Natural Heritage Evaluation and Species at Risk Assessment

101-119 Bay Lane

City of Barrie

Prepared for:
Bay Lane Estates

Prepared by:
Azimuth Environmental
Consulting, Inc.

November 2022

AEC 22-239

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Environmental Assessments & Approvals

November 8, 2022 AEC 22-239

Bay Lane Estates (Mr. Manny Schacht)
c/o JM Accounting Services
1 St. Clair Ave W, Suite 1105
Toronto, ON, M4V 1K7

Re: **Natural Heritage Evaluation and Species at Risk Assessment for a Plan of Subdivision Approval,**
101-119 Bay Lane, City of Barrie, County of Simcoe

Dear Mr. Schacht:

Azimuth Environmental Consulting, Inc. was retained to provide a Natural Heritage Evaluation and Species at Risk Assessment for the proposed plan of subdivision approval at the location described above. The purpose of this report is to provide the Lake Simcoe Region Conservation Authority (LSRCA), the City of Barrie (City) with an understanding of natural environmental conditions and potential for impacts related to the proposed development on significant natural heritage features and functions of the property and adjacent lands. This report also documents the natural environmental features present within the property and adjacent lands with regard to Species at Risk and their habitats.

Should you have any questions or require additional information please do not hesitate to contact the undersigned.

Yours truly,
AZIMUTH ENVIRONMENTAL CONSULTING, INC.

Jordan Wrobel

Jordan Wrobel, B.Sc.
Terrestrial Ecologist

642 Welham Road, Barrie, Ontario L4N 9A1
telephone: (705) 721-8451 • fax: (705) 721-8926 • info@azimuthenvironmental.com • www.azimuthenvironmental.com

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1.0 INTRODUCTION

Azimuth Environmental Consulting, Inc. (Azimuth) was retained by Bay Lane Estates to prepare a Natural Heritage Evaluation (NHE) and Species at Risk (SAR) Assessment for a Plan of Subdivision approval at 101-119 Bay Lane in the City of Barrie (City) (Figure 1). The property is approximately 2.55 hectares (ha) in size. In the 1960's, the shareholders (Bay Lane Estates Co. Ltd.) constructed 10 cottages, 10 septic systems, driveways, accessory structures (i.e. tennis courts, sheds, boathouses, decks) on the property. The shareholders have used the lands as a single ownership with each shareholder controlling their respective 'lot'. Within the last 10 years, the City has installed a municipal sanitary sewer and watermain along their private driveway on the south side of the property. The shareholders now wish to formally create their 10 individual lots and one common block, which require a zoning By-law Amendment and Plan of Subdivision approval.

During agency pre-consultation, it was confirmed by the City that a Natural Heritage Evaluation is required for the portion of the lands that are identified as "Level 1 (with existing development) Natural Heritage Resource" to establish the development limits for the property. Furthermore, it is our understanding that the Lake Simcoe Region Conservation Authority (LSRCA) have requested a SAR Assessment be undertaken.

The purpose of this NHE and SAR Assessment is to identify the candidate Key Natural Heritage Features (KNHFs) present within the study area and address potential impacts to candidate KNHFs. A review of background information in combination with a multiple site visits was undertaken in June and July, 2022 to identify natural heritage features and functions as candidates for consideration as significant KNHFs associated with the study area. This report also examines potential for SAR protected under the *Endangered Species Act*, 2007 (ESA) within the study area. The potential for negative impacts to natural heritage features resulting from the formalization of the 10 lots and common block is considered.

For the purposes of this NHE and SAR Assessment the study area comprises the property as shown on Figures 1-3 and adjacent lands (within approximately 120m) of the property limits. Natural features in the overall planning area beyond the defined study area limits are discussed where applicable throughout this report.

2.0 PLANNING CONTEXT

2.1 Provincial Planning Policy (2020)

The Provincial Policy Statement (PPS) (MMAH, 2020) outlines policies related to natural heritage features (Section 2.1) and water resources (Section 2.2). Ontario's *Planning Act*, (1990) requires that planning decisions shall be consistent with the PPS. The study area for this assessment is located entirely within **Ecoregion 6E**. According to the PPS development and site alteration shall not be permitted in:

- *Significant wetlands* in Ecoregions 5E, 6E and 7E; and,
- *Significant coastal wetlands*.

Similarly, Section 2.1.5 of the PPS states that, unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions, development and site alteration shall not be permitted within:

a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E; and 7E;
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 that are not subject to policy 2.1.4(b)

It is ultimately the responsibility of the Province and/or the Municipality to designate areas identified within Section 2.1.4 and 2.1.5 of the PPS as “significant”.

Section 2.1.6 of the PPS states that development and site alteration is not permitted in fish habitat except in accordance with federal and provincial requirements.

Section 2.1.7 of the PPS states that development and site alteration shall not be permitted in habitat of Endangered and Threatened species, except in accordance with provincial and federal requirements.

Furthermore, under Section 2.1.8 of the PPS, no development and site alteration will be permitted on lands adjacent to 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 there will be no negative impacts on the natural features and their ecological functions.

2.2 *Endangered Species Act*, 2007

Ontario's ESA provides regulatory protection to Endangered and Threatened species prohibiting harassment, harm and/or killing of individuals and destruction of their habitats. Habitat is broadly characterized within the ESA as the area prescribed by a regulation as the habitat of the species or an area on which the species depends, directly or indirectly, to carry on its life processes including reproduction, rearing of young, hibernation, migration or feeding.

The various schedules of the ESA included under O. Reg. 230/08 identify SAR in Ontario. These include species listed as Extirpated, Endangered, Threatened and Special Concern. As noted above, only species listed as Endangered and Threatened receive protection from harm and destruction to habitat on which they depend.

2.3 Growth Plan for the Greater Golden Horseshoe

The City of Barrie is within an identified Urban Growth Centre. Urban Growth Centres will be the focal areas for investment, commercial, recreational, cultural and entertainment uses. They will accommodate and support a transit network, and will accommodate significant population as per Section 2.2.3 of the Growth Plan (2020). The study area is identified within a Built-Up Area according to Schedule 4 (Urban Growth Centres) of the Growth Plan (Appendix A). Built-Up Areas are lands within the limits of the developed urban areas as in accordance with Policy 2.2.3.5 (Growth Plan, 2020).

2.4 City of Barrie

The City of Barrie Official Plan (OP: City of Barrie, 2018) illustrates the property is within a Residential designation and adjacent lands contain Open Space to the south of the existing driveway, according to Schedule A (Land Use). The study area contains Level 1 Resources with Existing Development and Level 3 Resources according to Schedule H (Natural Heritage Resources) of Barrie's OP (Appendix A).

The southwest corner of the property has been identified as part of the City's Level 1 Resources with existing Development Designation Subject to 3.5.2.4 d. This area currently contains woodland (extending along southern property boundary), an existing tennis court with hedgerows that abut the court (Appendix A, Figure 2). Section 3.5.2.4 d states that 'notwithstanding the land use limitation applicable to properties identified as Level 1 in 3.5.2.4 (a) i), where an existing designation permits other forms of development, such development may proceed subject to the policies of Level 2 in Section 3.5.2.4 (a) ii) and the appropriate planning application process. Section 3.5.2.4 (a) ii) states that...the features and functions of these areas should be retained, however, there is potential for development if no negative impact can be demonstrated or mitigated.

Level 3 Resources exist to the south and east of the property and appear to be associated with approximately 16 ha of woodland habitat that is part of the City's parkland known as "The Gables" (Appendix A, Figure 2).

The proposed development area is mapped within Lake Simcoe Watershed Boundary as illustrated in Schedule J (Lake Simcoe Watershed) of Barrie's OP (Appendix A).

2.5 Lake Simcoe Region Conservation Authority

The study area includes lands subject to O. Reg. 179/06 – "Regulation of Development Interference with Wetlands and Alterations to Shorelines and Watercourses" by the LSRCA. Under Regulation 179/06, the LSRCA requires that approvals be obtained for any proposed development or site alteration within areas regulated under a Conservation Authority's jurisdiction (Appendix B).

2.6 Lake Simcoe Protection Plan

Relevant policies of the Lake Simcoe Protection Plan (LSPP) 2009 apply to lands in the Lake Simcoe Watershed, including the subject property. As the study area is within designated Settlement Area according to the Barrie OP following policies apply:

A. An application for development shall seek to avoid, minimize and/or mitigate impacts associated with the quality and quantity of urban run-off into receiving streams, lakes, and wetlands (Policy 6.33-DPc),
B. Development and site alteration are permitted within Key Natural Heritage Features, a key hydrologic feature, and within a related vegetation protection zone when related to existing uses (Policy 6.23-DPc); and
C. Development or site alterations in relation to existing uses are permitted if the existing uses were lawfully used before the LSPP took effect June 2, 2009 (Policy 6.45-DPa).

2.7 Federal *Fisheries Act*

The *Fisheries Act* includes protections for fish and fish habitat in the form of standards, codes of practice, and guidelines for projects near water. The *Fisheries Act* provides protection against the "death of fish, other than by fishing", (Section 34.4(1)) and the "harmful alteration, disruption or destruction of fish habitat", (Section 35(1)), otherwise known as HADD.

In cases where impacts to fish and fish habitat cannot be avoided, and the project does not fall within waterbodies where Fisheries and Oceans Canada (DFO) review is not

required, proponents are asked to submit a request for review to their Fish and Fish Habitat Protection Program regional office to determine approval requirements. All projects are encouraged to avoid causing the death of fish and a HADD of fish habitat, using measures to protect fish and fish habitat that include standards and codes of practice for common works, undertakings and activities.

3.0 STUDY APPROACH

Azimuth attended the property in June and July, 2022 to carry out an assessment of the natural areas within the study area. Prior to undertaking the field studies an initial classification of habitats was undertaken using recent air photo imagery for an area encompassing the study area. Vegetation boundaries were then checked in the field and delineated as illustrated in Figure 2. Vegetation community types were classified using the Ecological Land Classification for Southern Ontario: First Approximation (ELC: Lee *et al*., 1998, 2008).

The SAR screening undertaken for the scope of this assignment compares the habitat requirements of species with potential to occur in the overall planning area with habitat types that occur on the property. The screening is based on air photo interpretation combined with onsite evaluation of the habitat as described below.

A Terms of Reference for the above survey program was provided to the LSRCA on June 9, 2022 to which a response was received on June 16, 2022 (Erin Fitzpatrick, Natural Heritage Ecologist) confirming the scope of the program undertaken was acceptable. A consultation record between Azimuth and the LSRCA is provided in Appendix B.

3.1 Breeding Bird Survey

Two dawn bird surveys were conducted within the study area on June 10, 2022 (time 06:14 to 06:30) and June 23, 2022 (time 07:41 to 08:01) guided by point count methodology presented in Appendix D of the OBBA Guide for Participants (2001). All surveys were conducted no earlier than one half hour before sunrise and were completed prior to 10:00a.m. Surveys were completed under suitable weather conditions (*i.e.* no precipitation and light winds (Beaufort wind scale ≤3)), with an observation period of at least 5 minutes carried out at the point count stations shown on Figure 2.

4.0 EXISTING CONDITIONS

4.1 Land Use

The property is within a built-up area of Barrie, located at the end of Bay Lane and is approximately 2.55 ha in size. The property contains 9 single detached residential dwellings (1 of the original dwellings burned down) with associated structures and

driveways. The property contains a private road to access the residential dwellings. A tennis court exists within the southwest corner of the property with treed hedgerows abutting the tennis court along the northern and eastern boundary. The north end of the property has 200m of water frontage of Kempenfelt Bay.

The adjacent lands south and east of the property contain woodland that is part of the City's parkland, known as 'The Gables' which is approximately 16ha of forested park with walking trails. Adjacent lands west of the property contain a subdivision of single family dwellings. Notably, the northern area adjacent to the property consists of Kempenfelt Bay.

4.2 Vegetation

A field survey was undertaken to evaluate vegetation community types including representative plant species compositions on July 19, 2022. Property access was granted within the property boundary only (Figure 2), and therefore alternative survey techniques (*i.e.* "fenceline"/binocular surveys) were completed for lands located beyond the property line. The site visit was undertaken by a qualified Terrestrial Ecologist with knowledge of rare, Threatened, and Endangered plant species with potential to occur in the area. A photographic record from the site visit is present in Appendix C.

A review of the MNRF NHIC database (1x 1 kilometre (km) square 17PK0614 identified a record of provincially Endangered Butternut (*Juglans cinerea*) within the vicinity of the study area. The database does not clarify whether the record is historical or recent. A detailed survey was undertaken to identify Butternut and Black Ash (*Fraxinus nigra;* Endangered) trees, however none were observed within the property limits or adjacent lands.

No plant species considered Endangered or Threatened were identified during the site investigation, including Butternut and Black Ash trees. Further, no provincially rare species were observed during the field program. None of the vegetation communities or species documented are of federal or provincial conservation concern (MNRF, 2022).

