Environmental Impact Study

161 Heathwood Heights Drive, Aurora

Prepared for

1000679027 Ontario Inc.

DEVNEX

September 24, 2025
Project No. P2025-949

Prepared by

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1. Introduction

GeoProcess Research Associates Inc. (GeoProcess) has been retained by 1000679027 Ontario Inc. to complete an Environmental Impact Study (EIS) for a proposed development at 161 Heathwood Heights Drive in Aurora, Ontario (Map 1). This is herein referred to as the "Subject Property." The "Study Area" will consist of the Subject Property and lands within 120 metres (m). It is our understanding that the Subject Property is the proposed site of a residential redevelopment.

The Subject Property is located on the southeast corner of Heathwood Heights Drive and Tilston Grove in Aurora, Ontario. The Aurora Walking/Bike Trail is located on the southern limits of the Subject Property. The property includes a single-family residence and a treed area to the east and south of the house. The house is proposed to be removed and the lot subdivided for construction of five (5) new single-family residences. The canopy of the treed areas in the Study Area is connected to a larger woodland system. This woodland system may be classified as a Significant Woodland and Environmental Protection designation in the Town of Aurora Official Plan (OP). Significant Woodlands are also considered Key Natural Heritage Features (KNHF) under the OP. As per Section 12.4.1 of the OP, an application for development or site alteration within 120 m of the Environmental Protection designation, or a Key Natural Heritage Feature or Key Hydrologic Feature shall be accompanied by an Environmental Impact Study.

This EIS establishes the extent and function of the KNHF within the Study Area based on field studies and policy conformity of the Town of Aurora, York Region, Lake Simcoe Region Conservation Authority (LSRCA), and the Province of Ontario. It has been prepared to assess potential negative impacts that the proposed development may have on the KNHF and the larger Natural Heritage System (NHS), recommend mitigation measures, and provide an analysis of the required buffers and developable limit of the Subject Property to protect or enhance existing natural heritage features and functions.

1.1. Study Area

The Study Area is situated approximately 6.8 kilometres west of Highway 404 and 480 metres east of Bathurst Street in the Town of Aurora. The property is occupied by a single-detached dwelling with suburban residential communities located in all directions. The Subject Property covers approximately 0.25 hectares (ha). Located within the East Holland subwatershed, a tributary of Tannery Creek flows in a north-south direction approximately 120 m west of the Study Area, and the associated wooded area covers the southern portion of the Study Area.

The Study Area is comprised of an Urban Area and a Regional Greenland System per the York Region Official Plan (ROP). The Regional Greenland System within the vicinity of the Study Area contains a woodland associated with a Key Hydrological Feature (Tannery Creek tributary) west of the Study Area. The Regional Greenland System encompasses the Town of Aurora's Natural Heritage System as outlined in the Town of Aurora Official Plan. As per Schedule A of the Town's Official Plan, an NHS Feature exists within the Study Area. The Study Area is designated as a Suburban Residential and Stable Neighbourhood under Schedules A and B of the Plan. Additionally, the property is also within the Oak Ridges Moraine Conservation Plan area (ORMCP).

2. Policy Context

Municipal, provincial, and federal natural heritage policies applicable to the Subject Property have been reviewed and described below.

2.1. Provincial Planning Statement (2024)

The Provincial Planning Statement (PPS) 2024 is administered under Section 3 of the *Planning Act*. It became effective October 20, 2024, and replaces the Provincial Policy Statement 2020. The PPS applies to planning decisions made on or after that date. It provides policy direction for land use and development within the Province of Ontario and provides for appropriate development while protecting resources of provincial interest, public health and safety, and the quality of the natural and built environment. The policies of the PPS may be complemented by provincial and municipal plans and policies.

The PPS defines eight natural heritage features and provides planning polices for each, listed below. The function of natural heritage features and areas is further clarified by the definition of a Natural Heritage System, which is *"a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems."*

- Significant wetlands
- Coastal wetlands
- Fish habitat
- Significant woodlands
- Significant valleylands
- Habitat of endangered species and threatened species
- Significant Wildlife Habitat
- Significant Areas of Natural and Scientific Interest (ANSIs)

Section 4.0 and 5.0 of the PPS deal with development and site alteration and where these activities shall not be permitted. Section 4.0 policies surround the conservation of biodiversity and protection of the health of the Great Lakes, natural heritage, water, agricultural, mineral and cultural heritage and archaeological resources for their economic, environmental and social benefits. Section 5.0 directs development away from areas of natural or human-made hazards to mitigate risks to public health or safety, and property damage from natural hazards, including the risks that may be associated with the impacts of a changing climate.

Policies in Section 4.1 are particularly relevant as they surround development and site alteration in and adjacent to natural heritage features. These policies and select others are outlined below in Table 1.

Table 1. Applicable Policies of the Provincial Planning Statement

Policy Number	Policy
(4.1 - Natural Heritage)	The diversity and connectivity of natural features in an area and the long-term *ecological function* and biodiversity of *natural heritage systems*, should be maintained, restored or

Policy Number	Policy
4.1.2	where possible, improved, recognizing linkages between and among *natural heritage features and areas*, *surface water features* and *ground water features*.
4.1.3	*Natural heritage systems* shall be identified in Ecoregions 6E & 7E, recognizing that *natural heritage systems* will vary in size and form in *settlement areas, rural areas*, and *prime agricultural areas*.
4.1.4	*Development* and site alteration shall not be permitted in: a) *significant wetlands* in Ecoregions 5E, 6E and 7E; and, b) *significant coastal wetlands*.
4.1.5	Development and site alteration shall not be permitted in: a) *significant wetlands* in the Canadian Shield north of Ecoregions 5E, 6E and 7E; b) *significant woodlan*ds in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); c) *significant valleylands* in Ecoregions 6E and 7E (excluding islands in Lake Huron and St. Marys River); 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 4.1.4(b) unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.
4.1.6	*Development* and *site alteration* shall not be permitted in *fish habitat* except in accordance with *provincial and federal requirements*.
4.1.7	*Development and site alteration* shall not be permitted in *habitat of endangered species and threatened species*, except in accordance with *provincial and federal requirements*.
4.1.8	*Development* and *site alteration* shall not be permitted on *adjacent lands* to the *natural heritage features and areas* identified in policies 4.1.4, 4.1.5 and 4.1.6 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*.
(4.2 - Water) 4.2.2	*Development* and *site alteration* shall be restricted in or near *sensitive surface water features* and *sensitive ground water features* such that these features and their related *hydrologic functions* will be protected, improved or restored which may require mitigative measures and/or alternative development approaches.
(5.2 - Natural Hazards) 5.2.1	Development shall generally be directed to areas outside of: a) *hazardous lands* adjacent to the shorelines of the *Great Lakes - St. Lawrence River System* and *large inland lakes* which are impacted by *flooding hazards, erosion hazards* and/or *dynamic beach hazards*; b) *hazardous lands* adjacent to *river, stream* and *small inland lake systems* which are impacted by *flooding hazards* and/or *erosion hazards*; and c) *hazardous sites*.
5.2.4	Planning authorities shall prepare for the impacts of a changing climate that may increase the risk associated with natural hazards.

2.2. Endangered Species Act (2007)

The *Endangered Species Act* (ESA) (2007) protects habitat and individuals of wildlife species designated as Threatened, Endangered, or Extirpated in Ontario. These designations are defined as:

- Threatened: A species shall be classified as a threatened species if it lives in the wild in Ontario, is not endangered, but is likely to become endangered if steps are not taken to address factors threatening to lead to its extinction or extirpation.
- Endangered: A species shall be classified as an endangered species if it lives in the wild in Ontario but is facing imminent extinction or extirpation.
- Extirpated: A species shall be classified as an extirpated species if it lives somewhere in the world, lived at one time in the wild in Ontario, but no longer lives in the wild in Ontario.

The ESA Subsection 9 (1) states that:

"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)."

Clause 10 (1) of the ESA also states that:

"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).

Provincial SAR are identified and assessed by the Committee on the Status of Species at Risk in Ontario (COSSARO). The ESA protects species listed by COSSARO as Endangered, Threatened, or Extirpated in Ontario and their habitats by prohibiting anyone from killing, harming, harassing, or possessing protected species, as well as prohibiting any damage or destruction to the habitat of the listed species. All listed species are provided with general habitat protection under the ESA aimed at protecting areas that species depend on to carry out their life processes, such as reproduction, rearing, hibernation, migration, or feeding. In addition, specific habitat regulations for some species have been developed that specifically define the extent and character of their protected habitat beyond what is stated in the general habitat regulation.

Activities that may impact a protected species or its habitat require the prior issuance of a permit from the Ministry of Environment, Conservation and Parks (MECP) unless the activities are exempted under Ontario Regulation 242/08. Ontario Regulation 242/08 (current as of April 1, 2024) identifies activities which are

exempt from the permitting requirements of the Act, these activities are subject to rigorous controls outside the permit process including registration of the activity and preparation of mitigation plans. Activities that are not exempt require a complete permit application process.

2.3. Oak Ridges Moraine Conservation Plan (2017)

The Oak Ridges Moraine Conservation Plan (2017) provides land use and resource management direction for the 190,000 ha of land and water within the Oak Ridges Moraine, which is one of Ontario's most significant landforms. The Plan is established under the authority of the *Oak Ridges Moraine Conservation Act* (2001). The irregular ridge stretches 160 Km from the Trent River in the east to the Niagara Escarpment in the west, spanning the Town of Aurora. The purpose of the Plan is to provide land use and resource management planning direction on how to protect the ecological and hydrological features and functions of the Moraine.

The Study Area is a designated Settlement Area within the ORMCP Area (Map 2). Urban uses and development, as set out in municipal official plans, are permitted within Settlement Areas. Requirements of the ORMCP are facilitated through regional, municipal, and conservation authority policies and guidelines.

2.4. York Region Official Plan (2022)

The York Region Official Plan (2022) outlines the policies and guidelines regulating development and associated activities within the regional boundary. Regarding natural systems, the objective of the York Region Official Plan (ROP) is to identify, protect, restore and enhance natural systems and their functions across the Regional Greenlands System and water resource system. The primary function of the Regional Greenlands System, as implemented by the policies of the Plan, is the protection of natural heritage features in a system of cores connected by corridors and linkages. Policy 3.2.1 of the ROP defines the Regional Greenlands System as cores, corridors, and linkages including areas identified within the Oak Ridges Moraine Conservation Plan, the Protected Countryside of the Greenbelt Plan, approved local natural heritage systems, and key natural heritage and hydrologic features and functions.

Section 3.4.30 and subsections A to G of the ROP discusses the criteria Woodlands must meet to qualify as Significant Woodlands. The Woodland located on the Subject Property will be assessed to determine if it meets one of the criteria listed in Section 3.4.30. See Section 8 for a detailed discussion on potential significant woodlands located in the Study Area.

Maps 1 and 2 of the Plan show the Regional Greenlands System overlay within the southern portion of the Study Area and Subject Property; aligning with the boundaries of the Woodland that overlaps with the rear of the property. Surrounding land use has been defined as Urban Area as per Map 1, and as a Community Area as per Map 1A. It is also designated a Settlement Area within the Oak Ridges Moraine Conservation Plan boundary and includes Woodlands. Development and/or site alteration applications within 120 m of the Regional Greenlands System trigger the need for an EIS under Policy 3.2.4.

2.5. Town of Aurora Official Plan (2024)

The Town of Aurora Official Plan (2024) establishes the vision, corresponding principles, and supporting policies to guide the development of lands within the Town of Aurora. The Official Plan contains policies related to the Town's Natural Heritage System (NHS) intended to protect it from the encroachment of urban development. The NHS includes an array of significant natural heritage features, parks, and open space

systems which reflect the Regional Greenlands System as well as the Natural Core and Natural Linkage Designations of the Oak Ridges Moraine Conservation Plan.

The following schedules apply to the Study Area:

- Schedule A – Town Structure
- Natural Heritage System within Residential Neighbourhood
- Wellington Street West is a Local Corridor Strategic Growth Area
- Schedule B – Land Use Plan
- Suburban Residential
- Environmental Protection
- Schedule F1 – Environmental Designations on ORM
- Woodlands
- Woodlands – Minimum Vegetation Protection Zone (30 m)

Based on Schedule A (Town Structure) of the Plan, a Natural Heritage System is located within and adjacent to the Subject Property. The Natural Heritage System within the Subject Property includes a portion of Woodlands which are associated with a tributary of Tannery Creek that flows west of the property. The Woodlands have been designated as an Environmental Protection Area as per Schedule B. Table 3.1 notes that within Oak Ridges Moraine Settlement Areas, *"[i]n the Urban Area and Towns and Villages, as designated on April 22, 2002, where secondary plans or zoning by-laws that were approved based on, or Master Environmental Servicing, or Functional Servicing Plans, or environmental studies that have identified minimum vegetation protective zones that are different from those identified in the Oak Ridges Moraine Conservation Plan, then the standards established within those Official plans, Secondary plans and/or by-laws shall prevail.'*

The policies of Section 12.4.1 apply to the Study Area, specifically Subsections 12.4.1 (a) – (c), where any application for development within 120 m of land with the Environmental Protection designation or a KNHF must be accompanied by an EIS. The policies of Section 12.3.3 also apply to the Study Area, particularly Subsection 12.3.3. (f), an EIS is required to evaluate the ecological function of the adjacent lands and demonstrate there will be no negative impacts on the natural features or their ecological functions. Additionally, Subsection 12.4.1 (a) – (c) states that the minimum vegetative protection zones for woodlots shall be established by an EIS and are subject to the approval of Council and any relevant agency.

