COMMITTEE OF ADJUSTMENT NOTICE OF PUBLIC HEARING
APPLICATION NO. B-2025-009

TAKE NOTICE that an application has been received by the Town of Innisfil from **Eloise Giancola, Owners**, for consent under Section 53 of the Planning Act, R.S.O. 1990, c. P.13, as amended for a consent to a conveyance of property for residential purposes.

The subject properties are described legally as **CON 8 PT LOT 26 PLAN 1718 LOT 3 RP 51R3573 PART 1,** known municipally as **2337 25th Sideroad,** and is zoned **"Residential Low Density 1 (RL1) and Environmental Protection (EP)".**

The applicant is proposing to sever portions of the subject lands for the purpose of creating two new residential lot. The first severed land is proposed to have a lot frontage of approximately 27.32m and a total lot area of approximately 1,576m2. The second severed land is proposed to have a lot frontage of approximately 79.82m (fronting on Chappell Court) and a total lot area of approximately 5,346m2. The retained land is proposed to have a lot frontage of approximately 52.5m and a total lot area of approximately 3,286m2.

The Committee of Adjustment for the Town of Innisfil will consider this application in person at Town Hall and virtually through Zoom on **Thursday, November 20, 2025, at 6:30 PM.**

To participate in the hearing and/or provide comments, you must register by following the link below or scanning the above QR code: https://innisfil.ca/en/building-and-development/committee-of-adjustment-hearings.aspx

Requests can also be submitted in writing to: Town of Innisfil Committee of Adjustment, 2101 Innisfil Beach Road, Innisfil, Ontario, L9S 1A1 or by email to planning@innisfil.ca.

If you wish to receive a copy of the decision of the Committee of Adjustment in respect of the proposed consent, you must make a written request to the Secretary-Treasurer of the Committee of Adjustment by way of email or regular mail. The Notice of Decision will also explain the process for appealing a decision to the Ontario Land Tribunal (OLT).

Additional information relating to the proposed application is available on the Town of Innisfil website. Accessible formats are available on request, to support participation in all aspects of the feedback process. To request an alternate format please contact Planning Services at planning@innisfil.ca.

Dated: **October 29, 2025**

Sarah Burton Hopkins,
Secretary Treasurer
sburtonhopkins@innisfil.ca
705-436-3710 ext. 3504


2337 25 SIDEROAD
N
*NB Easement to Chappell Crt. Required
67.02m
60.98m
3,286 SQm.
5,346.6 SQ m.
Retained
Severed
79.82m
55.28m
52.5
HOUSE 2337
1.8m
24.38
1,576.8 SQ m.
Severed
27.32
60.96m
67.02m
25 SIDEROAD
CHAPPE
COUR

PLAN AND FIELD NOTES OF SURVEY O

PART OF N.1/2 OF LOT 26, CONCESS

TOWNSHIP OF INNISFIL

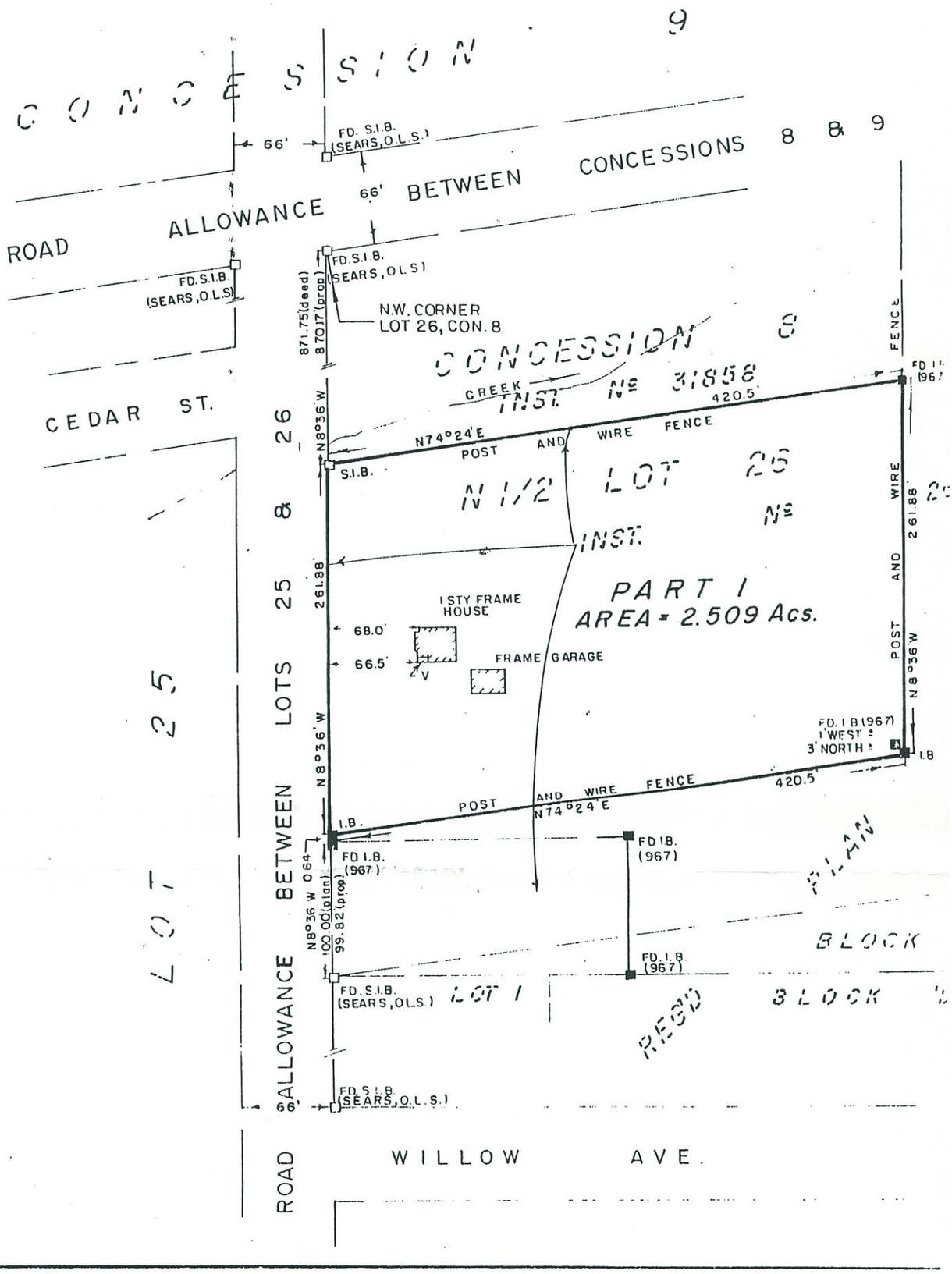
COUNTY OF SIMCOE

SCALE: 1 INCH = 100 FEET

R.C. KIRKPATRICK, O.L.S.

1974

2337 25th SIDEROAD



,ON 8

I REQUIRE THIS PLAN TO BE DEPOSITED UNDER PART II OF THE REGISTRY ACT.

DATE JULY 25, 1974

R. C. KIRKPATRICK
ONTARIO LAND SURVEYOR

RECEIVED AND DEPOSITED AS

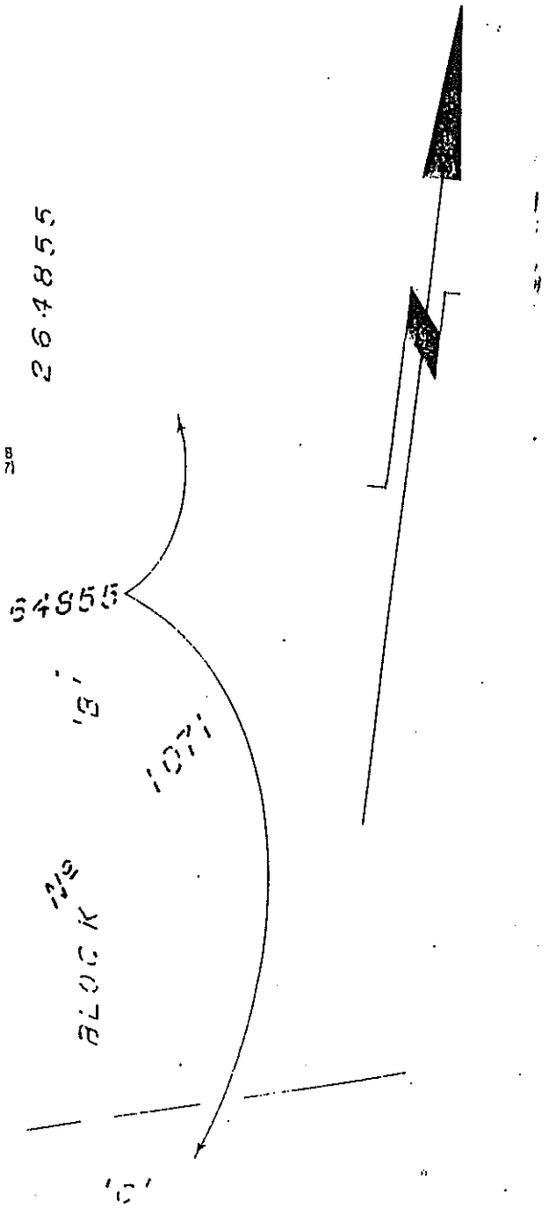
PLAN 51R- 3573

DATE JULY 25, 1974

DEPUTY LAND REGISTRAR FOR THE REGISTRY DIVISION OF SIMCOE (No 51)

CAUTION

THIS PLAN IS NOT A PLAN OF SUBDIVISION WITHIN THE MEANING OF SECTION 29, 32 OR 33 OF THE PLANNING ACT



LEGEND

■ I.B.---DENOTES A 5/8" SQ IRON BAR 2' LONG
OS I.B.---DENOTES A 1" SQ STANDARD IRON BAR 4' LONG
FD.----DENOTES FOUND

ALL HANGING LINES HAVE BEEN VERIFIED.
DISTANCES ARE IN FEET AND DECIMALS OF FEET.

BEARINGS ARE ASTRONOMIC, DERIVED FROM THE WEST LIMIT OF LOT 26, CONCESSION 8, SHOWN AS N8°36'W ON REGISTERED PLAN No 1071.

SURVEYOR'S CERTIFICATE

I HEREBY 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 22nd DAY OF JULY, 1974

JULY 25, 1974

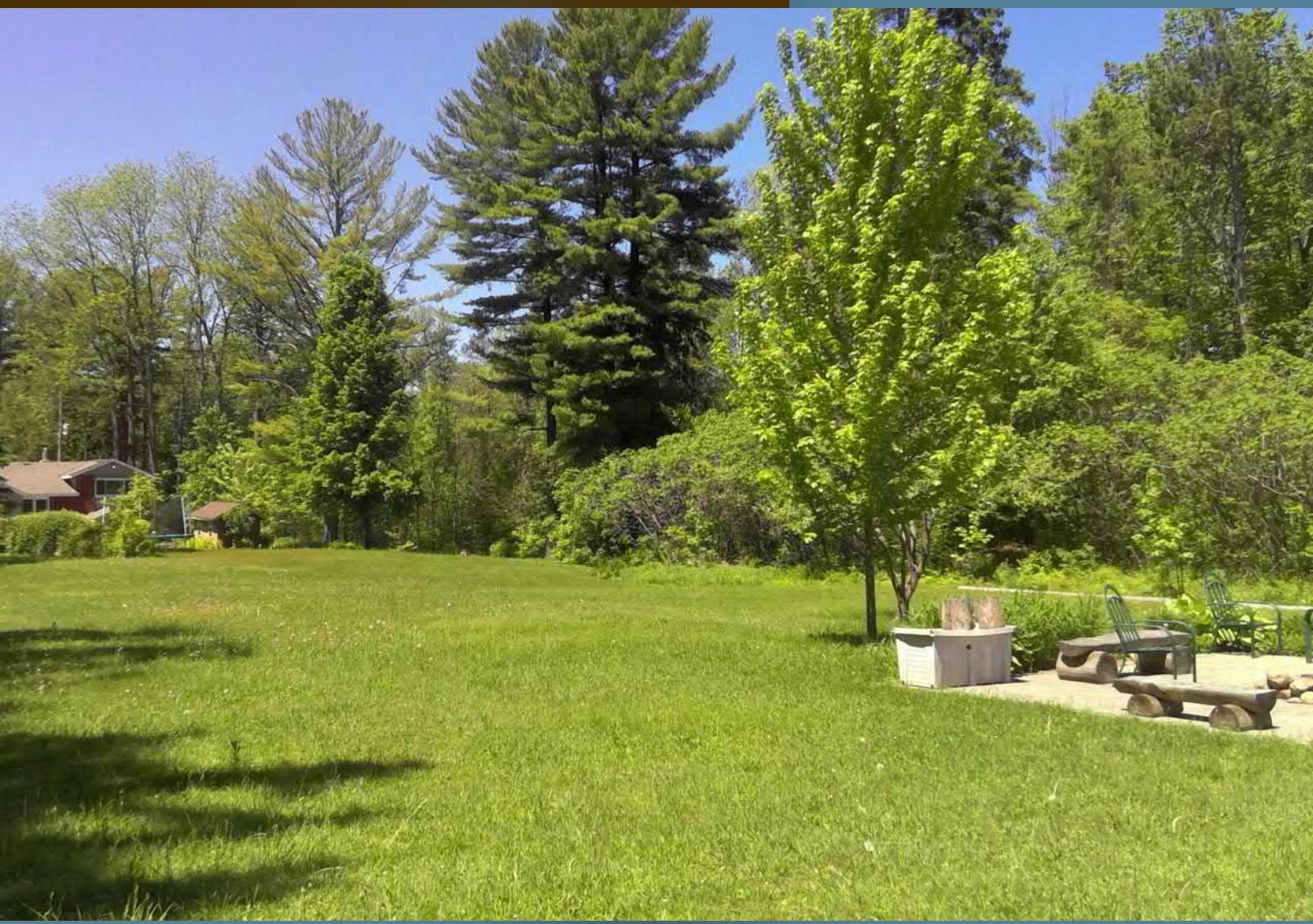
R. C. KIRKPATRICK
ONTARIO LAND SURVEYOR

R. C. KIRKPATRICK
ONTARIO LAND SURVEYOR
25 DUNLOP STREET EAST
BARRIE ONTARIO
PHONE: 728-1255

DRAWN A.F.S	CHK'D E.J.B
DATE JULY 25, 1974	JOB No RK-3295
SCALE 1 INCH = 100 FEET	

Natural Heritage Evaluation

2337 25th Sideroad, Alcona
Town of Innisfil
August 2024



RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

Table of Contents

List of Figures

List of Appendices

1 BACKGROUND

RiverStone Environmental Solutions Inc. (hereafter, "RiverStone") was retained by Raz and Eloise Giancola (the 'proponent') to complete a Natural Heritage Evaluation (NHE) for a property described as 2337 25th Sideroad, Alcona, Town of Innisfil (hereafter, "subject property"; **Figure 1**). The subject property is approximately 1 ha in size and is located in a built-up portion of the settlement area of Alcona. The surrounding landscape is largely characterized by residential areas of varying density. It is our understanding that the proposed development includes severance of two new lots from the existing subject property. One of the proposed new lots would support an existing on-site dwelling, while a second created lot and the retained lot would be vacant. To our knowledge, there are currently no plans or applications for development on either the created or retained lots.

The subject property is located within a designated settlement area and is zoned for a combination of Residential uses and Environmental Protection (per Town Zoning Bylaw By-Law 080-13). Schedule B1 to the Town's Official Plan (OP) similarly designates the subject property as a combination of 'Residential Low Density 1', 'Key Natural Heritage Features & Key Hydrologic Features', and 'Hazard Land Area Overlay' (**Appendix 1**). The latter two designations are applied to the same area that is zoned for EP, a narrow, wooded riparian corridor that encompasses a minority portion of the parcel along its northern boundary.

In addition to existing land use designations, Appendix 9 and 10 to the OP identify natural features throughout the Town limits, with features mapped on the property being limited to a 'Stream Corridor'. The property is located within the watershed-based planning jurisdiction of the Lake Simcoe Region Conservation Authority (LSRCA), with a portion regulated by this agency under Ontario Regulation 41/24 of the *Conservation Authorities Act* (see **Appendix 1**). As with designations discussed above, the LSRCA regulated area reflects hazard limits associated with a stream corridor. Despite this identified stream corridor, most of the property is represented by existing residential amenity space.

It is our understanding that this NHE has been requested by the Town to demonstrate conformity with policies of the Town's OP. In addition, the NHE is intended to inform the approval agency in their review of conformity with provincial planning policies and other environmental regulations as applicable. RiverStone's assessment has been undertaken to evaluate the application for consent to sever, including a review of whether the proposed parcel configuration is appropriate (from a natural heritage perspective) and identifying any potential impacts resulting from the prospective development.

2 APPROACH AND METHODS

The approach and methods used to carry out this NHE are detailed in this section. Broadly speaking, this includes:

1. Identifying a study area in which to focus assessment efforts.
2. Gathering background biophysical information for the study area to become familiar with existing natural heritage feature mapping and records of features and species of conservation interest prior to the site investigation.

3. Conducting site investigations and targeted survey methods (where appropriate), as well as consulting with relevant agencies, to field-verify the presence or absence of relevant features, *e.g.*, woodlands, drainage features, habitat for endangered or threatened species, etc.
4. Determining whether implementation of the proposed development plan will result in adverse impacts to natural heritage features, and to identify ways in which such impacts can be mitigated via avoidance, minimization, and/or compensation measures.
5. Providing an assessment of consistency and conformity of the proposed development plan with applicable municipal, provincial, and federal environmental policies.

2.1 Identification of Study Area

The primary focus of this assessment is the subject property on which development is proposed. As such, the study area for this NHE is equivalent to the limits of the subject property as shown on **Figure 1** and **Figure 2**. Informally, the study area also incorporates a 120 m radius around all limits of the proposed development footprint, except where existing built development disrupts any functional connection to lands within this 120 m radius. This is intended to ensure appropriate consideration for natural heritage features and functions of adjacent lands, consistent with direction in the Natural Heritage Reference Manual (NHRM) under the Provincial Policy Statement (PPS). In this case, we consider the adjacent arterial roadway (25th Sideroad), as well as existing residential subdivisions to the south and east, to be functional breaks in the adjacent land widths. Natural features that may occur opposite of these areas are not considered herein.