Vegetation communities within the property were determined in accordance with the ELC system, and are summarized as observed in Table 1 and illustrated on Figure 2. Vegetation communities identified within the study area are listed as follows:

- CVR_3 Single Family Residential
- FOMM2-2 (Dry-Fresh White Pine-Sugar Maple Forest)

4.3 Wildlife

Direct and indirect observations of wildlife (*e.g.* tracks, scat, fur) were collected as a matter of course during the June and July, 2022 site investigations. The following species and signs thereof were observed within the study area limits during the site investigation:

- Mammals: Eastern Chipmunk, Grey Squirrel
- Birds: Downy Woodpecker

4.3.1 Breeding Bird Surveys

A total of 15 bird species were recorded during dawn breeding bird surveys, all of which are typical/semi-urban landscapes and woodland edge habitats (Table 2). One SAR bird, the Eastern Wood-pewee (Special Concern) was observed within the study area during dawn breeding bird surveys. Downy Woodpecker was observed incidentally while conducting the vegetation/ELC survey.

4.4 Species at Risk

A screening for SAR occurred within the planning area based on potentially suitable habitat features identified during the site investigation (Table 3). The SAR assessment fully considers SAR with potential to occur within the study area. Based on this assessment in combination with vegetation communities and other environmental features observed during the site investigation, the following species are considered below in this report:

- **Threatened and Endangered:** Little Brown Myotis, Northern Myotis, Tri-colored Bat
- **Special Concern:** Eastern Wood-pewee

4.5 Wetlands

There are no wetlands within the study area identified as provincially or locally Significant Wetland, or similar designation on City or Provincial mapping resources (Appendix A). Wetlands were not identified within the study area limits during the July 19, 2022 site investigation.

4.6 Candidate Significant Woodland

Woodlands within the study area are identified as Significant Woodland on municipal mapping resources. The southwest wooded corner of the property has been identified as part of the City's Level 1 Resources with existing Development Designation and the adjacent lands are classified as Level 3 (Appendix A). As such, the woodland is

considered a component of the Natural Heritage Resource Network within the City, and is considered a Significant Woodland.

4.7 Candidate Significant Valleyland

No portion of the study area is identified as Significant Valleyland, nor assigned a similar designation on municipal or provincial mapping resources.

There are no valleyland features located within the study area according standards presented in the NHRM, principally due to the lack of permanent or intermittent watercourses that constitute a defining component of a valleyland feature. No portion of the study area fulfills the well-defined valley morphology and landform prominence required to be considered Candidate Significant Valleyland.

4.8 Candidate Significant Wildlife Habitat

An assessment of the potential for Significant Wildlife Habitat (SWH) within study area was conducted using the criteria outlined within the Significant Wildlife Habitat Technical Guide (OMNR, 2000) and the accompanying the Ecoregion 6E Criteria Schedules (MNRF, 2015). The following Candidate SWH types have potential to be present within the study area based on the results of the field program:

- Bat Maternity Colonies
- Habitat for Special Concern and Rare Wildlife Species
    - Eastern Wood-pewee

4.9 Areas of Natural and Scientific Interest

There are no Areas of Natural and Scientific Interest located within the study area according to municipal or provincial mapping resources (Appendix A).

4.10 Fish and Fish Habitat

Lake Simcoe is southern Ontario's largest body of water excluding the Great Lakes, and is part of a much larger system known as the Trent-Severn Waterway. Its average depth is 15m and can reach as deep as 42m (LSRCA, 2022). Lake Simcoe's shoreline is composed of cobble, sand, and organic muck. The lake contains diverse fish habitat as it supports over 50 fish species, and is popular for recreational fishing (LSRCA, 2022).

The northern property shoreline faces towards open water of Kempenfelt Bay (Figure 2), consisting of built up bank (with rocks), cobble substrate and minimal aquatic vegetation (Appendix C). Multiple existing docks are located along the property's shoreline. No Fish

Activity Areas are present within the study area according to Ontario Geohub Fish Activity mapping (Ontario Geohub, 2022).

Lake Simcoe is protected under the Federal *Fisheries Act* and Lake Simcoe Protection Plan.

No additional tributaries or drainage features were identified within the study area during site visits or through background mapping (NHIC and Ontario Hydro Network (OHN).

5.0 NATURAL HERITAGE FEATURES SUMMARY

The results of Azimuth's site investigation combined with review of background information indicate the potential for the following candidate KNHFs within the study area:

- Habitat for Endangered and Threatened Species
    - Little Brown Myotis, Northern Myotis, Tri-colored Bat
- Significant Woodland
- Candidate Significant Wildlife Habitat
    - Bat Maternity Colonies
    - Habitat for Special Concern and Rare Wildlife Species
        - Eastern Wood-pewee
- Fish Habitat

6.0 PROPOSED DEVELOPMENT

The proposed development involves the formalization of ten individual lots that correspond with the location of the exiting nine dwellings and vacant 'lot' on the property and one common block (Figure 3, Appendix D). Each lot created will include approximately 20m of Kempenfelt Bay frontage. There are no proposed upgrades or changes to the roadway.

7.0 IMPACT ASSESSMENT

This impact assessment is prepared with regards to the formalization of the 10 lots and one common block, as described above and illustrated in Figure 3.

7.1 Habitat for Threatened and Endangered Species

Impacts with regards to the ESA and Habitat of Threatened or Endangered Species are covered under Section 9 and 10 of the ESA. Section 9 deals directly with killing, harming, or harassing living members of a species while Section 10 covers destruction or damage to habitat of Threatened or Endangered species. The following Threatened and

Endangered species have the potential to occur within the limits of the property and on adjacent lands:

- Little Brown Myotis, Northern Myotis, Tri-colored Bat (Endangered)

7.1.1 Little Brown Myotis, Northern Myotis, Tri-colored Bat

Little Brown Myotis, Northern Myotis, and Tri-colored Bat may utilize woodlands as maternity roost sites, utilizing trees >25 centimetres (cm) diameter at breast height with evidence of cracks, holes, splits, lifted bark, etc. (called "snags") to provide refuge for the rearing of young during the late spring and early summer months (approximately June). The FOMM2-2 community and adjacent woodland areas have the potential to provide suitable SAR bat maternity habitat. Furthermore, trees within the CVR_3 area of sufficient size and characteristics/features could provide suitable habitat for the species.

There is no physical development or site alteration proposed for the property. Therefore, there will be no encroachment into the FOMM2-2 community and no trees within the CVR_3 community are currently planned to be removed. There is no expectation that the formalization of the 10 lots will result in a negative impact to Little Brown Myotis, Northern Myotis, Tri-Colored Bat, or the habitat upon which they depend.

7.2 Candidate Significant Woodland

No portion of the FOMM2-2 or adjacent woodlands will be removed or altered with the proposed works. As no physical site alteration is required for the proposed lot formalization. No negative impacts to the woodland are anticipated.

7.3 Candidate Significant Wildlife Habitat

According to the PPS development and site alteration are not permitted within SWH located in Ecoregion 6E, unless it can be demonstrated there will be no negative impacts upon the feature and its ecological functions. For the purposes of this assessment, Candidate SWH described below is treated as significant.

7.3.1 Bat Maternity Colonies

There is no expectation that the formalization of the 10 lots and common block will result in a negative impact to this potential SWH function. See Section 7.1.1 for assessment.

7.3.2 Habitat for Special Concern and Rare Wildlife Species

Species-specific surveys to target presence/absence of Special Concern species were not conducted as a part of this assessment. For the purposes of this assessment, presence of

Special Concern species (for which suitable habitat may be present) is assumed in lieu of conducting appropriate screenings for these species.

Eastern Wood-pewee

Eastern Wood-pewee inhabits mature deciduous and mixed stands with an open understory. This special concern species is usually associated with woodland clearings and edges within the vicinity of its nest (COSEWIC, 2012a). Eastern Wood-pewee was confirmed to occur within the property and adjacent woodlands during the initial dawn breeding bird survey (Table 2).

No physical development is involved with the proposed works and no encroachment within the FOMM2-2 community will occur. The formalization of the 10 lots and common block would not be expected to negatively impact the above Eastern Wood-Pewee.

7.4 Fish Habitat

The proposed works does not involve physical development, and will not result in direct alteration the Kempenfelt Bay shoreline nor will any portion of the property be subject to disturbance within 30m of such features. There is no expectation that the formalization of the 10 lots and common block will result in a negative impacts to fish or fish habitat under the Federal *Fisheries Act.*

8.0 SPECIES AT RISK DISCLAIMER

It should be noted that the absence of a protected species within the study area does not indicate that they will never occur within the area. Given the dynamic character of the natural environment, there is a constant variation in habitat use. Care should be taken in the interpretation of presence of species of concern including those listed under the ESA. Changes to policy, or the natural environment, could result in shifts, removal, or addition of new areas to the list of areas currently considered SAR habitat. This report is intended as a point in time assessment of the potential to impact SAR; not to provide long term "clearance" for SAR. While there is no expectation that the assessment should change significantly, it is the responsibility of the proponent to ensure that they are not in contravention of the ESA at the time that site works are undertaken.

8.1 Recommendations

At this time, there are no natural heritage recommendations related to the formalization of the 10 lots and common block. In the future, should any physical site alteration or development be proposed, consideration and mitigation for the aforementioned natural heritage features and functions will be required which may include:

- Timing restrictions for tree removals to avoid impacts to migratory breeding birds and SAR bats;
- Sediment and erosion controls;
- Maintaining appropriate distance from natural heritage features including Kempenfelt Bay and the woodland;
- Consideration of fish habitat within Kempenfelt Bay

9.0 CONCLUSIONS

Based upon our analysis, it is concluded that the environmental conditions are not limiting to the proposed formalization of ten lots.

At this time, our findings are summarized as follows:

- The proposal is consistent with the policies of the Provincial Policy Statement, ESA, City of Barrie Official Plan, Growth Plan of the Greater Golden Horseshoe, Lake Simcoe Protection Plan, and Lake Simcoe Region Conservation Authority O. Reg. 179/06.

- Our impact assessment has given full consideration to the habitat requirements of all SAR assumed and documented to occur in the area and results indicate the proposed formalization of the 10 lots and one common block will not result in negative direct or indirect impacts to habitat of SAR.

- The proposed lot formalization will not negatively impact the ecological functions of Significant Woodland or Candidate Significant Wildlife Habitat.

- No ephemeral, intermittent or permanent drainage features, open water units, fish or fish habitat are expected to be negatively impacted as a result of the formalization of the 10 lots and common block.

10.0 REFERENCES

Cadman, M.D., D.A. Sutherland, G.G. Beck, D. Lepage, and A.R. Couturier (eds.). 2007. Atlas of the Breeding Birds of Ontario (OBBA). 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field Ornithologies, Ontario Ministry of Natural Resources and Ontario Nature, Toronto, xxii + 706pp.

City of Barrie. 2018. City of Barrie Official Plan.

COSEWIC. 2012a. COSEWIC assessment and status report on the Eastern Wood-pewee Contopus virens in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.

Endangered Species Act, Ontario. 2007. An Act to protect species at risk and to make related changes to other Acts. Bill 184 Chapter 6, Statutes of Ontario 2007.

Fish and Wildlife Conservation Act, Ontario. 1997. S.O. 1997, c.41 Government of Canada. 1985. Federal Fisheries Act. (http://lawslois.justice.gc.ca/eng/acts/f-14/). Accessed October 2022.

Greater Golden Horseshoe. 2020. Growth Plan for the Greater Golden Horseshoe. (https://files.ontario.ca/appendix_-_growth_plan_2017_-_oc-10242017.pdf). Accessed October 2022.

Lake Simcoe Protection Plan. 2009. (https://rescuelakesimcoe.org/wpcontent/uploads/2021/02/Lake-Simcoe-Protection-Plan.pdf). Accessed October 2022.

Lake Simcoe Region Conservation Authority (LSRCA). 2022. (Our Watershed - Lake Simcoe Region Conservation Authority (lsrca.on.ca)). Accessed October 2022.

Lee, H.T., W.D. Bakowsky, J. Riley, J. Bowles, M. Puddister, P. Uhlig and S. McMurray. 1998, 2008. Ecological Land Classification for Southern Ontario. First Approximation and its Application. Ontario Ministry of Natural Resources, Southcentral Sciences Section, Science Development and Transfer Branch. SCSS Field Guide FG-02.

Ministry of the Environment, Conservation and Parks (MECP). 2022. Species at Risk in Ontario. (https://www.ontario.ca/page/species-risk-ontario). Accessed October 2022.

Ministry of Municipal Affairs and Housing (MMAH). 2020. Provincial Policy Statement.

Ministry of Natural Resources and Forestry (MNRF). 2015. Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E. 38 pp.

Ministry of Natural Resources and Forestry (MNRF). 2022a. Natural Heritage Information Centre (NHIC) internet web page. Government of Ontario, Ministry of Natural Resources and Forestry. (https://www.ontario.ca/page/naturalheritageinformation-centre). Accessed October 2022.

Ministry of Natural Resources and Forestry (MNRF). 2022b. Fish ON-Line internet web page, Government of Ontario, Ministry of Natural Resources and Forestry. https://www.lioapplications.lrc.gov.on.ca/fishonline/Index.html?viewer=FishONLine.FishONLine&locale=en-CA). Accessed October 2022.