The Oak Ridges Moraine Plan designates the Study Area as "Settlement Area". Therefore, natural heritage features such as woodlands in this area will be subject to the policies of the Town of Aurora Official Plan and the LSRCA. Furthermore, Subsection (m) states that appropriate minimum vegetation protection zones (VPZ) *"shall be established in accordance with the Table of Minimum Areas of Influence and Minimum Vegetation Protection Zones as set out in the Oak Ridges Moraine Conservation Plan, and the relevant Policies of this Plan"*. The Minimum Vegetation Protection Zone for a Significant Woodland is 30 m from the woodland dripline.

2.6. Lake Simcoe Region Conservation Authority

Under Ontario Regulation 41/24 (Prohibited Activities, Exemptions and Permits, April 2024), prior permission through the issuance of a permit is required from Conservation for any development within a floodplain, valleyland, wetland, or other hazardous lands. A permit is also required for any alteration to a river, creek, stream, or watercourse or any interference with the hydrological function of a wetland.

As per the LSRCA Regulation Map Viewer, an LSRCA-regulated watercourse is located approximately 80m west of the Subject Property. The regulated area limit extending from this watercourse does not extend onto the Subject Property (Map 2).

3. Methodology

The following provides the methodologies followed to complete the background studies and execute the field program designed to characterize the natural heritage features and their functions within the Study Area.

3.1. Background Studies

Literature and data pertaining to the Subject Property were reviewed and evaluated to obtain natural heritage and background planning policy information. A list of documents and information sources consulted to support this study are provided below:

- 2022 York Region Official Plan (June 2024)
- Town of Aurora Official Plan (January 2024)
- Oak Ridges Moraine Conservation Plan (May 2017)
- Lake Simcoe Region Conservation Authority Implementation Guidelines (June 2024)
- Lake Simcoe Region Open Data and East Holland River Subwatershed Plan (2010)
- *Endangered Species Act (2007)* and Species at Risk in Ontario List (Ontario Regulation 230/08)
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- *Conservation Authorities Act* (June 2024) and Ontario Regulation 41/24: Prohibited Activities, Exemptions and Permits (April 2024)
- Natural Heritage Information Centre (NHIC) database information, 1 km x 1 km square 17PJ2173, 17PJ2074, 17PJ2174
- Ontario Breeding Bird Atlas (OBBA) and eBird
- Ontario Reptile and Amphibian Atlas
- Ontario Butterfly and Moth Atlases
- iNaturalist- NHIC Rare Species of Ontario
- Fisheries and Oceans Canada (DFO) Aquatic Species at Risk Map

3.2. Field Work

GeoProcess conducted field studies to characterize and inventory the natural heritage features and wildlife activity of the Subject Property and surrounding landscape.

3.2.1. Breeding Bird Surveys

To characterize the wildlife community and identify potential breeding activity within the project area, breeding bird surveys were undertaken on two separate dates by a breeding bird expert under appropriate weather conditions. The area was surveyed using a travelling count approach to search for birds within the feature recording presence, abundance and level of breeding evidence using the Ontario Breeding Bird Atlas (OBBA) protocols. Travelling counts are one of the survey methods that are listed under the OBBA and are

implemented when the surveyor is travelling more than 50 m. Using the travelling count method, bird surveys were conducted on an 'area search' basis. This method involves the surveyor restricting their species list to a particular area such as a woodlot, wetland or field. This approach is also included as an observation type within the OBBA.

3.2.2. Floristic Studies

An Ecological Land Classification (ELC) with a single-season botanical inventory of all floristic species was completed in the summer of 2025. Species nomenclature and ranking was determined provincially by the Ministry of Natural Resources Natural Heritage Information Database (S Ranks). Vegetation communities are mapped and described according to the Ecological Land Classification system for Southern Ontario (Lee et al., 2008). Vegetation community boundaries have been determined using desktop analysis and further refined using field observations.

3.2.3. Snag Survey

GeoProcess staff conducted a snag survey on April 11, 2025, to assess the presence or absence of potential bat maternity roosting habitat. This involved assessing all living and dead trees with a Diameter at Breast Height (DBH) >10 cm for cavities, cracks, loose bark, etc. that have the potential to be bat habitat. Surveys are conducted during the leaf-off period so that the view of tree cavities, cracks, and loose bark is not obscured by foliage. The results of the survey are shown in Section 5.2.

3.2.1. Incidental Wildlife Surveys

Formal surveys for mammals, reptiles, and insects were not completed, but incidental observations were documented while completing site visits. The results are presented in Section 5.

3.2.2. Species at Risk Screening and Assessment

An assessment and screening of potential Species at Risk was conducted for the Study Area based on Federal and Provincial status. Following the Ministry of Environment, Conservation and Parks (MECP) Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the NHIC, regional species list, atlases (i.e. OBBA, butterfly, moth, and reptile and amphibian), citizen science databases (i.e. iNaturalist, eBird), and any additional provided lists. Data sources utilized for screening are described in Appendix A. The SAR assessment results are further discussed in Section 6.

3.2.3. Significant Wildlife Habitat Screening and Assessment

A screening for Significant Wildlife Habitat (SWH) following the Ministry of Natural Resources and Forestry (MNRF) Significant Wildlife Habitat Technical Guide (2000) and Significant Wildlife Habitat Criteria Schedule for Ecoregion 6E (2015) was conducted for the Subject Property based on the results of the wildlife and vegetation surveys. The results of the SWH evaluation are presented in Section 7.

4. Existing Conditions

4.1. General Landscape Position

The Study Area is generally situated within the Holland River East branch Watershed, and the Tannery Creek Subwatershed, approximately 7.5 km east of Highway 400, on the west side of the Town of Aurora. Located about 480 m east of Bathurst Street, the Subject Property is bound by the suburban streets of Heathwood Heights Drive in the north, and Tilston Grove in the West. The Regional Greenlands System and local Natural Heritage System border the property to the south and east, which is where the potential woodlands exist. Surrounding land use is largely residential for approximately 500 m in all directions, with the Town of Aurora Official Plan designating the Heathwood Heights community area as *suburban*. West of Bathurst Street and east of Highway 400 the surrounding land use transitions to predominantly agricultural.

The Study Area includes portions of the local Natural Heritage System and Regional Greenlands System that are associated with an unnamed tributary within the Tannery Creek Watershed (herein referred to as the Tannery Creek tributary). The Subject Property is located approximately 125 m east of the Tannery Creek tributary. The Tannery Creek tributary and associated natural heritage features appear to form a linkage between the Snowball Wetland Complex to the southwest and Tannery Creek to the northeast. Tannery Creek eventually connects to the Holland River East Branch and Lake Simcoe. The potential woodland within the Study Area surrounds the suburban homes from Aurora Heights Drive to St. John's Sideroad, following the Tannery Creek tributary. Tannery Creek, downstream of the Study Area, is similarly contained by urban development to its confluence with the Holland River East branch. The upstream portions of the watercourse to the west of the Study Area, across Bathurst Street, are connected to wetland areas surrounded by agricultural and recreational uses.

4.2. Physiography and Geology

The Study Area is located at the border of two physiographic regions of Southern Ontario, the Oak Ridges Moraine and Schomberg Clay Plain (Chapman and Putman, 1984). The ORM is approximately 160 Km in length, extending between the Trent River and the Niagara Escarpment, generally making up the topographic highs within the landscape, while the Schomberg Clay Plain comprises low-lying regions extending from Holland Landing to Aurora (LSRCA, 2010). The surficial geology is comprised of fine textured glaciolacustrine deposits that are massive to well-laminated through much of the Study Area and modern alluvial deposits among the adjacent Natural Heritage System. Bedrock geology within the Study Area is characterized as being from the Paleozoic Era, consisting of Blue Mountain Formation shale that is Upper Ordovician in age (LSRCA, 2010).

4.3. Natural Heritage Systems

The natural heritage system for the Study Area is comprised of natural heritage features that are classified under various policies including the York Region Official Plan, the Town of Aurora Official Plan, and the ORMCP. For the Study Area, the natural heritage system is comprised of a wooded area.

The wooded feature in the Study Area is encompassed within the Town of Aurora's Natural Heritage System as per Schedule F1, which reflects both York Region's Regional Greenlands System as well as the designations

of the ORMCP. The wooded feature that comprises the natural heritage system in the Study Area is the primary focus of this EIS. This feature is disconnected from the larger woodland to the south and west by the canopy clearing located by the water tower located approximately 150 south of the proposed development. The larger woodland includes the Tannery Creek tributary that conveys flows in a north to south direction. The tributary is located approximately 80m west of the Subject Property.

5. Fieldwork

Field work completed to date has been outlined below.

5.1. Ecological Land Classification

The results of the ELC are presented below in *Table 2* and shown on Map 3. A full botanical inventory can be found in Appendix B. Three vegetation communities were identified within the Study Area.

Table 2. Ecological land classification communities

ELC Code and Classification		Vegetation	Comments
CVR: Cultural-Residential	Canopy	Pyramid Cedar *(Thuja occidentalis 'Fastigiata');* Blue Spruce *(Picea pungens*), Littleleaf Linden *(Tilia cordata)*	Plant community mainly horticultural and naturalized plant species. Effective soil texture was silty loam.
	Sub-canopy	Callery Pear (*Pyrus calleryana*), Dwarf Alberta Spruce (*Picea glauca 'Conica'),* Japanese Yew *(Taxus cuspidata*)	
	Ground	Kentucky Bluegrass (*Poa pratensis*), Common Dandelion (*Taraxacum officinale*), White Clover (*Trifolium repens*)	
CUW: Cultural Woodland	Canopy	White Spruce (*Picea glauca*), Norway Spruce (*Picea abies*), American Elm (*Ulmus americana*)	Effective soil texture was clay, and the moisture regime was very fresh. American Elm rare in canopy.
	Sub-canopy	White Cedar (*Thuja occidentalis*), Common Lilac (*Syringa vulgaris*)	
	Ground	Kentucky Bluegrass (*Poa pratensis*), Common Dandelion (*Taraxacum officinale*), Wood Forget-me-not (*Myosotis sylvatica*)	

FOD5: Dry-Fresh Sugar Maple Deciduous Forest Ecosite	Canopy	Sugar Maple (*Acer saccharum*), Bitternut Hickory (*Carya cordiformis*), Basswood (*Tilia americana*)	Plant community consisting of many native woodland plant species. The effective soil texture was loam.
	Sub-canopy	Sugar Maple (*Acer saccharum*), Norway Maple (*Acer platanoides*), American Elm (*Ulmus americana*)	
	Ground	Yellow Trout Lily (*Erythronium americanum),* Virginia Waterleaf (*Hydrophyllum virginianum*), Lesser Periwinkle (*Vinca minor*)	

5.2. Snag Survey

A snag survey was completed for the Subject Property during the leaf-off period to assess for potential bat habitat. The survey included an assessment of dead standing trees (snags) or live trees with a DBH of 10 cm or greater with loose or exfoliating bark, cavities, hollows, or cracks that provide suitable bat maternity roosting habitat. The survey was completed on April 15, 2025.

One snag was identified as suitable bat roosting habitat (Table 3). The tree appeared to be dead or nearly dead, situated on its own. Upon the assessment of condition on June 12, 2025, the tree is confirmed to have no new growth in canopy.

Table 3. Snag Survey Result

Snag #	Species Common Name	DBH (cm)	Height Class	Notes
1	Butternut	25.5	Co-dominant (canopy height)	Butternut cankers visible. Cavities, loose bark, cracks present.

A butternut health assessment will be conducted to determine the condition of the butternut tree when vegetation surveys are completed during leaf-on surveys in early summer 2025.

5.3. Breeding Bird Surveys

Breeding bird surveys were conducted on two separate dates within the Study Area under suitable conditions between 5 am and 10 am as per OBBA protocols (Table 4). Three breeding bird transects were established in the Study Area, one for each habitat present, refer to Map 3 for their locations. One species at risk was found within the Study Area.

Table 4. BBS Survey Conditions

Visit Date	Visit Time	Wind Speed [Beaufort scale]	Rain	Noise Code (1-5)
June 12, 2025	06:26-07:15	0-1	0	2-3
June 27, 2025	08:38-09:14	2-3	0	2-3

Species heard and or observed within the search area were recorded and the highest level of breeding evidence (using Ontario Breeding Bird Atlas [OBBA] protocols) was determined after completion of both surveys (Table 5). Species at Risk in Ontario (SARO) and Committee on the Status of Endangered Wildlife in Canada (COSEWIC) rankings were attributed to each species.

