14 Bluebird Lane, Chandos Lake

June 2023

Scoped Environmental Impact Study

Sumac
ENVIRONMENTAL CONSULTING

Prepared For:
KMD Planning Inc.
560 Romaine Street
Peterborough, Ontario, K9J 2E3

Prepared By:
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June 20, 2023 SEC 23-025

KMD Planning Inc.
560 Romaine Street
Peterborough, Ontario
K9J 2E3

Attention: Kevin M. Duguay, MCIP, RPP

Re: **Scoped Environmental Impact Study at 14 Bluebird Lane, Chandos Lake**

Dear Mr. Duguay,

Thank you for retaining Sumac Environmental Consulting (Sumac) to prepare a Scoped Environmental Impact Study (EIS) at 14 Bluebird Lane, Chandos Lake. It is our understanding that the landowner wishes to construct an addition to the existing building in the approximate location of the existing deck.

The following report identifies the form and function of natural heritage identified on the subject property and adjacent lands and assesses the potential impacts to said features with respect to a proposed development. Recommendations and mitigation strategies have been included. This report has been prepared for KMD Planning Inc. and the undersigned accepts no responsibility for future use by other parties.

We thank you for the opportunity to be part of this project and should you have any questions, please do not hesitate to contact the undersigned.

Sumac Environmental Consulting

Cassandra Fligg, M.Sc.
Environmental Consultant

Nathan Fligg, M.Sc.
Environmental Consultant/GIS Technician

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1.0 Introduction

Sumac Environmental Consulting (Sumac) was retained to prepare a Scoped Environmental Impact Study (EIS) at 14 Bluebird Lane (hereinafter referred to as the 'subject property'; Figure 1) for the proposed construction of an addition to the existing dwelling in the approximate location of the original deck.

The subject property is situated at the shoreline of Chandos Lake and consists of a single-family dwelling, shed, gravel driveway accessed from Bluebird Lane, and natural cover. The surrounding area is predominantly composed of natural cover and shoreline residential development.

2.0 Planning Context

2.1. Federal

2.1.1. Fisheries Act

The fish and fish habitat protection provisions of the *Fisheries Act* include two (2) core prohibitions against persons carrying on works, undertaking or activities that result in the following:

- the death of fish, by means other than fishing; and
- the harmful alteration, disruption, or destruction of fish habitat.

2.2. Provincial

2.2.1. Endangered Species Act

Ontario's *Endangered Species Act* (ESA) provides protection, designation, recovery and other relevant aspects of conservation for species at risk, including habitat protection in the Province.

As per Section 9 (1) of the ESA, no person shall

a. kill, harm, harass, capture or take a living member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species;
b. possess, transport, collect, buy, sell, lease, trade or offer to buy, sell, lease or trade,
   (i) a living or dead member of a species that is listed on the Species at Risk in Ontario List as an extirpated, endangered or threatened species,
   (ii) any part of a living or dead member of a species referred to in subclause (i),
   (iii) anything derived from a living or dead member of a species referred to in subclause (i); or
c. sell, lease, trade or offer to sell, lease or trade anything that the person represents to be a thing described in subclause (b) (i), (ii) or (iii). 2007, c. 6, s. 9 (1).

As per Section 10 (1) of the ESA, no person shall damage or destroy the habitat of,

a. a species that is listed on the Species at Risk in Ontario List as an endangered or threatened species; or
b. a species that is listed on the Species at Risk in Ontario List as an extirpated species, if the species is prescribed by the regulations for the purpose of this clause. 2007, c. 6, s. 10 (1).

2.2.2. Provincial Policy Statement

The Provincial Policy Statement (MMAH, 2020) states that decisions affecting planning matters shall be consistent with policy statements issues under the *Planning Act*.

As per Section 2.1.4 of the PPS, development and site alteration shall not be permitted in:

a. significant wetlands in Ecoregions 5E, 6E and 7E; and
b. significant coastal wetlands.

As per Section 2.1.5 of the PPS, development and site alteration shall not be permitted in:

a. significant wetlands in the Canadian Shield north of Ecoregions 5E, 6E and 7E;
b. significant woodlands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
c. significant valleylands in Ecoregions 6E and 7E (excluding islands in Lake Huron and the St. Marys River);
d. significant wildlife habitat;
e. significant areas of natural and scientific interest; and
f. coastal wetlands in Ecoregions 5E, 6E and 7E1 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.

As per Section 2.1.8 of the PPS, 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.

2.2.3. Growth Plan for the Greater Golden Horseshoe

The subject property is mapped as part of the Natural Heritage System of the Greater Golden Horseshoe (MMAH, 2020). As per Section 4.2.2.4 of the Growth Plan for the Greater Golden Horseshoe (MMAH, 2020), provincial mapping of the Natural Heritage System for the Growth

Plan does not apply until it has been implemented in the applicable upper-or single-tier official plan. Until that time, the policies in this Plan that refer to the Natural Heritage System for the Growth Plan will apply outside settlement areas to the natural heritage systems identified in official plans that were approved and in effect as of July 1, 2017.

As per the Growth Plan for the Greater Golden Horseshoe (MMAH, 2020), key hydrologic features include permanent stream, intermittent streams, inland lakes and their littoral zones, seepage areas and springs, and wetlands.

As per Section 4.2.3.1 of the Growth Plan for the Greater Golden Horseshoe (MMAH, 2020), outside of settlement areas, development or site alteration is not permitted in key natural heritage features that are part of the Natural Heritage System for the Growth Plan or in key hydrologic features, except for:

a) forest, fish, and wildlife management;
b) conservation and flood or erosion control projects, but only if they have been demonstrated to be necessary in the public interest and after all alternatives have been considered;
c) activities that create or maintain infrastructure authorized under an environmental assessment process;
d) mineral aggregate operations and wayside pits and quarries;
e) expansions to existing buildings and structures, accessory structures and uses, and conversions of legally existing uses which bring the use more into conformity with this Plan, subject to demonstration that the use does not expand into the key hydrologic feature or key natural heritage feature or vegetative protection zone unless there is no other alternative, in which case any expansion will be limited in scope and kept within close geographical proximity to the existing structure;
f) expansions or alterations to existing buildings and structures for agricultural uses, agriculture-related uses, or on-farm diversified uses and expansions to existing residential dwellings if it is demonstrated that:
    i. there is no alternative, and the expansion or alteration in the feature is minimized and, in the vegetation protection zone, is directed away from the feature to the maximum extent possible; and
    ii. the impact of the expansion or alteration on the feature and its functions is minimized and mitigated to the maximum extent possible; and g) small-scale structures for recreational uses, including boardwalks, footbridges, fences, docks, and picnic facilities, if measures are taken to minimize the number of such structures and their negative impacts.

2.3. Municipal

2.3.1. County of Peterborough Official Plan

As per Section 4.1.3.4 of the County of Peterborough Official Plan (office consolidation 2022), local plans will prohibit development and site alterations within the following types of significant natural heritage features:

- significant wetlands;
- significant portions of the habitat of endangered and threatened species;

Moreover, local plans may permit development and site alteration in:

- significant woodlands south and east of the Canadian Shield;
- significant valleylands south and east of the Canadian Shield;
- significant wildlife habitat; and;
- significant areas of natural and scientific interest;

Moreover, development and site alteration will not be permitted in fish habitat except in accordance with provincial and federal requirements.

Moreover, development and site alteration shall not be permitted on adjacent lands to the natural heritage features and areas listed above unless the ecological function of the adjacent lands has been evaluated in accordance with an environmental impact assessment as described in Section 4.1.3.1 and it has been determined that there will be no new negative impacts on the natural features or on their ecological functions.

As per Schedule “A3” Land Use Plan - Township of North Kawartha (dated 2008), the subject property has been mapped as Seasonal Residential.

As per Section 6.2.5.3 h) of the County of Peterborough Official Plan (office consolidation 2022), the preservation of naturally-vegetated shoreline is encouraged in order to minimize destruction to the shoreline and wetbeach habitat, minimize visual impact on the waterbody, maintain wildlife habitats and corridors and improve water quality. In this regard, structures permitted in the Seasonal Residential designation, including leaching beds of septic systems, on lots created by consent or plan of subdivision after the date Official Plan Amendment No.3 comes into effect, shall be set back a minimum of 30 metres from the shoreline of any lake or major watercourse in order to ensure adequate protection from changes in water level and flooding and to ensure maintenance of water quality and the protection of fish and wildlife habitats. Applications to create lots within the Seasonal Residential designation, either by consent or plan of subdivision, shall demonstrate that this 30 metre setback requirement can be met on the proposed lot(s). However, structures legally existing as of the date Official Plan Amendment No.3 comes into

effect (October 22, 2008) that do not comply with the required setback provision that require replacement due to structural defects or destruction by fire or other natural causes or by permission of the Township will be permitted to be replaced on the same footprint and may only be enlarged in accordance with the provisions of the Zoning By-law, and where the enlargement does not further encroach into the 30 metre setback.

2.4. Watershed

A portion of the subject property falls within regulated lands of the Crowe Valley Conservation (CVCA) and therefore, in accordance with Ontario Regulation 159/06, a work permit may be required prior to the onset of site works.

