Suitable habitat for foraging and roosting present and recent nearby sightings.	No targeted surveys undertaken	HIGH - Suitable habitat for foraging and roosting present and recent nearby sightings.
Northern Myotis *Myotis septentrionalis*	Atlas of the Mammals of Ontario	SARO - END SARA - END	Hibernates during winter in mines or caves; during summer males roost alone and females form maternity colonies of up to 60 adults; roosts in houses, manmade structures but prefers hollow trees or under loose bark; hunts within forests, below canopy (OMNR 2000)	HIGH - Suitable habitat for foraging and roosting present.	No targeted surveys undertaken	HIGH - Suitable habitat for foraging and roosting present.
Special Concern Species						
Reptiles						

Endangered and Threatened Species						
Species	**Source**	**Status**	**Habitat Description**	**Habitat Present on Site**	**Surveys Conducted**	**Occurrence on Site**
Snapping Turtle *Chelydra serpentina*	NHIC, iNaturalist, Reptile & Amphibian Atlas (2019)	SARO - SC SARA - SC	Permanent, semi-permanent fresh water; marshes, swamps or bogs; rivers and streams with soft muddy banks or bottoms; often uses soft soil or clean dry sand on south-facing slopes for nest sites; may nest at some distance from water; often hibernate together in groups in mud under water; home range size ~28 ha (OMNR 2000).	HIGH - Suitable habitat present and recent nearby sightings.	No targeted surveys undertaken	HIGH - Suitable habitat present and recent nearby sightings.
Birds						
Bald Eagle *Haliaeetus leucocephalus*	eBird, iNaturalist	SARO – SC SARA – NAR	Require large continuous area of deciduous or mixed woods around large lakes, rivers; require area of 255 ha for nesting, shelter, feeding, roosting; prefer open woods with 30 to 50% canopy cover; nest in tall trees 50 to 200 m from shore; require tall, dead, partially dead trees within 400 m of nest for perching; sensitive to toxic chemicals (OMNR 2000)	MODERATE - Parcel 2 is ~200 ha of forested cover and 300 m from Lake Simcoe. Nearby and recent sighting, however, most occur outside of the breeding season.	No targeted surveys undertaken	HIGH - Suitable habitat for foraging and roosting present and recent nearby sightings.

