Environmental Impact Study

161 Heathwood Heights, Aurora

Prepared for

1000679027 Ontario Inc.

DEVNEX

April 30, 2025
Project No. P2025-949

Prepared by

GeoProcess Research Associates Inc.
133 King Street West
PO Box 65506 DUNDAS
Dundas, ON L9H 6Y6

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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 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 (Km) west of Highway 404 and 480 m 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 0.2 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 ORM Conservation Plan Area (Map 2). Urban uses and development, as set out in municipal official plans, are permitted within Settlement Areas. Requirements of the ORM Conservation Plan 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
- Natural Heritage System within Residential Neighbourhood
- Wellington Street West is a Local Corridor Strategic Growth Area
- Schedule B – Stable Neighbourhoods with Environmental Protection (NHS)
- 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)
- *Endangered Species Act (2007)* and Species at Risk in Ontario List (O. Reg. 230/08)
- 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 is currently conducting 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

Travelling approach:

Breeding bird surveys will be undertaken on two separate dates by a breeding bird expert under appropriate weather conditions. The area will be 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 will be 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 will be completed in the early summer of 2025. Species nomenclature and ranking will be determined provincially by the Ministry of Natural Resources Natural Heritage Information Database (S_Ranks). Vegetation communities will be mapped and described according to the Ecological Land Classification system for Southern Ontario (Lee et al., 2008). Vegetation community boundaries will be determined using desktop analysis and further refined in the field.

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 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 5.1.

3.2.1. Incidental Wildlife Surveys

Formal surveys for mammals, reptiles, and insects were not completed, but incidental observations will be documented while completing all site visits. The results will be presented upon completion of the field program in 2025.

3.2.2. Species at Risk Screening and Assessment

An assessment and screening of potential Species at Risk was conducted for the Property 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. Note that a complete SAR assessment will be completed following the field program in 2025.

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 7E (2015) will be conducted for the Subject Property based on the results of the wildlife and vegetation surveys. The field program for this EIS has not been completed at the time of writing this report and a SWH assessment could not be completed at this time.

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 Heithwood 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 directly 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 Oak Ridges Moraine Conservation Plan. The wooded feature that comprises the natural heritage system in the Study Area will be the primary focus of this EIS. This feature is disconnected from the larger woodland to the south and west by the canopy clearing located at 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. Field Work

Field work completed to date has been outlined below. Note that further studies are required to complete this EIS as per the ToR submitted to the Town. Vegetation surveys, ecological land classification, and breeding bird surveys are scheduled to be completed in early summer 2025 and will be added to this report as they are completed.

5.1. 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 and 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 2). The tree appeared to be dead or nearly dead, situated on its own

Table 2. 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.

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 3 below for data sources acquired on March 20, 2025.

Table 3. 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
Rusty Blackbird	*Euphagus carolinus*	S4B,S3N	SC	SC

Species		Status		
Common Name	**Scientific Name**	**S_Rank**	**SARO**	**SARA**
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

A full SAR assessment will be completed once vegetation and wildlife surveys have been completed in early summer 2025. Based on the screening and a desktop review 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.

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.

Red-headed woodpecker may make use of the wooded area within the Study Area due its close connection to larger woodlands in the vicinity.

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.

7. Significant Wildlife Habitat Screening

Significant Wildlife Habitat (SWH) is considered natural heritage and is protected as per Section 2.1 of the Provincial Policy Statement, 2014. The Significant Wildlife Habitat Technical Guide (OMNRF, 2000) aids in land use planning by providing the identification, description, and prioritisation of significant wildlife habitat in Ontario. The associated Ecoregion Criteria Schedules are used to further provide detailed criteria for assessing and confirming SWH within Ontario. This section will provide a screening in the form of a summary table followed and 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 will be conducted following the completion of vegetation and wildlife surveys in early summer 2025. This will include a review of the ELC codes and habitat criteria for candidate SWH.

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 result in 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 trees located along the southern boundary of the Subject Property.

8.1. Natural Heritage System Buffers

It is proposed that the development limit extend to the dripline and/or root zone of the wooded feature in the southern portion of the Subject Property is proposed as part of the site plan. This will require the removal of some trees within the backyard of the residence.

As stated previously, the woodland located in the Study Area is the primary focus of this EIS since it is the only natural heritage feature in proximity to the proposed development. An important component for determining the extent of the natural heritage feature limits will include the classification of the treed feature within the Study Area as it relates to the broader natural heritage system. This has been completed by reviewing the criteria for significant woodlands under the ORMCP and analysing the current conditions and pressures on the existing wooded feature and the larger woodland system nearby. This review will be expanded upon following vegetation and wildlife surveys scheduled to be completed in early summer 2025.