2.2 Background Information Review

Background biophysical information pertaining to the study area was collected from a variety of sources. These include:

- **Town of Innisfil Official Plan** & Schedules (Nov 2018)
- **Ministry of Natural Resources and Forestry (MNRF) Natural Heritage Areas and Natural Heritage Information Centre (NHIC)** database regarding information on occurrences of SAR and provincially tracked species (squares: 17PK1609); accessed July 2024, at: http://www.giscoeapp.lrc.gov.on.ca/Mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US).
- **Species at Risk (SAR) range maps** (accessed July 2024 at: http://www.ontario.ca/environment-and-energy/species-risk-ontario-list).
- **iNaturalist** (accessed July 2024 at: https://www.inaturalist.org).
- **Ontario Breeding Bird Atlas (OBBA) database and the Atlas of the Breeding Birds of Ontario, 2001–2005** (Cadman et al. 2007) regarding birds that were documented to be breeding in the vicinity of the study area during the 2001–2005 period (accessed July 2024 at: http://www.birdsontario.org/atlas/squareinfo.jsp).
- **Ontario Reptile and Amphibian Atlas (ORAA)** database regarding records of reptiles and amphibians that have been observed within the vicinity of the study area (accessed July 2024 at: http://www.ontarioinsects.org/herpatlas/herp_online.html).

- **Distribution of Fish Species at Risk** generated by Fisheries and Oceans Canada (accessed at: http://www.dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html).
- **Atlas of the Mammals of Ontario** (Dobbyn 1994) regarding mammal records within and adjacent to the study area.
- **Physiography of Southern Ontario** (Chapman and Putnam 2007) for information pertaining to the physiography and soils of the study area and adjacent lands.
- Digital Ontario base maps and aerial photography resources

2.3 Site Assessment Methods

The sections below outline the various methods used to characterize and assess potential features and functions within the subject property. RiverStone provided an outline of our proposed study scope to LSRCA in November of 2022; however, a scope of work was not finalized at that time and the project was subsequent placed on temporary hold. As it is our understanding that LSRCA is no longer providing technical natural heritage review on this application, a scope of work for this NHE has not been formally confirmed with any agency/peer reviewer. Nevertheless, we expect that the extent of work undertaken is appropriate and sufficient given the context for the property and the application.

2.3.1 *Habitat-based Wildlife Assessment*

RiverStone's primary approach to site assessment is habitat-based. We first focus on evaluating the potential for significant features and species within an area of interest, prior to undertaking any targeted assessments or surveys. An area is considered potential habitat if it satisfies several criteria, usually specific to a species, but occasionally characteristic of a broader group (*e.g.*, several species of turtles use sandy shorelines for nesting, several species of bats use cavity trees as day roosts and maternity sites, etc.). If habitat features are demonstrably absent from a study area, then targeted surveys would not be considered warranted to further support conclusions of the assessment.

Physical attributes of a site that can be used to assess habitat function include structural characteristics (*e.g.*, age and composition of forest canopy, water depth), ecological community (*e.g.*, meadow marsh, rock barren, coldwater stream), and structural connectivity to other habitat features required by a species of interest or indicator species. Species-specific habitat preferences and/or affinities are determined from status reports produced by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), Cadman et al. (2007), unpublished documents, and direct experience.

2.3.2 *Targeted Wildlife Assessment*

Where appropriate, RiverStone may complete targeted assessments in accordance with applicable standard methods and protocols. Targeted survey efforts may be undertaken due to one or more triggers, such as a specific request from an approval authority, an existing record for a species of interest, or a limitation to a habitat-based assessment. For this study, targeted survey methodologies were employed to support inventory and habitat assessment for multiple species and/or groups, as described in **Sections 2.3.2.1** and **2.3.2.2** below. RiverStone's plan for targeted survey effort was intended to inform a review of potential significant wildlife habitat functions as well as compliance and potential authorization requirements of the ESA.

2.3.2.1 Breeding Bird Survey

Breeding bird surveys are conducted following general standards of the Ontario Breeding Bird Atlas (OBBA) protocol (Bird Studies Canada et al. 2001). Surveys are conducted at the appropriate time of day (between dawn and 5 hours after dawn), and during appropriate weather conditions (no rain, wind speed ≤3 on the Beaufort Wind Scale). The purpose of this exercise is two-fold: to identify the presence of potential threatened/endangered bird species, and/or to identify species that may indicate the presence of significant wildlife habitat (SWH) associated with one or more vegetation communities. The timing, conditions, and other details of RiverStone's breeding bird surveys is provided in **Table 1**. Further discussion on the results of this work is provided in **Section 3**, with potential additional implications pertaining to development constraints discussed in further sections as appropriate.

2.3.2.2 Vascular Plant Survey

Vascular plants are typically inventoried during vegetation community classification efforts and other on-site surveys. Additional observations may be recorded incidentally as part of any other field data collection efforts. In this case, surveys were conducted across the spring and summer growing season, allowing for observation of vascular plants during peak growing conditions. RiverStone maintains a working list of observed vascular plant species and collects field samples of unknown species for future verification. A summarized vegetation list is prepared and reviewed to determine if any observed species are identified as having a conservation status that is relevant within the jurisdiction. Conservation status may include a listing as special concern, threatened, or endangered under the provincial ESA and/or a sub-national conservation rank of S1-S3, as administered by the provincial Natural Heritage Information Center (NHIC)

2.3.3 *Physical Assessment (Topography, Surficial Geology, & Drainage)*

The geophysical setting of the study area was determined using topographic mapping, soils mapping, geological mapping, aerial photography, and descriptions gathered through on-site investigations. Drainage features (where present) are identified through the review of background mapping resources and/or delineated in the field.

2.3.4 *Vegetation Community Assessment*

All natural vegetation communities on the subject property were mapped according to Ecological Land Classification (ELC) community tables (Lee et al., 1998). ELC defines ecological units or communities based on bedrock, climate (temperature, precipitation), physiography (soils, slope, aspect), and corresponding vegetation. Use of the system permits biologists and other land managers to use a common language to describe vegetation communities, which in turn facilitates the identification of communities likely to support certain natural heritage features or functions. The ELC system is an organizational framework that can be applied at different scales. The ecological units most useful for site-specific evaluations are ecosites and vegetation types (also known as ecoelements).

In our experience, the ELC classification key is not comprehensive and, as such, improvised classifications are occasionally used to describe communities, e.g., anthropogenic features. Vegetation communities were delineated via aerial photo interpretation and subsequently confirmed and refined in the field. The boundaries of any identified wetland boundaries were delineated in accordance with the "50% wetland vegetation rule" as directed by the Ontario Wetland Evaluation System (OWES), where feasible. Features boundaries, where identified by RiverStone, have been collected by a qualified

expert certified in both ELC and OWES and should be considered accurate for the purpose of this assessment.

2.3.5 *On-Site Investigations*

The background review of biophysical information and general preliminary assessment informed the scoping of a data collection activities undertaken in 2024. The site investigations were focused on characterizing and delineating biophysical features that are considered relevant under the specified scope of this assessment, including woodlands, wildlife habitat, and biophysical characteristics of the site as they relate to potential habitat for endangered or threatened species.

Overall, the scope of on-site data collection effort was considered appropriate given the location and scale of the proposed development plan. Evidence for the presence of a species (or use of an area by a species) was determined from visual and/or auditory documentation (*e.g.*, song, call) and/or observation of nests, tracks, burrows, browse, and scats (where applicable). Discrete feature boundaries (where present) were delineated with a high-accuracy GPS receiver and all relevant features were photographed and catalogued for inclusion in this report (**Appendix 2**).

Table 1 below summarizes the details of field investigations and primary tasks undertaken in support of the NHE.

Table 1. Site Investigation Summary.

Date	Primary tasks	Staff		Hours Spent on Site
May 24, 2024	General recon review, ELC, Vascular Plant Survey, Breeding Bird Survey 1, general SAR habitat assessment	Mike Francis	Air Temperature: 20°C; Beaufort Wind: 1; Cloud Cover: 0%; Precipitation: none	4 hours
June 20, 2024	Breeding Bird Survey 2, Additional ELC/summer Plant Inventory	Mike Francis	Air Temperature: 21-26°C; Beaufort Wind: 1; Cloud Cover: 20%; Precipitation: none	2 hours

2.4 Key Natural Heritage Feature Assessment

Provincial and local planning policies employ varying terms for natural heritage features and designations that have recognized 'statuses' within the applicable planning jurisdiction. The study area is located within the provincial planning area of the Growth Plan for the Greater Golden Horseshoe ('Growth Plan') and the Lake Simcoe Protection Plan (LSPP). The terminology used in this report is consistent with the Growth Plan and LSPP, including reference to relevant features as 'key natural heritage features' (KNHF) and 'key hydrologic features' (KHF). RiverStone conducted a review of the background information sources identified in **Section 2.2** to determine if KNHF/KHFs have been identified in association with the subject property by the province and/or local planning authority. The definition of KNHF/KHFs is generally consistent under both the Growth Plan and LSPP, including the following:

- Permanent & intermittent streams
- Inland lakes and their littoral zones

- Seepage areas and springs
- Wetlands (including provincially significant wetlands)
- Habitat of endangered and threatened species
- Fish habitat
- Areas of natural and scientific interest (life science)
- Significant valleylands
- Significant woodlands
- Significant wildlife habitat
- Sand barrens, savannahs, tallgrass prairies, and/or alvars.

RiverStone assesses the potential presence of each of the above KNHF/KHFs in accordance with applicable technical guidance documents, including the following:

- *Technical Definitions and Criteria for Identifying Key Natural Heritage Features and Key Hydrologic Features for the Lake Simcoe Protection Plan* (MNRF 2015)
- *Natural Heritage Reference Manual (NHRM) for the Natural Heritage Policies of the Provincial Policy Statement* (MNRF 2010)
- *Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E* (MNRF 2015).

The potential presence/absence of relevant species of conservation interest, such as endangered and threatened species, are assessed using a combination of the background information review outlined in **Section 2.2** and the habitat-based approach outlined in **Section 2.3.1**. Our assessment of KNHF/KHFs is provided in **Section 4** of this report.

2.5 Impact and Mitigation Assessment

To carry out a rigorous and defensible ecological assessment of potential impacts associated with the proposed development, RiverStone employs the following approach:

1. *Predict* impacts to identified natural heritage features within the study area based on the proposed development plan (from construction to post-completion), including both direct (*e.g.,* vegetation clearance) and indirect (*e.g.*, light pollution, encroachment post-development) impacts.
2. *Evaluate the significance* of predicted impacts to identified natural heritage features based on their spatial extent, magnitude, timing, frequency, and duration.
3. *Assess the probability or likelihood* that the predicted impacts will occur at the level of significance expected (*e.g.,* high, medium, low probability).

In instances where the potential for negative impacts to natural heritage features exists, mitigation measures are offered to avoid, minimize, and/or compensate for such impacts. RiverStone's natural heritage impact assessment and recommended mitigation measures are provided in **Section 5**.

2.6 Assessment of Conformance with Applicable Environmental Policies

There are several environmental policies (*e.g.*, statutes, regulations, plans, guidance documents, etc.) that may apply to the study area and proposed development which are listed below. A general assessment of the proposed development's consistency and conformity with these environmental policies is offered in **Section 6**.

- Federal *Fisheries Act*, R.S.C. 1985
- Federal *Migratory Birds Convention Act*, S.C. 1994, c. 22
- Provincial Policy Statement, 2020, pursuant to the *Planning Act*, R.S.O. 1990, c. P.13
    - Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005.
    - Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E.
- Provincial *Endangered Species Act*, S.O. 2007, c. 6
- Growth Plan for the Greater Golden Horseshoe, 2020 Consolidation
- Lake Simcoe Protection Plan (2009)
- Ontario Regulation 41/24 under the *Conservation Authorities Act*, R.S.O. 1990, c. C.27
- County of Simcoe Official Plan, 2016
- Town of Innisfil Official Plan, 2018

3 EXISTING CONDITIONS

3.1 General Site Conditions and Land-uses

The subject property is contained within the boundaries of the Alcona urban area, one of the larger settlement areas within the Town of Innisfil. The property contains wide frontage on the 25th Sideroad, but also connects with Chappell Ct. along the rear lot line. There is a dwelling and multiple accessory structures present, as well as a broad swath of grassed amenity space that is used for recreational purposes, gardens, etc. The shallow ravine along the northern portion of the property is in a generally natural condition and does not appear to be actively used for any specific purpose.

The property is one of a few larger in-fill lots surrounded by relatively dense residential subdivisions. These neighborhoods extend a considerable distance to the north and south, with the built boundary of Alcona extending over 500 m east to the Lake Simcoe shoreline. To the west, the same ravine that passes through the subject property transitions to a larger natural complex of wetlands and woodlands. Beyond the limits of the local settlement area, the broader landscape is largely represented by agricultural cover.

3.2 Topography, Physiography, & Drainage

The subject property is contained within the Lake Simcoe drainage basin, part of the broader physiographic region known as the Simcoe Lowlands (Chapman and Putnam 1984). Topography across most of the subject property is flat, with a transition in the north portion of the property to a shallow, north-facing slope. The local area is depicted in provincial soil mapping as part of an 'urban area'; however, soils directly west of 25th Sideroad are described as a complex of sandy loams, part of

the Tioga and Alliston series. Tioga soils are very well draining and more likely to occur within the tableland portions of the subject property. Alliston soils are imperfectly draining and likely occur in association with the Leonard Creek valleyland, consistent with soil mapping for west of 25th Sideroad.

A single drainage feature known as Leonard's Creek traverses a small portion of the subject property, one of several low-order streams comprising the 'Innisfil Creeks' subwatershed (LSRCA 2012). The feature drains an upstream catchment area of approximately 3-4 km^2, draining a large swath of agricultural lands and large wetland complex west of 25th Sideroad. A scoped stream assessment was undertaken during our June 20 (2024) site visit. The feature enters the property through a large (~1 m) steel culvert under 25th Sideroad. The stream is characterized by small meanders and a series of riffles and runs throughout the length of the property. Average bank full width and depth is 2-3 m and 0.5 m, respectively. The average depth of standing water at the time of site visit was 10 cm, with a measured water temperature of 20.5°C (air temp. ~25). Substrate includes a mix of coarse sand and small gravel. Several sections of bank are experiencing minor erosion and undercutting, though the banks are generally well vegetated and mostly well shaded by an upper canopy.

3.3 Vegetation Communities

Existing vegetation communities within the subject property were assessed through a combination of background review and on-site investigation. A desktop exercise was undertaken to map vegetation community boundaries using background information sources and current aerial photographs; the mapped vegetation communities were then ground-truthed to a high level and refined where necessary during the site investigation. Given the successional nature of some on-site vegetation assemblages, the assigned ELC codes/descriptions may be general in nature and non-conforming to the ELC guide. Vegetation community mapping with classifications generally based on Lee et al (1998) is provided on **Figure 2**, and descriptions are provided below. Each description includes a list of representative plant species within each community. Overall plant species diversity within the subject property is considered low, with invasive/non-native species being common and contributing to overall low quality and diversity across the site. A list of plant species observed within the study area during RiverStone's site investigation is included as **Appendix 3**.

3.3.1 *ANTH: Anthropogenic Area (Residential Amenity Space/Maintained Lawn)*

This classification is assigned to the portion of the study area containing an existing dwelling, grassed amenity space, and scattered landscaping trees. This includes garden areas and multiple small groupings of trees, such as Black Walnut (*Juglans nigra*) and Norway Spruce (*Picea abies*), that are entirely encompassed within maintained areas. No natural vegetation assemblages are present in this location.

3.3.2 *FOD/CUW: Fresh-Moist Deciduous Forest/Cultural Woodland*

This community is a combination of cultural/successional woodland along its margins, transitioning to fresh-moist riparian forest in its core. Species composition and structure is highly variable, but predominant canopy cover includes a mix of Ash (*Fraxinus americana, F. pennsylvanica*), White Cedar (*Thuja occidentalis*), Basswood (*Tilia americana*), American Elm (*Ulmus americana*), and Black Walnut. There is a small patch dominated by White Spruce and Red Pine toward the eastern limit of the property, and edges are largely composed of tall Staghorn Sumac (*Rhus typhina*) cover. Common sub-canopy species including Alternate-leaved Dogwood (*Cornus alternifolia*) and Common Buckthorn (*Rhamnus cathartica*).

The groundcover community throughout this ecosite is similarly highly variable, reflective of both the adjacent residential areas and the variable soil moisture along the valley slope. There are several large patches of non-native garden flora, such as Lily of the Valley (*Convallaria majalis*) and Goutweed (*Aegopodium podagraria*). Native groundcover includes species such as Sedge (*Carex gracillima*), Jack in the Pulpit (*Arisaema triphyllum*), Ostrich Fern (*Matteuchia struthiopteris*), and Bulblet Fern (*Cystopteris bulbifera*).

3.4 Fish & Wildlife Habitat

The combined results of RiverStone's background review and on-site assessment indicate that the study area is likely to support general fish habitat in association with the on-site watercourse. A more detailed discussion of potential fish habitat functions is provided under **Section 4.1**.

Given the location setting, within a developed portion of an urban area, any wildlife species present within the study area are likely to be tolerant of anthropogenic influences and disturbances. It is assumed that habitat exists directly on the subject property for limited generalist species, such as Raccoon (*Procyon lotor lotor*), Grey Squirrel (*Sciurus carolinensis*), and Coyote (*Canis latrans*). While our site investigation did not document any evidence of usage by herptile species or areas of likely habitat, there is inherent potential for common species, such as Eastern Gartersnake (*Thamnophis sirtalis*) to occur.

Investigations also included a targeted inventory of breeding birds, documented across two survey stations within the subject property (see **Figure 2**). The species documented during this survey are listed in **Appendix 4**. All observed species are considered common locally, regionally, and provincially.

In general, the subject property and associated small woodland patch is relatively isolated and would not be expected to provide habitat for wide-ranging or area-sensitive mammals, or important wildlife corridors or linkages.

We note that the subject property and/or surrounding landscape may represent habitat for one or more species protected under the ESA, as evidenced by existing records within the NHIC database, as well as indicative habitat features observed by RiverStone staff during the assessment. All relevant observations of fish and wildlife species and/or habitat features, including individuals of species at risk or other species of conservation concern, are discussed in **Section 4** of this report within the context of KNHFs.

4 KEY NATURAL HERITAGE/HYDROLOGIC FEATURE ASSESSMENT

Based on the biophysical information collected during background information gathering, and the summarized existing conditions of the subject property as described above, **Table 2** below identifies all KNHFs (and KHFs) that are present (or potentially present) within the subject property and/or adjacent lands. RiverStone's rationale for identifying such features is provided in the sections that follow.

Table 2. Summary of the Assessment of Key Natural Heritage Features and Key Hydrologic Features within the Subject Property and/or Adjacent Lands.