3.0 Background Review

The following resources were reviewed to gain a deeper understanding of natural heritage feature(s) with the potential of occurring on the subject property and adjacent lands (i.e., up to 120 m):

- Atlas Square No. 18TQ6567 of the Natural Heritage Information Centre;
- Atlas Square No. 18TQ66 of the Ontario Butterfly Atlas;
- Atlas Square No. 18TQ66 of the Ontario Reptile and Amphibian Atlas;
- Atlas Square No. 18TTQ66 of the Ontario Breeding Bird Atlas;
- County of Peterborough Official Plan (office consolidation 2022);
- Ebird;
- iNaturalist; and
- Land Information Ontario.

Given the relevant planning jurisdiction, the following features are being considered in the Scoped EIS, where applicable to the subject property and adjacent lands:

- Habitat of Endangered and Threatened Species;
- Inland lakes and their littoral zones;
- Permanent and intermittent streams;
- Seepage areas and springs;
- Significant Wildlife Habitat; and
- Wetlands.

4.0 Characterizing the Natural Environment: Approach and Methodology

A proposed terms a reference was submitted to the Township of North Kawartha for review to better define the purpose and structure of the Scoped EIS (Appendix A).

4.1. Vegetation

4.1.1. Botanical Inventory

A vascular plant inventory was completed on May 5, 2023.

4.1.2. Vegetation Communities

Orthographic imagery of the subject property and adjacent lands provided by the Ministry of Natural Resources and Forestry (MNRF) Make-a-Map Tool was used for the basis of ELC and further refined through a ground-truthing exercise on May 5, 2023. Vegetation communities were classified following protocol of the Ecological Land Classification of Ontario - Operational Draft.

4.2. Fish Habitat

Fish habitat is defined in subsection 2(1) of the *Fisheries Act* to include all waters frequented by fish and any other areas upon which fish depend directly or indirectly to carry out their life processes. The presence of water features on the subject property and their suitability to function as fish habitat were investigated on May 5, 2023.

4.3. Habitat of Endangered and Threatened Species

For the purpose of this study, we have defined "Species at Risk" (SAR) to include species designated special concern, threatened and endangered under O. Reg. 230/08 in accordance with the ESA. Species occurrence data from sources outlined in Section 3.0 of this report was used to determine which species at risk are known to occur in proximity to the subject property. An Ecological Land Classification (ELC) exercise was completed to identify potential habitat opportunities for the listed species at risk.

A SAR Habitat Assessment was completed to identify the presence/absence of SAR habitat on the subject property.

4.4. Significant Wildlife Habitat

Incidental observations of wildlife and wildlife habitat on the subject property and adjacent lands were noted during Sumac's field investigations. The potential for Significant Wildlife Habitat (SWH) on the subject property was assessed following criteria and thresholds outlined in the Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015).

4.5. Wetland

The subject property and adjacent lands were screened for wetland feature(s) and delineated following guidelines as described by the Ontario Wetland Evaluation System by a qualified wetland evaluator on May 5, 2023.

5.0 Data Analysis

5.1. Vegetation

5.1.1. Botanical Inventory

A list of vascular plants observed during Sumac's site visit has been documented (Table 1).

5.1.2. Vegetation Communities

The subject property contained four (4) distinct communities (Figure 2):

1. G13Tt Very Shallow, Dry to Fresh: Hemlock Cedar-Conifer: Approximately 1,640 m^2 of coniferous forest occurred on the subject property and extended onto much of the adjacent lands. The existing dwelling was located in this community. This community occurred on rolling upland with very shallow mineral substrates over bedrock. The canopy was dominated by mature Eastern hemlock and occasional Eastern white pine. A sparse subcanopy consisted of eastern hemlock, paper birch and Eastern white cedar. Understory vegetation was very sparse, and the ground cover consisted mostly of conifer needles with occasional shrubs and forbs where light and substrate availability permitted growth (e.g., mouse-eared chickweed, red elderberry, perry-winkle, partridge berry). The western edge of the community bordered the lake and constrained inclusions of active bedrock shoreline with a greater abundance of stunted Eastern white cedar.
2. G135S Organic Thicket Swamp: Approximately 480 m^2 of organic thicket swamp occurred on the southeastern portion of the subject property and extended onto the adjacent lands. This community was flooded during Sumac's site visit. This community occurred on lowland, divided by an unvegetated gravel driveway and Bluebird lane. A sparse and open canopy layer consisted mostly of young red maple and paper birch. A dense shrub layer was dominated by speckled alder and willow spp. amongst striped maple and young Eastern white cedar. There was a moderately vegetated low shrub layer (e.g., white meadowsweet, skunk currant). Emergent and groundcover vegetation was abundant, consisting of graminoids and ferns (e.g., Carex spp., broad-leaved cattail, sensitive fern, cinnamon fern).
3. G155X Active Limnetic Mineral: Approximately 51 m of Chandos Lake shoreline occurred at the western edge of the subject property. Shallow waters visible from the shoreline were unvegetated and the dominate substrate varied between cobble and course sand.

4. G160X Active Bedrock Shoreline: Approximately 68 m^2 of open bedrock occurred on the southern shoreline of the subject property and extended south onto the adjacent property. This community was mostly unvegetated bedrock with sparse patches of stunted Eastern white cedar, white meadowsweet and graminoids amongst shallow soil deposits.

The southern portion of the subject property and adjacent lands that includes buildings, parking, mown lawn and landscape trees is characteristic of a more cultural and anthropogenic community and therefore, has been given the descriptor of 'Maintained Area' (Figure 2).

5.2. Fish Habitat

Chandos Lake is approximately 1,650 ha in size and is a part of the Crowe River watershed. According to the Land Information Ontario, Chandos Lake is known to provide habitat for a variety of fish species (i.e., bluegill, bluntnose minnow, brown bullhead, cisco, golden shiner, lake trout, largemouth bass, Northern pike, pumpkinseed, rock bass, smallmouth bass, white sucker and yellow perch).

The shoreline was predominantly abrupt and nearly vertical (i.e., ~60-90 degrees) bedrock. The overhanging coniferous canopy providing in-water shade through parts of the day. Occasional undercut banks were noted with exposed roots in water. The portion of shoreline at the southwest corner of the subject property consisted of gently sloped sand (~20 degrees).

The subject property is located in a shallow bay where the near-shore water depth ranged from 20-60 cm and exhibited very low slope towards the lake (~10 degrees). In-water substrates consisted of cobble, sand and patches of detritus. The limit of Chandos Lake (i.e., top-of-bank) was recorded during Sumac's site visit (Figure 3).

5.3. Habitat of Endangered and Threatened Species

The SAR Habitat Assessment (Table 2) identified candidate/confirmed habitat of the following endangered and threatened species on the subject property:

- Mammals: Eastern small-footed myotis, little brown myotis, Northern myotis and tri-colored bat.
- Reptiles: Eastern hog-nosed snake.

5.3.1. Mammals

Eastern Small-footed Myotis: Candidate roosting habitat for Eastern small-footed myotis identified on the subject property along the shoreline in the crevices of bedrock. Foraging habitat

may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.

Little Brown Myotis: Candidate roosting habitat for little brown myotis may include the G13Tt community. The existing structures on the subject property appeared well maintained and are not anticipated to function as suitable roosting habitat for little brown myotis. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.

Northern Myotis: Candidate roosting habitat for Northern myotis may include the G13Tt community. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.

Tri-colored Bat: Candidate roosting habitat for tri-colored bat may include the G13Tt community. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.

5.3.2. Reptiles

Eastern Hog-nosed Snake: Eastern hog-nosed snake could use the bedrock along the shoreline in the G160X community for thermoregulation, reproduction, and/or shedding, should this species be present. The subject property could be used as movement habitat for Eastern hog-nosed snake, should this species be present.

5.4. Significant Wildlife Habitat

The following incidental observations were noted on the subject property during Sumac's field investigations:

- American Robin (*Turdus migratorius*);
- Beaver (*Castor canadensis*);
- Blue Jay (*Cyanocitta cristata*);
- Common Loon (*Gavia immer*);
- Green Frog (*Lithobates clamitans*);
- Northern Flicker (*Colaptes auratus*);
- Northern Leopard Frog (*Lithobates p*ipiens);
- Pine Warbler (*Setophaga pinus*);
- Red Squirrel (*Tamiasciurus hudsonicus*);
- Red-winged Blackbird (*Agelaius phoeniceus*);
- Ring-billed Gull (*Larus delawarensis*);

- Song Sparrow (*Melospiza melodia*);
- Spring Peeper (*Pseudacris crucifer*);
- Swamp Sparrow (*Melospiza georgiana*); and
- Winter Wren (*Troglodytes hiemalis*).

The SWH Assessment (Table 3) identified the following SWH as having the potential to occur on the subject property:

- Bat Maternity Colonies; and
- Special Concern and Rare Wildlife Species.

5.4.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: The G19Tt community has the potential to function as this SWH.

5.4.2. Habitat of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: Special concern species, monarch and snapping turtle, have the potential to utilize portions of the subject property. Adult monarch could utilize all natural cover areas for rest, dispersal and nectar sources. Snapping turtle could use the portion of Chandos Lake that borders the subject property. Candidate nesting habitat for snapping turtle occurs on adjacent lands south of the subject property associated with the sandy shoreline area. No globally rare or provincially rare vascular plant species were encountered on the subject property.