APPENDIX 6 | Significant Wildlife Habitat Screening

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Seasonal Concentration Areas of Animals					
Waterfowl Stopover and Staging Areas (Terrestrial) **Rationale:** Habitat important to migrating waterfowl.	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 unless they have spring sheet water available cxlviii. <u>Information Sources</u> •Anecdotal information from the landowner, adjacent landowners or local naturalist clubs may be good information in determining occurrence. •Reports and other information available from Conservation Authorities •Sites documented through water fowl planning processes (e.g., EHJV implementation plan) •Field Naturalist Clubs •Ducks Unlimited Canada •Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	Studies carried out and verified presence of an annual concentration of any listed species, evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •Any mixed species aggregations of 100 or more individuals required. •The flooded field ecosite habitat plus a 100-300m radius area, dependent on local site conditions and adjacent land use is the significant wildlife habitat. •Annual use of habitat is documented from information sources or field studies (annual use can be based on studies or determined by past surveys with species numbers and dates). •SWHMiST Index #7 provides development effects and mitigation measures.	**CANDIDATE** - Approximately 100 Mallards were observed by LSRCA staff in the southern agricultural fields on Property 2 during Breeding Bird Surveys in June/July. However, no spring surveys were conducted during spring sheet water conditions to confirm presence / absence.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Stopover and Staging Areas (Aquatic) **Rationale:** Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district.	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	MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7	•Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. •These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water) <u>Information Sources</u> •Environment Canada. •Naturalist clubs often are aware of staging/stopover areas. •OMNRF Wetland Evaluations indicate presence of locally and regionally significant waterfowl staging. •Sites documented through waterfowl planning processes (eg. EHJV implementation plan) •Ducks Unlimited projects •Element occurrence specification by Nature Serve: http://www.natureserve.org •Natural Heritage Information Centre (NHIC) Waterfowl Concentration Area	Studies carried out and verified presence of: •Aggregations of 100 or more of listed species for 7 days, results in > 700 waterfowl use days. •Areas with annual staging of ruddy ducks, canvasbacks, and redheads are SWH •The combined area of the ELC ecosites and a 100m radius area is the SWH •Wetland area and shorelines associated with sites identified within the SWHTG Appendix K are significant wildlife habitat. •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •Annual Use of Habitat is Documented from Information Sources or Field Studies (Annual can be based on completed studies or determined from past surveys with species numbers and dates recorded). •SWHMiST Index #7 provides development effects and mitigation measures.	ABSENT - The ecosites that are present on the Subject Lands do not meet the criteria for SWH. Property 2 contains a small pond that would support waterfowl, however, not as a staging habitat.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Shorebird Migratory Stopover Area **Rationale:** High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	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	BBO1 BBO2 BBS1 BBS2 BBT1 BBT2 SDO1 SDS2 SDT1 MAM1 MAM2 MAM3 MAM4 MAM5	•Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. •Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. •Sewage treatment ponds and storm water ponds do not qualify as a SWH. <u>Information Sources</u> •Western hemisphere shorebird reserve network. •Canadian Wildlife Service (CWS) Ontario Shorebird Survey. •Bird Studies Canada •Ontario Nature •Local birders and naturalist clubs •Natural Heritage Information Center (NHIC) Shorebird Migratory Concentration Area	Studies confirming: •Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. (shorebird use days are the accumulated number of shorebirds counted per day over the course of the fall or spring migration period) •Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. •The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area •Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" •SWHMiST Index #8 provides development effects and mitigation measures.	ABSENT - The ecosites that are present on the Subject Lands do not meet the criteria for SWH.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Raptor Wintering Area **Rationale:** Sites used by multiple species, a high number of individuals and used annually are most significant	Rough-legged Hawk Red -tailed Hawk Northern Harrier American Kestrel Snowy Owl **Special Concern:** Short-eared Owl Bald Eagle	<u>Hawks/Owls:</u> 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. <u>Bald Eagle:</u> Forest community Series: FOD, FOM, FOC, SWD, SWM or SWC on shoreline areas adjacent to large rivers or adjacent to lakes with open water (hunting area)	•The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. •Raptor wintering sites (hawk/owl) need to be > 20 ha cxlvi ii, cxlix with a combination of forest and upland. xvi, xvii, xviii, xix, xx, xxi. •Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15 ha) with adjacent woodlands cxlix •Field area of the habitat is to be wind swept with limited snow depth or accumulation. •Eagle sites have open water, large trees and snags available for roosting cxlix <u>Information Sources:</u> •OMNRF Ecologist or Biologist •Field Naturalist Clubs •Natural Heritage Information Center (NHIC) Raptor Winter Concentration Area •Data from Bird Studies Canada •Results of Christmas Bird Counts •Reports and other information available from Conservation Authorities.	Studies confirm the use of these habitats by: •One or more Short-eared Owls or; One or more Bald Eagles or; At least 10 individuals and two of the listed hawk/owl species. •To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. •The habitat area for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #10 and #11 provides development effects and mitigation measures.	**CANDIDATE** - Does not meet minimum size for upland habitat for listed Hawk and Owl species. However, while none of the properties contain shoreline habitat, Property 1 is within ~300 m to Lake Simcoe. Additionally, there have been records of Bald Eagle observations during the Sutton Christmas Bird Counts with 17 in 2021 (Dec 28, 2021). Therefore, candidate habitat for Bald Eagle wintering area is considered present on Property 1.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Bat Hibernacula **Rationale**: Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat Tri -coloured	Bat Hibernacula may be found in these ecosites: CCR1 CCR2 CCA1 CCA2 (Note: buildings are not considered to be SWH)	•Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. •Active mine sites should not be considered as SWH •The locations of bat hibernacula are relatively poorly known. <u>Information Sources:</u> •OMNRF for possible locations and contact for local experts •Natural Heritage Information Center (NHIC) Bat Hibernaculum •Ministry of Northern Development and Mines for location of mine shafts. •Clubs that explore caves (e.g., Sierra Club) •University Biology Departments with bat experts.	•All sites with confirmed hibernating bats are SWH. •The habitat area includes a 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms. •Studies are to be conducted during the peak swarming period (Aug. – Sept.). Surveys should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects". •SWHMiST Index #1 provides development effects and mitigation measures.	ABSENT - No caves, mine shafts, or underground foundations and Karsts observed.
Bat Maternity Colonies **Rationale:** Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Big Brown Bat Silver-haired Bat	Maternity colonies considered SWH are found in forested Ecosites. All ELC Ecosites in ELC Community Series: FOD FOM SWD SWM	•Maternity colonies can be found in tree cavities, vegetation and often in buildings (buildings are not considered to be SWH). •Maternity roosts are not found in caves and mines in Ontario. •Maternity colonies located in Mature deciduous or mixed forest stands with >10/ha large diameter (>25 cm DBH) wildlife trees •Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. •Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred <u>Information Sources</u> •OMNRF for possible locations and contact for local experts •University Biology Departments with bat experts.	Maternity Colonies with confirmed use by; •>10 Big Brown Bats •>5 Adult Female Silver-haired Bats •The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Eco-element containing the maternity colonies. •Evaluation methods for maternity colonies should be conducted following methods outlined in the "Bats and Bat Habitats: Guidelines for Wind Power Projects". •SWHMiST Index #12 provides development effects and mitigation measures.	**CANDIDATE** – Suitable forest communities occur within the Study Lands. Further surveys would be needed to confirm.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Turtle Wintering Areas **Rationale:** Generally, sites are the only known sites in the area. Sites with the highest number of individuals are most significant	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.	•For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. •Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen •Man -made ponds such as sewage lagoons or storm water ponds should not be considered SWH. <u>Information Sources</u> •EIS studies carried out by Conservation Authorities. •Local field naturalists and experts, as well as university herpetologists may also know where to find some of these sites. •OMNRF Ecologist or Biologist •Field Naturalist clubs •Natural Heritage Information Center (NHIC)	•Presence of 5 over-wintering Midland Painted Turtles is significant. •One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant. •The mapped ELC ecosite area with the over wintering turtles is the SWH. If the hibernation site is within a stream or river, the deep -water pool where the turtles are over wintering is the SWH. •Over wintering areas may be identified by searching for congregations (Basking Areas) of turtles on warm, sunny days during the fall (Sept. – Oct.) or spring (Mar. – May). •Congregation of turtles is more common where wintering areas are limited and therefore significant. •SWHMiST Index #28 provides development effects and mitigation measures for turtle wintering habitat.	**CANDIDATE** - Pond located on Property 2 may contain water deep enough water and soft mud substrates. Further surveys would be needed to confirm.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Reptile Hibernaculum **Rationale:** Generally, sites are the only known sites in the area. Sites with the highest number of individuals are	<u>Snakes:</u> Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **Special Concern:** Milksnake Eastern Ribbonsnake <u>Lizard:</u> **Special Concern (Southern Shield population):** Five-lined Skink	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. Observations or congregations of snakes on sunny warm days in the spring or fall is a good indicator. For Five-lined Skink, ELC Community Series of FOD and FOM and Ecosites: FOC1 FOC3	•For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. •Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. •Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. •Five-lined Skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures. <u>Information Sources</u> •In spring, local residents or landowners may have observed the emergence of snakes on their property (e.g., old dug wells). •Reports and other information available from Conservation Authorities. •Field Naturalists clubs •University herpetologists •Natural Heritage Information Center (NHIC) •OMNRF ecologist or biologist may be aware of locations of wintering skinks	Studies confirming: •Presence of snake hibernacula used by a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. •Congregations of a minimum of five individuals of a snake sp. or; individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct) •Note: If there are Special Concern Species present, then site is SWH •Note: Sites for hibernation possess specific habitat parameters (e.g. temperature, humidity, etc.) and consequently are used annually, often by many of the same individuals of a local population (i.e. strong hibernation site fidelity). Other critical life processes (e.g. mating) often take place in close proximity to hibernacula. The feature in which the hibernacula is located plus a 30 m radius area is the SWH •SWHMiST Index #13 provides development effects and mitigation measures for snake hibernacula. •Presence of any active hibernaculum for skink is significant. •SWHMiST Index #37 provides development effects and mitigation measures for five-lined skink wintering habitat.	**CANDIDATE -** Rock piles present on Properties 1 and 2 that may go below the frost line and provide hibernaculum habitat. Further studies would be needed to confirm. Red-bellied Snake and Eastern Gartersnake were observed on Property 1.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Colonially - Nesting Bird Breeding Habitat (Bank and Cliff) **Rationale:** Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles. Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: CUM1 CUT1 CUS1 BLO1 BLS1 BLT1 CLO1 CLS1 CLT1	•Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. •Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. •Does not include a licensed/permitted Mineral Aggregate Operation. <u>Information Sources</u> •Reports and other information available from Conservation Authorities. •Ontario Breeding Bird Atlas •Bird Studies Canada; NatureCountshttp://www.birdscanada.org/birdmon/ •Field Naturalist Clubs.	Studies confirming: •Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. •A colony identified as SWH will include a 50m radius habitat area from the peripheral nests •Field surveys to observe and count swallow nests are to be completed during the breeding season. Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #4 provides development effects and mitigation measures	ABSENT - The ecosites that are present on the subject properties do not meet the criteria for SWH.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs) **Rationale:** Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-Heron Great Egret Green Heron	SWM2 SWM3 SWM5 SWM6 SWD1 SWD2 SWD3 SWD4 SWD5 SWD6 SWD7 FET1	•Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. •Most nests in trees are 11 to 15 m from ground, near the top of the tree. <u>Information Sources</u> •Ontario Breeding Bird Atlas colonial nest records. •Ontario Heronry Inventory 1991 available from Bird Studies Canada or NHIC (OMNRF). •Natural Heritage Information Center (NHIC) Mixed Wader Nesting Colony •Aerial photographs can help identify large heronries. •Reports and other information available from CAs. •MNRF District Offices. •Local naturalist clubs	Studies confirming: •Presence of 5 or more active nests of Great Blue Heron or other listed species. •The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH •Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells •SWHMiST Index #5 provides development effects and mitigation measures.	ABSENT - The ecosites that are present on the Subject Lands do not meet the criteria for SWH.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Colonially - Nesting Bird Breeding Habitat (Ground) **Rationale:** Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	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	•Nesting colonies of gulls and terns are on islands or peninsulas associated with open water or in marshy areas. •Brewers Blackbird colonies are found loosely on the ground in low bushes in close proximity to streams and irrigation ditches within farmlands. <u>Information Sources</u> •Ontario Breeding Bird Atlas , rare/colonial species records. •Canadian Wildlife Service •Reports and other information available from CAs. •Natural Heritage Information Center (NHIC) Colonial Waterbird Nesting Area •MNRF District Offices. •Field Naturalist clubs.	Studies confirming: •Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. •Presence of 5 or more pairs for Brewer's Blackbird. •Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. •The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH •Studies would be done during May/June when actively nesting. Evaluation methods to follow "Bird and Bird Habitats: Guidelines for Wind Power Projects" •SWHMiST Index #6 provides development effects and mitigation measures.	ABSENT - The ecosites that are present on the Subject Lands do not meet the criteria for SWH.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Yarding Areas **Rationale:** Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer, yards typically represent 10-15% of an areas summer range.	White-tailed Deer	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM FOC SWM SWC	•Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. •The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. •OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual" •Woodlots with high densities of deer due to artificial feeding are not significant.	No Studies Required: •Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. •Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO). •Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. •If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.	**CONFIRMED** - Deer Wintering Areas (Stratum 2) present on Properties 1, 2 and 4.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Deer Winter Congregation Areas **Rationale:** Deer movement during winter in the southern areas of Eco region 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands to reduce or avoid the impacts of winter conditions.	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.	•Woodlots will typically be >100 ha in size. Woodlots <100 ha may be considered as significant based on MNRF studies or assessment. •Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands. •If deer are constrained by snow depth refer to the Deer Yarding Area habitat within Table 1.1 of this Schedule. •Large woodlots > 100 ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. •Woodlots with high densities of deer due to artificial feeding are not significant. <u>Information Sources</u> •MNRF District Offices. •LIO/NRVIS	Studies confirm: •Deer management is an MNRF responsibility, deer winter congregation areas considered significant will be mapped by MNRF. •Use of the woodlot by white-tailed deer will be determined by MNRF, all woodlots exceeding the area criteria are significant, unless determined not to be significant by MNRF •Studies should be completed during winter (Jan/Feb) when >20cm of snow is on the ground using aerial survey techniques, ground or road surveys. or a pellet count deer density survey. •If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule.	ABSENT - Not mapped by MNRF
Rare Vegetation Communities					
Cliffs and Talus Slopes **Rationale:** Cliffs and Talus Slopes are extremely rare habitats in Ontario.	Any ELC Ecosite within Community Series: TAO TAS TAT CLO CLS CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris	Most cliff and talus slopes occur along the Niagara Escarpment. <u>Information Sources</u> •The Niagara Escarpment Commission has detailed information on location of these habitats. •OMNRF District •Natural Heritage Information Center (NHIC) has location information available on their website •Field Naturalist clubs •Conservation Authorities	•Confirm any ELC Vegetation Type for Cliffs or Talus Slopes •SWHMiST Index #21 provides development effects and mitigation measures.	The Subject Lands does not contain the appropriate ELC ecosites, cliffs, or talus slopes.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Sand Barren **Rationale:** Sand barrens are rare in Ontario and support rare species. Most Sand Barrens have been lost due to cottage development and forestry	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%.	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah.	A sand barren area >0.5ha in size. <u>Information Sources</u> •OMNRF Districts. •Natural Heritage Information Center (NHIC) has location information available on their website. •Field Naturalist clubs •Conservation Authorities	•Confirm any ELC Vegetation Type for Sand Barrens •Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). •SWHMiST Index #20 provides development effects and mitigation measures.	The Subject Lands does not contain the appropriate ELC ecosites and / or sand barrens.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Alvar **Rationale:** Alvars are extremely rare habitats in Ecoregion 6E. Most alvars in Ontario are in Eco regions 6E and 7E. Alvars in 6E are small and highly localized just north of the Palaeozoic-Precambrian contact.	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 Five Alvar Indicator Species: 1) *Carex crawei* 2) *Panicum philadelphicum* 3) *Eleocharis compressa* 4) *Scutellaria parvula* 5) *Trichostema brachiatum*	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Cover varies from sparse lichen-moss to grasslands and shrublands and comprising a number of characteristic or indicator plants.	An Alvar site > 0.5 ha in size. <u>Information Sources</u> •Alvars of Ontario (2000), Federation of Ontario Naturalists lxxvi. •Ontario Nature – Cons erving Great Lakes Alvars ccviii. •Natural Heritage Information Center (NHIC) has location information available on their website •OMNRF Districts •Feld Naturalist clubs. •Conservation Authorities.	•Field studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. •Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). •The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses •SWHMiST Index #17 provides development effects and mitigation measures.	The Subject Lands does not contain the appropriate ELC ecosites and / or Alvars.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Old Growth Forest **Rationale:** Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	Forest Community Series: FOD FOC FOM SWD SWC SWM	Old Growth forests are characterized by heavy mortality or turnover of overstory trees resulting in a mosaic of gaps that encourage development of a multi- layered canopy and an abundance of snags and downed woody debris.	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. •OMNRF Forest Resource Inventory mapping •OMNRF Districts. •Field Naturalist clubs •Conservation Authorities •Sustainable Forestry License (SFL) companies will possibly know locations through field operations. •Municipal forestry departments	Field Studies will determine: •If dominant trees species of the are >140 years old, then the area containing these trees is Significant Wildlife Habitat •The forested area containing the old growth characteristics will have experienced no recognizable forestry activities (cut stumps will not be present) •The area of forest ecosites combined or an eco-element within an ecosite that contains the old growth characteristics is the SWH. •Determine ELC vegetation types for the forest area containing the old growth characteristics	The Subject Lands do not meet criteria for SWH.
Savannah **Rationale:** Savannahs are extremely rare habitats in Ontario.	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%.	No minimum size to site Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> •Natural Heritage Information Center (NHIC) has location information available on their website •OMNRF Districts •Feld Naturalist clubs. •Conservation Authorities.	Field studies confirm one or more of the Savannah indicator species listed in Appendix N should be present. Note: Savannah plant spp. list from Ecoregion 6E should be used. •Area of the ELC Ecosite is the SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). •SWHMiST Index #18 provides development effects and mitigation measures.	The Subject Lands does not contain the appropriate ELC ecosites and / or Savannah.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Tallgrass Prairie **Rationale:** Tallgrass Prairies are extremely rare habitats in Ontario.	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH. <u>Information Sources</u> •Natural Heritage Information Center (NHIC) has location information available on their website •OMNRF Districts •Feld Naturalist clubs. •Conservation Authorities.	Field studies confirm one or more of the Prairie indicator species listed in Appendix N should be present. Note: Prairie plant spp. list from Ecoregion 6E should be used •Area of the ELC Ecosite is the SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover is exotic sp.). •SWHMiS Index #19 provides development effects and mitigation measures.	The Subject Lands does not contain the appropriate ELC ecosites and / or Tallgrass Prairie.
Other Rare Vegetation Communities **Rationale:** Plant communities that often contain rare species which depend on the habitat for survival.	Provincially Rare S1, S2 and S3 vegetation communities are listed in Appendix M of the SWHTG. Any ELC Ecosite Code that has a possible ELC Vegetation Type that is Provincially Rare is Candidate SWH.	Rare Vegetation Communities may include beaches, fens, forest, marsh, barrens, dunes and swamps.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M The OMNRF/NHIC will have up to date listing for rare vegetation communities. <u>Information Sources</u> •Natural Heritage Information Center (NHIC) has location information available on their website •OMNRF Districts •Feld Naturalist clubs. •Conservation Authorities	Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG. •Area of the ELC Vegetation Type polygon is the SWH. •SWHMiST Index #37 provides development effects and mitigation measures.	The Subject Lands does not contain rare vegetation communities.
Specialized Habitat for Wildlife					