Key Natural Heritage/Hydrologic Feature	Presence/Absence within the Subject Property/Adjacent Lands
Permanent & Intermittent Streams	*Present*. See **Section 4.1**
Inland Lakes and Littoral Zones	*Absent*. See **Section 4.2**
Seepage Areas and Springs	*Absent*. See **Section 4.3**
Wetlands (Including PSWs)	*Absent*. See **Section 4.4**
Fish habitat	*Present*. See **Section 4.5**
Sand barrens, savannahs, tallgrass prairies, and alvars	*Absent.* See **Section 4.6**
Areas of Natural and Scientific Interest	*Absent*. See **Section 4.7**
Significant Valleylands	*Absent.* **See Section 4.8**
Significant Woodlands	*Absent.* **See Section 4.9**
Habitat of Endangered and Threatened Species	*Potentially Present*. See **Section 4.10**
Significant Wildlife Habitat	*Potentially present.* **See Section 4.11**

Shaded rows denote KNHF/KHF that are present or have the potential to be present within the study area.

4.1 Permanent & Intermittent Streams

There is a small watercourse known as Leonard's Creek that traverses the northern boundary of the subject property (see **Figure 2**). A technical summary of morphology and general stream characteristics is provided in **Section 3.2**. The feature appears to support a permanent flow regime. An assessment of potential impacts to this feature resulting from implementation of the development plan is provided in **Section 5.1.**

4.2 Lakes (and Littoral Zones)

No lakes were identified within the study area during RiverStone's on-site assessment or background information review. No further assessment undertaken.

4.3 Seepage Areas and Springs

No seeps or springs were identified within the study area during RiverStone's on-site assessment or background information review. No further assessment undertaken.

4.4 Wetlands

No wetlands were identified within the study area during RiverStone's on-site assessment. According to our background review, the nearest mapped wetland (a PSW) occurs approximately 100 m west of the subject property; however, this feature is functionally separated by a major roadway and not regarded as part of the study area. As discussed under **Section 3.3**, the stream that traverses the subject property contains some riparian vegetation along its banks; however, there is no broad coverage of wetland vegetation that would otherwise warrant identification of a distinct wetland vegetation community/ecosite. No further assessment undertaken.

4.5 Fish Habitat

The watercourse that traverses the property, Leonard's Creek, supports a permanent flow regime and is considered direct fish habitat. No targeted fish inventory was conducted as part of this study; however, background information is available from local authorities to support an understanding of habitat functions.

LSRCA's Innisfil Creek Subwatershed Plan lists the following species as having been captured during surveys in Leonard's Creek between 1975-2011: White Sucker, Central Mudminnow, Northern Redbelly Dace, Finescale Dace, Emerald Shiner, Common Shiner, Blacknose Shiner, Blunthose Minnow, Fathead Minnow, Blacknose Dace, Creek Chub, Brook Stickleback, Rock Bass, Pumpkinseed, and Mottled Sculpin. Leonard's Creek is one of a handful of creeks within the subwatershed that supports cold water species and is managed as a cold water system. The subwatershed report notes that, cold water species presence is sparse, with Brook Trout not known to occupy the system, but other species such as Mottled Sculpin known to occupy lower reaches. The ecological integrity of the system is rated as fair to good across its length.

An assessment of potential impacts to fish habitat resulting from implementation of the development plan is provided in **Section 5.1.**

4.6 Sand Barrens, Savannahs, Tallgrass Prairies, and Alvars

No vegetation communities representing sand barrens, savannahs, tallgrass prairies, or alvars were identified within the study area during RiverStone's on-site assessment or background information review. No further assessment undertaken.

4.7 Areas of Natural and Scientific Interest (Life Science)

It is the responsibility of the Ministry of Natural Resources and Forestry (MNRF) to designate and administer mapping for areas of natural and scientific interest (ANSIs). Based on available background mapping, the nearest life science ANSI occurs nearly 10 km south of the subject property. No further assessment undertaken.

4.8 Significant Valleylands

Significant valleylands represent valleys or other landform depressions with recognized significant attributes, such as supporting natural vegetation cover with associated ecological linkages and corridors. Valleylands are typically associated with a watercourse feature. Designation of significant valleylands is ultimately the responsibility of the relevant planning authority; however, site-specific designation of these feature can be undertaken using standardized criteria endorsed by the province and/or the planning authority.

The stream corridor that traverses the northern portion of the property is representative of a valleyland; however, given its small size and urban setting, we do not expect that this feature would constitute a significant valleyland. Applicable OP documents or other resources do not appear to designate lands within the study area as significant valleylands. No further assessment undertaken.

4.9 Significant Woodlands

Significant woodland features represent areas of forested cover with recognized significant attributes, such as large contiguous blocks of woodland, woodlands with unique characteristics, and/or woodlands

that support economic values, cultural values, or other ecosystem services. It is generally the responsibility of the applicable planning authority to designate significant woodland on a comprehensive basis; however, where appropriate, identification of candidate significant woodland can be undertaken on a site-specific basis using standardized criteria endorsed by the province and/or the planning authority.

Based on our background review, Appendix 10 to the OP (see **Appendix 1**) contains a layer for significant woodlands, indicating that the Town has undertaken a comprehensive exercise to review and classify these features in the planning jurisdiction. The subject property is not encompassed within a mapped significant woodland area. Therefore, it does not appear that local planning authorities regard the woodland patch associated with the subject property as significant woodland.

Notwithstanding existing designations, RiverStone provides an additional site-specific assessment herein to determine if a designation of significant would be appropriate based on applicable technical criteria. The following technical guidelines provide support to practitioners in the identification of significant woodland features within the jurisdiction:

- *Technical Definitions and Criteria for Identifying Key Natural Heritage Features and Key Hydrologic Features for the Lake Simcoe Protection Plan* (MNRF 2015)

Table 3 below outlines the various criteria provided in this technical guideline, with interpretation provided to assess the significance of the woodland feature identified within the study area.

Table 3. Assessment of significant woodland criteria contained in LSPP Technical Definitions guideline.

Criteria	Description	Area Threshold (north region)	Assessment
Size	Any woodlands of this size or greater are significant	10 hectares or more	The woodland feature within the study area covers an area of approximately 2 ha. **Does not meet criteria.**
Natural Composition	Any woodlands containing this area of naturally occurring (not planted) trees listed in the table in Appendix D that meet the definition of woodland	4 hectares or more	The woodland feature within the study area is composed of both naturally structured woodland communities and areas where the canopy is partly composed of exotic species. However, the continuous woodland feature within the study area only covers an area of approximately 2 ha. **Does not meet criteria.**
Age or Tree Size	Any woodlands of this size with either: a) 10 or more trees per ha that are either greater than 100 years old or 50 cm or more in diameter or b) containing a basal area of at least 8 square metres per	4 hectares or more	Portions of woodland within the subject property do contain mature trees; however, the continuous woodland feature within the study area only covers an area of approximately 2 ha. **Does not meet criteria.**

	hectare in native trees that are 40 cm or more in diameter		
Proximity	Any woodlands of this size wholly or partially within 30 metres of a: significant wetland; significant habitat of an endangered or threatened species; significant woodland	4 hectares or more	The woodland feature within the study area is not located within 30 m of significant wetland or any confirmed significant habitat of an endangered species. The woodland contains both Black Ash and Butternut trees (endangered); however, the continuous woodland feature within the study area only covers an area of approximately 2 ha. **Does not meet criteria.**
Rarity	Any woodlands of this size containing: a provincially rare treed vegetation community with an S1, S2 or S3 in its ranking by the MNR's NHIC; or habitat of a woodland plant species with an S1, S2 or S3 in its ranking or an 8, 9, or 10 in its Southern Ontario Coefficient of Conservatism by the NHIC, consisting of 10 or more individual stems or 100 or more square metres of leaf coverage	0.5 hectares or more	The woodland feature does not contain a provincially-rare treed vegetation community. The woodland contains multiple Butternut trees (S3); however, only three total trees were documented, which does not meet the threshold of at least 10 stems. **Does not meet criteria.**

Based on our assessment above, it is RiverStone's opinion that the discussed woodland feature within the study area is not a significant woodland and does not represent a KNHF for the purpose of applying policies of the LSPP or Town of Innisfil OP. Notwithstanding, it is acknowledged that the woodland feature can be assumed to provide general habitat functions, such as seasonal habitat for migratory birds. Therefore, the impact discussion provided in **Section 5** addresses potential impacts to general woodland habitat, providing mitigation recommendations where appropriate

4.10 Habitat of Endangered and Threatened Species

To assess the potential presence of individuals and/or habitat for endangered and threatened species within the study area, RiverStone staff conducted the following:

- Review of the list of species designated as endangered and threatened in Ontario, as per Schedules 2 and 3 of Ontario Regulation 230/08 [(Species at Risk in Ontario List (SARO List)], located here: https://www.ontario.ca/laws/regulation/080230. In our experience, the potential presence of most provincially endangered and/or threatened species can be ruled out based on their limited geographical ranges in the province and/or a lack of specific habitat conditions which they require to carry out key life processes.
- Reviewed the NHIC database for existing records of element occurrences for endangered or threatened species (data square 17PK1609). Databases of iNaturalist, OBBA, and ORAA were also reviewed as of July 2024.

- On-site investigation undertaken in 2024, during which vegetation conditions were characterized for detailed habitat-based assessment.

Information from the above assessment process was used to inform a site-specific screening, as contained in **Appendix 5**. Through this screening, the species discussed below were identified as having the potential to be present within the subject property or directly adjacent lands. Where relevant, potential development-related impacts to these species are discussed further in **Section 5.2**.

4.10.1 Black Ash (*Fraxinus nigra*; Endangered)

Black Ash is most frequently found in wetlands but can also be located in upland settings on sheltered valley slopes or in otherwise moist, cool locations where a local seed source is present. Local populations of Black Ash in the Innisfil area have been largely eliminated in recent years by infestation of Emerald Ash Borer, thought individuals persist on the landscape.

A single Black Ash sapling was identified on the subject property along the upper slope of the Leonard's Creek corridor. The individual was noted as generally healthy, measuring approximately 7.5-8 cm diameter. An assessment of potential impacts to this protected species resulting from implementation of the development plan is provided in **Section 5.2.**

4.10.2 Butternut (*Juglans cinerea*; Endangered)

Butternut is mostly associated with upland and well-draining riparian forests, preferring open or semi-open settings due to a general intolerance of shade for regeneration. Butternut populations have been greatly reduced in Ontario due to infection by an exotic pathogen, causing a typically fatal disease known as Butternut 'canker'.

Three Butternut saplings/young trees were identified on the subject property along the upper slope of the Leonard's Creek corridor, including along the edge of manicured residential space. Individuals were observed to be in a generally healthy condition. Butternut is known to hybridize with other walnut (Juglans) species, with the resulting offspring not protected under provincial regulations. In the absence of genetic testing, it is estimated that on-site trees are native in origin. An assessment of potential impacts to this protected species resulting from implementation of the development plan is provided in **Section 5.2.**

4.10.3 Endangered Bat Species *(Myotis lucifugus, M. septentrionalis, Perimyotis subflavus)*

These species, assessed as a species guild (related species with similar habitat characteristics), include several bat species listed as endangered in Ontario. Bats are highly mobile; however, individuals and groups of the noted bat species are also recognized as having some degree of fidelity to suitable local sites for daily and seasonal 'roosting' activities. While some species (*i.e.*, *Myotis lucifugus*) exhibit a preference for roosting in anthropogenic structures, natural roosting sites are also important. Natural roosting sites are generally associated with mature forests containing a sufficient density of large trees in various stages of decay, otherwise known as 'snags'. Snags provide features such as cavities and/or loose bark, on which bats rely for shelter and thermoregulation throughout the active season.

Treed features within the subject property include a combination of successional woodland and scattered landscape trees. Trees within the landscaped residential portion of the property were observed to be in a generally healthy condition. It is noted that the property owners appear to have regularly removed trees over time with health issues and defects to avoid hazard issues, thereby removing those

trees that may otherwise have supported bat roosting habitat. Trees within the Leonard's Creek corridor are generally young to mid-aged, lacking mature trees and decaying canopy components that would be ideally suited to supporting cavity formation. Being within a mostly urban landscape and lacking any open wetlands or other ideal foraging area, the subject property would not be amenable to supporting quality foraging habitat for bats. In general, there is no expectation that the subject property supports significant functional habitat for bats.

Current direction from MECP prescribes that targeted surveys of treed habitats/snags are not necessary to quantify the quality/extent of potential habitat for endangered bat species IF a project would involve removal of only a small number of potential maternity or day roost trees in treed habitats (or none at all). This approach assumes that other appropriate mitigation measures (*i.e.*, timing windows) are employed to avoid impacts to individuals of endangered bat species (MECP 2021). For our assessment, it is RiverStone's opinion that significant habitat features for endangered bat species are unlikely to occur within the subject property; however, it is not possible to rule out the potential for *individuals* of endangered bat species (or other bat species) to be present during the active season. Further discussion, including an assessment of potential impacts to individuals of endangered bat species resulting from implementation of the proposed development plan, is provided in **Section 5.2.**

4.11 Significant Wildlife Habitat

SWH represents a range of habitat features that are recognized as providing specialized or otherwise important functions for various forms of wildlife. Designation of confirmed SWH is ultimately the responsibility of the relevant planning authority, and it is our understanding that no specific SWH designations have been applied to the study area. Notwithstanding, it is recognized that SWH features and functions are generally impractical to identify and designate on a broad scale, and candidate SWH can be identified on a site-specific basis, often triggered through a large-scale development application.

To ensure due diligence in this regard, RiverStone has reviewed applicable technical guidance for the identification of specific SWH features and functions as contained in the SWH Criteria Schedules for Ecoregion 6E (MNRF 2015). A preliminary assessment of the criteria schedules is contained within **Appendix 6**. As discussed in **Appendix 6**, the results of RiverStone's field program indicate that there is very limited potential for SWH features/functions to occur on the subject property. The small property size, urban setting, and minor extent of natural vegetation communities are not well suited to supporting many significant functions. Notwithstanding, the following candidate SWH functions may have some potential to occur.

4.11.1 *Bat Maternity Colonies*

Refer to **Section 4.10.3** for discussion regarding the potential for bat maternity habitat to be present on or adjacent to the subject property. While the discussion in **Section 4.10.3** is provided specifically for endangered bat species, the assessment and conclusions are comparable to species that are not protected under the ESA.

4.11.2 Special Concern and Rare Wildlife Species

RiverStone staff have conducted a review of the list of species designated as special concern in Ontario, as per Schedule 4 of Ontario Regulation 230/08, located here: https://www.ontario.ca/laws/regulation/080230. RiverStone further reviewed several biodiversity databases for existing records of element occurrences for special concern or rare species, including: NHIC, iNaturalist, OBBA, and ORAA. On-site investigations further supported a review of what

species may be relevant to the subject property/study area. The NHIC database lists records of the following species within the data squares that overlap the subject property:

- Snapping Turtle (*Chelydra serpentina*; Special Concern)

Snapping Turtle was identified in the NHIC database square that overlaps the subject property. Importantly, we note that these database squares each cover an area of 1 km^2, meaning that the applicable species records may have been documented a considerable distance from the subject property. Moreover, records in the database may be several decades old, meaning that species once recorded in the local area may be no longer relevant (i.e., locally extirpated due to land use changes or other factors). These records are used as a general guide that, combined with professional experience and an on-site review, is used to support a site-specific screening.

Of the vegetation features described on the subject property, there are no features that are well-suited to supporting life processes for Snapping Turtle. A small stream traverses the property that may support seasonal movement of individuals; however, no wetland communities are present that would support typical basking, foraging, and overwintering functions. The remainder of the property is a closed-canopy forest and maintained residential amenity area. The likelihood of this species occurring on the subject property beyond the stream is low.

Based on our on-site surveys and background review, no other rare or special concern species have been identified as likely to occur on the subject property.

5 IMPACT ASSESSMENT & MITIGATION PLANNING

Based on a concept drawing supplied by the proponent, it is our understanding that the proposed development includes severance of two new lots from the existing subject property. One of the proposed new lots would support an existing on-site dwelling, while a second created lot and the retained lot would be vacant. To our knowledge, there are currently no plans or applications for development on either the created or retained lots. The general location of the proposed development in relation to natural features is displayed on **Figure 3**. We note that the development plan depicted in **Figure 3** should not be considered survey grade (*i.e.*, for reference purpose only); formal site plan drawings (see **Appendix 7**) should be cited for specific details on proposed future development footprint(s).

As previously discussed, the subject property is located within a designated settlement area and is zoned for a combination of Residential uses and Environmental Protection (per Town Zoning Bylaw By-Law 080-13). Schedule B1 to the Town's Official Plan (OP) similarly designates the subject property as a combination of 'Residential Low Density 1', 'Key Natural Heritage Features & Key Hydrologic Features', and 'Hazard Land Area Overlay' (**Appendix 1**). The limits of identified KNHF/KHFs (i.e., stream corridor) would be contained within the retained lot. One of the created lots would be overlapped by multiple identified constraints; however, this lot contains an existing dwelling and is already developed for residential uses.

RiverStone's impact assessment below is intended to inform a review of the proposal by the appropriate approval authority and/or technical peer reviewer. Our assessment is based on a review of existing conditions at the time of site investigation, as illustrated on **Figure 2** and in the photographic record contained in **Appendix 2**. The primary purpose of this report is to assess impacts and support

impact mitigation for all features that receive protections under applicable environmental planning policies and regulations. The potential for negative impacts on all identified KNHF/KHFs is discussed in the sections below, and several recommendations are listed to support minimization and avoidance of impacts. In assessing and identifying potential negative impacts through a development process, it is important to highlight how the PPS defines negative impacts, *i.e.*:

> "…*degradation that threatens the health and integrity of the natural features or ecological functions for which an area is identified due to single, multiple or successive development or site alteration activities*"

Importantly, as stated in Section 13.2 of the Natural Heritage Reference Manual (for Natural Heritage Policies of the PPS):

> *The PPS definition for "negative impacts" does not state that all impacts are negative, nor does it preclude the use of mitigation to prevent, modify or alleviate the impacts to the significant natural heritage feature or area*".

RiverStone's impact assessment is intended to be reflective of the above guidance, with consideration for the integrity and function of each feature, and in acknowledgement that not all development and site alteration represents a negative impact. RiverStone's assessment is intended to inform a review of the above proposal by the appropriate approval authority.

5.1 Stream & Fish Habitat

In general, development and/or site alteration activities that occur proximate to streams and fish habitat have the potential to cause negative impacts via the following pathways:

- Alterations of surface water and/or groundwater contributions to streams and wetlands that may result from:
    - Construction staging and detour requirements (*e.g.,* dewatering, etc.);
    - Increased post-construction coverage of impervious surfaces (*e.g.,* roads, roofs, etc.); and,
    - Permanent modifications to existing topography or drainage;
- Increased sediment and/or nutrient loadings to features via runoff exiting the development area from construction to post-completion of the project. This may adversely affect water quality via increased turbidity, nutrient enrichment, contamination by toxic substances, changes in pH, changes in flow or thermal regimes etc.;
- Disruption or loss of habitat for fish and other wetland-dependent wildlife, as well as constructed-related impacts to such wildlife during the construction process; and,
- Increased human activity/encroachment within the stream or wetland post construction, which may result in increased soil compaction, dumping, vandalism, or other disturbances.