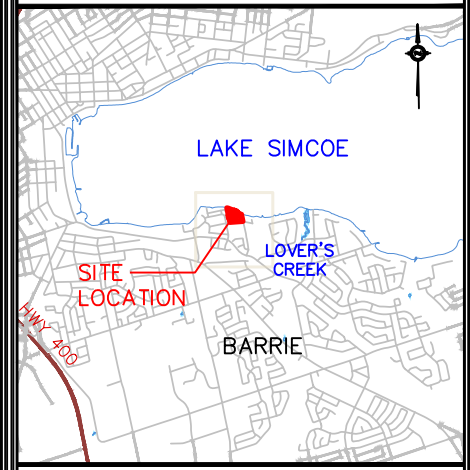
Ontario Hydro Network (OHN). 2022. Ontario Hydro Network-Watercourse. (https://geohub.lio.gov.on.ca/datasets/mnrf::ontario-hydro-network-ohn-watercourse/explore?location=44.094855%2C-80.168256%2C16.33). Accessed September 2022.

Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Fish and Wildlife Branch, Wildlife Section, Science Development and Transfer Branch, Southcentral Science Section. Queen's Printer for Ontario. 151 pp.

Ontario Planning Act. (1990). (https://www.ontario.ca/laws/statute/90p13). Accessed October 2022.

LEGEND:

APPROX. PROPERTY BOUNDARY



REGIONAL MAP

SCALE 1:100000

0 125.0 250.0

HORIZONTAL SCALE 1:5000

AZIMUTH ENVIRONMENTAL CONSULTING, INC.

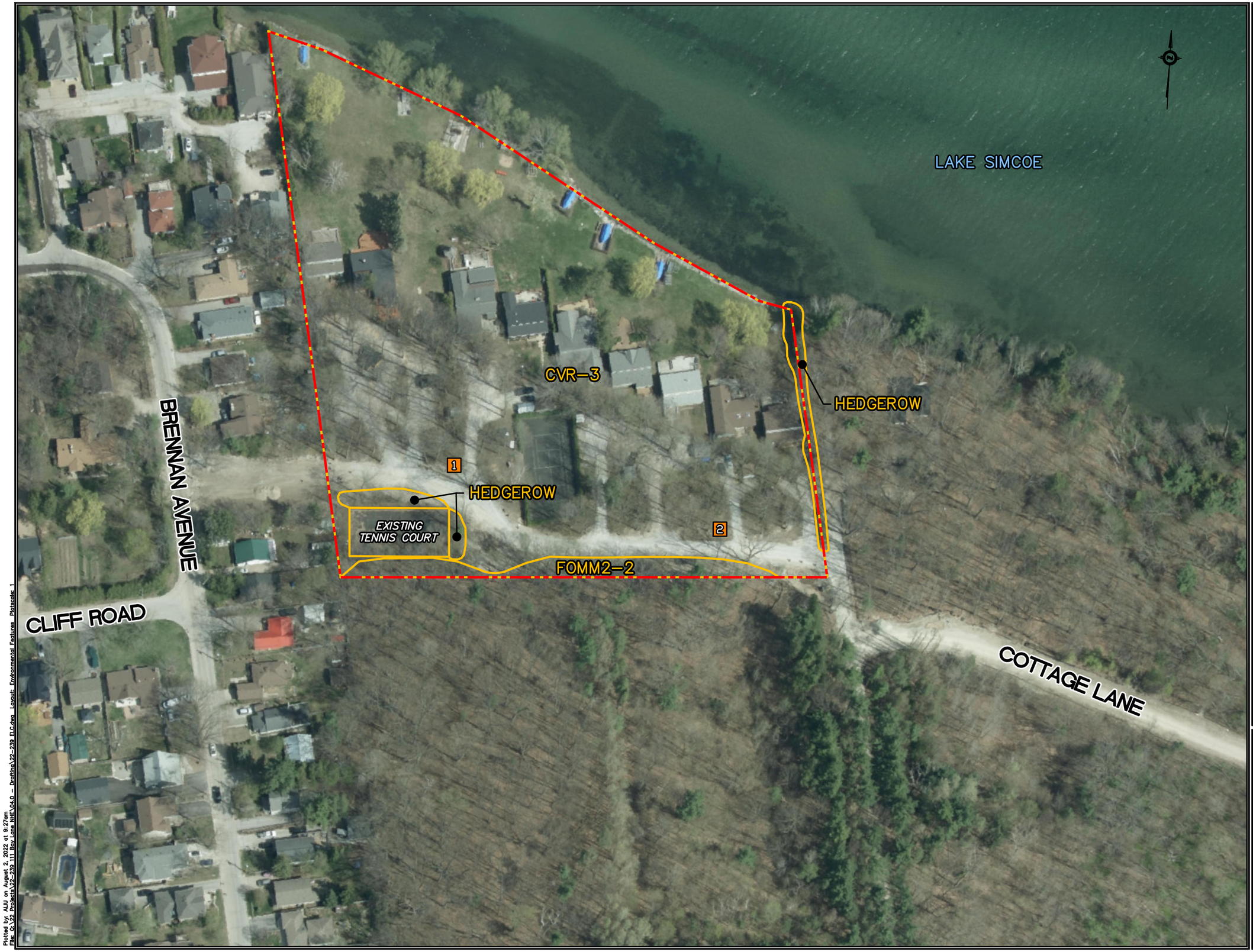
ENVIRONMENTAL ASSESSMENTS & APPROVALS

SITE LOCATION

111 BAY LANE
BARRIE, ON

DATE ISSUED: *AUGUST 2022*	Figure No.
CREATED BY: *A.L.*	
PROJECT NO.: *22-239*	1
REFERENCE: *SIMCOE COUNTY*	

Plotted by: ALU on July 4, 2022 at 1:24pm
File: Q:\22 Projects\22-239 111 Bay Lane NHE\04.0 - Drafting\22-239_Site Location.dwg Layout: Site Location Plotscale: 1



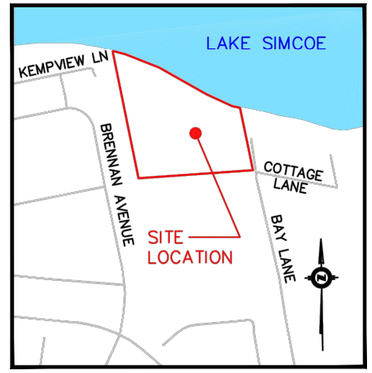
LEGEND:

APPROX. PROPERTY BOUNDARY

ELC UPLAND COMMUNITIES:

CVR_3	SINGLE FAMILY RESIDENTIAL
FOMM2	DRY–FRESH WHITE PINE–SUGAR MAPLE FOREST

DAWN BREEDING BIRD POINT COUNT



LOCATION PLAN

0 31.25 62.5

HORIZONTAL SCALE 1:1250

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

ENVIRONMENTAL FEATURES

111 BAY LANE
BARRIE, ON

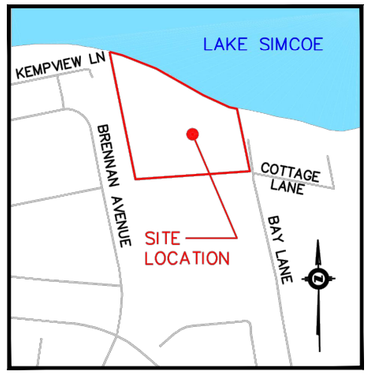
DATE ISSUED:	*AUGUST 2022*	Figure No. 2
CREATED BY:	*A.L.*	
PROJECT NO.:	*22-239*	
REFERENCE:	*SIMCOE COUNTY*	

LEGEND:

APPROX. PROPERTY BOUNDARY

ELC UPLAND COMMUNITIES:

CVR_3	SINGLE FAMILY RESIDENTIAL
FOMM2	DRY-FRESH WHITE PINE-SUGAR MAPLE FOREST



LOCATION PLAN

0 31.25 62.5

HORIZONTAL SCALE 1:1250

AZIMUTH ENVIRONMENTAL CONSULTING, INC.
ENVIRONMENTAL ASSESSMENTS & APPROVALS

PROPOSED DEVELOPMENT

111 BAY LANE
BARRIE, ON

DATE ISSUED:	*AUGUST 2022*	Figure No. 3
CREATED BY:	*A.L.*	
PROJECT NO.:	*22-239*	
REFERENCE:	*SIMCOE COUNTY*	

Ecological Land Classification[1]					
System	**Community Class**	**Community Series**	**Ecosite/Vegetation Type**	**Composition**	**Ground Cover**
Terrestrial	Cultural	CVR, Residential	CVR_3, Single Family Residental	Southern Half: Large trees are dominated by Red Oak (*Quercus rubra*) and Sugar Maple (*Acer sacharum*); followed by the occasional Ironwood (*Ostrya virginiana*), Red Maple (Acer rubrum), White Ash (*Fraxinus americana*), White Birch (*Betula papyrifera*), and Eastern Hemlock (*Tsuga canadensis).* Other smaller trees species ocassionally and somewhat sparsely are represented by a similar composition with the addition of Eastern White Cedar *(Thuja occidentalis*), Black Cherry (*Prunus serotina*), White Spruce (*Picea glauca*), and Red Pine (*Pinus resinosa*). Northern Half: Tree species are sparsely represented by various willow (Salix sp.), White Birch, Norway Maple (*Acer platanoides*), White Spruce, Red Pine, Black Locust (*Robinina pseudoacacia*), Red-osier Dogwood (*Cornus sericea*), and Maidenhair (*Ginkgo biloba*).	The entire community ground cover is dominated by maintained lawns and ornamental (*e.g.,* hostas) species. Lesser elements within the community include Poison Ivy (*Toxiodendron radicans*), Periwinkle (*Vinca minor*), Orange Day-lily (*Hemerocallis fulva*), Riverbank Grape (*Vitis riparia*), Lily of the Valley (*Convallaria majalis*), Common Plantain (*Plantago major*), Coltsfoot (*Tussilago farfara*), violets (Viola sp.), and goldenrods (Solidago sp.).
Terrestrial	Cultural	FOM, Mixed Forest	FOMM2-2, Dry-Fresh White Pine-Sugar Maple Forest	The canopy is dominated by Sugar Maple, White Pine (*Pinus strobus*), and Red Oak; followed by White Ash, American Basswood (*Tilia americana*), Scot Pine (*Pinus sylvestris*), Eastern Hemlock, White Birch, and White Oak (*Quercus alba*). Composition is similair within the subcanopy and understory with the addition of Eastern Cottonwood (*Populus deltoides*), Manitoba Maple (*Acer negundo*), Ironwood, Eastern White Cedar, Common Buckthorn (*Rhamnus cathartica*), and Black Locust. The overall stand composition fluctuates from coniferous to deciduous dominated througout the polygon.	The ground cover is dominated by Poison Ivy, False Solomon's Seal (*Maianthemum racemosum*), Canada Mayflower (*Maianthemum canadense*), Sugar Maple, and Riverbank Grape. Lesser elements of Wild Carrot (*Daucus carota*), White Clover (*Trifolium repens*), Birds Foot Trefoil (*Lotus corniculatus*), Lamb's Quarters (*Chenopodium album*), Wild Basil (*Clinopodium vulgare*), Orchard Grass (*Dactylis glomerata*), and Fox Sedge (*Carex vulpinoidea*) are scattered throughout. Furthermore, the ground cover contains multiple invasive species including Lily of the Valley, Garlic Mustard (*Alliaria petiolata*), Dog-stragnling vine (*Vincetoxicum rossicum*), Coltsfoot, and Common Buckthorn seedlings.