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Waterfowl Nesting Area **Rationale:** Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	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	A waterfowl nesting area extends 120 m cxlix from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. •Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. •Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. <u>Information Sources</u> •Ducks Unlimited staff may know the locations of particularly productive nesting sites. •OMNRF Wetland Evaluations for indication of significant waterfowl nesting habitat. •Reports and other information available from Conservation Authorities.	Studies confirmed: •Presence of 3 or more nesting pairs for listed species excluding Mallards, or; •Presence of 10 or more nesting pairs for listed species including Mallards. •Any active nesting site of an American Black Duck is considered significant. •Nesting studies should be completed during the spring breeding season (April - June). Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m i from the wetland and will provide enough habitat for waterfowl to successfully nest. •SWHMiST Index #25 provides development effects and mitigation measures.	**CANDIDATE** - Upland habitat located adjacent to MAS, MAM, and SWD habitat on Properties 1, 2, and 4 that is candidate for waterfowl nesting areas. Wood duck and Blue-winged Teal were observed on Property 1, and Mallard observed on properties 1, 2, and 3, however, exact locations are not known.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat **Rationale**: Nest sites are fairly uncommon in Ecoregion 6E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of 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	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. •Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. •Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). <u>Information Sources</u> •Natural Heritage Information Center (NHIC) compiles all known nesting sites for Bald Eagles in Ontario. •MNRF values information (LIO/ NRVIS) will list known nesting locations. Note: data from NRVIS is provided as a point and does not represent all the habitat. •Nature Counts, Ontario Nest Records Scheme data. •OMNRF Districts. •Check the Ontario Breeding Bird Atlas ccv or Rare Breeding Birds in Ontario for species documented •Reports and other information available from Conservation Authorities. •Field Naturalists clubs	Studies confirm the use of these nests by: •One or more active Osprey or Bald Eagle nests in an area. •Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. •For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH ci, maintaining undisturbed shorelines with large trees within this area is important. •For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. Area of the habitat from 400-800m is dependent on-site lines from the nest to the development and inclusion of perching and foraging habitat •To be significant a site must be used annually. When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. •Observational studies to determine nest site use, perching sites and foraging areas need to be done from mid-March to mid-August.	**CANDIDATE** - Forest communities present near shoreline, Property 1 is within ~300 m to Lake Simcoe. Bald Eagles known to occur in the general area from the Sutton Christmas Bird Count, however, the count does not take place during the breeding bird season.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Woodland Raptor Nesting Habitat **Rationale:** Nests sites for these species are rarely identified; these area sensitive habitats and are often used annually by these species.	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 >10 ha of interior habitat. Interior habitat determined with a 200m buffer •Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small offshore islands. •In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. Information Sources •OMNRF Districts. •Check the Ontario Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. •Check data from Bird Studies Canada. •Reports and other information available from Conservation Authorities.	Studies confirm: •Presence of 1 or more active nests from species list is considered significant. •Red -shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH ci. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest) •Barred Owl – A 200m radius around the nest is the SWH. •Broad-winged Hawk and Coopers Hawk, – A 100m radius around the nest is the SWH. •Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. •Conduct field investigations from mid-March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.	**CANDIDATE -** Property 1 and the forest that extends into Property 2 contain over 100 ha of forest habitat with over 10 ha of interior habitat. Barred Owl was detected, although exact location details are unknown (no stick nest observations are associated with this species record).

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Turtle Nesting Areas **Rationale:** These habitats are rare and when identified will often be the only breeding site for local populations of turtles	Midland Painted Turtle **Special Concern:** Northern Map Turtle Snapping Turtle	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. •For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. •Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <u>Information Sources</u> •Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). •Check the Ontario Herpetofaunal Summary Atlas records or other similar atlases for uncommon turtles; location information may help to find potential nesting habitat for them. •Natural Heritage Information Center (NHIC) •Field Naturalist clubs	Studies confirm: •Presence of 5 or more nesting Midland Painted Turtles •One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. •The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependent on slope, riparian vegetation and adjacent land use is the SWH. •Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. •Field investigations should be conducted in prime nesting season typically late spring to early summer. Observational studies observing the turtles nesting is a recommended method. •SWHMiST Index #28 provides development effects and mitigation measures for turtle nesting habitat	ABSENT - Gravel present on interior laneways on Property 4, however, closest water feature is a man-made agricultural pond.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Seeps and Springs **Rationale:** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	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.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. •Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species. <u>Information Sources</u> •Topographical Map. •Thermography. •Hydrological surveys conducted by Conservation Authorities and MOE. •Field Naturalists clubs and landowners. •Municipalities and Conservation Authorities may have drainage maps and headwater areas mapped.	Field Studies confirm: •Presence of a site with 2 or more seeps/springs should be considered SWH. •The area of a ELC forest ecosite or an eco-element within ecosite containing the seeps/springs is the SWH. The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat. •SWHMiST Index #30 provides development effect and mitigation measures	ABSENT - No seeps or springs observed.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Breeding Habitat (Woodland). **Rationale:** These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations	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 amphibian.	•Presence of a wetland, pond or woodland pool (including vernal pools) >500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). Some small wetlands may not be mapped and may be important breeding pools for amphibians. •Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat <u>Information Sources</u> •Ontario Herpetofaunal Summary Atlas (or other similar atlases) for records •Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. •OMNRF District. •OMNRF wetland evaluations •Field Naturalist clubs •Canadian Wildlife Service Amphibian Road Call Survey •Ontario Vernal Pool Association: http://www.ontariovernalpools.org	Studies confirm; •Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog species with Call Level Codes of 3. •A combination of observational study and call count surveys ii will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the woodland/wetlands. •The habitat is the wetland area plus a 230m radius of woodland area. If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat. •SWHMiST Index #14 provides development effects and mitigation measures.	**CONFIRMED -** Wetland (SWD) and vernal pools within or adjacent to a woodland on Property 1. Gray Treefrog call level code of 3 (Dillon 2015; LSRCA 2022). Three Blue-spotted / Jefferson Salamander Complex individuals were observed (Dillon 2015) and one Blue-spotted Salamander individual observed in 2022 by LSRCA.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Breeding Habitat (Wetlands) **Rationale:** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	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	ELC Community Classes SW, MA, FE, BO, OA and SA. Typically, these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	•Wetlands>500m2 (about 25m diameter), supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. •Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. •Bullfrogs require permanent water bodies with abundant emergent vegetation. <u>Information Sources</u> •Ontario Herpetofaunal Summary Atlas (or other similar atlases) •Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. •OMNRF Districts and wetland evaluations •Reports and other information available from Conservation Authorities.	Studies confirm: •Presence of breeding population of 1 or more of the listed newt/salamander species or 2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or 2 or more of the listed frog/toad species with Call Level Codes of 3. or Wetland with confirmed breeding Bullfrogs are significant. •The ELC ecosite wetland area and the shoreline are the SWH. •A combination of observational study and call count surveys ii will be required during the spring (March-June) when amphibians are concentrated around suitable breeding habitat within or near the wetlands. •If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. •SWHMiST Index #15 provides development effects and mitigation measures.	**CANDIDATE -** Wetlands and ponds present on Properties 2 and 4. Does not appear an amphibian station was placed at the pond on Property 2.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Woodland Area - Sensitive Bird Breeding Habitat **Rationale:** Large, natural blocks of mature woodland habitat within the settled areas of Southern Ontario are important habitats for area sensitive interior forest songbirds.	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 **Special Concern:** Cerulean Warbler Canada Warbler	All Ecosites associated with these ELC Community Series; FOC FOM FOD SWC SWM SWD	•Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. •Interior forest habitat is at least 200 m from forest edge habitat clxiv <u>Information Sources</u> •Local bird clubs. •Canadian Wildlife Service (CWS) for the location of forest bird monitoring. •Bird Studies Canada conducted a 3-year study of 287 woodlands to determine the effects of forest fragmentation on forest birds and to determine what forests were of greatest value to interior species •Reports and other information available from Conservation Authorities.	Studies confirm: •Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. •Note: any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. •Conduct field investigations in spring and early summer when birds are singing and defending their territories. •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #34 provides development effects and mitigation measures.	**CANDIDATE -** Forest and swamp ecosites present on Property 1 (and extending into Property 2) meet the Habitat Criteria. Yellow-bellied Sapsucker, Red-Breasted Nuthatch, Veery, Black-throated Green, and Scarlet Tanager all were recorded as breeding birds by Dillon (2015). LSRCA also recorded Blue-headed Vireo and Ovenbird during breeding bird surveys. Not all breeding bird data from conducted studies includes detailed information to confirm presence of nesting or breeding pairs.
Habitat for Species of Conservation Concern (not including Endangered and Threatened Species)					

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Marsh Breeding Bird Habitat **Rationale:** Wetlands for these bird species are typically productive and fairly rare in Southern Ontario landscapes.	American Bittern Virginia Rail Sora Common Moorhen American Coot Pied -billed Grebe Marsh Wren Sedge Wren Common Loon Sandhill Crane Green Heron Trumpeter Swan **Special Concern:** Black Tern Yellow Rail	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites.	Nesting occurs in wetlands. •All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. •For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. <u>Information Sources</u> •OMNRF District and wetland evaluations. •Field Naturalist clubs •Natural Heritage Information Center (NHIC) Records. •Reports and other information available from Conservation Authorities. •Ontario Breeding Bird Atlas.	Studies confirm: •Presence of 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes; or breeding by any combination of 5 or more of the listed species. •Note: any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. •Area of the ELC ecosite is the SWH. •Breeding surveys should be done in May/June when these species are actively nesting in wetland habitats. •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #35 provides development effects and mitigation measures	ABSENT - The ecosites that are present on the subject properties do not meet the criteria for SWH.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Open Country Bird Breeding Habitat **Rationale;** This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern:** Short-eared Owl	CUM1 CUM2	•Large grassland areas (includes natural and cultural fields and meadows) >30 ha •Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). •Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. •The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. <u>Information Sources</u> •Agricultural land classification maps, Ministry of Agriculture. •Local bird clubs. •Ontario Breeding Bird Atlas •Reports and other information available from C0nservation Authorities.	Field Studies confirm: •Presence of nesting or breeding of 2 or more of the listed species. •A field with 1 or more breeding Short-eared Owls is to be considered SWH. •The area of SWH is the contiguous ELC ecosite field areas. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #32 provides development effects and mitigation measures	ABSENT - The meadows on subject properties do not meet the size requirement.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Shrub/Early Successional Bird Breeding Habitat **Rationale;** This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	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 field areas succeeding to shrub and thicket habitats>10ha size. •Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e., no row-cropping, haying or live-stock pasturing in the last 5 years). •Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. •Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands. <u>Information Sources</u> •Agricultural land classification maps, Ministry of Agriculture. •Local bird clubs. •Ontario Breeding Bird Atlas •Reports and other information available from Conservation Authorities.	Field Studies confirm: •Presence of nesting or breeding of 1 of the indicator species and at least 2 of the common species. •A habitat with breeding Yellow-breasted Chat or Golden-winged Warbler is to be considered as Significant Wildlife Habitat. •The area of the SWH is the contiguous ELC ecosite field/thicket area. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories •Evaluation methods to follow “Bird and Bird Habitats: Guidelines for Wind Power Projects” •SWHMiST Index #33 provides development effects and mitigation measures.	ABSENT - The ecosites that are present on the subject properties do not meet the criteria for SWH. However, one indicator species and one common species, Brown Thrasher and Field Sparrow, respectively, were identified using the Merlin bird identification app only, on Property 1. Another common species, Eastern Towhee was observed on Property 1 as well. The exact locations and use of habitat is not known.