While the current application contemplates only the severance of parcels, we can expect that each parcel will support future development (one of the created lots would contain the existing dwelling and would not necessarily be subject to re-development). It is the implied future development (e.g., construction of dwellings) that has the potential to result in impacts to noted features.

The proposed new lot that would be left vacant (SW corner or property) would be located >40 m from the channel of the stream, with intervening lands represented by relatively flat, grassed amenity space and vegetated valley slope. We expect this physical and functional separation allows for simple mitigation of impacts through diligent erosion and sediment controls, work site isolation, and stormwater management. By avoiding construction-related sediment from migrating to the stream, and by ensuring that on-site stormwater management maintains exists drainage patterns, it is expected that any potential impacts to the stream and associated fish habitat can be avoided.

This same mitigation approach can also be applied to future development on the retained lot (east side of property); however, as the retained lot contains the actual stream corridor feature, it is key to establish minimum development setbacks through means other than parcel fabric boundaries. As depicted on **Figure 3**, it is recommended that future development on the retained lot be set back at least 30 m from limits of the creek as represented by the 'top of bank'. This results in protected of all vegetation within the forested stream corridor, as well as some areas beyond the natural vegetation limit. Adhering to this setback will ensure that any future development will support a functional, vegetated buffer from the stream.

The following mitigation measures are recommended to support avoidance of impacts to Leonard's Creek and fish habitat.

- **Maintain a 30 m development setback from the top of bank to Leonard's Creek. This will require that the retained lot achieve access from Chappell Ct. rather than 25th Sideroad (see Figure 3). While portions of the 30 m setback can be maintained as grassed amenity space (as it is currently), no development or site alteration should occur within this setback.**
- **Implement sediment and erosion control measures as per applicable best management practices to isolate the development footprint.**
    - **Sediment fencing must be constructed of heavy material and solid posts and be properly installed (trenched in) to maintain its integrity during inclement weather events.**
    - **Additional sediment fencing and appropriate control measures must be available on site so that any breach can be immediately repaired.**
    - **Regular inspection and monitoring will be necessary to ensure that the structural integrity and continued functioning of the sediment control measures is maintained (i.e., proper installation is not the only action necessary to satisfy the mitigation requirements).**
    - **An on-site supervisor should be responsible for daily inspections of the sediment and erosion control measures during construction activity and record the time and date of inspections, the status of the mitigation measures, and any repairs undertaken.**
    - **Removal of non-biodegradable erosion and sediment control materials should occur once construction is complete, and the site is stabilized.**
- **Best Management practices should be utilized with all machinery and fill being imported to the subject property to ensure that material and tracks are free from invasive species (*Phragmites australis*, etc.).**

- **Machinery should arrive on site in clean condition and is to be checked and maintained free of fluid leaks.**
- **Machinery must be refueled, washed, and serviced within the area isolated by sediment fencing.**
- **Locate all fuel and other potentially deleterious substances within the area isolated by sediment fencing.**
- **Temporary storage locations of aggregate/fill material (where required) should be located within the area isolated by sediment fencing.**
- **Offloading of construction and aggregate/fill materials (where required) should be completed during fair weather conditions. All stockpiled topsoil/overburden (where required) should be piled in low piles and stabilized as quickly as possible (e.g., erosion-prone areas covered with textile) to minimize the potential for runoff and wind erosion.**

5.2 Habitat of Endangered & Threatened Species

As per Section 10 of the ESA, areas of identified habitat for any endangered or threatened species are protected from destruction, unless otherwise authorized. Additionally, Section 9 of the ESA protects individuals of endangered or threatened species, prohibiting individuals from being killed, harmed, or harassed without appropriate authorizations. In many cases, avoidance or mitigation planning is sufficient to ensure that development can occur in a manner that is consistent with the above provisions. The following section(s) provide an assessment of potential impacts to any endangered or threatened species considered relevant to the development application, as determined through our screening exercise (**Appendix 5**) and subsequent assessment in **Section 4.10**.

5.2.1 Black Ash

Black Ash was added to the SARO List as of January 27, 2022, subject to a two-year moratorium before any species- or habitat-level protections were to be applied under Regulation 242/08 of the ESA. The province enacted two regulations in January of 2024 to clarify how Section 9 (species protections) and Section 10 (habitat protections) apply specifically to Black Ash. These regulations (O. Reg. 6/24 & O. Reg 7/24) could be interpreted as species-specific exemptions to how the Act applies to most species. The new regulations are summarized as follows:

O. Reg. 6/24

- The "species protection" prohibitions in subsection 9 (1) (a) of the ESA only apply to trees meeting all of the following:
    - **healthy** Black Ash trees (i.e., the prohibitions would not apply to persons impacting trees assessed as unhealthy)
    - with a stem diameter at breast height of **at least 8 centimetres**
    - located on lands within the boundaries of the municipalities listed in the regulation (**this includes Town of Innisfil**)
- assessments of tree health must be completed by a qualified professional and detailed in a report submitted to the ministry that contains the information required by the regulation, including whether a tree is significantly declining as indicated by its canopy condition qualified professionals may be an arborist, professional forester, forest technician, dendrologist, horticultural technician, botanist, entomologist, or any other person who has expertise in

relation to Black Ash, and who has the expertise, education, training and experience necessary to assess the extent to which a Black Ash tree has been affected by EAB

O. Reg 7/24

- the "habitat protection" prohibitions in subsection 10 (1) of the ESA apply to a **radial distance of 30 metres** around Black Ash trees protected under clause 9 (1) (a) of the ESA

To summarize above, all individual Black Ash within or adjacent to the subject property, measuring 8 cm or larger and that are deemed 'healthy' by a qualified professional are protected under the ESA. A 30 m radius of protection would also be applied to these trees. Conversely, trees that are either <8 cm or deemed unhealthy (per criteria provided in O. Reg. 6/24) are not protected. Any proposed removal of trees receiving protection under the ESA, or site alteration within 30 m of same, may require a permit under the ESA.

The single Black Ash observed on the subject property was healthy and slightly under the 8 cm threshold; however, with continued annual growth, it is expected that this specimen will be eligible for protection in the near future. We conservatively recommend that any future development on created or retained lots adhere to a 30 m setback, as depicted on **Figure 3**. If this cannot be accomplished, the following is recommended to ensure compliance with regulations under the ESA:

- **Conduct an in-season health assessment of individual Black Ash within the subject property. Determine if any individual trees are candidates for ESA protection.**

- **Pending results of the health assessment, avoid development within 30 m of any individual Black Ash eligible for ESA protection OR conduct further consultation with MECP regarding the potential need for a permit under the ESA.**

5.2.2 Butternut

Individual Butternut trees receive standard protections under Section 9 of the ESA. A total of three trees were documented on the subject property during our on-site investigations. Provincial 'Recovery Strategy' documents recommend a minimum 25 m development setback to avoid impacts to regeneration habitat of individual trees. If tree removal or encroachment within the 25 m habitat radius (see **Figure 3**) is determined to be required, a more detailed assessment must be undertaken to ensure compliance with the ESA. Individual Butternut can be removed as per an exemption to the ESA outlined in Ontario Regulation 830/21. To inform this process, a Butternut Health Assessment (BHA) would need to be completed for any effected tree(s). The tree would be categorized based on its condition and assigned a category between 1-3 (with 3 being the healthiest and regarded as highest priority for protection). Pending the outcome of the BHA, further requirements can range from removal of the tree without a requirement to mitigate, to potential compensation plantings or ESA authorizations. We conservatively recommend that any future development on created or retained lots adhere to a 25 m setback, as depicted on **Figure 3**. If this cannot be accomplished, the following is recommended to ensure compliance with regulations under the ESA:

- **Undertake a Butternut Health Assessment if future development would require removal or encroachment within 25 m of the tree.**

- **Pending the outcome of the BHA exercise, if the tree is identified as Category 2 or 3, follow the steps outlined in Section 25 & 26 under Ontario Regulation 830/21 to satisfy conditional exemption for removal of Butternut under the ESA.**

5.2.3 Endangered Bats

Any area of tree cover has the inherent potential to support habitat function for bats, although structure and composition of woodlands/treed areas is important in determining the degree of function. In this case, most of the subject property is represented by landscape trees in a healthy condition. A minority of the property supports tree cover composed of a younger, successional canopy. Neither setting is considered ideal for supporting important bat roosting habitat. As the property is situated in a residential area and lacks obvious sources of insect biomass, the potential for other bat habitat functions (e.g., foraging) is also limited.

While there is minimal expectation that the subject property supports any important life processes for these species, it would be impossible to conclude that individuals of endangered bats could not occur within or adjacent to the subject property during the active season. As the proposal involves no physical development, there is no specific plan available to determine whether tree removals would be required to facilitate future development. It can reasonably be expected that future construction could require removal of a minor number of landscape trees; however, it is recommended in this report that all development and site alteration remain outside of the on-site stream corridor, avoiding the needs for trees removals therein.

For such scenarios, common direction from MECP regarding impact avoidance for individuals of endangered bats includes strict adherence to vegetation removal timing windows. By limiting the timing window in which trees can be removed to outside of the active season for bats, development activities can avoid incidental harm to individuals of endangered bat species. Assuming implementation of appropriate tree removal timing windows, there is no expectation that the proposal will result in any negative impacts to individuals of endangered bat species. Recommendations are clarified as follows:

- **Any tree removals required to accommodate potential future development take place outside of the season in which endangered bats may be active, *i.e.*, April 1 – Oct 30. Note: this timing window extends further than the timing window recommended to avoid impacts to nesting migratory birds (see Section 5.3).**

- **If tree clearing must occur within the above-noted timing window, additional studies may need to be completed to confirm the presence or absence of SAR bats. These studies can include snag tree surveys and acoustic monitoring of the area where trees will be removed, by a qualified professional. If SAR bats may be impacted by the development proposal, the MECP should be contacted to determine if a permit would be required to proceed.**

5.3 General Mitigation

As discussed under **Section 4**, there are features contained on the subject property that do not receive any form of protection under relevant planning policies of the Town OP and/or LSPP. For example, the woodland feature on the subject property, while not regarded as significant, still represents a form of naturalized cover that requires some consideration in terms of development/construction mitigation.

Several standard mitigation recommendations are provided below to ensure that any future development adhere to provincial/federal requires for wildlife protection and to provide an overview of best management practices pertaining to construction isolation and vegetation removals.

- **Avoid any removal of vegetation, including residential/ornamental plantings, between April – August of any given year. If vegetation removals must occur during this period, a nest survey should be conducted by a qualified avian biologist prior to commencement of construction activities to identify and locate active nests of migratory bird species covered by the MBCA or FWCA. If a nest is located or evidence of breeding noted, then a mitigation plan should be developed to address any potential impacts on migratory birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying construction activities until the conclusion of the nesting season. Note: the recommended tree removal timing window for nesting migratory birds should be compared with the recommended timing window pertaining to bats, which extends for a longer period (see Section 5.2).**
- **Post-construction landscaping utilize native, site-appropriate species only.**
- **Prepare a lot-specific TIPP to determine the extent of potential tree removals following completion of severance and future development design. Construction exclusion, staging, and tree protection measures should be included in the TIPP for mitigation planning.**

6 CONFORMANCE WITH APPLICABLE ENVIRONMENTAL POLICIES

The following sections summarize the relevant federal, provincial, and municipal environmental policies that are applicable to the proposed development application.

6.1 Federal *Fisheries Act*, R.S.C. 1985

The *Federal Fisheries Act* states that:

34.4 (1) No person shall carry on any work, undertaking or activity, other than fishing, that results in the death of fish.

35. (1) No person shall carry on any work, undertaking or activity that results in harmful alteration, disruption or destruction of fish habitat.

DFO further states that "under subsection 35(1) a person may carry on such works, undertakings or activities without contravening this prohibition, provided that they are carried on under the authority of one of the exceptions listed in subsection 35(2), and in accordance with the requirements of the appropriate exception. In most cases, this exception would be Ministerial authorizations granted to proponents in accordance with the *Authorizations Concerning Fish and Fish Habitat Protection Regulations."*

It is RiverStone's opinion that proposed development will not result in the death of fish or the harmful alteration, disruption, or destruction of fish habitat.

6.2 Federal Migratory Birds Convention Act (1994)

Part 1, Section 5 of the Migratory Birds Regulations under the *Migratory Birds Convention Act, 1994* (MBCA) prohibits the disturbance or destruction of nests, eggs, or nest shelters of a migratory bird. The provincial *Fish and Wildlife Conservation Act, 1997* (FWCA) extends the protection of bird nests and eggs to species that are not listed under the Migratory Birds Regulations (e.g., Corvids).
For most migratory bird species, nest protections under the MBCA apply for the duration of time that a nest is occupied; however, protections extend beyond the period of occupation for several species that may be common locally, including Pileated Woodpecker, Green Heron, and Great Blue Heron, amongst others (see Schedule 1 under the Act for full list). For the species listed under Schedule 1, specific conditions must be met to damage/remove a nest, including providing notice to the minister in charge, and demonstrating that the nest has not been occupied by an applicable species for a time period specified under Schedule 1.

Based on our on-site assessments, there is no evidence of nesting in the study area by any species listed under Schedule 1 to the MBCA. Recommended breeding bird surveys will provide further confirmation in this regard. For other migratory bird species, restricting clearing of vegetation for any development to times outside of the period of April 1 to August 31, inclusive, will avoid destruction of nests and prevent contravention of Section 5 of the regulations. If vegetation removal must occur during this period, a nest survey should be conducted by a qualified avian biologist prior to commencement of construction activities to identify and locate active nests of migratory bird species covered by the MBCA or FWCA. If a nest is located or evidence of breeding noted, then a mitigation plan should be developed to address any potential impacts on migratory birds or their active nests. Mitigation may require establishing appropriate buffers around active nests or delaying construction activities until the conclusion of the nesting season.

6.3 Provincial *Endangered Species Act*, S.O. 2007, c. 6

The ESA protects designated endangered and threatened species in Ontario from being killed, harmed, or harassed (s. 9) or having their habitat damaged or destroyed (s. 10). **Section 4.10** identified one or more species or its habitat having the potential to occur within or adjacent to the study area.
Section 5.2 provided a subsequent discussion of potential impacts to such species and/or associated habitat features, should those species be present within or adjacent to the study area. Based on this assessment, and assuming full implementation of mitigation measures (if/where recommended), it is RiverStone's preliminary opinion that the proposed development can likely be accomplished in compliance with the ESA. It is noted that this assessment does not represent 'clearance' with respect to ESA compliance for any other listed species. It remains a proponent's continued and sole responsibility to ensure that a project does not result in a contravention to the ESA

6.4 Provincial Policy Statement, pursuant to the *Planning Act*, R.S.O. 1990, c. P. 13

The Provincial Policy Statement (PPS) is promulgated under the *Planning Act* and provides direction to municipalities on matters of provincial interest related to land-use planning. The PPS was updated in 2020. Municipal OP's must be consistent with the PPS. Key natural heritage-related provisions of the PPS, as assessed in this report, are listed below:

> **2.1.4** Development and site alteration shall not be permitted in:
>
> a) significant wetlands in Ecoregions 5E, 6E, and 7E1; and

b) significant coastal wetlands.

2.1.5 Development and site alteration shall not be permitted in:

a) significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E[1];
b) significant woodlands in Ecoregions 6E and 7E;
c) significant valleylands in Ecoregions 6E and 7E;
d) significant wildlife habitat;
e) significant areas of natural and scientific interest; and
f) coastal wetlands in Ecoregions 5E, 6E and 7E[1] that are not subject to policy 2.1.4(b)

unless it has been demonstrated that there will be *no negative impacts on the natural features or their ecological functions.*

2.1.6 Development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

2.1.7 Development and site alteration shall not be permitted in habitat of endangered species and threatened species, except in accordance with provincial and federal requirements.

2.1.8 Development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas identified in policies 2.1.4, 2.1.5, and 2.1.6 unless the ecological function of the adjacent lands has been evaluated and it has been demonstrated that there will be no negative impacts on the natural features or on their ecological functions.

Based on the results of RiverStone's impact assessment, and contingent on the implementation of the recommendations outlined in **Section 5** of this report, it is RiverStone's opinion that the development as proposed is consistent with Sections 2.1.4 to 2.1.8 of the PPS.

6.5 Growth Plan for The Greater Golden Horseshoe, pursuant to the *Places to Grow Act*, S.O. 2005

The Growth Plan provides direction to municipalities on matters of provincial interest related to land-use and growth planning within the Greater Golden Horseshoe planning area. The Growth Plan complements a series of other land-use plans associated with scoped planning jurisdictions, such as the Oak Ridges Moraine Conservation Plan and the Greenbelt Plan. Being within the boundaries of the County of Simcoe, the subject property is contained within the planning jurisdiction of the Growth Plan, the policies of which would be administered by local planning authorities.

Section 4.2 of the Growth Plan outlines a series of policies and provisions intended to direct growth and intensification toward designated settlement areas, and to protect natural heritage features on the landscape. The Growth Plan further provides direction for identifying a local Natural Heritage System (NHS) and stipulates how development should take place in association with the NHS. The core natural heritage protection policies of the Growth Plan are contained within Sections 4.2.2 – 4.2.4, inclusive. In general, policies of the Growth Plan prescribe that development remain outside of KNHFs within the NHS and KHFs. Additionally, development is generally to remain outside of a minimum 'vegetation protection zone' measuring 30 m from the outer boundaries of KNHFs, where such features occur within the NHS, and 30 m from KHFs anywhere outside of a settlement area.

The study area supports multiple confirmed and/or candidate KNHF/KHFs; however, the property is contained within a settlement area. Therefore, it is our understanding that relevant natural heritage protection provisions of the Growth are not considered applicable to this application.