Based on a review of aerial imagery, the wooded feature in the Study Area is disconnected from the larger woodland system in the area of the clearing for the water tower (Map 3). The larger woodland system that connects to the Study Area exhibits an irregular shape, a common characteristic of natural forest patches influenced by topography, past land use, and edge effects. A common characteristic observed for these connecting corridors is their location within residential backyards which often extend deep into the treed areas. These backyards are, by nature, commonly disturbed and result in a distinct vegetation structure that differs greatly from the undisturbed areas of the woodland.

The internal characteristics of the larger woodland support its designation as a significant woodland as per the York Region OP and the ORMCP. Desktop analysis of the tree canopy for the larger woodland reveals a tree crown cover exceeding 60% of the ground (as per Section 5a of Technical Paper 7), indicating a possibly well-established and structurally complex forest stand capable of providing diverse habitats and ecological functions. It is important to note the portion of the wooded feature within the Study Area appears to differ greatly in vegetation composition and disturbance level compared to the overall woodland.

Measurements across the southern woodland, based on aerial imagery, confirm an average width exceeding 40 metres, measured to the outer edges of the tree crowns. This is in line with the Significant Woodland criteria outlined in Section 5 of Technical Paper 7 for the ORMCP.

Finally, the total area of the overall woodland is located within a Settlement Area designated by the ORMCP and surpasses 4 hectares, which satisfies another Significant Woodland criteria in Section 3.4.30 of the York Region OP.

Based on the criteria outlined in the ORMCP Technical Paper 7, the larger woodland beyond the clearing for the water tower would qualify as a Significant Woodland. The area immediately south of the property is too narrow to be considered a Significant Woodland.

While the overall woodland south of the Subject Property technically meets the size and structural criteria for a Significant Woodland, several factors suggest a reduction in its overall habitat quality and ecological function. The wooded area located on the Subject Property is comprised of a plantation within a manicured residential backyard, indicating a history of human intervention and ongoing disturbance. This likely results in a simplified understory, reduced native species diversity, and the presence of non-native or invasive species. The similarly disturbed nature of the narrow, treed connection located on the neighbouring property to the south compromises the effectiveness of the wooded area as a potential high-quality wildlife corridor and may limit the movement of sensitive species. Consequently, the habitat quality of the wooded area on the Subject Property is likely diminished compared to a more mature and undisturbed forest. A public trail also extends in an east-west direction south of the Subject Property, bisecting the feature. Furthermore, the fact that the ecological functions of both the Subject Property wooded area and the neighbouring connected woodlands are already reduced due to anthropogenic disturbances suggests a landscape already under ecological stress. Therefore, while the woodland technically meets the ORMCP's definition based on size and connectivity metrics, its functional contribution to the larger Significant Woodland structure is likely to be much less substantial compared to an undisturbed equivalent.

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 larger Significant Woodland feature that extends to the south and west of the Subject Property.

The treed area located on the Subject Property is already subject to perpetual disturbance and the understory vegetation layer is comprised of a residential yard. See Photo 1 for an aerial image of the property that illustrates the disturbed nature of the vegetation within the conifer stand. In conclusion, a buffer setback based on the root protection zone of these trees is not likely to have negative impacts on the overall natural heritage system and the larger significant woodland will remain intact.

Photo 1. Aerial image of the subject property facing south.

Detailed studies on species composition, habitat features, wildlife, and ecological functions within the Study Area will provide an even more comprehensive understanding of this feature.

9. Preliminary Environmental Impact Assessment

A preliminary impact assessment has been completed with the understanding that revisions will be undertaken following completion of the field program in summer of 2025.

Impacts on the various natural heritage features associated within and adjacent to the Subject Property were considered in the impact analysis. Table 4 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 4. 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-September 30th 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 are 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 reduce or 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 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.	No residual effects expected if mitigation measures are followed.
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 and install fencing to delineate where the extent of the development footprint is limited. Clearly delineate the work are 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.	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

			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 nearby natural features/watercourses.	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 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.	Limited measures can be employed as a certain level of construction noise will occur. Limit construction activities at sunrise and sunset during the active spring breeding bird season.	Noise impacts to wildlife present within the surrounding landscape may occur, however they will be occurring during the construction phase of the project, which is a relatively short period of time. It is anticipated that wildlife may avoid the area during construction. Once the construction activities are complete, the noise associated with construction activities will end and wildlife will return. As the majority of the wildlife expected to be found within the local landscape is tolerant of disturbances, they are anticipated to return to the area once construction activities end.