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Terrestrial Crayfish **Rationale:** Terrestrial Crayfish are only found within SW Ontario in Canada and their habitats are very rare.	Chimney or Digger Crayfish; (*Fallicambarus fodiens*) Devil Crayfish or Meadow Crayfish; (*Cambarus Diogenes*)	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. •Constructs burrows in marshes, mudflats, meadows, the ground can't be too moist. Can often be found far from water. •Both species are a semi-terrestrial burrower which spends most of its life within burrows consisting of a network of tunnels. Usually the soil is not too moist so that the tunnel is well formed. <u>Information Sources</u> •Information sources from "Conservation Status of Freshwater Crayfishes" by Dr. Premek Hamr for the WWF and CNF March 1998	Studies Confirm: •Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites •Area of ELC ecosite or an eco-element area of meadow marsh or swamp within the larger ecosite area is the SWH. •Surveys should be done April to August in temporary or permanent water. Note the presence of burrows or chimneys are often the only indicator of presence, observance or collection of individuals is very difficult •SWHMiST Index #36 provides development effects and mitigation measures.	**CANDIDATE -** Chimney (burrows) were observed during surveys (NSE 2022), however, no individuals were seen to confirm whether these burrows belong to either of the two listed species (there are three terrestrial crayfish species in Ontario).

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Special Concern and Rare Wildlife Species **Rationale:** These species are quite rare or have experienced significant population declines in Ontario.	All Special Concern (SC) 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	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites <u>Information Sources</u> •Natural Heritage Information Centre (NHIC) will have Special Concern and Provincially Rare (S1-S3, SH) species lists with element occurrences data. •NHIC Website "Get Information" : http://nhic.mnr.gov.on.ca •Ontario Breeding Bird Atlas •Expert advice should be sought as many of the rare spp. have little information available about their requirements.	Studies Confirm: •Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. •The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat. •SWHMiST Index #37 provides development effects and mitigation measures.	**CONFIRMED** – Several Special Concern and Rare wildlife species have been confirmed on property including Eastern Wood-peewee, Monarch, and Wood Thrush. Through the Species at Risk Screening (Appendix 5), two Special Concern species were identified as having a moderate-high probability of occurrence: Snapping Turtle and Bald Eagle.
Animal Movement Corridors					

Wildlife Habitat	Wildlife Species	Candidate SWH		Confirmed SWH	Assessment of Habitat in Subject Lands
		ELC Ecosite Codes	Habitat Criteria and Information Sources	Defining Criteria	
Amphibian Movement Corridors **Rationale;** Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	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	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	Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule. <u>Information Sources</u> •MNRF District Office. •Natural Heritage Information Center (NHIC). •Reports and other information available from Conservation Authorities. •Field Naturalist Clubs.	•Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. •Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant •Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. •Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat.	**CANDIDATE** - Candidate Amphibian breeding habitat therefore movement corridors must be determined.
Deer Movement Corridors **Rationale:** Corridors important for all species to be able to access seasonally important life - cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.	White-tailed Deer	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridor	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule. •A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion. •Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). <u>Information Sources</u> •MNRF District Office. •Natural Heritage Information Center (NHIC). •Reports and other information available from Conservation Authorities. •Field Naturalist Clubs.	Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas. •Corridors that lead to a deer wintering habitat should be unbroken by roads and residential areas. •Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway. Shorter corridors are more significant than longer corridors. •SWHMiST Index #39 provides development effects and mitigation measures	**CANDIDATE** - Confirmed Deer Wintering Areas (Stratum 2) present on Properties 1, 2, and 4, therefore movement corridor must be determined.

APPENDIX 7 | Observations – Detailed Notes

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Incidental Observation	Black Ash		IC3	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Black Ash	young tree, 9cm DBH, dying, EAB exit holes. 74 degrees	IC49	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Boulder	several large boulders in immediate polygon. photographed approx 1.5m across by .3m in height. 229 degrees	IC65	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Boulders and Rock Pile	rock pile covered in dog strangling vine and a large boulder. Biggest boulder 1.5m high and 2 m long. 107 degrees.	IC66	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	21 DBH butternut dead, 40 DBH butternut has lost 50% of crown, no cankers.100o	IC4	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	lost 50% of crown	IC5	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	lost >50% of crown	IC6	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	two large butternuts, one lost 25%, one >50% of crown. no cankers.160 degrees	IC7	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	2 trees, one 50% lost, one >50% lost, many dead canopy branches	IC8	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	#41, previously marked, appears healthy	IC9	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	#99, looks healthy	IC10	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	few mature butternut, canopies look good.20 degrees	IC11	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	few mature butternut, canopies look good. 20 degrees.	IC13	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Incidental Observation	Butternut	dying, 10%canopy remaining. 232 degrees	IC25	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	butternut	cancers present, dying. small canopy remaining. DBH over 30cm. 64 degrees and canopy photo.	IC26	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	no signs of cankers. dying, 30% canopy or less. DBH over 25. 340 degrees and canopy	IC27	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	1, dead, 44cm DBH. Pileated woodpecker holes. No living canopy.	IC29	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Butternut	poor shape, 25% canopy remaining, 30DBH, cannot locate other 2 nearby. 248o	IC33	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Chimney Crayfish	Chimney on bank of standing water stream	IC32	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Deer Bedding Site	1 bedding spot, like others. 228 degrees	IC14	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Deer Trail	4 trails meet at point location. 234 degrees	IC19	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Deer Trail	faint trail. 64 degrees	IC23	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Foraging Spot	several disturbed areas, possible foraging. 0 degrees.	IC21	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Golden Crowned Kinglets	3, vocalizing, likely foraging	IC16	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Green Frog	1, adult, moving	IC28	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Pileated Woodpecker holes	several excavated holes in mature white cedar. possible bat habitat. 189 degrees	IC12	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Incidental Observation	Pileated Woodpecker holes	on white mature cedar. Shallow holes. some new and some older. 290 degrees	IC17	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Pollinator Habitat	Good pollinator habitat, bumblebees and other bees seen, goldenrod, Asters, milkweed present. 327 degrees.	IC63	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Possible Coyote Track		IC2	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Possible Nest	clump to the left may be a nest in Balsam fir, 15-20m high. 94 degrees	IC15	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Rock Pile	could be old boundary, possible snake habitat. 21 degrees	IC70	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Ruffed Grouse	approx location, drumming wing beats	IC18	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Terrestrial Crayfish Burrow	1, edge of pond	IC50	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Terrestrial crayfish burrow	8 burrows in vernal pool,	IC22	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pool	surrounded by sensitive fern, willow and ash as canopy, wood frog observed. 355 degrees.	IC64	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pool	freeman maple, black, ash, buckthorn. no standing water. 8x4m. another pool nearby. 204 degrees	IC67	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pool	large pool with many deer tracks. no standing water	IC69	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pool	2x4m, standing water present, 15cm deep. 312 degrees	IC74	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pools	scattered Vernal pools within meters of each other. only 1 with standing water. crayfish burrows found within pools. 265 degrees	IC68	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Incidental Observation	Vernal pools	large pool, no standing water. surrounded by buckthorn on one side. 226 degrees	IC71	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Vernal pools	Several small vernal pools. Very little standing water remained, few cms. 342 degrees	IC72	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	White-breasted Nuthatch	foraging, 1	IC24	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	White-throated Sparrow	1, singing	IC48	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Wood Frog	adult, 1. near ephemeral pond.	IC20	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Incidental Observation	Woodpecker Holes	Ash tree. 20 degrees	IC1	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Buckthorn	ground layer and understory. 319 degrees.	IS12	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Buckthorn and Honeysuckle	220 degrees	IS2	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Dog-strangling Vine	growing on buckthorn. scattered small patches. 7 degrees	IS13	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Dog-strangling Vine	extensive and widespread patch. dominant in ground layer. 160 degrees	IS17	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Dog-strangling Vine	large extensive patch, near several other patches. common throughout. buckthorn and DOG STRANGLING VINE dominant. 238 degrees	IS18	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	European buckthorn, Dog-strangling Vine	Excessive/dominant. 145 degrees.	IS3	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	European buckthorn, Dog-strangling Vine	very dense and extensive buckthorn, 0.5-2 m high. Widespread throughout polygon. DOG STRANGLING VINE also very common in the area. 240 degrees	IS4	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Invasive Species	Honeysuckle	Dense, 20 degrees	IS9	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Honeysuckle, Dog-strangling Vine	dense Tatarian honeysuckle, buckthorn and Dog Strangling Vine. photo taken from ATV trail. 156 degrees.	IS6	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Japanese Barberry	single plant, 5 degrees	IS5	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Japanese Barberry	2x2m patch, in fruit, 236 degrees	IS11	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Japanese Barberry	4x2m patch, 262 degrees	IS19	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Japanese Barberry	1 individual on edge of creek. 167 degrees.	IS37	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Multiflora rose	1x1m patch	IS21	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Phragmites australis australis	5 x 10 m, not very dense. 212 degrees.	IS1	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Phragmites australis australis	one patch, 10 x 20 m. 105 degrees	IS8	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Phragmites australis australis	10 x 10 m patch, 115 degrees	IS10	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Phragmites australis australis	small patch, 2x1m. 217 degrees	IS20	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Spongy Moth	pupa, approx 20 on elm. 136 degrees	IS14	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Spongy Moth	eggs and pupa casings. over 50 egg clusters on a few poplars. 48 degrees	IS16	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Invasive Species	Tartarian Honeysuckle	, dense, Common in area. 160 degrees	IS7	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Invasive Species	Tartarian Honeysuckle	scattered patches in entire plot. 135 degrees	IS15	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Cattail Marsh	240 degrees	PD30	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Clay Pit	5 x2m, clay substrate, lots of deer tracks. 99 degrees	PD23	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Creek	standing water, no flow. 0.5-1 m wide. oily sheen on surface. 336 degrees.	PD59	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Open Meadow from Dying Ash	210 degrees	PD6	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Organic Swamp	36o	PD29	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Poplar Stand	possible inclusion, 25m in height. 207 degrees	PD12	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Populus Alba (small stand)	215 degrees	PD9	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Regenerating Meadow	154 degrees	PD2	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Regenerating Moist Meadow	15 degrees	PD7	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo, 252 degrees	PD16	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	261 degrees	PD1	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