6.6 Lake Simcoe Protection Plan (2009)

The subject property is located within the planning area of the Lake Simcoe Protection Plan (LSPP) and further located in a settlement area. Chapter 6 of the LSPP outlines the various policies pertaining to shoreline and natural heritage protection. Sections 6.1-6.7 applies specifically to shorelines and adjacent lands, which are not relevant to the subject property or application. Sections 6.8-6.13 pertain to both Lake Simcoe and streams, with the following policies being potentially relevant:

> ***6.8-DP*** *No structures, including boathouses, shall be permitted in Lake Simcoe, other lakes or in a permanent or intermittent stream if the structure impedes the natural flow of water along the shoreline or in the stream, if the structure is intended to be used as a dwelling, or if the structure or its construction harmfully alters fish habitat. This policy does not prohibit drainage works such as those permitted under the Drainage Act, those required for infrastructure or those structures required for the purposes of stewardship, conservation, restoration or remediation undertakings.*
>
> **Interpretation:** No structures are proposed within the stream located on and adjacent to the subject property.
>
> ***6.10-DP*** *Where, in accordance with the policies of the Plan, development or site alteration is permitted within 120 metres of the Lake Simcoe shoreline, other lakes in the Lake Simcoe watershed, or any permanent or intermittent stream or a wetland, the development or site alteration should be integrated with and should not constrain ongoing or planned stewardship and remediation efforts.*
>
> **Interpretation:** The proposed development would not be expected to constrain any stewardship or remediation efforts.
>
> ***6.11-DP*** *Where, in accordance with the policies of this Plan, a proposal for development or site alteration is permitted within 30 metres of the Lake Simcoe shoreline, other lakes in the Lake Simcoe watershed, or a permanent or intermittent stream or wetland outside of settlement areas and the Greenbelt area and Oak Ridges Moraine area, the proposal for development or site alteration shall comply with the following where applicable:*
>
> *a) maintain, and where possible, increase or improve fish habitat in the Lake, stream or wetland, and any adjacent riparian areas;*
> *b) to the extent possible, enhance the ecological features and functions associated with the Lake, stream or wetland;*
> *c) minimize erosion, sedimentation, and the introduction of excessive nutrients or other pollutants and utilize planning, design, and construction practices that maintain and improve water quality; and*
> *d) integrate landscaping and habitat restoration into the design of the proposal to enhance the ability of native plants and animals to use the area as both wildlife habitat and a movement corridor.*

Interpretation: The proposed development is located inside of a settlement area and therefore not subject to the above provisions.

Further general natural heritage protection policies are outlined according to Section 6.20-6.31 of the LSPP. Importantly, Section 6.20 states that these policies are applicable only to areas outside of settlement areas and, therefore, are not applicable to the proposal. Subsequent policies under Section 6.32-6.35 apply specifically to lands within settlement areas, with the following considered applicable.

6.33-DP *An application for development or site alteration shall, where applicable:*

a) increase or improve fish habitat in streams, lakes and wetlands, and any adjacent riparian areas;
b) include landscaping and habitat restoration that increase the ability of native plants and animals to use valleylands or riparian areas as wildlife habitat and movement corridors;
c) seek to avoid, minimize and/or mitigate impacts associated with the quality and quantity of urban run-off into receiving streams, lakes and wetlands; and
d) establish or increase the extent and width of a vegetation protection zone adjacent to Lake Simcoe to a minimum of 30 metres where feasible.

Interpretation: The proposed development allows for a substantial vegetated, naturalized setback to the on-site watercourse. A further no development/no alteration zone is recommended from the limits of existing natural vegetation associated with the watercourse. Any additional requirements related to naturalization of portions of the subject property should be outlined by the approval authority and can be prepared and implemented as conditions of approval.

6.34-DP *Where, through an application for development or site alteration, a buffer is required to be established as a result of the application of the PPS, the buffer shall be composed of and maintained as natural self-sustaining vegetation.*

Interpretation: See comment above re: 6.33-DP.

6.7 Lake Simcoe Region Conservation Authority Regulation 41/24, pursuant to the *Conservation* Authorities *Act*, R.S.O. 1990

LSRCA's regulatory jurisdiction extends to areas within and adjacent to valley and stream corridors, shorelines, hazard lands (*i.e.,* floodplains, valley slopes), watercourses, and wetlands as provided for under O. Reg. 41/24 of the *Conservation Authorities Act, 1990*. LSRCA's regulated area encompasses a portion of the subject property (**Appendix 1**). Based on RiverStone's assessment herein, it is believed that proposed development can be accomplished without resulting in adverse impacts to regulated natural heritage features (*i.e*., watercourse). A permit from LSRCA may be required for any future development one or more lots to proceed. The details contained in this report are intended to facilitate review by LSRCA staff.

6.8 Town of Innisfil Official Plan (2020 Consolidation)

Schedule B1 to the Town's Official Plan (OP) designates the subject property as a combination of 'Residential Low Density 1', 'Key Natural Heritage Features & Key Hydrologic Features', and 'Hazard Land Area Overlay'**.** Based on the layers applied to the property and the assessment undertaken in this report, the KNHF/KHF identified within the study area includes Leonard's Creek, but not necessarily the associated vegetated corridor. That is, the stream itself can be considered

significant, but the entirety of adjoining woodlands do not appear to be regarded as significant. As per Sections 17.1.1-17.1.7 of the OP, the KNHF/KHF layer is intended to represent the Town's Natural Heritage System (NHS), which is composed of several features delineated in the various versions of Schedule B, as well as Appendix 9 and 10.

Section 17.1.8 of the OP outlines the requirement for completion of an NHE in scenarios where development is proposed within the NHS. This report has been prepared to satisfy the requirement for an NHE. Section 17.1.10 of the OP states that development is not permitted within the NHS, with a list of exceptions provided, none of which apply to the proposed development. Importantly, the proposal does not contemplate any development within the limits of identified KNHF/KHFs. Therefore, the permitted use exemption policies of Section 17.1.10 are not regarded as applicable. Section 17.1.13 states that development may be permitted in KNHF/KHFs (excepting PSWs) within settlement areas subject to the results of an NHE. Per Section 17.1.14, further requirements may be applicable if development would occur in the habitat of endangered and threatened species and/or in fish habitat. As discussed in this report, the proposal would not result in development occurring within any identified KNHF/KHFs.

Section 17.1.15 stipulates that development is not permitted within adjacent lands (120 m) to KNHF/KHFs unless evaluated and supported by the results of an NHE. Within the NHS overlay, the development must demonstrate a minimum setback of 30 m from the identified limits of KHFs, fish habitat, and significant woodland. While most of the subject property is not contained within the NHS overlay, a 30 m setback has been applied to the on-site watercourse. While this setback overlaps with one of the proposed severed parcels, this specific parcel already supports a residential dwelling. The resulting two vacant parcels both support development envelopes that achieve a minimum 30 m setback from the on-site watercourse and associated fish habitat.

This report has been prepared to satisfy the requirement for an EIS/NHE per requirements of the Town's OP. Notwithstanding the high-level overview provided herein, this report is intended to inform the Town, LSRCA, and/or other technical peer reviewer in their review of the development proposal. In general, it is our opinion that the proposal appears conform to the natural heritage planning and protection policies of the Town's OP. Most importantly, from an impact assessment perspective, we believe that the proposal meets the overarching intent of protecting and preserving KNHF/KHFs, as well as non-significant natural features identified in association with the subject property.

7 CONCLUSIONS

In accordance with requirements of applicable municipal and provincial planning policies, the preceding report provides the results of RiverStone's NHE. This report includes details regarding existing physical and ecological conditions on the subject property, a description of the development plan, an assessment of potential impacts to identified features (if present), and a general assessment of consistency and conformity with relevant municipal, provincial, and federal environmental policies.

Based upon the findings presented in this report and contingent upon the implementation of and adherence to the recommendations made herein, it is our conclusion that proposed development can be accomplished in conformity with applicable planning policies, and without negative impacts to any KNHF/KHFs. We advise that any recommended mitigation measures outlined in **Section 5** be implemented through appropriate planning mechanism, a determined by the approval authority.

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Legend

- Subject Property
- Landscape Drainage Network (ON GeoHub)
- Provincially Significant Wetland (ON GeoHub)

Orthorectified Aerial Photograph 2018

RS Project No. 2022-334	July 22, 2024	By: MF

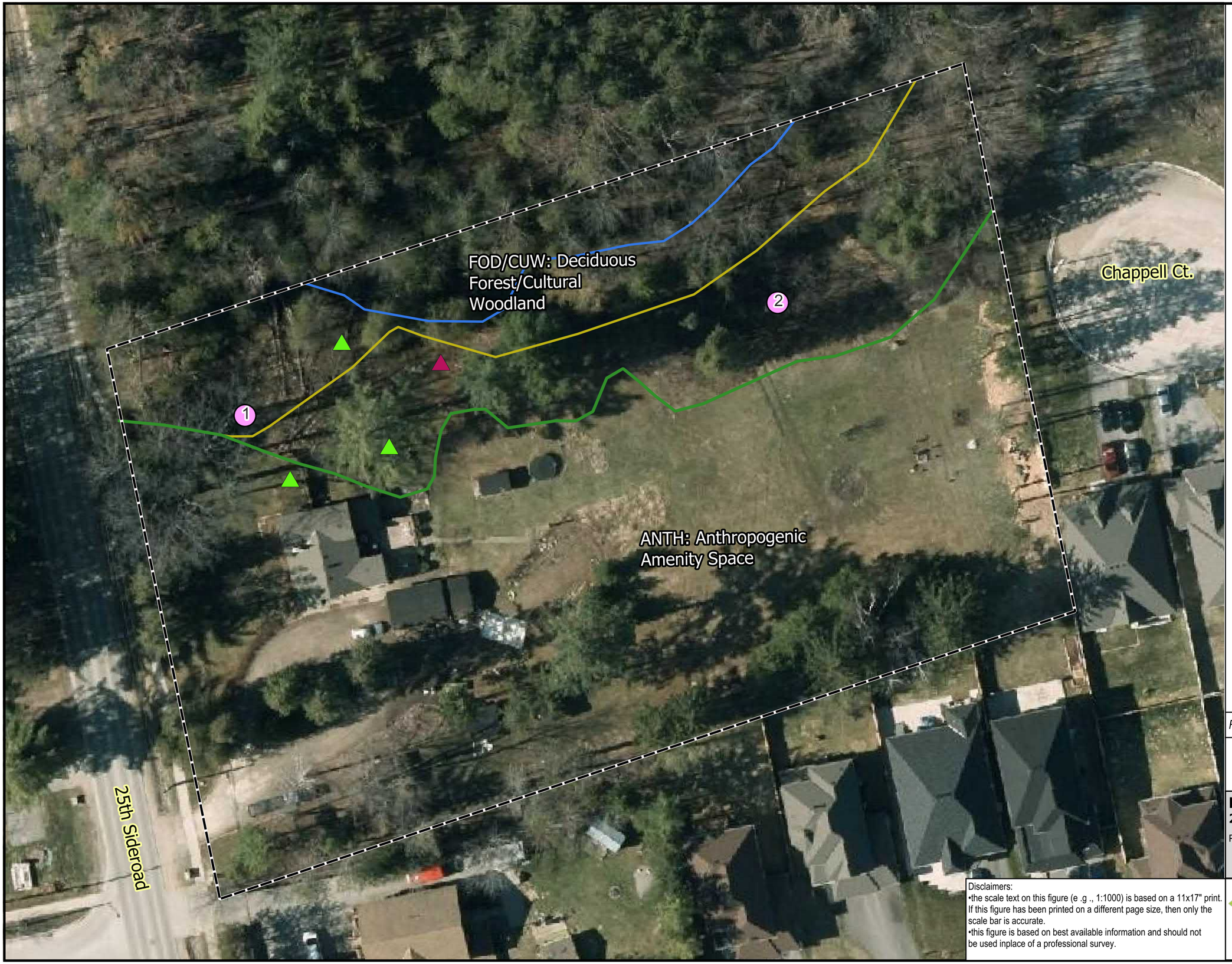
0 0.1 0.2 km

Figure 1. Property Location
2337 25th Sideroad, Innisfil

Prepared for: Raz & Eloise Giancola

Disclaimers:
•the scale text on this figure (e .g ., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
•this figure is based on best available information and should not be used inplace of a professional survey.

RIVERSTONE ENVIRONMENTAL SOLUTIONS INC.



Legend

- Subject Property
- Bird Survey Stations
- Crest of Slope
- Dripline
- Top of Bank
- Butternut
- Black Ash

Orthorectified Aerial Photograph 2018

RS Project No. 2022-334	July 22, 2024	By: MF

0 10 20 m

Figure 2. Existing Conditions
2337 25th Sideroad, Innisfil

Prepared for: Raz & Eloise Giancola

Disclaimers:
•the scale text on this figure (e .g ., 1:1000) is based on a 11x17" print. If this figure has been printed on a different page size, then only the scale bar is accurate.
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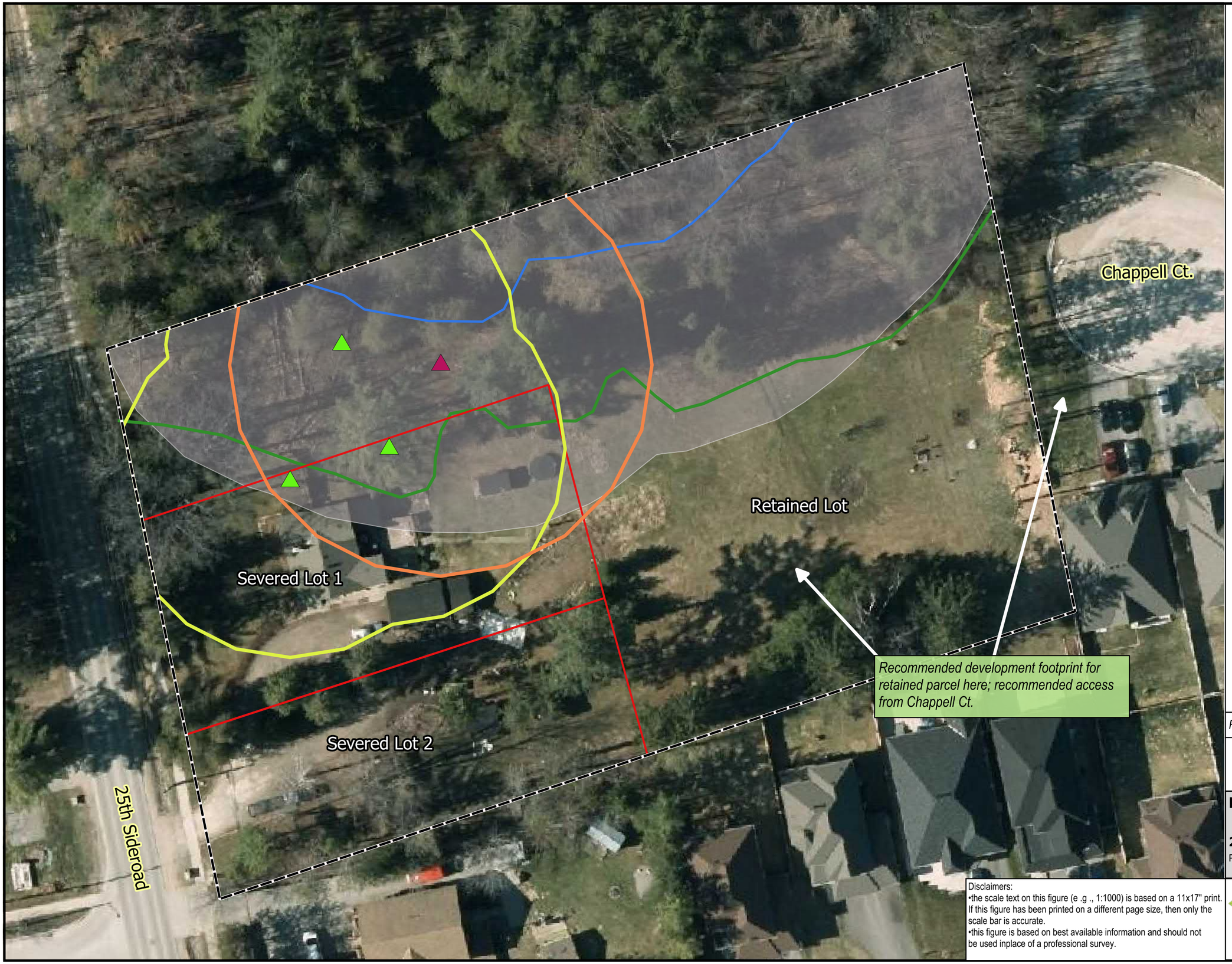
RIVERSTONE ENVIRONMENTAL SOLUTIONS INC



Legend

- Subject Property
- Proposed Severance
- Woodland Dripline (Non-Significant Woodland)
- Top of Bank
- Watercourse/Fish Habitat Setback (30 m)
- Butternut
- Butternut Habitat Setback (25 m)
- Black Ash
- Black Ash Habitat Setback (30 m)

Orthorectified Aerial Photograph 2018

RS Project No. 2022-334	July 30, 2024	By: MF

0 10 20 m

Figure 3. Proposed Development & Recommendations

2337 25th Sideroad, Innisfil

Prepared for: Raz & Eloise Giancola

Disclaimers:
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- this figure is based on best available information and should not be used inplace of a professional survey.

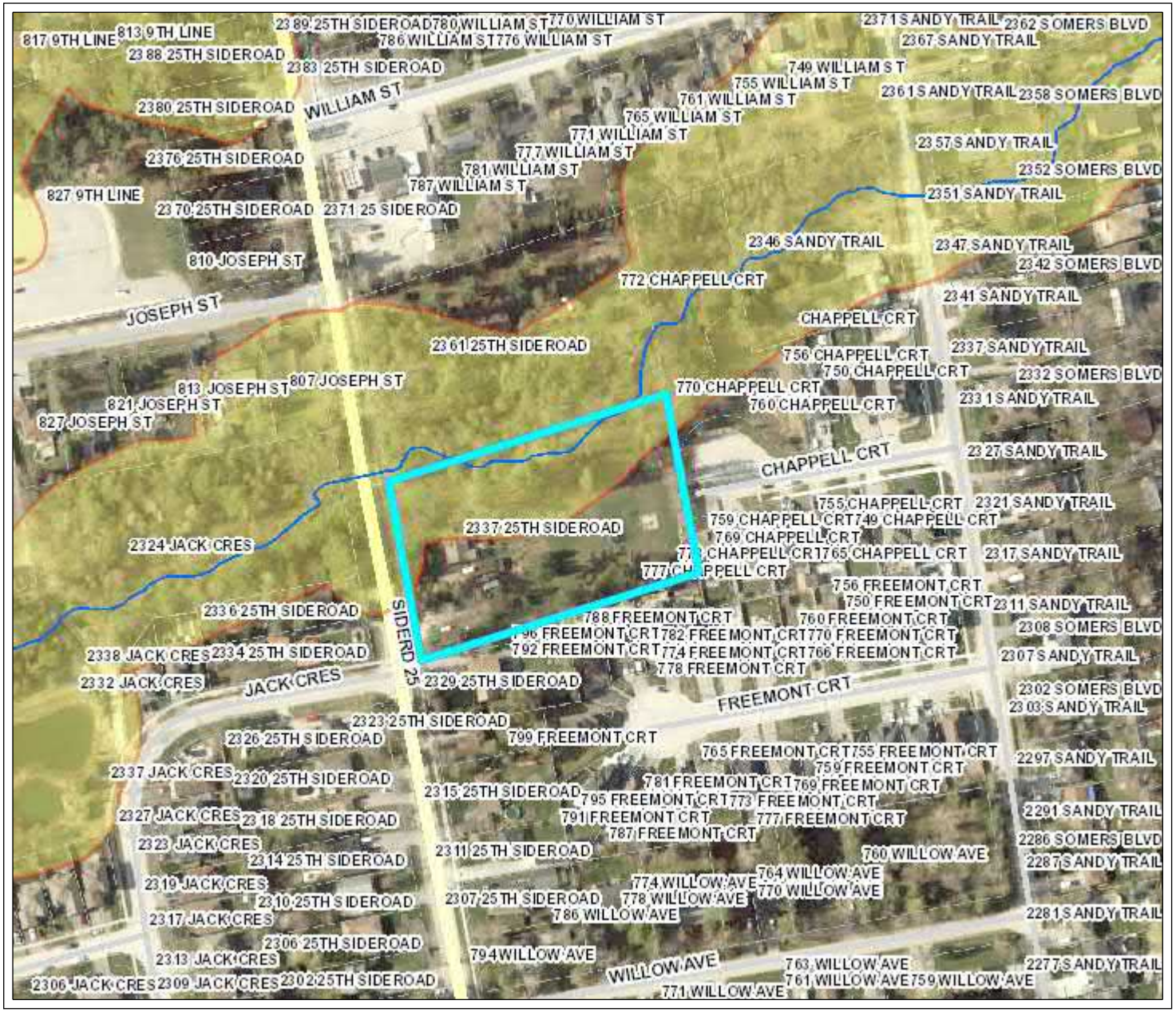
RIVERSTONE ENVIRONMENTAL SOLUTIONS INC

Appendix 1. Planning & Regulatory Schedules.