5.5. Wetland

The subject property was screened for wetland feature(s) and delineated following guidelines as described by the Ontario Wetland Evaluation System by a qualified wetland evaluator on May 05, 2023 (Figure 3). Pockets of lacustrine (lake influenced) wetlands occurred throughout the adjacent lands and consisted of deciduous swamp, coniferous swamp and thicket swamp. Approximately 480 m^2 of organic thicket swamp was recorded on the subject property and extended into the adjacent lands. It should be noted that the existing unvegetated gravel roads and driveways extend through the community, providing vehicle passage.

6.0 Project Description

The landowner wishes to construct an addition to the existing dwelling in the approximate location of the original deck. The proposed development has been strategically designed to minimize expansion to the footprint of the existing dwelling and original deck.

7.0 Impact Assessment

7.1. Fish Habitat

The proposed development is not anticipated to expand into fish habitat and has been kept in close geographical proximity to the existing structure. The proposed addition is located 10 m from Chandos Lake at its closest point (Figure 3). Given the proximity of site works to fish habitat, the proponent is encouraged to follow the prescribed mitigation measures outlined in Section 8.2.1 to avoid deposition of deleterious substances to fish habitat.

7.2. Habitat of Endangered and Threatened Species

7.2.1. Mammals

Eastern Small-footed Myotis: No alteration to candidate roosting habitat for Eastern small-footed myotis is anticipated to facilitate the proposed development. Candidate foraging habitat is not anticipated to be disturbed as a result of the proposed development.

Little Brown Myotis, Northern Myotis and Tri-colored Bat: It is our understanding that no trees will be removed to facilitate the proposed development. As such, no alteration to candidate roosting habitat for little brown myotis, Northern myotis and tri-colored bat is anticipated to facilitate the proposed development. Candidate foraging habitat is not anticipated to be disturbed as a result of the proposed development.

7.2.2. Reptiles

Eastern Hog-nosed Snake: The proposed development may be located in movement habitat for Eastern hog-nosed snake. However, given that the work area is located under closed canopy and displayed little to no microhabitat features favorable to this species, Eastern hog-nosed snake is not anticipated to occur in the work area. No significant impacts to Eastern hog-nosed snake and their habitat is anticipated due to the scale and nature of the proposed development.

7.3. Significant Wildlife Habitat

7.3.1. Seasonal Concentration Areas of Animals

Bat Maternity Colonies: It is our understanding that no trees will be removed to facilitate the proposed development. As such, no alteration to candidate bat maternity roosting sites is anticipated to facilitate the proposed development. No negative impacts to this SWH or their ecological functions is anticipated as a result of the proposed development.

7.3.2. Habitat of Species of Conservation Concern Considered SWH

Special Concern and Rare Wildlife Species: No significant amount of vegetation is anticipated to be removed to facilitate the proposed development. Due to the scale and nature of the proposed development, no negative impacts to monarch and snapping turtle habitat or their ecological functions are anticipated.

7.4. Wetland

The proposed development is not anticipated to expand into wetland and has been kept in close geographical proximity to the existing structure. The proposed addition is located 7 m from wetland at its closest point (Figure 3). Given the proximity of site works to wetland, the proponent is encouraged to follow the prescribed mitigation measures outlined in Section 8.2.1 to avoid deposition of deleterious substances to wetland.

8.0 Conclusion and Recommendations

8.1. Conclusion

Should the proponent adhere to the proposed development plan and follow the prescribed recommendations as noted below (Section 8.2), negative impacts to the overall form and function of the identified natural heritage on the subject property will be appropriately mitigated. Furthermore, it is our understanding that the proposed development as described herein would not contravene applicable environmental policy and regulations as described in Section 2.0 of this report.

8.2. Recommendations

8.2.1. Preventing Entry of Deleterious Substances in Aquatic Feature(s)

Deleterious substances should never be deposited and/or enter aquatic features. A response plan should be prepared prior to the onset of site works and an emergency spill kit should be kept on-site during site activities. All machinery should be kept in a clean condition and free of fluid leaks. Washing, fueling and servicing machinery should not be completed in or near (i.e., up to 30 m) of aquatic feature(s), including Chandos Lake and wetland.

8.2.2. Wildlife Encounters

Any wildlife encountered during site clearing or subsequent construction activities should be allowed to exit the site on their own, via safe routes. Construction staff should not attempt to capture or handle most kinds of wildlife, unless an animal is in imminent peril or is injured and cannot wait for rescue by qualified personnel. Improper handling can result in injuries to both workers and wildlife, and may in some cases contravene provincial or federal legislation. Removal and relocation of mammals, in particular, should only be done by qualified wildlife service

providers working in accordance with applicable laws (i.e., *Fish and Wildlife Conservation Act*). Observation records should include the observer's name, date and time, species, location (descriptive and georeferenced), photographs, and action taken.

9.0 References

Banton, Erin, J. Johnson, H. Lee, G. Racey, P. Uhlig, and M. Wester, 2009 (Banton et al, 2009). Ecosites of Ontario, Operational Draft, April 20th, 2009. Ontario Ministry of Natural Resources, Ecological Classification Working Group

County of Peterborough Official Plan (office consolidation 2022).

Ministry of Municipal Affairs and Housing, 2020 (MMAH, 2020). Growth Plan for the Greater Golden Horseshoe (office consolidation 2020).

Ministry of Natural Resources and Forestry, 2015 (MNRF, 2015). Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E.

R.S.C., 1985. c. F-14. Fisheries Act.

R.S.O. 1990, c. P.13, Section 3. Provincial Policy Statement.

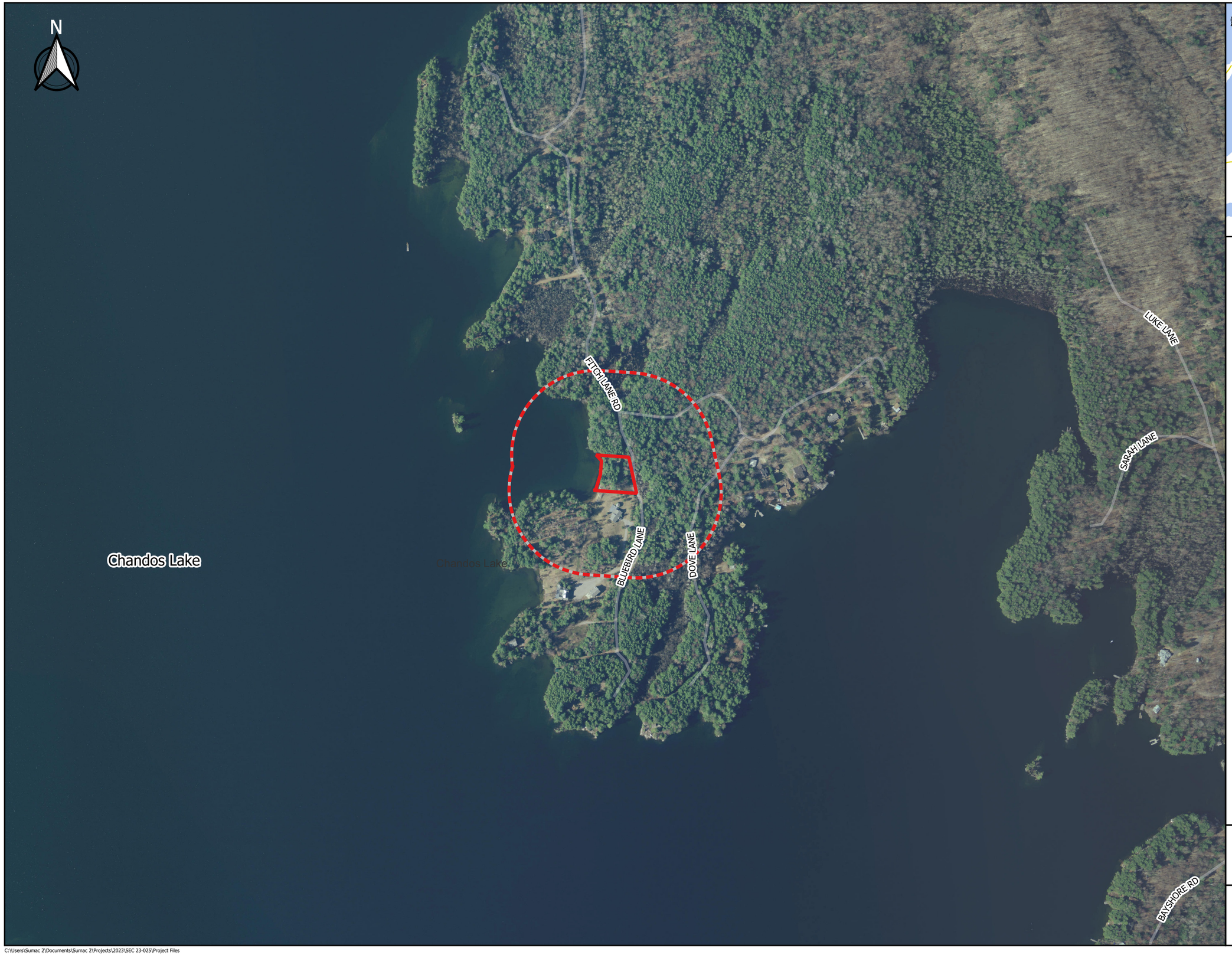
S.O. 1997, c. 41. Fish and Wildlife Conservation Act.