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 impacts 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; reducing features that create 'fly-through' conditions like glass corners; window muntins; exterior shutters; UV-treated glass. 2).	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 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.

Woodland

Considering the context provided in Section 8, the proposal to replace the single-family residence with multiple homes as part of an infill project is not expected to result in negative impacts on the overall woodland immediately south of the Subject Property, provided that appropriate mitigation measures are implemented. These measures should focus on minimizing further disturbance to the remaining woodland, 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 residence into multiple residences will have minimal cumulative imapcts. 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 plan (ESC) 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.

11. Policy Conformity

It is understood that the field studies to conduct a full EIS have not been completed at this time and will be required to satisfy the requirements of the Town of Aurora and the ORMCP. 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, offsetting, and construction measures identified for the Study Area will promote the protection of natural features outlined in this preliminary EIS.

12. Closing

This EIS completed a policy review, conducted partial biophysical surveys to document the existing ecological conditions and reviewed the proposed site plan. We recognize that further study is required to provide a complete assessment of natural heritage features in the Study Area. 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.

April 30, 2025

Prepared by:

Devin Hock, B.Sc.
Ecologist

Reviewed by:

Ian Roul, M.Sc.
Senior Ecologist

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Information obtained during the site investigations or received from third parties does not exhaustively cover all possible environmental conditions or circumstances that may exist in the study area. If a service is not expressly indicated, it should not be assumed that it was provided. Any discussion of the environmental conditions is based upon information provided and available at the time the conclusions were formulated.

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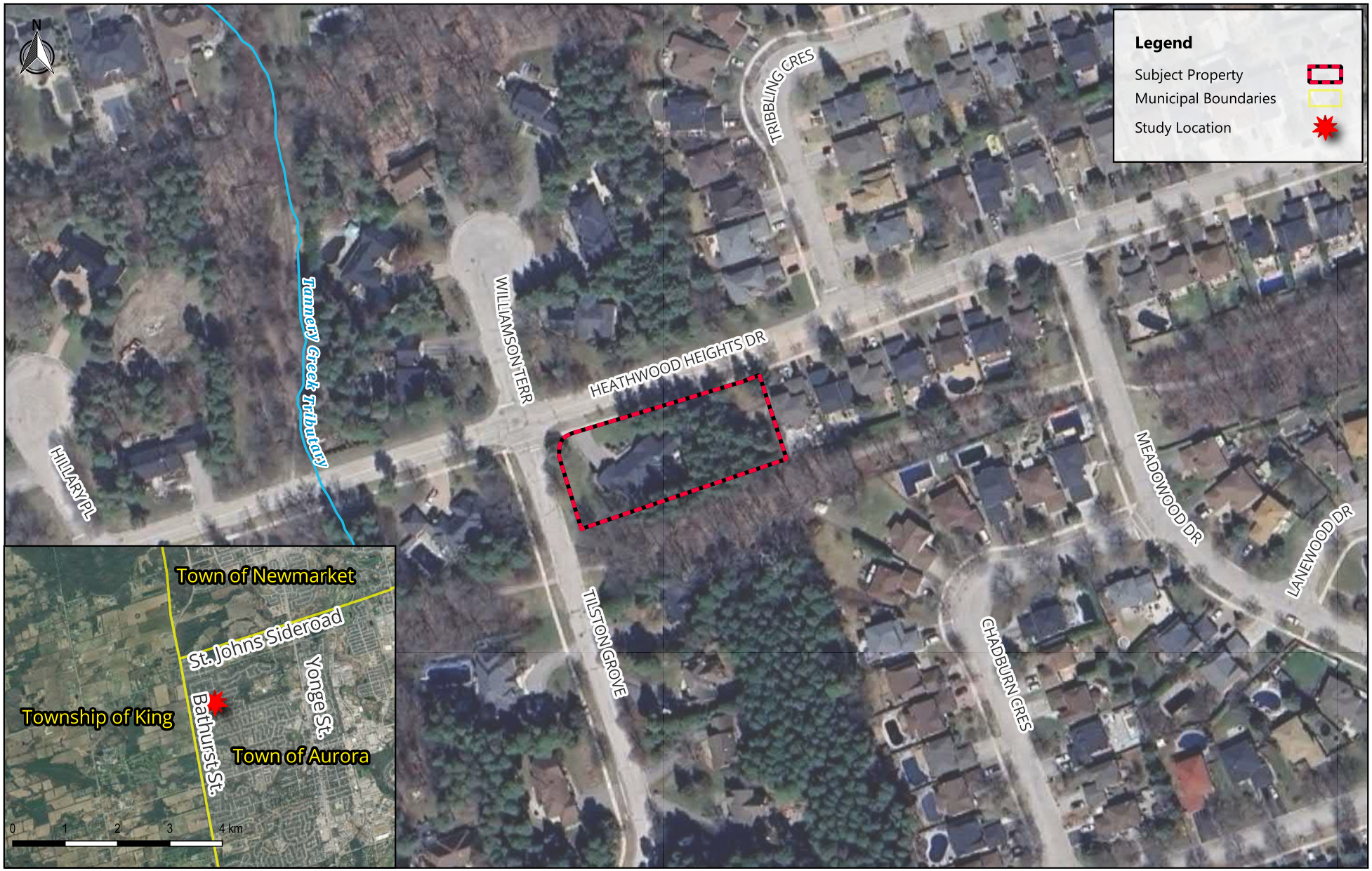
Maps