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.

Lake Simcoe Region conservation authority

2337 25th Sideroad



Scale 1: 2,673

Meters

136 0 68 136

Features

- LSRCA Watershed Boundary
- V_MASK_WATERSHED_1
- Watercourse
- Regulation Limit
- Address Labels
- Road Labels
- LSRCA Watershed Boundary
- Assessment Parcel
- Roads
  - Hwy 400 Series
  - Highway, Arterials
  - Local Road
- Railway

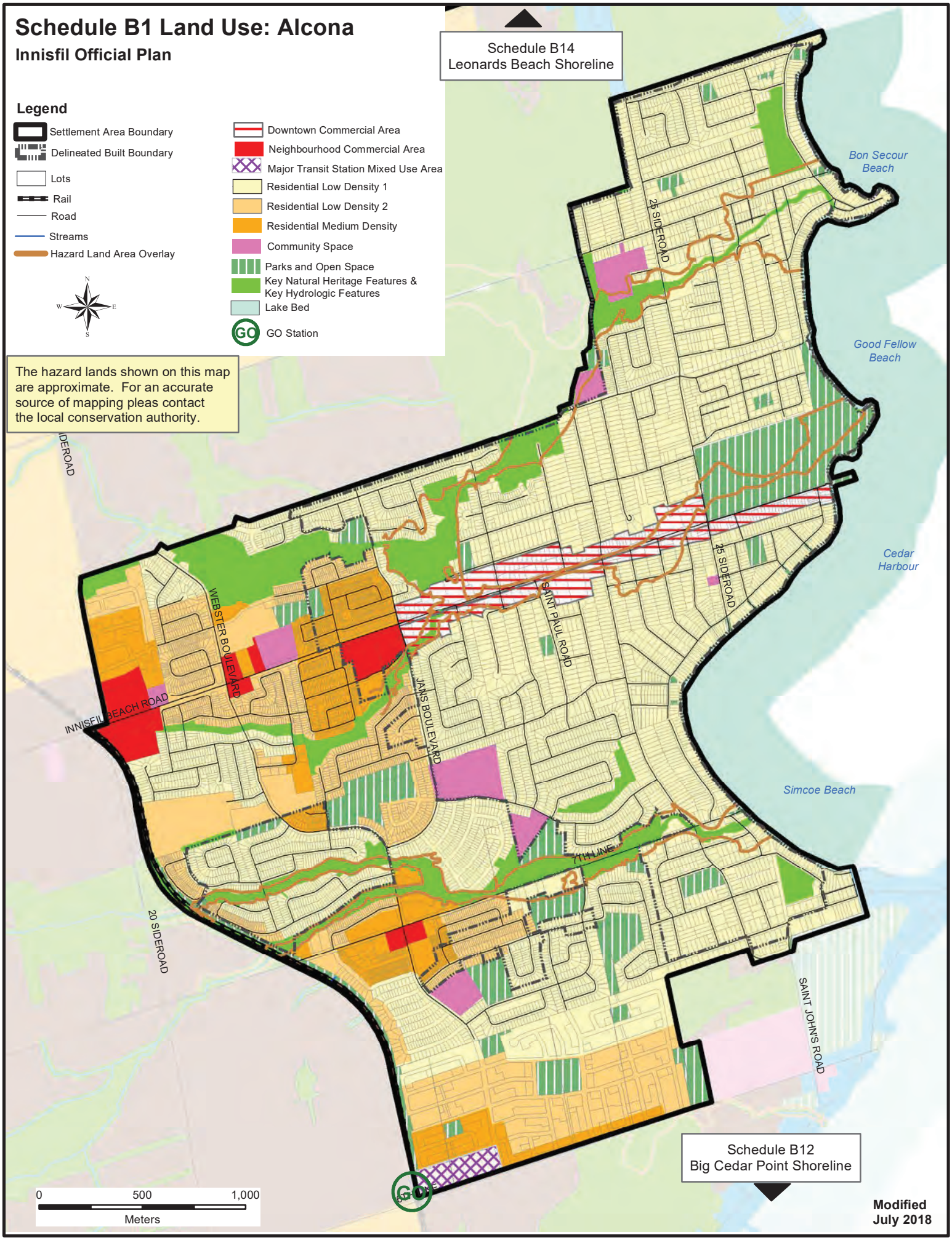
Printed On:
7/15/2024

WGS_1984_Web_Mercator_Auxiliary_Sphere

Mapped By:

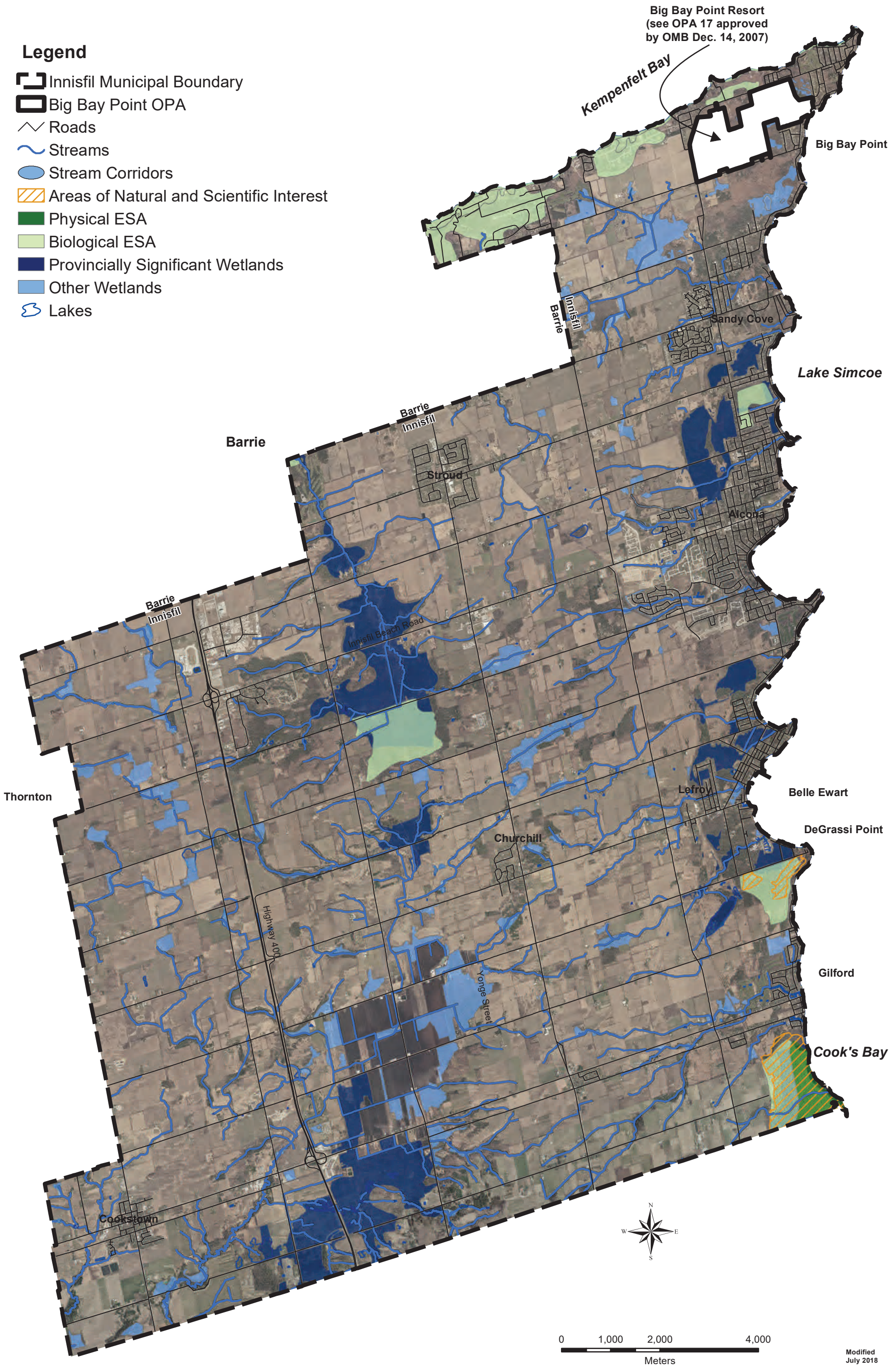
Schedule B1 Land Use: Alcona

Innisfil Official Plan



Appendix 9: Natural Areas

Innisfil Official Plan

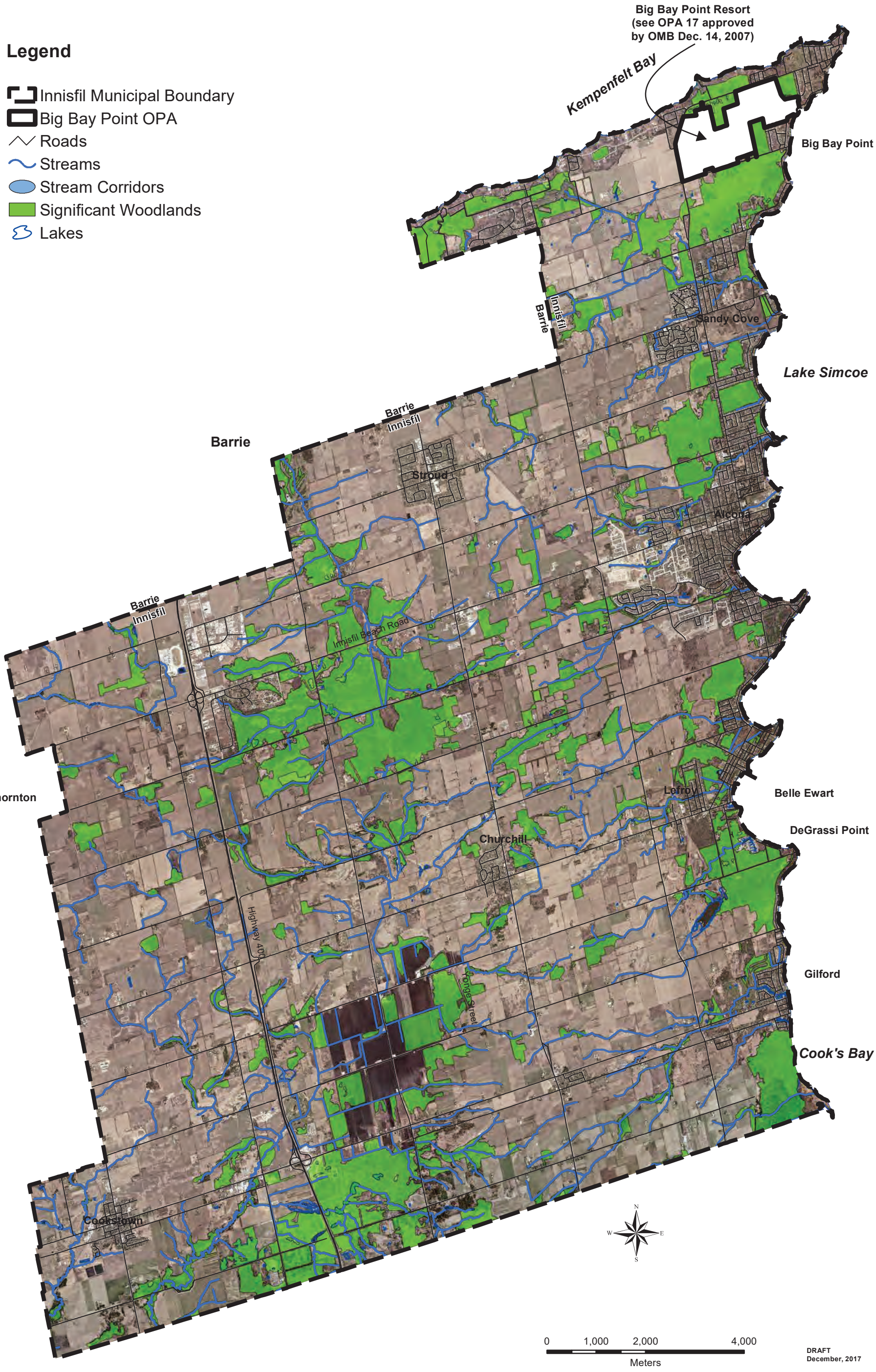


Appendix 10: Natural Areas

Innisfil Official Plan

Legend

- Innisfil Municipal Boundary
- Big Bay Point OPA
- Roads
- Streams
- Stream Corridors
- Significant Woodlands
- Lakes



Appendix 2. Photos of Representative Site Conditions.

Photo 1. Road frontage; facing north with existing dwelling to right of frame.

Photo 2. Southern parcel limit toward rear of property; treed amenity space.

Photo 3. Open maintained amenity space in center of parcel.

Photo 4. Garden at rear of property; recommended future access for retained lot.

Photo 5. Treed amenity space in front of dwelling; edge of valley corridor to left of frame.

Photo 6. Downstream end of culvert conveying stream under 25th Sideroad.

Photo 7. Typical stream morphology throughout central portion of parcel.

Photo 8. Stream and adjacent forested valley corridor.

Photo 9. Typical stream bed substrate; gravel and sand.

Photo 10. Example of dense coverage of invasive groundcover species (*e.g., Convallaria majalis*).

Photo 11. Native groundcover mix in portions of the forested valley corridor.

Photo 12. Area of steep top of bank, transitioning abruptly to residential amenity space.

Appendix 3. Observed Plant Species.

Observed Species		Applicable Status		
Scientific Name	**Common Name**	**G-Rank**	**S-Rank**	**ESA**
Abies balsamea	Balsam Fir	G5	S5	
Acer negundo	Manitoba Maple	G5	S5	
Acer platanoides	Norway Maple	GNR	SE5	
Acer rubrum	Red Maple	G5	S5	
Acer saccharinum	Silver Maple	G5	S5	
Acer saccharum	Sugar Maple	G5	S5	
Achillea millefolium	Common Yarrow	G5	SE	
Actaea rubra	Red Baneberry	G5	S5	
Aegopodium podagraria	Goutweed	GNR	SE5	
Aesculus hippocastanum	Horse Chestnut	GNR	SE2	
Agrimonia gryposepala	Hooked Agrimony	G5	S5	
Alliaria petiolata	Garlic Mustard	GNR	SE5	
Amelanchier arborea	Downy Serviceberry	G5	S5	
Antennaria neglecta	Field Pussytoes	G5	S5	
Arctium minus	Common Burdock	GNR	SE5	
Arisaema triphyllum	Jack-in-the-pulpit	G5	S5	
Asclepias syriaca	Common Milkweed	G5	S5	
Bromus inermis	Awnless Brome	G5TNR	SE5	
Carex gracillima	Graceful Sedge	G5	S5	
Carex retrorsa	Retrorse Sedge	G5	S5	
Carex rosea	Rosy Sedge	G5	S5	
Celastrus orbiculatus	Oriental Bittersweet	GNR	SE2	
Clematis virginiana	Virginia Virgin's-bower	G5	S5	
Convallaria majalis	European Lily-of-the-valley	G5	SE5	
Cornus alternifolia	Alternate-leaved Dogwood	G5	S5	
Cornus stolonifera	Red-osier Dogwood	G5	S5	
Cynanchum rossicum	European Swallow-wort	GNR	SE5	
Cystopteris bulbifera	Bulblet Fern	G5	S5	
Dactylis glomerata	Orchard Grass	GNR	SE5	
Dryopteris carthusiana	Spinulose Wood Fern	G5	S5	
Dryopteris intermedia	Evergreen Wood Fern	G5	S5	
Dryopteris marginalis	Marginal Wood Fern	G5	S5	
Erigeron canadensis	Canada Horseweed	G5	S5	
Erigeron philadelphicus	Philadelphia Fleabane	G5	S5	
Erythronium americanum	Yellow Trout-lily	G5	S5	
Fagus grandifolia	American Beech	G5	S4	
Fragaria virginiana	Wild Strawberry	G5	S5	
Frangula alnus	Glossy Buckthorn	GNR	SE5	
Fraxinus americana	White Ash	G5	S4	
Fraxinus nigra	Black Ash	G5	S4	END
Geranium robertianum	Herb-Robert	G5	S5	
Geum aleppicum	Yellow Avens	G5	S5	
Geum canadense	White Avens	G5	S5	
Glyceria striata	Fowl Mannagrass	G5	S5	
Hemerocallis fulva	Orange Daylily	GNA	SE5	