Table 5. Breeding Bird Survey Results

Common Name	*Scientific Name*	T1		T2		T3		SRank*	SARO	COSEWIC
		Q	BE	Q	BE	Q	BE			
American Crow	*Corvus brachyrhynchos*	6	P	1	S			S5		
American Goldfinch	*Spinus tristis*	6	A	6	S	2	A	S5		
American Robin	*Turdus migratorius*	4	CF	7	NU	6	NU	S5		
Belted Kingfisher	*Megaceryle alcyon*	1	S					S5B, S4N		
Black-capped Chickadee	*Poecile atricapillus*	2	S			1	S	S5		
Blue Jay	*Cyanocitta cristata*	1	H	2	S			S5		
Broad-winged Hawk	*Buteo platypterus*	1	S					S5B		
Cedar Waxwing	*Bombycilla cedrorum*			2	P	2	P	S5		
Chipping Sparrow	*Spizella passerina*	14	NY	8	A	3	CF	S5B, S3N		
Common Grackle	*Quiscalus quiscula*	3	S			2	S	S5		
Eastern Phoebe	*Sayornis phoebe*					1	S	S5B		

Common Name	*Scientific Name*	T1		T2		T3		SRank*	SARO	COSEWIC
		Q	BE	Q	BE	Q	BE			
Eastern Wood-pewee	*Contopus virens*	2	S					S4B	SC	SC
European Starling	*Sturnus vulgaris*	1	S			1	S	SNA		
Great Crested Flycatcher	*Myiarchus crinitus*			1	S			S5B		
Green Heron	*Butorides virescens*	1	S					S4B		
Hairy Woodpecker	*Dryobates villosus*			1	S			S5		
House Finch	*Haemorhous mexicanus*	3	S					SNA		
House Sparrow	*Passer domesticus*					1	S	SNA		
House Wren	*Troglodytes aedon*	1	S					S5B		
Mourning Dove	*Zenaida macroura*	4	S	1	H			S5		
Northern Cardinal	*Cardinalis cardinalis*	8	A	5	S			S5		
Red-breasted Nuthatch	*Sitta canadensis*	1	A	2	A	4	A	S5		
Red-eyed Vireo	*Vireo olivaceus*	1	S			3	S	S5B		
Red-tailed Hawk	*Buteo jamaicensis*	1	S					S5		
Red-winged Blackbird	*Agelaius phoeniceus*	2	A	1	S			S5		
Song Sparrow	*Melospiza melodia*			1	S			S5		
Wood Thrush	*Hylocichla mustelina*					1	S	S4B	SC	SC

**In the species rows, each species is assigned a breeding level, based on the highest level of breeding evidence observed within the regenerating area. The number recorded represents the highest one-day total for that species with the associated breeding code.*

Species status was evaluated using the following sources:

- The COSEWIC list for national status designations (current list at the time of report preparation)
- The *Species At Risk Act* (SARA) for federally listed species (current at the time of report preparation)
- The COSSARO list for provincial status designations (current list at the time of report preparation)
- The NHIC/Biodiversity Explorer website for provincial rarity ranks (e.g. S-Ranks)

Descriptions of OBBA breeding evidence codes, NHIC S-Ranks, COSEWIC, and COSSARO rankings can be found in Appendix C.

During the field surveys, 27 summer resident bird species were observed, all with some breeding evidence. Two of the observed species were those of conservation concern, including the Eastern Wood-pewee, and Wood Thrush. Species of conservation concern include those that are designated by COSEWIC and/or listed under SARA, species designated by COSSARO, including Endangered, Threatened, and Special Concern species listed and regulated under Ontario's ESA, and provincially rare species (NHIC S-Rank of S1 to S3). Two non-native species, the European Starling and the House Sparrow were detected, and a Green Heron, Broad-winged Hawk, and Red-tailed Hawk were observed calling while flying over the study site.

The highest level of breeding evidence observed during surveys was the "confirmed" breeding of two species including Chipping Sparrow and American Robin. These were based on the observations of adults carrying food for young (CF), used nests found that were occupied during the atlas period (NU), and nests with young seen or heard (NY). Six species were observed exhibiting "probable" breeding behaviour as pairs observed in their breeding season in suitable habitat (P) and exhibiting agitated behaviour or anxiety calls (A) including Red-breasted nuthatch, Red-winged Blackbird, Northern Cardinal, Chipping Sparrow, American Goldfinch, and American Crow. Seventeen residents were observed in suitable habitat (H) during the breeding season, or a singing male was present in the breeding season in suitable habitat (S), indicating "possible" breeding evidence (OBBA, 2001).

Based on the breeding bird surveys, habitat is present in the Study Area for the observed SAR (Eastern Wood-pewee and Wood Thrush). Both species prefer to nest in mature deciduous, or mixed forests with a well-developed understory, with the eastern Wood-pewee preferring open canopy and forest edges and the Wood Thrush preferring areas with moist soil, leaf litter and tall trees for singing perches. Although suitable nesting habitat is present within the Study Area, no suitable nesting habitat is present on the Subject Property since the treed areas therein are primarily coniferous and regularly disturbed by the nearby residential uses. Suitable habitat appears to be concentrated in the woodland 50m west of the Subject Property along the Tannery Creek Tributary. Additionally, no nests were found for either SAR. Otherwise, the Study Area provides habitat for species that are generally considered "apparently secure" (S4) and "secure" (S5). Rankings are provided by the Natural Heritage Information Centre (NHIC, 2019).

6. Species at Risk Screening

The *Endangered Species Act, 2007*, S.O. 2007 was passed to protect the biodiversity of Ontario by using the best available scientific, community, and indigenous traditional knowledge and the precautionary principle as its doctrine. The purpose of the Act is to identify species at risk, protect species at risk and their habitats, and promote the recovery of species at risk and stewardship activities that assist in these goals. The Committee on the Status of Species at Risk in Ontario (COSSARO) functions to maintain an up-to-date

database of information pertaining to species in Ontario and their classification. COSSARO advises the Minister of the Environment, Conservation and Parks, who makes and files a regulation that lists all plant and animal species classified by COSSARO as extirpated, endangered, threatened, or of special concern. This regulation is the Species at Risk in Ontario List (Ontario Regulation 230/08). Ontario Regulation 242/08 provides general policies concerning exemptions and habitat specifications for those listed SAR species.

6.1. SAR Long List

A Long List of potential SAR was developed for the Study Area based on Provincial and Federal status. Following the MECP Client's Guide to Preliminary SAR Screening (2019), this screening was based on a review of the Natural Heritage Information Centre (NHIC) database (Atlas ID: 17PJ2173, 17PJ2074, 17PJ2174), the regional species list, atlases (Ontario Breeding Bird, Butterfly, Moth, Reptile and Amphibian; Atlas Square: 17TPJ27), citizen science databases (i.e. iNaturalist and eBird), and any additional sources provided by the MECP. Observations of SAR within these squares do not necessarily represent observations within the boundaries of the Study Area. The SAR Long List is provided in Table 6 below for data sources acquired on March 20, 2025.

Table 6. Screening Results

Species		Status		
Common Name	**Scientific Name**	**S_Rank**	**SARO**	**SARA**
		Birds		
American White Pelican	*Pelecanus erythrorhynchos*	S3B,S4M	THR	NAR
Bank Swallow	*Riparia riparia*	S4B	THR	THR
Barn Swallow	*Hirundo rustica*	S4B	SC	SC
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	SC
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC
Eastern Meadowlark	*Sturnella magna*	S4B,S3N	THR	THR
Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC
Horned Grebe	*Podiceps auritus*	S1B,S3N,S4M	SC	SC
Least Bittern	*Botaurus exilis*	S4B	THR	THR
Lesser Yellowlegs	*Tringa flavipes*	S3S4B,S5M	THR	THR
Peregrine Falcon	*Falco peregrinus*	S4	SC	NAR
Red-headed Woodpecker	*Melanerpes erythrocephalus*	S3	END	END

Species		Status		
Common Name	Scientific Name	S_Rank	SARO	SARA
Rusty Blackbird	*Euphagus carolinus*	S4B,S3N	SC	SC
Wood Thrush	*Hylocichla mustelina*	S4B	SC	THR
Amphibians and Reptiles				
Blanding's Turtle	*Emydoidea blandingii*	S3	THR	END
Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC
Northern Map Turtle	*Graptemys geographica*	S3	SC	SC
Snapping Turtle	*Chelydra serpentina*	S4	SC	SC
Insects				
Monarch	*Danaus plexippus*	S4B,S2N	SC	END
Plants				
Black Ash	*Fraxinus nigra*	S4	END	THR

Sources: [1] NHIC Database, [2] OBBA, [3] Ontario Reptile and Amphibian Atlas, [4] eBird Database, [5] Ontario Butterfly Atlas, [6] DFO Aquatic SAR Map, [7] iNaturalist

6.2. Preliminary SAR Assessment

Based on the screening and in-field surveys of the Study Area conditions, the following species were identified for further assessment:

Eastern Wood-pewee

The eastern wood-pewee was designated as Special Concern on the Species at Risk in Ontario List on June 27, 2014. An aerial insectivore forest bird, it is identified by its distinct "pee-ah-wee" song and is difficult to distinguish from related species by morphology. Individuals reach only 15 cm in length and colouring is adapted to provide camouflage within the forest setting. It is one of many forest flycatchers which partition the forest canopy into different niches of foraging habitat. The most common habitat is intermediate age to mature forest with limited understory vegetation, though it is also found along forest edges and within clearings of forests. The species is found throughout the eastern half of the continent with its northern limit located north of the Great Lakes system. Threats to the species survival are relatively unclear but may include overall land use conversion and loss of forest, a decrease in available prey, an increase in predators (urbanized squirrels and jays), and impacts related to the over-browsing of forests by white-tailed deer. Threats specific to migration and overwinter habitat in the south must also be considered.

Eastern Wood-pewee may make use of the wooded area within the Study Area due its close connection to larger woodlands in the vicinity. Eastern Wood-pewee were observed during breeding bird surveys. Suitable deciduous and mixed forest habitat appears to be present west of the Subject Property in the woodlands associated with the Tannery Creek Tributary.

Red-headed Woodpecker

The red-headed woodpecker was already assessed as a species of Special Concern when the *Endangered Species Act* took effect in 2008. Red-headed woodpecker populations have declined by more than 60 percent in Ontario in the last 20 years due to habitat loss caused by forestry, agricultural uses, and the removal of dead trees. This species typically occurs in open woodland and woodland edge habitats and typically perch, forage, and nest in areas with many snag trees. The species has an insect diet in the summer and feeds on acorns and beechnuts in the winter months. The red-headed woodpecker is a medium-sized bird and is easily distinguishable for its vivid red head and neck. The bird's wings are black and white, and the body is a uniform white colour. This species typically returns to the same nesting sites every year and both parents take care of the young.

Suitable deciduous and mixed forest habitat appears to be present west of the Subject Property in the woodlands associated with the Tannery Creek Tributary. No Red-headed woodpecker were observed during the bird surveys.

Wood Thrush

The Wood thrush was added to the SARO list on June 27, 2014 as a species of Special Concern. It is a medium-sized songbird, about 20 cm long – slightly smaller than the American robin and similar in shape. These birds are rusty brown on the upper parts, have white under parts and large blackish spots on the breast and sides. The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These migrants fly south to Mexico and Central America for the winter. Major threats include the loss and fragmentation of forest habitat from urban, suburban and cottage development, over-browsing by white-tailed deer which decreases the number and type of plants and trees in the forest where the Wood Thrush nests, and parasitic behaviour from brown-headed cowbirds, which lay their eggs in the nests of the Wood Thrush (and other birds).

Wood thrush may make use of the wooded area within the Study Area due its close connection to larger woodlands in the vicinity. Wood thrush were observed during breeding bird surveys. Suitable deciduous and mixed forest habitat appears to be present west of the Subject Property in the woodlands associated with the Tannery Creek Tributary.

7. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is considered natural heritage and is protected as per Section 4.1 of the Provincial Planning Statement, 2024. The Significant Wildlife Habitat Technical Guide (OMNRF, 2000) aids in land use planning by providing the identification, description, and prioritisation of SWH in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario. This section provides a screening in the form of a summary table followed by an assessment of the potentially or confirmed occurring SWH.

Significant (and/or sensitive) Wildlife Habitat features and functions as described within the OMNRF Significant Wildlife Habitat Ecoregion Criteria Schedule for Region 6E (OMNRF, 2015) were reviewed and evaluated for the Study Area. The documented groups wildlife habitat into five main categories:

- Seasonal concentration areas of animals
- Rare vegetation communities or specialized habitats for wildlife
- Specialized Habitat for Wildlife
- Habitat for species of conservation concern
- Animal movement corridors

A full screening was conducted following the completion of vegetation and wildlife surveys in early summer 2025. A review of the ELC codes and habitat criteria for candidate SWH was conducted and no confirmed or candidate SWH was identified for the Study Area. See Appendix C for the full list of SWH criteria that were evaluated for the Study Area.

8. Proposed Development

The proposed site plan will occupy an approximate area of 0.25 ha to accommodate the construction of multiple single-family residences. This will include a subdivision of the existing single-family parcel (Map 4). The concept plan proposes the removal of multiple coniferous trees adjacent to the existing residence and the establishment of a development limit along the dripline of the treed area located along the southern boundary of the Subject Property.