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NAD83 / UTM zone 17N (EPSG:26917)

Notes:
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Map 1.

Key Map

Environmental Impact Statement
161 Heathwood Heights, Aurora

1000679027 Ontario Inc.

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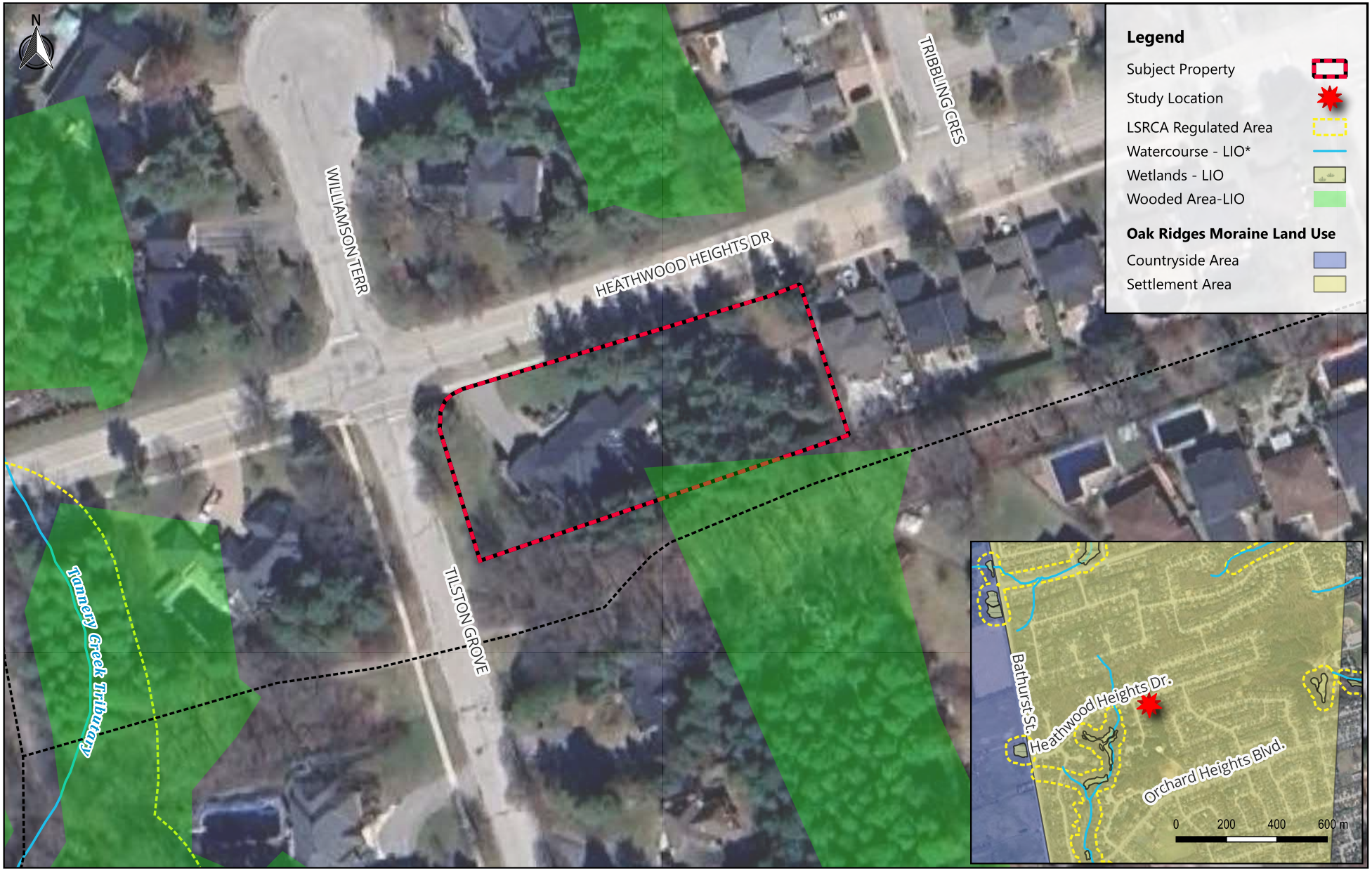

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Map 2.