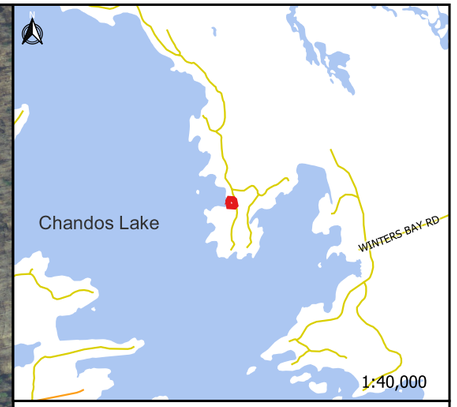
S.O. 2007, c. 6. Endangered Species Act.

Limitations:

This report was prepared using the most current site plan provided to Sumac's office. The conclusion and recommendations provided herein may no longer be applicable should changes be made to the site plan following submission of this report. The assessment provided herein is valid at the time of inspection.

Disclaimer:





Legend

Subject Property

Adjacent Lands

0 50 100 150 200 250 m

1:5,000

Figure 1: Subject Property

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Designed by: N.F.
Date: 06/12/2023
Project: SEC 23-025

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N

G135S

G13Tt

G155X

G135S

G160X

G13Tt

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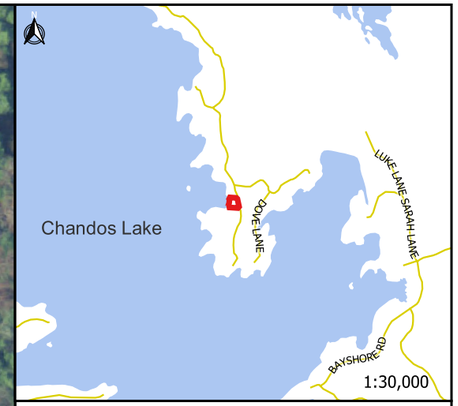
G135S



Legend

Adjacent Lands

Subject Property

Top of Bank

ELC Vegetation Communities

G13Tt	Very Shallow, Dry to Fresh: Hemlock Cedar-conifer
G135S	Organic Thicket Swamp
G19Tt	Dry to Fresh: Mixedwood
G160X	Active Bedrock Shoreline
G155X	Active Limnetic Mineral

0 10 20 30 40 50 60 m

1:1,200

Figure 2: Existing Conditions

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Date: 06/12/2023
Project: SEC 23-025

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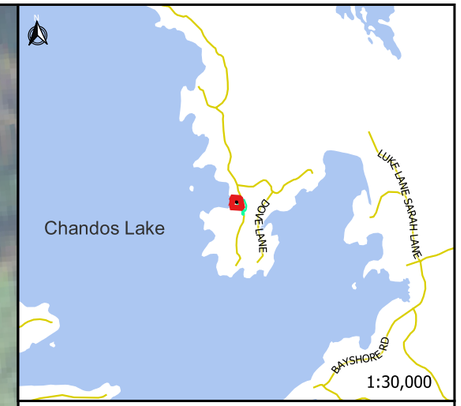
N

10 m

7 m



Legend

- Subject Property
- Top of Bank
- Wetland
- Existing Building
- Proposed Addition
- Existing Deck to be Removed

0 2.5 5 7.5 10 12.5 m

1:250

Figure 3: Proposed Development

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Designed by: N.F.
Date: 06/14/2023
Project: SEC 23-025

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Table 1: Vascular Plant Inventory **SEC 23-025 Bluebird Lane**

Scientific Name	Common Name	Vegetation Community[A]				S-Rank[B]	G-Rank[C]	Species at Risk Status		Non-native	Coefficient of Wetness
		G13Tt	G135S	G160X	G155X			Provincial[D]	Federal[E]		
Abies balsamea	Balsam Fir	✓	✓			S5	G5				-3
Acer pensylvanicum	Striped Maple	✓	✓			S4	G5				3
Acer rubrum	Red Maple	✓	✓			S5	G5				0
Alnus incana	Grey Alder		✓			S5	G5				-3
Betula papyrifera	Paper Birch	✓	✓			S5	G5				3
Carex pedunculata	Long-stalked Sedge		✓			S5	G5				3
Carex pensylvanica	Pennsylvania Sedge	✓		✓		S5	G5				5
Cerastium fontanum	Common Mouse-ear Chickweed	✓				SNA	GNR			Yes	3
Dactylis glomerata	Orchard Grass	✓				SNA	GNR			Yes	3
Dirca palustris	Eastern Leatherwood	✓	✓			S4	G4				0
Dryopteris cristata	Crested Wood Fern		✓	✓		S5	G5				-5
Equisetum arvense	Field Horsetail		✓			S5	G5				0
Equisetum hyemale	Common Scouring-rush		✓			S5	G5				0
Erigeron strigosus	Rough Fleabane	✓		✓		S5	G5				3
Galium palustre	Common Marsh Bedstraw		✓			S5	G5				-5
Lonicera canadensis	Canada Fly Honeysuckle	✓	✓			S5	G5				3
Maianthemum canadense	Wild Lily-of-the-valley	✓				S5	G5				3
Mitchella repens	Partridgeberry	✓				S5	G5				3
Onoclea sensibilis	Sensitive Fern		✓			S5	G5				-3
Osmundastrum cinnamomeum	Cinnamon Fern		✓			S5	G5				-3
Picea glauca	White Spruce		✓			S5	G5				3
Pinus strobus	Eastern White Pine	✓	✓	✓		S5	G5				3
Poa pratensis	Kentucky Bluegrass	✓		✓		S5	G5				3
Populus grandidentata	Large-toothed Aspen		✓			S5	G5				5
Populus tremuloides	Trembling Aspen		✓	✓		S5	G5				0
Potentilla norvegica	Rough Cinquefoil	✓	✓			S5	G5				0
Ribes glandulosum	Skunk Currant	✓	✓			S5	G5				-3
Rubus idaeus ssp. Strigosus	North American Red Raspberry	✓	✓			S5	G5T5				3
Salix spp.	Willows		✓								
Sambucus racemosa	Red Elderberry	✓	✓			S5	G5				3
Solidago caesia	Blue-stemmed Goldenrod	✓				S5	G5				3
Spiraea alba	White Meadowsweet		✓	✓		S5	G5				-3
Taraxacum officinale	Common Dandelion	✓	✓	✓		SNA	G5			Yes	3
Thuja occidentalis	Eastern White Cedar	✓	✓	✓		S5	G5				-3
Tsuga canadensis	Eastern Hemlock	✓	✓			S5	G4G5				3
Typha angustifolia	Narrow-leaved Cattail		✓			SNA	G5			Yes	-5
Verbascum thapsus	Common Mullein	✓				SNA	GNR			Yes	5
Vinca minor	Lesser Periwinkle	✓				SNA	GNR			Yes	5

[A]Refer to Figure 2 for Ecological Land Classification descriptors.

[B]Provincial Ranking Status. Definitions of each S-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_SRank.htm.

[C]Global Ranking Status. Definitions of each G-Rank can be found at the following website: https://caroliniancanada.ca/legacy/SpeciesHabitats_GRank.htm.

[D]Species at Risk status as per the O. Reg. 230/08.
[E]Species at Risk status as per the *Species at Risk Act (S.C. 2002, c.29)* .

Species Grouping	Common Name	Scientific Name	Provincial Status[A]	Federal Status[B]	SAR Habitat Assessment
Birds	Bald Eagle	*Haliaeetus leucocephalus*	Special Concern	Not Listed	Absent. No candidate bald eagle nests or nesting sites observed on the subject property.
Birds	Bank Swallow	*Riparia riparia*	Threatened	Threatened	Absent. No candidate nesting sites for bank swallow observed on the subject property.
Birds	Barn Swallow	*Hirundo rustica*	Special Concern	Threatened	Absent. No barn swallow nests were observed on the existing structures on the subject property.
Birds	Black Tern	*Chlidonias niger*	Special Concern	Not Listed	Absent. No shallow marsh identified on the subject property.
Birds	Bobolink	*Dolichonyx oryzivorus*	Threatened	Threatened	Absent. No grasslands or similar ecosites identified on the subject property.
Birds	Canada Warbler	*Cardellina canadensis*	Special Concern	Threatened	Absent. No suitable forested community for this species identified on the subject property.
Birds	Cerulean Warbler	*Setophaga cerulea*	Threatened	Endangered	Absent. No suitable forested community for this species identified on the subject property.
Birds	Chimney Swift	*Chaetura pelagica*	Threatened	Threatened	Absent. No suitable nesting sites for this species identified on the subject property.
Birds	Common Nighthawk	*Chordeiles minor*	Special Concern	Special Concern	Absent. No suitable open habitat areas identified on the subject property.
Birds	Eastern Meadowlark	*Sturnella magna*	Threatened	Threatened	Absent. No grasslands or similar ecosites identified on the subject property.
Birds	Eastern Whip-poor-will	*Antrostomus vociferus*	Threatened	Threatened	Absent. No combination of suitable open and forested areas identified on and in proximity to the subject property.
Birds	Eastern Wood-pewee	*Contopus virens*	Special Concern	Special Concern	Absent. No suitable forested and edge habitat features identified on the subject property.
Birds	Evening Grosbeak	*Coccothraustes vespertinus*	Special Concern	Special Concern	Absent. No suitable forested community for this species identified on the subject property.
Birds	Golden-winged Warbler	*Vermivora chrysoptera*	Special Concern	Threatened	Absent. No combination of suitable open and forested areas identified on and in proximity to the subject property.
Birds	Grasshopper Sparrow	*Ammodramus savannarum pratensis*	Special Concern	Special Concern	Absent. No grasslands or similar ecosites identified on the subject property.
Birds	Least Bittern	*Ixobrychus exilis*	Threatened	Threatened	Absent. No suitable wetland habitat for this species identified on the subject property.
Birds	Olive-sided Flycatcher	*Contopus cooperi*	Special Concern	Special Concern	Absent. No suitable and natural forest edges and openings identified on the subject property.
Birds	Peregrine Falcon	*Falco peregrinus*	Special Concern	Not Listed	Absent. No suitable cliffs for this species identified on the subject property.
Birds	Red-headed Woodpecker	*Melanerpes erythrocephalus*	Endangered	Endangered	Absent. No woodland/forested communities with an abundance of dead or dying trees observed on the subject property.
Birds	Wood Thrush	*Hylocichla mustelina*	Special Concern	Threatened	Absent. No suitable forested community for this species identified on the subject property.
Insects	Monarch	*Danaus plexippus*	Special Concern	Special Concern	Candidate. Adult monarch could utilize all natural cover areas for rest, dispersal and nectar sources.
Mammals	Eastern Small-footed Myotis	*Myotis leibii*	Endangered	Not Listed	Candidate. Candidate roosting habitat for Eastern small-footed myotis identified on the subject property along the shoreline in the crevices of bedrock. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.