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1 – Deer Park Road	Photo Documentation	Site Photo	198 degrees	PD4	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	photo to show ELC community, 31 degrees	PD10	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	photo to show different vegetation structure. 313 degrees	PD11	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	332 degrees	PD14	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo. 209 degrees.	PD18	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo, 151 degrees	PD22	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo. 11 degrees	PD24	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo, 176 degrees	PD26	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	Site photo, dead ash, basswood. 298 degrees	PD28	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Site Photo	site photo, trembling aspen willow dead ash. young black ash. 223 degrees.	PD60	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Photo Documentation	Willow Poplar Thicket	previously logged, old logs present. 105 degrees	PD8	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	ATV Trail	tire ruts, ATV, deep, few tracks, not old, this season. 100 degrees.	SD3	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	ATV Trail	intersects deer trail. plants not trampled but somewhat fresh ruts. 23 degrees	SD9	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Camp site	Camp site, dumped tires, and cement pad	SD18	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Culvert	metal pipe. appears to drain Vernal pool. Another a few meters down. 354 degrees.	SD11	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Culvert	series of metal culverts near road. 174 degrees	SD14	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Culvert	two metal culverts near road. 163 degrees	SD15	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Culvert	metal culvert along side of road. 342 degrees	SD16	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Dead Wood Pile	area with dry dead wood. 70 degrees	SD13	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Disturbed area/former road	DOG STRANGLING VINE and buckthorn. Very disturbed area, likely former road. 75 degrees	SD17	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Dump Site	Garbage. North and South side of road	SD6	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Dump Site	sofa, car seat	SD24	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Gravel Road	220 degrees	SD4	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Ladder Beside Trail	South side of trail	SD5	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Laneway	pointing towards small parking lot, Lakeway surrounded by buckthorn, some dumping. 98 degree	SD1	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Machinery Ruts	near phrag patch	SD10	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Road	loose gravel/crushed rock. 310 (more open) and 147 degrees	SD7	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Road	fairly open road, no placed substrate. 256 degrees	SD12	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Trail	140 degrees.	SD2	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
1 – Deer Park Road	Site Disturbance and Anthropogenic Feature	Wooden Stake	stake with flagging and caution tape. 266 degrees	SD8	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Black Ash	dying, 6m	IC31	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Black Ash	3 saplings and several mature dead standing in pond	IC43	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Black Ash	large historical tree, 78 cm DBH. 38 degrees	IC47	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Cavity Tree	two cavities near top of tree. tree over 50 cm DBH. over 25m in height. looks like dead ash but intact. 216 degrees.	IC44	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Cavity Tree	many cavities all the way up. maple sp, over 50 cm DBH and over 25 m in height. 120 degrees.	IC45	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Deer Tracks	deer tracks	IC42	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Rock Pile	covered in vegetation	IC73	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Wild Turkey	scat and feathers	IC46	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Wildlife Tree	two fallen trees, perching habitat. 164 degrees.	IC39	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
2 – Boyers Road	Incidental Observation	Woodpecker	hairy or downy woodpecker, 1, calling	IC41	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Incidental Observation	Yellow Nutsedge	narrow patch 20x1m along edge of MAM	IC40	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Black Locust	approx 10 trees on edge of soy field. 170 degrees	IS30	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Black Locust Stand	dominant canopy, in all layers as well. 240 degrees	IS31	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	dense, growing manitoba maple, lots of dumping. 0 degrees	IS22	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	dense under black locust canopy, with garlic mustard, buckthorn, manitoba maple . 90 degrees	IS23	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	dense, 8x20 patch. 173 degrees.	IS27	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	5x5 patch, 215 degrees	IS28	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	extensive and widespread, dominant ground cover. 32 degrees.	IS32	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	dominant ground in open areas, where cedars aren't present. 343 degrees	IS33	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	medium patch, 3x10m and scattered nearby. 12 degrees	IS35	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Dog-strangling Vine	Dog Strangling Vine ground and buckthorn understory. both dominant. 219 degrees.	IS36	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Garlic Mustard	large widespread patch, 20x15m, 153 degrees	IS29	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
2 – Boyers Road	Invasive Species	Phragmites australis australis	10 x 2 m, in ditch, 115 degrees	IS25	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Purple Loosetrife	115o	IS24	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Invasive Species	Scots Pine	large stand (center) and scattered younger saplings. 88 degrees.	IS34	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, entire field, active. 117 degrees.	PD35	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	showing other side and dead ash swd inclusion. deer tracks through soy. 2 degrees	PD37	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, active. 181 degrees	PD40	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, active, 197 degrees	PD42	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, active. 213 degrees	PD46	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, active. MAM Inclusion. 102 degrees.	PD49	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Agr Field	soy, active, 17 degrees.	PD50	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Pond	dead black ash in water, 3 saplings on edge. covered in duckweed. 230 degrees.	PD57	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, likely former Vernal pool. 183 degrees	PD36	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, meadow with hedgerows. 139 degrees	PD33	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
2 – Boyers Road	Photo Documentation	Site Photo	site photo, other direction, meadow and hedgerows. 36 degrees.	PD34	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, CUW. 89 degrees.	PD38	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, elm, Manitoba maple, buckthorn, Dog Strangling Vine, garlic mustard. 92 degrees.	PD39	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo. hedgerow. photo 1-94 degrees, photo 2-220 degrees	PD41	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	meadow, smooth brome. potential for restoration. 176 degrees	PD43	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, black locust. 114 degrees.	PD45	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, dead ash hedgerow. 48 degrees	PD47	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, MAM. 206 degrees.	PD48	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	MAM. 5 degrees.	PD51	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo. poplar, cedar, red pine. 351 degrees	PD52	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo. 325 degrees	PD53	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo. poplar. 286 degrees	PD55	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Site Photo	site photo, pond. 249 degrees.	PD56	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
2 – Boyers Road	Photo Documentation	Site Photo	site photo, sugar maple and Dog Strangling Vine. 291 degrees.	PD58	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Photo Documentation	Willow Thicket		PD54	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	ATV Trail	deep ruts covered in vegetation, including scattered purple loosestrife. 202 degrees.	SD36	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Blue Utility Pole	40 degrees	SD21	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Cedar fence	old fence along tree line. 302 degrees	SD34	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Dump Site	dumping, microwave, tires, carpet, bottles, cans, roofing sheets. 280 degrees.	SD22	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Dump Site	netting, shingles, misc plastic. 32 degrees	SD26	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Dump Site	rusted scrap metal covered in wild grape. 173 degrees.	SD29	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Dump Site	metal rectangle. 284 degrees.	SD30	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Gravel Disturbed Area	130 degrees	SD19	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Hunt Stand	possible old hunt stand. wood planks nailed into dead red pine. 86 degrees.	SD28	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Hunt Stand	wooden platform and ladder, 2.5m high up, on edge of pond. 185 degrees.	SD41	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Hunt Stand	wooden ladder and platform. 6m up in willow. 358 degrees.	SD42	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Hunt stand	wooden ladder, platform, and structure. approx 6 m high. 307 degrees.	SD43	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Old Cedar Fence	under buckthorn and white cedar. 20 degrees.	SD39	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Old Tracks	245 degrees	SD20	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Orange Stake	trail or boundary marker. 113 degrees	SD37	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Orange Stake	wooden stake, 107 degrees	SD38	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Sign for ATV/snowmobile	315o	SD23	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Stake	metal stake near white cedar.	SD35	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Trail	dirt path. 12 degrees.	SD40	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Wire Fence	page wire fence along tree line. 210 degrees	SD31	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Wire Fence	page wire fence along apple and buckthorn. 131 degrees	SD32	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Wire Fence	page wire fence, 82 degrees.	SD33	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
2 – Boyers Road	Site Disturbance and Anthropogenic Feature	Wire Fence, Dumping	page wire fence. metal barrels. 117 degrees.	SD27	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Incidental Observation	Butternut	25 m, 40 DBH (est), no canker, healthy canopy. 255o	IC30	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
3 – The Queensway	Incidental Observation	Butternut	54cm DBH, 3 trunks, one dead. no obvious signs of cancers. reduced canopy. 294 degrees	IC35	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Incidental Observation	Butternut	39 DBH, cancers present, reduced canopy. 335 degrees	IC36	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Incidental Observation	Butternut	28 cm DBH, mostly dead, cancers present. 195 degrees	IC37	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Incidental Observation	Deer Bed		IC34	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Incidental Observation	Yellow Nutsedge	10x20 m patch, 26 degrees	IC38	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Invasive Species	Lily of the Valley	throughout hedgerow, with Tatarian honeysuckle. 145 degrees.	IS26	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Photo Documentation	Agr Field	field photo, soy, active . 94 degrees	PD32	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Photo Documentation	Site Photo	site photo showing meadow and hedgerow. 136 degrees.	PD31	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
3 – The Queensway	Site Disturbance and Anthropogenic Feature	Old Wooden Fence	in hedgerow. 97 degrees	SD25	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Incidental Observation	Cavity Tree	wildlife attribute, many large cavities, dying sugar maple. approx 70cm DBH, over 20m in height. 281 degrees	IC51	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Incidental Observation	Pileated Woodpecker holes	on white cedar. 323 degrees	IC52	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Incidental Observation	Pool/flooding	signs of flooding and Vernal pooling. 150 degrees	IC75	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Invasive Species	Dog-strangling Vine	large dense patch under cedar and birch, 20x20m. 176 degrees	IS38	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
4 – Varney Road (E)	Invasive Species	Dog-strangling Vine	nearly 100% DOG STRANGLING VINE in ground layer, on slope, near edge of agr field. 165 degrees	IS44	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Invasive Species	Japanese Barberry	small, dense patch, 3x5m. 210 degrees	IS43	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Invasive Species	Phragmites australis australis	20x10 m, to shoreline of pond, extends back into a CUM. 195 degrees.	IS45	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Agr Field	corn, active. goldenrod patches on edges of field. 4 degrees	PD62	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Agr Field	corn, active. mowed area adjacent to field and trees. 211 degrees	PD63	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Agr Field	fallow field, unsure of cover grass species and if active. perrenial rye grass. Lolium, foxtail. hedgerow on left side. appears to be mowed once. 152 degrees.	PD80	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Agr Field	grass cover species, likely rye grass. unsure if active. 86 degrees.	PD81	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Agr Field	Corn, active	PD85	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Ditch	no standing water	PD84	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Pond	man made pond, dumping, tire, steel drum, cinder blocks, steep banks, little riparian Veg, phragites on south side, erosion on banks. 205 degrees	PD86	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Rock Drainage Ditch	182 degrees	PD87	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Site Photo	site photo and laneway. Manitoba maple, buckthorn, Dog Strangling Vine. 256 degrees.	PD64	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Site Photo	hedgerows on grass fields. sugar maple, Basswood, buckthorn. 15 degrees	PD82	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
4 – Varney Road (E)	Photo Documentation	Site Photo	maple, buckthorn hedgerow. 243 degrees.	PD83	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Photo Documentation	Steep Slope	on edge of agr field, approx 45 degrees angle. 96 degrees	PD79	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Cinder Block Pile	10 x 10 x 1 m. slopes down into pond. south side of path. 190o	SD57	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Dump Site	bags of cement and garbage. 100 degrees	SD49	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Horse Droppings	on gravel road, Recreational use	SD46	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Hunt Stand	wooden hunt stand platform, no ladder, in dead tree. approx 12m high. 134 degrees.	SD55	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Hunt Stand	wooden hunt stand in sugar maple. 10 degrees.	SD56	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Laneway	grass, to agr fields. 70 degrees	SD50	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Road	gravel farm road, 3m wide. goes down entire length. dog strangling vine. 169, 252 degrees.	SD44	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Road Junction	gravel road turns to grass and connects with another grass laneway. 90 degrees	SD48	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Stone Wall Entrance	two curved stone walls with large boulder between. just off of main road and connects in gravel interior road. 74 degrees	SD45	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (E)	Site Disturbance and Anthropogenic Feature	Trailer	popup trailer, poor condition. 225 degrees	SD47	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Black Ash	a few scattered saplings, good condition.	IC56	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
4 – Varney Road (W)	Incidental Observation	Black Ash	approx 12 saplings, declining health for many, 5-10 cm DBH	IC60	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Butternut	1, declining health with reduced canopy, no cankers present. over 25 m in height, 63 cm DBH. 68 degrees.	IC61	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Cavity Tree	ash sp., several small cavity holes near top. 344 degrees	IC55	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Deer Tracks	throughout	IC54	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Deer Tracks	Tracks throughout	IC58	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Large Mature Sugar Maple	310 degrees	IC62	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Pileated Woodpecker	Calling, 1	IC53	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Terrestrial Crayfish Burrow	1, burrow	IC57	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Incidental Observation	Yellow Ladyslipper	scattered, approx 30 individuals, flowered.	IC59	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Invasive Species	European Black Alder	large dense patch of saplings amongst dead ash	IS40	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Invasive Species	Japanese Barberry	1x1m, localized	IS41	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Invasive Species	Purple Loosestrife	widespread, most common ground layer species	IS39	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Invasive Species	spongy moth	pupa skins on aspen	IS42	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
4 – Varney Road (W)	Photo Documentation	Ephemeral Stream	no standing water. 225 degrees	PD75	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Marker	two metal black squares screwed into white cedars. 190 degrees	PD67	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	site photo, WOD. 292 degrees.	PD65	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	site photo, white cedar, Dog Strangling Vine. 248 degrees	PD66	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	site photo, meadow. 200, 2 degrees	PD68	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	dead ash, black alder, willow hedgerow. 349 degrees	PD69	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	dead ash and trembling aspen. 168 degrees	PD70	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	willow thicket with meadow, scattered dead ash. 156 degrees	PD71	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	site photo, white cedar, dead standing ash, buckthorn, Dog Strangling Vine. 31 degrees.	PD72	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	sugar maple, Basswood, dead ash, false nettle. 304 degrees	PD73	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	FOC white cedar. 228 degrees	PD74	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	SWD, 238 degrees	PD76	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Photo Documentation	Site Photo	swm, cedar, birch, dead ash 21 degrees	PD77	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