8.1. Natural Heritage System Buffers

The Town of Aurora Official Plan identifies the Environmental Protection Areas within the Town and these areas include:

- ANSI's;
- Evaluated Wetlands;
- Areas supporting regionally, Provincially or nationally significant plant and animal species in York Region as designated by the OMNR;
- Woodlands greater than 4 hectares (10 acres) in size;
- Significant vegetation communities including mature forests (greater than 100 years of age);
- Significant wildlife habitat including known deer wintering areas, fisheries habitat and waterfowl staging areas;
- Natural features that are part of the headwaters of the Holland River;
- Habitat of endangered and threatened species;
- Fish habitat;
- Significant valleylands; Lakes and their littoral zones;
- Permanent and intermittent streams;
- Kettle lakes Seepage areas and springs;
- and, Landforms that are especially representative of the Oak Ridges Moraine or Schomberg Ponding in their form and/or composition (e.g., kettle depressions).

Schedule A of the Official Plan identifies the Natural Heritage System adjacent to the site in the area of the deciduous woodland south of the property. The limits of this woodland were established through a site walk with representatives of the Town of Aurora on February 27, 2025. During this site walk, the remnant coniferous plantation was examined and determined to be part of the residential lot and not part of the woodland. South of the woodland, remnant coniferous plantation which forms parts of residential lots continue. These areas are not included on Schedule A as Natural Heritage or Schedule B as Environmental Protection. These areas were reviewed based on the Oak Ridges Moraine Technical Paper 7 and based on their average width being less than 40 m, these areas area excluded from the Significant Woodland designation. Figure 6 shows the overlay of the Environmental Protection designation and Figure 5 shows the average width of the remnant plantation as it extends to the south.

The average width of the remnant plantation is 37 m, less than the minimum 40 m width required for a woodland. The limits were delineated from the water tower where the woodland is effectively cut off.

The environmental protection area identified in the Official Plan contains a walking trail and sits between low density residential uses across its length. The conversion of a single family residential lot to five lots at a density consistent with the community will not result in impacts that require significant buffering. In order to protect the feature, it is recommended that grading avoid the tree protection zones and that an edge management plan be implemented to bolster the edge. This edge management plan should include monitoring of grading and planting of native shrubs and pioneer tree species to maintain the barrier between the new lots rear yards and the Based on the reduced quality of the wooded feature, including its anthropogenic origins and continued disturbance, it is unlikely that a buffer setback from the treed area is necessary to maintain the ecological integrity of the woodland feature that extends to the south and west of the Subject Property.

9. Preliminary Environmental Impact Assessment

Impacts on the various natural heritage features associated within and adjacent to the Subject Property were considered in the impact analysis. Table 7 presents the natural heritage components considered in this assessment, the proposed activity associated with that component, potential short-term and long-term impacts, recommended mitigation measures, and if any residual effects are anticipated. Potential impacts were assessed using secondary source information, including an overlay of the proposed site plan.

9.1. Impact Summary Table

Table 7. Impact Summary Table

Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
Short-Term Impacts				
Natural Heritage System (NHS)	Grading, Servicing & Development	Release of dust as a result of construction activities	Implement dust suppression measures during site grading when conditions are dry or strong winds are anticipated.	Impacts from dust to the surrounding landscape should be minimal through the implementation of dust suppression. No residual effects expected.
Breeding Birds	Site Clearing/Tree Removal	Impacts to nests and nesting birds	Vegetation and tree clearing should not occur between April 1-August 31 as per the *Migratory Birds Convention Act* (1994). If clearing is to occur during the nesting season, a nest survey should be completed by a qualified bird biologist 48 hours prior to the proposed works to identify any nest which is not to be disturbed until the young have fledged. Nests are not to be disturbed until the young have fledged or until the nest is deemed inactive. Education of contractors on wildlife encounters.	Implementation of applicable mitigation measures is expected to eliminate impacts to migratory and breeding birds during the construction period.
Surrounding Habitat	Grading, Servicing & Development	Release of petroleum products or other contaminants into surrounding habitats.	To prevent contaminant runoff into the nearby natural heritage features, equipment maintenance and refuelling need to be controlled to prevent any discharge of	No residual effects expected if mitigation measures are followed.

Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
			petroleum products. Vehicular maintenance and refuelling should be conducted at least 30m from the wooded area. Construction material, excess material, construction debris, and empty containers should be stored in one location with proper containment and spill control measures in place.	
Surrounding Habitat	Grading, Servicing & Development	Soil compaction and rutting outside of the construction zone	Implement a construction restoration plan to detail how the site will be remediated once construction is complete. Install fencing to delineate where the extent of the development footprint is limited. Clearly delineate the work area with ESC fencing and do not allow vehicles to encroach on the wooded feature.	No residual effects anticipated if mitigation measures are followed.
Adjacent Woodland	Grading, Servicing & Development	Damage to wooded area. Erosion and sedimentation release.	Implement silt fencing along the development limit to ensure construction activities and sediment do not migrate to the adjacent NHS. Avoid construction during high-volume rain events or significant snow melts/thaws. Construction should resume once soils have stabilized to avoid the risk of erosion, soil compaction, or the potential for sediment release into	Inspection of the erosion and sediment controls (e.g. silt fences, sediment traps, outlets, vegetation, etc.) by a qualified environmental professional (i.e. CAN-CISEC designation or approved equivalent) with follow-up reports to the governing municipality should ensure proper implementation throughout the development. Fencing should be left in place until after construction works are

Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
			nearby natural features/watercourses.	complete and the site has sufficiently stabilized/re-vegetated. No residual effects are expected.
Local and Migrating Wildlife	Grading, Servicing & Development	Noise from construction works on local and migrating wildlife.	Limit construction activities at sunrise and sunset during the active spring breeding bird season.	The wildlife expected found within the local area are tolerant of disturbances and suburban land uses..
Long-term Impacts				
Local and Migrating Wildlife	Development	Light pollution resulting in changes to animal behaviour.	Lights directed downward will reduce the amount of ambient light issuing from the Subject Property. It is recommended that downward-casting lighting is used across the site and lights are not directed towards the NHS.	Due to the location within an existing subdivision the overall impact of light pollution is not expected based on the proposed development. Shielding and downward casting lights and closing window coverings at night are good steps to reducing impacts in general and an educational component should be included with new home purchasers information.
Breeding Birds	Development	Bird Strikes/Deaths	There are several options to reduce bird strikes depending on whether the treatments are before or after the glass has been installed. 1) Pre-installation measures include: Frit and etched patterns; opaque materials and frosted glass;	Bird-friendly measures are recommended to be considered when designing the residential area. There is the potential for residual negative impact on the local and migrating avian population from bird strikes. For more information

Feature and Function	Proposed Activity	Potential Impacts	Recommended Mitigation	Residual Effects
			reducing features that create 'fly-through' conditions like glass corners; window muntins; exterior shutters; UV-treated glass. 2).	on bird strikes and bird-friendly building design, visit Flap Canada's website.
Surrounding Habitat	During Construction	Movement of invasive species to and from the site	Machinery is a major vector for spreading terrestrial invasive species into new areas as they may spread seeds or plant parts to other properties. Contractors are to follow the Clean Equipment Protocol for Industry (2013) as laid out by the Ontario Invasive Plants Council.	Some invasive species were found on site during floristic surveys. Minimal residual effects are expected while adhering to the recommended mitigation measures.

9.2. Direct Impact Assessment

Direct impacts are directly attributed to the proposed development activities, often occurring during the construction phase or associated with physically altering the landscape or removing vegetation communities. Construction activities including grading, servicing, and site development can cause direct impacts on the surrounding habitats and potential local and migrating wildlife.

Considering the context provided in Section 8, the proposal to replace the existing single-family residence with multiple homes as part of an infill project is not expected to result in negative impacts on the overall natural heritage system, including the wooded features south of the Subject Property, provided that appropriate mitigation measures are implemented. These measures should focus on minimizing further disturbance to the remaining wooded features, enhancing the quality of the connecting corridors where possible, and minimizing impacts to remaining trees to protect the ecological integrity of the adjacent wooded features.

9.3. Indirect Impact Assessment

Indirect impacts are those which occur as a secondary result of the proposed activity, and not necessarily as a direct result of the activity. These are usually associated with effects such as population growth, density changes, or alterations/additions to road networks. Indirect impacts can include light pollution, which can cause confusion in migrating birds at night, potentially resulting in window strikes. Mitigation recommendations are provided where possible.

The Subject Property is located in an area that is already urbanized as part of a suburban community. The proposed development will slightly increase the population in the local area, and it is expected that the subdivision of the property into multiple residences will have minimal cumulative impacts. Intensified light pollution could be an issue with the increase in nighttime lighting. It is recommended that outdoor lighting is kept to a minimum, is downcast, and covered on its sides to reduce horizontal projection and window coverings are used to reduce its effects when lights are kept on for extended periods at night.

As the property currently only supports wildlife habitat for those species most tolerant of an urban setting, it is unlikely that future wildlife utilizing the property will be impacted by the proposed development. Species utilizing the site will be accustomed to urbanization and may include animals such as grey squirrel, raccoon, mice, fox, and common backyard bird feeder birds. Residents planting pollinator gardens can have a positive influence on many insects including bees and butterflies.

10. Mitigation Measures and Recommendations

The following mitigation measures are recommended to avoid and minimize impacts. The measures have two distinct intended outcomes: mitigation to reduce the impact on the natural heritage system and mitigation to reduce the impact of active construction.

10.1. Natural Heritage System Measures

Before machinery is active on site, a visual search of the work area should be conducted before work commences each day, particularly for the period when most wildlife is active (generally April 1st to October 31st). Visual inspections will aim to locate snakes, turtles, and other ground-dwelling wildlife such as small mammals. Visual searches should also include inspection of machinery and equipment left in the work area overnight before starting equipment to ensure that wildlife is safely out of the work area.

Other natural heritage system measures include:

- Inspection by a qualified person(s) to conduct regular monitoring of all sediment erosion measures implemented to ensure they are in working order. Any deficiencies observed are to be recorded and immediately reported to the site contractor.
- Minimize outdoor lighting and direct it down and away from natural areas.
- Architectural considerations to minimize bird strikes, which could include window glazing, frosting or etching, UV-treated glass, or exterior window coverings (i.e. shutters or muntins), awnings or canopies over entryways.
- Provide native plantings reflective of the local area.

10.1.1. Tree Preservation Measures

Due to the proximity of the proposed development to the dripline of the wooded area on the Subject Property, care should be taken to ensure that construction works do not negatively affect the health of the remaining trees. A tree protection plan that satisfies the requirements of the Town of Aurora should be completed by a certified arborist prior to the start of work that details specific tree protection measures.

10.2. Construction Measures

General construction-related mitigation measures include the following:

- Clearing of vegetation within the Subject Property as part of site preparation should be conducted in late summer or winter months (September to March) so as not to coincide with breeding bird season. If clearing is to proceed within the breeding bird window, the Subject Property should be screened by a qualified bird biologist to determine if any migratory songbirds are nesting within the work zone. Any identified nests are to be protected until it is confirmed that the young have fledged from the nest.
- Construction activities should be limited at sunrise and sunset when birds are most active during the breeding bird season to reduce construction noise impacts.
- Implementation of the erosion and sediment control (ESC) plan is recommended to prevent releases of sediment into the adjacent natural areas. The ESC plan and monitoring should be reviewed and carried out by a qualified professional (i.e. CAN-CISEC certification). Any deficiencies observed are to be recorded and immediately reported to the site contractor. Gaps in fencing should be repaired immediately. ESC measures should not be removed until the site is deemed sufficiently stabilized by a qualified environmental professional.
- Heavy machinery should be washed prior to entering the Subject Property to prevent the spread of invasive species.

- Topsoil removed during stripping is recommended to be stockpiled for reapplication post-construction.
- A construction work plan should designate specific locations for stockpiling soils and other materials or outline the location of materials trucked offsite.
- Implementation of dust control measures is recommended to reduce dust impacts on the adjacent lands.
- Tree root zones should be marked and heavy machinery should be restricted from entering tree root zone areas to minimize compaction of soils and prevent decline of nearby trees.

11. Policy Conformity

The proposed development is expected to conform with the policies of the Town of Aurora Official Plan and the Oak Ridges Moraine Conservation Plan as it relates to Natural Heritage. Specifically, it identifies the limits of Key Natural Heritage Features in the Study Area and recommends a suitable setback from the wooded features in the Study Area. At the time of writing this report, no negative impacts to the natural heritage system are anticipated to result from the proposed development. Planning, design, and construction measures identified for the Study Area will promote the protection of natural features outlined in this EIS.

12. Closing

This EIS included a policy review, conducted partial biophysical surveys to document the existing ecological conditions and reviewed the proposed site plan. Classification of potential KNHFs was conducted with particular focus on potential woodlands. From a natural heritage perspective, the proposed plan meets the requirements of the Town of Aurora Official Plan and the ORMCP and with the implementation of the standard mitigation measures described can proceed without negative impacts to the natural environment.

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161 Heathwood Heights
Environmental Impact Statement

Prepared for 1000679027 Ontario Inc.