Mammals	Little Brown Myotis	*Myotis lucifugus*	Endangered	Endangered	Candidate. Candidate roosting habitat for little brown myotis may include the G13Tt community. The existing structures on the subject property appeared well maintained and are not anticipated to function as suitable roosting habitat for little brown myotis. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.
Mammals	Northern Myotis	*Myotis septentrionalis*	Endangered	Endangered	Candidate. Candidate roosting habitat for Northern myotis may include the G13Tt community. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.
Mammals	Tri-colored Bat	*Perimyotis subflavus*	Endangered	Endangered	Candidate. Candidate roosting habitat for tri-colored bat may include the G13Tt community. Foraging habitat may include wetland communities, Bluebird Lane and the shoreline of Chandos Lake, should this species be present.
Reptiles	Blanding's Turtle	*Emydoidea blandingii*	Threatened	Endangered	Absent. No suitable aquatic habitat for this species noted in the portion of Chandos Lake that borders the subject property.
Reptiles	Eastern Hog-nosed Snake	*Heterodon platirhinos*	Threatened	Threatened	Candidate. Eastern hog-nosed snake could use the bedrock along the shoreline in the G160X community for thermoregulation, reproduction, and/or shedding, should this species be present. The subject property could be used as movement habitat for Eastern hog-nosed snake, should this species be present.
Reptiles	Snapping Turtle	*Chelydra serpentina*	Special Concern	Special Concern	Candidate. Snapping turtle could use the portion of Chandos Lake that borders the subject property. Candidate nesting habitat for snapping turtle occurs on adjacent lands south of the subject property associated with a sandy shoreline area.

[A]Classification of species as they are anticipated to appear on the updated O. Reg. 230/08 Species at Risk Ontario (SARO) list on January 25, 2023.