Table 2: Breeding Bird Survey, 111 Bay Lane Surveyor: Lisa Moran **AEC22-239**

			Location[1,2]						Conservation Rankings[3]				
			1		2								
FAMILY	SCIENTIFIC NAME	COMMON NAME	Visit 1	Visit 2	Visit 1	Visit 2	Adjacent Lands	Incidental	GRANK	SRANK	ESA	SARA	TRACK
Sittidae	*Sitta canadensis*	Red-breasted Nuthatch				S			G5	S5			N
Vireonidae	*Vireo olivaceus*	Red-eyed Vireo				S	S		G5	S5B			N
Cardinalidae	*Cardinalis cardinalis*	Northern Cardinal	H, S	S		S	S		G5	S5			N
Tyrannidae	*Myiarchus crinitus*	Great Crested Flycatcher	S	S		S			G5	S5B			N
Corvidae	*Corvus brachyrhynchos*	American Crow	C	C, H	C				G5	S5			N
Tyrannidae	*Contopus virens*	Eastern Wood-pewee	S				S		G5	S4B	SC	SC	Y
Paridae	*Poecile atricapillus*	Black-capped Chickadee		S	S				G5	S5			N
Corvidae	*Cyanocitta cristata*	Blue Jay		C					G5	S5			N
Troglodytidae	*Troglodytes aedon*	House Wren	S	S					G5	S5B			N
Passerellidae	*Spizella passerina*	Chipping Sparrow		S					G5	S5B,S3N			N
Passerellidae	*Melospiza melodia*	Song Sparrow	S	S					G5	S5			N
Picidae	*Dryobates pubescens*	Downy Woodpecker						✓	G5	S5			N
Fringillidae	*Spinus tristis*	American Goldfinch	S						G5	S5			N
Anatidae	*Branta canadensis*	Canada Goose	P						G5	S5			N
Icteridae	*Icterus galbula*	Baltimore Oriole	S						G5	S4B			N

[1] **Visit 1**: June 10, 2022, Observer: Lisa Moran, Tempurature 11°C, Cloud Cover 10% , Wind: B3, Precipitation: Nil, Search Time 06:14 to 06:29; **Visit 2**: June 23, 2022, Observer: Lisa Moran, Tempurature 16°C, Cloud Cover 0% , Wind: B3, Precipitation: Nil, Search Time 07:41 to 08:01;

[2] Breeding Bird Evidence Codes: X - Species observed, C - Call heard, FO - Flyover (Species presence); H - Species observed in its breeding season in suitable nesting habitat, S - Singing male (Possible Breeding); P - Pair observed , T - Territorial behaviour, A - Agitated behaviour or anxiety calls of adult, V - Visiting a probably nest site, N - Nest building or excavation of nest hole (Probable Breeding); DD - Distraction display or injury feigning, NU - Used Nest or egg shells, FY - Recently fledged young, AE - Adult leaving or entering

[3] Conservation Rankings: From Ontario Ministry of Natural Resources and Forestry, Natural Heritage Information Centre (https://www.ontario.ca/page/natural-heritage-information-centre)

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
American Hart's-tongue Fern	*Asplenium scolopendrium* var. *americanum*	SC	SC	Grows on calcareous rocks in deep shade on slopes in deciduous forest. Most occurrences are in maple-beech forest (MECP, 2022). ESA Protection: N/A	Key habitat requiremets (*e.g.,* shoreline of lakes) do occur on the property or adjacent lands. The species was not observed during Danw Breeding Bird Surveys, and no nests were observed. Species would not be expected to occur.
Bald Eagle	*Haliaeetus leucocephalus*	SC	No status	Nests are typically found near the shoreline of lakes or large rivers, often on forested islands (Cadman *et al.*, 2007). ESA Protection: N/A	Key habitat requirements (*e.g.,* undeveloped area with high deer population) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Bank Swallow	*Riparia riparia*	THR	THR	Nests in burrows excavated in natural and human-made settings with vertical sand and silt faces. Commonly found in sand or gravel pits, road cuts, lakeshore bluffs, and along riverbanks (COSEWIC, 2013a). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* excavated vertical sand/silt stockpile faces) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Barn Swallow	*Hirundo rustica*	THR	THR	Ledges and walls of man-made structures such as buildings, barns, boathouses, garages, culverts and bridges. Also nest in caves, holes, crevices and cliff ledges (COSEWIC, 2011a). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g., houses and garages) do occur within the study area. Species was not observed during Dawn Breeding Bird Surveys and no nests were observed within the study area. Species would not be expected to occur.
Black Ash	*Fraxinus nigra*	END	No Status	Facultative wetland tree species frequently found in floodplain forests, swamps, seepage areas, shoreline margins and fens. Occupied sites are generally seasonally-flooded (COSEWIC, 2018). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* moist forest, wetlands) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Black Redhorse	*Moxostoma duquesnei*	THR	THR	Generally found in ppols and riffles of medium-sized rivers or streams (<2m deep); with moderate to fast currents and a sandy or gravel substrate (COSEWIC, 2005b). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* stream or rivers) do not occur on the property or adjacent lands. The species would not be expected to occur.
Black Tern	*Chlidonias niger*	SC	No status	Colonial nesters typically found within marshes. Its preferred nesting habitat is a hemi-marsh (*i.e.* a wetland with 50:50 open water and emergent vegetation). Nests are usually built on an upturned cattail root, floating vegetation mat or patch of mud (Cadman *et al.*, 2007). ESA Protection: N/A	Key habitat requirements (*e.g.,* hemi-marshes with abundant cattails) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Blanding's Turtle	*Emydoidea blandingii*	THR	END	Blanding's Turtles are a primarily aquatic species that prefer wetland habitats, lakes, ponds, slow-moving streams, etc., however they may utilize upland areas to search for suitable basking and nesting sites. In general, preferred wetland sites are eutrophic and characterized by clear, shallow water, with organic substrates and high density of aquatic vegetation (COSEWIC, 2005a). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* open wetlands, lakes with organic substrate and high density aquatic vegetation) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Bobolink	*Dolichonyx oryzivorus*	THR	THR	Nests primarily in forage crops (*e.g.* hayfields and pastures) dominated by a variety of species such as clover, Timothy, Kentucky Bluegrass, tall grass, and broadleaved plants. Also occurs in wet prairie, graminoid peatlands, and abandoned fields dominated by tall grasses. Does not generally occupy fields of row crops (*e.g.* corn, soybeans, wheat) or short-grass prairie. Sensitive to habitat size and has lower reproductive success in small habitat fragments (COSEWIC, 2010a). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (*e.g.,* hayfields, pastures, tall grass fields) do not occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys and would not be expected to occur on the property.
Broad Beech Fern	*Phygopteris hexagonoptera*	SC	SC	Rich soils in deciduous forests, such as Maple-Beech forests (MECP, 2022). ESA Protection: N/A	Key habitat requirements (*e.g.,* Maple-Beech dominated forests) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Butternut	*Juglans cinerea*	END	END	Commonly found in riparian habitats, but is also found in rich, moist, well-drained loams, and well-drained gravels. Butternut is intolerant of shade (COSEWIC, 2003a). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g., open habitats well-drained soil, forest edge) do occur on the property. The species was not observed during site investigations.
Canada Warbler	*Cardellina canadensis*	SC	THR	Wet, mixed deciduous-coniferous forests with a well developed shrub layer. Shrub marshes, Red-Maple stands, cedar stands, Black Spruce swamps, larch and riparian woodlands along rivers and lakes (COSEWIC, 2008a). ESA Protection: N/A	Key habitat requirements (e.g., mixed forests in proximity to lake) do occur on the property and adjacent lands. The species was not observed and during Dawn Breeding Bird Surveys.
Chimney Swift	*Chaetura pelagica*	THR	THR	Nests primarily in chimneys though some populations (*i.e.* in rural northern areas) may nest in cavity trees (COSEWIC, 2007a). Recent changes in chimney design may be a significant factor in recent declines in numbers (Cadman *et al.*, 2007). ESA Protection: Species and general habitat protection	Key habitat requirements (e.g., chimneys) do not occur on the property. The species was not observed during Dawn Breeding Bird surveys and is not expected to occur.
Common Five-lined Skink (Southern Shield population)	*Plestiodon fasciatus*	SC	SC	Southern Shield population -rocky outcrops embedded in a matrix of coniferous and deciduous forest, and individuals in these populations seek refuge under rocks overlaid on open bedrock (COSEWIC, 2007b). ESA Protection: N/A	Key habitat requirements (*e.g.,* rock outcrops) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Common Nighthawk	*Chordeiles minor*	SC	THR	Open habitats including sand dunes, beaches recently logged/burned over areas, forest clearings, short grass prairies, pastures, open forests, bogs, marshes, lakeshores, gravel roads, mine tailings, quarries, and other open relatively clear areas (COSEWIC, 2007c). ESA Protection: N/A	Key habitat requirements (*e.g.,* forest clearings, beaches, prairies) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Eastern Meadowlark	*Sturnella magna*	THR	THR	Most common in grassland, pastures, savannahs, as well as anthropogenic grassland habitats, including hayfields, weedy meadows, young orchards, golf courses, restored surface mines, *etc*. Occasionally nest in row crop fields such as corn and soybean, but there are considered low-quality habitat. Large tracts of grassland are preferred over smaller fragments and the minimum area required is estimated at 5ha (COSEWIC, 2011b). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (*e.g.,* large meadows, pastures) do not occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys.
Eastern Ribbonsnake	*Thamnophis sauritus*	SC	SC	Found in wetland habitats with both flowing and standing water such as marshes, bogs, fens, ponds, lake shorelines and wet meadows. Most sightings occur near the water's edge (COSEWIC, 2012c). ESA Protection: N/A	Key habitat requirements (*e.g.,* wetland habitats) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Eastern Small-footed Myotis	*Myotis Lleibii*	END	END	Generally occurs in mountainous or rocky regions as well as in buildings, on the face of rock bluffs and beneath slabs of rock and stones. Hibernation is typically confined to caves and old mines (Best and Jennings, 1997). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* rocky areas, bluffs, caves, old mines) for the species are not found on the property or adjacent lands. Hibernation and roosting habitats (rocky areas, caves) are not present. The species would not be expected to occur.
Eastern Whip-poor-will	*Antrostomus vociferus*	THR	THR	Semi-open forests or patchy forests with clearings, such as barrens or forests that are regenerating following major disturbances, are preferred nesting habitats (COSEWIC, 2009a). ESA Protection: Species and general habitat protection	Key habitat requirements (*e.g.,* forest regenerating from major disturbance) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Eastern Wood-pewee	*Contopus virens*	SC	SC	Mostly in mature and intermediate-age deciduous and mixed forests having an open understory. It is often associated with forests dominated by Sugar Maple and oak. Usually associated with forest clearings and edges within the vicinity of its nest (COSEWIC, 2012d). ESA Protection: N/A	**Key habitat requirements (*e.g.,* mixed forests with open understory) do occur on the property and adjacent lands. The species was observed during Dawn Breeding Bird surveys. Considered further in main text.**

Common Name	Species Name	ESA	SARA	Key Habitats Used By Species[1]	Initial Assessment
Least Bittern	*Ixobrychus exilis*	THR	THR	Breed strictly in marshes of emergents (usually cattails) that have relatively stable water levels and interspersed areas of open water (COSEWIC, 2009b). ESA Protection: Species and general habitat protection	Key habitat requirements for the species (*e.g.,* large marsh with stable water levels) do not occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys.
Little Brown Myotis	*Myotis lucifugus*	END	END	Forests and regularly aging human structures as maternity roost sites. Regularly associated with attics of older buildings and barns for summer maternity roost colonies. Overwintering sites are characteristically mines or caves (MNRF, 2014) (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	**Key habitat requirements (*e.g.,* anthropogenic stuctures, woodlands with large mature trees suitable for roosting) for the species occur within the study area, on adjacent lands. Considered further in main text.**
Monarch	*Danaus plexippus*	SC	SC	Breeding habitat is confined to sites where milkweeds, the sole food of caterpillars, grow. Milkweeds grow in a variety of environments, including meadows in farmlands, along roadsides and in ditches, open wetlands, dry sandy areas, short and tall grass prairie, river banks, irrigation ditches, arid valleys, and south-facing hills (COSEWIC, 2010c). ESA Protection: N/A	Key habitat requirements (*e.g.,* open habitat with abundant milkweed) do not occur on the property or adjacent lands. The species was not observed.
Northern Myotis	*Myotis septentrionalis*	END	END	Maternity roost sites are generally located within deciduous and mixed forests and focused in snags including loose bark and cavities of trees. Overwintering sites are characteristically mines or caves (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	**Key habitat requirement (e.g., deciduous woodlands with suitable trees for roosting) for species occur in the study area. Considered further in main text.**
Northern Map Turtle	*Grapetemys geographica*	SC	SC	Inhabits rivers and lakes where it basks on emergent rocks, banks, logs and fallen trees. Prefer shallow, soft-bottomed aquatic habitats with exposed objects for basking (COSEWIC, 2012e). ESA Protection: N/A	Key habitat requiremets (*e.g.,* suitable shoreline features for basking) do not occur on the property or adjacent lands. The species was not observed and is not expected to occur.
Red-headed Woodpecker	*Melanerpes erythrocephalus*	END	END	Occurs in open deciduous forests, particularly those dominated by oak and beech, groves of dead trees, floodplain forests, orchards, cemeteries, savannas and savanna-like grasslands. Although the species occupies a range of habitat types, key habitat is characteristically composed of woodlands where tall trees are of large crcumference (i.e.mature cover) and are at a low density. A high density of snag trees is also an indicator of key habitat types (COSEWIC, 2007d). ESA Protection: Species and general habitat protection.	Key habitat requirements for the species (*e.g.,* mature trees) do occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys.
Tri-colored Bat	*Perimyotis subflavus*	END	END	Maternity roost sites include forests and modified landscapes (barns or human-made structures). Overwintering sites include mines and caves (COSEWIC, 2013c). ESA Protection: Species and general habitat protection	**Key habitat requirement (e.g., anthropogenic structures, woodlands with large mature trees suitable for roosting) for the species occur within the study area, on adjacent lands. Further discussed in main text**
West Virginia White	*Pieris virginiensis*	SC	No Status	This species lives in moist, deciduous woodlands and requires a suppy of toothwort, a small, spring-blooming plant that is a member of the mustard family, since it is the only food source for the larvae (MNRF, 2014). ESA Protection: N/A	Key habitat requirements (*e.g.,* moist deciduous woodlands) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Wood Thrush	*Hylocichla mustelina*	SC	THR	Found in moist, deciduous hardwood or mixed stands, often previously disturbed, with a dense deciduous undergrowth and with tall trees for singing perches (COSEWIC, 2012f). ESA Protection: N/A	Key habitat requirements for the species (*e.g.,* moist woodland with dense undergrowth) do not occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys.
Wood Turtle	*Glyptemys insculpta*	END	THR	Rivers and streams with sand or gravel bottoms and prefers clear, meandering streams with moderate current. Riparian areas with diverse, patchy cover are most commonly used across the range (COSEWIC, 2007e). ESA Protection: Species and regulated habitat protection	Key habitat requirements (*e.g.,* rivers, streams) do not occur on the property or adjacent lands. The species was not observed and would not be expected to occur.
Yellow Rail	*Coturnicops noveboracensis*	SC	SC	Nest in wet marshy areas of short grass-like vegetation. The habitat must remain wet throughout the breeding season (COSEWIC, 2009c). ESA Protection: N/A	Key habitat requirements for the species (*e.g.,* marshes) do not occur on the property or adjacent lands. The species was not observed during Dawn Breeding Bird surveys.