Observed Species		Applicable Status		
Scientific Name	**Common Name**	**G-Rank**	**S-Rank**	**ESA**
Impatiens capensis	Spotted Jewelweed	G5	S5	
Juglans cinerea	Butternut	G4	S3?	END
Juglans nigra	Black Walnut	G5	S4	
Lactuca biennis	Tall Blue Lettuce	G5	S5	
Leonurus cardiaca	Common Motherwort	GNR	SE5	
Leucanthemum vulgare	Oxeye Daisy	GNR	SE5	
Ligustrum vulgare	European Privet	GNR	SE5	
Lonicera tatarica	Tartarian Honeysuckle	GNR	SE5	
Maianthemum canadense	Wild Lily-of-the-valley	G5	S5	
Maianthemum racemosum	False Solomon's-seal	G5	S5	
Matteuccia struthiopteris	Ostrich Fern	G5	S5	
Myosotis sylvatica	Woodland Forget-me-not	G5	SE4	
Narcissus pseudonarcissus	Commom Daffodil	GNR	SE2	
Oenothera biennis	Common Evening Primrose	G5	S5	
Onoclea sensibilis	Sensitive Fern	G5	S5	
Oxalis stricta	European Wood-sorrel	G5	S5	
Parthenocissus inserta	Thicket Creeper	G5	S5	
Phalaris arundinacea	Reed Canary Grass	G5	S5	
Picea abies	Norway Spruce	G5	SE3	
Picea glauca	White Spruce	G5	S5	
Picea pungens	Blue Spruce	G5	SE1	
Pilea pumila	Canada Clearweed	G5	S5	
Pinus resinosa	Red Pine	G5	S5	
Pinus strobus	Eastern White Pine	G5	S5	
Pinus sylvestris	Scotch Pine	GNR	SE5	
Populus balsamifera	Balsam Poplar	G5	S5	
Populus tremuloides	Trembling Aspen	G5	S5	
Prunus serotina	Wild Black Cherry	G5	S5	
Prunus virginiana	Choke Cherry	G5	S5	
Pyrola elliptica	Shinleaf	G5	S5	
Ranunculus acris	Tall Buttercup	G5	SE5	
Ranunculus recurvatus	Hooked Buttercup	G5	S5	
Rhamnus cathartica	Common Buckthorn	GNR	SE5	
Rhus typhina	Staghorn Sumac	G5	S5	
Ribes cynosbati	Prickly Gooseberry	G5	S5	
Ribes triste	Swamp Red Currant	G5	S5	
Rosa multiflora	Multiflora Rose	GNR	SE4	
Rubus allegheniensis	Alleghany Blackberry	G5	S5	
Rubus idaeus ssp. strigosus	Wild Red Raspberry	G5T5	S5	
Rudbeckia hirta var. hirta	Black-eyed Susan	G5T4T5	SU	
Rumex acetosella	Sheep Sorrel	GNR	SE5	
Sambucus racemosa	Red Elderberry	G5	S5	
Scirpus atrovirens	Dark-green Bulrush	G5?	S5	
Smilax herbacea	Herbaceous Carrionflower	G5	S4	
Solanum dulcamara	Climbing Nightshade	GNR	SE5	

222-334 - List of Observed Vascular Plants

Observed Species		Applicable Status		
Scientific Name	**Common Name**	**G-Rank**	**S-Rank**	**ESA**
Solidago canadensis var. canadensis	Canada Goldenrod	G5T5	S5	
Solidago rugosa var. rugosa	Northern Rough-leaved Goldenrod	G5T5	S5	
Sonchus oleraceus	Common Sow-thistle	GNR	SE5	
Symphyotrichum lanceolatum ssp. lanceolatum	Panicled Aster	G5T5	S5	
Symphyotrichum lateriflorum	Starved Aster	G5	S5	
Symphyotrichum novae-angliae	New England Aster	G5	S5	
Syringa vulgaris	Common Lilac	GNR	SE5	
Taraxacum officinale	Common Dandelion	G5	SE5	
Thalictrum dioicum	Early Meadow-rue	G5	S5	
Thuja occidentalis	Eastern White Cedar	G5	S5	
Tilia americana	American Basswood	G5	S5	
Toxicodendron rydbergii	Rydberg's Poison Ivy	G5	S5	
Trifolium repens	White Clover	GNR	SE5	
Tussilago farfara	Colt's-foot	GNR	SE5	

Appendix 4. Breeding Bird Survey Summary.

Job Name: Giancola Consent 222-334						
Species Recorded	Survey 1		Survey 2		Breeding Status Estimate	Notes/explanations for observations of potential significance:
	Station #					
	1	2	1	2		
Song Sparrow (Melospiza melodia)		Po	Po	Po	Pr	
House Wren (Troglodytes aedon)	Po	Po			Po	
Northern Cardinal (Cardinalis cardinalis)	Po	Po	Po	Po	Pr	
American Goldfinch (Spinus tristis)				Po	Po	
Ring-billed Gull (Larus delawarensis)			x		x	Flyover.
American Robin (Turdus migratorius)	Po			Po	Po	
Blue Jay (Cyanocitta cristata)	Po	Po			Po	
White-breasted Nuthatch (Sitta carolinensis)	Po	Po			Po	
Pine Warbler (Setophaga pinus)	Po			Po	Pr	Likely breeding near 25th.
Chipping Sparrow (Spizella passerina)		Po			Po	
Mourning Dove (Zenaida macroura)		Po		Po	Pr	
Canada Goose (Branta canadensis)		x			x	Flyover.
Red-winged Blackbird (Agelaius phoeniceus)			Po	Po	Po	
Black-capped Chickadee (Poecile atricapillus)			Po		Po	
Northern Flicker (Colaptes auratus)			Po	Po	Po	
American Crow (Corvus brachyrhynchos)		Po			Po	

Survey Details		
	Survey 1	Survey 2
Date	2024-05-24	2024-06-20
Staff	M.Francis	M.Francis
Time	7:10-7:40	9:00-9:30
Temperature (C)	11	25
Wind	1-2	0
Cloud Cover %	0	30
Background Noise Code	1-2	1-2

Code Explanations
Confirmed (Co): nest building, nest in use, nest with recent eggshells, adult carrying food or fecal sac, distraction display, fledged young
Probable (Pr): multiple singing birds and/or breeding pair in suitable habitat, mating display, territorial behavoir, agitated behavior, brood patch, nest building by cavity nesting species
Possible (Po): singing, species in suitable nesting habitat
Present (x): bird observed but does not fall under other codes
Incidental: The highest breeding code for a species observed >100m from survey stations or on transit between survey stations

Appendix 5. Endangered and Threatened Species Screening.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Acadian Flycatcher (*Empidonax virescens*)	END	The Acadian Flycatcher is native to the Carolinian forests of Southern Ontario. It is area sensitive and prefers mature woodlands >25 ha in areas with >30% forest cover. Nesting habitats are deciduous or mixed woodlands with closed canopies, open understories, and limited groundcover. They prefer to nest near permanent or ephemeral ponds or streams.	POSSIBLE	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
American Ginseng (*Panax quinquefolius*)	END	American Ginseng requires well-drained but moist acidic to neutral soils overlying limestone or marble bedrock. They are obligate understory plants found in undisturbed mature deciduous and mixed forests, and occasionally in coniferous forests and swamps.	YES	NO	NO	NO	The forest structure observed within the study area is not suitable for this species. None were observed during our on-site investigation that included a survey of vascular plants. No further assessment undertaken.
Bank Swallow (*Riparia riparia*)	THR	The Bank Swallow is a small aerial insectivore bird that nests colonially in burrows they excavate within banks. Colonies will nest in bluffs, riverbanks, aggregate pits, roadside embankments, and topsoil piles near open habitat that provides a steady source of insects. Colony sites must also be near roosting areas in wetland, reed, or cane beds.	YES	YES, OBBA	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Black Ash (*Fraxinus nigra*)	END	The Black Ash grows everywhere in Ontario except the Far North. These trees require moisture, and are commonly found in northern swampy woodlands, from eastern Manitoba, throughout Ontario, and as far east as Newfoundland.	YES	NO	YES	YES	Black Ash was observed on the subject property. See report for further discussion.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Blanding's Turtle (*Emydoidea blandingii*)	THR	Blanding's Turtle are semi-aquatic and use wetland habitats with shallow water and abundant vegetation. Their habitat includes a broad range of wetlands, forest clearings, and meadows. They breed in aquatic habitat and nest in open natural and anthropogenic upland areas.	YES	YES, Herp Atlas	NO	POSSIBLE	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Bobolink (*Dolichonyx oryzivorus*)	THR	Nests and forages in meadows, grasslands, hayfields, and pastureland. Fields must have 25% or less woody plant cover. They typically require large fields (>4ha) and avoid small, fragmented habitats. They also avoid habitat within 75 m of a forest edge.	YES	YES, NHIC and OBBA	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Butternut (*Juglans cinerea*)	END	Butternut is shade intolerant and grows in rich, moist, well-drained loams often along streambanks. Butternut is also found in well-drained gravel sites. It is often found at forest edges where it can access abundant sunlight.	YES	YES	YES	YES	Butternut was documented on the subject property. See report for further discussion.
Cerulean Warbler (*Setophaga cerulea*)	THR	Found in two small breeding clusters in the Carolinian Forest and the Frontenac Axis. They breed in hilly, mature deciduous forests with a preference for oak and/or maple dominated forests with swampy bottomlands. They are area and edge-sensitive and require large continuous tracts of forest.	YES	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Chimney Swift (*Chaetura pelagica*)	THR	The Chimney Swift historically nested and roosted in large hollow trees, rock walls, and other vertical surfaces. They now use human-made structures like uncapped chimneys and have high site fidelity to nesting chimneys. 95% of nests are within 1 km of a waterbody.	YES	YES, OBBA	NO	UNKNOWN	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Eastern Meadowlark (*Sturnella magna*)	THR	Nests and forages in meadows, grasslands, shrubby fields, hayfields and pastureland. Prefers habitat with >80% grass cover. Needs a minimum of 5 ha of continuous habitat.	YES	YES, NHIC and OBBA	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Eastern Prairie White-fringed Orchid (*Platanthera leucophaea*)	END	The Eastern Prairie Fringed Orchid grows in open fens and wet prairies within southern Ontario. They require high sun exposure as well as high moisture. Populations are sparse, with most locations well documented.	YES	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Eastern Small-footed Myotis (*Myotis leibii*)	END	Eastern Small-footed Myotis overwinter in caves and mines in Ontario and do not disperse far from their hibernacula during the summer. They can be found roosting in rocky habitats singly or in groups but will also use human structures as day roosts. They are aerial insectivores and forage in forests, rocky habitats, and ponds.	YES	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Eastern Whip-poor-will (*Antrostomus vociferus*)	THR	The Eastern Whip-poor-will forages in open natural and anthropogenic habitats and nests in semi open forests and forest edges with well-drained soils and moderate vegetation cover. Habitat immediately at the nest will be a short herbaceous plant, shrub, or sapling providing cover and shade with nearby perches for adults.	POSSIBLE	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Henslow's Sparrow (*Ammodramus henslowii*)	END	Henslow's Sparrows' current breeding habitat is generally limited to Prince Edward County and the Regional Municipality of Halton. Their habitat is open grasslands with dense vegetation at least 30 cm tall, thick standing dead material, <1% shrub cover, and intermediate moisture. They prefer larger, continuous grasslands and are sensitive to edge effects.	NO	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Jefferson Salamander (*Ambystoma jeffersonianum*)	END	Jefferson Salamanders have aquatic egg and larval stages in predatory fish-free ponds within deciduous and mixed forests. Once they metamorphose into adults they disperse up to a kilometer from their natal pond and use shaded forest habitats with thick leaf litter and high soil moisture. They use stone and woody debris as refugia.	NO	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
King Rail (*Rallus elegans*)	END	The King Rail is found on Great Lakes shorelines and inland in Bruce and Simcoe counties. They use large marshes (>231 ha) with low shrub cover, emergent vegetation, and open water. Breeding habitat is wetlands with shallow water and dense emergent vegetation to weave nests. Foraging habitat is shallow wetlands and mudflats.	NO	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Lake Sturgeon (*Acipenser fulvescens*)	END/THR	Lake Sturgeon need large continuous habitats in river and lake systems to provide for spawning, larval, juvenile, sub-adult, and adult habitat. Spawning takes place in shallow fast flowing headwaters where a natural or man-made barrier occurs. Spawning substrates are gravel, rock, hardpan, or sand. Larval and juvenile fish use clayey substrate habitats and older fish inhabit deep pools.	UNKNOWN	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Least Bittern (*Ixobrychus exilis*)	THR	Breeds in large marshes within Southern Ontario. Creates nest platforms from tall, dense emergent vegetation within 10m of water and prefers Typha spp. Will use other emergent vegetation. Needs 200 ha of wetland for nesting and foraging but does not need to be continuous wetland. Prefers complexes of smaller wetlands. Will avoid marshes surrounded by >30% forest cover or containing large trees.	YES	YES, OBBA	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Little Brown Myotis (*Myotis lucifugus*)	END	Their hibernacula are within caves and abandoned mines, wells, and tunnels. Maternity colonies are within a few kilometers of hibernacula within snag trees, rock crevices, exfoliating tree bark, and anthropogenic structures. Roosts and swarming sites are in similar areas around the hibernacula.	YES	NO	POSSIBLE	POSSIBLE	Woodlands on the subject property and adjacent lands have some potential to support roosting habitat for this species. See report for further discussion.
Louisiana Waterthrush (*Parkesia motacilla*)	THR	The Louisiana Waterthrush is mainly found along the Niagara Escarpment and north shore of Lake Erie. They are dependent on clear, steep, lower order streams in ravines within large unbroken mature deciduous-mixed forests.	POSSIBLE	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Northern Myotis/Northern Long-eared Bat (*Myotis septentrionalis*)	END	Northern Myotis are found below the tree line in Canada and are mostly absent from the prairies. They use live and dead trees near water in forest habitats when active and migrate to caves and abandoned mines for hibernation.	YES	NO	POSSIBLE	POSSIBLE	Woodlands on the subject property and adjacent lands have some potential to support roosting habitat for this species. See report for further discussion.
Red-Headed Woodpecker (*Melanerpes erythrocephalus*)	END	The Red-headed Woodpecker lives in open woodland and woodland edges and is often found in parks, golf courses and cemeteries. These areas typically have many dead trees, that the bird uses for nesting and perching. The Red-headed Woodpecker is found across southern Ontario, where it is widespread but rare.	POSSIBLE	YES, NHIC and OBBA	NO	NO	The forest structure observed within the study area is not well suited for this species. No individuals were documented during on-site investigations that included a survey of breeding birds. No further assessment undertaken.
Redside Dace (*Clinostomus elongatus*)	END	The Redside Dace is limited to specific tributaries and watersheds of Lake Ontario, Lake Simcoe, Lake Erie, and Lake Huron. They use slow moving clear or brown-tinged streams with overhanging vegetation and pool and riffle habitat, typically in the headwaters of streams. In May when temperatures are between 16 and 18 C they spawn in the nests of Creek Chub and Common Shiner.	NO	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Short-eared Owl	THR	The Short-eared Owl breeds in northern Ontario and is found year-round in southern Ontario. They use open habitats (tundra, grassland, pasture) to nest on the ground and overwinter in open areas with nearby roosting trees. They shelter from inclement weather in conifers and emergent wetland vegetation.	POSSIBLE	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Species	ESA Status	General Description of Habitat and Range	Is the study area within the current known range of the species.	Do applicable databases contain records for this species within or adjacent to the study area.	Is suitable habitat present within the study area.	Is suitable habitat present within lands adjacent to the study area.	Discussion of relevance to proposal
Spotted Turtle (*Clemmys guttata*)	END	The Spotted Turtle uses a mix of terrestrial and aquatic habitats. Aquatic habitats include wetlands, ponds, vernal pools, creeks, streams, sheltered bay edges, stormwater ponds, and man-made channels. Their terrestrial habitats are shorelines, rocky outcrops, upland forests, open fields, and meadows.	UNKNOWN	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.
Tricolored Bat (*Perimyotis subflavus*)	END	The Tri-colored Bat have a scattered distribution and are found as far north as Sudbury. They are found in a variety of forested habitats They overwinter alone in caves and mines and roost in dead vegetation clumps and lichen in forested habitats near water.	YES	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. On-site woodlands are generally lacking cover of preferred species (Oak and Sugar Maple). No further assessment undertaken.
Unisexual Ambystoma - Jefferson Salamander dependent population (*Ambystoma laterale - (2) jeffersonianum*)	END	Unisexual Ambystoma have egg and larval stages in predatory fish-free ponds within deciduous and mixed forests. Once they metamorphose into adults they disperse up to a kilometer from their natal pond and use shaded forest habitats with thick leaf litter and high soil moisture. They use stone and woody debris as refugia.	NO	NO	NO	NO	Based on our on-site assessment and background review, there is no expectation that this species is present within the study area. No further assessment undertaken.

[1]Highlighted species are present on or are likely to be present on the subject property.