[B]Classification of species as they appear on Schedule 1 of the Species at Risk Act.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Waterfowl Stopover and Staging Areas (Terrestrial)** **Rationale:** Habitat important to migrating waterfowl.	American Black Duck Wood Duck Green-winged Teal Blue-winged Teal Mallard Northern Pintail Northern Shoveler American Wigeon Gadwall	These field/meadow ELC ecosites with appropriate soils and vegetation: G060-062 G077-079 G093-095 G109-111 - Plus evidence of annual spring flooding from melt water or run-off.	Fields with sheet water during Spring (mid-March to May). -Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. -Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available.	Absent. None of the listed ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 100 m of the adjacent lands.
Seasonal Concentration Areas of Animals	**Waterfowl Stopover and Staging Areas (Aquatic)** **Rationale:** Important for local and migrant waterfowl populations during the spring or fall migration or both periods combined. Sites identified are usually only one of a few in the eco-district	Canada Goose Cackling Goose Snow Goose American Black Duck Northern Pintail Northern Shoveler American Wigeon Gadwall Green-winged Teal Blue-winged Teal Hooded Merganser Common Merganser Lesser Scaup Greater Scaup Long-tailed Duck Surf Scoter White-winged Scoter Black Scoter Ring-necked duck Common Goldeneye Bufflehead Redhead Ruddy Duck Red-breasted Merganser Brant Canvasback Ruddy Duck	ELC Ecosites: G142-G152	-Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify. -These habitats have an abundant food supply (mostly aquatic invertebrates and vegetation in shallow water.	Absent. None of the listed ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 100 m of the adjacent lands.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Shorebird Migratory Stopover Area** **<u>Rationale:</u>** High quality shorebird stopover habitat is extremely rare and typically has a long history of use.	Greater Yellowlegs Lesser Yellowlegs Marbled Godwit Hudsonian Godwit Black-bellied Plover American Golden-Plover Semipalmated Plover Solitary Sandpiper Spotted Sandpiper Semipalmated Sandpiper Pectoral Sandpiper White-rumped Sandpiper Baird's Sandpiper Least Sandpiper Purple Sandpiper Stilt Sandpiper Short-billed Dowitcher Red-necked Phalarope Whimbrel Ruddy Turnstone Sanderling Dunlin	ELC Ecosites: G005-G006 G160-G162 G170-G172 G176-G178 G186-G188 G204-G214	-Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. -Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. -Sewage treatment ponds and storm water ponds do not qualify as a SWH.	Absent. Although a listed ecosite was identified on the subject property (i.e., G160), this community did not exhibit high quality habitat features to be considered for this SWH.
Seasonal Concentration Areas of Animals	**Raptor Wintering Area** **<u>Rationale:</u>** Sites used by multiple species, a high number of individuals and used annually are most significant	Rough-legged Hawk Long-eared Owl Boreal Owl Northern Saw-whet Owl **Special Concern:** Short-eared Owl	Combination of meadow/field and forest/woodland ecosites. Need to have a forest ELC Ecosite : G011-G019 G023-G028 G033-G043 G048-G059 G064-G076 G081-G092 G097- G108 G113-G125	-The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. -Raptor wintering sites need to be > 20 ha, with a combination of forest and upland. -Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands -Field area of the habitat is to be wind swept with limited snow depth or accumulation.	Absent. The appropriate meadow/field and forest/woodland combination is not anticipated to occur in direct connectivity and proximity to the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Bat Hibernacula** **Rationale:** Bat hibernacula are rare habitats in all Ontario landscapes.	Big Brown Bat Tri-coloured Bat	Bat Hibernacula may be found in association with components of cliffs and rock talus in these ELC Ecosites; G158-G159 G164 G180-G181 Calcareous bedrock is fairly rare in ecoregion 5E. (Note: buildings are not considered to be SWH)	-Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. -Active mine sites should not be considered as SWH. -The locations of bat hibernacula are relatively poorly known.	Absent. None of the listed ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 400 m of the adjacent lands.
Seasonal Concentration Areas of Animals	**Bat Maternity Colonies** **Rationale:** Known locations of forested bat maternity colonies are extremely rare in all Ontario landscapes.	Big Brown Bat Silver-haired Bat	Maternity colonies considered SWH are found in forested Ecosites. ELC Ecosites: G016-G019 G028 G040-G043 G055-G059 G070-G076 G088-G092 G103- G108 G118-G125	-Maternity colonies can be found in tree cavities, vegetation and often in buildlings (buildings are not considered to be SWH). -Maternity roosts are not found in caves and mines in Ontario. -Maternity colonies located in Mature (dominant trees >80 years old) deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees -Female Bats prefer wildlife tree (snags) in early stages of decay, class 1-3 or class 1 or 2. -Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred.	Candidate. The G19Tt community has the potential to function as this SWH.
Seasonal Concentration Areas of Animals	**Turtle Wintering Areas** **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	Midland Painted Turtle **Special Concern:** Northern Map Turtle Snapping Turtle	Snapping and Midland Painted Turtles; ELC Ecosites: G128-G135 G140-G152 Northern Map Turtle; Open Water areas such as deeper rivers or streams and lakes with current can also be used as over-wintering habitat.	-For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates. -Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen. -Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.	Absent. Although a listed ecosite was identified on the subject property (i.e., G135), this community did not exhibit deep enough water to be considered for this SWH.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Reptile Hibernaculum** **Rationale:** Generally sites are the only known sites in the area. Sites with the highest number of individuals are most significant.	**Snakes:** Eastern Gartersnake Northern Watersnake Northern Red-bellied Snake Northern Brownsnake Smooth Green Snake Northern Ring-necked Snake **Special Concern:** Milksnake Eastern Ribbonsnake Lizard: **Special Concern** Five-lined Skink	For all snakes, habitat may be found in any ecosite other than very wet ones. Talus, Rock Barren, Crevice, Cave, and Alvar sites may be directly related to these habitats. The existence of rock piles or slopes, stone fences, and crumbling foundations assist in identifying candidate SWH. For Five-lined Skink ELC Ecosites: G056-G059 G070-G076 G087-G092 G103-G108 G118-G125	-For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. -Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line. -Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover. -Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures.	Absent. No candidate reptile hibernaculum for snakes or five-lined skink identified on the subject property.
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Bank and Cliff)** **Rationale:** Historical use and number of nests in a colony make this habitat significant. An identified colony can be very important to local populations. All swallow population are declining in Ontario.	Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. Habitat found in the following ecosites: G001-G004 G007-G008 G020-G021 G029-G031 G044-G046 G060-G062 G077-G079 G093-G095 G109-G111 G173-G175 G201-G203 G210-G212	-Any site or areas with exposed soil banks, undisturbed or naturally eroding that is not a licensed/permitted aggregate area. -Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles. -Does not include a licensed/permitted Mineral Aggregate Operation.	Absent. None of the listed ELC Ecosite Codes were identified on the subject property nor anticipated to occur within 50 m of the adjacent lands.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Tree/Shrubs)** **Rationale;** Large colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Great Blue Heron Black-crowned Night-heron	ELC Ecosites: G064-G076 G081-G092 G097-G108 G113-G125 G128-G136	-Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. -Most nests in trees are 11 to 15 m from ground, near the top of the tree.	Absent. No nests of the listed species were observed on the subject property, nor has this SWH been mapped on adjacent lands according to the LIO.
Seasonal Concentration Areas of Animals	**Colonially - Nesting Bird Breeding Habitat (Ground)** **Rationale:** Colonies are important to local bird population, typically sites are only known colony in area and are used annually.	Herring Gull Great Black-backed Gull Little Gull Ring-billed Gull Common Tern Caspian Tern Brewer's Blackbird	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) G001-G004 G007-G008 G020-G021 G029-G031 G044-G046 G060-G062 G077-G079 G093-G095 G109-G111 G142-G145	-Nesting colonies of gulls and terns are on islands or peninsulas associated with open water, marshy areas, lake or large river (two-lined on a 1:50,000 NTS map). -Brewers Blackbird colonies are found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	Absent. The subject property is not located on a rocky island or peninsula within a lake or large river.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Seasonal Concentration Areas of Animals	**Deer Yarding Areas** **Rationale:** Winter habitat for deer is considered to be the main limiting factor for northern deer populations. In winter, deer congregate in "yards" to survive severe winter conditions. Deer yards typically have a long history of annual use by deer. Sites identified are typically the only known sites in the area.	White-tailed Deer	May be found in all Tall Treed forest and swamp ELC Ecosites; G12-G15 G23-G27 G33-G38 G48-G54 G64-G69 G81-G87 G97-G103 G113-G118 G128-G129 Note: OMNRF to determine this habitat.	-Deer yarding areas or winter concentration areas (yards) are areas deer move to in response to the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter. -The Core of a deer yard (Stratum I) is located	Absent. Deer yarding area has not been mapped on the subject property.
Rare Vegetation Communities	**Beach/ Beach Ridge/ Bar/ Sand Dunes** **Rationale;** Uncommon to rare in Ecoregion, some of the best examples are in the North Channel (e.g. Mississagi River delta)	ELC Ecosites: G005-G006 G166-G168 G182-G184 G213-G214 **Indicator Spp.** Marram Grass (Ammophila breviligulata) Beach Pea (Lathyrus japonicus)	Vegetation can vary from patchy and barren to tree cover but less than 60%. Characterised by unstable sand.	Any identified beach, beach ridge, or sand dune.	Absent. None of the listed ELC Ecosites were identified on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Shallow Atlantic Coastal Marsh** **Rationale:** Provincially rare communities almost entirely restricted to Ecoregion 5E.	ELC Ecosites: G143-G145 G148-G152 **Indicator Spp.:** Virginia Meadowbeauty (Rhexia virgininica) **Other Associated Spp:** Rhynchospora capitellata, Xyris difformis, Panicum spretum, Triadenum virginicum, Polygonum careyi and Juncus militaris.	Shallow marsh occurs on shallow mineral (sand) or mineral organic (sandy peat) shoreline subject to low wave energy, on inland lakes and beaver ponds particularly those that experience fluctuating water levels from year to year (i.e. some years with exposed shorelines in summer/fall).		Absent. None of the listed ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	**Cliffs and Talus Slopes** **Rationale:** Uncommon to rare in Ecoregion 5E, Calcium rich, marble cliffs are a much rarer feature.	ELC Ecosites: G158-G159 G166-G168 G173-G175 G182-G184 G201-G203 Characteristic flora for cliffs and talus slopes include: lichen, such as Rock Tripe Umbilicaria spp., and ferns Polypodium virginianum, Cystopteris fragilis and Woodsia ilvensis, Cryptogramma stelleri, Woodsia alpina, and Saxifraga paniculata.	Vegetation can vary from patchy and barren to tree cover but less than 60%. Cliffs and talus slopes in 5E are primarily Precambrian rock and are typically sparsely vegetated.	Any cliff or talus slope.	Absent. None of the listed ELC Ecosites were identified on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Rock Barren** **Precambrian Rock Barren** **Rationale;** Uncommon to rare in Ecoregion,	ELC Ecosites: G163-G165 G179-G181 Characteristic flora for Rock Barrens include: lichens Cladina spp. and mosses Polytrichum spp.), sparse grasslands of Danthonia spicata and Deschampsia flexuosa, low shrubs (Juniperus communis, Vaccinium angustifolium, Comptonia peregrina, and stunted open grown trees Quercus alba, Quercus rubra and Pinus strobus. Also, Pteridium aquilinum, Aralia hispida, Spiranthes casei, Saxifraga virginiensis, Gaylussacia baccata, Corydalis sempervirens, Prunus pensylvanica, and Comandra umbellata.	Vegetation can vary from patchy and barren to tree cover but less than 60%. Rock barrens are characterized by extensive areas of exposed granitic rock bedrock sparsely vegetated.	Any rock barren area greater than 1 ha.	Absent. None of the listed ELC Ecosites were identified on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Sand Barren** **Rationale:** Uncommon to rare in Ecoregion	ELC Ecosites: G007 G215 Characteristic plant species of sand barrens in 5E include: Cladina spp., Carex houghtoniana, Carex merrittfernaldii, Comptonia peregrina, Rubus flagellaris, Selaginella rupestris, and Viola labradorica, Polygonella articulata, and Stipa spartea.	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little or no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.	A sand barren area, no minimum size.	Absent. None of the listed ELC Ecosites were identified on the subjet property.
Rare Vegetation Communities	**Alvar** **Rationale:** Alvars are extremely rare habitats in Ecoregion 5E. Most alvars in Ontario are in Ecoregions 6E and 7E. Alvars in 5E are small and highly localized just north of the Palaeozoic-Precambiran contact.	Southern Ontario ELC Ecosites: ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2 **5E Alvar Plant Indicator species:** Penstemon hirsutus, Panicum philadelphicum, Scutellaria parvula, Rhus aromatica, Monarda fistulosa,and Senecio pauperculus.	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars is complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a number of characteristic or indicator plants. Undisturbed alvars can be phyto- and zoogeographically diverse, supporting many uncommon or are relict plant and animals species. Vegetation cover varies from patchy to barren with a less than 60% tree cover lxxviii.	An Alvar site > 0.5 ha in size.	Absent. No alvars were observed on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Old Growth Forest** **Rationale:** Due to historic logging practices, extensive old growth forest is rare in the Ecoregion. Interior habitat provided by old growth forests is required by many wildlife species.	Long-lived forest spp. within these ELC Ecosites: G011-G15 G017-G018 G023 G027 G033 G036 G039-G042 G048 G051 G054-G058 G064 G066 G069 G071-G075 G081 G084 G087 G089-G091 G103 G105-G107 G113 G115 G118 G120-G124	Old Growth forests are characterized by exhibiting the greatest number of old-growth characteristics, such as mature forest with large trees that has been undisturbed. Heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.	Stands 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest.	Absent. No indication of old-growth forest on the subject property.
Rare Vegetation Communities	**Bog** **Rationale:** Bogs are a fairly rare vegetation community in Ecoregion 5E.	ELC Ecosites: G126 G137-G138	Bogs are nutrient-poor, acid peatlands dominated by peat mosses (Sphagnum sp.), ericaceous shrubs and sedges (Cyperaceae). The water table is at or near the surface in spring and slightly lower the remainder of the year and is vitually isolated from mineral soil waters.	Any size Bog.	Absent. No bogs identified on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Tallgrass Prairie** **Rationale:** In Ecoregion 5E, there are few if any tallgrass prairie remnants. Tallgrass plant species occur, often together, primarily along shorelines.	Southern ELC Ecosites: TPO1 TPO2 **Indicator Spp.** Andropogon gerardii and Spartina pectinata **Characteristic Spp.** Bromus kalmii, Ceanothus herbaceus, Lechea intermedia, Monarda fistulosa, Penstemon hirsutus, Polygala polygama, Rudbeckia hirta, Sorghastrum nutans, Viola fimbriatula,	A Tallgrass Prairie has ground cover dominated by prairie grasses. An open Tallgrass Prairie habitat has < 25% tree cover.	No minimum size to site. Site must be restored or a natural site. Remnant sites such as railway right of ways are not considered to be SWH.	Absent. No tallgrass prairies identified on the subject property.
Rare Vegetation Communities	**Savannah** **Rationale:** Savannahs are extremely rare habitats in Ontario.	Southern ELC Ecosites: TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is related to tallgrass prairie, but includes trees, which vary from 25 – 60% canopy cover. The open areas between the trees are dominated by prairie species, while forest species are found beneath the tree canopy	No minimum size to site. Site must be restored or a natural site.	Absent. No savannahs identified on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Rare Vegetation Communities	**Rare Forest Type:** **Red Spruce** **<u>Rationale;</u>** Stands containing red spruce trees are rare in Ecoregion 5E.	ELC Ecosites: G036 G051 G066 G084 G086 G100 G102 G116 G117	Red Spruce is a valued wildlife cover tree. Historically red spruce was much more abundant then it is now within the Ecoregion 5e forests. Red spruce is a shade tolerant conifer that evolved within tolerant hardwood forests. Red spruce grows best in a cool, moist climate. It will grow in shallow, till soils (ave. of 46 cm) and may grow on sites unfavourable for other species such as organic soils over rock, steeper slopes, and wet bottomlands, although poorly drained sites will inhibit growth.	No minimum size to stand.	Absent. None of the listed ELC Ecosites were identified on the subject property.
Rare Vegetation Communities	**Rare Forest Type:** **White Oak** **<u>Rationale;</u>** Stands containing white oak trees are rare in Ecoregion 5E	**White Oak** ELC Ecosites: G017 G041 G057 G072 G090 G106 G121	White oak is a valued wildlife mast producing tree. The mast produced by the white oak tree is often preferred over the more common red oak acorn. Forest stands containing white oak trees are uncommon in the Great Lakes St. Lawrence Forest.	No minimum size to stand.	Absent. None of the listed ELC Ecosites were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Waterfowl Nesting Area** **<u>Rationale:</u>** Important to local waterfowl populations, sites with greatest number of species and highest number of individuals are significant.	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Common Merganser Red-breasted Merganser Mallard Canada Goose American Widgeon Bufflehead Common Goldeneye	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: G129-G135 G142-G152 **Note: includes adjacency to Provincially Significant Wetlands**	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur. -Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests. -Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites.	Absent. No suitable upland habitat anticipated to occur in connectivity to the G135 community.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Bald Eagle and Osprey Nesting, Foraging and Perching Habitat** **Rationale:** Nest sites are fairly uncommon in Eco-region 5E and are used annually by these species. Many suitable nesting locations may be lost due to increasing shoreline development pressures and scarcity of habitat.	Osprey **Special Concern** Bald Eagle	Forest communities directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. -Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. -Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms).	Absent. No nests of the listed species were observed on the subject property, nor has this SWH been mapped on adjacent lands according to the LIO.
Specialized Habitats of Wildlife considered SWH	**Woodland Raptor Nesting Habitat** **Rationale:** Nests sites for these species are rarely identified; these area sensitive habitats are often used annually by these species.	Red-tailed Hawk Great Horned Owl: Broad-winged Hawk Sharp-shinned Hawk Merlin Barred Owl Red-shouldered Hawk Coopers Hawk Northern Goshawk	May be found in all forested ELC Ecosites in Community Class: TR May also be found in the forested swamp ELC Ecosites: G128-G133	All natural or conifer plantation woodland/forest stands. -Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Merlin or Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. -Includes nest sites within tree cavities for Barred Owl and sometime Great Horned Owls and Merlin -In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	Absent. No nests of the listed species were observed on the subject property, nor has this SWH been mapped on adjacent lands according to the LIO.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Turtle and Lizard Nesting Areas** **Rationale:** These habitats are rare and when identified will often be the only breeding site for local populations of turtles.	Midland Painted Turtle Special Concern Species Northern Map Turtle Snapping Turtle Five-lined Skink.	Turtle Nesting areas may be adjacent to these ELC Ecosites: G138 G140-149 For Five-lined Skink; ELC Ecosites: G056-G059 G070-G076 G087-G092 G103-G108 G118-G125	-Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. -For an area to function as a turtle- nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. -Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. -Skinks will nest under logs, in stumps or under loose rock in partially wooded areas.	Absent. None of the listed Ecosites were identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Seeps and Springs** **Rationale:** Seeps/Springs are typical of headwater areas and are often at the source of coldwater streams.	Wild Turkey Ruffed Grouse Spruce Grouse White-tailed Deer Salamander spp.	Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have seeps/springs.	Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system. -Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species.	Absent. No seeps or springs identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Aquatic Feeding Habitat** **Rationale;** Aquatic Feeding Habitats are an extremely important habitat component for moose and other wildlife as they supply important nutrients.	Moose White-tailed Deer	Habitat may be found in all forested ecosites adjacent to water.	MNRF maps these location on Crown land and rates the site on a scale of 0 – 4, with 4 being the best. Feeding sites classed 3 or 4 are potential/candidate significant. Where MAFA habitat is in low supply, class 2 MAFA habitat could also be considered potential/candidate significant • Wetlands and isolated embayments in rivers or lakes which provide an abundance of submerged aquatic vegetation such as pondweeds, water milfoil and yellow water lily are preferred sites. Adjacent stands of lowland conifer or mixed woods will provide cover and shade .	Absent. Aquatic Feeding Habitat has not been mapped on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Mineral Licks** **Rationale;** Mineral licks are a valuable habitat component but are also very rare on the landscape.	Moose White-tailed Deer	Habitat may be found in all forested ecosites.	This habitat component is found in upwelling groundwater and the soil around these seepage areas. It typically occurs in areas of sedimentary and volcanic bedrock. In areas of granitic bedrock, the site is usually overlain with calcareous glacial till.	Absent. No mineral licks identified on the subject property.
Specialized Habitats of Wildlife considered SWH	**Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf** **Rationale:** Species are important fur bearing mammals and specific denning habitat is becoming increasingly scarcer due to development pressures.	Mink Otter Marten Fisher Grey Wolf **Special Concern** Eastern Wolf	Habitat may be found in all forested ecosites.	• Mink prefer shorelines dominated by coniferous or mixed forests with dens usually underground. Mink will sometimes use old muskrat lodges. • Otters prefer undisturbed shorelines along water bodies that support productive fish populations with abundant shrubby vegetation and downed woody debris for denning. They often use old beaver lodges or log jams and crevices in rock piles. • Marten and fisher share the same general habitat, requiring large tracts of coniferous or mixed forests of mature or older age classes. Denning sites are often in cavities in large trees or under large downed woody debris.	Absent. No denning sites for mink, otter, marten, fisher or Eastern wolf observed on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Amphibian Breeding Habitat (Woodland).** **Rationale:** These habitats are extremely important to amphibian biodiversity within a landscape and often represent the only breeding habitat for local amphibian populations	Eastern Newt Blue-spotted Salamander Spotted Salamander Four-toed Salamander Northern Two-lined Salamander Spring Peeper Wood Frog American Toad	All forested, ELC Ecosites; The wetland breeding ponds (including vernal pools) may be permanent, seasonal, ephemeral, large or small in size and could be located within or adjacent to the woodland.	• Presence of a wetland or pond >500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). The wetland, lake or pond and surrounding forest, would be the Candidate SWH. Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Breeding ponds within the woodland or the shortest distance from forest habitat are more significant because of reduced risk to migrating amphibians and more likely to be used. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	Absent. No wetland inclusions or vernal pools noted in the forested communities that extend onto the subject property.
Specialized Habitats of Wildlife considered SWH	**Amphibian Breeding Habitat (Wetlands)** **Rationale:** Wetlands supporting breeding for these amphibian species are extremely important and fairly rare within Central Ontario landscapes.	Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog	ELC Ecosites: G129-G135 G142-G152 Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	-Wetlands and pools (including vernal pools) >500m2 (about 25m diameter) , supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats. -Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. -Bullfrogs require permanent water bodies with abundant emergent vegetation.	Absent. The G135 community is likely too small and fragmented by the road division to be considered as this SWH.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Specialized Habitats of Wildlife considered SWH	**Mast Producing Areas** **<u>Rationale:</u>** Mast is a very important food requirement for many wildlife species.	Black Bear White-tailed deer Wild Turkey Ruffed Grouse	ELC Ecosites: G015 G017 G019 G027-G028 G041-G043 G057 G059 G072 G090 G106 G108 G121	• Most important areas are mature forests >0.5 ha containing numerous large beech and red oak trees that supply the energy-rich mast that wildlife prefer. • Other significant tree species include hickory, basswood, black cherry, ironwood, mountain ash, pin cherry, and butternut. Significant shrub species include blueberries, wild black berry, serviceberry, raspberry, beaked hazel, choke cherry and hawthorn. • Sites providing long-term, relatively stable food supplies, forest openings or barrens >1 ha provide excellent sites for mast producing shrubs . Sites such as clear-cuts or burns are temporary source of food and are less significant.	Absent. None of the forested communities displayed an abundance of mature mast producing tree species.
Habitats of Species of Conservation Concern considered SWH	**Marsh Breeding Bird Habitat <u>Rationale:</u>** Wetlands for these bird species are very productive and rare in Central Ontario landscapes.	American Bittern Sora Red-necked Grebe Pie-billed Grebe Redhead Ring-necked Duck Lesser Scaup Ruddy Duck Common Moorhen American Coot Wilson’s Phalarope Common Loon Sandhill Crane Green Heron Sedge Wren Marsh Wren Trumpeter Swan **Special Concern:** Yellow Rail Black Tern	ELC Ecosites: G138-G152 For Green Heron: Above Ecosites plus: G129-G136.	• Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. • For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water.	Absent. No marshes identified on the subject property. Moreover, no green heron nests observed on the subject property.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Habitats of Species of Conservation Concern considered SWH	**Open Country Bird Breeding Habitat** **Rationale:** This wildlife habitat is declining throughout Ontario and North America. Species such as the Upland Sandpiper have declined significantly the past 40 years based on CWS (2004) trend records.	Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow **Special Concern:** Short-eared Owl	ELC Ecosites: G008-G009 G020-G021 G029-G031 G044-G046 G060-G062 G077-G079 G093-G095 G109-G111	-Large grassland areas (includes natural and cultural fields and meadows) >30 ha. -Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). -Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. -The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.	Absent. No grassland areas identified on the subject property.
Habitats of Species of Conservation Concern considered SWH	**Shrub/Early Successional Bird Breeding Habitat** **Rationale:** This wildlife habitat is declining throughout Ontario and North America. The Brown Thrasher has declined significantly over the past 40 years based on CWS (2004) trend records.	Willow Flycatcher Brown Thrasher Blue-winged Warbler Tennessee Warbler Prairie Warbler Eastern Towhee Clay-colored Sparrow Field Sparrow **Special Concern:** Golden-winged Warbler	ELC Ecosites: G009-G010 G021-G022 G031-G032 G046-G047 G062-G063 G079-G080 G095-G096 G111-G112 G134-G135 Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	• Large field areas succeeding to shrub and thicket habitats >30 ha in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or livestock pasturing in the last 5 years). • Larger shrub thicket habitats (>30 ha) are most likely to support and sustain a diversity of these species. • Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or lightly grazed pasturelands.	Absent. Although a listed Ecosite (i.e., G135) was identified on the subject property, this community is not likely large enough to be considered as this SWH.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Habitats of Species of Conservation Concern considered SWH	**Special Concern and Rare Wildlife Species** **<u>Rationale:</u>** These species are Provincially Rare or have experienced significant population declines in Ontario.	All Special Concern and Provincially Rare (S1-S3, SH) plant and animal species. Lists of these species are tracked by the Natural Heritage Information Centre (NHIC).	All plant and animal element occurrences (EO) within a 1 or 10km grid. Older element occurrences were recorded prior to GPS being available, therefore location information may lack accuracy	When an element occurrence is identified within a 1 or 10 km grid for a Special Concern or provincially Rare species; linking candidate habitat on the site needs to be completed to ELC Ecosites.	Candidate. Special concern species, monarch and snapping turtle, have the potential to utilize portions of the subject property. Adult monarch could utilize all natural cover areas for rest, dispersal and nectar sources. Snapping turtle could use the portion of Chandos Lake that borders the subject property. Candidate nesting habitat for snapping turtle occurs on adjacent lands south of the subject property associated with the sandy shoreline area. No globally rare or provincially rare vascular plant species were encountered on the subject property.
Animal Movement Corridors	**Amphibian Movement Corridors** **<u>Rationale:</u>** Movement corridors for amphibians moving from their terrestrial habitat to breeding habitat can be extremely important for local populations.	Eastern Newt Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog American Toad	Corridors may be found in all ecosites associated with water. -Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1	Movement corridors between breeding habitat and summer habitat. -Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2 (Amphibian Breeding Habitat –Wetland) of this Schedule.	Absent. The SWH Amphibian Breeding Habitat (Woodland/Wetland) was not confirmed.