[1] Habitat as outlined within the MNRF's Species at Risk in Ontario website files (https://www.ontario.ca/environment-and-energy/species-risk-ontario-list), or Species Specific COSEWIC Reports referenced in this document.

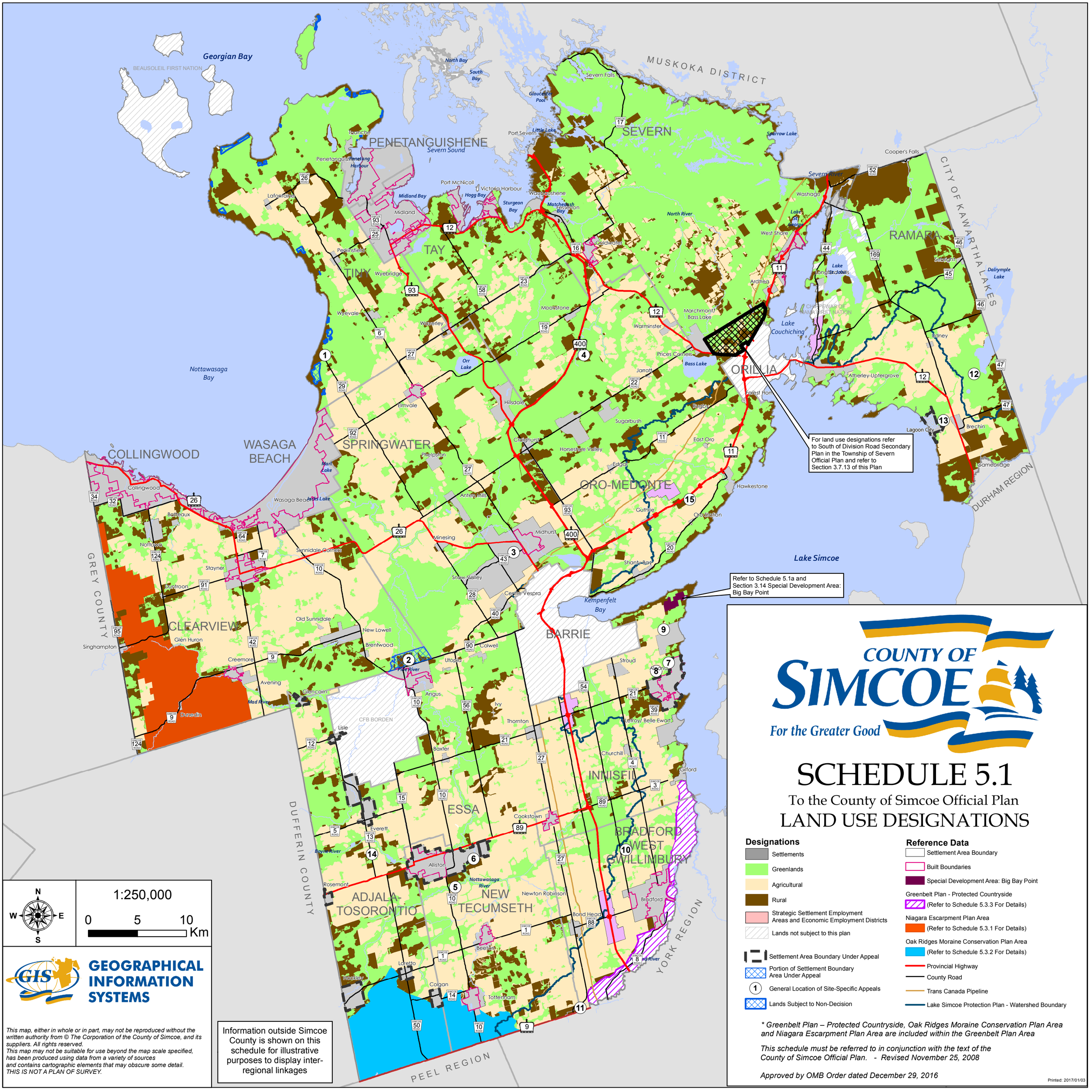
Species at Risk in Ontario List (June 13, 2017)
Best, T., and J. Jennings. 1997. Mammalian Species, *Myotis leibii* . The American Society of Mammalogists. No. 547, pp. 1-6, 5 figs.
Cadman, M., D. Sutherland, G. Beck, D. Lepage and A. Couturier. 2007. Atlas of the Breeding Birds of Ontario 2001-2005. Bird Studies Canada, Environment Canada, Ontario Field
COSEWIC. 2003. COSEWIC assessment and status report on the Butternut *Juglans cinerea* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
COSEWIC. 2005a. COSEWIC assessment and update status report on the Blanding's Turtle *Enydoidea blandingii* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa.viii +40 pp.
COSEWIC 2005b. COSEWIC assessment and update status report on the Black Redhorse Moxostoma duquesnei in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 21 pp.
COSEWIC. 2007a. COSEWIC assessment and update status report on the Chimney Swift *Chaetura pelagic* a in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 49 pp.
COSEWIC 2007b. COSEWIC assessment and update status report on the Five-lined Skink *Eumeces fasciatus* (Carolinian population and Great Lakes/St. Lawrence population) in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 50 pp.
COSEWIC. 2007c. COSEWIC assessment and status report on the Common Nighthawk *Chordeiles minor* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 35 pp.
COSEWIC. 2007d. COSEWIC assessment and status report on the Red-headed Woodpecker *Melanerpes erythrocephalu* s in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 27 pp.
COSEWIC. 2007e. COSEWIC assessment and update status report on the Wood Turtle *Glyptemys insculpta* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 42 pp.
COSEWIC. 2008a. COSEWIC assessment and status report on the Canada Warbler *Wilsonia Canadensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 35 pp.
COSEWIC. 2008c. COSEWIC assessment and status report on the Snapping Turtle *Chelydra serpentina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 47 pp.
COSEWIC. 2009a. COSEWIC assessment and update status report on the Whip-poor-will *Caprimulgus vociferus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 28 pp.
COSEWIC. 2009b. COSEWIC assessment and update status report on the Least Bittern *Ixobrychus exilis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 36 pp.
COSEWIC. 2009c. COSEWIC assessment and status report on the Yellow Rail *Coturnicops noveboracensis* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 32 pp.
COSEWIC. 2010a. COSEWIC assessment and update status report on the Bobolink *Dolichonyx oryzivorus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vi + 42 pp.
COSEWIC. 2010c. COSEWIC assessment and status report on the Monarch *Danaus plexippus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. vii + 43 pp.
COSEWIC. 2011a. COSEWIC assessment and update status report on the Barn Swallow *Hirundo rustica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 37 pp.
COSEWIC. 2011b. COSEWIC assessment and update status report on the Eastern Meadowlark *Sturnella magna* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 40 pp.
COSEWIC. 2012b. COSEWIC assessment and status report on the Eastern Musk Turtle *Sternotherus odoratus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xiii + 68 pp
COSEWIC. 2012c COSEWIC assessment and status report on the Eastern Ribbonsnake *Thamnophis sauritus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 39 pp.
COSEWIC. 2012d. COSEWIC assessment and status report on the Eastern Wood-pewee *Contopus virens* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. x + 39 pp.
COSEWIC. 2012e. COSEWIC assessment and status report on the Northern Map Turtle *Graptemys geographica* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 63 pp.
COSEWIC. 2012f. COSEWIC assessment and status report on the Wood Thrush *Hylocichla mustelina* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 46 pp.
COSEWIC. 2013a. COSEWIC assessment and update status report on the Bank Swallow *Riparia riparia* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. ix + 48 pp.
COSEWIC. 2013c. COSEWIC assessment and update status report on the Little Brown Myotis *Myotis lucifugus* , Northern Myotis *Myotis septentrionalis* and Tri-colored Bat *Perimyotis subfalvus* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xxiv + 93 pp.
COSEWIC. 2018. COSEWIC assessment and status report on the Black Ash *Fraxinus nigra* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xii + 95 pp.
Ministry of the Environment, Conservation and Parks (MECP). 2022. Species at Risk in Ontario (https://www.ontario.ca/page/species-risk-ontario)
Ministry of Natural Resources and Forestry (MNRF). 2014. Eastern Small-footed Bat. Queen's Printer for Ontario. https://www.ontario.ca/environment-and-energy/eastern-small-footed-bat

APPENDICES

Appendix A: Municipal and Provincial Information
Appendix B: LSRCA Consultation and Information
Appendix C: Photographic Record
Appendix D: Proposed Site Plan

APPENDIX A

Municipal and Provincial Information



GEOGRAPHICAL INFORMATION SYSTEMS

Information outside Simcoe County is shown on this schedule for illustrative purposes to display inter-regional linkages

COUNTY OF SIMCOE
For the Greater Good

SCHEDULE 5.1

To the County of Simcoe Official Plan

LAND USE DESIGNATIONS

Designations

- Settlements
- Greenlands
- Agricultural
- Rural
- Strategic Settlement Employment Areas and Economic Employment Districts
- Lands not subject to this plan
- Settlement Area Boundary Under Appeal
- Portion of Settlement Boundary Area Under Appeal
- (1) General Location of Site-Specific Appeals
- Lands Subject to Non-Decision

Reference Data

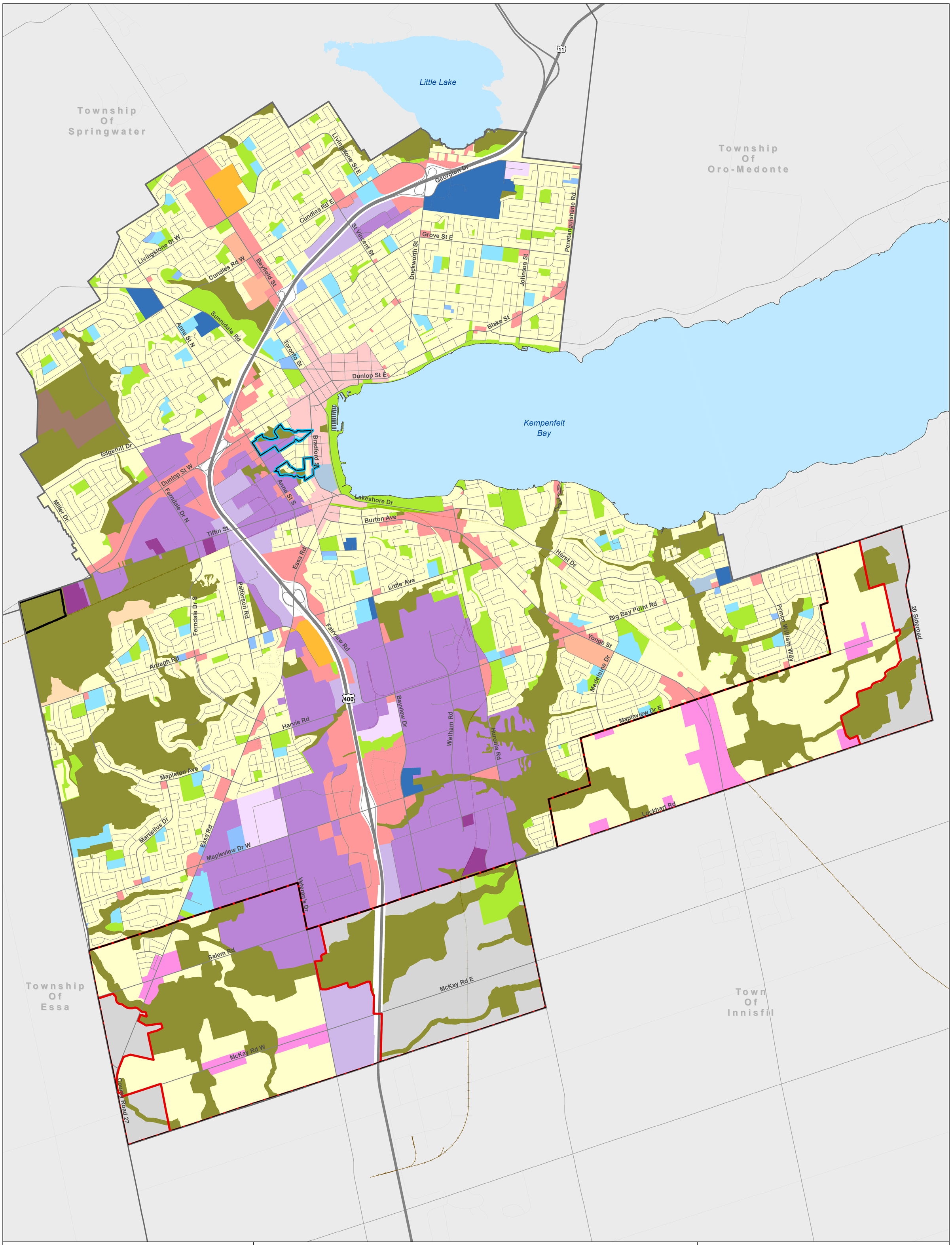
- Settlement Area Boundary
- Built Boundaries
- Special Development Area: Big Bay Point
- Greenbelt Plan - Protected Countryside (Refer to Schedule 5.3.3 For Details)
- Niagara Escarpment Plan Area (Refer to Schedule 5.3.1 For Details)
- Oak Ridges Moraine Conservation Plan Area (Refer to Schedule 5.3.2 For Details)
- Provincial Highway
- County Road
- Trans Canada Pipeline
- Lake Simcoe Protection Plan - Watershed Boundary