Property	Observation Type	Feature	Notes	Observation / Photo Number*	Photo Credit	Observation Date
4 – Varney Road (W)	Site Disturbance and Anthropogenic Feature	ATV Trail	trail appears to around meadow on imagery. ruts present.	SD53	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Site Disturbance and Anthropogenic Feature	Cedar fence	cedar fence approx 20m in from edge of meadow. 61 degrees	SD54	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Site Disturbance and Anthropogenic Feature	Dump Site	tires, metal, misc garbage. 302 degrees	SD51	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022
4 – Varney Road (W)	Site Disturbance and Anthropogenic Feature	Fence	metal fence, unknown length appears to only be on corner of FOC. 165 degrees	SD52	Grace Pitman & Patrick Strzalkowski (NSE)	October 5-7, 2022

* IC = Incidental Observation, IS - Invasive Species, PD = Photo Documentation and SD = Site Disturbance and Anthropogenic Features

APPENDIX 8 | Land Surveys

ORIGINAL

METRIC
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

PLAN 65M-2903

CERTIFICATE OF REGISTRATION

I CERTIFY THAT THIS PLAN 65M-2903 IS REGISTERED IN THE LAND REGISTRY OFFICE FOR THE LAND TITLES DIVISION OF YORK REGION (No. 65) AT 3:13 O'CLOCK ON THE 18th DAY OF AUGUST, 1992 AND ENTERED IN THE REGISTER FOR PARCEL PLAN-1 SECTION 65M-2903 AND REQUIRED CONSENTS AND AFFIDAVITS ARE REGISTERED AS PLAN DOCUMENT No. AT857637

Asst. Deputy LAND REGISTRAR

THIS PLAN COMPRISES ALL OF PARCEL 23-1, SECTION NG-3
SUBJECT TO A TEMPORARY EASEMENT IN INSTRUMENT No. 518123
AFFECTS PART OF BLOCK 1 AND PART OF BLOCK 14 DESCRIBED AS PART 7, PLAN 65R-15327.

PLAN OF SUBDIVISION OF
PART OF LOTS 23, 24, 25, 26 & 27, CONCESSION 3
AND
PART OF THE ROAD ALLOWANCE BETWEEN LOTS 25 & 26, CON. 3
(CLOSED BY BY-LAW No 88-243, INSTRUMENT No. 511654, AMENDED BY INSTRUMENT No. 517009)

TOWN OF GEORGINA
REGIONAL MUNICIPALITY OF YORK
(GEOGRAPHIC TOWNSHIP OF NORTH GWILLIMBURY

50 0 50 100 200m

SCALE: 1:3000

Marshall Macklin Monaghan
Ontario Limited
ONTARIO LAND SURVEYORS

1991

LEGEND

■	DENOTES SURVEY MONUMENT FOUND
□	DENOTES SURVEY MONUMENT PLANTED
SIB	DENOTES STANDARD IRON BAR
SSIB	DENOTES SHORT STANDARD IRON BAR
IB	DENOTES IRON BAR
MMM	DENOTES MARSHALL MACKLIN MONAGHAN ONTARIO LIMITED
882	DENOTES J.C. MOORE O.L.S.
917	DENOTES R.A. GARDEN O.L.S.
1137	DENOTES R.G. McKIBBON LTD., O.L.S.
P	DENOTES PLAN OF SURVEY BY J.C. MOORE, O.L.S.

OWNER'S CERTIFICATE

THIS IS TO CERTIFY THAT:

1. BLOCKS 1 TO 3, BOTH INCLUSIVE, THE STREET WIDENINGS NAMELY BLOCKS 4, 6, 7 AND 21, BLOCK 5, THE 0.30 RESERVES NAMELY BLOCKS 8 TO 20, BOTH INCLUSIVE AND BLOCK 22, HAVE BEEN LAID OUT IN ACCORDANCE WITH OUR INSTRUCTIONS.
2. THE STREET WIDENINGS NAMELY BLOCKS 4, 6, 7 AND 21 ARE HEREBY DEDICATED TO THE REGIONAL MUNICIPALITY OF YORK AS PUBLIC HIGHWAY.

OWNER – BERTAN INVESTMENTS LIMITED

AUGUST 20, 1991
DATE

HERBERT STRICKER
(PRESIDENT)

I HAVE THE AUTHORITY TO BIND THE CORPORATION.

NOTE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE SOUTH LIMIT OF PART 1, AS SHOWN ON PLAN 65R-15327 HAVING A BEARING OF N 72° 43' 20" E.

APPROVED UNDER SECTION 50 OF THE PLANNING ACT, 1983
THIS 14th DAY OF August 1992

M. DeAngelis
M. DeAngelis
Director of Development

SURVEYOR'S CERTIFICATE

I CERTIFY THAT

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE THEREUNDER.
2. THE SURVEY WAS COMPLETED ON THE 28th DAY OF OCTOBER, 1991.

29 October 1991
DATE

HERMAN WINKELBACHER
ONTARIO LAND SURVEYOR

Marshall Macklin Monaghan Ontario Limited
ONTARIO LAND SURVEYORS
70A WOODLAND RD. E., WHITBY, ONT. L1N-8Y8 (416)668-3022