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Animal Movement Corridors	**Cervid Movement Corridors** **<u>Rationale</u>** Corridors important for all species to be able to access seasonally important life-cycle habitats or to access new habitat for dispersing individuals by minimizing their vulnerability while travelling.	White-tailed Deer Moose	Corridors may be found in all forested ecosites.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 of this schedule and Moose Aquatic Feeding Area and Mineral Lick Habitat from Table 1.2.2 of this schedule. -A deer wintering habitat identified by the OMNRF as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion. -Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). -Corridors will be multi-functional i.e. these will function for any smaller mammal species as well.	Absent. The SWH Deer Wintering Habitat was not confirmed.
Animal Movement Corridors	**Furbearer Movement Corridor** **Rationale:** The identification of denning sites is rare, corridors to and from the habitat must be maintained as this habitat is extremely important for local populations.	Mink Otter	All Forested Ecosite Codes adjacent to or within shoreline habitats.	Mink and Otter den sites are typically found within a riparian area of a lake, river, stream or wetland. The den site will potentially have a movement corridor associated with it. • All Mink or Otter den sites identified using Table 1.2.2 of this schedule under the habitat of Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf are to be considered for an animal movement corridor.	Absent. The SWH Denning Sites for Mink, Otter, Marten, Fisher and Eastern Wolf was not confirmed.
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E	**5E-11**	**Rare Forest Types:** **Jack Pine** **<u>Rationale;</u>** Uncommon to rare in southern area of Ecoregion 5E.	Jack Pine ELC Ecosites: G012 G023 G034-G035 G049 G065 G068 G082-G083 G098-G099 G114	Jack Pine grows best on soils that are sandy, silty or a coarse loam on dry to moist sites. • No minimum size to stand. • Cultural plantations are not significant.	Absent. None of the listed ELC Ecosites were identified on the subject property.