** Greenbelt Plan – Protected Countryside, Oak Ridges Moraine Conservation Plan Area and Niagara Escarpment Plan Area are included within the Greenbelt Plan Area*

This schedule must be referred to in conjunction with the text of the County of Simcoe Official Plan. - Revised November 25, 2008

Approved by OMB Order dated December 29, 2016

Printed: 2017/01/03



OFFICIAL PLAN

Schedule A
Land Use

Office Consolidation
January 2018

- Residential
- City Centre
- General Commercial
- Community Centre Commercial
- Regional Centre Commercial
- Mixed Use Nodes and Corridors
- Business Park
- Highway 400 Industrial
- General Industrial
- Restricted Industrial
- Institutional
- Educational Institutional
- Major Institutional
- Open Space
- Environmental Protection Area
- Special Rural Area
- Water Treatment Centre
- Waste Management Facility
- Future Urban
- Waste Disposal Assessment Area
- City Boundary
- Application Before the Ontario Municipal Board (OMB)
- SecondaryPlanBoundary
- Settlement Area Boundary

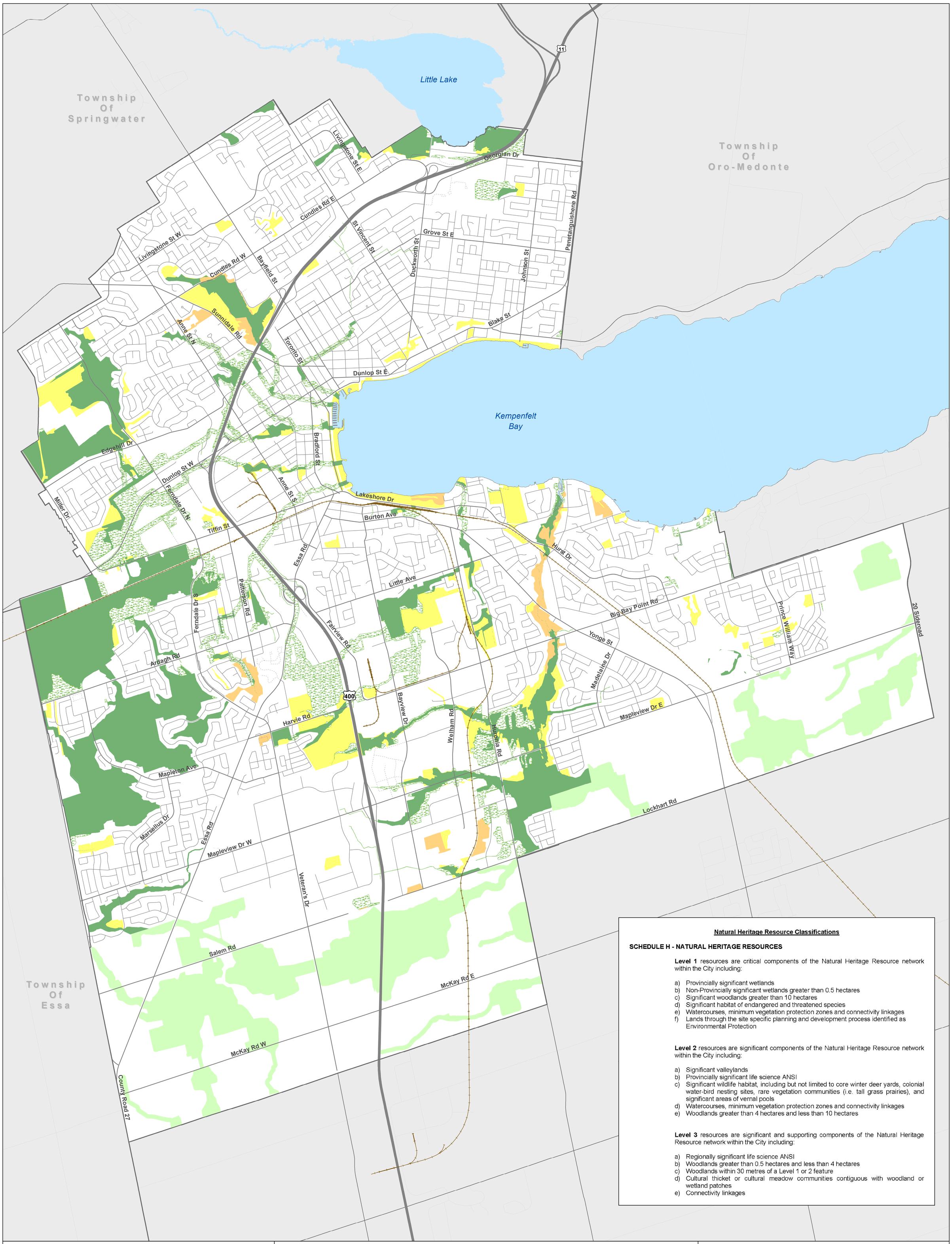
Barrie

1:20,000

0 0.5 1 2 km

N

GIS Branch 2/4/2020



Natural Heritage Resource Classifications

SCHEDULE H - NATURAL HERITAGE RESOURCES

Level 1 resources are critical components of the Natural Heritage Resource network within the City including:

a) Provincially significant wetlands
b) Non-Provincially significant wetlands greater than 0.5 hectares
c) Significant woodlands greater than 10 hectares
d) Significant habitat of endangered and threatened species
e) Watercourses, minimum vegetation protection zones and connectivity linkages
f) Lands through the site specific planning and development process identified as Environmental Protection

Level 2 resources are significant components of the Natural Heritage Resource network within the City including:

a) Significant valleylands
b) Provincially significant life science ANSI
c) Significant wildlife habitat, including but not limited to core winter deer yards, colonial water-bird nesting sites, rare vegetation communities (i.e. tall grass prairies), and significant areas of vernal pools
d) Watercourses, minimum vegetation protection zones and connectivity linkages
e) Woodlands greater than 4 hectares and less than 10 hectares

Level 3 resources are significant and supporting components of the Natural Heritage Resource network within the City including:

a) Regionally significant life science ANSI
b) Woodlands greater than 0.5 hectares and less than 4 hectares
c) Woodlands within 30 metres of a Level 1 or 2 feature
d) Cultural thicket or cultural meadow communities contiguous with woodland or wetland patches
e) Connectivity linkages

OFFICIAL PLAN
Schedule H
Natural Heritage Resources
Office Consolidation
January 2018

- Level 1
- Level 1 with Existing Development Designation Subject to 3.5.2.4 d
- Level 2
- Level 3
- Natural Heritage System Salem and Hewitt's Secondary Plan Areas