September 24, 2025

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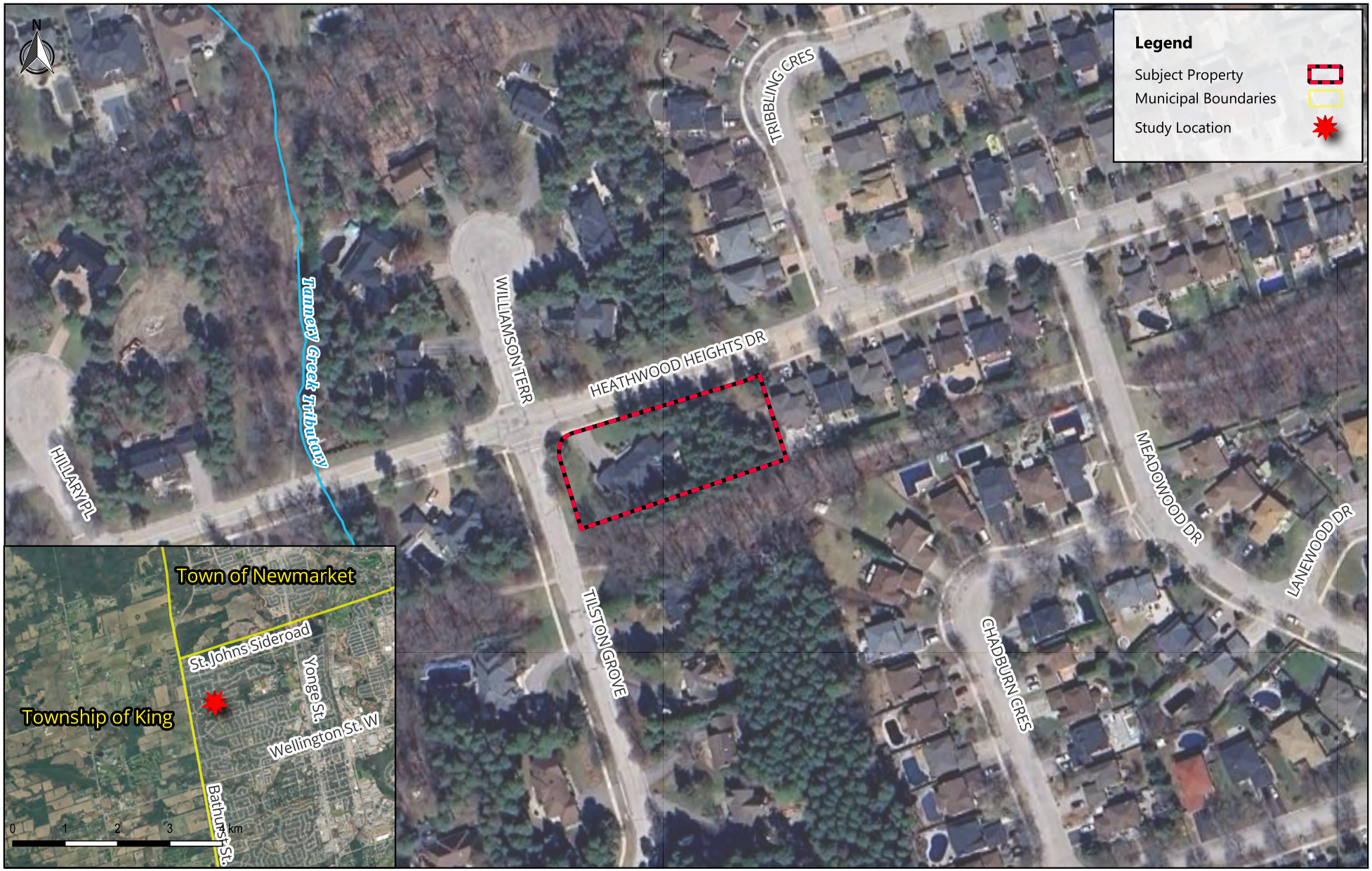
Project Number P2025-949

Maps



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NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
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Map 1.

Key Map

Environmental Impact Statement
161 Heathwood Heights, Aurora

1000679027 Ontario Inc.

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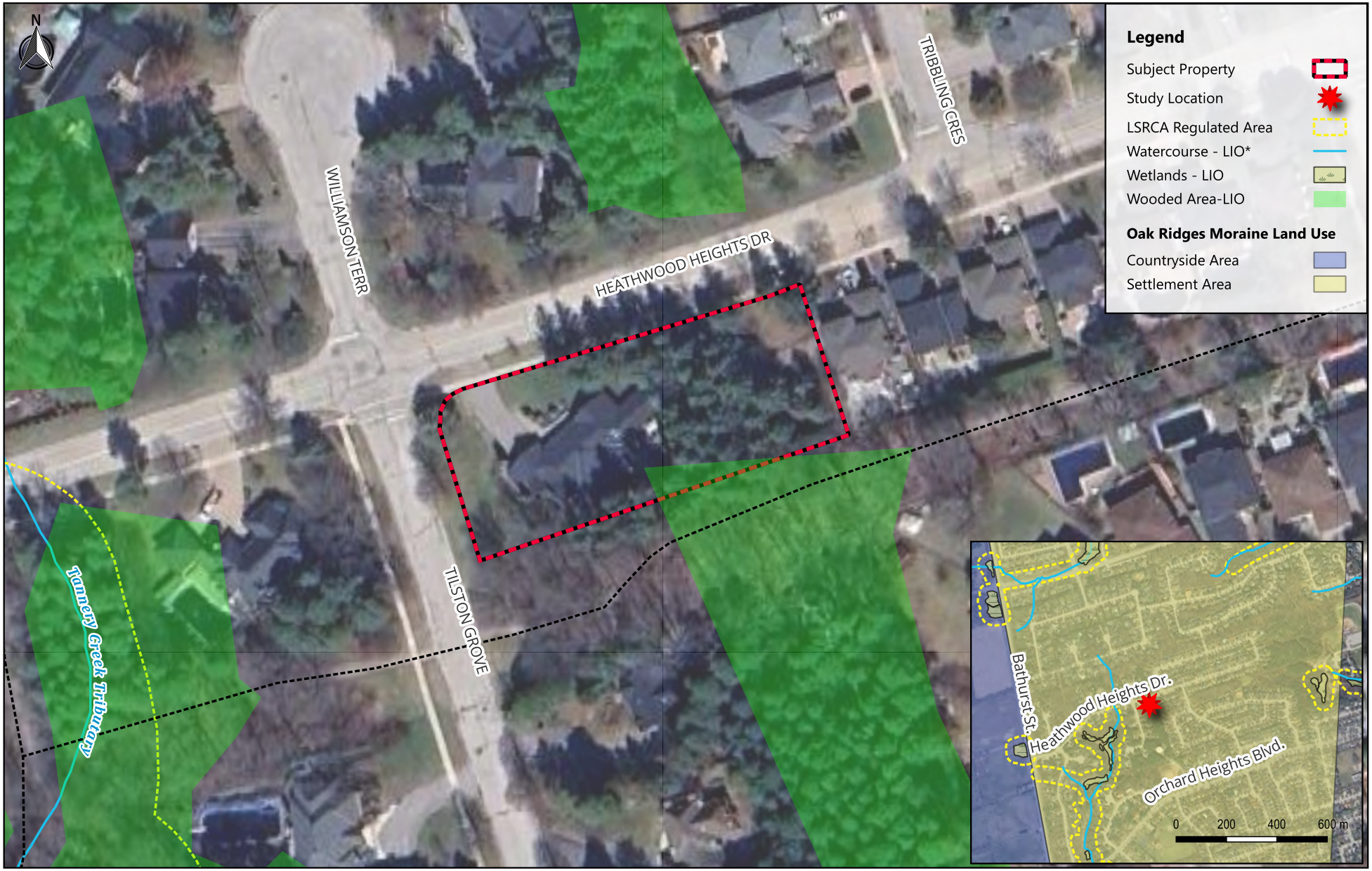

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CREATED BY:	DH	PROJECT NO.:	P2025-949
CHECKED BY:	IR	DATE:	Jul 29, 2025

0 25 50 75 100 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
[2] Contains information licensed under the Open Government Licence – Ontario.

*Land Information Ontario

Map 2.

Existing Conditions

Environmental Impact Statement
161 Heathwood Heights, Aurora
1000679027 Ontario Inc.

G:\Shared drives\Projects-2025\P2025-949 EIS for 161 Heathwood Heights, Aurora\GIS\Project\NH-EIS Mapping_2024-04-11.qgz

GeoProcess RESEARCH ASSOCIATES

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CHECKED BY:	IR	DATE:	Sep 24, 2025

0 25 50 75 100 m

NAD83 / UTM zone 17N (EPSG:26917)

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Map 3.

Natural Heritage System and Surveys

Environmental Impact Statement
161 Heathwood Heights, Aurora

1000679027 Ontario Inc.

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GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2025-949
CHECKED BY:	IR	DATE:	Jul 29, 2025

0 10 20 30 40 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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Map 4.

Proposed Development

Environmental Impact Statement
161 Heathwood Heights, Aurora

1000679027 Ontario Inc.

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GeoProcess RESEARCH ASSOCIATES

0 10 20 30 40 50 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
[1] Imagery from Google Earth.
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Woodland Average Width

161 Heathwood Heights Drive

CREATED BY:	DH	PROJECT NO.:	P2025-949
CHECKED BY:	IR	DATE:	Sep 19, 2025

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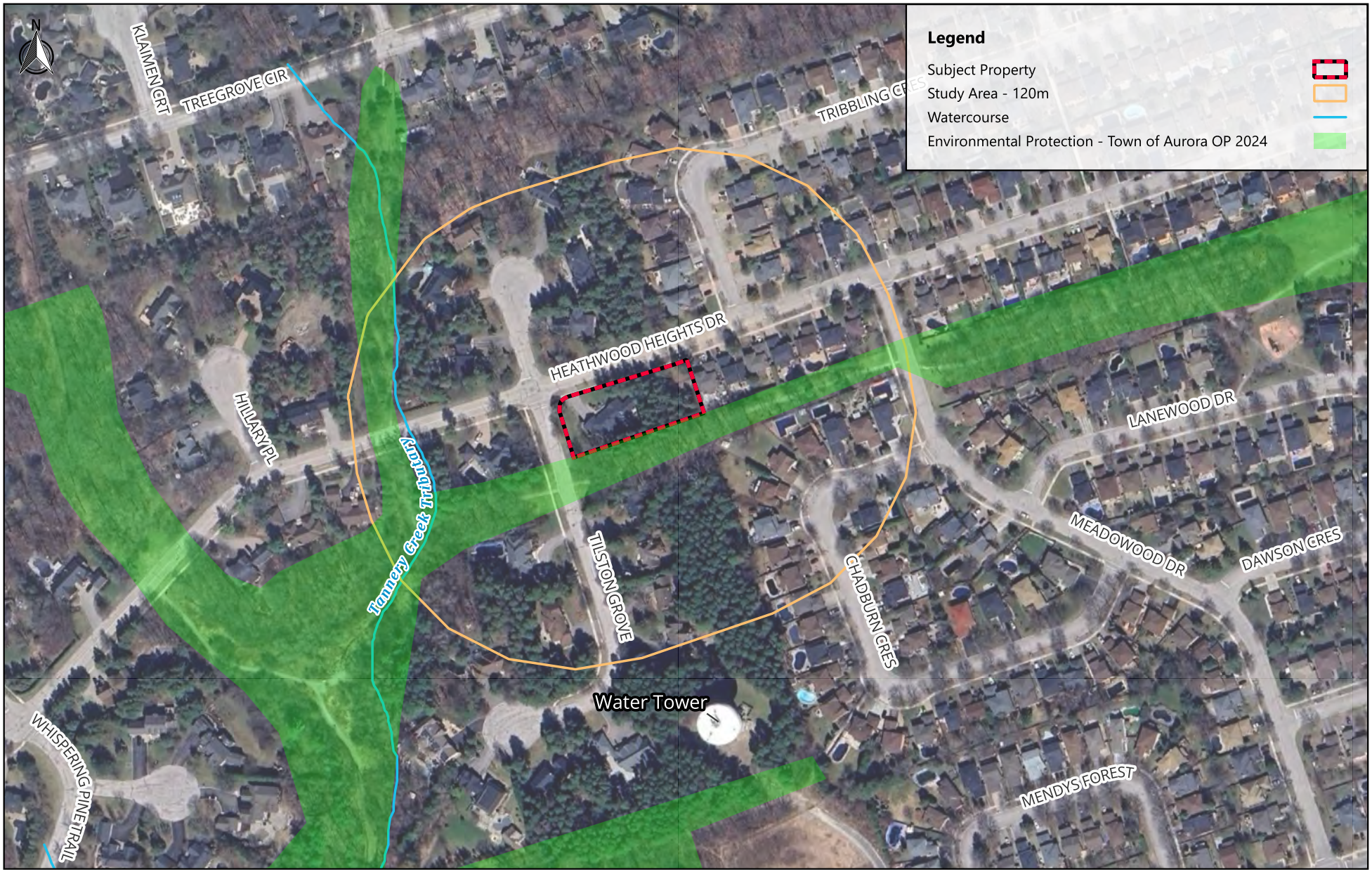

GeoProcess RESEARCH ASSOCIATES

CREATED BY:	DH	PROJECT NO.:	P2025-949
CHECKED BY:	IR	DATE:	Sep 23, 2025

0 50 100 150 200 m

NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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Map 6.