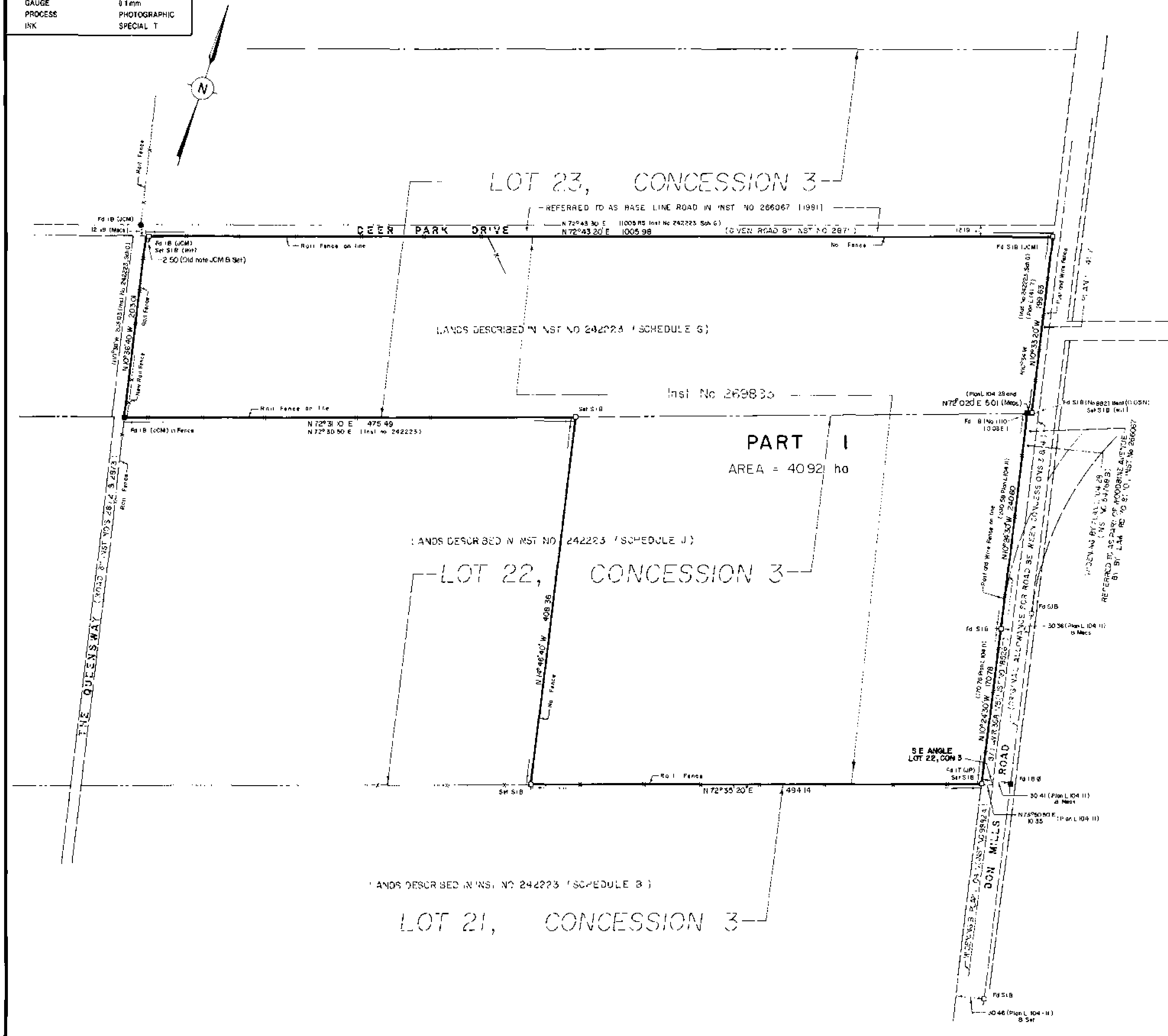
Drawn: W.L.E. | Checked: H.W.
Drawing No.: 20.89.450

65M2903

PLAN MATERIAL

PLASTIC MATERIAL	CRONAFLEX
GAUGE	0.1 mm
PROCESS	PHOTOGRAPHIC
INK	SPECIAL T

H 6408



I require this plan to be deposited under *The Land Titles Act*

Date MAY 8/81

R STEPHENSON O L S

PLAN 65R- 3920

Received and deposited

Date 21 MAY 1981

Approved May 15, 1981

ASSISTANT EXAMINER OF SURVEYS

LAND REGISTRAR FOR THE LAND TITLES DIVISION OF YORK NORTH (No 65)

CAUTION THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF *THE PLANNING ACT*

PART 1 – All of Parcel 22-1, Section G-3 (N G EYS)

PLAN OF SURVEY OF

PART OF LOTS 22 AND 23, CONCESSION 3

IN THE TOWNSHIP OF GEORGINA
REGIONAL MUNICIPALITY OF YORK

(FORMERLY IN THE TOWNSHIP OF NORTH GWILLIMBURY, COUNTY OF YORK)

SCALE 1 3000

Marshall Macklin Monaghan
Ontario Limited
ONTARIO LAND SURVEYORS

1980

SCHEDULE

PART		
1	Part of Lots 22 and 23, Con 3	Inst no 242223 (Sch's J & G)

METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

LEGEND

- SIB DENOTES STANDARD IRON BAR
- IB DENOTES IRON BAR
- Fd DENOTES FOUND
- JCM DENOTES J C MOORE O L S
- JP DENOTES JAMES PURCELL O L S
- ø DENOTES ROUND

NOTE

BEARINGS SHOWN HEREON ARE ASTRONOMIC AND DERIVED FROM THE N 10°24 30 W ON THE WESTERLY LIMIT OF DON MILLS ROAD IN ACCORDANCE WITH PLAN L 104 29

SURVEYOR'S CERTIFICATE

I CERTIFY THAT

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH *THE SURVEYS ACT* AND *THE LAND TITLES ACT* AND THE REGULATIONS MADE THEREUNDER
2. THE SURVEY WAS COMPLETED ON THE 6th DAY OF OCT 1980

Marshall Macklin Monaghan
Ontario Limited
ONTARIO LAND SURVEYORS

OCT 7th 1980
DATE

R STEPHENSON ONTARIO LAND SURVEYOR

Marshall Macklin Monaghan Ontario Limited — Ontario Land Surveyors

275 DUNCAN MILL ROAD DON MILLS ONTARIO M3B 2Y1 449 2500

drawn FCG checked RS

drawing no 51 79 157

65R-3920

TRANSLAR 120-8-79

SCHEDULE				
PART	LOT	CONCESSION	PIN	AREA
1	PART OF 21 & 22	3	ALL OF 03499-0025 (LT)	563529.4 m^2

PART 1 COMPRISES ALL OF PIN 03499-0025 (LT)

PLAN 65R-40140

Received and deposited

November 18th, 2022

Nicole Griffin

Representative for the Land Registrar for the Land Titles Division of York Region (No.65)

PLAN OF SURVEY OF

PART OF LOTS 21 & 22 CONCESSION 3

GEOGRAPHIC TOWNSHIP OF NORTH GWILLIMBURY

TOWN OF GEORGINA

REGIONAL MUNICIPALITY OF YORK

SCALE 1:1000

10 0 10 20 30 40 60 100 metres

GEOVERRA (ON) LTD.
ONTARIO LAND SURVEYORS
2022

THE INTENDED PLOT SIZE OF THIS PLAN IS 900mm IN WIDTH BY 1400mm IN HEIGHT WHEN PLOTTED AT A SCALE OF 1:1000

METRIC

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METERS AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTE

BEARINGS AND COORDINATES ARE UTM GRID AND ARE DERIVED FROM OBSERVED REFERENCE POINTS (ORPs) 1 AND 2, BY REAL TIME NETWORK (RTN) GPS OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS)(2010.0).

DISTANCES HEREON ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY A COMBINED SCALE FACTOR 0.999753.

INTEGRATION DATA		
OBSERVED REFERENCE POINTS (ORPs) UTM ZONE 17, NAD83 (CSRS)(2010.0) COORDINATE VALUES ARE TO AN URBAN ACCURACY IN ACCORDANCE WITH SECTION 14 (2) OF O.REG 216/10.		
POINT ID	NORTHING	EASTING
1	4903901.57	621880.73
2	4903092.00	622017.46
3	4903419.10	622992.31
COORDINATES CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.		

BEARING COMPARISONS SHOWN HEREON ARE NOT ROTATED AND ARE AS SHOWN ON DOCUMENT REFERENCED.

ALL SURVEYED BOUNDARIES ARE NOT FENCED UNLESS NOTED OTHERWISE.

LEGEND

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT PLANTED
IB	DENOTES	IRON BAR
RIB	DENOTES	ROUND IRON BAR
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
MS	DENOTES	MEASURED
OU	DENOTES	ORIGIN UNKNOWN
WIT	DENOTES	WITNESS
1100	DENOTES	R.D. TOMLINSON, O.L.S.
MMM	DENOTES	MARSHALL MACKLIN MONAGHAN ONTARIO LTD. O.L.S.
P1	DENOTES	PLAN OF SURVEY MARSHALL MACKLIN MONAGHAN DATED: MAY 3, 1999
P2	DENOTES	MTO PLAN L-104-11
P3	DENOTES	PLAN 65R-3920

SURVEYOR'S CERTIFICATE

I CERTIFY THAT :

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 30TH DAY OF SEPTEMBER, 2022.

DATE: OCTOBER 26, 2022

TONY PU
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER V-31557

GeoVerra (ON) Ltd. Ontario Land Surveyors

SUITE 101, 1875 BUCKHORN GATE, MISSISSAUGA, ONTARIO, CANADA, L4K 5P1
T: 647-905-8887 WEBSITE: WWW.GEOVERRA.COM

DRAWING NUMBER: 22-02999-000-R01		
P.CHIEF: K.S.	DWG. BY: A.C.	CHK'D BY: T.P.
JOB NUMBER: 22-02999-000		TAB NAME: e-Rplan-MAX 900x1400
DWG FILE NAME:		22-02999-000-R01.DWG

METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0 3048

I require this plan to be deposited under The Registry Act

DATE 30 July, 1990

J G YOUNG, Ontario Land Surveyor

PLAN 65R-14638

Received and deposited

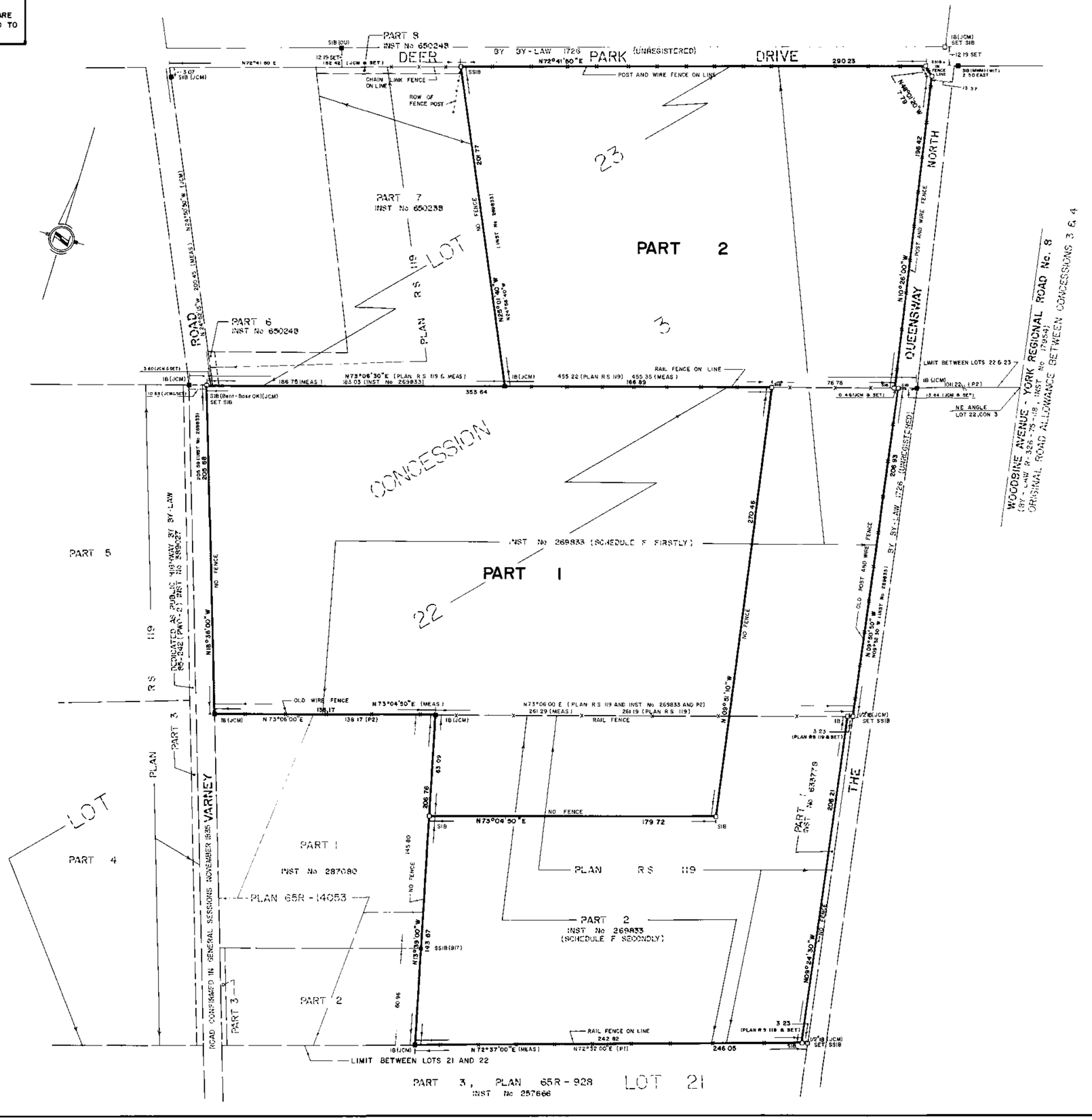
DATE 23RD August, 1990

Asst D. Webster

LAND REGISTRAR FOR THE REGISTRY DIVISION OF YORK (No 65)

CAUTION THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF THE PLANNING ACT

65R 14638



PLAN OF SURVEY OF

PART OF LOTS 22 and 23, CONCESSION 3

TOWN OF GEORGINA

REGIONAL MUNICIPALITY OF YORK

(FORMERLY IN THE TOWNSHIP OF NORTH GWILLIMBURY COUNTY YORK)

Scale 1 1250

25 0 25 50 100 metres

Marshall Macklin Monaghan Ontario Limited
ONTARIO LAND SURVEYORS
1990

SCHEDULE

PART	LOT	CONCESSION	INSTRUMENT	AREA
1	PART OF 22	3	269833	8.09 Ha
2	PART OF 22&23		(SCHEDULE F)	10.99 Ha

LEGEND

□	DENOTES MONUMENT PLANTED
■	DENOTES MONUMENT FOUND
SIB	DENOTES STANDARD IRON BAR
IB	DENOTES IRON BAR
J C M	DENOTES J C MOORE, O L S
OU	DENOTES ORIGIN UNKNOWN
SIB	DENOTES ROBERT A GARDEN, OLS
MMM	DENOTES MARSHALL MACKLIN MONAGHAN ONTARIO LTD, OLS
P1	DENOTES PLAN 65R-928
P2	DENOTES PLAN 65R-14053

SURVEYOR'S CERTIFICATE

I CERTIFY THAT

1 THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT AND THE REGISTRY ACT AND THE REGULATIONS MADE THEREUNDER

2 THE SURVEY WAS COMPLETED ON THE 10th DAY OF MAY, 1990

30/07/90
DATE

J G YOUNG, Ontario Land Surveyor

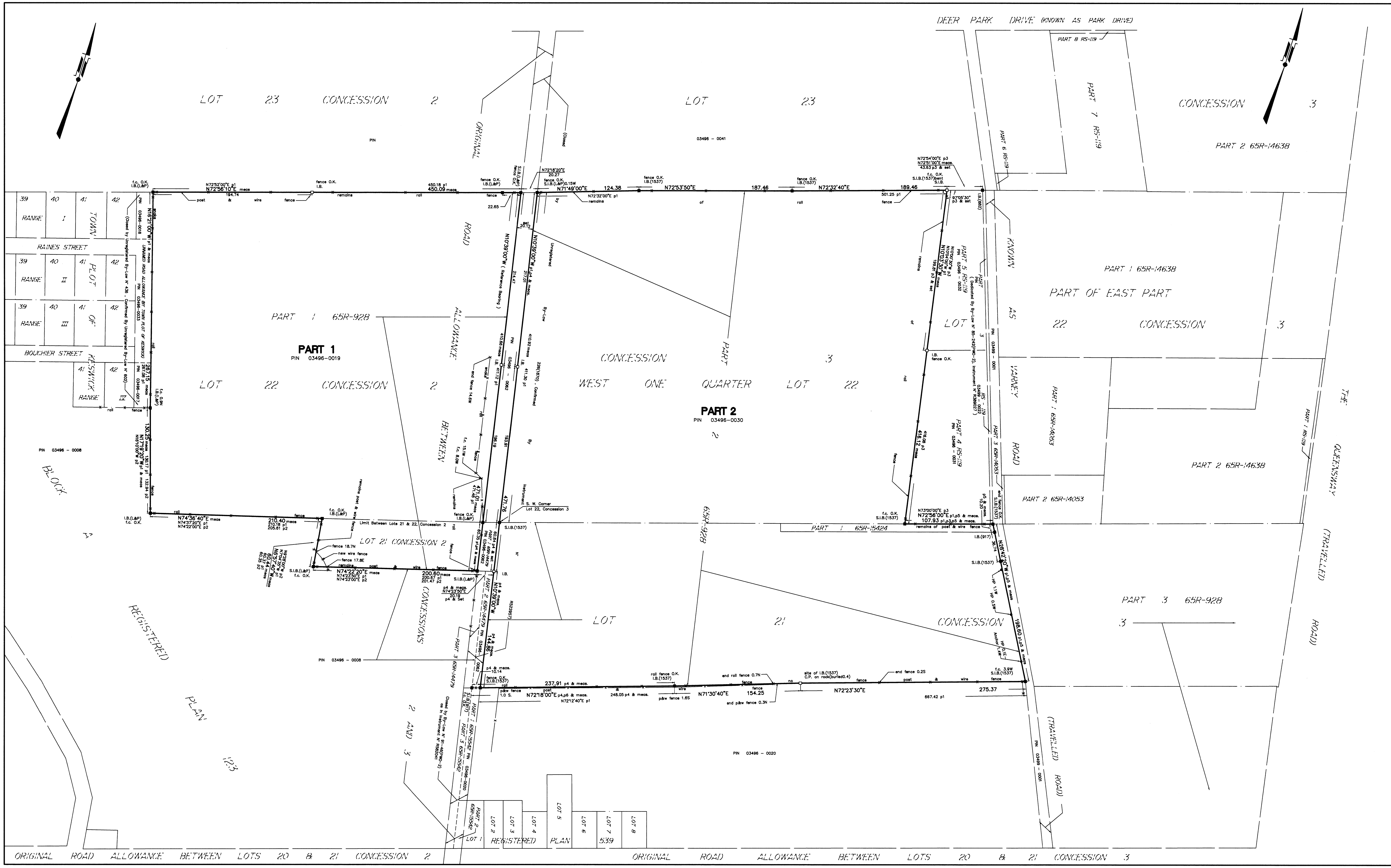
MARSHALL MACKLIN MONAGHAN ONTARIO LIMITED
ONTARIO LAND SURVEYORS
701 ROSSLAND RD E WHITBY ONT L1N-8Y9 (416)668-3022

DRAWN BWL | CHECKED JGY

DRAWING No. 21-90-721-000

(20-8-0755-000)

65R 14638



SURVEYOR'S CERTIFICATE		
I CERTIFY THAT : 1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT, THE LAND TITLES ACT AND THE REGULATIONS MADE UNDER THEM. 2. THE SURVEY WAS COMPLETED ON THE 21ST DAY OF APRIL, 2006. MAY 19, 2006 DATE NEIL A. LEGROW ONTARIO LAND SURVEYOR	I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT. DATE MAY 19, 2006 NEIL A. LEGROW, O.L.S.	**PLAN 65R-29665** RECEIVED AND DEPOSITED DATE 15 JANUARY, 2007 "T. Mallory" ASSISTANT DEPUTY LAND REGISTRAR FOR THE LAND TITLES DIVISION OF YORK REGION (No. 65)

SCHEDULE

PART	LOT	CONCESSION	ALL OF PIN	AREA m²
1	PART OF LOTS 21 AND 22	2	03496–0019	185,037
2	PART OF LOT 21 ALL OF THE WEST ONE QUARTER OF LOT 22	3	03496–0030	331,761

PLAN OF SURVEY OF
PART OF LOTS 21 AND 22
CONCESSION 2
PART OF LOT 21
THE WEST ONE QUARTER OF LOT 22
CONCESSION 3
GEOGRAPHIC TOWNSHIP OF NORTH GWILLIMBURY
TOWN OF GEORGINA
REGIONAL MUNICIPALITY OF YORK

LLOYD & PURCELL LTD., SCALE 1 : 2000

40 20 0 25 50 100 Metres

METRIC

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

BEARING REFERENCE

BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE EASTERLY LIMIT OF PART 1 AS SHOWN ON PLAN 65R–928 HAVING A BEARING OF N10°39'00"W.

LEGEND

S.I.B.	STANDARD IRON BAR
I.B.	IRON BAR
C.P.	CONCRETE PIN
■	FOUND
□	SET
meas.	MEASURED
L&P	LLOYD & PURCELL LTD.
882	J. C. MOORE O.L.S.
917	R. A. GARDEN O.L.S.
1537	T. CZERWINSKI O.L.S.
p1	PLAN 65R–928
p2	REGISTERED PLAN 123
p3	PLAN RS–119
p4	PLAN 65R–14479
p5	PLAN 65R–15424
p6	PLAN 65R–15542
f.c.	FENCE CORNER
HP	HYDRO POLE
m²	SQUARE METRES

LLOYD & PURCELL LTD.
ONTARIO LAND SURVEYORS
1228 GORHAM STREET, UNIT 28, NEWMARKET, ONTARIO, L3Y 8Z1
(905) 895-6416 Fax (905) 853-5837 E-MAIL: l_p@ontariolandsurveyors.ca
TORONTO LINE (905) 479-6500 Fax (905) 479-6515
WWW.ONTARIOLANDSURVEYORS.CA

CAD: LP/DB	PC: RS/PS	JOB: 04–262
CALC: MDR	CHK'D: NAL	FILE: G3–II–21–1

LLOYD & PURCELL Ltd.