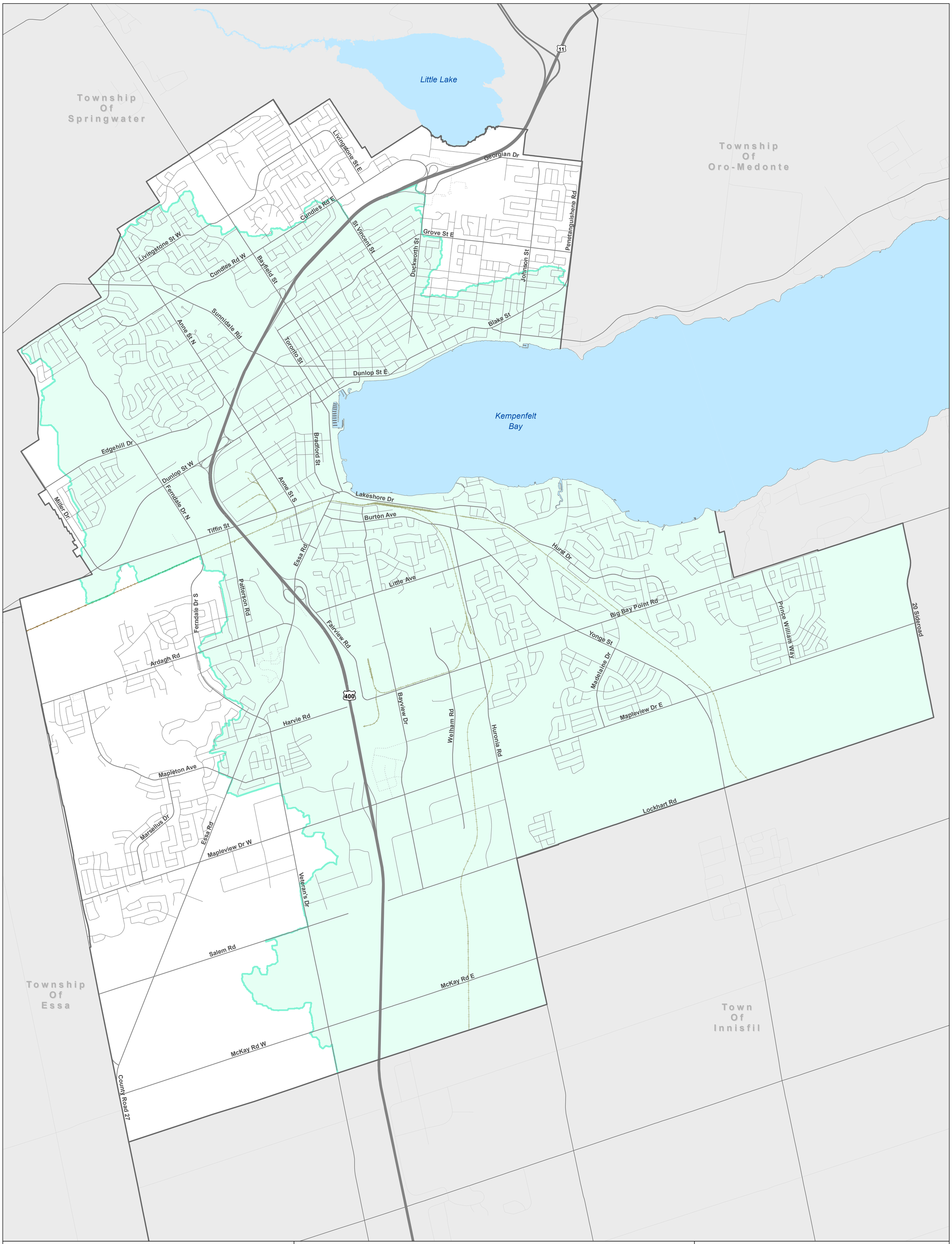
Barrie

1:20,000

0 0.5 1 2 km

N

GIS Branch 4/27/2018



OFFICIAL PLAN

Schedule J
Lake Simcoe Watershed

Office Consolidation
January 2018

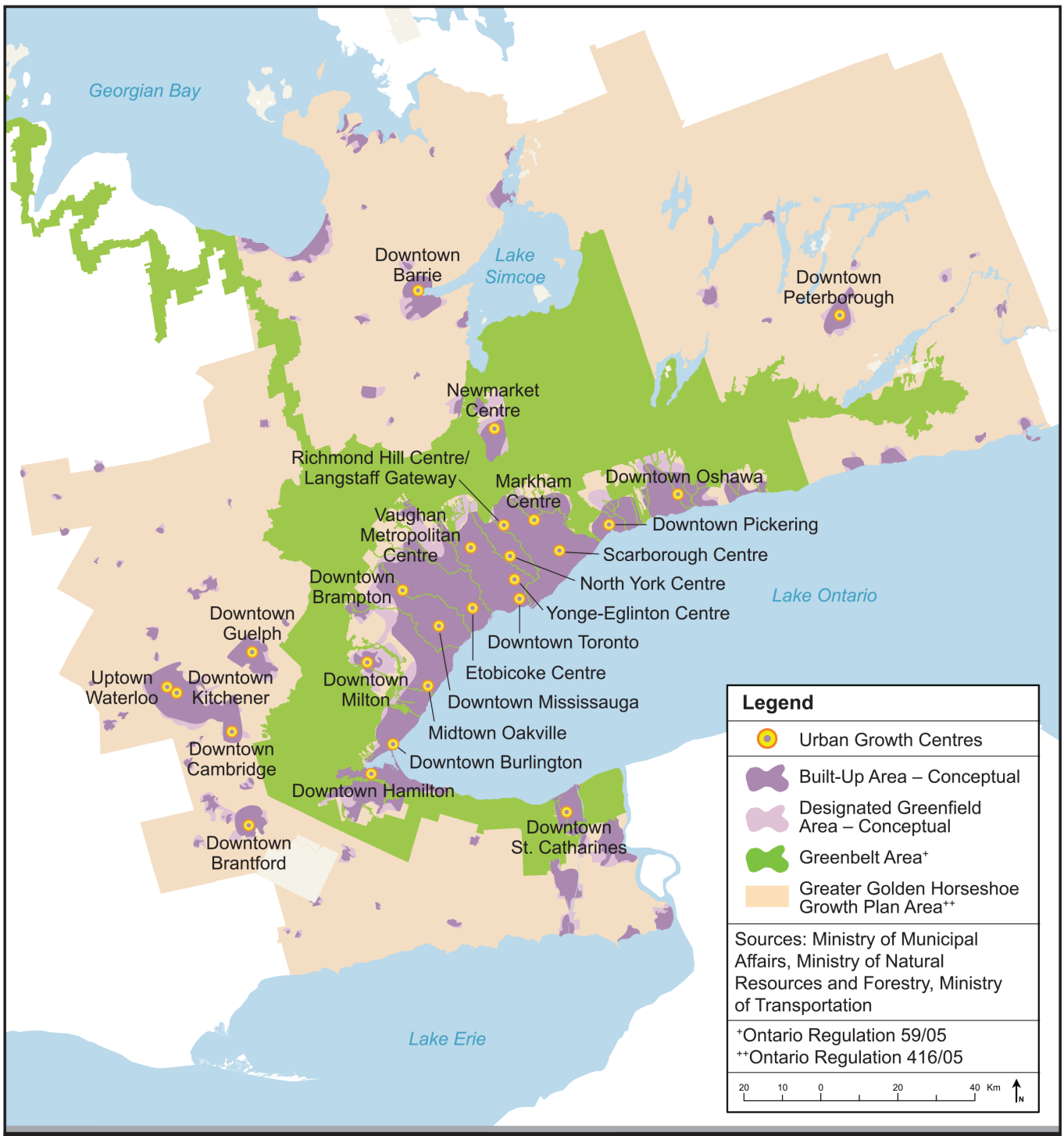
Lake Simcoe Watershed Boundary

1:20,000

0 0.5 1 2 km

N

GIS Branch 4/26/2018



Ontario

PLACES TO GROW

GROWTH PLAN FOR THE GREATER GOLDEN HORSESHOE, 2017

SCHEDULE 4
Urban Growth Centres

Note: The information displayed on this map is not to scale, does not accurately reflect approved land-use and planning boundaries, and may be out of date. For more information on precise boundaries, the appropriate municipality should be consulted. For more information on Greenbelt Area boundaries, the Greenbelt Plan should be consulted. The Province of Ontario assumes no responsibility or liability for any consequences of any use made of this map.

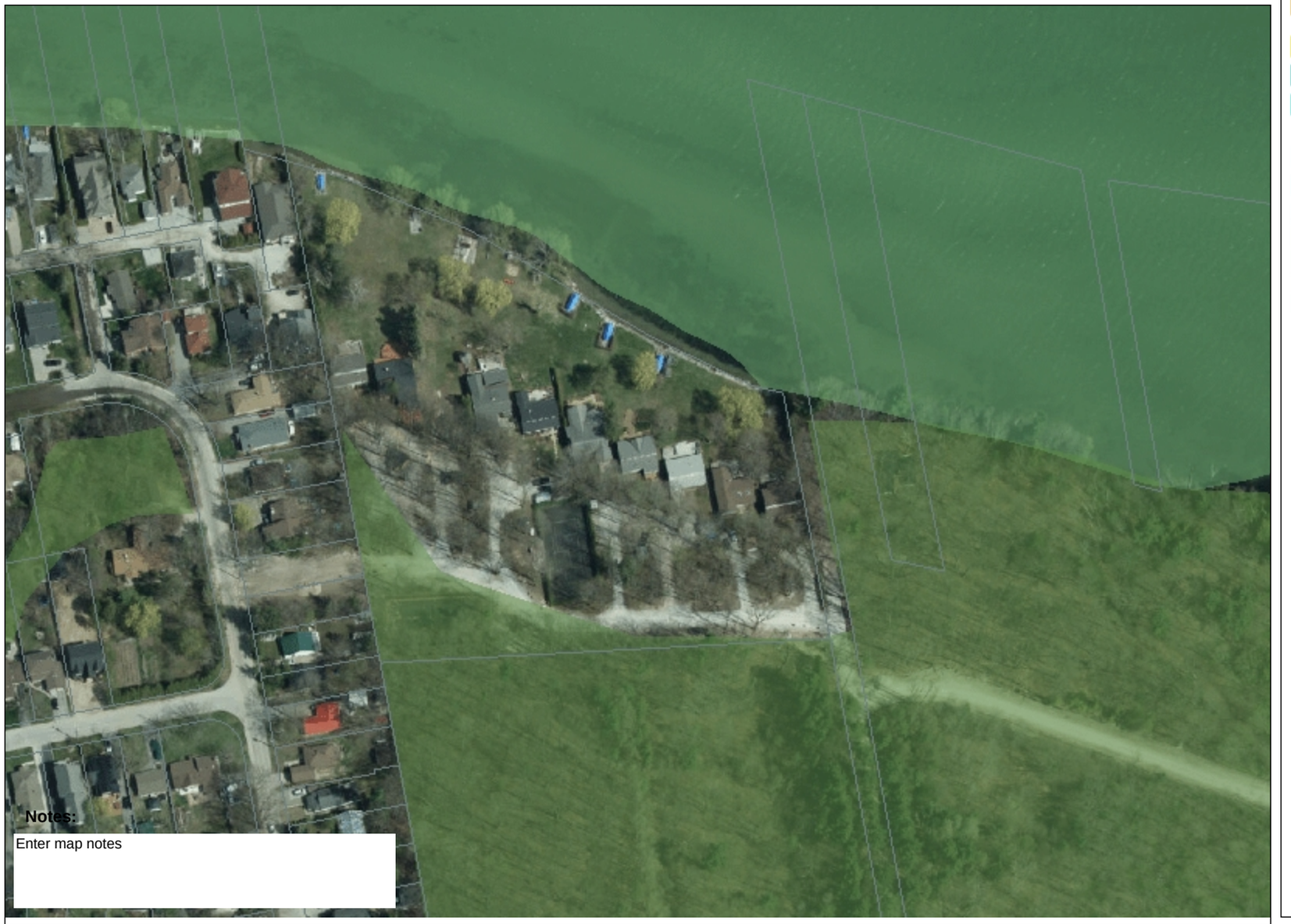
Ontario

Ministry of Natural Resources and Forestry

Make-a-Map: Natural Heritage Areas

22-239 111 Bay Lane

Map created:10/18/2022



Notes:

Enter map notes

Legend

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

0.1 0 0.06 0.1 Kilometres

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

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

APPENDIX B

LSRCA Consultation and Information

Lake Simcoe Region conservation authority

111 Bay Lane

Features

- LSRCA Watershed Boundary
- Watercourse
- Regulated Area Boundary
- Regulated Area
- Road Labels
- Assessment Parcel
- Roads
  - Hwy 400 Series
  - Highway, Arterials
  - Local Road
- Railway

Printed On:
10/12/2022

WGS_1984_Web_Mercator_Auxiliary_Sphere

Mapped By:

Scale 1: 2,660

Meters

135 0 68 135

Jordan Wrobel

From: Erin Fitzpatrick [E.Fitzpatrick@lsrca.on.ca]
Sent: June 16, 2022 1:43 PM
To: Jordan Wrobel
Cc: Liam Munnoch
Subject: RE: Terms of Reference-111 Bay Lane, Barrie (APID 104965)
Attachments: TOR checklist - 111 Bay Lane Barrie_LSRCA comments.pdf

Follow Up Flag: Flag for follow up
Flag Status: Completed

Hi Jordan,

Thank you for the follow-up. I am fine with there being no aquatic investigation as long as there will be no structures or site alteration within 30 m of the waterfront. A desktop review would be fine.

The revised TOR reflecting this change is attached.

Kind Regards,
Erin

Erin Fitzpatrick, M.Sc.
Natural Heritage Ecologist

Lake Simcoe Region Conservation Authority
120 Bayview Parkway,
Newmarket, Ontario L3Y 3W3
905-895-1281 ext. 286 | 1-800-465-0437 | Mobile: 289-716-5840
e.fitzpatrick@LSRCA.on.ca | www.LSRCA.on.ca

Twitter: @LSRCA
Facebook: LakeSimcoeConservation

From: Jordan Wrobel <JWrobel@azimuthenvironmental.com>
Sent: June 14, 2022 1:14 PM
To: Erin Fitzpatrick <E.Fitzpatrick@lsrca.on.ca>
Subject: RE: Terms of Reference-111 Bay Lane, Barrie (APID 104965)

Good Afternoon Erin,

Yes, the severance of the 10 lots is technically a 'development' as you mentioned in your previous email, and it is our understanding no new structures will be created.

To clarify, our original evaluation of aquatic conditions for the property was by completing a desktop review only, as there are no watercourse on the property to be influenced by the proposed work. Also, the Lake Simcoe frontage will not be altered and is not within the vicinity of the potential road reconstruction, for those reasons no negative impacts would occur to the feature or its functions. Therefore, is a desktop review not sufficient for this proposed development, and a review of the aquatic conditions in the field not necessary?

Regarding the tree impacts, if road reconstruction/driveway creation were to occur and tree's may be impacted, completing a bat snag inventory will be addressed in the EIS. From a recent site visit the treed area in the southern portion of the property comprises of a minimal number of mature trees. We also understand if encroachment into the southern woodland boundary were to occur staking would be required. Also, conformity with applicable policies and tree protection by-laws will be detailed in the EIS as you mentioned.

Thank you,

Jordan Wrobel, H.B.Sc.,
Terrestrial Ecologist

Azimuth Environmental Consulting, Inc.
642 Welham Road
Barrie, Ontario, L4N 9A1
Cell: 705-305-4830
www.azimuthenvironmental.com

Providing services in hydrogeology, terrestrial and aquatic ecology & environmental engineering
Please consider the environment before printing this correspondence

---

From: Erin Fitzpatrick [mailto:E.Fitzpatrick@lsrca.on.ca]
Sent: June 10, 2022 4:49 PM
To: Jordan Wrobel
Cc: Liam Munnoch; Emma Dias
Subject: FW: Terms of Reference-111 Bay Lane, Barrie (APID 104965)

Hi Jordan,

Thank you for providing us with a copy of the draft EIS TOR for the 111 Bay Lane, Barrie. It is noted that creation of a new lot constitutes 'development' under applicable policies; however, it is my understanding that the current application, which will sever the existing lot into 10 residential lots, does not include creation of new structures. It is noted that reconstruction of the road may be proposed, and that the concept plan appears to identify several 'proposed driveways'.

The proposed TOR appears to be suitable to identify key natural heritage and hydrologic features on the subject property and adjacent lands, and assess the potential for impacts to those features and their functions as a result of the proposed development. Please note that I added the aquatic habitat assessment to the TOR checklist (attached) – if you have any concerns with this, please feel free to reach out. From the work program description in your email it was difficult to determine if aquatic conditions were to be reviewed in the field.

If tree impacts are likely to occur to facilitate road reconstruction or driveway creation, the suitability of those trees as habitat for SAR bats should be considered and addressed through the EIS. Compensation plantings and/or edge management plantings may be required depending on the location and level of impact. I have not requested a staking exercise for the woodland boundary to the south; however, should encroachment into the woodland be proposed a staking may be required.

As noted in the LSRCA's pre-consultation letter, the EIS will need to confirm that there will be no negative impacts to identified key natural heritage and/or hydrologic features and their functions as a result of the proposed development. Conformity with applicable policies and tree protection by-laws will need to be detailed in the EIS.

Our data is publicly available via the following link:
https://data.lsrca.on.ca/navigo/search?fq=location:7e8415f44a07dd2a&fq=location:fcb5ddbbeb0bf133&fq=location:660af2a29f2a5348&fq=location:6a60c9fe0dd2cd76&fq=location:7bf69f7cf0bbfe94&fq=location:3e763e99b0886b13&fq=location:66b84d44e35b7efa&fq=location:96c978a271dc8dd3&fq=location:c272fa0df7957425&fq=location:d

6dac54a18415c1v&fq=location:d7201b3f1d7a108c&fq=location:ea8ce27bc3306fa3&disp=D15A9050E63E&view=card&sort=score%20desc&basemap=ESRI%20Street%20Map&place.op=within&q=%7B!expand%7Dfisheries

Kind Regards,
Erin

Erin Fitzpatrick, M.Sc.
Natural Heritage Ecologist

Lake Simcoe Region Conservation Authority
120 Bayview Parkway,
Newmarket, Ontario L3Y 3W3
905-895-1281 ext. 286 | 1-800-465-0437 | Mobile: 289-716-5840
e.fitzpatrick@LSRCA.on.ca | www.LSRCA.on.ca

Twitter: @LSRCA
Facebook: LakeSimcoeConservation

From: Jordan Wrobel <JWrobel@azimuthenvironmental.com>
Sent: June 9, 2022 12:50 PM
To: Liam Munnoch <L.Munnoch@lsrca.on.ca>
Subject: Terms of Reference-111 Bay Lane, Barrie

Good Afternoon Liam,

Azimuth Environmental Consulting, Inc. (Azimuth) has been retained to complete a Natural Heritage Evaluation (NHE) report for the property located at 111 Bay Lane, City of Barrie. It is our understanding that an NHE is required by the Lake Simcoe Region Conservation Authority (LSRCA) given the presence of Level 1 Natural Heritage Resources (with existing development) and the 200 metres of Kempenfelt Bay (Lake Simcoe) frontage. The property currently has nine existing dwellings with corresponding driveways and septic systems, accessory structures (including tennis courts), and a private road. According to aerial imagery and provincial mapping, the property appears to consist of woodland and maintained lands, and the property is within the Greater Golden Horseshoe plan area. Additionally, the property is partially regulated by the LSRCA due to the lake frontage.