Environmental Protection Area
Town of Aurora Official Plan 2024

Environmental Impact Statement
161 Heathwood Heights, Aurora

1000679027 Ontario Inc.

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Appendix A

Species at Risk Screening Resources

Table A 1. SAR screening resources

Screening Resource	Description
Natural Heritage Information Center (NHIC)	The Natural Heritage Information Center (NHIC), operated by the Ontario Ministry of Natural Resources and Forestry, collects, reviews, manages and distributes information on Ontario's biodiversity. Data distributed by the NHIC is used in conservation and natural resource management decision making and was a primary resource for this report. Through the NHIC Make-a-Map tool, data on species, plant communities, wildlife concentration areas and natural areas is made accessible to the public and professionals using generalized 1-kilometer grid units to protect sensitive information. The mapping interface provides current and historical occurrences of SAR within the specified grid unit. The database also identifies environmental designations which provide insight into habitat potential including wetland, areas of natural and scientific interests and woodlands.
Breeding Bird Atlas	The atlas divides the province into 10×10 km squares and then birders find as many breeding species as possible in each square. Atlassers who know birds well by song complete 5-minute "Point Counts", 25 of which are required to provide an index of the abundance of each species in a square. Data from every square are mapped to show the distribution of each species. Point count data from each square show how the relative abundance of each species varies across the province.
eBird	eBird data document bird distribution, abundance, habitat use, and trends through checklist data collected within a simple, scientific framework. Birders enter when, where, and how they went birding, and then fill out a checklist of all the birds seen and heard during the outing. eBird's free mobile app allows offline data collection anywhere in the world, and the website provides many ways to explore and summarize your data and other observations from the global eBird community. eBird hotspots that are within 1 km of the Study Area are selected for species review.
Ontario Moth Atlas	The Ontario Moth Atlas is a project of the Toronto Entomologists' Association. The atlas currently covers about 250 species from 7 of the best-known families. The atlas presently includes 62,000 records. The last update of the atlas was in April 2020. The atlas is updated at least every 3 months. Most atlas data come from iNaturalist records. However, there is some data from Chris Schmidt of Agriculture Canada, the BOLD (Barcode of Life Datasystems) project of the University of Guelph, and from other records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
Ontario Butterfly Atlas	The Ontario Butterfly Atlas is a project of the Toronto Entomologists' Association (TEA). The TEA has been accumulating records and publishing annual seasonal summaries (Ontario Lepidoptera) for 50 years, with the first edition appearing in 1969. Atlas data comes from eButterfly records, iNaturalist records, BAMONA records, and records submitted directly to the TEA. The atlas uses the same 10×10 km squares at the Breeding Bird Atlas.
i-Naturalist	i-Naturalist is a nature app that helps public identify plants and animals. Using algorithms as well as scientists and taxonomic experts' multiple observations can be identified at a research scale. This data generated by the iNat community can be used in science and conservation. The program actively distributes the data in venues where scientists and land managers can find it. I-Naturalist has a project group for (NHIC) Rare species of Ontario. GeoProcess only records observations with-in 1 km of the Study Area.
Fisheries and Ocean Aquatic Species at Risk Maps	The DFO has compiled critical habitat and distribution data for aquatic species listed under the Species at Risk Act (SARA). The interactive map is intended to provide an overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters. The official source of information is the Species at Risk Public Registry. Using this map, a 1 km radius circle is outlined around aquatic features located within the Study Area.

Appendix B

Plant Species List

Common Name	Scientific Name	Polygons Observed	Provincial Conservation Rank (SRank)	Coefficient of Conservatism	Coefficient of Wetness
Norway Maple	*Acer platanoides*	CUW; FOD5	SNA	-	5
Sugar Maple	*Acer saccharum*	FOD5	S5	4	3
Goutweed	*Aegopodium podagraria*	CUW	SNA	-	0
Bugleweed	*Ajuga reptans*	CUW	SNA	-	5
Garlic Mustard	*Allaria petiolata*	CVR; CUW; FOD5	SNA	-	0
Burdock	Arctium sp.	FOD5	SNA	-	3
Jack-in-the-pulpit	*Arisaema triphyllum*	FOD5	S5	5	-3
Creeping Bellflower	*Campanula rapunculoides*	CUW	SNA	-	5
Sedge	*Carex sp.*	FOD5	-	-	-
Loose-Flowered Sedge	*Carex laxiflora*	FOD5	S5	5	0
Bitternut Hickory	*Carya cordiformis*	FOD5	S5	6	0
Quince	*Chaenomeles sp.*	CVR	-	-	-
Broad-leaved Enchanter's Nightshade	*Circaea canadensis*	FOD5	S5	2	3
Thistle	*Cirsium sp.*	CVR	-	-	-
Bull Thistle	*Cirsium vulgare*	CUW	SNA	-	3
Alternate-leaved Dogwood	*Cornus alternifolia*	FOD5	S5	6	3
Dotted Hawthorn	*Crataegus punctata*	FOD5	S5	4	5
Fleabane	*Erigeron sp.*	CUW; FOD5	-	-	-
Yellow Trout Lily	*Erythronium americanum*	FOD5	S5	5	5
Winged Euonymus	*Euonymous alatus*	CVR	SNA	5	-5
Virginia Strawberry	*Fragaria virginiana*	CUW; FOD5	S5	2	3
Ash	*Fraxinus sp.*	FOD5	-	-	-
Fragrant Bedstraw	*Galium triflorum*	CUW	S5	4	3
Herb Robert	*Geranium robertianum*	CUW	S5	2	3
Avens	*Geum sp.*	CVR	-	-	-
Ground Ivy	*Glechoma hederacea*	FOD5	SNA	-	3
Common Ivy	*Hedera helix*	FOD5	SNA	-	3
Coral Bells	*Heuchera sp.*	CVR	-	-	-
Hosta	*Hosta sp.*	CVR	-	-	-

Common Name	Scientific Name	Polygons Observed	Provincial Conservation Rank (SRank)	Coefficient of Conservatism	Coefficient of Wetness
Bigleaf Hydrangea	*Hydrangea macrophylla*	CVR	-	-	-
Virginia Waterleaf	*Hydrophyllum virginianum*	FOD5	S5	6	0
Live-forever	*Hylotelephium sp.*	CVR	SNA	-	-
Flaky Juniper	*Juniperus squamata*	CVR	-	-	-
Black Walnut	*Juglans nigra*	FOD5	S4?	5	3
Honeysuckle	*Lonicera sp.*	FOD5	-	-	-
Large False Solomon's Seal	*Maianthemum racemosum*	CUW	S5	4	3
Star-flowered False Solomon's Seal	*Maianthemum stellatum*	CUW; FOD5	S5	6	0
Forget-me-not	*Myosotis sp.*	CVR	-	-	-
Wood Forget-me-not	*Myosotis sylvatica*	CUW	SNA	-	5
Daffodil	*Narcissus sp.*	CVR	SNA	-	-
Eastern Hop-hornbeam	*Ostrya virginiana*	FOD5	S5	4	3
Wood Sorrel	*Oxalis sp.*	CUW	-	-	-
Peony	*Paeonia sp.*	CVR	SNA	-	-
Norway Spruce	*Picea abies*	CUW; FOD5	SNA	-	5
Blue Spruce	*Picea pungens*	CVR	SNA	-	3
White Spruce	*Picea glauca*	CUW; FOD5	S5	6	3
Dwarf Alberta Spruce	*Picea glauca 'Conica'*	CVR	-	-	-
Hawkweed	*Pillosella sp.*	CUW	SNA	-	-
Broadleaf Plantain	*Plantago major*	CVR; CUW	SNA	-	3
Annual Bluegrass	*Poa annua*	CUW	SNA	-	3
Kentucky Bluegrass	*Poa pratensis*	CVR; CUW	S5	0	3
Black Cherry	*Prunus serotina*	FOD5	S5	3	3
Chokecherry	*Prunus virginiana*	CUW; FOD5	S5	2	3
Common Buckthorn	*Rhamnus cathartica*	CUW; FOD5	SNA	-	0
Currant	*Ribes sp.*	FOD5	-	-	-
Prickly Gooseberry	*Ribes cynosbati*	FOD5	S5	4	3
Rose	*Rosa sp.*	CVR	-	-	-
Dock	*Rumex sp.*	CVR	-	-	-
Bitter Dock	*Rumex obtusifolius*	CUW; FOD5	SNA	-	-3
Black Lace Elderberry	*Sambucus nigra 'Eva'*	CVR	SNA	-	-
Red Elderberry	*Sambucus racemosa*	CUW	S5	5	3

Common Name	Scientific Name	Polygons Observed	Provincial Conservation Rank (SRank)	Coefficient of Conservatism	Coefficient of Wetness
Squill	*Scilla sp.*	CVR	SNA	-	-
Herbaceous Carrionflower	*Smilax herbacea*	FOD5	S4?	5	0
Bittersweet Nightshade	*Solanum dulcamara*	CUW	SNA	-	0
Rowan	*Sorbus aucuparia*	CUW	SNA	-	5
Chickweed	*Stellaria media*	CUW	SNA	-	3
Common Lilac	*Syringa vulgaris*	CUW	SNA	-	5
Common Dandelion	*Taraxacum officinale*	CVR; CUW	SNA	-	3
Japanese Yew	*Taxus cuspidata*	CVR	-	-	-
White Cedar	*Thuja occidentalis*	CUW; FOD5	S5	4	-3
Pyramid Cedar	*Thuja occidentalis 'Fastigiata'*	CVR	-	-	-
Basswood	*Tilia americana*	FOD5	S5	4	3
Littleleaf Linden	*Tilia cordata*	CVR	SNA	-	5
White Clover	*Trifolium repens*	CVR	SNA	-	3
White Trillium	*Trillium grandiflorum*	FOD5	S5	5	3
Colt's Foot	*Tussilago farfara*	CUW	SNA	-	3
White Elm	*Ulmus americana*	CUW; FOD5	S5	3	-3
Slippery Elm	*Ulmus rubra*	FOD5	S5	6	0
Siberian Elm	*Ulmus pumila*	FOD5	SNA	-	3
Corn Speedwell	*Veronica arvensis*	CVR	SNA	-	5
Thyme-leaved Speedwell	*Veronica serpyllifolia*	CVR	SU	-	0
Mapleleaf Viburnum	*Viburnum acerifolium*	FOD5	S5	6	5
Vetch	*Vicia sp.*	CUW	-	-	-
Lesser Periwinkle	*Vinca minor*	CUW; FOD5	SNA	-	-
Yellow Violet	*Viola pubescens*	FOD5	S5	5	3
Common Blue Violet	*Viola soraria*	CVR; CUW; FOD5	S5	4	0

Appendix C

Significant Wildlife Habitat Screening

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Seasonal Concentration Areas of Animal					
Waterfowl Stopover and Staging Areas (Terrestrial)	CUM, CUT1 - plus evidence of annual spring flooding within these ecosites *Fields with seasonal flooding and waste grains in certain areas are specific to Tundra Swan	Fields with sheet water during Spring (mid-March to May) •agricultural fields with waste grain are not SWH unless they have spring sheet water available.	No	No habitat features on site suitable for species aggregation.	•Any mixed species aggregations of 100+ individuals • the flooded field plus 100-300m radius, dependant on localized site and adjacent land us • Annual Use of Habitat is documented from information sources or field studies •Specific evaluation methods required
Waterfowl Stopover and Staging Areas (Aquatic)	MAS1,MAS2,MAS3,SAS1,SAM1,SAF1, SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. • Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.	No	No habitat features on site suitable for species aggregation.	•Aggregations of 100 + of species listred for 7 days, results in > 700 waterfowl use days. •Areas with annual staging for ruddyducks, canvasbacks and redheads. •The combined area of the ELC ecosites and a 100m radius area. •Wetland area and shorelines associated with sites identified within the SWHTG, Appendix K, are significant wildlife habitat. •Annual Use of Habitat is documented from information sources or field studies • Specific evaluation methods required
Shorebird Migratory Stopover Area	BBO1,BBO2,BBS1,BBS2,BBT1,BBT2,SDO1,SDS2,SDT1,MAM1,MAM2,MAM3, MAM4,MAM5	•Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. •Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores in May to mid-June and early July to October. • No sewage treatment or storm water management ponds.	No	No habitat features on site suitable for species aggregation.	•Presence of 3 or more of listed species and > 1000 shorebird use days during spring or fall migration period. •Whimbrel stop briefly (<24hrs) during spring migration, any site with >100 Whimbrel used for 3 years or more is significant. •The area of significant shorebird habitat includes the mapped ELC shoreline ecosites plus a 100m radius area. •Annual Use of Habitat is documented from information sources or field studies • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Raptor Wintering Area	Combo of one of each Community Series from one of each: Forest (FOD,FOM,FOC) and Upland (CUM,CUT,CUS,CUW). Bald Eagle: Forest on shoreline area adjacent to large rivers and lakes.	A combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors. • Need to be > 20 ha. •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. • Eagle sites have open water and large trees and snags available for roosting .	No	No habitat features on site. Potential woodland habitat is fragmented and disturbed.	•One or more Short-eared Owls or; •One of more Bald Eagles or; • At least 10 individuals and two of the listed hawk/owl species. •To be significant a site must be used regularly (3 in 5 years) for a minimum of 20 days by the above number of birds. •for an Eagle winter site is the shoreline forest ecosites directly adjacent to the prime hunting area. • Specific evaluation methods required
Bat Hibernacula	CCR1,CCR2,CCA1,CCA2. * buildings are not to be considered SWH	May be found in caves, mine shafts, underground foundations and Karsts. •Active mine sites are not considered SWH.	No	No habitat features on site.	•All sites with confirmed hibernating bats are SWH. • area includes 200m radius around the entrance of the hibernaculum for most development types and 1000m for wind farms. •Studies are to be conducted during the peak swarming period (Aug. – Sept.). • Specific survey methods required
Bat Maternity Colonies	All Ecosites in: FOD,FOM,SWD,SWM.	Maternity colonies can be found in tree cavities, vegetation and often in building. *Building are not considered SWH. • Not found in caves or mines in ON. •Located in Mature Deciduous or mixed forest stands with >10/ha large diameter (>25cm dbh) wildlife trees. •Prefer snags in early stages of decay (class 1-3 or class 1 or class 2). •Silver-haired Bats prefer older mixed or deciduous forests with at least 21 snags/ha.	No	Woodlands in the Study Area are fragmented and do not meet the size criteria.	•Confimed use by: >10 Big Brown Bats >5 Adult female Silver Haired Bats. •The area of the habitat includes the entire woodland or a forest stand ELC Ecosite or an Ecoelement containing the maternity colonies. • Specific evaluation methods required
Turtle Wintering Areas	Snapping and Midland Painted: SW,MA,OA,SA and FEO/BOO Series. Northern Map: Open water areas such as deeper rivers or streams and lakes.	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	No	No wetlands or open water observed in the Study Area.	•Presence of 5 over-wintering Midland Painted Turtles is significant •One or more Northern Map Turtle or Snapping Turtle over-wintering within a wetland is significant • The mapped ELC ecosite area with the over