Existing Conditions

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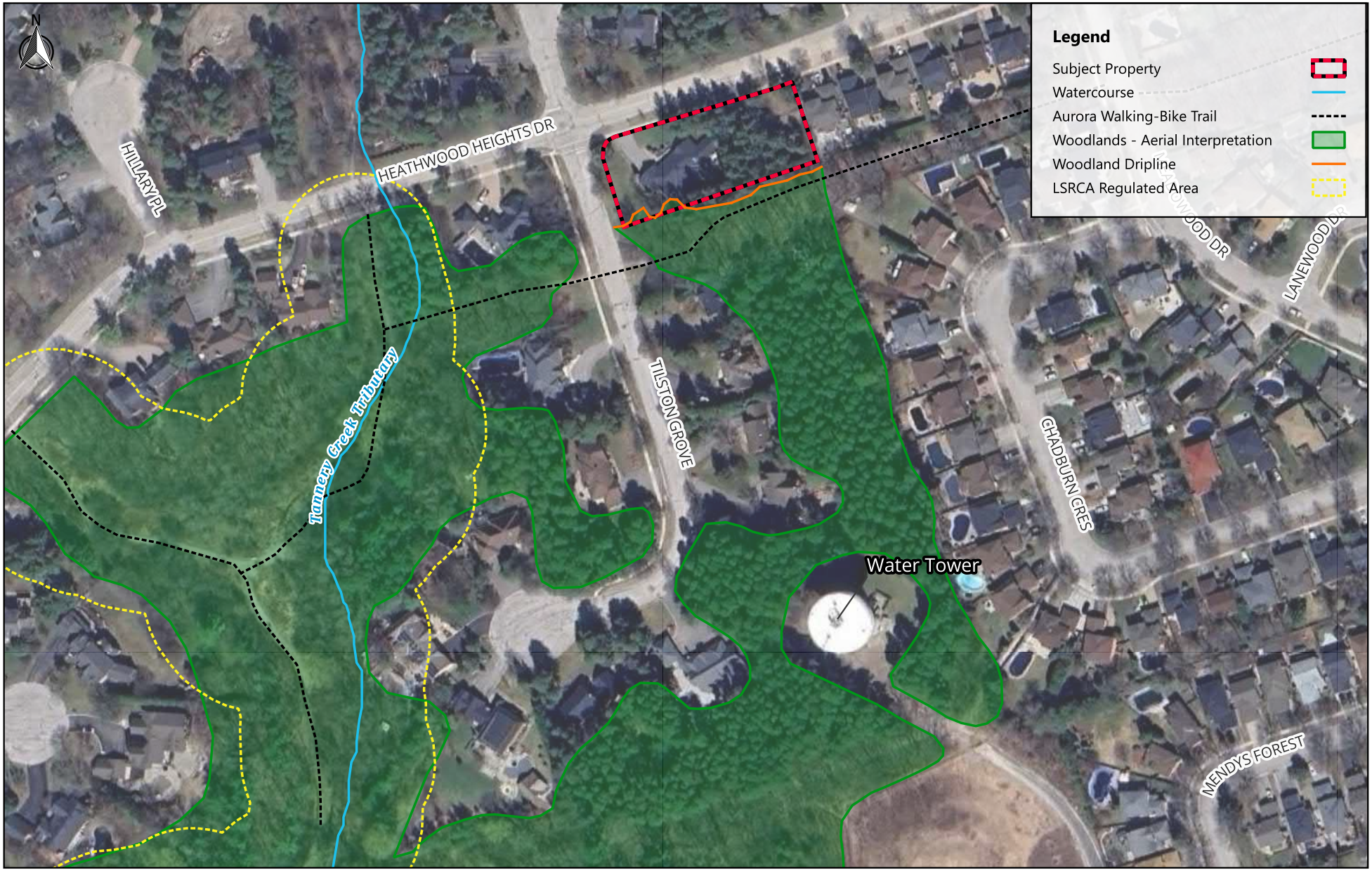

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Map 3.

Natural Heritage System

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Map 4.

Proposed Development

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161 Heathwood Heights, Aurora
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Map 5.

Woodland Measurements

161 Heathwood Heights Drive

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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.