Appendix 6. Significant Wildlife Habitat Assessment

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Seasonal Concentration Areas for Wildlife Species					
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck, Wood Duck, Green-winged Teal, Blue-winged Teal, Mallard, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall	CUM1, CUT1, in addition to evidence of spring flooding	Fields flooded with sheet water during Spring (mid March to May)	**Studies Confirm**: Annual mixed species aggregations of 100 or more total birds **Area of SWH Defined As:** Ecosite plus 100-300m radius	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall, Green-winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White-winged Scoter, Black Scoter, Ring-necked Duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant, Canvasback	MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, SWD1, SWD2, SWD3, SWD5, SWD6, SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Reservoirs managed as large ponds qualify.	**Studies Confirm**: Mixed species aggregations of 100 or more total birds for 7 days, **and/or** annual use by Ruddy Ducks, Canvasbacks, or Redheads **Area of SWH Defined As:** Ecosites plus 100m radius, includes wetlands and shorelines	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Shorebird Migratory Stopover Areas	Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit, Black-bellied Plover, American Golden-Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt Sandpiper, Short-billed Dowitcher, Red-necked Phalarope, Whimbrel, Ruddy Turnstone, Sanderling, Dunlin	BBO1, BBO2, BBS1, BBS2, BBT1, BBT2, SDO1, SDS2, SDT1, MAM1, MAM2, MAM3, MAM4, MAM5	Shorelines of lakes, rivers and wetlands, including beach areas, bars, groynes, armour rock, and seasonally flooded, muddy and un-vegetated shoreline habitats.	**Studies Confirm**: Mixed species aggregations of 3 or more listed species with >1000 shorebirds counted over the migration period, **and/or** any site with >100 Whimbrel for 3 or more years **Area of SWH Defined As:** ELC shorelines plus 100m radius	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Raptor Wintering Area	Rough-legged Hawk, Red-tailed Hawk, Northern Harrier, American Kestrel, Snowy Owl **Special Concern**: Short-eared Owl, Bald Eagle	**Hawks/Owls**: one each from forest (FOD, FOM, FOC) and upland (CUM, CUT, CUS, CUW) **Bald Eagle**: forest (FOD, FOM, FOC, SWD, SWM, SWC) on shorelines of large water bodies	Combination of fields and woodlands that provide roosting, foraging and resting habitats. **Hawks/Owls**: >20 ha with a combination of forest and upland; >15ha field habitat; field area windswept with limited snow depth/accumulation **Bald Eagle**: open water, large trees and snags	**Studies Confirm: 1** or more Short-eared Owls, 1 or more Bald Eagles, or at least 10 individuals and 2 of the listed species **and** used ≥3 times in 5 years for a minimum of 20 days **Area of SWH Defined As:** n/a	The study area does not contain any features that may support this habitat function. The associated forest patch is not of sufficient size and no open cultural communities are present. No further assessment provided - not SWH.
Bat Hibernacula	Big Brown Bat, Tri-coloured Bat	CCR1, CCR2, CCA1, CCA2 Buildings are not SWH	Caves, mine shafts, underground foundations, Karsts Does not include active mines	**Studies Confirm:** confirmed hibernating bats **Area of SWH Defined As:** 200m radius around hibernaculum entrance, 1000m radius for wind farms	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Bat Maternity Colonies	Big Brown Bat, Silver-haired Bat	All Ecosites in Community Series: FOD, FOM, SWD, SWM Buildings are not SWH	Tree cavities and snags; deciduous or mixed stands with >10/ha >25cm dbh trees, Silver-haired Bats prefer forests with 21 snags/ha	**Studies Confirm:** confirmed use by >10 Big Brown Bats **or** >5 adult female Silver-haired Bats **Area of SWH Defined As:** entire woodland/forest ELC **or** Ecoelement containing maternity colonies	Woodland/treed areas on or adjacent to the study area have potential to support this habitat function. See report for further discussion.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Turtle Wintering Areas	Midland Painted Turtle **Special Concern**: Northern Map Turtle, Snapping Turtle	**Snapping and Midland Painted Turtles**: Community classes SW, MA, OA, SA, ELC Community Series FEO, BOO **Northern Map Turtle**: open water areas with current Not sewage lagoons or stormwater ponds	Water deep enough to not freeze, soft mud substrates; permanent water bodies, large wetlands, bogs or fens with adequate Dissolved Oxygen	**Studies Confirm:** 5 over-wintering Midland Painted Turtles, **or** 1 or more overwintering Northern Map Turtles or Snapping Turtles **Area of SWH Defined As:** ELC with overwintering turtles, if site is within a stream or river only the deep-water pool is protected	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Reptile Hibernaculum	**Snakes**: Eastern Gartersnake, Northern Watersnake, Northern Red-bellied Snake, Northern Brownsnake, Smooth Green Snake, Northern Ring-necked Snake **Special Concern**: Five-lined Skink, Milksnake, Eastern Ribbonsnake	**Snakes:** any forest ecosite other than very wet ones; talus, rock barrens, crevice, cave, and alvar sites; rock piles or slopes, stone fences, crumbling foundations **Skink:** Community Series FOD, FOM and Ecosites FOC1, FOC3	**Snakes:** sites with access below the frost line, wetlands with hummocks **Skink:** mixed forests with rock outcrops providing cover rock overlaying granite bedrock with fissures	**Studies Confirm:** use by ≥5 individuals from one species **or** use by individuals from ≥2 species; congregation of ≥5 individuals from one species **or** individuals from ≥2 species near potential hibernacula; if SC species are present site is SWH; any active skink hibernaculum **Area of SWH Defined As:** feature containing hibernacula plus 30m radius	The study area does not contain any features that may support this habitat function. No potential hibernacula sites observed. No further assessment provided - not SWH.
Colonially-nesting Bird Breeding Habitat (Bank and Cliff)	Cliff Swallow, Northern Rough-winged Swallow	Found in CUM1, CUT1, CUS1, BLO1, BLS1, BLT1, CLO1, CLS1, CLT1	Exposed banks, sandy hills, borrow pits, steep slopes, sand piles that are undisturbed or naturally eroding Does not include man-made structures or active aggregate pits	**Studies Confirm:** 1 or more nesting sites with ≥8 Cliff Swallow pairs **and/or** Rough-winged Swallow Pairs during the breeding season **Area of SWH Defined As:** colony and 50m radius from peripheral nests	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Colonially-nesting Bird Breeding Habitat (Tree/Shrubs)	Great Blue Heron, Black-crowned Night Heron, Great Egret, Green Heron	SWM2, SWM3, SWM5, SWM6, SWD1, SWD2, SWD3, SWD4, SWD5, SWD6, SWD7, FET1	Live or dead standing trees in wetlands, lakes, islands, peninsulas, may use shrubs or other emergent vegetation; most nests 11-15m from ground	**Studies Confirm:** ≥5 active Great Blue Heron or other listed species nests **Area of SWH Defined As:** colony plus 300m radius **or** extent of forest ecosite containing colony **or** any island <15ha with a colony	The study area does not contain any features that may support this habitat function. No nests observed. No further assessment provided - not SWH.
Colonially-nesting Bird Breeding Habitat (Ground)	Herring Gull, Great Black-backed Gull, Little Gull, Ring-billed Gull, Common Tern, Caspian Tern, Brewer's Blackbird	MAM1-6, MAS1-3, CUM, CUT, CUS **Brewer's Blackbird**: close to watercourses in open fields	**Gulls and Terns:** rocky islands or peninsulas in open water, marshy areas **Brewer's Blackbird:** near streams and irrigation ditches in farmland	**Studies Confirm:** >25 active nests of Herring Gulls or Ring-billed Gulls, >5 active nests of Common Terns, >2 active nests of Caspian Terns, ≥5 Brewer's Blackbird pairs, any active nesting colony of Little Gulls or Great Black-backed Gulls **Area of SWH Defined As:** colony plus 150m radius **or** extent of ecosites containing colony **or** any island <3ha	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Migratory Butterfly Stopover Areas	Painted Lady, Red Admiral **Special Concern**: Monarch	One Community Series each from field (CUM, CUT, CUS) and forest (FOC, FOD, FOM, CUP)	Minimum 10ha combination of field and forest located within 5km of Lake Ontario	**Studies Confirm**: >3000 Monarch Use Days (days a site is used * the number of individuals), **or** >3000 Monarch Use Days with Painted Ladies or Red Admirals present **Area of SWH Defined As**: n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Landbird Migratory Stopover Areas	All migratory songbirds and raptors	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Woodlots > 10ha within 5km of Lake Ontario; significance increases with proximity to shoreline and size	**Studies Confirm**: use by > 200 birds/day with > 35 species, **and** at least 10 species recorded on 5 different survey days **Area of SWH Defined As**: n/a	The study area is located outside of applicable distance from Lake Ontario shoreline. No further assessment provided - not SWH.
Deer Yarding Areas	White-tailed Deer	Community Series FOM, FOC, SWM, SWC and Ecosites CUP2, CUP3, FOD3, CUT	**Stratum** I: coniferous forest with >60% canopy cover **Stratum II**: mixed or deciduous forest surrounding Stratum I	**Confirm Studies**: mapping by MNRF **Area of SWH Defined As**: n/a	The study area is not contained in a significant Deer Yarding Area as identified by the MNRF. No further assessment provided - not SWH.
Deer Winter Congregation Areas	White-tailed Deer	Community Series FOC, FOM, FOD, SWC, SWM, SWD, conifer plantations	Woodlots > 100ha, smaller woodlots can be SWH based on MNRF assessment	**Confirm Studies**: mapping by MNRF, all woodlots >100ha are significant **Area of SWH Defined As**: n/a	N/A - see Deer Yarding Area category above.
Rare Vegetation Communities					
Cliffs and Talus Slopes		Community Series TAO, CLO, TAS, CLS, TAT, CLT	Any cliff > 3m or talus slope	**Confirm Studies:** any ELC for cliffs or talus slopes **Area of SWH Defined As:** n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Sand Barren		SBO1, SBS1, SBT1	Exposed sand, sparsely vegetated, <60% tree cover	**Confirm Studies:** confirmed ELC for Sand Barrens, <50% exotic vegetative cover **Area of SWH Defined As:** n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Alvar	**Indicator species**: Carex crawei, Panicum philadelphicum, Eleocharis compressa, Scutellaria parvula, Trichostema brachiatum	ALO1, ALS1, ALT1, FOC1, FOC2, CUM2, CUS2, CUT2-1, CUW2	Level calcerous bedrock, rock pavement, overlain by thin veneer of soil, <60% tree cover	Confirm Studies: >0.5ha, at least 4 indicator species, <50% exotic vegetative cover, in good condition **Area of SWH Defined As**: n/a	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Old Growth Forest		Community Series FOD, FOC, FOM, SWD, SWC, SWM	Woodland ≥30ha with at least 10ha interior habitat with 100m edge buffer	**Studies Confirm**: dominant trees are >140 years old, no recognizable forestry activities **Area of SWH Defined As**: combined ecosites or ecoelements with old growth characteristics	The study area does not contain any climax forest/old growth tree cover. No further assessment provided - not SWH.
Savannah	See Appendix N of the Significant Wildlife Habitat Technical Guide.	TPS1, TPS2, TPW1, TPW2, CUS2	Tallgrass prairie with 25-60% tree cover, cannot be remnant site	**Studies Confirm**: ≥1 Savannah indicator species **and** <50% exotic vegetative cover **Area of SWH Defined As**: ecosite	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Tallgrass Prairie	See Appendix N of the Significant Wildlife Habitat Technical Guide.	TPO1, TPO2	Dominated by prairie grasses, <25% tree cover	**Studies Confirm**: ≥1 Prairie indicator species **Area of SWH Defined As**: ecosite	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.
Other Rare Vegetation Communities		Provincially Rare S1, S2, and S3 vegetation communities in Appendix M of the SWHTG	Beaches, Fens, Forest, Marsh, Barrens, Dunes, Swamps	**Studies Confirm**: confirmed ELC from Appendix M of the SWHTG **Area of SWH Defined As**: ELC	The study area does not contain any applicable ELC ecosites. No further assessment provided - not SWH.

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[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Specialized Habitats for Wildlife					
Waterfowl Nesting Area	American Black Duck, Northern Pintail, Northern Shoveler, Gadwall, Blue-winged Teal, Green-winged Teal, Wood Duck, Hooded Merganser, Mallard	Upland habitat adjacent to MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, SWT1, SWT2, SWD1, SWD2, SWD3, SWD4	Area extending 120m from >0.5ha wetland, **or** a cluster of ≥3 <0.5ha wetlands, adjacent upland areas at least 120m wide, trees >40cm dbh with nesting cavities	**Studies Confirm: ≥**3 nesting pairs from listed species excluding Mallards, **or** ≥10 nested pairs including Mallards, **or** active nesting American Black Ducks **Area of SWH Defined As:** wetland and 120m boundary, boundary may vary to provide nesting habitat	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey **Special Concern**: Bald Eagle	Community Series FOD, FOM, FOC, SWD, SWM, SWC	Forested shorelines along lakes, ponds, rivers, or wetlands **Osprey**: nest at the top of tree **Eagle**: nest in notch of super canopy tree Does not include nests on man-made structures	**Studies Confirm:** one or more active nests in area, nest must be used annually, must be inactive ≥3 years to be non-significant **Area of SWH Defined As:** Osprey nest and 300m radius or contiguous woodland stand Bald Eagle nest and 400-800m radius plus perching and foraging habitat	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

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[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Woodland Raptor Nesting Habitat	Northern Goshawk, Cooper's Hawk, Sharp-shinned Hawk, Red-shouldered Hawk, Barred Owl, Broad-winged Hawk	All forested Ecosites, also SWC, SWM, SWD, CUP3	Natural or conifer plantation stands >30ha with >10ha of interior habitat with 200m edge buffer, stick nests found in conifer, deciduous, or mixed forests, Coopers Hawk nest on forest edges	**Studies Confirm:** 1 or more active nests from listed species **Area of SWH Defined As:** active Red-shouldered Hawk, Northern Goshawk nest and 400m radius or 28ha of suitable habitat Active Barred Owl nest and 200m radius Active Broad-winged Hawk, Coopers Hawk nest and 100m radius Active Sharp-shinned Hawk nest and 50m radius	The study area contains no large forest patches or interior woodland habitat. No further assessment provided - not SWH.
Turtle Nesting Areas	Midland Painted Turtle **Special Concern**: Northern Map Turtle, Snapping Turtle	MAS1, MAS2, MAS3, SAS1, SAM1, SAF1, BOO1, FEO1	Close to water with open, sunny areas containing sand and gravel turtles can dig in, does not include road shoulders	**Studies Confirm:** ≥5 nesting Midland Painted Turtles, **or** ≥1 nesting Northern Map Turtle or Snapping Turtle **Area of SWH Defined As:** area/areas with exposed mineral soils plus 30-100m radius, including travel routes from wetland to nesting area	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Seeps and Springs	Wild Turkey, Ruffed Grouse, Spruce Grouse, White-tailed Deer, Salamander spp.	Any forested ecosite near headwaters	Forested area with <25% meadow/field/pasture within headwaters of river or stream	**Studies Confirm: ≥**2 seeps/springs **Area of SWH Defined As:** area containing seeps/springs	No seeps or springs were documented during on-site investigations.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Amphibian Breeding Habitat (Woodland)	Eastern Newt, Blue-spotted Salamander, Spotted Salamander, Gray Treefrog, Spring Peeper, Western Chorus Frog, Wood Frog	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Wetland, pond, pool >500m^2 within 120m of a woodland	**Studies Confirm**: breeding by ≥1 listed newt/salamander species **or** ≥2 listed frog species with at least 20 adults or egg masses **or** ≥2 listed frog species with Call Level Codes of 3 **Area of SWH Defined As**: wetland plus 230m radius of woodland, including travel corridor	The study area does not contain any features that may support this habitat function. No breeding pools or wetland ecosites are present. No further assessment provided - not SWH.
Amphibian Breeding Habitat (Wetlands)	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 Classes SW, MA, FE, BO, OA, SA	Wetlands >500m^2, bullfrogs require permanent waterbodies	**Studies Confirm**: breeding by ≥1 listed newt/salamander species **or** ≥2 frog/toad species with at least 20 adults or egg masses **or** ≥2 frog/toad species with Call Level Codes of 3 **Area of SWH Defined As**: ELC ecosite and shoreline are SWH	The study area does not contain any features that may support this habitat function. No breeding pools or wetland ecosites are present. No further assessment provided - not SWH.
Woodland Area-Sensitive Bird Breeding Habitat	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	Community Series FOC, FOM, FOD, SWC, SWM, SWD	Habitats where interior forest birds are breeding, typically forests >30ha and >60 years old; interior forest habitat is at least 200 m from forest edge habitat.	**Studies Confirm**: breeding pairs/nesting by ≥3 listed species, any site with breeding Cerulean Warblers or Canada Warblers **Area of SWH Defined As**: n/a	The study area contains no large forest patches or interior woodland habitat. Sufficient diversity of indicator species was not documented. No further assessment provided - not SWH.

*as per Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (January 2015)

[1]Shaded rows denote habitat categories that may be present within a subject property.

Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Habitats of Species of Conservation Concern					
Marsh Bird Breeding Habitat	American Bittern, Virginia Rail, Sora, Common Moorhen, American Coot, Pied-billed Grebe, Marsh 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 **Green Heron:** SW, MA, CUM1	Shallow water with emergent vegetation **Green Heron:** edge of sluggish streams, ponds, marshes sheltered by shrubs and trees	**Studies Confirm: ≥**5 nesting pairs of Sedge Wren or Marsh Wren **or** 1 pair of Sandhill Cranes, **or** breeding by ≥5 of the listed species, **or** ≥1 pairs of Trumpeter Swans, Black Terns, Green Herons, or Yellow Rails **Area of SWH Defined As:** area of ELC used for breeding	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Open Country Bird Breeding Habitat	Upland Sandpiper, Grasshopper Sparrow, Vesper Sparrow, Northern Harrier, Savannah Sparrow **Special Concern**: Short-eared Owl	CUM1, CUM2	Grassland areas >30ha, includes cultural fields and meadows, agricultural land not used for farming in last 5 years	**Studies Confirm:** nesting/breeding of ≥2 listed species **or** ≥1 breeding Short-eared Owls **Area of SWH Defined As:** contiguous grassland ELC	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.
Shrub/Early Successional Bird Breeding Habitat	**Indicator Species**: Brown Thrasher, Clay-coloured Sparrow **Common Species**: Field Sparrow, Black-billed Cuckoo, Eastern Towhee, Willow Flycatcher **Special Concern**: Yellow-breasted Chat, Golden-winged Warbler	CUT1, CUT2, CUS1, CUS2, CUW1, CUW2	Large fields >10ha succeeding to shrub and thicket, shrub thickets >10ha	**Studies Confirm:** nesting/breeding of ≥1 Indicated Species **and** at least 2 Common Species, **or** breeding Yellow-breasted Chat or Golden-winged Warbler **Area of SWH Defined As:** contiguous field/thicket ELC	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

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Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Terrestrial Crayfish	Chimney or Digger Crayfish, Devil or Meadow Crayfish	MAM1, MAM2, MAM3, MAM4, MAM5, MAM6, MAS1, MAS2, MAS3, SWD, SWT, SWM, CUM1 with inclusions of meadow marsh or swamp	Wet meadow/shallow marsh edges	**Studies Confirm**: ≥1 individuals or burrows in suitable habitat **Area of SWH Defined As**: area of ELC with burrows	Evidence of terrestrial crayfish was not documented during on-site investigations.
Special Concern and Rare Wildlife Species	Species tracked by NHIC	n/a	ELC surrounding recorded occurrence	**Studies Confirm:** confirmation species is present **Area of SWH Defined As:** area of habitat to the finest ELC scale that protects habitat form and function	Either background databases contain existing records or site investigations indicate that the study area has the potential to support habitat for one or more special concern or rare species. See report for further discussion.
Animal Movement Corridors					
Amphibian Movement Corridors	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	Any ecosite associated with water	Corridor linking summer and breeding habitat	**Studies Confirm:** confirmed Amphibian Breeding Habitat-Wetland, at least 15m of vegetation on both sides of waterway **or** up to 200m wide **Area of SWH Defined As:** corridor is part of buffer surrounding Amphibian Breeding Habitat- Wetland	The study area does not contain any features that may support this habitat function. No further assessment provided - not SWH.

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Ecoregion 6E[1]	Species	Candidate SWH Habitat - ELC Ecosites	Candidate Significant Wildlife Habitat - Habitat Criteria	Confirmed Significant Wildlife Habitat	Discussion
Deer Movement Corridors	White-tailed Deer	Any forested ecosite	Identified by MNRF, follow riparian areas, woodlots, ravines, or ridges	**Studies Confirm:** confirmed Deer Wintering Habitat **Area of SWH Defined As:** corridors at least 200m wide with gaps <20m, with 15m of vegetation on both sides of waterways	N/A
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 6E					
6E-14 Mast Producing Areas	Black Bear	Community Series FOM, FOD	Woodland ecosites >30ha with mast-producing tree species (cherry, oak, beech)	**Studies Confirm**: woodlands >30ha with 50% composition of FOM1-1, FOM2-1, FOM3-1, FOD1-1, FOD1-2, FOD2-1, FOD2-1, FOD2-3, FOD2-4, FOD4-1, FOD5-2, FOD5-3, FOD5-7, FOD6-5 **Area of SWH Defined As**: n/a	N/A
6E-17 Lek	Sharp-tailed Grouse	CUM, CUT, CUS	Grassland >15ha adjacent to shrubland, grassland >30ha adjacent to deciduous woodland	**Studies Confirm**: confirmed courtship activities **Area of SWH Defined As**: field/meadow ecosites plus 200m radius	N/A

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Appendix 7. Development Concept Plan

RIVERSTONE
ENVIRONMENTAL SOLUTIONS INC.