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		Oxygen. *Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.			wintering turtles is the SWH. • If the hibernation site is within a stream or river, the deepwater pool where the turtles are over wintering is the SWH. • Search for congregations in Basking Areas in spring and fall.
Reptile Hibernaculum	Any ecosite other that very wet. •Talus, Rock Barren, Crevice, Cave, Alvar may be directly related. •Observations of congregations in spring or fall is good indicator.	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	No	No habitat features observed on site.	•Presence of snake hibernacula used by - a minimum of five individuals of a snake sp. or; - individuals of two or more snake spp.. •Congregations of -a minimum of five individuals of a snake sp. or; -individuals of two or more snake spp. near potential hibernacula (eg. foundation or rocky slope) on sunny warm days in Spring (Apr/May) and Fall (Sept/Oct). • If there are Special Concern Species present, then site is SWH. •The feature in which the hibernacula is located plus a 30 m radius area is the SWH. • Hibernacula are used annually, often by the same individuals (strong site fidelity) and other life processes often take place near by
Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)	Eroding banks, sandy hills, borrow pits, steep slopes, and sand piles Cliff faces, bridge abutments, silos, barns. CUM1,CUS1,BLS1,CLO1,CLT1,CUT1,BLO1,BLT1,CLS1.	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, recently (2 years) disturbed soil areas or liscenced Mineral Aggregate Operation.	No	No habitat features on site suitable for species aggregation.	•Presence of 1 or more nesting sites with 8 or more cliff swallow pairs and/or rough-winged swallow pairs during the breeding season. • A colony identified as SWH will include a 50m radius habitat area from the peripheral nests. •Field surveys to observe and count swallow nests are to be completed during the breeding season. • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
Colonially-Nesting Bird Breeding Habitat (Tree/Shrub)	SWM2,SWM3,SWM5,SWM6,SWD1,SWD2,SWD3,SWD4,SWD5,SWD6,SWD7,FET1	Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used. •Most nests in trees are 11 to 15 m from ground, near the top of the tree.	No	No habitat features on site suitable for species aggregation.	•Presence of 5 or more active nests of Great Blue Heron or other listed species. •The habitat extends from the edge of the colony and a minimum 300m radius or extent of the Forest Ecosite containing the colony or any island <15.0ha with a colony is the SWH. •Confirmation of active heronries are to be achieved through site visits conducted during the nesting season (April to August) or by evidence such as the presence of fresh guano, dead young and/or eggshells.
Colonially-Nesting Bird Breeding Habitat (Ground)	Any rocky island or peninsula (natural or artificial) within a lake or large river (two-lined on a 1;50,000 NTS map). Close proximity to watercourses in open fields or pastures with scattered trees or shrubs (Brewer's Blackbird) MAM1 – 6; MAS1 – 3; CUM,CUT,CUS	Nesting colonies on islands or peninsulas associated with open water or in marshy areas. • Brewers Blackbird colonies found loosely on the ground in or in low bushes in close proximity to streams and irrigation ditches within farmlands.	No	No habitat features on site suitable for species aggregation.	•Presence of > 25 active nests for Herring Gulls or Ring-billed Gulls, >5 active nests for Common Tern or >2 active nests for Caspian Tern. •Presence of 5 or more pairs for Brewer's Blackbird. •Any active nesting colony of one or more Little Gull, and Great Black-backed Gull is significant. •The edge of the colony and a minimum 150m radius area of habitat, or the extent of the ELC ecosites containing the colony or any island <3.0ha with a colony is the SWH. •Studies would be done during May/June when actively nesting. • Specfic evaluation methods required
Migratory Butterfly Stopover Areas	Combo of one of each Field (CUM, CUT, CUS) and Forest (FOC, FOD,FOM,CUP).	Minimum 10 ha in size with combo of field and forest located within 5km of Lake Erie or Lake Ontario. •Should not be disturbed. • Field/meadows with an abundance of preferred nectar plants and woodland edge providing shelter are requirements for this habitat. •Should provide protection from the elements, often	No	No habitat features on site suitable for species aggregation.	•Presence of Monarch Use Days (MUD) during Fall migration (Aug/Oct) •Observational studies are to be completed and need to be done frequently during the migration period to estimate MUD. •MUD of >5000 or >3000 with the presence of Painted Ladies or Red Admiral's is to be considered

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		spits of land or areas with the shortest distance to cross the Great Lakes.			significant.
Landbird Migratory Stopover Areas	All Ecosites within: FOC,FOM,FOD,SWC,SWM,SWD	Woodlots >10ha in size and within 5km of Lake Erie and Lake Ontario. • If woodlands are rare in area, smaller size can be considered. • If multiple woodlands located along shore line, those <2km from shoreline are more significant. • Sites have a variety of habitats; forest, grassland and wetland complexes. •The largest sites are more significant. •Woodlots and forest fragments are important habitats to migrating birds, these features located along the shore and located within 5km of Lake Erie and Lake Ontario are Candidate SWH.	No	No habitat features on site suitable for species aggregation.	•Use of the habitat by >200 birds/day and with >35 spp with at least 10 bird spp. recorded on at least 5 different survey dates. •Studies should be completed during spring (Mar to May) and fall (Aug to Oct) migration using standardized assessment techniques. • Specific evaluation methods required
Deer Yarding Areas	Note: OMNRF to determine this habitat. ELC Community Series providing a thermal cover component for a deer yard would include; FOM, FOC, SWM and SWC. Or these ELC Ecosites; CUP2 CUP3 FOD3 CUT	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.	No	No MNRF-designated areas on site.	No Studies Required: • Snow depth and temperature are the greatest influence on deer use of winter yards. Snow depths > 40cm for more than 60 days in a typically winter are minimum criteria for a deer yard to be considered as SWH. • Deer Yards are mapped by OMNRF District offices. Locations of Core or Stratum 1 and Stratum 2 Deer yards considered significant by OMNRF will be available at local MNRF offices or via Land Information Ontario (LIO). • Field investigations that record deer tracks in winter are done to confirm use (best done from an aircraft). Preferably, this is done over a series of winters to

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		• The Core of a deer yard (Stratum I) is located within the Stratum II area and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%. • OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual. •Woodlots with high densities of deer due to artificial feeding are not significant			establish the boundary of the Stratum I and Stratum II yard in an "average" winter. MNRF will complete these field investigations. • If a SWH is determined for Deer Wintering Area or if a proposed development is within Stratum II yarding area then Movement Corridors are to be considered as outlined in Table 1.4.1 of this Schedule. •
Deer Winter Congregation Areas	All forested ecosites within: FOC,FOM,FOD,SWC,SWM,SWD + conifer plantations much smaller than 50 ha may be used.	Woodlots will typically be >100 ha in size. Woodlots <100ha may be considered as significant based on MNRF studies or assessment. • Deer movement during winter in the southern areas of Ecoregion 6E are not constrained by snow depth, however deer will annually congregate in large numbers in suitable woodlands • Large woodlots > 100ha and up to 1500 ha are known to be used annually by densities of deer that range from 0.1-1.5 deer/ha. *Woodlots with high densities of deer due to artificial feeding are not significant.	No	No MNRF-designated areas on site.	•Will be mapped by MNRF. • All woodlots exceeding the criteria are significant unless determined to be not by the MNRF. •Studies to be completed during winter when >20 cm of snow is on the ground, using aerial survey or pellet count.
Rare Vegetation Communities					

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
Cliffs and Talus Slopes	Any Ecosite within: TAO CLO TAS CLS TAT CLT	A Cliff is vertical to near vertical bedrock >3m in height. A Talus Slope is rock rubble at the base of a cliff made up of coarse rocky debris. Most cliff and talus slopes occur along the Niagara Escarpment.	No	No habitat features on site.	•Confirm any ELC Vegetation Type for Cliffs or Talus Slopes
Sand Barren	SBO1 SBS1 SBT1 Vegetation cover varies from patchy and barren to continuous meadow (SBO1), thicketlike (SBS1), or more closed and treed (SBT1). Tree cover always < or equal to 60%	A sand barren area >0.5ha in size. • Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. Usually located within other types of natural habitat such as forest or savannah. • Vegetation can vary from patchy and barren to tree covered, but less than 60%.	No	No habitat features on site.	•Confirm any ELC Vegetation Type for Sand Barrens. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.
Alvar	ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1 CUW2, Five Alvar Indicator Species: 1) Carex crawei 2) Panicum philadelphicum 3) Eleocharis compressa 4) Scutellaria parvula 5) Trichostema brachiatum	An Alvar site > 0.5 ha in size, only known sites are found in the western islands of Lake Erie. • 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.	No	No habitat features on site.	•Studies that identify four of the five Alvar Indicator Species at a Candidate Alvar site is Significant. • Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.). •The alvar must be in excellent condition and fit in with surrounding landscape with few conflicting land uses.
Old Growth Forest	FOD FOC FOM SWD SWC SWM	Woodland areas 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. • Characterized by heavy mortality or turnover of overstorey trees resulting in a mosaic of gaps that	No	Woodlands in Study Area do not meet the size criteria.	•If dominant trees species of the area are >140 years old, then the area containing these trees is Significant Wildlife Habitat. • The forested area containing the old growth characteristics will have experienced no recognizable

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
		encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.			forestry activities • The area of forest ecosites combined or an eco-element within an ecosite that contain the old growth characteristics is the SWH. • Determine ELC vegetation types for the forest and forest area containing the old growth characteristics
Savannah	TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is a tallgrass prairie habitat that has tree cover between 25 – 60%. • No minimum size to site. • Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH.	No	No habitat features on site.	•Field studies confirm one or more of the Savannah indicator species found in Appendix N, Ecoregion 6E of the SWHTG, OMNR (2000). •Entire area of the ELC Ecosite is SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic species).
Tallgrass Prairie	TPO1 TPO2	A Tallgrass Prairie has ground cover dominated by prairie grasses. •An open Tallgrass Prairie habitat has < 25% tree cover. •No minimum size to site. •Site must be restored or a natural site. *Remnant sites such as railway right of ways are not considered to be SWH.	No	No habitat features on site.	•Field studies confirm one or more of the Prairie indicator species in Appendix N, Ecoregion 6E of The SWHTG, OMNR (2000). •Area of the ELC Ecosite is the SWH. •Site must not be dominated by exotic or introduced species (<50% vegetative cover are exotic sp.)
Other Rare Vegetation Communities	See the Significant Wildlife Habitat Techinical Guide (OMNR, 200), Appendix M for Provincially Rare S1,S2 and S3 ELC Vegetation Types.	ELC Ecosite codes that have the potential to be a rare ELC Vegetation Type as outlined in Appendix M. •May include beaches, fens, forest, marsh, barrens, dunes and swamps. See OMNRF/NHIC for up to date list of rare vegetation communities.	No	No SAR or otherwise rare vegetation species found in the Study Area.	•Field studies should confirm if an ELC Vegetation Type is a rare vegetation community based on listing within Appendix M of SWHTG, OMNR (2000). •Area of the ELC Vegetation Type polygon is the SWH.
Specialized Habitat for Wildlife					
Waterfowl Nesting Area	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SWT1	A waterfowl nesting area extends 120 m from a wetland (> 0.5 ha) or a wetland (>0.5ha) and any small wetlands (0.5ha) within 120m or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur.	No	No habitat features on site suitable for species aggregation.	•Presence of 3 or more nesting pairs for listed species excluding Mallards OR •Presence of 10 or more nesting pairs for listed species including Mallards. •Any active nesting site of an American Black Duck is