It is our understanding that the proponent intends to severe the property into ten lots to correspond with the existing dwellings, and to potentially reconstruct the access road. Official development plans for the access road have not been confirmed, but will generally be within the current location.

The following Terms of Reference is proposed toward completion of the scoped NHE:

- Investigate background data to assess natural heritage features and functions attributed to lands in the vicinity of the proposed development;
- Complete an aquatic assessment through obtaining current and historical data on aquatic features within and surrounding the property;
- Complete the following field work in (spring/summer 2022);

- Map vegetation communities based on Ecological Land Classification methods (ELC; Lee et al. 1998. Ecological land classification for southern Ontario: first approximation and its applications. SCSS Field Guide FG-02)(summer 2022);
- Conduct one (1) detailed vascular plant inventories including a search for Butternut (summer 2022);
- Conduct two (2) dawn breeding surveys according to standard methods to determine if the property functions as habitat for Species at Risk (SAR) birds or area-sensitive species (June 2022);
- Record all incidental wildlife observations during site visits;

- Complete an assessment of potential SAR and their habitat that could be present within the study area, including a screening for Butternut trees (Endangered), using field data collected by Azimuth staff and other data available and/or provided by agencies to confirm environmental constraints; and,

- Prepare an NHE report. The NHE will include a description of existing natural heritage features and functions, an explanation of the development, provide relevant mapping, an evaluation of potential impacts, and mitigation/avoidance/restoration strategy as required.

At this time Azimuth requests that LSRCA indicate concurrence with the above proposed Terms of Reference toward completion of the NHE. We would also like to take this opportunity to request any natural heritage background information from the LSRCA that may be helpful in completing the NHE. Additionally, the TOR checklist for the property is attached to this e-mail.

Please feel free to contact us if you would like to discuss any aspects of the project.

Best regards,

Jordan Wrobel, B.Sc.,
Terrestrial Ecologist

Azimuth Environmental Consulting, Inc.
642 Welham Road
Barrie, Ontario, L4N 9A1
Cell: 705-305-4830
www.azimuthenvironmental.com

Terms of Reference

Natural Heritage Evaluation (NHE)
Environmental Impact Study (EIS)

1. **General Information:**

Date: June 9, 2022

Address: 111 Bay Lane, Barrie, ON

Name of consulting firm: Azimuth Environmental Consulting Inc.

Contact information: jwrobel@azimuthenvironmental.com

2. **Identify all <u>potential</u> natural heritage and hydrologic features in the study area (check all that apply):**

**The LSRCA recognizes that this is a preliminary assessment to determine what studies may be suitable for the property. A site visit may be required to verify the presence/absence of features.*

- ☐ Wetland
- ☒ Woodland
- ☐ Valleyland
- ☐ Grassland or meadow
- ☒ Wildlife habitat
- ☐ Area of natural and scientific interest (ANSI)
- ☐ Sand barren, savannah or tallgrass prairie
- ☐ Alvar
- ☐ Drainage feature/watercourse
- ☐ Kettle lake
- ☐ Seepage area or spring
- ☐ Lake or pond (and their littoral zone)
- ☒ Lake Simcoe shoreline
- ☒ Natural areas abutting Lake Simcoe
- ☒ Habitat of endangered and threatened species
- ☐ Fish habitat

3. **Activities to be undertaken and studies required for a complete NHE/EIS submission**:**

*** Some activities/studies are pre-selected (☒) as they are a minimum requirement for NHE/EIS submissions.*

☒ Consult with the appropriate Municipal and Conservation Authority staff, as required, to establish the required scope of study.

☒ Identify an appropriate study area - generally the area of anticipated disturbance plus 120 m.

☒ Collect and include applicable background information and current environmental mapping for natural heritage and hydrologic features, and the natural heritage system within and surrounding the study area.

☒ Identify and provide detailed descriptions of natural heritage and hydrologic features in the study area, their function, and the broader natural heritage system that they are within. Determine the significance of these natural heritage and hydrologic features under applicable policy.

☒ Evaluate existing vegetation communities using Ecological Land Classification (ELC) for Southern Ontario (Lee et al. 1998. Ecological Land Classification for Southern Ontario: first approximation and its applications. SCSS Field Guide FG-02). Provide a description of ELC communities in the study area and include completed ELC field sheets as an appendix.

☒ Conduct a one -season vegetation inventory in the late spring/summer/fall. Include the inventory categorized by ELC community as an appendix and denote any Species at Risk and/or provincially/locally rare species.

☐ Conduct three (3) breeding amphibian surveys as per the Marsh Monitoring Program protocol (Bird Studies Canada). Observational salamander surveys may be required if potential habitat exists in the study area. Include completed field sheets as an appendix.

- ⬓ Conduct two (2) dawn breeding bird surveys between May 24 and July 15, under appropriate conditions, with a minimum of 10 days between surveys, and record all occurrences and breeding behaviors. Point counts, wandering transects or a combination of the two must be used according to features present and site conditions. Include completed field sheets as an appendix. A third survey will be required if suitable grassland bird habitat is present.

- ☒ Record observations of all wildlife occurrences and behaviours and assess wildlife habitat function.

- ☒ Screen for Species at Risk (SAR), listed under the *Endangered Species Act, 2007,* based on existing or potential habitat. Additional species-specific surveys may be required if SAR habitat is present (e.g. butternut health assessments, snag surveys, bat acoustic monitoring surveys, evening whip-poor-will surveys, etc.), please contact the Ministry of Environment, Conservation and Parks (MECP) for further direction. Include any relevant correspondence with the MECP as an appendix

- ☒ Assess for Significant Wildlife Habitat (e.g. turtle nesting or wintering area, reptile hibernaculum, woodland raptor nesting habitat, seeps, springs, etc.) as per the Significant Wildlife Habitat Criteria Schedules for Ecoregion 6E (MNRF, January 2015).

- ☒ Identify any ecological linkages or movement corridors within the study area. Demonstrate how connectivity within and between natural heritage and hydrologic features will be maintained and, where possible, improved or restored to allow for the effective dispersal and movement of plants and animals.

- ☒ Provide a general description of the methodology, dates, timing, and locations of completed field surveys.

- ☐ Confirm the boundaries of any wetland and/or woodland features on the property through a staking exercise with the LSRCA. Boundary points must be surveyed with a high-accuracy GPS device (accurate to within 10 cm). A professional Ontario Land Surveyor (OLS) may be required to attend. Wetland staking exercises must be completed between June 15 and September 30 (exceptions may apply). Note that a site visit fee may apply.

- ☐ Complete an aquatic habitat assessment for all drainage features/watercourses in the study area, including characterization of hydrologic features (i.e. permanent, intermittent, ephemeral, headwater drainage feature) and suitability as fish habitat. Include a description of instream and riparian cover, bank stability, substrate composition, stream morphology, dimensions and gradient, thermal regime indicators, potential barriers, woody debris distribution, aquatic vegetation, groundwater seepage areas, etc.

- ☐ Complete a catchment-based water balance for the study area to assess how existing drainage conditions and moisture regimes that support sensitive hydrologic features (e.g. wetland, woodlands, watercourse) may be impacted by the proposed development. Demonstrate how current hydrologic inputs will be maintained post-development. Please note, the water balance assessment may also be a requirement under other provincial policies, therefore the NHE/EIS should coordinate with/summarize the water balance work undertaken by others.

- ☐ Recommend the dimensions of an appropriate vegetation protection zone (VPZ)/buffer to natural heritage and hydrologic features required to mitigate impacts from the proposed development. Recommendations for restoration/plantings should be provided for all buffers.

- ☒ Provide a detailed description of the proposed development.

☒ Map the following information separately on current high quality ortho-air photos:

1) ELC vegetation communities, natural heritage and hydrologic features and their associated VPZs, and the proposed development and anticipated limit of disturbance (e.g. grading limits); and,
2) ELC vegetation communities, survey locations, other environmental features (e.g. linkages, wildlife corridors, seeps, springs, stick nests, wildlife habitat, rare species, invasive species, etc.), and existing structures and/or trails.

☒ Assess the potential direct, indirect, and cumulative impacts of the proposed development on natural heritage and hydrologic features, the natural heritage system, and related ecological and hydrologic functions.

☒ Develop and provide an appropriate avoidance/mitigation/restoration strategy to address the potential impacts of the proposed development.

☒ Demonstrate how the proposed development is in conformity with all federal, provincial, regional, and municipal natural heritage policies applicable in the Lake Simcoe watershed.

☒ Complete one final report for circulation and approval, prepared by qualified professionals, in an electronic format as well as one (1) hard copy.

4. Additional studies or plans that may be required include:

☐ Landscape/Restoration/Planting Plan
☐ Edge Management Plan
☐ Tree Inventory/Arborist Report/Tree Preservation Plan
☐ Trails Impact Study
☐ Ecological Offsetting Strategy (please refer to LSRCA's Ecological Offsetting Policy)
☐ Environmental Monitoring Plan/Report
☐ Fluvial Geomorphological Assessment
☐ Natural Channel Design

5. Additional notes and/or requirements:

Please note that changes to the study area, the proposed development, and/or policy changes may require additional information/studies.

Please provide current field survey data in the NHE/EIS submission. Field survey data will be considered valid for five (5) years from the date the survey was conducted, except for Species at Risk screenings, which are valid for one (1) year. If outdated field data is provided, additional surveys may be required.

APPENDIX C

Photographic Record

View of the FOMM2-2 community edge, at the southeast property corner (facing west)– July 19, 2022

View of the private road within the CVR_3 community, and the northern edge of FOMM2-2 (facing east)– July 19, 2022

View of the private road and southwest tennis court, (facing west)– July 19, 2022

Central area of CVR_3 community (facing east), with tennis court, driveway, and maintained lawn– July 19, 2022

View of eastern portion of CVR_3 community (facing northwest)– July 19, 2022

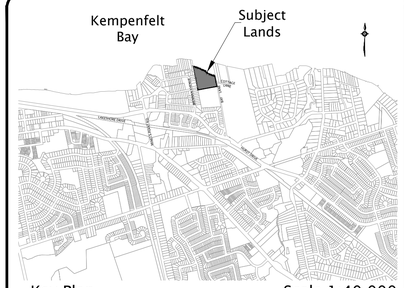
View of empty lot in CV_3 community, where previous dwelling burnt down (facing north)– July 19, 2022

View of north east half of CVR_3 community and Kempenfelt Bay shoreline– July 19, 2022

View of north west maintained yards in CVR_3 community, adjacent to Kempenfelt Bay– July 19, 2022

APPENDIX D

Proposed Site Plan



Draft Plan of Subdivision

Part of Lot 12, Concession 14
Geographic Township of Innisfil
City of Barrie
County of Simcoe
2022

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN
b) SHOWN ON DRAFT PLAN
c) SHOWN ON KEY PLAN
d) RESIDENTIAL
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT PLAN
h) MUNICIPAL WATER
i) TIOGA LOAMY SAND & BONDHEAD SANDY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) THERE ARE NO RESTRICTIVE COVENANTS AFFECTING THE LAND TO BE SUBDIVIDED.

OWNER'S CERTIFICATE

I, THE UNDERSIGNED, BEING THE REGISTERED OWNER OF THE SUBJECT LANDS, HEREBY AUTHORIZE THE JONES CONSULTING GROUP LTD., TO PREPARE THIS DRAFT PLAN OF SUBDIVISION AND TO SUBMIT SAME TO THE CITY OF BARRIE FOR APPROVAL.

DATE _____ OWNER _____

SURVEYOR'S CERTIFICATE

I CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

DATE _____ OLS _____

STATISTICS	Area (ha.)	Units
Residential Singles (Lots 1 - 10)	1.89 ha.	10 Lots
Accessory Use/Shared Access (Block 11)	0.66 ha.	n/a
Totals	2.55 ha.	10 Lots

Legend
AB - Existing Accessory Building

0 5 10 20 30M
SCALE 1 : 500 (A1)

BAY LANE ESTATES

Draft Plan of Subdivision

Raymond J. Duhamel
REGISTERED PROFESSIONAL PLANNER
R.P.P.

Date Issued:	APRIL 6, 2022
Checked By:	RD
Project No.:	BAY-10209
Drawn By:	m.c.r.
Drawing Name:	BAY-10209-DP-1.dwg

JONES CONSULTING GROUP LTD.
PLANNERS & ENGINEERS
229 Mapleview Drive East, Unit 1, Barrie, Ontario, L4N 0W5
Phone: 705-734-2538 Fax: 705-734-1056
www.jonesconsulting.com

BAY LANE ESTATES
CITY OF BARRIE