Table 3: Significant Wildlife Habitat Assessment **SEC 23-025 Bluebird Lane**

Source: Significant Wildlife Habitat Criteria Schedules for Ecoregion 5E (MNRF, 2015)

Wildlife Category	Wildlife Habitat	Wildlife Species	Candidate ELC Ecosite Codes	Candidate Habitat Criteria	SWH Assessment
Significant Wildlife Habitat Exceptions for Ecodistricts within EcoRegion 5E	**5E-13**	**Late Winter Moose Habitat**	The preferred ELC Ecosites: G012-G014 G024-G026 G035-G038 G050-G053 G066-G068 G083-G086 G099-G102	Late winter moose habitat is characterized by dense conifer cover with greater than 50% canopy closure and >10 m in height. • Snow depth in excess of 70 cm restrict moose movement during winter, however late winter thermal refuge is important in relieving heat stress . • These habitats are extensively used by moose during late spring and summer due to the shade provided. Conifer stands >50 ha, dominated by tall trees >10 m, on gentle to moderately rugged sites with deep soils. Areas identified as rating 3 or 4 for late winter moose habitat are Candidate SWH.	Absent. The subject property is not located in EcoDistrict 5E-13.

List of Appendices

Appendix A: Township of North Kawartha Consultation

Gmail **Cassandra Fligg <sumacenvironmental@gmail.com>**

14 Bluebird Lane, Chandos Lake - EIS

Janine Cik <J.Cik@northkawartha.ca> Wed, May 24, 2023 at 12:01 PM
To: Cassandra Fligg <sumacenvironmental@gmail.com>

Good morning Cassandra,

Sincere apologies for the late reply.

I have read through your email below and the contents of the scoped EIS looks to be sufficient for our purposes. In terms of providing an SAR list, our County Official Plan does not have an available list, though it does reference the Ontario Endangered Species Act.

Hope this helps. If you have any further questions please let me know.

Thank you,

Janine Cik, B.A. (Hons)

Junior Planner, Township of North Kawartha

280 Burleigh Street

Apsley, ON K0L 1A0

Phone: 705-656-5183

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From: Cassandra Fligg <sumacenvironmental@gmail.com>
Sent: May 8, 2023 10:46 AM

To: Janine Cik <J.Cik@northkawartha.ca>
Subject: 14 Bluebird Lane, Chandos Lake - EIS

Good morning,

Sumac Environmental Consulting (Sumac) has been retained to complete a scoped Environmental Impact Study (EIS) at 14 Bluebird Lane, Chandos Lake. It is our understanding that the landowner wishes to modify the existing dwelling on the subject property by replacing a portion of the existing deck with a building addition. Moreover, the proposed building addition is not anticipated to extend beyond the limits of the existing deck.

Sumac anticipates the following tasks to be required for the completion of the scoped EIS:

- Complete a background review of documented occurrences of Species at Risk (SAR) in the local area.
- Complete the following field studies on the subject property during a single-day site visit in spring of 2023:

1. Characterize the shoreline area and identify candidate fish habitat features.
2. Complete a vascular plant inventory.
3. Classify vegetation communities following protocol of the Ecological Land Classification of Ontario - Operational Draft (Banton et al. 2009).
4. Approximate the limits of natural heritage (e.g., wetland, woodland, fish habitat) that extend onto the subject property, where applicable.
5. Record incidental wildlife and wildlife habitat observations.

- Prepare a report that includes the following:

1. A description of the form and function of candidate natural heritage feature(s) identified on the subject property.
2. A SAR screening that assesses the potential for SAR and/or their habitat on the subject property and adjacent lands.
3. A Significant Wildlife Habitat (SWH) screening that assesses the potential for SWH areas on the subject property and adjacent lands.
4. A review of environmental policy and regulations.
5. Impact assessment that identifies any potential impacts to the above noted natural heritage feature(s) as a result of the proposed building modification.
6. Mapping that depicts the above noted natural heritage feature(s) and proposed development footprint.
7. Recommendations and mitigation measures.

At this time, we ask that you please review the proposed terms of reference for the scoped EIS as outlined above and provide a SAR list for the respective township, county or watershed, if available.

Kind regards,

Cassandra Fligg, M.Sc.

Environmental Consultant

Sumac Environmental Consulting

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