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
	SWT2 SWD1 SWD2 SWD3 SWD4. * Note: includes adjacency to Provincially Significant Wetlands	•Wood Ducks and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. • Upland areas should be at least 120 m wide so that predators such as racoons, skunks, and foxes have difficulty finding nests.			considered significant. •Nesting studies should be completed during the spring breeding season (April - June). •Specific evaluation methods required •A field study confirming waterfowl nesting habitat will determine the boundary of the waterfowl nesting habitat for the SWH, this may be greater or less than 120 m from the wetland and will provide enough habitat for waterfowl to successfully nest.
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	ELC Forest Community Series: FOD, FOM, FOC, SWD, SWM and SWC directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. *Nests located on man-made objects are not to be included as SWH. •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.	No	No habitat features on site.	One or more active Osprey or Bald Eagle nests in an area. •Some species have more than one nest in a given area and priority is given to the primary nest with alternate nests included within the area of the SWH. •For an Osprey, the active nest and a 300 m radius around the nest or the contiguous woodland stand is the SWH. *with additional requirements •For a Bald Eagle the active nest and a 400-800 m radius around the nest is the SWH. * with additional requirements •To be significant a site must be used annually. •When found inactive, the site must be known to be inactive for > 3 years or suspected of not being used for >5 years before being considered not significant. •Observational studies to determine nest site use, perching sites and foraging areas need to be done from early March to mid August. • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
Woodland Raptor Nesting Habitat	May be found in all forested ELC Ecosites. May also be found in SWC, SWM, SWD and CUP3.	All natural or conifer plantation woodland/forest stands >30ha with >10ha of interior habitat. • Interior habitat determined with a 200m buffer. •Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest.	No	Woodlands are present in the Study Area but do not meet the size criteria and minimal to no interior habitat observed.	Presence of 1 or more active nests from species list is considered significant. •Red-shouldered Hawk and Northern Goshawk – A 400m radius around the nest or 28 ha area of habitat is the SWH. (the 28 ha habitat area would be applied where optimal habitat is irregularly shaped around the nest) •Barred Owl – A 200m radius around the nest is the SWH. •Broad-winged Hawk and Coopers Hawk,– A 100m radius around the nest is the SWH. •Sharp-Shinned Hawk – A 50m radius around the nest is the SWH. • Conduct field investigations from early March to end of May. The use of call broadcasts can help in locating territorial (courting/nesting) raptors and facilitate the discovery of nests by narrowing down the search area.
Turtle Nesting Areas	Exposed mineral soil (sand or gravel) areas adjacent (<100m) or within the following ELC Ecosites: MAS1 MAS2 MAS3 SAS1 SAM1 SAF1 BOO1 FEO1	Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. •For an area to function as a turtle nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. *Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used.	No	No habitat features on site.	Presence of: - 5 or more nesting Midland Painted Turtles OR - One or more Northern Map Turtle or Snapping Turtle nesting is a SWH. •The area or collection of sites within an area of exposed mineral soils where the turtles nest, plus a radius of 30-100m around the nesting area dependant on slope, riparian vegetation and adjacent land use is the SWH. • Travel routes from wetland to nesting area are to be considered within the SWH as part of the 30-100m area of habitat. •Field investigations should be conducted in prime nesting season typically late spring to early summer.

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
					•Observational studies observing the turtles nesting is a recommended method.
Seeps and Springs	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.	No	No habitat features on site.	Presence of a site with 2 or more seeps/springs should be considered SWH. •The area of a ELC forest ecosite or an ecoelement within ecosite containing the seeps/springs is the SWH. •The protection of the recharge area considering the slope, vegetation, height of trees and groundwater condition need to be considered in delineation the habitat.
Amphibian Beeding Habitat (Woodland)	All Ecosites associated with these ELC Community Series: FOC FOM FOD SWC SWM SWD •Breeding pools within the woodland or the shortest distance from forest habitat are more significant because they are more likely to be used due to reduced risk to migrating amphibians.	Presence of a wetland, pond or woodland pool (including vernal pools) >500m2 (about 25m diameter) within or adjacent (within 120m) to a woodland (no minimum size). • Some small wetlands may not be mapped and may be important breeding pools for amphibians. •Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat.	No	No suitable habitat features on site.	Presence of breeding population of: - 1 or more of the listed newt/salamander species or - 2 or more of the listed frog species with at least 20 individuals (adults or eggs masses) or - 2 or more of the listed frog species with Call Level Codes of 3. •A combo fo observational and call count surveys required during the spring (March-June) . •The habitat is the wetland area plus a 230m radius of woodland area. • If a wetland area is adjacent to a woodland, a travel corridor connecting the wetland to the woodland is to be included in the habitat.
Amphibian Beeding Habitat (Wetlands)	ELC Community Classes SW, MA, FE, BO, OA and SA. •Typically these wetland ecosites will be isolated (>120m) from woodland ecosites, however larger wetlands	Wetlands >500m2 (about 25m diameter), supporting high species diversity are significant; •some small or ephemeral habitats may not be identified on MNRF mapping and could be important amphibian breeding habitats.	No	No suitable habitat features on site.	Presence of breeding population of: -1 or more of the listed newt/salamander species or -2 or more of the listed frog/toad species with at least 20 individuals (adults or eggs masses) or -2 or more of the listed frog/toad species with Call

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
	containing predominantly aquatic species (e.g. Bull Frog) may be adjacent to woodlands.	•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.			Level Codes of 3. or; -Wetland with confirmed breeding Bullfrogs are significant. •The ELC ecosite wetland area and the shoreline are the SWH. •A combo of observational and call count surveys will be required during the spring (March-June). •If a SWH is determined for Amphibian Breeding Habitat (Wetlands) then Movement Corridors are to be considered.
Woodland Area-Sensitive Bird Breeding Habitat	All Ecosites withing: FOC FOM FOD SWC SWM SWD	Habitats where interior forest breeding birds are breeding, typically large mature (>60 yrs old) forest stands or woodlots >30 ha. •Interior forest habitat is at least 200 m from forest edge habitat.	No	Woodlands in the Study Area do not meet the size criteria with minimal to no interior habitat present.	Presence of nesting or breeding pairs of 3 or more of the listed wildlife species. *any site with breeding Cerulean Warblers or Canada Warblers is to be considered SWH. • Conduct field investigations in spring and early summer. • Specific evaluation methods required
Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)					
Marsh Bird Breeding Habitat	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 SAS1 SAM1 SAF1 FEO1 BOO1 For Green Heron: All SW, MA and CUM1 sites	Nesting occurs in wetlands. All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present. •For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water..	No	No habitat features on site.	Presence of: - 5 or more nesting pairs of Sedge Wren or Marsh Wren or 1 pair of Sandhill Cranes or; -breeding by any combination of 5 or more of the listed species. •any wetland with breeding of 1 or more Black Terns, Trumpeter Swan, Green Heron or Yellow Rail is SWH. •Area of the ELC ecosite is the SWH. •Breeding surveys should be done in May/June. • Specific evaluation methods required

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
Open Country Bird Breeding Habitat	CUM1 CUM2	Large grassland areas (includes natural and cultural fields and meadows) >30 ha. •Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years). •Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. •The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species.	No	No habitat features on site. Study Area is primarily suburban with no meadows.	Presence of nesting or breeding of: -2 or more of the listed species. • A field with 1 or more breeding Short-eared Owls is to be considered SWH. •The area of SWH is the contiguous ELC ecosite field areas. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Specific evaluation methods required.
Shrub/Early Successional Bird Breeding Habitat	CUT1 CUT2 CUS1 CUS2 CUW1 CUW2 •Patches of shrub ecosites can be complexed into a larger habitat for some bird species.	Large field areas succeeding to shrub and thicket habitats>10ha in size. •Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no rowcropping, haying or livestock pasturing in the last 5 years). •Shrub thicket habitats (>10 ha) are most likely to support and sustain a diversity of these species. •Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or pasturelands.	No	No habitat features on site. Study Area is primarily suburban with no suitable vegetation communities.	Presence of nesting or breeding of - 1 of the indicator species and at least 2 of the common species. •A habitat with breeding Yellow breasted Chat or Golden-winged Warbler is to be considered as SWH. •The area of the SWH is the contiguous ELC ecosite field/thicket area. •Conduct field investigations of the most likely areas in spring and early summer when birds are singing and defending their territories. • Specific evaluation methods required
Terrestrial Crayfish	MAM1 MAM2 MAM3 MAM4 MAM5 MAM6 MAS1 MAS2 MAS3 SWD SWT SWM CUM1-with inclusions of above meadow marsh ecosites can be used by terrestrial crayfish.	Wet meadow and edges of shallow marshes (no minimum size) should be surveyed for terrestrial crayfish. •Usually the soil is not too moist so that the tunnel is well formed. •Can often be found far from water.	No	No habitat features on site.	Presence of 1 or more individuals of species listed or their chimneys (burrows) in suitable meadow marsh, swamp or moist terrestrial sites. • Area of ELC ecosite or an ecoelement area of meadow marsh or swamp within the larger ecosite area is the SWH. •Surveys should be done April to August in temporary or permanent water. • Note the presence of burrows or chimneys are often

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm…
	ELC Ecosite Codes	ELC Ecosite Codes			
					the only indicator of presence, observance or collection of individuals is very difficult.
Special Concern and Rare Wildlife Species	All plant and animal element occurrences (EO) within a 1 or 10km grid. All Special Concern and Provincially Rare plant and animal species.	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.	N/A	See SAR Screening Section	Assessment/inventory of the site for the identified special concern or rare species needs to be completed during the time of year when the species is present or easily identifiable. •The area of the habitat to the finest ELC scale that protects the habitat form and function is the SWH, this must be delineated through detailed field studies. The habitat needs be easily mapped and cover an important life stage component for a species e.g. specific nesting habitat or foraging habitat.
Animal Movement Corridors					
Amphibian Movement Corridors	Corridors may be found in all ecosites associated with water.	Corridors will be determined based on identifying the significant breeding habitat for these species. Movement corridors between breeding habitat and summer habitat. Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from this Schedule.	No	The Study Area does not appear to be in a potential movement corridor. No amphibian habitat observed in the Study Area.	Field Studies must be conducted at the time of year when species are expected to be migrating or entering breeding sites. Corridors should consist of native vegetation, with several layers of vegetation. Corridors unbroken by roads, waterways or bodies, and undeveloped areas are most significant. Corridors should have at least 15m of vegetation on both sides of waterway or be up to 200m wide of woodland habitat and with gaps <20m. Shorter corridors are more significant than longer corridors, however amphibians must be able to get to and from their summer and breeding habitat.
Deer Movement Corridors	Corridors may be found in all forested ecosites. A Project Proposal in Stratum II Deer Wintering Area has potential to contain corridors.	Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH. A deer wintering habitat identified by the OMNRF as SWH will have corridors that the deer use during fall	No	No Stratum II Deer Wintering Areas present in or near the Study Area.	• Studies must be conducted at the time of year when deer are migrating or moving to and from winter concentration areas . • Corridors that lead to a deer wintering habitat

Wildlife Habitat	Candidate SWH Habitat Criteria		Potential on Site	Rationale	Confirmed Defining Criteria= Studies to confirm...
	ELC Ecosite Codes	ELC Ecosite Codes			
		migration and spring dispersion •Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges).			should be unbroken by roads and residential areas. • Corridors should be at least 200m wide with gaps <20m and if following riparian area with at least 15m of vegetation on both sides of waterway •Shorter corridors are more significant than longer corridors.
Exceptions for EcoRegion 6E					
Mast Producing Areas (Black Bear) •EcoDistrict 6E-14	All Forested habitat represented by ELC Community Series: FOM FOD	Black bears require forested habitat that provides cover, winter hibernation sites, and mastproducing tree species. • Forested habitats need to be large enough to provide cover and protection for black bears Criteria •Woodland ecosites >30ha with mast-producing tree species, either soft (cherry) or hard (oak and beech)	No	Site not located within EcoDistrict 6E-14	•All woodlands >30 ha with a 50% composition of these ELC Vegetation Types are considered significant: FOM1-1 FOM2-1 FOM3-1 FOD1-1 FOD1-2 FOD2-1 FOD2-2 FOD2-3 FOD2-4 FOD4-1 FOD5-2 FOD5-3 FOD5-7 FOD6-5
Lek (Sharp-tailed grouse) •EcoDistrict 6E-17	CUM CUS CUT	The lek or dancing ground consists of bare, grassy or sparse shrubland. There is often a hill or rise in topography. • Leks are typically a grassy field/meadow >15ha with adjacent shrublands and >30ha with adjacent deciduous woodland. Conifer trees within 500m are not tolerated. Criteria •Grasslands (field/meadow) are to be >15ha when adjacent to shrubland and >30ha when adjacent to deciduous woodland • Grasslands are to be undisturbed with low intensities of agriculture (light grazing or late haying) • Leks will be used annually if not destroyed by cultivation or invasion by woody plants or tree planting	No	Site not located within EcoDistrict 6E-17	Studies confirming lek habitat are to be completed from late March to June. • Any site confirmed with sharp-tailed grouse courtship activities is considered significant • The field/meadow ELC ecosites plus a 200 m radius area with shrub or deciduous woodland is the lek habitat.